Form 3160 -3 (March 2012)

## UNITED STATES

FORM	APPROVED
OMB N	o. 1004-0137
Expires C	ctober 31, 201

DEPARTMENT OF THE II BUREAU OF LAND MANA				NMLC061869		
APPLICATION FOR PERMIT TO DRILL OR REENTER				6. If Indian, Allotee or Tribe Name		iame
la. Type of work:  DRILL  REENTER				7 If Unit or CA Agreement, Name and No. NMNM134249		ne and No.
lb. Type of Well: Oil Well Gas Well Other	Sin	ngle Zone 🔽 Multip	le Zone	8. Lease Name and \BIG SINKS DRAW		( <b>br.</b> ED 422H
2. Name of Operator DEVON ENERGY PRODUCTION COM	PANY LP			9. API Well No. 30-015-	-440	223
3a. Address 333 West Sheridan Avenue Oklahoma City Ok	3b. Phone No (405)552-6	. (include area code) 5571		· ·	10. Field and Pool, or Exploratory COTTON DRAW, SOUTH / DELAWARE	
4. Location of Well (Report location clearly and in accordance with any	State requirem	ents.*)		11. Sec., T. R. M. or B	lk. and Sur	vey or Area
At surface SENW / 2350 FNL / 1345 FWL / LAT 32.1020	724 / LONG	G -103. <b>7</b> 358506		SEC 25 / T25S / R	31E / NM	iP
At proposed prod. zone NENW / 330 FNL / 1980 FWL / LAT	32,122155	54 / LONG <b>-103.73</b> 3	37371			
14. Distance in miles and direction from nearest town or post office*				12. County or Parish EDDY		13. State NM
15. Distance from proposed* location to nearest 1345 feet property or lease line, ft. (Also to nearest drig. unit line, if any)	16. No. of a 2398.96	acres in lease	17. Spacir 240	g Unit dedicated to this	well	
18. Distance from proposed location*	19. Proposed Depth 20. B		20. BLM/	M/BIA Bond No. on file		
to nearest well, drilling, completed, 631 feet applied for, on this lease, ft.	8160 feet	/ 15328 feet	FED: C	CO1104		
21. Elevations (Show whether DF, KDB, RT, GL, etc.) 3340 feet	22. Approxi 10/28/201	mate date work will sta	rt*	23. Estimated duration 45 days		
	24. Atta	chments		<del></del>		
The following, completed in accordance with the requirements of Onshor	e Oil and Gas	Order No.1, must be a	ttached to th	nis form:		
<ol> <li>Well plat certified by a registered surveyor.</li> <li>A Drilling Plan.</li> <li>A Surface Use Plan (if the location is on National Forest System SUPO must be filed with the appropriate Forest Service Office).</li> </ol>		<ul><li>4. Bond to cover t Item 20 above).</li><li>5. Operator certification</li></ul>	he operation	ons unless covered by ar	_	•
25. Signature	Name	(Printed/Typed)	·		Date	
(Electronic Submission)	l l	a Good / Ph: (405)5	52-6558		11/16/2	2016
Title Regulatory Compliance Professional						
Approved by (Signature)		(Printed/Typed)			Date	_
(Electronic Submission) Cody Layton / Ph: (575)234-5959			234-5959		05/16/2	2017 
Title Supervisor Multiple Resources	Office	: LSBAD				
Application approval does not warrant or certify that the applicant hold			ts in the sul	oject lease which would	entitle the a	ipplicant 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 cr States any false, fictitious or fraudulent statements or representations as t			willfully to r	make to any department	or agency (	of the United

(Continued on page 2)



\*(Instructions on page 2)

#### **NM OIL CONSERVATION**

ARTESIA DISTRICT

MAY 30 2017

RECEIVED



U.S. Department of the Interior BUREAU OF LAND MANAGEMENT



#### **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: 11/16/2016

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

Representative Name: Ray Vaz

Street Address: 6488 Seven Rivers Hwy

City: Artesia State: NM Zip: 88210

Phone: (575)748-1871

Email address: ray.vaz@dvn.com

#### AFMSS

U.S. Department of the Interior BUREAU OF LAND MANAGEMENT



**APD ID:** 10400007930 **Submission Date:** 11/16/2016

Operator Name: DEVON ENERGY PRODUCTION COMPANY LP

Well Name: BIG SINKS DRAW 25-24 FED COM Well Number: 422H

Well Type: OIL WELL Well Work Type: Drill

Section 1 - General

APD ID: 10400007930 Tie to previous NOS? Submission Date: 11/16/2016

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: NMLC061869 Lease Acres: 2398.96

Surface access agreement in place? Allotted? Reservation:

Agreement in place? YES Federal or Indian agreement: FEDERAL

Agreement number: NMNM134249

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 Mater Development Plan name:

Well in Master SUPO? NO Master SUPO name:

Well in Master Drilling Plan? NO Master Drilling Plan name:

Well Name: BIG SINKS DRAW 25-24 FED COM Well Number: 422H Well API Number:

Field/Pool or Exploratory? Field and Pool Field Name: COTTON DRAW, Pool Name: DELAWARE

SOUTH

Well Name: BIG SINKS DRAW 25-24 FED COM Well Number: 422H

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

Describe other minerals:

Is the proposed well in a Helium production area? N Use Existing Well Pad? NO New surface disturbance?

Type of Well Pad: MULTIPLE WELL Multiple Well Pad Name: BIG Number: 421H/422H

SINKS DRAW 25-24 FED COM

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: 631 FT Distance to lease line: 1345 FT

Reservoir well spacing assigned acres Measurement: 240 Acres

Well plat: BSD 25-24 Fed Com 422H\_C-102\_signed\_11-14-2016.pdf

Well work start Date: 10/28/2017 Duration: 45 DAYS

Section 3 - Well Location Table

Survey Type: RECTANGULAR

**Describe Survey Type:** 

Datum: NAD83 Vertical Datum: NAVD88

Survey number: 4739

STATE: NEW MEXICO Meridian: NEW MEXICO PRINCIPAL County: EDDY

**Latitude:** 32.1020724 **Longitude:** -103.7358506

SHL **Elevation:** 3340 **MD:** 0 **TVD:** 0

Leg #: 1 Lease Type: FEDERAL Lease #: NMLC062300

NS-Foot: 2350 NS Indicator: FNL

**EW-Foot**: 1345 **EW Indicator**: FWL

**Twsp:** 25S **Range:** 31E **Section:** 25

Aliquot: SENW Lot: Tract:

Well Name: BIG SINKS DRAW 25-24 FED COM Well Number: 422H

STATE: NEW MEXICO Meridian: NEW MEXICO PRINCIPAL County: EDDY

**Latitude:** 32.1020724 **Longitude:** -103.7358506

KOP Elevation: -4376 MD: 7740 TVD: 7716

Leg #: 1 Lease Type: FEDERAL Lease #: NMLC062300

NS-Foot: 2320

NS Indicator: FNL

EW-Foot: 1980

EW Indicator: FWL

**Twsp:** 25S **Range:** 31E **Section:** 25

Aliquot: SENW Lot: Tract:

STATE: NEW MEXICO Meridian: NEW MEXICO PRINCIPAL County: EDDY

Latitude: 32,1020724 Longitude: -103,7358506

PPP **Elevation:** -4763 **MD:** 8190 **TVD:** 8103

Leg #: 1 Lease Type: FEDERAL Lease #: NMLC062300

NS-Foot: 2123 NS Indicator: FNL EW-Foot: 1718 EW Indicator: FWL

Twsp: 25S Range: 31E Section: 25

Aliquot: SENW Lot: Tract:

STATE: NEW MEXICO Meridian: NEW MEXICO PRINCIPAL County: EDDY

**Latitude:** 32.1221554 **Longitude:** -103.7337371

EXIT **Elevation:** -4820 **MD:** 15328 **TVD:** 8160

Leg #: 1 Lease Type: FEDERAL Lease #: NMLC061869

NS-Foot: 330 NS Indicator: FNL EW-Foot: 1980 EW Indicator: FWL

Twsp: 25S Range: 31E Section: 24

Aliquot: NENW Lot: Tract:

STATE: NEW MEXICO Meridian: NEW MEXICO PRINCIPAL County: EDDY

**Latitude:** 32.1221554 **Longitude:** -103.7337371

BHL **Elevation:** -4820 **MD:** 15328 **TVD:** 8160

Leg #: 1 Lease Type: FEDERAL Lease #: NMLC061869

NS-Foot: 330

NS Indicator: FNL

EW-Foot: 1980

EW Indicator: FWL

Well Name: BIG SINKS DRAW 25-24 FED COM

Well Number: 422H

Twsp: 25S

Range: 31E

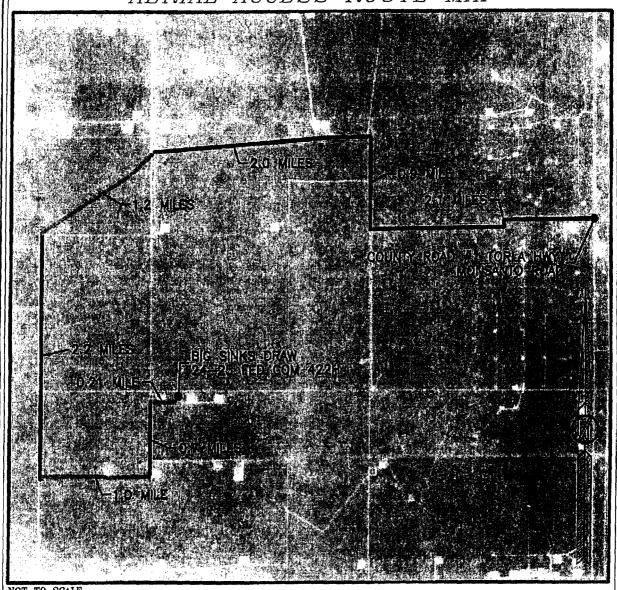
Section: 24

Aliquot: NENW

Lot:

Tract:

# SECTION 25, TOWNSHIP 25 SOUTH, RANGE 31 EAST, N.M.P.M. EDDY COUNTY, STATE OF NEW MEXICO AERIAL ACCESS ROUTE MAP



NOT TO SCALE AERIAL PHOTO: GOOGLE EARTH NOV. 2015

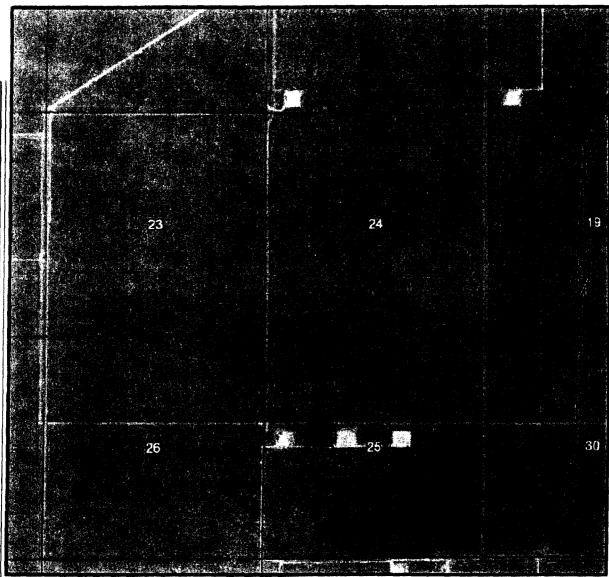
DEVON ENERGY PRODUCTION COMPANY, L.P.
BIG SINKS DRAW 25-24 FED COM 422H
LOCATED 2350 FT. FROM THE NORTH LINE
AND 1345 FT. FROM THE WEST LINE OF
SECTION 25, TOWNSHIP 25 SOUTH,
RANGE 31 EAST, N.M.P.M.
EDDY COUNTY, STATE OF NEW MEXICO

JUNE 20, 2016

SURVEY NO. 4739

MADRON SURVEYING, INC. 301 SOUTH CANAL CARLSBAD, NEW MEXICO

## SECTION 25, TOWNSHIP 25 SOUTH, RANGE 31 EAST, N.M.P.M. EDDY COUNTY, STATE OF NEW MEXICO $AERIAL\ PHOTO$



NOT TO SCALE AERIAL PHOTO: GOOGLE EARTH NOV. 2015

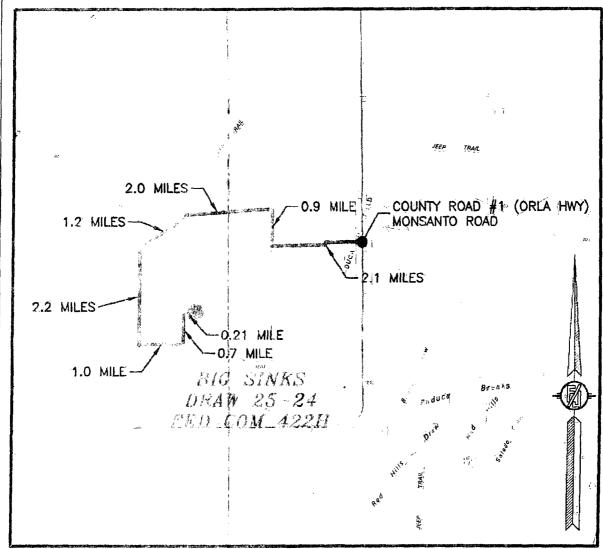
DEVON ENERGY PRODUCTION COMPANY, L.P.
BIG SINKS DRAW 25-24 FED COM 422H
LOCATED 2350 FT. FROM THE NORTH LINE
AND 1345 FT. FROM THE WEST LINE OF
SECTION 25, TOWNSHIP 25 SOUTH,
RANGE 31 EAST, N.M.P.M.
EDDY COUNTY, STATE OF NEW MEXICO

JUNE 20, 2016

SURVEY NO. 4739

MADRON SURVEYING, INC. 301 SOUTH CANAL CARLSBAD, NEW MEXICO

### SECTION 25, TOWNSHIP 25 SOUTH, RANGE 31 EAST, N.M.P.M. EDDY COUNTY, STATE OF NEW MEXICO VICINITY MAP



DISTANCES IN MILES

NOT TO SCALE

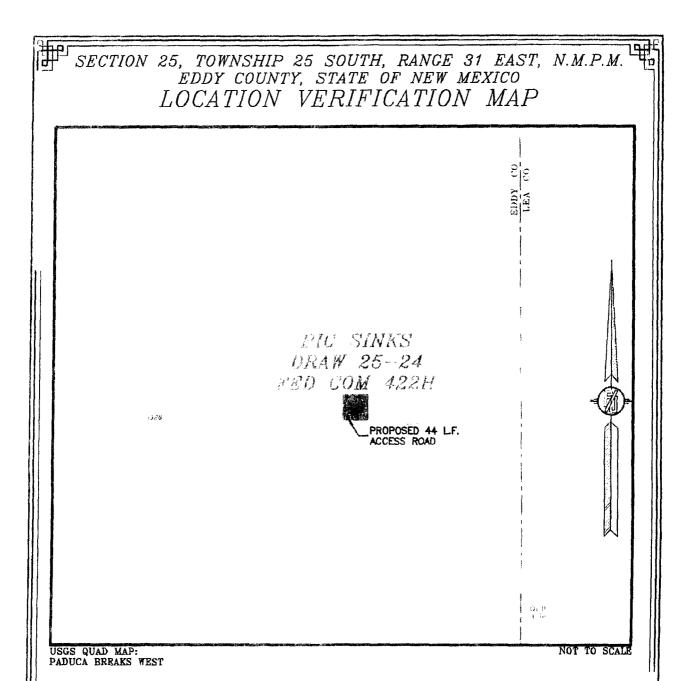
DIRECTIONS TO LOCATION
FROM THE INTERSECTION OF COUNTY ROAD #1 (ORLA HWY)
AND MONSANTO ROAD GO WEST APPROX. 2.1 MILES TURN
RIGHT (NORTH) GO NORTH APPROX 0.9 MILE TURN LEFT
(WEST) GO WEST 2.0 MILES TURN LEFT (SOUTHWEST) MIDDLE
ROAD GO (SOUTHWEST) APPROX. 1.2 MILES ROAD TURNS LEFT
(SOUTH) GO SOUTH APPROX 2.2 MILES TO A LEASE ROAD ON
LEFT (EAST) TURN EAST GO 1.0 MILE TO A LEASE ROAD ON
LEFT (NORTH) TURN NORTH GO APPROX 0.7 MILE TURN RIGHT
(EAST) GO EAST APPROX. 0.21 MILE TO SOUTHWEST CORNER
OF PAD FOR THIS LOCATION.

EDDY COUNTY, STATE OF NEW MEXICO JUNE 20, 2016

DEVON ENERGY PRODUCTION COMPANY, L.P. BIG SINKS DRAW 25-24 FED COM 422H LOCATED 2350 FT. FROM THE NORTH LINE AND 1345 FT. FROM THE WEST LINE OF SECTION 25, TOWNSHIP 25 SOUTH, RANGE 31 EAST, N.M.P.M.

SURVEY NO. 4739

MADRON SURVEYING, INC. 301 SOUTH CANAL CARLSBAD, NEW MEXICO

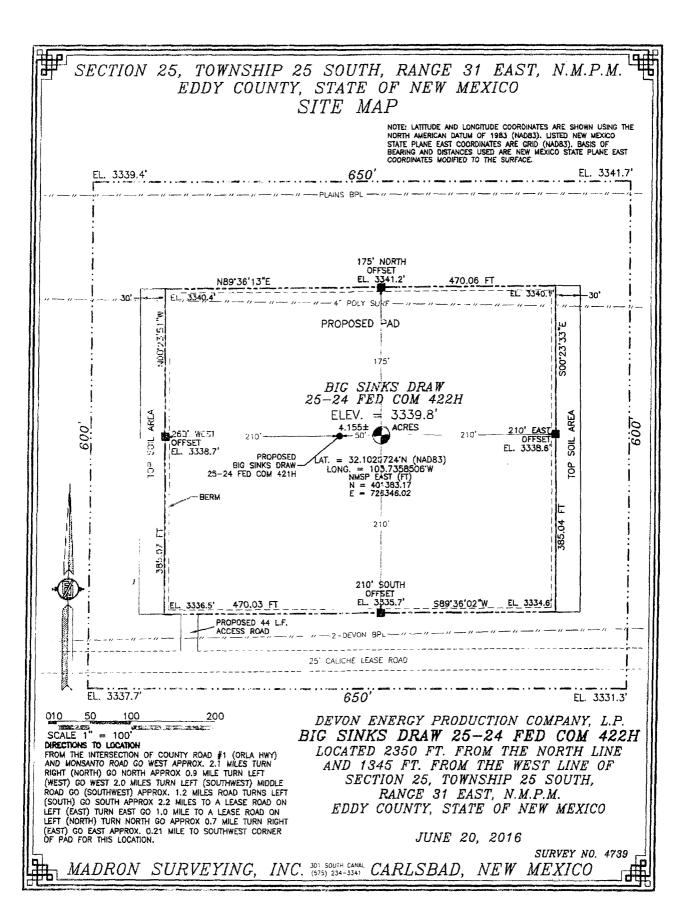


DEVON ENERGY PRODUCTION COMPANY, L.P.
BIG SINKS DRAW 25-24 FED COM 422H
LOCATED 2350 FT. FROM THE NORTH LINE
AND 1345 FT. FROM THE WEST LINE OF
SECTION 25, TOWNSHIP 25 SOUTH,
RANGE 31 EAST, N.M.P.M.
EDDY COUNTY, STATE OF NEW MEXICO

JUNE 20, 2016

SURVEY NO. 4739

MADRON SURVEYING, INC. 675) 234-3341 CARLSBAD, NEW MEXICO



#### \*AFMSS

U.S. Department of the Interior BUREAU OF LAND MANAGEMENT



**APD ID:** 10400007930 **Submission Date:** 11/16/2016

Operator Name: DEVON ENERGY PRODUCTION COMPANY LP

Well Name: BIG SINKS DRAW 25-24 FED COM

Well Number: 422H

Well Type: OIL WELL

Well Work Type: Drill

#### **Section 1 - Geologic Formations**

ID: Surface formation

Name: UNKNOWN

Lithology(ies):

**ALLUVIUM** 

Elevation: 3340

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: 2688

**True Vertical Depth: 652** 

Measured Depth: 652

Mineral Resource(s):

NONE

Is this a producing formation? N

ID: Formation 2

Name: SALADO

Lithology(ies):

SALT

Elevation: 2295

True Vertical Depth: 1045

Measured Depth: 1045

Mineral Resource(s):

NONE

Is this a producing formation? N

Well Name: BIG SINKS DRAW 25-24 FED COM

Well Number: 422H

ID: Formation 3

Name: BASE OF SALT

Lithology(ies):

**SALT** 

Elevation: -773

**True Vertical Depth: 4113** 

Measured Depth: 4113

Mineral Resource(s):

NONE

Is this a producing formation? N

ID: Formation 4

Name: DELAWARE

Lithology(ies):

**SANDSTONE** 

Elevation: -1011

True Vertical Depth: 4351

Measured Depth: 4351

Mineral Resource(s):

NATURAL GAS

OIL

Is this a producing formation? Y

ID: Formation 5

Name: LAMAR

Lithology(ies):

SANDSTONE

Elevation: -1015

True Vertical Depth: 4355

Measured Depth: 4355

Mineral Resource(s):

NATURAL GAS

OIL

Is this a producing formation? N

ID: Formation 6

Name: BELL CANYON

Lithology(ies):

SANDSTONE

Elevation: -1031 True Vertical Depth: 4371

Measured Depth: 4371

Well Name: BIG SINKS DRAW 25-24 FED COM Well Number: 422H

Mineral Resource(s):

NATURAL GAS

OIL

Is this a producing formation? N

ID: Formation 7

Name: CHERRY CANYON

Lithology(ies):

SANDSTONE

Elevation: -1981

True Vertical Depth: 5321

Measured Depth: 5321

Mineral Resource(s):

NATURAL GAS

OIL

Is this a producing formation? N

ID: Formation 8

Name: BRUSHY CANYON

Lithology(ies):

SANDSTONE

Elevation: -3322

**True Vertical Depth:** 6662

Measured Depth: 6662

Mineral Resource(s):

NATURAL GAS

OIL

Is this a producing formation? N

ID: Formation 9

Name: BRUSHY CANYON

Lithology(ies):

SANDSTONE

Elevation: -4765

True Vertical Depth: 8105

Measured Depth: 8105

Mineral Resource(s):

NATURAL GAS

OIL

Is this a producing formation? Y

Well Name: BIG SINKS DRAW 25-24 FED COM Well Number: 422H

#### Section 2 - Blowout Prevention

Pressure Rating (PSI): 3M Rating Depth: 8160

**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 multi-bowl 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:**

BSD 25-24 Fed Com 422H\_3M BOPE\_Ck\_11-14-2016.pdf

#### **BOP Diagram Attachment:**

BSD 25-24 Fed Com 422H 3M BOPE\_Ck\_11-14-2016.pdf

Pressure Rating (PSI): 3M Rating Depth: 4150

**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 multi-bowl 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:**

BSD 25-24 Fed Com 422H\_3M BOPE\_Ck\_11-14-2016.pdf

#### **BOP Diagram Attachment:**

BSD 25-24 Fed Com 422H\_3M BOPE\_Ck\_11-14-2016.pdf

#### Section 3 - Casing

Well Name: BIG SINKS DRAW 25-24 FED COM

Well Number: 422H

String Type: PRODUCTION

Other String Type:

Hole Size: 8.75

Top setting depth MD: 0

Top setting depth TVD: 0

Top setting depth MSL: -4820

Bottom setting depth MD: 15328

Bottom setting depth TVD: 8160

Bottom setting depth MSL: -12980 Calculated casing length MD: 15328

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):

BSD 25-24 Fed Com 422H ProdCasing Ass 11-14-2016.pdf

Well Name: BIG SINKS DRAW 25-24 FED COM

Well Number: 422H

String Type: INTERMEDIATE Other String Type:

**Hole Size: 12.25** 

Top setting depth MD: 0 Top setting depth TVD: 0

Top setting depth MSL: -4820

Bottom setting depth MD: 4150 Bottom setting depth TVD: 4150

Bottom setting depth MSL: -8970 Calculated casing length MD: 4150

outoutation outsing for guilding in the

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):

BSD 25-24 Fed Com 422H Int Csg Ass 11-14-2016.pdf

Well Name: BIG SINKS DRAW 25-24 FED COM

Weil Number: 422H

String Type: SURFACE

Other String Type:

Hole Size: 17.5

Top setting depth MD: 0

Top setting depth TVD: 0

Top setting depth MSL: -4820

Bottom setting depth MD: 965

**Bottom setting depth TVD: 965** 

Bottom setting depth MSL: -5785 Calculated casing length MD: 965

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):

BSD 25-24 Fed Com 422H\_SurfCsg Ass\_11-14-2016.pdf

Section 4 - Cement

Casing String Type: SURFACE

Well Name: BIG SINKS DRAW 25-24 FED COM Well Number: 422H

Stage Tool Depth:

Lead

Cement Type: C Top MD of Segment: 0 **Bottom MD Segment: 965** 

Yield (cu.ff./sk): 1.34 Additives: 1% Calcium Chloride Quantity (sks): 754

Percent Excess: 50 Density: 14.8 Volume (cu.ft.): 1010

Casing String Type: INTERMEDIATE

Stage Tool Depth:

<u>Lead</u>

Cement Type: C Top MD of Segment: 0 **Bottom MD Segment: 3150** 

Additives: Poz (Fly Ash): 6% BWOC Quantity (sks): 695 Yield (cu.ff./sk): 1.85 Bentonite + 5% BWOW Sodium

Volume (cu.ft.): 1285 Percent Excess: 30 Chloride + 0.125 lbs/sks Poly-E-Flake

Pensity: 12.9

**Bottom MD Segment: 4150** Cement Type: H

Top MD of Segment: 3150 Yield (cu.ff./sk): 1.33 Quantity (sks): 306

Additives: 0.125 lbs/sks Poly-R-Flake Percent Excess: 30 Volume (cu.ft.): 407

Density: 14.8

Casing String Type: PRODUCTION

Stage Tool Depth:

Lead

Cement Type: TUNED Top MD of Segment: 3950 **Bottom MD Segment: 8100** 

Yield (cu.ff./sk): 3.27 Additives: N/A Quantity (sks): 401

Percent Excess: 25 . Density: 9 Volume (cu.ft.): 1310

<u>Tail</u>

Cement Type: H Top MD of Segment: 8100 **Bottom MD Segment: 15328** 

Yield (cu.ff./sk): 1.2 Additives: Poz (Fly Ash): 6% BWOC Quantity (sks): 1902 Bentonite + 5% BWOW Sodium

Percent Excess: 25 Volume (cu.ft.): 2282

Chloride + 0.125 lbs/sks Poly-E-Flake Density: 14.5

Well Name: BIG SINKS DRAW 25-24 FED COM

Well Number: 422H

#### 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 time

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

#### **Circulating Medium Table**

Top Depth: 965 **Bottom Depth: 4150** 

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: 4150 Bottom Depth: 15328

**CUT BRINE** Mud Type: OTHER

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:** 

Well Name: BIG SINKS DRAW 25-24 FED COM Well Number: 422H

Top Depth: 0 Bottom Depth: 965

Mud Type: OTHER FRESH WATER

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:

#### 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, MUDŁOG

Coring operation description for the well:

N/A

#### Section 7 - Pressure

Anticipated Bottom Hole Pressure: 3686 Anticipated Surface Pressure: 1890.8

Anticipated Bottom Hole Temperature(F): 140

Anticipated abnormal proessures, temperatures, or potential geologic hazards? NO

Describe:

Contingency Plans geoharzards description:

Contingency Plans geohazards attachment:

Hydrogen Sulfide drilling operations plan required? YES

Hydrogen sulfide drilling operations plan:

BSD 25-24 Fed Com 422H\_H2S Plan\_11-14-2016.pdf

Well Name: BIG SINKS DRAW 25-24 FED COM Well Number: 422H

#### **Section 8 - Other Information**

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

BSD 25-24 Fed Com 422H\_Dir Plan\_11-14-2016.pdf BSD 25-24 Fed Com 422H\_Dwg 11-14-2016.pdf

#### Other proposed operations facets description:

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

#### Other proposed operations facets attachment:

BSD 25-24 Fed Com 422H\_MB Verb 3M\_11-14-2016.pdf BSD 25-24 Fed Com 422H\_MB Wellhd\_11-14-2016.pdf BSD 25-24 Fed Com 422H\_Clsd Loop 11-14-2016.pdf

BSD 25-24 Fed Com 422H\_ProdCmtContg\_11-14-2016.pdf

#### Other Variance attachment:

BSD 25-24 Fed Com 422H\_Co-flex\_11-14-2016.pdf

## 4" line to flare pit (150 ft from wellhead) 8" line to flare pit (150 ft from wellhead) 6" line to separator Separator 4" line to shakers Note: all valves & lines on choke manifold are 3" unless otherwise noted. Exact manifold configuration may vary. S S S valve & line 13-5/8" 3M BOPE & Closed Loop Roll Off Bins & Tracks Closed Loop Equip Shakers Volume Tanks Process Tanks Equipment Schematic $\otimes \otimes$ Remotely operated Adjustable Choke Adjustable Choke 3" Choke Line (Possible Co-Flex Hose) Flowline to shakers Mud Pumps Pipe Rams Blind Rams Rotating Head Annular Fill up line Check Valve 2" Kill Line 🚫

Surface

All casing design assumptions were ran in Stress Check to determine safety factor which meet or exceed both Devon Energy and BLM minimum requirements. All casing strings will be filled while running in hole in order to not exceed collapse rating of the pipe.

Surface Casing Burst Design				
Load Case External Pressure Internal Pressure				
Pressure Test	Formation Pore Pressure	Max mud weight of next hole- section plus Test psi		
Drill Ahead	Formation Pore Pressure	Max mud weight of next hole section		
Displace to Gas	Formation Pore Pressure	Dry gas from next casing point		

Surface Casing Collapse Design				
Load Case External Pressure Internal Pressure				
Full Evacuation	Water gradient in cement, mud above TOC	None		
Cementing	Wet cement weight	Water (8.33ppg)		

Surface Casing Tension Design			
Load Case Assumptions			
Overpull 100kips			
Runing in hole 3 ft/s			
Service Loads N/A			

#### Casing Assumptions and Load Cases

#### Intermediate

All casing design assumptions were ran in Stress Check to determine safety factor which meet or exceed both Devon Energy and BLM minimum requirements. All casing strings will be filled while running in hole in order to not exceed collapse rating of the pipe.

Intermediate Casing Burst Design				
Load Case	Internal Pressure			
Pressure Test	Formation Pore Pressure	Max mud weight of next hole- section plus Test psi		
Drill Ahead	Formation Pore Pressure	Max mud weight of next hole section		
Fracture @ Shoe	Formation Pore Pressure	Dry gas		

Intermediate Casing Collapse Design				
Load Case External Pressure Internal Pressure				
Full Evacuation	Water gradient in cement, mud above TOC	None		
Cementing Wet cement weight Water (8.33ppg)				

Intermediate Casing Tension Design			
Load Case Assumptions			
Overpull	100kips		
Runing in hole 2 ft/s			
Service Loads N/A			

All casing design assumptions were ran in Stress Check to determine safety factor which meet or exceed both Devon Energy and BLM minimum requirements. All casing strings will be filled while running in hole in order to not exceed collapse rating of the pipe.

Production Casing Burst Design				
Load Case	External Pressure	Internal Pressure		
Pressure Test	Formation Pore Pressure	Fluid in hole (water or produced water) + test psi		
Tubing Leak	Formation Pore Pressure	Packer @ KOP, leak below surface 8.6 ppg packer fluid		
Stimulation	Formation Pore Pressure	Max frac pressure with heaviest frac fluid		

Production Casing Collapse Design					
Load Case External Pressure Internal Pressure					
Full Evacuation	Water gradient in cement, mud above TOC.	None			
Cementing Wet cement weight Water (8.33ppg)					

Production Casing Tension Design			
Load Case Assumptions			
Overpull 100kips			
Runing in hole 2 ft/s			
Service Loads N/A			



Devon Energy Center 333 West Sheridan Avenue Oklahoma City, Oklahoma 73102-5015

## Hydrogen Sulfide (H<sub>2</sub>S) Contingency Plan

For

Big Sinks Draw 25-24 Fed Com 422H

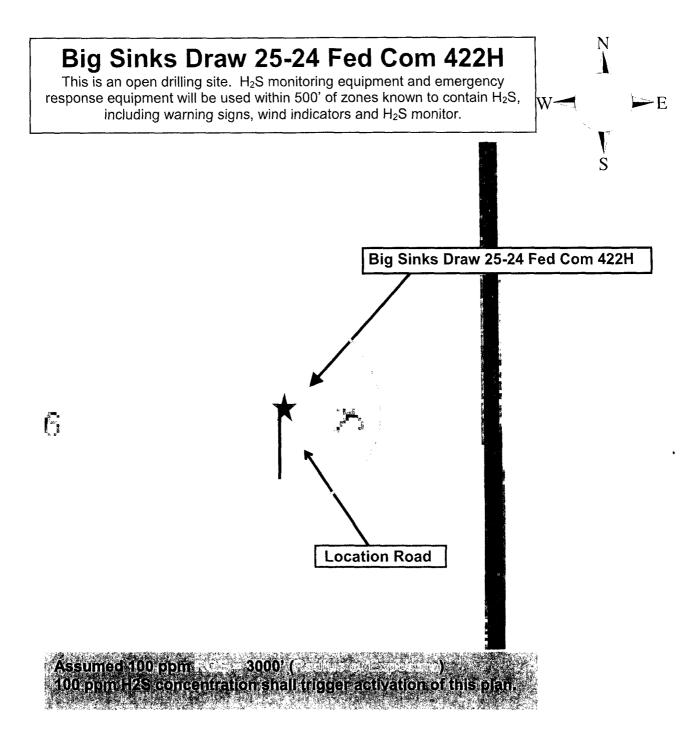
Sec-25 T-25S R-31E 2350' FNL & 1345' FWL LAT. = 32.1020724' N (NAD83) LONG = 103.7358506' W

**Eddy County NM** 

NM OIL CONSERVATION
ARTESIA DISTRICT

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#### Escape

Crews shall escape upwind of escaping gas in the event of an emergency release of gas. Escape can be facilitated from the location entrance road. Crews should then block the entrance to the location from the lease road so as not to allow anyone traversing into a hazardous area. The blockade should be at a safe distance outside of the ROE. There are no homes or buildings in or near the ROE.

**Assumed 100 ppm ROE = 3000'** 

100 ppm H<sub>2</sub>S concentration shall trigger activation of this plan.

#### **Emergency Procedures**

In the event of a release of gas containing H2S, the first responder(s) must

- Isolate the area and prevent entry by other persons into the 100 ppm ROE.
- Evacuate any public places encompassed by the 100 ppm ROE.
- Be equipped with H<sub>2</sub>S monitors and air packs in order to control the release.
- Use the "buddy system" to ensure no injuries occur during the response
- Take precautions to avoid personal injury during this operation.
- Contact operator and/or local officials to aid in operation. See list of phone numbers attached.
- · Have received training in the
  - o Detection of H₂S, and
  - Measures for protection against the gas,
  - o Equipment used for protection and emergency response.

#### **Ignition of Gas Source**

Should control of the well be considered lost and ignition considered, take care to protect against exposure to Sulfur Dioxide (SO<sub>2</sub>). Intentional ignition must be coordinated with the NMOCD and local officials. Additionally the NM State Police may become involved. NM State Police shall be the Incident Command on scene of any major release. Take care to protect downwind whenever there is an ignition of the gas

#### Characteristics of H<sub>2</sub>S and SO<sub>2</sub>

Common Name	Chemical Formula	Specific Gravity	Threshold Limit	Hazardous Limit	Lethal Concentration
Hydrogen Sulfide	H <sub>2</sub> S	1.189 Air = 1	10 ppm	100 ppm/hr	600 ppm
Sulfur Dioxide	SO <sub>2</sub>	2.21 Air = 1	2 ppm	N/A	1000 ppm

#### **Contacting Authorities**

Devon Energy Corp. personnel must liaison with local and state agencies to ensure a proper response to a major release. Additionally, the OCD must be notified of the release as soon as possible but no later than 4 hours. Agencies will ask for information such as type and volume of release, wind direction, location of release, etc. Be prepared with all information available. The following call list of essential and potential responders has been prepared for use during a release. Devon Energy Corp. Company response must be in coordination with the State of New Mexico's 'Hazardous Materials Emergency Response Plan' (HMER)

#### Hydrogen Sulfide Drilling Operation Plan

#### I. HYDROGEN SULFIDE (H<sub>2</sub>S) TRAINING

All personnel, whether regularly assigned, contracted, or employed on an unscheduled basis, will receive training from a qualified instructor in the following areas prior to commencing drilling operations on this well:

- 1. The hazards and characteristics of hydrogen sulfide (H<sub>2</sub>S)
- 2. The proper use and maintenance of personal protective equipment and life support systems.
- 3. The proper use of H<sub>2</sub>S detectors, alarms, warning systems, briefing areas, evacuation procedures, and prevailing winds.
- 4. The proper techniques for first aid and rescue procedures.

In addition, supervisory personnel will be trained in the following areas:

- The effects of H<sub>2</sub>S metal components. If high tensile tubulars are to be used, personnel will be trained in their special maintenance requirements.
- 2. Corrective action and shut-in procedures when drilling or reworking a well and blowout prevention and well control procedures.
- 3. The contents and requirements of the H<sub>2</sub>S Drilling Operations Plan and Public Protection Plan.

There will be an initial training session just prior to encountering a known or probable H<sub>2</sub>S zone (within 3 days or 500 feet) and weekly H<sub>2</sub>S and well control drills for all personnel in each crew. The initial training session shall include a review of the site specific H<sub>2</sub>S Drilling Operations Plan and the Public Protection Plan.

#### II. HYDROGEN SULFIDE TRAINING

Note: All  $H_2S$  safety equipment and systems will be installed, tested, and operational when drilling reaches a depth of 500 feet above, or three days prior to penetrating the first zone containing or reasonably expected to contain  $H_2S$ .

#### 1. Well Control Equipment

- A. Flare line
- B. Choke manifold Remotely Operated
- C. Blind rams and pipe rams to accommodate all pipe sizes with properly sized closing unit
- D. Auxiliary equipment may include if applicable: annular preventer and rotating head.
- E. Mud/Gas Separator

#### 2. Protective equipment for essential personnel:

30-minute SCBA units located at briefing areas, as indicated on well site diagram, with one escape unit available in the top doghouse. As it may be difficult to communicate audibly while wearing these units, hand signals shall be utilized.

#### 3. H<sub>2</sub>S detection and monitoring equipment:

Portable H<sub>2</sub>S monitors positioned on location for best coverage and response. These units have warning lights which activate when H<sub>2</sub>S levels reach 10 ppm and audible sirens which activate at 10 ppm. Sensor locations:

- Bell nipple
- Shale shaker
   Trip tank

- Suction pit
- Rig floor
- Cellar

- Choke manifold
- Living Quarters (usually the company man's trailer stairs.)

#### Visual warning systems:

- A. Wind direction indicators as shown on well site diagram
- B. Caution/ Danger signs shall be posted on roads providing direct access to locations. Signs will be painted a high visibility vellow with black lettering of sufficient size to be reasonable distance from the immediate location. Bilingual signs will be used when appropriate.

#### 4. Mud program:

The mud program has been designed to minimize the volume of H<sub>2</sub>S circulated to surface. Proper mud weight, safe drilling practices and the use of H<sub>2</sub>S scavengers will minimize hazards when penetrating H<sub>2</sub>S bearing zones.

#### 5. Metallurgy:

- A. All drill strings, casings, tubing, wellhead, blowout preventer, drilling spool, kill lines, choke manifold lines, and valves shall be H<sub>2</sub>S trim.
- B. All elastomers used for packing and seals shall be H<sub>2</sub>S trim.

#### 6. Communication:

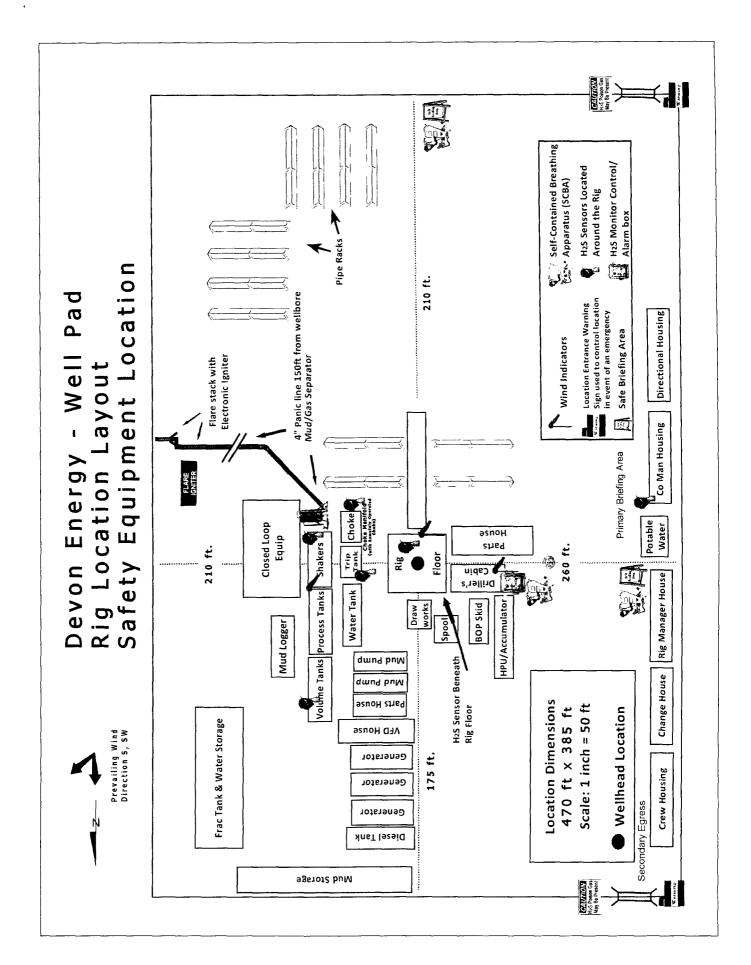
- A. Company personnel have/use cellular telephones in the field.
- B. Land line (telephone) communications at Office

#### 7. Well testing:

- A. Drill stem testing will be performed with a minimum number of personnel in the immediate vicinity, which are necessary to safety and adequately conduct the test. The drill stem testing will be conducted during daylight hours and formation fluids will not be flowed to the surface. All drill-stem-testing operations conducted in an H<sub>2</sub>S environment will use the closed chamber method of testing.
- B. There will be no drill stem testing.

Drilling Supervisor - Slope - Norman Naill   405-760-72:	Drillina Su	rilling Supervisor – Basin – Mark Kramer						
Agency   Call List		405-823-4796 405-760-7234						
Lea   Lea   County   Lea County Communication Authority   393-394	EHS Profe	575-513-9087						
Lea   County								
Lea County Communication Authority   393-393	Agency	Call List						
State Police   392-556   City Police   397-926   Sheriff's Office   393-255								
City Police         397-926           Sheriff's Office         393-25           Ambulance         9           Fire Department         397-936           LEPC (Local Emergency Planning Committee)         393-261           NMOCD         393-610           US Bureau of Land Management         393-36           County         State Police         885-31           State Police         885-31           City Police         885-31           Sheriff's Office         887-75           Ambulance         9           Fire Department         885-31           LEPC (Local Emergency Planning Committee)         887-37           US Bureau of Land Management         885-31           LEPC (Local Emergency Planning Committee)         887-37           US Bureau of Land Management         887-37           NM Emergency Response Commission (Santa Fe)         (505) 476-96           24 HR         (505) 827-91           National Pollution Control Center: Direct         (703) 872-60           For Oil Spills         (800) 280-71				393-3981				
Sheriff's Office   393-25	(5/5)							
Ambulance   99				<del></del>				
Fire Department   397-938     LEPC (Local Emergency Planning Committee)   393-28     NMOCD   393-61     US Bureau of Land Management   393-36     County (575)   50   50   50     City Police   885-31     City Police   887-75     Ambulance   9     Fire Department   885-31     LEPC (Local Emergency Planning Committee)   887-37     US Bureau of Land Management   887-65     NM Emergency Response Commission (Santa Fe)   (505) 476-96     24 HR								
LEPC (Local Emergency Planning Committee)   393-28'     NMOCD   393-61'     US Bureau of Land Management   393-36     US Bureau of Land Management   393-36     Eddy				911				
NMOCD   393-610     US Bureau of Land Management   393-36     US Bureau of Land Management   393-36     County (575)   State Police   885-31     City Police   887-75     Ambulance   9     Fire Department   885-31     LEPC (Local Emergency Planning Committee)   887-37     US Bureau of Land Management   887-65     NM Emergency Response Commission (Santa Fe)   (505) 476-96     24 HR   (505) 827-91     National Emergency Response Center   (800) 424-88     National Pollution Control Center: Direct   (703) 872-60     For Oil Spills   (800) 280-71     Emergency Services   Wild Well Control   (915) 699- (915) 563-33     Halliburton   (575) 746-27     Cudd Pressure Control   (915) 699- (915) 563-33     Halliburton   (575) 746-27     B. J. Services   (575) 746-35     Give GPS   Flight For Life - Lubbock, TX   (806) 747-89     position:   (800) 222-12     Poison Control (24/7)   (575) 272-31								
US Bureau of Land Management   393-36			ittee)	393-2870				
Eddy   Carlsbad   State Police   885-31		<u></u>		393-6161				
County (575)         State Police         885-31           City Police         885-21           Sheriff's Office         887-75           Ambulance         9           Fire Department         885-31           LEPC (Local Emergency Planning Committee)         887-37           US Bureau of Land Management         887-65           NM Emergency Response Commission (Santa Fe)         (505) 476-96           24 HR         (505) 827-91           National Emergency Response Center         (800) 424-88           National Pollution Control Center: Direct         (703) 872-60           For Oil Spills         (800) 280-71           Emergency Services         Wild Well Control         (281) 784-47           Cudd Pressure Control         (915) 699-         (915) 563-33           Halliburton         (575) 746-27         (575) 746-27           B. J. Services         (575) 746-35           Give         Native Air – Emergency Helicopter – Hobbs         (575) 746-35           GPS         Flight For Life - Lubbock, TX         (806) 747-89           position:         Aerocare - Lubbock, TX         (806) 747-89           Med Flight Air Amb - Albuquerque, NM         (575) 842-44           Lifeguard Air Med Svc. Albuquerque, NM         (800) 222-12		US Bureau of Land Management		393-3612				
City Police         885-21           Sheriff's Office         887-75           Ambulance         9           Fire Department         885-31           LEPC (Local Emergency Planning Committee)         887-37           US Bureau of Land Management         887-65           NM Emergency Response Commission (Santa Fe)         (505) 476-96           24 HR         (505) 827-91           National Emergency Response Center         (800) 424-88           National Pollution Control Center: Direct         (703) 872-60           For Oil Spills         (800) 280-71           Emergency Services         (800) 280-71           Wild Well Control         (281) 784-47           Cudd Pressure Control         (915) 699-           0139         (915) 563-33           Halliburton         (575) 746-35           Give         Native Air – Emergency Helicopter – Hobbs         (575) 392-64           GPS         Flight For Life - Lubbock, TX         (806) 743-99           position:         Aerocare - Lubbock, TX         (806) 747-89           Med Flight Air Amb - Albuquerque, NM         (575) 842-44           Lifeguard Air Med Svc. Albuquerque, NM         (800) 222-12           Poison Control (24/7)         (575) 272-31	Eddy	Carlsbad						
Sheriff's Office		State Police		885-313				
Ambulance         9           Fire Department         885-31           LEPC (Local Emergency Planning Committee)         887-37           US Bureau of Land Management         887-65           NM Emergency Response Commission (Santa Fe)         (505) 476-96           24 HR         (505) 827-91           National Emergency Response Center         (800) 424-88           National Pollution Control Center: Direct         (703) 872-60           For Oil Spills         (800) 280-71           Emergency Services         Wild Well Control         (281) 784-47           Cudd Pressure Control         (915) 699-         (915) 563-33           Halliburton         (575) 746-27         (575) 746-35           Give         Native Air – Emergency Helicopter – Hobbs         (575) 392-64           GPS         Flight For Life - Lubbock, TX         (806) 743-99           position:         Aerocare - Lubbock, TX         (806) 747-89           Med Flight Air Amb - Albuquerque, NM         (575) 842-44           Lifeguard Air Med Svc. Albuquerque, NM         (800) 222-12           Poison Control (24/7)         (575) 272-31	<u>(575)</u>	City Police		885-211				
Fire Department				887-755				
LEPC (Local Emergency Planning Committee) 887-37  US Bureau of Land Management 887-65  NM Emergency Response Commission (Santa Fe) (505) 476-96  24 HR (505) 827-91  National Emergency Response Center (800) 424-88  National Pollution Control Center: Direct (703) 872-60  For Oil Spills (800) 280-71  Emergency Services  Wild Well Control (281) 784-47  Cudd Pressure Control (915) 699- (915) 563-33  Halliburton (575) 746-27  B. J. Services (575) 746-35  Give Rota Air – Emergency Helicopter – Hobbs (575) 392-64  Flight For Life - Lubbock, TX (806) 743-99  position:  Med Flight Air Amb - Albuquerque, NM (575) 842-44  Lifeguard Air Med Svc. Albuquerque, NM (800) 222-12  Poison Control (24/7) (575) 272-31				91′				
US Bureau of Land Management  NM Emergency Response Commission (Santa Fe)  24 HR  (505) 827-91  National Emergency Response Center  National Pollution Control Center: Direct  For Oil Spills  Emergency Services  Wild Well Control  Cudd Pressure Control  Halliburton  Halliburton  B. J. Services  Wite Air – Emergency Helicopter – Hobbs  Fight For Life - Lubbock, TX  Med Flight Air Amb - Albuquerque, NM  Lifeguard Air Med Svc. Albuquerque, NM  Poison Control (24/7)  Rood (250) 476-96  (505) 476-96  (800) 424-88  (800) 280-71  (800) 280-71  (801) 784-47  (802) 784-47  (803) 784-47  (804) 784-47  (805) 784-47  (806) 784-99  (806) 784-99  (807) 884-44  (806) 784-89  (807) 884-44  (807) 884-44  (807) 884-44  (807) 884-44  (807) 884-44  (807) 884-44  (807) 884-44  (807) 884-44  (807) 884-44  (807) 884-44  (807) 884-44  (807) 884-44  (807) 884-44  (807) 884-44  (807) 884-44  (807) 884-44		<u> </u>		885-312				
NM Emergency Response Commission (Santa Fe)   (505) 476-96   (24 HR   (505) 827-91   (505) 827-91   (505) 827-91   (505) 827-91   (505) 827-91   (505) 827-91   (505) 827-91   (505) 827-91   (505) 827-91   (505) 827-91   (505) 827-91   (505) 827-91   (505) 827-91   (505) 827-91   (505) 827-91   (505) 827-91   (505) 827-60   (505) 827			ittee)	887-379				
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National Emergency Response Center   (800) 424-88   National Pollution Control Center: Direct   (703) 872-60   For Oil Spills   (800) 280-71     Emergency Services   (281) 784-47   Cudd Pressure Control   (915) 699- (915) 563-33   (915) 563-33			Santa Fe)	(505) 476-960				
National Pollution Control Center: Direct			(505) 827-912					
For Oil Spills (800) 280-71  Emergency Services  Wild Well Control (281) 784-47  Cudd Pressure Control (915) 699- 0139  Halliburton (575) 746-27  B. J. Services (575) 746-35  Give Native Air – Emergency Helicopter – Hobbs (575) 392-64  GPS Flight For Life - Lubbock, TX (806) 743-99  position: Aerocare - Lubbock, TX (806) 747-89  Med Flight Air Amb - Albuquerque, NM (575) 842-44  Lifeguard Air Med Svc. Albuquerque, NM (800) 222-12  Poison Control (24/7) (575) 272-31			(800) 424-880					
Emergency Services   Wild Well Control   (281) 784-47   Cudd Pressure Control   (915) 699-		National Pollution Control Center: Direct	(703) 872-600					
Wild Well Control       (281) 784-47         Cudd Pressure Control       (915) 699-       (915) 563-33         Malliburton       (575) 746-27         B. J. Services       (575) 746-35         Give       Native Air – Emergency Helicopter – Hobbs       (575) 392-64         GPS       Flight For Life - Lubbock, TX       (806) 743-99         position:       Aerocare - Lubbock, TX       (806) 747-89         Med Flight Air Amb - Albuquerque, NM       (575) 842-44         Lifeguard Air Med Svc. Albuquerque, NM       (800) 222-12         Poison Control (24/7)       (575) 272-31		For Oil Spills	(800) 280-711					
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Halliburton		Wild Well Control		(281) 784-470				
Halliburton       (575) 746-27         B. J. Services       (575) 746-35         Give       Native Air – Emergency Helicopter – Hobbs       (575) 392-64         GPS       Flight For Life - Lubbock, TX       (806) 743-99         position:       Aerocare - Lubbock, TX       (806) 747-89         Med Flight Air Amb - Albuquerque, NM       (575) 842-44         Lifeguard Air Med Svc. Albuquerque, NM       (800) 222-12         Poison Control (24/7)       (575) 272-31		Cudd Pressure Control		(915) 563-335				
Give         Native Air – Emergency Helicopter – Hobbs         (575) 392-64           GPS         Flight For Life - Lubbock, TX         (806) 743-99           position:         Aerocare - Lubbock, TX         (806) 747-89           Med Flight Air Amb - Albuquerque, NM         (575) 842-44           Lifeguard Air Med Svc. Albuquerque, NM         (800) 222-12           Poison Control (24/7)         (575) 272-31			(575) 746-275					
GPS         Flight For Life - Lubbock, TX         (806) 743-99           position:         Aerocare - Lubbock, TX         (806) 747-89           Med Flight Air Amb - Albuquerque, NM         (575) 842-44           Lifeguard Air Med Svc. Albuquerque, NM         (800) 222-12           Poison Control (24/7)         (575) 272-31			(575) 746-356					
position:Aerocare - Lubbock, TX(806) 747-89Med Flight Air Amb - Albuquerque, NM(575) 842-44Lifeguard Air Med Svc. Albuquerque, NM(800) 222-12Poison Control (24/7)(575) 272-31			bs	(575) 392-6429				
Med Flight Air Amb - Albuquerque, NM(575) 842-44Lifeguard Air Med Svc. Albuquerque, NM(800) 222-12Poison Control (24/7)(575) 272-31				(806) 743-991				
Lifeguard Air Med Svc. Albuquerque, NM (800) 222-12 Poison Control (24/7) (575) 272-31	position:			(806) 747-892				
Poison Control (24/7) (575) 272-31				(575) 842-443				
				(800) 222-122:				
Oil & Gas Pipeline 24 Hour Service (800) 364-43			(575) 272-311					
		Oil & Gas Pipeline 24 Hour Service	(800) 364-436					

Prepared in conjunction with Dave Small COMMUNICATIONS & CONMUNICATIONS & CONSULTING, ELC





#### **5D Plan Report**

**Devon Energy** 

Field Name: Eddy Co, NM (Nad 83 NME)

Site Name: Big Sinks Draw 25-24 Fed Com 422H
Well Name: Big Sinks Draw 25-24 Fed Com 422H

Plan: Working plan

28 October 2016

MM OIL CONSERVATION

ARTESIA DISTRICT

MAY 30 2017

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### Big Sinks Draw 25-24 Fed Com 422H

Map Units: US ft Company Name: Devon Energy

Projected Coordinate System: NAD83 / New Mexico East (ftUS)

**Field Name:** 

Vertical Reference Datum (VRD): Mean Sea Level

Eddy Co, NM (Nad 83 NME)

Comment:

Units: US ft

North Reference: Grid

Convergence Angle: 0.32

Position:

Northing: 401383.17 US ft Easting: 726346.02 US ft

Latitude: 32° 6' 7.46"

Longitude: -103° 44' 9.06"

Big Sinks Draw 25-24 Fed Com 422H

Site:

Elevation above MSL:3339.80 US ft

Comment:

Position (Relative to Site Centre)

Slot:

+N/-S: 0.00 US ft

Northing: 401383.17 US ft

Latitude: 32°6'7.46"

+E/-W: 0.00 US ft

Easting: 726346.02 US ft

Longitude: -103°44'9.06"

Big Sinks Draw 25-24 Fed Com 422H

Slot TVD Reference: Ground Elevation Elevation above MSL: 3339.80 US ft

Comment:

Type:Main well

UWI:

Plan: Working Plan

Well:

File Number: Comment:

Closure Azimuth: 4.78° Closure Distance: 7369.69US ft

Big Sinks Draw

Vertical Section: Position of Origin (Relative to Slot centre)

25-24 Fed Com

+N/-S: -0.00 US ft

+E/-W: 0.00 US ft

Az: 1.94°

**Dip:** 59.93° Date:

422H

Model: bggm2016 Field Strength:

Declination: 7.14°

30/Nov/2016

47997.3nT

Inclination: 0.00°

Azimuth: 0.00°

Drill floor: Plan: Working Plan

Rig Height (Drill Floor): Elevation above MSL:

**Magnetic Parameters:** 

23.50us ft 3363,30us ft

Target set: Blg Sin	ks Draw 25-24 F	ed Com 422H Tgts (	Comment:				
Target Name:	Shape:	(US ft)	N.Offset (US ft)	E.Offset (US ft)	Northing (USFt)	Easting (USFt)	Comment
LP	Point	8196.00	43.92	635.10	401427.09	726981.12	
PBHL 422H	Point	8160.00	7344.11	613.53	408727.28	726959.55	

Tie Point MD: 0.00	: OUSFt	Inclinatio 0.00°	n: Azi	muth:	0.00°	<b>TVD:</b> - 0.00USFt		<b>:h Offset:</b> USFt		ast Offset 0.00USFt	:
MD	Inc	e to Slot centr	TVD	N.Offset	E.Offset		DLS	B.Rate	T.Rate	T.Face	Comment
(US ft)	(°)	(6)	(US ft)	(US ft)	(US ft)	(US ft)	(°/100US ft)	(°/100US ft)	(°/100US ft)	(°)	
0,00	0.00	0.00	-0.00	-0.00	0,00	0.00	0.00	0.00	0,00	0.00	
4300.00	0.00	0.00	4300.00	-0.00	0.00	0.00	0.00	0.00	0.00	0.00	Nudge
5100.00	8.00	85.00	5097.40	4.86	55.55	6.74	1.00	1.00	0.00	85.00	Hold
6939.50	8.00	85.00	6919.00	27.17	310.58	37.67	0.00	0.00	0.00	0.00	Drop
7739.50	0.00	0.00	7716.40	32.03	366.13	44.41	1.00	-1.00	0.00	180.00	KOP; KOP: 2320.09' FNL/1980.0 1' FWL
8190.04	54.07	1.94	8103.00	229,18	372.80	241.67	12.00	12.00	0.00	1,94	POE: 2122.50' FNL/1718.3 4 FWL
8491,86	90.28	1.94	8193.86	511.59	382.36	524,24	12.00	12.00	-0.00	0.00	LP
15328.38	90.28	1.94	8160.00	7344.11	613.53	7360.67	0.00	0.00	0.00	0.00	PBHL 422H
State Trans. 1 May 1 1 Gr		Relative to Slot				F.Offset	VS	DLS	Northing	Easting	Commont
MD (US ft)	Inc (°)	Az. (°)	TVD (US ft)	N.Off (US		(US ft)		9/100US ft)	Northing (US ft)	(US ft)	Comment
0.00	0.00	0.00	-0.00	-0.0	00	0.00	0.00	0.00	401383.17	726346.02	, , , ,
100.00	0.00	0.00	100.00	-0.0	00	0.00	0.00	0.00	401383.17	726346.02	
200.00	0.00	0.00	200.00	-0.0	00	0.00	0.00	0.00	401383.17	726346.02	
300.00	0.00	0.00	300.00	-0.0	00	0.00	0.00	0.00	401383.17	726346.02	
400.00	0.00	0.00	400.00	-0.0	00	0.00	0.00	0.00	401383.17	726346.02	
500.00	0.00	0.00	500.00	-0.0		0.00	0.00	0.00	401383.17	726346.02	
600.00	0.00	0.00	600.00	-0.0		0.00	0.00	0.00	401383.17	726346.02	
700.00	0.00	0.00	700.00	-0.0		0.00	0.00	0.00	401383.17	726346.02	
800.00	0.00	0.00	800.00	-0.0		0.00	0.00	0.00	401383.17	726346.02	
900.00	0.00	0.00	900.00	-0.0		0.00	0.00	0.00	401383.17	726346.02	
1000.00 1100.00	0.00	0.00 0.00	1000.00 1100.00			0.00	0.00	0.00	401383.17 401383.17	726346.02 726346.02	
1200.00	0.00	0.00	1200.00			0.00	0.00	0.00	401383.17	726346.02	
1300.00	0.00	0.00	1300.00			0.00	0.00	0.00	401383.17	726346.02	
1400.00	0.00	0.00	1400.00			0.00	0.00	0.00	401383.17	726346,02	
1500.00	0.00	0.00	1500.00			0.00	0.00	0.00	401383.17	726346.02	
1600.00	0.00	0.00	1600.00	-0.0	00	0.00	0.00	0.00	401383.17	726346,02	
1700.00	0.00	0.00	1700.00	-0.0	00	0.00	0.00	0.00	401383.17	726346.02	
1800.00	0.00	0.00	1800.00	-0.0	00	0.00	0.00	0.00	401383.17	726346.02	
1900.00	0.00	0.00	1900.00	~0.0	00	0.00	0.00	0.00	401383.17	726346.02	
2000.00	0.00	0.00	2000.00	-0.0	00	0.00	0.00	0.00	401383.17	726346.02	
2100.00	0.00	0.00	2100.00			0.00	0.00	0.00	401383.17	726346.02	
2200.00	0.00	0.00	2200.00			0.00	0.00	0.00	401383.17	726346.02	
2300.00	0.00	0.00	2300.00			0.00	0.00	0.00	401383.17	726346.02	
2400.00	0.00	0.00	2400.00			0.00	0.00	0.00	401383.17	726346.02	
2500.00 2600.00	0.00	0.00	2500.00			0.00	0.00	0.00	401383.17	726346.02	
2700.00	0.00	0.00	2600.00 2700.00			0.00	0.00	0.00 0.00	401383.17 401383.17	726346.02 726346.02	
2800.00	0.00	0.00	2800.00			0.00	0.00	0.00	401383.17	726346.02	
2900.00	0.00	0.00	2900.00			0.00	0.00	0.00	401383.17	726346.02	
3000.00	0.00	0.00	3000.00			0.00	0.00	0.00	401383.17	726346.02	
3100.00	0.00	0.00	3100.00			0.00	0.00	0.00	401383.17	726346.02	
3200.00	0.00	0.00	3200.00			0.00	0.00	0.00	401383.17	726346.02	
3300.00	0.00	0.00	3300.00			0.00	0.00	0.00	401383.17	726346.02	
3400.00	0.00	0.00	3400.00			0.00	0.00	0.00	401383.17	726346.02	
3500.00	0.00	0.00	3500.00	-0.0	00	0.00	0.00	0.00	401383.17	726346.02	
3600.00	0.00	0.00	3600.00	-0.0	00	0.00	0.00	0.00	401383.17	726346.02	
3700.00	0.00	0.00	3700.00	-0.0	00	0.00	0.00	0.00	401383.17	726346.02	
3800.00	0.00	0.00	3800.00	-0.0	00	0.00	0.00	0.00	401383.17	726346.02	
3900.00	0.00	0.00	3900.00	-0.0	00	0.00	0.00	0.00	401383.17	726346.02	

n

Interpolated	Points: (Rela	tive to Slot co	entre)(TVD rel	ative to Drill	Floor)					
MD (US ft)	Inc (°)	Az (°)	TVD (US ft)	N.Offset (US ft)	E.Offset (US ft)	VS (US ft)	DLS (°/100US ft)	Northing (US ft)	Easting (US ft)	Comment
4000.00	0.00	0.00	4000.00	-0.00	0.00	0.00	0.00	401383.17	726346.02	
4100.00	0.00	0.00	4100.00	-0.00	0.00	0.00	0.00	401383.17	726346.02	
4200.00	0.00	0.00	4200.00	-0.00	0.00	0.00	0.00	401383.17	726346.02	
4300.00	0.00	0.00	4300.00	-0.00	0.00	0.00	0.00	401383.17	726346.02	Nudge
4400.00	1.00	85.00	4399.99	0.08	0.87	0.11	1.00	401383.25	726346.89	
4500.00	2.00	85.00	4499.96	0.30	3.48	0.42	1.00	401383.47	726349.50	
4600.00	3.00	85.00	4599.86	0.68	7.82	0.95	1.00	401383.85	726353.84	
4700.00	4.00	85.00	4699.68	1.22	13.90	1.69	1.00	401384.39	726359.92	
4800.00	5.00	85.00	4799.37	1.90	21.72	2.63	1.00	401385.07	726367.74	
4900.00	6.00	85.00	4898.90	2.74	31.27	3.79	1.00	401385.91	726377.29	
5000.00	7.00	85.00	4998.26	3.72	42.54	5.16	1.00	401386.89	726388,56	
5100.00	8.00	85.00	5097.40	4.86	55,55	6.74	1.00	401388.03	726401.57	Hold
5200.00	8.00	85.00	5196,43	6.07	69.41	8.42	0.00	401389.24	726415.43	7,0,0
5300.00	8.00	85.00	5295.46	7.29	83.28	10.10	0.00	401390.46	726429,30	
5400.00	8.00	85.00	5394,48		97,14	11.78	0.00	401391,67		
				8.50					726443,16	
5500,00	8.00	85.00	5493.51	9.71	111.01	13.46	0.00	401392,88	726457.03	
5600.00	8.00	85.00	5592.54	10.92	124.87	15.15	0.00	401394.09	726470.89	
5700.00	8.00	85.00	5691.56	12.14	138.73	16.83	0.00	401395.31	726484.75	
5800.00	8.00	85.00	5790.59	13.35	152.60	18.51	0.00	401396.52	726498.62	
5900.00	8.00	85.00	5889.62	14.56	166.46	20.19	0.00	401397.73	726512.48	
6000.00	8.00	85.00	5988.64	15.78	180.33	21.87	0.00	401398.95	726526.35	
6100.00	8.00	85.00	6087.67	16.99	194.19	23.55	0.00	401400,16	726540.21	
6200.00	8.00	85.00	6186.70	18.20	208.06	25.24	0.00	401401.37	726554.08	
6300.00	8.00	85.00	6285.72	19.42	221.92	26.92	0.00	401402.59	726567.94	
6400.00	8.00	85.00	6384.75	20.63	235.78	28.60	0.00	401403.80	726581.80	
6500.00	8.00	85.00	6483.78	21.84	249.65	30.28	0.00	401405.01	726595.67	
6600.00	8.00	85.00	6582.81	23.05	263.51	31.96	0.00	401406.22	726609.53	
6700.00	8.00	85.00	6681.83	24.27	277.38	33.64	0.00	401407.44	726623.40	
6800.00	8.00	85.00	6780.86	25.48	291.24	35.33	0.00	401408.65	726637.26	
6900.00	8.00	85.00	6879.89	26.69	305.11	37.01	0.00	401409.86	726651.13	
6939.50	8.00	85.00	6919.00	27.17	310.58	37.67	0.00	401410.34	726656.60	Drop
7000.00	7.39	85.00	6978.96	27.88	318.66	38.65	1.00	401411.05	726664.68	
7100.00	6,39	85.00	70 <b>7</b> 8.23	28.92	330.61	40.10	1.00	401412.09	726676.63	
7200.00	5,39	85.00	7177.70	29.82	340.85	41.34	1.00	401412.99	726686,87	
7300.00	4.39	85.00	7277.34	30.56	349.35	42.37	1.00	401413.73	726695.37	
7400.00	3.39	85.00	7377.10	31.16	356.11	43.19	1.00	401414.33	726702.13	
7500.00	2.39	85.00	7476.97	31.60	361.14	43.80	1.00	401414.77	726707.16	
7600.00	1.39	85.00	7576.92	31.88	364.44	44.20	1.00	401415.05	726710.46	
7700.00	0.39	85.00	7676.90	32.02	365.99	44.39	1.00	401415.19	726712.01	
7739.50	0.00	0.00	7716.40	32.03	366.13	44.41	1.00	401415.20	726712.15	KOP; KOP: 2320.09' FNL/1980.01' FWL
7800.00	7.26	1.94	7776.74	35.86	366.26	48.24	12.00	401419.03	726712.28	. ***
7900.00	19.26	1.94	7873.90	58.74	367.03	71.13	12.00	401419.03	726712.26	
8000.00	31.26	1.94	7964.17	101.31	368.47	113.73	12.00	401441.91	726713.03	
8100.00	43,26	1.94	8043.62	161.71	370.52	174.16	12.00	401544.88	726714.49	
8190.04	54.07	1,94	8103.00	229.18	370.32	241.67	12.00	401544.88	726718.34	POE:
	34.07	1,54	3103.00	223.10	372.00	241,07	12.00	401012.33	720716.02	2122.50' FNL/1718.34 FWL
8200.00	55.26	1.94	8108.76	237.30	373.07	249.79	12.00	401620.47	726719.09	
8300.00	67.26	1.94	8156.75	324.77	376.03	337.31	12.00	401707.94	726722.05	
8400.00	79.26	1.94	8185.50	420.30	379.27	432.90	12.00	401803.47	726725.29	
8491.86	90.28	1.94	8193.86	511.59	382.36	524.24	12.00	401894.76	726728.38	LP
8500.00	90.28	1.94	8193.82	519.72	382.63	532.37	0.00	401902.89	726728.65	
8600.00	90.28	1.94	8193.33	619.66	386.01	632.37	0.00	402002.83	726732.03	
8700.00	90.28	1.94	8192.83	719.60	389.39	732,37	0.00	402102.77	726735,41	
8800.00	90.28	1.94	8192.34	819.54	392.77	832.37	0.00	402202.71	726738.79	
8900.00	90.28	1.94	8191.84	919.49	396.16	932.37	0.00	402302.66	726742.18	
9000.00	90.28	1,94	8191.35	1019.43	399.54	1032,37	0.00	402402.60	726745.56	
200.00	20.20	1.27	0101.00	1019,71	۳۵. د د د	1032,37	0.00	702702.00	,20,73,30	

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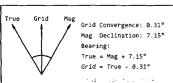
Interpolated l	Points: (Rela	tive to Slot ce	ntre)(TVD rel	ative to Drill F	loor)					
MD (US ft)	Inc (°)	Az (°)	TVD (US (t)	N.Offset (US ft)	E.Offset (US ft)	VS (US ft)	DLS (°/100US ft)	Northing (US ft)	Easting (US ft)	Comment
9100.00	90.28	1.94	8190.85	1119.37	402.92	1132.37	0.00	402502.54	726748.94	
9200.00	90.28	1.94	8190.35	1219.31	406.30	1232.37	0.00	402602.48	726752.32	
9300.00	90.28	1.94	8189.86	1319.25	409.68	1332.36	0.00	402702.42	726755.70	
9400,00	90.28	1.94	8189.36	1419.19	413.06	1432.36	0.00	402802.36	726759.08	
9500.00	90.28	1.94	8188.87	1519.13	416.45	1532.36	0.00	402902.30	726762.47	
9600.00	90.28	1.94	8188.37	1619.08	419.83	1632.36	0.00	403002.25	726765.85	
9700.00	90.28	1.94	8187.88	1719.02	423.21	1732.36	0.00	403102.19	726769.23	
9800.00	90.28	1.94	8187.38	1818.96	426.59	1832.36	0.00	403202.13	726772.61	
9900.00	90.28	1.94	8186.89	1918.90	429.97	1932.36	0.00	403302.07	726775.99	
10000.00	90.28	1.94	8186.39	2018.84	433.35	2032.36	0.00	403402.01	726779.37	
10100,00	90.28	1.94	8185.90	2118.78	436.73	2132.35	0.00	403501.95	726782.75	
10200.00	90.28	1.94	8185.40	2218.73	440.12	2232.35	0.00	403601.90	726786.14	
10300.00	90.28	1.94	8184.91	2318.67	443.50	2332.35	0.00	403701.84	726789.52	
10400.00	90.28	1.94	8184.41	2418.61	446.88	2432.35	0.00	403801.78	726792.90	
10500.00	90.28	1.94	8183.92	2518.55	450.26	2532.35	0.00	403901.72	726796,28	
10600.00	90.28	1.94	8183.42	2618,49	453.64	2632.35	0.00	404001.66	726799.66	
10700.00	90.28	1.94	8182.92	2718.43	457.02	2732.35	0.00	404101.60	726803.04	
10800.00	90.28	1.94	8182.43	2818.38	460.40	2832.35	0.00	404201.55	726806.42	
10900.00	90.28	1.94	8181.93	2918.32	463.79	2932.34	0.00	404301.49	726809.81	
11000.00	90.28	1.94	8181.44	3018.26	467.17	3032.34	0.00	404401.43	726813.19	
11100.00	90.28	1.94	8180.94	3118.20	470.55	3132.34	0.00	404501.37	726816.57	
11200.00	90.28	1.94	8180.45	3218,14	473.93	3232.34	0.00	404601.31	726819.95	
11300.00	90.28	1.94	8179.95	3318.08	477,31	3332,34	0.00	404701.25	726823.33	
11400.00	90.28	1.94	8179.46	3418.03	480.69	3432.34	0.00	404801.20	726826.71	
11500.00	90.28	1.94	8178.96	3517.97	484.07	3532.34	0.00	404901.14	726830.09	
11600.00	90.28	1.94	8178.47	3617.91	487.46	3632.34	0.00	405001.08	726833.48	
11700.00	90.28	1.94	8177.97	3717.85	490.84	3732.34	0.00	405101.02	726836.86	
11800.00	90.28	1.94	8177.48	3817.79	494.22	3832.33	0.00	405200.96	726840.24	
11900.00	90.28	1.94	8176.98	3917.73	497.60	3932.33	0.00	405300.90	726843.62	
12000.00	90.28	1.94	8176,49	4017.67	500.98	4032.33	0.00	405400.84	726847.00	
12100.00	90.28	1.94	8175.99	4117.62	504.36	4132.33	0.00	405500.79	726850.38	
12200.00 12300.00	90.28	1.94	8175.50	4217.56	507.74	4232.33	0.00	405600.73 405700.67	726853.76 726857.15	
12400.00	90,28 90,28	1.94 1.94	8175,00 8174,50	4317.50 4417.44	511.13 514.51	4332,33 4432,33	0.00	405700,67	726860.53	
12500.00	90.28	1.94	8174.01	4517.38	517.89	4532.33	0.00	405900.55	726863.91	
12600.00	90.28	1.94	8173.51	4617.32	521.27	4632.32	0.00	406000.49	726867.29	
12700.00	90.28	1.94	8173.02	4717.27	524.65	4732.32	0.00	406100.44	726870.67	
12800.00	90.28	1.94	8172.52	4817.21	528.03	4832.32	0.00	406200.38	726874.05	
12900.00	90.28	1.94	8172.03	4917.15	531.42	4932.32	0.00	406300.32	726877.44	
13000.00	90.28	1.94	8171,53	5017.09	534.80	5032.32	0.00	406400.26	726880.82	
13100.00	90.28	1.94	8171.04	5117.03	538.18	5132.32	0.00	406500.20	726884.20	
13200.00	90.28	1.94	8170.54	5216.97	541.56	5232.32	0.00	406600.14	726887.58	
13300.00	90.28	1.94	8170.05	5316.92	544.94	5332.32	0.00	406700.09	726890.96	
13400.00	90.28	1.94	8169.55	5416.86	548.32	5432.31	0.00	406800.03	726894.34	
13500.00	90,28	1.94	8169.06	5516.80	551.70	5532.31	0.00	406899.97	726897.72	
13600.00	90.28	1.94	8168.56	5616.74	555.09	5632.31	0.00	406999.91	726901.11	
13700.00	90.28	1.94	8168.07	5716.68	558.47	5732.31	0.00	407099.85	726904.49	
13800,00	90.28	1.94	8167.57	5816.62	561.85	5832.31	0.00	407199.79	726907.87	
13900.00	90.28	1.94	8167.07	5916.56	565.23	5932.31	0.00	407299.73	726911.25	
14000.00	90.28	1.94	8166.58	6016.51	568.61	6032.31	0.00	407399.68	726914.63	
14100.00	90.28	1.94	8166.08	6116.45	571.99	6132.31	0.00	407499.62	726918.01	
14200.00	90.28	1.94	8165.59	6216.39	575.37	6232.30	0.00	407599.56	726921.39	
14300.00	90.28	1.94	8165.09	6316.33	578.76	6332.30	0.00	407699.50	726924.78	
14400.00	90.28	1.94	8164.60	6416.27	582.14	6432.30	0.00	407799.44	726928.16	
14500.00	90.28	1.94	8164,10	6516.21	585.52	6532.30	0.00	407899.38	726931.54	
14600.00	90.28	1.94	8163.61	6616.16	588.90	6632.30	0.00	407999.33	726934.92	
14700.00	90.28	1.94	8163.11	6716.10	592.28	6732.30	0.00	408099.27	726938.30	
14800.00	90.28	1.94	8162.62	6816.04	595.66	6832.30	0.00	408199.21	726941.68	
14900.00	90.28	1.94	8162.12	6915.98	599.04	6932.30	0.00	408299.15	726945.06	

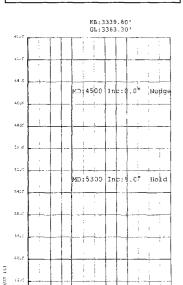
Interpolated	Points: (Rela	tive to Slot c	entre)(TVD rei	ative to Drill (	Floor)				And the second second	
MD (US ft)	Inc (°)	Az (°)	TVD (US ft)	N.Offset (US ft)	E.Offset (US ft)	VS (U <b>S</b> ft)	DLS (°/100US ft)	Northing (US ft)	Easting (US ft)	Comment
15000.00	90.28	1.94	8161.63	7015.92	602.43	7032.29	0.00	408399.09	726948.45	
15100.00	90.28	1.94	8161.13	7115.86	605.81	7132.29	0.00	408499.03	726951.83	
15200.00	90,28	1.94	8160.64	7215.81	609.19	7232.29	0.00	408598.98	726955.21	
15300.00	90.28	1.94	8160.14	7315.75	612.57	7332.29	0.00	408698.92	726958.59	
15328.38	90.28	1.94	8160.00	7344.11	613.53	7360.67	0.00	408727.28	726959.55	PBHL 422H



**Devon Energy**Big Sinks Draw 25-24 Fed Com 422H
Eddy Co, NM

# Weatherford

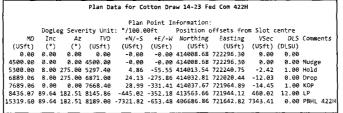




17.0

1600

82



Plan Data for Cotton Draw 14-23 Fed Com 422H

Field: Eddy Co, NM (Nad 83 NME)

Vertical Reference Datum (VRD): Mean Sea Level Map Unit: USFt Projected Coordinate System: NAD83 / New Mexico East (ftUS) Site: Cotton Draw 14-23 Fed Com 422H Unit: USFeet TVD Reference:
Company Name: Devon Energy
n: Northing: 414408.68USFt Latitude: 32.136839°
Easting: 722296.38USFt Longitude: -103.748707°
North Reference: Grid Grid Convergence: 0.31°
Elevation Above VRD: 3416.88USFt Position: Slot: Cotton Draw 14-23 Fed Com 422H Position: Offset is from Site centre
Northing: 414008.68USft Latitude: 32.136839°
Easting: 722296.30USft Longitude: -103.748707°
Elevation Above VRD: 3416.80USft +N/-S: 0.00USft Well: Cotton Draw 14-23 Fed Com 422H Type: Main-Well File Number: Plan Folder: P1 Plan: P1:V1 Plan Folder: P1

Vertical Section: Position offset of origin from \$10t centre:
+N/-5: -0.00USft
Azimuth: 182.51°
+E/-W: -0.00USft
Magnetic Parameters: Field Strength: Declination: Dip: 48018(nT) 7.15° 59.9 Dip: Date: 59.96° 2016-11-30 bggm2016 48018(nT) Plan Data for Cotton Draw 14-23 Fed Com 422H

Target Set Information:
Name: CD 14-23 Fed Com 422H Tgts
Position offsets from Slot centre
Name TVD Elevation +N/-5 +E/-W Northing Easting
(USft) (USft) (USft) (USft) (USft) (USft)
LP 8143.00 -4702.70 -42.16 -652.34 413966.52 721643.96
PBHL 422H 8189.00 -4748.70 -7321.82 -653.48 406686.86 721642.82

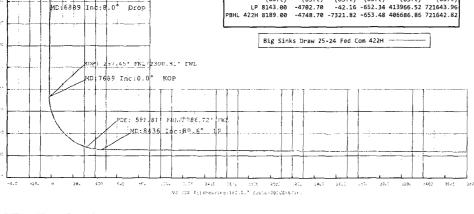
MD:15228 Inc:90.3°

~2"0

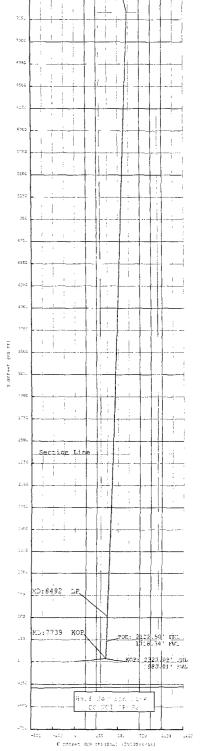
4601

PBHL 422H

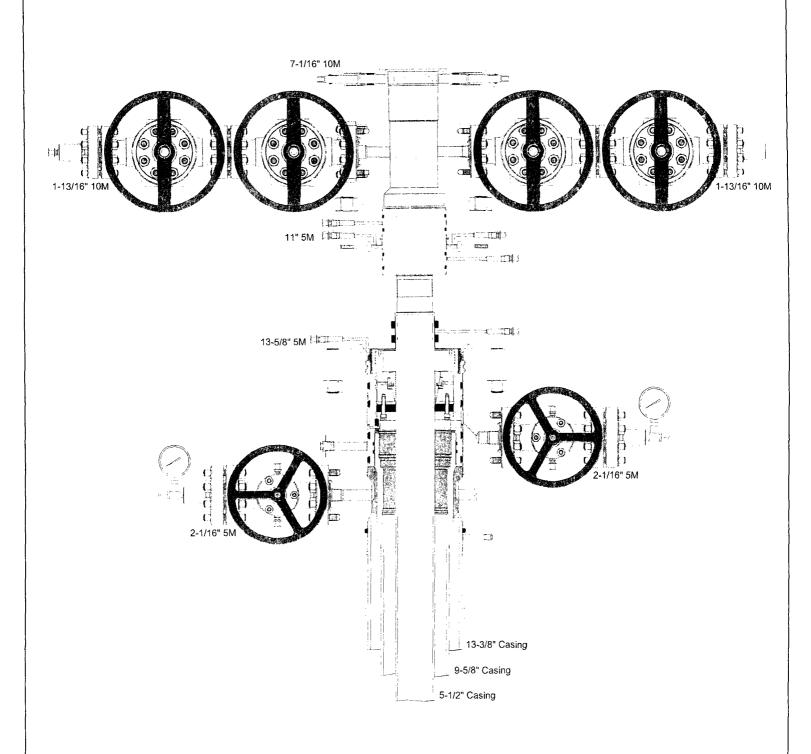
120%



VE (UE (t))(Beering, 194" Stalk NEOUTHS, H



MD:15328 PBHL 422H



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.

Devon proposes using a multi-bowl wellhead assembly. This assembly will only be tested when installed on the surface casing. Minimum working pressure of the blowout preventer (BOP) and related equipment (BOPE) required for drilling below the surface casing shoe shall be 3000 (3M) psi.

- Wellhead will be installed by wellhead representatives.
- If the welding is performed by a third party, the wellhead representative will monitor the temperature to verify that it does not exceed the maximum temperature of the seal.
- Wellhead representative will install the test plug for the initial BOP test.
- Wellhead company will install a solid steel body pack-off to completely isolate the lower head after cementing intermediate casing. After installation of the pack-off, the pack-off and the lower flange will be tested to 3M, as shown on the attached schematic. Everything above the pack-off will not have been altered whatsoever from the initial nipple up. Therefore the BOP components will not be retested at that time.
- If the cement does not circulate and one inch operations would have been possible with a standard wellhead, the well head will be cut and top out operations will be conducted.
- Devon will pressure test all seals above and below the mandrel (but still above the casing) to full working pressure rating.
- Devon will test the casing to 0.22 psi/ft or 1500 psi, whichever is greater, as per Onshore Order #2.

After running the 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 and will undergo a 250 psi low pressure test followed by a 3,000 psi high pressure test. The 3,000 psi high and 250 psi low test will cover testing requirements a maximum of 30 days, as per Onshore Order #2. If the well is not complete within 30 days of this BOP test, another full BOP test will be conducted, as per Onshore Order #2.

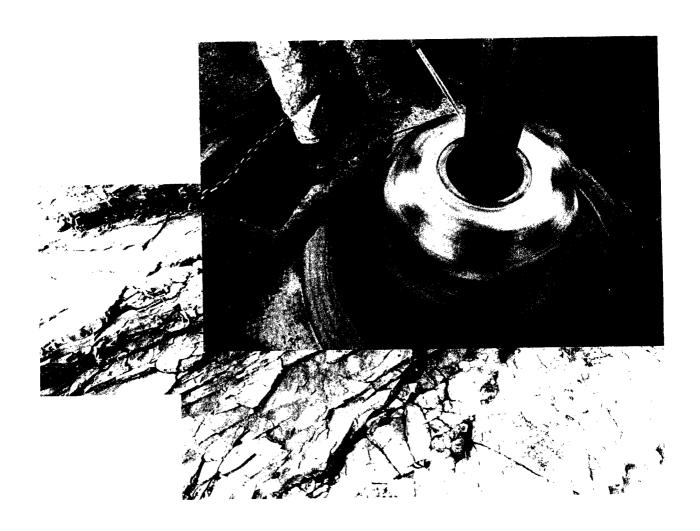
After running the 9-5/8' intermediate casing with a mandrel hanger, the 13-5/8" BOP/BOPE system with a minimum rating of 3M will already be installed on the wellhead.

The pipe rams will be operated and checked each 24 hour period and each time the drill pipe is out of the hole. These tests will be logged in the daily driller's log. A 2" kill line and 3" choke line will be incorporated into the drilling spool below the ram BOP. In addition to the rams and annular preventer, additional BOP accessories include a kelly cock, floor safety valve, choke lines, and choke manifold rated at 3,000 psi WP.

Devon's proposed wellhead manufactures will be FMC Technologies, Cactus Wellhead, or Cameron.



## Commitment Runs Deep



Design Parn Che at un and dan tenance Plan Coure Ma

Company of

### I. Design Plan

Devon uses MI SWACO closed loop system (CLS). The MI SWACO CLS is designed to maintain drill solids at or below 5%. The equipment is arranged to progressively remove solids from the largest to the smallest size. Drilling fluids can thus be reused and savings is realized on mud and disposal costs. Dewatering may be required with the centrifuges to insure removal of ultra fine solids.

The drilling location is constructed to allow storm water to flow to a central sump normally the cellar. This insures no contamination leaves the drilling pad in the event of a spill. Storm water is reused in the mud system or stored in a reserve fluid tank farm until it can be reused. All lubricants, oils, or chemicals are removed immediately from the ground to prevent the contamination of storm water. An oil trap is normally installed on the sump if an oil spill occurs during a storm.

A tank farm is utilized to store drilling fluids including fresh water and brine fluids. The tank farm is constructed on a 20 ml plastic lined, bermed pad to prevent the contamination of the drilling site during a spill. Fluids from other sites may be stored in these tanks for processing by the solids control equipment and reused in the mud system. At the end of the well the fluids are transported from the tank farm to an adjoining well or to the next well for the rig.

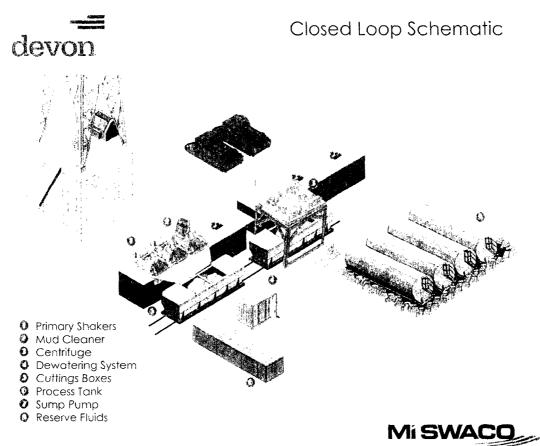
Prior to installing a closed-loop system on site, the topsoil, if present, will be stripped and stockpiled for use as the final cover or fill at the time of closure.

Signs will be posted on the fence surrounding the closed-loop system unless the closed-loop system is located on a site where there is an existing well, that is operated by Devon.

### II. Operations and Maintenance Plan

*Primary Shakers:* The primary shakers make the first removal of drill solids from the drilling mud as it leaves the well bore. The shakers are sized to handle maximum drilling rate at optimal screen size. The shakers normally remove solids down to 74 microns.

Mud Cleaner: The Mud Cleaner cleans the fluid after it leaves the shakers. A set of hydrocyclones are sized to handle 1.25 to 1.5 times the maximum circulating rate. This ensures all the fluid is being processed to an average cut point of 25 microns. The wet discharged is dewatered on a shaker equipped with ultra fine mesh screens and generally cut at 40 microns.



Centrifuges: The centrifuges can be one or two in number depending on the well geometry or depth of well. The centrifuges are sized to maintain low gravity solids at 5% or below. They may or may not need a dewatering system to enhance the removal rates. The centrifuges can make a cut point of 8-10 microns depending on bowl speed, feed rate, solids loading and other factors.

The centrifuge system is designed to work on the active system and be flexible to process incoming fluids from other locations. This set-up is also dependant on well factors.

Dewatering System: The dewatering system is a chemical mixing and dosing system designed to enhance the solids removal of the centrifuge. Not commonly used in shallow wells. It may contain pH adjustment, coagulant mixing and dosing, and polymer mixing and dosing. Chemical flocculation binds ultra fine solids into a mass that is within the centrifuge operating design. The

dewatering system improves the centrifuge cut point to infinity or allows for the return of clear water or brine fluid. This ability allows for the ultimate control of low gravity solids.

Cuttings Boxes: Cuttings boxes are utilized to capture drill solids that are discarded from the solids control equipment. These boxes are set upon a rail system that allows for the removal and replacement of a full box of cuttings with an empty one. They are equipped with a cover that insures no product is spilled into the environment during the transportation phase.

Process Tank: (Optional) The process tank allows for the holding and process of fluids that are being transferred into the mud system. Additionally, during times of lost circulation the process tank may hold active fluids that are removed for additional treatment. It can further be used as a mixing tank during well control conditions.

Sump and Sump Pump: The sump is used to collect storm water and the pump is used to transfer this fluid to the active system or to the tank for to hold in reserve. It can also be used to collect fluids that may escape during spills. The location contains drainage ditches that allow the location fluids to drain to the sump.

Reserve Fluids (Tank Farm): A series of frac tanks are used to replace the reserve pit. These are steel tanks that are equipped with a manifold system and a transfer pump. These tanks can contain any number of fluids used during the drilling process. These can include fresh water, cut brine, and saturated salt fluid. The fluid can be from the active well or reclaimed fluid from other locations. A 20 ml liner and berm system is employed to ensure the fluids do not migrate to the environment during a spill.

If a leak develops, the appropriate division district office will be notified within 48 hours of the discovery and the leak will be addressed. Spill prevention is accomplished by maintaining pump packing, hoses, and pipe fittings to insure no leaks are occurring. During an upset condition the source of the spill is isolated and repaired as soon as it is discovered. Free liquid is removed by a diaphragm pump and returned to the mud system. Loose topsoil may be used to stabilize the spill and the contaminated soil is excavated and placed in the cuttings boxes. After the well is finished and the rig has moved, the entire location is scrapped and testing will be performed to determine if a release has occurred.

All trash is kept in a wire mesh enclosure and removed to an approved landfill when full. All spent motor oils are kept in separate containers and they are removed and sent to an approved recycling center. Any spilled lubricants, pipe

dope, or regulated chemicals are removed from soil and sent to landfills approved for these products.

These operations are monitored by Mi Swaco service technicians. Daily logs are maintained to ensure optimal equipment operation and maintenance. Screen and chemical use is logged to maintain inventory control. Fluid properties are monitored and recorded and drilling mud volumes are accounted for in the mud storage farm. This data is kept for end of well review to insure performance goals are met. Lessons learned are logged and used to help with continuous improvement.

A MI SWACO field supervisor manages from 3-5 wells. They are responsible for training personnel, supervising installations, and inspecting sites for compliance of MI SWACO safety and operational policy.

### III. Closure Plan

A maximum 340' X 340' caliche pad is built per well. All of the trucks and steel tanks fit on this pad. All fluid cuttings go to the steel tanks to be hauled by various trucking companies to an agency approved disposal.

	L	Continge	ency String		
Additional Info for String	3	Additional Strin	g Description		
Stage Tool Depth	4200				
	ead				
Top MD of Segment	4000	Btm MD of Segment	4100	Cement Type	С
				<del></del>	
0.05% BWO + 0.2% BWO	923 + 10% BWOC Bentonite C SA-1015 + 0.3% BWOC HR-8 C FE-2 + 0.125 lb/sk Pol-E-Fla 0.5 lb/sk D-Air 5000	800	20	Yield (cu.ft./sk)	3.31
Density (lbs/gal)	10.9	Valume (cu.ft.)	66	Percent Excess	25
	'ail				
Top MD of Segment	4100	Top MD of Segment	4200	Cement Type	Н
Additives		Quanity (sks)	30	Yield (cu.ft./sk)	1.33
Density (lbs/gal)	14.8	Volume (cu.ft.)	40	Percent Excess	25
nensity (ibs/gai)	114.0		gency String	renem Excess	
Density (lbs/gat)  Additional Info for String			rency String	Fercent Extess	[23
		Conting	rency String	Fercent Extess	[23
Additional Info for String Stage Tool Depth	3 3 4200	Conting	rency String	Fercent Extess	[25]
Additional Info for String Stage Tool Depth	3	Conting	rency String	Cement Type	[25]
Additional Info for String Stage Tool Depth  L Top MD of Segment  Additives  Enhancer 0.05% BWO + 0.2% BWO	3 3 4200  ead 4200  923 + 10% BWOC Bentonite C SA-1015 + 0.3% BWOC HR- DC FE-2 + 0.125 ib/sk Pal-E-Fi	Additional String Additional String  Btm MD of Segment  Quanity (sks)	gency String		
Additional Info for String Stage Tool Depth  L Top MD of Segment  Additives  Enhancer 0.05% BWO + 0.2% BWO	3 3 4200  ead 4200  923 + 10% BWOC Bentonite C SA-1015 + 0.3% BWOC HR-	Additional String Additional String  Btm MD of Segment  Quanity (sks)	gency String  ng Description  8100	Cement Type	С
Additional Info for String Stage Tool Depth  Top MD of Segment  Additives  Enhancer 0.05% BWO + 0.2% BWO Density (lbs/gal)	923 + 10% BWOC Bentonite C SA-1015 + 0.3% BWOC HR-DC FE-2 + 0.125 ib/sk Pol-E-Fii + 0.5 lb/sk D-Air 5000	Additional Strin  Additional Strin  Btm MD of Segment  Quanity (sks)  *  ake	gency String ng Description  8100	Cement Type Yield (cu.ft./sk)	C 3.31
Additional Info for String Stage Tool Depth  Top MD of Segment  Additives  Enhancer 0.05% BWO + 0.2% GWC  Density (lbs/gal)	2 3 4200 ead 4200 923 + 10% BWOC Bentonite C SA-1015 + 0.3% BWOC HR- C FE-2 + 0.125 lb/sk Pol-E-Fli + 0.5 lb/sk D-Air 5000 10.9	Additional Strin  Additional Strin  Btm MD of Segment  Quanity (sks)  800 ake  Volume (cu.ft.)	gency String and Description  8100  371	Cement Type Yield (cu.ft./sk) Percent Excess	C [3.31
Additional Info for String Stage Tool Depth  Top MD of Segment  Additives  Enhancer 0.05% BWO + 0.2% BWO Density (lbs/gal)	923 + 10% BWOC Bentonite C SA-1015 + 0.3% BWOC HR-DC FE-2 + 0.125 ib/sk Pol-E-Fii + 0.5 lb/sk D-Air 5000	Additional Strin  Additional Strin  Btm MD of Segment  Quanity (sks)  *  ake	gency String ng Description  8100	Cement Type Yield (cu.ft./sk)	C 3.31
Additional Info for String Stage Tool Depth  Top MD of Segment  Additives  Enhancer 0.05% BWO + 0.2% GWC  Density (Ibs/gal)  Top MD of Segment  Additives  Poz (Fly A	2 3 4200 ead 4200 923 + 10% BWOC Bentonite C SA-1015 + 0.3% BWOC HR- C FE-2 + 0.125 lb/sk Pol-E-Fli + 0.5 lb/sk D-Air 5000 10.9	Conting  Additional Strin  Additional Strin  Btm MD of Segment  Quanity (sks)  Volume (cu.ft.)  Top MD of Segment  Quanity (sks)	gency String and Description  8100  371	Cement Type Yield (cu.ft./sk) Percent Excess	C [3.31



### Fluid Technology

ContiTech Beattle Corp. Website: www.contitechbeattle.com

Monday, June 14, 2010

RE:

Drilling & Production Hoses Lifting & Safety Equipment

To Helmerich & Payne,

A Continental ContiTech hose assembly can perform as intended and suitable for the application regardless of whether the hose is secured or unsecured in its configuration. As a manufacturer of High Pressure Hose Assemblies for use in Drilling & Production, we do offer the corresponding lifting and safety equipment, this has the added benefit of easing the lifting and handling of each hose assembly whilst affording hose longevity by ensuring correct handling methods and procedures as well as securing the hose in the unlikely event of a failure; but in no way does the lifting and safety equipment affect the performance of the hoses providing the hoses have been handled and installed correctly it is good practice to use lifting & safety equipment but not mandatory

Should you have any questions or require any additional information/darifications then please do not hesitate to contact us.

ContiTech Beattle is part of the Continental AG Corporation and can offer the full support resources associated with a global organization.

Best regards,

Robin Hodgson Sales Manager ContiTech Beattie Corp

ContiTech Beatife Corp, 11535 Brittmoore Park Drive, Houston, TX 77041 Phore: +1 (832) 327-0141 Fax: +1 (832) 327-0148 www.contitechbeatife.com



# R16 212



# Quality document

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Phone: (361) 456-4200 • Fax: (361) 217-2972, 456-4273 • www.taurusemerge.hu

QUAL INSPECTION	ITY CONTRAINED TEST		CATE	İ	CERT. N	io:	552	
PURCHASER:	Phoenix Beat	tie Co.						
PHOENIX RUBBER order N°	170466	HOSE TYP	E: 3"	(D	Cho	oke and Ki	ll Hose	
HOSE SERIAL Nº	34128	NOMINAL	ACTUAL L	ENGTH:		11,43 n	n	
W.P. 68,96 MPa 1	0000 psi	T.P. 103	,4 MPa	1500	O psi	Duration:	60	min.
Pressure test with water at ambient temperature					,		· ·	
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Туре		Serial N°			Quality		Heat N°	
3" coupling with	7:	20 719		A	ISI 4130		C7626	
4 1/16" Flange end				A	JSI 4130	,	47357	
API Spec 16 C Temperature rate:"B"  All metal parts are flawless								
WE CERTIFY THAT THE ABOVE HOSE HAS BEEN MANUFACTURED IN ACCORDANCE WITH THE TERMS OF THE ORDER AND PRESSURE TESTED AS ABOVE WITH SATISFACTORY RESULT.								
Date: 29. April. 2002.	Inspector		Qua	lity Cont	HOI In Hose	ENIX RUIdustrial Linspection	td. n and 1	in .

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GNL -0.00

VERIFIED TRUE CG. PHOENIX RUBBER C.C.

シャン 力

### \*\*AFMSS

U.S. Department of the Interior BUREAU OF LAND MANAGEMENT



Operator Name: DEVON ENERGY PRODUCTION COMPANY LP

Well Name: BIG SINKS DRAW 25-24 FED COM

Well Number: 422H

Well Type: OIL WELL

Well Work Type: Drill

### Section 1 - Existing Roads

Will existing roads be used? YES

**Existing Road Map:** 

BSD 25-24 Fed Com 422H\_Ex AccessRd\_11-14-2016.pdf BSD 25 Fed Com 1H2H3H\_Ex Lse Rd\_11-14-2016.pdf

Existing Road Purpose: ACCESS,FLUID TRANSPORT

Row(s) Exist? YES

ROW ID(s)

ID: NM130643

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:** 

BSD 25-24 Fed Com 422H\_New Access Rd 11-15-2016.pdf

New road type: COLLECTOR, RESOURCE

Length: 44

Feet

Width (ft.): 16

Max slope (%): 6

Max grade (%): 4

Army Corp of Engineers (ACOE) permit required? NO

ACOE Permit Number(s):

New road travel width: 14

New road access erosion control: Water drainage ditch.

New road access plan or profile prepared? NO

New road access plan attachment:

Well Name: BIG SINKS DRAW 25-24 FED COM Well Number: 422H

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):

### Section 3 - Location of Existing Wells

**Existing Wells Map? YES** 

Attach Well map:

BSD 25-24 Fed Com 422H\_1Mile Map\_11-14-2016.pdf

**Existing Wells description:** 

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

Submit or defer a Proposed Production Facilities plan? DEFER

Estimated Production Facilities description: All flowlines will be buried going to the Big Sinks 25 CTB 2.

Well Name: BIG SINKS DRAW 25-24 FED COM

Well Number: 422H

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

### **Water Source Table**

Water source use type: STIMULATION Water source type: RECYCLED

Describe type:

Source latitude: Source longitude:

Source datum:

Water source permit type: OTHER
Source land ownership: FEDERAL

Water source transport method: PIPELINE, TRUCKING

Source transportation land ownership: FEDERAL

Water source volume (barrels): 85000 Source volume (acre-feet): 10.955914

Source volume (gal): 3570000

### Water source and transportation map:

BSD 25-24 Fed Com 422H\_WtrXfrMap\_rev\_11-14-2016.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:

Drilling method:

Grout material:

Grout depth:

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

Well Production type: Completion Method:

Water well additional information:

State appropriation permit:

Well Name: BIG SINKS DRAW 25-24 FED COM Well Number: 422H

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:** 

BSD 25-24 Fed Com 422H\_Caliche Pit\_01-24-2017.pdf

### Section 7 - Methods for Handling Waste

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 Disposal location ownership: COMMERCIAL

**FACILITY** 

Disposal type description:

Disposal location description: All cutting will be hauled to Sundance, R360, 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 containment attachment:

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

**FACILITY** 

Disposal type description:

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

Waste type: FLOWBACK

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

(BWPD).

Amount of waste: 1500 barrels

Waste disposal frequency : Daily Safe containment description: N/A

Safe containment attachment:

Well Name: BIG SINKS DRAW 25-24 FED COM Well Number: 422H

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

Disposal type description:

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

Waste type: PRODUCED WATER

Waste content description: Produced water during production operations. This amount is a daily average during the first

year of production (BWPD).

Amount of waste: 1000 barrels

Waste disposal frequency : Daily Safe containment description: N/A

Safe containment 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

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

Well Name: BIG SINKS DRAW 25-24 FED COM Well Number: 422H

### Section 8 - Ancillary Facilities

Are you requesting any Ancillary Facilities?: NO

**Ancillary Facilities attachment:** 

Comments:

### Section 9 - Well Site Layout

Well Site Layout Diagram:

BSD 25-24 Fed Com 422H\_Rig Layout\_11-14-2016.pdf

Comments: All flowlines will be buried.

### Section 10 - Plans for Surface Reclamation

Type of disturbance: NEW

Recontouring attachment:

BSD 25-24 Fed Com 422H\_Reclamation\_11-14-2016.pdf

**Drainage/Erosion control construction:** All areas disturbed shall be reclaimed as early and as nearly as practicable to theiroriginal 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): 1.887 Wellpad short term disturbance (acres): 4.155

Access road long term disturbance (acres): 0.021 Access road short term disturbance (acres): 0.021

Pipeline long term disturbance (acres): 0.81884295 Pipeline short term disturbance (acres): 0.81884295

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

Total long term disturbance: 2.7268429 Total short term disturbance: 4.994843

**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:** 

Well Name: BIG SINKS DRA	W 25-24 FED COM	Well Number: 422H	
Existing Vegetation Commun	nity at the pipeline:		
<b>Existing Vegetation Commun</b>	nity at the pipeline atta	chment:	
Existing Vegetation Commun	nity at other disturband	ces:	
Existing Vegetation Commun	nity at other disturband	ces attachment:	
Non native seed used? NO			
Non native seed description:	:		
Seedling transplant descript	ion:		
Will seedlings be transplante	ed for this project? NO		
Seedling transplant descript	ion attachment:		
Will seed be harvested for us	se in site reclamation?	NO	
Seed harvest description:			
Seed harvest description att	achment:		
Seed Managemen	t		
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 St	ummary	Total pounds/Acre:	
Seed Type	Pounds/Acre		
Seed reclamation attachmen	ıt:		
Operator Contact/F	Responsible Offic	ial Contact Info	
First Name: Mark		Last Name: Smith	
<b>Phone:</b> (575)746-5559		Email: mark.smith@dvn.com	
Seedbed prep:			
Seed BMP:			
Seed method:			

Well Name: BIG SINKS DRAW 25-24 FED COM

Well Number: 422H

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: 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:

Well Name: BIG SINKS DRAW 25-24 FED COM	Well Number: 422H
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:

Well Name: BIG SINKS DRAW 25-24 FED COM

Well Number: 422H

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**

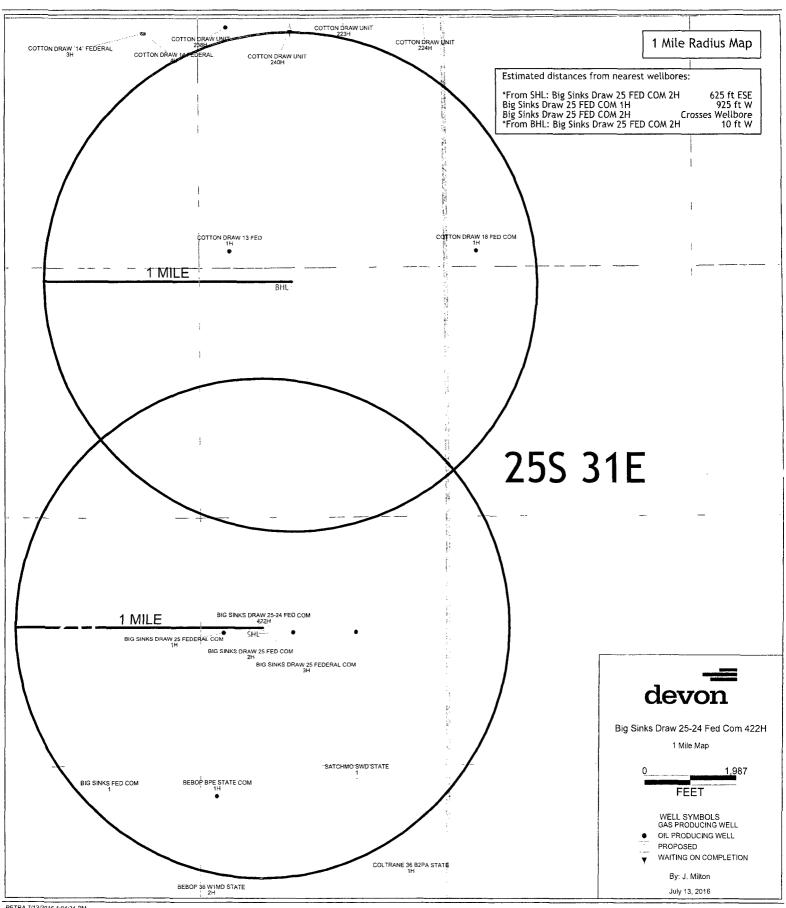
SUPO Additional Information: Electric Survey, Flowline Survey

Use a previously conducted onsite? NO

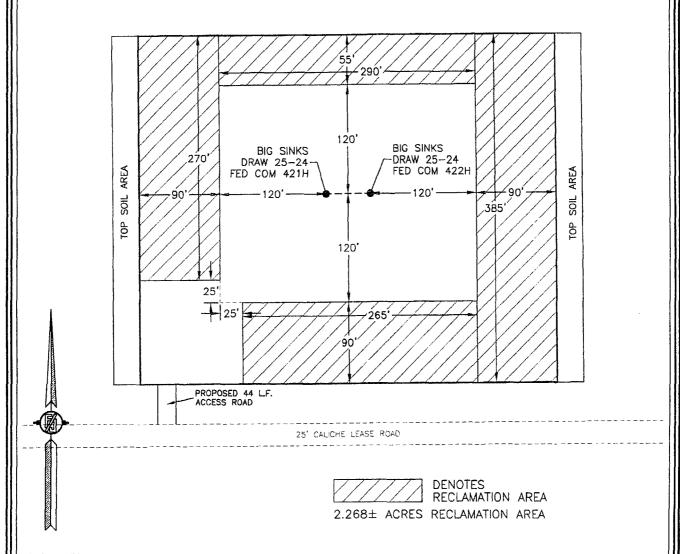
Previous Onsite information:

### Other SUPO Attachment

BSD 25-24 Fed Com 422H\_Electric\_11-14-2016.PDF BSD 25-24 Fed Com 422H\_Flowline\_11-14-2016.PDF



PROPOSED INTERIM SITE RECLAMATION
FOR BIG SINKS DRAW 25-24 FED COM 422H
SECTION 25, TOWNSHIP 25 SOUTH, RANGE 31 EAST, N.M.P.M.
EDDY COUNTY, STATE OF NEW MEXICO



DEVON ENERGY PRODUCTION COMPANY, L.P.

BIG SINKS DRAW 25-24 FED COM 422H

LOCATED 2350 FT. FROM THE NORTH LINE

AND 1345 FT. FROM THE WEST LINE OF

SECTION 25, TOWNSHIP 25 SOUTH,

RANGE 31 EAST, N.M.P.M.

EDDY COUNTY, STATE OF NEW MEXICO

JUNE 20, 2016

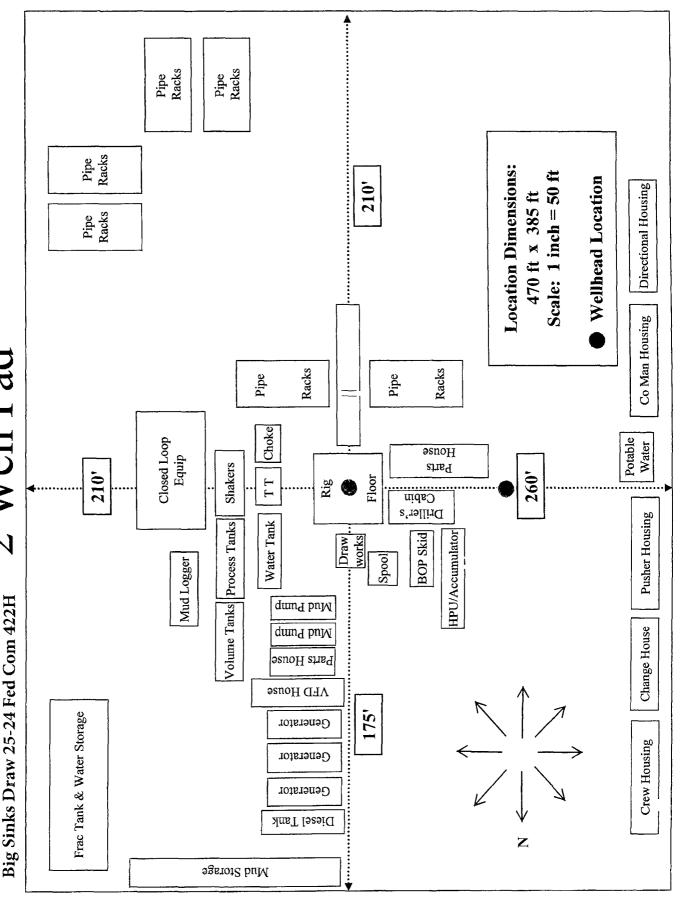
SURVEY NO. 4739

MADRON SURVEYING, INC. 301 SOUTH CANAL CARLSBAD, NEW MEXICO

SCALE 1" = 100'

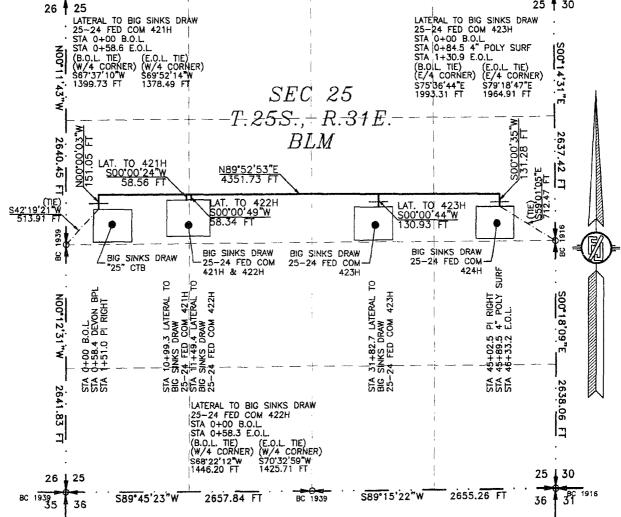
# Rig Location Layout

2 Well Pad

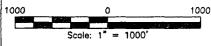


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FLOWLINE PLAT (400672XYZ) MULTI-USE ROW FOR 6" CAS LIFT & 6" POLY FIBER FLEX FLOWLINE FROM BIG SINKS DRAW "25" CTB TO BIG SINKS DRAW 25-24 FED COM 424H WITH LATERALS TO BIG SINKS DRAW 25-24 FED COM 421H, 422H, & 423H DEVON ENERGY PRODUCTION COMPANY, L.P. CENTERLINE SURVEY OF A PIPELINE CROSSING SECTION 25, TOWNSHIP 25 SOUTH, RANGE 31 EAST, N.M.P.M. EDDY COUNTY, STATE OF NEW MEXICO JUNE 28, 2016 BC 1939 N89\*33'20"E N89°36'13"E 2651.94 FT 26 🕇 LATERAL TO BIG SINKS DRAW 25-24 FED COM 423H STA 0+00 B.O.L. STA 0+84.5 4" POLY SURF LATERAL TO BIG SINKS DRAW 25-24 FED COM 421H STA 0+00 B.O.L. STA 0+58.6 E.O.L. (B.O.L. TIE) (E.O.L. TIE) (W/4 CORNER) (W/4 CORNER) \$67'37'10"W \$69'52'14"W STA 1+30.9 E.O.L. (E.O.L. TIE) (E/4 CORNER) S79'18'47"E 1964.91 FT (B.O.L. TIE) (E/4 CORNER) 1399.73 FT 1378.49 F SEC 25 -T.25S.,+R.31E. BLM2640.45 LAT. TO 421H 500'00'24"W 58.56 FT LAT. TO 422H 500'00'49 W LAT. TO 423H S00\*00'44"W 30.93 FT BIG SINKS DRAW BIG SINKS DRAW BIG SINKS DRAW 25-24 FED COM 25-24 FED COM 25-24 FED COM



SEE NEXT SHEET (2-4) FOR DESCRIPTION



### GENERAL NOTES

1.) THE INTENT OF THIS ROUTE SURVEY IS TO ACQUIRE AN EASEMENT.

2.) BASIS OF BEARING IS NMSP EAST (NAD83) MÓDIFIED TO SURFACE COORDINATES. NAD 83 (FEET) AND NAVD 88 (FEET) COORDINATE SYSTÉMS USED IN THE SURVEY.

SHEET: 1-4

MADRON SURVEYING, INC. 301 SOUTH COME. (575) 234-5034:

### SURVEYOR CERTIFICATE

I, FILIMON F. JARAMILLO, A NEW MEXICO PROFESSIONAL SURVEYOR NO. 12797. HEREBY CERTIFY THAT I HAVE CONDUCTED AND AM RESPONSIBLE FOR THIS SURVEY, THAT THIS SURVEY IS TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF, AND THAT THIS SURVEY AND PLAT MEET THE MINIMUM STANDARDS FOR LAND SURVEYING IN THE STATE OF NEW MEXICO.

IN WITNESS WHEREOF, THIS CERTIFICATE IS EXECUTED AT CARLSBAD,

DAY OF JUNE 2016 NEW MEXICO, THIS &

MADRON SURVEYING, INC. 301 SOUTH CANAL CARLSBAD, NEW MEXICO 88220 Phone (575) 234-3341

SURVEY NO. 4746

CARLSBAD, NEW MEXICO

FLOWLINE PLAT (400672XYZ)

MULTI-USE ROW FOR 6" GAS LIFT & 6" POLY FIBER FLEX FLOWLINE FROM BIG SINKS DRAW "25" CTB TO BIG SINKS DRAW 25-24 FED COM 424H WITH LATERALS TO BIC SINKS DRAW 25-24 FED COM 421H, 422H, & 423H

> DEVON ENERGY PRODUCTION COMPANY, L.P.CENTERLINE SURVEY OF A PIPELINE CROSSING SECTION 25, TOWNSHIP 25 SOUTH, RANGE 31 EAST, N.M.P.M. EDDY COUNTY, STATE OF NEW MEXICO JUNE 28, 2016

### DESCRIPTION

A STRIP OF LAND 30 FEET WIDE CROSSING BUREAU OF LAND MANAGEMENT LAND IN SECTION 25, TOWNSHIP 25 SOUTH, RANGE 31 EAST, N.M.P.M., EDDY COUNTY, STATE OF NEW MEXICO AND BEING 15 FEET EACH SIDE OF THE FOLLOWING DESCRIBED CENTERLINE SURVEY:

MAIN LINE TO BIG SINKS DRAW 25-24 FED COM 424H

BEGINNING AT A POINT WITHIN THE SW/4 NW/4 OF SAID SECTION 25, TOWNSHIP 25 SOUTH, RANGE 31 EAST, N.M.P.M., WHENCE THE WEST QUARTER CORNER OF SAID SECTION 25, TOWNSHIP 25 SOUTH, RANGE 31 EAST, N.M.P.M. BEARS \$42\*19'21"W, A DISTANCE OF 513.91 FEET; THENCE NOO'00'03"W A DISTANCE OF 151.05 FEET TO AN ANGLE POINT OF THE LINE HEREIN DESCRIBED;

THENCE N89'52'53"E A DISTANCE OF 4351.73 FEET TO AN ANGLE POINT OF THE LINE HEREIN DESCRIBED;
THENCE SDO'00'35"W A DISTANCE OF 131.28 FEET THE TERMINUS OF THIS CENTERLINE SURVEY, WHENCE THE EAST QUARTER CORNER OF SAID SECTION 25, TOWNSHIP 25 SOUTH, RANGE 31 EAST, N.M.P.M. BEARS S59'01'05"E, A DISTANCE OF 712.47 FEET;

SAID STRIP OF LAND BEING 4634.06 FEET OR 280.85 RODS IN LENGTH, CONTAINING 3.192 ACRES MORE OR LESS AND BEING ALLOCATED BY FORTIES AS FOLLOWS:

SW/4 NW/4 1130.62 L.F. 68.52 RODS 0.779 ACRES SE/4 NW/4 SW/4 NE/4 80.43 RODS 80.45 RODS 1327.15 L.F. 0.914 ACRES 0.914 ACRES 1327.42 L.F. 848.87 L.F. 51.45 RODS 0.585 ACRES

LATERAL TO BIG SINKS DRAW 25-24 FED COM 421H

BEGINNING AT A POINT WITHIN THE SW/4 NW/4 OF SAID SECTION 25, TOWNSHIP 25 SOUTH, RANGE 31 EAST, N.M.P.M., WHENCE THE WEST QUARTER CORNER OF SAID SECTION 25, TOWNSHIP 25 SOUTH, RANGE 31 EAST, N.M.P.M. BEARS S67'37'10"W, A DISTANCE OF 1399.73 FEET; THENCE S00'00'24"W A DISTANCE OF 58.56 FEET THE TERMINUS OF THIS CENTERLINE SURVEY, WHENCE THE WEST QUARTER CORNER OF SAID SECTION 25, TOWNSHIP 25 SOUTH, RANGE 31 EAST, N.M.P.M. BEARS S69'52'14"W, A DISTANCE OF 1378.49 FEET;

SAID STRIP OF LAND BEING 58.56 FEET OR 3.55 RODS IN LENGTH, CONTAINING 0.040 ACRES MORE OR LESS AND BEING ALLOCATED BY FORTIES AS FOLLOWS:

SW/4 NW/4 58.56 L.F. 3.55 RODS 0.040 ACRES

LATERAL TO BIG SINKS DRAW 25-24 FED COM 422H

BEGINNING AT A POINT WITHIN THE SE/4 NW/4 OF SAID SECTION 25, TOWNSHIP 25 SOUTH, RANGE 31 EAST, N.M.P.M., WHENCE THE WEST QUARTER CORNER OF SAID SECTION 25, TOWNSHIP 25 SOUTH, RANGE 31 EAST, N.M.P.M. BEARS S88'22'12'W, A DISTANCE OF 1446.20 FEET; THENCE S00'00'49"W A DISTANCE OF 58.34 FEET THE TERMINUS OF THIS CENTERLINE SURVEY, WHENCE THE WEST QUARTER CORNER OF SAID SECTION 25, TOWNSHIP 25 SOUTH, RANGE 31 EAST, N.M.P.M. BEARS S70"32"59"W, A DISTANCE OF 1425.71 FEET;

SAID STRIP OF LAND BEING 58.34 FEET OR 3.54 RODS IN LENGTH, CONTAINING 0.040 ACRES MORE OR LESS AND BEING ALLOCATED BY FORTIES AS FOLLOWS:

SE/4 NW/4 58.34 L.F. 3.54 RODS 0.040 ACRES

LATERAL TO BIG SINKS DRAW 25-24 FED COM 423H BEGINNING AT A POINT WITHIN THE SW/4 NE/4 OF SAID SECTION 25, TOWNSHIP 25 SOUTH, RANGE 31 EAST, N.M.P.M., WHENCE THE EAST QUARTER CORNER OF SAID SECTION 25, TOWNSHIP 25 SOUTH, RANGE 31 EAST, N.M.P.M. BEARS \$75'36'44"E, A DISTANCE OF 1993.31 FEET; THENCE S00'00'44"W A DISTANCE OF 130.93 FEET THE TERMINUS OF THIS CENTERLINE SURVEY, WHENCE THE EAST QUARTER CORNER OF SAID SECTION 25, TOWNSHIP 25 SOUTH, RANGE 31 EAST, N.M.P.M. BEARS S79'18'47"E, A DISTANCE OF 1964.91 FEET;

SAID STRIP OF LAND BEING 130.93 FEET OR 7.93 RODS IN LENGTH, CONTAINING 0.090 ACRES MORE OR LESS AND BEING ALLOCATED BY FORTIES AS FOLLOWS:

SW/4 NE/4 130.93 L.F. 7.93 RODS 0.090 ACRES

### SURVEYOR CERTIFICATE

GENERAL NOTES 1.) THE INTENT OF THIS ROUTE SURVEY IS TO ACQUIRE AN EASEMENT.

2.) BASIS OF BEARING IS NMSP EAST MÓDIFIED TO SURFACE COORDINATES.

I, FILIMON F. JARAMILLO, A NEW MEXICO PROFESSIONAL SURVEYOR NO. 12797, HEREBY CERTIFY THAT I HAVE CONDUCTED AND AM RESPONSIBLE FOR THIS SURVEY, THAT THIS SURVEY IS TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF, AND THAT THIS SURVEY AND PLAT MEET THE MINIMUM STANDARDS FOR LAND SURVEYING IN THE STATE OF NEW MEXICO.

IN WITNESS WHEREOF, THIS CERTIFICATE IS EXECUTED AT CARLSBAD,

NEW MEXICO, THIS Z DAY OF JUNE 2016

MADRON SURVEYING, INC. 301 SOUTH CANAL CARLSBAD, NEW MEXICO 88220 Phone (575) 234-3341

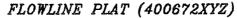
JARAMILLE FILIMON F

SURVEY NO. 4746

MADRON SURVEYING, INC. (675) 234-3341

 $\mathit{CARLSBAD}$ *NEW MEXICO* 

SHEET: 2-4



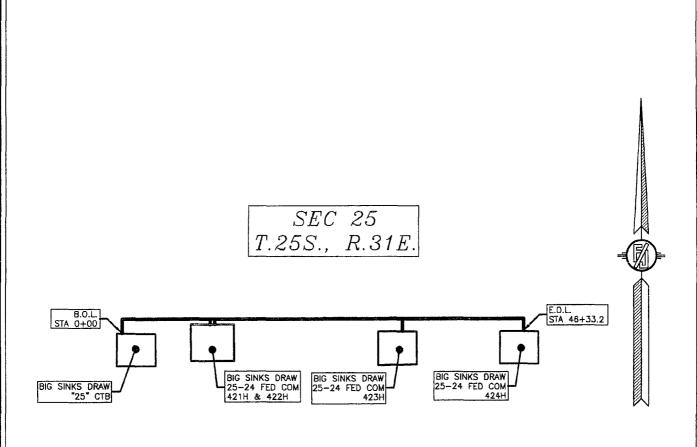
MULTI-USE ROW FOR 6" CAS LIFT & 6" POLY FIBER FLEX FLOWLINE FROM BIG SINKS DRAW "25" CTB TO BIG SINKS DRAW 25-24 FED COM 424H WITH LATERALS TO BIG SINKS DRAW 25-24 FED COM 421H, 422H, & 423H

DEVON ENERGY PRODUCTION COMPANY, L.P.

CENTERLINE SURVEY OF A PIPELINE CROSSING
SECTION 25, TOWNSHIP 25 SOUTH, RANGE 31 EAST, N.M.P.M.

EDDY COUNTY, STATE OF NEW MEXICO

JUNE 28, 2016



SHEET: 3-4

SURVEY NO. 4746

MADRON SURVEYING, INC. 301 SOUTH CANAL CARLSBAD, NEW MEXICO

### FLOWLINE PLAT (400672XYZ)

MULTI-USE ROW FOR 6" GAS LIFT & 6" POLY FIBER FLEX FLOWLINE FROM BIG SINKS DRAW "25" CTB TO BIG SINKS DRAW 25-24 FED COM 424H WITH LATERALS TO BIG SINKS DRAW 25-24 FED COM 421H, 422H, & 423H

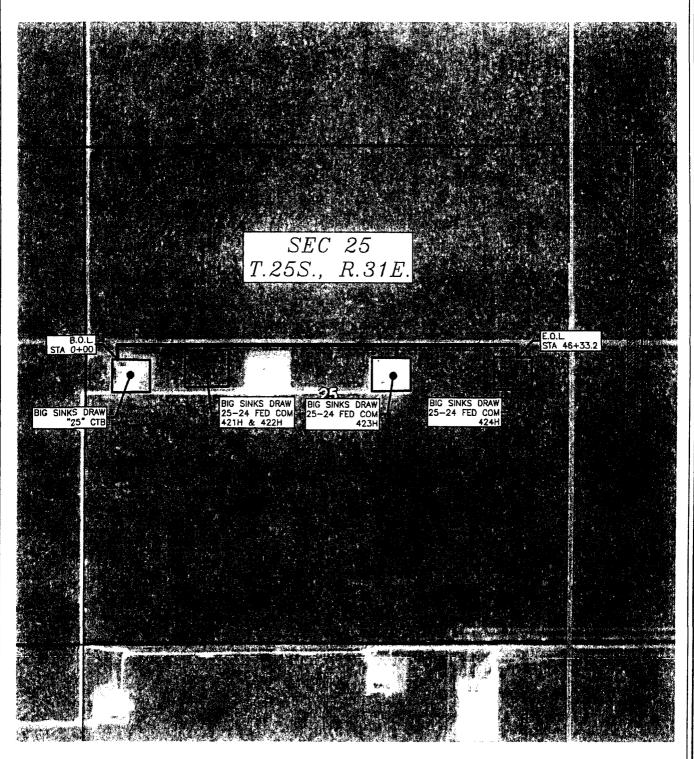
DEVON ENERGY PRODUCTION COMPANY, L.P.

CENTERLINE SURVEY OF A PIPELINE CROSSING

SECTION 25, TOWNSHIP 25 SOUTH, RANGE 31 EAST, N.M.P.M.

EDDY COUNTY, STATE OF NEW MEXICO

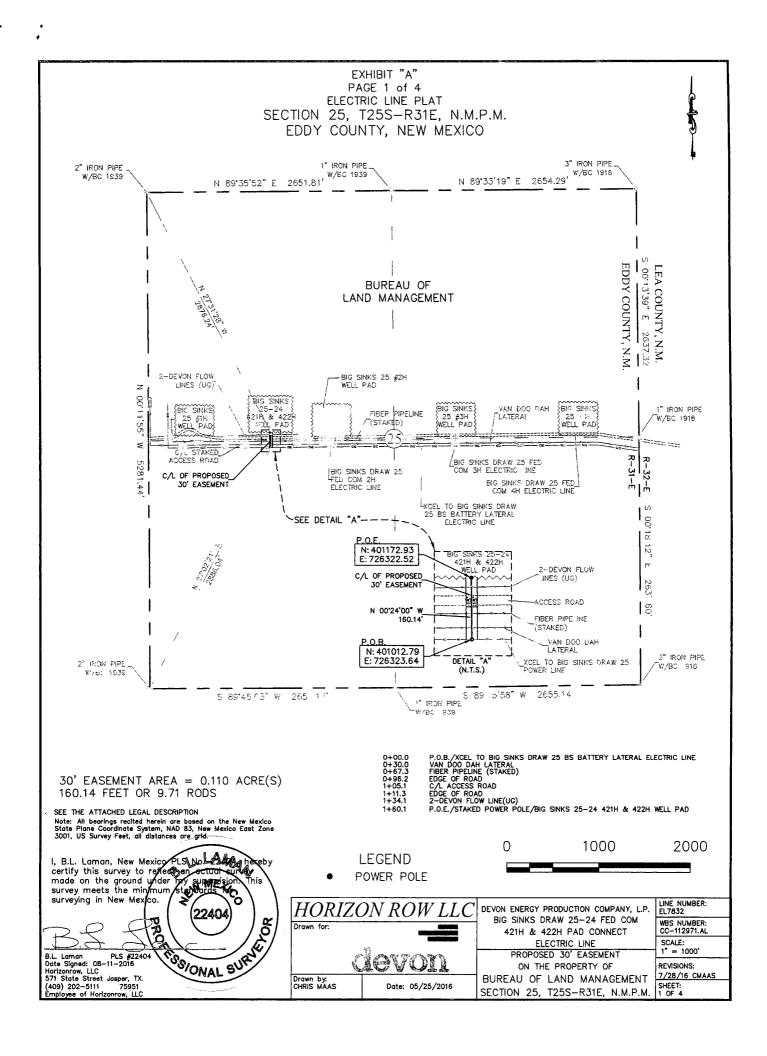
JUNE 28, 2016



SHEET: 4-4

SURVEY NO. 4746

MADRON SURVEYING, INC. 301 SOUTH CANAL CARLSBAD, NEW MEXICO



# SECTION 25, T25S-R31E, N.M.P.M., EDDY COUNTY, NEW MEXICO

### **ELECTRIC LINE PLAT**

### LEGAL DESCRIPTION

### **FOR**

### DEVON ENERGY PRODUCTION COMPANY, L.P.

### **BUREAU OF LAND MANAGEMENT**

### **30' EASEMENT DESCRIPTION:**

**BEING** an easement thirty (30) feet in width lying fifteen (15) feet on the right side and fifteen (15) feet on the left side of the survey centerline described below, being out of the southwest quarter (SW ¼) and the northwest quarter (NW ¼) of Section 25, Township 25 South, Range 31 East, N.M.P.M., Eddy County, New Mexico, and being out of a parcel of land owned by the Bureau of Land Management. Said centerline of easement being more particularly described as follows:

Commencing from a 2" iron pipe w/ BC 1939 for the southwest corner of Section 25, T25S-R31E, N.M.P.M., Eddy County, New Mexico;

Thence N 27°02'21" E a distance of 2886.04' to the **Point of Beginning** of this easement having coordinates of Northing=401012.79 feet, Easting=726323.64 feet and continuing the following course;

Thence N 00°24′00" W a distance of 160.14' to the **Point of Ending** having coordinates of Northing=401172.93 feet, Easting=726322.52 feet, from said point a 2" iron pipe w/ BC 1939 for the northwest corner of Section 25, T25S-R31E bears N 27°31'28" W a distance of 2876.24', covering **160.14' or 9.71 rods** and having an area of **0.110 acres**.

### **NOTES:**

Bearings, distances and coordinates shown herein are based on New Mexico State Plane Coordinate System, NAD 83, East Zone 3001, US Survey Feet, all distances are grid.

I, B.L. Laman, New Mexico PLS No. 22404, hereby certify this survey to reflect an actual survey made on the ground under my supervision. This survey meets the minimum standards for surveying in New Mexico.

B.L. Laman

PLS 22404

Date Signed: 08/11/2016

Horizon Row, LLC

571 State Street, Jasper, TX

(402) 202-5111

75951

Employee of Horizon Row, LLC

EXHIBIT "A" PAGE 3 of 4 BIG SINKS TRAW -TRUNKLII 🖫 (GAS AND WATER) BULLAU C BIG SINKS SPAW 25 FED COM 2F PAD LIDE A CHAREMIN JONNOCT ELECTRIC L'NE 14 KS 25 KELL 1 NE COTTON DRAW 26-27 BATTERY CONNECT--BIG SILVIS 25 #444 (GAS AND WATER) WE . PAD BIG SINKS 25 ; VAN LUG DAH 1NKS 25 ∦2H LATERAL XCEL TO BIG SINKS DR./. -25 BS SATITPY LA TERAL ELECTRIC LINE WEL PAD E ^ SINKS DE/ W 25-24 421H & 422H / ELL PAD BIG SINKS DRAW 25-24 FED COM 421H & 422H PAD CONNECT-ELECTRIC LINE R-31-E R-32-E **QUAD MAP** SECTION 25, T25S-R31E, N.M.P.M. EDDY COUNTY, NEW MEXICO LINE NUMBER: HORIZON ROW LLC EL7832

DEVON ENERGY PRODUCTION CO., L.P.

PROPOSED 30' EASEMENT

Date: 05/25/2016

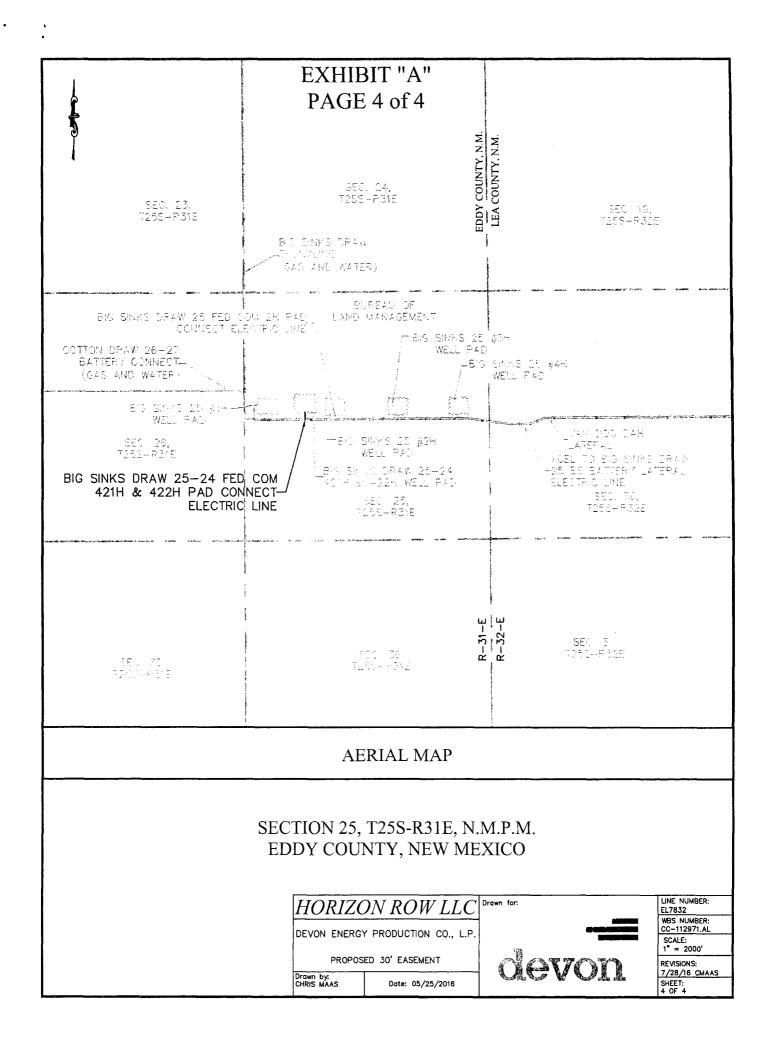
Drawn by: CHRIS MAAS devon

WBS NUMBER: CC-112971.AL

SCALE: 1" = 2000'

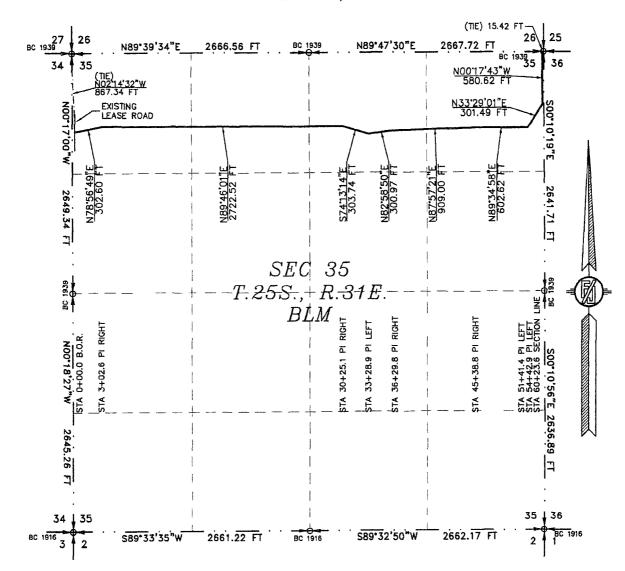
REVISIONS: 7/28/16 CMAAS

SHEET: 3 OF 4

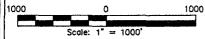


AS-BUILT EXISTING LEASE ROAD TO BIG SINKS DRAW "25" FED COM 1H, 2H, & 3H AND PROPOSED BIG SINKS DRAW "25" FED COM 4H

DEVON ENERGY PRODUCTION COMPANY, L.P. CENTERLINE SURVEY OF AN ACCESS ROAD CROSSING SECTION 35, TOWNSHIP 25 SOUTH, RANGE 31 EAST, N.M.P.M. EDDY COUNTY, STATE OF NEW MEXICO SEPTEMBER 30, 2015



SEE NEXT SHEET (2-8) FOR DESCRIPTION



# GENERAL NOTES

1.) THE INTENT OF THIS ROUTE SURVEY IS TO ACQUIRE AN EASEMENT.

2.) BASIS OF BEARING IS NMSP EAST MODIFIED TO SURFACE COORDINATES.

# SURVEYOR CERTIFICATE

I, FILIMON F. JARAMILLO, A NEW MEXICO PROFESSIONAL SURVEYOR NO. 12797, HEREBY CERTIFY THAT I HAVE CONDUCTED AND AM RESPONSIBLE FOR THIS SURVEY, THAT THIS SURVEY IS TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF, AND THAT THIS SURVEY AND PLAT MEET THE MINIMUM STANDARDS FOR LAND SURVEYING IN THE STATE OF NEW MEXICO.

IN WITNESS WHEREOF, THIS CERTIFICATE IS EXECUTED AT CARLSBAD,

NEW MEXICO, THIS OF OCTOBER 2015

> MADRON SURVEYING, INC. 301 SOUTH CANAL CARLSBAD, NEW MEXICO 88220 Phone (575) 234-3341

SHEET: 1-8

MADRON SURVEYING, UNC. 501 SOUTH CANAL (575) 234-3341

CARLSBAD. NEW MEXICO

SURVEY NO. 4247

AS-BUILT EXISTING LEASE ROAD TO BIG SINKS DRAW "25" FED COM 1H, 2H, & 3H
AND PROPOSED BIG SINKS DRAW "25" FED COM 4H

DEVON ENERGY PRODUCTION COMPANY, L.P.

CENTERLINE SURVEY OF AN ACCESS ROAD CROSSING
SECTION 35, TOWNSHIP 25 SOUTH, RANGE 31 EAST, N.M.P.M.

EDDY COUNTY, STATE OF NEW MEXICO

SEPTEMBER 30, 2015

# DESCRIPTION

A STRIP OF LAND 20 FEET WIDE CROSSING BUREAU OF LAND MANAGMENT LAND IN SECTION 35, TOWNSHIP 25 SOUTH, RANGE 31 EAST, N.M.P.M., EDDY COUNTY, STATE OF NEW MEXICO AND BEING 10 FEET EACH SIDE OF THE FOLLOWING DESCRIBED CENTERLINE SURVEY:

BEGINNING AT A POINT WITHIN THE NW/4 NW4 OF SAID SECTION 35, TOWNSHIP 25 SOUTH, RANGE 31 EAST, N.M.P.M., WHENCE THE NORTHWEST CORNER OF SAID SECTION 35, TOWNSHIP 25 SOUTH, RANGE 31 EAST, N.M.P.M. BEARS NO2"14"32"W, A DISTANCE OF 867.34 FEET;

THENCE N78'56'49"E A DISTANCE OF 302.60 FEET TO AN ANGLE POINT OF THE LINE HEREIN DESCRIBED; THENCE N89'46'01"E A DISTANCE OF 2722.52 FEET TO AN ANGLE POINT OF THE LINE HEREIN DESCRIBED; THENCE S74'13'14"E A DISTANCE OF 303.74 FEET TO AN ANGLE POINT OF THE LINE HEREIN DESCRIBED; THENCE N82'58'50"E A DISTANCE OF 300.97 FEET TO AN ANGLE POINT OF THE LINE HEREIN DESCRIBED; THENCE N87'57'21"E A DISTANCE OF 909.00 FEET TO AN ANGLE POINT OF THE LINE HEREIN DESCRIBED; THENCE N89'34'58"E A DISTANCE OF 602.62 FEET TO AN ANGLE POINT OF THE LINE HEREIN DESCRIBED; THENCE N33'29'01"E A DISTANCE OF 301.49 FEET TO AN ANGLE POINT OF THE LINE HEREIN DESCRIBED; THENCE N00"17'43"W A DISTANCE OF 580.62 FEET THE TERMINUS OF THIS CENTERLINE SURVEY, WHENCE THE NORTHEAST CORNER OF SAID SECTION 35, TOWNSHIP 25 SOUTH, RANGE 31 EAST, N.M.P.M. BEARS N89'47'30"E, A DISTANCE OF 15.42 FEET;

SAID STRIP OF LAND BEING 6023.56 FEET OR 365.06 RODS IN LENGTH, CONTAINING 2.766 ACRES MORE OR LESS AND BEING ALLOCATED BY FORTIES AS FOLLOWS:

NW/4 NW/4	1308.72 L.F.	79.32 RODS	0.601 ACRES
NE/4 NW/4	1332.87 L.F.	80.78 RODS	0.612 ACRES
NW/4 NE/4	1347.49 L.F.	81.67 RODS	0.619 ACRES
NE/4 NE/4	2034.48 L.F.	123.30 RODS	0.934 ACRES

#### SURVEYOR CERTIFICATE

CENERAL NOTES

1.) THE INTENT OF THIS ROUTE SURVEY IS TO ACQUIRE AN EASEMENT.

2.) BASIS OF BEARING IS NMSP EAST MODIFIED TO SURFACE COORDINATES.

I, FILIMON F. JARAMILLO, A NEW MEXICO PROFESSIONAL SURVEYOR NO. 12797, HEREBY CERTIFY THAT I HAVE CONDUCTED AND AM RESPONSIBLE FOR THIS SURVEY, THAT THIS SURVEY IS TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF, AND THAT THIS SURVEY AND PLAT MEET THE MINIMUM STANDARDS FOR LAND SURVEYING IN THE STATE OF NEW MEXICO.

IN WITNESS WHEREOF, THIS CERTIFICATE IS EXECUTED AT CARLSBAD,

NEW MEXICO, THIS \_\_\_\_ DAY OF OCTOBER 2015

MADRON SURVEYING, INC 301 SOUTH CANAL CARLSBAD, NEW MEXICO 88220 Phone (575) 234-3341

SURVEY NO. 4247

SHEET: 2-8

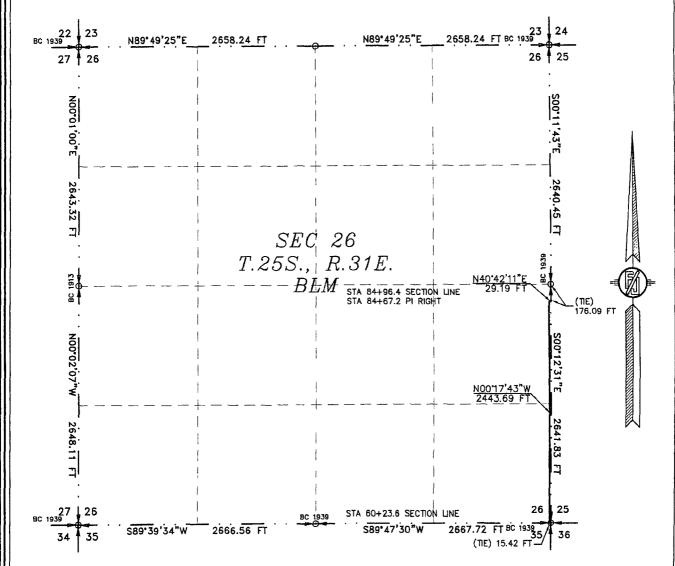
MADRON SURVEYING, (INC. 301 SOUTH CANA

TIMON F. LARMILLO PER 1200

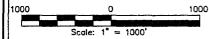
ESBAD, NEW MEXICO

AS-BUILT EXISTING LEASE ROAD TO BIG SINKS DRAW "25" FED COM 1H, 2H, & 3H AND PROPOSED BIG SINKS DRAW "25" FED COM 4H

DEVON ENERGY PRODUCTION COMPANY, L.P. CENTERLINE SURVEY OF AN ACCESS ROAD CROSSING SECTION 26, TOWNSHIP 25 SOUTH, RANGE 31 EAST, N.M.P.M. EDDY COUNTY, STATE OF NEW MEXICO SEPTEMBER 30, 2015



SEE NEXT SHEET (4-8) FOR DESCRIPTION



# GENERAL NOTES

1.) THE INTENT OF THIS ROUTE SURVEY IS TO ACQUIRE AN EASEMENT.

2.) BASIS OF BEARING IS NMSP EAST MÓDIFIED TO SURFACE COORDINATES.

#### SURVEYOR CERTIFICATE

I, FILIMON F. JARAMILLO, A NEW MEXICO PROFESSIONAL SURVEYOR NO. 12797, HEREBY CERTIFY THAT I HAVE CONDUCTED AND AM RESPONSIBLE FOR THIS SURVEY, THAT THIS SURVEY IS TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF, AND THAT THIS SURVEY AND PLAT MEET THE MINIMUM STANDARDS FOR LAND SURVEYING IN THE STATE OF NEW MEXICO.

IN WITNESS WHEREOF, THIS CERTIFICATE IS EXECUTED AT CARLSBAD,

NEW MEXICO, THIS

MADRON SURVEYING, INC 301 SOUTH CANAL CARLSBAD, NEW MEXICO 88220 Phone (575) 234-3341

SURVEY NO. 4247

SHEET: 3-8

MADRON SURVEYING, (INC. 301 SOUTH CANAL (575) 234-3341,

FAILMON F.

CARLSBAD

NEW MEXICO

AS-BUILT EXISTING LEASE ROAD TO BIG SINKS DRAW "25" FED COM 1H, 2H, & 3H AND PROPOSED BIG SINKS DRAW "25" FED COM 4H

DEVON ENERGY PRODUCTION COMPANY. L.P. CENTERLINE SURVEY OF AN ACCESS ROAD CROSSING SECTION 26, TOWNSHIP 25 SOUTH, RANGE 31 EAST, N.M.P.M. EDDY COUNTY, STATE OF NEW MEXICO SEPTEMBER 30, 2015

# **DESCRIPTION**

A STRIP OF LAND 20 FEET WIDE CROSSING BUREAU OF LAND MANAGMENT LAND IN SECTION 26, TOWNSHIP 25 SOUTH, RANGE 31 EAST, N.M.P.M., EDDY COUNTY, STATE OF NEW MEXICO AND BEING 10 FEET EACH SIDE OF THE FOLLOWING DESCRIBED CENTERLINE SURVEY:

BEGINNING AT A POINT WITHIN THE SE/4 SE/4 OF SAID SECTION 26, TOWNSHIP 25 SOUTH, RANGE 31 EAST, N.M.P.M., WHENCE THE SOUTHEAST CORNER OF SAID SECTION 26, TOWNSHIP 25 SOUTH, RANGE 31 EAST, N.M.P.M. BEARS N89°47'30"E, A DISTANCE OF 15.42 FEET;

THENCE NO017'43"W A DISTANCE OF 2443.69 FEET TO AN ANGLE POINT OF THE LINE HEREIN DESCRIBED; THENCE N40'42'11"E A DISTANCE OF 29.19 FEET THE TERMINUS OF THIS CENTERLINE SURVEY, WHENCE THE EAST QUARTER CORNER OF SAID SECTION 26, TOWNSHIP 25 SOUTH, RANGE 31 EAST, N.M.P.M. BEARS NO0"12"31"W, A DISTANCE OF 176.09 FEET;

SAID STRIP OF LAND BEING 2472.87 FEET OR 149.87 RODS IN LENGTH, CONTAINING 1.135 ACRES MORE OR LESS AND BEING ALLOCATED BY FORTIES AS FOLLOWS:

SE/4 SE/4

1320.91 L.F.

80.06 RODS

0.606 ACRES

NE/4 SE/4

1151.96 L.F.

69.82 RODS

0.529 ACRES

#### SURVEYOR CERTIFICATE

GENERAL NOTES

1.) THE INTENT OF THIS ROUTE SURVEY IS TO ACQUIRE AN EASEMENT.

2.) BASIS OF BEARING IS NMSP EAST MÓDIFIED TO SURFACE COORDINATES.

I, FILIMON F. JARAMILLO, A NEW MEXICO PROFESSIONAL SURVEYOR NO. 12797, HEREBY CERTIFY THAT I HAVE CONDUCTED AND AM RESPONSIBLE FOR THIS SURVEY, THAT THIS SURVEY IS TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF, AND THAT THIS SURVEY AND PLAT MEET THE MINIMUM STANDARDS FOR LAND SURVEYING IN THE STATE OF MEM MEXICO.

IN WITNESS WHEREOF, THIS CERTIFICATE IS EXECUTED AT CARLSBAD,

DAY OF OCTOBER 2015 NEW MEXICO, THIS

MADRON SURVEYING, INC. 301 SOUTH CANAL CARLSBAD, NEW MEXICO 88220 Phone (575) 234-3341

SHEET: 4-8

*MADRON SURVEYING*,

301 SOUTH CANAL

SURVEY NO. 4247

CARLSBAD NEW MEXICO

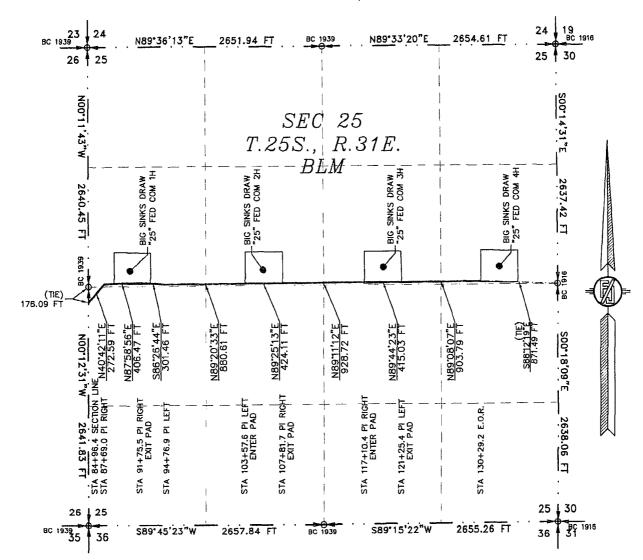
AS-BUILT EXISTING LEASE ROAD TO BIG SINKS DRAW "25" FED COM 1H, 2H, & 3H AND PROPOSED BIG SINKS DRAW "25" FED COM 4H

DEVON ENERGY PRODUCTION COMPANY, L.P.

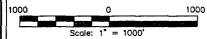
CENTERLINE SURVEY OF AN ACCESS ROAD CROSSING
SECTION 25, TOWNSHIP 25 SOUTH, RANGE 31 EAST, N.M.P.M.

EDDY COUNTY, STATE OF NEW MEXICO

SEPTEMBER 30, 2015



SEE NEXT SHEET (6-8) FOR DESCRIPTION



# GENERAL NOTES

1.) THE INTENT OF THIS ROUTE SURVEY IS TO ACQUIRE AN EASEMENT.

2.) BASIS OF BEARING IS NMSP EAST MODIFIED TO SURFACE COORDINATES.

#### SURVEYOR CERTIFICATE

I, FILIMON F. JARAMILLO, A NEW MEXICO PROFESSIONAL SURVEYOR NO. 12797, HEREBY CERTIFY THAT I HAVE CONDUCTED AND AM RESPONSIBLE FOR THIS SURVEY, THAT THIS SURVEY IS TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF, AND THAT THIS SURVEY AND PLAT MEET THE MINIMUM STANDARDS FOR LAND SURVEYING IN THE STATE OF NEW MEXICO.

IN WITNESS WHEREOF, THIS CERTIFICATE IS EXECUTED AT CARLSBAD,

NEW MEXICO, THIS \_\_\_\_ DAY OF OCTOBER 2015

MADRON SURVEYING, INC. 301 SOUTH CANA: CARLSBAD, NEW MEXICO 88220 Phone (575) 234-3341

SHEET: 5-8

MADRON SURVEYING, (INC. 3/1 SOUTH CANAL (575) 234-3341

FIRMON F. SANDING DES (12897)
C. (575) 234-3341 CARLSBAD.

SURVEY NO. 4247 NEW MEXICO

AS-BUILT EXISTING LEASE ROAD TO BIG SINKS DRAW "25" FED COM 1H, 2H, & 3H
AND PROPOSED BIG SINKS DRAW "25" FED COM 4H

DEVON ENERGY PRODUCTION COMPANY, L.P.

CENTERLINE SURVEY OF AN ACCESS ROAD CROSSING
SECTION 25, TOWNSHIP 25 SOUTH, RANGE 31 EAST, N.M.P.M.

EDDY COUNTY, STATE OF NEW MEXICO

SEPTEMBER 30, 2015

#### DESCRIPTION

A STRIP OF LAND 20 FEET WIDE CROSSING BUREAU OF LAND MANAGMENT LAND IN SECTION 25, TOWNSHIP 25 SOUTH, RANGE 31 EAST, N.M.P.M., EDDY COUNTY, STATE OF NEW MEXICO AND BEING 10 FEET EACH SIDE OF THE FOLLOWING DESCRIBED CENTERLINE SURVEY:

BEGINNING AT A POINT WITHIN THE NW/4 SW/4 OF SAID SECTION 25, TOWNSHIP 25 SOUTH, RANGE 31 EAST, N.M.P.M., WHENCE THE WEST QUARTER CORNER OF SAID SECTION 25, TOWNSHIP 25 SOUTH, RANGE 31 EAST, N.M.P.M. BEARS NO0712'31"W, A DISTANCE OF 176.09 FEET;

THENCE N40'42'11"E A DISTANCE OF 272.59 FEET TO AN ANGLE POINT OF THE LINE HEREIN DESCRIBED; THENCE N87'58'56"E A DISTANCE OF 406.47 FEET TO AN ANGLE POINT OF THE LINE HEREIN DESCRIBED; THENCE S86'26'44"E A DISTANCE OF 301.46 FEET TO AN ANGLE POINT OF THE LINE HEREIN DESCRIBED; THENCE N89'20'33"E A DISTANCE OF 880.61 FEET TO AN ANGLE POINT OF THE LINE HEREIN DESCRIBED; THENCE N89'25'13"E A DISTANCE OF 424.11 FEET TO AN ANGLE POINT OF THE LINE HEREIN DESCRIBED; THENCE N89'11'12"E A DISTANCE OF 928.72 FEET TO AN ANGLE POINT OF THE LINE HEREIN DESCRIBED; THENCE N89'44'23"E A DISTANCE OF 415.03 FEET TO AN ANGLE POINT OF THE LINE HEREIN DESCRIBED; THENCE N89'08'07"E A DISTANCE OF 903.79 FEET THE TERMINUS OF THIS CENTERLINE SURVEY, WHENCE THE EAST QUARTER CORNER OF SAID SECTION 25, TOWNSHIP 25 SOUTH, RANGE 31 EAST, N.M.P.M. BEARS S88'12'19"E, A DISTANCE OF 871.49 FEET;

SAID STRIP OF LAND BEING 4532.77 FEET OR 274.71 RODS IN LENGTH, CONTAINING 2.081 ACRES MORE OR LESS AND BEING ALLOCATED BY FORTIES AS FOLLOWS:

NW/4 SW/4	233.88 L.F.	14.17 RODS	0.107 ACRES
SW/4 NW/4	1188.80 L.F.	72.05 RODS	0.546 ACRES
SE/4 NW/4	1327.47 L.F.	80.45 RODS	0.609 ACRES
SW/4 NE/4	1327.48 L.F.	80.45 RODS	0.609 ACRES
SE/4 NE/4	455.15 L.F.	27.58 RODS	0.209 ACRES

#### SURVEYOR CERTIFICATE

GENERAL NOTES

1.) THE INTENT OF THIS ROUTE SURVEY IS TO ACQUIRE AN EASEMENT.

2.) BASIS OF BEARING IS NMSP EAST MODIFIED TO SURFACE COORDINATES.

I, FILIMON F. JARAMILLO, A NEW MEXICO PROFESSIONAL SURVEYOR NO. 12797, HEREBY CERTIFY THAT I HAVE CONDUCTED AND AM RESPONSIBLE FOR THIS SURVEY, THAT THIS SURVEY IS TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF, AND THAT THIS SURVEY AND PLAT MEET THE MINIMUM STANDARDS FOR LAND SURVEYING IN THE STATE OF NEW MEXICO.

IN WITNESS WHEREOF, THIS CERTIFICATE IS EXECUTED AT CARLSBAD,

NEW NEXICO, THIS DAY OF OCTOBER 2015

MADRON SURVEYING, 'NC. 301 SOUTH CANAL CARLSBAD, NEW MEXICO 88220 Phone (575) 234-3341

SHEET: 6-8

MADRON SURVEYING.

SOUTH CANADA TO TO TO A T

SURVEY NO. 4247

(575) 234--3341,

H CANAL CARLSBAD.

SBAD, NEW MEXICO

AS-BUILT EXISTING LEASE ROAD TO BIG SINKS DRAW "25" FED COM 1H, 2H, & 3H AND PROPOSED BIG SINKS DRAW "25" FED COM 4H

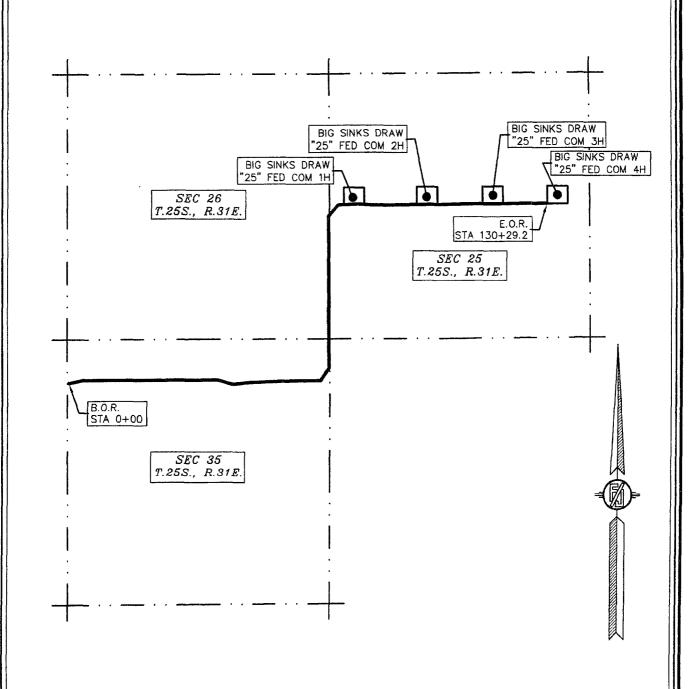
DEVON ENERGY PRODUCTION COMPANY, L.P.

CENTERLINE SURVEY OF AN ACCESS ROAD CROSSING

SECTIONS 35, 26, & 25, TOWNSHIP 25 SOUTH, RANGE 31 EAST, N.M.P.M.

EDDY COUNTY, STATE OF NEW MEXICO

SEPTEMBER 30, 2015



SHEET: 7-8
SURVEY NO. 4247
MADRON SURVEYING, INC. 301 SOUTH CANAL CARLSBAD, NEW MEXICO

AS-BUILT EXISTING LEASE ROAD TO BIG SINKS DRAW "25" FED COM 1H, 2H, & 3H AND PROPOSED BIG SINKS DRAW "25" FED COM 4H

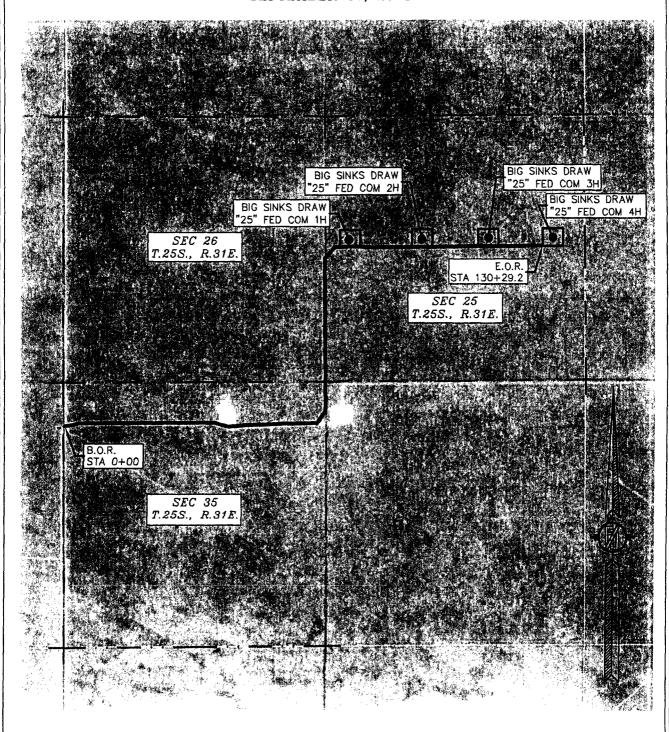
DEVON ENERGY PRODUCTION COMPANY, L.P.

CENTERLINE SURVEY OF AN ACCESS ROAD CROSSING

SECTIONS 35, 26, & 25, TOWNSHIP 25 SOUTH, RANGE 31 EAST, N.M.P.M.

EDDY COUNTY, STATE OF NEW MEXICO

SEPTEMBER 30, 2015



SHEET: 8-8
SURVEY NO. 4247
MADRON SURVEYING, INC. 30: SOUTH CANAL CARLSBAD, NEW MEXICO

# **TAFMSS**

U.S. Department of the Interior BUREAU OF LAND MANAGEMENT



# Section 1 - General

Lined pit: do you have a reclamation bond for the pit? Is the reclamation bond a rider under the BLM bond?

Additional bond information attachment:

Lined pit bond number: Lined pit bond amount:

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: 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:

#### Section 3 - Unlined Pits

Injection PWD discharge volume (bbl/day):

Injection well mineral owner:

Would you like to utilize Unlined Pit PWD options? NO Produced Water Disposal (PWD) Location: PWD disturbance (acres): PWD surface owner: Unlined pit PWD on or off channel: Unlined pit PWD discharge volume (bbl/day): Unlined pit specifications: Precipitated solids disposal: Decribe 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: 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 disturbance (acres): PWD surface 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:	
	Other PWD type attachment:	
	Have other regulatory requirements been met?	
	Other regulatory requirements attachment:	

# \*\*AFMSS

U.S. Department of the Interior BUREAU OF LAND MANAGEMENT

# **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:



# PECOS DISTRICT DRILLING OPERATIONS CONDITIONS OF APPROVAL

OPERATOR'S NAME: Devon Energy Production Co, L.P.

LEASE NO.: | NMLC062300

WELL NAME & NO.: | 422H-Big Sinks Draw 25 24 Fed

SURFACE HOLE FOOTAGE: 2350'/N & 1345'/W BOTTOM HOLE FOOTAGE 330'/N & 1980'/W

LOCATION: | Section 25, T.25 S., R.31 E., NMPM

COUNTY: | Eddy County, New Mexico

# **Communitization Agreement**

- The operator will submit a Communitization Agreement to the Carlsbad Field Office, 620 E Greene St. Carlsbad, New Mexico 88220, at least 90 days before the anticipated date of first production from a well subject to a spacing order issued by the New Mexico Oil Conservation Division. The Communitization Agreement will include the signatures of all working interest owners in all Federal and Indian leases subject to the Communitization Agreement (i.e., operating rights owners and lessees of record), or certification that the operator has obtained the written signatures of all such owners and will make those signatures available to the BLM immediately upon request.
- If the operator does not comply with this condition of approval, the BLM may take enforcement actions that include, but are not limited to, those specified in 43 CFR 3163.1.
- In addition, the well sign shall include the surface and bottom hole lease numbers. When the Communitization Agreement number is known, it shall also be on the sign.

# A. DRILLING OPERATIONS REQUIREMENTS

The BLM is to be notified in advance for a representative to witness:

- a. Spudding well (minimum of 24 hours)
- b. Setting and/or Cementing of all casing strings (minimum of 4 hours)
- c. BOPE tests (minimum of 4 hours)
  - **Eddy County**

Call the Carlsbad Field Office, 620 East Greene St., Carlsbad, NM 88220, (575) 361-2822

1. Hydrogen Sulfide (H2S) monitors shall be installed prior to drilling out the surface shoe. If H2S is detected in concentrations greater than 100 ppm, the Hydrogen Sulfide area shall meet Onshore Order 6 requirements, which

NM OIL CONSERVATION

ARTESTA DISTRICT

MAY **30** 2017





includes equipment and personnel/public protection items. If Hydrogen Sulfide is encountered, provide measured values and formations to the BLM.

- 2. Unless the production casing has been run and cemented or the well has been properly plugged, the drilling rig shall not be removed from over the hole without prior approval. If the drilling rig is removed without approval an Incident of Non-Compliance will be written and will be a "Major" violation.
- 3. Floor controls are required for 3M or Greater systems. These controls will be on the rig floor, unobstructed, readily accessible to the driller and will be operational at all times during drilling and/or completion activities. Rig floor is defined as the area immediately around the rotary table; the area immediately above the substructure on which the draw works is located, this does not include the dog house or stairway area.
- 4. The record of the drilling rate along with the GR/N well log run from TD to surface (horizontal well vertical portion of hole) shall be submitted to the BLM office as well as all other logs run on the borehole 30 days from completion. If available, a digital copy of the logs is to be submitted in addition to the paper copies. The Rustler top and top and bottom of Salt are to be recorded on the Completion Report.

#### B. CASING

Changes to the approved APD casing program need prior approval if the items substituted are of lesser grade or different casing size or are Non-API. The Operator can exchange the components of the proposal with that of superior strength (i.e. changing from J-55 to N-80, or from 36# to 40#). Changes to the approved cement program need prior approval if the altered cement plan has less volume or strength or if the changes are substantial (i.e. Multistage tool, ECP, etc.). The initial wellhead installed on the well will remain on the well with spools used as needed.

Centralizers required on surface casing per Onshore Order 2.III.B.1.f.

# Wait on cement (WOC) for Water Basin:

After cementing but before commencing any tests, the casing string shall stand cemented under pressure until both of the following conditions have been met: 1) cement reaches a minimum compressive strength of 500 psi at the shoe, 2) until cement has been in place at least 8 hours. WOC time will be recorded in the driller's log. See individual casing strings for details regarding lead cement slurry requirements.

No pea gravel permitted for remedial or fall back remedial without prior authorization from the BLM engineer.

Possibility of water flows in the Salado and Castile.

Possibility of lost circulation in the Red Beds, Rustler, and Delaware.

- A. The 13-3/8 inch surface casing shall be set at approximately 965 feet (in a competent bed below the Magenta Dolomite, which is a Member of the Rustler, and if salt is encountered, set casing at least 25 feet above the salt) and cemented to the surface.
  - 1. If cement does not circulate to the surface, the appropriate BLM office shall be notified and a temperature survey utilizing an electronic type temperature survey with surface log readout will be used or a cement bond log shall be run to verify the top of the cement. Temperature survey will be run a minimum of six hours after pumping cement and ideally between 8-10 hours after completing the cement job.
  - 2. Wait on cement (WOC) time for a primary cement job is to include the lead cement slurry.
  - 3. Wait on cement (WOC) time for a remedial job will be a minimum of 4 hours after bringing cement to surface or 500 pounds compressive strength, whichever is greater.
  - 4. If cement falls back, remedial cementing will be done prior to drilling out that string.

Intermediate casing shall be kept fluid filled while running into hole to meet BLM minimum collapse requirements.

B. The minimum required fill of cement behind the 9-5/8 inch intermediate casing is:

G	TC	
	If cement does not circulate see B.1.a, c-d above.  t maybe required. Excess cement calculates only 23	. 0 /

Centralizers required on horizontal leg, must be type for horizontal service and a minimum of one every other joint.

C. The minimum required fill of cement behind the 5-1/2 inch production casing is:	C. The	minimum re	equired fill	of cement	behind t	the <b>5-1/2</b>	inch prod	uction casir	ig is:
--	--------	------------	--------------	-----------	----------	------------------	-----------	--------------	--------

- Cement should tie-back at least 500 feet into previous casing string. Operator shall provide method of verification. Additional cement maybe required. Excess cement calculates only 25%
- 4. If hardband drill pipe is rotated inside casing, returns will be monitored for metal. If metal is found in samples, drill pipe will be pulled and rubber protectors which have a larger diameter than the tool joints of the drill pipe will be installed prior to continuing drilling operations.

# C. PRESSURE CONTROL

- A. All blowout preventer (BOP) and related equipment (BOPE) shall comply with well control requirements as described in Onshore Oil and Gas Order No. 2 and API 53.
- B. Variance approved to use flex line from BOP to choke manifold. Check condition of flexible line from BOP to choke manifold, replace if exterior is damaged or if line fails test. Line to be as straight as possible with no hard bends and is to be anchored according to Manufacturer's requirements. The flexible hose can be exchanged with a hose of equal size and equal or greater pressure rating. Anchor requirements, specification sheet and hydrostatic pressure test certification matching the hose in service, to be onsite for review. These documents shall be posted in the company man's trailer and on the rig floor. If the BLM inspector questions the straightness of the hose, a BLM engineer will be contacted and will review in the field or via picture supplied by inspector to determine if changes are required (operator shall expect delays if this occurs).
- C. Operator has proposed a multi-bowl wellhead assembly. This assembly will only be tested when installed on the surface casing. Minimum working pressure of the blowout preventer (BOP) and related equipment (BOPE) required for drilling below the surface casing shoe shall be 3000 (3M) psi.
  - a. Wellhead shall be installed by manufacturer's representatives, submit documentation with subsequent sundry.
  - b. If the welding is performed by a third party, the manufacturer's representative shall monitor the temperature to verify that it does not exceed the maximum temperature of the seal.
  - c. Manufacturer representative shall install the test plug for the initial BOP test.
  - d. Operator shall perform the intermediate casing integrity test to 70% of the casing burst. This will test the multi-bowl seals.
  - e. If the cement does not circulate and one inch operations would have been possible with a standard wellhead, the well head shall be cut off, cementing operations performed and another wellhead installed.
- D. The appropriate BLM office shall be notified a minimum of 4 hours in advance for a representative to witness the tests.
  - 1. In a water basin, for all casing strings utilizing slips, these are to be set as soon as the crew and rig are ready and any fallback cement remediation has been done. The casing cut-off and BOP installation can be initiated four hours after installing the slips, which will be approximately six hours after bumping the

plug. For those casing strings not using slips, the minimum wait time before cut-off is eight hours after bumping the plug. BOP/BOPE testing can begin after cut-off or once cement reaches 500 psi compressive strength (including lead when specified), whichever is greater. However, if the float does not hold, cut-off cannot be initiated until cement reaches 500 psi compressive strength (including lead when specified).

- 2. The tests shall be done by an independent service company utilizing a test plug **not a cup or J-packer**.
- 3. The test shall be run on a 5000 psi chart for a 2-3M BOP/BOP, on a 10000 psi chart for a 5M BOP/BOPE and on a 15000 psi chart for a 10M BOP/BOPE. If a linear chart is used, it shall be a one hour chart. A circular chart shall have a maximum 2 hour clock. If a twelve hour or twenty-four hour chart is used, tester shall make a notation that it is run with a two hour clock.
- 4. The results of the test shall be reported to the appropriate BLM office.
- 5. All tests are required to be recorded on a calibrated test chart. A copy of the BOP/BOPE test chart and a copy of independent service company test will be submitted to the appropriate BLM office.
- 6. The BOP/BOPE test shall include a low pressure test from 250 to 300 psi. The test will be held for a minimum of 10 minutes if test is done with a test plug and 30 minutes without a test plug. This test shall be performed prior to the test at full stack pressure.

# D. DRILL STEM TEST

If drill stem tests are performed, Onshore Order 2.III.D shall be followed.

#### E. WASTE MATERIAL AND FLUIDS

All waste (i.e. drilling fluids, trash, salts, chemicals, sewage, gray water, etc.) created as a result of drilling operations and completion operations shall be safely contained and disposed of properly at a waste disposal facility. No waste material or fluid shall be disposed of on the well location or surrounding area.

Porto-johns and trash containers will be on-location during fracturing operations or any other crew-intensive operations.

#### CLN 03202017

# PECOS DISTRICT SURFACE USE CONDITIONS OF APPROVAL

OPERATOR'S NAME:
LEASE NO.:
WELL NAME & NO.:
SURFACE HOLE FOOTAGE:
BOTTOM HOLE FOOTAGE
LOCATION:
COUNTY:
Devon Energy Production Co, L.P.
NMLC062300
422H-Big Sinks Draw 25 24 Fed
2350'/N & 1345'/W
330'/N & 1980'/W
Section 25, T.25 S., R.31 E., NMPM
Eddy County, New Mexico

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Standard Conditions of Approval (COA) apply to this APD. If any deviations to these standards exist or special COAs are required, the section with the deviation or requirement will be checked below.

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Final Abandonment & Reclamation	RECEIVED

# I. GENERAL PROVISIONS

The approval of the Application For Permit To Drill (APD) is in compliance with all applicable laws and regulations: 43 Code of Federal Regulations 3160, the lease terms, Onshore Oil and Gas Orders, Notices To Lessees, New Mexico Oil Conservation Division (NMOCD) Rules, National Historical Preservation Act As Amended, and instructions and orders of the Authorized Officer. Any request for a variance shall be submitted to the Authorized Officer on Form 3160-5, Sundry Notices and Report on Wells.

## II. PERMIT EXPIRATION

If the permit terminates prior to drilling and drilling cannot be commenced within 60 days after expiration, an operator is required to submit Form 3160-5, Sundry Notices and Reports on Wells, requesting surface reclamation requirements for any surface disturbance. However, if the operator will be able to initiate drilling within 60 days after the expiration of the permit, the operator must have set the conductor pipe in order to allow for an extension of 60 days beyond the expiration date of the APD. (Filing of a Sundry Notice is required for this 60 day extension.)

# III. ARCHAEOLOGICAL, PALEONTOLOGY & HISTORICAL SITES

Any cultural and/or paleontological resource discovered by the operator or by any person working on the operator's behalf shall immediately report such findings to the Authorized Officer. The operator is fully accountable for the actions of their contractors and subcontractors. The operator shall suspend all operations in the immediate area of such discovery until written authorization to proceed is issued by the Authorized Officer. An evaluation of the discovery shall be made by the Authorized Officer to determine the appropriate actions that shall be required to prevent the loss of significant cultural or scientific values of the discovery. The operator shall be held responsible for the cost of the proper mitigation measures that the Authorized Officer assesses after consultation with the operator on the evaluation and decisions of the discovery. Any unauthorized collection or disturbance of cultural or paleontological resources may result in a shutdown order by the Authorized Officer.

# IV. NOXIOUS WEEDS

The operator shall be held responsible if noxious weeds become established within the areas of operations. Weed control shall be required on the disturbed land where noxious weeds exist, which includes the roads, pads, associated pipeline corridor, and adjacent land affected by the establishment of weeds due to this action. The operator shall consult with the Authorized Officer for acceptable weed control methods, which include following EPA and BLM requirements and policies.

# V. SPECIAL REQUIREMENT(S)

Timing Limitation Stipulation / Condition of Approval for lesser prairie-chicken:

Oil and gas activities including 3-D geophysical exploration, and drilling will not be allowed in lesser prairie-chicken habitat during the period from March 1st through June 15th annually. During that period, other activities that produce noise or involve human activity, such as the maintenance of oil and gas facilities, pipeline, road, and well pad construction, will be allowed except between 3:00 am and 9:00 am. The 3:00 am to 9:00 am restriction will not apply to normal, around-the-clock operations, such as venting, flaring, or pumping, which do not require a human presence during this period. Additionally, no new drilling will be allowed within up to 200 meters of leks known at the time of permitting. Normal vehicle use on existing roads will not be restricted. Exhaust noise from pump jack engines must be muffled or otherwise controlled so as not to exceed 75 db measured at 30 feet from the source of the noise.

Ground-level Abandoned Well Marker to avoid raptor perching: Upon the plugging and subsequent abandonment of the well, the well marker will be installed at ground level on a plate containing the pertinent information for the plugged well. For more installation details, contact the Carlsbad Field Office at 575-234-5972.

This authorization is subject to your Certificate of Participation and/or Certificate of Inclusion under the New Mexico Candidate Conservation Agreement. Because it involves surface disturbing activities covered under your Certificate, your Habitat Conservation Fund Account with the Center of Excellence for Hazardous Materials Management (CEHMM) will be debited according to Exhibit B Part 2 of the Certificate of Participation.

# Watershed

The entire well pad will be bermed to prevent oil, salt, and other chemical contaminants from leaving the well pad. Topsoil shall not be used to construct the berm. No water flow from the uphill side(s) of the pad shall be allowed to enter the well pad. The berm shall be maintained through the life of the well and after interim reclamation has been completed.

# VI. CONSTRUCTION

#### A. NOTIFICATION

The BLM shall administer compliance and monitor construction of the access road and well pad. Notify the Carlsbad Field Office at (575) 234-5909 at least 3 working days prior to commencing construction of the access road and/or well pad.

When construction operations are being conducted on this well, the operator shall have the approved APD and Conditions of Approval (COA) on the well site and they shall be made available upon request by the Authorized Officer.

#### B. TOPSOIL

The operator shall strip the top portion of the soil (root zone) from the entire well pad area and stockpile the topsoil along the edge of the well pad as depicted in the APD. The root zone is typically six (6) inches in depth. All the stockpiled topsoil will be redistributed over the interim reclamation areas. Topsoil shall not be used for berming the pad or facilities. For final reclamation, the topsoil shall be spread over the entire pad area for seeding preparation.

Other subsoil (below six inches) stockpiles must be completely segregated from the topsoil stockpile. Large rocks or subsoil clods (not evident in the surrounding terrain) must be buried within the approved area for interim and final reclamation.

# C. CLOSED LOOP SYSTEM

Tanks are required for drilling operations: No Pits.

The operator shall properly dispose of drilling contents at an authorized disposal site.

# D. FEDERAL MINERAL MATERIALS PIT

Payment shall be made to the BLM prior to removal of any federal mineral materials. Call the Carlsbad Field Office at (575) 234-5972.

# E. WELL PAD SURFACING

Surfacing of the well pad is not required.

If the operator elects to surface the well pad, the surfacing material may be required to be removed at the time of reclamation. The well pad shall be constructed in a manner which creates the smallest possible surface disturbance, consistent with safety and operational needs.

# F. EXCLOSURE FENCING (CELLARS & PITS)

## **Exclosure Fencing**

The operator will install and maintain exclosure fencing for all open well cellars to prevent access to public, livestock, and large forms of wildlife before and after drilling operations until the pit is free of fluids and the operator initiates backfilling. (For examples of exclosure fencing design, refer to BLM's Oil and Gas Gold Book, Exclosure Fence Illustrations, Figure 1, Page 18.)

# G. ON LEASE ACCESS ROADS

#### Road Width

The access road shall have a driving surface that creates the smallest possible surface disturbance and does not exceed fourteen (14) feet in width. The maximum width of surface disturbance, when constructing the access road, shall not exceed twenty-five (25) feet.

# Surfacing

Surfacing material is not required on the new access road driving surface. If the operator elects to surface the new access road or pad, the surfacing material may be required to be removed at the time of reclamation.

Where possible, no improvements should be made on the unsurfaced access road other than to remove vegetation as necessary, road irregularities, safety issues, or to fill low areas that may sustain standing water.

The Authorized Officer reserves the right to require surfacing of any portion of the access road at any time deemed necessary. Surfacing may be required in the event the road deteriorates, erodes, road traffic increases, or it is determined to be beneficial for future field development. The surfacing depth and type of material will be determined at the time of notification

# Crowning

Crowning shall be done on the access road driving surface. The road crown shall have a grade of approximately 2% (i.e., a 1" crown on a 14' wide road). The road shall conform to Figure 1; cross section and plans for typical road construction.

#### Ditching

Ditching shall be required on both sides of the road.

## **Turnouts**

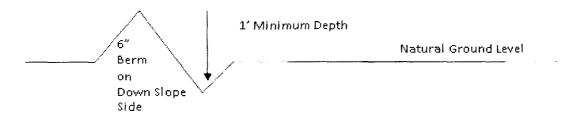
Vehicle turnouts shall be constructed on the road. Turnouts shall be intervisible with interval spacing distance less than 1000 feet. Turnouts shall conform to Figure 1; cross section and plans for typical road construction.

# **Drainage**

Drainage control systems shall be constructed on the entire length of road (e.g. ditches, sidehill outsloping and insloping, lead-off ditches, culvert installation, and low water crossings).

A typical lead-off ditch has a minimum depth of 1 foot below and a berm of 6 inches above natural ground level. The berm shall be on the down-slope side of the lead-off ditch.

# Cross Section of a Typical Lead-off Ditch



All lead-off ditches shall be graded to drain water with a 1 percent minimum to 3 percent maximum ditch slope. The spacing interval are variable for lead-off ditches and shall be determined according to the formula for spacing intervals of lead-off ditches, but may be amended depending upon existing soil types and centerline road slope (in %);

# Formula for Spacing Interval of Lead-off Ditches

Example - On a 4% road slope that is 400 feet long, the water flow shall drain water into a lead-off ditch. Spacing interval shall be determined by the following formula:

400 foot road with 4% road slope: 
$$\frac{400'}{4\%} + 100' = 200'$$
 lead-off ditch interval

# Cattle guards

An appropriately sized cattle guard sufficient to carry out the project shall be installed and maintained at fence/road crossings. Any existing cattle guards on the access road route shall be repaired or replaced if they are damaged or have deteriorated beyond practical use. The operator shall be responsible for the condition of the existing cattle guards that are in place and are utilized during lease operations.

# Fence Requirement

Where entry is granted across a fence line, the fence shall be braced and tied off on both sides of the passageway prior to cutting. The operator shall notify the private surface landowner or the grazing allotment holder prior to crossing any fences.

## **Public Access**

Public access on this road shall not be restricted by the operator without specific written approval granted by the Authorized Officer.

# **Construction Steps**

- 1. Salvage topsoil
- 3. Redistribute topsoil
- 2. Construct road 4. Revegetate slopes

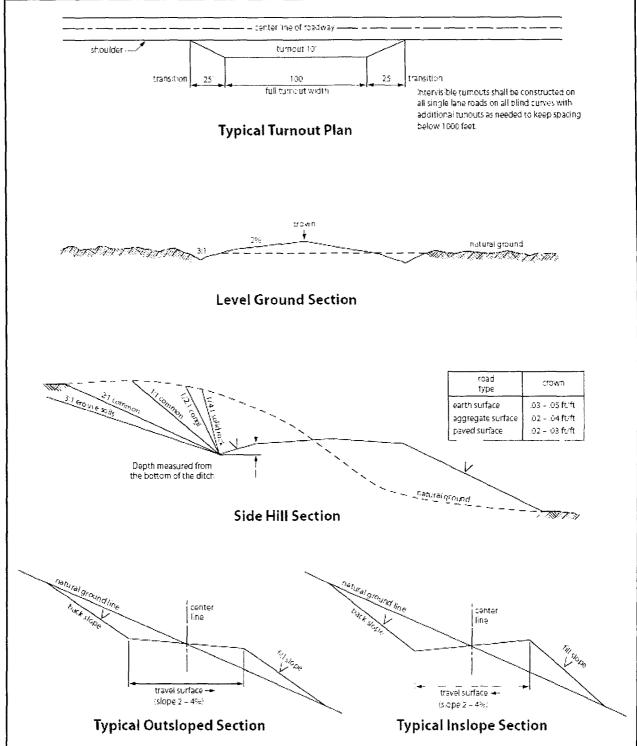


Figure 1. Cross-sections and plans for typical road sections representative of BLM resource or FS local and higher-class roads.

# VII. PRODUCTION (POST DRILLING)

# A. WELL STRUCTURES & FACILITIES

#### **Placement of Production Facilities**

Production facilities should be placed on the well pad to allow for maximum interim recontouring and revegetation of the well location.

# **Exclosure Netting (Open-top Tanks)**

Immediately following active drilling or completion operations, the operator will take actions necessary to prevent wildlife and livestock access, including avian wildlife, to all open-topped tanks that contain or have the potential to contain salinity sufficient to cause harm to wildlife or livestock, hydrocarbons, or Resource Conservation and Recovery Act of 1976-exempt hazardous substances. At a minimum, the operator will net, screen, or cover open-topped tanks to exclude wildlife and livestock and prevent mortality. If the operator uses netting, the operator will cover and secure the open portion of the tank to prevent wildlife entry. The operator will net, screen, or cover the tanks until the operator removes the tanks from the location or the tanks no longer contain substances that could be harmful to wildlife or livestock. Use a maximum netting mesh size of 1 ½ inches. The netting must not be in contact with fluids and must not have holes or gaps.

# Chemical and Fuel Secondary Containment and Exclosure Screening

The operator will prevent all hazardous, poisonous, flammable, and toxic substances from coming into contact with soil and water. At a minimum, the operator will install and maintain an impervious secondary containment system for any tank or barrel containing hazardous, poisonous, flammable, or toxic substances sufficient to contain the contents of the tank or barrel and any drips, leaks, and anticipated precipitation. The operator will dispose of fluids within the containment system that do not meet applicable state or U. S. Environmental Protection Agency livestock water standards in accordance with state law; the operator must not drain the fluids to the soil or ground. The operator will design, construct, and maintain all secondary containment systems to prevent wildlife and livestock exposure to harmful substances. At a minimum, the operator will install effective wildlife and livestock exclosure systems such as fencing, netting, expanded metal mesh, lids, and grate covers. Use a maximum netting mesh size of 1 ½ inches.

# **Open-Vent Exhaust Stack Exclosures**

The operator will construct, modify, equip, and maintain all open-vent exhaust stacks on production equipment to prevent birds and bats from entering, and to discourage perching, roosting, and nesting. (*Recommended exclosure structures on open-vent exhaust stacks are in the shape of a cone.*) Production equipment includes, but may not be limited to, tanks, heater-treaters, separators, dehydrators, flare stacks, in-line units, and compressor mufflers.

#### **Containment Structures**

Proposed production facilities such as storage tanks and other vessels will have a secondary containment structure that is constructed to hold the capacity of 1.5 times the largest tank, plus freeboard to account for precipitation, unless more stringent protective requirements are deemed necessary.

# **Painting Requirement**

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All above-ground structures including meter housing that are not subject to safety requirements shall be painted a flat non-reflective paint color, **Shale Green** from the BLM Standard Environmental Color Chart (CC-001: June 2008).

#### B. PIPELINES

#### **BURIED PIPELINE STIPULATIONS**

A copy of the application (Grant, APD, or Sundry Notice) and attachments, including conditions of approval, survey plat and/or map, will be on location during construction. BLM personnel may request to you a copy of your permit during construction to ensure compliance with all stipulations.

Holder agrees to comply with the following stipulations to the satisfaction of the Authorized Officer:

- 1. The Holder shall indemnify the United States against any liability for damage to life or property arising from the occupancy or use of public lands under this grant.
- 2. The Holder shall comply with all applicable Federal laws and regulations existing or hereafter enacted or promulgated. In any event, the holder shall comply with the Toxic Substances Control Act of 1976 as amended, 15 USC 2601 et seq. (1982) with regards to any toxic substances that are used, generated by or stored on the right-of-way or on facilities authorized under this right-of-way grant. (See 40 CFR Part 702-799 and especially, provisions on polychlorinated biphenyls, 40 CFR 761.1-761.193.) Additionally, any release of toxic substances (leaks, spills, etc.) in excess of the reportable quantity established by 40 CFR Part 117 shall be reported as required by the Comprehensive Environmental Response, Compensation, and Liability Act, section 102b. A copy of any report required or requested by any Federal agency or State government as a result of a reportable release or spill of any toxic substances shall be furnished to the authorized officer concurrent with the filing of the reports to the involved Federal agency or State government.
- 3. The holder agrees to indemnify the United States against any liability arising from the release of any hazardous substance or hazardous waste (as these terms are defined in the Comprehensive Environmental Response, Compensation and Liability Act of 1980, 42 U.S.C. 9601, et seq. or the Resource Conservation and Recovery Act, 42 U.S.C.6901, et seq.) on the Right-of-Way (unless the release or threatened release is wholly unrelated to the Right-of-Way holder's activity on the Right-of-Way), or resulting from the activity of

the Right-of-Way holder on the Right-of-Way. This agreement applies without regard to whether a release is caused by the holder, its agent, or unrelated third parties.

- 4. If, during any phase of the construction, operation, maintenance, or termination of the pipeline, any oil or other pollutant should be discharged from the pipeline system, impacting Federal lands, the control and total removal, disposal, and cleaning up of such oil or other pollutant, wherever found, shall be the responsibility of holder, regardless of fault. Upon failure of holder to control, dispose of, or clean up such discharge on or affecting Federal lands, or to repair all damages resulting therefrom, on the Federal lands, the Authorized Officer may take such measures as he deems necessary to control and clean up the discharge and restore the area, including where appropriate, the aquatic environment and fish and wildlife habitats, at the full expense of the holder. Such action by the Authorized Officer shall not relieve holder of any responsibility as provided herein.
- 5. All construction and maintenance activity will be confined to the authorized right-of-way.
- 6. The pipeline will be buried with a minimum cover of 36 inches between the top of the pipe and ground level.
- 7. The maximum allowable disturbance for construction in this right-of-way will be  $\underline{30}$  feet:
  - Blading of vegetation within the right-of-way will be allowed: maximum width of blading operations will not exceed <u>20</u> feet. The trench is included in this area. (Blading is defined as the complete removal of brush and ground vegetation.)
  - Clearing of brush species within the right-of-way will be allowed: maximum width of clearing operations will not exceed <u>30</u> feet. The trench and bladed area are included in this area. (Clearing is defined as the removal of brush while leaving ground vegetation (grasses, weeds, etc.) intact. Clearing is best accomplished by holding the blade 4 to 6 inches above the ground surface.)
  - The remaining area of the right-of-way (if any) shall only be disturbed by compressing the vegetation. (Compressing can be caused by vehicle tires, placement of equipment, etc.)
- 8. The holder shall stockpile an adequate amount of topsoil where blading is allowed. The topsoil to be stripped is approximately \_\_\_6\_\_ inches in depth. The topsoil will be segregated from other spoil piles from trench construction. The topsoil will be evenly distributed over the bladed area for the preparation of seeding.

- 9. The holder shall minimize disturbance to existing fences and other improvements on public lands. The holder is required to promptly repair improvements to at least their former state. Functional use of these improvements will be maintained at all times. The holder will contact the owner of any improvements prior to disturbing them. When necessary to pass through a fence line, the fence shall be braced on both sides of the passageway prior to cutting of the fence. No permanent gates will be allowed unless approved by the Authorized Officer.
- 10. Vegetation, soil, and rocks left as a result of construction or maintenance activity will be randomly scattered on this right-of-way and will not be left in rows, piles, or berms, unless otherwise approved by the Authorized Officer. The entire right-of-way shall be recontoured to match the surrounding landscape. The backfilled soil shall be compacted and a 6 inch berm will be left over the ditch line to allow for settling back to grade.
- 11. In those areas where erosion control structures are required to stabilize soil conditions, the holder will install such structures as are suitable for the specific soil conditions being encountered and which are in accordance with sound resource management practices.
- 12. The holder will reseed all disturbed areas. Seeding will be done according to the attached seeding requirements, using the following seed mix.

( ) seed mixture 1	( ) seed mixture 3
() seed mixture 2	( ) seed mixture 4
(X) seed mixture 2/LPC	( ) Aplomado Falcon Mixture

- 13. All above-ground structures not subject to safety requirements shall be painted by the holder to blend with the natural color of the landscape. The paint used shall be color which simulates "Standard Environmental Colors" **Shale Green**, Munsell Soil Color No. 5Y 4/2.
- 14. The pipeline will be identified by signs at the point of origin and completion of the right-of-way and at all road crossings. At a minimum, signs will state the holder's name, BLM serial number, and the product being transported. All signs and information thereon will be posted in a permanent, conspicuous manner, and will be maintained in a legible condition for the life of the pipeline.

- 15. The holder shall not use the pipeline route as a road for purposes other than routine maintenance as determined necessary by the Authorized Officer in consultation with the holder before maintenance begins. The holder will take whatever steps are necessary to ensure that the pipeline route is not used as a roadway. As determined necessary during the life of the pipeline, the Authorized Officer may ask the holder to construct temporary deterrence structures.
- 16. Any cultural and/or paleontological resources (historic or prehistoric site or object) discovered by the holder, or any person working on his behalf, on public or Federal land shall be immediately reported to the Authorized Officer. Holder shall suspend all operations in the immediate area of such discovery until written authorization to proceed is issued by the Authorized Officer. An evaluation of the discovery will be made by the Authorized Officer to determine appropriate actions to prevent the loss of significant cultural or scientific values. The holder will be responsible for the cost of evaluation and any decision as to proper mitigation measures will be made by the Authorized Officer after consulting with the holder.
- 17. The operator shall be held responsible if noxious weeds become established within the areas of operations. Weed control shall be required on the disturbed land where noxious weeds exist, which includes associated roads, pipeline corridor and adjacent land affected by the establishment of weeds due to this action. The operator shall consult with the Authorized Officer for acceptable weed control methods, which include following EPA and BLM requirements and policies.
- 18. <u>Escape Ramps</u> The operator will construct and maintain pipeline/utility trenches [that are not otherwise fenced, screened, or netted] to prevent livestock, wildlife, and humans from becoming entrapped. At a minimum, the operator will construct and maintain escape ramps, ladders, or other methods of avian and terrestrial wildlife escape in the trenches according to the following criteria:
  - a. Any trench left open for eight (8) hours or less is not required to have escape ramps; however, before the trench is backfilled, the contractor/operator shall inspect the trench for wildlife, remove all trapped wildlife, and release them at least 100 yards from the trench.
  - b. For trenches left open for eight (8) hours or more, earthen escape ramps (built at no more than a 30 degree slope and spaced no more than 500 feet apart) shall be placed in the trench.
- 19. Special Stipulations:

# Lesser Prairie-Chicken

Oil and gas activities will not be allowed in lesser prairie-chicken habitat during the period from March 1st through June 15th annually. During that period, other activities

that produce noise or involve human activity, such as the maintenance of oil and gas facilities, geophysical exploration other than 3-D operations, and pipeline, road, and well pad construction, will be allowed except between 3:00 am and 9:00 am. The 3:00 am to 9:00 am restriction will not apply to normal, around-the-clock operations, such as venting, flaring, or pumping, which do not require a human presence during this period. Normal vehicle use on existing roads will not be restricted. Exhaust noise from pump jack engines must be muffled or otherwise controlled so as not to exceed 75 db measured at 30 ft. from the source of the noise.

This authorization is subject to your Certificate of Participation and/or Certificate of Inclusion under the New Mexico Candidate Conservation Agreement. Because it involves surface disturbing activities covered under your Certificate, your Habitat Conservation Fund Account with the Center of Excellence for Hazardous Materials Management (CEHMM) will be debited according to Exhibit B Part 2 of the Certificate of Participation.

#### C. ELECTRIC LINES

STANDARD STIPULATIONS FOR OVERHEAD ELECTRIC DISTRIBUTION LINES

A copy of the grant and attachments, including stipulations, survey plat and/or map, will be on location during construction. BLM personnel may request to you a copy of your permit during construction to ensure compliance with all stipulations.

Holder agrees to comply with the following stipulations to the satisfaction of the Authorized Officer:

- 1. The holder shall indemnify the United States against any liability for damage to life or property arising from the occupancy or use of public lands under this grant.
- 2. The holder shall comply with all applicable Federal laws and regulations existing or hereafter enacted or promulgated. In any event, the holder shall comply with the Toxic Substances Control Act of 1976 as amended, 15 USC 2601 et seq. (1982) with regards to any toxic substances that are used, generated by or stored on the right-of-way or on facilities authorized under this right-of-way grant. (See 40 CFR, Part 702-799 and especially, provisions on polychlorinated biphenyls, 40 CFR 761.1-761.193.) Additionally, any release of toxic substances (leaks, spills, etc.) in excess of the reportable quantity established by 40 CFR, Part 117 shall be reported as required by the Comprehensive Environmental Response, Compensation, and Liability Act, section 102b. A copy of any report required or requested by any Federal agency or State government as a result of a reportable release or spill of any toxic substances shall be furnished to the authorized officer concurrent with the filing of the reports to the involved Federal agency or State government.
- 3. The holder agrees to indemnify the United States against any liability arising from the

release of any hazardous substance or hazardous waste (as these terms are defined in the Comprehensive Environmental Response, Compensation and Liability Act of 1980, 42 U.S.C. 9601, et seq. or the Resource Conservation and Recovery Act, 42 U.S.C. 6901, et seq.) on the Right-of-Way (unless the release or threatened release is wholly unrelated to the Right-of-Way holder's activity on the Right-of-Way), or resulting from the activity of the Right-of-Way holder on the Right-of-Way. This agreement applies without regard to whether a release is caused by the holder, its agent, or unrelated third parties.

- 4. There will be no clearing or blading of the right-of-way unless otherwise agreed to in writing by the Authorized Officer.
- 5. Power lines shall be constructed and designed in accordance to standards outlined in "Suggested Practices for Avian Protection on Power lines: The State of the Art in 2006" Edison Electric Institute, APLIC, and the California Energy Commission 2006. The holder shall assume the burden and expense of proving that pole designs not shown in the above publication deter raptor perching, roosting, and nesting. Such proof shall be provided by a raptor expert approved by the Authorized Officer. The BLM reserves the right to require modification or additions to all powerline structures placed on this right-of-way, should they be necessary to ensure the safety of large perching birds. Such modifications and/or additions shall be made by the holder without liability or expense to the United States.

Raptor deterrence will consist of but not limited to the following: triangle perch discouragers shall be placed on each side of the cross arms and a nonconductive perching deterrence shall be placed on all vertical poles that extend past the cross arms.

- 6. The holder shall minimize disturbance to existing fences and other improvements on public lands. The holder is required to promptly repair improvements to at least their former state. Functional use of these improvements will be maintained at all times. The holder will contact the owner of any improvements prior to disturbing them. When necessary to pass through a fence line, the fence shall be braced on both sides of the passageway prior to cutting the fence. No permanent gates will be allowed unless approved by the Authorized Officer.
- 7. The BLM serial number assigned to this authorization shall be posted in a permanent, conspicuous manner where the power line crosses roads and at all serviced facilities. Numbers will be at least two inches high and will be affixed to the pole nearest the road crossing and at the facilities served.
- 8. Upon cancellation, relinquishment, or expiration of this grant, the holder shall comply with those abandonment procedures as prescribed by the Authorized Officer.
- 9. All surface structures (poles, lines, transformers, etc.) shall be removed within 180 days of abandonment, relinquishment, or termination of use of the serviced facility or facilities or within 180 days of abandonment, relinquishment, cancellation, or expiration of this grant, whichever comes first. This will not apply where the power line extends

service to an active, adjoining facility or facilities.

10. Any cultural and/or paleontological resource (historic or prehistoric site or object) discovered by the holder, or any person working on his behalf, on public or Federal land shall be immediately reported to the Authorized Officer. Holder shall suspend all operations in the immediate area of such discovery until written authorization to proceed is issued by the Authorized Officer. An evaluation of the discovery will be made by the Authorized Officer to determine appropriate actions to prevent the loss of significant cultural or scientific values. The holder will be responsible for the cost of evaluation and any decision as to proper mitigation measures will be made by the Authorized Officer after consulting with the holder.

# 11. Special Stipulations:

- For reclamation remove poles, lines, transformer, etc. and dispose of properly.
- Fill in any holes from the poles removed.

# Timing Limitation Stipulation/Condition of Approval for Lesser Prairie-Chicken:

Oil and gas activities including 3-D geophysical exploration, and drilling will not be allowed in lesser prairie-chicken habitat during the period from March 1st through June 15th annually. During that period, other activities that produce noise or involve human activity, such as the maintenance of oil and gas facilities, geophysical exploration other than 3-D operations, and pipeline, road, and well pad construction, will be allowed except between 3:00 am and 9:00 am. The 3:00 am to 9:00 am restriction will not apply to normal, around-the-clock operations, such as venting, flaring, or pumping, which do not require a human presence during this period. Additionally, no new drilling will be allowed within up to 200 meters of leks known at the time of permitting. Normal vehicle use on existing roads will not be restricted. Exhaust noise from pump jack engines must be muffled or otherwise controlled so as not to exceed 75 db measured at 30 ft. from the source of the noise.

This authorization is subject to your Certificate of Participation and/or Certificate of Inclusion under the New Mexico Candidate Conservation Agreement. Because it involves surface disturbing activities covered under your Certificate, your Habitat Conservation Fund Account with the Center of Excellence for Hazardous Materials Management (CEHMM) will be debited according to Exhibit B Part 2 of the Certificate of Participation.

# VIII. INTERIM RECLAMATION

During the life of the development, all disturbed areas not needed for active support of production operations should undergo interim reclamation in order to minimize the environmental impacts of development on other resources and uses.

Within six (6) months of well completion, operators should work with BLM surface management specialists (Jim Amos: 575-234-5909) to devise the best strategies to reduce the size of the location. Interim reclamation should allow for remedial well operations, as well as safe and efficient removal of oil and gas.

During reclamation, the removal of caliche is important to increasing the success of revegetating the site. Removed caliche that is free of contaminants may be used for road repairs, fire walls or for building other roads and locations. In order to operate the well or complete workover operations, it may be necessary to drive, park and operate on restored interim vegetation within the previously disturbed area. Disturbing revegetated areas for production or workover operations will be allowed. If there is significant disturbance and loss of vegetation, the area will need to be revegetated. Communicate with the appropriate BLM office for any exceptions/exemptions if needed.

All disturbed areas after they have been satisfactorily prepared need to be reseeded with the seed mixture provided below.

Upon completion of interim reclamation, the operator shall submit a Sundry Notices and Reports on Wells, Subsequent Report of Reclamation (Form 3160-5).

### IX. FINAL ABANDONMENT & RECLAMATION

At final abandonment, well locations, production facilities, and access roads must undergo "final" reclamation so that the character and productivity of the land are restored.

Earthwork for final reclamation must be completed within six (6) months of well plugging. All pads, pits, facility locations and roads must be reclaimed to a satisfactory revegetated, safe, and stable condition, unless an agreement is made with the landowner or BLM to keep the road and/or pad intact.

After all disturbed areas have been satisfactorily prepared, these areas need to be revegetated with the seed mixture provided below. Seeding should be accomplished by drilling on the contour whenever practical or by other approved methods. Seeding may need to be repeated until revegetation is successful, as determined by the BLM.

Operators shall contact a BLM surface protection specialist prior to surface abandonment operations for site specific objectives (Jim Amos: 575-234-5909).

Ground-level Abandoned Well Marker to avoid raptor perching: Upon the plugging and subsequent abandonment of the well, the well marker will be installed at ground level on a plate containing the pertinent information for the plugged well.

# Seed Mixture for LPC Sand/Shinnery Sites

Holder shall seed all disturbed areas with the seed mixture listed below. The seed mixture shall be planted in the amounts specified in pounds of pure live seed (PLS)\* per acre. There shall be <u>no</u> primary or secondary noxious weeds in the seed mixture. Seed will be tested and the viability testing of seed shall be done in accordance with State law(s) and within nine (9) months prior to purchase. Commercial seed shall be either certified or registered seed. The seed container shall be tagged in accordance with State law(s) and available for inspection by the Authorized Officer.

Seed will be planted using a drill equipped with a depth regulator to ensure proper depth of planting where drilling is possible. The seed mixture will be evenly and uniformly planted over the disturbed area (smaller/heavier seeds have a tendency to drop the bottom of the drill and are planted first). Holder shall take appropriate measures to ensure this does not occur. Where drilling is not possible, seed will be broadcast and the area shall be raked or chained to cover the seed. When broadcasting the seed, the pounds per acre are to be doubled. Seeding shall be repeated until a satisfactory stand is established as determined by the Authorized Officer. Evaluation of growth may not be made before completion of at least one full growing season after seeding.

Species to be planted in pounds of pure live seed\* per acre:

Species	<u>lb/acre</u>
Plains Bristlegrass	5lbs/A
Sand Bluestem	5lbs/A
Little Bluestem	3lbs/A
Big Bluestem	6lbs/A
Plains Coreopsis	2lbs/A
Sand Dropseed	1lbs/A

<sup>\*</sup>Pounds of pure live seed:

Pounds of seed x percent purity x percent germination = pounds pure live seed