

UNITED STATES  
DEPARTMENT OF THE INTERIOR **HOBBS OCD**  
BUREAU OF LAND MANAGEMENT  
**APPLICATION FOR PERMIT TO DRILL OR REENTER**

5. Lease Serial No.  
NMLC0061873B

6. If Indian, Allottee or Tribe Name

7. If Unit or CA Agreement, Name and No.

8. Lease Name and Well No.  
MUSTANG #29 FED COM  
238H (526167)

9. API-Well No.  
90-025-46415 (91899)

10. Field and Pool, or Exploratory  
FED WC-025-G-06 S253206M / BONE SF

11. Sec., T, R, M, or Blk. and Survey or Area  
SEC 8 / T25S / R32E / NMP

1a. Type of work:  DRILL  REENTER **RECEIVED**  
1b. Type of Well:  Oil Well  Gas Well  Other  
1c. Type of Completion:  Hydraulic Fracturing  Single Zone  Multiple Zone

2. Name of Operator  
DEVON ENERGY PRODUCTION COMPANY LP (6137)

3a. Address  
333 West Sheridan Avenue Oklahoma City OK 73102  
3b. Phone No. (include area code)  
(800)583-3866

4. Location of Well (Report location clearly and in accordance with any State requirements. \*)  
At surface SENE / 2463 FNL / 695 FEL / LAT 32.1453727 / LONG -103.6908546  
At proposed prod. zone SENE / 2620 FNL / 900 FEL / LAT 32.1013805 / LONG -103.691545

14. Distance in miles and direction from nearest town or post office\*  
12. County or Parish  
LEA  
13. State  
NM

15. Distance from proposed\* location to nearest property or lease line, ft. (Also to nearest drig. unit line, if any) 695 feet  
16. No of acres in lease 1759.31  
17. Spacing Unit dedicated to this well 480

18. Distance from proposed location\* to nearest well, drilling, completed, applied for, on this lease, ft. 1018 feet  
19. Proposed Depth 11615 feet / 27582 feet  
20. BLM/BIA Bond No. in file FED: NMB000801

21. Elevations (Show whether DF, KDB, RT, GL, etc.) 3434 feet  
22. Approximate date work will start\* 12/01/2019  
23. Estimated duration 45 days

24. Attachments

The following, completed in accordance with the requirements of Onshore Oil and Gas Order No. 1, and the Hydraulic Fracturing rule per 43 CFR 3162.3-3 (as applicable)

- 1. Well plat certified by a registered surveyor.
- 2. A Drilling Plan.
- 3. A Surface Use Plan (if the location is on National Forest System Lands, the SUPO must be filed with the appropriate Forest Service Office).
- 4. Bond to cover the operations unless covered by an existing bond on file (see Item 20 above).
- 5. Operator certification.
- 6. Such other site specific information and/or plans as may be requested by the BLM.

25. Signature (Electronic Submission) Name (Printed/Typed) Date  
Jenny Harms / Ph: (405)524-4902 04/10/2019

Title  
Regulatory Compliance Professional

Approved by (Signature) (Electronic Submission) Name (Printed/Typed) Date  
Cody Layton / Ph: (575)234-5959 09/27/2019

Title  
Assistant Field Manager Lands & Minerals  
Office  
CARLSBAD

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

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

Rec GCP 10/01/19

**APPROVED WITH CONDITIONS**  
Approval Date: 09/27/2019

KN  
10/08/19  
Double checked

## INSTRUCTIONS

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

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

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

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

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

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

**ITEM 24:** If the proposal will involve hydraulic fracturing operations, you must comply with 43 CFR 3162.3-3, including providing information about the protection of usable water. Operators should provide the best available information about all formations containing water and their depths. This information could include data and interpretation of resistivity logs run on nearby wells. Information may also be obtained from state or tribal regulatory agencies and from local BLM offices.

## NOTICES

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

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

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

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

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

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

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

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

## Additional Operator Remarks

### Location of Well

1. SHL: SENE / 2463 FNL / 695 FEL / TWSP: 25S / RANGE: 32E / SECTION: 8 / LAT: 32.1453727 / LONG: -103.6908546 ( TVD: 0 feet, MD: 0 feet )  
PPP: SENE / 2537 FSL / 900 FEL / TWSP: 25S / RANGE: 32E / SECTION: 8 / LAT: 32.1445996 / LONG: -103.6915147 ( TVD: 10069 feet, MD: 10150 feet )  
PPP: NENE / 1 FNL / 900 FEL / TWSP: 25S / RANGE: 32E / SECTION: 20 / LAT: 32.137612 / LONG: -103.691519 ( TVD: 11615 feet, MD: 14400 feet )  
BHL: SENE / 2620 FNL / 900 FEL / TWSP: 24S / RANGE: 32E / SECTION: 29 / LAT: 32.1013805 / LONG: -103.691545 ( TVD: 11615 feet, MD: 27582 feet )

### BLM Point of Contact

Name: Candy Vigil  
Title: Admin Support Assistant  
Phone: 5752345982  
Email: cvigil@blm.gov

**CONFIDENTIAL**

## Review and Appeal Rights

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

## Geologic Conditions of Approval

:

All APDs in Basin Areas need to consist of: Rustler Top of Salt Base of Salt Lamar Bell Canyon Cherry Canyon Brushy Canyon Bone Springs Lime 1st Bone Sand 2nd Bone Sand 3rd Bone Lime (if near or in Potash Area) 3rd Bone Sand Wolfcamp Strawn \*All formation casing setting depths, TVD formations.

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*Application for Permit to Drill*

**APD Package Report**

Date Printed: 09/29/2019 07:47 PM

APD ID: 10400040680

Well Status: AAPD

APD Received Date: 04/10/2019 03:00 PM

Well Name: MUSTANG 8-29 FED COM

Operator: DEVON ENERGY PRODUCTION CC Well Number: 238H

APD Package Report Contents

- Form 3160-3
- Operator Certification Report
- Application Report
- Application Attachments
  - Well Plat: 1 file(s)
- Drilling Plan Report
- Drilling Plan Attachments
  - Blowout Prevention Choke Diagram Attachment: 4 file(s)
  - Blowout Prevention BOP Diagram Attachment: 4 file(s)
  - Casing Design Assumptions and Worksheet(s): 6 file(s)
  - Hydrogen sulfide drilling operations plan: 1 file(s)
  - Proposed horizontal/directional/multi-lateral plan submission: 4 file(s)
  - Other Facets: 5 file(s)
  - Other Variances: 1 file(s)
- SUPO Report
- SUPO Attachments
  - Existing Road Map: 1 file(s)
  - New Road Map: 1 file(s)
  - Attach Well map: 1 file(s)
  - Water source and transportation map: 1 file(s)
  - Construction Materials source location attachment: 1 file(s)
  - Well Site Layout Diagram: 1 file(s)
  - Recontouring attachment: 1 file(s)
  - Other SUPO Attachment: 7 file(s)
- PWD Report
- PWD Attachments
  - None

- Bond Report
- Bond Attachments
  - None

## PECOS DISTRICT DRILLING CONDITIONS OF APPROVAL

<b>OPERATOR'S NAME:</b>	<b>Devon Energy Production Company LP</b>
<b>LEASE NO.:</b>	<b>NMLC0061873B</b>
<b>WELL NAME &amp; NO.:</b>	<b>Mustang 8-17 Fed Com 238H</b>
<b>SURFACE HOLE FOOTAGE:</b>	<b>2463'/N &amp; 695'/E</b>
<b>BOTTOM HOLE FOOTAGE:</b>	<b>2620'/S &amp; 900'/E</b>
<b>LOCATION:</b>	<b>Section 8, T.25 S., R.32 E., NMPM</b>
<b>COUNTY:</b>	<b>Lea County, New Mexico</b>

COA

H2S	<input checked="" type="radio"/> Yes	<input type="radio"/> No	
Potash	<input checked="" type="radio"/> None	<input type="radio"/> Secretary	<input type="radio"/> R-111-P
Cave/Karst Potential	<input checked="" type="radio"/> Low	<input type="radio"/> Medium	<input type="radio"/> High
Variance	<input type="radio"/> None	<input checked="" type="radio"/> Flex Hose	<input type="radio"/> Other
Wellhead	<input type="radio"/> Conventional	<input type="radio"/> Multibowl	<input checked="" type="radio"/> Both
Other	<input type="checkbox"/> 4 String Area	<input type="checkbox"/> Capitan Reef	<input type="checkbox"/> WIPP
Other	<input checked="" type="checkbox"/> Fluid Filled	<input checked="" type="checkbox"/> Cement Squeeze	<input type="checkbox"/> Pilot Hole
Special Requirements	<input type="checkbox"/> Water Disposal	<input checked="" type="checkbox"/> COM	<input type="checkbox"/> Unit

### A. HYDROGEN SULFIDE

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

### B. CASING

1. The 13-3/8 inch surface casing shall be set at approximately **830 feet** (a minimum of **25 feet (Lea County)** into the Rustler Anhydrite and above the salt) and cemented to the surface.
  - a. 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.
  - b. Wait on cement (WOC) time for a primary cement job will be a minimum of **8 hours** or 500 pounds compressive strength, whichever is greater. (This is to

- include the lead cement)
- c. 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.
  - d. If cement falls back, remedial cementing will be done prior to drilling out that string.

**Intermediate casing must be kept fluid filled to meet BLM minimum collapse requirement.**

2. The minimum required fill of cement behind the 9-5/8 inch intermediate casing shall be set at approximately **4601 feet** is:

**Option 1 (Single Stage):**

- Cement to surface. If cement does not circulate see B.1.a, c-d above.

**Option 2:**

Operator has proposed a DV tool, the depth may be adjusted as long as the cement is changed proportionally. The DV tool may be cancelled if cement circulates to surface on the first stage.

- a. First stage to DV tool: Cement to circulate. If cement does not circulate off the DV tool, contact the appropriate BLM office before proceeding with second stage cement job.
- b. Second stage above DV tool:
  - Cement to surface. If cement does not circulate, contact the appropriate BLM office.

**Operator has proposed to pump down 13-3/8" X 9-5/8" annulus. Operator must run a CBL from TD of the 9-5/8" casing to surface. Submit results to BLM.**

3. The minimum required fill of cement behind the 5-1/2 inch production casing is:
  - Cement should tie-back at least **200 feet** into previous casing string. Operator shall provide method of verification.  
**Cement excess is less than 25%, more cement might be required. (11.55%)**

## C. PRESSURE CONTROL

1. Variance approved to use flex line from BOP to choke manifold. Manufacturer's specification to be readily available. No external damage to flex line. Flex line to be installed as straight as possible (no hard bends).'
- 2.

### Option 1:

- a. Minimum working pressure of the blowout preventer (BOP) and related equipment (BOPE) required for drilling below the surface casing shoe shall be **5000 (5M)** psi.
- b. Minimum working pressure of the blowout preventer (BOP) and related equipment (BOPE) required for drilling below the intermediate casing shoe shall be **5000 (5M)** psi.

### Option 2:

1. 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 **5000 (5M)** 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. 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.
  - e. Whenever any seal subject to test pressure is broken, all the tests in OOGO2.III.A.2.i must be followed.

## D. SPECIAL REQUIREMENT (S)

### 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.

## GENERAL 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

Lea County

Call the Hobbs Field Station, 414 West Taylor, Hobbs NM 88240, (575)  
393-3612

1. 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.
  - a. In the event the operator has proposed to drill multiple wells utilizing a skid/walking rig. Operator shall secure the wellbore on the current well, after installing and testing the wellhead, by installing a blind flange of like pressure rating to the wellhead and a pressure gauge that can be monitored while drilling is performed on the other well(s).
  - b. When the operator proposes to set surface casing with Spudder Rig
    - Notify the BLM when moving in and removing the Spudder Rig.
    - Notify the BLM when moving in the 2<sup>nd</sup> Rig. Rig to be moved in within 90 days of notification that Spudder Rig has left the location.
    - BOP/BOPE test to be conducted per Onshore Oil and Gas Order No. 2 as soon as 2nd Rig is rigged up on well.
2. 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 are located, this does not include the dog house or stairway area.
3. 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.

## A. CASING

1. 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.
2. Wait on cement (WOC) for Potash Areas: 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 for all cement blends, 2) until cement has been in place at least 24 hours. WOC time will be recorded in the driller's log. The casing integrity test can be done (prior to the cement setting up) immediately after bumping the plug.
3. 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. The casing integrity test can be done (prior to the cement setting up) immediately after bumping the plug.
4. Provide compressive strengths including hours to reach required 500 pounds compressive strength prior to cementing each casing string. Have well specific cement details onsite prior to pumping the cement for each casing string.
5. No pea gravel permitted for remedial or fall back remedial without prior authorization from the BLM engineer.
6. On that portion of any well approved for a 5M BOPE system or greater, a pressure integrity test of each casing shoe shall be performed. Formation at the shoe shall be tested to a minimum of the mud weight equivalent anticipated to control the formation pressure to the next casing depth or at total depth of the well. This test shall be performed before drilling more than 20 feet of new hole.
7. 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.
8. Whenever a casing string is cemented in the R-111-P potash area, the NMOCD requirements shall be followed.

## B. PRESSURE CONTROL

1. 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 RP 53 Sec. 17.
2. If a variance is approved for a flexible hose to be installed from the BOP to the choke manifold, the following requirements apply: 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.
3. 5M or higher system requires an HCR valve, remote kill line and annular to match. The remote kill line is to be installed prior to testing the system and tested to stack pressure.
4. If the operator has proposed a multi-bowl wellhead assembly in the APD. The following requirements must be met:
  - 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. Whenever any seal subject to test pressure is broken, all the tests in OOGO2.III.A.2.i must be followed.
  - 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.
5. The appropriate BLM office shall be notified a minimum of 4 hours in advance for a representative to witness the tests.
  - a. 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).

- b. In potash areas, 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. For all casing strings, casing cut-off and BOP installation can be initiated at twelve hours after bumping the plug. However, **no tests** shall commence until the cement has had a minimum of 24 hours setup time, except the casing pressure test can be initiated immediately after bumping the plug (only applies to single stage cement jobs).
- c. The tests shall be done by an independent service company utilizing a test plug not a cup or J-packer. The operator also has the option of utilizing an independent tester to test without a plug (i.e. against the casing) pursuant to Onshore Order 2 with the pressure not to exceed 70% of the burst rating for the casing. Any test against the casing must meet the WOC time for water basin (8 hours) or potash (24 hours) or 500 pounds compressive strength, whichever is greater, prior to initiating the test (see casing segment as lead cement may be critical item).
- d. 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.
- e. The results of the test shall be reported to the appropriate BLM office.
- f. 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.
- g. 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.
- h. BOP/BOPE must be tested by an independent service company within 500 feet of the top of the Wolfcamp formation if the time between the setting of the intermediate casing and reaching this depth exceeds 20 days. This test does not exclude the test prior to drilling out the casing shoe as per Onshore Order No. 2.

C. DRILLING MUD

Mud system monitoring equipment, with derrick floor indicators and visual and audio alarms, shall be operating before drilling into the Wolfcamp formation, and shall be used until production casing is run and cemented.

**D. 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.

**PECOS DISTRICT  
SURFACE USE  
CONDITIONS OF APPROVAL**

OPERATOR'S NAME:	Devon Energy Production Company LP
WELL NAME & NO.:	Mustang 8-17 Fed Com 237H
SURFACE HOLE FOOTAGE:	2463'/N & 725'/E
BOTTOM HOLE FOOTAGE:	20'/S & 2225'/E
LOCATION:	Section 8, T.25 S., R.32 E., NMPM
COUNTY:	Lea 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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- Archaeology, Paleontology, and Historical Sites**
- Noxious Weeds**
- Special Requirements**
  - Lesser Prairie-Chicken Timing Stipulations
  - Ground-level Abandoned Well Marker
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- Production (Post Drilling)**
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- Interim Reclamation**
- Final Abandonment & Reclamation**

**Approval Date: 09/27/2019**

## **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.

### **Timing Limitation Exceptions:**

The Carlsbad Field Office will publish an annual map of where the LPC timing and noise stipulations and conditions of approval (Limitations) will apply for the identified year (between March 1 and June 15) based on the latest survey information. The LPC Timing Area map will identify areas which are Habitat Areas (HA), Isolated Population Area (IPA), and Primary Population Area (PPA). The LPC Timing Area map will also have an area in red crosshatch. The red crosshatch area is the only area where an operator is required to submit a request for exception to the LPC Limitations. If an operator is operating outside the red crosshatch area, the LPC Limitations do not apply for that year and an exception to LPC Limitations is not required.

**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.

### **Hydrological Features Stipulations / Condition of Approval**

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.

Any water erosion that may occur due to the construction of the well pad during the life of the well will be quickly corrected and proper measures will be taken to prevent future erosion.

Tank battery locations will be lined and bermed. A 20 mil permanent liner will be installed with a 4 oz. felt backing to prevent tears or punctures. Tank battery berms must be large enough to contain 1 ½ times the content of the largest tank.

Automatic shut off, check valves, or similar systems will be installed for tanks to minimize the effects of catastrophic line failures used in production or drilling.

### **Range Stipulations / Conditions of Approval**

#### *Cattleguards*

Where a permanent cattlegaurd is approved, an appropriately sized cattleguard(s) sufficient to carry out the project shall be installed and maintained at fence crossing(s). Any existing cattleguard(s) on the access road 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 cattleguard(s) that are in place and are utilized during lease operations. A gate shall be constructed on one side of the cattleguard and fastened securely to H-braces.

#### *Fence Requirement*

Where entry granted across a fence line, the fence must be braced and tied off on both sides of the passageway prior to cutting. Once the work is completed, the fence will be restored to its prior condition, or better. The operator shall notify the private surface landowner or the grazing allotment holder prior to crossing any fence(s).

#### *Livestock Watering Requirement*

Structures that provide water to livestock, such as windmills, pipelines, drinking troughs, and earthen reservoirs, will be avoided by moving the proposed action.

## **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**

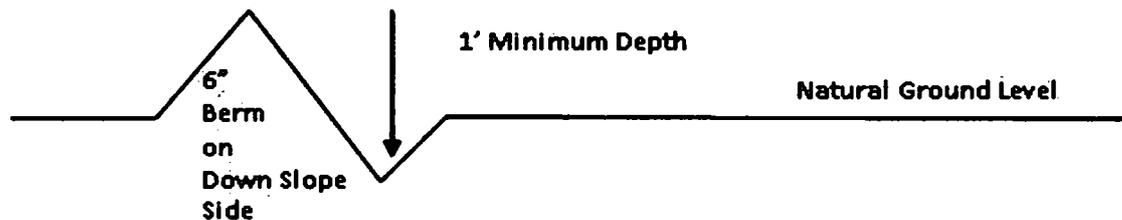
Vehicle turnouts shall be constructed on the road. Turnouts shall be intervisible with interval spacing distance less than 1000 feet. Turnouts shall conform to Figure 1; cross section and plans for typical road construction.

### **Drainage**

Drainage control systems shall be constructed on the entire length of road (e.g. ditches, sidehill out sloping 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:

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

### 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
2. Construct road

3. Redistribute topsoil
4. Revegetate slopes

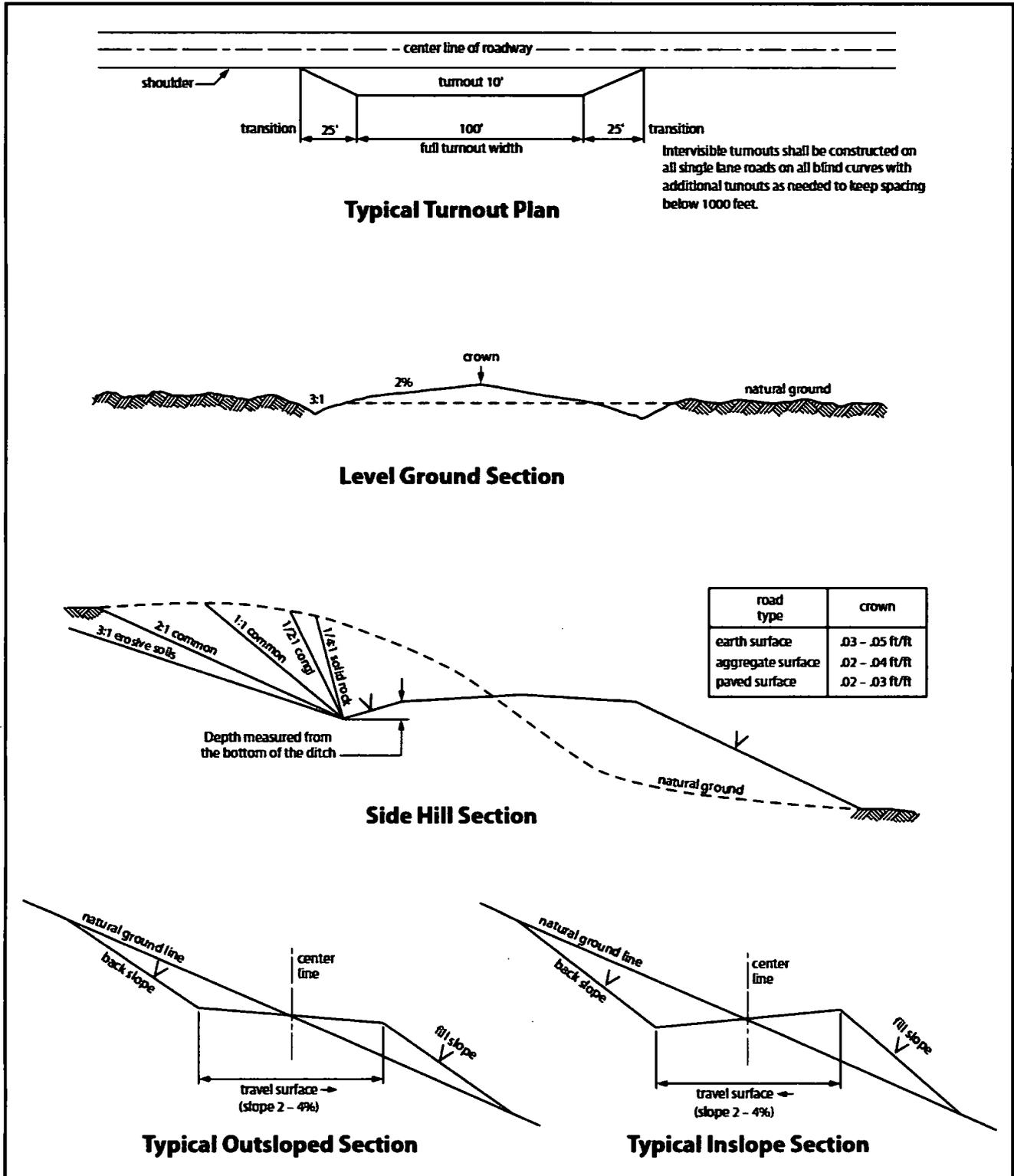


Figure 1. Cross-sections and plans for typical road sections representative of BLM resource or FS local and higher-class roads.

## **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**

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 30 feet:

- Blading of vegetation within the right-of-way will be allowed: maximum width of blading operations will not exceed 20 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 30 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.

- |  |  |
|--|--|
| <input type="checkbox"/> seed mixture 1                | <input type="checkbox"/> seed mixture 3          |
| <input type="checkbox"/> seed mixture 2                | <input type="checkbox"/> seed mixture 4          |
| <input checked="" type="checkbox"/> seed mixture 2/LPC | <input type="checkbox"/> 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. Escape Ramps - 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:

**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 leaks 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.

**Timing Limitation Exceptions:**

The Carlsbad Field Office will publish an annual map of where the LPC timing and noise stipulations and conditions of approval (Limitations) will apply for the identified year (between March 1 and June 15) based on the latest survey information. The LPC Timing Area map will identify areas which are Habitat Areas (HA), Isolated Population Area (IPA), and Primary Population Area (PPA). The LPC Timing Area map will also have an area in red crosshatch. The red crosshatch area is the only area where an operator is required to submit a request for exception to the LPC Limitations. If an operator is operating outside the red crosshatch area, the LPC Limitations do not apply for that year and an exception to LPC Limitations is not required.

**Range Stipulations / Conditions of Approval**

*Cattleguards*

Where a permanent cattleguard is approved, an appropriately sized cattleguard(s) sufficient to carry out the project shall be installed and maintained at fence crossing(s). Any existing cattleguard(s) on the access road 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 cattleguard(s) that are in place and are utilized during lease operations. A gate shall be constructed on one side of the cattleguard and fastened securely to H-braces.

*Fence Requirement*

Where entry granted across a fence line, the fence must be braced and tied off on both sides of the passageway prior to cutting. Once the work is completed, the fence will be restored to its prior condition, or better. The operator shall notify the private surface landowner or the grazing allotment holder prior to crossing any fence(s).

*Livestock Watering Requirement*

Structures that provide water to livestock, such as windmills, pipelines, drinking troughs, and earthen reservoirs, will be avoided by moving the proposed action.

**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 deterrent 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, 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.

**Timing Limitation Exceptions:**

The Carlsbad Field Office will publish an annual map of where the LPC timing and noise stipulations and conditions of approval (Limitations) will apply for the identified year (between March 1 and June 15) based on the latest survey information. The LPC Timing Area map will identify areas which are Habitat Areas (HA), Isolated Population Area (IPA), and Primary Population Area (PPA). The LPC Timing Area map will also have an area in red crosshatch. The red crosshatch area is the only area where an operator is required to submit a request for exception to the LPC Limitations. If an operator is operating outside the red crosshatch area, the LPC Limitations do not apply for that year and an exception to LPC Limitations is not required.

**D. OIL AND GAS RELATED SITES**

**STANDARD STIPULATIONS FOR OIL AND GAS RELATED SITES**

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

The holder agrees to comply with the following stipulations to the satisfaction of the Authorized Officer, BLM.

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 and for all response costs, penalties, damages, claims, and other costs arising from the provisions of the Resource Conservation and Recovery Act (RCRA), 42 U.S.C. Chap. 82, Section 6901 et. seq., from the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA), 42 U.S.C. Chap. 109, Section 9601 et. seq., and from other applicable environmental statutes.

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 U.S.C. 2601, et. seq.) with regard to any toxic substances that are used, generated by or stored on the right-of-way or on facilities authorized by this 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). 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 site or related pipeline(s), any oil or other pollutant should be discharged from site facilities, the pipeline(s) or from containers or vehicles impacting Federal lands, the control and total removal, disposal, and cleanup of such oil or other pollutant, wherever found, shall be the responsibility of the holder, regardless of fault. Upon failure of the holder to control, dispose of, or clean up such discharge on or affecting Federal lands, or to repair all damages to Federal lands resulting therefrom, the Authorized Officer may take such measures as deemed necessary to control and cleanup 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 the holder of any liability or responsibility.

5. Sites shall be maintained in an orderly, sanitary condition at all times. Waste materials, both liquid and solid, shall be disposed of promptly at an appropriate, authorized waste disposal facility in accordance with all applicable State and Federal laws. "Waste" means all discarded matter including, but not limited to, human waste, trash, garbage, refuse, petroleum products, brines, chemicals, oil drums, ashes, and equipment.

6. The operator will notify the Bureau of Land Management (BLM) authorized officer and nearest Fish and Wildlife Service (FWS) Law Enforcement office within 24 hours, if the operator discovers a dead or injured federally protected species (i.e., migratory bird species, bald or golden eagle, or species listed by the FWS as threatened or endangered) in or adjacent to a pit, trench, tank, exhaust stack, or fence. (If the operator is unable to contact the FWS Law Enforcement office, the operator must contact the nearest FWS Ecological Services office.)

7. 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 a color which simulates "Standard Environmental Colors" designated by the Rocky Mountain

Five-State Interagency Committee. The color selected for this project is **Shale Green**, Munsell Soil Color Chart Number 5Y 4/2.

8. Any cultural and/or paleontological resource (historic or prehistoric site or object) discovered by the holder, or any person working on the holder's behalf, on public or Federal land shall be immediately reported to the Authorized Officer. The 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 the proper mitigation measures will be made by the Authorized Officer after consulting with the holder.

9. A sales contract for removal of mineral material (caliche, sand, gravel, fill dirt) from an authorized pit, site, or on location must be obtained from the BLM prior to commencing construction. There are several options available for purchasing mineral material: contact the BLM office (575-234-5972).

10. 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.

11. Once the site is no longer in service or use, the site must undergo final abandonment. At final abandonment, the site 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 the abandonment of the site. All pads and 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. 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).

12. The holder shall stockpile an adequate amount of topsoil where blading occurs. The topsoil to be stripped is approximately   6   inches in depth. The topsoil will be segregated from other spoil piles. The topsoil will be used for final reclamation.

13. The holder will reseed all disturbed areas. Seeding will be done according to the attached seeding requirements, using the following seed mix.

- |  |  |
|--|--|
| <input type="checkbox"/> seed mixture 1                | <input type="checkbox"/> seed mixture 3          |
| <input type="checkbox"/> seed mixture 2                | <input type="checkbox"/> seed mixture 4          |
| <input checked="" type="checkbox"/> seed mixture 2/LPC | <input type="checkbox"/> Aplomado Falcon Mixture |

14. In those areas where erosion control structures are required to stabilize soil conditions, the holder shall install such structures as are suitable for the specific soil conditions being encountered and which are in accordance with sound management practices. Any earth work will require prior approval by the Authorized Officer.

15. Open-topped Tanks - 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

16. 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 enclosure systems such as fencing, netting, expanded metal mesh, lids, and grate covers. Use a maximum netting mesh size of 1 ½ inches.

17. Open-Vent Exhaust Stack Enclosures – 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 enclosure 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.

18. 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.

19. Special Stipulations:

- 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.
- Any water erosion that may occur due to the construction of the well pad during the life of the well will be corrected within two weeks and proper measures will be taken to prevent future erosion.

**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 permanent engines must be muffled or otherwise controlled so as not to exceed 75 db measured at 30 ft. from the source of the noise.

**Timing Limitation Exceptions:**

The Carlsbad Field Office will publish an annual map of where the LPC timing and noise stipulations and conditions of approval (Limitations) will apply for the identified year (between March 1 and June 15) based on the latest survey information. The LPC Timing Area map will identify areas which are Habitat Areas (HA), Isolated Population Area (IPA), and Primary Population Area (PPA). The LPC Timing Area map will also have an area in red crosshatch. The red crosshatch area is the only area where an operator is required to submit a request for exception to the LPC Limitations. If an operator is operating outside the red crosshatch area, the LPC Limitations do not apply for that year and an exception to LPC Limitations is not required.

### **Hydrological Features Stipulations / Condition of Approval**

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.

Any water erosion that may occur due to the construction of the well pad during the life of the well will be quickly corrected and proper measures will be taken to prevent future erosion.

Tank battery locations will be lined and bermed. A 20 mil permanent liner will be installed with a 4 oz. felt backing to prevent tears or punctures. Tank battery berms must be large enough to contain 1 ½ times the content of the largest tank. Automatic shut off, check valves, or similar systems will be installed for tanks to minimize the effects of catastrophic line failures used in production or drilling.

### **Range Stipulations / Conditions of Approval**

#### *Cattleguards*

Where a permanent cattleguard is approved, an appropriately sized cattleguard(s) sufficient to carry out the project shall be installed and maintained at fence crossing(s). Any existing cattleguard(s) on the access road 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 cattleguard(s) that are in place and are utilized during lease operations. A gate shall be constructed on one side of the cattleguard and fastened securely to H-braces.

#### *Fence Requirement*

Where entry granted across a fence line, the fence must be braced and tied off on both sides of the passageway prior to cutting. Once the work is completed, the fence will be restored to its prior condition, or better. The operator shall notify the private surface landowner or the grazing allotment holder prior to crossing any fence(s).

#### *Livestock Watering Requirement*

Structures that provide water to livestock, such as windmills, pipelines, drinking troughs, and earthen reservoirs, will be avoided by moving the proposed action.

## **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 no 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:

<u>Species</u>	<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

\*Pounds of pure live seed:

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



**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:** Jenny Harms

**Signed on:** 04/08/2019

**Title:** Regulatory Compliance Professional

**Street Address:** 333 W SHERDIAN AVE

**City:** OKLAHOMA CITY                      **State:** OK

**Zip:** 73170

**Phone:** (405)524-4902

**Email address:** RAY.VAZ@DVN.COM

**Field Representative**

**Representative Name:** Ray vaz

**Street Address:** 333 WEST SHERIDAN AVE

**City:** OKLAHOMA CITY                      **State:** OK

**Zip:** 73102

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

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

APD ID: 10400040680

Submission Date: 04/10/2019

Operator Name: DEVON ENERGY PRODUCTION COMPANY LP

Well Name: MUSTANG 8-29 FED COM

Well Number: 238H

Well Type: OIL WELL

Well Work Type: Drill

  
[Show Final Text](#)**Section 1 - General**

APD ID: 10400040680

Tie to previous NOS?

Submission Date: 04/10/2019

BLM Office: CARLSBAD

User: Jenny Harms

Title: Regulatory Compliance

Federal/Indian APD: FED

Is the first lease penetrated for production Federal or Indian? FED

Lease number: NMLC0061873B

Lease Acres: 1759.31

Surface access agreement in place?

Allotted?

Reservation:

Agreement in place? NO

Federal or Indian agreement:

Agreement number:

Agreement name:

Keep application confidential? YES

Permitting Agent? NO

APD Operator: DEVON ENERGY PRODUCTION COMPANY LP

Operator letter of designation:

**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: (800)583-3866

Operator Internet Address:

**Section 2 - Well Information**

Well in Master Development Plan? NO

Master Development Plan name:

Well in Master SUPO? NO

Master SUPO name:

Well in Master Drilling Plan? NO

Master Drilling Plan name:

Well Name: MUSTANG 8-29 FED COM

Well Number: 238H

Well API Number:

Field/Pool or Exploratory? Field and Pool

Field Name: FED WC-025 G-06  
S253206MPool Name: BONE SPRING  
(OIL)

Operator Name: DEVON ENERGY PRODUCTION COMPANY LP

Well Name: MUSTANG 8-29 FED COM

Well Number: 238H

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

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: CHINCOTEAGUE 8 PAD

Number: 3

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: 1018 FT

Distance to lease line: 695 FT

Reservoir well spacing assigned acres Measurement: 480 Acres

Well plat: AA000213614\_MUSTANG\_8\_29\_FED\_COM\_238H\_WL\_P\_R2\_C102\_signed\_8\_19\_2019\_20190819121344.pdf

Well work start Date: 12/01/2019

Duration: 45 DAYS

Section 3 - Well Location Table

Survey Type: RECTANGULAR

Describe Survey Type:

Datum: NAD83

Vertical Datum: NAVD88

Survey number: 7012B

Reference Datum:

	NS-Foot	NS Indicator	EW-Foot	EW Indicator	Twsp	Range	Section	Aliquot/Lot/Tract	Latitude	Longitude	County	State	Meridian	Lease Type	Lease Number	Elevation	MD	TVD
SHL Leg #1		FNL	695	FEL	25S	32E		Aliquot SENE			LEA	NEW MEXI CO	NEW MEXI CO	F	NMLC0 061873 B			
KOP Leg #1		FNL	900	FEL	25S	32E		Aliquot SENE			LEA	NEW MEXI CO	NEW MEXI CO	F	NMLC0 061873 B			
PPP Leg #1		FNL	900	FEL	25S	32E		Aliquot NENE			LEA	NEW MEXI CO	NEW MEXI CO	F	NMLC0 061869			

Planning Report - Geographic

<b>Database:</b>	EDM r5000.141_Prod US	<b>Local Co-ordinate Reference:</b>	Well Mustang 8-29 Fed Com 238H
<b>Company:</b>	WCDSC Permian NM	<b>TVD Reference:</b>	RKB @ 3459.20ft
<b>Project:</b>	Lea County (NAD83 New Mexico East)	<b>MD Reference:</b>	RKB @ 3459.20ft
<b>Site:</b>	Sec 08-T25S-R32E	<b>North Reference:</b>	Grid
<b>Well:</b>	Mustang 8-29 Fed Com 238H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	Permit Plan 1		

<b>Project</b>	Lea County (NAD83 New Mexico East)		
<b>Map System:</b>	US State Plane 1983	<b>System Datum:</b>	Mean Sea Level
<b>Geo Datum:</b>	North American Datum 1983		
<b>Map Zone:</b>	New Mexico Eastern Zone		

<b>Site</b>	Sec 08-T25S-R32E				
<b>Site Position:</b>		<b>Northing:</b>	419,630.47 usft	<b>Latitude:</b>	32.152087
<b>From:</b>	Map	<b>Easting:</b>	735,551.49 usft	<b>Longitude:</b>	-103.705780
<b>Position Uncertainty:</b>	0.00 ft	<b>Slot Radius:</b>	13-3/16 "	<b>Grid Convergence:</b>	0.33 °

<b>Well</b>	Mustang 8-29 Fed Com 238H					
<b>Well Position</b>	<b>+N/-S</b>	0.00 ft	<b>Northing:</b>	417,215.28 usft	<b>Latitude:</b>	32.145373
	<b>+E/-W</b>	0.00 ft	<b>Easting:</b>	740,185.19 usft	<b>Longitude:</b>	-103.690855
<b>Position Uncertainty</b>		0.50 ft	<b>Wellhead Elevation:</b>		<b>Ground Level:</b>	3,434.20 ft

<b>Wellbore</b>	Wellbore #1				
<b>Magnetics</b>	<b>Model Name</b>	<b>Sample Date</b>	<b>Declination (°)</b>	<b>Dip Angle (°)</b>	<b>Field Strength (nT)</b>
	IGRF2015	3/20/2019	6.81	59.95	47,698.46929495

<b>Design</b>	Permit Plan 1			
<b>Audit Notes:</b>				
<b>Version:</b>	<b>Phase:</b>	PROTOTYPE	<b>Tie On Depth:</b>	0.00
<b>Vertical Section:</b>	<b>Depth From (TVD) (ft)</b>	<b>+N/-S (ft)</b>	<b>+E/-W (ft)</b>	<b>Direction (°)</b>
	0.00	0.00	0.00	180.42

<b>Plan Survey Tool Program</b>	<b>Date</b>	3/28/2019		
<b>Depth From (ft)</b>	<b>Depth To (ft)</b>	<b>Survey (Wellbore)</b>	<b>Tool Name</b>	<b>Remarks</b>
1	0.00	27,580.55 Permit Plan 1 (Wellbore #1)	MWD+HDGM OWSG MWD + HDGM	

<b>Plan Sections</b>										
<b>Measured Depth (ft)</b>	<b>Inclination (°)</b>	<b>Azimuth (°)</b>	<b>Vertical Depth (ft)</b>	<b>+N/-S (ft)</b>	<b>+E/-W (ft)</b>	<b>Dogleg Rate (°/100usft)</b>	<b>Build Rate (°/100usft)</b>	<b>Turn Rate (°/100usft)</b>	<b>TFO (°)</b>	<b>Target</b>
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
4,000.00	0.00	0.00	4,000.00	0.00	0.00	0.00	0.00	0.00	0.00	
4,201.61	2.52	314.29	4,201.55	3.10	-3.17	1.25	1.25	0.00	314.29	
10,530.23	2.52	314.29	10,524.04	197.42	-202.36	0.00	0.00	0.00	0.00	
10,698.24	0.00	0.00	10,692.00	200.00	-205.00	1.50	-1.50	0.00	180.00	
11,048.28	0.00	0.00	11,042.04	200.00	-205.00	0.00	0.00	0.00	0.00	
11,948.28	90.00	179.69	11,615.00	-372.95	-201.94	10.00	10.00	0.00	179.69	PBHL - Mustang 8-29
27,580.55	90.00	179.69	11,615.00	-16,004.99	-118.37	0.00	0.00	0.00	0.00	PBHL - Mustang 8-29

Planning Report - Geographic

<b>Database:</b>	EDM r5000.141_Prod US	<b>Local Co-ordinate Reference:</b>	Well Mustang 8-29 Fed Com 238H
<b>Company:</b>	WCDSC Permian NM	<b>TVD Reference:</b>	RKB @ 3459.20ft
<b>Project:</b>	Lea County (NAD83 New Mexico East)	<b>MD Reference:</b>	RKB @ 3459.20ft
<b>Site:</b>	Sec 08-T25S-R32E	<b>North Reference:</b>	Grid
<b>Well:</b>	Mustang 8-29 Fed Com 238H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	Permit Plan 1		

Planned Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude
0.00	0.00	0.00	0.00	0.00	0.00	417,215.28	740,185.19	32.145373	-103.690855
100.00	0.00	0.00	100.00	0.00	0.00	417,215.28	740,185.19	32.145373	-103.690855
200.00	0.00	0.00	200.00	0.00	0.00	417,215.28	740,185.19	32.145373	-103.690855
300.00	0.00	0.00	300.00	0.00	0.00	417,215.28	740,185.19	32.145373	-103.690855
400.00	0.00	0.00	400.00	0.00	0.00	417,215.28	740,185.19	32.145373	-103.690855
500.00	0.00	0.00	500.00	0.00	0.00	417,215.28	740,185.19	32.145373	-103.690855
600.00	0.00	0.00	600.00	0.00	0.00	417,215.28	740,185.19	32.145373	-103.690855
700.00	0.00	0.00	700.00	0.00	0.00	417,215.28	740,185.19	32.145373	-103.690855
800.00	0.00	0.00	800.00	0.00	0.00	417,215.28	740,185.19	32.145373	-103.690855
900.00	0.00	0.00	900.00	0.00	0.00	417,215.28	740,185.19	32.145373	-103.690855
1,000.00	0.00	0.00	1,000.00	0.00	0.00	417,215.28	740,185.19	32.145373	-103.690855
1,100.00	0.00	0.00	1,100.00	0.00	0.00	417,215.28	740,185.19	32.145373	-103.690855
1,200.00	0.00	0.00	1,200.00	0.00	0.00	417,215.28	740,185.19	32.145373	-103.690855
1,300.00	0.00	0.00	1,300.00	0.00	0.00	417,215.28	740,185.19	32.145373	-103.690855
1,400.00	0.00	0.00	1,400.00	0.00	0.00	417,215.28	740,185.19	32.145373	-103.690855
1,500.00	0.00	0.00	1,500.00	0.00	0.00	417,215.28	740,185.19	32.145373	-103.690855
1,600.00	0.00	0.00	1,600.00	0.00	0.00	417,215.28	740,185.19	32.145373	-103.690855
1,700.00	0.00	0.00	1,700.00	0.00	0.00	417,215.28	740,185.19	32.145373	-103.690855
1,800.00	0.00	0.00	1,800.00	0.00	0.00	417,215.28	740,185.19	32.145373	-103.690855
1,900.00	0.00	0.00	1,900.00	0.00	0.00	417,215.28	740,185.19	32.145373	-103.690855
2,000.00	0.00	0.00	2,000.00	0.00	0.00	417,215.28	740,185.19	32.145373	-103.690855
2,100.00	0.00	0.00	2,100.00	0.00	0.00	417,215.28	740,185.19	32.145373	-103.690855
2,200.00	0.00	0.00	2,200.00	0.00	0.00	417,215.28	740,185.19	32.145373	-103.690855
2,300.00	0.00	0.00	2,300.00	0.00	0.00	417,215.28	740,185.19	32.145373	-103.690855
2,400.00	0.00	0.00	2,400.00	0.00	0.00	417,215.28	740,185.19	32.145373	-103.690855
2,500.00	0.00	0.00	2,500.00	0.00	0.00	417,215.28	740,185.19	32.145373	-103.690855
2,600.00	0.00	0.00	2,600.00	0.00	0.00	417,215.28	740,185.19	32.145373	-103.690855
2,700.00	0.00	0.00	2,700.00	0.00	0.00	417,215.28	740,185.19	32.145373	-103.690855
2,800.00	0.00	0.00	2,800.00	0.00	0.00	417,215.28	740,185.19	32.145373	-103.690855
2,900.00	0.00	0.00	2,900.00	0.00	0.00	417,215.28	740,185.19	32.145373	-103.690855
3,000.00	0.00	0.00	3,000.00	0.00	0.00	417,215.28	740,185.19	32.145373	-103.690855
3,100.00	0.00	0.00	3,100.00	0.00	0.00	417,215.28	740,185.19	32.145373	-103.690855
3,200.00	0.00	0.00	3,200.00	0.00	0.00	417,215.28	740,185.19	32.145373	-103.690855
3,300.00	0.00	0.00	3,300.00	0.00	0.00	417,215.28	740,185.19	32.145373	-103.690855
3,400.00	0.00	0.00	3,400.00	0.00	0.00	417,215.28	740,185.19	32.145373	-103.690855
3,500.00	0.00	0.00	3,500.00	0.00	0.00	417,215.28	740,185.19	32.145373	-103.690855
3,600.00	0.00	0.00	3,600.00	0.00	0.00	417,215.28	740,185.19	32.145373	-103.690855
3,700.00	0.00	0.00	3,700.00	0.00	0.00	417,215.28	740,185.19	32.145373	-103.690855
3,800.00	0.00	0.00	3,800.00	0.00	0.00	417,215.28	740,185.19	32.145373	-103.690855
3,900.00	0.00	0.00	3,900.00	0.00	0.00	417,215.28	740,185.19	32.145373	-103.690855
4,000.00	0.00	0.00	4,000.00	0.00	0.00	417,215.28	740,185.19	32.145373	-103.690855
4,100.00	1.25	314.29	4,099.99	0.76	-0.78	417,216.04	740,184.41	32.145375	-103.690857
4,200.00	2.50	314.29	4,199.94	3.05	-3.12	417,218.33	740,182.06	32.145381	-103.690865
4,201.61	2.52	314.29	4,201.55	3.10	-3.17	417,218.38	740,182.01	32.145381	-103.690865
4,300.00	2.52	314.29	4,299.84	6.12	-6.27	417,221.40	740,178.92	32.145390	-103.690875
4,400.00	2.52	314.29	4,399.74	9.19	-9.42	417,224.47	740,175.77	32.145398	-103.690885
4,500.00	2.52	314.29	4,499.65	12.26	-12.56	417,227.54	740,172.62	32.145407	-103.690895
4,600.00	2.52	314.29	4,599.55	15.33	-15.71	417,230.61	740,169.47	32.145415	-103.690905
4,700.00	2.52	314.29	4,699.45	18.40	-18.86	417,233.68	740,166.33	32.145424	-103.690915
4,800.00	2.52	314.29	4,799.36	21.47	-22.01	417,236.75	740,163.18	32.145432	-103.690926
4,900.00	2.52	314.29	4,899.26	24.54	-25.15	417,239.82	740,160.03	32.145441	-103.690936
5,000.00	2.52	314.29	4,999.16	27.61	-28.30	417,242.89	740,156.89	32.145449	-103.690946
5,100.00	2.52	314.29	5,099.07	30.68	-31.45	417,245.96	740,153.74	32.145458	-103.690956
5,200.00	2.52	314.29	5,198.97	33.75	-34.60	417,249.03	740,150.59	32.145466	-103.690966
5,300.00	2.52	314.29	5,298.87	36.82	-37.74	417,252.10	740,147.44	32.145475	-103.690976

Planning Report - Geographic

<b>Database:</b>	EDM r5000.141_Prod US	<b>Local Co-ordinate Reference:</b>	Well Mustang 8-29 Fed Com 238H
<b>Company:</b>	WCDC Permian NM	<b>TVD Reference:</b>	RKB @ 3459.20ft
<b>Project:</b>	Lea County (NAD83 New Mexico East)	<b>MD Reference:</b>	RKB @ 3459.20ft
<b>Site:</b>	Sec 08-T25S-R32E	<b>North Reference:</b>	Grid
<b>Well:</b>	Mustang 8-29 Fed Com 238H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	Permit Plan 1		

Planned Survey										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude	
5,400.00	2.52	314.29	5,398.78	39.89	-40.89	417,255.17	740,144.30	32.145483	-103.690986	
5,500.00	2.52	314.29	5,498.68	42.96	-44.04	417,258.24	740,141.15	32.145492	-103.690996	
5,600.00	2.52	314.29	5,598.58	46.03	-47.19	417,261.31	740,138.00	32.145500	-103.691006	
5,700.00	2.52	314.29	5,698.49	49.10	-50.33	417,264.38	740,134.85	32.145509	-103.691017	
5,800.00	2.52	314.29	5,798.39	52.18	-53.48	417,267.45	740,131.71	32.145517	-103.691027	
5,900.00	2.52	314.29	5,898.29	55.25	-56.63	417,270.53	740,128.56	32.145526	-103.691037	
6,000.00	2.52	314.29	5,998.20	58.32	-59.77	417,273.60	740,125.41	32.145534	-103.691047	
6,100.00	2.52	314.29	6,098.10	61.39	-62.92	417,276.67	740,122.26	32.145543	-103.691057	
6,200.00	2.52	314.29	6,198.00	64.46	-66.07	417,279.74	740,119.12	32.145551	-103.691067	
6,300.00	2.52	314.29	6,297.91	67.53	-69.22	417,282.81	740,115.97	32.145560	-103.691077	
6,400.00	2.52	314.29	6,397.81	70.60	-72.36	417,285.88	740,112.82	32.145568	-103.691087	
6,500.00	2.52	314.29	6,497.71	73.67	-75.51	417,288.95	740,109.68	32.145576	-103.691097	
6,600.00	2.52	314.29	6,597.62	76.74	-78.66	417,292.02	740,106.53	32.145585	-103.691108	
6,700.00	2.52	314.29	6,697.52	79.81	-81.81	417,295.09	740,103.38	32.145593	-103.691118	
6,800.00	2.52	314.29	6,797.42	82.88	-84.95	417,298.16	740,100.23	32.145602	-103.691128	
6,900.00	2.52	314.29	6,897.33	85.95	-88.10	417,301.23	740,097.09	32.145610	-103.691138	
7,000.00	2.52	314.29	6,997.23	89.02	-91.25	417,304.30	740,093.94	32.145619	-103.691148	
7,100.00	2.52	314.29	7,097.13	92.09	-94.40	417,307.37	740,090.79	32.145627	-103.691158	
7,200.00	2.52	314.29	7,197.04	95.16	-97.54	417,310.44	740,087.64	32.145636	-103.691168	
7,300.00	2.52	314.29	7,296.94	98.23	-100.69	417,313.51	740,084.50	32.145644	-103.691178	
7,400.00	2.52	314.29	7,396.84	101.30	-103.84	417,316.58	740,081.35	32.145653	-103.691188	
7,500.00	2.52	314.29	7,496.75	104.37	-106.98	417,319.65	740,078.20	32.145661	-103.691198	
7,600.00	2.52	314.29	7,596.65	107.45	-110.13	417,322.72	740,075.06	32.145670	-103.691209	
7,700.00	2.52	314.29	7,696.55	110.52	-113.28	417,325.80	740,071.91	32.145678	-103.691219	
7,800.00	2.52	314.29	7,796.45	113.59	-116.43	417,328.87	740,068.76	32.145687	-103.691229	
7,900.00	2.52	314.29	7,896.36	116.66	-119.57	417,331.94	740,065.61	32.145695	-103.691239	
8,000.00	2.52	314.29	7,996.26	119.73	-122.72	417,335.01	740,062.47	32.145704	-103.691249	
8,100.00	2.52	314.29	8,096.16	122.80	-125.87	417,338.08	740,059.32	32.145712	-103.691259	
8,200.00	2.52	314.29	8,196.07	125.87	-129.02	417,341.15	740,056.17	32.145721	-103.691269	
8,300.00	2.52	314.29	8,295.97	128.94	-132.16	417,344.22	740,053.02	32.145729	-103.691279	
8,400.00	2.52	314.29	8,395.87	132.01	-135.31	417,347.29	740,049.88	32.145738	-103.691289	
8,500.00	2.52	314.29	8,495.78	135.08	-138.46	417,350.36	740,046.73	32.145746	-103.691300	
8,600.00	2.52	314.29	8,595.68	138.15	-141.60	417,353.43	740,043.58	32.145755	-103.691310	
8,700.00	2.52	314.29	8,695.58	141.22	-144.75	417,356.50	740,040.43	32.145763	-103.691320	
8,800.00	2.52	314.29	8,795.49	144.29	-147.90	417,359.57	740,037.29	32.145772	-103.691330	
8,900.00	2.52	314.29	8,895.39	147.36	-151.05	417,362.64	740,034.14	32.145780	-103.691340	
9,000.00	2.52	314.29	8,995.29	150.43	-154.19	417,365.71	740,030.99	32.145789	-103.691350	
9,100.00	2.52	314.29	9,095.20	153.50	-157.34	417,368.78	740,027.85	32.145797	-103.691360	
9,200.00	2.52	314.29	9,195.10	156.57	-160.49	417,371.85	740,024.70	32.145806	-103.691370	
9,300.00	2.52	314.29	9,295.00	159.65	-163.64	417,374.92	740,021.55	32.145814	-103.691380	
9,400.00	2.52	314.29	9,394.91	162.72	-166.78	417,377.99	740,018.40	32.145823	-103.691391	
9,500.00	2.52	314.29	9,494.81	165.79	-169.93	417,381.07	740,015.26	32.145831	-103.691401	
9,600.00	2.52	314.29	9,594.71	168.86	-173.08	417,384.14	740,012.11	32.145840	-103.691411	
9,700.00	2.52	314.29	9,694.62	171.93	-176.23	417,387.21	740,008.96	32.145848	-103.691421	
9,800.00	2.52	314.29	9,794.52	175.00	-179.37	417,390.28	740,005.81	32.145857	-103.691431	
9,900.00	2.52	314.29	9,894.42	178.07	-182.52	417,393.35	740,002.67	32.145865	-103.691441	
10,000.00	2.52	314.29	9,994.33	181.14	-185.67	417,396.42	739,999.52	32.145874	-103.691451	
10,100.00	2.52	314.29	10,094.23	184.21	-188.81	417,399.49	739,996.37	32.145882	-103.691461	
10,200.00	2.52	314.29	10,194.13	187.28	-191.96	417,402.56	739,993.22	32.145891	-103.691471	
10,300.00	2.52	314.29	10,294.04	190.35	-195.11	417,405.63	739,990.08	32.145899	-103.691482	
10,400.00	2.52	314.29	10,393.94	193.42	-198.26	417,408.70	739,986.93	32.145908	-103.691492	
10,500.00	2.52	314.29	10,493.84	196.49	-201.40	417,411.77	739,983.78	32.145916	-103.691502	
10,530.23	2.52	314.29	10,524.04	197.42	-202.36	417,412.70	739,982.83	32.145919	-103.691505	
10,600.00	1.47	314.29	10,593.77	199.12	-204.10	417,414.40	739,981.09	32.145923	-103.691510	
10,698.24	0.00	0.00	10,692.00	200.00	-205.00	417,415.28	739,980.19	32.145926	-103.691513	

Planning Report - Geographic

<b>Database:</b>	EDM r5000.141_Prod US	<b>Local Co-ordinate Reference:</b>	Well Mustang 8-29 Fed Com 238H
<b>Company:</b>	WCDSC Permian NM	<b>TVD Reference:</b>	RKB @ 3459.20ft
<b>Project:</b>	Lea County (NAD83 New Mexico East)	<b>MD Reference:</b>	RKB @ 3459.20ft
<b>Site:</b>	Sec 08-T25S-R32E	<b>North Reference:</b>	Grid
<b>Well:</b>	Mustang 8-29 Fed Com 238H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	Permit Plan 1		

Planned Survey										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude	
10,700.00	0.00	0.00	10,693.76	200.00	-205.00	417,415.28	739,980.19	32.145926	-103.691513	
10,800.00	0.00	0.00	10,793.76	200.00	-205.00	417,415.28	739,980.19	32.145926	-103.691513	
10,900.00	0.00	0.00	10,893.76	200.00	-205.00	417,415.28	739,980.19	32.145926	-103.691513	
11,000.00	0.00	0.00	10,993.76	200.00	-205.00	417,415.28	739,980.19	32.145926	-103.691513	
11,048.28	0.00	0.00	11,042.04	200.00	-205.00	417,415.28	739,980.19	32.145926	-103.691513	
<b>KOP @ 11048' MD, 2263' FNL, 900' FEL</b>										
11,100.00	5.17	179.69	11,093.69	197.67	-204.99	417,412.95	739,980.20	32.145919	-103.691513	
11,200.00	15.17	179.69	11,191.99	180.03	-204.89	417,395.31	739,980.29	32.145871	-103.691513	
11,300.00	25.17	179.69	11,285.74	145.59	-204.71	417,360.87	739,980.48	32.145776	-103.691513	
11,400.00	35.17	179.69	11,372.08	95.39	-204.44	417,310.67	739,980.75	32.145638	-103.691514	
11,500.00	45.17	179.69	11,448.40	30.97	-204.10	417,246.25	739,981.09	32.145461	-103.691514	
11,600.00	55.17	179.69	11,512.36	-45.73	-203.69	417,169.55	739,981.50	32.145250	-103.691514	
11,700.00	65.17	179.69	11,562.04	-132.37	-203.22	417,082.91	739,981.96	32.145012	-103.691514	
11,800.00	75.17	179.69	11,595.92	-226.32	-202.72	416,988.96	739,982.47	32.144754	-103.691514	
11,854.92	80.66	179.69	11,607.41	-280.00	-202.43	416,935.28	739,982.75	32.144606	-103.691514	
<b>FTP @ 11855' MD, 2537' FSL, 900' FEL</b>										
11,900.00	85.17	179.69	11,612.97	-324.73	-202.19	416,890.55	739,982.99	32.144483	-103.691514	
11,948.28	90.00	179.69	11,615.00	-372.95	-201.94	416,842.33	739,983.25	32.144351	-103.691514	
12,000.00	90.00	179.69	11,615.00	-424.67	-201.66	416,790.61	739,983.53	32.144209	-103.691515	
12,100.00	90.00	179.69	11,615.00	-524.67	-201.13	416,690.61	739,984.06	32.143934	-103.691515	
12,200.00	90.00	179.69	11,615.00	-624.67	-200.59	416,590.62	739,984.60	32.143659	-103.691515	
12,300.00	90.00	179.69	11,615.00	-724.66	-200.06	416,490.62	739,985.13	32.143384	-103.691515	
12,400.00	90.00	179.69	11,615.00	-824.66	-199.52	416,390.62	739,985.66	32.143109	-103.691515	
12,500.00	90.00	179.69	11,615.00	-924.66	-198.99	416,290.62	739,986.20	32.142834	-103.691516	
12,600.00	90.00	179.69	11,615.00	-1,024.66	-198.45	416,190.62	739,986.73	32.142559	-103.691516	
12,700.00	90.00	179.69	11,615.00	-1,124.66	-197.92	416,090.62	739,987.27	32.142285	-103.691516	
12,800.00	90.00	179.69	11,615.00	-1,224.66	-197.38	415,990.62	739,987.80	32.142010	-103.691516	
12,900.00	90.00	179.69	11,615.00	-1,324.66	-196.85	415,890.63	739,988.34	32.141735	-103.691516	
13,000.00	90.00	179.69	11,615.00	-1,424.65	-196.31	415,790.63	739,988.87	32.141460	-103.691517	
13,100.00	90.00	179.69	11,615.00	-1,524.65	-195.78	415,690.63	739,989.41	32.141185	-103.691517	
13,200.00	90.00	179.69	11,615.00	-1,624.65	-195.25	415,590.63	739,989.94	32.140910	-103.691517	
13,300.00	90.00	179.69	11,615.00	-1,724.65	-194.71	415,490.63	739,990.48	32.140635	-103.691517	
13,400.00	90.00	179.69	11,615.00	-1,824.65	-194.18	415,390.63	739,991.01	32.140360	-103.691517	
13,500.00	90.00	179.69	11,615.00	-1,924.65	-193.64	415,290.64	739,991.55	32.140086	-103.691518	
13,600.00	90.00	179.69	11,615.00	-2,024.65	-193.11	415,190.64	739,992.08	32.139811	-103.691518	
13,700.00	90.00	179.69	11,615.00	-2,124.64	-192.57	415,090.64	739,992.61	32.139536	-103.691518	
13,800.00	90.00	179.69	11,615.00	-2,224.64	-192.04	414,990.64	739,993.15	32.139261	-103.691518	
13,900.00	90.00	179.69	11,615.00	-2,324.64	-191.50	414,890.64	739,993.68	32.138986	-103.691518	
14,000.00	90.00	179.69	11,615.00	-2,424.64	-190.97	414,790.64	739,994.22	32.138711	-103.691519	
14,100.00	90.00	179.69	11,615.00	-2,524.64	-190.43	414,690.65	739,994.75	32.138436	-103.691519	
14,200.00	90.00	179.69	11,615.00	-2,624.64	-189.90	414,590.65	739,995.29	32.138161	-103.691519	
14,300.00	90.00	179.69	11,615.00	-2,724.64	-189.37	414,490.65	739,995.82	32.137886	-103.691519	
14,392.37	90.00	179.69	11,615.00	-2,817.00	-188.87	414,398.28	739,996.32	32.137633	-103.691519	
<b>Cross Section @ 14392' MD, 0' FNL, 900' FEL</b>										
14,400.00	90.00	179.69	11,615.00	-2,824.63	-188.83	414,390.65	739,996.36	32.137612	-103.691519	
14,500.00	90.00	179.69	11,615.00	-2,924.63	-188.30	414,290.65	739,996.89	32.137337	-103.691520	
14,600.00	90.00	179.69	11,615.00	-3,024.63	-187.76	414,190.65	739,997.43	32.137062	-103.691520	
14,700.00	90.00	179.69	11,615.00	-3,124.63	-187.23	414,090.66	739,997.96	32.136787	-103.691520	
14,800.00	90.00	179.69	11,615.00	-3,224.63	-186.69	413,990.66	739,998.49	32.136512	-103.691520	
14,900.00	90.00	179.69	11,615.00	-3,324.63	-186.16	413,890.66	739,999.03	32.136237	-103.691520	
15,000.00	90.00	179.69	11,615.00	-3,424.63	-185.62	413,790.66	739,999.56	32.135962	-103.691521	
15,100.00	90.00	179.69	11,615.00	-3,524.62	-185.09	413,690.66	740,000.10	32.135687	-103.691521	
15,200.00	90.00	179.69	11,615.00	-3,624.62	-184.55	413,590.66	740,000.63	32.135413	-103.691521	
15,300.00	90.00	179.69	11,615.00	-3,724.62	-184.02	413,490.67	740,001.17	32.135138	-103.691521	

Planning Report - Geographic

<b>Database:</b>	EDM r5000.141_Prod US	<b>Local Co-ordinate Reference:</b>	Well Mustang 8-29 Fed Com 238H
<b>Company:</b>	WCDSC Permian NM	<b>TVD Reference:</b>	RKB @ 3459.20ft
<b>Project:</b>	Lea County (NAD83 New Mexico East)	<b>MD Reference:</b>	RKB @ 3459.20ft
<b>Site:</b>	Sec 08-T25S-R32E	<b>North Reference:</b>	Grid
<b>Well:</b>	Mustang 8-29 Fed Com 238H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	Permit Plan 1		

Planned Survey										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude	
15,400.00	90.00	179.69	11,615.00	-3,824.62	-183.48	413,390.67	740,001.70	32.134863	-103.691521	
15,500.00	90.00	179.69	11,615.00	-3,924.62	-182.95	413,290.67	740,002.24	32.134588	-103.691521	
15,600.00	90.00	179.69	11,615.00	-4,024.62	-182.42	413,190.67	740,002.77	32.134313	-103.691522	
15,700.00	90.00	179.69	11,615.00	-4,124.62	-181.88	413,090.67	740,003.31	32.134038	-103.691522	
15,800.00	90.00	179.69	11,615.00	-4,224.61	-181.35	412,990.67	740,003.84	32.133763	-103.691522	
15,900.00	90.00	179.69	11,615.00	-4,324.61	-180.81	412,890.68	740,004.37	32.133488	-103.691522	
16,000.00	90.00	179.69	11,615.00	-4,424.61	-180.28	412,790.68	740,004.91	32.133213	-103.691522	
16,100.00	90.00	179.69	11,615.00	-4,524.61	-179.74	412,690.68	740,005.44	32.132939	-103.691523	
16,200.00	90.00	179.69	11,615.00	-4,624.61	-179.21	412,590.68	740,005.98	32.132664	-103.691523	
16,300.00	90.00	179.69	11,615.00	-4,724.61	-178.67	412,490.68	740,006.51	32.132389	-103.691523	
16,400.00	90.00	179.69	11,615.00	-4,824.61	-178.14	412,390.68	740,007.05	32.132114	-103.691523	
16,500.00	90.00	179.69	11,615.00	-4,924.60	-177.60	412,290.69	740,007.58	32.131839	-103.691523	
16,600.00	90.00	179.69	11,615.00	-5,024.60	-177.07	412,190.69	740,008.12	32.131564	-103.691524	
16,700.00	90.00	179.69	11,615.00	-5,124.60	-176.54	412,090.69	740,008.65	32.131289	-103.691524	
16,800.00	90.00	179.69	11,615.00	-5,224.60	-176.00	411,990.69	740,009.19	32.131014	-103.691524	
16,900.00	90.00	179.69	11,615.00	-5,324.60	-175.47	411,890.69	740,009.72	32.130740	-103.691524	
17,000.00	90.00	179.69	11,615.00	-5,424.60	-174.93	411,790.69	740,010.26	32.130465	-103.691524	
17,032.00	90.00	179.69	11,615.00	-5,456.60	-174.76	411,758.69	740,010.43	32.130377	-103.691525	
<b>Cross LC0061869 @ 17032' MD, 2640' FSL, 900' FEL</b>										
17,100.00	90.00	179.69	11,615.00	-5,524.60	-174.40	411,690.69	740,010.79	32.130190	-103.691525	
17,200.00	90.00	179.69	11,615.00	-5,624.59	-173.86	411,590.70	740,011.32	32.129915	-103.691525	
17,300.00	90.00	179.69	11,615.00	-5,724.59	-173.33	411,490.70	740,011.86	32.129640	-103.691525	
17,400.00	90.00	179.69	11,615.00	-5,824.59	-172.79	411,390.70	740,012.39	32.129365	-103.691525	
17,500.00	90.00	179.69	11,615.00	-5,924.59	-172.26	411,290.70	740,012.93	32.129090	-103.691525	
17,600.00	90.00	179.69	11,615.00	-6,024.59	-171.72	411,190.70	740,013.46	32.128815	-103.691526	
17,700.00	90.00	179.69	11,615.00	-6,124.59	-171.19	411,090.70	740,014.00	32.128540	-103.691526	
17,800.00	90.00	179.69	11,615.00	-6,224.59	-170.66	410,990.71	740,014.53	32.128266	-103.691526	
17,900.00	90.00	179.69	11,615.00	-6,324.58	-170.12	410,890.71	740,015.07	32.127991	-103.691526	
18,000.00	90.00	179.69	11,615.00	-6,424.58	-169.59	410,790.71	740,015.60	32.127716	-103.691526	
18,100.00	90.00	179.69	11,615.00	-6,524.58	-169.05	410,690.71	740,016.14	32.127441	-103.691527	
18,200.00	90.00	179.69	11,615.00	-6,624.58	-168.52	410,590.71	740,016.67	32.127166	-103.691527	
18,300.00	90.00	179.69	11,615.00	-6,724.58	-167.98	410,490.71	740,017.20	32.126891	-103.691527	
18,400.00	90.00	179.69	11,615.00	-6,824.58	-167.45	410,390.72	740,017.74	32.126616	-103.691527	
18,500.00	90.00	179.69	11,615.00	-6,924.58	-166.91	410,290.72	740,018.27	32.126341	-103.691527	
18,600.00	90.00	179.69	11,615.00	-7,024.57	-166.38	410,190.72	740,018.81	32.126067	-103.691528	
18,700.00	90.00	179.69	11,615.00	-7,124.57	-165.84	410,090.72	740,019.34	32.125792	-103.691528	
18,800.00	90.00	179.69	11,615.00	-7,224.57	-165.31	409,990.72	740,019.88	32.125517	-103.691528	
18,900.00	90.00	179.69	11,615.00	-7,324.57	-164.77	409,890.72	740,020.41	32.125242	-103.691528	
19,000.00	90.00	179.69	11,615.00	-7,424.57	-164.24	409,790.73	740,020.95	32.124967	-103.691528	
19,100.00	90.00	179.69	11,615.00	-7,524.57	-163.71	409,690.73	740,021.48	32.124692	-103.691529	
19,200.00	90.00	179.69	11,615.00	-7,624.57	-163.17	409,590.73	740,022.02	32.124417	-103.691529	
19,300.00	90.00	179.69	11,615.00	-7,724.56	-162.64	409,490.73	740,022.55	32.124142	-103.691529	
19,400.00	90.00	179.69	11,615.00	-7,824.56	-162.10	409,390.73	740,023.09	32.123868	-103.691529	
19,500.00	90.00	179.69	11,615.00	-7,924.56	-161.57	409,290.73	740,023.62	32.123593	-103.691529	
19,600.00	90.00	179.69	11,615.00	-8,024.56	-161.03	409,190.74	740,024.15	32.123318	-103.691530	
19,672.44	90.00	179.69	11,615.00	-8,097.00	-160.65	409,118.30	740,024.54	32.123119	-103.691530	
<b>Cross Section/Lease @ 19672' MD, 0' FNL, 900' FEL</b>										
19,700.00	90.00	179.69	11,615.00	-8,124.56	-160.50	409,090.74	740,024.69	32.123043	-103.691530	
19,800.00	90.00	179.69	11,615.00	-8,224.56	-159.96	408,990.74	740,025.22	32.122768	-103.691530	
19,900.00	90.00	179.69	11,615.00	-8,324.56	-159.43	408,890.74	740,025.76	32.122493	-103.691530	
20,000.00	90.00	179.69	11,615.00	-8,424.55	-158.89	408,790.74	740,026.29	32.122218	-103.691530	
20,100.00	90.00	179.69	11,615.00	-8,524.55	-158.36	408,690.74	740,026.83	32.121943	-103.691531	
20,200.00	90.00	179.69	11,615.00	-8,624.55	-157.83	408,590.75	740,027.36	32.121668	-103.691531	
20,300.00	90.00	179.69	11,615.00	-8,724.55	-157.29	408,490.75	740,027.90	32.121394	-103.691531	

Planning Report - Geographic

<b>Database:</b>	EDM r5000.141_Prod US	<b>Local Co-ordinate Reference:</b>	Well Mustang 8-29 Fed Com 238H
<b>Company:</b>	WCDCS Permian NM	<b>TVD Reference:</b>	RKB @ 3459.20ft
<b>Project:</b>	Lea County (NAD83 New Mexico East)	<b>MD Reference:</b>	RKB @ 3459.20ft
<b>Site:</b>	Sec 08-T25S-R32E	<b>North Reference:</b>	Grid
<b>Well:</b>	Mustang 8-29 Fed Com 238H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	Permit Plan 1		

Planned Survey										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude	
20,400.00	90.00	179.69	11,615.00	-8,824.55	-156.76	408,390.75	740,028.43	32.121119	-103.691531	
20,500.00	90.00	179.69	11,615.00	-8,924.55	-156.22	408,290.75	740,028.97	32.120844	-103.691531	
20,600.00	90.00	179.69	11,615.00	-9,024.55	-155.69	408,190.75	740,029.50	32.120569	-103.691532	
20,700.00	90.00	179.69	11,615.00	-9,124.54	-155.15	408,090.75	740,030.03	32.120294	-103.691532	
20,800.00	90.00	179.69	11,615.00	-9,224.54	-154.62	407,990.76	740,030.57	32.120019	-103.691532	
20,900.00	90.00	179.69	11,615.00	-9,324.54	-154.08	407,890.76	740,031.10	32.119744	-103.691532	
21,000.00	90.00	179.69	11,615.00	-9,424.54	-153.55	407,790.76	740,031.64	32.119469	-103.691532	
21,100.00	90.00	179.69	11,615.00	-9,524.54	-153.01	407,690.76	740,032.17	32.119195	-103.691533	
21,200.00	90.00	179.69	11,615.00	-9,624.54	-152.48	407,590.76	740,032.71	32.118920	-103.691533	
21,300.00	90.00	179.69	11,615.00	-9,724.54	-151.94	407,490.76	740,033.24	32.118645	-103.691533	
21,400.00	90.00	179.69	11,615.00	-9,824.53	-151.41	407,390.76	740,033.78	32.118370	-103.691533	
21,500.00	90.00	179.69	11,615.00	-9,924.53	-150.88	407,290.77	740,034.31	32.118095	-103.691533	
21,600.00	90.00	179.69	11,615.00	-10,024.53	-150.34	407,190.77	740,034.85	32.117820	-103.691534	
21,700.00	90.00	179.69	11,615.00	-10,124.53	-149.81	407,090.77	740,035.38	32.117545	-103.691534	
21,800.00	90.00	179.69	11,615.00	-10,224.53	-149.27	406,990.77	740,035.92	32.117270	-103.691534	
21,900.00	90.00	179.69	11,615.00	-10,324.53	-148.74	406,890.77	740,036.45	32.116995	-103.691534	
22,000.00	90.00	179.69	11,615.00	-10,424.53	-148.20	406,790.77	740,036.98	32.116721	-103.691534	
22,100.00	90.00	179.69	11,615.00	-10,524.52	-147.67	406,690.78	740,037.52	32.116446	-103.691535	
22,200.00	90.00	179.69	11,615.00	-10,624.52	-147.13	406,590.78	740,038.05	32.116171	-103.691535	
22,300.00	90.00	179.69	11,615.00	-10,724.52	-146.60	406,490.78	740,038.59	32.115896	-103.691535	
22,400.00	90.00	179.69	11,615.00	-10,824.52	-146.06	406,390.78	740,039.12	32.115621	-103.691535	
22,500.00	90.00	179.69	11,615.00	-10,924.52	-145.53	406,290.78	740,039.66	32.115346	-103.691535	
22,600.00	90.00	179.69	11,615.00	-11,024.52	-145.00	406,190.78	740,040.19	32.115071	-103.691536	
22,700.00	90.00	179.69	11,615.00	-11,124.52	-144.46	406,090.79	740,040.73	32.114796	-103.691536	
22,800.00	90.00	179.69	11,615.00	-11,224.51	-143.93	405,990.79	740,041.26	32.114522	-103.691536	
22,900.00	90.00	179.69	11,615.00	-11,324.51	-143.39	405,890.79	740,041.80	32.114247	-103.691536	
23,000.00	90.00	179.69	11,615.00	-11,424.51	-142.86	405,790.79	740,042.33	32.113972	-103.691536	
23,100.00	90.00	179.69	11,615.00	-11,524.51	-142.32	405,690.79	740,042.86	32.113697	-103.691536	
23,200.00	90.00	179.69	11,615.00	-11,624.51	-141.79	405,590.79	740,043.40	32.113422	-103.691537	
23,300.00	90.00	179.69	11,615.00	-11,724.51	-141.25	405,490.80	740,043.93	32.113147	-103.691537	
23,400.00	90.00	179.69	11,615.00	-11,824.51	-140.72	405,390.80	740,044.47	32.112872	-103.691537	
23,500.00	90.00	179.69	11,615.00	-11,924.50	-140.18	405,290.80	740,045.00	32.112597	-103.691537	
23,600.00	90.00	179.69	11,615.00	-12,024.50	-139.65	405,190.80	740,045.54	32.112322	-103.691537	
23,700.00	90.00	179.69	11,615.00	-12,124.50	-139.11	405,090.80	740,046.07	32.112048	-103.691538	
23,800.00	90.00	179.69	11,615.00	-12,224.50	-138.58	404,990.80	740,046.61	32.111773	-103.691538	
23,900.00	90.00	179.69	11,615.00	-12,324.50	-138.05	404,890.81	740,047.14	32.111498	-103.691538	
24,000.00	90.00	179.69	11,615.00	-12,424.50	-137.51	404,790.81	740,047.68	32.111223	-103.691538	
24,100.00	90.00	179.69	11,615.00	-12,524.50	-136.98	404,690.81	740,048.21	32.110948	-103.691538	
24,200.00	90.00	179.69	11,615.00	-12,624.49	-136.44	404,590.81	740,048.74	32.110673	-103.691539	
24,300.00	90.00	179.69	11,615.00	-12,724.49	-135.91	404,490.81	740,049.28	32.110398	-103.691539	
24,400.00	90.00	179.69	11,615.00	-12,824.49	-135.37	404,390.81	740,049.81	32.110123	-103.691539	
24,500.00	90.00	179.69	11,615.00	-12,924.49	-134.84	404,290.82	740,050.35	32.109849	-103.691539	
24,600.00	90.00	179.69	11,615.00	-13,024.49	-134.30	404,190.82	740,050.88	32.109574	-103.691539	
24,700.00	90.00	179.69	11,615.00	-13,124.49	-133.77	404,090.82	740,051.42	32.109299	-103.691540	
24,800.00	90.00	179.69	11,615.00	-13,224.49	-133.23	403,990.82	740,051.95	32.109024	-103.691540	
24,900.00	90.00	179.69	11,615.00	-13,324.48	-132.70	403,890.82	740,052.49	32.108749	-103.691540	
25,000.00	90.00	179.69	11,615.00	-13,424.48	-132.17	403,790.82	740,053.02	32.108474	-103.691540	
25,100.00	90.00	179.69	11,615.00	-13,524.48	-131.63	403,690.83	740,053.56	32.108199	-103.691540	
25,200.00	90.00	179.69	11,615.00	-13,624.48	-131.10	403,590.83	740,054.09	32.107924	-103.691541	
25,300.00	90.00	179.69	11,615.00	-13,724.48	-130.56	403,490.83	740,054.63	32.107649	-103.691541	
25,400.00	90.00	179.69	11,615.00	-13,824.48	-130.03	403,390.83	740,055.16	32.107375	-103.691541	
25,500.00	90.00	179.69	11,615.00	-13,924.48	-129.49	403,290.83	740,055.69	32.107100	-103.691541	
25,600.00	90.00	179.69	11,615.00	-14,024.47	-128.96	403,190.83	740,056.23	32.106825	-103.691541	
25,700.00	90.00	179.69	11,615.00	-14,124.47	-128.42	403,090.83	740,056.76	32.106550	-103.691542	
25,800.00	90.00	179.69	11,615.00	-14,224.47	-127.89	402,990.84	740,057.30	32.106275	-103.691542	

Planning Report - Geographic

<b>Database:</b>	EDM r5000.141_Prod US	<b>Local Co-ordinate Reference:</b>	Well Mustang 8-29 Fed Com 238H
<b>Company:</b>	WCDSC Permian NM	<b>TVD Reference:</b>	RKB @ 3459.20ft
<b>Project:</b>	Lea County (NAD83 New Mexico East)	<b>MD Reference:</b>	RKB @ 3459.20ft
<b>Site:</b>	Sec 08-T25S-R32E	<b>North Reference:</b>	Grid
<b>Well:</b>	Mustang 8-29 Fed Com 238H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	Permit Plan 1		

Planned Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude
25,900.00	90.00	179.69	11,615.00	-14,324.47	-127.35	402,890.84	740,057.83	32.106000	-103.691542
26,000.00	90.00	179.69	11,615.00	-14,424.47	-126.82	402,790.84	740,058.37	32.105725	-103.691542
26,100.00	90.00	179.69	11,615.00	-14,524.47	-126.28	402,690.84	740,058.90	32.105450	-103.691542
26,200.00	90.00	179.69	11,615.00	-14,624.47	-125.75	402,590.84	740,059.44	32.105176	-103.691543
26,300.00	90.00	179.69	11,615.00	-14,724.46	-125.22	402,490.84	740,059.97	32.104901	-103.691543
26,400.00	90.00	179.69	11,615.00	-14,824.46	-124.68	402,390.85	740,060.51	32.104626	-103.691543
26,500.00	90.00	179.69	11,615.00	-14,924.46	-124.15	402,290.85	740,061.04	32.104351	-103.691543
26,600.00	90.00	179.69	11,615.00	-15,024.46	-123.61	402,190.85	740,061.57	32.104076	-103.691543
26,700.00	90.00	179.69	11,615.00	-15,124.46	-123.08	402,090.85	740,062.11	32.103801	-103.691544
26,800.00	90.00	179.69	11,615.00	-15,224.46	-122.54	401,990.85	740,062.64	32.103526	-103.691544
26,900.00	90.00	179.69	11,615.00	-15,324.46	-122.01	401,890.85	740,063.18	32.103251	-103.691544
27,000.00	90.00	179.69	11,615.00	-15,424.45	-121.47	401,790.86	740,063.71	32.102976	-103.691544
27,100.00	90.00	179.69	11,615.00	-15,524.45	-120.94	401,690.86	740,064.25	32.102702	-103.691544
27,200.00	90.00	179.69	11,615.00	-15,624.45	-120.40	401,590.86	740,064.78	32.102427	-103.691545
27,300.00	90.00	179.69	11,615.00	-15,724.45	-119.87	401,490.86	740,065.32	32.102152	-103.691545
27,400.00	90.00	179.69	11,615.00	-15,824.45	-119.34	401,390.86	740,065.85	32.101877	-103.691545
27,500.00	90.00	179.69	11,615.00	-15,924.45	-118.80	401,290.86	740,066.39	32.101602	-103.691545
27,500.54	90.00	179.69	11,615.00	-15,924.99	-118.80	401,290.32	740,066.39	32.101601	-103.691545
LTP @ 27501' MD, 2520' FNL, 900' FEL									
27,580.54	90.00	179.69	11,615.00	-16,004.99	-118.37	401,210.33	740,066.82	32.101381	-103.691545
PBHL; 2620' FNL, 900' FEL									
27,580.55	90.00	179.69	11,615.00	-16,004.99	-118.37	401,210.32	740,066.82	32.101381	-103.691545

Design Targets									
Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (usft)	Easting (usft)	Latitude	Longitude
PBHL - Mustang 8-29 Fe	0.00	0.00	0.00	-16,004.99	-118.37	401,210.32	740,066.82	32.101381	-103.691545
- plan misses target center by 11615.00ft at 27580.55ft MD (11615.00 TVD, -16004.99 N, -118.37 E)									
- Point									

Plan Annotations					
Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates		Comment	
		+N/-S (ft)	+E/-W (ft)		
11,048.28	11,042.04	200.00	-205.00	KOP @ 11048' MD, 2263' FNL, 900' FEL	
11,854.92	11,607.41	-280.00	-202.43	FTP @ 11855' MD, 2537' FSL, 900' FEL	
14,392.37	11,615.00	-2,817.00	-188.87	Cross Section @ 14392' MD, 0' FNL, 900' FEL	
17,032.00	11,615.00	-5,456.60	-174.76	Cross LC0061869 @ 17032' MD, 2640' FSL, 900' FEL	
19,672.44	11,615.00	-8,097.00	-160.65	Cross Section/Lease @ 19672' MD, 0' FNL, 900' FEL	
27,500.54	11,615.00	-15,924.99	-118.80	LTP @ 27501' MD, 2520' FNL, 900' FEL	
27,580.54	11,615.00	-16,004.99	-118.37	PBHL; 2620' FNL, 900' FEL	

# Devon Energy

WELL DETAILS: Mustang 8-29 Fed Com 238H

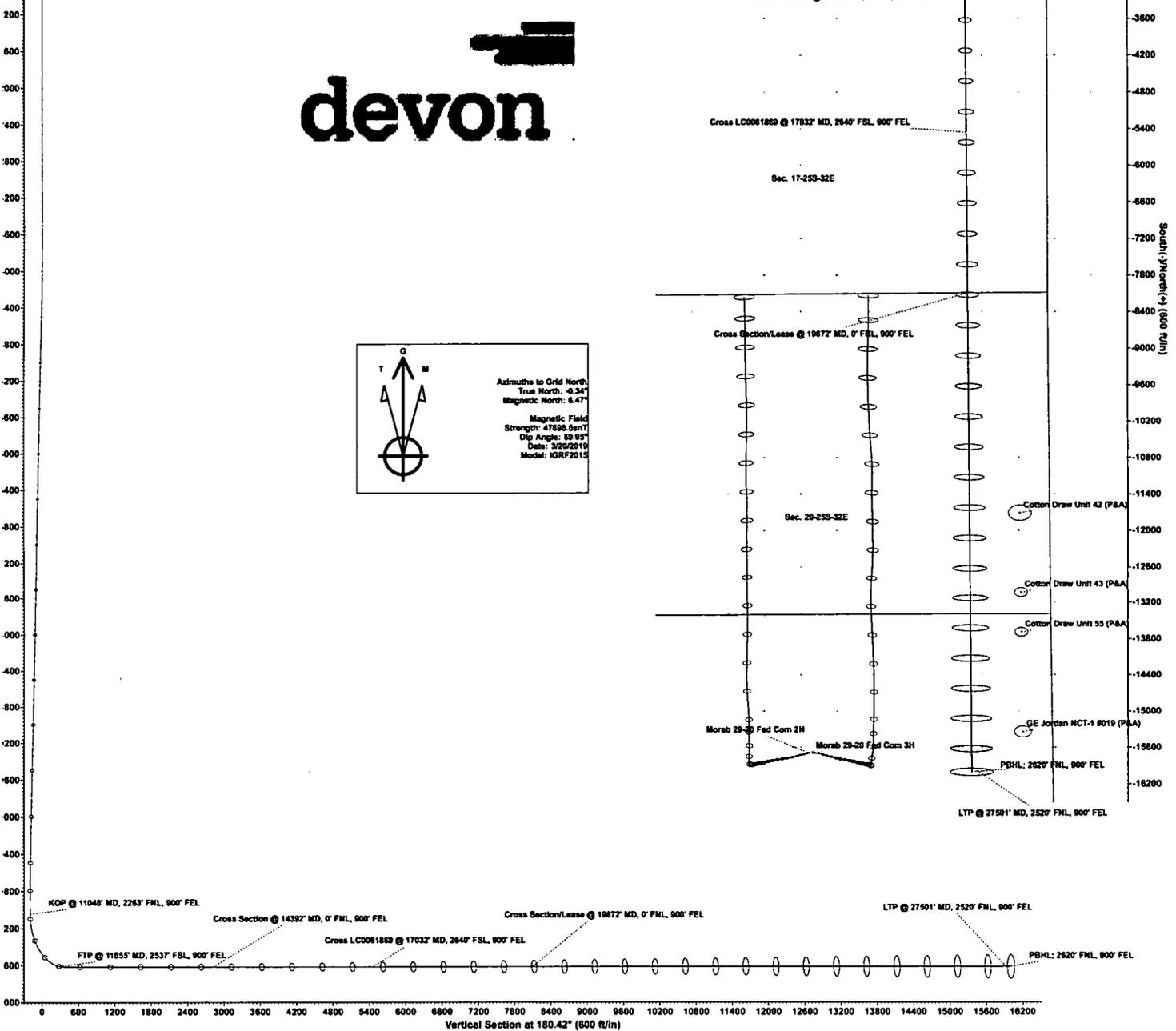
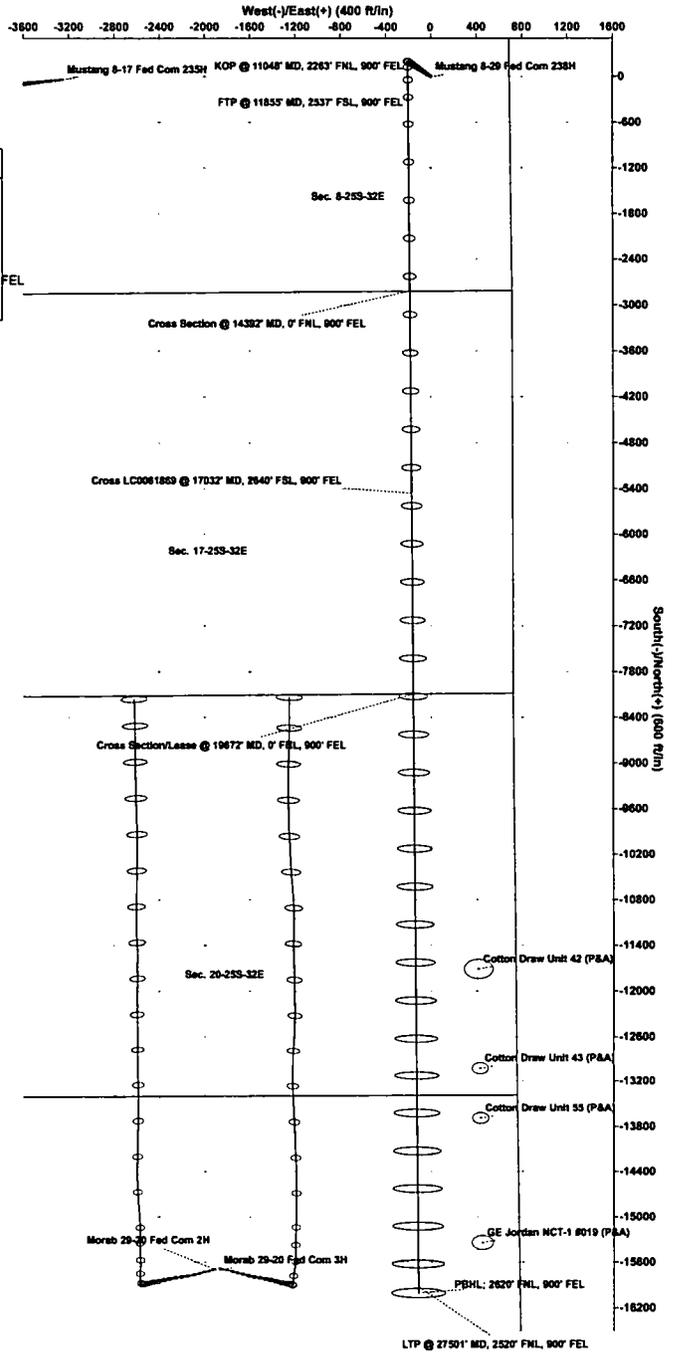
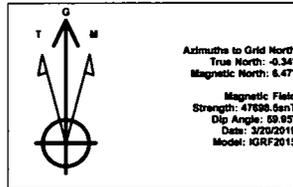
RKB @ 3459.20h  
3434.20

Northing 417215.28 Easting 740185.19 Latitude 32.145373 Longitude -103.690855

### SECTION DETAILS Permit Plan 1

MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	Vsect	Annotation
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
4000.00	0.00	0.00	4000.00	0.00	0.00	0.00	0.00	
4201.61	2.52	314.29	4201.55	3.10	-3.17	1.25	-3.07	
10530.23	2.52	314.29	10524.04	197.42	-202.36	0.00	-195.92	
10698.24	0.00	0.00	10692.00	200.00	-205.00	1.50	-198.48	
11048.28	0.00	0.00	11042.04	200.00	-205.00	0.00	-198.48	KOP @ 11048' MD, 2263' FNL, 900' FEL
11948.28	90.00	179.69	11815.00	-372.95	-201.94	10.00	374.43	
27580.55	90.00	179.69	11815.00	-16004.99	-118.37	0.00	16005.43	PBHL: 2620' FNL, 900' FEL

# devon





**2. Casing Program**

Hole Size	Casing Interval		Csg. Size	Wt (PPF)	Grade	Conn	Min SF Collapse	Min SF Burst	Min SF Tension
	From	To							
17 1/2	0	750 TVD	13 3/8	48.0	H40	BTC	1.125	1.25	1.6
12 1/4	0	4635 TVD	9 5/8	40.0	J-55	BTC	1.125	1.25	1.6
8 3/4	0	TD	5 1/2	17.0	P110	BTC	1.125	1.25	1.6
BLM Minimum Safety Factor							1.125	1	1.6 Dry 1.8 Wet

- All casing strings will be tested in accordance with Onshore Oil and Gas Order #2 IILB.1.h Must have table for contingency casing.
- Rustler top will be validated via drilling parameters (i.e. reduction in ROP) and surface casing setting depth revised accordingly if needed.
- A variance is requested for collapse rating on intermediate casing. Operator will keep pipe full while running casing.
- Int casing shoe will be selected based on drilling data, gamma, and flows experienced while drilling. Setting depth will be revised accordingly if needed.
- A variance is requested to wave the centralizer requirement for the Intermediate casing and production casing.

Mustang 8-29 Fed Com 238H

	Y or N
Is casing new? If used, attach certification as required in Onshore Order #1	Y
Does casing meet API specifications? If no, attach casing specification sheet.	Y
Is premium or uncommon casing planned? If yes attach casing specification sheet.	N
Does the above casing design meet or exceed BLM's minimum standards? If not provide justification (loading assumptions, casing design criteria).	Y
Will the intermediate pipe be kept at a minimum 1/3 fluid filled to avoid approaching the collapse pressure rating of the casing?	Y
Is well located within Capitan Reef?	N
If yes, does production casing cement tie back a minimum of 50' above the Reef?	
Is well within the designated 4 string boundary.	
Is well located in SOPA but not in R-111-P?	N
If yes, are the first 2 strings cemented to surface and 3 <sup>rd</sup> string cement tied back 500' into previous casing?	
Is well located in R-111-P and SOPA?	N
If yes, are the first three strings cemented to surface?	
Is 2 <sup>nd</sup> string set 100' to 600' below the base of salt?	
Is well located in high Cave/Karst?	N
If yes, are there two strings cemented to surface?	
(For 2 string wells) If yes, is there a contingency casing if lost circulation occurs?	
Is well located in critical Cave/Karst?	N
If yes, are there three strings cemented to surface?	

**3. Cementing Program (3-String Primary Design)**

<b>Casing</b>	<b># Sks</b>	<b>TOC</b>	<b>Wt. (lb/gal)</b>	<b>Yld (ft<sup>3</sup>/sack)</b>	<b>Slurry Description</b>
Surface	581	Surf	13.2	1.4	Lead: Class C Cement + additives
Int	508	Surf	9.0	3.3	Lead: Class C Cement + additives
	154	500' above shoe	13.2	1.4	Tail: Class H / C + additives
Int 1 Two Stage w/ DV @ TVD of Delaware	495	Surf	9.0	3.3	1st stage Lead: Class C Cement + additives
	136	500' above shoe	13.2	1.4	1st stage Tail: Class H / C + additives
	480	Surf	9.0	3.3	2nd stage Lead: Class C Cement + additives
	136	500' above DV	13.2	1.4	2nd stage Tail: Class H / C + additives
Int 1 Intermediate Squeeze	As Needed	Surf	9.0	3.3	Squeeze Lead: Class C Cement + additives
	508	Surf	9.0	3.3	Lead: Class C Cement + additives
	154	500' above shoe	13.2	1.4	Tail: Class H / C + additives
Production	589	500' tieback	9.0	3.3	Lead: Class H / C + additives
	3190	KOP	13.2	1.4	Tail: Class H / C + additives

If a DV tool is ran the depth(s) will be adjusted based on hole conditions and cement volumes will be adjusted proportionally. Slurry weights will be adjusted based on estimated fracture gradient of the formation. DV tool will be set a minimum of 50 feet below previous casing and a minimum of 200 feet above current shoe. If cement is not returned to surface during the primary cement job on the surface casing string, a planned top job will be conducted immediately after completion of the primary job.

<b>Casing String</b>	<b>% Excess</b>
Surface	50%
Intermediate	30%
Production	10%

**4. Pressure Control Equipment (Three String Design)**

<b>BOP installed and tested before drilling which hole?</b>	<b>Size?</b>	<b>Min. Required WP</b>	<b>Type</b>	<b>✓</b>	<b>Tested to:</b>
Int 1	13-5/8"	5M	Annular	X	50% of rated working pressure
			Blind Ram	X	5M
			Pipe Ram		
			Double Ram	X	
			Other*		
Production	13-5/8"	5M	Annular	X	50% of rated working pressure
			Blind Ram	X	5M
			Pipe Ram		
			Double Ram	X	
			Other*		
			Annular (5M)		
			Blind Ram		
			Pipe Ram		
			Double Ram		
			Other*		

**5. Mud Program (Three String Design)**

Section	Type	Weight (ppg)
Surface	FW Gel	8.5-9
Intermediate	Brine	10-10.5
Production	WBM	8.5-9

Sufficient mud materials to maintain mud properties and meet minimum lost circulation and weight increase requirements will be kept on location at all times.

What will be used to monitor the loss or gain of fluid?	PVT/Pason/Visual Monitoring
---	-----------------------------

**6. Logging and Testing Procedures**

Logging, Coring and Testing	
X	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.
	No logs are planned based on well control or offset log information.
	Drill stem test? If yes, explain.
	Coring? If yes, explain.

Additional logs planned	Interval
	Resistivity
	Density
X	CBL
X	Mud log
	PEX
	Production casing
	KOP to TD

**7. Drilling Conditions**

Condition	Specify what type and where?
BH pressure at deepest TVD	5436
Abnormal temperature	No

Mitigation measure for abnormal conditions. Describe. Lost circulation material/sweeps/mud scavengers.

Hydrogen Sulfide (H2S) monitors will be installed prior to drilling out the surface shoe. If H2S is detected in concentrations greater than 100 ppm, the operator will comply with the provisions of Onshore Oil and Gas Order #6. If Hydrogen Sulfide is encountered measured values and formations will be provided to the BLM.	
N	H2S is present
Y	H2S plan attached.

**8. Other facets of operation**

Is this a walking operation? Potentially

- 1 If operator elects, drilling rig will batch drill the surface holes and run/cement surface casing; walking the rig to next wells on the pad.
- 2 The drilling rig will then batch drill the intermediate sections and run/cement intermediate casing; the wellbore will be isolated with a blind flange and pressure gauge installed for monitoring the well before walking to the next well.
- 3 The drilling rig will then batch drill the production hole sections on the wells with OBM, run/cement production casing, and install TA caps or tubing heads for completions.

NOTE: During batch operations the drilling rig will be moved from well to well however, it will not be removed from the pad until all wells have production casing run/cemented.

Will be pre-setting casing? Potentially

- 1 Spudder rig will move in and batch drill surface hole.
  - a. Rig will utilize fresh water based mud to drill surface hole to TD. Solids control will be handled entirely on a closed loop basis.
- 2 After drilling the surface hole section, the spudder rig will run casing and cement following all of the applicable rules and regulations (OnShore Order 2, all COAs and NMOCD regulations).
- 3 The wellhead will be installed and tested once the surface casing is cut off and the WOC time has been reached.
- 4 A blind flange with the same pressure rating as the wellhead will be installed to seal the wellbore. Pressure will be monitored with a pressure gauge installed on the wellhead.
- 5 Spudder rig operations is expected to take 4-5 days per well on a multi-well pad.
- 6 The NMOCD will be contacted and notified 24 hours prior to commencing spudder rig operations.
- 7 Drilling operations will be performed with drilling rig. At that time an approved BOP stack will be nipped up and tested on the wellhead before drilling operations commences on each well.
  - a. The NMOCD will be contacted / notified 24 hours before the drilling rig moves back on to the pad with the pre-set surface casing.

Attachments

- X Directional Plan  
           Other, describe

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 5000 (5M) psi.

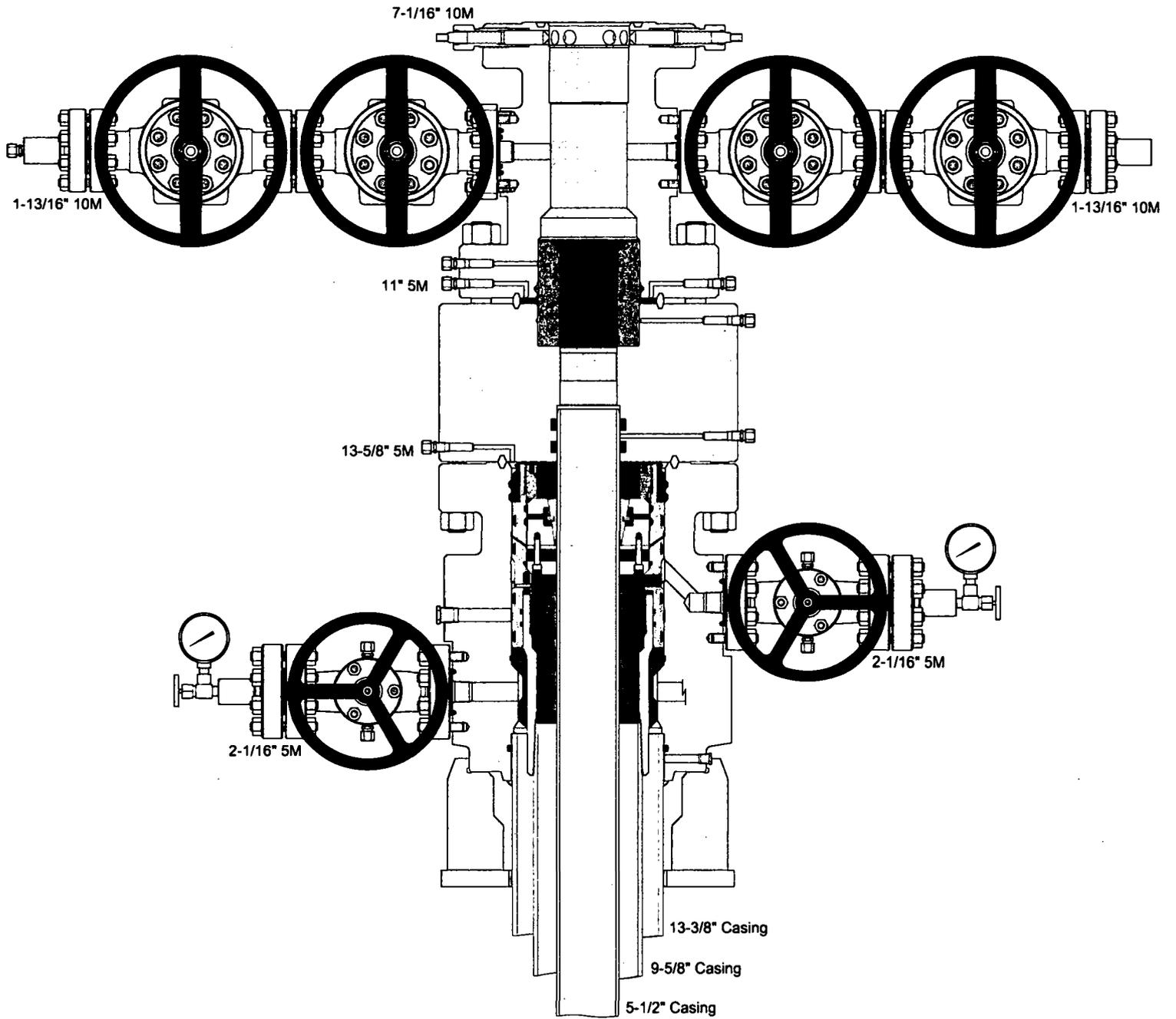
- Wellhead will be installed by wellhead representatives.
- If the welding is performed by a third party, the wellhead representative will monitor the temperature to verify that it does not exceed the maximum temperature of the seal.
- Wellhead representative will install the test plug for the initial 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 5M, 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 5M will be installed on the wellhead system and will undergo a 250 psi low pressure test followed by a 5,000 psi high pressure test. The 5,000 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 5M 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 5,000 psi WP.

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



**Devon Energy**  
**APD VARIANCE DATA**

**OPERATOR NAME:** Devon Energy

**1. SUMMARY OF Variance:**

Devon Energy respectfully requests approval for the following additions to the drilling plan:

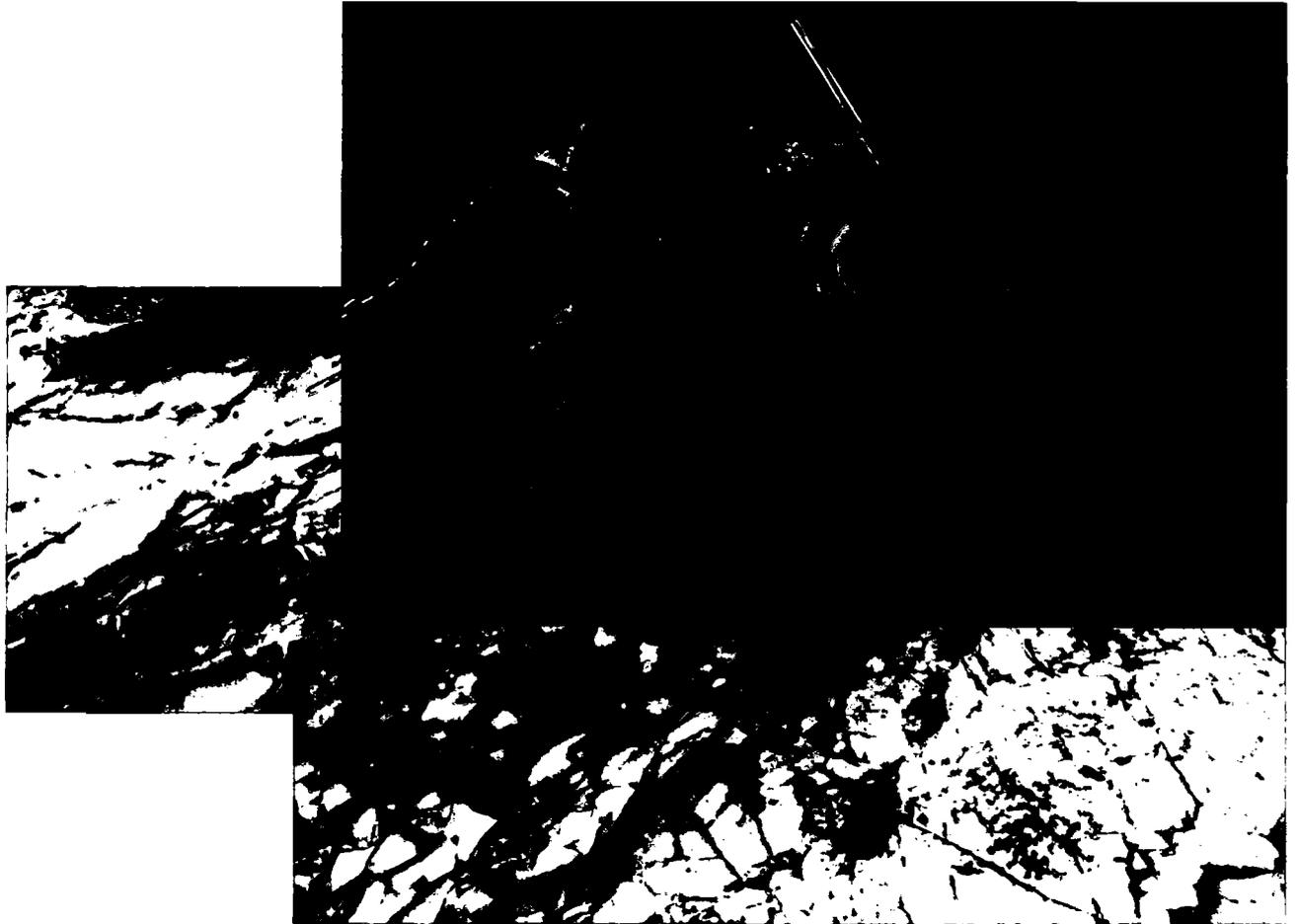
1. Potential utilization of a spudder rig to pre-set surface casing.

**2. Description of Operations**

1. A spudder rig contractor may move in their rig to drill the surface hole section and pre-set surface casing on this well.
  - a. After drilling the surface hole section, the rig will run casing and cement following all of the applicable rules and regulations (OnShore Order 2, all COAs and NMOCD regulations).
  - b. Rig will utilize fresh water based mud to drill surface hole to TD.
2. The wellhead will be installed and tested once the surface casing is cut off and the WOC time has been reached.
3. A blind flange with the same pressure rating as the wellhead will be installed to seal the wellbore. Pressure will be monitored with needle valves installed on two wingvalves.
  - a. A means for intervention will be maintained while the drilling rig is not over the well.
4. The BLM will be contacted and notified 24 hours prior to commencing spudder rig operations.
5. Drilling operation will be performed with the big rig. At that time an approved BOP stack will be nipped up and tested on the wellhead before drilling operations commences on each well.
  - a. The BLM will be contacted / notified 24 hours before the big rig moves back on to the pad with the pre-set surface casing.
6. Devon Energy will have supervision on the rig to ensure compliance with all BLM and NMOCD regulations and to oversee operations.
7. Once the rig is removed, Devon Energy will secure the wellhead area by placing a guard rail around the cellar area.



Commitment Runs Deep



Design Plan  
Operation and Maintenance Plan  
Closure Plan

SENM - Closed Loop Systems  
June 2010

## **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.

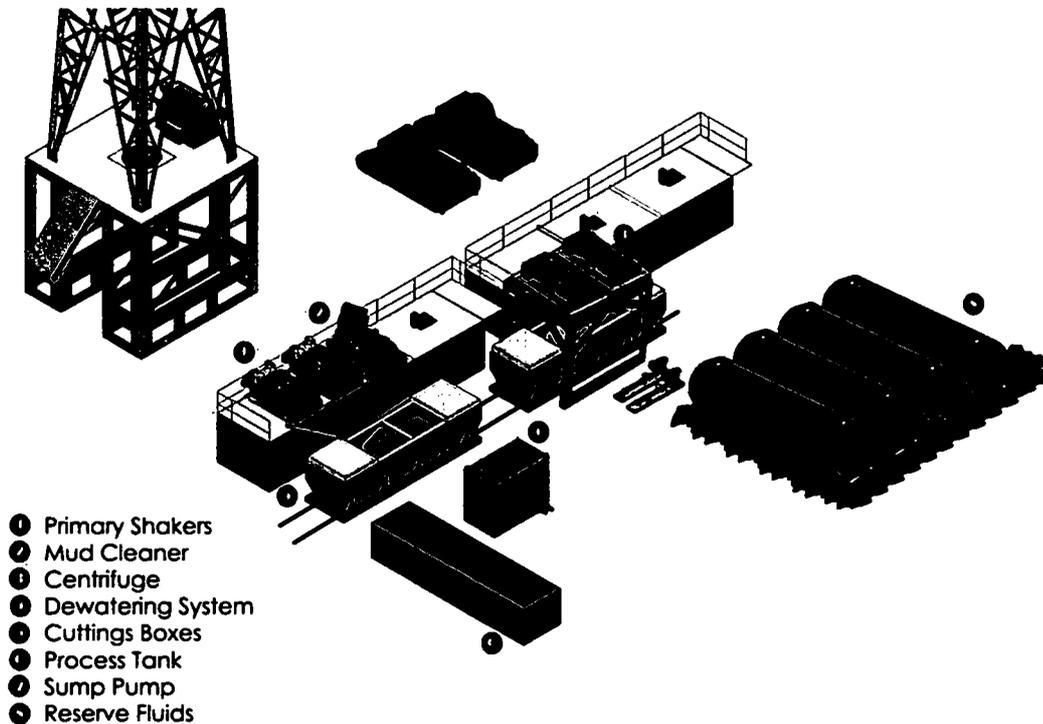
## **II. Operations and Maintenance Plan**

*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.



### Closed Loop Schematic



**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.

District I  
1625 N. French Dr., Hobbs, NM 88240  
District II  
811 S. First St., Artesia, NM 88210  
District III  
1000 Rio Brazos Road, Aztec, NM 87410  
District IV  
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico  
Energy, Minerals and Natural Resources Department

Submit Original  
to Appropriate  
District Office

Oil Conservation Division  
1220 South St. Francis Dr.  
Santa Fe, NM 87505

**HOBBS OCD**

OCT 01 2019

**RECEIVED**

**GAS CAPTURE PLAN**

Date: 4/4/2019

Original  
 Amended - Reason for Amendment: \_\_\_\_\_

Devon & OGRID No.: Devon Energy Prod Co., LP (6137)

This Gas Capture Plan outlines actions to be taken by the Devon to reduce well/production facility flaring/venting for new completion (new drill, recomplete to new zone, re-frac) activity.

Note: Form C-129 must be submitted and approved prior to exceeding 60 days allowed by Rule (Subsection A of 19.15.18.12 NMAC).

**Well(s)/Production Facility – Name of facility**

The well(s) that will be located at the production facility are shown in the table below.

Well Name	API	Well Location (ULSTR)	Footages	Expected MCF/D	Flared or Vented	Comments
Mustang 8-17 Fed 235H	N/A	Lot F, Sec 8, T25S, R 32E	2468 FNL 1375 FWL			Chincoteague 8 CTB 1
Mustang 8-17 Fed 236H	N/A	Lot F, Sec 8, T25S, R 32E	2468 FNL 1405 FWL			Chincoteague 8 CTB 1
Mustang 8-17 Fed Com 237H	N/A	Lot H, Sec 8, T25S, R 32E	2463 FNL 725 FEL			Chincoteague 8 CTB 1
Mustang 8-29 Fed Com 238H	N/A	Lot H, Sec 8, T25S, R 32E	2463 FNL 695 FEL			Chincoteague 8 CTB 1

**Gathering System and Pipeline Notification**

Well(s) will be connected to a production facility after flowback operations are complete, if DCP system is in place. The gas produced from production facility is dedicated to DCP and will be connected to DCP low/high pressure gathering system located in Lea County, New Mexico. It will require 0' of pipeline to connect the facility to low/high pressure gathering system. Devon provides (periodically) to DCP a drilling, completion and estimated first production date for wells that are scheduled to be drilled in the foreseeable future. In addition, Devon and DCP have periodic conference calls to discuss changes to drilling and completion schedules. Gas from these wells will be processed at DCP Processing Plant located in Sec.19, Twn. 19S, Rng. 32E, Eddy County, New Mexico. The actual flow of the gas will be based on compression operating parameters and gathering system pressures.

**Flowback Strategy**

After the fracture treatment/completion operations, well(s) will be produced to temporary production tanks and gas will be flared or vented. During flowback, the fluids and sand content will be monitored. When the produced fluids contain minimal sand, the wells will be turned to production facilities. Gas sales should start as soon as the wells start flowing through the production facilities, unless there are operational issues on DCP system at that time. Based on current information, it is Devon's belief the system can take this gas upon completion of the well(s).

Safety requirements during cleanout operations from the use of underbalanced air cleanout systems may necessitate that sand and non-pipeline quality gas be vented and/or flared rather than sold on a temporary basis.

**Alternatives to Reduce Flaring**

Below are alternatives considered from a conceptual standpoint to reduce the amount of gas flared.

- Power Generation – On lease
  - Only a portion of gas is consumed operating the generator, remainder of gas will be flared
- Compressed Natural Gas – On lease
  - Gas flared would be minimal, but might be uneconomical to operate when gas volume declines
- NGL Removal – On lease
  - Plants are expensive, residue gas is still flared, and uneconomical to operate when gas volume declines



Fluid Technology

ContiTech Beattie Corp.  
Website: [www.contitechbeattie.com](http://www.contitechbeattie.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.

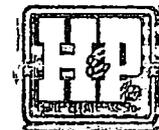
Should you have any questions or require any additional information/clarifications then please do not hesitate to contact us.

ContiTech Beattie 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 Beattie Corp,  
11535 Brittmoore Park Drive,  
Houston, TX 77041  
Phone: +1 (832) 327-0141  
Fax: +1 (832) 327-0148  
[www.contitechbeattie.com](http://www.contitechbeattie.com)



**ACCESS ROAD PLAT**  
**ACCESS ROAD TO THE CHINCOTEAGUE 8 CTB 1**

**DEVON ENERGY PRODUCTION COMPANY, L.P.**  
**CENTERLINE SURVEY OF AN ACCESS ROAD CROSSING**  
**SECTION 8, TOWNSHIP 25 SOUTH, RANGE 32 EAST, N.M.P.M.**  
**LEA COUNTY, STATE OF NEW MEXICO**  
**OCTOBER 12, 2018**

**DESCRIPTION**

A STRIP OF LAND 30 FEET WIDE CROSSING BUREAU OF LAND MANAGEMENT LAND IN SECTION 8, TOWNSHIP 25 SOUTH, RANGE 32 EAST, N.M.P.M., LEA COUNTY, STATE OF NEW MEXICO AND BEING 15 FEET EACH SIDE OF THE FOLLOWING DESCRIBED CENTERLINE SURVEY:

BEGINNING AT A POINT WITHIN THE SE/4 NW/4 OF SAID SECTION 8, TOWNSHIP 25 SOUTH, RANGE 32 EAST, N.M.P.M., WHENCE THE NORTHWEST CORNER OF SAID SECTION 8, TOWNSHIP 25 SOUTH, RANGE 32 EAST, N.M.P.M. BEARS N39°55'00"W, A DISTANCE OF 2461.53 FEET;

THENCE S89°50'59"W A DISTANCE OF 59.55 FEET THE TERMINUS OF THIS CENTERLINE SURVEY, WHENCE THE WEST QUARTER CORNER OF SAID SECTION 8, TOWNSHIP 25 SOUTH, RANGE 32 EAST, N.M.P.M. BEARS S63°13'33"W, A DISTANCE OF 1694.74 FEET;

SAID STRIP OF LAND BEING 59.55 FEET OR 3.61 RODS IN LENGTH, CONTAINING 0.041 ACRES MORE OR LESS AND BEING ALLOCATED BY FORTIES AS FOLLOWS:

SE/4 NW/4 59.55 L.F. 3.61 RODS 0.041 ACRES

**SURVEYOR CERTIFICATE**

I, FILMON 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 12<sup>TH</sup> DAY OF OCTOBER 2018

FILMON F. JARAMILLO  
PROFESSIONAL SURVEYOR  
NO. 12797

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

**GENERAL NOTES**

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

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

**SHEET: 2-2**

**MADRON SURVEYING, INC. CARLSBAD, NEW MEXICO**

**SURVEY NO. 6548**

301 SOUTH CANAL  
(575) 234-3341



APD ID: 10400040680

Submission Date: 04/10/2019

Operator Name: DEVON ENERGY PRODUCTION COMPANY LP

Well Name: MUSTANG 8-29 FED COM

Well Number: 238H

Well Type: OIL WELL

Well Work Type: Drill

### Section 1 - General

Would you like to address long-term produced water disposal? NO

### Section 2 - Lined Pits

Would you like to utilize Lined Pit PWD options? NO

Produced Water Disposal (PWD) Location:

PWD surface owner:

PWD disturbance (acres):

Lined pit PWD on or off channel:

Lined pit PWD discharge volume (bbl/day):

Lined pit specifications:

Pit liner description:

Pit liner manufacturers information:

Precipitated solids disposal:

Describe precipitated solids disposal:

Precipitated solids disposal permit:

Lined pit precipitated solids disposal schedule:

Lined pit precipitated solids disposal schedule attachment:

Lined pit reclamation description:

Lined pit reclamation attachment:

Leak detection system description:

Leak detection system attachment:

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

**Well Name:** MUSTANG 8-29 FED COM

**Well Number:** 238H

**Lined pit Monitor description:**

**Lined pit Monitor attachment:**

**Lined pit: do you have a reclamation bond for the pit?**

**Is the reclamation bond a rider under the BLM bond?**

**Lined pit bond number:**

**Lined pit bond amount:**

**Additional bond information attachment:**

### **Section 3 - Unlined Pits**

**Would you like to utilize Unlined Pit PWD options? NO**

**Produced Water Disposal (PWD) Location:**

**PWD 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:**

**Describe precipitated solids disposal:**

**Precipitated solids disposal permit:**

**Unlined pit precipitated solids disposal schedule:**

**Unlined pit precipitated solids disposal schedule attachment:**

**Unlined pit reclamation description:**

**Unlined pit reclamation attachment:**

**Unlined pit Monitor description:**

**Unlined pit Monitor attachment:**

**Do you propose to put the produced water to beneficial use?**

**Beneficial use user confirmation:**

**Estimated depth of the shallowest aquifer (feet):**

**Does the produced water have an annual average Total Dissolved Solids (TDS) concentration equal to or less than that of the existing water to be protected?**

**TDS lab results:**

**Geologic and hydrologic evidence:**

**State authorization:**

**Unlined Produced Water Pit Estimated percolation:**

**Unlined pit: do you have a reclamation bond for the pit?**

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

**Well Name:** MUSTANG 8-29 FED COM

**Well Number:** 238H

**Is the reclamation bond a rider under the BLM bond?**

**Unlined pit bond number:**

**Unlined pit bond amount:**

**Additional bond information attachment:**

### Section 4 - Injection

**Would you like to utilize Injection PWD options?** NO

**Produced Water Disposal (PWD) Location:**

**PWD surface owner:**

**PWD disturbance (acres):**

**Injection PWD discharge volume (bbl/day):**

**Injection well mineral owner:**

**Injection well type:**

**Injection well number:**

**Injection well name:**

**Assigned injection well API number?**

**Injection well API number:**

**Injection well new surface disturbance (acres):**

**Minerals protection information:**

**Mineral protection attachment:**

**Underground Injection Control (UIC) Permit?**

**UIC Permit attachment:**

### Section 5 - Surface Discharge

**Would you like to utilize Surface Discharge PWD options?** NO

**Produced Water Disposal (PWD) Location:**

**PWD surface owner:**

**PWD disturbance (acres):**

**Surface discharge PWD discharge volume (bbl/day):**

**Surface Discharge NPDES Permit?**

**Surface Discharge NPDES Permit attachment:**

**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):**

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

**Well Name:** MUSTANG 8-29 FED COM

**Well Number:** 238H

**Other PWD type description:**

**Other PWD type attachment:**

**Have other regulatory requirements been met?**

**Other regulatory requirements attachment:**



APD ID: 10400040680

Submission Date: 04/10/2019

Operator Name: DEVON ENERGY PRODUCTION COMPANY LP

Well Name: MUSTANG 8-29 FED COM

Well Number: 238H

[Show Final Text](#)

Well Type: OIL WELL

Well Work Type: Drill

### Bond Information

Federal/Indian APD: FED

BLM Bond number: NMB000801

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: