

**NM OIL CONSERVATION**  
ARTESIA DISTRICT

FORM APPROVED  
OMB No. 1004-0137  
Expires: January 31, 2018

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

OCT 15 2019

**APPLICATION FOR PERMIT TO DRILL OR REENTER**

1a. Type of work: <input checked="" type="checkbox"/> DRILL <input type="checkbox"/> REENTER		5. Lease Serial No. NMNM0404441
1b. Type of Well: <input checked="" type="checkbox"/> Oil Well <input type="checkbox"/> Gas Well <input type="checkbox"/> Other		6. If Indian, Allottee or Tribe Name
1c. Type of Completion: <input type="checkbox"/> Hydraulic Fracturing <input checked="" type="checkbox"/> Single Zone <input type="checkbox"/> Multiple Zone		7. If Unit or CA Agreement, Name and No.
2. Name of Operator DEVON ENERGY PRODUCTION COMPANY LP		8. Lease Name and Well No. BELLOQ 11-2 FED-STATE COM 521H
3a. Address 333 West Sheridan Avenue Oklahoma City OK 73102	3b. Phone No. (include area code) (800)583-3866	9. API Well No. 30-015-416395
4. Location of Well (Report location clearly and in accordance with any State requirements. *) At surface SWSW / 300 FSL / 660 FWL / LAT 32.3125655 / LONG -103.754988 At proposed prod. zone LOT 4 / 20 FNL / 400 FWL / LAT 32.3406799 / LONG -103.7558653		10. Field and Pool, or Exploratory LIVINGSTON RIDGE / BONESPRING
11. Sec., T, R, M. or Blk. and Survey or Area SEC 11 / T23S / R31E / NMP		12. County or Parish EDDY
13. State NM		14. Distance in miles and direction from nearest town or post office*
15. Distance from proposed* location to nearest property or lease line, ft. (Also to nearest drig. unit line, if any)	300 feet	16. No of acres in lease 1440
17. Spacing Unit dedicated to this well	640	18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft. 260 feet
19. Proposed Depth 9040 feet / 19267 feet	20. BLM/BIA Bond No. in file FED: CO1104	21. Elevations (Show whether DF, KDB, RT, GL, etc.) 3430 feet
22. Approximate date work will start* 12/19/2019	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.   | 4. Bond to cover the operations unless covered by an existing bond on file (see Item 20 above). |
| 2. A Drilling Plan.  | 5. Operator certification.  |
| 3. A Surface Use Plan (if the location is on National Forest System Lands, the SUPO must be filed with the appropriate Forest Service Office). | 6. Such other site specific information and/or plans as may be requested by the BLM.            |

25. Signature (Electronic Submission)	Name (Printed/Typed) Jenny Harms / Ph: (405)524-4902	Date 01/31/2019
Title Regulatory Compliance Professional		
Approved by (Signature) (Electronic Submission)	Name (Printed/Typed) Cody Layton / Ph: (575)234-5959	Date 10/04/2019
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.

**APPROVED WITH CONDITIONS**  
Approval Date: 10/04/2019

R/L 10-18-19

\*(Instructions on page 2)

## INSTRUCTIONS

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

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

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

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

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

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

**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 connects this information to an 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: SWSW / 300 FSL / 660 FWL / TWSP: 23S / RANGE: 31E / SECTION: 11 / LAT: 32.3125655 / LONG: -103.754988 ( TVD: 0 feet, MD: 0 feet )  
PPP: SWSW / 100 FSL / 400 FWL / TWSP: 23S / RANGE: 31E / SECTION: 11 / LAT: 32.3120179 / LONG: -103.7558293 ( TVD: 8686 feet, MD: 8704 feet )  
BHL: LOT 4 / 20 FNL / 400 FWL / TWSP: 23S / RANGE: 31E / SECTION: 2 / LAT: 32.3406799 / LONG: -103.7558653 ( TVD: 9040 feet, MD: 19267 feet )

### BLM Point of Contact

Name: Tenille Ortiz

Title: Legal Instruments Examiner

Phone: 5752342224

Email: tortiz@blm.gov

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## 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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# PECOS DISTRICT

## DRILLING CONDITIONS OF APPROVAL

<b>OPERATOR'S NAME:</b>	Devon Energy Production Company L.P.
<b>LEASE NO.:</b>	NMNM0404441
<b>WELL NAME &amp; NO.:</b>	BELLOQ 11-2 FED STATE COM 521H
<b>SURFACE HOLE FOOTAGE:</b>	300'/S & 660'/W
<b>BOTTOM HOLE FOOTAGE:</b>	20'/N & 400'/W
<b>LOCATION:</b>	Section 11, T.23 S., R.31 E., NMPM
<b>COUNTY:</b>	Eddy County, New Mexico

COA

H2S	<input checked="" type="radio"/> Yes	<input type="radio"/> No	
Potash	<input type="radio"/> None	<input type="radio"/> Secretary	<input checked="" 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

A Hydrogen Sulfide (H2S) Drilling Plan shall be activated 500 feet prior to drilling into the **Triste Draw Sand Dunes, the Salad, and Bone Spring** formation. As a result, the Hydrogen Sulfide area must meet Onshore Order 6 requirements, which includes equipment and personnel/public protection items. If Hydrogen Sulfide is encountered, please provide measured values and formations to the BLM.

### B. CASING

1. The 13-3/8 inch surface casing shall be set at approximately **764 feet** (a minimum of **70 feet (Eddy 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 **24 hours in the Potash Area** 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 4325 feet is:

**Option 1 (Single Stage):**

- Cement to surface. If cement does not circulate see B.1.a, c-d above.  
**Wait on cement (WOC) time for a primary cement job is to include the lead cement slurry due to cave/karst or potash.**

**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.  
**Wait on cement (WOC) time for a primary cement job is to include the lead cement slurry due to cave/karst or potash.**

**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 to surface. If cement does not circulate, contact the appropriate BLM office.  
**Cement excess is less than 25%, more cement might be required. (-10.38%)**

### **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 **2000 (2M)** psi.
- b. Minimum working pressure of the blowout preventer (BOP) and related equipment (BOPE) required for drilling below the intermediate casing shoe shall be **3000 (3M)** 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 **3000 (3M)** psi.
  - a. Wellhead shall be installed by manufacturer's representatives, submit documentation with subsequent sundry.
  - b. If the welding is performed by a third party, the manufacturer's representative shall monitor the temperature to verify that it does not exceed the maximum temperature of the seal.
  - c. Manufacturer representative shall install the test plug for the initial BOP test.
  - d. 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 NMOC 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 L.P.
WELL NAME & NO.:	BELLOQ 11-2 FED STATE COM
SURFACE HOLE FOOTAGE:	300'/S & 660'/W
BOTTOM HOLE FOOTAGE:	20'/N & 400'/W
LOCATION:	Section 11, T.23 S., R.31 E., NMPM
COUNTY:	Eddy County, New Mexico

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

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- ☒ **Special Requirements**
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## **I. GENERAL PROVISIONS**

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

## **II. PERMIT EXPIRATION**

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

## **III. ARCHAEOLOGICAL, PALEONTOLOGY & HISTORICAL SITES**

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

## **IV. NOXIOUS WEEDS**

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

## V. SPECIAL REQUIREMENT(S)

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

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

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

Lessees must comply with the 2012 Secretarial Potash Order. The Order is designed to manage the efficient development of oil, gas, and potash resources. Section 6 of the Order provides general provisions which must be followed to minimize conflict between the industries and ensure the safety of operations.

To minimize impacts to potash resources, the proposed well is confined within the boundaries of the established Uber North Drill Island (See Potash Memo and Map in attached file for Drill Island description).

### **Livestock Watering Requirement**

Any damage to structures that provide water to livestock throughout the life of the well, caused by operations from the well site, must be immediately corrected by the operator. The operator must notify the BLM office (575-234-5972) and the private surface landowner or the grazing allotment holder if any damage occurs to structures that provide water to livestock.

### **Fence Requirement**

Where entry is granted across a fence line, the fence must be braced and tied off on both sides of the passageway with H-braces 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).

The operator must contact the allotment holder prior to construction to identify the location of the pipeline. The operator must take measures to protect the pipeline from compression or other damages. If the pipeline is damaged or compromised in any way near the proposed project as a result of oil and gas activity, the operator is responsible for repairing the pipeline immediately. The operator must notify the BLM office (575-234-5972) and the private surface landowner or the grazing allotment holder if any damage occurs to structures that provide water to livestock.

During construction, the proponent shall minimize disturbance to existing fences, water lines, troughs, windmills, and other improvements on public lands. The proponent 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 grazing permittee/allottee prior to disturbing any range improvement projects. 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.

## **VI. CONSTRUCTION**

### **A. NOTIFICATION**

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

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

### **B. TOPSOIL**

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

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

### **C. CLOSED LOOP SYSTEM**

Tanks are required for drilling operations: No Pits.

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

### **D. FEDERAL MINERAL MATERIALS PIT**

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

### **E. WELL PAD SURFACING**

Surfacing of the well pad is not required.

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

### **F. EXCLOSURE FENCING (CELLARS & PITS)**

**Exclosure Fencing**

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

**G. ON LEASE ACCESS ROADS****Road Width**

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

**Surfacing**

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

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

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

**Crowning**

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

**Ditching**

Ditching shall be required on both sides of the road.

**Turnouts**

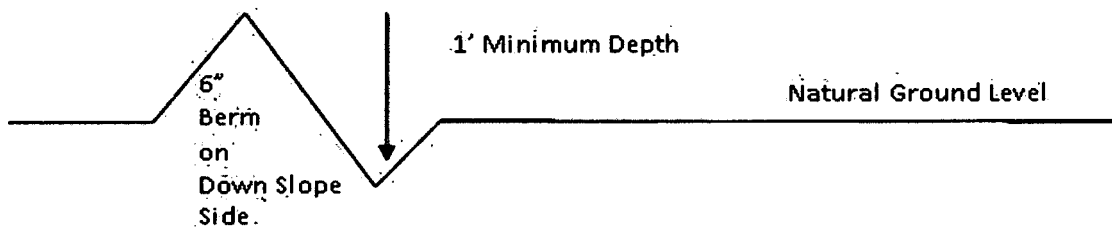
Vehicle turnouts shall be constructed on the road. Turnouts shall be intervisible with interval spacing distance less than 1000 feet. Turnouts shall conform to Figure 1; cross section and plans for typical road construction.

**Drainage**

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

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

#### **Cross Section of a Typical Lead-off Ditch**



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

#### **Formula for Spacing Interval of Lead-off Ditches**

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

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

#### **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

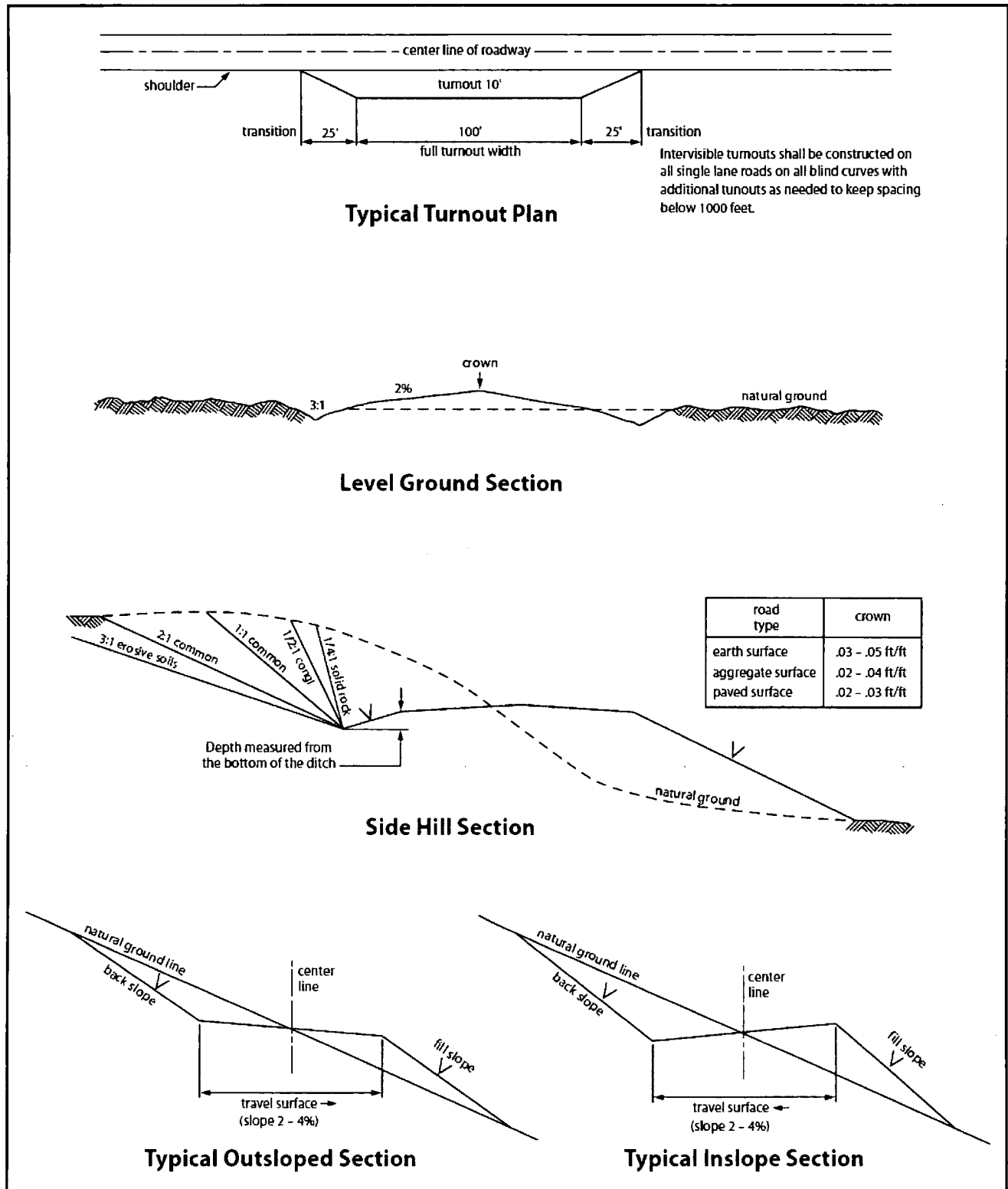


Figure 1. Cross-sections and plans for typical road sections representative of BLM resource or FS local and higher-class roads.

## **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:

**Lesser Prairie-Chicken**

Oil and gas activities will not be allowed in lesser prairie-chicken habitat during the period from March 1st through June 15th annually. During that period, other activities that produce noise or involve human activity, such as the maintenance of oil and gas facilities, geophysical exploration other than 3-D operations, and pipeline, road, and well pad construction, will be allowed except between 3:00 am and 9:00 am. The 3:00 am to 9:00 am restriction will not apply to normal, around-the-clock operations, such as venting, flaring, or pumping, which do not require a human presence during this period. Normal vehicle use on existing roads will not be restricted. Exhaust noise from pump jack engines must be muffled or otherwise controlled so as not to exceed 75 db measured at 30 ft. from the source of the noise.

**STANDARD STIPULATIONS FOR SURFACE INSTALLED PIPELINES**

**A copy of the application (Grant, Sundry Notice, APD) 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 activity of 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. The holder shall be liable for damage or injury to the United States to the extent provided by 43 CFR Sec. 2883.1-4. The holder shall be held to a standard of strict liability for damage or injury to the United States resulting from pipe rupture, fire, or spills caused or substantially aggravated by any of the following within the right-of-way or permit area:

- a. Activities of the holder including, but not limited to construction, operation, maintenance, and termination of the facility.
- b. Activities of other parties including, but not limited to:
  - (1) Land clearing.
  - (2) Earth-disturbing and earth-moving work.
  - (3) Blasting.
  - (4) Vandalism and sabotage.
- c. Acts of God.

The maximum limitation for such strict liability damages shall not exceed one million dollars (\$1,000,000) for any one event, and any liability in excess of such amount shall be determined by the ordinary rules of negligence of the jurisdiction in which the damage or injury occurred.

This section shall not impose strict liability for damage or injury resulting primarily from an act of war or from the negligent acts or omissions of the United States.

5. If, during any phase of the construction, operation, maintenance, or termination of the pipeline, any oil, salt water, 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, salt water, 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 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 the holder



of any responsibility as provided herein.

6. All construction and maintenance activity will be confined to the authorized right-of-way width of 20 feet. If the pipeline route follows an existing road or buried pipeline right-of-way, the surface pipeline must be installed no farther than 10 feet from the edge of the road or buried pipeline right-of-way. If existing surface pipelines prevent this distance, the proposed surface pipeline must be installed immediately adjacent to the outer surface pipeline. All construction and maintenance activity will be confined to existing roads or right-of-ways.

7. No blading or clearing of any vegetation will be allowed unless approved in writing by the Authorized Officer.

8. The holder shall install the pipeline on the surface in such a manner that will minimize suspension of the pipeline across low areas in the terrain. In hummocky or dune areas, the pipeline will be "snaked" around hummocks and dunes rather than suspended across these features.

9. The pipeline shall be buried with a minimum of 24 inches under all roads, "two-tracks," and trails. Burial of the pipe will continue for 20 feet on each side of each crossing. The condition of the road, upon completion of construction, shall be returned to at least its former state with no bumps or dips remaining in the road surface.

10. 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.

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. Excluding the pipe, all above-ground structures not subject to safety requirement 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" – **Shale Green**, Munsell Soil Color No. 5Y 4/2; designated by the Rocky Mountain Five State Interagency Committee.

13. 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. Signs will be maintained in a legible condition for the life of the pipeline.

14. 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. The holder will take whatever steps are necessary to ensure that the pipeline route is not used as a roadway.

15. 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 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.

16. 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, powerline 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.

17. Surface pipelines must be less than or equal to 4 inches and a working pressure below 125 psi.

18. Special Stipulations:

- a. **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 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.

## **C. ELECTRIC LINES**

### **STANDARD STIPULATIONS FOR OVERHEAD ELECTRIC DISTRIBUTION LINES**

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

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

1. The holder shall indemnify the United States against any liability for damage to life or property arising from the occupancy or use of public lands under this grant.
2. The holder shall comply with all applicable Federal laws and regulations existing or hereafter enacted or promulgated. In any event, the holder shall comply with the Toxic Substances Control Act of 1976 as amended, 15 USC 2601 et seq. (1982) with regards to any toxic substances that are used, generated by or stored on the right-of-way or on facilities authorized under this right-of-way grant. (See 40 CFR, Part 702-799 and especially, provisions on polychlorinated biphenyls, 40 CFR 761.1-761.193.) Additionally, any release of toxic substances (leaks, spills, etc.) in excess of the reportable quantity established by 40 CFR, Part 117 shall be reported as required by the Comprehensive Environmental Response, Compensation, and Liability Act, section 102b. A copy of any report required or requested by any Federal agency or State government as a result of a reportable release or spill of any toxic substances shall be furnished to the authorized officer concurrent with the filing of the reports to the involved Federal agency or State government.
3. The holder agrees to indemnify the United States against any liability arising from the release of any hazardous substance or hazardous waste (as these terms are defined in the Comprehensive Environmental Response, Compensation and Liability Act of 1980, 42 U.S.C. 9601, et seq. or the Resource Conservation and Recovery Act, 42 U.S.C. 6901, et seq.) on the Right-of-Way (unless the release or threatened release is wholly unrelated to the Right-of-Way holder's activity on the Right-of-Way), or resulting from the activity of the Right-of-Way holder on the Right-of-Way. This agreement applies without regard to whether a release is caused by the holder, its agent, or unrelated third parties.
4. There will be no clearing or blading of the right-of-way unless otherwise agreed to in writing by the Authorized Officer.
5. Power lines shall be constructed and designed in accordance to standards outlined in "Suggested Practices for Avian Protection on Power lines: The State of the Art in 2006" Edison Electric Institute, APLIC, and the California Energy Commission 2006 . The holder shall assume the burden and expense of proving that pole designs not shown in the above publication deter raptor perching, roosting, and nesting. Such proof shall be provided by a raptor expert approved by the Authorized Officer. The BLM reserves the right to require modification or additions to all powerline structures placed on this right-of-way, should they be necessary to ensure the safety of large perching birds. Such modifications and/or additions shall be made by the holder without liability or expense to the United States.

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

6. The holder shall minimize disturbance to existing fences and other improvements on public lands. The holder is required to promptly repair improvements to at least their former state. Functional use of these improvements will be maintained at all times. The holder will contact the owner of any improvements prior to disturbing them. When necessary to pass through a fence line, the fence shall be braced on both sides of the passageway prior to cutting the fence. No permanent gates will be allowed unless approved by the Authorized Officer.

7. The BLM serial number assigned to this authorization shall be posted in a permanent, conspicuous manner where the power line crosses roads and at all serviced facilities. Numbers will be at least two inches high and will be affixed to the pole nearest the road crossing and at the facilities served.

8. Upon cancellation, relinquishment, or expiration of this grant, the holder shall comply with those abandonment procedures as prescribed by the Authorized Officer.

9. All surface structures (poles, lines, transformers, etc.) shall be removed within 180 days of abandonment, relinquishment, or termination of use of the serviced facility or facilities or within 180 days of abandonment, relinquishment, cancellation, or expiration of this grant, whichever comes first. This will not apply where the power line extends service to an active, adjoining facility or facilities.

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

11. Special Stipulations:

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

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

Oil and gas activities including 3-D geophysical exploration, and drilling will not be allowed in lesser prairie-chicken habitat during the period from March 1st through June 15th annually. During that period, other activities that produce noise or involve human activity, such as the maintenance of oil and gas facilities, geophysical exploration other than 3-D operations, and pipeline, road, and well pad construction, will be allowed except between 3:00 am and 9:00 am. The 3:00 am to 9:00 am restriction will not apply to normal, around-the-clock operations, such as venting, flaring, or pumping, which do not require a human presence during this period. Additionally, no new drilling will be

allowed within up to 200 meters of 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 ft. from the source of the noise.

#### 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.

## **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



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

## Operator Certification Data Report

10/09/2019

### 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:** 01/30/2019

**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:** 6488 Seven Rivers Hwy

**City:** Artesia

**State:** NM

**Zip:** 88210

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

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



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

## Application Data Report

10/09/2019

APD ID: 10400038616

Submission Date: 01/31/2019

Highlighted data  
reflects the most  
recent changes

Operator Name: DEVON ENERGY PRODUCTION COMPANY LP

Well Name: BELLOQ 11-2 FED STATE COM

Well Number: 521H

[Show Final Text](#)

Well Type: OIL WELL

Well Work Type: Drill

### Section 1 - General

APD ID: 10400038616

Tie to previous NOS?

Submission Date: 01/31/2019

BLM Office: CARLSBAD

User: Jenny Harms

Title: Regulatory Compliance  
Professional

Federal/Indian APD: FED

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

Lease number: NMNM0404441

Lease Acres: 1440

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: BELLOQ 11-2 FED STATE COM

Well Number: 521H

Well API Number:

Field/Pool or Exploratory? Field and Pool

Field Name: LIVINGSTON  
RIDGE

Pool Name: BONESPRING

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

**Well Name:** BELLOQ 11-2 FED STATE COM

**Well Number:** 521H

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

**Is the proposed well in a Helium production area?** N

**Use Existing Well Pad?** YES

**New surface disturbance?** Y

**Type of Well Pad:** MULTIPLE WELL

**Multiple Well Pad Name:**

**Number:** 2

**Well Class:** HORIZONTAL

BELLOQ 11 PAD

**Number of Legs:** 1

**Well Work Type:** Drill

**Well Type:** OIL WELL

**Describe Well Type:**

**Well sub-Type:** INFILL

**Describe sub-type:**

**Distance to town:**

**Distance to nearest well:** 260 FT

**Distance to lease line:** 300 FT

**Reservoir well spacing assigned acres Measurement:** 640 Acres

**Well plat:** BELLOQ\_11\_2\_FED\_STATE\_COM\_521H\_WL\_P\_signed\_1\_30\_2019\_20190130053223.pdf

**Well work start Date:** 12/19/2019

**Duration:** 45 DAYS

### Section 3 - Well Location Table

**Survey Type:** RECTANGULAR

**Describe Survey Type:**

**Datum:** NAD83

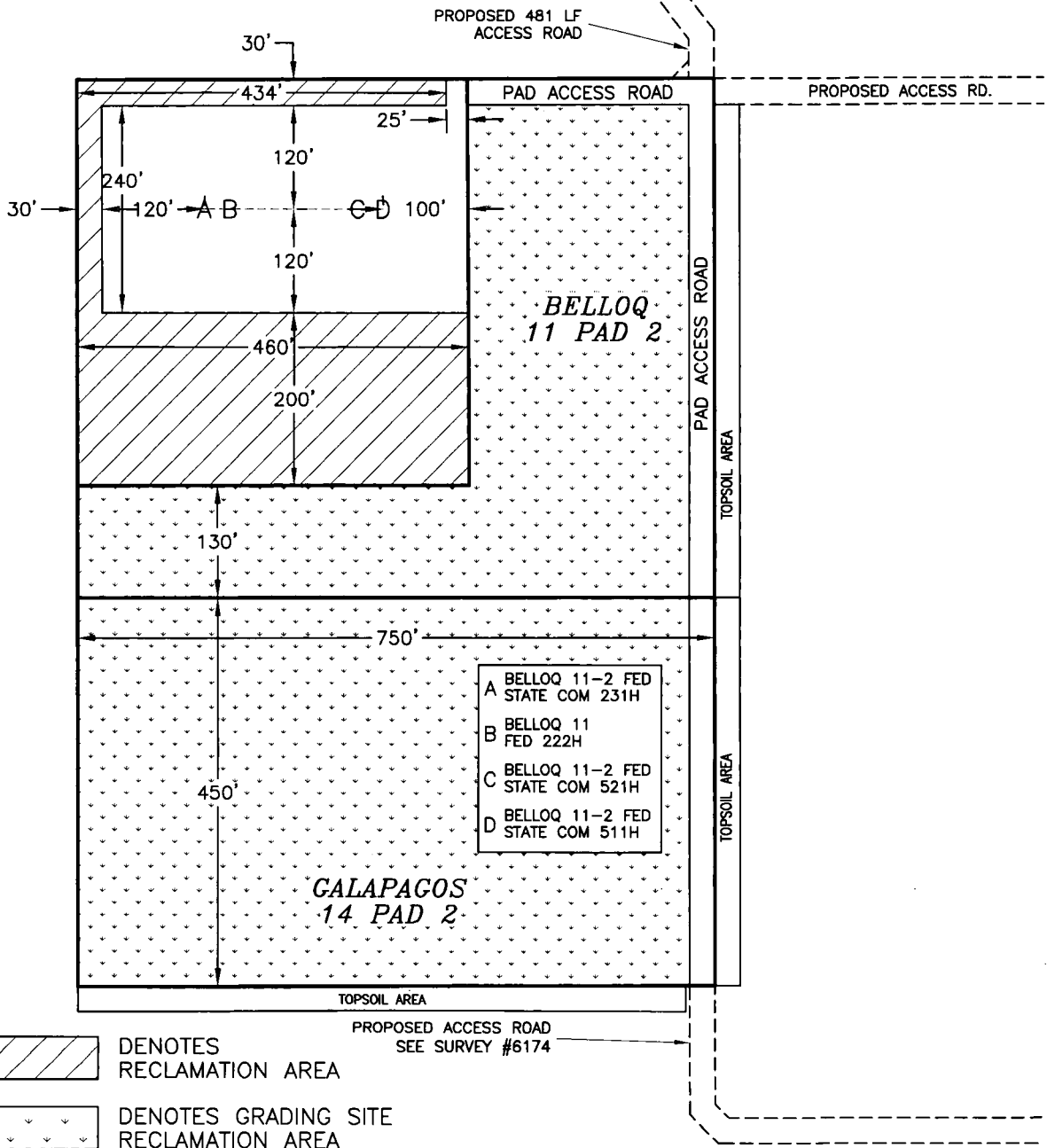
**Vertical Datum:** NAVD88

**Survey number:** 6708

**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	300	FSL	660	FWL	23S	31E	11	Aliquot SWS W	32.31256 55	- 103.7549 88	EDD Y	NEW MEXI CO	NEW MEXI CO	F	NMNM 040444 1	343 0	0	0
KOP Leg #1	50	FSL	400	FWL	23S	31E	11	Aliquot SESE	32.31194	- 103.7558	EDD Y	NEW MEXI CO	NEW MEXI CO	F	NMNM 040444 1	- 502 2	846 3	845 2
PPP Leg #1	100	FSL	400	FWL	23S	31E	11	Aliquot SWS W	32.31201 79	- 103.7558 293	EDD Y	NEW MEXI CO	NEW MEXI CO	F	NMNM 040444 1	- 525 6	870 4	868 6

SECTION 11, TOWNSHIP 23 SOUTH, RANGE 31 EAST, N.M.P.M.  
EDDY COUNTY, STATE OF NEW MEXICO  
INTERIM SITE BUILD PLAN



020 100 200 400  
SCALE 1" = 200'

2.575± ACRES INTERIM PAD RECLAMATION AREA  
12.216± ACRES GRADING SITE RECLAMATION AREA  
3.289± ACRES NON-RECLAIMED AREA  
18.080± ACRES BELLOQ & GALAPAGOS WELL PAD

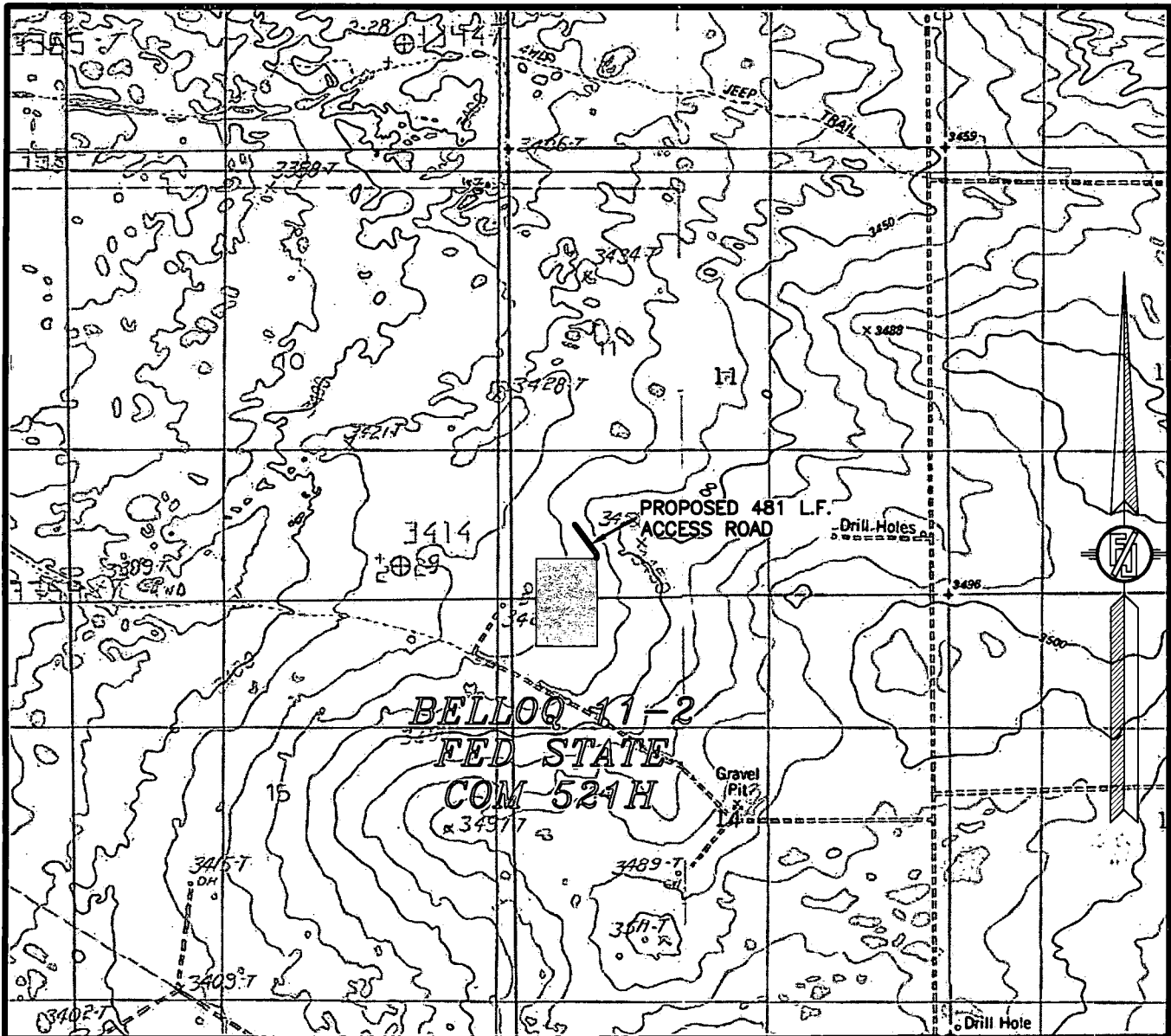
DEVON ENERGY PRODUCTION COMPANY, L.P.  
**BELLOQ 11-2 FED STATE COM 521H**  
LOCATED 300 FT. FROM THE SOUTH LINE  
AND 660 FT. FROM THE WEST LINE OF  
SECTION 11, TOWNSHIP 23 SOUTH,  
RANGE 31 EAST, N.M.P.M.  
EDDY COUNTY, STATE OF NEW MEXICO

DECEMBER 20, 2018

SURVEY NO. 6708

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

SECTION 11, TOWNSHIP 23 SOUTH, RANGE 31 EAST, N.M.P.M.  
EDDY COUNTY, STATE OF NEW MEXICO  
LOCATION VERIFICATION MAP



USGS QUAD MAP:  
LOS MEDANOS  
BOOTLEG RIDGE

NOT TO SCALE

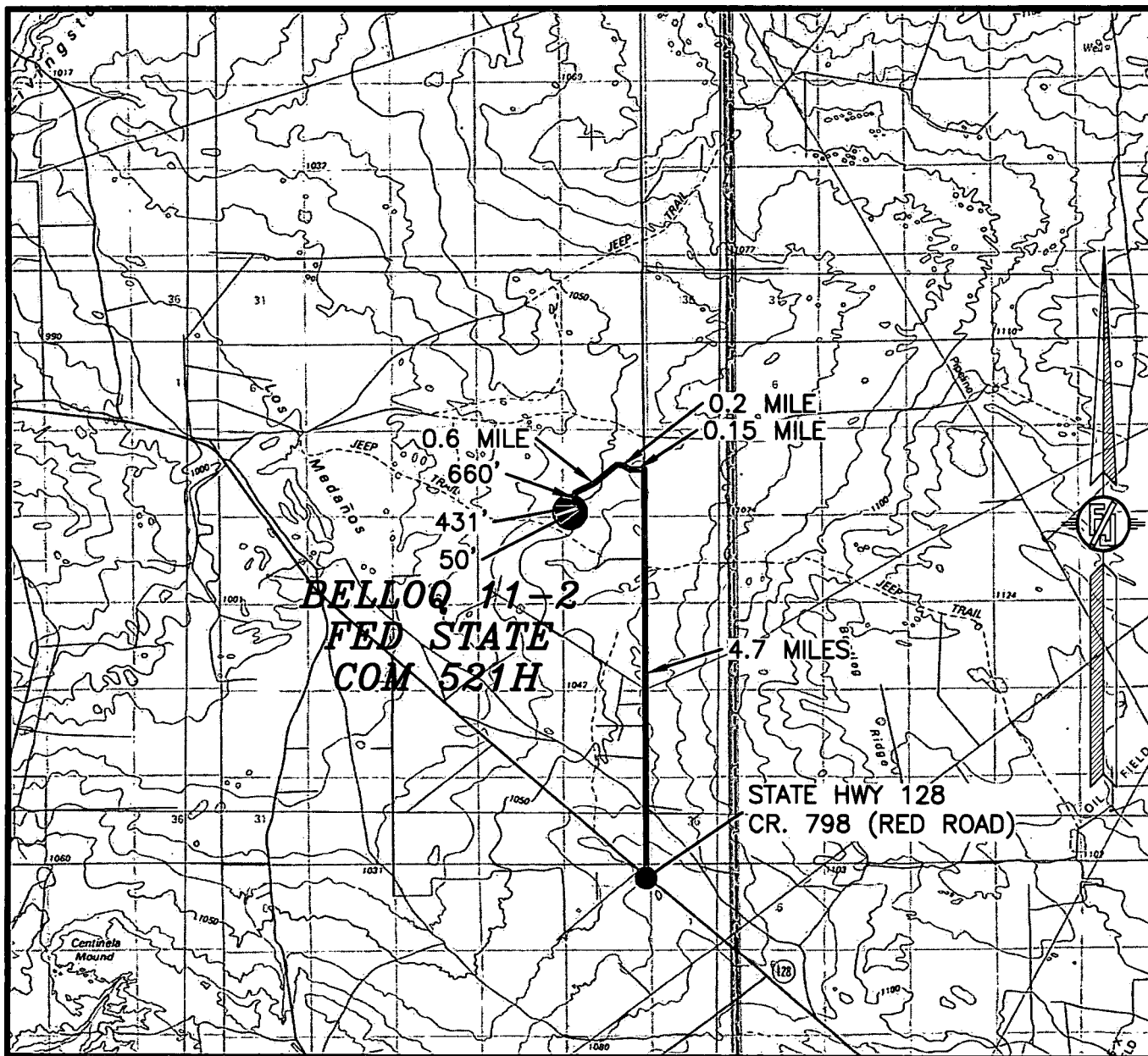
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**BELLOQ 11-2 FED STATE COM 521H**  
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SECTION 11, TOWNSHIP 23 SOUTH,  
RANGE 31 EAST, N.M.P.M.  
EDDY COUNTY, STATE OF NEW MEXICO

DECEMBER 20, 2018

MADRON SURVEYING, INC. 301 SOUTH CANAL (575) 234-3341 CARLSBAD, NEW MEXICO SURVEY NO. 6708



SECTION 11, TOWNSHIP 23 SOUTH, RANGE 31 EAST, N.M.P.M.  
EDDY COUNTY, STATE OF NEW MEXICO  
VICINITY MAP



DISTANCES IN MILES

NOT TO SCALE

**DIRECTIONS TO LOCATION**

FROM STATE HIGHWAY 128 AND CR 798 (RED ROAD) GO NORTH ON CR 798 4.7 MILES, TURN LEFT ON CALICHE ROAD AND GO WEST 0.15 OF A MILE, BEND RIGHT AND GO NORTHWEST 0.2 OF A MILE, TURN LEFT AND GO SOUTHWEST 0.6 OF A MILE, TURN LEFT AND GO SOUTH 660' TO PROPOSED ROAD SURVEY AND FOLLOW FLAGS SOUTHEAST 431', THEN SOUTH 50' TO THE NORTHEAST PAD CORNER.

DEVON ENERGY PRODUCTION COMPANY, L.P.

**BELLOQ 11-2 FED STATE COM 521H**

LOCATED 300 FT. FROM THE SOUTH LINE  
AND 660 FT. FROM THE WEST LINE OF  
SECTION 11, TOWNSHIP 23 SOUTH,  
RANGE 31 EAST, N.M.P.M.

EDDY COUNTY, STATE OF NEW MEXICO

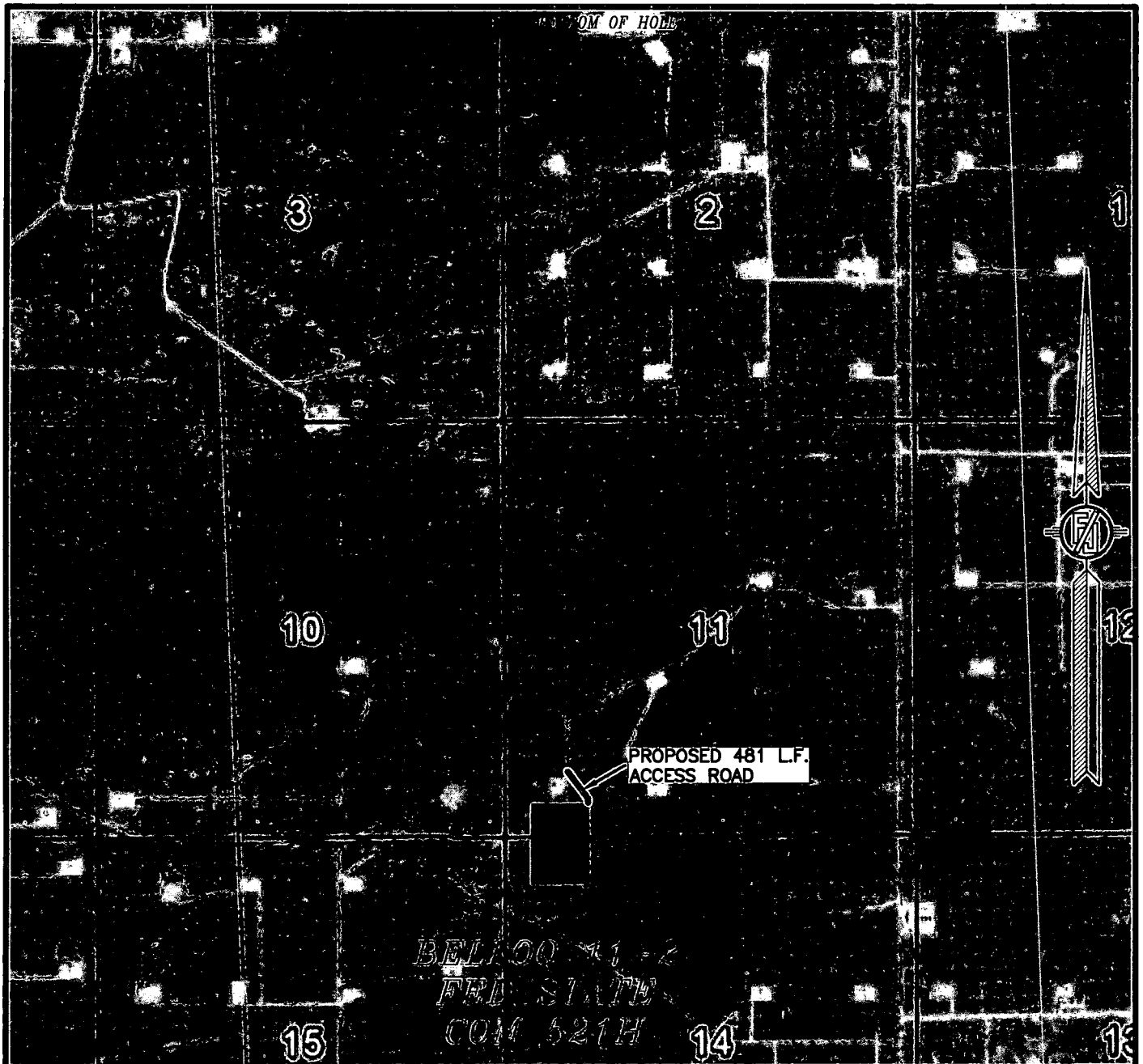
DECEMBER 20, 2018

SURVEY NO. 6708

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

CARLSBAD, NEW MEXICO

SECTION 11, TOWNSHIP 23 SOUTH, RANGE 31 EAST, N.M.P.M.  
EDDY COUNTY, STATE OF NEW MEXICO  
AERIAL PHOTO



NOT TO SCALE  
AERIAL PHOTO:  
GOOGLE EARTH  
NOV. 2017

DEVON ENERGY PRODUCTION COMPANY, L.P.  
**BELLOQ 11-2 FED STATE COM 521H**  
LOCATED 300 FT. FROM THE SOUTH LINE  
AND 660 FT. FROM THE WEST LINE OF  
SECTION 11, TOWNSHIP 23 SOUTH,  
RANGE 31 EAST, N.M.P.M.  
EDDY COUNTY, STATE OF NEW MEXICO

DECEMBER 20, 2018

SURVEY NO. 6708

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

SECTION 11, TOWNSHIP 23 SOUTH, RANGE 31 EAST, N.M.P.M.  
 EDDY COUNTY, STATE OF NEW MEXICO  
 AERIAL ACCESS ROUTE MAP



NOT TO SCALE  
 AERIAL PHOTO:  
 GOOGLE EARTH  
 NOV. 2017

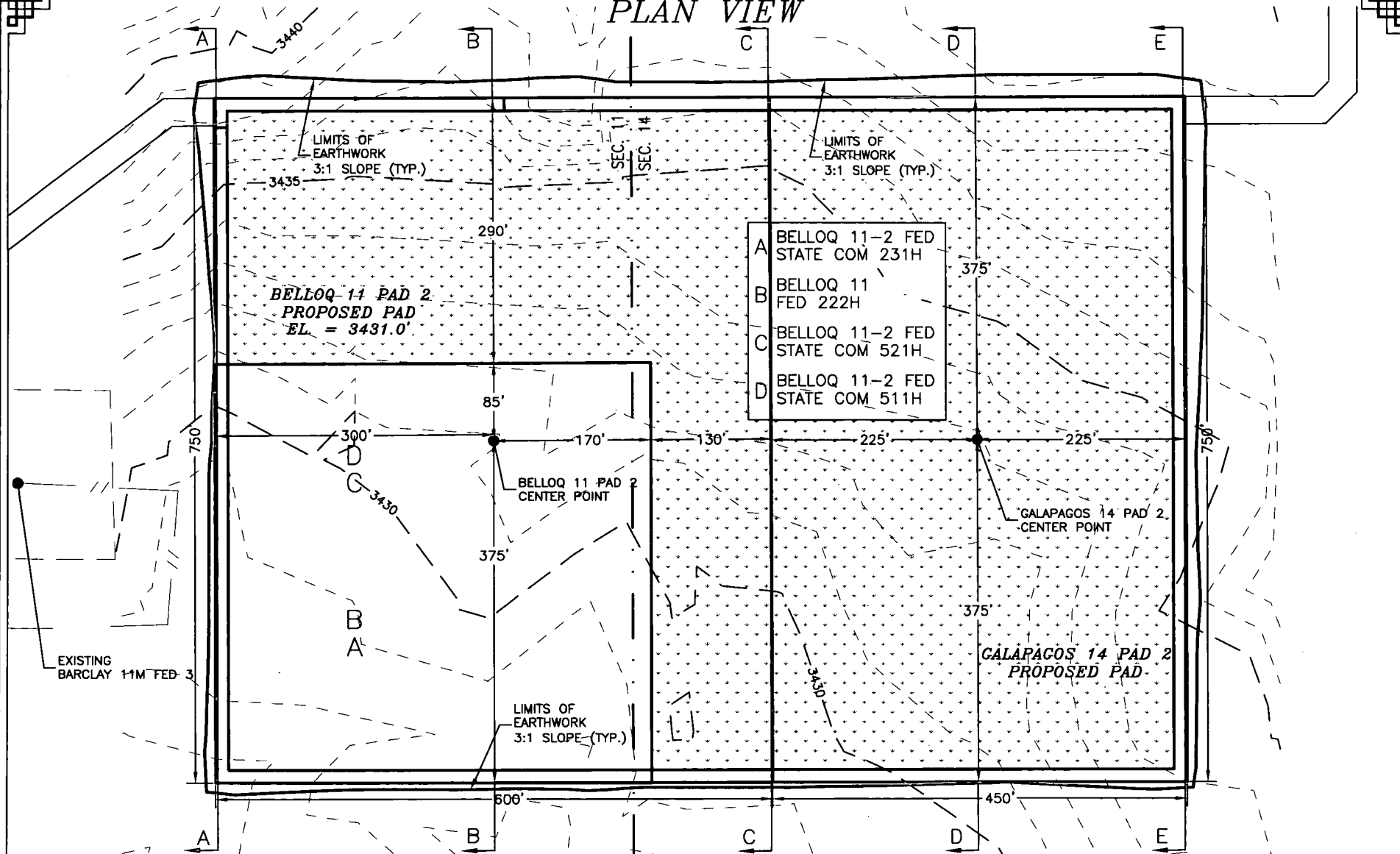
DEVON ENERGY PRODUCTION COMPANY, L.P.  
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 EDDY COUNTY, STATE OF NEW MEXICO

DECEMBER 20, 2018

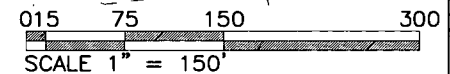
SURVEY NO. 6708

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

# PLAN VIEW



DEVON ENERGY PRODUCTION COMPANY, L.P.  
 PAD GRADING AND CROSS SECTIONS  
 FOR BELLOQ 11-2 FED STATE COM 521H  
 SECTION 11, TOWNSHIP 23 SOUTH,  
 RANGE 31 EAST, N.M.P.M.  
 EDDY COUNTY, STATE OF NEW MEXICO



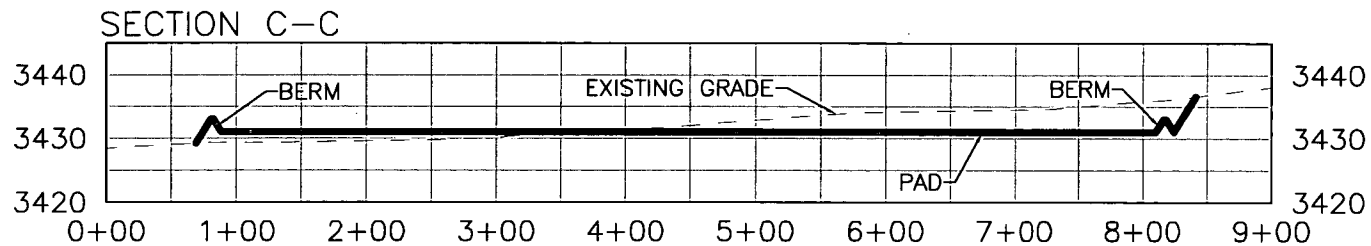
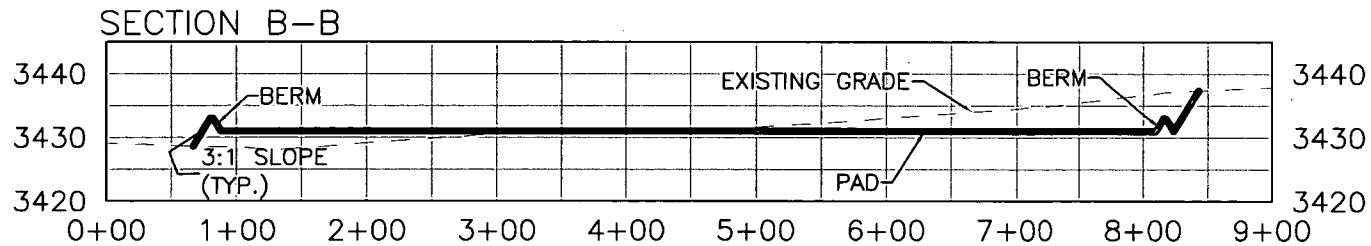
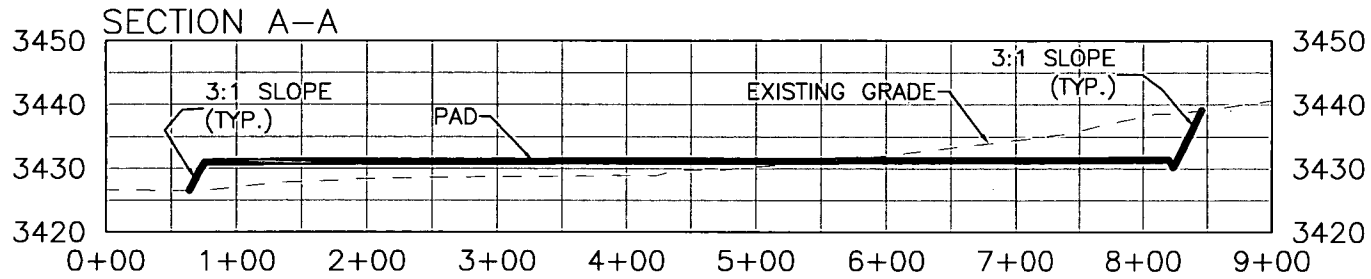
CUT	FILL	NET
63729 CU. YD	15537 CU. YD	48191 CU. YD (CUT)

EARTHWORK QUANTITIES ARE ESTIMATED

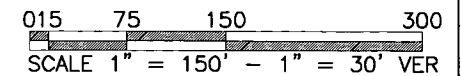
DECEMBER 20, 2018  
 MADRON SURVEYING, INC. 301 SOUTH CANAL (575) 234-3341 CARLSBAD, NEW MEXICO

SHEET 1-3  
 SURVEY NO. 6708

# CROSS SECTIONS



DEVON ENERGY PRODUCTION COMPANY, L.P.  
 PAD GRADING AND CROSS SECTIONS  
 FOR BELLOQ 11-2 FED STATE COM 521H  
 SECTION 11, TOWNSHIP 23 SOUTH,  
 RANGE 31 EAST, N.M.P.M.  
 EDDY COUNTY, STATE OF NEW MEXICO



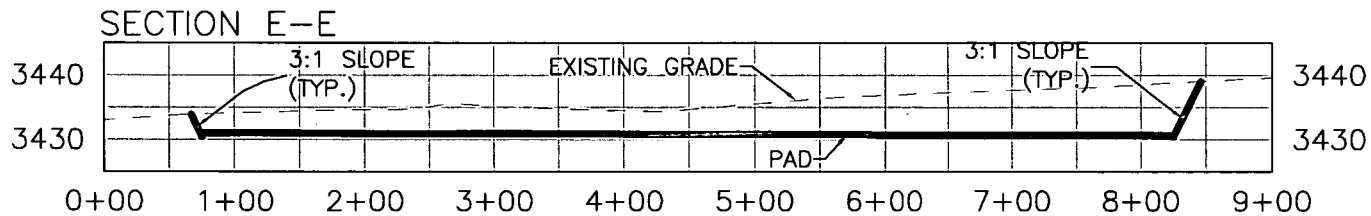
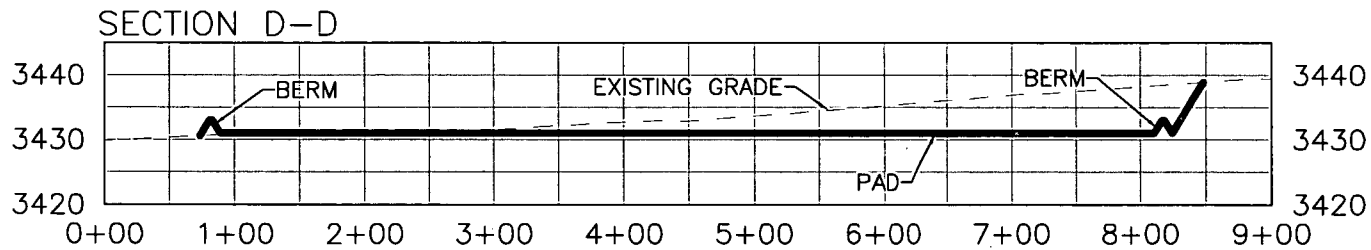
CUT	FILL	NET
63729 CU. YD	15537 CU. YD	48191 CU. YD (CUT)

EARTHWORK QUANTITIES ARE ESTIMATED

DECEMBER 20, 2018  
 MADRON SURVEYING, INC. 301 SOUTH CANAL CARLSBAD, NEW MEXICO  
 (575) 234-3341

SHEET 2-3  
 SURVEY NO. 6708

# CROSS SECTIONS



DEVON ENERGY PRODUCTION COMPANY, L.P.  
PAD GRADING AND CROSS SECTIONS  
FOR BELLOQ 11-2 FED STATE COM 521H  
SECTION 11, TOWNSHIP 23 SOUTH,  
RANGE 31 EAST, N.M.P.M.  
EDDY COUNTY, STATE OF NEW MEXICO

015 75 150 300  
SCALE 1" = 150' - 1" = 30' VER

CUT	FILL	NET
63729 CU. YD	15537 CU. YD	48191 CU. YD (CUT)

EARTHWORK QUANTITIES ARE ESTIMATED

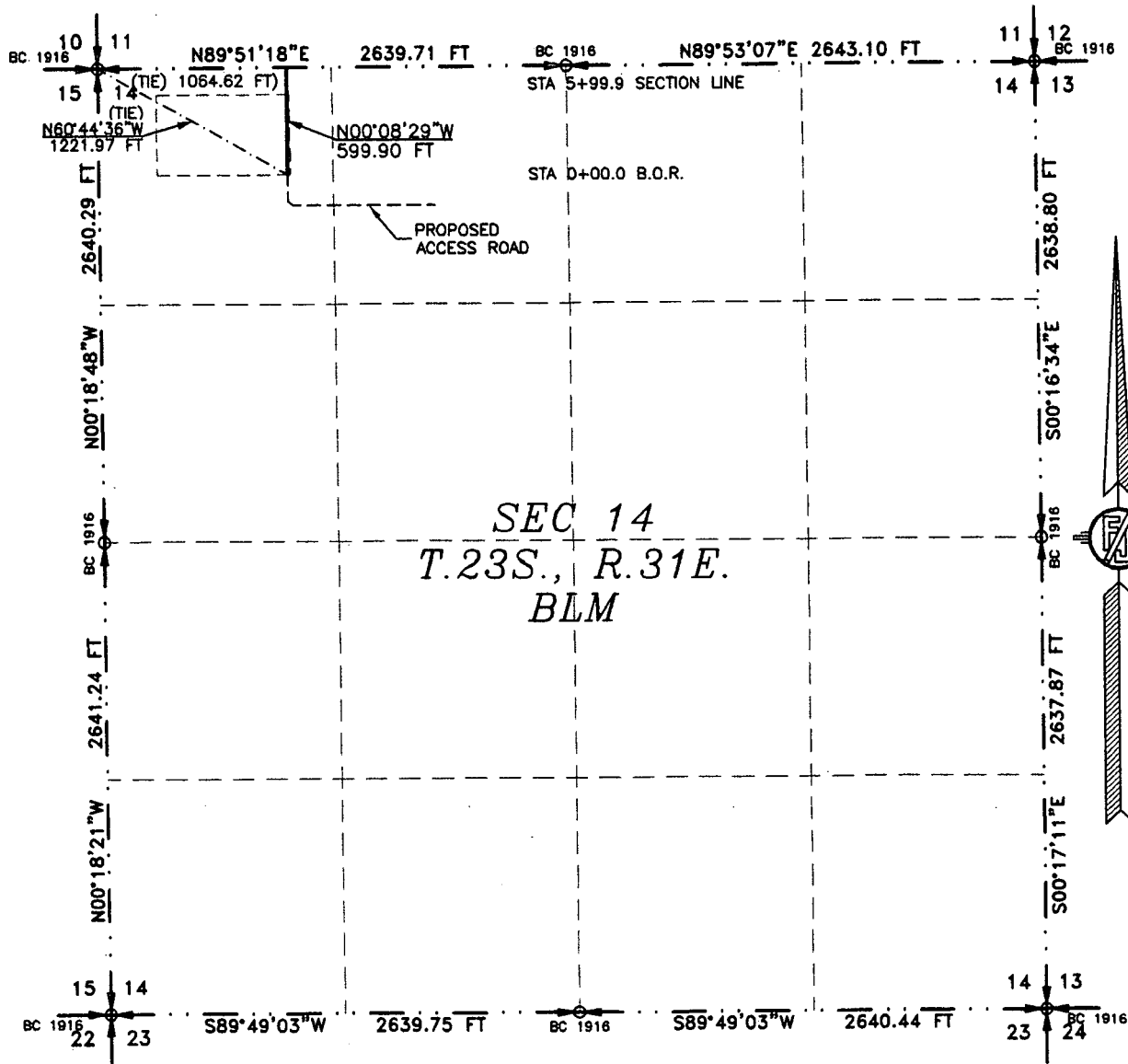
DECEMBER 20, 2018  
MADRON SURVEYING, INC. 301 SOUTH CANAL CARLSBAD, NEW MEXICO  
(575) 234-3341

SHEET 3-3  
SURVEY NO. 6708

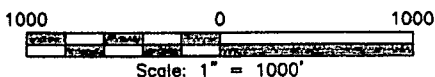
# ACCESS ROAD PLAT

ACCESS ROAD FOR BELLOQ 11-2 FED STATE COM 231H, 521H, 511H, & BELLOQ 11 FED 222H

DEVON ENERGY PRODUCTION COMPANY, L.P.  
CENTERLINE SURVEY OF AN ACCESS ROAD CROSSING  
SECTION 14, TOWNSHIP 23 SOUTH, RANGE 31 EAST, N.M.P.M.  
EDDY COUNTY, STATE OF NEW MEXICO  
DECEMBER 20, 2018



SEE NEXT SHEET (2-4) FOR DESCRIPTION



## GENERAL NOTES

- 1.) THE INTENT OF THIS ROUTE SURVEY IS TO ACQUIRE AN EASEMENT.
- 2.) BASIS OF BEARING AND DISTANCE IS NMSP EAST (NAD83) MODIFIED TO SURFACE COORDINATES. NAD 83 (FEET) AND NAVD 88 (FEET) COORDINATE SYSTEMS USED IN THE SURVEY.

SHEET: 1-4

MADRON SURVEYING, INC.

## SURVEYOR CERTIFICATE

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

IN WITNESS WHEREOF, THIS CERTIFICATE IS EXECUTED AT CARLSBAD, NEW MEXICO, THIS 20<sup>TH</sup> DAY OF DECEMBER 2018

FILIMON F. JARAMILLO, PLS. 12797  
301 SOUTH CANAL  
(575) 234-3341

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

SURVEY NO. 6708

CARLSBAD, NEW MEXICO

## ACCESS ROAD PLAT

ACCESS ROAD FOR BELLOQ 11-2 FED STATE COM 231H, 521H, 511H, & BELLOQ 11 FED 222H

DEVON ENERGY PRODUCTION COMPANY, L.P.  
CENTERLINE SURVEY OF AN ACCESS ROAD CROSSING  
SECTION 14, TOWNSHIP 23 SOUTH, RANGE 31 EAST, N.M.P.M.  
EDDY COUNTY, STATE OF NEW MEXICO  
DECEMBER 20, 2018

### DESCRIPTION

A STRIP OF LAND 30 FEET WIDE CROSSING BUREAU OF LAND MANAGEMENT LAND IN SECTION 14, TOWNSHIP 23 SOUTH, RANGE 31 EAST, N.M.P.M., EDDY COUNTY, STATE OF NEW MEXICO AND BEING 15 FEET EACH SIDE OF THE FOLLOWING DESCRIBED CENTERLINE SURVEY:

BEGINNING AT A POINT WITHIN THE NW/4 NW/4 OF SAID SECTION 14, TOWNSHIP 23 SOUTH, RANGE 31 EAST, N.M.P.M., WHENCE THE NORTHWEST CORNER OF SAID SECTION 14, TOWNSHIP 23 SOUTH, RANGE 31 EAST, N.M.P.M. BEARS N60°44'36"W, A DISTANCE OF 1221.97 FEET;  
THENCE N00°08'29"W A DISTANCE OF 599.90 FEET THE TERMINUS OF THIS CENTERLINE SURVEY, WHENCE THE NORTHWEST CORNER OF SAID SECTION 14, TOWNSHIP 23 SOUTH, RANGE 31 EAST, N.M.P.M. BEARS S89°51'18"W, A DISTANCE OF 1064.62 FEET;

SAID STRIP OF LAND BEING 599.90 FEET OR 36.36 RODS IN LENGTH, CONTAINING 0.413 ACRES MORE OR LESS AND BEING ALLOCATED BY FORTIES AS FOLLOWS:

NW/4 NW/4    599.90 FT    36.36 RODS    0.413 ACRES

### 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: 2-4

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

### 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 20 DAY OF DECEMBER, 2018

FILMON F. JARAMILLO, PLS. 12797  
MADRON SURVEYING, INC.  
301 SOUTH CANAL  
CARLSBAD, NEW MEXICO 88220  
Phone (575) 234-3341

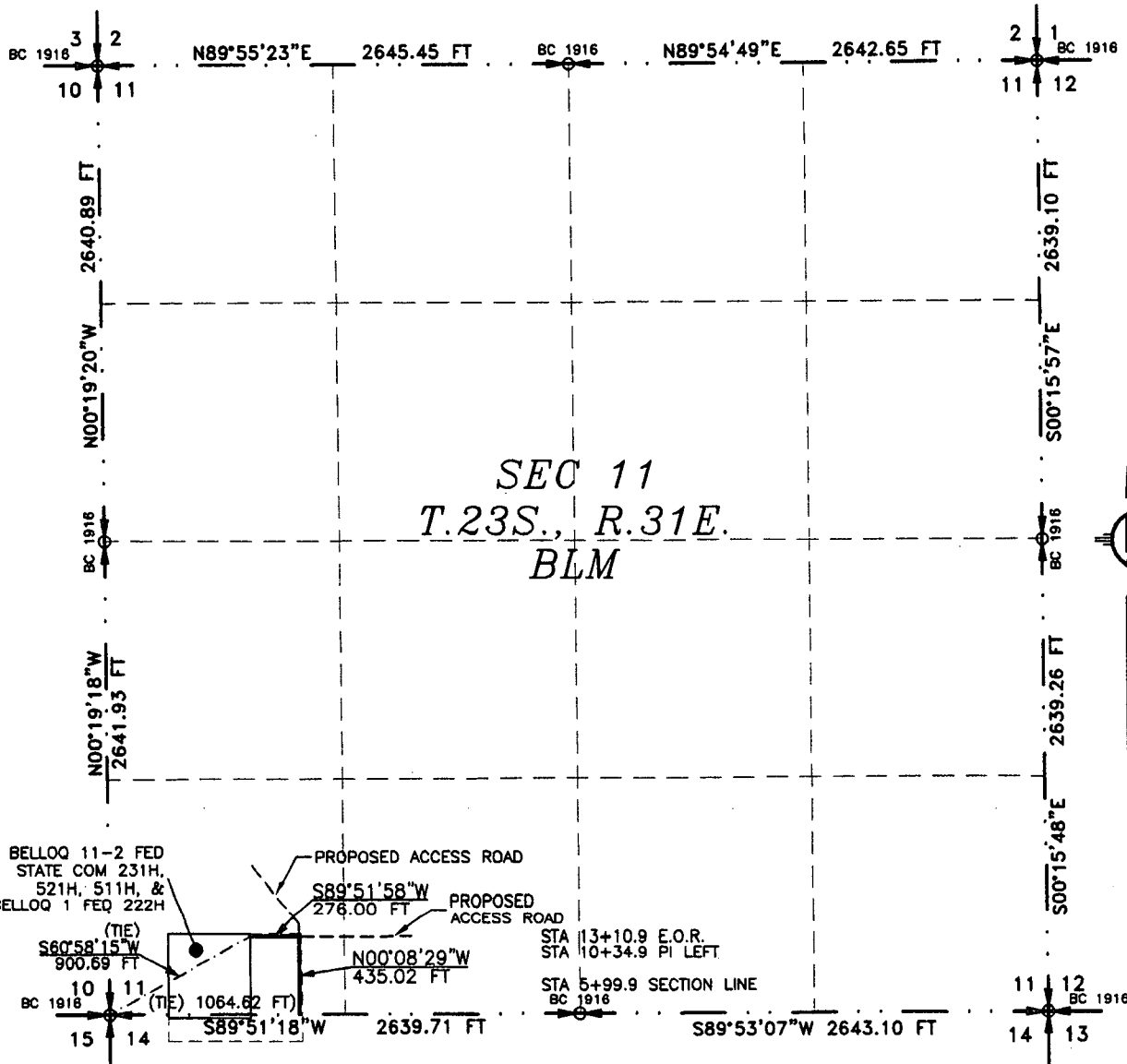
SURVEY NO. 6708



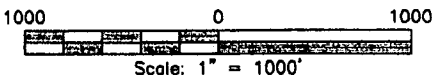
# ACCESS ROAD PLAT

ACCESS ROAD FOR BELLOQ 11-2 FED STATE COM 231H, 521H, 511H, & BELLOQ 11 FED 222H

DEVON ENERGY PRODUCTION COMPANY, L.P.  
CENTERLINE SURVEY OF AN ACCESS ROAD CROSSING  
SECTION 11, TOWNSHIP 23 SOUTH, RANGE 31 EAST, N.M.P.M.  
EDDY COUNTY, STATE OF NEW MEXICO  
DECEMBER 20, 2018



SEE NEXT SHEET (4-4) FOR DESCRIPTION



## 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: 3-4

MADRON SURVEYING, INC.

## SURVEYOR CERTIFICATE

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

IN WITNESS WHEREOF, THIS CERTIFICATE IS EXECUTED AT CARLSBAD, NEW MEXICO, THIS 20 DAY OF DECEMBER 2018

FILIMON F. JARAMILLO, PLS. 12797  
301 SOUTH CANAL  
(575) 234-3341

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

SURVEY NO. 6708

CARLSBAD, NEW MEXICO

## ACCESS ROAD PLAT

ACCESS ROAD FOR BELLOQ 11-2 FED STATE COM 231H, 511H, & BELLOQ 11 FED 222H

**DEVON ENERGY PRODUCTION COMPANY, L.P.**  
**CENTERLINE SURVEY OF AN ACCESS ROAD CROSSING**  
**SECTION 11, TOWNSHIP 23 SOUTH, RANGE 31 EAST, N.M.P.M.**  
**EDDY COUNTY, STATE OF NEW MEXICO**  
**DECEMBER 20, 2018**

### DESCRIPTION

A STRIP OF LAND 30 FEET WIDE CROSSING BUREAU OF LAND MANAGEMENT LAND IN SECTION 11, TOWNSHIP 23 SOUTH, RANGE 31 EAST, N.M.P.M., EDDY COUNTY, STATE OF NEW MEXICO AND BEING 15 FEET EACH SIDE OF THE FOLLOWING DESCRIBED CENTERLINE SURVEY:

BEGINNING AT A POINT WITHIN THE SW/4 SW/4 OF SAID SECTION 11, TOWNSHIP 23 SOUTH, RANGE 31 EAST, N.M.P.M., WHENCE THE SOUTHWEST CORNER OF SAID SECTION 11, TOWNSHIP 23 SOUTH, RANGE 31 EAST, N.M.P.M. BEARS S89°51'18"W, A DISTANCE OF 1064.62 FEET;  
THENCE N00°08'29"W A DISTANCE OF 435.02 FEET TO AN ANGLE POINT OF THE LINE HEREIN DESCRIBED;  
THENCE S89°51'58"W A DISTANCE OF 276.00 FEET THE TERMINUS OF THIS CENTERLINE SURVEY, WHENCE THE SOUTHWEST CORNER OF SAID SECTION 11, TOWNSHIP 23 SOUTH, RANGE 31 EAST, N.M.P.M. BEARS S60°58'15"W, A DISTANCE OF 900.69 FEET;

SAID STRIP OF LAND BEING 711.02 FEET OR 43.09 RODS IN LENGTH, CONTAINING 0.490 ACRES MORE OR LESS AND BEING ALLOCATED BY FORTIES AS FOLLOWS:

SW/4 SW/4    711.02 L.F.    43.09 RODS    0.490 ACRES

### 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: 4-4

### SURVEYOR CERTIFICATE

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IN WITNESS WHEREOF, THIS CERTIFICATE IS EXECUTED AT CARLSBAD, NEW MEXICO, THIS 20<sup>TH</sup> DAY OF DECEMBER 2018

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

FILMON F. JARAMILLO, PLS. 12797

SURVEY NO. 6708

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



APD ID: 10400038616

Submission Date: 01/31/2019

Highlighted data  
reflects the most  
recent changes

Operator Name: DEVON ENERGY PRODUCTION COMPANY LP

Well Name: BELLOQ 11-2 FED STATE COM

Well Number: 521H

[Show Final Text](#)

Well Type: OIL WELL

Well Work Type: Drill

## Section 1 - Geologic Formations

Formation ID	Formation Name	Elevation	True Vertical Depth	Measured Depth	Lithologies	Mineral Resources	Producing Formation
1	UNKNOWN	3430	0	0	ALLUVIUM	NONE	N
2	RUSTLER	2691	739	739	SANDSTONE	NONE	N
3	BASE OF SALT	-1040	4470	4470	SALT	NONE	N
4	DELAWARE	-1077	4507	4507	SANDSTONE	NATURAL GAS,OIL	N
5	BONE SPRING 1ST	-6032	9462	9462	SANDSTONE	NATURAL GAS,OIL	N
6	BONE SPRING 2ND	-6437	9867	9867	SANDSTONE	NATURAL GAS,OIL	Y

## Section 2 - Blowout Prevention

Pressure Rating (PSI): 5M

Rating Depth: 6000

**Equipment:** BOP/BOPE will be installed per Onshore Oil & Gas Order #2 requirements prior to drilling below surface casing, a BOP/BOPE system with the minimum rating listed above will be installed on the wellhead system. BOP/BOPE will be tested by an independent service company per Onshore Oil & Gas Order #2 requirements and MASP (Maximum Anticipated Surface Pressure) calculations. If the system is upgraded, all the components installed will be functional and tested.

**Requesting Variance?** YES

**Variance request:** A variance is requested for the use of a flexible choke line from the BOP stack to the choke manifold. See attached for specs for hydrostatic test chart.

**Testing Procedure:** A multibowl wellhead may be used. The BOP will be tested per Onshore Order #2 after installation on the surface casing which will cover testing requirements for a maximum of 30 days. If any seal subject to test pressure is broken the system must be tested.

**Choke Diagram Attachment:**

5M\_BOPE\_\_CK\_20190129135606.pdf

**BOP Diagram Attachment:**

5M\_BOPE\_\_CK\_20190129135615.pdf

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

**Well Name:** BELLOQ 11-2 FED STATE COM

**Well Number:** 521H

**Pressure Rating (PSI):** 5M

**Rating Depth:** 9039

**Equipment:** BOP/BOPE will be installed per Onshore Oil & Gas Order #2 requirements prior to drilling below surface casing, a BOP/BOPE system with the minimum rating listed above will be installed on the wellhead system. BOP/BOPE will be tested by an independent service company per Onshore Oil & Gas Order #2 requirements and MASP (Maximum Anticipated Surface Pressure) calculations. If the system is upgraded, all the components installed will be functional and tested.

**Requesting Variance?** YES

**Variance request:** A variance is requested for the use of a flexible choke line from the BOP stack to the choke manifold. See attached for specs for hydrostatic test chart.

**Testing Procedure:** A multibowl wellhead may be used. The BOP will be tested per Onshore Order #2 after installation on the surface casing which will cover testing requirements for a maximum of 30 days. If any seal subject to test pressure is broken the system must be tested.

**Choke Diagram Attachment:**

5M\_BOPE\_\_CK\_20190129135705.pdf

**BOP Diagram Attachment:**

5M\_BOPE\_\_CK\_20190129135720.pdf

### Section 3 - Casing

Casing ID	String Type	Hole Size	Csg Size	Condition	Standard	Tapered String	Top Set MD	Bottom Set MD	Top Set TVD	Bottom Set TVD	Top Set MSL	Bottom Set MSL	Calculated casing length MD	Grade	Weight	Joint Type	Collapse SF	Burst SF	Joint SF Type	Joint SF	Body SF Type	Body SF
1	SURFACE	17.5	13.375	NEW	API	N	0	764	0	764	-6990	-7665	764	H-40	48	ST&C	1.125	1	BUOY	1.6	BUOY	1.6
2	INTERMEDIATE	12.25	9.625	NEW	API	N	0	6000	0	6000	-6990	-11150	6000	J-55	40	OTHER - BTC	1.125	1	BUOY	1.6	BUOY	1.6
3	PRODUCTION	8.75	5.5	NEW	API	N	0	19267	0	9039	-6990	-16785	19267	P-110	17	OTHER - BTC	1.125	1	BUOY	1.6	BUOY	1.6

**Casing Attachments**

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

**Well Name:** BELLOQ 11-2 FED STATE COM

**Well Number:** 521H

#### Casing Attachments

---

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

**Inspection Document:**

**Spec Document:**

**Tapered String Spec:**

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

Surf\_Csg\_Ass\_20190129135920.pdf

---

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

**Inspection Document:**

**Spec Document:**

**Tapered String Spec:**

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

Int\_Csg\_Ass\_20190129135930.pdf

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

**Inspection Document:**

**Spec Document:**

**Tapered String Spec:**

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

Prod\_Csg\_Ass\_20190129135940.pdf

---

#### Section 4 - Cement

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

**Well Name:** BELLOQ 11-2 FED STATE COM

**Well Number:** 521H

String Type	Lead/Tail	Stage Tool Depth	Top MD	Bottom MD	Quantity(sx)	Yield	Density	Cu Ft	Excess%	Cement type	Additives
SURFACE	Lead		0	764	798	1.33	13.2	1061	100	C	Class C + adds

INTERMEDIATE	Lead		0	5500	1115	1.94	9	2164	50	C	Class C + adds
INTERMEDIATE	Tail		5500	6000	196	1.33	13.2	261	50	C	Class C + adds
PRODUCTION	Lead		5500	8463	735.6	3.27	9	2405.3	10	TUNED	Class C + adds
PRODUCTION	Tail		8463	19267	2257.1	1.33	13.2	3002	10	H	(50:50) Clas H Cement: Poz (Fly Ash) + 0.5% bwoc HALAD-344 + 0.4% bwoc CFR-3 + 0.2% BWOC HR-601 + 2% bwoc Bentonite

### Section 5 - Circulating Medium

**Mud System Type:** Closed

**Will an air or gas system be Used?** NO

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

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

**Describe what will be on location to control well or mitigate other conditions:** Sufficient mud materials to maintain mud properties and meet minimum lost circulation and weight increase requirements will be kept on location at all times.

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

### Circulating Medium Table

Top Depth	Bottom Depth	Mud Type	Min Weight (lbs/gal)	Max Weight (lbs/gal)	Density (lbs/cu ft)	Gel Strength (lbs/100 sqft)	PH	Viscosity (CP)	Salinity (ppm)	Filtration (cc)	Additional Characteristics
0	9040	OTHER : FRESH WATER	8.5	9				2			

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

**Well Name:** BELLOQ 11-2 FED STATE COM

**Well Number:** 521H

Top Depth	Bottom Depth	Mud Type	Min Weight (lbs/gal)	Max Weight (lbs/gal)	Density (lbs/cu ft)	Gel Strength (lbs/100 sqft)	PH	Viscosity (CP)	Salinity (ppm)	Filtration (cc)	Additional Characteristics
764	9040	OTHER : BRINE	10	10.5				2			
6000	9040	WATER-BASED MUD	8.5	9							

### Section 6 - Test, Logging, Coring

**List of production tests including testing procedures, equipment and safety measures:**

Will run GRMWD from TD to from KOP. Cement bond logs will be run in vertical to determine top of cement. Stated logs run will be in the completion report and submitted to the BLM.

**List of open and cased hole logs run in the well:**

CALIPER,CBL,DS,GR,MUDLOG

**Coring operation description for the well:**

N/A

### Section 7 - Pressure

**Anticipated Bottom Hole Pressure:** 4230

**Anticipated Surface Pressure:** 2241.19

**Anticipated Bottom Hole Temperature(F):** 145

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

**Describe:**

**Contingency Plans geohazards description:**

**Contingency Plans geohazards attachment:**

**Hydrogen Sulfide drilling operations plan required?** YES

**Hydrogen sulfide drilling operations plan:**

Belloq\_11\_2\_Fed\_State\_Com\_521H\_H2S\_20190130063113.pdf

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

**Well Name:** BELLOQ 11-2 FED STATE COM

**Well Number:** 521H

## Section 8 - Other Information

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

Devon\_\_Belloq\_11\_2\_Fed\_State\_Com\_521H\_\_p2\_20190130063158.pdf

Belloq\_11\_2\_Fed\_State\_Com\_521H\_APD\_20190708091139.pdf

### Other proposed operations facets description:

Multi-Bowl Verbiage

Multi-Bowl Wellhead

Closed-Loop Design Plan

Gas Capture Plan

Drill plan/SPEC SHEETS- revised drill plan, prod cmt 7/8/2019

### Other proposed operations facets attachment:

MB\_Verb\_5M\_20190129140757.pdf

9.625\_40\_\_J\_55\_SPEC\_20190129140732.pdf

5\_500in\_17\_00\_\_P110RY\_DWC\_C\_SPEC\_20190129140735.pdf

MB\_Verb\_5M\_20190129140734.pdf

MB\_Wellhd\_5M\_20190129140734.pdf

Clsd\_Loop\_20190129140733.pdf

13.375\_48\_\_H40\_SPEC\_20190129140732.pdf

BELLOQ\_11\_CTB\_1\_GasCapturePlan\_20190129141006.pdf

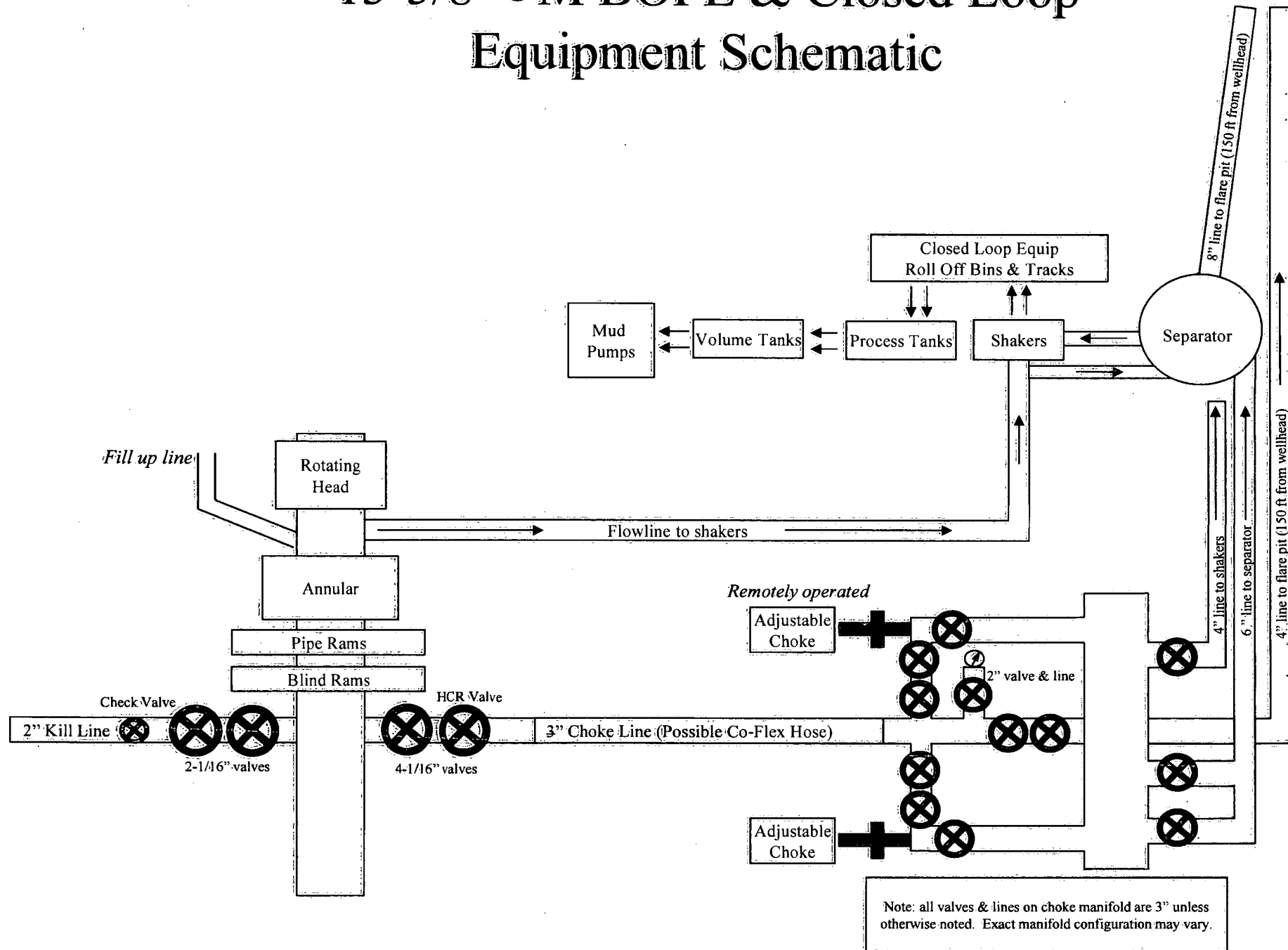
Spudder\_Rig\_Info\_20190130063428.pdf

### Other Variance attachment:

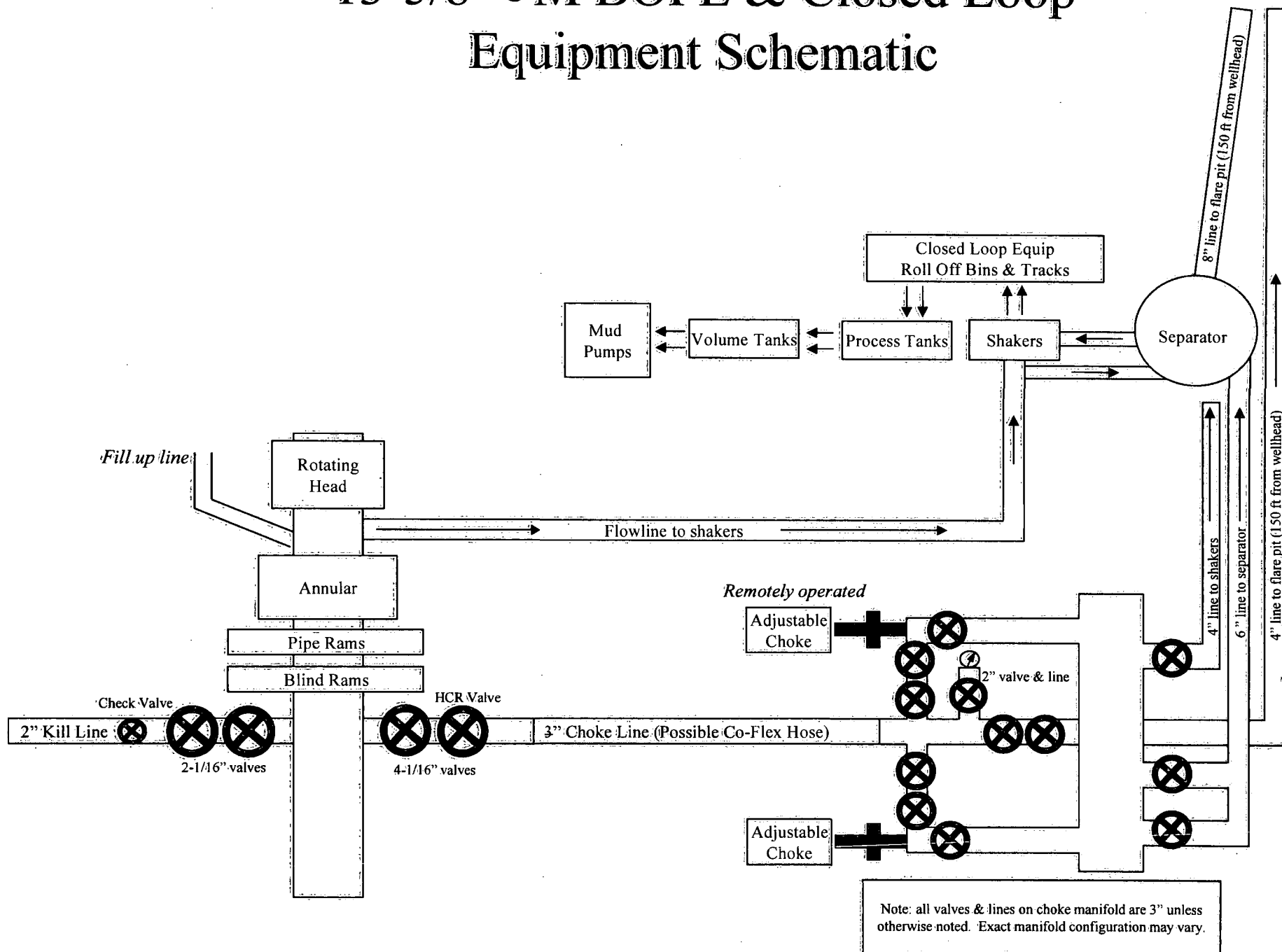
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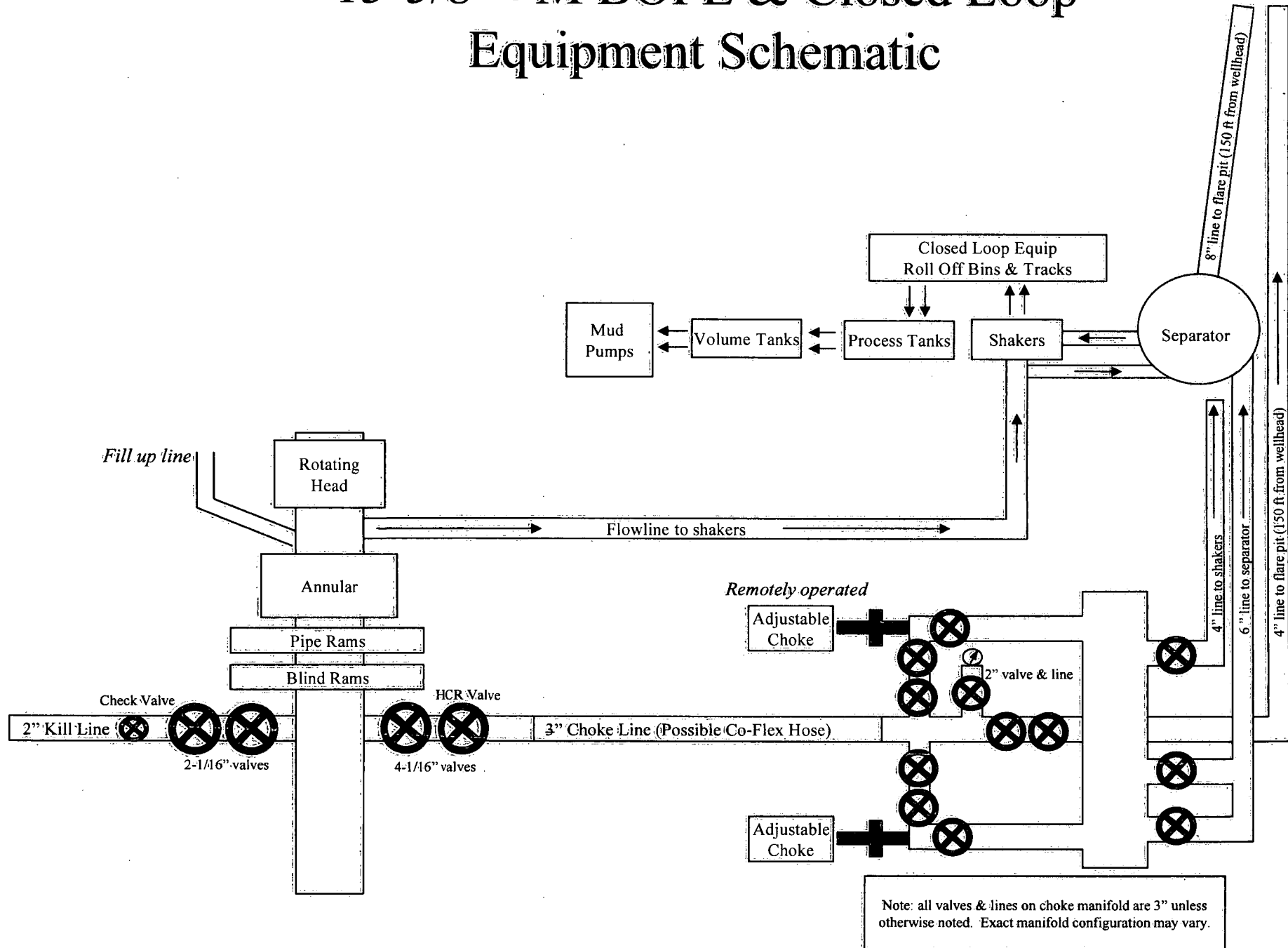
# 13-5/8" 5M BOPE & Closed Loop Equipment Schematic



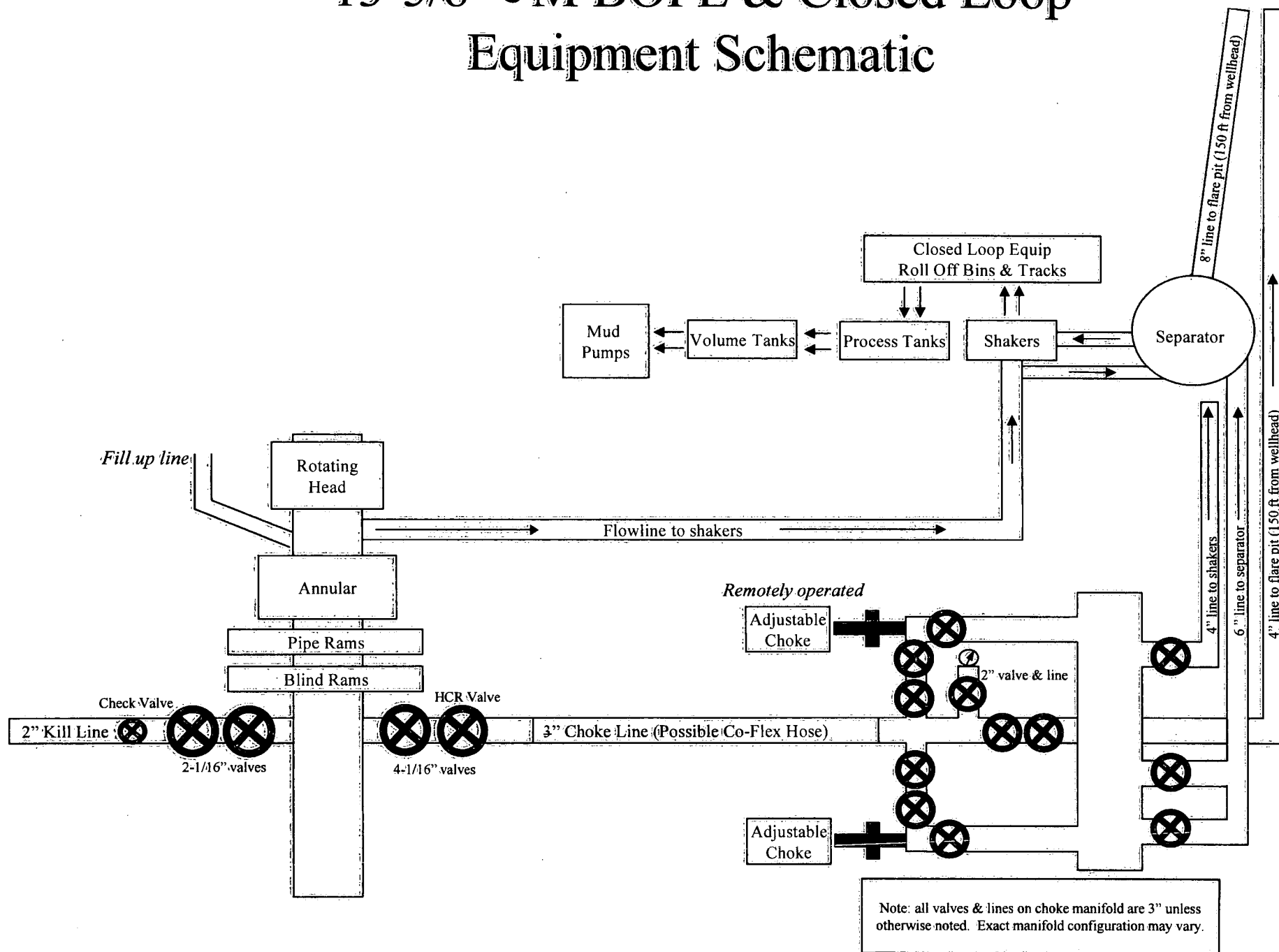
# 13-5/8" 5M BOPE & Closed Loop Equipment Schematic



# 13-5/8" 5M BOPE & Closed Loop Equipment Schematic



# 13-5/8" 5M BOPE & Closed Loop Equipment Schematic



## Casing Assumptions and Load Cases

### Surface

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

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

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

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

## Casing Assumptions and Load Cases

### Intermediate

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

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

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

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

## Casing Assumptions and Load Cases

### Production

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

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

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

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



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

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

**For**

**Belloq 11-2 Fed State Com 521H**

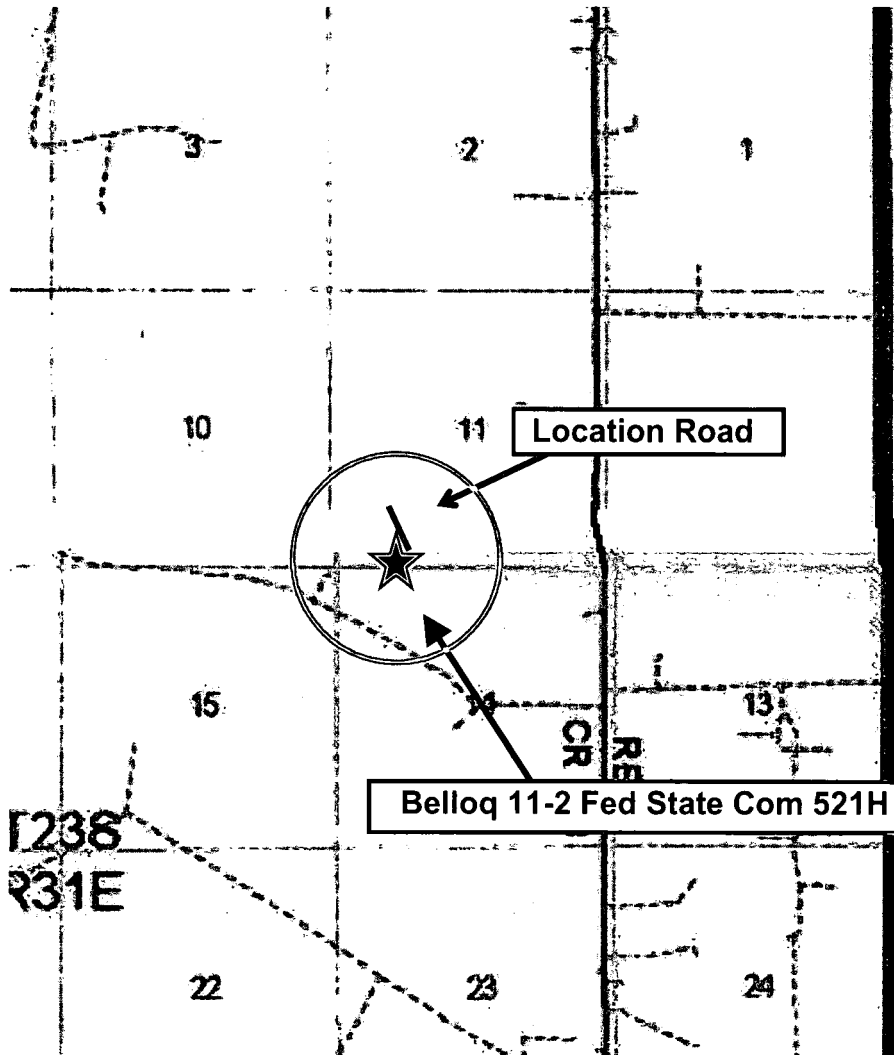
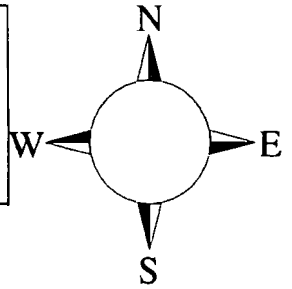
**Sec-11 T-23S R-31E  
300' FSL & 660' FWL  
LAT. = 32.3125655' N (NAD83)  
LONG = 103.7549880' W**

**Eddy County NM**



## Belloq 11-2 Fed State Com 521H

This is an open drilling site. H<sub>2</sub>S monitoring equipment and emergency response equipment will be used within 500' of zones known to contain H<sub>2</sub>S, including warning signs, wind indicators and H<sub>2</sub>S monitor.



**Assumed 100 ppm ROE = 3000' (Radius of Exposure)**  
**100 ppm H<sub>2</sub>S concentration shall trigger activation of this plan.**

### Escape

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

**Assumed 100 ppm ROE = 3000'**

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

### **Emergency Procedures**

**In the event of a release of gas containing H<sub>2</sub>S, the first responder(s) must**

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

### **Ignition of Gas Source**

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

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

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

### **Contacting Authorities**

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

## **Hydrogen Sulfide Drilling Operation Plan**

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

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

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

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

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

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

### **II. HYDROGEN SULFIDE TRAINING**

Note: All H<sub>2</sub>S safety equipment and systems will be installed, tested, and operational when drilling reaches a depth of 500 feet above, or three days prior to penetrating the first zone containing or reasonably expected to contain H<sub>2</sub>S.

## **1. Well Control Equipment**

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

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

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

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

Portable H<sub>2</sub>S monitors positioned on location for best coverage and response. These units have warning lights which activate when H<sub>2</sub>S levels reach 10 ppm and audible sirens which activate at 15 ppm. Sensor locations:

- Bell nipple
- Possum Belly/Shale shaker
- Rig floor
- Choke manifold
- Cellar

### **Visual warning systems:**

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

#### **4. Mud program:**

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

#### **5. Metallurgy:**

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

#### **6. Communication:**

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

#### **7. Well testing:**

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

<b><u>Devon Energy Corp. Company Call List</u></b>		
Drilling Supervisor – Basin – Mark Kramer		405-823-4796
EHS Professional – Laura Wright		405-439-8129
<b><u>Agency Call List</u></b>		
<b><u>Lea County (575)</u></b>	<b><u>Hobbs</u></b>	
	Lea County Communication Authority	393-3981
	State Police	392-5588
	City Police	397-9265
	Sheriff's Office	393-2515
	<b>Ambulance</b>	<b>911</b>
	Fire Department	397-9308
	LEPC (Local Emergency Planning Committee)	393-2870
	NMOCD	393-6161
	US Bureau of Land Management	393-3612
<b><u>Eddy County (575)</u></b>	<b><u>Carlsbad</u></b>	
	State Police	885-3137
	City Police	885-2111
	Sheriff's Office	887-7551
	<b>Ambulance</b>	<b>911</b>
	Fire Department	885-3125
	LEPC (Local Emergency Planning Committee)	887-3798
	US Bureau of Land Management	887-6544
	NM Emergency Response Commission (Santa Fe)	(505) 476-9600
	24 HR	(505) 827-9126
	National Emergency Response Center	(800) 424-8802
	National Pollution Control Center: Direct	(703) 872-6000
	For Oil Spills	(800) 280-7118
	<b>Emergency Services</b>	
	Wild Well Control	(281) 784-4700
	Cudd Pressure Control	(915) 699-0139 (915) 563-3356
	Halliburton	(575) 746-2757
	B. J. Services	(575) 746-3569
	<b>Give GPS position:</b>	
	Native Air – Emergency Helicopter – Hobbs	(575) 392-6429
	Flight For Life - Lubbock, TX	(806) 743-9911
	Aerocare - Lubbock, TX	(806) 747-8923
	Med Flight Air Amb - Albuquerque, NM	(575) 842-4433
	Lifeguard Air Med Svc. Albuquerque, NM	(800) 222-1222
	Poison Control (24/7)	(575) 272-3115
	Oil & Gas Pipeline 24 Hour Service	(800) 364-4366
	NOAA – Website - <a href="http://www.nhc.noaa.gov">www.nhc.noaa.gov</a>	

Prepared in conjunction with  
Dave Small



# Devon Energy

Project: Eddy County, NM (NAD-83)  
 Site: Belloq 11-2 Fed State Com  
 Well: Belloq 11-2 Fed State Com 521H  
 Wellbore: OH  
 Design: Plan #2



Azimuths to Grid North  
 True North: -0.31°  
 Magnetic North: 6.54°  
 Magnetic Field  
 Strength: 48018.0snT  
 Dip Angle: 60.05°  
 Date: 1/21/2019  
 Model: HDGM

PROJECT DETAILS: Eddy County, NM (NAD-83)

Geodetic System: US State Plane 1983  
 Datum: North American Datum 1983  
 Ellipsoid: GRS 1980  
 Zone: New Mexico Eastern Zone  
 Datum: 3430' GE + 23.5' KB @ 3453.50usft

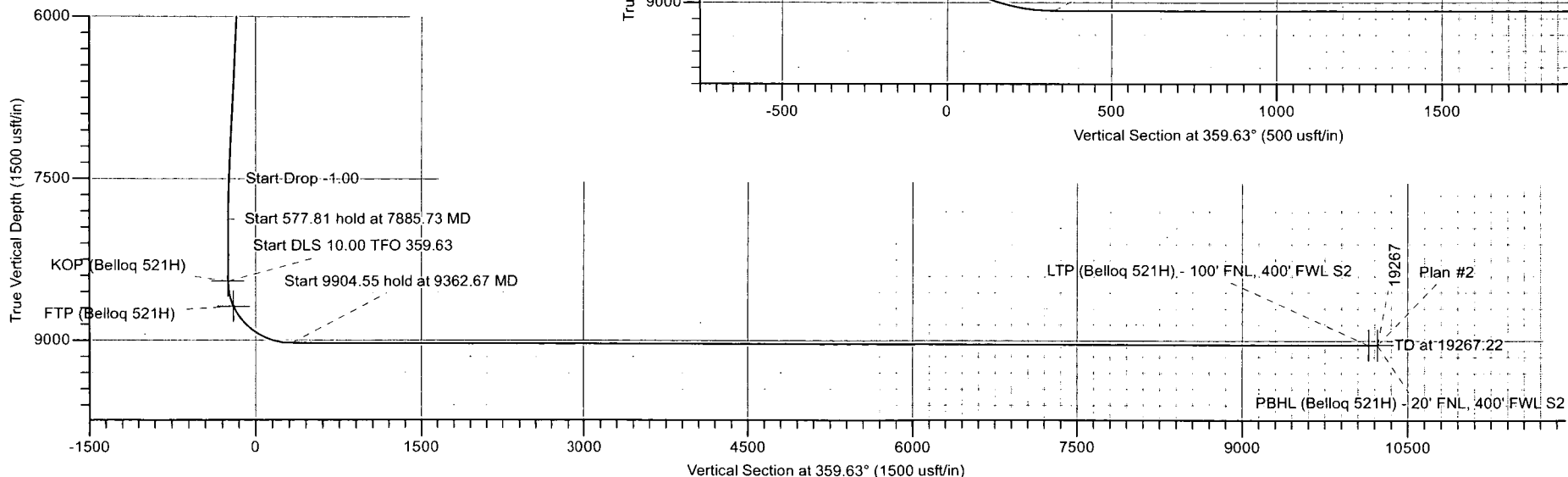
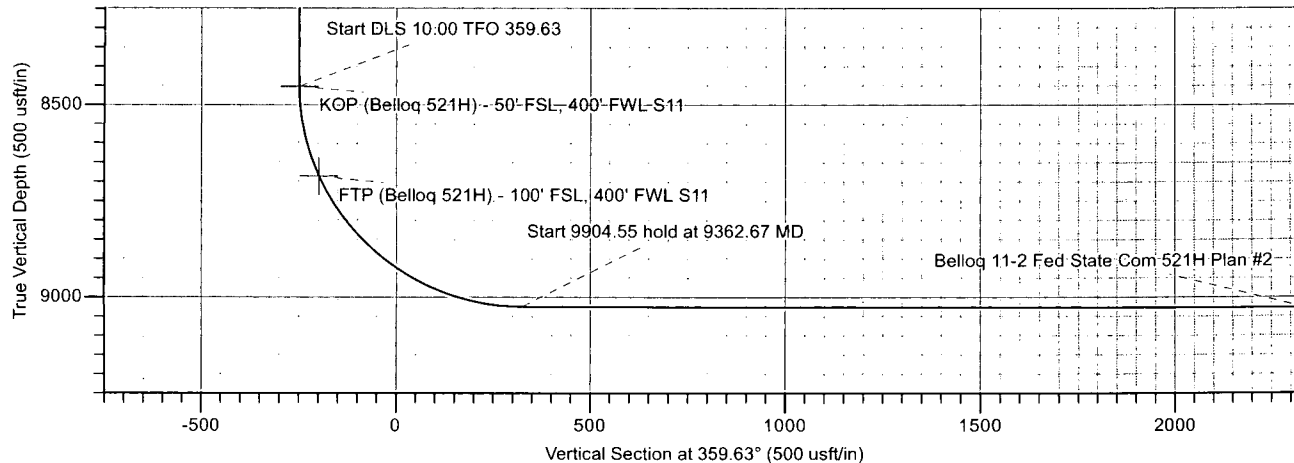
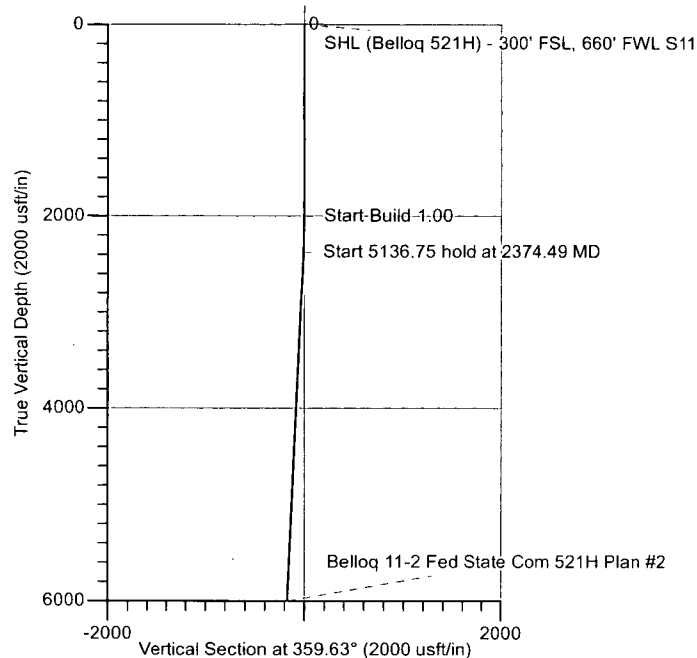


## SECTION DETAILS

MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	Vsect
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2000.00	0.00	0.00	2000.00	0.00	0.00	0.00	0.00	0.00
2374.49	3.74	226.01	2374.23	-8.50	-8.80	1.00	226.01	-8.44
7511.24	3.74	226.01	7500.00	-241.50	-250.20	0.00	0.00	-239.88
7885.73	0.00	0.00	7874.23	-250.00	-259.00	1.00	180.00	-248.32
8463.54	0.00	0.00	8452.04	-250.00	-259.00	0.00	0.00	-248.32
9362.67	89.91	359.63	9025.00	322.08	-262.67	10.00	359.63	323.77
19267.22	89.91	359.63	9040.00	10226.41	-326.16	0.00	0.00	10228.30

## DESIGN TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
FTP (Belloq 521H)	8686.13	-200.00	-259.32	477725.73	719748.77	32° 18' 43.2707 N	103° 45' 20.9912 W
KOP (Belloq 521H)	8452.04	-250.00	-259.00	477675.73	719749.09	32° 18' 42.7759 N	103° 45' 20.9906 W
LTP (Belloq 521H)	9039.88	10146.41	-325.65	488072.14	719682.44	32° 20' 25.6561 N	103° 45' 21.1144 W
PBHL (Belloq 521H)	9040.00	10226.41	-326.16	488152.14	719681.93	32° 20' 26.4477 N	103° 45' 21.1153 W
SHL (Belloq 521H)	0.00	0.00	0.00	477925.73	720008.09	32° 18' 45.2359 N	103° 45' 17.9570 W



LEAM DRILLING SERVICES  
 2010 East Davis, Conroe, Texas 77301  
 Phone: 936/756-7618, Fax: 936/756-7595

Plan: Plan #2 (Belloq 11-2 Fed State Com 521H/OH)  
 Belloq 11-2 Fed State Com  
 Created By: Dustin Ault  
 Date: 12:12, January 23 2019  
 Approved: \_\_\_\_\_ Date: \_\_\_\_\_

# Devon Energy

Project: Eddy County, NM (NAD-83)  
 Site: Belloq 11-2 Fed State Com  
 Well: Belloq 11-2 Fed State Com 521H  
 Wellbore: OH  
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Azimuths to Grid North  
 True North: -0.31°  
 Magnetic North: 6.54°

Magnetic Field  
 Strength: 48018.0snT  
 Dip Angle: 60.05°  
 Date: 1/21/2019  
 Model: HDGM

# devon

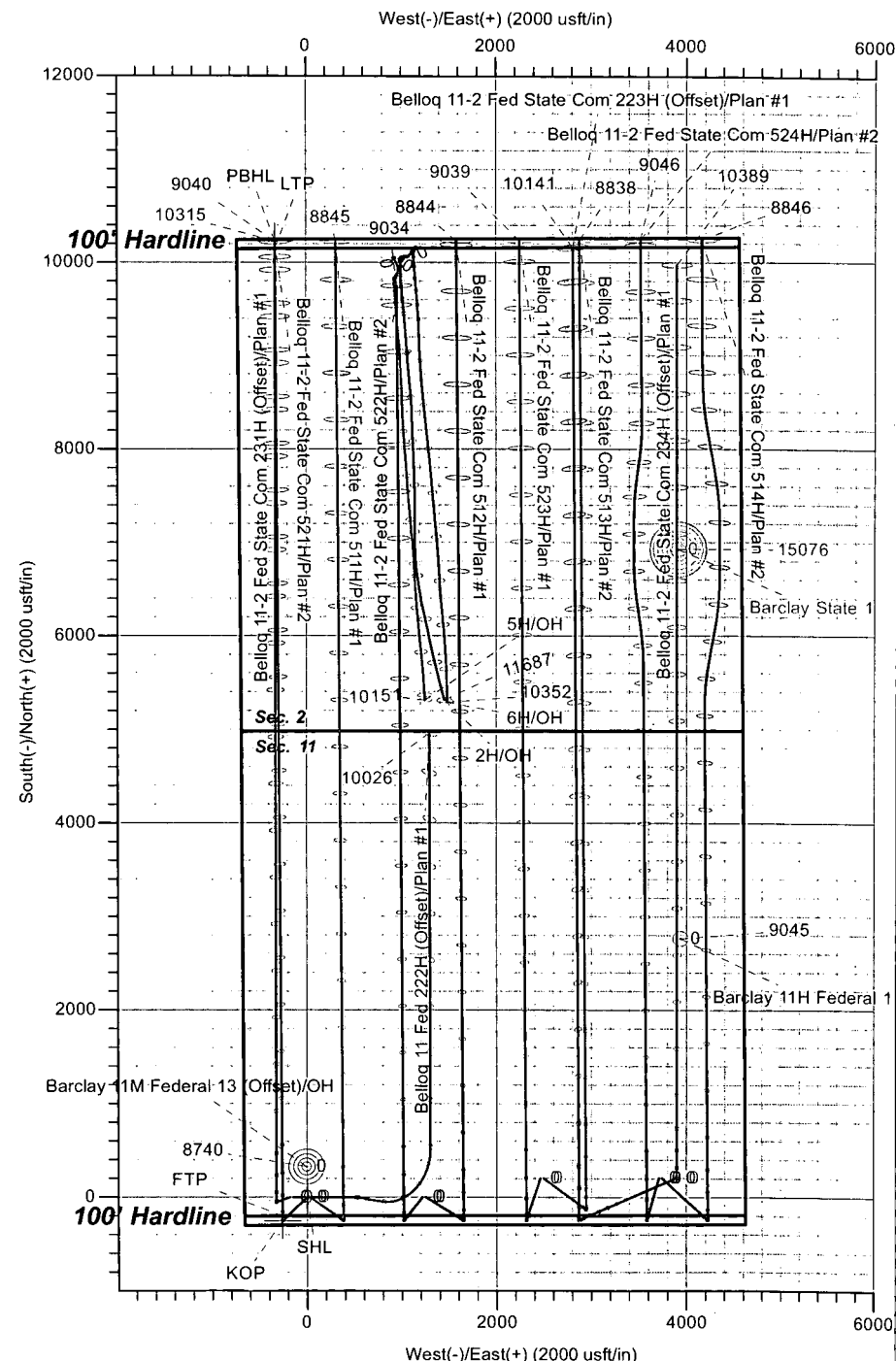
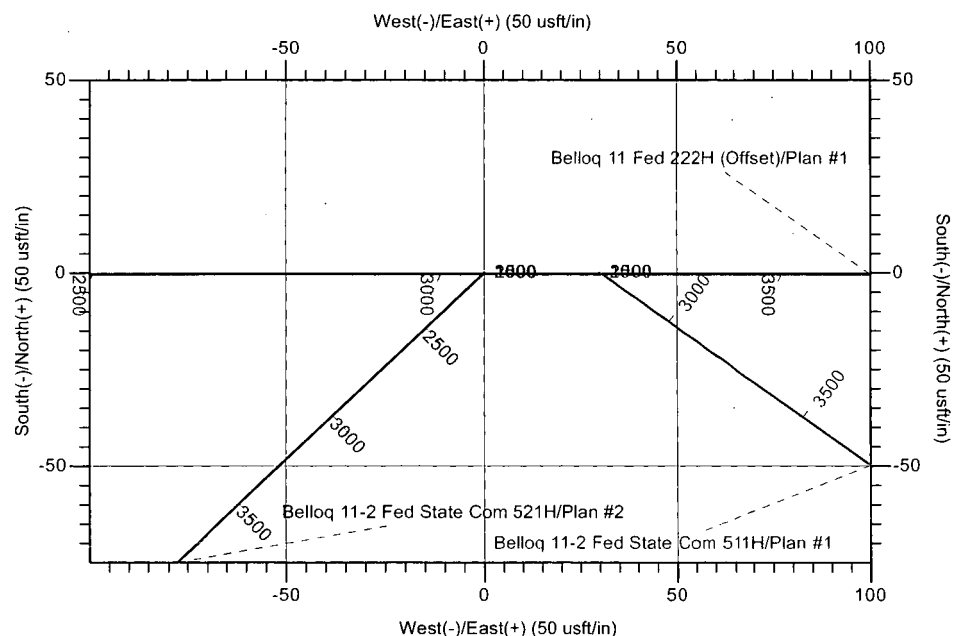
PROJECT DETAILS: Eddy County, NM (NAD-83)  
 Geodetic System: US State Plane 1983  
 Datum: North American Datum 1983  
 Ellipsoid: GRS 1980  
 Zone: New Mexico Eastern Zone

## DESIGN TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
FTP (Belloq 521H)	8686.13	-200.00	-259.32	477725.73	719748.77	32° 18' 43.2707 N	103° 45' 20.9912 W
KOP (Belloq 521H)	8452.04	-250.00	-259.00	477675.73	719749.09	32° 18' 42.7759 N	103° 45' 20.9906 W
LTP (Belloq 521H)	9039.88	10146.41	-325.65	488072.14	719682.44	32° 20' 25.6561 N	103° 45' 21.1144 W
PBHL (Belloq 521H)	9040.00	10226.41	-326.16	488152.14	719681.93	32° 20' 26.4477 N	103° 45' 21.1153 W
SHL (Belloq 521H)	0.00	0.00	0.00	477925.73	720008.09	32° 18' 45.2359 N	103° 45' 17.9570 W

## SECTION DETAILS

MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	Vsect	Annotation
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
2000.00	0.00	0.00	2000.00	0.00	0.00	0.00	0.00	0.00	
2374.49	3.74	226.01	2374.23	-8.50	-8.80	1.00	226.01	-8.44	
7511.24	3.74	226.01	7500.00	-241.50	-250.20	0.00	0.00	-239.88	
7885.73	0.00	0.00	7874.23	-250.00	-259.00	1.00	180.00	-248.32	
8463.54	0.00	0.00	8452.04	-250.00	-259.00	0.00	0.00	-248.32	
9362.67	89.91	359.63	9025.00	322.08	-262.67	10.00	359.63	323.77	
19267.22	89.91	359.63	9040.00	10226.41	-326.16	0.00	0.00	10228.30	



LEAM DRILLING SYSTEMS LLC  
 2010 East Davis, Conroe, Texas 77301  
 Phone: 936/756-7577, Fax: 936/756-7595

Plan: Plan #2 (Belloq 11-2 Fed State Com 521H/Plan #2)  
 Belloq 11-2 Fed State Com  
 Created By: Dustin Ault  
 Date: 12/13, January 23 2019  
 Approved: \_\_\_\_\_  
 Date: \_\_\_\_\_



# **Devon Energy**

**Eddy County, NM (NAD-83)**

**Belloq 11-2 Fed State Com**

**Belloq 11-2 Fed State Com 521H**

**OH**

**Plan: Plan #2**

## **Standard Planning Report - Geographic**

**23 January, 2019**

# LEAM Drilling Services

## Planning Report - Geographic

<b>Database:</b>	EDM 5000.1 Multi User Db	<b>Local Co-ordinate Reference:</b>	Well Belloq 11-2 Fed State Com 521H
<b>Company:</b>	Devon Energy	<b>TVD Reference:</b>	3430' GE + 23.5' KB @ 3453.50usft
<b>Project:</b>	Eddy County, NM (NAD-83)	<b>MD Reference:</b>	3430' GE + 23.5' KB @ 3453.50usft
<b>Site:</b>	Belloq 11-2 Fed State Com	<b>North Reference:</b>	Grid
<b>Well:</b>	Belloq 11-2 Fed State Com 521H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	OH		
<b>Design:</b>	Plan #2		

<b>Project</b>	Eddy County, NM (NAD-83)		
<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>	Belloq 11-2 Fed State Com		
<b>Site Position:</b>	<b>Northing:</b>	477,925.73 usft	<b>Latitude:</b> 32° 18' 45.2359 N
<b>From:</b> Map	<b>Easting:</b>	720,008.09 usft	<b>Longitude:</b> 103° 45' 17.9570 W
<b>Position Uncertainty:</b>	0.00 usft	<b>Slot Radius:</b> 13-3/16 "	<b>Grid Convergence:</b> 0.31 °

<b>Well</b>	Belloq 11-2 Fed State Com 521H		
<b>Well Position</b>	<b>+N/-S</b>	0.00 usft	<b>Northing:</b> 477,925.73 usft
	<b>+E/-W</b>	0.00 usft	<b>Easting:</b> 720,008.09 usft
<b>Position Uncertainty</b>	0.00 usft	<b>Wellhead Elevation:</b>	0.00 usft
		<b>Ground Level:</b>	3,430.00 usft

Wellbore		OH			
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	HDGM	1/21/2019	6.85	60.05	48,018

Design	Plan #2			
Audit Notes:				
Version:	Phase:	PLAN	Tie On Depth:	0.00
Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (°)
	0.00	0.00	0.00	359.63

<b>Plan Sections</b>										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	TFO (°)	Target
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
2,000.00	0.00	0.00	2,000.00	0.00	0.00	0.00	0.00	0.00	0.00	
2,374.49	3.74	226.01	2,374.23	-8.50	-8.80	1.00	1.00	0.00	226.01	
7,511.24	3.74	226.01	7,500.00	-241.50	-250.20	0.00	0.00	0.00	0.00	
7,885.73	0.00	0.01	7,874.23	-250.00	-259.00	1.00	-1.00	0.00	180.00	
8,463.54	0.00	0.01	8,452.04	-250.00	-259.00	0.00	0.00	0.00	0.01	
9,362.67	89.91	359.63	9,025.00	322.08	-262.67	10.00	10.00	-0.04	359.63	
19,267.22	89.91	359.63	9,040.00	10,226.41	-326.16	0.00	0.00	0.00	0.00	PBHL (Belloq 521H) -

# LEAM Drilling Services

## Planning Report - Geographic

<b>Database:</b>	EDM 5000.1 Multi User Db	<b>Local Co-ordinate Reference:</b>	Well Belloq 11-2 Fed State Com 521H
<b>Company:</b>	Devon Energy	<b>TVD Reference:</b>	3430' GE + 23.5' KB @ 3453.50usft
<b>Project:</b>	Eddy County, NM (NAD-83)	<b>MD Reference:</b>	3430' GE + 23.5' KB @ 3453.50usft
<b>Site:</b>	Belloq 11-2 Fed State Com	<b>North Reference:</b>	Grid
<b>Well:</b>	Belloq 11-2 Fed State Com 521H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	OH		
<b>Design:</b>	Plan #2		

Planned Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude
0.00	0.00	0.00	0.00	0.00	0.00	477,925.73	720,008.09	32° 18' 45.2359 N	103° 45' 17.9570 W
<b>SHL (Belloq 521H) - 300' FSL, 660' FWL S11</b>									
100.00	0.00	0.00	100.00	0.00	0.00	477,925.73	720,008.09	32° 18' 45.2359 N	103° 45' 17.9570 W
200.00	0.00	0.00	200.00	0.00	0.00	477,925.73	720,008.09	32° 18' 45.2359 N	103° 45' 17.9570 W
300.00	0.00	0.00	300.00	0.00	0.00	477,925.73	720,008.09	32° 18' 45.2359 N	103° 45' 17.9570 W
400.00	0.00	0.00	400.00	0.00	0.00	477,925.73	720,008.09	32° 18' 45.2359 N	103° 45' 17.9570 W
500.00	0.00	0.00	500.00	0.00	0.00	477,925.73	720,008.09	32° 18' 45.2359 N	103° 45' 17.9570 W
600.00	0.00	0.00	600.00	0.00	0.00	477,925.73	720,008.09	32° 18' 45.2359 N	103° 45' 17.9570 W
700.00	0.00	0.00	700.00	0.00	0.00	477,925.73	720,008.09	32° 18' 45.2359 N	103° 45' 17.9570 W
800.00	0.00	0.00	800.00	0.00	0.00	477,925.73	720,008.09	32° 18' 45.2359 N	103° 45' 17.9570 W
900.00	0.00	0.00	900.00	0.00	0.00	477,925.73	720,008.09	32° 18' 45.2359 N	103° 45' 17.9570 W
1,000.00	0.00	0.00	1,000.00	0.00	0.00	477,925.73	720,008.09	32° 18' 45.2359 N	103° 45' 17.9570 W
1,100.00	0.00	0.00	1,100.00	0.00	0.00	477,925.73	720,008.09	32° 18' 45.2359 N	103° 45' 17.9570 W
1,200.00	0.00	0.00	1,200.00	0.00	0.00	477,925.73	720,008.09	32° 18' 45.2359 N	103° 45' 17.9570 W
1,300.00	0.00	0.00	1,300.00	0.00	0.00	477,925.73	720,008.09	32° 18' 45.2359 N	103° 45' 17.9570 W
1,400.00	0.00	0.00	1,400.00	0.00	0.00	477,925.73	720,008.09	32° 18' 45.2359 N	103° 45' 17.9570 W
1,500.00	0.00	0.00	1,500.00	0.00	0.00	477,925.73	720,008.09	32° 18' 45.2359 N	103° 45' 17.9570 W
1,600.00	0.00	0.00	1,600.00	0.00	0.00	477,925.73	720,008.09	32° 18' 45.2359 N	103° 45' 17.9570 W
1,700.00	0.00	0.00	1,700.00	0.00	0.00	477,925.73	720,008.09	32° 18' 45.2359 N	103° 45' 17.9570 W
1,800.00	0.00	0.00	1,800.00	0.00	0.00	477,925.73	720,008.09	32° 18' 45.2359 N	103° 45' 17.9570 W
1,900.00	0.00	0.00	1,900.00	0.00	0.00	477,925.73	720,008.09	32° 18' 45.2359 N	103° 45' 17.9570 W
2,000.00	0.00	0.00	2,000.00	0.00	0.00	477,925.73	720,008.09	32° 18' 45.2359 N	103° 45' 17.9570 W
2,100.00	1.00	226.01	2,099.99	-0.61	-0.63	477,925.12	720,007.46	32° 18' 45.2299 N	103° 45' 17.9643 W
2,200.00	2.00	226.01	2,199.96	-2.42	-2.51	477,923.31	720,005.57	32° 18' 45.2120 N	103° 45' 17.9864 W
2,300.00	3.00	226.01	2,299.86	-5.45	-5.65	477,920.28	720,002.44	32° 18' 45.1822 N	103° 45' 18.0231 W
2,374.49	3.74	226.01	2,374.23	-8.50	-8.80	477,917.23	719,999.28	32° 18' 45.1523 N	103° 45' 18.0601 W
2,400.00	3.74	226.01	2,399.68	-9.65	-10.00	477,916.08	719,998.08	32° 18' 45.1409 N	103° 45' 18.0741 W
2,500.00	3.74	226.01	2,499.47	-14.19	-14.70	477,911.54	719,993.39	32° 18' 45.0963 N	103° 45' 18.1292 W
2,600.00	3.74	226.01	2,599.25	-18.73	-19.40	477,907.00	719,988.69	32° 18' 45.0516 N	103° 45' 18.1842 W
2,700.00	3.74	226.01	2,699.04	-23.26	-24.10	477,902.47	719,983.99	32° 18' 45.0070 N	103° 45' 18.2392 W
2,800.00	3.74	226.01	2,798.82	-27.80	-28.80	477,897.93	719,979.29	32° 18' 44.9624 N	103° 45' 18.2943 W
2,900.00	3.74	226.01	2,898.61	-32.33	-33.50	477,893.40	719,974.59	32° 18' 44.9177 N	103° 45' 18.3493 W
3,000.00	3.74	226.01	2,998.40	-36.87	-38.20	477,888.86	719,969.89	32° 18' 44.8731 N	103° 45' 18.4044 W
3,100.00	3.74	226.01	3,098.18	-41.41	-42.90	477,884.32	719,965.19	32° 18' 44.8285 N	103° 45' 18.4594 W
3,200.00	3.74	226.01	3,197.97	-45.94	-47.60	477,879.79	719,960.49	32° 18' 44.7838 N	103° 45' 18.5145 W
3,300.00	3.74	226.01	3,297.76	-50.48	-52.30	477,875.25	719,955.79	32° 18' 44.7392 N	103° 45' 18.5695 W
3,400.00	3.74	226.01	3,397.54	-55.01	-56.99	477,870.72	719,951.09	32° 18' 44.6946 N	103° 45' 18.6246 W
3,500.00	3.74	226.01	3,497.33	-59.55	-61.69	477,866.18	719,946.39	32° 18' 44.6499 N	103° 45' 18.6796 W
3,600.00	3.74	226.01	3,597.12	-64.09	-66.39	477,861.64	719,941.69	32° 18' 44.6053 N	103° 45' 18.7346 W
3,700.00	3.74	226.01	3,696.90	-68.62	-71.09	477,857.11	719,936.99	32° 18' 44.5606 N	103° 45' 18.7897 W
3,800.00	3.74	226.01	3,796.69	-73.16	-75.79	477,852.57	719,932.29	32° 18' 44.5160 N	103° 45' 18.8447 W
3,900.00	3.74	226.01	3,896.48	-77.69	-80.49	477,848.04	719,927.59	32° 18' 44.4714 N	103° 45' 18.8998 W
4,000.00	3.74	226.01	3,996.26	-82.23	-85.19	477,843.50	719,922.89	32° 18' 44.4267 N	103° 45' 18.9548 W
4,100.00	3.74	226.01	4,096.05	-86.77	-89.89	477,838.96	719,918.20	32° 18' 44.3821 N	103° 45' 19.0099 W
4,200.00	3.74	226.01	4,195.84	-91.30	-94.59	477,834.43	719,913.50	32° 18' 44.3375 N	103° 45' 19.0649 W
4,300.00	3.74	226.01	4,295.62	-95.84	-99.29	477,829.89	719,908.80	32° 18' 44.2928 N	103° 45' 19.1200 W
4,400.00	3.74	226.01	4,395.41	-100.38	-103.99	477,825.36	719,904.10	32° 18' 44.2482 N	103° 45' 19.1750 W
4,500.00	3.74	226.01	4,495.19	-104.91	-108.69	477,820.82	719,899.40	32° 18' 44.2036 N	103° 45' 19.2300 W
4,600.00	3.74	226.01	4,594.98	-109.45	-113.39	477,816.28	719,894.70	32° 18' 44.1589 N	103° 45' 19.2851 W
4,700.00	3.74	226.01	4,694.77	-113.98	-118.09	477,811.75	719,890.00	32° 18' 44.1143 N	103° 45' 19.3401 W
4,800.00	3.74	226.01	4,794.55	-118.52	-122.79	477,807.21	719,885.30	32° 18' 44.0697 N	103° 45' 19.3952 W
4,900.00	3.74	226.01	4,894.34	-123.06	-127.49	477,802.68	719,880.60	32° 18' 44.0250 N	103° 45' 19.4502 W
5,000.00	3.74	226.01	4,994.13	-127.59	-132.18	477,798.14	719,875.90	32° 18' 43.9804 N	103° 45' 19.5053 W
5,100.00	3.74	226.01	5,093.91	-132.13	-136.88	477,793.60	719,871.20	32° 18' 43.9357 N	103° 45' 19.5603 W

# LEAM Drilling Services

## Planning Report - Geographic

<b>Database:</b>	EDM 5000.1 Multi User Db	<b>Local Co-ordinate Reference:</b>	Well Belloq 11-2 Fed State Com 521H
<b>Company:</b>	Devon Energy	<b>TVD Reference:</b>	3430' GE + 23.5' KB @ 3453.50usft
<b>Project:</b>	Eddy County, NM (NAD-83)	<b>MD Reference:</b>	3430' GE + 23.5' KB @ 3453.50usft
<b>Site:</b>	Belloq 11-2 Fed State Com	<b>North Reference:</b>	Grid
<b>Well:</b>	Belloq 11-2 Fed State Com 521H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	OH		
<b>Design:</b>	Plan #2		

Planned Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude
5,200.00	3.74	226.01	5,193.70	-136.66	-141.58	477,789.07	719,866.50	32° 18' 43.8911 N	103° 45' 19.6154 W
5,300.00	3.74	226.01	5,293.49	-141.20	-146.28	477,784.53	719,861.80	32° 18' 43.8465 N	103° 45' 19.6704 W
5,400.00	3.74	226.01	5,393.27	-145.74	-150.98	477,779.99	719,857.10	32° 18' 43.8018 N	103° 45' 19.7254 W
5,500.00	3.74	226.01	5,493.06	-150.27	-155.68	477,775.46	719,852.40	32° 18' 43.7572 N	103° 45' 19.7805 W
5,600.00	3.74	226.01	5,592.85	-154.81	-160.38	477,770.92	719,847.70	32° 18' 43.7126 N	103° 45' 19.8355 W
5,700.00	3.74	226.01	5,692.63	-159.34	-165.08	477,766.39	719,843.01	32° 18' 43.6679 N	103° 45' 19.8906 W
5,800.00	3.74	226.01	5,792.42	-163.88	-169.78	477,761.85	719,838.31	32° 18' 43.6233 N	103° 45' 19.9456 W
5,900.00	3.74	226.01	5,892.21	-168.42	-174.48	477,757.31	719,833.61	32° 18' 43.5787 N	103° 45' 20.0007 W
6,000.00	3.74	226.01	5,991.99	-172.95	-179.18	477,752.78	719,828.91	32° 18' 43.5340 N	103° 45' 20.0557 W
6,100.00	3.74	226.01	6,091.78	-177.49	-183.88	477,748.24	719,824.21	32° 18' 43.4894 N	103° 45' 20.1107 W
6,200.00	3.74	226.01	6,191.57	-182.02	-188.58	477,743.71	719,819.51	32° 18' 43.4448 N	103° 45' 20.1658 W
6,300.00	3.74	226.01	6,291.35	-186.56	-193.28	477,739.17	719,814.81	32° 18' 43.4001 N	103° 45' 20.2208 W
6,400.00	3.74	226.01	6,391.14	-191.10	-197.98	477,734.63	719,810.11	32° 18' 43.3555 N	103° 45' 20.2759 W
6,500.00	3.74	226.01	6,490.92	-195.63	-202.68	477,730.10	719,805.41	32° 18' 43.3108 N	103° 45' 20.3309 W
6,600.00	3.74	226.01	6,590.71	-200.17	-207.37	477,725.56	719,800.71	32° 18' 43.2662 N	103° 45' 20.3860 W
6,700.00	3.74	226.01	6,690.50	-204.70	-212.07	477,721.03	719,796.01	32° 18' 43.2216 N	103° 45' 20.4410 W
6,800.00	3.74	226.01	6,790.28	-209.24	-216.77	477,716.49	719,791.31	32° 18' 43.1769 N	103° 45' 20.4961 W
6,900.00	3.74	226.01	6,890.07	-213.78	-221.47	477,711.95	719,786.61	32° 18' 43.1323 N	103° 45' 20.5511 W
7,000.00	3.74	226.01	6,989.86	-218.31	-226.17	477,707.42	719,781.91	32° 18' 43.0877 N	103° 45' 20.6061 W
7,100.00	3.74	226.01	7,089.64	-222.85	-230.87	477,702.88	719,777.21	32° 18' 43.0430 N	103° 45' 20.6612 W
7,200.00	3.74	226.01	7,189.43	-227.39	-235.57	477,698.35	719,772.51	32° 18' 42.9984 N	103° 45' 20.7162 W
7,300.00	3.74	226.01	7,289.22	-231.92	-240.27	477,693.81	719,767.82	32° 18' 42.9538 N	103° 45' 20.7713 W
7,400.00	3.74	226.01	7,389.00	-236.46	-244.97	477,689.27	719,763.12	32° 18' 42.9091 N	103° 45' 20.8263 W
7,500.00	3.74	226.01	7,488.79	-240.99	-249.67	477,684.74	719,758.42	32° 18' 42.8645 N	103° 45' 20.8814 W
7,511.24	3.74	226.01	7,500.00	-241.50	-250.20	477,684.23	719,757.89	32° 18' 42.8595 N	103° 45' 20.8875 W
7,600.00	2.86	226.01	7,588.62	-245.05	-253.87	477,680.68	719,754.21	32° 18' 42.8245 N	103° 45' 20.9306 W
7,700.00	1.86	226.01	7,688.53	-247.91	-256.83	477,677.82	719,751.25	32° 18' 42.7964 N	103° 45' 20.9653 W
7,800.00	0.86	226.01	7,788.50	-249.55	-258.54	477,676.18	719,749.55	32° 18' 42.7802 N	103° 45' 20.9852 W
7,885.73	0.00	0.01	7,874.23	-250.00	-259.00	477,675.73	719,749.09	32° 18' 42.7759 N	103° 45' 20.9906 W
7,900.00	0.00	0.00	7,888.50	-250.00	-259.00	477,675.73	719,749.09	32° 18' 42.7759 N	103° 45' 20.9906 W
8,000.00	0.00	0.00	7,988.50	-250.00	-259.00	477,675.73	719,749.09	32° 18' 42.7759 N	103° 45' 20.9906 W
8,100.00	0.00	0.00	8,088.50	-250.00	-259.00	477,675.73	719,749.09	32° 18' 42.7759 N	103° 45' 20.9906 W
8,200.00	0.00	0.00	8,188.50	-250.00	-259.00	477,675.73	719,749.09	32° 18' 42.7759 N	103° 45' 20.9906 W
8,300.00	0.00	0.00	8,288.50	-250.00	-259.00	477,675.73	719,749.09	32° 18' 42.7759 N	103° 45' 20.9906 W
8,400.00	0.00	0.00	8,388.50	-250.00	-259.00	477,675.73	719,749.09	32° 18' 42.7759 N	103° 45' 20.9906 W
8,463.54	0.00	0.00	8,452.04	-250.00	-259.00	477,675.73	719,749.09	32° 18' 42.7759 N	103° 45' 20.9906 W
<b>KOP (Belloq 521H) - 50' FSL, 400' FWL S11</b>									
8,500.00	3.65	359.63	8,488.47	-248.84	-259.01	477,676.89	719,749.08	32° 18' 42.7873 N	103° 45' 20.9907 W
8,550.00	8.65	359.63	8,538.17	-243.49	-259.04	477,682.24	719,749.04	32° 18' 42.8403 N	103° 45' 20.9907 W
8,600.00	13.65	359.63	8,587.21	-233.83	-259.10	477,691.90	719,748.98	32° 18' 42.9359 N	103° 45' 20.9908 W
8,650.00	18.65	359.63	8,635.22	-219.93	-259.19	477,705.80	719,748.89	32° 18' 43.0735 N	103° 45' 20.9910 W
8,700.00	23.65	359.63	8,681.84	-201.90	-259.31	477,723.83	719,748.78	32° 18' 43.2519 N	103° 45' 20.9912 W
8,704.69	24.11	359.63	8,686.13	-200.00	-259.32	477,725.73	719,748.77	32° 18' 43.2707 N	103° 45' 20.9912 W
<b>FTP (Belloq 521H) - 100' FSL, 400' FWL S11</b>									
8,750.00	28.65	359.63	8,726.71	-179.87	-259.45	477,745.86	719,748.64	32° 18' 43.4698 N	103° 45' 20.9915 W
8,800.00	33.65	359.63	8,769.49	-154.02	-259.62	477,771.71	719,748.47	32° 18' 43.7257 N	103° 45' 20.9918 W
8,850.00	38.65	359.63	8,809.85	-124.54	-259.80	477,801.19	719,748.28	32° 18' 44.0174 N	103° 45' 20.9921 W
8,900.00	43.65	359.63	8,847.49	-91.65	-260.02	477,834.08	719,748.07	32° 18' 44.3429 N	103° 45' 20.9925 W
8,950.00	48.65	359.63	8,882.13	-55.61	-260.25	477,870.12	719,747.84	32° 18' 44.6995 N	103° 45' 20.9930 W
9,000.00	53.65	359.63	8,913.48	-16.68	-260.50	477,909.05	719,747.59	32° 18' 45.0847 N	103° 45' 20.9934 W
9,050.00	58.65	359.63	8,941.33	24.83	-260.76	477,950.56	719,747.32	32° 18' 45.4955 N	103° 45' 20.9939 W
9,100.00	63.65	359.63	8,965.45	68.60	-261.04	477,994.34	719,747.04	32° 18' 45.9287 N	103° 45' 20.9944 W
9,150.00	68.65	359.63	8,985.66	114.32	-261.34	478,040.05	719,746.75	32° 18' 46.3811 N	103° 45' 20.9950 W
9,200.00	73.65	359.63	9,001.82	161.62	-261.64	478,087.35	719,746.45	32° 18' 46.8492 N	103° 45' 20.9956 W

# LEAM Drilling Services

## Planning Report - Geographic

<b>Database:</b>	EDM 5000.1 Multi User Db	<b>Local Co-ordinate Reference:</b>	Well Belloq 11-2 Fed State Com 521H
<b>Company:</b>	Devon Energy	<b>TVD Reference:</b>	3430' GE + 23.5' KB @ 3453.50usft
<b>Project:</b>	Eddy County, NM (NAD-83)	<b>MD Reference:</b>	3430' GE + 23.5' KB @ 3453.50usft
<b>Site:</b>	Belloq 11-2 Fed State Com	<b>North Reference:</b>	Grid
<b>Well:</b>	Belloq 11-2 Fed State Com 521H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	OH		
<b>Design:</b>	Plan #2		

Planned Survey										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude	
9,250.00	78.65	359.63	9,013.78	210.15	-261.95	478,135.88	719,746.14	32° 18' 47.3294 N	103° 45' 20.9961 W	
9,300.00	83.65	359.63	9,021.48	259.54	-262.27	478,185.27	719,745.82	32° 18' 47.8181 N	103° 45' 20.9967 W	
9,350.00	88.65	359.63	9,024.84	309.41	-262.59	478,235.14	719,745.50	32° 18' 48.3116 N	103° 45' 20.9973 W	
9,362.67	89.91	359.63	9,025.00	322.08	-262.67	478,247.81	719,745.42	32° 18' 48.4370 N	103° 45' 20.9975 W	
9,400.00	89.91	359.63	9,025.05	359.40	-262.91	478,285.13	719,745.18	32° 18' 48.8064 N	103° 45' 20.9979 W	
9,500.00	89.91	359.63	9,025.21	459.40	-263.55	478,385.13	719,744.54	32° 18' 49.7959 N	103° 45' 20.9991 W	
9,600.00	89.91	359.63	9,025.36	559.40	-264.19	478,485.13	719,743.90	32° 18' 50.7855 N	103° 45' 21.0003 W	
9,700.00	89.91	359.63	9,025.51	659.40	-264.83	478,585.13	719,743.26	32° 18' 51.7750 N	103° 45' 21.0015 W	
9,800.00	89.91	359.63	9,025.66	759.39	-265.47	478,685.13	719,742.62	32° 18' 52.7646 N	103° 45' 21.0027 W	
9,900.00	89.91	359.63	9,025.81	859.39	-266.11	478,785.12	719,741.97	32° 18' 53.7542 N	103° 45' 21.0039 W	
10,000.00	89.91	359.63	9,025.96	959.39	-266.75	478,885.12	719,741.33	32° 18' 54.7437 N	103° 45' 21.0051 W	
10,100.00	89.91	359.63	9,026.11	1,059.39	-267.39	478,985.12	719,740.69	32° 18' 55.7333 N	103° 45' 21.0062 W	
10,200.00	89.91	359.63	9,026.27	1,159.39	-268.04	479,085.12	719,740.05	32° 18' 56.7228 N	103° 45' 21.0074 W	
10,300.00	89.91	359.63	9,026.42	1,259.38	-268.68	479,185.11	719,739.41	32° 18' 57.7124 N	103° 45' 21.0086 W	
10,400.00	89.91	359.63	9,026.57	1,359.38	-269.32	479,285.11	719,738.77	32° 18' 58.7019 N	103° 45' 21.0098 W	
10,500.00	89.91	359.63	9,026.72	1,459.38	-269.96	479,385.11	719,738.13	32° 18' 59.6915 N	103° 45' 21.0110 W	
10,600.00	89.91	359.63	9,026.87	1,559.38	-270.60	479,485.11	719,737.49	32° 19' 0.6810 N	103° 45' 21.0122 W	
10,700.00	89.91	359.63	9,027.02	1,659.38	-271.24	479,585.11	719,736.85	32° 19' 1.6706 N	103° 45' 21.0134 W	
10,800.00	89.91	359.63	9,027.17	1,759.37	-271.88	479,685.10	719,736.20	32° 19' 2.6601 N	103° 45' 21.0146 W	
10,900.00	89.91	359.63	9,027.33	1,859.37	-272.52	479,785.10	719,735.56	32° 19' 3.6497 N	103° 45' 21.0158 W	
11,000.00	89.91	359.63	9,027.48	1,959.37	-273.16	479,885.10	719,734.92	32° 19' 4.6392 N	103° 45' 21.0170 W	
11,100.00	89.91	359.63	9,027.63	2,059.37	-273.80	479,985.10	719,734.28	32° 19' 5.6288 N	103° 45' 21.0182 W	
11,200.00	89.91	359.63	9,027.78	2,159.36	-274.45	480,085.10	719,733.64	32° 19' 6.6184 N	103° 45' 21.0194 W	
11,300.00	89.91	359.63	9,027.93	2,259.36	-275.09	480,185.09	719,733.00	32° 19' 7.6079 N	103° 45' 21.0205 W	
11,400.00	89.91	359.63	9,028.08	2,359.36	-275.73	480,285.09	719,732.36	32° 19' 8.5975 N	103° 45' 21.0217 W	
11,500.00	89.91	359.63	9,028.23	2,459.36	-276.37	480,385.09	719,731.72	32° 19' 9.5870 N	103° 45' 21.0229 W	
11,600.00	89.91	359.63	9,028.39	2,559.36	-277.01	480,485.09	719,731.08	32° 19' 10.5766 N	103° 45' 21.0241 W	
11,700.00	89.91	359.63	9,028.54	2,659.35	-277.65	480,585.08	719,730.44	32° 19' 11.5661 N	103° 45' 21.0253 W	
11,800.00	89.91	359.63	9,028.69	2,759.35	-278.29	480,685.08	719,729.79	32° 19' 12.5557 N	103° 45' 21.0265 W	
11,900.00	89.91	359.63	9,028.84	2,859.35	-278.93	480,785.08	719,729.15	32° 19' 13.5452 N	103° 45' 21.0277 W	
12,000.00	89.91	359.63	9,028.99	2,959.35	-279.57	480,885.08	719,728.51	32° 19' 14.5348 N	103° 45' 21.0289 W	
12,100.00	89.91	359.63	9,029.14	3,059.35	-280.21	480,985.08	719,727.87	32° 19' 15.5243 N	103° 45' 21.0301 W	
12,200.00	89.91	359.63	9,029.30	3,159.34	-280.86	481,085.07	719,727.23	32° 19' 16.5139 N	103° 45' 21.0313 W	
12,300.00	89.91	359.63	9,029.45	3,259.34	-281.50	481,185.07	719,726.59	32° 19' 17.5034 N	103° 45' 21.0324 W	
12,400.00	89.91	359.63	9,029.60	3,359.34	-282.14	481,285.07	719,725.95	32° 19' 18.4930 N	103° 45' 21.0336 W	
12,500.00	89.91	359.63	9,029.75	3,459.34	-282.78	481,385.07	719,725.31	32° 19' 19.4826 N	103° 45' 21.0348 W	
12,600.00	89.91	359.63	9,029.90	3,559.33	-283.42	481,485.06	719,724.67	32° 19' 20.4721 N	103° 45' 21.0360 W	
12,700.00	89.91	359.63	9,030.05	3,659.33	-284.06	481,585.06	719,724.02	32° 19' 21.4617 N	103° 45' 21.0372 W	
12,800.00	89.91	359.63	9,030.20	3,759.33	-284.70	481,685.06	719,723.38	32° 19' 22.4512 N	103° 45' 21.0384 W	
12,900.00	89.91	359.63	9,030.36	3,859.33	-285.34	481,785.06	719,722.74	32° 19' 23.4408 N	103° 45' 21.0396 W	
13,000.00	89.91	359.63	9,030.51	3,959.33	-285.98	481,885.06	719,722.10	32° 19' 24.4303 N	103° 45' 21.0408 W	
13,100.00	89.91	359.63	9,030.66	4,059.32	-286.63	481,985.05	719,721.46	32° 19' 25.4199 N	103° 45' 21.0420 W	
13,200.00	89.91	359.63	9,030.81	4,159.32	-287.27	482,085.05	719,720.82	32° 19' 26.4094 N	103° 45' 21.0432 W	
13,300.00	89.91	359.63	9,030.96	4,259.32	-287.91	482,185.05	719,720.18	32° 19' 27.3990 N	103° 45' 21.0443 W	
13,400.00	89.91	359.63	9,031.11	4,359.32	-288.55	482,285.05	719,719.54	32° 19' 28.3885 N	103° 45' 21.0455 W	
13,500.00	89.91	359.63	9,031.26	4,459.31	-289.19	482,385.05	719,718.90	32° 19' 29.3781 N	103° 45' 21.0467 W	
13,600.00	89.91	359.63	9,031.42	4,559.31	-289.83	482,485.04	719,718.26	32° 19' 30.3676 N	103° 45' 21.0479 W	
13,700.00	89.91	359.63	9,031.57	4,659.31	-290.47	482,585.04	719,717.61	32° 19' 31.3572 N	103° 45' 21.0491 W	
13,800.00	89.91	359.63	9,031.72	4,759.31	-291.11	482,685.04	719,716.97	32° 19' 32.3467 N	103° 45' 21.0503 W	
13,900.00	89.91	359.63	9,031.87	4,859.31	-291.75	482,785.04	719,716.33	32° 19' 33.3363 N	103° 45' 21.0515 W	
14,000.00	89.91	359.63	9,032.02	4,959.30	-292.39	482,885.03	719,715.69	32° 19' 34.3259 N	103° 45' 21.0527 W	
14,100.00	89.91	359.63	9,032.17	5,059.30	-293.04	482,985.03	719,715.05	32° 19' 35.3154 N	103° 45' 21.0539 W	
14,200.00	89.91	359.63	9,032.32	5,159.30	-293.68	483,085.03	719,714.41	32° 19' 36.3050 N	103° 45' 21.0551 W	
14,300.00	89.91	359.63	9,032.48	5,259.30	-294.32	483,185.03	719,713.77	32° 19' 37.2945 N	103° 45' 21.0562 W	
14,400.00	89.91	359.63	9,032.63	5,359.30	-294.96	483,285.03	719,713.13	32° 19' 38.2841 N	103° 45' 21.0574 W	

# LEAM Drilling Services

## Planning Report - Geographic

<b>Database:</b>	EDM 5000.1 Multi User Db	<b>Local Co-ordinate Reference:</b>	Well Belloq 11-2 Fed State Com 521H
<b>Company:</b>	Devon Energy	<b>TVD Reference:</b>	3430' GE + 23.5' KB @ 3453.50usft
<b>Project:</b>	Eddy County, NM (NAD-83)	<b>MD Reference:</b>	3430' GE + 23.5' KB @ 3453.50usft
<b>Site:</b>	Belloq 11-2 Fed State Com	<b>North Reference:</b>	Grid
<b>Well:</b>	Belloq 11-2 Fed State Com 521H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	OH		
<b>Design:</b>	Plan #2		

Planned Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude
14,500.00	89.91	359.63	9,032.78	5,459.29	-295.60	483,385.02	719,712.49	32° 19' 39.2736 N	103° 45' 21.0586 W
14,600.00	89.91	359.63	9,032.93	5,559.29	-296.24	483,485.02	719,711.85	32° 19' 40.2632 N	103° 45' 21.0598 W
14,700.00	89.91	359.63	9,033.08	5,659.29	-296.88	483,585.02	719,711.20	32° 19' 41.2527 N	103° 45' 21.0610 W
14,800.00	89.91	359.63	9,033.23	5,759.29	-297.52	483,685.02	719,710.56	32° 19' 42.2423 N	103° 45' 21.0622 W
14,900.00	89.91	359.63	9,033.38	5,859.28	-298.16	483,785.02	719,709.92	32° 19' 43.2318 N	103° 45' 21.0634 W
15,000.00	89.91	359.63	9,033.54	5,959.28	-298.81	483,885.01	719,709.28	32° 19' 44.2214 N	103° 45' 21.0646 W
15,100.00	89.91	359.63	9,033.69	6,059.28	-299.45	483,985.01	719,708.64	32° 19' 45.2109 N	103° 45' 21.0658 W
15,200.00	89.91	359.63	9,033.84	6,159.28	-300.09	484,085.01	719,708.00	32° 19' 46.2005 N	103° 45' 21.0669 W
15,300.00	89.91	359.63	9,033.99	6,259.28	-300.73	484,185.01	719,707.36	32° 19' 47.1900 N	103° 45' 21.0681 W
15,400.00	89.91	359.63	9,034.14	6,359.27	-301.37	484,285.00	719,706.72	32° 19' 48.1796 N	103° 45' 21.0693 W
15,500.00	89.91	359.63	9,034.29	6,459.27	-302.01	484,385.00	719,706.08	32° 19' 49.1691 N	103° 45' 21.0705 W
15,600.00	89.91	359.63	9,034.45	6,559.27	-302.65	484,485.00	719,705.43	32° 19' 50.1587 N	103° 45' 21.0717 W
15,700.00	89.91	359.63	9,034.60	6,659.27	-303.29	484,585.00	719,704.79	32° 19' 51.1482 N	103° 45' 21.0729 W
15,800.00	89.91	359.63	9,034.75	6,759.26	-303.93	484,685.00	719,704.15	32° 19' 52.1378 N	103° 45' 21.0741 W
15,900.00	89.91	359.63	9,034.90	6,859.26	-304.57	484,784.99	719,703.51	32° 19' 53.1273 N	103° 45' 21.0753 W
16,000.00	89.91	359.63	9,035.05	6,959.26	-305.22	484,884.99	719,702.87	32° 19' 54.1169 N	103° 45' 21.0765 W
16,100.00	89.91	359.63	9,035.20	7,059.26	-305.86	484,984.99	719,702.23	32° 19' 55.1065 N	103° 45' 21.0776 W
16,200.00	89.91	359.63	9,035.35	7,159.26	-306.50	485,084.99	719,701.59	32° 19' 56.0960 N	103° 45' 21.0788 W
16,300.00	89.91	359.63	9,035.51	7,259.25	-307.14	485,184.98	719,700.95	32° 19' 57.0856 N	103° 45' 21.0800 W
16,400.00	89.91	359.63	9,035.66	7,359.25	-307.78	485,284.98	719,700.31	32° 19' 58.0751 N	103° 45' 21.0812 W
16,500.00	89.91	359.63	9,035.81	7,459.25	-308.42	485,384.98	719,699.67	32° 19' 59.0647 N	103° 45' 21.0824 W
16,600.00	89.91	359.63	9,035.96	7,559.25	-309.06	485,484.98	719,699.02	32° 20' 0.0542 N	103° 45' 21.0836 W
16,700.00	89.91	359.63	9,036.11	7,659.25	-309.70	485,584.98	719,698.38	32° 20' 1.0438 N	103° 45' 21.0848 W
16,800.00	89.91	359.63	9,036.26	7,759.24	-310.34	485,684.97	719,697.74	32° 20' 2.0333 N	103° 45' 21.0860 W
16,900.00	89.91	359.63	9,036.41	7,859.24	-310.99	485,784.97	719,697.10	32° 20' 3.0229 N	103° 45' 21.0872 W
17,000.00	89.91	359.63	9,036.57	7,959.24	-311.63	485,884.97	719,696.46	32° 20' 4.0124 N	103° 45' 21.0883 W
17,100.00	89.91	359.63	9,036.72	8,059.24	-312.27	485,984.97	719,695.82	32° 20' 5.0020 N	103° 45' 21.0895 W
17,200.00	89.91	359.63	9,036.87	8,159.23	-312.91	486,084.97	719,695.18	32° 20' 5.9915 N	103° 45' 21.0907 W
17,300.00	89.91	359.63	9,037.02	8,259.23	-313.55	486,184.96	719,694.54	32° 20' 6.9811 N	103° 45' 21.0919 W
17,400.00	89.91	359.63	9,037.17	8,359.23	-314.19	486,284.96	719,693.90	32° 20' 7.9706 N	103° 45' 21.0931 W
17,500.00	89.91	359.63	9,037.32	8,459.23	-314.83	486,384.96	719,693.25	32° 20' 8.9602 N	103° 45' 21.0943 W
17,600.00	89.91	359.63	9,037.47	8,559.23	-315.47	486,484.96	719,692.61	32° 20' 9.9497 N	103° 45' 21.0955 W
17,700.00	89.91	359.63	9,037.63	8,659.22	-316.11	486,584.95	719,691.97	32° 20' 10.9393 N	103° 45' 21.0967 W
17,800.00	89.91	359.63	9,037.78	8,759.22	-316.75	486,684.95	719,691.33	32° 20' 11.9288 N	103° 45' 21.0979 W
17,900.00	89.91	359.63	9,037.93	8,859.22	-317.40	486,784.95	719,690.69	32° 20' 12.9184 N	103° 45' 21.0990 W
18,000.00	89.91	359.63	9,038.08	8,959.22	-318.04	486,884.95	719,690.05	32° 20' 13.9079 N	103° 45' 21.1002 W
18,100.00	89.91	359.63	9,038.23	9,059.22	-318.68	486,984.95	719,689.41	32° 20' 14.8975 N	103° 45' 21.1014 W
18,200.00	89.91	359.63	9,038.38	9,159.21	-319.32	487,084.94	719,688.77	32° 20' 15.8870 N	103° 45' 21.1026 W
18,300.00	89.91	359.63	9,038.54	9,259.21	-319.96	487,184.94	719,688.13	32° 20' 16.8766 N	103° 45' 21.1038 W
18,400.00	89.91	359.63	9,038.69	9,359.21	-320.60	487,284.94	719,687.49	32° 20' 17.8661 N	103° 45' 21.1050 W
18,500.00	89.91	359.63	9,038.84	9,459.21	-321.24	487,384.94	719,686.84	32° 20' 18.8557 N	103° 45' 21.1062 W
18,600.00	89.91	359.63	9,038.99	9,559.20	-321.88	487,484.93	719,686.20	32° 20' 19.8452 N	103° 45' 21.1074 W
18,700.00	89.91	359.63	9,039.14	9,659.20	-322.52	487,584.93	719,685.56	32° 20' 20.8348 N	103° 45' 21.1085 W
18,800.00	89.91	359.63	9,039.29	9,759.20	-323.16	487,684.93	719,684.92	32° 20' 21.8243 N	103° 45' 21.1097 W
18,900.00	89.91	359.63	9,039.44	9,859.20	-323.81	487,784.93	719,684.28	32° 20' 22.8139 N	103° 45' 21.1109 W
19,000.00	89.91	359.63	9,039.60	9,959.20	-324.45	487,884.93	719,683.64	32° 20' 23.8034 N	103° 45' 21.1121 W
19,100.00	89.91	359.63	9,039.75	10,059.19	-325.09	487,984.92	719,683.00	32° 20' 24.7930 N	103° 45' 21.1133 W
19,187.22	89.91	359.63	9,039.88	10,146.41	-325.65	488,072.14	719,682.44	32° 20' 25.6561 N	103° 45' 21.1143 W
LTP (Belloq 521H) - 100' FNL, 400' FWL S2									
19,200.00	89.91	359.63	9,039.90	10,159.19	-325.73	488,084.92	719,682.36	32° 20' 25.7825 N	103° 45' 21.1145 W
19,267.22	89.91	359.63	9,040.00	10,226.41	-326.16	488,152.14	719,681.93	32° 20' 26.4477 N	103° 45' 21.1153 W
PBHL (Belloq 521H) - 20' FNL, 400' FWL S2									

# LEAM Drilling Services

## Planning Report - Geographic

<b>Database:</b>	EDM 5000.1 Multi User.Db	<b>Local Co-ordinate Reference:</b>	Well Belloq 11-2 Fed State Com 521H
<b>Company:</b>	Devon Energy	<b>TVD Reference:</b>	3430' GE + 23.5' KB @ 3453.50usft
<b>Project:</b>	Eddy County, NM (NAD-83)	<b>MD Reference:</b>	3430' GE + 23.5' KB @ 3453.50usft
<b>Site:</b>	Belloq 11-2 Fed State Com	<b>North Reference:</b>	Grid
<b>Well:</b>	Belloq 11-2 Fed State Com 521H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	OH		
<b>Design:</b>	Plan #2		

Design Targets										
Target Name										
- hit/miss target	Dip Angle	Dip Dir.	TVD	+N/-S	+E/-W	Northing	Easting			
- Shape	(°)	(°)	(usft)	(usft)	(usft)	(usft)	(usft)	Latitude	Longitude	
SHL (Belloq 521H) - 300 - plan hits target center - Point	0.00	0.01	0.00	0.00	0.00	477,925.73	720,008.09	32° 18' 45.2359 N	103° 45' 17.9570 W	
KOP (Belloq 521H) - 50' - plan hits target center - Point	0.00	0.00	8,452.04	-250.00	-259.00	477,675.73	719,749.09	32° 18' 42.7759 N	103° 45' 20.9906 W	
FTP (Belloq 521H) - 100 - plan hits target center - Point	0.00	0.00	8,686.13	-200.00	-259.32	477,725.73	719,748.77	32° 18' 43.2707 N	103° 45' 20.9912 W	
LTP (Belloq 521H) - 100' - plan hits target center - Point	0.00	0.01	9,039.88	10,146.41	-325.65	488,072.14	719,682.44	32° 20' 25.6561 N	103° 45' 21.1144 W	
PBHL (Belloq 521H) - 200' - plan hits target center - Point	0.00	0.00	9,040.00	10,226.41	-326.16	488,152.14	719,681.93	32° 20' 26.4477 N	103° 45' 21.1153 W	

# **Devon Energy**

**Eddy County, NM (NAD-83)**

**Belloq 11-2 Fed State Com**

**Belloq 11-2 Fed State Com 521H**

**OH**

**Plan #2**

## **Anticollision Report**

**23 January, 2019**



# LEAM Drilling Services

## Anticollision Report

<b>Company:</b>	Devon Energy	<b>Local Co-ordinate Reference:</b>	Well Belloq 11-2 Fed State Com 521H
<b>Project:</b>	Eddy County, NM (NAD-83)	<b>TVD Reference:</b>	3430' GE + 23.5' KB @ 3453.50usft
<b>Reference Site:</b>	Belloq 11-2 Fed State Com	<b>MD Reference:</b>	3430' GE + 23.5' KB @ 3453.50usft
<b>Site Error:</b>	0.00 usft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	Belloq 11-2 Fed State Com 521H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.00 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	OH	<b>Database:</b>	EDM 5000.1 Multi User Db
<b>Reference Design:</b>	Plan #2	<b>Offset TVD Reference:</b>	Offset Datum

<b>Reference</b>	Plan #2
<b>Filter type:</b>	NO GLOBAL FILTER: Using user defined selection & filtering criteria
<b>Interpolation Method:</b>	MD Interval 100.00usft
<b>Depth Range:</b>	Unlimited
<b>Results Limited by:</b>	Maximum center-center distance of 2,000.00 usft
<b>Warning Levels Evaluated at:</b>	2.00 Sigma
<b>Error Model:</b>	ISCWSA
<b>Scan Method:</b>	Closest Approach 3D
<b>Error Surface:</b>	Elliptical Conic
<b>Casing Method:</b>	Not applied

<b>Survey Tool Program</b>	<b>Date</b>	1/23/2019
<b>From (usft)</b>	<b>To (usft)</b>	<b>Survey (Wellbore)</b>
0.00	19,266.54	Plan #2 (OH)
		<b>Tool Name</b>
		LEAM MWD+HDGM
		<b>Description</b>
		MWD+HDGM

Summary						
Site Name	Reference Measured Depth (usft)	Offset Measured Depth (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Separation Factor	Warning
<b>Offset Well - Wellbore - Design</b>						
<b>Belloq 11-2 Fed State Com</b>						
Barclay 11H Federal 1 (Offset) - OH - OH						Out of range
Barclay 11M Federal 13 (Offset) - OH - OH	2,000.00	2,058.87	328.69	283.44	7.264	CC
Barclay 11M Federal 13 (Offset) - OH - OH	9,000.00	8,800.00	462.19	270.80	2.415	SF
Barclay 11M Federal 13 (Offset) - OH - OH	9,300.00	8,800.00	386.29	242.74	2.691	ES
Barclay State 1 (Offset) - OH - OH						Out of range
Belloq 11 Fed 222H (Offset) - OH - Plan #1	2,851.41	2,898.28	30.38	17.90	2.435	CC, ES, SF
Belloq 11-2 Fed State Com 223H (Offset) - OH - Plan #1						Out of range
Belloq 11-2 Fed State Com 231H (Offset) - OH - Plan #1	8,954.11	8,927.53	63.92	25.64	1.670	CC, ES, SF
Belloq 11-2 Fed State Com 234H (Offset) - OH - Plan #1						Out of range
Belloq 11-2 Fed State Com 511H - OH - Plan #1	2,000.00	2,000.10	30.00	21.29	3.443	CC, ES
Belloq 11-2 Fed State Com 511H - OH - Plan #1	19,267.22	19,117.10	668.95	341.25	2.041	SF
Belloq 11-2 Fed State Com 512H - OH - Plan #1	2,000.00	2,026.50	1,249.72	1,240.95	142.457	CC, ES
Belloq 11-2 Fed State Com 512H - OH - Plan #1	19,267.22	19,142.98	1,919.67	1,581.77	5.681	SF
Belloq 11-2 Fed State Com 513H - OH - Plan #2						Out of range
Belloq 11-2 Fed State Com 514H - OH - Plan #2						Out of range
Belloq 11-2 Fed State Com 522H - OH - Plan #2	2,000.00	2,025.60	1,219.77	1,211.00	139.075	CC
Belloq 11-2 Fed State Com 522H - OH - Plan #2	18,800.00	18,808.61	1,279.96	955.79	3.948	ES, SF
Belloq 11-2 Fed State Com 523H - OH - Plan #1						Out of range
Belloq 11-2 Fed State Com 524H - OH - Plan #2						Out of range
<b>Belloq 2 State</b>						
2H - OH - OH	19,089.94	9,066.98	1,348.25	1,163.73	7.307	CC
2H - OH - OH	19,100.00	9,067.06	1,348.29	1,163.63	7.301	ES
2H - OH - OH	19,200.00	9,067.83	1,352.74	1,167.19	7.291	SF
5H - OH - OH	18,869.82	9,065.53	1,265.65	1,083.05	6.932	CC
5H - OH - OH	18,900.00	9,065.24	1,266.01	1,083.04	6.919	ES, SF
6H - OH - OH	19,181.82	9,076.31	1,477.43	1,291.23	7.935	CC
6H - OH - OH	19,200.00	9,076.34	1,477.54	1,291.09	7.925	ES
6H - OH - OH	19,267.22	9,076.47	1,479.90	1,292.99	7.918	SF

# LEAM Drilling Services

## Anticollision Report

<b>Company:</b>	Devon Energy	<b>Local Co-ordinate Reference:</b>	Well Belloq 11-2 Fed State Com 521H
<b>Project:</b>	Eddy County, NM (NAD-83)	<b>TVD Reference:</b>	3430' GE + 23.5' KB @ 3453.50usft
<b>Reference Site:</b>	Belloq 11-2 Fed State Com	<b>MD Reference:</b>	3430' GE + 23.5' KB @ 3453.50usft
<b>Site Error:</b>	0.00 usft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	Belloq 11-2 Fed State Com 521H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.00 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	OH	<b>Database:</b>	EDM 5000.1 Multi User Db
<b>Reference Design:</b>	Plan #2	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design Belloq 11-2 Fed State Com - Barclay 11M Federal 13 (Offset) - OH - OH														Offset Site Error:	0.00 usft
Survey Program: 250-INC-ONLY														Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Distance		Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning		
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)							
0.00	0.00	58.60	58.60	0.00	0.56	-1.22	328.61	-6.98	328.69						
100.00	100.00	158.60	158.60	0.09	1.52	-1.22	328.61	-6.98	328.69	327.08	1.61	204.699			
200.00	200.00	258.61	258.60	0.31	2.58	-1.22	328.61	-6.98	328.69	325.80	2.89	113.749			
300.00	300.00	358.61	358.60	0.54	4.71	-1.22	328.61	-6.98	328.69	323.44	5.24	62.696			
400.00	400.00	458.61	458.60	0.76	6.84	-1.22	328.61	-6.98	328.69	321.09	7.60	43.274			
500.00	500.00	558.61	558.60	0.99	8.96	-1.22	328.61	-6.98	328.69	318.74	9.95	33.039			
600.00	600.00	658.61	658.60	1.21	11.09	-1.22	328.61	-6.98	328.69	316.39	12.30	26.720			
700.00	700.00	758.61	758.60	1.43	13.22	-1.22	328.61	-6.98	328.69	314.03	14.65	22.429			
800.00	800.00	858.61	858.60	1.66	15.35	-1.22	328.61	-6.98	328.69	311.68	17.01	19.326			
900.00	900.00	958.61	958.60	1.88	17.48	-1.22	328.61	-6.98	328.69	309.33	19.36	16.978			
1,000.00	1,000.00	1,058.72	1,058.60	2.11	19.61	-1.22	328.61	-6.98	328.69	306.97	21.72	15.136			
1,100.00	1,100.00	1,158.72	1,158.60	2.33	21.74	-1.22	328.61	-6.98	328.69	304.62	24.07	13.656			
1,200.00	1,200.00	1,258.72	1,258.60	2.56	23.86	-1.22	328.61	-6.98	328.69	302.27	26.42	12.440			
1,300.00	1,300.00	1,358.72	1,358.60	2.78	25.99	-1.22	328.61	-6.98	328.69	299.91	28.77	11.423			
1,400.00	1,400.00	1,458.79	1,458.60	3.01	28.12	-1.22	328.61	-6.98	328.69	297.56	31.13	10.559			
1,500.00	1,500.00	1,558.79	1,558.60	3.23	30.25	-1.22	328.61	-6.98	328.69	295.20	33.48	9.817			
1,600.00	1,600.00	1,658.79	1,658.60	3.46	32.38	-1.22	328.61	-6.98	328.69	292.85	35.84	9.172			
1,700.00	1,700.00	1,758.79	1,758.60	3.68	34.51	-1.22	328.61	-6.98	328.69	290.50	38.19	8.607			
1,800.00	1,800.00	1,858.79	1,858.60	3.91	36.63	-1.22	328.61	-6.98	328.69	288.15	40.54	8.107			
1,900.00	1,900.00	1,958.87	1,958.60	4.13	38.76	-1.22	328.61	-6.98	328.69	285.79	42.90	7.662			
2,000.00	2,000.00	2,058.87	2,058.60	4.36	40.89	-1.22	328.61	-6.98	328.69	283.44	45.25	7.264 CC			
2,100.00	2,099.99	2,158.86	2,158.59	4.56	43.02	132.88	328.61	-6.98	329.28	281.70	47.58	6.921			
2,200.00	2,199.96	2,258.83	2,258.56	4.74	45.15	133.20	328.61	-6.98	331.07	281.18	49.89	6.637			
2,300.00	2,299.86	2,358.73	2,358.46	4.92	47.28	133.72	328.61	-6.98	334.07	281.87	52.20	6.400			
2,400.00	2,399.68	2,458.63	2,458.28	5.11	49.40	134.44	328.61	-6.98	338.28	283.77	54.51	6.206			
2,500.00	2,499.47	2,558.41	2,558.07	5.31	51.52	135.22	328.61	-6.98	342.89	286.06	56.83	6.034			
2,600.00	2,599.25	2,658.20	2,657.85	5.50	53.65	135.97	328.61	-6.98	347.56	288.41	59.15	5.876			
2,700.00	2,699.04	2,757.99	2,757.64	5.71	55.77	136.71	328.61	-6.98	352.29	290.82	61.47	5.731			
2,800.00	2,798.82	2,857.82	2,857.42	5.91	57.90	137.43	328.61	-6.98	357.08	293.28	63.80	5.597			
2,900.00	2,898.61	2,957.61	2,957.21	6.12	60.02	138.13	328.61	-6.98	361.92	295.79	66.13	5.473			
3,000.00	2,998.40	3,057.43	3,057.00	6.34	62.15	138.81	328.61	-6.98	366.81	298.36	68.46	5.358			
3,100.00	3,098.18	3,157.22	3,156.78	6.55	64.27	139.47	328.61	-6.98	371.76	300.97	70.79	5.252			
3,200.00	3,197.97	3,257.01	3,256.57	6.77	66.39	140.12	328.61	-6.98	376.75	303.63	73.12	5.152			
3,300.00	3,297.76	3,356.79	3,356.36	6.99	68.52	140.74	328.61	-6.98	381.79	306.33	75.46	5.060			
3,400.00	3,397.54	3,456.63	3,456.14	7.21	70.64	141.36	328.61	-6.98	386.87	309.08	77.80	4.973			
3,500.00	3,497.33	3,556.42	3,555.93	7.44	72.77	141.95	328.61	-6.98	392.00	311.87	80.13	4.892			
3,600.00	3,597.12	3,656.20	3,655.72	7.66	74.89	142.53	328.61	-6.98	397.17	314.70	82.47	4.816			
3,700.00	3,696.90	3,756.04	3,755.50	7.89	77.35	143.10	328.61	-6.98	402.38	317.23	85.15	4.726			
3,800.00	3,796.69	3,855.82	3,855.29	8.12	79.83	143.65	328.61	-6.98	407.62	319.78	87.84	4.640			
3,900.00	3,896.48	3,955.61	3,955.08	8.35	82.31	144.18	328.61	-6.98	412.90	322.37	90.54	4.561			
4,000.00	3,996.26	4,055.40	4,054.86	8.58	84.79	144.71	328.61	-6.98	418.22	324.99	93.24	4.486			
4,100.00	4,096.05	4,155.18	4,154.65	8.81	87.27	145.22	328.61	-6.98	423.57	327.64	95.94	4.415			
4,200.00	4,195.84	4,254.97	4,254.44	9.05	89.75	145.71	328.61	-6.98	428.96	330.32	98.63	4.349			
4,300.00	4,295.62	4,354.98	4,354.22	9.28	92.24	146.20	328.61	-6.98	434.37	333.03	101.35	4.286			
4,400.00	4,395.41	4,454.76	4,454.01	9.51	94.73	146.67	328.61	-6.98	439.82	335.77	104.05	4.227			
4,500.00	4,495.19	4,554.62	4,553.79	9.75	96.94	147.13	328.61	-6.98	445.30	338.81	106.49	4.182			
4,600.00	4,594.98	4,654.40	4,653.58	9.99	99.06	147.58	328.61	-6.98	450.80	341.97	108.83	4.142			
4,700.00	4,694.77	4,754.19	4,753.37	10.22	101.18	148.02	328.61	-6.98	456.33	345.16	111.17	4.105			
4,800.00	4,794.55	4,853.98	4,853.15	10.46	103.30	148.45	328.61	-6.98	461.89	348.37	113.52	4.069			
4,900.00	4,894.34	4,953.83	4,952.94	10.70	105.43	148.87	328.61	-6.98	467.47	351.61	115.86	4.035			
5,000.00	4,994.13	5,053.62	5,052.73	10.94	107.55	149.28	328.61	-6.98	473.07	354.87	118.21	4.002			
5,100.00	5,093.91	5,153.40	5,152.51	11.18	109.67	149.68	328.61	-6.98	478.70	358.15	120.55	3.971			

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

# LEAM Drilling Services

## Anticollision Report

<b>Company:</b>	Devon Energy	<b>Local Co-ordinate Reference:</b>	Well Belloq 11-2 Fed State Com 521H
<b>Project:</b>	Eddy County, NM (NAD-83)	<b>TVD Reference:</b>	3430' GE + 23.5' KB @ 3453.50usft
<b>Reference Site:</b>	Belloq 11-2 Fed State Com	<b>MD Reference:</b>	3430' GE + 23.5' KB @ 3453.50usft
<b>Site Error:</b>	0.00 usft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	Belloq 11-2 Fed State Com 521H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.00 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	OH	<b>Database:</b>	EDM 5000.1 Multi User Db
<b>Reference Design:</b>	Plan #2	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design: Belloq 11-2 Fed State Com - Barclay 11M Federal 13 (Offset) - OH - OH													Offset Site Error: 0.00 usft
Survey Program: 250-INC-ONLY													Offset Well Error: 0.00 usft
Reference		Offset		Semi Major Axis		Highside Tooface (")	Distance		Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)					
5,200.00	5,193.70	5,253.19	5,252.30	11.42	111.80	150.07	328.61	-6.98	484.36	361.46	122.90	3.941	
5,300.00	5,293.49	5,352.98	5,352.09	11.66	113.92	150.45	328.61	-6.98	490.03	364.79	125.24	3.913	
5,400.00	5,393.27	5,452.76	5,451.87	11.90	116.04	150.82	328.61	-6.98	495.73	368.14	127.59	3.885	
5,500.00	5,493.06	5,552.63	5,551.66	12.14	118.16	151.19	328.61	-6.98	501.44	371.51	129.94	3.859	
5,600.00	5,592.85	5,652.42	5,651.45	12.38	120.29	151.54	328.61	-6.98	507.18	374.90	132.28	3.834	
5,700.00	5,692.63	5,752.21	5,751.23	12.63	122.41	151.89	328.61	-6.98	512.93	378.30	134.63	3.810	
5,800.00	5,792.42	5,851.99	5,851.02	12.87	124.53	152.23	328.61	-6.98	518.70	381.73	136.97	3.787	
5,900.00	5,892.21	5,951.78	5,950.81	13.11	126.65	152.56	328.61	-6.98	524.49	385.17	139.32	3.765	
6,000.00	5,991.99	6,051.64	6,050.59	13.35	128.78	152.89	328.61	-6.98	530.30	388.63	141.67	3.743	
6,100.00	6,091.78	6,151.43	6,150.38	13.60	130.90	153.20	328.61	-6.98	536.13	392.11	144.02	3.723	
6,200.00	6,191.57	6,251.22	6,250.17	13.84	133.02	153.51	328.61	-6.98	541.97	395.60	146.36	3.703	
6,300.00	6,291.35	6,351.00	6,349.95	14.08	135.15	153.82	328.61	-6.98	547.82	399.11	148.71	3.684	
6,400.00	6,391.14	6,450.85	6,449.74	14.33	137.27	154.12	328.61	-6.98	553.69	402.64	151.06	3.665	
6,500.00	6,490.92	6,550.64	6,549.52	14.57	139.39	154.41	328.61	-6.98	559.58	406.17	153.41	3.648	
6,600.00	6,590.71	6,650.42	6,649.31	14.82	141.52	154.70	328.61	-6.98	565.48	409.73	155.75	3.631	
6,700.00	6,690.50	6,750.21	6,749.10	15.06	143.64	154.97	328.61	-6.98	571.39	413.29	158.10	3.614	
6,800.00	6,790.28	6,850.00	6,848.88	15.31	145.76	155.25	328.61	-6.98	577.32	416.87	160.45	3.598	
6,900.00	6,890.07	6,949.86	6,948.67	15.55	147.89	155.52	328.61	-6.98	583.26	420.46	162.80	3.583	
7,000.00	6,989.86	7,049.64	7,048.46	15.80	150.01	155.78	328.61	-6.98	589.21	424.07	165.15	3.568	
7,100.00	7,089.64	7,149.43	7,148.24	16.04	152.13	156.04	328.61	-6.98	595.18	427.68	167.50	3.553	
7,200.00	7,189.43	7,249.21	7,248.03	16.29	154.26	156.29	328.61	-6.98	601.16	431.31	169.84	3.539	
7,300.00	7,289.22	7,349.00	7,347.82	16.53	156.38	156.54	328.61	-6.98	607.14	434.95	172.19	3.526	
7,400.00	7,389.00	7,448.86	7,447.60	16.78	158.50	156.78	328.61	-6.98	613.14	438.60	174.54	3.513	
7,500.00	7,488.79	7,548.65	7,547.39	17.03	160.63	157.02	328.61	-6.98	619.15	442.26	176.89	3.500	
7,600.00	7,588.62	7,648.48	7,647.22	17.25	162.75	157.25	328.61	-6.98	624.54	445.32	179.22	3.485	
7,700.00	7,688.53	7,748.44	7,747.13	17.44	164.88	157.41	328.61	-6.98	628.34	446.79	181.54	3.461	
7,800.00	7,788.50	7,848.41	7,847.10	17.62	167.01	157.50	328.61	-6.98	630.52	446.67	183.86	3.429	
7,900.00	7,888.50	7,948.44	7,947.10	17.81	169.13	23.54	328.61	-6.98	631.12	444.93	186.18	3.390	
8,000.00	7,988.50	8,048.44	8,047.10	18.00	171.26	23.54	328.61	-6.98	631.12	442.61	188.51	3.348	
8,100.00	8,088.50	8,148.44	8,147.10	18.19	173.39	23.54	328.61	-6.98	631.12	440.29	190.83	3.307	
8,200.00	8,188.50	8,248.44	8,247.10	18.38	175.52	23.54	328.61	-6.98	631.12	437.96	193.16	3.267	
8,300.00	8,288.50	8,348.44	8,347.10	18.57	177.64	23.54	328.61	-6.98	631.12	435.64	195.48	3.229	
8,400.00	8,388.50	8,448.44	8,447.10	18.76	179.77	23.54	328.61	-6.98	631.12	433.31	197.81	3.191	
8,500.00	8,488.47	8,548.42	8,547.07	18.94	181.90	23.99	328.61	-6.98	630.06	429.92	200.13	3.148	
8,600.00	8,587.21	8,647.16	8,645.81	19.10	184.00	25.14	328.61	-6.98	616.36	413.94	202.42	3.045	
8,700.00	8,681.84	8,741.79	8,740.44	19.21	186.01	27.83	328.61	-6.98	587.46	382.85	204.61	2.871	
8,800.00	8,769.49	8,800.00	8,798.52	19.30	187.25	31.53	328.61	-6.98	545.56	339.88	205.68	2.652	
8,900.00	8,847.49	8,800.00	8,798.52	19.35	187.25	34.14	328.61	-6.98	502.21	300.85	201.37	2.494	
9,000.00	8,913.48	8,800.00	8,798.52	19.39	187.25	36.67	328.61	-6.98	462.19	270.80	191.39	2.415 SF	
9,100.00	8,965.45	8,800.00	8,798.52	19.43	187.25	38.91	328.61	-6.98	427.80	251.76	176.04	2.430	
9,200.00	9,001.82	8,800.00	8,798.52	19.63	187.25	40.65	328.61	-6.98	401.66	243.74	157.92	2.543	
9,300.00	9,021.48	8,800.00	8,798.52	20.05	187.25	41.67	328.61	-6.98	386.29	242.74	143.54	2.691 ES	
9,352.24	9,025.77	8,800.00	8,798.52	20.32	187.25	41.77	328.61	-6.98	383.85	243.55	140.30	2.736	
9,400.00	9,025.05	8,800.00	8,798.52	20.57	187.25	41.89	328.61	-6.98	384.38	243.29	141.09	2.724	
9,500.00	9,025.21	8,800.00	8,798.52	21.20	187.25	41.89	328.61	-6.98	405.36	256.08	149.28	2.715	
9,600.00	9,025.36	8,800.00	8,798.52	21.93	187.25	41.89	328.61	-6.98	448.21	286.71	161.50	2.775	
9,700.00	9,025.51	8,800.00	8,798.52	22.75	187.25	41.89	328.61	-6.98	507.41	334.76	172.65	2.939	
9,800.00	9,025.66	8,800.00	8,798.52	23.66	187.25	41.89	328.61	-6.98	577.96	396.78	181.18	3.190	
9,900.00	9,025.81	8,800.00	8,798.52	24.63	187.25	41.89	328.61	-6.98	656.21	468.86	187.35	3.503	
10,000.00	9,025.96	8,800.00	8,798.52	25.68	187.25	41.89	328.61	-6.98	739.72	547.96	191.76	3.858	
10,100.00	9,026.11	8,800.00	8,798.52	26.78	187.25	41.89	328.61	-6.98	826.89	631.95	194.95	4.242	
10,200.00	9,026.27	8,800.00	8,798.52	27.94	187.25	41.89	328.61	-6.98	916.69	719.40	197.29	4.646	

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

# LEAM Drilling Services

## Anticollision Report

<b>Company:</b>	Devon Energy	<b>Local Co-ordinate Reference:</b>	Well Belloq 11-2 Fed State Com 521H
<b>Project:</b>	Eddy County, NM (NAD-83)	<b>TVD Reference:</b>	3430' GE + 23.5' KB @ 3453.50usft
<b>Reference Site:</b>	Belloq 11-2 Fed State Com	<b>MD Reference:</b>	3430' GE + 23.5' KB @ 3453.50usft
<b>Site Error:</b>	0.00 usft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	Belloq 11-2 Fed State Com 521H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.00 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	OH	<b>Database:</b>	EDM 5000.1 Multi User Db
<b>Reference Design:</b>	Plan #2	<b>Offset TVD Reference:</b>	Offset Datum

<b>Offset Design</b> Belloq 11-2 Fed State Com - Barclay 11M Federal 13 (Offset) - OH - OH													Offset Site Error:	0.00 usft
Survey Program: 250-INC-ONLY													Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor		
10,300.00	9,026.42	8,800.00	8,798.52	29.14	187.25	41.89	328.61	-6.98	1,008.41	809.36	199.06	5.066		
10,400.00	9,026.57	8,800.00	8,798.52	30.38	187.25	41.89	328.61	-6.98	1,101.58	901.17	200.41	5.497		
10,500.00	9,026.72	8,800.00	8,798.52	31.66	187.25	41.89	328.61	-6.98	1,195.84	994.38	201.47	5.936		
10,600.00	9,026.87	8,800.00	8,798.52	32.97	187.25	41.89	328.61	-6.98	1,290.98	1,088.66	202.31	6.381		
10,700.00	9,027.02	8,800.00	8,798.52	34.31	187.25	41.89	328.61	-6.98	1,386.79	1,183.80	202.99	6.832		
10,800.00	9,027.17	8,800.00	8,798.52	35.67	187.25	41.89	328.61	-6.98	1,483.16	1,279.60	203.55	7.286		
10,900.00	9,027.33	8,800.00	8,798.52	37.06	187.25	41.89	328.61	-6.98	1,579.98	1,375.96	204.02	7.744		
11,000.00	9,027.48	8,800.00	8,798.52	38.46	187.25	41.89	328.61	-6.98	1,677.17	1,472.75	204.42	8.205		
11,100.00	9,027.63	8,800.00	8,798.52	39.89	187.25	41.89	328.61	-6.98	1,774.68	1,569.92	204.76	8.667		
11,200.00	9,027.78	8,800.00	8,798.52	41.33	187.25	41.89	328.61	-6.98	1,872.45	1,667.39	205.05	9.131		
11,300.00	9,027.93	8,800.00	8,798.52	42.78	187.25	41.89	328.61	-6.98	1,970.44	1,765.13	205.31	9.597		

# LEAM Drilling Services

## Anticollision Report

<b>Company:</b>	Devon Energy	<b>Local Co-ordinate Reference:</b>	Well Belloq 11-2 Fed State Com 521H
<b>Project:</b>	Eddy County, NM (NAD-83)	<b>TVD Reference:</b>	3430' GE + 23.5' KB @ 3453.50usft
<b>Reference Site:</b>	Belloq 11-2 Fed State Com	<b>MD Reference:</b>	3430' GE + 23.5' KB @ 3453.50usft
<b>Site Error:</b>	0.00 usft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	Belloq 11-2 Fed State Com 521H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.00 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	OH	<b>Database:</b>	EDM 5000.1 Multi User-Db
<b>Reference Design:</b>	Plan #2	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design													Offset Site Error:	0.00 usft
Belloq 11-2 Fed State Com - Belloq 11 Fed 222H (Offset) - OH - Plan #1													Offset Well Error:	0.00 usft
Survey Program: 0-LEAM MWD+HDGM														
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre		Distance		Minimum Separation (usft)	Separation Factor	Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)				
0.00	0.00	38.50	38.50	0.00	0.03	-90.15	-0.38	-149.95	149.95					
100.00	100.00	138.50	138.50	0.09	0.16	-90.15	-0.38	-149.95	149.95	149.70	0.25	601.027		
200.00	200.00	238.50	238.50	0.31	0.39	-90.15	-0.38	-149.95	149.95	149.25	0.70	214.515		
300.00	300.00	338.50	338.50	0.54	0.61	-90.15	-0.38	-149.95	149.95	148.80	1.15	130.556		
400.00	400.00	438.50	438.50	0.76	0.84	-90.15	-0.38	-149.95	149.95	148.35	1.60	93.831		
500.00	500.00	538.50	538.50	0.99	1.06	-90.15	-0.38	-149.95	149.95	147.90	2.05	73.232		
600.00	600.00	638.50	638.50	1.21	1.29	-90.15	-0.38	-149.95	149.95	147.45	2.50	60.049		
700.00	700.00	738.50	738.50	1.43	1.51	-90.15	-0.38	-149.95	149.95	147.00	2.95	50.888		
800.00	800.00	838.50	838.50	1.66	1.74	-90.15	-0.38	-149.95	149.95	146.55	3.40	44.152		
900.00	900.00	938.50	938.50	1.88	1.96	-90.15	-0.38	-149.95	149.95	146.10	3.85	38.991		
1,000.00	1,000.00	1,038.50	1,038.50	2.11	2.19	-90.15	-0.38	-149.95	149.95	145.66	4.30	34.911		
1,100.00	1,100.00	1,138.50	1,138.50	2.33	2.41	-90.15	-0.38	-149.95	149.95	145.21	4.74	31.603		
1,200.00	1,200.00	1,238.50	1,238.50	2.56	2.64	-90.15	-0.38	-149.95	149.95	144.76	5.19	28.868		
1,300.00	1,300.00	1,338.50	1,338.50	2.78	2.86	-90.15	-0.38	-149.95	149.95	144.31	5.64	26.569		
1,400.00	1,400.00	1,438.50	1,438.50	3.01	3.09	-90.15	-0.38	-149.95	149.95	143.86	6.09	24.609		
1,500.00	1,500.00	1,538.50	1,538.50	3.23	3.31	-90.15	-0.38	-149.95	149.95	143.41	6.54	22.918		
1,600.00	1,600.00	1,638.50	1,638.50	3.46	3.54	-90.15	-0.38	-149.95	149.95	142.96	6.99	21.445		
1,700.00	1,700.00	1,738.50	1,738.50	3.68	3.76	-90.15	-0.38	-149.95	149.95	142.51	7.44	20.149		
1,800.00	1,800.00	1,838.50	1,838.50	3.91	3.98	-90.15	-0.38	-149.95	149.95	142.06	7.89	19.001		
1,900.00	1,900.00	1,938.50	1,938.50	4.13	4.21	-90.15	-0.38	-149.95	149.95	141.61	8.34	17.977		
2,000.00	2,000.00	2,040.62	2,040.62	4.36	4.43	-90.15	-0.38	-149.66	149.68	140.89	8.79	17.030		
2,100.00	2,099.99	2,145.92	2,145.92	4.56	4.65	44.12	-0.38	-146.23	145.79	136.60	9.20	15.851		
2,200.00	2,199.96	2,250.76	2,250.76	4.74	4.87	44.99	-0.38	-138.98	137.01	127.44	9.57	14.320		
2,300.00	2,299.86	2,354.49	2,353.59	4.92	5.09	46.67	-0.38	-128.05	123.44	113.51	9.93	12.430		
2,400.00	2,399.68	2,456.77	2,454.84	5.11	5.32	49.62	-0.38	-113.61	105.35	95.06	10.29	10.241		
2,500.00	2,499.47	2,555.81	2,552.43	5.31	5.56	54.13	-0.38	-96.74	84.44	73.77	10.66	7.919		
2,600.00	2,599.25	2,653.27	2,648.40	5.50	5.81	61.49	-0.38	-79.81	64.03	52.96	11.07	5.782		
2,700.00	2,699.04	2,750.72	2,744.38	5.71	6.07	75.10	-0.38	-62.89	45.55	34.01	11.54	3.948		
2,800.00	2,798.82	2,848.18	2,840.35	5.91	6.34	102.25	-0.38	-45.97	32.49	20.35	12.14	2.676		
2,851.41	2,850.12	2,898.28	2,889.69	6.02	6.48	122.54	-0.38	-37.27	30.38	17.90	12.48	2.435 CC, ES, SF		
2,900.00	2,898.61	2,945.63	2,936.33	6.12	6.62	141.81	-0.38	-29.04	32.27	19.56	12.72	2.538		
3,000.00	2,998.40	3,043.09	3,032.30	6.34	6.90	169.44	-0.38	-12.12	45.08	32.05	13.03	3.460		
3,100.00	3,098.18	3,140.54	3,128.27	6.55	7.20	-176.68	-0.38	4.80	63.47	50.11	13.36	4.751		
3,200.00	3,197.97	3,237.99	3,224.25	6.77	7.49	-169.20	-0.38	21.72	83.85	70.11	13.74	6.104		
3,300.00	3,297.76	3,335.45	3,320.22	6.99	7.79	-164.68	-0.38	38.65	105.06	90.92	14.14	7.430		
3,400.00	3,397.54	3,432.90	3,416.20	7.21	8.10	-161.68	-0.38	55.57	126.69	112.13	14.56	8.702		
3,500.00	3,497.33	3,530.36	3,512.17	7.44	8.41	-159.56	-0.38	72.49	148.55	133.56	14.99	9.912		
3,600.00	3,597.12	3,627.81	3,608.14	7.66	8.72	-157.96	-0.38	89.42	170.56	155.14	15.42	11.060		
3,700.00	3,696.90	3,725.27	3,704.12	7.89	9.04	-156.76	-0.38	106.34	192.66	176.80	15.86	12.147		
3,800.00	3,796.69	3,822.72	3,800.09	8.12	9.35	-155.80	-0.38	123.26	214.83	198.52	16.30	13.176		
3,900.00	3,896.48	3,920.18	3,896.07	8.35	9.68	-155.01	-0.38	140.18	237.04	220.29	16.75	14.150		
4,000.00	3,996.26	4,017.63	3,992.04	8.58	10.00	-154.36	-0.38	157.11	259.29	242.09	17.20	15.073		
4,100.00	4,096.05	4,115.08	4,088.01	8.81	10.32	-153.81	-0.38	174.03	281.57	263.92	17.65	15.949		
4,200.00	4,195.84	4,212.54	4,183.99	9.05	10.65	-153.34	-0.38	190.95	303.87	285.76	18.11	16.779		
4,300.00	4,295.62	4,309.99	4,279.96	9.28	10.98	-152.94	-0.38	207.87	326.18	307.62	18.57	17.568		
4,400.00	4,395.41	4,407.45	4,375.93	9.51	11.31	-152.59	-0.38	224.80	348.51	329.49	19.03	18.319		
4,500.00	4,495.19	4,504.90	4,471.91	9.75	11.64	-152.28	-0.38	241.72	370.85	351.37	19.49	19.032		
4,600.00	4,594.98	4,602.36	4,567.88	9.99	11.98	-152.00	-0.38	258.64	393.20	373.25	19.95	19.712		
4,700.00	4,694.77	4,699.81	4,663.86	10.22	12.31	-151.76	-0.38	275.57	415.56	395.14	20.41	20.360		
4,800.00	4,794.55	4,797.27	4,759.83	10.46	12.65	-151.54	-0.38	292.49	437.92	417.04	20.88	20.978		
4,900.00	4,894.34	4,894.72	4,855.80	10.70	12.98	-151.34	-0.38	309.41	460.29	438.94	21.34	21.568		
5,000.00	4,994.13	4,992.17	4,951.78	10.94	13.32	-151.16	-0.38	326.33	482.66	460.85	21.81	22.132		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

# LEAM Drilling Services

## Anticollision Report

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<b>Project:</b>	Eddy County, NM (NAD-83)	<b>TVD Reference:</b>	3430' GE + 23.5' KB @ 3453.50usft
<b>Reference Site:</b>	Belloq 11-2 Fed State Com	<b>MD Reference:</b>	3430' GE + 23.5' KB @ 3453.50usft
<b>Site Error:</b>	0.00 usft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	Belloq 11-2 Fed State Com 521H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.00 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	OH	<b>Database:</b>	EDM 5000.1 Multi User Db
<b>Reference Design:</b>	Plan #2	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design Belloq 11-2 Fed State Com - Belloq 11 Fed 222H (Offset) - OH - Plan #1													Offset Site Error: 0.00 usft
Survey Program: 0-LEAM MWD+HDGM													Offset Well Error: 0.00 usft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Distance		Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)					
5,100.00	5,093.91	5,089.63	5,047.75	11.18	13.66	-151.00	-0.38	343.26	505.04	482.76	22.28	22.672	
5,200.00	5,193.70	5,187.08	5,143.73	11.42	14.00	-150.85	-0.38	360.18	527.42	504.67	22.75	23.188	
5,300.00	5,293.49	5,284.54	5,239.70	11.66	14.34	-150.71	-0.38	377.10	549.80	526.58	23.21	23.683	
5,400.00	5,393.27	5,381.99	5,335.67	11.90	14.68	-150.58	-0.38	394.03	572.19	548.50	23.69	24.157	
5,500.00	5,493.06	5,479.45	5,431.65	12.14	15.02	-150.46	-0.38	410.95	594.58	570.42	24.16	24.613	
5,600.00	5,592.85	5,576.90	5,527.62	12.38	15.36	-150.35	-0.38	427.87	616.97	592.34	24.63	25.050	
5,700.00	5,692.63	5,674.36	5,623.60	12.63	15.70	-150.25	-0.38	444.79	639.36	614.26	25.10	25.470	
5,800.00	5,792.42	5,771.81	5,719.57	12.87	16.04	-150.16	-0.38	461.72	661.75	636.18	25.58	25.873	
5,900.00	5,892.21	5,869.26	5,815.54	13.11	16.39	-150.07	-0.38	478.64	684.15	658.10	26.05	26.262	
6,000.00	5,991.99	5,967.66	5,932.36	13.35	16.76	-150.00	-0.38	497.88	705.56	678.92	26.64	26.487	
6,100.00	6,091.78	6,117.56	6,061.29	13.60	17.06	-150.03	-0.38	513.59	722.90	695.69	27.21	26.566	
6,200.00	6,191.57	6,249.20	6,192.54	13.84	17.32	-150.17	-0.38	523.53	735.87	708.14	27.73	26.538	
6,300.00	6,291.35	6,382.06	6,325.34	14.08	17.54	-150.43	-0.38	527.44	744.39	716.20	28.19	26.405	
6,400.00	6,391.14	6,486.36	6,429.64	14.33	17.71	-150.69	-0.38	527.50	750.13	721.51	28.61	26.215	
6,500.00	6,490.92	6,586.15	6,529.42	14.57	17.88	-150.93	-0.38	527.50	755.83	726.79	29.05	26.023	
6,600.00	6,590.71	6,685.93	6,629.21	14.82	18.05	-151.17	-0.38	527.50	761.55	732.07	29.48	25.835	
6,700.00	6,690.50	6,785.72	6,729.00	15.06	18.22	-151.41	-0.38	527.50	767.28	737.37	29.91	25.653	
6,800.00	6,790.28	6,885.51	6,828.78	15.31	18.39	-151.64	-0.38	527.50	773.02	742.68	30.34	25.476	
6,900.00	6,890.07	6,985.29	6,928.57	15.55	18.56	-151.87	-0.38	527.50	778.78	748.00	30.78	25.304	
7,000.00	6,989.86	7,085.08	7,028.36	15.80	18.74	-152.09	-0.38	527.50	784.55	753.34	31.21	25.137	
7,100.00	7,089.64	7,184.87	7,128.14	16.04	18.91	-152.31	-0.38	527.50	790.33	758.68	31.65	24.974	
7,200.00	7,189.43	7,284.65	7,227.93	16.29	19.09	-152.53	-0.38	527.50	796.12	764.04	32.08	24.815	
7,300.00	7,289.22	7,384.44	7,327.72	16.53	19.27	-152.75	-0.38	527.50	801.92	769.41	32.52	24.661	
7,400.00	7,389.00	7,484.23	7,427.50	16.78	19.45	-152.96	-0.38	527.50	807.74	774.79	32.95	24.511	
7,500.00	7,488.79	7,584.01	7,527.29	17.03	19.63	-153.17	-0.38	527.50	813.56	780.17	33.39	24.365	
7,600.00	7,588.62	7,683.84	7,627.12	17.25	19.81	-153.37	-0.38	527.50	818.79	784.98	33.81	24.218	
7,700.00	7,688.53	7,783.75	7,727.03	17.44	19.99	-153.52	-0.38	527.50	822.47	788.26	34.20	24.046	
7,800.00	7,788.50	7,883.72	7,827.00	17.62	20.17	-153.60	-0.38	527.50	824.59	789.99	34.60	23.834	
7,900.00	7,888.50	7,983.72	7,927.00	17.81	20.36	-153.60	-0.38	527.50	825.16	790.16	35.00	23.576	
8,000.00	7,988.50	8,083.72	8,027.00	18.00	20.54	-153.60	-0.38	527.50	825.16	789.76	35.40	23.311	
8,100.00	8,088.50	8,183.72	8,127.00	18.19	20.72	-153.60	-0.38	527.50	825.16	789.36	35.80	23.051	
8,200.00	8,188.50	8,283.72	8,227.00	18.38	20.91	-153.60	-0.38	527.50	825.16	788.96	36.20	22.796	
8,300.00	8,288.50	8,383.72	8,327.00	18.57	21.10	-153.60	-0.38	527.50	825.16	788.56	36.60	22.545	
8,400.00	8,388.50	8,483.72	8,427.00	18.76	21.28	-153.60	-0.38	527.50	825.16	788.16	37.00	22.300	
8,500.00	8,488.47	8,583.70	8,526.97	18.94	21.47	-153.60	-0.38	527.50	824.82	787.42	37.40	22.052	
8,600.00	8,587.21	8,682.44	8,625.71	19.10	21.66	-153.60	-0.38	527.50	820.51	782.76	37.76	21.732	
8,700.00	8,687.84	8,777.07	8,720.34	19.21	21.84	-153.60	-0.38	527.50	812.20	774.15	38.05	21.344	
8,800.00	8,789.49	8,864.71	8,807.99	19.30	22.01	-153.60	-0.38	527.50	801.97	763.66	38.31	20.934	
8,900.00	8,847.49	8,942.72	8,885.99	19.35	22.15	-153.60	-0.38	527.50	792.79	754.23	38.56	20.562	
9,000.00	8,913.48	9,008.71	8,951.98	19.39	22.28	-153.60	-0.38	527.50	788.16	749.33	38.83	20.296	
9,013.85	8,921.55	9,016.78	8,960.05	19.40	22.30	-153.60	-0.38	527.50	788.08	749.20	38.88	20.269	
9,100.00	8,965.45	9,060.67	9,003.95	19.43	22.38	-153.60	-0.38	527.50	791.55	752.38	39.17	20.206	
9,200.00	9,001.82	9,097.04	9,040.32	19.63	22.45	-153.60	-0.38	527.50	805.60	766.01	39.59	20.350	
9,300.00	9,021.48	9,116.70	9,059.98	20.05	22.49	-153.60	-0.38	527.50	831.44	791.39	40.05	20.762	
9,400.00	9,025.05	9,120.28	9,063.55	20.57	22.49	-153.60	-0.38	527.50	868.44	827.94	40.50	21.441	
9,500.00	9,025.21	9,120.43	9,063.71	21.20	22.49	-153.60	-0.38	527.50	914.96	874.00	40.96	22.339	
9,600.00	9,025.36	9,120.58	9,063.86	21.93	22.49	-153.60	-0.38	527.50	969.60	928.21	41.39	23.424	
9,700.00	9,025.51	9,120.73	9,064.01	22.75	22.49	-153.60	-0.38	527.50	1,031.06	989.27	41.79	24.673	
9,800.00	9,025.66	9,120.88	9,064.16	23.66	22.50	-153.60	-0.38	527.50	1,098.21	1,056.07	42.14	26.062	
9,900.00	9,025.81	9,121.03	9,064.31	24.63	22.50	-153.60	-0.38	527.50	1,170.06	1,127.61	42.44	27.567	
10,000.00	9,025.96	9,121.19	9,064.46	25.68	22.50	-153.60	-0.38	527.50	1,245.79	1,203.09	42.71	29.171	
10,100.00	9,026.11	9,121.34	9,064.61	26.78	22.50	-153.60	-0.38	527.50	1,324.75	1,281.82	42.93	30.857	

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

# LEAM Drilling Services

## Anticollision Report

<b>Company:</b>	Devon Energy	<b>Local Co-ordinate Reference:</b>	Well Belloq 11-2 Fed State Com 521H
<b>Project:</b>	Eddy County, NM (NAD-83)	<b>TVD Reference:</b>	3430' GE + 23.5' KB @ 3453.50usft
<b>Reference Site:</b>	Belloq 11-2 Fed State Com	<b>MD Reference:</b>	3430' GE + 23.5' KB @ 3453.50usft
<b>Site Error:</b>	0.00 usft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	Belloq 11-2 Fed State Com 521H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.00 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	OH	<b>Database:</b>	EDM 5000.1 Multi User Db
<b>Reference Design:</b>	Plan #2	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design														Offset Site Error:	0.00 usft
Belloq 11-2 Fed State Com - Belloq 11 Fed 222H (Offset) - OH - Plan #1														Offset Well Error:	0.00 usft
Survey Program: O-LEAM MWD+HDGM															
Reference		Offset		Semi Major Axis		Distance									
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning		
10,200.00	9,026.27	9,121.49	9,064.77	27.94	22.50	90.13	-0.38	527.50	1,406.39	1,363.26	43.13	32.611			
10,300.00	9,026.42	9,121.64	9,064.92	29.14	22.50	90.14	-0.38	527.50	1,490.27	1,446.97	43.30	34.421			
10,400.00	9,026.57	9,121.79	9,065.07	30.38	22.50	90.15	-0.38	527.50	1,576.03	1,532.59	43.44	36.279			
10,500.00	9,026.72	9,121.94	9,065.22	31.66	22.50	90.16	-0.38	527.50	1,663.38	1,619.81	43.57	38.176			
10,600.00	9,026.87	9,122.09	9,065.37	32.97	22.50	90.17	-0.38	527.50	1,752.09	1,708.40	43.69	40.105			
10,700.00	9,027.02	9,122.25	9,065.52	34.31	22.50	90.18	-0.38	527.50	1,841.95	1,798.16	43.79	42.063			
10,800.00	9,027.17	12,013.75	10,049.73	35.67	42.23	122.08	1,756.66	1,298.24	1,853.02	1,790.78	62.24	29.774			
10,900.00	9,027.33	12,113.75	10,050.21	37.06	43.21	122.08	1,856.65	1,298.12	1,853.62	1,789.07	64.56	28.713			
11,000.00	9,027.48	12,213.75	10,050.68	38.46	44.24	122.08	1,956.65	1,298.00	1,854.23	1,787.31	66.92	27.708			
11,100.00	9,027.63	12,313.75	10,051.15	39.89	45.30	122.08	2,056.65	1,297.87	1,854.84	1,785.52	69.32	26.756			
11,200.00	9,027.78	12,413.75	10,051.62	41.33	46.41	122.08	2,156.64	1,297.75	1,855.45	1,783.69	71.76	25.856			
11,300.00	9,027.93	12,513.74	10,052.09	42.78	47.55	122.08	2,256.64	1,297.63	1,856.06	1,781.83	74.23	25.003			
11,400.00	9,028.08	12,613.74	10,052.56	44.25	48.73	122.08	2,356.64	1,297.51	1,856.67	1,779.94	76.73	24.197			
11,500.00	9,028.23	12,713.74	10,053.03	45.72	49.93	122.08	2,456.64	1,297.38	1,857.28	1,778.02	79.26	23.433			
11,600.00	9,028.39	12,813.74	10,053.50	47.21	51.16	122.08	2,556.63	1,297.26	1,857.89	1,776.08	81.81	22.710			
11,700.00	9,028.54	12,913.74	10,053.98	48.71	52.42	122.08	2,656.63	1,297.14	1,858.50	1,774.12	84.38	22.026			
11,800.00	9,028.69	13,013.73	10,054.45	50.22	53.70	122.08	2,756.63	1,297.02	1,859.11	1,772.14	86.97	21.377			
11,900.00	9,028.84	13,113.73	10,054.92	51.73	55.01	122.08	2,856.62	1,296.90	1,859.72	1,770.14	89.58	20.761			
12,000.00	9,028.99	13,213.73	10,055.39	53.26	56.33	122.08	2,956.62	1,296.77	1,860.33	1,768.12	92.20	20.176			
12,100.00	9,029.14	13,313.73	10,055.86	54.79	57.67	122.08	3,056.62	1,296.65	1,860.94	1,766.09	94.84	19.621			
12,200.00	9,029.30	13,413.73	10,056.33	56.32	59.03	122.08	3,156.61	1,296.53	1,861.55	1,764.05	97.50	19.093			
12,300.00	9,029.45	13,513.73	10,056.80	57.86	60.40	122.08	3,256.61	1,296.41	1,862.16	1,761.99	100.17	18.591			
12,400.00	9,029.60	13,613.72	10,057.27	59.41	61.79	122.08	3,356.61	1,296.28	1,862.76	1,759.92	102.84	18.112			
12,500.00	9,029.75	13,713.72	10,057.74	60.96	63.19	122.08	3,456.61	1,296.16	1,863.37	1,757.84	105.53	17.657			
12,600.00	9,029.90	13,813.72	10,058.22	62.52	64.61	122.08	3,556.60	1,296.04	1,863.98	1,755.75	108.23	17.222			
12,700.00	9,030.05	13,913.72	10,058.69	64.08	66.03	122.08	3,656.60	1,295.92	1,864.59	1,753.65	110.94	16.807			
12,800.00	9,030.20	14,013.72	10,059.16	65.64	67.47	122.08	3,756.60	1,295.79	1,865.20	1,751.54	113.66	16.410			
12,900.00	9,030.36	14,113.71	10,059.63	67.21	68.91	122.08	3,856.59	1,295.67	1,865.81	1,749.42	116.39	16.031			
13,000.00	9,030.51	14,213.71	10,060.10	68.78	70.37	122.08	3,956.59	1,295.55	1,866.42	1,747.30	119.12	15.668			
13,100.00	9,030.66	14,313.71	10,060.57	70.35	71.83	122.08	4,056.59	1,295.43	1,867.03	1,745.17	121.86	15.321			
13,200.00	9,030.81	14,413.71	10,061.04	71.93	73.31	122.07	4,156.58	1,295.31	1,867.64	1,743.03	124.61	14.988			
13,300.00	9,030.96	14,513.71	10,061.51	73.51	74.79	122.07	4,256.58	1,295.18	1,868.25	1,740.89	127.36	14.669			
13,400.00	9,031.11	14,613.70	10,061.99	75.09	76.27	122.07	4,356.58	1,295.06	1,868.86	1,738.74	130.12	14.363			
13,500.00	9,031.26	14,713.70	10,062.46	76.68	77.77	122.07	4,456.57	1,294.94	1,869.47	1,736.59	132.88	14.069			
13,600.00	9,031.42	14,813.70	10,062.93	78.27	79.27	122.07	4,556.57	1,294.82	1,870.08	1,734.43	135.65	13.786			
13,700.00	9,031.57	14,913.70	10,063.40	79.85	80.77	122.07	4,656.57	1,294.69	1,870.69	1,732.26	138.42	13.514			
13,800.00	9,031.72	15,013.70	10,063.87	81.45	82.28	122.07	4,756.57	1,294.57	1,871.30	1,730.09	141.20	13.253			
13,900.00	9,031.87	15,113.70	10,064.34	83.04	83.80	122.07	4,856.56	1,294.45	1,871.90	1,727.92	143.98	13.001			
14,000.00	9,032.02	15,213.69	10,064.81	84.63	85.32	122.07	4,956.56	1,294.33	1,872.51	1,725.74	146.77	12.758			
14,100.00	9,032.17	15,219.52	10,064.84	86.23	85.41	122.07	4,962.39	1,294.32	1,875.49	1,726.70	148.79	12.605			
14,200.00	9,032.32	15,219.52	10,064.84	87.83	85.41	122.07	4,962.39	1,294.32	1,883.77	1,733.37	150.39	12.526			
14,300.00	9,032.48	15,219.52	10,064.84	89.43	85.41	122.07	4,962.39	1,294.32	1,897.28	1,745.68	151.61	12.514			
14,400.00	9,032.63	15,219.52	10,064.84	91.03	85.41	122.07	4,962.39	1,294.32	1,915.93	1,763.49	152.45	12.568			
14,500.00	9,032.78	15,219.52	10,064.84	92.63	85.41	122.07	4,962.39	1,294.32	1,939.57	1,786.64	152.92	12.683			
14,600.00	9,032.93	15,219.52	10,064.84	94.23	85.41	122.07	4,962.39	1,294.32	1,968.00	1,814.95	153.05	12.858			

# LEAM Drilling Services

## Anticollision Report

<b>Company:</b>	Devon Energy	<b>Local Co-ordinate Reference:</b>	Well Belloq 11-2 Fed State Com 521H
<b>Project:</b>	Eddy County, NM (NAD-83)	<b>TVD Reference:</b>	3430' GE + 23.5' KB @ 3453.50usft
<b>Reference Site:</b>	Belloq 11-2 Fed State Com	<b>MD Reference:</b>	3430' GE + 23.5' KB @ 3453.50usft
<b>Site Error:</b>	0.00 usft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	Belloq 11-2 Fed State Com 521H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.00 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	OH	<b>Database:</b>	EDM 5000.1 Multi User Db
<b>Reference Design:</b>	Plan #2	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design Belloq 11-2 Fed State Com - Belloq 11-2 Fed State Com 231H (Offset) - OH - Plan #1														Offset Site Error:	0.00 usft
Survey Program: 0-LEAM MWD+HDGM														Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Distance		Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning		
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)							
0.00	0.00	37.50	37.50	0.00	0.03	-90.13	-0.41	-179.90	179.90						
100.00	100.00	137.50	137.50	0.09	0.16	-90.13	-0.41	-179.90	179.90	179.65	0.25	724.334			
200.00	200.00	237.50	237.50	0.31	0.39	-90.13	-0.41	-179.90	179.90	179.20	0.70	257.774			
300.00	300.00	337.50	337.50	0.54	0.61	-90.13	-0.41	-179.90	179.90	178.75	1.15	156.785			
400.00	400.00	437.50	437.50	0.76	0.84	-90.13	-0.41	-179.90	179.90	178.30	1.60	112.652			
500.00	500.00	537.50	537.50	0.99	1.06	-90.13	-0.41	-179.90	179.90	177.85	2.05	87.907			
600.00	600.00	637.50	637.50	1.21	1.29	-90.13	-0.41	-179.90	179.90	177.40	2.50	72.075			
700.00	700.00	737.50	737.50	1.43	1.51	-90.13	-0.41	-179.90	179.90	176.95	2.95	61.075			
800.00	800.00	837.50	837.50	1.66	1.74	-90.13	-0.41	-179.90	179.90	176.51	3.40	52.988			
900.00	900.00	937.50	937.50	1.88	1.96	-90.13	-0.41	-179.90	179.90	176.06	3.84	46.793			
1,000.00	1,000.00	1,037.50	1,037.50	2.11	2.19	-90.13	-0.41	-179.90	179.90	175.61	4.29	41.894			
1,100.00	1,100.00	1,137.50	1,137.50	2.33	2.41	-90.13	-0.41	-179.90	179.90	175.16	4.74	37.924			
1,200.00	1,200.00	1,237.50	1,237.50	2.56	2.63	-90.13	-0.41	-179.90	179.90	174.71	5.19	34.641			
1,300.00	1,300.00	1,337.50	1,337.50	2.78	2.86	-90.13	-0.41	-179.90	179.90	174.26	5.64	31.882			
1,400.00	1,400.00	1,437.50	1,437.50	3.01	3.08	-90.13	-0.41	-179.90	179.90	173.81	6.09	29.529			
1,500.00	1,500.00	1,537.50	1,537.50	3.23	3.31	-90.13	-0.41	-179.90	179.90	173.36	6.54	27.500			
1,600.00	1,600.00	1,637.50	1,637.50	3.46	3.53	-90.13	-0.41	-179.90	179.90	172.91	6.99	25.732			
1,700.00	1,700.00	1,737.50	1,737.50	3.68	3.76	-90.13	-0.41	-179.90	179.90	172.46	7.44	24.177			
1,800.00	1,800.00	1,837.50	1,837.50	3.91	3.98	-90.13	-0.41	-179.90	179.90	172.01	7.89	22.800			
1,900.00	1,900.00	1,937.50	1,937.50	4.13	4.21	-90.13	-0.41	-179.90	179.90	171.56	8.34	21.571			
2,000.00	2,000.00	2,037.50	2,037.50	4.36	4.43	-90.13	-0.41	-179.90	179.90	171.11	8.79	20.468			
2,100.00	2,099.99	2,137.49	2,137.49	4.56	4.66	44.05	-0.41	-179.90	179.27	170.06	9.21	19.456			
2,200.00	2,199.96	2,237.46	2,237.46	4.74	4.88	44.65	-0.41	-179.90	177.40	167.78	9.62	18.446			
2,300.00	2,299.86	2,337.36	2,337.36	4.92	5.11	45.68	-0.41	-179.90	174.32	164.30	10.02	17.389			
2,400.00	2,399.68	2,437.18	2,437.18	5.11	5.33	47.16	-0.41	-179.90	170.15	159.71	10.44	16.304			
2,500.00	2,499.47	2,536.97	2,536.97	5.31	5.56	48.82	-0.41	-179.90	165.77	154.92	10.85	15.276			
2,600.00	2,599.25	2,636.75	2,636.75	5.50	5.78	50.56	-0.41	-179.90	161.54	150.27	11.27	14.331			
2,700.00	2,699.04	2,736.54	2,736.54	5.71	6.00	52.39	-0.41	-179.90	157.47	145.77	11.70	13.463			
2,800.00	2,798.82	2,836.32	2,836.32	5.91	6.23	54.32	-0.41	-179.90	153.56	141.44	12.12	12.666			
2,900.00	2,898.61	2,936.11	2,936.11	6.12	6.45	56.34	-0.41	-179.90	149.84	137.29	12.56	11.934			
3,000.00	2,998.40	3,034.45	3,034.44	6.34	6.67	58.39	-0.48	-180.09	146.50	133.51	12.98	11.285			
3,085.37	3,083.59	3,116.32	3,116.29	6.52	6.83	59.71	-1.22	-182.12	145.46	132.14	13.32	10.917			
3,100.00	3,098.18	3,130.37	3,130.32	6.55	6.86	59.88	-1.42	-182.69	145.49	132.11	13.38	10.873			
3,200.00	3,197.97	3,227.47	3,227.24	6.77	7.05	60.66	-3.45	-188.26	147.17	133.40	13.77	10.688			
3,300.00	3,297.76	3,327.43	3,326.96	6.99	7.24	61.25	-5.84	-194.81	149.57	135.40	14.18	10.549			
3,400.00	3,397.54	3,427.39	3,426.68	7.21	7.44	61.81	-8.22	-201.36	151.99	137.40	14.59	10.415			
3,500.00	3,497.33	3,527.35	3,526.39	7.44	7.64	62.36	-10.61	-207.92	154.43	139.41	15.01	10.287			
3,600.00	3,597.12	3,627.31	3,626.11	7.66	7.85	62.89	-12.99	-214.47	156.87	141.44	15.44	10.163			
3,700.00	3,696.90	3,727.27	3,725.82	7.89	8.05	63.41	-15.38	-221.02	159.33	143.47	15.86	10.044			
3,800.00	3,796.69	3,827.23	3,825.54	8.12	8.26	63.91	-17.76	-227.57	161.81	145.51	16.29	9.930			
3,900.00	3,896.48	3,927.19	3,925.26	8.35	8.48	64.39	-20.14	-234.12	164.29	147.56	16.73	9.820			
4,000.00	3,996.26	4,027.15	4,024.97	8.58	8.69	64.86	-22.53	-240.68	166.79	149.62	17.17	9.715			
4,100.00	4,096.05	4,127.11	4,124.69	8.81	8.91	65.32	-24.91	-247.23	169.29	151.68	17.61	9.614			
4,200.00	4,195.84	4,227.07	4,224.41	9.05	9.12	65.76	-27.30	-253.78	171.81	153.76	18.05	9.517			
4,300.00	4,295.62	4,327.03	4,324.12	9.28	9.35	66.19	-29.68	-260.33	174.34	155.84	18.50	9.424			
4,400.00	4,395.41	4,426.99	4,423.84	9.51	9.57	66.60	-32.07	-266.89	176.87	157.92	18.95	9.334			
4,500.00	4,495.19	4,526.95	4,523.55	9.75	9.79	67.01	-34.45	-273.44	179.42	160.02	19.40	9.248			
4,600.00	4,594.98	4,626.91	4,623.27	9.99	10.01	67.40	-36.84	-279.99	181.97	162.12	19.85	9.165			
4,700.00	4,694.77	4,726.87	4,722.99	10.22	10.24	67.79	-39.22	-286.54	184.53	164.22	20.31	9.085			
4,800.00	4,794.55	4,826.83	4,822.70	10.46	10.47	68.16	-41.61	-293.10	187.10	166.34	20.77	9.009			
4,900.00	4,894.34	4,926.79	4,922.42	10.70	10.70	68.52	-43.99	-299.65	189.68	168.45	21.23	8.935			
5,000.00	4,994.13	5,026.75	5,022.14	10.94	10.93	68.87	-46.38	-306.20	192.27	170.58	21.69	8.864			

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



# LEAM Drilling Services

## Anticollision Report

<b>Company:</b>	Devon Energy	<b>Local Co-ordinate Reference:</b>	Well Belloq 11-2 Fed State Com 521H
<b>Project:</b>	Eddy County, NM (NAD-83)	<b>TVD Reference:</b>	3430' GE + 23.5' KB @ 3453.50usft
<b>Reference Site:</b>	Belloq 11-2 Fed State Com	<b>MD Reference:</b>	3430' GE + 23.5' KB @ 3453.50usft
<b>Site Error:</b>	0.00 usft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	Belloq 11-2 Fed State Com 521H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.00 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore:</b>	OH	<b>Database:</b>	EDM 5000.1 Multi User Db
<b>Reference Design:</b>	Plan #2	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design Belloq 11-2 Fed State Com - Belloq 11-2 Fed State Com 231H (Offset) - OH - Plan #1														Offset Site Error:	0.00 usft
Survey Program: 0-LEAM MWD+HDGM														Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis		Highside Tooface (')	Offset Wellbore Centre		Distance		Minimum Separation (usft)	Separation Factor	Warning		
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)					
5,100.00	5,093.91	5,126.71	5,121.85	11.18	11.16	69.22	-48.76	-312.75	194.86	172.71	22.15	8.796			
5,200.00	5,193.70	5,227.97	5,222.87	11.42	11.39	69.58	-51.13	-319.27	197.38	174.75	22.62	8.725			
5,300.00	5,293.49	5,332.94	5,327.75	11.66	11.61	70.53	-52.64	-323.42	198.07	174.97	23.09	8.577			
5,400.00	5,393.27	5,435.97	5,430.77	11.90	11.81	72.21	-52.92	-324.18	196.50	172.95	23.55	8.345			
5,500.00	5,493.06	5,535.76	5,530.56	12.14	12.01	74.04	-52.92	-324.18	194.60	170.59	24.01	8.105			
5,600.00	5,592.85	5,635.55	5,630.35	12.38	12.22	75.90	-52.92	-324.18	192.90	168.42	24.48	7.880			
5,700.00	5,692.63	5,735.33	5,730.13	12.63	12.44	77.79	-52.92	-324.18	191.41	166.46	24.95	7.672			
5,800.00	5,792.42	5,835.12	5,829.92	12.87	12.65	79.71	-52.92	-324.18	190.14	164.72	25.42	7.480			
5,900.00	5,892.21	5,934.90	5,929.71	13.11	12.86	81.66	-52.92	-324.18	189.08	163.19	25.89	7.303			
6,000.00	5,991.99	6,034.69	6,029.49	13.35	13.08	83.62	-52.92	-324.18	188.24	161.88	26.36	7.141			
6,100.00	6,091.78	6,134.48	6,129.28	13.60	13.29	85.60	-52.92	-324.18	187.62	160.79	26.83	6.993			
6,200.00	6,191.57	6,234.26	6,229.07	13.84	13.51	87.59	-52.92	-324.18	187.23	159.94	27.30	6.859			
6,300.00	6,291.35	6,334.05	6,328.85	14.08	13.72	89.58	-52.92	-324.18	187.07	159.31	27.76	6.738			
6,321.00	6,312.31	6,355.01	6,349.81	14.14	13.77	90.00	-52.92	-324.18	187.07	159.20	27.86	6.714			
6,400.00	6,391.14	6,433.84	6,428.64	14.33	13.94	91.58	-52.92	-324.18	187.14	158.91	28.23	6.630			
6,500.00	6,490.92	6,533.62	6,528.42	14.57	14.15	93.57	-52.92	-324.18	187.43	158.74	28.69	6.533			
6,600.00	6,590.71	6,633.41	6,628.21	14.82	14.37	95.55	-52.92	-324.18	187.95	158.80	29.15	6.447			
6,700.00	6,690.50	6,733.20	6,728.00	15.06	14.59	97.52	-52.92	-324.18	188.70	159.09	29.61	6.372			
6,800.00	6,790.28	6,832.98	6,827.78	15.31	14.80	99.47	-52.92	-324.18	189.66	159.60	30.07	6.308			
6,900.00	6,890.07	6,932.77	6,927.57	15.55	15.02	101.41	-52.92	-324.18	190.85	160.33	30.52	6.253			
7,000.00	6,989.86	7,032.56	7,027.36	15.80	15.24	103.31	-52.92	-324.18	192.25	161.27	30.98	6.206			
7,100.00	7,089.64	7,132.34	7,127.14	16.04	15.45	105.18	-52.92	-324.18	193.86	162.43	31.43	6.169			
7,200.00	7,189.43	7,232.13	7,226.93	16.29	15.67	107.03	-52.92	-324.18	195.68	163.80	31.88	6.139			
7,300.00	7,289.22	7,331.92	7,326.72	16.53	15.89	108.83	-52.92	-324.18	197.69	165.37	32.32	6.116			
7,400.00	7,389.00	7,431.70	7,426.50	16.78	16.11	110.60	-52.92	-324.18	199.90	167.13	32.77	6.100			
7,500.00	7,488.79	7,531.49	7,526.29	17.03	16.33	112.33	-52.92	-324.18	202.30	169.08	33.21	6.091			
7,600.00	7,588.62	7,631.32	7,626.12	17.25	16.54	113.86	-52.92	-324.18	204.59	170.96	33.63	6.083			
7,700.00	7,688.53	7,731.23	7,726.03	17.44	16.76	114.92	-52.92	-324.18	206.29	172.26	34.03	6.062			
7,800.00	7,788.50	7,831.20	7,826.00	17.62	16.98	115.52	-52.92	-324.18	207.30	172.87	34.43	6.021			
7,900.00	7,888.50	7,931.20	7,926.00	17.81	17.20	116.30	-52.92	-324.18	207.58	172.74	34.84	5.958			
8,000.00	7,988.50	8,031.20	8,026.00	18.00	17.42	117.30	-52.92	-324.18	207.58	172.33	35.25	5.889			
8,100.00	8,088.50	8,131.20	8,126.00	18.19	17.64	118.30	-52.92	-324.18	207.58	171.92	35.66	5.822			
8,200.00	8,188.50	8,231.20	8,226.00	18.38	17.86	119.30	-52.92	-324.18	207.58	171.51	36.07	5.755			
8,300.00	8,288.50	8,331.20	8,326.00	18.57	18.08	120.30	-52.92	-324.18	207.58	171.10	36.48	5.691			
8,400.00	8,388.50	8,431.20	8,426.00	18.76	18.30	121.30	-52.92	-324.18	207.58	170.69	36.89	5.627			
8,500.00	8,488.47	8,531.17	8,526.97	18.94	18.52	122.30	-52.92	-324.18	206.48	169.17	37.30	5.535			
8,600.00	8,587.21	8,629.91	8,624.71	19.10	18.73	123.30	-52.92	-324.18	192.26	154.55	37.71	5.099			
8,700.00	8,681.84	8,724.54	8,719.34	19.21	18.94	124.30	-52.92	-324.18	162.49	124.40	38.09	4.266			
8,800.00	8,769.49	8,812.19	8,806.99	19.30	19.14	125.30	-52.92	-324.18	119.96	81.55	38.41	3.123			
8,900.00	8,847.49	8,890.19	8,884.99	19.35	19.31	126.30	-52.92	-324.18	74.95	36.46	38.49	1.947			
8,954.11	8,884.83	8,927.53	8,922.33	19.37	19.39	127.30	-52.92	-324.18	63.92	25.64	38.28	1.670 CC, ES, SF			
9,000.00	8,913.48	8,956.18	8,950.98	19.39	19.45	128.30	-52.92	-324.18	73.27	34.99	38.29	1.914			
9,100.00	8,965.45	9,008.15	9,002.95	19.43	19.57	129.30	-52.92	-324.18	136.95	98.19	38.76	3.533			
9,200.00	9,001.82	9,044.52	9,039.32	19.63	19.65	130.33	-52.92	-324.18	223.47	184.44	39.03	5.726			
9,300.00	9,021.48	9,064.18	9,058.98	20.05	19.69	131.38	-52.92	-324.18	318.53	279.37	39.16	8.134			
9,400.00	9,025.05	9,067.75	9,062.55	20.57	19.70	132.38	-52.92	-324.18	416.85	377.64	39.21	10.631			
9,500.00	9,025.21	9,067.90	9,062.71	21.20	19.70	133.38	-52.92	-324.18	515.90	476.65	39.24	13.147			
9,600.00	9,025.36	9,068.06	9,062.86	21.93	19.70	134.38	-52.92	-324.18	615.25	575.98	39.27	15.669			
9,700.00	9,025.51	9,068.21	9,063.01	22.75	19.70	135.38	-52.92	-324.18	714.79	675.50	39.29	18.193			
9,800.00	9,025.66	9,068.36	9,063.16	23.66	19.70	136.38	-52.92	-324.18	814.43	775.12	39.31	20.719			
9,900.00	9,025.81	9,068.51	9,063.31	24.63	19.70	137.38	-52.92	-324.18	914.16	874.83	39.33	23.243			
10,000.00	9,025.96	9,068.66	9,063.46	25.68	19.70	138.38	-52.92	-324.18	1,013.94	974.59	39.35	25.766			

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

# LEAM Drilling Services

## Anticollision Report

<b>Company:</b>	Devon Energy	<b>Local Co-ordinate Reference:</b>	Well Belloq 11-2 Fed State Com 521H
<b>Project:</b>	Eddy County, NM (NAD-83)	<b>TVD Reference:</b>	3430' GE + 23.5' KB @ 3453.50usft
<b>Reference Site:</b>	Belloq 11-2 Fed State Com	<b>MD Reference:</b>	3430' GE + 23.5' KB @ 3453.50usft
<b>Site Error:</b>	0.00 usft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	Belloq 11-2 Fed State Com 521H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.00 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	OH	<b>Database:</b>	EDM 5000.1 Multi User Db
<b>Reference Design:</b>	Plan #2	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design														Offset Site Error:	0.00' usft
Survey Program: 0-LEAM MWD+HDGM														Offset Well Error:	0.00' usft
Reference: Belloq 11-2 Fed State Com - Belloq 11-2 Fed State Com 231H (Offset) - OH - Plan #1															
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Distance		Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning		
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)							
10,100.00	9,026.11	9,068.81	9,063.61	26.78	19.70	-91.51	-52.92	-324.18	1,113.76	1,074.38	39.37	28.286			
10,200.00	9,026.27	9,068.96	9,063.77	27.94	19.70	-91.65	-52.92	-324.18	1,213.61	1,174.21	39.40	30.804			
10,300.00	9,026.42	11,441.46	10,366.66	29.14	30.27	-177.56	1,261.43	-324.18	1,303.93	1,273.80	30.13	43.272			
10,400.00	9,026.57	11,541.46	10,366.51	30.38	31.39	-177.59	1,361.43	-324.18	1,303.60	1,272.50	31.09	41.926			
10,500.00	9,026.72	11,641.46	10,366.35	31.66	32.56	-177.62	1,461.43	-324.18	1,303.26	1,271.17	32.09	40.612			
10,600.00	9,026.87	11,741.46	10,366.19	32.97	33.76	-177.64	1,561.42	-324.18	1,302.93	1,269.80	33.12	39.336			
10,700.00	9,027.02	11,841.45	10,366.04	34.31	35.00	-177.67	1,661.42	-324.18	1,302.59	1,268.40	34.19	38.103			
10,800.00	9,027.17	11,941.45	10,365.88	35.67	36.27	-177.70	1,761.42	-324.18	1,302.26	1,266.98	35.28	36.913			
10,900.00	9,027.33	12,041.45	10,365.72	37.06	37.57	-177.73	1,861.41	-324.18	1,301.92	1,265.53	36.40	35.770			
11,000.00	9,027.48	12,141.45	10,365.56	38.46	38.90	-177.75	1,961.41	-324.18	1,301.59	1,264.05	37.54	34.672			
11,100.00	9,027.63	12,241.44	10,365.41	39.89	40.25	-177.78	2,061.41	-324.18	1,301.26	1,262.55	38.70	33.621			
11,200.00	9,027.78	12,341.44	10,365.25	41.33	41.61	-177.81	2,161.41	-324.18	1,300.92	1,261.03	39.89	32.615			
11,300.00	9,027.93	12,441.44	10,365.09	42.78	43.00	-177.84	2,261.40	-324.18	1,300.59	1,259.50	41.09	31.652			
11,400.00	9,028.08	12,541.44	10,364.94	44.25	44.41	-177.86	2,361.40	-324.18	1,300.26	1,257.95	42.31	30.733			
11,500.00	9,028.23	12,641.43	10,364.78	45.72	45.83	-177.89	2,461.40	-324.18	1,299.93	1,256.38	43.54	29.854			
11,600.00	9,028.39	12,741.43	10,364.62	47.21	47.26	-177.92	2,561.40	-324.18	1,299.59	1,254.80	44.79	29.015			
11,700.00	9,028.54	12,841.43	10,364.46	48.71	48.71	-177.95	2,661.39	-324.18	1,299.26	1,253.21	46.05	28.214			
11,800.00	9,028.69	12,941.43	10,364.31	50.22	50.17	-177.98	2,761.39	-324.18	1,298.93	1,251.61	47.32	27.448			
11,900.00	9,028.84	13,041.42	10,364.15	51.73	51.64	-178.00	2,861.39	-324.18	1,298.60	1,249.99	48.61	26.717			
12,000.00	9,028.99	13,141.42	10,363.99	53.26	53.12	-178.03	2,961.39	-324.18	1,298.27	1,248.37	49.90	26.018			
12,100.00	9,029.14	13,241.42	10,363.84	54.79	54.61	-178.06	3,061.38	-324.18	1,297.94	1,246.74	51.20	25.349			
12,200.00	9,029.30	13,341.42	10,363.68	56.32	56.10	-178.09	3,161.38	-324.18	1,297.61	1,245.10	52.51	24.710			
12,300.00	9,029.45	13,441.41	10,363.52	57.86	57.61	-178.11	3,261.38	-324.18	1,297.28	1,243.45	53.83	24.098			
12,400.00	9,029.60	13,541.41	10,363.37	59.41	59.12	-178.14	3,361.37	-324.18	1,296.95	1,241.79	55.16	23.513			
12,500.00	9,029.75	13,641.41	10,363.21	60.96	60.64	-178.17	3,461.37	-324.18	1,296.62	1,240.13	56.49	22.952			
12,600.00	9,029.90	13,741.40	10,363.05	62.52	62.16	-178.20	3,561.37	-324.18	1,296.29	1,238.46	57.83	22.415			
12,700.00	9,030.05	13,841.40	10,362.89	64.08	63.69	-178.23	3,661.37	-324.18	1,295.96	1,236.79	59.18	21.899			
12,800.00	9,030.20	13,941.40	10,362.74	65.64	65.23	-178.25	3,761.36	-324.18	1,295.64	1,235.11	60.53	21.405			
12,900.00	9,030.36	14,041.40	10,362.58	67.21	66.77	-178.28	3,861.36	-324.18	1,295.31	1,233.42	61.89	20.930			
13,000.00	9,030.51	14,141.39	10,362.42	68.78	68.31	-178.31	3,961.36	-324.18	1,294.98	1,231.73	63.25	20.475			
13,100.00	9,030.66	14,241.39	10,362.27	70.35	69.86	-178.34	4,061.36	-324.18	1,294.65	1,230.04	64.61	20.037			
13,200.00	9,030.81	14,341.39	10,362.11	71.93	71.41	-178.37	4,161.35	-324.18	1,294.33	1,228.34	65.98	19.616			
13,300.00	9,030.96	14,441.39	10,361.95	73.51	72.97	-178.39	4,261.35	-324.18	1,294.00	1,226.64	67.36	19.211			
13,400.00	9,031.11	14,541.38	10,361.79	75.09	74.53	-178.42	4,361.35	-324.18	1,293.67	1,224.94	68.74	18.821			
13,500.00	9,031.26	14,641.38	10,361.64	76.68	76.09	-178.45	4,461.35	-324.18	1,293.35	1,223.23	70.12	18.446			
13,600.00	9,031.42	14,741.38	10,361.48	78.27	77.66	-178.48	4,561.34	-324.18	1,293.02	1,221.52	71.50	18.084			
13,700.00	9,031.57	14,841.38	10,361.32	79.85	79.23	-178.51	4,661.34	-324.18	1,292.70	1,219.81	72.89	17.735			
13,800.00	9,031.72	14,941.37	10,361.17	81.45	80.80	-178.53	4,761.34	-324.18	1,292.37	1,218.09	74.28	17.399			
13,900.00	9,031.87	15,041.37	10,361.01	83.04	82.37	-178.56	4,861.34	-324.18	1,292.05	1,216.37	75.67	17.074			
14,000.00	9,032.02	15,141.37	10,360.85	84.63	83.95	-178.59	4,961.33	-324.18	1,291.72	1,214.65	77.07	16.760			
14,100.00	9,032.17	15,241.37	10,360.69	86.23	85.53	-178.62	5,061.33	-324.18	1,291.40	1,212.93	78.47	16.457			
14,200.00	9,032.32	15,341.36	10,360.54	87.83	87.11	-178.65	5,161.33	-324.19	1,291.08	1,211.21	79.87	16.165			
14,300.00	9,032.48	15,441.36	10,360.38	89.43	88.69	-178.67	5,261.32	-324.19	1,290.75	1,209.48	81.27	15.882			
14,400.00	9,032.63	15,541.36	10,360.22	91.03	90.28	-178.70	5,361.32	-324.19	1,290.43	1,207.75	82.68	15.608			
14,500.00	9,032.78	15,641.36	10,360.07	92.63	91.87	-178.73	5,461.32	-324.19	1,290.11	1,206.02	84.09	15.343			
14,600.00	9,032.93	15,741.35	10,359.91	94.23	93.46	-178.76	5,561.32	-324.19	1,289.78	1,204.29	85.50	15.086			
14,700.00	9,033.08	15,841.35	10,359.75	95.84	95.05	-178.79	5,661.31	-324.19	1,289.46	1,202.55	86.91	14.837			
14,800.00	9,033.23	15,941.35	10,359.60	97.45	96.64	-178.82	5,761.31	-324.19	1,289.14	1,200.82	88.32	14.596			
14,900.00	9,033.38	16,041.35	10,359.44	99.05	98.23	-178.84	5,861.31	-324.19	1,288.82	1,199.08	89.73	14.363			
15,000.00	9,033.54	16,141.34	10,359.28	100.66	99.83	-178.87	5,961.31	-324.19	1,288.50	1,197.35	91.15	14.136			
15,100.00	9,033.69	16,241.34	10,359.12	102.27	101.42	-178.90	6,061.30	-324.19	1,288.18	1,195.61	92.57	13.916			
15,200.00	9,033.84	16,341.34	10,358.97	103.88	103.02	-178.93	6,161.30	-324.19	1,287.85	1,193.87	93.99	13.702			

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

# LEAM Drilling Services

## Anticollision Report

<b>Company:</b>	Devon Energy	<b>Local Co-ordinate Reference:</b>	Well Belloq 11-2 Fed State Com 521H
<b>Project:</b>	Eddy County, NM (NAD-83)	<b>TVD Reference:</b>	3430' GE + 23.5' KB @ 3453.50usft
<b>Reference Site:</b>	Belloq 11-2 Fed State Com	<b>MD Reference:</b>	3430' GE + 23.5' KB @ 3453.50usft
<b>Site Error:</b>	0.00 usft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	Belloq 11-2 Fed State Com 521H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.00 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	OH	<b>Database:</b>	EDM 5000.1 Multi User Db
<b>Reference Design:</b>	Plan #2	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design													Belloq 11-2 Fed State Com - Belloq 11-2 Fed State Com 231H (Offset) - OH - Plan #1		Offset Site Error: 0.00 usft	
Survey Program: O-LEAM MWD+HDGM													Offset Well Error: 0.00 usft			
Reference		Offset		Semi Major Axis			Distance									
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning			
15,300.00	9,033.99	16,441.34	10,358.81	105.49	104.62	-178.96	6,261.30	-324.19	1,287.53	1,192.13	95.41	13.495				
15,400.00	9,034.14	16,541.33	10,358.65	107.10	106.22	-178.98	6,361.30	-324.19	1,287.21	1,190.38	96.83	13.294				
15,500.00	9,034.29	16,641.33	10,358.50	108.72	107.82	-179.01	6,461.29	-324.19	1,286.89	1,188.64	98.25	13.098				
15,600.00	9,034.45	16,741.33	10,358.34	110.33	109.42	-179.04	6,561.29	-324.19	1,286.58	1,186.90	99.68	12.907				
15,700.00	9,034.60	16,841.33	10,358.18	111.94	111.03	-179.07	6,661.29	-324.19	1,286.26	1,185.15	101.10	12.722				
15,800.00	9,034.75	16,941.32	10,358.02	113.56	112.63	-179.10	6,761.28	-324.19	1,285.94	1,183.41	102.53	12.542				
15,900.00	9,034.90	17,041.32	10,357.87	115.18	114.24	-179.13	6,861.28	-324.19	1,285.62	1,181.66	103.96	12.367				
16,000.00	9,035.05	17,141.32	10,357.71	116.79	115.84	-179.15	6,961.28	-324.19	1,285.30	1,179.91	105.39	12.196				
16,100.00	9,035.20	17,241.32	10,357.55	118.41	117.45	-179.18	7,061.28	-324.19	1,284.98	1,178.17	106.82	12.030				
16,200.00	9,035.35	17,341.31	10,357.40	120.03	119.06	-179.21	7,161.27	-324.19	1,284.67	1,176.42	108.25	11.868				
16,300.00	9,035.51	17,441.31	10,357.24	121.64	120.67	-179.24	7,261.27	-324.19	1,284.35	1,174.67	109.68	11.710				
16,400.00	9,035.66	17,541.31	10,357.08	123.26	122.28	-179.27	7,361.27	-324.19	1,284.03	1,172.92	111.11	11.556				
16,500.00	9,035.81	17,641.31	10,356.92	124.88	123.89	-179.30	7,461.27	-324.19	1,283.71	1,171.17	112.55	11.406				
16,600.00	9,035.96	17,741.30	10,356.77	126.50	125.50	-179.33	7,561.26	-324.19	1,283.40	1,169.42	113.98	11.260				
16,700.00	9,036.11	17,841.30	10,356.61	128.12	127.11	-179.35	7,661.26	-324.19	1,283.08	1,167.67	115.42	11.117				
16,800.00	9,036.26	17,941.30	10,356.45	129.74	128.72	-179.38	7,761.26	-324.19	1,282.77	1,165.91	116.85	10.978				
16,900.00	9,036.41	18,041.30	10,356.30	131.37	130.33	-179.41	7,861.26	-324.19	1,282.45	1,164.16	118.29	10.842				
17,000.00	9,036.57	18,141.29	10,356.14	132.99	131.95	-179.44	7,961.25	-324.19	1,282.14	1,162.41	119.73	10.709				
17,100.00	9,036.72	18,241.29	10,355.98	134.61	133.56	-179.47	8,061.25	-324.19	1,281.82	1,160.66	121.17	10.579				
17,200.00	9,036.87	18,341.29	10,355.83	136.23	135.18	-179.50	8,161.25	-324.19	1,281.51	1,158.90	122.60	10.452				
17,300.00	9,037.02	18,441.29	10,355.67	137.86	136.79	-179.52	8,261.24	-324.19	1,281.19	1,157.15	124.04	10.329				
17,400.00	9,037.17	18,541.28	10,355.51	139.48	138.41	-179.55	8,361.24	-324.19	1,280.88	1,155.39	125.48	10.207				
17,500.00	9,037.32	18,641.28	10,355.35	141.10	140.02	-179.58	8,461.24	-324.19	1,280.57	1,153.64	126.93	10.089				
17,600.00	9,037.47	18,741.28	10,355.20	142.73	141.64	-179.61	8,561.24	-324.19	1,280.25	1,151.89	128.37	9.973				
17,700.00	9,037.63	18,841.28	10,355.04	144.35	143.26	-179.64	8,661.23	-324.19	1,279.94	1,150.13	129.81	9.860				
17,800.00	9,037.78	18,941.27	10,354.88	145.98	144.88	-179.67	8,761.23	-324.19	1,279.63	1,148.37	131.25	9.749				
17,900.00	9,037.93	19,041.27	10,354.73	147.60	146.49	-179.70	8,861.23	-324.19	1,279.32	1,146.62	132.70	9.641				
18,000.00	9,038.08	19,141.27	10,354.57	149.23	148.11	-179.72	8,961.23	-324.19	1,279.00	1,144.86	134.14	9.535				
18,100.00	9,038.23	19,241.27	10,354.41	150.85	149.73	-179.75	9,061.22	-324.19	1,278.69	1,143.11	135.59	9.431				
18,200.00	9,038.38	19,341.26	10,354.25	152.48	151.35	-179.78	9,161.22	-324.19	1,278.38	1,141.35	137.03	9.329				
18,300.00	9,038.54	19,441.26	10,354.10	154.11	152.97	-179.81	9,261.22	-324.19	1,278.07	1,139.59	138.48	9.229				
18,400.00	9,038.69	19,541.26	10,353.94	155.73	154.59	-179.84	9,361.22	-324.19	1,277.76	1,137.84	139.92	9.132				
18,500.00	9,038.84	19,641.26	10,353.78	157.36	156.21	-179.87	9,461.21	-324.19	1,277.45	1,136.08	141.37	9.036				
18,600.00	9,038.99	19,741.25	10,353.63	158.99	157.83	-179.90	9,561.21	-324.19	1,277.14	1,134.32	142.82	8.942				
18,700.00	9,039.14	19,841.25	10,353.47	160.61	159.45	-179.93	9,661.21	-324.19	1,276.83	1,132.56	144.27	8.850				
18,800.00	9,039.29	19,941.25	10,353.31	162.24	161.07	-179.95	9,761.21	-324.19	1,276.52	1,130.81	145.72	8.760				
18,900.00	9,039.44	20,041.25	10,353.15	163.87	162.70	-179.98	9,861.20	-324.19	1,276.21	1,129.05	147.17	8.672				
19,000.00	9,039.60	20,141.24	10,353.00	165.50	164.32	-179.99	9,961.20	-324.19	1,275.90	1,127.29	148.62	8.585				
19,100.00	9,039.75	20,241.24	10,352.84	167.13	165.94	-179.96	10,061.20	-324.19	1,275.60	1,125.53	150.07	8.500				
19,200.00	9,039.90	20,341.24	10,352.68	168.76	167.56	-179.93	10,161.19	-324.19	1,275.29	1,123.77	151.52	8.417				
19,267.22	9,040.00	20,407.05	10,352.58	169.60	168.63	-179.91	10,227.01	-324.19	1,275.08	1,122.85	152.23	8.376				

# LEAM Drilling Services

## Anticollision Report

<b>Company:</b>	Devon Energy	<b>Local Co-ordinate Reference:</b>	Well Belloq 11-2 Fed State Com 521H
<b>Project:</b>	Eddy County, NM (NAD-83)	<b>TVD Reference:</b>	3430' GE + 23.5' KB @ 3453.50usft
<b>Reference Site:</b>	Belloq 11-2 Fed State Com	<b>MD Reference:</b>	3430' GE + 23.5' KB @ 3453.50usft
<b>Site Error:</b>	0.00 usft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	Belloq 11-2 Fed State Com 521H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.00 usft	<b>Output errors are at:</b>	2.00 sigma
<b>Reference Wellbore</b>	OH	<b>Database:</b>	EDM 5000.1 Multi User Db
<b>Reference Design:</b>	Plan #2	<b>Offset TVD Reference:</b>	Offset Datum

<b>Offset Design:</b> Belloq 11-2 Fed State Com - Belloq 11-2 Fed State Com 511H - OH - Plan #1													Offset Site Error: 0.00 usft
Survey Program: 0-LEAM MWD+HDGM													Offset Well Error: 0.00 usft
Reference	Offset	Semi Major Axis		Distance		Warning							
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
0.00	0.00	0.10	0.10	0.00	0.00	89.85	0.08	30.00	30.00				
100.00	100.00	100.10	100.10	0.09	0.09	89.85	0.08	30.00	30.00	29.83	0.17	174.246	
200.00	200.00	200.10	200.10	0.31	0.31	89.85	0.08	30.00	30.00	29.38	0.62	48.255	
300.00	300.00	300.10	300.10	0.54	0.54	89.85	0.08	30.00	30.00	28.93	1.07	28.005	
400.00	400.00	400.10	400.10	0.76	0.76	89.85	0.08	30.00	30.00	28.48	1.52	19.727	
500.00	500.00	500.10	500.10	0.99	0.99	89.85	0.08	30.00	30.00	28.03	1.97	15.226	
600.00	600.00	600.10	600.10	1.21	1.21	89.85	0.08	30.00	30.00	27.58	2.42	12.398	
700.00	700.00	700.10	700.10	1.43	1.43	89.85	0.08	30.00	30.00	27.13	2.87	10.455	
800.00	800.00	800.10	800.10	1.66	1.66	89.85	0.08	30.00	30.00	26.68	3.32	9.039	
900.00	900.00	900.10	900.10	1.88	1.88	89.85	0.08	30.00	30.00	26.23	3.77	7.961	
1,000.00	1,000.00	1,000.10	1,000.10	2.11	2.11	89.85	0.08	30.00	30.00	25.78	4.22	7.112	
1,100.00	1,100.00	1,100.10	1,100.10	2.33	2.33	89.85	0.08	30.00	30.00	25.33	4.67	6.427	
1,200.00	1,200.00	1,200.10	1,200.10	2.56	2.56	89.85	0.08	30.00	30.00	24.88	5.12	5.863	
1,300.00	1,300.00	1,300.10	1,300.10	2.78	2.78	89.85	0.08	30.00	30.00	24.43	5.57	5.389	
1,400.00	1,400.00	1,400.10	1,400.10	3.01	3.01	89.85	0.08	30.00	30.00	23.98	6.02	4.987	
1,500.00	1,500.00	1,500.10	1,500.10	3.23	3.23	89.85	0.08	30.00	30.00	23.53	6.47	4.640	
1,600.00	1,600.00	1,600.10	1,600.10	3.46	3.46	89.85	0.08	30.00	30.00	23.08	6.92	4.338	
1,700.00	1,700.00	1,700.10	1,700.10	3.68	3.68	89.85	0.08	30.00	30.00	22.64	7.36	4.074	
1,800.00	1,800.00	1,800.10	1,800.10	3.91	3.91	89.85	0.08	30.00	30.00	22.19	7.81	3.839	
1,900.00	1,900.00	1,900.10	1,900.10	4.13	4.13	89.85	0.08	30.00	30.00	21.74	8.26	3.630	
2,000.00	2,000.00	2,000.10	2,000.10	4.36	4.36	89.85	0.08	30.00	30.00	21.29	8.71	3.443 CC, ES	
2,100.00	2,099.99	2,100.09	2,100.09	4.56	4.58	-137.29	0.08	30.00	30.64	21.50	9.14	3.353	
2,200.00	2,199.96	2,200.06	2,200.06	4.74	4.81	-140.40	0.08	30.00	32.61	23.07	9.54	3.417	
2,300.00	2,299.86	2,299.96	2,299.96	4.92	5.03	-144.80	0.08	30.00	36.08	26.13	9.95	3.626	
2,400.00	2,399.68	2,399.78	2,399.78	5.11	5.26	-149.64	0.08	30.00	41.17	30.81	10.36	3.974	
2,500.00	2,499.47	2,499.57	2,499.57	5.31	5.48	-153.67	0.08	30.00	46.92	36.15	10.77	4.355	
2,600.00	2,599.25	2,598.84	2,598.83	5.50	5.68	-156.03	-0.41	30.69	53.34	42.17	11.17	4.777	
2,700.00	2,699.04	2,698.00	2,697.96	5.71	5.86	-156.52	-1.90	32.79	60.77	49.23	11.54	5.266	
2,800.00	2,798.82	2,797.01	2,796.88	5.91	6.05	-155.71	-4.39	36.27	69.18	57.26	11.92	5.805	
2,900.00	2,898.61	2,895.80	2,895.49	6.12	6.23	-154.06	-7.85	41.13	78.61	66.31	12.30	6.390	
3,000.00	2,998.40	2,994.38	2,993.77	6.34	6.43	-151.90	-12.28	47.36	89.14	76.46	12.69	7.026	
3,100.00	3,098.18	3,093.71	3,092.73	6.55	6.63	-149.86	-17.18	54.24	100.26	87.18	13.09	7.661	
3,200.00	3,197.97	3,193.03	3,191.70	6.77	6.83	-148.22	-22.08	61.12	111.48	97.99	13.49	8.262	
3,300.00	3,297.76	3,292.35	3,290.66	6.99	7.04	-146.89	-26.98	67.99	122.77	108.87	13.90	8.830	
3,400.00	3,397.54	3,391.68	3,389.62	7.21	7.25	-145.78	-31.88	74.87	134.12	119.80	14.32	9.366	
3,500.00	3,497.33	3,491.00	3,488.59	7.44	7.47	-144.84	-36.78	81.75	145.51	130.77	14.74	9.872	
3,600.00	3,597.12	3,590.32	3,587.55	7.66	7.68	-144.04	-41.68	88.63	156.93	141.77	15.16	10.349	
3,700.00	3,696.90	3,689.65	3,686.52	7.89	7.90	-143.35	-46.58	95.51	168.38	152.79	15.59	10.799	
3,800.00	3,796.69	3,788.97	3,785.48	8.12	8.13	-142.75	-51.48	102.38	179.85	163.82	16.02	11.225	
3,900.00	3,896.48	3,888.29	3,884.44	8.35	8.35	-142.22	-56.37	109.26	191.33	174.88	16.46	11.627	
4,000.00	3,996.26	3,987.62	3,983.41	8.58	8.58	-141.75	-61.27	116.14	202.83	185.94	16.89	12.007	
4,100.00	4,096.05	4,086.94	4,082.37	8.81	8.81	-141.33	-66.17	123.02	214.35	197.01	17.33	12.367	
4,200.00	4,195.84	4,186.26	4,181.33	9.05	9.04	-140.95	-71.07	129.90	225.87	208.10	17.77	12.708	
4,300.00	4,295.62	4,285.59	4,280.30	9.28	9.28	-140.61	-75.97	136.77	237.40	219.18	18.22	13.032	
4,400.00	4,395.41	4,384.91	4,379.26	9.51	9.51	-140.30	-80.87	143.65	248.94	230.28	18.66	13.339	
4,500.00	4,495.19	4,484.23	4,478.23	9.75	9.75	-140.02	-85.77	150.53	260.48	241.37	19.11	13.630	
4,600.00	4,594.98	4,583.56	4,577.19	9.99	9.99	-139.76	-90.67	157.41	272.04	252.48	19.56	13.908	
4,700.00	4,694.77	4,682.88	4,676.15	10.22	10.23	-139.52	-95.57	164.29	283.59	263.58	20.01	14.172	
4,800.00	4,794.55	4,782.20	4,775.12	10.46	10.47	-139.31	-100.46	171.17	295.15	274.69	20.46	14.423	
4,900.00	4,894.34	4,881.53	4,874.08	10.70	10.71	-139.10	-105.36	178.04	306.72	285.80	20.92	14.663	
5,000.00	4,994.13	4,980.85	4,973.05	10.94	10.95	-138.92	-110.26	184.92	318.29	296.91	21.37	14.892	
5,100.00	5,093.91	5,080.17	5,072.01	11.18	11.19	-138.74	-115.16	191.80	329.86	308.03	21.83	15.110	

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

# LEAM Drilling Services

## Anticollision Report

<b>Company:</b>	Devon Energy	<b>Local Co-ordinate Reference:</b>	Well Belloq 11-2 Fed State Com 521H
<b>Project:</b>	Eddy County, NM.(NAD-83)	<b>TVD Reference:</b>	3430' GE + 23.5' KB @ 3453.50usft
<b>Reference Site:</b>	Belloq 11-2 Fed State Com	<b>MD Reference:</b>	3430' GE + 23.5' KB @ 3453.50usft
<b>Site Error:</b>	0.00 usft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	Belloq 11-2 Fed State Com 521H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.00 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	OH	<b>Database:</b>	EDM 5000.1 Multi User Db
<b>Reference Design:</b>	Plan #2	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design														Offset Site Error:	0.00 usft
Belloq 11-2 Fed State Com - Belloq 11-2 Fed State Com 511H - OH - Plan #1														Offset Well Error:	0.00 usft
Survey Program: 0-LEAM MWD+HDGM															
Reference		Offset		Semi Major Axis		Highside Tooface (°)	Offset Wellbore Centre:		Distance		Minimum Separation (usft)	Separation Factor	Warning		
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)					
5,200.00	5,193.70	5,179.50	5,170.97	11.42	11.44	-138.58	-120.06	198.68	341.43	319.14	22.29	15.319			
5,300.00	5,293.49	5,278.82	5,269.94	11.66	11.68	-138.43	-124.96	205.56	353.01	330.26	22.75	15.519			
5,400.00	5,393.27	5,378.15	5,368.90	11.90	11.93	-138.29	-129.86	212.43	364.59	341.38	23.21	15.711			
5,500.00	5,493.06	5,477.47	5,467.87	12.14	12.18	-138.15	-134.76	219.31	376.17	352.50	23.67	15.894			
5,600.00	5,592.85	5,576.79	5,566.83	12.38	12.42	-138.03	-139.66	226.19	387.75	363.62	24.13	16.070			
5,700.00	5,692.63	5,676.12	5,665.79	12.63	12.67	-137.91	-144.56	233.07	399.33	374.74	24.59	16.239			
5,800.00	5,792.42	5,775.44	5,764.76	12.87	12.92	-137.80	-149.45	239.95	410.92	385.86	25.06	16.401			
5,900.00	5,892.21	5,874.76	5,863.72	13.11	13.17	-137.69	-154.35	246.82	422.51	396.99	25.52	16.556			
6,000.00	5,991.99	5,974.09	5,962.68	13.35	13.42	-137.59	-159.25	253.70	434.10	408.11	25.98	16.706			
6,100.00	6,091.78	6,073.41	6,061.65	13.60	13.67	-137.50	-164.15	260.58	445.69	419.24	26.45	16.850			
6,200.00	6,191.57	6,172.73	6,160.61	13.84	13.92	-137.41	-169.05	267.46	457.28	430.36	26.92	16.989			
6,300.00	6,291.35	6,272.06	6,259.58	14.08	14.17	-137.32	-173.95	274.34	468.87	441.49	27.38	17.122			
6,400.00	6,391.14	6,371.38	6,358.54	14.33	14.43	-137.24	-178.85	281.22	480.46	452.61	27.85	17.251			
6,500.00	6,490.92	6,470.70	6,457.50	14.57	14.68	-137.17	-183.75	288.09	492.06	463.74	28.32	17.375			
6,600.00	6,590.71	6,570.03	6,556.47	14.82	14.93	-137.09	-188.65	294.97	503.65	474.86	28.79	17.495			
6,700.00	6,690.50	6,669.35	6,655.43	15.06	15.18	-137.02	-193.54	301.85	515.25	485.99	29.26	17.611			
6,800.00	6,790.28	6,768.67	6,754.40	15.31	15.44	-136.95	-198.44	308.73	526.84	497.12	29.73	17.723			
6,900.00	6,890.07	6,868.00	6,853.36	15.55	15.69	-136.89	-203.34	315.61	538.44	508.24	30.20	17.831			
7,000.00	6,989.86	6,967.32	6,952.32	15.80	15.95	-136.83	-208.24	322.48	550.04	519.37	30.67	17.935			
7,100.00	7,089.64	7,066.64	7,051.29	16.04	16.20	-136.77	-213.14	329.36	561.64	530.50	31.14	18.036			
7,200.00	7,189.43	7,165.97	7,150.25	16.29	16.46	-136.71	-218.04	336.24	573.23	541.62	31.61	18.134			
7,300.00	7,289.22	7,265.29	7,249.21	16.53	16.71	-136.66	-222.94	343.12	584.83	552.75	32.08	18.229			
7,400.00	7,389.00	7,364.61	7,348.18	16.78	16.97	-136.60	-227.84	350.00	596.43	563.88	32.56	18.321			
7,500.00	7,488.79	7,463.94	7,447.14	17.03	17.22	-136.55	-232.74	356.87	608.03	575.01	33.03	18.410			
7,600.00	7,588.62	7,563.31	7,546.16	17.28	17.48	-136.53	-237.64	363.76	619.14	585.66	33.48	18.493			
7,700.00	7,688.53	7,672.02	7,654.54	17.44	17.71	-136.43	-242.46	370.52	628.31	594.39	33.91	18.526			
7,800.00	7,788.50	7,781.59	7,763.94	17.62	17.93	-136.30	-246.11	375.65	634.67	600.34	34.33	18.487			
7,900.00	7,888.50	7,891.43	7,873.69	17.81	18.14	89.87	-248.55	379.07	638.25	603.50	34.75	18.368			
8,000.00	7,988.50	8,001.39	7,983.63	18.00	18.34	89.98	-249.77	380.79	639.81	604.66	35.15	18.203			
8,100.00	8,088.50	8,106.36	8,088.60	18.19	18.54	89.99	-249.92	381.00	640.00	604.46	35.54	18.005			
8,200.00	8,188.50	8,206.36	8,188.60	18.38	18.73	89.99	-249.92	381.00	640.00	604.07	35.93	17.811			
8,300.00	8,288.50	8,306.36	8,288.60	18.57	18.92	89.99	-249.92	381.00	640.00	603.68	36.32	17.620			
8,370.42	8,358.91	8,376.94	8,359.03	18.70	19.05	89.64	-245.99	380.97	639.99	603.40	36.59	17.492			
8,400.00	8,368.50	8,406.13	8,387.91	18.76	19.09	89.27	-241.84	380.95	640.00	603.31	36.69	17.442			
8,500.00	8,488.47	8,500.00	8,478.76	18.94	19.22	87.61	-218.64	380.80	640.59	603.58	37.01	17.308			
8,600.00	8,587.21	8,590.91	8,562.00	19.10	19.30	85.35	-182.34	380.57	642.24	604.99	37.24	17.245			
8,700.00	8,681.84	8,678.00	8,635.41	19.21	19.35	83.26	-135.63	380.27	644.68	607.29	37.39	17.243			
8,800.00	8,769.49	8,762.58	8,699.14	19.30	19.39	81.37	-80.14	379.91	647.62	610.15	37.48	17.281			
8,900.00	8,847.49	8,845.15	8,752.82	19.35	19.41	79.72	-17.50	379.51	650.75	613.19	37.56	17.327			
9,000.00	8,913.48	8,926.13	8,796.20	19.39	19.42	78.34	50.81	379.07	653.74	616.05	37.69	17.343			
9,100.00	8,965.45	9,005.92	8,829.10	19.43	19.43	77.25	123.42	378.60	656.33	618.38	37.95	17.295			
9,200.00	9,001.82	9,084.86	8,851.43	19.63	19.58	76.49	199.07	378.12	658.28	619.90	38.38	17.150			
9,300.00	9,021.48	9,163.27	8,863.11	20.05	19.94	76.05	276.54	377.62	659.44	620.41	39.03	16.896			
9,400.00	9,025.05	9,249.97	8,864.92	20.57	20.41	75.94	363.19	377.06	659.74	619.79	39.94	16.518			
9,500.00	9,025.21	9,349.97	8,864.72	21.20	21.05	75.91	463.19	376.42	659.82	618.69	41.13	16.042			
9,600.00	9,025.36	9,449.97	8,864.51	21.93	21.78	75.88	563.18	375.78	659.90	617.38	42.53	15.518			
9,700.00	9,025.51	9,549.97	8,864.31	22.75	22.60	75.85	663.18	375.14	659.99	615.88	44.11	14.963			
9,800.00	9,025.66	9,649.97	8,864.11	23.66	23.51	75.82	763.18	374.49	660.08	614.21	45.86	14.393			
9,900.00	9,025.81	9,749.96	8,863.91	24.63	24.49	75.79	863.18	373.85	660.16	612.40	47.76	13.822			
10,000.00	9,025.96	9,849.96	8,863.71	25.68	25.54	75.76	963.17	373.21	660.25	610.45	49.80	13.259			
10,100.00	9,026.11	9,949.96	8,863.50	26.78	26.64	75.74	1,063.17	372.57	660.33	608.39	51.95	12.712			
10,200.00	9,026.27	10,049.96	8,863.30	27.94	27.80	75.71	1,163.17	371.92	660.42	606.22	54.20	12.185			

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

# LEAM Drilling Services

## Anticollision Report

<b>Company:</b>	Devon Energy	<b>Local Co-ordinate Reference:</b>	Well Belloq 11-2 Fed State Com 521H
<b>Project:</b>	Eddy County, NM (NAD-83)	<b>TVD Reference:</b>	3430' GE + 23.5' KB @ 3453.50usft
<b>Reference Site:</b>	Belloq 11-2 Fed State Com	<b>MD Reference:</b>	3430' GE + 23.5' KB @ 3453.50usft
<b>Site Error:</b>	0.00 usft	<b>North Reference:</b>	Grid.
<b>Reference Well:</b>	Belloq 11-2 Fed State Com 521H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.00 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	OH	<b>Database:</b>	EDM 5000.1 Multi User Db
<b>Reference Design:</b>	Plan #2	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design														Offset Site Error:	0.00 usft.
Survey Program: O-LEAM MWD+HDGM														Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Distance		Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning		
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)							
10,300.00	9,026.42	10,149.96	8,863.10	29.14	29.00	75.68	1,263.16	371.28	660.50	603.96	56.54	11.681			
10,400.00	9,026.57	10,249.96	8,862.90	30.38	30.24	75.65	1,363.16	370.64	660.59	601.62	58.97	11.202			
10,500.00	9,026.72	10,349.96	8,862.70	31.66	31.52	75.62	1,463.16	370.00	660.68	599.22	61.46	10.749			
10,600.00	9,026.87	10,449.96	8,862.50	32.97	32.83	75.59	1,563.16	369.36	660.76	596.75	64.02	10.322			
10,700.00	9,027.02	10,549.96	8,862.29	34.31	34.17	75.56	1,663.15	368.71	660.85	594.22	66.63	9.919			
10,800.00	9,027.17	10,649.96	8,862.09	35.67	35.53	75.53	1,763.15	368.07	660.94	591.65	69.28	9.539			
10,900.00	9,027.33	10,749.96	8,861.89	37.06	36.92	75.50	1,863.15	367.43	661.03	589.04	71.99	9.183			
11,000.00	9,027.48	10,849.96	8,861.69	38.46	38.32	75.47	1,963.14	366.79	661.11	586.39	74.72	8.847			
11,100.00	9,027.63	10,949.96	8,861.49	39.89	39.75	75.44	2,063.14	366.15	661.20	583.70	77.50	8.532			
11,200.00	9,027.78	11,049.96	8,861.28	41.33	41.19	75.41	2,163.14	365.50	661.29	580.99	80.30	8.235			
11,300.00	9,027.93	11,149.96	8,861.08	42.78	42.64	75.38	2,263.14	364.86	661.38	578.25	83.13	7.956			
11,400.00	9,028.08	11,249.96	8,860.88	44.25	44.11	75.35	2,363.13	364.22	661.46	575.48	85.99	7.693			
11,500.00	9,028.23	11,349.96	8,860.68	45.72	45.58	75.32	2,463.13	363.58	661.55	572.69	88.86	7.445			
11,600.00	9,028.39	11,449.96	8,860.48	47.21	47.07	75.29	2,563.13	362.93	661.64	569.88	91.76	7.211			
11,700.00	9,028.54	11,549.96	8,860.27	48.71	48.57	75.26	2,663.12	362.29	661.73	567.06	94.67	6.990			
11,800.00	9,028.69	11,649.96	8,860.07	50.22	50.08	75.23	2,763.12	361.65	661.82	564.21	97.60	6.781			
11,900.00	9,028.84	11,749.96	8,859.87	51.73	51.60	75.20	2,863.12	361.01	661.91	561.36	100.55	6.583			
12,000.00	9,028.99	11,849.96	8,859.67	53.26	53.12	75.17	2,963.12	360.37	662.00	558.49	103.51	6.396			
12,100.00	9,029.14	11,949.96	8,859.47	54.79	54.65	75.14	3,063.11	359.72	662.09	555.61	106.48	6.218			
12,200.00	9,029.30	12,049.96	8,859.27	56.32	56.18	75.11	3,163.11	359.08	662.18	552.71	109.46	6.049			
12,300.00	9,029.45	12,149.96	8,859.06	57.86	57.72	75.08	3,263.11	358.44	662.27	549.81	112.46	5.889			
12,400.00	9,029.60	12,249.96	8,858.86	59.41	59.27	75.05	3,363.10	357.80	662.36	546.90	115.46	5.737			
12,500.00	9,029.75	12,349.96	8,858.66	60.96	60.82	75.02	3,463.10	357.15	662.45	543.98	118.47	5.592			
12,600.00	9,029.90	12,449.96	8,858.46	62.52	62.38	74.99	3,563.10	356.51	662.54	541.05	121.49	5.453			
12,700.00	9,030.05	12,549.96	8,858.26	64.08	63.94	74.96	3,663.09	355.87	662.63	538.11	124.51	5.322			
12,800.00	9,030.20	12,649.96	8,858.05	65.64	65.50	74.94	3,763.09	355.23	662.72	535.17	127.55	5.196			
12,900.00	9,030.36	12,749.96	8,857.85	67.21	67.07	74.91	3,863.09	354.59	662.81	532.22	130.59	5.076			
13,000.00	9,030.51	12,849.96	8,857.65	68.78	68.64	74.88	3,963.09	353.94	662.90	529.27	133.63	4.961			
13,100.00	9,030.66	12,949.96	8,857.45	70.35	70.22	74.85	4,063.08	353.30	662.99	526.31	136.68	4.851			
13,200.00	9,030.81	13,049.96	8,857.25	71.93	71.79	74.82	4,163.08	352.66	663.08	523.35	139.74	4.745			
13,300.00	9,030.96	13,149.96	8,857.05	73.51	73.37	74.79	4,263.08	352.02	663.17	520.38	142.80	4.644			
13,400.00	9,031.11	13,249.96	8,856.84	75.09	74.96	74.76	4,363.07	351.37	663.26	517.41	145.86	4.547			
13,500.00	9,031.26	13,349.96	8,856.64	76.68	76.54	74.73	4,463.07	350.73	663.36	514.43	148.93	4.454			
13,600.00	9,031.42	13,449.96	8,856.44	78.27	78.13	74.70	4,563.07	350.09	663.45	511.45	152.00	4.365			
13,700.00	9,031.57	13,549.96	8,856.24	79.85	79.72	74.67	4,663.07	349.45	663.54	508.47	155.07	4.279			
13,800.00	9,031.72	13,649.96	8,856.04	81.45	81.31	74.64	4,763.06	348.81	663.63	505.48	158.15	4.196			
13,900.00	9,031.87	13,749.96	8,855.83	83.04	82.90	74.61	4,863.06	348.16	663.73	502.49	161.23	4.117			
14,000.00	9,032.02	13,849.96	8,855.63	84.63	84.50	74.58	4,963.06	347.52	663.82	499.50	164.31	4.040			
14,100.00	9,032.17	13,949.96	8,855.43	86.23	86.09	74.55	5,063.05	346.88	663.91	496.51	167.40	3.966			
14,200.00	9,032.32	14,049.96	8,855.23	87.83	87.69	74.52	5,163.05	346.24	664.00	493.52	170.49	3.895			
14,300.00	9,032.48	14,149.96	8,855.03	89.43	89.29	74.49	5,263.05	345.59	664.10	490.52	173.58	3.826			
14,400.00	9,032.63	14,249.96	8,854.82	91.03	90.89	74.46	5,363.05	344.95	664.19	487.52	176.67	3.760			
14,500.00	9,032.78	14,349.96	8,854.62	92.63	92.50	74.43	5,463.04	344.31	664.29	484.52	179.76	3.695			
14,600.00	9,032.93	14,449.96	8,854.42	94.23	94.10	74.40	5,563.04	343.67	664.38	481.52	182.86	3.633			
14,700.00	9,033.08	14,549.96	8,854.22	95.84	95.70	74.38	5,663.04	343.03	664.47	478.52	185.96	3.573			
14,800.00	9,033.23	14,649.96	8,854.02	97.45	97.31	74.35	5,763.03	342.38	664.57	475.51	189.06	3.515			
14,900.00	9,033.38	14,749.96	8,853.82	99.05	98.92	74.32	5,863.03	341.74	664.66	472.51	192.16	3.459			
15,000.00	9,033.54	14,849.96	8,853.61	100.66	100.53	74.29	5,963.03	341.10	664.76	469.50	195.26	3.405			
15,100.00	9,033.69	14,949.96	8,853.41	102.27	102.13	74.26	6,063.03	340.46	664.85	466.49	198.36	3.352			
15,200.00	9,033.84	15,049.96	8,853.21	103.88	103.75	74.23	6,163.02	339.82	664.95	463.48	201.46	3.301			
15,300.00	9,033.99	15,149.96	8,853.01	105.49	105.36	74.20	6,263.02	339.17	665.04	460.47	204.57	3.251			
15,400.00	9,034.14	15,249.96	8,852.81	107.10	106.97	74.17	6,363.02	338.53	665.14	457.46	207.67	3.203			

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

# LEAM Drilling Services

## Anticollision Report

<b>Company:</b>	Devon Energy	<b>Local Co-ordinate Reference:</b>	Well Belloq 11-2 Fed State Com 521H
<b>Project:</b>	Eddy County, NM (NAD-83)	<b>TVD Reference:</b>	3430' GE + 23.5' KB @ 3453.50usft
<b>Reference Site:</b>	Belloq 11-2 Fed State Com	<b>MD Reference:</b>	3430' GE + 23.5' KB @ 3453.50usft
<b>Site Error:</b>	0.00 usft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	Belloq 11-2 Fed State Com 521H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.00 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	OH	<b>Database:</b>	EDM 5000.1 Multi User Db
<b>Reference Design:</b>	Plan #2	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design										Bellog 11-2 Fed State Com - Bellog 11-2 Fed State Com 511H - OH - Plan #1				Offset Site Error: 0.00 usft	
Survey Program: 0-LEAM MWD+HDGM														Offset Well Error: 0.00 usft	
Reference		Offset		Semi Major Axis			Distance								
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning		
15,500.00	9,034.29	15,349.93	8,852.60	108.72	108.58	74.14	6,463.01	337.89	665.23	454.45	210.78	3.156			
15,600.00	9,034.45	15,449.93	8,852.40	110.33	110.19	74.11	6,563.01	337.25	665.33	451.44	213.89	3.111			
15,700.00	9,034.60	15,549.93	8,852.20	111.94	111.81	74.08	6,663.01	336.60	665.42	448.43	216.99	3.067			
15,800.00	9,034.75	15,649.93	8,852.00	113.56	113.42	74.05	6,763.01	335.96	665.52	445.42	220.10	3.024			
15,900.00	9,034.90	15,749.93	8,851.80	115.18	115.04	74.02	6,863.00	335.32	665.61	442.40	223.21	2.982			
16,000.00	9,035.05	15,849.93	8,851.59	116.79	116.66	73.99	6,963.00	334.68	665.71	439.39	226.32	2.941			
16,100.00	9,035.20	15,949.93	8,851.39	118.41	118.27	73.97	7,063.00	334.04	665.81	436.38	229.43	2.902			
16,200.00	9,035.35	16,049.93	8,851.19	120.03	119.89	73.94	7,162.99	333.39	665.90	433.36	232.54	2.864			
16,300.00	9,035.51	16,149.92	8,850.99	121.64	121.51	73.91	7,262.99	332.75	666.00	430.35	235.65	2.826			
16,400.00	9,035.66	16,249.92	8,850.79	123.26	123.13	73.88	7,362.99	332.11	666.10	427.33	238.76	2.790			
16,500.00	9,035.81	16,349.92	8,850.59	124.88	124.75	73.85	7,462.99	331.47	666.19	424.32	241.87	2.754			
16,600.00	9,035.96	16,449.92	8,850.38	126.50	126.37	73.82	7,562.98	330.82	666.29	421.31	244.98	2.720			
16,700.00	9,036.11	16,549.92	8,850.18	128.12	127.99	73.79	7,662.98	330.18	666.39	418.29	248.10	2.686			
16,800.00	9,036.26	16,649.92	8,849.98	129.74	129.61	73.76	7,762.98	329.54	666.49	415.28	251.21	2.653			
16,900.00	9,036.41	16,749.92	8,849.78	131.37	131.23	73.73	7,862.97	328.90	666.58	412.26	254.32	2.621			
17,000.00	9,036.57	16,849.92	8,849.58	132.99	132.85	73.70	7,962.97	328.26	666.68	409.25	257.43	2.590			
17,100.00	9,036.72	16,949.92	8,849.37	134.61	134.48	73.67	8,062.97	327.61	666.78	406.24	260.54	2.559			
17,200.00	9,036.87	17,049.92	8,849.17	136.23	136.10	73.64	8,162.96	326.97	666.88	403.22	263.66	2.529			
17,300.00	9,037.02	17,149.92	8,848.97	137.86	137.72	73.61	8,262.96	326.33	666.98	400.21	266.77	2.500			
17,400.00	9,037.17	17,249.92	8,848.77	139.48	139.34	73.59	8,362.96	325.69	667.08	397.20	269.88	2.472			
17,500.00	9,037.32	17,349.92	8,848.57	141.10	140.97	73.56	8,462.96	325.04	667.17	394.18	272.99	2.444			
17,600.00	9,037.47	17,449.92	8,848.36	142.73	142.59	73.53	8,562.95	324.40	667.27	391.17	276.10	2.417			
17,700.00	9,037.63	17,549.92	8,848.16	144.35	144.22	73.50	8,662.95	323.76	667.37	388.16	279.22	2.390			
17,800.00	9,037.78	17,649.92	8,847.96	145.98	145.84	73.47	8,762.95	323.12	667.47	385.15	282.33	2.364			
17,900.00	9,037.93	17,749.91	8,847.76	147.60	147.47	73.44	8,862.94	322.48	667.57	382.13	285.44	2.339			
18,000.00	9,038.08	17,849.91	8,847.56	149.23	149.09	73.41	8,962.94	321.83	667.67	379.12	288.55	2.314			
18,100.00	9,038.23	17,949.91	8,847.36	150.85	150.72	73.38	9,062.94	321.19	667.77	376.11	291.66	2.290			
18,200.00	9,038.38	18,049.91	8,847.15	152.48	152.35	73.35	9,162.94	320.55	667.87	373.10	294.77	2.266			
18,300.00	9,038.54	18,149.91	8,846.95	154.11	153.97	73.32	9,262.93	319.91	667.97	370.09	297.88	2.242			
18,400.00	9,038.69	18,249.91	8,846.75	155.73	155.60	73.29	9,362.93	319.26	668.07	367.08	300.99	2.220			
18,500.00	9,038.84	18,349.91	8,846.55	157.36	157.23	73.27	9,462.93	318.62	668.17	364.07	304.10	2.197			
18,600.00	9,038.99	18,449.91	8,846.35	158.99	158.85	73.24	9,562.92	317.98	668.27	361.06	307.21	2.175			
18,700.00	9,039.14	18,549.91	8,846.14	160.61	160.48	73.21	9,662.92	317.34	668.37	358.05	310.32	2.154			
18,800.00	9,039.29	18,649.91	8,845.94	162.24	162.11	73.18	9,762.92	316.70	668.47	355.05	313.43	2.133			
18,900.00	9,039.44	18,749.91	8,845.74	163.87	163.74	73.15	9,862.92	316.05	668.58	352.04	316.54	2.112			
19,000.00	9,039.60	18,849.91	8,845.54	165.50	165.37	73.12	9,962.91	315.41	668.68	349.03	319.65	2.092			
19,100.00	9,039.75	18,949.91	8,845.34	167.13	166.99	73.09	10,062.91	314.77	668.78	346.03	322.75	2.072			
19,200.00	9,039.90	19,049.91	8,845.13	168.76	168.62	73.06	10,162.91	314.13	668.88	343.02	325.86	2.053			
19,267.22	9,040.00	19,117.10	8,845.00	169.60	169.72	73.04	10,230.10	313.70	668.95	341.25	327.70	2.041 SF			

# LEAM Drilling Services

## Anticollision Report

<b>Company:</b>	Devon Energy	<b>Local Co-ordinate Reference:</b>	Well Belloq 11-2 Fed State Com 521H
<b>Project:</b>	Eddy County, NM (NAD-83)	<b>TVD Reference:</b>	3430' GE + 23.5' KB @ 3453.50usft
<b>Reference Site:</b>	Belloq 11-2 Fed State Com	<b>MD Reference:</b>	3430' GE + 23.5' KB @ 3453.50usft
<b>Site Error:</b>	0.00 usft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	Belloq 11-2 Fed State Com 521H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.00 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	OH	<b>Database:</b>	EDM 5000.1 Multi User Db
<b>Reference Design:</b>	Plan #2	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design: Belloq 11-2 Fed State Com - Belloq 11-2 Fed State Com 521H - OH - Plan #1													Offset Site Error: 0.00 usft
Survey Program: 0-LEAM MWD+HDGM													Offset Well Error: 0.00 usft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Distance		Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)					
0.00	0.00	26.50	26.50	0.00	0.02	89.85	3.18	1,249.72	1,249.72				
100.00	100.00	126.50	126.50	0.09	0.15	89.85	3.18	1,249.72	1,249.72	1,249.49	0.23	5,398.161	
200.00	200.00	226.50	226.50	0.31	0.37	89.85	3.18	1,249.72	1,249.72	1,249.04	0.68	1,835.019	
300.00	300.00	326.50	326.50	0.54	0.60	89.85	3.18	1,249.72	1,249.72	1,248.59	1.13	1,105.390	
400.00	400.00	426.50	426.50	0.76	0.82	89.85	3.18	1,249.72	1,249.72	1,248.14	1.58	790.912	
500.00	500.00	526.50	526.50	0.99	1.04	89.85	3.18	1,249.72	1,249.72	1,247.69	2.03	615.738	
600.00	600.00	626.50	626.50	1.21	1.27	89.85	3.18	1,249.72	1,249.72	1,247.24	2.48	504.090	
700.00	700.00	726.50	726.50	1.43	1.49	89.85	3.18	1,249.72	1,249.72	1,246.80	2.93	426.716	
800.00	800.00	826.50	826.50	1.66	1.72	89.85	3.18	1,249.72	1,249.72	1,246.35	3.38	369.934	
900.00	900.00	926.50	926.50	1.88	1.94	89.85	3.18	1,249.72	1,249.72	1,245.90	3.83	326.489	
1,000.00	1,000.00	1,026.50	1,026.50	2.11	2.17	89.85	3.18	1,249.72	1,249.72	1,245.45	4.28	292.176	
1,100.00	1,100.00	1,126.50	1,126.50	2.33	2.39	89.85	3.18	1,249.72	1,249.72	1,245.00	4.73	264.389	
1,200.00	1,200.00	1,226.50	1,226.50	2.56	2.62	89.85	3.18	1,249.72	1,249.72	1,244.55	5.18	241.429	
1,300.00	1,300.00	1,326.50	1,326.50	2.78	2.84	89.85	3.18	1,249.72	1,249.72	1,244.10	5.63	222.138	
1,400.00	1,400.00	1,426.50	1,426.50	3.01	3.07	89.85	3.18	1,249.72	1,249.72	1,243.65	6.08	205.701	
1,500.00	1,500.00	1,526.50	1,526.50	3.23	3.29	89.85	3.18	1,249.72	1,249.72	1,243.20	6.52	191.530	
1,600.00	1,600.00	1,626.50	1,626.50	3.46	3.52	89.85	3.18	1,249.72	1,249.72	1,242.75	6.97	179.185	
1,700.00	1,700.00	1,726.50	1,726.50	3.68	3.74	89.85	3.18	1,249.72	1,249.72	1,242.30	7.42	168.335	
1,800.00	1,800.00	1,826.50	1,826.50	3.91	3.97	89.85	3.18	1,249.72	1,249.72	1,241.85	7.87	158.724	
1,900.00	1,900.00	1,926.50	1,926.50	4.13	4.19	89.85	3.18	1,249.72	1,249.72	1,241.40	8.32	150.152	
2,000.00	2,000.00	2,026.50	2,026.50	4.36	4.42	89.85	3.18	1,249.72	1,249.72	1,240.95	8.77	142.457 CC, ES	
2,100.00	2,099.99	2,126.49	2,126.49	4.56	4.64	-136.18	3.18	1,249.72	1,250.35	1,241.16	9.20	135.946	
2,200.00	2,199.96	2,226.46	2,226.46	4.74	4.87	-136.25	3.18	1,249.72	1,252.24	1,242.64	9.60	130.433	
2,300.00	2,299.86	2,326.36	2,326.36	4.92	5.09	-136.37	3.18	1,249.72	1,255.40	1,245.39	10.01	125.441	
2,400.00	2,399.68	2,426.18	2,426.18	5.11	5.31	-136.54	3.18	1,249.72	1,259.79	1,249.37	10.42	120.908	
2,500.00	2,499.47	2,521.90	2,521.90	5.31	5.52	-136.73	3.18	1,249.76	1,264.58	1,253.76	10.82	116.871	
2,600.00	2,599.25	2,600.00	2,599.99	5.50	5.68	-136.87	2.72	1,250.46	1,270.30	1,259.13	11.17	113.714	
2,700.00	2,699.04	2,690.06	2,690.03	5.71	5.85	-136.99	1.51	1,252.39	1,277.23	1,265.70	11.53	110.763	
2,800.00	2,798.82	2,773.98	2,773.88	5.91	6.01	-137.08	-0.28	1,255.28	1,285.40	1,273.52	11.88	108.174	
2,900.00	2,898.61	2,857.74	2,857.51	6.12	6.17	-137.13	-2.73	1,259.19	1,294.80	1,282.56	12.24	105.813	
3,000.00	2,998.40	2,941.31	2,940.88	6.34	6.33	-137.15	-5.81	1,264.14	1,305.41	1,292.82	12.59	103.662	
3,100.00	3,098.18	3,024.65	3,023.92	6.55	6.49	-137.15	-9.52	1,270.09	1,317.23	1,304.28	12.95	101.711	
3,200.00	3,197.97	3,120.89	3,119.73	6.77	6.69	-137.12	-14.30	1,277.76	1,329.86	1,316.52	13.35	99.634	
3,300.00	3,297.76	3,220.09	3,218.49	6.99	6.90	-137.09	-19.24	1,285.68	1,342.51	1,328.76	13.76	97.587	
3,400.00	3,397.54	3,319.28	3,317.24	7.21	7.11	-137.06	-24.18	1,293.60	1,355.16	1,340.99	14.17	95.625	
3,500.00	3,497.33	3,418.47	3,416.00	7.44	7.33	-137.03	-29.12	1,301.52	1,367.82	1,353.23	14.59	93.747	
3,600.00	3,597.12	3,517.67	3,514.75	7.66	7.55	-137.00	-34.06	1,309.45	1,380.47	1,365.45	15.01	91.949	
3,700.00	3,696.90	3,616.86	3,613.50	7.89	7.77	-136.97	-38.99	1,317.37	1,393.12	1,377.68	15.44	90.227	
3,800.00	3,796.69	3,716.06	3,712.26	8.12	8.00	-136.94	-43.93	1,325.29	1,405.77	1,389.90	15.87	88.579	
3,900.00	3,896.48	3,815.25	3,811.01	8.35	8.23	-136.92	-48.87	1,333.21	1,418.42	1,402.12	16.30	87.001	
4,000.00	3,996.26	3,914.45	3,909.77	8.58	8.46	-136.89	-53.81	1,341.13	1,431.08	1,414.34	16.74	85.490	
4,100.00	4,096.05	4,013.64	4,008.52	8.81	8.69	-136.86	-58.75	1,349.06	1,443.73	1,426.55	17.18	84.043	
4,200.00	4,195.84	4,112.83	4,107.27	9.05	8.93	-136.84	-63.69	1,356.98	1,456.38	1,438.76	17.62	82.656	
4,300.00	4,295.62	4,212.03	4,206.03	9.28	9.16	-136.81	-68.63	1,364.90	1,469.04	1,450.97	18.06	81.327	
4,400.00	4,395.41	4,311.22	4,304.78	9.51	9.40	-136.79	-73.57	1,372.82	1,481.69	1,463.18	18.51	80.052	
4,500.00	4,495.19	4,410.42	4,403.53	9.75	9.65	-136.76	-78.51	1,380.74	1,494.35	1,475.39	18.96	78.829	
4,600.00	4,594.98	4,509.61	4,502.29	9.99	9.89	-136.74	-83.44	1,388.67	1,507.00	1,487.59	19.41	77.654	
4,700.00	4,694.77	4,608.80	4,601.04	10.22	10.13	-136.72	-88.38	1,396.59	1,519.65	1,499.80	19.86	76.527	
4,800.00	4,794.55	4,708.00	4,699.80	10.46	10.38	-136.69	-93.32	1,404.51	1,532.31	1,512.00	20.31	75.443	
4,900.00	4,894.34	4,807.19	4,798.55	10.70	10.63	-136.67	-98.26	1,412.43	1,544.96	1,524.20	20.77	74.402	
5,000.00	4,994.13	4,906.39	4,897.30	10.94	10.87	-136.65	-103.20	1,420.35	1,557.62	1,536.40	21.22	73.400	
5,100.00	5,093.91	5,005.58	4,996.06	11.18	11.12	-136.63	-108.14	1,428.28	1,570.28	1,548.60	21.68	72.436	

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



# LEAM Drilling Services

## Anticollision Report

<b>Company:</b>	Devon Energy	<b>Local Co-ordinate Reference:</b>	Well-Belloq 11-2 Fed State Com 521H
<b>Project:</b>	Eddy County, NM (NAD:83)	<b>TVD Reference:</b>	3430' GE + 23.5' KB @ 3453.50usft
<b>Reference Site:</b>	Belloq 11-2 Fed State Com	<b>MD Reference:</b>	3430' GE + 23.5' KB @ 3453.50usft
<b>Site Error:</b>	0.00 usft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	Belloq 11-2 Fed State Com 521H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.00 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	OH	<b>Database:</b>	EDM 5000.1 Multi User Db
<b>Reference Design:</b>	Plan #2	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design Belloq 11-2 Fed State Com - Belloq 11-2 Fed State Com 521H - OH - Plan #1														Offset Site Error:	0.00 usft
Survey Program: O-LEAM MWD+HDGM														Offset Well Error:	0.00 usft
Measured Depth (usft)	Reference Depth (usft)	Offset Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Semi Major Axis (usft)	Highside Toolface (°)	Offset Wellbore Centre +N-S (usft)	+E-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning	
5,200.00	5,193.70	5,104.77	5,094.81	11.42	11.37	-136.60	-113.08	1,436.20	1,582.93	1,560.80	22.14	71.508			
5,300.00	5,293.49	5,203.97	5,193.57	11.66	11.62	-136.58	-118.02	1,444.12	1,595.59	1,572.99	22.60	70.614			
5,400.00	5,393.27	5,303.16	5,292.32	11.90	11.88	-136.56	-122.96	1,452.04	1,608.24	1,585.19	23.06	69.752			
5,500.00	5,493.06	5,402.36	5,391.07	12.14	12.13	-136.54	-127.89	1,459.96	1,620.90	1,597.38	23.52	68.921			
5,600.00	5,592.85	5,501.55	5,489.83	12.38	12.38	-136.52	-132.83	1,467.89	1,633.56	1,609.58	23.98	68.119			
5,700.00	5,692.63	5,600.75	5,588.58	12.63	12.64	-136.50	-137.77	1,475.81	1,646.21	1,621.77	24.44	67.345			
5,800.00	5,792.42	5,699.94	5,687.33	12.87	12.89	-136.48	-142.71	1,483.73	1,658.87	1,633.96	24.91	66.598			
5,900.00	5,892.21	5,799.13	5,786.09	13.11	13.15	-136.46	-147.65	1,491.65	1,671.53	1,646.16	25.37	65.875			
6,000.00	5,991.99	5,898.33	5,884.84	13.35	13.41	-136.44	-152.59	1,499.57	1,684.19	1,658.35	25.84	65.177			
6,100.00	6,091.78	5,997.52	5,983.60	13.60	13.66	-136.42	-157.53	1,507.50	1,696.84	1,670.54	26.31	64.502			
6,200.00	6,191.57	6,096.72	6,082.35	13.84	13.92	-136.40	-162.47	1,515.42	1,709.50	1,682.73	26.77	63.849			
6,300.00	6,291.35	6,195.91	6,181.10	14.08	14.18	-136.39	-167.41	1,523.34	1,722.16	1,694.92	27.24	63.216			
6,400.00	6,391.14	6,295.10	6,279.86	14.33	14.44	-136.37	-172.34	1,531.26	1,734.82	1,707.11	27.71	62.603			
6,500.00	6,490.92	6,394.30	6,378.61	14.57	14.70	-136.35	-177.28	1,539.18	1,747.48	1,719.30	28.18	62.010			
6,600.00	6,590.71	6,493.49	6,477.37	14.82	14.96	-136.33	-182.22	1,547.11	1,760.14	1,731.49	28.65	61.435			
6,700.00	6,690.50	6,592.69	6,576.12	15.06	15.22	-136.31	-187.16	1,555.03	1,772.80	1,743.67	29.12	60.877			
6,800.00	6,790.28	6,691.88	6,674.87	15.31	15.48	-136.30	-192.10	1,562.95	1,785.45	1,755.86	29.59	60.336			
6,900.00	6,890.07	6,791.07	6,773.63	15.55	15.74	-136.28	-197.04	1,570.87	1,798.11	1,768.05	30.06	59.811			
7,000.00	6,989.86	6,890.27	6,872.38	15.80	16.00	-136.26	-201.98	1,578.79	1,810.77	1,780.24	30.54	59.301			
7,100.00	7,089.64	6,989.46	6,971.13	16.04	16.26	-136.25	-206.92	1,586.72	1,823.43	1,792.42	31.01	58.806			
7,200.00	7,189.43	7,088.66	7,069.89	16.29	16.52	-136.23	-211.86	1,594.64	1,836.09	1,804.61	31.48	58.324			
7,300.00	7,289.22	7,187.85	7,168.64	16.53	16.78	-136.22	-216.79	1,602.56	1,848.75	1,816.80	31.95	57.857			
7,400.00	7,389.00	7,287.05	7,267.61	16.78	17.04	-136.20	-221.73	1,610.48	1,861.41	1,828.98	32.43	57.402			
7,500.00	7,488.79	7,386.24	7,366.15	17.03	17.31	-136.18	-226.67	1,618.40	1,874.07	1,841.17	32.90	56.960			
7,600.00	7,588.62	7,485.49	7,464.96	17.25	17.57	-136.23	-231.61	1,626.33	1,886.24	1,852.88	33.36	56.549			
7,700.00	7,688.53	7,609.86	7,588.84	17.44	17.87	-136.23	-237.44	1,635.68	1,896.74	1,862.90	33.85	56.041			
7,800.00	7,788.50	7,748.51	7,727.17	17.62	18.15	-136.20	-242.32	1,643.50	1,904.08	1,869.75	34.33	55.465			
7,900.00	7,888.50	7,887.62	7,866.16	17.81	18.42	89.86	-245.44	1,648.50	1,908.13	1,873.33	34.81	54.821			
8,000.00	7,988.50	8,026.95	8,005.46	18.00	18.67	89.90	-246.77	1,650.64	1,909.66	1,874.40	35.26	54.155			
8,100.00	8,088.50	8,136.48	8,115.00	18.19	18.88	89.90	-246.82	1,650.72	1,909.72	1,874.06	35.67	53.543			
8,200.00	8,188.50	8,236.48	8,215.00	18.38	19.07	89.90	-246.82	1,650.72	1,909.72	1,873.67	36.06	52.966			
8,300.00	8,288.50	8,336.53	8,315.05	18.57	19.26	89.90	-246.81	1,650.72	1,909.72	1,873.28	36.45	52.399			
8,398.66	8,387.16	8,435.68	8,413.66	18.75	19.42	89.63	-237.74	1,650.66	1,909.70	1,872.89	36.81	51.884			
8,400.00	8,388.50	8,437.00	8,414.96	18.76	19.42	89.63	-237.50	1,650.66	1,909.70	1,872.89	36.81	51.877			
8,500.00	8,488.47	8,531.84	8,506.41	18.94	19.54	89.27	-212.84	1,650.50	1,909.87	1,872.74	37.13	51.440			
8,600.00	8,587.21	8,621.98	8,588.47	19.10	19.62	88.48	-175.73	1,650.26	1,910.42	1,873.05	37.37	51.119			
8,700.00	8,681.84	8,708.90	8,661.13	19.21	19.67	87.74	-128.19	1,649.96	1,911.27	1,873.71	37.56	50.885			
8,800.00	8,769.49	8,793.19	8,723.96	19.30	19.71	87.07	-72.12	1,649.60	1,912.33	1,874.60	37.73	50.683			
8,900.00	8,847.49	8,875.37	8,776.66	19.35	19.72	86.46	-9.15	1,649.19	1,913.47	1,875.54	37.93	50.445			
9,000.00	8,913.48	8,955.90	8,819.04	19.39	19.73	85.95	59.24	1,648.75	1,914.58	1,876.38	38.21	50.112			
9,100.00	8,965.45	9,035.17	8,851.00	19.43	19.75	85.54	131.71	1,648.29	1,915.57	1,876.96	38.60	49.620			
9,200.00	9,001.82	9,113.53	8,872.48	19.63	19.86	85.24	207.01	1,647.81	1,916.33	1,877.18	39.15	48.943			
9,300.00	9,021.48	9,191.31	8,883.44	20.05	20.15	85.07	283.94	1,647.31	1,916.81	1,876.94	39.87	48.075			
9,400.00	9,025.05	9,278.81	8,884.93	20.57	20.61	85.01	371.41	1,646.75	1,916.95	1,876.14	40.81	46.972			
9,500.00	9,025.21	9,378.81	8,884.78	21.20	21.25	85.00	471.41	1,646.11	1,916.98	1,874.95	42.03	45.611			
9,600.00	9,025.36	9,478.81	8,884.63	21.93	21.98	85.00	571.41	1,645.47	1,917.00	1,873.55	43.46	44.114			
9,700.00	9,025.51	9,578.81	8,884.48	22.75	22.80	84.99	671.41	1,644.82	1,917.03	1,871.95	45.07	42.531			
9,800.00	9,025.66	9,678.81	8,884.32	23.66	23.70	84.98	771.40	1,644.18	1,917.05	1,870.19	46.87	40.906			
9,900.00	9,025.81	9,778.81	8,884.17	24.63	24.68	84.97	871.40	1,643.54	1,917.08	1,868.27	48.81	39.276			
10,000.00	9,025.96	9,878.81	8,884.02	25.68	25.72	84.96	971.40	1,642.90	1,917.10	1,866.21	50.89	37.671			
10,100.00	9,026.11	9,978.81	8,883.87	26.78	26.83	84.95	1,071.40	1,642.26	1,917.13	1,864.04	53.09	36.110			
10,200.00	9,026.27	10,078.81	8,883.72	27.94	27.98	84.94	1,171.39	1,641.61	1,917.15	1,861.76	55.40	34.607			

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

# LEAM Drilling Services

## Anticollision Report

<b>Company:</b>	Devon Energy	<b>Local Co-ordinate Reference:</b>	Well Belloq 11-2 Fed State Com 521H
<b>Project:</b>	Eddy County, NM (NAD-83)	<b>TVD Reference:</b>	3430' GE + 23.5' KB @ 3453.50usft
<b>Reference Site:</b>	Belloq 11-2 Fed State Com	<b>MD Reference:</b>	3430' GE + 23.5' KB @ 3453.50usft
<b>Site Error:</b>	0.00 usft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	Belloq 11-2 Fed State Com 521H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.00 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore:</b>	OH	<b>Database:</b>	EDM 5000.1 Multi User Db
<b>Reference Design:</b>	Plan #2	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design Belloq 11-2 Fed State Com - Belloq 11-2 Fed State Com 521H - OH - Plan #1														Offset Site Error:	0.00 usft
Survey Program: O-LEAM MWD+HDGM														Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Distance		Minimum Separation (usft)	Separation Factor	Warning				
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)							
10,300.00	9,026.42	10,178.81	8,883.57	29.14	29.18	84.93	1,271.39	1,640.97	1,917.18	1,859.38	57.80	33.171			
10,400.00	9,026.57	10,278.81	8,883.42	30.38	30.42	84.92	1,371.39	1,640.33	1,917.20	1,856.93	60.28	31.806			
10,500.00	9,026.72	10,378.81	8,883.27	31.66	31.69	84.91	1,471.39	1,639.69	1,917.23	1,854.40	62.83	30.514			
10,600.00	9,026.87	10,478.81	8,883.11	32.97	33.00	84.91	1,571.38	1,639.04	1,917.26	1,851.81	65.45	29.295			
10,700.00	9,027.02	10,578.81	8,882.96	34.31	34.33	84.90	1,671.38	1,638.40	1,917.28	1,849.16	68.12	28.146			
10,800.00	9,027.17	10,678.81	8,882.81	35.67	35.69	84.89	1,771.38	1,637.76	1,917.31	1,846.46	70.84	27.064			
10,900.00	9,027.33	10,778.81	8,882.66	37.06	37.07	84.88	1,871.37	1,637.12	1,917.33	1,843.72	73.61	26.047			
11,000.00	9,027.48	10,878.81	8,882.51	38.46	38.47	84.87	1,971.37	1,636.48	1,917.36	1,840.94	76.42	25.090			
11,100.00	9,027.63	10,978.81	8,882.36	39.89	39.89	84.86	2,071.37	1,635.83	1,917.39	1,838.13	79.26	24.191			
11,200.00	9,027.78	11,078.81	8,882.21	41.33	41.33	84.85	2,171.37	1,635.19	1,917.41	1,835.28	82.13	23.345			
11,300.00	9,027.93	11,178.81	8,882.05	42.78	42.78	84.84	2,271.36	1,634.55	1,917.44	1,832.40	85.04	22.548			
11,400.00	9,028.08	11,278.81	8,881.90	44.25	44.25	84.83	2,371.36	1,633.91	1,917.46	1,829.50	87.96	21.798			
11,500.00	9,028.23	11,378.81	8,881.75	45.72	45.72	84.82	2,471.36	1,633.27	1,917.49	1,826.57	90.92	21.091			
11,600.00	9,028.39	11,478.80	8,881.60	47.21	47.21	84.82	2,571.36	1,632.62	1,917.52	1,823.63	93.89	20.423			
11,700.00	9,028.54	11,578.80	8,881.45	48.71	48.70	84.81	2,671.35	1,631.98	1,917.54	1,820.66	96.88	19.793			
11,800.00	9,028.69	11,678.80	8,881.30	50.22	50.21	84.80	2,771.35	1,631.34	1,917.57	1,817.68	99.89	19.197			
11,900.00	9,028.84	11,778.80	8,881.15	51.73	51.72	84.79	2,871.35	1,630.70	1,917.60	1,814.68	102.91	18.633			
12,000.00	9,028.99	11,878.80	8,880.99	53.26	53.24	84.78	2,971.35	1,630.05	1,917.62	1,811.67	105.95	18.099			
12,100.00	9,029.14	11,978.80	8,880.84	54.79	54.77	84.77	3,071.34	1,629.41	1,917.65	1,808.65	109.00	17.593			
12,200.00	9,029.30	12,078.80	8,880.69	56.32	56.30	84.76	3,171.34	1,628.77	1,917.68	1,805.61	112.07	17.112			
12,300.00	9,029.45	12,178.80	8,880.54	57.86	57.84	84.75	3,271.34	1,628.13	1,917.70	1,802.56	115.14	16.655			
12,400.00	9,029.60	12,278.80	8,880.39	59.41	59.39	84.74	3,371.34	1,627.49	1,917.73	1,799.50	118.23	16.221			
12,500.00	9,029.75	12,378.80	8,880.24	60.96	60.94	84.73	3,471.33	1,626.84	1,917.76	1,796.43	121.32	15.807			
12,600.00	9,029.90	12,478.80	8,880.09	62.52	62.49	84.72	3,571.33	1,626.20	1,917.78	1,793.36	124.43	15.413			
12,700.00	9,030.05	12,578.80	8,879.94	64.08	64.05	84.72	3,671.33	1,625.56	1,917.81	1,790.27	127.54	15.037			
12,800.00	9,030.20	12,678.80	8,879.78	65.64	65.61	84.71	3,771.32	1,624.92	1,917.84	1,787.18	130.66	14.679			
12,900.00	9,030.36	12,778.80	8,879.63	67.21	67.18	84.70	3,871.32	1,624.28	1,917.86	1,784.08	133.78	14.336			
13,000.00	9,030.51	12,878.80	8,879.48	68.78	68.75	84.69	3,971.32	1,623.63	1,917.89	1,780.97	136.92	14.008			
13,100.00	9,030.66	12,978.80	8,879.33	70.35	70.32	84.68	4,071.32	1,622.99	1,917.92	1,777.86	140.05	13.694			
13,200.00	9,030.81	13,078.80	8,879.18	71.93	71.90	84.67	4,171.31	1,622.35	1,917.94	1,774.75	143.20	13.394			
13,300.00	9,030.96	13,178.80	8,879.03	73.51	73.48	84.66	4,271.31	1,621.71	1,917.97	1,771.62	146.35	13.106			
13,400.00	9,031.11	13,278.80	8,878.88	75.09	75.06	84.65	4,371.31	1,621.07	1,918.00	1,768.50	149.50	12.829			
13,500.00	9,031.26	13,378.80	8,878.72	76.68	76.64	84.64	4,471.31	1,620.42	1,918.02	1,765.36	152.66	12.564			
13,600.00	9,031.42	13,478.80	8,878.57	78.27	78.23	84.63	4,571.30	1,619.78	1,918.05	1,762.23	155.83	12.309			
13,700.00	9,031.57	13,578.80	8,878.42	79.85	79.82	84.63	4,671.30	1,619.14	1,918.08	1,759.09	158.99	12.064			
13,800.00	9,031.72	13,678.79	8,878.27	81.45	81.41	84.62	4,771.30	1,618.50	1,918.11	1,755.94	162.17	11.828			
13,900.00	9,031.87	13,778.79	8,878.12	83.04	83.00	84.61	4,871.30	1,617.85	1,918.13	1,752.79	165.34	11.601			
14,000.00	9,032.02	13,878.79	8,877.97	84.63	84.59	84.60	4,971.29	1,617.21	1,918.16	1,749.64	168.52	11.382			
14,100.00	9,032.17	13,978.79	8,877.82	86.23	86.19	84.59	5,071.29	1,616.57	1,918.19	1,746.49	171.70	11.172			
14,200.00	9,032.32	14,078.79	8,877.67	87.83	87.79	84.58	5,171.29	1,615.93	1,918.22	1,743.33	174.89	10.968			
14,300.00	9,032.48	14,178.79	8,877.51	89.43	89.38	84.57	5,271.29	1,615.29	1,918.24	1,740.17	178.07	10.772			
14,400.00	9,032.63	14,278.79	8,877.36	91.03	90.98	84.56	5,371.28	1,614.64	1,918.27	1,737.01	181.26	10.583			
14,500.00	9,032.78	14,378.79	8,877.21	92.63	92.59	84.55	5,471.28	1,614.00	1,918.30	1,733.84	184.46	10.400			
14,600.00	9,032.93	14,478.79	8,877.06	94.23	94.19	84.54	5,571.28	1,613.36	1,918.33	1,730.67	187.65	10.223			
14,700.00	9,033.08	14,578.79	8,876.91	95.84	95.79	84.54	5,671.27	1,612.72	1,918.35	1,727.50	190.85	10.052			
14,800.00	9,033.23	14,678.79	8,876.76	97.45	97.40	84.53	5,771.27	1,612.08	1,918.38	1,724.33	194.05	9.886			
14,900.00	9,033.38	14,778.79	8,876.61	99.05	99.01	84.52	5,871.27	1,611.43	1,918.41	1,721.16	197.25	9.726			
15,000.00	9,033.54	14,878.79	8,876.45	100.66	100.61	84.51	5,971.27	1,610.79	1,918.44	1,717.98	200.46	9.570			
15,100.00	9,033.69	14,978.79	8,876.30	102.27	102.22	84.50	6,071.26	1,610.15	1,918.47	1,714.80	203.66	9.420			
15,200.00	9,033.84	15,078.79	8,876.15	103.88	103.83	84.49	6,171.26	1,609.51	1,918.49	1,711.62	206.87	9.274			
15,300.00	9,033.99	15,178.79	8,876.00	105.49	105.44	84.48	6,271.26	1,608.87	1,918.52	1,708.44	210.08	9.132			
15,400.00	9,034.14	15,278.79	8,875.85	107.10	107.05	84.47	6,371.26	1,608.22	1,918.55	1,705.26	213.29	8.995			

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

# LEAM Drilling Services

## Anticollision Report

<b>Company:</b>	Devon Energy	<b>Local Co-ordinate Reference:</b>	Well Belloq 11-2 Fed State Com 521H
<b>Project:</b>	Eddy County, NM (NAD-83)	<b>TVD Reference:</b>	3430' GE + 23.5' KB @ 3453.50usft
<b>Reference Site:</b>	Belloq 11-2 Fed State Com	<b>MD Reference:</b>	3430' GE + 23.5' KB @ 3453.50usft
<b>Site Error:</b>	0.00 usft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	Belloq 11-2 Fed State Com 521H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.00 usft	<b>Output errors are at:</b>	2.00 sigma
<b>Reference Wellbore:</b>	OH	<b>Database:</b>	EDM 5000.1 Multi User Db
<b>Reference Design:</b>	Plan #2	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design														Offset Site Error:	0.00 usft
Belloq 11-2 Fed State Com - Belloq 11-2 Fed State Com 521H - OH - Plan #1														Offset Well Error:	0.00 usft
Survey Program: 0-LEAM MWD+HDGM															
Reference		Offset		Semi Major Axis		Distance									
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning		
15,500.00	9,034.29	15,378.79	8,875.70	108.72	108.67	84.46	6,471.25	1,607.58	1,918.58	1,702.08	216.50	8.862			
15,600.00	9,034.45	15,478.79	8,875.55	110.33	110.28	84.45	6,571.25	1,606.94	1,918.61	1,698.89	219.72	8.732			
15,700.00	9,034.60	15,578.79	8,875.39	111.94	111.89	84.45	6,671.25	1,606.30	1,918.63	1,695.70	222.93	8.606			
15,800.00	9,034.75	15,678.79	8,875.24	113.56	113.51	84.44	6,771.25	1,605.65	1,918.66	1,692.51	226.15	8.484			
15,900.00	9,034.90	15,778.79	8,875.09	115.18	115.12	84.43	6,871.24	1,605.01	1,918.69	1,689.32	229.37	8.365			
16,000.00	9,035.05	15,878.78	8,874.94	116.79	116.74	84.42	6,971.24	1,604.37	1,918.72	1,686.13	232.59	8.249			
16,100.00	9,035.20	15,978.78	8,874.79	118.41	118.35	84.41	7,071.24	1,603.73	1,918.75	1,682.94	235.81	8.137			
16,200.00	9,035.35	16,078.78	8,874.64	120.03	119.97	84.40	7,171.24	1,603.09	1,918.78	1,679.75	239.03	8.027			
16,300.00	9,035.51	16,178.78	8,874.49	121.64	121.59	84.39	7,271.23	1,602.44	1,918.80	1,676.55	242.25	7.921			
16,400.00	9,035.66	16,278.78	8,874.34	123.26	123.21	84.38	7,371.23	1,601.80	1,918.83	1,673.36	245.47	7.817			
16,500.00	9,035.81	16,378.78	8,874.18	124.88	124.83	84.37	7,471.23	1,601.16	1,918.86	1,670.16	248.70	7.716			
16,600.00	9,035.96	16,478.78	8,874.03	126.50	126.45	84.36	7,571.22	1,600.52	1,918.89	1,666.97	251.92	7.617			
16,700.00	9,036.11	16,578.78	8,873.88	128.12	128.07	84.36	7,671.22	1,599.88	1,918.92	1,663.77	255.15	7.521			
16,800.00	9,036.26	16,678.78	8,873.73	129.74	129.69	84.35	7,771.22	1,599.23	1,918.95	1,660.57	258.38	7.427			
16,900.00	9,036.41	16,778.78	8,873.58	131.37	131.31	84.34	7,871.22	1,598.59	1,918.98	1,657.37	261.61	7.335			
17,000.00	9,036.57	16,878.78	8,873.43	132.99	132.93	84.33	7,971.21	1,597.95	1,919.01	1,654.17	264.84	7.246			
17,100.00	9,036.72	16,978.78	8,873.28	134.61	134.55	84.32	8,071.21	1,597.31	1,919.03	1,650.97	268.07	7.159			
17,200.00	9,036.87	17,078.78	8,873.12	136.23	136.17	84.31	8,171.21	1,596.66	1,919.06	1,647.77	271.30	7.074			
17,300.00	9,037.02	17,178.78	8,872.97	137.86	137.80	84.30	8,271.21	1,596.02	1,919.09	1,644.57	274.53	6.991			
17,400.00	9,037.17	17,278.78	8,872.82	139.48	139.42	84.29	8,371.20	1,595.38	1,919.12	1,641.36	277.76	6.909			
17,500.00	9,037.32	17,378.78	8,872.67	141.10	141.04	84.28	8,471.20	1,594.74	1,919.15	1,638.16	280.99	6.830			
17,600.00	9,037.47	17,478.78	8,872.52	142.73	142.67	84.28	8,571.20	1,594.10	1,919.18	1,634.96	284.22	6.752			
17,700.00	9,037.63	17,578.78	8,872.37	144.35	144.29	84.27	8,671.20	1,593.45	1,919.21	1,631.75	287.46	6.676			
17,800.00	9,037.78	17,678.78	8,872.22	145.98	145.92	84.26	8,771.19	1,592.81	1,919.24	1,628.55	290.69	6.602			
17,900.00	9,037.93	17,778.78	8,872.06	147.60	147.54	84.25	8,871.19	1,592.17	1,919.27	1,625.34	293.93	6.530			
18,000.00	9,038.08	17,878.78	8,871.91	149.23	149.17	84.24	8,971.19	1,591.53	1,919.30	1,622.13	297.16	6.459			
18,100.00	9,038.23	17,978.78	8,871.76	150.85	150.79	84.23	9,071.19	1,590.89	1,919.33	1,618.93	300.40	6.389			
18,200.00	9,038.38	18,078.77	8,871.61	152.48	152.42	84.22	9,171.18	1,590.24	1,919.36	1,615.72	303.63	6.321			
18,300.00	9,038.54	18,178.77	8,871.46	154.11	154.04	84.21	9,271.18	1,589.60	1,919.38	1,612.51	306.87	6.255			
18,400.00	9,038.69	18,278.77	8,871.31	155.73	155.67	84.20	9,371.18	1,588.96	1,919.41	1,609.31	310.11	6.189			
18,500.00	9,038.84	18,378.77	8,871.16	157.36	157.30	84.19	9,471.17	1,588.32	1,919.44	1,606.10	313.35	6.126			
18,600.00	9,038.99	18,478.77	8,871.01	158.99	158.92	84.18	9,571.17	1,587.68	1,919.47	1,602.89	316.58	6.063			
18,700.00	9,039.14	18,578.77	8,870.85	160.61	160.55	84.18	9,671.17	1,587.03	1,919.50	1,599.68	319.82	6.002			
18,800.00	9,039.29	18,678.77	8,870.70	162.24	162.18	84.17	9,771.17	1,586.39	1,919.53	1,596.47	323.06	5.942			
18,900.00	9,039.44	18,778.77	8,870.55	163.87	163.81	84.16	9,871.16	1,585.75	1,919.56	1,593.26	326.30	5.883			
19,000.00	9,039.60	18,878.77	8,870.40	165.50	165.44	84.15	9,971.16	1,585.11	1,919.59	1,590.05	329.54	5.825			
19,100.00	9,039.75	18,978.77	8,870.25	167.13	167.06	84.14	10,071.16	1,584.46	1,919.62	1,586.84	332.78	5.768			
19,200.00	9,039.90	19,078.77	8,870.10	168.76	168.69	84.13	10,171.16	1,583.82	1,919.65	1,583.63	336.02	5.713			
19,300.00	9,039.90	19,078.77	8,870.10	168.76	168.69	84.13	10,171.16	1,583.82	1,919.65	1,583.63	336.02	5.713			
19,267.22	9,040.00	19,142.98	8,870.00	169.60	169.74	84.12	10,235.36	1,583.41	1,919.67	1,581.77	337.90	5.681 SF			

# LEAM Drilling Services

## Anticollision Report

<b>Company:</b>	Devon Energy	<b>Local Co-ordinate Reference:</b>	Well Belloq 11-2 Fed State Com 521H
<b>Project:</b>	Eddy County, NM (NAD-83)	<b>TVD Reference:</b>	3430' GE + 23.5' KB @ 3453.50usft
<b>Reference Site:</b>	Belloq 11-2 Fed State Com	<b>MD Reference:</b>	3430' GE + 23.5' KB @ 3453.50usft
<b>Site Error:</b>	0.00 usft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	Belloq 11-2 Fed State Com 521H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.00 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	OH	<b>Database:</b>	EDM 5000.1 Multi User Db
<b>Reference Design:</b>	Plan #2	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design													Offset Site Error:	0.00 usft
Survey Program: 0-LEAM MWD+HDGM													Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Distance		Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)						
0.00	0.00	25.60	25.60	0.00	0.02	89.86	3.08	1,219.77	1,219.77					
100.00	100.00	125.60	125.60	0.09	0.14	89.86	3.08	1,219.77	1,219.77	1,219.54	0.23	5,315.235		
200.00	200.00	225.60	225.60	0.31	0.37	89.86	3.08	1,219.77	1,219.77	1,219.09	0.68	1,796.378		
300.00	300.00	325.60	325.60	0.54	0.59	89.86	3.08	1,219.77	1,219.77	1,218.65	1.13	1,080.832		
400.00	400.00	425.60	425.60	0.76	0.82	89.86	3.08	1,219.77	1,219.77	1,218.20	1.58	772.947		
500.00	500.00	525.60	525.60	0.99	1.04	89.86	3.08	1,219.77	1,219.77	1,217.75	2.03	601.581		
600.00	600.00	625.60	625.60	1.21	1.27	89.86	3.08	1,219.77	1,219.77	1,217.30	2.48	492.411		
700.00	700.00	725.60	725.60	1.43	1.49	89.86	3.08	1,219.77	1,219.77	1,216.85	2.93	416.778		
800.00	800.00	825.60	825.60	1.66	1.72	89.86	3.08	1,219.77	1,219.77	1,216.40	3.38	361.285		
900.00	900.00	925.60	925.60	1.88	1.94	89.86	3.08	1,219.77	1,219.77	1,215.95	3.83	318.833		
1,000.00	1,000.00	1,025.60	1,025.60	2.11	2.17	89.86	3.08	1,219.77	1,219.77	1,215.50	4.28	285.309		
1,100.00	1,100.00	1,125.60	1,125.60	2.33	2.39	89.86	3.08	1,219.77	1,219.77	1,215.05	4.72	258.164		
1,200.00	1,200.00	1,225.60	1,225.60	2.56	2.62	89.86	3.08	1,219.77	1,219.77	1,214.60	5.17	235.735		
1,300.00	1,300.00	1,325.60	1,325.60	2.78	2.84	89.86	3.08	1,219.77	1,219.77	1,214.15	5.62	216.892		
1,400.00	1,400.00	1,425.60	1,425.60	3.01	3.07	89.86	3.08	1,219.77	1,219.77	1,213.70	6.07	200.839		
1,500.00	1,500.00	1,525.60	1,525.60	3.23	3.29	89.86	3.08	1,219.77	1,219.77	1,213.25	6.52	186.998		
1,600.00	1,600.00	1,625.60	1,625.60	3.46	3.52	89.86	3.08	1,219.77	1,219.77	1,212.80	6.97	174.942		
1,700.00	1,700.00	1,725.60	1,725.60	3.68	3.74	89.86	3.08	1,219.77	1,219.77	1,212.35	7.42	164.346		
1,800.00	1,800.00	1,825.60	1,825.60	3.91	3.96	89.86	3.08	1,219.77	1,219.77	1,211.90	7.87	154.960		
1,900.00	1,900.00	1,925.60	1,925.60	4.13	4.19	89.86	3.08	1,219.77	1,219.77	1,211.45	8.32	146.589		
2,000.00	2,000.00	2,025.60	2,025.60	4.36	4.41	89.86	3.08	1,219.77	1,219.77	1,211.00	8.77	139.075 CC		
2,100.00	2,099.99	2,125.59	2,125.59	4.56	4.64	-136.18	3.08	1,219.77	1,220.40	1,211.21	9.20	132.719		
2,200.00	2,199.96	2,225.56	2,225.56	4.74	4.86	-136.25	3.08	1,219.77	1,222.29	1,212.70	9.60	127.340		
2,300.00	2,299.86	2,325.46	2,325.46	4.92	5.09	-136.37	3.08	1,219.77	1,225.45	1,215.44	10.01	122.473		
2,400.00	2,399.68	2,425.28	2,425.28	5.11	5.31	-136.55	3.08	1,219.77	1,229.84	1,219.42	10.42	118.057		
2,500.00	2,499.47	2,529.02	2,529.02	5.31	5.54	-136.76	3.02	1,219.72	1,234.55	1,223.72	10.83	113.957		
2,600.00	2,599.25	2,644.69	2,644.67	5.50	5.76	-136.94	1.65	1,218.64	1,238.36	1,227.12	11.25	110.116		
2,700.00	2,699.04	2,760.54	2,760.45	5.71	5.96	-137.03	-1.56	1,216.09	1,240.90	1,229.25	11.65	106.550		
2,800.00	2,798.82	2,875.24	2,874.97	5.91	6.17	-137.04	-6.54	1,212.15	1,242.16	1,230.11	12.05	103.079		
2,900.00	2,898.61	2,975.24	2,974.76	6.12	6.36	-137.01	-11.57	1,208.17	1,242.87	1,230.43	12.44	99.907		
3,000.00	2,998.40	3,075.23	3,074.55	6.34	6.55	-136.99	-16.59	1,204.19	1,243.58	1,230.74	12.84	96.883		
3,100.00	3,098.18	3,175.23	3,174.35	6.55	6.75	-136.97	-21.62	1,200.21	1,244.29	1,231.06	13.24	93.999		
3,200.00	3,197.97	3,275.23	3,274.14	6.77	6.95	-136.94	-26.64	1,196.23	1,245.01	1,231.36	13.64	91.248		
3,300.00	3,297.76	3,375.22	3,373.93	6.99	7.15	-136.92	-31.66	1,192.25	1,245.72	1,231.66	14.06	88.627		
3,400.00	3,397.54	3,475.22	3,473.72	7.21	7.35	-136.90	-36.69	1,188.27	1,246.43	1,231.96	14.47	86.128		
3,500.00	3,497.33	3,575.21	3,573.51	7.44	7.56	-136.88	-41.71	1,184.30	1,247.14	1,232.25	14.89	83.746		
3,600.00	3,597.12	3,675.21	3,673.30	7.66	7.77	-136.85	-46.73	1,180.32	1,247.86	1,232.54	15.32	81.474		
3,700.00	3,696.90	3,775.21	3,773.09	7.89	7.98	-136.83	-51.76	1,176.34	1,248.57	1,232.83	15.74	79.308		
3,800.00	3,796.69	3,875.20	3,872.88	8.12	8.20	-136.81	-56.78	1,172.36	1,249.28	1,233.11	16.17	77.241		
3,900.00	3,896.48	3,975.20	3,972.67	8.35	8.41	-136.78	-61.81	1,168.38	1,250.00	1,233.39	16.61	75.268		
4,000.00	3,896.26	4,075.20	4,072.46	8.58	8.63	-136.76	-66.83	1,164.40	1,250.71	1,233.67	17.04	73.384		
4,100.00	4,096.05	4,175.19	4,172.25	8.81	8.85	-136.74	-71.85	1,160.42	1,251.43	1,233.94	17.48	71.583		
4,200.00	4,195.84	4,275.19	4,272.04	9.05	9.07	-136.72	-76.88	1,156.44	1,252.14	1,234.22	17.92	69.862		
4,300.00	4,295.62	4,375.18	4,371.83	9.28	9.30	-136.69	-81.90	1,152.47	1,252.85	1,234.49	18.37	68.215		
4,400.00	4,395.41	4,475.18	4,471.62	9.51	9.52	-136.67	-86.92	1,148.49	1,253.57	1,234.76	18.81	66.638		
4,500.00	4,495.19	4,575.18	4,571.41	9.75	9.75	-136.65	-91.95	1,144.51	1,254.28	1,235.03	19.26	65.128		
4,600.00	4,594.98	4,675.17	4,671.20	9.99	9.97	-136.63	-96.97	1,140.53	1,255.00	1,235.29	19.71	63.681		
4,700.00	4,694.77	4,775.17	4,771.00	10.22	10.20	-136.60	-102.00	1,136.55	1,255.72	1,235.56	20.16	62.293		
4,800.00	4,794.55	4,875.17	4,870.79	10.46	10.43	-136.58	-107.02	1,132.57	1,256.43	1,235.82	20.61	60.962		
4,900.00	4,894.34	4,975.16	4,970.58	10.70	10.66	-136.56	-112.04	1,128.59	1,257.15	1,236.08	21.06	59.683		
5,000.00	4,994.13	5,075.16	5,070.37	10.94	10.89	-136.54	-117.07	1,124.61	1,257.86	1,236.34	21.52	58.455		
5,100.00	5,093.91	5,175.15	5,170.16	11.18	11.12	-136.51	-122.09	1,120.63	1,258.58	1,236.60	21.97	57.274		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

# LEAM Drilling Services

## Anticollision Report

<b>Company:</b>	Devon Energy	<b>Local Co-ordinate Reference:</b>	Well Belloq 11-2 Fed State Com 521H
<b>Project:</b>	Eddy County, NM (NAD-83)	<b>TVD Reference:</b>	3430' GE + 23.5' KB @ 3453.50usft
<b>Reference Site:</b>	Belloq 11-2 Fed State Com	<b>MD Reference:</b>	3430' GE + 23.5' KB @ 3453.50usft
<b>Site Error:</b>	0.00 usft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	Belloq 11-2 Fed State Com 521H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.00 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	OH	<b>Database:</b>	EDM 5000.1 Multi User Db
<b>Reference Design:</b>	Plan #2	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design										Belloq 11-2 Fed State Com - Belloq 11-2 Fed State Com 522H - OH - Plan #2				Offset Site Error: 0.00 usft	
Survey Program: 0-LEAM MWD+HDGM														Offset Well Error: 0.00 usft	
Reference		Offset		Semi Major Axis			Distance								
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning		
5,200.00	5,193.70	5,275.15	5,269.95	11.42	11.35	-136.49	-127.11	1,116.66	1,259.30	1,236.86	22.43	56.139			
5,300.00	5,293.49	5,375.15	5,369.74	11.66	11.59	-136.47	-132.14	1,112.68	1,260.01	1,237.12	22.89	55.046			
5,400.00	5,393.27	5,475.14	5,469.53	11.90	11.82	-136.45	-137.16	1,108.70	1,260.73	1,237.38	23.35	53.993			
5,500.00	5,493.06	5,575.14	5,569.32	12.14	12.06	-136.42	-142.19	1,104.72	1,261.45	1,237.63	23.81	52.979			
5,600.00	5,592.85	5,675.13	5,669.11	12.38	12.29	-136.40	-147.21	1,100.74	1,262.16	1,237.89	24.27	52.001			
5,700.00	5,692.63	5,775.13	5,768.90	12.63	12.53	-136.38	-152.23	1,096.76	1,262.88	1,238.15	24.73	51.058			
5,800.00	5,792.42	5,875.13	5,868.69	12.87	12.76	-136.36	-157.26	1,092.78	1,263.60	1,238.40	25.20	50.148			
5,900.00	5,892.21	5,975.12	5,968.48	13.11	13.00	-136.33	-162.28	1,088.80	1,264.31	1,238.65	25.66	49.269			
6,000.00	5,991.99	6,075.12	6,068.27	13.35	13.24	-136.31	-167.30	1,084.83	1,265.03	1,238.91	26.13	48.420			
6,100.00	6,091.78	6,175.12	6,168.06	13.60	13.47	-136.29	-172.33	1,080.85	1,265.75	1,239.16	26.59	47.600			
6,200.00	6,191.57	6,275.11	6,267.86	13.84	13.71	-136.27	-177.35	1,076.87	1,266.47	1,239.41	27.06	46.806			
6,300.00	6,291.35	6,375.11	6,367.65	14.08	13.95	-136.24	-182.38	1,072.89	1,267.19	1,239.66	27.52	46.038			
6,400.00	6,391.14	6,475.10	6,467.44	14.33	14.19	-136.22	-187.40	1,068.91	1,267.91	1,239.91	27.99	45.295			
6,500.00	6,490.92	6,575.10	6,567.23	14.57	14.43	-136.20	-192.42	1,064.93	1,268.63	1,240.16	28.46	44.576			
6,600.00	6,590.71	6,675.10	6,667.02	14.82	14.67	-136.18	-197.45	1,060.95	1,269.34	1,240.42	28.93	43.878			
6,700.00	6,690.50	6,775.09	6,766.81	15.06	14.91	-136.16	-202.47	1,056.97	1,270.06	1,240.67	29.40	43.202			
6,800.00	6,790.28	6,875.09	6,866.60	15.31	15.15	-136.13	-207.49	1,053.00	1,270.78	1,240.92	29.87	42.547			
6,900.00	6,890.07	6,975.09	6,966.39	15.55	15.39	-136.11	-212.52	1,049.02	1,271.50	1,241.16	30.34	41.911			
7,000.00	6,989.86	7,075.08	7,066.18	15.80	15.63	-136.09	-217.54	1,045.04	1,272.22	1,241.41	30.81	41.295			
7,100.00	7,089.64	7,175.08	7,165.97	16.04	15.87	-136.07	-222.57	1,041.06	1,272.94	1,241.66	31.28	40.696			
7,200.00	7,189.43	7,275.07	7,265.76	16.29	16.11	-136.05	-227.59	1,037.08	1,273.66	1,241.91	31.75	40.114			
7,300.00	7,289.22	7,375.07	7,365.55	16.53	16.35	-136.02	-232.61	1,033.10	1,274.38	1,242.16	32.22	39.549			
7,400.00	7,389.00	7,475.07	7,465.34	16.78	16.60	-136.00	-237.64	1,029.12	1,275.10	1,242.41	32.70	38.999			
7,500.00	7,488.79	7,563.04	7,553.17	17.03	16.78	-136.01	-241.54	1,026.03	1,276.29	1,243.18	33.11	38.544			
7,600.00	7,588.62	7,650.86	7,640.92	17.25	16.95	-136.05	-244.38	1,023.78	1,277.93	1,244.44	33.50	38.148			
7,700.00	7,688.53	7,738.66	7,728.69	17.44	17.12	-136.09	-246.17	1,022.37	1,279.28	1,245.43	33.85	37.788			
7,800.00	7,788.50	7,826.45	7,816.48	17.62	17.29	-136.13	-246.90	1,021.79	1,280.33	1,246.13	34.20	37.433			
7,900.00	7,888.50	7,924.08	7,914.10	17.81	17.48	89.86	-246.92	1,021.77	1,280.77	1,246.18	34.59	37.028			
8,000.00	7,988.50	8,024.08	8,014.10	18.00	17.67	89.86	-246.92	1,021.77	1,280.77	1,245.80	34.97	36.620			
8,100.00	8,088.50	8,124.08	8,114.10	18.19	17.86	89.86	-246.92	1,021.77	1,280.77	1,245.41	35.36	36.220			
8,200.00	8,188.50	8,224.08	8,214.10	18.38	18.06	89.86	-246.92	1,021.77	1,280.77	1,245.02	35.75	35.827			
8,300.00	8,288.50	8,324.08	8,314.10	18.57	18.25	89.86	-246.92	1,021.77	1,280.77	1,244.64	36.14	35.441			
8,400.00	8,388.50	8,424.08	8,414.10	18.76	18.45	89.86	-246.92	1,021.77	1,280.77	1,244.24	36.53	35.061			
8,500.00	8,488.47	8,524.45	8,514.43	18.94	18.64	90.21	-245.35	1,021.76	1,280.77	1,243.86	36.91	34.697			
8,600.00	8,587.21	8,625.20	8,613.74	19.10	18.80	90.16	-229.12	1,021.65	1,280.77	1,243.54	37.22	34.408			
8,700.00	8,681.84	8,725.74	8,708.48	19.21	18.92	90.11	-195.86	1,021.44	1,280.76	1,243.31	37.45	34.196			
8,800.00	8,769.49	8,826.06	8,795.78	19.30	19.01	90.05	-146.70	1,021.12	1,280.75	1,243.11	37.64	34.023			
8,900.00	8,847.49	8,926.15	8,873.01	19.35	19.07	89.99	-83.24	1,020.71	1,280.75	1,242.90	37.85	33.839			
9,000.00	8,913.48	9,026.00	8,937.90	19.39	19.14	89.93	-7.51	1,020.21	1,280.74	1,242.61	38.13	33.589			
9,100.00	8,965.45	9,125.63	8,988.58	19.43	19.24	89.88	78.11	1,019.66	1,280.74	1,242.19	38.55	33.223			
9,200.00	9,001.82	9,225.04	9,023.63	19.63	19.53	89.82	171.01	1,019.05	1,280.73	1,241.58	39.15	32.714			
9,300.00	9,021.48	9,324.26	9,042.09	20.05	19.95	89.78	268.37	1,018.42	1,280.73	1,240.77	39.95	32.057			
9,400.00	9,025.05	9,423.73	9,045.07	20.57	20.47	89.75	367.74	1,017.77	1,280.72	1,239.76	40.96	31.266			
9,500.00	9,025.21	9,523.73	9,045.22	21.20	21.10	89.75	467.74	1,017.12	1,280.71	1,238.52	42.19	30.357			
9,600.00	9,025.36	9,623.73	9,045.38	21.93	21.83	89.75	567.73	1,016.47	1,280.70	1,237.08	43.63	29.356			
9,700.00	9,025.51	9,723.73	9,045.54	22.75	22.66	89.75	667.73	1,015.82	1,280.69	1,235.43	45.26	28.297			
9,800.00	9,025.66	9,823.73	9,045.70	23.66	23.57	89.75	767.73	1,015.17	1,280.68	1,233.62	47.06	27.213			
9,900.00	9,025.81	9,923.73	9,045.86	24.63	24.55	89.75	867.73	1,014.52	1,280.68	1,231.66	49.02	26.126			
10,000.00	9,025.96	10,023.73	9,046.02	25.68	25.60	89.75	967.72	1,013.87	1,280.67	1,229.55	51.11	25.056			
10,100.00	9,026.11	10,123.73	9,046.18	26.78	26.71	89.75	1,067.72	1,013.22	1,280.66	1,227.33	53.32	24.016			
10,200.00	9,026.27	10,223.73	9,046.34	27.94	27.87	89.75	1,167.72	1,012.57	1,280.65	1,225.01	55.64	23.016			
10,300.00	9,026.42	10,323.73	9,046.50	29.14	29.08	89.75	1,267.72	1,011.92	1,280.64	1,222.59	58.05	22.060			

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

# LEAM Drilling Services

## Anticollision Report

<b>Company:</b>	Devon Energy	<b>Local Co-ordinate Reference:</b>	Well Belloq 11-2 Fed State Com 521H
<b>Project:</b>	Eddy County, NM (NAD-83)	<b>TVD Reference:</b>	3430' GE + 23.5' KB @ 3453.50usft
<b>Reference Site:</b>	Belloq 11-2 Fed State Com	<b>MD Reference:</b>	3430' GE + 23.5' KB @ 3453.50usft
<b>Site Error:</b>	0.00 usft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	Belloq 11-2 Fed State Com 521H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.00 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	OH	<b>Database:</b>	EDM 5000.1 Multi User Db
<b>Reference Design:</b>	Plan #2	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design: Belloq 11-2 Fed State Com - Belloq 11-2 Fed State Com 522H - OH - Plan #2													Offset Site Error:	0.00 usft
Survey Program: O-LEAM MWD+HDGM													Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Distance		Minimum Separation (usft)	Separation Factor	Warning			
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)						
10,400.00	9,026.57	10,423.73	9,046.66	30.38	30.33	89.75	1,367.72	1,011.27	1,280.63	1,220.08	60.55	21.152		
10,500.00	9,026.72	10,523.73	9,046.82	31.66	31.61	89.75	1,467.71	1,010.62	1,280.62	1,217.51	63.11	20.292		
10,600.00	9,026.87	10,623.73	9,046.97	32.97	32.93	89.75	1,567.71	1,009.97	1,280.61	1,214.87	65.74	19.480		
10,700.00	9,027.02	10,723.73	9,047.13	34.31	34.27	89.75	1,667.71	1,009.32	1,280.60	1,212.18	68.42	18.716		
10,800.00	9,027.17	10,823.73	9,047.29	35.67	35.64	89.75	1,767.71	1,008.67	1,280.59	1,209.44	71.16	17.997		
10,900.00	9,027.33	10,923.73	9,047.45	37.06	37.03	89.76	1,867.70	1,008.02	1,280.59	1,206.65	73.94	17.320		
11,000.00	9,027.48	11,023.73	9,047.61	38.46	38.44	89.76	1,967.70	1,007.37	1,280.58	1,203.82	76.75	16.684		
11,100.00	9,027.63	11,123.73	9,047.77	39.89	39.86	89.76	2,067.70	1,006.72	1,280.57	1,200.96	79.61	16.086		
11,200.00	9,027.78	11,223.73	9,047.93	41.33	41.31	89.76	2,167.70	1,006.07	1,280.56	1,198.06	82.49	15.523		
11,300.00	9,027.93	11,323.73	9,048.09	42.78	42.76	89.76	2,267.69	1,005.42	1,280.55	1,195.14	85.41	14.993		
11,400.00	9,028.08	11,423.73	9,048.25	44.25	44.23	89.76	2,367.69	1,004.77	1,280.54	1,192.19	88.35	14.494		
11,500.00	9,028.23	11,523.73	9,048.41	45.72	45.72	89.76	2,467.69	1,004.12	1,280.53	1,189.22	91.31	14.024		
11,600.00	9,028.39	11,623.73	9,048.57	47.21	47.21	89.76	2,567.69	1,003.47	1,280.52	1,186.23	94.29	13.580		
11,700.00	9,028.54	11,723.73	9,048.73	48.71	48.71	89.76	2,667.69	1,002.82	1,280.51	1,183.22	97.30	13.161		
11,800.00	9,028.69	11,823.73	9,048.88	50.22	50.22	89.76	2,767.68	1,002.17	1,280.50	1,180.19	100.32	12.765		
11,900.00	9,028.84	11,923.73	9,049.04	51.73	51.74	89.76	2,867.68	1,001.52	1,280.50	1,177.14	103.35	12.390		
12,000.00	9,028.99	12,023.73	9,049.20	53.26	53.26	89.76	2,967.68	1,000.87	1,280.49	1,174.08	106.40	12.034		
12,100.00	9,029.14	12,123.73	9,049.36	54.79	54.79	89.76	3,067.68	1,000.22	1,280.48	1,171.01	109.47	11.697		
12,200.00	9,029.30	12,223.73	9,049.52	56.32	56.33	89.76	3,167.67	999.57	1,280.47	1,167.93	112.54	11.378		
12,300.00	9,029.45	12,323.73	9,049.68	57.86	57.87	89.76	3,267.67	998.92	1,280.46	1,164.83	115.63	11.074		
12,400.00	9,029.60	12,423.73	9,049.84	59.41	59.42	89.76	3,367.67	998.27	1,280.45	1,161.72	118.73	10.785		
12,500.00	9,029.75	12,523.73	9,050.00	60.96	60.98	89.76	3,467.67	997.62	1,280.44	1,158.61	121.83	10.510		
12,600.00	9,029.90	12,623.73	9,050.16	62.52	62.53	89.76	3,567.67	996.97	1,280.43	1,155.48	124.95	10.248		
12,700.00	9,030.05	12,723.73	9,050.32	64.08	64.10	89.76	3,667.66	996.32	1,280.42	1,152.35	128.07	9.998		
12,800.00	9,030.20	12,823.73	9,050.48	65.64	65.66	89.76	3,767.66	995.67	1,280.41	1,149.21	131.20	9.759		
12,900.00	9,030.36	12,923.73	9,050.64	67.21	67.23	89.76	3,867.66	995.02	1,280.40	1,146.06	134.34	9.531		
13,000.00	9,030.51	13,023.73	9,050.79	68.78	68.80	89.76	3,967.66	994.37	1,280.40	1,142.91	137.49	9.313		
13,100.00	9,030.66	13,123.73	9,050.95	70.35	70.38	89.76	4,067.65	993.72	1,280.39	1,139.75	140.64	9.104		
13,200.00	9,030.81	13,223.73	9,051.11	71.93	71.96	89.76	4,167.65	993.07	1,280.38	1,136.58	143.80	8.904		
13,300.00	9,030.96	13,323.73	9,051.27	73.51	73.54	89.76	4,267.65	992.42	1,280.37	1,133.41	146.96	8.712		
13,400.00	9,031.11	13,423.73	9,051.43	75.09	75.12	89.76	4,367.65	991.77	1,280.36	1,130.23	150.13	8.529		
13,500.00	9,031.26	13,523.73	9,051.59	76.68	76.71	89.76	4,467.65	991.12	1,280.35	1,127.05	153.30	8.352		
13,600.00	9,031.42	13,623.73	9,051.75	78.27	78.29	89.76	4,567.64	990.47	1,280.34	1,123.87	156.48	8.182		
13,700.00	9,031.57	13,723.73	9,051.91	79.85	79.89	89.76	4,667.64	989.82	1,280.33	1,120.68	159.66	8.019		
13,800.00	9,031.72	13,823.73	9,052.07	81.45	81.48	89.76	4,767.64	989.17	1,280.32	1,117.48	162.84	7.862		
13,900.00	9,031.87	13,923.73	9,052.23	83.04	83.07	89.77	4,867.64	988.52	1,280.31	1,114.29	166.03	7.711		
14,000.00	9,032.02	14,023.73	9,052.39	84.63	84.67	89.77	4,967.63	987.87	1,280.31	1,111.08	169.22	7.566		
14,100.00	9,032.17	14,123.73	9,052.54	86.23	86.26	89.77	5,067.63	987.22	1,280.30	1,107.88	172.42	7.426		
14,200.00	9,032.32	14,223.73	9,052.70	87.83	87.86	89.77	5,167.63	986.57	1,280.29	1,104.67	175.61	7.290		
14,300.00	9,032.48	14,323.73	9,052.86	89.43	89.46	89.77	5,267.63	985.92	1,280.28	1,101.46	178.82	7.160		
14,400.00	9,032.63	14,423.73	9,053.02	91.03	91.07	89.77	5,367.63	985.27	1,280.27	1,098.25	182.02	7.034		
14,500.00	9,032.78	14,523.73	9,053.18	92.63	92.67	89.77	5,467.62	984.62	1,280.26	1,095.03	185.23	6.912		
14,600.00	9,032.93	14,623.73	9,053.34	94.23	94.27	89.77	5,567.62	983.97	1,280.25	1,091.82	188.44	6.794		
14,700.00	9,033.08	14,723.73	9,053.50	95.84	95.88	89.77	5,667.62	983.32	1,280.24	1,088.60	191.65	6.680		
14,800.00	9,033.23	14,823.73	9,053.66	97.45	97.49	89.77	5,767.62	982.67	1,280.23	1,085.37	194.86	6.570		
14,900.00	9,033.38	14,923.73	9,053.82	99.05	99.09	89.77	5,867.61	982.02	1,280.22	1,082.15	198.08	6.463		
15,000.00	9,033.54	15,023.73	9,053.98	100.66	100.70	89.77	5,967.61	981.37	1,280.22	1,078.92	201.30	6.360		
15,100.00	9,033.69	15,123.73	9,054.14	102.27	102.31	89.77	6,067.61	980.72	1,280.21	1,075.69	204.52	6.260		
15,200.00	9,033.84	15,223.73	9,054.30	103.88	103.92	89.77	6,167.61	980.07	1,280.20	1,072.46	207.74	6.163		
15,300.00	9,033.99	15,323.73	9,054.45	105.49	105.54	89.77	6,267.61	979.42	1,280.19	1,069.23	210.96	6.068		
15,400.00	9,034.14	15,423.73	9,054.61	107.10	107.15	89.77	6,367.60	978.77	1,280.18	1,065.99	214.19	5.977		
15,500.00	9,034.29	15,523.73	9,054.77	108.72	108.76	89.77	6,467.60	978.12	1,280.17	1,062.76	217.41	5.888		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

# LEAM Drilling Services

## Anticollision Report

<b>Company:</b>	Devon Energy	<b>Local Co-ordinate Reference:</b>	Well Belloq 11-2 Fed.State Com 521H
<b>Project:</b>	Eddy County, NM (NAD-83)	<b>TVD Reference:</b>	3430' GE + 23.5' KB @ 3453.50usft
<b>Reference Site:</b>	Belloq 11-2 Fed State Com	<b>MD Reference:</b>	3430' GE + 23.5' KB @ 3453.50usft
<b>Site Error:</b>	0.00 usft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	Belloq 11-2 Fed State Com 521H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.00 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	OH	<b>Database:</b>	EDM 5000.1 Multi User Db
<b>Reference Design:</b>	Plan #2	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design														Offset Site Error:	0.00 usft
Belloq 11-2 Fed State Com - Belloq 11-2 Fed State Com 522H - OH - Plan #2														Offset Well Error:	0.00 usft
Survey Program: 0-LEAM MWD+HDGM															
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre		Distance		Minimum Separation (usft)	Separation Factor	Warning		
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)					
15,600.00	9,034.45	15,623.73	9,054.93	110.33	110.38	89.77	6,567.60	977.47	1,280.16	1,059.52	220.64	5.802			
15,700.00	9,034.60	15,723.73	9,055.09	111.94	111.99	89.77	6,667.60	976.82	1,280.15	1,056.28	223.87	5.718			
15,800.00	9,034.75	15,823.73	9,055.25	113.56	113.61	89.77	6,767.59	976.17	1,280.14	1,053.04	227.10	5.637			
15,900.00	9,034.90	15,923.73	9,055.41	115.18	115.22	89.77	6,867.59	975.52	1,280.13	1,049.80	230.34	5.558			
16,000.00	9,035.05	16,023.73	9,055.57	116.79	116.84	89.77	6,967.59	974.87	1,280.13	1,046.55	233.57	5.481			
16,100.00	9,035.20	16,123.73	9,055.73	118.41	118.46	89.77	7,067.59	974.22	1,280.12	1,043.31	236.81	5.406			
16,200.00	9,035.35	16,223.73	9,055.89	120.03	120.08	89.77	7,167.59	973.57	1,280.11	1,040.06	240.04	5.333			
16,300.00	9,035.51	16,323.73	9,056.05	121.64	121.69	89.77	7,267.58	972.92	1,280.10	1,036.82	243.28	5.262			
16,400.00	9,035.66	16,423.73	9,056.20	123.26	123.31	89.77	7,367.58	972.27	1,280.09	1,033.57	246.52	5.193			
16,500.00	9,035.81	16,523.73	9,056.36	124.88	124.93	89.77	7,467.58	971.62	1,280.08	1,030.32	249.76	5.125			
16,600.00	9,035.96	16,623.73	9,056.52	126.50	126.55	89.77	7,567.58	970.97	1,280.07	1,027.07	253.00	5.060			
16,700.00	9,036.11	16,723.73	9,056.68	128.12	128.17	89.77	7,667.57	970.32	1,280.06	1,023.82	256.24	4.996			
16,800.00	9,036.26	16,823.73	9,056.84	129.74	129.80	89.78	7,767.57	969.67	1,280.05	1,020.57	259.48	4.933			
16,900.00	9,036.41	16,923.73	9,057.00	131.37	131.42	89.78	7,867.57	969.02	1,280.04	1,017.32	262.73	4.872			
17,000.00	9,036.57	17,023.73	9,057.16	132.99	133.04	89.78	7,967.57	968.37	1,280.04	1,014.06	265.97	4.813			
17,100.00	9,036.72	17,123.73	9,057.32	134.61	134.66	89.78	8,067.57	967.72	1,280.03	1,010.81	269.22	4.755			
17,200.00	9,036.87	17,223.73	9,057.48	136.23	136.29	89.78	8,167.56	967.07	1,280.02	1,007.55	272.47	4.698			
17,300.00	9,037.02	17,323.73	9,057.64	137.86	137.91	89.78	8,267.56	966.42	1,280.01	1,004.30	275.71	4.643			
17,400.00	9,037.17	17,423.73	9,057.80	139.48	139.53	89.78	8,367.56	965.77	1,280.00	1,001.04	278.96	4.588			
17,500.00	9,037.32	17,523.73	9,057.96	141.10	141.16	89.78	8,467.56	965.12	1,279.99	997.78	282.21	4.536			
17,600.00	9,037.47	17,623.73	9,058.11	142.73	142.78	89.78	8,567.55	964.47	1,279.98	994.52	285.46	4.484			
17,700.00	9,037.63	17,723.73	9,058.27	144.35	144.41	89.78	8,667.55	963.82	1,279.97	991.26	288.71	4.433			
17,800.00	9,037.78	17,823.73	9,058.43	145.98	146.03	89.78	8,767.55	963.17	1,279.96	988.00	291.96	4.384			
17,900.00	9,037.93	17,923.73	9,058.59	147.60	147.66	89.78	8,867.55	962.52	1,279.95	984.74	295.21	4.336			
18,000.00	9,038.08	18,023.73	9,058.75	149.23	149.28	89.78	8,967.55	961.87	1,279.95	981.48	298.46	4.288			
18,100.00	9,038.23	18,123.73	9,058.91	150.85	150.91	89.78	9,067.54	961.22	1,279.94	978.22	301.71	4.242			
18,200.00	9,038.38	18,223.73	9,059.07	152.48	152.54	89.78	9,167.54	960.57	1,279.93	974.96	304.97	4.197			
18,300.00	9,038.54	18,323.73	9,059.23	154.11	154.16	89.78	9,267.54	959.92	1,279.92	971.70	308.22	4.153			
18,400.00	9,038.69	18,423.73	9,059.39	155.73	155.79	89.78	9,367.54	959.27	1,279.91	968.43	311.48	4.109			
18,500.00	9,038.84	18,523.73	9,059.55	157.36	157.42	89.78	9,467.53	958.62	1,279.90	965.17	314.73	4.067			
18,600.00	9,038.99	18,623.73	9,059.71	158.99	159.05	89.78	9,567.53	957.97	1,279.89	961.91	317.99	4.025			
18,700.00	9,039.14	18,723.73	9,059.87	160.61	160.67	89.78	9,667.53	957.32	1,279.88	958.64	321.24	3.984			
18,785.16	9,039.27	18,808.61	9,060.00	162.00	162.06	89.78	9,752.41	956.77	1,279.87	955.87	324.01	3.950			
18,800.00	9,039.29	18,808.61	9,060.00	162.24	162.06	89.78	9,752.41	956.77	1,279.96	955.79	324.17	3.948 ES, SF			
18,900.00	9,039.44	18,808.61	9,060.00	163.87	162.06	89.78	9,752.41	956.77	1,285.03	960.87	324.16	3.964			
19,000.00	9,039.60	18,808.61	9,060.00	165.50	162.06	89.78	9,752.41	956.77	1,297.81	975.53	322.28	4.027			
19,100.00	9,039.75	18,808.61	9,060.00	167.13	162.06	89.78	9,752.41	956.77	1,318.07	999.41	318.66	4.136			
19,200.00	9,039.90	18,808.61	9,060.00	168.76	162.06	89.78	9,752.41	956.77	1,345.48	1,031.95	313.53	4.291			
19,267.22	9,040.00	18,808.61	9,060.00	169.60	162.06	89.78	9,752.41	956.77	1,367.70	1,058.51	309.19	4.423			

# LEAM Drilling Services

## Anticollision Report

<b>Company:</b>	Devon Energy	<b>Local Co-ordinate Reference:</b>	Well Belloq 11-2 Fed State Com 521H
<b>Project:</b>	Eddy County, NM (NAD-83)	<b>TVD Reference:</b>	3430' GE + 23.5' KB @ 3453.50usft
<b>Reference Site:</b>	Belloq 11-2 Fed State Com	<b>MD Reference:</b>	3430' GE + 23.5' KB @ 3453.50usft
<b>Site Error:</b>	0.00 usft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	Belloq 11-2 Fed State Com 521H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.00 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	OH	<b>Database:</b>	EDM 5000.1 Multi User Db
<b>Reference Design:</b>	Plan #2	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design													Belloq 2 State - 2H - OH - OH		Offset Site Error: 0.00 usft	
Survey Program: 225-MWD-ISCWSA, 771-LEAM MWD+HDGM, 16141-Project													Offset Well Error: 0.00 usft			
Reference		Offset		Semi Major Axis		Highside Toolface (*)	Offset Wellbore Centre		Distance		Minimum Separation (usft)	Separation Factor	Warning			
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)						
17,700.00	9,037.63	9,053.58	9,051.48	144.35	17.57	90.43	10,057.66	1,023.23	1,936.39	1,814.77	121.61	15.922				
17,800.00	9,037.78	9,054.74	9,052.64	145.98	17.58	90.48	10,057.66	1,023.21	1,865.91	1,739.56	126.35	14.768				
17,900.00	9,037.93	9,055.86	9,053.76	147.60	17.58	90.52	10,057.67	1,023.19	1,798.24	1,666.94	131.30	13.696				
18,000.00	9,038.08	9,056.95	9,054.85	149.23	17.58	90.57	10,057.68	1,023.17	1,733.69	1,597.26	136.43	12.707				
18,100.00	9,038.23	9,058.01	9,055.91	150.85	17.58	90.62	10,057.69	1,023.15	1,672.63	1,530.91	141.73	11.802				
18,200.00	9,038.38	9,059.03	9,056.93	152.48	17.58	90.66	10,057.69	1,023.14	1,615.47	1,468.34	147.13	10.980				
18,300.00	9,038.54	9,060.03	9,057.93	154.11	17.59	90.70	10,057.70	1,023.12	1,562.61	1,410.04	152.57	10.242				
18,400.00	9,038.69	9,061.00	9,058.89	155.73	17.59	90.74	10,057.71	1,023.10	1,514.52	1,356.55	157.97	9.587				
18,500.00	9,038.84	9,061.94	9,059.83	157.36	17.59	90.78	10,057.71	1,023.09	1,471.66	1,308.44	163.22	9.016				
18,600.00	9,038.99	9,062.85	9,060.75	158.99	17.59	90.82	10,057.72	1,023.07	1,434.51	1,266.30	168.21	8.528				
18,700.00	9,039.14	9,063.74	9,061.63	160.61	17.59	90.86	10,057.72	1,023.05	1,403.51	1,230.70	172.81	8.122				
18,800.00	9,039.29	9,064.60	9,062.50	162.24	17.60	90.90	10,057.73	1,023.04	1,379.08	1,202.21	176.87	7.797				
18,900.00	9,039.44	9,065.44	9,063.34	163.87	17.60	90.93	10,057.73	1,023.03	1,361.57	1,181.30	180.27	7.553				
19,000.00	9,039.60	9,066.26	9,064.16	165.50	17.60	90.97	10,057.74	1,023.01	1,351.25	1,168.36	182.89	7.388				
19,089.94	9,039.73	9,066.98	9,064.87	166.96	17.60	91.00	10,057.74	1,023.00	1,348.25	1,163.73	184.53	7.307 CC				
19,100.00	9,039.75	9,067.06	9,064.95	167.13	17.60	91.00	10,057.74	1,023.00	1,348.29	1,163.63	184.67	7.301 ES				
19,200.00	9,039.90	9,067.83	9,065.73	168.76	17.60	91.03	10,057.75	1,022.98	1,352.74	1,167.19	185.54	7.291 SF				
19,267.22	9,040.00	9,068.34	9,066.24	169.60	17.60	91.05	10,057.75	1,022.97	1,359.86	1,174.47	185.39	7.335				



# LEAM Drilling Services

## Anticollision Report

<b>Company:</b>	Devon Energy	<b>Local Co-ordinate Reference:</b>	Well Belloq 11-2 Fed State Com 521H
<b>Project:</b>	Eddy County, NM (NAD-83)	<b>TVD Reference:</b>	3430' GE + 23.5' KB @ 3453.50usft
<b>Reference Site:</b>	Belloq 11-2 Fed State Com	<b>MD Reference:</b>	3430' GE + 23.5' KB @ 3453.50usft
<b>Site Error:</b>	0.00 usft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	Belloq 11-2 Fed State Com 521H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.00 usft	<b>Output errors are at:</b>	2.00 sigma
<b>Reference Wellbore:</b>	OH	<b>Database:</b>	EDM 5000.1 Multi User Db
<b>Reference Design:</b>	Plan.#2	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design														Offset Site Error:	0.00 usft
Survey Program: 115-MWD-ISCWSA, 9477-LEAM MWD+HDGM, 14380-Project														Offset Well Error:	0.00 usft
Reference: Belloq 2 State - 5H - OH - OH															
Offset															
Semi Major Axis															
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning		
13,800.00	9,031.72	14,380.00	10,152.89	81.45	75.08	125.93	5,313.99	1,248.82	1,982.88	1,851.26	131.62	15.065			
13,900.00	9,031.87	14,380.00	10,152.89	83.04	75.08	125.93	5,313.99	1,248.82	1,957.68	1,823.70	133.98	14.612			
14,000.00	9,032.02	14,380.00	10,152.89	84.63	75.08	125.93	5,313.99	1,248.82	1,937.32	1,801.23	136.10	14.235			
14,100.00	9,032.17	14,380.00	10,152.89	86.23	75.08	125.93	5,313.99	1,248.82	1,921.96	1,784.02	137.94	13.933			
14,200.00	9,032.32	14,380.00	10,152.89	87.83	75.08	125.93	5,313.99	1,248.82	1,911.71	1,772.23	139.48	13.706			
14,300.00	9,032.48	14,319.26	10,151.41	89.43	74.99	125.95	5,374.61	1,245.32	1,905.66	1,764.93	140.73	13.541			
14,400.00	9,032.63	14,229.52	10,149.79	91.03	73.68	125.98	5,464.19	1,240.14	1,900.36	1,759.44	140.92	13.486			
14,500.00	9,032.78	14,127.16	10,149.32	92.63	72.18	126.08	5,566.31	1,233.32	1,895.12	1,754.24	140.88	13.452			
14,600.00	9,032.93	14,027.81	10,150.47	94.23	70.73	126.22	5,665.38	1,225.87	1,890.16	1,749.35	140.81	13.423			
14,700.00	9,033.08	13,917.92	10,153.30	95.84	69.08	126.47	5,774.70	1,215.12	1,884.17	1,743.71	140.46	13.414			
14,800.00	9,033.23	13,825.36	10,156.43	97.45	67.67	126.69	5,866.80	1,206.45	1,879.04	1,738.70	140.34	13.389			
14,900.00	9,033.38	13,679.20	10,158.81	99.05	65.42	126.99	6,012.22	1,192.06	1,872.56	1,733.19	139.37	13.436			
15,000.00	9,033.54	13,565.52	10,158.04	100.66	63.68	127.17	6,125.30	1,180.38	1,864.35	1,725.35	139.00	13.413			
15,100.00	9,033.69	13,472.33	10,156.70	102.27	62.28	127.30	6,218.02	1,171.13	1,855.98	1,716.96	139.02	13.350			
15,200.00	9,033.84	13,390.00	10,155.57	103.88	61.07	127.40	6,300.00	1,163.67	1,848.35	1,709.09	139.26	13.273			
15,300.00	9,033.99	13,321.80	10,155.03	105.49	60.06	127.47	6,367.99	1,158.31	1,842.04	1,702.34	139.69	13.186			
15,400.00	9,034.14	13,230.55	10,154.79	107.10	58.70	127.57	6,459.04	1,152.27	1,837.02	1,697.23	139.79	13.141			
15,500.00	9,034.29	13,138.24	10,153.81	108.72	57.36	127.63	6,551.18	1,146.82	1,832.11	1,692.18	139.93	13.093			
15,600.00	9,034.45	13,061.35	10,152.60	110.33	56.26	127.66	6,627.98	1,143.36	1,828.03	1,687.72	140.31	13.028			
15,700.00	9,034.60	12,961.46	10,152.29	111.94	54.82	127.71	6,727.80	1,139.57	1,825.25	1,684.86	140.40	13.001			
15,800.00	9,034.75	12,823.22	10,151.85	113.56	52.82	127.83	6,865.58	1,131.22	1,820.63	1,680.72	139.91	13.013			
15,900.00	9,034.90	12,698.91	10,151.32	115.18	51.05	127.99	6,989.68	1,121.23	1,814.41	1,674.88	139.54	13.003			
16,000.00	9,035.05	12,597.98	10,151.45	116.79	49.61	128.17	7,090.16	1,111.73	1,807.48	1,668.03	139.45	12.962			
16,100.00	9,035.20	12,505.85	10,151.57	118.41	48.31	128.32	7,181.93	1,103.47	1,800.91	1,661.39	139.53	12.907			
16,200.00	9,035.35	12,413.12	10,152.37	120.03	47.02	128.49	7,274.25	1,094.92	1,794.62	1,655.04	139.58	12.857			
16,300.00	9,035.51	12,317.93	10,153.84	121.64	45.67	128.68	7,369.06	1,086.42	1,788.99	1,649.44	139.55	12.819			
16,400.00	9,035.66	12,154.25	10,152.54	123.26	43.31	128.93	7,531.99	1,071.32	1,781.84	1,643.37	138.46	12.869			
16,500.00	9,035.81	12,064.00	10,147.46	124.88	42.05	128.93	7,621.82	1,064.29	1,772.66	1,633.86	138.80	12.771			
16,600.00	9,035.96	11,970.00	10,141.64	126.50	40.80	128.89	7,715.45	1,058.23	1,764.15	1,624.98	139.17	12.676			
16,700.00	9,036.11	11,875.00	10,136.09	128.12	39.57	128.85	7,810.10	1,052.36	1,756.06	1,616.50	139.56	12.583			
16,800.00	9,036.26	11,798.49	10,133.00	129.74	38.61	128.87	7,886.36	1,047.03	1,748.51	1,608.37	140.14	12.477			
16,900.00	9,036.41	11,703.88	10,131.39	131.37	37.40	128.96	7,980.68	1,039.84	1,741.92	1,601.55	140.38	12.409			
17,000.00	9,036.57	11,611.28	10,130.09	132.99	36.23	129.06	8,073.00	1,032.78	1,735.52	1,594.88	140.63	12.341			
17,100.00	9,036.72	11,529.55	10,129.18	134.61	35.21	129.14	8,154.53	1,027.09	1,729.83	1,588.77	141.06	12.263			
17,200.00	9,036.87	11,448.31	10,128.93	136.23	34.18	129.22	8,235.62	1,022.13	1,725.29	1,583.83	141.46	12.196			
17,300.00	9,037.02	11,354.63	10,128.42	137.86	33.00	129.29	8,329.19	1,017.65	1,721.63	1,579.87	141.75	12.145			
17,400.00	9,037.17	11,265.86	10,127.63	139.48	31.92	129.34	8,417.86	1,013.66	1,718.02	1,575.86	142.16	12.085			
17,500.00	9,037.32	11,175.57	10,127.30	141.10	30.88	129.37	8,508.11	1,010.82	1,715.70	1,573.10	142.60	12.031			
17,600.00	9,037.47	11,063.44	10,126.90	142.73	29.63	129.45	8,620.13	1,005.88	1,712.42	1,569.59	142.83	11.989			
17,700.00	9,037.63	10,960.64	10,127.77	144.35	28.51	129.56	8,722.79	1,000.64	1,709.43	1,566.33	143.10	11.945			
17,800.00	9,037.78	9,076.43	9,070.80	145.98	19.27	91.34	9,837.00	941.70	1,657.19	1,523.57	133.62	12.402			
17,900.00	9,037.93	9,075.36	9,069.74	147.60	19.26	91.29	9,837.01	941.72	1,594.47	1,455.44	139.03	11.469			
18,000.00	9,038.08	9,074.30	9,068.68	149.23	19.26	91.24	9,837.02	941.74	1,535.71	1,391.13	144.58	10.622			
18,100.00	9,038.23	9,073.25	9,067.63	150.85	19.26	91.19	9,837.03	941.75	1,481.36	1,331.17	150.19	9.863			
18,200.00	9,038.38	9,072.22	9,066.60	152.48	19.26	91.15	9,837.04	941.77	1,431.95	1,276.16	155.79	9.192			
18,300.00	9,038.54	9,071.19	9,065.57	154.11	19.25	91.10	9,837.05	941.79	1,388.00	1,226.75	161.25	8.608			
18,400.00	9,038.69	9,070.17	9,064.55	155.73	19.25	91.05	9,837.06	941.80	1,350.03	1,183.59	166.44	8.111			
18,500.00	9,038.84	9,069.17	9,063.55	157.36	19.25	91.01	9,837.07	941.82	1,318.57	1,147.36	171.20	7.702			
18,600.00	9,038.99	9,068.17	9,062.55	158.99	19.25	90.96	9,837.08	941.83	1,294.09	1,118.71	175.38	7.379			
18,700.00	9,039.14	9,067.18	9,061.56	160.61	19.25	90.92	9,837.09	941.85	1,276.99	1,098.18	178.81	7.142			
18,800.00	9,039.29	9,066.21	9,060.59	162.24	19.24	90.87	9,837.10	941.86	1,267.57	1,086.20	181.37	6.989			
18,869.82	9,039.40	9,065.53	9,059.91	163.38	19.24	90.84	9,837.10	941.87	1,265.65	1,083.05	182.59	6.932 CC			

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

# LEAM Drilling Services

## Anticollision Report

<b>Company:</b>	Devon Energy	<b>Local Co-ordinate Reference:</b>	Well Belloq 11-2 Fed State Com 521H
<b>Project:</b>	Eddy County, NM (NAD-83)	<b>TVD Reference:</b>	3430' GE + 23.5' KB @ 3453.50usft
<b>Reference Site:</b>	Belloq 11-2 Fed State Com	<b>MD Reference:</b>	3430' GE + 23.5' KB @ 3453.50usft
<b>Site Error:</b>	0.00 usft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	Belloq 11-2 Fed State Com 521H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.00 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	OH	<b>Database:</b>	EDM 5000.1 Multi User Db
<b>Reference Design:</b>	Plan #2	<b>Offset TVD Reference:</b>	Offset Datum

<b>Offset Design</b> Belloq 2 State - 5H - OH - OH													Offset Site Error:	0.00 usft
Survey Program: 115-MWD-ISCWSA, 9477-LEAM MWD+HDGM, 14380-Project													Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor		
18,900.00	9,039.44	9,065.24	9,059.62	163.87	19.24	90.83	9,837.11	941.88	1,266.01	1,083.04	182.97	6.919	ES, SF	
19,000.00	9,039.60	9,064.28	9,058.66	165.50	19.24	90.79	9,837.12	941.89	1,272.32	1,088.75	183.57	6.931		
19,100.00	9,039.75	9,063.33	9,057.71	167.13	19.24	90.74	9,837.12	941.90	1,286.41	1,103.21	183.19	7.022		
19,200.00	9,039.90	9,062.39	9,056.77	168.76	19.24	90.70	9,837.13	941.92	1,308.00	1,126.10	181.91	7.191		
19,267.22	9,040.00	9,061.76	9,056.14	169.60	19.23	90.67	9,837.14	941.93	1,326.57	1,146.17	180.40	7.354		

# LEAM Drilling Services

## Anticollision Report

<b>Company:</b>	Devon Energy	<b>Local Co-ordinate Reference:</b>	Well Belloq 11-2 Fed State Com 521H
<b>Project:</b>	Eddy County, NM (NAD-83)	<b>TVD Reference:</b>	3430' GE + 23.5' KB @ 3453.50usft
<b>Reference Site:</b>	Belloq 11-2 Fed State Com	<b>MD Reference:</b>	3430' GE + 23.5' KB @ 3453.50usft
<b>Site Error:</b>	0.00 usft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	Belloq 11-2 Fed State Com 521H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.00 usft	<b>Output errors are at:</b>	2.00 sigma
<b>Reference Wellbore:</b>	OH	<b>Database:</b>	EDM 5000.1 Multi User Db
<b>Reference Design:</b>	Plan #2	<b>Offset TVD Reference:</b>	Offset Datum

<b>Offset Design</b> Belloq 2 State - 6H - OH - OH														<b>Offset Site Error:</b>	0.00 usft
Survey Program: 109-MWD-ISCWSA, 744-LEAM MWD+HDGM; 14955-Project														<b>Offset Well Error:</b>	0.00 usft
Reference		Offset		Semi Major Axis		Distance									
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning		
17,900.00	9,037.93	9,073.57	9,066.93	147.60	17.83	90.99	10,150.43	1,151.57	1,955.98	1,823.77	132.21	14.794			
18,000.00	9,038.08	9,073.80	9,067.16	149.23	17.84	91.00	10,150.43	1,151.56	1,891.95	1,754.93	137.03	13.807			
18,100.00	9,038.23	9,074.03	9,067.39	150.85	17.84	91.01	10,150.43	1,151.56	1,831.15	1,689.18	141.97	12.898			
18,200.00	9,038.38	9,074.26	9,067.62	152.48	17.84	91.01	10,150.43	1,151.56	1,773.91	1,626.89	147.02	12.066			
18,300.00	9,038.54	9,074.48	9,067.84	154.11	17.84	91.02	10,150.43	1,151.55	1,720.58	1,568.47	152.11	11.312			
18,400.00	9,038.69	9,074.70	9,068.06	155.73	17.84	91.03	10,150.43	1,151.55	1,671.54	1,514.35	157.18	10.634			
18,500.00	9,038.84	9,074.91	9,068.28	157.36	17.84	91.04	10,150.44	1,151.54	1,627.17	1,465.00	162.17	10.034			
18,600.00	9,038.99	9,075.13	9,068.49	158.99	17.84	91.05	10,150.44	1,151.54	1,587.86	1,420.89	166.97	9.510			
18,700.00	9,039.14	9,075.34	9,068.70	160.61	17.84	91.06	10,150.44	1,151.54	1,554.01	1,382.51	171.50	9.061			
18,800.00	9,039.29	9,075.54	9,068.91	162.24	17.84	91.06	10,150.44	1,151.53	1,525.97	1,350.33	175.64	8.688			
18,900.00	9,039.44	9,075.75	9,069.11	163.87	17.84	91.07	10,150.44	1,151.53	1,504.07	1,324.77	179.29	8.389			
19,000.00	9,039.60	9,075.95	9,069.31	165.50	17.84	91.08	10,150.44	1,151.52	1,488.57	1,306.21	182.36	8.163			
19,100.00	9,039.75	9,076.15	9,069.51	167.13	17.84	91.09	10,150.44	1,151.52	1,479.69	1,294.92	184.77	8.008			
19,181.82	9,039.87	9,076.31	9,069.67	168.46	17.84	91.09	10,150.44	1,151.52	1,477.43	1,291.23	186.20	7.935 CC			
19,200.00	9,039.90	9,076.34	9,069.70	168.76	17.84	91.09	10,150.44	1,151.52	1,477.54	1,291.09	186.45	7.925 ES			
19,267.22	9,040.00	9,076.47	9,069.83	169.60	17.84	91.10	10,150.44	1,151.51	1,479.90	1,292.99	186.91	7.918 SF			

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

# LEAM Drilling Services

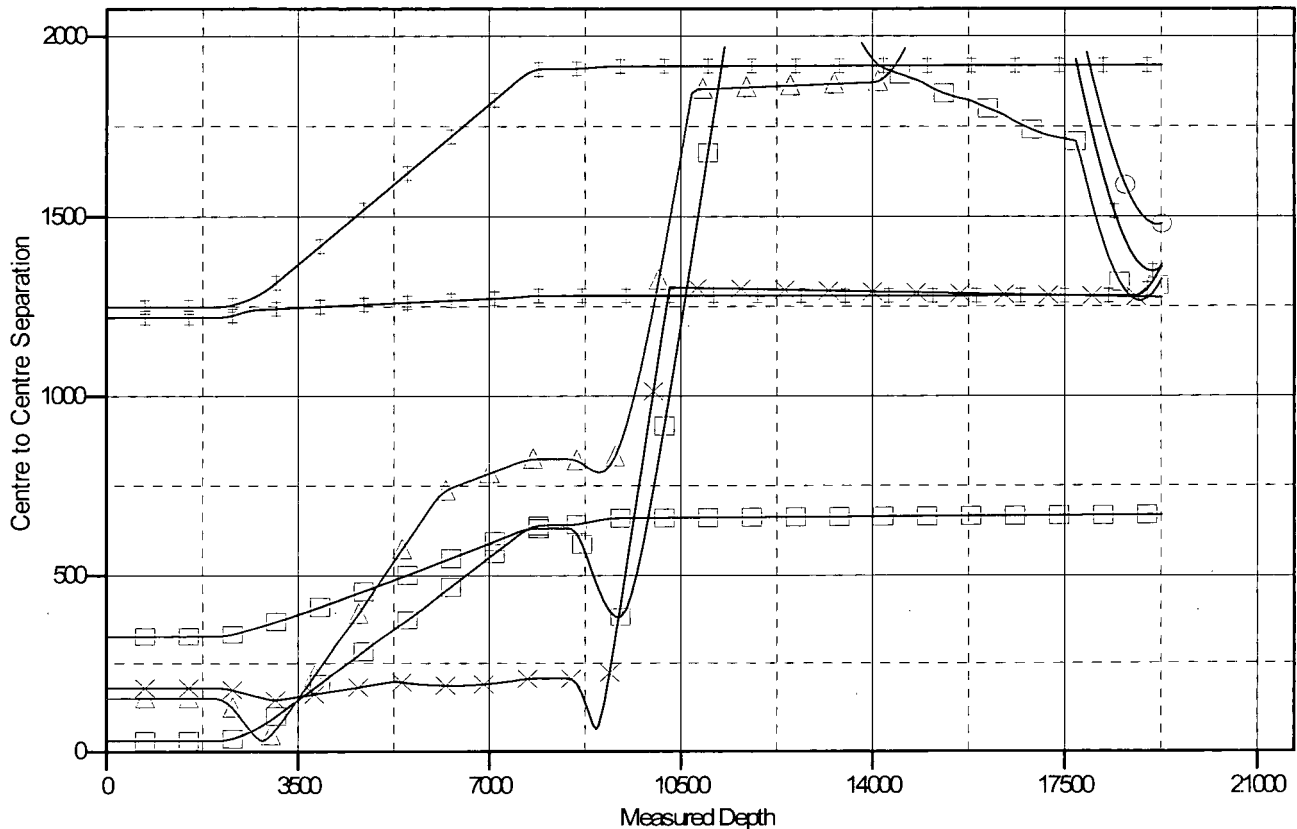
## Anticollision Report

<b>Company:</b>	Devon Energy	<b>Local Co-ordinate Reference:</b>	Well Belloq 11-2 Fed State Com 521H
<b>Project:</b>	Eddy County, NM (NAD-83)	<b>TVD Reference:</b>	3430' GE + 23.5' KB @ 3453.50usft
<b>Reference Site:</b>	Belloq 11-2 Fed State Com	<b>MD Reference:</b>	3430' GE + 23.5' KB @ 3453.50usft
<b>Site Error:</b>	0.00 usft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	Belloq 11-2 Fed State Com 521H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.00 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	OH	<b>Database:</b>	EDM 5000.1 Multi User Db
<b>Reference Design:</b>	Plan #2	<b>Offset TVD Reference:</b>	Offset Datum

Reference Depths are relative to 3430' GE + 23.5' KB @ 3453.50usft  
 Offset Depths are relative to Offset Datum  
 Central Meridian is 104° 19' 60.0000 W

Coordinates are relative to: Belloq 11-2 Fed State Com 521H  
 Coordinate System is US State Plane 1983, New Mexico Eastern Zone  
 Grid Convergence at Surface is: 0.31°

### Ladder Plot



### LEGEND

OHV0	—+— Belloq 11-2 Fed State Com 522H, OH, Plan #2V0	—△— Belloq 11 Fed 222H (Offset), OH, Plan #1V0
OHV0	—+— Belloq 11-2 Fed State Com 512H, OH, Plan #1V0	—□— Barday 11M Federal 13 (Offset), OH, OHV0
OHV0	—+— Belloq 11-2 Fed State Com 511H, OH, Plan #1V0	—x— Belloq 11-2 Fed State Com 231H (Offset) C

# LEAM Drilling Services

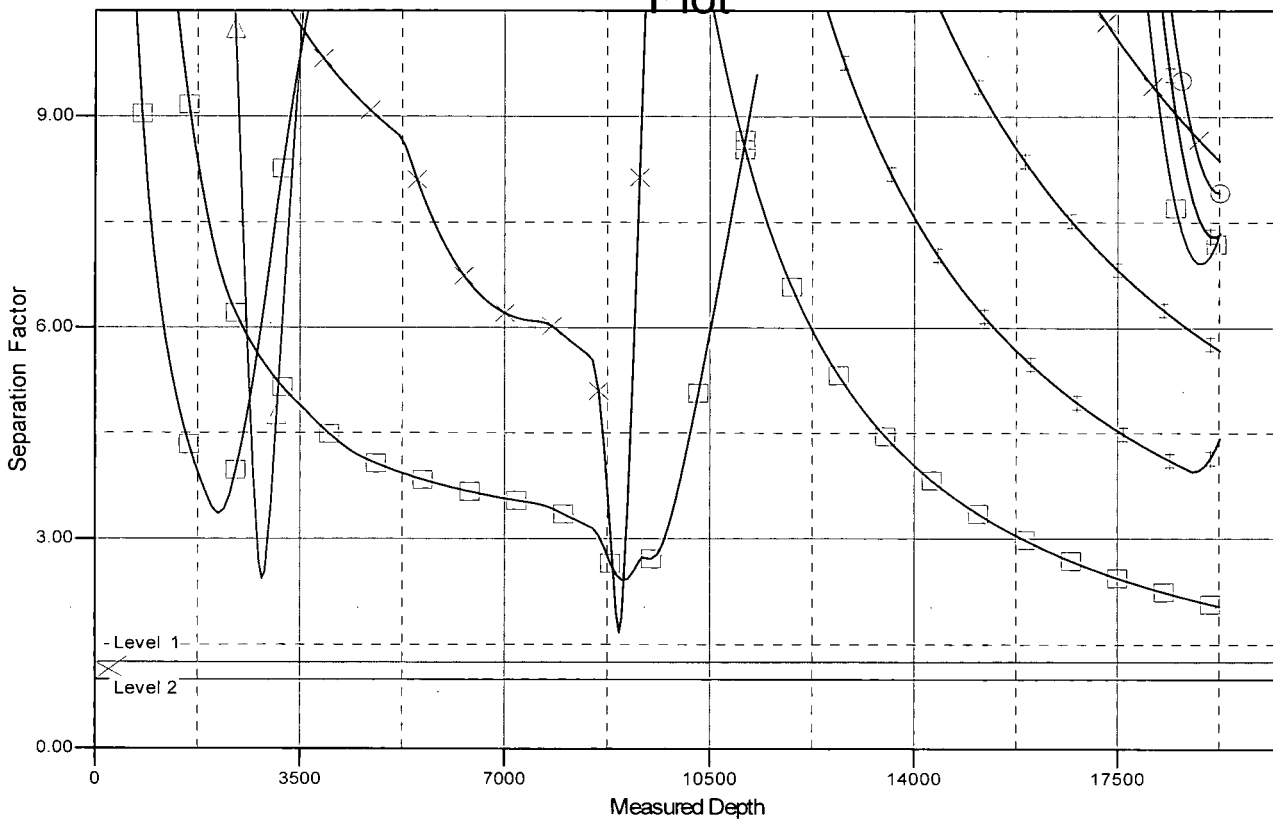
## Anticollision Report

<b>Company:</b>	Devon Energy	<b>Local Co-ordinate Reference:</b>	Well Belloq 11-2 Fed State Com 521H
<b>Project:</b>	Eddy County, NM (NAD-83)	<b>TVD Reference:</b>	3430' GE + 23.5' KB @ 3453.50usft
<b>Reference Site:</b>	Belloq 11-2 Fed State Com	<b>MD Reference:</b>	3430' GE + 23.5' KB @ 3453.50usft
<b>Site Error:</b>	0.00 usft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	Belloq 11-2 Fed State Com 521H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.00 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore:</b>	OH	<b>Database:</b>	EDM 5000.1 Multi User Db
<b>Reference Design:</b>	Plan #2	<b>Offset TVD Reference:</b>	Offset Datum

Reference Depths are relative to 3430' GE + 23.5' KB @ 3453.50usft  
 Offset Depths are relative to Offset Datum  
 Central Meridian is 104° 19' 60.0000 W

Coordinates are relative to: Belloq 11-2 Fed State Com 521H  
 Coordinate System is US State Plane 1983, New Mexico Eastern Zone  
 Grid Convergence at Surface is: 0.31°

### Separation Factor Plot



### LEGEND

OHV0	✚ Belloq 11-2 Fed State Com 522H, OH, Plan #2V0	✚ Belloq 11 Fed 222H (Offset), OH, Plan #1V0
OHV0	✚ Belloq 11-2 Fed State Com 512H, OH, Plan #1V0	✚ Barday 11M Federal 13 (Offset), OH, OHV0
OHV0	✚ Belloq 11-2 Fed State Com 511H, OH, Plan #1V0	✚ Belloq 11-2 Fed State Com 231H (Offset) C

## Devon Energy – Belloq 11-2 Fed State Com 521H

### 1. Geologic Formations

TVD of target	9040	Pilot hole depth	N/A
MD at TD:	19267	Deepest expected fresh water:	

#### Basin

Formation	Depth (TVD) from KB	Water/Mineral Bearing/ Target Zone?	Hazards*
Rustler	739		
Base of Salt	4470		
Delaware	4507		
Leonard	8454		
1BSS	9462		
2BSS	9867		

\*H2S, water flows, loss of circulation, abnormal pressures, etc.

## Devon Energy – Belloq 11-2 Fed State Com 521H

### 2. Casing Program

Hole Size	Casing Interval		Csg. Size	Weight (PPF)	Grade	Conn.
	From	To				
17.5"	0	764	13.375"	48	H-40	STC
12.25"	0	6000	9.625"	40	J-55	BTC
8.75"	0	TD	5.5"	17	P-110	BTC
BLM Minimum Safety Factor				Collapse: 1.125	Burst: 1.00	Tension: 1.6 Dry 1.8 Wet

- All casing strings will be tested in accordance with Onshore Oil and Gas Order #2 III.B.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.
- Variance is requested for collapse rating on intermediate casing. Operator will keep pipe full while running casing. No losses are expected in subsequent hole section.
- 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 waive the centralizer requirement for the intermediate and production casing strings if drilling conditions dictate

## Devon Energy – Belloq 11-2 Fed State Com 521H

	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?	



## Devon Energy – Belloq 11-2 Fed State Com 521H

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

Casing	# Sks	TOC	Wt. (lb/gal)	Yld (ft <sup>3</sup> /sack)	Slurry Description
Surface	798	Surf	13.2	1.33	Lead: Class C Cement + additives
Int	1115	Surf	9	1.94	Lead: Class C Cement + additives
	197	500' above shoe	13.2	1.33	Tail: Class H / C + additives
Int 1 Two Stage (optional) w/ DV @ ~4500	560	Surf	9	1.94	Stage 1 Lead: Class C Cement + additives
	196	500' above shoe	13.2	1.33	Stage 1 Tail: Class H / C + additives
	580	Surf	9	1.94	Stage 2 Lead: Class C Cement + additives
	196	500' above DV	13.2	1.33	Stage 2 Tail: Class H / C + additives
Int 1 Intermediate Squeeze	As Needed	Surf	13.2	1.33	Squeeze Lead: Class C Cement + additives
	1115	Surf	9	1.94	Lead: Class C Cement + additives
	197	500' above shoe	13.2	1.33	Tail: Class H / C + additives
Production	735	Surf	9	3.27	Lead: Class H / C + additives
	2257	KOP	13.2	1.33	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.

Casing String	% Excess
Surface	100%
Intermediate	50%
Production	10%

**Devon Energy – Belloq 11-2 Fed State Com 521H**

**4. Pressure Control Equipment**

<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		5M
			Pipe Ram		
			Double Ram	X	
			Other*		
Production	13-5/8"	5M	Annular	X	50% of rated working pressure
			Blind Ram		5M
			Pipe Ram		
			Double Ram	X	
			Other *		
			Annular		
			Blind Ram		
			Pipe Ram		
			Double Ram		
			Other *		

## Devon Energy – Belloq 11-2 Fed State Com 521H

### 5. Mud Program

Interval	Type	Weight (ppg)	Vis	Water Loss
Surface	FW	8.5 – 9.0	28-34	N/C
Intermediate	Brine	10 – 10.5	28-34	N/C
Production	WBM	8.5 – 9.0	28-34	N/C

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	Production casing
X	Mud log	KOP to TD

### 7. Drilling Conditions

Condition	Specify what type and where?
BH Pressure at deepest TVD	4231 psi
Abnormal Temperature	No

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

Hydrogen Sulfide (H <sub>2</sub> S) monitors will be installed prior to drilling out the surface shoe. If H <sub>2</sub> S 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	H <sub>2</sub> S is present
Y	H <sub>2</sub> S Plan attached

## Devon Energy – Belloq 11-2 Fed State Com 521H

### 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 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 the 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

☒ 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.



# U. S. Steel Tubular Products

## 9.625" 40.00lbs/ft (0.395" Wall) J55

1/24/2019 2:45:24 PM

MECHANICAL PROPERTIES	Pipe	BTC	LTC	STC	
Minimum Yield Strength	55,000	--	--	--	psi
Maximum Yield Strength	80,000	--	--	--	psi
Minimum Tensile Strength	75,000	--	--	--	psi

DIMENSIONS	Pipe	BTC	LTC	STC	
Outside Diameter	9.625	10.625	10.625	10.625	in.
Wall Thickness	0.395	--	--	--	in.
Inside Diameter	8.835	8.835	8.835	8.835	in.
Standard Drift	8.679	8.679	8.679	8.679	in.
Alternate Drift	8.750	8.750	8.750	8.750	in.
Nominal Linear Weight, T&C	40.00	--	--	--	lbs/ft
Plain End Weight	38.97	--	--	--	lbs/ft

PERFORMANCE	Pipe	BTC	LTC	STC	
Minimum Collapse Pressure	2,570	2,570	2,570	2,570	psi
Minimum Internal Yield Pressure	3,950	3,950	3,950	3,950	psi
Minimum Pipe Body Yield Strength	630	--	--	--	1,000 lbs
Joint Strength	--	714	520	452	1,000 lbs
Reference Length	--	11,898	8,665	7,529	ft

MAKE-UP DATA	Pipe	BTC	LTC	STC	
Make-Up Loss	--	4.81	4.75	3.38	in.
Minimum Make-Up Torque	--	--	3,900	3,390	ft-lbs
Maximum Make-Up Torque	--	--	6,500	5,650	ft-lbs

### Legal Notice

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Spring, Texas 77380

1-877-893-9461  
connections@uss.com  
www.usstubular.com

### Technical Specifications

Connection Type:	Size(O.D.):	Weight (Wall):	Grade:
DWC/C Casing standard	5-1/2 in	17.00 lb/ft (0.304 in)	P-110RY

	Material
P-110RY	Grade
110,000	Minimum Yield Strength (psi)
125,000	Minimum Ultimate Strength (psi)

	Pipe Dimensions
5.500	Nominal Pipe Body O.D. (in)
4.892	Nominal Pipe Body I.D.(in)
0.304	Nominal Wall Thickness (in)
17.00	Nominal Weight (lbs/ft)
16.89	Plain End Weight (lbs/ft)
4.962	Nominal Pipe Body Area (sq in)

	Pipe Body Performance Properties
546,000	Minimum Pipe Body Yield Strength (lbs)
7,480	Minimum Collapse Pressure (psi)
10,640	Minimum Internal Yield Pressure (psi)
9,700	Hydrostatic Test Pressure (psi)

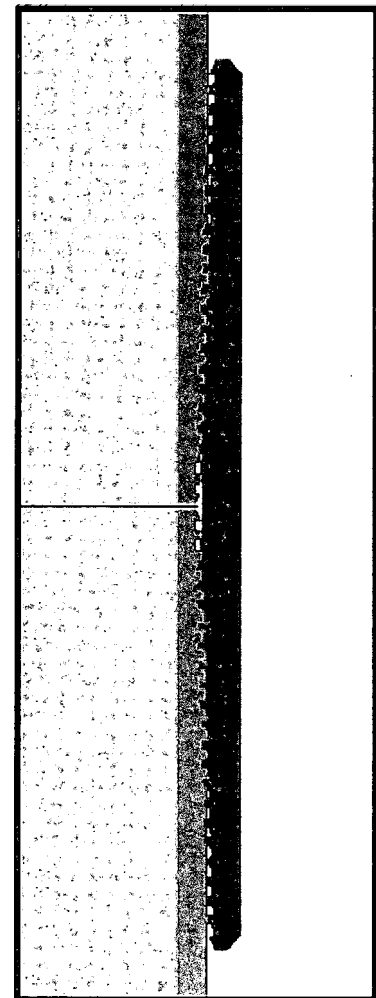
	Connection Dimensions
6.050	Connection O.D. (in)
4.892	Connection I.D. (in)
4.767	Connection Drift Diameter (in)
4.13	Make-up Loss (in)
4.962	Critical Area (sq in)
100.0	Joint Efficiency (%)

	Connection Performance Properties
546,000	Joint Strength (lbs)
22,940	Reference String Length (ft) 1.4 Design Factor
568,000	API Joint Strength (lbs)
546,000	Compression Rating (lbs)
7,480	API Collapse Pressure Rating (psi)
10,640	API Internal Pressure Resistance (psi)
91.7	Maximum Uniaxial Bend Rating [degrees/100 ft]

	Appoximated Field End Torque Values
12,000	Minimum Final Torque (ft-lbs)
13,800	Maximum Final Torque (ft-lbs)
15,500	Connection Yield Torque (ft-lbs)



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Fax: 713-479-3234  
E-mail: [VAMUSAsales@vam-usa.com](mailto:VAMUSAsales@vam-usa.com)



For detailed information on performance properties, refer to DWC Connection Data Notes on following page(s).

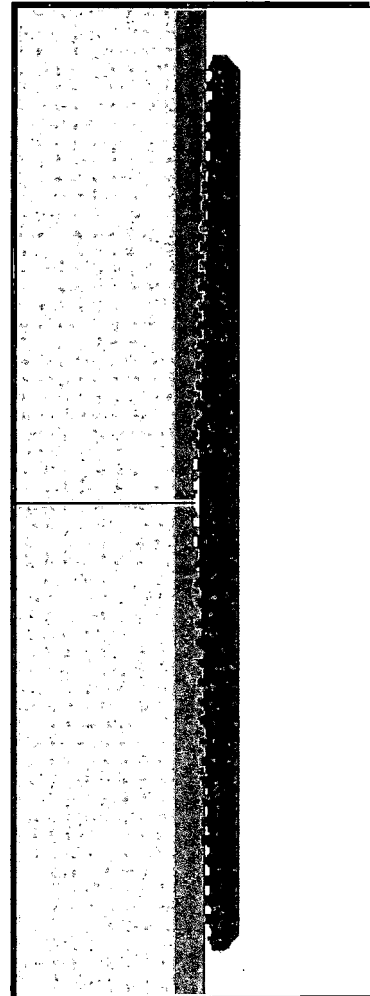
Connection specifications within the control of VAM-USA were correct as of the date printed. Specifications are subject to change without notice. Certain connection specifications are dependent on the mechanical properties of the pipe. Mechanical properties of mill proprietary pipe grades were obtained from mill publications and are subject to change. Properties of mill proprietary grades should be confirmed with the mill. Users are advised to obtain current connection specifications and verify pipe mechanical properties for each application.

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### DWC Connection Data Notes:

1. DWC connections are available with a seal ring (SR) option.
2. All standard DWC/C connections are interchangeable for a give pipe OD. DWC connections are interchangeable with DWC/C-SR connections of the same OD and wall.
3. Connection performance properties are based on nominal pipe body and connection dimensions.
4. DWC connection internal and external pressure resistance is calculated using the API rating for buttress connections. API Internal pressure resistance is calculated from formulas 31, 32, and 35 in the API Bulletin 5C3.
5. DWC joint strength is the minimum pipe body yield strength multiplied by the connection critical area.
6. API joint strength is for reference only. It is calculated from formulas 42 and 43 in the API Bulletin 5C3.
7. Bending efficiency is equal to the compression efficiency.
8. The torque values listed are recommended. The actual torque required may be affected by field conditions such as temperature, thread compound, speed of make-up, weather conditions, etc.
9. Connection yield torque is not to be exceeded.
10. Reference string length is calculated by dividing the joint strength by both the nominal weight in air and a design factor (DF) of 1.4. These values are offered for reference only and do not include load factors such as bending, buoyancy, temperature, load dynamics, etc.
11. DWC connections will accommodate API standard drift diameters.



Connection specifications within the control of VAM-USA were correct as of the date printed. Specifications are subject to change without notice. Certain connection specifications are dependent on the mechanical properties of the pipe. Mechanical properties of mill proprietary pipe grades were obtained from mill publications and are subject to change. Properties of mill proprietary grades should be confirmed with the mill. Users are advised to obtain current connection specifications and verify pipe mechanical properties for each application.

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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.

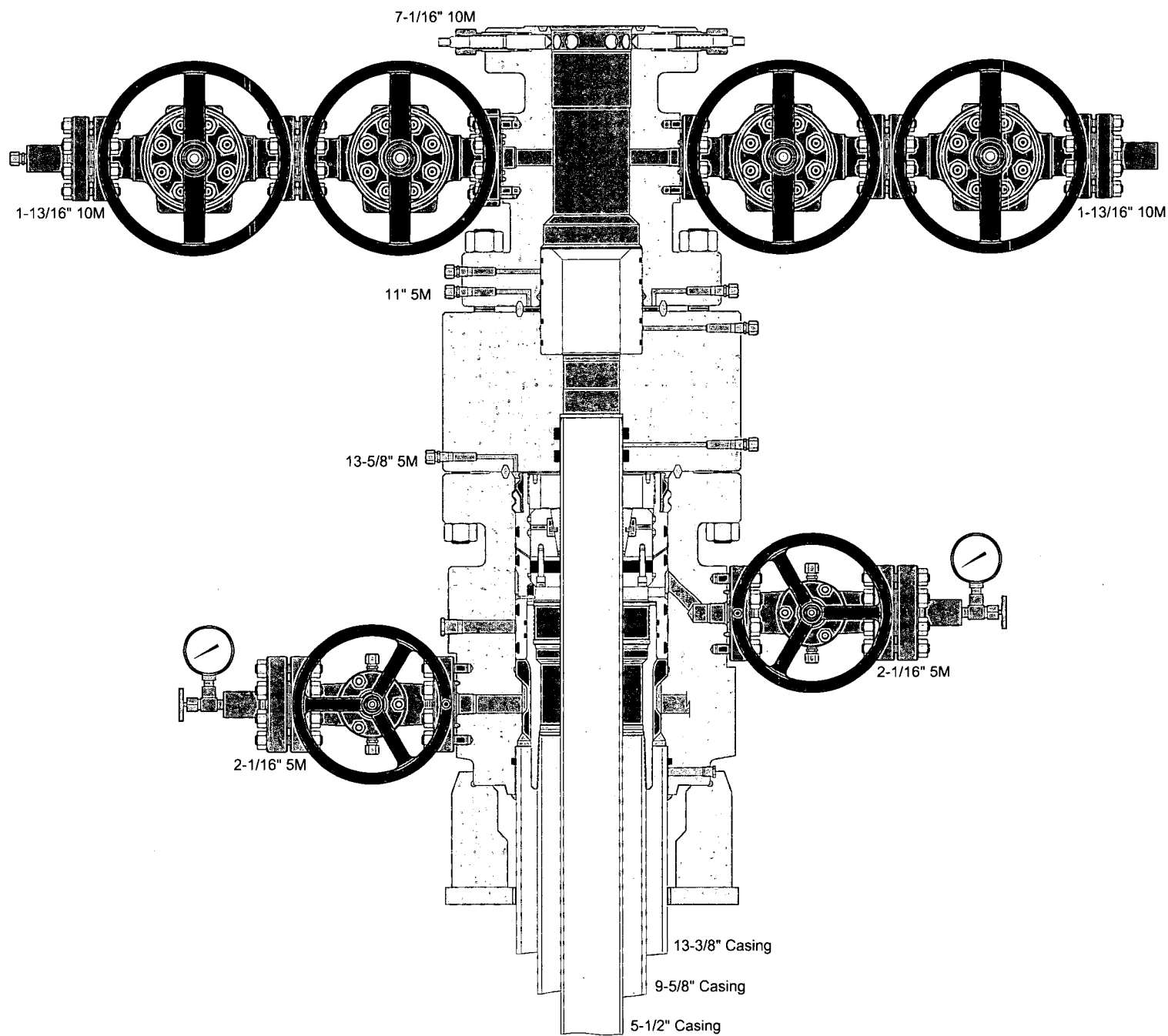
- Wellhead will be installed by wellhead representatives.
- If the welding is performed by a third party, the wellhead representative will monitor the temperature to verify that it does not exceed the maximum temperature of the seal.
- Wellhead representative will install the test plug for the initial 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.

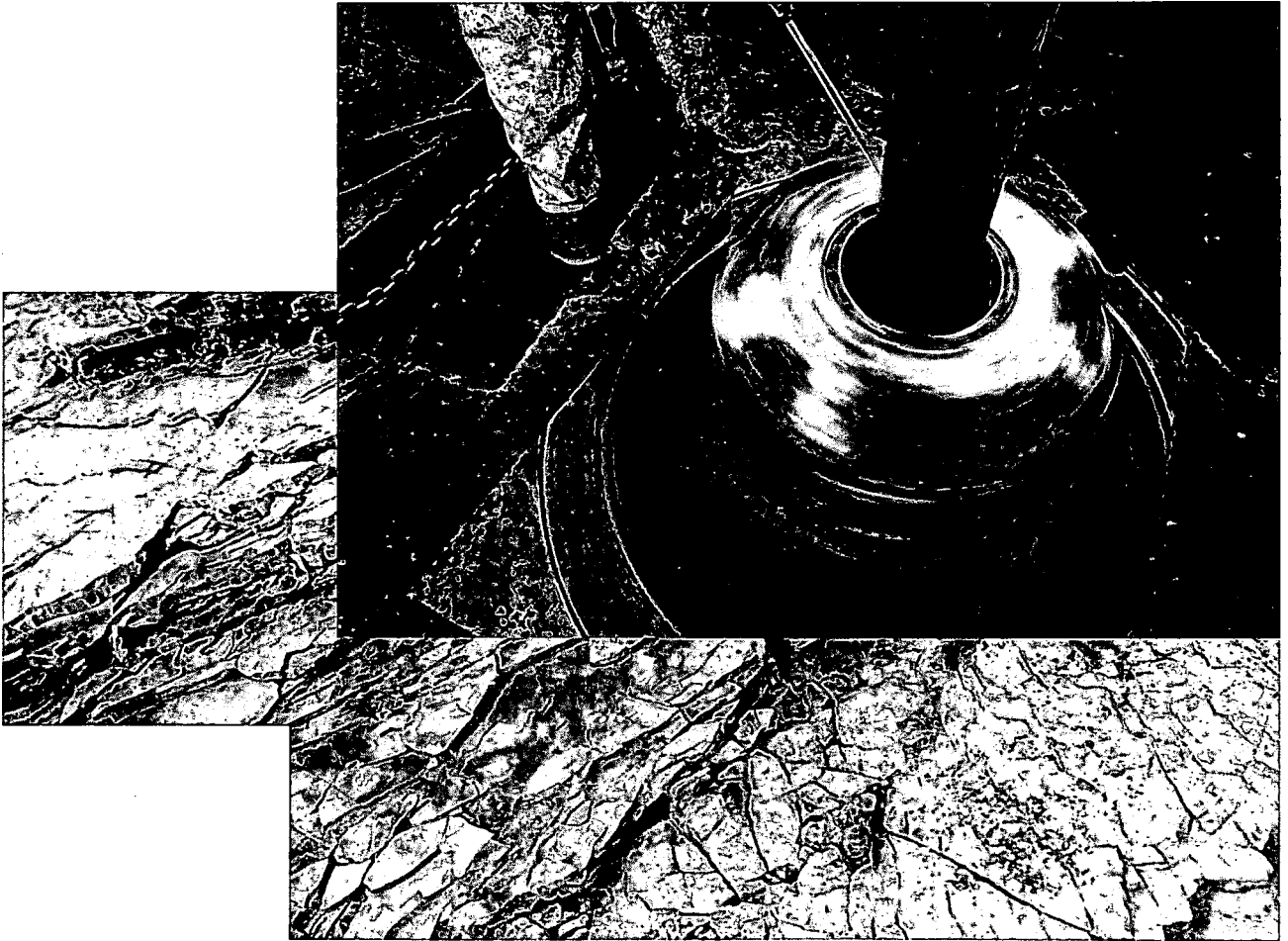
The pipe rams will be operated and checked each 24 hour period and each time the drill pipe is out of the hole. These tests will be logged in the daily driller's log. A 2" kill line and 3" choke line will be incorporated into the drilling spool below the ram BOP. In addition to the rams and annular preventer, 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.





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.

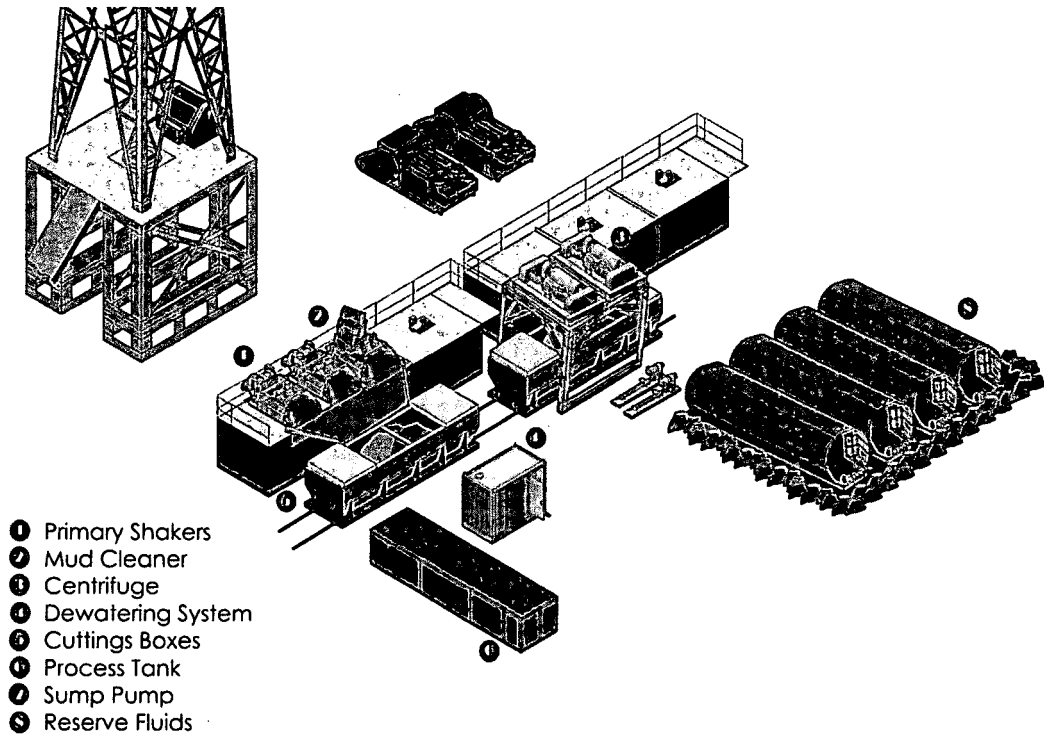
## **II. Operations and Maintenance Plan**

*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.



# U. S. Steel Tubular Products

## 13.375" 48.00lbs/ft (0.330" Wall) H40

1/8/2019 12:38:52 PM

MECHANICAL PROPERTIES	Pipe	BTC	LTC	STC	
Minimum Yield Strength	40,000	--	--	--	psi
Maximum Yield Strength	80,000	--	--	--	psi
Minimum Tensile Strength	60,000	--	--	--	psi

DIMENSIONS	Pipe	BTC	LTC	STC	
Outside Diameter	13.375	--	--	14.375	in.
Wall Thickness	0.330	--	--	--	in.
Inside Diameter	12.715	--	--	12.715	in.
Standard Drift	12.559	12.559	--	12.559	in.
Alternate Drift	--	--	--	--	in.
Nominal Linear Weight, T&C	48.00	--	--	--	lbs/ft
Plain End Weight	46.02	--	--	--	lbs/ft

PERFORMANCE	Pipe	BTC	LTC	STC	
Minimum Collapse Pressure	740	740	--	740	psi
Minimum Internal Yield Pressure	1,730	1,730	--	1,730	psi
Minimum Pipe Body Yield Strength	541	--	--	--	1,000 lbs
Joint Strength	--	--	--	322	1,000 lbs
Reference Length	--	--	--	4,473	ft

MAKE-UP DATA	Pipe	BTC	LTC	STC	
Make-Up Loss	--	--	--	3.50	in.
Minimum Make-Up Torque	--	--	--	2,420	ft-lbs
Maximum Make-Up Torque	--	--	--	4,030	ft-lbs

### Legal Notice

All material contained in this publication is for general information only. This material should not therefore be used or relied upon for any specific application without independent competent professional examination and verification of accuracy, suitability and applicability. Anyone making use of this material does so at their own risk and assumes any and all liability resulting from such use. U. S. Steel disclaims any and all expressed or implied warranties of fitness for any general or particular application.

U. S. Steel Tubular Products  
460 Wildwood Forest Drive, Suite 300S  
Spring, Texas 77380

1-877-893-9461  
connections@uss.com  
www.usstubular.com



**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.



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.

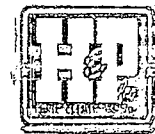
Should you have any questions or require any additional information/clarifications then please do not hesitate to contact us.

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)



RIG 212



## QUALITY DOCUMENT

PHOENIX RUBBER

INDUSTRIAL LTD.

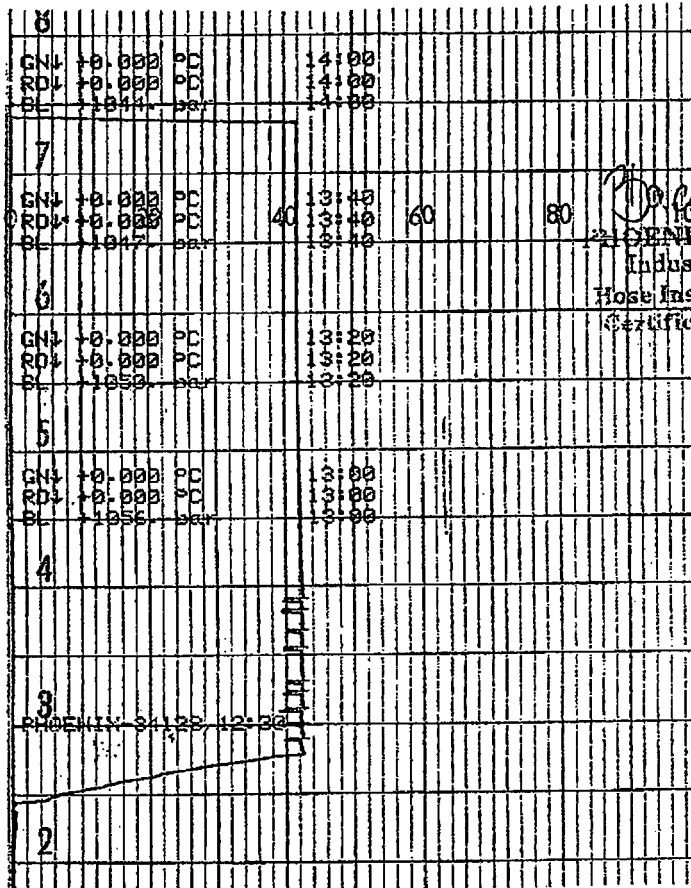
6728 Szeged, Budapesti út 10. Hungary • H-6701 Szeged, P. O. Box 152  
Phone: (3662) 566-737 • Fax: (3662) 566-738

SALES & MARKETING: H-1092 Budapest, Ráday u. 42-44. Hungary • H-1440 Budapest, P. O. Box 26  
Phone: (361) 456-4200 • Fax: (361) 217-2972, 456-4273 • www.taurusermerge.hu

QUALITY CONTROL INSPECTION AND TEST CERTIFICATE				CERT. N°: 552	
PURCHASER: Phoenix Beattie Co.			P.O. N°: 1519FA-871		
PHOENIX RUBBER order N°: 170466		HOSE TYPE: 3" ID Choke and Kill Hose			
HOSE SERIAL N°: 34128		NOMINAL / ACTUAL LENGTH: 11,43 m			
W.P. 68,96 MPa	10000 psi	T.P. 103,4 MPa	15000 psi	Duration: 60 min.	
Pressure test with water at ambient temperature  <div style="text-align: center;">See attachment. (1 page)</div>					
↑ 10 mm = 10 Min. → 10 mm = 25 MPa					
COUPLINGS					
Type	Serial N°		Quality	Heat N°	
3" coupling with 4 1/16" Flange end	720 719		AISI 4130	C7626	
			AISI 4130	47357	
API Spec 16 C Temperature rate: "B"					
All metal parts are flawless					
WE CERTIFY THAT THE ABOVE HOSE HAS BEEN MANUFACTURED IN ACCORDANCE WITH THE TERMS OF THE ORDER AND PRESSURE TESTED AS ABOVE WITH SATISFACTORY RESULT.					
Date:	Inspector		Quality Control		
29. April. 2002.			PHOENIX RUBBER Industrial Ltd. Hose Inspection and Pressure Testing PHOENIX RUBBER Q.C.		

14094-66

40920-0-00015 NB000



*[Signature]*  
**GENEX RUBBER**  
 Industrial Ltd.  
 Hose Inspection and  
 Certification Dept.

VERIFIED TRUE CO.  
 PHOENIX RUBBER CO.



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

## SUPO Data Report

10/09/2019

APD ID: 10400038616

Submission Date: 01/31/2019

Highlighted data  
reflects the most  
recent changes

Operator Name: DEVON ENERGY PRODUCTION COMPANY LP

Well Name: BELLOQ 11-2 FED STATE COM

Well Number: 521H

[Show Final Text](#)

Well Type: OIL WELL

Well Work Type: Drill

### Section 1 - Existing Roads

Will existing roads be used? YES

Existing Road Map:

EX\_RD\_20190130063635.pdf

Existing Road Purpose: ACCESS

Row(s) Exist? NO

ROW ID(s)

ID:

Do the existing roads need to be improved? NO

Existing Road Improvement Description:

Existing Road Improvement Attachment:

### Section 2 - New or Reconstructed Access Roads

Will new roads be needed? NO

### Section 3 - Location of Existing Wells

Existing Wells Map? YES

Attach Well map:

BELLOQ\_11\_2\_FED\_STATE\_COM\_521H\_OneMileBuffer\_WA017267310\_20190130063654.pdf

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

**Well Name:** BELLOQ 11-2 FED STATE COM

**Well Number:** 521H

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

**Submit or defer a Proposed Production Facilities plan?** DEFER

**Estimated Production Facilities description:** Wells will go to Belloq 11 CTB 1. Please refer to CTB plat.

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

##### Water Source Table

**Water source type:** OTHER

**Describe type:** null

**Water source use type:** STIMULATION

**Source latitude:**

**Source longitude:**

**Source datum:**

**Water source permit type:** OTHER

**Water source transport method:** PIPELINE

**Source land ownership:** FEDERAL

**Source transportation land ownership:** STATE

**Water source volume (barrels):** 230000

**Source volume (acre-feet):** 29.645412

**Source volume (gal):** 9660000

**Water source and transportation map:**

BELLOQ\_11\_2\_FED\_STATE\_COM\_521H\_511H\_water\_x\_\_map\_20190129141245.PDF

**Water source comments:** The attached Water Transfer Map is a proposal only and the final route and documentation will be provided by a Devon contractor prior to installation. When available Devon will always follow existing disturbance.

**New water well?** NO

##### New Water Well Info

**Well latitude:**

**Well Longitude:**

**Well datum:**

**Well target aquifer:**

**Est. depth to top of aquifer(ft):**

**Est thickness of aquifer:**

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

**Well Name:** BELLOQ 11-2 FED STATE COM

**Well Number:** 521H

**Aquifer comments:**

**Aquifer documentation:**

**Well depth (ft.):**

**Well casing type:**

**Well casing outside diameter (in.):**

**Well casing inside diameter (in.):**

**New water well casing?**

**Used casing source:**

**Drilling method:**

**Drill material:**

**Grout material:**

**Grout depth:**

**Casing length (ft.):**

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

**Well Production type:**

**Completion Method:**

**Water well additional information:**

**State appropriation permit:**

**Additional information attachment:**

### Section 6 - Construction Materials

**Using any construction materials:** YES

**Construction Materials description:** Dirt fill and caliche will be used to construct well pad. Map attached.

**Construction Materials source location attachment:**

BELLOQ\_11\_\_Caliche\_Map\_20190129141306.pdf

### Section 7 - Methods for Handling Waste

**Waste type:** PRODUCED WATER

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

**Amount of waste:** 1000 barrels

**Waste disposal frequency :** Daily

**Safe containment description:** N/A

**Safe containmant attachment:**

**Waste disposal type:** OFF-LEASE INJECTION **Disposal location ownership:** PRIVATE

**Disposal type description:**

**Disposal location description:** Multiple methods for handling waste will be utilized. Via trucking, Dvn owned disposal system and or third party pipeline take away.

**Waste type:** COMPLETIONS/STIMULATION

**Waste content description:** Flow back water during completion operations.

**Amount of waste:** 3000 barrels

**Waste disposal frequency :** One Time Only

**Safe containment description:** N/A

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

**Well Name:** BELLOQ 11-2 FED STATE COM

**Well Number:** 521H

**Safe containmant attachment:**

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

**Disposal type description:**

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

**Waste type:** FLOWBACK

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

**Amount of waste:** 2000 barrels

**Waste disposal frequency :** Daily

**Safe containment description:** N/A

**Safe containmant attachment:**

**Waste disposal type:** OFF-LEASE INJECTION **Disposal location ownership:** STATE

**Disposal type description:**

**Disposal location description:** Produced water during flowback will be disposed of at various disposals in Lea and Eddy County.

**Waste type:** DRILLING

**Waste content description:** Water Based Cuttings

**Amount of waste:** 1978 barrels

**Waste disposal frequency :** Daily

**Safe containment description:** N/A

**Safe containmant attachment:**

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

**Disposal type description:**

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

### Reserve Pit

**Reserve Pit being used?** NO

**Temporary disposal of produced water into reserve pit?**

**Reserve pit length (ft.)** **Reserve pit width (ft.)**

**Reserve pit depth (ft.)** **Reserve pit volume (cu. yd.)**

**Is at least 50% of the reserve pit in cut?**

**Reserve pit liner**

**Reserve pit liner specifications and installation description**



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

**Well Name:** BELLOQ 11-2 FED STATE COM

**Well Number:** 521H

### Cuttings Area

**Cuttings Area being used?** NO

**Are you storing cuttings on location?** NO

**Description of cuttings location**

**Cuttings area length (ft.)**

**Cuttings area width (ft.)**

**Cuttings area depth (ft.)**

**Cuttings area volume (cu. yd.)**

**Is at least 50% of the cuttings area in cut?**

**WCuttings area liner**

**Cuttings area liner specifications and installation description**

### Section 8 - Ancillary Facilities

**Are you requesting any Ancillary Facilities?:** NO

**Ancillary Facilities attachment:**

**Comments:**

### Section 9 - Well Site Layout

**Well Site Layout Diagram:**

521H\_RIG\_LAYOUT\_20190130063805.pdf

**Comments:**

### Section 10 - Plans for Surface Reclamation

**Type of disturbance:** New Surface Disturbance

**Multiple Well Pad Name:** BELLOQ 11 PAD

**Multiple Well Pad Number:** 2

**Recontouring attachment:**

RECLAMATION\_20190130063821.pdf

**Drainage/Erosion control construction:** All areas disturbed shall be reclaimed as early and as nearly as practicable to their original condition or their final land use and shall be maintained to control dust and minimize erosion to the extent practicable.

**Drainage/Erosion control reclamation:** Topsoils and subsoils shall be replaced to their original relative positions and contoured so as to achieve erosion control, long-term stability and preservation of surface water flow patterns. The disturbed area then shall be reseeded in the first favorable growing season.

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

**Well Name:** BELLOQ 11-2 FED STATE COM

**Well Number:** 521H

<b>Well pad proposed disturbance (acres):</b> 4.961	<b>Well pad interim reclamation (acres):</b> 2.575	<b>Well pad long term disturbance (acres):</b> 2.386
<b>Road proposed disturbance (acres):</b> 0.8	<b>Road interim reclamation (acres):</b> 0	<b>Road long term disturbance (acres):</b> 0
<b>Powerline proposed disturbance (acres):</b> 0	<b>Powerline interim reclamation (acres):</b> 0	<b>Powerline long term disturbance (acres):</b> 0
<b>Pipeline proposed disturbance (acres):</b> 0.794	<b>Pipeline interim reclamation (acres):</b> 0	<b>Pipeline long term disturbance (acres):</b> 0.794
<b>Other proposed disturbance (acres):</b> 0	<b>Other interim reclamation (acres):</b> 0	<b>Other long term disturbance (acres):</b> 0
<b>Total proposed disturbance:</b> 6.555	<b>Total interim reclamation:</b> 2.575	<b>Total long term disturbance:</b> 3.18

**Disturbance Comments:**

**Reconstruction method:** Operator will use Best Management Practices "BMP" to mechanically recontour to obtain the desired outcome.

**Topsoil redistribution:** Topsoils shall be replaced to their original relative positions and contoured so as to achieve erosion control, long-term stability and preservation of surface water flow patterns.

**Soil treatment:** Topsoils shall be replaced to their original relative positions and contoured so as to achieve erosion control, long-term stability and preservation of surface water flow patterns.

**Existing Vegetation at the well pad:** Shinnery, yucca, grasses and mesquite.

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

**Existing Vegetation Community at the road:** Shinnery, yucca, grasses and mesquite.

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

**Existing Vegetation Community at the pipeline:** Shinnery, yucca, grasses and mesquite.

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

**Existing Vegetation Community at other disturbances:** Shinnery, yucca, grasses and mesquite.

**Existing Vegetation Community at other disturbances attachment:**

**Non native seed used?** NO

**Non native seed description:**

**Seedling transplant description:**

**Will seedlings be transplanted for this project?** NO

**Seedling transplant description attachment:**

**Will seed be harvested for use in site reclamation?** NO

**Seed harvest description:**

**Seed harvest description attachment:**

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

**Well Name:** BELLOQ.11-2 FED STATE COM

**Well Number:** 521H

## Seed Management

### Seed Table

**Seed type:**

**Seed source:**

**Seed name:**

**Source name:**

**Source address:**

**Source phone:**

**Seed cultivar:**

**Seed use location:**

**PLS pounds per acre:**

**Proposed seeding season:**

Seed Summary	
Seed Type	Pounds/Acre

**Total pounds/Acre:**

**Seed reclamation attachment:**

### Operator Contact/Responsible Official Contact Info

**First Name:** JACOB

**Last Name:** OCHOA

**Phone:** (575)748-9934

**Email:** JACOB.OCHOA@DVN.COM

**Seedbed prep:**

**Seed BMP:**

**Seed method:**

**Existing invasive species?** NO

**Existing invasive species treatment description:**

**Existing invasive species treatment attachment:**

**Weed treatment plan description:** Maintain weeds on an as need basis.

**Weed treatment plan attachment:**

**Monitoring plan description:** Monitor as needed.

**Monitoring plan attachment:**

**Success standards:** N/A

**Pit closure description:** N/A

**Pit closure attachment:**

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

**Well Name:** BELLOQ 11-2 FED STATE COM

**Well Number:** 521H

## **Section 11 - Surface Ownership**

**Disturbance type:** PIPELINE

**Describe:**

**Surface Owner:** BUREAU OF LAND MANAGEMENT

**Other surface owner description:**

**BIA Local Office:**

**BOR Local Office:**

**COE Local Office:**

**DOD Local Office:**

**NPS Local Office:**

**State Local Office:**

**Military Local Office:**

**USFWS Local Office:**

**Other Local Office:**

**USFS Region:**

**USFS Forest/Grassland:**

**USFS Ranger District:**

**Disturbance type:** NEW ACCESS ROAD

**Describe:**

**Surface Owner:** BUREAU OF LAND MANAGEMENT

**Other surface owner description:**

**BIA Local Office:**

**BOR Local Office:**

**COE Local Office:**

**DOD Local Office:**

**NPS Local Office:**

**State Local Office:**

**Military Local Office:**

**USFWS Local Office:**

**Other Local Office:**

**USFS Region:**

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

**Well Name:** BELLOQ 11-2 FED STATE COM

**Well Number:** 521H

**USFS Forest/Grassland:**

**USFS Ranger District:**

**Disturbance type:** EXISTING ACCESS ROAD

**Describe:**

**Surface Owner:** BUREAU OF LAND MANAGEMENT

**Other surface owner description:**

**BIA Local Office:**

**BOR Local Office:**

**COE Local Office:**

**DOD Local Office:**

**NPS Local Office:**

**State Local Office:**

**Military Local Office:**

**USFWS Local Office:**

**Other Local Office:**

**USFS Region:**

**USFS Forest/Grassland:**

**USFS Ranger District:**

**Disturbance type:** WELL PAD

**Describe:**

**Surface Owner:** BUREAU OF LAND MANAGEMENT

**Other surface owner description:**

**BIA Local Office:**

**BOR Local Office:**

**COE Local Office:**

**DOD Local Office:**

**NPS Local Office:**

**State Local Office:**

**Military Local Office:**

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

**Well Name:** BELLOQ 11-2 FED STATE COM

**Well Number:** 521H

**USFWS Local Office:**

**Other Local Office:**

**USFS Region:**

**USFS Forest/Grassland:**

**USFS Ranger District:**

### Section 12 - Other Information

**Right of Way needed?** NO

**Use APD as ROW?**

**ROW Type(s):**

#### ROW Applications

**SUPO Additional Information:**

**Use a previously conducted onsite?** YES

**Previous Onsite information:** MAY 2017/ BELLOQ 222H

#### Other SUPO Attachment

Belloq\_11\_WP\_2\_to\_Belloq\_11\_CTB\_1\_20190129141738.pdf

AA000145290\_BELLOQ\_11\_CTB\_1\_PAD\_P\_20190129141737.pdf

EL8029\_BELLOQ\_11\_WELL\_PAD\_2\_ELECTRIC\_LINE\_P\_R1\_20190129141741.pdf

521H\_523H\_513H\_522H\_Pay.gov\_\_Receipt\_20190130115543.pdf



SECTION 11, TOWNSHIP 23 SOUTH, RANGE 31 EAST, N.M.P.M.  
EDDY COUNTY, STATE OF NEW MEXICO  
AERIAL ACCESS ROUTE MAP



NOT TO SCALE  
AERIAL PHOTO:  
GOOGLE EARTH  
NOV. 2017

DEVON ENERGY PRODUCTION COMPANY, L.P.  
**BELLOQ 11-2 FED STATE COM 521H**  
LOCATED 300 FT. FROM THE SOUTH LINE  
AND 660 FT. FROM THE WEST LINE OF  
SECTION 11, TOWNSHIP 23 SOUTH,  
RANGE 31 EAST, N.M.P.M.  
EDDY COUNTY, STATE OF NEW MEXICO

DECEMBER 20, 2018

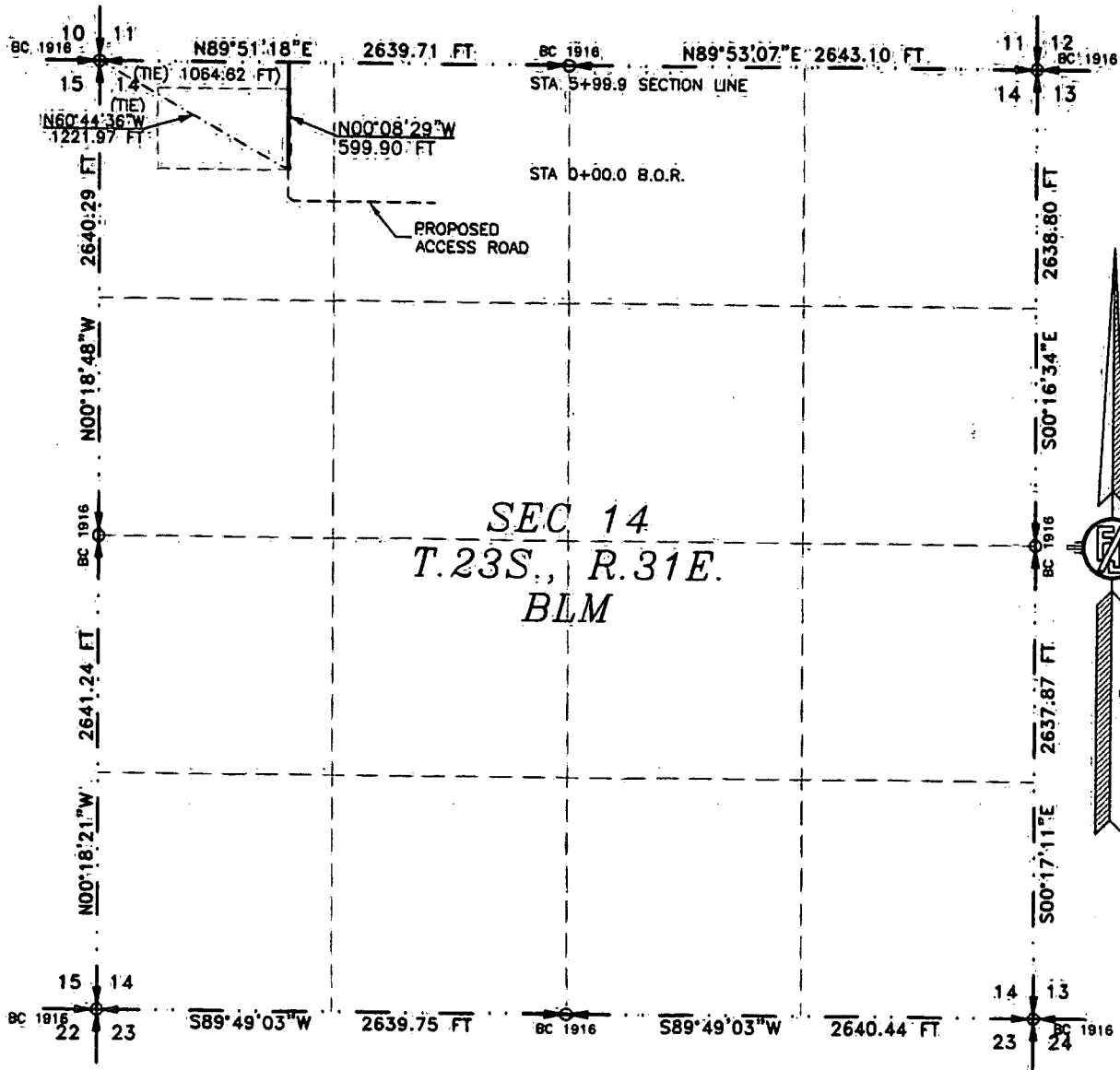
SURVEY NO. 6708

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



**ACCESS ROAD PLAT**  
 ACCESS ROAD FOR BELLOQ 11-2 FED STATE COM 231H, 521H, 511H, & BELLOQ 11 FED 222H

**DEVON ENERGY PRODUCTION COMPANY, L.P.**  
 CENTERLINE SURVEY OF AN ACCESS ROAD CROSSING  
 SECTION 14, TOWNSHIP 23 SOUTH, RANGE 31 EAST, N.M.P.M.  
 EDDY COUNTY, STATE OF NEW MEXICO  
 DECEMBER 13, 2018



SEE NEXT SHEET (2-4) FOR DESCRIPTION

**SURVEYOR CERTIFICATE**

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

IN WITNESS WHEREOF, THIS CERTIFICATE IS EXECUTED AT CARLSBAD, NEW MEXICO, THIS 13 DAY OF DECEMBER 2018

FILIMON F. JARAMILLO, SURVEYOR NO. 12797  
 MADRON SURVEYING, INC.  
 301 SOUTH CANAL  
 CARLSBAD, NEW MEXICO 88220  
 Phone (575) 234-3341

SURVEY NO. 6178B

**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: 1-4

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

**ACCESS ROAD PLAT**  
**ACCESS ROAD FOR BELLOQ 11-2 FED STATE COM 231H, 521H, 511H, & BELLOQ 11 FED 222H**

**DEVON ENERGY PRODUCTION COMPANY, L.P.**  
**CENTERLINE SURVEY OF AN ACCESS ROAD CROSSING**  
**SECTION 14, TOWNSHIP 23 SOUTH, RANGE 31 EAST, N.M.P.M.**  
**EDDY COUNTY, STATE OF NEW MEXICO**  
**DECEMBER 13, 2018**

**DESCRIPTION**

A STRIP OF LAND 30 FEET WIDE CROSSING BUREAU OF LAND MANAGEMENT LAND IN SECTION 14, TOWNSHIP 23 SOUTH, RANGE 31 EAST, N.M.P.M., EDDY COUNTY, STATE OF NEW MEXICO AND BEING 15 FEET EACH SIDE OF THE FOLLOWING DESCRIBED CENTERLINE SURVEY:

BEGINNING AT A POINT WITHIN THE NW/4 NW/4 OF SAID SECTION 14, TOWNSHIP 23 SOUTH, RANGE 31 EAST, N.M.P.M., WHENCE THE NORTHWEST CORNER OF SAID SECTION 14, TOWNSHIP 23 SOUTH, RANGE 31 EAST, N.M.P.M. BEARS N60°44'36"W, A DISTANCE OF 1221.97 FEET;  
THENCE N00°08'29"W A DISTANCE OF 599.90 FEET THE TERMINUS OF THIS CENTERLINE SURVEY, WHENCE THE NORTHWEST CORNER OF SAID SECTION 14, TOWNSHIP 23 SOUTH, RANGE 31 EAST, N.M.P.M. BEARS S89°51'18"W, A DISTANCE OF 1064.62 FEET;

SAID STRIP OF LAND BEING 599.90 FEET OR 36.36 RODS IN LENGTH, CONTAINING 0.413 ACRES MORE OR LESS AND BEING ALLOCATED BY FORTIES AS FOLLOWS:

NW/4 NW/4 599.90 FT 36.36 RODS 0.413 ACRES

**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: 2-4**

**MADRON SURVEYING, INC.**

**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 27<sup>TH</sup> DAY OF DECEMBER, 2018

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

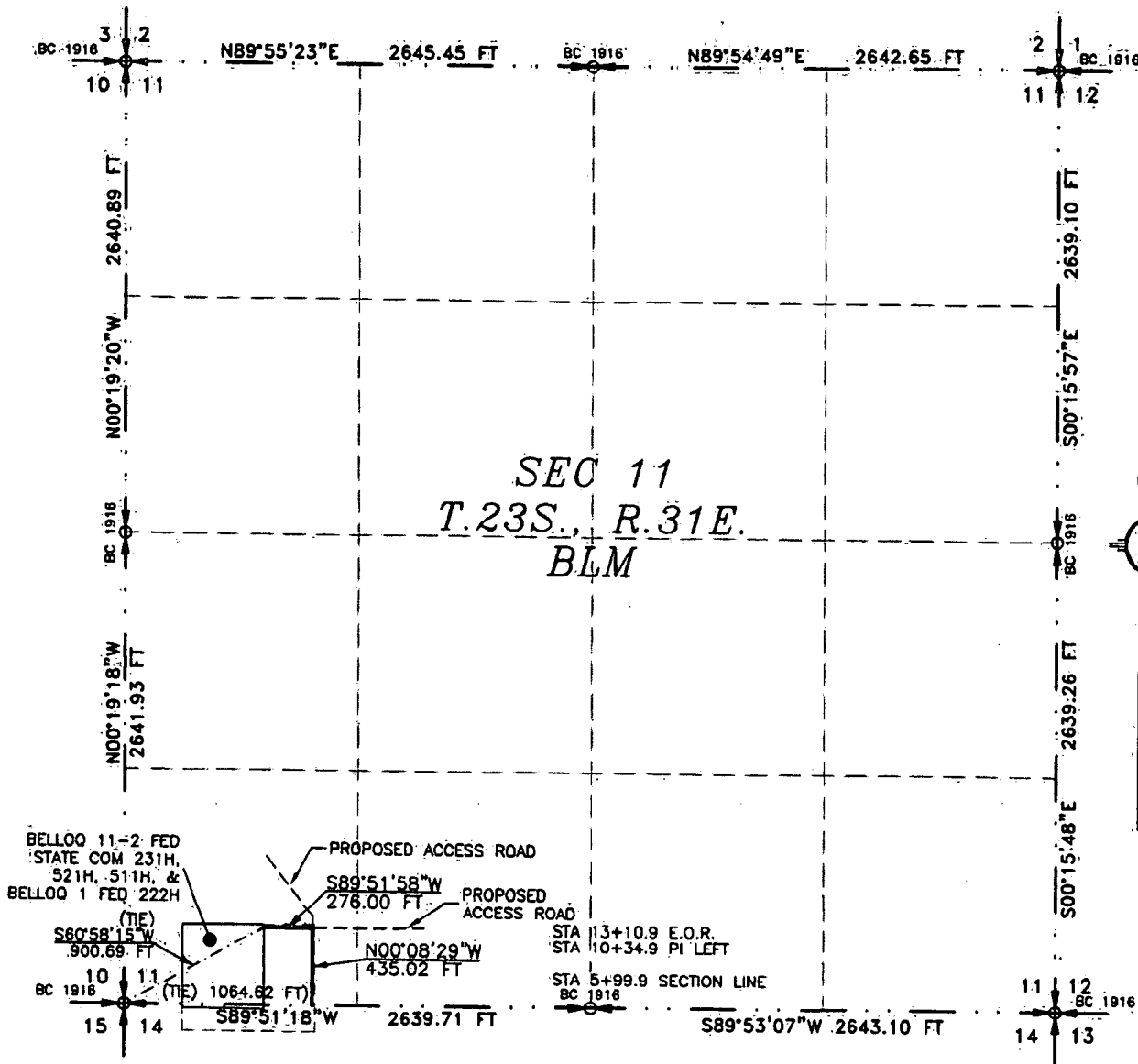
**SURVEY NO. 6178B**

**CARLSBAD, NEW MEXICO**

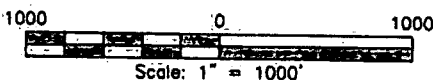
# ACCESS ROAD PLAT

ACCESS ROAD FOR BELLOQ 11-2 FED STATE COM 231H, 521H, 511H, & BELLOQ 11 FED 222H

DEVON ENERGY PRODUCTION COMPANY, L.P.  
CENTERLINE SURVEY OF AN ACCESS ROAD CROSSING  
SECTION 11, TOWNSHIP 23 SOUTH, RANGE 31 EAST, N.M.P.M.  
EDDY COUNTY, STATE OF NEW MEXICO  
DECEMBER 13, 2018



SEE NEXT SHEET (4-4) FOR DESCRIPTION



## 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: 3-4

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

## SURVEYOR CERTIFICATE

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

IN WITNESS WHEREOF, THIS CERTIFICATE IS EXECUTED AT CARLSBAD, NEW MEXICO, THIS 13 DAY OF DECEMBER 2018

FILIMON F. JARAMILLO, PLS. 12797

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

SURVEY NO. 6178B

**ACCESS ROAD PLAT**

ACCESS ROAD FOR BELLOQ 11-2 FED STATE COM 231H, 521H, 511H, & BELLOQ 11 FED 222H

**DEVON ENERGY PRODUCTION COMPANY, L.P.  
CENTERLINE SURVEY OF AN ACCESS ROAD CROSSING  
SECTION 11, TOWNSHIP 23 SOUTH, RANGE 31 EAST, N.M.P.M.  
EDDY COUNTY, STATE OF NEW MEXICO  
DECEMBER 13, 2018**

**DESCRIPTION**

A STRIP OF LAND 30 FEET WIDE CROSSING BUREAU OF LAND MANAGEMENT LAND IN SECTION 11, TOWNSHIP 23 SOUTH, RANGE 31 EAST, N.M.P.M., EDDY COUNTY, STATE OF NEW MEXICO AND BEING 15 FEET EACH SIDE OF THE FOLLOWING DESCRIBED CENTERLINE SURVEY:

BEGINNING AT A POINT WITHIN THE SW/4 SW/4 OF SAID SECTION 11, TOWNSHIP 23 SOUTH, RANGE 31 EAST, N.M.P.M., WHENCE THE SOUTHWEST CORNER OF SAID SECTION 11, TOWNSHIP 23 SOUTH, RANGE 31 EAST, N.M.P.M. BEARS S89°51'18"W, A DISTANCE OF 1064.62 FEET;  
THENCE N00°08'29"W A DISTANCE OF 435.02 FEET TO AN ANGLE POINT OF THE LINE HEREIN DESCRIBED;  
THENCE S89°51'58"W A DISTANCE OF 276.00 FEET THE TERMINUS OF THIS CENTERLINE SURVEY, WHENCE THE SOUTHWEST CORNER OF SAID SECTION 11, TOWNSHIP 23 SOUTH, RANGE 31 EAST, N.M.P.M. BEARS S60°58'15"W, A DISTANCE OF 900.69 FEET;

SAID STRIP OF LAND BEING 711.02 FEET OR 43.09 RODS IN LENGTH, CONTAINING 0.490 ACRES MORE OR LESS AND BEING ALLOCATED BY FORTIES AS FOLLOWS:

SW/4 SW/4 711.02 L.F. 43.09 RODS 0.490 ACRES

**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: 4-4**

**MADRON SURVEYING, INC.**

**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 13 DAY OF DECEMBER, 2018.

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

**SURVEY NO. 6178B**

FILMON F. JARAMILLO 12797

301 SOUTH CANAL  
(575) 234-3341

**CARLSBAD, NEW MEXICO**

**PLAT**  
**One Mile Radius Map**

**devon**  
This map is for illustrative purposes only and is neither a legally recorded map nor a survey and is not intended to be used as one. Devon makes no warranty, representation, or guarantee of any kind regarding this map.

USA Contiguous Equidistant Conic  
Datum: North American 1983  
Created by: FME Server  
Map is current as of 1/17/2019



0 0.3 Miles  
1 inch = 0.44 miles

**BELLOQ 11-2 FED STATE COM 521H**  
**WA017267310**

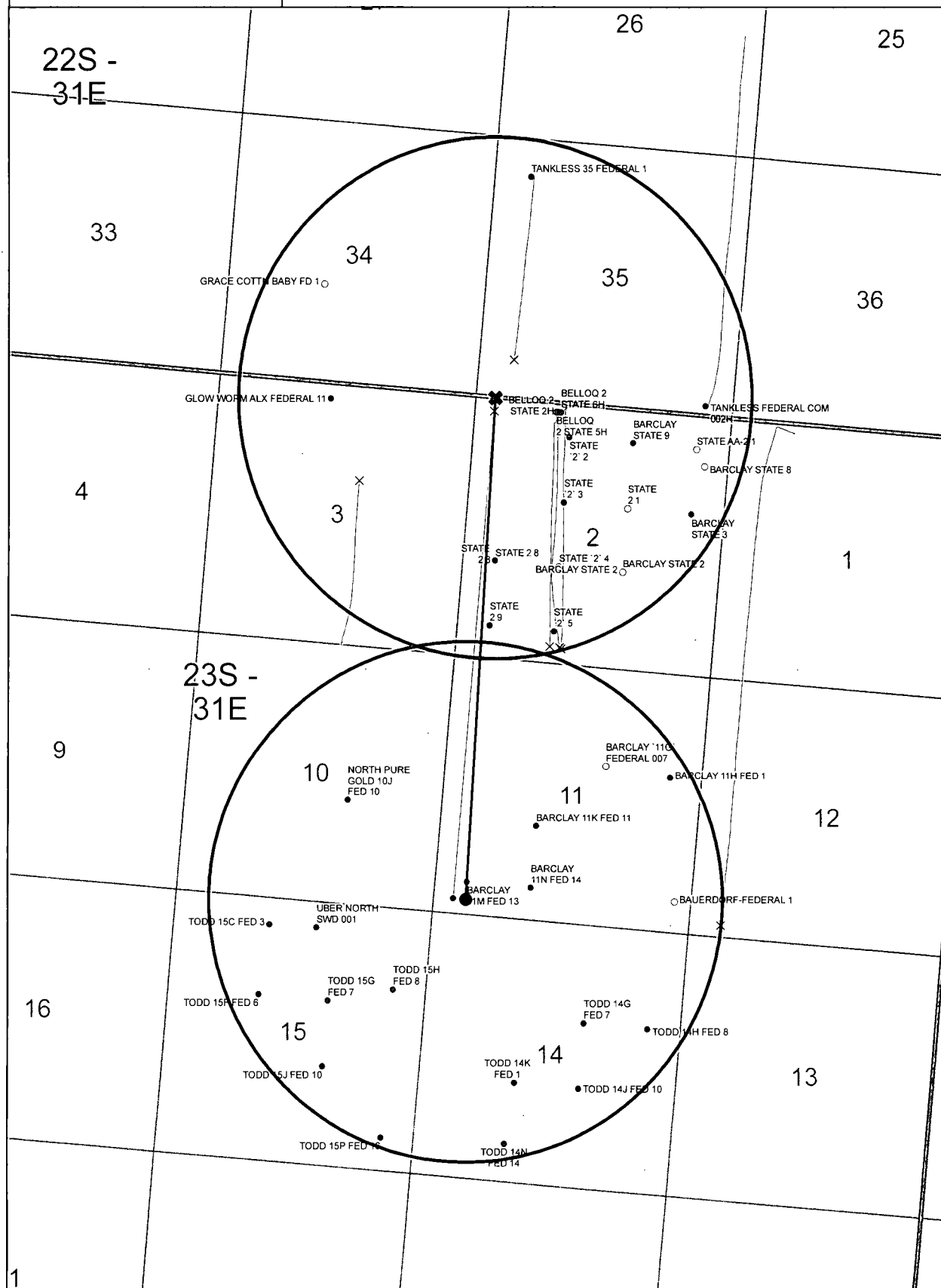
**BELLOQ 11-2 FED STATE COM 231H**

Nearest wellbore to SHL: 260 ft.

**BELLOQ 11-2 FED STATE COM 231H**

Nearest wellbore to BHL: 269 ft.

- Unknown SHL
- Active SHL
- Inactive SHL
- × BHL



# BELLOQ 11-2 FED STATE COM

522H, 511H



This map is for illustrative purposes only and is neither a legally recorded map nor survey and is not intended to be used as one. Devon makes no warranty, representation, or guarantee of any kind regarding this map.

WGS\_1984\_Web\_Mercator\_Auxiliary\_Sphere

Prepared by: \_User

Map is current as of: 17-May-2018



Miles

0 0.14 0.28 0.56 1:28,457

CROFT FW POND

DEVON 30 DAY, INSTALL DAYS PRIOR TO COMPLETION  
DEVON WILL CONTACT BLM IF ADDITIONAL TIME IS NEEDED  
DISTURBANCE: EXISTING  
CONTENTS: TREATED WATER & FRESH WATER  
TYPE OF TYPE: LAYFLAT  
SIZE OF PIPE: 10" OR 12"  
LENGTH OF PIPE: TW 10,662' & FW 19,948'

TODD 2 TW POND

BELLOQ 11-2 FED STATE COM 521H, 511H

1E - 3

23S - 31E - 2

23S - 31E - 1

23S - 32E - 6

23310104

615

# Caliche Pit 23S 31E Section 1

Total 12,911.57 ft

6,332.82 ft

3 - 10

23S - 31E - 1

23S - 31E - 12

23S - 32E - 7

Belloq 11

3 - 15

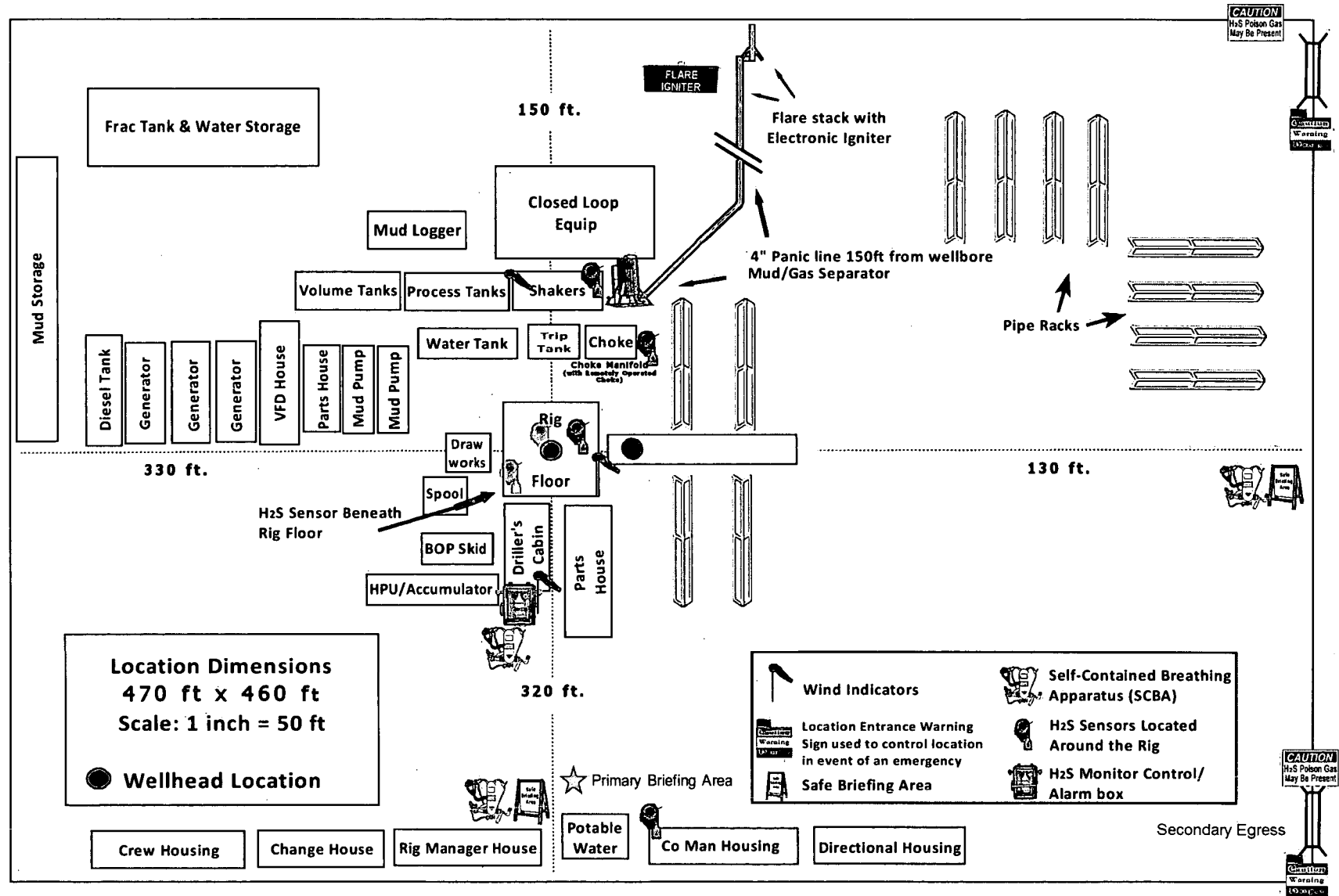
23S - 31E - 14

23S - 31E - 13

23S - 32E - 10



# Devon Energy - Well Pad Rig Location Layout Safety Equipment Location



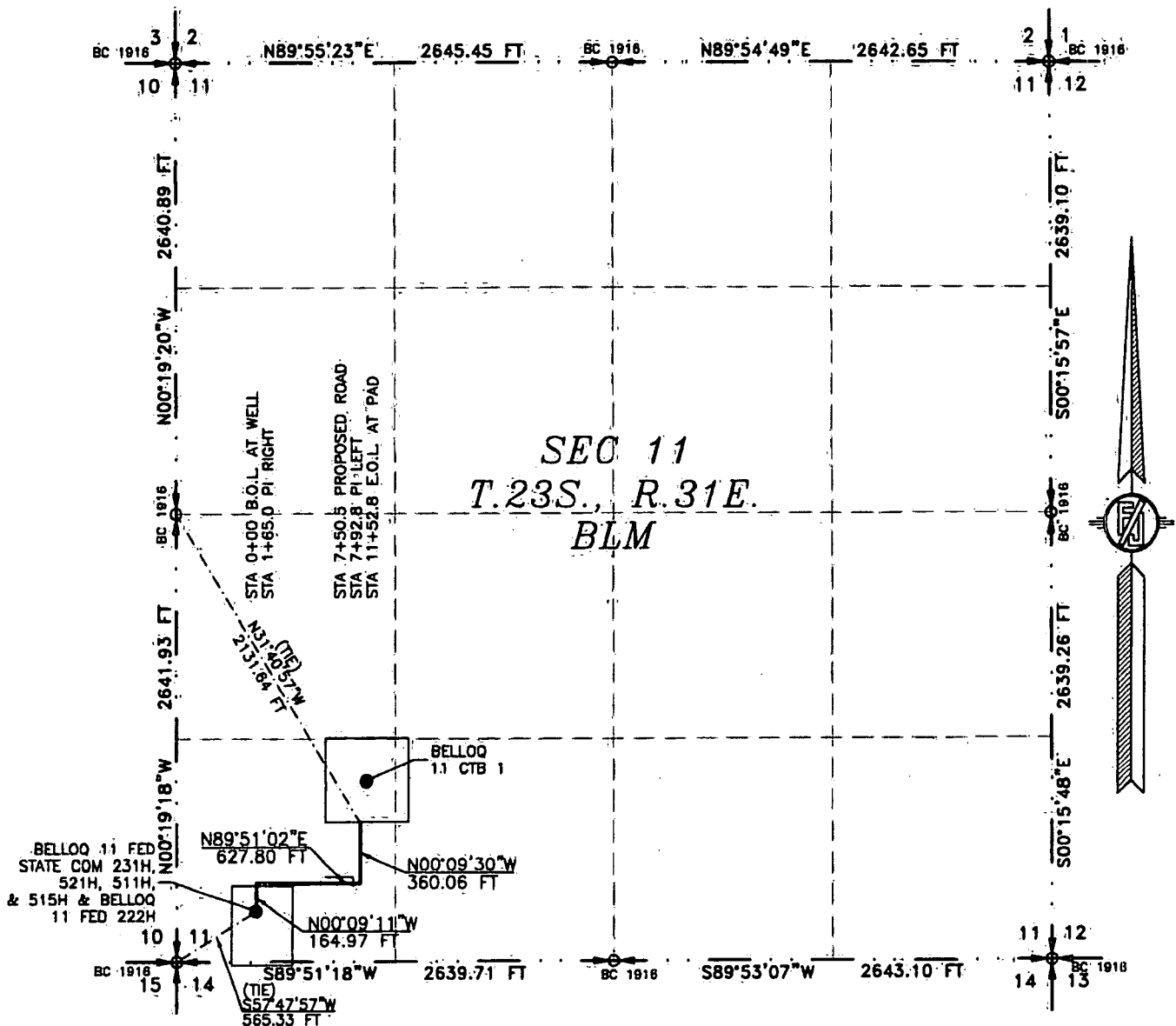


*CARLSBAD, NEW MEXICO*

# FLOWLINE PLAT

FIVE-8" POLY FLOWLINES AND ONE-8" POLY FLEX GAS LIFT LINE BURIED IN THE SAME DITCH FROM BELLOQ 11 FED STATE COM 231H, 521H, 511H, & 515H & BELLOQ 11 FED 222H TO BELLOQ 11 CTB 1

DEVON ENERGY PRODUCTION COMPANY, L.P.  
CENTERLINE SURVEY OF A PIPELINE CROSSING  
SECTION 11, TOWNSHIP 23 SOUTH, RANGE 31 EAST, N.M.P.M.  
EDDY COUNTY, STATE OF NEW MEXICO  
AUGUST 6, 2018



SEE NEXT SHEET (2-4) FOR DESCRIPTION

## SURVEYOR CERTIFICATE

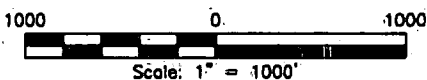
I, FILMON F. JARAMILLO, A NEW MEXICO PROFESSIONAL SURVEYOR NO. 12797, HEREBY CERTIFY THAT I HAVE CONDUCTED AND AM RESPONSIBLE FOR THIS SURVEY, THAT THIS SURVEY IS TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF, AND THAT THIS SURVEY AND PLAT MEET THE MINIMUM STANDARDS FOR LAND SURVEYING IN THE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

IN WITNESS WHEREOF, THIS CERTIFICATE IS EXECUTED AT CARLSBAD, NEW MEXICO, THIS DAY OF AUGUST 2018.

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

FILMON F. JARAMILLO, PLS. 12797

SURVEY NO. 5316B



## 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: 1-4

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

# FLOWLINE PLAT

FIVE-8" POLY FLOWLINES AND ONE-8" POLY FLEX GAS LIFT LINE BURIED IN THE SAME DITCH  
FROM BELLOQ 11 FED STATE COM 231H, 521H, 511H, & 515H & BELLOQ 11 FED 222H TO BELLOQ 11 CTB 1

## DEVON ENERGY PRODUCTION COMPANY, L.P. CENTERLINE SURVEY OF A PIPELINE CROSSING SECTION 11, TOWNSHIP 23 SOUTH, RANGE 31 EAST, N.M.P.M. EDDY COUNTY, STATE OF NEW MEXICO AUGUST 6, 2018

### DESCRIPTION

A STRIP OF LAND 30 FEET WIDE CROSSING BUREAU OF LAND MANAGEMENT LAND IN SECTION 11, TOWNSHIP 23 SOUTH, RANGE 31 EAST, N.M.P.M., EDDY COUNTY, STATE OF NEW MEXICO AND BEING 15 FEET EACH SIDE OF THE FOLLOWING DESCRIBED CENTERLINE SURVEY:

BEGINNING AT A POINT WITHIN THE SW/4 SW/4 OF SAID SECTION 11, TOWNSHIP 23 SOUTH, RANGE 31 EAST, N.M.P.M., WHENCE THE SOUTHWEST CORNER OF SAID SECTION 11, TOWNSHIP 23 SOUTH, RANGE 31 EAST, N.M.P.M. BEARS S57°47'57"W, A DISTANCE OF 565.33 FEET;  
THENCE N00°09'11"W A DISTANCE OF 164.97 FEET TO AN ANGLE POINT OF THE LINE HEREIN DESCRIBED;  
THENCE N89°51'02"E A DISTANCE OF 627.80 FEET TO AN ANGLE POINT OF THE LINE HEREIN DESCRIBED;  
THENCE N00°09'30"W A DISTANCE OF 360.06 FEET THE TERMINUS OF THIS CENTERLINE SURVEY, WHENCE THE WEST QUARTER CORNER OF SAID SECTION 11, TOWNSHIP 23 SOUTH, RANGE 31 EAST, N.M.P.M. BEARS N31°40'57"W, A DISTANCE OF 2131.64 FEET;

SAID STRIP OF LAND BEING 1152.83 FEET OR 69.87 RODS IN LENGTH, CONTAINING 0.794 ACRES MORE OR LESS AND BEING ALLOCATED BY FORTIES AS FOLLOWS:

SW/4 SW/4 1152.83 L.F. 69.87 RODS 0.794 ACRES

### SURVEYOR CERTIFICATE

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

IN WITNESS WHEREOF THIS CERTIFICATE IS EXECUTED AT CARLSBAD,

NEW MEXICO, THIS 6 DAY OF AUGUST 2018

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

FILIMON F. JARAMILLO, PLS 12797

SURVEY NO. 5316B

### 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: 2-4

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

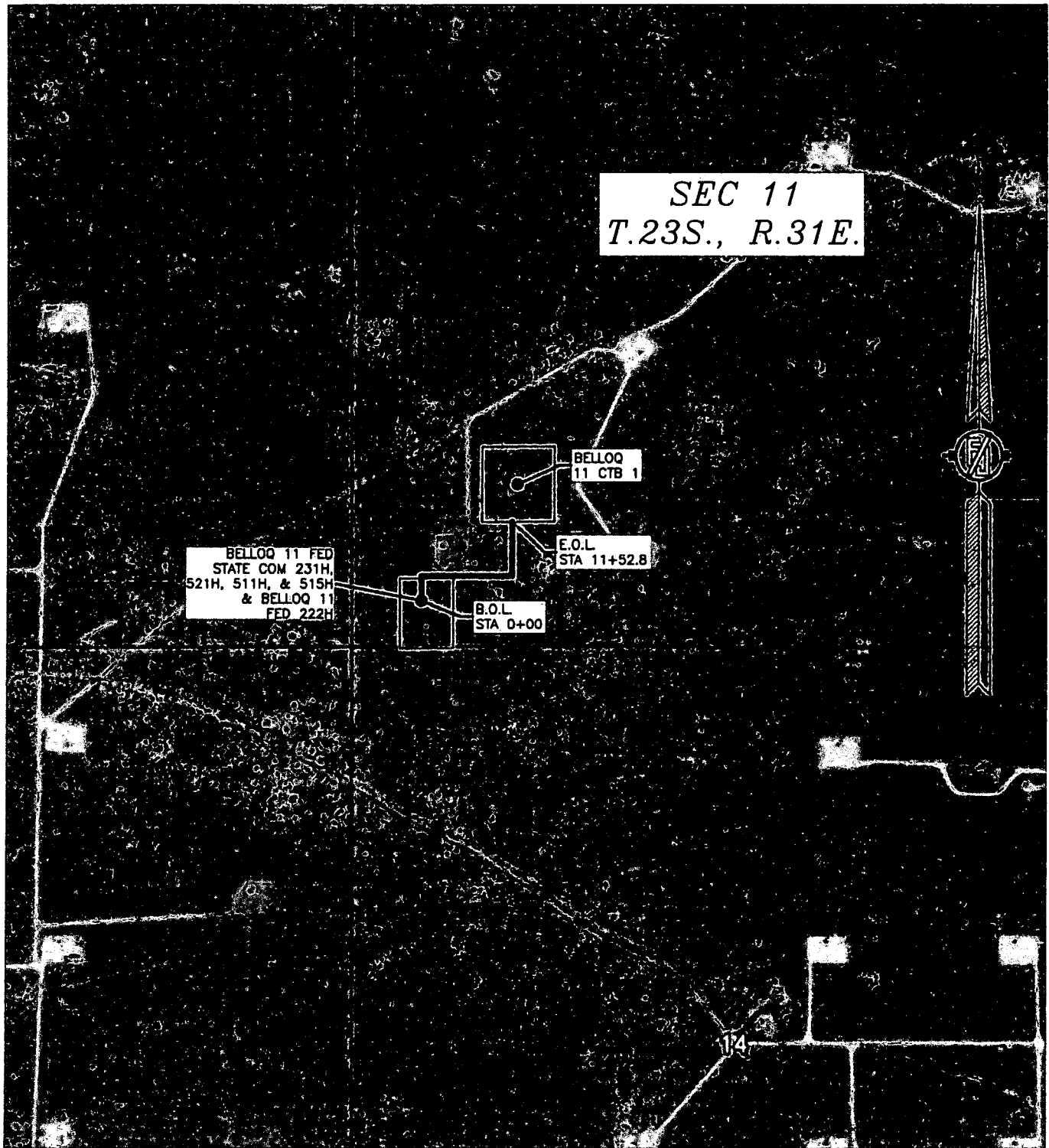
FIVE-8" POLY FLOWLINES AND ONE-8" POLY FLEX GAS LIFT LINE BURIED IN THE SAME DITCH FROM BELLOQ 11 FED STATE COM 231H, 521H, 511H, & 515H & BELLOQ 11 FED 222H TO BELLOQ 11 CTB 1

[illegible]

# FLOWLINE PLAT

FIVE-8" POLY FLOWLINES AND ONE-8" POLY FLEX GAS LIFT LINE BURIED IN THE SAME DITCH  
FROM BELLOQ 11 FED STATE COM 231H, 521H, 511H, & 515H & BELLOQ 11 FED 222H TO BELLOQ 11 CTB 1

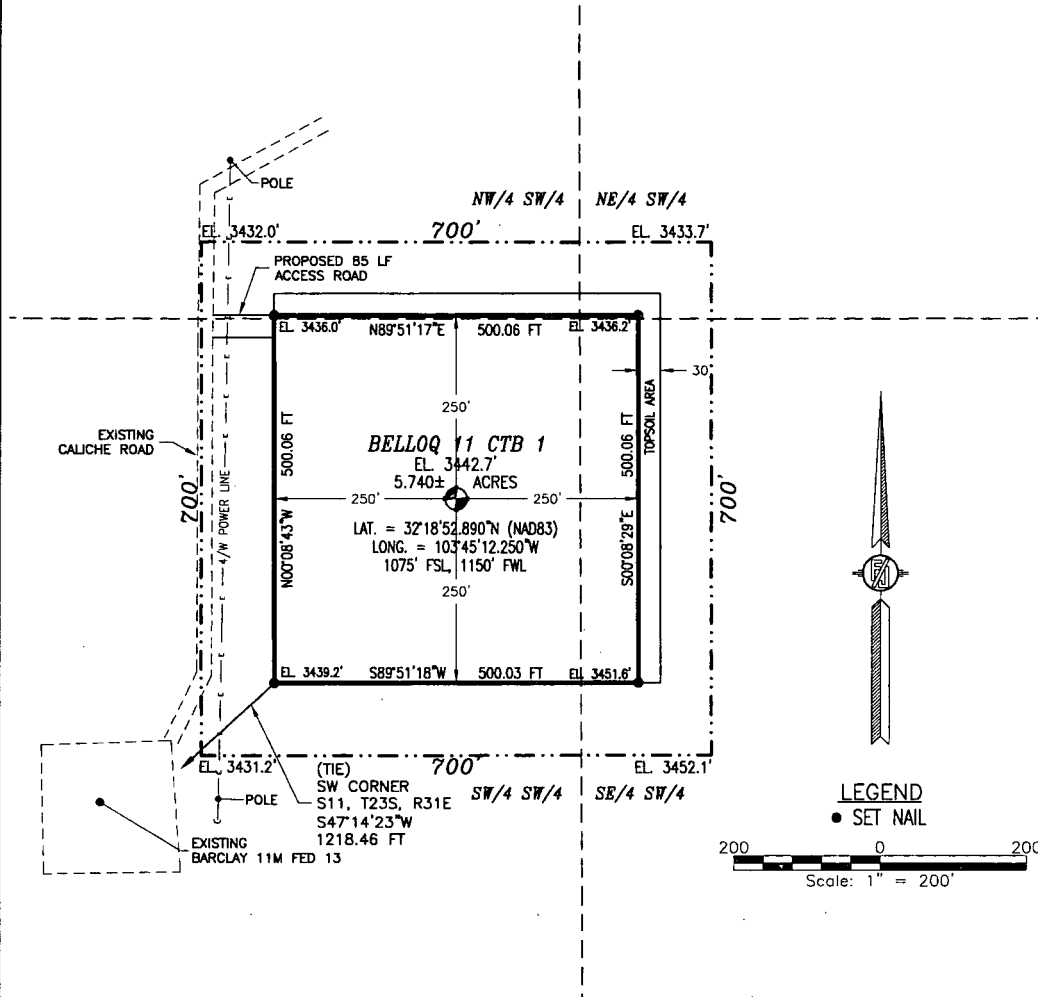
DEVON ENERGY PRODUCTION COMPANY, L.P.  
CENTERLINE SURVEY OF A PIPELINE CROSSING  
SECTION 11, TOWNSHIP 23 SOUTH, RANGE 31 EAST, N.M.P.M.  
EDDY COUNTY, STATE OF NEW MEXICO  
AUGUST 6, 2018



BELLOQ 11 CTB 1

DEVON ENERGY PRODUCTION COMPANY, L.P.  
IN THE SW/4 SW/4 & SE/4 SW/4 & NW/4 SW/4 & NE/4 SW/4 OF  
SECTION 11, TOWNSHIP 23 SOUTH, RANGE 31 EAST, N.M.P.M.  
EDDY COUNTY, STATE OF NEW MEXICO

MAY 15, 2017



DESCRIPTION

A CERTAIN PIECE OR PARCEL OF LAND AND REAL ESTATE LYING IN THE SW/4 SW/4 & SE/4 SW/4 & NW/4 SW/4 & NE/4 SW/4 OF SECTION 11, TOWNSHIP 23 SOUTH, RANGE 31 EAST, N.M.P.M., EDDY COUNTY, NEW MEXICO.

BEGINNING AT THE SOUTHWEST CORNER OF THE PARCEL, WHENCE THE SOUTHWEST CORNER OF SECTION 11, TOWNSHIP 23 SOUTH, RANGE 31 EAST, N.M.P.M. BEARS S47°14'23\"W, A DISTANCE OF 1218.46 FEET;  
THENCE N00°08'43\"W A DISTANCE OF 500.06 FEET TO THE NORTHWEST CORNER OF THE PARCEL;  
THENCE N89°51'17\"E A DISTANCE OF 500.06 FEET TO THE NORTHEAST CORNER OF THE PARCEL;  
THENCE S00°08'29\"E A DISTANCE OF 500.06 FEET TO THE SOUTHEAST CORNER OF THE PARCEL;  
THENCE S89°51'18\"W A DISTANCE OF 500.03 FEET TO THE SOUTHWEST CORNER OF THE PARCEL, TO THE POINT OF BEGINNING;

CONTAINING 4.783 ACRES IN THE SW/4 SW/4 & 0.905 ACRES IN THE SE/4 SW/4 & 0.044 ACRES IN THE NW/4 SW/4 & 0.008 ACRES IN THE NE/4 SW/4 FOR A TOTAL OF 5.740 ACRES MORE OR LESS.

GENERAL NOTES

- 1.) THE INTENT OF THIS SURVEY IS TO ACQUIRE A BUSINESS LEASE FOR THE PURPOSE OF BUILDING A CENTRAL TANK BATTERY
- 2.) BASIS OF BEARING IS NEW MEXICO STATE PLANE EAST ZONE MODIFIED TO THE SURFACE (NAD83)

**DRIVING DIRECTIONS:** FROM STATE HIGHWAY 128 AND CR 798 (RED ROAD) GO NORTH ON CR 798 4.7 MILES, TURN LEFT ON CALICHE ROAD AND GO WEST 0.15 OF A MILE, BEND RIGHT AND GO NORTHWEST 0.2 OF A MILE, TURN LEFT AND GO SOUTHWEST 0.6 OF A MILE, TURN LEFT AND GO SOUTH 188', TURN LEFT GO EAST 85' TO THE NORTHWEST PAD CORNER.

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 15 DAY OF MAY 2017

FILMON F. JARAMILLO, Surveyor No. 12797

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

SURVEY NO. 5240

SHEET: 1-3

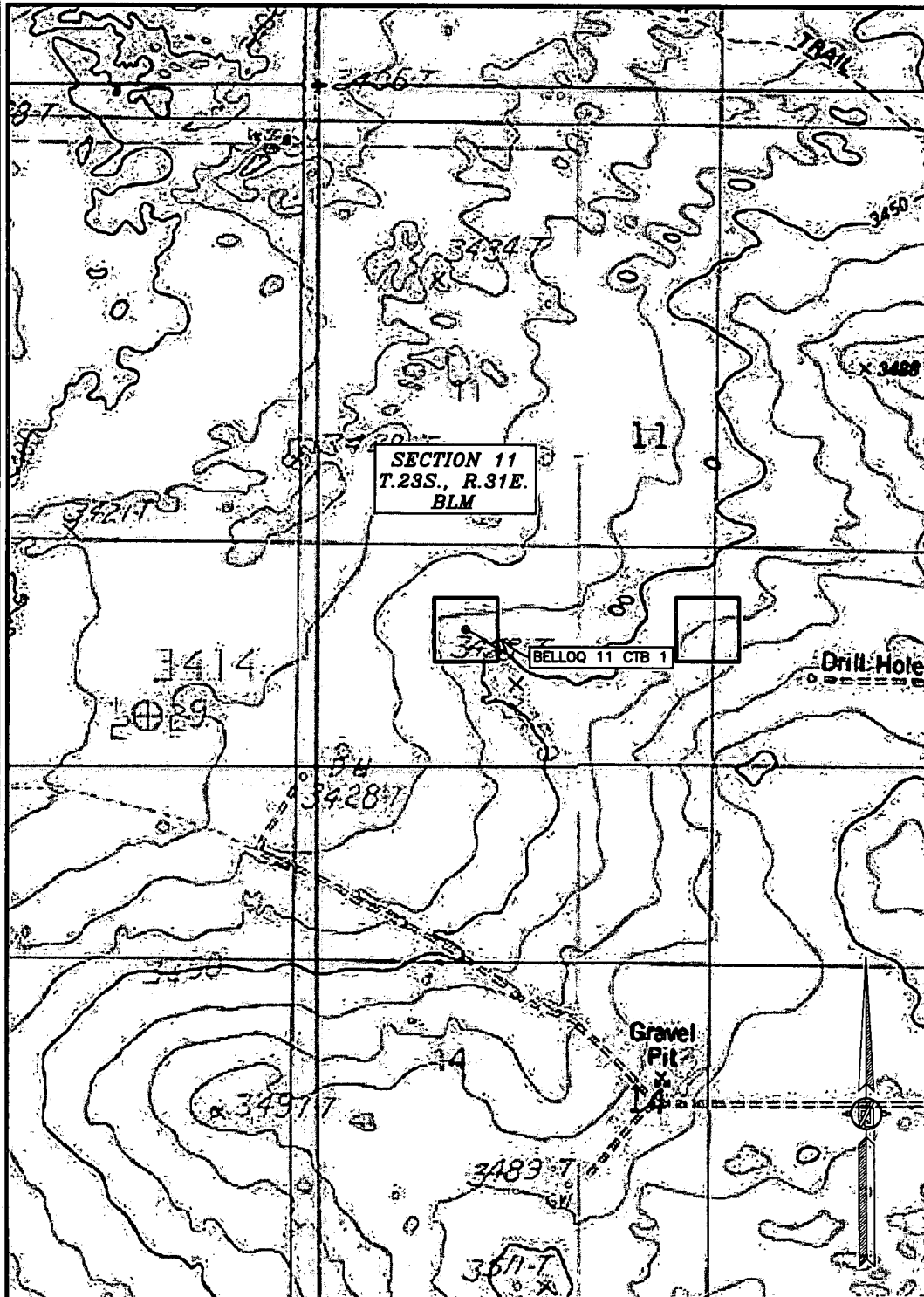
MADRON SURVEYING, INC. CARLSBAD, NEW MEXICO

BELLOQ 11 CTB 1

DEVON ENERGY PRODUCTION COMPANY, L.P.  
IN THE SW/4 SW/4 & SE/4 SW/4 & NW/4 SW/4 & NE/4 SW/4 OF  
SECTION 11, TOWNSHIP 23 SOUTH, RANGE 31 EAST, N.M.P.M.  
EDDY COUNTY, STATE OF NEW MEXICO

MAY 15, 2017

QUAD MAP



SHEET: 2-3

SURVEY NO. 5240

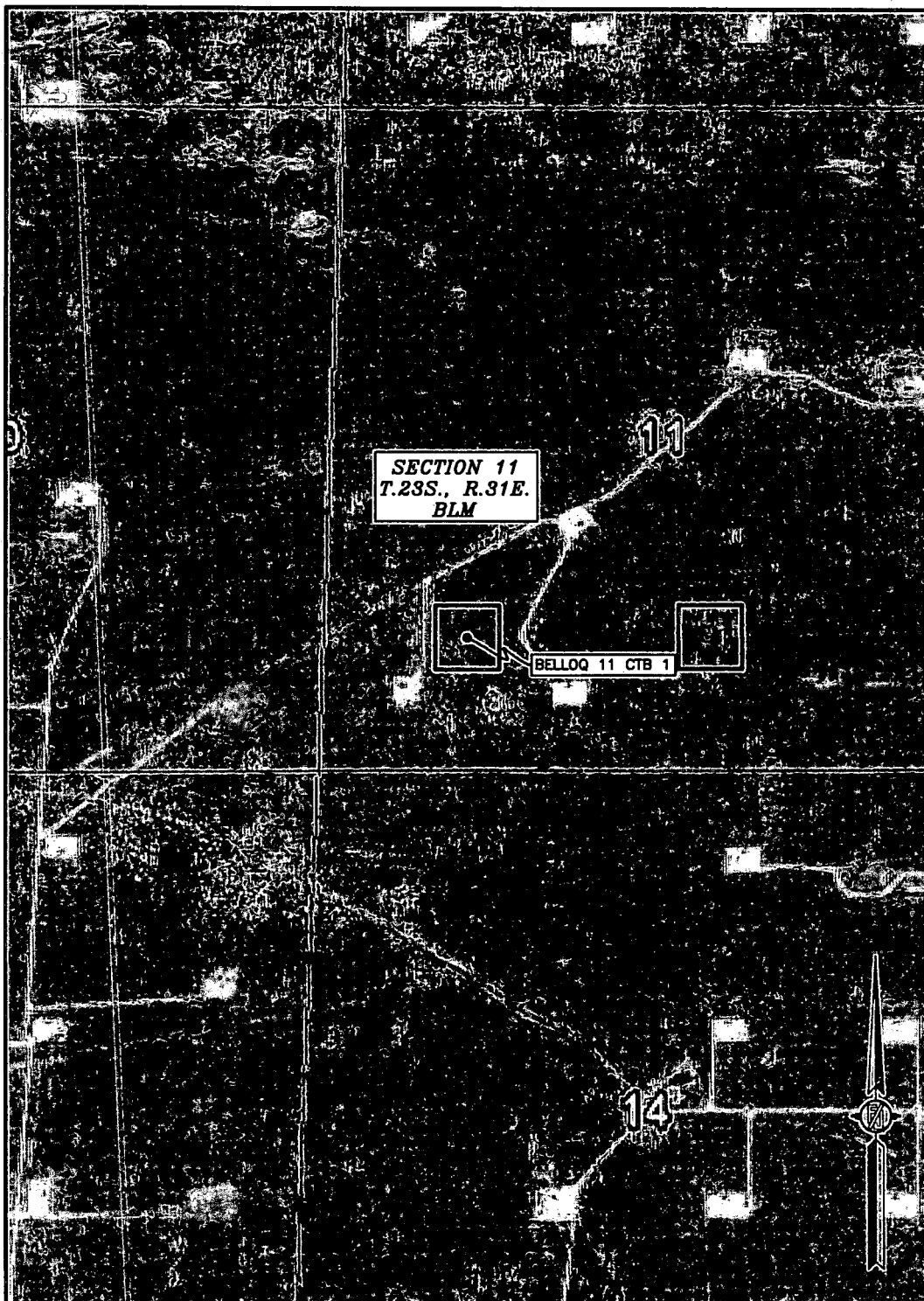
MADRON SURVEYING, INC. 301 SOUTH CANAL (575) 234-3341 CARLSBAD, NEW MEXICO

BELLOQ 11 CTB 1

DEVON ENERGY PRODUCTION COMPANY, L.P.  
IN THE SW/4 SW/4 & SE/4 SW/4 & NW/4 SW/4 & NE/4 SW/4 OF  
SECTION 11, TOWNSHIP 23 SOUTH, RANGE 31 EAST, N.M.P.M.  
EDDY COUNTY, STATE OF NEW MEXICO

MAY 15, 2017

AERIAL PHOTO



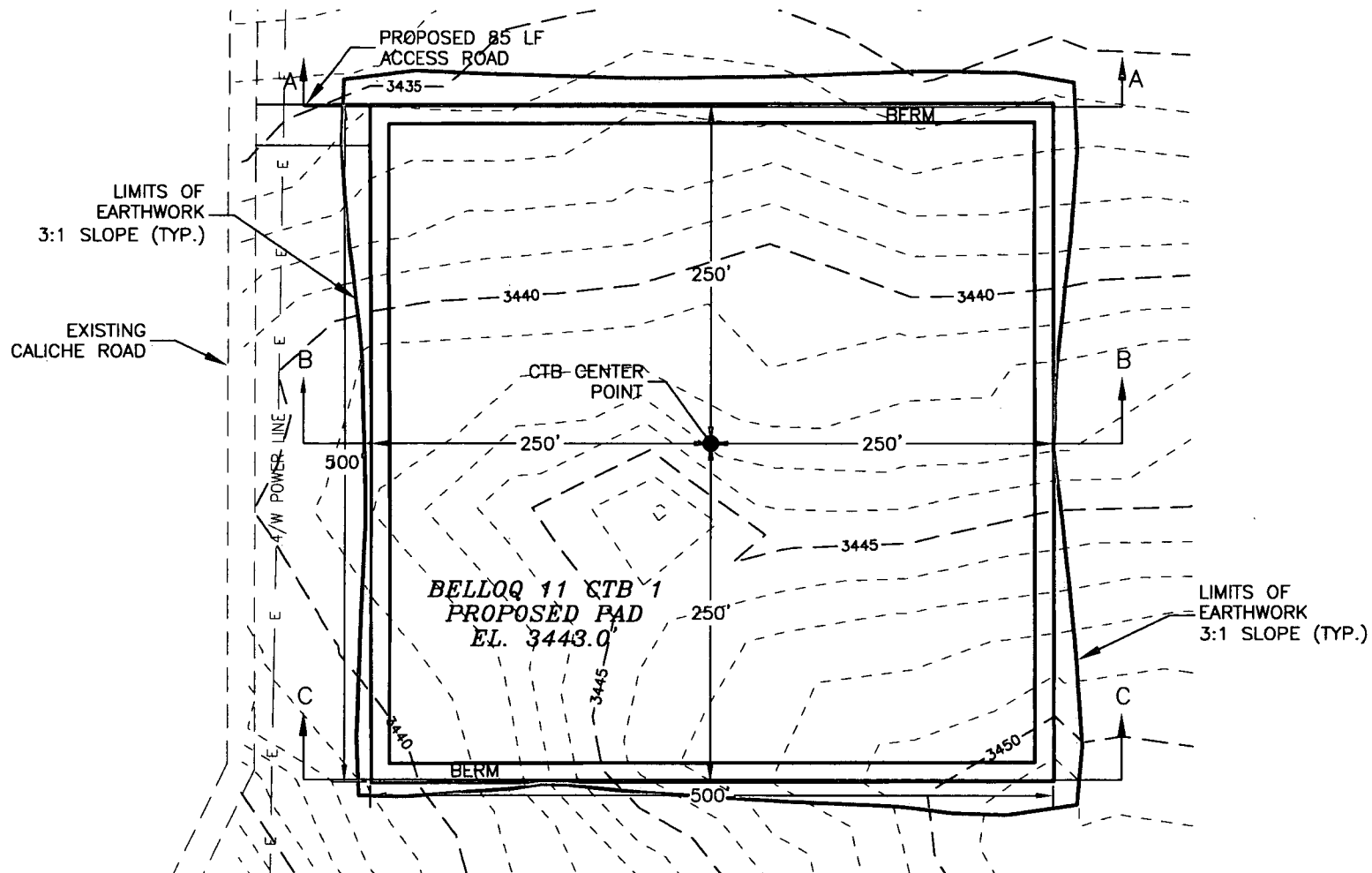
SHEET: 3-3

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

SURVEY NO. 5240



# PLAN VIEW



DEVON ENERGY PRODUCTION COMPANY, L.P.  
 GRADING PLAN AND CROSS SECTIONS  
 FOR BELLOQ 11 CTB 1  
 SECTION 11, TOWNSHIP 23 SOUTH,  
 RANGE 31 EAST, N.M.P.M.  
 EDDY COUNTY, STATE OF NEW MEXICO

012 60 120 240  
 SCALE 1" = 120'

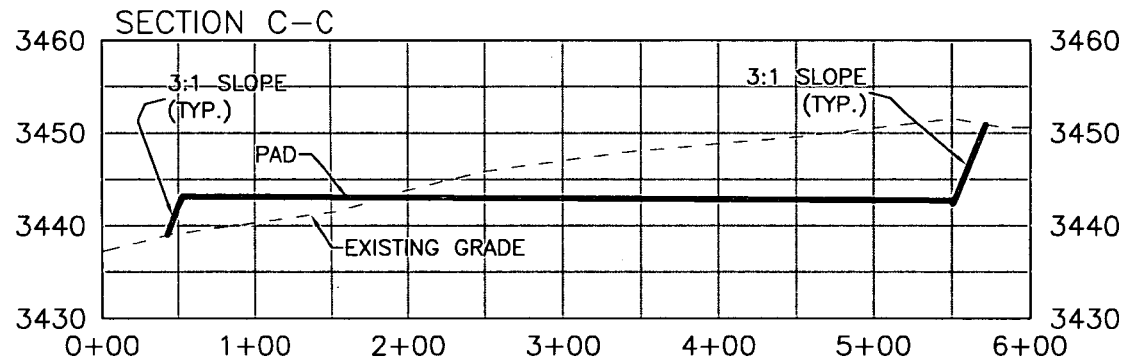
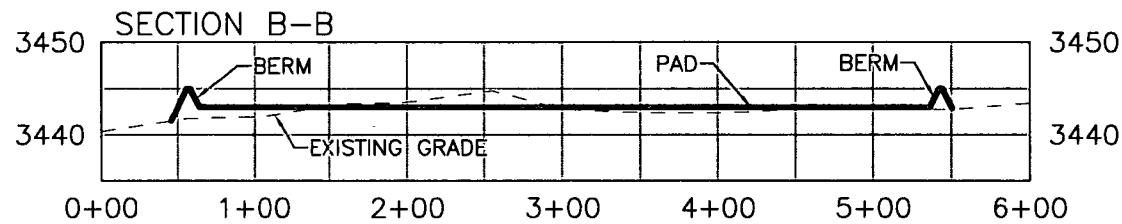
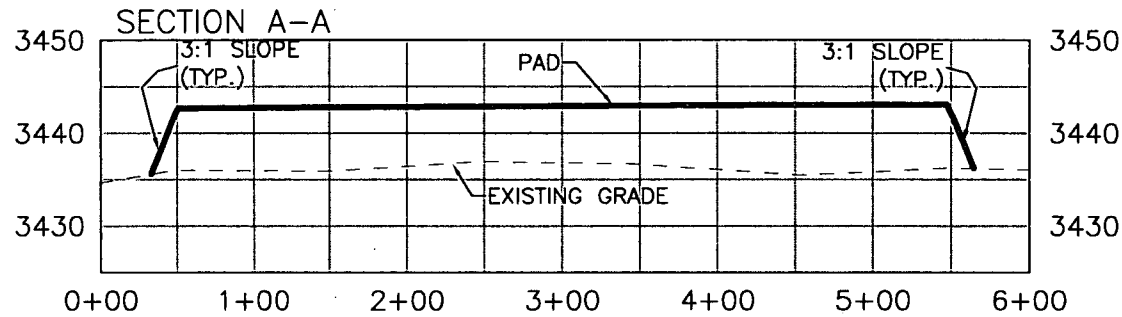
CUT	FILL	NET
11766 CU. YD	20087 CU. YD	8321 CU. YD (FILL)

EARTHWORK QUANTITIES ARE ESTIMATED

MAY 15, 2017  
 MADRON SURVEYING, INC. 301 SOUTH CANAL CARLSBAD, NEW MEXICO  
 (575) 234-3341

SHEET 1-2  
 SURVEY NO. 5240

# CROSS SECTIONS



DEVON ENERGY PRODUCTION COMPANY, L.P.  
 GRADING PLAN AND CROSS SECTIONS  
**FOR BELLOQ 11 CTB 1**  
 SECTION 11, TOWNSHIP 23 SOUTH,  
 RANGE 31 EAST, N.M.P.M.  
 EDDY COUNTY, STATE OF NEW MEXICO

012 60 120 240  
 SCALE 1" = 120' - 1" = 20' VER

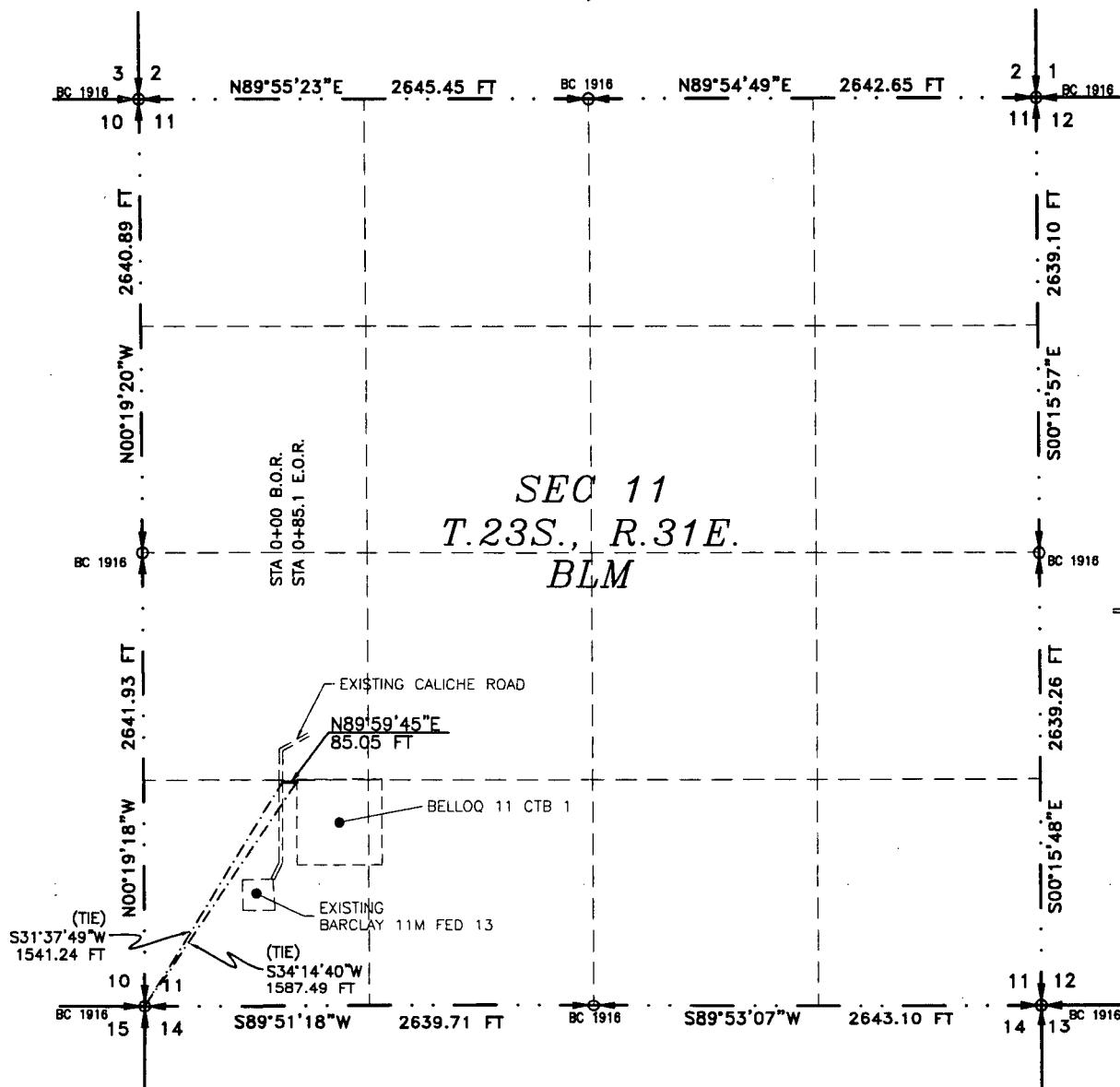
MAY 15, 2017

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

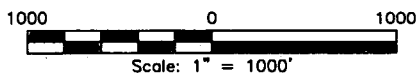
SHEET 2-2  
 SURVEY NO. 5240

ACCESS ROAD PLAT  
ACCESS ROAD TO THE BELLOQ 11 CTB 1

DEVON ENERGY PRODUCTION COMPANY, L.P.  
CENTERLINE SURVEY OF AN ACCESS ROAD CROSSING  
SECTION 11, TOWNSHIP 23 SOUTH, RANGE 31 EAST, N.M.P.M.  
EDDY COUNTY, STATE OF NEW MEXICO  
MAY 15, 2017



SEE NEXT SHEET (2-2) FOR DESCRIPTION



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: 1-2

MADRON SURVEYING, INC.

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 15<sup>TH</sup> DAY OF MAY, 2017

FILMON F. JARAMILLO, PLS. 12797  
301 SOUTH CANAL  
(575) 234-3341

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

SURVEY NO. 5240

CARLSBAD, NEW MEXICO

**ACCESS ROAD PLAT**  
**ACCESS ROAD TO THE BELLOQ 11 CTB 1**

**DEVON ENERGY PRODUCTION COMPANY, L.P.**  
**CENTERLINE SURVEY OF AN ACCESS ROAD CROSSING**  
**SECTION 11, TOWNSHIP 23 SOUTH, RANGE 31 EAST, N.M.P.M.**  
**EDDY COUNTY, STATE OF NEW MEXICO**  
**MAY 15, 2017**

**DESCRIPTION**

A STRIP OF LAND 30 FEET WIDE CROSSING BUREAU OF LAND MANAGEMENT LAND IN SECTION 11, TOWNSHIP 23 SOUTH, RANGE 31 EAST, N.M.P.M., EDDY COUNTY, STATE OF NEW MEXICO AND BEING 15 FEET EACH SIDE OF THE FOLLOWING DESCRIBED CENTERLINE SURVEY:

BEGINNING AT A POINT WITHIN THE SW/4 SW/4 OF SAID SECTION 11, TOWNSHIP 23 SOUTH, RANGE 31 EAST, N.M.P.M., WHENCE THE SOUTHWEST CORNER OF SAID SECTION 11, TOWNSHIP 23 SOUTH, RANGE 31 EAST, N.M.P.M. BEARS S31°37'49"W, A DISTANCE OF 1541.24 FEET;

THENCE N89°59'45"E A DISTANCE OF 85.05 FEET THE TERMINUS OF THIS CENTERLINE SURVEY, WHENCE THE SOUTHWEST CORNER OF SAID SECTION 11, TOWNSHIP 23 SOUTH, RANGE 31 EAST, N.M.P.M. BEARS S34°14'40"W, A DISTANCE OF 1587.49 FEET;

SAID STRIP OF LAND BEING 85.05 FEET OR 5.15 RODS IN LENGTH, CONTAINING 0.059 ACRES MORE OR LESS AND BEING ALLOCATED BY FORTIES AS FOLLOWS:

SW/4 SW/4 85.05 L.F. 5.15 RODS 0.059 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 18 DAY OF MAY 2017

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

**SURVEY NO. 5240**

**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.

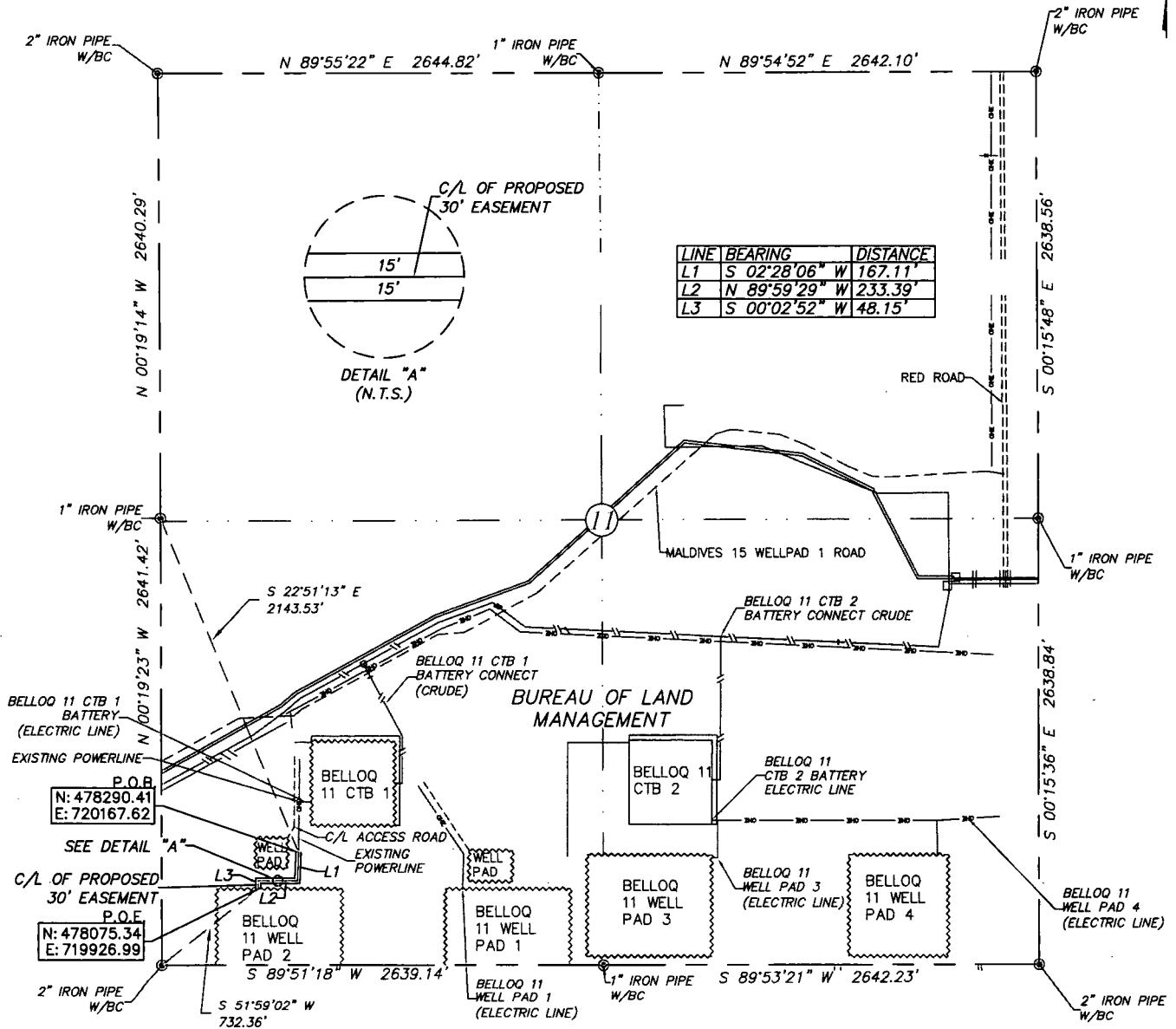
**SHEET: 2-2**

**MADRON SURVEYING, INC.**

301 SOUTH CANAL  
(575) 234-3341

**CARLSBAD, NEW MEXICO**

EXHIBIT "A"  
PAGE 1 of 4  
ELECTRIC LINE PLAT  
SECTION 11, T23S-R31E, N.M.P.M.  
EDDY COUNTY, NEW MEXICO



30' EASEMENT AREA = 0.309 ACRE(S)  
448.65 FEET OR 27.19 RODS

SEE THE ATTACHED LEGAL DESCRIPTION

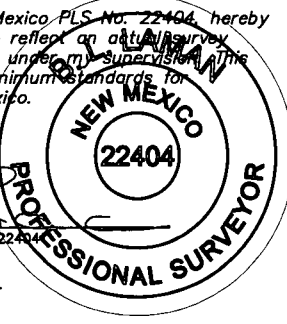
Note: All bearings recited herein are based on the New Mexico State Plane Coordinate System, NAD 83, New Mexico East Zone 3001, US Survey Feet, all distances are grid.

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

0+00.0 P.O.B./EXISTING POWERLINE  
3+28.6 EXISTING PIPELINE  
4+09.9 EXISTING PIPELINE  
4+48.6 P.O.E./BELLOQ 11 WELL PAD 2

0 1000 2000

B.L. Laman  
Date Signed: 03-21-2018  
Horizonrow, LLC  
P.O. Box 548, Dry Creek, LA.  
(903) 388-3045 70637  
Employee of Horizonrow, LLC



HORIZON ROW LLC

Drawn for:

devon

Drawn by:  
JEANNIE PERRY

Date: 03/11/2018

DEVON ENERGY PRODUCTION COMPANY, L.P.

BELLOQ 11 WELL PAD 2  
ELECTRIC LINE

PROPOSED 30' EASEMENT  
ON THE PROPERTY OF  
BUREAU OF LAND MANAGEMENT  
SECTION 11, T23S-R31E, N.M.P.M.

LINE NUMBER:  
EL8029

WBS NUMBER:  
CC-127671.01.FAC

SCALE:  
1" = 1000'

REVISIONS:

SHEET:  
1 OF 4

SECTION 11, T23S-R31E, N.M.P.M.,  
EDDY COUNTY, NEW MEXICO

**ELECTRIC LINE PLAT**

**LEGAL DESCRIPTION**

**FOR**

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

**BUREAU OF LAND MANAGEMENT**

**30' EASEMENT DESCRIPTION:**

**BEING** an easement thirty (30) feet in width lying fifteen (15) feet on the right side and fifteen (15) feet on the left side of the survey centerline described below, being out of Section 11, Township 23 South, Range 31 East, N.M.P.M., Eddy County, New Mexico, and being out of a parcel of land owned by the Bureau of Land Management. Said centerline of easement being more particularly described as follows:

Commencing from a 1" iron pipe w/ BC found for the west quarter corner of Section 11, T23S-R31E, N.M.P.M., Eddy County, New Mexico;

Thence S 22°51'13" E, a distance of 2143.53' to the **Point of Beginning** of this easement, having coordinates of Northing=478290.41 feet, Easting=720167.62 feet, and continuing the following courses;

Thence S 02°28'06" W, a distance of 167.11' to an angle point;

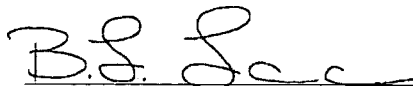
Thence N 89°59'29" W, a distance of 233.39' to an angle point;

Thence S 00°02'52" W, a distance of 48.15' to the **Point of Ending**, having coordinates of Northing=478075.34 feet, Easting=719926.99 feet, from said point a 2" iron pipe w/ BC found for the southwest corner of Section 11, T23S-R31E, N.M.P.M., Eddy County, New Mexico bears S 51°59'02" W a distance of 732.36', covering a total of **448.65' or 27.19 rods** and having an area of **0.309 acres**.

**NOTES:**

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

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



B.L. Laman PLS 22404

Date Signed: 03/21/2018

Horizon Row, LLC

P.O. Box 548, Dry Creek, LA

(903) 388-3045 70637

Employee of Horizon Row, LLC



EXHIBIT "A"  
PAGE 3 of 4

TODD 2 WATER TREATMENT FACILITY-ELECTRIC LINE

SEC 11  
T23S-R31E  
BUREAU OF LAND MANAGEMENT

BELLOQ 11 CTB 1  
BATTERY CONNECT (CRUDE)

BELLOQ 11 CTB 1 BATTERY  
(ELECTRIC LINE)

C/L ACCESS ROAD

EXISTING  
3% POWERLINE

MALDIVES 15  
LATERAL CRUDE

BUREAU OF LAND  
MANAGEMENT

BELLOQ 11 WELL PAD 1  
(ELECTRIC LINE)

BELLOQ 11 CTB 2  
BATTERY CONNECT CRUDE

BELLOQ 11  
WELL PAD 3 (ELECTRIC LINE)

Drill Hole

BELLOQ 11 WELL PAD 4  
(ELECTRIC LINE)

BELLOQ 11 CTB 1

BELLOQ 11 CTB 2

BELLOQ 11 WELL PAD 1

BELLOQ 11 WELL PAD 2

BELLOQ 11 WELL PAD 3

BELLOQ 11 WELL PAD 4

MALDIVES 15 WELL PAD 1  
ELECTRIC LINE

MALDIVES 15 CTB 1  
ELECTRIC LINE

BUREAU OF LAND  
MANAGEMENT

Gravel  
Pit

SEC 11  
T23S-R31E  
BUREAU OF LAND  
MANAGEMENT

Drill Hole

SECTION 11, T23S-R31E, N.M.P.M.;  
EDDY COUNTY, NEW MEXICO

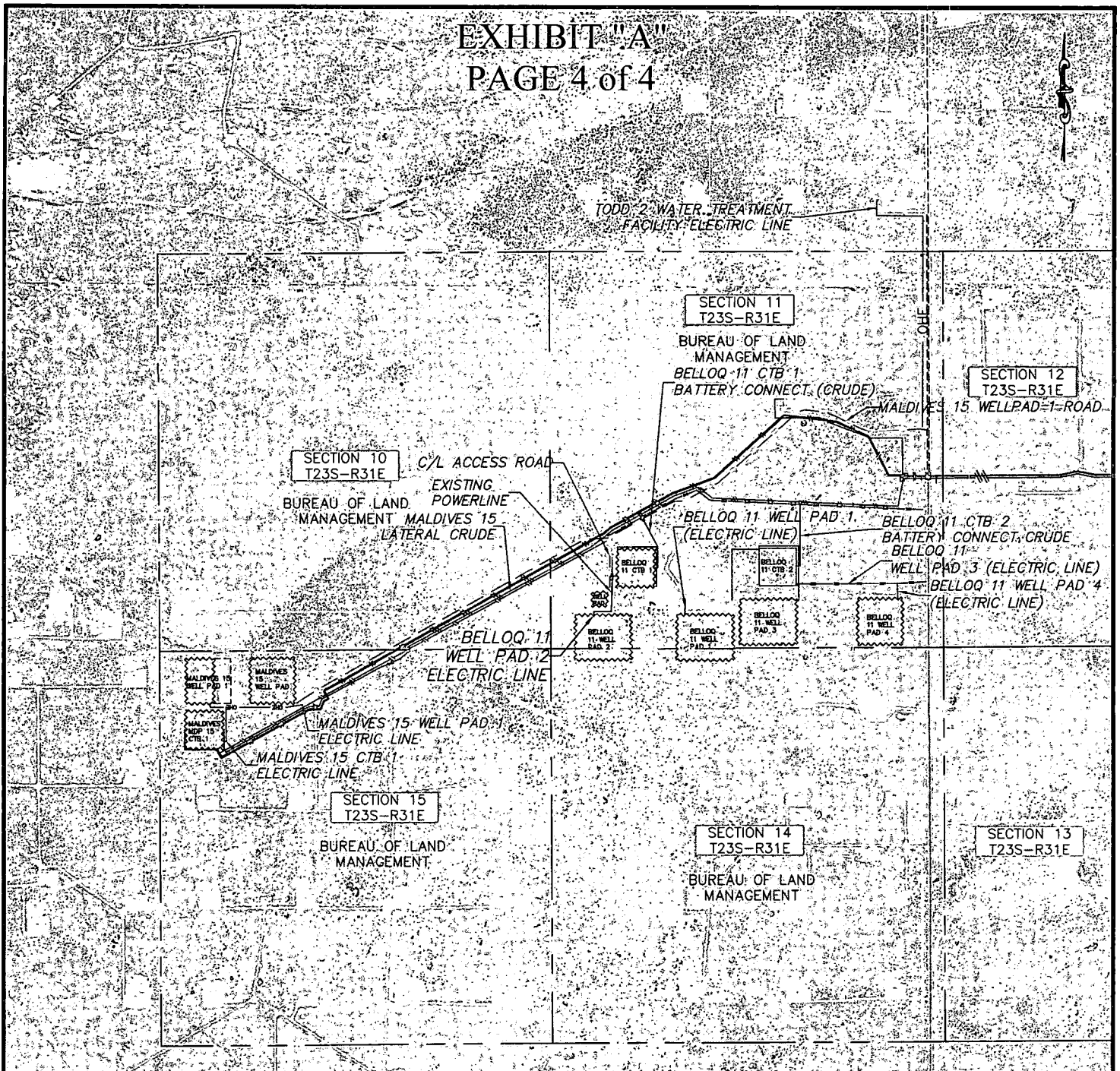


devon

LINE NUMBER: EL8029
WBS NUMBER: CC-127671.01.FAC
SCALE: 1" = 2000'
REVISIONS:
SHEET: 3 OF 4

# EXHIBIT "A"

## PAGE 4 of 4



### AERIAL MAP

SECTION 11, T23S-R31E, N.M.P.M.;  
EDDY COUNTY, NEW MEXICO

**HORIZON ROW LLC**

DEVON ENERGY PRODUCTION CO., L.P.

PROPOSED 30' EASEMENT

Drawn by:  
JEANNIE PERRY

Date: 03/11/2018

Drawn for:



LINE NUMBER:  
EL8029

WBS NUMBER:  
CC-127671.01.FAC

SCALE:  
1" = 2000'

REVISIONS:

SHEET:  
4 OF 4





## Receipt

---

### Tracking Information

Pay.gov Tracking ID: 26F3G8H6

Agency Tracking ID: 75668973274

Form Name: Bureau of Land Management (BLM) Application for Permit to Drill (APD) Fee

Application Name: BLM Oil and Gas Online Payment

### Payment Information

Payment Type: Bank account (ACH)

Payment Amount: \$40,200.00

Transaction Date: 01/30/2019 11:23:59 AM EST

Payment Date: 01/31/2019

Company: Devon Energy Production Company, L.P.

APD IDs: 10400038616, 10400038618, 10400038619, 10400038571

Lease Numbers: NMNM0404441, NMNM0404441, NMNM0404441, NMNM0404441

Well Numbers: 521H, 523H, 513H, 522H

Note: You will need your Pay.gov Tracking ID to complete your APD transaction in AFMSS II. Please ensure you write this number down upon completion of payment.

### Account Information

Account Holder Name: Devon Energy Production Company, L.P.

Routing Number: 061000052

Account Number: \*\*\*\*\*9892



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

## PWD Data Report

10/09/2019

APD ID: 10400038616

Submission Date: 01/31/2019

Operator Name: DEVON ENERGY PRODUCTION COMPANY LP

Well Name: BELLOQ 11-2 FED STATE COM

Well Number: 521H

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:** BELLOQ 11-2 FED STATE COM

**Well Number:** 521H

**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:** BELLOQ 11-2 FED STATE COM

**Well Number:** 521H

**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:** BELLOQ 11-2 FED STATE COM

**Well Number:** 521H

**Other PWD type description:**

**Other PWD type attachment:**

**Have other regulatory requirements been met?**

**Other regulatory requirements attachment:**



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

## Bond Info Data Report

10/09/2019

**APD ID:** 10400038616

**Submission Date:** 01/31/2019

Highlighted data  
reflects the most  
recent changes

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

**Well Name:** BELLOQ 11-2 FED STATE COM

**Well Number:** 521H

[Show Final Text](#)

**Well Type:** OIL WELL

**Well Work Type:** Drill

### Bond Information

**Federal/Indian APD:** FED

**BLM Bond number:** CO1104

**BIA Bond number:**

**Do you have a reclamation bond?** NO

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

**Is the reclamation bond BLM or Forest Service?**

**BLM reclamation bond number:**

**Forest Service reclamation bond number:**

**Forest Service reclamation bond attachment:**

**Reclamation bond number:**

**Reclamation bond amount:**

**Reclamation bond rider amount:**

**Additional reclamation bond information attachment:**