

NM OIL CONSERVATION

ARTESIA DISTRICT

OCT 15 2019

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

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

RECEIVED

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 513H 322487
3a. Address 333 West Sheridan Avenue Oklahoma City OK 73102	3b. Phone No. (include area code) (800)583-3866	9. API-Well No. 30-015-46397
4. Location of Well (Report location clearly and in accordance with any State requirements. *) At surface SWSE / 500 FSL / 2130 FEL / LAT 32.3130946 / LONG -103.7469196 At proposed prod. zone LOT 2 / 20 FNL / 1680 FEL / LAT 32.3406733 / LONG -103.7454938		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) 500 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. 2743 feet	19. Proposed Depth 8885 feet / 19055 feet	20. BLM/BIA Bond No. in file FED: CO1104
21. Elevations (Show whether DF, KDB, RT, GL, etc.) 3476 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 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

RW 10-18-19

## 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: SWSE / 500 FSL / 2130 FEL / TWSP: 23S / RANGE: 31E / SECTION: 11 / LAT: 32.3130946 / LONG: -103.7469196 ( TVD: 0 feet, MD: 0 feet )  
PPP: SWSE / 100 FSL / 1680 FEL / TWSP: 23S / RANGE: 31E / SECTION: 11 / LAT: 32.31191 / LONG: -103.7454644 ( TVD: 8521 feet, MD: 8555 feet )  
BHL: LOT 2 / 20 FNL / 1680 FEL / TWSP: 23S / RANGE: 31E / SECTION: 2 / LAT: 32.3406733 / LONG: -103.7454938 ( TVD: 8885 feet, MD: 19055 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.

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# PECOS DISTRICT

## DRILLING CONDITIONS OF APPROVAL

<b>OPERATOR'S NAME:</b>	<b>Devon Energy Production Company LP</b>
<b>LEASE NO.:</b>	<b>NMNM0404441</b>
<b>WELL NAME &amp; NO.:</b>	<b>BELLOQ 11-2 FED STATE COM 513H</b>
<b>SURFACE HOLE FOOTAGE:</b>	<b>500'/S &amp; 2130'/W</b>
<b>BOTTOM HOLE FOOTAGE:</b>	<b>20'/N &amp; 1680'/W</b>
<b>LOCATION:</b>	<b>Section 11, T.23 S., R.31 E., NMPM</b>
<b>COUNTY:</b>	<b>Eddy County, New Mexico</b>

COA

H2S	<input type="radio"/> Yes	<input checked="" 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

Hydrogen Sulfide (H2S) monitors shall be installed prior to drilling out the surface shoe. If H2S is detected in concentrations greater than 100 ppm, the Hydrogen Sulfide area shall meet Onshore Order 6 requirements, which includes equipment and personnel/public protection items. If Hydrogen Sulfide is encountered, provide measured values and formations to the BLM.

### B. CASING

1. The 13-3/8 inch surface casing shall be set at approximately **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 **4350 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%)**

### **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 NMOCD requirements shall be followed.

B. PRESSURE CONTROL

1. All blowout preventer (BOP) and related equipment (BOPE) shall comply with well control requirements as described in Onshore Oil and Gas Order No. 2 and API RP 53 Sec. 17.
2. If a variance is approved for a flexible hose to be installed from the BOP to the choke manifold, the following requirements apply: Check condition of flexible line from BOP to choke manifold, replace if exterior is damaged or if line fails test. Line to be as straight as possible with no hard bends and is to be anchored according to Manufacturer's requirements. The flexible hose can be exchanged with a hose of equal size and equal or greater pressure rating. Anchor requirements, specification sheet and hydrostatic pressure test certification matching the hose in service, to be onsite for review. These documents shall be posted in the company man's trailer and on the rig floor.
3. 5M or higher system requires an HCR valve, remote kill line and annular to match. The remote kill line is to be installed prior to testing the system and tested to stack pressure.
4. If the operator has proposed a multi-bowl wellhead assembly in the APD. The following requirements must be met:
  - a. Wellhead shall be installed by manufacturer's representatives, submit documentation with subsequent sundry.
  - b. If the welding is performed by a third party, the manufacturer's representative shall monitor the temperature to verify that it does not exceed the maximum temperature of the seal.
  - c. Manufacturer representative shall install the test plug for the initial BOP test.
  - d. Whenever any seal subject to test pressure is broken, all the tests in OOGO2.III.A.2.i must be followed.
  - e. If the cement does not circulate and one inch operations would have been possible with a standard wellhead, the well head shall be cut off, cementing operations performed and another wellhead installed.
5. The appropriate BLM office shall be notified a minimum of 4 hours in advance for a representative to witness the tests.
  - a. In a water basin, for all casing strings utilizing slips, these are to be set as soon as the crew and rig are ready and any fallback cement remediation has been done. The casing cut-off and BOP installation can be initiated four hours after installing the slips, which will be approximately six hours after bumping the plug. For those casing strings not using slips, the minimum wait time before cut-off is eight hours after bumping the plug. BOP/BOPE testing can begin after cut-off or once cement reaches 500 psi compressive strength (including lead when specified), whichever is greater. However, if the float does not

hold, cut-off cannot be initiated until cement reaches 500 psi compressive strength (including lead when specified).

- b. In potash areas, for all casing strings utilizing slips, these are to be set as soon as the crew and rig are ready and any fallback cement remediation has been done. For all casing strings, casing cut-off and BOP installation can be initiated at twelve hours after bumping the plug. However, **no tests** shall commence until the cement has had a minimum of 24 hours setup time, except the casing pressure test can be initiated immediately after bumping the plug (only applies to single stage cement jobs).
- c. The tests shall be done by an independent service company utilizing a test plug not a cup or J-packer. The operator also has the option of utilizing an independent tester to test without a plug (i.e. against the casing) pursuant to Onshore Order 2 with the pressure not to exceed 70% of the burst rating for the casing. Any test against the casing must meet the WOC time for water basin (8 hours) or potash (24 hours) or 500 pounds compressive strength, whichever is greater, prior to initiating the test (see casing segment as lead cement may be critical item).
- d. The test shall be run on a 5000 psi chart for a 2-3M BOP/BOP, on a 10000 psi chart for a 5M BOP/BOPE and on a 15000 psi chart for a 10M BOP/BOPE. If a linear chart is used, it shall be a one hour chart. A circular chart shall have a maximum 2 hour clock. If a twelve hour or twenty-four hour chart is used, tester shall make a notation that it is run with a two hour clock.
- e. The results of the test shall be reported to the appropriate BLM office.
- f. All tests are required to be recorded on a calibrated test chart. A copy of the BOP/BOPE test chart and a copy of independent service company test will be submitted to the appropriate BLM office.
- g. The BOP/BOPE test shall include a low pressure test from 250 to 300 psi. The test will be held for a minimum of 10 minutes if test is done with a test plug and 30 minutes without a test plug. This test shall be performed prior to the test at full stack pressure.
- h. BOP/BOPE must be tested by an independent service company within 500 feet of the top of the Wolfcamp formation if the time between the setting of the intermediate casing and reaching this depth exceeds 20 days. This test does not exclude the test prior to drilling out the casing shoe as per Onshore Order No. 2.

C. DRILLING MUD

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

**D. WASTE MATERIAL AND FLUIDS**

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

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

# PECOS DISTRICT SURFACE USE CONDITIONS OF APPROVAL

OPERATOR'S NAME:	Devon Energy Production Company L.P.
WELL NAME & NO.:	BELLOQ 11-2 FED STATE COM 513H
SURFACE HOLE FOOTAGE:	500'/S & 2130'/W
BOTTOM HOLE FOOTAGE:	20'/N & 1680'/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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  - Range
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- ☐ **Construction**
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  - Oil and Gas Related sites
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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.

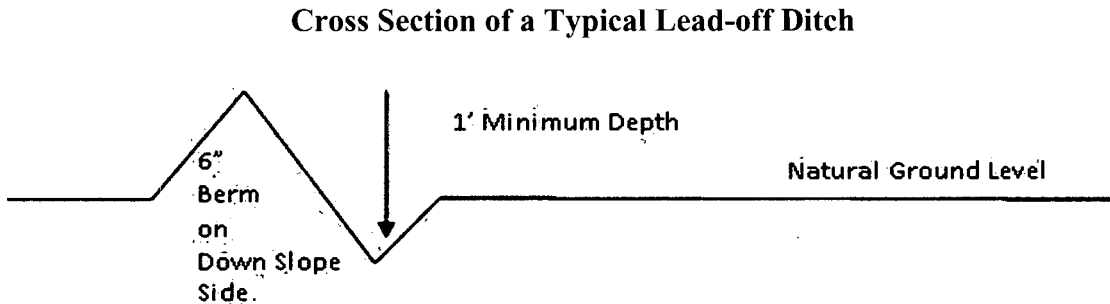
**Turnouts**

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 outslowing 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.



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

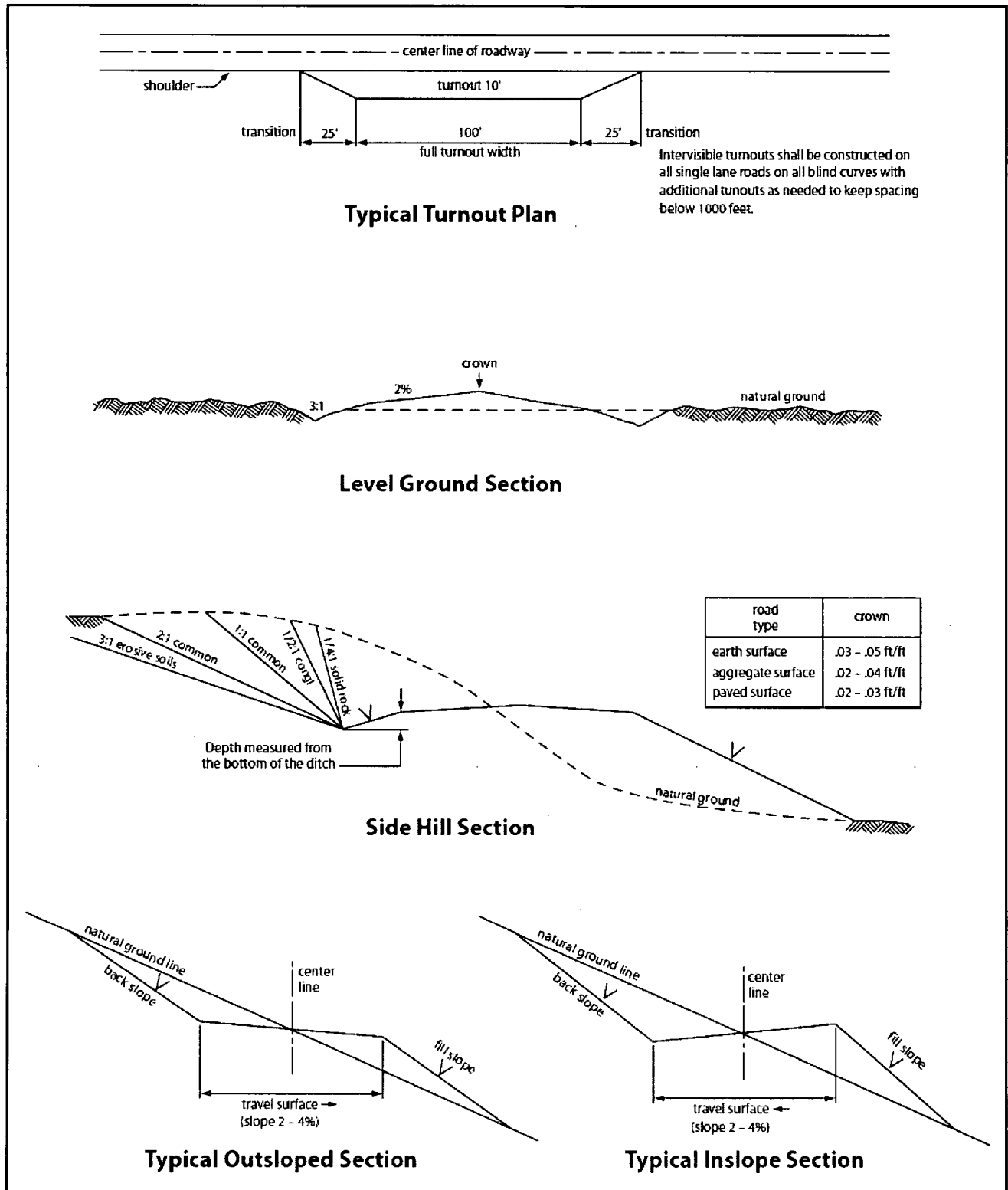


Figure 1. Cross-sections and plans for typical road sections representative of BLM resource or FS local and higher-class roads.

## **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

10/10/2019

### 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*

**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

10/10/2019

APD ID: 10400038619

Submission Date: 01/31/2019

Highlighted data  
reflects the most  
recent changes  
[Show Final Text](#)

Operator Name: DEVON ENERGY PRODUCTION COMPANY LP

Well Name: BELLOQ 11-2 FED STATE COM

Well Number: 513H

Well Type: OIL WELL

Well Work Type: Drill

### Section 1 - General

APD ID: 10400038619

Tie to previous NOS?

Submission Date: 01/31/2019

BLM Office: CARLSBAD

User: Jenny Harms

Title: Regulatory Compliance

Federal/Indian APD: FED

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

Lease number: 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: 513H

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:** 513H

**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:** 3

**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:** 2743 FT

**Distance to lease line:** 500 FT

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

**Well plat:** Belloq\_11\_2\_Fed\_State\_Com\_513H\_C\_102\_20190814125159.pdf

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

**Duration:** 45 DAYS

### Section 3 - Well Location Table

**Survey Type:** RECTANGULAR

**Describe Survey Type:**

**Datum:** NAD83

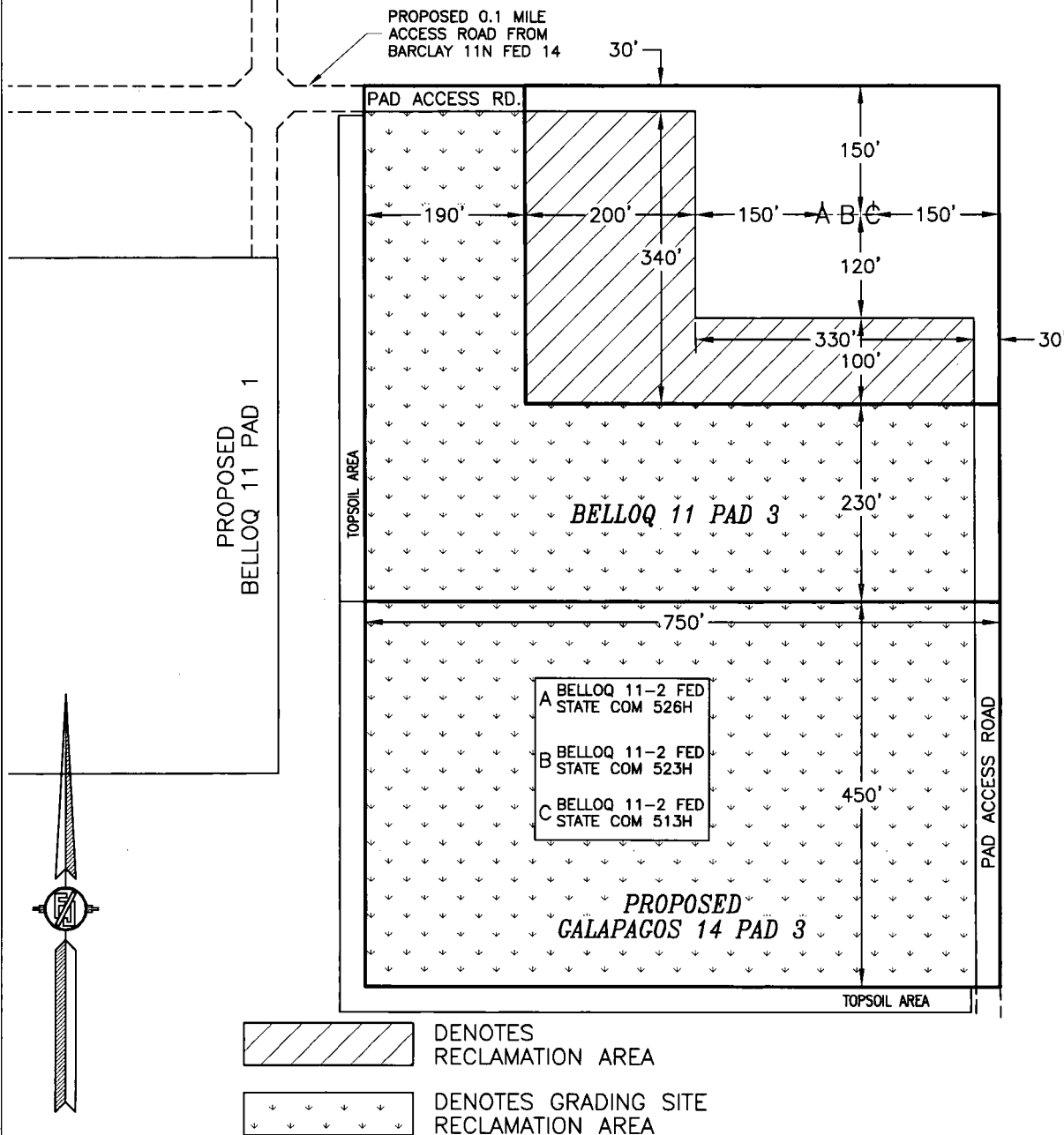
**Vertical Datum:** NAVD88

**Survey number:** 6185B

**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
	500	FSL	213 0	FEL	23S	31E	11	SWSE	32.31309 46	- 103.7469 196	EDD Y	NEW MEXI	NEW MEXI	F	NMNM 040444	347 6	0	0
	165	FSL	168 0	FEL	23S	31E	11	SWSE	32.31217	- 103.7455	EDD Y	NEW MEXI	NEW MEXI	F	NMNM 040444	- 485 1	835 7	832 7
	100	FSL	168 0	FEL	23S	31E	11	SWSE	32.31191	- 103.7454 644	EDD Y	NEW MEXI	NEW MEXI	F	NMNM 040444	- 504 5	855 5	852 1

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



0 10 50 100 200  
SCALE 1" = 100'

2.318± ACRES INTERIM PAD RECLAMATION AREA  
12.727± ACRES GRADING SITE RECLAMATION AREA  
3.036± ACRES NON-RECLAIMED AREA  
18.081± ACRES BELLOQ & GALAPAGOS WELL PAD

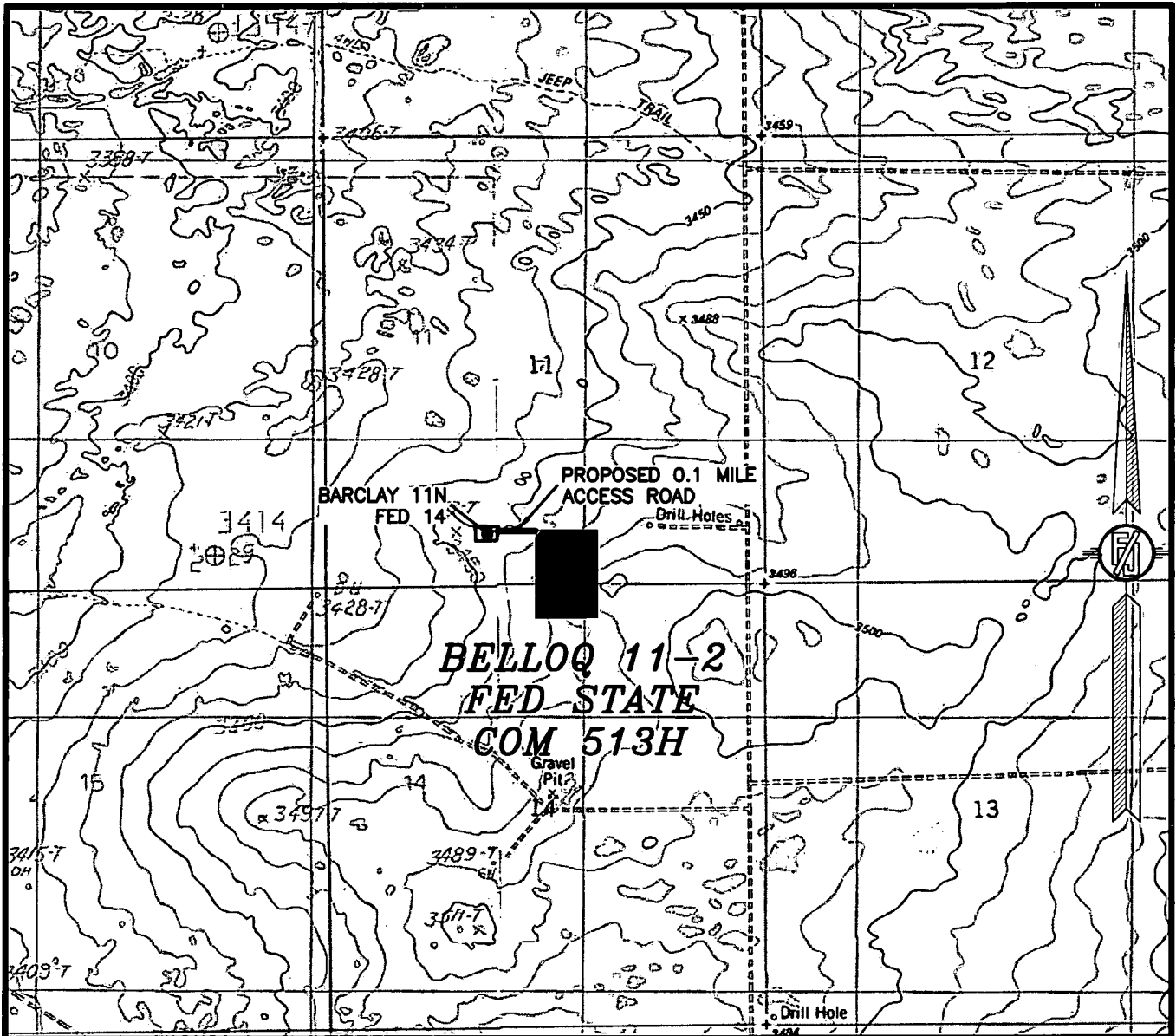
DEVON ENERGY PRODUCTION COMPANY, L.P.  
**BELLOQ 11-2 FED STATE COM 513H**  
LOCATED 500 FT. FROM THE SOUTH LINE  
AND 2130 FT. FROM THE EAST LINE OF  
SECTION 11, TOWNSHIP 23 SOUTH,  
RANGE 31 EAST, N.M.P.M.  
EDDY COUNTY, STATE OF NEW MEXICO

DECEMBER 20, 2018

SURVEY NO. 6185B

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

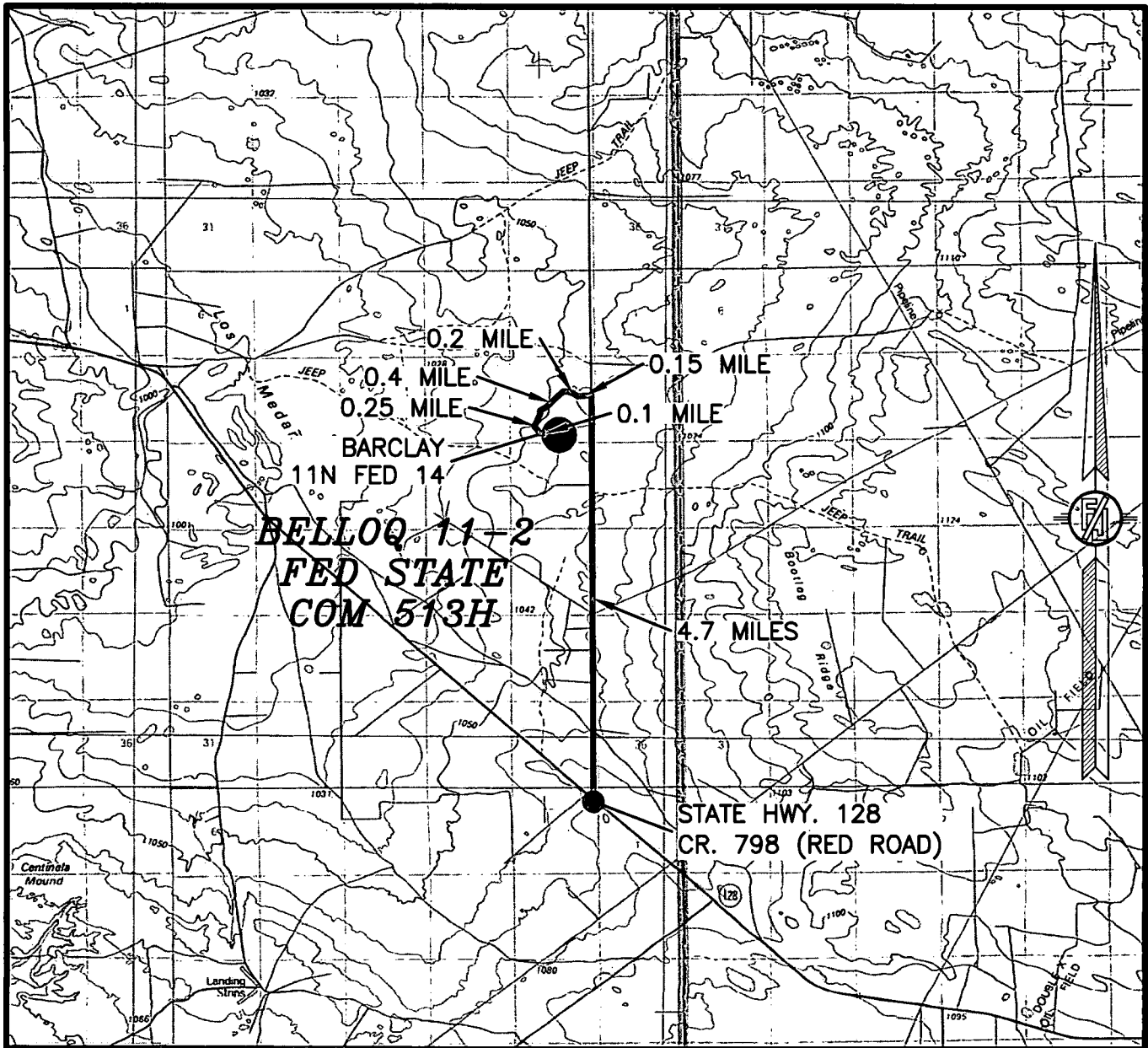
NOT TO SCALE

DEVON ENERGY PRODUCTION COMPANY, L.P.  
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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 SURVEY NO. 6185B CARLSBAD, NEW MEXICO

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 (WEST) AT LEASE ROAD GO WEST 0.15 OF A MILE, ROAD BENDS RIGHT GO NORTHWEST 0.2 OF A MILE, TURN LEFT (SOUTHWEST) GO 0.4 OF A MILE, TURN LEFT (SOUTH) GO APPROX. 0.25 OF A MILE TO EXISTING PAD (BARCLAY 11N FED 14), AT EAST EDGE OF PAD IS ROAD LATH RED & WHITE FLAGGING, GO EAST APPROX. 0.1 OF A MILE TO LOCATION.

DEVON ENERGY PRODUCTION COMPANY, L.P.

**BELLOQ 11-2 FED STATE COM 513H**

LOCATED 500 FT. FROM THE SOUTH LINE

AND 2130 FT. FROM THE EAST LINE OF

SECTION 11, TOWNSHIP 23 SOUTH,

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

EDDY COUNTY, STATE OF NEW MEXICO

DECEMBER 20, 2018

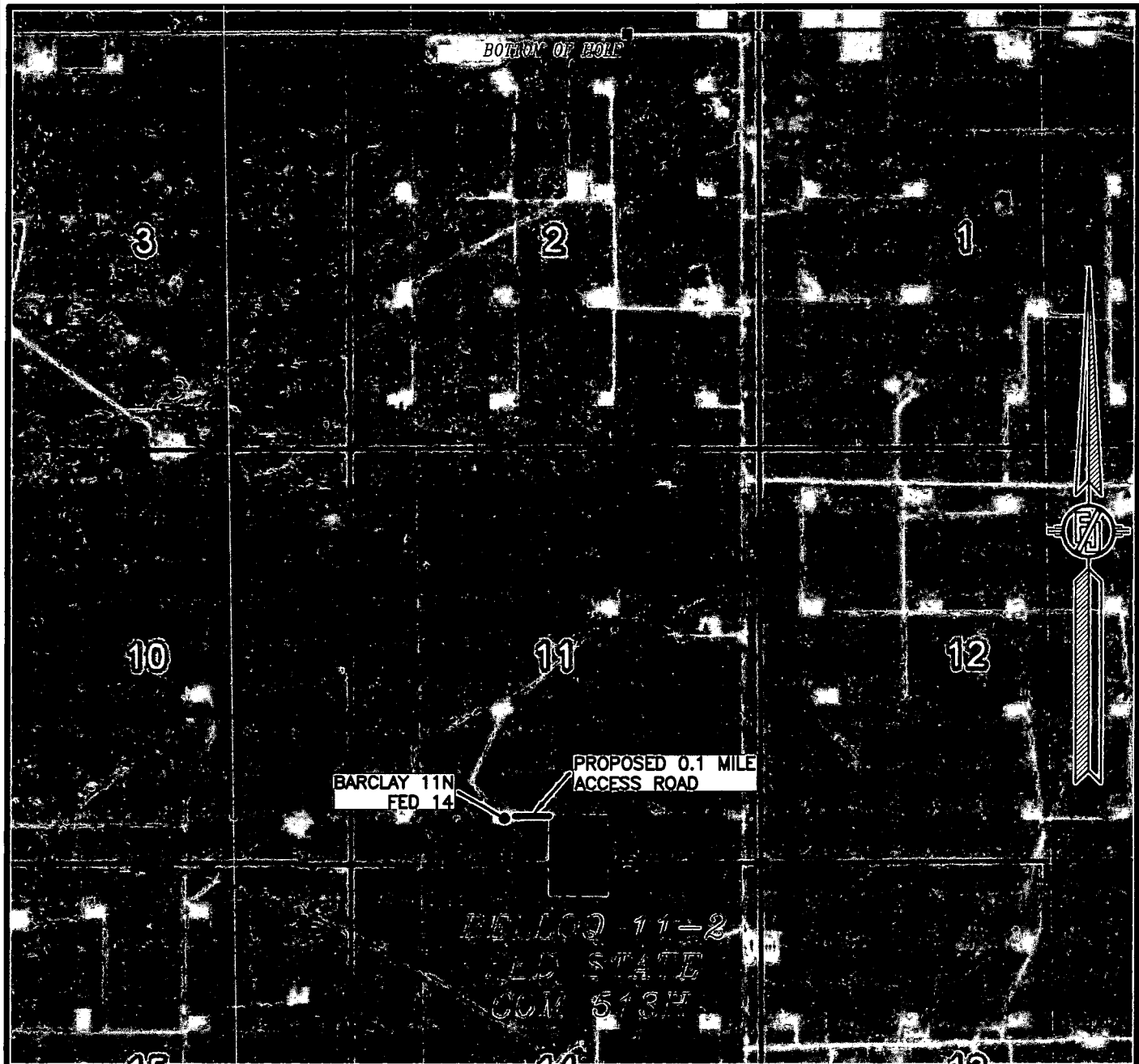
SURVEY NO. 6185B

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

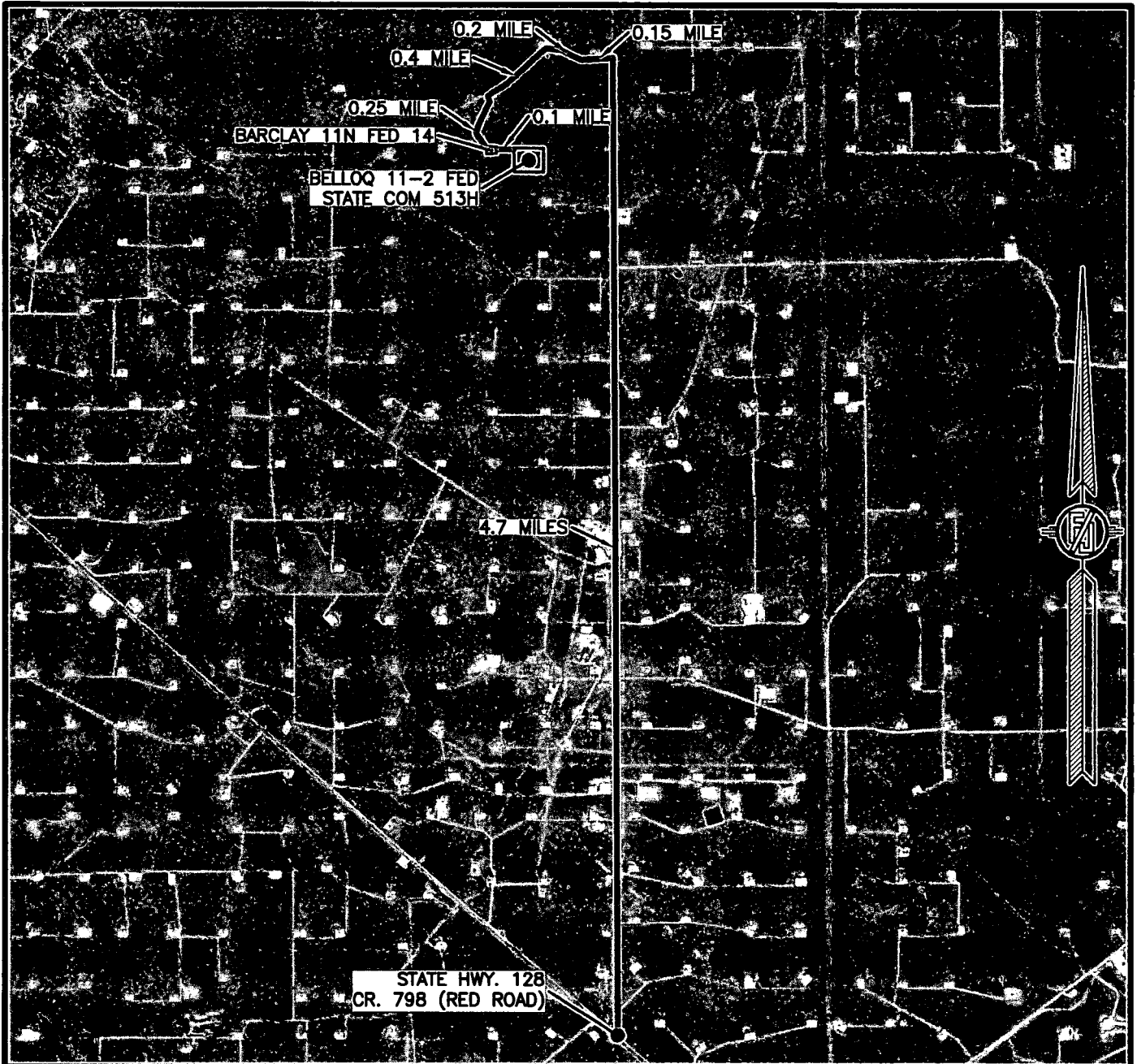
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RANGE 31 EAST, N.M.P.M.  
EDDY COUNTY, STATE OF NEW MEXICO

DECEMBER 20, 2018

SURVEY NO. 6185B

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

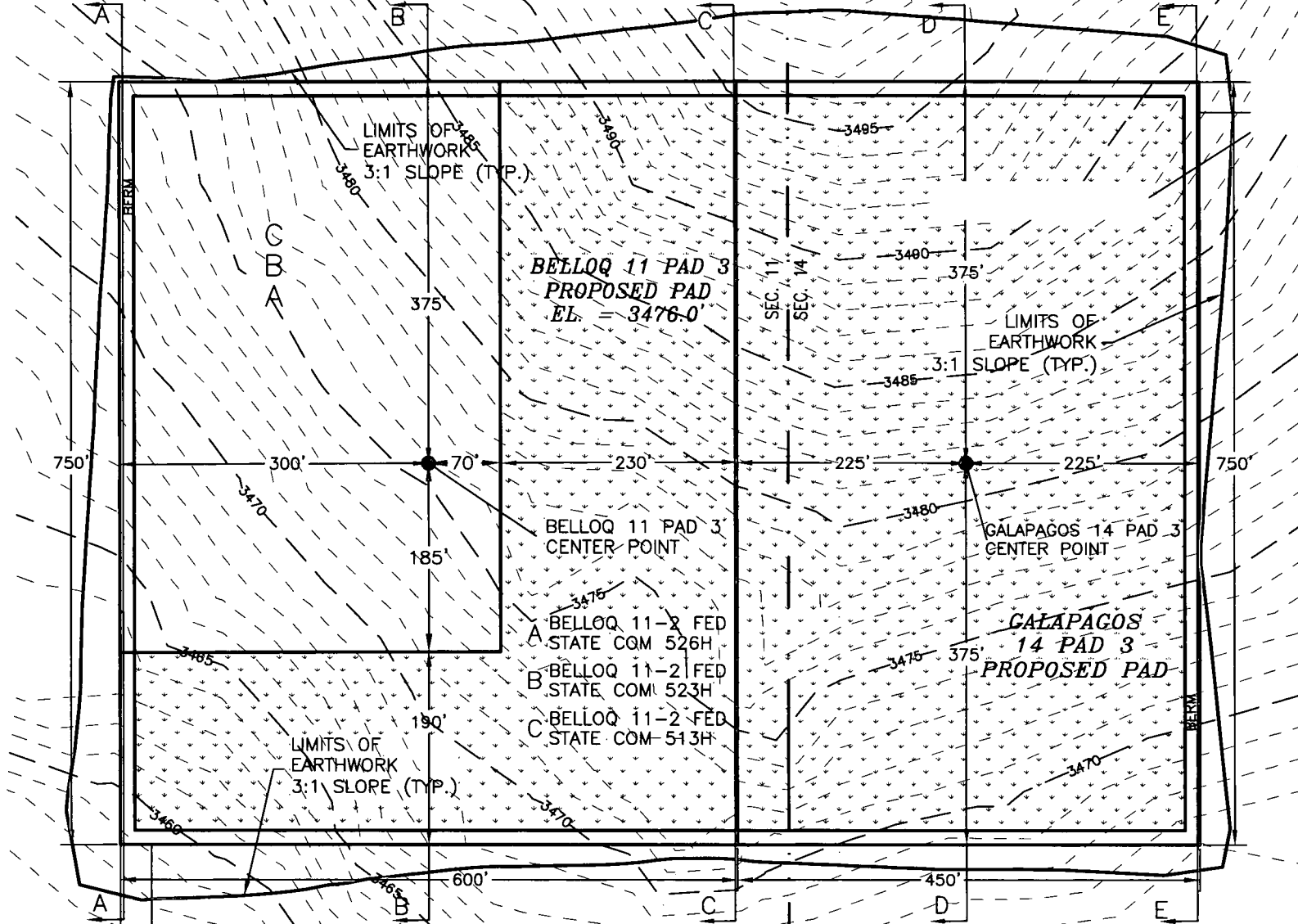
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 EDDY COUNTY, STATE OF NEW MEXICO

DECEMBER 20, 2018

SURVEY NO. 6185B

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 513H**  
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'

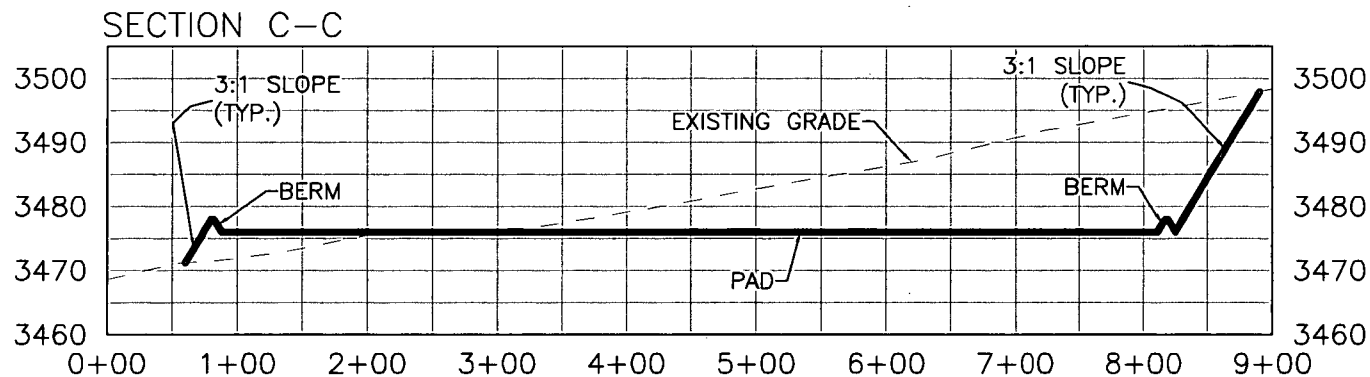
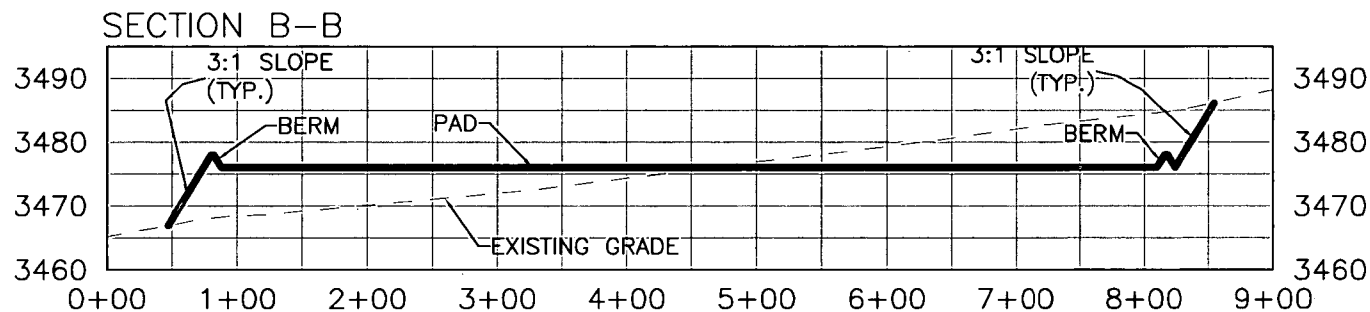
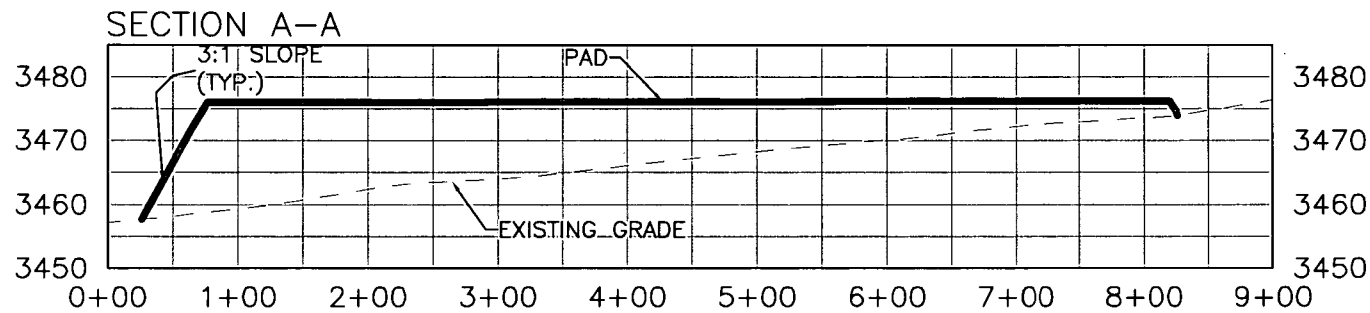
CUT	FILL	NET
135899 CU. YD	81250 CU. YD	54649 CU. YD (CUT)

EARTHWORK QUANTITIES ARE ESTIMATED

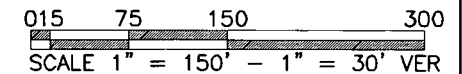
DECEMBER 20, 2018  
MADRON SURVEYING, INC. 301 SOUTH CANAL  
(575) 234-3341 CARLSBAD, NEW MEXICO

SHEET 1-3  
SURVEY NO. 6185B

# CROSS SECTIONS



DEVON ENERGY PRODUCTION COMPANY, L.P.  
PAD GRADING AND CROSS SECTIONS  
FOR BELLOQ 11-2 FED STATE COM 513H  
SECTION 11, TOWNSHIP 23 SOUTH,  
RANGE 31 EAST, N.M.P.M.  
EDDY COUNTY, STATE OF NEW MEXICO



CUT	FILL	NET
135899 CU. YD	81250 CU. YD	54649 CU. YD (CUT)

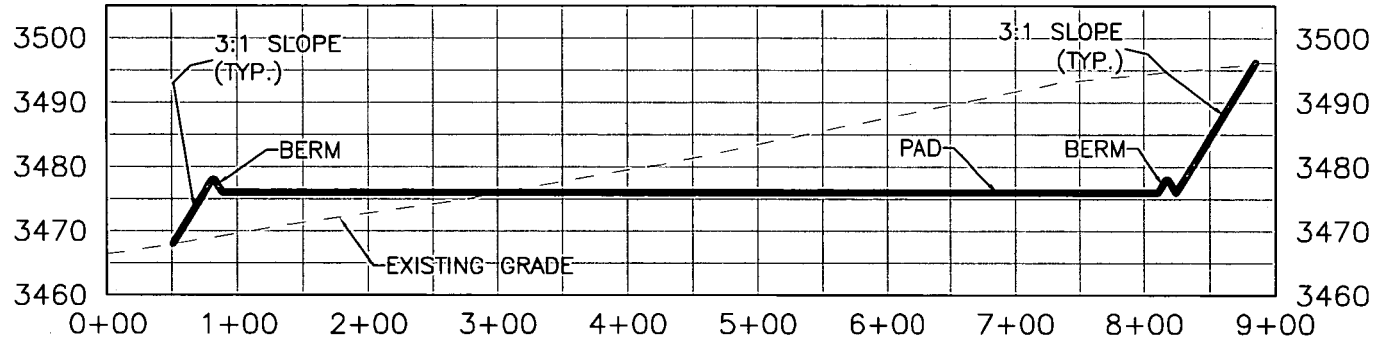
EARTHWORK QUANTITIES ARE ESTIMATED

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

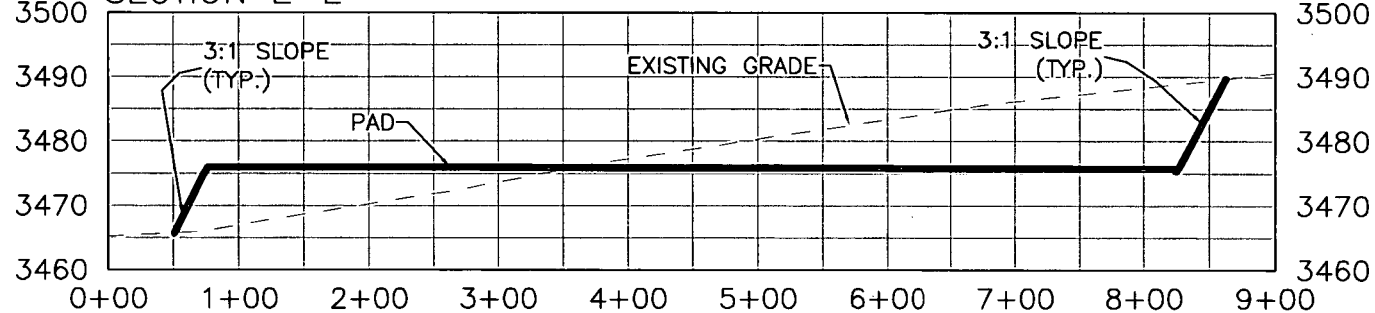
SHEET 2-3  
SURVEY NO. 6185B

# CROSS SECTIONS

SECTION D-D



SECTION E-E



DEVON ENERGY PRODUCTION COMPANY, L.P.  
 PAD GRADING AND CROSS SECTIONS  
 FOR BELLOQ 11-2 FED STATE COM 513H  
 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
135899 CU. YD	81250 CU. YD	54649 CU. YD (CUT)

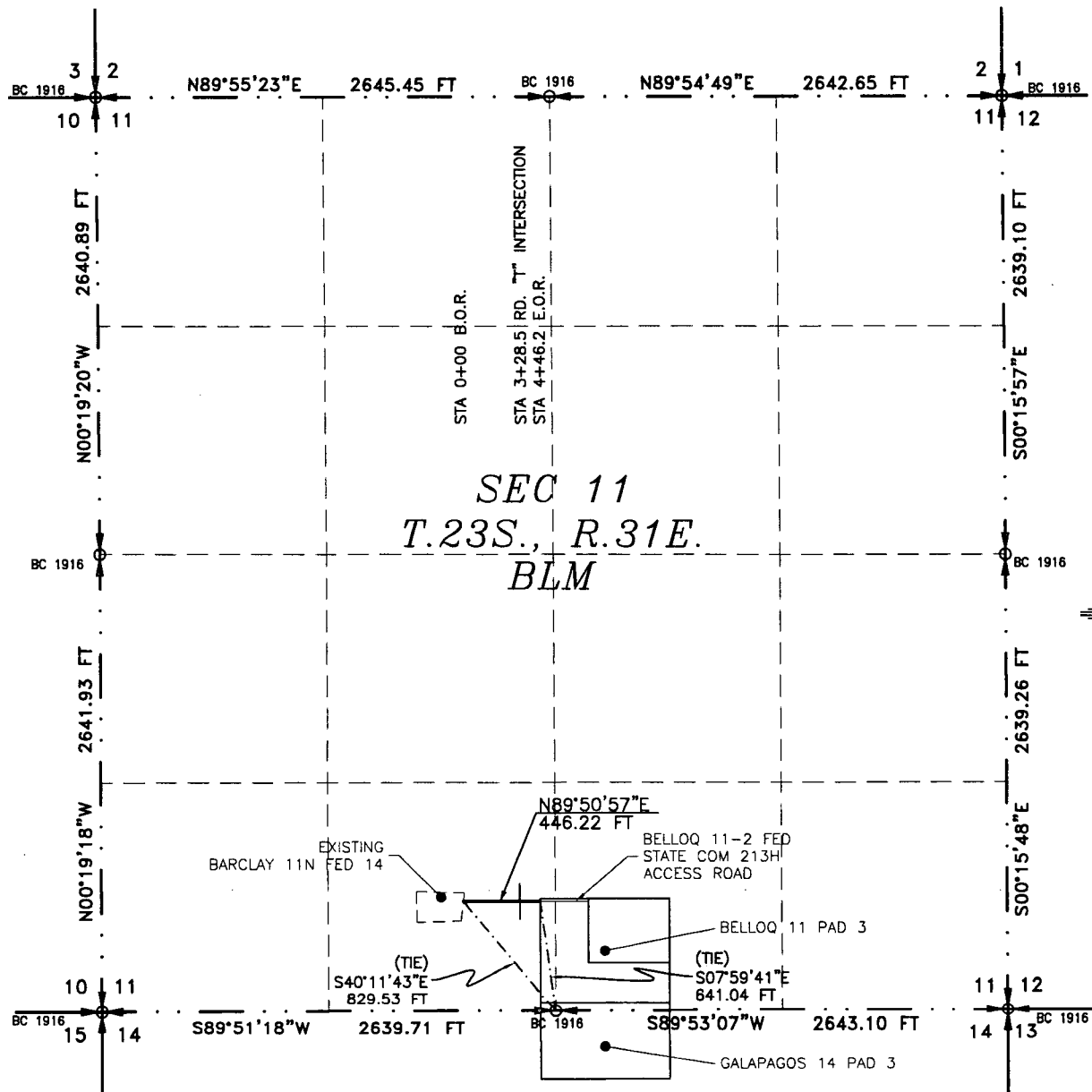
EARTHWORK QUANTITIES ARE ESTIMATED

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

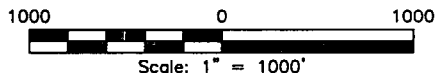
SHEET 3-3  
 SURVEY NO. 6185B

**ACCESS ROAD PLAT**  
ACCESS ROAD TO THE BELLOQ 11 PAD 3

**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**  
**APRIL 11, 2018**



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.

**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 23<sup>RD</sup> DAY OF APRIL 2018.

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

FILMON F. JARAMILLO PLS. 12797

**SURVEY NO. 5226B**

**SHEET: 1-2**

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

**ACCESS ROAD PLAT**  
**ACCESS ROAD TO THE BELLOQ 11 PAD 3**

**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**  
**APRIL 11, 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 SE/4 SW/4 OF SAID SECTION 11, TOWNSHIP 23 SOUTH, RANGE 31 EAST, N.M.P.M., WHENCE THE SOUTH QUARTER CORNER OF SAID SECTION 11, TOWNSHIP 23 SOUTH, RANGE 31 EAST, N.M.P.M. BEARS S40°11'43"E, A DISTANCE OF 829.53 FEET;

THENCE N89°50'57"E A DISTANCE OF 446.22 FEET THE TERMINUS OF THIS CENTERLINE SURVEY, WHENCE THE SOUTH QUARTER CORNER OF SAID SECTION 11, TOWNSHIP 23 SOUTH, RANGE 31 EAST, N.M.P.M. BEARS S07°59'41"E, A DISTANCE OF 641.04 FEET;

SAID STRIP OF LAND BEING 446.22 FEET OR 27.04 RODS IN LENGTH, CONTAINING 0.307 ACRES MORE OR LESS AND BEING ALLOCATED BY FORTIES AS FOLLOWS:

SE/4 SW/4 446.22 L.F. 27.04 RODS 0.307 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: 2-2**

**MADRON SURVEYING, INC.** 301 SOUTH CANAL CARLSBAD, NEW MEXICO  
(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 23 DAY OF APRIL 2018

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

**SURVEY NO. 5226B**



APD ID: 10400038619

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: 513H

[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	3476	0	0	ALLUVIUM	NONE	N
2	RUSTLER	2736	739	739	SANDSTONE	NONE	N
3	BASE OF SALT	-995	4470	4470	SALT	NONE	N
4	DELAWARE	-1032	4507	4507	SANDSTONE	NATURAL GAS,OIL	N
5	BONE SPRING 1ST	-5987	9462	9462	SANDSTONE	NATURAL GAS,OIL	N
6	BONE SPRING 2ND	-6392	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:** 513H

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

**Rating Depth:** 8885

**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	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	19055	0	8885	-6990	-16785	19055	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:** 513H

#### 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

---

**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:** 513H

String Type	Lead/Tail	Stage Tool	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	8357	726.6	3.27	9	2375.9	10	TUNED	Class C + adds
PRODUCTION	Tail		8357	19055	2235	1.33	13.2	2972.5	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	8885	OTHER :	8.5	9				2			

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

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

**Well Number:** 513H

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
		FRESH WATER									
764	8885	OTHER : BRINE	10	10.5				2			
6000	8885	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:** 4158

**Anticipated Surface Pressure:** 2203.3

**Anticipated Bottom Hole Temperature(F):** 142

**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\_513H\_H2S\_20190130074057.pdf

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

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

**Well Number:** 513H

## Section 8 - Other Information

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

Devon\_\_\_Belloq\_11\_2\_Fed\_State\_Com\_513H\_\_\_p2\_20190130074432.pdf

Belloq\_11\_2\_Fed\_State\_Com\_513H\_APD\_20190708090701.pdf

**Other proposed operations facets description:**

Multi-Bowl Verbiage

Multi-Bowl Wellhead

Closed-Loop Design Plan

Gas Capture Plan-BELLOQ CTB 2

Drill plan/SPEC SHEETS; updated drilling 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

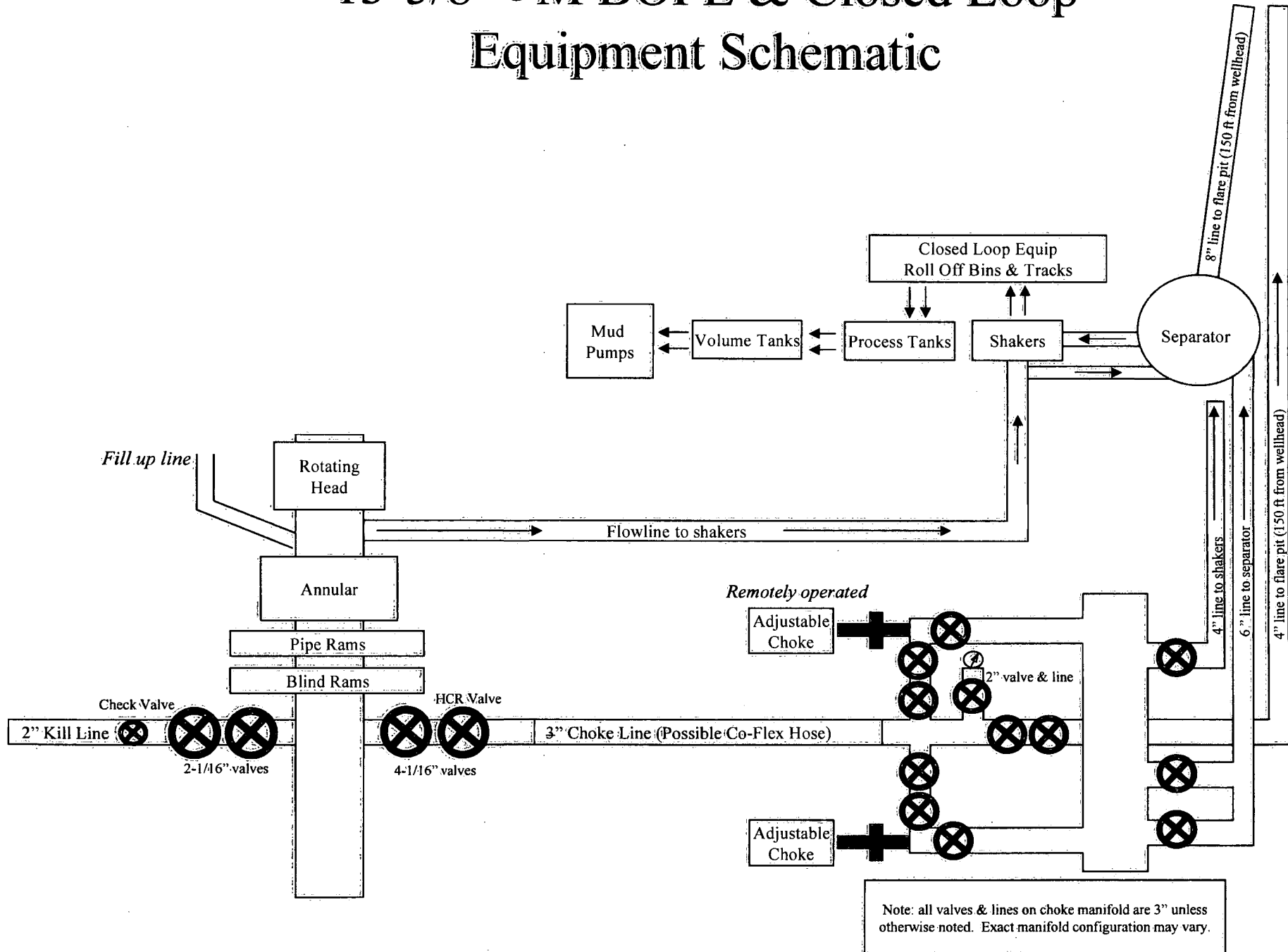
Spudder\_Rig\_Info\_20190130063428.pdf

BELLOQ\_11\_CTB\_2\_GasCapturePlan\_20190130070206.pdf

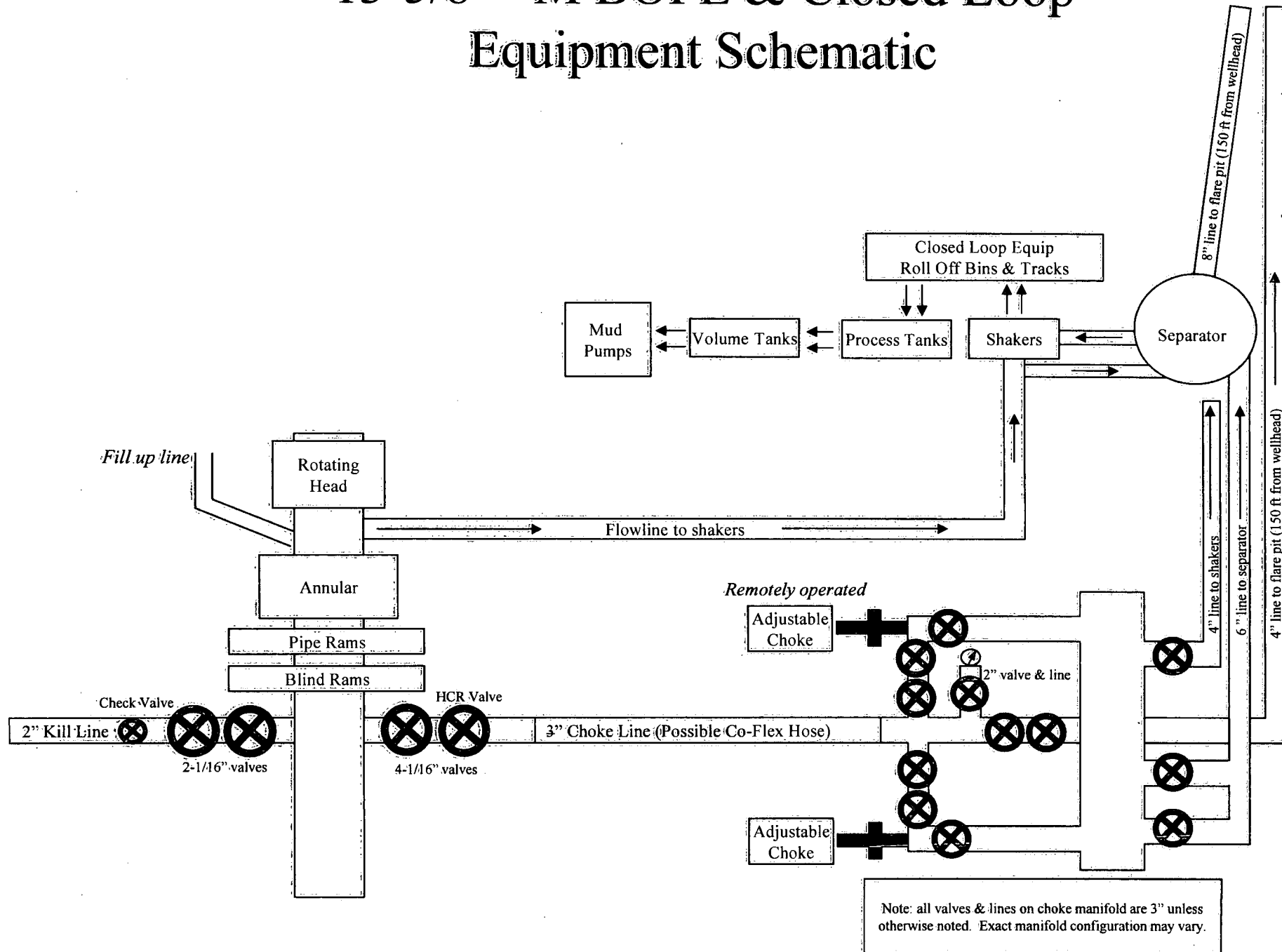
**Other Variance attachment:**

Co\_flex\_20190130063458.pdf

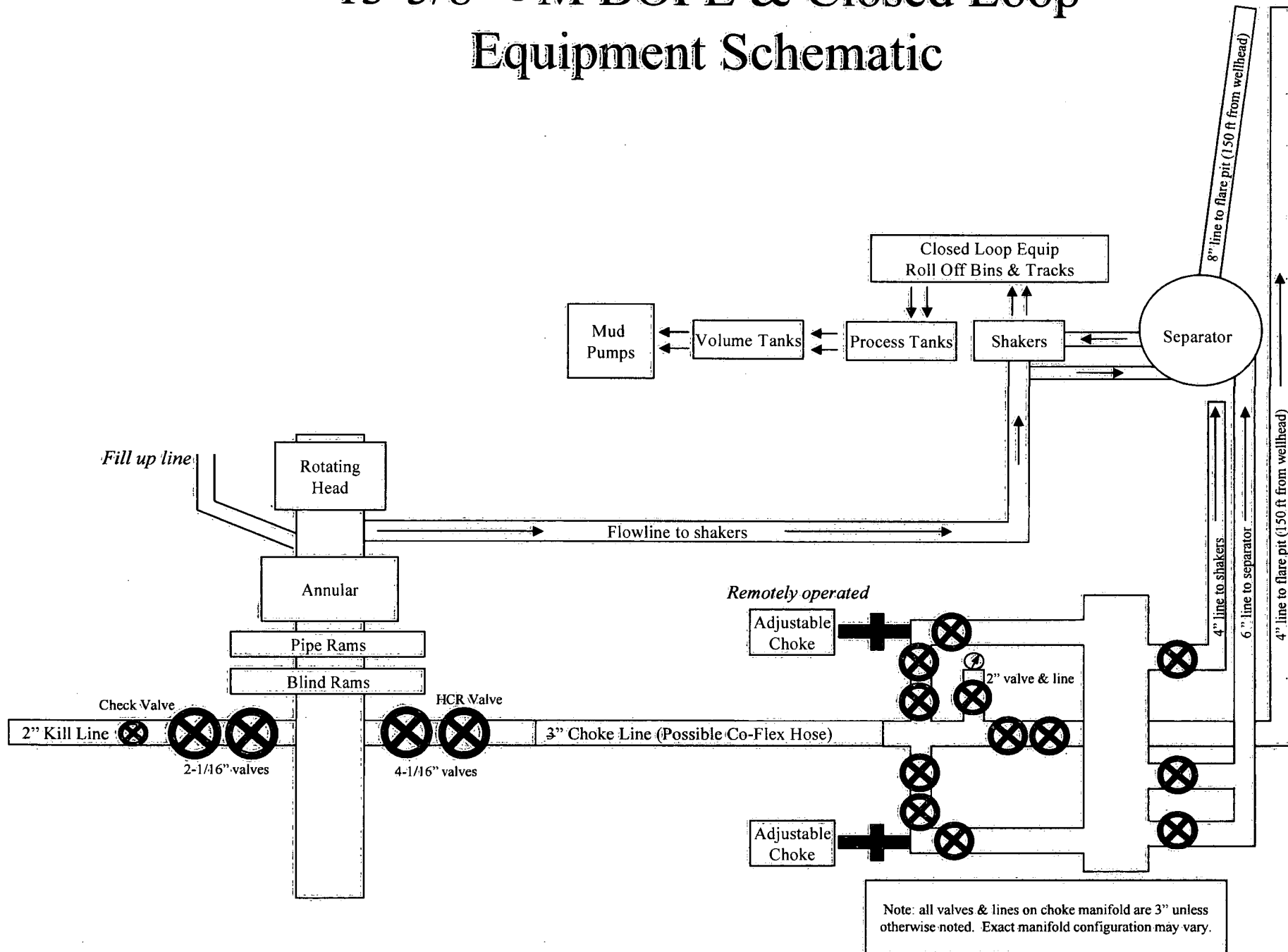
# 13-5/8" 5M BOPE & Closed Loop Equipment Schematic



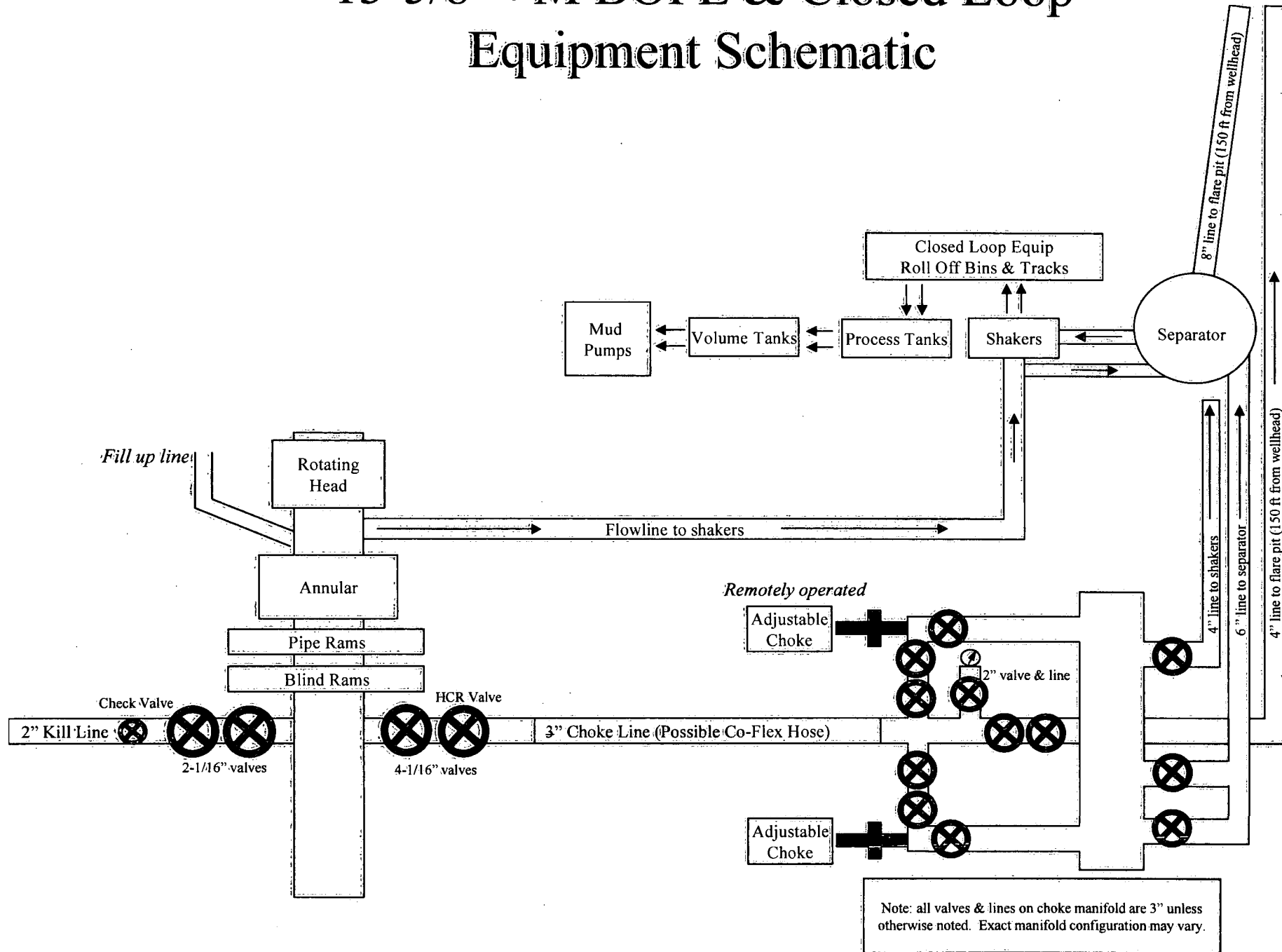
# 13-5/8" 5M BOPE & Closed Loop Equipment Schematic



# 13-5/8" 5 M 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.

<b>Production Casing Burst Design</b>		
<b>Load Case</b>	<b>External Pressure</b>	<b>Internal Pressure</b>
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

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

<b>Production Casing Tension Design</b>	
<b>Load Case</b>	<b>Assumptions</b>
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**

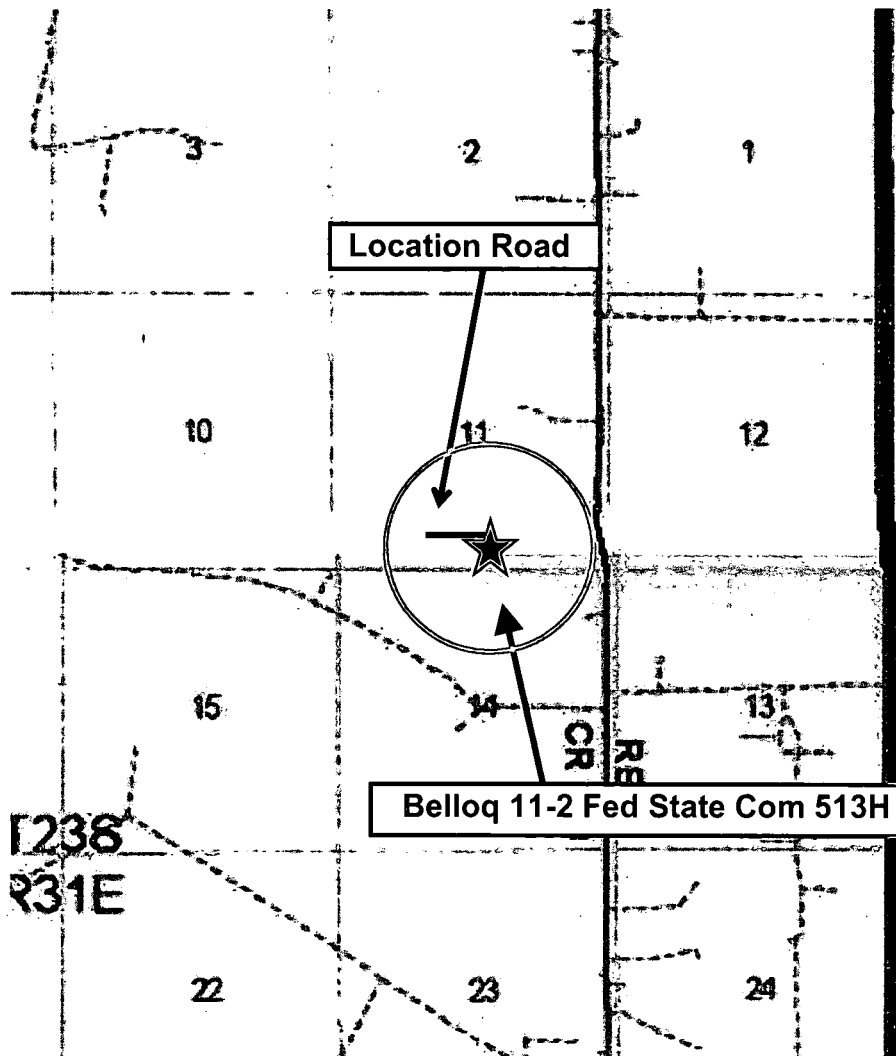
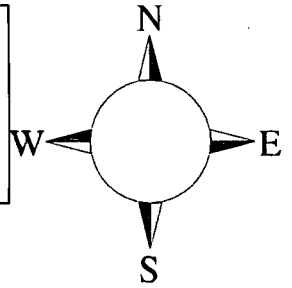
**Belloq 11-2 Fed State Com 513H**

**Sec-11 T-23S R-31E  
500' FSL & 2130' FEL  
LAT. = 32.3130946' N (NAD83)  
LONG = 103.7469196' W**

**Eddy County NM**

## Belloq 11-2 Fed State Com 513H

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>Hobbs</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>Carlsbad</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><u>Give GPS position:</u></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 513H  
 Wellbore: OH  
 Design: Plan #2



Azimuths to Grid North  
 True North: -0.31°  
 Magnetic North: 6.54°  
 Magnetic Field  
 Strength: 48018.9snT  
 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: 3476.8' GE + 23.5' KB @ 3500.30usft

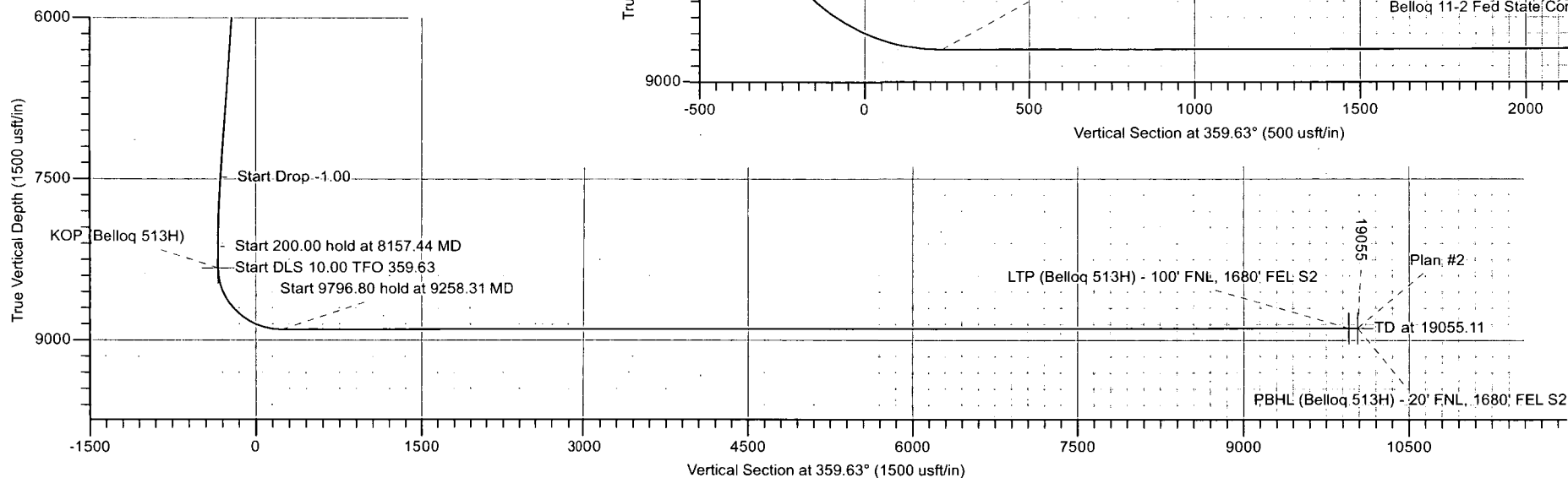
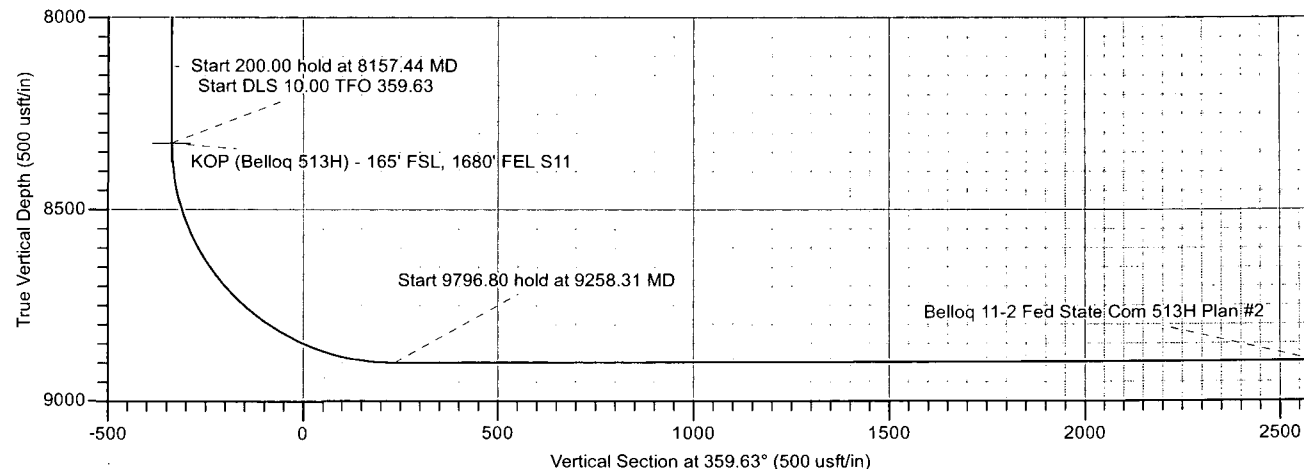
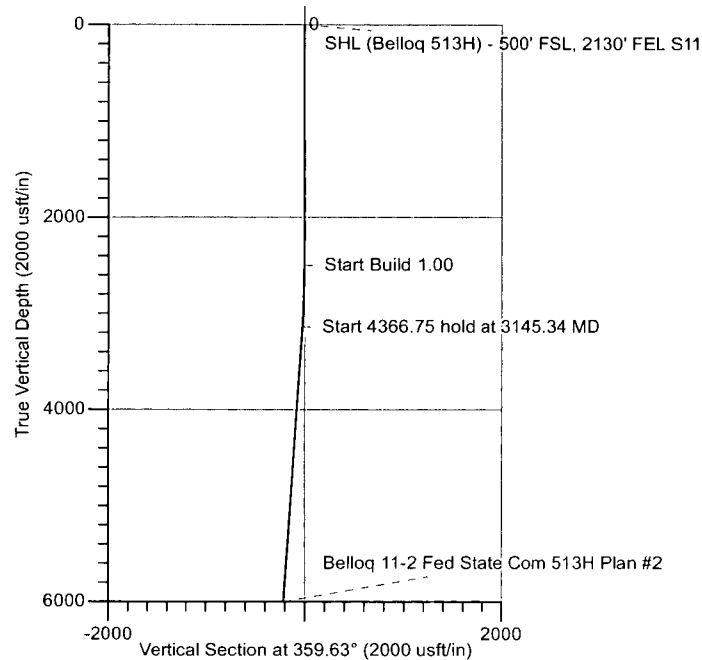


## SECTION DETAILS

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
2500.00	0.00	0.00	2500.00	0.00	0.00	0.00	0.00	0.00
3145.34	6.45	126.48	3143.98	-21.59	29.19	1.00	126.48	-21.77
7512.10	6.45	126.48	7483.06	-313.41	423.81	0.00	0.00	-316.14
8157.44	0.00	0.00	8127.04	-335.00	453.00	1.00	180.00	-337.92
8357.44	0.00	0.00	8327.04	-335.00	453.00	0.00	0.00	-337.92
9258.31	90.09	359.63	8900.00	238.82	449.26	10.00	359.63	235.92
19055.11	90.09	359.63	8885.00	10035.40	385.43	0.00	0.00	10032.70

## DESIGN TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
KOP (Belloq 513H)	8327.04	-335.00	453.00	477796.76	722952.70	32° 18' 43.8012 N	103° 44' 43.6533 W
LTP (Belloq 513H)	8885.12	9955.40	385.95	488087.16	722885.65	32° 20' 25.6322 N	103° 44' 43.7767 W
PBHL (Belloq 513H)	8885.00	10035.40	385.43	488167.16	722885.13	32° 20' 26.4239 N	103° 44' 43.7777 W
SHL (Belloq 513H)	0.00	0.00	0.00	478131.76	722499.70	32° 18' 47.1407 N	103° 44' 48.9105 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 513H/OH)  
 Belloq 11-2 Fed State Com  
 Created By: Dustin Autt Date: 12:00, January 23 2019  
 Date: \_\_\_\_\_  
 Approved: \_\_\_\_\_ Date: \_\_\_\_\_

# Devon Energy

Project: Eddy County, NM (NAD-83)  
Site: Belloq 11-2 Fed State Com  
Well: Belloq 11-2 Fed State Com 513H  
Wellbore: OH  
Design: Plan #2



Azimuths to Grid North  
True North: -0.31°  
Magnetic North: 6.54°

Magnetic Field  
Strength: 48018.9nT  
Dip Angle: 60.05°  
Date: 1/21/2019  
Model: HDGM

# devon

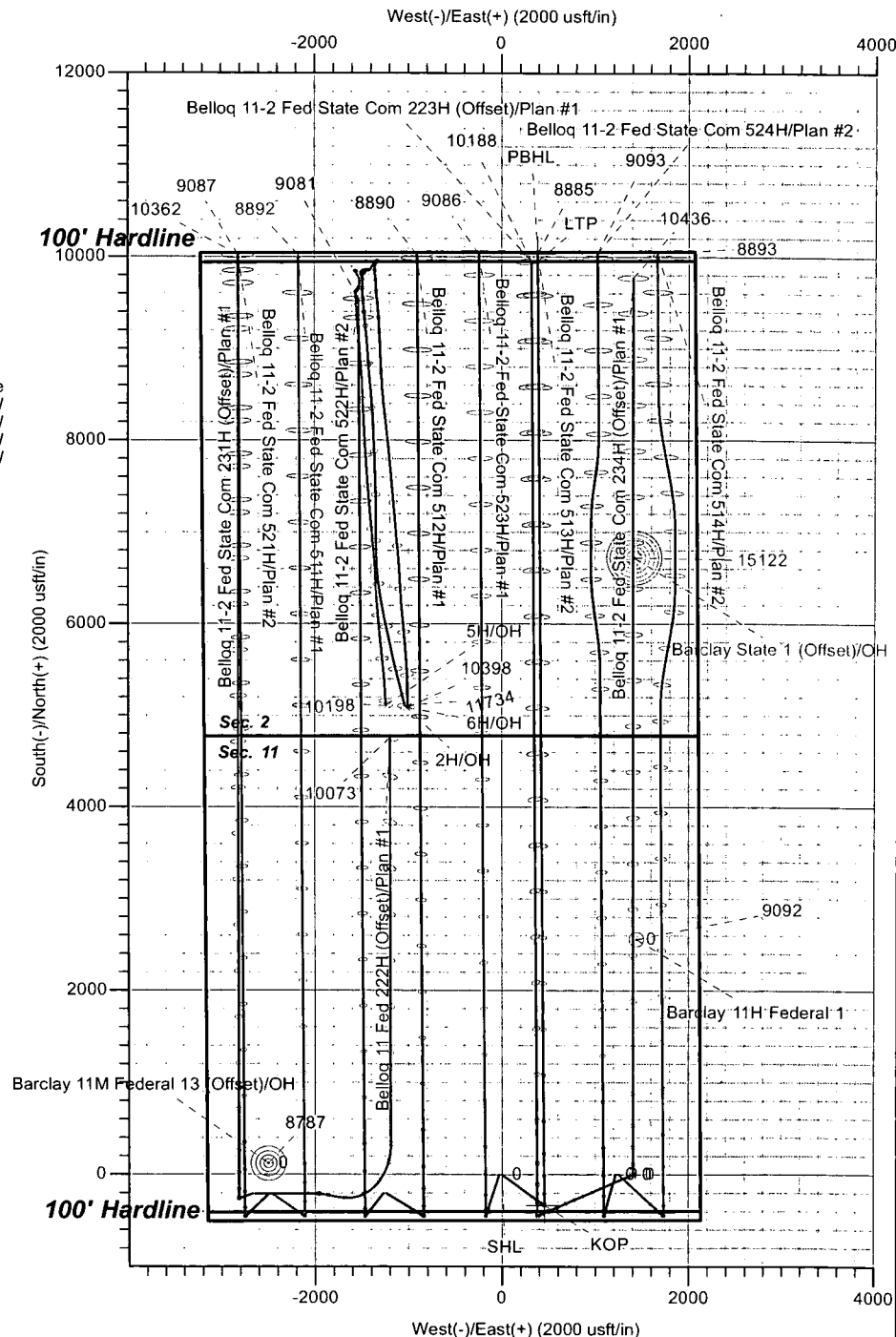
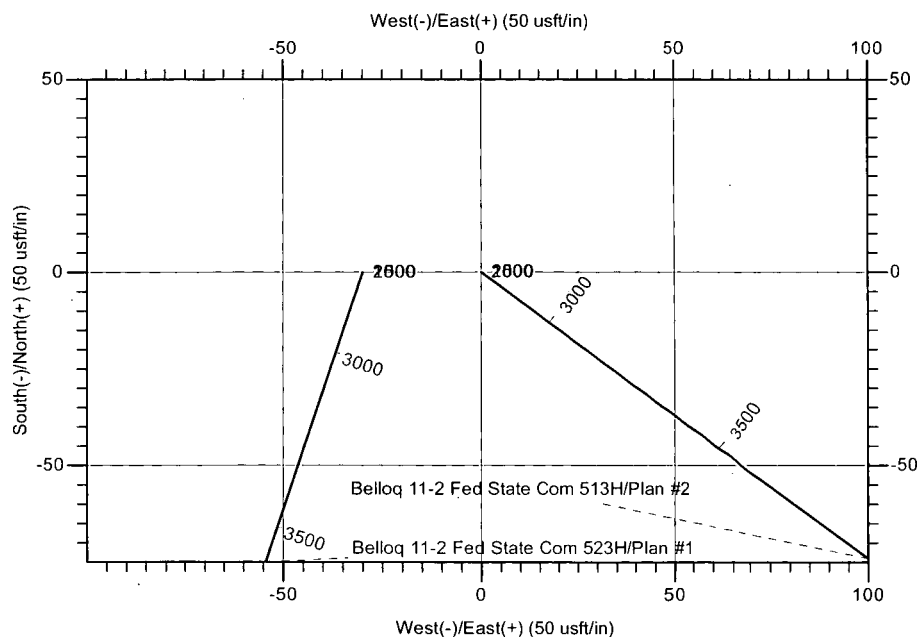
PROJECT DETAILS: Eddy County, NM (NAD-83)  
Geodetic System: US State Plane 1983  
Datum: North American Datum 1983  
Ellipsoid: GRS 1980  
Zone: New Mexico Eastern Zone

## DESIGN TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
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PBHL (Belloq 513H)	8885.00	10035.40	385.43	488167.16	722885.13	32° 20' 26.4239 N	103° 44' 43.7777 W
SHL (Belloq 513H)	0.00	0.00	0.00	478131.76	722499.70	32° 18' 47.1407 N	103° 44' 48.9105 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	
2500.00	0.00	0.00	2500.00	0.00	0.00	0.00	0.00	0.00	
3145.34	6.45	126.48	3143.98	-21.59	29.19	1.00	126.48	-21.77	
7512.10	6.45	126.48	7483.06	-313.41	423.81	0.00	0.00	-316.14	
8157.44	0.00	0.00	8127.04	-335.00	453.00	1.00	180.00	-337.92	
8357.44	0.00	0.00	8327.04	-335.00	453.00	0.00	0.00	-337.92	
9258.31	90.09	359.63	8900.00	238.82	449.26	10.00	359.63	235.92	
19055.11	90.09	359.63	8885.00	10035.40	385.43	0.00	0.00	10032.70	



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 513H/OH)  
Belloq 11-2 Fed State Com  
Created By: Dustin Ault  
Date: 12:01, January 23 2019  
Approved: \_\_\_\_\_  
Date: \_\_\_\_\_

# **Devon Energy**

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

**Belloq 11-2 Fed State Com**

**Belloq 11-2 Fed State Com 513H**

**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 513H
<b>Company:</b>	Devon Energy	<b>TVD Reference:</b>	3476.8' GE + 23.5' KB @ 3500.30usft
<b>Project:</b>	Eddy County, NM (NAD-83)	<b>MD Reference:</b>	3476.8' GE + 23.5' KB @ 3500.30usft
<b>Site:</b>	Belloq 11-2 Fed State Com	<b>North Reference:</b>	Grid
<b>Well:</b>	Belloq 11-2 Fed State Com 513H	<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		

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

Well	Belloq 11-2 Fed State Com 513H					
Well Position	+N/-S	0.00 usft	Northing:	478,131.76 usft	Latitude:	32° 18' 47.1407 N
	+E/-W	0.00 usft	Easting:	722,499.70 usft	Longitude:	103° 44' 48.9105 W
Position Uncertainty		0.00 usft	Wellhead Elevation:	0.00 usft	Ground Level:	3,476.80 usft

<b>Wellbore</b>	OH				
<b>Magnetics</b>	<b>Model Name</b>	<b>Sample Date</b>	<b>Declination (°)</b>	<b>Dip Angle (°)</b>	<b>Field Strength (nT)</b>
	HDGM	1/21/2019	6.85	60.05	48,019

<b>Design</b>	Plan #2			
<b>Audit Notes:</b>				
<b>Version:</b>	<b>Phase:</b>	PLAN	<b>Tie On Depth:</b>	0.00
<b>Vertical Section:</b>	<b>Depth From (TVD) (usft)</b>	<b>+N/-S (usft)</b>	<b>+E/-W (usft)</b>	<b>Direction (°)</b>
	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	
2,500.00	0.00	0.00	2,500.00	0.00	0.00	0.00	0.00	0.00	0.00	
3,145.34	6.45	126.48	3,143.98	-21.59	29.19	1.00	1.00	0.00	126.48	
7,512.10	6.45	126.48	7,483.06	-313.41	423.81	0.00	0.00	0.00	0.00	
8,157.44	0.00	0.00	8,127.04	-335.00	453.00	1.00	-1.00	0.00	180.00	
8,357.44	0.00	0.00	8,327.04	-335.00	453.00	0.00	0.00	0.00	0.00	
9,258.31	90.09	359.63	8,900.00	238.82	449.26	10.00	10.00	-0.04	359.63	
19,055.11	90.09	359.63	8,885.00	10,035.40	385.43	0.00	0.00	0.00	0.00	PBHL (Belloq 513H) -

# LEAM Drilling Services

## Planning Report - Geographic

Database:	EDM 5000.1 Multi User Db	Local Co-ordinate Reference:	Well Belloq 11-2 Fed State Com 513H
Company:	Devon Energy	TVD Reference:	3476.8' GE + 23.5' KB @ 3500.30usft
Project:	Eddy County, NM (NAD-83)	MD Reference:	3476.8' GE + 23.5' KB @ 3500.30usft
Site:	Belloq 11-2 Fed State Com	North Reference:	Grid
Well:	Belloq 11-2 Fed State Com 513H	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	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	478,131.76	722,499.70	32° 18' 47.1407 N	103° 44' 48.9105 W	
SHL (Belloq 513H) - 500' FSL, 2130' FEL S11										
100.00	0.00	0.00	100.00	0.00	0.00	478,131.76	722,499.70	32° 18' 47.1407 N	103° 44' 48.9105 W	
200.00	0.00	0.00	200.00	0.00	0.00	478,131.76	722,499.70	32° 18' 47.1407 N	103° 44' 48.9105 W	
300.00	0.00	0.00	300.00	0.00	0.00	478,131.76	722,499.70	32° 18' 47.1407 N	103° 44' 48.9105 W	
400.00	0.00	0.00	400.00	0.00	0.00	478,131.76	722,499.70	32° 18' 47.1407 N	103° 44' 48.9105 W	
500.00	0.00	0.00	500.00	0.00	0.00	478,131.76	722,499.70	32° 18' 47.1407 N	103° 44' 48.9105 W	
600.00	0.00	0.00	600.00	0.00	0.00	478,131.76	722,499.70	32° 18' 47.1407 N	103° 44' 48.9105 W	
700.00	0.00	0.00	700.00	0.00	0.00	478,131.76	722,499.70	32° 18' 47.1407 N	103° 44' 48.9105 W	
800.00	0.00	0.00	800.00	0.00	0.00	478,131.76	722,499.70	32° 18' 47.1407 N	103° 44' 48.9105 W	
900.00	0.00	0.00	900.00	0.00	0.00	478,131.76	722,499.70	32° 18' 47.1407 N	103° 44' 48.9105 W	
1,000.00	0.00	0.00	1,000.00	0.00	0.00	478,131.76	722,499.70	32° 18' 47.1407 N	103° 44' 48.9105 W	
1,100.00	0.00	0.00	1,100.00	0.00	0.00	478,131.76	722,499.70	32° 18' 47.1407 N	103° 44' 48.9105 W	
1,200.00	0.00	0.00	1,200.00	0.00	0.00	478,131.76	722,499.70	32° 18' 47.1407 N	103° 44' 48.9105 W	
1,300.00	0.00	0.00	1,300.00	0.00	0.00	478,131.76	722,499.70	32° 18' 47.1407 N	103° 44' 48.9105 W	
1,400.00	0.00	0.00	1,400.00	0.00	0.00	478,131.76	722,499.70	32° 18' 47.1407 N	103° 44' 48.9105 W	
1,500.00	0.00	0.00	1,500.00	0.00	0.00	478,131.76	722,499.70	32° 18' 47.1407 N	103° 44' 48.9105 W	
1,600.00	0.00	0.00	1,600.00	0.00	0.00	478,131.76	722,499.70	32° 18' 47.1407 N	103° 44' 48.9105 W	
1,700.00	0.00	0.00	1,700.00	0.00	0.00	478,131.76	722,499.70	32° 18' 47.1407 N	103° 44' 48.9105 W	
1,800.00	0.00	0.00	1,800.00	0.00	0.00	478,131.76	722,499.70	32° 18' 47.1407 N	103° 44' 48.9105 W	
1,900.00	0.00	0.00	1,900.00	0.00	0.00	478,131.76	722,499.70	32° 18' 47.1407 N	103° 44' 48.9105 W	
2,000.00	0.00	0.00	2,000.00	0.00	0.00	478,131.76	722,499.70	32° 18' 47.1407 N	103° 44' 48.9105 W	
2,100.00	0.00	0.00	2,100.00	0.00	0.00	478,131.76	722,499.70	32° 18' 47.1407 N	103° 44' 48.9105 W	
2,200.00	0.00	0.00	2,200.00	0.00	0.00	478,131.76	722,499.70	32° 18' 47.1407 N	103° 44' 48.9105 W	
2,300.00	0.00	0.00	2,300.00	0.00	0.00	478,131.76	722,499.70	32° 18' 47.1407 N	103° 44' 48.9105 W	
2,400.00	0.00	0.00	2,400.00	0.00	0.00	478,131.76	722,499.70	32° 18' 47.1407 N	103° 44' 48.9105 W	
2,500.00	0.00	0.00	2,500.00	0.00	0.00	478,131.76	722,499.70	32° 18' 47.1407 N	103° 44' 48.9105 W	
2,600.00	1.00	126.48	2,599.99	-0.52	0.70	478,131.24	722,500.40	32° 18' 47.1355 N	103° 44' 48.9023 W	
2,700.00	2.00	126.48	2,699.96	-2.08	2.81	478,129.69	722,502.50	32° 18' 47.1200 N	103° 44' 48.8779 W	
2,800.00	3.00	126.48	2,799.86	-4.67	6.31	478,127.09	722,506.01	32° 18' 47.0941 N	103° 44' 48.8372 W	
2,900.00	4.00	126.48	2,899.68	-8.30	11.22	478,123.46	722,510.92	32° 18' 47.0580 N	103° 44' 48.7802 W	
3,000.00	5.00	126.48	2,999.37	-12.96	17.53	478,118.80	722,517.23	32° 18' 47.0115 N	103° 44' 48.7070 W	
3,100.00	6.00	126.48	3,098.90	-18.66	25.24	478,113.10	722,524.93	32° 18' 46.9546 N	103° 44' 48.6176 W	
3,145.34	6.45	126.48	3,143.98	-21.59	29.19	478,110.17	722,528.89	32° 18' 46.9255 N	103° 44' 48.5717 W	
3,200.00	6.45	126.48	3,198.29	-25.24	34.13	478,106.52	722,533.83	32° 18' 46.8891 N	103° 44' 48.5144 W	
3,300.00	6.45	126.48	3,297.66	-31.92	43.17	478,099.84	722,542.86	32° 18' 46.8225 N	103° 44' 48.4095 W	
3,400.00	6.45	126.48	3,397.02	-38.61	52.20	478,093.16	722,551.90	32° 18' 46.7558 N	103° 44' 48.3046 W	
3,500.00	6.45	126.48	3,496.39	-45.29	61.24	478,086.47	722,560.94	32° 18' 46.6892 N	103° 44' 48.1998 W	
3,600.00	6.45	126.48	3,595.76	-51.97	70.28	478,079.79	722,569.97	32° 18' 46.6226 N	103° 44' 48.0949 W	
3,700.00	6.45	126.48	3,695.12	-58.65	79.31	478,073.11	722,579.01	32° 18' 46.5560 N	103° 44' 47.9900 W	
3,800.00	6.45	126.48	3,794.49	-65.34	88.35	478,066.42	722,588.05	32° 18' 46.4894 N	103° 44' 47.8851 W	
3,900.00	6.45	126.48	3,893.85	-72.02	97.39	478,059.74	722,597.08	32° 18' 46.4227 N	103° 44' 47.7803 W	
4,000.00	6.45	126.48	3,993.22	-78.70	106.42	478,053.06	722,606.12	32° 18' 46.3561 N	103° 44' 47.6754 W	
4,100.00	6.45	126.48	4,092.59	-85.39	115.46	478,046.37	722,615.16	32° 18' 46.2895 N	103° 44' 47.5705 W	
4,200.00	6.45	126.48	4,191.95	-92.07	124.50	478,039.69	722,624.19	32° 18' 46.2229 N	103° 44' 47.4656 W	
4,300.00	6.45	126.48	4,291.32	-98.75	133.54	478,033.01	722,633.23	32° 18' 46.1563 N	103° 44' 47.3607 W	
4,400.00	6.45	126.48	4,390.69	-105.43	142.57	478,026.33	722,642.27	32° 18' 46.0896 N	103° 44' 47.2559 W	
4,500.00	6.45	126.48	4,490.05	-112.12	151.61	478,019.64	722,651.31	32° 18' 46.0230 N	103° 44' 47.1510 W	
4,600.00	6.45	126.48	4,589.42	-118.80	160.65	478,012.96	722,660.34	32° 18' 45.9564 N	103° 44' 47.0461 W	
4,700.00	6.45	126.48	4,688.79	-125.48	169.68	478,006.28	722,669.38	32° 18' 45.8898 N	103° 44' 46.9412 W	
4,800.00	6.45	126.48	4,788.15	-132.17	178.72	477,999.59	722,678.42	32° 18' 45.8232 N	103° 44' 46.8364 W	
4,900.00	6.45	126.48	4,887.52	-138.85	187.76	477,992.91	722,687.45	32° 18' 45.7565 N	103° 44' 46.7315 W	
5,000.00	6.45	126.48	4,986.88	-145.53	196.79	477,986.23	722,696.49	32° 18' 45.6899 N	103° 44' 46.6266 W	
5,100.00	6.45	126.48	5,086.25	-152.21	205.83	477,979.55	722,705.53	32° 18' 45.6233 N	103° 44' 46.5217 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 513H
<b>Company:</b>	Devon Energy	<b>TVD Reference:</b>	3476.8' GE + 23.5' KB @ 3500.30usft
<b>Project:</b>	Eddy County, NM (NAD-83)	<b>MD Reference:</b>	3476.8' GE + 23.5' KB @ 3500.30usft
<b>Site:</b>	Belloq 11-2 Fed State Com	<b>North Reference:</b>	Grid
<b>Well:</b>	Belloq 11-2 Fed State Com 513H	<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	6.45	126.48	5,185.62	-158.90	214.87	477,972.86	722,714.56	32° 18' 45.5567 N	103° 44' 46.4169 W
5,300.00	6.45	126.48	5,284.98	-165.58	223.90	477,966.18	722,723.60	32° 18' 45.4901 N	103° 44' 46.3120 W
5,400.00	6.45	126.48	5,384.35	-172.26	232.94	477,959.50	722,732.64	32° 18' 45.4234 N	103° 44' 46.2071 W
5,500.00	6.45	126.48	5,483.72	-178.95	241.98	477,952.81	722,741.67	32° 18' 45.3568 N	103° 44' 46.1022 W
5,600.00	6.45	126.48	5,583.08	-185.63	251.02	477,946.13	722,750.71	32° 18' 45.2902 N	103° 44' 45.9974 W
5,700.00	6.45	126.48	5,682.45	-192.31	260.05	477,939.45	722,759.75	32° 18' 45.2236 N	103° 44' 45.8925 W
5,800.00	6.45	126.48	5,781.82	-199.00	269.09	477,932.77	722,768.79	32° 18' 45.1570 N	103° 44' 45.7876 W
5,900.00	6.45	126.48	5,881.18	-205.68	278.13	477,926.08	722,777.82	32° 18' 45.0903 N	103° 44' 45.6827 W
6,000.00	6.45	126.48	5,980.55	-212.36	287.16	477,919.40	722,786.86	32° 18' 45.0237 N	103° 44' 45.5779 W
6,100.00	6.45	126.48	6,079.91	-219.04	296.20	477,912.72	722,795.90	32° 18' 44.9571 N	103° 44' 45.4730 W
6,200.00	6.45	126.48	6,179.28	-225.73	305.24	477,906.03	722,804.93	32° 18' 44.8905 N	103° 44' 45.3681 W
6,300.00	6.45	126.48	6,278.65	-232.41	314.27	477,899.35	722,813.97	32° 18' 44.8239 N	103° 44' 45.2632 W
6,400.00	6.45	126.48	6,378.01	-239.09	323.31	477,892.67	722,823.01	32° 18' 44.7572 N	103° 44' 45.1584 W
6,500.00	6.45	126.48	6,477.38	-245.78	332.35	477,885.98	722,832.04	32° 18' 44.6906 N	103° 44' 45.0535 W
6,600.00	6.45	126.48	6,576.75	-252.46	341.38	477,879.30	722,841.08	32° 18' 44.6240 N	103° 44' 44.9486 W
6,700.00	6.45	126.48	6,676.11	-259.14	350.42	477,872.62	722,850.12	32° 18' 44.5574 N	103° 44' 44.8437 W
6,800.00	6.45	126.48	6,775.48	-265.82	359.46	477,865.94	722,859.15	32° 18' 44.4908 N	103° 44' 44.7389 W
6,900.00	6.45	126.48	6,874.85	-272.51	368.50	477,859.25	722,868.19	32° 18' 44.4241 N	103° 44' 44.6340 W
7,000.00	6.45	126.48	6,974.21	-279.19	377.53	477,852.57	722,877.23	32° 18' 44.3575 N	103° 44' 44.5291 W
7,100.00	6.45	126.48	7,073.58	-285.87	386.57	477,845.89	722,886.27	32° 18' 44.2909 N	103° 44' 44.4242 W
7,200.00	6.45	126.48	7,172.94	-292.56	395.61	477,839.20	722,895.30	32° 18' 44.2243 N	103° 44' 44.3194 W
7,300.00	6.45	126.48	7,272.31	-299.24	404.64	477,832.52	722,904.34	32° 18' 44.1577 N	103° 44' 44.2145 W
7,400.00	6.45	126.48	7,371.68	-305.92	413.68	477,825.84	722,913.38	32° 18' 44.0910 N	103° 44' 44.1096 W
7,500.00	6.45	126.48	7,471.04	-312.61	422.72	477,819.16	722,922.41	32° 18' 44.0244 N	103° 44' 44.0047 W
7,512.10	6.45	126.48	7,483.06	-313.41	423.81	477,818.35	722,923.51	32° 18' 44.0164 N	103° 44' 43.9921 W
7,600.00	5.57	126.48	7,570.48	-318.89	431.21	477,812.87	722,930.91	32° 18' 43.9618 N	103° 44' 43.9061 W
7,700.00	4.57	126.48	7,670.09	-324.15	438.33	477,807.61	722,938.02	32° 18' 43.9093 N	103° 44' 43.8236 W
7,800.00	3.57	126.48	7,769.84	-328.37	444.04	477,803.39	722,943.73	32° 18' 43.8672 N	103° 44' 43.7573 W
7,900.00	2.57	126.48	7,869.69	-331.56	448.35	477,800.20	722,948.05	32° 18' 43.8354 N	103° 44' 43.7073 W
8,000.00	1.57	126.48	7,969.62	-333.71	451.26	477,798.05	722,950.96	32° 18' 43.8140 N	103° 44' 43.6735 W
8,100.00	0.57	126.48	8,069.60	-334.83	452.77	477,796.93	722,952.46	32° 18' 43.8029 N	103° 44' 43.6560 W
8,157.44	0.00	0.00	8,127.04	-335.00	453.00	477,796.76	722,952.70	32° 18' 43.8012 N	103° 44' 43.6533 W
8,200.00	0.00	0.00	8,169.60	-335.00	453.00	477,796.76	722,952.70	32° 18' 43.8012 N	103° 44' 43.6533 W
8,300.00	0.00	0.00	8,269.60	-335.00	453.00	477,796.76	722,952.70	32° 18' 43.8012 N	103° 44' 43.6533 W
8,357.44	0.00	0.00	8,327.04	-335.00	453.00	477,796.76	722,952.70	32° 18' 43.8012 N	103° 44' 43.6533 W
<b>KOP (Belloq 513H) - 165' FSL, 1680' FEL S11</b>									
8,400.00	4.26	359.63	8,369.56	-333.42	452.99	477,798.34	722,952.69	32° 18' 43.8168 N	103° 44' 43.6533 W
8,450.00	9.26	359.63	8,419.20	-327.54	452.95	477,804.22	722,952.65	32° 18' 43.8750 N	103° 44' 43.6534 W
8,500.00	14.26	359.63	8,468.14	-317.36	452.89	477,814.41	722,952.58	32° 18' 43.9758 N	103° 44' 43.6535 W
8,550.00	19.26	359.63	8,516.00	-302.95	452.79	477,828.82	722,952.49	32° 18' 44.1184 N	103° 44' 43.6537 W
8,555.95	19.85	359.63	8,521.60	-300.96	452.78	477,830.81	722,952.47	32° 18' 44.1381 N	103° 44' 43.6537 W
<b>FTP (Belloq 513H) - 100' FSL, 1680' FEL S11</b>									
8,600.00	24.26	359.63	8,562.42	-284.42	452.67	477,847.34	722,952.37	32° 18' 44.3017 N	103° 44' 43.6539 W
8,650.00	29.26	359.63	8,607.05	-261.92	452.52	477,869.84	722,952.22	32° 18' 44.5244 N	103° 44' 43.6542 W
8,700.00	34.26	359.63	8,649.56	-235.61	452.35	477,896.15	722,952.05	32° 18' 44.7847 N	103° 44' 43.6545 W
8,750.00	39.26	359.63	8,689.60	-205.70	452.16	477,926.06	722,951.85	32° 18' 45.0807 N	103° 44' 43.6548 W
8,800.00	44.26	359.63	8,726.89	-172.41	451.94	477,959.35	722,951.64	32° 18' 45.4101 N	103° 44' 43.6552 W
8,850.00	49.26	359.63	8,761.13	-136.00	451.70	477,995.76	722,951.40	32° 18' 45.7704 N	103° 44' 43.6557 W
8,900.00	54.26	359.63	8,792.07	-96.75	451.45	478,035.01	722,951.14	32° 18' 46.1589 N	103° 44' 43.6562 W
8,950.00	59.26	359.63	8,819.48	-54.94	451.18	478,076.82	722,950.87	32° 18' 46.5725 N	103° 44' 43.6567 W
9,000.00	64.26	359.63	8,843.13	-10.91	450.89	478,120.85	722,950.58	32° 18' 47.0083 N	103° 44' 43.6572 W
9,050.00	69.26	359.63	8,862.86	35.02	450.59	478,166.78	722,950.29	32° 18' 47.4628 N	103° 44' 43.6577 W
9,100.00	74.26	359.63	8,878.50	82.49	450.28	478,214.25	722,949.98	32° 18' 47.9325 N	103° 44' 43.6583 W
9,150.00	79.26	359.63	8,889.95	131.14	449.96	478,262.90	722,949.66	32° 18' 48.4140 N	103° 44' 43.6589 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 513H
<b>Company:</b>	Devon Energy	<b>TVD Reference:</b>	3476.8' GE + 23.5' KB @ 3500.30usft
<b>Project:</b>	Eddy County, NM (NAD-83)	<b>MD Reference:</b>	3476.8' GE + 23.5' KB @ 3500.30usft
<b>Site:</b>	Belloq 11-2 Fed State Com	<b>North Reference:</b>	Grid
<b>Well:</b>	Belloq 11-2 Fed State Com 513H	<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
9,200.00	84.26	359.63	8,897.12	180.61	449.64	478,312.37	722,949.34	32° 18' 48.9035 N	103° 44' 43.6595 W
9,250.00	89.26	359.63	8,899.95	230.51	449.32	478,362.27	722,949.01	32° 18' 49.3973 N	103° 44' 43.6601 W
9,258.31	90.09	359.63	8,900.00	238.82	449.26	478,370.58	722,948.96	32° 18' 49.4796 N	103° 44' 43.6602 W
9,300.00	90.09	359.63	8,899.93	280.51	448.99	478,412.27	722,948.69	32° 18' 49.8921 N	103° 44' 43.6607 W
9,400.00	90.09	359.63	8,899.78	380.51	448.34	478,512.27	722,948.03	32° 18' 50.8816 N	103° 44' 43.6619 W
9,500.00	90.09	359.63	8,899.63	480.50	447.69	478,612.26	722,947.38	32° 18' 51.8712 N	103° 44' 43.6631 W
9,600.00	90.09	359.63	8,899.47	580.50	447.03	478,712.26	722,946.73	32° 18' 52.8607 N	103° 44' 43.6643 W
9,700.00	90.09	359.63	8,899.32	680.50	446.38	478,812.26	722,946.08	32° 18' 53.8503 N	103° 44' 43.6655 W
9,800.00	90.09	359.63	8,899.17	780.50	445.73	478,912.26	722,945.43	32° 18' 54.8399 N	103° 44' 43.6667 W
9,900.00	90.09	359.63	8,899.02	880.49	445.08	479,012.26	722,944.78	32° 18' 55.8294 N	103° 44' 43.6679 W
10,000.00	90.09	359.63	8,898.86	980.49	444.43	479,112.25	722,944.12	32° 18' 56.8190 N	103° 44' 43.6691 W
10,100.00	90.09	359.63	8,898.71	1,080.49	443.78	479,212.25	722,943.47	32° 18' 57.8085 N	103° 44' 43.6703 W
10,200.00	90.09	359.63	8,898.56	1,180.49	443.13	479,312.25	722,942.82	32° 18' 58.7981 N	103° 44' 43.6715 W
10,300.00	90.09	359.63	8,898.40	1,280.49	442.47	479,412.25	722,942.17	32° 18' 59.7876 N	103° 44' 43.6727 W
10,400.00	90.09	359.63	8,898.25	1,380.48	441.82	479,512.24	722,941.52	32° 19' 0.7772 N	103° 44' 43.6739 W
10,500.00	90.09	359.63	8,898.10	1,480.48	441.17	479,612.24	722,940.87	32° 19' 1.7667 N	103° 44' 43.6751 W
10,600.00	90.09	359.63	8,897.94	1,580.48	440.52	479,712.24	722,940.22	32° 19' 2.7563 N	103° 44' 43.6763 W
10,700.00	90.09	359.63	8,897.79	1,680.48	439.87	479,812.24	722,939.56	32° 19' 3.7458 N	103° 44' 43.6775 W
10,800.00	90.09	359.63	8,897.64	1,780.47	439.22	479,912.23	722,938.91	32° 19' 4.7354 N	103° 44' 43.6787 W
10,900.00	90.09	359.63	8,897.48	1,880.47	438.56	480,012.23	722,938.26	32° 19' 5.7249 N	103° 44' 43.6799 W
11,000.00	90.09	359.63	8,897.33	1,980.47	437.91	480,112.23	722,937.61	32° 19' 6.7145 N	103° 44' 43.6811 W
11,100.00	90.09	359.63	8,897.18	2,080.47	437.26	480,212.23	722,936.96	32° 19' 7.7040 N	103° 44' 43.6823 W
11,200.00	90.09	359.63	8,897.02	2,180.47	436.61	480,312.23	722,936.31	32° 19' 8.6936 N	103° 44' 43.6835 W
11,300.00	90.09	359.63	8,896.87	2,280.46	435.96	480,412.22	722,935.65	32° 19' 9.6831 N	103° 44' 43.6847 W
11,400.00	90.09	359.63	8,896.72	2,380.46	435.31	480,512.22	722,935.00	32° 19' 10.6727 N	103° 44' 43.6859 W
11,500.00	90.09	359.63	8,896.57	2,480.46	434.66	480,612.22	722,934.35	32° 19' 11.6622 N	103° 44' 43.6871 W
11,600.00	90.09	359.63	8,896.41	2,580.46	434.00	480,712.22	722,933.70	32° 19' 12.6518 N	103° 44' 43.6883 W
11,700.00	90.09	359.63	8,896.26	2,680.45	433.35	480,812.21	722,933.05	32° 19' 13.6414 N	103° 44' 43.6895 W
11,800.00	90.09	359.63	8,896.11	2,780.45	432.70	480,912.21	722,932.40	32° 19' 14.6309 N	103° 44' 43.6907 W
11,900.00	90.09	359.63	8,895.95	2,880.45	432.05	481,012.21	722,931.75	32° 19' 15.6205 N	103° 44' 43.6919 W
12,000.00	90.09	359.63	8,895.80	2,980.45	431.40	481,112.21	722,931.09	32° 19' 16.6100 N	103° 44' 43.6931 W
12,100.00	90.09	359.63	8,895.65	3,080.45	430.75	481,212.21	722,930.44	32° 19' 17.5996 N	103° 44' 43.6943 W
12,200.00	90.09	359.63	8,895.49	3,180.44	430.09	481,312.20	722,929.79	32° 19' 18.5891 N	103° 44' 43.6955 W
12,300.00	90.09	359.63	8,895.34	3,280.44	429.44	481,412.20	722,929.14	32° 19' 19.5787 N	103° 44' 43.6967 W
12,400.00	90.09	359.63	8,895.19	3,380.44	428.79	481,512.20	722,928.49	32° 19' 20.5682 N	103° 44' 43.6979 W
12,500.00	90.09	359.63	8,895.03	3,480.44	428.14	481,612.20	722,927.84	32° 19' 21.5578 N	103° 44' 43.6991 W
12,600.00	90.09	359.63	8,894.88	3,580.43	427.49	481,712.19	722,927.18	32° 19' 22.5473 N	103° 44' 43.7003 W
12,700.00	90.09	359.63	8,894.73	3,680.43	426.84	481,812.19	722,926.53	32° 19' 23.5369 N	103° 44' 43.7015 W
12,800.00	90.09	359.63	8,894.58	3,780.43	426.19	481,912.19	722,925.88	32° 19' 24.5264 N	103° 44' 43.7027 W
12,900.00	90.09	359.63	8,894.42	3,880.43	425.53	482,012.19	722,925.23	32° 19' 25.5160 N	103° 44' 43.7039 W
13,000.00	90.09	359.63	8,894.27	3,980.42	424.88	482,112.19	722,924.58	32° 19' 26.5055 N	103° 44' 43.7051 W
13,100.00	90.09	359.63	8,894.12	4,080.42	424.23	482,212.18	722,923.93	32° 19' 27.4951 N	103° 44' 43.7063 W
13,200.00	90.09	359.63	8,893.96	4,180.42	423.58	482,312.18	722,923.28	32° 19' 28.4846 N	103° 44' 43.7075 W
13,300.00	90.09	359.63	8,893.81	4,280.42	422.93	482,412.18	722,922.62	32° 19' 29.4742 N	103° 44' 43.7087 W
13,400.00	90.09	359.63	8,893.66	4,380.42	422.28	482,512.18	722,921.97	32° 19' 30.4637 N	103° 44' 43.7099 W
13,500.00	90.09	359.63	8,893.50	4,480.41	421.62	482,612.17	722,921.32	32° 19' 31.4533 N	103° 44' 43.7111 W
13,600.00	90.09	359.63	8,893.35	4,580.41	420.97	482,712.17	722,920.67	32° 19' 32.4428 N	103° 44' 43.7123 W
13,700.00	90.09	359.63	8,893.20	4,680.41	420.32	482,812.17	722,920.02	32° 19' 33.4324 N	103° 44' 43.7135 W
13,800.00	90.09	359.63	8,893.04	4,780.41	419.67	482,912.17	722,919.37	32° 19' 34.4219 N	103° 44' 43.7147 W
13,900.00	90.09	359.63	8,892.89	4,880.40	419.02	483,012.17	722,918.71	32° 19' 35.4115 N	103° 44' 43.7159 W
14,000.00	90.09	359.63	8,892.74	4,980.40	418.37	483,112.16	722,918.06	32° 19' 36.4010 N	103° 44' 43.7171 W
14,100.00	90.09	359.63	8,892.59	5,080.40	417.72	483,212.16	722,917.41	32° 19' 37.3906 N	103° 44' 43.7183 W
14,200.00	90.09	359.63	8,892.43	5,180.40	417.06	483,312.16	722,916.76	32° 19' 38.3801 N	103° 44' 43.7195 W
14,300.00	90.09	359.63	8,892.28	5,280.40	416.41	483,412.16	722,916.11	32° 19' 39.3697 N	103° 44' 43.7207 W
14,400.00	90.09	359.63	8,892.13	5,380.39	415.76	483,512.15	722,915.46	32° 19' 40.3593 N	103° 44' 43.7219 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 513H
<b>Company:</b>	Devon Energy	<b>TVD Reference:</b>	3476.8' GE + 23.5' KB @ 3500.30usft
<b>Project:</b>	Eddy County, NM (NAD-83)	<b>MD Reference:</b>	3476.8' GE + 23.5' KB @ 3500.30usft
<b>Site:</b>	Belloq 11-2 Fed State Com	<b>North Reference:</b>	Grid
<b>Well:</b>	Belloq 11-2 Fed State Com 513H	<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	90.09	359.63	8,891.97	5,480.39	415.11	483,612.15	722,914.81	32° 19' 41.3488 N	103° 44' 43.7231 W
14,600.00	90.09	359.63	8,891.82	5,580.39	414.46	483,712.15	722,914.15	32° 19' 42.3384 N	103° 44' 43.7243 W
14,700.00	90.09	359.63	8,891.67	5,680.39	413.81	483,812.15	722,913.50	32° 19' 43.3279 N	103° 44' 43.7255 W
14,800.00	90.09	359.63	8,891.51	5,780.38	413.15	483,912.15	722,912.85	32° 19' 44.3175 N	103° 44' 43.7267 W
14,900.00	90.09	359.63	8,891.36	5,880.38	412.50	484,012.14	722,912.20	32° 19' 45.3070 N	103° 44' 43.7279 W
15,000.00	90.09	359.63	8,891.21	5,980.38	411.85	484,112.14	722,911.55	32° 19' 46.2966 N	103° 44' 43.7291 W
15,100.00	90.09	359.63	8,891.05	6,080.38	411.20	484,212.14	722,910.90	32° 19' 47.2861 N	103° 44' 43.7303 W
15,200.00	90.09	359.63	8,890.90	6,180.38	410.55	484,312.14	722,910.24	32° 19' 48.2757 N	103° 44' 43.7315 W
15,300.00	90.09	359.63	8,890.75	6,280.37	409.90	484,412.13	722,909.59	32° 19' 49.2652 N	103° 44' 43.7327 W
15,400.00	90.09	359.63	8,890.60	6,380.37	409.24	484,512.13	722,908.94	32° 19' 50.2548 N	103° 44' 43.7339 W
15,500.00	90.09	359.63	8,890.44	6,480.37	408.59	484,612.13	722,908.29	32° 19' 51.2443 N	103° 44' 43.7351 W
15,600.00	90.09	359.63	8,890.29	6,580.37	407.94	484,712.13	722,907.64	32° 19' 52.2339 N	103° 44' 43.7363 W
15,700.00	90.09	359.63	8,890.14	6,680.36	407.29	484,812.13	722,906.99	32° 19' 53.2234 N	103° 44' 43.7375 W
15,800.00	90.09	359.63	8,889.98	6,780.36	406.64	484,912.12	722,906.33	32° 19' 54.2130 N	103° 44' 43.7387 W
15,900.00	90.09	359.63	8,889.83	6,880.36	405.99	485,012.12	722,905.68	32° 19' 55.2025 N	103° 44' 43.7399 W
16,000.00	90.09	359.63	8,889.68	6,980.36	405.34	485,112.12	722,905.03	32° 19' 56.1921 N	103° 44' 43.7411 W
16,100.00	90.09	359.63	8,889.52	7,080.36	404.68	485,212.12	722,904.38	32° 19' 57.1816 N	103° 44' 43.7423 W
16,200.00	90.09	359.63	8,889.37	7,180.35	404.03	485,312.11	722,903.73	32° 19' 58.1712 N	103° 44' 43.7435 W
16,300.00	90.09	359.63	8,889.22	7,280.35	403.38	485,412.11	722,903.08	32° 19' 59.1607 N	103° 44' 43.7447 W
16,400.00	90.09	359.63	8,889.06	7,380.35	402.73	485,512.11	722,902.43	32° 20' 0.1503 N	103° 44' 43.7459 W
16,500.00	90.09	359.63	8,888.91	7,480.35	402.08	485,612.11	722,901.77	32° 20' 1.1398 N	103° 44' 43.7471 W
16,600.00	90.09	359.63	8,888.76	7,580.34	401.43	485,712.11	722,901.12	32° 20' 2.1294 N	103° 44' 43.7483 W
16,700.00	90.09	359.63	8,888.61	7,680.34	400.77	485,812.10	722,900.47	32° 20' 3.1189 N	103° 44' 43.7495 W
16,800.00	90.09	359.63	8,888.45	7,780.34	400.12	485,912.10	722,899.82	32° 20' 4.1085 N	103° 44' 43.7507 W
16,900.00	90.09	359.63	8,888.30	7,880.34	399.47	486,012.10	722,899.17	32° 20' 5.0980 N	103° 44' 43.7519 W
17,000.00	90.09	359.63	8,888.15	7,980.34	398.82	486,112.10	722,898.52	32° 20' 6.0876 N	103° 44' 43.7531 W
17,100.00	90.09	359.63	8,887.99	8,080.33	398.17	486,212.09	722,897.86	32° 20' 7.0771 N	103° 44' 43.7542 W
17,200.00	90.09	359.63	8,887.84	8,180.33	397.52	486,312.09	722,897.21	32° 20' 8.0667 N	103° 44' 43.7554 W
17,300.00	90.09	359.63	8,887.69	8,280.33	396.87	486,412.09	722,896.56	32° 20' 9.0562 N	103° 44' 43.7566 W
17,400.00	90.09	359.63	8,887.53	8,380.33	396.21	486,512.09	722,895.91	32° 20' 10.0458 N	103° 44' 43.7578 W
17,500.00	90.09	359.63	8,887.38	8,480.32	395.56	486,612.08	722,895.26	32° 20' 11.0353 N	103° 44' 43.7590 W
17,600.00	90.09	359.63	8,887.23	8,580.32	394.91	486,712.08	722,894.61	32° 20' 12.0249 N	103° 44' 43.7602 W
17,700.00	90.09	359.63	8,887.07	8,680.32	394.26	486,812.08	722,893.96	32° 20' 13.0144 N	103° 44' 43.7614 W
17,800.00	90.09	359.63	8,886.92	8,780.32	393.61	486,912.08	722,893.30	32° 20' 14.0040 N	103° 44' 43.7626 W
17,900.00	90.09	359.63	8,886.77	8,880.32	392.96	487,012.08	722,892.65	32° 20' 14.9935 N	103° 44' 43.7638 W
18,000.00	90.09	359.63	8,886.62	8,980.31	392.30	487,112.07	722,892.00	32° 20' 15.9831 N	103° 44' 43.7650 W
18,100.00	90.09	359.63	8,886.46	9,080.31	391.65	487,212.07	722,891.35	32° 20' 16.9726 N	103° 44' 43.7662 W
18,200.00	90.09	359.63	8,886.31	9,180.31	391.00	487,312.07	722,890.70	32° 20' 17.9622 N	103° 44' 43.7674 W
18,300.00	90.09	359.63	8,886.16	9,280.31	390.35	487,412.07	722,890.05	32° 20' 18.9517 N	103° 44' 43.7686 W
18,400.00	90.09	359.63	8,886.00	9,380.30	389.70	487,512.06	722,889.39	32° 20' 19.9413 N	103° 44' 43.7698 W
18,500.00	90.09	359.63	8,885.85	9,480.30	389.05	487,612.06	722,888.74	32° 20' 20.9308 N	103° 44' 43.7710 W
18,600.00	90.09	359.63	8,885.70	9,580.30	388.40	487,712.06	722,888.09	32° 20' 21.9204 N	103° 44' 43.7722 W
18,700.00	90.09	359.63	8,885.54	9,680.30	387.74	487,812.06	722,887.44	32° 20' 22.9099 N	103° 44' 43.7734 W
18,800.00	90.09	359.63	8,885.39	9,780.30	387.09	487,912.06	722,886.79	32° 20' 23.8995 N	103° 44' 43.7746 W
18,900.00	90.09	359.63	8,885.24	9,880.29	386.44	488,012.05	722,886.14	32° 20' 24.8890 N	103° 44' 43.7758 W
18,975.11	90.09	359.63	8,885.12	9,955.40	385.95	488,087.16	722,885.65	32° 20' 25.6322 N	103° 44' 43.7767 W
LTP (Belloq 513H) - 100' FNL, 1680' FEL S2									
19,000.00	90.09	359.63	8,885.08	9,980.29	385.79	488,112.05	722,885.49	32° 20' 25.8786 N	103° 44' 43.7770 W
19,055.11	90.09	359.63	8,885.00	10,035.40	385.43	488,167.16	722,885.13	32° 20' 26.4239 N	103° 44' 43.7777 W
PBHL (Belloq 513H) - 20' FNL, 1680' FEL 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 513H
<b>Company:</b>	Devon Energy	<b>TVD Reference:</b>	3476.8' GE + 23.5' KB @ 3500.30usft
<b>Project:</b>	Eddy County, NM (NAD-83)	<b>MD Reference:</b>	3476.8' GE + 23.5' KB @ 3500.30usft
<b>Site:</b>	Belloq 11-2 Fed.State Com	<b>North Reference:</b>	Grid
<b>Well:</b>	Belloq 11-2 Fed State Com 513H	<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		Latitude	Longitude
- Shape	(°)	(°)	(usft)	(usft)	(usft)	(usft)	(usft)			
SHL (Belloq 513H) - 500'	0.00	0.00	0.00	0.00	0.00	478,131.76	722,499.70		32° 18' 47.1407 N	103° 44' 48.9105 W
- plan hits target center										
- Point										
KOP (Belloq 513H) - 16'	0.00	0.00	8,327.04	-335.00	453.00	477,796.76	722,952.70		32° 18' 43.8012 N	103° 44' 43.6533 W
- plan hits target center										
- Point										
PBHL (Belloq 513H) - 20'	0.00	0.00	8,885.00	10,035.40	385.43	488,167.16	722,885.13		32° 20' 26.4239 N	103° 44' 43.7777 W
- plan hits target center										
- Point										
LTP (Belloq 513H) - 100'	0.00	0.00	8,885.12	9,955.40	385.95	488,087.16	722,885.65		32° 20' 25.6322 N	103° 44' 43.7767 W
- plan hits target center										
- Point										

# **Devon Energy**

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

**Belloq 11-2 Fed State Com**

**Belloq 11-2 Fed State Com 513H**

**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 513H
<b>Project:</b>	Eddy County, NM (NAD-83)	<b>TVD Reference:</b>	3476.8' GE + 23.5' KB @ 3500.30usft
<b>Reference Site:</b>	Belloq 11-2 Fed State Com	<b>MD Reference:</b>	3476.8' GE + 23.5' KB @ 3500.30usft
<b>Site Error:</b>	0.00 usft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	Belloq 11-2 Fed State Com 513H	<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

Survey Tool Program		Date	1/23/2019		
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description	
0.00	19,055.11	Plan #2 (OH)	LEAM MWD+HDGM	MWD+HDGM	

Summary						
Site Name	Reference	Offset	Distance		Separation	Warning
	Measured	Measured	Between	Between		
Offset Well - Wellbore - Design	Depth	Depth	Centres	Ellipses	Factor	
	(usft)	(usft)	(usft)	(usft)		
Belloq 11-2 Fed State Com						
Barclay 11H Federal 1 (Offset) - OH - OH	11,574.62	8,908.25	1,011.33	886.57	8.106	CC
Barclay 11H Federal 1 (Offset) - OH - OH	11,600.00	8,908.21	1,011.65	886.41	8.078	ES
Barclay 11H Federal 1 (Offset) - OH - OH	11,700.00	8,908.06	1,019.08	892.19	8.031	SF
Barclay 11M Federal 13 (Offset) - OH - OH						Out of range
Barclay State 1 (Offset) - OH - OH	15,735.23	8,902.76	1,013.11	728.23	3.556	CC, ES
Barclay State 1 (Offset) - OH - OH	15,800.00	8,902.66	1,015.18	729.16	3.549	SF
Belloq 11 Fed 222H (Offset) - OH - Plan #1						Out of range
Belloq 11-2 Fed State Com 223H (Offset) - OH - Plan #1	8,330.16	8,412.65	73.74	30.93	1.722	CC, ES
Belloq 11-2 Fed State Com 223H (Offset) - OH - Plan #1	8,400.00	8,480.84	74.96	31.43	1.722	SF
Belloq 11-2 Fed State Com 231H (Offset) - OH - Plan #1						Out of range
Belloq 11-2 Fed State Com 234H (Offset) - OH - Plan #1	9,008.17	8,858.43	978.89	939.81	25.050	CC, ES
Belloq 11-2 Fed State Com 234H (Offset) - OH - Plan #1	18,900.00	19,983.89	1,860.07	1,644.54	8.630	SF
Belloq 11-2 Fed State Com 511H - OH - Plan #1						Out of range
Belloq 11-2 Fed State Com 512H - OH - Plan #1	3,082.14	3,151.00	1,255.13	1,241.84	94.433	CC
Belloq 11-2 Fed State Com 512H - OH - Plan #1	19,055.11	19,140.75	1,293.65	957.13	3.844	ES, SF
Belloq 11-2 Fed State Com 514H - OH - Plan #2	3,309.42	3,208.58	1,242.88	1,229.06	89.945	CC
Belloq 11-2 Fed State Com 514H - OH - Plan #2	19,055.11	19,224.84	1,279.75	949.58	3.876	ES, SF
Belloq 11-2 Fed State Com 521H - OH - Plan #2						Out of range
Belloq 11-2 Fed State Com 522H - OH - Plan #2	2,500.00	2,478.80	1,287.93	1,277.02	118.017	CC, ES
Belloq 11-2 Fed State Com 522H - OH - Plan #2	18,700.00	18,808.61	1,937.15	1,616.04	6.033	SF
Belloq 11-2 Fed State Com 523H - OH - Plan #1	2,500.00	2,498.90	29.96	19.00	2.734	CC, ES
Belloq 11-2 Fed State Com 523H - OH - Plan #1	19,055.11	19,327.10	661.19	338.75	2.051	SF
Belloq 11-2 Fed State Com 524H - OH - Plan #2	15,571.94	15,869.54	583.00	373.01	2.776	CC
Belloq 11-2 Fed State Com 524H - OH - Plan #2	19,055.11	19,356.15	672.79	354.59	2.114	ES, SF
Belloq 2 State						
2H - OH - OH	18,880.97	8,834.63	1,852.34	1,671.20	10.226	CC
2H - OH - OH	18,900.00	8,834.74	1,852.44	1,671.05	10.212	ES
2H - OH - OH	19,000.00	8,835.27	1,856.16	1,673.74	10.175	SF
5H - OH - OH	18,667.21	8,832.73	1,935.50	1,756.18	10.793	CC
5H - OH - OH	18,700.00	8,831.90	1,935.78	1,756.04	10.770	ES
5H - OH - OH	18,800.00	8,829.36	1,940.05	1,759.31	10.734	SF
6H - OH - OH	18,975.48	8,816.83	1,721.28	1,538.51	9.418	CC
6H - OH - OH	19,000.00	8,816.66	1,721.45	1,538.38	9.403	ES
6H - OH - OH	19,055.11	8,816.29	1,723.12	1,539.47	9.383	SF

CC - Min centre to center distance or covergent 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 513H
<b>Project:</b>	Eddy County, NM (NAD-83)	<b>TVD Reference:</b>	3476.8' GE + 23.5' KB @ 3500.30usft
<b>Reference Site:</b>	Belloq 11-2 Fed State Com	<b>MD Reference:</b>	3476.8' GE + 23.5' KB @ 3500.30usft
<b>Site Error:</b>	0.00 usft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	Belloq 11-2 Fed State Com 513H	<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: 9104-INC-ONLY													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		
9,900.00	8,899.02	8,910.82	8,910.82	25.24	77.55	90.15	2,561.66	1,445.48	1,956.30	1,858.61	97.69	20.025			
10,000.00	8,898.86	8,910.66	8,910.66	26.31	77.55	90.14	2,561.66	1,445.48	1,871.42	1,773.43	97.99	19.098			
10,100.00	8,898.71	8,910.51	8,910.51	27.42	77.55	90.13	2,561.66	1,445.48	1,788.09	1,689.69	98.40	18.172			
10,200.00	8,898.56	8,910.36	8,910.36	28.59	77.54	90.12	2,561.66	1,445.48	1,706.56	1,607.61	98.95	17.247			
10,300.00	8,898.40	8,910.20	8,910.20	29.80	77.54	90.11	2,561.66	1,445.48	1,627.09	1,527.43	99.66	16.326			
10,400.00	8,898.25	8,910.05	8,910.05	31.04	77.54	90.10	2,561.66	1,445.48	1,550.00	1,449.45	100.56	15.414			
10,500.00	8,898.10	8,909.90	8,909.90	32.33	77.54	90.09	2,561.66	1,445.48	1,475.67	1,374.00	101.66	14.515			
10,600.00	8,897.94	8,909.74	8,909.74	33.64	77.54	90.08	2,561.66	1,445.48	1,404.52	1,301.52	103.00	13.636			
10,700.00	8,897.79	8,909.59	8,909.59	34.98	77.54	90.08	2,561.66	1,445.48	1,337.07	1,232.49	104.58	12.786			
10,800.00	8,897.64	8,909.44	8,909.44	36.34	77.54	90.07	2,561.66	1,445.48	1,273.90	1,167.50	106.40	11.972			
10,900.00	8,897.48	8,909.28	8,909.28	37.73	77.53	90.06	2,561.66	1,445.48	1,215.69	1,107.22	108.47	11.207			
11,000.00	8,897.33	8,909.13	8,909.13	39.13	77.53	90.05	2,561.66	1,445.48	1,163.17	1,052.41	110.76	10.502			
11,100.00	8,897.18	8,908.98	8,908.98	40.55	77.53	90.04	2,561.66	1,445.48	1,117.16	1,003.94	113.23	9.867			
11,200.00	8,897.02	8,908.82	8,908.82	41.99	77.53	90.03	2,561.66	1,445.48	1,078.49	962.68	115.80	9.313			
11,300.00	8,896.87	8,908.67	8,908.67	43.44	77.53	90.02	2,561.66	1,445.48	1,047.95	929.56	118.40	8.851			
11,400.00	8,896.72	8,908.52	8,908.52	44.91	77.53	90.02	2,561.66	1,445.48	1,026.30	905.39	120.91	8.488			
11,500.00	8,896.57	8,908.37	8,908.37	46.38	77.53	90.01	2,561.66	1,445.48	1,014.08	890.86	123.22	8.230			
11,574.62	8,896.45	8,908.25	8,908.25	47.49	77.53	90.00	2,561.66	1,445.48	1,011.33	886.57	124.76	8.106 CC			
11,600.00	8,896.41	8,908.21	8,908.21	47.87	77.53	90.00	2,561.66	1,445.48	1,011.65	886.41	125.24	8.078 ES			
11,700.00	8,896.26	8,908.06	8,908.06	49.37	77.52	89.99	2,561.66	1,445.48	1,019.08	892.19	126.89	8.031 SF			
11,800.00	8,896.11	8,907.91	8,907.91	50.87	77.52	89.98	2,561.66	1,445.48	1,036.14	908.02	128.12	8.087			
11,900.00	8,895.95	8,907.75	8,907.75	52.38	77.52	89.97	2,561.66	1,445.48	1,062.39	933.45	128.94	8.239			
12,000.00	8,895.80	8,907.60	8,907.60	53.90	77.52	89.96	2,561.66	1,445.48	1,097.15	967.77	129.38	8.480			
12,100.00	8,895.65	8,907.45	8,907.45	55.43	77.52	89.95	2,561.66	1,445.48	1,139.66	1,010.16	129.50	8.800			
12,200.00	8,895.49	8,907.29	8,907.29	56.96	77.52	89.95	2,561.66	1,445.48	1,189.07	1,059.72	129.35	9.192			
12,300.00	8,895.34	8,907.14	8,907.14	58.50	77.52	89.94	2,561.66	1,445.48	1,244.58	1,115.57	129.01	9.647			
12,400.00	8,895.19	8,906.99	8,906.99	60.05	77.51	89.93	2,561.66	1,445.48	1,305.39	1,176.87	128.52	10.157			
12,500.00	8,895.03	8,906.83	8,906.83	61.60	77.51	89.92	2,561.66	1,445.48	1,370.81	1,242.87	127.94	10.714			
12,600.00	8,894.88	8,906.68	8,906.68	63.15	77.51	89.91	2,561.66	1,445.48	1,440.21	1,312.90	127.31	11.313			
12,700.00	8,894.73	8,906.53	8,906.53	64.71	77.51	89.90	2,561.66	1,445.48	1,513.04	1,386.40	126.64	11.948			
12,800.00	8,894.58	8,906.38	8,906.38	66.27	77.51	89.89	2,561.66	1,445.48	1,588.82	1,462.86	125.97	12.613			
12,900.00	8,894.42	8,906.22	8,906.22	67.84	77.51	89.89	2,561.66	1,445.48	1,667.16	1,541.86	125.30	13.305			
13,000.00	8,894.27	8,906.07	8,906.07	69.41	77.51	89.88	2,561.66	1,445.48	1,747.72	1,623.06	124.65	14.021			
13,100.00	8,894.12	8,905.92	8,905.92	70.98	77.51	89.87	2,561.66	1,445.48	1,830.19	1,706.16	124.03	14.756			
13,200.00	8,893.96	8,905.76	8,905.76	72.55	77.50	89.86	2,561.66	1,445.48	1,914.33	1,790.90	123.43	15.509			
13,300.00	8,893.81	8,905.61	8,905.61	74.13	77.50	89.85	2,561.66	1,445.48	1,999.93	1,877.07	122.87	16.277			

# LEAM Drilling Services

## Anticollision Report

<b>Company:</b>	Devon Energy	<b>Local Co-ordinate Reference:</b>	Well Belloq 11-2 Fed State Com 513H
<b>Project:</b>	Eddy County, NM (NAD-83)	<b>TVD Reference:</b>	3476.8' GE + 23.5' KB @ 3500.30usft
<b>Reference Site:</b>	Belloq 11-2 Fed State Com	<b>MD Reference:</b>	3476.8' GE + 23.5' KB @ 3500.30usft
<b>Site Error:</b>	0.00 usft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	Belloq 11-2 Fed State Com 513H	<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: 142-INC-ONLY											Offset Well Error:		0.00 usft
Reference		Offset		Semi Major Axis			Distance				Warning		
Measured Depth	Vertical	Measured	Vertical	Reference	Offset	Highside	Offset Wellbore Centre	Between	Between	Minimum		Separation	
Depth (usft)	Depth (usft)	Depth (usft)	Depth (usft)	(usft)	(usft)	Toolface (")	+N/-S (usft)	+E/-W (usft)	Centres (usft)	Ellipses (usft)		Separation (usft)	Factor
14,100.00	8,892.59	8,905.27	8,904.39	86.84	171.95	90.14	6,722.19	1,420.15	1,923.63	1,706.41	217.22	8.856	
14,200.00	8,892.43	8,905.11	8,904.23	88.43	171.94	90.13	6,722.19	1,420.15	1,839.38	1,619.46	219.91	8.364	
14,300.00	8,892.28	8,904.96	8,904.08	90.03	171.94	90.12	6,722.19	1,420.15	1,756.78	1,533.91	222.86	7.883	
14,400.00	8,892.13	8,904.81	8,903.93	91.63	171.94	90.12	6,722.19	1,420.15	1,676.07	1,449.98	226.09	7.413	
14,500.00	8,891.97	8,904.65	8,903.77	93.23	171.93	90.11	6,722.19	1,420.15	1,597.55	1,367.94	229.61	6.958	
14,600.00	8,891.82	8,904.50	8,903.62	94.83	171.93	90.10	6,722.19	1,420.15	1,521.55	1,288.11	233.44	6.518	
14,700.00	8,891.67	8,904.35	8,903.47	96.44	171.93	90.09	6,722.19	1,420.15	1,448.48	1,210.88	237.59	6.096	
14,800.00	8,891.51	8,904.19	8,903.31	98.04	171.92	90.08	6,722.19	1,420.15	1,378.78	1,136.72	242.06	5.696	
14,900.00	8,891.36	8,904.04	8,903.16	99.65	171.92	90.07	6,722.19	1,420.15	1,313.01	1,066.17	246.83	5.319	
15,000.00	8,891.21	8,903.89	8,903.01	101.26	171.92	90.06	6,722.19	1,420.15	1,251.78	999.91	251.87	4.970	
15,100.00	8,891.05	8,903.73	8,902.85	102.86	171.91	90.05	6,722.19	1,420.15	1,195.78	938.69	257.10	4.651	
15,200.00	8,890.90	8,903.58	8,902.70	104.47	171.91	90.05	6,722.19	1,420.15	1,145.80	883.38	262.42	4.366	
15,300.00	8,890.75	8,903.43	8,902.55	106.08	171.91	90.04	6,722.19	1,420.15	1,102.64	834.96	267.67	4.119	
15,400.00	8,890.60	8,903.28	8,902.40	107.69	171.90	90.03	6,722.19	1,420.15	1,067.13	794.44	272.69	3.913	
15,500.00	8,890.44	8,903.12	8,902.24	109.30	171.90	90.02	6,722.19	1,420.15	1,040.06	762.83	277.23	3.752	
15,600.00	8,890.29	8,902.97	8,902.09	110.92	171.90	90.01	6,722.19	1,420.15	1,022.09	741.00	281.09	3.636	
15,700.00	8,890.14	8,902.82	8,901.94	112.53	171.89	90.00	6,722.19	1,420.15	1,013.72	729.66	284.06	3.569	
15,735.23	8,890.08	8,902.76	8,901.88	113.10	171.89	90.00	6,722.19	1,420.15	1,013.11	728.23	284.87	3.556 CC, ES	
15,800.00	8,889.98	8,902.66	8,901.78	114.14	171.89	89.99	6,722.19	1,420.15	1,015.18	729.16	286.02	3.549 SF	
15,900.00	8,889.83	8,902.51	8,901.63	115.76	171.89	89.99	6,722.19	1,420.15	1,026.42	739.51	286.91	3.578	
16,000.00	8,889.68	8,902.36	8,901.48	117.38	171.88	89.98	6,722.19	1,420.15	1,047.14	760.37	286.77	3.651	
16,100.00	8,889.52	8,902.20	8,901.32	118.99	171.88	89.97	6,722.19	1,420.15	1,076.78	791.05	285.73	3.769	
16,200.00	8,889.37	8,902.05	8,901.17	120.61	171.88	89.96	6,722.19	1,420.15	1,114.63	830.69	283.95	3.926	
16,300.00	8,889.22	8,901.90	8,901.02	122.23	171.87	89.95	6,722.19	1,420.15	1,159.89	878.28	281.61	4.119	
16,400.00	8,889.06	8,901.74	8,900.86	123.84	171.87	89.94	6,722.19	1,420.15	1,211.74	932.84	278.90	4.345	
16,500.00	8,888.91	8,901.59	8,900.71	125.46	171.87	89.93	6,722.19	1,420.15	1,269.36	993.39	275.97	4.600	
16,600.00	8,888.76	8,901.44	8,900.56	127.08	171.87	89.93	6,722.19	1,420.15	1,332.00	1,059.06	272.93	4.880	
16,700.00	8,888.61	8,901.29	8,900.41	128.70	171.86	89.92	6,722.19	1,420.15	1,398.99	1,129.10	269.89	5.184	
16,800.00	8,888.45	8,901.13	8,900.25	130.32	171.86	89.91	6,722.19	1,420.15	1,469.74	1,202.83	266.91	5.506	
16,900.00	8,888.30	8,900.98	8,900.10	131.94	171.86	89.90	6,722.19	1,420.15	1,543.72	1,279.69	264.03	5.847	
17,000.00	8,888.15	8,900.83	8,899.95	133.56	171.85	89.89	6,722.19	1,420.15	1,620.50	1,359.22	261.28	6.202	
17,100.00	8,887.99	8,900.67	8,899.79	135.18	171.85	89.88	6,722.19	1,420.15	1,699.70	1,441.02	258.68	6.571	
17,200.00	8,887.84	8,900.52	8,899.64	136.81	171.85	89.87	6,722.19	1,420.15	1,780.99	1,524.77	256.22	6.951	
17,300.00	8,887.69	8,900.37	8,899.49	138.43	171.84	89.86	6,722.19	1,420.15	1,864.11	1,610.19	253.92	7.341	
17,400.00	8,887.53	8,900.21	8,899.33	140.05	171.84	89.86	6,722.19	1,420.15	1,948.81	1,697.04	251.77	7.741	

# LEAM Drilling Services

## Anticollision Report

<b>Company:</b>	Devon Energy	<b>Local Co-ordinate Reference:</b>	Well Belloq 11-2 Fed State Com 513H
<b>Project:</b>	Eddy County, NM (NAD-83)	<b>TVD Reference:</b>	3476.8' GE + 23.5' KB @ 3500.30usft
<b>Reference Site:</b>	Belloq 11-2 Fed State Com	<b>MD Reference:</b>	3476.8' GE + 23.5' KB @ 3500.30usft
<b>Site Error:</b>	0.00 usft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	Belloq 11-2 Fed State Com 513H	<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)							
0.00	0.00	11.80	11.80	0.00	0.01	89.89	2.78	1,399.73	1,399.73	1,399.54	0.20	7,113.082			
100.00	100.00	111.80	111.80	0.09	0.11	89.89	2.78	1,399.73	1,399.73	1,399.09	0.65	2,165.713			
200.00	200.00	211.80	211.80	0.31	0.34	89.89	2.78	1,399.73	1,399.73	1,399.09	0.65	2,165.713			
300.00	300.00	311.80	311.80	0.54	0.56	89.89	2.78	1,399.73	1,399.73	1,398.64	1.10	1,277.307			
400.00	400.00	411.80	411.80	0.76	0.79	89.89	2.78	1,399.73	1,399.73	1,398.19	1.55	905.754			
500.00	500.00	511.80	511.80	0.99	1.01	89.89	2.78	1,399.73	1,399.73	1,397.74	1.99	701.652			
600.00	600.00	611.80	611.80	1.21	1.23	89.89	2.78	1,399.73	1,399.73	1,397.29	2.44	572.618			
700.00	700.00	711.80	711.80	1.43	1.46	89.89	2.78	1,399.73	1,399.73	1,396.84	2.89	483.671			
800.00	800.00	811.80	811.80	1.66	1.68	89.89	2.78	1,399.73	1,399.73	1,396.39	3.34	418.642			
900.00	900.00	911.80	911.80	1.88	1.91	89.89	2.78	1,399.73	1,399.73	1,395.94	3.79	369.027			
1,000.00	1,000.00	1,011.80	1,011.80	2.11	2.13	89.89	2.78	1,399.73	1,399.73	1,395.49	4.24	329.926			
1,100.00	1,100.00	1,111.80	1,111.80	2.33	2.36	89.89	2.78	1,399.73	1,399.73	1,395.04	4.69	298.317			
1,200.00	1,200.00	1,211.80	1,211.80	2.56	2.58	89.89	2.78	1,399.73	1,399.73	1,394.59	5.14	272.235			
1,300.00	1,300.00	1,311.80	1,311.80	2.78	2.81	89.89	2.78	1,399.73	1,399.73	1,394.14	5.59	250.347			
1,400.00	1,400.00	1,411.80	1,411.80	3.01	3.03	89.89	2.78	1,399.73	1,399.73	1,393.69	6.04	231.717			
1,500.00	1,500.00	1,511.80	1,511.80	3.23	3.26	89.89	2.78	1,399.73	1,399.73	1,393.24	6.49	215.668			
1,600.00	1,600.00	1,611.80	1,611.80	3.46	3.48	89.89	2.78	1,399.73	1,399.73	1,392.79	6.94	201.697			
1,700.00	1,700.00	1,711.80	1,711.80	3.68	3.71	89.89	2.78	1,399.73	1,399.73	1,392.34	7.39	189.427			
1,800.00	1,800.00	1,811.80	1,811.80	3.91	3.93	89.89	2.78	1,399.73	1,399.73	1,391.89	7.84	178.564			
1,900.00	1,900.00	1,911.80	1,911.80	4.13	4.16	89.89	2.78	1,399.73	1,399.73	1,391.44	8.29	168.879			
2,000.00	2,000.00	2,011.80	2,011.80	4.36	4.38	89.89	2.78	1,399.73	1,399.73	1,390.99	8.74	160.191			
2,100.00	2,100.00	2,111.80	2,111.80	4.58	4.61	89.89	2.78	1,399.73	1,399.73	1,390.55	9.19	152.353			
2,200.00	2,200.00	2,211.80	2,211.80	4.81	4.83	89.89	2.78	1,399.73	1,399.73	1,390.10	9.64	145.246			
2,300.00	2,300.00	2,311.80	2,311.80	5.03	5.06	89.89	2.78	1,399.73	1,399.73	1,389.65	10.09	138.773			
2,400.00	2,400.00	2,411.80	2,411.80	5.26	5.28	89.89	2.78	1,399.73	1,399.73	1,389.20	10.54	132.852			
2,500.00	2,500.00	2,511.80	2,511.80	5.48	5.51	89.89	2.78	1,399.73	1,399.73	1,388.75	10.99	127.416			
2,600.00	2,599.99	2,611.79	2,611.79	5.68	5.73	-36.62	2.78	1,399.73	1,399.03	1,387.62	11.41	122.595			
2,700.00	2,699.96	2,711.76	2,711.76	5.86	5.95	-36.70	2.78	1,399.73	1,396.93	1,385.11	11.82	118.212			
2,800.00	2,799.86	2,811.66	2,811.66	6.05	6.18	-36.83	2.78	1,399.73	1,393.44	1,381.21	12.23	113.976			
2,900.00	2,899.68	2,911.48	2,911.48	6.24	6.40	-37.01	2.78	1,399.73	1,388.55	1,375.92	12.64	109.877			
3,000.00	2,999.37	3,014.35	3,014.35	6.44	6.63	-37.25	2.77	1,399.71	1,382.28	1,369.22	13.06	105.868			
3,100.00	3,098.90	3,142.08	3,142.07	6.64	6.89	-37.58	2.07	1,398.12	1,373.40	1,359.90	13.50	101.721			
3,200.00	3,198.29	3,269.16	3,269.06	6.85	7.13	-37.90	0.23	1,393.95	1,361.33	1,347.40	13.93	97.731			
3,300.00	3,297.66	3,395.63	3,395.32	7.06	7.37	-38.16	-2.73	1,387.24	1,347.13	1,332.77	14.36	93.838			
3,400.00	3,397.02	3,521.41	3,520.69	7.29	7.62	-38.37	-6.79	1,378.04	1,330.93	1,316.14	14.78	90.035			
3,500.00	3,496.39	3,646.37	3,645.00	7.51	7.88	-38.55	-11.92	1,366.41	1,312.74	1,297.54	15.21	86.324			
3,600.00	3,595.76	3,770.41	3,768.09	7.74	8.15	-38.68	-18.10	1,352.41	1,292.59	1,276.96	15.63	82.692			
3,700.00	3,695.12	3,893.43	3,889.81	7.98	8.43	-38.77	-25.28	1,336.13	1,270.49	1,254.44	16.05	79.139			
3,800.00	3,794.49	4,015.32	4,010.01	8.22	8.72	-38.82	-33.44	1,317.64	1,246.46	1,229.99	16.48	75.654			
3,900.00	3,893.85	4,135.98	4,128.56	8.46	9.03	-38.82	-42.53	1,297.03	1,220.54	1,203.64	16.90	72.233			
4,000.00	3,893.22	4,243.18	4,233.50	8.70	9.33	-38.79	-51.36	1,277.02	1,193.00	1,175.67	17.32	68.868			
4,100.00	4,092.59	4,339.25	4,327.50	8.95	9.60	-38.75	-59.37	1,258.86	1,165.25	1,147.49	17.76	65.618			
4,200.00	4,191.95	4,435.33	4,421.50	9.20	9.88	-38.72	-67.38	1,240.70	1,137.51	1,119.31	18.20	62.504			
4,300.00	4,291.32	4,531.40	4,515.49	9.45	10.18	-38.68	-75.39	1,222.54	1,109.77	1,091.12	18.65	59.520			
4,400.00	4,390.69	4,627.47	4,609.49	9.71	10.47	-38.64	-83.40	1,204.38	1,082.02	1,062.93	19.10	56.661			
4,500.00	4,490.05	4,723.54	4,703.49	9.97	10.78	-38.59	-91.41	1,186.22	1,054.28	1,034.73	19.55	53.922			
4,600.00	4,589.42	4,819.61	4,797.49	10.23	11.09	-38.55	-99.43	1,168.06	1,026.54	1,006.53	20.01	51.296			
4,700.00	4,688.79	4,915.68	4,891.49	10.49	11.40	-38.50	-107.44	1,149.90	998.80	978.32	20.48	48.779			
4,800.00	4,788.15	5,011.76	4,985.49	10.75	11.73	-38.45	-115.45	1,131.74	971.06	950.12	20.94	46.365			
4,900.00	4,887.52	5,107.83	5,079.49	11.01	12.05	-38.39	-123.46	1,113.58	943.32	921.91	21.42	44.049			
5,000.00	4,986.88	5,203.90	5,173.49	11.28	12.38	-38.34	-131.47	1,095.42	915.58	893.69	21.89	41.826			
5,100.00	5,086.25	5,299.97	5,267.49	11.55	12.71	-38.27	-139.48	1,077.26	887.84	865.48	22.37	39.692			

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 513H
<b>Project:</b>	Eddy County, NM (NAD-83)	<b>TVD Reference:</b>	3476.8' GE + 23.5' KB @ 3500.30usft
<b>Reference Site:</b>	Belloq 11-2 Fed State Com	<b>MD Reference:</b>	3476.8' GE + 23.5' KB @ 3500.30usft
<b>Site Error:</b>	0.00 usft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	Belloq 11-2 Fed State Com 513H	<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: Belloq 11-2 Fed State Com - Belloq 11-2 Fed State Com 223H (Offset) - OH - Plan #1															
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	5,185.62	5,396.04	5,361.49	11.81	13.05	-38.21	-147.50	1,059.11	860.11	837.26	22.85	37.643			
5,300.00	5,284.98	5,492.11	5,455.49	12.08	13.39	-38.14	-155.51	1,040.95	832.37	809.04	23.33	35.673			
5,400.00	5,384.35	5,588.19	5,549.48	12.35	13.74	-38.07	-163.52	1,022.79	804.64	780.82	23.82	33.780			
5,500.00	5,483.72	5,684.26	5,643.48	12.62	14.08	-37.99	-171.53	1,004.63	776.90	752.60	24.31	31.959			
5,600.00	5,583.08	5,780.33	5,737.48	12.90	14.43	-37.90	-179.54	986.47	749.17	724.37	24.80	30.208			
5,700.00	5,682.45	5,876.40	5,831.48	13.17	14.79	-37.81	-187.55	968.31	721.44	696.15	25.30	28.521			
5,800.00	5,781.82	5,972.47	5,925.48	13.44	15.14	-37.71	-195.57	950.15	693.72	667.92	25.79	26.897			
5,900.00	5,881.18	6,068.54	6,019.48	13.72	15.50	-37.61	-203.58	931.99	665.99	639.70	26.29	25.332			
6,000.00	5,980.55	6,164.62	6,113.48	13.99	15.86	-37.49	-211.59	913.83	638.27	611.47	26.79	23.824			
6,100.00	6,079.91	6,260.69	6,207.48	14.27	16.22	-37.36	-219.60	895.67	610.54	583.25	27.29	22.369			
6,200.00	6,179.28	6,356.76	6,301.48	14.54	16.58	-37.22	-227.61	877.51	582.83	555.03	27.80	20.966			
6,300.00	6,278.65	6,452.83	6,395.48	14.82	16.94	-37.07	-235.62	859.35	555.11	526.81	28.31	19.611			
6,400.00	6,378.01	6,548.90	6,489.48	15.10	17.31	-36.90	-243.63	841.19	527.40	498.59	28.82	18.302			
6,500.00	6,477.38	6,644.98	6,583.47	15.38	17.67	-36.71	-251.65	823.03	499.70	470.37	29.33	17.038			
6,600.00	6,576.75	6,741.05	6,677.47	15.66	18.04	-36.50	-259.66	804.87	472.00	442.15	29.84	15.817			
6,700.00	6,676.11	6,837.12	6,771.47	15.94	18.41	-36.27	-267.67	786.71	444.30	413.94	30.36	14.635			
6,800.00	6,775.48	6,933.19	6,865.47	16.22	18.78	-36.00	-275.68	768.55	416.62	385.74	30.88	13.493			
6,900.00	6,874.85	7,029.26	6,959.47	16.50	19.15	-35.70	-283.69	750.39	388.94	357.54	31.40	12.387			
7,000.00	6,974.21	7,125.33	7,053.47	16.78	19.53	-35.34	-291.70	732.23	361.28	329.35	31.92	11.317			
7,100.00	7,073.58	7,221.41	7,147.47	17.06	19.90	-34.93	-299.72	714.07	333.63	301.17	32.45	10.280			
7,200.00	7,172.94	7,317.48	7,241.47	17.34	20.27	-34.45	-307.73	695.91	305.99	273.01	32.99	9.276			
7,300.00	7,272.31	7,413.55	7,335.47	17.62	20.65	-33.87	-315.74	677.75	278.39	244.86	33.53	8.303			
7,400.00	7,371.68	7,509.62	7,429.47	17.90	21.03	-33.16	-323.75	659.59	250.81	216.74	34.08	7.360			
7,500.00	7,471.04	7,605.69	7,523.46	18.19	21.40	-32.28	-331.76	641.43	223.28	188.65	34.63	6.447			
7,600.00	7,570.48	7,701.90	7,617.60	18.44	21.78	-30.92	-339.79	623.25	196.37	161.18	35.19	5.580			
7,700.00	7,670.09	7,798.46	7,712.07	18.65	22.16	-28.87	-347.84	605.00	171.03	135.26	35.77	4.781			
7,800.00	7,769.84	7,895.32	7,806.85	18.86	22.55	-25.87	-355.91	586.69	147.46	111.04	36.42	4.049			
7,900.00	7,869.69	7,992.47	7,901.90	19.06	22.93	-21.52	-364.02	568.33	125.95	88.77	37.18	3.388			
8,000.00	7,969.62	8,089.88	7,997.21	19.25	23.32	-15.27	-372.14	549.91	107.04	68.91	38.13	2.807			
8,100.00	8,069.60	8,187.51	8,092.73	19.42	23.70	-6.48	-380.28	531.46	91.58	52.23	39.35	2.327			
8,200.00	8,169.60	8,285.32	8,188.43	19.60	24.09	131.70	-388.44	512.97	80.63	39.78	40.85	1.974			
8,300.00	8,269.60	8,383.17	8,284.17	19.79	24.48	146.05	-396.60	494.48	74.31	31.91	42.40	1.753			
8,330.16	8,299.76	8,412.65	8,313.01	19.84	24.60	151.24	-399.06	488.90	73.74	30.93	42.81	1.722 CC, ES			
8,400.00	8,369.56	8,480.84	8,379.73	19.96	24.87	162.41	-404.74	476.01	74.96	31.43	43.54	1.722 SF			
8,500.00	8,468.14	8,575.97	8,472.81	20.09	25.25	177.14	-412.67	458.03	95.72	51.81	43.91	2.180			
8,600.00	8,562.42	8,666.82	8,561.85	20.17	25.54	-174.20	-419.96	441.53	136.56	92.58	43.98	3.105			
8,700.00	8,649.56	8,751.01	8,644.71	20.20	25.78	-170.16	-425.95	427.94	192.62	148.45	44.17	4.360			
8,800.00	8,726.89	8,825.81	8,718.60	20.20	25.97	-167.98	-430.66	417.28	261.33	216.90	44.44	5.881			
8,900.00	8,792.07	8,888.80	8,780.99	20.17	26.13	-166.04	-434.17	409.32	340.81	296.12	44.69	7.626			
9,000.00	8,843.13	8,937.77	8,829.58	20.12	26.25	-162.88	-436.61	403.79	429.04	384.15	44.89	9.557			
9,100.00	8,878.50	8,970.77	8,862.37	20.07	26.32	-155.00	-438.11	400.38	523.73	478.69	45.04	11.629			
9,200.00	8,897.12	8,986.25	8,877.77	20.09	26.36	-119.46	-438.78	398.87	622.24	577.12	45.12	13.789			
9,300.00	8,899.93	8,984.76	8,876.29	20.45	26.36	-56.23	-438.71	399.01	721.83	676.66	45.16	15.983			
9,400.00	8,899.78	8,979.97	8,871.51	21.02	26.35	-52.68	-438.51	399.48	821.45	776.26	45.19	18.178			
9,500.00	8,899.63	8,975.06	8,866.63	21.69	26.33	-49.30	-438.30	399.96	921.13	875.92	45.21	20.375			
9,600.00	8,899.47	8,970.03	8,861.64	22.46	26.32	-46.11	-438.08	400.45	1,020.85	975.62	45.23	22.571			
9,700.00	8,899.32	8,964.89	8,856.52	23.31	26.31	-43.10	-437.85	400.97	1,120.60	1,075.35	45.25	24.766			
9,800.00	8,899.17	8,959.62	8,851.29	24.24	26.30	-40.28	-437.61	401.50	1,220.37	1,175.11	45.26	26.961			
9,900.00	8,899.02	11,390.59	10,200.00	25.24	30.55	-176.74	880.04	371.61	1,291.28	1,262.00	29.28	44.101			
10,000.00	8,898.86	11,490.59	10,200.00	26.31	31.39	-176.74	980.04	371.00	1,291.43	1,261.18	30.25	42.694			
10,100.00	8,898.71	11,590.59	10,200.00	27.42	32.31	-176.74	1,080.04	370.38	1,291.58	1,260.32	31.26	41.322			
10,200.00	8,898.56	11,690.59	10,200.00	28.59	33.29	-176.74	1,180.04	369.77	1,291.73	1,259.43	32.30	39.990			

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 513H
<b>Project:</b>	Eddy County, NM (NAD-83)	<b>TVD Reference:</b>	3476.8' GE + 23.5' KB @ 3500.30usft
<b>Reference Site:</b>	Belloq 11-2 Fed State Com	<b>MD Reference:</b>	3476.8' GE + 23.5' KB @ 3500.30usft
<b>Site Error:</b>	0.00 usft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	Belloq 11-2 Fed State Com 513H	<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	8,898.40	11,790.59	10,200.00	29.80	34.32	-176.75	1,280.04	369.16	1,291.88	1,258.50	33.38	38.705		
10,400.00	8,898.25	11,890.59	10,200.00	31.04	35.41	-176.75	1,380.03	368.55	1,292.03	1,257.54	34.48	37.467		
10,500.00	8,898.10	11,990.59	10,200.00	32.33	36.53	-176.75	1,480.03	367.94	1,292.18	1,256.56	35.62	36.279		
10,600.00	8,897.94	12,090.59	10,200.00	33.64	37.70	-176.75	1,580.03	367.32	1,292.33	1,255.55	36.77	35.142		
10,700.00	8,897.79	12,190.59	10,200.00	34.98	38.90	-176.76	1,680.03	366.71	1,292.48	1,254.53	37.95	34.054		
10,800.00	8,897.64	12,290.59	10,200.00	36.34	40.13	-176.76	1,780.03	366.10	1,292.63	1,253.48	39.15	33.014		
10,900.00	8,897.48	12,390.59	10,200.00	37.73	41.39	-176.76	1,880.02	365.49	1,292.78	1,252.41	40.37	32.022		
11,000.00	8,897.33	12,490.59	10,200.00	39.13	42.68	-176.76	1,980.02	364.88	1,292.93	1,251.33	41.61	31.076		
11,100.00	8,897.18	12,590.59	10,200.00	40.55	43.99	-176.76	2,080.02	364.26	1,293.08	1,250.23	42.85	30.173		
11,200.00	8,897.02	12,690.59	10,200.00	41.99	45.32	-176.77	2,180.02	363.65	1,293.23	1,249.11	44.12	29.313		
11,300.00	8,896.87	12,790.59	10,200.00	43.44	46.67	-176.77	2,280.02	363.04	1,293.38	1,247.99	45.39	28.492		
11,400.00	8,896.72	12,890.59	10,200.00	44.91	48.04	-176.77	2,380.01	362.43	1,293.53	1,246.85	46.68	27.709		
11,500.00	8,896.57	12,990.59	10,200.00	46.38	49.43	-176.77	2,480.01	361.82	1,293.69	1,245.70	47.98	26.963		
11,600.00	8,896.41	13,090.59	10,200.00	47.87	50.83	-176.77	2,580.01	361.20	1,293.84	1,244.55	49.29	26.250		
11,700.00	8,896.26	13,190.59	10,200.00	49.37	52.24	-176.78	2,680.01	360.59	1,293.99	1,243.38	50.61	25.570		
11,800.00	8,896.11	13,290.59	10,200.00	50.87	53.67	-176.78	2,780.01	359.98	1,294.14	1,242.20	51.93	24.920		
11,900.00	8,895.95	13,390.59	10,200.00	52.38	55.11	-176.78	2,880.00	359.37	1,294.29	1,241.02	53.27	24.298		
12,000.00	8,895.80	13,490.59	10,200.00	53.90	56.56	-176.78	2,980.00	358.76	1,294.44	1,239.83	54.61	23.705		
12,100.00	8,895.65	13,590.59	10,200.00	55.43	58.02	-176.79	3,080.00	358.14	1,294.59	1,238.63	55.95	23.136		
12,200.00	8,895.49	13,690.59	10,200.00	56.96	59.48	-176.79	3,180.00	357.53	1,294.74	1,237.43	57.31	22.592		
12,300.00	8,895.34	13,790.59	10,200.00	58.50	60.96	-176.79	3,280.00	356.92	1,294.89	1,236.22	58.67	22.071		
12,400.00	8,895.19	13,890.59	10,200.00	60.05	62.45	-176.79	3,379.99	356.31	1,295.04	1,235.01	60.03	21.572		
12,500.00	8,895.03	13,990.59	10,200.00	61.60	63.94	-176.79	3,479.99	355.70	1,295.19	1,233.79	61.40	21.093		
12,600.00	8,894.88	14,090.59	10,200.00	63.15	65.44	-176.80	3,579.99	355.08	1,295.34	1,232.56	62.78	20.633		
12,700.00	8,894.73	14,190.59	10,200.00	64.71	66.95	-176.80	3,679.99	354.47	1,295.49	1,231.33	64.16	20.192		
12,800.00	8,894.58	14,290.59	10,200.00	66.27	68.46	-176.80	3,779.99	353.86	1,295.64	1,230.10	65.54	19.768		
12,900.00	8,894.42	14,390.59	10,200.00	67.84	69.98	-176.80	3,879.98	353.25	1,295.79	1,228.86	66.93	19.361		
13,000.00	8,894.27	14,490.59	10,200.00	69.41	71.50	-176.80	3,979.98	352.64	1,295.94	1,227.62	68.32	18.969		
13,100.00	8,894.12	14,590.59	10,200.00	70.98	73.03	-176.81	4,079.98	352.02	1,296.10	1,226.38	69.72	18.591		
13,200.00	8,893.96	14,690.58	10,200.00	72.55	74.56	-176.81	4,179.98	351.41	1,296.25	1,225.13	71.11	18.228		
13,300.00	8,893.81	14,790.58	10,200.00	74.13	76.10	-176.81	4,279.98	350.80	1,296.40	1,223.88	72.51	17.878		
13,400.00	8,893.66	14,890.58	10,200.00	75.71	77.64	-176.81	4,379.97	350.19	1,296.55	1,222.63	73.92	17.540		
13,500.00	8,893.50	14,990.58	10,200.00	77.29	79.18	-176.81	4,479.97	349.58	1,296.70	1,221.37	75.32	17.215		
13,600.00	8,893.35	15,090.58	10,200.00	78.88	80.73	-176.82	4,579.97	348.96	1,296.85	1,220.12	76.73	16.901		
13,700.00	8,893.20	15,190.58	10,200.00	80.47	82.28	-176.82	4,679.97	348.35	1,297.00	1,218.85	78.14	16.597		
13,800.00	8,893.04	15,290.58	10,200.00	82.06	83.84	-176.82	4,779.97	347.74	1,297.15	1,217.59	79.56	16.304		
13,900.00	8,892.89	15,390.58	10,200.00	83.65	85.40	-176.82	4,879.96	347.13	1,297.30	1,216.33	80.97	16.021		
14,000.00	8,892.74	15,490.58	10,200.00	85.24	86.96	-176.83	4,979.96	346.52	1,297.45	1,215.06	82.39	15.747		
14,100.00	8,892.59	15,590.58	10,200.00	86.84	88.52	-176.83	5,079.96	345.90	1,297.60	1,213.79	83.81	15.482		
14,200.00	8,892.43	15,690.58	10,200.00	88.43	90.09	-176.83	5,179.96	345.29	1,297.75	1,212.52	85.23	15.226		
14,300.00	8,892.28	15,790.58	10,200.00	90.03	91.66	-176.83	5,279.96	344.68	1,297.90	1,211.25	86.66	14.977		
14,400.00	8,892.13	15,890.58	10,200.00	91.63	93.23	-176.83	5,379.95	344.07	1,298.05	1,209.97	88.08	14.737		
14,500.00	8,891.97	15,990.58	10,200.00	93.23	94.81	-176.84	5,479.95	343.46	1,298.20	1,208.70	89.51	14.504		
14,600.00	8,891.82	16,090.58	10,200.00	94.83	96.38	-176.84	5,579.95	342.85	1,298.36	1,207.42	90.94	14.277		
14,700.00	8,891.67	16,190.58	10,200.00	96.44	97.96	-176.84	5,679.95	342.23	1,298.51	1,206.14	92.37	14.058		
14,800.00	8,891.51	16,290.58	10,200.00	98.04	99.54	-176.84	5,779.95	341.62	1,298.66	1,204.86	93.80	13.845		
14,900.00	8,891.36	16,390.58	10,200.00	99.65	101.12	-176.84	5,879.94	341.01	1,298.81	1,203.58	95.23	13.638		
15,000.00	8,891.21	16,490.58	10,200.00	101.26	102.71	-176.85	5,979.94	340.40	1,298.96	1,202.29	96.66	13.438		
15,100.00	8,891.05	16,590.58	10,200.00	102.86	104.29	-176.85	6,079.94	339.79	1,299.11	1,201.01	98.10	13.243		
15,200.00	8,890.90	16,690.58	10,200.00	104.47	105.88	-176.85	6,179.94	339.17	1,299.26	1,199.72	99.54	13.053		
15,300.00	8,890.75	16,790.58	10,200.00	106.08	107.47	-176.85	6,279.94	338.56	1,299.41	1,198.44	100.97	12.869		
15,400.00	8,890.60	16,890.58	10,200.00	107.69	109.06	-176.86	6,379.93	337.95	1,299.56	1,197.15	102.41	12.690		

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 513H
<b>Project:</b>	Eddy County, NM (NAD-83)	<b>TVD Reference:</b>	3476.8' GE + 23.5' KB @ 3500.30usft
<b>Reference Site:</b>	Belloq 11-2 Fed State Com	<b>MD Reference:</b>	3476.8' GE + 23.5' KB @ 3500.30usft
<b>Site Error:</b>	0.00 usft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	Belloq 11-2 Fed State Com 513H	<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			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		
15,500.00	8,890.44	16,990.58	10,200.00	109.30	110.65	-176.86	6,479.93	337.34	1,299.71	1,195.86	103.85	12.515		
15,600.00	8,890.29	17,090.58	10,200.00	110.92	112.25	-176.86	6,579.93	336.73	1,299.86	1,194.57	105.29	12.345		
15,700.00	8,890.14	17,190.58	10,200.00	112.53	113.84	-176.86	6,679.93	336.11	1,300.01	1,193.28	106.73	12.180		
15,800.00	8,889.98	17,290.58	10,200.00	114.14	115.44	-176.86	6,779.93	335.50	1,300.16	1,191.99	108.17	12.019		
15,900.00	8,889.83	17,390.58	10,200.00	115.76	117.03	-176.87	6,879.92	334.89	1,300.31	1,190.70	109.62	11.862		
16,000.00	8,889.68	17,490.58	10,200.00	117.38	118.63	-176.87	6,979.92	334.28	1,300.47	1,189.40	111.06	11.709		
16,100.00	8,889.52	17,590.58	10,200.00	118.99	120.23	-176.87	7,079.92	333.67	1,300.62	1,188.11	112.51	11.560		
16,200.00	8,889.37	17,690.58	10,200.00	120.61	121.83	-176.87	7,179.92	333.05	1,300.77	1,186.82	113.95	11.415		
16,300.00	8,889.22	17,790.58	10,200.00	122.23	123.43	-176.87	7,279.92	332.44	1,300.92	1,185.52	115.40	11.273		
16,400.00	8,889.06	17,890.58	10,200.00	123.84	125.04	-176.88	7,379.91	331.83	1,301.07	1,184.22	116.84	11.135		
16,500.00	8,888.91	17,990.58	10,200.00	125.46	126.64	-176.88	7,479.91	331.22	1,301.22	1,182.93	118.29	11.000		
16,600.00	8,888.76	18,090.58	10,200.00	127.08	128.24	-176.88	7,579.91	330.61	1,301.37	1,181.63	119.74	10.868		
16,700.00	8,888.61	18,190.58	10,200.00	128.70	129.85	-176.88	7,679.91	329.99	1,301.52	1,180.33	121.19	10.740		
16,800.00	8,888.45	18,290.58	10,200.00	130.32	131.45	-176.88	7,779.91	329.38	1,301.67	1,179.03	122.64	10.614		
16,900.00	8,888.30	18,390.58	10,200.00	131.94	133.06	-176.89	7,879.90	328.77	1,301.82	1,177.74	124.09	10.491		
17,000.00	8,888.15	18,490.58	10,200.00	133.56	134.67	-176.89	7,979.90	328.16	1,301.97	1,176.44	125.54	10.371		
17,100.00	8,887.99	18,590.58	10,200.00	135.18	136.28	-176.89	8,079.90	327.55	1,302.12	1,175.14	126.99	10.254		
17,200.00	8,887.84	18,690.58	10,200.00	136.81	137.88	-176.89	8,179.90	326.93	1,302.27	1,173.83	128.44	10.139		
17,300.00	8,887.69	18,790.58	10,200.00	138.43	139.49	-176.90	8,279.90	326.32	1,302.42	1,172.53	129.89	10.027		
17,400.00	8,887.53	18,890.58	10,200.00	140.05	141.11	-176.90	8,379.89	325.71	1,302.58	1,171.23	131.34	9.917		
17,500.00	8,887.38	18,990.58	10,200.00	141.67	142.72	-176.90	8,479.89	325.10	1,302.73	1,169.93	132.80	9.810		
17,600.00	8,887.23	19,090.58	10,200.00	143.30	144.33	-176.90	8,579.89	324.49	1,302.88	1,168.63	134.25	9.705		
17,700.00	8,887.07	19,190.58	10,200.00	144.92	145.94	-176.90	8,679.89	323.87	1,303.03	1,167.32	135.70	9.602		
17,800.00	8,886.92	19,290.58	10,200.00	146.55	147.55	-176.91	8,779.89	323.26	1,303.18	1,166.02	137.16	9.501		
17,900.00	8,886.77	19,390.58	10,200.00	148.17	149.17	-176.91	8,879.88	322.65	1,303.33	1,164.72	138.61	9.403		
18,000.00	8,886.62	19,490.58	10,200.00	149.80	150.78	-176.91	8,979.88	322.04	1,303.48	1,163.41	140.07	9.306		
18,100.00	8,886.46	19,590.58	10,200.00	151.42	152.40	-176.91	9,079.88	321.43	1,303.63	1,162.11	141.52	9.211		
18,200.00	8,886.31	19,690.58	10,200.00	153.05	154.01	-176.91	9,179.88	320.81	1,303.78	1,160.80	142.98	9.119		
18,300.00	8,886.16	19,790.58	10,200.00	154.67	155.63	-176.92	9,279.88	320.20	1,303.93	1,159.50	144.44	9.028		
18,400.00	8,886.00	19,890.58	10,200.00	156.30	157.24	-176.92	9,379.87	319.59	1,304.08	1,158.19	145.89	8.939		
18,500.00	8,885.85	19,990.58	10,200.00	157.93	158.86	-176.92	9,479.87	318.98	1,304.23	1,156.88	147.35	8.851		
18,600.00	8,885.70	20,090.58	10,200.00	159.55	160.48	-176.92	9,579.87	318.37	1,304.38	1,155.58	148.81	8.766		
18,700.00	8,885.54	20,190.58	10,200.00	161.18	162.09	-176.92	9,679.87	317.75	1,304.54	1,154.27	150.26	8.682		
18,800.00	8,885.39	20,290.58	10,200.00	162.81	163.71	-176.93	9,779.87	317.14	1,304.69	1,152.96	151.72	8.599		
18,900.00	8,885.24	20,390.58	10,200.00	164.43	165.33	-176.93	9,879.86	316.53	1,304.84	1,151.66	153.18	8.518		
18,902.89	8,885.23	20,393.47	10,200.00	164.48	165.38	-176.93	9,882.76	316.51	1,304.84	1,151.62	153.22	8.516		
19,000.00	8,885.08	20,465.86	10,200.00	166.06	166.55	-176.93	9,955.15	316.07	1,305.22	1,150.90	154.32	8.458		
19,055.11	8,885.00	20,465.86	10,200.00	166.96	166.55	-176.93	9,955.15	316.07	1,307.51	1,153.26	154.25	8.477		

# LEAM Drilling Services

## Anticollision Report

<b>Company:</b>	Devon Energy	<b>Local Co-ordinate Reference:</b>	Well Belloq 11-2 Fed State Com 513H
<b>Project:</b>	Eddy County, NM (NAD-83)	<b>TVD Reference:</b>	3476.8' GE + 23.5' KB @ 3500.30usft
<b>Reference Site:</b>	Belloq 11-2 Fed State Com	<b>MD Reference:</b>	3476.8' GE + 23.5' KB @ 3500.30usft
<b>Site Error:</b>	0.00 usft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	Belloq 11-2 Fed State Com 513H	<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 234H (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		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	11.80	11.80	0.00	0.01	89.89	2.85	1,429.71	1,429.71				
100.00	100.00	111.80	111.80	0.09	0.11	89.89	2.85	1,429.71	1,429.71	1,429.52	0.20	7,265.433	
200.00	200.00	211.80	211.80	0.31	0.34	89.89	2.85	1,429.71	1,429.71	1,429.07	0.65	2,212.099	
300.00	300.00	311.80	311.80	0.54	0.56	89.89	2.85	1,429.71	1,429.71	1,428.62	1.10	1,304.665	
400.00	400.00	411.80	411.80	0.76	0.79	89.89	2.85	1,429.71	1,429.71	1,428.17	1.55	925.153	
500.00	500.00	511.80	511.80	0.99	1.01	89.89	2.85	1,429.71	1,429.71	1,427.72	1.99	716.680	
600.00	600.00	611.80	611.80	1.21	1.23	89.89	2.85	1,429.71	1,429.71	1,427.27	2.44	584.883	
700.00	700.00	711.80	711.80	1.43	1.46	89.89	2.85	1,429.71	1,429.71	1,426.82	2.89	494.031	
800.00	800.00	811.80	811.80	1.66	1.68	89.89	2.85	1,429.71	1,429.71	1,426.37	3.34	427.609	
900.00	900.00	911.80	911.80	1.88	1.91	89.89	2.85	1,429.71	1,429.71	1,425.92	3.79	376.931	
1,000.00	1,000.00	1,011.80	1,011.80	2.11	2.13	89.89	2.85	1,429.71	1,429.71	1,425.47	4.24	336.992	
1,100.00	1,100.00	1,111.80	1,111.80	2.33	2.36	89.89	2.85	1,429.71	1,429.71	1,425.02	4.69	304.706	
1,200.00	1,200.00	1,211.80	1,211.80	2.56	2.58	89.89	2.85	1,429.71	1,429.71	1,424.57	5.14	278.066	
1,300.00	1,300.00	1,311.80	1,311.80	2.78	2.81	89.89	2.85	1,429.71	1,429.71	1,424.12	5.59	255.709	
1,400.00	1,400.00	1,411.80	1,411.80	3.01	3.03	89.89	2.85	1,429.71	1,429.71	1,423.67	6.04	236.680	
1,500.00	1,500.00	1,511.80	1,511.80	3.23	3.26	89.89	2.85	1,429.71	1,429.71	1,423.22	6.49	220.287	
1,600.00	1,600.00	1,611.80	1,611.80	3.46	3.48	89.89	2.85	1,429.71	1,429.71	1,422.77	6.94	206.018	
1,700.00	1,700.00	1,711.80	1,711.80	3.68	3.71	89.89	2.85	1,429.71	1,429.71	1,422.32	7.39	193.484	
1,800.00	1,800.00	1,811.80	1,811.80	3.91	3.93	89.89	2.85	1,429.71	1,429.71	1,421.87	7.84	182.389	
1,900.00	1,900.00	1,911.80	1,911.80	4.13	4.16	89.89	2.85	1,429.71	1,429.71	1,421.42	8.29	172.496	
2,000.00	2,000.00	2,011.80	2,011.80	4.36	4.38	89.89	2.85	1,429.71	1,429.71	1,420.97	8.74	163.622	
2,100.00	2,100.00	2,111.80	2,111.80	4.58	4.61	89.89	2.85	1,429.71	1,429.71	1,420.53	9.19	155.616	
2,200.00	2,200.00	2,211.80	2,211.80	4.81	4.83	89.89	2.85	1,429.71	1,429.71	1,420.08	9.64	148.357	
2,300.00	2,300.00	2,311.80	2,311.80	5.03	5.06	89.89	2.85	1,429.71	1,429.71	1,419.63	10.09	141.745	
2,400.00	2,400.00	2,411.80	2,411.80	5.26	5.28	89.89	2.85	1,429.71	1,429.71	1,419.18	10.54	135.698	
2,500.00	2,500.00	2,511.80	2,511.80	5.48	5.51	89.89	2.85	1,429.71	1,429.71	1,418.73	10.99	130.145	
2,600.00	2,599.99	2,611.79	2,611.79	5.68	5.73	-36.62	2.85	1,429.71	1,429.01	1,417.60	11.41	125.222	
2,700.00	2,699.96	2,711.76	2,711.76	5.86	5.95	-36.70	2.85	1,429.71	1,426.91	1,415.10	11.82	120.749	
2,800.00	2,799.86	2,811.66	2,811.66	6.05	6.18	-36.82	2.85	1,429.71	1,423.42	1,411.19	12.23	116.428	
2,900.00	2,899.68	2,911.48	2,911.48	6.24	6.40	-37.00	2.85	1,429.71	1,418.53	1,405.89	12.64	112.249	
3,000.00	2,999.37	3,011.17	3,011.17	6.44	6.63	-37.23	2.85	1,429.71	1,412.27	1,399.22	13.05	108.200	
3,100.00	3,098.90	3,110.70	3,110.70	6.64	6.85	-37.51	2.85	1,429.71	1,404.64	1,391.17	13.47	104.270	
3,200.00	3,198.29	3,210.09	3,210.09	6.85	7.07	-37.81	2.85	1,429.71	1,395.86	1,381.97	13.89	100.463	
3,300.00	3,297.66	3,309.46	3,309.46	7.06	7.30	-38.10	2.85	1,429.71	1,386.98	1,372.66	14.32	96.851	
3,400.00	3,397.02	3,408.82	3,408.82	7.29	7.52	-38.38	2.85	1,429.71	1,378.13	1,363.38	14.75	93.425	
3,500.00	3,496.39	3,508.19	3,508.19	7.51	7.74	-38.68	2.85	1,429.71	1,369.32	1,354.13	15.19	90.174	
3,600.00	3,595.76	3,607.56	3,607.56	7.74	7.97	-38.97	2.85	1,429.71	1,360.54	1,344.91	15.62	87.086	
3,700.00	3,695.12	3,706.92	3,706.92	7.98	8.19	-39.27	2.85	1,429.71	1,351.80	1,335.73	16.06	84.152	
3,800.00	3,794.49	3,806.29	3,806.29	8.22	8.41	-39.57	2.85	1,429.71	1,343.09	1,326.58	16.51	81.361	
3,900.00	3,893.85	3,905.65	3,905.65	8.46	8.64	-39.88	2.85	1,429.71	1,334.42	1,317.47	16.95	78.706	
4,000.00	3,993.22	4,005.02	4,005.02	8.70	8.86	-40.19	2.85	1,429.71	1,325.80	1,308.39	17.40	76.177	
4,100.00	4,092.59	4,104.39	4,104.39	8.95	9.08	-40.50	2.85	1,429.71	1,317.21	1,299.35	17.86	73.767	
4,200.00	4,191.95	4,203.75	4,203.75	9.20	9.31	-40.82	2.85	1,429.71	1,308.66	1,290.35	18.31	71.469	
4,300.00	4,291.32	4,303.12	4,303.12	9.45	9.53	-41.15	2.85	1,429.71	1,300.15	1,281.38	18.77	69.276	
4,400.00	4,390.69	4,402.49	4,402.49	9.71	9.75	-41.47	2.85	1,429.71	1,291.68	1,272.46	19.23	67.182	
4,500.00	4,490.05	4,501.85	4,501.85	9.97	9.98	-41.80	2.85	1,429.71	1,283.26	1,263.57	19.69	65.180	
4,600.00	4,589.42	4,601.22	4,601.22	10.23	10.20	-42.14	2.85	1,429.71	1,274.88	1,254.73	20.15	63.266	
4,700.00	4,688.79	4,700.59	4,700.59	10.49	10.42	-42.48	2.85	1,429.71	1,266.55	1,245.93	20.62	61.434	
4,800.00	4,788.15	4,799.95	4,799.95	10.75	10.65	-42.82	2.85	1,429.71	1,258.25	1,237.17	21.08	59.680	
4,900.00	4,887.52	4,899.32	4,899.32	11.01	10.87	-43.17	2.85	1,429.71	1,250.01	1,228.46	21.55	57.999	
5,000.00	4,986.88	4,998.68	4,998.68	11.28	11.09	-43.53	2.85	1,429.71	1,241.81	1,219.79	22.02	56.387	
5,100.00	5,086.25	5,098.05	5,098.05	11.55	11.32	-43.89	2.85	1,429.71	1,233.66	1,211.17	22.50	54.841	

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 513H
<b>Project:</b>	Eddy County, NM (NAD-83)	<b>TVD Reference:</b>	3476.8' GE + 23.5' KB @ 3500.30usft
<b>Reference Site:</b>	Belloq 11-2 Fed State Com	<b>MD Reference:</b>	3476.8' GE + 23.5' KB @ 3500.30usft
<b>Site Error:</b>	0.00 usft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	Belloq 11-2 Fed State Com 513H	<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			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			
5,200.00	5,185.62	5,197.42	5,197.42	11.81	11.54	-44.25	2.85	1,429.71	1,225.56	1,202.59	22.97	53.357			
5,300.00	5,284.98	5,296.78	5,296.78	12.08	11.76	-44.62	2.85	1,429.71	1,217.51	1,194.07	23.44	51.931			
5,400.00	5,384.35	5,396.15	5,396.15	12.35	11.99	-44.99	2.85	1,429.71	1,209.51	1,185.59	23.92	50.561			
5,500.00	5,483.72	5,495.52	5,495.52	12.62	12.21	-45.37	2.85	1,429.71	1,201.56	1,177.16	24.40	49.243			
5,600.00	5,583.08	5,594.88	5,594.88	12.90	12.43	-45.75	2.85	1,429.71	1,193.67	1,168.79	24.88	47.976			
5,700.00	5,682.45	5,694.25	5,694.25	13.17	12.66	-46.14	2.85	1,429.71	1,185.83	1,160.47	25.36	46.755			
5,800.00	5,781.82	5,793.62	5,793.62	13.44	12.88	-46.53	2.85	1,429.71	1,178.04	1,152.20	25.85	45.580			
5,900.00	5,881.18	5,892.98	5,892.98	13.72	13.10	-46.93	2.85	1,429.71	1,170.31	1,143.98	26.33	44.448			
6,000.00	5,980.55	5,992.35	5,992.35	13.99	13.33	-47.33	2.85	1,429.71	1,162.64	1,135.82	26.82	43.356			
6,100.00	6,079.91	6,091.71	6,091.71	14.27	13.55	-47.74	2.85	1,429.71	1,155.02	1,127.72	27.30	42.303			
6,200.00	6,179.28	6,191.08	6,191.08	14.54	13.77	-48.15	2.85	1,429.71	1,147.47	1,119.68	27.79	41.288			
6,300.00	6,278.65	6,290.45	6,290.45	14.82	14.00	-48.57	2.85	1,429.71	1,139.98	1,111.69	28.28	40.307			
6,400.00	6,378.01	6,389.81	6,389.81	15.10	14.22	-49.00	2.85	1,429.71	1,132.54	1,103.77	28.77	39.361			
6,500.00	6,477.38	6,489.18	6,489.18	15.38	14.44	-49.43	2.85	1,429.71	1,125.18	1,095.91	29.27	38.447			
6,600.00	6,576.75	6,588.55	6,588.55	15.66	14.67	-49.87	2.85	1,429.71	1,117.87	1,088.11	29.76	37.563			
6,700.00	6,676.11	6,687.91	6,687.91	15.94	14.89	-50.31	2.85	1,429.71	1,110.63	1,080.38	30.26	36.709			
6,800.00	6,775.48	6,787.28	6,787.28	16.22	15.12	-50.75	2.85	1,429.71	1,103.46	1,072.71	30.75	35.883			
6,900.00	6,874.85	6,886.65	6,886.65	16.50	15.34	-51.21	2.85	1,429.71	1,096.36	1,065.11	31.25	35.084			
7,000.00	6,974.21	6,986.01	6,986.01	16.78	15.56	-51.67	2.85	1,429.71	1,089.32	1,057.57	31.75	34.311			
7,100.00	7,073.58	7,085.38	7,085.38	17.06	15.79	-52.13	2.85	1,429.71	1,082.36	1,050.11	32.25	33.563			
7,200.00	7,172.94	7,184.74	7,184.74	17.34	16.01	-52.60	2.85	1,429.71	1,075.47	1,042.72	32.75	32.838			
7,300.00	7,272.31	7,284.11	7,284.11	17.62	16.23	-53.08	2.85	1,429.71	1,068.65	1,035.40	33.25	32.137			
7,400.00	7,371.68	7,383.48	7,383.48	17.90	16.46	-53.56	2.85	1,429.71	1,061.91	1,028.16	33.76	31.458			
7,500.00	7,471.04	7,482.84	7,482.84	18.19	16.68	-54.05	2.85	1,429.71	1,055.25	1,020.99	34.26	30.799			
7,600.00	7,570.48	7,582.28	7,582.28	18.44	16.90	-54.47	2.85	1,429.71	1,049.05	1,014.31	34.74	30.195			
7,700.00	7,670.09	7,681.89	7,681.89	18.65	17.13	-54.82	2.85	1,429.71	1,043.92	1,008.73	35.19	29.669			
7,800.00	7,769.84	7,781.64	7,781.64	18.86	17.35	-55.11	2.85	1,429.71	1,039.83	1,004.21	35.62	29.192			
7,900.00	7,869.69	7,881.49	7,881.49	19.06	17.57	-55.33	2.85	1,429.71	1,036.77	1,000.73	36.05	28.761			
8,000.00	7,969.62	7,981.42	7,981.42	19.25	17.80	-55.48	2.85	1,429.71	1,034.72	998.25	36.47	28.375			
8,100.00	8,069.60	8,081.40	8,081.40	19.42	18.02	-55.55	2.85	1,429.71	1,033.65	996.78	36.87	28.032			
8,199.80	8,169.41	8,181.21	8,181.21	19.60	18.25	70.91	2.85	1,429.71	1,033.37	996.09	37.28	27.717			
8,200.00	8,169.60	8,181.40	8,181.40	19.60	18.25	70.92	2.85	1,429.71	1,033.49	996.21	37.28	27.720			
8,300.00	8,269.60	8,281.40	8,281.40	19.79	18.47	70.92	2.85	1,429.71	1,033.49	995.80	37.69	27.418			
8,400.00	8,369.56	8,381.36	8,381.36	19.96	18.70	71.42	2.85	1,429.71	1,032.99	994.89	38.10	27.115			
8,500.00	8,468.14	8,479.94	8,479.94	20.09	18.92	72.74	2.85	1,429.71	1,027.97	989.56	38.41	26.762			
8,600.00	8,562.42	8,574.22	8,574.22	20.17	19.13	75.34	2.85	1,429.71	1,018.40	979.77	38.62	26.367			
8,700.00	8,649.56	8,661.36	8,661.36	20.20	19.33	78.91	2.85	1,429.71	1,006.03	967.28	38.75	25.961			
8,800.00	8,726.89	8,738.69	8,738.69	20.20	19.50	82.96	2.85	1,429.71	993.35	954.52	38.83	25.583			
8,900.00	8,792.07	8,803.87	8,803.87	20.17	19.65	86.82	2.85	1,429.71	983.32	944.41	38.91	25.272			
9,000.00	8,843.13	8,854.93	8,854.93	20.12	19.76	89.81	2.85	1,429.71	978.92	939.86	39.06	25.064			
9,008.17	8,846.63	8,858.43	8,858.43	20.11	19.77	90.00	2.85	1,429.71	978.89	939.81	39.08	25.050 CC, ES			
9,100.00	8,878.50	8,890.30	8,890.30	20.07	19.84	91.37	2.85	1,429.71	982.66	943.34	39.33	24.988			
9,200.00	8,897.12	8,908.92	8,908.92	20.09	19.88	91.08	2.85	1,429.71	996.06	956.32	39.73	25.068			
9,300.00	8,899.93	8,911.73	8,911.73	20.45	19.89	89.97	2.85	1,429.71	1,019.27	979.01	40.26	25.318			
9,400.00	8,899.78	8,911.58	8,911.58	21.02	19.89	89.97	2.85	1,429.71	1,051.53	1,010.64	40.89	25.717			
9,500.00	8,899.63	8,911.43	8,911.43	21.69	19.89	89.96	2.85	1,429.71	1,092.03	1,050.45	41.58	26.266			
9,600.00	8,899.47	8,911.27	8,911.27	22.46	19.89	89.95	2.85	1,429.71	1,139.88	1,097.61	42.27	26.967			
9,700.00	8,899.32	8,911.12	8,911.12	23.31	19.89	89.94	2.85	1,429.71	1,194.21	1,151.27	42.94	27.813			
9,800.00	8,899.17	8,910.97	8,910.97	24.24	19.89	89.93	2.85	1,429.71	1,254.17	1,210.61	43.56	28.793			
9,900.00	8,899.02	8,910.82	8,910.82	25.24	19.89	89.92	2.85	1,429.71	1,319.00	1,274.88	44.12	29.895			
10,000.00	8,898.86	8,910.66	8,910.66	26.31	19.89	89.91	2.85	1,429.71	1,388.01	1,343.38	44.63	31.102			
10,100.00	8,898.71	8,910.51	8,910.51	27.42	19.89	89.90	2.85	1,429.71	1,460.61	1,415.53	45.08	32.403			

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 513H
<b>Project:</b>	Eddy County, NM (NAD-83)	<b>TVD Reference:</b>	3476.8' GE + 23.5' KB @ 3500.30usft
<b>Reference Site:</b>	Belloq 11-2 Fed State Com	<b>MD Reference:</b>	3476.8' GE + 23.5' KB @ 3500.30usft
<b>Site Error:</b>	0.00 usft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	Belloq 11-2 Fed State Com 513H	<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 234H (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)						
10,200.00	8,898.56	8,910.36	8,910.36	28.59	19.89	89.89	2.85	1,429.71	1,536.29	1,490.81	45.47	33.784		
10,300.00	8,898.40	8,910.20	8,910.20	29.80	19.89	89.88	2.85	1,429.71	1,614.62	1,568.79	45.82	35.235		
10,400.00	8,898.25	8,910.05	8,910.05	31.04	19.89	89.88	2.85	1,429.71	1,695.23	1,649.09	46.13	36.745		
10,500.00	8,898.10	8,909.90	8,909.90	32.33	19.89	89.87	2.85	1,429.71	1,777.81	1,731.40	46.41	38.307		
10,600.00	8,897.94	11,796.48	10,460.47	33.64	34.18	148.06	1,582.84	1,407.35	1,827.43	1,782.80	44.63	40.948		
10,700.00	8,897.79	11,896.48	10,460.31	34.98	35.40	148.04	1,682.84	1,407.35	1,827.78	1,781.51	46.27	39.506		
10,800.00	8,897.64	11,996.48	10,460.16	36.34	36.66	148.02	1,782.84	1,407.35	1,828.12	1,780.18	47.94	38.131		
10,900.00	8,897.48	12,096.48	10,460.01	37.73	37.94	148.01	1,882.83	1,407.35	1,828.47	1,778.81	49.66	36.821		
11,000.00	8,897.33	12,196.47	10,459.86	39.13	39.25	147.99	1,982.83	1,407.35	1,828.81	1,777.41	51.41	35.577		
11,100.00	8,897.18	12,296.47	10,459.70	40.55	40.59	147.97	2,082.83	1,407.35	1,829.16	1,775.98	53.18	34.394		
11,200.00	8,897.02	12,396.47	10,459.55	41.99	41.94	147.95	2,182.83	1,407.35	1,829.51	1,774.52	54.99	33.272		
11,300.00	8,896.87	12,496.47	10,459.40	43.44	43.32	147.94	2,282.82	1,407.35	1,829.85	1,773.04	56.81	32.208		
11,400.00	8,896.72	12,596.47	10,459.25	44.91	44.71	147.92	2,382.82	1,407.35	1,830.20	1,771.54	58.66	31.198		
11,500.00	8,896.57	12,696.46	10,459.10	46.38	46.12	147.90	2,482.82	1,407.35	1,830.55	1,770.01	60.54	30.239		
11,600.00	8,896.41	12,796.46	10,458.94	47.87	47.55	147.88	2,582.82	1,407.35	1,830.89	1,768.47	62.43	29.329		
11,700.00	8,896.26	12,896.46	10,458.79	49.37	48.98	147.87	2,682.82	1,407.35	1,831.24	1,766.91	64.33	28.465		
11,800.00	8,896.11	12,996.46	10,458.64	50.87	50.43	147.85	2,782.81	1,407.35	1,831.59	1,765.33	66.26	27.644		
11,900.00	8,895.95	13,096.45	10,458.49	52.38	51.89	147.83	2,882.81	1,407.35	1,831.94	1,763.74	68.20	26.863		
12,000.00	8,895.80	13,196.45	10,458.33	53.90	53.36	147.82	2,982.81	1,407.35	1,832.28	1,762.14	70.15	26.121		
12,100.00	8,895.65	13,296.45	10,458.18	55.43	54.84	147.80	3,082.81	1,407.35	1,832.63	1,760.52	72.11	25.414		
12,200.00	8,895.49	13,396.45	10,458.03	56.96	56.33	147.78	3,182.80	1,407.35	1,832.98	1,758.89	74.09	24.741		
12,300.00	8,895.34	13,496.45	10,457.88	58.50	57.83	147.76	3,282.80	1,407.35	1,833.33	1,757.25	76.07	24.099		
12,400.00	8,895.19	13,596.44	10,457.73	60.05	59.33	147.75	3,382.80	1,407.35	1,833.68	1,755.60	78.07	23.487		
12,500.00	8,895.03	13,696.44	10,457.57	61.60	60.84	147.73	3,482.80	1,407.35	1,834.02	1,753.95	80.08	22.903		
12,600.00	8,894.88	13,796.44	10,457.42	63.15	62.36	147.71	3,582.79	1,407.35	1,834.37	1,752.28	82.09	22.345		
12,700.00	8,894.73	13,896.44	10,457.27	64.71	63.89	147.70	3,682.79	1,407.35	1,834.72	1,750.61	84.12	21.812		
12,800.00	8,894.58	13,996.44	10,457.12	66.27	65.42	147.68	3,782.79	1,407.35	1,835.07	1,748.92	86.15	21.301		
12,900.00	8,894.42	14,096.43	10,456.96	67.84	66.95	147.66	3,882.79	1,407.35	1,835.42	1,747.23	88.19	20.813		
13,000.00	8,894.27	14,196.43	10,456.81	69.41	68.49	147.64	3,982.79	1,407.35	1,835.77	1,745.54	90.23	20.345		
13,100.00	8,894.12	14,296.43	10,456.66	70.98	70.03	147.63	4,082.78	1,407.35	1,836.12	1,743.83	92.28	19.896		
13,200.00	8,893.96	14,396.43	10,456.51	72.55	71.58	147.61	4,182.78	1,407.35	1,836.47	1,742.13	94.34	19.466		
13,300.00	8,893.81	14,496.42	10,456.35	74.13	73.13	147.59	4,282.78	1,407.35	1,836.82	1,740.41	96.41	19.053		
13,400.00	8,893.66	14,596.42	10,456.20	75.71	74.69	147.58	4,382.78	1,407.35	1,837.17	1,738.69	98.48	18.656		
13,500.00	8,893.50	14,696.42	10,456.05	77.29	76.25	147.56	4,482.77	1,407.35	1,837.52	1,736.97	100.55	18.274		
13,600.00	8,893.35	14,796.42	10,455.90	78.88	77.81	147.54	4,582.77	1,407.35	1,837.87	1,735.24	102.63	17.907		
13,700.00	8,893.20	14,896.42	10,455.75	80.47	79.37	147.52	4,682.77	1,407.35	1,838.22	1,733.50	104.72	17.554		
13,800.00	8,893.04	14,996.41	10,455.59	82.06	80.94	147.51	4,782.77	1,407.35	1,838.57	1,731.76	106.81	17.214		
13,900.00	8,892.89	15,096.41	10,455.44	83.65	82.51	147.49	4,882.77	1,407.35	1,838.92	1,730.02	108.90	16.886		
14,000.00	8,892.74	15,196.41	10,455.29	85.24	84.08	147.47	4,982.76	1,407.35	1,839.27	1,728.27	111.00	16.570		
14,100.00	8,892.59	15,296.41	10,455.14	86.84	85.66	147.46	5,082.76	1,407.35	1,839.62	1,726.52	113.10	16.265		
14,200.00	8,892.43	15,396.41	10,454.98	88.43	87.24	147.44	5,182.76	1,407.35	1,839.97	1,724.77	115.21	15.971		
14,300.00	8,892.28	15,496.40	10,454.83	90.03	88.82	147.42	5,282.76	1,407.35	1,840.33	1,723.01	117.32	15.687		
14,400.00	8,892.13	15,596.40	10,454.68	91.63	90.40	147.40	5,382.75	1,407.35	1,840.68	1,721.25	119.43	15.412		
14,500.00	8,891.97	15,696.40	10,454.53	93.23	91.98	147.39	5,482.75	1,407.35	1,841.03	1,719.48	121.55	15.146		
14,600.00	8,891.82	15,796.40	10,454.38	94.83	93.57	147.37	5,582.75	1,407.35	1,841.38	1,717.71	123.67	14.890		
14,700.00	8,891.67	15,896.40	10,454.22	96.44	95.16	147.35	5,682.75	1,407.35	1,841.73	1,715.94	125.79	14.641		
14,800.00	8,891.51	15,996.39	10,454.07	98.04	96.75	147.34	5,782.75	1,407.35	1,842.09	1,714.17	127.92	14.400		
14,900.00	8,891.36	16,096.39	10,453.92	99.65	98.34	147.32	5,882.74	1,407.35	1,842.44	1,712.39	130.05	14.167		
15,000.00	8,891.21	16,196.39	10,453.77	101.26	99.93	147.30	5,982.74	1,407.35	1,842.79	1,710.61	132.18	13.941		
15,100.00	8,891.05	16,296.39	10,453.61	102.86	101.52	147.28	6,082.74	1,407.35	1,843.14	1,708.83	134.32	13.722		
15,200.00	8,890.90	16,396.38	10,453.46	104.47	103.12	147.27	6,182.74	1,407.35	1,843.50	1,707.04	136.46	13.510		
15,300.00	8,890.75	16,496.38	10,453.31	106.08	104.72	147.25	6,282.73	1,407.35	1,843.85	1,705.25	138.60	13.304		

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 513H
<b>Project:</b>	Eddy County, NM (NAD-83)	<b>TVD Reference:</b>	3476.8' GE + 23.5' KB @ 3500.30usft
<b>Reference Site:</b>	Belloq 11-2 Fed State Com	<b>MD Reference:</b>	3476.8' GE + 23.5' KB @ 3500.30usft
<b>Site Error:</b>	0.00 usft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	Belloq 11-2 Fed State Com 513H	<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 234H (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			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	
15,400.00	8,890.60	16,596.38	10,453.16	107.69	106.31	147.23	6,382.73	1,407.35	1,844.20	1,703.46	140.74	13.104		
15,500.00	8,890.44	16,696.38	10,453.01	109.30	107.91	147.22	6,482.73	1,407.35	1,844.56	1,701.67	142.89	12.909		
15,600.00	8,890.29	16,796.38	10,452.85	110.92	109.51	147.20	6,582.73	1,407.35	1,844.91	1,699.87	145.03	12.720		
15,700.00	8,890.14	16,896.37	10,452.70	112.53	111.11	147.18	6,682.73	1,407.35	1,845.26	1,698.08	147.19	12.537		
15,800.00	8,889.98	16,996.37	10,452.55	114.14	112.72	147.17	6,782.72	1,407.35	1,845.62	1,696.28	149.34	12.359		
15,900.00	8,889.83	17,096.37	10,452.40	115.76	114.32	147.15	6,882.72	1,407.35	1,845.97	1,694.48	151.49	12.185		
16,000.00	8,889.68	17,196.37	10,452.24	117.38	115.92	147.13	6,982.72	1,407.35	1,846.33	1,692.67	153.65	12.016		
16,100.00	8,889.52	17,296.37	10,452.09	118.99	117.53	147.11	7,082.72	1,407.35	1,846.68	1,690.87	155.81	11.852		
16,200.00	8,889.37	17,396.36	10,451.94	120.61	119.14	147.10	7,182.71	1,407.35	1,847.03	1,689.06	157.97	11.692		
16,300.00	8,889.22	17,496.36	10,451.79	122.23	120.74	147.08	7,282.71	1,407.35	1,847.39	1,687.25	160.14	11.536		
16,400.00	8,889.06	17,596.36	10,451.64	123.84	122.35	147.06	7,382.71	1,407.35	1,847.74	1,685.44	162.31	11.384		
16,500.00	8,888.91	17,696.36	10,451.48	125.46	123.96	147.05	7,482.71	1,407.35	1,848.10	1,683.63	164.47	11.236		
16,600.00	8,888.76	17,796.35	10,451.33	127.08	125.57	147.03	7,582.71	1,407.35	1,848.45	1,681.81	166.64	11.092		
16,700.00	8,888.61	17,896.35	10,451.18	128.70	127.18	147.01	7,682.70	1,407.35	1,848.81	1,679.99	168.82	10.952		
16,800.00	8,888.45	17,996.35	10,451.03	130.32	128.79	147.00	7,782.70	1,407.35	1,849.16	1,678.17	170.99	10.814		
16,900.00	8,888.30	18,096.35	10,450.87	131.94	130.40	146.98	7,882.70	1,407.35	1,849.52	1,676.35	173.17	10.681		
17,000.00	8,888.15	18,196.35	10,450.72	133.56	132.01	146.96	7,982.70	1,407.35	1,849.88	1,674.53	175.34	10.550		
17,100.00	8,887.99	18,296.34	10,450.57	135.18	133.63	146.95	8,082.69	1,407.35	1,850.23	1,672.71	177.52	10.422		
17,200.00	8,887.84	18,396.34	10,450.42	136.81	135.24	146.93	8,182.69	1,407.35	1,850.59	1,670.88	179.71	10.298		
17,300.00	8,887.69	18,496.34	10,450.27	138.43	136.85	146.91	8,282.69	1,407.35	1,850.94	1,669.06	181.89	10.176		
17,400.00	8,887.53	18,596.34	10,450.11	140.05	138.47	146.89	8,382.69	1,407.35	1,851.30	1,667.23	184.07	10.057		
17,500.00	8,887.38	18,696.34	10,449.96	141.67	140.08	146.88	8,482.69	1,407.35	1,851.66	1,665.40	186.26	9.941		
17,600.00	8,887.23	18,796.33	10,449.81	143.30	141.70	146.86	8,582.68	1,407.35	1,852.01	1,663.56	188.45	9.828		
17,700.00	8,887.07	18,896.33	10,449.66	144.92	143.31	146.84	8,682.68	1,407.35	1,852.37	1,661.73	190.64	9.717		
17,800.00	8,886.92	18,996.33	10,449.50	146.55	144.93	146.83	8,782.68	1,407.35	1,852.73	1,659.90	192.83	9.608		
17,900.00	8,886.77	19,096.33	10,449.35	148.17	146.55	146.81	8,882.68	1,407.35	1,853.09	1,658.06	195.03	9.502		
18,000.00	8,886.62	19,196.33	10,449.20	149.80	148.16	146.79	8,982.67	1,407.35	1,853.44	1,656.22	197.22	9.398		
18,100.00	8,886.46	19,296.32	10,449.05	151.42	149.78	146.78	9,082.67	1,407.35	1,853.80	1,654.38	199.42	9.296		
18,200.00	8,886.31	19,396.32	10,448.89	153.05	151.40	146.76	9,182.67	1,407.35	1,854.16	1,652.54	201.62	9.196		
18,300.00	8,886.16	19,496.32	10,448.74	154.67	153.02	146.74	9,282.67	1,407.35	1,854.52	1,650.70	203.82	9.099		
18,400.00	8,886.00	19,596.32	10,448.59	156.30	154.64	146.73	9,382.67	1,407.35	1,854.88	1,648.86	206.02	9.004		
18,500.00	8,885.85	19,696.31	10,448.44	157.93	156.26	146.71	9,482.66	1,407.35	1,855.23	1,647.01	208.22	8.910		
18,600.00	8,885.70	19,796.31	10,448.29	159.55	157.88	146.69	9,582.66	1,407.35	1,855.59	1,645.17	210.42	8.818		
18,700.00	8,885.54	19,896.31	10,448.13	161.18	159.50	146.68	9,682.66	1,407.35	1,855.95	1,643.32	212.63	8.729		
18,800.00	8,885.39	19,983.89	10,448.00	162.81	160.92	146.66	9,770.24	1,407.35	1,856.35	1,641.64	214.71	8.646		
18,900.00	8,885.24	19,983.89	10,448.00	164.43	160.92	146.66	9,770.24	1,407.35	1,860.07	1,644.54	215.53	8.630 SF		
19,000.00	8,885.08	19,983.89	10,448.00	166.06	160.92	146.66	9,770.24	1,407.35	1,869.14	1,653.36	215.78	8.662		
19,055.11	8,885.00	19,983.89	10,448.00	166.96	160.92	146.66	9,770.24	1,407.35	1,876.39	1,660.73	215.67	8.700		

# LEAM Drilling Services

## Anticollision Report

<b>Company:</b>	Devon Energy	<b>Local Co-ordinate Reference:</b>	Well Belloq 11-2 Fed State Com 513H
<b>Project:</b>	Eddy County, NM (NAD-83)	<b>TVD Reference:</b>	3476.8' GE + 23.5' KB @ 3500.30usft
<b>Reference Site:</b>	Belloq 11-2 Fed State Com	<b>MD Reference:</b>	3476.8' GE + 23.5' KB @ 3500.30usft
<b>Site Error:</b>	0.00 usft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	Belloq 11-2 Fed State Com 513H	<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 512H - 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)				Between Centres (usft)	Between Ellipses (usft)
0.00	0.00	0.00	0.00	0.00	0.00	-99.28	-202.85	-1,241.89	1,258.51				
100.00	100.00	79.70	79.70	0.09	0.07	-99.28	-202.85	-1,241.89	1,258.35	1,258.19	0.15 8,144.978		
200.00	200.00	179.70	179.70	0.31	0.27	-99.28	-202.85	-1,241.89	1,258.35	1,257.77	0.58 2,185.197		
300.00	300.00	279.70	279.70	0.54	0.49	-99.28	-202.85	-1,241.89	1,258.35	1,257.32	1.03 1,227.198		
400.00	400.00	379.70	379.70	0.76	0.71	-99.28	-202.85	-1,241.89	1,258.35	1,256.87	1.47 853.166		
500.00	500.00	479.70	479.70	0.99	0.94	-99.28	-202.85	-1,241.89	1,258.35	1,256.42	1.92 653.875		
600.00	600.00	579.70	579.70	1.21	1.16	-99.28	-202.85	-1,241.89	1,258.35	1,255.97	2.37 530.058		
700.00	700.00	679.70	679.70	1.43	1.39	-99.28	-202.85	-1,241.89	1,258.35	1,255.52	2.82 445.668		
800.00	800.00	779.70	779.70	1.66	1.61	-99.28	-202.85	-1,241.89	1,258.35	1,255.07	3.27 384.458		
900.00	900.00	879.70	879.70	1.88	1.84	-99.28	-202.85	-1,241.89	1,258.35	1,254.63	3.72 338.031		
1,000.00	1,000.00	979.70	979.70	2.11	2.06	-99.28	-202.85	-1,241.89	1,258.35	1,254.18	4.17 301.610		
1,100.00	1,100.00	1,079.70	1,079.70	2.33	2.29	-99.28	-202.85	-1,241.89	1,258.35	1,253.73	4.62 272.273		
1,200.00	1,200.00	1,179.70	1,179.70	2.56	2.51	-99.28	-202.85	-1,241.89	1,258.35	1,253.28	5.07 248.137		
1,300.00	1,300.00	1,279.70	1,279.70	2.78	2.74	-99.28	-202.85	-1,241.89	1,258.35	1,252.83	5.52 227.932		
1,400.00	1,400.00	1,379.70	1,379.70	3.01	2.96	-99.28	-202.85	-1,241.89	1,258.35	1,252.38	5.97 210.770		
1,500.00	1,500.00	1,479.70	1,479.70	3.23	3.19	-99.28	-202.85	-1,241.89	1,258.35	1,251.93	6.42 196.011		
1,600.00	1,600.00	1,579.70	1,579.70	3.46	3.41	-99.28	-202.85	-1,241.89	1,258.35	1,251.48	6.87 183.184		
1,700.00	1,700.00	1,679.70	1,679.70	3.68	3.64	-99.28	-202.85	-1,241.89	1,258.35	1,251.03	7.32 171.933		
1,800.00	1,800.00	1,779.70	1,779.70	3.91	3.86	-99.28	-202.85	-1,241.89	1,258.35	1,250.58	7.77 161.984		
1,900.00	1,900.00	1,879.70	1,879.70	4.13	4.09	-99.28	-202.85	-1,241.89	1,258.35	1,250.13	8.22 153.123		
2,000.00	2,000.00	1,979.70	1,979.70	4.36	4.31	-99.28	-202.85	-1,241.89	1,258.35	1,249.68	8.67 145.181		
2,100.00	2,100.00	2,079.70	2,079.70	4.58	4.54	-99.28	-202.85	-1,241.89	1,258.35	1,249.23	9.12 138.023		
2,200.00	2,200.00	2,179.70	2,179.70	4.81	4.76	-99.28	-202.85	-1,241.89	1,258.35	1,248.78	9.57 131.537		
2,300.00	2,300.00	2,279.70	2,279.70	5.03	4.99	-99.28	-202.85	-1,241.89	1,258.35	1,248.33	10.02 125.633		
2,400.00	2,400.00	2,379.70	2,379.70	5.26	5.21	-99.28	-202.85	-1,241.89	1,258.35	1,247.88	10.47 120.237		
2,500.00	2,500.00	2,479.70	2,479.70	5.48	5.43	-99.28	-202.85	-1,241.89	1,258.35	1,247.43	10.92 115.285		
2,600.00	2,599.99	2,595.47	2,595.47	5.68	5.67	134.25	-203.27	-1,241.22	1,258.46	1,247.10	11.35 110.831		
2,700.00	2,699.96	2,715.27	2,715.22	5.86	5.90	134.26	-204.99	-1,238.46	1,258.24	1,246.49	11.75 107.066		
2,800.00	2,799.86	2,835.05	2,834.86	6.05	6.12	134.26	-208.03	-1,233.58	1,257.68	1,245.52	12.15 103.484		
2,900.00	2,899.68	2,954.82	2,954.34	6.24	6.36	134.25	-212.40	-1,226.58	1,256.75	1,244.19	12.56 100.058		
3,000.00	2,999.37	3,068.87	3,067.94	6.44	6.58	134.25	-217.74	-1,218.01	1,255.54	1,242.57	12.97 96.832		
3,082.14	3,081.14	3,151.00	3,149.71	6.60	6.76	134.27	-221.83	-1,211.45	1,255.13	1,241.84	13.29 94.433 CC		
3,100.00	3,098.90	3,168.86	3,167.49	6.64	6.79	134.28	-222.72	-1,210.02	1,255.15	1,241.79	13.36 93.933		
3,200.00	3,198.29	3,268.84	3,267.03	6.85	7.00	134.36	-227.70	-1,202.04	1,255.80	1,242.03	13.77 91.216		
3,300.00	3,297.66	3,368.82	3,366.57	7.06	7.22	134.45	-232.67	-1,194.05	1,256.57	1,242.39	14.18 88.616		
3,400.00	3,397.02	3,468.80	3,466.10	7.29	7.44	134.53	-237.65	-1,186.07	1,257.35	1,242.75	14.60 86.121		
3,500.00	3,496.39	3,568.78	3,565.64	7.51	7.66	134.62	-242.63	-1,178.08	1,258.13	1,243.10	15.03 83.731		
3,600.00	3,595.76	3,668.76	3,665.17	7.74	7.89	134.70	-247.61	-1,170.10	1,258.91	1,243.45	15.46 81.442		
3,700.00	3,695.12	3,768.74	3,764.71	7.98	8.12	134.78	-252.59	-1,162.11	1,259.69	1,243.80	15.90 79.250		
3,800.00	3,794.49	3,868.72	3,864.25	8.22	8.35	134.87	-257.56	-1,154.13	1,260.48	1,244.14	16.34 77.153		
3,900.00	3,893.85	3,968.70	3,963.78	8.46	8.59	134.95	-262.54	-1,146.14	1,261.27	1,244.49	16.78 75.147		
4,000.00	3,993.22	4,068.68	4,063.32	8.70	8.82	135.04	-267.52	-1,138.16	1,262.07	1,244.83	17.23 73.228		
4,100.00	4,092.59	4,168.66	4,162.85	8.95	9.06	135.12	-272.50	-1,130.17	1,262.86	1,245.17	17.69 71.391		
4,200.00	4,191.95	4,268.64	4,262.39	9.20	9.30	135.20	-277.48	-1,122.19	1,263.66	1,245.51	18.15 69.633		
4,300.00	4,291.32	4,368.62	4,361.93	9.45	9.54	135.29	-282.45	-1,114.20	1,264.46	1,245.85	18.61 67.950		
4,400.00	4,390.69	4,468.60	4,461.46	9.71	9.79	135.37	-287.43	-1,106.22	1,265.27	1,246.19	19.07 66.339		
4,500.00	4,490.05	4,568.58	4,561.00	9.97	10.03	135.45	-292.41	-1,098.23	1,266.07	1,246.53	19.54 64.795		
4,600.00	4,589.42	4,668.56	4,660.53	10.23	10.28	135.54	-297.39	-1,090.25	1,266.88	1,246.87	20.01 63.316		
4,700.00	4,688.79	4,768.54	4,760.07	10.49	10.53	135.62	-302.37	-1,082.27	1,267.69	1,247.21	20.48 61.897		
4,800.00	4,788.15	4,868.52	4,859.61	10.75	10.78	135.70	-307.34	-1,074.28	1,268.51	1,247.56	20.95 60.537		
4,900.00	4,887.52	4,968.50	4,959.14	11.01	11.03	135.79	-312.32	-1,066.30	1,269.33	1,247.90	21.43 59.231		
5,000.00	4,986.88	5,068.48	5,058.68	11.28	11.28	135.87	-317.30	-1,058.31	1,270.15	1,248.24	21.91 57.978		

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 513H
<b>Project:</b>	Eddy County, NM (NAD-83)	<b>TVD Reference:</b>	3476.8' GE + 23.5' KB @ 3500.30usft
<b>Reference Site:</b>	Belloq 11-2 Fed State Com	<b>MD Reference:</b>	3476.8' GE + 23.5' KB @ 3500.30usft
<b>Site Error:</b>	0.00 usft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	Belloq 11-2 Fed State Com 513H	<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 512H - 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		Between Centres		Between Ellipses	Minimum Separation	Separation Factor	Warning				
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Tooface (")	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)							
5,100.00	5,086.25	5,168.46	5,158.21	11.55	11.53	135.95	-322.28	-1,050.33	1,270.97	1,248.58	22.39	56.773			
5,200.00	5,185.62	5,268.44	5,257.75	11.81	11.79	136.03	-327.26	-1,042.34	1,271.80	1,248.93	22.87	55.616			
5,300.00	5,284.98	5,368.42	5,357.29	12.08	12.04	136.12	-332.23	-1,034.36	1,272.62	1,249.27	23.35	54.503			
5,400.00	5,384.35	5,468.40	5,456.82	12.35	12.30	136.20	-337.21	-1,026.37	1,273.45	1,249.62	23.83	53.432			
5,500.00	5,483.72	5,568.38	5,556.36	12.62	12.55	136.28	-342.19	-1,018.39	1,274.29	1,249.97	24.32	52.401			
5,600.00	5,583.08	5,668.36	5,655.89	12.90	12.81	136.36	-347.17	-1,010.40	1,275.12	1,250.32	24.80	51.408			
5,700.00	5,682.45	5,768.34	5,755.43	13.17	13.07	136.45	-352.15	-1,002.42	1,275.96	1,250.67	25.29	50.451			
5,800.00	5,781.82	5,868.32	5,854.97	13.44	13.33	136.53	-357.12	-994.43	1,276.80	1,251.02	25.78	49.529			
5,900.00	5,881.18	5,968.30	5,954.50	13.72	13.59	136.61	-362.10	-986.45	1,277.65	1,251.38	26.27	48.639			
6,000.00	5,980.55	6,068.28	6,054.04	13.99	13.85	136.69	-367.08	-978.46	1,278.49	1,251.74	26.76	47.781			
6,100.00	6,079.91	6,168.26	6,153.57	14.27	14.11	136.77	-372.06	-970.48	1,279.34	1,252.09	27.25	46.952			
6,200.00	6,179.28	6,268.24	6,253.11	14.54	14.37	136.85	-377.04	-962.49	1,280.19	1,252.45	27.74	46.151			
6,300.00	6,278.65	6,368.22	6,352.65	14.82	14.63	136.94	-382.01	-954.51	1,281.05	1,252.82	28.23	45.377			
6,400.00	6,378.01	6,468.20	6,452.18	15.10	14.89	137.02	-386.99	-946.52	1,281.91	1,253.18	28.72	44.628			
6,500.00	6,477.38	6,568.18	6,551.72	15.38	15.15	137.10	-391.97	-938.54	1,282.76	1,253.55	29.22	43.904			
6,600.00	6,576.75	6,668.16	6,651.25	15.66	15.41	137.18	-396.95	-930.56	1,283.63	1,253.92	29.71	43.204			
6,700.00	6,676.11	6,768.14	6,750.79	15.94	15.68	137.26	-401.93	-922.57	1,284.49	1,254.29	30.21	42.525			
6,800.00	6,775.48	6,868.12	6,850.33	16.22	15.94	137.34	-406.90	-914.59	1,285.36	1,254.66	30.70	41.868			
6,900.00	6,874.85	6,968.10	6,949.86	16.50	16.20	137.42	-411.88	-906.60	1,286.23	1,255.03	31.20	41.232			
7,000.00	6,974.21	7,068.08	7,049.40	16.78	16.47	137.50	-416.86	-898.62	1,287.10	1,255.41	31.69	40.614			
7,100.00	7,073.58	7,168.06	7,148.93	17.06	16.73	137.58	-421.84	-890.63	1,287.97	1,255.79	32.19	40.016			
7,200.00	7,172.94	7,268.04	7,248.47	17.34	16.99	137.66	-426.82	-882.65	1,288.85	1,256.17	32.68	39.435			
7,300.00	7,272.31	7,368.02	7,348.01	17.62	17.26	137.74	-431.79	-874.66	1,289.73	1,256.55	33.18	38.871			
7,400.00	7,371.68	7,468.00	7,447.54	17.90	17.52	137.82	-436.77	-866.68	1,290.61	1,256.94	33.68	38.324			
7,500.00	7,471.04	7,568.01	7,539.95	18.19	17.76	137.90	-441.75	-858.69	1,291.49	1,257.32	34.15	37.822			
7,600.00	7,570.48	7,668.00	7,624.48	18.44	17.94	138.00	-446.73	-850.64	1,292.36	1,257.70	34.65	37.416			
7,700.00	7,670.09	7,768.03	7,709.06	18.65	18.12	138.08	-451.71	-842.65	1,293.24	1,258.08	35.15	37.004			
7,800.00	7,769.84	7,868.01	7,793.70	18.86	18.28	138.15	-456.69	-834.66	1,294.12	1,258.46	35.65	36.727			
7,900.00	7,869.69	7,968.00	7,878.54	19.06	18.44	138.21	-461.66	-826.67	1,295.00	1,258.84	36.15	36.403			
8,000.00	7,969.62	8,068.00	7,963.07	19.25	18.60	138.26	-466.64	-818.68	1,295.88	1,259.22	36.65	36.094			
8,100.00	8,069.60	8,168.00	8,049.30	19.42	18.76	138.30	-471.62	-810.69	1,296.76	1,259.60	37.15	35.788			
8,200.00	8,169.60	8,268.00	8,149.30	19.60	18.94	138.35	-476.60	-802.70	1,297.64	1,260.00	37.65	35.480			
8,300.00	8,269.60	8,368.00	8,249.30	19.79	19.13	138.40	-481.58	-794.71	1,298.52	1,260.40	38.15	35.171			
8,400.00	8,369.60	8,468.00	8,350.07	19.96	19.33	138.45	-486.56	-786.72	1,299.40	1,260.80	38.65	34.879			
8,500.00	8,469.60	8,568.00	8,431.01	20.13	19.51	138.50	-491.54	-778.73	1,300.28	1,261.20	39.15	34.598			
8,600.00	8,569.60	8,668.00	8,532.07	20.30	19.62	138.55	-496.52	-770.74	1,301.16	1,261.60	39.65	34.324			
8,700.00	8,669.60	8,768.00	8,613.07	20.47	19.69	138.60	-501.50	-762.75	1,302.04	1,262.00	40.15	34.050			
8,800.00	8,769.60	8,868.00	8,713.07	20.64	19.72	138.65	-506.48	-754.76	1,302.92	1,262.40	40.65	33.781			
8,900.00	8,869.60	8,968.00	8,813.07	20.81	19.73	138.70	-511.46	-746.77	1,303.80	1,262.80	41.15	33.516			
9,000.00	8,969.60	9,068.00	8,913.07	20.98	19.79	138.75	-516.44	-738.78	1,304.68	1,263.20	41.65	33.250			
9,100.00	9,069.60	9,168.00	9,013.07	21.15	20.12	138.80	-521.42	-730.79	1,305.56	1,263.60	42.15	32.984			
9,200.00	9,169.60	9,268.00	9,113.07	21.32	20.65	138.85	-526.40	-722.80	1,306.44	1,264.00	42.65	32.718			
9,300.00	9,269.60	9,368.00	9,213.07	21.49	21.29	138.90	-531.38	-714.81	1,307.32	1,264.40	43.15	32.452			
9,400.00	9,369.60	9,468.00	9,313.07	21.66	22.03	138.95	-536.36	-706.82	1,308.20	1,264.80	43.65	32.186			
9,500.00	9,469.60	9,568.00	9,413.07	21.83	22.86	139.00	-541.34	-698.83	1,309.08	1,265.20	44.15	31.920			
9,600.00	9,569.60	9,668.00	9,513.07	22.00	23.77	139.05	-546.32	-690.84	1,309.96	1,265.60	44.65	31.654			
9,700.00	9,669.60	9,768.00	9,613.07	22.17	24.75	139.10	-551.30	-682.85	1,310.84	1,266.00	45.15	31.388			
9,800.00	9,769.60	9,868.00	9,713.07	22.34	25.80	139.15	-556.28	-674.86	1,311.72	1,266.40	45.65	31.122			
9,900.00	9,869.60	9,968.00	9,813.07	22.51	26.90	139.20	-561.26	-666.87	1,312.60	1,266.80	46.15	30.856			
10,000.00	9,969.60	10,068.00	9,913.07	22.68	28.06	139.25	-566.24	-658.88	1,313.48	1,267.20	46.65	30.590			
10,100.00	10,069.60	10,168.00	10,013.07	22.85	29.26	139.30	-571.22	-650.89	1,314.36	1,267.60	47.15	30.324			
10,200.00	10,169.60	10,268.00	10,113.07	23.02	30.50	139.35	-576.20	-642.90	1,315.24	1,268.00	47.65	30.058			

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 513H
<b>Project:</b>	Eddy County, NM (NAD-83)	<b>TVD Reference:</b>	3476.8' GE + 23.5' KB @ 3500.30usft
<b>Reference Site:</b>	Belloq 11-2 Fed State Com	<b>MD Reference:</b>	3476.8' GE + 23.5' KB @ 3500.30usft
<b>Site Error:</b>	0.00 usft.	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	Belloq 11-2 Fed State Com 513H	<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 512H - OH - Plan #1													<b>Offset Site Error:</b> 0.00 usft.
<b>Survey Program:</b> O-LEAM MWD+HDGM													<b>Offset Well Error:</b> 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	8,898.40	10,385.64	8,883.25	29.80	31.78	-90.23	1,272.18	-851.97	1,294.48	1,233.52	60.96	21.234	
10,400.00	8,898.25	10,485.64	8,883.10	31.04	33.09	-90.23	1,372.18	-852.61	1,294.47	1,230.94	63.53	20.375	
10,500.00	8,898.10	10,585.64	8,882.95	32.33	34.42	-90.23	1,472.18	-853.25	1,294.46	1,228.30	66.16	19.565	
10,600.00	8,897.94	10,685.64	8,882.80	33.64	35.78	-90.23	1,572.17	-853.89	1,294.45	1,225.60	68.85	18.801	
10,700.00	8,897.79	10,785.64	8,882.65	34.98	37.17	-90.23	1,672.17	-854.54	1,294.44	1,222.85	71.59	18.082	
10,800.00	8,897.64	10,885.64	8,882.50	36.34	38.57	-90.23	1,772.17	-855.18	1,294.43	1,220.06	74.37	17.405	
10,900.00	8,897.48	10,985.64	8,882.35	37.73	39.99	-90.23	1,872.17	-855.82	1,294.42	1,217.23	77.19	16.769	
11,000.00	8,897.33	11,085.64	8,882.20	39.13	41.43	-90.23	1,972.17	-856.46	1,294.41	1,214.36	80.05	16.171	
11,100.00	8,897.18	11,185.64	8,882.04	40.55	42.88	-90.23	2,072.16	-857.10	1,294.40	1,211.47	82.93	15.608	
11,200.00	8,897.02	11,285.64	8,881.89	41.99	44.35	-90.23	2,172.16	-857.75	1,294.39	1,208.54	85.85	15.077	
11,300.00	8,896.87	11,385.64	8,881.74	43.44	45.82	-90.23	2,272.16	-858.39	1,294.38	1,205.59	88.79	14.578	
11,400.00	8,896.72	11,485.64	8,881.59	44.91	47.31	-90.23	2,372.16	-859.03	1,294.37	1,202.62	91.76	14.107	
11,500.00	8,896.57	11,585.64	8,881.44	46.38	48.81	-90.23	2,472.16	-859.67	1,294.36	1,199.62	94.74	13.662	
11,600.00	8,896.41	11,685.64	8,881.29	47.87	50.31	-90.23	2,572.15	-860.31	1,294.36	1,196.61	97.74	13.242	
11,700.00	8,896.26	11,785.64	8,881.14	49.37	51.83	-90.23	2,672.15	-860.96	1,294.35	1,193.58	100.76	12.845	
11,800.00	8,896.11	11,885.64	8,880.98	50.87	53.35	-90.23	2,772.15	-861.60	1,294.34	1,190.53	103.80	12.469	
11,900.00	8,895.95	11,985.64	8,880.83	52.38	54.88	-90.23	2,872.15	-862.24	1,294.33	1,187.47	106.85	12.113	
12,000.00	8,895.80	12,085.64	8,880.68	53.90	56.41	-90.23	2,972.14	-862.88	1,294.32	1,184.40	109.92	11.775	
12,100.00	8,895.65	12,185.64	8,880.53	55.43	57.95	-90.23	3,072.14	-863.53	1,294.31	1,181.31	112.99	11.455	
12,200.00	8,895.49	12,285.64	8,880.38	56.96	59.49	-90.23	3,172.14	-864.17	1,294.30	1,178.22	116.08	11.150	
12,300.00	8,895.34	12,385.64	8,880.23	58.50	61.04	-90.23	3,272.14	-864.81	1,294.29	1,175.11	119.18	10.860	
12,400.00	8,895.19	12,485.64	8,880.08	60.05	62.60	-90.23	3,372.14	-865.45	1,294.28	1,171.99	122.29	10.584	
12,500.00	8,895.03	12,585.64	8,879.93	61.60	64.16	-90.23	3,472.13	-866.09	1,294.27	1,168.87	125.40	10.321	
12,600.00	8,894.88	12,685.64	8,879.77	63.15	65.72	-90.23	3,572.13	-866.74	1,294.26	1,165.73	128.53	10.070	
12,700.00	8,894.73	12,785.64	8,879.62	64.71	67.29	-90.23	3,672.13	-867.38	1,294.25	1,162.59	131.66	9.830	
12,800.00	8,894.58	12,885.64	8,879.47	66.27	68.86	-90.23	3,772.13	-868.02	1,294.24	1,159.44	134.80	9.601	
12,900.00	8,894.42	12,985.64	8,879.32	67.84	70.43	-90.23	3,872.12	-868.66	1,294.23	1,156.29	137.94	9.382	
13,000.00	8,894.27	13,085.64	8,879.17	69.41	72.01	-90.23	3,972.12	-869.30	1,294.22	1,153.13	141.10	9.173	
13,100.00	8,894.12	13,185.64	8,879.02	70.98	73.59	-90.23	4,072.12	-869.95	1,294.21	1,149.96	144.25	8.972	
13,200.00	8,893.96	13,285.64	8,878.87	72.55	75.17	-90.23	4,172.12	-870.59	1,294.20	1,146.79	147.42	8.779	
13,300.00	8,893.81	13,385.64	8,878.71	74.13	76.75	-90.23	4,272.12	-871.23	1,294.20	1,143.61	150.58	8.595	
13,400.00	8,893.66	13,485.64	8,878.56	75.71	78.34	-90.23	4,372.11	-871.87	1,294.19	1,140.43	153.76	8.417	
13,500.00	8,893.50	13,585.64	8,878.41	77.29	79.93	-90.23	4,472.11	-872.52	1,294.18	1,137.24	156.93	8.247	
13,600.00	8,893.35	13,685.64	8,878.26	78.88	81.52	-90.23	4,572.11	-873.16	1,294.17	1,134.05	160.11	8.083	
13,700.00	8,893.20	13,785.64	8,878.11	80.47	83.11	-90.23	4,672.11	-873.80	1,294.16	1,130.86	163.30	7.925	
13,800.00	8,893.04	13,885.64	8,877.96	82.06	84.70	-90.23	4,772.10	-874.44	1,294.15	1,127.66	166.49	7.773	
13,900.00	8,892.89	13,985.64	8,877.81	83.65	86.30	-90.23	4,872.10	-875.08	1,294.14	1,124.46	169.68	7.627	
14,000.00	8,892.74	14,085.64	8,877.65	85.24	87.90	-90.23	4,972.10	-875.73	1,294.13	1,121.26	172.87	7.486	
14,100.00	8,892.59	14,185.64	8,877.50	86.84	89.49	-90.23	5,072.10	-876.37	1,294.12	1,118.05	176.07	7.350	
14,200.00	8,892.43	14,285.64	8,877.35	88.43	91.09	-90.23	5,172.10	-877.01	1,294.11	1,114.84	179.27	7.219	
14,300.00	8,892.28	14,385.64	8,877.20	90.03	92.70	-90.23	5,272.09	-877.65	1,294.10	1,111.62	182.48	7.092	
14,400.00	8,892.13	14,485.64	8,877.05	91.63	94.30	-90.23	5,372.09	-878.29	1,294.09	1,108.41	185.69	6.969	
14,500.00	8,891.97	14,585.64	8,876.90	93.23	95.90	-90.23	5,472.09	-878.94	1,294.08	1,105.19	188.89	6.851	
14,600.00	8,891.82	14,685.64	8,876.75	94.83	97.51	-90.23	5,572.09	-879.58	1,294.07	1,101.97	192.11	6.736	
14,700.00	8,891.67	14,785.64	8,876.60	96.44	99.12	-90.23	5,672.09	-880.22	1,294.06	1,098.74	195.32	6.625	
14,800.00	8,891.51	14,885.64	8,876.44	98.04	100.72	-90.23	5,772.08	-880.86	1,294.05	1,095.52	198.54	6.518	
14,900.00	8,891.36	14,985.64	8,876.29	99.65	102.33	-90.23	5,872.08	-881.50	1,294.04	1,092.29	201.75	6.414	
15,000.00	8,891.21	15,085.64	8,876.14	101.26	103.94	-90.23	5,972.08	-882.15	1,294.04	1,089.06	204.97	6.313	
15,100.00	8,891.05	15,185.64	8,875.99	102.86	105.55	-90.23	6,072.08	-882.79	1,294.03	1,085.83	208.20	6.215	
15,200.00	8,890.90	15,285.64	8,875.84	104.47	107.16	-90.23	6,172.07	-883.43	1,294.02	1,082.60	211.42	6.121	
15,300.00	8,890.75	15,385.64	8,875.69	106.08	108.78	-90.23	6,272.07	-884.07	1,294.01	1,079.36	214.65	6.029	
15,400.00	8,890.60	15,485.64	8,875.54	107.69	110.39	-90.23	6,372.07	-884.72	1,294.00	1,076.12	217.87	5.939	

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 513H
<b>Project:</b>	Eddy County, NM (NAD-83)	<b>TVD Reference:</b>	3476.8' GE + 23.5' KB @ 3500.30usft
<b>Reference Site:</b>	Belloq 11-2 Fed State Com	<b>MD Reference:</b>	3476.8' GE + 23.5' KB @ 3500.30usft
<b>Site Error:</b>	0.00 usft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	Belloq 11-2 Fed State Com 513H	<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 512H - OH - Plan #1													Offset Well Error:		0.00 usft			
Survey Program: O-LEAM MWD+HDGM																		
Reference		Offset		Semi Major Axis		Distance												
Measured Depth	Vertical	Measured	Vertical	Reference	Offset	Highside	Offset Wellbore Centre	Between	Between	Minimum	Separation	Warning						
Depth (usft)	Depth (usft)	Depth (usft)	Depth (usft)	Reference (usft)	Offset (usft)	Toolface (°)	+N/-S (usft)	+E/-W (usft)	Centres (usft)	Ellipses (usft)	Separation (usft)	Factor						
15,500.00	8,890.44	15,585.64	8,875.38	109.30	112.00	-90.23	6,472.07	-885.36	1,293.99	1,072.89	221.10	5.852						
15,600.00	8,890.29	15,685.64	8,875.23	110.92	113.62	-90.23	6,572.07	-886.00	1,293.98	1,069.65	224.33	5.768						
15,700.00	8,890.14	15,785.64	8,875.08	112.53	115.23	-90.23	6,672.06	-886.64	1,293.97	1,066.41	227.56	5.686						
15,800.00	8,889.98	15,885.64	8,874.93	114.14	116.85	-90.23	6,772.06	-887.28	1,293.96	1,063.16	230.80	5.607						
15,900.00	8,889.83	15,985.64	8,874.78	115.76	118.47	-90.23	6,872.06	-887.93	1,293.95	1,059.92	234.03	5.529						
16,000.00	8,889.68	16,085.64	8,874.63	117.38	120.08	-90.23	6,972.06	-888.57	1,293.94	1,056.68	237.27	5.454						
16,100.00	8,889.52	16,185.64	8,874.48	118.99	121.70	-90.23	7,072.05	-889.21	1,293.93	1,053.43	240.50	5.380						
16,200.00	8,889.37	16,285.64	8,874.32	120.61	123.32	-90.23	7,172.05	-889.85	1,293.92	1,050.18	243.74	5.309						
16,300.00	8,889.22	16,385.64	8,874.17	122.23	124.94	-90.23	7,272.05	-890.49	1,293.91	1,046.93	246.98	5.239						
16,400.00	8,889.06	16,485.64	8,874.02	123.84	126.56	-90.23	7,372.05	-891.14	1,293.90	1,043.68	250.22	5.171						
16,500.00	8,888.91	16,585.64	8,873.87	125.46	128.18	-90.23	7,472.05	-891.78	1,293.89	1,040.43	253.46	5.105						
16,600.00	8,888.76	16,685.64	8,873.72	127.08	129.80	-90.23	7,572.04	-892.42	1,293.88	1,037.18	256.70	5.040						
16,700.00	8,888.61	16,785.64	8,873.57	128.70	131.42	-90.23	7,672.04	-893.06	1,293.88	1,033.93	259.94	4.978						
16,800.00	8,888.45	16,885.64	8,873.42	130.32	133.04	-90.23	7,772.04	-893.71	1,293.87	1,030.68	263.19	4.916						
16,900.00	8,888.30	16,985.64	8,873.27	131.94	134.66	-90.23	7,872.04	-894.35	1,293.86	1,027.42	266.43	4.856						
17,000.00	8,888.15	17,085.64	8,873.11	133.56	136.29	-90.23	7,972.04	-894.99	1,293.85	1,024.17	269.68	4.798						
17,100.00	8,887.99	17,185.64	8,872.96	135.18	137.91	-90.23	8,072.03	-895.63	1,293.84	1,020.91	272.92	4.741						
17,200.00	8,887.84	17,285.64	8,872.81	136.81	139.53	-90.23	8,172.03	-896.27	1,293.83	1,017.66	276.17	4.685						
17,300.00	8,887.69	17,385.64	8,872.66	138.43	141.16	-90.23	8,272.03	-896.92	1,293.82	1,014.40	279.42	4.630						
17,400.00	8,887.53	17,485.64	8,872.51	140.05	142.78	-90.23	8,372.03	-897.56	1,293.81	1,011.14	282.67	4.577						
17,500.00	8,887.38	17,585.64	8,872.36	141.67	144.40	-90.23	8,472.02	-898.20	1,293.80	1,007.88	285.92	4.525						
17,600.00	8,887.23	17,685.64	8,872.21	143.30	146.03	-90.23	8,572.02	-898.84	1,293.79	1,004.62	289.17	4.474						
17,700.00	8,887.07	17,785.64	8,872.05	144.92	147.65	-90.23	8,672.02	-899.48	1,293.78	1,001.36	292.42	4.424						
17,800.00	8,886.92	17,885.64	8,871.90	146.55	149.28	-90.23	8,772.02	-900.13	1,293.77	998.10	295.67	4.376						
17,900.00	8,886.77	17,985.64	8,871.75	148.17	150.90	-90.23	8,872.02	-900.77	1,293.76	994.84	298.92	4.328						
18,000.00	8,886.62	18,085.64	8,871.60	149.80	152.53	-90.23	8,972.01	-901.41	1,293.75	991.58	302.17	4.281						
18,100.00	8,886.46	18,185.64	8,871.45	151.42	154.16	-90.23	9,072.01	-902.05	1,293.74	988.32	305.43	4.236						
18,200.00	8,886.31	18,285.64	8,871.30	153.05	155.78	-90.23	9,172.01	-902.69	1,293.73	985.05	308.68	4.191						
18,300.00	8,886.16	18,385.64	8,871.15	154.67	157.41	-90.23	9,272.01	-903.34	1,293.72	981.79	311.94	4.147						
18,400.00	8,886.00	18,485.64	8,871.00	156.30	159.04	-90.23	9,372.00	-903.98	1,293.71	978.52	315.19	4.105						
18,500.00	8,885.85	18,585.64	8,870.84	157.93	160.66	-90.23	9,472.00	-904.62	1,293.71	975.26	318.45	4.063						
18,600.00	8,885.70	18,685.64	8,870.69	159.55	162.29	-90.23	9,572.00	-905.26	1,293.70	971.99	321.70	4.021						
18,700.00	8,885.54	18,785.64	8,870.54	161.18	163.92	-90.23	9,672.00	-905.91	1,293.69	968.73	324.96	3.981						
18,800.00	8,885.39	18,885.64	8,870.39	162.81	165.55	-90.23	9,772.00	-906.55	1,293.68	965.46	328.21	3.942						
18,900.00	8,885.24	18,985.64	8,870.24	164.43	167.18	-90.23	9,871.99	-907.19	1,293.67	962.20	331.47	3.903						
19,000.00	8,885.08	19,085.64	8,870.09	166.06	168.80	-90.23	9,971.99	-907.83	1,293.66	958.93	334.73	3.865						
19,055.11	8,885.00	19,140.75	8,870.00	166.96	169.70	-90.23	10,027.10	-908.19	1,293.65	957.13	336.52	3.844 ES, SF						

# LEAM Drilling Services

## Anticollision Report

<b>Company:</b>	Devon Energy	<b>Local Co-ordinate Reference:</b>	Well Belloq 11-2 Fed State Com 513H
<b>Project:</b>	Eddy County, NM (NAD-83)	<b>TVD Reference:</b>	3476.8' GE + 23.5' KB @ 3500.30usft
<b>Reference Site:</b>	Belloq 11-2 Fed State Com	<b>MD Reference:</b>	3476.8' GE + 23.5' KB @ 3500.30usft
<b>Site Error:</b>	0.00 usft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	Belloq 11-2 Fed State Com 513H	<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 514H - OH - Plan #2															
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		
0.00	0.00	12.00	12.00	0.00	0.01	89.89	2.47	1,249.76	1,249.76						
100.00	100.00	112.00	112.00	0.09	0.11	89.89	2.47	1,249.76	1,249.76	1,249.56	0.20	6,282.797			
200.00	200.00	212.00	212.00	0.31	0.34	89.89	2.47	1,249.76	1,249.76	1,249.11	0.65	1,927.307			
300.00	300.00	312.00	312.00	0.54	0.56	89.89	2.47	1,249.76	1,249.76	1,248.66	1.10	1,138.236			
400.00	400.00	412.00	412.00	0.76	0.79	89.89	2.47	1,249.76	1,249.76	1,248.21	1.55	807.593			
500.00	500.00	512.00	512.00	0.99	1.01	89.89	2.47	1,249.76	1,249.76	1,247.77	2.00	625.805			
600.00	600.00	612.00	612.00	1.21	1.24	89.89	2.47	1,249.76	1,249.76	1,247.32	2.45	510.821			
700.00	700.00	712.00	712.00	1.43	1.46	89.89	2.47	1,249.76	1,249.76	1,246.87	2.90	431.531			
800.00	800.00	812.00	812.00	1.66	1.69	89.89	2.47	1,249.76	1,249.76	1,246.42	3.35	373.549			
900.00	900.00	912.00	912.00	1.88	1.91	89.89	2.47	1,249.76	1,249.76	1,245.97	3.80	329.303			
1,000.00	1,000.00	1,012.00	1,012.00	2.11	2.14	89.89	2.47	1,249.76	1,249.76	1,245.52	4.24	294.428			
1,100.00	1,100.00	1,112.00	1,112.00	2.33	2.36	89.89	2.47	1,249.76	1,249.76	1,245.07	4.69	266.233			
1,200.00	1,200.00	1,212.00	1,212.00	2.56	2.59	89.89	2.47	1,249.76	1,249.76	1,244.62	5.14	242.966			
1,300.00	1,300.00	1,312.00	1,312.00	2.78	2.81	89.89	2.47	1,249.76	1,249.76	1,244.17	5.59	223.439			
1,400.00	1,400.00	1,412.00	1,412.00	3.01	3.03	89.89	2.47	1,249.76	1,249.76	1,243.72	6.04	206.817			
1,500.00	1,500.00	1,512.00	1,512.00	3.23	3.26	89.89	2.47	1,249.76	1,249.76	1,243.27	6.49	192.497			
1,600.00	1,600.00	1,612.00	1,612.00	3.46	3.48	89.89	2.47	1,249.76	1,249.76	1,242.82	6.94	180.032			
1,700.00	1,700.00	1,712.00	1,712.00	3.68	3.71	89.89	2.47	1,249.76	1,249.76	1,242.37	7.39	169.083			
1,800.00	1,800.00	1,812.00	1,812.00	3.91	3.93	89.89	2.47	1,249.76	1,249.76	1,241.92	7.84	159.389			
1,900.00	1,900.00	1,912.00	1,912.00	4.13	4.16	89.89	2.47	1,249.76	1,249.76	1,241.47	8.29	150.746			
2,000.00	2,000.00	2,012.00	2,012.00	4.36	4.38	89.89	2.47	1,249.76	1,249.76	1,241.02	8.74	142.993			
2,100.00	2,100.00	2,112.00	2,112.00	4.58	4.61	89.89	2.47	1,249.76	1,249.76	1,240.57	9.19	135.998			
2,200.00	2,200.00	2,212.00	2,212.00	4.81	4.83	89.89	2.47	1,249.76	1,249.76	1,240.12	9.64	129.656			
2,300.00	2,300.00	2,312.00	2,312.00	5.03	5.06	89.89	2.47	1,249.76	1,249.76	1,239.67	10.09	123.878			
2,400.00	2,400.00	2,412.00	2,412.00	5.26	5.28	89.89	2.47	1,249.76	1,249.76	1,239.22	10.54	118.594			
2,412.12	2,412.12	2,424.12	2,424.12	5.28	5.31	89.89	2.47	1,249.76	1,249.76	1,239.17	10.59	117.984			
2,500.00	2,500.00	2,510.35	2,510.35	5.48	5.50	89.89	2.46	1,249.77	1,249.77	1,238.79	10.98	113.808			
2,600.00	2,599.99	2,600.00	2,599.99	5.68	5.68	-36.59	1.88	1,250.40	1,249.76	1,238.40	11.36	109.996			
2,700.00	2,699.96	2,682.84	2,682.81	5.86	5.83	-36.59	0.48	1,251.90	1,249.43	1,237.75	11.69	106.903			
2,800.00	2,799.86	2,769.09	2,768.99	6.05	5.99	-36.59	-1.83	1,254.39	1,248.81	1,236.79	12.02	103.863			
2,900.00	2,899.68	2,855.35	2,855.12	6.24	6.15	-36.59	-5.03	1,257.83	1,247.89	1,235.53	12.36	100.927			
3,000.00	2,999.37	2,941.61	2,941.17	6.44	6.31	-36.60	-9.11	1,262.22	1,246.67	1,233.96	12.71	98.087			
3,100.00	3,098.90	3,027.88	3,027.13	6.64	6.48	-36.60	-14.08	1,267.56	1,245.15	1,232.09	13.06	95.332			
3,200.00	3,198.29	3,114.16	3,112.98	6.85	6.65	-36.60	-19.92	1,273.84	1,243.54	1,230.12	13.42	92.669			
3,300.00	3,297.66	3,200.00	3,198.26	7.06	6.83	-36.56	-26.61	1,281.04	1,242.88	1,229.10	13.78	90.182			
3,309.42	3,307.01	3,208.58	3,206.77	7.09	6.85	-36.55	-27.33	1,281.81	1,242.88	1,229.06	13.82	89.945 CC			
3,400.00	3,397.02	3,288.87	3,286.39	7.29	7.03	-36.47	-34.44	1,289.45	1,243.32	1,229.16	14.16	87.800			
3,500.00	3,496.39	3,388.84	3,385.44	7.51	7.25	-36.36	-43.59	1,299.30	1,244.15	1,229.57	14.58	85.326			
3,600.00	3,595.76	3,488.81	3,484.50	7.74	7.48	-36.24	-52.75	1,309.15	1,244.99	1,229.98	15.01	82.950			
3,700.00	3,695.12	3,588.77	3,583.56	7.98	7.72	-36.13	-61.91	1,319.00	1,245.84	1,230.39	15.44	80.668			
3,800.00	3,794.49	3,688.74	3,682.61	8.22	7.96	-36.01	-71.07	1,328.85	1,246.68	1,230.80	15.89	78.480			
3,900.00	3,893.85	3,788.70	3,781.67	8.46	8.21	-35.90	-80.22	1,338.70	1,247.54	1,231.20	16.33	76.383			
4,000.00	3,993.22	3,888.67	3,880.73	8.70	8.46	-35.79	-89.38	1,348.55	1,248.39	1,231.61	16.79	74.375			
4,100.00	4,092.59	3,988.63	3,979.79	8.95	8.72	-35.67	-98.54	1,358.40	1,249.26	1,232.01	17.24	72.451			
4,200.00	4,191.95	4,088.60	4,078.84	9.20	8.98	-35.56	-107.70	1,368.25	1,250.12	1,232.42	17.70	70.610			
4,300.00	4,291.32	4,188.56	4,177.90	9.45	9.25	-35.44	-116.85	1,378.10	1,251.00	1,232.83	18.17	68.847			
4,400.00	4,390.69	4,288.53	4,276.96	9.71	9.51	-35.33	-126.01	1,387.95	1,251.87	1,233.23	18.64	67.159			
4,500.00	4,490.05	4,388.50	4,376.01	9.97	9.79	-35.22	-135.17	1,397.80	1,252.76	1,233.64	19.11	65.543			
4,600.00	4,589.42	4,488.46	4,475.07	10.23	10.06	-35.11	-144.33	1,407.65	1,253.64	1,234.05	19.59	63.995			
4,700.00	4,688.79	4,588.43	4,574.13	10.49	10.34	-34.99	-153.48	1,417.50	1,254.54	1,234.47	20.07	62.512			
4,800.00	4,788.15	4,688.39	4,673.18	10.75	10.61	-34.88	-162.64	1,427.34	1,255.43	1,234.88	20.55	61.090			
4,900.00	4,887.52	4,788.36	4,772.24	11.01	10.89	-34.77	-171.80	1,437.19	1,256.34	1,235.30	21.03	59.727			

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 513H
<b>Project:</b>	Eddy County, NM (NAD-83)	<b>TVD Reference:</b>	3476.8' GE + 23.5' KB @ 3500.30usft
<b>Reference Site:</b>	Belloq 11-2 Fed State Com	<b>MD Reference:</b>	3476.8' GE + 23.5' KB @ 3500.30usft
<b>Site Error:</b>	0.00 usft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	Belloq 11-2 Fed State Com 513H	<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 514H - 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			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	
5,000.00	4,986.88	4,888.32	4,871.30	11.28	11.18	-34.66	-180.95	1,447.04	1,257.24	1,235.72	21.52	58.420		
5,100.00	5,086.25	4,988.29	4,970.35	11.55	11.46	-34.54	-190.11	1,456.89	1,258.15	1,236.14	22.01	57.165		
5,200.00	5,185.62	5,088.26	5,069.41	11.81	11.75	-34.43	-199.27	1,466.74	1,259.07	1,236.57	22.50	55.961		
5,300.00	5,284.98	5,188.22	5,168.47	12.08	12.04	-34.32	-208.43	1,476.59	1,259.99	1,237.00	22.99	54.803		
5,400.00	5,384.35	5,288.19	5,267.52	12.35	12.33	-34.21	-217.58	1,486.44	1,260.92	1,237.43	23.48	53.692		
5,500.00	5,483.72	5,388.15	5,366.58	12.62	12.62	-34.10	-226.74	1,496.29	1,261.85	1,237.87	23.98	52.622		
5,600.00	5,583.08	5,488.12	5,465.64	12.90	12.91	-33.99	-235.90	1,506.14	1,262.78	1,238.31	24.48	51.594		
5,700.00	5,682.45	5,588.08	5,564.69	13.17	13.20	-33.88	-245.06	1,515.99	1,263.72	1,238.75	24.97	50.604		
5,800.00	5,781.82	5,688.05	5,663.75	13.44	13.50	-33.76	-254.21	1,525.84	1,264.67	1,239.20	25.47	49.651		
5,900.00	5,881.18	5,788.01	5,762.81	13.72	13.79	-33.65	-263.37	1,535.69	1,265.62	1,239.65	25.97	48.733		
6,000.00	5,980.55	5,887.98	5,861.86	13.99	14.09	-33.54	-272.53	1,545.54	1,266.57	1,240.10	26.47	47.848		
6,100.00	6,079.91	5,987.95	5,960.92	14.27	14.38	-33.43	-281.69	1,555.39	1,267.53	1,240.56	26.97	46.994		
6,200.00	6,179.28	6,087.91	6,059.98	14.54	14.68	-33.32	-290.84	1,565.24	1,268.49	1,241.02	27.47	46.171		
6,300.00	6,278.65	6,187.88	6,159.04	14.82	14.98	-33.21	-300.00	1,575.08	1,269.46	1,241.49	27.98	45.376		
6,400.00	6,378.01	6,287.84	6,258.09	15.10	15.28	-33.10	-309.16	1,584.93	1,270.44	1,241.96	28.48	44.608		
6,500.00	6,477.38	6,387.81	6,357.15	15.38	15.58	-32.99	-318.32	1,594.78	1,271.41	1,242.43	28.98	43.866		
6,600.00	6,576.75	6,487.77	6,456.21	15.66	15.88	-32.88	-327.47	1,604.63	1,272.40	1,242.91	29.49	43.149		
6,700.00	6,676.11	6,587.74	6,555.26	15.94	16.18	-32.77	-336.63	1,614.48	1,273.38	1,243.39	29.99	42.456		
6,800.00	6,775.48	6,687.70	6,654.32	16.22	16.49	-32.67	-345.79	1,624.33	1,274.37	1,243.88	30.50	41.785		
6,900.00	6,874.85	6,787.67	6,753.38	16.50	16.79	-32.56	-354.95	1,634.18	1,275.37	1,244.37	31.00	41.135		
7,000.00	6,974.21	6,887.64	6,852.43	16.78	17.09	-32.45	-364.10	1,644.03	1,276.37	1,244.86	31.51	40.506		
7,100.00	7,073.58	6,987.60	6,951.49	17.06	17.40	-32.34	-373.26	1,653.88	1,277.38	1,245.36	32.02	39.897		
7,200.00	7,172.94	7,087.57	7,050.55	17.34	17.70	-32.23	-382.42	1,663.73	1,278.39	1,245.86	32.52	39.307		
7,300.00	7,272.31	7,187.53	7,149.60	17.62	18.01	-32.12	-391.58	1,673.58	1,279.40	1,246.37	33.03	38.734		
7,400.00	7,371.68	7,287.50	7,248.66	17.90	18.31	-32.01	-400.73	1,683.43	1,280.42	1,246.88	33.54	38.179		
7,500.00	7,471.04	7,387.46	7,347.72	18.19	18.62	-31.91	-409.89	1,693.28	1,281.44	1,247.40	34.04	37.640		
7,600.00	7,570.48	7,503.69	7,462.99	18.44	18.94	-31.79	-420.03	1,704.19	1,282.56	1,248.00	34.56	37.107		
7,700.00	7,670.09	7,625.05	7,583.63	18.65	19.21	-31.68	-428.96	1,713.78	1,283.54	1,248.51	35.03	36.644		
7,800.00	7,769.84	7,746.45	7,704.57	18.86	19.48	-31.60	-436.14	1,721.51	1,284.34	1,248.86	35.47	36.206		
7,900.00	7,869.69	7,867.91	7,825.76	19.06	19.72	-31.53	-441.58	1,727.36	1,284.95	1,249.05	35.90	35.791		
8,000.00	7,969.62	7,989.40	7,947.13	19.25	19.96	-31.49	-445.27	1,731.33	1,285.39	1,249.07	36.31	35.399		
8,100.00	8,069.60	8,110.91	8,068.60	19.42	20.17	-31.47	-447.21	1,733.42	1,285.63	1,248.93	36.70	35.027		
8,200.00	8,169.60	8,223.91	8,181.60	19.60	20.37	-31.42	-447.53	1,733.76	1,285.69	1,248.60	37.09	34.663		
8,300.00	8,269.60	8,323.91	8,281.60	19.79	20.54	-31.37	-447.53	1,733.76	1,285.69	1,248.22	37.47	34.312		
8,400.00	8,369.56	8,434.47	8,392.10	19.96	20.73	-31.33	-445.34	1,733.75	1,285.68	1,247.84	37.84	33.975		
8,500.00	8,468.14	8,560.64	8,515.57	20.09	20.84	-31.30	-442.62	1,733.59	1,285.35	1,247.25	38.10	33.740		
8,600.00	8,562.42	8,684.89	8,628.99	20.17	20.86	-31.28	-437.50	1,733.27	1,284.64	1,246.42	38.23	33.607		
8,700.00	8,649.56	8,805.99	8,726.65	20.20	20.79	-31.27	-429.26	1,732.81	1,283.69	1,245.39	38.29	33.521		
8,800.00	8,726.89	8,923.13	8,804.86	20.20	20.69	-31.26	-421.33	1,732.25	1,282.63	1,244.25	38.38	33.419		
8,900.00	8,792.07	9,035.88	8,861.96	20.17	20.56	-31.25	-415.33	1,731.63	1,281.62	1,243.07	38.55	33.242		
9,000.00	8,843.13	9,144.16	8,897.93	20.12	20.43	-31.24	-413.38	1,730.97	1,280.80	1,241.93	38.87	32.950		
9,100.00	8,878.50	9,248.13	8,913.85	20.07	20.31	-31.23	-409.23	1,730.31	1,280.26	1,240.90	39.36	32.525		
9,200.00	8,897.12	9,347.77	8,914.93	20.09	20.26	-31.22	-406.83	1,729.67	1,280.07	1,240.02	40.05	31.961		
9,246.30	8,900.67	9,393.93	8,914.88	20.20	20.51	-31.21	-404.99	1,729.38	1,280.07	1,239.64	40.43	31.662		
9,300.00	8,899.93	9,447.67	8,914.82	20.45	20.83	-31.20	-403.73	1,729.03	1,280.07	1,239.16	40.91	31.287		
9,400.00	8,899.78	9,547.67	8,914.71	21.02	21.46	-31.19	-403.73	1,728.39	1,280.08	1,238.08	42.01	30.474		
9,500.00	8,899.63	9,647.67	8,914.59	21.69	22.19	-31.18	-403.73	1,727.75	1,280.09	1,236.77	43.32	29.550		
9,600.00	8,899.47	9,747.67	8,914.48	22.46	22.99	-31.17	-403.73	1,727.11	1,280.10	1,235.27	44.83	28.552		
9,700.00	8,899.32	9,847.67	8,914.37	23.31	23.88	-31.16	-403.73	1,726.46	1,280.11	1,233.58	46.53	27.511		
9,800.00	8,899.17	9,947.67	8,914.26	24.24	24.84	-31.15	-403.73	1,725.82	1,280.12	1,231.73	48.39	26.453		
9,900.00	8,899.02	10,047.67	8,914.15	25.24	25.86	-31.14	-403.73	1,725.18	1,280.13	1,229.73	50.40	25.401		
10,000.00	8,898.86	10,147.67	8,914.04	26.31	26.94	-31.13	-403.73	1,724.54	1,280.14	1,227.61	52.53	24.369		

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 513H
<b>Project:</b>	Eddy County, NM (NAD-83)	<b>TVD Reference:</b>	3476.8' GE + 23.5' KB @ 3500.30usft
<b>Reference Site:</b>	Belloq 11-2 Fed State Com	<b>MD Reference:</b>	3476.8' GE + 23.5' KB @ 3500.30usft
<b>Site Error:</b>	0.00 usft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	Belloq 11-2 Fed State Com 513H	<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		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		
10,100.00	8,898.71	10,247.67	8,913.93	27.42	28.07	90.14	1,088.71	1,723.89	1,280.15	1,225.37	54.78	23.370			
10,200.00	8,898.56	10,347.67	8,913.82	28.59	29.25	90.15	1,188.71	1,723.25	1,280.16	1,223.03	57.13	22.410			
10,300.00	8,898.40	10,447.67	8,913.71	29.80	30.47	90.15	1,288.71	1,722.61	1,280.17	1,220.61	59.56	21.494			
10,400.00	8,898.25	10,547.67	8,913.59	31.04	31.72	90.15	1,388.71	1,721.97	1,280.18	1,218.10	62.07	20.623			
10,500.00	8,898.10	10,647.67	8,913.48	32.33	33.01	90.15	1,488.71	1,721.33	1,280.19	1,215.53	64.66	19.800			
10,600.00	8,897.94	10,747.67	8,913.37	33.64	34.33	90.15	1,588.70	1,720.68	1,280.19	1,212.90	67.30	19.023			
10,700.00	8,897.79	10,847.67	8,913.26	34.98	35.68	90.16	1,688.70	1,720.04	1,280.20	1,210.21	70.00	18.290			
10,800.00	8,897.64	10,947.67	8,913.15	36.34	37.04	90.16	1,788.70	1,719.40	1,280.21	1,207.47	72.74	17.600			
10,900.00	8,897.48	11,047.67	8,913.04	37.73	38.43	90.16	1,888.70	1,718.76	1,280.22	1,204.70	75.53	16.950			
11,000.00	8,897.33	11,147.67	8,912.93	39.13	39.84	90.16	1,988.70	1,718.11	1,280.23	1,201.88	78.35	16.339			
11,100.00	8,897.18	11,247.67	8,912.82	40.55	41.26	90.16	2,088.69	1,717.47	1,280.24	1,199.03	81.21	15.764			
11,200.00	8,897.02	11,347.67	8,912.71	41.99	42.70	90.16	2,188.69	1,716.83	1,280.25	1,196.15	84.10	15.222			
11,300.00	8,896.87	11,447.67	8,912.60	43.44	44.15	90.17	2,288.69	1,716.19	1,280.26	1,193.24	87.02	14.712			
11,400.00	8,896.72	11,547.67	8,912.48	44.91	45.62	90.17	2,388.69	1,715.55	1,280.27	1,190.31	89.96	14.231			
11,500.00	8,896.57	11,647.67	8,912.37	46.38	47.09	90.17	2,488.68	1,714.90	1,280.28	1,187.35	92.93	13.777			
11,600.00	8,896.41	11,747.67	8,912.26	47.87	48.58	90.17	2,588.68	1,714.26	1,280.29	1,184.37	95.91	13.348			
11,700.00	8,896.26	11,847.67	8,912.15	49.37	50.08	90.17	2,688.68	1,713.62	1,280.30	1,181.38	98.92	12.943			
11,800.00	8,896.11	11,947.67	8,912.04	50.87	51.58	90.18	2,788.68	1,712.98	1,280.31	1,178.37	101.94	12.559			
11,900.00	8,895.95	12,047.67	8,911.93	52.38	53.09	90.18	2,888.68	1,712.33	1,280.32	1,175.34	104.98	12.196			
12,000.00	8,895.80	12,147.67	8,911.82	53.90	54.61	90.18	2,988.67	1,711.69	1,280.33	1,172.30	108.03	11.852			
12,100.00	8,895.65	12,247.67	8,911.71	55.43	56.14	90.18	3,088.67	1,711.05	1,280.34	1,169.24	111.09	11.525			
12,200.00	8,895.49	12,347.67	8,911.60	56.96	57.67	90.18	3,188.67	1,710.41	1,280.35	1,166.18	114.17	11.214			
12,300.00	8,895.34	12,447.67	8,911.48	58.50	59.21	90.19	3,288.67	1,709.77	1,280.36	1,163.10	117.26	10.919			
12,400.00	8,895.19	12,547.67	8,911.37	60.05	60.75	90.19	3,388.67	1,709.12	1,280.37	1,160.01	120.35	10.638			
12,500.00	8,895.03	12,647.67	8,911.26	61.60	62.30	90.19	3,488.66	1,708.48	1,280.38	1,156.91	123.46	10.371			
12,600.00	8,894.88	12,747.67	8,911.15	63.15	63.86	90.19	3,588.66	1,707.84	1,280.38	1,153.81	126.58	10.116			
12,700.00	8,894.73	12,847.67	8,911.04	64.71	65.41	90.19	3,688.66	1,707.20	1,280.39	1,150.69	129.70	9.872			
12,800.00	8,894.58	12,947.67	8,910.93	66.27	66.97	90.19	3,788.66	1,706.56	1,280.40	1,147.57	132.83	9.639			
12,900.00	8,894.42	13,047.67	8,910.82	67.84	68.54	90.20	3,888.65	1,705.91	1,280.41	1,144.44	135.97	9.417			
13,000.00	8,894.27	13,147.67	8,910.71	69.41	70.11	90.20	3,988.65	1,705.27	1,280.42	1,141.31	139.11	9.204			
13,100.00	8,894.12	13,247.67	8,910.60	70.98	71.68	90.20	4,088.65	1,704.63	1,280.43	1,138.17	142.26	9.000			
13,200.00	8,893.96	13,347.67	8,910.48	72.55	73.25	90.20	4,188.65	1,703.99	1,280.44	1,135.02	145.42	8.805			
13,300.00	8,893.81	13,447.67	8,910.37	74.13	74.83	90.20	4,288.65	1,703.34	1,280.45	1,131.87	148.58	8.618			
13,400.00	8,893.66	13,547.67	8,910.26	75.71	76.41	90.21	4,388.64	1,702.70	1,280.46	1,128.71	151.75	8.438			
13,500.00	8,893.50	13,647.67	8,910.15	77.29	77.99	90.21	4,488.64	1,702.06	1,280.47	1,125.55	154.92	8.265			
13,600.00	8,893.35	13,747.67	8,910.04	78.88	79.58	90.21	4,588.64	1,701.42	1,280.48	1,122.38	158.10	8.099			
13,700.00	8,893.20	13,847.67	8,909.93	80.47	81.16	90.21	4,688.64	1,700.78	1,280.49	1,119.21	161.28	7.940			
13,800.00	8,893.04	13,947.67	8,909.82	82.06	82.75	90.21	4,788.64	1,700.13	1,280.50	1,116.04	164.46	7.786			
13,900.00	8,892.89	14,047.67	8,909.71	83.65	84.34	90.22	4,888.63	1,699.49	1,280.51	1,112.86	167.65	7.638			
14,000.00	8,892.74	14,147.67	8,909.60	85.24	85.93	90.22	4,988.63	1,698.85	1,280.52	1,109.68	170.84	7.495			
14,100.00	8,892.59	14,247.67	8,909.51	86.84	87.53	90.22	5,088.63	1,698.20	1,281.42	1,107.74	173.68	7.378			
14,200.00	8,892.43	14,347.67	8,909.43	88.43	89.12	90.22	5,188.63	1,697.56	1,281.43	1,106.84	176.43	7.282			
14,300.00	8,892.28	14,447.67	8,909.37	90.03	90.72	90.22	5,288.63	1,696.91	1,281.44	1,105.93	179.18	7.215			
14,400.00	8,892.13	14,547.67	8,909.30	91.63	92.31	90.22	5,388.63	1,696.27	1,281.45	1,105.01	181.93	7.162			
14,500.00	8,891.97	14,647.67	8,909.23	93.23	93.92	90.22	5,488.63	1,695.62	1,281.46	1,104.09	184.68	7.125			
14,600.00	8,891.82	14,747.67	8,909.17	94.83	95.52	90.22	5,588.63	1,694.97	1,281.47	1,103.17	187.43	7.113			
14,700.00	8,891.67	14,847.67	8,909.11	96.44	97.13	90.22	5,688.63	1,694.32	1,281.48	1,102.25	190.18	7.114			
14,800.00	8,891.51	14,947.67	8,909.04	98.04	98.73	90.22	5,788.63	1,693.67	1,281.49	1,101.33	192.93	7.119			
14,900.00	8,891.36	15,047.67	8,908.95	99.65	100.34	90.22	5,888.63	1,693.02	1,281.50	1,100.41	195.68	7.098			
15,000.00	8,891.21	15,147.67	8,908.87	101.26	101.95	90.22	5,988.63	1,692.37	1,281.51	1,100.00	198.43	7.078			
15,100.00	8,891.05	15,247.67	8,908.78	102.86	103.55	90.22	6,088.63	1,691.72	1,281.52	1,099.58	201.18	7.058			
15,200.00	8,890.90	15,347.67	8,908.68	104.47	105.16	90.22	6,188.63	1,691.07	1,281.53	1,099.17	203.93	7.018			

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 513H
<b>Project:</b>	Eddy County, NM (NAD-83)	<b>TVD Reference:</b>	3476.8' GE + 23.5' KB @ 3500.30usft
<b>Reference Site:</b>	Belloq 11-2 Fed State Com	<b>MD Reference:</b>	3476.8' GE + 23.5' KB @ 3500.30usft
<b>Site Error:</b>	0.00 usft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	Belloq 11-2 Fed State Com 513H	<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 514H - OH - Plan #2															
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	8,890.75	15,319.58	8,908.51	106.08	102.49	90.22	6,149.76	1,843.39	1,439.44	1,231.01	208.43	6.906			
15,400.00	8,890.60	15,520.66	8,908.33	107.69	105.29	90.22	6,350.48	1,854.59	1,445.67	1,232.86	212.80	6.793			
15,500.00	8,890.44	15,650.56	8,908.22	109.30	107.24	90.23	6,480.37	1,855.21	1,446.62	1,230.45	216.18	6.692			
15,600.00	8,890.29	15,750.55	8,908.13	110.92	108.85	90.23	6,580.37	1,855.21	1,447.28	1,227.87	219.40	6.596			
15,700.00	8,890.14	15,850.55	8,908.04	112.53	110.46	90.23	6,680.37	1,855.21	1,447.93	1,225.30	222.63	6.504			
15,800.00	8,889.98	15,950.55	8,907.95	114.14	112.06	90.24	6,780.37	1,855.21	1,448.58	1,222.72	225.86	6.414			
15,900.00	8,889.83	16,050.55	8,907.87	115.76	113.67	90.24	6,880.37	1,855.21	1,449.23	1,220.15	229.08	6.326			
16,000.00	8,889.68	16,150.55	8,907.78	117.38	115.29	90.24	6,980.36	1,855.21	1,449.88	1,217.57	232.32	6.241			
16,100.00	8,889.52	16,322.88	8,907.63	118.99	117.82	90.25	7,152.63	1,851.64	1,448.77	1,213.16	235.61	6.149			
16,200.00	8,889.37	16,524.05	8,907.45	120.61	120.73	90.25	7,353.04	1,834.56	1,440.92	1,202.94	237.99	6.055			
16,300.00	8,889.22	16,701.07	8,907.30	122.23	123.33	90.26	7,528.03	1,808.01	1,426.31	1,186.54	239.77	5.949			
16,400.00	8,889.06	16,799.66	8,907.21	123.84	124.93	90.27	7,625.12	1,790.89	1,409.59	1,166.57	243.01	5.800			
16,500.00	8,888.91	16,898.25	8,907.13	125.46	126.54	90.27	7,722.22	1,773.77	1,392.86	1,146.61	246.25	5.656			
16,600.00	8,888.76	16,996.84	8,907.04	127.08	128.14	90.28	7,819.31	1,756.65	1,376.14	1,126.64	249.50	5.516			
16,700.00	8,888.61	17,095.44	8,906.95	128.70	129.75	90.29	7,916.41	1,739.53	1,359.42	1,106.68	252.74	5.379			
16,800.00	8,888.45	17,194.03	8,906.87	130.32	131.36	90.29	8,013.50	1,722.41	1,342.70	1,086.71	255.99	5.245			
16,900.00	8,888.30	17,268.66	8,906.80	131.94	132.53	90.30	8,087.07	1,709.91	1,326.66	1,066.95	259.71	5.108			
17,000.00	8,888.15	17,336.47	8,906.74	133.56	133.54	90.30	8,154.17	1,700.13	1,312.89	1,049.47	263.42	4.984			
17,100.00	8,887.99	17,400.00	8,906.69	135.18	134.45	90.30	8,217.24	1,692.42	1,301.49	1,034.44	267.05	4.874			
17,200.00	8,887.84	17,473.24	8,906.62	136.81	135.49	90.31	8,290.13	1,685.27	1,292.44	1,022.03	270.41	4.780			
17,300.00	8,887.69	17,542.06	8,906.56	138.43	136.48	90.31	8,358.76	1,680.24	1,285.79	1,012.10	273.70	4.698			
17,400.00	8,887.53	17,600.00	8,906.51	140.05	137.31	90.31	8,416.62	1,677.30	1,281.62	1,004.79	276.83	4.630			
17,500.00	8,887.38	17,680.15	8,906.43	141.67	138.45	90.32	8,496.75	1,675.15	1,279.71	999.89	279.82	4.573			
17,528.78	8,887.34	17,700.76	8,906.41	142.14	138.75	90.32	8,517.35	1,674.96	1,279.63	998.97	280.66	4.559			
17,600.00	8,887.23	17,771.98	8,906.35	143.30	139.90	90.32	8,588.57	1,674.50	1,279.63	996.66	282.97	4.522			
17,700.00	8,887.07	17,871.98	8,906.25	144.92	141.52	90.32	8,688.57	1,673.85	1,279.64	993.42	286.22	4.471			
17,800.00	8,886.92	17,971.98	8,906.16	146.55	143.14	90.32	8,788.57	1,673.21	1,279.65	990.18	289.46	4.421			
17,900.00	8,886.77	18,071.98	8,906.07	148.17	144.76	90.33	8,888.56	1,672.56	1,279.66	986.94	292.71	4.372			
18,000.00	8,886.62	18,171.98	8,905.98	149.80	146.39	90.33	8,988.56	1,671.92	1,279.66	983.70	295.96	4.324			
18,100.00	8,886.46	18,271.98	8,905.88	151.42	148.01	90.33	9,088.56	1,671.28	1,279.67	980.46	299.21	4.277			
18,200.00	8,886.31	18,371.98	8,905.79	153.05	149.63	90.33	9,188.56	1,670.63	1,279.68	977.22	302.46	4.231			
18,300.00	8,886.16	18,471.98	8,905.70	154.67	151.25	90.34	9,288.55	1,669.99	1,279.69	973.98	305.71	4.186			
18,400.00	8,886.00	18,571.98	8,905.61	156.30	152.88	90.34	9,388.55	1,669.34	1,279.70	970.73	308.96	4.142			
18,500.00	8,885.85	18,671.98	8,905.51	157.93	154.50	90.34	9,488.55	1,668.70	1,279.70	967.49	312.21	4.099			
18,600.00	8,885.70	18,771.98	8,905.42	159.55	156.13	90.35	9,588.55	1,668.06	1,279.71	964.24	315.47	4.057			
18,700.00	8,885.54	18,871.98	8,905.33	161.18	157.75	90.35	9,688.55	1,667.41	1,279.72	961.00	318.72	4.015			
18,800.00	8,885.39	18,971.98	8,905.23	162.81	159.37	90.35	9,788.54	1,666.77	1,279.73	957.75	321.97	3.975			
18,900.00	8,885.24	19,071.98	8,905.14	164.43	161.00	90.35	9,888.54	1,666.12	1,279.73	954.51	325.23	3.935			
19,000.00	8,885.08	19,171.98	8,905.05	166.06	162.62	90.36	9,988.54	1,665.48	1,279.74	951.26	328.48	3.896			
19,003.97	8,885.08	19,175.95	8,905.05	166.13	162.69	90.36	9,992.51	1,665.45	1,279.74	951.13	328.61	3.894			
19,055.11	8,885.00	19,224.84	8,905.00	166.96	163.40	90.36	10,041.40	1,665.14	1,279.75	949.58	330.17	3.876 ES, SF			

# LEAM Drilling Services

## Anticollision Report

<b>Company:</b>	Devon Energy	<b>Local Co-ordinate Reference:</b>	Well Belloq 11-2 Fed State Com 513H
<b>Project:</b>	Eddy County, NM (NAD-83)	<b>TVD Reference:</b>	3476.8' GE + 23.5' KB @ 3500.30usft
<b>Reference Site:</b>	Belloq 11-2 Fed State Com	<b>MD Reference:</b>	3476.8' GE + 23.5' KB @ 3500.30usft
<b>Site Error:</b>	0.00 usft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	Belloq 11-2 Fed State Com 513H	<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					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)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)				
0.00	0.00	0.00	0.00	0.00	0.00	-99.07	-202.95	-1,271.84	1,288.11						
100.00	100.00	78.80	78.80	0.09	0.07	-99.07	-202.95	-1,271.84	1,287.93	1,287.78	0.15	8,378.424			
200.00	200.00	178.80	178.80	0.31	0.26	-99.07	-202.95	-1,271.84	1,287.93	1,287.36	0.57	2,244.455			
300.00	300.00	278.80	278.80	0.54	0.49	-99.07	-202.95	-1,271.84	1,287.93	1,286.91	1.02	1,258.532			
400.00	400.00	378.80	378.80	0.76	0.71	-99.07	-202.95	-1,271.84	1,287.93	1,286.46	1.47	874.423			
500.00	500.00	478.80	478.80	0.99	0.94	-99.07	-202.95	-1,271.84	1,287.93	1,286.01	1.92	669.951			
600.00	600.00	578.80	578.80	1.21	1.16	-99.07	-202.95	-1,271.84	1,287.93	1,285.56	2.37	542.983			
700.00	700.00	678.80	678.80	1.43	1.39	-99.07	-202.95	-1,271.84	1,287.93	1,285.11	2.82	456.472			
800.00	800.00	778.80	778.80	1.66	1.61	-99.07	-202.95	-1,271.84	1,287.93	1,284.66	3.27	393.740			
900.00	900.00	878.80	878.80	1.88	1.84	-99.07	-202.95	-1,271.84	1,287.93	1,284.21	3.72	346.167			
1,000.00	1,000.00	978.80	978.80	2.11	2.06	-99.07	-202.95	-1,271.84	1,287.93	1,283.76	4.17	308.850			
1,100.00	1,100.00	1,078.80	1,078.80	2.33	2.29	-99.07	-202.95	-1,271.84	1,287.93	1,283.31	4.62	278.796			
1,200.00	1,200.00	1,178.80	1,178.80	2.56	2.51	-99.07	-202.95	-1,271.84	1,287.93	1,282.86	5.07	254.072			
1,300.00	1,300.00	1,278.80	1,278.80	2.78	2.74	-99.07	-202.95	-1,271.84	1,287.93	1,282.41	5.52	233.377			
1,400.00	1,400.00	1,378.80	1,378.80	3.01	2.96	-99.07	-202.95	-1,271.84	1,287.93	1,281.96	5.97	215.798			
1,500.00	1,500.00	1,478.80	1,478.80	3.23	3.19	-99.07	-202.95	-1,271.84	1,287.93	1,281.51	6.42	200.683			
1,600.00	1,600.00	1,578.80	1,578.80	3.46	3.41	-99.07	-202.95	-1,271.84	1,287.93	1,281.06	6.87	187.546			
1,700.00	1,700.00	1,678.80	1,678.80	3.68	3.63	-99.07	-202.95	-1,271.84	1,287.93	1,280.61	7.32	176.024			
1,800.00	1,800.00	1,778.80	1,778.80	3.91	3.86	-99.07	-202.95	-1,271.84	1,287.93	1,280.16	7.77	165.835			
1,900.00	1,900.00	1,878.80	1,878.80	4.13	4.08	-99.07	-202.95	-1,271.84	1,287.93	1,279.71	8.22	156.761			
2,000.00	2,000.00	1,978.80	1,978.80	4.36	4.31	-99.07	-202.95	-1,271.84	1,287.93	1,279.27	8.67	148.629			
2,100.00	2,100.00	2,078.80	2,078.80	4.58	4.53	-99.07	-202.95	-1,271.84	1,287.93	1,278.82	9.11	141.299			
2,200.00	2,200.00	2,178.80	2,178.80	4.81	4.76	-99.07	-202.95	-1,271.84	1,287.93	1,278.37	9.56	134.658			
2,300.00	2,300.00	2,278.80	2,278.80	5.03	4.98	-99.07	-202.95	-1,271.84	1,287.93	1,277.92	10.01	128.613			
2,400.00	2,400.00	2,378.80	2,378.80	5.26	5.21	-99.07	-202.95	-1,271.84	1,287.93	1,277.47	10.46	123.088			
2,500.00	2,500.00	2,478.80	2,478.80	5.48	5.43	-99.07	-202.95	-1,271.84	1,287.93	1,277.02	10.91	118.017	CC, ES		
2,600.00	2,599.99	2,567.60	2,567.60	5.68	5.61	134.46	-203.26	-1,272.09	1,288.88	1,277.59	11.30	114.100			
2,700.00	2,699.96	2,653.33	2,653.31	5.86	5.77	134.45	-204.56	-1,273.11	1,292.14	1,280.50	11.63	111.074			
2,800.00	2,799.86	2,738.93	2,738.86	6.05	5.93	134.44	-206.85	-1,274.93	1,297.71	1,285.75	11.97	108.455			
2,900.00	2,899.68	2,824.34	2,824.17	6.24	6.08	134.43	-210.14	-1,277.54	1,305.60	1,293.30	12.30	106.130			
3,000.00	2,999.37	2,916.59	2,916.23	6.44	6.25	134.41	-214.65	-1,281.11	1,315.67	1,303.01	12.66	103.931			
3,100.00	3,098.90	3,015.90	3,015.34	6.64	6.44	134.44	-219.64	-1,285.06	1,327.09	1,314.05	13.04	101.774			
3,200.00	3,198.29	3,115.06	3,114.30	6.85	6.63	134.55	-224.62	-1,289.01	1,339.55	1,326.12	13.43	99.756			
3,300.00	3,297.66	3,214.20	3,213.23	7.06	6.82	134.70	-229.60	-1,292.95	1,352.14	1,338.32	13.82	97.816			
3,400.00	3,397.02	3,313.33	3,312.17	7.29	7.02	134.86	-234.58	-1,296.89	1,364.74	1,350.52	14.23	95.937			
3,500.00	3,496.39	3,412.47	3,411.10	7.51	7.22	135.00	-239.56	-1,300.84	1,377.36	1,362.72	14.63	94.121			
3,600.00	3,595.76	3,511.61	3,510.04	7.74	7.43	135.15	-244.55	-1,304.78	1,389.98	1,374.93	15.05	92.368			
3,700.00	3,695.12	3,610.75	3,608.97	7.98	7.63	135.29	-249.53	-1,308.73	1,402.61	1,387.14	15.47	90.679			
3,800.00	3,794.49	3,709.89	3,707.90	8.22	7.84	135.44	-254.51	-1,312.67	1,415.25	1,399.36	15.89	89.052			
3,900.00	3,893.85	3,809.03	3,806.84	8.46	8.05	135.57	-259.49	-1,316.62	1,427.90	1,411.57	16.32	87.485			
4,000.00	3,993.22	3,908.16	3,905.77	8.70	8.27	135.71	-264.47	-1,320.56	1,440.55	1,423.80	16.75	85.979			
4,100.00	4,092.59	4,007.30	4,004.71	8.95	8.48	135.84	-269.45	-1,324.51	1,453.22	1,436.02	17.19	84.529			
4,200.00	4,191.95	4,106.44	4,103.64	9.20	8.70	135.98	-274.43	-1,328.45	1,465.89	1,448.25	17.63	83.136			
4,300.00	4,291.32	4,205.58	4,202.58	9.45	8.92	136.10	-279.41	-1,332.40	1,478.57	1,460.49	18.08	81.796			
4,400.00	4,390.69	4,304.72	4,301.51	9.71	9.14	136.23	-284.39	-1,336.34	1,491.25	1,472.73	18.52	80.507			
4,500.00	4,490.05	4,403.86	4,400.45	9.97	9.36	136.36	-289.37	-1,340.29	1,503.94	1,484.97	18.97	79.268			
4,600.00	4,589.42	4,502.99	4,499.38	10.23	9.58	136.48	-294.35	-1,344.23	1,516.64	1,497.22	19.43	78.076			
4,700.00	4,688.79	4,602.13	4,598.31	10.49	9.81	136.60	-299.33	-1,348.17	1,529.35	1,509.47	19.88	76.930			
4,800.00	4,788.15	4,701.27	4,697.25	10.75	10.03	136.72	-304.31	-1,352.12	1,542.06	1,521.73	20.34	75.826			
4,900.00	4,887.52	4,800.41	4,796.18	11.01	10.26	136.84	-309.29	-1,356.06	1,554.78	1,533.99	20.80	74.764			
5,000.00	4,986.88	4,899.55	4,895.12	11.28	10.49	136.95	-314.27	-1,360.01	1,567.51	1,546.25	21.26	73.742			
5,100.00	5,086.25	4,998.69	4,994.05	11.55	10.71	137.06	-319.25	-1,363.95	1,580.24	1,558.52	21.72	72.757			

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 513H
<b>Project:</b>	Eddy County, NM (NAD-83)	<b>TVD Reference:</b>	3476.8' GE + 23.5' KB @ 3500.30usft
<b>Reference Site:</b>	Belloq 11-2 Fed State Com	<b>MD Reference:</b>	3476.8' GE + 23.5' KB @ 3500.30usft
<b>Site Error:</b>	0.00 usft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	Belloq 11-2 Fed State Com 513H	<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			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	5,185.62	5,097.82	5,092.99	11.81	10.94	137.17	-324.24	-1,367.90	1,592.98	1,570.80	22.18	71.807			
5,300.00	5,284.98	5,196.96	5,191.92	12.08	11.17	137.28	-329.22	-1,371.84	1,605.72	1,583.07	22.65	70.892			
5,400.00	5,384.35	5,296.10	5,290.86	12.35	11.40	137.39	-334.20	-1,375.79	1,618.47	1,595.36	23.12	70.010			
5,500.00	5,483.72	5,395.24	5,389.79	12.62	11.63	137.50	-339.18	-1,379.73	1,631.23	1,607.64	23.59	69.159			
5,600.00	5,583.08	5,494.38	5,488.72	12.90	11.87	137.60	-344.16	-1,383.68	1,643.99	1,619.93	24.06	68.337			
5,700.00	5,682.45	5,593.51	5,587.66	13.17	12.10	137.71	-349.14	-1,387.62	1,656.76	1,632.23	24.53	67.544			
5,800.00	5,781.82	5,692.65	5,686.59	13.44	12.33	137.81	-354.12	-1,391.57	1,669.53	1,644.53	25.00	66.778			
5,900.00	5,881.18	5,791.79	5,785.53	13.72	12.57	137.91	-359.10	-1,395.51	1,682.30	1,656.83	25.47	66.038			
6,000.00	5,980.55	5,890.93	5,884.46	13.99	12.80	138.00	-364.08	-1,399.46	1,695.08	1,669.13	25.95	65.322			
6,100.00	6,079.91	5,990.07	5,983.40	14.27	13.03	138.10	-369.06	-1,403.40	1,707.87	1,681.44	26.43	64.630			
6,200.00	6,179.28	6,089.21	6,082.33	14.54	13.27	138.20	-374.04	-1,407.34	1,720.66	1,693.76	26.90	63.960			
6,300.00	6,278.65	6,188.34	6,181.27	14.82	13.51	138.29	-379.02	-1,411.29	1,733.46	1,706.08	27.38	63.312			
6,400.00	6,378.01	6,287.48	6,280.20	15.10	13.74	138.38	-384.00	-1,415.23	1,746.25	1,718.40	27.86	62.684			
6,500.00	6,477.38	6,386.62	6,379.13	15.38	13.98	138.47	-388.98	-1,419.18	1,759.06	1,730.72	28.34	62.076			
6,600.00	6,576.75	6,485.76	6,478.07	15.66	14.21	138.56	-393.96	-1,423.12	1,771.87	1,743.05	28.82	61.487			
6,700.00	6,676.11	6,584.90	6,577.00	15.94	14.45	138.65	-398.94	-1,427.07	1,784.68	1,755.38	29.30	60.915			
6,800.00	6,775.48	6,684.04	6,675.94	16.22	14.69	138.74	-403.93	-1,431.01	1,797.50	1,767.72	29.78	60.361			
6,900.00	6,874.85	6,783.17	6,774.87	16.50	14.93	138.83	-408.91	-1,434.96	1,810.32	1,780.06	30.26	59.824			
7,000.00	6,974.21	6,882.31	6,873.81	16.78	15.17	138.91	-413.89	-1,438.90	1,823.14	1,792.40	30.74	59.302			
7,100.00	7,073.58	6,981.45	6,972.74	17.06	15.40	138.99	-418.87	-1,442.85	1,835.97	1,804.74	31.23	58.795			
7,200.00	7,172.94	7,080.59	7,071.68	17.34	15.64	139.08	-423.85	-1,446.79	1,848.80	1,817.09	31.71	58.303			
7,300.00	7,272.31	7,179.73	7,170.61	17.62	15.88	139.16	-428.83	-1,450.74	1,861.64	1,829.45	32.19	57.825			
7,400.00	7,371.68	7,278.87	7,269.54	17.90	16.12	139.24	-433.81	-1,454.68	1,874.48	1,841.80	32.68	57.361			
7,500.00	7,471.04	7,378.00	7,368.48	18.19	16.36	139.32	-438.79	-1,458.63	1,887.32	1,854.16	33.16	56.909			
7,600.00	7,570.48	7,477.54	7,467.81	18.44	16.60	139.45	-443.79	-1,462.59	1,899.66	1,866.03	33.63	56.489			
7,700.00	7,670.09	7,605.58	7,595.67	18.65	16.86	139.59	-449.08	-1,466.77	1,909.93	1,875.82	34.11	55.994			
7,800.00	7,769.84	7,734.06	7,724.09	18.86	17.11	139.73	-452.13	-1,469.19	1,917.39	1,882.81	34.57	55.463			
7,900.00	7,869.69	7,858.47	7,848.49	19.06	17.35	139.87	-452.95	-1,469.84	1,922.03	1,887.02	35.01	54.895			
8,000.00	7,969.62	7,958.40	7,948.42	19.25	17.55	139.95	-452.95	-1,469.84	1,924.80	1,889.40	35.40	54.377			
8,100.00	8,069.60	8,058.38	8,048.40	19.42	17.74	140.00	-452.95	-1,469.84	1,926.23	1,890.46	35.78	53.841			
8,200.00	8,169.60	8,158.38	8,148.40	19.60	17.93	-93.51	-452.95	-1,469.84	1,926.45	1,890.29	36.16	53.274			
8,300.00	8,269.60	8,258.38	8,248.40	19.79	18.13	-93.51	-452.95	-1,469.84	1,926.45	1,889.91	36.55	52.709			
8,300.01	8,269.61	8,258.39	8,248.41	19.79	18.13	-93.51	-452.95	-1,469.84	1,926.45	1,889.91	36.55	52.709			
8,400.00	8,369.56	8,358.34	8,348.36	19.96	18.32	-93.18	-452.95	-1,469.84	1,926.54	1,889.61	36.93	52.164			
8,500.00	8,468.14	8,456.91	8,446.94	20.09	18.51	-93.55	-452.95	-1,469.84	1,927.50	1,890.23	37.27	51.722			
8,600.00	8,562.42	8,576.23	8,565.83	20.17	18.73	-94.32	-445.22	-1,469.89	1,929.43	1,891.86	37.57	51.355			
8,700.00	8,649.56	8,712.10	8,695.98	20.20	18.90	-95.04	-407.37	-1,470.14	1,931.33	1,893.55	37.78	51.121			
8,800.00	8,726.89	8,856.64	8,820.53	20.20	19.03	-95.57	-334.78	-1,470.61	1,932.81	1,894.88	37.93	50.964			
8,900.00	8,792.07	9,007.08	8,926.64	20.17	19.12	-95.82	-228.74	-1,471.30	1,933.55	1,895.43	38.13	50.710			
9,000.00	8,843.13	9,159.14	9,002.19	20.12	19.32	-95.77	-97.30	-1,472.15	1,933.40	1,894.85	38.55	50.152			
9,100.00	8,878.50	9,308.05	9,040.23	20.07	19.87	-95.42	46.24	-1,473.08	1,932.38	1,893.09	39.29	49.183			
9,200.00	8,897.12	9,429.86	9,045.07	20.09	20.51	-95.00	167.83	-1,473.88	1,930.98	1,890.75	40.24	47.991			
9,295.33	8,902.05	9,525.03	9,045.23	20.43	21.11	-94.88	263.00	-1,474.49	1,930.57	1,889.34	41.23	46.829			
9,300.00	8,899.93	9,529.76	9,045.23	20.45	21.14	-94.95	267.74	-1,474.52	1,930.75	1,889.47	41.28	46.776			
9,400.00	8,899.78	9,629.76	9,045.39	21.02	21.88	-94.96	367.74	-1,475.17	1,930.77	1,888.24	42.53	45.393			
9,500.00	8,899.63	9,729.76	9,045.55	21.69	22.71	-94.97	467.73	-1,475.82	1,930.80	1,886.80	44.00	43.882			
9,600.00	8,899.47	9,829.76	9,045.71	22.46	23.63	-94.97	567.73	-1,476.47	1,930.83	1,885.17	45.65	42.294			
9,700.00	8,899.32	9,929.76	9,045.87	23.31	24.61	-94.98	667.73	-1,477.12	1,930.85	1,883.38	47.47	40.672			
9,800.00	8,899.17	10,029.76	9,046.03	24.24	25.67	-94.99	767.73	-1,477.77	1,930.88	1,881.43	49.44	39.052			
9,900.00	8,899.02	10,129.76	9,046.19	25.24	26.78	-95.00	867.72	-1,478.42	1,930.90	1,879.36	51.55	37.460			
10,000.00	8,898.86	10,229.76	9,046.35	26.31	27.95	-95.01	967.72	-1,479.08	1,930.93	1,877.16	53.77	35.914			
10,100.00	8,898.71	10,329.76	9,046.51	27.42	29.16	-95.02	1,067.72	-1,479.73	1,930.95	1,874.87	56.09	34.427			

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 513H
<b>Project:</b>	Eddy County, NM (NAD-83)	<b>TVD Reference:</b>	3476.8' GE + 23.5' KB @ 3500.30usft
<b>Reference Site:</b>	Belloq 11-2 Fed State Com	<b>MD Reference:</b>	3476.8' GE + 23.5' KB @ 3500.30usft
<b>Site Error:</b>	0.00 usft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	Belloq 11-2 Fed State Com 513H	<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			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		
10,200.00	8,898.56	10,429.76	9,046.67	28.59	30.41	-95.03	1,167.71	-1,480.38	1,930.98	1,872.48	58.50	33.007		
10,300.00	8,898.40	10,529.76	9,046.83	29.80	31.69	-95.04	1,267.71	-1,481.03	1,931.01	1,870.01	60.99	31.659		
10,400.00	8,898.25	10,629.76	9,046.98	31.04	33.01	-95.05	1,367.71	-1,481.68	1,931.03	1,867.47	63.56	30.382		
10,500.00	8,898.10	10,729.76	9,047.14	32.33	34.35	-95.06	1,467.71	-1,482.33	1,931.06	1,864.87	66.18	29.177		
10,600.00	8,897.94	10,829.76	9,047.30	33.64	35.72	-95.07	1,567.70	-1,482.98	1,931.08	1,862.22	68.87	28.041		
10,700.00	8,897.79	10,929.76	9,047.46	34.98	37.11	-95.08	1,667.70	-1,483.63	1,931.11	1,859.51	71.60	26.972		
10,800.00	8,897.64	11,029.76	9,047.62	36.34	38.52	-95.09	1,767.70	-1,484.28	1,931.14	1,856.77	74.37	25.967		
10,900.00	8,897.48	11,129.76	9,047.78	37.73	39.95	-95.09	1,867.70	-1,484.93	1,931.16	1,853.98	77.18	25.021		
11,000.00	8,897.33	11,229.76	9,047.94	39.13	41.39	-95.10	1,967.69	-1,485.58	1,931.19	1,851.16	80.03	24.131		
11,100.00	8,897.18	11,329.76	9,048.10	40.55	42.85	-95.11	2,067.69	-1,486.23	1,931.21	1,848.31	82.91	23.293		
11,200.00	8,897.02	11,429.76	9,048.26	41.99	44.32	-95.12	2,167.69	-1,486.88	1,931.24	1,845.43	85.81	22.505		
11,300.00	8,896.87	11,529.75	9,048.42	43.44	45.80	-95.13	2,267.68	-1,487.53	1,931.27	1,842.52	88.75	21.762		
11,400.00	8,896.72	11,629.75	9,048.58	44.91	47.30	-95.14	2,367.68	-1,488.18	1,931.29	1,839.59	91.70	21.061		
11,500.00	8,896.57	11,729.75	9,048.73	46.38	48.80	-95.15	2,467.68	-1,488.83	1,931.32	1,836.65	94.68	20.399		
11,600.00	8,896.41	11,829.75	9,048.89	47.87	50.31	-95.16	2,567.68	-1,489.48	1,931.35	1,833.68	97.67	19.774		
11,700.00	8,896.26	11,929.75	9,049.05	49.37	51.83	-95.17	2,667.67	-1,490.13	1,931.37	1,830.69	100.68	19.183		
11,800.00	8,896.11	12,029.75	9,049.21	50.87	53.35	-95.18	2,767.67	-1,490.78	1,931.40	1,827.69	103.71	18.624		
11,900.00	8,895.95	12,129.75	9,049.37	52.38	54.89	-95.19	2,867.67	-1,491.43	1,931.43	1,824.68	106.75	18.094		
12,000.00	8,895.80	12,229.75	9,049.53	53.90	56.42	-95.20	2,967.67	-1,492.08	1,931.45	1,821.65	109.80	17.591		
12,100.00	8,895.65	12,329.75	9,049.69	55.43	57.97	-95.21	3,067.66	-1,492.73	1,931.48	1,818.61	112.87	17.113		
12,200.00	8,895.49	12,429.75	9,049.85	56.96	59.52	-95.21	3,167.66	-1,493.38	1,931.51	1,815.56	115.94	16.659		
12,300.00	8,895.34	12,529.75	9,050.01	58.50	61.07	-95.22	3,267.66	-1,494.03	1,931.53	1,812.50	119.03	16.227		
12,400.00	8,895.19	12,629.75	9,050.17	60.05	62.63	-95.23	3,367.65	-1,494.68	1,931.56	1,809.44	122.13	15.816		
12,500.00	8,895.03	12,729.75	9,050.33	61.60	64.19	-95.24	3,467.65	-1,495.33	1,931.59	1,806.36	125.23	15.424		
12,600.00	8,894.88	12,829.75	9,050.49	63.15	65.76	-95.25	3,567.65	-1,495.98	1,931.62	1,803.27	128.34	15.050		
12,700.00	8,894.73	12,929.75	9,050.64	64.71	67.32	-95.26	3,667.65	-1,496.63	1,931.64	1,800.18	131.46	14.693		
12,800.00	8,894.58	13,029.75	9,050.80	66.27	68.90	-95.27	3,767.64	-1,497.28	1,931.67	1,797.08	134.59	14.352		
12,900.00	8,894.42	13,129.75	9,050.96	67.84	70.47	-95.28	3,867.64	-1,497.93	1,931.70	1,793.97	137.72	14.026		
13,000.00	8,894.27	13,229.75	9,051.12	69.41	72.05	-95.29	3,967.64	-1,498.58	1,931.72	1,790.86	140.86	13.713		
13,100.00	8,894.12	13,329.75	9,051.28	70.98	73.63	-95.30	4,067.64	-1,499.23	1,931.75	1,787.74	144.01	13.414		
13,200.00	8,893.96	13,429.75	9,051.44	72.55	75.22	-95.31	4,167.63	-1,499.88	1,931.78	1,784.62	147.16	13.127		
13,300.00	8,893.81	13,529.75	9,051.60	74.13	76.80	-95.32	4,267.63	-1,500.53	1,931.81	1,781.49	150.31	12.852		
13,400.00	8,893.66	13,629.74	9,051.76	75.71	78.39	-95.33	4,367.63	-1,501.18	1,931.83	1,778.36	153.47	12.587		
13,500.00	8,893.50	13,729.74	9,051.92	77.29	79.98	-95.33	4,467.62	-1,501.83	1,931.86	1,775.22	156.64	12.333		
13,600.00	8,893.35	13,829.74	9,052.08	78.88	81.57	-95.34	4,567.62	-1,502.48	1,931.89	1,772.08	159.81	12.089		
13,700.00	8,893.20	13,929.74	9,052.24	80.47	83.17	-95.35	4,667.62	-1,503.13	1,931.92	1,768.94	162.98	11.854		
13,800.00	8,893.04	14,029.74	9,052.40	82.06	84.76	-95.36	4,767.62	-1,503.78	1,931.94	1,765.79	166.16	11.627		
13,900.00	8,892.89	14,129.74	9,052.55	83.65	86.36	-95.37	4,867.61	-1,504.43	1,931.97	1,762.64	169.33	11.409		
14,000.00	8,892.74	14,229.74	9,052.71	85.24	87.96	-95.38	4,967.61	-1,505.08	1,932.00	1,759.48	172.52	11.199		
14,100.00	8,892.59	14,329.74	9,052.87	86.84	89.56	-95.39	5,067.61	-1,505.73	1,932.03	1,756.32	175.70	10.996		
14,200.00	8,892.43	14,429.74	9,053.03	88.43	91.16	-95.40	5,167.61	-1,506.38	1,932.05	1,753.16	178.89	10.800		
14,300.00	8,892.28	14,529.74	9,053.19	90.03	92.77	-95.41	5,267.60	-1,507.03	1,932.08	1,750.00	182.08	10.611		
14,400.00	8,892.13	14,629.74	9,053.35	91.63	94.37	-95.42	5,367.60	-1,507.68	1,932.11	1,746.84	185.27	10.428		
14,500.00	8,891.97	14,729.74	9,053.51	93.23	95.98	-95.43	5,467.60	-1,508.33	1,932.14	1,743.67	188.47	10.252		
14,600.00	8,891.82	14,829.74	9,053.67	94.83	97.58	-95.44	5,567.59	-1,508.98	1,932.17	1,740.50	191.67	10.081		
14,700.00	8,891.67	14,929.74	9,053.83	96.44	99.19	-95.45	5,667.59	-1,509.63	1,932.19	1,737.33	194.87	9.915		
14,800.00	8,891.51	15,029.74	9,053.99	98.04	100.80	-95.45	5,767.59	-1,510.28	1,932.22	1,734.15	198.07	9.755		
14,900.00	8,891.36	15,129.74	9,054.15	99.65	102.41	-95.46	5,867.59	-1,510.93	1,932.25	1,730.98	201.28	9.600		
15,000.00	8,891.21	15,229.74	9,054.30	101.26	104.02	-95.47	5,967.58	-1,511.58	1,932.28	1,727.80	204.48	9.450		
15,100.00	8,891.05	15,329.74	9,054.46	102.86	105.63	-95.48	6,067.58	-1,512.23	1,932.31	1,724.62	207.69	9.304		
15,200.00	8,890.90	15,429.74	9,054.62	104.47	107.25	-95.49	6,167.58	-1,512.88	1,932.34	1,721.44	210.90	9.162		
15,300.00	8,890.75	15,529.74	9,054.78	106.08	108.86	-95.50	6,267.58	-1,513.53	1,932.36	1,718.25	214.11	9.025		

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 513H
<b>Project:</b>	Eddy County, NM (NAD-83)	<b>TVD Reference:</b>	3476.8' GE + 23.5' KB @ 3500.30usft
<b>Reference Site:</b>	Belloq 11-2 Fed State Com	<b>MD Reference:</b>	3476.8' GE + 23.5' KB @ 3500.30usft
<b>Site Error:</b>	0.00 usft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	Belloq 11-2 Fed State Com 513H	<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 (°)	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)				
15,400.00	8,890.60	15,629.73	9,054.94	107.69	110.47	-95.51	6,367.57	-1,514.18	1,932.39	1,715.07	217.32	8.892		
15,500.00	8,890.44	15,729.73	9,055.10	109.30	112.09	-95.52	6,467.57	-1,514.83	1,932.42	1,711.88	220.54	8.762		
15,600.00	8,890.29	15,829.73	9,055.26	110.92	113.70	-95.53	6,567.57	-1,515.48	1,932.45	1,708.70	223.75	8.637		
15,700.00	8,890.14	15,929.73	9,055.42	112.53	115.32	-95.54	6,667.56	-1,516.13	1,932.48	1,705.51	226.97	8.514		
15,800.00	8,889.98	16,029.73	9,055.58	114.14	116.94	-95.55	6,767.56	-1,516.78	1,932.51	1,702.32	230.19	8.395		
15,900.00	8,889.83	16,129.73	9,055.74	115.76	118.55	-95.56	6,867.56	-1,517.43	1,932.54	1,699.13	233.41	8.280		
16,000.00	8,889.68	16,229.73	9,055.90	117.38	120.17	-95.57	6,967.56	-1,518.08	1,932.56	1,695.94	236.63	8.167		
16,100.00	8,889.52	16,329.73	9,056.06	118.99	121.79	-95.57	7,067.55	-1,518.73	1,932.59	1,692.74	239.85	8.058		
16,200.00	8,889.37	16,429.73	9,056.21	120.61	123.41	-95.58	7,167.55	-1,519.38	1,932.62	1,689.55	243.07	7.951		
16,300.00	8,889.22	16,529.73	9,056.37	122.23	125.03	-95.59	7,267.55	-1,520.03	1,932.65	1,686.35	246.30	7.847		
16,400.00	8,889.06	16,629.73	9,056.53	123.84	126.65	-95.60	7,367.55	-1,520.68	1,932.68	1,683.16	249.52	7.746		
16,500.00	8,888.91	16,729.73	9,056.69	125.46	128.27	-95.61	7,467.54	-1,521.33	1,932.71	1,679.96	252.75	7.647		
16,600.00	8,888.76	16,829.73	9,056.85	127.08	129.89	-95.62	7,567.54	-1,521.98	1,932.74	1,676.76	255.97	7.551		
16,700.00	8,888.61	16,929.73	9,057.01	128.70	131.52	-95.63	7,667.54	-1,522.63	1,932.77	1,673.57	259.20	7.457		
16,800.00	8,888.45	17,029.73	9,057.17	130.32	133.14	-95.64	7,767.53	-1,523.28	1,932.80	1,670.37	262.43	7.365		
16,900.00	8,888.30	17,129.73	9,057.33	131.94	134.76	-95.65	7,867.53	-1,523.93	1,932.83	1,667.17	265.66	7.276		
17,000.00	8,888.15	17,229.73	9,057.49	133.56	136.38	-95.66	7,967.53	-1,524.58	1,932.85	1,663.97	268.89	7.188		
17,100.00	8,887.99	17,329.73	9,057.65	135.18	138.01	-95.67	8,067.53	-1,525.23	1,932.88	1,660.76	272.12	7.103		
17,200.00	8,887.84	17,429.73	9,057.81	136.81	139.63	-95.68	8,167.52	-1,525.88	1,932.91	1,657.56	275.35	7.020		
17,300.00	8,887.69	17,529.73	9,057.96	138.43	141.26	-95.69	8,267.52	-1,526.53	1,932.94	1,654.36	278.58	6.939		
17,400.00	8,887.53	17,629.73	9,058.12	140.05	142.88	-95.69	8,367.52	-1,527.18	1,932.97	1,651.16	281.81	6.859		
17,500.00	8,887.38	17,729.72	9,058.28	141.67	144.50	-95.70	8,467.52	-1,527.83	1,933.00	1,647.95	285.05	6.781		
17,600.00	8,887.23	17,829.72	9,058.44	143.30	146.13	-95.71	8,567.51	-1,528.48	1,933.03	1,644.75	288.28	6.705		
17,700.00	8,887.07	17,929.72	9,058.60	144.92	147.76	-95.72	8,667.51	-1,529.13	1,933.06	1,641.54	291.52	6.631		
17,800.00	8,886.92	18,029.72	9,058.76	146.55	149.38	-95.73	8,767.51	-1,529.78	1,933.09	1,638.34	294.75	6.558		
17,900.00	8,886.77	18,129.72	9,058.92	148.17	151.01	-95.74	8,867.50	-1,530.43	1,933.12	1,635.13	297.99	6.487		
18,000.00	8,886.62	18,229.72	9,059.08	149.80	152.63	-95.75	8,967.50	-1,531.08	1,933.15	1,631.93	301.22	6.418		
18,100.00	8,886.46	18,329.72	9,059.24	151.42	154.26	-95.76	9,067.50	-1,531.73	1,933.18	1,628.72	304.46	6.350		
18,200.00	8,886.31	18,429.72	9,059.40	153.05	155.89	-95.77	9,167.50	-1,532.38	1,933.21	1,625.51	307.70	6.283		
18,300.00	8,886.16	18,529.72	9,059.56	154.67	157.52	-95.78	9,267.49	-1,533.03	1,933.24	1,622.31	310.93	6.218		
18,400.00	8,886.00	18,629.72	9,059.72	156.30	159.14	-95.79	9,367.49	-1,533.68	1,933.27	1,619.10	314.17	6.154		
18,500.00	8,885.85	18,729.72	9,059.87	157.93	160.77	-95.80	9,467.49	-1,534.33	1,933.30	1,615.89	317.41	6.091		
18,500.10	8,885.85	18,729.82	9,059.87	157.93	160.77	-95.80	9,467.59	-1,534.33	1,933.30	1,615.89	317.41	6.091		
18,600.00	8,885.70	18,808.61	9,060.00	159.55	162.06	-95.80	9,566.38	-1,534.84	1,933.44	1,613.19	320.25	6.037		
18,700.00	8,885.54	18,808.61	9,060.00	161.18	162.06	-95.80	9,566.38	-1,534.84	1,937.15	1,616.04	321.11	6.033 SF		
18,800.00	8,885.39	18,808.61	9,060.00	162.81	162.06	-95.80	9,566.38	-1,534.84	1,945.99	1,624.86	321.13	6.060		
18,900.00	8,885.24	18,808.61	9,060.00	164.43	162.06	-95.80	9,566.38	-1,534.84	1,959.90	1,639.56	320.34	6.118		
19,000.00	8,885.08	18,808.61	9,060.00	166.06	162.06	-95.80	9,566.38	-1,534.84	1,978.78	1,659.99	318.79	6.207		
19,055.11	8,885.00	18,808.61	9,060.00	166.96	162.06	-95.80	9,566.38	-1,534.84	1,991.25	1,673.62	317.62	6.269		

# LEAM Drilling Services

## Anticollision Report

<b>Company:</b>	Devon Energy	<b>Local Co-ordinate Reference:</b>	Well Belloq 11-2 Fed State Com 513H
<b>Project:</b>	Eddy County, NM (NAD-83)	<b>TVD Reference:</b>	3476.8' GE + 23.5' KB @ 3500.30usft
<b>Reference Site:</b>	Belloq 11-2 Fed State Com	<b>MD Reference:</b>	3476.8' GE + 23.5' KB @ 3500.30usft
<b>Site Error:</b>	0.00 usft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	Belloq 11-2 Fed State Com 513H	<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)							
0.00	0.00	0.00	0.00	0.00	0.00	-90.15	-0.08	-29.96	29.98						
100.00	100.00	98.90	98.90	0.09	0.09	-90.15	-0.08	-29.96	29.96	29.79	0.17	175.205			
200.00	200.00	198.90	198.90	0.31	0.31	-90.15	-0.08	-29.96	29.96	29.34	0.62	48.400			
300.00	300.00	298.90	298.90	0.54	0.53	-90.15	-0.08	-29.96	29.96	28.89	1.07	28.038			
400.00	400.00	398.90	398.90	0.76	0.76	-90.15	-0.08	-29.96	29.96	28.44	1.52	19.736			
500.00	500.00	498.90	498.90	0.99	0.98	-90.15	-0.08	-29.96	29.96	27.99	1.97	15.227			
600.00	600.00	598.90	598.90	1.21	1.21	-90.15	-0.08	-29.96	29.96	27.54	2.42	12.395			
700.00	700.00	698.90	698.90	1.43	1.43	-90.15	-0.08	-29.96	29.96	27.09	2.87	10.451			
800.00	800.00	798.90	798.90	1.66	1.66	-90.15	-0.08	-29.96	29.96	26.64	3.32	9.034			
900.00	900.00	898.90	898.90	1.88	1.88	-90.15	-0.08	-29.96	29.96	26.19	3.77	7.956			
1,000.00	1,000.00	998.90	998.90	2.11	2.11	-90.15	-0.08	-29.96	29.96	25.74	4.22	7.108			
1,100.00	1,100.00	1,098.90	1,098.90	2.33	2.33	-90.15	-0.08	-29.96	29.96	25.30	4.66	6.423			
1,200.00	1,200.00	1,198.90	1,198.90	2.56	2.56	-90.15	-0.08	-29.96	29.96	24.85	5.11	5.858			
1,300.00	1,300.00	1,298.90	1,298.90	2.78	2.78	-90.15	-0.08	-29.96	29.96	24.40	5.56	5.385			
1,400.00	1,400.00	1,398.90	1,398.90	3.01	3.01	-90.15	-0.08	-29.96	29.96	23.95	6.01	4.982			
1,500.00	1,500.00	1,498.90	1,498.90	3.23	3.23	-90.15	-0.08	-29.96	29.96	23.50	6.46	4.636			
1,600.00	1,600.00	1,598.90	1,598.90	3.46	3.45	-90.15	-0.08	-29.96	29.96	23.05	6.91	4.334			
1,700.00	1,700.00	1,698.90	1,698.90	3.68	3.68	-90.15	-0.08	-29.96	29.96	22.60	7.36	4.070			
1,800.00	1,800.00	1,798.90	1,798.90	3.91	3.90	-90.15	-0.08	-29.96	29.96	22.15	7.81	3.835			
1,900.00	1,900.00	1,898.90	1,898.90	4.13	4.13	-90.15	-0.08	-29.96	29.96	21.70	8.26	3.627			
2,000.00	2,000.00	1,998.90	1,998.90	4.36	4.35	-90.15	-0.08	-29.96	29.96	21.25	8.71	3.440			
2,100.00	2,100.00	2,098.90	2,098.90	4.58	4.58	-90.15	-0.08	-29.96	29.96	20.80	9.16	3.271			
2,200.00	2,200.00	2,198.90	2,198.90	4.81	4.80	-90.15	-0.08	-29.96	29.96	20.35	9.61	3.118			
2,300.00	2,300.00	2,298.90	2,298.90	5.03	5.03	-90.15	-0.08	-29.96	29.96	19.90	10.06	2.978			
2,400.00	2,400.00	2,398.90	2,398.90	5.26	5.25	-90.15	-0.08	-29.96	29.96	19.45	10.51	2.851			
2,500.00	2,500.00	2,498.90	2,498.90	5.48	5.48	-90.15	-0.08	-29.96	29.96	19.00	10.96	2.734 CC, ES			
2,600.00	2,599.99	2,598.73	2,598.72	5.68	5.67	142.82	-0.89	-30.22	30.93	19.57	11.36	2.724			
2,700.00	2,699.96	2,698.49	2,698.45	5.86	5.85	141.33	-3.35	-31.03	33.86	22.15	11.71	2.893			
2,800.00	2,799.86	2,798.13	2,798.00	6.05	6.02	139.32	-7.45	-32.37	38.79	26.73	12.06	3.216			
2,900.00	2,899.68	2,897.59	2,897.27	6.24	6.20	137.23	-13.19	-34.24	45.74	33.32	12.42	3.682			
3,000.00	2,999.37	2,996.80	2,996.18	6.44	6.38	135.31	-20.54	-36.64	54.74	41.95	12.79	4.279			
3,100.00	3,098.90	3,095.98	3,094.93	6.64	6.57	133.84	-29.29	-39.50	65.67	52.50	13.17	4.985			
3,200.00	3,198.29	3,195.25	3,193.75	6.85	6.76	133.49	-38.24	-42.42	77.73	64.16	13.57	5.730			
3,300.00	3,297.66	3,294.50	3,292.56	7.06	6.96	133.35	-47.18	-45.35	89.91	75.94	13.97	6.437			
3,400.00	3,397.02	3,393.76	3,391.37	7.29	7.16	133.24	-56.12	-48.27	102.09	87.71	14.38	7.101			
3,500.00	3,496.39	3,493.01	3,490.18	7.51	7.37	133.15	-65.06	-51.19	114.27	99.47	14.80	7.723			
3,600.00	3,595.76	3,592.27	3,588.98	7.74	7.59	133.08	-74.00	-54.11	126.45	111.23	15.22	8.308			
3,700.00	3,695.12	3,691.52	3,687.79	7.98	7.80	133.02	-82.94	-57.03	138.63	122.98	15.65	8.857			
3,800.00	3,794.49	3,790.78	3,786.60	8.22	8.02	132.97	-91.89	-59.95	150.81	134.72	16.09	9.373			
3,900.00	3,893.85	3,890.04	3,885.41	8.46	8.25	132.93	-100.83	-62.87	162.99	146.46	16.53	9.858			
4,000.00	3,993.22	3,989.29	3,984.22	8.70	8.47	132.90	-109.77	-65.79	175.18	158.19	16.98	10.314			
4,100.00	4,092.59	4,088.55	4,083.03	8.95	8.70	132.86	-118.71	-68.71	187.36	169.92	17.44	10.744			
4,200.00	4,191.95	4,187.80	4,181.84	9.20	8.93	132.84	-127.65	-71.63	199.54	181.64	17.90	11.150			
4,300.00	4,291.32	4,287.06	4,280.64	9.45	9.17	132.81	-136.60	-74.56	211.72	193.36	18.36	11.532			
4,400.00	4,390.69	4,386.31	4,379.45	9.71	9.40	132.79	-145.54	-77.48	223.90	205.08	18.83	11.894			
4,500.00	4,490.05	4,485.57	4,478.26	9.97	9.64	132.77	-154.48	-80.40	236.08	216.79	19.30	12.235			
4,600.00	4,589.42	4,584.82	4,577.07	10.23	9.88	132.76	-163.42	-83.32	248.27	228.50	19.77	12.559			
4,700.00	4,688.79	4,684.08	4,675.88	10.49	10.12	132.74	-172.36	-86.24	260.45	240.20	20.24	12.865			
4,800.00	4,788.15	4,783.33	4,774.69	10.75	10.36	132.73	-181.30	-89.16	272.63	251.91	20.72	13.155			
4,900.00	4,887.52	4,882.59	4,873.49	11.01	10.61	132.71	-190.25	-92.08	284.81	263.61	21.21	13.431			
5,000.00	4,986.88	4,981.84	4,972.30	11.28	10.86	132.70	-199.19	-95.00	296.99	275.30	21.69	13.692			
5,100.00	5,086.25	5,081.10	5,071.11	11.55	11.10	132.69	-208.13	-97.92	309.18	287.00	22.18	13.941			

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 513H
<b>Project:</b>	Eddy County, NM (NAD-83)	<b>TVD Reference:</b>	3476.8' GE + 23.5' KB @ 3500.30usft
<b>Reference Site:</b>	Belloq 11-2 Fed State Com	<b>MD Reference:</b>	3476.8' GE + 23.5' KB @ 3500.30usft
<b>Site Error:</b>	0.00 usft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	Belloq 11-2 Fed State Com 513H	<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		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	5,185.62	5,180.35	5,169.92	11.81	11.35	132.68	-217.07	-100.84	321.36	298.69	22.67	14.178	
5,300.00	5,284.98	5,279.61	5,268.73	12.08	11.60	132.67	-226.01	-103.76	333.54	310.38	23.16	14.404	
5,400.00	5,384.35	5,378.86	5,367.54	12.35	11.85	132.66	-234.96	-106.69	345.72	322.07	23.65	14.619	
5,500.00	5,483.72	5,478.12	5,466.35	12.62	12.10	132.65	-243.90	-109.61	357.90	333.76	24.14	14.824	
5,600.00	5,583.08	5,577.37	5,565.15	12.90	12.35	132.64	-252.84	-112.53	370.09	345.45	24.64	15.019	
5,700.00	5,682.45	5,676.63	5,663.96	13.17	12.61	132.64	-261.78	-115.45	382.27	357.13	25.14	15.206	
5,800.00	5,781.82	5,775.88	5,762.77	13.44	12.86	132.63	-270.72	-118.37	394.45	368.81	25.64	15.385	
5,900.00	5,881.18	5,875.14	5,861.58	13.72	13.12	132.62	-279.66	-121.29	406.63	380.49	26.14	15.557	
6,000.00	5,980.55	5,974.39	5,960.39	13.99	13.37	132.62	-288.61	-124.21	418.81	392.17	26.64	15.721	
6,100.00	6,079.91	6,073.65	6,059.20	14.27	13.63	132.61	-297.55	-127.13	431.00	403.85	27.14	15.878	
6,200.00	6,179.28	6,172.90	6,158.00	14.54	13.89	132.61	-306.49	-130.05	443.18	415.53	27.65	16.029	
6,300.00	6,278.65	6,272.16	6,256.81	14.82	14.14	132.60	-315.43	-132.97	455.36	427.21	28.15	16.173	
6,400.00	6,378.01	6,371.42	6,355.62	15.10	14.40	132.60	-324.37	-135.90	467.54	438.88	28.66	16.313	
6,500.00	6,477.38	6,470.67	6,454.43	15.38	14.66	132.59	-333.31	-138.82	479.73	450.56	29.17	16.446	
6,600.00	6,576.75	6,569.93	6,553.24	15.66	14.92	132.59	-342.26	-141.74	491.91	462.23	29.68	16.575	
6,700.00	6,676.11	6,669.18	6,652.05	15.94	15.18	132.58	-351.20	-144.66	504.09	473.90	30.19	16.698	
6,800.00	6,775.48	6,768.44	6,750.85	16.22	15.44	132.58	-360.14	-147.58	516.27	485.57	30.70	16.817	
6,900.00	6,874.85	6,867.69	6,849.66	16.50	15.70	132.58	-369.08	-150.50	528.45	497.24	31.21	16.932	
7,000.00	6,974.21	6,966.95	6,948.47	16.78	15.96	132.57	-378.02	-153.42	540.64	508.91	31.72	17.043	
7,100.00	7,073.58	7,066.20	7,047.28	17.06	16.22	132.57	-386.97	-156.34	552.82	520.58	32.24	17.149	
7,200.00	7,172.94	7,165.46	7,146.09	17.34	16.49	132.57	-395.91	-159.26	565.00	532.25	32.75	17.252	
7,300.00	7,272.31	7,264.71	7,244.90	17.62	16.75	132.56	-404.85	-162.18	577.18	543.92	33.26	17.352	
7,400.00	7,371.68	7,363.97	7,343.71	17.90	17.01	132.56	-413.79	-165.11	589.36	555.59	33.78	17.448	
7,500.00	7,471.04	7,463.22	7,442.51	18.19	17.27	132.56	-422.73	-168.03	601.55	567.25	34.29	17.541	
7,600.00	7,570.48	7,562.22	7,545.08	18.44	17.51	132.62	-431.59	-170.92	613.07	578.30	34.78	17.629	
7,700.00	7,670.09	7,671.21	7,649.80	18.65	17.73	132.70	-438.89	-173.31	622.60	587.39	35.21	17.681	
7,800.00	7,769.84	7,776.46	7,754.89	18.86	17.95	132.79	-444.39	-175.10	630.07	594.43	35.63	17.681	
7,900.00	7,869.69	7,881.91	7,860.26	19.06	18.15	132.90	-448.05	-176.30	635.47	599.43	36.04	17.632	
8,000.00	7,969.62	7,987.47	7,965.80	19.25	18.35	133.02	-449.86	-176.89	638.80	602.37	36.43	17.533	
8,100.00	8,069.60	8,090.17	8,068.50	19.42	18.54	133.14	-450.08	-176.96	640.19	603.37	36.81	17.390	
8,200.00	8,169.60	8,190.17	8,168.50	19.60	18.73	-100.35	-450.08	-176.96	640.39	603.20	37.19	17.222	
8,300.00	8,269.60	8,290.17	8,268.50	19.79	18.91	-100.35	-450.08	-176.96	640.39	602.83	37.56	17.050	
8,400.00	8,369.56	8,390.13	8,368.46	19.96	19.09	-100.09	-450.08	-176.96	640.66	602.73	37.93	16.891	
8,500.00	8,468.14	8,488.70	8,467.04	20.09	19.27	-101.18	-450.08	-176.96	643.68	605.42	38.25	16.826	
8,600.00	8,568.42	8,607.52	8,585.50	20.17	19.46	-103.46	-443.21	-177.00	649.84	611.32	38.52	16.871	
8,700.00	8,649.56	8,745.38	8,717.85	20.20	19.56	-105.62	-405.82	-177.24	655.88	617.36	38.52	17.028	
8,800.00	8,726.89	8,892.57	8,844.93	20.20	19.55	-107.16	-332.38	-177.72	660.49	622.26	38.23	17.276	
8,900.00	8,792.07	9,046.01	8,952.99	20.17	19.50	-107.88	-224.10	-178.41	662.72	624.85	37.87	17.500	
9,000.00	8,843.13	9,200.92	9,029.10	20.12	19.53	-107.67	-89.71	-179.28	662.06	624.27	37.78	17.522	
9,100.00	8,878.50	9,352.07	9,066.13	20.07	19.77	-106.57	56.38	-180.22	658.66	620.40	38.26	17.217	
9,200.00	8,897.12	9,472.13	9,070.08	20.09	20.17	-105.36	176.28	-180.99	654.23	615.09	39.14	16.716	
9,295.78	8,902.05	9,567.75	9,070.22	20.43	20.61	-105.02	271.91	-181.61	652.96	612.94	40.02	16.316	
9,300.00	8,899.93	9,572.03	9,070.23	20.45	20.64	-105.20	276.19	-181.63	653.52	613.48	40.04	16.323	
9,400.00	8,899.78	9,672.03	9,070.38	21.02	21.22	-105.23	376.19	-182.28	653.59	612.46	41.13	15.891	
9,500.00	8,899.63	9,772.03	9,070.53	21.69	21.91	-105.26	476.18	-182.92	653.66	611.23	42.43	15.405	
9,600.00	8,899.47	9,872.03	9,070.68	22.46	22.69	-105.28	576.18	-183.57	653.73	609.81	43.93	14.882	
9,700.00	8,899.32	9,972.03	9,070.84	23.31	23.57	-105.31	676.18	-184.21	653.81	608.21	45.60	14.339	
9,800.00	8,899.17	10,072.03	9,070.99	24.24	24.52	-105.33	776.18	-184.85	653.88	606.46	47.42	13.789	
9,900.00	8,899.02	10,172.03	9,071.14	25.24	25.54	-105.36	876.17	-185.50	653.95	604.57	49.38	13.243	
10,000.00	8,898.86	10,272.03	9,071.29	26.31	26.63	-105.39	976.17	-186.14	654.02	602.56	51.47	12.708	
10,100.00	8,898.71	10,372.03	9,071.44	27.42	27.77	-105.41	1,076.17	-186.78	654.10	600.44	53.66	12.190	

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 513H
<b>Project:</b>	Eddy County, NM (NAD-83)	<b>TVD Reference:</b>	3476.8' GE + 23.5' KB @ 3500.30usft
<b>Reference Site:</b>	Belloq 11-2 Fed State Com	<b>MD Reference:</b>	3476.8' GE + 23.5' KB @ 3500.30usft
<b>Site Error:</b>	0.00 usft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	Belloq 11-2 Fed State Com 513H	<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			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			
10,200.00	8,898.56	10,472.03	9,071.59	28.59	28.95	-105.44	1,176.17	-187.43	654.17	598.22	55.95	11.693			
10,300.00	8,898.40	10,572.03	9,071.74	29.80	30.18	-105.46	1,276.16	-188.07	654.24	595.93	58.32	11.219			
10,400.00	8,898.25	10,672.03	9,071.90	31.04	31.44	-105.49	1,376.16	-188.71	654.32	593.56	60.76	10.769			
10,500.00	8,898.10	10,772.03	9,072.05	32.33	32.74	-105.52	1,476.16	-189.36	654.39	591.12	63.27	10.343			
10,600.00	8,897.94	10,872.03	9,072.20	33.64	34.07	-105.54	1,576.15	-190.00	654.47	588.63	65.84	9.941			
10,700.00	8,897.79	10,972.03	9,072.35	34.98	35.43	-105.57	1,676.15	-190.65	654.54	586.08	68.46	9.562			
10,800.00	8,897.64	11,072.03	9,072.50	36.34	36.80	-105.59	1,776.15	-191.29	654.61	583.50	71.12	9.205			
10,900.00	8,897.48	11,172.03	9,072.65	37.73	38.20	-105.62	1,876.15	-191.93	654.69	580.87	73.82	8.868			
11,000.00	8,897.33	11,272.03	9,072.80	39.13	39.62	-105.64	1,976.14	-192.58	654.76	578.20	76.56	8.552			
11,100.00	8,897.18	11,372.03	9,072.96	40.55	41.05	-105.67	2,076.14	-193.22	654.84	575.50	79.33	8.254			
11,200.00	8,897.02	11,472.02	9,073.11	41.99	42.50	-105.70	2,176.14	-193.86	654.91	572.78	82.13	7.974			
11,300.00	8,896.87	11,572.02	9,073.26	43.44	43.96	-105.72	2,276.14	-194.51	654.99	570.03	84.96	7.709			
11,400.00	8,896.72	11,672.02	9,073.41	44.91	45.43	-105.75	2,376.13	-195.15	655.06	567.25	87.81	7.460			
11,500.00	8,896.57	11,772.02	9,073.56	46.38	46.92	-105.77	2,476.13	-195.79	655.14	564.46	90.68	7.225			
11,600.00	8,896.41	11,872.02	9,073.71	47.87	48.41	-105.80	2,576.13	-196.44	655.21	561.64	93.57	7.002			
11,700.00	8,896.26	11,972.02	9,073.86	49.37	49.92	-105.83	2,676.13	-197.08	655.29	558.81	96.48	6.792			
11,800.00	8,896.11	12,072.02	9,074.02	50.87	51.43	-105.85	2,776.12	-197.73	655.36	555.96	99.40	6.593			
11,900.00	8,895.95	12,172.02	9,074.17	52.38	52.95	-105.88	2,876.12	-198.37	655.44	553.10	102.34	6.405			
12,000.00	8,895.80	12,272.02	9,074.32	53.90	54.48	-105.90	2,976.12	-199.01	655.51	550.23	105.29	6.226			
12,100.00	8,895.65	12,372.02	9,074.47	55.43	56.01	-105.93	3,076.12	-199.66	655.59	547.34	108.25	6.056			
12,200.00	8,895.49	12,472.02	9,074.62	56.96	57.55	-105.95	3,176.11	-200.30	655.67	544.44	111.22	5.895			
12,300.00	8,895.34	12,572.02	9,074.77	58.50	59.09	-105.98	3,276.11	-200.94	655.74	541.54	114.21	5.742			
12,400.00	8,895.19	12,672.02	9,074.92	60.05	60.64	-106.01	3,376.11	-201.59	655.82	538.62	117.20	5.596			
12,500.00	8,895.03	12,772.02	9,075.07	61.60	62.20	-106.03	3,476.10	-202.23	655.89	535.70	120.20	5.457			
12,600.00	8,894.88	12,872.02	9,075.23	63.15	63.75	-106.06	3,576.10	-202.87	655.97	532.76	123.21	5.324			
12,700.00	8,894.73	12,972.02	9,075.38	64.71	65.32	-106.08	3,676.10	-203.52	656.05	529.83	126.22	5.198			
12,800.00	8,894.58	13,072.02	9,075.53	66.27	66.88	-106.11	3,776.10	-204.16	656.12	526.88	129.24	5.077			
12,900.00	8,894.42	13,172.02	9,075.68	67.84	68.45	-106.13	3,876.09	-204.81	656.20	523.93	132.27	4.961			
13,000.00	8,894.27	13,272.02	9,075.83	69.41	70.03	-106.16	3,976.09	-205.45	656.28	520.97	135.31	4.850			
13,100.00	8,894.12	13,372.02	9,075.98	70.98	71.60	-106.19	4,076.09	-206.09	656.36	518.01	138.34	4.744			
13,200.00	8,893.96	13,472.02	9,076.13	72.55	73.18	-106.21	4,176.09	-206.74	656.43	515.04	141.39	4.643			
13,300.00	8,893.81	13,572.01	9,076.29	74.13	74.76	-106.24	4,276.08	-207.38	656.51	512.07	144.44	4.545			
13,400.00	8,893.66	13,672.01	9,076.44	75.71	76.34	-106.26	4,376.08	-208.02	656.59	509.10	147.49	4.452			
13,500.00	8,893.50	13,772.01	9,076.59	77.29	77.93	-106.29	4,476.08	-208.67	656.67	506.12	150.55	4.362			
13,600.00	8,893.35	13,872.01	9,076.74	78.88	79.52	-106.31	4,576.08	-209.31	656.74	503.14	153.61	4.276			
13,700.00	8,893.20	13,972.01	9,076.89	80.47	81.11	-106.34	4,676.07	-209.95	656.82	500.15	156.67	4.192			
13,800.00	8,893.04	14,072.01	9,077.04	82.06	82.70	-106.37	4,776.07	-210.60	656.90	497.16	159.74	4.112			
13,900.00	8,892.89	14,172.01	9,077.19	83.65	84.29	-106.39	4,876.07	-211.24	656.98	494.17	162.80	4.035			
14,000.00	8,892.74	14,272.01	9,077.35	85.24	85.89	-106.42	4,976.06	-211.88	657.06	491.18	165.88	3.961			
14,100.00	8,892.59	14,372.01	9,077.50	86.84	87.49	-106.44	5,076.06	-212.53	657.13	488.18	168.95	3.889			
14,200.00	8,892.43	14,472.01	9,077.65	88.43	89.09	-106.47	5,176.06	-213.17	657.21	485.19	172.03	3.820			
14,300.00	8,892.28	14,572.01	9,077.80	90.03	90.69	-106.49	5,276.06	-213.82	657.29	482.19	175.11	3.754			
14,400.00	8,892.13	14,672.01	9,077.95	91.63	92.29	-106.52	5,376.05	-214.46	657.37	479.18	178.19	3.689			
14,500.00	8,891.97	14,772.01	9,078.10	93.23	93.89	-106.55	5,476.05	-215.10	657.45	476.18	181.27	3.627			
14,600.00	8,891.82	14,872.01	9,078.25	94.83	95.50	-106.57	5,576.05	-215.75	657.53	473.17	184.36	3.567			
14,700.00	8,891.67	14,972.01	9,078.41	96.44	97.10	-106.60	5,676.05	-216.39	657.61	470.17	187.44	3.508			
14,800.00	8,891.51	15,072.01	9,078.56	98.04	98.71	-106.62	5,776.04	-217.03	657.69	467.16	190.53	3.452			
14,900.00	8,891.36	15,172.01	9,078.71	99.65	100.32	-106.65	5,876.04	-217.68	657.77	464.15	193.62	3.397			
15,000.00	8,891.21	15,272.01	9,078.86	101.26	101.92	-106.67	5,976.04	-218.32	657.85	461.14	196.71	3.344			
15,100.00	8,891.05	15,372.01	9,079.01	102.86	103.53	-106.70	6,076.04	-218.96	657.93	458.13	199.80	3.293			
15,200.00	8,890.90	15,472.01	9,079.16	104.47	105.14	-106.72	6,176.03	-219.61	658.01	455.11	202.90	3.243			
15,300.00	8,890.75	15,572.01	9,079.31	106.08	106.76	-106.75	6,276.03	-220.25	658.09	452.10	205.99	3.195			

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 513H
<b>Project:</b>	Eddy County, NM (NAD-83)	<b>TVD Reference:</b>	3476.8' GE + 23.5' KB @ 3500.30usft
<b>Reference Site:</b>	Belloq 11-2 Fed State Com	<b>MD Reference:</b>	3476.8' GE + 23.5' KB @ 3500.30usft
<b>Site Error:</b>	0.00 usft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	Belloq 11-2 Fed State Com 513H	<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 523H - 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
15,400.00	8,890.80	15,672.01	9,079.46	107.69	108.37	-106.78	6,376.03	-220.90	658.17	449.08	209.08	3.148	
15,500.00	8,890.44	15,772.00	9,079.62	109.30	109.98	-106.80	6,476.03	-221.54	658.25	446.07	212.18	3.102	
15,600.00	8,890.29	15,872.00	9,079.77	110.92	111.59	-106.83	6,576.02	-222.18	658.33	443.05	215.28	3.058	
15,700.00	8,890.14	15,972.00	9,079.92	112.53	113.21	-106.85	6,676.02	-222.83	658.41	440.03	218.37	3.015	
15,800.00	8,889.98	16,072.00	9,080.07	114.14	114.82	-106.88	6,776.02	-223.47	658.49	437.02	221.47	2.973	
15,900.00	8,889.83	16,172.00	9,080.22	115.76	116.44	-106.90	6,876.01	-224.11	658.57	434.00	224.57	2.933	
16,000.00	8,889.68	16,272.00	9,080.37	117.38	118.06	-106.93	6,976.01	-224.76	658.65	430.98	227.67	2.893	
16,100.00	8,889.52	16,372.00	9,080.52	118.99	119.68	-106.96	7,076.01	-225.40	658.73	427.96	230.77	2.854	
16,200.00	8,889.37	16,472.00	9,080.68	120.61	121.29	-106.98	7,176.01	-226.04	658.81	424.94	233.87	2.817	
16,300.00	8,889.22	16,572.00	9,080.83	122.23	122.91	-107.01	7,276.00	-226.69	658.90	421.92	236.97	2.780	
16,400.00	8,889.06	16,672.00	9,080.98	123.84	124.53	-107.03	7,376.00	-227.33	658.98	418.90	240.07	2.745	
16,500.00	8,888.91	16,772.00	9,081.13	125.46	126.15	-107.06	7,476.00	-227.98	659.06	415.88	243.17	2.710	
16,600.00	8,888.76	16,872.00	9,081.28	127.08	127.77	-107.08	7,576.00	-228.62	659.14	412.86	246.28	2.676	
16,700.00	8,888.61	16,972.00	9,081.43	128.70	129.39	-107.11	7,675.99	-229.26	659.22	409.84	249.38	2.643	
16,800.00	8,888.45	17,072.00	9,081.58	130.32	131.01	-107.13	7,775.99	-229.91	659.30	406.82	252.48	2.611	
16,900.00	8,888.30	17,172.00	9,081.74	131.94	132.63	-107.16	7,875.99	-230.55	659.39	403.80	255.58	2.580	
17,000.00	8,888.15	17,272.00	9,081.89	133.56	134.26	-107.18	7,975.99	-231.19	659.47	400.78	258.69	2.549	
17,100.00	8,887.99	17,372.00	9,082.04	135.18	135.88	-107.21	8,075.98	-231.84	659.55	397.76	261.79	2.519	
17,200.00	8,887.84	17,472.00	9,082.19	136.81	137.50	-107.24	8,175.98	-232.48	659.63	394.74	264.89	2.490	
17,300.00	8,887.69	17,572.00	9,082.34	138.43	139.12	-107.26	8,275.98	-233.12	659.72	391.72	267.99	2.462	
17,400.00	8,887.53	17,672.00	9,082.49	140.05	140.75	-107.29	8,375.97	-233.77	659.80	388.70	271.10	2.434	
17,500.00	8,887.38	17,772.00	9,082.64	141.67	142.37	-107.31	8,475.97	-234.41	659.88	385.68	274.20	2.407	
17,600.00	8,887.23	17,872.00	9,082.80	143.30	144.00	-107.34	8,575.97	-235.06	659.97	382.66	277.30	2.380	
17,700.00	8,887.07	17,971.99	9,082.95	144.92	145.62	-107.36	8,675.97	-235.70	660.05	379.64	280.41	2.354	
17,800.00	8,886.92	18,071.99	9,083.10	146.55	147.25	-107.39	8,775.96	-236.34	660.13	376.62	283.51	2.328	
17,900.00	8,886.77	18,171.99	9,083.25	148.17	148.87	-107.41	8,875.96	-236.99	660.22	373.61	286.61	2.304	
18,000.00	8,886.62	18,271.99	9,083.40	149.80	150.50	-107.44	8,975.96	-237.63	660.30	370.59	289.71	2.279	
18,100.00	8,886.46	18,371.99	9,083.55	151.42	152.12	-107.46	9,075.96	-238.27	660.38	367.57	292.82	2.255	
18,200.00	8,886.31	18,471.99	9,083.70	153.05	153.75	-107.49	9,175.95	-238.92	660.47	364.55	295.92	2.232	
18,300.00	8,886.16	18,571.99	9,083.85	154.67	155.38	-107.52	9,275.95	-239.56	660.55	361.53	299.02	2.209	
18,400.00	8,886.00	18,671.99	9,084.01	156.30	157.00	-107.54	9,375.95	-240.20	660.64	358.51	302.12	2.187	
18,500.00	8,885.85	18,771.99	9,084.16	157.93	158.63	-107.57	9,475.95	-240.85	660.72	355.50	305.22	2.165	
18,600.00	8,885.70	18,871.99	9,084.31	159.55	160.26	-107.59	9,575.94	-241.49	660.80	352.48	308.33	2.143	
18,700.00	8,885.54	18,971.99	9,084.46	161.18	161.88	-107.62	9,675.94	-242.14	660.89	349.46	311.43	2.122	
18,800.00	8,885.39	19,071.99	9,084.61	162.81	163.51	-107.64	9,775.94	-242.78	660.97	346.45	314.53	2.101	
18,900.00	8,885.24	19,171.99	9,084.76	164.43	165.14	-107.67	9,875.94	-243.42	661.06	343.43	317.63	2.081	
19,000.00	8,885.08	19,271.99	9,084.91	166.06	166.77	-107.69	9,975.93	-244.07	661.14	340.41	320.73	2.061	
19,055.11	8,885.00	19,327.10	9,085.00	166.96	167.67	-107.71	10,031.04	-244.42	661.19	338.75	322.44	2.051 SF	

# LEAM Drilling Services

## Anticollision Report

<b>Company:</b>	Devon Energy	<b>Local Co-ordinate Reference:</b>	Well Belloq 11-2 Fed State Com 513H
<b>Project:</b>	Eddy County, NM (NAD-83)	<b>TVD Reference:</b>	3476.8' GE + 23.5' KB @ 3500.30usft
<b>Reference Site:</b>	Belloq 11-2 Fed State Com	<b>MD Reference:</b>	3476.8' GE + 23.5' KB @ 3500.30usft
<b>Site Error:</b>	0.00 usft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	Belloq 11-2 Fed State Com 513H	<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: Belloq 11-2 Fed State Com - Belloq 11-2 Fed State Com 524H - OH - Plan #2														
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	12.10	12.10	0.00	0.01	89.89	2.41	1,219.77	1,219.77					
100.00	100.00	112.10	112.10	0.09	0.11	89.89	2.41	1,219.77	1,219.77	1,219.57	0.20	6,125.110		
200.00	200.00	212.10	212.10	0.31	0.34	89.89	2.41	1,219.77	1,219.77	1,219.12	0.65	1,880.406		
300.00	300.00	312.10	312.10	0.54	0.56	89.89	2.41	1,219.77	1,219.77	1,218.67	1.10	1,110.694		
400.00	400.00	412.10	412.10	0.76	0.79	89.89	2.41	1,219.77	1,219.77	1,218.22	1.55	788.099		
500.00	500.00	512.10	512.10	0.99	1.01	89.89	2.41	1,219.77	1,219.77	1,217.78	2.00	610.719		
600.00	600.00	612.10	612.10	1.21	1.24	89.89	2.41	1,219.77	1,219.77	1,217.33	2.45	498.517		
700.00	700.00	712.10	712.10	1.43	1.46	89.89	2.41	1,219.77	1,219.77	1,216.88	2.90	421.143		
800.00	800.00	812.10	812.10	1.66	1.69	89.89	2.41	1,219.77	1,219.77	1,216.43	3.35	364.561		
900.00	900.00	912.10	912.10	1.88	1.91	89.89	2.41	1,219.77	1,219.77	1,215.98	3.80	321.382		
1,000.00	1,000.00	1,012.10	1,012.10	2.11	2.14	89.89	2.41	1,219.77	1,219.77	1,215.53	4.24	287.348		
1,100.00	1,100.00	1,112.10	1,112.10	2.33	2.36	89.89	2.41	1,219.77	1,219.77	1,215.08	4.69	259.832		
1,200.00	1,200.00	1,212.10	1,212.10	2.56	2.59	89.89	2.41	1,219.77	1,219.77	1,214.63	5.14	237.125		
1,300.00	1,300.00	1,312.10	1,312.10	2.78	2.81	89.89	2.41	1,219.77	1,219.77	1,214.18	5.59	218.069		
1,400.00	1,400.00	1,412.10	1,412.10	3.01	3.04	89.89	2.41	1,219.77	1,219.77	1,213.73	6.04	201.847		
1,500.00	1,500.00	1,512.10	1,512.10	3.23	3.26	89.89	2.41	1,219.77	1,219.77	1,213.28	6.49	187.871		
1,600.00	1,600.00	1,612.10	1,612.10	3.46	3.48	89.89	2.41	1,219.77	1,219.77	1,212.83	6.94	175.706		
1,700.00	1,700.00	1,712.10	1,712.10	3.68	3.71	89.89	2.41	1,219.77	1,219.77	1,212.38	7.39	165.020		
1,800.00	1,800.00	1,812.10	1,812.10	3.91	3.93	89.89	2.41	1,219.77	1,219.77	1,211.93	7.84	155.560		
1,900.00	1,900.00	1,912.10	1,912.10	4.13	4.16	89.89	2.41	1,219.77	1,219.77	1,211.48	8.29	147.125		
2,000.00	2,000.00	2,012.10	2,012.10	4.36	4.38	89.89	2.41	1,219.77	1,219.77	1,211.03	8.74	139.558		
2,100.00	2,100.00	2,112.10	2,112.10	4.58	4.61	89.89	2.41	1,219.77	1,219.77	1,210.58	9.19	132.731		
2,200.00	2,200.00	2,212.10	2,212.10	4.81	4.83	89.89	2.41	1,219.77	1,219.77	1,210.13	9.64	126.541		
2,300.00	2,300.00	2,312.10	2,312.10	5.03	5.06	89.89	2.41	1,219.77	1,219.77	1,209.68	10.09	120.903		
2,400.00	2,400.00	2,412.10	2,412.10	5.26	5.28	89.89	2.41	1,219.77	1,219.77	1,209.23	10.54	115.746		
2,500.00	2,500.00	2,512.85	2,512.85	5.48	5.51	89.89	2.40	1,219.77	1,219.77	1,208.78	10.99	111.031		
2,600.00	2,599.99	2,619.02	2,619.01	5.68	5.71	-36.57	1.22	1,219.43	1,218.75	1,207.36	11.39	107.001		
2,700.00	2,699.96	2,725.11	2,725.05	5.86	5.89	-36.52	-1.85	1,218.57	1,215.83	1,204.08	11.75	103.463		
2,800.00	2,799.86	2,831.05	2,830.87	6.05	6.08	-36.45	-6.79	1,217.17	1,211.01	1,198.89	12.12	99.921		
2,900.00	2,899.68	2,936.79	2,936.36	6.24	6.27	-36.35	-13.61	1,215.25	1,204.29	1,191.80	12.50	96.376		
3,000.00	2,999.37	3,041.80	3,040.99	6.44	6.46	-36.22	-22.22	1,212.82	1,195.69	1,182.81	12.88	92.838		
3,100.00	3,098.90	3,141.22	3,139.98	6.64	6.65	-36.12	-31.13	1,210.30	1,185.49	1,172.22	13.26	89.372		
3,200.00	3,198.29	3,240.54	3,238.87	6.85	6.85	-36.03	-40.03	1,207.79	1,174.10	1,160.44	13.66	85.959		
3,300.00	3,297.66	3,339.85	3,337.74	7.06	7.05	-35.91	-48.93	1,205.28	1,162.58	1,148.52	14.06	82.683		
3,400.00	3,397.02	3,439.15	3,436.62	7.29	7.25	-35.79	-57.83	1,202.77	1,151.06	1,136.58	14.47	79.544		
3,500.00	3,496.39	3,538.46	3,535.49	7.51	7.46	-35.67	-66.73	1,200.26	1,139.54	1,124.65	14.89	76.541		
3,600.00	3,595.76	3,637.76	3,634.37	7.74	7.68	-35.54	-75.63	1,197.75	1,128.03	1,112.72	15.31	73.668		
3,700.00	3,695.12	3,737.07	3,733.24	7.98	7.90	-35.41	-84.52	1,195.24	1,116.52	1,100.78	15.74	70.923		
3,800.00	3,794.49	3,836.37	3,832.11	8.22	8.12	-35.28	-93.42	1,192.72	1,105.02	1,088.85	16.18	68.300		
3,900.00	3,893.85	3,935.68	3,930.99	8.46	8.34	-35.15	-102.32	1,190.21	1,093.53	1,076.91	16.62	65.794		
4,000.00	3,993.22	4,034.98	4,029.86	8.70	8.57	-35.02	-111.22	1,187.70	1,082.04	1,064.98	17.07	63.400		
4,100.00	4,092.59	4,134.29	4,128.73	8.95	8.80	-34.88	-120.12	1,185.19	1,070.56	1,053.04	17.52	61.113		
4,200.00	4,191.95	4,233.59	4,227.61	9.20	9.03	-34.74	-129.02	1,182.68	1,059.09	1,041.11	17.97	58.927		
4,300.00	4,291.32	4,332.90	4,326.48	9.45	9.26	-34.59	-137.92	1,180.17	1,047.62	1,029.19	18.43	56.838		
4,400.00	4,390.69	4,432.20	4,425.35	9.71	9.50	-34.44	-146.82	1,177.66	1,036.16	1,017.26	18.89	54.841		
4,500.00	4,490.05	4,531.51	4,524.23	9.97	9.73	-34.29	-155.71	1,175.14	1,024.70	1,005.34	19.36	52.931		
4,600.00	4,589.42	4,630.81	4,623.10	10.23	9.97	-34.14	-164.61	1,172.63	1,013.25	993.42	19.83	51.103		
4,700.00	4,688.79	4,730.12	4,721.97	10.49	10.21	-33.98	-173.51	1,170.12	1,001.81	981.51	20.30	49.354		
4,800.00	4,788.15	4,829.42	4,820.85	10.75	10.46	-33.82	-182.41	1,167.61	990.38	969.61	20.77	47.678		
4,900.00	4,887.52	4,928.73	4,919.72	11.01	10.70	-33.65	-191.31	1,165.10	978.95	957.71	21.25	46.072		
5,000.00	4,986.88	5,028.03	5,018.60	11.28	10.95	-33.48	-200.21	1,162.59	967.54	945.81	21.73	44.533		
5,100.00	5,086.25	5,127.34	5,117.47	11.55	11.19	-33.31	-209.11	1,160.07	956.13	933.92	22.21	43.056		

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 513H
<b>Project:</b>	Eddy County, NM (NAD-83)	<b>TVD Reference:</b>	3476.8' GE + 23.5' KB @ 3500.30usft
<b>Reference Site:</b>	Belloq 11-2 Fed State Com	<b>MD Reference:</b>	3476.8' GE + 23.5' KB @ 3500.30usft
<b>Site Error:</b>	0.00 usft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	Belloq 11-2 Fed State Com 513H	<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 524H - 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								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				
5,200.00	5,185.62	5,226.64	5,216.34	11.81	11.44	-33.13	-218.01	1,157.56	944.73	922.04	22.69	41.639				
5,300.00	5,284.98	5,325.95	5,315.22	12.08	11.69	-32.95	-226.91	1,155.05	933.34	910.17	23.17	40.278				
5,400.00	5,384.35	5,425.25	5,414.09	12.35	11.94	-32.76	-235.80	1,152.54	921.96	898.30	23.66	38.971				
5,500.00	5,483.72	5,524.56	5,512.96	12.62	12.19	-32.57	-244.70	1,150.03	910.59	886.45	24.14	37.714				
5,600.00	5,583.08	5,623.86	5,611.84	12.90	12.44	-32.38	-253.60	1,147.52	899.23	874.60	24.63	36.506				
5,700.00	5,682.45	5,723.17	5,710.71	13.17	12.69	-32.18	-262.50	1,145.01	887.88	862.76	25.12	35.343				
5,800.00	5,781.82	5,822.47	5,809.58	13.44	12.95	-31.97	-271.40	1,142.49	876.54	850.93	25.61	34.223				
5,900.00	5,881.18	5,921.78	5,908.46	13.72	13.20	-31.76	-280.30	1,139.98	865.21	839.11	26.10	33.145				
6,000.00	5,980.55	6,021.08	6,007.33	13.99	13.46	-31.54	-289.20	1,137.47	853.90	827.30	26.60	32.106				
6,100.00	6,079.91	6,120.39	6,106.20	14.27	13.71	-31.32	-298.10	1,134.96	842.60	815.51	27.09	31.104				
6,200.00	6,179.28	6,219.69	6,205.08	14.54	13.97	-31.09	-307.00	1,132.45	831.31	803.72	27.58	30.137				
6,300.00	6,278.65	6,319.00	6,303.95	14.82	14.22	-30.85	-315.89	1,129.94	820.03	791.95	28.08	29.204				
6,400.00	6,378.01	6,418.30	6,402.83	15.10	14.48	-30.61	-324.79	1,127.43	808.77	780.19	28.57	28.304				
6,500.00	6,477.38	6,517.61	6,501.70	15.38	14.74	-30.36	-333.69	1,124.91	797.52	768.45	29.07	27.434				
6,600.00	6,576.75	6,616.91	6,600.57	15.66	15.00	-30.11	-342.59	1,122.40	786.29	756.72	29.57	26.593				
6,700.00	6,676.11	6,716.22	6,699.45	15.94	15.26	-29.84	-351.49	1,119.89	775.07	745.01	30.06	25.781				
6,800.00	6,775.48	6,815.52	6,798.32	16.22	15.51	-29.57	-360.39	1,117.38	763.87	733.31	30.56	24.995				
6,900.00	6,874.85	6,914.83	6,897.19	16.50	15.77	-29.29	-369.29	1,114.87	752.69	721.63	31.06	24.234				
7,000.00	6,974.21	7,014.13	6,996.07	16.78	16.03	-29.01	-378.19	1,112.36	741.53	709.97	31.56	23.498				
7,100.00	7,073.58	7,113.44	7,094.94	17.06	16.29	-28.71	-387.08	1,109.85	730.38	698.33	32.05	22.785				
7,200.00	7,172.94	7,212.74	7,193.81	17.34	16.56	-28.40	-395.98	1,107.33	719.26	686.70	32.55	22.095				
7,300.00	7,272.31	7,312.05	7,292.69	17.62	16.82	-28.09	-404.88	1,104.82	708.15	675.10	33.05	21.426				
7,400.00	7,371.68	7,411.35	7,391.56	17.90	17.08	-27.77	-413.78	1,102.31	697.07	663.52	33.55	20.777				
7,500.00	7,471.04	7,510.66	7,490.43	18.19	17.34	-27.43	-422.68	1,099.80	686.01	651.96	34.05	20.149				
7,600.00	7,570.48	7,608.89	7,588.30	18.44	17.57	-27.08	-430.84	1,097.50	675.65	641.14	34.50	19.583				
7,700.00	7,670.09	7,707.25	7,686.42	18.65	17.78	-26.79	-437.40	1,095.64	667.02	632.11	34.90	19.110				
7,800.00	7,769.84	7,805.82	7,784.85	18.86	17.98	-26.59	-442.35	1,094.25	660.13	624.83	35.30	18.702				
7,900.00	7,869.69	7,904.54	7,883.51	19.06	18.17	-26.48	-445.67	1,093.31	654.98	619.30	35.68	18.355				
8,000.00	7,969.62	8,003.35	7,982.31	19.25	18.35	-26.45	-447.36	1,092.83	651.56	615.50	36.06	18.068				
8,100.00	8,069.60	8,102.75	8,081.70	19.42	18.54	-26.49	-447.59	1,092.77	649.86	613.42	36.44	17.834				
8,199.81	8,169.42	8,202.56	8,181.52	19.60	18.72	99.97	-447.59	1,092.77	649.41	612.60	36.81	17.640				
8,200.00	8,169.60	8,202.74	8,181.70	19.60	18.72	99.98	-447.59	1,092.77	649.60	612.79	36.81	17.645				
8,300.00	8,269.60	8,302.74	8,281.70	19.79	18.91	99.98	-447.59	1,092.77	649.60	612.41	37.19	17.467				
8,300.00	8,269.60	8,302.74	8,281.70	19.79	18.91	99.98	-447.59	1,092.77	649.60	612.41	37.19	17.467				
8,400.00	8,369.56	8,402.71	8,381.66	19.96	19.09	100.46	-447.59	1,092.77	649.89	612.33	37.56	17.302				
8,500.00	8,468.14	8,501.28	8,480.24	20.09	19.27	101.52	-447.59	1,092.77	653.00	615.14	37.86	17.248				
8,600.00	8,562.42	8,620.63	8,599.25	20.17	19.46	103.77	-440.91	1,092.73	659.37	621.32	38.06	17.325				
8,700.00	8,649.56	8,760.52	8,733.56	20.20	19.56	105.92	-403.04	1,092.49	665.56	627.54	38.02	17.506				
8,800.00	8,726.89	8,910.03	8,862.38	20.20	19.55	107.42	-328.00	1,092.01	670.16	632.43	37.73	17.763				
8,900.00	8,792.07	9,065.73	8,971.22	20.17	19.51	108.07	-217.33	1,091.30	672.20	634.81	37.39	17.978				
9,000.00	8,843.13	9,222.43	9,046.71	20.12	19.57	107.75	-80.58	1,090.43	671.21	633.85	37.36	17.966				
9,100.00	8,878.50	9,374.58	9,082.01	20.07	19.84	106.52	66.95	1,089.48	667.43	629.53	37.89	17.613				
9,200.00	8,897.12	9,492.06	9,085.12	20.09	20.23	105.32	184.34	1,088.73	662.87	624.09	38.78	17.094				
9,296.07	8,902.05	9,587.98	9,085.31	20.43	20.69	104.99	280.25	1,088.12	661.64	621.99	39.65	16.688				
9,300.00	8,899.93	9,591.97	9,085.32	20.45	20.71	105.17	284.24	1,088.10	662.19	622.54	39.65	16.699				
9,400.00	8,899.78	9,691.97	9,085.51	21.02	21.30	105.20	384.24	1,087.46	662.30	621.58	40.72	16.264				
9,500.00	8,899.63	9,791.97	9,085.71	21.69	21.99	105.23	484.24	1,086.82	662.40	620.40	42.00	15.770				
9,600.00	8,899.47	9,891.97	9,085.91	22.46	22.78	105.26	584.24	1,086.18	662.51	619.03	43.48	15.237				
9,700.00	8,899.32	9,991.97	9,086.11	23.31	23.66	105.29	684.23	1,085.54	662.61	617.48	45.13	14.681				
9,800.00	8,899.17	10,091.97	9,086.31	24.24	24.62	105.32	784.23	1,084.90	662.72	615.77	46.95	14.117				
9,900.00	8,899.02	10,191.97	9,086.51	25.24	25.65	105.34	884.23	1,084.26	662.82	613.92	48.90	13.555				
10,000.00	8,898.86	10,291.97	9,086.71	26.31	26.73	105.37	984.22	1,083.63	662.93	611.95	50.97	13.005				

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 513H
<b>Project:</b>	Eddy County, NM (NAD-83)	<b>TVD Reference:</b>	3476.8' GE + 23.5' KB @ 3500.30usft
<b>Reference Site:</b>	Belloq 11-2 Fed State Com	<b>MD Reference:</b>	3476.8' GE + 23.5' KB @ 3500.30usft
<b>Site Error:</b>	0.00 usft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	Belloq 11-2 Fed State Com 513H	<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														
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	
10,100.00	8,898.71	10,391.97	9,086.91	27.42	27.87	105.40	1,084.22	1,082.99	663.03	609.88	53.16	12.473		
10,200.00	8,898.56	10,491.97	9,087.11	28.59	29.06	105.43	1,184.22	1,082.35	663.14	607.70	55.44	11.962		
10,300.00	8,898.40	10,591.97	9,087.31	29.80	30.29	105.46	1,284.22	1,081.71	663.25	605.44	57.80	11.474		
10,400.00	8,898.25	10,691.97	9,087.50	31.04	31.56	105.49	1,384.21	1,081.07	663.35	603.11	60.24	11.011		
10,500.00	8,898.10	10,791.97	9,087.70	32.33	32.86	105.52	1,484.21	1,080.43	663.46	600.71	62.75	10.573		
10,600.00	8,897.94	10,891.97	9,087.90	33.64	34.19	105.55	1,584.21	1,079.79	663.57	598.25	65.31	10.160		
10,700.00	8,897.79	10,991.96	9,088.10	34.98	35.55	105.58	1,684.20	1,079.16	663.67	595.74	67.93	9.770		
10,800.00	8,897.64	11,091.96	9,088.30	36.34	36.93	105.61	1,784.20	1,078.52	663.78	593.19	70.59	9.403		
10,900.00	8,897.48	11,191.96	9,088.50	37.73	38.32	105.63	1,884.20	1,077.88	663.89	590.60	73.29	9.058		
11,000.00	8,897.33	11,291.96	9,088.70	39.13	39.74	105.66	1,984.20	1,077.24	663.99	587.97	76.03	8.733		
11,100.00	8,897.18	11,391.96	9,088.90	40.55	41.18	105.69	2,084.19	1,076.60	664.10	585.30	78.80	8.428		
11,200.00	8,897.02	11,491.96	9,089.10	41.99	42.63	105.72	2,184.19	1,075.96	664.21	582.61	81.60	8.140		
11,300.00	8,896.87	11,591.96	9,089.30	43.44	44.09	105.75	2,284.19	1,075.32	664.32	579.90	84.42	7.869		
11,400.00	8,896.72	11,691.96	9,089.49	44.91	45.56	105.78	2,384.18	1,074.68	664.43	577.16	87.27	7.614		
11,500.00	8,896.57	11,791.96	9,089.69	46.38	47.05	105.81	2,484.18	1,074.05	664.53	574.40	90.14	7.372		
11,600.00	8,896.41	11,891.96	9,089.89	47.87	48.54	105.84	2,584.18	1,073.41	664.64	571.62	93.03	7.145		
11,700.00	8,896.26	11,991.96	9,090.09	49.37	50.05	105.87	2,684.18	1,072.77	664.75	568.82	95.93	6.930		
11,800.00	8,896.11	12,091.96	9,090.29	50.87	51.56	105.89	2,784.17	1,072.13	664.86	566.01	98.85	6.726		
11,900.00	8,895.95	12,191.96	9,090.49	52.38	53.08	105.92	2,884.17	1,071.49	664.97	563.18	101.79	6.533		
12,000.00	8,895.80	12,291.96	9,090.69	53.90	54.61	105.95	2,984.17	1,070.85	665.08	560.34	104.73	6.350		
12,100.00	8,895.65	12,391.96	9,090.89	55.43	56.14	105.98	3,084.16	1,070.21	665.19	557.49	107.69	6.177		
12,200.00	8,895.49	12,491.96	9,091.09	56.96	57.68	106.01	3,184.16	1,069.58	665.30	554.63	110.66	6.012		
12,300.00	8,895.34	12,591.95	9,091.29	58.50	59.22	106.04	3,284.16	1,068.94	665.41	551.76	113.64	5.855		
12,400.00	8,895.19	12,691.95	9,091.48	60.05	60.77	106.07	3,384.16	1,068.30	665.52	548.88	116.63	5.706		
12,500.00	8,895.03	12,791.95	9,091.68	61.60	62.33	106.10	3,484.15	1,067.66	665.63	546.00	119.63	5.564		
12,600.00	8,894.88	12,891.95	9,091.88	63.15	63.88	106.13	3,584.15	1,067.02	665.74	543.10	122.63	5.429		
12,700.00	8,894.73	12,991.95	9,092.08	64.71	65.45	106.15	3,684.15	1,066.38	665.85	540.20	125.65	5.299		
12,800.00	8,894.58	13,091.95	9,092.28	66.27	67.01	106.18	3,784.14	1,065.74	665.96	537.29	128.67	5.176		
12,900.00	8,894.42	13,191.95	9,092.48	67.84	68.58	106.21	3,884.14	1,065.11	666.07	534.38	131.69	5.058		
13,000.00	8,894.27	13,291.95	9,092.68	69.41	70.16	106.24	3,984.14	1,064.47	666.18	531.46	134.72	4.945		
13,100.00	8,894.12	13,391.95	9,092.88	70.98	71.73	106.27	4,084.14	1,063.83	666.29	528.53	137.76	4.837		
13,200.00	8,893.96	13,491.95	9,093.08	72.55	73.31	106.30	4,184.13	1,063.19	666.40	525.60	140.80	4.733		
13,300.00	8,893.81	13,591.95	9,093.28	74.13	74.89	106.33	4,284.13	1,062.55	666.51	522.67	143.84	4.634		
13,400.00	8,893.66	13,691.95	9,093.47	75.71	76.47	106.36	4,384.13	1,061.91	666.62	519.73	146.89	4.538		
13,500.00	8,893.50	13,791.95	9,093.67	77.29	78.06	106.38	4,484.12	1,061.27	666.73	516.79	149.94	4.447		
13,600.00	8,893.35	13,891.95	9,093.87	78.88	79.65	106.41	4,584.12	1,060.63	666.85	513.85	153.00	4.359		
13,700.00	8,893.20	13,991.95	9,094.07	80.47	81.24	106.44	4,684.12	1,060.00	666.96	510.90	156.06	4.274		
13,800.00	8,893.04	14,091.95	9,094.27	82.06	82.83	106.47	4,784.12	1,059.36	667.07	507.95	159.12	4.192		
13,900.00	8,892.89	14,191.94	9,094.47	83.65	84.42	106.50	4,884.11	1,058.72	667.18	505.00	162.18	4.114		
14,000.00	8,892.74	14,291.94	9,094.67	85.24	86.02	106.53	4,984.11	1,058.08	667.29	502.04	165.25	4.038		
14,100.00	8,892.59	14,391.94	9,094.87	86.84	87.62	106.56	5,084.11	1,057.44	667.41	499.09	168.32	3.965		
14,200.00	8,892.43	14,491.94	9,095.07	88.43	89.22	106.58	5,184.10	1,056.80	667.52	496.13	171.39	3.895		
14,300.00	8,892.28	14,591.94	9,095.27	90.03	90.82	106.61	5,284.10	1,056.16	667.63	493.17	174.47	3.827		
14,400.00	8,892.13	14,691.94	9,095.46	91.63	92.42	106.64	5,384.10	1,055.53	667.75	490.20	177.54	3.761		
14,500.00	8,891.97	14,791.94	9,095.66	93.23	94.02	106.67	5,484.10	1,054.89	667.86	487.24	180.62	3.698		
14,600.00	8,891.82	14,915.39	9,095.91	94.83	95.86	106.75	5,607.50	1,052.17	666.54	482.85	183.69	3.629		
14,700.00	8,891.67	15,043.68	9,096.16	96.44	97.65	106.98	5,735.51	1,043.78	661.00	474.74	186.26	3.549		
14,800.00	8,891.51	15,171.04	9,096.41	98.04	99.45	107.36	5,862.08	1,029.78	651.21	462.81	188.40	3.457		
14,900.00	8,891.36	15,274.69	9,096.61	99.65	101.10	107.76	5,964.74	1,015.43	638.71	447.67	191.04	3.343		
15,000.00	8,891.21	15,373.81	9,096.80	101.26	102.73	108.16	6,062.89	1,001.64	626.18	432.36	193.82	3.231		
15,100.00	8,891.05	15,472.92	9,096.99	102.86	104.36	108.57	6,161.04	987.85	613.68	417.11	196.57	3.122		
15,200.00	8,890.90	15,558.75	9,097.15	104.47	105.63	108.92	6,246.14	976.67	602.09	402.57	199.52	3.018		

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 513H
<b>Project:</b>	Eddy County, NM (NAD-83)	<b>TVD Reference:</b>	3476.8' GE + 23.5' KB @ 3500.30usft
<b>Reference Site:</b>	Belloq 11-2 Fed State Com	<b>MD Reference:</b>	3476.8' GE + 23.5' KB @ 3500.30usft
<b>Site Error:</b>	0.00 usft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	Belloq 11-2 Fed State Com 513H	<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 524H - 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	
15,300.00	8,890.75	15,641.89	9,097.32	106.08	106.80	109.20	6,328.85	968.22	593.21	390.76	202.44	2.930		
15,400.00	8,890.60	15,725.42	9,097.48	107.69	107.98	109.40	6,412.15	962.16	587.08	381.80	205.28	2.860		
15,500.00	8,890.44	15,809.22	9,097.66	109.30	109.16	109.53	6,495.87	958.51	583.71	375.66	208.05	2.806		
15,571.94	8,890.33	15,869.54	9,097.78	110.46	110.01	109.58	6,556.18	957.40	583.00	373.01	209.99	2.776	CC	
15,600.00	8,890.29	15,893.32	9,097.83	110.92	110.34	109.58	6,579.96	957.32	583.10	372.37	210.74	2.767		
15,700.00	8,890.14	15,993.32	9,098.04	112.53	111.95	109.60	6,679.95	957.32	583.84	370.04	213.80	2.731		
15,800.00	8,889.98	16,093.32	9,098.25	114.14	113.56	109.61	6,779.95	957.32	584.57	367.71	216.87	2.696		
15,900.00	8,889.83	16,193.31	9,098.46	115.76	115.17	109.62	6,879.95	957.32	585.31	365.38	219.93	2.661		
16,000.00	8,889.68	16,293.31	9,098.67	117.38	116.79	109.63	6,979.95	957.32	586.05	363.04	223.00	2.628		
16,100.00	8,889.52	16,393.07	9,098.88	118.99	118.40	109.64	7,079.71	957.32	586.78	360.71	226.07	2.596		
16,200.00	8,889.37	16,476.87	9,099.05	120.61	119.57	109.61	7,163.50	958.58	588.93	360.25	228.68	2.575		
16,300.00	8,889.22	16,560.48	9,099.23	122.23	120.73	109.50	7,247.02	962.27	593.83	362.63	231.20	2.568		
16,400.00	8,889.06	16,643.77	9,099.40	123.84	121.88	109.32	7,330.08	968.38	601.48	367.85	233.63	2.575		
16,500.00	8,888.91	16,726.61	9,099.58	125.46	123.01	109.06	7,412.48	976.84	611.87	375.92	235.95	2.593		
16,600.00	8,888.76	16,812.34	9,099.76	127.08	124.21	108.73	7,497.48	988.03	624.93	386.52	238.41	2.621		
16,700.00	8,888.61	16,911.28	9,099.96	128.70	125.73	108.35	7,595.45	1,001.80	638.86	397.01	241.85	2.642		
16,800.00	8,888.45	17,021.08	9,100.19	130.32	127.36	107.95	7,704.25	1,016.65	652.50	406.61	245.89	2.654		
16,900.00	8,888.30	17,148.36	9,100.46	131.94	129.08	107.62	7,830.88	1,029.34	662.73	412.33	250.40	2.647		
17,000.00	8,888.15	17,276.60	9,100.73	133.56	130.85	107.45	7,958.91	1,036.43	668.73	414.36	254.37	2.629		
17,100.00	8,887.99	17,401.74	9,100.98	135.18	132.63	107.43	8,084.03	1,037.85	670.49	412.74	257.76	2.601		
17,200.00	8,887.84	17,501.74	9,101.19	136.81	134.25	107.46	8,184.03	1,037.21	670.61	409.76	260.85	2.571		
17,300.00	8,887.69	17,601.74	9,101.39	138.43	135.87	107.49	8,284.03	1,036.56	670.73	406.78	263.94	2.541		
17,400.00	8,887.53	17,701.74	9,101.60	140.05	137.50	107.52	8,384.02	1,035.92	670.84	403.81	267.04	2.512		
17,500.00	8,887.38	17,801.74	9,101.81	141.67	139.12	107.55	8,484.02	1,035.28	670.96	400.83	270.13	2.484		
17,600.00	8,887.23	17,901.73	9,102.01	143.30	140.74	107.58	8,584.02	1,034.64	671.08	397.85	273.22	2.456		
17,700.00	8,887.07	18,001.73	9,102.22	144.92	142.37	107.61	8,684.01	1,033.99	671.19	394.87	276.32	2.429		
17,800.00	8,886.92	18,101.73	9,102.42	146.55	143.99	107.64	8,784.01	1,033.35	671.31	391.90	279.41	2.403		
17,900.00	8,886.77	18,201.73	9,102.63	148.17	145.62	107.67	8,884.01	1,032.71	671.43	388.92	282.50	2.377		
18,000.00	8,886.62	18,301.73	9,102.83	149.80	147.24	107.70	8,984.01	1,032.07	671.54	385.95	285.60	2.351		
18,100.00	8,886.46	18,401.73	9,103.04	151.42	148.87	107.72	9,084.00	1,031.42	671.66	382.97	288.69	2.327		
18,200.00	8,886.31	18,501.73	9,103.24	153.05	150.49	107.75	9,184.00	1,030.78	671.78	380.00	291.78	2.302		
18,300.00	8,886.16	18,601.73	9,103.45	154.67	152.12	107.78	9,284.00	1,030.14	671.90	377.02	294.87	2.279		
18,400.00	8,886.00	18,701.73	9,103.66	156.30	153.75	107.81	9,383.99	1,029.50	672.02	374.05	297.97	2.255		
18,500.00	8,885.85	18,801.73	9,103.86	157.93	155.37	107.84	9,483.99	1,028.85	672.13	371.08	301.06	2.233		
18,600.00	8,885.70	18,901.73	9,104.07	159.55	157.00	107.87	9,583.99	1,028.21	672.25	368.10	304.15	2.210		
18,700.00	8,885.54	19,001.73	9,104.27	161.18	158.63	107.90	9,683.98	1,027.57	672.37	365.13	307.24	2.188		
18,800.00	8,885.39	19,101.73	9,104.48	162.81	160.26	107.93	9,783.98	1,026.93	672.49	362.16	310.33	2.167		
18,900.00	8,885.24	19,201.73	9,104.68	164.43	161.88	107.95	9,883.98	1,026.28	672.61	359.19	313.42	2.146		
19,000.00	8,885.08	19,301.73	9,104.89	166.06	163.51	107.98	9,983.98	1,025.64	672.73	356.22	316.51	2.125		
19,055.11	8,885.00	19,356.15	9,105.00	166.96	164.40	108.00	10,038.40	1,025.29	672.79	354.59	318.20	2.114	ES, SF	

# LEAM Drilling Services

## Anticollision Report

<b>Company:</b>	Devon Energy	<b>Local Co-ordinate Reference:</b>	Well Belloq 11-2 Fed State Com 513H
<b>Project:</b>	Eddy County, NM (NAD-83)	<b>TVD Reference:</b>	3476.8' GE + 23.5' KB @ 3500.30usft
<b>Reference Site:</b>	Belloq 11-2 Fed State Com	<b>MD Reference:</b>	3476.8' GE + 23.5' KB @ 3500.30usft
<b>Site Error:</b>	0.00 usft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	Belloq 11-2 Fed State Com 513H	<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 - 2H - OH - OH												<b>Offset Site Error:</b>	0.00 usft
Survey Program: 225-MWD-ISCWSA, 771-LEAM MWD+HDGM, 16141-Project,												<b>Offset Well Error:</b>	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)					
18,200.00	8,886.31	8,831.10	8,829.03	153.05	17.11	-89.66	9,849.15	-1,465.71	1,973.54	1,810.85	162.69	12.130	
18,300.00	8,886.16	8,831.61	8,829.54	154.67	17.11	-89.67	9,849.15	-1,465.71	1,941.31	1,774.98	166.33	11.672	
18,400.00	8,886.00	8,832.12	8,830.05	156.30	17.11	-89.69	9,849.16	-1,465.71	1,913.76	1,744.04	169.72	11.276	
18,500.00	8,885.85	8,832.63	8,830.56	157.93	17.11	-89.70	9,849.16	-1,465.71	1,891.11	1,718.29	172.82	10.942	
18,600.00	8,885.70	8,833.15	8,831.08	159.55	17.11	-89.72	9,849.17	-1,465.72	1,873.53	1,697.95	175.58	10.670	
18,700.00	8,885.54	8,833.67	8,831.61	161.18	17.11	-89.74	9,849.17	-1,465.72	1,861.16	1,683.21	177.95	10.459	
18,800.00	8,885.39	8,834.20	8,832.13	162.81	17.11	-89.75	9,849.17	-1,465.72	1,854.11	1,674.21	179.90	10.307	
18,880.97	8,885.27	8,834.63	8,832.56	164.12	17.11	-89.76	9,849.18	-1,465.72	1,852.34	1,671.20	181.14	10.226 CC	
18,900.00	8,885.24	8,834.74	8,832.67	164.43	17.11	-89.77	9,849.18	-1,465.72	1,852.44	1,671.05	181.39	10.212 ES	
19,000.00	8,885.08	8,835.27	8,833.20	166.06	17.12	-89.78	9,849.18	-1,465.72	1,856.16	1,673.74	182.42	10.175 SF	
19,055.11	8,885.00	8,835.57	8,833.50	166.96	17.12	-89.79	9,849.19	-1,465.73	1,860.51	1,677.73	182.78	10.179	

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-513H
<b>Project:</b>	Eddy County, NM (NAD-83)	<b>TVD Reference:</b>	3476.8' GE + 23.5' KB @ 3500.30usft
<b>Reference Site:</b>	Belloq 11-2 Fed State Com	<b>MD Reference:</b>	3476.8' GE + 23.5' KB @ 3500.30usft
<b>Site Error:</b>	0.00 usft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	Belloq 11-2 Fed State Com 513H	<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												<b>Offset Site Error:</b>	0.00 usft
Survey Program: 115-MWD-ISCWSA, 9477-LEAM MWD+HDGM, 14380-Project												<b>Offset Well Error:</b>	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	
18,200.00	8,886.31	8,844.26	8,838.68	153.05	18.78	-89.94	9,634.60	-1,547.53	1,991.06	1,822.23	168.83	11.793	
18,300.00	8,886.16	8,841.84	8,836.26	154.67	18.77	-89.87	9,634.66	-1,547.52	1,970.01	1,798.29	171.72	11.472	
18,400.00	8,886.00	8,839.39	8,833.81	156.30	18.76	-89.80	9,634.72	-1,547.50	1,953.85	1,779.56	174.29	11.211	
18,500.00	8,885.85	8,836.92	8,831.34	157.93	18.76	-89.72	9,634.77	-1,547.48	1,942.71	1,766.21	176.50	11.007	
18,600.00	8,885.70	8,834.42	8,828.85	159.55	18.75	-89.65	9,634.83	-1,547.47	1,936.67	1,758.34	178.32	10.860	
18,667.21	8,885.59	8,832.73	8,827.16	160.65	18.75	-89.60	9,634.87	-1,547.46	1,935.50	1,756.18	179.32	10.793 CC	
18,700.00	8,885.54	8,831.90	8,826.33	161.18	18.75	-89.57	9,634.89	-1,547.45	1,935.78	1,756.04	179.74	10.770 ES	
18,800.00	8,885.39	8,829.36	8,823.78	162.81	18.74	-89.50	9,634.95	-1,547.43	1,940.05	1,759.31	180.74	10.734 SF	
18,900.00	8,885.24	8,826.78	8,821.21	164.43	18.74	-89.42	9,635.01	-1,547.41	1,949.44	1,768.13	181.31	10.752	
19,000.00	8,885.08	8,824.19	8,818.61	166.06	18.73	-89.35	9,635.08	-1,547.40	1,963.89	1,782.41	181.47	10.822	
19,055.11	8,885.00	8,822.74	8,817.17	166.96	18.73	-89.30	9,635.11	-1,547.39	1,973.97	1,792.58	181.39	10.882	

# LEAM Drilling Services

## Anticollision Report

<b>Company:</b>	Devon Energy	<b>Local Co-ordinate Reference:</b>	Well Belloq 11-2 Fed State Com 513H
<b>Project:</b>	Eddy County, NM (NAD-83)	<b>TVD Reference:</b>	3476.8' GE + 23.5' KB @ 3500.30usft
<b>Reference Site:</b>	Belloq 11-2 Fed State Com	<b>MD Reference:</b>	3476.8' GE + 23.5' KB @ 3500.30usft
<b>Site Error:</b>	0.00 usft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	Belloq 11-2 Fed State Com 513H	<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														Offset Site Error:	0.00 usft
Survey Program: 109-MWD-ISCWSA, 744-LEAM MWD+HDGM, 14955-Project														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)							
18,000.00	8,886.62	8,823.35	8,816.77	149.80	17.32	-89.23	9,944.48	-1,335.15	1,978.46	1,827.83	150.63	13.134			
18,100.00	8,886.46	8,822.69	8,816.10	151.42	17.32	-89.21	9,944.48	-1,335.14	1,931.12	1,776.15	154.97	12.462			
18,200.00	8,886.31	8,822.03	8,815.44	153.05	17.32	-89.19	9,944.49	-1,335.12	1,887.89	1,728.67	159.22	11.857			
18,300.00	8,886.16	8,821.36	8,814.78	154.67	17.32	-89.16	9,944.49	-1,335.11	1,849.07	1,685.73	163.33	11.321			
18,400.00	8,886.00	8,820.70	8,814.11	156.30	17.32	-89.14	9,944.49	-1,335.10	1,814.93	1,647.68	167.25	10.852			
18,500.00	8,885.85	8,820.03	8,813.44	157.93	17.31	-89.12	9,944.50	-1,335.09	1,785.74	1,614.84	170.90	10.449			
18,600.00	8,885.70	8,819.36	8,812.77	159.55	17.31	-89.10	9,944.50	-1,335.08	1,761.75	1,587.53	174.22	10.112			
18,700.00	8,885.54	8,818.69	8,812.10	161.18	17.31	-89.07	9,944.51	-1,335.07	1,743.18	1,566.03	177.15	9.840			
18,800.00	8,885.39	8,818.01	8,811.43	162.81	17.31	-89.05	9,944.51	-1,335.05	1,730.20	1,550.56	179.63	9.632			
18,900.00	8,885.24	8,817.34	8,810.75	164.43	17.31	-89.03	9,944.51	-1,335.04	1,722.93	1,541.31	181.62	9.487			
18,975.48	8,885.12	8,816.83	8,810.24	165.66	17.31	-89.01	9,944.52	-1,335.03	1,721.28	1,538.51	182.77	9.418 CC			
19,000.00	8,885.08	8,816.66	8,810.08	166.06	17.31	-89.01	9,944.52	-1,335.03	1,721.45	1,538.38	183.07	9.403 ES			
19,055.11	8,885.00	8,816.29	8,809.70	166.96	17.31	-88.99	9,944.52	-1,335.02	1,723.12	1,539.47	183.64	9.383 SF			

# LEAM Drilling Services

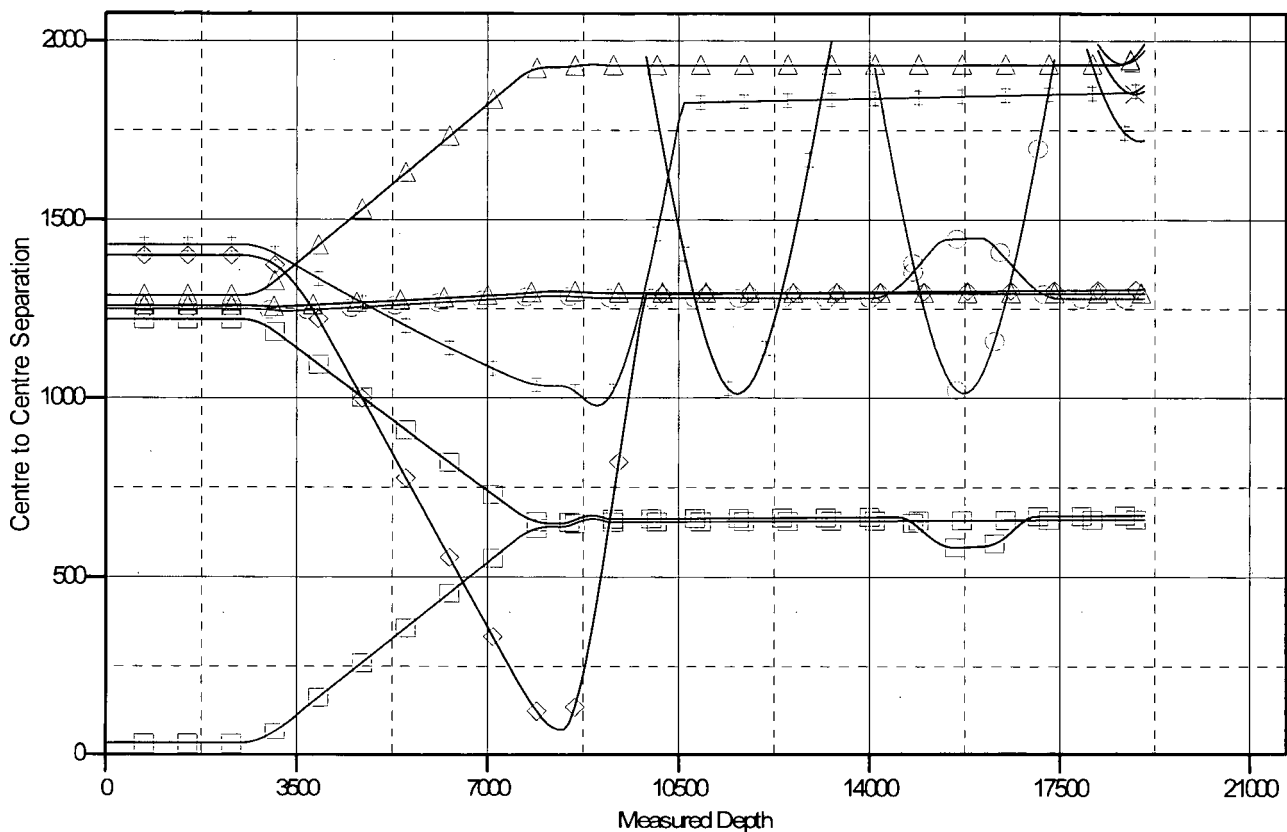
## Anticollision Report

<b>Company:</b>	Devon Energy	<b>Local Co-ordinate Reference:</b>	Well Belloq 11-2 Fed State Com 513H
<b>Project:</b>	Eddy County, NM (NAD-83)	<b>TVD Reference:</b>	3476.8' GE + 23.5' KB @ 3500.30usft
<b>Reference Site:</b>	Belloq 11-2 Fed State Com	<b>MD Reference:</b>	3476.8' GE + 23.5' KB @ 3500.30usft
<b>Site Error:</b>	0.00 usft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	Belloq 11-2 Fed State Com 513H	<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 3476.8' GE + 23.5' KB @ 3500.30usft  
 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 513H  
 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	◆ Barday 11H Federal 1 (Offset), OH, OHV0
OHV0	◆ Belloq 11-2 Fed State Com 223H (Offset), OH, Plan #1 V0	■ Belloq 11-2 Fed State Com 523H, OH, Plan
OHV0	○ Barday State 1 (Offset), OH, OHV0	◆ Belloq 11-2 Fed State Com 234H (Offset) C
I1-2 Fed State Com 514H, OH, Plan #2V0	▲ Belloq 11-2 Fed State Com 512H, OH, Plan #1V0	■ Belloq 11-2 Fed State Com 524H, OH, Plan

# LEAM Drilling Services

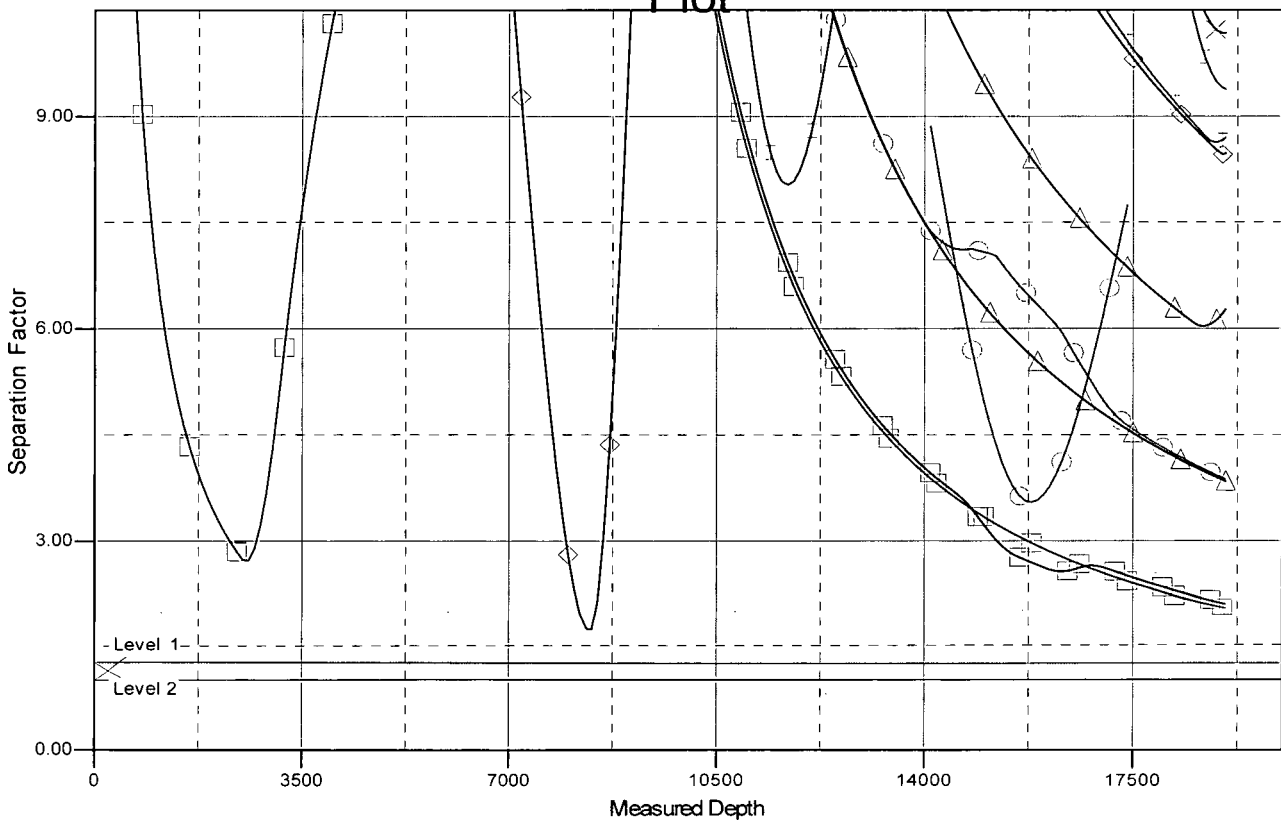
## Anticollision Report

<b>Company:</b>	Devon Energy	<b>Local Co-ordinate Reference:</b>	Well Belloq 11-2 Fed State Com 513H
<b>Project:</b>	Eddy County, NM (NAD-83)	<b>TVD Reference:</b>	3476.8' GE + 23.5' KB @ 3500.30usft
<b>Reference Site:</b>	Belloq 11-2 Fed State Com	<b>MD Reference:</b>	3476.8' GE + 23.5' KB @ 3500.30usft
<b>Site Error:</b>	0.00 usft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	Belloq 11-2 Fed State Com 513H	<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 3476.8' GE + 23.5' KB @ 3500.30usft  
 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 513H  
 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	✚ Barday 11H Federal 1 (Offset), OH, OHV0
OHV0	◆ Belloq 11-2 Fed State Com 223H (Offset), OH, Plan #1 V0	◻ Belloq 11-2 Fed State Com 523H, OH, Plan
OHV0	⊖ Barday State 1 (Offset), OH, OHV0	✚ Belloq 11-2 Fed State Com 234H (Offset) O
I1-2 Fed State Com 514H, OH, Plan #2V0	▲ Belloq 11-2 Fed State Com 512H, OH, Plan #1V0	◻ Belloq 11-2 Fed State Com 524H, OH, Plan

## Devon Energy – Belloq 11-2 Fed State Com 513H

### 1. Geologic Formations

TVD of target	8885	Pilot hole depth	N/A
MD at TD:	19055	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 513H

### 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 513H**

	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 513H

### 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	726	Surf	9	3.27	Lead: Class H / C + additives
	2235	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 513H

## 4. Pressure Control Equipment

BOP installed and tested before drilling which hole?	Size?	Min. Required WP	Type	✓	Tested to:
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 513H

### 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
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### 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	4158 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

**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

  x   Directional Plan

       Other, describe

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

Devon proposes using a multi-bowl wellhead assembly. This assembly will only be tested when installed on the surface casing. Minimum working pressure of the blowout preventer (BOP) and related equipment (BOPE) required for drilling below the surface casing shoe shall be 5000 (5M) psi.

- Wellhead will be installed by wellhead representatives.
- If the welding is performed by a third party, the wellhead representative will monitor the temperature to verify that it does not exceed the maximum temperature of the seal.
- Wellhead representative will install the test plug for the initial BOP test.
- Wellhead company will install a solid steel body pack-off to completely isolate the lower head after cementing intermediate casing. After installation of the pack-off, the pack-off and the lower flange will be tested to 5M, as shown on the attached schematic. Everything above the pack-off will not have been altered whatsoever from the initial nipple up. Therefore the BOP components will not be retested at that time.
- If the cement does not circulate and one inch operations would have been possible with a standard wellhead, the well head will be cut and top out operations will be conducted.
- Devon will pressure test all seals above and below the mandrel (but still above the casing) to full working pressure rating.
- Devon will test the casing to 0.22 psi/ft or 1500 psi, whichever is greater, as per Onshore Order #2.

After running the 13-3/8" surface casing, a 13-5/8" BOP/BOPE system with a minimum rating of 5M will be installed on the wellhead system and will undergo a 250 psi low pressure test followed by a 5,000 psi high pressure test. The 5,000 psi high and 250 psi low test will cover testing requirements a maximum of 30 days, as per Onshore Order #2. If the well is not complete within 30 days of this BOP test, another full BOP test will be conducted, as per Onshore Order #2.

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

The pipe rams will be operated and checked each 24 hour period and each time the drill pipe is out of the hole. These tests will be logged in the daily driller's log. A 2" kill line and 3" choke line will be incorporated into the drilling spool below the ram BOP. In addition to the rams and annular preventer, additional BOP accessories include a kelly cock, floor safety valve, choke lines, and choke manifold rated at 5,000 psi WP.

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



# 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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U. S. Steel Tubular Products  
460 Wildwood Forest Drive, Suite 300S  
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)

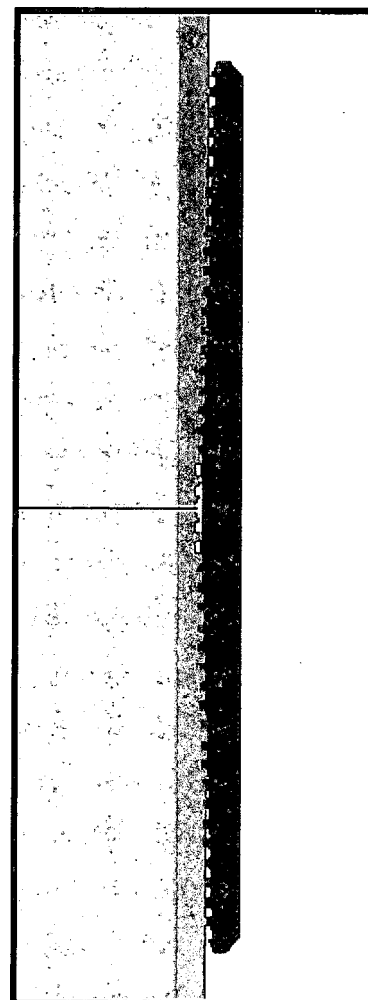
	Connection Dimensions
6.050	Connection O.D. (in)
4.892	Connection I.D. (in)
4.767	Connection Drift Diameter (in)
4.13	Make-up Loss (in)
4.962	Critical Area (sq in)
100.0	Joint Efficiency (%)

	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)



VAM-USA  
4424 W. Sam Houston Pkwy. Suite 150  
Houston, TX 77041  
Phone: 713-479-3200  
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).

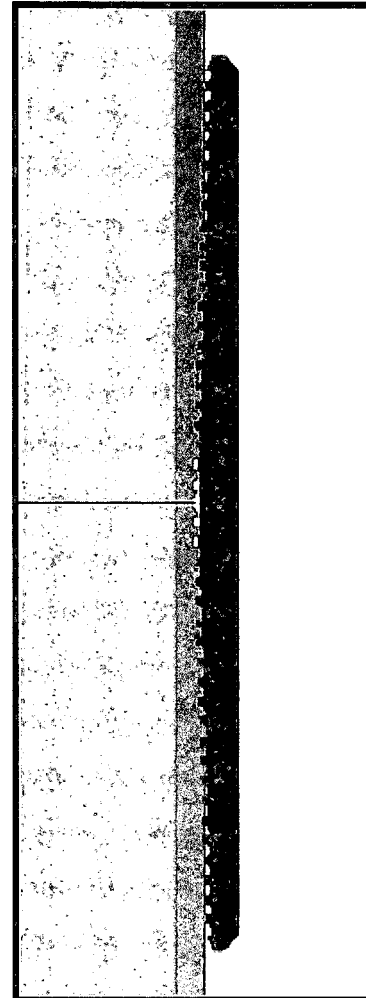
Connection specifications within the control of VAM-USA were correct as of the date printed. Specifications are subject to change without notice. Certain connection specifications are dependent on the mechanical properties of the pipe. Mechanical properties of mill proprietary pipe grades were obtained 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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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.

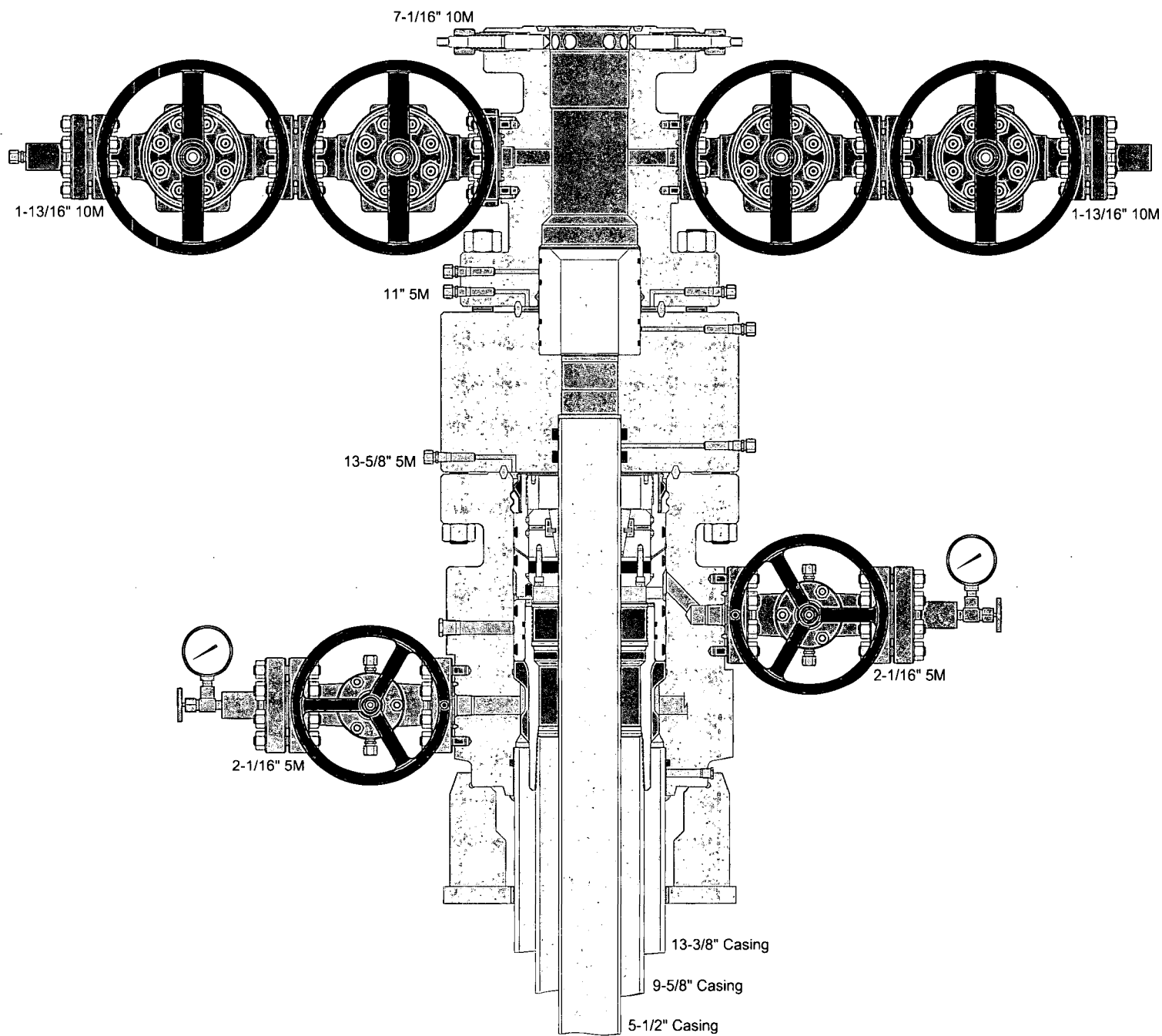
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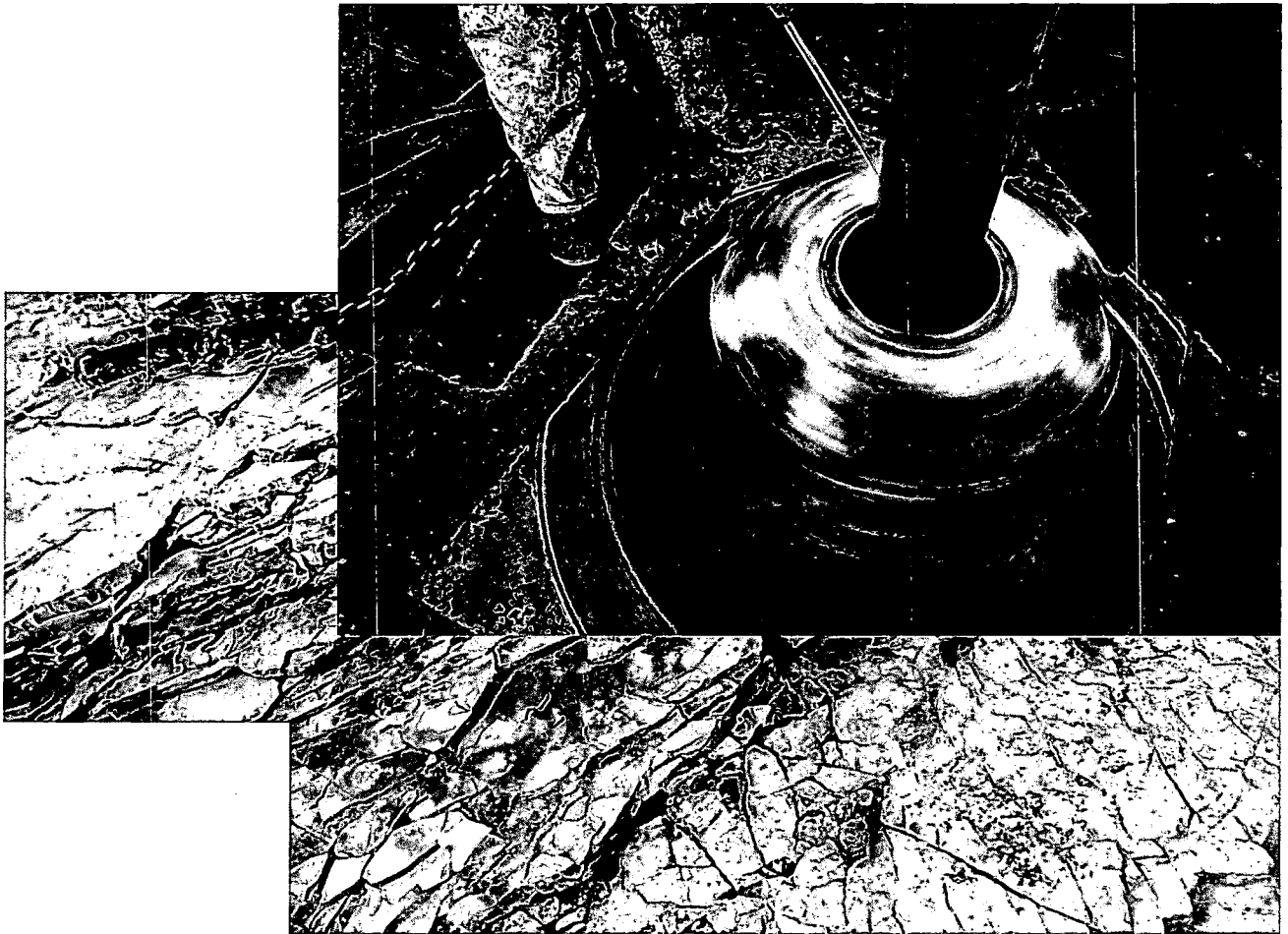
The pipe rams will be operated and checked each 24 hour period and each time the drill pipe is out of the hole. These tests will be logged in the daily driller's log. A 2" kill line and 3" choke line will be incorporated into the drilling spool below the ram BOP. In addition to the rams and annular preventer,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

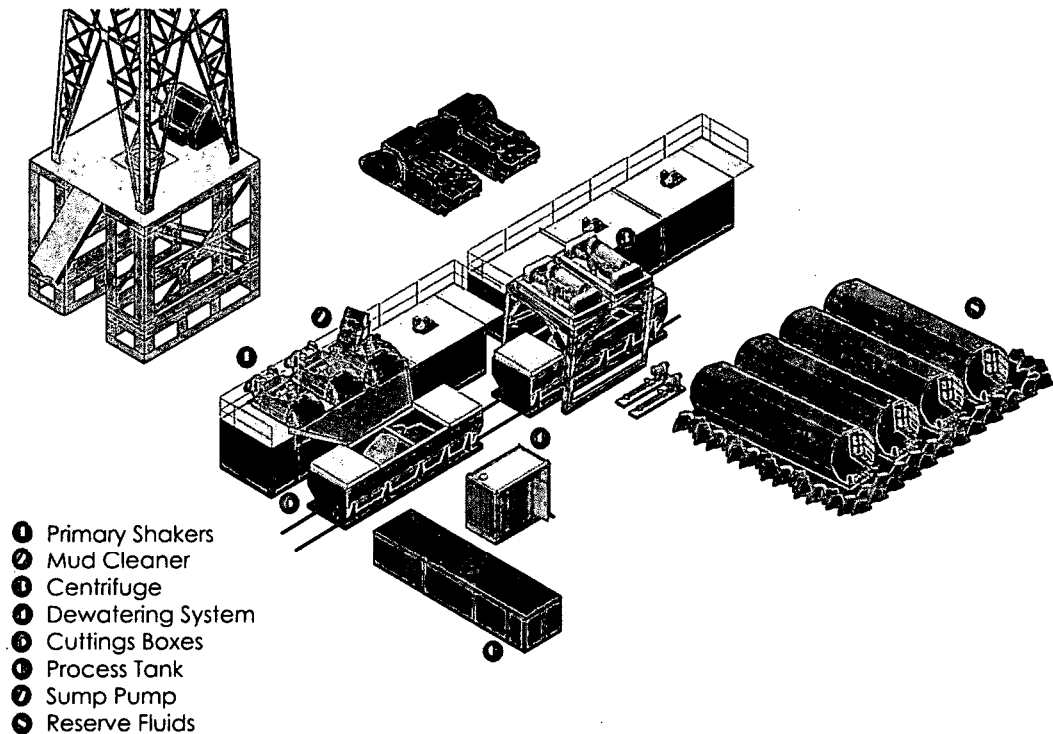
## **II. Operations and Maintenance Plan**

*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

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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.

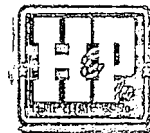
Should you have any questions or require any additional information/clarifications then please do not hesitate to contact us.

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)





# 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.taunusemerge.hu](http://www.taunusemerge.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 Test Dept.			

14094-65

40920-0-00015 N800C

8	GNL +0.000 PC	14:00			
	RDL +0.000 PC	14:00			
	BL +0.000 PC	14:00			
7	GNL +0.000 PC	13:40	40	60	80
	RDL +0.000 PC	13:40			
	BL +0.000 PC	13:40			
6	GNL +0.000 PC	13:20			
	RDL +0.000 PC	13:20			
	BL +0.000 PC	13:20			
5	GNL +0.000 PC	13:00			
	RDL +0.000 PC	13:00			
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	BL +0.000 PC	12:40			
3	GNL +0.000 PC	12:20			
	RDL +0.000 PC	12:20			
	BL +0.000 PC	12:20			
2	GNL +0.000 PC	12:00			
	RDL +0.000 PC	12:00			
	BL +0.000 PC	12:00			

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

VERIFIED TRUE CO.  
 PHOENIX RUBBER CO.



**APD ID:** 10400038619

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

Highlighted data  
reflects the most  
recent changes  
[Show Final Text](#)

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

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

**Well Number:** 513H

**Well Type:** OIL WELL

**Well Work Type:** Drill

### Section 1 - Existing Roads

**Will existing roads be used?** YES

**Existing Road Map:**

EX\_RD\_20190130074458.pdf

**Existing Road Purpose:** ACCESS,FLUID TRANSPORT

**Row(s) Exist?** NO

**ROW ID(s)**

**ID:**

**Do the existing roads need to be improved?** NO

**Existing Road Improvement Description:**

**Existing Road Improvement Attachment:**

### Section 2 - New or Reconstructed Access Roads

**Will new roads be needed?** YES

**New Road Map:**

ACCESS\_RD\_8\_14\_2019\_20190814125449.pdf

**New road type:** COLLECTOR,RESOURCE

**Length:** 469

Feet

**Width (ft.):** 30

**Max slope (%):** 6

**Max grade (%):** 4

**Army Corp of Engineers (ACOE) permit required?** NO

**ACOE Permit Number(s):**

**New road travel width:** 20

**New road access erosion control:** Water Drainage Ditch

**New road access plan or profile prepared?** NO

**New road access plan attachment:**

**Access road engineering design?** NO

**Access road engineering design attachment:**

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

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

**Well Number:** 513H

**Turnout?** N

**Access surfacing type:** GRAVEL

**Access topsoil source:** ONSITE

**Access surfacing type description:**

**Access onsite topsoil source depth:** 6

**Offsite topsoil source description:**

**Onsite topsoil removal process:** See attached Interim reclamation diagram.

**Access other construction information:**

**Access miscellaneous information:**

**Number of access turnouts:**

**Access turnout map:**

### Drainage Control

**New road drainage crossing:** CULVERT

**Drainage Control comments:** na

**Road Drainage Control Structures (DCS) description:** na

**Road Drainage Control Structures (DCS) attachment:**

### Access Additional Attachments

## Section 3 - Location of Existing Wells

**Existing Wells Map?** YES

**Attach Well map:**

BELLOQ\_11\_2\_FED\_STATE\_COM\_513H\_OneMileBuffer\_WA017267297\_20190130074549.pdf

## 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 2. Please refer to CTB plat.

## Section 5 - Location and Types of Water Supply

### Water Source Table

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

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

**Well Number:** 513H

**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\_523H\_513H\_water\_x\_map\_20190130071912.PDF

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

**New water well?** NO

**New Water Well Info**

**Well latitude:**

**Well Longitude:**

**Well datum:**

**Well target aquifer:**

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

**Est thickness of aquifer:**

**Aquifer comments:**

**Aquifer documentation:**

**Well depth (ft):**

**Well casing type:**

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

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

**New water well casing?**

**Used casing source:**

**Drilling method:**

**Drill material:**

**Grout material:**

**Grout depth:**

**Casing length (ft.):**

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

**Well Production type:**

**Completion Method:**

**Water well additional information:**

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

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

**Well Number:** 513H

**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

**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

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

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

**Well Number:** 513H

**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:** 1962                  barrels

**Waste disposal frequency :** Daily

**Safe containment description:** N/A

**Safe containmant attachment:**

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

**Disposal type description:**

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

### Reserve Pit

**Reserve Pit being used?** NO

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

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

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

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

**Reserve pit liner**

**Reserve pit liner specifications and installation description**

### Cuttings Area

**Cuttings Area being used?** NO

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

**Description of cuttings location**

**Cuttings area length (ft.)**                                  **Cuttings area width (ft.)**

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

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

**WCuttings area liner**

Operator Name: DEVON ENERGY PRODUCTION COMPANY LP

Well Name: BELLOQ 11-2 FED STATE COM

Well Number: 513H

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:

513H\_RIG\_LAYOUT\_20190130074651.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: 3

Recontouring attachment:

RECLAMATION\_20190130074705.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.

Well pad proposed disturbance  
(acres): 4.759

Road proposed disturbance (acres):  
0.323

Powerline proposed disturbance  
(acres): 1.092

Pipeline proposed disturbance  
(acres): 0.222

Other proposed disturbance (acres):  
5.741

Total proposed disturbance: 12.137

Well pad interim reclamation (acres):  
2.318

Road interim reclamation (acres): 0

Powerline interim reclamation (acres):  
0

Pipeline interim reclamation (acres): 0

Other interim reclamation (acres): 0

Total interim reclamation: 2.318

Well pad long term disturbance  
(acres): 2.441

Road long term disturbance (acres):  
0.323

Powerline long term disturbance  
(acres): 1.092

Pipeline long term disturbance  
(acres): 0.222

Other long term disturbance (acres):  
5.741

Total long term disturbance: 9.819

Disturbance Comments:

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

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

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

**Well Number:** 513H

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:**

## Seed Management

### Seed Table

**Seed type:**

**Seed source:**

**Seed name:**

**Source name:**

**Source address:**

**Source phone:**

**Seed cultivar:**

**Seed use location:**

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

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

**Well Number:** 513H

**PLS pounds per acre:**

**Proposed seeding season:**

Seed Summary	
Seed Type	Pounds/Acre

**Total pounds/Acre:**

**Seed reclamation attachment:**

<b>Operator Contact/Responsible Official Contact Info</b>
---

**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:**

<b>Section 11 - Surface Ownership</b>
---------------------------------------

**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:**

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

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

**Well Number:** 513H

**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:**

**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:**

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

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

**Well Number:** 513H

**BOR Local Office:**

**COE Local Office:**

**DOD Local Office:**

**NPS Local Office:**

**State Local Office:**

**Military Local Office:**

**USFWS Local Office:**

**Other Local Office:**

**USFS Region:**

**USFS Forest/Grassland:**

**USFS Ranger District:**

**Disturbance type:** WELL PAD

**Describe:**

**Surface Owner:** BUREAU OF LAND MANAGEMENT

**Other surface owner description:**

**BIA Local Office:**

**BOR Local Office:**

**COE Local Office:**

**DOD Local Office:**

**NPS Local Office:**

**State Local Office:**

**Military Local Office:**

**USFWS Local Office:**

**Other Local Office:**

**USFS Region:**

**USFS Forest/Grassland:**

**USFS Ranger District:**

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

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

**Well Number:** 513H

### Section 12 - Other Information

**Right of Way needed?** NO

**Use APD as ROW?**

**ROW Type(s):**

#### ROW Applications

**SUPO Additional Information:** 8/14/2019-UPDATED ACCESS RD IN C102 AND SUPO ATTACHMENTS, SENT  
UPDATED GIS FILES

**Use a previously conducted onsite?** YES

**Previous Onsite information:** MAY 2017/ Uber North-DRILL ISLAND

#### Other SUPO Attachment

EL8030\_BELLOQ\_11\_WELL\_PAD\_3\_ELECTRIC\_LINE\_P\_R1\_20190130072354.pdf

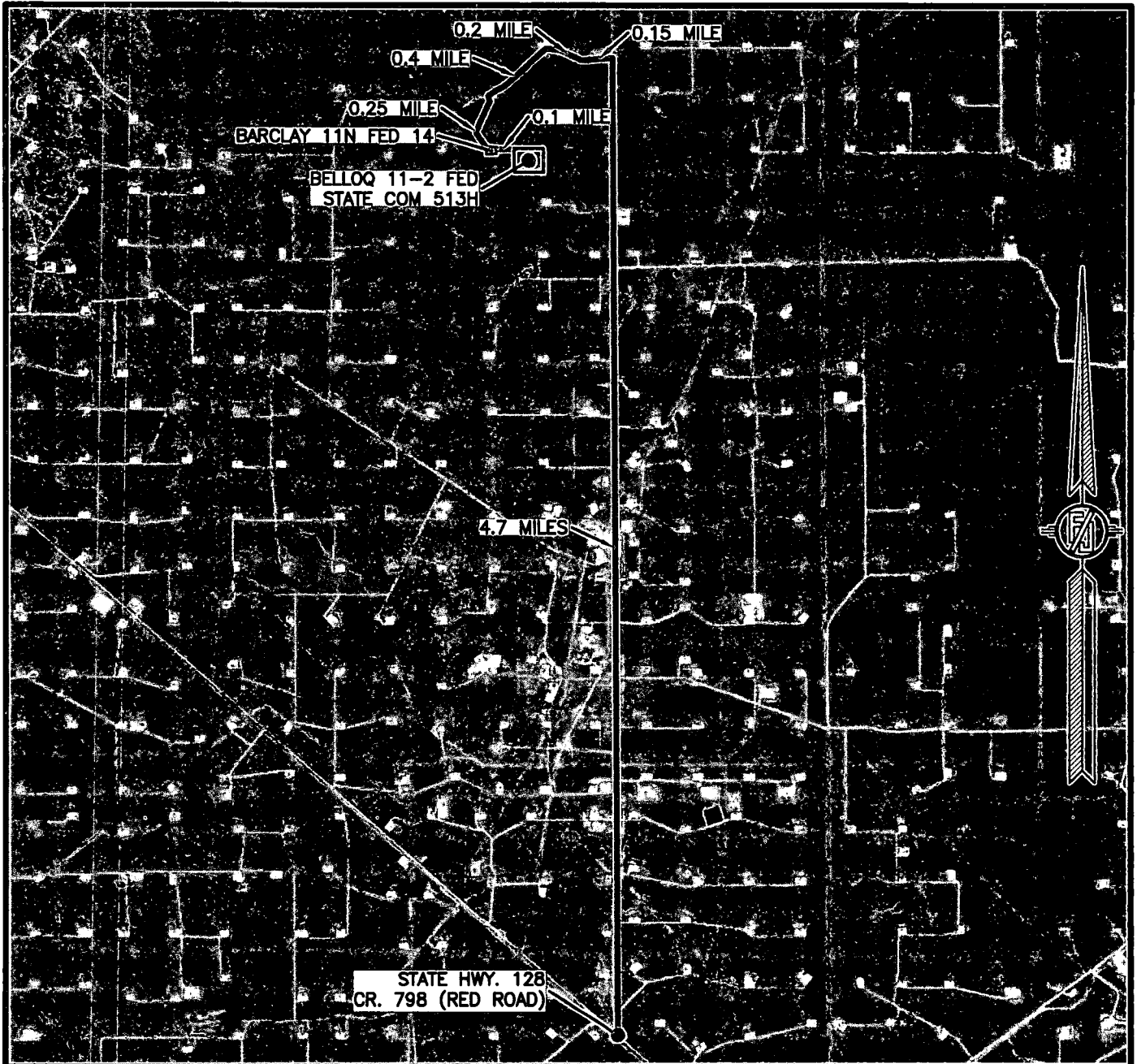
7660156F\_BELLOQ\_11\_PAD\_3\_CTB\_2\_FL\_P\_20190130072340.pdf

AA000145292\_BELLOQ\_11\_CTB\_2\_PAD\_P\_20190130072351.pdf

521H\_523H\_513H\_522H\_Pay.gov\_\_\_\_Receipt\_20190130115708.pdf

Belloq\_Access\_Road\_Plan\_20190814125528.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 513H**  
LOCATED 500 FT. FROM THE SOUTH LINE  
AND 2130 FT. FROM THE EAST LINE OF  
SECTION 11, TOWNSHIP 23 SOUTH,  
RANGE 31 EAST, N.M.P.M.  
EDDY COUNTY, STATE OF NEW MEXICO

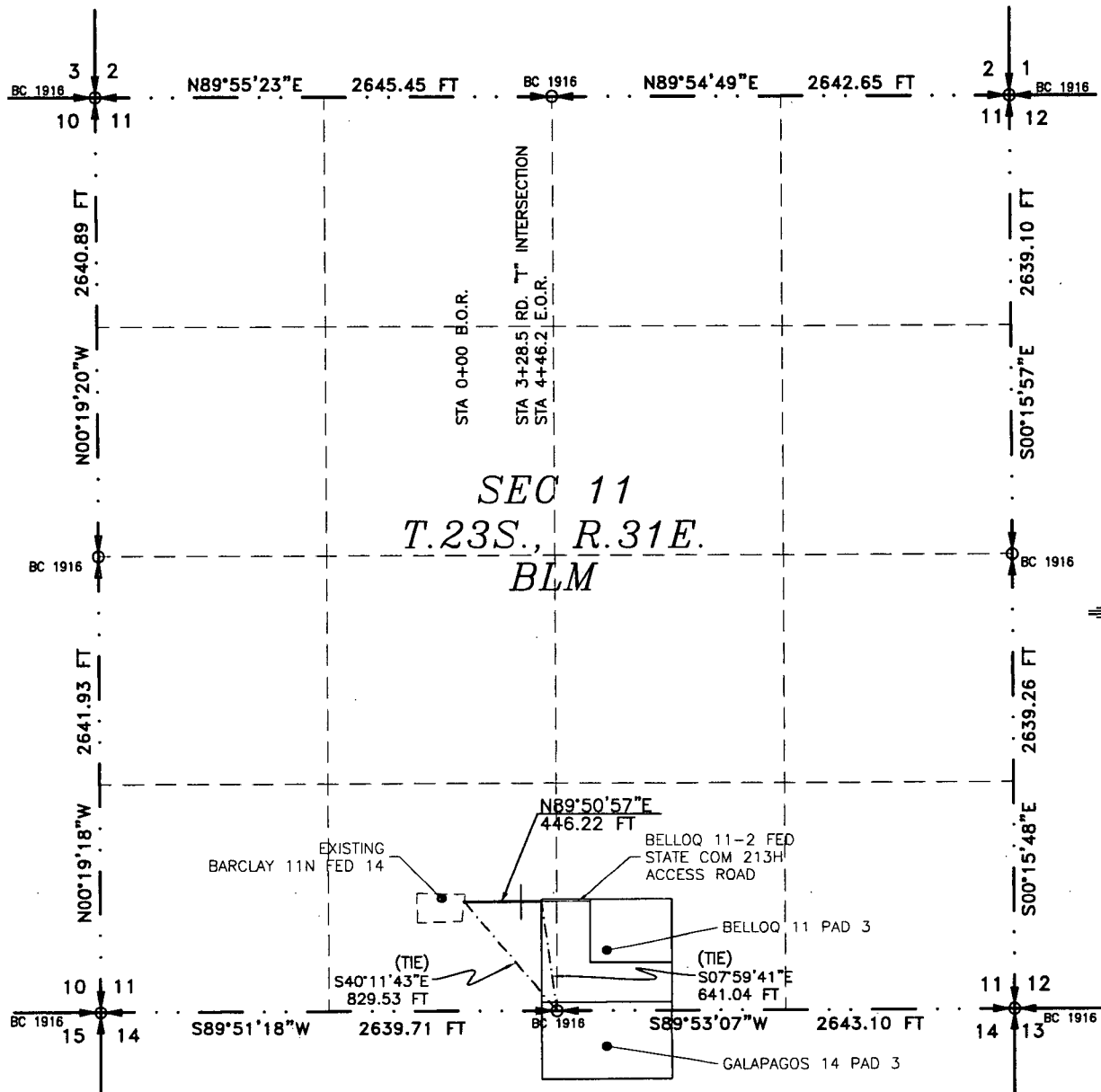
DECEMBER 20, 2018

SURVEY NO. 6185B

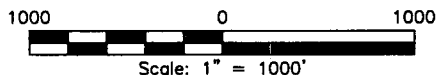
MADRON SURVEYING, INC. 301 SOUTH CANAL (575) 234-3341 CARLSBAD, NEW MEXICO

**ACCESS ROAD PLAT**  
**ACCESS ROAD TO THE BELLOQ 11 PAD 3**

**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**  
**APRIL 11, 2018**



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 25<sup>TH</sup> DAY OF APRIL 2018.

FILMON F. JARAMILLO, PLS 12797

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

**SURVEY NO. 5226B**

**CARLSBAD, NEW MEXICO**

**ACCESS ROAD PLAT**  
**ACCESS ROAD TO THE BELLOQ 11 PAD 3**

**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**  
**APRIL 11, 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 SE/4 SW/4 OF SAID SECTION 11, TOWNSHIP 23 SOUTH, RANGE 31 EAST, N.M.P.M., WHENCE THE SOUTH QUARTER CORNER OF SAID SECTION 11, TOWNSHIP 23 SOUTH, RANGE 31 EAST, N.M.P.M. BEARS S40°11'43"E, A DISTANCE OF 829.53 FEET;

THENCE N89°50'57"E A DISTANCE OF 446.22 FEET THE TERMINUS OF THIS CENTERLINE SURVEY, WHENCE THE SOUTH QUARTER CORNER OF SAID SECTION 11, TOWNSHIP 23 SOUTH, RANGE 31 EAST, N.M.P.M. BEARS S07°59'41"E, A DISTANCE OF 641.04 FEET;

SAID STRIP OF LAND BEING 446.22 FEET OR 27.04 RODS IN LENGTH, CONTAINING 0.307 ACRES MORE OR LESS AND BEING ALLOCATED BY FORTIES AS FOLLOWS:

SE/4 SW/4 446.22 L.F. 27.04 RODS 0.307 ACRES

**GENERAL NOTES**

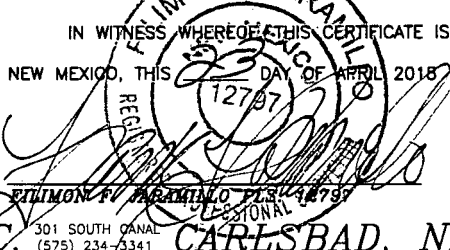
1.) THE INTENT OF THIS ROUTE SURVEY IS TO ACQUIRE AN EASEMENT.

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.

**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 11 DAY OF APRIL 2018



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

**SHEET: 2-2**

**MADRON SURVEYING, INC.**

301 SOUTH CANAL  
(575) 234-3341


**SURVEY NO. 5226B**  
**CARLSBAD, NEW MEXICO**

## 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.

Map is current as of 1/17/2019



 Miles      1 inch = 0.44 miles

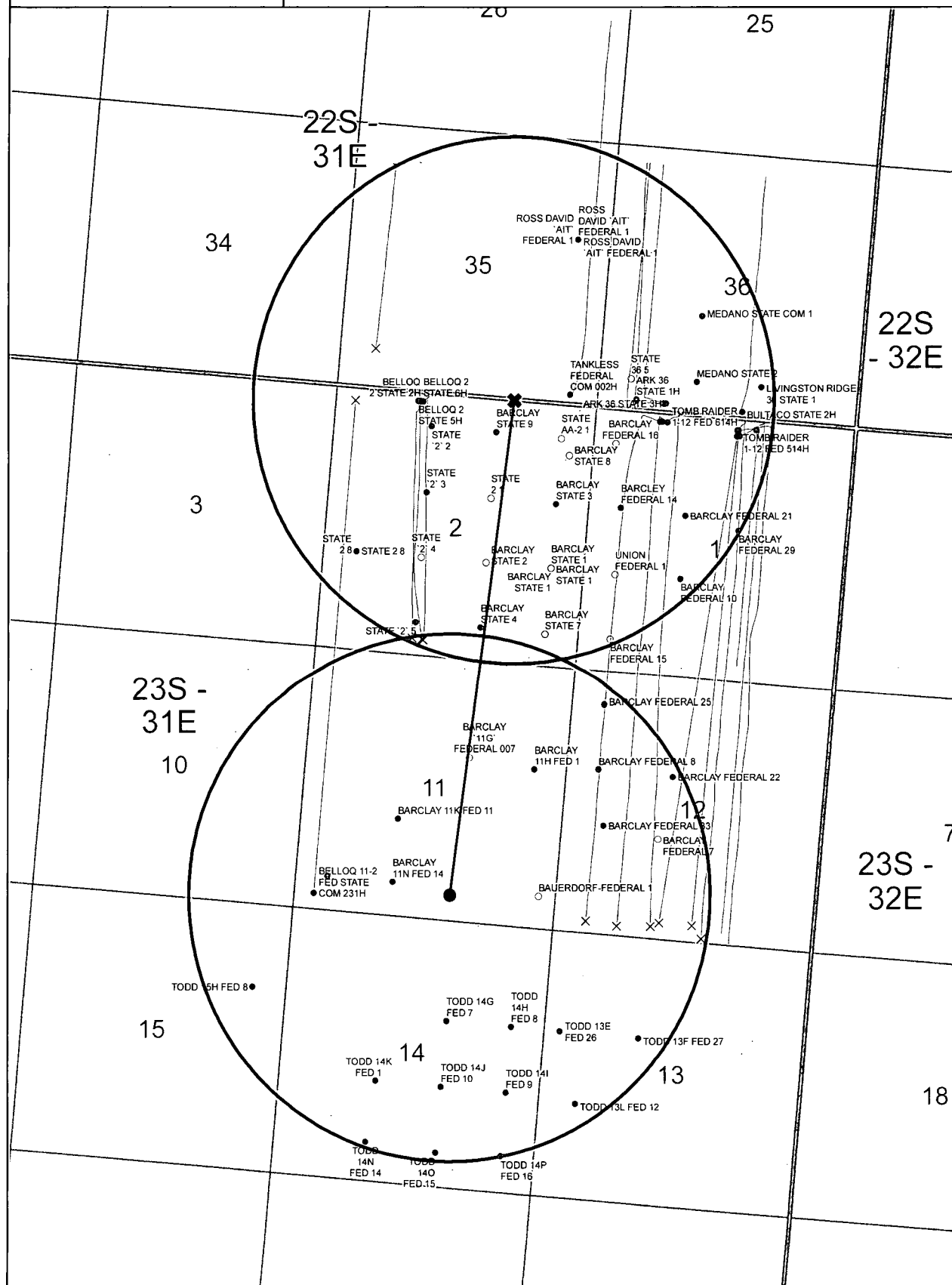
Nearest wellbore to SHL:

2743 ft.

Nearest wellbore to BHL:

1131 ft.

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



# BELLOQ 11-2 FED STATE COM

523H, 513H



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.

WG5\_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

GROFT 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 8,115' & FW 17,455'

TODD 2 TW POND

BELLOQ 11-2 FED STATE COM 523H, 513H

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 - 13

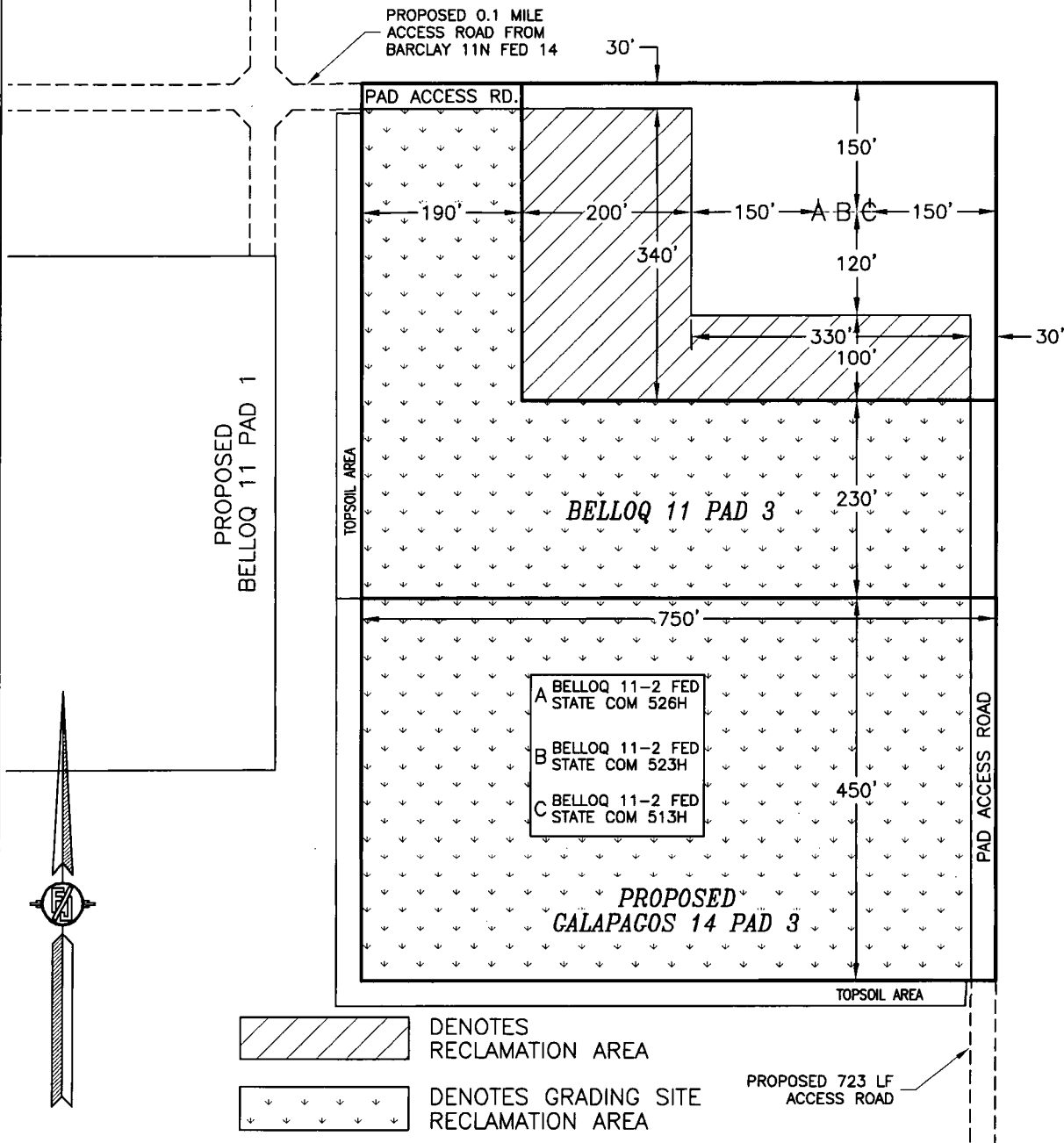
23S - 31E - 13

23S - 32E - 18


 Prevailing Wind  
Direction S. SW



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



0 10 50 100 200  
SCALE 1" = 100'

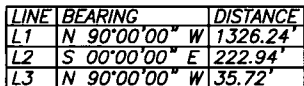
2.318± ACRES INTERIM PAD RECLAMATION AREA  
12.727± ACRES GRADING SITE RECLAMATION AREA  
3.036± ACRES NON-RECLAIMED AREA  
18.081± ACRES BELLOQ & GALAPAGOS WELL PAD

DEVON ENERGY PRODUCTION COMPANY, L.P.  
**BELLOQ 11-2 FED STATE COM 513H**  
LOCATED 500 FT. FROM THE SOUTH LINE  
AND 2130 FT. FROM THE EAST 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. 6185B

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



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 2" iron pipe w/ BC found for the southeast corner of Section 11, T23S-R31E, N.M.P.M., Eddy County, New Mexico;

Thence N 36°02'25" W, a distance of 1053.19' to the **Point of Beginning** of this easement, having coordinates of Northing=478487.70 feet, Easting=724011.72 feet, and continuing the following courses;

Thence N 90°00'00" W, a distance of 1326.24' to an angle point;

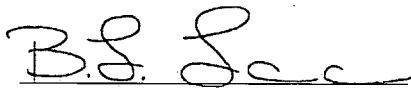
Thence S 00°00'00" E, a distance of 222.94' to an angle point;

Thence N 90°00'00" W, a distance of 35.72' to the **Point of Ending**, having coordinates of Northing=478264.76 feet, Easting=722649.76 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 79°00'56" W a distance of 3361.33', covering a total of **1584.90' or 96.05 rods** and having an area of **1.092 acres**.

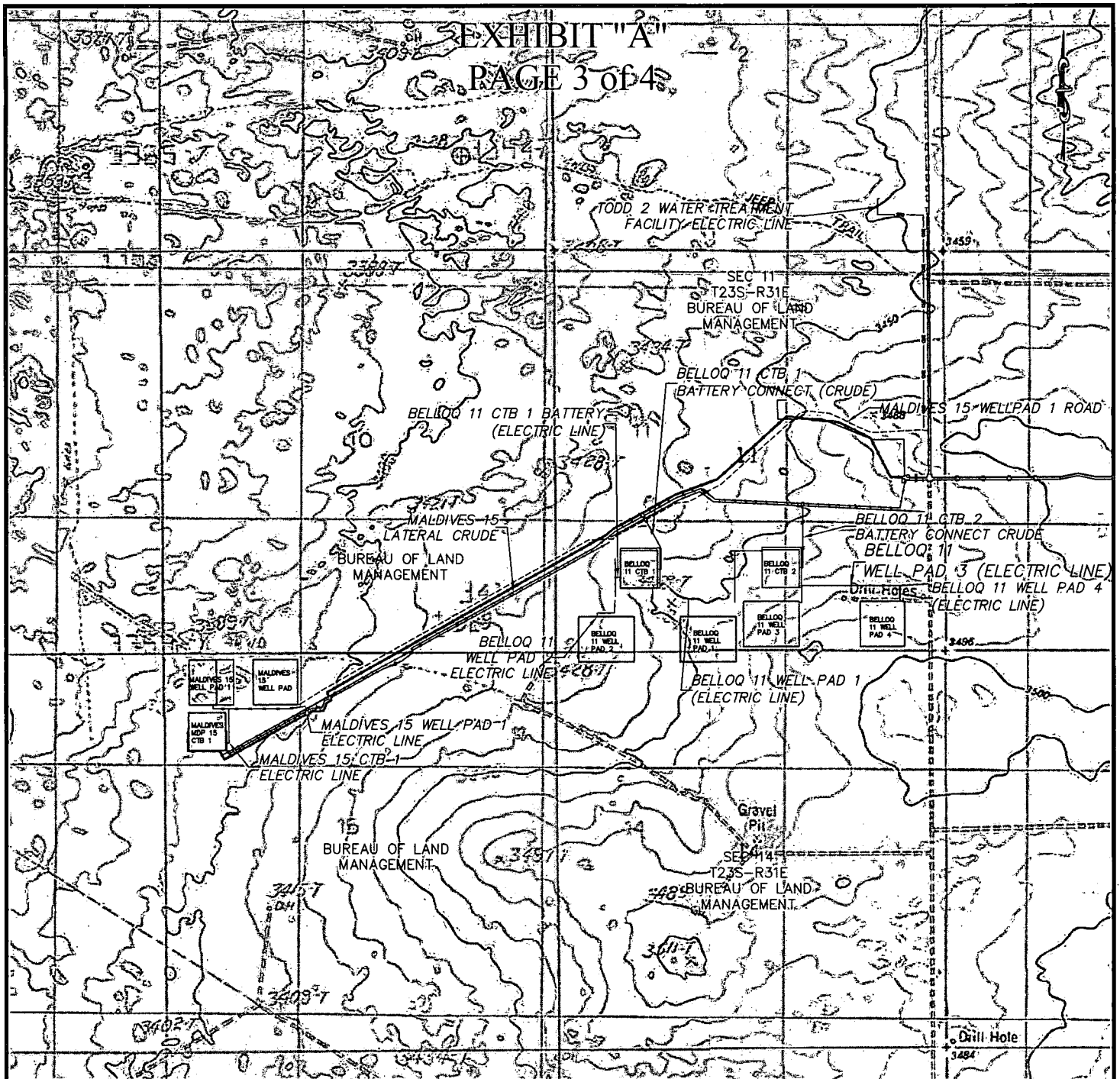
**NOTES:**

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: 03/22/2018  
Horizon Row, LLC  
P.O. Box 548, Dry Creek, LA  
(903) 388-3045      70637  
Employee of Horizon Row, LLC





## QUAD MAP

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

*HORIZON ROW LLC*

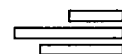
DEVON ENERGY PRODUCTION CO., L.P.

PROPOSED 30' EASEMENT

Drawn by:  
JEANNIE PERRY

Date: 03/11/2018

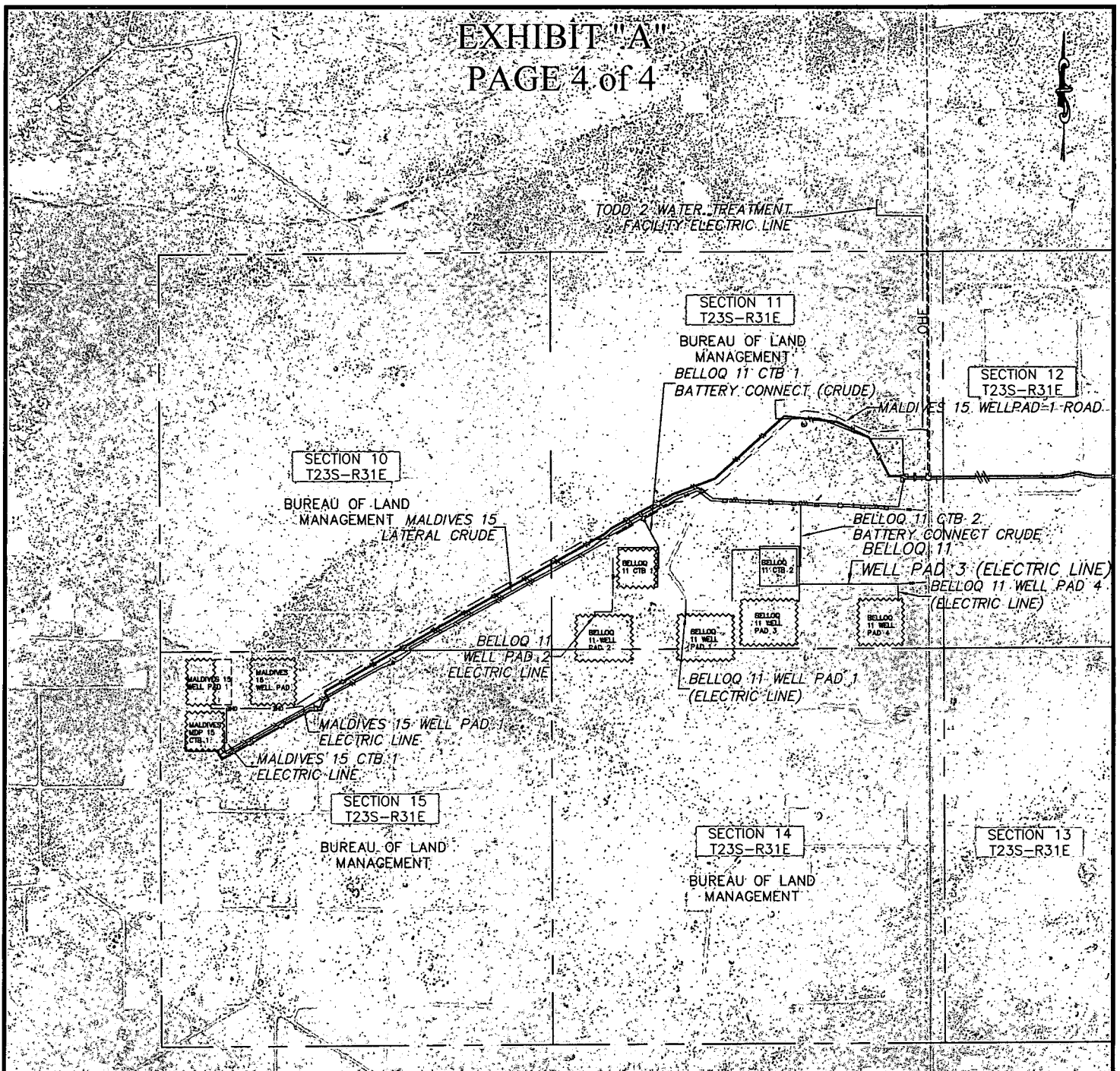
Drawn for:



devon


LINE NUMBER: EL8030
WBS NUMBER: CC-127671.01.FAC
SCALE: 1" = 2000'
REVISIONS:
SHEET: 3 OF 4

PAGE 4 of 4



*AERIAL MAP*

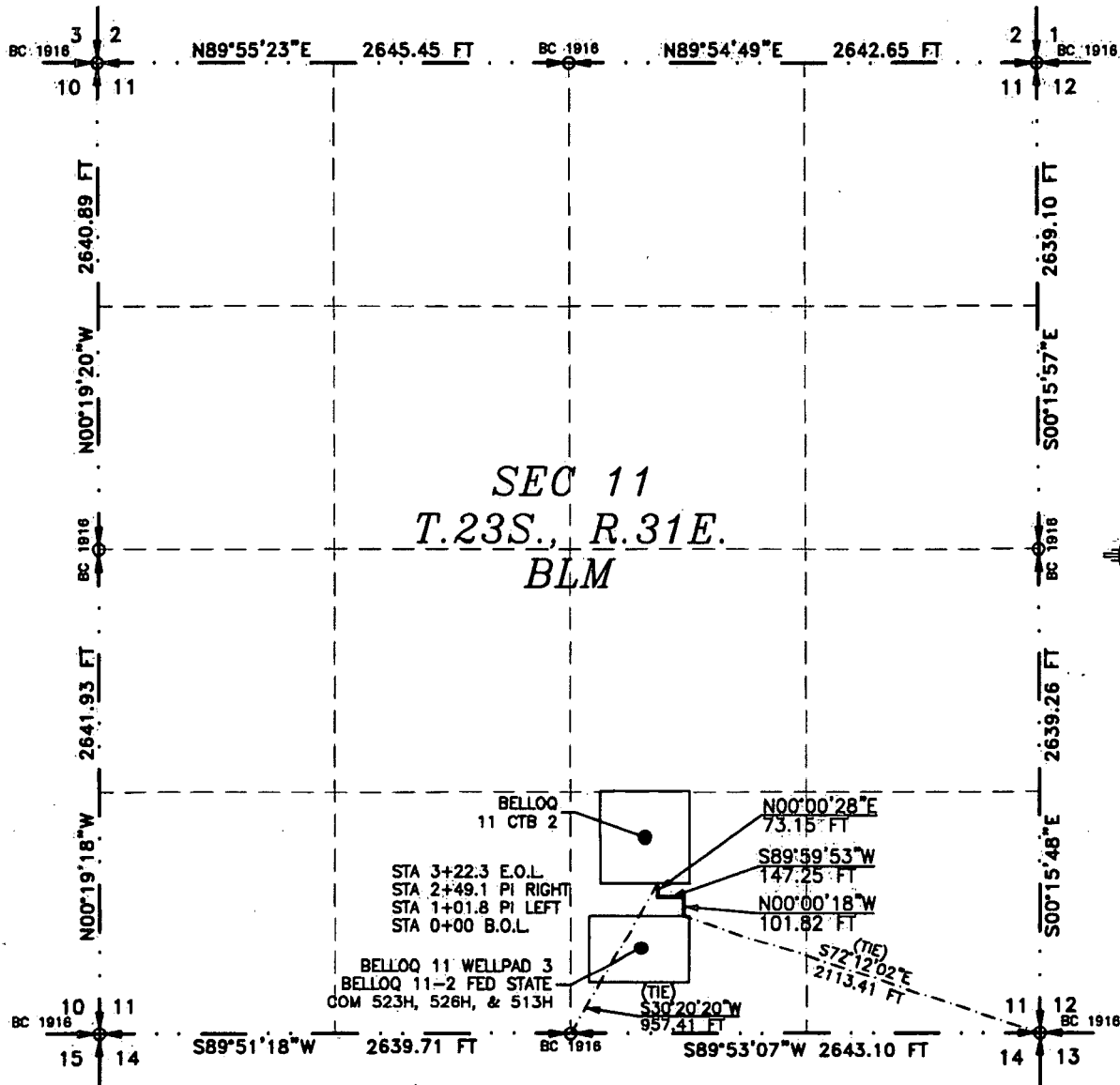
SECTION 11, T23S-R31E, N.M.P.M.;  
EDDY COUNTY, NEW MEXICO

<b><i>HORIZON ROW LLC</i></b>		Drawn for:	LINE NUMBER: EL8030
DEVON ENERGY PRODUCTION CO., L.P.			WBS NUMBER: CC-127671.01.FAC
PROPOSED 30' EASEMENT			SCALE: 1" = 2000'
Drawn by: JEANNIE PERRY	Date: 03/11/2018		REVISIONS:
			SHEET: 4 OF 4

# FLOWLINE PLAT

THREE-8" FLOWLINES & ONE-8" GAS LIFT LINE BURIED IN THE SAME DITCH  
FROM BELLOQ 11 WELLPAD 3 (BELLOQ 11-2 FED. STATE COM 526H, 524H, & 513H) TO BELLOQ 11 CTB 2

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  
JANUARY 9, 2019



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 11/16/19 DAY OF JANUARY 2019

FILMON F. JARAMILLO, PLS. 12797

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

SURVEY NO. 6833

## 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

THREE-8" FLOWLINES & ONE-8" GAS LIFT LINE BURIED IN THE SAME DITCH  
FROM BELLOQ 11 WELLPAD 3 (BELLOQ 11-2 FED STATE COM 526H, 524H, & 513H) TO BELLOQ 11 CTB 2

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  
JANUARY 9, 2019

### 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 SE/4 OF SAID SECTION 11, TOWNSHIP 23 SOUTH, RANGE 31 EAST, N.M.P.M., WHENCE THE SOUTHEAST CORNER OF SAID SECTION 11, TOWNSHIP 23 SOUTH, RANGE 31 EAST, N.M.P.M. BEARS S72°12'02"E, A DISTANCE OF 2113.41 FEET;  
THENCE N00°00'18"W A DISTANCE OF 101.82 FEET TO AN ANGLE POINT OF THE LINE HEREIN DESCRIBED;  
THENCE S89°59'53"W A DISTANCE OF 147.25 FEET TO AN ANGLE POINT OF THE LINE HEREIN DESCRIBED;  
THENCE N00°00'28"E A DISTANCE OF 73.15 FEET THE TERMINUS OF THIS CENTERLINE SURVEY, WHENCE THE SOUTH QUARTER CORNER OF SAID SECTION 11, TOWNSHIP 23 SOUTH, RANGE 31 EAST, N.M.P.M. BEARS S30°20'20"W, A DISTANCE OF 957.41 FEET;

SAID STRIP OF LAND BEING 322.22 FEET OR 19.53 RODS IN LENGTH, CONTAINING 0.222 ACRES MORE OR LESS AND BEING ALLOCATED BY FORTIES AS FOLLOWS:

SW/4 SE/4    322.22 L.F.    19.53 RODS    0.222 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 9 DAY OF JANUARY, 2019

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

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

### GENERAL NOTES

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

SHEET: 2-4

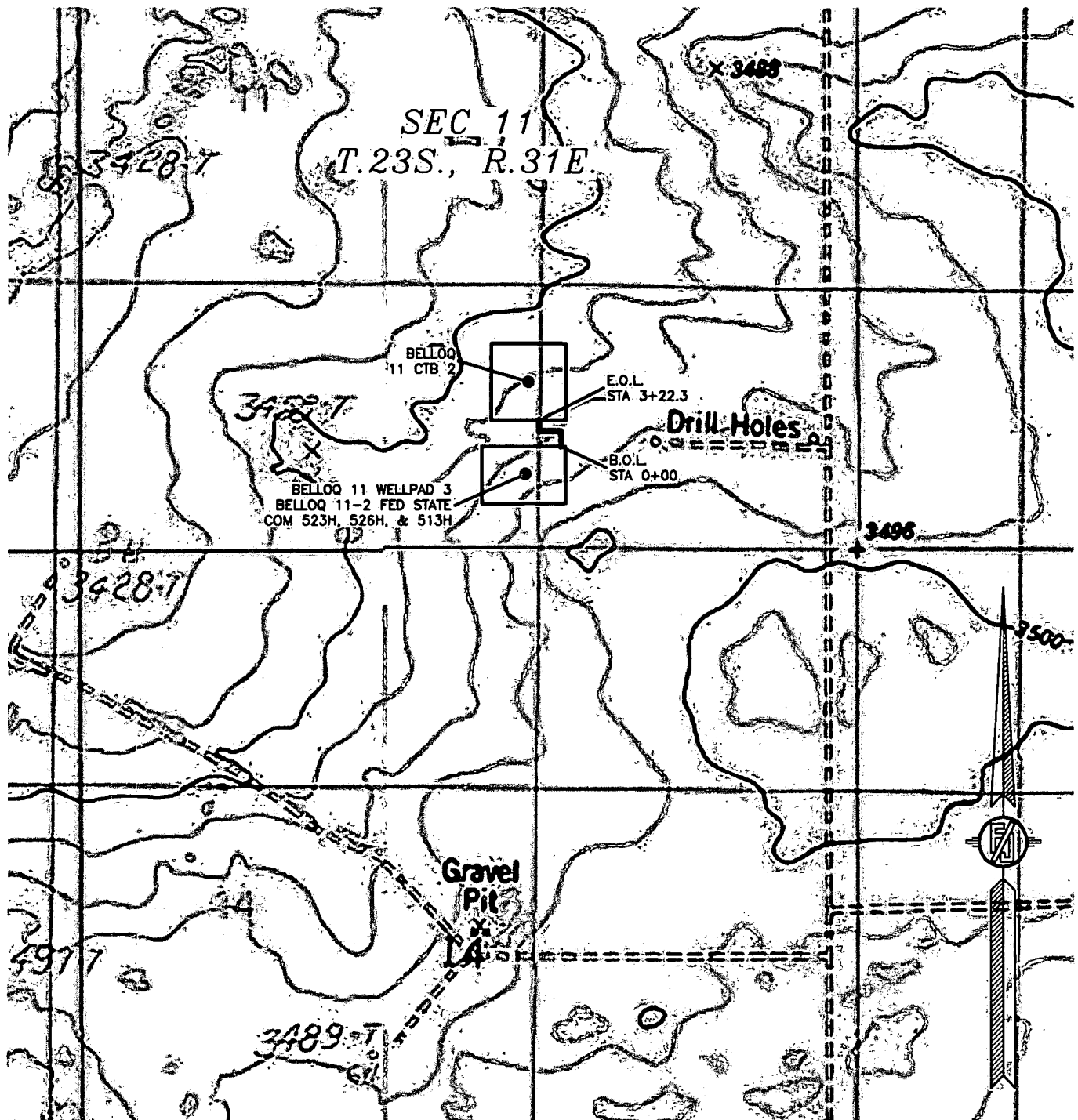
MADRON SURVEYING, INC. CARLSBAD, NEW MEXICO

SURVEY NO. 6833

# FLOWLINE PLAT

THREE-8" FLOWLINES & ONE-8" GAS LIFT LINE BURIED IN THE SAME DITCH  
FROM BELLOQ 11 WELLPAD 3 (BELLOQ 11-2 FED STATE COM 526H, 524H, & 513H) TO BELLOQ 11 CTB 2

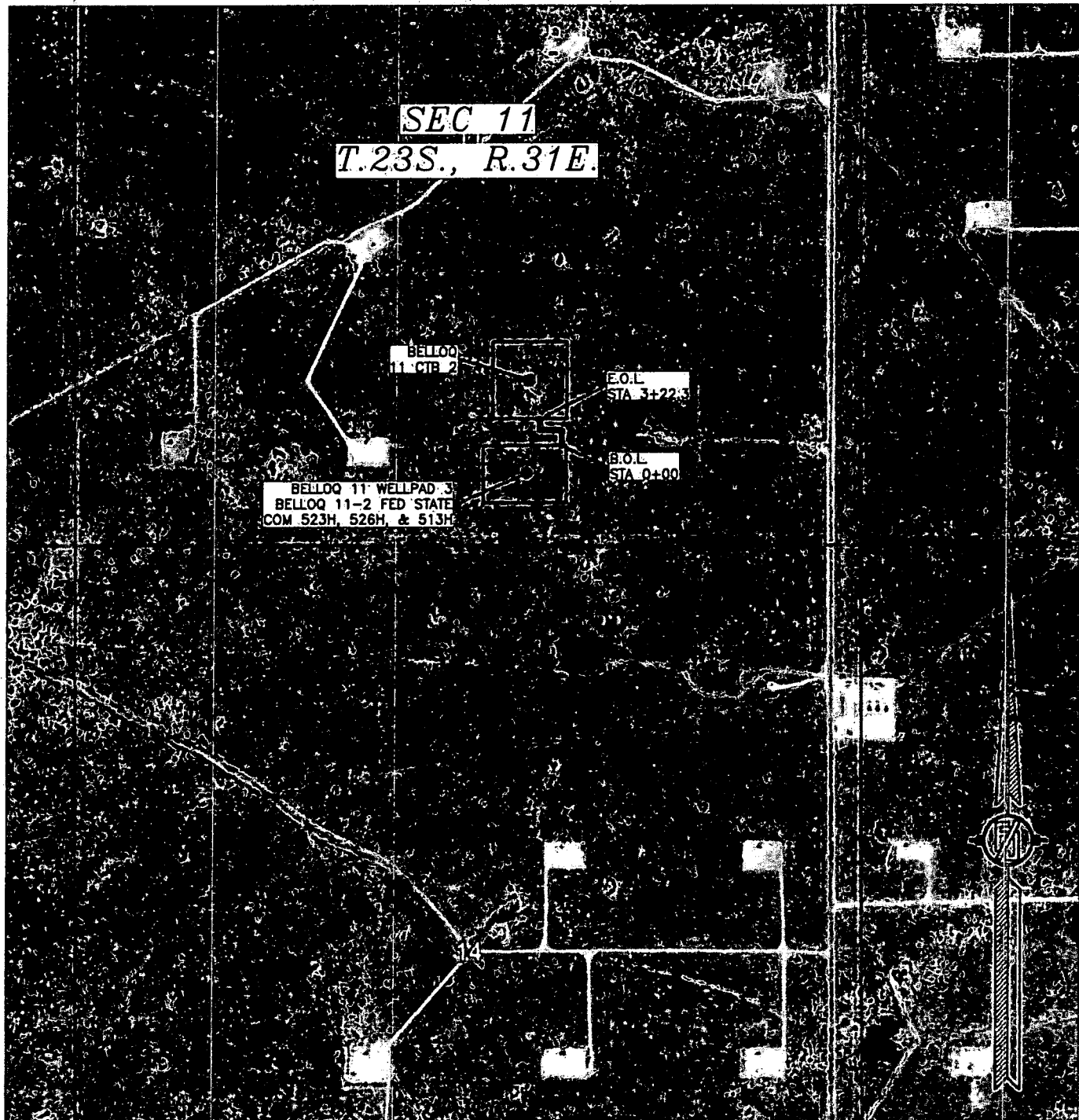
DEVON ENERGY PRODUCTION COMPANY, L.P.  
CENTERLINE SURVEY OF A PIPELINE CROSSING  
SECTION 11, TOWNSHIP 23 SOUTH, RANGE 31 EAST, N.M.P.M.  
EDDY COUNTY, STATE OF NEW MEXICO  
JANUARY 9, 2019



**FLOWLINE PLAT**

**THREE-8" FLOWLINES & ONE-8" GAS LIFT LINE BURIED IN THE SAME DITCH  
FROM BELLOQ 11 WELLPAD 3 (BELLOQ 11-2 FED STATE COM 526H, 524H, & 513H) TO BELLOQ 11 CTB 2**

**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  
JANUARY 9, 2019**



 OWNERSHIP

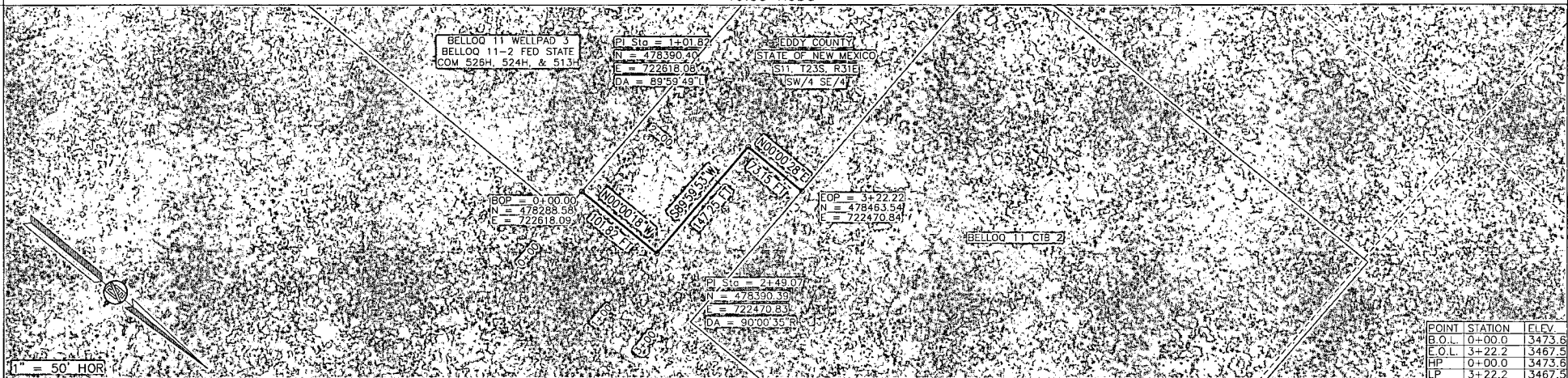
## PLAN ON AERIAL

ASSESSMENT

## STATIONING

## PROFILE

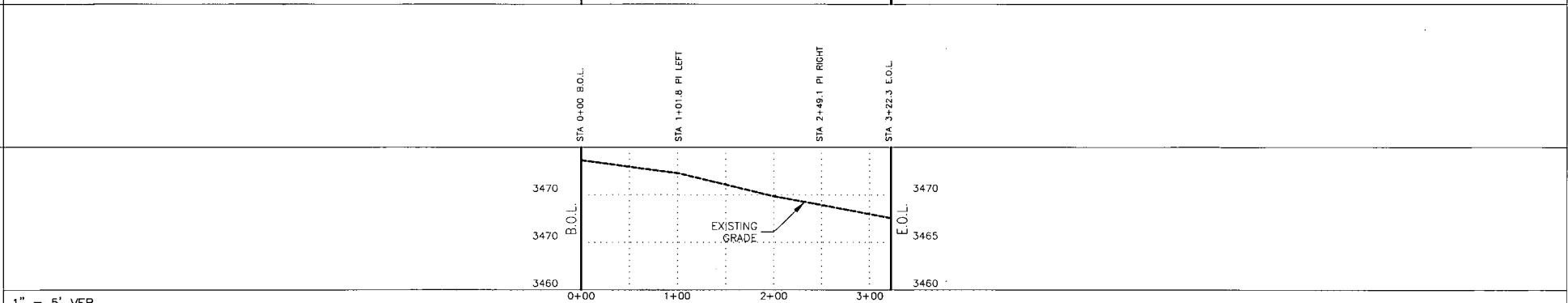
## LEGEND



POINT	STATION	ELEV.
B.O.L.	0+00.0	3473.6
E.O.L.	3+22.2	3467.5
HP	0+00.0	3473.6
LP	3+22.2	3467.5

N.T.S.

A diagram showing a horizontal line representing the centerline of a road. Above the line, the text "CENTERLINE" is written, followed by "30' ROW" with a line pointing to the right side of the centerline. The left side of the diagram is labeled "B.O.L." (Beginning of Line) and the right side is labeled "E.O.L." (End of Line).



1" = 5' VER

[illegible]

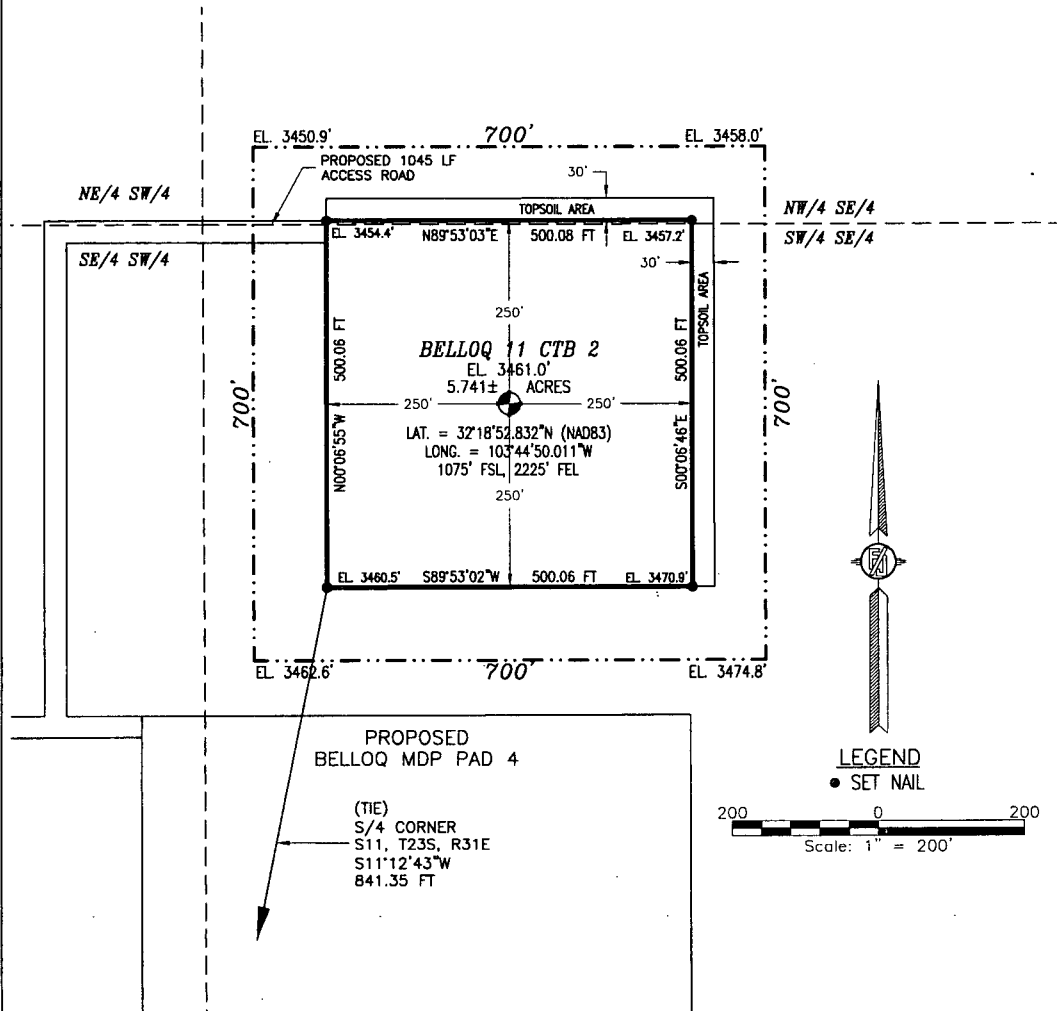
MADRON SURVEYING, INC. 301 SOUTH CANAL (575) 234-3341 CARLSBAD, NEW MEXICO

SURVEY NO. 6833  
SHEET: 1-1

BELLOQ 11 CTB 2

DEVON ENERGY PRODUCTION COMPANY, L.P.  
IN THE SW/4 SE/4 & NW/4 SE/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 SE/4 & NW/4 SE/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 SOUTH QUARTER CORNER OF SECTION 11, TOWNSHIP 23 SOUTH, RANGE 31 EAST, N.M.P.M. BEARS S11°12'43\"W, A DISTANCE OF 841.35 FEET;  
THENCE N00°06'55\"W A DISTANCE OF 500.06 FEET TO THE NORTHWEST CORNER OF THE PARCEL;  
THENCE N89°53'03\"E A DISTANCE OF 500.08 FEET TO THE NORTHEAST CORNER OF THE PARCEL;  
THENCE S00°06'46\"E A DISTANCE OF 500.06 FEET TO THE SOUTHEAST CORNER OF THE PARCEL;  
THENCE S89°53'02\"W A DISTANCE OF 500.06 FEET TO THE SOUTHWEST CORNER OF THE PARCEL, TO THE POINT OF BEGINNING;

CONTAINING 5.682 ACRES IN THE SW/4 SE/4 & 0.059 ACRES IN THE NW/4 SE/4 FOR A TOTAL OF 5.741 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 (WEST) AT LEASE ROAD GO WEST 0.15 OF A MILE, ROAD BENDS RIGHT GO NORTHWEST 0.2 OF A MILE, TURN LEFT (SOUTHWEST) GO 0.4 OF A MILE, TURN LEFT (SOUTH) GO APPROX. 0.25 OF A MILE TO EXISTING PAD (BARCLAY 11N FED 14, AT EAST EDGE OF PAD IS ROAD LATH RED & WHITE FLAGGING, GO EAST APPROX. 328', TURN LEFT GO NORTH 675', TURN RIGHT GO EAST 370' TO THE NORTHWEST PAD CORNER.

SHEET: 1-3

MADRON SURVEYING, INC. CARLSBAD, NEW MEXICO

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

*[Signature of Filmon F. Jaramillo]*  
FILMON F. JARAMILLO, PLS. #12797

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

SURVEY NO. 5241

BELLOQ 11 CTB 2

DEVON ENERGY PRODUCTION COMPANY, L.P.  
IN THE SW/4 SE/4 & NW/4 SE/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. 5241

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

BELLOQ 11 CTB 2

DEVON ENERGY PRODUCTION COMPANY, L.P.  
IN THE SW/4 SE/4 & NW/4 SE/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. 5241

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

BELLOQ 11 CTB 2

DEVON ENERGY PRODUCTION COMPANY, L.P.  
IN THE SW/4 SE/4 & NW/4 SE/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. 5241

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

BELLOQ 11 CTB 2

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

MAY 15, 2017

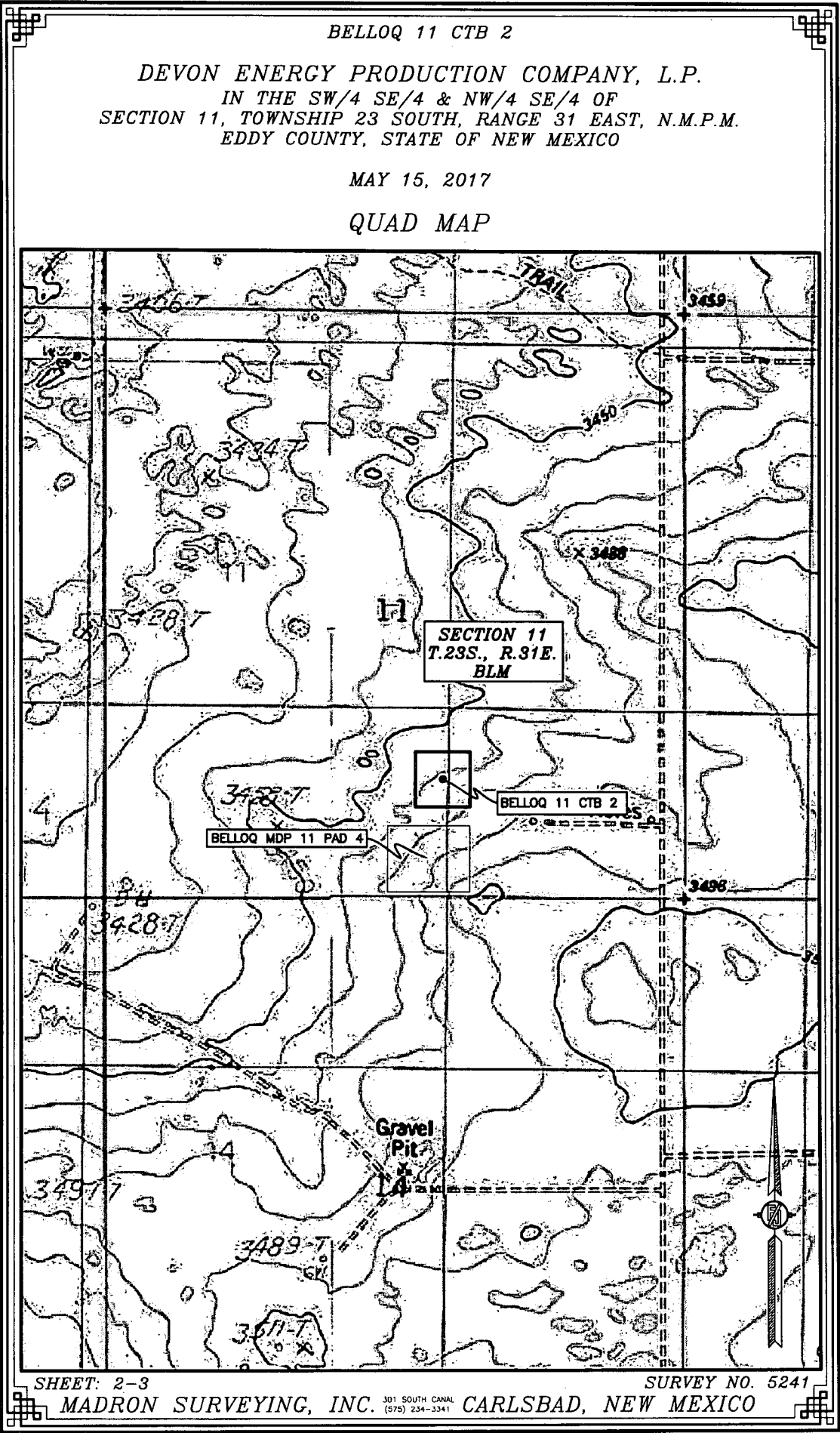
QUAD MAP

The figure is a topographic quad map of Section 11, T.23S., R.31E., BLM. The map is overlaid with a grid. Key features include:
 

- Section Label:** A central box labeled "SECTION 11 T.23S., R.31E. BLM".
- Project Labels:** Two boxes labeled "BELLOQ 11 CTB 2" and "BELLOQ MDP 11 PAD 4" with arrows pointing to specific locations on the map.
- Gravel Pit:** A label "Gravel Pit" with an arrow pointing to a location in the lower-left quadrant.
- Trail:** A dashed line labeled "TRAIL" in the upper-right quadrant.
- Contour Lines:** Various contour lines are shown, with labels such as 3406.7, 3434.7, 3428.7, 3450, 3459, 3498, 3497.7, 3489.7, and 3511.7.
- North Arrow:** A north arrow is located in the bottom right corner.
- Grid:** A grid of lines is overlaid on the map, with some lines labeled with numbers like 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90, 91, 92, 93, 94, 95, 96, 97, 98, 99, 100.

SHEET: 2-3      SURVEY NO. 5241

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



SHEET: 2-3 SURVEY NO. 5241  
MADRON SURVEYING, INC. 301 SOUTH CANAL CARLSBAD, NEW MEXICO  
(575) 234-3341

SHEET: 2-3 SURVEY NO. 5241  
MADRON SURVEYING, INC. 301 SOUTH CANAL CARLSBAD, NEW MEXICO  
(575) 234-3341

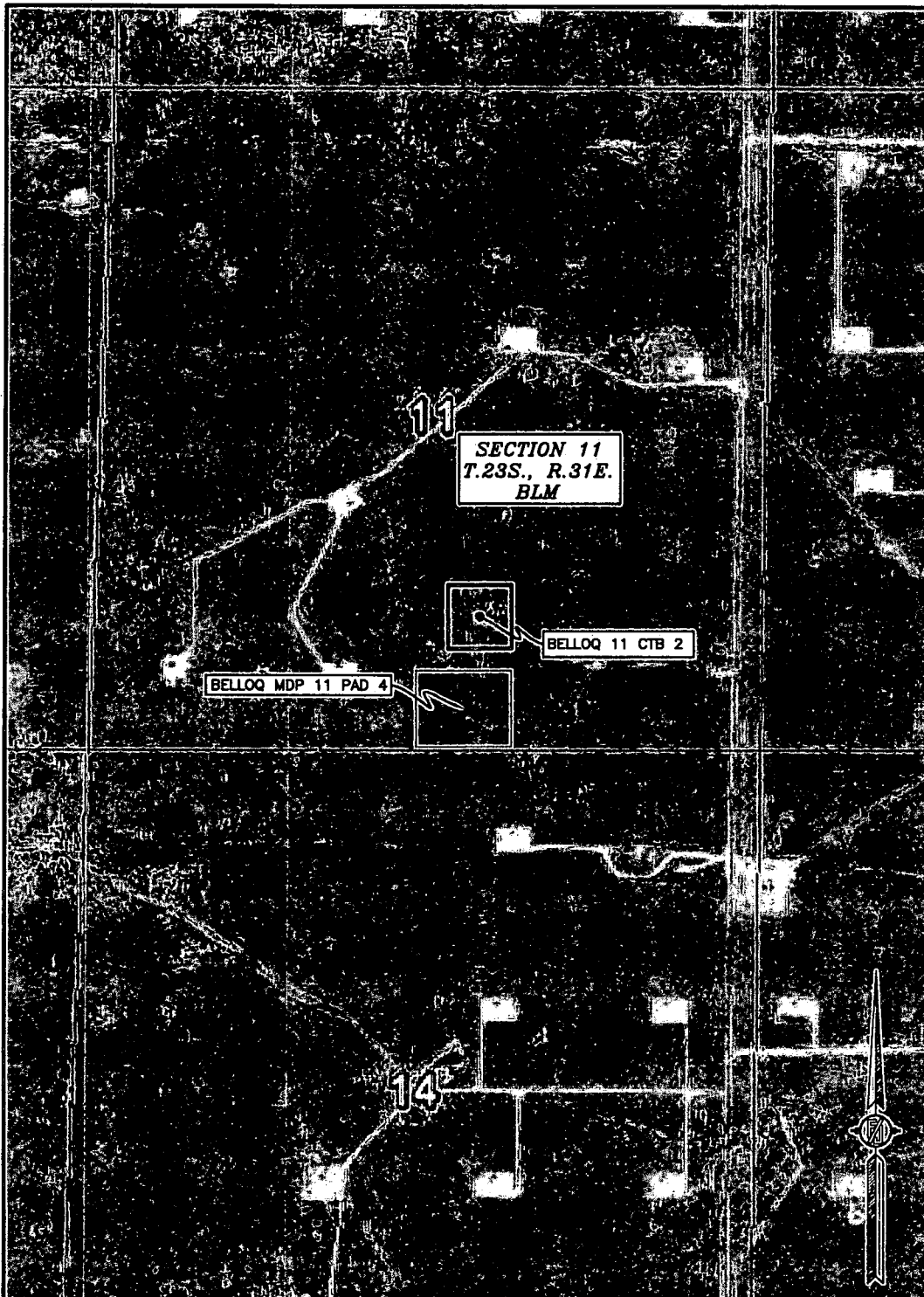
SHEET: 2-3 SURVEY NO. 5241  
MADRON SURVEYING, INC. 301 SOUTH CANAL CARLSBAD, NEW MEXICO  
(575) 234-3341

BELLOQ 11 CTB 2

DEVON ENERGY PRODUCTION COMPANY, L.P.  
IN THE SW/4 SE/4 & NW/4 SE/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

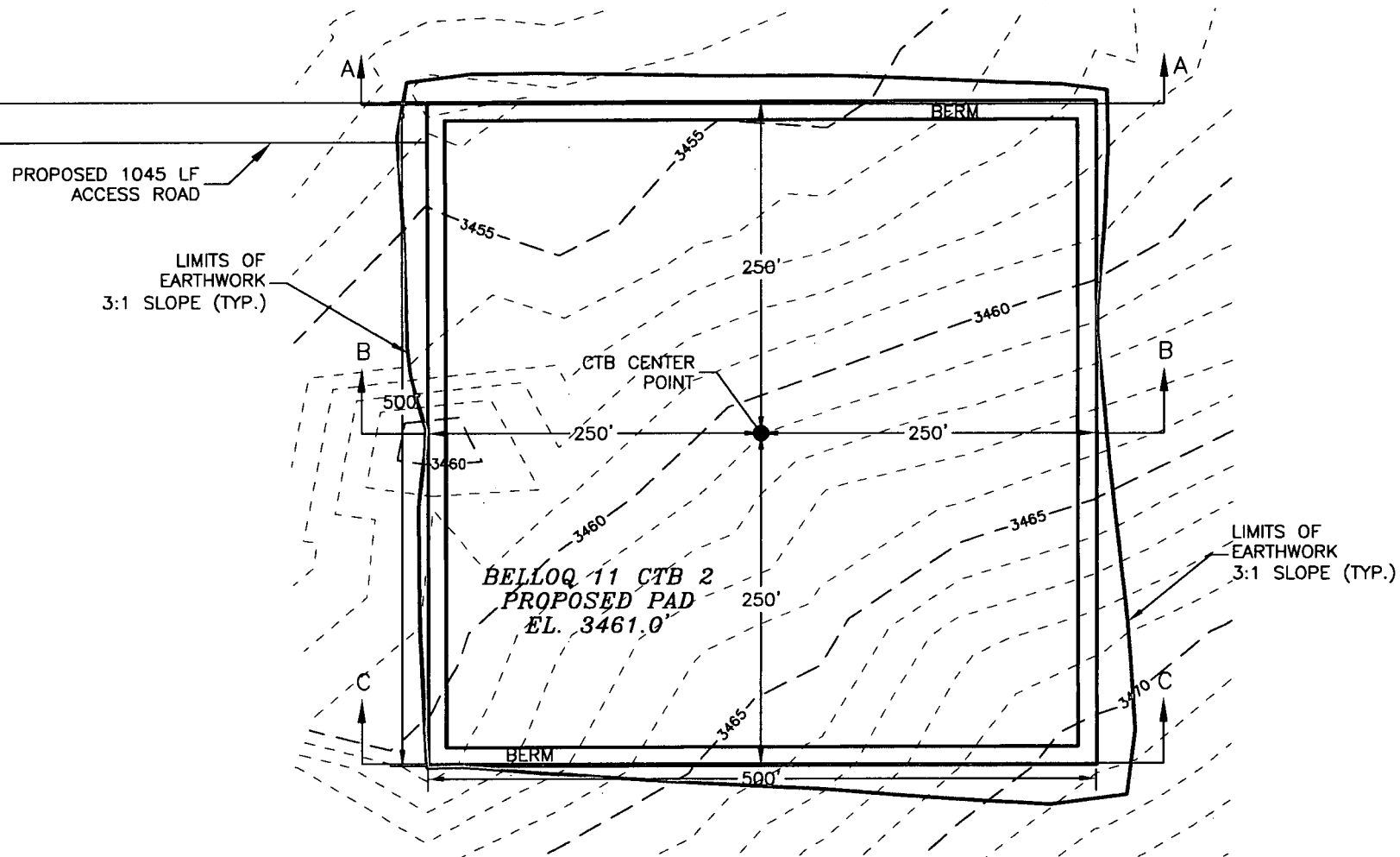


SHEET: 3-3

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

SURVEY NO. 5241

# PLAN VIEW



DEVON ENERGY PRODUCTION COMPANY, L.P.  
 GRADING PLAN AND CROSS SECTIONS  
 FOR BELLOQ 11 CTB 2  
 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'

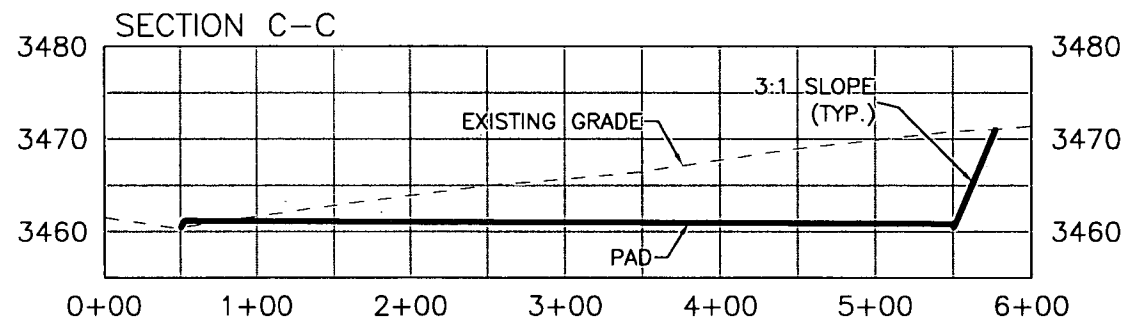
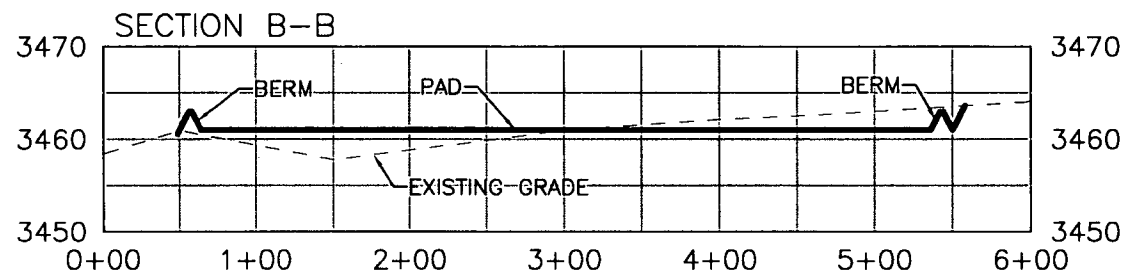
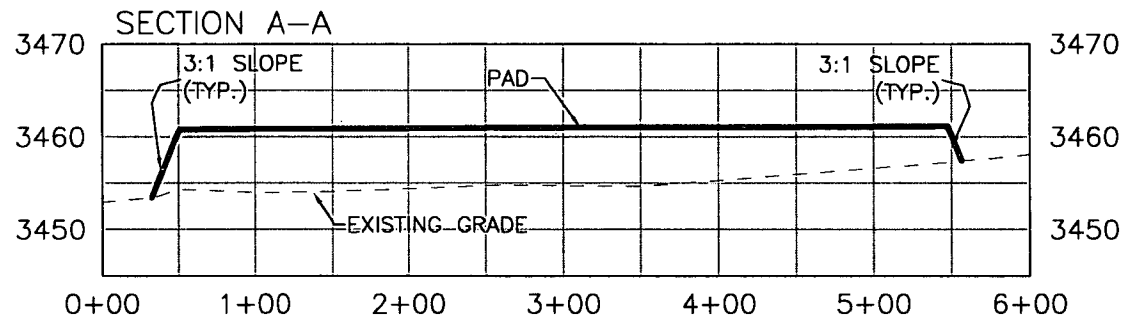
CUT	FILL	NET
14524 CU. YD	20841 CU. YD	6317 CU. YD (FILL)

EARTHWORK QUANTITIES ARE ESTIMATED

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

SHEET 1-2  
 SURVEY NO. 5241

# CROSS SECTIONS



DEVON ENERGY PRODUCTION COMPANY, L.P.  
 GRADING PLAN AND CROSS SECTIONS  
**FOR BELLOQ 11 CTB 2**  
 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

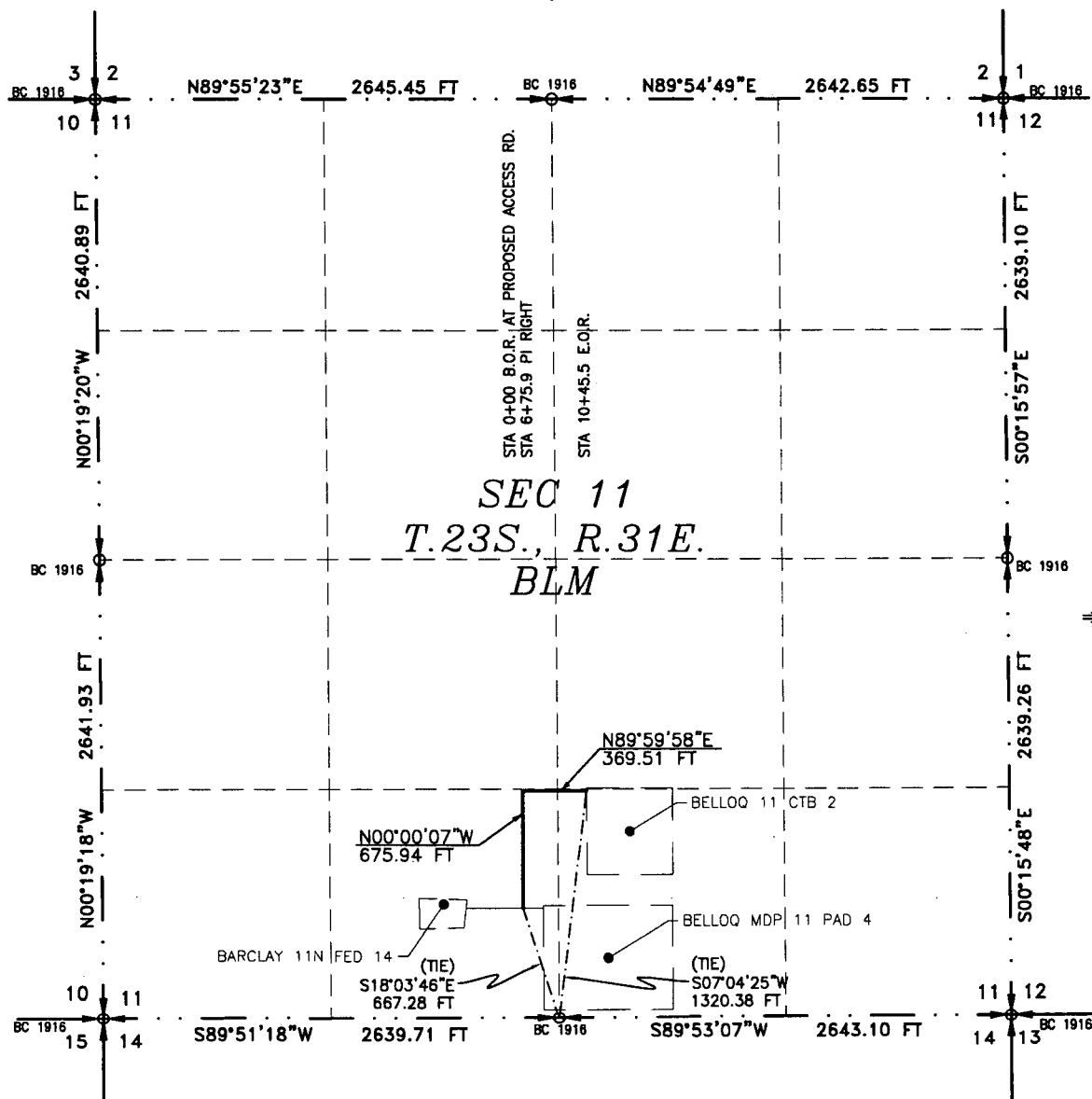
MAY 15, 2017

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

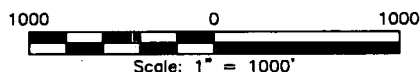
SHEET 2-2  
 SURVEY NO. 5241

**ACCESS ROAD PLAT**  
ACCESS ROAD TO THE BELLOQ 11 CTB 2

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 23 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. 5241

CARLSBAD, NEW MEXICO

**ACCESS ROAD PLAT**  
**ACCESS ROAD TO THE BELLOQ 11 CTB 2**

**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 SE/4 SW/4 OF SAID SECTION 11, TOWNSHIP 23 SOUTH, RANGE 31 EAST, N.M.P.M., WHENCE THE SOUTH QUARTER CORNER OF SAID SECTION 11, TOWNSHIP 23 SOUTH, RANGE 31 EAST, N.M.P.M. BEARS S18°03'46"E, A DISTANCE OF 667.28 FEET;

THENCE N00°00'07"W A DISTANCE OF 675.94 FEET TO AN ANGLE POINT OF THE LINE HEREIN DESCRIBED;

THENCE N89°59'58"E A DISTANCE OF 369.51 FEET THE TERMINUS OF THIS CENTERLINE SURVEY, WHENCE THE SOUTH QUARTER CORNER OF SAID SECTION 11, TOWNSHIP 23 SOUTH, RANGE 31 EAST, N.M.P.M. BEARS S07°04'25"W, A DISTANCE OF 1320.38 FEET;

SAID STRIP OF LAND BEING 1045.45 FEET OR 63.36 RODS IN LENGTH, CONTAINING 0.720 ACRES MORE OR LESS AND BEING ALLOCATED BY FORTIES AS FOLLOWS:

SE/4 SW/4 876.91 L.F. 53.15 RODS 0.604 ACRES  
SW/4 SE/4 168.54 L.F. 10.21 RODS 0.116 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 23 DAY OF MAY 2017

**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 CARLSBAD, NEW MEXICO  
(575) 234-3341

**SURVEY NO. 5241**



## Receipt

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### 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

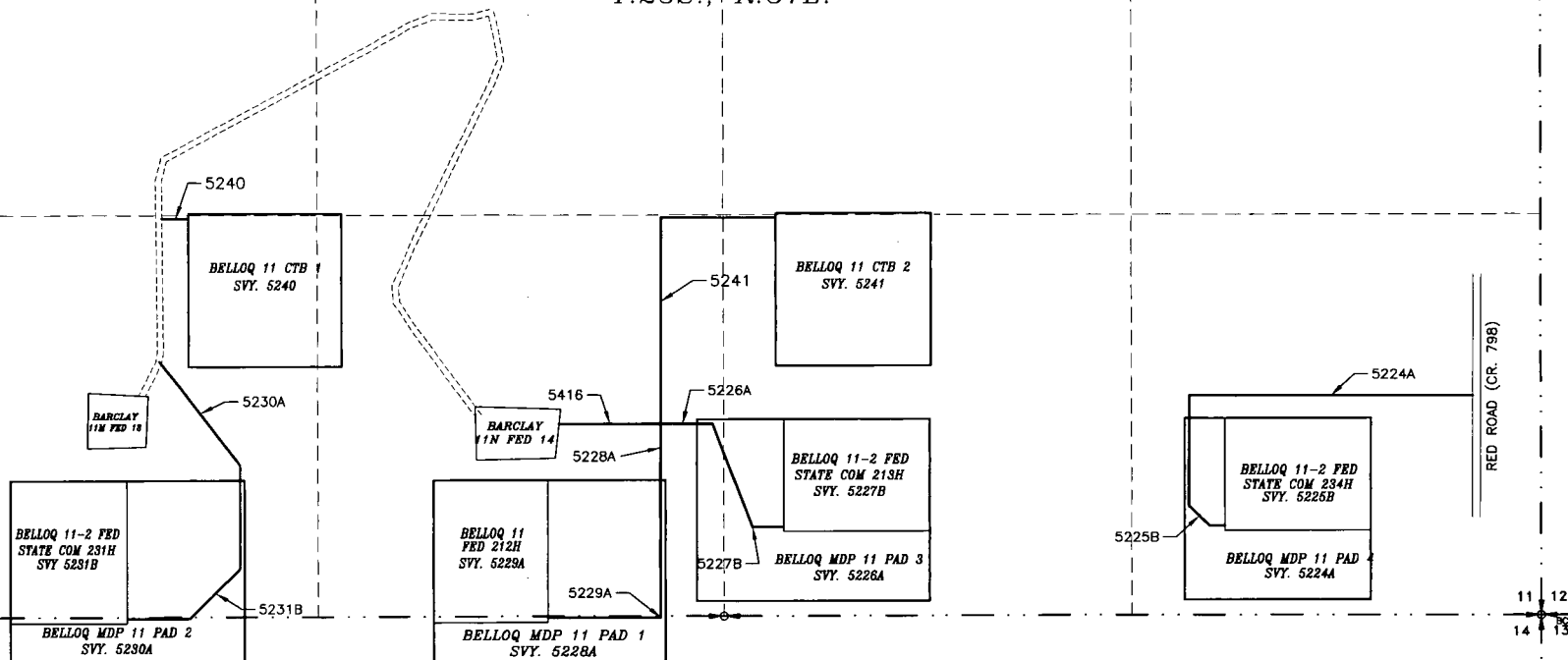
Account Number: \*\*\*\*\*9892

DEVON ENERGY PRODUCTION COMPANY, L.P.

BELLOQ MDP 11 PADS, CTBS, WELLS AND ACCESS ROADS  
SECTION 11, TOWNSHIP 23 SOUTH, RANGE 31 EAST N.M.P.M.  
EDDY COUNTY, STATE OF NEW MEXICO

OCTOBER 23, 2017

SEC 11  
T.23S., R.31E.



SEC 14  
T.23S., R.31E.

0 40 200 400 800  
SCALE: 1" = 400'

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

SVY. 5228



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

## PWD Data Report

10/10/2019

APD ID: 10400038619

Submission Date: 01/31/2019

Operator Name: DEVON ENERGY PRODUCTION COMPANY LP

Well Name: BELLOQ 11-2 FED STATE COM

Well Number: 513H

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:** 513H

**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:** 513H

**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:** 513H

**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

10/10/2019

**APD ID:** 10400038619

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

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

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

**Well Number:** 513H

**Well Type:** OIL WELL

**Well Work Type:** Drill

Highlighted data  
reflects the most  
recent changes  
[Show Final Text](#)

### 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:**