

RECEIVED

JUN 14 2019

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

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT DISTRICT II-ARTESIA O.C.D.

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. BORA BORA 13-24-FED.COM 215H 325761
3a. Address 333 West Sheridan Avenue Oklahoma City OK 73102	3b. Phone No. (include area code) (800)583-3866	9. API Well No. 30-015-46117
4. Location of Well (Report location clearly and in accordance with any State requirements. *) At surface NENE / 100 FNL / 1180 FEL / LAT 32.3114209 / LONG -103.7267782 At proposed prod. zone SESE / 20 FSL / 1250 FEL / LAT 32.2827366 / LONG -103.7270112		10. Field and Pool, or Exploratory LIVINGSTON RIDGE / BONESPRING
14. Distance in miles and direction from nearest town or post office*		11. Sec., T, R, M, or Blk. and Survey or Area SEC 13 / T23S / R31E / NMP
15. Distance from proposed* location to nearest property or lease line, ft. (Also to nearest drig. unit line, if any) 100 feet	16. No of acres in lease 1440	12. County or Parish EDDY
17. Spacing Unit dedicated to this well 320	13. State NM	
18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft. 274 feet	19. Proposed Depth 10240 feet / 20511 feet	20. BLM/BIA Bond No. in file FED: CO1104
21. Elevations (Show whether DF, KDB, RT, GL, etc.) 3507 feet	22. Approximate date work will start* 05/26/2019	23. Estimated duration 45 days

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)552-6560	Date 11/26/2018
Title Regulatory Compliance Professional		
Approved by (Signature) (Electronic Submission)	Name (Printed/Typed) Cody Layton / Ph: (575)234-5959	Date 06/11/2019
Title Assistant Field Manager Lands & Minerals Office CARLSBAD		

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

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

**APPROVED WITH CONDITIONS**  
Approval Date: 06/11/2019

RUP 6-24-19.

## 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 a new 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: NENE / 100 FNL / 1180 FEL / TWSP: 23S / RANGE: 31E / SECTION: 13 / LAT: 32.3114209 / LONG: -103.7267782 ( TVD: 0 feet, MD: 0 feet )  
PPP: NENE / 100 FNL / 1250 FEL / TWSP: 23S / RANGE: 31E / SECTION: 13 / LAT: 32.3114211 / LONG: -103.7270046 ( TVD: 9930 feet, MD: 9939 feet )  
BHL: SESE / 20 FSL / 1250 FEL / TWSP: 23S / RANGE: 31E / SECTION: 24 / LAT: 32.2827366 / LONG: -103.7270112 ( TVD: 10240 feet, MD: 20511 feet )

### BLM Point of Contact

Name: Candy Vigil  
Title: Admin Support Assistant  
Phone: 5752345982  
Email: cvigil@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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- Gas flared would be minimal, but might be uneconomical to operate when gas volume declines
- NGL Removal – On lease
  - Plants are expensive, residue gas is still flared, and uneconomical to operate when gas volume declines

## 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>Bora Bora 13-24 Fed Com 215H</b>
<b>SURFACE HOLE FOOTAGE:</b>	<b>100'/N &amp; 1180'/E</b>
<b>BOTTOM HOLE FOOTAGE:</b>	<b>20'/S &amp; 1250'/E</b>
<b>LOCATION:</b>	<b>Section 13, T.23 S., R.31 E., NMPM</b>
<b>COUNTY:</b>	<b>Eddy County, New Mexico</b>

COA

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

### A. HYDROGEN SULFIDE

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

### B. CASING

1. The **13-3/8** inch surface casing shall be set at approximately **921 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 **6000 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.**  
**Cement excess is less than 25%, more cement might be required.**

**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.**  
**Cement excess is less than 25%, more cement might be required.**
3. The minimum required fill of cement behind the 5-1/2 inch production casing is:
    - Cement should tie-back at least **500 feet** into previous casing string. Operator shall provide method of verification.  
**Cement excess is less than 25%, more cement might be required.**

## 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 **3000 (3M)** psi.
- b. Minimum working pressure of the blowout preventer (BOP) and related equipment (BOPE) required for drilling below the intermediate casing shoe shall be **5000 (5M)** psi.

### Option 2:

1. Operator has proposed a multi-bowl wellhead assembly. This assembly will only be tested when installed on the surface casing. Minimum working pressure of the blowout preventer (BOP) and related equipment (BOPE) required for drilling below the surface casing shoe shall be **5000 (5M)** psi.
  - a. Wellhead shall be installed by manufacturer's representatives, submit documentation with subsequent sundry.
  - b. If the welding is performed by a third party, the manufacturer's representative shall monitor the temperature to verify that it does not exceed the maximum temperature of the seal.
  - c. Manufacturer representative shall install the test plug for the initial BOP test.
  - d. If the cement does not circulate and one inch operations would have been possible with a standard wellhead, the well head shall be cut off, cementing operations performed and another wellhead installed.
  - e. Whenever any seal subject to test pressure is broken, all the tests in OOGO2.III.A.2.i must be followed.

## D. SPECIAL REQUIREMENT (S)

### Communitization Agreement

- The operator will submit a Communitization Agreement to the Carlsbad Field Office, 620 E Greene St. Carlsbad, New Mexico 88220, at least 90 days before the anticipated date of first production from a well subject to a spacing order issued by the New Mexico Oil Conservation Division. The Communitization Agreement will include the signatures of all working interest owners in all Federal and Indian leases subject to the Communitization Agreement (i.e., operating rights owners and lessees

of record), or certification that the operator has obtained the written signatures of all such owners and will make those signatures available to the BLM immediately upon request.

- If the operator does not comply with this condition of approval, the BLM may take enforcement actions that include, but are not limited to, those specified in 43 CFR 3163.1.
- In addition, the well sign shall include the surface and bottom hole lease numbers. When the Communitization Agreement number is known, it shall also be on the sign.

## GENERAL REQUIREMENTS

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

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

Chaves and Roosevelt Counties  
Call the Roswell Field Office, 2909 West Second St., Roswell NM 88201.  
During office hours call (575) 627-0272.  
After office hours call (575)

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

## C. DRILLING MUD

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

D. WASTE MATERIAL AND FLUIDS

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

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

**PECOS DISTRICT  
SURFACE USE  
CONDITIONS OF APPROVAL**

OPERATOR'S NAME:	Devon Energy Production Company LP
WELL NAME & NO.:	Bora Bora 13-24 Fed Com 215H
SURFACE HOLE FOOTAGE:	100'/N & 1180'/E
BOTTOM HOLE FOOTAGE:	20'/S & 1250'/E
LOCATION:	Section 13, 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.

- General Provisions**
- Permit Expiration**
- Archaeology, Paleontology, and Historical Sites**
- Noxious Weeds**
- Special Requirements**
  - Lesser Prairie-Chicken Timing Stipulations
  - Ground-level Abandoned Well Marker
  - Escape Ramps
  - Hydrology
  - Pipelines
  - Tank Battery
  - Range
- Construction**
  - Notification
  - Topsoil
  - Closed Loop System
  - Federal Mineral Material Pits
  - Well Pads
  - Roads
- Road Section Diagram**
- Production (Post Drilling)**
  - Well Structures & Facilities
  - Pipelines
  - Electric Lines
- Interim Reclamation**
- Final Abandonment & Reclamation**

## **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)

**The Pad is Build as you go. No grading the whole pad.**

**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.

**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.

**Watershed/Water Quality:**

The entire perimeter of the well pad will be bermed to prevent oil, salt, and other chemical contaminants from leaving the well pad.

- The compacted berm shall be constructed at a minimum of 12 inches high with impermeable mineral material (e.g. caliche).
- No water flow from the uphill side(s) of the pad shall be allowed to enter the well pad.

- The topsoil stockpile shall be located outside the bermed well pad.
- Topsoil, either from the well pad or surrounding area, shall not be used to construct the berm.
- No storm drains, tubing or openings shall be placed in the berm.
- If fluid collects within the bermed area, the fluid must be vacuumed into a safe container and disposed of properly at a state approved facility.
- The integrity of the berm shall be maintained around the surfaced pad throughout the life of the well and around the downsized pad after interim reclamation has been completed.
- Any access road entering the well pad shall be constructed so that the integrity of the berm height surrounding the well pad is not compromised. (Any access road crossing the berm cannot be lower than the berm height.)

**Tank Battery:**

Tank battery locations will be lined and bermed. A 20 mil permanent liner will be installed with a 4 oz. felt backing to prevent tears or punctures. Tank battery berms must be large enough to contain 1 ½ times the content of the largest tank or 24 hour production. Automatic shut off, check valves, or similar systems will be installed for tanks to minimize the effects of catastrophic line failures used in production or drilling.

During construction, Devon shall minimize disturbance to existing fences, water lines, troughs, windmills, and other improvements on public lands. Devon 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.

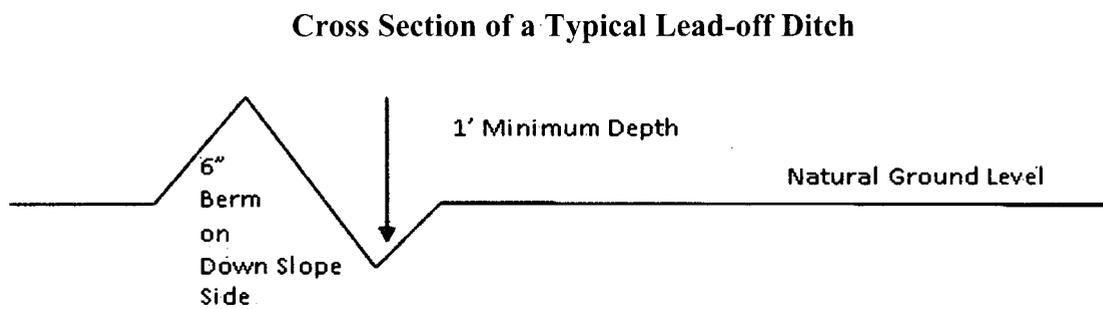
**Turnouts**

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 out-sloping and in-sloping, 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

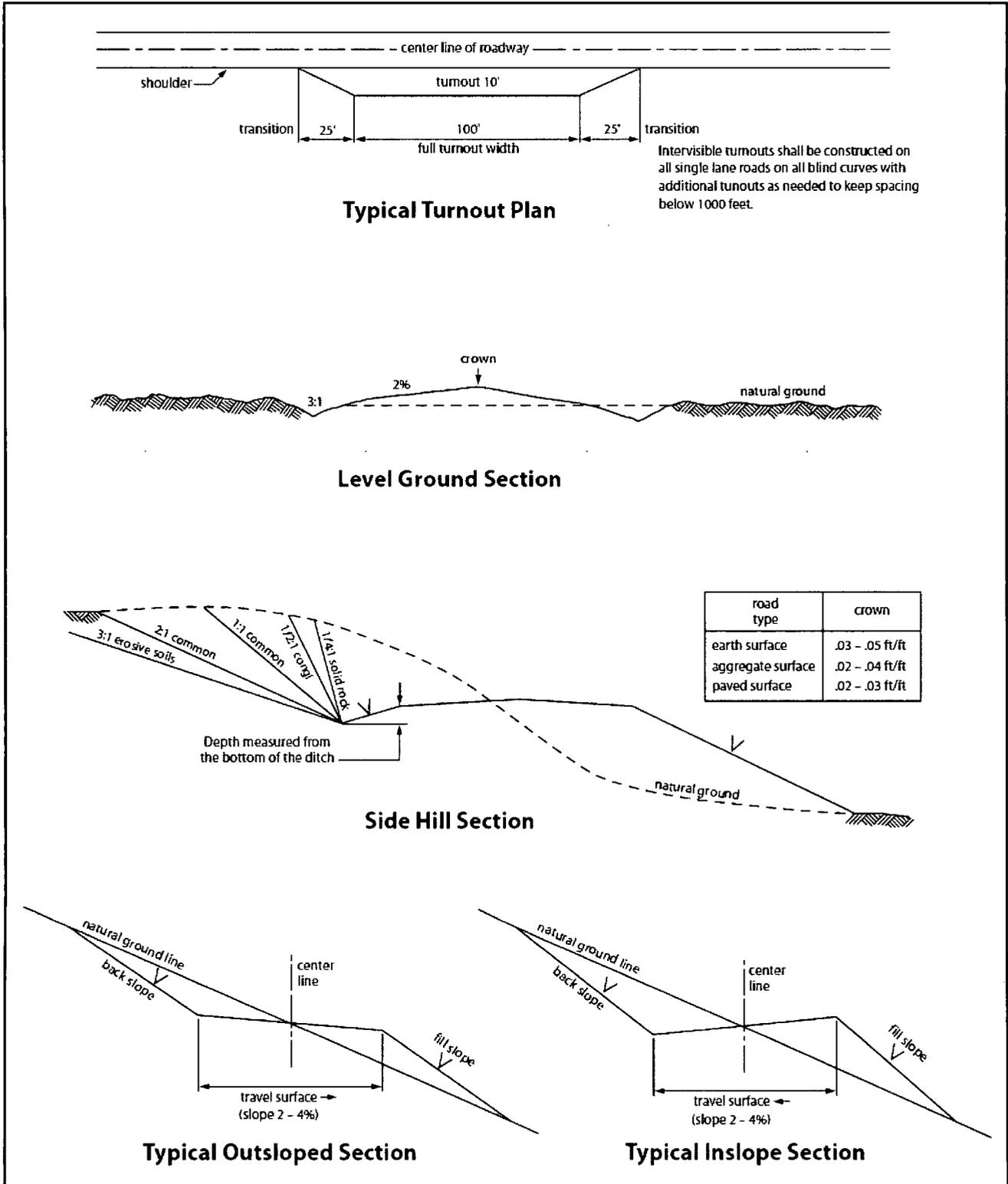


Figure 1. Cross-sections and plans for typical road sections representative of BLM resource or FS local and higher-class roads.

## **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.

### **C. ELECTRIC LINES**

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

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

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

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

A copy of any report required or requested by any Federal agency or State government as a result of a reportable release or spill of any toxic substances shall be furnished to the authorized officer concurrent with the filing of the reports to the involved Federal agency or State government.

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

4. There will be no clearing or blading of the right-of-way unless otherwise agreed to in writing by the Authorized Officer.

5. Power lines shall be constructed and designed in accordance to standards outlined in "Suggested Practices for Avian Protection on Power lines: The State of the Art in 2006" Edison Electric Institute, APLIC, and the California Energy Commission 2006 . The holder shall assume the burden and expense of proving that pole designs not shown in the above publication deter raptor perching, roosting, and nesting. Such proof shall be provided by a raptor expert approved by the Authorized Officer. The BLM reserves the right to require modification or additions to all powerline structures placed on this right-of-way, should they be necessary to ensure the safety of large perching birds. Such modifications and/or additions shall be made by the holder without liability or expense to the United States.

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

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

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

8. Upon cancellation, relinquishment, or expiration of this grant, the holder shall comply

with those abandonment procedures as prescribed by the Authorized Officer.

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

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

11. Special Stipulations:

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

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

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

## **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

06/12/2019

## Operator Certification

*I hereby certify that I, or someone under my direct supervision, have inspected the drill site and access route proposed herein; that I am familiar with the conditions which currently exist; that I have full knowledge of state and Federal laws applicable to this operation; that the statements made in this APD package are, to the best of my knowledge, true and correct; and that the work associated with the operations proposed herein will be performed in conformity with this APD package and the terms and conditions under which it is approved. I also certify that I, or the company I represent, am responsible for the operations conducted under this application. These statements are subject to the provisions of 18 U.S.C. 1001 for the filing of false statements.*

**NAME:** Jenny Harms

**Signed on:** 11/26/2018

**Title:** Regulatory Compliance Professional

**Street Address:** 333 W Sheridan Ave

**City:** Oklahoma City

**State:** OK

**Zip:** 73102

**Phone:** (405)552-6560

**Email address:** jenny.harms@dvn.com

## Field Representative

**Representative Name:** Ray Vaz

**Street Address:** 333 WEST SHERIDAN AVENUE

**City:** OKLAHOMA CITY

**State:** OK

**Zip:** 73102-5015

**Phone:** (405)552-4902

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



APD ID: 10400036684

Submission Date: 11/26/2018

Highlighted data reflects the most recent changes

Operator Name: DEVON ENERGY PRODUCTION COMPANY LP

Well Name: BORA BORA 13-24 FED COM

Well Number: 215H

[Show Final Text](#)

Well Type: OIL WELL

Well Work Type: Drill

**Section 1 - General**

APD ID: 10400036684

Tie to previous NOS?

Submission Date: 11/26/2018

BLM Office: CARLSBAD

User: Jenny Harms

Title: Regulatory Compliance Professional

Federal/Indian APD: FED

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

Lease number: NMNM0404441

Lease Acres: 1440

Surface access agreement in place?

Allotted?

Reservation:

Agreement in place? NO

Federal or Indian agreement:

Agreement number:

Agreement name:

Keep application confidential? YES

Permitting Agent? NO

APD Operator: DEVON ENERGY PRODUCTION COMPANY LP

Operator letter of designation:

**Operator Info**

Operator Organization Name: DEVON ENERGY PRODUCTION COMPANY LP

Operator Address: 333 West Sheridan Avenue

Zip: 73102

Operator PO Box:

Operator City: Oklahoma City State: OK

Operator Phone: (800)583-3866

Operator Internet Address:

**Section 2 - Well Information**

Well in Master Development Plan? NO

Master Development Plan name:

Well in Master SUPO? NO

Master SUPO name:

Well in Master Drilling Plan? NO

Master Drilling Plan name:

Well Name: BORA BORA 13-24 FED COM

Well Number: 215H

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: BORA BORA 13-24 FED COM

Well Number: 215H

Is the proposed well in an area containing other mineral resources? POTASH

Describe other minerals:

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: TOMB Number: 3

RAIDER MDP 13 PAD

Well Class: HORIZONTAL

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: 274 FT

Distance to lease line: 100 FT

Reservoir well spacing assigned acres Measurement: 320 Acres

Well plat: BORA\_BORA\_13\_24\_FED\_COM\_215H\_C102\_20181126135057.pdf

Well work start Date: 05/26/2019

Duration: 45 DAYS

### Section 3 - Well Location Table

Survey Type: RECTANGULAR

Describe Survey Type:

Datum: NAD83

Vertical Datum: NAVD88

Survey number: 6675A

	NS-Foot	NS Indicator	EW-Foot	EW Indicator	Twsp	Range	Section	Aliquot/Lot/Tract	Latitude	Longitude	County	State	Meridian	Lease Type	Lease Number	Elevation	MD	TVD
SHL Leg #1	100	FNL	1180	FEL	23S	31E	13	Aliquot NENE	32.3114209	-103.7267782	EDD Y	NEW MEXI CO	NEW MEXI CO	F	NMNM 0404441	3507	0	0
KOP Leg #1	50	FNL	1250	FEL	23S	31E	13	Aliquot NENE	32.311558	-103.727004	EDD Y	NEW MEXI CO	NEW MEXI CO	F	NMNM 0404441	-6190	9699	9697
PPP Leg #1	100	FNL	1250	FEL	23S	31E	13	Aliquot NENE	32.3114211	-103.7270046	EDD Y	NEW MEXI CO	NEW MEXI CO	F	NMNM 0404441	-6423	9939	9930

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

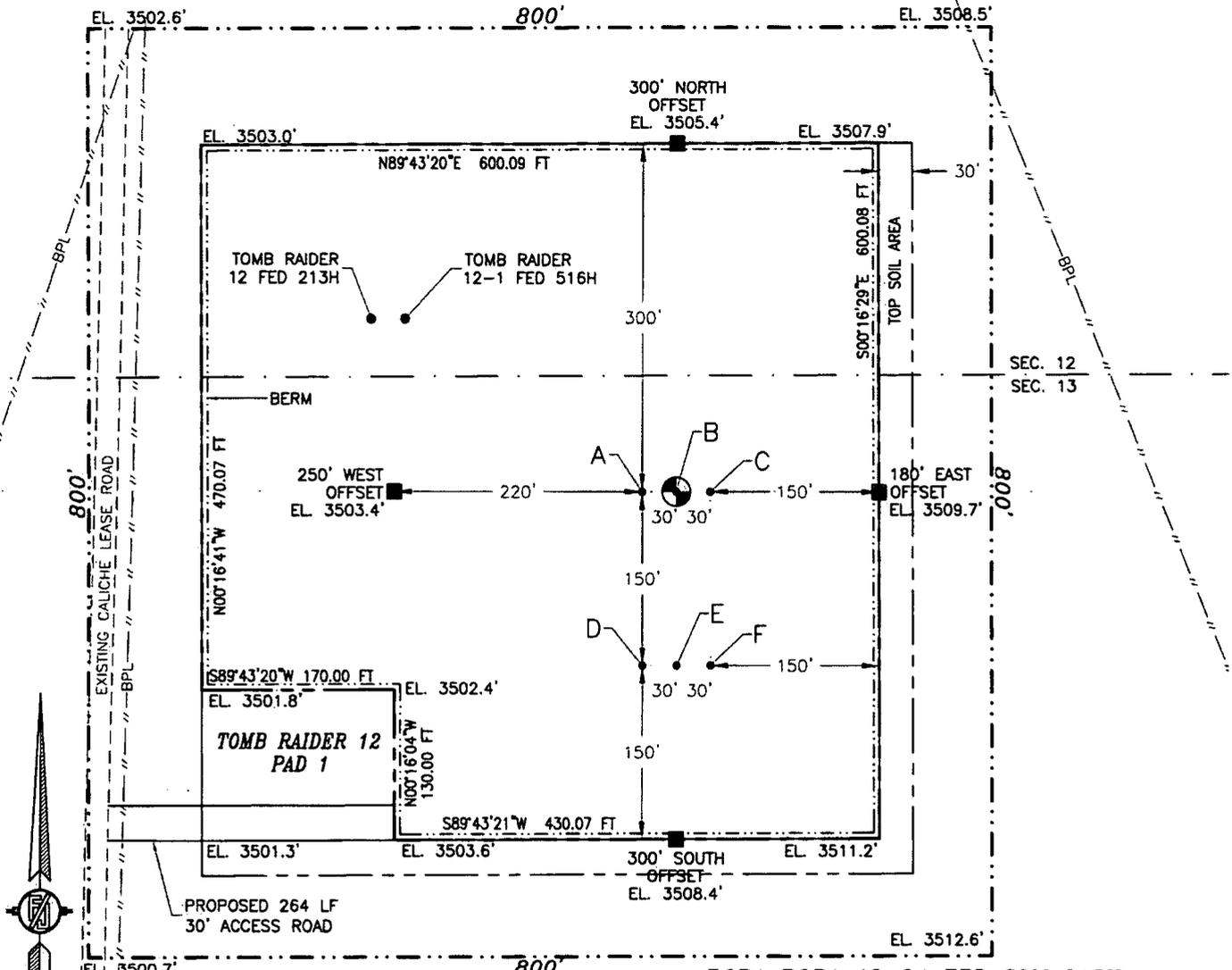
**Well Name:** BORA BORA 13-24 FED COM

**Well Number:** 215H

	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
EXIT Leg #1	100	FSL	125 0	FEL	23S	31E	24	Aliquot SESE	32.28295 65	- 103.7270 112	EDD Y	NEW MEXI CO	NEW MEXI CO	F	NMNM 053317 7A	- 673 3	204 31	102 40
BHL Leg #1	20	FSL	125 0	FEL	23S	31E	24	Aliquot SESE	32.28273 66	- 103.7270 112	EDD Y	NEW MEXI CO	NEW MEXI CO	F	NMNM 053317 7A	- 673 3	205 11	102 40

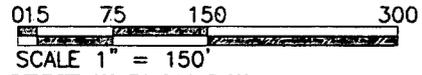
SECTION 13, TOWNSHIP 23 SOUTH, RANGE 31 EAST, N.M.P.M.  
 EDDY COUNTY, STATE OF NEW MEXICO  
**SITE MAP**

NOTE: LATITUDE AND LONGITUDE COORDINATES ARE SHOWN USING THE NORTH AMERICAN DATUM OF 1983 (NAD83) LISTED NEW MEXICO STATE PLANE EAST COORDINATES ARE GRID (NAD83). BASIS OF BEARING AND DISTANCES USED ARE NEW MEXICO STATE PLANE EAST COORDINATES MODIFIED TO THE SURFACE. VERTICAL DATUM NAVD88.



- A - BORA BORA 13-24 FED COM 214H
- B - BORA BORA 13-24 FED COM 215H
- C - BORA BORA 13-24 FED COM 216H
- D - BORA BORA 13-24 FED COM 523H
- E - BORA BORA 13-24 FED COM 514H
- F - BORA BORA 13-24 FED COM 524H

**BORA BORA 13-24 FED COM 215H**  
 ELEV. = 3507.0'  
 7.759 ± ACRES  
 LAT. = 32.3114209°N (NAD83)  
 LONG. = 103.7267782°W  
 NMSP EAST (FT)  
 N = 477557.50  
 E = 728725.57



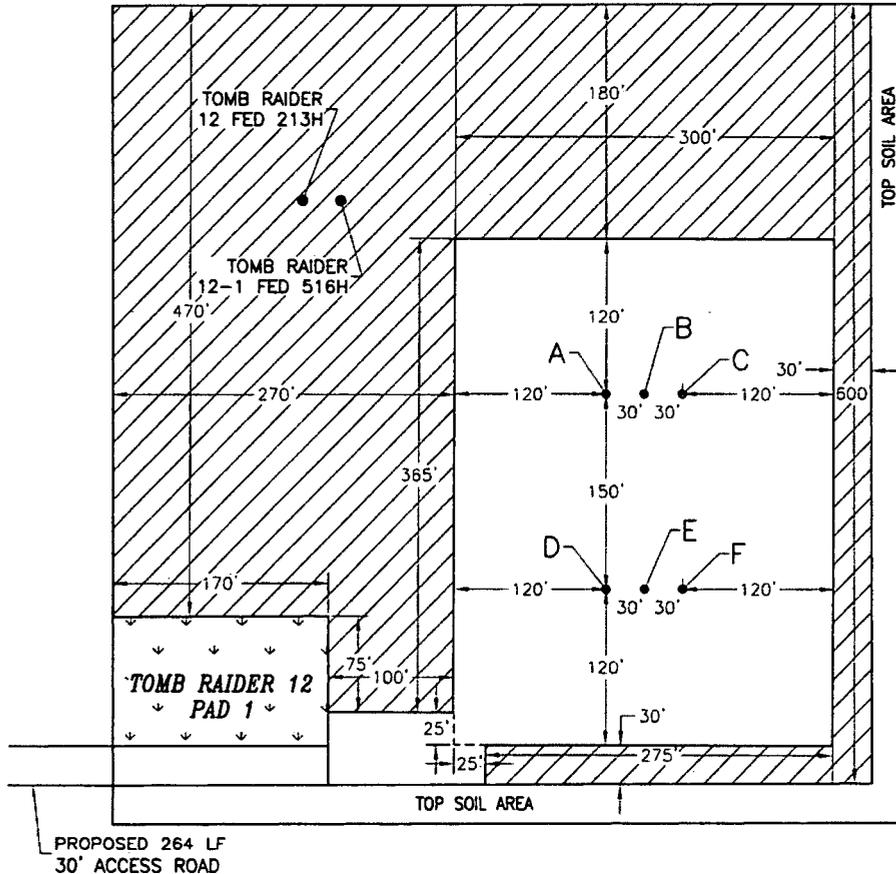
**DIRECTIONS TO LOCATION**  
 FROM STATE HIGHWAY 128 AND CR 798 (RED ROAD) GO NORTH ON CR 798 APPROX. 5.0 MILES, TURN RIGHT (EAST) GO EAST 0.3 OF A MILE, TURN RIGHT (SOUTH) GO SOUTH 0.3 OF A MILE, TURN LEFT (EAST) GO EAST APPROX. 0.5 OF A MILE, TURN RIGHT (SOUTH) GO SOUTH APPROX. 0.5 OF A MILE, TURN RIGHT (WEST) GO WEST 0.2 OF A MILE, TURN LEFT (SOUTH) GO SOUTH 0.2 OF A MILE, TURN LEFT (EAST) GO 264' TO THE SOUTHWEST PAD CORNER FOR THIS LOCATION.

**DEVON ENERGY PRODUCTION COMPANY, L.P.**  
**BORA BORA 13-24 FED COM 215H**  
 LOCATED 100 FT. FROM THE NORTH LINE  
 AND 1180 FT. FROM THE EAST LINE OF  
 SECTION 13, TOWNSHIP 23 SOUTH,  
 RANGE 31 EAST, N.M.P.M.  
 EDDY COUNTY, STATE OF NEW MEXICO  
 LAND STATUS: BLM

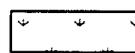
NOVEMBER 15, 2018  
 SURVEY NO. 6675A

SECTION 13, TOWNSHIP 23 SOUTH, RANGE 31 EAST, N.M.P.M.  
 EDDY COUNTY, STATE OF NEW MEXICO  
 INTERIM SITE BUILD PLAN

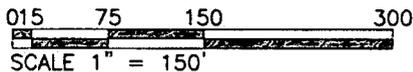
- A - BORA BORA 13-24 FED COM 214H
- B - BORA BORA 13-24 FED COM 215H
- C - BORA BORA 13-24 FED COM 216H
- D - BORA BORA 13-24 FED COM 523H
- E - BORA BORA 13-24 FED COM 514H
- F - BORA BORA 13-24 FED COM 524H



DENOTES INTERIM PAD RECLAMATION AREA



DENOTES GRADING SITE RECLAMATION AREA



DEVON ENERGY PRODUCTION COMPANY, L.P.  
**BORA BORA 13-24 FED COM 215H**  
 LOCATED 100 FT. FROM THE NORTH LINE  
 AND 1180 FT. FROM THE EAST LINE OF  
 SECTION 13, TOWNSHIP 23 SOUTH,  
 RANGE 31 EAST, N.M.P.M.  
 EDDY COUNTY, STATE OF NEW MEXICO  
 LAND STATUS: BLM

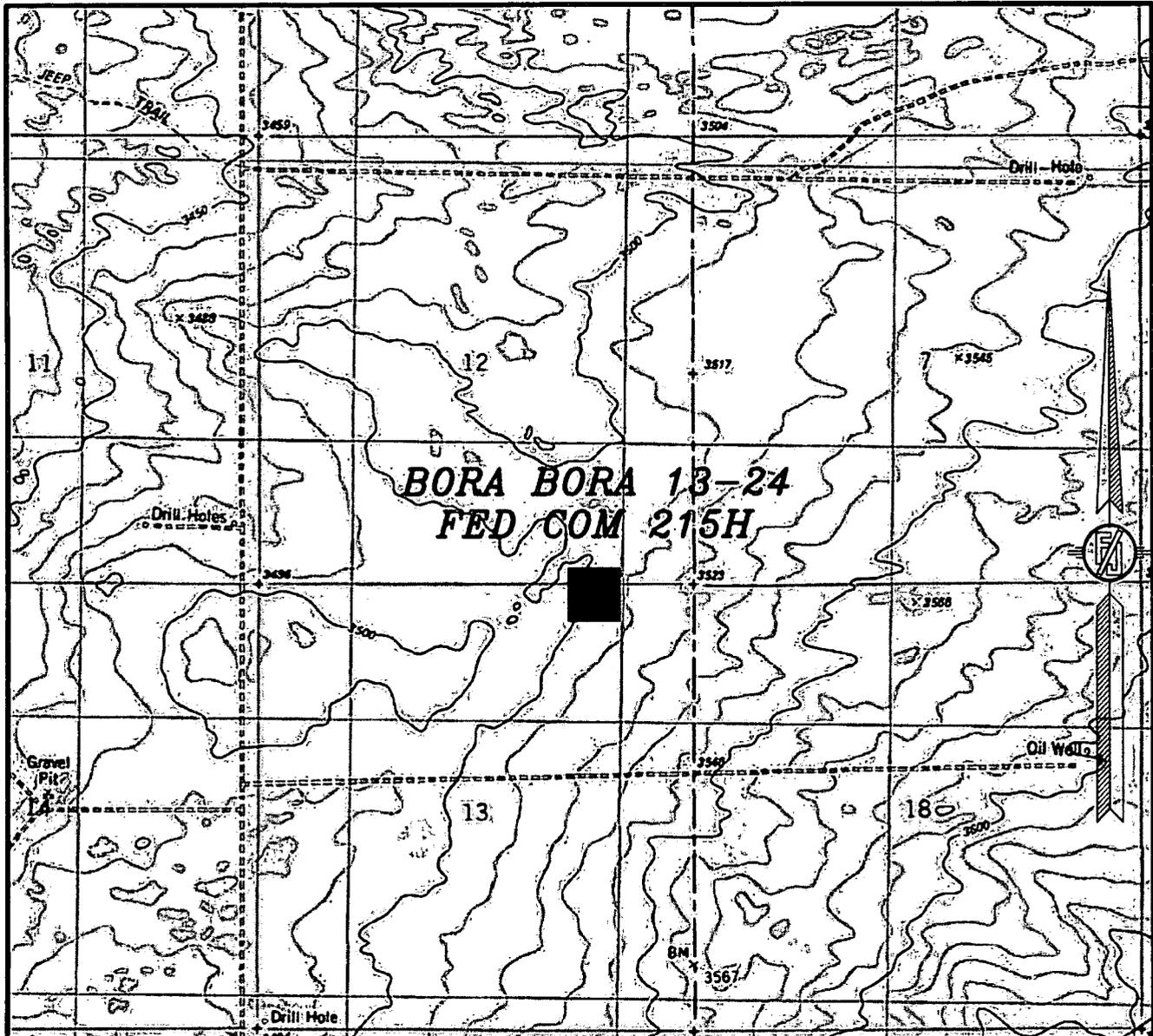
4.929± ACRES INTERIM PAD RECLAMATION AREA  
 0.390± ACRES GRADING SITE RECLAMATION AREA  
 2.948± ACRES NON-RECLAIMED AREA  
 8.267± ACRES TOMB RAIDER 12 PAD 1

NOVEMBER 15, 2018

SURVEY NO. 6675A

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

SECTION 13, TOWNSHIP 23 SOUTH, RANGE 31 EAST, N.M.P.M.  
EDDY COUNTY, STATE OF NEW MEXICO  
LOCATION VERIFICATION MAP



USGS QUAD MAP:  
BOOTLEG RIDGE

NOT TO SCALE

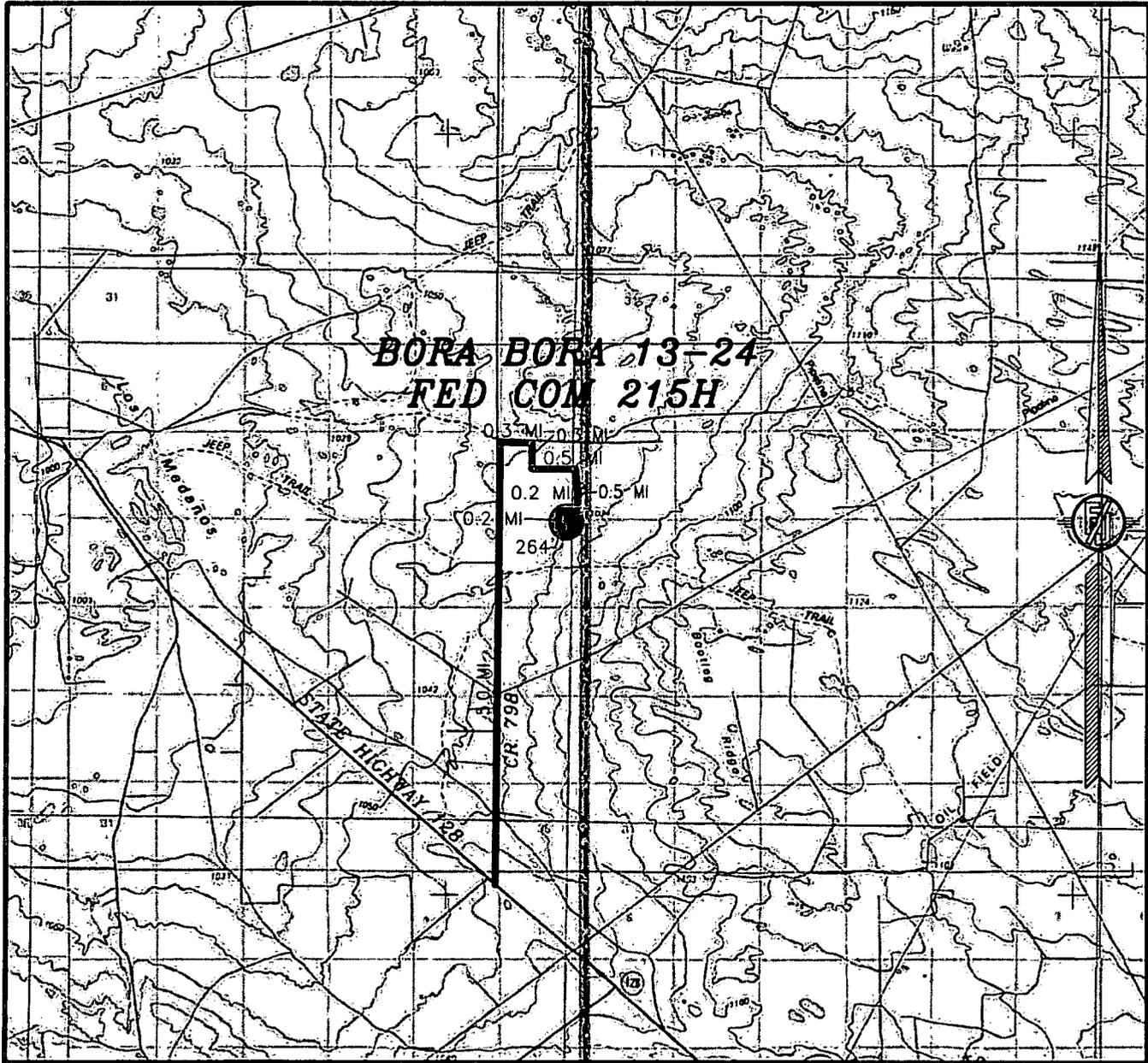
DEVON ENERGY PRODUCTION COMPANY, L.P.  
**BORA BORA 13-24 FED COM 215H**  
LOCATED 100 FT. FROM THE NORTH LINE  
AND 1180 FT. FROM THE EAST LINE OF  
SECTION 13, TOWNSHIP 23 SOUTH,  
RANGE 31 EAST, N.M.P.M.  
EDDY COUNTY, STATE OF NEW MEXICO  
LAND STATUS: BLM

NOVEMBER 15, 2018

SURVEY NO. 6675A

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

SECTION 13, TOWNSHIP 23 SOUTH, RANGE 31 EAST, N.M.P.M.  
 EDDY COUNTY, STATE OF NEW MEXICO  
 VICINITY MAP



DISTANCES IN MILES

NOT TO SCALE

DEVON ENERGY PRODUCTION COMPANY, L.P.

**BORA BORA 13-24 FED COM 215H**

LOCATED 100 FT. FROM THE NORTH LINE

AND 1180 FT. FROM THE EAST LINE OF

SECTION 13, TOWNSHIP 23 SOUTH,

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

EDDY COUNTY, STATE OF NEW MEXICO

LAND STATUS: BLM

NOVEMBER 15, 2018

**DIRECTIONS TO LOCATION**

FROM STATE HIGHWAY 128 AND CR 798 (RED ROAD) GO  
 NORTH ON CR 798 APPROX. 5.0 MILES, TURN RIGHT (EAST)  
 GO EAST 0.3 OF A MILE, TURN RIGHT (SOUTH) GO SOUTH 0.3  
 OF A MILE, TURN LEFT (EAST) GO EAST APPROX. 0.5 OF A  
 MILE, TURN RIGHT (SOUTH) GO SOUTH APPROX. 0.5 OF A  
 MILE, TURN RIGHT (WEST) GO WEST 0.2 OF A MILE, TURN LEFT  
 (SOUTH) GO SOUTH 0.2 OF A MILE, TURN LEFT (EAST) GO  
 264' TO THE SOUTHWEST PAD CORNER FOR THIS LOCATION.

SURVEY NO. 6675A

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

SECTION 13, 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  
NOVEMBER 2017

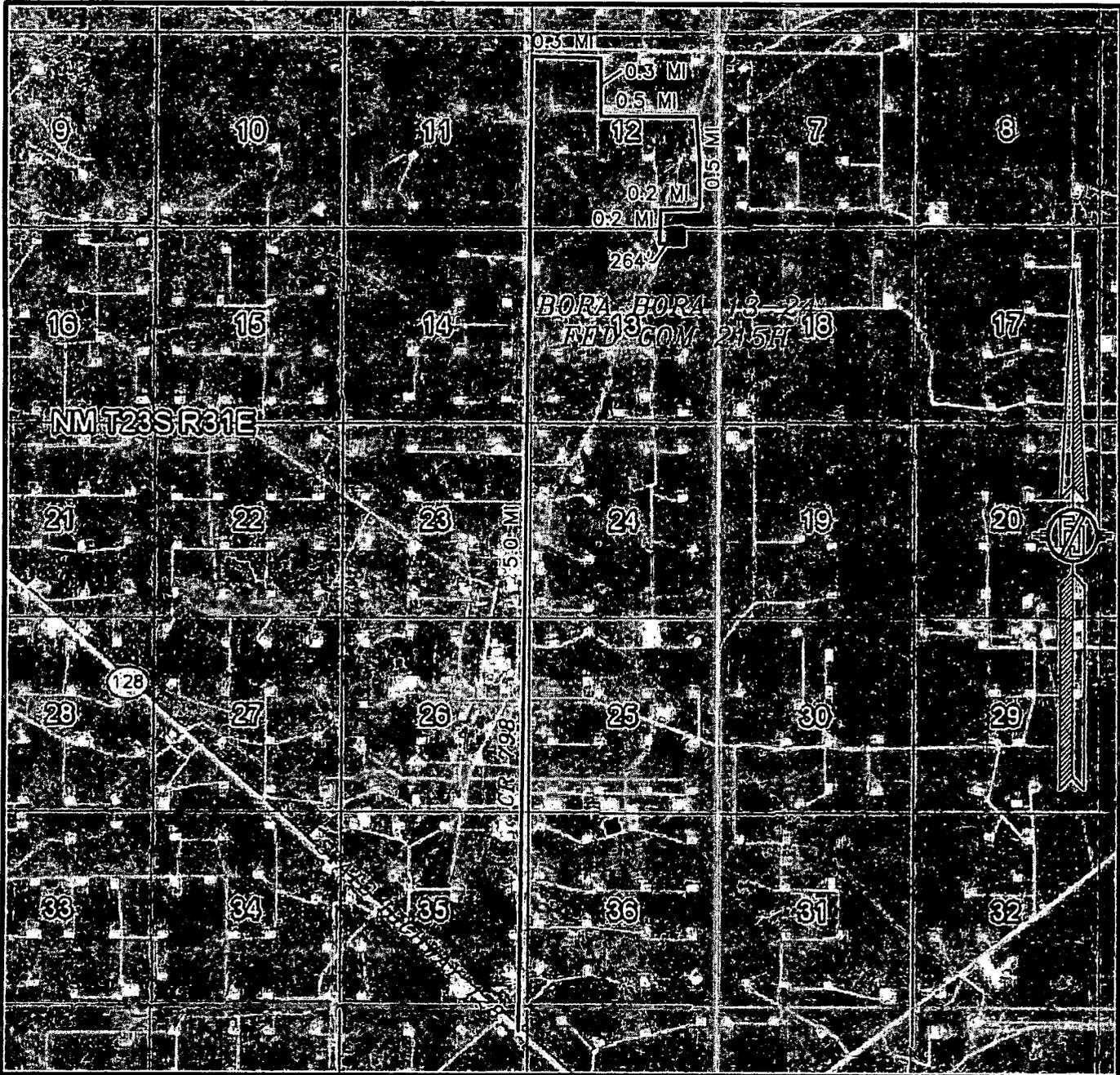
DEVON ENERGY PRODUCTION COMPANY, L.P.  
BORA BORA 13-24 FED COM 215H  
LOCATED 100 FT. FROM THE NORTH LINE  
AND 1180 FT. FROM THE EAST LINE OF  
SECTION 13, TOWNSHIP 23 SOUTH,  
RANGE 31 EAST, N.M.P.M.  
EDDY COUNTY, STATE OF NEW MEXICO  
LAND STATUS: BLM

NOVEMBER 15, 2018

SURVEY NO. 6675A

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

SECTION 13, TOWNSHIP 23 SOUTH, RANGE 31 EAST, N.M.P.M.  
 EDDY COUNTY, STATE OF NEW MEXICO  
 ACCESS AERIAL ROUTE MAP



NOT TO SCALE  
 AERIAL PHOTO:  
 GOOGLE EARTH  
 NOVEMBER 2017

**DEVON ENERGY PRODUCTION COMPANY, L.P.**  
**BORA BORA 13-24 FED COM 215H**  
 LOCATED 100 FT. FROM THE NORTH LINE  
 AND 1180 FT. FROM THE EAST LINE OF  
 SECTION 13, TOWNSHIP 23 SOUTH,  
 RANGE 31 EAST, N.M.P.M.  
 EDDY COUNTY, STATE OF NEW MEXICO  
 LAND STATUS: BLM

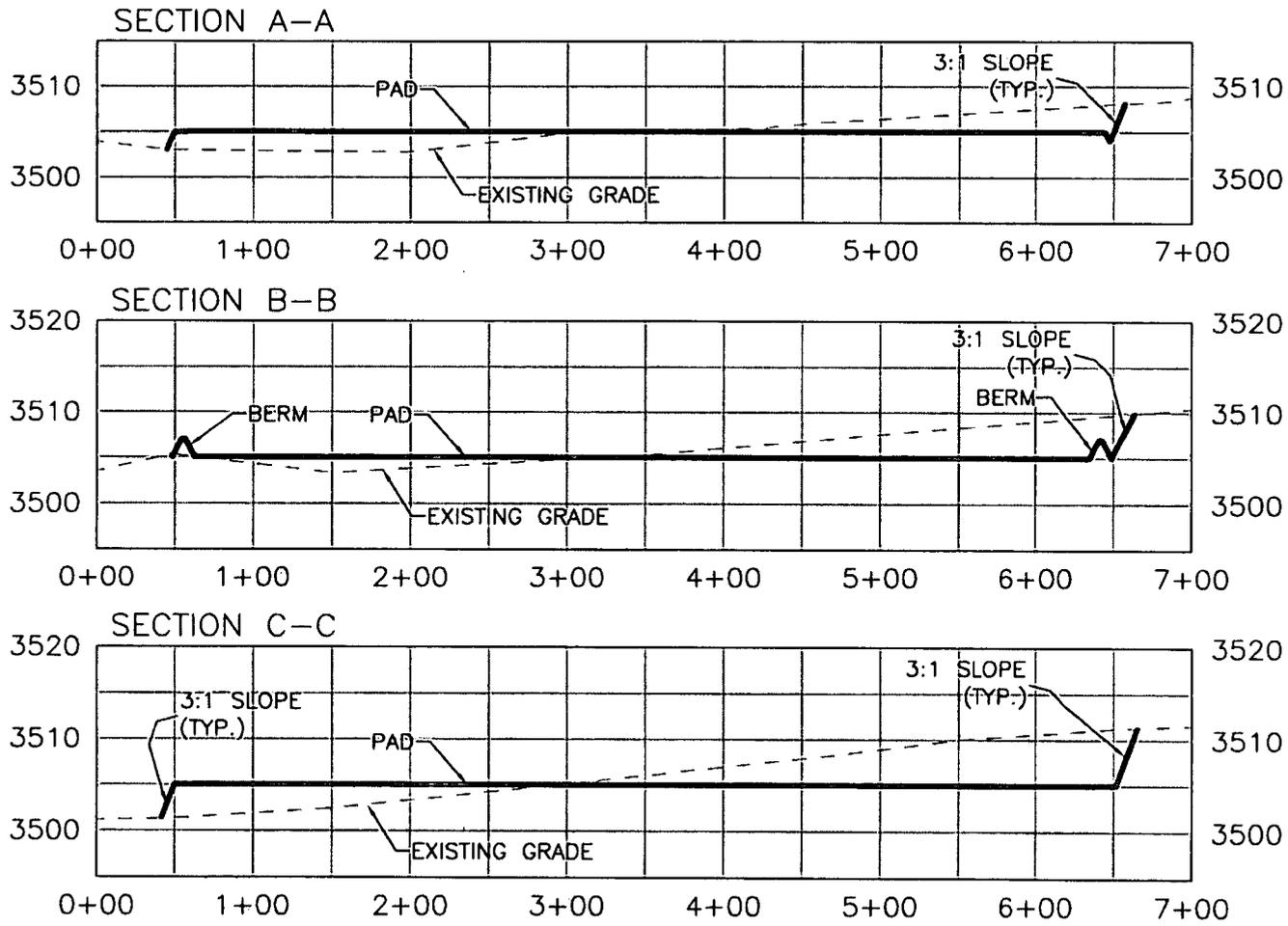
NOVEMBER 15, 2018

SURVEY NO. 6675A

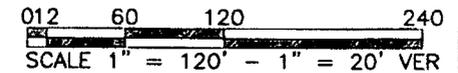
MADRON SURVEYING, INC. 301 SOUTH CANAL CARLSBAD, NEW MEXICO  
 (575) 234-3341



# CROSS SECTIONS



**DEVON ENERGY PRODUCTION COMPANY, L.P.**  
**GRADING PLAN AND CROSS SECTIONS**  
**FOR BORA BORA 13-24 FED COM 215H**  
 SECTION 13, TOWNSHIP 23 SOUTH,  
 RANGE 31 EAST, N.M.P.M.  
 EDDY COUNTY, STATE OF NEW MEXICO



CUT	FILL	NET
16930 CU. YD	10137 CU. YD	6793 CU. YD (CUT)

EARTHWORK QUANTITIES ARE ESTIMATED

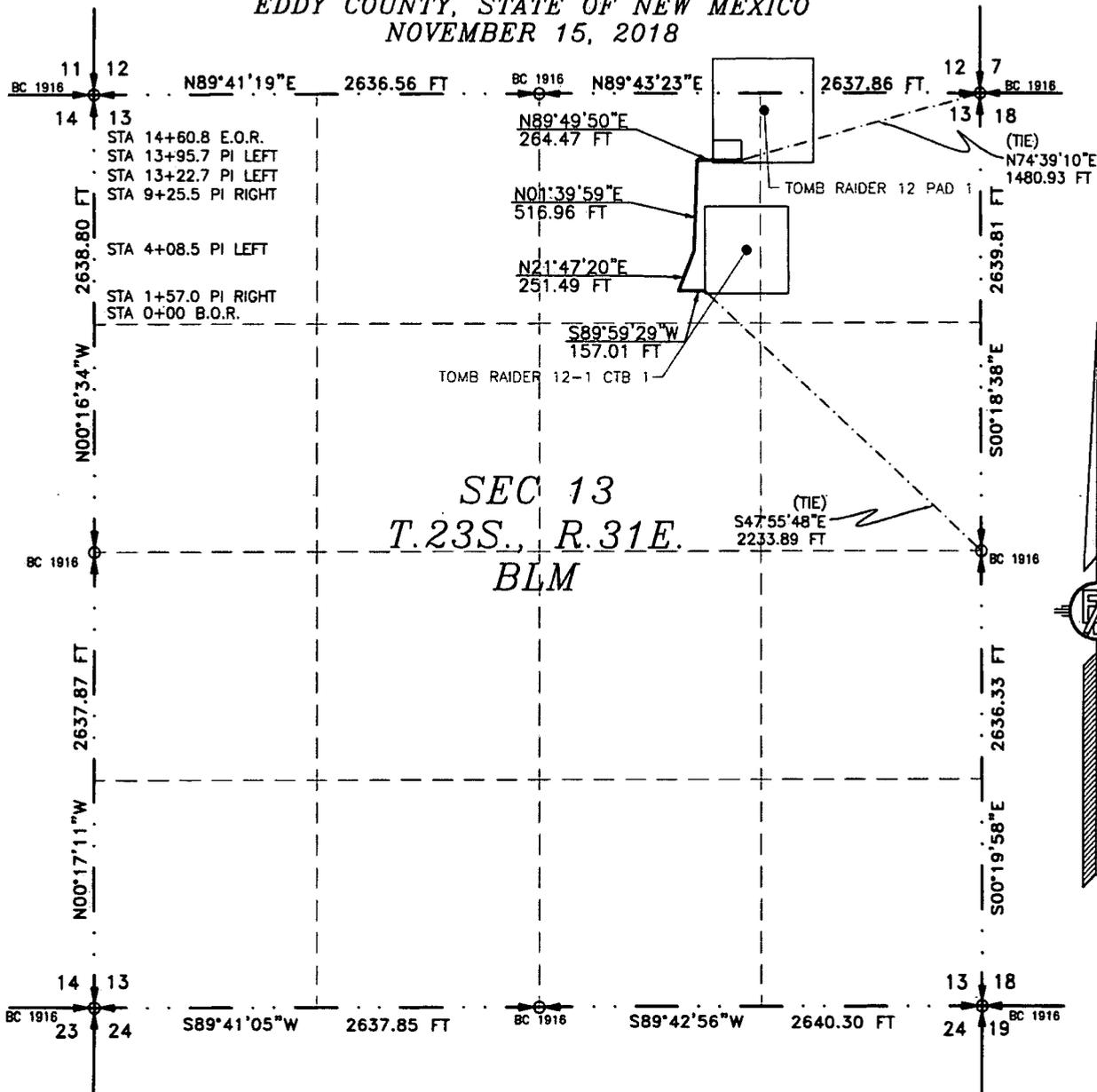
NOVEMBER 15, 2018  
**MADRON SURVEYING, INC.** 301 SOUTH CANAL CARLSBAD, NEW MEXICO  
(575) 234-3341

**SHEET 2-2**  
 SURVEY NO. 6675A

**ACCESS ROAD PLAT**

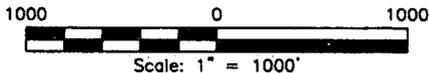
ACCESS ROAD FROM THE TOMB RAIDER 12-1 CTB 1 TO THE TOMB RAIDER 12 PAD 1  
(TOMB RAIDER 12 FED 213H, TOMB RAIDER 12-1 FED 516H, BORA BORA 13-24 FED COM 214H, 215H,  
216H, 523H, 514H, 524H)

**DEVON ENERGY PRODUCTION COMPANY, L.P.**  
CENTERLINE SURVEY OF AN ACCESS ROAD CROSSING  
SECTION 13, TOWNSHIP 23 SOUTH, RANGE 31 EAST, N.M.P.M.  
EDDY COUNTY, STATE OF NEW MEXICO  
NOVEMBER 15, 2018



SEC 13  
T. 23S., R. 31E.  
BLM

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. 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 15 DAY OF NOVEMBER, 2018

*(Signature of Filmon F. Jaramillo)*  
FILMON F. JARAMILLO, P.L.S. #12797  
301 SOUTH CANAL  
CARLSBAD, N.M. 88220  
(575) 234-3341

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

SURVEY NO. 6675A

**ACCESS ROAD PLAT**

ACCESS ROAD FROM THE TOMB RAIDER 12-1 CTB 1 TO THE TOMB RAIDER 12 PAD 1  
(TOMB RAIDER 12 FED 213H, TOMB RAIDER 12-1 FED 516H, BORA BORA 13-24 FED COM 214H, 215H,  
216H, 523H, 514H, 524H)

**DEVON ENERGY PRODUCTION COMPANY, L.P.**  
**CENTERLINE SURVEY OF AN ACCESS ROAD CROSSING**  
**SECTION 13, TOWNSHIP 23 SOUTH, RANGE 31 EAST, N.M.P.M.**  
**EDDY COUNTY, STATE OF NEW MEXICO**  
**NOVEMBER 15, 2018**

**DESCRIPTION**

A STRIP OF LAND 30 FEET WIDE CROSSING BUREAU OF LAND MANAGEMENT LAND IN SECTION 13, TOWNSHIP 23 SOUTH, RANGE 31 EAST, N.M.P.M., EDDY COUNTY, STATE OF NEW MEXICO AND BEING 15 FEET EACH SIDE OF THE FOLLOWING DESCRIBED CENTERLINE SURVEY:

BEGINNING AT A POINT WITHIN THE NW/4 NE/4 OF SAID SECTION 13, TOWNSHIP 23 SOUTH, RANGE 31 EAST, N.M.P.M., WHENCE THE EAST QUARTER CORNER OF SAID SECTION 13, TOWNSHIP 23 SOUTH, RANGE 31 EAST, N.M.P.M. BEARS S47°55'48"E, A DISTANCE OF 2233.89 FEET;

THENCE S89°59'29"W A DISTANCE OF 157.01 FEET TO AN ANGLE POINT OF THE LINE HEREIN DESCRIBED;

THENCE N21°47'20"E A DISTANCE OF 251.49 FEET TO AN ANGLE POINT OF THE LINE HEREIN DESCRIBED;

THENCE N01°39'59"E A DISTANCE OF 516.96 FEET TO AN ANGLE POINT OF THE LINE HEREIN DESCRIBED;

THENCE N89°49'50"E A DISTANCE OF 264.47 FEET THE TERMINUS OF THIS CENTERLINE SURVEY, WHENCE THE NORTHEAST CORNER OF SAID SECTION 13, TOWNSHIP 23 SOUTH, RANGE 31 EAST, N.M.P.M. BEARS N74°39'10"E, A DISTANCE OF 1480.93 FEET;

SAID STRIP OF LAND BEING 1189.93 FEET OR 72.12 RODS IN LENGTH, CONTAINING 0.820 ACRES MORE OR LESS AND BEING ALLOCATED BY FORTIES AS FOLLOWS:

NW/4 NE/4 1189.93 L.F. 72.12 RODS 0.820 ACRES

**SURVEYOR CERTIFICATE**

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

IN WITNESS WHEREOF, THIS CERTIFICATE IS EXECUTED AT CARLSBAD, NEW MEXICO, THIS 15 DAY OF NOVEMBER 2018

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

**SURVEY NO. 6675A**

**GENERAL NOTES**

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

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

**SHEET: 2-2**

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

301 SOUTH CANAL  
(575) 234-3341

APD ID: 10400036684

Submission Date: 11/26/2018

Highlighted data reflects the most recent changes

Operator Name: DEVON ENERGY PRODUCTION COMPANY LP

Well Name: BORA BORA 13-24 FED COM

Well Number: 215H

[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	3507	0	0	ALLUVIUM	NONE	No
2	RUSTLER	2681	825	825	SALT	NONE	No
3	SALADO	2307	1200	1200	SALT	NONE	No
4	BASE OF SALT	-994	4500	4500	SALT	NONE	No
5	DELAWARE	-1024	4530	4530	SANDSTONE	NATURAL GAS,OIL	No
6	BONE SPRING	-4934	8440	8440	SANDSTONE	NATURAL GAS,OIL	No
7	BONE SPRING 2ND	-6564	10070	10070	SANDSTONE	NATURAL GAS,OIL	Yes

## Section 2 - Blowout Prevention

Pressure Rating (PSI): 3M

Rating Depth: 6000

**Equipment:** BOP/BOPE will be installed per Onshore Oil & Gas Order #2 requirements prior to drilling below surface casing, a 13-5/8" BOP/BOPE system with a minimum rating of 3M will be installed on the wellhead system. BOP/BOPE will be tested by an independent service company per Onshore Oil & Gas Order #2 requirements and MASP (Maximum Anticipated Surface Pressure) calculations. If the system is upgraded, all the components installed will be functional and tested.

**Requesting Variance?** YES

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

**Testing Procedure:** A 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:**

3M\_BOPE\_CK\_20181126124040.pdf

**BOP Diagram Attachment:**

3M\_BOPE\_CK\_20181126124049.pdf

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

**Well Name:** BORA BORA 13-24 FED COM

**Well Number:** 215H

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

**Rating Depth:** 10240

**Equipment:** BOP/BOPE will be installed per Onshore Oil & Gas Order #2 requirements prior to drilling below intermediate casing, a BOP/BOPE system with the above minimum rating 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\_20190426131919.pdf

**BOP Diagram Attachment:**

5M\_BOPE\_\_CK\_20190426131927.pdf

### Section 3 - Casing

Casing ID	String Type	Hole Size	Csg Size	Condition	Standard	Tapered String	Top Set MD	Bottom Set MD	Top Set TVD	Bottom Set TVD	Top Set MSL	Bottom Set MSL	Calculated casing length MD	Grade	Weight	Joint Type	Collapse SF	Burst SF	Joint SF Type	Joint SF	Body SF Type	Body SF
1	SURFACE	17.5	13.375	NEW	API	N	0	850	0	850	-6768	-7557	850	H-40	48	STC	1.125	1	BUOY	1.6	BUOY	1.6
2	INTERMEDIATE	12.25	9.625	NEW	API	N	0	6000	0	6000	-6768	-11036	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	20511	0	10240	-6768	-16768	20511	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:** BORA BORA 13-24 FED COM

**Well Number:** 215H

**Casing Attachments**

---

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

**Inspection Document:**

**Spec Document:**

**Tapered String Spec:**

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

Surf\_Csg\_Ass\_20181126124403.pdf

---

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

**Inspection Document:**

**Spec Document:**

**Tapered String Spec:**

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

Int\_Csg\_Ass\_20181126124414.pdf

---

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

**Inspection Document:**

**Spec Document:**

**Tapered String Spec:**

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

Prod\_Csg\_Ass\_20181126124428.pdf

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**Section 4 - Cement**

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

**Well Name:** BORA BORA 13-24 FED COM

**Well Number:** 215H

String Type	Lead/Tail	Stage Tool Depth	Top MD	Bottom MD	Quantity(sx)	Yield	Density	Cu Ft	Excess%	Cement type	Additives
SURFACE	Lead		0	850	887	1.33	13.2	1180	100	C	Class C + adds

INTERMEDIATE	Lead		0	5500	1091	1.94	9	2116	50	C	Class C + adds
INTERMEDIATE	Tail		5500	6000	196.8	1.33	13.2	261	50	C	Class C + adds
PRODUCTION	Lead		5500	9699	328	1.94	9	1171	10	TUNED	Class C + adds
PRODUCTION	Tail		9699	2051 1	2057. 7	1.6	13.2	3004. 2	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	850	OTHER : FRESH WATER	8.5	9				2			

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

**Well Name:** BORA BORA 13-24 FED COM

**Well Number:** 215H

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
850	6000	OTHER : BRINE	10	10.5				2			
6000	10240	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:** 4792

**Anticipated Surface Pressure:** 2539.19

**Anticipated Bottom Hole Temperature(F):** 164

**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:**

Bora\_Bora\_13\_24\_Fed\_Com\_215H\_H2S\_20181126140249.pdf

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

**Well Name:** BORA BORA 13-24 FED COM

**Well Number:** 215H

## Section 8 - Other Information

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

Devon\_\_Bora\_Bora\_13\_24\_Fed\_Com\_215H\_\_p1\_20181126140309.pdf

Drilling\_Plan\_Bora\_Bora\_13\_24\_Fed\_Com\_215H\_4\_15\_20190426132512.pdf

### Other proposed operations facets description:

Multi-Bowl Verbiage

Multi-Bowl Wellhead

Closed-Loop Design Plan

DRILL PLAN-REVSIED 4/26/2019

GAS CAPTURE PLAN

SPUDDER RIG

### Other proposed operations facets attachment:

GasCapturePlan\_20181126131228.pdf

Clsd\_Loop\_20181126130115.pdf

Multi\_Bowl\_Verbiage\_3M\_Rev1\_20181126130044.pdf

MB\_Wellhd\_3M\_20181126130116.pdf

Spudder\_Rig\_Info\_20190426132559.pdf

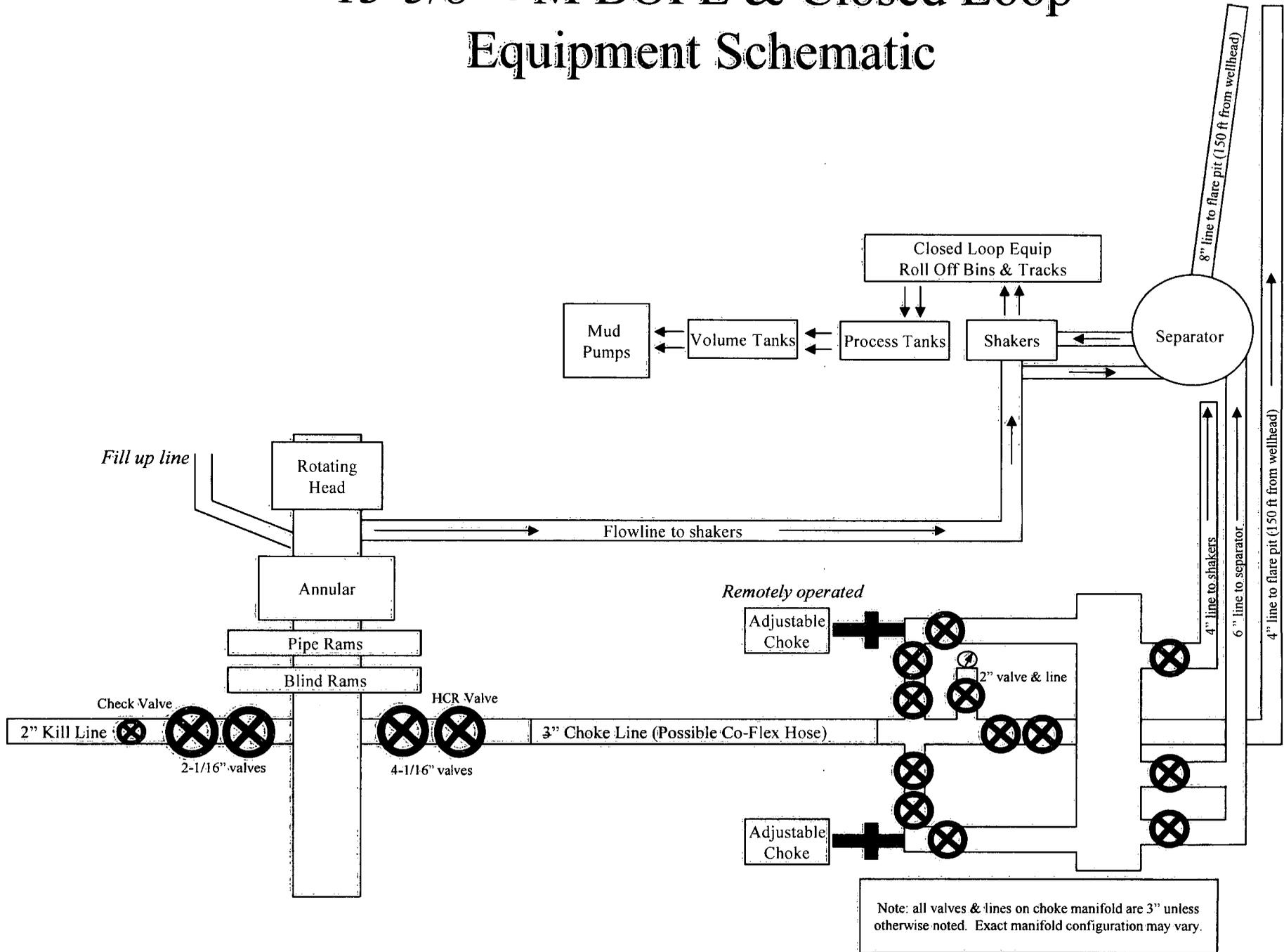
MB\_Verb\_5M\_20190426132611.pdf

MB\_Wellhd\_5M\_20190426132612.pdf

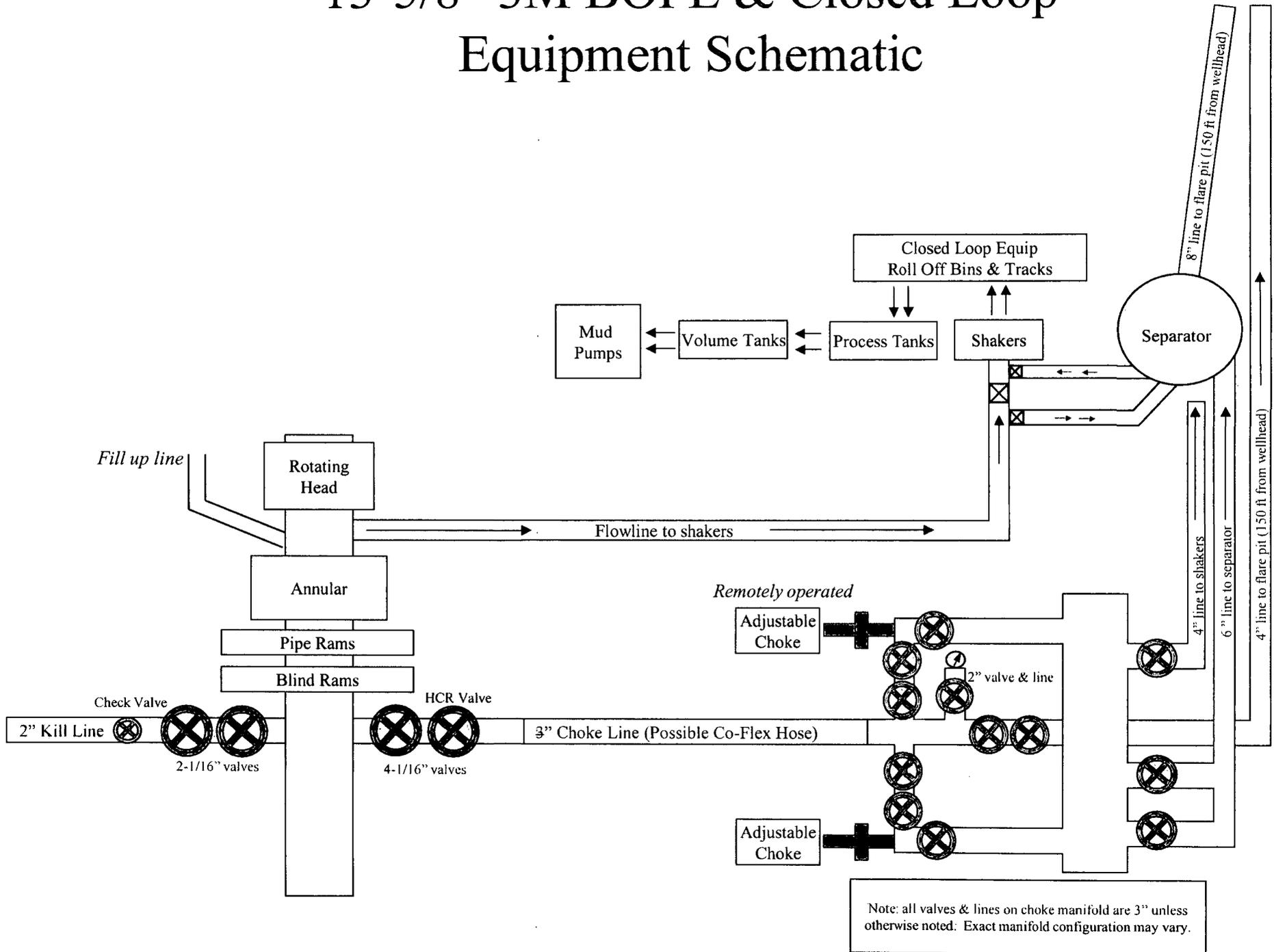
### Other Variance attachment:

Co\_flex\_20181126130144.pdf

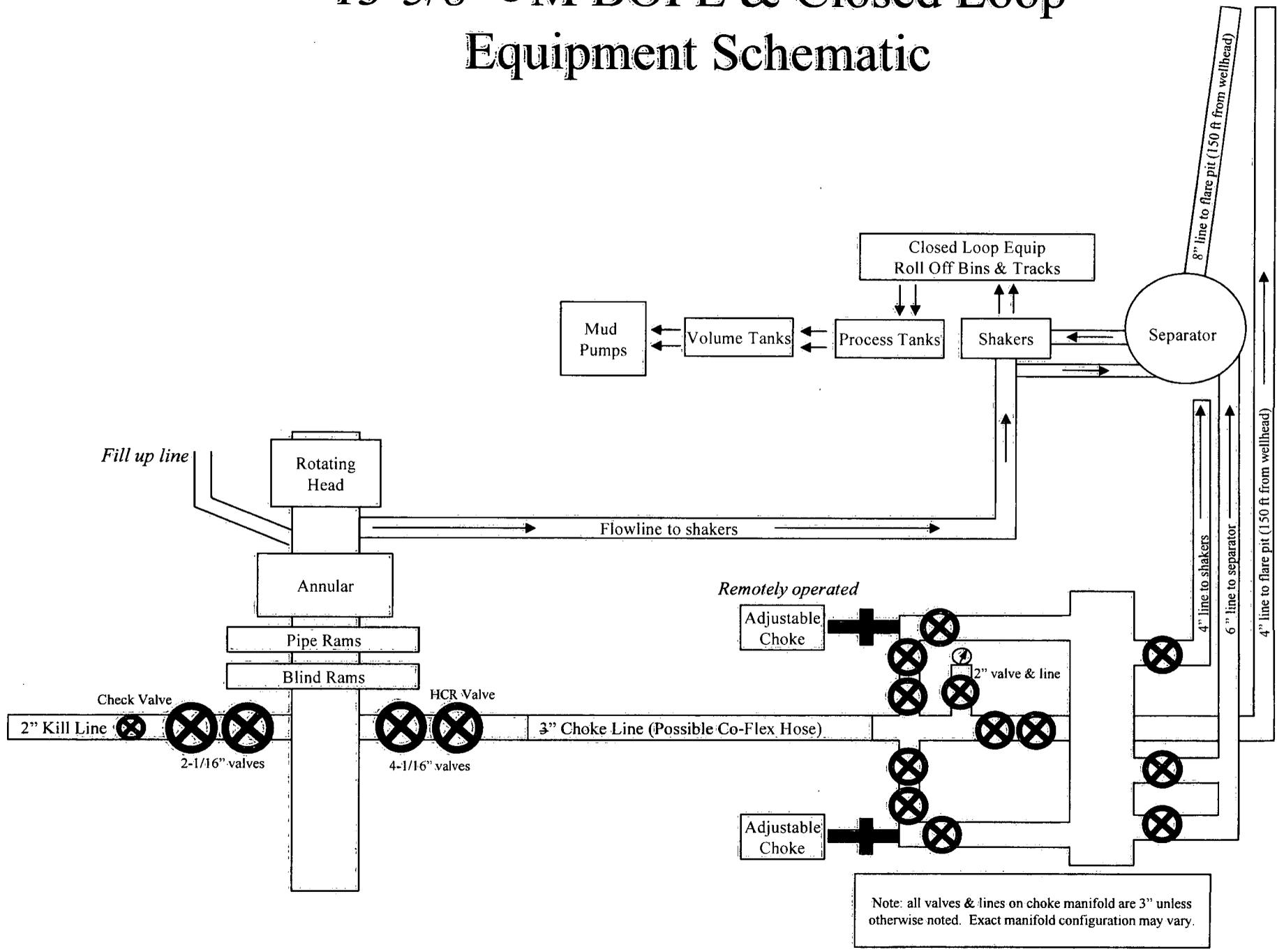
# 13-5/8" 5 M BOPE & Closed Loop Equipment Schematic



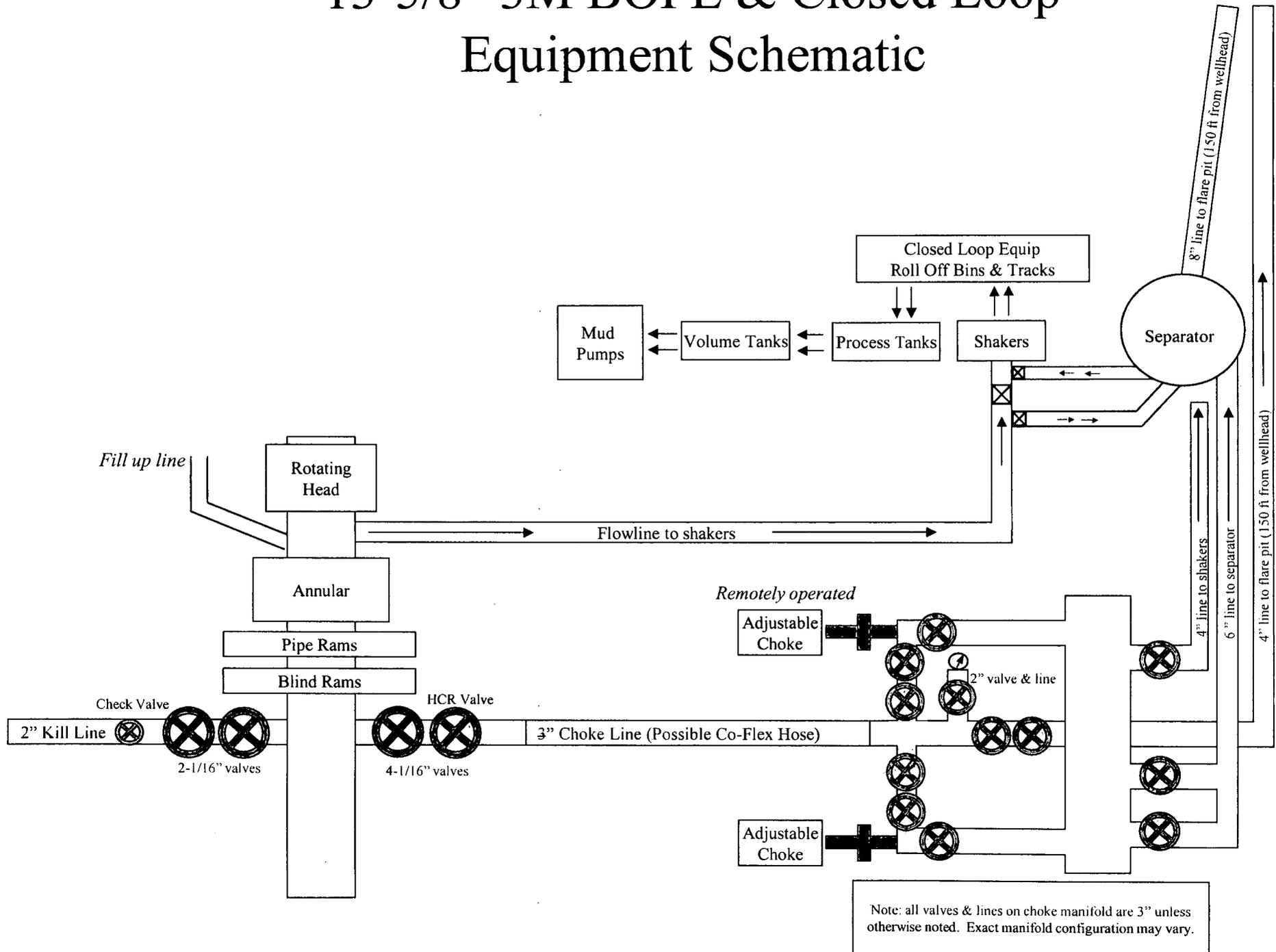
# 13-5/8" 3M BOPE & Closed Loop Equipment Schematic



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



# 13-5/8" 3M 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.

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

<b>Surface 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>Surface Casing Tension Design</b>	
<b>Load Case</b>	<b>Assumptions</b>
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.

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

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

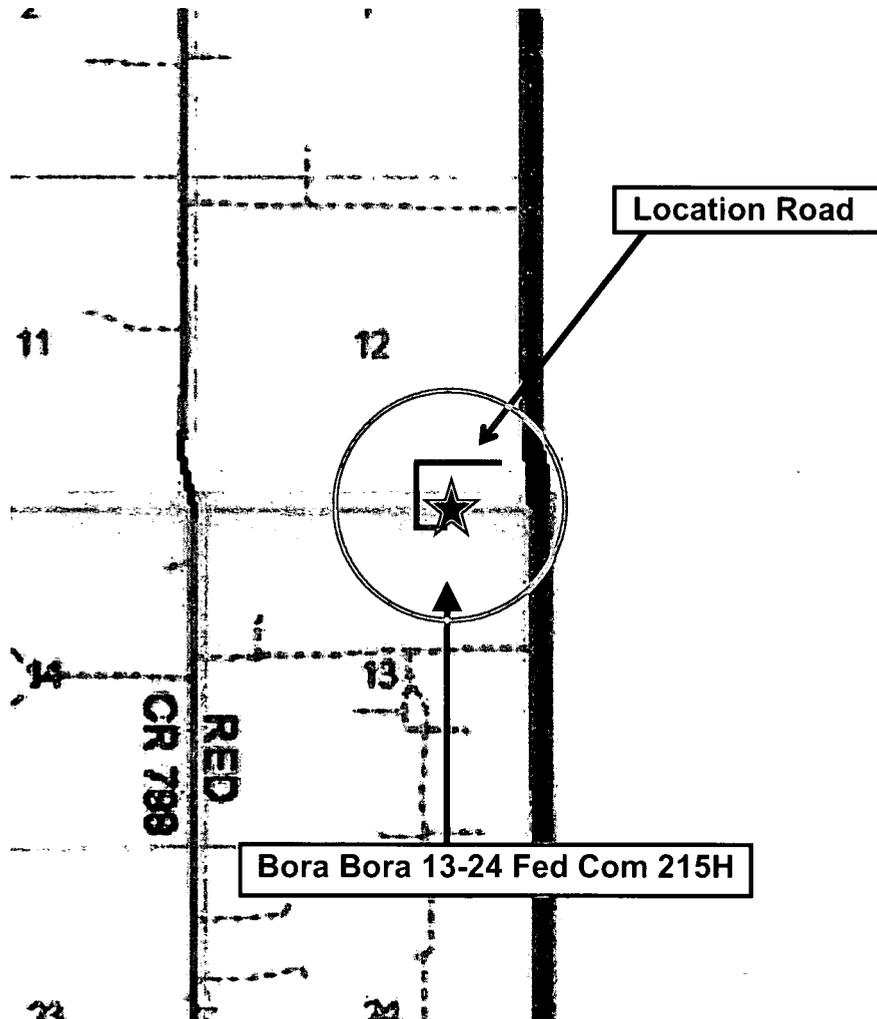
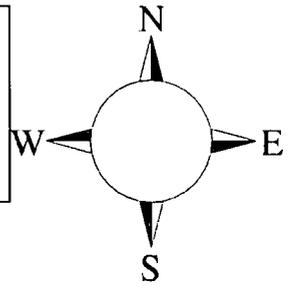
**Bora Bora 13-24 Fed Com 215H**

**Sec-13 T-23S R-31E  
100' FNL & 1180' FEL  
LAT. = 32.3114209' N (NAD83)  
LONG = 103.7267782' W**

**Eddy County NM**

## Bora Bora 13-24 Fed Com 215H

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.

# Devon Energy

Project: Eddy County, NM (NAD-83)

Site: Bora Bora 13-24

Well: Bora Bora 13-24 Fed Com 215H

Wellbore: OH

Design: Plan #1

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  
 System Datum: Mean Sea Level



Azimuths to Grid North  
 True North: -0.32°  
 Magnetic North: 6.54°

Magnetic Field  
 Strength: 48032.8nT  
 Dip Angle: 60.07°  
 Date: 11/20/2018  
 Model: HDGM

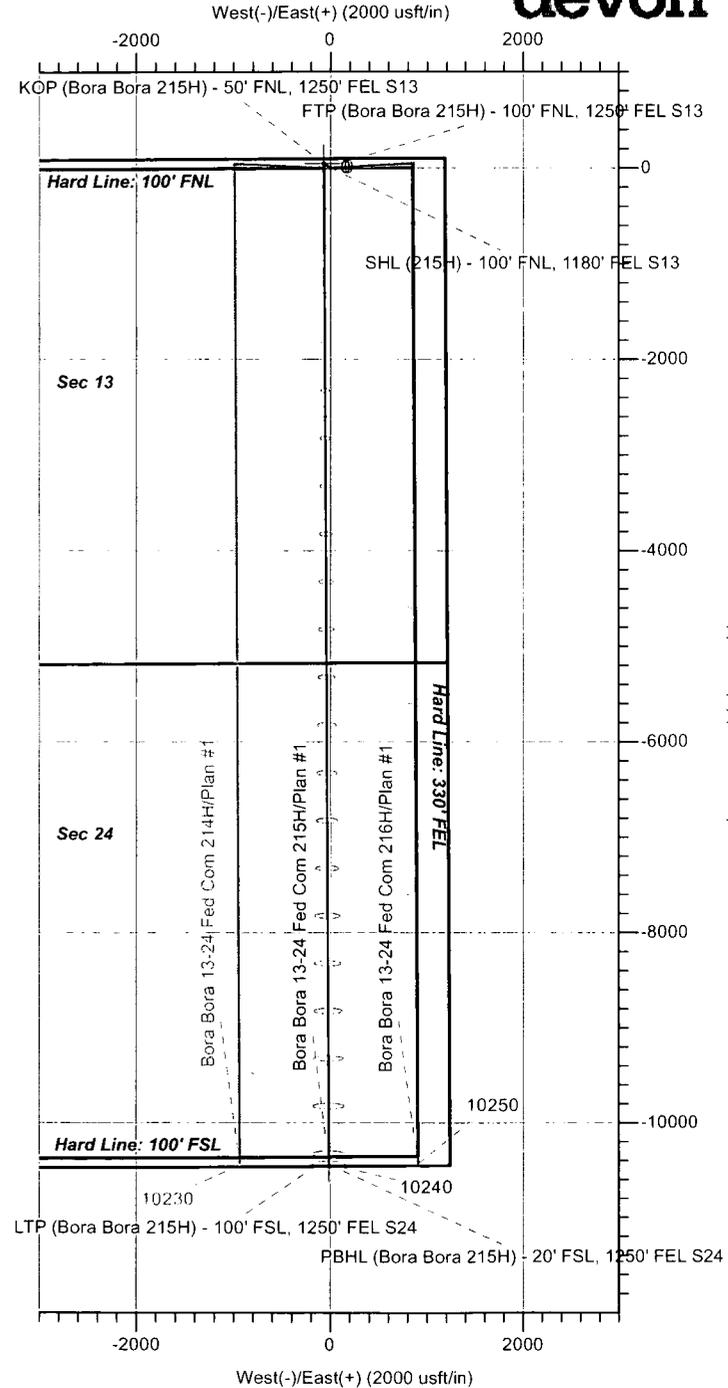
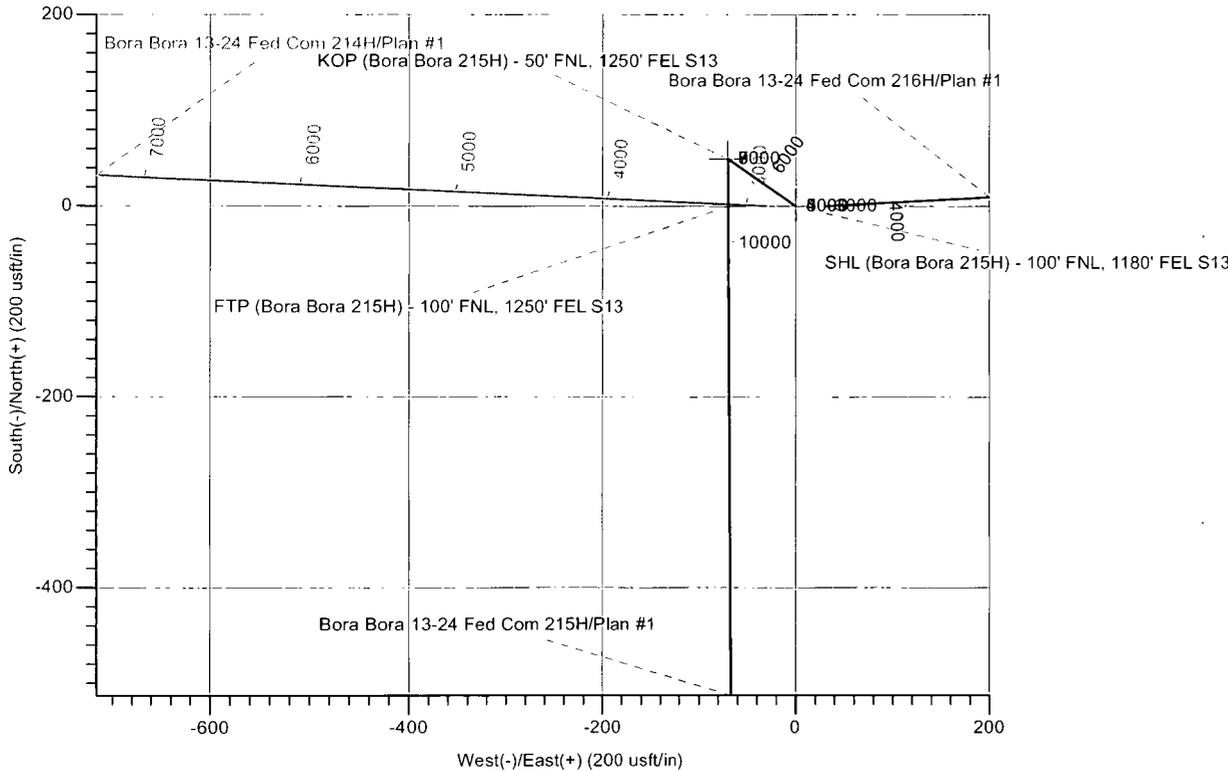


### DESIGN TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
FTP	9930.79	-0.35	-69.96	477557.15	728655.61	32° 18' 41.1158 N	103° 43' 37.2167 W
KOP	9697.04	49.50	-70.00	477607.00	728655.57	32° 18' 41.6091 N	103° 43' 37.2139 W
LTP	10240.24	-10355.60	-13.43	467201.90	728712.14	32° 16' 58.6433 N	103° 43' 37.2403 W
PBHL	10240.00	-10435.58	-12.98	467121.92	728712.59	32° 16' 57.8519 N	103° 43' 37.2403 W
SHL	0.00	0.00	0.00	477557.50	728725.57	32° 18' 41.1153 N	103° 43' 36.4015 W

### 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
5000.00	0.00	0.00	5000.00	0.00	0.00	0.00	0.00	0.00
5286.44	2.86	305.27	5286.32	4.13	-5.84	1.00	305.27	-4.16
6715.59	2.86	305.27	6713.68	45.37	-64.16	0.00	0.00	-45.71
7002.02	0.00	0.00	7000.00	49.50	-70.00	1.00	180.00	-49.88
9699.06	0.00	0.00	9697.04	49.50	-70.00	0.00	0.00	-49.88
10600.80	90.17	179.69	10270.00	-525.18	-66.87	10.00	179.69	524.81
20511.39	90.17	179.69	10240.00	-10435.58	-12.98	0.00	0.00	10435.36



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

Plan: Plan #1 (Bora Bora 13-24 Fed Com 215H/OH)  
 Bora Bora 13-24  
 Created By: Dustin Ault  
 Date: 9:49, November 20 2018  
 Approved: \_\_\_\_\_ Date: \_\_\_\_\_

# LEAM Drilling Services

## Planning Report - Geographic

<b>Database:</b>	EDM 5000.1 Multi User Db	<b>Local Co-ordinate Reference:</b>	Well Bora Bora 13-24 Fed Com 215H
<b>Company:</b>	Devon Energy	<b>TVD Reference:</b>	3507.0' GE + 23.5' KB @ 3530.50usft
<b>Project:</b>	Eddy County, NM (NAD-83)	<b>MD Reference:</b>	3507.0' GE + 23.5' KB @ 3530.50usft
<b>Site:</b>	Bora Bora 13-24	<b>North Reference:</b>	Grid
<b>Well:</b>	Bora Bora 13-24 Fed Com 215H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	OH		
<b>Design:</b>	Plan #1		

<b>Project</b>	Eddy County, NM (NAD-83)		
<b>Map System:</b>	US State Plane 1983	<b>System Datum:</b>	Mean Sea Level
<b>Geo Datum:</b>	North American Datum 1983		
<b>Map Zone:</b>	New Mexico Eastern Zone		

<b>Site</b>	Bora Bora 13-24
-------------	-----------------

<b>Site Position:</b>		<b>Northing:</b>	477,557.32 usft	<b>Latitude:</b>	32° 18' 41.1152 N
<b>From:</b>	Map	<b>Easting:</b>	728,695.61 usft	<b>Longitude:</b>	103° 43' 36.7506 W
<b>Position Uncertainty:</b>	0.00 usft	<b>Slot Radius:</b>	13-3/16 "	<b>Grid Convergence:</b>	0.32 °

<b>Well</b>	Bora Bora 13-24 Fed Com 215H
-------------	------------------------------

<b>Well Position</b>	<b>+N/-S</b>	0.00 usft	<b>Northing:</b>	477,557.50 usft	<b>Latitude:</b>	32° 18' 41.1153 N
	<b>+E/-W</b>	0.00 usft	<b>Easting:</b>	728,725.57 usft	<b>Longitude:</b>	103° 43' 36.4015 W
<b>Position Uncertainty</b>		0.00 usft	<b>Wellhead Elevation:</b>	0.00 usft	<b>Ground Level:</b>	3,507.00 usft

<b>Wellbore</b>	OH
-----------------	----

Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	HDGM	11/20/2018	6.87	60.07	48,033

<b>Design</b>	Plan #1
---------------	---------

<b>Audit Notes:</b>					
<b>Version:</b>		<b>Phase:</b>	PLAN	<b>Tie On Depth:</b>	0.00

Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (°)
	0.00	0.00	0.00	179.69

<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	
5,000.00	0.00	0.00	5,000.00	0.00	0.00	0.00	0.00	0.00	0.00	
5,286.44	2.86	305.27	5,286.32	4.13	-5.84	1.00	1.00	0.00	305.27	
6,715.59	2.86	305.27	6,713.68	45.37	-64.16	0.00	0.00	0.00	0.00	
7,002.02	0.00	0.00	7,000.00	49.50	-70.00	1.00	-1.00	0.00	180.00	
9,699.06	0.00	0.00	9,697.04	49.50	-70.00	0.00	0.00	0.00	0.00	
10,600.80	90.17	179.69	10,270.00	-525.18	-66.87	10.00	10.00	19.93	179.69	
20,511.39	90.17	179.69	10,240.00	-10,435.58	-12.98	0.00	0.00	0.00	0.00	PBHL (Bora Bora 215)

# LEAM Drilling Services

## Planning Report - Geographic

<b>Database:</b>	EDM 5000.1 Multi User Db	<b>Local Co-ordinate Reference:</b>	Well Bora Bora 13-24 Fed Com 215H
<b>Company:</b>	Devon Energy	<b>TVD Reference:</b>	3507.0' GE + 23.5' KB @ 3530.50usft
<b>Project:</b>	Eddy County, NM (NAD-83)	<b>MD Reference:</b>	3507.0' GE + 23.5' KB @ 3530.50usft
<b>Site:</b>	Bora Bora 13-24	<b>North Reference:</b>	Grid
<b>Well:</b>	Bora Bora 13-24 Fed Com 215H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	OH		
<b>Design:</b>	Plan #1		

Planned Survey										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude	
0.00	0.00	0.00	0.00	0.00	0.00	477,557.50	728,725.57	32° 18' 41.1153 N	103° 43' 36.4015 W	
<b>SHL (Bora Bora 215H) - 100' FNL, 1180' FEL S13</b>										
100.00	0.00	0.00	100.00	0.00	0.00	477,557.50	728,725.57	32° 18' 41.1153 N	103° 43' 36.4015 W	
200.00	0.00	0.00	200.00	0.00	0.00	477,557.50	728,725.57	32° 18' 41.1153 N	103° 43' 36.4015 W	
300.00	0.00	0.00	300.00	0.00	0.00	477,557.50	728,725.57	32° 18' 41.1153 N	103° 43' 36.4015 W	
400.00	0.00	0.00	400.00	0.00	0.00	477,557.50	728,725.57	32° 18' 41.1153 N	103° 43' 36.4015 W	
500.00	0.00	0.00	500.00	0.00	0.00	477,557.50	728,725.57	32° 18' 41.1153 N	103° 43' 36.4015 W	
600.00	0.00	0.00	600.00	0.00	0.00	477,557.50	728,725.57	32° 18' 41.1153 N	103° 43' 36.4015 W	
700.00	0.00	0.00	700.00	0.00	0.00	477,557.50	728,725.57	32° 18' 41.1153 N	103° 43' 36.4015 W	
800.00	0.00	0.00	800.00	0.00	0.00	477,557.50	728,725.57	32° 18' 41.1153 N	103° 43' 36.4015 W	
900.00	0.00	0.00	900.00	0.00	0.00	477,557.50	728,725.57	32° 18' 41.1153 N	103° 43' 36.4015 W	
1,000.00	0.00	0.00	1,000.00	0.00	0.00	477,557.50	728,725.57	32° 18' 41.1153 N	103° 43' 36.4015 W	
1,100.00	0.00	0.00	1,100.00	0.00	0.00	477,557.50	728,725.57	32° 18' 41.1153 N	103° 43' 36.4015 W	
1,200.00	0.00	0.00	1,200.00	0.00	0.00	477,557.50	728,725.57	32° 18' 41.1153 N	103° 43' 36.4015 W	
1,300.00	0.00	0.00	1,300.00	0.00	0.00	477,557.50	728,725.57	32° 18' 41.1153 N	103° 43' 36.4015 W	
1,400.00	0.00	0.00	1,400.00	0.00	0.00	477,557.50	728,725.57	32° 18' 41.1153 N	103° 43' 36.4015 W	
1,500.00	0.00	0.00	1,500.00	0.00	0.00	477,557.50	728,725.57	32° 18' 41.1153 N	103° 43' 36.4015 W	
1,600.00	0.00	0.00	1,600.00	0.00	0.00	477,557.50	728,725.57	32° 18' 41.1153 N	103° 43' 36.4015 W	
1,700.00	0.00	0.00	1,700.00	0.00	0.00	477,557.50	728,725.57	32° 18' 41.1153 N	103° 43' 36.4015 W	
1,800.00	0.00	0.00	1,800.00	0.00	0.00	477,557.50	728,725.57	32° 18' 41.1153 N	103° 43' 36.4015 W	
1,900.00	0.00	0.00	1,900.00	0.00	0.00	477,557.50	728,725.57	32° 18' 41.1153 N	103° 43' 36.4015 W	
2,000.00	0.00	0.00	2,000.00	0.00	0.00	477,557.50	728,725.57	32° 18' 41.1153 N	103° 43' 36.4015 W	
2,100.00	0.00	0.00	2,100.00	0.00	0.00	477,557.50	728,725.57	32° 18' 41.1153 N	103° 43' 36.4015 W	
2,200.00	0.00	0.00	2,200.00	0.00	0.00	477,557.50	728,725.57	32° 18' 41.1153 N	103° 43' 36.4015 W	
2,300.00	0.00	0.00	2,300.00	0.00	0.00	477,557.50	728,725.57	32° 18' 41.1153 N	103° 43' 36.4015 W	
2,400.00	0.00	0.00	2,400.00	0.00	0.00	477,557.50	728,725.57	32° 18' 41.1153 N	103° 43' 36.4015 W	
2,500.00	0.00	0.00	2,500.00	0.00	0.00	477,557.50	728,725.57	32° 18' 41.1153 N	103° 43' 36.4015 W	
2,600.00	0.00	0.00	2,600.00	0.00	0.00	477,557.50	728,725.57	32° 18' 41.1153 N	103° 43' 36.4015 W	
2,700.00	0.00	0.00	2,700.00	0.00	0.00	477,557.50	728,725.57	32° 18' 41.1153 N	103° 43' 36.4015 W	
2,800.00	0.00	0.00	2,800.00	0.00	0.00	477,557.50	728,725.57	32° 18' 41.1153 N	103° 43' 36.4015 W	
2,900.00	0.00	0.00	2,900.00	0.00	0.00	477,557.50	728,725.57	32° 18' 41.1153 N	103° 43' 36.4015 W	
3,000.00	0.00	0.00	3,000.00	0.00	0.00	477,557.50	728,725.57	32° 18' 41.1153 N	103° 43' 36.4015 W	
3,100.00	0.00	0.00	3,100.00	0.00	0.00	477,557.50	728,725.57	32° 18' 41.1153 N	103° 43' 36.4015 W	
3,200.00	0.00	0.00	3,200.00	0.00	0.00	477,557.50	728,725.57	32° 18' 41.1153 N	103° 43' 36.4015 W	
3,300.00	0.00	0.00	3,300.00	0.00	0.00	477,557.50	728,725.57	32° 18' 41.1153 N	103° 43' 36.4015 W	
3,400.00	0.00	0.00	3,400.00	0.00	0.00	477,557.50	728,725.57	32° 18' 41.1153 N	103° 43' 36.4015 W	
3,500.00	0.00	0.00	3,500.00	0.00	0.00	477,557.50	728,725.57	32° 18' 41.1153 N	103° 43' 36.4015 W	
3,600.00	0.00	0.00	3,600.00	0.00	0.00	477,557.50	728,725.57	32° 18' 41.1153 N	103° 43' 36.4015 W	
3,700.00	0.00	0.00	3,700.00	0.00	0.00	477,557.50	728,725.57	32° 18' 41.1153 N	103° 43' 36.4015 W	
3,800.00	0.00	0.00	3,800.00	0.00	0.00	477,557.50	728,725.57	32° 18' 41.1153 N	103° 43' 36.4015 W	
3,900.00	0.00	0.00	3,900.00	0.00	0.00	477,557.50	728,725.57	32° 18' 41.1153 N	103° 43' 36.4015 W	
4,000.00	0.00	0.00	4,000.00	0.00	0.00	477,557.50	728,725.57	32° 18' 41.1153 N	103° 43' 36.4015 W	
4,100.00	0.00	0.00	4,100.00	0.00	0.00	477,557.50	728,725.57	32° 18' 41.1153 N	103° 43' 36.4015 W	
4,200.00	0.00	0.00	4,200.00	0.00	0.00	477,557.50	728,725.57	32° 18' 41.1153 N	103° 43' 36.4015 W	
4,300.00	0.00	0.00	4,300.00	0.00	0.00	477,557.50	728,725.57	32° 18' 41.1153 N	103° 43' 36.4015 W	
4,400.00	0.00	0.00	4,400.00	0.00	0.00	477,557.50	728,725.57	32° 18' 41.1153 N	103° 43' 36.4015 W	
4,500.00	0.00	0.00	4,500.00	0.00	0.00	477,557.50	728,725.57	32° 18' 41.1153 N	103° 43' 36.4015 W	
4,600.00	0.00	0.00	4,600.00	0.00	0.00	477,557.50	728,725.57	32° 18' 41.1153 N	103° 43' 36.4015 W	
4,700.00	0.00	0.00	4,700.00	0.00	0.00	477,557.50	728,725.57	32° 18' 41.1153 N	103° 43' 36.4015 W	
4,800.00	0.00	0.00	4,800.00	0.00	0.00	477,557.50	728,725.57	32° 18' 41.1153 N	103° 43' 36.4015 W	
4,900.00	0.00	0.00	4,900.00	0.00	0.00	477,557.50	728,725.57	32° 18' 41.1153 N	103° 43' 36.4015 W	
5,000.00	0.00	0.00	5,000.00	0.00	0.00	477,557.50	728,725.57	32° 18' 41.1153 N	103° 43' 36.4015 W	
5,100.00	1.00	305.27	5,100.00	0.50	-0.71	477,558.00	728,724.85	32° 18' 41.1203 N	103° 43' 36.4098 W	
5,200.00	2.00	305.27	5,199.96	2.02	-2.85	477,559.52	728,722.72	32° 18' 41.1354 N	103° 43' 36.4346 W	

# LEAM Drilling Services

## Planning Report - Geographic

<b>Database:</b>	EDM 5000.1 Multi User Db	<b>Local Co-ordinate Reference:</b>	Well Bora Bora 13-24 Fed Com 215H
<b>Company:</b>	Devon Energy	<b>TVD Reference:</b>	3507.0' GE + 23.5' KB @ 3530.50usft
<b>Project:</b>	Eddy County, NM (NAD-83)	<b>MD Reference:</b>	3507.0' GE + 23.5' KB @ 3530.50usft
<b>Site:</b>	Bora Bora 13-24	<b>North Reference:</b>	Grid
<b>Well:</b>	Bora Bora 13-24 Fed Com 215H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	OH		
<b>Design:</b>	Plan #1		

Planned Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude
5,286.44	2.86	305.27	5,286.32	4.13	-5.84	477,561.63	728,719.72	32° 18' 41.1565 N	103° 43' 36.4693 W
5,300.00	2.86	305.27	5,299.86	4.52	-6.40	477,562.03	728,719.17	32° 18' 41.1604 N	103° 43' 36.4757 W
5,400.00	2.86	305.27	5,399.74	7.41	-10.48	477,564.91	728,715.09	32° 18' 41.1892 N	103° 43' 36.5231 W
5,500.00	2.86	305.27	5,499.61	10.29	-14.56	477,567.80	728,711.01	32° 18' 41.2180 N	103° 43' 36.5705 W
5,600.00	2.86	305.27	5,599.49	13.18	-18.64	477,570.68	728,706.93	32° 18' 41.2468 N	103° 43' 36.6178 W
5,700.00	2.86	305.27	5,699.36	16.07	-22.72	477,573.57	728,702.85	32° 18' 41.2756 N	103° 43' 36.6652 W
5,800.00	2.86	305.27	5,799.24	18.95	-26.80	477,576.45	728,698.77	32° 18' 41.3043 N	103° 43' 36.7125 W
5,900.00	2.86	305.27	5,899.11	21.84	-30.88	477,579.34	728,694.69	32° 18' 41.3331 N	103° 43' 36.7599 W
6,000.00	2.86	305.27	5,998.99	24.72	-34.96	477,582.22	728,690.61	32° 18' 41.3619 N	103° 43' 36.8072 W
6,100.00	2.86	305.27	6,098.86	27.61	-39.04	477,585.11	728,686.53	32° 18' 41.3907 N	103° 43' 36.8546 W
6,200.00	2.86	305.27	6,198.74	30.49	-43.12	477,587.99	728,682.45	32° 18' 41.4195 N	103° 43' 36.9019 W
6,300.00	2.86	305.27	6,298.61	33.38	-47.20	477,590.88	728,678.37	32° 18' 41.4482 N	103° 43' 36.9493 W
6,400.00	2.86	305.27	6,398.49	36.26	-51.28	477,593.76	728,674.29	32° 18' 41.4770 N	103° 43' 36.9966 W
6,500.00	2.86	305.27	6,498.36	39.15	-55.36	477,596.65	728,670.21	32° 18' 41.5058 N	103° 43' 37.0440 W
6,600.00	2.86	305.27	6,598.24	42.03	-59.44	477,599.53	728,666.13	32° 18' 41.5346 N	103° 43' 37.0913 W
6,700.00	2.86	305.27	6,698.11	44.92	-63.52	477,602.42	728,662.05	32° 18' 41.5633 N	103° 43' 37.1387 W
6,715.59	2.86	305.27	6,713.68	45.37	-64.16	477,602.87	728,661.41	32° 18' 41.5678 N	103° 43' 37.1461 W
6,800.00	2.02	305.27	6,798.02	47.44	-67.09	477,604.94	728,658.47	32° 18' 41.5885 N	103° 43' 37.1801 W
6,900.00	1.02	305.27	6,897.98	48.98	-69.26	477,606.48	728,656.31	32° 18' 41.6038 N	103° 43' 37.2053 W
7,002.02	0.00	0.00	7,000.00	49.50	-70.00	477,607.00	728,655.57	32° 18' 41.6091 N	103° 43' 37.2139 W
7,100.00	0.00	0.00	7,097.98	49.50	-70.00	477,607.00	728,655.57	32° 18' 41.6091 N	103° 43' 37.2139 W
7,200.00	0.00	0.00	7,197.98	49.50	-70.00	477,607.00	728,655.57	32° 18' 41.6091 N	103° 43' 37.2139 W
7,300.00	0.00	0.00	7,297.98	49.50	-70.00	477,607.00	728,655.57	32° 18' 41.6091 N	103° 43' 37.2139 W
7,400.00	0.00	0.00	7,397.98	49.50	-70.00	477,607.00	728,655.57	32° 18' 41.6091 N	103° 43' 37.2139 W
7,500.00	0.00	0.00	7,497.98	49.50	-70.00	477,607.00	728,655.57	32° 18' 41.6091 N	103° 43' 37.2139 W
7,600.00	0.00	0.00	7,597.98	49.50	-70.00	477,607.00	728,655.57	32° 18' 41.6091 N	103° 43' 37.2139 W
7,700.00	0.00	0.00	7,697.98	49.50	-70.00	477,607.00	728,655.57	32° 18' 41.6091 N	103° 43' 37.2139 W
7,800.00	0.00	0.00	7,797.98	49.50	-70.00	477,607.00	728,655.57	32° 18' 41.6091 N	103° 43' 37.2139 W
7,900.00	0.00	0.00	7,897.98	49.50	-70.00	477,607.00	728,655.57	32° 18' 41.6091 N	103° 43' 37.2139 W
8,000.00	0.00	0.00	7,997.98	49.50	-70.00	477,607.00	728,655.57	32° 18' 41.6091 N	103° 43' 37.2139 W
8,100.00	0.00	0.00	8,097.98	49.50	-70.00	477,607.00	728,655.57	32° 18' 41.6091 N	103° 43' 37.2139 W
8,200.00	0.00	0.00	8,197.98	49.50	-70.00	477,607.00	728,655.57	32° 18' 41.6091 N	103° 43' 37.2139 W
8,300.00	0.00	0.00	8,297.98	49.50	-70.00	477,607.00	728,655.57	32° 18' 41.6091 N	103° 43' 37.2139 W
8,400.00	0.00	0.00	8,397.98	49.50	-70.00	477,607.00	728,655.57	32° 18' 41.6091 N	103° 43' 37.2139 W
8,500.00	0.00	0.00	8,497.98	49.50	-70.00	477,607.00	728,655.57	32° 18' 41.6091 N	103° 43' 37.2139 W
8,600.00	0.00	0.00	8,597.98	49.50	-70.00	477,607.00	728,655.57	32° 18' 41.6091 N	103° 43' 37.2139 W
8,700.00	0.00	0.00	8,697.98	49.50	-70.00	477,607.00	728,655.57	32° 18' 41.6091 N	103° 43' 37.2139 W
8,800.00	0.00	0.00	8,797.98	49.50	-70.00	477,607.00	728,655.57	32° 18' 41.6091 N	103° 43' 37.2139 W
8,900.00	0.00	0.00	8,897.98	49.50	-70.00	477,607.00	728,655.57	32° 18' 41.6091 N	103° 43' 37.2139 W
9,000.00	0.00	0.00	8,997.98	49.50	-70.00	477,607.00	728,655.57	32° 18' 41.6091 N	103° 43' 37.2139 W
9,100.00	0.00	0.00	9,097.98	49.50	-70.00	477,607.00	728,655.57	32° 18' 41.6091 N	103° 43' 37.2139 W
9,200.00	0.00	0.00	9,197.98	49.50	-70.00	477,607.00	728,655.57	32° 18' 41.6091 N	103° 43' 37.2139 W
9,300.00	0.00	0.00	9,297.98	49.50	-70.00	477,607.00	728,655.57	32° 18' 41.6091 N	103° 43' 37.2139 W
9,400.00	0.00	0.00	9,397.98	49.50	-70.00	477,607.00	728,655.57	32° 18' 41.6091 N	103° 43' 37.2139 W
9,500.00	0.00	0.00	9,497.98	49.50	-70.00	477,607.00	728,655.57	32° 18' 41.6091 N	103° 43' 37.2139 W
9,600.00	0.00	0.00	9,597.98	49.50	-70.00	477,607.00	728,655.57	32° 18' 41.6091 N	103° 43' 37.2139 W
9,699.06	0.00	0.00	9,697.04	49.50	-70.00	477,607.00	728,655.57	32° 18' 41.6091 N	103° 43' 37.2139 W
<b>KOP (Bora Bora 215H) - 50' FNL, 1250' FEL S13</b>									
9,750.00	5.09	179.69	9,747.91	47.24	-69.99	477,604.74	728,655.58	32° 18' 41.5867 N	103° 43' 37.2139 W
9,800.00	10.09	179.69	9,797.45	40.63	-69.95	477,598.13	728,655.61	32° 18' 41.5213 N	103° 43' 37.2139 W
9,850.00	15.09	179.69	9,846.24	29.73	-69.89	477,587.23	728,655.67	32° 18' 41.4135 N	103° 43' 37.2139 W
9,900.00	20.09	179.69	9,893.88	14.63	-69.81	477,572.13	728,655.76	32° 18' 41.2640 N	103° 43' 37.2140 W
9,939.84	24.08	179.69	9,930.79	-0.35	-69.73	477,557.15	728,655.84	32° 18' 41.1157 N	103° 43' 37.2140 W
<b>FTP (Bora Bora 215H) - 100' FNL, 1250' FEL S13</b>									

# LEAM Drilling Services

## Planning Report - Geographic

<b>Database:</b>	EDM 5000.1 Multi User Db	<b>Local Co-ordinate Reference:</b>	Well Bora Bora 13-24 Fed Com 215H
<b>Company:</b>	Devon Energy	<b>TVD Reference:</b>	3507.0' GE + 23.5' KB @ 3530.50usft
<b>Project:</b>	Eddy County, NM (NAD-83)	<b>MD Reference:</b>	3507.0' GE + 23.5' KB @ 3530.50usft
<b>Site:</b>	Bora Bora 13-24	<b>North Reference:</b>	Grid
<b>Well:</b>	Bora Bora 13-24 Fed Com 215H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	OH		
<b>Design:</b>	Plan #1		

Planned Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude
9,950.00	25.09	179.69	9,940.03	-4.58	-69.71	477,552.92	728,655.86	32° 18' 41.0739 N	103° 43' 37.2140 W
10,000.00	30.09	179.69	9,984.33	-27.73	-69.58	477,529.77	728,655.99	32° 18' 40.8448 N	103° 43' 37.2141 W
10,050.00	35.09	179.69	10,026.44	-54.65	-69.43	477,502.85	728,656.13	32° 18' 40.5784 N	103° 43' 37.2142 W
10,100.00	40.09	179.69	10,066.05	-85.15	-69.27	477,472.35	728,656.30	32° 18' 40.2766 N	103° 43' 37.2142 W
10,150.00	45.09	179.69	10,102.84	-118.98	-69.08	477,438.53	728,656.48	32° 18' 39.9419 N	103° 43' 37.2143 W
10,200.00	50.09	179.69	10,136.55	-155.88	-68.88	477,401.62	728,656.68	32° 18' 39.5767 N	103° 43' 37.2144 W
10,250.00	55.09	179.69	10,166.92	-195.59	-68.67	477,361.91	728,656.90	32° 18' 39.1838 N	103° 43' 37.2145 W
10,300.00	60.09	179.69	10,193.70	-237.79	-68.44	477,319.72	728,657.13	32° 18' 38.7662 N	103° 43' 37.2146 W
10,350.00	65.09	179.69	10,216.71	-282.16	-68.20	477,275.34	728,657.37	32° 18' 38.3271 N	103° 43' 37.2147 W
10,400.00	70.09	179.69	10,235.76	-328.37	-67.95	477,229.13	728,657.62	32° 18' 37.8698 N	103° 43' 37.2148 W
10,450.00	75.09	179.69	10,250.72	-376.06	-67.69	477,181.44	728,657.88	32° 18' 37.3978 N	103° 43' 37.2150 W
10,500.00	80.09	179.69	10,261.46	-424.88	-67.42	477,132.62	728,658.15	32° 18' 36.9147 N	103° 43' 37.2151 W
10,550.00	85.09	179.69	10,267.90	-474.45	-67.15	477,083.05	728,658.42	32° 18' 36.4243 N	103° 43' 37.2152 W
10,600.80	90.17	179.69	10,270.00	-525.18	-66.87	477,032.32	728,658.69	32° 18' 35.9222 N	103° 43' 37.2154 W
10,700.00	90.17	179.69	10,269.70	-624.38	-66.34	476,933.12	728,659.23	32° 18' 34.9405 N	103° 43' 37.2156 W
10,800.00	90.17	179.69	10,269.39	-724.38	-65.79	476,833.12	728,659.77	32° 18' 33.9510 N	103° 43' 37.2159 W
10,900.00	90.17	179.69	10,269.09	-824.38	-65.25	476,733.12	728,660.32	32° 18' 32.9614 N	103° 43' 37.2161 W
11,000.00	90.17	179.69	10,268.79	-924.38	-64.70	476,633.12	728,660.86	32° 18' 31.9719 N	103° 43' 37.2164 W
11,100.00	90.17	179.69	10,268.48	-1,024.38	-64.16	476,533.13	728,661.41	32° 18' 30.9823 N	103° 43' 37.2166 W
11,200.00	90.17	179.69	10,268.18	-1,124.37	-63.62	476,433.13	728,661.95	32° 18' 29.9928 N	103° 43' 37.2169 W
11,300.00	90.17	179.69	10,267.88	-1,224.37	-63.07	476,333.13	728,662.49	32° 18' 29.0032 N	103° 43' 37.2171 W
11,400.00	90.17	179.69	10,267.58	-1,324.37	-62.53	476,233.13	728,663.04	32° 18' 28.0137 N	103° 43' 37.2174 W
11,500.00	90.17	179.69	10,267.27	-1,424.37	-61.98	476,133.13	728,663.58	32° 18' 27.0241 N	103° 43' 37.2176 W
11,600.00	90.17	179.69	10,266.97	-1,524.37	-61.44	476,033.13	728,664.13	32° 18' 26.0346 N	103° 43' 37.2179 W
11,700.00	90.17	179.69	10,266.67	-1,624.36	-60.90	475,933.14	728,664.67	32° 18' 25.0450 N	103° 43' 37.2181 W
11,800.00	90.17	179.69	10,266.37	-1,724.36	-60.35	475,833.14	728,665.21	32° 18' 24.0555 N	103° 43' 37.2184 W
11,900.00	90.17	179.69	10,266.06	-1,824.36	-59.81	475,733.14	728,665.76	32° 18' 23.0659 N	103° 43' 37.2187 W
12,000.00	90.17	179.69	10,265.76	-1,924.36	-59.27	475,633.14	728,666.30	32° 18' 22.0764 N	103° 43' 37.2189 W
12,100.00	90.17	179.69	10,265.46	-2,024.36	-58.72	475,533.14	728,666.84	32° 18' 21.0868 N	103° 43' 37.2192 W
12,200.00	90.17	179.69	10,265.16	-2,124.35	-58.18	475,433.15	728,667.39	32° 18' 20.0973 N	103° 43' 37.2194 W
12,300.00	90.17	179.69	10,264.85	-2,224.35	-57.63	475,333.15	728,667.93	32° 18' 19.1077 N	103° 43' 37.2197 W
12,400.00	90.17	179.69	10,264.55	-2,324.35	-57.09	475,233.15	728,668.48	32° 18' 18.1182 N	103° 43' 37.2199 W
12,500.00	90.17	179.69	10,264.25	-2,424.35	-56.55	475,133.15	728,669.02	32° 18' 17.1286 N	103° 43' 37.2202 W
12,600.00	90.17	179.69	10,263.94	-2,524.35	-56.00	475,033.15	728,669.56	32° 18' 16.1391 N	103° 43' 37.2204 W
12,700.00	90.17	179.69	10,263.64	-2,624.34	-55.46	474,933.16	728,670.11	32° 18' 15.1495 N	103° 43' 37.2207 W
12,800.00	90.17	179.69	10,263.34	-2,724.34	-54.92	474,833.16	728,670.65	32° 18' 14.1600 N	103° 43' 37.2209 W
12,900.00	90.17	179.69	10,263.04	-2,824.34	-54.37	474,733.16	728,671.19	32° 18' 13.1704 N	103° 43' 37.2212 W
13,000.00	90.17	179.69	10,262.73	-2,924.34	-53.83	474,633.16	728,671.74	32° 18' 12.1809 N	103° 43' 37.2214 W
13,100.00	90.17	179.69	10,262.43	-3,024.34	-53.28	474,533.16	728,672.28	32° 18' 11.1913 N	103° 43' 37.2217 W
13,200.00	90.17	179.69	10,262.13	-3,124.33	-52.74	474,433.17	728,672.83	32° 18' 10.2018 N	103° 43' 37.2219 W
13,300.00	90.17	179.69	10,261.83	-3,224.33	-52.20	474,333.17	728,673.37	32° 18' 9.2122 N	103° 43' 37.2222 W
13,400.00	90.17	179.69	10,261.52	-3,324.33	-51.65	474,233.17	728,673.91	32° 18' 8.2227 N	103° 43' 37.2225 W
13,500.00	90.17	179.69	10,261.22	-3,424.33	-51.11	474,133.17	728,674.46	32° 18' 7.2331 N	103° 43' 37.2227 W
13,600.00	90.17	179.69	10,260.92	-3,524.33	-50.56	474,033.17	728,675.00	32° 18' 6.2436 N	103° 43' 37.2230 W
13,700.00	90.17	179.69	10,260.62	-3,624.33	-50.02	473,933.18	728,675.55	32° 18' 5.2540 N	103° 43' 37.2232 W
13,800.00	90.17	179.69	10,260.31	-3,724.32	-49.48	473,833.18	728,676.09	32° 18' 4.2645 N	103° 43' 37.2235 W
13,900.00	90.17	179.69	10,260.01	-3,824.32	-48.93	473,733.18	728,676.63	32° 18' 3.2749 N	103° 43' 37.2237 W
14,000.00	90.17	179.69	10,259.71	-3,924.32	-48.39	473,633.18	728,677.18	32° 18' 2.2854 N	103° 43' 37.2240 W
14,100.00	90.17	179.69	10,259.40	-4,024.32	-47.85	473,533.18	728,677.72	32° 18' 1.2958 N	103° 43' 37.2242 W
14,200.00	90.17	179.69	10,259.10	-4,124.32	-47.30	473,433.19	728,678.26	32° 18' 0.3063 N	103° 43' 37.2245 W
14,300.00	90.17	179.69	10,258.80	-4,224.31	-46.76	473,333.19	728,678.81	32° 17' 59.3167 N	103° 43' 37.2247 W
14,400.00	90.17	179.69	10,258.50	-4,324.31	-46.21	473,233.19	728,679.35	32° 17' 58.3272 N	103° 43' 37.2250 W
14,500.00	90.17	179.69	10,258.19	-4,424.31	-45.67	473,133.19	728,679.90	32° 17' 57.3376 N	103° 43' 37.2252 W
14,600.00	90.17	179.69	10,257.89	-4,524.31	-45.13	473,033.19	728,680.44	32° 17' 56.3481 N	103° 43' 37.2255 W
14,700.00	90.17	179.69	10,257.59	-4,624.31	-44.58	472,933.19	728,680.98	32° 17' 55.3585 N	103° 43' 37.2257 W

# LEAM Drilling Services

## Planning Report - Geographic

<b>Database:</b>	EDM 5000.1 Multi User Db	<b>Local Co-ordinate Reference:</b>	Well Bora Bora 13-24 Fed Com 215H
<b>Company:</b>	Devon Energy	<b>TVD Reference:</b>	3507.0' GE + 23.5' KB @ 3530.50usft
<b>Project:</b>	Eddy County, NM (NAD-83)	<b>MD Reference:</b>	3507.0' GE + 23.5' KB @ 3530.50usft
<b>Site:</b>	Bora Bora 13-24	<b>North Reference:</b>	Grid
<b>Well:</b>	Bora Bora 13-24 Fed Com 215H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	OH		
<b>Design:</b>	Plan #1		

Planned Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude
14,800.00	90.17	179.69	10,257.29	-4,724.30	-44.04	472,833.20	728,681.53	32° 17' 54.3690 N	103° 43' 37.2260 W
14,900.00	90.17	179.69	10,256.98	-4,824.30	-43.50	472,733.20	728,682.07	32° 17' 53.3794 N	103° 43' 37.2262 W
15,000.00	90.17	179.69	10,256.68	-4,924.30	-42.95	472,633.20	728,682.61	32° 17' 52.3899 N	103° 43' 37.2265 W
15,100.00	90.17	179.69	10,256.38	-5,024.30	-42.41	472,533.20	728,683.16	32° 17' 51.4003 N	103° 43' 37.2267 W
15,200.00	90.17	179.69	10,256.08	-5,124.30	-41.86	472,433.20	728,683.70	32° 17' 50.4108 N	103° 43' 37.2270 W
15,300.00	90.17	179.69	10,255.77	-5,224.29	-41.32	472,333.21	728,684.25	32° 17' 49.4212 N	103° 43' 37.2272 W
15,400.00	90.17	179.69	10,255.47	-5,324.29	-40.78	472,233.21	728,684.79	32° 17' 48.4317 N	103° 43' 37.2275 W
15,500.00	90.17	179.69	10,255.17	-5,424.29	-40.23	472,133.21	728,685.33	32° 17' 47.4421 N	103° 43' 37.2278 W
15,600.00	90.17	179.69	10,254.86	-5,524.29	-39.69	472,033.21	728,685.88	32° 17' 46.4526 N	103° 43' 37.2280 W
15,700.00	90.17	179.69	10,254.56	-5,624.29	-39.14	471,933.21	728,686.42	32° 17' 45.4630 N	103° 43' 37.2283 W
15,800.00	90.17	179.69	10,254.26	-5,724.28	-38.60	471,833.22	728,686.97	32° 17' 44.4735 N	103° 43' 37.2285 W
15,900.00	90.17	179.69	10,253.96	-5,824.28	-38.06	471,733.22	728,687.51	32° 17' 43.4839 N	103° 43' 37.2288 W
16,000.00	90.17	179.69	10,253.65	-5,924.28	-37.51	471,633.22	728,688.05	32° 17' 42.4944 N	103° 43' 37.2290 W
16,100.00	90.17	179.69	10,253.35	-6,024.28	-36.97	471,533.22	728,688.60	32° 17' 41.5048 N	103° 43' 37.2293 W
16,200.00	90.17	179.69	10,253.05	-6,124.28	-36.43	471,433.22	728,689.14	32° 17' 40.5153 N	103° 43' 37.2295 W
16,300.00	90.17	179.69	10,252.75	-6,224.27	-35.88	471,333.23	728,689.68	32° 17' 39.5257 N	103° 43' 37.2298 W
16,400.00	90.17	179.69	10,252.44	-6,324.27	-35.34	471,233.23	728,690.23	32° 17' 38.5362 N	103° 43' 37.2300 W
16,500.00	90.17	179.69	10,252.14	-6,424.27	-34.79	471,133.23	728,690.77	32° 17' 37.5466 N	103° 43' 37.2303 W
16,600.00	90.17	179.69	10,251.84	-6,524.27	-34.25	471,033.23	728,691.32	32° 17' 36.5571 N	103° 43' 37.2305 W
16,700.00	90.17	179.69	10,251.54	-6,624.27	-33.71	470,933.23	728,691.86	32° 17' 35.5675 N	103° 43' 37.2308 W
16,800.00	90.17	179.69	10,251.23	-6,724.27	-33.16	470,833.24	728,692.40	32° 17' 34.5780 N	103° 43' 37.2310 W
16,900.00	90.17	179.69	10,250.93	-6,824.26	-32.62	470,733.24	728,692.95	32° 17' 33.5884 N	103° 43' 37.2313 W
17,000.00	90.17	179.69	10,250.63	-6,924.26	-32.08	470,633.24	728,693.49	32° 17' 32.5989 N	103° 43' 37.2315 W
17,100.00	90.17	179.69	10,250.33	-7,024.26	-31.53	470,533.24	728,694.03	32° 17' 31.6093 N	103° 43' 37.2318 W
17,200.00	90.17	179.69	10,250.02	-7,124.26	-30.99	470,433.24	728,694.58	32° 17' 30.6198 N	103° 43' 37.2320 W
17,300.00	90.17	179.69	10,249.72	-7,224.26	-30.44	470,333.25	728,695.12	32° 17' 29.6302 N	103° 43' 37.2323 W
17,400.00	90.17	179.69	10,249.42	-7,324.25	-29.90	470,233.25	728,695.67	32° 17' 28.6407 N	103° 43' 37.2325 W
17,500.00	90.17	179.69	10,249.11	-7,424.25	-29.36	470,133.25	728,696.21	32° 17' 27.6511 N	103° 43' 37.2328 W
17,600.00	90.17	179.69	10,248.81	-7,524.25	-28.81	470,033.25	728,696.75	32° 17' 26.6616 N	103° 43' 37.2330 W
17,700.00	90.17	179.69	10,248.51	-7,624.25	-28.27	469,933.25	728,697.30	32° 17' 25.6720 N	103° 43' 37.2333 W
17,800.00	90.17	179.69	10,248.21	-7,724.25	-27.72	469,833.25	728,697.84	32° 17' 24.6825 N	103° 43' 37.2335 W
17,900.00	90.17	179.69	10,247.90	-7,824.24	-27.18	469,733.26	728,698.39	32° 17' 23.6929 N	103° 43' 37.2338 W
18,000.00	90.17	179.69	10,247.60	-7,924.24	-26.64	469,633.26	728,698.93	32° 17' 22.7034 N	103° 43' 37.2340 W
18,100.00	90.17	179.69	10,247.30	-8,024.24	-26.09	469,533.26	728,699.47	32° 17' 21.7138 N	103° 43' 37.2343 W
18,200.00	90.17	179.69	10,247.00	-8,124.24	-25.55	469,433.26	728,700.02	32° 17' 20.7242 N	103° 43' 37.2345 W
18,300.00	90.17	179.69	10,246.69	-8,224.24	-25.01	469,333.26	728,700.56	32° 17' 19.7347 N	103° 43' 37.2348 W
18,400.00	90.17	179.69	10,246.39	-8,324.23	-24.46	469,233.27	728,701.10	32° 17' 18.7451 N	103° 43' 37.2350 W
18,500.00	90.17	179.69	10,246.09	-8,424.23	-23.92	469,133.27	728,701.65	32° 17' 17.7556 N	103° 43' 37.2353 W
18,600.00	90.17	179.69	10,245.79	-8,524.23	-23.37	469,033.27	728,702.19	32° 17' 16.7660 N	103° 43' 37.2355 W
18,700.00	90.17	179.69	10,245.48	-8,624.23	-22.83	468,933.27	728,702.74	32° 17' 15.7765 N	103° 43' 37.2358 W
18,800.00	90.17	179.69	10,245.18	-8,724.23	-22.29	468,833.27	728,703.28	32° 17' 14.7869 N	103° 43' 37.2360 W
18,900.00	90.17	179.69	10,244.88	-8,824.22	-21.74	468,733.28	728,703.82	32° 17' 13.7974 N	103° 43' 37.2363 W
19,000.00	90.17	179.69	10,244.57	-8,924.22	-21.20	468,633.28	728,704.37	32° 17' 12.8078 N	103° 43' 37.2365 W
19,100.00	90.17	179.69	10,244.27	-9,024.22	-20.66	468,533.28	728,704.91	32° 17' 11.8183 N	103° 43' 37.2368 W
19,200.00	90.17	179.69	10,243.97	-9,124.22	-20.11	468,433.28	728,705.45	32° 17' 10.8287 N	103° 43' 37.2370 W
19,300.00	90.17	179.69	10,243.67	-9,224.22	-19.57	468,333.28	728,706.00	32° 17' 9.8392 N	103° 43' 37.2373 W
19,400.00	90.17	179.69	10,243.36	-9,324.21	-19.02	468,233.29	728,706.54	32° 17' 8.8496 N	103° 43' 37.2375 W
19,500.00	90.17	179.69	10,243.06	-9,424.21	-18.48	468,133.29	728,707.09	32° 17' 7.8601 N	103° 43' 37.2378 W
19,600.00	90.17	179.69	10,242.76	-9,524.21	-17.94	468,033.29	728,707.63	32° 17' 6.8705 N	103° 43' 37.2380 W
19,700.00	90.17	179.69	10,242.46	-9,624.21	-17.39	467,933.29	728,708.17	32° 17' 5.8810 N	103° 43' 37.2383 W
19,800.00	90.17	179.69	10,242.15	-9,724.21	-16.85	467,833.29	728,708.72	32° 17' 4.8914 N	103° 43' 37.2385 W
19,900.00	90.17	179.69	10,241.85	-9,824.21	-16.30	467,733.30	728,709.26	32° 17' 3.9019 N	103° 43' 37.2388 W
20,000.00	90.17	179.69	10,241.55	-9,924.20	-15.76	467,633.30	728,709.81	32° 17' 2.9123 N	103° 43' 37.2390 W
20,100.00	90.17	179.69	10,241.25	-10,024.20	-15.22	467,533.30	728,710.35	32° 17' 1.9228 N	103° 43' 37.2393 W
20,200.00	90.17	179.69	10,240.94	-10,124.20	-14.67	467,433.30	728,710.89	32° 17' 0.9332 N	103° 43' 37.2395 W

# LEAM Drilling Services

## Planning Report - Geographic

<b>Database:</b>	EDM 5000.1 Multi User Db	<b>Local Co-ordinate Reference:</b>	Well Bora Bora 13-24 Fed Com 215H
<b>Company:</b>	Devon Energy	<b>TVD Reference:</b>	3507.0' GE + 23.5' KB @ 3530.50usft
<b>Project:</b>	Eddy County, NM (NAD-83)	<b>MD Reference:</b>	3507.0' GE + 23.5' KB @ 3530.50usft
<b>Site:</b>	Bora Bora 13-24	<b>North Reference:</b>	Grid
<b>Well:</b>	Bora Bora 13-24 Fed Com 215H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	OH		
<b>Design:</b>	Plan #1		

Planned Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude
20,300.00	90.17	179.69	10,240.64	-10,224.20	-14.13	467,333.30	728,711.44	32° 16' 59.9436 N	103° 43' 37.2398 W
20,400.00	90.17	179.69	10,240.34	-10,324.20	-13.59	467,233.31	728,711.98	32° 16' 58.9541 N	103° 43' 37.2400 W
20,431.41	90.17	179.69	10,240.24	-10,355.60	-13.41	467,201.90	728,712.15	32° 16' 58.6433 N	103° 43' 37.2401 W
<b>LTP (Bora Bora 215H) - 100' FSL, 1250' FEL S24</b>									
20,500.00	90.17	179.69	10,240.03	-10,424.19	-13.04	467,133.31	728,712.52	32° 16' 57.9645 N	103° 43' 37.2403 W
20,511.39	90.17	179.69	10,240.00	-10,435.58	-12.98	467,121.92	728,712.59	32° 16' 57.8519 N	103° 43' 37.2403 W
<b>PBHL (Bora Bora 215H) - 20' FSL, 1250' FEL S24</b>									

Design Targets									
Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude
SHL (Bora Bora 215H) - - hit/miss target - Shape - Point	0.00	0.00	0.00	0.00	0.00	477,557.50	728,725.57	32° 18' 41.1153 N	103° 43' 36.4015 W
KOP (Bora Bora 215H) - - plan hits target center - Point	0.00	0.00	9,697.04	49.50	-70.00	477,607.00	728,655.57	32° 18' 41.6091 N	103° 43' 37.2139 W
FTP (Bora Bora 215H) - - plan misses target center by 0.23usft at 9939.84usft MD (9930.79 TVD, -0.35 N, -69.73 E) - Point	0.00	0.00	9,930.79	-0.35	-69.96	477,557.15	728,655.61	32° 18' 41.1158 N	103° 43' 37.2167 W
PBHL (Bora Bora 215H) - plan hits target center - Point	0.00	0.00	10,240.00	-10,435.58	-12.98	467,121.92	728,712.59	32° 16' 57.8519 N	103° 43' 37.2403 W
LTP (Bora Bora 215H) - - plan misses target center by 0.02usft at 20431.41usft MD (10240.24 TVD, -10355.60 N, -13.41 E) - Point	0.00	0.00	10,240.24	-10,355.60	-13.43	467,201.90	728,712.14	32° 16' 58.6433 N	103° 43' 37.2403 W

# **Devon Energy**

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

**Bora Bora 13-24**

**Bora Bora 13-24 Fed Com 215H**

**OH**

**Plan #1**

## **Anticollision Report**

**20 November, 2018**

# LEAM Drilling Services

## Anticollision Report

<b>Company:</b>	Devon Energy	<b>Local Co-ordinate Reference:</b>	Well Bora Bora 13-24 Fed Com 215H
<b>Project:</b>	Eddy County, NM (NAD-83)	<b>TVD Reference:</b>	3507.0' GE + 23.5' KB @ 3530.50usft
<b>Reference Site:</b>	Bora Bora 13-24	<b>MD Reference:</b>	3507.0' GE + 23.5' KB @ 3530.50usft
<b>Site Error:</b>	0.00 usft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	Bora Bora 13-24 Fed Com 215H	<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 #1	<b>Offset TVD Reference:</b>	Offset Datum

<b>Reference</b>		Plan #1	
<b>Filter type:</b>	NO GLOBAL FILTER: Using user defined selection & filtering criteria		
<b>Interpolation Method:</b>	MD Interval 100.00usft	<b>Error Model:</b>	ISCWSA
<b>Depth Range:</b>	Unlimited	<b>Scan Method:</b>	Closest Approach 3D
<b>Results Limited by:</b>	Maximum center-center distance of 2,174.65 usft	<b>Error Surface:</b>	Elliptical Conic
<b>Warning Levels Evaluated at:</b>	2.00 Sigma	<b>Casing Method:</b>	Not applied

<b>Survey Tool Program</b>		<b>Date</b> 11/20/2018	
<b>From (usft)</b>	<b>To (usft)</b>	<b>Survey (Wellbore)</b>	<b>Tool Name</b>
0.00	20,511.12	Plan #1 (OH)	LEAM MWD+HDGM
			<b>Description</b>
			MWD+HDGM

Site Name	Reference Measured Depth (usft)	Offset Measured Depth (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Separation Factor	Warning
<b>Offset Well - Wellbore - Design</b>						
<b>Bora Bora 13-24</b>						
Bora Bora 13-24 Fed Com 214H - OH - Plan #1	2,500.00	2,499.70	29.96	19.00	2.734	CC, ES
Bora Bora 13-24 Fed Com 214H - OH - Plan #1	20,511.39	20,581.66	919.86	575.16	2.669	SF
Bora Bora 13-24 Fed Com 216H - OH - Plan #1	2,916.63	2,916.73	30.02	17.19	2.339	CC
Bora Bora 13-24 Fed Com 216H - OH - Plan #1	3,000.00	3,000.00	30.02	16.81	2.273	ES
Bora Bora 13-24 Fed Com 216H - OH - Plan #1	3,100.00	3,099.57	30.89	17.25	2.264	SF

<b>Offset Design</b>													Offset Site Error:	0.00 usft		
Survey Program: 0-LEAM MWD+HDGM													Offset Well Error:		0.00 usft	
Reference		Offset		Semi Major Axis			Distance						Warning			
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N-S (usft)	+E-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor				
0.00	0.00	0.00	0.00	0.00	0.00	-90.34	-0.18	-29.96	29.96							
100.00	100.00	99.70	99.70	0.09	0.09	-90.34	-0.18	-29.96	29.96	29.79	0.17	174.505				
200.00	200.00	199.70	199.70	0.31	0.31	-90.34	-0.18	-29.96	29.96	29.34	0.62	48.261				
300.00	300.00	299.70	299.70	0.54	0.53	-90.34	-0.18	-29.96	29.96	28.89	1.07	27.992				
400.00	400.00	399.70	399.70	0.76	0.76	-90.34	-0.18	-29.96	29.96	28.44	1.52	19.713				
500.00	500.00	499.70	499.70	0.99	0.98	-90.34	-0.18	-29.96	29.96	27.99	1.97	15.213				
600.00	600.00	599.70	599.70	1.21	1.21	-90.34	-0.18	-29.96	29.96	27.54	2.42	12.386				
700.00	700.00	699.70	699.70	1.43	1.43	-90.34	-0.18	-29.96	29.96	27.09	2.87	10.445				
800.00	800.00	799.70	799.70	1.66	1.66	-90.34	-0.18	-29.96	29.96	26.64	3.32	9.030				
900.00	900.00	899.70	899.70	1.88	1.88	-90.34	-0.18	-29.96	29.96	26.19	3.77	7.952				
1,000.00	1,000.00	999.70	999.70	2.11	2.11	-90.34	-0.18	-29.96	29.96	25.74	4.22	7.105				
1,100.00	1,100.00	1,099.70	1,099.70	2.33	2.33	-90.34	-0.18	-29.96	29.96	25.29	4.67	6.420				
1,200.00	1,200.00	1,199.70	1,199.70	2.56	2.56	-90.34	-0.18	-29.96	29.96	24.84	5.12	5.856				
1,300.00	1,300.00	1,299.70	1,299.70	2.78	2.78	-90.34	-0.18	-29.96	29.96	24.39	5.57	5.383				
1,400.00	1,400.00	1,399.70	1,399.70	3.01	3.01	-90.34	-0.18	-29.96	29.96	23.95	6.02	4.981				
1,500.00	1,500.00	1,499.70	1,499.70	3.23	3.23	-90.34	-0.18	-29.96	29.96	23.50	6.46	4.634				
1,600.00	1,600.00	1,599.70	1,599.70	3.46	3.46	-90.34	-0.18	-29.96	29.96	23.05	6.91	4.333				
1,700.00	1,700.00	1,699.70	1,699.70	3.68	3.68	-90.34	-0.18	-29.96	29.96	22.60	7.36	4.069				
1,800.00	1,800.00	1,799.70	1,799.70	3.91	3.91	-90.34	-0.18	-29.96	29.96	22.15	7.81	3.835				
1,900.00	1,900.00	1,899.70	1,899.70	4.13	4.13	-90.34	-0.18	-29.96	29.96	21.70	8.26	3.626				
2,000.00	2,000.00	1,999.70	1,999.70	4.36	4.36	-90.34	-0.18	-29.96	29.96	21.25	8.71	3.439				
2,100.00	2,100.00	2,099.70	2,099.70	4.58	4.58	-90.34	-0.18	-29.96	29.96	20.80	9.16	3.270				

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 Bora Bora 13-24 Fed Com 215H
<b>Project:</b>	Eddy County, NM (NAD-83)	<b>TVD Reference:</b>	3507.0' GE + 23.5' KB @ 3530.50usft
<b>Reference Site:</b>	Bora Bora 13-24	<b>MD Reference:</b>	3507.0' GE + 23.5' KB @ 3530.50usft
<b>Site Error:</b>	0.00 usft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	Bora Bora 13-24 Fed Com 215H	<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 #1	<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						Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre		Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor		
							+N-S (usft)	+E-W (usft)						
2,200.00	2,200.00	2,199.70	2,199.70	4.81	4.81	-90.34	-0.18	-29.96	29.96	20.35	9.61	3.117		
2,300.00	2,300.00	2,299.70	2,299.70	5.03	5.03	-90.34	-0.18	-29.96	29.96	19.90	10.06	2.978		
2,400.00	2,400.00	2,399.70	2,399.70	5.26	5.25	-90.34	-0.18	-29.96	29.96	19.45	10.51	2.851		
2,500.00	2,500.00	2,499.70	2,499.70	5.48	5.48	-90.34	-0.18	-29.96	29.96	19.00	10.96	2.734	CC, ES	
2,600.00	2,600.00	2,599.17	2,599.17	5.71	5.69	-90.26	-0.14	-30.82	30.82	19.43	11.39	2.705		
2,700.00	2,700.00	2,698.58	2,698.54	5.93	5.89	-90.03	-0.02	-33.40	33.42	21.61	11.81	2.829		
2,800.00	2,800.00	2,797.87	2,797.74	6.15	6.09	-89.72	0.19	-37.69	37.74	25.52	12.23	3.087		
2,900.00	2,900.00	2,896.99	2,896.67	6.38	6.30	-89.39	0.47	-43.69	43.80	31.16	12.64	3.465		
3,000.00	3,000.00	2,995.86	2,995.24	6.60	6.51	-89.07	0.83	-51.38	51.58	38.53	13.05	3.952		
3,100.00	3,100.00	3,094.44	3,093.38	6.83	6.72	-88.80	1.27	-60.73	61.08	47.62	13.46	4.539		
3,200.00	3,200.00	3,192.67	3,190.99	7.05	6.94	-88.57	1.79	-71.73	72.28	58.42	13.86	5.215		
3,300.00	3,300.00	3,290.49	3,287.99	7.28	7.17	-88.38	2.39	-84.34	85.19	70.93	14.26	5.973		
3,400.00	3,400.00	3,387.85	3,384.30	7.50	7.40	-88.22	3.06	-98.54	99.78	85.12	14.66	6.807		
3,500.00	3,500.00	3,486.50	3,481.75	7.73	7.65	-88.10	3.78	-113.87	115.34	100.25	15.09	7.643		
3,600.00	3,600.00	3,585.28	3,579.33	7.95	7.91	-88.00	4.51	-129.22	130.90	115.37	15.53	8.431		
3,700.00	3,700.00	3,684.06	3,676.91	8.18	8.17	-87.93	5.24	-144.58	146.46	130.50	15.96	9.174		
3,800.00	3,800.00	3,782.85	3,774.48	8.40	8.43	-87.87	5.96	-159.94	162.02	145.62	16.40	9.877		
3,900.00	3,900.00	3,881.63	3,872.06	8.63	8.71	-87.82	6.69	-175.30	177.59	160.74	16.85	10.542		
4,000.00	4,000.00	3,980.41	3,969.64	8.85	8.98	-87.77	7.41	-190.65	193.15	175.86	17.29	11.172		
4,100.00	4,100.00	4,079.19	4,067.22	9.08	9.26	-87.74	8.14	-206.01	208.71	190.98	17.73	11.769		
4,200.00	4,200.00	4,177.97	4,164.80	9.30	9.54	-87.71	8.86	-221.37	224.28	206.10	18.18	12.336		
4,300.00	4,300.00	4,276.75	4,262.37	9.53	9.83	-87.68	9.59	-236.72	239.84	221.21	18.63	12.876		
4,400.00	4,400.00	4,375.53	4,359.95	9.75	10.12	-87.66	10.32	-252.08	255.40	236.33	19.08	13.389		
4,500.00	4,500.00	4,474.32	4,457.53	9.98	10.41	-87.64	11.04	-267.44	270.97	251.44	19.53	13.878		
4,600.00	4,600.00	4,573.10	4,555.11	10.20	10.71	-87.62	11.77	-282.79	286.53	266.55	19.98	14.344		
4,700.00	4,700.00	4,671.88	4,652.68	10.43	11.01	-87.60	12.49	-298.15	302.09	281.67	20.43	14.788		
4,800.00	4,800.00	4,770.66	4,750.26	10.65	11.31	-87.59	13.22	-313.51	317.66	296.78	20.88	15.213		
4,900.00	4,900.00	4,869.44	4,847.84	10.87	11.61	-87.57	13.94	-328.86	333.22	311.89	21.33	15.620		
5,000.00	5,000.00	4,968.22	4,945.42	11.10	11.91	-87.56	14.67	-344.22	348.78	327.00	21.79	16.008		
5,100.00	5,100.00	5,067.11	5,043.10	11.32	12.22	-32.81	15.40	-359.59	363.62	341.39	22.24	16.353		
5,200.00	5,199.96	5,166.20	5,140.99	11.53	12.53	-32.94	16.12	-375.00	377.01	354.33	22.68	16.624		
5,300.00	5,299.86	5,265.46	5,239.03	11.75	12.84	-33.21	16.85	-390.43	388.97	365.85	23.12	16.821		
5,400.00	5,399.74	5,364.77	5,337.14	11.96	13.15	-33.58	17.58	-405.87	400.40	376.83	23.57	16.987		
5,500.00	5,499.61	5,464.09	5,435.24	12.18	13.46	-33.92	18.31	-421.31	411.85	387.83	24.02	17.147		
5,600.00	5,599.49	5,563.40	5,533.34	12.40	13.78	-34.24	19.04	-436.75	423.30	398.84	24.47	17.300		
5,700.00	5,699.36	5,662.71	5,631.45	12.62	14.09	-34.55	19.77	-452.19	434.78	409.86	24.92	17.448		
5,800.00	5,799.24	5,762.03	5,729.55	12.83	14.41	-34.84	20.50	-467.63	446.26	420.89	25.37	17.590		
5,900.00	5,899.11	5,861.34	5,827.65	13.05	14.72	-35.12	21.23	-483.07	457.75	431.93	25.82	17.726		
6,000.00	5,998.99	5,960.66	5,925.76	13.27	15.04	-35.38	21.96	-498.51	469.26	442.98	26.28	17.858		
6,100.00	6,098.86	6,059.97	6,023.86	13.49	15.36	-35.63	22.69	-513.95	480.77	454.04	26.73	17.985		
6,200.00	6,198.74	6,159.28	6,121.96	13.72	15.68	-35.87	23.42	-529.39	492.30	465.11	27.19	18.107		
6,300.00	6,298.61	6,258.60	6,220.07	13.94	16.00	-36.10	24.15	-544.83	503.83	476.18	27.64	18.225		
6,400.00	6,398.49	6,357.91	6,318.17	14.16	16.32	-36.31	24.88	-560.27	515.36	487.26	28.10	18.339		
6,500.00	6,498.36	6,457.22	6,416.27	14.38	16.65	-36.52	25.61	-575.71	526.91	498.35	28.56	18.449		
6,600.00	6,598.24	6,556.54	6,514.38	14.61	16.97	-36.72	26.34	-591.15	538.46	509.44	29.02	18.555		
6,700.00	6,698.11	6,655.85	6,612.48	14.83	17.29	-36.91	27.07	-606.58	550.02	520.54	29.48	18.658		
6,800.00	6,798.02	6,755.11	6,710.53	15.03	17.62	-37.12	27.79	-622.02	562.07	532.15	29.92	18.784		
6,900.00	6,897.98	6,854.20	6,808.42	15.21	17.94	-37.23	28.52	-637.42	575.50	545.15	30.34	18.966		
7,000.00	6,997.98	6,953.10	6,906.11	15.39	18.26	-37.25	29.25	-652.80	590.29	559.53	30.76	19.190		
7,100.00	7,097.98	7,051.88	7,003.68	15.59	18.59	-91.87	29.97	-668.15	605.81	574.61	31.20	19.419		
7,200.00	7,197.98	7,150.66	7,101.26	15.81	18.91	-91.76	30.70	-683.51	621.32	589.66	31.66	19.625		
7,300.00	7,297.98	7,249.44	7,198.84	16.03	19.24	-91.65	31.43	-698.87	636.84	604.72	32.12	19.826		

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 Bora Bora 13-24 Fed Com 215H
<b>Project:</b>	Eddy County, NM (NAD-83)	<b>TVD Reference:</b>	3507.0' GE + 23.5' KB @ 3530.50usft
<b>Reference Site:</b>	Bora Bora 13-24	<b>MD Reference:</b>	3507.0' GE + 23.5' KB @ 3530.50usft
<b>Site Error:</b>	0.00 usft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	Bora Bora 13-24 Fed Com 215H	<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 #1	<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						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)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor		
7,400.00	7,397.98	7,348.22	7,296.42	16.26	19.56	-91.54	32.15	-714.22	652.36	619.78	32.58	20.021		
7,500.00	7,497.98	7,447.01	7,393.99	16.48	19.89	-91.44	32.88	-729.58	667.89	634.84	33.05	20.210		
7,600.00	7,597.98	7,545.79	7,491.57	16.70	20.21	-91.35	33.60	-744.94	683.41	649.90	33.51	20.395		
7,700.00	7,697.98	7,644.57	7,589.15	16.93	20.54	-91.26	34.33	-760.29	698.94	664.96	33.97	20.573		
7,800.00	7,797.98	7,743.35	7,686.73	17.15	20.86	-91.17	35.05	-775.65	714.47	680.03	34.44	20.747		
7,900.00	7,897.98	7,842.13	7,784.31	17.37	21.19	-91.09	35.78	-791.01	730.00	695.10	34.90	20.917		
8,000.00	7,997.98	7,940.91	7,881.88	17.60	21.52	-91.01	36.51	-806.36	745.53	710.16	35.36	21.081		
8,100.00	8,097.98	8,039.69	7,979.46	17.82	21.84	-90.94	37.23	-821.72	761.06	725.23	35.83	21.242		
8,200.00	8,197.98	8,138.48	8,077.04	18.04	22.17	-90.86	37.96	-837.08	776.59	740.30	36.29	21.398		
8,300.00	8,297.98	8,237.26	8,174.62	18.27	22.50	-90.79	38.68	-852.44	792.13	755.37	36.76	21.550		
8,400.00	8,397.98	8,336.04	8,272.19	18.49	22.83	-90.72	39.41	-867.79	807.66	770.44	37.22	21.698		
8,500.00	8,497.98	8,434.82	8,369.77	18.71	23.16	-90.66	40.13	-883.15	823.20	785.51	37.69	21.842		
8,600.00	8,597.98	8,533.60	8,467.35	18.94	23.49	-90.60	40.86	-898.51	838.74	800.58	38.15	21.983		
8,700.00	8,697.98	8,632.38	8,564.93	19.16	23.81	-90.54	41.58	-913.86	854.28	815.66	38.62	22.120		
8,800.00	8,797.98	8,741.50	8,672.78	19.39	24.13	-90.47	42.37	-930.43	869.47	830.35	39.12	22.254		
8,900.00	8,897.98	8,858.47	8,788.69	19.61	24.41	-90.42	43.11	-946.05	882.83	843.20	39.63	22.275		
9,000.00	8,997.98	8,976.03	8,905.49	19.83	24.67	-90.37	43.73	-959.37	894.16	854.03	40.13	22.283		
9,100.00	9,097.98	9,094.09	9,023.04	20.06	24.92	-90.33	44.25	-970.34	903.44	862.84	40.61	22.249		
9,200.00	9,197.98	9,212.56	9,141.19	20.28	25.15	-90.31	44.66	-978.91	910.68	869.61	41.07	22.175		
9,300.00	9,297.98	9,331.33	9,259.81	20.50	25.37	-90.29	44.95	-985.05	915.85	874.33	41.51	22.062		
9,400.00	9,397.98	9,450.31	9,378.72	20.73	25.57	-90.27	45.12	-988.74	918.95	877.01	41.94	21.911		
9,500.00	9,497.98	9,569.27	9,497.68	20.95	25.75	-90.27	45.18	-989.96	919.97	877.62	42.35	21.721		
9,600.00	9,597.98	9,669.27	9,597.68	21.18	25.92	-90.27	45.18	-989.96	919.97	877.20	42.77	21.507		
9,666.12	9,664.10	9,735.39	9,663.80	21.32	26.04	90.04	45.18	-989.96	919.97	876.91	43.06	21.367		
9,700.00	9,697.98	9,769.27	9,697.68	21.40	26.09	90.04	45.18	-989.96	919.97	876.77	43.20	21.296		
9,800.00	9,797.45	9,869.40	9,797.28	21.58	26.25	90.05	36.34	-989.91	919.97	876.42	43.55	21.122		
9,900.00	9,893.88	9,969.53	9,893.84	21.75	26.39	90.05	10.32	-989.77	919.97	876.10	43.87	20.970		
10,000.00	9,984.33	10,069.66	9,984.41	21.91	26.54	90.05	-32.09	-989.54	919.97	875.78	44.19	20.820		
10,100.00	10,066.05	10,169.79	10,066.22	22.05	26.68	90.04	-89.60	-989.22	919.97	875.43	44.54	20.656		
10,200.00	10,136.55	10,269.92	10,136.78	22.22	26.84	90.04	-160.46	-988.84	919.97	875.00	44.97	20.458		
10,300.00	10,193.70	10,370.03	10,193.94	22.48	27.03	90.04	-242.50	-988.39	919.97	874.44	45.53	20.207		
10,400.00	10,235.76	10,470.13	10,235.96	22.82	27.27	90.03	-333.21	-987.90	919.96	873.72	46.24	19.894		
10,500.00	10,261.46	10,570.21	10,261.57	23.26	27.58	90.03	-429.82	-987.37	919.96	872.83	47.13	19.518		
10,600.00	10,270.01	10,670.28	10,270.01	23.79	27.98	90.02	-529.40	-986.83	919.96	871.77	48.19	19.090		
10,700.00	10,269.70	10,770.28	10,269.60	24.40	28.47	90.01	-629.40	-986.28	919.96	870.53	49.43	18.611		
10,800.00	10,269.39	10,870.28	10,269.20	25.10	29.06	90.01	-729.40	-985.74	919.96	869.11	50.84	18.094		
10,900.00	10,269.09	10,970.28	10,268.80	25.89	29.73	90.00	-829.40	-985.19	919.96	867.53	52.42	17.548		
11,000.00	10,268.79	11,070.28	10,268.39	26.76	30.48	89.99	-929.39	-984.65	919.95	865.80	54.16	16.987		
11,100.00	10,268.48	11,170.28	10,267.99	27.69	31.30	89.99	-1,029.39	-984.10	919.95	863.92	56.03	16.419		
11,200.00	10,268.18	11,270.28	10,267.58	28.69	32.19	89.98	-1,129.39	-983.55	919.95	861.93	58.03	15.854		
11,300.00	10,267.88	11,370.28	10,267.18	29.75	33.13	89.98	-1,229.39	-983.01	919.95	859.82	60.13	15.298		
11,400.00	10,267.58	11,470.28	10,266.78	30.86	34.14	89.97	-1,329.38	-982.46	919.95	857.60	62.35	14.756		
11,500.00	10,267.27	11,570.28	10,266.37	32.01	35.19	89.96	-1,429.38	-981.92	919.95	855.30	64.65	14.230		
11,600.00	10,266.97	11,670.28	10,265.97	33.20	36.29	89.96	-1,529.38	-981.37	919.95	852.92	67.03	13.724		
11,700.00	10,266.67	11,770.28	10,265.57	34.44	37.43	89.95	-1,629.38	-980.83	919.94	850.46	69.49	13.239		
11,800.00	10,266.37	11,870.28	10,265.16	35.70	38.61	89.94	-1,729.38	-980.28	919.94	847.94	72.01	12.776		
11,900.00	10,266.06	11,970.28	10,264.76	36.99	39.82	89.94	-1,829.37	-979.74	919.94	845.35	74.59	12.334		
12,000.00	10,265.76	12,070.28	10,264.36	38.31	41.06	89.93	-1,929.37	-979.19	919.94	842.72	77.22	11.913		
12,100.00	10,265.46	12,170.28	10,263.95	39.66	42.33	89.92	-2,029.37	-978.65	919.94	840.04	79.90	11.513		
12,200.00	10,265.16	12,270.28	10,263.55	41.02	43.62	89.92	-2,129.37	-978.10	919.94	837.31	82.63	11.133		
12,300.00	10,264.85	12,370.28	10,263.14	42.40	44.94	89.91	-2,229.36	-977.56	919.94	834.54	85.39	10.773		
12,400.00	10,264.55	12,470.28	10,262.74	43.81	46.27	89.91	-2,329.36	-977.01	919.93	831.74	88.19	10.431		

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 Bora Bora 13-24 Fed Com 215H
<b>Project:</b>	Eddy County, NM (NAD-83)	<b>TVD Reference:</b>	3507.0' GE + 23.5' KB @ 3530.50usft
<b>Reference Site:</b>	Bora Bora 13-24	<b>MD Reference:</b>	3507.0' GE + 23.5' KB @ 3530.50usft
<b>Site Error:</b>	0.00 usft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	Bora Bora 13-24 Fed Com 215H	<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 #1	<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						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		
12,500.00	10,264.25	12,570.28	10,262.34	45.22	47.63	89.90	-2,429.36	-976.46	919.93	828.91	91.02	10.107		
12,600.00	10,263.94	12,670.28	10,261.93	46.66	49.00	89.89	-2,529.36	-975.92	919.93	826.05	93.88	9.799		
12,700.00	10,263.64	12,770.28	10,261.53	48.10	50.39	89.89	-2,629.35	-975.37	919.93	823.16	96.77	9.506		
12,800.00	10,263.34	12,870.28	10,261.13	49.56	51.80	89.88	-2,729.35	-974.83	919.93	820.25	99.68	9.229		
12,900.00	10,263.04	12,970.28	10,260.72	51.03	53.21	89.87	-2,829.35	-974.28	919.93	817.31	102.61	8.965		
13,000.00	10,262.73	13,070.28	10,260.32	52.51	54.65	89.87	-2,929.35	-973.74	919.93	814.36	105.57	8.714		
13,100.00	10,262.43	13,170.28	10,259.92	54.00	56.09	89.86	-3,029.34	-973.19	919.93	811.38	108.54	8.475		
13,200.00	10,262.13	13,270.28	10,259.51	55.49	57.54	89.86	-3,129.34	-972.65	919.92	808.39	111.53	8.248		
13,300.00	10,261.83	13,370.28	10,259.11	57.00	59.00	89.85	-3,229.34	-972.10	919.92	805.39	114.54	8.032		
13,400.00	10,261.52	13,470.28	10,258.71	58.51	60.47	89.84	-3,329.34	-971.56	919.92	802.36	117.56	7.825		
13,500.00	10,261.22	13,570.28	10,258.30	60.03	61.95	89.84	-3,429.34	-971.01	919.92	799.33	120.59	7.628		
13,600.00	10,260.92	13,670.28	10,257.90	61.55	63.44	89.83	-3,529.33	-970.47	919.92	796.28	123.64	7.440		
13,700.00	10,260.62	13,770.28	10,257.49	63.08	64.94	89.82	-3,629.33	-969.92	919.92	793.22	126.70	7.261		
13,800.00	10,260.31	13,870.28	10,257.09	64.62	66.44	89.82	-3,729.33	-969.38	919.92	790.15	129.76	7.089		
13,900.00	10,260.01	13,970.28	10,256.69	66.16	67.95	89.81	-3,829.33	-968.83	919.91	787.07	132.84	6.925		
14,000.00	10,259.71	14,070.28	10,256.28	67.71	69.46	89.81	-3,929.32	-968.28	919.91	783.98	135.93	6.768		
14,100.00	10,259.40	14,170.28	10,255.88	69.26	70.98	89.80	-4,029.32	-967.74	919.91	780.88	139.03	6.617		
14,200.00	10,259.10	14,270.28	10,255.48	70.81	72.51	89.79	-4,129.32	-967.19	919.91	777.78	142.13	6.472		
14,300.00	10,258.80	14,370.28	10,255.07	72.37	74.04	89.79	-4,229.32	-966.65	919.91	774.66	145.25	6.333		
14,400.00	10,258.50	14,470.28	10,254.67	73.93	75.57	89.78	-4,329.31	-966.10	919.91	771.54	148.37	6.200		
14,500.00	10,258.19	14,570.28	10,254.27	75.49	77.11	89.77	-4,429.31	-965.56	919.91	768.41	151.49	6.072		
14,600.00	10,257.89	14,670.28	10,253.86	77.06	78.65	89.77	-4,529.31	-965.01	919.91	765.28	154.63	5.949		
14,700.00	10,257.59	14,770.28	10,253.46	78.63	80.20	89.76	-4,629.31	-964.47	919.91	762.14	157.77	5.831		
14,800.00	10,257.29	14,870.28	10,253.05	80.21	81.75	89.76	-4,729.30	-963.92	919.90	758.99	160.91	5.717		
14,900.00	10,256.98	14,970.28	10,252.65	81.78	83.30	89.75	-4,829.30	-963.38	919.90	755.84	164.06	5.607		
15,000.00	10,256.68	15,070.28	10,252.25	83.36	84.86	89.74	-4,929.30	-962.83	919.90	752.69	167.21	5.501		
15,100.00	10,256.38	15,170.28	10,251.84	84.94	86.42	89.74	-5,029.30	-962.29	919.90	749.53	170.37	5.399		
15,200.00	10,256.08	15,270.28	10,251.44	86.52	87.98	89.73	-5,129.30	-961.74	919.90	746.36	173.54	5.301		
15,300.00	10,255.77	15,370.28	10,251.04	88.11	89.55	89.72	-5,229.29	-961.19	919.90	743.19	176.71	5.206		
15,400.00	10,255.47	15,470.28	10,250.63	89.70	91.12	89.72	-5,329.29	-960.65	919.90	740.02	179.88	5.114		
15,500.00	10,255.17	15,570.28	10,250.23	91.28	92.69	89.71	-5,429.29	-960.10	919.90	736.84	183.05	5.025		
15,600.00	10,254.86	15,670.28	10,249.83	92.88	94.26	89.70	-5,529.29	-959.56	919.90	733.66	186.23	4.939		
15,700.00	10,254.56	15,770.28	10,249.42	94.47	95.84	89.70	-5,629.28	-959.01	919.89	730.48	189.42	4.856		
15,800.00	10,254.26	15,870.28	10,249.02	96.06	97.41	89.69	-5,729.28	-958.47	919.89	727.29	192.60	4.776		
15,900.00	10,253.96	15,970.28	10,248.62	97.66	98.99	89.69	-5,829.28	-957.92	919.89	724.10	195.79	4.698		
16,000.00	10,253.65	16,070.28	10,248.21	99.25	100.57	89.68	-5,929.28	-957.38	919.89	720.91	198.98	4.623		
16,100.00	10,253.35	16,170.28	10,247.81	100.85	102.16	89.67	-6,029.27	-956.83	919.89	717.71	202.18	4.550		
16,200.00	10,253.05	16,270.28	10,247.40	102.45	103.74	89.67	-6,129.27	-956.29	919.89	714.51	205.38	4.479		
16,300.00	10,252.75	16,370.28	10,247.00	104.05	105.33	89.66	-6,229.27	-955.74	919.89	711.31	208.58	4.410		
16,400.00	10,252.44	16,470.28	10,246.60	105.65	106.92	89.65	-6,329.27	-955.20	919.89	708.11	211.78	4.344		
16,500.00	10,252.14	16,570.28	10,246.19	107.26	108.51	89.65	-6,429.26	-954.65	919.89	704.90	214.99	4.279		
16,600.00	10,251.84	16,670.28	10,245.79	108.86	110.10	89.64	-6,529.26	-954.11	919.89	701.69	218.19	4.216		
16,700.00	10,251.54	16,770.28	10,245.39	110.47	111.69	89.64	-6,629.26	-953.56	919.89	698.48	221.40	4.155		
16,800.00	10,251.23	16,870.28	10,244.98	112.07	113.29	89.63	-6,729.26	-953.01	919.88	695.27	224.61	4.095		
16,900.00	10,250.93	16,970.28	10,244.58	113.68	114.88	89.62	-6,829.26	-952.47	919.88	692.06	227.83	4.038		
17,000.00	10,250.63	17,070.28	10,244.18	115.29	116.48	89.62	-6,929.25	-951.92	919.88	688.84	231.04	3.981		
17,100.00	10,250.33	17,170.28	10,243.77	116.90	118.07	89.61	-7,029.25	-951.38	919.88	685.62	234.26	3.927		
17,200.00	10,250.02	17,270.28	10,243.37	118.51	119.67	89.60	-7,129.25	-950.83	919.88	682.40	237.48	3.874		
17,300.00	10,249.72	17,370.28	10,242.96	120.12	121.27	89.60	-7,229.25	-950.29	919.88	679.18	240.70	3.822		
17,400.00	10,249.42	17,470.28	10,242.56	121.73	122.87	89.59	-7,329.24	-949.74	919.88	675.96	243.92	3.771		
17,500.00	10,249.11	17,570.28	10,242.16	123.34	124.48	89.59	-7,429.24	-949.20	919.88	672.74	247.14	3.722		
17,600.00	10,248.81	17,670.28	10,241.75	124.95	126.08	89.58	-7,529.24	-948.65	919.88	669.51	250.37	3.674		

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 Bora Bora 13-24 Fed Com 215H
<b>Project:</b>	Eddy County, NM (NAD-83)	<b>TVD Reference:</b>	3507.0' GE + 23.5' KB @ 3530.50usft
<b>Reference Site:</b>	Bora Bora 13-24	<b>MD Reference:</b>	3507.0' GE + 23.5' KB @ 3530.50usft
<b>Site Error:</b>	0.00 usft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	Bora Bora 13-24 Fed Com 215H	<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 #1	<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						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		
17,700.00	10,248.51	17,770.28	10,241.35	126.57	127.68	89.57	-7,629.24	-948.11	919.88	666.28	253.59	3.627		
17,800.00	10,248.21	17,870.28	10,240.95	128.18	129.29	89.57	-7,729.23	-947.56	919.88	663.06	256.82	3.582		
17,900.00	10,247.90	17,970.28	10,240.54	129.80	130.89	89.56	-7,829.23	-947.02	919.88	659.83	260.05	3.537		
18,000.00	10,247.60	18,070.28	10,240.14	131.41	132.50	89.55	-7,929.23	-946.47	919.87	656.60	263.28	3.494		
18,100.00	10,247.30	18,170.27	10,239.74	133.03	134.11	89.55	-8,029.23	-945.92	919.87	653.36	266.51	3.452		
18,200.00	10,247.00	18,270.27	10,239.33	134.64	135.71	89.54	-8,129.22	-945.38	919.87	650.13	269.74	3.410		
18,300.00	10,246.69	18,370.27	10,238.93	136.26	137.32	89.54	-8,229.22	-944.83	919.87	646.90	272.97	3.370		
18,400.00	10,246.39	18,470.27	10,238.53	137.88	138.93	89.53	-8,329.22	-944.29	919.87	643.66	276.21	3.330		
18,500.00	10,246.09	18,570.27	10,238.12	139.50	140.54	89.52	-8,429.22	-943.74	919.87	640.43	279.44	3.292		
18,600.00	10,245.79	18,670.27	10,237.72	141.12	142.15	89.52	-8,529.22	-943.20	919.87	637.19	282.68	3.254		
18,700.00	10,245.48	18,770.27	10,237.31	142.73	143.77	89.51	-8,629.21	-942.65	919.87	633.95	285.92	3.217		
18,800.00	10,245.18	18,870.27	10,236.91	144.35	145.38	89.50	-8,729.21	-942.11	919.87	630.71	289.16	3.181		
18,900.00	10,244.88	18,970.27	10,236.51	145.97	146.99	89.50	-8,829.21	-941.56	919.87	627.47	292.40	3.146		
19,000.00	10,244.57	19,070.27	10,236.10	147.59	148.60	89.49	-8,929.21	-941.02	919.87	624.23	295.64	3.111		
19,100.00	10,244.27	19,170.27	10,235.70	149.22	150.22	89.48	-9,029.20	-940.47	919.87	620.99	298.88	3.078		
19,200.00	10,243.97	19,270.27	10,235.30	150.84	151.83	89.48	-9,129.20	-939.93	919.87	617.75	302.12	3.045		
19,300.00	10,243.67	19,370.27	10,234.89	152.46	153.45	89.47	-9,229.20	-939.38	919.87	614.50	305.36	3.012		
19,400.00	10,243.36	19,470.27	10,234.49	154.08	155.06	89.47	-9,329.20	-938.84	919.86	611.26	308.61	2.981		
19,500.00	10,243.06	19,570.27	10,234.09	155.70	156.68	89.46	-9,429.19	-938.29	919.86	608.01	311.85	2.950		
19,600.00	10,242.76	19,670.27	10,233.68	157.33	158.29	89.45	-9,529.19	-937.74	919.86	604.77	315.09	2.919		
19,700.00	10,242.46	19,770.27	10,233.28	158.95	159.91	89.45	-9,629.19	-937.20	919.86	601.52	318.34	2.890		
19,800.00	10,242.15	19,870.27	10,232.87	160.57	161.53	89.44	-9,729.19	-936.65	919.86	598.28	321.59	2.860		
19,900.00	10,241.85	19,970.27	10,232.47	162.20	163.15	89.43	-9,829.18	-936.11	919.86	595.03	324.83	2.832		
20,000.00	10,241.55	20,070.27	10,232.07	163.82	164.77	89.43	-9,929.18	-935.56	919.86	591.78	328.08	2.804		
20,100.00	10,241.25	20,170.27	10,231.66	165.44	166.38	89.42	-10,029.18	-935.02	919.86	588.53	331.33	2.776		
20,200.00	10,240.94	20,270.27	10,231.26	167.07	168.00	89.42	-10,129.18	-934.47	919.86	585.28	334.58	2.749		
20,300.00	10,240.64	20,370.27	10,230.86	168.69	169.62	89.41	-10,229.18	-933.93	919.86	582.03	337.83	2.723		
20,400.00	10,240.34	20,470.27	10,230.45	170.32	171.24	89.40	-10,329.17	-933.38	919.86	578.78	341.08	2.697		
20,500.00	10,240.03	20,570.27	10,230.05	171.95	172.86	89.40	-10,429.17	-932.84	919.86	575.53	344.33	2.671		
20,511.39	10,240.00	20,581.66	10,230.00	172.13	173.05	89.40	-10,440.56	-932.77	919.86	575.16	344.70	2.669 SF		

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

# LEAM Drilling Services

## Anticollision Report

<b>Company:</b>	Devon Energy	<b>Local Co-ordinate Reference:</b>	Well Bora Bora 13-24 Fed Com 215H
<b>Project:</b>	Eddy County, NM (NAD-83)	<b>TVD Reference:</b>	3507.0' GE + 23.5' KB @ 3530.50usft
<b>Reference Site:</b>	Bora Bora 13-24	<b>MD Reference:</b>	3507.0' GE + 23.5' KB @ 3530.50usft
<b>Site Error:</b>	0.00 usft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	Bora Bora 13-24 Fed Com 215H	<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 #1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design: Bora Bora 13-24 - Bora Bora 13-24 Fed Com 216H - 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	Warning	
0.00	0.00	0.10	0.10	0.00	0.00	89.90	0.05	30.02	30.02					
100.00	100.00	100.10	100.10	0.09	0.09	89.90	0.05	30.02	30.02	29.85	0.17	174.362		
200.00	200.00	200.10	200.10	0.31	0.31	89.90	0.05	30.02	30.02	29.40	0.62	48.287		
300.00	300.00	300.10	300.10	0.54	0.54	89.90	0.05	30.02	30.02	28.95	1.07	28.024		
400.00	400.00	400.10	400.10	0.76	0.76	89.90	0.05	30.02	30.02	28.50	1.52	19.740		
500.00	500.00	500.10	500.10	0.99	0.99	89.90	0.05	30.02	30.02	28.05	1.97	15.236		
600.00	600.00	600.10	600.10	1.21	1.21	89.90	0.05	30.02	30.02	27.60	2.42	12.406		
700.00	700.00	700.10	700.10	1.43	1.43	89.90	0.05	30.02	30.02	27.15	2.87	10.462		
800.00	800.00	800.10	800.10	1.66	1.66	89.90	0.05	30.02	30.02	26.70	3.32	9.045		
900.00	900.00	900.10	900.10	1.88	1.88	89.90	0.05	30.02	30.02	26.25	3.77	7.966		
1,000.00	1,000.00	1,000.10	1,000.10	2.11	2.11	89.90	0.05	30.02	30.02	25.80	4.22	7.117		
1,100.00	1,100.00	1,100.10	1,100.10	2.33	2.33	89.90	0.05	30.02	30.02	25.35	4.67	6.432		
1,200.00	1,200.00	1,200.10	1,200.10	2.56	2.56	89.90	0.05	30.02	30.02	24.90	5.12	5.867		
1,300.00	1,300.00	1,300.10	1,300.10	2.78	2.78	89.90	0.05	30.02	30.02	24.45	5.57	5.393		
1,400.00	1,400.00	1,400.10	1,400.10	3.01	3.01	89.90	0.05	30.02	30.02	24.00	6.02	4.990		
1,500.00	1,500.00	1,500.10	1,500.10	3.23	3.23	89.90	0.05	30.02	30.02	23.55	6.47	4.643		
1,600.00	1,600.00	1,600.10	1,600.10	3.46	3.46	89.90	0.05	30.02	30.02	23.10	6.92	4.341		
1,700.00	1,700.00	1,700.10	1,700.10	3.68	3.68	89.90	0.05	30.02	30.02	22.66	7.36	4.076		
1,800.00	1,800.00	1,800.10	1,800.10	3.91	3.91	89.90	0.05	30.02	30.02	22.21	7.81	3.842		
1,900.00	1,900.00	1,900.10	1,900.10	4.13	4.13	89.90	0.05	30.02	30.02	21.76	8.26	3.633		
2,000.00	2,000.00	2,000.10	2,000.10	4.36	4.36	89.90	0.05	30.02	30.02	21.31	8.71	3.445		
2,100.00	2,100.00	2,100.10	2,100.10	4.58	4.58	89.90	0.05	30.02	30.02	20.86	9.16	3.276		
2,200.00	2,200.00	2,200.10	2,200.10	4.81	4.81	89.90	0.05	30.02	30.02	20.41	9.61	3.123		
2,300.00	2,300.00	2,300.10	2,300.10	5.03	5.03	89.90	0.05	30.02	30.02	19.96	10.06	2.984		
2,400.00	2,400.00	2,400.10	2,400.10	5.26	5.26	89.90	0.05	30.02	30.02	19.51	10.51	2.856		
2,500.00	2,500.00	2,500.10	2,500.10	5.48	5.48	89.90	0.05	30.02	30.02	19.06	10.96	2.739		
2,600.00	2,600.00	2,600.10	2,600.10	5.71	5.71	89.90	0.05	30.02	30.02	18.61	11.41	2.631		
2,700.00	2,700.00	2,700.10	2,700.10	5.93	5.93	89.90	0.05	30.02	30.02	18.16	11.86	2.531		
2,800.00	2,800.00	2,800.10	2,800.10	6.15	6.15	89.90	0.05	30.02	30.02	17.71	12.31	2.439		
2,900.00	2,900.00	2,900.10	2,900.10	6.38	6.38	89.90	0.05	30.02	30.02	17.26	12.76	2.353		
2,916.63	2,916.63	2,916.73	2,916.73	6.42	6.42	89.90	0.05	30.02	30.02	17.19	12.83	2.339 CC		
3,000.00	3,000.00	3,000.00	3,000.00	6.60	6.60	89.90	0.05	30.02	30.02	16.81	13.21	2.273 ES		
3,100.00	3,100.00	3,099.57	3,099.56	6.83	6.81	89.82	0.10	30.88	30.89	17.25	13.64	2.264 SF		
3,200.00	3,200.00	3,198.98	3,198.94	7.05	7.01	89.58	0.24	33.47	33.49	19.43	14.06	2.382		
3,300.00	3,300.00	3,298.27	3,298.13	7.28	7.21	89.26	0.49	37.77	37.82	23.35	14.47	2.614		
3,400.00	3,400.00	3,397.38	3,397.06	7.50	7.42	88.92	0.82	43.77	43.89	29.01	14.88	2.949		
3,500.00	3,500.00	3,496.25	3,495.63	7.73	7.63	88.60	1.25	51.46	51.67	36.39	15.29	3.380		
3,600.00	3,600.00	3,594.83	3,593.76	7.95	7.84	88.32	1.78	60.82	61.18	45.49	15.69	3.899		
3,700.00	3,700.00	3,693.06	3,691.37	8.18	8.06	88.09	2.40	71.82	72.39	56.30	16.09	4.500		
3,800.00	3,800.00	3,790.87	3,788.37	8.40	8.28	87.89	3.10	84.43	85.30	68.82	16.48	5.176		
3,900.00	3,900.00	3,889.35	3,885.84	8.63	8.51	87.74	3.89	98.43	99.53	82.63	16.90	5.890		
4,000.00	4,000.00	3,988.32	3,983.78	8.85	8.75	87.62	4.69	112.59	113.86	96.53	17.33	6.570		
4,100.00	4,100.00	4,087.29	4,081.73	9.08	9.00	87.52	5.48	126.75	128.19	110.43	17.76	7.216		
4,200.00	4,200.00	4,186.25	4,179.68	9.30	9.24	87.45	6.28	140.91	142.52	124.32	18.20	7.830		
4,300.00	4,300.00	4,285.22	4,277.62	9.53	9.50	87.39	7.07	155.07	156.85	138.21	18.64	8.415		
4,400.00	4,400.00	4,384.19	4,375.57	9.75	9.75	87.34	7.87	169.23	171.18	152.10	19.08	8.973		
4,500.00	4,500.00	4,483.16	4,473.52	9.98	10.02	87.30	8.66	183.39	185.51	165.99	19.52	9.505		
4,600.00	4,600.00	4,582.12	4,571.46	10.20	10.28	87.26	9.46	197.55	199.84	179.88	19.96	10.012		
4,700.00	4,700.00	4,681.09	4,669.41	10.43	10.55	87.23	10.25	211.71	214.17	193.77	20.40	10.497		
4,800.00	4,800.00	4,780.06	4,767.35	10.65	10.82	87.20	11.05	225.88	228.50	207.66	20.85	10.961		
4,900.00	4,900.00	4,879.03	4,865.30	10.87	11.09	87.18	11.84	240.04	242.83	221.54	21.29	11.405		
5,000.00	5,000.00	4,978.00	4,963.25	11.10	11.37	87.15	12.64	254.20	257.17	235.43	21.74	11.830		

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 Bora Bora 13-24 Fed Com 215H
<b>Project:</b>	Eddy County, NM (NAD-83)	<b>TVD Reference:</b>	3507.0' GE + 23.5' KB @ 3530.50usft
<b>Reference Site:</b>	Bora Bora 13-24	<b>MD Reference:</b>	3507.0' GE + 23.5' KB @ 3530.50usft
<b>Site Error:</b>	0.00 usft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	Bora Bora 13-24 Fed Com 215H	<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 #1	<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				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		
5,100.00	5,100.00	5,076.86	5,061.09	11.32	11.64	141.89	13.43	268.34	272.18	250.00	22.18	12.272		
5,200.00	5,199.96	5,175.50	5,158.71	11.53	11.92	142.09	14.22	282.46	288.55	265.93	22.61	12.760		
5,300.00	5,299.86	5,273.88	5,256.08	11.75	12.20	142.46	15.01	296.53	306.27	283.23	23.05	13.288		
5,400.00	5,399.74	5,372.17	5,353.35	11.96	12.48	142.95	15.80	310.60	324.53	301.05	23.48	13.819		
5,500.00	5,499.61	5,470.45	5,450.62	12.18	12.77	143.39	16.59	324.66	342.81	318.89	23.92	14.331		
5,600.00	5,599.49	5,568.74	5,547.89	12.40	13.05	143.78	17.38	338.72	361.11	336.75	24.36	14.825		
5,700.00	5,699.36	5,667.02	5,645.16	12.62	13.34	144.14	18.17	352.79	379.42	354.62	24.80	15.301		
5,800.00	5,799.24	5,765.30	5,742.43	12.83	13.63	144.46	18.96	366.85	397.74	372.50	25.24	15.760		
5,900.00	5,899.11	5,863.59	5,839.70	13.05	13.92	144.75	19.75	380.91	416.08	390.40	25.68	16.203		
6,000.00	5,998.99	5,961.87	5,936.96	13.27	14.21	145.02	20.54	394.98	434.42	408.30	26.12	16.631		
6,100.00	6,098.86	6,060.15	6,034.23	13.49	14.50	145.27	21.33	409.04	452.77	426.21	26.56	17.044		
6,200.00	6,198.74	6,158.44	6,131.50	13.72	14.79	145.50	22.12	423.10	471.13	444.12	27.01	17.444		
6,300.00	6,298.61	6,256.72	6,228.77	13.94	15.09	145.71	22.91	437.16	489.50	462.05	27.45	17.830		
6,400.00	6,398.49	6,355.00	6,326.04	14.16	15.38	145.90	23.70	451.23	507.87	479.97	27.90	18.203		
6,500.00	6,498.36	6,453.29	6,423.31	14.38	15.68	146.08	24.49	465.29	526.25	497.90	28.35	18.564		
6,600.00	6,598.24	6,551.57	6,520.58	14.61	15.97	146.25	25.28	479.35	544.63	515.84	28.80	18.914		
6,700.00	6,698.11	6,649.85	6,617.85	14.83	16.27	146.41	26.07	493.42	563.02	533.78	29.24	19.253		
6,800.00	6,798.02	6,748.23	6,715.21	15.03	16.57	146.61	26.86	507.49	580.90	551.22	29.68	19.574		
6,900.00	6,897.98	6,846.87	6,812.83	15.21	16.87	146.72	27.65	521.61	597.36	567.28	30.09	19.854		
7,000.00	6,997.98	6,945.73	6,910.67	15.39	17.17	146.72	28.45	535.75	612.39	581.89	30.50	20.080		
7,100.00	7,097.98	7,044.70	7,008.61	15.59	17.47	91.87	29.24	549.91	626.66	595.73	30.93	20.262		
7,200.00	7,197.98	7,143.66	7,106.56	15.81	17.78	91.76	30.04	564.07	640.94	609.55	31.39	20.422		
7,300.00	7,297.98	7,242.63	7,204.51	16.03	18.08	91.65	30.83	578.23	655.22	623.38	31.84	20.577		
7,400.00	7,397.98	7,341.60	7,302.45	16.26	18.38	91.55	31.63	592.40	669.50	637.20	32.30	20.727		
7,500.00	7,497.98	7,440.57	7,400.40	16.48	18.69	91.45	32.42	606.56	683.78	651.03	32.76	20.873		
7,600.00	7,597.98	7,539.54	7,498.35	16.70	18.99	91.35	33.22	620.72	698.07	664.85	33.22	21.015		
7,700.00	7,697.98	7,638.50	7,596.29	16.93	19.30	91.26	34.01	634.88	712.36	678.68	33.68	21.153		
7,800.00	7,797.98	7,737.47	7,694.24	17.15	19.61	91.17	34.81	649.04	726.65	692.51	34.13	21.288		
7,900.00	7,897.98	7,836.44	7,792.18	17.37	19.91	91.09	35.60	663.20	740.94	706.34	34.59	21.418		
8,000.00	7,997.98	7,935.41	7,890.13	17.60	20.22	91.00	36.40	677.36	755.23	720.18	35.05	21.545		
8,100.00	8,097.98	8,034.37	7,988.08	17.82	20.53	90.93	37.19	691.52	769.52	734.01	35.51	21.669		
8,200.00	8,197.98	8,133.34	8,086.02	18.04	20.84	90.85	37.99	705.68	783.82	747.85	35.97	21.789		
8,300.00	8,297.98	8,232.31	8,183.97	18.27	21.14	90.78	38.78	719.84	798.12	761.68	36.43	21.906		
8,400.00	8,397.98	8,331.28	8,281.91	18.49	21.45	90.71	39.58	734.00	812.41	775.52	36.89	22.020		
8,500.00	8,497.98	8,430.25	8,379.86	18.71	21.76	90.64	40.37	748.17	826.71	789.36	37.36	22.131		
8,600.00	8,597.98	8,529.21	8,477.81	18.94	22.07	90.57	41.17	762.33	841.01	803.20	37.82	22.239		
8,700.00	8,697.98	8,628.18	8,575.75	19.16	22.38	90.51	41.96	776.49	855.31	817.04	38.28	22.345		
8,800.00	8,797.98	8,727.15	8,673.70	19.39	22.69	90.45	42.76	790.65	869.62	830.88	38.74	22.448		
8,900.00	8,897.98	8,843.70	8,789.21	19.61	22.99	90.38	43.63	806.20	882.96	843.69	39.27	22.485		
9,000.00	8,997.98	8,961.26	8,906.00	19.83	23.26	90.33	44.38	819.50	894.27	854.50	39.77	22.485		
9,100.00	9,097.98	9,079.31	9,023.55	20.06	23.51	90.29	44.99	830.45	903.54	863.28	40.26	22.443		
9,200.00	9,197.98	9,197.78	9,141.69	20.28	23.75	90.25	45.47	839.01	910.76	870.03	40.73	22.359		
9,300.00	9,297.98	9,316.54	9,260.30	20.50	23.97	90.23	45.82	845.13	915.92	874.73	41.19	22.237		
9,400.00	9,397.98	9,435.51	9,379.21	20.73	24.18	90.22	46.02	848.81	919.01	877.38	41.63	22.076		
9,500.00	9,497.98	9,554.39	9,498.08	20.95	24.37	90.21	46.09	850.02	920.03	877.97	42.05	21.878		
9,600.00	9,597.98	9,654.39	9,598.08	21.18	24.55	90.21	46.09	850.02	920.03	877.55	42.48	21.659		
9,699.91	9,697.89	9,754.28	9,697.97	21.40	24.73	-89.48	46.09	850.02	920.03	877.12	42.91	21.443		
9,700.00	9,697.98	9,754.37	9,698.06	21.40	24.73	-89.48	46.09	850.02	920.03	877.12	42.91	21.443		
9,800.00	9,797.45	9,852.92	9,796.11	21.58	24.89	-89.48	37.46	850.07	920.03	876.76	43.27	21.265		
9,900.00	9,893.88	9,951.52	9,891.28	21.75	25.05	-89.51	12.16	850.21	920.02	876.44	43.58	21.109		
10,000.00	9,984.33	10,050.00	9,980.61	21.91	25.20	-89.54	-29.00	850.43	920.02	876.12	43.90	20.957		
10,025.65	10,006.23	10,075.52	10,002.50	21.94	25.24	-89.55	-42.13	850.50	920.02	876.03	43.99	20.914		

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 Bora Bora 13-24 Fed Com 215H
<b>Project:</b>	Eddy County, NM (NAD-83)	<b>TVD Reference:</b>	3507.0' GE + 23.5' KB @ 3530.50usft
<b>Reference Site:</b>	Bora Bora 13-24	<b>MD Reference:</b>	3507.0' GE + 23.5' KB @ 3530.50usft
<b>Site Error:</b>	0.00 usft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	Bora Bora 13-24 Fed Com 215H	<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 #1	<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						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		
10,100.00	10,066.05	10,148.99	10,061.98	22.05	25.36	-89.59	-85.16	850.74	920.01	875.76	44.26	20.789		
10,200.00	10,136.55	10,247.94	10,132.45	22.22	25.54	-89.66	-154.44	851.12	920.01	875.32	44.69	20.586		
10,300.00	10,193.70	10,347.07	10,190.07	22.48	25.76	-89.73	-234.97	851.56	920.01	874.76	45.25	20.332		
10,400.00	10,235.76	10,446.43	10,233.04	22.82	26.03	-89.81	-324.41	852.05	920.00	874.03	45.97	20.014		
10,482.85	10,258.25	10,528.91	10,256.54	23.19	26.32	-89.88	-403.40	852.48	920.00	873.30	46.71	19.698		
10,500.00	10,261.46	10,546.01	10,259.97	23.26	26.39	-89.90	-420.15	852.57	920.00	873.14	46.86	19.632		
10,600.00	10,270.00	10,645.85	10,269.95	23.79	26.84	-89.99	-519.36	853.11	920.00	872.08	47.92	19.197		
10,700.00	10,269.70	10,745.85	10,269.81	24.40	27.38	-90.00	-619.35	853.66	920.01	870.84	49.17	18.712		
10,800.00	10,269.39	10,845.85	10,269.61	25.10	28.01	-90.01	-719.35	854.21	920.01	869.43	50.58	18.189		
10,900.00	10,269.09	10,945.85	10,269.41	25.89	28.73	-90.01	-819.35	854.75	920.01	867.85	52.16	17.637		
11,000.00	10,268.79	11,045.85	10,269.21	26.76	29.52	-90.02	-919.35	855.30	920.02	866.12	53.90	17.069		
11,100.00	10,268.48	11,145.85	10,269.00	27.69	30.38	-90.03	-1,019.35	855.85	920.02	864.24	55.78	16.495		
11,200.00	10,268.18	11,245.84	10,268.80	28.69	31.31	-90.03	-1,119.34	856.39	920.02	862.25	57.78	15.924		
11,300.00	10,267.88	11,345.84	10,268.60	29.75	32.29	-90.04	-1,219.34	856.94	920.03	860.14	59.89	15.362		
11,400.00	10,267.58	11,445.84	10,268.40	30.86	33.33	-90.04	-1,319.34	857.49	920.03	857.92	62.10	14.814		
11,500.00	10,267.27	11,545.84	10,268.20	32.01	34.41	-90.05	-1,419.34	858.03	920.03	855.62	64.41	14.284		
11,600.00	10,266.97	11,645.84	10,267.99	33.20	35.54	-90.06	-1,519.34	858.58	920.03	853.24	66.80	13.774		
11,700.00	10,266.67	11,745.84	10,267.79	34.44	36.70	-90.06	-1,619.34	859.13	920.04	850.78	69.26	13.285		
11,800.00	10,266.37	11,845.84	10,267.59	35.70	37.90	-90.07	-1,719.33	859.67	920.04	848.26	71.78	12.817		
11,900.00	10,266.06	11,945.84	10,267.39	36.99	39.13	-90.08	-1,819.33	860.22	920.04	845.68	74.37	12.372		
12,000.00	10,265.76	12,045.84	10,267.19	38.31	40.40	-90.08	-1,919.33	860.77	920.05	843.04	77.00	11.948		
12,100.00	10,265.46	12,145.84	10,266.99	39.66	41.68	-90.09	-2,019.33	861.31	920.05	840.36	79.69	11.546		
12,200.00	10,265.16	12,245.84	10,266.78	41.02	43.00	-90.10	-2,119.33	861.86	920.05	837.64	82.42	11.164		
12,300.00	10,264.85	12,345.84	10,266.58	42.40	44.33	-90.10	-2,219.33	862.41	920.06	834.87	85.18	10.801		
12,400.00	10,264.55	12,445.84	10,266.38	43.81	45.68	-90.11	-2,319.32	862.95	920.06	832.07	87.98	10.457		
12,500.00	10,264.25	12,545.84	10,266.18	45.22	47.05	-90.11	-2,419.32	863.50	920.06	829.24	90.82	10.131		
12,600.00	10,263.94	12,645.84	10,265.98	46.66	48.44	-90.12	-2,519.32	864.05	920.07	826.38	93.68	9.821		
12,700.00	10,263.64	12,745.84	10,265.77	48.10	49.85	-90.13	-2,619.32	864.59	920.07	823.50	96.57	9.527		
12,800.00	10,263.34	12,845.84	10,265.57	49.56	51.26	-90.13	-2,719.32	865.14	920.07	820.59	99.48	9.248		
12,900.00	10,263.04	12,945.84	10,265.37	51.03	52.69	-90.14	-2,819.31	865.69	920.08	817.66	102.42	8.983		
13,000.00	10,262.73	13,045.84	10,265.17	52.51	54.14	-90.15	-2,919.31	866.23	920.08	814.70	105.38	8.731		
13,100.00	10,262.43	13,145.84	10,264.97	54.00	55.59	-90.15	-3,019.31	866.78	920.08	811.73	108.35	8.492		
13,200.00	10,262.13	13,245.84	10,264.76	55.49	57.05	-90.16	-3,119.31	867.33	920.08	808.74	111.34	8.264		
13,300.00	10,261.83	13,345.84	10,264.56	57.00	58.53	-90.16	-3,219.31	867.87	920.09	805.74	114.35	8.046		
13,400.00	10,261.52	13,445.84	10,264.36	58.51	60.01	-90.17	-3,319.31	868.42	920.09	802.72	117.37	7.839		
13,500.00	10,261.22	13,545.84	10,264.16	60.03	61.50	-90.18	-3,419.30	868.97	920.09	799.69	120.41	7.642		
13,600.00	10,260.92	13,645.84	10,263.96	61.55	62.99	-90.18	-3,519.30	869.51	920.10	796.64	123.45	7.453		
13,700.00	10,260.62	13,745.84	10,263.75	63.08	64.50	-90.19	-3,619.30	870.06	920.10	793.59	126.51	7.273		
13,800.00	10,260.31	13,845.84	10,263.55	64.62	66.01	-90.20	-3,719.30	870.61	920.10	790.52	129.58	7.100		
13,900.00	10,260.01	13,945.84	10,263.35	66.16	67.52	-90.20	-3,819.30	871.16	920.11	787.44	132.66	6.936		
14,000.00	10,259.71	14,045.84	10,263.15	67.71	69.05	-90.21	-3,919.30	871.70	920.11	784.36	135.75	6.778		
14,100.00	10,259.40	14,145.84	10,262.95	69.26	70.57	-90.21	-4,019.29	872.25	920.11	781.26	138.85	6.627		
14,200.00	10,259.10	14,245.84	10,262.74	70.81	72.10	-90.22	-4,119.29	872.80	920.12	778.16	141.96	6.482		
14,300.00	10,258.80	14,345.84	10,262.54	72.37	73.64	-90.23	-4,219.29	873.34	920.12	775.05	145.07	6.343		
14,400.00	10,258.50	14,445.84	10,262.34	73.93	75.18	-90.23	-4,319.29	873.89	920.12	771.93	148.19	6.209		
14,500.00	10,258.19	14,545.84	10,262.14	75.49	76.73	-90.24	-4,419.29	874.44	920.13	768.81	151.32	6.081		
14,600.00	10,257.89	14,645.84	10,261.94	77.06	78.28	-90.25	-4,519.28	874.98	920.13	765.68	154.45	5.957		
14,700.00	10,257.59	14,745.84	10,261.73	78.63	79.83	-90.25	-4,619.28	875.53	920.13	762.54	157.59	5.839		
14,800.00	10,257.29	14,845.84	10,261.53	80.21	81.38	-90.26	-4,719.28	876.08	920.14	759.40	160.74	5.724		
14,900.00	10,256.98	14,945.84	10,261.33	81.78	82.94	-90.26	-4,819.28	876.62	920.14	756.25	163.89	5.614		
15,000.00	10,256.68	15,045.84	10,261.13	83.36	84.51	-90.27	-4,919.28	877.17	920.14	753.10	167.05	5.508		
15,100.00	10,256.38	15,145.84	10,260.93	84.94	86.07	-90.28	-5,019.28	877.72	920.15	749.94	170.21	5.406		

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 Bora Bora 13-24 Fed Com 215H
<b>Project:</b>	Eddy County, NM (NAD-83)	<b>TVD Reference:</b>	3507.0' GE + 23.5' KB @ 3530.50usft
<b>Reference Site:</b>	Bora Bora 13-24	<b>MD Reference:</b>	3507.0' GE + 23.5' KB @ 3530.50usft
<b>Site Error:</b>	0.00 usft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	Bora Bora 13-24 Fed Com 215H	<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 #1	<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 Tooface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor		
15,200.00	10,256.08	15,245.84	10,260.72	86.52	87.64	-90.28	-5,119.27	878.26	920.15	746.78	173.37	5.307		
15,300.00	10,255.77	15,345.84	10,260.52	88.11	89.21	-90.29	-5,219.27	878.81	920.16	743.62	176.54	5.212		
15,400.00	10,255.47	15,445.84	10,260.32	89.70	90.78	-90.30	-5,319.27	879.36	920.16	740.45	179.71	5.120		
15,500.00	10,255.17	15,545.84	10,260.12	91.28	92.36	-90.30	-5,419.27	879.90	920.16	737.27	182.89	5.031		
15,600.00	10,254.86	15,645.84	10,259.92	92.88	93.94	-90.31	-5,519.27	880.45	920.17	734.10	186.07	4.945		
15,700.00	10,254.56	15,745.84	10,259.72	94.47	95.51	-90.31	-5,619.27	881.00	920.17	730.92	189.25	4.862		
15,800.00	10,254.26	15,845.84	10,259.51	96.06	97.10	-90.32	-5,719.26	881.54	920.17	727.74	192.44	4.782		
15,900.00	10,253.96	15,945.84	10,259.31	97.66	98.68	-90.33	-5,819.26	882.09	920.18	724.55	195.63	4.704		
16,000.00	10,253.65	16,045.84	10,259.11	99.25	100.26	-90.33	-5,919.26	882.64	920.18	721.36	198.82	4.628		
16,100.00	10,253.35	16,145.84	10,258.91	100.85	101.85	-90.34	-6,019.26	883.18	920.18	718.17	202.01	4.555		
16,200.00	10,253.05	16,245.84	10,258.71	102.45	103.44	-90.35	-6,119.26	883.73	920.19	714.97	205.21	4.484		
16,300.00	10,252.75	16,345.84	10,258.50	104.05	105.03	-90.35	-6,219.26	884.28	920.19	711.78	208.41	4.415		
16,400.00	10,252.44	16,445.84	10,258.30	105.65	106.62	-90.36	-6,319.25	884.82	920.19	708.58	211.62	4.348		
16,500.00	10,252.14	16,545.84	10,258.10	107.26	108.21	-90.36	-6,419.25	885.37	920.20	705.38	214.82	4.284		
16,600.00	10,251.84	16,645.84	10,257.90	108.86	109.81	-90.37	-6,519.25	885.92	920.20	702.17	218.03	4.221		
16,700.00	10,251.54	16,745.84	10,257.70	110.47	111.40	-90.38	-6,619.25	886.46	920.20	698.97	221.24	4.159		
16,800.00	10,251.23	16,845.84	10,257.49	112.07	113.00	-90.38	-6,719.25	887.01	920.21	695.76	224.45	4.100		
16,900.00	10,250.93	16,945.84	10,257.29	113.68	114.60	-90.39	-6,819.24	887.56	920.21	692.55	227.66	4.042		
17,000.00	10,250.63	17,045.84	10,257.09	115.29	116.20	-90.40	-6,919.24	888.10	920.22	689.34	230.88	3.986		
17,100.00	10,250.33	17,145.84	10,256.89	116.90	117.80	-90.40	-7,019.24	888.65	920.22	686.13	234.09	3.931		
17,200.00	10,250.02	17,245.84	10,256.69	118.51	119.40	-90.41	-7,119.24	889.20	920.22	682.91	237.31	3.878		
17,300.00	10,249.72	17,345.84	10,256.48	120.12	121.00	-90.41	-7,219.24	889.75	920.23	679.69	240.53	3.826		
17,400.00	10,249.42	17,445.84	10,256.28	121.73	122.61	-90.42	-7,319.24	890.29	920.23	676.48	243.75	3.775		
17,500.00	10,249.11	17,545.84	10,256.08	123.34	124.21	-90.43	-7,419.23	890.84	920.23	673.26	246.98	3.726		
17,600.00	10,248.81	17,645.84	10,255.88	124.95	125.82	-90.43	-7,519.23	891.39	920.24	670.04	250.20	3.678		
17,700.00	10,248.51	17,745.84	10,255.68	126.57	127.42	-90.44	-7,619.23	891.93	920.24	666.81	253.43	3.631		
17,800.00	10,248.21	17,845.84	10,255.47	128.18	129.03	-90.45	-7,719.23	892.48	920.25	663.59	256.66	3.586		
17,900.00	10,247.90	17,945.84	10,255.27	129.80	130.64	-90.45	-7,819.23	893.03	920.25	660.37	259.88	3.541		
18,000.00	10,247.60	18,045.84	10,255.07	131.41	132.25	-90.46	-7,919.23	893.57	920.25	657.14	263.11	3.498		
18,100.00	10,247.30	18,145.84	10,254.87	133.03	133.86	-90.47	-8,019.22	894.12	920.26	653.91	266.34	3.455		
18,200.00	10,247.00	18,245.84	10,254.67	134.64	135.47	-90.47	-8,119.22	894.67	920.26	650.68	269.58	3.414		
18,300.00	10,246.69	18,345.84	10,254.46	136.26	137.08	-90.48	-8,219.22	895.21	920.26	647.45	272.81	3.373		
18,400.00	10,246.39	18,445.84	10,254.26	137.88	138.69	-90.48	-8,319.22	895.76	920.27	644.22	276.04	3.334		
18,500.00	10,246.09	18,545.84	10,254.06	139.50	140.30	-90.49	-8,419.22	896.31	920.27	640.99	279.28	3.295		
18,600.00	10,245.79	18,645.84	10,253.86	141.12	141.91	-90.50	-8,519.21	896.85	920.28	637.76	282.52	3.257		
18,700.00	10,245.48	18,745.84	10,253.66	142.73	143.53	-90.50	-8,619.21	897.40	920.28	634.53	285.75	3.221		
18,800.00	10,245.18	18,845.84	10,253.45	144.35	145.14	-90.51	-8,719.21	897.95	920.28	631.29	288.99	3.184		
18,900.00	10,244.88	18,945.84	10,253.25	145.97	146.76	-90.52	-8,819.21	898.49	920.29	628.06	292.23	3.149		
19,000.00	10,244.57	19,045.84	10,253.05	147.59	148.37	-90.52	-8,919.21	899.04	920.29	624.82	295.47	3.115		
19,100.00	10,244.27	19,145.84	10,252.85	149.22	149.99	-90.53	-9,019.21	899.59	920.30	621.58	298.71	3.081		
19,200.00	10,243.97	19,245.84	10,252.65	150.84	151.60	-90.53	-9,119.20	900.13	920.30	618.35	301.95	3.048		
19,300.00	10,243.67	19,345.84	10,252.45	152.46	153.22	-90.54	-9,219.20	900.68	920.30	615.11	305.20	3.015		
19,400.00	10,243.36	19,445.84	10,252.24	154.08	154.84	-90.55	-9,319.20	901.23	920.31	611.87	308.44	2.984		
19,500.00	10,243.06	19,545.84	10,252.04	155.70	156.45	-90.55	-9,419.20	901.77	920.31	608.63	311.68	2.953		
19,600.00	10,242.76	19,645.84	10,251.84	157.33	158.07	-90.56	-9,519.20	902.32	920.31	605.39	314.93	2.922		
19,700.00	10,242.46	19,745.84	10,251.64	158.95	159.69	-90.57	-9,619.20	902.87	920.32	602.15	318.17	2.893		
19,800.00	10,242.15	19,845.84	10,251.44	160.57	161.31	-90.57	-9,719.19	903.41	920.32	598.90	321.42	2.863		
19,900.00	10,241.85	19,945.84	10,251.23	162.20	162.93	-90.58	-9,819.19	903.96	920.33	595.66	324.66	2.835		
20,000.00	10,241.55	20,045.84	10,251.03	163.82	164.55	-90.58	-9,919.19	904.51	920.33	592.42	327.91	2.807		
20,100.00	10,241.25	20,145.84	10,250.83	165.44	166.17	-90.59	-10,019.19	905.05	920.33	589.17	331.16	2.779		
20,200.00	10,240.94	20,245.84	10,250.63	167.07	167.79	-90.60	-10,119.19	905.60	920.34	585.93	334.41	2.752		
20,300.00	10,240.64	20,345.84	10,250.43	168.69	169.41	-90.60	-10,219.19	906.15	920.34	582.69	337.66	2.726		

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 Bora Bora 13-24 Fed Com 215H
<b>Project:</b>	Eddy County, NM (NAD-83)	<b>TVD Reference:</b>	3507.0' GE + 23.5' KB @ 3530.50usft
<b>Reference Site:</b>	Bora Bora 13-24	<b>MD Reference:</b>	3507.0' GE + 23.5' KB @ 3530.50usft
<b>Site Error:</b>	0.00 usft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	Bora Bora 13-24 Fed Com 215H	<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 #1	<b>Offset TVD Reference:</b>	Offset Datum

<b>Offset Design</b>												<b>Offset Site Error:</b>	0.00 usft
Bora Bora 13-24 - Bora Bora 13-24 Fed Com 216H - OH - Plan #1												<b>Offset Well Error:</b>	0.00 usft
Survey Program: 0-LEAM MWD+HDGM													
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	
20,400.00	10,240.34	20,445.84	10,250.22	170.32	171.03	-90.61	-10,319.18	906.70	920.35	579.44	340.91	2.700	
20,500.00	10,240.03	20,545.84	10,250.02	171.95	172.65	-90.62	-10,419.18	907.24	920.35	576.19	344.16	2.674	
20,500.67	10,240.03	20,546.51	10,250.02	171.96	172.66	-90.62	-10,419.85	907.25	920.35	576.17	344.18	2.674	
20,511.39	10,240.00	20,556.49	10,250.00	172.13	172.82	-90.62	-10,429.83	907.30	920.35	575.83	344.52	2.671	

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

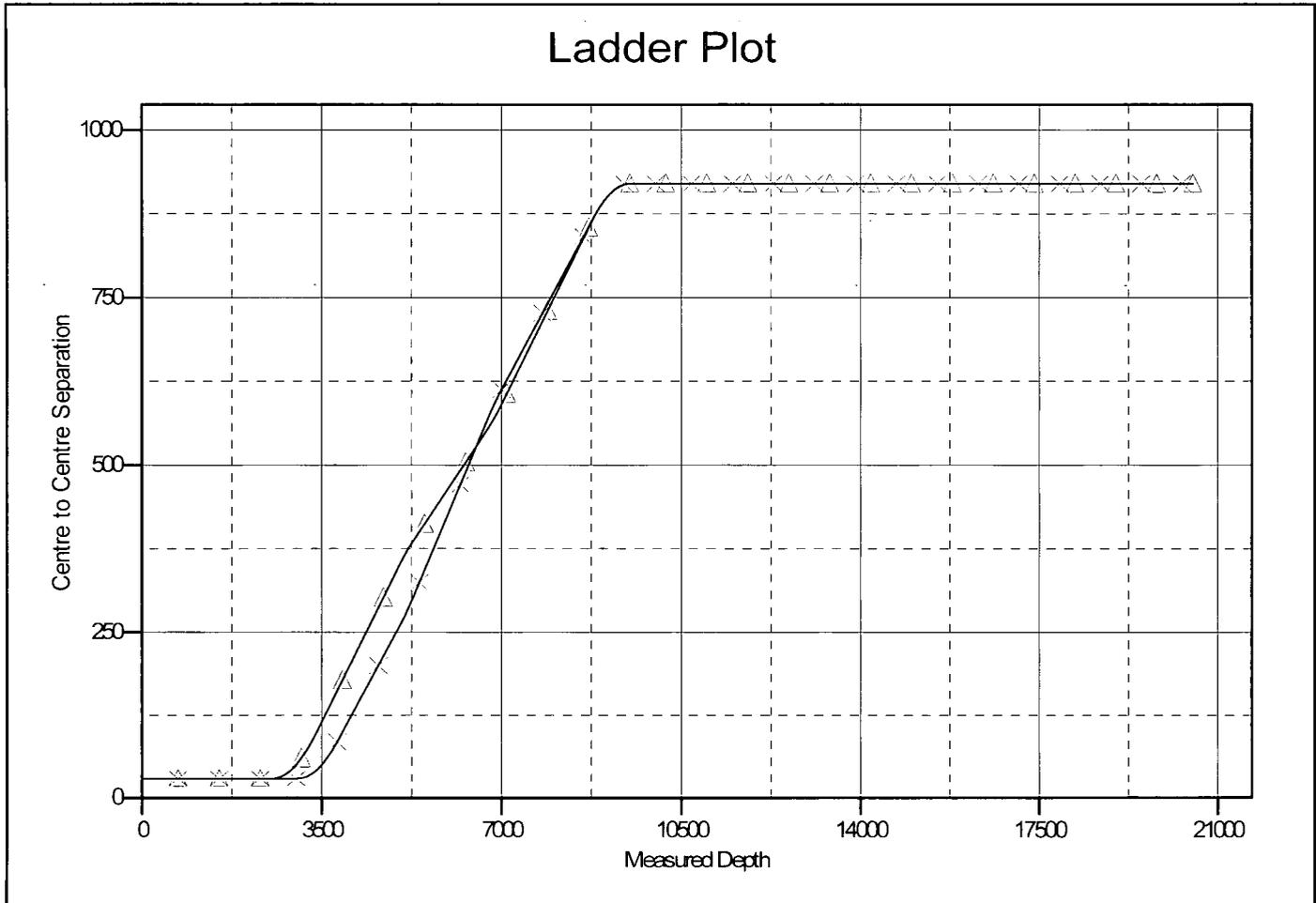
# LEAM Drilling Services

## Anticollision Report

<b>Company:</b>	Devon Energy	<b>Local Co-ordinate Reference:</b>	Well Bora Bora 13-24 Fed Com 215H
<b>Project:</b>	Eddy County, NM (NAD-83)	<b>TVD Reference:</b>	3507.0' GE + 23.5' KB @ 3530.50usft
<b>Reference Site:</b>	Bora Bora 13-24	<b>MD Reference:</b>	3507.0' GE + 23.5' KB @ 3530.50usft
<b>Site Error:</b>	0.00 usft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	Bora Bora 13-24 Fed Com 215H	<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 #1	<b>Offset TVD Reference:</b>	Offset Datum

Reference Depths are relative to 3507.0' GE + 23.5' KB @ 3530.50usft  
 Offset Depths are relative to Offset Datum  
 Central Meridian is 104° 19' 60.0000 W

Coordinates are relative to: Bora Bora 13-24 Fed Com 215H  
 Coordinate System is US State Plane 1983, New Mexico Eastern Zone  
 Grid Convergence at Surface is: 0.32°



### LEGEND

- x Bora Bora 13-24 Fed Com 216H, OH, Plan #1 V0
- ▲ Bora Bora 13-24 Fed Com 214H, OH, Plan #1 V0

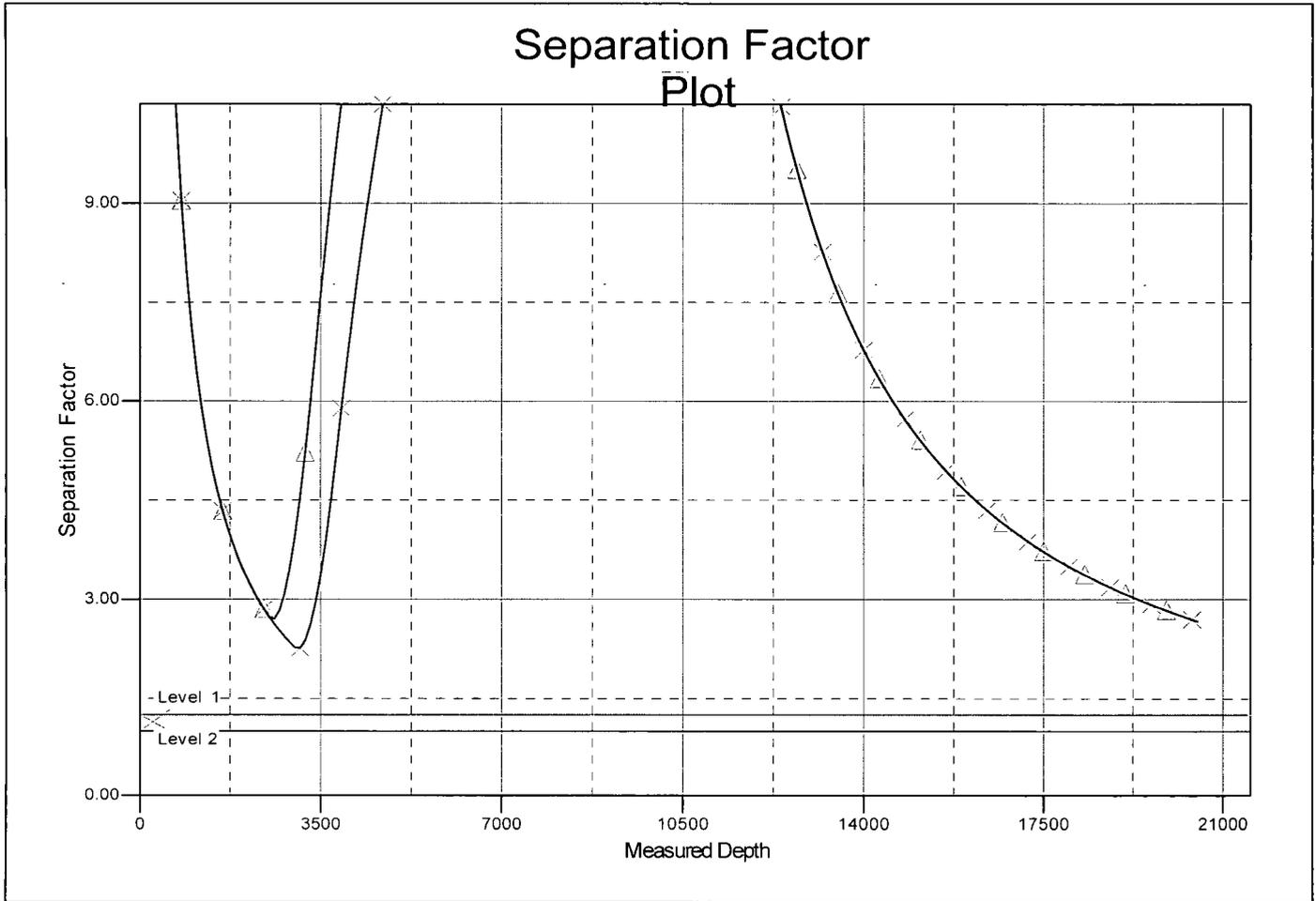
# LEAM Drilling Services

## Anticollision Report

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### LEGEND

✕ Bora Bora 13-24 Fed Com 216H, OH, Plan #1 V0    ▲ Bora Bora 13-24 Fed Com 214H, OH, Plan #1 V0

## Devon Energy – Bora Bora 13-24 Fed Com 215H

### 1. Geologic Formations

TVD of target	10240	Pilot hole depth	N/A
MD at TD:	20511	Deepest expected fresh water:	

#### Basin

Formation	Depth (TVD) from KB	Water/Mineral Bearing/ Target Zone?	Hazards*
Rustler	825		
Salado	1200		
Base of Salt	4500		
Delaware	4530		
L Brushy Canyon	8110		
Bone Spring	8440		
Leonard 'A'	8540		
Leonard 'B'	9050		
Leonard 'C'	9260		
1st BSPG Sand	9475		
2nd BSPG Sand	10070		
Landing Point	10270		
EOL	10240		

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

## Devon Energy – Bora Bora 13-24 Fed Com 215H

### 2. Casing Program

Hole Size	Casing Interval		Csg. Size	Weight (PPF)	Grade	Conn.
	From	To				
17.5"	0	850	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 – Bora Bora 13-24 Fed Com 215H**

	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 – Bora Bora 13-24 Fed Com 215H**

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

<b>Casing</b>	<b># Sks</b>	<b>TOC</b>	<b>Wt. (lb/gal)</b>	<b>H<sub>2</sub>O (gal/sk)</b>	<b>Yld (ft<sup>3</sup>/sack)</b>	<b>Slurry Description</b>
Surface	887	Surf	13.2	6.33	1.33	Lead: Class C Cement + additives
Int	1091	Surf	9	20.6	1.94	Lead: Class C Cement + additives
	196	500' above shoe	13.2	6.42	1.33	Tail: Class H / C + additives
Production	328	500' tieback	9	20.6	1.94	Lead: Class H / C + additives
	2058	KOP	13.2	5.31	1.6	Tail: Class H / C + additives

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

<b>Casing String</b>	<b>% Excess</b>
Surface	100%
Intermediate	50%
Production	10%

Devon Energy – Bora Bora 13-24 Fed Com 215H

4. Pressure Control Equipment

BOP installed and tested before drilling which hole?	Size?	Min. Required WP	Type	✓	Tested to:
Int 1	13-5/8"	3M	Annular	X	50% of rated working pressure
			Blind Ram	X	3M
			Pipe Ram		
			Double Ram	X	
			Other*		
Production	13-5/8"	5M	Annular	X	50% of rated working pressure
			Blind Ram	X	5M
			Pipe Ram		
			Double Ram	X	
			Other*		
			Annular		
			Blind Ram		
			Pipe Ram		
			Double Ram		
			Other*		

**Devon Energy – Bora Bora 13-24 Fed Com 215H**

**5. Mud Program**

6. Depth		Type	Weight (ppg)	Vis	Water Loss
From	To				
0	850	FW	8.5 – 9.0	28-34	N/C
850	6000	Brine	10 – 10.5	28-34	N/C
6000	TD	WBM	8.5 – 9.0	28-34	N/C

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

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

**6. Logging and Testing Procedures**

Logging, Coring and Testing.	
X	Will run GR/CNL from TD to surface (horizontal well – vertical portion of hole). Stated logs run will be in the Completion Report and submitted to the BLM.
	No Logs are planned based on well control or offset log information.
	Drill stem test? If yes, explain
	Coring? If yes, explain

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

**7. Drilling Conditions**

Condition	Specify what type and where?
BH Pressure at deepest TVD	4792psi
Abnormal Temperature	No

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

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

## Devon Energy – Bora Bora 13-24 Fed Com 215H

### 8. Other facets of operation

Is this a walking operation? Potentially

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

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

Will be pre-setting casing? Potentially

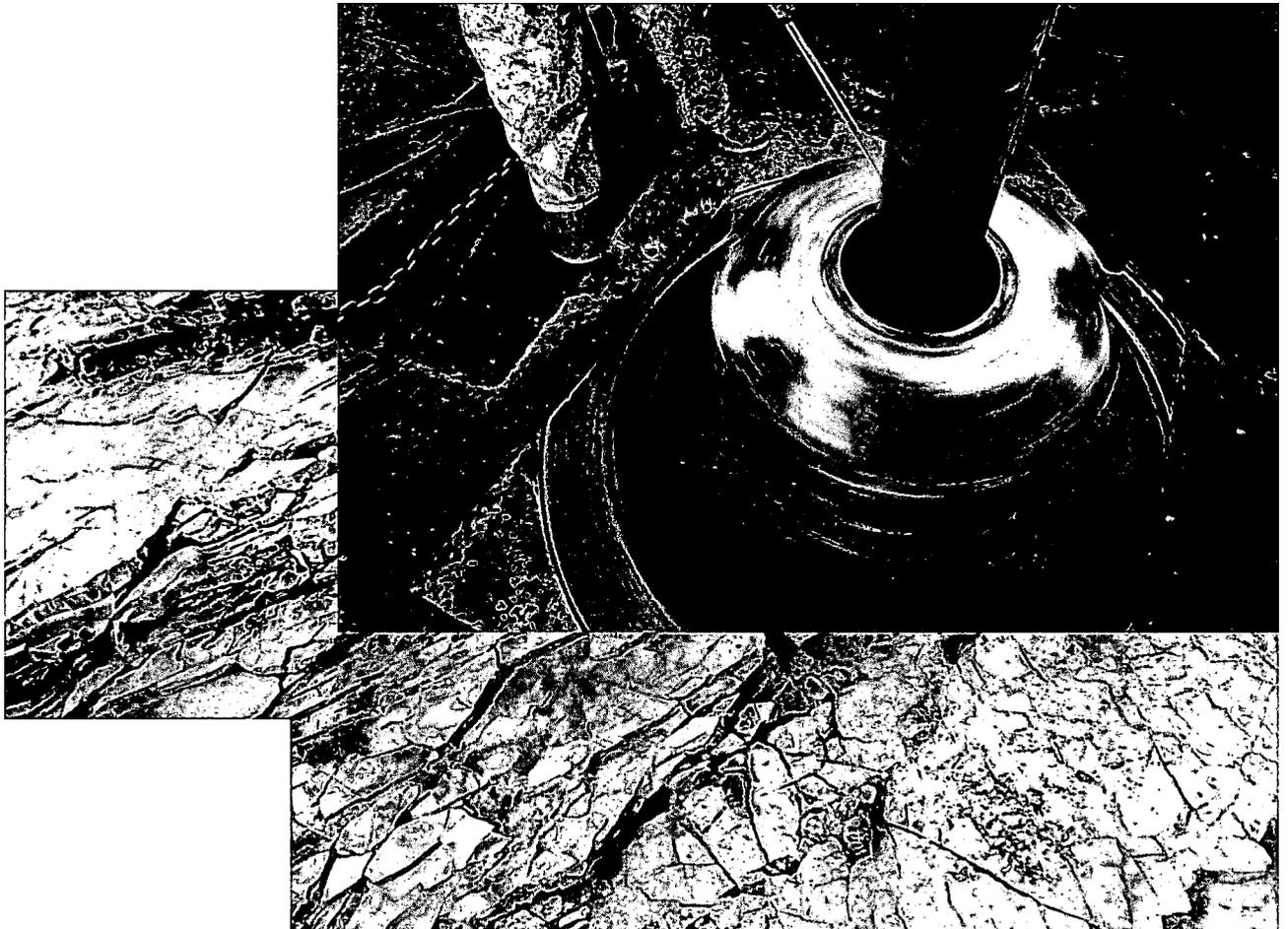
1. Spudder rig will move in and drill surface hole.
  - a. Rig will utilize fresh water based mud to drill surface hole to TD. Solids control will be handled entirely on a closed loop basis.
2. After drilling the surface hole section, the spudder rig will run casing and cement following all of the applicable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

Attachments

- Directional Plan  
 Other, describe



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.

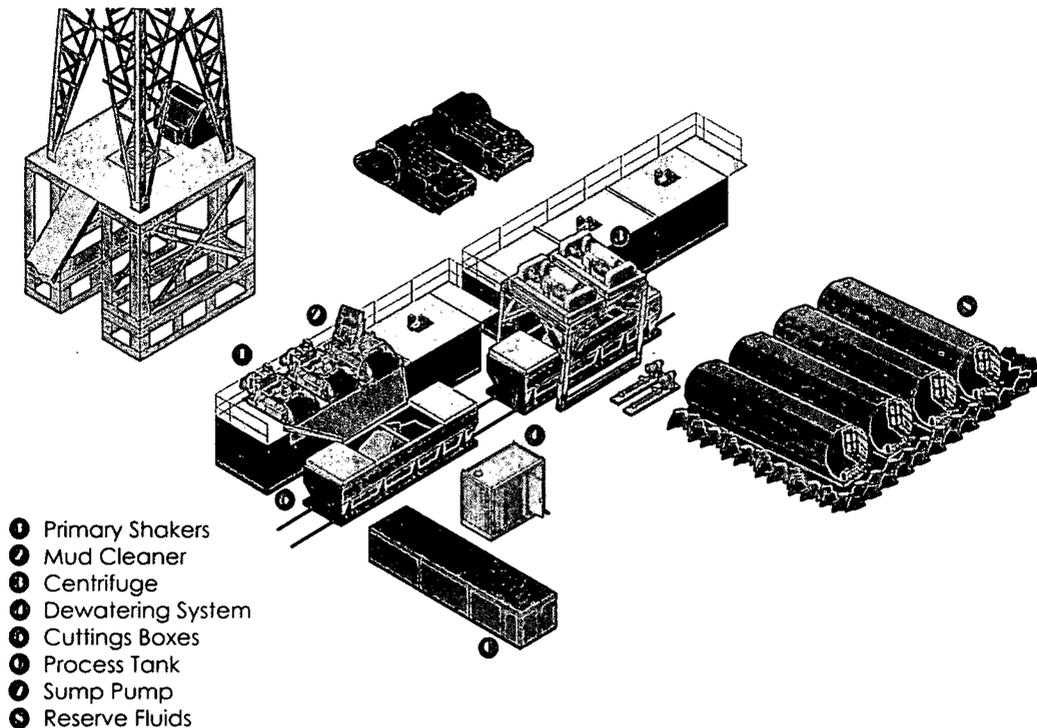
## II. Operations and Maintenance Plan

*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



- ① Primary Shakers
- ② Mud Cleaner
- ③ Centrifuge
- ④ Dewatering System
- ⑤ Cuttings Boxes
- ⑥ Process Tank
- ⑦ Sump Pump
- ⑧ Reserve Fluids



**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.

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.

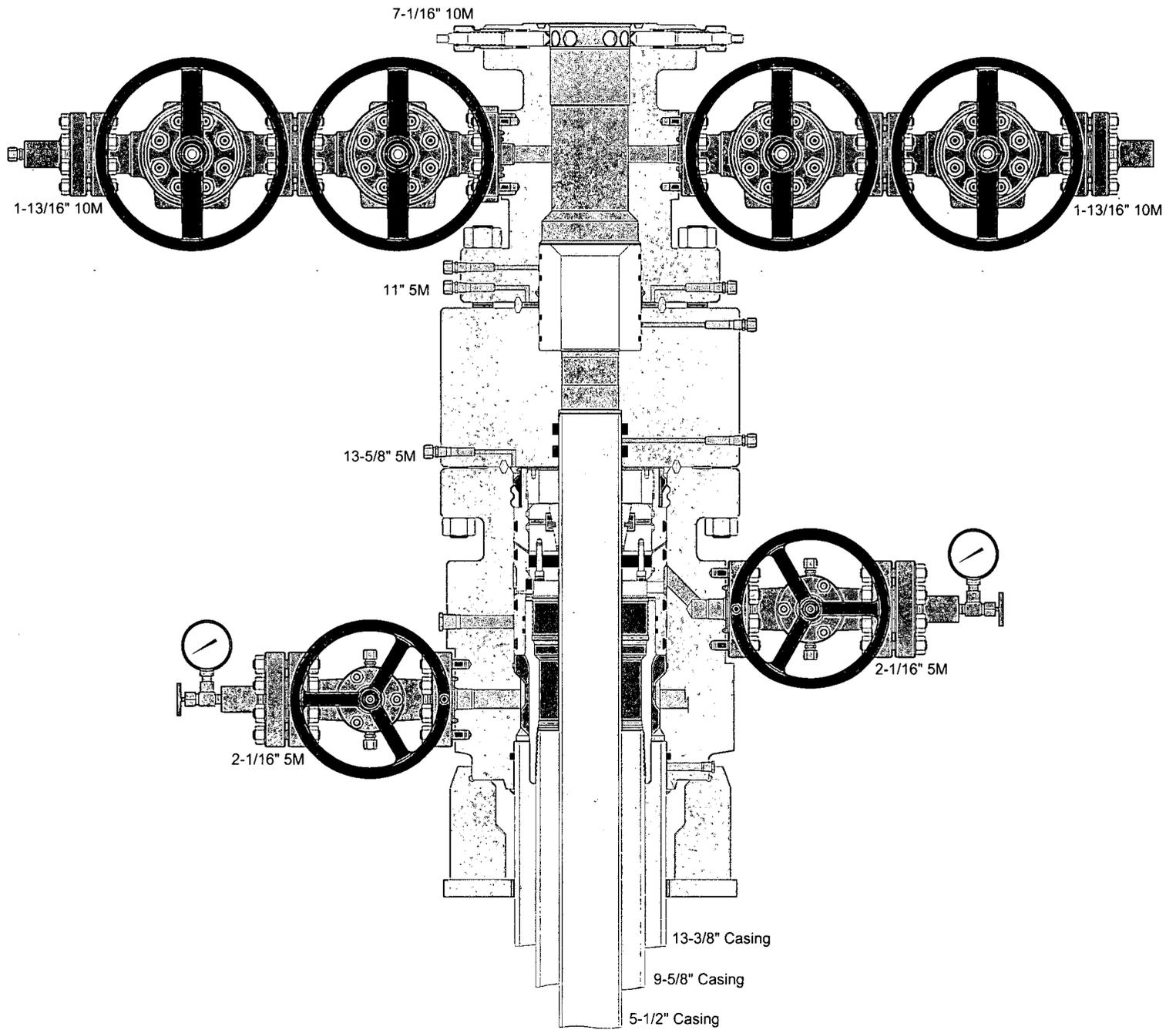
- Wellhead will be installed by wellhead representatives.
- If the welding is performed by a third party, the wellhead representative will monitor the temperature to verify that it does not exceed the maximum temperature of the seal.
- Wellhead representative will install the test plug for the initial 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 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 intermediate casing with a mandrel hanger, the 13-5/8" BOP/BOPE system with a minimum rating of 5M will already be installed on the wellhead.

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

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



# **Devon Energy**

## **APD VARIANCE DATA**

**OPERATOR NAME:** Devon Energy

### **1. SUMMARY OF Variance:**

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

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

### **2. Description of Operations**

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

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.

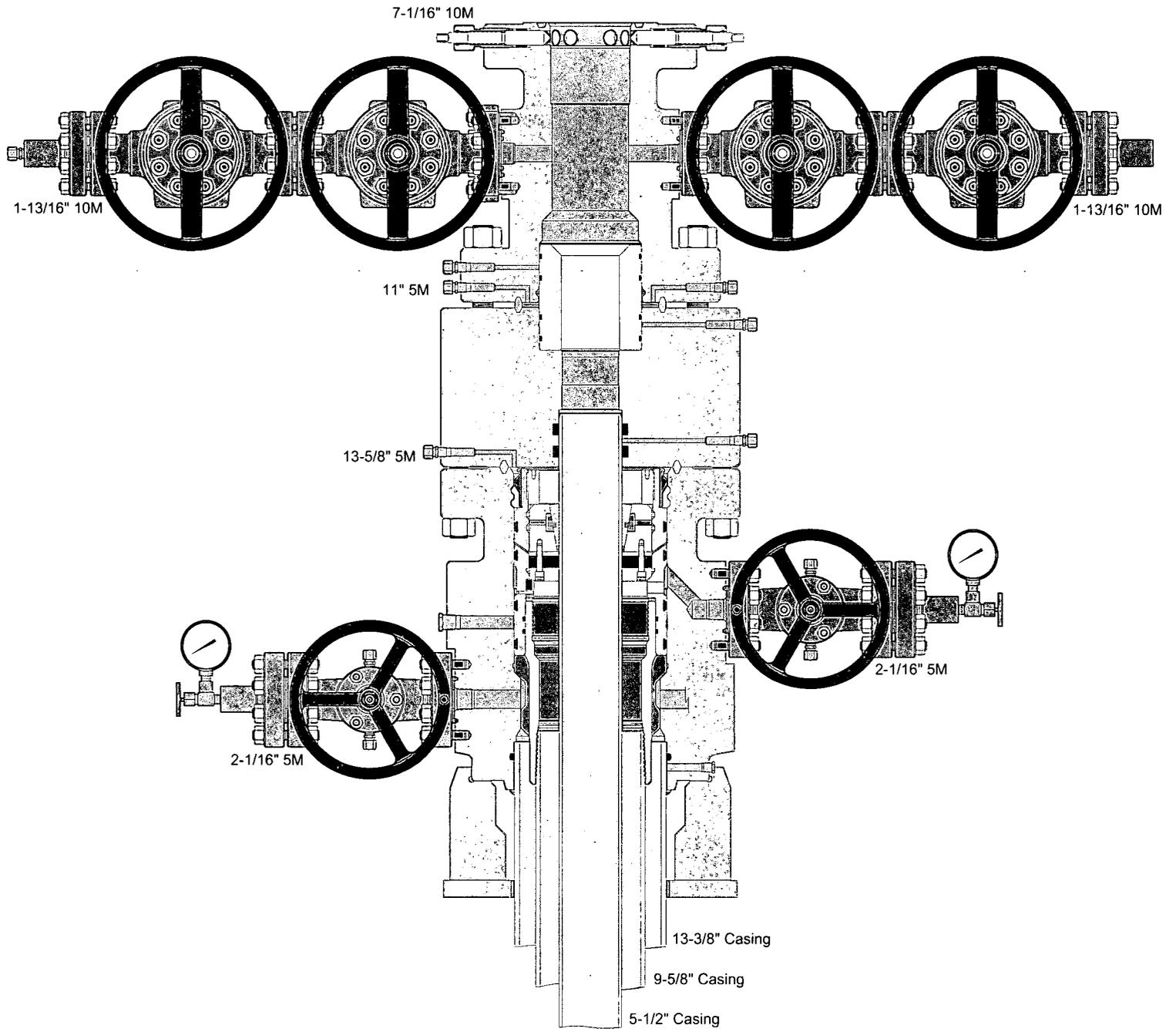
- Wellhead will be installed by wellhead representatives.
- If the welding is performed by a third party, the wellhead representative will monitor the temperature to verify that it does not exceed the maximum temperature of the seal.
- Wellhead representative will install the test plug for the initial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





Fluid Technology

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

Monday, June 14, 2010

RE: Drilling & Production Hoses  
Lifting & Safety Equipment

To Helmerich & Payne,

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

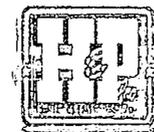
Should you have any questions or require any additional information/clarifications then please do not hesitate to contact us.

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

Best regards,

Robin Hodgson  
Sales Manager  
ContiTech Beattie Corp

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



RIG 212



QUALITY DOCUMENT

PHOENIX RUBBER INDUSTRIAL LTD.

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

SALES & MARKETING: H-1092 Budapest, Ráday u. 42-44. Hungary • H-1440 Budapest, P. O. Box 26  
Phone: (361) 456-4200 • Fax: (361) 217-2972, 456-4273 • www.taurusemerge.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.	
<p>Pressure test with water at ambient temperature</p> <p style="text-align: center;">See attachment. (1 page)</p> <p>↑ 10 mm = 10 Min. → 10 mm = 25 MPa</p>					
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: 29. April. 2002.	Inspector		Quality Control PHOENIX RUBBER Industrial Ltd. Hose Inspection and Pressure Test PHOENIX RUBBER Q.C.		

14094-65

40920-0-00015 N800C

6	CN	+0.000	0	14:00		
	RD	+0.000	0	14:00		
	PL	+0.000	0	14:00		
7	CN	+0.000	0	13:45	40	60
	RD	+0.000	0	13:40		
	PL	+0.000	0	13:10		
8	CN	+0.000	0	13:20		
	RD	+0.000	0	13:20		
	PL	+0.000	0	13:20		
5	CN	+0.000	0	13:00		
	RD	+0.000	0	13:00		
	PL	+0.000	0	13:00		
4						
3						
2						

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

VERIFIED TRUE CO.  
 PHOENIX RUBBER CO.



**APD ID:** 10400036684

**Submission Date:** 11/26/2018

Highlighted data reflects the most recent changes

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

**Well Name:** BORA BORA 13-24 FED COM

**Well Number:** 215H

[Show Final Text](#)

**Well Type:** OIL WELL

**Well Work Type:** Drill

### Section 1 - Existing Roads

**Will existing roads be used?** YES

**Existing Road Map:**

BORA\_BORA\_13\_24\_FED\_COM\_215H\_EX\_RD\_20181126140346.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?** NO

### Section 3 - Location of Existing Wells

**Existing Wells Map?** YES

**Attach Well map:**

OneMileBuffer\_WA017459410\_20181126140400.pdf

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

**Well Name:** BORA BORA 13-24 FED COM

**Well Number:** 215H

**Existing Wells description:**

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

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

**Estimated Production Facilities description:** Wells will go to an existing production facility. Please refer to CTB plat.

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

#### Water Source Table

**Water source use type:** STIMULATION

**Water source type:** OTHER

**Describe type:** Fresh Water

**Source latitude:**

**Source longitude:**

**Source datum:**

**Water source permit type:** OTHER

**Source land ownership:** FEDERAL

**Water source transport method:** PIPELINE

**Source transportation land ownership:** STATE

**Water source volume (barrels):** 135000

**Source volume (acre-feet):** 17.400568

**Source volume (gal):** 5670000

**Water source and transportation map:**

WATER\_MAP\_215\_20181126140427.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.):**

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

**Well Name:** BORA BORA 13-24 FED COM

**Well Number:** 215H

**New water well casing?**

**Used casing source:**

**Drilling method:**

**Drill material:**

**Grout material:**

**Grout depth:**

**Casing length (ft.):**

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

**Well Production type:**

**Completion Method:**

**Water well additional information:**

**State appropriation permit:**

**Additional information attachment:**

### Section 6 - Construction Materials

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

**Construction Materials source location attachment:**

Caliche\_Map\_215\_20181126140451.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.



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

**Well Name:** BORA BORA 13-24 FED COM

**Well Number:** 215H

**Description of cuttings location**

**Cuttings area length (ft.)**

**Cuttings area width (ft.)**

**Cuttings area depth (ft.)**

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

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

**WCuttings area liner**

**Cuttings area liner specifications and installation description**

**Section 8 - Ancillary Facilities**

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

**Ancillary Facilities attachment:**

**Comments:**

**Section 9 - Well Site Layout**

**Well Site Layout Diagram:**

RIGLAYOUT\_20181126140525.pdf

**Comments:**

**Section 10 - Plans for Surface Reclamation**

**Type of disturbance:** New Surface Disturbance

**Multiple Well Pad Name:** TOMB RAIDER MDP 13 PAD

**Multiple Well Pad Number:** 3

**Recontouring attachment:**

**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.

<b>Well pad proposed disturbance (acres):</b> 8.267	<b>Well pad interim reclamation (acres):</b> 4.929	<b>Well pad long term disturbance (acres):</b> 3.338
<b>Road proposed disturbance (acres):</b> 0	<b>Road interim reclamation (acres):</b> 1.006	<b>Road long term disturbance (acres):</b> 1.006
<b>Powerline proposed disturbance (acres):</b> 0	<b>Powerline interim reclamation (acres):</b> 0	<b>Powerline long term disturbance (acres):</b> 0
<b>Pipeline proposed disturbance (acres):</b> 0	<b>Pipeline interim reclamation (acres):</b> 0.3694146	<b>Pipeline long term disturbance (acres):</b> 0.3694146
<b>Other proposed disturbance (acres):</b> 0	<b>Other interim reclamation (acres):</b> 0	<b>Other long term disturbance (acres):</b> 0

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

**Well Name:** BORA BORA 13-24 FED COM

**Well Number:** 215H

**Total proposed disturbance:** 8.267      **Total interim reclamation:** 6.3044147      **Total long term disturbance:** 4.7134147

**Disturbance Comments:**

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

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

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

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

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

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

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

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

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

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

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

**Non native seed used?** NO

**Non native seed description:**

**Seedling transplant description:**

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

**Seedling transplant description attachment:**

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

**Seed harvest description:**

**Seed harvest description attachment:**

**Seed Management**

**Seed Table**

**Seed type:**

**Seed source:**

**Seed name:**

**Source name:**

**Source address:**

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

**Well Name:** BORA BORA 13-24 FED COM

**Well Number:** 215H

**Source phone:**

**Seed cultivar:**

**Seed use location:**

**PLS pounds per acre:**

**Proposed seeding season:**

<b>Seed Summary</b>	
<b>Seed Type</b>	<b>Pounds/Acre</b>

**Total pounds/Acre:**

**Seed reclamation attachment:**

**Operator Contact/Responsible Official Contact Info**

**First Name:** JACOB

**Last Name:** OCHOA

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

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

**Seedbed prep:**

**Seed BMP:**

**Seed method:**

**Existing invasive species?** NO

**Existing invasive species treatment description:**

**Existing invasive species treatment attachment:**

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

**Weed treatment plan attachment:**

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

**Monitoring plan attachment:**

**Success standards:** N/A

**Pit closure description:** N/A

**Pit closure attachment:**

**Section 11 - Surface Ownership**

**Disturbance type:** PIPELINE

**Describe:**

**Surface Owner:** BUREAU OF LAND MANAGEMENT

**Other surface owner description:**

**BIA Local Office:**

**BOR Local Office:**

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

**Well Name:** BORA BORA 13-24 FED COM

**Well Number:** 215H

**COE Local Office:**

**DOD Local Office:**

**NPS Local Office:**

**State Local Office:**

**Military Local Office:**

**USFWS Local Office:**

**Other Local Office:**

**USFS Region:**

**USFS Forest/Grassland:**

**USFS Ranger District:**

**Disturbance type:** NEW ACCESS ROAD

**Describe:**

**Surface Owner:** BUREAU OF LAND MANAGEMENT

**Other surface owner description:**

**BIA Local Office:**

**BOR Local Office:**

**COE Local Office:**

**DOD Local Office:**

**NPS Local Office:**

**State Local Office:**

**Military Local Office:**

**USFWS Local Office:**

**Other Local Office:**

**USFS Region:**

**USFS Forest/Grassland:**

**USFS Ranger District:**

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

**Well Name:** BORA BORA 13-24 FED COM

**Well Number:** 215H

**Disturbance type:** EXISTING ACCESS ROAD

**Describe:**

**Surface Owner:** BUREAU OF LAND MANAGEMENT

**Other surface owner description:**

**BIA Local Office:**

**BOR Local Office:**

**COE Local Office:**

**DOD Local Office:**

**NPS Local Office:**

**State Local Office:**

**Military Local Office:**

**USFWS Local Office:**

**Other Local Office:**

**USFS Region:**

**USFS Forest/Grassland:**

**USFS Ranger District:**

**Disturbance type:** WELL PAD

**Describe:**

**Surface Owner:** BUREAU OF LAND MANAGEMENT

**Other surface owner description:**

**BIA Local Office:**

**BOR Local Office:**

**COE Local Office:**

**DOD Local Office:**

**NPS Local Office:**

**State Local Office:**

**Military Local Office:**

**USFWS Local Office:**

**Other Local Office:**

**USFS Region:**

**USFS Forest/Grassland:**

**USFS Ranger District:**

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

**Well Name:** BORA BORA 13-24 FED COM

**Well Number:** 215H

**Section 12 - Other Information**

**Right of Way needed?** NO

**Use APD as ROW?**

**ROW Type(s):**

**ROW Applications**

**SUPO Additional Information:** FLOWLINES -BURIED ELECTRIC LINES CTB

**Use a previously conducted onsite?** NO

**Previous Onsite information:**

**Other SUPO Attachment**

AA000145295\_TOMB\_RAIDER\_12\_1\_CTB\_1\_PAD\_P\_R2\_20181126133241.pdf

400774XYZ\_FL\_GL\_TR\_12\_FED\_213\_516\_TR\_12\_CTB\_1\_P\_R1\_20181126133236.pdf

ELEC\_LN\_TR\_13\_CTB1\_TR\_12\_PAD\_1\_4\_5\_TR1\_12\_CTB\_2\_3\_20181126133242.pdf

Pay.gov\_\_Receipt\_20181126145839.pdf

TOMB\_RAIDER\_12\_1\_FED\_516H\_FLOWLINES\_BURIED\_20190426131707.pdf

SECTION 13, TOWNSHIP 23 SOUTH, RANGE 31 EAST, N.M.P.M.  
 EDDY COUNTY, STATE OF NEW MEXICO  
 ACCESS AERIAL ROUTE MAP



NOT TO SCALE  
 AERIAL PHOTO:  
 GOOGLE EARTH  
 NOVEMBER 2017

**DEVON ENERGY PRODUCTION COMPANY, L.P.**  
**BORA BORA 13-24 FED COM 215H**  
 LOCATED 100 FT. FROM THE NORTH LINE  
 AND 1180 FT. FROM THE EAST LINE OF  
 SECTION 13, TOWNSHIP 23 SOUTH,  
 RANGE 31 EAST, N.M.P.M.  
 EDDY COUNTY, STATE OF NEW MEXICO  
 LAND STATUS: BLM

NOVEMBER 15, 2018

SURVEY NO. 6675A

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

PLAT

One Mile Radius Map

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

USA Contiguous Equidistant Conic Datum: North American 1983 Created by: FME Server Map is current as of 11/26/2018

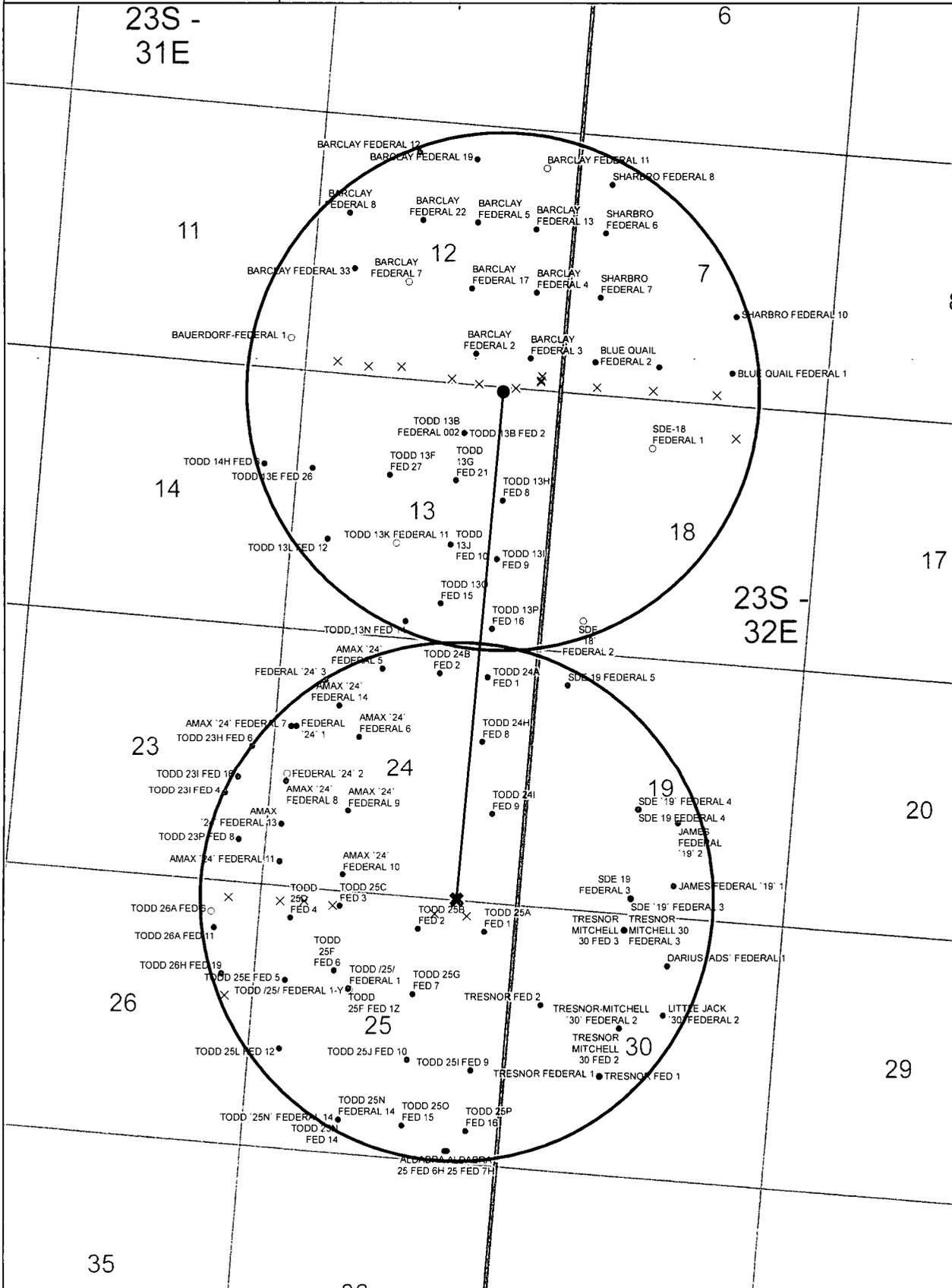
0 0.3 Miles 1 inch = 0.45 miles

BORA BORA 13-24 FED COM 215H WA017459410

TOMB RAIDER 1-12 FED 334H Nearest wellbore to SHL: 274 ft.

ALDABRA 25 FED 7H Nearest wellbore to BHL: 405 ft.

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



BORA BORA 13-24 FED COM 215H



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

WGS\_1984\_Web\_Mercator\_Auxiliary\_Sphere

Prepared by: \_User

Map is current as of: 17-May-2018



Miles

0 0.14 0.28 0.56 1:28,457



BORA BORA 13-24 FED COM 215H

DEVON 30 DAYS INSTALL PRIOR TO COMPLETION  
DEVON WILL CONTACT BLM IF ADDITIONAL TIME IS NEEDED  
DISTURBANCE: EXISTING  
CONTENT: TREATED WATER & FRESH WATER  
TYPE OF PIPE: LAYFLAT  
SIZE OF PIPE: 10" OR 12"  
LENGTH OF PIPE: 9,358' FOR FW & 12,011' FOR TW

23S - 31E - 3

23S - 31E - 2

23S - 31E - 1

23S - 32E - 6

### Caliche Pit 23S 31E Section 1

4,749.77 ft

23S - 31E - 10

23S - 31E - 11

23S - 31E - 12

23S - 32E - 7

4,829.87 ft

4,196.91 ft

BORA BORA 13-24 FED COM 215H

23S - 31E - 15

23S - 31E - 14

23S - 31E - 13

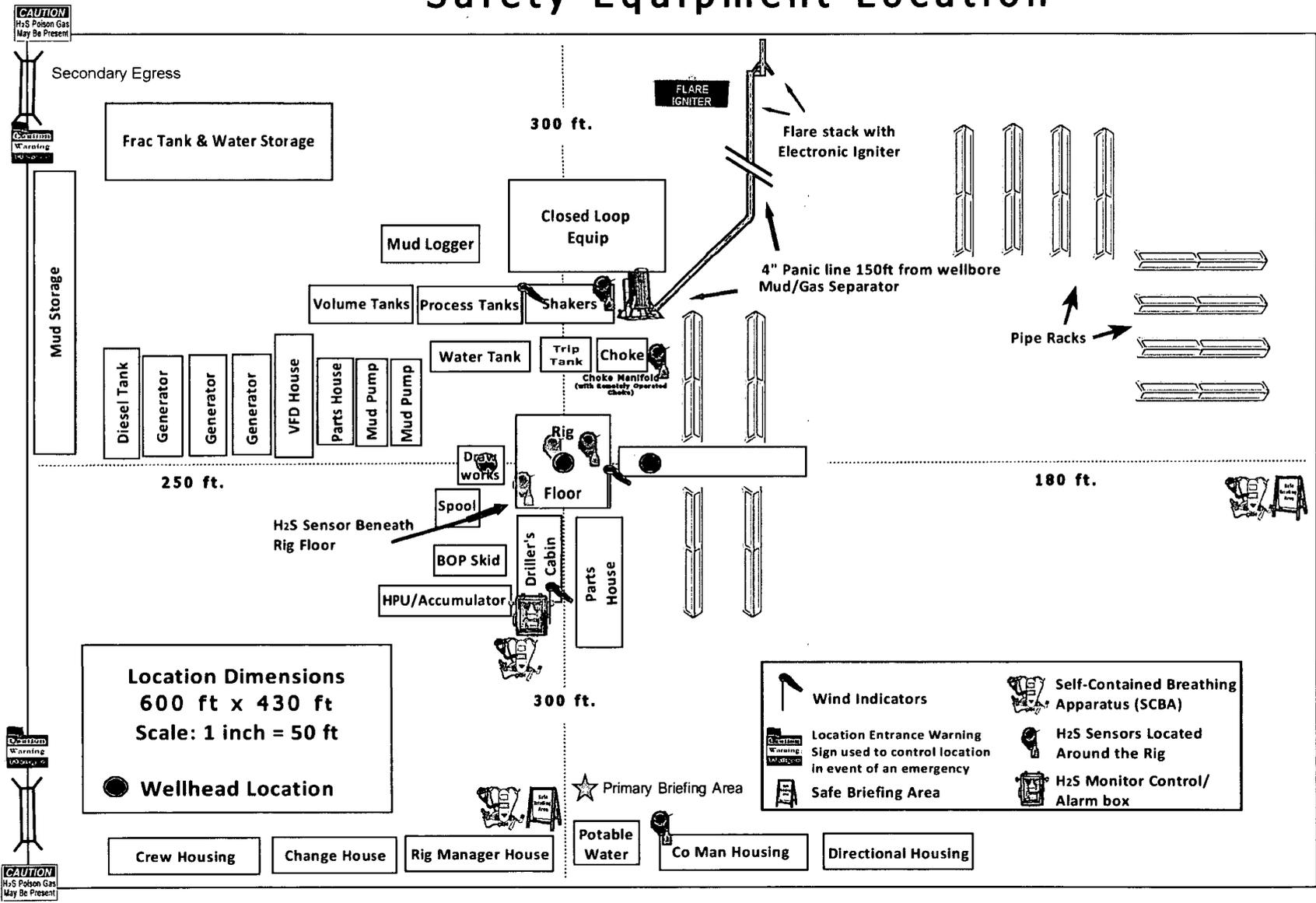
23S - 32E - 18

Total 15,844.57 ft

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



Prevailing Wind  
Direction S, SW



**CAUTION**  
H<sub>2</sub>S Poison Gas  
May Be Present

**CAUTION**  
Warning

**CAUTION**  
Warning

**CAUTION**  
H<sub>2</sub>S Poison Gas  
May Be Present

Secondary Egress

Frac Tank & Water Storage

300 ft.

FLARE IGNITER

Flare stack with  
Electronic Igniter

Closed Loop  
Equip

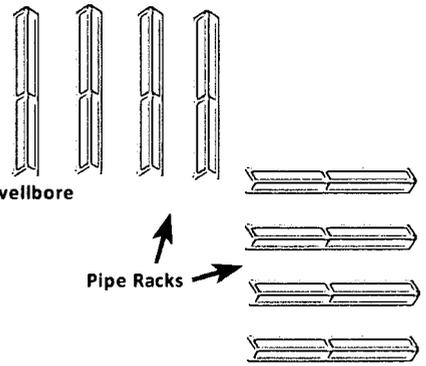
Mud Logger

4" Panic line 150ft from wellbore  
Mud/Gas Separator

Volume Tanks

Process Tanks

Shakers



Pipe Racks

Mud Storage

Diesel Tank

Generator

Generator

Generator

VFD House

Parts House

Mud Pump

Mud Pump

Water Tank

Trip Tank

Choke

Choke Manifold  
(with remotely operated  
choke)

Rig  
Floor

250 ft.

180 ft.

H<sub>2</sub>S Sensor Beneath  
Rig Floor

Drax  
works

Spool

BOP Skid

HPU/Accumulator

Driller's  
Cabin

Parts  
House

Location Dimensions  
600 ft x 430 ft  
Scale: 1 inch = 50 ft

Wellhead Location

300 ft.

★ Primary Briefing Area

- Wind Indicators
- Self-Contained Breathing Apparatus (SCBA)
- Location Entrance Warning Sign used to control location in event of an emergency
- H<sub>2</sub>S Sensors Located Around the Rig
- Safe Briefing Area
- H<sub>2</sub>S Monitor Control/ Alarm box

Crew Housing

Change House

Rig Manager House

Potable  
Water

Co Man Housing

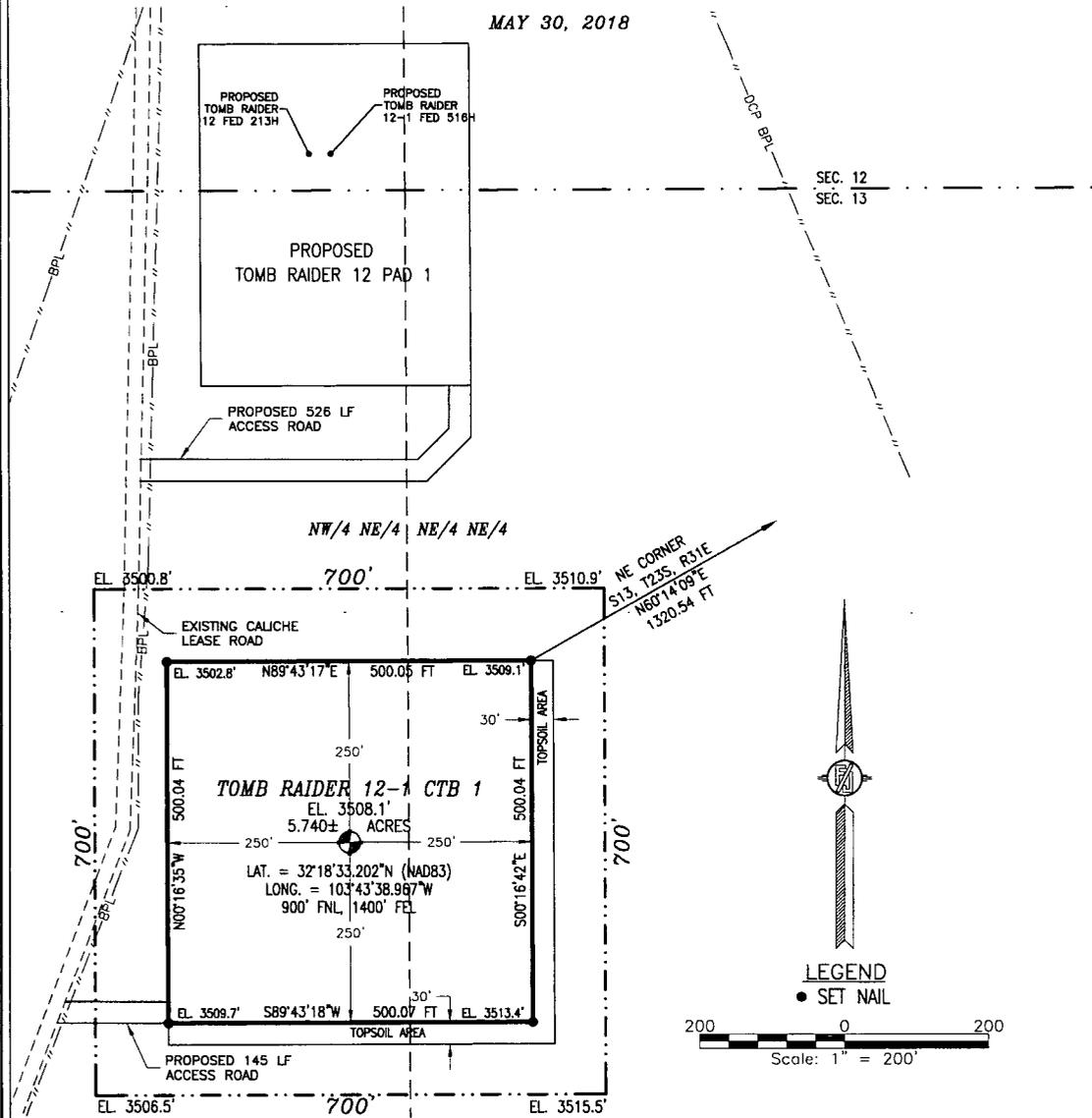
Directional Housing

TOMB RAIDER 12-1 CTB 1

DEVON ENERGY PRODUCTION COMPANY, L.P.

IN THE NW/4 NE/4 & NE/4 NE/4 OF  
SECTION 13, TOWNSHIP 23 SOUTH, RANGE 31 EAST, N.M.P.M.  
EDDY COUNTY, STATE OF NEW MEXICO

MAY 30, 2018



DESCRIPTION

A CERTAIN PIECE OR PARCEL OF LAND AND REAL ESTATE LYING IN THE NW/4 NE/4 & NE/4 NE/4 OF SECTION 13, TOWNSHIP 23 SOUTH, RANGE 31 EAST N.M.P.M., EDDY COUNTY, NEW MEXICO.

BEGINNING AT THE NORTHEAST CORNER OF THE PARCEL, WHENCE THE NORTHEAST CORNER OF SECTION 13, TOWNSHIP 23 SOUTH, RANGE 31 EAST, N.M.P.M. BEARS N60°14'09"E, A DISTANCE OF 1320.54 FEET;  
THENCE S00°16'42"E A DISTANCE OF 500.04 FEET TO THE SOUTHEAST CORNER OF THE PARCEL;  
THENCE S89°43'18"W A DISTANCE OF 500.07 FEET TO THE SOUTHWEST CORNER OF THE PARCEL;  
THENCE N00°16'35"W A DISTANCE OF 500.04 FEET TO THE NORTHWEST CORNER OF THE PARCEL;  
THENCE N89°43'17"E A DISTANCE OF 500.05 FEET TO THE NORTHEAST CORNER OF THE PARCEL, TO THE POINT OF BEGINNING;  
CONTAINING 3.800 ACRES IN THE NW/4 NE/4 & 1.940 ACRES IN THE NE/4 NE/4 FOR TOTAL OF 5.740 ACRES MORE OR LESS.

GENERAL NOTES

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

**DRIVING DIRECTIONS:** FROM STATE HIGHWAY 128 AND CR 798 (RED ROAD) GO NORTH ON CR 798 APPROX. 5.0 MILES, TURN RIGHT (EAST) GO EAST 0.3 OF A MILE, TURN RIGHT (SOUTH) GO SOUTH 0.3 OF A MILE, TURN LEFT (EAST) GO EAST APPROX. 0.5 OF A MILE, TURN RIGHT (SOUTH) GO SOUTH APPROX. 0.5 OF A MILE, TURN RIGHT (WEST) GO WEST 0.2 OF A MILE, TURN LEFT (SOUTH) GO SOUTH 0.34 OF A MILE, TURN LEFT (EAST) GO 145' TO THE SOUTHWEST PAD CORNER FOR THIS LOCATION.

SHEET: 1-3

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 30th DAY OF MAY 2018

FILMON F. JARAMILLO, P.L.S. 12797

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

SURVEY NO. 5242B

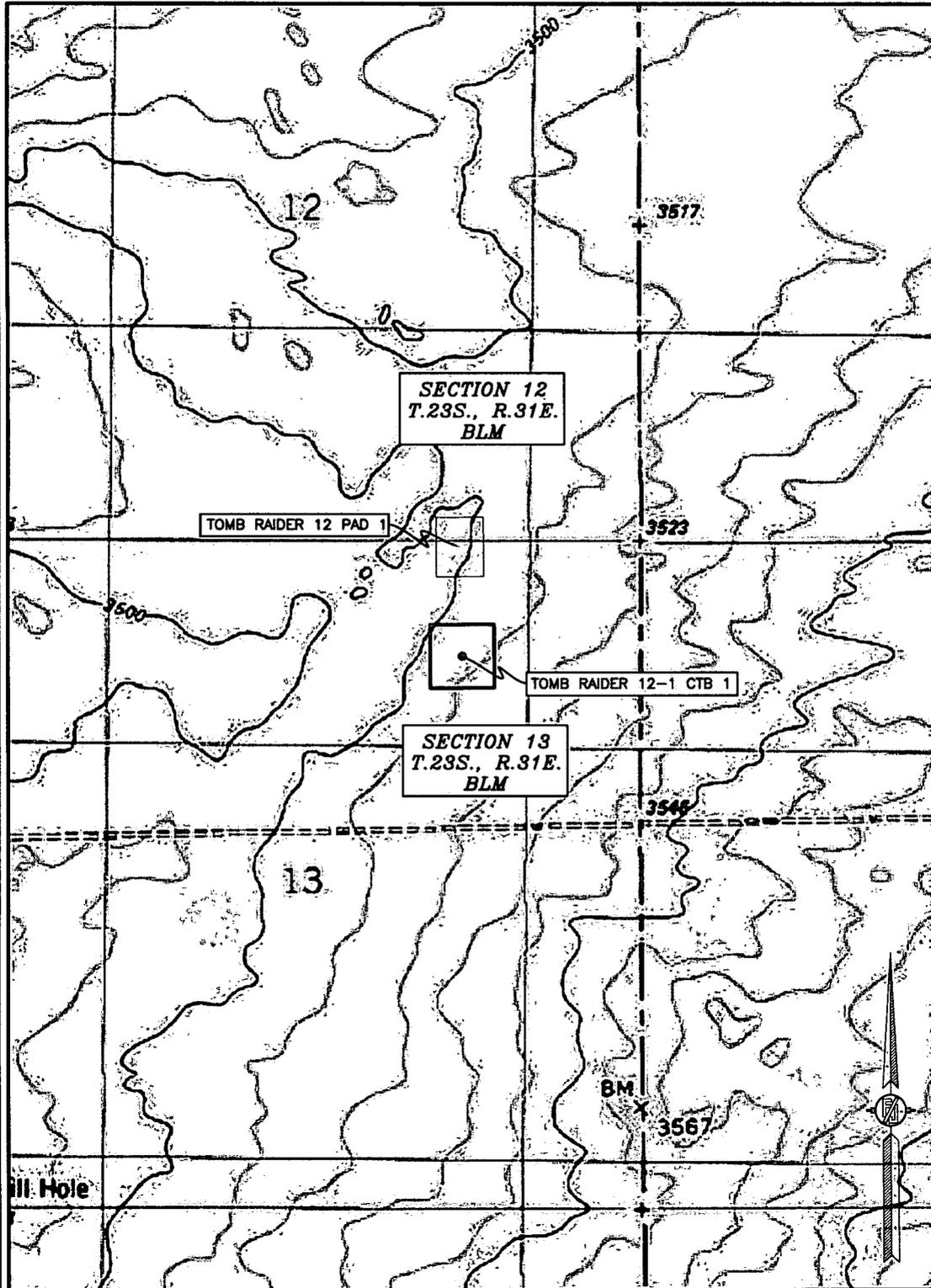
CARLSBAD, NEW MEXICO

TOMB RAIDER 12-1 CTB 1

DEVON ENERGY PRODUCTION COMPANY, L.P.  
IN THE NW/4 NE/4 & NE/4 NE/4 OF  
SECTION 13, TOWNSHIP 23 SOUTH, RANGE 31 EAST, N.M.P.M.  
EDDY COUNTY, STATE OF NEW MEXICO

MAY 30, 2018

QUAD MAP



SHEET: 2-3

SURVEY NO. 5242B

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

TOMB RAIDER 12-1 CTB 1

DEVON ENERGY PRODUCTION COMPANY, L.P.  
IN THE NW/4 NE/4 & NE/4 NE/4 OF  
SECTION 13, TOWNSHIP 23 SOUTH, RANGE 31 EAST, N.M.P.M.  
EDDY COUNTY, STATE OF NEW MEXICO

MAY 30, 2018

AERIAL PHOTO

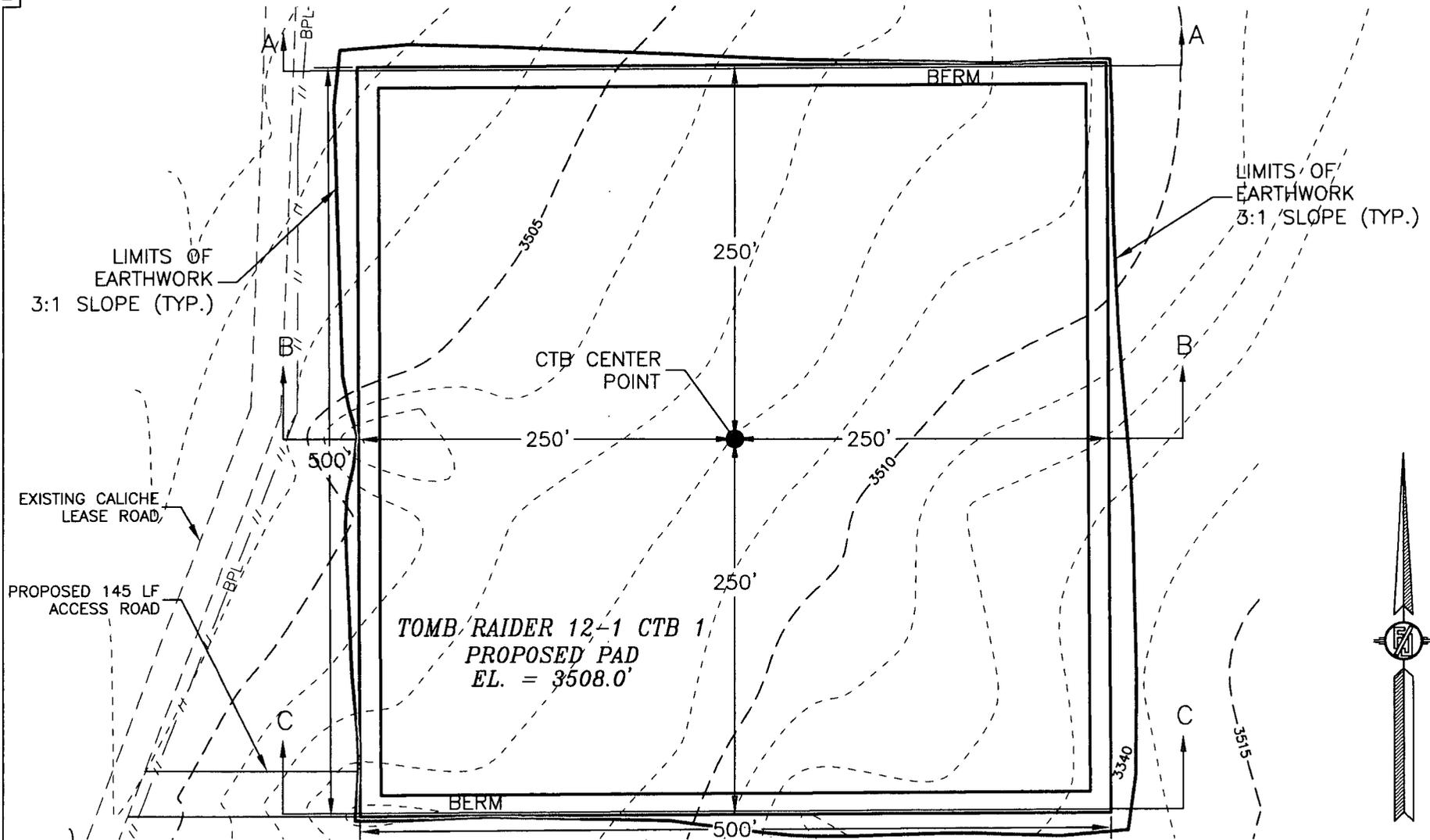


SHEET: 3-3

SURVEY NO. 5242B

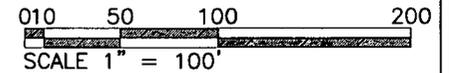
MADRON SURVEYING, INC. 301 SOUTH CANAL CARLSBAD, NEW MEXICO  
(575) 234-3341

# PLAN VIEW



DEVON ENERGY PRODUCTION COMPANY, L.P.  
 GRADING PLAN AND CROSS SECTIONS  
**FOR TOMB RAIDER 12-1 CTB 1**  
 SECTION 13, TOWNSHIP 23 SOUTH,  
 RANGE 31 EAST, N.M.P.M.  
 EDDY COUNTY, STATE OF NEW MEXICO

MAY 30, 2018



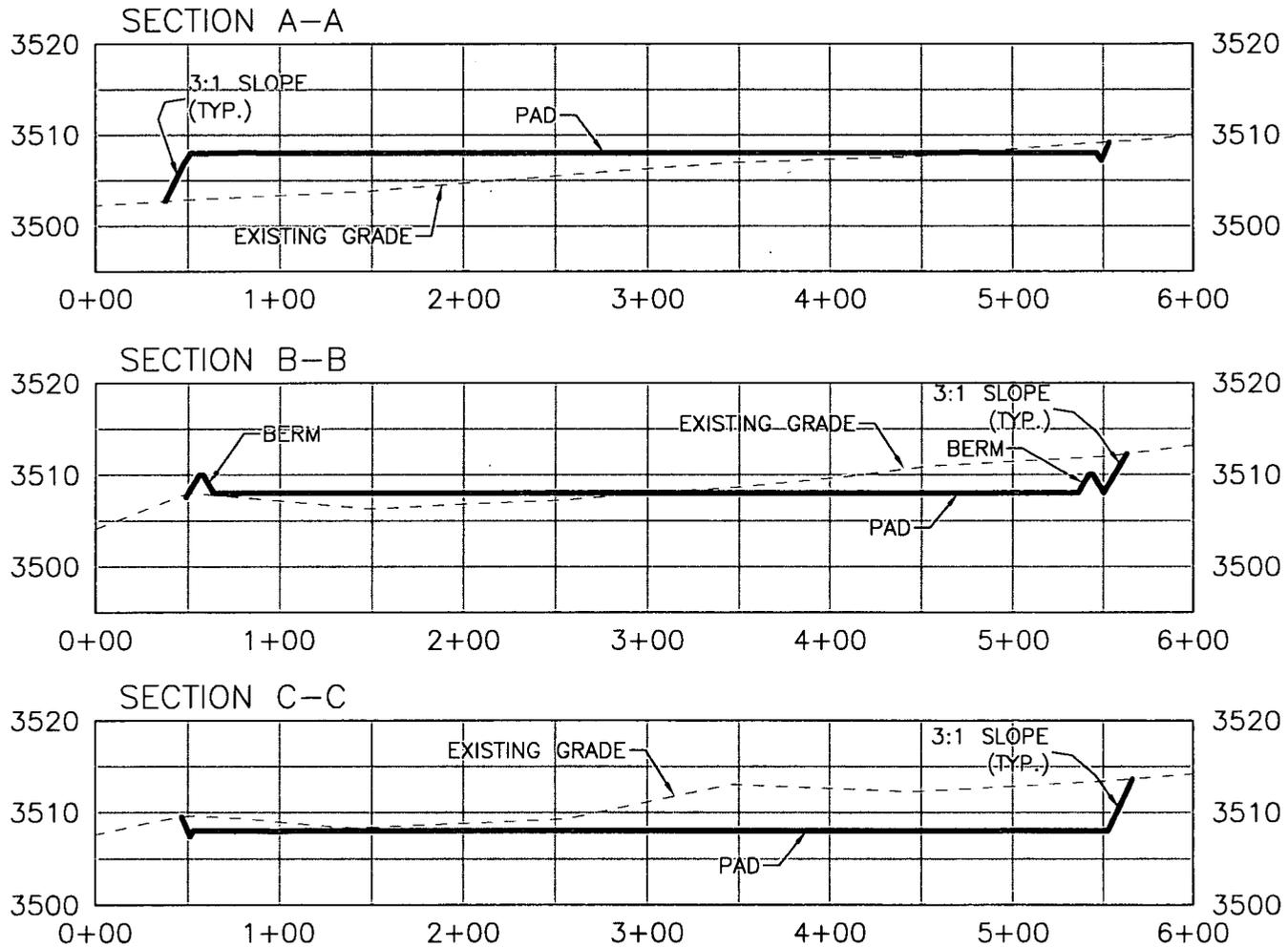
CUT	FILL	NET
10490 CU. YD	8983 CU. YD	1507 CU. YD (CUT)

EARTHWORK QUANTITIES ARE ESTIMATED

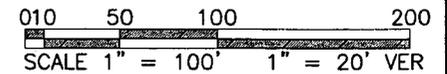
MADRON SURVEYING, INC. 301 SOUTH CANAL CARLSBAD, NEW MEXICO  
 (575) 234-3341

SHEET 1-2  
 SURVEY NO. 5242B

# CROSS SECTIONS



**DEVON ENERGY PRODUCTION COMPANY, L.P.**  
**GRADING PLAN AND CROSS SECTIONS**  
**FOR TOMB RAIDER 12-1 CTB 1**  
 SECTION 13, TOWNSHIP 23 SOUTH,  
 RANGE 31 EAST, N.M.P.M.  
 EDDY COUNTY, STATE OF NEW MEXICO



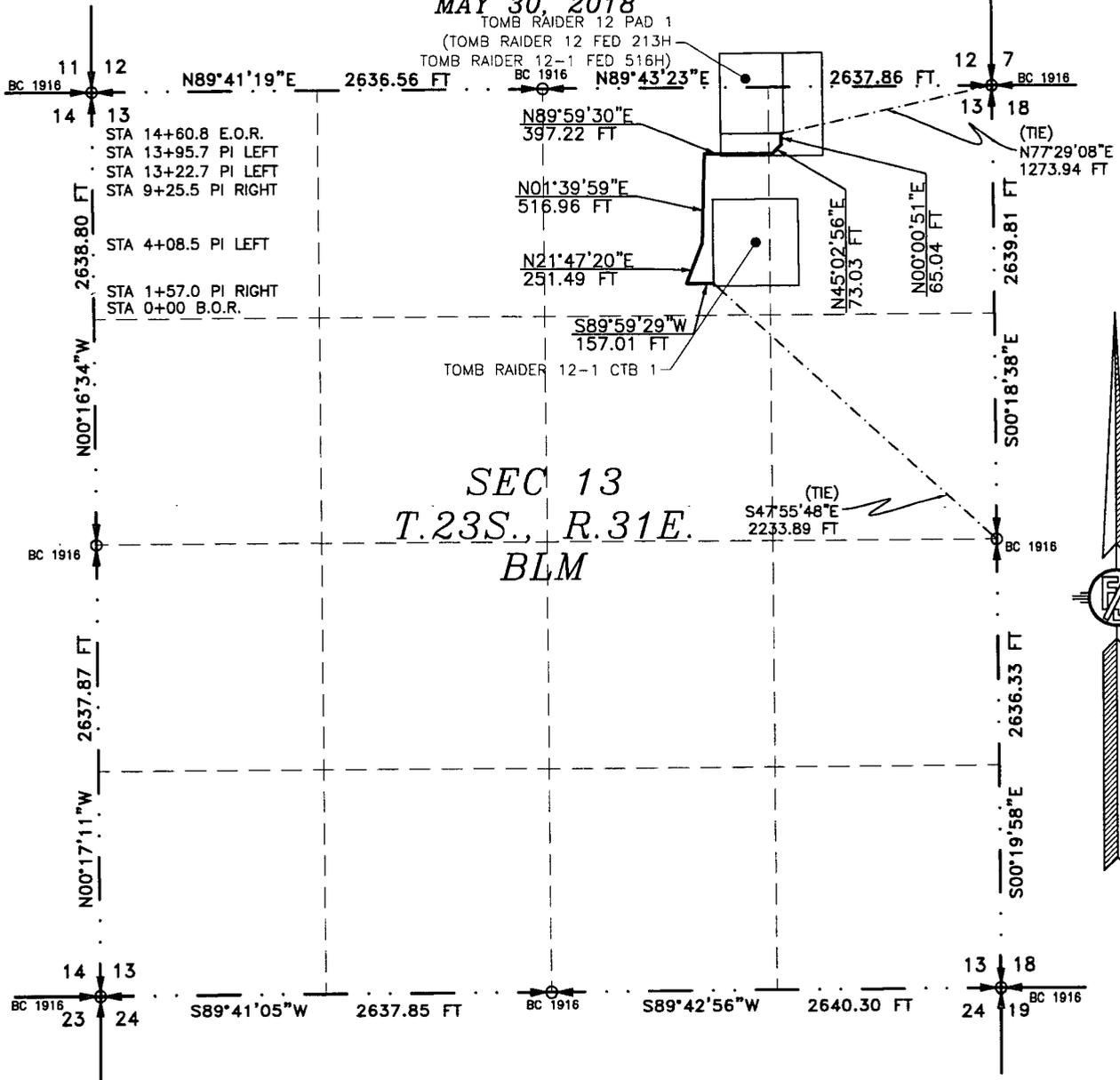
MAY 30, 2018

**ACCESS ROAD PLAT**

ACCESS ROAD FROM THE TOMB RAIDER 12-1 CTB 1 TO THE TOMB RAIDER 12 PAD 1  
(TOMB RAIDER 12 FED 213H, TOMB RAIDER 12-1 FED 516H)

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

MAY 30, 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, FILIMON F. JARAMILLO, A NEW MEXICO PROFESSIONAL SURVEYOR NO. 12797, HEREBY CERTIFY THAT I HAVE CONDUCTED AND AM RESPONSIBLE FOR THIS SURVEY, THAT THIS SURVEY IS TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF, AND THAT THIS SURVEY AND PLAT MEET THE MINIMUM STANDARDS FOR LAND SURVEYING IN THE STATE OF NEW MEXICO.

IN WITNESS WHEREOF, THIS CERTIFICATE IS EXECUTED AT CARLSBAD, NEW MEXICO, THIS 30 DAY OF MAY 2018

FILIMON F. JARAMILLO, PLS. SURVEYOR  
 MADRON SURVEYING, INC.  
 501 SOUTH CANAL  
 CARLSBAD, NEW MEXICO 88220  
 Phone (575) 234-3341

SHEET: 1-2

MADRON SURVEYING, INC. CARLSBAD, NEW MEXICO SURVEY NO. 5242B

301 SOUTH CANAL  
(575) 234-3341

**ACCESS ROAD PLAT**

ACCESS ROAD FROM THE TOMB RAIDER 12-1 CTB 1 TO THE TOMB RAIDER 12 PAD 1  
(TOMB RAIDER 12 FED 213H, TOMB RAIDER 12-1 FED 516H)

**DEVON ENERGY PRODUCTION COMPANY, L.P.  
CENTERLINE SURVEY OF AN ACCESS ROAD CROSSING  
SECTION 13, TOWNSHIP 23 SOUTH, RANGE 31 EAST, N.M.P.M.  
EDDY COUNTY, STATE OF NEW MEXICO  
MAY 30, 2018**

**DESCRIPTION**

A STRIP OF LAND 30 FEET WIDE CROSSING BUREAU OF LAND MANAGEMENT LAND IN SECTION 13, TOWNSHIP 23 SOUTH, RANGE 31 EAST, N.M.P.M., EDDY COUNTY, STATE OF NEW MEXICO AND BEING 15 FEET EACH SIDE OF THE FOLLOWING DESCRIBED CENTERLINE SURVEY:

BEGINNING AT A POINT WITHIN THE NW/4 NE/4 OF SAID SECTION 13, TOWNSHIP 23 SOUTH, RANGE 31 EAST, N.M.P.M., WHENCE THE EAST QUARTER CORNER OF SAID SECTION 13, TOWNSHIP 23 SOUTH, RANGE 31 EAST, N.M.P.M. BEARS S47°55'48"E, A DISTANCE OF 2233.89 FEET;

THENCE S89°59'29"W A DISTANCE OF 157.01 FEET TO AN ANGLE POINT OF THE LINE HEREIN DESCRIBED;

THENCE N21°47'20"E A DISTANCE OF 251.49 FEET TO AN ANGLE POINT OF THE LINE HEREIN DESCRIBED;

THENCE N01°39'59"E A DISTANCE OF 516.96 FEET TO AN ANGLE POINT OF THE LINE HEREIN DESCRIBED;

THENCE N89°59'30"E A DISTANCE OF 397.22 FEET TO AN ANGLE POINT OF THE LINE HEREIN DESCRIBED;

THENCE N45°02'56"E A DISTANCE OF 73.03 FEET TO AN ANGLE POINT OF THE LINE HEREIN DESCRIBED;

THENCE N00°00'51"E A DISTANCE OF 65.04 FEET THE TERMINUS OF THIS CENTERLINE SURVEY, WHENCE THE NORTHEAST CORNER OF SAID SECTION 13, TOWNSHIP 23 SOUTH, RANGE 31 EAST, N.M.P.M. BEARS N77°29'08"E, A DISTANCE OF 1273.94 FEET;

SAID STRIP OF LAND BEING 1460.75 FEET OR 88.53 RODS IN LENGTH, CONTAINING 1.006 ACRES MORE OR LESS AND BEING ALLOCATED BY FORTIES AS FOLLOWS:

NW/4 NE/4 1301.18 L.F. 78.86 RODS 0.896 ACRES

NE/4 NE/4 159.57 L.F. 9.67 RODS 0.110 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, FILIMON F. JARAMILLO, A NEW MEXICO PROFESSIONAL SURVEYOR NO. 12797, HEREBY CERTIFY THAT I HAVE CONDUCTED AND AM RESPONSIBLE FOR THIS SURVEY, THAT THIS SURVEY IS TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF, AND THAT THIS SURVEY AND PLAT MEET THE MINIMUM STANDARDS FOR LAND SURVEYING IN THE STATE OF NEW MEXICO.

IN WITNESS WHEREOF, THIS CERTIFICATE IS EXECUTED AT CARLSBAD,

NEW MEXICO, THIS 12737 DAY OF MAY 2018

FILIMON F. JARAMILLO, P.E.S. 12797

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

SURVEY NO. 5242B

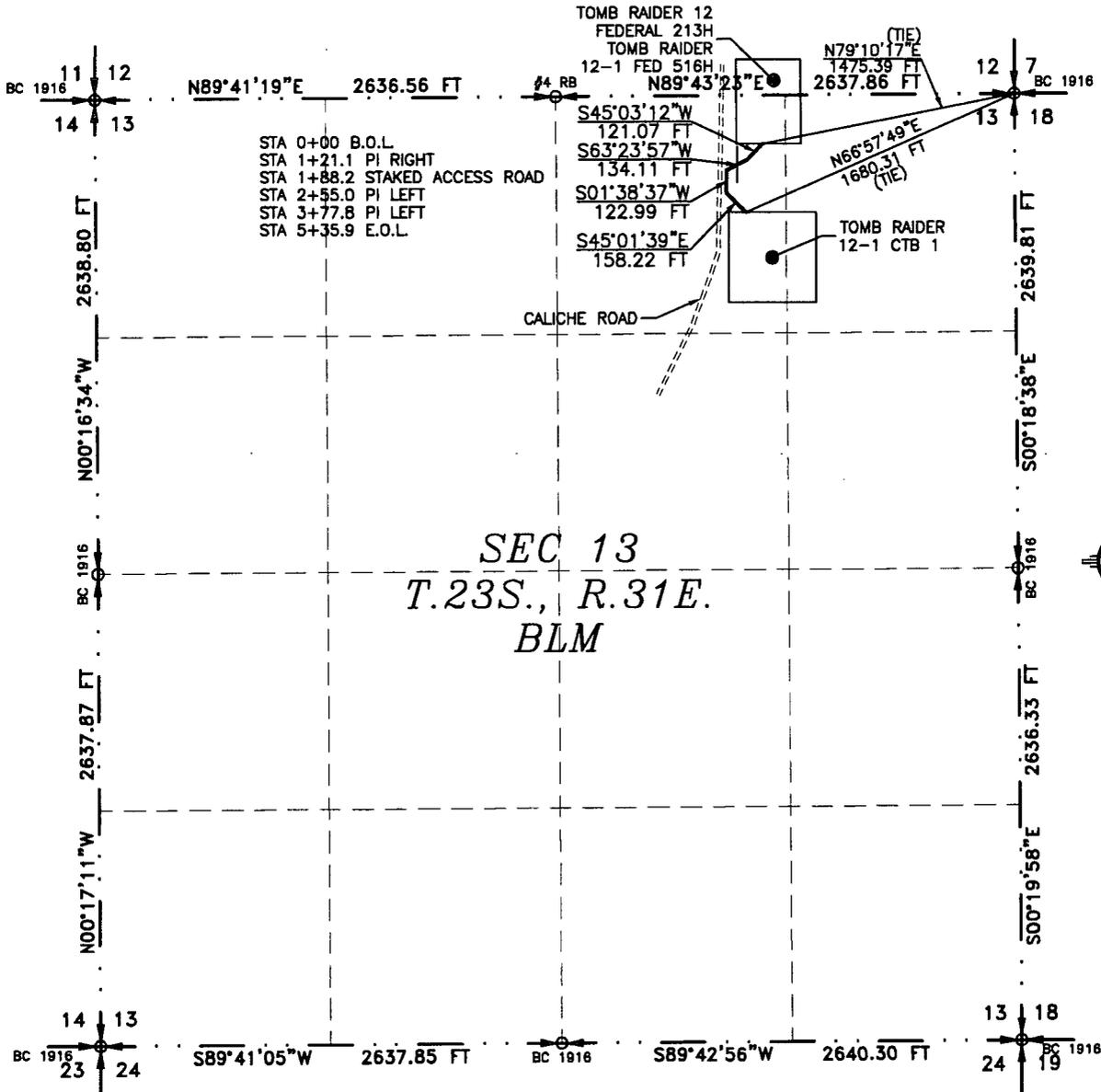
MADRON SURVEYING, INC. 301 SOUTH CANAL CARLSBAD, NEW MEXICO  
(575) 234-3341

SHEET: 2-2

**FLOWLINE PLAT**

TWO-8" POLY FLOWLINES & ONE-6" GAS LIFT LINE BURIED IN THE SAME DITCH FROM  
TOMB RAIDER 12 FEDERAL 213H & TOMB RAIDER 12-1 FED 516H TO TOMB RAIDER 12-1 CTB 1

**DEVON ENERGY PRODUCTION COMPANY, L.P.**  
CENTERLINE SURVEY OF A PIPELINE CROSSING  
SECTION 13, TOWNSHIP 23 SOUTH, RANGE 31 EAST, N.M.P.M.  
EDDY COUNTY, STATE OF NEW MEXICO  
MAY 29, 2018



SEE NEXT SHEET (2-4) FOR DESCRIPTION

**SURVEYOR CERTIFICATE**

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

IN WITNESS WHEREOF, THIS CERTIFICATE IS EXECUTED AT CARLSBAD, NEW MEXICO, THIS 29<sup>th</sup> DAY OF MAY 2018

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

FILMON F. JARAMILLO, PLS. 12797

SURVEY NO. 5406A

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



**GENERAL NOTES**

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

SHEET: 1-4

**FLOWLINE PLAT**

**TWO-8" POLY FLOWLINES & ONE-6" GAS LIFT LINE BURIED IN THE SAME DITCH FROM  
TOMB RAIDER 12 FEDERAL 213H & TOMB RAIDER 12-1 FED 516H TO TOMB RAIDER 12-1 CTB 1**

**DEVON ENERGY PRODUCTION COMPANY, L.P.  
CENTERLINE SURVEY OF A PIPELINE CROSSING  
SECTION 13, TOWNSHIP 23 SOUTH, RANGE 31 EAST, N.M.P.M.  
EDDY COUNTY, STATE OF NEW MEXICO  
MAY 29, 2018**

**DESCRIPTION**

A STRIP OF LAND 30 FEET WIDE CROSSING BUREAU OF LAND MANAGEMENT LAND IN SECTION 13, TOWNSHIP 23 SOUTH, RANGE 31 EAST, N.M.P.M., EDDY COUNTY, STATE OF NEW MEXICO AND BEING 15 FEET EACH SIDE OF THE FOLLOWING DESCRIBED CENTERLINE SURVEY:

BEGINNING AT A POINT WITHIN THE NW/4 NE/4 OF SAID SECTION 13, TOWNSHIP 23 SOUTH, RANGE 31 EAST, N.M.P.M., WHENCE THE NORTHEAST CORNER OF SAID SECTION 13, TOWNSHIP 23 SOUTH, RANGE 31 EAST, N.M.P.M. BEARS N66°57'49"E, A DISTANCE OF 1680.31 FEET;  
THENCE N45°01'39"W A DISTANCE OF 158.22 FEET TO AN ANGLE POINT OF THE LINE HEREIN DESCRIBED;  
THENCE N01°38'37"E A DISTANCE OF 122.99 FEET TO AN ANGLE POINT OF THE LINE HEREIN DESCRIBED;  
THENCE N63°23'57"E A DISTANCE OF 134.11 FEET TO AN ANGLE POINT OF THE LINE HEREIN DESCRIBED;  
THENCE N45°03'12"E A DISTANCE OF 121.07 FEET THE TERMINUS OF THIS CENTERLINE SURVEY, WHENCE THE NORTHEAST CORNER OF SAID SECTION 13, TOWNSHIP 23 SOUTH, RANGE 31 EAST, N.M.P.M. BEARS N79°10'17"E, A DISTANCE OF 1475.39 FEET;

SAID STRIP OF LAND BEING 536.39 FEET OR 32.51 RODS IN LENGTH, CONTAINING 0.369 ACRES MORE OR LESS AND BEING ALLOCATED BY FORTIES AS FOLLOWS:

NW/4 NE/4    536.39 L.F.    32.51 RODS    0.369 ACRES

**SURVEYOR CERTIFICATE**

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

IN WITNESS WHEREOF, THIS CERTIFICATE IS EXECUTED AT CARLSBAD, NEW MEXICO, THIS 30 DAY OF MAY 2018

*Filimon F. Jaramillo*  
FILIMON F. JARAMILLO, PLS. 12797

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

**GENERAL NOTES**

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

SHEET: 2-4

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

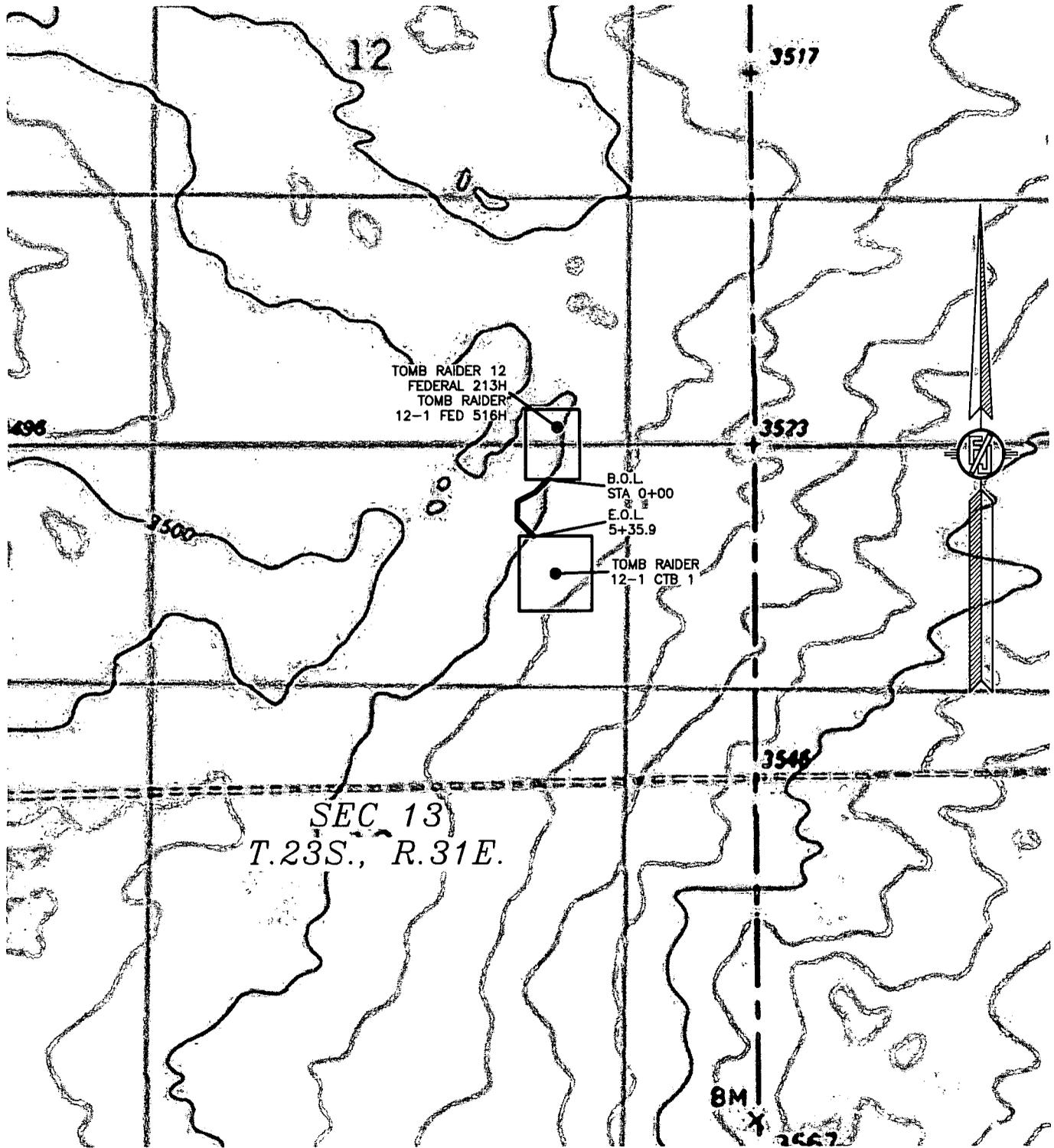
**SURVEY NO. 5406A**

301 SOUTH CANAL  
(575) 234-3341

**FLOWLINE PLAT**

TWO-8" POLY FLOWLINES & ONE-6" GAS LIFT LINE BURIED IN THE SAME DITCH FROM  
TOMB RAIDER 12 FEDERAL 213H & TOMB RAIDER 12-1 FED 516H TO TOMB RAIDER 12-1 CTB 1

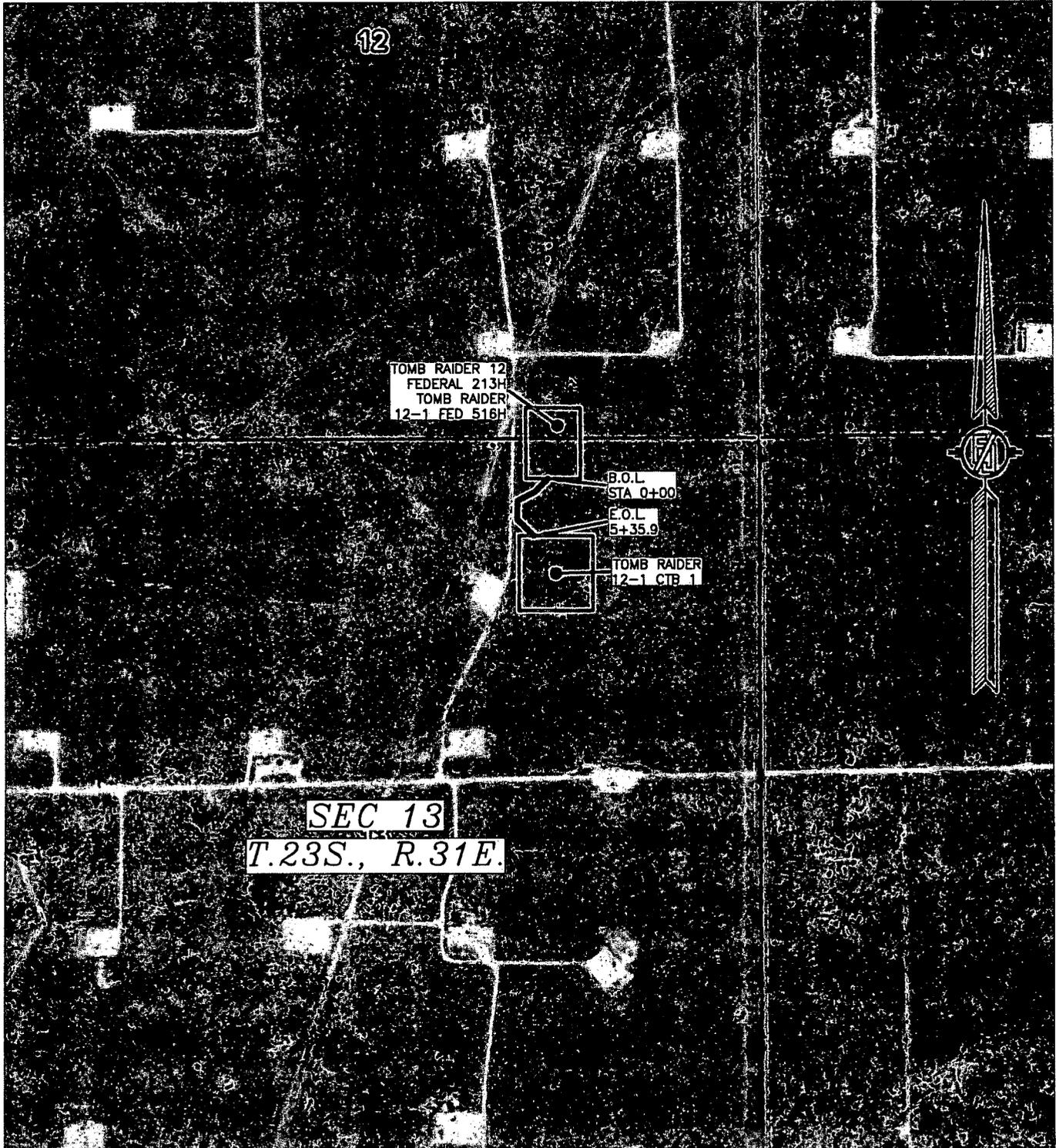
**DEVON ENERGY PRODUCTION COMPANY, L.P.**  
CENTERLINE SURVEY OF A PIPELINE CROSSING  
SECTION 13, TOWNSHIP 23 SOUTH, RANGE 31 EAST, N.M.P.M.  
EDDY COUNTY, STATE OF NEW MEXICO  
MAY 29, 2018



**FLOWLINE PLAT**

TWO-8" POLY FLOWLINES & ONE-6" GAS LIFT LINE BURIED IN THE SAME DITCH FROM  
TOMB RAIDER 12 FEDERAL 213H & TOMB RAIDER 12-1 FED 516H TO TOMB RAIDER 12-1 CTB 1

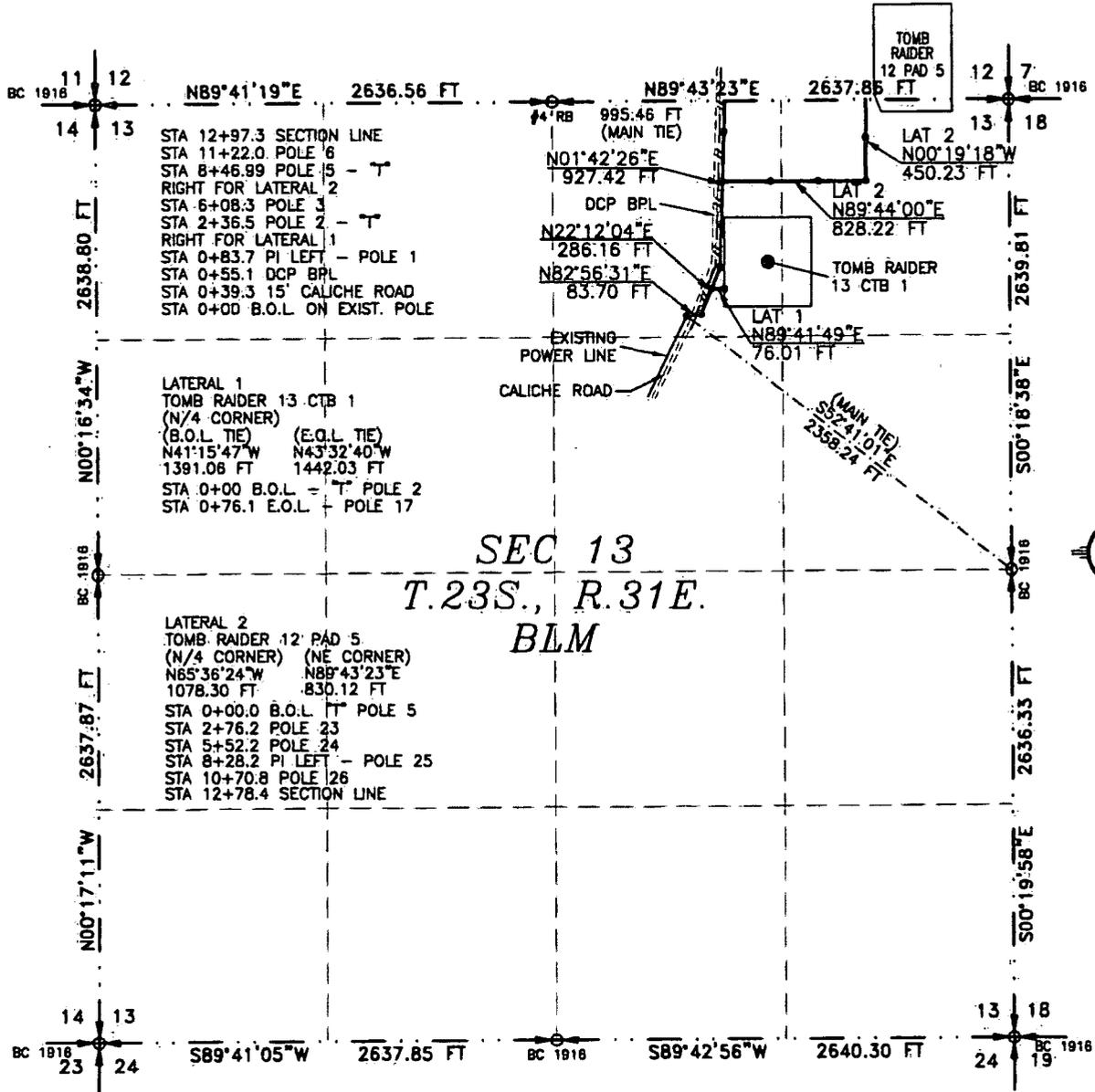
**DEVON ENERGY PRODUCTION COMPANY, L.P.**  
CENTERLINE SURVEY OF A PIPELINE CROSSING  
SECTION 13, TOWNSHIP 23 SOUTH, RANGE 31 EAST, N.M.P.M.  
EDDY COUNTY, STATE OF NEW MEXICO  
MAY 29, 2018



**ELECTRIC LINE PLAT**

ELECTRIC LINE TO CONNECT TOMB RAIDER 13 CTB 1, TOMB RAIDER 12 PAD 1 (TOMB RAIDER 12-1 FED 516H), TOMB RAIDER 12 PAD 4 & 5, AND TOMB RAIDER 12 CTB 2 & 3

**DEVON ENERGY PRODUCTION COMPANY, L.P.**  
**CENTERLINE SURVEY OF AN ELECTRIC LINE CROSSING**  
**SECTION 13, TOWNSHIP 23 SOUTH, RANGE 31 EAST, N.M.P.M.**  
**EDDY COUNTY, STATE OF NEW MEXICO**  
**JUNE 18, 2018**



SEE NEXT SHEET (2-7) 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 18<sup>TH</sup> DAY OF JUNE 2018

*(Signature)*  
 FILMON F. JARAMILLO, PLS., 12797

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

**SURVEY NO. 6299**



**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: 1-7**

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

**ELECTRIC LINE PLAT**

**ELECTRIC LINE TO CONNECT TOMB RAIDER 13 CTB 1, TOMB RAIDER 12 PAD 1 (TOMB RAIDER 12-1 FED 516H), TOMB RAIDER 12 PAD 4 & 5, AND TOMB RAIDER 12 CTB 2 & 3**

**DEVON ENERGY PRODUCTION COMPANY, L.P.  
CENTERLINE SURVEY OF AN ELECTRIC LINE CROSSING  
SECTION 13, TOWNSHIP 23 SOUTH, RANGE 31 EAST, N.M.P.M.  
EDDY COUNTY, STATE OF NEW MEXICO  
JUNE 18, 2018**

**DESCRIPTION**

A STRIP OF LAND 30 FEET WIDE CROSSING BUREAU OF LAND MANAGEMENT LAND IN SECTION 13, 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:

MAIN LINE - TOMB RAIDER 12 CTB 3  
BEGINNING AT A POINT WITHIN THE NW/4 NE/4 OF SAID SECTION 13, TOWNSHIP 23 SOUTH, RANGE 31 EAST, N.M.P.M., WHENCE THE EAST QUARTER CORNER OF SAID SECTION 13, TOWNSHIP 23 SOUTH, RANGE 31 EAST, N.M.P.M. BEARS S52°41'01"E, A DISTANCE OF 2358.24 FEET;  
THENCE N82°56'31"E A DISTANCE OF 83.70 FEET TO AN ANGLE POINT OF THE LINE HEREIN DESCRIBED;  
THENCE N22°12'04"E A DISTANCE OF 286.16 FEET TO AN ANGLE POINT OF THE LINE HEREIN DESCRIBED;  
THENCE N01°42'26"E A DISTANCE OF 927.42 FEET THE TERMINUS OF THIS CENTERLINE SURVEY, WHENCE THE NORTH QUARTER CORNER OF SAID SECTION 13, TOWNSHIP 23 SOUTH, RANGE 31 EAST, N.M.P.M. BEARS S89°43'23"W, A DISTANCE OF 995.46 FEET;

SAID STRIP OF LAND BEING 1297.28 FEET OR 78.63 RODS IN LENGTH, CONTAINING 0.893 ACRES MORE OR LESS AND BEING ALLOCATED BY FORTIES AS FOLLOWS:

NW/4 NE/4 1297.28 L.F. 78.63 RODS 0.893 ACRES

LATERAL 1 - TOMB RAIDER 13 CTB 1  
BEGINNING AT A POINT WITHIN THE NW/4 NE/4 OF SAID SECTION 13, TOWNSHIP 23 SOUTH, RANGE 31 EAST, N.M.P.M., WHENCE THE NORTH QUARTER CORNER OF SAID SECTION 13, TOWNSHIP 23 SOUTH, RANGE 31 EAST, N.M.P.M. BEARS N41°15'47"W, A DISTANCE OF 1391.06 FEET;  
THENCE N89°41'49"E A DISTANCE OF 76.01 FEET THE TERMINUS OF THIS CENTERLINE SURVEY, WHENCE THE NORTH QUARTER CORNER OF SAID SECTION 13, TOWNSHIP 23 SOUTH, RANGE 31 EAST, N.M.P.M. BEARS N43°32'40"W, A DISTANCE OF 1442.03 FEET;

SAID STRIP OF LAND BEING 76.01 FEET OR 4.61 RODS IN LENGTH, CONTAINING 0.052 ACRES MORE OR LESS AND BEING ALLOCATED BY FORTIES AS FOLLOWS:

NW/4 NE/4 76.01 L.F. 4.61 RODS 0.052 ACRES

LATERAL 2 - TOMB RAIDER 12 PAD 5  
BEGINNING AT A POINT WITHIN THE NW/4 NE/4 OF SAID SECTION 13, TOWNSHIP 23 SOUTH, RANGE 31 EAST, N.M.P.M., WHENCE THE NORTH QUARTER CORNER OF SAID SECTION 13, TOWNSHIP 23 SOUTH, RANGE 31 EAST, N.M.P.M. BEARS N65°36'24"W, A DISTANCE OF 1078.30 FEET;  
THENCE N89°44'00"E A DISTANCE OF 828.22 FEET TO AN ANGLE POINT OF THE LINE HEREIN DESCRIBED;  
THENCE N00°19'18"W A DISTANCE OF 450.23 FEET THE TERMINUS OF THIS CENTERLINE SURVEY, WHENCE THE NORTH QUARTER CORNER OF SAID SECTION 13, TOWNSHIP 23 SOUTH, RANGE 31 EAST, N.M.P.M. BEARS N89°43'23"E, A DISTANCE OF 830.12 FEET;

SAID STRIP OF LAND BEING 1278.45 FEET OR 77.48 RODS IN LENGTH, CONTAINING 0.880 ACRES MORE OR LESS AND BEING ALLOCATED BY FORTIES AS FOLLOWS:

NW/4 NE/4 339.30 L.F. 20.56 RODS 0.234 ACRES  
NE/4 NE/4 939.15 L.F. 56.92 RODS 0.647 ACRES

**SURVEYOR CERTIFICATE**

I, FILMON F. JARAMILLO, A NEW MEXICO PROFESSIONAL SURVEYOR NO. 12787, HEREBY CERTIFY THAT I HAVE CONDUCTED AND AM RESPONSIBLE FOR THIS SURVEY, THAT THIS SURVEY IS TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF, AND THAT THIS SURVEY AND PLAT MEET THE MINIMUM STANDARDS FOR LAND SURVEYING IN THE STATE OF NEW MEXICO.

IN WITNESS WHEREOF, THIS CERTIFICATE IS EXECUTED AT CARLSBAD,

NEW MEXICO, THIS 18 DAY OF JUNE 2018

*(Signature of Filmon F. Jaramillo)*  
FILMON F. JARAMILLO  
301 SOUTH CANAL  
CARLSBAD, NEW MEXICO 86220  
(575) 234-3341

MADRON SURVEYING, INC.  
301 SOUTH CANAL  
CARLSBAD, NEW MEXICO 86220  
Phone (575) 234-3341

**SURVEY NO. 6299**

**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.

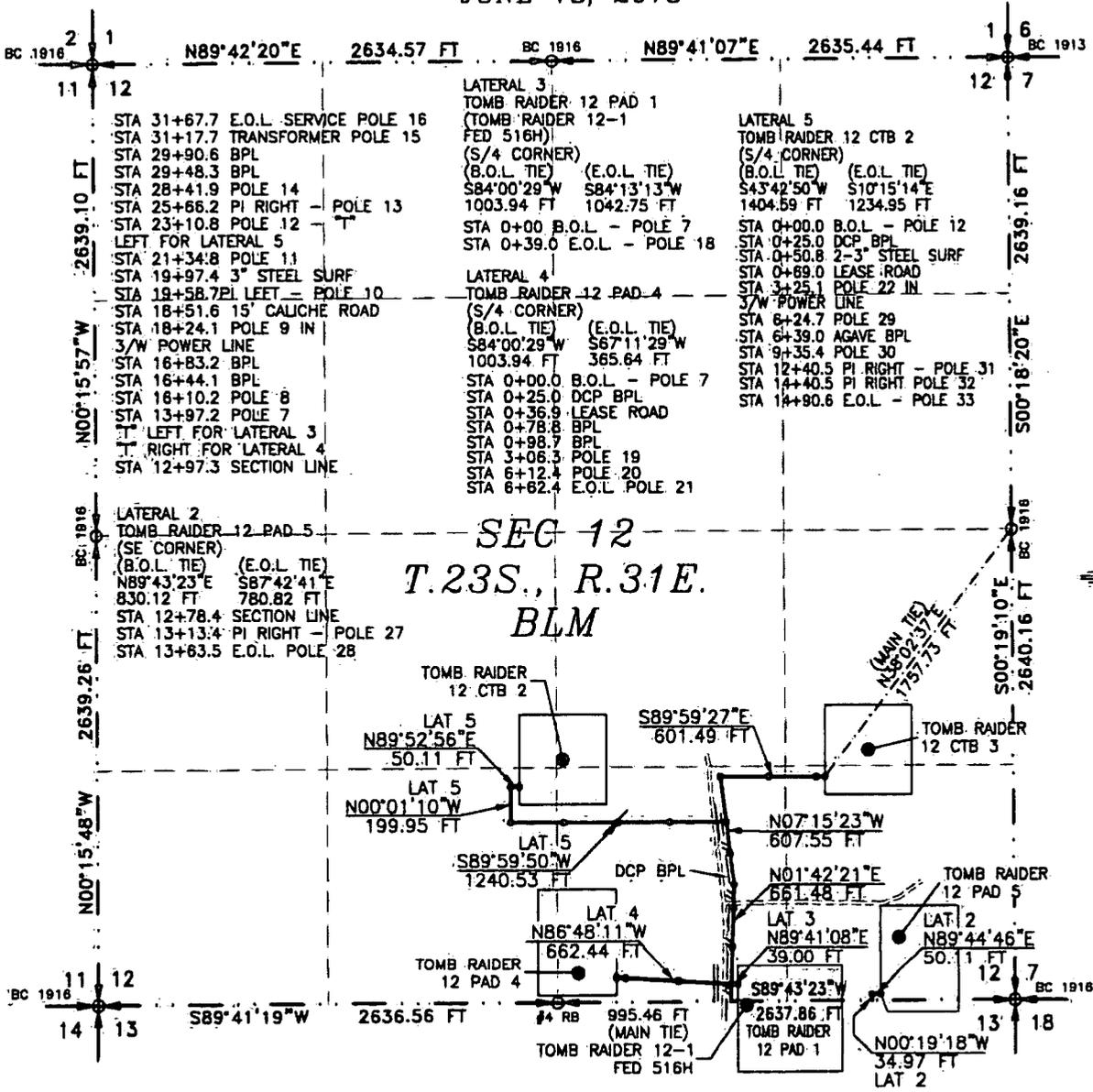
**SHEET: 2-7**

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

# ELECTRIC LINE PLAT

ELECTRIC LINE TO CONNECT TOMB RAIDER 13 CTB 1, TOMB RAIDER 12 PAD 1 (TOMB RAIDER 12-1 FED 516H), TOMB RAIDER 12 PAD 4 & 5, AND TOMB RAIDER 12 CTB 2 & 3

**DEVON ENERGY PRODUCTION COMPANY, L.P.**  
**CENTERLINE SURVEY OF AN ELECTRIC LINE CROSSING**  
**SECTION 12, TOWNSHIP 23 SOUTH, RANGE 31 EAST, N.M.P.M.**  
**EDDY COUNTY, STATE OF NEW MEXICO**  
**JUNE 18, 2018**



SEC 12  
 T. 23S., R. 31E.  
 BLM

SEE SHEETS (4-7 & 5-7) FOR DESCRIPTION

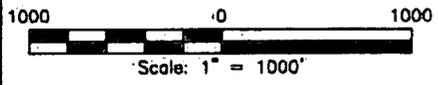
### SURVEYOR CERTIFICATE

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

IN WITNESS WHEREOF, THIS CERTIFICATE IS EXECUTED AT CARLSBAD,  
 NEW MEXICO, THIS 22 DAY OF JUNE 2018

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

SURVEY NO. 6299  
 FILIMON F. JARAMILLO PLS 12797  
 MADRON SURVEYING, INC. 301 SOUTH CANAL CARLSBAD, NEW MEXICO



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

**SHEET: 3-7**  
**MADRON SURVEYING, INC.**

**ELECTRIC LINE PLAT**

**ELECTRIC LINE TO CONNECT TOMB RAIDER 13 CTB 1, TOMB RAIDER 12 PAD 1 (TOMB RAIDER 12-1 FED 516H), TOMB RAIDER 12 PAD 4 & 5, AND TOMB RAIDER 12 CTB 2 & 3**

**DEVON ENERGY PRODUCTION COMPANY, L.P.  
CENTERLINE SURVEY OF AN ELECTRIC LINE CROSSING  
SECTION 12, TOWNSHIP 23 SOUTH, RANGE 31 EAST, N.M.P.M.  
EDDY COUNTY, STATE OF NEW MEXICO  
JUNE 18, 2018**

**DESCRIPTION**

A STRIP OF LAND 30 FEET WIDE CROSSING BUREAU OF LAND MANAGEMENT LAND IN SECTION 12, 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:

**MAIN LINE - TOMB RAIDER 12 CTB 3**

BEGINNING AT A POINT WITHIN THE SW/4 SE/4 OF SAID SECTION 12, TOWNSHIP 23 SOUTH, RANGE 31 EAST, N.M.P.M., WHENCE THE SOUTH QUARTER CORNER OF SAID SECTION 12, TOWNSHIP 23 SOUTH, RANGE 31 EAST, N.M.P.M. BEARS S89°43'23"W, A DISTANCE OF 995.46 FEET;  
THENCE N01°42'21"E A DISTANCE OF 661.48 FEET TO AN ANGLE POINT OF THE LINE HEREIN DESCRIBED;  
THENCE N07°15'23"W A DISTANCE OF 607.55 FEET TO AN ANGLE POINT OF THE LINE HEREIN DESCRIBED;  
THENCE S89°59'27"E A DISTANCE OF 601.49 FEET THE TERMINUS OF THIS CENTERLINE SURVEY, WHENCE THE EAST QUARTER CORNER OF SAID SECTION 12, TOWNSHIP 23 SOUTH, RANGE 31 EAST, N.M.P.M. BEARS N38°02'37"E, A DISTANCE OF 1757.73 FEET;

SAID STRIP OF LAND BEING 1870.52 FEET OR 113.37 RODS IN LENGTH, CONTAINING 1.288 ACRES MORE OR LESS AND BEING ALLOCATED BY FORTIES AS FOLLOWS:

SW/4 SE/4	1642.95 L.F.	99.57 RODS	1.132 ACRES
SE/4 SE/4	227.57 L.F.	13.79 RODS	0.157 ACRES

**LATERAL 2 - TOMB RAIDER 12 PAD 5**

BEGINNING AT A POINT WITHIN THE SE/4 SE/4 OF SAID SECTION 12, TOWNSHIP 23 SOUTH, RANGE 31 EAST, N.M.P.M., WHENCE THE SOUTHEAST CORNER OF SAID SECTION 12, TOWNSHIP 23 SOUTH, RANGE 31 EAST, N.M.P.M. BEARS N89°43'23"E, A DISTANCE OF 830.12 FEET;  
THENCE N00°19'18"W A DISTANCE OF 34.97 FEET TO AN ANGLE POINT OF THE LINE HEREIN DESCRIBED;  
THENCE N89°44'46"E A DISTANCE OF 50.11 FEET THE TERMINUS OF THIS CENTERLINE SURVEY, WHENCE THE SOUTHEAST CORNER OF SAID SECTION 12, TOWNSHIP 23 SOUTH, RANGE 31 EAST, N.M.P.M. BEARS S87°42'41"E, A DISTANCE OF 780.82 FEET;

SAID STRIP OF LAND BEING 85.08 FEET OR 5.16 RODS IN LENGTH, CONTAINING 0.059 ACRES MORE OR LESS AND BEING ALLOCATED BY FORTIES AS FOLLOWS:

SE/4 SE/4	85.08 L.F.	5.16 RODS	0.059 ACRES
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**LATERAL 3 - TOMB RAIDER 12 PAD 1 (TOMB RAIDER 12-1 FED 516H)**

BEGINNING AT A POINT WITHIN THE SW/4 SE/4 OF SAID SECTION 12, TOWNSHIP 23 SOUTH, RANGE 31 EAST, N.M.P.M., WHENCE THE SOUTH QUARTER CORNER OF SAID SECTION 12, TOWNSHIP 23 SOUTH, RANGE 31 EAST, N.M.P.M. BEARS S84°00'29"W, A DISTANCE OF 1003.94 FEET;  
THENCE N89°41'08"E A DISTANCE OF 39.00 FEET THE TERMINUS OF THIS CENTERLINE SURVEY, WHENCE THE SOUTH QUARTER CORNER OF SAID SECTION 12, TOWNSHIP 23 SOUTH, RANGE 31 EAST, N.M.P.M. BEARS S84°13'13"W, A DISTANCE OF 1042.75 FEET;

SAID STRIP OF LAND BEING 39.00 FEET OR 2.36 RODS IN LENGTH, CONTAINING 0.027 ACRES MORE OR LESS AND BEING ALLOCATED BY FORTIES AS FOLLOWS:

SW/4 SE/4	39.00 L.F.	2.36 RODS	0.027 ACRES
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**SURVEYOR CERTIFICATE**

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

IN WITNESS WHEREOF THIS CERTIFICATE IS EXECUTED AT CARLSBAD,

NEW MEXICO, THIS 18 DAY OF JUNE 2018

*(Signature of Filmon F. Jaramillo)*  
FILMON F. JARAMILLO, P.L.S. #2797

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

**SURVEY NO. 6299**

**GENERAL NOTES**

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

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

**SHEET: 4-7**

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

301 SOUTH CANAL  
(575) 234-3341

**ELECTRIC LINE PLAT**

**ELECTRIC LINE TO CONNECT TOMB RAIDER 13 CTB 1, TOMB RAIDER 12 PAD 1 (TOMB RAIDER 12-1 FED 516H), TOMB RAIDER 12 PAD 4 & 5, AND TOMB RAIDER 12 CTB 2 & 3**

**DEVON ENERGY PRODUCTION COMPANY, L.P.  
CENTERLINE SURVEY OF AN ELECTRIC LINE CROSSING  
SECTION 12, TOWNSHIP 23 SOUTH, RANGE 31 EAST, N.M.P.M.  
EDDY COUNTY, STATE OF NEW MEXICO  
JUNE 18, 2018**

**DESCRIPTION**

A STRIP OF LAND 30 FEET WIDE CROSSING BUREAU OF LAND MANAGEMENT LAND IN SECTION 12, 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:

**LATERAL 4 - TOMB RAIDER 12 PAD 2**

BEGINNING AT A POINT WITHIN THE SW/4 SE/4 OF SAID SECTION 12, TOWNSHIP 23 SOUTH, RANGE 31 EAST, N.M.P.M., WHENCE THE SOUTH QUARTER CORNER OF SAID SECTION 12, TOWNSHIP 23 SOUTH, RANGE 31 EAST, N.M.P.M. BEARS S84°00'29"W, A DISTANCE OF 1003.94 FEET;  
THENCE N86°48'11"W A DISTANCE OF 662.44 FEET THE TERMINUS OF THIS CENTERLINE SURVEY, WHENCE THE SOUTH QUARTER CORNER OF SAID SECTION 12, TOWNSHIP 23 SOUTH, RANGE 31 EAST, N.M.P.M. BEARS S67°11'29"W, A DISTANCE OF 365.64 FEET;

SAID STRIP OF LAND BEING 662.44 FEET OR 40.15 RODS IN LENGTH, CONTAINING 0.456 ACRES MORE OR LESS AND BEING ALLOCATED BY FORTIES AS FOLLOWS:

SW/4 SE/4    662.44 L.F.    40.15 RODS    0.456 ACRES

**LATERAL 5 - TOMB RAIDER 12 CTB 2**

BEGINNING AT A POINT WITHIN THE SW/4 SE/4 OF SAID SECTION 12, TOWNSHIP 23 SOUTH, RANGE 31 EAST, N.M.P.M., WHENCE THE SOUTH QUARTER CORNER OF SAID SECTION 12, TOWNSHIP 23 SOUTH, RANGE 31 EAST, N.M.P.M. BEARS S43°42'50"W, A DISTANCE OF 1404.59 FEET;  
THENCE S89°59'50"W A DISTANCE OF 1240.53 FEET TO AN ANGLE POINT OF THE LINE HEREIN DESCRIBED;  
THENCE N00°01'10"W A DISTANCE OF 199.95 FEET TO AN ANGLE POINT OF THE LINE HEREIN DESCRIBED;  
THENCE N89°52'56"E A DISTANCE OF 50.11 FEET THE TERMINUS OF THIS CENTERLINE SURVEY, WHENCE THE SOUTH QUARTER CORNER OF SAID SECTION 12, TOWNSHIP 23 SOUTH, RANGE 31 EAST, N.M.P.M. BEARS S10°15'14"E, A DISTANCE OF 1234.95 FEET;

SAID STRIP OF LAND BEING 1490.59 FEET OR 90.34 RODS IN LENGTH, CONTAINING 1.027 ACRES MORE OR LESS AND BEING ALLOCATED BY FORTIES AS FOLLOWS:

SW/4 SE/4    975.73 L.F.    59.13 RODS    0.672 ACRES  
SE/4 SW/4    514.86 L.F.    31.20 RODS    0.355 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 22 DAY OF JUNE 2018

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

**GENERAL NOTES**

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

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

SHEET: 5-7

MADRON SURVEYING, INC. CARLSBAD, NEW MEXICO

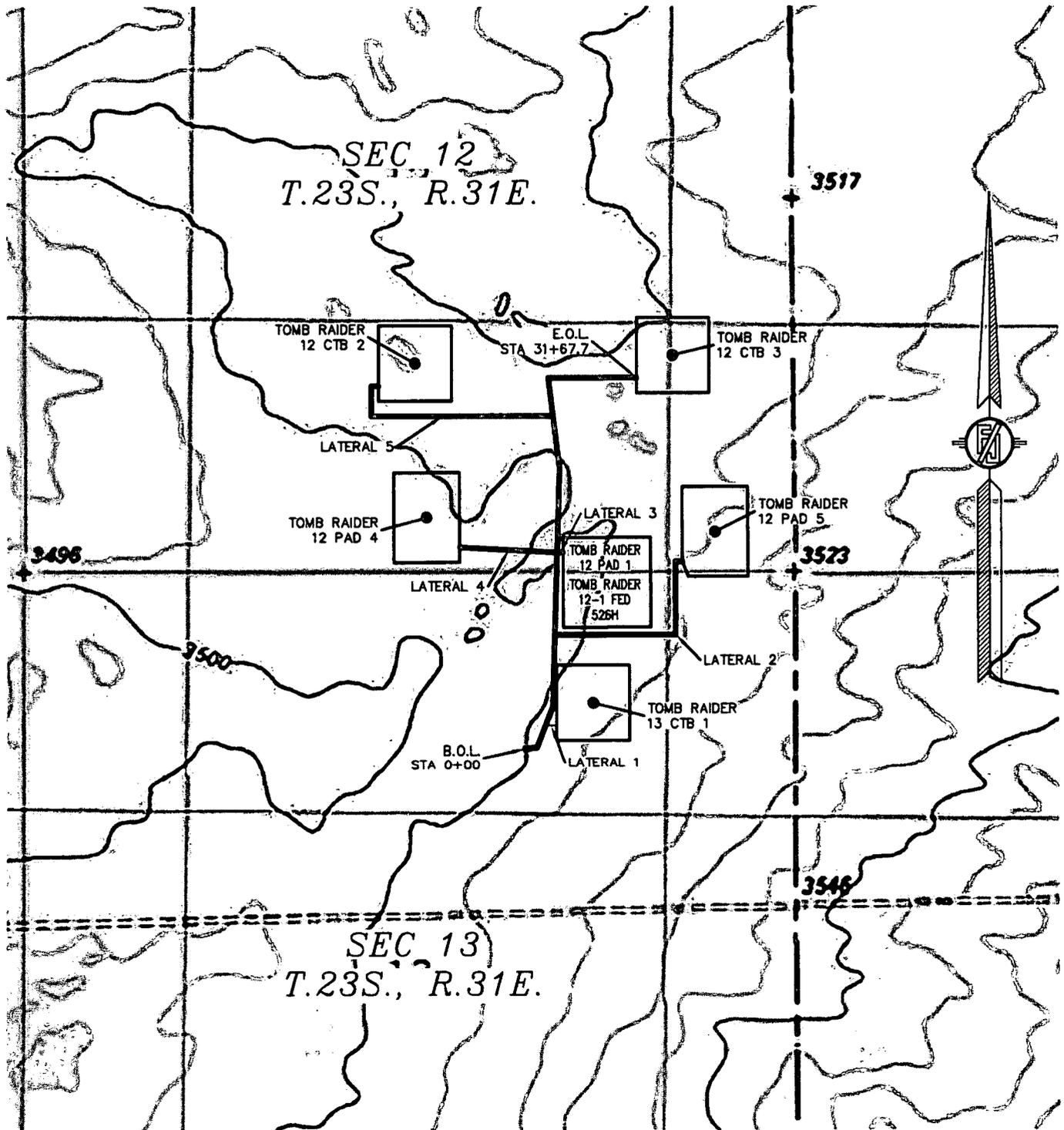
SURVEY NO. 6299

301 SOUTH CANAL  
(575) 234-3341

**ELECTRIC LINE PLAT**

**ELECTRIC LINE TO CONNECT TOMB RAIDER 13 CTB 1, TOMB RAIDER 12 PAD 1 (TOMB RAIDER 12-1 FED 516H), TOMB RAIDER 12 PAD 4 & 5, AND TOMB RAIDER 12 CTB 2 & 3**

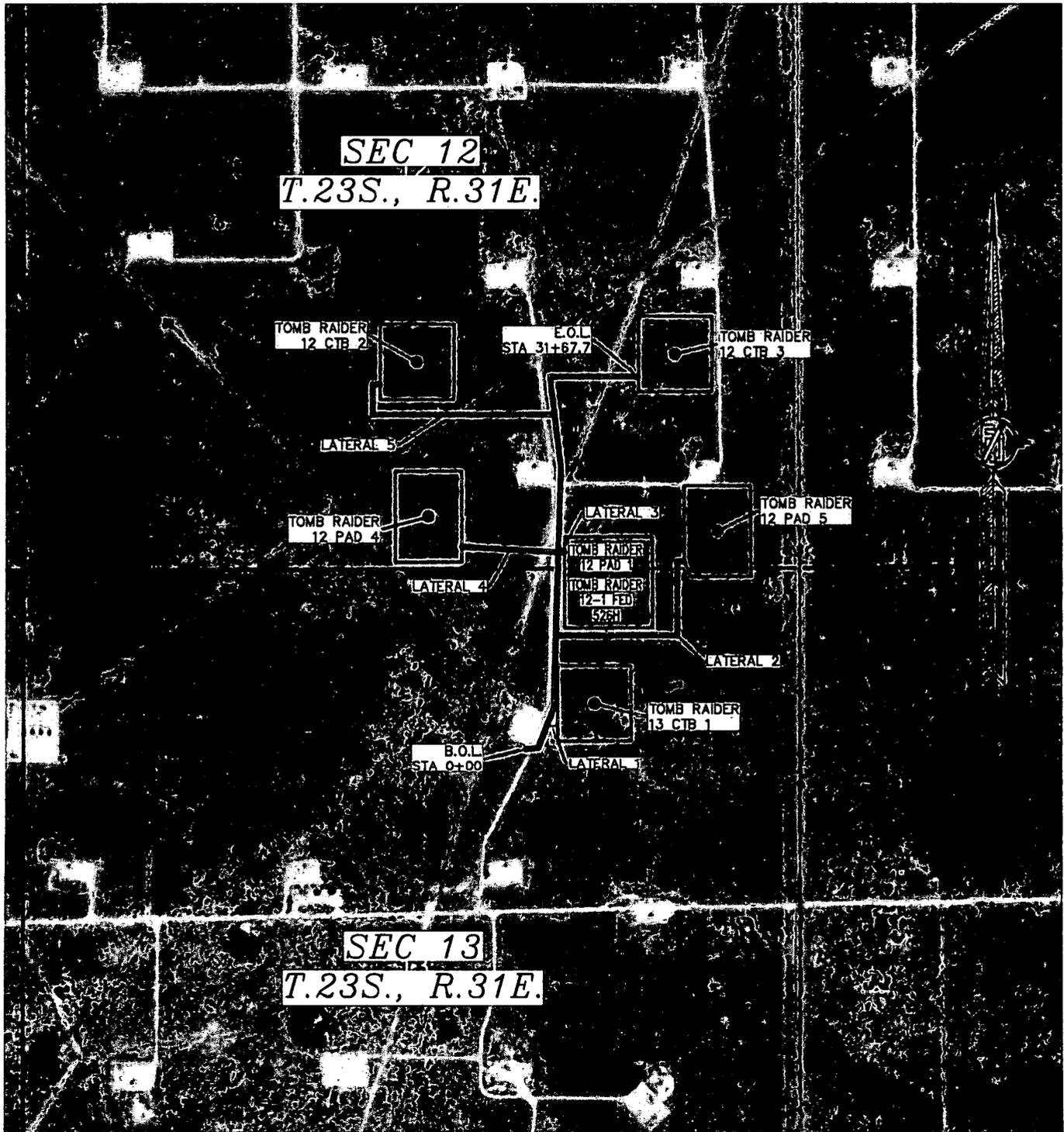
**DEVON ENERGY PRODUCTION COMPANY, L.P.  
CENTERLINE SURVEY OF AN ELECTRIC LINE CROSSING  
SECTIONS 13 & 12, TOWNSHIP 23 SOUTH, RANGE 31 EAST, N.M.P.M.  
EDDY COUNTY, STATE OF NEW MEXICO  
JUNE 18, 2018**



**ELECTRIC LINE PLAT**

**ELECTRIC LINE TO CONNECT TOMB RAIDER 13 CTB 1, TOMB RAIDER 12 PAD 1 (TOMB RAIDER 12-1 FED 516H), TOMB RAIDER 12 PAD 4 & 5, AND TOMB RAIDER 12 CTB 2 & 3**

**DEVON ENERGY PRODUCTION COMPANY, L.P.  
CENTERLINE SURVEY OF AN ELECTRIC LINE CROSSING  
SECTIONS 13 & 12, TOWNSHIP 23 SOUTH, RANGE 31 EAST, N.M.P.M.  
EDDY COUNTY, STATE OF NEW MEXICO  
JUNE 18, 2018**





## Receipt

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### Tracking Information

Pay.gov Tracking ID: 26DNIUGV

Agency Tracking ID: 75623046826

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: \$30,150.00

Transaction Date: 11/26/2018 04:44:04 PM EST

Payment Date: 11/27/2018

Company: DEVON ENERGY PRODUCTION CO., L.P.

APD IDs: 10400036686, 10400036684, 10400036665

Lease Numbers: NMNM0404441, NMNM0404441, NMNM0404441

Well Numbers: 216H, 215H, 214H

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

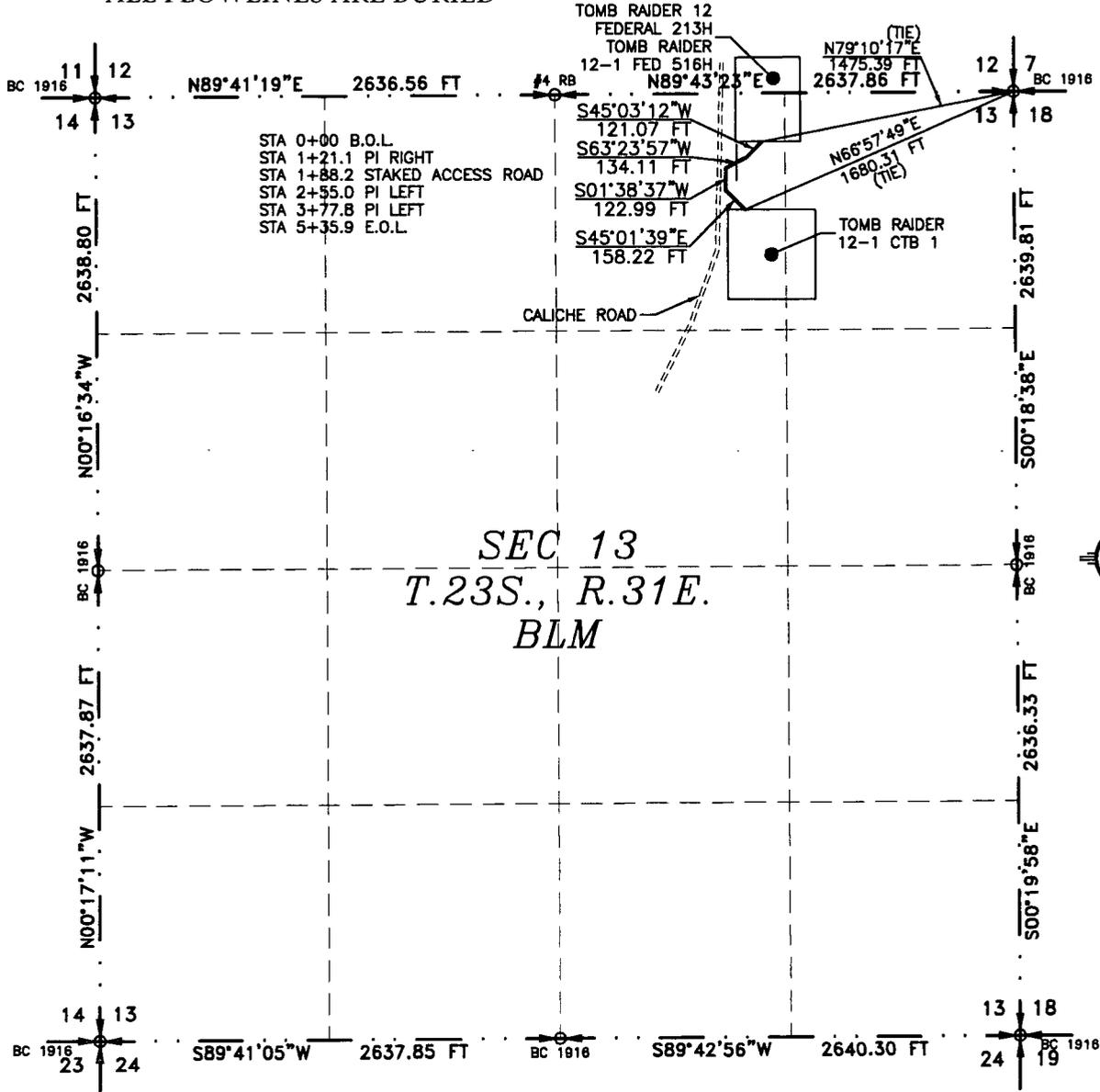
Account Number: \*\*\*\*\*9892

**BURIED FLOWLINE PLAT**

TWO-8" POLY FLOWLINES & ONE-6" GAS LIFT LINE BURIED IN THE SAME DITCH FROM  
TOMB RAIDER 12 FEDERAL 213H & TOMB RAIDER 12-1 FED 516H TO TOMB RAIDER 12-1 CTB 1

**DEVON ENERGY PRODUCTION COMPANY, L.P.**  
CENTERLINE SURVEY OF A PIPELINE CROSSING  
SECTION 13, TOWNSHIP 23 SOUTH, RANGE 31 EAST, N.M.P.M.  
EDDY COUNTY, STATE OF NEW MEXICO  
MAY 29, 2018

\*ALL FLOWLINES ARE BURIED\*



SEC 13  
T.23S., R.31E.  
BLM

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 29<sup>th</sup> DAY OF MAY 2018

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

FILMON F. JARAMILLO, PLS 12797

SURVEY NO. 5406A

MADRON SURVEYING, INC. CARLSBAD, NEW MEXICO



**GENERAL NOTES**

- 1.) THE INTENT OF THIS ROUTE SURVEY IS TO ACQUIRE AN EASEMENT.
- 2.) BASIS OF BEARING AND DISTANCE IS NMS83 EAST (NAD83) MODIFIED TO SURFACE COORDINATES. NAD 83 (FEET) AND NAVD 88 (FEET) COORDINATE SYSTEMS USED IN THE SURVEY.

SHEET: 1-4

**BURIED FLOWLINE PLAT**

**TWO-8" POLY FLOWLINES & ONE-6" GAS LIFT LINE BURIED IN THE SAME DITCH FROM  
TOMB RAIDER 12 FEDERAL 213H & TOMB RAIDER 12-1 FED 516H TO TOMB RAIDER 12-1 CTB 1**

**DEVON ENERGY PRODUCTION COMPANY, L.P.  
CENTERLINE SURVEY OF A PIPELINE CROSSING  
SECTION 13, TOWNSHIP 23 SOUTH, RANGE 31 EAST, N.M.P.M.  
EDDY COUNTY, STATE OF NEW MEXICO  
MAY 29, 2018**

**\*ALL FLOWLINES ARE BURIED\* DESCRIPTION**

A STRIP OF LAND 30 FEET WIDE CROSSING BUREAU OF LAND MANAGEMENT LAND IN SECTION 13, TOWNSHIP 23 SOUTH, RANGE 31 EAST, N.M.P.M., EDDY COUNTY, STATE OF NEW MEXICO AND BEING 15 FEET EACH SIDE OF THE FOLLOWING DESCRIBED CENTERLINE SURVEY:

BEGINNING AT A POINT WITHIN THE NW/4 NE/4 OF SAID SECTION 13, TOWNSHIP 23 SOUTH, RANGE 31 EAST, N.M.P.M., WHENCE THE NORTHEAST CORNER OF SAID SECTION 13, TOWNSHIP 23 SOUTH, RANGE 31 EAST, N.M.P.M. BEARS N66°57'49"E, A DISTANCE OF 1680.31 FEET;  
THENCE N45°01'39"W A DISTANCE OF 158.22 FEET TO AN ANGLE POINT OF THE LINE HEREIN DESCRIBED;  
THENCE N01°38'37"E A DISTANCE OF 122.99 FEET TO AN ANGLE POINT OF THE LINE HEREIN DESCRIBED;  
THENCE N63°23'57"E A DISTANCE OF 134.11 FEET TO AN ANGLE POINT OF THE LINE HEREIN DESCRIBED;  
THENCE N45°03'12"E A DISTANCE OF 121.07 FEET THE TERMINUS OF THIS CENTERLINE SURVEY, WHENCE THE NORTHEAST CORNER OF SAID SECTION 13, TOWNSHIP 23 SOUTH, RANGE 31 EAST, N.M.P.M. BEARS N79°10'17"E, A DISTANCE OF 1475.39 FEET;

SAID STRIP OF LAND BEING 536.39 FEET OR 32.51 RODS IN LENGTH, CONTAINING 0.369 ACRES MORE OR LESS AND BEING ALLOCATED BY FORTIES AS FOLLOWS:

NW/4 NE/4    536.39 L.F.    32.51 RODS    0.369 ACRES

**SURVEYOR CERTIFICATE**

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

IN WITNESS WHEREOF THIS CERTIFICATE IS EXECUTED AT CARLSBAD, NEW MEXICO, THIS 30 DAY OF MAY 2018

*[Signature]*  
FILIMON F. JARAMILLO, PLS. 12797

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

**GENERAL NOTES**

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

SHEET: 2-4

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

**SURVEY NO. 5406A**

301 SOUTH CANAL  
(575) 234-3341

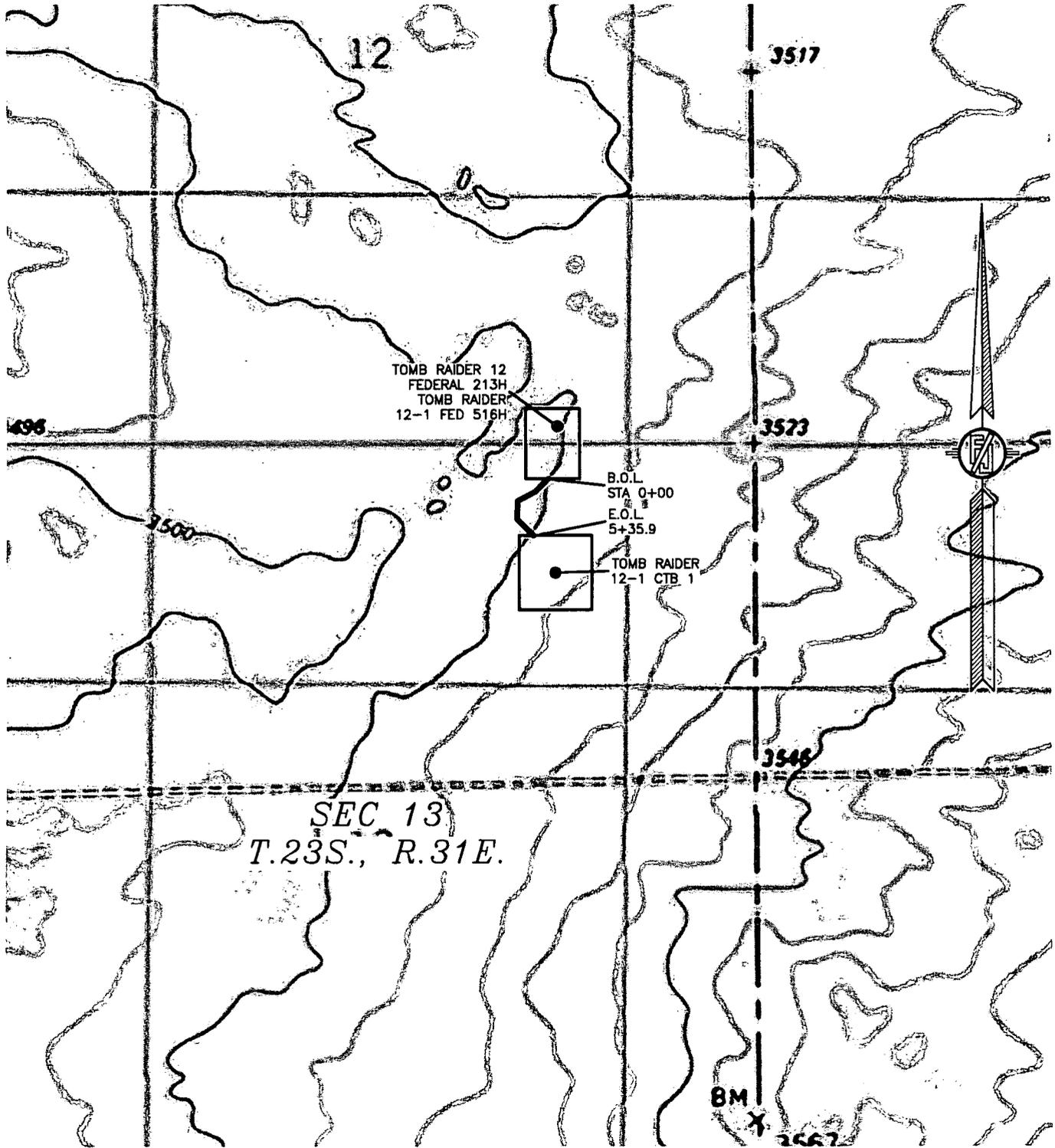
**BURIED FLOWLINE PLAT**

TWO-8" POLY FLOWLINES & ONE-6" GAS LIFT LINE BURIED IN THE SAME DITCH FROM  
TOMB RAIDER 12 FEDERAL 213H & TOMB RAIDER 12-1 FED 516H TO TOMB RAIDER 12-1 CTB 1

**DEVON ENERGY PRODUCTION COMPANY, L.P.**  
CENTERLINE SURVEY OF A PIPELINE CROSSING  
SECTION 13, TOWNSHIP 23 SOUTH, RANGE 31 EAST, N.M.P.M.  
EDDY COUNTY, STATE OF NEW MEXICO

MAY 29, 2018

\*ALL FLOWLINES ARE BURIED\*

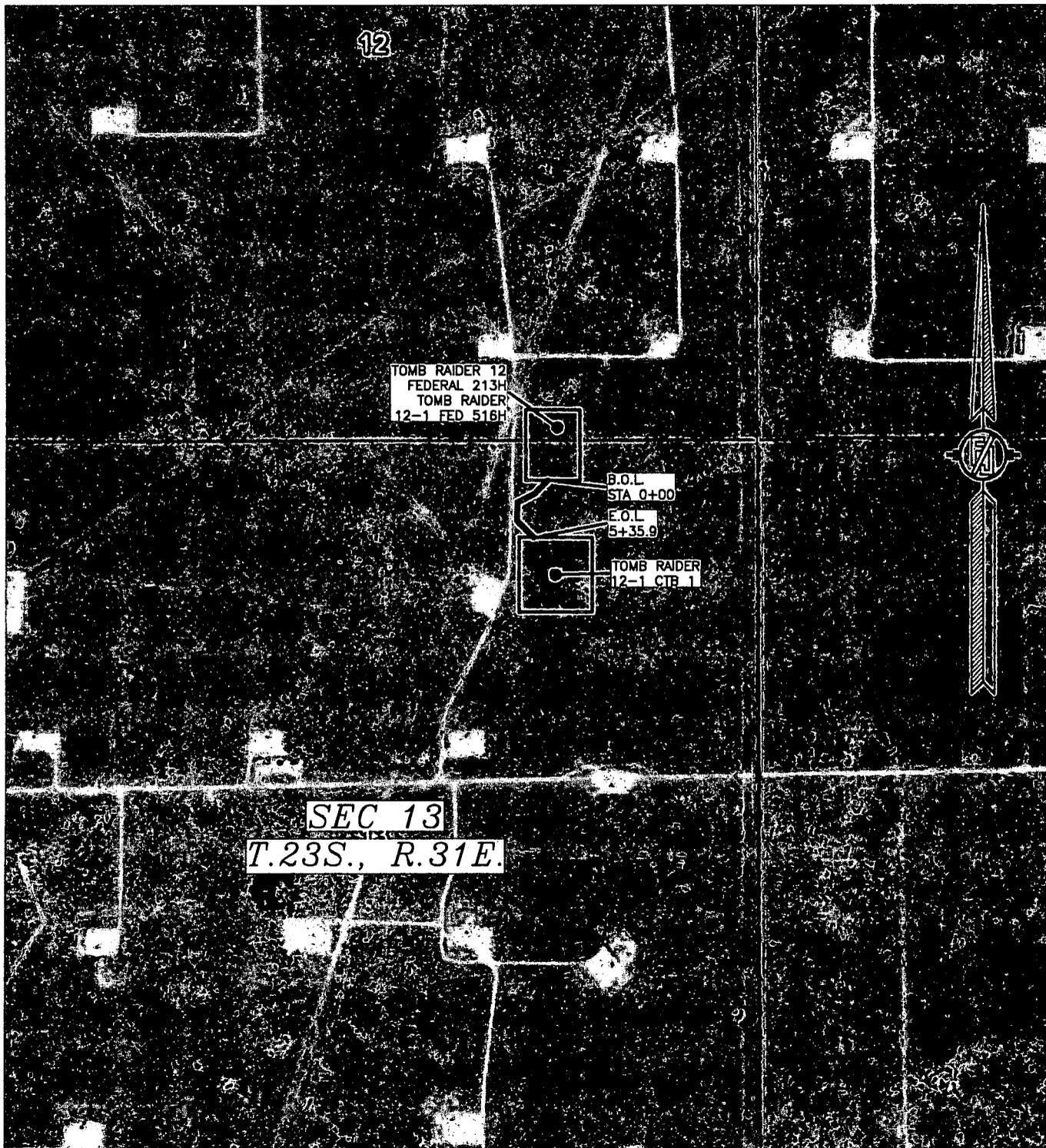


BURIED **FLOWLINE PLAT**

TWO-8" POLY FLOWLINES & ONE-6" GAS LIFT LINE BURIED IN THE SAME DITCH FROM  
TOMB RAIDER 12 FEDERAL 213H & TOMB RAIDER 12-1 FED 516H TO TOMB RAIDER 12-1 CTB 1

DEVON ENERGY PRODUCTION COMPANY, L.P.  
CENTERLINE SURVEY OF A PIPELINE CROSSING  
SECTION 13, TOWNSHIP 23 SOUTH, RANGE 31 EAST, N.M.P.M.  
EDDY COUNTY, STATE OF NEW MEXICO  
MAY 29, 2018

\*ALL FLOWLINES ARE BURIED\*





**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:

Lined pit Monitor description:

Lined pit Monitor attachment:

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

Is the reclamation bond a rider under the BLM bond?

Lined pit bond number:

Lined pit bond amount:

Additional bond information attachment:

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

Would you like to utilize Unlined Pit PWD options? NO

Produced Water Disposal (PWD) Location:

PWD surface owner:

PWD disturbance (acres):

Unlined pit PWD on or off channel:

Unlined pit PWD discharge volume (bbl/day):

Unlined pit specifications:

Precipitated solids disposal:

Describe precipitated solids disposal:

Precipitated solids disposal permit:

Unlined pit precipitated solids disposal schedule:

Unlined pit precipitated solids disposal schedule attachment:

Unlined pit reclamation description:

Unlined pit reclamation attachment:

Unlined pit Monitor description:

Unlined pit Monitor attachment:

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

Beneficial use user confirmation:

Estimated depth of the shallowest aquifer (feet):

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

TDS lab results:

Geologic and hydrologic evidence:

State authorization:

Unlined Produced Water Pit Estimated percolation:

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

Is the reclamation bond a rider under the BLM bond?

Unlined pit bond number:

Unlined pit bond amount:

Additional bond information attachment:

### **Section 4 - Injection**

Would you like to utilize Injection PWD options? NO

Produced Water Disposal (PWD) Location:

PWD surface owner:

PWD disturbance (acres):

Injection PWD discharge volume (bbl/day):

Injection well mineral owner:

**Injection well type:**

**Injection well number:**

**Assigned injection well API number?**

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

**Minerals protection information:**

**Mineral protection attachment:**

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

**UIC Permit attachment:**

**Injection well name:**

**Injection well API number:**

### **Section 5 - Surface Discharge**

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

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

**PWD surface owner:**

**PWD disturbance (acres):**

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

**Surface Discharge NPDES Permit?**

**Surface Discharge NPDES Permit attachment:**

**Surface Discharge site facilities information:**

**Surface discharge site facilities map:**

### **Section 6 - Other**

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

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

**PWD surface owner:**

**PWD disturbance (acres):**

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

**Other PWD type description:**

**Other PWD type attachment:**

**Have other regulatory requirements been met?**

**Other regulatory requirements attachment:**



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

**Bond Information**

**Federal/Indian APD:** FED

**BLM Bond number:** CO1104

**BIA Bond number:**

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

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

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

**BLM reclamation bond number:**

**Forest Service reclamation bond number:**

**Forest Service reclamation bond attachment:**

**Reclamation bond number:**

**Reclamation bond amount:**

**Reclamation bond rider amount:**

**Additional reclamation bond information attachment:**