

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

**APPLICATION FOR PERMIT TO DRILL OR REENTER**

FORM APPROVED  
OMB No. 1004-0137  
Expires October 31, 2014

5. Lease Serial No. NMNM22080	
6. If Indian, Allottee or Tribe Name	
7. If Unit or CA Agreement, Name and No.	
8. Lease Name and Well No. TOMB RAIDER 12 FED 213H 321158	
9. API Well No. 30-015-44854	
1a. Type of work: <input checked="" type="checkbox"/> DRILL <input type="checkbox"/> REENTER	10. Field and Pool, or Exploratory LIVINGSTON RIDGE / BONESPRING 39350
1b. Type of Well: <input checked="" type="checkbox"/> Oil Well <input type="checkbox"/> Gas Well <input type="checkbox"/> Other <input checked="" type="checkbox"/> Single Zone <input type="checkbox"/> Multiple Zone	11. Sec., T. R. M. or Blk. and Survey or Area SEC 12 / T23S / R31E / NMP
2. Name of Operator DEVON ENERGY PRODUCTION COMPANY LP	12. County or Parish EDDY
3a. Address 333 West Sheridan Avenue Oklahoma City OK	13. State NM
3b. Phone No. (include area code) (405)552-6571	14. Distance in miles and direction from nearest town or post office*
4. Location of Well (Report location clearly and in accordance with any State requirements.)* At surface SWSE / 50 FSL / 1450 FEL / LAT 32.3118337 / LONG -103.7276518 At proposed prod. zone NWNE / 290 FNL / 1650 FEL / LAT 32.3254052 / LONG -103.728296	15. Distance from proposed* location to nearest property or lease line, ft. (Also to nearest drig. unit line, if any) 50 feet
16. No. of acres in lease 1280	17. Spacing Unit dedicated to this well 160
18. Distance from proposed location* to nearest well, drilling, completed, 490 feet applied for, on this lease, ft.	19. Proposed Depth 10272 feet / 14963 feet
20. BLM/BIA Bond No. on file FED: CO1104	21. Elevations (Show whether DF, KDB, RT, GL, etc.) 3504 feet
22. Approximate date work will start* 04/29/2018	23. Estimated duration 45 days

24. Attachments

The following, completed in accordance with the requirements of Onshore Oil and Gas Order No.1, must be attached to this form:

- |  |   |
|--|---|
| 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 required by the BLM.             |

25. Signature (Electronic Submission)	Name (Printed/Typed) Chance Bland / Ph: (405)228-8593	Date 08/24/2017
Title Regulatory Compliance Professional		
Approved by (Signature) (Electronic Submission)	Name (Printed/Typed) Cody Layton / Ph: (575)234-5959	Date 03/09/2018
Title Supervisor Multiple Resources		

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.

(Continued on page 2)

\*(Instructions on page 2)

**APPROVED WITH CONDITIONS**  
Approval Date: 03/09/2018

BUREAU OF LAND MANAGEMENT  
ARTESIA DISTRICT  
APR 03 2018

RECEIVED

RUP 4-5-18

## 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.

## NOTICES

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

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

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

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

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

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

The BLM collects this information to allow evaluation of the technical, safety, and environmental factors involved with drilling for oil and/or gas on Federal and Indian oil and gas leases. This information will be used to analyze and approve applications.

Response to this request is mandatory only if the operator elects to initiate drilling or reentry operations on an oil and gas lease.

The BLM would like you to know that you do not have to respond to this or any other Federal agency-sponsored information collection unless it displays a currently valid OMB control number.

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

## Additional Operator Remarks

### Location of Well

1. SHL: SWSE / 50 FSL / 1450 FEL / TWSP: 23S / RANGE: 31E / SECTION: 12 / LAT: 32.3118337 / LONG: -103.7276518 ( TVD: 9786 feet, MD: 9786 feet )  
PPP: SWSE / 330 FSL / 1450 FEL / TWSP: 23S / RANGE: 31E / SECTION: 12 / LAT: 32.312282 / LONG: -103.728386 ( TVD: 10242 feet, MD: 10400 feet )  
BHL: NWNE / 290 FNL / 1650 FEL / TWSP: 23S / RANGE: 31E / SECTION: 12 / LAT: 32.3254052 / LONG: -103.728296 ( TVD: 10272 feet, MD: 14963 feet )

## BLM Point of Contact

Name: Judith Yeager

Title: Legal Instruments Examiner

Phone: 5752345936

Email: jyeager@blm.gov

## **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.

## PECOS DISTRICT DRILLING CONDITIONS OF APPROVAL

OPERATOR'S NAME:	Devon Energy Production Company LP
LEASE NO.:	NMNM22080
WELL NAME & NO.:	Tomb Raider 12 Fed 213H
SURFACE HOLE FOOTAGE:	50'S & 1450'E
BOTTOM HOLE FOOTAGE:	290'N & 1650'E
LOCATION:	Section 12, T.23 S., R. 31E., NMPM
COUNTY:	Eddy County, New Mexico

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 checked="" type="radio"/> Multibowl	
Other	<input type="checkbox"/> 4 String Area	<input type="checkbox"/> Capitan Reef	<input type="checkbox"/> WIPP

### A. Hydrogen Sulfide

1. Hydrogen Sulfide (H<sub>2</sub>S) monitors shall be installed prior to drilling out the surface shoe. If H<sub>2</sub>S is detected in concentrations greater than 100 ppm, the Hydrogen Sulfide area shall meet Onshore Order 6 requirements, which includes equipment and personnel/public protection items. If Hydrogen Sulfide is encountered, provide measured values and formations to the BLM.

### B. CASING

1. The **13 3/8** inch surface casing shall be set at approximately **843** feet (a minimum of 25 feet 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.
2. The minimum required fill of cement behind the **9 5/8** inch intermediate casing is:
    - 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 potash. Excess calculates to 21% - additional 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. **Excess calculates to 21% - additional 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. **Operator has proposed a multi-bowl wellhead assembly. This assembly will only be tested when installed on the surface casing. Minimum working pressure of the blowout preventer (BOP) and related equipment (BOPE) required for drilling below the surface casing shoe shall be 3000 (3M) psi.**
  - a. **Wellhead shall be installed by manufacturer's representatives, submit documentation with subsequent sundry.**
  - b. **If the welding is performed by a third party, the manufacturer's representative shall monitor the temperature to verify that it does not exceed the maximum temperature of the seal.**
  - c. **Manufacturer representative shall install the test plug for the initial BOP test.**
  - d. **If the cement does not circulate and one inch operations would have been possible with a standard wellhead, the well head shall be cut off, cementing operations performed and another wellhead installed.**
  - e. **Whenever any seal subject to test pressure is broken, all the tests in OOGO2.III.A.2.i must be followed.**

**MHH 03052018**

## 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
LEASE NO.:	NMNM22080
WELL NAME & NO.:	Tomb Raider 12 Fed 213H
SURFACE HOLE FOOTAGE:	50'S & 1450'E
BOTTOM HOLE FOOTAGE	290'N & 1650'E
LOCATION:	Section 12, T.23 S., R. 31E., 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**

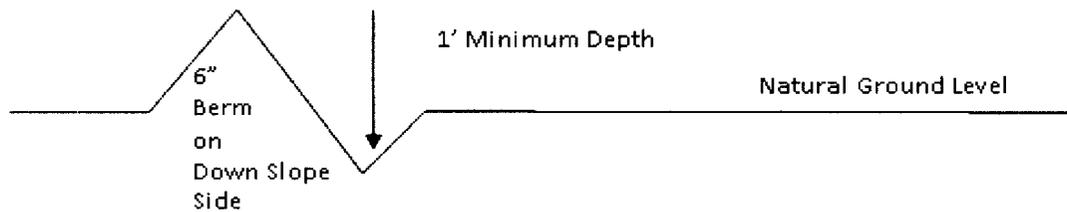
Vehicle turnouts shall be constructed on the road. Turnouts shall be intervisible with interval spacing distance less than 1000 feet. Turnouts shall conform to Figure 1; cross section and plans for typical road construction.

**Drainage**

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

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

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



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

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

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

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

### Cattle guards

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

### Fence Requirement

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

### Public Access

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

**Construction Steps**

1. Salvage topsoil
2. Construct road

3. Redistribute topsoil
4. Revegetate slopes

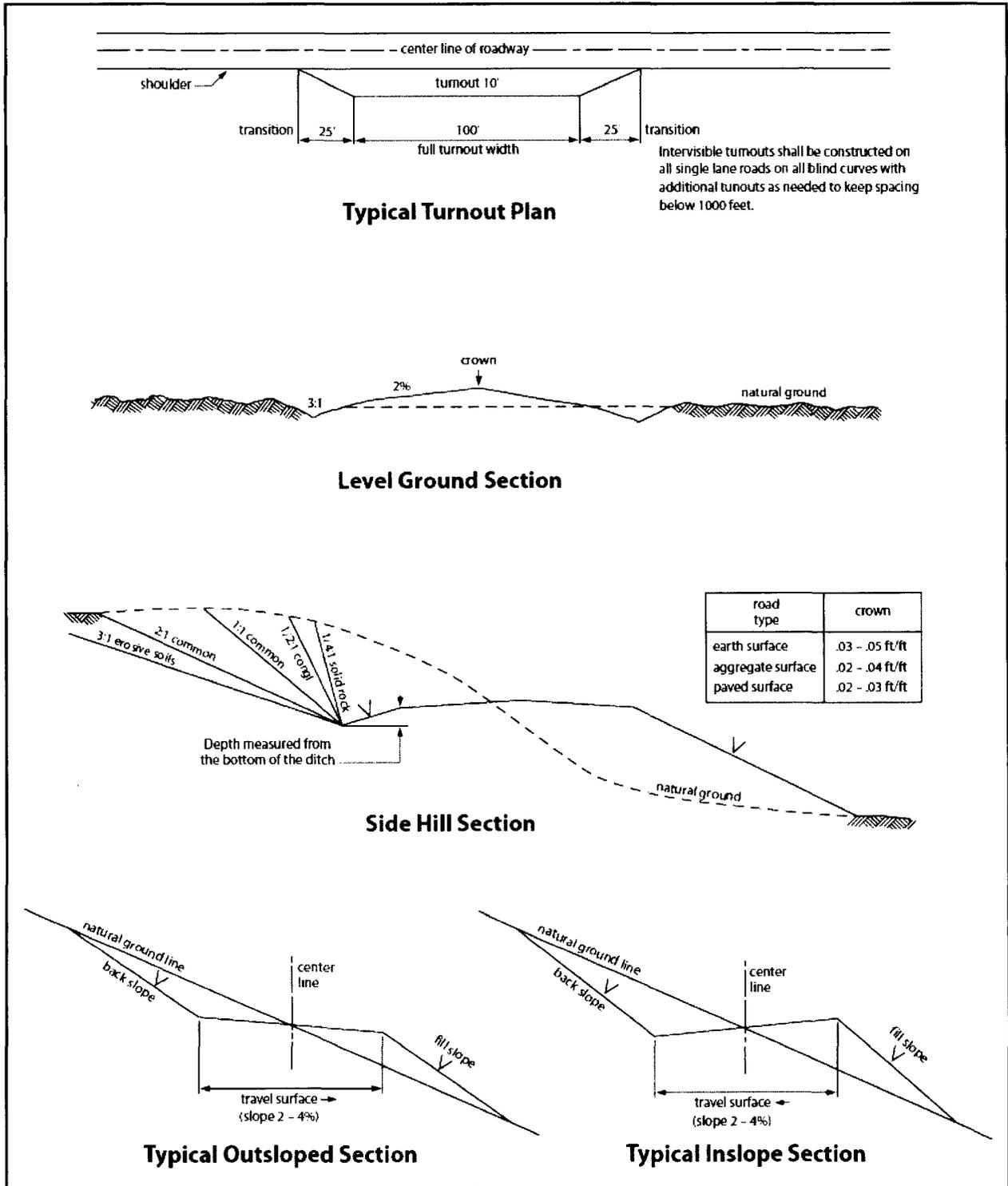


Figure 1. Cross-sections and plans for typical road sections representative of BLM resource or FS local and higher-class roads.

## **VII. PRODUCTION (POST DRILLING)**

### **A. WELL STRUCTURES & FACILITIES**

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

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

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

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

#### **Chemical and Fuel Secondary Containment and Exclosure Screening**

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

#### **Open-Vent Exhaust Stack Exclosures**

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

#### **Containment Structures**

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

### **Painting Requirement**

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

## **B. PIPELINES**

### **BURIED PIPELINE STIPULATIONS**

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

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

1. The Holder shall indemnify the United States against any liability for damage to life or property arising from the occupancy or use of public lands under this grant.
2. The Holder shall comply with all applicable Federal laws and regulations existing or hereafter enacted or promulgated. In any event, the holder shall comply with the Toxic Substances Control Act of 1976 as amended, 15 USC 2601 et seq. (1982) with regards to any toxic substances that are used, generated by or stored on the right-of-way or on facilities authorized under this right-of-way grant. (See 40 CFR Part 702-799 and especially, provisions on polychlorinated biphenyls, 40 CFR 761.1-761.193.) Additionally, any release of toxic substances (leaks, spills, etc.) in excess of the reportable quantity established by 40 CFR Part 117 shall be reported as required by the Comprehensive Environmental Response, Compensation, and Liability Act, section 102b. A copy of any report required or requested by any Federal agency or State government as a result of a reportable release or spill of any toxic substances shall be furnished to the authorized officer concurrent with the filing of the reports to the involved Federal agency or State government.
3. The holder agrees to indemnify the United States against any liability arising from the release of any hazardous substance or hazardous waste (as these terms are defined in the Comprehensive Environmental Response, Compensation and Liability Act of 1980, 42 U.S.C. 9601, et seq. or the Resource Conservation and Recovery Act, 42 U.S.C.6901, et seq.) on the Right-of-Way (unless the release or threatened release is wholly unrelated to the Right-of-Way holder's activity on the Right-of-Way), or resulting from the activity of the Right-of-Way holder on the Right-of-Way. This agreement applies without regard to whether a release is caused by the holder, its agent, or unrelated third parties.

4. If, during any phase of the construction, operation, maintenance, or termination of the pipeline, any oil or other pollutant should be discharged from the pipeline system, impacting Federal lands, the control and total removal, disposal, and cleaning up of such oil or other pollutant, wherever found, shall be the responsibility of holder, regardless of fault. Upon failure of holder to control, dispose of, or clean up such discharge on or affecting Federal lands, or to repair all damages resulting therefrom, on the Federal lands, the Authorized Officer may take such measures as he deems necessary to control and clean up the discharge and restore the area, including where appropriate, the aquatic environment and fish and wildlife habitats, at the full expense of the holder. Such action by the Authorized Officer shall not relieve holder of any responsibility as provided herein.

5. All construction and maintenance activity will be confined to the authorized right-of-way.
6. The pipeline will be buried with a minimum cover of 36 inches between the top of the pipe and ground level.
7. The maximum allowable disturbance for construction in this right-of-way will be 30 feet:
  - Blading of vegetation within the right-of-way will be allowed: maximum width of blading operations will not exceed 20 feet. The trench is included in this area. (*Blading is defined as the complete removal of brush and ground vegetation.*)
  - Clearing of brush species within the right-of-way will be allowed: maximum width of clearing operations will not exceed 30 feet. The trench and bladed area are included in this area. (*Clearing is defined as the removal of brush while leaving ground vegetation (grasses, weeds, etc.) intact. Clearing is best accomplished by holding the blade 4 to 6 inches above the ground surface.*)
  - The remaining area of the right-of-way (if any) shall only be disturbed by compressing the vegetation. (*Compressing can be caused by vehicle tires, placement of equipment, etc.*)
8. The holder shall stockpile an adequate amount of topsoil where blading is allowed. The topsoil to be stripped is approximately 6 inches in depth. The topsoil will be segregated from other spoil piles from trench construction. The topsoil will be evenly distributed over the bladed area for the preparation of seeding.
9. The holder shall minimize disturbance to existing fences and other improvements on public lands. The holder is required to promptly repair improvements to at least their former state. Functional use of these improvements will be maintained at all times. The holder will contact the owner of any improvements prior to disturbing them. When necessary to pass through a fence line, the fence shall be braced on both sides of the passageway prior to cutting of the fence. No permanent gates will be allowed unless approved by the Authorized Officer.
10. Vegetation, soil, and rocks left as a result of construction or maintenance activity will be randomly scattered on this right-of-way and will not be left in rows, piles, or berms, unless otherwise approved by the Authorized Officer. The entire right-of-way shall be recontoured to match the surrounding landscape. The backfilled soil shall be compacted and a 6 inch berm will be left over the ditch line to allow for settling back to grade.
11. In those areas where erosion control structures are required to stabilize soil conditions, the holder will install such structures as are suitable for the specific soil conditions being encountered and which are in accordance with sound resource management practices.

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

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

13. All above-ground structures not subject to safety requirements shall be painted by the holder to blend with the natural color of the landscape. The paint used shall be color which simulates “Standard Environmental Colors” – **Shale Green**, Munsell Soil Color No. 5Y 4/2.

14. The pipeline will be identified by signs at the point of origin and completion of the right-of-way and at all road crossings. At a minimum, signs will state the holder’s name, BLM serial number, and the product being transported. All signs and information thereon will be posted in a permanent, conspicuous manner, and will be maintained in a legible condition for the life of the pipeline.

15. The holder shall not use the pipeline route as a road for purposes other than routine maintenance as determined necessary by the Authorized Officer in consultation with the holder before maintenance begins. The holder will take whatever steps are necessary to ensure that the pipeline route is not used as a roadway. As determined necessary during the life of the pipeline, the Authorized Officer may ask the holder to construct temporary deterrence structures.

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

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

18. Escape Ramps - The operator will construct and maintain pipeline/utility trenches that are not otherwise fenced, screened, or netted to prevent livestock, wildlife, and humans from becoming entrapped. At a minimum, the operator will construct and maintain escape ramps, ladders, or

other methods of avian and terrestrial wildlife escape in the trenches according to the following criteria:

- a. Any trench left open for eight (8) hours or less is not required to have escape ramps; however, before the trench is backfilled, the contractor/operator shall inspect the trench for wildlife, remove all trapped wildlife, and release them at least 100 yards from the trench.
- b. For trenches left open for eight (8) hours or more, earthen escape ramps (built at no more than a 30 degree slope and spaced no more than 500 feet apart) shall be placed in the trench.

19. Special Stipulations:

### **Lesser Prairie-Chicken**

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

### **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

**PECOS DISTRICT  
SURFACE USE  
CONDITIONS OF APPROVAL**

OPERATOR'S NAME:	Devon Energy Production Company LP
LEASE NO.:	NMNM22080
WELL NAME & NO.:	Tomb Raider 12 Fed 213H
SURFACE HOLE FOOTAGE:	50'/S & 1450'/E
BOTTOM HOLE FOOTAGE:	290'/N & 1650'/E
LOCATION:	Section 12, T.23 S., R. 31E., NMPM
COUNTY:	Eddy County, New Mexico

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

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- Noxious Weeds**
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## **I. GENERAL PROVISIONS**

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

## **II. PERMIT EXPIRATION**

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

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

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

## **IV. NOXIOUS WEEDS**

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

## V. SPECIAL REQUIREMENT(S)

**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**

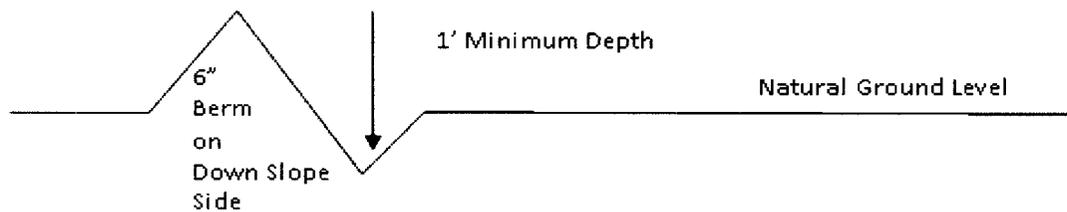
Vehicle turnouts shall be constructed on the road. Turnouts shall be intervisible with interval spacing distance less than 1000 feet. Turnouts shall conform to Figure 1; cross section and plans for typical road construction.

**Drainage**

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

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

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



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

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

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

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

### Cattle guards

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

### Fence Requirement

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

### Public Access

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

**Construction Steps**

1. Salvage topsoil
2. Construct road

3. Redistribute topsoil
4. Revegetate slopes

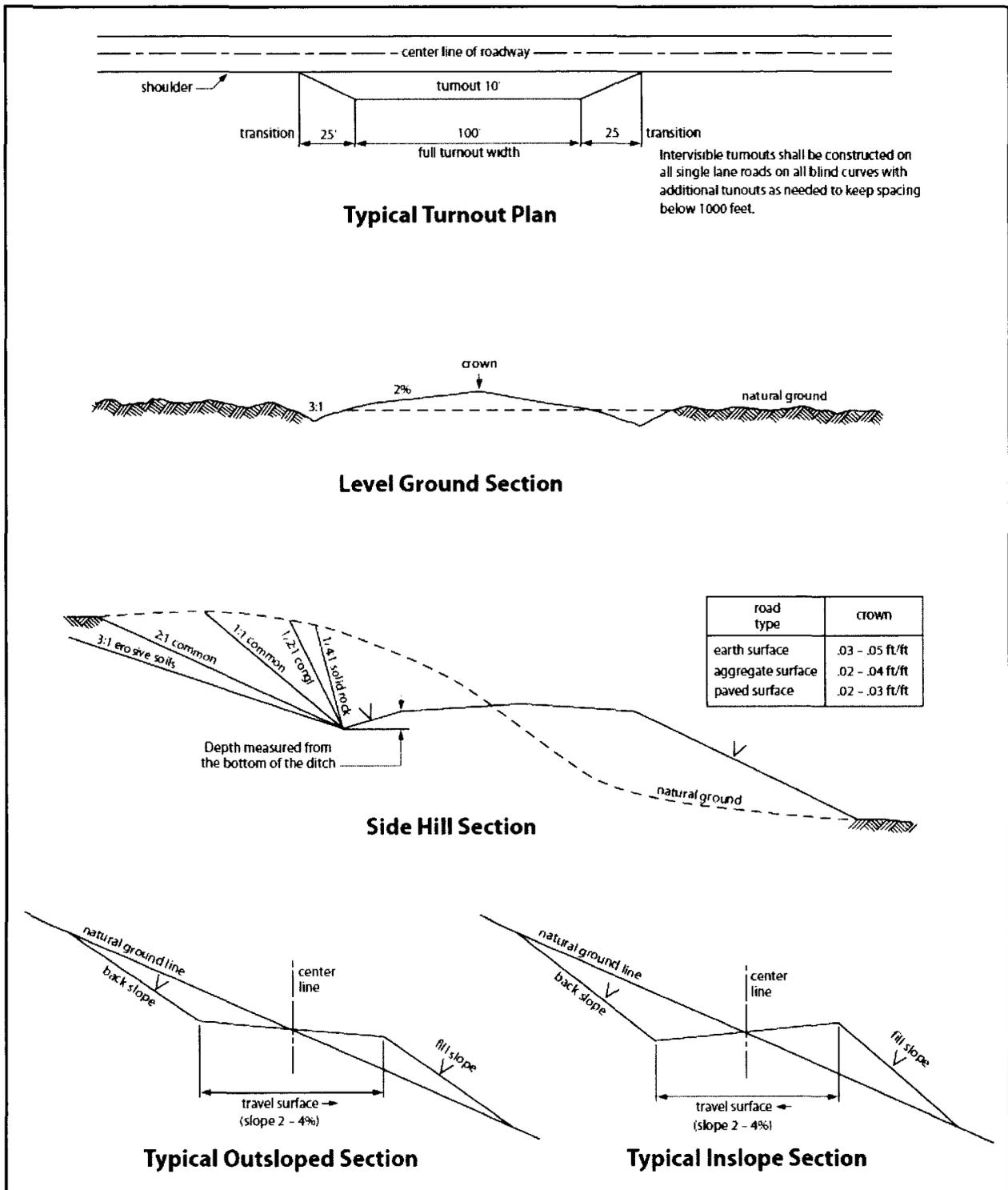


Figure 1. Cross-sections and plans for typical road sections representative of BLM resource or FS local and higher-class roads.

## VII. PRODUCTION (POST DRILLING)

### A. WELL STRUCTURES & FACILITIES

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

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

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

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

#### **Chemical and Fuel Secondary Containment and Exclosure Screening**

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

#### **Open-Vent Exhaust Stack Exclosures**

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

#### **Containment Structures**

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

### **Painting Requirement**

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

## **B. PIPELINES**

### **BURIED PIPELINE STIPULATIONS**

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

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

1. The Holder shall indemnify the United States against any liability for damage to life or property arising from the occupancy or use of public lands under this grant.
2. The Holder shall comply with all applicable Federal laws and regulations existing or hereafter enacted or promulgated. In any event, the holder shall comply with the Toxic Substances Control Act of 1976 as amended, 15 USC 2601 et seq. (1982) with regards to any toxic substances that are used, generated by or stored on the right-of-way or on facilities authorized under this right-of-way grant. (See 40 CFR Part 702-799 and especially, provisions on polychlorinated biphenyls, 40 CFR 761.1-761.193.) Additionally, any release of toxic substances (leaks, spills, etc.) in excess of the reportable quantity established by 40 CFR Part 117 shall be reported as required by the *Comprehensive Environmental Response, Compensation, and Liability Act*, section 102b. A copy of any report required or requested by any Federal agency or State government as a result of a reportable release or spill of any toxic substances shall be furnished to the authorized officer concurrent with the filing of the reports to the involved Federal agency or State government.
3. The holder agrees to indemnify the United States against any liability arising from the release of any hazardous substance or hazardous waste (as these terms are defined in the *Comprehensive Environmental Response, Compensation and Liability Act* of 1980, 42 U.S.C. 9601, et seq. or the *Resource Conservation and Recovery Act*, 42 U.S.C.6901, et seq.) on the Right-of-Way (unless the release or threatened release is wholly unrelated to the Right-of-Way holder's activity on the Right-of-Way), or resulting from the activity of the Right-of-Way holder on the Right-of-Way. This agreement applies without regard to whether a release is caused by the holder, its agent, or unrelated third parties.

4. If, during any phase of the construction, operation, maintenance, or termination of the pipeline, any oil or other pollutant should be discharged from the pipeline system, impacting Federal lands, the control and total removal, disposal, and cleaning up of such oil or other pollutant, wherever found, shall be the responsibility of holder, regardless of fault. Upon failure of holder to control, dispose of, or clean up such discharge on or affecting Federal lands, or to repair all damages resulting therefrom, on the Federal lands, the Authorized Officer may take such measures as he deems necessary to control and clean up the discharge and restore the area, including where appropriate, the aquatic environment and fish and wildlife habitats, at the full expense of the holder. Such action by the Authorized Officer shall not relieve holder of any responsibility as provided herein.

5. All construction and maintenance activity will be confined to the authorized right-of-way.
6. The pipeline will be buried with a minimum cover of 36 inches between the top of the pipe and ground level.
7. The maximum allowable disturbance for construction in this right-of-way will be 30 feet:
- Blading of vegetation within the right-of-way will be allowed: maximum width of blading operations will not exceed 20 feet. The trench is included in this area. (*Blading is defined as the complete removal of brush and ground vegetation.*)
  - Clearing of brush species within the right-of-way will be allowed: maximum width of clearing operations will not exceed 30 feet. The trench and bladed area are included in this area. (*Clearing is defined as the removal of brush while leaving ground vegetation (grasses, weeds, etc.) intact. Clearing is best accomplished by holding the blade 4 to 6 inches above the ground surface.*)
  - The remaining area of the right-of-way (if any) shall only be disturbed by compressing the vegetation. (*Compressing can be caused by vehicle tires, placement of equipment, etc.*)
8. The holder shall stockpile an adequate amount of topsoil where blading is allowed. The topsoil to be stripped is approximately 6 inches in depth. The topsoil will be segregated from other spoil piles from trench construction. The topsoil will be evenly distributed over the bladed area for the preparation of seeding.
9. The holder shall minimize disturbance to existing fences and other improvements on public lands. The holder is required to promptly repair improvements to at least their former state. Functional use of these improvements will be maintained at all times. The holder will contact the owner of any improvements prior to disturbing them. When necessary to pass through a fence line, the fence shall be braced on both sides of the passageway prior to cutting of the fence. No permanent gates will be allowed unless approved by the Authorized Officer.
10. Vegetation, soil, and rocks left as a result of construction or maintenance activity will be randomly scattered on this right-of-way and will not be left in rows, piles, or berms, unless otherwise approved by the Authorized Officer. The entire right-of-way shall be recontoured to match the surrounding landscape. The backfilled soil shall be compacted and a 6 inch berm will be left over the ditch line to allow for settling back to grade.
11. In those areas where erosion control structures are required to stabilize soil conditions, the holder will install such structures as are suitable for the specific soil conditions being encountered and which are in accordance with sound resource management practices.

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

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

13. All above-ground structures not subject to safety requirements shall be painted by the holder to blend with the natural color of the landscape. The paint used shall be color which simulates "Standard Environmental Colors" – **Shale Green**, Munsell Soil Color No. 5Y 4/2.

14. The pipeline will be identified by signs at the point of origin and completion of the right-of-way and at all road crossings. At a minimum, signs will state the holder's name, BLM serial number, and the product being transported. All signs and information thereon will be posted in a permanent, conspicuous manner, and will be maintained in a legible condition for the life of the pipeline.

15. The holder shall not use the pipeline route as a road for purposes other than routine maintenance as determined necessary by the Authorized Officer in consultation with the holder before maintenance begins. The holder will take whatever steps are necessary to ensure that the pipeline route is not used as a roadway. As determined necessary during the life of the pipeline, the Authorized Officer may ask the holder to construct temporary deterrence structures.

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

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

18. Escape Ramps - The operator will construct and maintain pipeline/utility trenches that are not otherwise fenced, screened, or netted to prevent livestock, wildlife, and humans from becoming entrapped. At a minimum, the operator will construct and maintain escape ramps, ladders, or

other methods of avian and terrestrial wildlife escape in the trenches according to the following criteria:

- a. Any trench left open for eight (8) hours or less is not required to have escape ramps; however, before the trench is backfilled, the contractor/operator shall inspect the trench for wildlife, remove all trapped wildlife, and release them at least 100 yards from the trench.
- b. For trenches left open for eight (8) hours or more, earthen escape ramps (built at no more than a 30 degree slope and spaced no more than 500 feet apart) shall be placed in the trench.

19. Special Stipulations:

### **Lesser Prairie-Chicken**

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

### **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

03/13/2018

### 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:** Chance Bland

**Signed on:** 08/24/2017

**Title:** Regulatory Compliance Professional

**Street Address:** 333 West Sheridan Avenue

**City:** Oklahoma City

**State:** OK

**Zip:** 73102

**Phone:** (405)228-8593

**Email address:** Chance.Bland@dvn.com

### Field Representative

**Representative Name:** Ray Vaz

**Street Address:** 6488 Seven Rivers Hwy

**City:** Artesia

**State:** NM

**Zip:** 88210

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

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



APD ID: 10400020785

Submission Date: 08/24/2017

Highlighted data  
reflects the most  
recent changes

Operator Name: DEVON ENERGY PRODUCTION COMPANY LP

Well Name: TOMB RAIDER 12 FED

Well Number: 213H

[Show Final Text](#)

Well Type: OIL WELL

Well Work Type: Drill

### Section 1 - General

APD ID: 10400020785

Tie to previous NOS?

Submission Date: 08/24/2017

BLM Office: CARLSBAD

User: Chance Bland

Title: Regulatory Compliance  
Professional

Federal/Indian APD: FED

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

Lease number: NMNM22080

Lease Acres: 1280

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: (405)552-6571

Operator Internet Address: aletha.dewbre@dvn.com

### Section 2 - Well Information

Well in Master Development Plan? NO

Mater Development Plan name:

Well in Master SUPO? NO

Master SUPO name:

Well in Master Drilling Plan? NO

Master Drilling Plan name:

Well Name: TOMB RAIDER 12 FED

Well Number: 213H

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:** TOMB RAIDER 12 FED

**Well Number:** 213H

**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:** 1

**Well Class:** HORIZONTAL

RAIDER 13 CTB

**Number of Legs:** 1

**Well Work Type:** Drill

**Well Type:** OIL WELL

**Describe Well Type:**

**Well sub-Type:** APPRAISAL

**Describe sub-type:**

**Distance to town:**

**Distance to nearest well:** 490 FT

**Distance to lease line:** 50 FT

**Reservoir well spacing assigned acres Measurement:** 160 Acres

**Well plat:** Tomb\_Raider\_12\_Fed\_213H\_C\_102\_Signed\_08-24-2017.pdf

**Well work start Date:** 04/29/2018

**Duration:** 45 DAYS

### Section 3 - Well Location Table

**Survey Type:** RECTANGULAR

**Describe Survey Type:**

**Datum:** NAD83

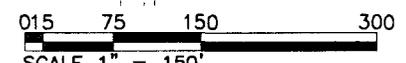
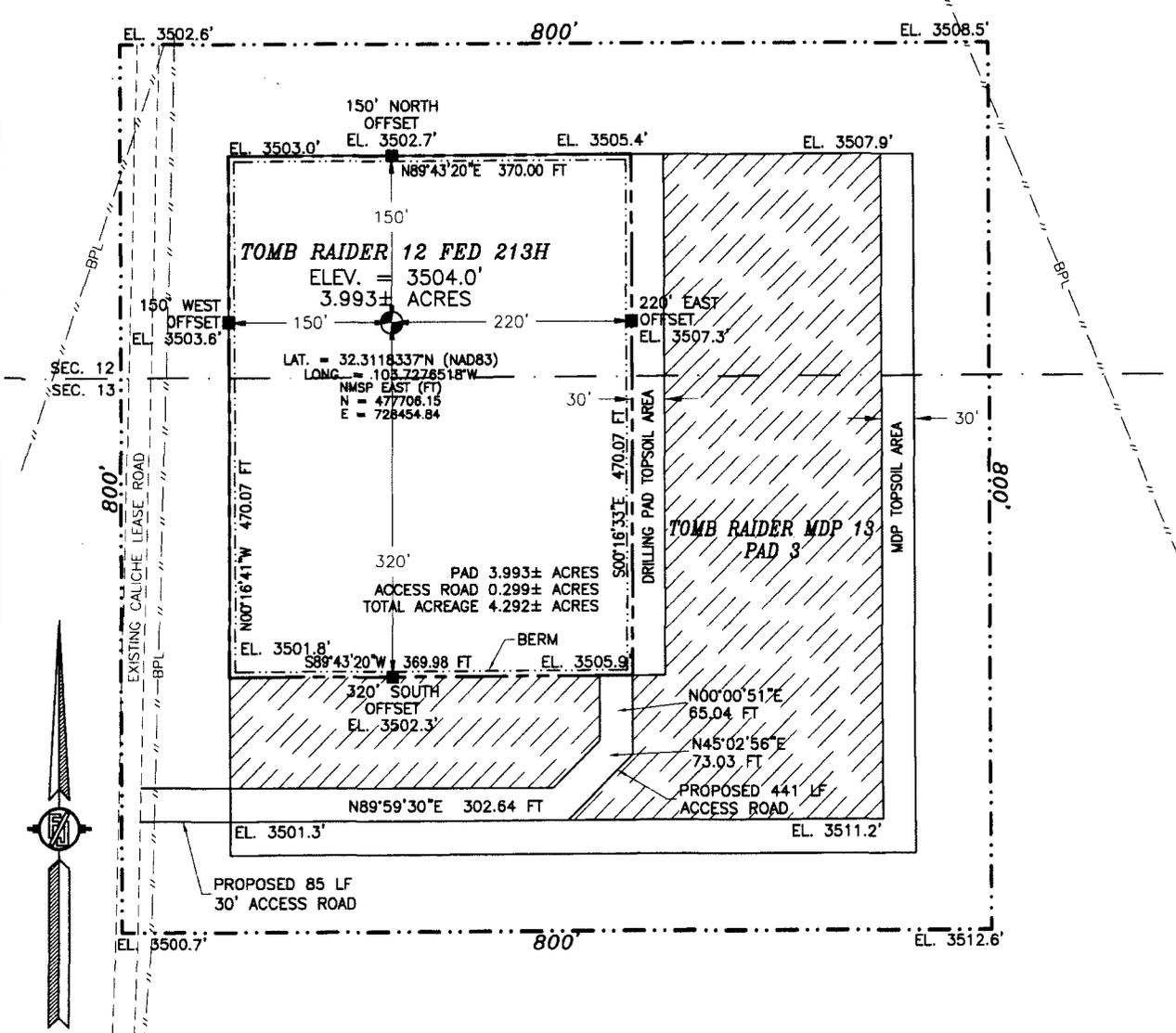
**Vertical Datum:** NAVD88

**Survey number:** 5239

	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	50	FSL	1450	FEL	23S	31E	12	Aliquot SWSE	32.3118337	-103.7276518	EDD Y	NEW MEXI CO	NEW MEXI CO	F	NMNM 22080	3504	9786	9786
KOP Leg #1	50	FSL	1450	FEL	23S	31E	12	Aliquot SWSE	32.3118337	-103.7276518	EDD Y	NEW MEXI CO	NEW MEXI CO	F	NMNM 22080	3504	9794	9786
PPP Leg #1	330	FSL	1450	FEL	23S	31E	12	Aliquot SWSE	32.312282	-103.728386	EDD Y	NEW MEXI CO	NEW MEXI CO	F	NMNM 22080	-6738	10400	10242

SECTION 12, 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.



**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 387', THEN NORTHEAST 441', THEN NORTH 85' TO THE SOUTHEAST PAD CORNER FOR THIS LOCATION.

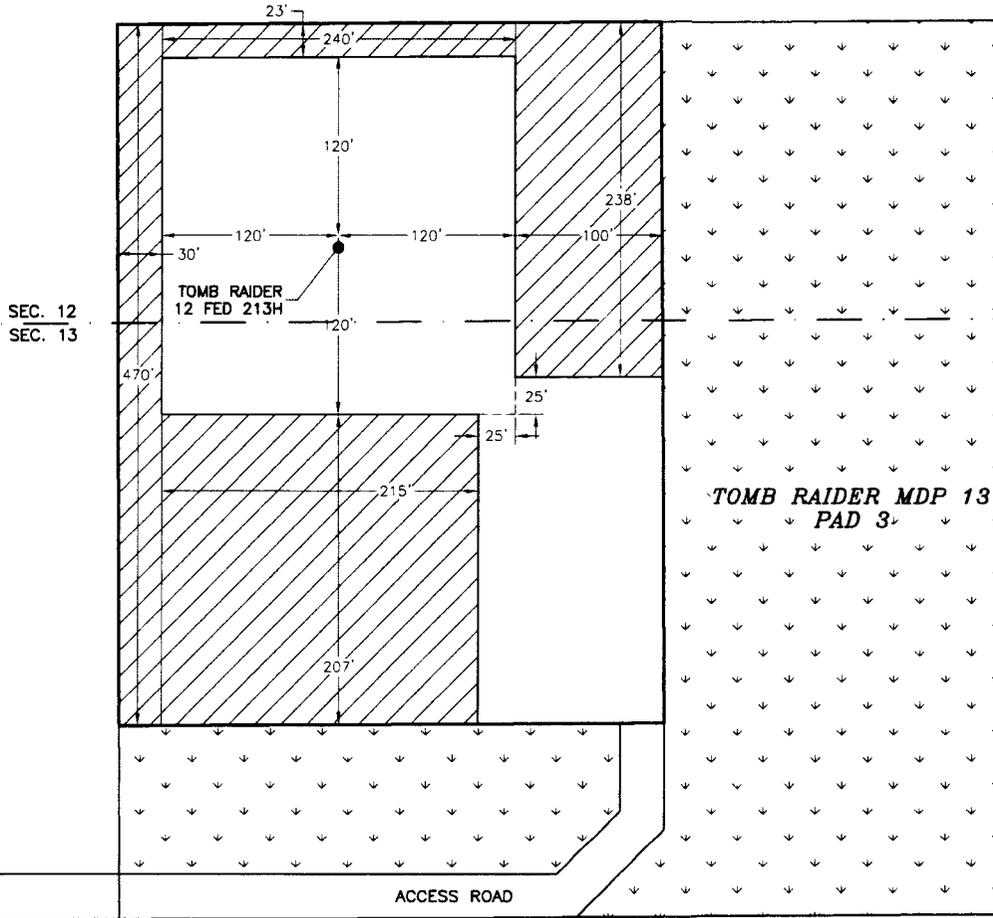
DEVON ENERGY PRODUCTION COMPANY, L.P.  
**TOMB RAIDER 12 FED 213H**  
 LOCATED 50 FT. FROM THE SOUTH LINE  
 AND 1450 FT. FROM THE EAST LINE OF  
 SECTION 12, TOWNSHIP 23 SOUTH,  
 RANGE 31 EAST, N.M.P.M.  
 EDDY COUNTY, STATE OF NEW MEXICO

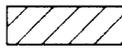
MAY 8, 2017

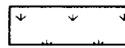
SURVEY NO. 5239

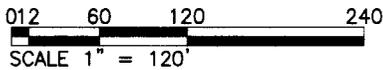
MADRON SURVEYING, INC. 301 SOUTH CANAL (575) 234-3341 CARLSBAD, NEW MEXICO

SECTION 12, TOWNSHIP 23 SOUTH, RANGE 31 EAST, N.M.P.M.  
 EDDY COUNTY, STATE OF NEW MEXICO  
 INTERIM SITE BUILD PLAN



 DENOTES INTERIM PAD RECLAMATION AREA

 DENOTES GRADING SITE RECLAMATION AREA



2.016± ACRES INTERIM PAD RECLAMATION AREA  
 3.977± ACRES GRADING SITE RECLAMATION AREA  
 2.273± ACRES NON-RECLAIMED AREA  
 8.266± ACRES TOMB RAIDER MDP 13 PAD 3

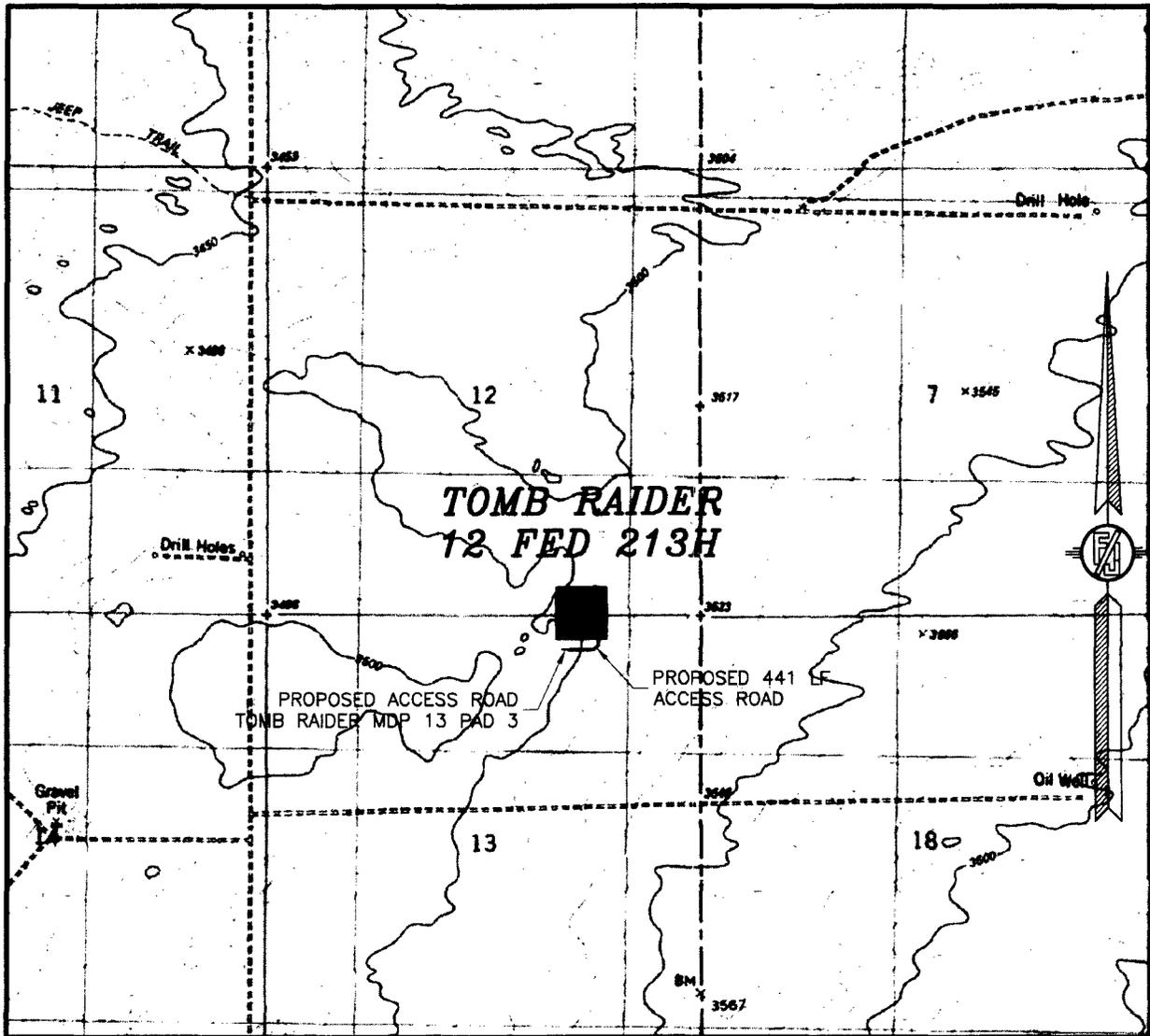
DEVON ENERGY PRODUCTION COMPANY, L.P.  
**TOMB RAIDER 12 FED 213H**  
 LOCATED 50 FT. FROM THE SOUTH LINE  
 AND 1450 FT. FROM THE EAST LINE OF  
 SECTION 12, TOWNSHIP 23 SOUTH,  
 RANGE 31 EAST, N.M.P.M.  
 EDDY COUNTY, STATE OF NEW MEXICO

MAY 8, 2017

SURVEY NO. 5239

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

SECTION 12, 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

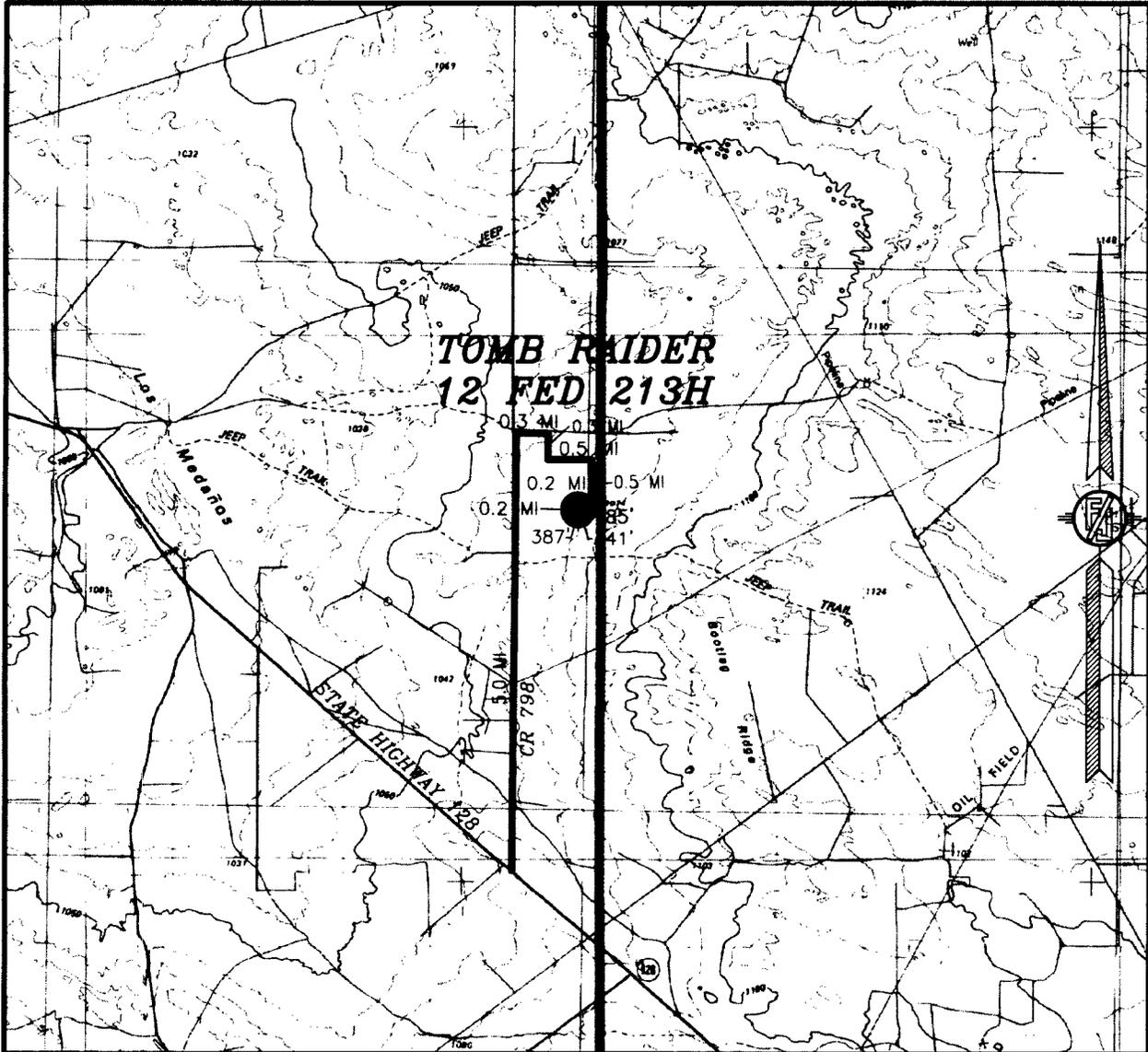
DEVON ENERGY PRODUCTION COMPANY, L.P.  
**TOMB RAIDER 12 FED 213H**  
 LOCATED 50 FT. FROM THE SOUTH LINE  
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 SECTION 12, TOWNSHIP 23 SOUTH,  
 RANGE 31 EAST, N.M.P.M.  
 EDDY COUNTY, STATE OF NEW MEXICO

MAY 8, 2017

SURVEY NO. 5239

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

SECTION 12, 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.

**TOMB RAIDER 12 FED 213H**

LOCATED 50 FT. FROM THE SOUTH LINE  
 AND 1450 FT. FROM THE EAST LINE OF  
 SECTION 12, TOWNSHIP 23 SOUTH,  
 RANGE 31 EAST, N.M.P.M.

EDDY COUNTY, STATE OF NEW MEXICO

MAY 8, 2017

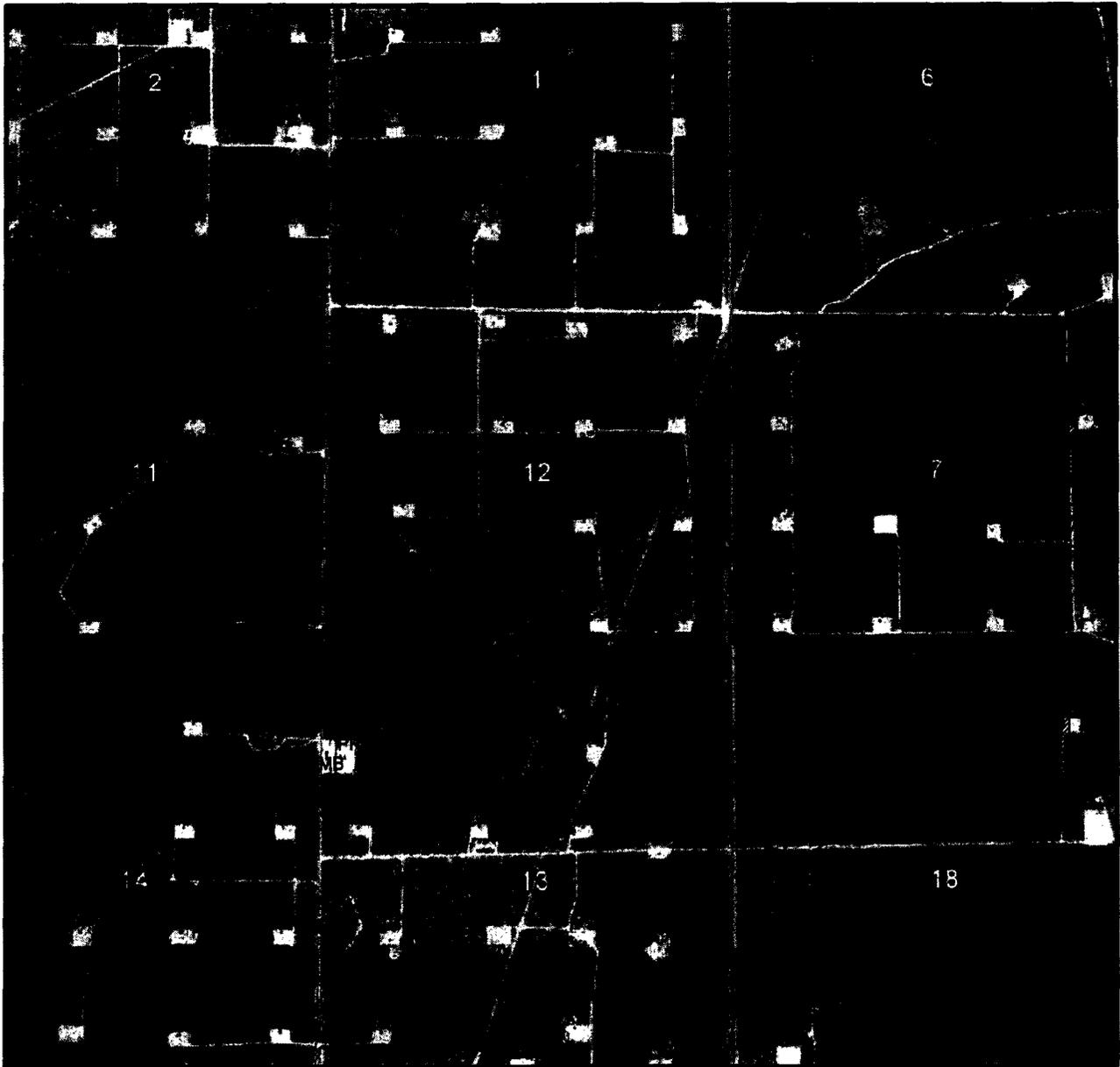
**DIRECTIONS TO LOCATION**

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  
 387', THEN NORTHEAST 441', THEN NORTH 85' TO THE  
 SOUTHEAST PAD CORNER FOR THIS LOCATION.

SURVEY NO. 5239

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

SECTION 12, 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  
FEBRUARY 2017

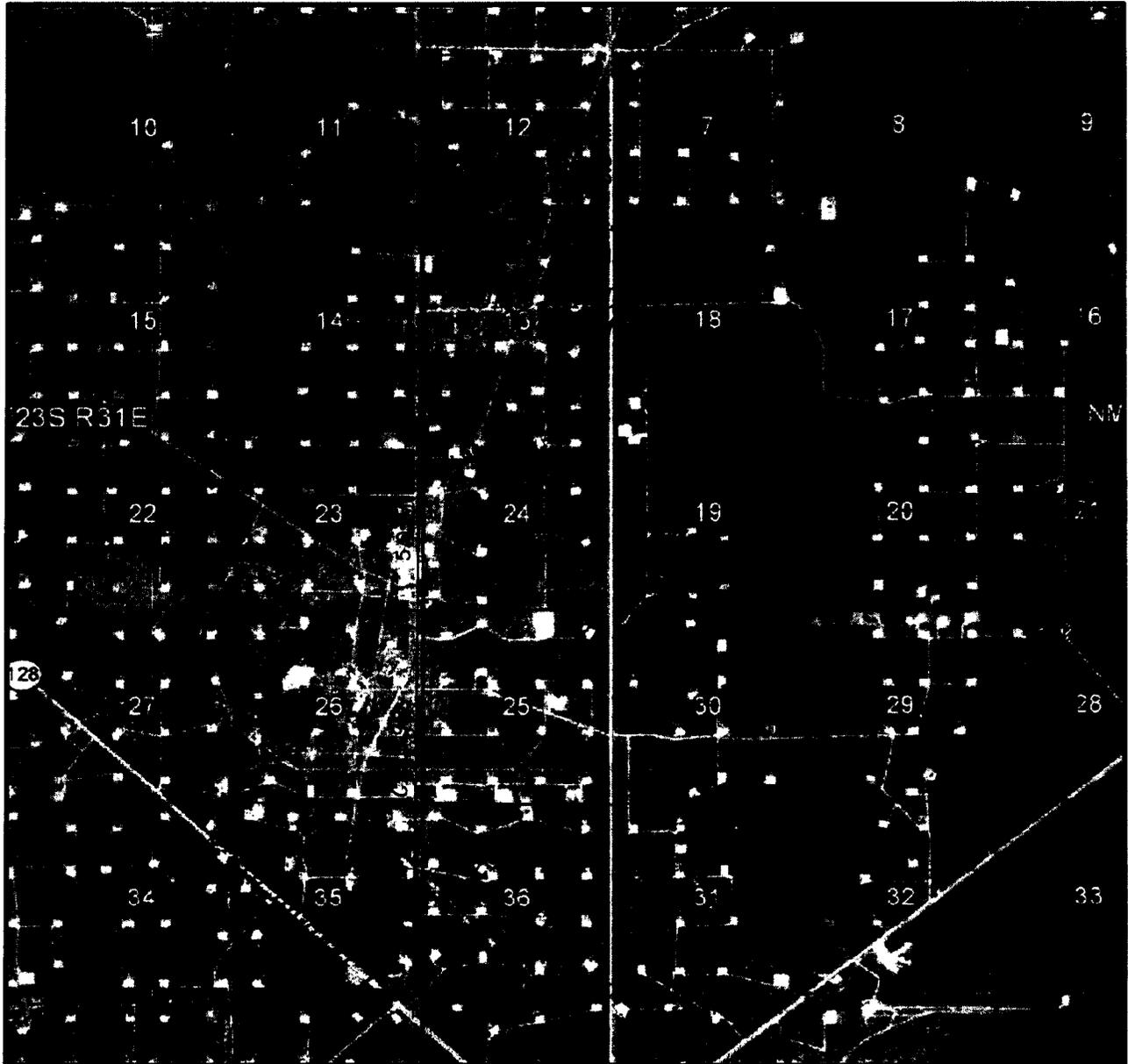
DEVON ENERGY PRODUCTION COMPANY, L.P.  
**TOMB RAIDER 12 FED 213H**  
LOCATED 50 FT. FROM THE SOUTH LINE  
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SECTION 12, TOWNSHIP 23 SOUTH,  
RANGE 31 EAST, N.M.P.M.  
EDDY COUNTY, STATE OF NEW MEXICO

MAY 8, 2017

SURVEY NO. 5239

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

SECTION 12, 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  
FEBRUARY 2017

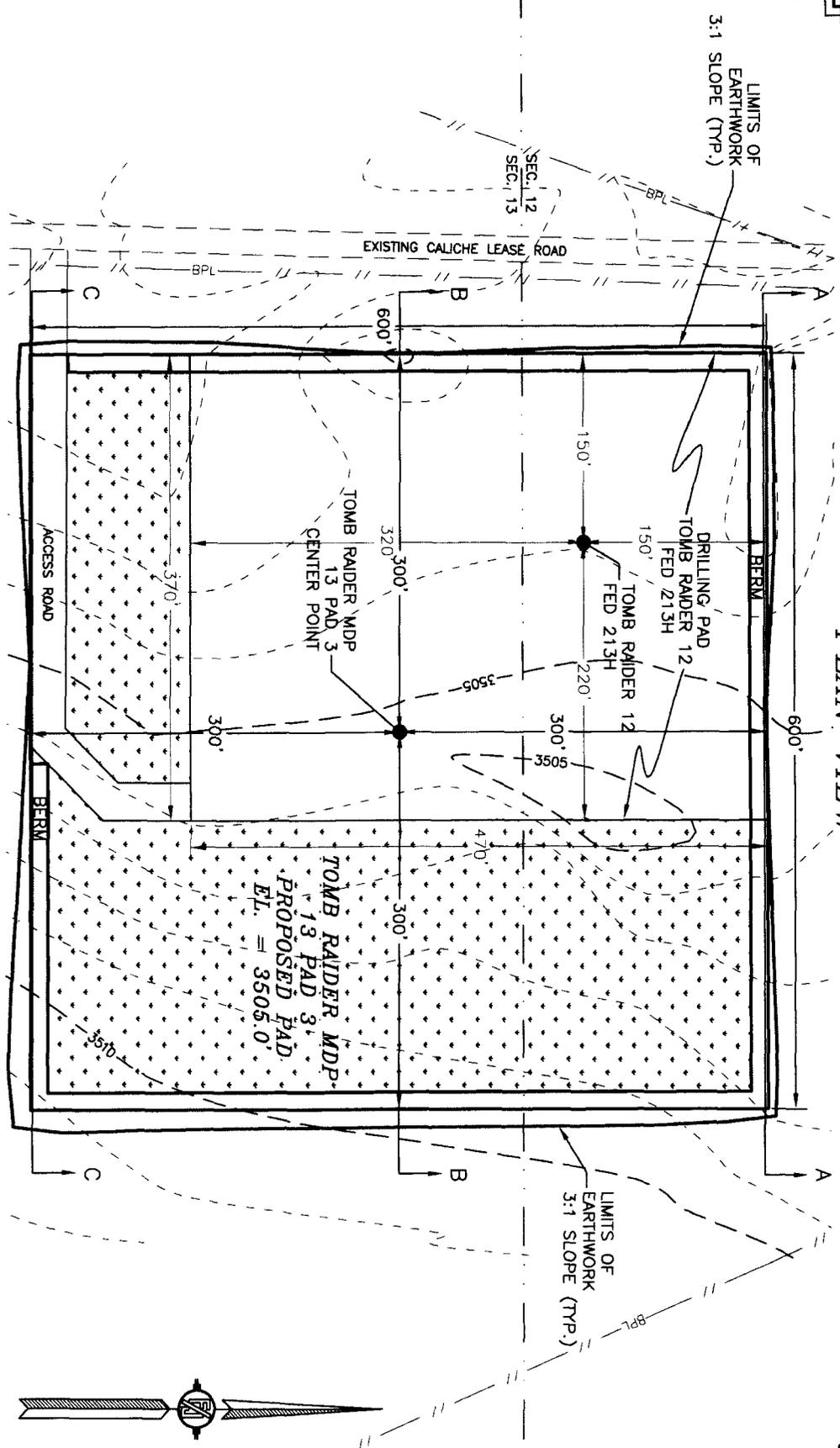
DEVON ENERGY PRODUCTION COMPANY, L.P.  
**TOMB RAIDER 12 FED 213H**  
LOCATED 50 FT. FROM THE SOUTH LINE  
AND 1450 FT. FROM THE EAST LINE OF  
SECTION 12, TOWNSHIP 23 SOUTH,  
RANGE 31 EAST, N.M.P.M.  
EDDY COUNTY, STATE OF NEW MEXICO

MAY 8, 2017

SURVEY NO. 5239

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 FED 213H**  
 SECTION 12, TOWNSHIP 23 SOUTH,  
 RANGE 31 EAST, N.M.P.M.  
 EDDY COUNTY, STATE OF NEW MEXICO

MAY 8, 2017  
 MADRON SURVEYING, INC. 301 SOUTH CANAL CARLSBAD, NEW MEXICO  
 (505) 234-3341

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

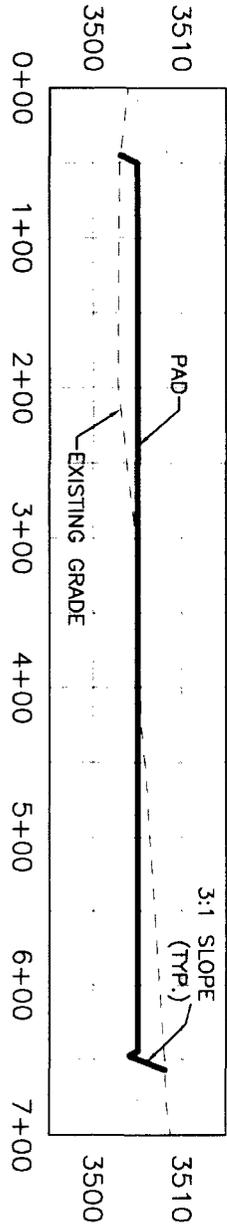
EARTHWORK QUANTITIES ARE ESTIMATED



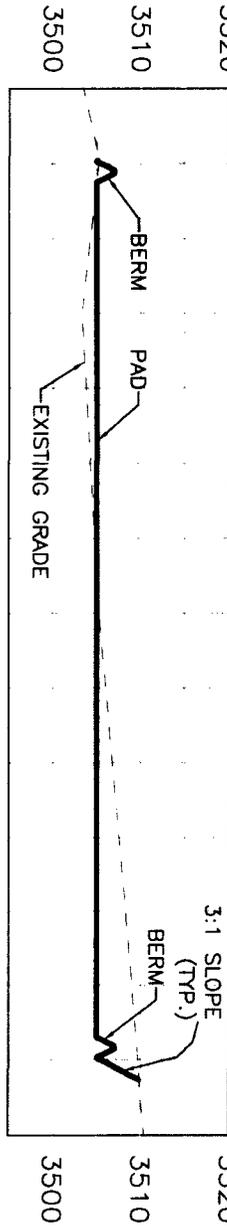
SHEET 1-2  
 SURVEY NO. 5239

# CROSS SECTIONS

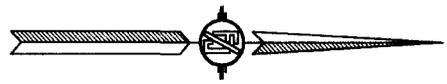
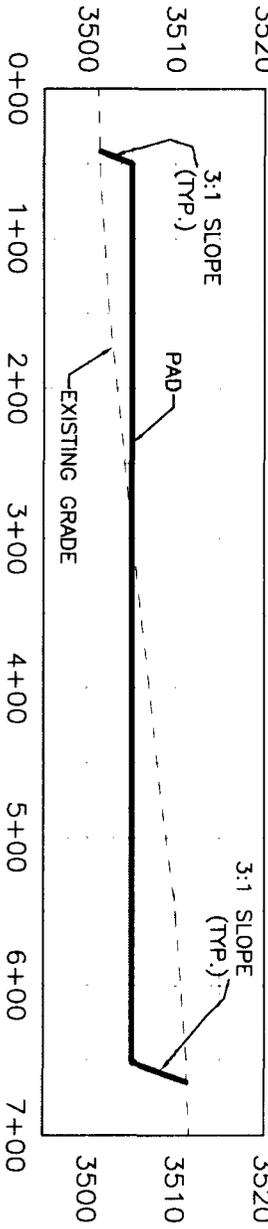
SECTION A-A



SECTION B-B



SECTION C-C



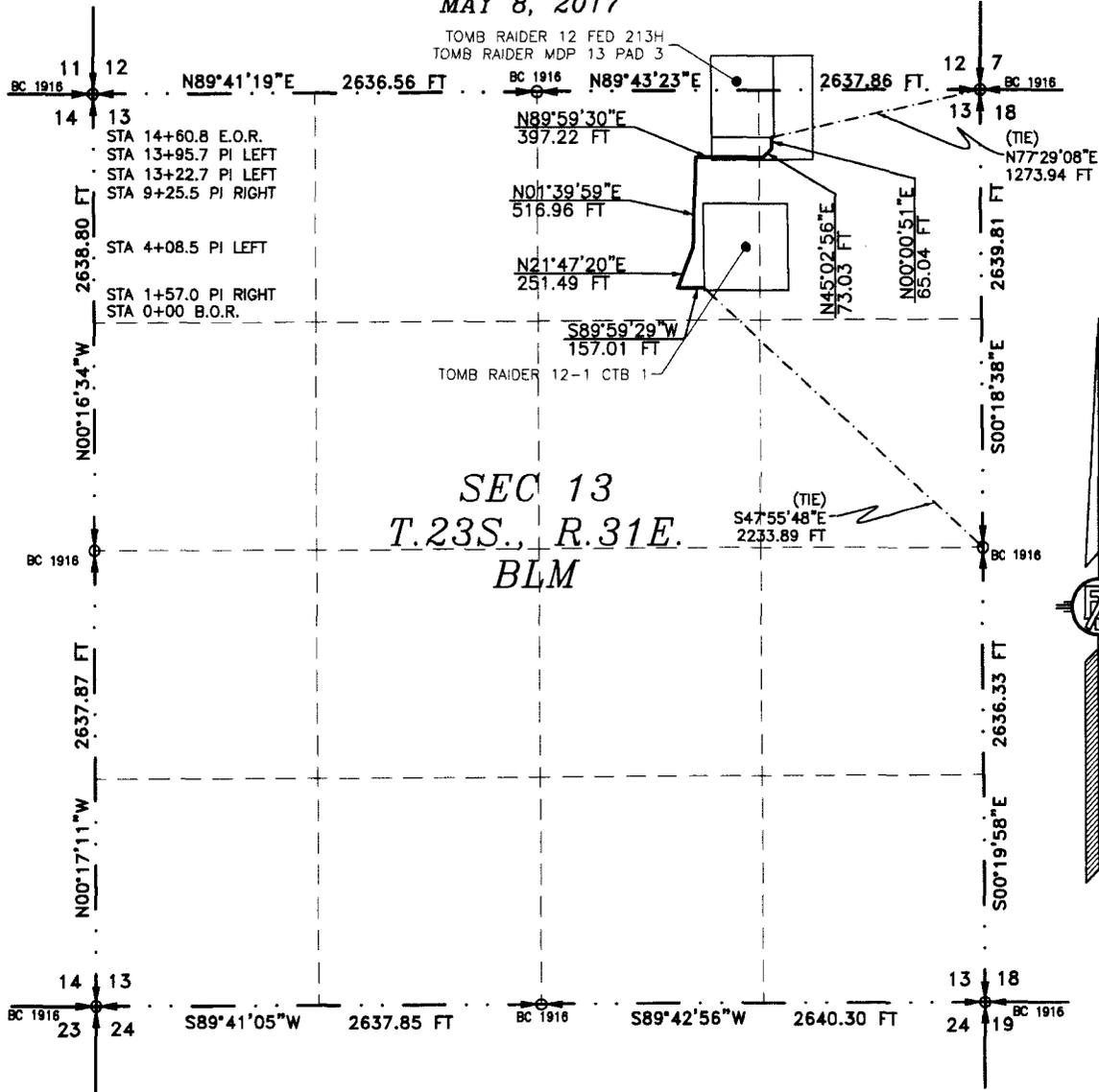
DEVON ENERGY PRODUCTION COMPANY, L.P.  
 GRADING PLAN AND CROSS SECTIONS  
**FOR TOMB RAIDER 12 FED 213H**  
 SECTION 12, TOWNSHIP 28 SOUTH,  
 RANGE 31 EAST, N.M.P.M.  
 EDDY COUNTY, STATE OF NEW MEXICO

MAY 8, 2017  
 301 SOUTH CANAL  
 (375) 241-3341  
**MADRON SURVEYING, INC.**  
 CARLSBAD, NEW MEXICO

SHEET 2-2  
 SURVEY NO. 6239

**ACCESS ROAD PLAT**  
 ACCESS ROAD FROM THE TOMB RAIDER 12-1 CTB 1 TO THE TOMB RAIDER 12 FED 213H &  
 TOMB RAIDER MDP 13 PAD 3

**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 8, 2017



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.

**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 MAY 2017

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

SHEET: 1-2

MADRON SURVEYING, INC. CARLSBAD, NEW MEXICO

SURVEY NO. 5239

**ACCESS ROAD PLAT**  
ACCESS ROAD FROM THE TOMB RAIDER 12-1 CTB 1 TO THE TOMB RAIDER 12 FED 213H &  
TOMB RAIDER MDP 13 PAD 3

**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 8, 2017

**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

**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 8 DAY OF MAY 2017

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

**GENERAL NOTES**

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

SHEET: 2-2

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

SURVEY NO. 5239

APD ID: 10400020785

Submission Date: 08/24/2017

Highlighted data reflects the most recent changes

Operator Name: DEVON ENERGY PRODUCTION COMPANY LP

Well Name: TOMB RAIDER 12 FED

Well Number: 213H

[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	---	3357.5	0	0	OTHER : Surface	NONE	No
2	RUSTLER	2539.5	818	818	SANDSTONE	NONE	No
3	BASE OF SALT	-1155.5	4513	4513	SALT	NONE	No
4	DELAWARE	-1155.5	4513	4513	SANDSTONE	NATURAL GAS,OIL	No
5	BONE SPRING	-5048.5	8406	8406	SANDSTONE	NATURAL GAS,OIL	No
6	BONE SPRING 2ND	-6690.5	10048	10048	SANDSTONE	NATURAL GAS,OIL	Yes

## Section 2 - Blowout Prevention

Pressure Rating (PSI): 3M

Rating Depth: 4311

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

**Requesting Variance?** YES

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

**Testing Procedure:** A 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:**

Tomb\_Raider\_12\_Fed\_213H\_3M\_BOPE\_CK\_08-24-2017.pdf

**BOP Diagram Attachment:**

Tomb\_Raider\_12\_Fed\_213H\_3M\_BOPE\_CK\_08-24-2017.pdf

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

**Well Name:** TOMB RAIDER 12 FED

**Well Number:** 213H

**Pressure Rating (PSI):** 3M

**Rating Depth:** 10272

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

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**Choke Diagram Attachment:**

Tomb\_Raider\_12\_Fed\_213H\_3M\_BOPE\_CK\_08-24-2017.pdf

**BOP Diagram Attachment:**

Tomb\_Raider\_12\_Fed\_213H\_3M\_BOPE\_CK\_08-24-2017.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	843	0	843	-6768	-7557	843	H-40	48	STC	1.4	3.15	BUOY	14.27	BUOY	14.27
2	INTERMEDIATE	12.25	9.625	NEW	API	N	0	4311	0	4311	-6768	-11036	4311	J-55	40	OTHER - BTC	1.15	1.77	BUOY	4.1	BUOY	4.1
3	PRODUCTION	8.75	5.5	NEW	API	N	0	15003	0	10272	-6768	-16768	15003	P-110	17	OTHER - BTC	1.45	2.07	BUOY	2.48	BUOY	2.48

### Casing Attachments

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

**Well Name:** TOMB RAIDER 12 FED

**Well Number:** 213H

**Casing Attachments**

---

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

**Inspection Document:**

**Spec Document:**

**Tapered String Spec:**

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

Tomb\_Raider\_12\_Fed\_213H\_Surf\_Csg\_Ass\_08-24-2017.pdf

---

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

**Inspection Document:**

**Spec Document:**

**Tapered String Spec:**

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

Tomb\_Raider\_12\_Fed\_213H\_Int\_Csg\_Ass\_08-24-2017.pdf

---

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

**Inspection Document:**

**Spec Document:**

**Tapered String Spec:**

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

Tomb\_Raider\_12\_Fed\_213H\_Prod\_Csg\_Ass\_08-24-2017.pdf

---

**Section 4 - Cement**

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

**Well Name:** TOMB RAIDER 12 FED

**Well Number:** 213H

String Type	Lead/Tail	Stage Tool Depth	Top MD	Bottom MD	Quantity(sx)	Yield	Density	Cu Ft	Excess%	Cement type	Additives
SURFACE	Lead		0	843	659	1.33	14.8	876	50	C	0.125 lbs/sack Poly-F-Flake

INTERMEDIATE	Lead		0	3311	712	1.85	12.9	1316	30	C	(65:35) Class C Cement: Poz (Fly Ash): 6% BWOC Bentonite + 5% BWOW Sodium Chloride + 0.125 lbs/sks Poly-E-Flake
INTERMEDIATE	Tail		3311	4311	306	1.33	14.8	407	30	C	0.125 lbs/sack Poly-F-Flake
PRODUCTION	Lead		4111	1040 0	605	3.27	9	1980	25	TUNED	Tuned light
PRODUCTION	Tail		1040 0	1500 3	996	1.46	13.2	1453	25	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

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

**Well Name:** TOMB RAIDER 12 FED

**Well Number:** 213H

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	843	WATER-BASED MUD	8.5	9				2			
843	4311	SALT SATURATED	10	11				2			
4311	1500 3	WATER-BASED MUD	8.5	9.3							

### 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:** 4968

**Anticipated Surface Pressure:** 2708.16

**Anticipated Bottom Hole Temperature(F):** 160

**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:**

Tomb\_Raider\_12\_Fed\_213H\_H2S\_Plan\_08-24-2017.pdf

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

**Well Name:** TOMB RAIDER 12 FED

**Well Number:** 213H

## **Section 8 - Other Information**

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

Tomb\_Raider\_12\_Fed\_213H\_Dir\_Pln\_08-24-2017.pdf

**Other proposed operations facets description:**

Multi-Bowl Verbiage

Multi-Bowl Wellhead

Closed-Loop Design Plan

**Other proposed operations facets attachment:**

Tomb\_Raider\_12\_Fed\_213H\_MB\_Verb\_08-24-2017.pdf

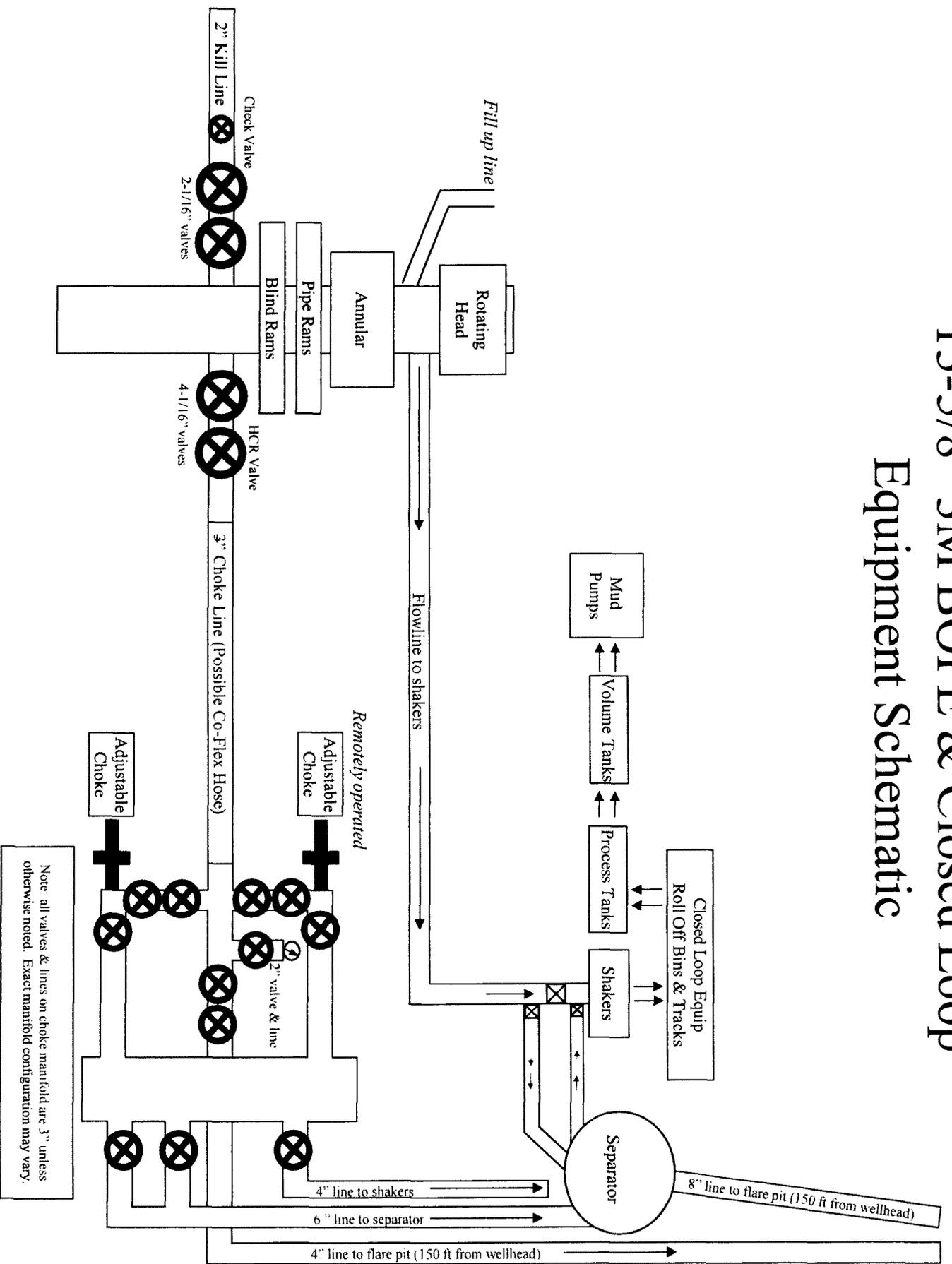
Tomb\_Raider\_12\_Fed\_213H\_MB\_Wellhd\_08-24-2017.pdf

Tomb\_Raider\_12\_Fed\_213H\_Clsd\_Loop\_08-24-2017.pdf

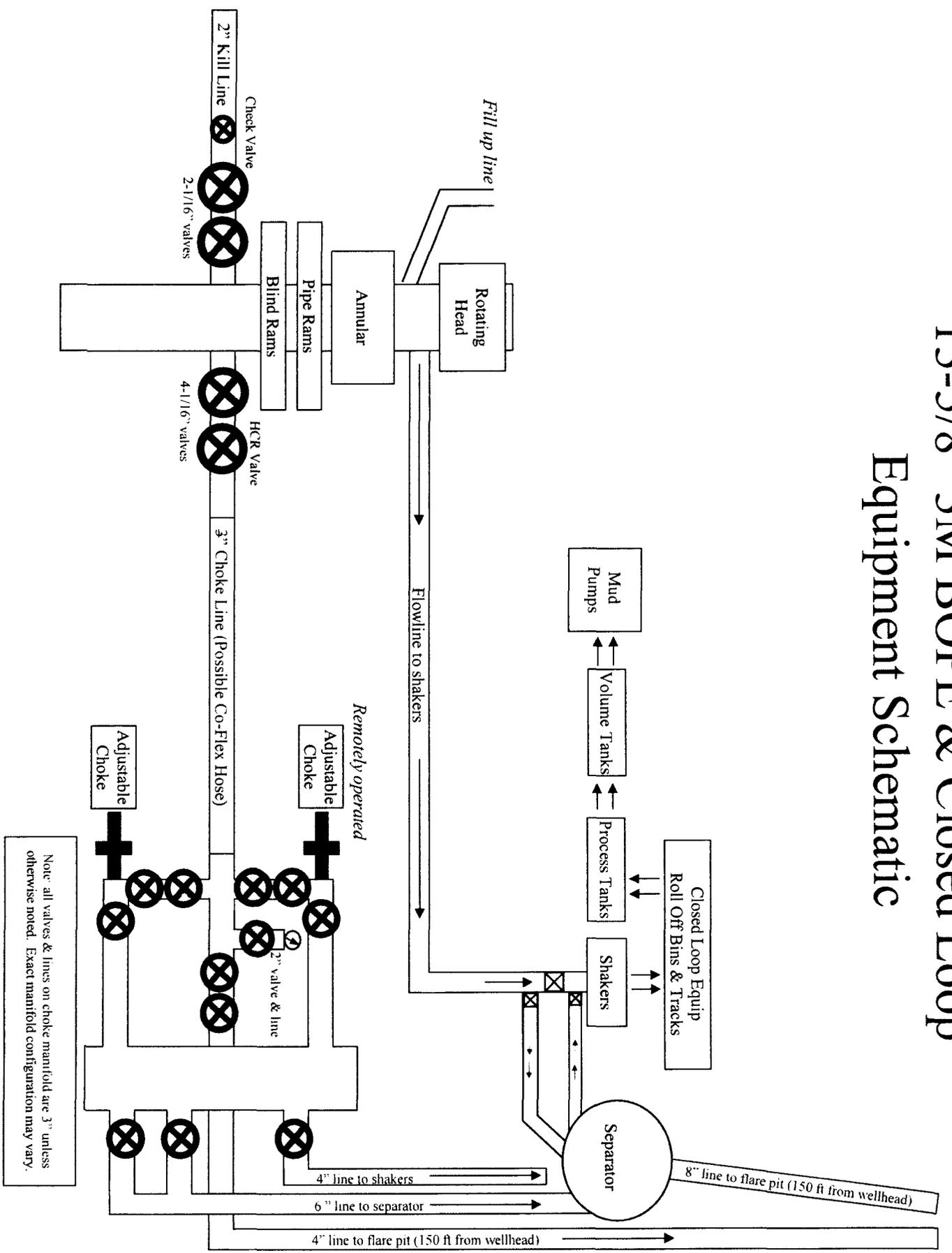
**Other Variance attachment:**

Tomb\_Raider\_12\_Fed\_213H\_Co\_flex\_08-24-2017.pdf

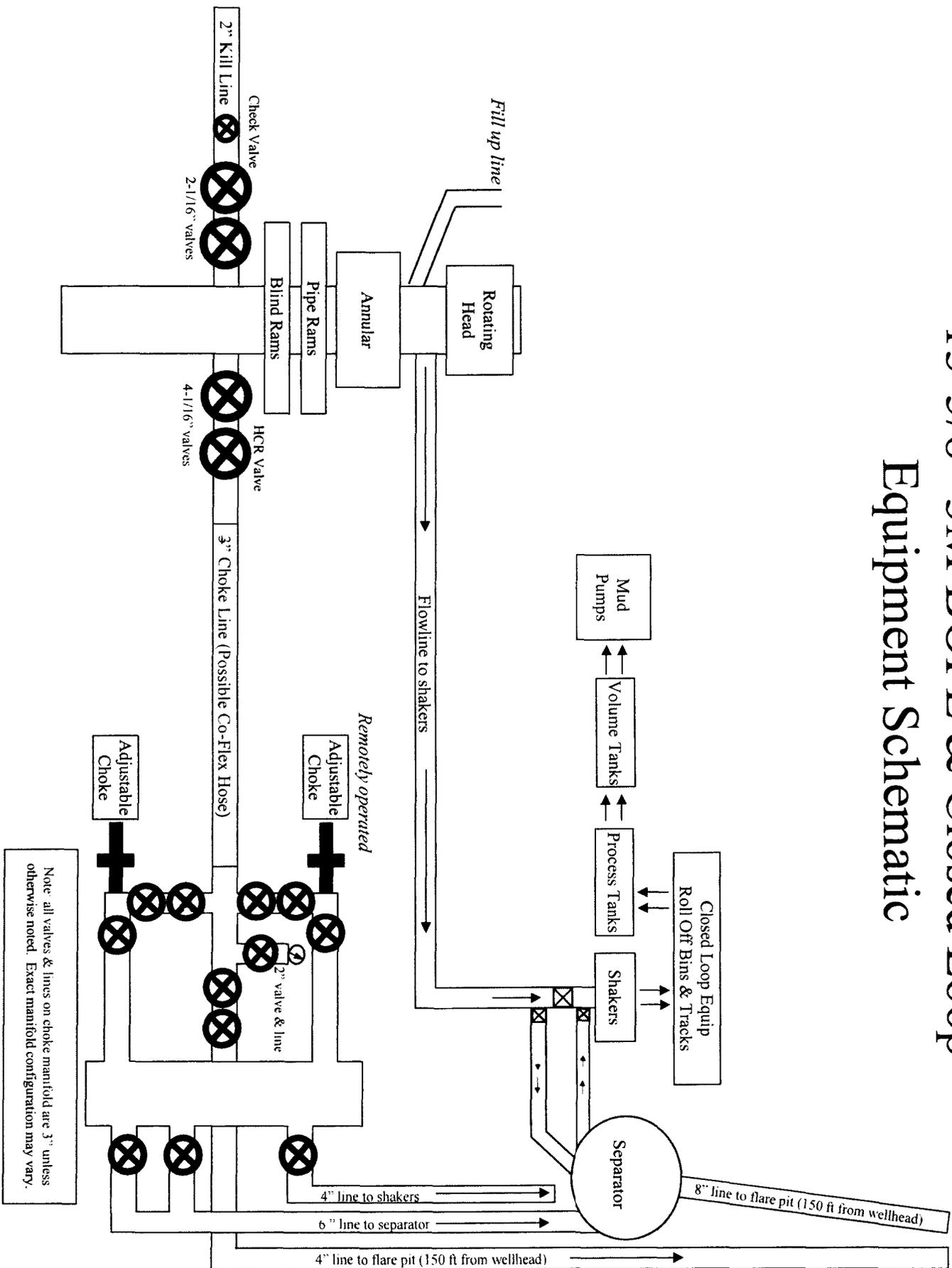
# 13-5/8" 3M BOPPE & Closed Loop Equipment Schematic



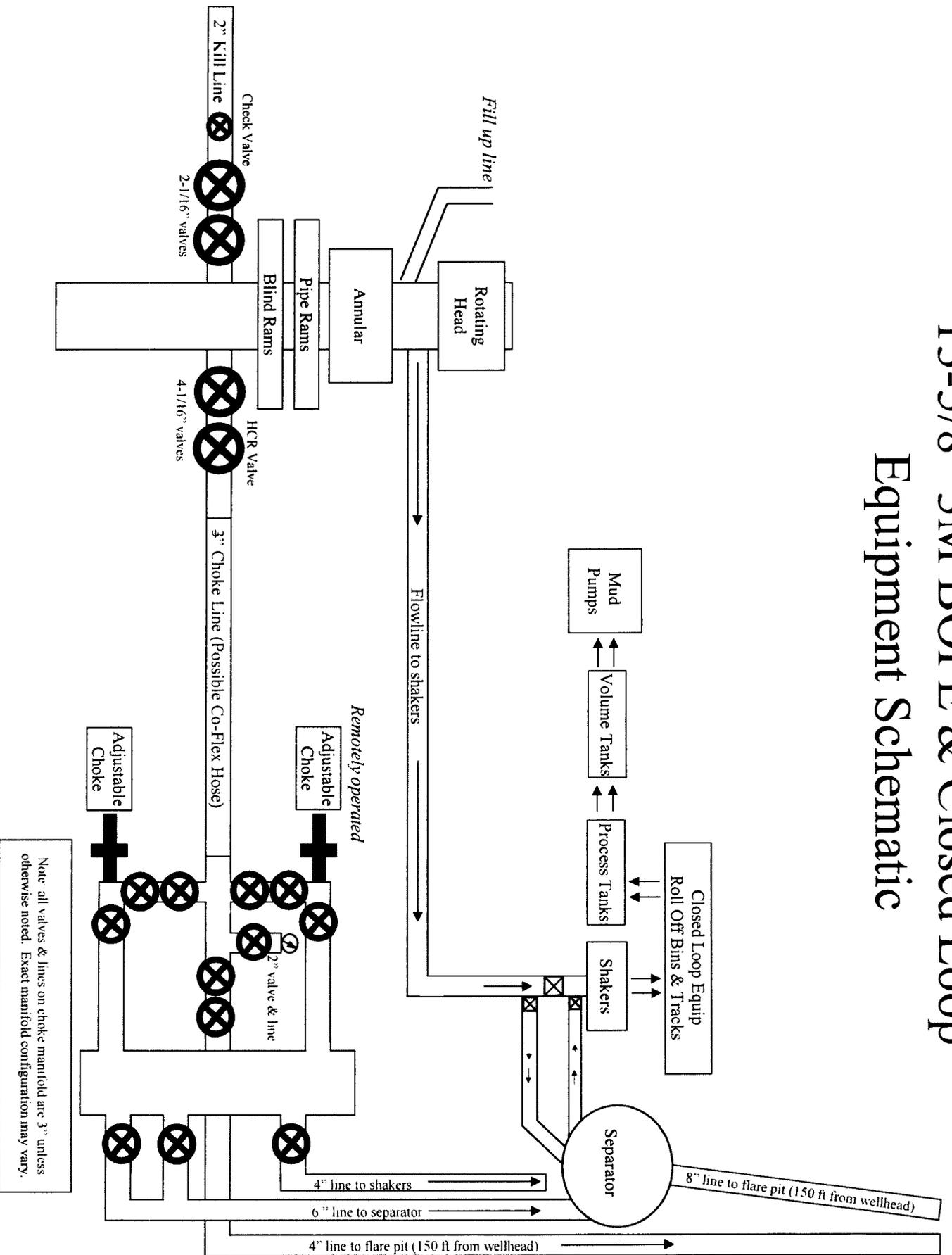
# 13-5/8" 3M BOPE & Closed Loop Equipment Schematic



# 13-5/8" 3M 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**

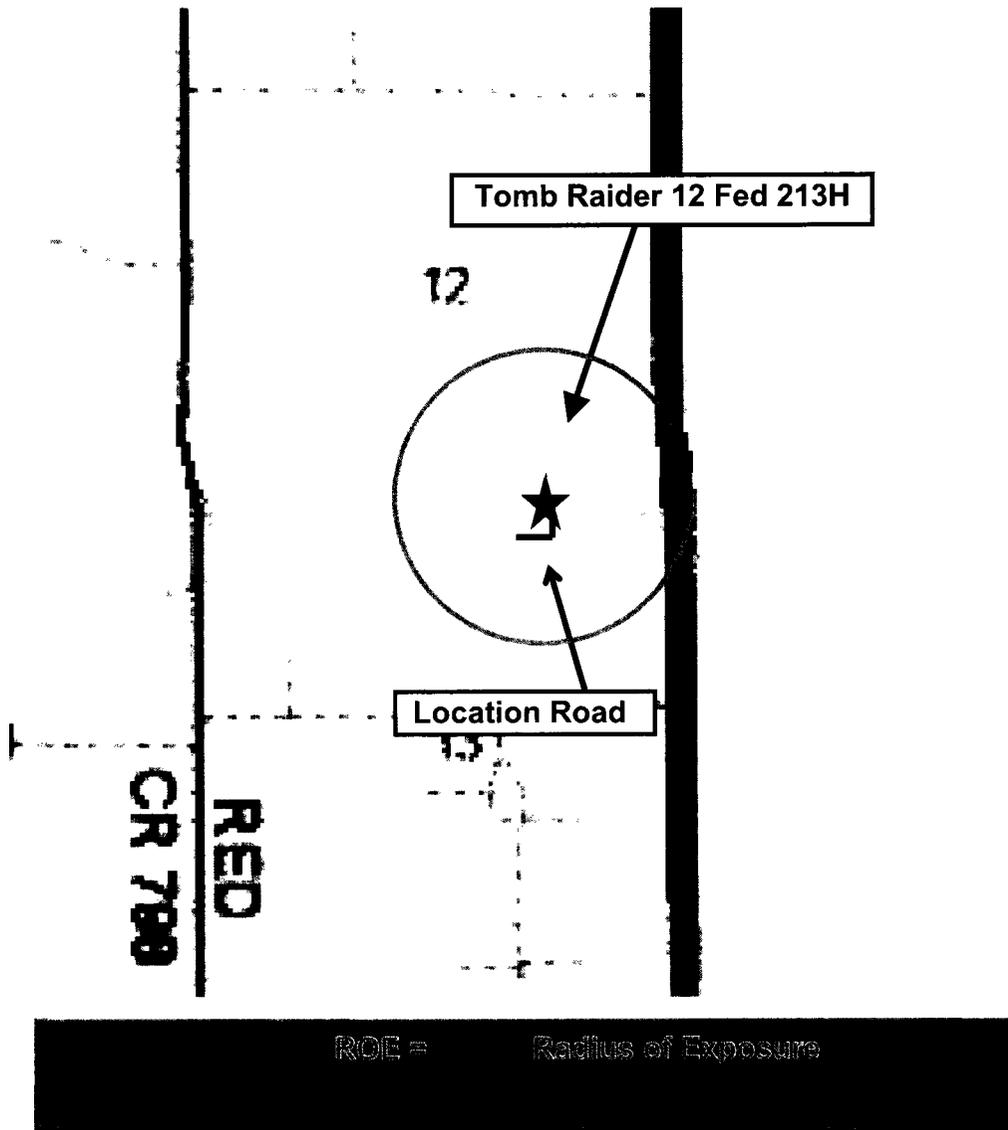
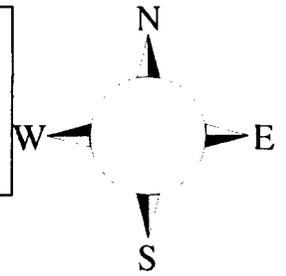
**Tomb Raider 12 Fed 213H**

**Sec-12 T-23S R-31E  
50 FSL & 1450' FEL  
LAT. = 32.3118337' N (NAD83)  
LONG = 103.7276518' W**

**Eddy County NM**

## Tomb Raider 12 Fed 213H

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.



### 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

## **Hydrogen Sulfide Drilling Operation Plan**

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

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

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

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

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

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

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

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

## 1. Well Control Equipment

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

## 2. Protective equipment for essential personnel:

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

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

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

- Bell nipple
- Shale shaker
- Trip tank
- Suction pit
- Rig floor
- Cellar
- Choke manifold
- Living Quarters (usually the company man's trailer stairs.)

### Visual warning systems:

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

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

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

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

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

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

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

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

- A. There will be no drill stem testing.

<b><u>Devon Energy Corp. Company Call List</u></b>		
Drilling Supervisor – Basin – Mark Kramer		405-823-4796
Jerry Matthews – Day: 575-748-0161 Cell: 575-748-5234		
EHS Professional – Jason Robison		405-541-2841
<b><u>Agency Call List</u></b>		
<b><u>Lea County (575)</u></b>	<b>Hobbs</b>	
	Lea County Communication Authority	393-3981
	State Police	392-5588
	City Police	397-9265
	Sheriff's Office	393-2515
	<b>Ambulance</b>	<b>911</b>
	Fire Department	397-9308
	LEPC (Local Emergency Planning Committee)	393-2870
	NMOCD	393-6161
	US Bureau of Land Management	393-3612
<b><u>Eddy County (575)</u></b>	<b>Carlsbad</b>	
	State Police	885-3137
	City Police	885-2111
	Sheriff's Office	887-7551
	<b>Ambulance</b>	<b>911</b>
	Fire Department	885-3125
	LEPC (Local Emergency Planning Committee)	887-3798
	US Bureau of Land Management	887-6544
	NM Emergency Response Commission (Santa Fe)	(505) 476-9600
	24 HR	(505) 827-9126
	National Emergency Response Center	(800) 424-8802
	National Pollution Control Center: Direct	(703) 872-6000
	For Oil Spills	(800) 280-7118
	<b>Emergency Services</b>	
	Wild Well Control	(281) 784-4700
	Cudd Pressure Control	(915) 699-0139 (915) 563-3356
	Halliburton	(575) 746-2757
B. J. Services	(575) 746-3569	
<b><u>Give GPS position:</u></b>	Native Air – Emergency Helicopter – Hobbs	(575) 392-6429
	Flight For Life - Lubbock, TX	(806) 743-9911
	Aerocare - Lubbock, TX	(806) 747-8923
	Med Flight Air Amb - Albuquerque, NM	(575) 842-4433
	Lifeguard Air Med Svc. Albuquerque, NM	(800) 222-1222
Poison Control (24/7)	(575) 272-3115	
Oil & Gas Pipeline 24 Hour Service	(800) 364-4366	
NOAA – Website - <a href="http://www.nhc.noaa.gov">www.nhc.noaa.gov</a>		

Prepared in conjunction with  
Dave Small







**5D Plan Report**

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**Devon Energy**

**Field Name:** *Eddy Co, NM (Nad 83 NME)*  
**Site Name:** *Tomb Raider 12 Fed 213H*  
**Well Name:** *Tomb Raider 12 Fed 213H*  
**Plan:** *P1:V1*

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28 June 2017





**Tomb Raider 12 Fed 213H**

**Field Name:** Eddy Co, NM (Nad 83 NME)  
**Map Units:** US ft  
**Company Name:** Devon Energy  
**Vertical Reference Datum (VRD):** Mean Sea Level  
**Projected Coordinate System:** NAD83 / New Mexico East (ftUS)  
**Comment:**

**Site:** Tomb Raider 12 Fed 213H  
**Units:** US ft  
**North Reference:** Grid  
**Convergence Angle:** 0.32  
**Position:** Northing: 477706.15 US ft Latitude: 32° 18' 42.60"  
 Easting: 728454.84 US ft Longitude: -103° 43' 39.55"  
**Elevation above MSL:** 3504.00 US ft  
**Comment:**

**Slot:** Tomb Raider 12 Fed 213H  
**Position (Relative to Site Centre)**  
 +N/-S: 0.00 US ft Northing: 477706.15 US ft Latitude: 32° 18' 42.60"  
 +E/-W: 0.00 US ft Easting: 728454.84 US ft Longitude: -103° 43' 39.55"  
**Slot TVD Reference:** Ground Elevation  
**Elevation above MSL:** 3504.00 US ft  
**Comment:**

**Well:** Tomb Raider 12 Fed 213H  
**Type:** Main well  
**UWI:**  
**Plan:** P1:V1  
**File Number:** **Comment:**  
**Closure Distance:** 4941.33 US ft  
**Closure Azimuth:** 357.37°  
**Vertical Section: Position of Origin (Relative to Slot centre)**  
 +N/-S: 0.00 US ft +E/-W: 0.00 US ft **Az:** 0.00°  
**Magnetic Parameters:**  
**Model:** bggm2017 **Field Strength:** 48025.7nT **Declination:** 7.07° **Dip:** 60.09° **Date:** 01/Oct/2017

**Drill floor: Plan: P1:V1**

**Rig Height (Drill Floor):** 24.00us ft  
**Elevation above MSL:** 3528.00us ft  
**Inclination:** 0.00°  
**Azimuth:** 0.00°

**Target set: TR 12 Fed 213H Targets Comment:**

Target Name:	Shape:	TVD (US ft)	N.Offset (US ft)	E.Offset (US ft)	Northing (USft)	Easting (USft)	Comment
KOP	Point	9786.36	0.00	-226.92	477706.15	728227.92	
PBHL 213H	Point	10272.00	4936.12	-226.92	482642.27	728227.92	

**Wellpath created using minimum curvature.**

**Tie Point:**

**MD:** 0.00USFt  
**Inclination:** 0.00°  
**Azimuth:** 0.00°  
**TVD:** 0.00USFt  
**North Offset:** 0.00USFt  
**East Offset:** 0.00USFt

5D Plan Report

<b>Salient Points: (Relative to Slot centre)(TVD relative to Drill Floor)</b>											
MD (US ft)	Inc (°)	Az (°)	TVD (US ft)	N. Offset (US ft)	E. Offset (US ft)	VS (US ft)	DLS (°/100US ft)	B. Rate (°/100US ft)	T. Rate (°/100US ft)	T. Face (°)	Comment
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
6000.00	0.00	0.00	6000.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	Begin Nudge @ 1° DLS
6399.99	4.00	270.00	6399.66	0.00	-13.96	-0.00	1.00	1.00	0.00	270.00	Hold
9252.97	4.00	270.00	9245.70	0.00	-212.96	-0.00	0.00	0.00	0.00	0.00	Drop @ 1° DLS
9652.96	0.00	0.00	9645.36	0.00	-226.92	-0.00	1.00	-1.00	0.00	180.00	Hold Vertical
9793.96	0.00	0.00	9786.36	0.00	-226.92	-0.00	0.00	0.00	0.00	0.00	KOP-Build @ 12° DLS
10543.08	89.89	0.00	10263.82	476.59	-226.92	476.59	12.00	12.00	0.00	0.00	Landing Pt
15002.62	89.89	0.00	10272.00	4936.12	-226.92	4936.12	0.00	0.00	0.00	0.00	PBHL 213H

<b>Interpolated Points: (Relative to Slot centre)(TVD relative to Drill Floor)</b>											
MD (US ft)	Inc (°)	Az (°)	TVD (US ft)	N. Offset (US ft)	E. Offset (US ft)	VS (US ft)	DLS (°/100US ft)	Northing (US ft)	Easting (US ft)		Comment
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	477706.15	728454.84		
100.00	0.00	0.00	100.00	0.00	0.00	0.00	0.00	477706.15	728454.84		
200.00	0.00	0.00	200.00	0.00	0.00	0.00	0.00	477706.15	728454.84		
300.00	0.00	0.00	300.00	0.00	0.00	0.00	0.00	477706.15	728454.84		
400.00	0.00	0.00	400.00	0.00	0.00	0.00	0.00	477706.15	728454.84		
500.00	0.00	0.00	500.00	0.00	0.00	0.00	0.00	477706.15	728454.84		
600.00	0.00	0.00	600.00	0.00	0.00	0.00	0.00	477706.15	728454.84		
700.00	0.00	0.00	700.00	0.00	0.00	0.00	0.00	477706.15	728454.84		
800.00	0.00	0.00	800.00	0.00	0.00	0.00	0.00	477706.15	728454.84		
900.00	0.00	0.00	900.00	0.00	0.00	0.00	0.00	477706.15	728454.84		
1000.00	0.00	0.00	1000.00	0.00	0.00	0.00	0.00	477706.15	728454.84		
1100.00	0.00	0.00	1100.00	0.00	0.00	0.00	0.00	477706.15	728454.84		
1200.00	0.00	0.00	1200.00	0.00	0.00	0.00	0.00	477706.15	728454.84		
1300.00	0.00	0.00	1300.00	0.00	0.00	0.00	0.00	477706.15	728454.84		
1400.00	0.00	0.00	1400.00	0.00	0.00	0.00	0.00	477706.15	728454.84		
1500.00	0.00	0.00	1500.00	0.00	0.00	0.00	0.00	477706.15	728454.84		
1600.00	0.00	0.00	1600.00	0.00	0.00	0.00	0.00	477706.15	728454.84		
1700.00	0.00	0.00	1700.00	0.00	0.00	0.00	0.00	477706.15	728454.84		
1800.00	0.00	0.00	1800.00	0.00	0.00	0.00	0.00	477706.15	728454.84		
1900.00	0.00	0.00	1900.00	0.00	0.00	0.00	0.00	477706.15	728454.84		
2000.00	0.00	0.00	2000.00	0.00	0.00	0.00	0.00	477706.15	728454.84		
2100.00	0.00	0.00	2100.00	0.00	0.00	0.00	0.00	477706.15	728454.84		
2200.00	0.00	0.00	2200.00	0.00	0.00	0.00	0.00	477706.15	728454.84		
2300.00	0.00	0.00	2300.00	0.00	0.00	0.00	0.00	477706.15	728454.84		
2400.00	0.00	0.00	2400.00	0.00	0.00	0.00	0.00	477706.15	728454.84		
2500.00	0.00	0.00	2500.00	0.00	0.00	0.00	0.00	477706.15	728454.84		
2600.00	0.00	0.00	2600.00	0.00	0.00	0.00	0.00	477706.15	728454.84		
2700.00	0.00	0.00	2700.00	0.00	0.00	0.00	0.00	477706.15	728454.84		
2800.00	0.00	0.00	2800.00	0.00	0.00	0.00	0.00	477706.15	728454.84		
2900.00	0.00	0.00	2900.00	0.00	0.00	0.00	0.00	477706.15	728454.84		
3000.00	0.00	0.00	3000.00	0.00	0.00	0.00	0.00	477706.15	728454.84		
3100.00	0.00	0.00	3100.00	0.00	0.00	0.00	0.00	477706.15	728454.84		
3200.00	0.00	0.00	3200.00	0.00	0.00	0.00	0.00	477706.15	728454.84		
3300.00	0.00	0.00	3300.00	0.00	0.00	0.00	0.00	477706.15	728454.84		
3400.00	0.00	0.00	3400.00	0.00	0.00	0.00	0.00	477706.15	728454.84		
3500.00	0.00	0.00	3500.00	0.00	0.00	0.00	0.00	477706.15	728454.84		
3600.00	0.00	0.00	3600.00	0.00	0.00	0.00	0.00	477706.15	728454.84		
3700.00	0.00	0.00	3700.00	0.00	0.00	0.00	0.00	477706.15	728454.84		
3800.00	0.00	0.00	3800.00	0.00	0.00	0.00	0.00	477706.15	728454.84		
3900.00	0.00	0.00	3900.00	0.00	0.00	0.00	0.00	477706.15	728454.84		
4000.00	0.00	0.00	4000.00	0.00	0.00	0.00	0.00	477706.15	728454.84		
4100.00	0.00	0.00	4100.00	0.00	0.00	0.00	0.00	477706.15	728454.84		
4200.00	0.00	0.00	4200.00	0.00	0.00	0.00	0.00	477706.15	728454.84		
4300.00	0.00	0.00	4300.00	0.00	0.00	0.00	0.00	477706.15	728454.84		

5D Plan Report

Interpolated Points: (Relative to Slot centre)(TVD relative to Drill Floor)										
MD (US ft)	Inc (°)	Az (°)	TVD (US ft)	N.Offset (US ft)	E.Offset (US ft)	VS (US ft)	DLS (°/100US ft)	Northing (US ft)	Easting (US ft)	Comment
4400.00	0.00	0.00	4400.00	0.00	0.00	0.00	0.00	477706.15	728454.84	
4500.00	0.00	0.00	4500.00	0.00	0.00	0.00	0.00	477706.15	728454.84	
4600.00	0.00	0.00	4600.00	0.00	0.00	0.00	0.00	477706.15	728454.84	
4700.00	0.00	0.00	4700.00	0.00	0.00	0.00	0.00	477706.15	728454.84	
4800.00	0.00	0.00	4800.00	0.00	0.00	0.00	0.00	477706.15	728454.84	
4900.00	0.00	0.00	4900.00	0.00	0.00	0.00	0.00	477706.15	728454.84	
5000.00	0.00	0.00	5000.00	0.00	0.00	0.00	0.00	477706.15	728454.84	
5100.00	0.00	0.00	5100.00	0.00	0.00	0.00	0.00	477706.15	728454.84	
5200.00	0.00	0.00	5200.00	0.00	0.00	0.00	0.00	477706.15	728454.84	
5300.00	0.00	0.00	5300.00	0.00	0.00	0.00	0.00	477706.15	728454.84	
5400.00	0.00	0.00	5400.00	0.00	0.00	0.00	0.00	477706.15	728454.84	
5500.00	0.00	0.00	5500.00	0.00	0.00	0.00	0.00	477706.15	728454.84	
5600.00	0.00	0.00	5600.00	0.00	0.00	0.00	0.00	477706.15	728454.84	
5700.00	0.00	0.00	5700.00	0.00	0.00	0.00	0.00	477706.15	728454.84	
5800.00	0.00	0.00	5800.00	0.00	0.00	0.00	0.00	477706.15	728454.84	
5900.00	0.00	0.00	5900.00	0.00	0.00	0.00	0.00	477706.15	728454.84	
6000.00	0.00	0.00	6000.00	0.00	0.00	0.00	0.00	477706.15	728454.84	Begin Nudge @ 1° DLS
6100.00	1.00	270.00	6099.99	0.00	-0.87	-0.00	1.00	477706.15	728453.97	
6200.00	2.00	270.00	6199.96	0.00	-3.49	-0.00	1.00	477706.15	728451.35	
6300.00	3.00	270.00	6299.86	0.00	-7.85	-0.00	1.00	477706.15	728446.99	
6399.99	4.00	270.00	6399.66	0.00	-13.96	-0.00	1.00	477706.15	728440.88	Hold
6400.00	4.00	270.00	6399.68	0.00	-13.96	-0.00	0.00	477706.15	728440.88	
6500.00	4.00	270.00	6499.43	0.00	-20.93	-0.00	0.00	477706.15	728433.91	
6600.00	4.00	270.00	6599.19	0.00	-27.91	-0.00	0.00	477706.15	728426.93	
6700.00	4.00	270.00	6698.94	0.00	-34.88	-0.00	0.00	477706.15	728419.96	
6800.00	4.00	270.00	6798.70	0.00	-41.86	-0.00	0.00	477706.15	728412.98	
6900.00	4.00	270.00	6898.46	0.00	-48.83	-0.00	0.00	477706.15	728406.01	
7000.00	4.00	270.00	6998.21	0.00	-55.81	-0.00	0.00	477706.15	728399.03	
7100.00	4.00	270.00	7097.97	0.00	-62.78	-0.00	0.00	477706.15	728392.06	
7200.00	4.00	270.00	7197.73	0.00	-69.76	-0.00	0.00	477706.15	728385.08	
7300.00	4.00	270.00	7297.48	0.00	-76.74	-0.00	0.00	477706.15	728378.10	
7400.00	4.00	270.00	7397.24	0.00	-83.71	-0.00	0.00	477706.15	728371.13	
7500.00	4.00	270.00	7497.00	0.00	-90.69	-0.00	0.00	477706.15	728364.15	
7600.00	4.00	270.00	7596.75	0.00	-97.66	-0.00	0.00	477706.15	728357.18	
7700.00	4.00	270.00	7696.51	0.00	-104.64	-0.00	0.00	477706.15	728350.20	
7800.00	4.00	270.00	7796.27	0.00	-111.61	-0.00	0.00	477706.15	728343.23	
7900.00	4.00	270.00	7896.02	0.00	-118.59	-0.00	0.00	477706.15	728336.25	
8000.00	4.00	270.00	7995.78	0.00	-125.56	-0.00	0.00	477706.15	728329.28	
8100.00	4.00	270.00	8095.53	0.00	-132.54	-0.00	0.00	477706.15	728322.30	
8200.00	4.00	270.00	8195.29	0.00	-139.51	-0.00	0.00	477706.15	728315.33	
8300.00	4.00	270.00	8295.05	0.00	-146.49	-0.00	0.00	477706.15	728308.35	
8400.00	4.00	270.00	8394.80	0.00	-153.47	-0.00	0.00	477706.15	728301.37	
8500.00	4.00	270.00	8494.56	0.00	-160.44	-0.00	0.00	477706.15	728294.40	
8600.00	4.00	270.00	8594.32	0.00	-167.42	-0.00	0.00	477706.15	728287.42	
8700.00	4.00	270.00	8694.07	0.00	-174.39	-0.00	0.00	477706.15	728280.45	
8800.00	4.00	270.00	8793.83	0.00	-181.37	-0.00	0.00	477706.15	728273.47	
8900.00	4.00	270.00	8893.59	0.00	-188.34	-0.00	0.00	477706.15	728266.50	
9000.00	4.00	270.00	8993.34	0.00	-195.32	-0.00	0.00	477706.15	728259.52	
9100.00	4.00	270.00	9093.10	0.00	-202.29	-0.00	0.00	477706.15	728252.55	
9200.00	4.00	270.00	9192.85	0.00	-209.27	-0.00	0.00	477706.15	728245.57	
9252.97	4.00	270.00	9245.70	0.00	-212.96	-0.00	0.00	477706.15	728241.88	Drop @ 1° DLS
9300.00	3.53	270.00	9292.62	0.00	-216.05	-0.00	1.00	477706.15	728238.79	
9400.00	2.53	270.00	9392.48	0.00	-221.34	-0.00	1.00	477706.15	728233.50	
9500.00	1.53	270.00	9492.42	0.00	-224.88	-0.00	1.00	477706.15	728229.96	
9600.00	0.53	270.00	9592.40	0.00	-226.68	-0.00	1.00	477706.15	728228.16	
9652.96	0.00	0.00	9645.36	0.00	-226.92	-0.00	1.00	477706.15	728227.92	Hold Vertical
9700.00	0.00	0.00	9692.40	0.00	-226.92	-0.00	0.00	477706.15	728227.92	



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

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

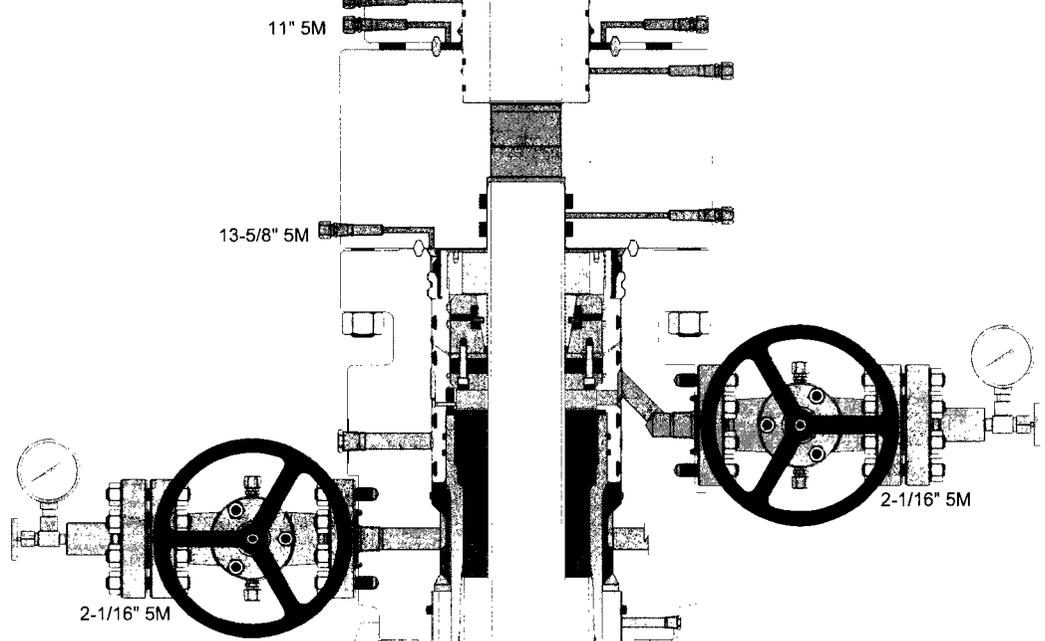
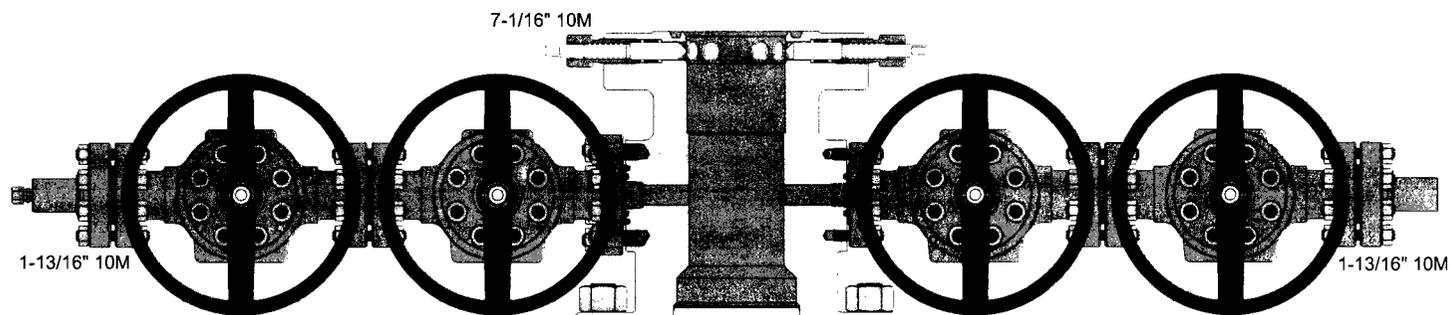
- Wellhead will be installed by wellhead representatives.
- If the welding is performed by a third party, the wellhead representative will monitor the temperature to verify that it does not exceed the maximum temperature of the seal.
- Wellhead representative will install the test plug for the initial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

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

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

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

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



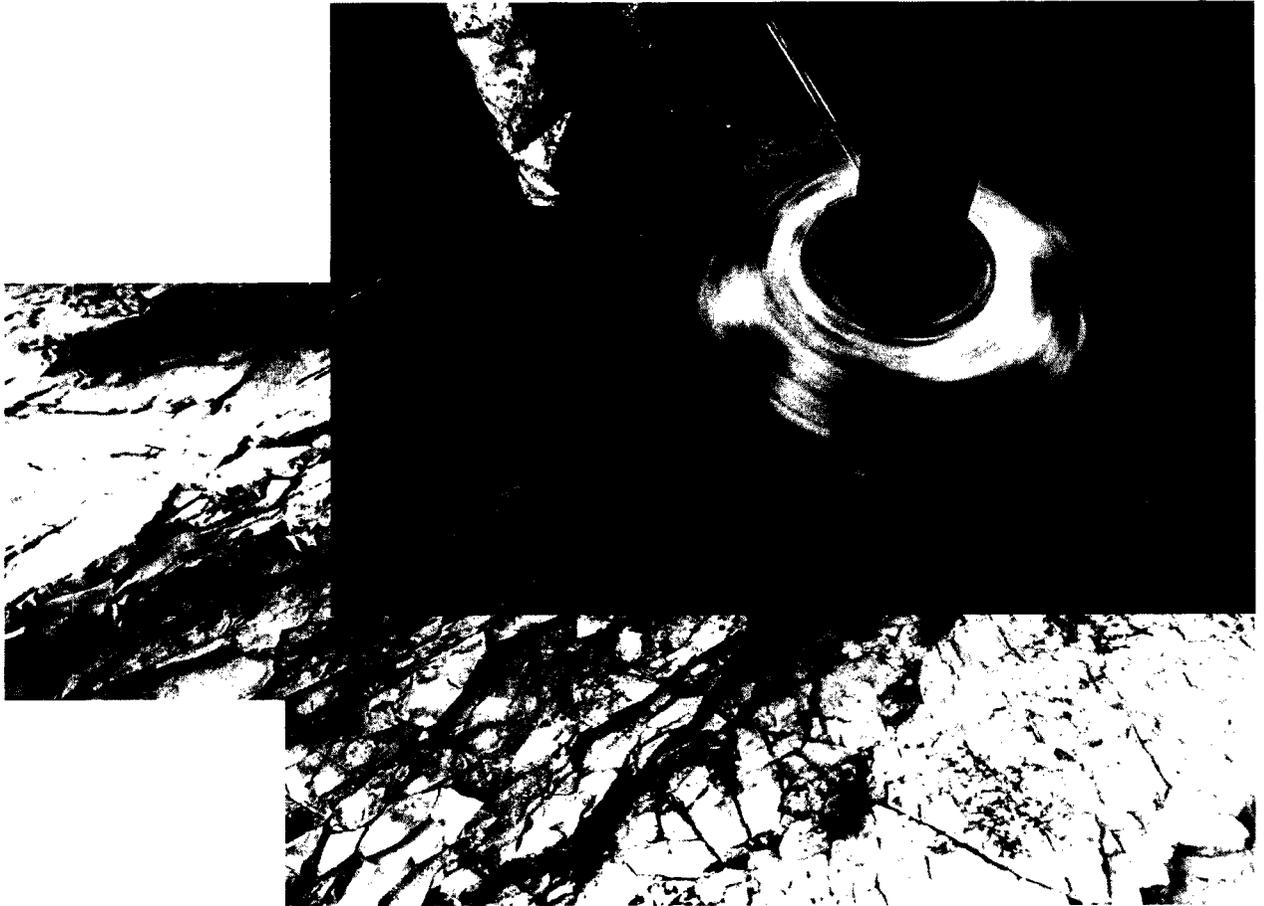
13-3/8" Casing

9-5/8" Casing

5-1/2" Casing



Commitment Runs Deep



Design Plan  
Operation and Maintenance Plan  
Closure Plan

SENM - Closed Loop Systems  
June 2010

## I. Design Plan

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

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

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

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

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

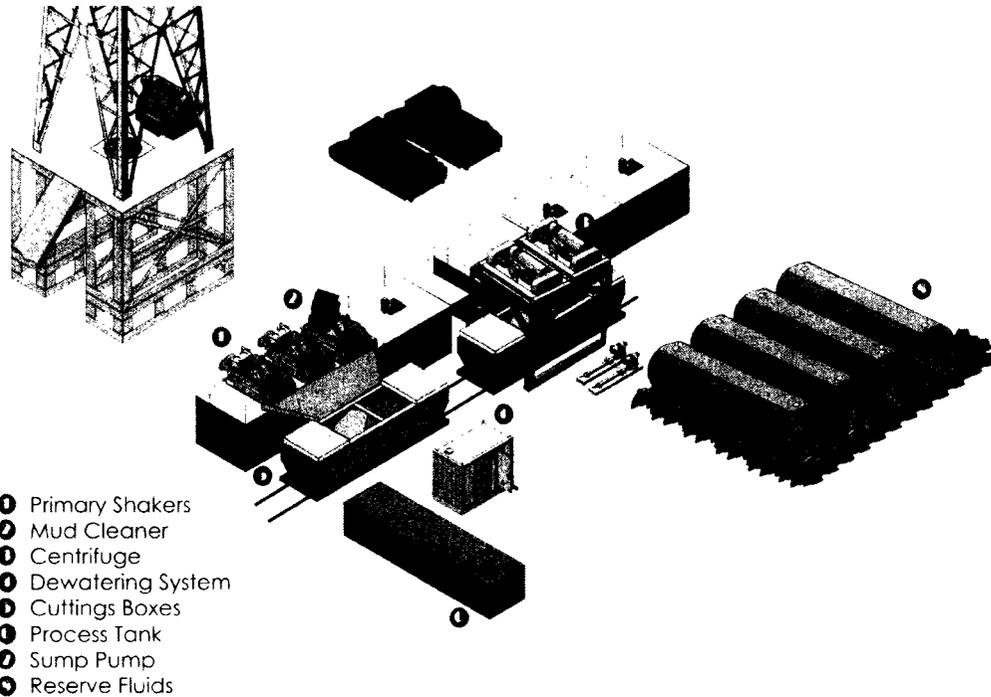
## II. Operations and Maintenance Plan

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

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



Closed Loop Schematic



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

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

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

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

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

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

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

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

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

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

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

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

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

### **III. Closure Plan**

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



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, Budapest 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.tauruserge.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. <i>[Signature]</i> Hose Inspection and PHOENIX RUBBER Q.C.		





APD ID: 10400020785

Submission Date: 08/24/2017

Highlighted data reflects the most recent changes

Operator Name: DEVON ENERGY PRODUCTION COMPANY LP

Well Name: TOMB RAIDER 12 FED

Well Number: 213H

[Show Final Text](#)

Well Type: OIL WELL

Well Work Type: Drill

### Section 1 - Existing Roads

Will existing roads be used? YES

Existing Road Map:

Tomb\_Raider\_12\_Fed\_213H\_Access\_Rd\_08-24-2017.pdf

Existing Road Purpose: ACCESS,FLUID TRANSPORT

Row(s) Exist? NO

#### ROW ID(s)

ID:

Do the existing roads need to be improved? YES

Existing Road Improvement Description: Improve road to accommodate Drilling and Completion operations.

Existing Road Improvement Attachment:

### Section 2 - New or Reconstructed Access Roads

Will new roads be needed? YES

New Road Map:

Tomb\_Raider\_12\_Fed\_213H\_New\_Access\_Rd\_08-24-2017.pdf

New road type: LOCAL

Length: 1273.94 Feet

Width (ft.): 30

Max slope (%): 6

Max grade (%): 4

Army Corp of Engineers (ACOE) permit required? NO

ACOE Permit Number(s):

New road travel width: 14

New road access erosion control: Water Drainage Ditch

New road access plan or profile prepared? NO

New road access plan attachment:

Access road engineering design? NO

Access road engineering design attachment:

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

**Well Name:** TOMB RAIDER 12 FED

**Well Number:** 213H

**Access surfacing type:** GRAVEL

**Access topsoil source:** ONSITE

**Access surfacing type description:**

**Access onsite topsoil source depth:** 6

**Offsite topsoil source description:**

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

**Access other construction information:**

**Access miscellaneous information:**

**Number of access turnouts:**

**Access turnout map:**

### **Drainage Control**

**New road drainage crossing:** OTHER

**Drainage Control comments:** na

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

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

### **Access Additional Attachments**

**Additional Attachment(s):**

### **Section 3 - Location of Existing Wells**

**Existing Wells Map?** YES

**Attach Well map:**

Tomb\_Raider\_12\_Fed\_213H\_One\_Mile\_Map\_08-24-2017.pdf

**Existing Wells description:**

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

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

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

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

#### **Water Source Table**

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

**Well Name:** TOMB RAIDER 12 FED

**Well Number:** 213H

**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:**

TOMB\_RAIDER\_12\_FED\_COM\_213H\_Water\_X\_Map\_08-24-2017.pdf

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

**New water well?** NO

### New Water Well Info

**Well latitude:**

**Well Longitude:**

**Well datum:**

**Well target aquifer:**

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

**Est thickness of aquifer:**

**Aquifer comments:**

**Aquifer documentation:**

**Well depth (ft):**

**Well casing type:**

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

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

**New water well casing?**

**Used casing source:**

**Drilling method:**

**Drill material:**

**Grout material:**

**Grout depth:**

**Casing length (ft.):**

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

**Well Production type:**

**Completion Method:**

**Water well additional information:**

**State appropriation permit:**

**Additional information attachment:**

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

**Well Name:** TOMB RAIDER 12 FED

**Well Number:** 213H

## 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:**

Tomb\_Raider\_12\_Fed\_213H\_Caliche\_Map\_08-24-2017.pdf

## Section 7 - Methods for Handling Waste

**Waste type:** PRODUCED WATER

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

**Amount of waste:** 1000 barrels

**Waste disposal frequency :** Daily

**Safe containment description:** N/A

**Safe containmant attachment:**

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

**Disposal type description:**

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

**Waste type:** COMPLETIONS/STIMULATION

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

**Amount of waste:** 3000 barrels

**Waste disposal frequency :** One Time Only

**Safe containment description:** N/A

**Safe containmant attachment:**

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

**Disposal type description:**

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

**Waste type:** FLOWBACK

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

**Amount of waste:** 2000 barrels

**Waste disposal frequency :** Daily

**Safe containment description:** N/A

**Safe containmant attachment:**

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

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

**Well Name:** TOMB RAIDER 12 FED

**Well Number:** 213H

**Disposal type description:**

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

**Waste type:** DRILLING

**Waste content description:** Water Based Cuttings

**Amount of waste:** 1980 barrels

**Waste disposal frequency :** Daily

**Safe containment description:** N/A

**Safe containmant attachment:**

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

**Disposal type description:**

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

### Reserve Pit

**Reserve Pit being used?** NO

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

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

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

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

**Reserve pit liner**

**Reserve pit liner specifications and installation description**

### Cuttings Area

**Cuttings Area being used?** NO

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

**Description of cuttings location**

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

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

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

**WCuttings area liner**

**Cuttings area liner specifications and installation description**

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

**Well Name:** TOMB RAIDER 12 FED

**Well Number:** 213H

## Section 8 - Ancillary Facilities

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

**Ancillary Facilities attachment:**

**Comments:**

## Section 9 - Well Site Layout

**Well Site Layout Diagram:**

Tomb\_Raider\_12\_Fed\_213H\_Rig\_Layout\_08-24-2017.pdf

**Comments:**

## Section 10 - Plans for Surface Reclamation

**Type of disturbance:** New Surface Disturbance

**Multiple Well Pad Name:** TOMB RAIDER 13 CTB

**Multiple Well Pad Number:** 1

**Recontouring attachment:**

Tomb\_Raider\_12\_Fed\_213H\_Grading\_Pln\_08-24-2017.pdf

**Drainage/Erosion control construction:** N/A

**Drainage/Erosion control reclamation:** N/A

**Wellpad long term disturbance (acres):** 2.273

**Wellpad short term disturbance (acres):** 8.266

**Access road long term disturbance (acres):** 1.006

**Access road short term disturbance (acres):** 1.006

**Pipeline long term disturbance (acres):** 0.3694146

**Pipeline short term disturbance (acres):** 0.3694146

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

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

**Total long term disturbance:** 3.6484146

**Total short term disturbance:** 9.641415

**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.

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

**Well Name:** TOMB RAIDER 12 FED

**Well Number:** 213H

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

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

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

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

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

**Non native seed used?** NO

**Non native seed description:**

**Seedling transplant description:**

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

**Seedling transplant description attachment:**

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

**Seed harvest description:**

**Seed harvest description attachment:**

## Seed Management

### Seed Table

**Seed type:**

**Seed source:**

**Seed name:**

**Source name:**

**Source address:**

**Source phone:**

**Seed cultivar:**

**Seed use location:**

**PLS pounds per acre:**

**Proposed seeding season:**

### Seed Summary

**Total pounds/Acre:**

**Seed Type**

**Pounds/Acre**

**Seed reclamation attachment:**

### Operator Contact/Responsible Official Contact Info

**First Name:** Cole

**Last Name:** Metcalf

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

**Well Name:** TOMB RAIDER 12 FED

**Well Number:** 213H

**Phone:** (575)748-1872

**Email:** cole.metcalfe@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:**

**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:** TOMB RAIDER 12 FED

**Well Number:** 213H

**Disturbance type:** NEW ACCESS ROAD

**Describe:**

**Surface Owner:** BUREAU OF LAND MANAGEMENT

**Other surface owner description:**

**BIA Local Office:**

**BOR Local Office:**

**COE Local Office:**

**DOD Local Office:**

**NPS Local Office:**

**State Local Office:**

**Military Local Office:**

**USFWS Local Office:**

**Other Local Office:**

**USFS Region:**

**USFS Forest/Grassland:**

**USFS Ranger District:**

**Disturbance type:** EXISTING ACCESS ROAD

**Describe:**

**Surface Owner:** BUREAU OF LAND MANAGEMENT

**Other surface owner description:**

**BIA Local Office:**

**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:** TOMB RAIDER 12 FED

**Well Number:** 213H

**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:**

## Section 12 - Other Information

**Right of Way needed?** YES

**Use APD as ROW?** YES

**ROW Type(s):** 281001 ROW - ROADS,288100 ROW – O&G Pipeline,FLPMA (Powerline),Other

### ROW Applications

**SUPO Additional Information:** All gas and water connections will be submitted by a third party gatherer at a later date.

**Use a previously conducted onsite?** YES

**Previous Onsite information:** 5/2/2017 Uber North/ Belloq onsite

### Other SUPO Attachment

Tomb\_Raider\_12\_Fed\_213H\_CTB\_08-24-2017.pdf

Tomb\_Raider\_12\_Fed\_213H\_Flowline\_08-24-2017.pdf

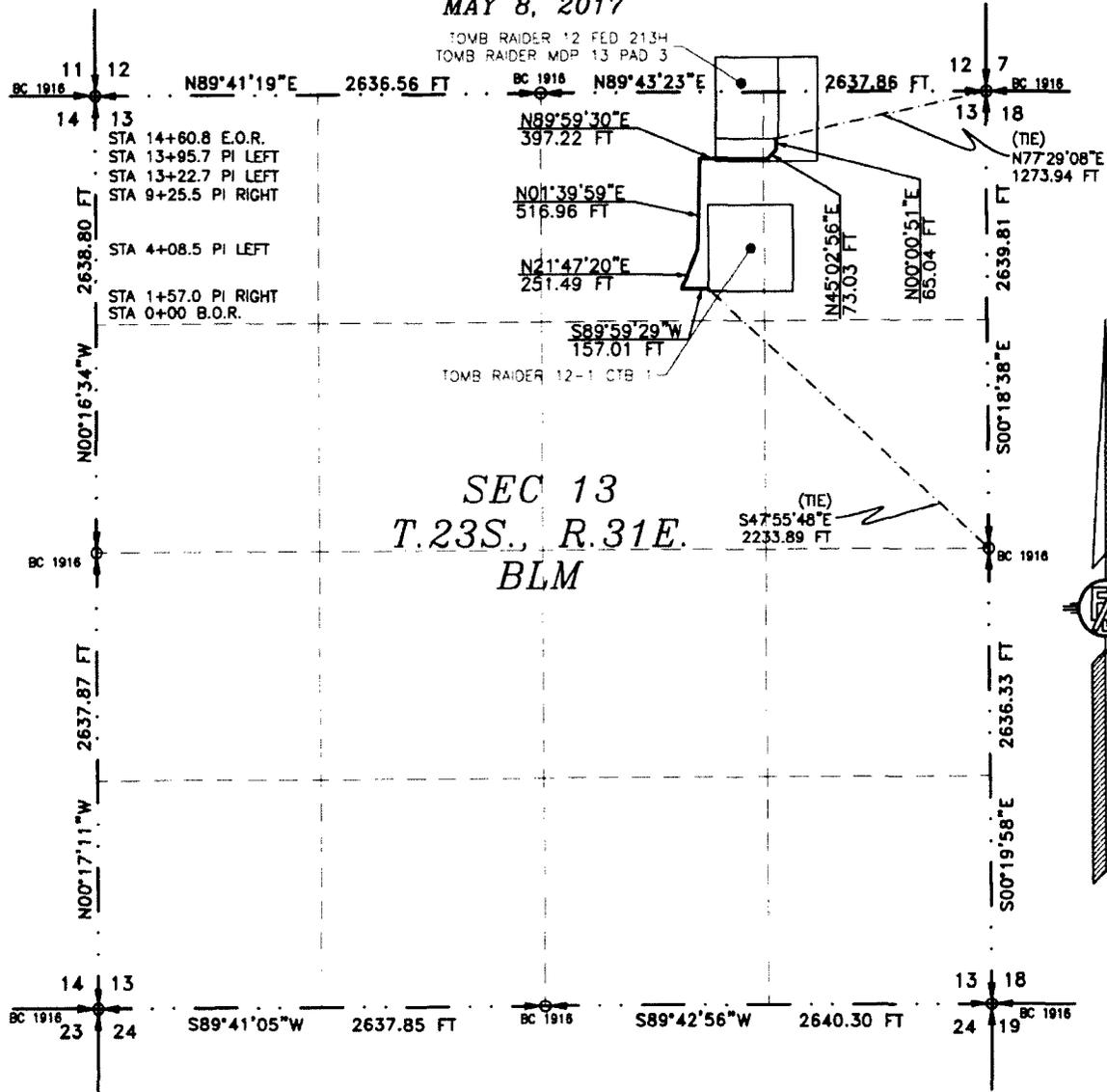
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Tomb\_Raider\_12\_Fed\_213H\_Crude\_20180104122401.PDF

Tomb\_Raider\_12\_Fed\_213H\_Pad\_Elec\_20180104122416.PDF

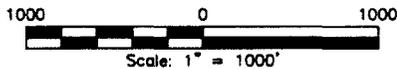
**ACCESS ROAD PLAT**  
 ACCESS ROAD FROM THE TOMB RAIDER 12-1 CTB 1 TO THE TOMB RAIDER 12 FED 213H &  
 TOMB RAIDER MDP 13 PAD 3

**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 8, 2017



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.** CARLSBAD, NEW MEXICO

**SURVEYOR CERTIFICATE**

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

IN WITNESS WHEREOF, THIS CERTIFICATE IS EXECUTED AT CARLSBAD, NEW MEXICO, THIS 15 DAY OF MAY 2017

*Filmon F. Jaramillo*  
 FILMON F. JARAMILLO, P.L.S. #12797

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

SURVEY NO. 5239

**ACCESS ROAD PLAT**  
ACCESS ROAD FROM THE TOMB RAIDER 12-1 CTB 1 TO THE TOMB RAIDER 12 FED 213H &  
TOMB RAIDER MDP 13 PAD 3

**DEVON ENERGY PRODUCTION COMPANY, L.P.**  
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**SECTION 13, TOWNSHIP 23 SOUTH, RANGE 31 EAST, N.M.P.M.**  
**EDDY COUNTY, STATE OF NEW MEXICO**  
**MAY 8, 2017**

**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

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NEW MEXICO, THIS 5 DAY OF MAY 2017

**GENERAL NOTES**

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**SHEET: 2-2**

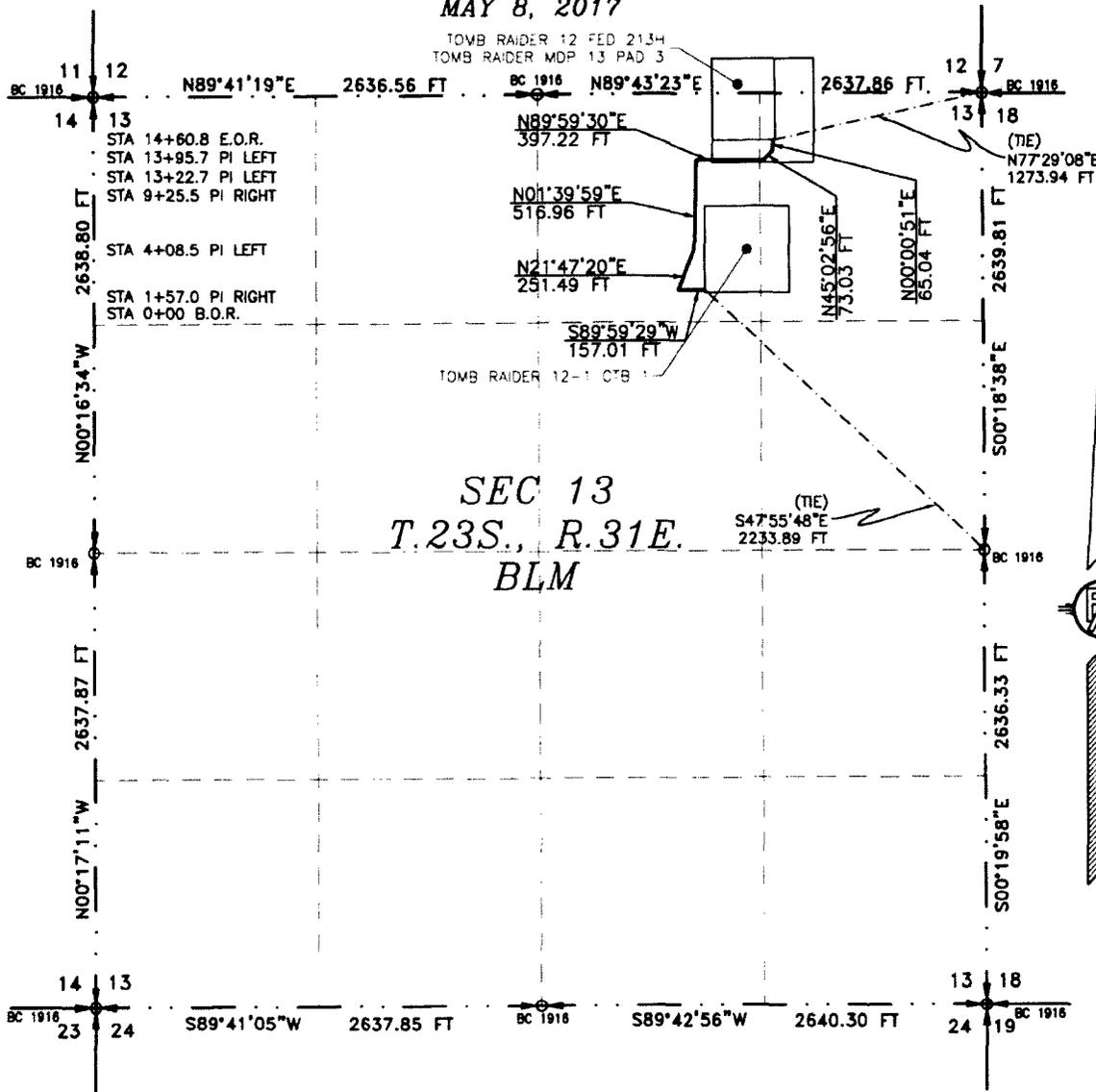
**MADRON SURVEYING, INC.** CARLSBAD, NEW MEXICO

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

**SURVEY NO. 5239**

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 ACCESS ROAD FROM THE TOMB RAIDER 12-1 CTB 1 TO THE TOMB RAIDER 12 FED 213H &  
 TOMB RAIDER MDP 13 PAD 3

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 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 8, 2017



SEE NEXT SHEET (2-2) FOR DESCRIPTION



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 301 SOUTH CANAL  
 CARLSBAD, NEW MEXICO 88220  
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SHEET: 1-2

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

SURVEY NO. 5239

**ACCESS ROAD PLAT**  
**ACCESS ROAD FROM THE TOMB RAIDER 12-1 CTB 1 TO THE TOMB RAIDER 12 FED 213H & TOMB RAIDER MDP 13 PAD 3**

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**CENTERLINE SURVEY OF AN ACCESS ROAD CROSSING**  
**SECTION 13, TOWNSHIP 23 SOUTH, RANGE 31 EAST, N.M.P.M.**  
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**MAY 8, 2017**

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SHEET: 2-2

MADRON SURVEYING, INC. 201 SOUTH CANAL CARLSBAD, NEW MEXICO

FILIMON F. JARAMILLO, P.S. 12797

SURVEY NO. 5239

201 SOUTH CANAL  
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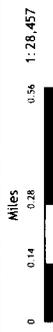


# TOMB RAIDER 12 FED 213H WATER ROUTES

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, expressed or implied, regarding this map.



WGS\_1984\_Web\_Mercator\_Auxiliary\_Sphere  
Prepared by: STEPHEN RICHARDS  
Map is current as of: 10-Aug-2017



Caliche Pit 23S 31E Section 1

4,749.77 ft

4,829.87 ft

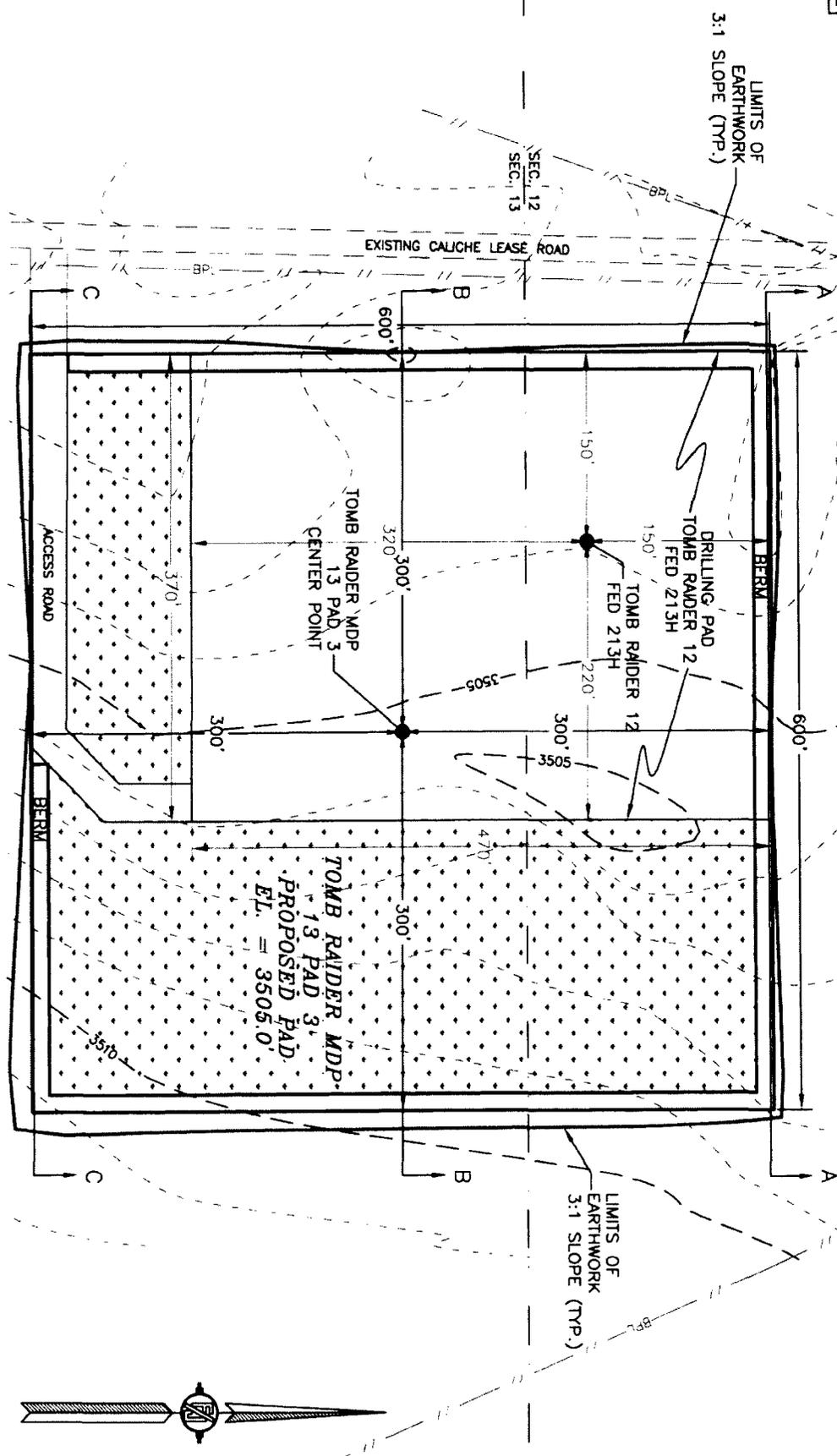
4,196.91 ft

Tomb Raider 12 Fed 213

Total 15,844.57 ft



# PLAN VIEW



DEVON ENERGY PRODUCTION COMPANY, L.P.  
 GRADING PLAN AND CROSS SECTIONS  
 FOR TOMB RAIDER 12 FED 213H  
 SECTION 12, TOWNSHIP 23 SOUTH,  
 RANGE 31 EAST, N.M.P.M.  
 EDDY COUNTY, STATE OF NEW MEXICO

MAY 8, 2017  
 301 SOUTH GAMA, CARLSBAD, NEW MEXICO  
 MADRON SURVEYING, INC. (GPS) 234-3541



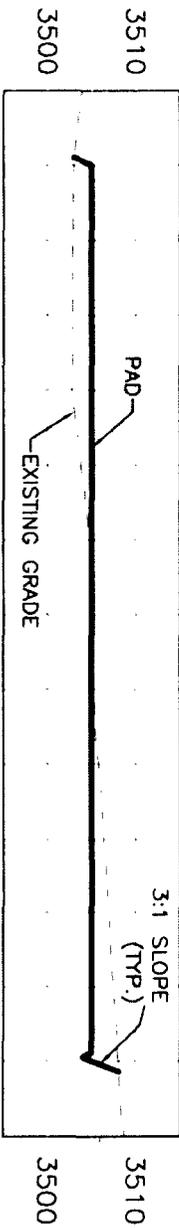
CUT	FILL	NET
16930 CU. YD.	10137 CU. YD.	6793 CU. YD. (CUT)

EARTHWORK QUANTITIES ARE ESTIMATED

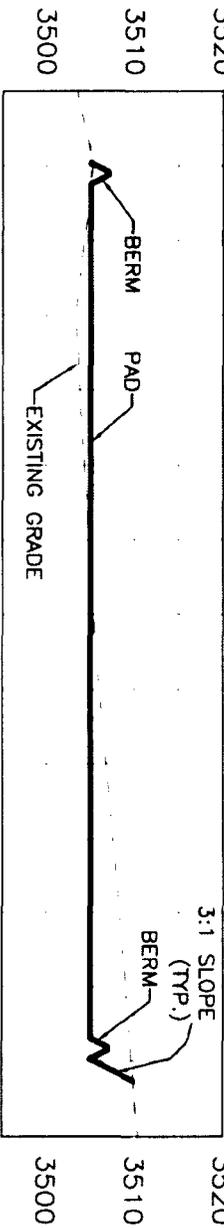
SHEET 1-2  
 SURVEY NO. 62391

# CROSS SECTIONS

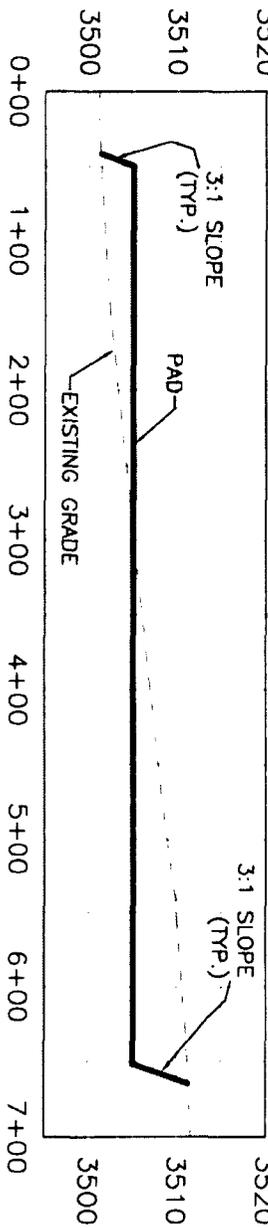
SECTION A-A



SECTION B-B



SECTION C-C



DEVON ENERGY PRODUCTION COMPANY, L.P.  
 GRADING PLAN AND CROSS SECTIONS  
**FOR TOMB RAIDER 12 FED 219H**  
 SECTION 12, TOWNSHIP 23 SOUTH,  
 RANGE 31 EAST, N.M.P.M.,  
 EDDY COUNTY, STATE OF NEW MEXICO

MAY 8, 2017  
 101 SOUTH CANON  
 CARLSBAD, NEW MEXICO

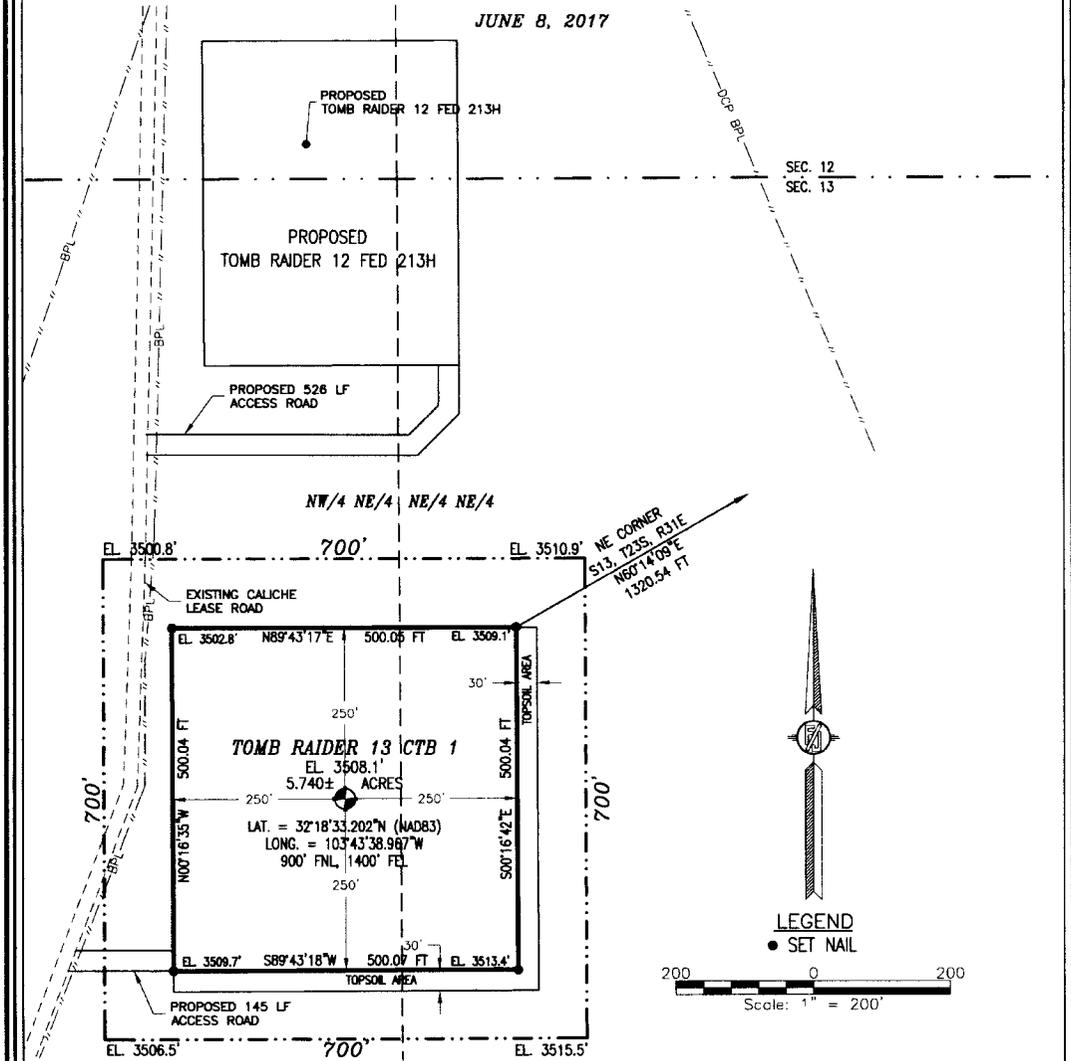
SHEET 2-2  
 SURVEY NO. 6239



TOMB RAIDER 13 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

JUNE 8, 2017



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 SOUTHWEST 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.

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 7<sup>TH</sup> DAY OF JUNE 2017

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

SURVEY NO. 5242A

SHEET: 1-3

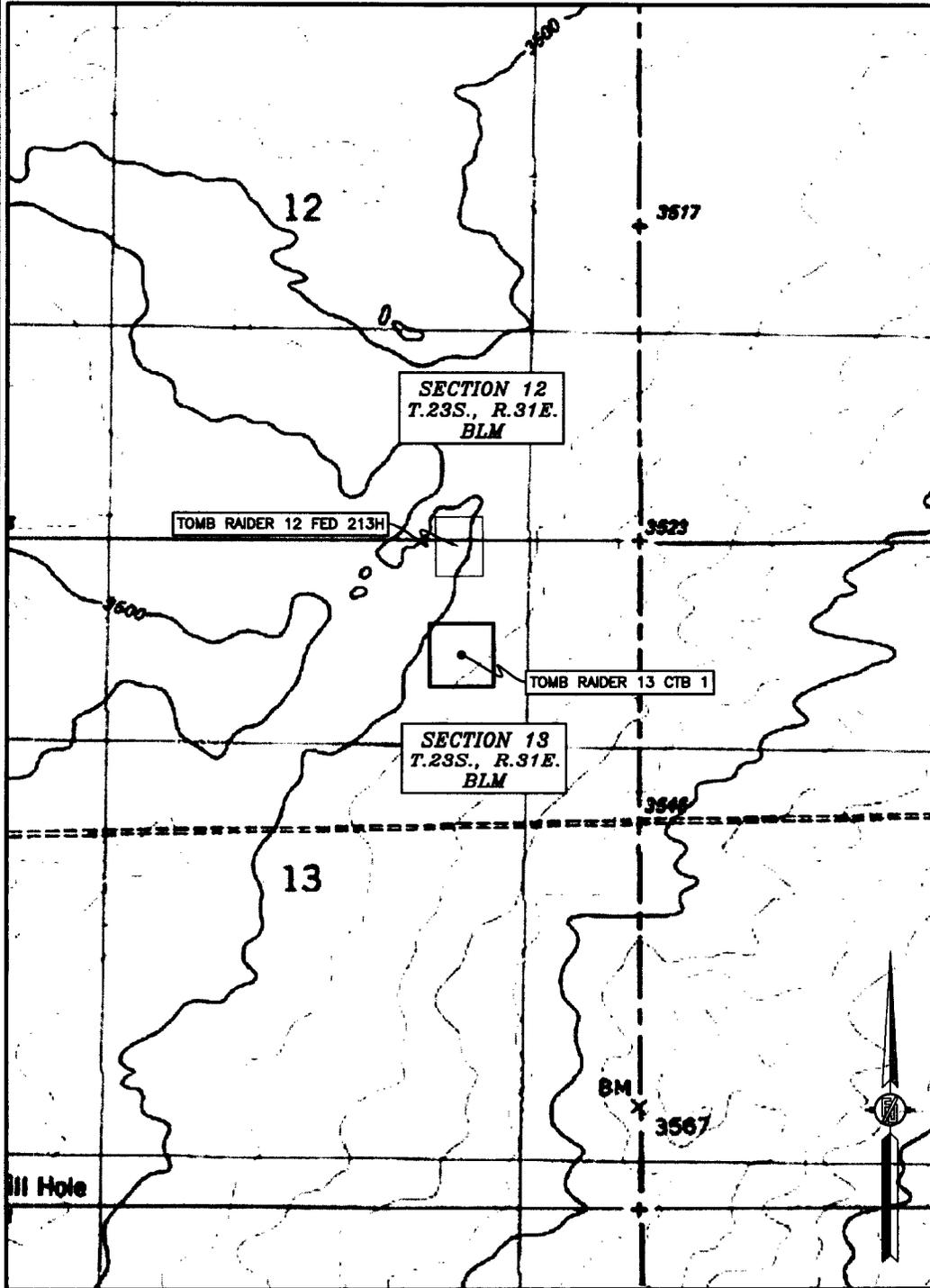
MADRON SURVEYING, INC. CARLSBAD, NEW MEXICO

TOMB RAIDER 13 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

JUNE 8, 2017

QUAD MAP



SHEET: 2-3

SURVEY NO. 5242A

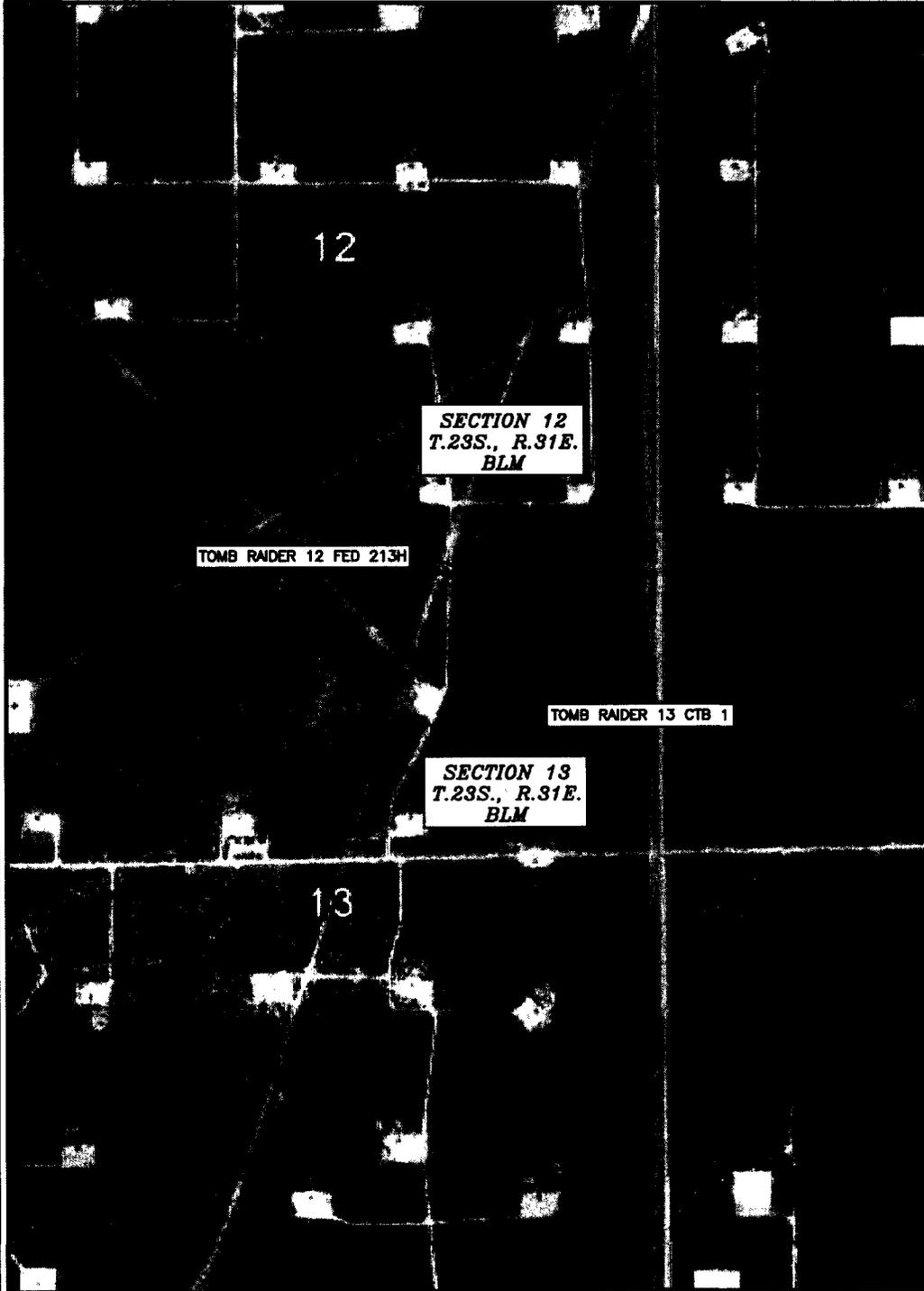
MADRON SURVEYING, INC. 301 SOUTH CANAL CARLSBAD, NEW MEXICO  
(575) 234-3341

TOMB RAIDER 13 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

JUNE 8, 2017

AERIAL PHOTO

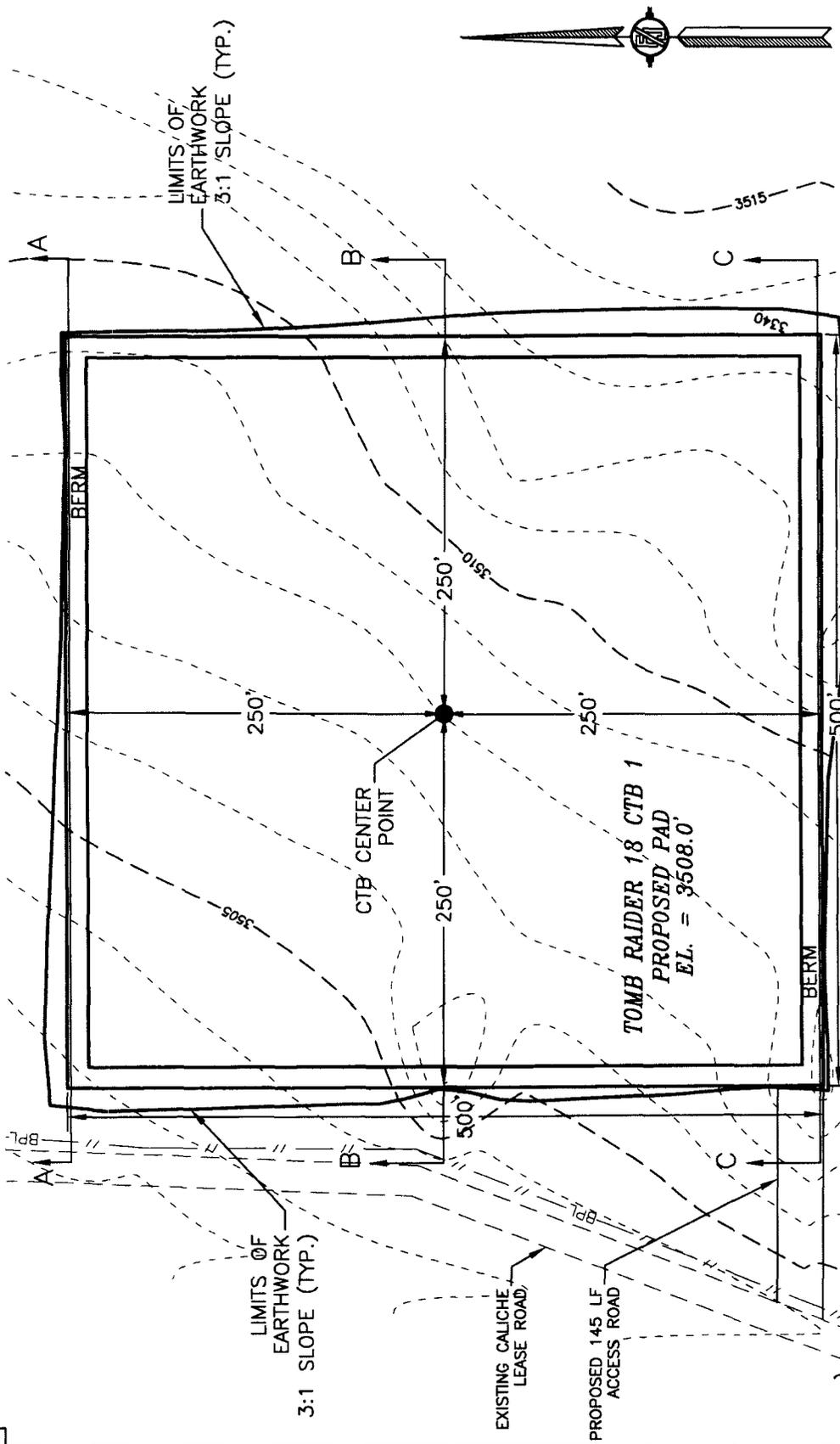


SHEET: 3-3

SURVEY NO. 5242A

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

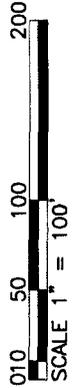
PLAN VIEW



DEVON ENERGY PRODUCTION COMPANY, L.P.  
**TOMB RAIDER 13 CTB 1**  
 LOCATED 900 FT. FROM THE NORTH LINE  
 AND 1400 FT. FROM THE EAST LINE OF  
 SECTION 13, TOWNSHIP 23 SOUTH,  
 RANGE 31 EAST, N.M.P.M.  
 EDDY COUNTY, STATE OF NEW MEXICO

JUNE 8, 2017

MADRON SURVEYING, INC. (S75) 234-3341  
 301 SOUTH CANAL

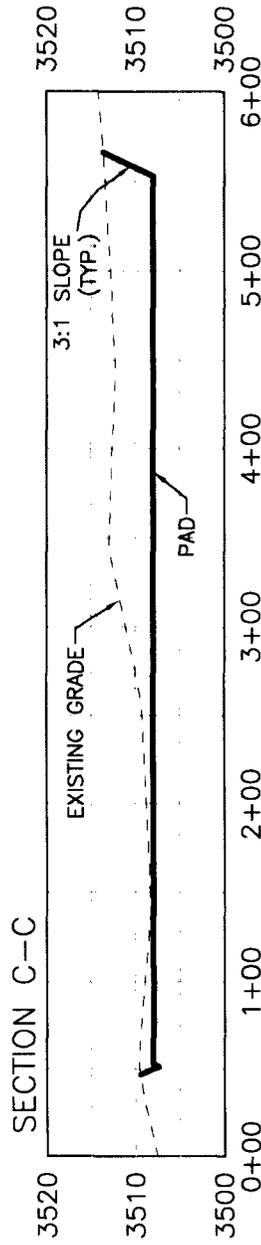
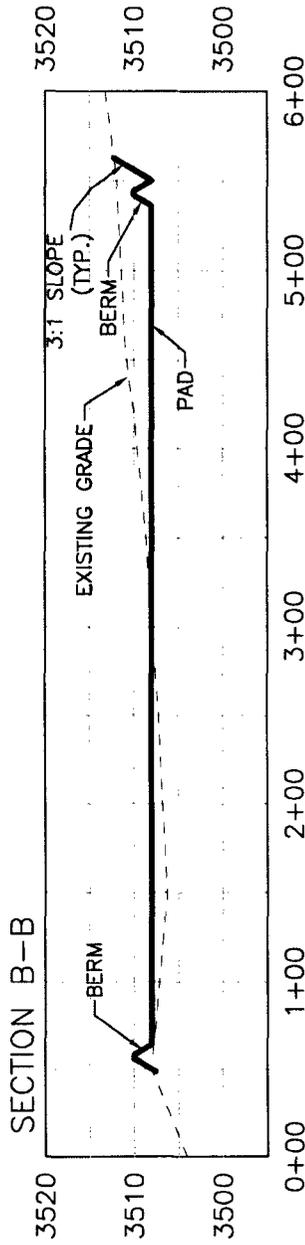
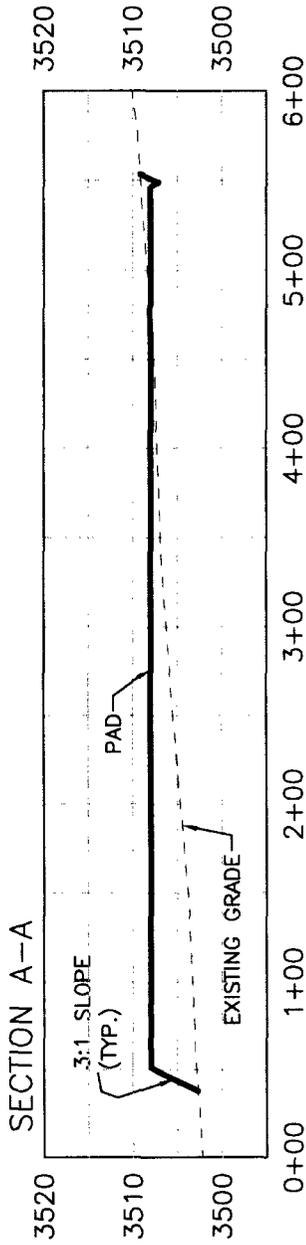


CUT	FILL	NET
10490 CU. YD.	8983 CU. YD.	1507 CU. YD. (CUT)

EARTHWORK QUANTITIES ARE ESTIMATED

SHEET 1-2  
 SURVEY NO. 5242A

# CROSS SECTIONS

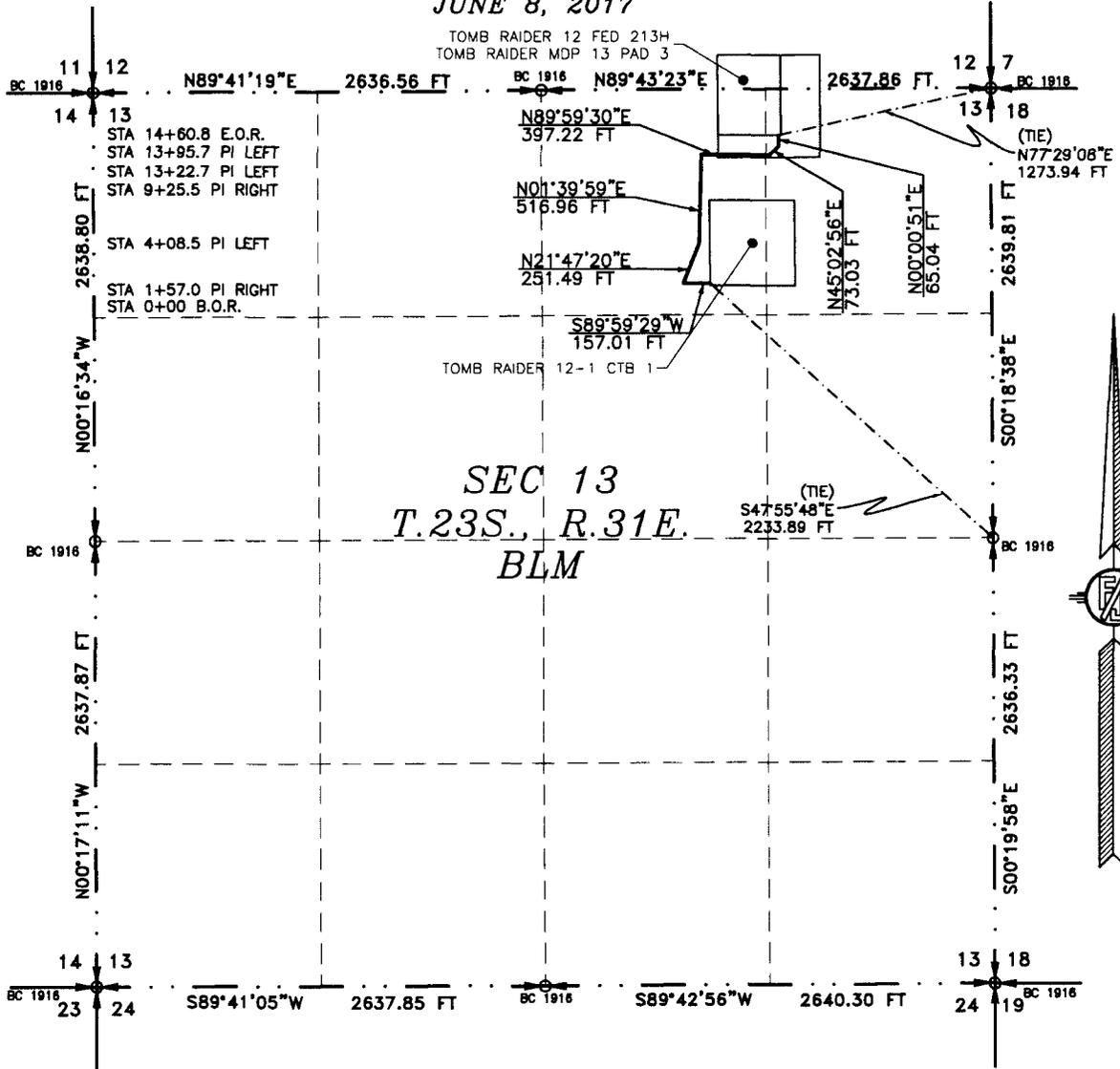


DEVON ENERGY PRODUCTION COMPANY, L.P.  
**TOMB RAIDER 13 CTB 1**  
 LOCATED 900 FT. FROM THE NORTH LINE  
 AND 1400 FT. FROM THE EAST LINE OF  
 SECTION 13, TOWNSHIP 23 SOUTH,  
 RANGE 31 EAST, N.M.P.M.  
 EDDY COUNTY, STATE OF NEW MEXICO

JUNE 8, 2017

**ACCESS ROAD PLAT**  
 ACCESS ROAD FROM THE TOMB RAIDER 12-1 CTB 1 TO THE TOMB RAIDER 12 FED 213H &  
 TOMB RAIDER MDP 13 PAD 3

**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  
 JUNE 8, 2017



SEE NEXT SHEET (2-2) FOR DESCRIPTION



**GENERAL NOTES**

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

**SHEET: 1-2**

**MADRON SURVEYING, INC.**

**SURVEYOR CERTIFICATE**

I, 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 17 DAY OF JUNE 2017.

FILIMON F. JARAMILLO, PLS. 12797  
 PROFESSIONAL SURVEYOR  
 STATE OF NEW MEXICO

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

**SURVEY NO. 5242A**

301 SOUTH CANAL  
 (675) 234-3341  
**CARLSBAD, NEW MEXICO**

**ACCESS ROAD PLAT**

**ACCESS ROAD FROM THE TOMB RAIDER 12-1 CTB 1 TO THE TOMB RAIDER 12 FED 213H & TOMB RAIDER MDP 13 PAD 3**

**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  
JUNE 8, 2017**

**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

**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 08 DAY OF JUNE 2017

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

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

**SURVEY NO. 5242A**

**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



**FLOWLINE PLAT**

**ONE-4" POLY FLOWLINE & ONE-6" GAS LIFT LINE BURIED IN THE SAME DITCH FROM TOMB RAIDER 12  
FEDERAL 213H TO TOMB RAIDER 13 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  
AUGUST 9, 2017**

**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 9 DAY OF AUGUST 2017

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

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

**SURVEY NO. 5406**

**GENERAL NOTES**

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

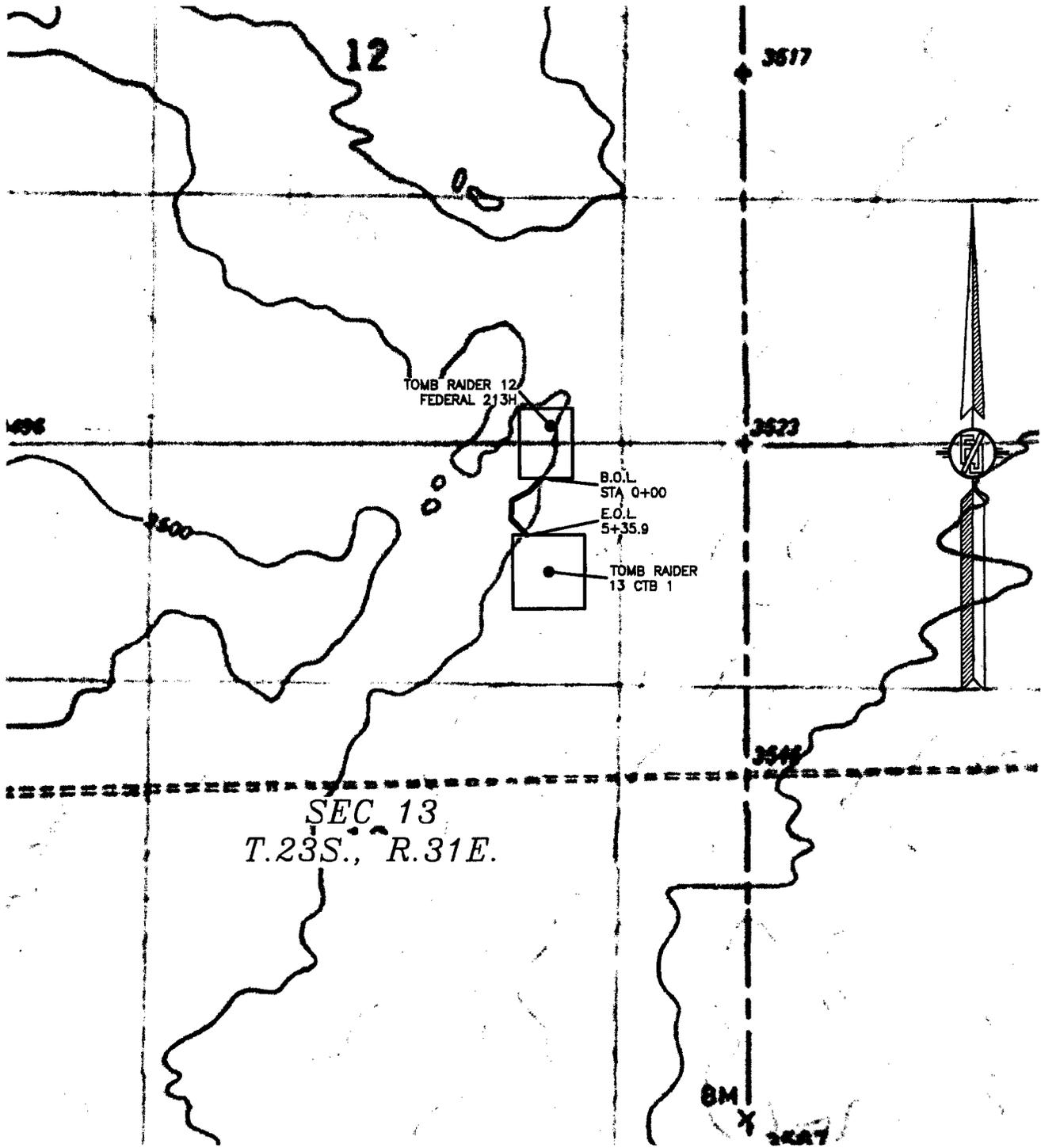
**SHEET: 2-4**

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

**FLOWLINE PLAT**

ONE-4" POLY FLOWLINE & ONE-6" GAS LIFT LINE BURIED IN THE SAME DITCH  
FROM TOMB RAIDER 12 FEDERAL 213H TO TOMB RAIDER 13 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  
AUGUST 9, 2017



**FLOWLINE PLAT**

**ONE-4" POLY FLOWLINE & ONE-6" GAS LIFT LINE BURIED IN THE SAME DITCH  
FROM TOMB RAIDER 12 FEDERAL 213H TO TOMB RAIDER 13 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  
AUGUST 9, 2017**

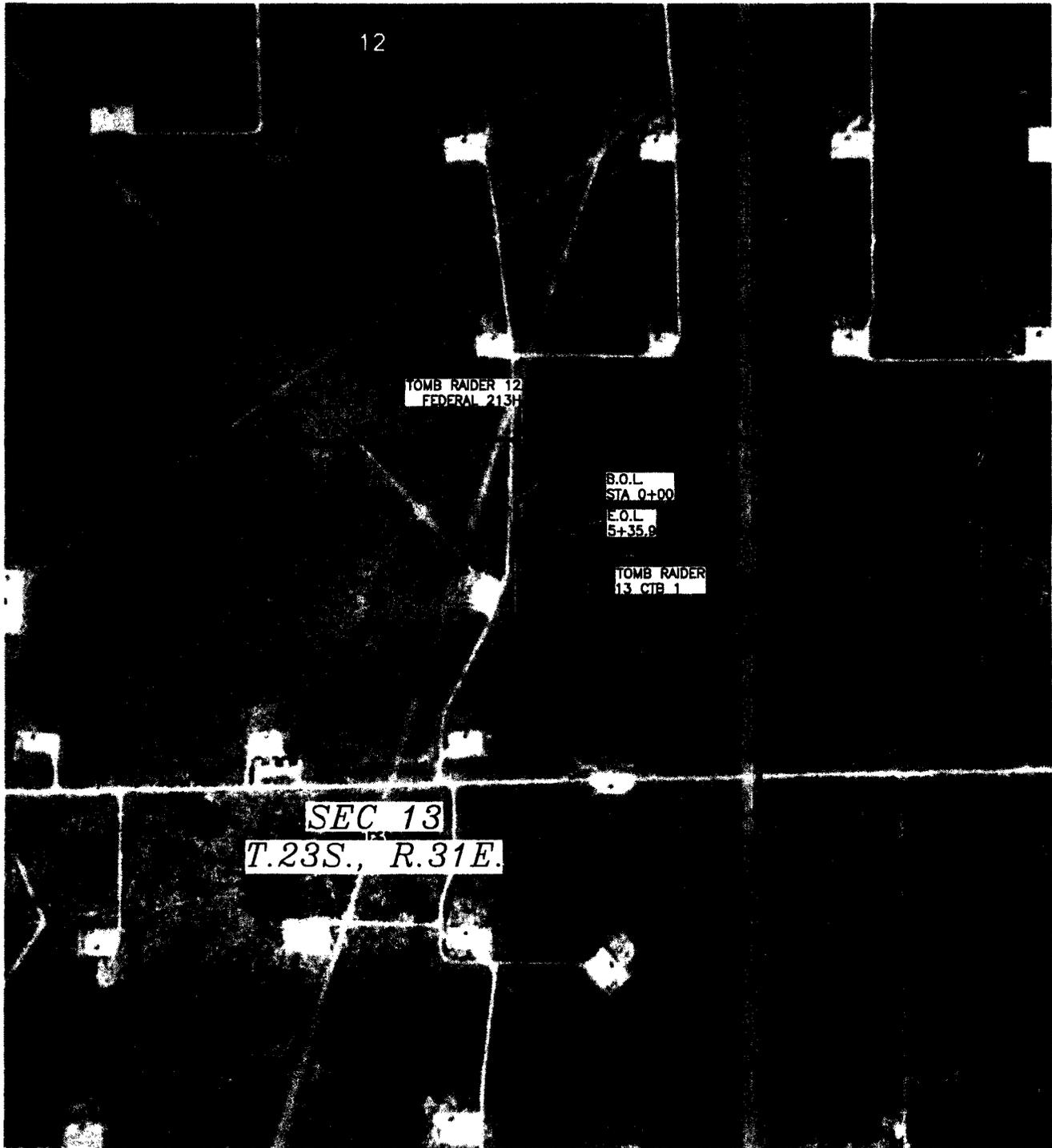
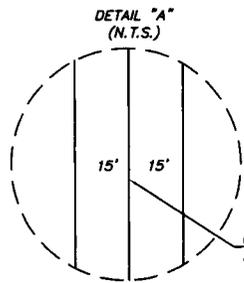
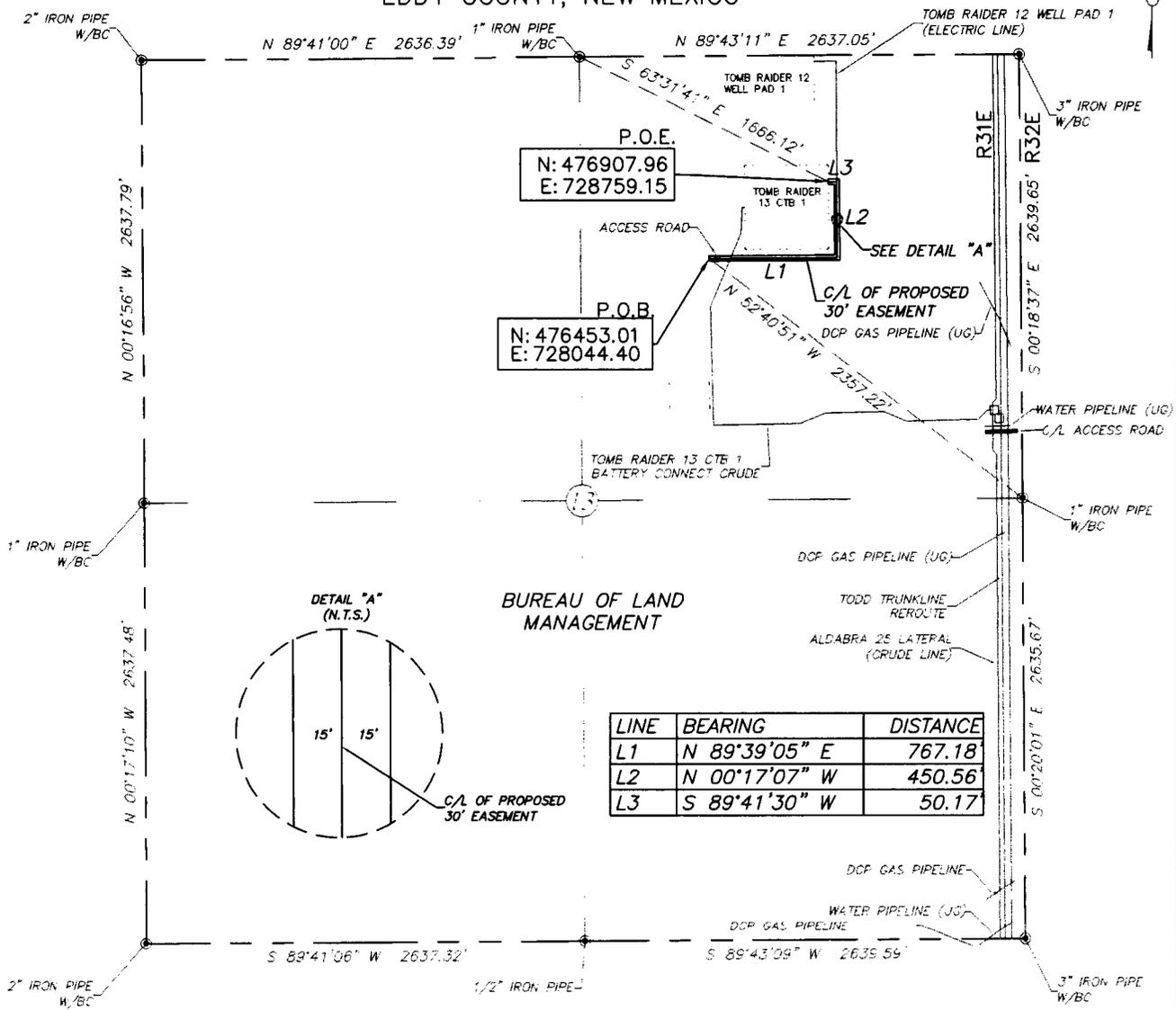


EXHIBIT "A"  
 PAGE 1 of 4  
 ELECTRIC LINE PLAT  
 SECTION 13, T23S-R31E, N.M.P.M.  
 EDDY COUNTY, NEW MEXICO

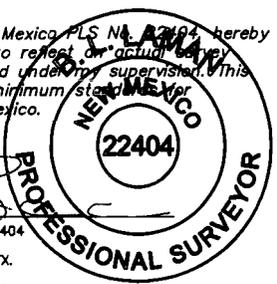


LINE	BEARING	DISTANCE
L1	N 89°39'05" E	767.18'
L2	N 00°17'07" W	450.56'
L3	S 89°41'30" W	50.17'

30' EASEMENT AREA = 0.873 ACRE(S)  
 1267.91 FEET OR 76.84 RODS

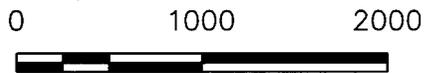
SEE THE ATTACHED LEGAL DESCRIPTION  
 Note: All bearings recited herein are based on the New Mexico State Plane Coordinate System, NAD 83, New Mexico East Zone 3001, US Survey Feet, all distances are grid.

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



B.L. Laman PLS #22404  
 Date Signed: 08-30-2017  
 571 State Street, Jasper, TX.  
 (409) 202-5111 75951  
 Employee of Horizonrow, LLC

- 0+00 P.O.B.
- 0+30.1 ACCESS ROAD
- 0+37.8 CL ACCESS ROAD
- 0+44.6 ACCESS ROAD
- 0+60.8 CROSSING
- 1+28.5 PROPOSED PIPELINE
- 2+56.0 STAKED POWER POLE
- 5+11.1 STAKED POWER POLE
- 7+67.2 STAKED POWER POLE
- 9+93.0 STAKED POWER POLE
- 12+17.7 STAKED POWER POLE/TOMB RAIDER 13 WELL PAD 1 ELECTRIC LINE
- 12+67.9 P.O.E./TOMB RAIDER 13 CTB



**HORIZON ROW LLC**

Drawn for:

**devon**

Drawn by: JEANNIE PERRY  
 Date: 08/22/2017

DEVON ENERGY PRODUCTION COMPANY, L.P.

TOMB RAIDER 13 CTB 1 BATTERY ELECTRIC LINE

PROPOSED 30' EASEMENT ON THE PROPERTY OF BUREAU OF LAND MANAGEMENT SECTION 13, T23S-R31E, N.M.P.M.

LINE NUMBER: EL8036
WBS NUMBER: CC-123117.18.ELE
SCALE: 1" = 1000'
REVISIONS:
SHEET: 1 OF 4

SECTION 13, T23S-R31E, N.M.P.M.,  
EDDY COUNTY, NEW MEXICO

**ELECTRIC LINE PLAT**

**LEGAL DESCRIPTION**

**FOR**

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

**BUREAU OF LAND MANAGEMENT**

**30' EASEMENT DESCRIPTION:**

**BEING** an easement thirty (30) feet in width lying fifteen (15) feet on the right side and fifteen (15) feet on the left side of the survey centerline described below, being out of Section 13, Township 23 South, Range 31 East, N.M.P.M., Eddy County, New Mexico, and being out of a parcel of land owned by the Bureau of Land Management. Said centerline of easement being more particularly described as follows:

Commencing from a 1" iron pipe w/ BC found for the east quarter corner of Section 13, T23S-R31E, N.M.P.M., Eddy County, New Mexico;

Thence N 52°40'51" W, a distance of 2357.22' to the **Point of Beginning** of this easement, having coordinates of Northing=476453.01 feet, Easting=728044.40 feet, and continuing the following courses;

Thence N 89°39'05" E, a distance of 767.18' an angle point;

Thence N 00°17'07" W, a distance of 450.56' an angle point;

Thence S 89°41'30" W, a distance of 50.17' to the **Point of Ending**, having coordinates of Northing=476907.96 feet, Easting=728759.15 feet, from said point a 1" iron pipe w/ BC found for the north quarter corner of Section 13, T23S-R31E, N.M.P.M., Eddy County, New Mexico bears N 63°31'41" W a distance of 1666.12', covering a total of **1267.91' or 76.84 rods** and having an area of **0.873 acres**.

**NOTES:**

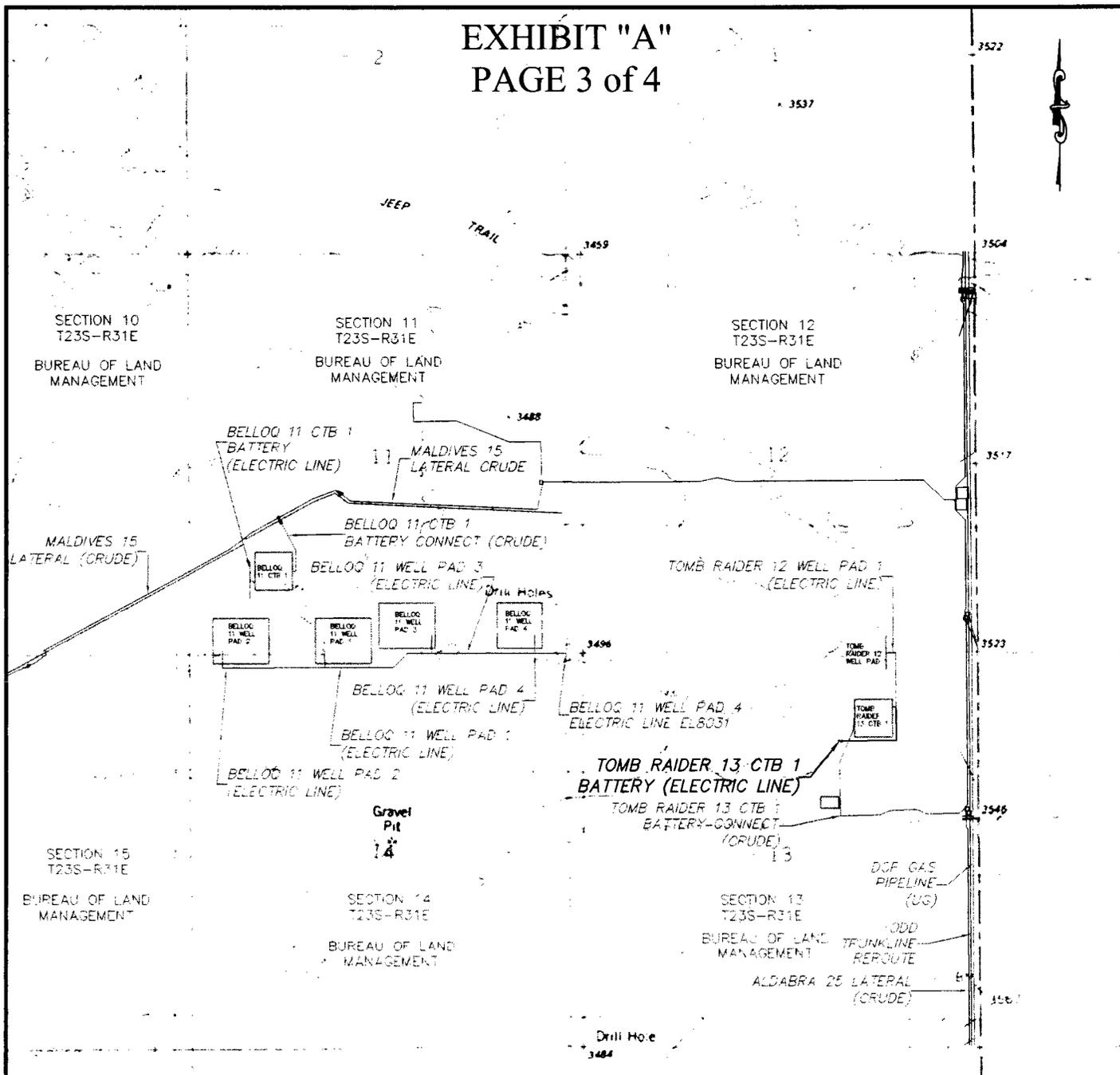
Bearings, distances and coordinates shown herein are based on New Mexico State Plane Coordinate System, NAD 83, East Zone 3001, US Survey Feet, all distances are grid.

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

  
B.L. Laman      PLS 22404  
Date Signed: 08/30/2017  
Horizon Row, LLC  
571 State Street, Jasper, TX  
(409) 202-5111      75951  
Employee of Horizon Row, LLC



EXHIBIT "A"  
PAGE 3 of 4



QUAD MAP

SECTION 13, T23S-R31E, N.M.P.M.;  
EDDY COUNTY, NEW MEXICO

**HORIZON ROW LLC**

DEVON ENERGY PRODUCTION CO., L.P.

PROPOSED 30' EASEMENT

Drawn by:  
JEANNIE PERRY

Date: 08/22/2017

Drawn for:



LINE NUMBER:  
EL8036

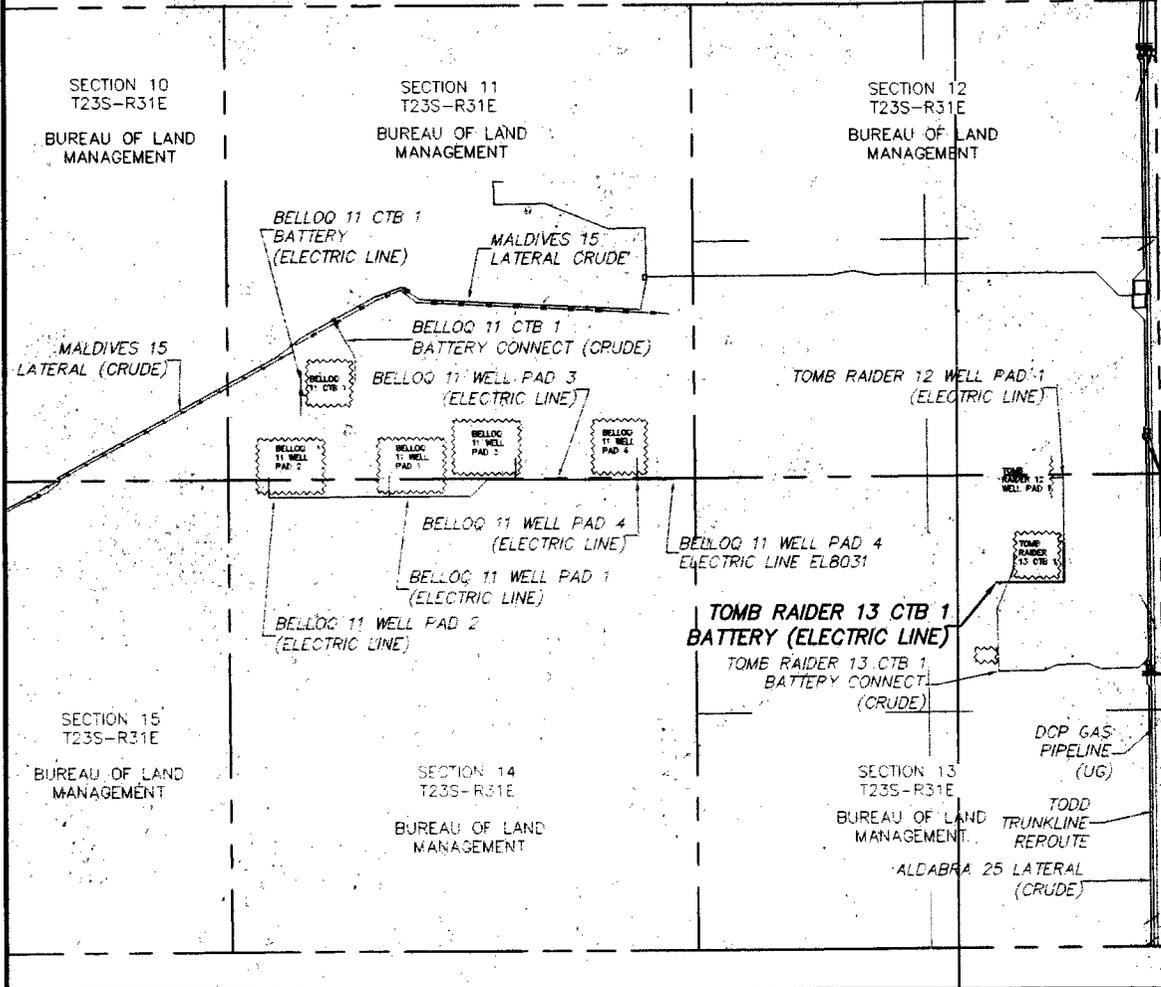
WBS NUMBER:  
CC-123117.18.ELE

SCALE:  
1" = 2000'

REVISIONS:

SHEET:  
3 OF 4

EXHIBIT "A"  
PAGE 4 of 4



AERIAL MAP

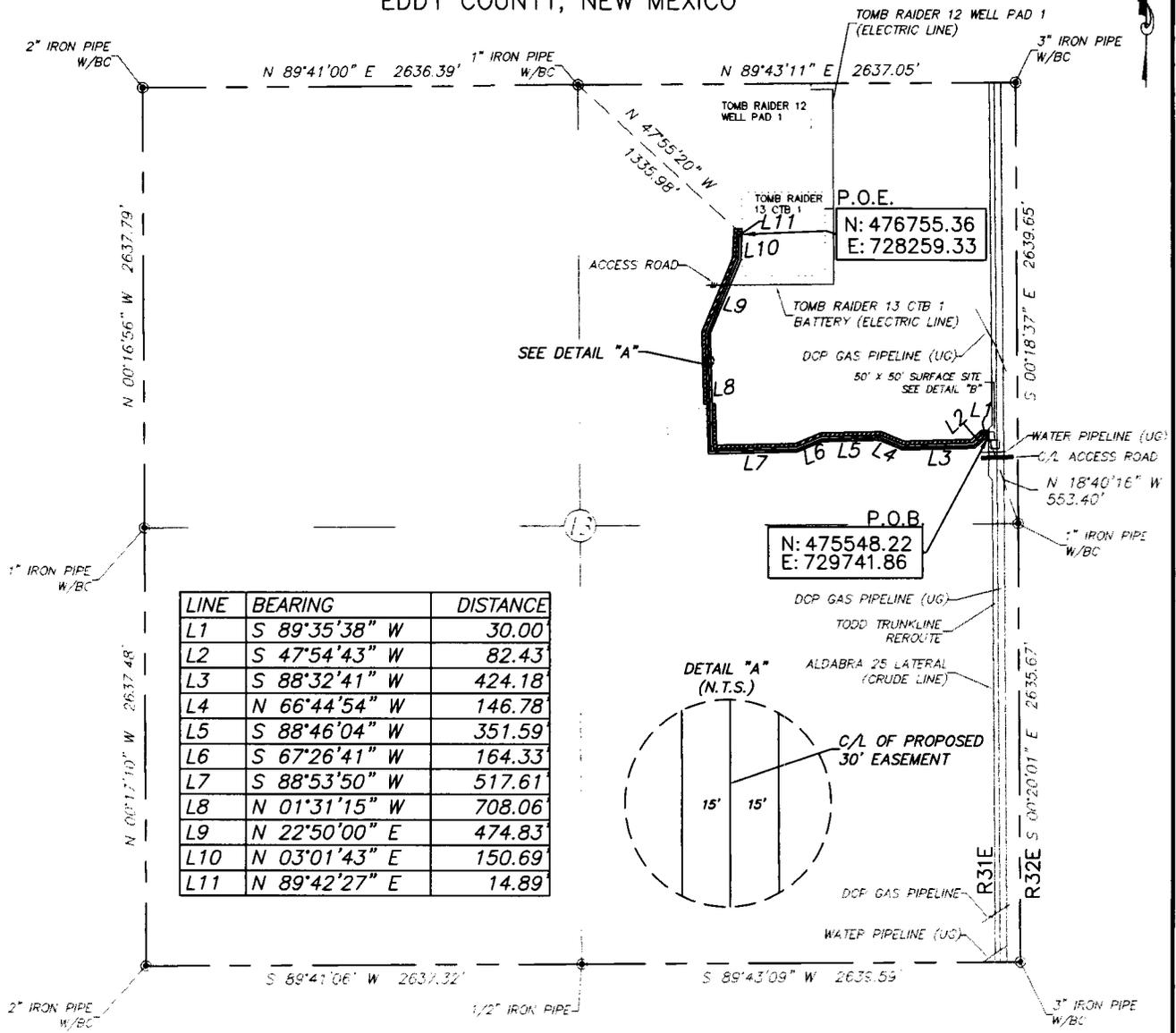
SECTION 13, T23S-R31E, N.M.P.M.;  
EDDY COUNTY, NEW MEXICO

**HORIZON ROW LLC**  
DEVON ENERGY PRODUCTION CO., L.P.  
PROPOSED 30' EASEMENT  
Drawn by: JEANNIE PERRY  
Date: 08/21/2017

Drawn for:

LINE NUMBER: EL8037
WBS NUMBER: CC-123117.18.ELE
SCALE: 1" = 2000'
REVISIONS:
SHEET: 4 OF 4

EXHIBIT "A"  
 PAGE 1 of 5  
 SECTION 13, T23S-R31E, N.M.P.M.  
 EDDY COUNTY, NEW MEXICO

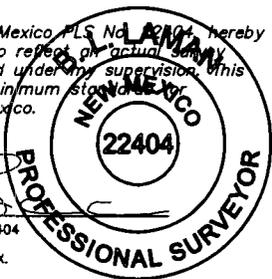


20' TEMPORARY WORKSPACE AREA = 1.408 ACRE(S)  
 30' EASEMENT AREA = 2.111 ACRE(S)  
 3065.39 FEET OR 185.78 RODS

0+00 P.O.B.  
 0+15.0 EXIT 50'X50' SURFACE SITE  
 27+36.0 PROPOSED POWERLINE  
 30+65.4 P.O.E./TOMB RAIDER 13 CTB

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

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



B.L. Laman PLS #22404  
 Date Signed: 08-30-2017  
 571 State Street, Jasper, TX  
 (409) 202-5111 75951  
 Employee of Horizonrow, LLC

0 1000 2000



**HORIZON ROW LLC**  
 Drawn for:  
  
 Drawn by: JEANNIE PERRY  
 Date: 08/24/2017

DEVON ENERGY PRODUCTION COMPANY, L.P.  
 TOMB RAIDER 13 CTB 1 BATTERY  
 CONNECT (CRUDE)  
 PROPOSED 30' EASEMENT  
 ON THE PROPERTY OF  
 BUREAU OF LAND MANAGEMENT  
 SECTION 13, T23S-R31E, N.M.P.M.

LINE NUMBER: 766117Y
WBS NUMBER: CC-123664.01.SLC
SCALE: 1" = 1000'
REVISIONS:
SHEET: 1 OF 5

**SECTION 13, T23S-R31E, N.M.P.M.,  
EDDY COUNTY, NEW MEXICO**

**ELECTRIC LINE PLAT**

**LEGAL DESCRIPTION**

**FOR**

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

**BUREAU OF LAND MANAGEMENT**

**30' EASEMENT DESCRIPTION:**

**BEING** an easement thirty (30) feet in width lying fifteen (15) feet on the right side and fifteen (15) feet on the left side of the survey centerline described below, being out of Section 13, Township 23 South, Range 31 East, N.M.P.M., Eddy County, New Mexico, and being out of a parcel of land owned by the Bureau of Land Management. Said centerline of easement being more particularly described as follows:

Commencing from a 1" iron pipe w/ BC found for the east quarter corner of Section 13, T23S-R31E, N.M.P.M., Eddy County, New Mexico;

Thence N 18°40'16" W, a distance of 553.40' to the **Point of Beginning** of this easement, having coordinates of Northing=475548.22 feet, Easting=729741.86 feet, and continuing the following courses;

Thence S 89°35'38" W, a distance of 30.00' an angle point;

Thence S 47°54'43" W, a distance of 82.43' an angle point;

Thence S 88°32'41" W, a distance of 424.18' an angle point;

Thence N 66°44'54" W, a distance of 146.78' an angle point;

Thence S 88°46'04" W, a distance of 351.59' an angle point;

Thence S 67°26'41" W, a distance of 164.33' an angle point;

Thence S 88°53'50" W, a distance of 517.61' an angle point;

Thence N 01°31'15" W, a distance of 708.06' an angle point;

Thence N 22°50'00" E, a distance of 474.83' an angle point;

Thence N 03°01'43" E, a distance of 150.69' an angle point;

Thence N 89°42'27" E, a distance of 14.89' to the **Point of Ending**, having coordinates of Northing=476755.36 feet, Easting=728259.33 feet, from said point a 1" iron pipe w/ BC found for the north quarter corner of Section 13, T23S-R31E, N.M.P.M., Eddy County, New Mexico bears N 47°55'20" W a distance of 1335.98', covering a total of **3065.39' or 185.78 rods** and having an area of **2.111 acres**.

**20' TEMPORARY WORK SPACE DESCRIPTION:**

Being a temporary work space twenty (20) feet in width lying on the right side and adjoining the right side from station 0+00.0 to station 20+00.0 and also a temporary work space twenty (20) feet in width lying on

the left side and adjoining the left side of the above described thirty (30) feet easement from station 20+00.0 to station 30+65.4, having a total area of **1.408 acres**.

**NOTES:**

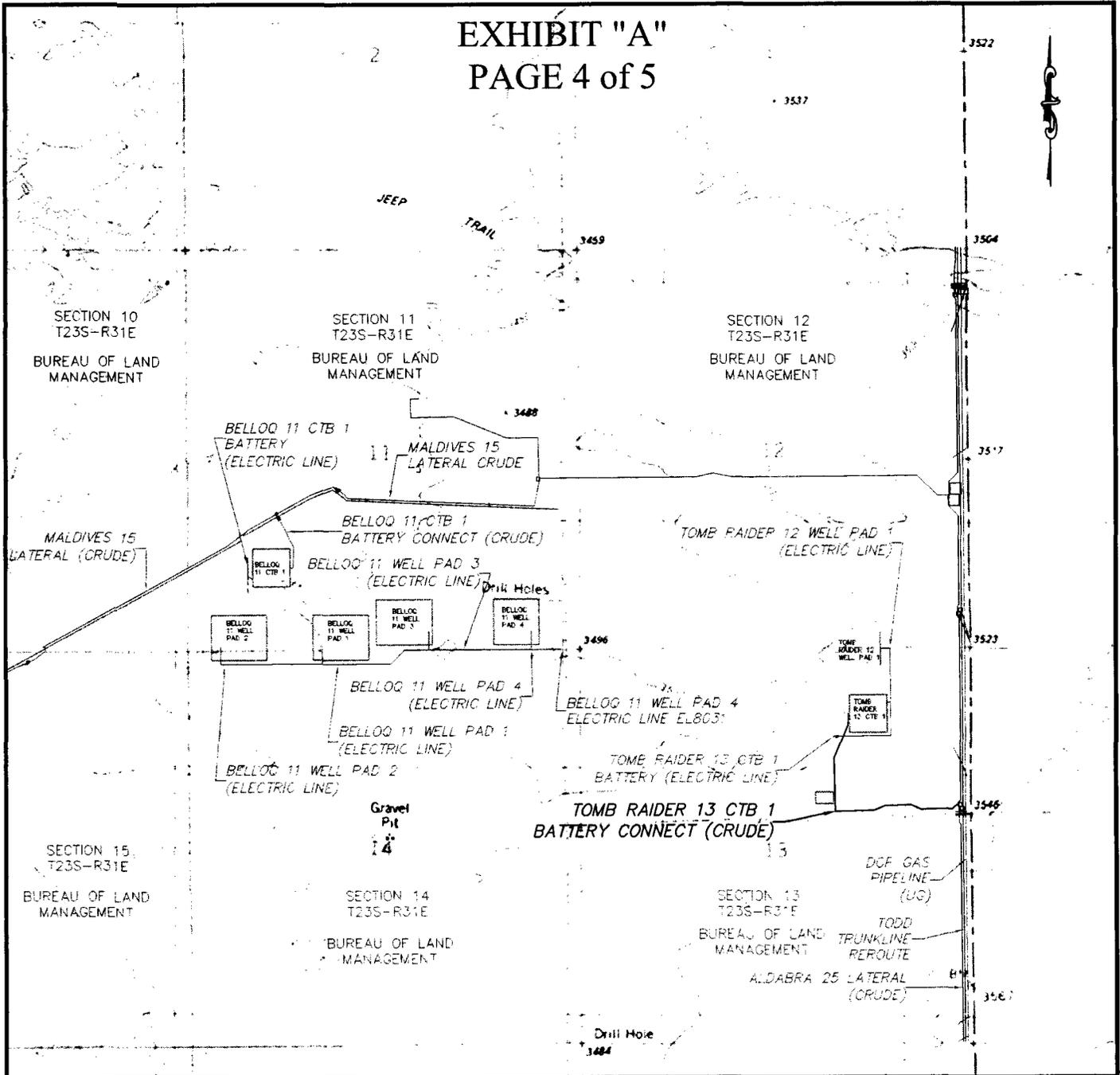
Bearings, distances and coordinates shown herein are based on New Mexico State Plane Coordinate System, NAD 83, East Zone 3001, US Survey Feet, all distances are grid.

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

  
B.L. Laman                      PLS 22404  
Date Signed: 08/30/2017  
Horizon Row, LLC  
571 State Street, Jasper, TX  
(409) 202-5111                      75951  
Employee of Horizon Row, LLC



EXHIBIT "A"  
PAGE 4 of 5



QUAD MAP

SECTION 13, T23S-R31E, N.M.P.M.;  
EDDY COUNTY, NEW MEXICO

**HORIZON ROW LLC**

DEVON ENERGY PRODUCTION CO., L.P.

PROPOSED 30' EASEMENT

Drawn by:  
JEANNIE PERRY

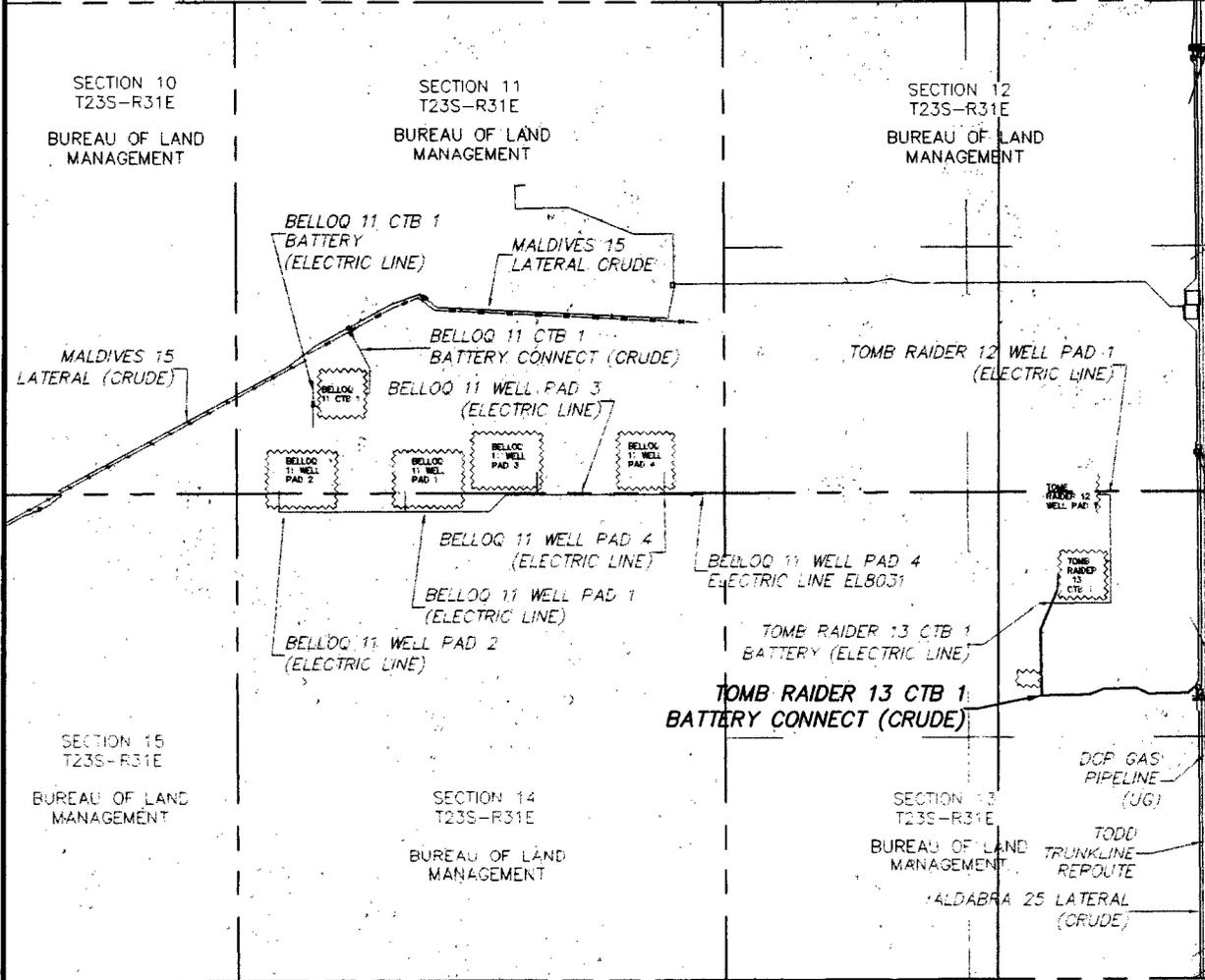
Date: 08/24/2017

Drawn for:



LINE NUMBER:  
766117Y  
WBS NUMBER:  
CC-123664.01.SLC  
SCALE:  
1" = 2000'  
REVISIONS:  
SHEET:  
4 OF 5

EXHIBIT "A"  
PAGE 5 of 5



AERIAL MAP

SECTION 13, T23S-R31E, N.M.P.M.;  
EDDY COUNTY, NEW MEXICO

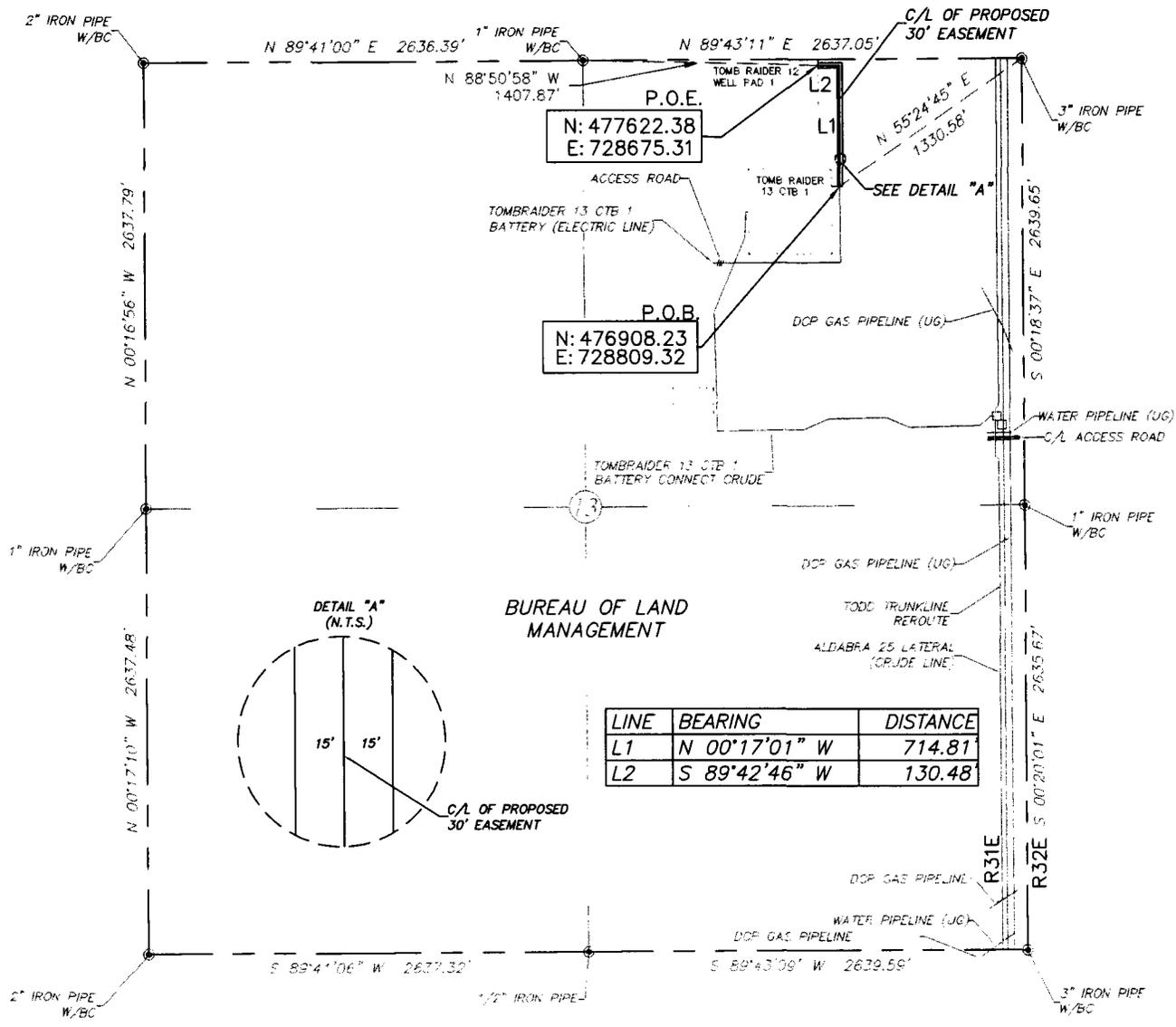
<b>HORIZON ROW LLC</b>	
DEVON ENERGY PRODUCTION CO., L.P.	
PROPOSED 30' EASEMENT	
Drawn by: JEANNIE PERRY	Date: 08/24/2017

Drawn for:



LINE NUMBER: 766117Y
WBS NUMBER: CC-123664.01.SLC
SCALE: 1" = 2000'
REVISIONS:
SHEET: 5 OF 5

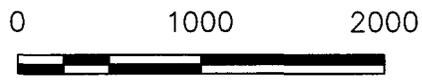
EXHIBIT "A"  
 PAGE 1 of 4  
 ELECTRIC LINE PLAT  
 SECTION 13, T23S-R31E, N.M.P.M.  
 EDDY COUNTY, NEW MEXICO



30' EASEMENT AREA = 0.582 ACRE(S)  
 845.29 FEET OR 51.23 RODS

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

- 0+00 P.O.B./TOMB RAIDER 13 CTB 1 BATTERY ELECTRIC LINE
- 2+38.4 STAKED POWER POLE
- 4+76.3 STAKED POWER POLE
- 7+14.8 STAKED POWER POLE
- 8+45.3 P.O.E./TOMB RAIDER 12 WELL PAD 1



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

**B.L. LAMAN**  
 22404  
 PROFESSIONAL SURVEYOR

B.L. Laman PLS #22404  
 Date Signed: 08-30-2017  
 571 State Street, Jasper, TX  
 (409) 202-5111 75951  
 Employee of Horizonrow, LLC

<b>HORIZON ROW LLC</b>		DEVON ENERGY PRODUCTION COMPANY, L.P.	LINE NUMBER: EL8037
Drawn for:		TOMB RAIDER 12 WELL PAD 1 ELECTRIC LINE	WBS NUMBER: CC-123117.18.ELE
<b>devon</b>		PROPOSED 30' EASEMENT ON THE PROPERTY OF	SCALE: 1" = 1000'
Drawn by: JEANNIE PERRY	Date: 08/21/2017	BUREAU OF LAND MANAGEMENT SECTION 13, T23S-R31E, N.M.P.M.	REVISIONS:
			SHEET: 1 OF 4

**SECTION 13, T23S-R31E, N.M.P.M.,  
EDDY COUNTY, NEW MEXICO**

**ELECTRIC LINE PLAT**

**LEGAL DESCRIPTION**

**FOR**

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

**BUREAU OF LAND MANAGEMENT**

**30' EASEMENT DESCRIPTION:**

**BEING** an easement thirty (30) feet in width lying fifteen (15) feet on the right side and fifteen (15) feet on the left side of the survey centerline described below, being out of Section 13, Township 23 South, Range 31 East, N.M.P.M., Eddy County, New Mexico, and being out of a parcel of land owned by the Bureau of Land Management. Said centerline of easement being more particularly described as follows:

Commencing from a 3" iron pipe w/ BC found for the northeast corner of Section 13, T23S-R31E, N.M.P.M., Eddy County, New Mexico;

Thence S 55°24'45" W, a distance of 1330.58' to the **Point of Beginning** of this easement, having coordinates of Northing=476908.23 feet, Easting=728809.32 feet, and continuing the following courses;

Thence N 00°17'01" W, a distance of 714.81' an angle point;

Thence S 89°42'46" W, a distance of 130.48' to the **Point of Ending**, having coordinates of Northing=477622.38 feet, Easting=728675.31 feet, from said point a 1" iron pipe w/ BC found for the north quarter corner of Section 13, T23S-R31E, N.M.P.M., Eddy County, New Mexico bears N 88°50'58" W a distance of 1407.87', covering a total of **845.29' or 51.23 rods** and having an area of **0.582 acres**.

**NOTES:**

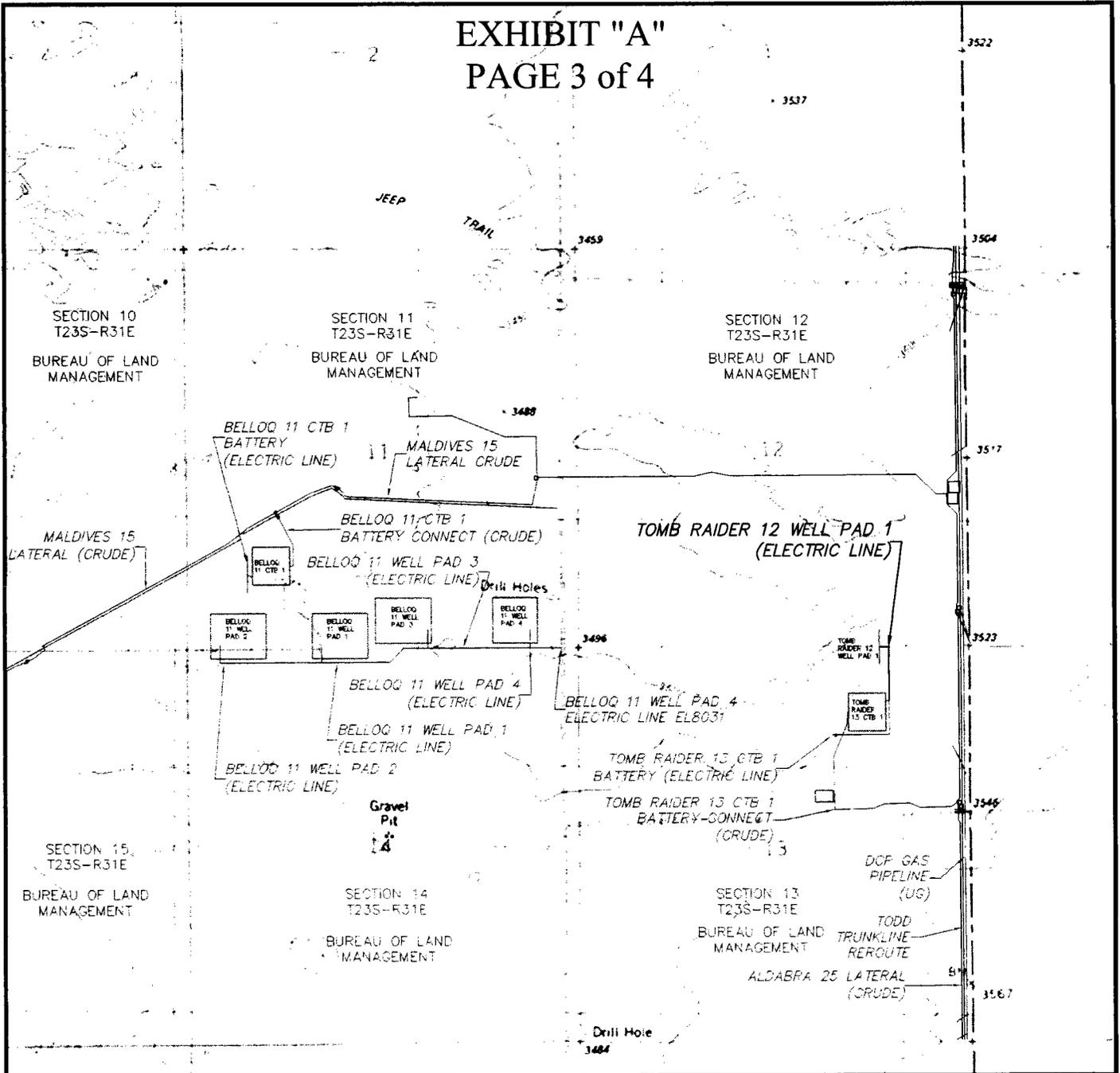
Bearings, distances and coordinates shown herein are based on New Mexico State Plane Coordinate System, NAD 83, East Zone 3001, US Survey Feet, all distances are grid.

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

  
B.L. Laman      PLS 22404  
Date Signed: 08/30/2017  
Horizon Row, LLC  
571 State Street, Jasper, TX  
(409) 202-5111      75951  
Employee of Horizon Row, LLC



EXHIBIT "A"  
PAGE 3 of 4



QUAD MAP

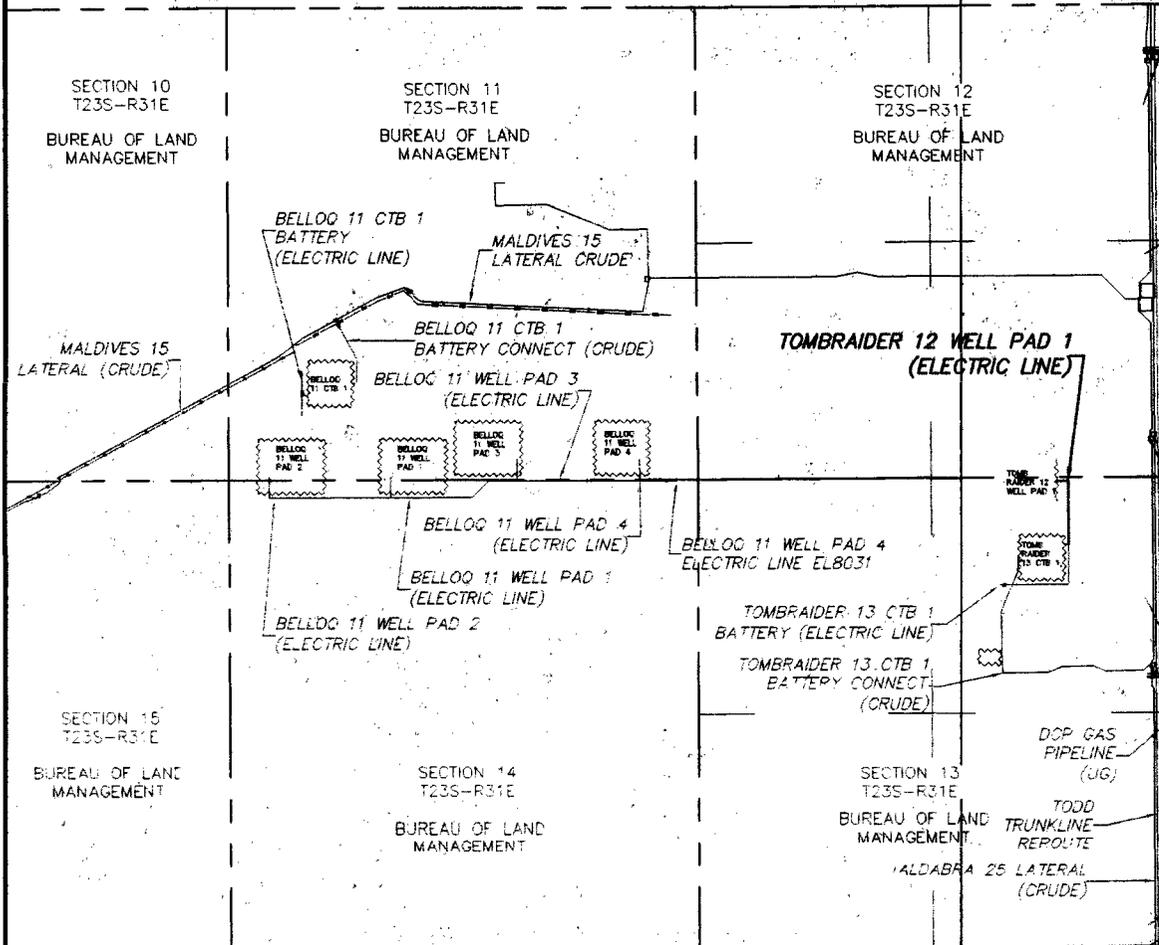
SECTION 13, T23S-R31E, N.M.P.M.;  
EDDY COUNTY, NEW MEXICO

<b>HORIZON ROW LLC</b>	
DEVON ENERGY PRODUCTION CO., L.P.	
PROPOSED 30' EASEMENT	
Drawn by: JEANNIE PERRY	Date: 08/21/2017

Drawn for:

LINE NUMBER: EL8037
WBS NUMBER: CC-123117.18.ELE
SCALE: 1" = 2000'
REVISIONS:
SHEET: 3 OF 4

EXHIBIT "A"  
PAGE 4 of 4



AERIAL MAP

SECTION 13, T23S-R31E, N.M.P.M.;  
EDDY COUNTY, NEW MEXICO

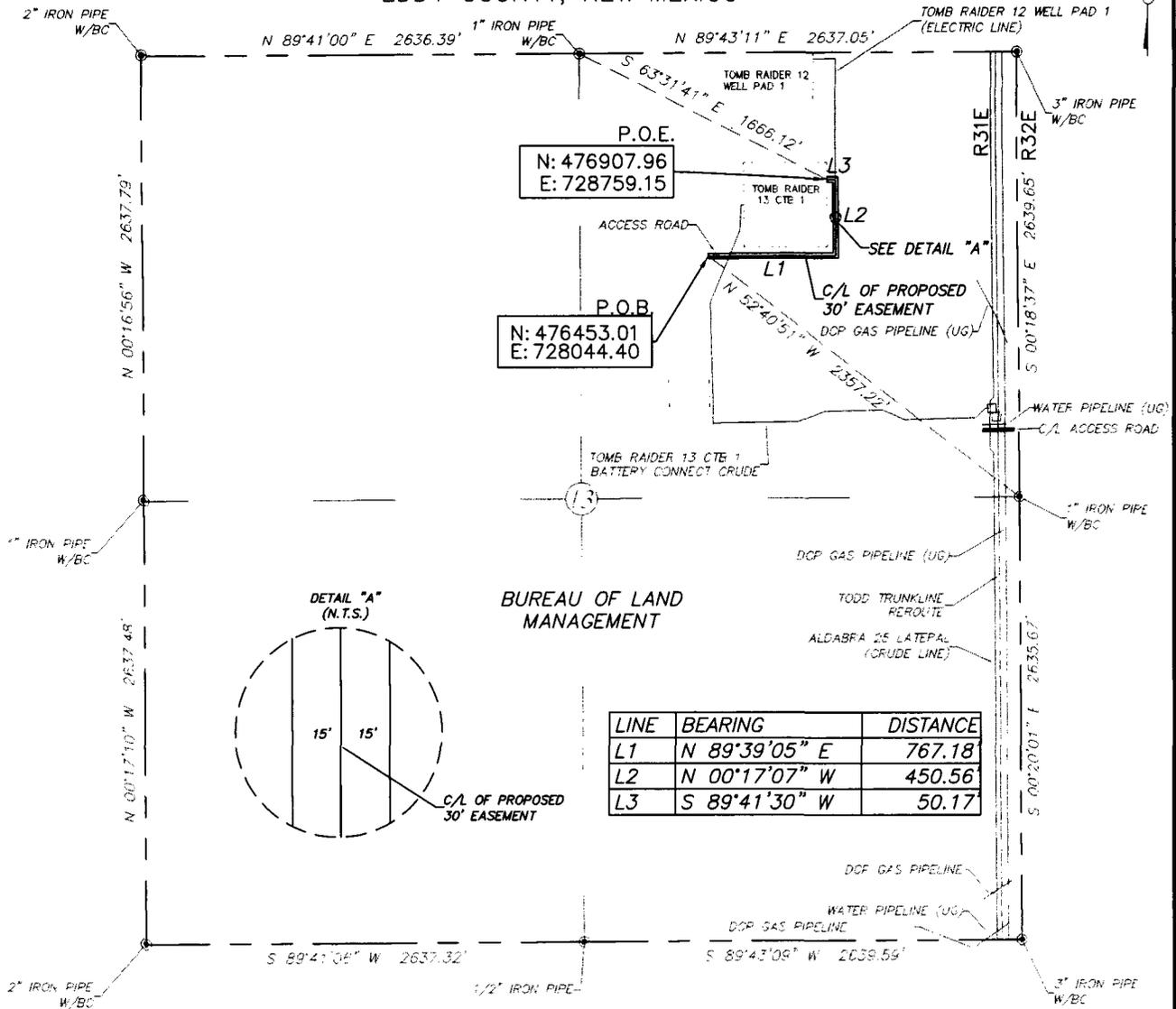
<b>HORIZON ROW LLC</b>	
DEVON ENERGY PRODUCTION CO., L.P.	
PROPOSED 30' EASEMENT	
Drawn by: JEANNIE PERRY	Date: 08/21/2017

Drawn for:



LINE NUMBER: EL8037
WBS NUMBER: XX-123664.01.SLC
SCALE: 1" = 2000'
REVISIONS:
SHEET: 4 OF 4

EXHIBIT "A"  
 PAGE 1 of 4  
 ELECTRIC LINE PLAT  
 SECTION 13, T23S-R31E, N.M.P.M.  
 EDDY COUNTY, NEW MEXICO



LINE	BEARING	DISTANCE
L1	N 89°39'05" E	767.18
L2	N 00°17'07" W	450.56
L3	S 89°41'30" W	50.17

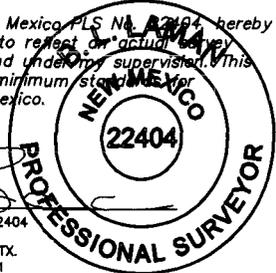
- 0+00 P.O.B.
- 0+30.1 ACCESS ROAD
- 0+37.8 CL ACCESS ROAD
- 0+44.6 ACCESS ROAD
- 0+60.8 CROSSING
- 1+28.5 PROPOSED PIPELINE
- 2+56.0 STAKED POWER POLE
- 5+11.1 STAKED POWER POLE
- 7+67.2 STAKED POWER POLE
- 9+93.0 STAKED POWER POLE
- 12+17.7 STAKED POWER POLE/TOMB RAIDER 13 WELL PAD 1 ELECTRIC LINE
- 12+67.9 P.O.E./TOMB RAIDER 13 CTB



30' EASEMENT AREA = 0.873 ACRE(S)  
 1267.91 FEET OR 76.84 RODS

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

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



B.L. Laman PLS #22404  
 Date Signed: 08-30-2017  
 571 State Street, Jasper, TX  
 (409) 202-5111 75951  
 Employee of Horizonrow, LLC

<b>HORIZON ROW LLC</b>		DEVON ENERGY PRODUCTION COMPANY, L.P.	LINE NUMBER: EL8036
Drawn for:		TOMB RAIDER 13 CTB 1 BATTERY ELECTRIC LINE	WBS NUMBER: CC-123117.18.ELE
Drawn by: JEANNIE PERRY		PROPOSED 30' EASEMENT ON THE PROPERTY OF BUREAU OF LAND MANAGEMENT SECTION 13, T23S-R31E, N.M.P.M.	SCALE: 1" = 1000'
Date: 08/22/2017			REVISIONS:
			SHEET: 1 OF 4

SECTION 13, T23S-R31E, N.M.P.M.,  
EDDY COUNTY, NEW MEXICO

**ELECTRIC LINE PLAT**

**LEGAL DESCRIPTION**

**FOR**

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

**BUREAU OF LAND MANAGEMENT**

**30' EASEMENT DESCRIPTION:**

**BEING** an easement thirty (30) feet in width lying fifteen (15) feet on the right side and fifteen (15) feet on the left side of the survey centerline described below, being out of Section 13, Township 23 South, Range 31 East, N.M.P.M., Eddy County, New Mexico, and being out of a parcel of land owned by the Bureau of Land Management. Said centerline of easement being more particularly described as follows:

Commencing from a 1" iron pipe w/ BC found for the east quarter corner of Section 13, T23S-R31E, N.M.P.M., Eddy County, New Mexico;

Thence N 52°40'51" W, a distance of 2357.22' to the **Point of Beginning** of this easement, having coordinates of Northing=476453.01 feet, Easting=728044.40 feet, and continuing the following courses;

Thence N 89°39'05" E, a distance of 767.18' an angle point;

Thence N 00°17'07" W, a distance of 450.56' an angle point;

Thence S 89°41'30" W, a distance of 50.17' to the **Point of Ending**, having coordinates of Northing=476907.96 feet, Easting=728759.15 feet, from said point a 1" iron pipe w/ BC found for the north quarter corner of Section 13, T23S-R31E, N.M.P.M., Eddy County, New Mexico bears N 63°31'41" W a distance of 1666.12', covering a total of **1267.91' or 76.84 rods** and having an area of **0.873 acres**.

**NOTES:**

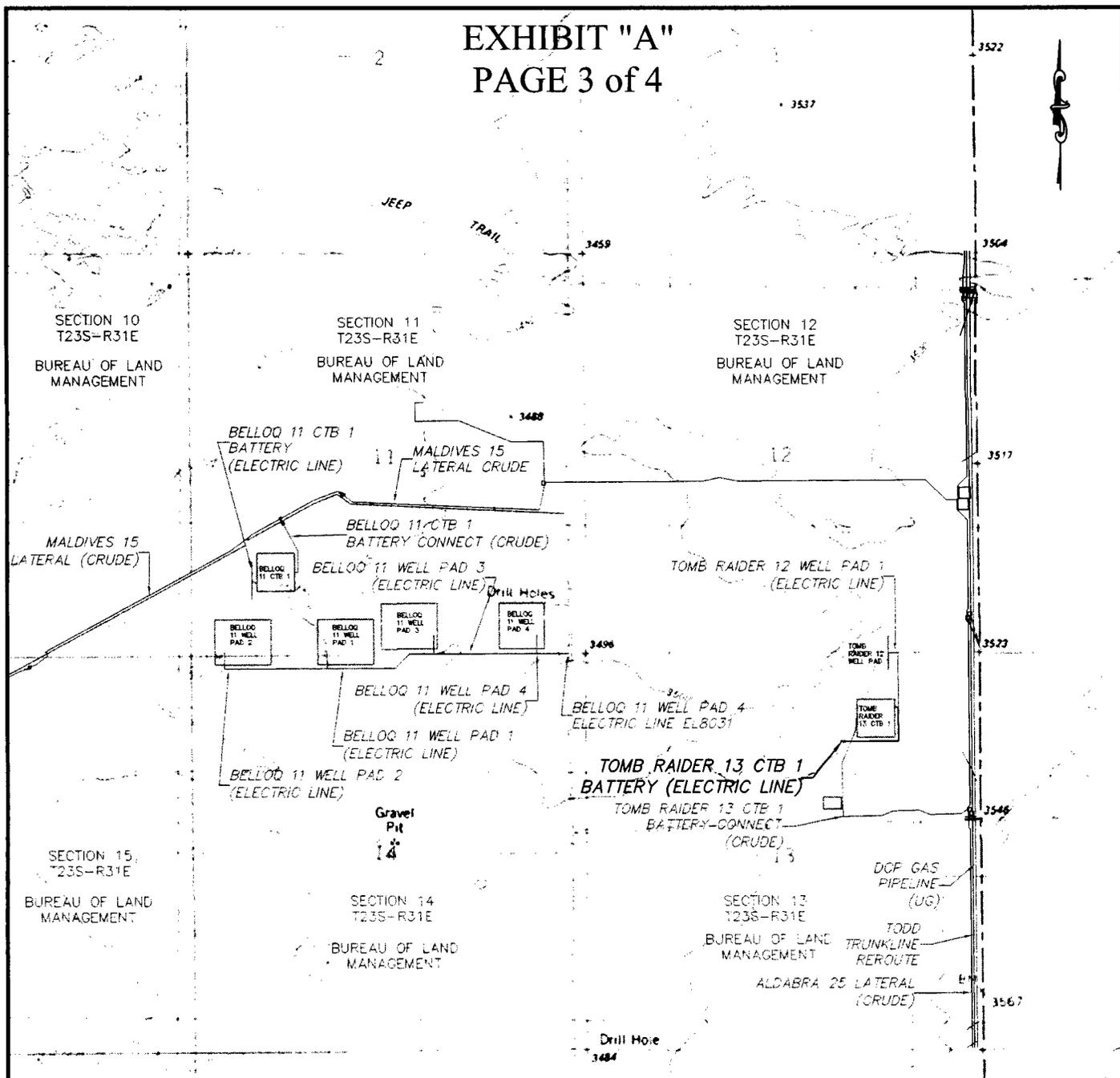
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B.L. Laman PLS 22404  
Date Signed: 08/30/2017  
Horizon Row, LLC  
571 State Street, Jasper, TX  
(409) 202-5111 75951  
Employee of Horizon Row, LLC



EXHIBIT "A"  
PAGE 3 of 4



QUAD MAP

SECTION 13, T23S-R31E, N.M.P.M.;  
EDDY COUNTY, NEW MEXICO

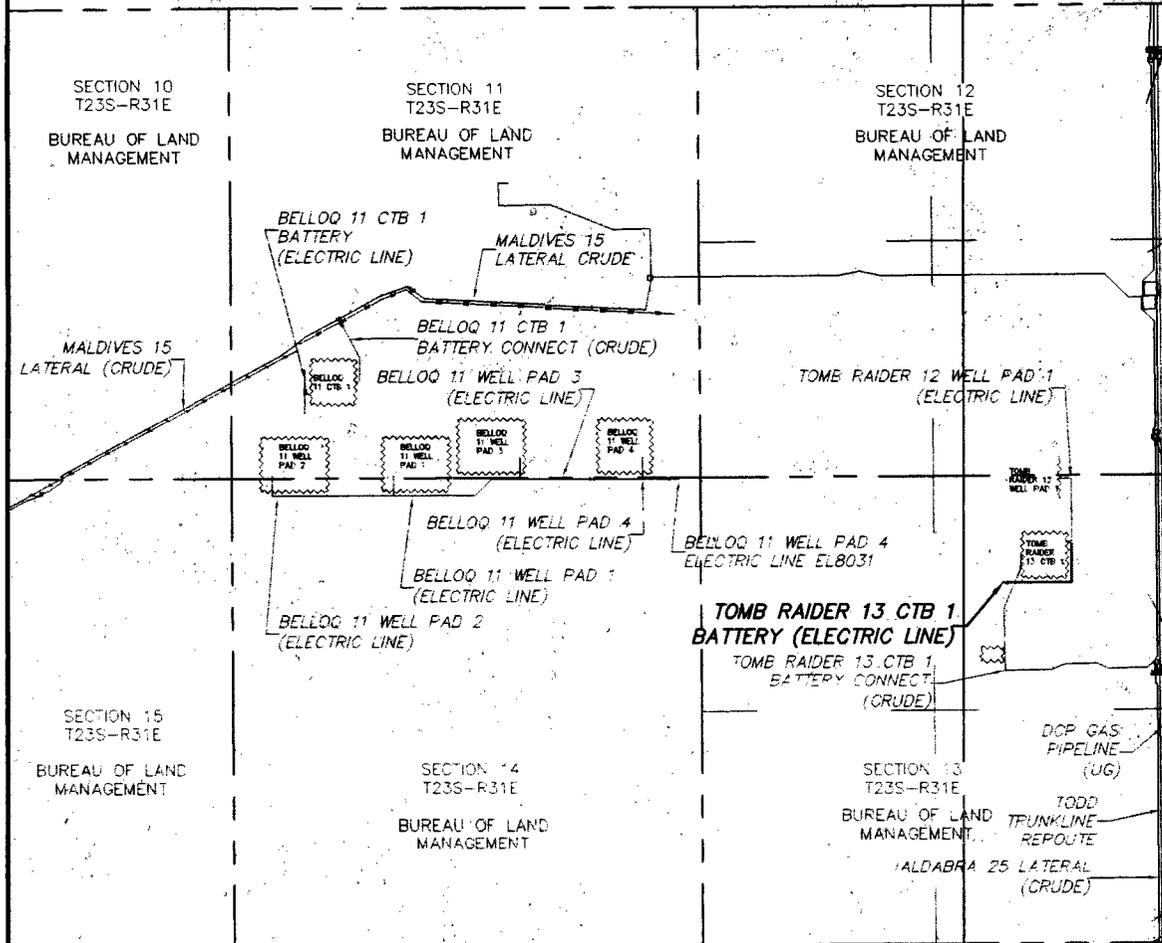
<b>HORIZON ROW LLC</b>	
DEVON ENERGY PRODUCTION CO., L.P.	
PROPOSED 30' EASEMENT	
Drawn by: JEANNIE PERRY	Date: 08/22/2017

Drawn for:



LINE NUMBER: EL8036
WBS NUMBER: CC-123117.18.ELE
SCALE: 1" = 2000'
REVISIONS:
SHEET: 3 OF 4

EXHIBIT "A"  
PAGE 4 of 4



AERIAL MAP

SECTION 13, T23S-R31E, N.M.P.M.;  
EDDY COUNTY, NEW MEXICO

**HORIZON ROW LLC**

DEVON ENERGY PRODUCTION CO., L.P.

PROPOSED 30' EASEMENT

Drawn by:  
JEANNIE PERRY

Date: 08/21/2017

Drawn for:



LINE NUMBER:  
ELB037  
WBS NUMBER:  
CC-123117.1B.ELE  
SCALE:  
1" = 2000'  
REVISIONS:  
SHEET:  
4 OF 4



## 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 Info Data Report

03/13/2018

### 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: