Form 3160-3 (June 2015)

# **UNITED STATES**

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

	RILL O	<b>ENTER!</b>	Q <sub>S</sub>	NMNM113898			
a. Type of work: DRILL RI	HILL O	CEEN ILEN	DEPARTMENT OF THE INTERIOR BUREAU OF LAND MANAGEMENT APPLICATION FOR PERMIT TO DRILL OR GENTER  1a. Type of work:    DRILL   REENTER				
a. Type of work: DRILL RI				6. If Indian, Allotee or	iribe Name		
— — —	EENTER	1		7. If Unit or CA Agreen	nent, Name and No.		
b. Type of Well: Oil Well Gas Well Ot	ther	1		8. Lease Name and Wel	INO		
c. Type of Completion: Hydraulic Fracturing Sin	ingle Zone	Multiple Zone		STRANGER 34 FED	COM		
Name of Operator DEVON ENERGY PRODUCTION COMPANY LP	37)			9. API-Well No.	SEOIX.		
a. Address	36. Phon	No. (include area cod	le)	10, Field and Pool, or E			
333 West Sheridan Avenue Oklahoma City OK 73102	(800)58	-3866		BOBCAT DRAWYUP	PER WOLFCAMP		
Location of Well (Report location clearly and in accordance w	with any Si	te requirements.*)		11. Sec., T. R. M. or Bl			
At surface SESW / 205 FSL / 1910 FWL / LAT 32.0803	3035 / LO	IG -103.4601681		SEC 341 T255/ R348	E / NMP		
At proposed prod. zone NENW / 20 FNL / 1650 FWL / LA	AT 32.094	1843 / LONG -103,4	61021				
4. Distance in miles and direction from nearest town or post offi-	ice*		3	12. County or Parish LEA	13. State		
5. Distance from proposed* location to nearest 205 feet property or lease line, ft. (Also to nearest drig. unit line, if any)	16. No o	acres in lease	17. Spaci	ng Unit dedicated to this	well		
8. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft. 596 feet		sed Depth at / 17769 feet	20/BLM FED: CO	/BIA Bond No. in file			
1. Elevations (Show whether DF, KDB, RT, GL, etc.)	22. Appr	ximate date work will	start*	23. Estimated duration			
3306 feet	08/08/20	1 >		45 days			
// <	24. AI	achments/		1	<del></del>		
he following, completed in accordance with the requirements of its applicable)  . Well plat certified by a registered surveyor.  . A Drilling Plan.  . A Surface Use Plan (if the location is on National Forest System SUPO must be filed with the appropriate Forest Service Office	m Lands, t	4. Bond to cover to Item 20 above).  5. Operator certifi	he operation	Hydraulic Fracturing rule  ns unless covered by an ex  rmation and/or plans as ma	isting bond on file (see		
The state of the s	<i>y</i>	BLM.					
5. Signature Electronic Submission)		ne <i>(Printed/Typed)</i> ecca Deal / Ph: (40	5)228-842	Da 9 11	te /26/2018		
itle Regulatory Compliance Professional							
pproved by (Signature) [Electronic Submission)	- 1	ne (Printed/Typed) istopher Walls / Ph:	(575)234-	Da 2234 05	ite 5/15/2019		
itle Petroleum Engineer	Of CA	ce RLSBAD		1.			
pplication approval does not warrant or certify that the applican pplicant to conduct operations thereon. onditions of approval, if any, are attached.	nt holds leg	al or equitable title to t	those rights	in the subject lease which	n would entitle the		
itle 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, m f the United States any false, fictitious or fraudulent statements of					department or agency		
SCP Rec 09/23/19		ITH CONDIT	1018	K# 63 1	9		

(Continued on page 2)

Approval Date: 05/15/2019

\*(Instructions on page 2)

#### INSTRUCTIONS

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

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

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

ITEM 14: Needed only when location of well cannot readily be found by road from the land or lease description. A plat, or plats, separate or on the reverse side, showing the roads to, and the surveyed location of, the wen, 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 directionany drilled, give distances for subsurface location of hole in any present or objective productive zone.

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

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

#### NOTICES

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

AUTHORITY: 30 U.S.C. 181 et seq., 25 U.S.C. 396; 43 CRR 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 wen 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 win 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 conects this information to anow 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 Conection Clearance Officer (WO-630), 1849 C Street, N.W., Mail Stop 401 LS, Washington, D.C. 20240.

(Form 3160-3, page 2)

#### **Additional Operator Remarks**

#### **Location of Well**

1. SHL: SESW / 205 FSL / 1910 FWL / TWSP: 25S / RANGE: 34E / SECTION: 34 / LAT: 32.0803035 / LONG: -103.4601681 (TVD: Qfeet, MD; Offeet )

PPP: SESW / 100 FSL / 1650 FWL / TWSP: 25S / RANGE: 34E / SECTION: 34 / LAT: 32.080162 / LONG: -103.461493 (TVD: 12240 feet, MD: 12249 feet )

BHL: NENW / 20 FNL / 1650 FWL / TWSP: 25S / RANGE: 34E / SECTION: 34 / LAT: 32.0941843 / LONG: -103.461021 (TVD: 12890) feet, MD: 17769 feet )

#### **BLM Point of Contact**

Name: Candy Vigil

Title: Admin Support Assistant

Phone: 5752345982 Email: cvigil@blm.gov

(Form 3160-3, page 3)

## PECOS DISTRICT DRILLING CONDITIONS OF APPROVAL

**OPERATOR'S NAME:** Devon Energy Production Company LP

**LEASE NO.:** | NMNM113898

WELL NAME & NO.: | Stranger 34 Fed Com 14H

**SURFACE HOLE FOOTAGE:** 205'/S & 1910'/W **BOTTOM HOLE FOOTAGE** 20'/N & 1650'/W

**LOCATION:** | Section 34, T.25 S., R.34 E., NMPM

**COUNTY:** Lea County, New Mexico

COA

H2S	C Yes	© No	
Potash	© None	Secretary	C R-111-P
Cave/Karst Potential	<b>€</b> Low		↑ High
Variance	None	Flex Hose	Other
Wellhead	Conventional	← Multibowl	<b>€</b> Both
Other	☐4 String Area	Capitan Reef	<b>□</b> WIPP
Other	Fluid Filled	<b>▼</b> Cement Squeeze	☐ Pilot Hole
Special Requirements		<b>▼</b> COM	☐ Unit

#### A. HYDROGEN SULFIDE

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

#### **B. CASING**

#### **Primary Casing Design:**

- 1. The 10-3/4 inch surface casing shall be set at approximately 955 feet (a minimum of 25 feet (Lea County) into the Rustler Anhydrite and above the salt) and cemented to the surface.
  - a. If cement does not circulate to the surface, the appropriate BLM office shall be notified and a temperature survey utilizing an electronic type temperature survey with surface log readout will be used or a cement bond log shall be run to verify the top of the cement. Temperature survey will be run a minimum of six hours after pumping cement and ideally between 8-10 hours after completing the cement job.

- b. Wait on cement (WOC) time for a primary cement job will be a minimum of **8** hours or 500 pounds compressive strength, whichever is greater. (This is to include the lead cement)
- c. Wait on cement (WOC) time for a remedial job will be a minimum of 4 hours after bringing cement to surface or 500 pounds compressive strength, whichever is greater.
- d. If cement falls back, remedial cementing will be done prior to drilling out that string.

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

2. The minimum required fill of cement behind the 7-5/8 inch intermediate casing is:

#### **Option 1 (Single Stage):**

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

#### Option 2:

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

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

## Operator has proposed to pump down 10-3/4" X 7-5/8" annulus. Operator must run a CBL from TD of the 7-5/8" casing to surface. Submit results to BLM.

- 3. The minimum required fill of cement behind the 5-1/2 inch production casing is:
  - Cement should tie-back at least **200 feet** into previous casing string. Operator shall provide method of verification.

#### **Alternate Casing Design:**

4. The 13-3/8 inch surface casing shall be set at approximately 955 feet (a minimum of 25 feet (Lea County) into the Rustler Anhydrite and above the salt) and cemented to the surface.

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- e. 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.
- f. Wait on cement (WOC) time for a primary cement job will be a minimum of **8** hours or 500 pounds compressive strength, whichever is greater. (This is to include the lead cement)
- g. 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.
- h. If cement falls back, remedial cementing will be done prior to drilling out that string.

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

5. The minimum required fill of cement behind the 8-5/8 inch intermediate casing is:

#### **Option 1 (Single Stage):**

• Cement to surface. If cement does not circulate see B.1.a, c-d above. Cement excess is less than 25% more cement might be required.

#### **Option 2:**

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

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

Cement excess is less than 25% more cement might be required.

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

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

#### C. PRESSURE CONTROL

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

2.

#### Option 1:

- a. Minimum working pressure of the blowout preventer (BOP) and related equipment (BOPE) required for drilling below the surface casing shoe shall be 5000 (5M) psi.
- b. Minimum working pressure of the blowout preventer (BOP) and related equipment (BOPE) required for drilling below the intermediate casing shoe shall be 10,000 (10M) psi. Variance is approved to use a 5000 (5M) Annular which shall be tested to 5000 (5M) psi.

#### **Option 2:**

- 1. Operator has proposed a multi-bowl wellhead assembly. This assembly will only be tested when installed on the surface casing. Minimum working pressure of the blowout preventer (BOP) and related equipment (BOPE) required for drilling below the surface casing shoe shall be 10,000 (10M) psi. Variance is approved to use a 5000 (5M) Annular which shall be tested to 5000 (5M) psi.
  - a. Wellhead shall be installed by manufacturer's representatives, submit documentation with subsequent sundry.
  - b. If the welding is performed by a third party, the manufacturer's representative shall monitor the temperature to verify that it does not exceed the maximum temperature of the seal.
  - c. Manufacturer representative shall install the test plug for the initial BOP test.
  - d. If the cement does not circulate and one inch operations would have been possible with a standard wellhead, the well head shall be cut off, cementing operations performed and another wellhead installed.

e. Whenever any seal subject to test pressure is broken, all the tests in OOGO2.III.A.2.i must be followed.

#### D. SPECIAL REQUIREMENT (S)

#### **Communitization Agreement**

- The operator will submit a Communitization Agreement to the Carlsbad Field Office, 620 E Greene St. Carlsbad, New Mexico 88220, at least 90 days before the anticipated date of first production from a well subject to a spacing order issued by the New Mexico Oil Conservation Division. The Communitization Agreement will include the signatures of all working interest owners in all Federal and Indian leases subject to the Communitization Agreement (i.e., operating rights owners and lessees of record), or certification that the operator has obtained the written signatures of all such owners and will make those signatures available to the BLM immediately upon request.
- If the operator does not comply with this condition of approval, the BLM may take enforcement actions that include, but are not limited to, those specified in 43 CFR 3163.1.
- In addition, the well sign shall include the surface and bottom hole lease numbers. When the Communitization Agreement number is known, it shall also be on the sign.

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#### **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
- 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.

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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.

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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

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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.

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# PECOS DISTRICT SURFACE USE CONDITIONS OF APPROVAL

OPERATOR'S NAME: Devon Energy Production Company LP
WELL NAME & NO.: Stranger 34 Fed Com 14H
SURFACE HOLE FOOTAGE: 205'/S & 1910'/W
BOTTOM HOLE FOOTAGE 20'/N & 1650'/W
LOCATION: Section 34, T.25 S., R.34 E., NMPM
COUNTY: Lea County, New Mexico

#### **TABLE OF CONTENTS**

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
Hydrology
Range
☐ Construction
Notification
Topsoil
Closed Loop System
Federal Mineral Material Pits
Well Pads
Roads
Road Section Diagram
Well Structures & Facilities
Pipelines
Electric Lines
Interim Reclamation
☐ Final Abandonment & Reclamation

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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.

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#### V. SPECIAL REQUIREMENT(S)

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

#### **Timing Limitation Exceptions:**

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

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 power line structures placed on this right-of-way, should they be necessary to ensure the safety of large perching birds. The holder without liability or expense shall make such modifications and/or additions to the United States

<u>Ground-level Abandoned Well Marker to avoid raptor perching</u>: 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.

#### **Hydrology:**

The entire 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 with impermeable mineral material (e.g. caliche). Topsoil shall not be used to construct the berm. No water flow from the uphill side(s) of the pad shall be allowed to

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enter the well pad. 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 water erosion that may occur due to the construction of the well pad during the life of the well will be quickly corrected and proper measures will be taken to prevent future erosion. Stockpiling of topsoil is required. The top soil shall be stockpiled in an appropriate location to prevent loss of soil due to water or wind erosion and not used for berming or erosion control. 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.

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, whichever is greater. 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.

A leak detection plan will be submitted to the BLM Carlsbad Field Office for approval prior to pipeline installation. The method could incorporate gauges to detect pressure drops, situating valves and lines so they can be visually inspected periodically or installing electronic sensors to alarm when a leak is present. The leak detection plan will incorporate an automatic shut off system that will be installed for proposed pipelines to minimize the effects of an undesirable event.

Electric Lines: Any water erosion that may occur due to the construction of overhead electric line and during the life of the power line will be quickly corrected and proper measures will be taken to prevent future erosion.

#### Livestock Watering Requirement

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

#### **Fence Requirement**

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

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

During construction, the proponent shall minimize disturbance to existing fences, water lines, troughs, windmills, and other improvements on public lands. The proponent is required to promptly repair improvements to at least their former state. Functional use of these

improvements will be maintained at all times. The holder will contact the grazing permittee/allottee prior to disturbing any range improvement projects. When necessary to pass through a fence line, the fence shall be braced on both sides of the passageway prior to cutting of the fence. No permanent gates will be allowed unless approved by the Authorized Officer.

#### VI. CONSTRUCTION

#### A. NOTIFICATION

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

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

#### B. TOPSOIL

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

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

#### C. CLOSED LOOP SYSTEM

Tanks are required for drilling operations: No Pits.

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

#### D. FEDERAL MINERAL MATERIALS PIT

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

#### E. WELL PAD SURFACING

Surfacing of the well pad is not required.

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

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

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#### **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**

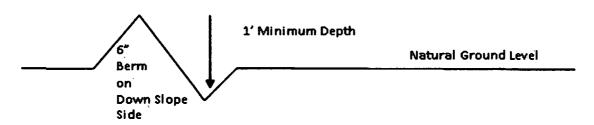
Vehicle turnouts shall be constructed on the road. Turnouts shall be intervisible with interval spacing distance less than 1000 feet. Turnouts shall conform to Figure 1; cross section and plans for typical road construction.

#### 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 foot road with 4% road slope: 
$$\frac{400'}{4\%}$$
 + 100' = 200' 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.

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#### **Construction Steps**

- 1. Salvage topsoil
- 3. Redistribute topsoil
- 2. Construct road
- 4. Revegetate slopes

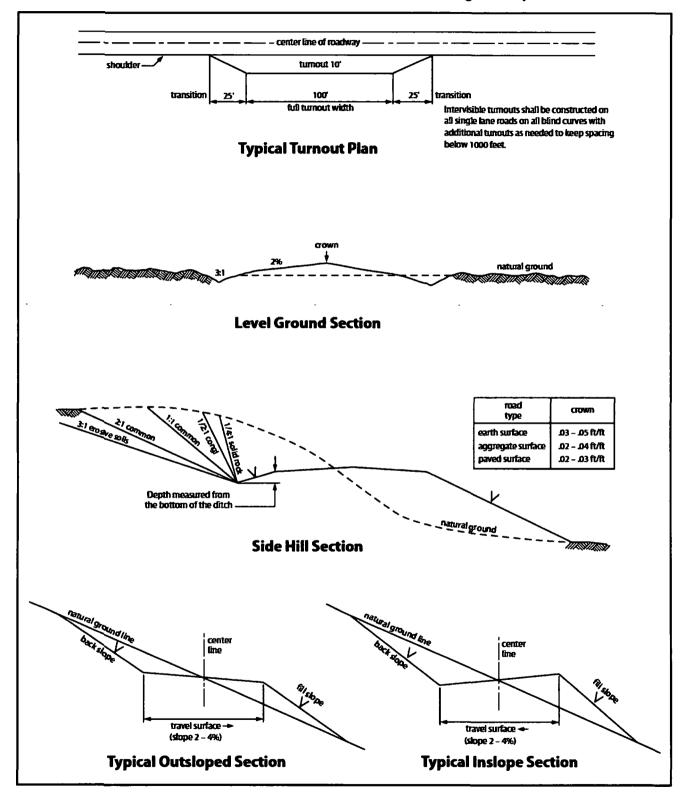


Figure 1. Cross-sections and plans for typical road sections representative of BLM resource or FS local and higher-class roads.

#### 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**

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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.

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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.

	e pipeline will be buried with a minimum cover of 36 inches between the to nd ground level.
7. The	e maximum allowable disturbance for construction in this right-of-way will be 30 f
•	Blading of vegetation within the right-of-way will be allowed: maximum width
	blading operations will not exceed <u>20</u> feet. The trench is included in this area. (sis defined as the complete removal of brush and ground vegetation.)
•	Clearing of brush species within the right-of-way will be allowed: maximum wid
-	clearing operations will not exceed <u>30</u> feet. The trench and bladed area are incluthis area. (Clearing is defined as the removal of brush while leaving ground veg (grasses, weeds, etc.) intact. Clearing is best accomplished by holding the blade inches above the ground surface.)
•	The remaining area of the right-of-way (if any) shall only be disturbed by comprethe vegetation. (Compressing can be caused by vehicle tires, placement of equipmetc.)
topsoi from o	e holder shall stockpile an adequate amount of topsoil where blading is allowed. The look stripped is approximately6 inches in depth. The topsoil will be segrepher spoil piles from trench construction. The topsoil will be evenly distributed over a rea for the preparation of seeding.
lands. Functi owner line, tl	e holder shall minimize disturbance to existing fences and other improvements on p. The holder is required to promptly repair improvements to at least their former state on the state on the state of these improvements will be maintained at all times. The holder will conform of any improvements prior to disturbing them. When necessary to pass through a fine fence shall be braced on both sides of the passageway prior to cutting of the fence ment gates will be allowed unless approved by the Authorized Officer.
randor otherv match	egetation, soil, and rocks left as a result of construction or maintenance activity will mly scattered on this right-of-way and will not be left in rows, piles, or berms, unless rise approved by the Authorized Officer. The entire right-of-way shall be recontout the surrounding landscape. The backfilled soil shall be compacted and a 6 inch berover the ditch line to allow for settling back to grade.

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	r will reseed all disturbed areas. sements, using the following seed	Seeding will be done according to the attached mix.
	( ) seed mixture 1	( ) seed mixture 3
	( ) seed mixture 2	( ) seed mixture 4
	(X) seed mixture 2/LPC	( ) Aplomado Falcon Mixture
to blend with t	he natural color of the landscape.	afety requirements shall be painted by the holder The paint used shall be color which simulates n, Munsell Soil Color No. 5Y 4/2.
way and at all number, and th	road crossings. At a minimum, some product being transported. All	ne point of origin and completion of the right-of- igns will state the holder's name, BLM serial signs and information thereon will be posted in a intained in a legible condition for the life of the
maintenance a before mainter pipeline route	s determined necessary by the Au nance begins. The holder will tak is not used as a roadway. As dete	is a road for purposes other than routine thorized Officer in consultation with the holder whatever steps are necessary to ensure that the ermined necessary during the life of the pipeline, instruct temporary deterrence structures.
discovered by immediately re immediate are: Authorized Of determine app. holder will be	the holder, or any person working eported to the Authorized Officer. a of such discovery until written a ficer. An evaluation of the discovery propriate actions to prevent the loss responsible for the cost of evaluar	es (historic or prehistoric site or object) g on his behalf, on public or Federal land shall be Holder shall suspend all operations in the suthorization to proceed is issued by the very will be made by the Authorized Officer to s of significant cultural or scientific values. The tion and any decision as to proper mitigation er after consulting with the holder.
of operations. which includes of weeds due to	Weed control shall be required or s associated roads, pipeline corrid o this action. The operator shall c	xious weeds become established within the areas the disturbed land where noxious weeds exist, or and adjacent land affected by the establishment onsult with the Authorized Officer for acceptable EPA and BLM requirements and policies.

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

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

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

#### Lesser Prairie-Chicken

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

#### STANDARD STIPULATIONS FOR SURFACE INSTALLED PIPELINES

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

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

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

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authorized officer concurrent with the filing of the reports to the involved Federal agency or State government.

- 3. The holder agrees to indemnify the United States against any liability arising from the release of any hazardous substance or hazardous waste (as these terms are defined in the Comprehensive Environmental Response, Compensation and Liability Act of 1980, 42 U.S.C. 9601, et seq. or the Resource Conservation and Recovery Act, 42 U.S.C. 6901, et seq.) on the Right-of-Way (unless the release or threatened release is wholly unrelated to activity of the Right-of-Way holder's activity on the Right-of-Way), or resulting from the activity of the Right-of-Way holder on the Right-of-Way. This agreement applies without regard to whether a release is caused by the holder, its agent, or unrelated third parties.
- 4. The holder shall be liable for damage or injury to the United States to the extent provided by 43 CFR Sec. 2883.1-4. The holder shall be held to a standard of strict liability for damage or injury to the United States resulting from pipe rupture, fire, or spills caused or substantially aggravated by any of the following within the right-of-way or permit area:
  - a. Activities of the holder including, but not limited to construction, operation, maintenance, and termination of the facility.
  - b. Activities of other parties including, but not limited to:
    - (1) Land clearing.
    - (2) Earth-disturbing and earth-moving work.
    - (3) Blasting.
    - (4) Vandalism and sabotage.
  - c. Acts of God.

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

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

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

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of any responsibility as provided herein.

- 6. All construction and maintenance activity will be confined to the authorized right-of-way width of \_\_\_\_\_\_\_ feet. If the pipeline route follows an existing road or buried pipeline right-of-way, the surface pipeline must be installed no farther than 10 feet from the edge of the road or buried pipeline right-of-way. If existing surface pipelines prevent this distance, the proposed surface pipeline must be installed immediately adjacent to the outer surface pipeline. All construction and maintenance activity will be confined to existing roads or right-of-ways.
- 7. No blading or clearing of any vegetation will be allowed unless approved in writing by the Authorized Officer.
- 8. The holder shall install the pipeline on the surface in such a manner that will minimize suspension of the pipeline across low areas in the terrain. In hummocky of duney areas, the pipeline will be "snaked" around hummocks and dunes rather then suspended across these features.
- 9. The pipeline shall be buried with a minimum of <u>24</u> inches under all roads, "two-tracks," and trails. Burial of the pipe will continue for 20 feet on each side of each crossing. The condition of the road, upon completion of construction, shall be returned to at least its former state with no bumps or dips remaining in the road surface.
- 10. The holder shall minimize disturbance to existing fences and other improvements on public lands. The holder is required to promptly repair improvements to at least their former state. Functional use of these improvements will be maintained at all times. The holder will contact the owner of any improvements prior to disturbing them. When necessary to pass through a fence line, the fence shall be braced on both sides of the passageway prior to cutting of the fence. No permanent gates will be allowed unless approved by the Authorized Officer.
- 11. In those areas where erosion control structures are required to stabilize soil conditions, the holder will install such structures as are suitable for the specific soil conditions being encountered and which are in accordance with sound resource management practices.
- 12. Excluding the pipe, all above-ground structures not subject to safety requirement shall be painted by the holder to blend with the natural color of the landscape. The paint used shall be a color which simulates "Standard Environmental Colors" **Shale Green**, Munsell Soil Color No. 5Y 4/2; designated by the Rocky Mountain Five State Interagency Committee.
- 13. The pipeline will be identified by signs at the point of origin and completion of the right-of-way and at all road crossings. At a minimum, signs will state the holder's name, BLM serial number, and the product being transported. Signs will be maintained in a legible condition for the life of the pipeline.

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- 14. The holder shall not use the pipeline route as a road for purposes other than routine maintenance as determined necessary by the Authorized Officer in consultation with the holder. The holder will take whatever steps are necessary to ensure that the pipeline route is not used as a roadway.
- 15. Any cultural and/or paleontological resource (historic or prehistoric site or object) discovered by the holder, or any person working on his behalf, on public or Federal land shall be immediately reported to the authorized officer. Holder shall suspend all operations in the immediate area of such discovery until written authorization to proceed is issued by the authorized officer. An evaluation of the discovery will be made by the authorized officer to determine appropriate cultural or scientific values. The holder will be responsible for the cost of evaluation and any decision as to proper mitigation measures will be made by the authorized officer after consulting with the holder.
- 16. The operator shall be held responsible if noxious weeds become established within the areas of operations. Weed control shall be required on the disturbed land where noxious weeds exist, which includes the roads, powerline corridor, and adjacent land affected by the establishment of weeds due to this action. The operator shall consult with the Authorized Officer for acceptable weed control methods, which include following EPA and BLM requirements and policies.
- 17. Surface pipelines must be less than or equal to 4 inches and a working pressure below 125 psi.

#### 18. Special Stipulations:

a. <u>Lesser Prairie-Chicken</u>: Oil and gas activities will not be allowed in lesser prairie-chicken habitat during the period from March 1st through June 15th annually. During that period, other activities that produce noise or involve human activity, such as the maintenance of oil and gas facilities and pipeline, road, and well pad construction, will be allowed except between 3:00 am and 9:00 am. The 3:00 am to 9:00 am restriction will not apply to normal, around-the-clock operations, such as venting, flaring, or pumping, which do not require a human presence during this period. Normal vehicle use on existing roads will not be restricted.

#### C. ELECTRIC LINES

STANDARD STIPULATIONS FOR OVERHEAD ELECTRIC DISTRIBUTION LINES

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

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

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- 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

Page 20 of 23

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.

Page 21 of 23

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 <u>no</u> 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:

Species	<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

<sup>\*</sup>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 05/20/2019

### **Operator Certification**

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

NAME: Rebecca Deal Signed on: 11/26/2018

**Title:** Regulatory Compliance Professional

Street Address: 333 West Sheridan Avenue

City: Oklahoma City State: OK Zip: 73102

Phone: (405)228-8429

Email address: Rebecca.Deal@dvn.com

#### Field Representative

Representative Name: Travis Phibbs

Street Address: 333 W SHERIDAN AVE

City: OKC State: OK Zip: 73102

Phone: (575)748-9929

Email address: travis.phibbs@dvn.com



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

## **Application Data Report**

APD ID: 10400036677 Submission Date: 11/26/2018

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

Well Name: STRANGER 34 FED COM

Well Number: 14H

Well Work Type: Drill

**Show Final Text** 

#### Section 1 - General

APD ID:

10400036677

Tie to previous NOS?

Submission Date: 11/26/2018

**BLM Office: CARLSBAD** 

User: Rebecca Deal

Title: Regulatory Compliance

Federal/Indian APD: FED

Well Type: OIL WELL

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

Lease number: NMNM113898

Lease Acres: 920

Surface access agreement in place?

Allotted?

Reservation:

Agreement in place? NO

Federal or Indian agreement:

Agreement number:

Agreement name:

Keep application confidential? YES

**Permitting Agent? NO** 

APD Operator: DEVON ENERGY PRODUCTION COMPANY LP

Operator letter of designation:

#### **Operator Info**

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

Operator Address: 333 West Sheridan Avenue

**Zip:** 73102

Operator PO Box:

Operator City: Oklahoma City

State: OK

**Operator Phone:** (800)583-3866

Operator Internet Address:

#### **Section 2 - Well Information**

Well in Master Development Plan? NO

Master Development Plan name:

Well in Master SUPO? NO

Master SUPO name:

Well in Master Drilling Plan? NO

Master Drilling Plan name:

Well Name: STRANGER 34 FED COM

Well Number: 14H

Well API Number:

Field/Pool or Exploratory? Field and Pool

Field Name: BOBCAT DRAW

**Pool Name: UPPER** 

WOLFCAMP

Well Name: STRANGER 34 FED COM

Well Number: 14H

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

Describe other minerals:

Is the proposed well in a Helium production area? N Use Existing Well Pad? NO New surface disturbance?

Number of Legs: 1

Type of Well Pad: MULTIPLE WELL Multiple Well Pad Name: Number: 2

Well Class: HORIZONTAL STRANGER 34 WELLPAD

Well Type: OIL WELL

Describe Well Type: Well sub-Type: INFILL

Describe sub-type:

Distance to town: Distance to nearest well: 596 FT Distance to lease line: 205 FT

Reservoir well spacing assigned acres Measurement: 160 Acres

Well plat: Stranger\_34\_Fed\_Com\_14H\_C\_102\_20181126120710.pdf

Well work start Date: 08/08/2020 Duration: 45 DAYS

#### **Section 3 - Well Location Table**

Survey Type: RECTANGULAR

**Describe Survey Type:** 

Datum: NAD83 Vertical Datum: NAVD88

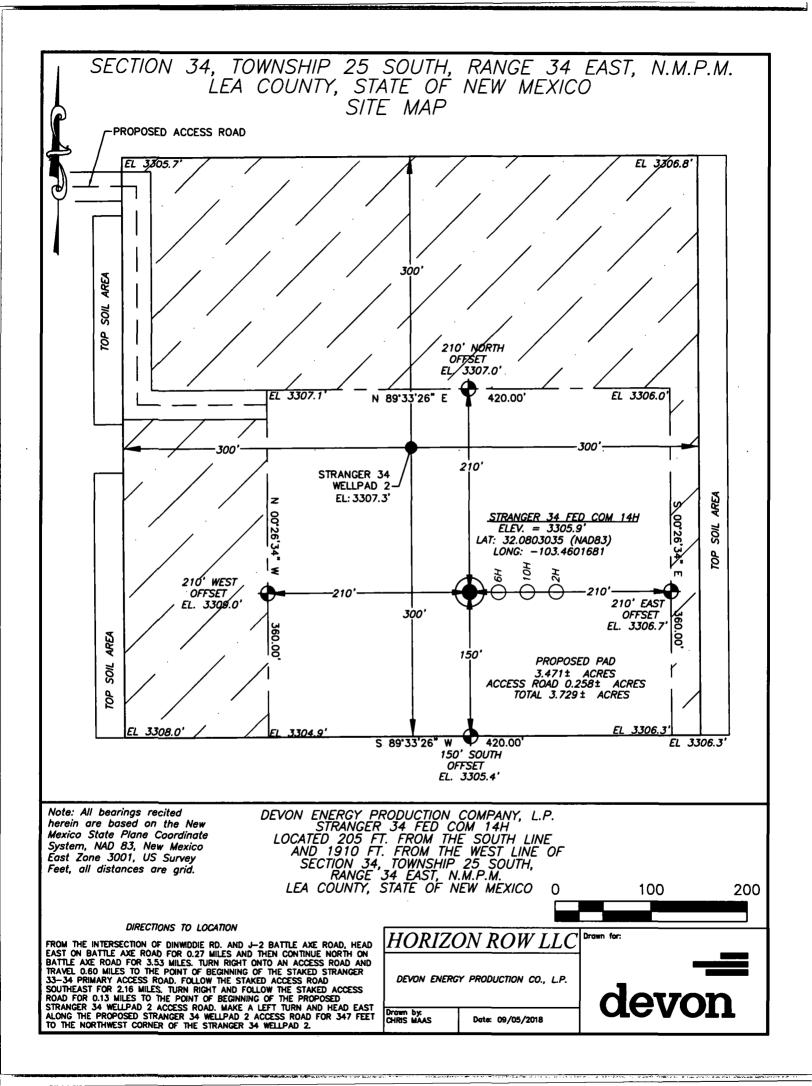
Survey number:

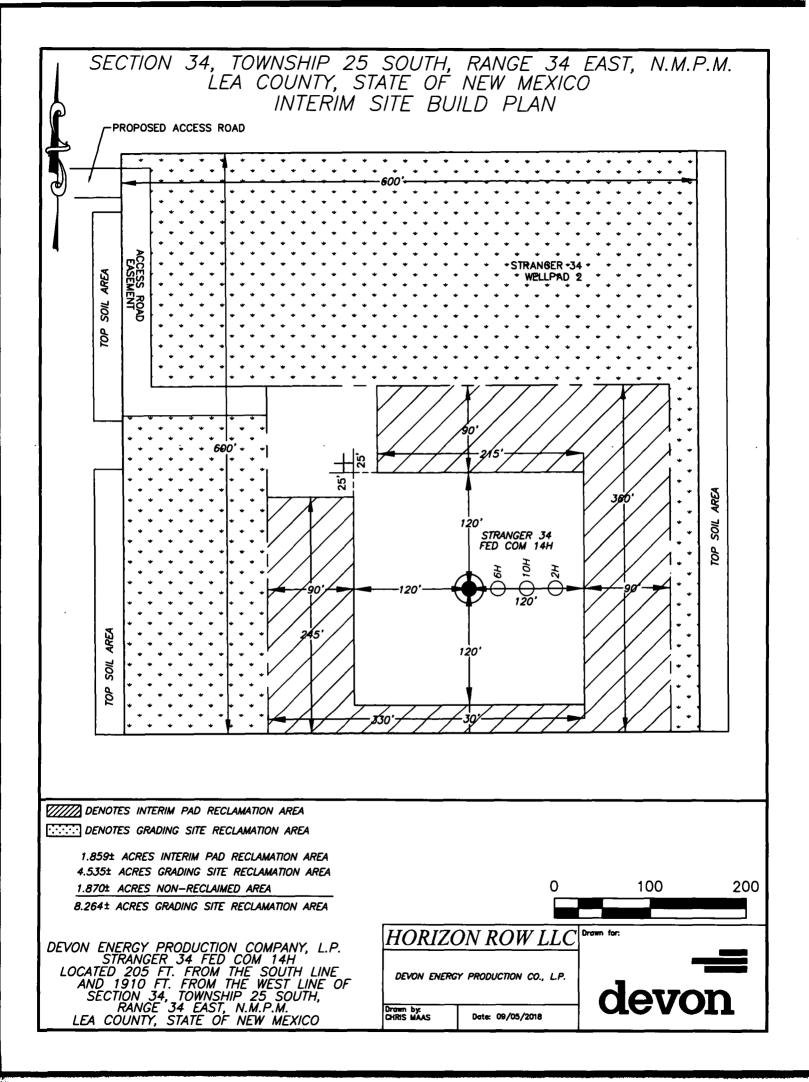
	NS-Foot	NS Indicator	EW-Foot	EW Indicator	Twsp	Range	Section	Aliquot/Lot/Tract	Latitude	Longitude	County	State	Meridian	Lease Type	Lease Number	Elevation	MD	TVD
SHL	205	FSL	191	FWL	25S	34E	34	Aliquot	32.08030	-	LEA	l	NEW	F	NMNM	330	0	0
Leg #1			0					SESW	35	103.4601 681		CO	CO		113898	6		
KOP Leg #1	50	FSL	165 0	FWL	<b>25</b> S	34E	34	Aliquot SESW	32.08016 2	- 103.4614 93	LEA	NEW MEXI CO	• • • • • •	F	NMNM 113898	- 893 4	122 49	122 40
PPP Leg #1	100	FSL	165 0	FWL	258	34E	34	Aliquot SESW	32.08016 2	- 103.4614 93	LEA	MEXI	• • • • • • • • • • • • • • • • • • •	F	NMNM 113898	- 893 4	122 49	122 40

Well Name: STRANGER 34 FED COM

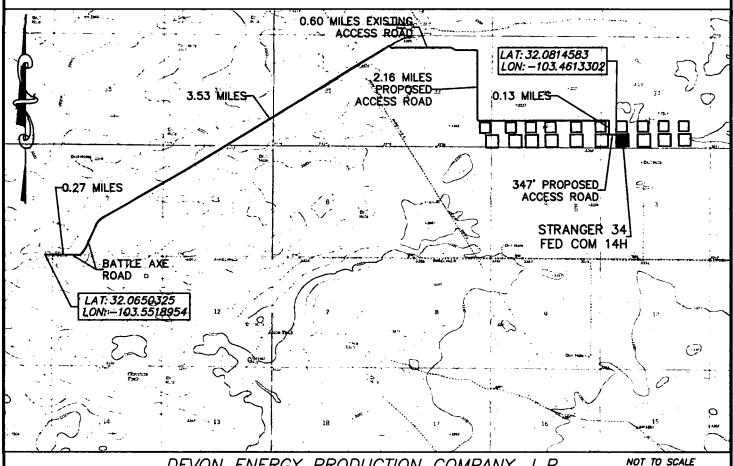
Well Number: 14H

	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	DVT
EXIT Leg	100	FNL	165 0	FWL	25S	34E	34	Aliquot NENW	32.09396 5	103.4610	LEA	MEXI	1		NMNM 094114	- 958	176 89	128 90
#1										19		co	СО			4		
BHL	20	FNL	165	FWL	25S	34E	34	Aliquot	32.09418		LEA		NEW		MMMM	-	177	128
Leg #1			0					NENW	43	103.4610 21		CO	CO		094114	958 4	69	90





# SECTION 34, TOWNSHIP 25 SOUTH, RANGE 34 EAST, N.M.P.M. LEA COUNTY, STATE OF NEW MEXICO VICINITY MAP



DEVON ENERGY PRODUCTION COMPANY, L.P.
STRANGER 34 FED COM 14H
LOCATED 205 FT. FROM THE SOUTH LINE
AND 1910 FT. FROM THE WEST LINE OF
SECTION 34, TOWNSHIP 25 SOUTH,
RANGE 34 EAST, N.M.P.M.
LEA COUNTY, STATE OF NEW MEXICO

#### DIRECTIONS TO LOCATION

FROM THE INTERSECTION OF DINWIDDIE RD. AND J-2 BATTLE AXE ROAD, HEAD EAST ON BATTLE AXE ROAD FOR 0.27 MILES AND THEN CONTINUE NORTH ON BATTLE AXE ROAD FOR 3.53 MILES. TURN RIGHT ONTO AN ACCESS ROAD AND TRAVEL 0.60 MILES TO THE POINT OF BEGINNING OF THE STAKED STRANGER 33-34 PRIMARY ACCESS ROAD. FOLLOW THE STAKED ACCESS ROAD SOUTHEAST FOR 2.16 MILES. TURN RIGHT AND FOLLOW THE STAKED ACCESS ROAD FOR 0.13 MILES TO THE POINT OF BEGINNING OF THE PROPOSED STRANGER 34 WELLPAD 2 ACCESS ROAD. MAKE A LEFT TURN AND HEAD EAST ALONG THE PROPOSED STRANGER 34 WELLPAD 2 ACCESS ROAD FOR 347 FEET TO THE NORTHWEST CORNER OF THE STRANGER 34 WELLPAD 2.

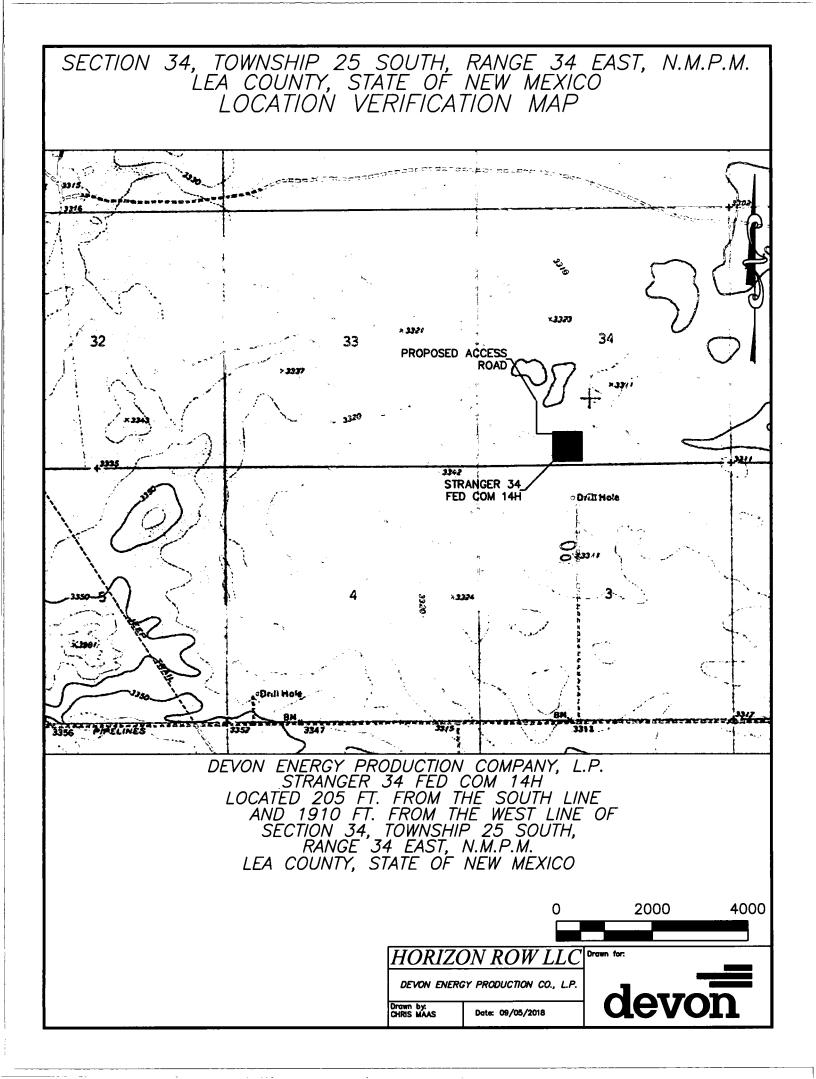
## HORIZON ROW LLC

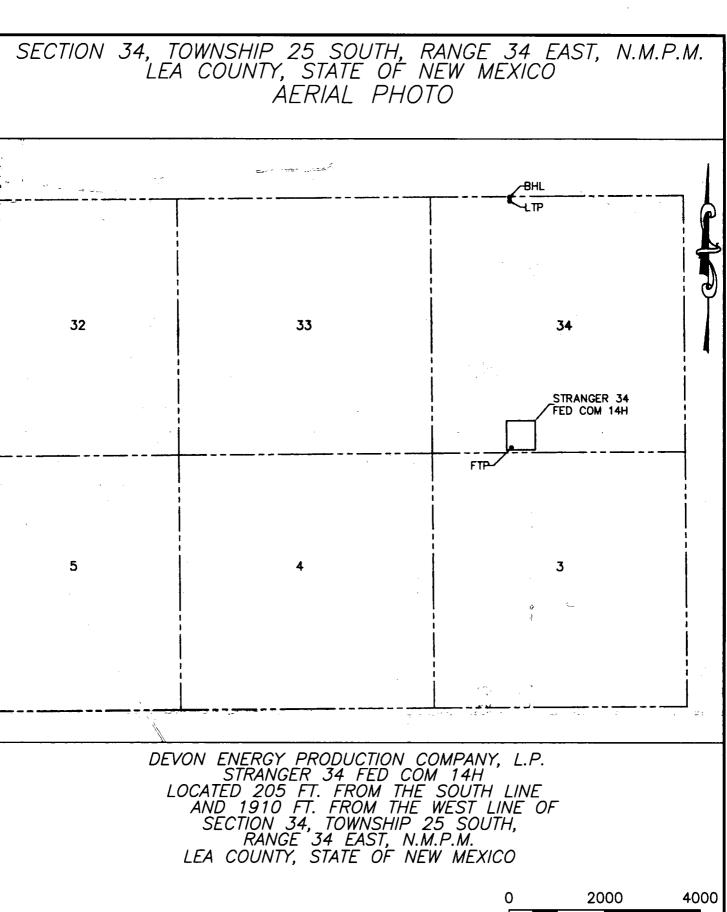
DEVON ENERGY PRODUCTION CO., L.P.

Drawn by: CHRIS MAAS

Date: 09/05/2018







O 2000 4000

HORIZON ROW LLC

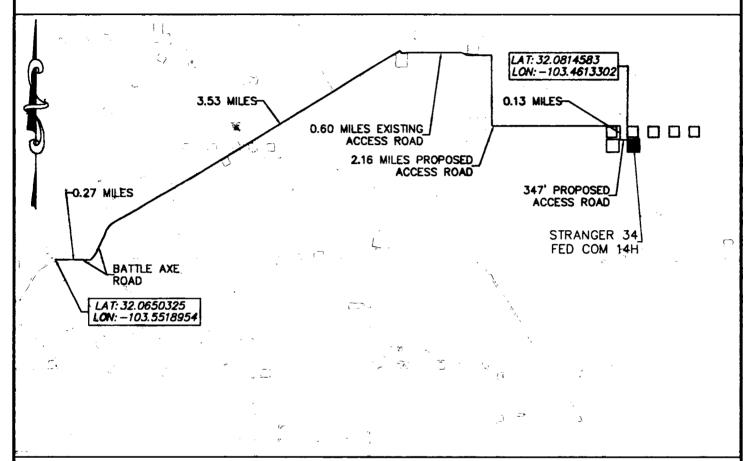
DEVON ENERGY PRODUCTION CO., L.P.

Drawn by: CHRIS MAAS

Date: 09/05/2018

devon

# SECTION 34, TOWNSHIP 25 SOUTH, RANGE 34 EAST, N.M.P.M. LEA COUNTY, STATE OF NEW MEXICO AERIAL ACCESS ROUTE MAP



DEVON ENERGY PRODUCTION COMPANY, L.P.
STRANGER 34 FED COM 14H
LOCATED 205 FT. FROM THE SOUTH LINE
AND 1910 FT. FROM THE WEST LINE OF
SECTION 34, TOWNSHIP 25 SOUTH,
RANGE 34 EAST, N.M.P.M.
LEA COUNTY, STATE OF NEW MEXICO

NOT TO SCALE

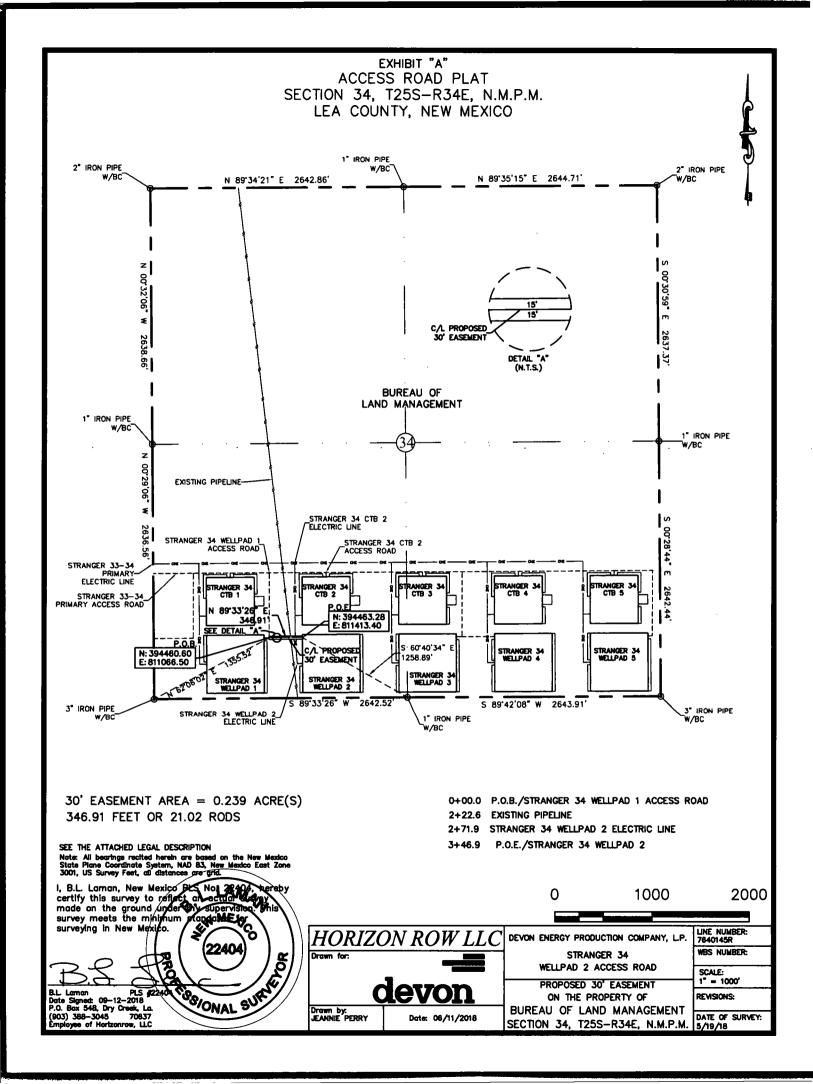
HORIZON ROW LLC

DEVON ENERGY PRODUCTION CO., L.P.

Drawn by: CHRIS MAAS

Date: 09/05/2018

devon



# SECTION 34, T25S-R34E, N.M.P.M., LEA COUNTY, NEW MEXICO

#### ACCESS ROAD 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 the southwest quarter (SW 1/4) of Section 34, Township 25 South, Range 34 East, N.M.P.M., Lea 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 for the southwest corner of Section 34, T25S-R34E, N.M.P.M., Lea County, New Mexico;

Thence N 62°06'02" E a distance of 1355.52' to the **Point of Beginning** of this easement having coordinates of Northing=394460.60, Easting=811066.50 feet and continuing the following course;

Thence N 89°33'26" E a distance of 346.91' to the **Point of Ending** having coordinates of Northing=394463.28, Easting=811413.40 feet from said point a 1" iron pipe w/BC for the south quarter corner of Section 34, T25S-R34E bears S 60°40'34" E a distance of 1258.89', covering **346.91' or 21.02 rods** and having an area of **0.239 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.

SONAL

B.L. Laman

PLS 22404

Date Signed: 09/12/2018

Horizon Row, LLC

P.O. Box 548, Dry Creek, La.

(903) 388-3045 70637

Employee of Horizon Row, LLC

SECTION 34, TOWNSHIP 25 SOUTH, RANGE 34 EAST, N.M.P.M.
LEA COUNTY, STATE OF NEW MEXICO
PLAN VIEW

STRANGER 34

MELLEA 300

STRANGER 34

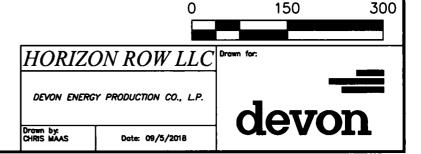
MELLEA 300

STRANGER 34

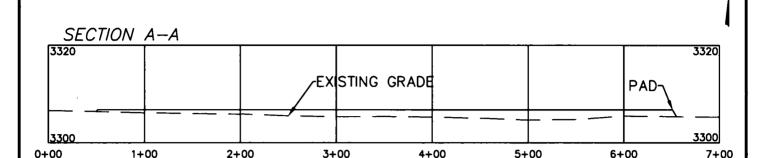
DEVON ENERGY PRODUCTION COMPANY, L.P.
STRANGER 34 FED COM 14H
LOCATED 205 FT. FROM THE SOUTH LINE
AND 1910 FT. FROM THE WEST LINE OF
SECTION 34, TOWNSHIP 25 SOUTH,
RANGE 34 EAST, N.M.P.M.
LEA COUNTY, STATE OF NEW MEXICO

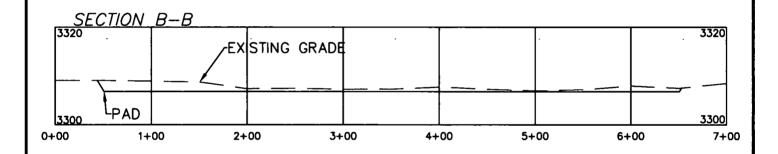
EARTHWORK QUANTITIES FOR STRANGER 34 WELLPAD 2

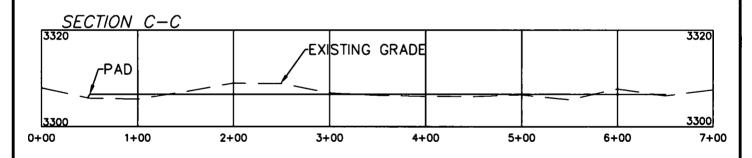
CUT	FILL	NET
6,277 CY	6,277 CY	O CY
FARTHWORK	COLIANTITIES	ARE ESTIMATED



# SECTION 34, TOWNSHIP 25 SOUTH, RANGE 34 EAST, N.M.P.M. LEA COUNTY, STATE OF NEW MEXICO CROSS SECTIONS







DEVON ENERGY PRODUCTION COMPANY, L.P.
STRANGER 34 FED COM 14H
LOCATED 205 FT. FROM THE SOUTH LINE
AND 1910 FT. FROM THE WEST LINE OF
SECTION 34, TOWNSHIP 25 SOUTH,
RANGE 34 EAST, N.M.P.M.
LEA COUNTY, STATE OF NEW MEXICO

SCALE 1" = 100' HORIZONTAL SCALE 1" = 20' VERTICAL

# EARTHWORK QUANTITIES FOR STRANGER 34 WELLPAD 2

CUT	FILL	NET
6,277 CY	6,277 CY	O CY
EARTHWORK	C QUANTITIES .	ARE ESTIMATED

*HORIZON ROW LLC* 

DEVON ENERGY PRODUCTION CO., L.P.

Drawn by: CHRIS MAAS Date: 09/05/2018





APD ID: 10400036677

Well Type: OIL WELL

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

# Drilling Plan Data Report

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

Operator Name: DEVON ENERGY PRODUCTION COMPANY LP

Well Name: STRANGER 34 FED COM Well

Well Number: 14H

Well Work Type: Drill



**Show Final Text** 

## **Section 1 - Geologic Formations**

Formation			True Vertical	Measured			Producing
ID	Formation Name	Elevation	Depth	Depth	Lithologies	Mineral Resources	Formation
1		3308	0	0	SANDSTONE,OTHER : SURFACE	NONE	No
2	RUSTLER	2428	880	880	SANDSTONE	NONE	No
3	TOP SALT	2036	1272	1272	SALT	NONE	No
4	BASE OF SALT	-1755	5063	5063	LIMESTONE	NONE	No
5	BELL CANYON	-2078	5386	5386	SANDSTONE	NATURAL GAS,OIL	No
6	CHERRY CANYON	-3058	6366	6366	SANDSTONE	NATURAL GAS,OIL	No
7	BRUSHY CANYON	-4773	8081	8081	SANDSTONE	NATURAL GAS,OIL	No
8	BONE SPRINGS	-6147	9455	9455	SHALE	NATURAL GAS,OIL	No
9	BONE SPRING 1ST	-7175	10483	10483	SANDSTONE	NATURAL GAS,OIL	No
10	BONE SPRING 2ND	-7725	11033	11033	SANDSTONE	NATURAL GAS,OIL	No
11	BONE SPRING 3RD	-8812	12120	12120	SANDSTONE	NATURAL GAS,OIL	No
12	WOLFCAMP	-9268	12576	12576	SHALE	NATURAL GAS,OIL	Yes
13	STRAWN	-11680	14988	14988	LIMESTONE	NATURAL GAS,OIL	No

### **Section 2 - Blowout Prevention**

Well Name: STRANGER 34 FED COM Well Number: 14H

Pressure Rating (PSI): 10M

Rating Depth: 12890

Requesting Variance? YES

**Choke Diagram Attachment:** 

10M\_BOPE\_CHK\_DR\_CLS\_RKL\_20190423121601.pdf

**BOP Diagram Attachment:** 

10M\_BOPE\_CHK\_DR\_CLS\_RKL\_20190423121610.pdf

Pressure Rating (PSI): 5M

Rating Depth: 12730

**Requesting Variance?** YES

Choke Diagram Attachment:

5M\_BOPE\_CK\_20181009072557.pdf

**BOP Diagram Attachment:** 

5M\_BOPE\_CK\_20181009072606.pdf

Well Name: STRANGER 34 FED COM Well Number: 14H

## **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	14.7 5	10.75	NEW	API	N	0	820	0	820			820	J-55	40.5	STC	1.12 5	1.25	BUOY	1.6	BUOY	1.6
2	INTERMED IATE	9.87 5	7.625	NEW	API	N	0	12249	0	12240			12249	P- 110		OTHER - BTC	1.12 5	1.25	BUOY	1.6	BUOY	1.6
3	INTERMED IATE	8.75	7.625	NEW	API	N	12249	12809	12240	12730			560	P- 110		OTHER - FLUSHMAX	1.12 5	1.25	BUOY	1.6	BUOY	1.6
4	PRODUCTI ON	6.75	5.5	NEW	API	N	o -	17769	0	12890			17769	P- 110		OTHER - VAM SG	1.12 5	1.25	BUOY	1.6	BUOY	1.6

#### **Casing Attachments**

Casing ID: 1

String Type: SURFACE

Inspection Document:

**Spec Document:** 

Tapered String Spec:

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

Surf\_Csg\_Ass\_20181009072657.pdf

Well Name: STRANGER 34 FED (	COM Well Number: 14	н
	-	
Casing Attachments  Casing ID: 2 Strit	ng Type:INTERMEDIATE	
Inspection Document:		
Spec Document:		÷
Tapered String Spec:		
Casing Design Assumptions	and Worksheet(s):	
Int_Csg_Ass_201810090	72743.pdf	
	ng Type:INTERMEDIATE	
Inspection Document:		
Spec Document:		,
Tapered String Spec:		
Casing Design Assumptions	and Worksheet(s):	
Int_Csg_Ass_201810090	73352.pdf	
Casing ID: 4 Strin	ng Type:PRODUCTION	
Spec Document:		
Tapered String Spec:		
Casing Design Assumptions	and Worksheet(s):	
Prod_Csg_Ass_2018110	6101143.pdf	

**Section 4 - Cement** 

Well Name: STRANGER 34 FED COM

Well Number: 14H

String Type	Lead/Tail	Stage Tool Depth	Top MD	Bottom MD	Quantity(sx)	Yield	Density	Cu Ft	Excess%	Cement type	Additives
INTERMEDIATE	Lead		0	0	0	0	0	0		Agricon Company	0

SURFACE	Lead	0	820	510	1.34	14.8	684	50	1% Calcium Chloride

INTERMEDIATE	Lead	0	8809	723	3.27	9	2363	30	*.	TUNED LIGHT
INTERMEDIATE	Tail	8809	1280 9	621	1.6	13.2	993	30	<b>H</b>	Poz (Fly Ash) + 0.5% bwoc HALAD-344 + 0.4% bwoc CFR-3 + 0.2% BWOC HR-601 + 2% bwoc Bentonite
PRODUCTION	Lead	1260 9	1776 9	404.7	1.33	13.2	538	25		0.125 lbs/sack Poly-E- Flake

## **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** 

Well Name: STRANGER 34 FED COM Well Number: 14H

Top Depth	Bottom Depth	Mud Type	Min Weight (lbs/gal)	Max Weight (Ibs/gal)	Density (lbs/cu ft)	Gel Strength (lbs/100 sqft)	ЬН	Viscosity (CP)	Salinity (ppm)	Filtration (cc)	Additional Characteristics
1280 9	1776 9	OIL-BASED MUD	10	12				12			
0	820	SPUD MUD	8.33	9				2	·		
820	1280 9	SALT SATURATED	9	10				2			
820	1280 9	SALT SATURATED	9	10				2			

### 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: 7000** 

**Anticipated Surface Pressure: 4164.2** 

Anticipated Bottom Hole Temperature(F): 180

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

Describe:

Contingency Plans geoharzards description:

Contingency Plans geohazards attachment:

Hydrogen Sulfide drilling operations plan required? YES

Hydrogen sulfide drilling operations plan:

Stranger\_34\_Fed\_Com\_14H\_H2S\_Plan\_20181126121441.pdf

Well Name: STRANGER 34 FED COM Well Number: 14H

#### Section 8 - Other Information

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

Stranger\_34\_Fed\_14H\_Dir\_Svy\_20181126121500.pdf Stranger\_34\_Fed\_14H\_Plot\_20181126121500.pdf

#### Other proposed operations facets description:

DRILLING PLAN
DIRECTIONAL SURVEY
PLOT
MULTI-BOWL WELLHEAD
MULTI-BOWL VERBIAGE
GAS CAPTURE PLAN
CLOSED LOOP DESIGN
CO-FLEX VARIANCE
ANTI-COLLISION PLAN
SPUDDER RIG DOCUMENT
4 SPEC SHEETS

ANNULAR VARIANCE REQUEST - DOC & SCHEMATIC

#### Other proposed operations facets attachment:

MB\_Wellhd\_10M\_20180823120206.pdf

Spudder\_Rig\_Info\_20180823120206.pdf

MB Wellhd 10M 2 20180823120321.PDF

Clsd\_Loop\_20180823120203.pdf

Stranger\_34\_Fed\_Com\_WP2\_GCP\_Form\_20181126122123.pdf

5.5\_20\_P110\_EC\_VAMSG\_20190423122736.pdf

7.625\_29.70\_P110\_Flushmax\_20190423122736.pdf

10.750\_40.50\_\_J55\_USS\_20190423122738.PDF

8.625\_32.00\_P110HSCY\_TLW\_20190423122737.PDF

13.375\_48\_\_H40\_20190423122739.pdf

MB\_Verb\_10M\_20190423122739.pdf

Stranger\_34\_Fed\_14H\_Drilling\_Document\_R1\_20190423122848.pdf

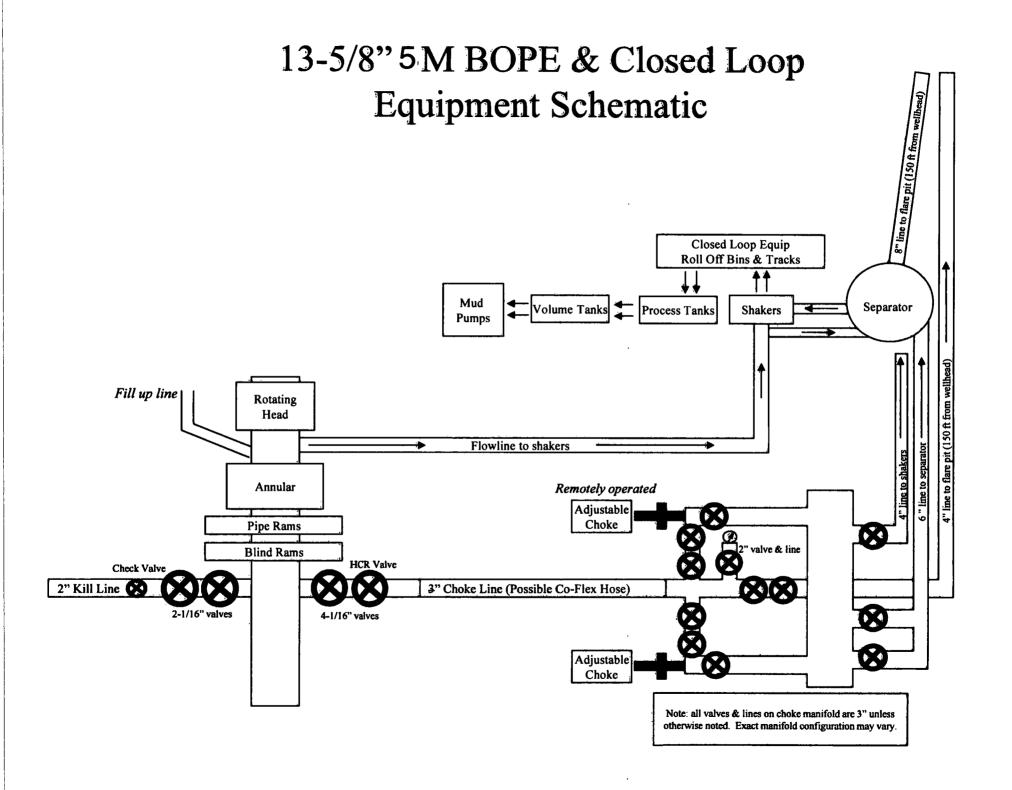
#### **Other Variance attachment:**

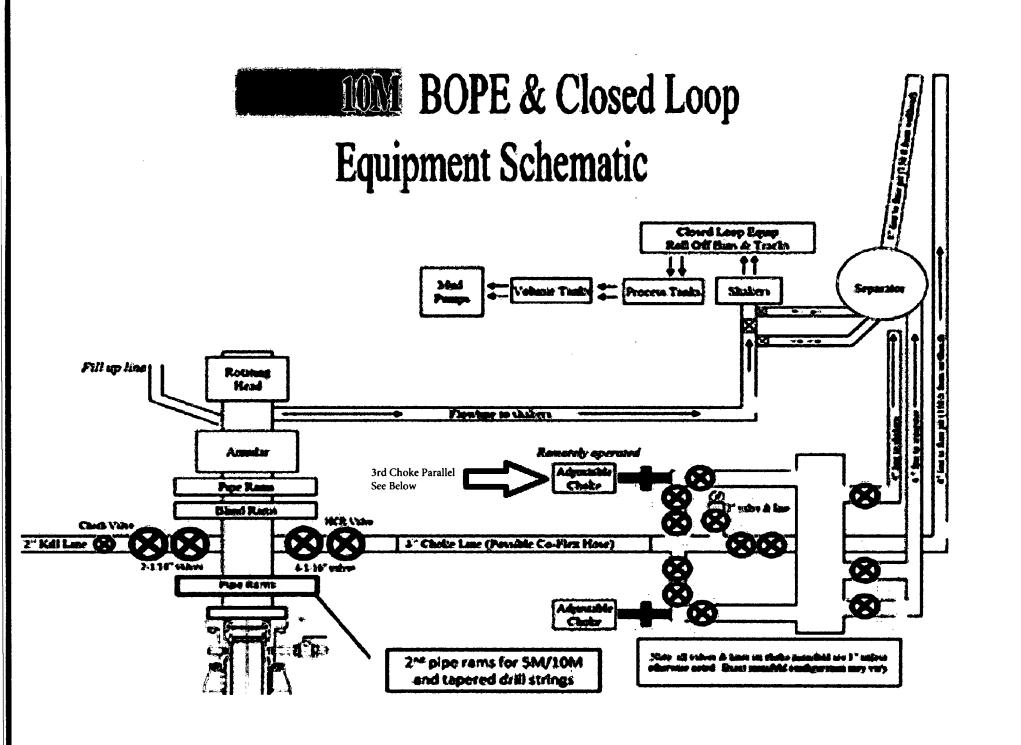
Co\_flex\_20180823120220.pdf

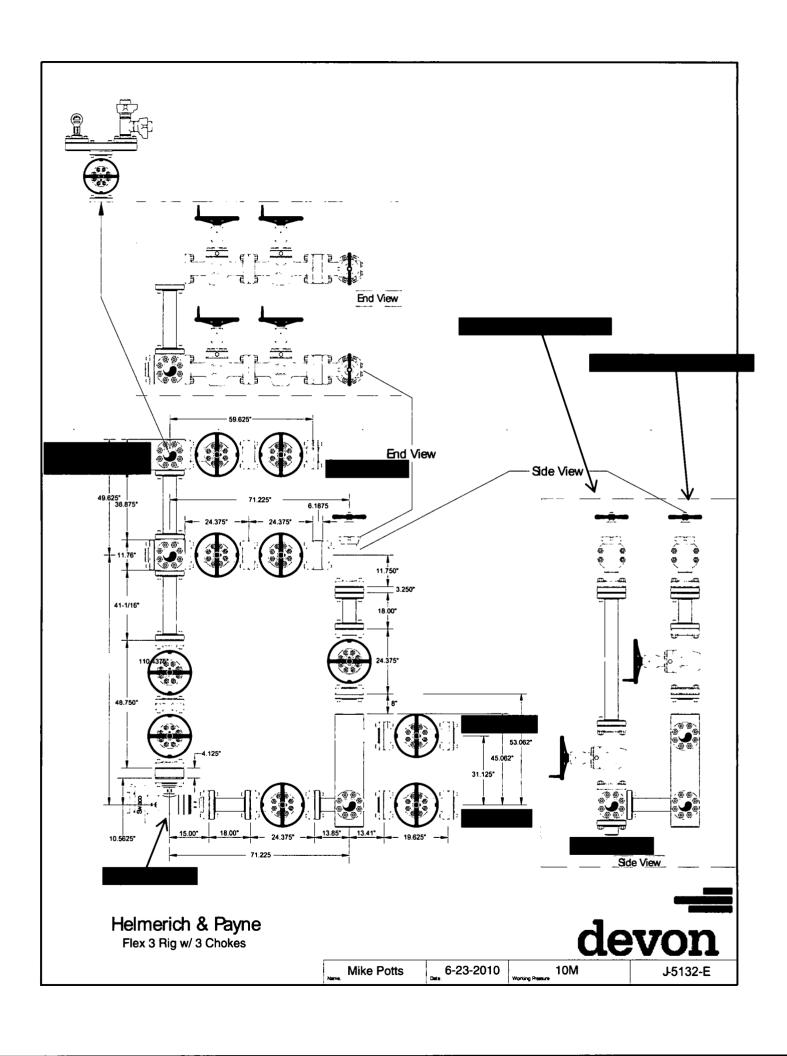
10M\_BOPE\_CHK\_DR\_CLS\_RKL\_20190423122750.pdf

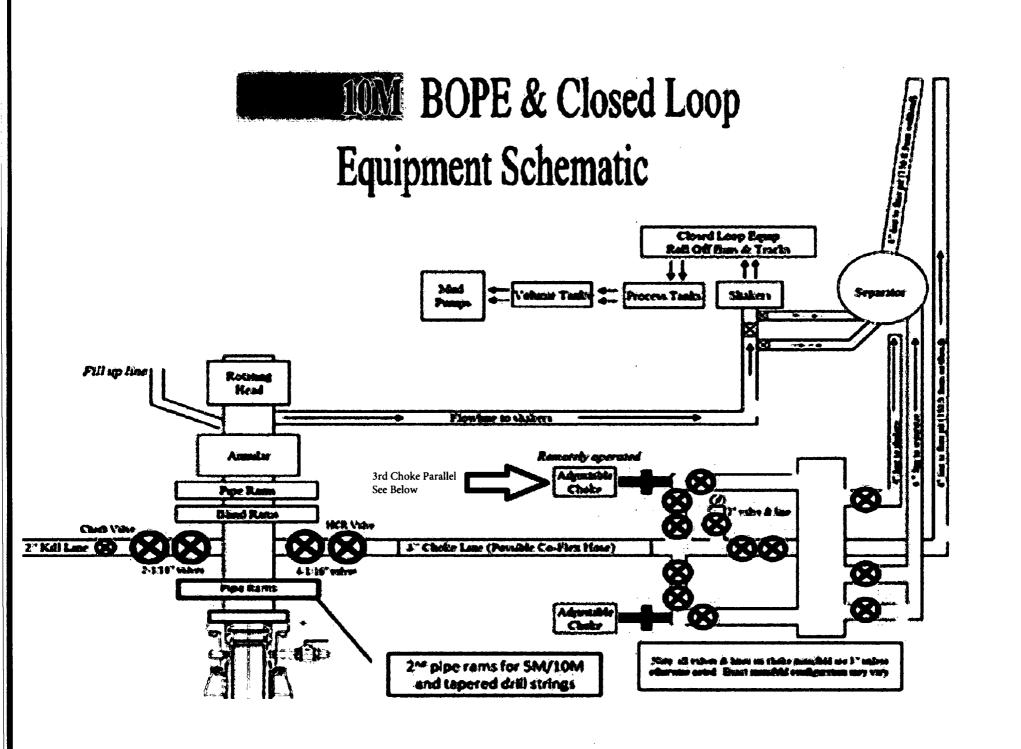
Annular\_Variance\_\_\_Preventer\_Summary\_20190423122750.pdf

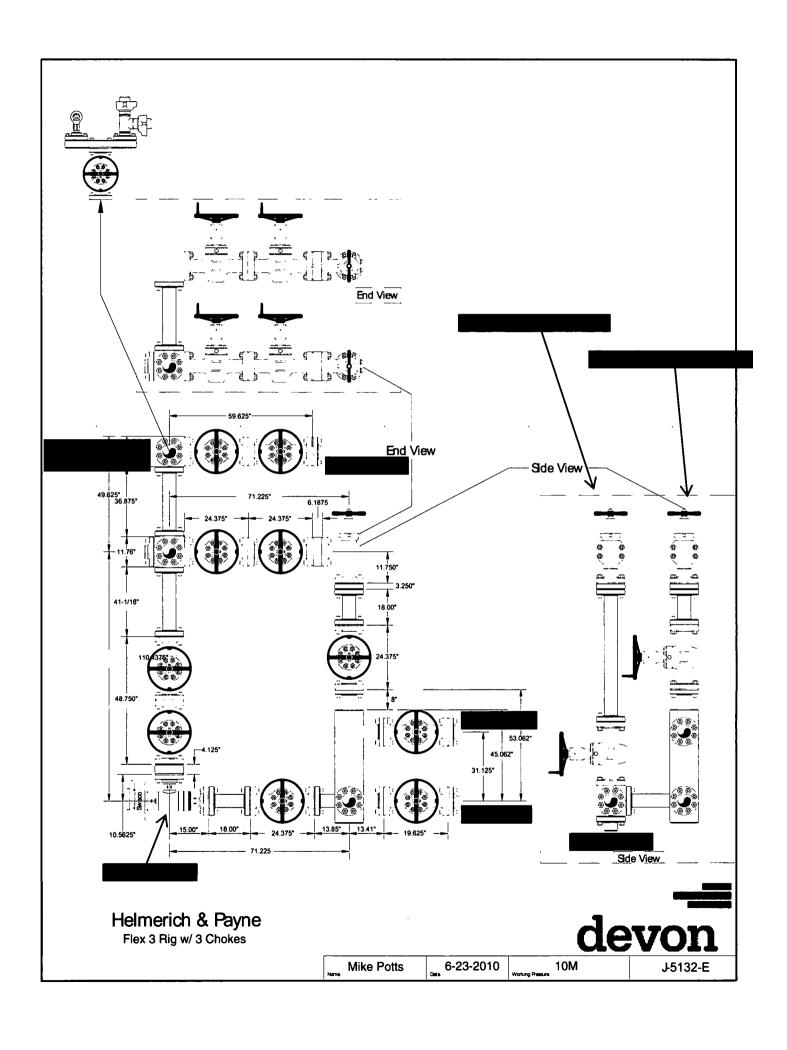
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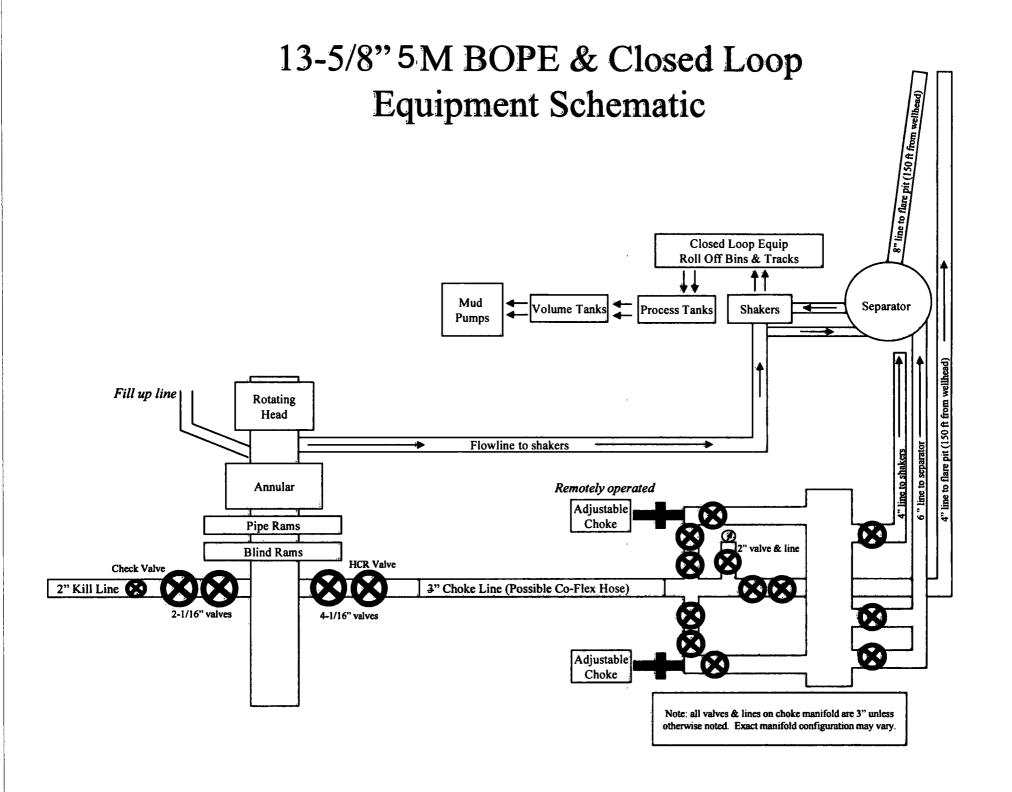


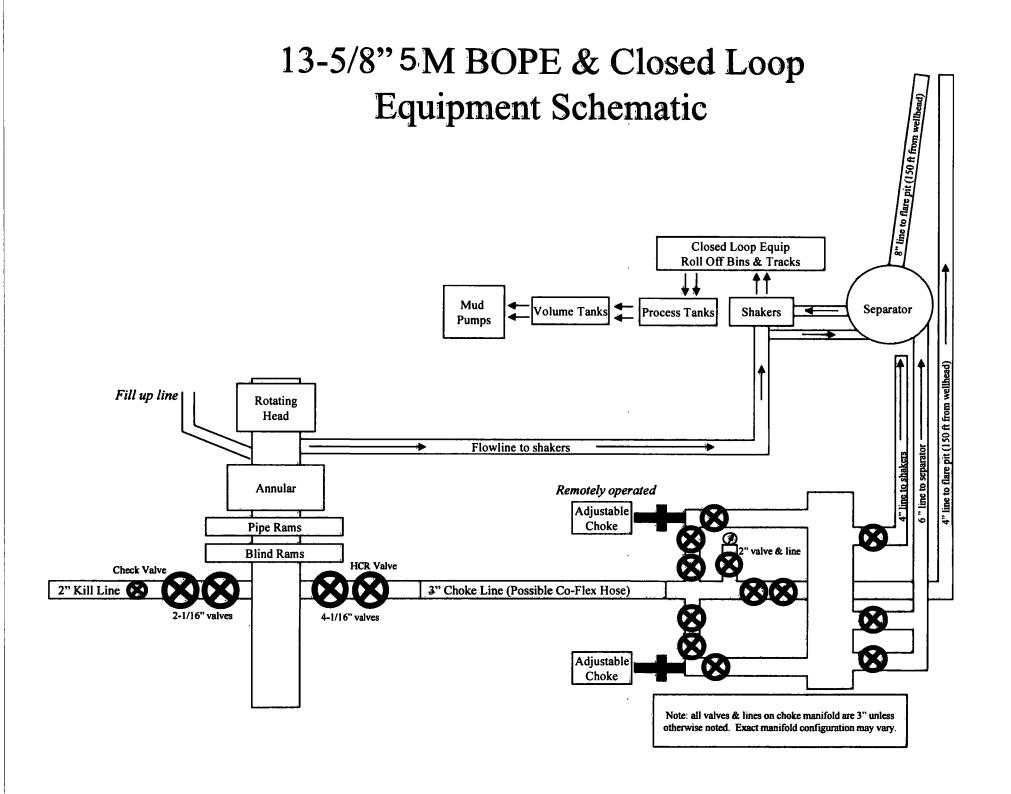


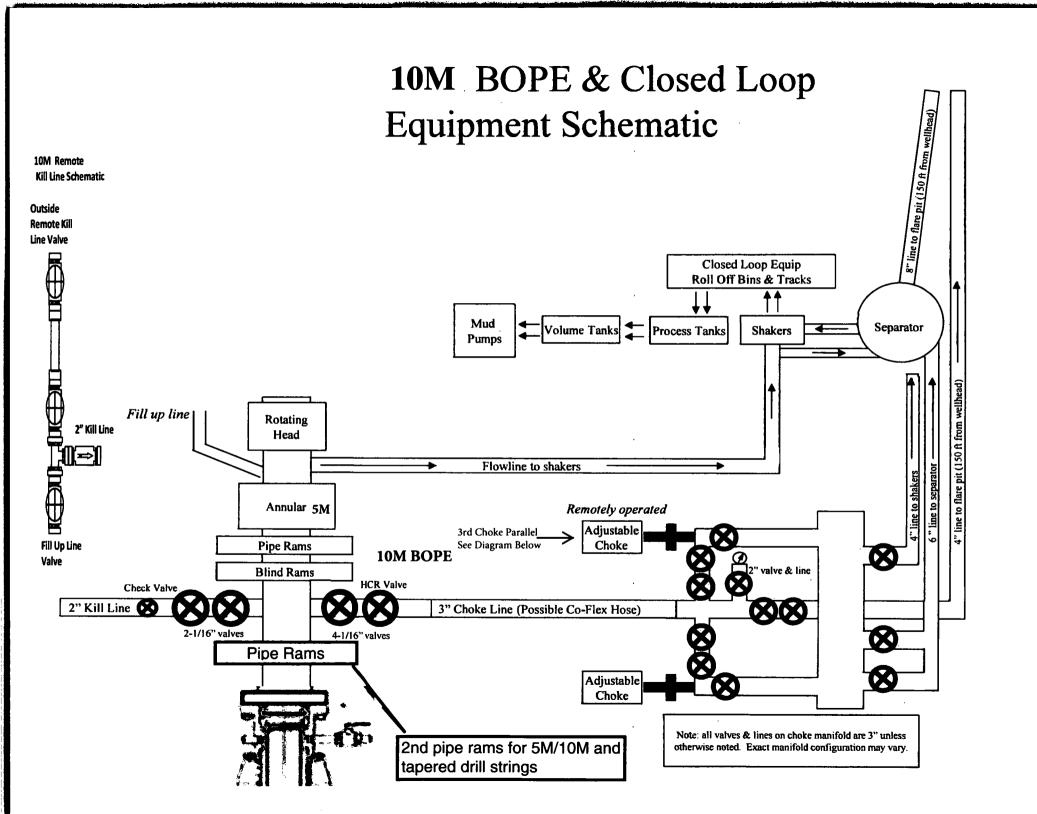


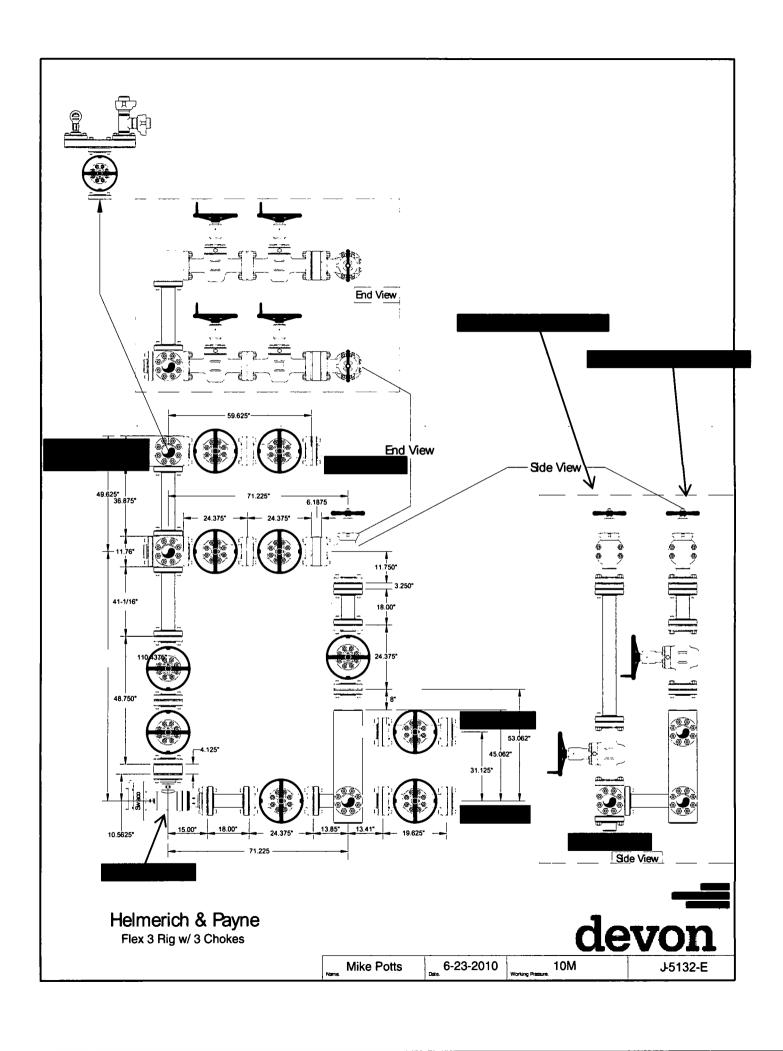


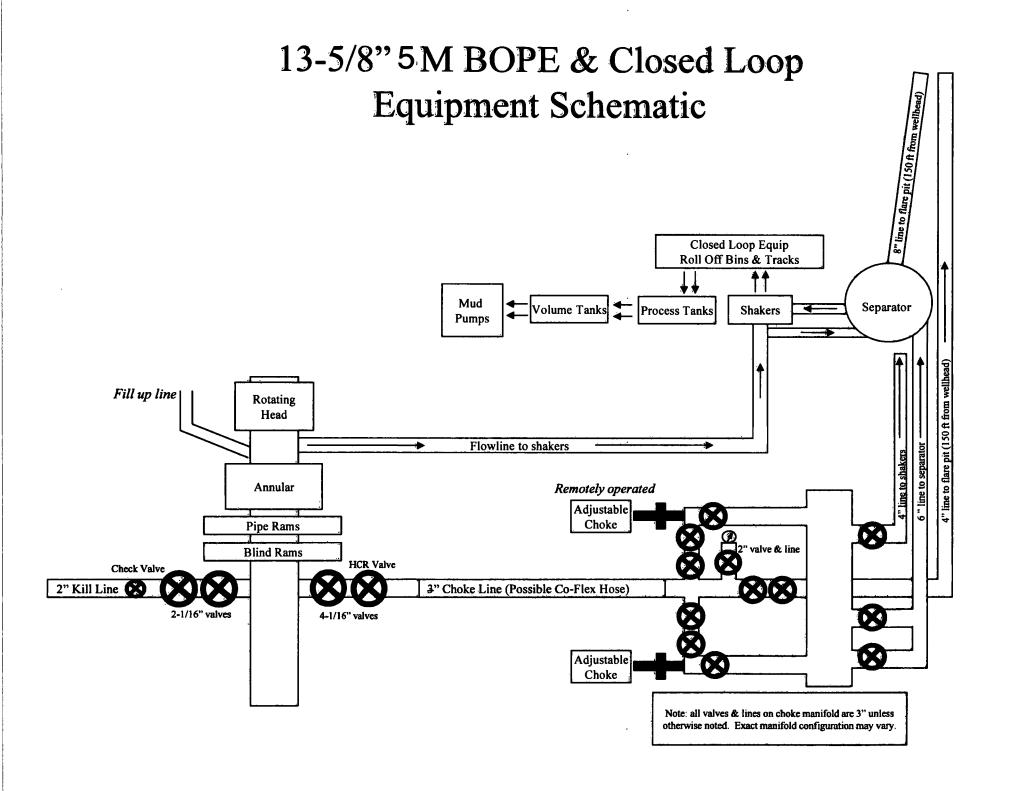


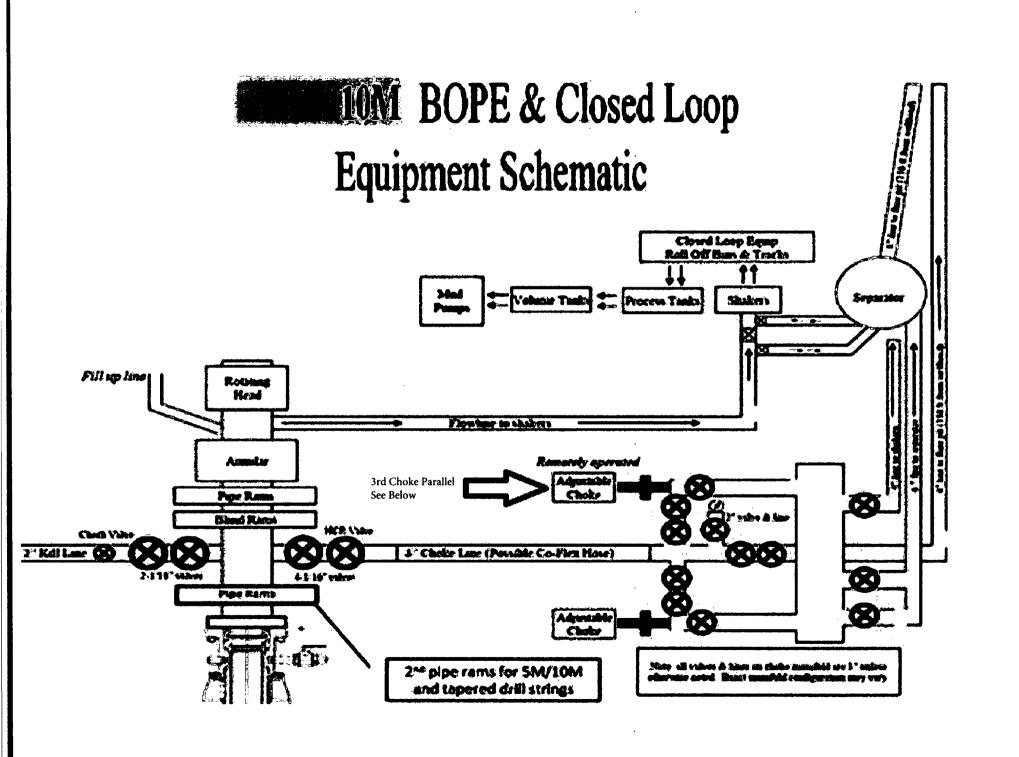


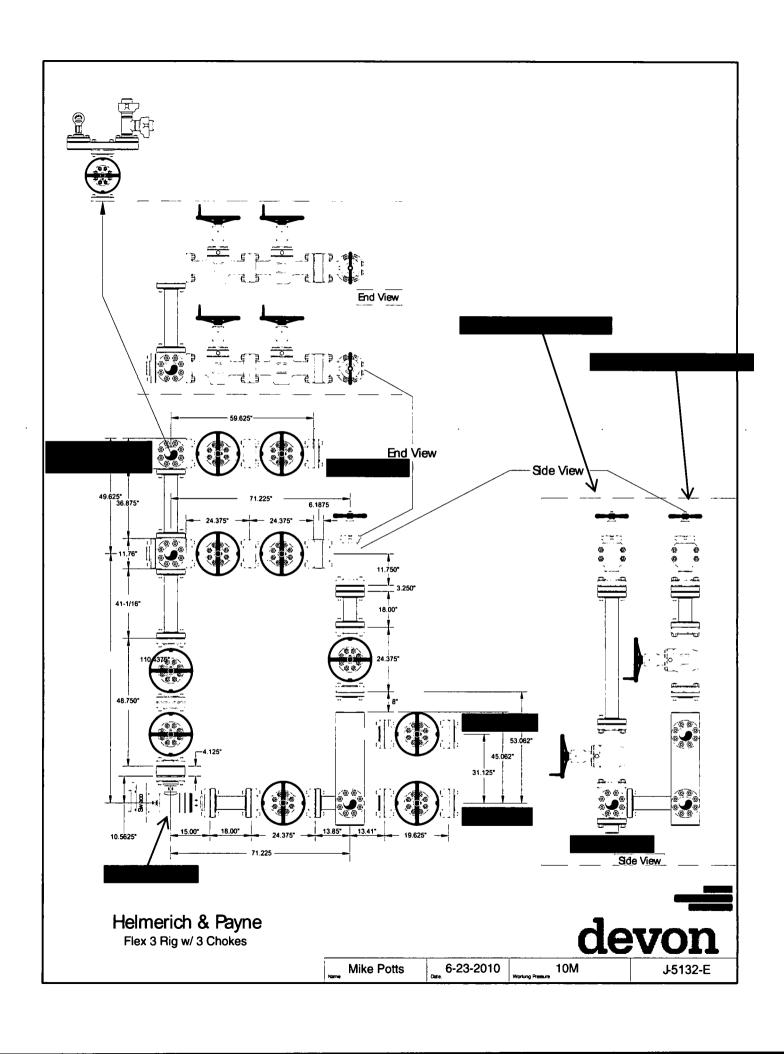


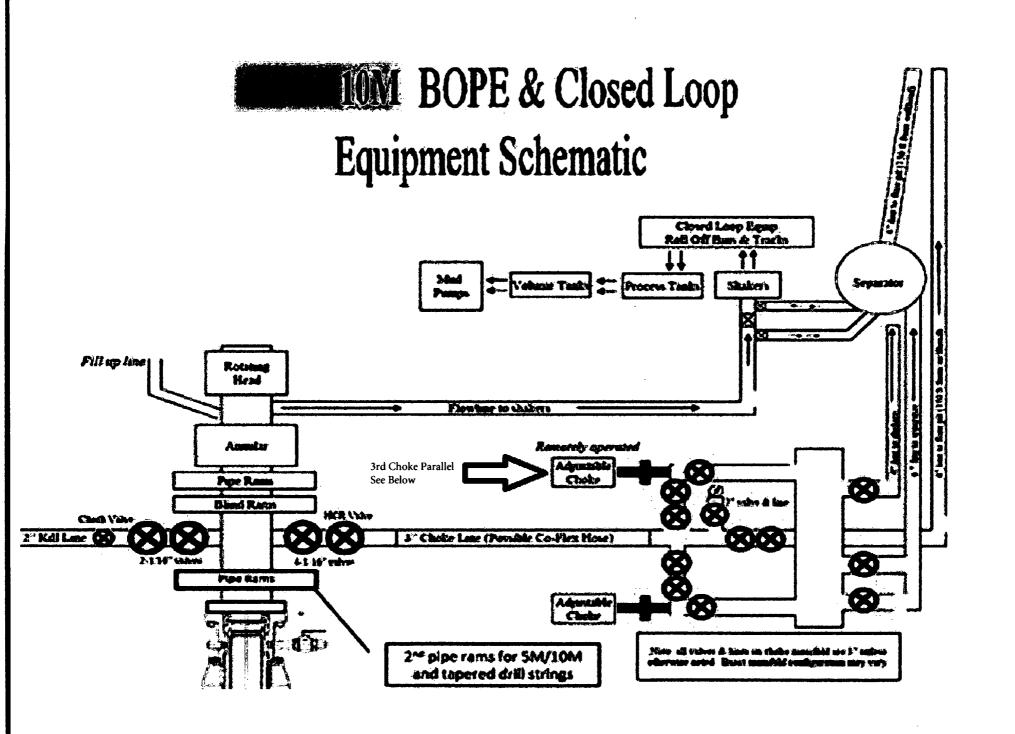


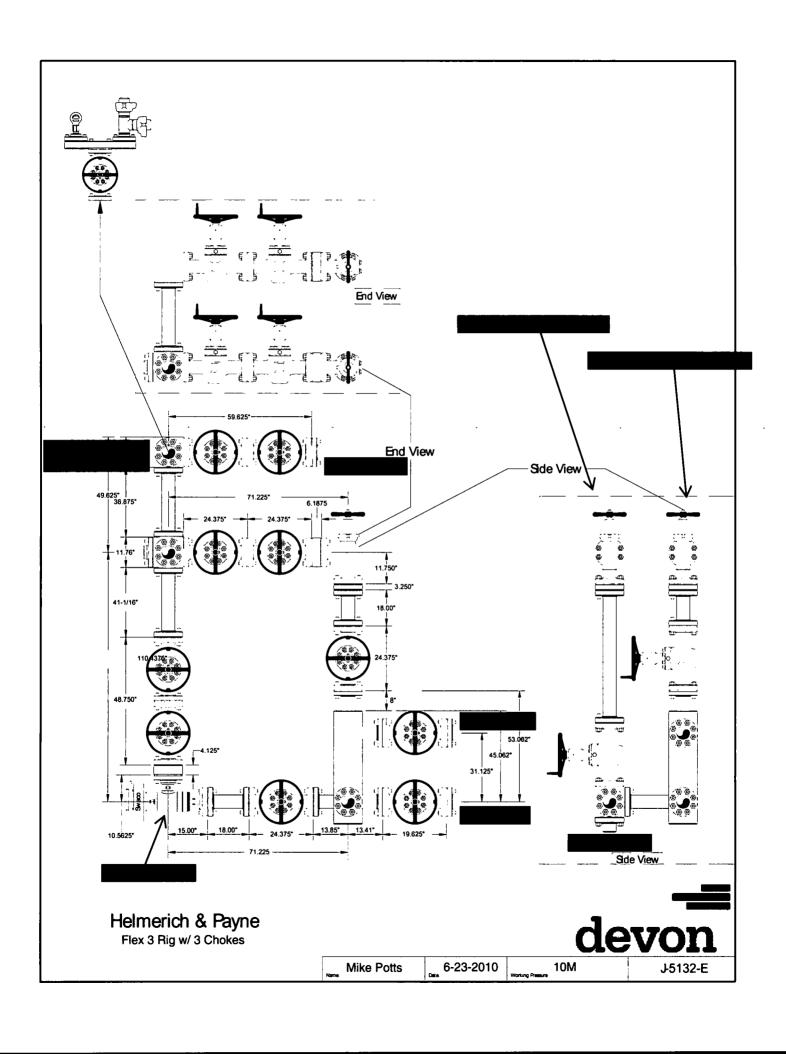


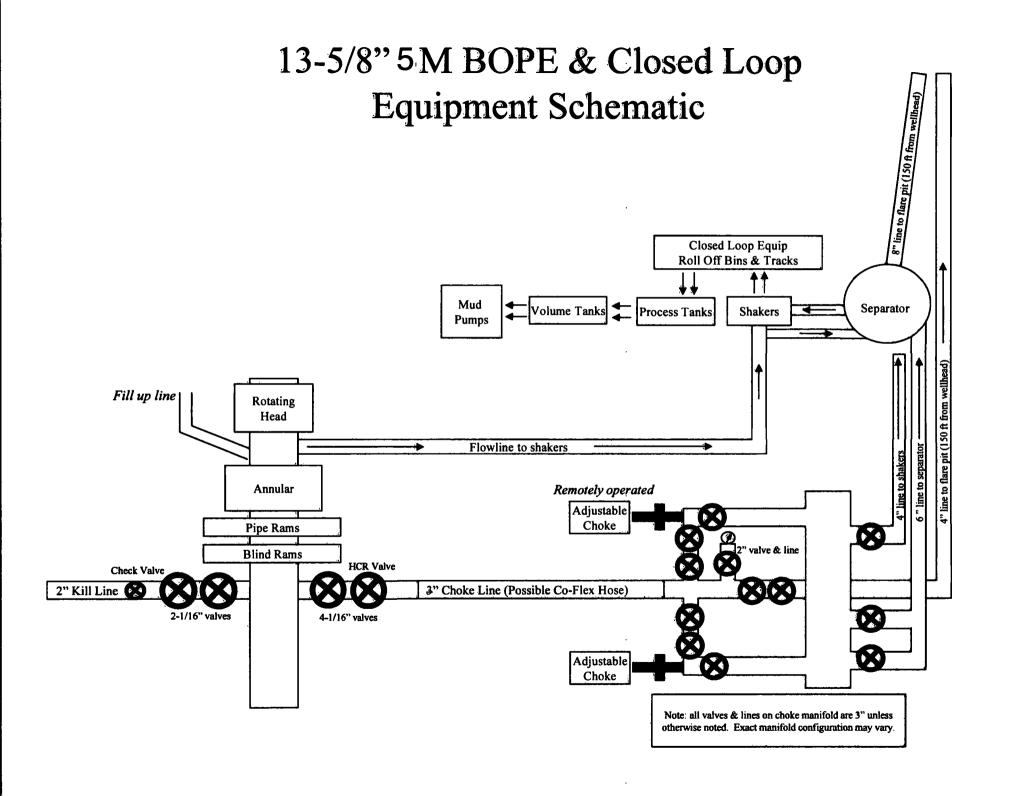


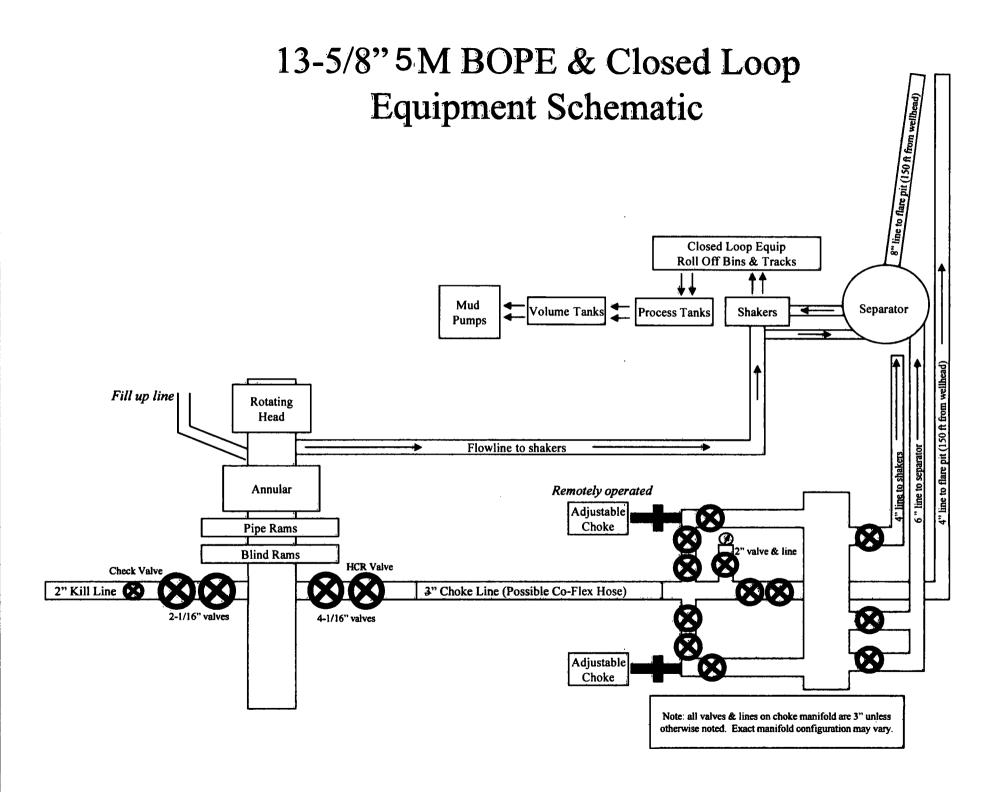


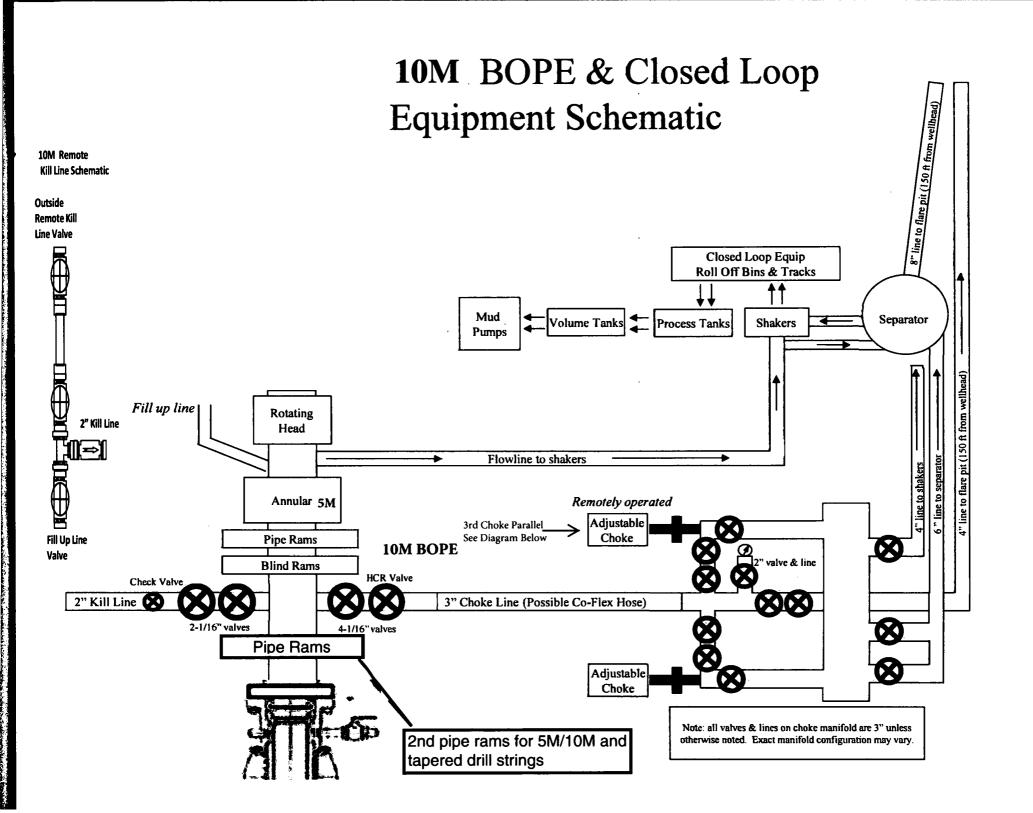


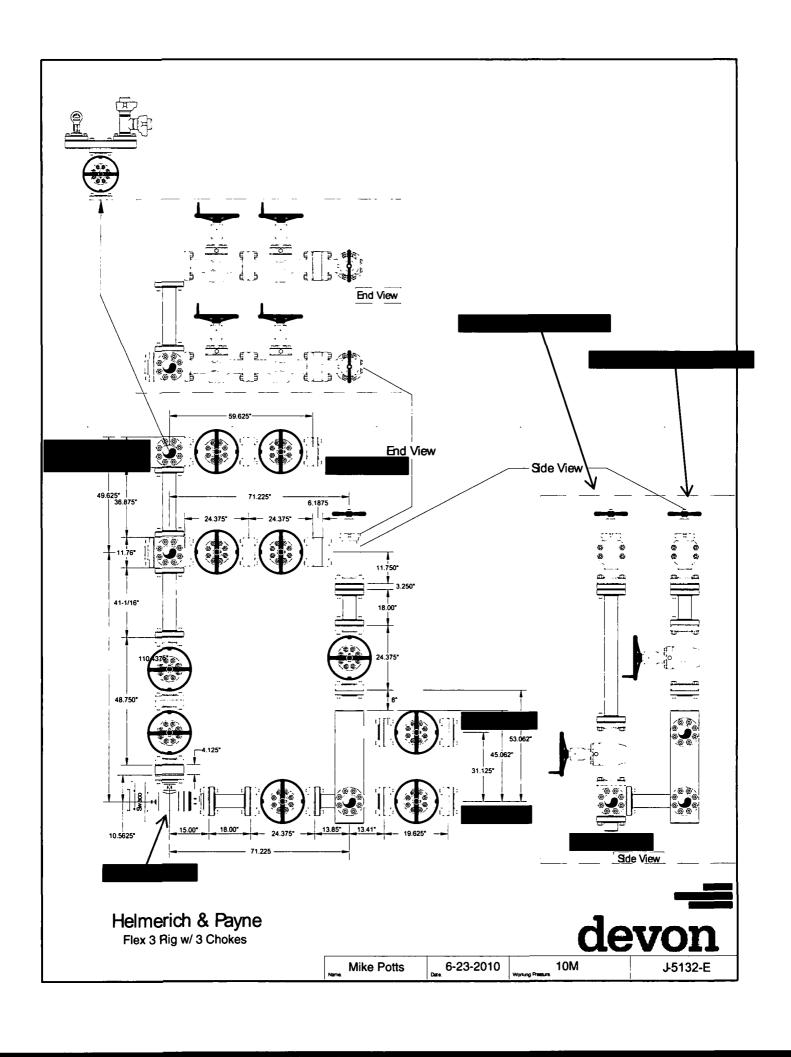












### **Casing Assumptions and Load Cases**

### Intermediate

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

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

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

### **Casing Assumptions and Load Cases**

### Intermediate

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

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

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

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

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

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

Surface

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

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

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

Intermediate

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

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

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

## Intermediate

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

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

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

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

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

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



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

# Hydrogen Sulfide (H₂S) Contingency Plan

For

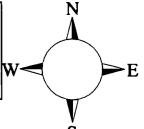
Stranger 34 Fed Com 14H

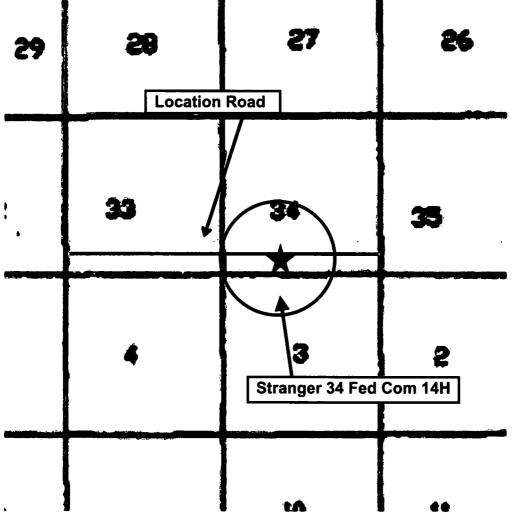
Sec-34 T-25S R-34E 205' FSL & 1910' FWL LAT. = 32.0803035' N (NAD83) LONG = 103.4601681' W

**Lea County NM** 

# Stranger 34 Fed Com 14H

This is an open drilling site. H₂S monitoring equipment and emergency response equipment will be used within 500' of zones known to contain H₂S, including warning signs, wind indicators and H₂S monitor.





**Assumed 100 ppm** ROE = **3000'** (Radius of Exposure) **100 ppm H2S concentration shall trigger activation of this plan.** 

## **Escape**

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

**Assumed 100 ppm ROE = 3000'** 

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

## **Emergency Procedures**

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

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

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

# **Contacting Authorities**

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

# **Hydrogen Sulfide Drilling Operation Plan**

# I. HYDROGEN SULFIDE (H2S) TRAINING

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

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

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

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

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

### II. HYDROGEN SULFIDE TRAINING

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

### 1. Well Control Equipment

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

## 2. Protective equipment for essential personnel:

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

## 3. H₂S detection and monitoring equipment:

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

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

### Visual warning systems:

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

### 4. Mud program:

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

## 5. Metallurgy:

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

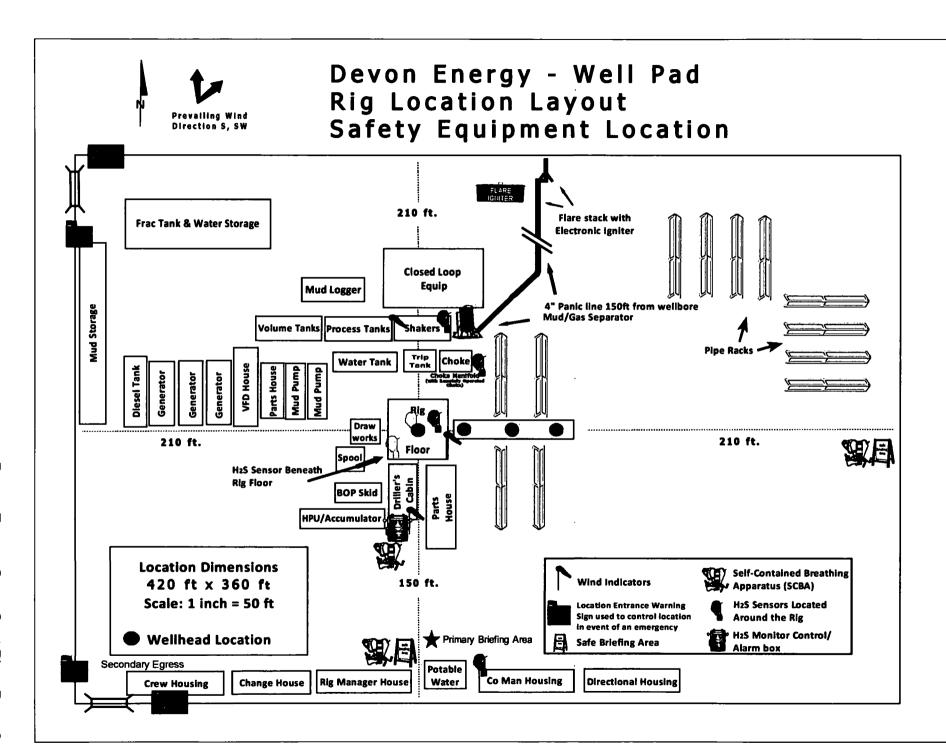
### 6. Communication:

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

## 7. Well testing:

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

Drilling Su	ıpervisor – Basin – Mark Kramer		405-823-479
EHS Profe	essional – Laura Wright		405-439-812
Agency	Call List		
<u>Lea</u>	Hobbs		
<u>County</u>	Lea County Communication Authority		393-398
(575)	State Police		392-558
	City Police		397-926
	Sheriff's Office		393-251
	Ambulance		91
	Fire Department	397-930	
	LEPC (Local Emergency Planning Committee	393-287	
	NMOCD		393-616
	US Bureau of Land Management		393-361
Eddy	Carlsbad	<u> </u>	
<u>County</u> (575)	State Police	885-313	
	City Police	885-211	
	Sheriff's Office	887-755	
	Ambulance	91	
	Fire Department	885-312	
	LEPC (Local Emergency Planning Committee	)	887-379
	US Bureau of Land Management		887-654
	NM Emergency Response Commission (Santa	a Fe)	(505) 476-960
	24 HR		(505) 827-912
	National Emergency Response Center		(800) 424-880
	National Pollution Control Center: Direct		(703) 872-600
	For Oil Spills		(800) 280-711
	Emergency Services		
	Wild Well Control		(281) 784-470
	1	15) 699- 39	(915) 563-335
	Halliburton		(575) 746-275
	B. J. Services		(575) 746-356
Give	Native Air – Emergency Helicopter – Hobbs		(575) 392-642
GPS	Flight For Life - Lubbock, TX		(806) 743-991
position:			(806) 747-892
	Med Flight Air Amb - Albuquerque, NM		(575) 842-443
	Lifeguard Air Med Svc. Albuquerque, NM		(800) 222-122
	Poison Control (24/7)		(575) 272-311
	Oil & Gas Pipeline 24 Hour Service  NOAA – Website - www.nhc.noaa.gov	(800) 364-436	



# **WCDSC Permian NM**

Lea County (NAD83 New Mexico East) Sec 34-T25S-R34E Stranger 34 Fed Com 14H

Wellbore #1

Plan: Permit Plan 1

# **Standard Planning Report - Geographic**

18 October, 2018

Database: Company: EDM r5000.141\_Prod US

Local Co-ordinate Reference:

Well Stranger 34 Fed Com 14H

Project:

WCDSC Permian NM

TVD Reference:

RKB @ 3330.90ft

Site:

Lea County (NAD83 New Mexico East) Sec 34-T25S-R34E

MD Reference:

RKB @ 3330.90ft

Well:

Stranger 34 Fed Com 14H

North Reference: **Survey Calculation Method:**  Grid Minimum Curvature

Wellbore: Design:

Project

Wellbore #1 Permit Plan 1

Lea County (NAD83 New Mexico East)

Map System: Geo Datum:

Map Zone:

US State Plane 1983

North American Datum 1983 New Mexico Eastern Zone

System Datum:

Mean Sea Level

Site

Sec 34-T25S-R34E

Site Position:

Northing:

399,101.34 usft

Latitude:

32.094242

From:

Мар

Easting:

Longitude:

809,821.58 usft

**Position Uncertainty:** 

Slot Radius:

13-3/16 "

6.75

**Grid Convergence:** 

-103.466349 0.46°

Well

Stranger 34 Fed Com 14H

**Well Position** 

+N/-S 0.00 8 0.00 ft +E/-W

Northing: Easting:

394 046 07 usft 811,776.73 usft Latitude: Longitude: 32.080304

**Position Uncertainty** 

0.50 ft

0.00 ft

Wellhead Elevation:

**Ground Level:** 

-103.460168 3,305.90 ft

Wellbore

Wellbore #1

**Magnetics Model Name IGRF2015**  Sample Date

10/18/2018

Declination (°)

Dip Angle (°)

**Field Strength** 

47,727.89210742

(nT)

Design

Permit Plan 1

**Audit Notes:** 

Version:

Phase:

**PROTOTYPE** 

Tie On Depth:

0.00

59.93

**Vertical Section:** 

Depth From (TVD) (ft)

0.00

+N/-S (ft) 0.00

+E/-W (ft)

0.00

Direction (°)

356.55

Plan Survey Tool Program

10/18/2018 Date

**Depth From** (ft)

Depth To (ft)

Survey (Wellbore)

**Tool Name** 

Remarks

1

0.00

17,769.07 Permit Plan 1 (Wellbore #1)

MWD+HDGM

OWSG MWD + HDGM **Plan Sections** 

Database:

EDM r5000.141\_Prod US

WCDSC Permian NM

Local Co-ordinate Reference:

Well Stranger 34 Fed Com 14H

Company: Project:

Lea County (NAD83 New Mexico East)

**TVD Reference:** MD Reference:

RKB @ 3330.90ft RKB @ 3330.90ft

Site: Well: Sec 34-T25S-R34E

North Reference:

Grid

Wellbore:

Stranger 34 Fed Com 14H

**Survey Calculation Method:** 

Minimum Curvature

Design:

Wellbore #1 Permit Plan 1

ned Survey					· ·		-		
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude
0.00	0.00	0.00	0.00	0.00	0.00	394,046.07	811,776.73	32.080304	-103.4601
100.00	0.00	0.00	100.00	0.00	0.00	394,046.07	811,776.73	32.080304	-103.4601
200.00	0.00	0.00	200.00	0.00	0.00	394,046.07	811,776.73	32.080304	-103.460°
300.00	0.00	0.00	300.00	0.00	0.00	394,046.07	811,776.73	32.080304	-103.460
400.00	0.00	0.00	400.00	0.00	0.00	394,046.07	811,776.73	32.080304	-103.460
500.00	0.00	0.00	500.00	0.00	0.00	394,046.07	811,776.73	32.080304	-103.460
600.00	0.00	0.00	600.00	0.00	0.00	394,046.07	811,776.73	32.080304	-103.460
700.00	0.00	0.00	700.00	0.00	0.00	394,046.07	811,776.73	32.080304	-103.460
800.00	0.00	0.00	800.00	0.00	0.00	394,046.07	811,776.73	32.080304	-103.460
900.00	0.00	0.00	900.00	0.00	0.00	394,046.07	811,776.73	32.080304	-103.460
1,000.00	0.00	0.00	1,000.00	0.00	0.00	394,046.07	811,776.73	32.080304	-103.460
1,100.00	0.00	0.00	1,100.00	0.00	0.00	394,046.07	811,776.73	32.080304	-103.460
1,200.00	0.00	0.00	1,200.00	. 0.00	0.00	394,046.07	811,776.73	. 32.080304	-103.460
1,300.00	0.00	0.00	1,300.00	0.00	0.00	394,046.07	811,776.73	32.080304	-103.460
1,400.00	0.00	0.00	1,400.00	0.00	0.00	394,046.07	811,776.73	32.080304	-103.460
1,500.00	0.00	0.00	1,500.00	0.00	0.00	394,046.07	811,776.73	32.080304	-103.460
1,600.00	0.00	0.00	1,600.00	0.00	0.00	394,046.07	811,776.73	32.080304	-103.460
1,700.00	0.00	0.00	1,700.00	0.00	0.00	394.046.07	811,776.73	32.080304	-103.460
1,800.00	0.00	0.00	1,800.00	0.00	0.00	394,046.07	811,776.73	32.080304	-103.460
1,900.00	0.00	0.00	1,900.00	0.00	0.00	394,046.07	811,776.73	32.080304	-103.460
2,000.00	0.00	0.00	2,000.00	0.00	0.00	394,046.07	811,776.73	32.080304	-103.460
2,100.00	0.00	0.00	2,100.00	0.00	0.00	394,046.07	811,776.73	32.080304	-103.460
2,200.00	0.00	0.00	2,200.00	0.00	0.00	394,046.07	811,776.73	32.080304	-103,460
2,300.00	0.00	0.00	2,300.00	0.00	0.00	394,046.07	811,776.73	32.080304	-103.460
2,400.00	0.00	0.00	2,400.00	0.00	0.00	394,046.07	811,776.73	32.080304	-103.460
2,500.00	0.00	0.00	2,500.00	0.00	0.00	394,046.07	811,776.73	32.080304	-103.460
2,600.00	1.00	262.36	2,599.99	-0.12	-0.86	394,045.95	811,775.86	32.080303	-103,460
2,700.00	2.00	262.36	2,699.96	-0.46	-3.46	394,045.60	811,773.27	32.080302	-103.460
2,758.16	2.58	262.36	2,758.07	-0.77	-5.76	394,045.29	811,770.96	32.080302	-103.460
2,800.00	2.58	262.36	2,799.87	-1.02	-7.63	394,045.04	811,769.09	32.080301	-103.460
2,900.00	2.58	262.36	2,899.77	-1.62	-7.03 -12.10	394,044,44	811,764.63	32.080299	-103.460
3,000.00	2.58	262.36	2,999.67	-2.22	-16.56	394,043.84	811,760.17	32.080298	-103.460
3,100.00	2.58	262.36	3,099.57	-2.22 -2.82	-10.30	394,043.25	811,755.70	32.080296	-103.460
3,200.00	2.58	262.36	3,199.46	-2.62 -3.42	-21.02 -25.49	394,043.25 394,042.65	811,751.24	32.080295	-103.460
3,300.00	2.58	262.36	3,299.36	-3.42 -4.02	-23. <del>43</del> -29.95	394,042.05	811,746.77	32.080293	-103.460
3,400.00	2.58	262.36	3,399.26	-4.62	-2 <del>9.9</del> 5 -34.42	394,041.45		32.080293	-103.460
-		262.36	•		-34.42 -38.88		811,742.31 811,737.84		
3,500.00	2.58	262.36	3,499.16	-5.22 5.01	-30.66 -43.34	394,040.85	811,733.38	32.080290	-103.460 -103.460
3,600.00	2.58		3,599.06	-5.81		394,040.25	•	32.080289	-103.460
3,700.00	2.58	262.36	3,698.96	-6.41 7.04	-47.81 -50.07	394,039.65	811,728.92	32.080287	
3,800.00	2.58	262.36	3,798.86	-7.01	-52.27	394,039.05	811,724.45	32.080285	-103.460
3,900.00	2.58	262.36	3,898.75	-7.61	-56.74	394,038.46	811,719.99	32.080284	-103.460
4,000.00	2.58	262.36	3,998.65	-8.21	-61.20	394,037.86	811,715.52	32.080282	-103.460
4,100.00	2.58	262.36	4,098.55	-8.81	-65.67	394,037.26	811,711.06	32.080281	-103.460
4,200.00	2.58	262.36	4,198.45	-9.41	-70.13	394,036.66	811,706.59	32.080279	-103.460
4,300.00	2.58	262.36	4,298.35	-10.01	-74.59	394,036.06	811,702.13	32.080278	-103.460
4,400.00	2.58	262.36	4,398.25	-10.61	-79.06	394,035.46	811,697.67	32.080276	-103.460
4,500.00	2.58	262.36	4,498.14	-11.20	-83.52	394,034.86	811,693.20	32.080275	-103.460
4,600.00	2.58	262.36	4,598.04	-11.80	-87.99	394,034.26	811,688.74	32.080273	-103.460
4,700.00	2.58	262.36	4,697.94	-12.40	-92.45	394,033.66	811,684.27	32.080272	-103.460
4,800.00	2.58	262.36	4,797.84	-13.00	-96.92	394,033.07	811,679.81	32.080270	-103.460
4,900.00	2.58	262.36	4,897.74	-13.60	-101.38	394,032.47	811,675.35	32.080268	-103.460
5,000.00	2.58	262.36	4,997.64	-14.20	-105.84	394,031.87	811,670.88	32.080267	-103.460
5,100.00	2.58	262.36	5,097.54	-14.80	-110.31	394,031.27	811,666.42	32.080265	-103.460
5,200.00	2.58	262.36	5,197.43	-15.40	-114.77	394,030.67	811,661.95	32.080264	-103.460
5,300.00	2.58	262.36	5,297.33	-16.00	-119.24	394,030.07	811,657.49	32.080262	-103.460

Database:

EDM r5000.141\_Prod US

WCDSC Permian NM

Local Co-ordinate Reference: **TVD Reference:** 

Well Stranger 34 Fed Com 14H

Company: Project:

Lea County (NAD83 New Mexico East)

MD Reference:

RKB @ 3330.90ft RKB @ 3330.90ft

Site: Well: Sec 34-T25S-R34E

North Reference:

Grid

Wellbore:

Stranger 34 Fed Com 14H

**Survey Calculation Method:** 

Minimum Curvature

Design:

Wellbore #1 Permit Plan 1

Planned Survey		-							
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude
5,400.00	2.58	262.36	5,397.23	-16.59	-123.70	394,029.47	811,653.02	32.080261	-103.460568
5,500.00	2.58	262.36	5,497.13	-17.19	-128.16	394,028.87	811,648.56	32.080259	-103.460583
5,600.00	2.58	262.36	5,597.03	-17.79	-132.63	394,028.27	811,644.10	32.080258	-103.460597
5,700.00	2.58	262.36	5,696.93	-18.39	-137.09	394,027.68	811,639.63	32.080256	-103.460611
5,800.00	2.58	262.36	5,796.83	-18.99	-141.56	394,027.08	811,635.17	32.080255	-103.460626
5,900.00	2.58	262.36	5,896.72	-19.59	-146.02	394,026.48	811,630.70	32.080253	-103.460640
6,000.00	2.58	262.36	5,996.62	-20.19	-150.49	394,025.88	811,626.24	32.080251	-103.460655
6,100.00	2.58	262.36	6,096.52	-20.79	-154.95	394,025.28	811,621.78	32.080250	-103.460669
6,200.00	2.58	262.36	6,196.42	-21.38	-159.41	394,024.68	811,617.31	32.080248	-103.460684
6,300.00	2.58	262.36	6,296.32	-21.98	-163.88	394,024.08	811,612.85	32.080247	-103.460698
6,400.00	2.58	262.36	6,396.22	-22.58	-168.34	394,023.48	811,608.38	32.080245	-103.460712
6,500.00	2.58	262.36	6,496.12	-23.18	-172.81	394,022.88	811,603.92	32.080244	-103.460727
6,600.00	2.58.	262.36	6,596.01	<i>-</i> 23.78	-177.27	394,022.29	811,599.45	. 32.080242	-103.460741
6,700.00	2.58	262.36	6,695.91	-24.38	-181.74	394,021.69	811,594.99	32.080241	-103.460756
6,800.00	2.58	262.36	6,795.81	-24.98	-186.20	394,021.09	811,590.53	32.080239	-103.460770
6,900.00	2.58	262.36	6,895.71	-25.58	-190.66	394,020.49	811,586.06	32.080238	-103.460785
7,000.00	2.58	262.36	6,995.61	-26.18	-195.13	394,019.89	811,581.60	32.080236	-103.460799
7,100.00	2.58	262.36	7,095.51	-26.77	-199.59	394,019.29	811,577.13	32.080234	-103.460813
7,200.00	2.58	262.36	7,195.40	-27.37	-204.06	394,018.69	811,572.67	32.080233	-103.460828
7,300.00	2.58	262.36	7,295.30	-27.97	-208.52	394,018.09	811,568.20	32.080231	-103.460842
7,400.00	2.58	262.36	7,395.20	-28.57	-212.98	394,017.50	811,563.74	32.080230	-103.460857
7,500.00	2.58	262.36	7,495.10	-29.17	-217.45	394,016.90	811,559.28	32.080228	-103.460871
7,600.00	2.58	262.36	7,595.00	-29.77	-221.91	394,016.30	811,554.81	32.080227	-103.460886
7,700.00	2.58	262.36	7,694.90	-30.37	-226.38	394,015.70	811,550.35	32.080225	-103.460900
7,800.00	2.58	262.36	7,794.80	-30.97	-230.84	394,015.10	811,545.88	32.080224	-103.460914
7,900.00	2.58	262.36	7,894.69	-31.57	-235.31	394,014.50	811,541.42	32.080222	-103.460929
8,000.00	2.58	262.36	7,994.59	-32.16	-239.77	394,013.90	811,536.96	32.080221	-103.460943
8,100.00	2.58	262.36	8,094.49	-32.76	-244.23	394,013.30	811,532.49	32.080219	-103.460958
8,200.00	2.58	262.36	8,194.39	-33.36	-248.70	394,012.70	811,528.03	32.080217	-103.460972
8,300.00	2.58	262.36	8,294.29	-33.96	-253.16 257.63	394,012.11	811,523.56	32.080216	-103.460987
8,400.00	2.58	262.36	8,394.19	-34.56	-257.63	394,011.51	811,519.10	32.080214	-103.461001
8,500.00	2.58	262.36 262.36	8,494.09	-35.16	-262.09	394,010.91	811,514.63	32.080213	-103.461015
8,600.00 8,700.00	2.58 2.58	262.36	8,593.98 8,693.88	-35.76 -36.36	-266.56 -271.02	394,010.31 394,009.71	811,510.17 811,505.71	32.080211 32.080210	-103.461030 -103.461044
8,800.00	2.58	262.36	8,793.78	-36.96	-271.02	394,009.11	811,501.24	32.080208	-103.461059
8,900.00	2.58	262.36	8,893.68	-37.55	-279.95	394,008.51	811,496.78	32.080207	-103.461073
9,000.00	2.58	262.36	8,993.58	-38.15	-284.41	394,007.91	811,492.31	32.080205	-103.461088
9,100.00	2.58	262.36	9,093.48	-38.75	-288.88	394,007.31	811,487.85	32.080203	-103.461102
9,200.00	2.58	262.36	9,193.38	-39.35	-293.34	394,006.72	811,483.38	32.080202	-103.461116
9,300.00	2.58	262.36	9,293.27	-39.95	-297.81	394,006.12	811,478.92	32.080200	-103.461131
9,400.00	2.58	262.36	9,393.17	-40.55	-302.27	394,005.52	811,474.46	32.080199	-103.461145
9,500.00	2.58	262.36	9,493.07	-41.15	-306.73	394,004.92	811,469.99	32.080197	-103.461160
9,600.00	2.58	262.36	9,592.97	-41.75	-311.20	394,004.32	811,465.53	32.080196	-103.461174
9,700.00	2.58	262.36	9,692.87	-42.34	-315.66	394,003.72	811,461.06	32.080194	-103.461189
9,800.00	2.58	262.36	9,792.77	-42.94	-320.13	394,003.12	811,456.60	32.080193	-103.461203
9,900.00	2.58	262.36	9,892.66	-43.54	-324.59	394,002.52	811,452.14	32.080191	-103.461217
10,000.00	2.58	262.36	9,992.56	-44.14	-329.05	394,001.92	811,447.67	32.080190	-103.461232
10,100.00	2.58	262.36	10,092.46	-44.74	-333.52	394,001.33	811,443.21	32.080188	-103.461246
10,200.00	2.58	262.36	10,192.36	-45.34	-337.98	394,000.73	811,438.74	32.080186	-103.461261
10,300.00	2.58	262.36	10,292.26	-45.94	-342.45	394,000.13	811,434.28	32.080185	-103.461275
10,400.00	2.58	262.36	10,392.16	-46.54	-346.91	393,999.53	811,429.81	32.080183	-103.461290
10,500.00	2.58	262.36	10,492.06	-47.14	-351.38	393,998.93	811,425.35	32.080182	-103.461304
10,600.00	2.58	262.36	10,591.95	-47.73	-355.84	393,998.33	811,420.89	32.080180	-103.461318
10,700.00	2.58	262.36	10,691.85	-48.33	-360.30	393,997.73	811,416.42	32.080179	-103.461333
10,800.00	2.58	262.36	10,791.75	-48.93	-364.77	393,997.13	811,411.96	32.080177	-103.461347

Database: Company: EDM r5000.141\_Prod US WCDSC Permian NM

Lea County (NAD83 New Mexico East) Sec 34-T25S-R34E

Site: Well:

Project:

Wellbore: Design:

Stranger 34 Fed Com 14H

Wellbore #1 Permit Plan 1 Local Co-ordinate Reference:

**TVD Reference:** 

MD Reference:

North Reference:

**Survey Calculation Method:** 

Well Stranger 34 Fed Com 14H

RKB @ 3330.90ft RKB @ 3330.90ft

Grid

Minimum Curvature

Planned Survey

Measured			Vertical			Мар	Мар		
Depth	Inclination	Azimuth	Depth	+N/-S	+E/-W	Northing	Easting		
(ft)	(°)	(°)	(ft)	(ft)	(ft)	(usft)	(usft)	Latitude	Longitude
10,900.0	2.58	262.36	10,891.65	-49.53	-369.23	393,996.54	811,407.49	32.080176	-103.461362
11,000.0	2.58	262.36	10,991.55	-50.13	-373.70	393,995.94	811,403.03	32.080174	-103.461376
11,100.00	2.58	262.36	11,091.45	-50.73	-378.16	393,995.34	811,398.56	32.080173	-103.461391
11,200.0		262.36	11,191.35	-51.33	-382.63	393,994.74	811,394.10	32.080171	-103.461405
11,300.0		262.36	11,291.24	-51.93	-387.09	393,994.14	811,389.64	32.080169	-103.461419
11,400.0		262.36	11,391.14	-52.53	-391.55	393,993.54	811,385.17	32.080168	-103.461434
11,500.0		262.36	11,491.04	-53.12	-396.02	393,992.94	811,380.71	32.080166	-103.461448
11,600.0		262.36	11,590.94	-53.72	-400.48	393,992.34	811,376.24	32.080165	-103.461463
11,700.0		262.36	11,690.84	-54.32	-404.95	393,991.74	811,371.78	32.080163	-103.461477
11,727.14		262.36	11,717.95	-54.48	-406.16	393,991.58	811,370.57	32.080163	-103.461481
11,800.0		262.36	11,790.76	-54.83	-408.72	393,991.24	811,368.00	32.080162	-103.461489
11,899.2		0.00	11,890.00	-55.00	-410.00	393,991.07	811,366.73	32.080162	-103.461493
11,900.0		. 0.00	11,890.75	-55.00	-410.00	393,991.07	811,366.73	.32.080162	-103.461493
12,000.0		0.00	11,990.75	-55.00	<del>-4</del> 10.00	393,991.07	811,366.73	32.080162	-103.461493
12,100.0		0.00	12,090.75	-55.00	-410.00	393,991.07	811,366.73	32.080162	-103.461493
12,200.0		0.00	12,190.75	-55.00	-410.00	393,991.07	811,366.73	32.080162	-103.46149
12,249.2		0.00	12,240.04	-55.00	<b>-410.00</b>	393,991.07	811,366.73	32.080162	-103.46149
-	FTP @ 12249'			-55.00	-410.00	333,331.07	011,300.73	32.000102	-105.40149
12,300.0	-	64.16	12,290.69	-54.02	-407.98	393 992 04	811,368.75	32.080164	-103,461487
12,400.0		64.16	12,389.02	-46.40	-392.24	393,999.67	811,384.48	32.080185	-103.46143
12,418.7		64.16	12,406.99	-44.15	-387.60	394,001.91	811,389.13	32.080191	-103.46142
12,500.0		43.63	12,483.80	-28.13	-366.57	394,017.93	811,410.15	32.080234	-103.46135
12,600.0		28.78	12,574.10	6.76	-342.01	394,052.83	811,434.71	32.080330	-103.46127
12,700.00		20.00	12,657.22	57.39	-319.59	394,103.45	811,457.14	32.080468	-103.46119
12,800.0		14.16	12,730.62	122.21	-299.98	394,168.28	811,476.74	32.080646	-103.46113
12,900.0		9.85	12,792.08	199.25	-283.79	394,245.32	811,492.93	32.080858	-103.46107
13,000.0		6.39	12,839.72	286.17	-271.51	394,332.23	811,505.21	32.081096	-103.461037
13,100.0		3.41	12,872.09	380.31	-263.51	394,426.37	811,513.21	32.081355	-103.461009
13,100.0		0.67	12,888.20	478.81	-260.04	394,524.88	811,516.68	32.081625	-103.460995
13,246.2		359.44	12,890.00	525.00	-260.00	394,571.07	811,516.73	32.081752	-103.460994
13,300.0		359.44	12,890.00	578.76	-260.53	394,624.83	811,516.20	32.081900	-103.460994
13,400.0		359.44	12,890.00	678.76	-261.52	394,724.82	811,515.21	32.082175	-103.460995
13,500.0		359.44	12,890.00	778.75	-261.52 -262.50	394,824.82	811,514.22	32.082450	-103.46099
13,600.0		359.44	12,890.00	878.75	-263.49	394,924.81	811,513.24	32.082725	-103.460996
13,700.0		359.44	12,890.00	978.74	-264.47	395,024.81	811,512.25	32.083000	-103.46099
13,800.0		359.44	12,890.00	1,078.74	-265.46	395,124.80	811,511.27	32.083275	-103.460997
13,900.0		359.44	12,890.00	1,178.73	-266.44	395,224.80	811,510.28	32.083549	-103.460998
14,000.0		359.44	12,890.00	1,176.73	-267.43	395,324.79	811,509.30	32.083824	-103.46099
14,100.00		359.44	12,890.00	1,378.72	-267. <del>4</del> 3 -268.41	395,424.79	811,508.31	32.084099	-103.46099
14,100.00		359.44	12,890.00	1,478.72	-269.40	395,524.78	811,507.33	32.084374	-103.46099
14,300.00		359.44	12,890.00	1,578.71	-209.40 -270.38	395,624.78	811,506.34	32.084649	-103.46100
			•	•		•			
14,400.00		359.44	12,890.00	1,678.71	-271.37	395,724.77	811,505.36	32.084924	-103.46100 -103.46100
14,500.00		359.44	12,890.00	1,778.70	-272.36	395,824.77	811,504.37	32.085199	
14,600.00		359.44	12,890.00	1,878.70	-273.34	395,924.76	811,503.38	32.085474	-103.46100
14,700.00		359.44	12,890.00	1,978.69	-274.33	396,024.76	811,502.40	32.085748	-103.461002
14,800.00		359.44	12,890.00	2,078.69	-275.31	396,124.75	811,501.41	32.086023	-103.461003
14,900.00		359.44	12,890.00	2,178.68	-276.30	396,224.75	811,500.43	32.086298	-103.46100
15,000.00		359.44	12,890.00	2,278.68	-277.28	396,324.74	811,499.44	32.086573	-103.46100
15,100.00		359.44	12,890.00	2,378.67	-278.27	396,424.74	811,498.46	32.086848	-103.46100
15,200.00		359.44	12,890.00	2,478.67	-279.25	396,524.73	811,497.47	32.087123	-103.46100
15,300.00	90.00	359.44	12,890.00	2,578.67	-280.24	396,624.73	811,496.49	32.087398	-103.46100
15,400.00	90.00	359.44	12,890.00	2,678.66	-281.23	396,724.72	811,495.50	32.087673	-103.461006
15,500.00	90.00	359.44	12,890.00	2,778.66	-282.21	396,824.72	811,494.52	32.087947	-103.46100
15,600.00	90.00	359.44	12,890.00	2,878.65	-283.20	396,924.71	811,493.53	32.088222	-103.461007

Database:

EDM r5000.141\_Prod US

WCDSC Permian NM

Local Co-ordinate Reference: TVD Reference:

Well Stranger 34 Fed Com 14H

Company: Project:

Lea County (NAD83 New Mexico East)

MD Reference:

RKB @ 3330.90ft

Site: Well: Sec 34-T25S-R34E

North Reference:

RKB @ 3330.90ft Grid

Wellbore:

Stranger 34 Fed Com 14H Wellbore #1

**Survey Calculation Method:** 

Minimum Curvature

Design: Permit Plan 1

nned Survey									
Measured			Vertical			Map Northing	Map Easting		
Depth (ft)	Inclination (°)	Azimuth (°)	Depth (ft)	+N/-S (ft)	+E/-W (ft)	(usft)	(usft)	Latitude	Longitude
15,700.00	90.00	359.44	12,890.00	2,978.65	-284.18	397,024.71	811,492.54	32.088497	-103.4610
15,800.00	90.00	359.44	12,890.00	3,078.64	-285.17	397,124.70	811,491.56	32.088772	-103.4610
15,900.00	90.00	359.44	12,890.00	3,178.64	-286.15	397,224.70	811,490.57	32.089047	-103.4610
16,000.00	90.00	359.44	12,890.00	3,278.63	-287.14	397,324.69	811,489.59	32.089322	-103.4610
16,100.00	90.00	359.44	12,890.00	3,378.63	-288.12	397,424.69	811,488.60	32.089597	-103.4610
16,200.00	90.00	359.44	12,890.00	3,478.62	-289.11	397,524.68	811,487.62	32.089871	-103.4610
16,300.00	90.00	359.44	12,890.00	3,578.62	-290.09	397,624.68	811,486.63	32.090146	-103.4610
16,400.00	90.00	359.44	12,890.00	3,678.61	-291.08	397,724.67	811,485.65	32.090421	-103.4610
16,500.00	90.00	359.44	12,890.00	3,778.61	-292.07	397,824.67	811,484.66	32.090696	-103.4610
16,600.00	90.00	359.44	12,890.00	3,878.60	-293.05	397,924.66	811,483.67	32.090971	-103.4610
16,700.00	90.00	359.44	12,890.00	3,978.60	-294.04	398,024.66	811,482.69	32.091246	-103.4610
16,800.00	90.00	359.44	12,890.00	4,078.59	-295.02	398,124.65	811,481.70	32.091521	-103.4610
16,900.00	90.00	. 359.44	12,890.00	4,178.59	-296.01	398,224.65	811,480.72	32.091796	-103.4610
17,000.00	90.00	359.44	12,890.00	4,278.58	-296.99	398,324.64	811,479.73	32.092070	-103.4610
17,100.00	90.00	359.44	12,890.00	4,378.58	-297.98	398,424.64	811,478.75	32.092345	-103.4610
17,200.00	90.00	359.44	12,890.00	4,478.57	-298.96	398,524.63	811,477.76	32.092620	-103.4610
17,300.00	90.00	359.44	12,890.00	4,578.57	-299.95	398,624.63	811,476.78	32.092895	-103.4610
17,400.00	90.00	359.44	12,890.00	4,678.56	-300.93	398,724.62	811,475.79	32.093170	-103.4610
17,500.00	90.00	359.44	12,890.00	4,778.56	-301.92	398,824.61	811,474.81	32.093445	-103.4610
17,600.00	90.00	359.44	12,890.00	4,878.55	-302.91	398,924.61	811,473.82	32.093720	-103.4610
17,689.07	90.00	359.44	12,890.00	4,967.62	-303.78	399,013.68	811,472.94	32.093965	-103.4610
LTP @ 17	7690' MD, 100	' FNL, 1650' F	WL						
17,700.00	90.00	359.44	12,890.00	4,978.55	-303.89	399,024.60	811,472.83	32.093995	-103.4610
17,769.07	90.00	359.44	12,890.00	5,047.62	-304.57	399,093.67	811,472.15	32.094184	-103.4610
PBHL; 20	)' FNL, 1650' I	FWL			-				

Design Targets			-	~	-			-	-
Target Name - hit/miss target - Shape	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (usft)	Easting (usft)	Latitude	Longitude
PBHI - Stranger 34 Fed	0.00	0.00	0.00	5 047 59	-305.02	399 093 65	811 471 71	32 094184	-103 461021

- plan misses target center by 5056.80ft at 0.00ft MD (0.00 TVD, 0.00 N, 0.00 E)

- Point

Plan Annota	tions			* -	
Measured Vertical			Local Coor	dinates	
	Depth	Depth	+N/-S	+E/-W	
}	(ft)	(ft)	(ft)	(ft)	Comment
	12,249.29	12,240.04	-55.00	-410.00	KOP @ FTP @ 12249' MD, 150' FSL, 1500' FWL
	17,689.07	12,890.00	4,967.62	-303.78	LTP @ 17690' MD, 100' FNL, 1650' FWL
	17,769.07	12,890.00	5,047.62	-304.57	PBHL; 20' FNL, 1650' FWL

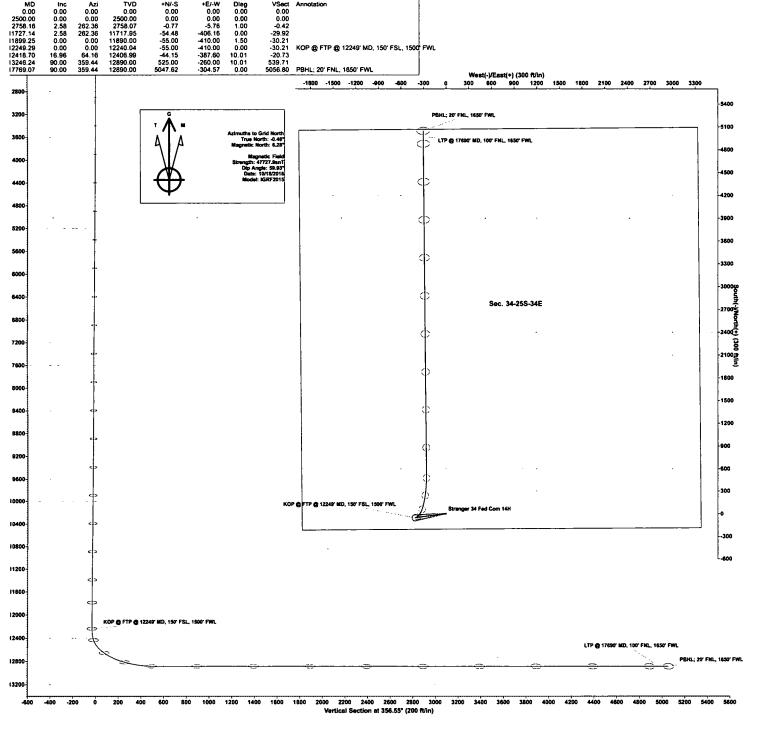
### **WCDSC Permian NM**

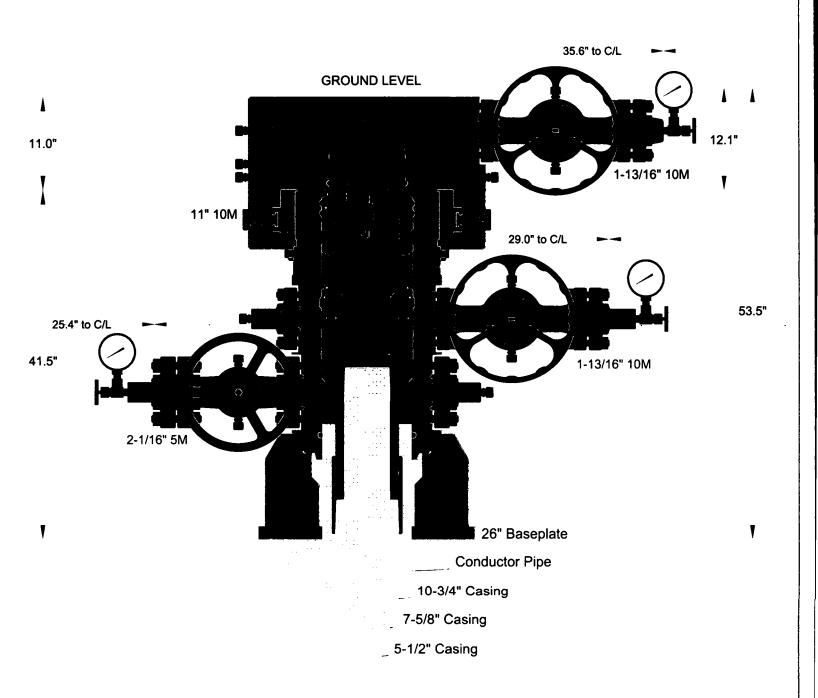
WELL DETAILS: Stranger 34 Fed Corn 14H

RKB @ 3330.90ft 3305.90

	3303.90							
	Northing 394046.07	Easting 811776.73		ittude 80304	Longitude -103.46016			
	<u> </u>	SECTION	N DETAILS	Perr	nit Plan 1			
Azi	TVD	+N/-S	+E/-W	Dieg	VSect	Annotation		
.00	0.00	0.00	0.00	0.00	0.00			
.00	2500.00	0.00	0.00	0.00	0.00			

devon





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# CACTUS WELLHEAD LLC

16" x 11-7/8" x 7-5/8" MBU-T Wellhead Assembly With 7-5/8" & 5-1/2" Pin Bottom Mandrel Casing Hangers And 11" 10M MBU-T-HPS-F TA Cap

# **DEVON ENERGY CORPORATION**

DRAWN DLE 29NOV17
APPRV

DRAWING NO.

OKE0001764

# Devon Energy APD VARIANCE DATA

**OPERATOR NAME:** Devon Energy

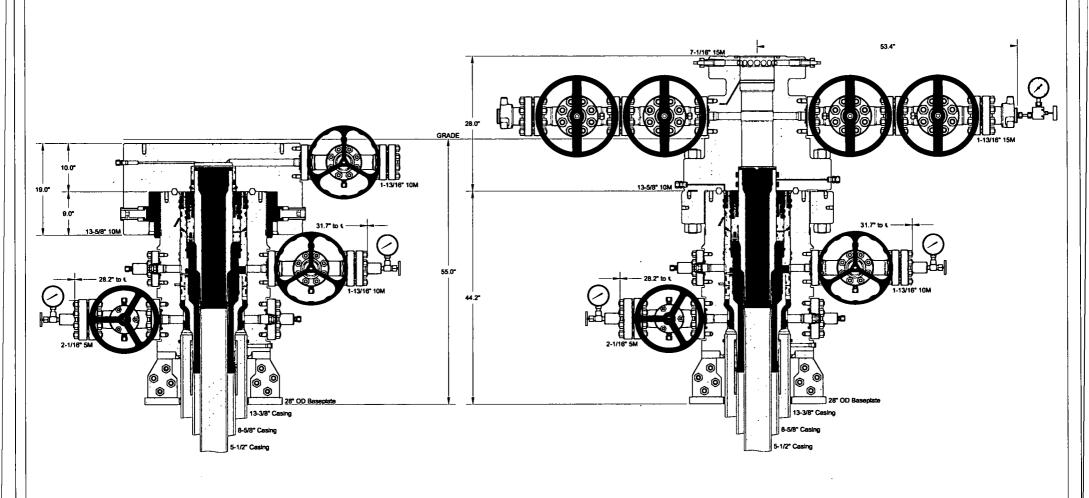
### 1. SUMMARY OF Variance:

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

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

### 2. Description of Operations

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



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# **CACTUS WELLHEAD LLC**

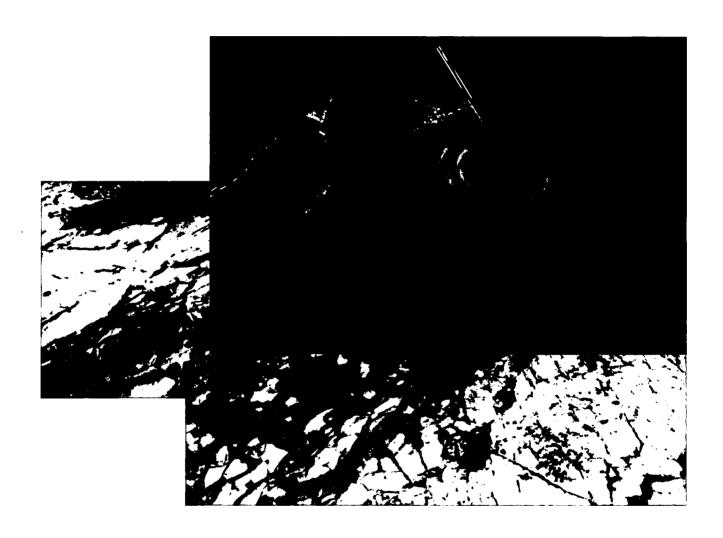
13-3/8" x 8-5/8" x 5-1/2" 5M MBU-3T Wellhead System With 8-5/8" & 5-1/2" Pin Down Rotating Mandrel Hangers And 13-5/8" 10M x 7-1/16" 15M CTH-P-DBLHPS Tubing Head

# **DEVON ENERGY CORPORATION**

DRAWN	DLE	10MAY18
APPRV		
DRAWING NO	ODE00	02309



# 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.

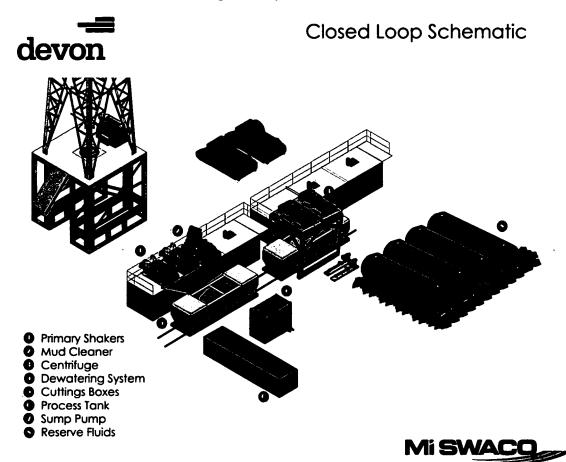
Prior to installing a closed-loop system on site, the topsoil, if present, will be stripped and stockpiled for use as the final cover or fill at the time of closure.

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.



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.

Metal One Corp.	FLUSHMA	FLUSHMAX-III				
Metal One	0	Compaction Data Chart				
	Connection Dat	Connection Data Sheet				
	Pipe Body	<u>Imperi</u>	<u>al</u>	<u>S.I.</u>		
FLUSHMAX-III	Pipe OD ( D )	7 5/8	in	193.68	mm	
PLUSHWAX-III	Actual weight	29.04		43.21	kg/m	
	Pipe ID ( d )	6.875	in	174.63	mm	
	Drift Dia.	6.750	in	171.45	mm	
	Connection					
4 7	PIÑ ID	6.875	in	174.63	mm	
Box critical area	Thread Taper		l / 16 ( 3/4	l" per ft )		
Make up —d	Performance Properties	for Pipe Bod	ly			
Pin	M.I.Y.P.	9,470	psi	65.31	MPa	
critical	Note S.M.Y.S.= Spec M.I.Y.P. = Minir					
	Performance Properties	for Connect	ion			
	Min. Compression Yield	563 kip	s ( 60% c	of S.M.Y.S.)	·	
D	External Pressure		100% 0	Collapse S	strength	
1 1	Recommended Torque					
	Opti.	17,200	ft-lb	23,300	N-m	
	Operational Max. Note: Operational Max.	23,600 torque can be ap	ft-lb	32,000 h torque applic	N-m ation	

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Statements regarding the suitability of products for certain types of applications are based on Metal One's knowledge of typical requirements that are often placed on Metal One products in standard well configurations. Such statements are not binding statements about the suitability of products for a particular application. It is the customer's responsibility to validate that a particular product with the properties described in the product specification is suitable for use in a particular application

The products described in this Connection Data Sheet are not recommended for use in deep water offshore applications. For more information, please refer to <a href="http://www.mtlo.co.jp/mo-con/">http://www.mtlo.co.jp/mo-con/</a> images/top/WebsiteTerms Active 20333287 1.pdf the contents of which are incorporated by reference into this Connection Data Sheet.



# **U. S. Steel Tubular Products** 10.75 40.5/0.35 J55

IECHANICAL PROPERTIES	Pipo	et@	LIG STJ	STC	
Minimum Yield Strength	55,000	-	_		psi
Maximum Yield Strength	80,000				psi
Minimum Tensile Strength	75,000		<b></b>		psi
IMENSIONS	Apo	enc	e e e	STC	
Outside Diameter	10.750	11.750		11.750	in.
Wall Thickness	0.350				in.
Inside Diameter	10.050	10.050		10.050	in.
Standard Drift	9.894	9.894		9.894	in.
Alternate Drift					in.
Nominal Linear Weight, T&C	40.50				lbs/ft
Plain End Weight	38.91			_	lbs/ft
PERFORMANCE	Pipo	STE	LTC	STC	
Minimum Collapse Pressure	1,580	1,580		1,580	psi
Minimum Internal Yield Pressure	3,130	3,130		3,130	psi
Minimum Pipe Body Yield Strength	629,000				lbs
Joint Strength		700		420	lbs
Reference Length	<b></b> ·	11,522	·	6,915	ft
Make-Up Loss	-	4.81		3.50	in.
Minimum Make-Up Torque				3,150	ft-lbs
Maximum Make-Up Torque				5,250	ft-lbs

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بعده وبيدي وويا والمناف والمراج والمناف والمنا

U. S. Steel Tubular Products 1-877-893-9461 10343 Sam Houston Park Dr., #120

buston Park Dr., #120 connections@uss.com Houston, TX 77064 www.usstubular.com



## **TEC-LOCK WEDGE**

8.625" 32.00 LB/FT (.352" Wall) BORUSAN MANNESMANNP110 HSCY

#### **Pipe Body Data**

Nominal OD: 8.625 in **Nominal Wall:** .352 in **Nominal Weight:** 32.00 lb/ft Plain End Weight: 31.13 lb/ft **Material Grade:** P110 HSCY Mill/Specification: **BORUSAN MANNESMANN Yield Strength:** 125,000 psi Tensile Strength: 125,000 psi Nominal ID: 7.921 **API Drift Diameter:** 7.796 in Special Drift Diameter: 7.875 in RBW: 87.5 % **Body Yield:** 1,144,000 lbf **Burst:** 8,930 psi Collapse: 4,230 psi

#### **Connection Data**

Standard OD: 9.000 in Pin Bored ID: 7.921 in **Critical Section Area:** 8.61433 in² **Tensile Efficiency:** 94.2 % Compressive Efficiency: 100.0 % Longitudinal Yield Strength: 1,077,000 lbf **Compressive Limit:** 1,144,000 **Internal Pressure Rating:** 8,930 psi **External Pressure Rating:** 4,230 psi Maximum Bend: 62.6 °/100

#### **Operational Data**

Minimum Makeup Torque: 29,900 ft\*lbf
Optimum Makeup Torque: 37,375 ft\*lbf
Maximum Makeup Torque: 80,900 ft\*lbf
Minimum Yield: 89,900 ft\*lbf
Makeup Loss: 5.97 in

#### **Notes**

Operational Torque is equivalent to the Maximum Make-Up Torque.





## **U. S. Steel Tubular Products** 13.375" 48.00lbs/ft (0.330" Wall)

MECHANICAL PROPERTIES	Pipo	ETC	ST	STC	
Minimum Yield Strength	40,000				psi
Maximum Yield Strength	80,000				psi
Minimum Tensile Strength	60,000				psi
DIMENSIONS	Pipo	BTC	97.1	STC	
Outside Diameter	13.375			14.375	in.
Wall Thickness	0.330		-		in.
Inside Diameter	12.715			12.715	in.
Standard Drift	12.559	12.559		12.559	in.
Alternate Drift		-			in.
Nominal Linear Weight, T&C	48.00				lbs/ft
Plain End Weight	46.02		<del></del>		lbs/ft
PERFORMANCE	Pipo	eic	e ST2	STC	
Minimum Collapse Pressure	740	740		740	psi
Minimum Internal Yield Pressure	1,730	1,730		1,730	psi
Minimum Pipe Body Yield Strength	541				1,000 lbs
Joint Strength				322	1,000 lbs
Reference Length	'		`	4,473	· ft
MAKBUPDATA	Abo	BTC	OTJ	STC	
Make-Up Loss				3.50	in.
Minimum Make-Up Torque			<b></b>	2,420	ft-lbs
Maximum Make-Up Torque				4,030	ft-lbs

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U. S. Steel Tubular Products 1-877-893-9461 460 Wildwood Forest Drive, Suite 300S connections@us

connections@uss.com Spring, Texas 77380 www.usstubular.com

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

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

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

After running the intermediate casing with a mandrel hanger, the 13-5/8" BOP/BOPE system with a minimum rating of 10M will be installed and tested, with 5M annular being tested to 100% of rated working pressure.

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 10,000 psi WP.

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

#### 1. Geologic Formations

TVD of target	12,890'	Pilot hole depth	N/A
MD at TD:	17,769'	Deepest expected fresh water:	810'

#### **Basin**

Formation	Depth (TVD) from KB	Water/Mineral Bearing/ Target Zone?	Hazards*
Rustler	810		
Top of Salt	1200		
3BSSS	12020		
WFMP	12480		11

<sup>\*</sup>H2S, water flows, loss of circulation, abnormal pressures, etc.

#### 2. Casing Program

Hole	Casing Interval		Csg. Size	Weight	eight Grade	Conn.	SF	SF	SF
Size	From	То	7	(lbs)			Collapse	Burst	Tension
14.75"	See	See	See	See	See	See	See	See	See
	AFMSS	AFMSS	AFMSS	AFMSS	AFMSS	AFMSS	AFMSS	AFMSS	AFMSS
9.875"	See	See	See	See	See	See	See	See	See
	AFMSS	AFMSS	AFMSS	AFMSS	AFMSS	AFMSS	AFMSS	AFMSS	AFMSS
8.75"	See	See	See	See	See	See	See	See	See
	AFMSS	AFMSS	AFMSS	AFMSS	AFMSS	AFMSS	AFMSS	AFMSS	AFMSS
6.75"	See	See	See	See	See	See	See	See	See
	AFMSS	AFMSS	AFMSS	AFMSS	AFMSS	AFMSS	AFMSS	AFMSS	AFMSS

All casing strings will be tested in accordance with Onshore Oil and Gas Order #2 III.B.1.h

Rustler top will be validated via drilling parameters (i.e. reduction in ROP) and surface casing setting depth revised accordingly if needed.

A variance is requested to wave the centralizer requirement for the 7-5/8" flush casing in the 8-3/4" hole and the 5-1/2" SF/Flush casing in the 6-3/4" hole.

#### **Casing Program (Alternate Design)**

Casing Frogram (Arternate Design)										
Hole Size	Casi	Casing Interval		Weight	Grade	Conn.	SF	SF	SF	
	From	То		(lbs)			Collapse	Burs t	Tension	
17.5"	0	810'	13.375"	48	H-40	STC	1.125	1.25	1.6	
9.875"	0	12,249'	8.625"	32	P110	TLW	1.125	1.25	1.6	
7.875"	0	TD	5.5"	20	P110	Vam SG	1.125	1.25	1.6	

All casing strings will be tested in accordance with Onshore Oil and Gas Order #2 III.B.1.h

Rustler top will be validated via drilling parameters (i.e. reduction in ROP) and surface casing setting depth revised accordingly if needed.

A variance is requested to wave the centralizer requirement for the 8-5/8" casing in the 9-7/8" hole and the 5-1/2" casing in the 7-7/8" hole.

#### 8-5/8" Intermediate casing will be kept fluid filled to 100%

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

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

4. Casin	# Sks	Wt. lb/ gal	H₂0 gal/sk	Yld ft3/ sack	Slurry Description
Surface	See AFMSS	See AFMSS	See AFMSS	See AFMSS	See AFMSS
let	See AFMSS	See AFMSS	See AFMSS	See AFMSS	See AFMSS
Int	See AFMSS	See AFMSS	See AFMSS	See AFMSS	See AFMSS

Intermediate Two-Stage (Bradenhead)	1000	14.8	6.32	1.33	Class C Cement + 0.125 lbs/sack Poly-E- Flake
	609	13.2	5.31	1.6	Tail: (50:50) Class H Cement: Poz (Fly Ash) + 0.5% bwoc HALAD-344 + 0.4% bwoc CFR-3 + 0.2% BWOC HR-601 + 2% bwoc Bentonite
Production	See AFMSS	See AFMSS	See AFMSS	See AFMSS	See AFMSS

If a DV tool is used, depth(s) will be adjusted based on hole conditions and cement volumes will be adjusted proportionally. DV tool will be set a minimum of 50 feet below previous casing and a minimum of 200 feet above current shoe. Lab reports with the 500 psi compressive strength time for the cement will be onsite for review.

**Cementing Program (Alternate Design)** 

cementing i regium (Attenute Design)								
Casing	# Sks	Wt. lb/ gal	H₂0 gal/sk	Yld ft3/ sack	Slurry Description			
Surface	569	14.8	6.34	1.34	Tail: Class C Cement + 1% Calcium Chloride			
	436	9	13.5	3.27	Lead: Tuned Light® Cement			
Int	482	13.2	5.31	1.6	Tail: (50:50) Class H Cement: Poz (Fly Ash) + 0.5% bwoc HALAD-344 + 0.4% bwoc CFR-3 + 0.2% BWOC HR-601 + 2% bwoc Bentonite			
Intermediate	1000	14.8	6.32	1.33	Class C Cement + 0.125 lbs/sack Poly-E-Flake			
Two-Stage (Bradenhead)	482	13.2	5.31	1.6	Tail: (50:50) Class H Cement: Poz (Fly Ash) + 0.5% bwoc HALAD-344 + 0.4% bwoc CFR-3 + 0.2% BWOC HR-601 + 2% bwoc Bentonite			
Production	813	14.8	6.32	1.33	Class H Cement + 0.125 lbs/sack Poly-E-Flake			

If a DV tool is used, depth(s) will be adjusted based on hole conditions and cement volumes will be adjusted proportionally. DV tool will be set a minimum of 50 feet below previous casing and a minimum of 200 feet above current shoe. Lab reports with the 500 psi compressive strength time for the cement will be onsite for review.

4. Pressure Control Equipment

N A variance is schematic.	N A variance is requested for the use of a diverter on the surface casing. See attached for schematic.									
BOP installed and tested before drilling which hole?	Size?	Min. Required WP	Туре			Tested to:				
			Annular		X	50% of rated working pressure				
1		43.5/0//	1			Blind Ram		Х		
Intermediate	13-5/8"	5M	Pipe I	Pipe Ram		5M				
			Double	Ram	Х	JIVI				
			Other*							

		10M	Annular (5M)		x	100% of rated working pressure
Dona donation	12 5 /0"		Blind Ram		Х	
Production	13-5/8"		Pipe Ram		Х	1014
			Doub	le Ram	Х	10M
			Other*			
			Annular			
			Blind Ram			

<sup>\*</sup>Specify if additional ram is utilized.

BOP/BOPE will be tested by an independent service company to 250 psi low and the high pressure indicated above per Onshore Order 2 requirements. The System may be upgraded to a higher pressure but still tested to the working pressure listed in the table above. If the system is upgraded all the components installed will be functional and tested.

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 10,000 psi WP.

Y	Formation integrity test will be performed per Onshore Order #2.  On Exploratory wells or 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. Will be tested in accordance with Onshore Oil and Gas Order #2 III.B.1.i.						
Y	A variance is requested for the use of a flexible choke line from the BOP to Choke Manifold. See attached for specs and hydrostatic test chart.						
	Y	Are anchors required by manufacturer?					
Y	Devon requests a variance to use a flexible line with flanged ends between the BOP and the choke manifold (choke line). The line will be kept as straight as possible with minimal turns.						
Υ	Devon requests a variance to run a 5M annular on a 10M BOP system. See separately attached variance request and support documents in AFMSS.						

#### 5. Mud Program

Depth From To		Туре	Weight (ppg)	Viscosity	Water Loss	
0	810'	FW Gel	See AFMSS	See AFMSS	See AFMSS	
810'	12,809'	OBM/Cut Brine	See AFMSS	See AFMSS	See AFMSS	
12,809'	TD	Oil Based Mud	See AFMSS	See AFMSS	See AFMSS	

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

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

#### 6. Logging and Testing Procedures

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

Add	litional logs planned	Interval		
	Resistivity	Int. shoe to KOP		
	Density	Int. shoe to KOP		
Х	CBL	Production casing		
Х	Mud log	Intermediate shoe to TD		
	PEX			

#### 7. Drilling Conditions

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

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

N H2S is present

		- Province of the Earth
	Z	H2S is present
F	Y	H2S Plan attached

#### 8. Other facets of operation

Is this a walking operation? Potentially

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

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

Will be pre-setting casing? Potentially

- 1. Spudder rig will move in and drill surface hole.
  - a. Rig will utilize fresh water based mud to drill 14 ¾" surface hole to TD. Solids control will be handled entirely on a closed loop basis.
- 2. After drilling the surface hole section, the spudder rig will run casing and cement following all of the applicable rules and regulations (OnShore Order 2, all COAs and NMOCD regulations).
- 3. The wellhead will be installed and tested once the 10-3/4" surface casing is cut off and the WOC time has been reached.

- **4.** A blind flange with the same pressure rating as the wellhead will be installed to seal the wellbore. Pressure will be monitored with a pressure gauge installed on the wellhead.
- 5. Spudder rig operations is expected to take 4-5 days per well on a multi well pad.
- **6.** The NMOCD will be contacted and notified 24 hours prior to commencing spudder rig operations.
- 7. Drilling operations will be performed with the drilling rig. At that time an approved BOP stack will be nippled up and tested on the wellhead before drilling operations commences on each well.
  - **a.** The NMOCD will be contacted / notified 24 hours before the drilling rig moves back on to the pad with the pre-set surface casing.

Att	achments
<u>_x</u>	Directional Plan
	Other, describe



#### Fluid Technology

ContiTech Beattle Corp. Website: <a href="https://www.contitechbeattle.com">www.contitechbeattle.com</a>

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/darifications 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 Beattle Corp, 11535 Brittmoore Park Drive, Houston, TX 77041 Phone: +1 (832) 327-0141 Fax: +1 (832) 327-0148 www.contitechbeattle.com



## R16 212

## **PHOENIX**

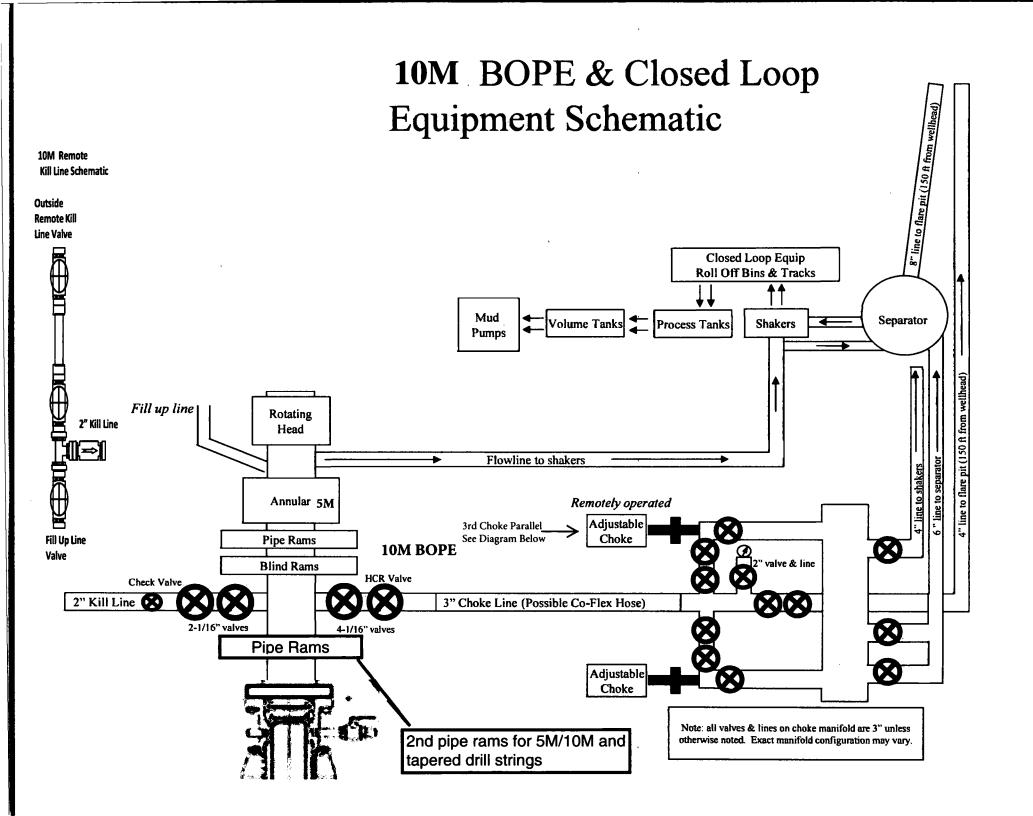
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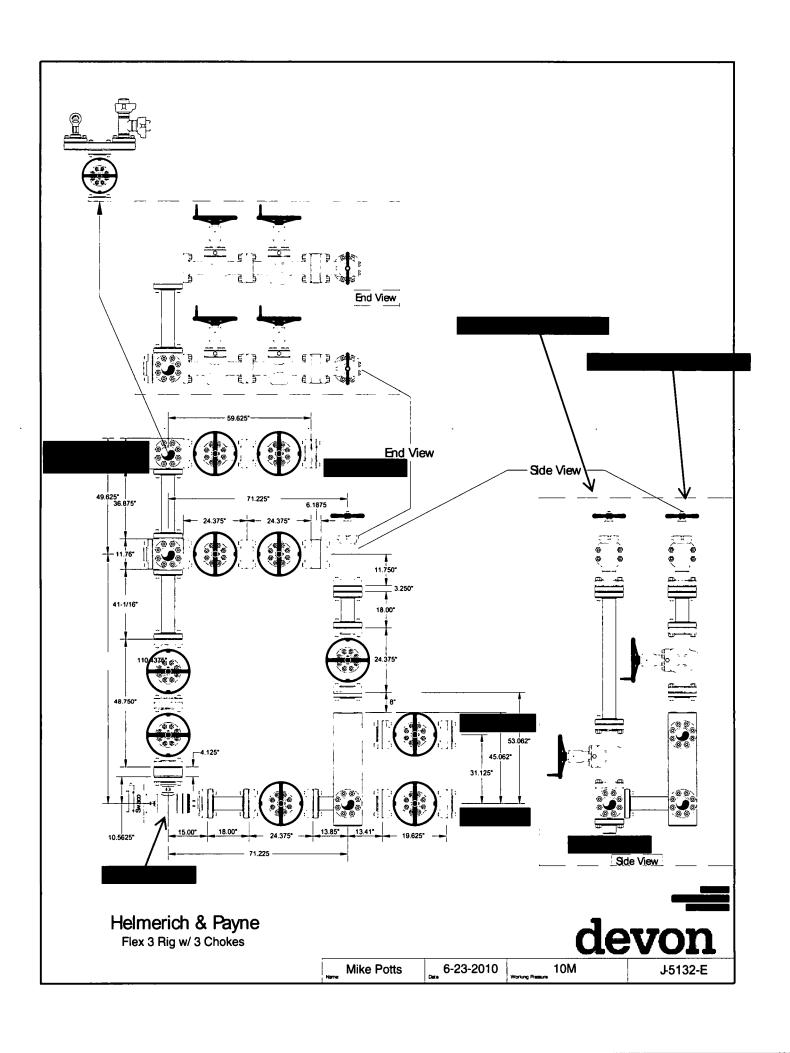
## PHOENIX RUBBER INDUSTRIAL LTD.

6728 Szeged, Budapesti út 10. Hungary • H-6701 Szeged, P. O. Box 152 none: (3662) 566-737 • Fax: (3662) 566-738 SALES & MARKETBNG: 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.taurusemerga.hu

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PHOENIX RUBBER Q.C.





#### **Devon Energy Annular Preventer Summary**

#### 1. Component and Preventer Compatibility Table

The table below, which covers the drilling and casing of the 10M MASP portion of the well, outlines the tubulars and the compatible preventers in use. This table, combined with the mud program, documents that two barriers to flow can be maintained at all times, independent of the rating of the annular preventer.

6-3/4" Production hole section, 10M requirement

Component	OD	Preventer	RWP
Drillpipe	4.5"	Fixed lower 4.5"	10M
		Upper 4.5-7" VBR	
HWDP	4.5"	Fixed lower 4.5"	10M
		Upper 4.5-7" VBR	
Drill collars and MWD tools	4.75"	Upper 4.5-7" VBR	10M
Mud Motor	4.75"	Upper 4.5-7" VBR	10M
Production casing	5.5"	Upper 4.5-7" VBR	10M
ALL	0-13-5/8"	Annular	5M
Open-hole	-	Blind Rams	10M

VBR = Variable Bore Ram. Compatible range listed in chart.

#### 2. Well Control Procedures

Well control procedures are specific to the rig equipment and the operation at the time the kick occurs. Below are the minimal high-level tasks prescribed to assure a proper shut-in while drilling, tripping, running casing, pipe out of the hole (open hole), and moving the BHA through the BOPs. The pressure at which control is swapped from the annular to another compatible ram is variable, but the operator will document in the submission their operating pressure limit. The operator may chose an operating pressure less than or equal to RWP, but in no case will it exceed the RWP of the annular preventer.

#### General Procedure While Drilling

- 1. Sound alarm (alert crew)
- 2. Space out drill string
- 3. Shut down pumps (stop pumps and rotary)
- 4. Shut-in Well (uppermost applicable BOP, typically annular preventer first. HCR and choke will already be in the closed position.)
- 5. Confirm shut-in
- 6. Notify toolpusher/company representative
- 7. Read and record the following:
  - a. SIDPP and SICP
  - b. Pit gain
  - c. Time
- 8. Regroup and identify forward plan
- 9. If pressure has built or is anticipated during the kill to reach the RWP of the annular preventer, confirm spacing and swap to the upper pipe ram.

#### **Devon Energy Annular Preventer Summary**

#### General Procedure While Tripping

- 1. Sound alarm (alert crew)
- 2. Stab full opening safety valve and close
- 3. Space out drill string
- 4. Shut-in (uppermost applicable BOP, typically annular preventer first. HCR and choke will already be in the closed position.)
- 5. Confirm shut-in
- 6. Notify toolpusher/company representative
- 7. Read and record the following:
  - a. SIDPP and SICP
  - b. Pit gain
  - c. Time
- 8. Regroup and identify forward plan
- 9. If pressure has built or is anticipated during the kill to reach the RWP of the annular preventer, confirm spacing and swap to the upper pipe ram.

#### General Procedure While Running Casing

- 1. Sound alarm (alert crew)
- 2. Stab crossover and full opening safety valve and close
- 3. Space out string
- 4. Shut-in (uppermost applicable BOP, typically annular preventer first. HCR and choke will already be in the closed position.)
- 5. Confirm shut-in
- 6. Notify toolpusher/company representative
- 7. Read and record the following:
  - a. SIDPP and SICP
  - b. Pit gain
  - c. Time
- 8. Regroup and identify forward plan
- 9. If pressure has built or is anticipated during the kill to reach the RWP of the annular preventer, confirm spacing and swap to compatible pipe ram.

#### General Procedure With No Pipe In Hole (Open Hole)

- 1. Sound alarm (alert crew)
- 2. Shut-in with blind rams or BSR. (HCR and choke will already be in the closed position.)
- 3. Confirm shut-in
- 4. Notify toolpusher/company representative
- 5. Read and record the following:
  - a. SICP
  - b. Pit gain
  - c. Time
- 6. Regroup and identify forward plan

#### **Devon Energy Annular Preventer Summary**

#### General Procedures While Pulling BHA thru Stack

- 1. PRIOR to pulling last joint of drillpipe thru the stack.
  - a. Perform flowcheck, if flowing:
  - b. Sound alarm (alert crew)
  - c. Stab full opening safety valve and close
  - d. Space out drill string with tool joint just beneath the upper pipe ram.
  - e. Shut-in using upper pipe ram. (HCR and choke will already be in the closed position.)
  - f. Confirm shut-in
  - g. Notify toolpusher/company representative
  - h. Read and record the following:
    - i. SIDPP and SICP
    - ii. Pit gain
    - iii. Time
  - i. Regroup and identify forward plan
- 2. With BHA in the stack and compatible ram preventer and pipe combo immediately available.
  - a. Sound alarm (alert crew)
  - b. Stab crossover and full opening safety valve and close
  - c. Space out drill string with upset just beneath the compatible pipe ram.
  - d. Shut-in using compatible pipe ram. (HCR and choke will already be in the closed position.)
  - e. Confirm shut-in
  - f. Notify toolpusher/company representative
  - g. Read and record the following:
    - i. SIDPP and SICP
    - ii. Pit gain
    - iii. Time
  - h. Regroup and identify forward plan
- 3. With BHA in the stack and NO compatible ram preventer and pipe combo immediately available.
  - a. Sound alarm (alert crew)
  - b. If possible to pick up high enough, pull string clear of the stack and follow "Open Hole" scenario.
  - c. If impossible to pick up high enough to pull the string clear of the stack:
  - d. Stab crossover, make up one joint/stand of drillpipe, and full opening safety valve and close
  - e. Space out drill string with tooljoint just beneath the upper pipe ram.
  - f. Shut-in using upper pipe ram. (HCR and choke will already be in the closed position.)
  - g. Confirm shut-in
  - h. Notify toolpusher/company representative
  - i. Read and record the following:
    - i. SIDPP and SICP
    - ii. Pit gain
    - iii. Time
  - i. Regroup and identify forward plan



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



**APD ID:** 10400036677 **Submission Date:** 11/26/2018

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

Well Name: STRANGER 34 FED COM

Well Number: 14H

Well Type: OIL WELL Well Work Type: Drill



**Show Final Text** 

#### **Section 1 - Existing Roads**

Will existing roads be used? YES

**Existing Road Map:** 

Stranger\_34\_Fed\_Com\_14H\_ACCESS\_RD\_20181126122142.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:** 

STRANGER\_33\_34\_PRIMARY\_ACC\_RD2\_20181126090918.pdf

STRANGER\_33\_34\_PRIMARY\_ACC\_RD\_20181126090917.pdf

Stranger\_34\_Fed\_Com\_14H\_NEW\_ACCESS\_RD\_20181126122219.pdf

New road type: LOCAL

Length: 347

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? YES

New road access plan attachment:

Well Name: STRANGER 34 FED COM Well Number: 14H

STRANGER\_33\_34\_PRIMARY\_ACC\_RD2\_20181126090942.pdf STRANGER\_33\_34\_PRIMARY\_ACC\_RD\_20181126090941.pdf Stranger\_34\_Fed\_Com\_14H\_NEW\_ACCESS\_RD\_20181126135828.pdf

Access road engineering design? YES

Access road engineering design attachment:

STRANGER\_33\_34\_PRIMARY\_ACC\_RD2\_20181126091000.pdf
Stranger\_34\_Fed\_Com\_13H\_New\_Access\_Rd\_20181126090956.pdf
Stranger\_34\_Fed\_Com\_14H\_NEW\_ACCESS\_RD\_20181126135836.pdf

Access surfacing type: NONE

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: N/A** 

Road Drainage Control Structures (DCS) description: N/A

**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:

Stranger\_34\_Fed\_Com\_14H\_OneMileBuffer\_20181126135915.pdf

**Existing Wells description:** 

Well Name: STRANGER 34 FED COM

Well Number: 14H

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

#### Submit or defer a Proposed Production Facilities plan? SUBMIT

Production Facilities description: SIX PLATS ATTACHED - 4 ELECTRIC, CTB PAD PLAT, FLOWLINE PLAT.

CONNECTS HANDLED BY THIRD PARTY. WELLPAD PLAT - SEE PG 3 OF C-102

**Production Facilities map:** 

STRANGER\_34\_CTB\_3\_ELE\_20181126140008.PDF

STRANGER\_33\_34\_SOUTH\_LATERAL\_ELE\_20181126140006.PDF

STRANGER\_34\_WP\_2\_ELE\_20181126140011.pdf

STRANGER\_34\_CTB\_3\_PLAT\_20181126140009.pdf

STRANGER\_34\_WP\_2\_TO\_CTB\_3\_FL\_20181126140012.PDF

STRANGER 34 PRIMARY ELE 20181126140040.pdf

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

#### **Water Source Table**

Water source use type: STIMULATION

Water source type: RECYCLED

Describe type:

Source latitude:

Source longitude:

Source datum:

Water source permit type: OTHER Source land ownership: FEDERAL

Water source transport method: PIPELINE

Source transportation land ownership: FEDERAL

Water source volume (barrels): 225000

Source volume (acre-feet): 29.000946

Source volume (gal): 9450000

#### Water source and transportation map:

Stranger\_34\_WP\_2\_WATER\_MAP\_20181126140149.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:

Well Name: STRANGER 34 FED COM Well Number: 14H

**Aquifer comments:** 

**Aquifer documentation:** 

Well depth (ft):

Well casing type:

Well casing outside diameter (in.):

Well casing inside diameter (in.):

New water well casing?

Used casing source:

**Drilling method:** 

**Drill material:** 

**Grout material:** 

Grout depth:

Casing length (ft.):

Casing top depth (ft.):

**Well Production type:** 

**Completion Method:** 

Water well additional information:

State appropriation permit:

Additional information attachment:

#### **Section 6 - Construction Materials**

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

**Construction Materials source location attachment:** 

Stranger\_34\_WP\_2\_Caliche\_Map\_20181126140203.pdf

#### **Section 7 - Methods for Handling Waste**

Waste type: DRILLING

Waste content description: Water Based and Oil Based Cuttings

Amount of waste: 1740

barrels

Waste disposal frequency: Daily

Safe containment description: N/A

Safe containment attachment:

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

**FACILITY** 

Disposal type description:

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

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 containment attachment:

Well Name: STRANGER 34 FED COM Well Number: 14H

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

**FACILITY** 

Disposal type description:

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

Waste type: PRODUCED WATER

Waste content description: Produced water during flowback will be disposed of at our Rattlesnake 16 SWD.

Amount of waste: 2500 barrels

Waste disposal frequency : Daily

Safe containment description: n/a Safe containment attachment:

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

Disposal type description:

**Disposal location description:** Produced water will be primarily disposed of at our Rattlesnake 16 SWD. Portions of this water will be recycled and used for stimulations (recycle facility co-located with SWD). Surplus produced water will be sent to third party suppliers for disposal.

Waste type: FLOWBACK

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

Amount of waste: 6900 barrels

Waste disposal frequency: Daily Safe containment description: n/a

Safe containment attachment:

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

Disposal type description:

**Disposal location description:** Produced water will be primarily disposed of at our Rattlesnake 16 SWD. Portions of this water will be recycled and used for stimulations (recycle facility co-located with SWD). Surplus produced water will be sent to third party suppliers for disposal.

#### **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

Well Name: STRANGER 34 FED COM Well Number: 14H

#### **Cuttings Area**

**Cuttings Area being used? NO** 

Are you storing cuttings on location? NO

**Description of cuttings location** 

**Cuttings area length (ft.)** 

Cuttings area width (ft.)

Cuttings area depth (ft.)

Cuttings area volume (cu. yd.)

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

**WCuttings area liner** 

Cuttings area liner specifications and installation description

#### **Section 8 - Ancillary Facilities**

Are you requesting any Ancillary Facilities?: NO

**Ancillary Facilities attachment:** 

#### Comments:

#### Section 9 - Well Site Layout

**Well Site Layout Diagram:** 

Stranger\_34\_Fed\_Com\_14H\_Well\_Layout\_20181126140243.pdf

Comments:

#### Section 10 - Plans for Surface Reclamation

Type of disturbance: New Surface Disturbance Multiple Well Pad Name: STRANGER 34 WELLPAD

**Multiple Well Pad Number: 2** 

**Recontouring attachment:** 

Stranger\_34\_Fed\_Com\_14H\_INTERIM\_RECL\_20181126140256.pdf

**Drainage/Erosion control construction:** n/a

Drainage/Erosion control reclamation: n/a

Well Name: STRANGER 34 FED COM Well Number: 14H

Well pad proposed disturbance

(acres): 8.264

Road proposed disturbance (acres):

0.239

Powerline proposed disturbance

(acres): 0.758

Pipeline proposed disturbance

(acres): 0.546

Other proposed disturbance (acres): 0

**Total proposed disturbance: 9.807** 

Well pad interim reclamation (acres):

6.394

Road interim reclamation (acres): 0

Powerline interim reclamation (acres):

0

Pipeline interim reclamation (acres): 0

Other interim reclamation (acres): 0

Total interim reclamation: 6.394

Well pad long term disturbance

(acres): 1.87

Road long term disturbance (acres):

0.239

Powerline long term disturbance

(acres): 0.758

Pipeline long term disturbance

(acres): 0.546

Other long term disturbance (acres): 0

**Total long term disturbance: 3.413** 

#### **Disturbance Comments:**

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

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

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

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

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

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

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

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

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

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

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

Non native seed used? NO

Non native seed description:

Seedling transplant description:

Will seedlings be transplanted for this project? NO

Seedling transplant description attachment:

Will seed be harvested for use in site reclamation? NO

Seed harvest description:

Seed harvest description attachment:

Well Name: STRANGER 34 FED COM

Well Number: 14H

#### **Seed Management**

#### **Seed Table**

Seed type:

Seed source:

Seed name:

Source name:

Source address:

Total pounds/Acre:

Source phone:

Seed cultivar:

Seed use location:

PLS pounds per acre:

Proposed seeding season:

**Seed Summary** 

**Seed Type** 

Pounds/Acre

Seed reclamation attachment:

#### **Operator Contact/Responsible Official Contact Info**

First Name: TRAVIS

Last Name: PHIBBS

Phone: (575)748-9929

Email: TRAVIS.PHIBBS@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:

Well Name: STRANGER 34 FED COM

Well Number: 14H

**USFS Ranger District:** 

### Section 11 - Surface Ownership

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:
Disturbance type: EXISTING ACCESS ROAD
Describe:
Describe:
Surface Owner: BUREAU OF LAND MANAGEMENT
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Surface Owner: BUREAU OF LAND MANAGEMENT Other surface owner description: BIA Local Office: BOR Local Office: COE Local Office: DOD Local Office:

USFWS Local Office:
Other Local Office:

**USFS Region:** 

Disturbance type: WELL PAD Describe: Surface Owner: BUREAU OF LAND MANAGEMENT Other surface owner description: BIA Local Office: BOR Local Office: DOD Local Office: DOD Local Office: WISTA Local Office: USFWS Local Office: USFWS Local Office: USFS Region: USFS Region: USFS Forest/Grassland: USFS Ranger District:  Disturbance type: PIPELINE Describe: Surface Owner: BUREAU OF LAND MANAGEMENT Other surface owner description: BIA Local Office: BOR Local Office: BOR Local Office: COE Local Office:	Operator Name: DEVON ENERGY PRODUCT	ION COMPANY LP			
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COE Local Office: DOD Local Office: NPS Local Office:	BOR Local Office:				
DOD Local Office:					
NPS Local Office:					
	State Local Office:				

**Military Local Office:** 

Well Name: STRANGER 34 FED COM

Well Number: 14H

**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: SEE SEC. 4 FOR FACILITY, ELECTRIC AND FLOWLINE PLATS. SEE C-102 FOR

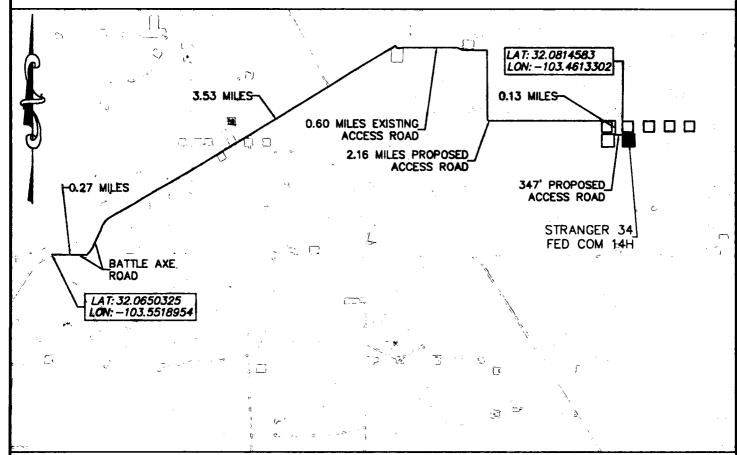
**GRADING PLATS** 

Use a previously conducted onsite? YES

Previous Onsite information: CONDUCTED 4/13/2018

**Other SUPO Attachment** 

# SECTION 34, TOWNSHIP 25 SOUTH, RANGE 34 EAST, N.M.P.M. LEA COUNTY, STATE OF NEW MEXICO AERIAL ACCESS ROUTE MAP



DEVON ENERGY PRODUCTION COMPANY, L.P.
STRANGER 34 FED COM 14H
LOCATED 205 FT. FROM THE SOUTH LINE
AND 1910 FT. FROM THE WEST LINE OF
SECTION 34, TOWNSHIP 25 SOUTH,
RANGE 34 EAST, N.M.P.M.
LEA COUNTY, STATE OF NEW MEXICO

NOT TO SCALE

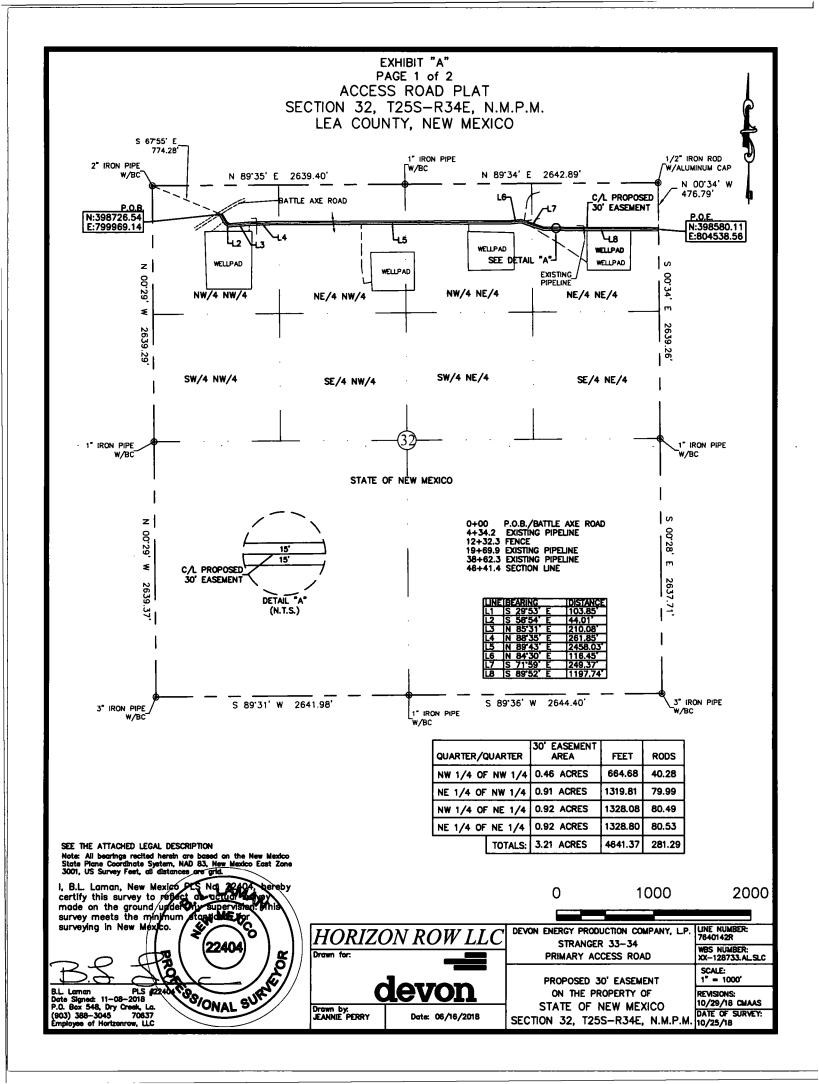
#### HORIZON ROW LLC

DEVON ENERGY PRODUCTION CO., L.P.

Drawn by: CHRIS MAAS

Date: 09/05/2018

devon



## SECTION 32, T25S-R34E, N.M.P.M., LEA COUNTY, NEW MEXICO

#### **ACCESS ROAD PLAT**

#### **LEGAL DESCRIPTION**

#### **FOR**

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

#### STATE OF NEW MEXICO

#### 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 the northwest quarter of the northeast quarter (NW ¼ NE ¼) and the northeast quarter of the northeast quarter (NE ¼ NE ¼) of Section 32, Township 25 South, Range 34 East, N.M.P.M., Lea County, New Mexico, and being out of a parcel of land owned by the State of New Mexico. Said centerline of easement being more particularly described as follows:

Commencing from a 2" iron pipe w/BC for the northwest corner of Section 32, T25S-R34E, N.M.P.M., Lea County, New Mexico;

Thence S 67°55' E a distance of 774.28' to the **Point of Beginning** of this easement having coordinates of Northing=398726.54, Easting=799969.14 feet and continuing the following courses;

Thence S 29°53' E a distance of 103.85' to an angle point;

Thence S 58°54' E a distance of 44.01' to an angle point;

Thence N 85°31' E a distance of 210.08' to an angle point;

Thence N 88°35' E a distance of 261.85' to an angle point;

Thence N 89°43' E a distance of 2458.03' to an angle point;

Thence N 84°30' E a distance of 116.45' to an angle point;

Thence S 71°59' E a distance of 249.37' to an angle point;

Thence S 89°52' E a distance of 1197.74' to the **Point of Ending** having coordinates of Northing=398580.11, Easting=804538.56 feet in the east line, from said point a 0.5" iron rod w/aluminum cap found for the northeast corner of Section 32, T25S-R34E bears N 00°34' W a distance of 476.79', covering **4641.37' or 281.29 rods** and having an area of **3.21 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: 11/08/2018

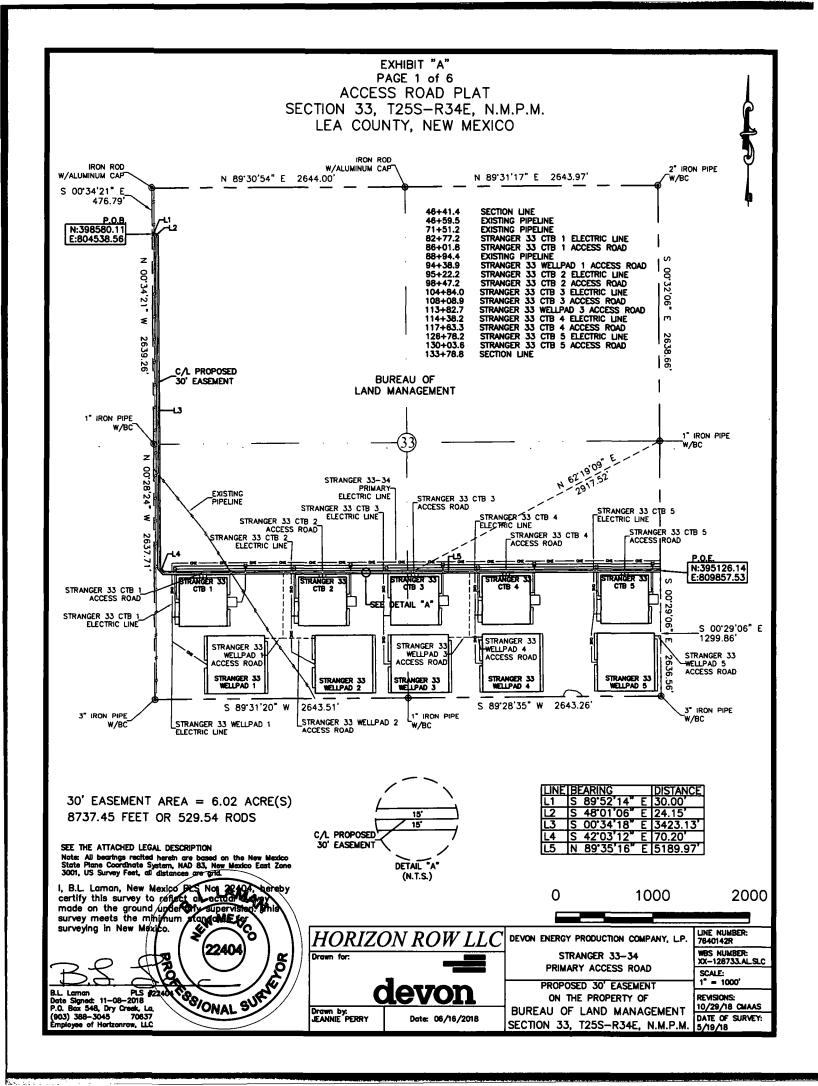
Horizon Row, LLC

P.O. Box 548, Dry Creek, La. (903) 388-3045 70637

Employee of Horizon Row, LLC

Sheet 2 of 2

SS/ONAL S



## SECTION 33, T25S-R34E, N.M.P.M., LEA COUNTY, NEW MEXICO

#### **ACCESS ROAD 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 the northwest quarter (NW ¼) and the southwest quarter (SW ¼) and the southeast quarter (SE ¼) of Section 33, Township 25 South, Range 34 East, N.M.P.M., Lea 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 an iron rod w/aluminum cap found for the northwest corner of Section 33, T25S-R34E, N.M.P.M., Lea County, New Mexico;

Thence S 00°34'21" E a distance of 476.79' to the **Point of Beginning** of this easement having coordinates of Northing=398580.11, Easting=804538.56 feet in the west line of Section 33 and continuing the following course;

Thence S 89°52'14" E a distance of 30.00' to an angle point;

Thence S 48°01'06" E a distance of 24.15' to an angle point;

Thence S 00°34'18" E a distance of 3423.13' to an angle point;

Thence S 42°03'12" E a distance of 70.20' to an angle point;

Thence S 89°35'16" E a distance of 5189.97' to the **Point of Ending** having coordinates of Northing=395126.14, Easting=809857.53 feet in the east line of Section 33, from said point a 3" iron pipe w/BC for the southeast corner of Section 33, T25S-R34E bears S 00°29'06" E a distance of 1299.86', covering **8737.45' or 529.54 rods** and having an area of **6.02 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

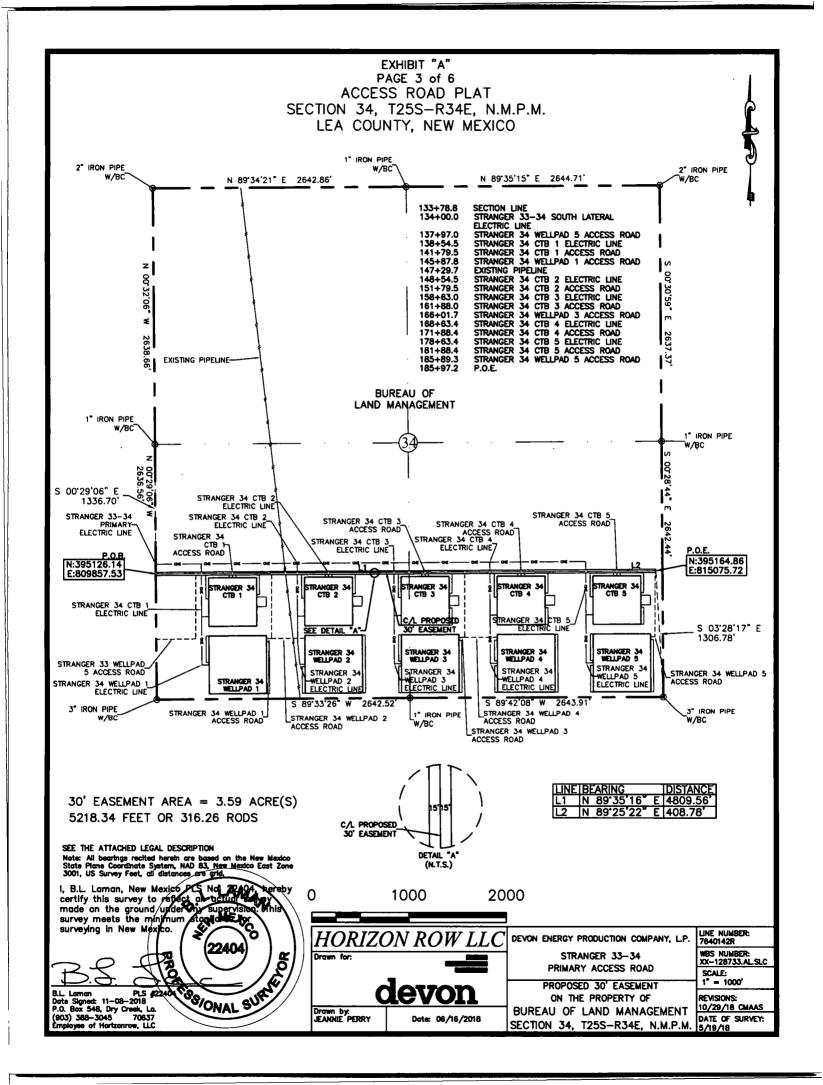
Date Signed: 11/08/2018

Horizon Row, LLC

P.O. Box 548, Dry Creek, La. (903) 388-3045 70637

Employee of Horizon Row, LLC

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## SECTION 34, T25S-R34E, N.M.P.M., LEA COUNTY, NEW MEXICO

#### ACCESS ROAD 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 the southwest quarter (SW ¼) and the southeast quarter (SE ¼) of Section 34, Township 25 South, Range 34 East, N.M.P.M., Lea 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 for the west quarter corner of Section 34, T25S-R34E, N.M.P.M., Lea County, New Mexico;

Thence S 00°29'06" E a distance of 1336.70' to the **Point of Beginning** of this easement having coordinates of Northing=395126.14, Easting=809857.53 feet in the west line of Section 34 and continuing the following course;

Thence N 89°35'16" E a distance of 4809.56' to an angle point;

Thence N 89°25'22" E a distance of 408.78' to the **Point of Ending** having coordinates of Northing=395164.86, Easting=815075.72 feet from said point a 3" iron pipe w/BC for the southeast corner of Section 34, T25S-R34E bears S 03°28'17" E a distance of 1306.78', covering **5218.34' or 316.26 rods** and having an area of **3.59 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

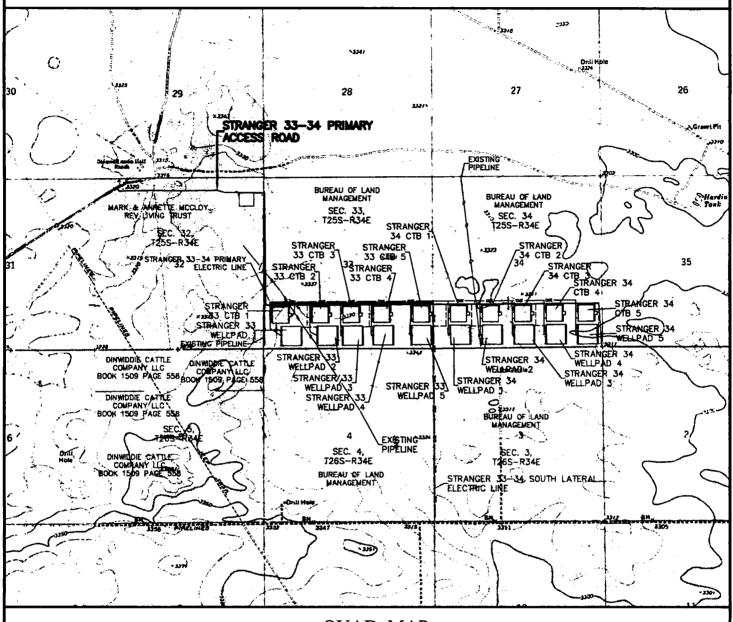
Date Signed: 11/08/2018

Horizon Row, LLC

P.O. Box 548, Dry Creek, La. (903) 388-3045 70637

Employee of Horizon Row, LLC

# EXHIBIT "A" PAGE 5 of 6



QUAD MAP

SECTION 32, T25S-R34E, N.M.P.M.; SECTION 33, T25S-R34E, N.M.P.M.; SECTION 34, T25S-R34E, N.M.P.M LEA COUNTY, NEW MEXICO

#### HORIZON ROW LLC

DEVON ENERGY PRODUCTION CO., L.P.

PROPOSED 30' EASEMENT

Drawn by: JEANNIE PERRY

Date: 06/18/2018





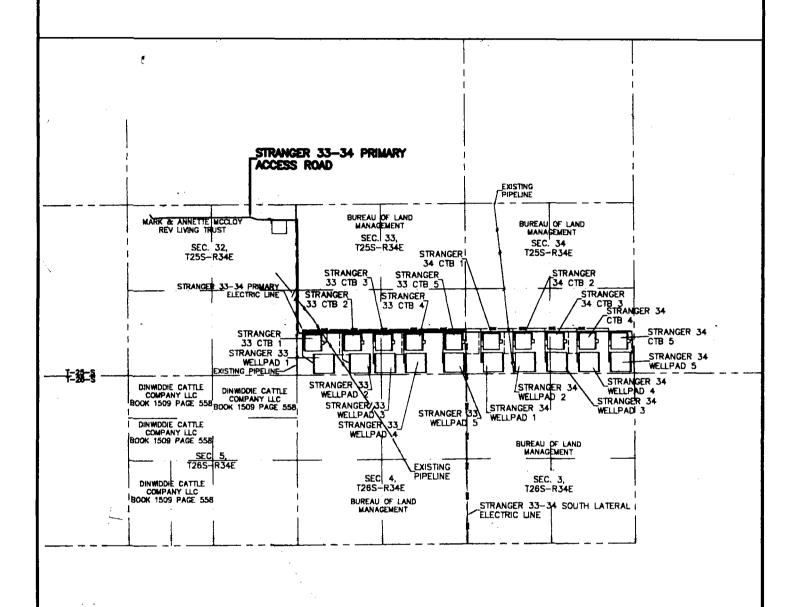
LINE NUMBER: 7640142R WBS NUMBER: XX-128733.AL.SLC

XX-128733.AL.S. SCALE:

1" = 3000'

REVISIONS: 10/29/18 CMAAS DATE OF SURVEY: 10/25/18

# **EXHIBIT "A"** PAGE 6 of 6



### **AERIAL MAP**

SECTION 32, T25S-R34E, N.M.P.M.; SECTION 33, T25S-R34E, N.M.P.M.; **SECTION 34, T25S-R34E, N.M.P.M** LEA COUNTY, NEW MEXICO

# *HORIZON ROW LLC*

DEVON ENERGY PRODUCTION CO., L.P.

PROPOSED 30' EASEMENT

Drawn by: JEANNIE PERRY

Date: 06/18/2018

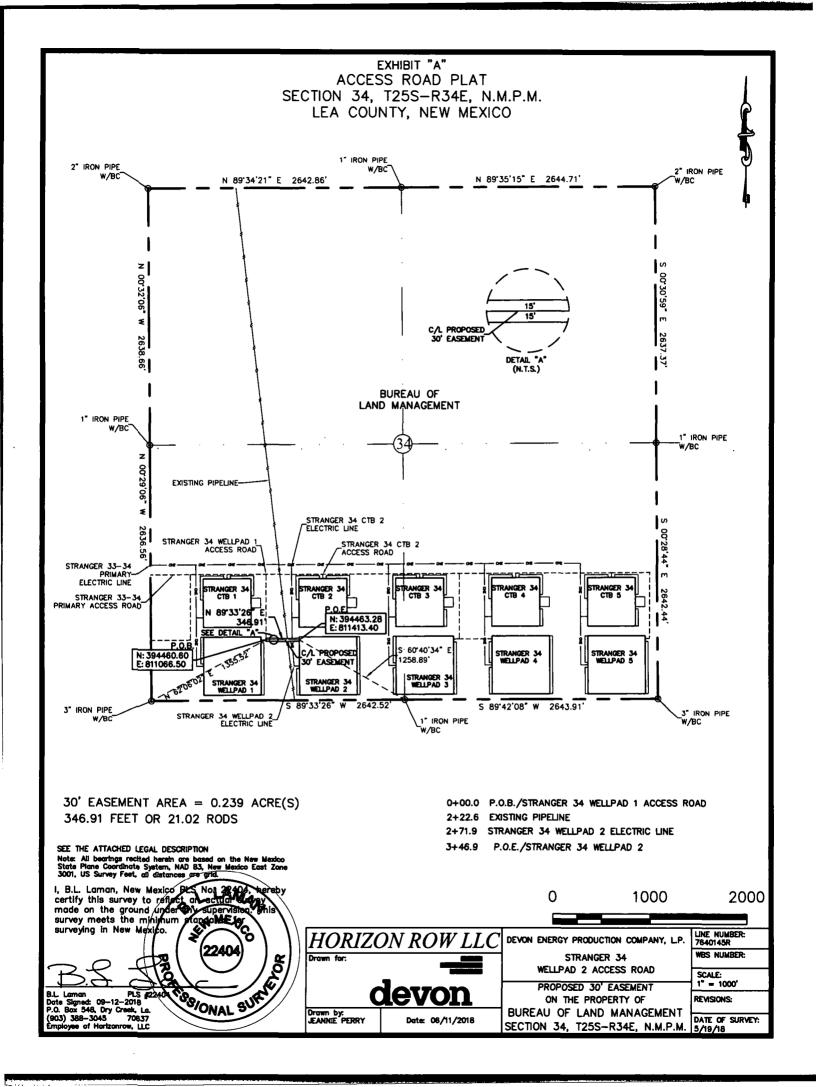




LINE NUMBER: 7640142R

WBS NUMBER: XX-128733.AL.SLC SCALE: 1" = 3000"

REVISIONS: 10/29/18 CMAAS DATE OF SURVEY: 10/25/18



#### **ACCESS ROAD 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 the southwest quarter (SW ¼) of Section 34, Township 25 South, Range 34 East, N.M.P.M., Lea 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 for the southwest corner of Section 34, T25S-R34E, N.M.P.M., Lea County, New Mexico;

Thence N 62°06'02" E a distance of 1355.52' to the **Point of Beginning** of this easement having coordinates of Northing=394460.60, Easting=811066.50 feet and continuing the following course;

Thence N 89°33'26" E a distance of 346.91' to the **Point of Ending** having coordinates of Northing=394463.28, Easting=811413.40 feet from said point a 1" iron pipe w/BC for the south quarter corner of Section 34, T25S-R34E bears S 60°40'34" E a distance of 1258.89', covering 346.91' or 21.02 rods and having an area of 0.239 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.

SSIONAL SY

B.L. Laman

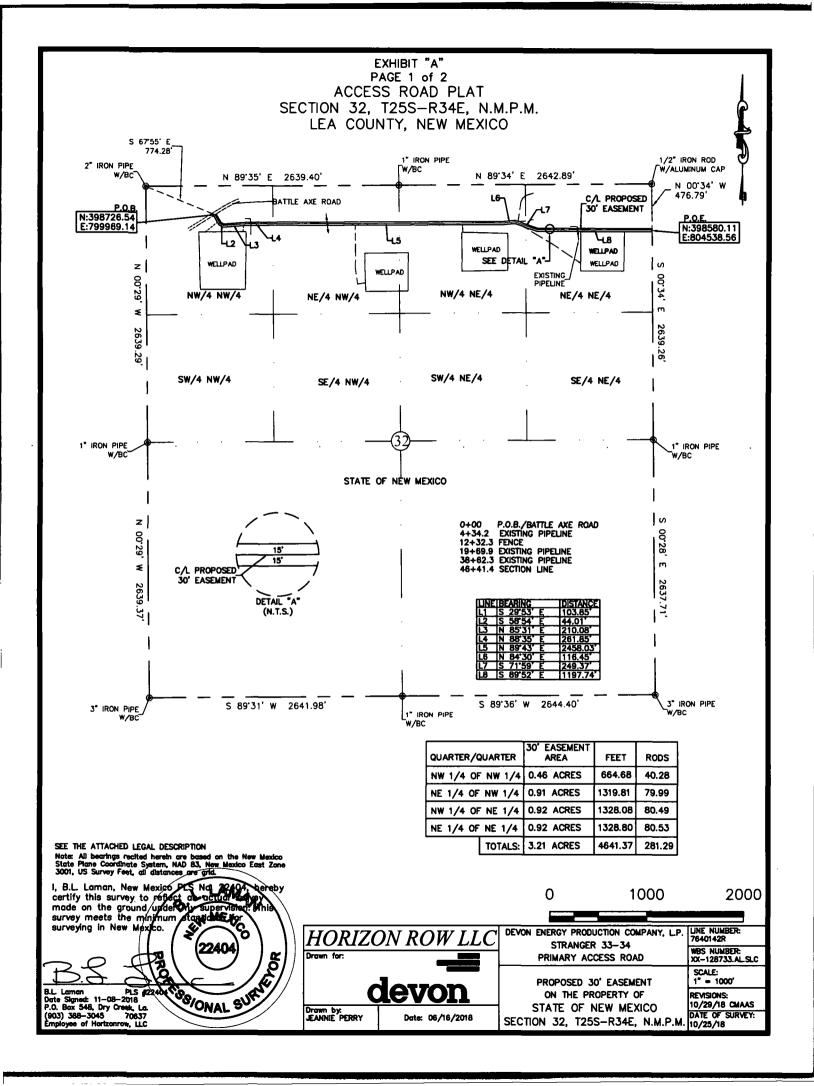
PLS 22404

Date Signed: 09/12/2018

Horizon Row, LLC

P.O. Box 548, Dry Creek, La.

(903) 388-3045 70637



#### **ACCESS ROAD PLAT**

#### LEGAL DESCRIPTION

#### **FOR**

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

#### STATE OF NEW MEXICO

#### **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 the northwest quarter of the northeast quarter (NW ½ NE ½) and the northeast quarter of the northeast quarter (NE ½ NE ½) of Section 32, Township 25 South, Range 34 East, N.M.P.M., Lea County, New Mexico, and being out of a parcel of land owned by the State of New Mexico. Said centerline of easement being more particularly described as follows:

Commencing from a 2" iron pipe w/BC for the northwest corner of Section 32, T25S-R34E, N.M.P.M., Lea County, New Mexico;

Thence S 67°55' E a distance of 774.28' to the **Point of Beginning** of this easement having coordinates of Northing=398726.54, Easting=799969.14 feet and continuing the following courses;

Thence S 29°53' E a distance of 103.85' to an angle point;

Thence S 58°54' E a distance of 44.01' to an angle point;

Thence N 85°31' E a distance of 210.08' to an angle point;

Thence N 88°35' E a distance of 261.85' to an angle point;

Thence N 89°43' E a distance of 2458.03' to an angle point;

Thence N 84°30' E a distance of 116.45' to an angle point;

Thence S 71°59' E a distance of 249.37' to an angle point;

Thence S 89°52' E a distance of 1197.74' to the **Point of Ending** having coordinates of Northing=398580.11, Easting=804538.56 feet in the east line, from said point a 0.5" iron rod w/aluminum cap found for the northeast corner of Section 32, T25S-R34E bears N 00°34' W a distance of 476.79', covering **4641.37' or 281.29 rods** and having an area of **3.21 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.

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B.L. Laman PLS 22404

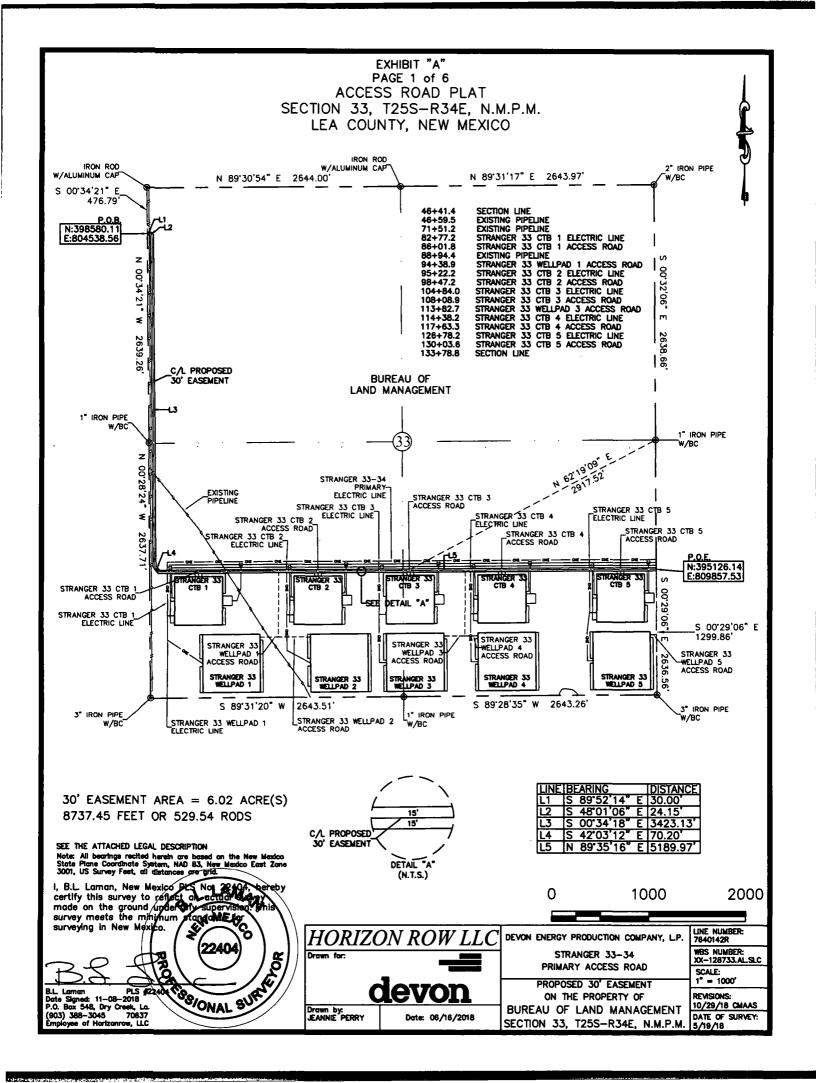
Date Signed: 11/08/2018

Horizon Row, LLC

P.O. Box 548, Dry Creek, La. (903) 388-3045 70637

Employee of Horizon Row, LLC

D. L. LAMAN WEY, CO PROPOSITION OF THE STREET



#### **ACCESS ROAD 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 the northwest quarter (NW ¼) and the southwest quarter (SW ¼) and the southeast quarter (SE ¼) of Section 33, Township 25 South, Range 34 East, N.M.P.M., Lea 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 an iron rod w/aluminum cap found for the northwest corner of Section 33, T25S-R34E, N.M.P.M., Lea County, New Mexico;

Thence S 00°34'21" E a distance of 476.79' to the **Point of Beginning** of this easement having coordinates of Northing=398580.11, Easting=804538.56 feet in the west line of Section 33 and continuing the following course;

Thence S 89°52'14" E a distance of 30.00' to an angle point;

Thence S 48°01'06" E a distance of 24.15' to an angle point;

Thence S 00°34'18" E a distance of 3423.13' to an angle point;

Thence S 42°03'12" E a distance of 70.20' to an angle point;

Thence S 89°35'16" E a distance of 5189.97' to the **Point of Ending** having coordinates of Northing=395126.14, Easting=809857.53 feet in the east line of Section 33, from said point a 3" iron pipe w/BC for the southeast corner of Section 33, T25S-R34E bears S 00°29'06" E a distance of 1299.86', covering **8737.45' or 529.54 rods** and having an area of **6.02 acres**.

#### **NOTES:**

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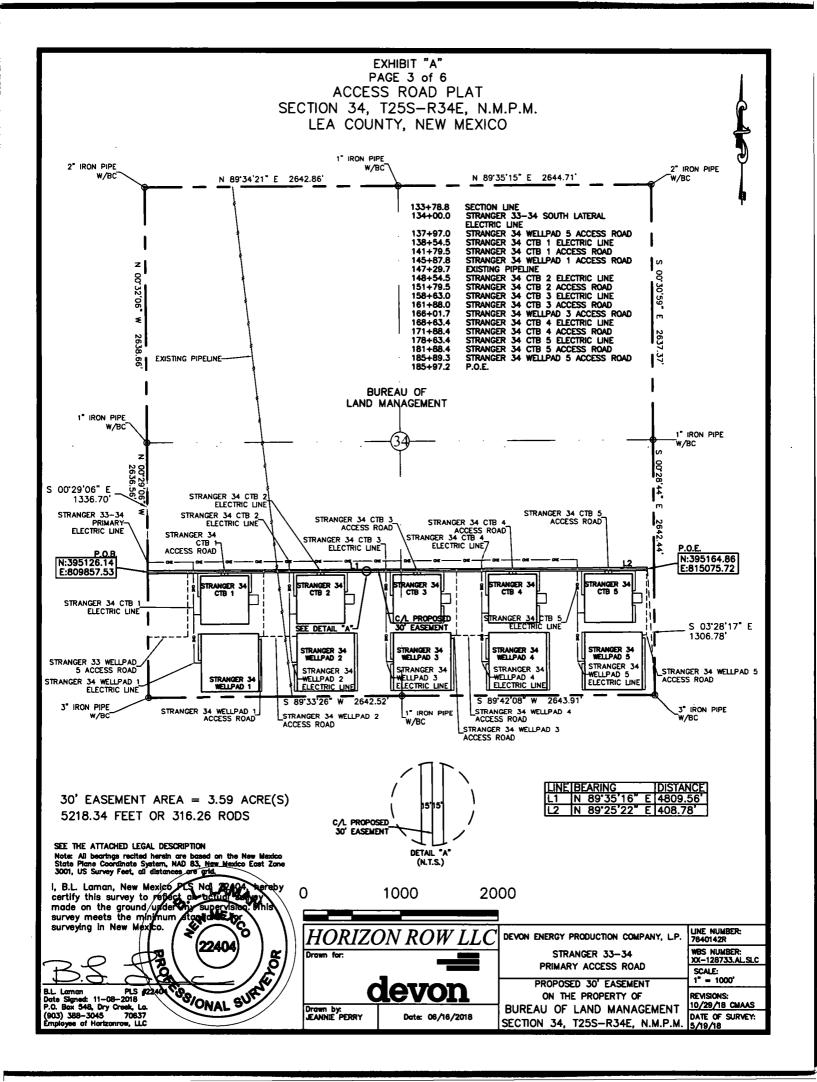
B.L. Laman

PLS 22404

Date Signed: 11/08/2018

Horizon Row, LLC

P.O. Box 548, Dry Creek, La. (903) 388-3045 70637



#### **ACCESS ROAD 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 the southwest quarter (SW ¼) and the southeast quarter (SE ¼) of Section 34, Township 25 South, Range 34 East, N.M.P.M., Lea 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 for the west quarter corner of Section 34, T25S-R34E, N.M.P.M., Lea County, New Mexico;

Thence S 00°29'06" E a distance of 1336.70' to the **Point of Beginning** of this easement having coordinates of Northing=395126.14, Easting=809857.53 feet in the west line of Section 34 and continuing the following course;

Thence N 89°35'16" E a distance of 4809.56' to an angle point;

Thence N 89°25'22" E a distance of 408.78' to the **Point of Ending** having coordinates of Northing=395164.86, Easting=815075.72 feet from said point a 3" iron pipe w/BC for the southeast corner of Section 34, T25S-R34E bears S 03°28'17" E a distance of 1306.78', covering **5218.34' or 316.26 rods** and having an area of **3.59 acres**.

#### **NOTES:**

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B.L. Laman

nan PLS 22404

Date Signed: 11/08/2018

Horizon Row, LLC

P.O. Box 548, Dry Creek, La.

(903) 388-3045 70637

#### EXHIBIT "A" PAGE 5 of 6 12341 0 27 26 28 STRANGER 33—34 PRIMARY BUREAU OF LAND BUREAU OF LAND MANAGEMENT SEC. 33, T25S-R34E SEC. 34 T25S-R34E STRANGER 34 CTB 1 STRANGER STRANGER 33 CTB 3 STRANGER 33 CTD 5 STRANGER 33-34 PRIMARY 35 STRANGER STRANGER 34 STRANGER 34 33 etb 2 33 CTB CTB 4 STRANGER 34 STRANGER STRANGER 33 WELLPAD STRANGER 34 STRANGER 34 DINWIDDIE CATTLE DINWIDDIE CATTLE COMPANY LLC COMPANY LLC COMPANY LLC BOOK 1509 PAGE 558 BOOK 1509 PAGE 558 STRANGER STRANGER 3 WELLPAD 4 STRANGER 34 WELLPAD 3 WEILD AGE 2 STRANGER 33 WELLPAD 3 STRANGER STRANGER 33 STRANGER 34 DINWIDDIE CAPILE COMPANY LLC BOOK 1509 PAGE 5 BUREAU OF LAND MANAGEMENT \_ /3-, \_ EXISTING" SEC. 3, T265-R34E SEC. 4, 7265-R34E COMPANY LLC BOOK 1509 PAGE 558 BUREAU OF LAND MANAGEMENT STRANGER 33-34 SOUTH LATERA BOOK MALLINES \*\*\*\*\*\*

QUAD MAP

SECTION 32, T25S-R34E, N.M.P.M.; SECTION 33, T25S-R34E, N.M.P.M.; SECTION 34, T25S-R34E, N.M.P.M LEA COUNTY, NEW MEXICO

## |HORIZON ROW LLC|

DEVON ENERGY PRODUCTION CO., L.P.

PROPOSED 30' EASEMENT

Drawn by: JEANNIE PERRY

Date: 06/18/2018

#### Drawn for

devon

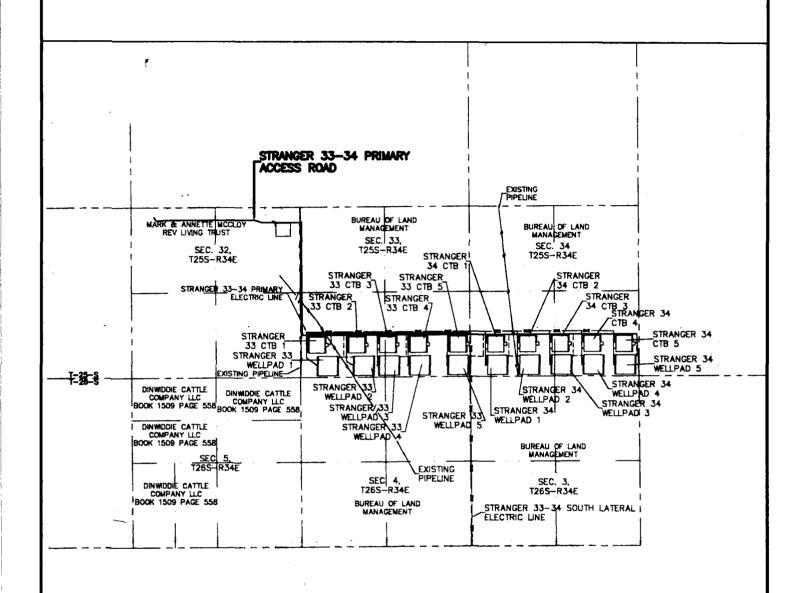
LINE NUMBER: 7640142R

WBS NUMBER: XX-128733.AL.SLC

SCALE: 1" = 3000"

REVISIONS: 10/29/18 CMAAS DATE OF SURVEY: 10/25/18

# EXHIBIT "A" PAGE 6 of 6



### **AERIAL MAP**

SECTION 32, T25S-R34E, N.M.P.M.; SECTION 33, T25S-R34E, N.M.P.M.; SECTION 34, T25S-R34E, N.M.P.M LEA COUNTY, NEW MEXICO

# HORIZON ROW LLC

DEVON ENERGY PRODUCTION CO., L.P.

PROPOSED 30' EASEMENT

Drawn by: JEANNIE PERRY

Date: 06/18/2018

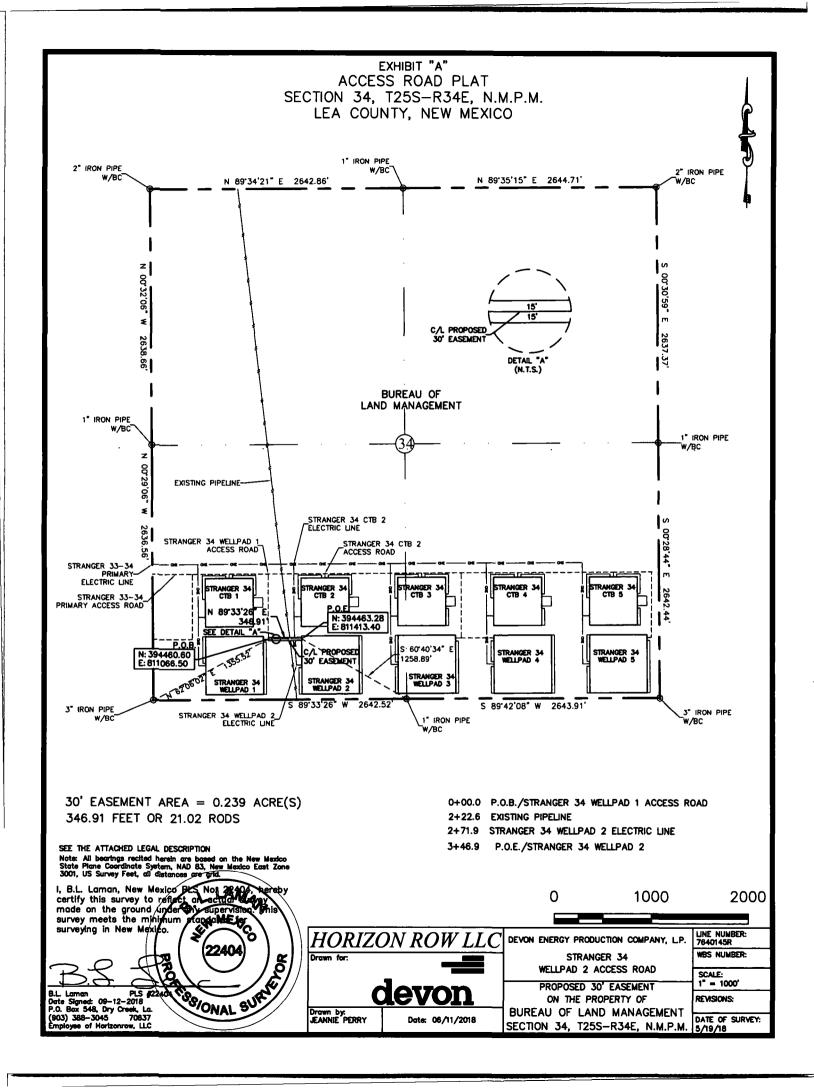




LINE NUMBER: 7640142R WBS NUMBER: XX-128733.AL.SLC

SCALE: 1" = 3000'

REVISIONS: 10/29/18 CMAAS DATE OF SURVEY: 10/25/18



#### **ACCESS ROAD 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 the southwest quarter (SW ¼) of Section 34, Township 25 South, Range 34 East, N.M.P.M., Lea 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 for the southwest corner of Section 34, T25S-R34E, N.M.P.M., Lea County, New Mexico;

Thence N 62°06'02" E a distance of 1355.52' to the **Point of Beginning** of this easement having coordinates of Northing=394460.60, Easting=811066.50 feet and continuing the following course;

Thence N 89°33'26" E a distance of 346.91' to the **Point of Ending** having coordinates of Northing=394463.28, Easting=811413.40 feet from said point a 1" iron pipe w/BC for the south quarter corner of Section 34, T25S-R34E bears S 60°40'34" E a distance of 1258.89', covering **346.91' or 21.02 rods** and having an area of **0.239 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.

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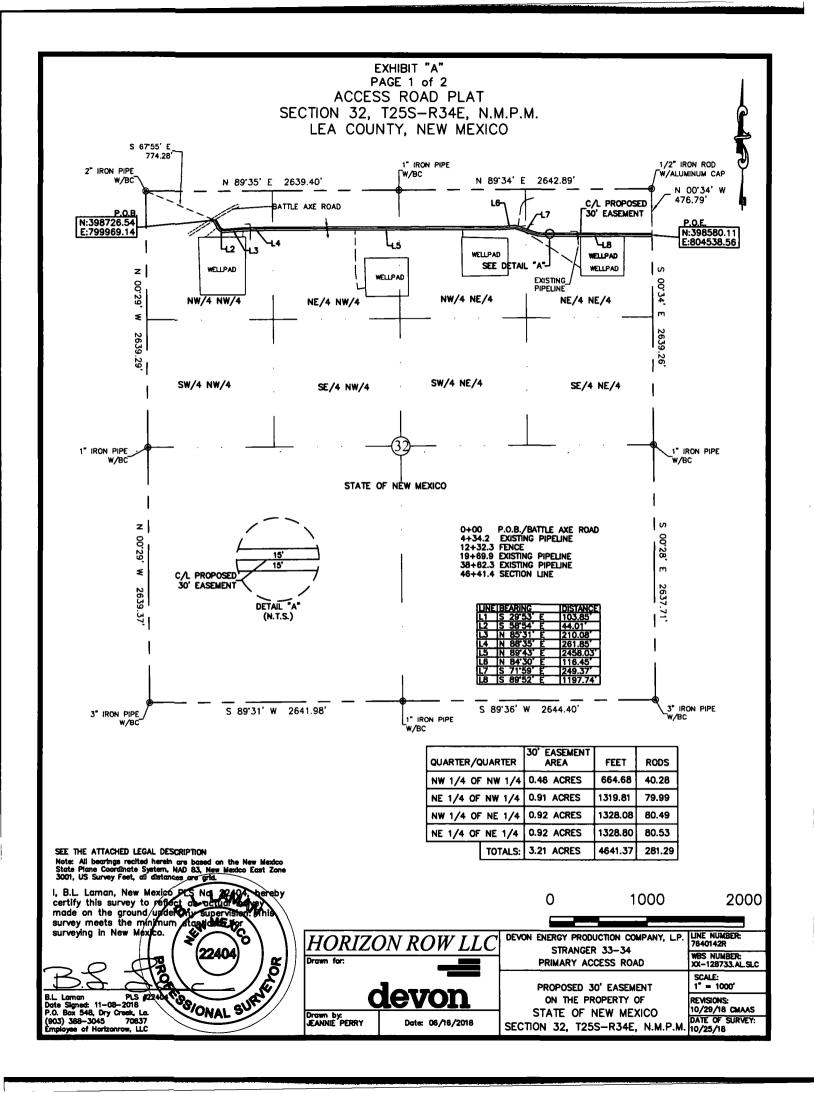
B.L. Laman

PLS 22404

Date Signed: 09/12/2018

Horizon Row, LLC

P.O. Box 548, Dry Creek, La. (903) 388-3045 70637



#### **ACCESS ROAD PLAT**

#### LEGAL DESCRIPTION

#### **FOR**

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

#### STATE OF NEW MEXICO

#### 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 the northwest quarter of the northwest quarter (NW ¼ NE ¼) and the northeast quarter of the northeast quarter (NE ¼ NE ¼) of Section 32, Township 25 South, Range 34 East, N.M.P.M., Lea County, New Mexico, and being out of a parcel of land owned by the State of New Mexico. Said centerline of easement being more particularly described as follows:

Commencing from a 2" iron pipe w/BC for the northwest corner of Section 32, T25S-R34E, N.M.P.M., Lea County, New Mexico:

Thence S 67°55' E a distance of 774.28' to the Point of Beginning of this easement having coordinates of Northing=398726.54, Easting=799969.14 feet and continuing the following courses;

Thence S 29°53' E a distance of 103.85' to an angle point;

Thence S 58°54' E a distance of 44.01' to an angle point;

Thence N 85°31' E a distance of 210.08' to an angle point;

Thence N 88°35' E a distance of 261.85' to an angle point;

Thence N 89°43' E a distance of 2458.03' to an angle point;

Thence N 84°30' E a distance of 116.45' to an angle point;

Thence S 71°59' E a distance of 249.37' to an angle point;

Thence S 89°52' E a distance of 1197.74' to the **Point of Ending** having coordinates of Northing=398580.11, Easting=804538.56 feet in the east line, from said point a 0.5" iron rod w/aluminum cap found for the northeast corner of Section 32, T25S-R34E bears N 00°34' W a distance of 476.79', covering 4641.37' or 281.29 rods and having an area of 3.21 acres.

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B.L. Laman

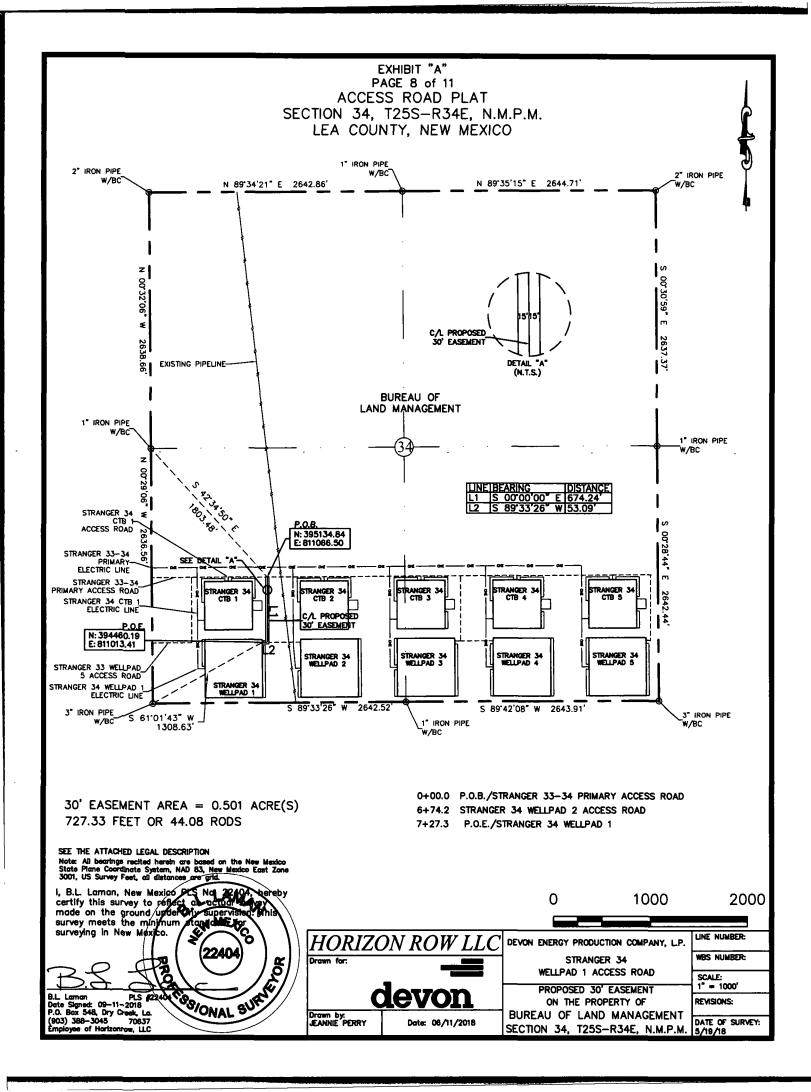
PLS 22404

Date Signed: 11/08/2018

Horizon Row, LLC

P.O. Box 548, Dry Creek, La.

(903) 388-3045 70637



#### ACCESS ROAD 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 the southwest quarter (SW ¼) of Section 34, Township 25 South, Range 34 East, N.M.P.M., Lea 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 for the west quarter corner of Section 34, T25S-R34E, N.M.P.M., Lea County, New Mexico;

Thence S 42°34'50" E a distance of 1803.48' to the **Point of Beginning** of this easement having coordinates of Northing=395134.84, Easting=811066.50 feet and continuing the following course;

Thence S 00°00'00" E a distance of 674.24' to an angle point;

Thence S 89°33'26" W a distance of 53.09' to the **Point of Ending** having coordinates of Northing=394460.19, Easting=811013.41 feet from said point a 2" iron pipe w/BC for the southwest corner of Section 34, T25S-R34E bears S 61°01'43" W a distance of 1308.63', covering **727.33' or 44.08 rods** and having an area of **0.501 acres**.

#### **NOTES:**

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B.L. Laman

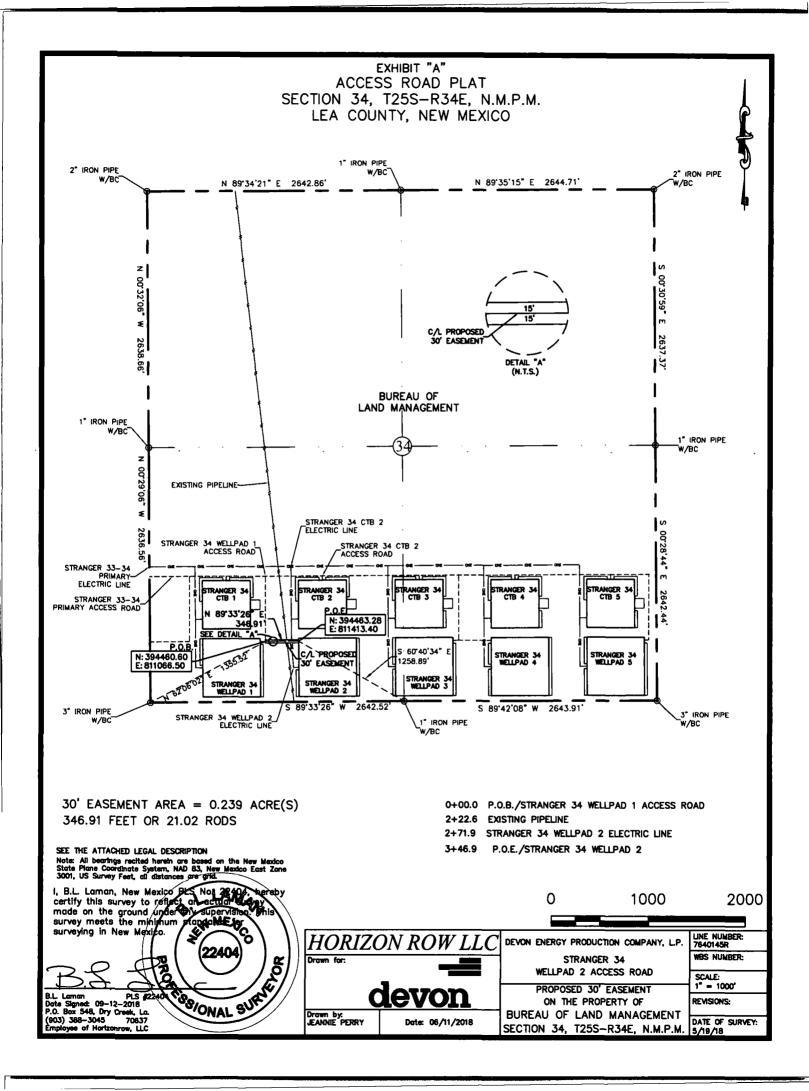
PLS 22404

Date Signed: 09/11/2018

Horizon Row, LLC

P.O. Box 548, Dry Creek, La.

(903) 388-3045 70637



#### **ACCESS ROAD 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 the southwest quarter (SW 1/4) of Section 34, Township 25 South, Range 34 East, N.M.P.M., Lea 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 for the southwest corner of Section 34, T25S-R34E, N.M.P.M., Lea County, New Mexico;

Thence N 62°06'02" E a distance of 1355.52' to the **Point of Beginning** of this easement having coordinates of Northing=394460.60, Easting=811066.50 feet and continuing the following course;

Thence N 89°33'26" E a distance of 346.91' to the **Point of Ending** having coordinates of Northing=394463.28, Easting=811413.40 feet from said point a 1" iron pipe w/BC for the south quarter corner of Section 34, T25S-R34E bears S 60°40'34" E a distance of 1258.89', covering **346.91' or 21.02 rods** and having an area of **0.239 acres**.

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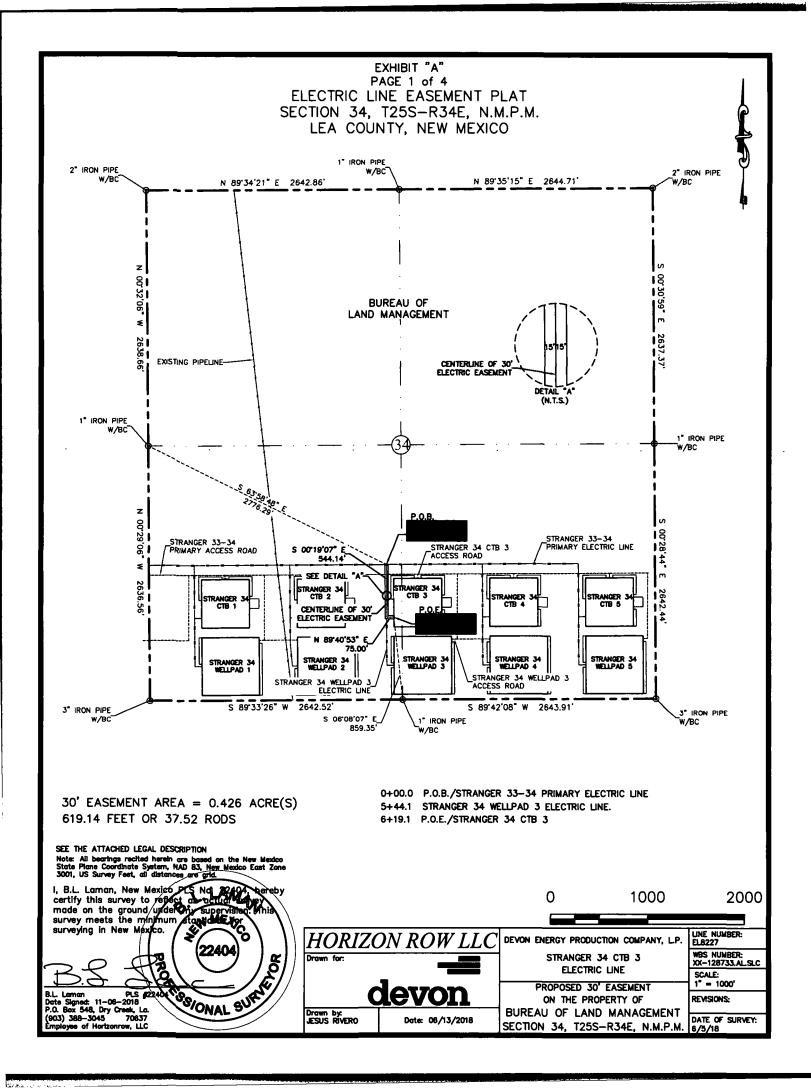
PLS 22404

Date Signed: 09/12/2018

Horizon Row, LLC

P.O. Box 548, Dry Creek, La. (903) 388-3045 70637

# PLAT STRANGER 34 FED COM 014H WA017292019 One Mile Radius Map This map is for illustrative purposes only and is neither a legally recorded map nor a survey and is not intended to be used as one. Devon makes no warranty, representation, or guarantee of any kind regarding this map. DEAN 'APQ' FEDERAL 2H devon Nearest wellbore to SHL: 569 ft. ○ Unknown SHL USA Contiguous Equidistant Conic **Active SHL** Datum: North American 1983 Created by: FME Server Map is current as of 9/26/2018 PITCHBLENDE `27` FEDERAL 1H Inactive SHL Nearest wellbore to BHL: 735 ft. × BHL Miles 1 inch = 0.33 miles 25S -34E OCONOCO FEDERAL 1 27 26 **%**3 34 35 RUBY 2 S COM 601 RUBY 2 COM 60 GULF-YATES-FEDERAL 1 2 26S -34E



#### **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 the southwest quarter (SW ¼) of Section 34, Township 25 South, Range 34 East, N.M.P.M., Lea 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 for the west quarter corner of Section 34, T25S-R34E, N.M.P.M., Lea County, New Mexico;

Thence S 63°58'48" E a distance of 2776.29' to the **Point of Beginning** of this easement having coordinates of Northing=395244.88 Easting=812341.11 feet and continuing the following courses;

Thence S 00°19'07" E a distance of 544.14' to an angle point;

Thence N 89°40'53" E a distance of 75.00' to the **Point of Ending** having coordinates of Northing=394701.17, Easting=812419.13 feet, from said point a 1" iron pipe w/BC for the south quarter corner of Section 34, T25S-R34E bears S 06°08'07" E a distance of 859.35', covering **619.14' or 37.52 rods** and having an area of **0.426 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

Date Signed: 11/06/2018

Horizon Row, LLC

P.O. Box 548, Dry Creek, La. (903) 388-3045 70637

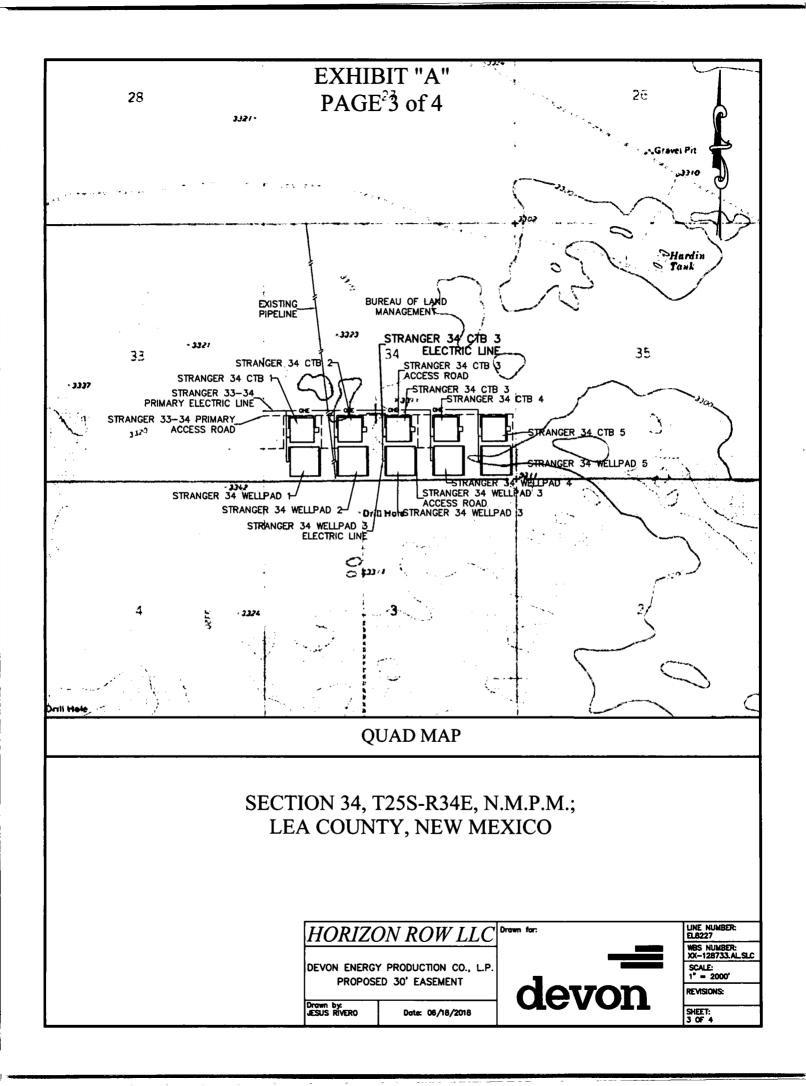
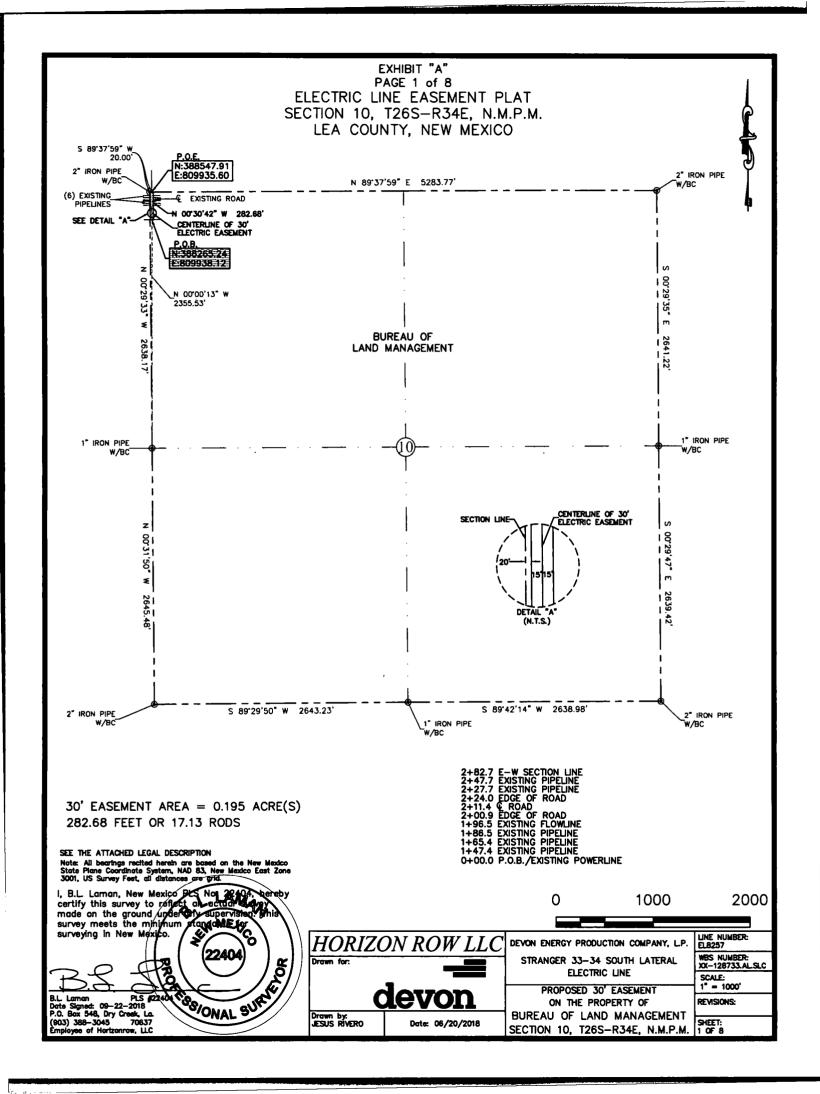


EXHIBIT "A" PAGE 4 of 4 DE RUAE STRANGER 34 CTB 3 ELECTRIC LINE **AERIAL MAP** SECTION 34, T25S-R34E, N.M.P.M.; LEA COUNTY, NEW MEXICO LINE NUMBER: EL8227 HORIZON ROW LLC DEVON ENERGY PRODUCTION CO., L.P. SCALE: 1" = 2000' devon PROPOSED 30' EASEMENT REVISIONS: Drown by: JESUS RIVERO SHEET: 4 OF 4 Date: 06/18/2018



#### **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 the northwest quarter (NW ¼) of Section 10, Township 26 South, Range 34 East, N.M.P.M., Lea 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 for the west quarter corner of Section 10, T26S-R34E, N.M.P.M., Lea County, New Mexico;

Thence N 00°00'13" W a distance of 2355.53' to the **Point of Beginning** of this easement having coordinates of Northing=388265.24 Easting=809938.12 feet and continuing the following courses;

Thence N 00°30'42" W a distance of 282.68' to the **Point of Ending** having coordinates of Northing=388547.91, Easting=809935.60 feet, from said point a 2" iron pipe w/BC for the northwest corner of Section 10, T26S-R34E bears S 89°37'59" W a distance of 20.00', covering **282.68' or 17.13 rods** and having an area of **0.195 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: 09/22/2018

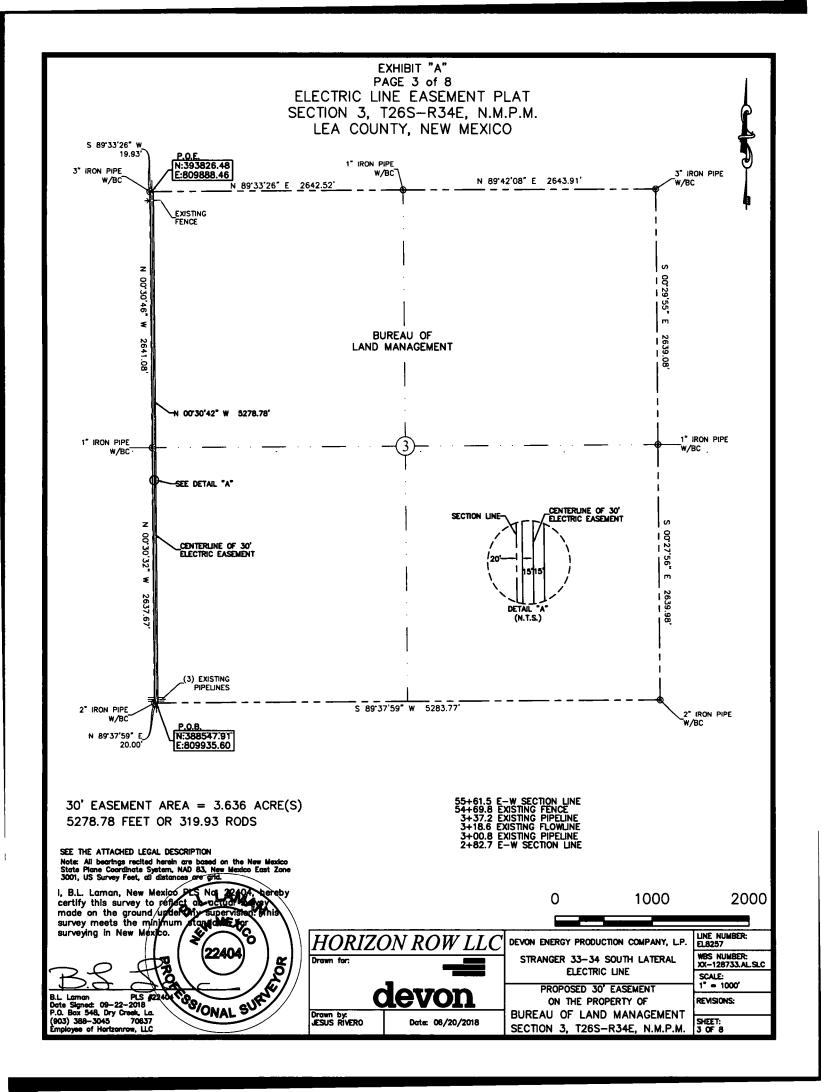
Horizon Row, LLC

P.O. Box 548, Dry Creek, La. (903) 388-3045 70637

Employee of Horizon Row, LLC

Sheet 2 of 8

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#### **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 the west half (W ½) of Section 3, Township 26 South, Range 34 East, N.M.P.M., Lea County, New Mexico, and being out of a parcel of land owned by the Bureau of Land Management. Said centerline of easement being more particularly described as follows:

Commencing from a 2" iron pipe w/BC for the southwest corner of Section 3, T26S-R34E, N.M.P.M., Lea County, New Mexico;

Thence N 89°37'59" E a distance of 20.00' to the **Point of Beginning** of this easement having coordinates of Northing=388547.91, Easting=809935.60 feet and continuing the following courses;

Thence N 00°30'42" W a distance of 5278.78' to the **Point of Ending** having coordinates of Northing=393826.48, Easting=809888.46 feet, from said point a 3" iron pipe w/BC for the northwest corner of Section 3, T26S-R34E bears S 89°33'26" W a distance of 19.93', covering **5278.78' or 319.93 rods** and having an area of **3.636 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.

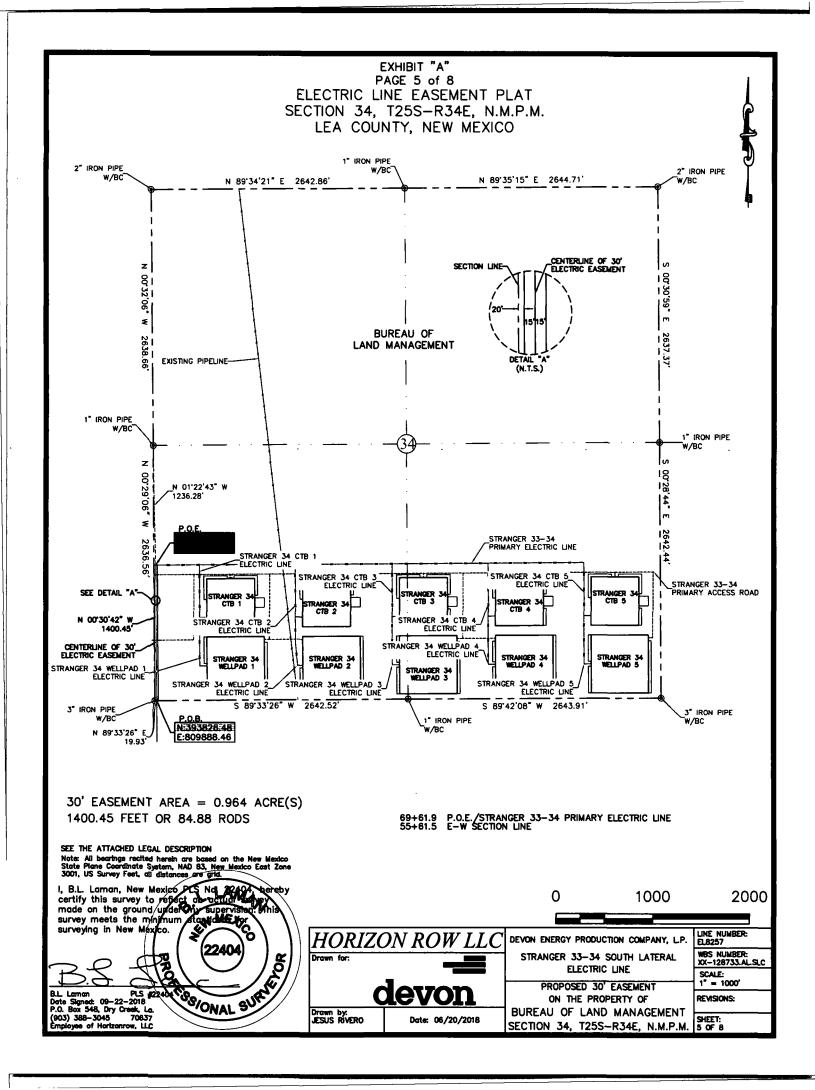
B.L. Laman

PLS 22404

Date Signed: 09/22/2018

Horizon Row, LLC

P.O. Box 548, Dry Creek, La. (903) 388-3045 70637



#### **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 the southwest (SW ¼) of Section 34, Township 25 South, Range 34 East, N.M.P.M., Lea 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 for the southwest corner of Section 34, T25S-R34E, N.M.P.M., Lea County, New Mexico;

Thence N 89°33'26" E a distance of 19.93' to the **Point of Beginning** of this easement having coordinates of Northing=393826.48, Easting=809888.46 feet and continuing the following courses;

Thence N 00°30'42" W a distance of 1400.45' to the **Point of Ending** having coordinates of Northing=395226.87, Easting=809875.96 feet, from said point a 1" iron pipe w/BC for the west quarter corner of Section 34, T25S-R34E bears N 01°22'43" W a distance of 1236.28', covering **1400.45' or 84.88 rods** and having an area of **0.964 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

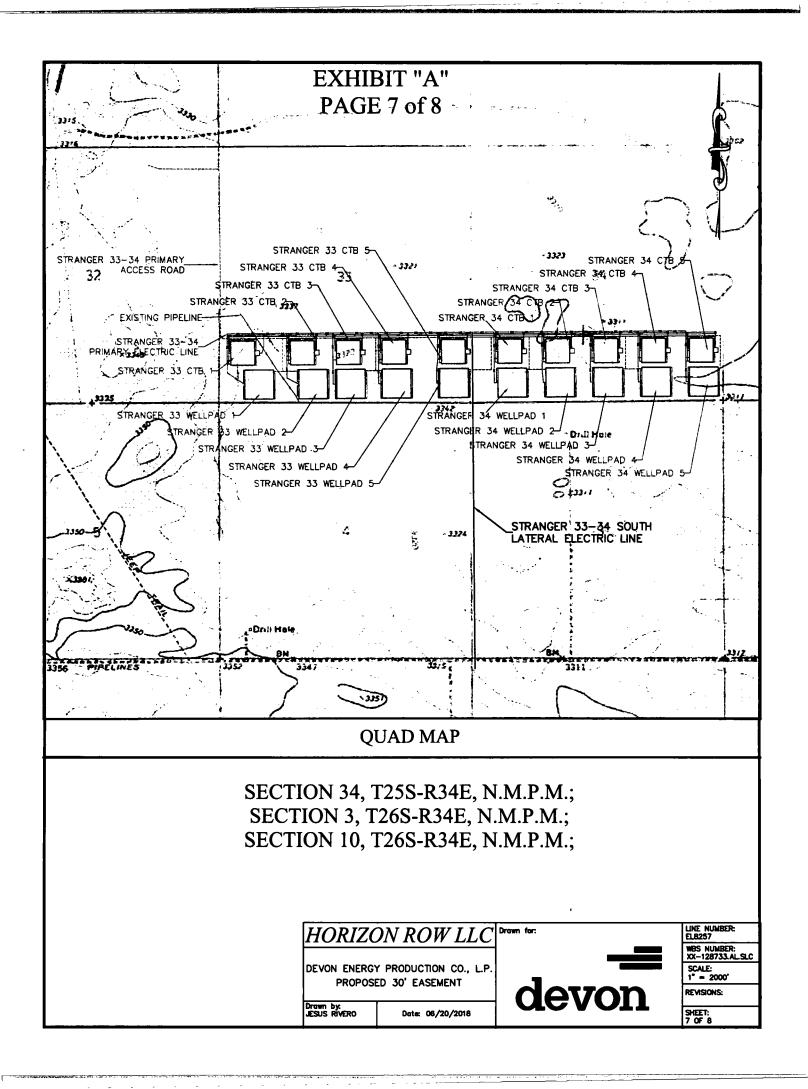
PLS 22404

Date Signed: 09/22/2018

Horizon Row, LLC

P.O. Box 548, Dry Creek, La.

(903) 388-3045 70637



# EXHIBIT "A" PAGE 8 of 8



STRANGER 33-34 SOUTH LATERAL ELECTRIC LINE

### **AERIAL MAP**

SECTION 34, T25S-R34E, N.M.P.M.; SECTION 3, T26S-R34E, N.M.P.M.; SECTION 10, T26S-R34E, N.M.P.M.;

# HORIZON ROW LLC

DEVON ENERGY PRODUCTION CO., L.P. PROPOSED 30' EASEMENT

Drawn by: JESUS RIVERO

Date: 08/20/2018





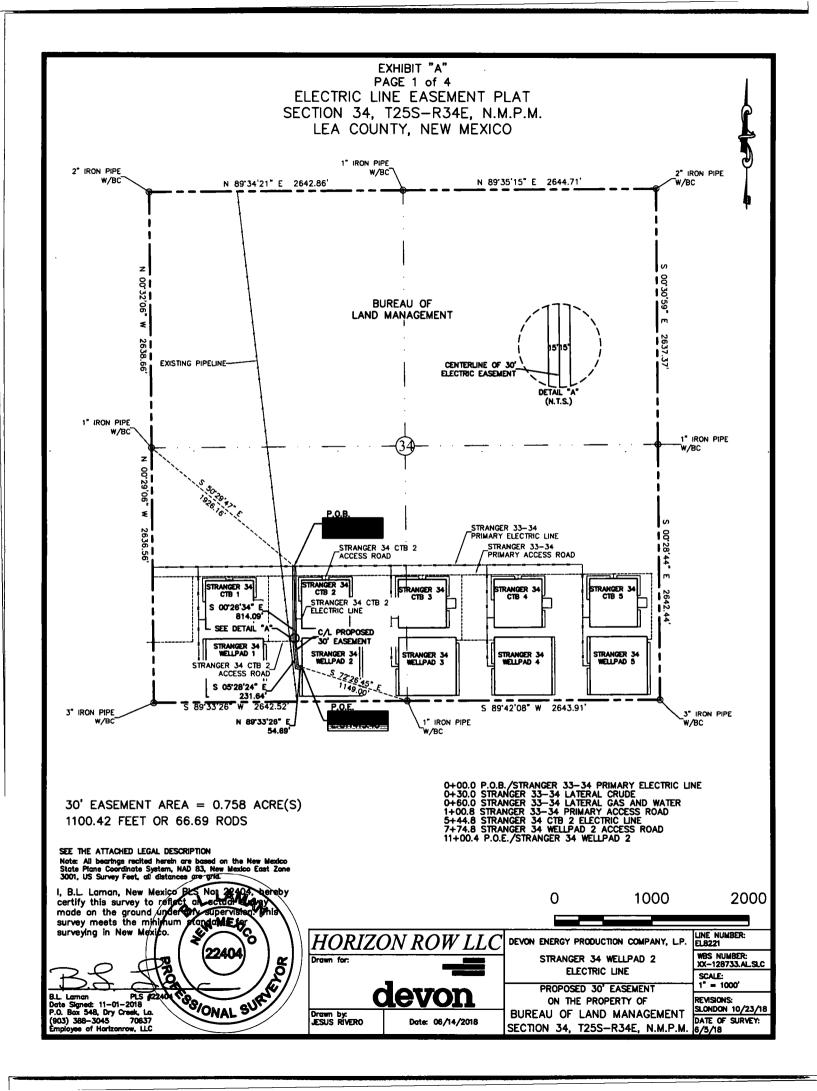
LINE NUMBER:

WBS NUMBER: XX-128733.AL.SLC

SCALE:

REVISIONS:

HEET:



#### **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 the southwest quarter (SW ¼) of Section 34, Township 25 South, Range 34 East, N.M.P.M., Lea 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 for the west quarter corner of Section 34, T25S-R34E, N.M.P.M., Lea County, New Mexico;

Thence S 50°29'47" E a distance of 1926.16' to the **Point of Beginning** of this easement having coordinates of Northing=395237.51 Easting=811332.41 feet and continuing the following courses;

Thence S 00°26'34" E a distance of 814.09' to an angle point;

Thence S 05°28'24" E a distance of 231.64' to an angle point;

Thence N 89°33'26" E a distance of 54.69' to the **Point of Ending** having coordinates of Northing=394193.29, Easting=811415.48 feet, from said point a 1" iron pipe w/BC for the south quarter corner of Section 34, T25S-R34E bears S 72°26'45" E a distance of 1149.00', covering **1100.42' or 66.69 rods** and having an area of **0.758 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 224

Date Signed: 11/01/2018 Horizon Row, LLC

P.O. Box 548, Dry Creek, La. (903) 388-3045 70637

Employee of Horizon Row, LLC

Sheet 2 of 4

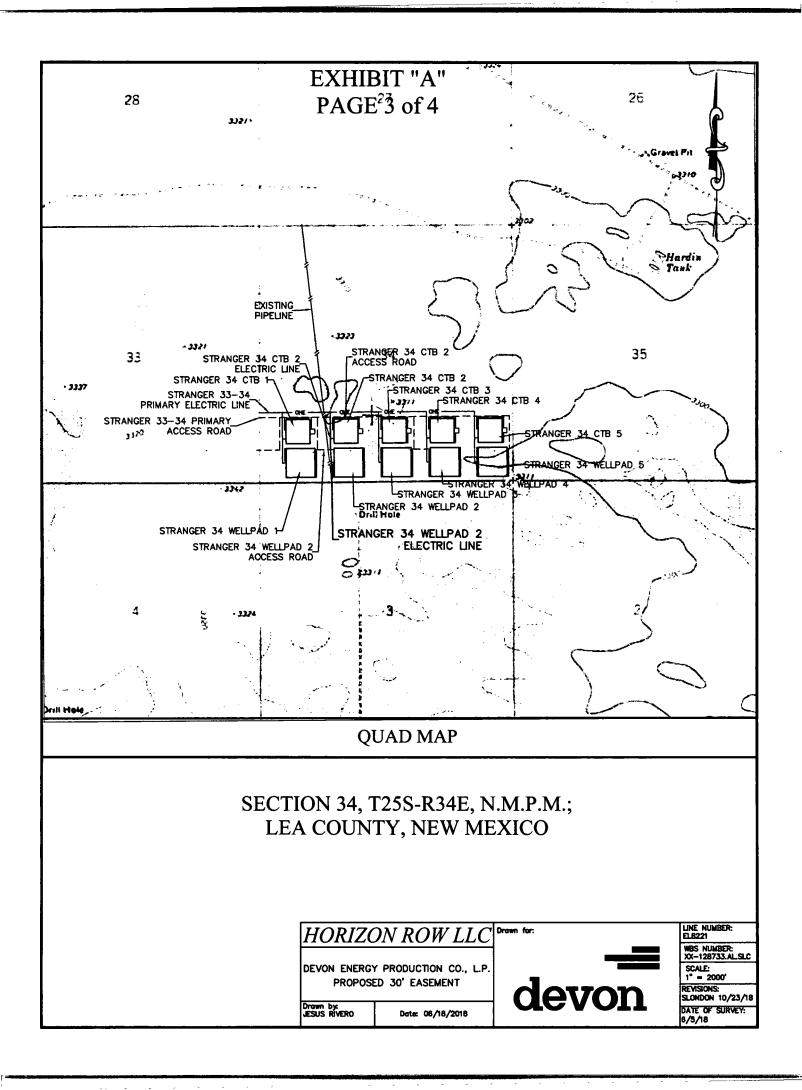
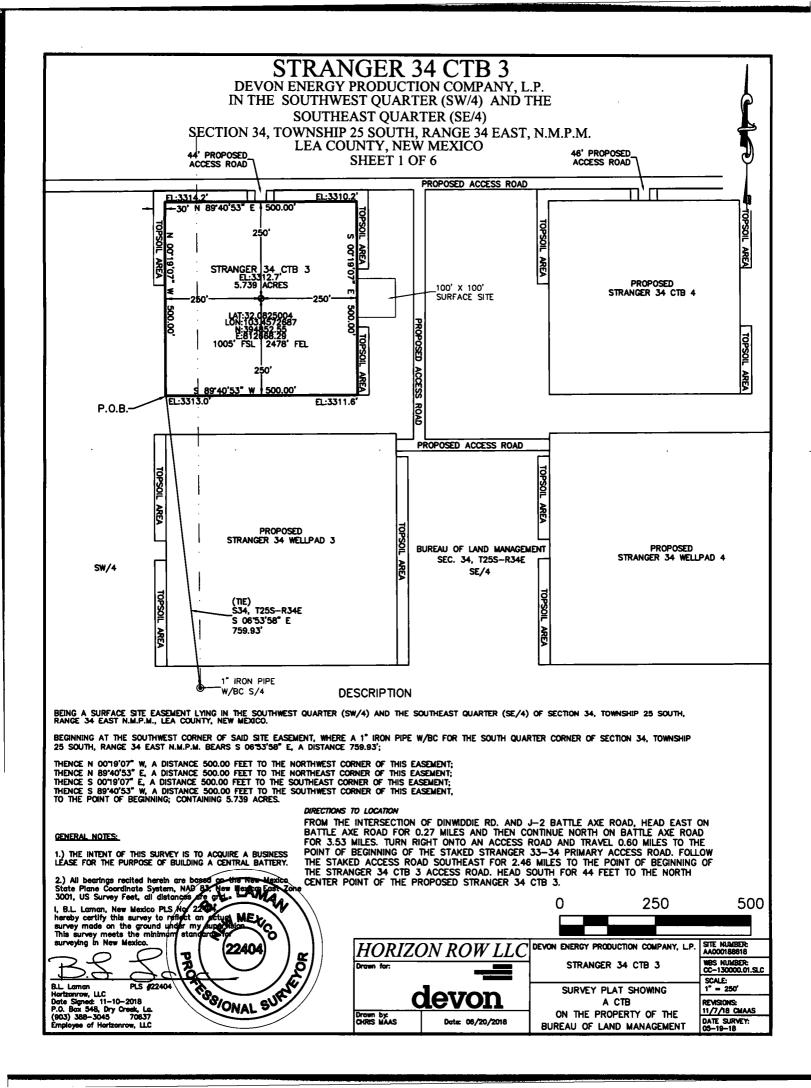
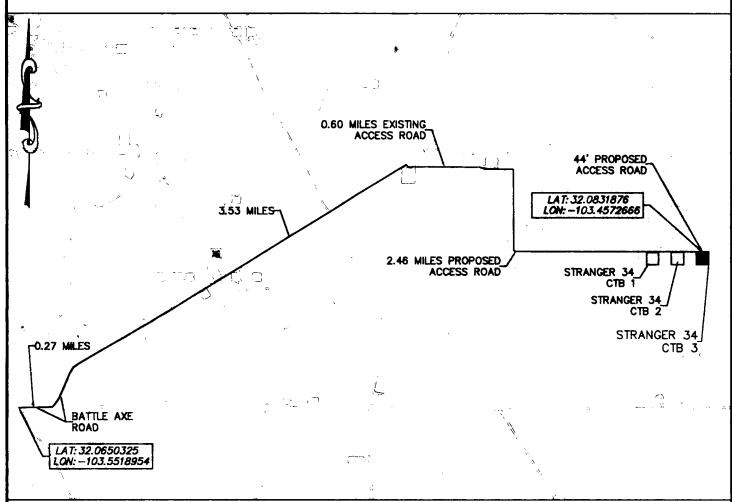


	EXHIBIT PAGE 4			
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	STRANGER	34 WELLPAD 2 ELECTRIC LINE		
	· •	·		
AERIAL MAP				
SE	ECTION 34, T25 LEA COUNTY			
	HORIZON		Drawn for:	LINE NUMBER: EL8221 WBS NUMBER: XX-128733.AL.SLC
	DEVON ENERGY PRO PROPOSED 30  Drawn by: JESUS RIVERO		devon	SCALE: 1° = 2000' REVISIONS: SLONDON 10/23/18 DATE OF SURVEY: 8/5/18



# SECTION 34, TOWNSHIP 25 SOUTH, RANGE 34 EAST, N.M.P.M. LEA COUNTY, STATE OF NEW MEXICO AERIAL ACCESS ROUTE MAP



#### DIRECTIONS TO LOCATION

NOT TO SCALE

FROM THE INTERSECTION OF DINWIDDIE RD. AND J-2 BATTLE AXE ROAD, HEAD EAST ON BATTLE AXE ROAD FOR 0.27 MILES AND THEN CONTINUE NORTH ON BATTLE AXE ROAD FOR 3.53 MILES. TURN RIGHT ONTO AN ACCESS ROAD AND TRAVEL 0.60 MILES TO THE POINT OF BEGINNING OF THE STAKED STRANGER 33-34 PRIMARY ACCESS ROAD. FOLLOW THE STAKED ACCESS ROAD SOUTHEAST FOR 2.46 MILES TO THE POINT OF BEGINNING OF THE STRANGER 34 CTB 3 ACCESS ROAD. HEAD SOUTH FOR 44 FEET TO THE NORTH CENTER POINT OF THE PROPOSED STRANGER 34 CTB 3.

SHEET 2 OF 6

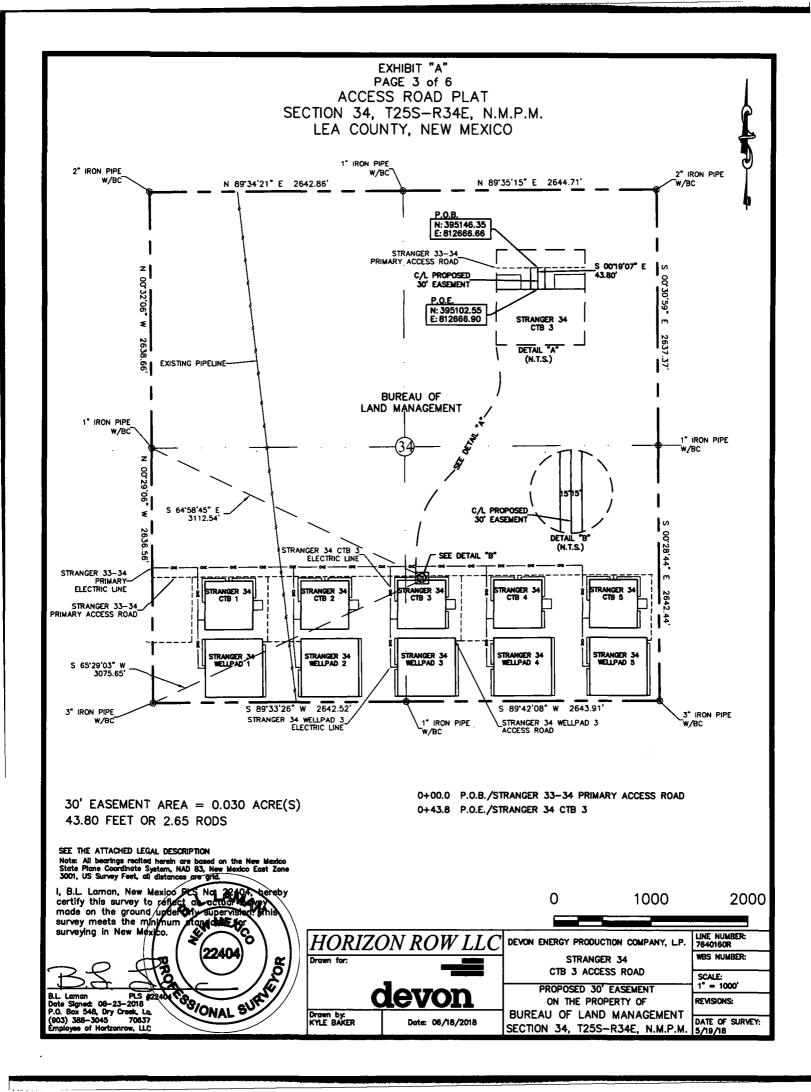
### |HORIZON ROW LLC|

DEVON ENERGY PRODUCTION CO., L.P.

Drawn by: CHRIS MAAS

Date: 06/20/2018





# SECTION 34, T25S-R34E, N.M.P.M., LEA COUNTY, NEW MEXICO

#### **ACCESS ROAD 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 the southeast quarter (SE 1/4) of Section 34, Township 25 South, Range 34 East, N.M.P.M., Lea 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 for the west quarter corner of Section 34, T25S-R34E, N.M.P.M., Lea County, New Mexico;

Thence S 64°58'45" E a distance of 3112.54' to the **Point of Beginning** of this easement having coordinates of Northing=395146.35, Easting=812666.66 feet and continuing the following course;

Thence S 00°19'07" E a distance of 43.80' to the **Point of Ending** having coordinates of Northing=395102.55, Easting=812666.90 feet from said point a 3" iron pipe w/BC for the southwest corner of Section 34, T25S-R34E bears S 65°29'03" W a distance of 3075.65', covering **43.80' or 2.65 rods** and having an area of **0.030 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.

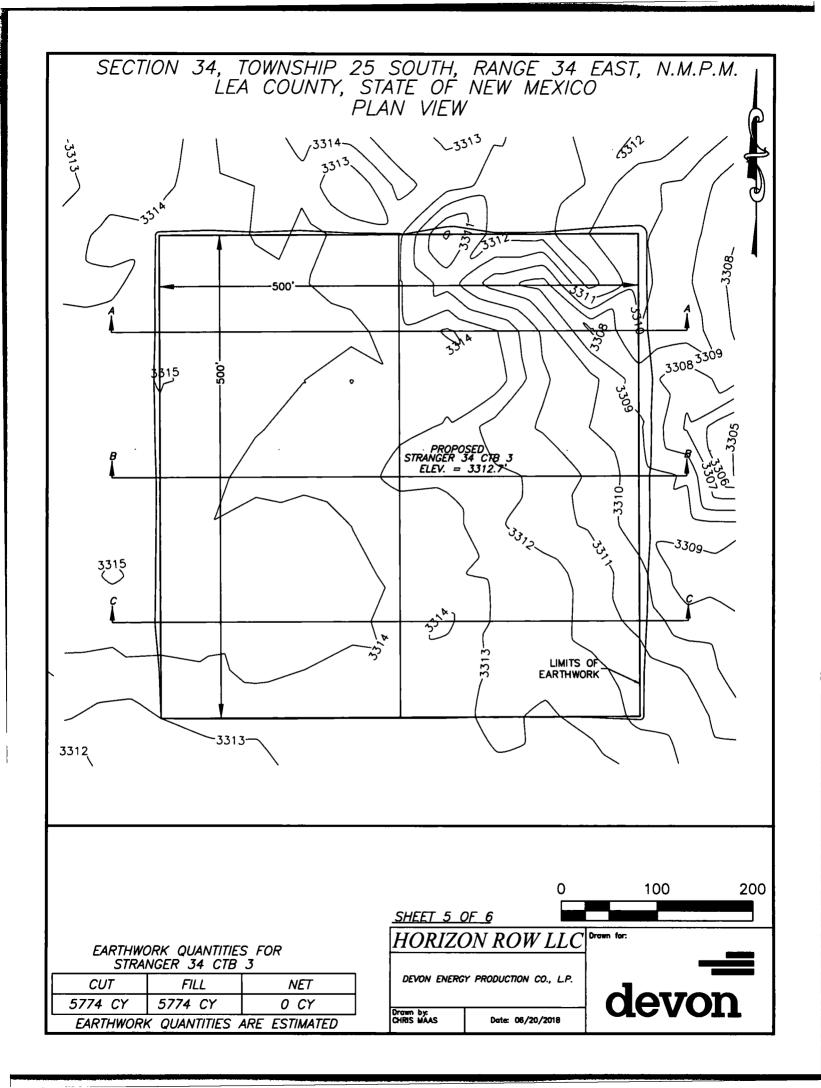
B.L. Laman PLS 2

Date Signed: 08/23/2018

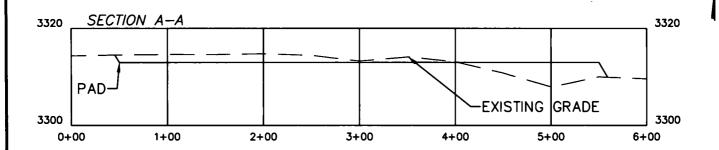
Horizon Row, LLC

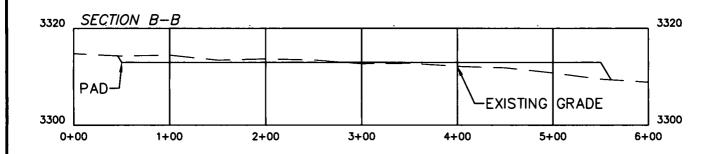
P.O. Box 548, Dry Creek, La. (903) 388-3045 70637

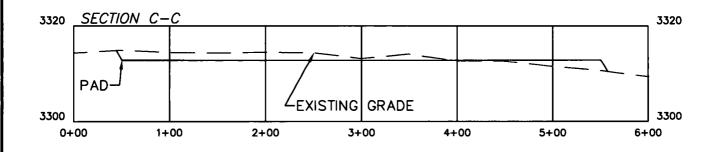
Employee of Horizon Row, LLC



# SECTION 34, TOWNSHIP 25 SOUTH, RANGE 34 EAST, N.M.P.M. LEA COUNTY, STATE OF NEW MEXICO CROSS SECTIONS







EARTHWORK QUANTITIES FOR STRANGER 34 CTB 3

CUT	FILL	NET
5774 CY	5774 CY	0 CY
EARTHWORK QUANTITIES ARE ESTIMATED		

SHEET 6 OF 6

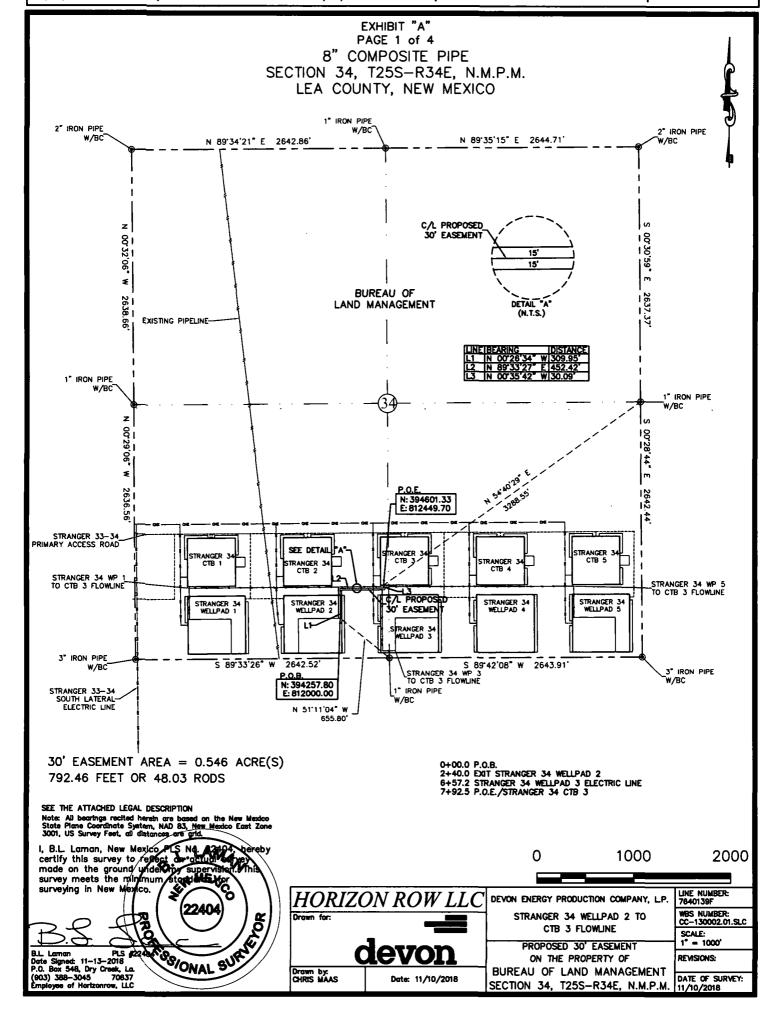
SCALE 1" = 100' HORIZONTAL SCALE 1" = 20' VERTICAL

DEVON ENERGY PRODUCTION CO., L.P.

HORIZON ROW LLC

Drawn by: CHRIS MAAS Date: 06/20/2018





#### **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 the southwest quarter (SW ¼) of Section 34, Township 25 South, Range 34 East, N.M.P.M., Lea 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 for the south quarter corner of Section 34, T25S-R34E, N.M.P.M., Lea County, New Mexico;

Thence N 51°11'04" W a distance of 655.80' to the **Point of Beginning** of this easement having coordinates of Northing=394257.80, Easting=812000.00 feet and continuing the following courses;

Thence N 00°26'34" W a distance of 309.95' to an angle point;

Thence N 89°33'27" E a distance of 452.42' to an angle point;

Thence N 00°35'42" W a distance of 30.09' to the **Point of Ending** having coordinates of Northing=394601.33, Easting=812449.70 feet, from said point a 1" iron pipe w/BC for the east quarter corner of Section 34, T25S-R34E bears N 54°40'29" E a distance of 3288.55', covering 792.46' or 48.03 rods and having an area of 0.546 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

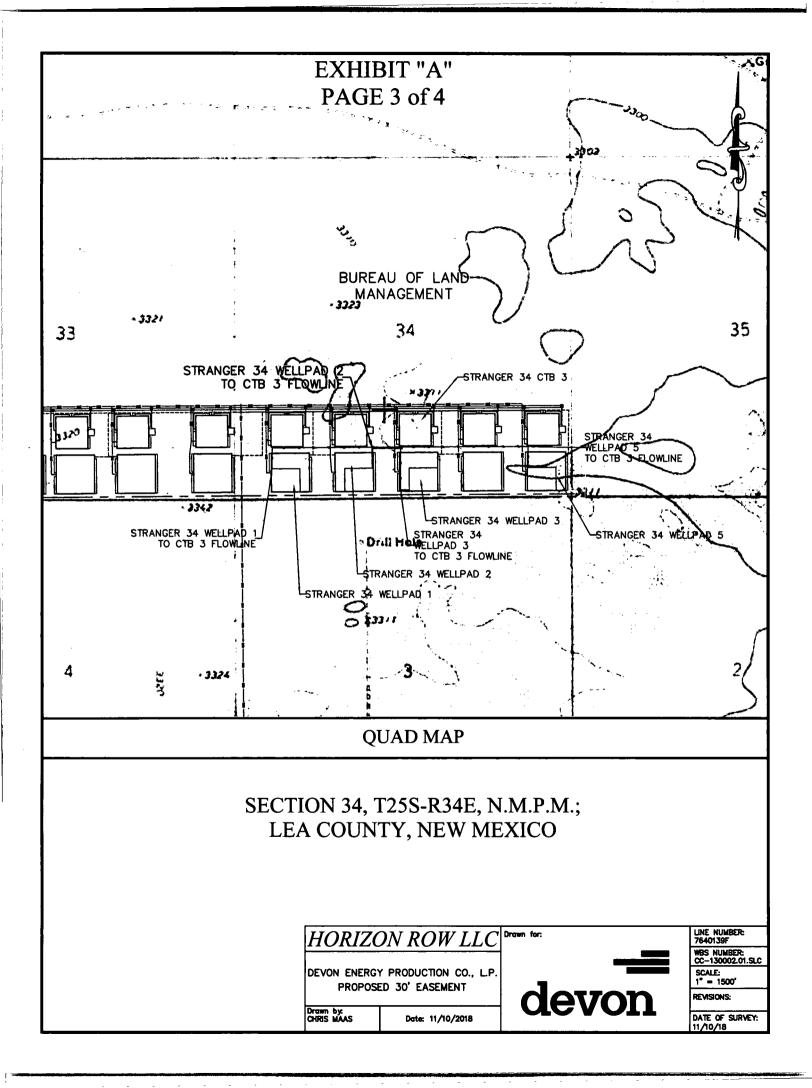
Date Signed: 11/13/2018

Horizon Row, LLC

P.O. Box 548, Dry Creek, La.

(903) 388-3045 70637

Employee of Horizon Row, LLC

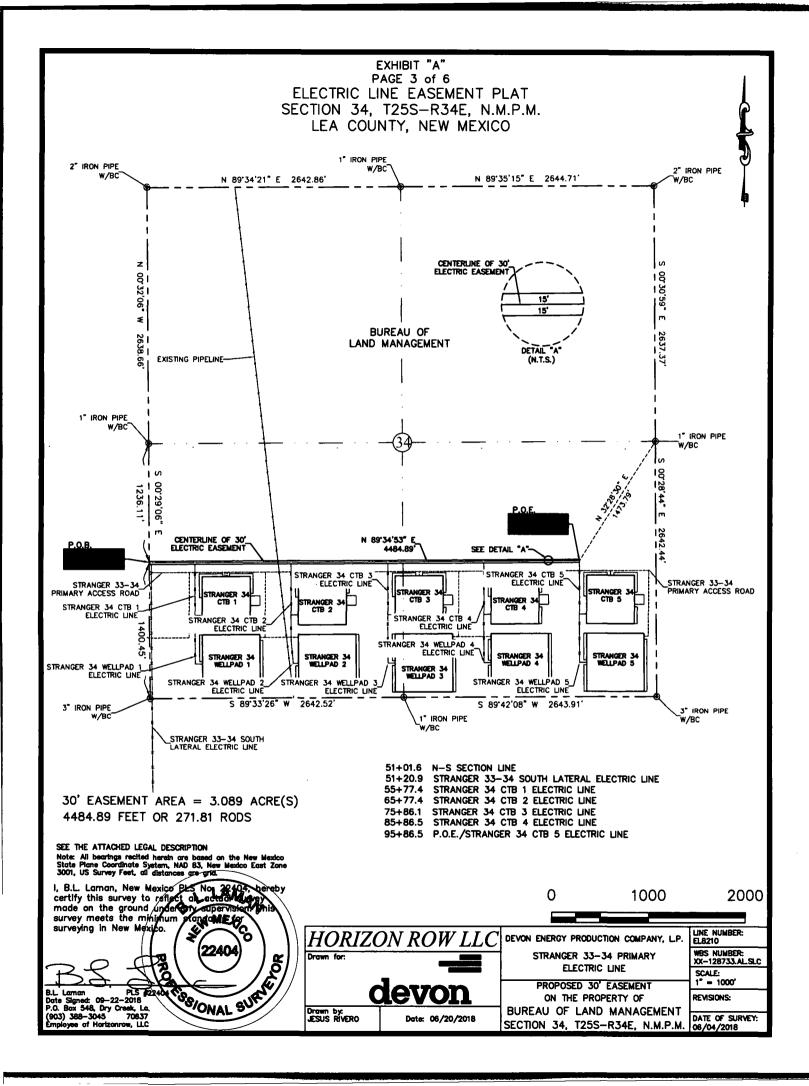


**EXHIBIT "A"** PAGE 4 of 4 BUREAU OF LAND BUREAU OF LAND **MANAGEMENT** MANAGEMENT SEC. 34, T25S-R34E SEC. 33, T25S-R34E STRANGER 34 WELLPAD 2\_ TO CTB 3 FLOWLINE **AERIAL MAP** SECTION 34, T25S-R34E, N.M.P.M.; LEA COUNTY, NEW MEXICO LINE NUMBER: 7640139F HORIZON ROW LLC WBS NUMBER: CC-130002.01.SLC DEVON ENERGY PRODUCTION CO., L.P. SCALE: 1" = 1500' PROPOSED 30' EASEMENT REVISIONS:

> Drawn by: CHRIS MAAS

Date: 11/10/2018

DATE OF SURVEY:



#### **SECTION 34, T25S-R34E, N.M.P.M.,** LEA 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 the south half (S ½) of Section 34, Township 25 South, Range 34 East, N.M.P.M., Lea 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 for the west quarter corner of Section 34, T25S-R34E, N.M.P.M., Lea County, New Mexico;

Thence S 00°29'06" E a distance of 1236.11' to the **Point of Beginning** of this easement having coordinates of Northing=395226.73, Easting=809856.68 feet and continuing the following courses;

Thence N 89°34'53" E a distance of 4484.89' to the **Point of Ending** having coordinates of Northing=395259.50, Easting=814341.45 feet, from said point a 1" iron pipe w/BC for the east quarter corner of Section 34, T25S-R34E bears N 32°28'30" E a distance of 1473.79', covering 4484.89' or 271.81 rods and having an area of 3.089 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: 09/22/2018

Horizon Row, LLC

P.O. Box 548, Dry Creek, La.

(903) 388-3045 70637

Employee of Horizon Row, LLC

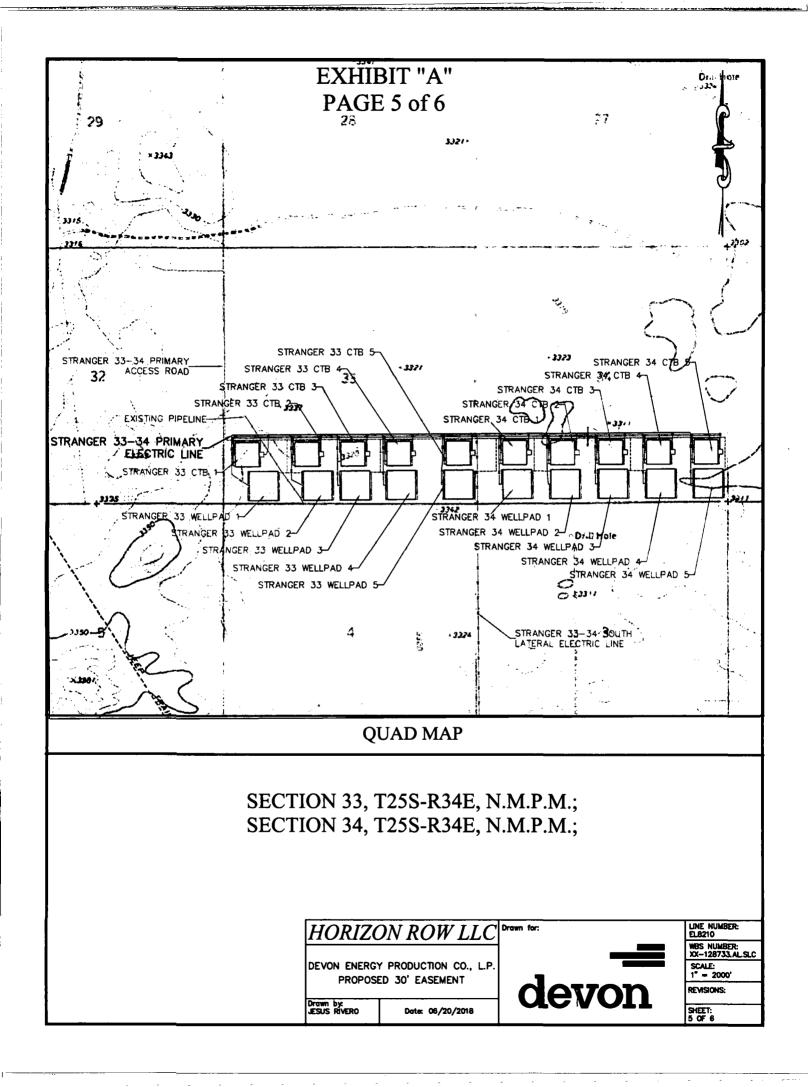


EXHIBIT "A" PAGE 6 of 6

STRANGER 33-34 PRIMARY\_ ELECTRIC LINE

### **AERIAL MAP**

SECTION 33, T25S-R34E, N.M.P.M.; SECTION 34, T25S-R34E, N.M.P.M.;

## HORIZON ROW LLC

DEVON ENERGY PRODUCTION CO., L.P. PROPOSED 30' EASMENT

Drawn by: JESUS RIVERO

Date: 08/20/2018





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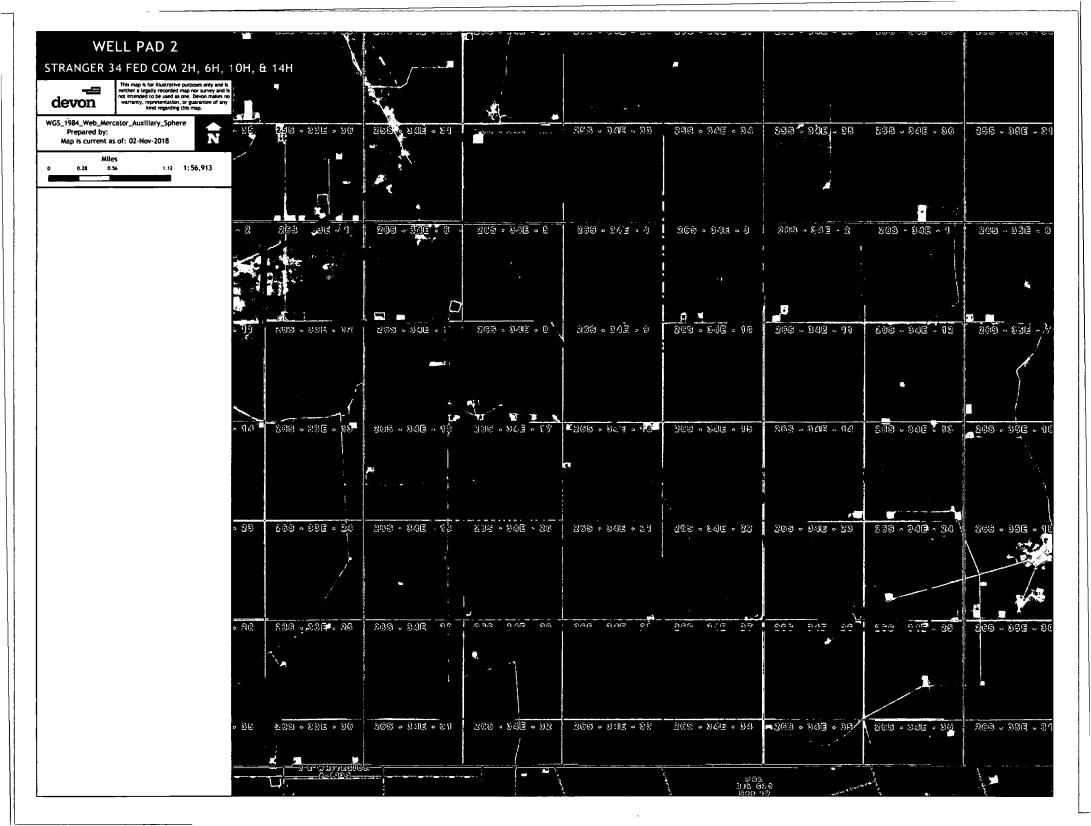
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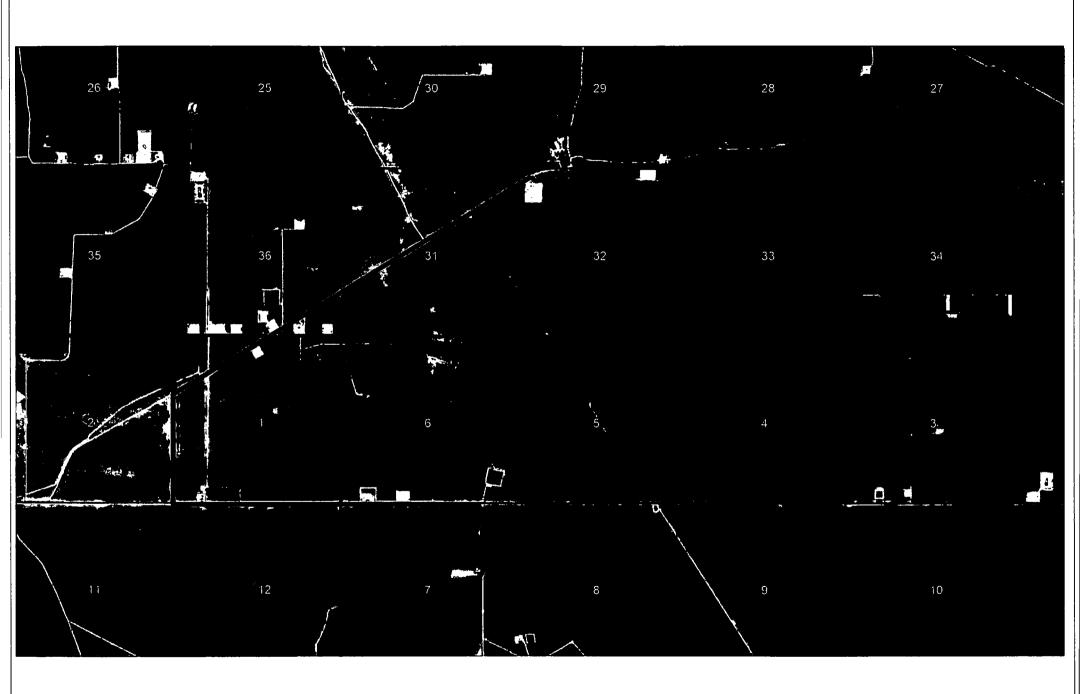
WBS NUMBER: XX-128733.AL.SLC

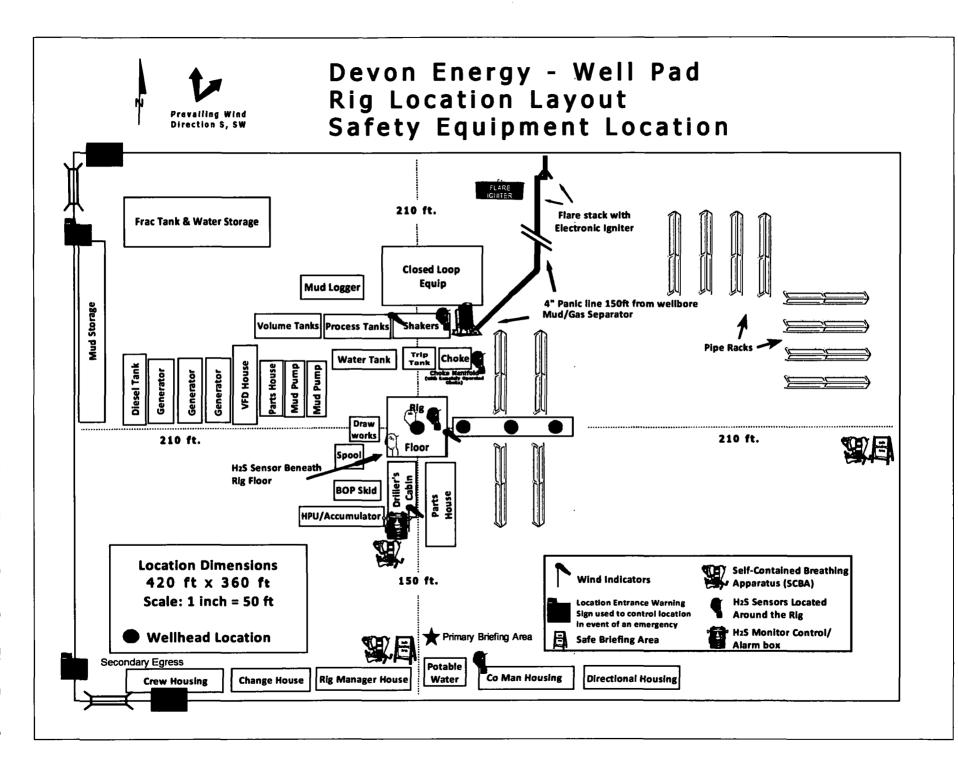
SCALE: 1" = 2000'

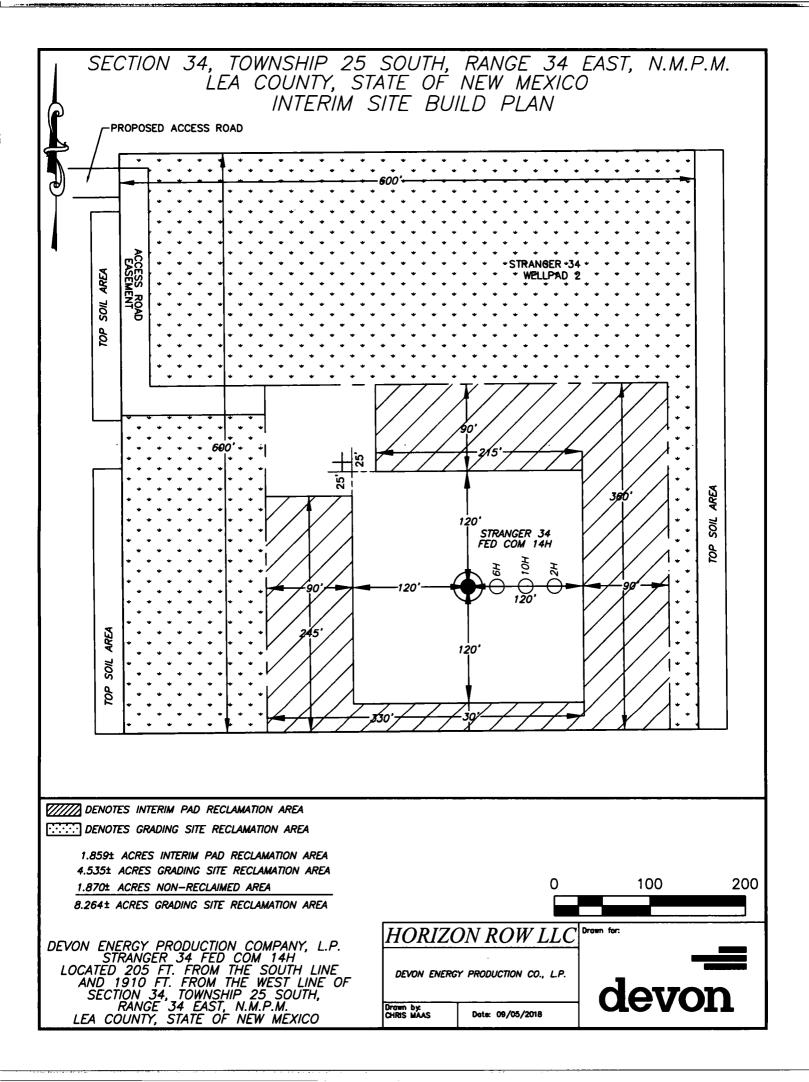
REVISIONS:

SHEET: 6 OF 6











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

# PWD Data Report

#### 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:

Decribe 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

Injection PWD discharge volume (bbl/day):

Injection well mineral owner:

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:	
Decribe precipitated solids disposal:	
Precipitated solids disposal permit:	
Unlined pit precipitated solids disposal schedule:	
Unlined pit precipitated solids disposal schedule attachm	ment:
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 I that of the existing water to be protected?	Dissolved Solids (TDS) concentration equal to or less than
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):

	<del> </del>
Injection well type:	
Injection well number:	Injection well name:
Assigned injection well API number?	Injection well API number:
Injection well new surface disturbance (acres):	
Minerals protection information:	
Mineral protection attachment:	
Underground Injection Control (UIC) Permit?	
UIC Permit attachment:	
Section 5 - Surface Discharge	
Would you like to utilize Surface Discharge PWD options? NO	
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

#### **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: