Form 3160-3
(June 2015)

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

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

APPLICATION FOR PERMIT TO DRILL OR REENTER

5. Lease Serial No.
NMLC0061869

6. If Indian, Allotee or Tribe Name

1a. Type of work: ☑ DRILL ☐ REENTER

1b. Type of Well: ☑ Oil Well ☐ Gas Well ☐ Other

1c. Type of Completion: ☐ Hydraulic Fracturing ☑ Single Zone ☐ Multiple Zone

7. If Unit or CA Agreement, Name and No.

8. Lease Name and Well No.
MARWARI 21-16 STATE FED COM
718H [325998]

2. Name of Operator
DEVON ENERGY PRODUCTION COMPANY LP [6137]

9. API Well No.
30-025-49135

3a. Address
333 WEST SHERIDAN AVE OKLAHOMA CITY OK 73102

3b. Phone No. *(include area code)*
(405)235-3611

10. Field and Pool, or Exploratory [98270]
WC-025 G-07 S253216D / UPPER WOLF

4. Location of Well *(Report location clearly and in accordance with any State requirements.*)*
At surface NENE / 325 FNL / 685 FEL / LAT 32.1078034 / LONG -103.6737081
At proposed prod. zone NENE / 20 FNL / 700 FEL / LAT 32.1376568 / LONG -103.6736949

11. Sec., T. R. M. or Blk. and Survey or Area
SEC 28 / T25S / R32E / NMP

14. Distance in miles and direction from nearest town or post office*

12. County or Parish
LEA

13. State
NM

15. Distance from proposed* location to nearest property or lease line, ft. (Also to nearest drig. unit line, if any)
325 feet

16. No of acres in lease

17. Spacing Unit dedicated to this well
320

18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft.
56 feet

19. Proposed Depth
11960 feet / 22687 feet

20. BLM/BIA Bond No. in file
FED: CO1104

21. Elevations (Show whether DF, KDB, RT, GL, etc.)
3384 feet

22. Approximate date work will start*
11/19/2019

23. Estimated duration
45 days

24. Attachments

The following, completed in accordance with the requirements of Onshore Oil and Gas Order No. 1, and the Hydraulic Fracturing rule per 43 CFR 3162.3-3 (as applicable)

1. Well plat certified by a registered surveyor.
2. A Drilling Plan.
3. A Surface Use Plan (if the location is on National Forest System Lands, the SUPO must be filed with the appropriate Forest Service Office).
4. Bond to cover the operations unless covered by an existing bond on file (see Item 20 above).
5. Operator certification.
6. Such other site specific information and/or plans as may be requested by the BLM.

25. Signature
(Electronic Submission)

Name *(Printed/Typed)*

Date
02/21/2019

Title

Approved by *(Signature)*
(Electronic Submission)

Name *(Printed/Typed)*
Cody Layton / Ph: (575)234-5959

Date
03/23/2021

Title
Assistant Field Manager Lands & Minerals

Office
CARLSBAD

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

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

GCP Rec 05/14/2021

APPROVED WITH CONDITIONS

KZ
07/02/2021

SL

(Continued on page 2)

*(Instructions on page 2)

Approval Date: 03/23/2021

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 CFR 3160

PRINCIPAL PURPOSES: The information will be used to: (1) process and evaluate your application for a permit to drill a new oil, gas, or service 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.

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Additional Operator Remarks

Location of Well

1. SHL: NENE / 325 FNL / 685 FEL / TWSP: 25S / RANGE: 32E / SECTION: 28 / LAT: 32.1078034 / LONG: -103.6737081 (TVD: 0 feet, MD: 0 feet)
   PPP: SESE / 100 FSL / 700 FEL / TWSP: 25S / RANGE: 32E / SECTION: 21 / LAT: 32.108972 / LONG: -103.67375 (TVD: 11958 feet, MD: 12252 feet)
   BHL: NENE / 20 FNL / 700 FEL / TWSP: 25S / RANGE: 32E / SECTION: 16 / LAT: 32.1376568 / LONG: -103.6736949 (TVD: 11960 feet, MD: 22687 feet)

BLM Point of Contact

Name: Candy Vigil
Title: LIE
Phone: 5752345982
Email: cvigil@blm.gov

Review and Appeal Rights

A person contesting a decision shall request a State Director review. This request must be filed within 20 working days of receipt of the Notice with the appropriate State Director (see 43 CFR 3165.3). The State Director review decision may be appealed to the Interior Board of Land Appeals, 801 North Quincy Street, Suite 300, Arlington, VA 22203 (see 43 CFR 3165.4). Contact the above listed Bureau of Land Management office for further information.

PECOS DISTRICT
DRILLING CONDITIONS OF APPROVAL

OPERATOR'S NAME:	**Devon Energy Production Company LP**
LEASE NO.:	**NMLC0061869**
LOCATION:	Section 28, T.25 S., R.32 E., NMPM
COUNTY:	Lea County, New Mexico

WELL NAME & NO.:	Marwari 21-16 State Fed Com 716H
SURFACE HOLE FOOTAGE:	325'/N & 1710'/E
BOTTOM HOLE FOOTAGE	20'/N & 1900'/W

WELL NAME & NO.:	Marwari 21-16 State Fed Com 718H
SURFACE HOLE FOOTAGE:	325'/N & 685'/E
BOTTOM HOLE FOOTAGE	20'/N & 700'/E

WELL NAME & NO.:	Marwari 21-16 State Fed Com 731H
SURFACE HOLE FOOTAGE:	325'/N & 250'/W
BOTTOM HOLE FOOTAGE	20'/N & 1580'/W

WELL NAME & NO.:	Marwari 21-16 State Fed Com 733H
SURFACE HOLE FOOTAGE:	325'/N & 1650'/E
BOTTOM HOLE FOOTAGE	20'/N & 1300'/E

WELL NAME & NO.:	Marwari 21-16 State Fed Com 734H
SURFACE HOLE FOOTAGE:	325'/N & 655'/E
BOTTOM HOLE FOOTAGE	20'/N & 550'/E

COA

H2S	◉ Yes	○ No	
Potash	◉ None	○ Secretary	○ R-111-P
Cave/Karst Potential	◉ Low	○ Medium	○ High
Cave/Karst Potential	○ Critical		
Variance	○ None	◉ Flex Hose	○ Other
Wellhead	○ Conventional	○ Multibowl	◉ Both
Other	☐ 4 String Area	☐ Capitan Reef	☐ WIPP
Other	☑ Fluid Filled	☑ Cement Squeeze	☐ Pilot Hole
Special Requirements	☐ Water Disposal	☑ COM	☐ Unit

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A. HYDROGEN SULFIDE

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

B. CASING

1. The **13-3/8** inch surface casing shall be set at approximately **920 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 **8-5/8** inch intermediate casing is:

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

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.

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

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.

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 Santa Fe Office, 301 Dinosaur Trail Santa Fe, New Mexico 87508, at least 90 days before the anticipated date of first production from a well subject to a spacing order issued by the New Mexico Oil Conservation Division. The Communitization Agreement will include the signatures of all working interest owners in all Federal and Indian leases subject to the Communitization Agreement (i.e., operating rights owners and lessees of record), or certification that the operator has obtained the written signatures of all such owners and will make those signatures available to the BLM immediately upon request.
- If the operator does not comply with this condition of approval, the BLM may take enforcement actions that include, but are not limited to, those specified in 43 CFR 3163.1.
- In addition, the well sign shall include the surface and bottom hole lease numbers. When the Communitization Agreement number is known, it shall also be on the sign.

GENERAL REQUIREMENTS

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

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

☒ Eddy County
Call the Carlsbad Field Office, 620 East Greene St., Carlsbad, NM 88220, (575) 361-2822

☒ Lea County
Call the Hobbs Field Station, 414 West Taylor, Hobbs NM 88240, (575) 393-3612

1. Unless the production casing has been run and cemented or the well has been properly plugged, the drilling rig shall not be removed from over the hole without prior approval.

   a. In the event the operator has proposed to drill multiple wells utilizing a skid/walking rig. Operator shall secure the wellbore on the current well, after installing and testing the wellhead, by installing a blind flange of like pressure rating to the wellhead and a pressure gauge that can be monitored while drilling is performed on the other well(s).
   b. When the operator proposes to set surface casing with Spudder Rig
      - Notify the BLM when moving in and removing the Spudder Rig.
      - Notify the BLM when moving in the 2nd Rig. Rig to be moved in within 90 days of notification that Spudder Rig has left the location.
      - BOP/BOPE test to be conducted per Onshore Oil and Gas Order No. 2 as soon as 2nd Rig is rigged up on well.

2. Floor controls are required for 3M or Greater systems. These controls will be on the rig floor, unobstructed, readily accessible to the driller and will be operational at all times during drilling and/or completion activities. Rig floor is defined as the area immediately around the rotary table; the area immediately above the substructure on which the draw works are located, this does not include the dog house or stairway area.

3. The record of the drilling rate along with the GR/N well log run from TD to surface (horizontal well – vertical portion of hole) shall be submitted to the BLM office as well as all other logs run on the borehole 30 days from completion. If available, a digital copy of the logs is to be submitted in addition to the paper copies. The Rustler top and top and bottom of Salt are to be recorded on the Completion Report.

A. CASING

1. Changes to the approved APD casing program need prior approval if the items substituted are of lesser grade or different casing size or are Non-API. The Operator can exchange the components of the proposal with that of superior strength (i.e. changing from J-55 to N-80, or from 36# to 40#). Changes to the approved cement program need prior approval if the altered cement plan has less volume or strength or if the changes are substantial (i.e. Multistage tool, ECP, etc.). The initial wellhead installed on the well will remain on the well with spools used as needed.

2. Wait on cement (WOC) for Potash Areas: After cementing but before commencing any tests, the casing string shall stand cemented under pressure until both of the following conditions have been met: 1) cement reaches a minimum compressive strength of 500 psi for all cement blends, 2) until cement has been in place at least 24 hours. WOC time will be recorded in the driller's log. The casing intergrity test can be done (prior to the cement setting up) immediately after bumping the plug.

3. Wait on cement (WOC) for Water Basin: After cementing but before commencing any tests, the casing string shall stand cemented under pressure until both of the following conditions have been met: 1) cement reaches a minimum compressive strength of 500 psi at the shoe, 2) until cement has been in place at least 8 hours. WOC time will be recorded in the driller's log. See individual casing strings for details regarding lead cement slurry requirements. The casing intergrity test can be done (prior to the cement setting up) immediately after bumping the plug.

4. Provide compressive strengths including hours to reach required 500 pounds compressive strength prior to cementing each casing string. Have well specific cement details onsite prior to pumping the cement for each casing string.

5. No pea gravel permitted for remedial or fall back remedial without prior authorization from the BLM engineer.

6. On that portion of any well approved for a 5M BOPE system or greater, a pressure integrity test of each casing shoe shall be performed. Formation at the shoe shall be tested to a minimum of the mud weight equivalent anticipated to control the formation pressure to the next casing depth or at total depth of the well. This test shall be performed before drilling more than 20 feet of new hole.

7. If hardband drill pipe is rotated inside casing, returns will be monitored for metal. If metal is found in samples, drill pipe will be pulled and rubber protectors which have a larger diameter than the tool joints of the drill pipe will be installed prior to continuing drilling operations.
8. Whenever a casing string is cemented in the R-111-P potash area, the NMOCD requirements shall be followed.

B. PRESSURE CONTROL

 Approval Date: 03/23/2021

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: The flex line must meet the requirements of API 16C. Check condition of flexible line from BOP to choke manifold, replace if exterior is damaged or if line fails test. Line to be as straight as possible with no hard bends and is to be anchored according to Manufacturer's requirements. The flexible hose can be exchanged with a hose of equal size and equal or greater pressure rating. Anchor requirements, specification sheet and hydrostatic pressure test certification matching the hose in service, to be onsite for review. These documents shall be posted in the company man's trailer and on the rig floor.

3. 5M or higher system requires an HCR valve, remote kill line and annular to match. The remote kill line is to be installed prior to testing the system and tested to stack pressure.

4. If the operator has proposed a multi-bowl wellhead assembly in the APD. The following requirements must be met:

    a. Wellhead shall be installed by manufacturer's representatives, submit documentation with subsequent sundry.
    b. If the welding is performed by a third party, the manufacturer's representative shall monitor the temperature to verify that it does not exceed the maximum temperature of the seal.
    c. Manufacturer representative shall install the test plug for the initial BOP test.
    d. Whenever any seal subject to test pressure is broken, all the tests in OOGO2.III.A.2.i must be followed.
    e. If the cement does not circulate and one inch operations would have been possible with a standard wellhead, the well head shall be cut off, cementing operations performed and another wellhead installed.

5. The appropriate BLM office shall be notified a minimum of 4 hours in advance for a representative to witness the tests.

    a. In a water basin, for all casing strings utilizing slips, these are to be set as soon as the crew and rig are ready and any fallback cement remediation has been done. The casing cut-off and BOP installation can be initiated four hours after installing the slips, which will be approximately six hours after bumping the plug. For those casing strings not using slips, the minimum wait time before cut-off is eight hours after bumping the plug. BOP/BOPE testing can begin after cut-off or once cement reaches 500 psi compressive strength (including lead when specified), whichever is greater. However, if the float does not

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

b. In potash areas, for all casing strings utilizing slips, these are to be set as soon as the crew and rig are ready and any fallback cement remediation has been done. For all casing strings, casing cut-off and BOP installation can be initiated at twelve hours after bumping the plug. However, **no tests** shall commence until the cement has had a minimum of 24 hours setup time, except the casing pressure test can be initiated immediately after bumping the plug (only applies to single stage cement jobs).

c. The tests shall be done by an independent service company utilizing a test plug not a cup or J-packer. The operator also has the option of utilizing an independent tester to test without a plug (i.e. against the casing) pursuant to Onshore Order 2 with the pressure not to exceed 70% of the burst rating for the casing. Any test against the casing must meet the WOC time for water basin (8 hours) or potash (24 hours) or 500 pounds compressive strength, whichever is greater, prior to initiating the test (see casing segment as lead cement may be critical item).

d. The test shall be run on a 5000 psi chart for a 2-3M BOP/BOP, on a 10000 psi chart for a 5M BOP/BOPE and on a 15000 psi chart for a 10M BOP/BOPE. If a linear chart is used, it shall be a one hour chart. A circular chart shall have a maximum 2 hour clock. If a twelve hour or twenty-four hour chart is used, tester shall make a notation that it is run with a two hour clock.

e. The results of the test shall be reported to the appropriate BLM office.

f. All tests are required to be recorded on a calibrated test chart. A copy of the BOP/BOPE test chart and a copy of independent service company test will be submitted to the appropriate BLM office.

g. The BOP/BOPE test shall include a low pressure test from 250 to 300 psi. The test will be held for a minimum of 10 minutes if test is done with a test plug and 30 minutes without a test plug. This test shall be performed prior to the test at full stack pressure.

h. BOP/BOPE must be tested by an independent service company within 500 feet of the top of the Wolfcamp formation if the time between the setting of the intermediate casing and reaching this depth exceeds 20 days. This test does not exclude the test prior to drilling out the casing shoe as per Onshore Order No. 2.

C. DRILLING MUD

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

D. WASTE MATERIAL AND FLUIDS

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

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

PECOS DISTRICT
SURFACE USE
CONDITIONS OF APPROVAL
Marwari 21, Marwari 28, Van Doo Dah 33
Well Pads, Central Tank Batteries, Access Roads, Buried Flowlines (Composite Flowline and Composite Gas Lift Line), Electric Lines
Devon Energy Production Co.

Van Doo Dah 28-33		**FED**	**333H**		**Marwari 21 Well Pad 1**				
Surface	Section	**21**	T25S,	R32E	200	FSL,	1540	FWL,	Lea County
Bottom Hole	Section	**33**	T25S,	R32E	20	FSL,	2070	FWL,	Lea County
Van Doo Dah 28-33		**FED**	**713H**		**Marwari 21 Well Pad 1**				
Surface	Section	**21**	T25S,	R32E	200	FSL,	1510	FWL,	Lea County
Bottom Hole	Section	**33**	T25S,	R32E	20	FSL,	1650	FWL,	Lea County
Van Doo Dah 28-33		**FED**	**733H**		**Marwari 21 Well Pad 1**				
Surface	Section	**21**	T25S,	R32E	200	FSL,	1570	FWL,	Lea County
Bottom Hole	Section	**33**	T25S,	R32E	20	FSL,	2310	FWL,	Lea County
Marwari 21-16		**State/FED**	**332H**		**Marwari 21 Well Pad 1**				
Surface	Section	**21**	T25S,	R32E	350	FSL,	1540	FWL,	Lea County
Bottom Hole	Section	**16**	T25S,	R32E	20	FNL,	2480	FWL,	Lea County
Marwari 21-16		**State/FED**	**622H**		**Marwari 21 Well Pad 1**				
Surface	Section	**21**	T25S,	R32E	350	FSL,	1480	FWL,	Lea County
Bottom Hole	Section	**16**	T25S,	R32E	20	FNL,	1880	FWL,	Lea County
Marwari 21-16		**State/FED**	**714H**		**Marwari 21 Well Pad 1**				
Surface	Section	**21**	T25S,	R32E	350	FSL,	1510	FWL,	Lea County
Bottom Hole	Section	**16**	T25S,	R32E	20	FNL,	2180	FWL,	Lea County
Marwari 21-16		**State/FED**	**732H**		**Marwari 21 Well Pad 1**				
Surface	Section	**21**	T25S,	R32E	350	FSL,	1570	FWL,	Lea County
Bottom Hole	Section	**16**	T25S,	R32E	20	FNL,	2500	FEL,	Lea County
Van Doo Dah 28-33		**FED**	**620H**		**Marwari 28 Well Pad 1**				
Surface	Section	**28**	T25S,	R32E	475	FNL,	190	FWL,	Lea County
Bottom Hole	Section	**33**	T25S,	R32E	20	FSL,	750	FWL,	Lea County
Van Doo Dah 28-33		**FED**	**711H**		**Marwari 28 Well Pad 1**				
Surface	Section	**28**	T25S,	R32E	475	FNL,	160	FWL,	Lea County
Bottom Hole	Section	**33**	T25S,	R32E	20	FSL,	330	FWL,	Lea County
Van Doo Dah 28-33		**FED**	**730H**		**Marwari 28 Well Pad 1**				
Surface	Section	**28**	T25S,	R32E	475	FNL,	220	FWL,	Lea County
Bottom Hole	Section	**33**	T25S,	R32E	20	FSL,	990	FWL,	Lea County

Marwari 21-16	**State/FED**	**331H**		**Marwari 28 Well Pad 1**					
Surface	Section	**28**	T25S,	R32E	325	FNL,	220	FWL,	Lea County
Bottom Hole	Section	**16**	T25S,	R32E	20	FNL,	1280	FWL,	Lea County
Marwari 21-16	**State/FED**	**621H**		**Marwari 28 Well Pad 1**					
Surface	Section	**28**	T25S,	R32E	325	FNL,	160	FWL,	Lea County
Bottom Hole	Section	**16**	T25S,	R32E	20	FNL,	680	FWL,	Lea County
Marwari 21-16	**State/FED**	**712H**		**Marwari 28 Well Pad 1**					
Surface	Section	**28**	T25S,	R32E	325	FNL,	190	FWL,	Lea County
Bottom Hole	Section	**16**	T25S,	R32E	20	FNL,	980	FWL,	Lea County
Marwari 21-16	**State/FED**	**731H**		**Marwari 28 Well Pad 1**					
Surface	Section	**28**	T25S,	R32E	325	FNL,	250	FWL,	Lea County
Bottom Hole	Section	**16**	T25S,	R32E	20	FNL,	1580	FWL,	Lea County
Marwari 21-16	**State/FED**	**333H**		**Marwari 28 Well Pad 2**					
Surface	Section	**28**	T25S,	R32E	325	FNL,	1680	FEL,	Lea County
Bottom Hole	Section	**16**	T25S,	R32E	20	FNL,	1600	FEL,	Lea County
Marwari 21-16	**State/FED**	**623H**		**Marwari 28 Well Pad 2**					
Surface	Section	**28**	T25S,	R32E	325	FNL,	1740	FEL,	Lea County
Bottom Hole	Section	**16**	T25S,	R32E	20	FNL,	2200	FEL,	Lea County
Marwari 21-16	**State/FED**	**716H**		**Marwari 28 Well Pad 2**					
Surface	Section	**28**	T25S,	R32E	325	FNL,	1710	FEL,	Lea County
Bottom Hole	Section	**16**	T25S,	R32E	20	FNL,	1900	FEL,	Lea County
Marwari 21-16	**State/FED**	**733H**		**Marwari 28 Well Pad 2**					
Surface	Section	**28**	T25S,	R32E	325	FNL,	1300	FEL,	Lea County
Bottom Hole	Section	**16**	T25S,	R32E	20	FNL,	1900	FEL,	Lea County
Van Doo Dah 28-33	**FED**	**625H**		**Marwari 28 Well Pad 2**					
Surface	Section	**28**	T25S,	R32E	475	FNL,	1890	FEL,	Lea County
Bottom Hole	Section	**33**	T25S,	R32E	20	FSL,	1890	FEL,	Lea County
Van Doo Dah 28-33	**FED**	**715H**		**Marwari 28 Well Pad 2**					
Surface	Section	**28**	T25S,	R32E	475	FNL,	1920	FEL,	Lea County
Bottom Hole	Section	**33**	T25S,	R32E	20	FSL,	2310	FEL,	Lea County
Van Doo Dah 28-33	**FED**	**735H**		**Marwari 28 Well Pad 2**					
Surface	Section	**28**	T25S,	R32E	475	FNL,	1860	FEL,	Lea County
Bottom Hole	Section	**33**	T25S,	R32E	20	FSL,	1650	FEL,	Lea County
Marwari 21-16	**State/FED**	**334H**		**Marwari 28 Well Pad 3**					
Surface	Section	**28**	T25S,	R32E	325	FNL,	625	FEL,	Lea County
Bottom Hole	Section	**16**	T25S,	R32E	20	FNL,	400	FEL,	Lea County
Marwari 21-16	**State/FED**	**624H**		**Marwari 28 Well Pad 3**					
Surface	Section	**28**	T25S,	R32E	325	FNL,	715	FEL,	Lea County
Bottom Hole	Section	**16**	T25S,	R32E	20	FNL,	1000	FEL,	Lea County
Marwari 21-16	**State/FED**	**718H**		**Marwari 28 Well Pad 3**					
Surface	Section	**28**	T25S,	R32E	325	FNL,	685	FEL,	Lea County
Bottom Hole	Section	**16**	T25S,	R32E	20	FNL,	700	FEL,	Lea County

Marwari 21-16	**State/FED**	**734H**		**Marwari 28 Well Pad 3**					
Surface	Section	**28**	T25S,	R32E	325	FNL,	655	FEL,	Lea County
Bottom Hole	Section	**16**	T25S,	R32E	20	FNL,	550	FEL,	Lea County
Van Doo Dah 28-33	**FED**	**337H**		**Marwari 28 Well Pad 3**					
Surface	Section	**28**	T25S,	R32E	475	FNL,	865	FEL,	Lea County
Bottom Hole	Section	**33**	T25S,	R32E	20	FSL,	570	FEL,	Lea County
Van Doo Dah 28-33	**FED**	**717H**		**Marwari 28 Well Pad 3**					
Surface	Section	**28**	T25S,	R32E	475	FNL,	895	FEL,	Lea County
Bottom Hole	Section	**33**	T25S,	R32E	20	FSL,	990	FEL,	Lea County
Van Doo Dah 28-33	**FED**	**737H**		**Marwari 28 Well Pad 3**					
Surface	Section	**28**	T25S,	R32E	475	FNL,	835	FEL,	Lea County
Bottom Hole	Section	**33**	T25S,	R32E	20	FSL,	330	FEL,	Lea County
Van Doo Dah 33-28	**FED**	**624H**		**Van Doo Dah 33 Well Pad 1**					
Surface	Section	**33**	T25S,	R32E	180	FSL,	2246	FEL,	Lea County
Bottom Hole	Section	**28**	T25S,	R32E	20	FNL,	1890	FEL,	Lea County
Van Doo Dah 33-28	**FED**	**714H**		**Van Doo Dah 33 Well Pad 1**					
Surface	Section	**33**	T25S,	R32E	180	FSL,	2276	FEL,	Lea County
Bottom Hole	Section	**28**	T25S,	R32E	20	FNL,	2310	FEL,	Lea County
Van Doo Dah 33-28	**FED**	**734H**		**Van Doo Dah 33 Well Pad 1**					
Surface	Section	**33**	T25S,	R32E	180	FSL,	2216	FEL,	Lea County
Bottom Hole	Section	**28**	T25S,	R32E	20	FNL,	1650	FEL,	Lea County
Van Doo Dah 33-28	**FED**	**626H**		**Van Doo Dah 33 Well Pad 2**					
Surface	Section	**33**	T25S,	R32E	177	FSL,	821	FEL,	Lea County
Bottom Hole	Section	**28**	T25S,	R32E	20	FNL,	570	FEL,	Lea County
Van Doo Dah 33-28	**FED**	**716H**		**Van Doo Dah 33 Well Pad 2**					
Surface	Section	**33**	T25S,	R32E	177	FSL,	851	FEL,	Lea County
Bottom Hole	Section	**28**	T25S,	R32E	20	FNL,	990	FEL,	Lea County
Van Doo Dah 33-28	**FED**	**736H**		**Van Doo Dah 33 Well Pad 2**					
Surface	Section	**33**	T25S,	R32E	177	FSL,	791	FEL,	Lea County
Bottom Hole	Section	**28**	T25S,	R32E	20	FNL,	330	FEL,	Lea County

Planned (Future Wells)

Van Doo Dah 21 -33	**FED**	**233H**		**Marwari 28 Well Pad 1**			
Surface	Section	**28**	T25S,	R32E	TBD	TBD	Lea County
Bottom Hole	Section	**33 TBD**					Lea County
Marwari 21-16	**State/FED**	**234H**		**Marwari 28 Well Pad 1**			
Surface	Section	**28**	T25S,	R32E	TBD	TBD	Lea County
Bottom Hole	Section	**16 TBD**					Lea County
Van Doo Dah 28 -33	**FED**	**233H**		**Marwari 28 Well Pad 1**			
Surface	Section	**28**	T25S,	R32E	TBD	TBD	Lea County
Bottom Hole	Section	**28 -TBD**					Lea County

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

I. GENERAL PROVISIONS

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

II. PERMIT EXPIRATION

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

III. ARCHAEOLOGICAL, PALEONTOLOGY & HISTORICAL SITES

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

IV. NOXIOUS WEEDS

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

V. SPECIAL REQUIREMENT(S)

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

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.

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

Hydrology:
The entire well pad(s) 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 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.

When crossing ephemeral drainages the pipeline(s) will be buried to a minimum depth of 48 inches from the top of pipe to ground level. Erosion control methods such as gabions and/or rock aprons should be placed on both up and downstream sides of the pipeline crossing. In addition, curled (weed free) wood/straw fiber wattles/logs and/or silt fences should be placed on the downstream side for sediment control during construction and maintained until soils and vegetation have stabilized. Water bars should be placed within the ROW to divert and dissipate surface runoff. A pipeline access road is not permitted to cross these ephemeral drainages. Traffic should be diverted to a preexisting route. Additional seeding may be required in floodplains and drainages to restore energy dissipating vegetation.

Prior to pipeline installation/construction a leak detection plan will be developed. The method(s) 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.

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. A power pole should not be placed in drainages, playas, wetlands, riparian areas, or floodplains and must span across the features at a distance away that would not promote further erosion.

VI. CONSTRUCTION

A. NOTIFICATION

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

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

B. TOPSOIL

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

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

C. CLOSED LOOP SYSTEM

Tanks are required for drilling operations: No Pits.

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

D. FEDERAL MINERAL MATERIALS PIT

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

E. WELL PAD SURFACING

Surfacing of the well pad is not required.

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

F. EXCLOSURE FENCING (CELLARS & PITS)

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

G. ON LEASE ACCESS ROADS

Road Width
The access road shall have a driving surface that creates the smallest possible surface disturbance and does not exceed fourteen (24) feet in width. The maximum width of surface disturbance, when constructing the access road, shall not exceed thirty (30) 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 24' 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.

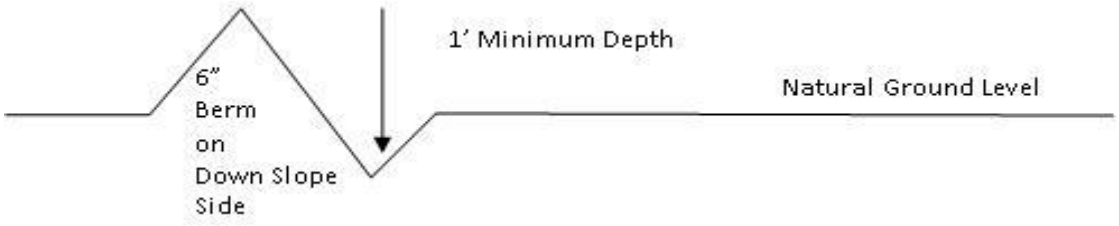
Turnouts
Vehicle turnouts shall be constructed on the road. Turnouts shall be intervisible with interval spacing distance less than 1000 feet. Turnouts shall conform to Figure 1; cross section and plans for typical road construction.

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.

Construction Steps

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

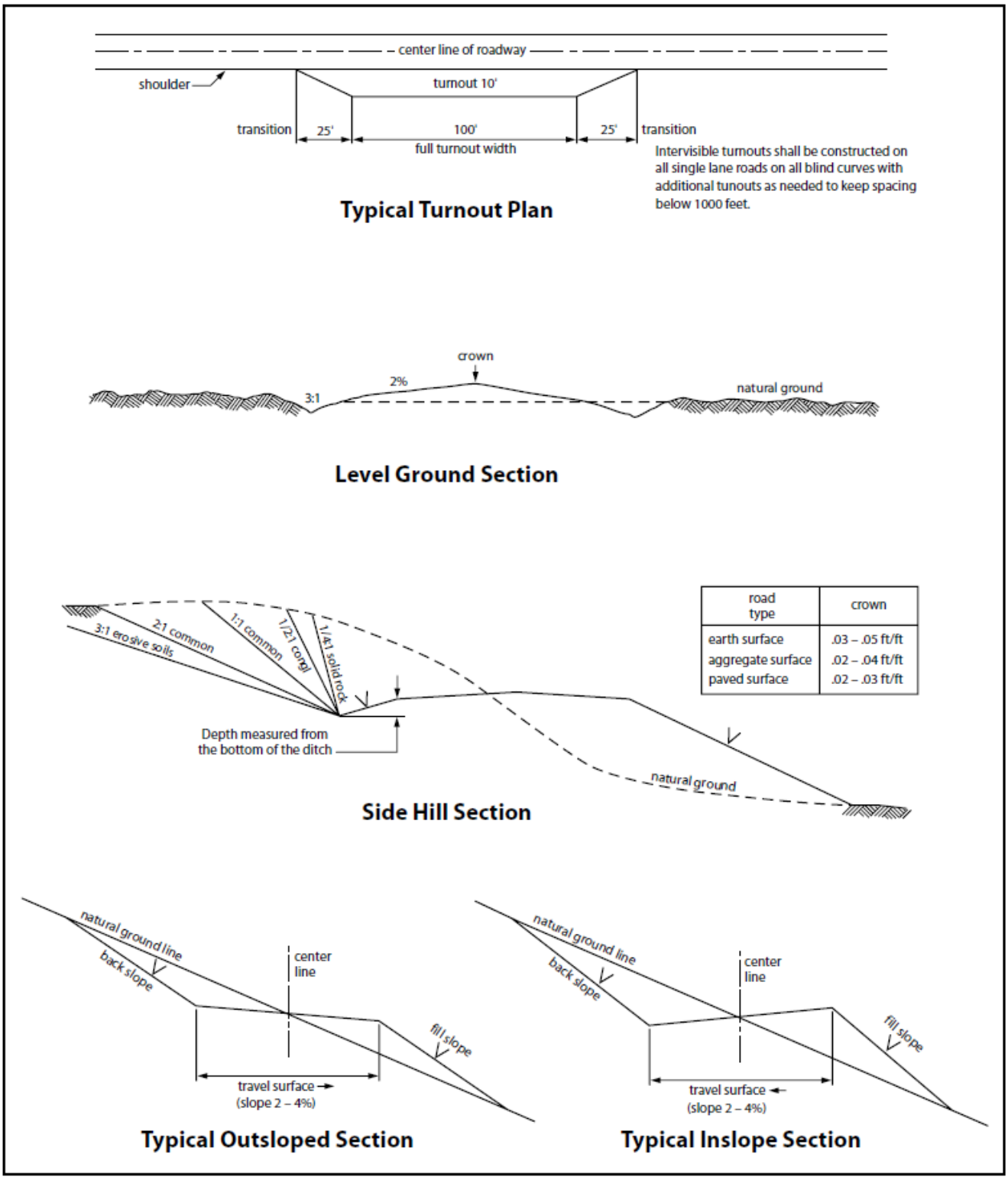


Figure 1. Cross-sections and plans for typical road sections representative of BLM resource or FS local and higher-class roads.

Approval Date: 03/23/2021

VII. PRODUCTION (POST DRILLING)

A. WELL STRUCTURES & FACILITIES

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

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

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

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

Containment Structures

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

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

B. PIPELINES

BURIED PIPELINE STIPULATIONS

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

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

1. The Holder shall indemnify the United States against any liability for damage to life or property arising from the occupancy or use of public lands under this grant.

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

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

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

5. All construction and maintenance activity will be confined to the authorized right-of-way.

6. The pipeline will be buried with a minimum cover of **36** inches between the top of the pipe and ground level.

7. The maximum allowable disturbance for construction in this right-of-way will be **30** feet:

- Blading of vegetation within the right-of-way will be allowed: maximum width of blading operations will not exceed **30** feet. The trench is included in this area. (*Blading is defined as the complete removal of brush and ground vegetation*.)

- Clearing of brush species within the right-of-way will be allowed: maximum width of clearing operations will not exceed **30** feet. The trench and bladed area are included in this area. (*Clearing is defined as the removal of brush while leaving ground vegetation (grasses, weeds, etc.) intact. Clearing is best accomplished by holding the blade 4 to 6 inches above the ground surface.*)

- The remaining area of the right-of-way (if any) shall only be disturbed by compressing the vegetation. (*Compressing can be caused by vehicle tires, placement of equipment, etc.*)

8. The holder shall stockpile an adequate amount of topsoil where blading is allowed. The topsoil to be stripped is approximately ___6___ inches in depth. The topsoil will be segregated from other spoil piles from trench construction. The topsoil will be evenly distributed over the bladed area for the preparation of seeding.

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

10. Vegetation, soil, and rocks left as a result of construction or maintenance activity will be randomly scattered on this right-of-way and will not be left in rows, piles, or berms, unless otherwise approved by the Authorized Officer. The entire right-of-way shall be recontoured to match the surrounding landscape. The backfilled soil shall be compacted and a 6 inch berm will be left over the ditch line to allow for settling back to grade.

11. In those areas where erosion control structures are required to stabilize soil conditions, the holder will install such structures as are suitable for the specific soil conditions being encountered and which are in accordance with sound resource management practices.

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

( ) seed mixture 1	( ) seed mixture 3
(X) seed mixture 2	( ) seed mixture 4
( ) seed mixture 2/LPC	( ) Aplomado Falcon Mixture

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

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

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

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

 Approval Date: 03/23/2021

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

18. Escape Ramps - The operator will construct and maintain pipeline/utility trenches [that are not otherwise fenced, screened, or netted] to prevent livestock, wildlife, and humans from becoming entrapped. At a minimum, the operator will construct and maintain escape ramps, ladders, or other methods of avian and terrestrial wildlife escape in the trenches according to the following criteria:

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

STANDARD STIPULATIONS FOR SURFACE INSTALLED PIPELINES

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

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

1. The holder shall indemnify the United States against any liability for damage to life or property arising from the occupancy or use of public lands under this grant.

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

3. The holder agrees to indemnify the United States against any liability arising from the release of any hazardous substance or hazardous waste (as these terms are defined in the

Comprehensive Environmental Response, Compensation and Liability Act of 1980, 42 U.S.C. 9601, et seq. or the Resource Conservation and Recovery Act, 42 U.S.C. 6901, et seq.) on the Right-of-Way (unless the release or threatened release is wholly unrelated to activity of the Right-of-Way holder's activity on the Right-of-Way), or resulting from the activity of the Right-of-Way holder on the Right-of-Way. This agreement applies without regard to whether a release is caused by the holder, its agent, or unrelated third parties.

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

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

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

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

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

6. All construction and maintenance activity will be confined to the authorized right-of-way width of **20** feet. If the pipeline route follows an existing road or buried pipeline right-of-way, the surface pipeline must be installed no farther than 10 feet

from the edge of the road or buried pipeline right-of-way. If existing surface pipelines prevent this distance, the proposed surface pipeline must be installed immediately adjacent to the outer surface pipeline. All construction and maintenance activity will be confined to existing roads or right-of-ways.

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

8. The holder shall install the pipeline on the surface in such a manner that will minimize suspension of the pipeline across low areas in the terrain. In hummocky 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 **24** inches under all roads, "two-tracks," and trails. Burial of the pipe will continue for 20 feet on each side of each crossing. The condition of the road, upon completion of construction, shall be returned to at least its former state with no bumps or dips remaining in the road surface.

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

11. In those areas where erosion control structures are required to stabilize soil conditions, the holder will install such structures as are suitable for the specific soil conditions being encountered and which are in accordance with sound resource management practices.

12. Excluding the pipe, all above-ground structures not subject to safety requirement shall be painted by the holder to blend with the natural color of the landscape. The paint used shall be a color which simulates "Standard Environmental Colors" – **Shale Green**, Munsell Soil Color No. 5Y 4/2; designated by the Rocky Mountain Five State Interagency Committee.

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

14. The holder shall not use the pipeline route as a road for purposes other than routine maintenance as determined necessary by the Authorized Officer in consultation with the holder. The holder will take whatever steps are necessary to ensure that the pipeline route is not used as a roadway.

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

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

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

C. ELECTRIC LINES

STANDARD STIPULATIONS FOR OVERHEAD ELECTRIC DISTRIBUTION LINES

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

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

1. The holder shall indemnify the United States against any liability for damage to life or property arising from the occupancy or use of public lands under this grant.

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

a result of a reportable release or spill of any toxic substances shall be furnished to the authorized officer concurrent with the filing of the reports to the involved Federal agency or State government.

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

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

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

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

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

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

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

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

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

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

VIII. INTERIM RECLAMATION

During the life of the development, all disturbed areas not needed for active support of production operations should undergo interim reclamation in order to minimize the environmental impacts of development on other resources and uses.

Within six (6) months of well completion, operators should work with BLM surface management specialists (Jim Amos: 575-234-5909) to devise the best strategies to reduce the size of the location. Interim reclamation should allow for remedial well operations, as well as safe and efficient removal of oil and gas.

During reclamation, the removal of caliche is important to increasing the success of revegetating the site. Removed caliche that is free of contaminants may be used for road repairs, fire walls or for building other roads and locations. In order to operate the well or complete workover operations, it may be necessary to drive, park and operate on restored interim vegetation within the previously disturbed area. Disturbing revegetated areas for production or workover operations will be allowed. If there is significant disturbance and loss of vegetation, the area will need to be revegetated. Communicate with the appropriate BLM office for any exceptions/exemptions if needed.

All disturbed areas after they have been satisfactorily prepared need to be reseeded with the seed mixture provided below.

Upon completion of interim reclamation, the operator shall submit a Sundry Notices and Reports on Wells, Subsequent Report of Reclamation (Form 3160-5).

IX. FINAL ABANDONMENT & RECLAMATION

At final abandonment, well locations, production facilities, and access roads must undergo "final" reclamation so that the character and productivity of the land are restored.

Earthwork for final reclamation must be completed within six (6) months of well plugging. All pads, pits, facility locations and roads must be reclaimed to a satisfactory revegetated, safe, and stable condition, unless an agreement is made with the landowner or BLM to keep the road and/or pad intact.

After all disturbed areas have been satisfactorily prepared, these areas need to be revegetated with the seed mixture provided below. Seeding should be accomplished by drilling on the contour whenever practical or by other approved methods. Seeding may need to be repeated until revegetation is successful, as determined by the BLM.

Operators shall contact a BLM surface protection specialist prior to surface abandonment operations for site specific objectives (Jim Amos: 575-234-5909).

Approval Date: 03/23/2021

Seed Mixture 2, for Sandy Sites

The holder shall seed all disturbed areas with the seed mixture listed below. The seed mixture shall be planted in the amounts specified in pounds of pure live seed (PLS)* per acre. There shall be no primary or secondary noxious weeds in the seed mixture. Seed will be tested and the viability testing of seed will be done in accordance with State law (s) and within nine (9) months prior to purchase. Commercial seed will be either certified or registered seed. The seed container will 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). The 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. The seeding will be repeated until a satisfactory stand is established as determined by the authorized officer. Evaluation of growth will 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	lb/acre
Sand dropseed (Sporobolus cryptandrus)	1.0
Sand love grass (Eragrostis trichodes)	1.0
Plains bristlegrass (Setaria macrostachya)	2.0

*Pounds of pure live seed:

Pounds of seed **x** percent purity **x** percent germination = pounds pure live seed

Approval Date: 03/23/2021

District I
1625 N. French Dr., Hobbs, NM 88240
Phone: (575) 393-6161 Fax: (575) 393-0720
District II
811 S. First St., Artesia, NM 88210
Phone: (575) 748-1283 Fax: (575) 748-9720
District III
1000 Rio Brazos Road, Aztec, NM 87410
Phone: (505) 334-6178 Fax: (505) 334-6170
District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505
Phone: (505) 476-3460 Fax: (505) 476-3462

State of New Mexico
Energy, Minerals & Natural Resources Department
OIL CONSERVATION DIVISION
1220 South St. Francis Dr.
Santa Fe, NM 87505

Form C-102
Revised August 1, 2011
Submit one copy to appropriate District Office

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

[1] API Number	[2] Pool Code	[3] Pool Name
30-025-49135	98270	WC-025 G-07 S253216D;UPPER WOLFCAM

[4] Property Code	[5] Property Name	[6] Well Number
325998	MARWARI 21-16 STATE FED COM	718H

[7] OGRID No.	[8] Operator Name	[9] Elevation
6137	DEVON ENERGY PRODUCTION COMPANY, L.P.	3383.9

[10] Surface Location

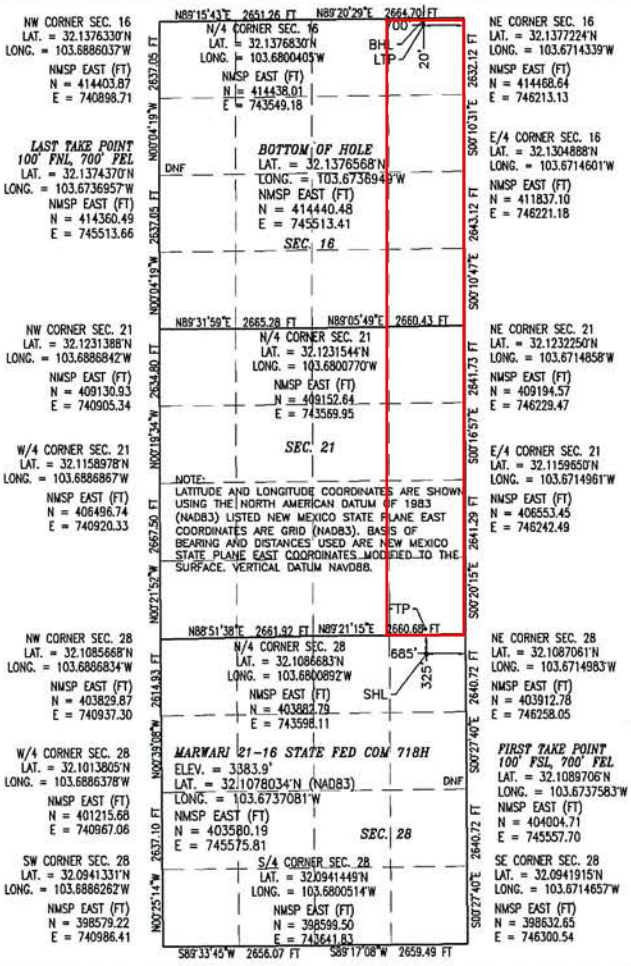
UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
A	28	25 S	32 E		325	NORTH	685	EAST	LEA

[11] Bottom Hole Location If Different From Surface

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
A	16	25 S	32 E		20	NORTH	700	EAST	LEA

[12] Dedicated Acres	[13] Joint or Infill	[14] Consolidation Code	[15] Order No.
320			

No allowable will be assigned to this completion until all interests have been consolidated or a non-standard unit has been approved by the division.



[17] OPERATOR CERTIFICATION

I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief, and that this organization either owns a working interest or unleased mineral interest in the land including the proposed bottom hole location or has a right to drill this well at this location pursuant to a contract with an owner of such a mineral or working interest, or to a voluntary pooling agreement or a compulsory pooling order heretofore entered by the division.

Linda Good — 2/19/2019
Signature — Date

Linda Good
Printed Name

linda.good@dvn.com
E-mail Address

[18] SURVEYOR CERTIFICATION

I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my belief.

FEBRUARY 12, 2019
Date of Survey

Signature and Seal of Professional Surveyor:

Certificate Number: FILIMON F. JARAMILLO, PLS 12797
SURVEY NO. 6232A

Intent [X] As Drilled [ ]

API #

Operator Name:	Property Name:	Well Number
DEVON ENERGY PRODUCTION CO., L.P.	MARWARI 21-16 STATE FED COM	718H

Kick Off Point (KOP)

UL	Section	Township	Range	Lot	Feet	From N/S	Feet	From E/W	County
A	28	25S	32E		425	NORTH	810	EAST	LEA

Latitude	Longitude	NAD
32.107531	-103.674114	83

First Take Point (FTP)

UL	Section	Township	Range	Lot	Feet	From N/S	Feet	From E/W	County
P	21	25S	32E		100	SOUTH	700	EAST	LEA

Latitude	Longitude	NAD
32.1089706	103.6737583	83

Last Take Point (LTP)

UL	Section	Township	Range	Lot	Feet	From N/S	Feet	From E/W	County
A	16	25S	32E		100	NORTH	700	EAST	LEA

Latitude	Longitude	NAD
32.1374370	103.6736957	83

Is this well the defining well for the Horizontal Spacing Unit? [YES]

Is this well an infill well? [ ]

If infill is yes please provide API if available, Operator Name and well number for Defining well for Horizontal Spacing Unit.

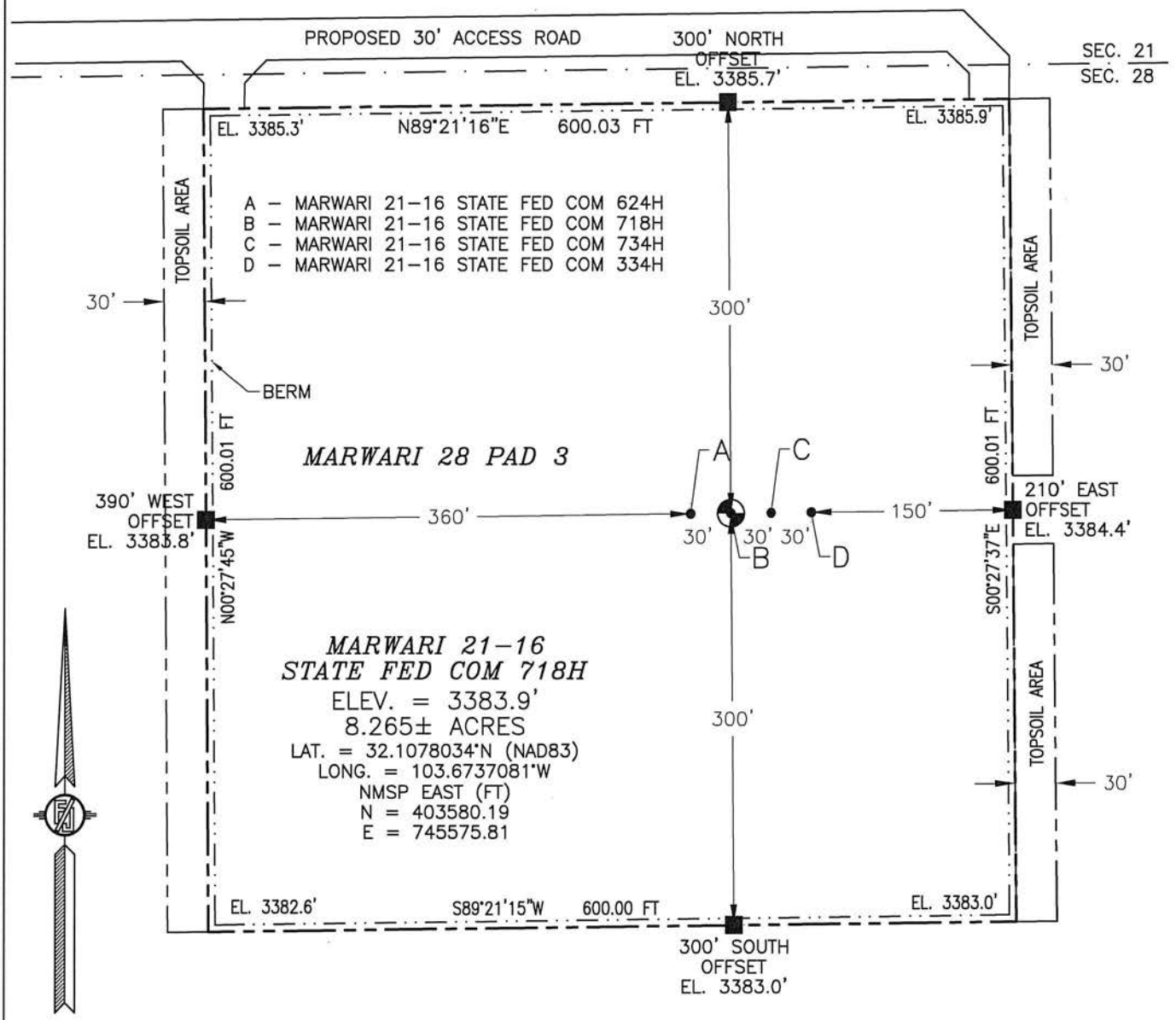
API #

Operator Name:	Property Name:	Well Number

KZ 06/29/2018

SECTION 28, TOWNSHIP 25 SOUTH, RANGE 32 EAST, N.M.P.M.
LEA COUNTY, STATE OF NEW MEXICO
SITE MAP

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



012 60 120 240

SCALE 1" = 120'

DIRECTIONS TO LOCATION

FROM THE INTERSECTION OF CR 1 (ORLA) & MONSANTO ROAD GO WEST APPROX. 0.65 MILE, GO SOUTH ON 20' CALICHE LEASE ROAD FOR APPROX. 1.09 MILES, FOLLOW ROAD SURVEY EAST APPROX. 0.53 OF A MILE TO NORTHEAST PAD CORNER FOR THIS LOCATION.

DEVON ENERGY PRODUCTION COMPANY, L.P.

MARWARI 21–16 STATE FED COM 718H

LOCATED 325 FT. FROM THE NORTH LINE AND 685 FT. FROM THE EAST LINE OF SECTION 28, TOWNSHIP 25 SOUTH, RANGE 32 EAST, N.M.P.M. LEA COUNTY, STATE OF NEW MEXICO

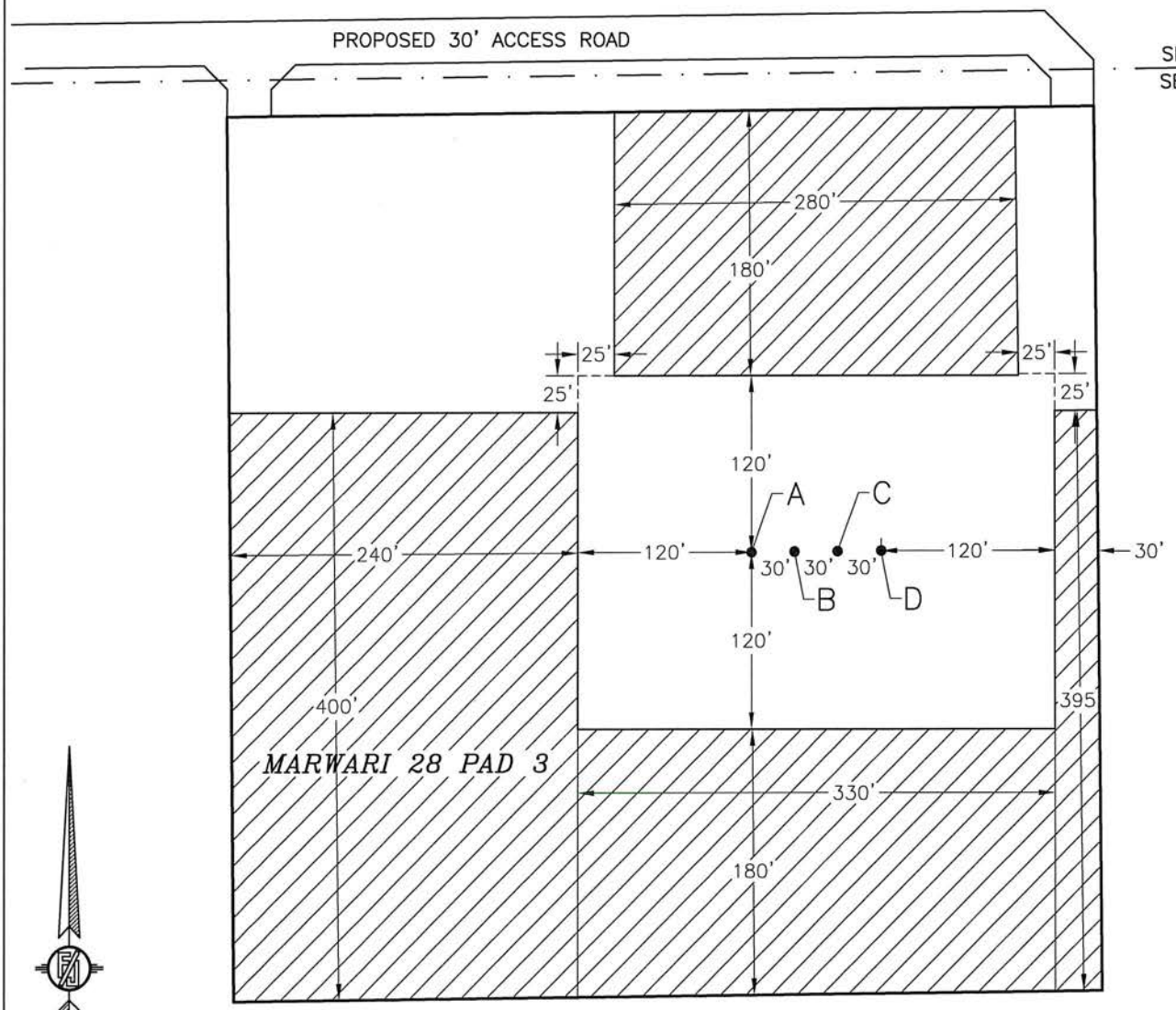
LAND STATUS: BLM

FEBRUARY 12, 2019

SURVEY NO. 6232A

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

SECTION 28, TOWNSHIP 25 SOUTH, RANGE 32 EAST, N.M.P.M.
LEA COUNTY, STATE OF NEW MEXICO
INTERIM SITE BUILD PLAN



A – MARWARI 21–16 STATE FED COM 624H
B – MARWARI 21–16 STATE FED COM 718H
C – MARWARI 21–16 STATE FED COM 734H
D – MARWARI 21–16 STATE FED COM 334H

DENOTES INTERIM PAD RECLAMATION AREA
4.979± ACRES

012 60 120 240
SCALE 1" = 120'

DEVON ENERGY PRODUCTION COMPANY, L.P.

MARWARI 21–16 STATE FED COM 718H

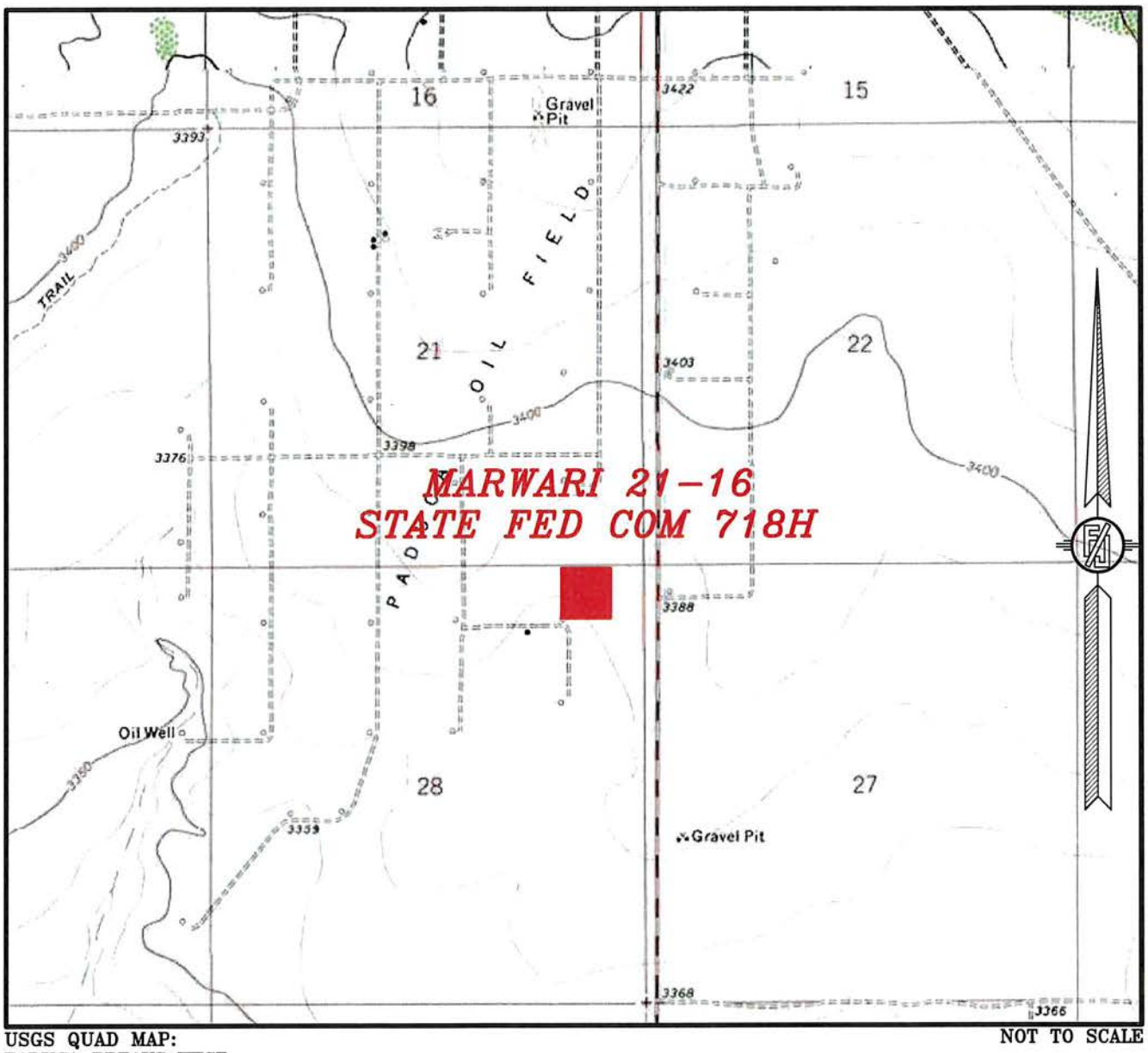
LOCATED 325 FT. FROM THE NORTH LINE
AND 685 FT. FROM THE EAST LINE OF
SECTION 28, TOWNSHIP 25 SOUTH,
RANGE 32 EAST, N.M.P.M.
LEA COUNTY, STATE OF NEW MEXICO
LAND STATUS: BLM

FEBRUARY 12, 2019
SURVEY NO. 6232A

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

SECTION 28, TOWNSHIP 25 SOUTH, RANGE 32 EAST, N.M.P.M.
LEA COUNTY, STATE OF NEW MEXICO

LOCATION VERIFICATION MAP



USGS QUAD MAP:
PADUCA BREAKS WEST

NOT TO SCALE

DEVON ENERGY PRODUCTION COMPANY, L.P.
MARWARI 21-16 STATE FED COM 718H
LOCATED 325 FT. FROM THE NORTH LINE
AND 685 FT. FROM THE EAST LINE OF
SECTION 28, TOWNSHIP 25 SOUTH,
RANGE 32 EAST, N.M.P.M.
LEA COUNTY, STATE OF NEW MEXICO
LAND STATUS: BLM

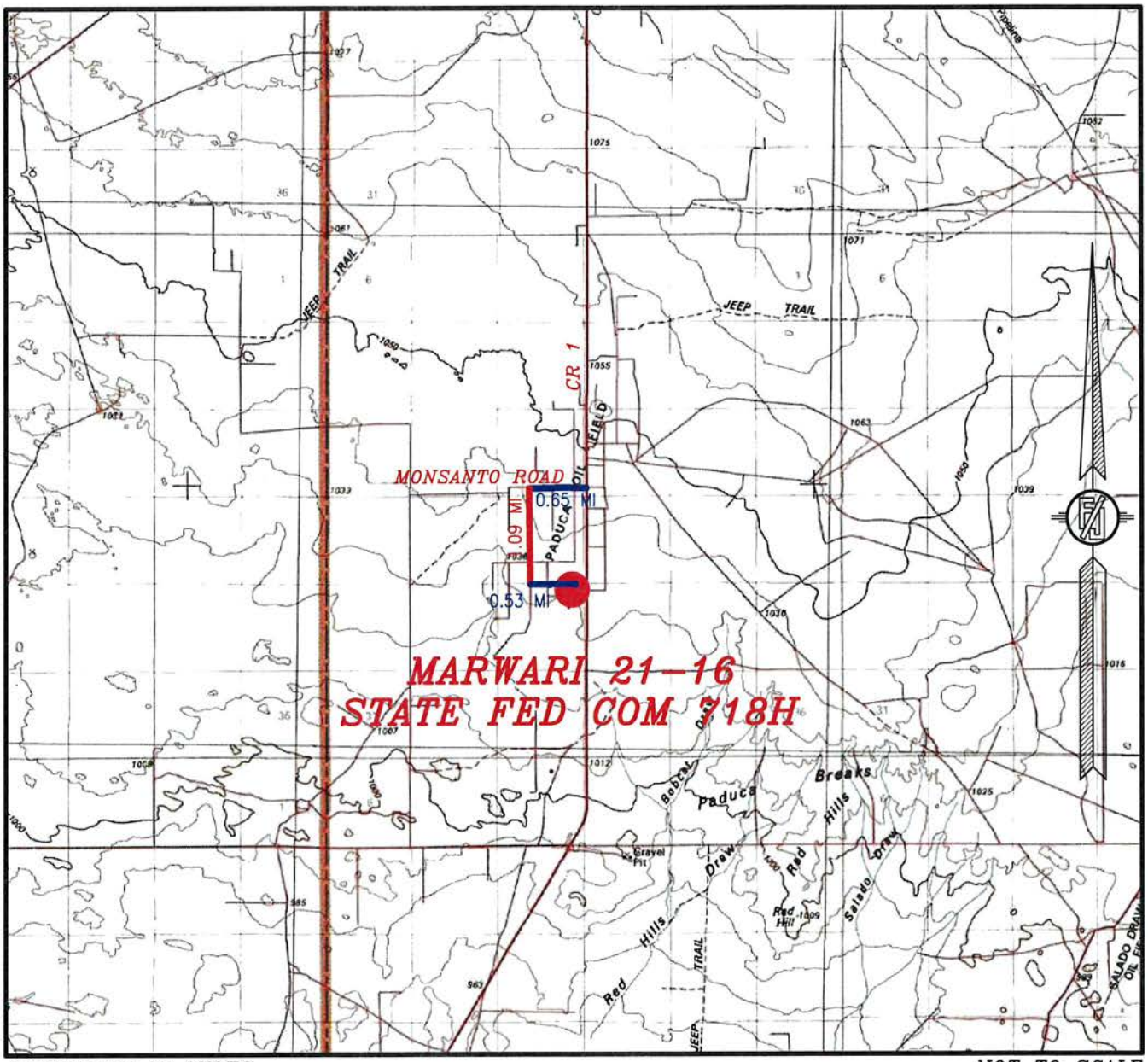
FEBRUARY 12, 2019

SURVEY NO. 6232A

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

SECTION 28, TOWNSHIP 25 SOUTH, RANGE 32 EAST, N.M.P.M.
LEA COUNTY, STATE OF NEW MEXICO

VICINITY MAP



DISTANCES IN MILES

NOT TO SCALE

DEVON ENERGY PRODUCTION COMPANY, L.P.

MARWARI 21-16 STATE FED COM 718H

LOCATED 325 FT. FROM THE NORTH LINE
AND 685 FT. FROM THE EAST LINE OF
SECTION 28, TOWNSHIP 25 SOUTH,
RANGE 32 EAST, N.M.P.M.
LEA COUNTY, STATE OF NEW MEXICO
LAND STATUS: BLM

FEBRUARY 12, 2019

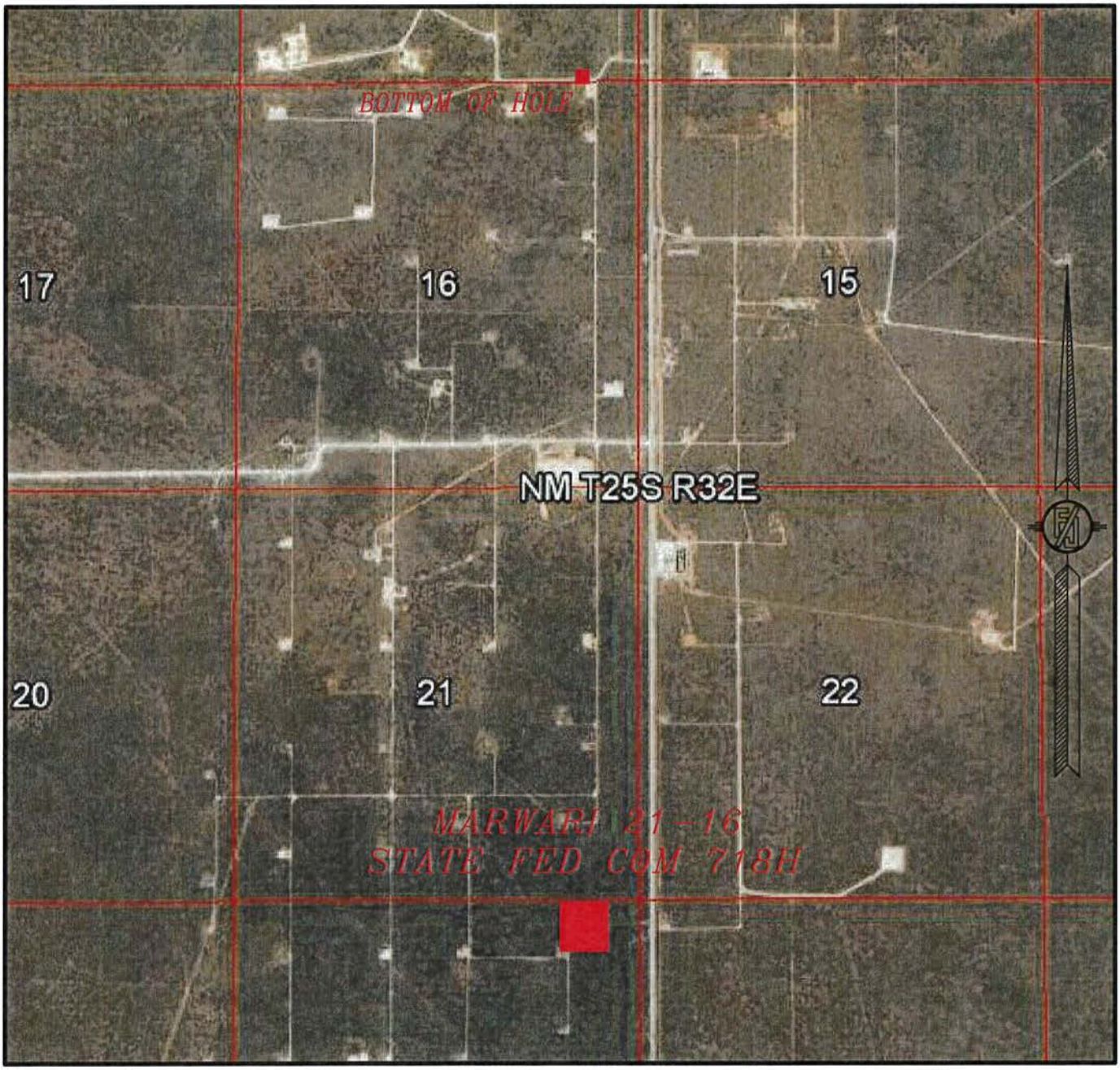
DIRECTIONS TO LOCATION
FROM THE INTERSECTION OF CR 1 (ORLA) & MONSANTO ROAD GO WEST APPROX. 0.65 MILE, GO SOUTH ON 20' CALICHE LEASE ROAD FOR APPROX. 1.09 MILES, FOLLOW ROAD SURVEY EAST APPROX. 0.53 OF A MILE TO NORTHEAST PAD CORNER FOR THIS LOCATION.

SURVEY NO. 6232A

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

SECTION 28, TOWNSHIP 25 SOUTH, RANGE 32 EAST, N.M.P.M.
LEA COUNTY, STATE OF NEW MEXICO

AERIAL PHOTO



NOT TO SCALE
AERIAL PHOTO:
GOOGLE EARTH
NOVEMBER 2017

DEVON ENERGY PRODUCTION COMPANY, L.P.

MARWARI 21-16 STATE FED COM 718H

LOCATED 325 FT. FROM THE NORTH LINE
AND 685 FT. FROM THE EAST LINE OF
SECTION 28, TOWNSHIP 25 SOUTH,
RANGE 32 EAST, N.M.P.M.
LEA COUNTY, STATE OF NEW MEXICO
LAND STATUS: BLM

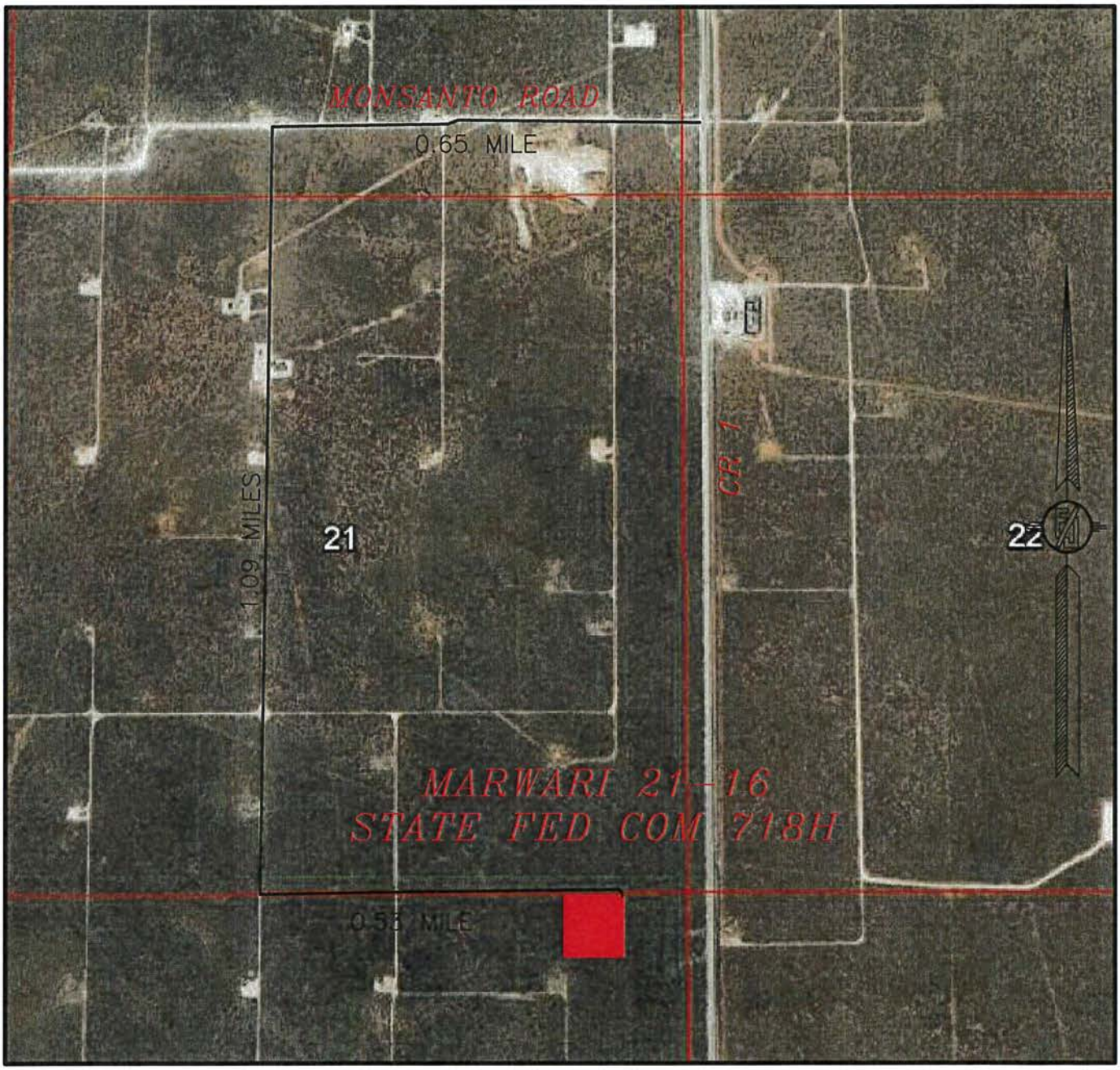
FEBRUARY 12, 2019

SURVEY NO. 6232A

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

SECTION 28, TOWNSHIP 25 SOUTH, RANGE 32 EAST, N.M.P.M.
LEA COUNTY, STATE OF NEW MEXICO

ACCESS AERIAL ROUTE MAP



NOT TO SCALE
AERIAL PHOTO:
GOOGLE EARTH
NOVEMBER 2017

DEVON ENERGY PRODUCTION COMPANY, L.P.

MARWARI 21-16 STATE FED COM 718H

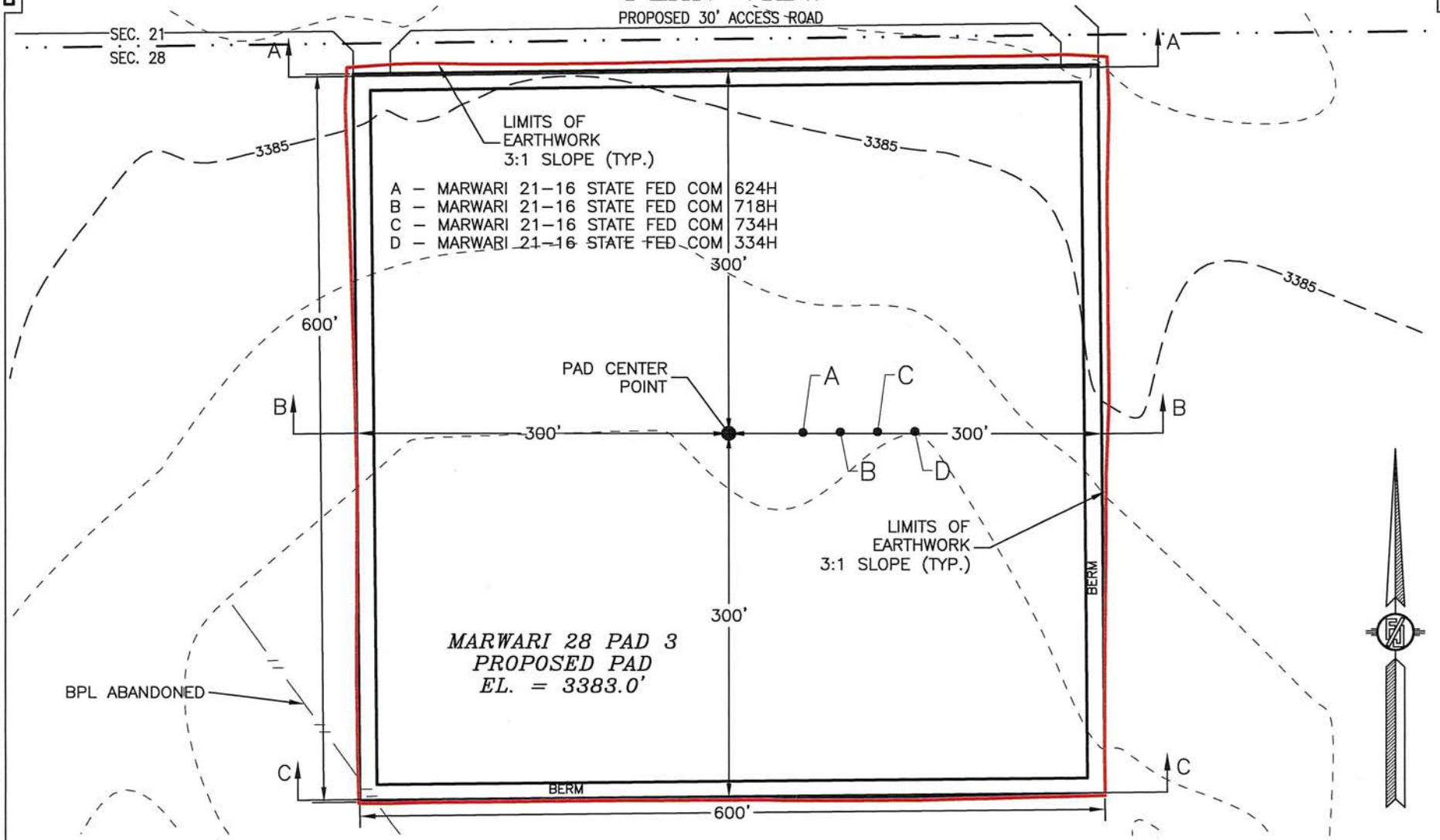
LOCATED 325 FT. FROM THE NORTH LINE
AND 685 FT. FROM THE EAST LINE OF
SECTION 28, TOWNSHIP 25 SOUTH,
RANGE 32 EAST, N.M.P.M.
LEA COUNTY, STATE OF NEW MEXICO
LAND STATUS: BLM

FEBRUARY 12, 2019

SURVEY NO. 6232A

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

PLAN VIEW



DEVON ENERGY PRODUCTION COMPANY, L.P.
GRADING PLAN AND CROSS SECTIONS
FOR MARWARI 21–16 STATE FED COM 718H
SECTION 28, TOWNSHIP 25 SOUTH,
RANGE 32 EAST, N.M.P.M.
LEA COUNTY, STATE OF NEW MEXICO

012 60 120 240
SCALE 1" = 120'

CUT	FILL	NET
8534 CU. YD	2515 CU. YD	6018 CU. YD (CUT)

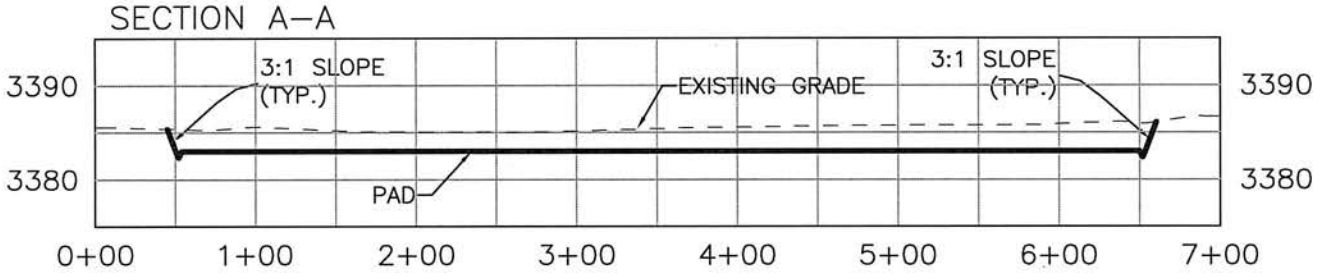
EARTHWORK QUANTITIES ARE ESTIMATED

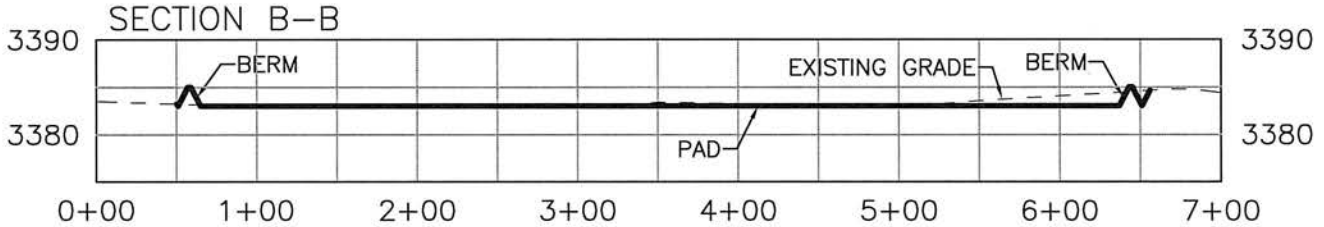
FEBRUARY 12, 2019

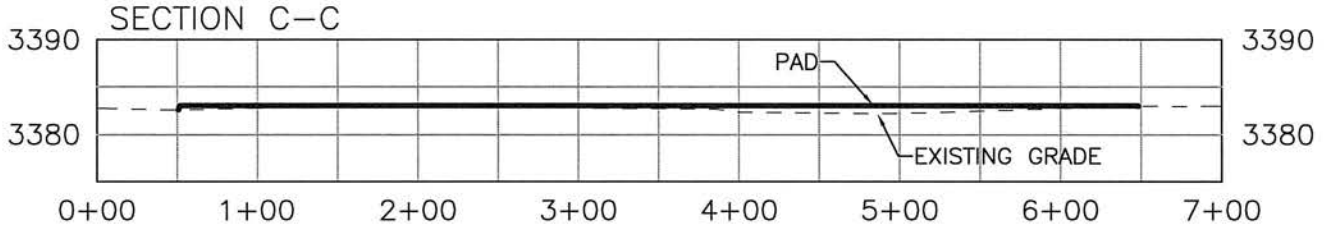
MADRON SURVEYING, INC. 301 SOUTH CANAL (575) 234–3341 *CARLSBAD, NEW MEXICO*

SHEET 1–2
SURVEY NO. 6232A

CROSS SECTIONS







DEVON ENERGY PRODUCTION COMPANY, L.P.
GRADING PLAN AND CROSS SECTIONS
FOR MARWARI 21–16 STATE FED COM 718H
SECTION 28, TOWNSHIP 25 SOUTH,
RANGE 32 EAST, N.M.P.M.
LEA COUNTY, STATE OF NEW MEXICO

FEBRUARY 12, 2019

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

CUT	FILL	NET
8534 CU. YD	2515 CU. YD	6018 CU. YD (CUT)

EARTHWORK QUANTITIES ARE ESTIMATED

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

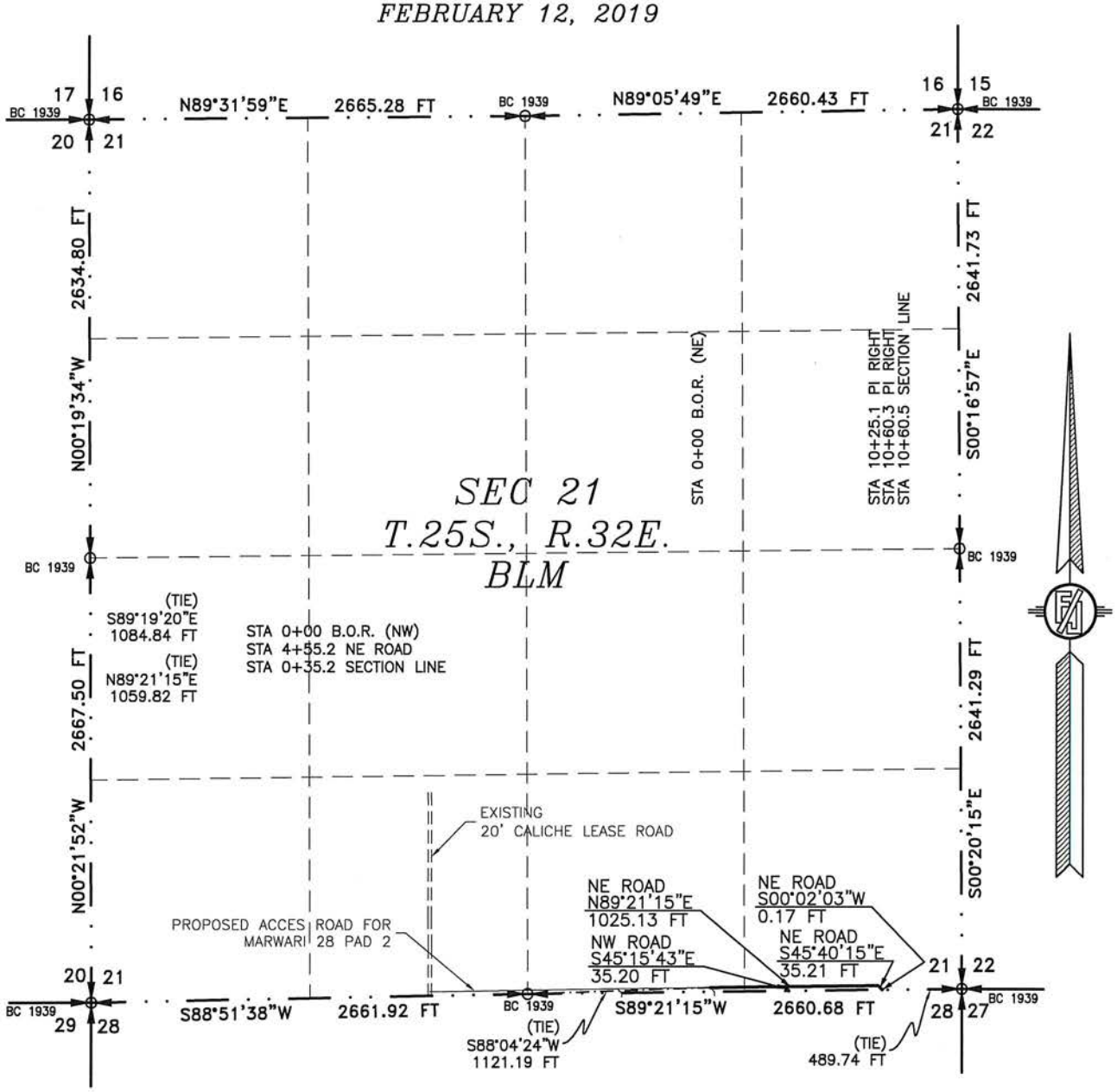
SHEET 2–2
SURVEY NO. 6232A

ACCESS ROAD PLAT

ACCESS ROAD TO THE MARWARI 28 PAD 3 (MARWARI 21–16 STATE FED COM 624H, 718H, 734H, 334H)

DEVON ENERGY PRODUCTION COMPANY, L.P.

CENTERLINE SURVEY OF AN ACCESS ROAD CROSSING
SECTION 21, TOWNSHIP 25 SOUTH, RANGE 32 EAST, N.M.P.M.
LEA COUNTY, STATE OF NEW MEXICO
FEBRUARY 12, 2019



SEE NEXT SHEET (2–4) FOR DESCRIPTION

1000 0 1000
Scale: 1" = 1000'

GENERAL NOTES

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

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

SURVEYOR CERTIFICATE

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

IN WITNESS WHEREOF, THIS CERTIFICATE IS EXECUTED AT CARLSBAD, NEW MEXICO, THIS 13 DAY OF FEBRUARY 2019

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

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

SHEET: 1–4

SURVEY NO. 6232A

MADRON SURVEYING, INC. CARLSBAD, NEW MEXICO

ACCESS ROAD PLAT

ACCESS ROAD TO THE MARWARI 28 PAD 3 (MARWARI 21–16 STATE FED COM 624H, 718H, 734H, 334H)

DEVON ENERGY PRODUCTION COMPANY, L.P.
CENTERLINE SURVEY OF AN ACCESS ROAD CROSSING
SECTION 21, TOWNSHIP 25 SOUTH, RANGE 32 EAST, N.M.P.M.
LEA COUNTY, STATE OF NEW MEXICO
FEBRUARY 12, 2019

DESCRIPTION

A STRIP OF LAND 30 FEET WIDE CROSSING BUREAU OF LAND MANAGEMENT LAND IN SECTION 21, TOWNSHIP 25 SOUTH, RANGE 32 EAST, N.M.P.M., LEA COUNTY, STATE OF NEW MEXICO AND BEING 15 FEET EACH SIDE OF THE FOLLOWING DESCRIBED CENTERLINE SURVEY:

NORTHEAST ACCESS ROAD

BEGINNING AT A POINT WITHIN THE SW/4 SE/4 OF SAID SECTION 21, TOWNSHIP 25 SOUTH, RANGE 32 EAST, N.M.P.M., WHENCE THE SOUTH QUARTER CORNER OF SAID SECTION 21, TOWNSHIP 25 SOUTH, RANGE 32 EAST, N.M.P.M. BEARS S88°04'24"W, A DISTANCE OF 1121.19 FEET;
THENCE N89°21'15"E A DISTANCE OF 1025.13 FEET TO AN ANGLE POINT OF THE LINE HEREIN DESCRIBED;
THENCE S45°40'15"E A DISTANCE OF 35.21 FEET TO AN ANGLE POINT OF THE LINE HEREIN DESCRIBED;
THENCE S00°02'03"W A DISTANCE OF 0.17 FEET THE TERMINUS OF THIS CENTERLINE SURVEY, WHENCE THE SOUTHEAST CORNER OF SAID SECTION 21, TOWNSHIP 25 SOUTH, RANGE 32 EAST, N.M.P.M. BEARS N89°21'15"E, A DISTANCE OF 489.74 FEET;

SAID STRIP OF LAND BEING 1060.51 FEET OR 64.27 RODS IN LENGTH, CONTAINING 0.730 ACRES MORE OR LESS AND BEING ALLOCATED BY FORTIES AS FOLLOWS:

SW/4 SE/4	209.58 L.F.	12.70 RODS	0.144 ACRES
SE/4 SE/4	850.93 L.F.	51.57 RODS	0.586 ACRES

NORTHWEST ACCESS ROAD

BEGINNING AT A POINT WITHIN THE SE/4 SE/4 OF SAID SECTION 21, TOWNSHIP 25 SOUTH, RANGE 32 EAST, N.M.P.M., WHENCE THE SOUTHEAST CORNER OF SAID SECTION 21, TOWNSHIP 25 SOUTH, RANGE 32 EAST, N.M.P.M. BEARS S89°19'20"E, A DISTANCE OF 1084.84 FEET;
THENCE S45°15'43"E A DISTANCE OF 35.20 FEET THE TERMINUS OF THIS CENTERLINE SURVEY, WHENCE THE SOUTHEAST CORNER OF SAID SECTION 21, TOWNSHIP 25 SOUTH, RANGE 32 EAST, N.M.P.M. BEARS N89°21'15"E, A DISTANCE OF 1059.82 FEET;

SAID STRIP OF LAND BEING 35.20 FEET OR 2.13 RODS IN LENGTH, CONTAINING 0.024 ACRES MORE OR LESS AND BEING ALLOCATED BY FORTIES AS FOLLOWS:

SE/4 SE/4	35.20 L.F.	2.13 RODS	0.024 ACRES

GENERAL NOTES

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

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

SURVEYOR CERTIFICATE

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IN WITNESS WHEREOF, THIS CERTIFICATE IS EXECUTED AT CARLSBAD, NEW MEXICO, THIS 13 DAY OF FEBRUARY 2019

FILIMON F. JARAMILLO PLS/ 12797

301 SOUTH CANAL
(575) 234-3341

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

SHEET: 2–4

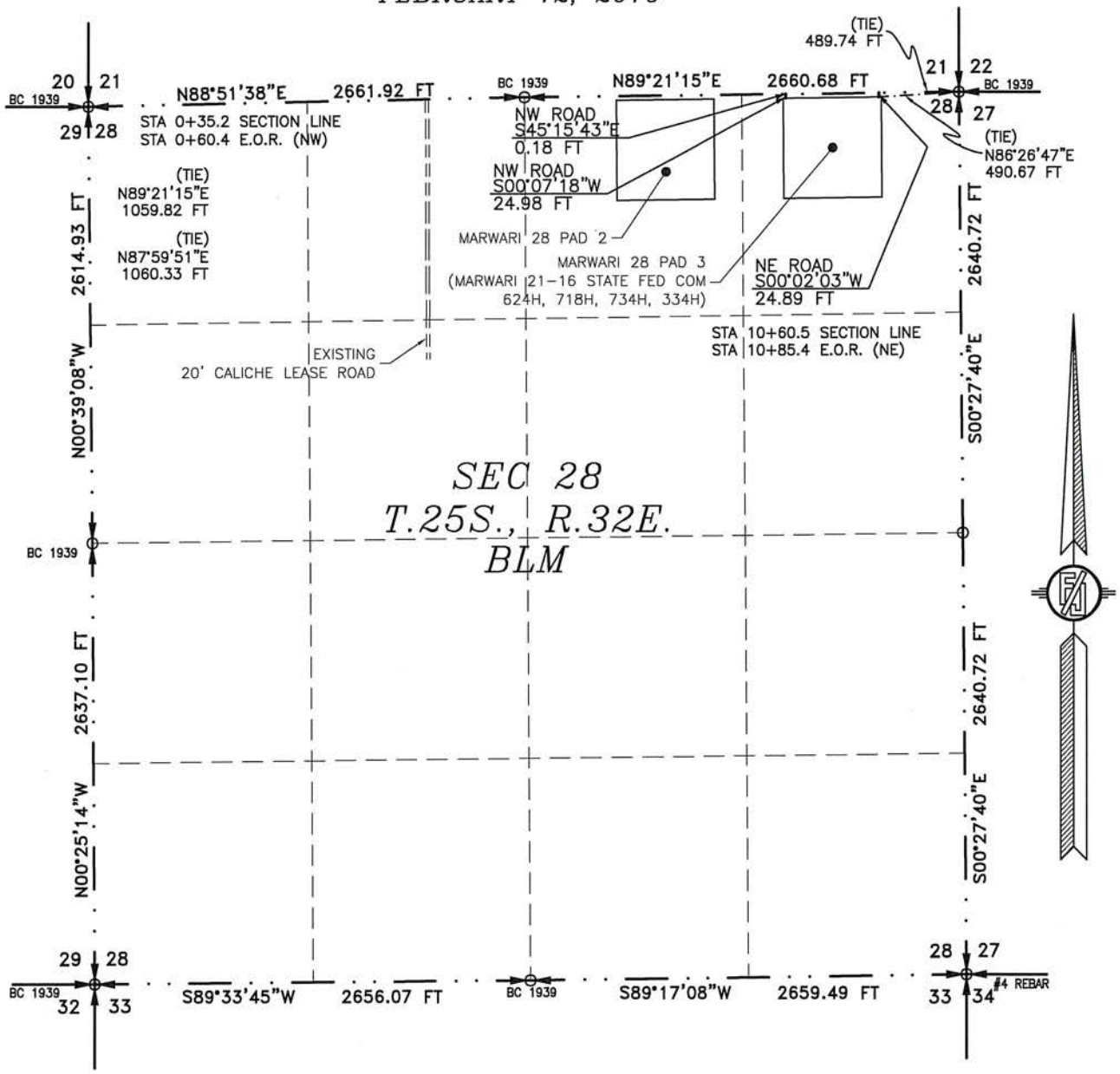
SURVEY NO. 6232A

MADRON SURVEYING, INC. CARLSBAD, NEW MEXICO

ACCESS ROAD PLAT

ACCESS ROAD TO THE MARWARI 28 PAD 3 (MARWARI 21-16 STATE FED COM 624H, 718H, 734H, 334H)

DEVON ENERGY PRODUCTION COMPANY, L.P.
CENTERLINE SURVEY OF AN ACCESS ROAD CROSSING
SECTION 28, TOWNSHIP 25 SOUTH, RANGE 32 EAST, N.M.P.M.
LEA COUNTY, STATE OF NEW MEXICO
FEBRUARY 12, 2019



SEE NEXT SHEET (4-4) FOR DESCRIPTION

1000 0 1000
Scale: 1" = 1000'

GENERAL NOTES

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

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

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IN WITNESS WHEREOF, THIS CERTIFICATE IS EXECUTED AT CARLSBAD, NEW MEXICO, THIS 13 DAY OF FEBRUARY 2019

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

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

SHEET: 3-4

SURVEY NO. 6232A

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

ACCESS ROAD PLAT

ACCESS ROAD TO THE MARWARI 28 PAD 3 (MARWARI 21–16 STATE FED COM 624H, 718H, 734H, 334H)

DEVON ENERGY PRODUCTION COMPANY, L.P.
CENTERLINE SURVEY OF AN ACCESS ROAD CROSSING
SECTION 28, TOWNSHIP 25 SOUTH, RANGE 32 EAST, N.M.P.M.
LEA COUNTY, STATE OF NEW MEXICO
FEBRUARY 12, 2019

DESCRIPTION

A STRIP OF LAND 30 FEET WIDE CROSSING BUREAU OF LAND MANAGEMENT LAND IN SECTION 28, TOWNSHIP 25 SOUTH, RANGE 32 EAST, N.M.P.M., LEA COUNTY, STATE OF NEW MEXICO AND BEING 15 FEET EACH SIDE OF THE FOLLOWING DESCRIBED CENTERLINE SURVEY:

NORTHEAST ACCESS ROAD

BEGINNING AT A POINT WITHIN THE NE/4 NE/4 OF SAID SECTION 28, TOWNSHIP 25 SOUTH, RANGE 32 EAST, N.M.P.M., WHENCE THE NORTHEAST CORNER OF SAID SECTION 28, TOWNSHIP 25 SOUTH, RANGE 32 EAST, N.M.P.M. BEARS N89°21'15"E, A DISTANCE OF 489.74 FEET;
THENCE S00°02'03"W A DISTANCE OF 24.89 FEET THE TERMINUS OF THIS CENTERLINE SURVEY, WHENCE THE NORTHEAST CORNER OF SAID SECTION 28, TOWNSHIP 25 SOUTH, RANGE 32 EAST, N.M.P.M. BEARS N86°26'47"E, A DISTANCE OF 490.67 FEET;

SAID STRIP OF LAND BEING 24.89 FEET OR 1.51 RODS IN LENGTH, CONTAINING 0.017 ACRES MORE OR LESS AND BEING ALLOCATED BY FORTIES AS FOLLOWS:

NE/4 NE/4 24.89 L.F. 1.51 RODS 0.017 ACRES

NORTHWEST ACCESS ROAD

BEGINNING AT A POINT WITHIN THE NE/4 NE/4 OF SAID SECTION 28, TOWNSHIP 25 SOUTH, RANGE 32 EAST, N.M.P.M., WHENCE THE NORTHEAST CORNER OF SAID SECTION 28, TOWNSHIP 25 SOUTH, RANGE 32 EAST, N.M.P.M. BEARS N89°21'15"E, A DISTANCE OF 1059.82 FEET;
THENCE S45°15'43"E A DISTANCE OF 0.18 FEET TO AN ANGLE POINT OF THE LINE HEREIN DESCRIBED;
THENCE S00°07'18"W A DISTANCE OF 24.98 FEET THE TERMINUS OF THIS CENTERLINE SURVEY, WHENCE THE NORTHEAST CORNER OF SAID SECTION 28, TOWNSHIP 25 SOUTH, RANGE 32 EAST, N.M.P.M. BEARS N87°59'51"E, A DISTANCE OF 1060.33 FEET;

SAID STRIP OF LAND BEING 25.16 FEET OR 1.52 RODS IN LENGTH, CONTAINING 0.017 ACRES MORE OR LESS AND BEING ALLOCATED BY FORTIES AS FOLLOWS:

NE/4 NE/4 25.16 L.F. 1.52 RODS 0.017 ACRES

GENERAL NOTES

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

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FILIMON F. JARAMILLO PLS. 12797

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

District I
1625 N. French Dr., Hobbs, NM 88240
District II
811 S. First St., Artesia, NM 88210
District III
1000 Rio Brazos Road, Aztec, NM 87410
District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico
Energy, Minerals and Natural Resources Department

Oil Conservation Division
1220 South St. Francis Dr.
Santa Fe, NM 87505

Submit Original
to Appropriate
District Office

GAS CAPTURE PLAN

Date: 2/19/2019

☒ Original Operator & OGRID No.: Devon Energy Prod Co., LP (6137)
☐ Amended - Reason for Amendment:

This Gas Capture Plan outlines actions to be taken by the Devon to reduce well/production facility flaring/venting for new completion (new drill, recomplete to new zone, re-frac) activity.

Note: Form C-129 must be submitted and approved prior to exceeding 60 days allowed by Rule (Subsection A of 19.15.18.12 NMAC).

Well(s)/Production Facility – Name of facility

The well(s) that will be located at the production facility are shown in the table below.

Well Name	API	Well Location (ULSTR)	Footages	Expected MCF/D	Flared or Vented	Comments
Marwari 21-16 State Fed Com 718H	30-025-49135	Unit A, Sec 28-T25S-R32E	325 FNL 685 FEL			MARAWARI 28 CTB 3

Gathering System and Pipeline Notification

Well(s) will be connected to a production facility after flowback operations are complete, if DCP system is in place. The gas produced from production facility is dedicated to DCP and will be connected to DCP low/high pressure gathering system located in Lea County, New Mexico. It will require 650' of pipeline to connect the facility to low/high pressure gathering system. Devon provides (periodically) to DCP a drilling, completion and estimated first production date for wells that are scheduled to be drilled in the foreseeable future. In addition, Devon and DCP have periodic conference calls to discuss changes to drilling and completion schedules. Gas from these wells will be processed at DCP Processing Plant located in Sec. 19, Twn. 19S, Rng. 32E, Lea County, New Mexico. The actual flow of the gas will be based on compression operating parameters and gathering system pressures.

Flowback Strategy

After the fracture treatment/completion operations, well(s) will be produced to temporary production tanks and gas will be flared or vented. During flowback, the fluids and sand content will be monitored. When the produced fluids contain minimal sand, the wells will be turned to production facilities. Gas sales should start as soon as the wells start flowing through the production facilities, unless there are operational issues on DCP system at that time. Based on current information, it is Devon's belief the system can take this gas upon completion of the well(s).

Safety requirements during cleanout operations from the use of underbalanced air cleanout systems may necessitate that sand and non-pipeline quality gas be vented and/or flared rather than sold on a temporary basis.

Alternatives to Reduce Flaring

Below are alternatives considered from a conceptual standpoint to reduce the amount of gas flared.

- Power Generation – On lease
  - Only a portion of gas is consumed operating the generator, remainder of gas will be flared
- Compressed Natural Gas – On lease
  - Gas flared would be minimal, but might be uneconomical to operate when gas volume declines
- NGL Removal – On lease
  - Plants are expensive, residue gas is still flared, and uneconomical to operate when gas volume declines

Marwari 21-16 State Fed Com 718H

1. Geologic Formations

TVD of target	12065	Pilot hole depth	N/A
MD at TD:	22360	Deepest expected fresh water	

Basin

Formation	Depth (TVD) from KB	Water/Mineral Bearing/Target Zone?	Hazards*
Rustler	995		
Salt	1380		
Base of Salt	4625		
Lamar	4625		
Delaware	4625		
Cherry Canyon	5580		
Brushy Canyon	7170		
1st Bone Spring Lime	8680		
Bone Spring 1st	9665		
Bone Spring 2nd	10310		
3rd Bone Spring Lime	10805		
Bone Spring 3rd	11415		
Wolfcamp	11910		

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

Marwari 21-16 State Fed Com 718H

2. Casing Program (Primary Design)

Hole Size	Csg. Size	Wt (PPF)	Grade	Conn	Casing Interval		Casing Interval	
					From (MD)	To (MD)	From (TVD)	To (TVD)
17 1/2	13 3/8	48	H40	STC	0	1020	0	1020
9 7/8	8 5/8	32	P110	TLW	0	11415	0	11415
7 7/8	5 1/2	17	P110	BTC	0	22360	0	12065

• All casing strings will be tested in accordance with Onshore Oil and Gas Order #2 IILB.1.h Must have table for continengcy casing.

3. Cementing Program (Primary Design)

Casing	# Sks	TOC	Wt. ppg	Yld (ft3/sack)	Slurry Description
Surface	777	Surf	13.2	1.44	Lead: Class C Cement + additives
Int 1	469	Surf	9	3.27	Lead: Class C Cement + additives
	465	4000' above	13.2	1.44	Tail: Class H / C + additives
Int 1 Intermediate Squeeze	As Needed	Surf	13.2	1.44	Squeeze Lead: Class C Cement + additives
	469	Surf	9	3.27	Lead: Class C Cement + additives
	465	4000' above	13.2	1.44	Tail: Class H / C + additives
Production	117	9528	9	3.27	Lead: Class H /C + additives
	1434	11528	13.2	1.44	Tail: Class H / C + additives

Casing String	% Excess
Surface	50%
Intermediate 1	30%
Intermediate 1 (Two Stage)	25%
Prod	10%

Marwari 21-16 State Fed Com 718H

4. Pressure Control Equipment (Three String Design)

BOP installed and tested before drilling which hole?	Size?	Min. Required WP	Type	✓	Tested to:
Int 1	13-58"	5M	Annular	X	50% of rated working pressure
			Blind Ram	X	5M
			Pipe Ram		
			Double Ram	X	
			Other*		
Production	13-5/8"	5M	Annular (5M)	X	100% of rated working pressure
			Blind Ram	X	10M
			Pipe Ram		
			Double Ram	X	
			Other*		
			Annular (5M)		
			Blind Ram		
			Pipe Ram		
			Double Ram		
			Other*		

N	A variance is requested for the use of a diverter on the surface casing. See attached for schematic.
Y	A variance is requested to run a 5 M annular on a 10M system

5. Mud Program (Three String Design)

Section	Type	Weight (ppg)
Surface	FW Gel	8.5-9
Intermediate	DBE / Cut Brine	10-10.5
Production	OBM	10-10.5

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

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

6. Logging and Testing Procedures

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

Additional logs planned		Interval
	Resistivity	Int. shoe to KOP
	Density	Int. shoe to KOP
X	CBL	Production casing
X	Mud log	Intermediate shoe to TD
	PEX	

7. Drilling Conditions

Condition	Specfiy what type and where?
BH pressure at deepest TVD	6588
Abnormal temperature	No

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

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

8. Other facets of operation

Is this a walking operation? Potentially

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

NOTE: During batch operations the drilling rig will be moved from well to well however, it will not be removed

from the pad until all wells have production casing run/cemented.

Will be pre-setting casing? Potentially

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

Attachments

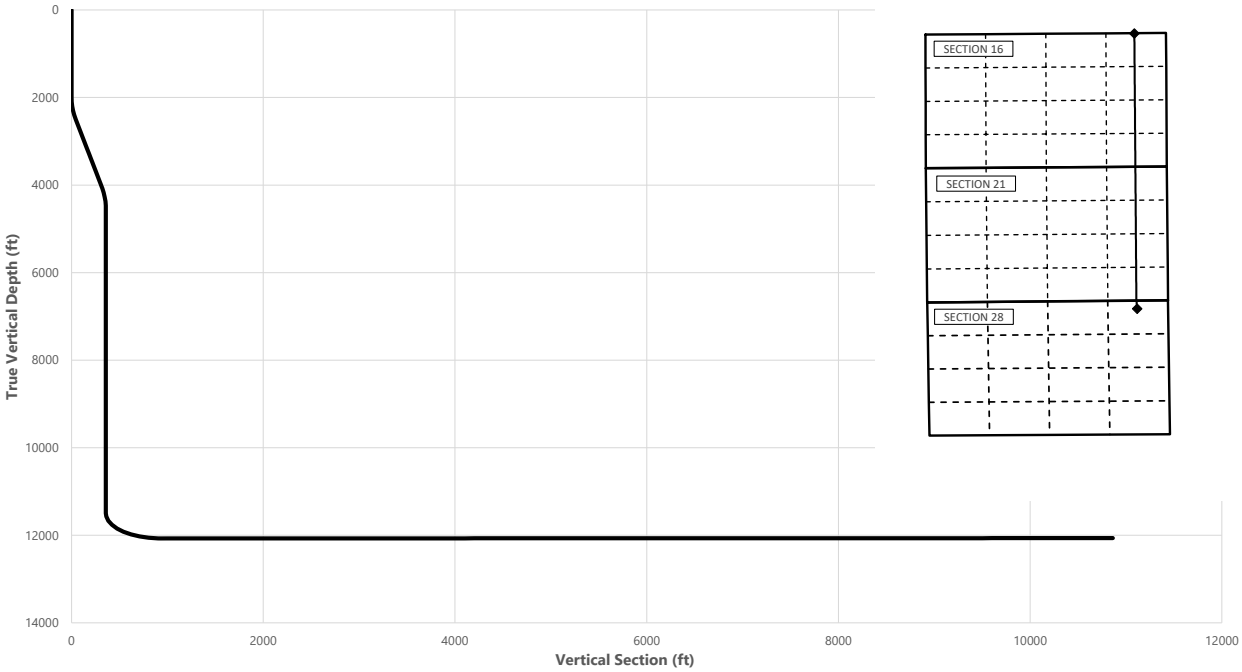
X Directional Plan

_____ Other, describe

Well: Marwari 21-16 State Fed Com 718H
County: Lea
Wellbore: Permit Plan
Design: Permit Plan #1

Geodetic System: US State Plane 1983
Datum: North American Datum 1927
Ellipsoid: Clarke 1866
Zone: 3001 - NM East (NAD83)

MD (ft)	INC (°)	AZI (°)	TVD (ft)	NS (ft)	EW (ft)	VS (ft)	DLS (°/100ft)	Comment
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	SHL
2000.00	0.00	357.20	2000.00	0.00	0.00	0.00	0.00	Start Tangent
2500.00	10.00	357.20	2497.47	43.47	-2.13	43.48	1.00	Hold Tangent
4060.81	10.00	357.20	4034.56	314.18	-15.37	314.26	0.00	Drop to Vertical
4560.81	0.00	357.20	4532.03	357.65	-17.49	357.74	2.00	Hold Vertical
11527.82	0.00	359.76	11499.04	357.65	-17.49	357.74	0.00	KOP
12428.23	90.04	359.76	12072.00	931.01	-19.94	931.11	10.00	Landing Point
22359.93	90.04	359.76	12065.00	10862.61	-62.41	10862.79	0.00	BHL



Key Depths	MD (ft)	TVD (ft)
Rustler	0.00	0.00
Salt	1380.00	1380.00
Base of Salt	4653.78	4625.00
Lamar	4653.78	4625.00
Delaware	4653.78	4625.00
Cherry Canyon	5608.78	5580.00
Brushy Canyon	7198.78	7170.00
1st Bone Spring Lime	8708.78	8680.00
Bone Spring 1st	9693.78	9665.00
Bone Spring 2nd	10338.78	10310.00
3rd Bone Spring Lime	10833.78	10805.00
Bone Spring 3rd	11443.78	11415.00
Wolfcamp / Point of Penetration	11986.11	11910.00
EXIT	22279.93	12065.07

	MD (ft)	TVD (ft)	Lat (°)	Long (°)	Section Footages
SHL	0.00	0.00	32.1077	-103.6738	325' FNL, 685' FEL of Sec 28 in T25S, R32E
KOP	11527.82	11499.04	32.1087	-103.6738	36' FSL, 700' FEL of Sec 21 in T25S, R32E
Point of Penetration	11986.11	11910.00	32.1089	-103.6737	100' FSL, 700' FEL of Sec 21 in T25S, R32E
Exit	22279.93	12065.07	32.1374	-103.6737	100' FNL, 700' FEL of Sec 16 in T25S, R32E
BHL	22359.93	12065.00	32.1375	-103.6738	20' FNL, 700' FEL of Sec 16 in T25S, R32E

devon

Well: Marwari 21-16 State Fed Com 718H
County: Lea
Wellbore: Permit Plan
Design: Permit Plan #1

Geodetic System: US State Plane 1983
Datum: North American Datum 1927
Ellipsoid: Clarke 1866
Zone: 3001 - NM East (NAD83)

MD (ft)	INC (°)	AZI (°)	TVD (ft)	NS (ft)	EW (ft)	VS (ft)	DLS (°/100ft)	Comment
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	SHL
100.00	0.00	357.20	100.00	0.00	0.00	0.00	0.00	
200.00	0.00	357.20	200.00	0.00	0.00	0.00	0.00	
300.00	0.00	357.20	300.00	0.00	0.00	0.00	0.00	
400.00	0.00	357.20	400.00	0.00	0.00	0.00	0.00	
500.00	0.00	357.20	500.00	0.00	0.00	0.00	0.00	
600.00	0.00	357.20	600.00	0.00	0.00	0.00	0.00	
700.00	0.00	357.20	700.00	0.00	0.00	0.00	0.00	
800.00	0.00	357.20	800.00	0.00	0.00	0.00	0.00	
900.00	0.00	357.20	900.00	0.00	0.00	0.00	0.00	
995.00	0.00	357.20	995.00	0.00	0.00	0.00	0.00	Rustler
1000.00	0.00	357.20	1000.00	0.00	0.00	0.00	0.00	
1100.00	0.00	357.20	1100.00	0.00	0.00	0.00	0.00	
1200.00	0.00	357.20	1200.00	0.00	0.00	0.00	0.00	
1300.00	0.00	357.20	1300.00	0.00	0.00	0.00	0.00	
1380.00	0.00	357.20	1380.00	0.00	0.00	0.00	0.00	Salt
1400.00	0.00	357.20	1400.00	0.00	0.00	0.00	0.00	
1500.00	0.00	357.20	1500.00	0.00	0.00	0.00	0.00	
1600.00	0.00	357.20	1600.00	0.00	0.00	0.00	0.00	
1700.00	0.00	357.20	1700.00	0.00	0.00	0.00	0.00	
1800.00	0.00	357.20	1800.00	0.00	0.00	0.00	0.00	
1900.00	0.00	357.20	1900.00	0.00	0.00	0.00	0.00	
2000.00	0.00	357.20	2000.00	0.00	0.00	0.00	0.00	Start Tangent
2100.00	2.00	357.20	2099.98	1.74	-0.09	1.74	2.00	
2200.00	4.00	357.20	2199.84	6.97	-0.34	6.97	2.00	
2300.00	6.00	357.20	2299.45	15.67	-0.77	15.68	2.00	
2400.00	8.00	357.20	2398.70	27.85	-1.36	27.85	2.00	
2500.00	10.00	357.20	2497.47	43.47	-2.13	43.48	1.00	Hold Tangent
2600.00	10.00	357.20	2595.95	60.81	-2.97	60.83	0.00	
2700.00	10.00	357.20	2694.43	78.16	-3.82	78.18	0.00	
2800.00	10.00	357.20	2792.91	95.50	-4.67	95.53	0.00	
2900.00	10.00	357.20	2891.39	112.85	-5.52	112.88	0.00	
3000.00	10.00	357.20	2989.87	130.19	-6.37	130.23	0.00	
3100.00	10.00	357.20	3088.35	147.54	-7.22	147.57	0.00	
3200.00	10.00	357.20	3186.83	164.88	-8.06	164.92	0.00	
3300.00	10.00	357.20	3285.31	182.22	-8.91	182.27	0.00	
3400.00	10.00	357.20	3383.79	199.57	-9.76	199.62	0.00	
3500.00	10.00	357.20	3482.27	216.91	-10.61	216.97	0.00	
3600.00	10.00	357.20	3580.75	234.26	-11.46	234.32	0.00	
3700.00	10.00	357.20	3679.23	251.60	-12.31	251.67	0.00	
3800.00	10.00	357.20	3777.72	268.94	-13.15	269.01	0.00	
3900.00	10.00	357.20	3876.20	286.29	-14.00	286.36	0.00	
4000.00	10.00	357.20	3974.68	303.63	-14.85	303.71	0.00	
4060.81	10.00	357.20	4034.56	314.18	-15.37	314.26	0.00	Drop to Vertical
4100.00	9.22	357.20	4073.20	320.71	-15.69	320.80	2.00	
4200.00	7.22	357.20	4172.17	334.99	-16.38	335.07	2.00	
4300.00	5.22	357.20	4271.58	345.80	-16.91	345.89	2.00	
4400.00	3.22	357.20	4371.30	353.14	-17.27	353.24	2.00	
4500.00	1.22	357.20	4471.22	357.00	-17.46	357.10	2.00	
4560.81	0.00	357.20	4532.03	357.65	-17.49	357.74	2.00	Hold Vertical
4600.00	0.00	359.76	4571.22	357.65	-17.49	357.74	0.00	
4653.78	0.00	359.76	4625.00	357.65	-17.49	357.74	0.00	Base of Salt, Lamar, Delaware
4700.00	0.00	359.76	4671.22	357.65	-17.49	357.74	0.00	
4800.00	0.00	359.76	4771.22	357.65	-17.49	357.74	0.00	
4900.00	0.00	359.76	4871.22	357.65	-17.49	357.74	0.00	
5000.00	0.00	359.76	4971.22	357.65	-17.49	357.74	0.00	
5100.00	0.00	359.76	5071.22	357.65	-17.49	357.74	0.00	
5200.00	0.00	359.76	5171.22	357.65	-17.49	357.74	0.00	
5300.00	0.00	359.76	5271.22	357.65	-17.49	357.74	0.00	
5400.00	0.00	359.76	5371.22	357.65	-17.49	357.74	0.00	
5500.00	0.00	359.76	5471.22	357.65	-17.49	357.74	0.00	
5600.00	0.00	359.76	5571.22	357.65	-17.49	357.74	0.00	
5608.78	0.00	359.76	5580.00	357.65	-17.49	357.74	0.00	Cherry Canyon
5700.00	0.00	359.76	5671.22	357.65	-17.49	357.74	0.00	
5800.00	0.00	359.76	5771.22	357.65	-17.49	357.74	0.00	
5900.00	0.00	359.76	5871.22	357.65	-17.49	357.74	0.00	
6000.00	0.00	359.76	5971.22	357.65	-17.49	357.74	0.00	
6100.00	0.00	359.76	6071.22	357.65	-17.49	357.74	0.00	
6200.00	0.00	359.76	6171.22	357.65	-17.49	357.74	0.00	
6300.00	0.00	359.76	6271.22	357.65	-17.49	357.74	0.00	

devon

Well: Marwari 21-16 State Fed Com 718H
County: Lea
Wellbore: Permit Plan
Design: Permit Plan #1

Geodetic System: US State Plane 1983
Datum: North American Datum 1927
Ellipsoid: Clarke 1866
Zone: 3001 - NM East (NAD83)

MD (ft)	INC (°)	AZI (°)	TVD (ft)	NS (ft)	EW (ft)	VS (ft)	DLS (°/100ft)	Comment
6400.00	0.00	359.76	6371.22	357.65	-17.49	357.74	0.00	
6500.00	0.00	359.76	6471.22	357.65	-17.49	357.74	0.00	
6600.00	0.00	359.76	6571.22	357.65	-17.49	357.74	0.00	
6700.00	0.00	359.76	6671.22	357.65	-17.49	357.74	0.00	
6800.00	0.00	359.76	6771.22	357.65	-17.49	357.74	0.00	
6900.00	0.00	359.76	6871.22	357.65	-17.49	357.74	0.00	
7000.00	0.00	359.76	6971.22	357.65	-17.49	357.74	0.00	
7100.00	0.00	359.76	7071.22	357.65	-17.49	357.74	0.00	
7198.78	0.00	359.76	7170.00	357.65	-17.49	357.74	0.00	Brushy Canyon
7200.00	0.00	359.76	7171.22	357.65	-17.49	357.74	0.00	
7300.00	0.00	359.76	7271.22	357.65	-17.49	357.74	0.00	
7400.00	0.00	359.76	7371.22	357.65	-17.49	357.74	0.00	
7500.00	0.00	359.76	7471.22	357.65	-17.49	357.74	0.00	
7600.00	0.00	359.76	7571.22	357.65	-17.49	357.74	0.00	
7700.00	0.00	359.76	7671.22	357.65	-17.49	357.74	0.00	
7800.00	0.00	359.76	7771.22	357.65	-17.49	357.74	0.00	
7900.00	0.00	359.76	7871.22	357.65	-17.49	357.74	0.00	
8000.00	0.00	359.76	7971.22	357.65	-17.49	357.74	0.00	
8100.00	0.00	359.76	8071.22	357.65	-17.49	357.74	0.00	
8200.00	0.00	359.76	8171.22	357.65	-17.49	357.74	0.00	
8300.00	0.00	359.76	8271.22	357.65	-17.49	357.74	0.00	
8400.00	0.00	359.76	8371.22	357.65	-17.49	357.74	0.00	
8500.00	0.00	359.76	8471.22	357.65	-17.49	357.74	0.00	
8600.00	0.00	359.76	8571.22	357.65	-17.49	357.74	0.00	
8700.00	0.00	359.76	8671.22	357.65	-17.49	357.74	0.00	
8708.78	0.00	359.76	8680.00	357.65	-17.49	357.74	0.00	1st Bone Spring Lime
8800.00	0.00	359.76	8771.22	357.65	-17.49	357.74	0.00	
8900.00	0.00	359.76	8871.22	357.65	-17.49	357.74	0.00	
9000.00	0.00	359.76	8971.22	357.65	-17.49	357.74	0.00	
9100.00	0.00	359.76	9071.22	357.65	-17.49	357.74	0.00	
9200.00	0.00	359.76	9171.22	357.65	-17.49	357.74	0.00	
9300.00	0.00	359.76	9271.22	357.65	-17.49	357.74	0.00	
9400.00	0.00	359.76	9371.22	357.65	-17.49	357.74	0.00	
9500.00	0.00	359.76	9471.22	357.65	-17.49	357.74	0.00	
9600.00	0.00	359.76	9571.22	357.65	-17.49	357.74	0.00	
9693.78	0.00	359.76	9665.00	357.65	-17.49	357.74	0.00	Bone Spring 1st
9700.00	0.00	359.76	9671.22	357.65	-17.49	357.74	0.00	
9800.00	0.00	359.76	9771.22	357.65	-17.49	357.74	0.00	
9900.00	0.00	359.76	9871.22	357.65	-17.49	357.74	0.00	
10000.00	0.00	359.76	9971.22	357.65	-17.49	357.74	0.00	
10100.00	0.00	359.76	10071.22	357.65	-17.49	357.74	0.00	
10200.00	0.00	359.76	10171.22	357.65	-17.49	357.74	0.00	
10300.00	0.00	359.76	10271.22	357.65	-17.49	357.74	0.00	
10338.78	0.00	359.76	10310.00	357.65	-17.49	357.74	0.00	Bone Spring 2nd
10400.00	0.00	359.76	10371.22	357.65	-17.49	357.74	0.00	
10500.00	0.00	359.76	10471.22	357.65	-17.49	357.74	0.00	
10600.00	0.00	359.76	10571.22	357.65	-17.49	357.74	0.00	
10700.00	0.00	359.76	10671.22	357.65	-17.49	357.74	0.00	
10800.00	0.00	359.76	10771.22	357.65	-17.49	357.74	0.00	
10833.78	0.00	359.76	10805.00	357.65	-17.49	357.74	0.00	3rd Bone Spring Lime
10900.00	0.00	359.76	10871.22	357.65	-17.49	357.74	0.00	
11000.00	0.00	359.76	10971.22	357.65	-17.49	357.74	0.00	
11100.00	0.00	359.76	11071.22	357.65	-17.49	357.74	0.00	
11200.00	0.00	359.76	11171.22	357.65	-17.49	357.74	0.00	
11300.00	0.00	359.76	11271.22	357.65	-17.49	357.74	0.00	
11400.00	0.00	359.76	11371.22	357.65	-17.49	357.74	0.00	
11443.78	0.00	359.76	11415.00	357.65	-17.49	357.74	0.00	Bone Spring 3rd
11500.00	0.00	359.76	11471.22	357.65	-17.49	357.74	0.00	
11527.82	0.00	359.76	11499.04	357.65	-17.49	357.74	0.00	KOP
11600.00	7.22	359.76	11571.03	362.19	-17.51	362.28	10.00	
11700.00	17.22	359.76	11668.64	383.32	-17.60	383.42	10.00	
11800.00	27.22	359.76	11761.10	421.09	-17.76	421.18	10.00	
11900.00	37.22	359.76	11845.59	474.33	-17.99	474.43	10.00	
11986.11	45.83	359.76	11910.00	531.36	-18.24	531.46	10.00	Wolfcamp / Point of Penetration
12000.00	47.22	359.76	11919.56	541.44	-18.28	541.54	10.00	
12100.00	57.22	359.76	11980.75	620.38	-18.62	620.47	10.00	
12200.00	67.22	359.76	12027.30	708.74	-19.00	708.83	10.00	
12300.00	77.22	359.76	12057.80	803.84	-19.40	803.94	10.00	
12400.00	87.22	359.76	12071.33	902.79	-19.83	902.89	10.00	
12428.23	90.04	359.76	12072.00	931.01	-19.94	931.11	10.00	Landing Point

devon

Well: Marwari 21-16 State Fed Com 718H
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MD (ft)	INC (°)	AZI (°)	TVD (ft)	NS (ft)	EW (ft)	VS (ft)	DLS (°/100ft)	Comment
12500.00	90.04	359.76	12071.95	1002.78	-20.25	1002.88	0.00	
12600.00	90.04	359.76	12071.88	1102.78	-20.68	1102.88	0.00	
12700.00	90.04	359.76	12071.81	1202.78	-21.11	1202.88	0.00	
12800.00	90.04	359.76	12071.74	1302.78	-21.54	1302.88	0.00	
12900.00	90.04	359.76	12071.67	1402.77	-21.96	1402.88	0.00	
13000.00	90.04	359.76	12071.60	1502.77	-22.39	1502.88	0.00	
13100.00	90.04	359.76	12071.53	1602.77	-22.82	1602.88	0.00	
13200.00	90.04	359.76	12071.46	1702.77	-23.25	1702.88	0.00	
13300.00	90.04	359.76	12071.39	1802.77	-23.68	1802.88	0.00	
13400.00	90.04	359.76	12071.32	1902.77	-24.10	1902.88	0.00	
13500.00	90.04	359.76	12071.25	2002.77	-24.53	2002.88	0.00	
13600.00	90.04	359.76	12071.18	2102.77	-24.96	2102.88	0.00	
13700.00	90.04	359.76	12071.11	2202.77	-25.39	2202.88	0.00	
13800.00	90.04	359.76	12071.03	2302.77	-25.82	2302.88	0.00	
13900.00	90.04	359.76	12070.96	2402.76	-26.24	2402.88	0.00	
14000.00	90.04	359.76	12070.89	2502.76	-26.67	2502.88	0.00	
14100.00	90.04	359.76	12070.82	2602.76	-27.10	2602.88	0.00	
14200.00	90.04	359.76	12070.75	2702.76	-27.53	2702.88	0.00	
14300.00	90.04	359.76	12070.68	2802.76	-27.96	2802.88	0.00	
14400.00	90.04	359.76	12070.61	2902.76	-28.39	2902.88	0.00	
14500.00	90.04	359.76	12070.54	3002.76	-28.81	3002.88	0.00	
14600.00	90.04	359.76	12070.47	3102.76	-29.24	3102.87	0.00	
14700.00	90.04	359.76	12070.40	3202.76	-29.67	3202.87	0.00	
14800.00	90.04	359.76	12070.33	3302.76	-30.10	3302.87	0.00	
14900.00	90.04	359.76	12070.26	3402.76	-30.53	3402.87	0.00	
15000.00	90.04	359.76	12070.19	3502.75	-30.95	3502.87	0.00	
15100.00	90.04	359.76	12070.12	3602.75	-31.38	3602.87	0.00	
15200.00	90.04	359.76	12070.05	3702.75	-31.81	3702.87	0.00	
15300.00	90.04	359.76	12069.98	3802.75	-32.24	3802.87	0.00	
15400.00	90.04	359.76	12069.91	3902.75	-32.67	3902.87	0.00	
15500.00	90.04	359.76	12069.84	4002.75	-33.10	4002.87	0.00	
15600.00	90.04	359.76	12069.77	4102.75	-33.52	4102.87	0.00	
15700.00	90.04	359.76	12069.70	4202.75	-33.95	4202.87	0.00	
15800.00	90.04	359.76	12069.63	4302.75	-34.38	4302.87	0.00	
15900.00	90.04	359.76	12069.56	4402.75	-34.81	4402.87	0.00	
16000.00	90.04	359.76	12069.49	4502.75	-35.24	4502.87	0.00	
16100.00	90.04	359.76	12069.42	4602.74	-35.66	4602.87	0.00	
16200.00	90.04	359.76	12069.35	4702.74	-36.09	4702.87	0.00	
16300.00	90.04	359.76	12069.28	4802.74	-36.52	4802.87	0.00	
16400.00	90.04	359.76	12069.21	4902.74	-36.95	4902.87	0.00	
16500.00	90.04	359.76	12069.14	5002.74	-37.38	5002.87	0.00	
16600.00	90.04	359.76	12069.07	5102.74	-37.80	5102.87	0.00	
16700.00	90.04	359.76	12068.99	5202.74	-38.23	5202.87	0.00	
16800.00	90.04	359.76	12068.92	5302.74	-38.66	5302.87	0.00	
16900.00	90.04	359.76	12068.85	5402.74	-39.09	5402.87	0.00	
17000.00	90.04	359.76	12068.78	5502.74	-39.52	5502.87	0.00	
17100.00	90.04	359.76	12068.71	5602.73	-39.95	5602.87	0.00	
17200.00	90.04	359.76	12068.64	5702.73	-40.37	5702.87	0.00	
17300.00	90.04	359.76	12068.57	5802.73	-40.80	5802.87	0.00	
17400.00	90.04	359.76	12068.50	5902.73	-41.23	5902.87	0.00	
17500.00	90.04	359.76	12068.43	6002.73	-41.66	6002.87	0.00	
17600.00	90.04	359.76	12068.36	6102.73	-42.09	6102.87	0.00	
17700.00	90.04	359.76	12068.29	6202.73	-42.51	6202.87	0.00	
17800.00	90.04	359.76	12068.22	6302.73	-42.94	6302.87	0.00	
17900.00	90.04	359.76	12068.15	6402.73	-43.37	6402.87	0.00	
18000.00	90.04	359.76	12068.08	6502.73	-43.80	6502.87	0.00	
18100.00	90.04	359.76	12068.01	6602.73	-44.23	6602.87	0.00	
18200.00	90.04	359.76	12067.94	6702.72	-44.65	6702.87	0.00	
18300.00	90.04	359.76	12067.87	6802.72	-45.08	6802.87	0.00	
18400.00	90.04	359.76	12067.80	6902.72	-45.51	6902.87	0.00	
18500.00	90.04	359.76	12067.73	7002.72	-45.94	7002.87	0.00	
18600.00	90.04	359.76	12067.66	7102.72	-46.37	7102.87	0.00	
18700.00	90.04	359.76	12067.59	7202.72	-46.80	7202.87	0.00	
18800.00	90.04	359.76	12067.52	7302.72	-47.22	7302.87	0.00	
18900.00	90.04	359.76	12067.45	7402.72	-47.65	7402.87	0.00	
19000.00	90.04	359.76	12067.38	7502.72	-48.08	7502.87	0.00	
19100.00	90.04	359.76	12067.31	7602.72	-48.51	7602.87	0.00	
19200.00	90.04	359.76	12067.24	7702.71	-48.94	7702.87	0.00	
19300.00	90.04	359.76	12067.17	7802.71	-49.36	7802.87	0.00	
19400.00	90.04	359.76	12067.10	7902.71	-49.79	7902.87	0.00	

devon

Well: Marwari 21-16 State Fed Com 718H
County: Lea
Wellbore: Permit Plan
Design: Permit Plan #1

Geodetic System: US State Plane 1983
Datum: North American Datum 1927
Ellipsoid: Clarke 1866
Zone: 3001 - NM East (NAD83)

MD (ft)	INC (°)	AZI (°)	TVD (ft)	NS (ft)	EW (ft)	VS (ft)	DLS (°/100ft)	Comment
19500.00	90.04	359.76	12067.02	8002.71	-50.22	8002.87	0.00	
19600.00	90.04	359.76	12066.95	8102.71	-50.65	8102.87	0.00	
19700.00	90.04	359.76	12066.88	8202.71	-51.08	8202.87	0.00	
19800.00	90.04	359.76	12066.81	8302.71	-51.50	8302.87	0.00	
19900.00	90.04	359.76	12066.74	8402.71	-51.93	8402.87	0.00	
20000.00	90.04	359.76	12066.67	8502.71	-52.36	8502.87	0.00	
20100.00	90.04	359.76	12066.60	8602.71	-52.79	8602.87	0.00	
20200.00	90.04	359.76	12066.53	8702.71	-53.22	8702.87	0.00	
20300.00	90.04	359.76	12066.46	8802.70	-53.65	8802.87	0.00	
20400.00	90.04	359.76	12066.39	8902.70	-54.07	8902.87	0.00	
20500.00	90.04	359.76	12066.32	9002.70	-54.50	9002.87	0.00	
20600.00	90.04	359.76	12066.25	9102.70	-54.93	9102.87	0.00	
20700.00	90.04	359.76	12066.18	9202.70	-55.36	9202.87	0.00	
20800.00	90.04	359.76	12066.11	9302.70	-55.79	9302.87	0.00	
20900.00	90.04	359.76	12066.04	9402.70	-56.21	9402.87	0.00	
21000.00	90.04	359.76	12065.97	9502.70	-56.64	9502.87	0.00	
21100.00	90.04	359.76	12065.90	9602.70	-57.07	9602.87	0.00	
21200.00	90.04	359.76	12065.83	9702.70	-57.50	9702.87	0.00	
21300.00	90.04	359.76	12065.76	9802.70	-57.93	9802.87	0.00	
21400.00	90.04	359.76	12065.69	9902.69	-58.35	9902.87	0.00	
21500.00	90.04	359.76	12065.62	10002.69	-58.78	10002.87	0.00	
21600.00	90.04	359.76	12065.55	10102.69	-59.21	10102.87	0.00	
21700.00	90.04	359.76	12065.48	10202.69	-59.64	10202.87	0.00	
21800.00	90.04	359.76	12065.41	10302.69	-60.07	10302.87	0.00	
21900.00	90.04	359.76	12065.34	10402.69	-60.50	10402.87	0.00	
22000.00	90.04	359.76	12065.27	10502.69	-60.92	10502.87	0.00	
22100.00	90.04	359.76	12065.20	10602.69	-61.35	10602.87	0.00	
22200.00	90.04	359.76	12065.13	10702.69	-61.78	10702.86	0.00	
22279.93	90.04	359.76	12065.07	10782.61	-62.12	10782.79	0.00	EXIT
22300.00	90.04	359.76	12065.06	10802.69	-62.21	10802.86	0.00	
22359.93	90.04	359.76	12065.00	10862.61	-62.41	10862.79	0.00	BHL

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

Hydrogen Sulfide (H_2S) Contingency Plan

For

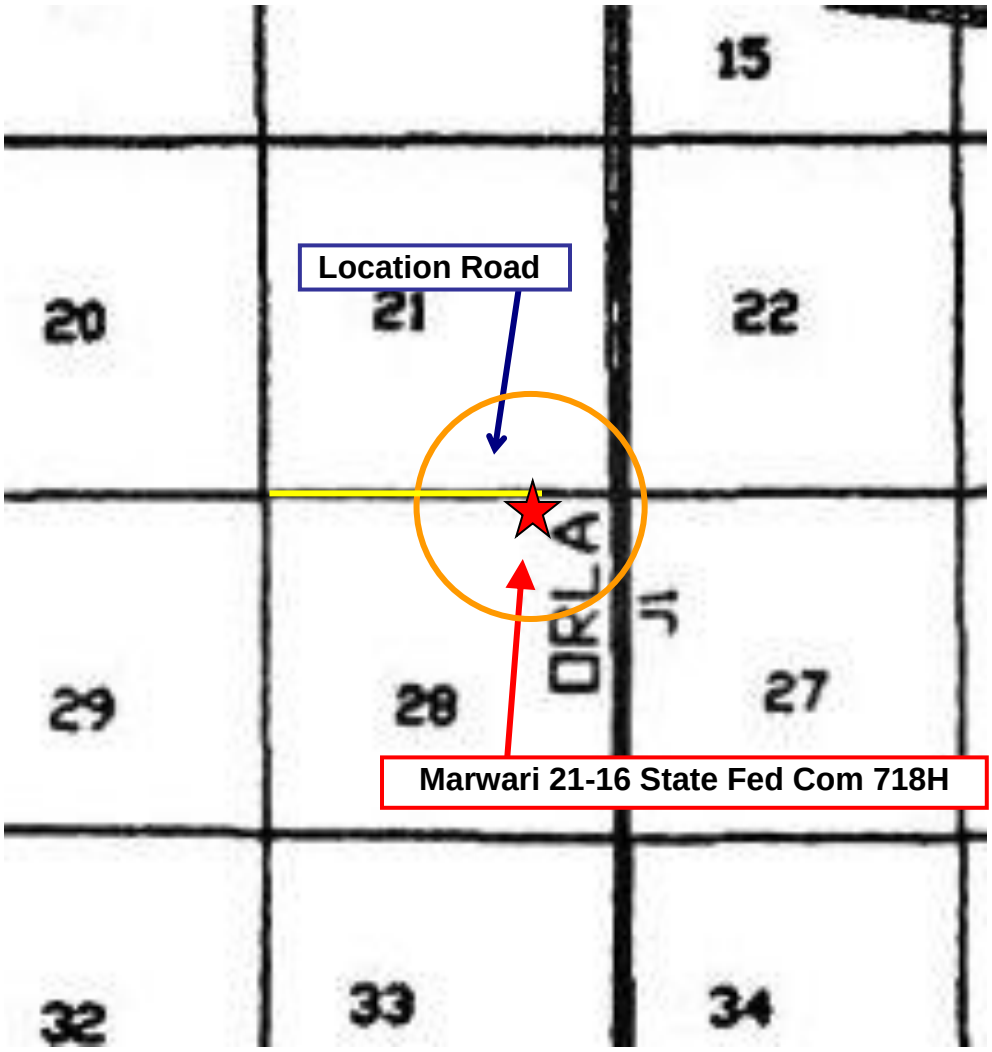
Marwari 21-16 State Fed Com 718H

Sec-28 T-25S R-32E
325’ FNL & 685’ FEL
LAT. = 32.1078034’ N (NAD83)
LONG = 103.6737081’ W

Lea County NM

Marwari 21-16 State Fed Com 718H

This is an open drilling site. H_2S monitoring equipment and emergency response equipment will be used within 500' of zones known to contain H_2S, including warning signs, wind indicators and H_2S 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_2S concentration shall trigger activation of this plan.

Emergency Procedures

In the event of a release of gas containing H_2S, 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_2S monitors and air packs in order to control the release.**
- **Use the "buddy system" to ensure no injuries occur during the response**
- **Take precautions to avoid personal injury during this operation.**
- **Contact operator and/or local officials to aid in operation. See list of phone numbers attached.**
- **Have received training in the**
  - **Detection of H_2S, and**
  - **Measures for protection against the gas,**
  - **Equipment used for protection and emergency response.**

Ignition of Gas Source

Should control of the well be considered lost and ignition considered, take care to protect against exposure to Sulfur Dioxide (SO_2). 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_2S and SO_2

Common Name	Chemical Formula	Specific Gravity	Threshold Limit	Hazardous Limit	Lethal Concentration
Hydrogen Sulfide	H_2S	1.189 Air = 1	10 ppm	100 ppm/hr	600 ppm
Sulfur Dioxide	SO_2	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 (H_2S) 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_2S)
2. The proper use and maintenance of personal protective equipment and life support systems.
3. The proper use of H_2S 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_2S 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_2S Drilling Operations Plan and Public Protection Plan.

There will be an initial training session just prior to encountering a known or probable H_2S zone (within 3 days or 500 feet) and weekly H_2S and well control drills for all personnel in each crew. The initial training session shall include a review of the site specific H_2S Drilling Operations Plan and the Public Protection Plan.

II. HYDROGEN SULFIDE TRAINING

Note: All H_2S 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_2S.

1. **Well Control Equipment**

   A. Flare line

   B. Choke manifold – Remotely Operated

   C. Blind rams and pipe rams to accommodate all pipe sizes with properly sized closing unit

   D. Auxiliary equipment may include if applicable: annular preventer and rotating head.

   E. Mud/Gas Separator

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

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

3. **H_2S detection and monitoring equipment:**

   Portable H_2S monitors positioned on location for best coverage and response. These units have warning lights which activate when H_2S levels reach 10 ppm and audible sirens which activate at 15 ppm. Sensor locations:

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

   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_2S circulated to surface. Proper mud weight, safe drilling practices and the use of H_2S scavengers will minimize hazards when penetrating H_2S 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_2S trim.

   B. All elastomers used for packing and seals shall be H_2S 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_2S environment will use the closed chamber method of testing.

   B. There will be no drill stem testing.

Devon Energy Corp. Company Call List			
Drilling Supervisor – Basin – Mark Kramer			405-823-4796
EHS Professional – Laura Wright			405-439-8129
Agency Call List			
Lea County (575)	**Hobbs**		
	Lea County Communication Authority		393-3981
	State Police		392-5588
	City Police		397-9265
	Sheriff's Office		393-2515
	Ambulance		**911**
	Fire Department		397-9308
	LEPC (Local Emergency Planning Committee)		393-2870
	NMOCD		393-6161
	US Bureau of Land Management		393-3612
Eddy County (575)	**Carlsbad**		
	State Police		885-3137
	City Police		885-2111
	Sheriff's Office		887-7551
	Ambulance		**911**
	Fire Department		885-3125
	LEPC (Local Emergency Planning Committee)		887-3798
	US Bureau of Land Management		887-6544
	NM Emergency Response Commission (Santa Fe)		(505) 476-9600
	24 HR		(505) 827-9126
	National Emergency Response Center		(800) 424-8802
	National Pollution Control Center: Direct		(703) 872-6000
	For Oil Spills		(800) 280-7118
	Emergency Services		
	Wild Well Control		(281) 784-4700
	Cudd Pressure Control	(915) 699-0139	(915) 563-3356
	Halliburton		(575) 746-2757
	B. J. Services		(575) 746-3569
Give GPS position:	Native Air – Emergency Helicopter – Hobbs (NM and TX)		(800)642-7828
	Flight For Life - Lubbock, TX		(806) 743-9911
	Aerocare - Lubbock, TX		(806) 747-8923
	Med Flight Air Amb - Albuquerque, NM		(575) 842-4433
	Lifeguard Air Med Svc. Albuquerque, NM		(800) 222-1222
	Poison Control (24/7)		(575) 272-3115
	Oil & Gas Pipeline 24 Hour Service		(800) 364-4366
	NOAA – Website - www.nhc.noaa.gov		

Prepared in conjunction with
Dave Small

SHARP communications and consulting

devon

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.

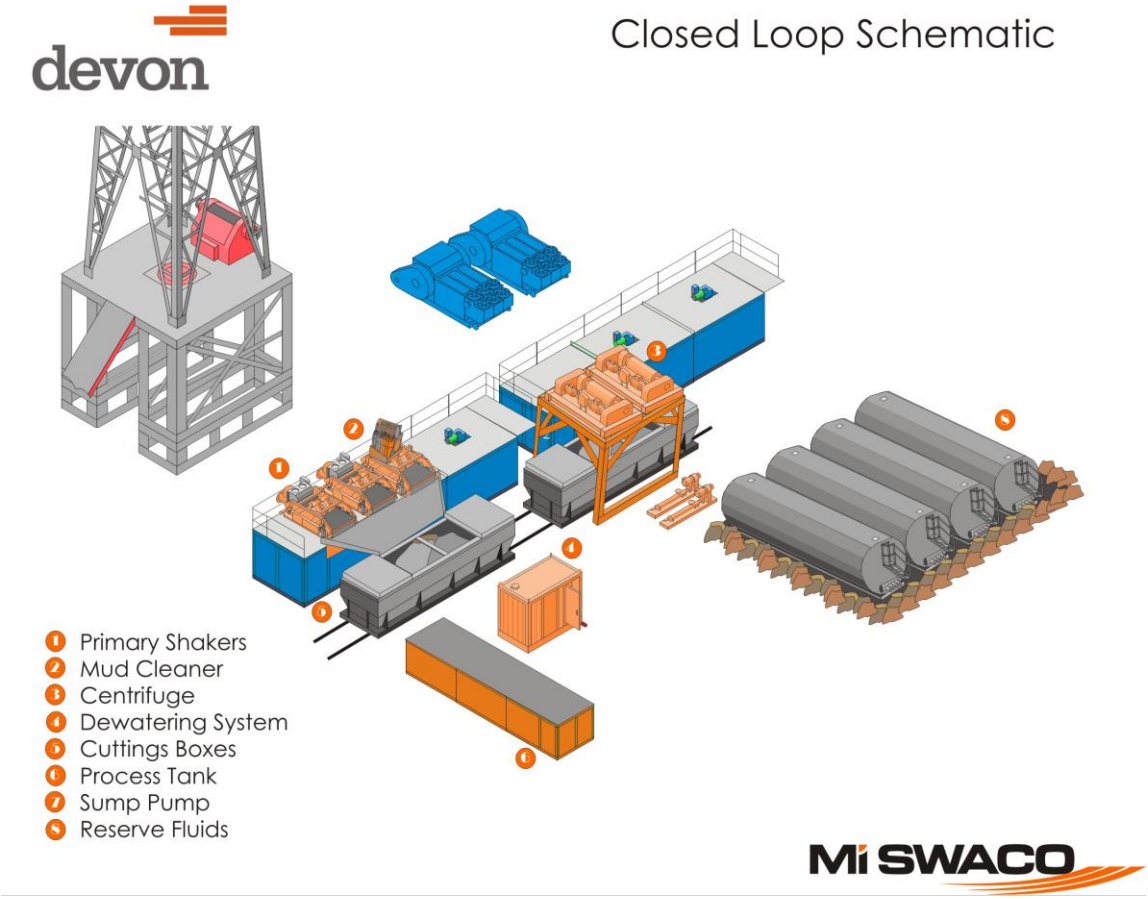
Prior to installing a closed-loop system on site, the topsoil, if present, will be stripped and stockpiled for use as the final cover or fill at the time of closure.

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.

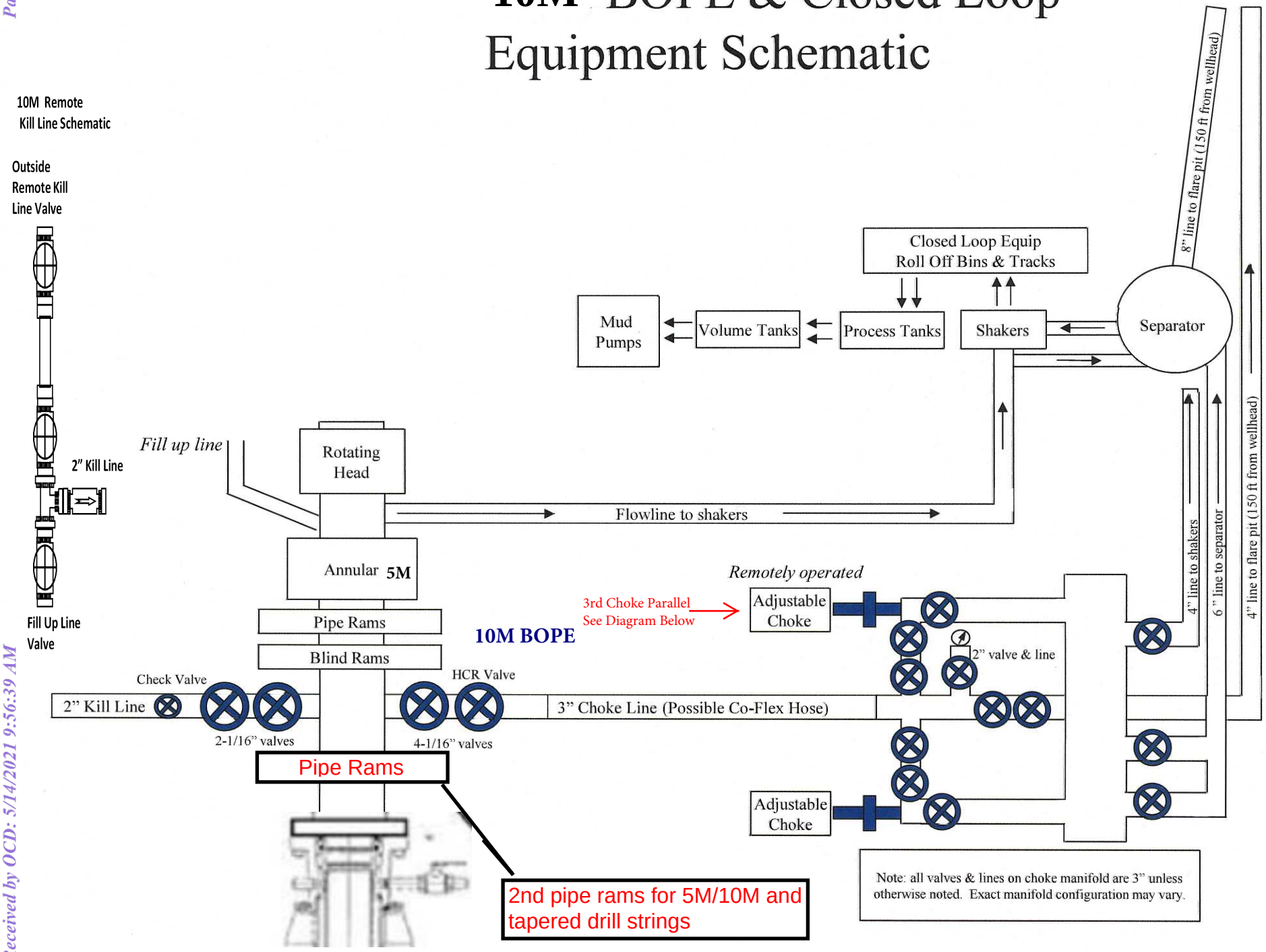
These operations are monitored by Mi Swaco service technicians. Daily logs are maintained to ensure optimal equipment operation and maintenance. Screen and chemical use is logged to maintain inventory control. Fluid properties are monitored and recorded and drilling mud volumes are accounted for in the 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.

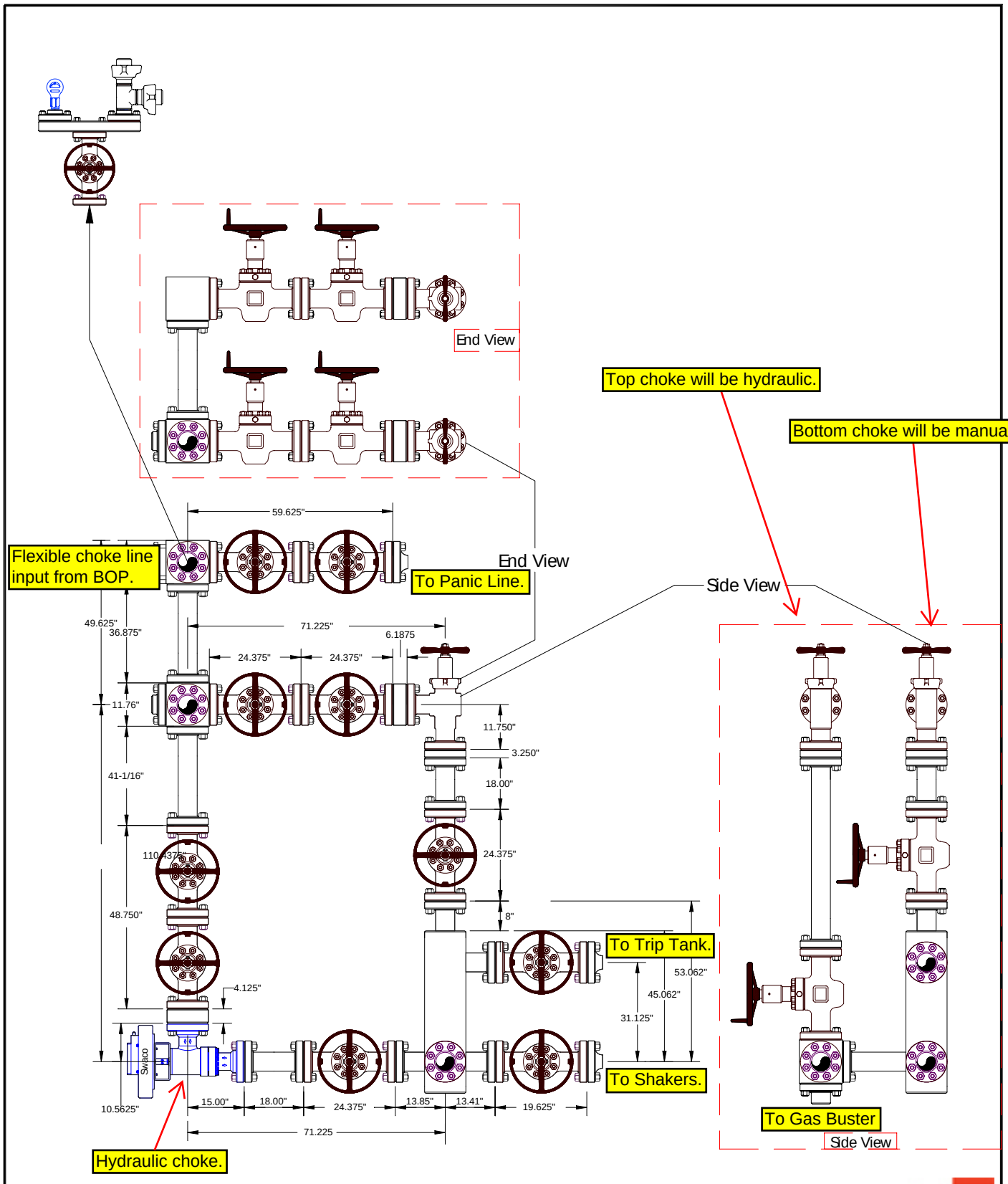
A MI SWACO field supervisor manages from 3-5 wells. They are responsible for training personnel, supervising installations, and inspecting sites for compliance of MI SWACO safety and operational policy.

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.

10M BOPE & Closed Loop Equipment Schematic




End View
Top choke will be hydraulic.
Bottom choke will be manual.
59.625"
Flexible choke line input from BOP.
End View
To Panic Line.
Side View
49.625"
36.875"
71.225"
6.1875
24.375"
24.375"
11.76"
11.750"
3.250"
18.00"
41-1/16"
24.375"
48.750"
8"
To Trip Tank.
53.062"
45.062"
31.125"
4.125"
To Shakers.
10.5625"
15.00"
18.00"
24.375"
13.85"
13.41"
19.625"
71.225
Hydraulic choke.
To Gas Buster
Side View
Helmerich & Payne
Flex 3 Rig w/ 3 Chokes
devon
Mike Potts
Name:
6-23-2010
Date:
10M
Working Pressure:
J-5132-E

District I
1625 N. French Dr., Hobbs, NM 88240
Phone:(575) 393-6161 Fax:(575) 393-0720
District II
811 S. First St., Artesia, NM 88210
Phone:(575) 748-1283 Fax:(575) 748-9720
District III
1000 Rio Brazos Rd., Aztec, NM 87410
Phone:(505) 334-6178 Fax:(505) 334-6170
District IV
1220 S. St Francis Dr., Santa Fe, NM 87505
Phone:(505) 476-3470 Fax:(505) 476-3462

State of New Mexico
Energy, Minerals and Natural Resources
Oil Conservation Division
1220 S. St Francis Dr.
Santa Fe, NM 87505

CONDITIONS

Action 28260

CONDITIONS

Operator:	OGRID:
DEVON ENERGY PRODUCTION COMPANY, LP 333 West Sheridan Ave. Oklahoma City, OK 73102	6137
	Action Number: 28260
	Action Type: [C-101] BLM - Federal/Indian Land Lease (Form 3160-3)

CONDITIONS

Created By	Condition	Condition Date
pkautz	Will require a File As Drilled C-102 and a Directional Survey with the C-104	7/2/2021
pkautz	Once the well is spud, to prevent ground water contamination through whole or partial conduits from the surface, the operator shall drill without interruption through the fresh water zone or zones and shall immediately set in cement the water protection string	7/2/2021