Form 3160-3
(June 2015)

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

P/F
(H)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

HOBBS OCD
APR 16 2019
RECEIVED

APPLICATION FOR PERMIT TO DRILL OR REENTER

5. Lease Serial No.
NMNM118722

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.
SD 14 23 FED P18
10H (325387)

2. Name of Operator
CHEVRON USA INCORPORATED (4323)

9. API Well No.
30-025-45819

3a. Address
6301 Deauville Blvd. Midland TX 79706

3b. Phone No. *(include area code)*
(432)687-7866

10. Field and Pool, or Exploratory
98065
~~WC025G09S263327G~~ / UPPER WOLFC

4. Location of Well *(Report location clearly and in accordance with any State requirements.*)*
At surface NENW / 455 FNL / 1405 FWL / LAT 32.049055 / LONG -103.64961
At proposed prod. zone SWSW / 180 FSL / 740 FWL / LAT 32.021391 / LONG -103.651804

11. Sec., T. R. M. or Blk. and Survey or Area
SEC 14 / T26S / R32E / NMP

14. Distance in miles and direction from nearest town or post office*	12. County or Parish	13. State
33 miles	LEA	NM

15. Distance from proposed* location to nearest property or lease line, ft. (Also to nearest drig. unit line, if any)	16. No of acres in lease	17. Spacing Unit dedicated to this well
455 feet	3080	320
18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft.	**19. Proposed Depth**	**20. BLM/BIA Bond No. in file**
4035 feet	12480 feet / 22668 feet	FED: CA0329
21. Elevations (Show whether DF, KDB, RT, GL, etc.)	**22. Approximate date work will start***	**23. Estimated duration**
3197 feet	07/05/2019	146 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	Name *(Printed/Typed)*	Date
(Electronic Submission)	Laura Becerra / Ph: (432)687-7665	05/22/2018
Title: Permitting Specialist		
Approved by *(Signature)*	Name *(Printed/Typed)*	Date
(Electronic Submission)	Cody Layton / Ph: (575)234-5959	03/22/2019
Title: Assistant Field Manager Lands & Minerals	Office: CARLSBAD	

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

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

GCP Rec 04/16/19

APPROVED WITH CONDITIONS

KZ 04/18/19

(Continued on page 2)

*(Instructions on page 2)

Approval Date: 03/22/2019

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.

(Continued on page 3)

Approval Date: 03/22/2019

Additional Operator Remarks

Location of Well

1. SHL: NENW / 455 FNL / 1405 FWL / TWSP: 26S / RANGE: 32E / SECTION: 14 / LAT: 32.049055 / LONG: -103.64961 (TVD: 0 feet, MD: 0 feet)
   PPP: NWNW / 330 FNL / 840 FWL / TWSP: 26S / RANGE: 32E / SECTION: 14 / LAT: 32.049399 / LONG: -103.651432 (TVD: 12480 feet, MD: 12480 feet)
   BHL: SWSW / 180 FSL / 740 FWL / TWSP: 26S / RANGE: 32E / SECTION: 23 / LAT: 32.021391 / LONG: -103.651804 (TVD: 12480 feet, MD: 22668 feet)

BLM Point of Contact

Name: Katrina Ponder
Title: Geologist
Phone: 5752345969
Email: kponder@blm.gov

Approval Date: 03/22/2019

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:	**Chevron USA Incorporated**
LEASE NO.:	**NMNM118722**
WELL NAME & NO.:	**SD 14 23 Fed P18 10H**
SURFACE HOLE FOOTAGE:	**455'/N & 1405'/W**
BOTTOM HOLE FOOTAGE	**180'/S & 740'/W**
LOCATION:	**Section 14, T.26 S., R.32 E., NMPM**
COUNTY:	**Lea County, New Mexico**

COA

H2S	○ Yes	◉ No	
Potash	◉ None	○ Secretary	○ R-111-P
Cave/Karst Potential	○ Low	◉ Medium	○ High
Variance	○ None	◉ Flex Hose	○ Other
Wellhead	○ Conventional	◉ Multibowl	○ Both
Other	☐ 4 String Area	☐ Capitan Reef	☐ WIPP

A. Hydrogen Sulfide

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

B. CASING

1. The **13-3/8** inch surface casing shall be set at approximately **800** feet (a minimum of 25 feet into the Rustler Anhydrite and above the salt) and cemented to the surface.

    a. If cement does not circulate to the surface, the appropriate BLM office shall be notified and a temperature survey utilizing an electronic type temperature survey with surface log readout will be used or a cement bond log shall be run to verify the top of the cement. Temperature survey will be run a minimum of six hours after pumping cement and ideally between 8-10 hours after completing the cement job.
    b. Wait on cement (WOC) time for a primary cement job will be a minimum of **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.

Operator shall filled 50% of casing with fluid while running intermediate casing to maintain collapse safety factor.

2. The minimum required fill of cement behind the **9-5/8** inch intermediate casing is: Operator has proposed a DV tool, the depth may be adjusted as long as the cement is changed proportionally. The DV tool may be cancelled if cement circulates to surface on the first stage.

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

   b. Second stage above DV tool: Cement to surface. If cement does not circulate, contact the appropriate BLM office.

   ❖ In Medium Cave/Karst Areas if cement does not circulate to surface on the first two casing strings , the cement on the 3rd casing string must come to surface.

Operator shall filled 1/3rd of casing with fluid while running intermediate casing to maintain collapse safety factor.

3. The minimum required fill of cement behind the **7-5/8** inch intermediate liner is:
   a. Cement should tie-back at least 100 feet into previous casing string. Operator shall provide method of verification.

Variance for an annular spacing between 7 5/8" and 5 ½" casing is approved. The 5 ½" casing shall be set at 11480 ft.

4. The minimum required fill of cement behind the **5-1/2 x 5** inch production casing is:
   a. 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. 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.

3. Minimum working pressure of the blowout preventer (BOP) and related equipment (BOPE) required for drilling below the **9-5/8** intermediate casing shoe shall be **10,000 (10M)** psi.

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)

☒ 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. 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

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. 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.

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

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. 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.

f. 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. This test shall be performed prior to the test at full stack pressure.

g. 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.

Waste Minimization Plan (WMP)

In the interest of resource development, submission of additional well gas capture development plan information is deferred but may be required by the BLM Authorized Officer at a later date.

ZS 032019

PECOS DISTRICT
SURFACE USE
CONDITIONS OF APPROVAL

OPERATOR'S NAME: Chevron USA Incorporated
LEASE NO: NMNM118722
LOCATION: Section 14, T.26 S., R.32 E., NMPM

SD 14 23 FED P18 9H

Surface Hole Location: Sec. 14, NENW, T. 26 S., R. 32 E., 455' FNL & 1380' FWL

Bottom Hole Location: Sec. 14, SWSW, T. 26 S., R. 32 E., 180' FSL & 330' FWL

SD 14 23 FED P18 10H

Surface Hole Location: Sec. 14, NENW, T. 26 S., R. 32 E., 455' FNL & 1405' FWL

Bottom Hole Location: Sec. 14, SWSW, T. 26 S., R. 32 E., 180' FSL & 740' FWL

SD 14 23 FED P18 11H

Surface Hole Location: Sec. 14, NENW, T. 26 S., R. 32 E., 455' FNL & 1430' FWL

Bottom Hole Location: Sec. 14, SWSW, T. 26 S., R. 32 E., 180' FSL & 11500' FWL

SD 14 23 FED P18 12H

Surface Hole Location: Sec. 14, NENW, T. 26 S., R. 32 E., 455' FNL & 1455' FWL

Bottom Hole Location: Sec. 14, SESW, T. 26 S., R. 32 E., 180' FSL & 1560' FWL

SD 14 23 FED P18 13H

Surface Hole Location: Sec. 14, NENW, T. 26 S., R. 32 E., 455' FNL & 1480' FWL

Bottom Hole Location: Sec. 14, SESW, T. 26 S., R. 32 E., 180' FSL & 1970' FWL

SD 14 23 FED P18 14H

Surface Hole Location: Sec. 14, NENW, T. 26 S., R. 32 E., 455' FNL & 1505' FWL

Bottom Hole Location: Sec. 14, SESW, T. 26 S., R. 32 E., 180' FSL & 2380' FWL

SD 14 23 FED P19 15H

Surface Hole Location: Sec. 14, NWNE, T. 26 S., R. 32 E., 455' FNL & 1505' FEL

Bottom Hole Location: Sec. 14, SWSE, T. 26 S., R. 32 E., 180' FSL & 2440' FEL

SD 14 23 FED P19 16H

Surface Hole Location: Sec. 14, NWNE, T. 26 S., R. 32 E., 455' FNL & 1480' FEL

Bottom Hole Location: Sec. 14, SWSE, T. 26 S., R. 32 E., 180' FSL & 2040' FEL

Approval Date: 03/22/2019

SD 14 23 FED P19 17H

Surface Hole Location: Sec. 14, NWNE, T. 26 S., R. 32 E., 455' FNL & 1455' FEL

Bottom Hole Location: Sec. 14, SWSE, T. 26 S., R. 32 E., 180' FSL & 1640' FEL

SD 14 23 FED P19 18H

Surface Hole Location: Sec. 14, NWNE, T. 26 S., R. 32 E., 455' FNL & 1430' FEL

Bottom Hole Location: Sec. 14, SESE, T. 26 S., R. 32 E., 180' FSL & 1240' FEL

SD 14 23 FED P19 19H

Surface Hole Location: Sec. 14, NWNE, T. 26 S., R. 32 E., 455' FNL & 1405' FEL

Bottom Hole Location: Sec. 14, SESE, T. 26 S., R. 32 E., 180' FSL & 840' FEL

SD 14 23 FED P19 20H

Surface Hole Location: Sec. 14, NWNE, T. 26 S., R. 32 E., 455' FNL & 1380' FEL

Bottom Hole Location: Sec. 14, SESE, T. 26 S., R. 32 E., 180' FSL & 440' FEL

TABLE OF CONTENTS

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

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)

Hydrology:

The entire well pad will be bermed to prevent oil, salt, and other chemical contaminants from leaving the well pad. The compacted berm shall be constructed at a minimum of 12 inches with impermeable mineral material (e.g. caliche). Topsoil shall not be used to construct the berm. No water flow from the uphill side(s) of the pad shall be allowed to enter the well pad. The integrity of the berm shall be maintained around the surfaced pad throughout the life of the well and around the downsized pad after interim reclamation has been completed. Any water erosion that may occur due to the construction of the well pad during the life of the well will be quickly corrected and proper measures will be taken to prevent future erosion. Stockpiling of topsoil is required. The top soil shall be stockpiled in an appropriate location to prevent loss of soil due to water or wind erosion and not used for berming or erosion control. If fluid collects within the bermed area, the fluid must be vacuumed into a safe container and disposed of properly at a state approved facility.

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

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

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

Cave/Karst Surface Mitigation
The following stipulations will be applied to minimize impacts during construction, drilling and production:
Construction:

In the advent that any underground voids are opened up during construction activities, construction activities will be halted and the BLM will be notified immediately.

No Blasting:
No blasting will be utilized for pad construction. The pad will be constructed and leveled by adding the necessary fill and caliche.

Pad Berming:

- The entire perimeter of the well pad will be bermed to prevent oil, salt, and other chemical contaminants from leaving the well pad.
- The compacted berm shall be constructed at a minimum of 12 inches high with impermeable mineral material (e.g., caliche).
- No water flow from the uphill side(s) of the pad shall be allowed to enter the well pad.
- The topsoil stockpile shall be located outside the bermed well pad.
- Topsoil, either from the well pad or surrounding area, shall not be used to construct the berm.
- No storm drains, tubing or openings shall be placed in the berm.
- If fluid collects within the bermed area, the fluid must be vacuumed into a safe container and disposed of properly at a state approved facility.
- The integrity of the berm shall be maintained around the surfaced pad throughout the life of the well and around the downsized pad after interim reclamation has been completed.
- Any access road entering the well pad shall be constructed so that the integrity of the berm height surrounding the well pad is not compromised. (Any access road crossing the berm cannot be lower than the berm height.)
- Following a rain event, all fluids will vacuumed off of the pad and hauled off-site and disposed at a proper disposal facility.

Tank Battery Liners and Berms:
Tank battery locations and all facilities will be lined and bermed. A 20 mil permanent liner will be installed with a 4 oz. felt backing, or equivalent, to prevent tears or punctures. Tank battery berms must be large enough to contain 1 ½ times the content of the largest tank.

Leak Detection System:
A method of detecting leaks is required. The method could incorporate gauges to measure loss, situating values and lines so they can be visually inspected, or installing electronic sensors to alarm when a leak is present. Leak detection plan will be submitted to BLM for approval.

Automatic Shut-off Systems:

Automatic shut off, check values, or similar systems will be installed for pipelines and tanks to minimize the effects of catastrophic line failures used in production or drilling.

Cave/Karst Subsurface Mitigation

The following stipulations will be applied to protect cave/karst and ground water concerns:

Rotary Drilling with Fresh Water:
Fresh water will be used as a circulating medium in zones where caves or karst features are expected. SEE ALSO: Drilling COAs for this well.

Directional Drilling:
Kick off for directional drilling will occur at least 100 feet below the bottom of the cave occurrence zone. SEE ALSO: Drilling COAs for this well.

Lost Circulation:
ALL lost circulation zones from the surface to the base of the cave occurrence zone will be logged and reported in the drilling report.

Regardless of the type of drilling machinery used, if a void of four feet or more and circulation losses greater than 70 percent occur simultaneously while drilling in any cave-bearing zone, the BLM will be notified immediately by the operator. The BLM will assess the situation and work with the operator on corrective actions to resolve the problem.

Abandonment Cementing:
Upon well abandonment in high cave karst areas additional plugging conditions of approval may be required. The BLM will assess the situation and work with the operator to ensure proper plugging of the wellbore.

Pressure Testing:
Annual pressure monitoring will be performed by the operator on all casing annuli and reported in a sundry notice. If the test results indicated a casing failure has occurred, remedial action will be undertaken to correct the problem to the BLM's approval.

FLOWLINES (SURFACE):

- Flowlines will be routed around sinkholes and other karst features to avoid or lessen the possibility of encountering near surface voids and to minimize the possibility of leaks and spills from entering karst systems.
- If a void is encountered alignments may be rerouted to avoid the karst feature and lessen; the potential of subsidence or collapse of karst features, buildup of toxic or combustible gas, or other possible impacts to cave and karst resources from the buried pipeline.

- Regular monitoring is required to quickly identify leaks for their immediate and proper treatment.
- All spills or leaks will be reported to the BLM immediately for their immediate and proper treatment.

VI. CONSTRUCTION

A. NOTIFICATION

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

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

B. TOPSOIL

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

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

C. CLOSED LOOP SYSTEM

Tanks are required for drilling operations: No Pits.

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

D. FEDERAL MINERAL MATERIALS PIT

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

E. WELL PAD SURFACING

Surfacing of the well pad is not required.

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

F. EXCLOSURE FENCING (CELLARS & PITS)

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

G. ON LEASE ACCESS ROADS

Road Width
The access road shall have a driving surface that creates the smallest possible surface disturbance and does not exceed fourteen (14) feet in width. The maximum width of surface disturbance, when constructing the access road, shall not exceed twenty-five (25) feet.

Surfacing
Surfacing material is not required on the new access road driving surface. If the operator elects to surface the new access road or pad, the surfacing material may be required to be removed at the time of reclamation.

Where possible, no improvements should be made on the unsurfaced access road other than to remove vegetation as necessary, road irregularities, safety issues, or to fill low areas that may sustain standing water.

The Authorized Officer reserves the right to require surfacing of any portion of the access road at any time deemed necessary. Surfacing may be required in the event the road deteriorates, erodes, road traffic increases, or it is determined to be beneficial for future field development. The surfacing depth and type of material will be determined at the time of notification.

Crowning
Crowning shall be done on the access road driving surface. The road crown shall have a grade of approximately 2% (i.e., a 1" crown on a 14' wide road). The road shall conform to Figure 1; cross section and plans for typical road construction.

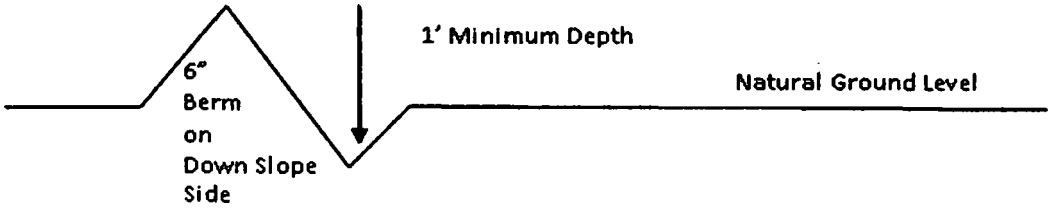
Ditching
Ditching shall be required on both sides of the road.

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

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

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

Cross Section of a Typical Lead-off Ditch



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

Formula for Spacing Interval of Lead-off Ditches

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

400 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.

Livestock Watering Requirement
During the operations throughout the life of the well, any damage to structures that provide water to livestock, such as windmills, pipelines, drinking troughs, and earthen reservoirs, must be immediately corrected by the operator. The operator must notify the BLM office (575-234-5972) and the private surface landowner or the grazing allotment holder if any damage occurs to structures that provide water to livestock.

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

Construction Steps

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

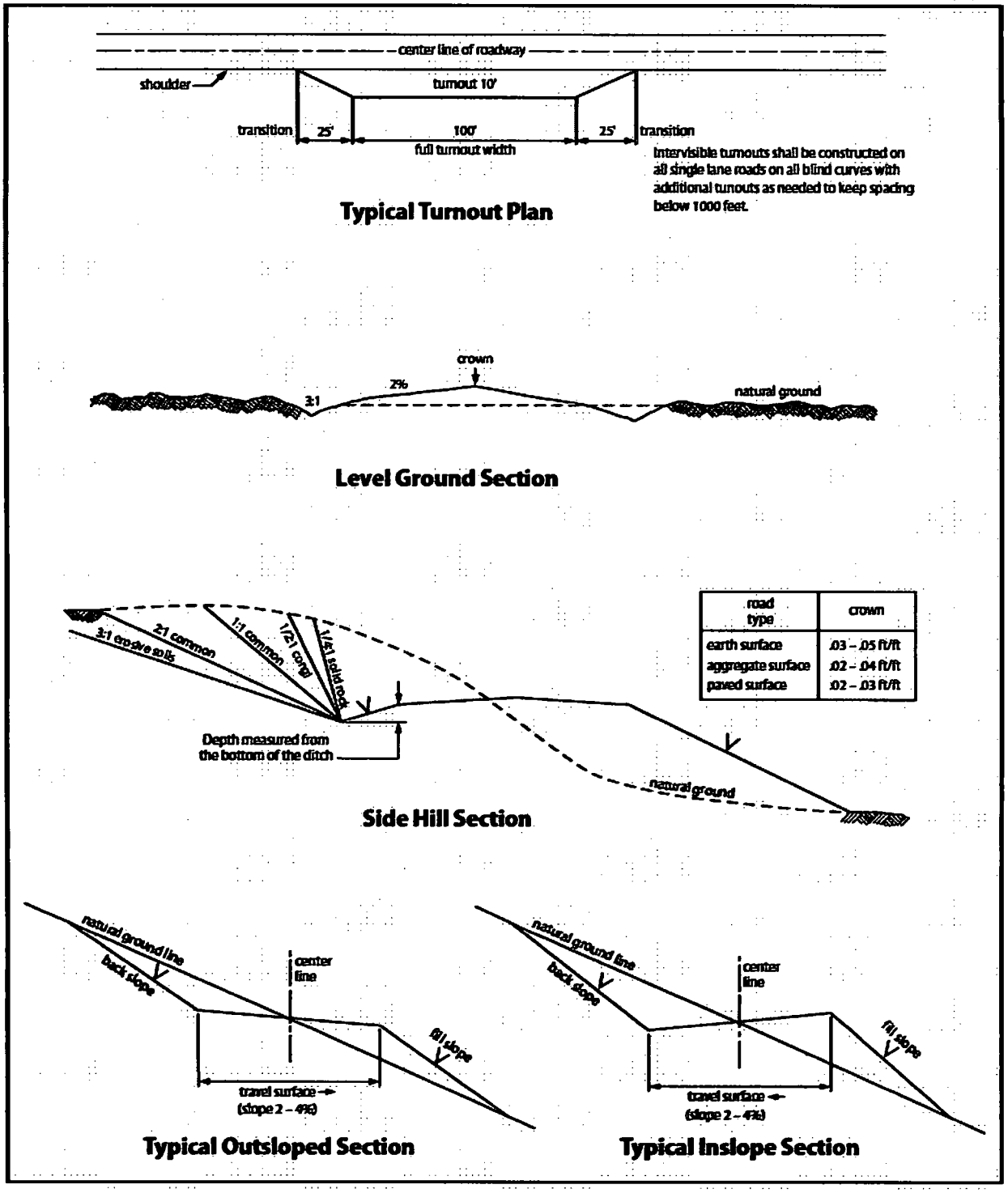


Figure 1. Cross-sections and plans for typical road sections representative of BLM resource or FS local and higher-class roads.

VII. PRODUCTION (POST DRILLING)

A. WELL STRUCTURES & FACILITIES

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

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

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

Open-Vent Exhaust Stack Exclosures
The operator will construct, modify, equip, and maintain all open-vent exhaust stacks on production equipment to prevent birds and bats from entering, and to discourage perching, roosting, and nesting. (*Recommended exclosure structures on open-vent exhaust stacks are in the shape of a cone.*) Production

equipment includes, but may not be limited to, tanks, heater-treaters, separators, dehydrators, flare stacks, in-line units, and compressor mufflers.

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

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

B. PIPELINES

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.

18. Special Stipulations:

- Flowlines will be routed around sinkholes and other karst features to avoid or lessen the possibility of encountering near surface voids and to minimize the possibility of leaks and spills from entering karst systems.
- If a void is encountered alignments may be rerouted to avoid the karst feature and lessen; the potential of subsidence or collapse of karst features, buildup of toxic or combustible gas, or other possible impacts to cave and karst resources from the buried pipeline.
- Regular monitoring is required to quickly identify leaks for their immediate and proper treatment.
- All spills or leaks will be reported to the BLM immediately for their immediate and proper treatment.

BURIED PIPELINE STIPULATIONS

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

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

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

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

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

4. If, during any phase of the construction, operation, maintenance, or termination of the pipeline, any oil or other pollutant should be discharged from the pipeline system, impacting Federal lands, the control and total removal, disposal, and cleaning up of such oil or other pollutant, wherever found, shall be the responsibility of holder, regardless of fault. Upon failure of holder to control, dispose of, or clean up such discharge on or affecting Federal lands, or to repair all damages resulting therefrom, on the Federal lands, the Authorized Officer may take such measures as he deems necessary to control and clean up the discharge and restore the area, including where appropriate, the aquatic environment and fish and wildlife habitats, at the full expense of the holder. Such

action by the Authorized Officer shall not relieve holder of any responsibility as provided herein.

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

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

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

- Blading of vegetation within the right-of-way will be allowed: maximum width of blading operations will not exceed **20** feet. The trench is included in this area. (*Blading is defined as the complete removal of brush and ground vegetation.*)

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

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

8. The holder shall stockpile an adequate amount of topsoil where blading is allowed. The topsoil to be stripped is approximately 6 inches in depth. The topsoil will be segregated from other spoil piles from trench construction. The topsoil will be evenly distributed over the bladed area for the preparation of seeding.

9. The holder shall minimize disturbance to existing fences and other improvements on public lands. The holder is required to promptly repair improvements to at least their former state. Functional use of these improvements will be maintained at all times. The holder will contact the owner of any improvements prior to disturbing them. When necessary to pass through a fence line, the fence shall be braced on both sides of the passageway prior to

cutting of the fence. No permanent gates will be allowed unless approved by the Authorized Officer.

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

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

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

(X) seed mixture 1	( ) seed mixture 3
( ) 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.

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

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

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

19. Special Stipulations:

- The BLM, Carlsbad Field Office, will be informed immediately if any subsurface drainage channels, passages, or voids are intersected by trenching, and no pipe will be laid in the trench at that point until clearance has been issued by the Authorized Officer.
- If a void is encountered alignments may be rerouted to avoid the karst feature and lessen; the potential of subsidence or collapse of karst features, buildup of toxic or combustible gas, or other possible impacts to cave and karst resources from the buried pipeline.
- Special restoration stipulations or realignment may be required at such intersections, if any.
- A leak detection plan **will be submitted to the BLM Carlsbad Field Office for approval** prior to pipeline installation. The method could

incorporate gauges to detect pressure drops, situating values 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.

- Regular monitoring is required to quickly identify leaks for their immediate and proper treatment.
- All spills or leaks will be reported to the BLM immediately for their immediate and proper treatment.

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.
- Smaller powerlines will be routed around sinkholes and other karst features to avoid or lessen the possibility of encountering near surface voids and to minimize changes to runoff or possible leaks and spills from entering karst systems. Larger powerlines will adjust their pole spacing to avoid cave and karst features.
- The BLM, Carlsbad Field Office, will be informed immediately if any subsurface drainage channels, cave passages, or voids are penetrated during construction.
- No further construction will be done until clearance has been issued by the Authorized Officer.
- Special restoration stipulations or realignment may be required.

VIII. INTERIM RECLAMATION

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

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

During reclamation, the removal of caliche is important to increasing the success of revegetating the site. Removed caliche that is free of contaminants may be used for road repairs, fire walls or for building other roads and locations. In order to operate the well or complete workover operations, it may be necessary to

drive, park and operate on restored interim vegetation within the previously disturbed area. Disturbing revegetated areas for production or workover operations will be allowed. If there is significant disturbance and loss of vegetation, the area will need to be revegetated. Communicate with the appropriate BLM office for any exceptions/exemptions if needed.

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

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

IX. FINAL ABANDONMENT & RECLAMATION

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

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

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

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

Ground-level Abandoned Well Marker to avoid raptor perching: Upon the plugging and subsequent abandonment of the well, the well marker will be installed at ground level on a plate containing the pertinent information for the plugged well.

Seed Mixture 1 for Loamy Sites

Holder shall seed all disturbed areas with the seed mixture listed below. The seed mixture shall be planted in the amounts specified in pounds of pure live seed (PLS)* per acre. There shall be no primary or secondary noxious weeds in the seed mixture. Seed shall 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 shall be either certified or registered seed. The seed container shall be tagged in accordance with State law(s) and available for inspection by the Authorized Officer.

Seed shall be planted using a drill equipped with a depth regulator to ensure proper depth regulator to ensure proper depth of planting where drilling is possible. The seed mixture shall be evenly and uniformly planted over the disturbed area (small/heavier seeds have a tendency to drop the bottom of the drill and are planted first). Holder shall take appropriate measures to ensure this does not occur. Where drilling is not possible, seed shall be broadcast and the area shall be raked or chained to cover the seed. When broadcasting the seed, the pounds per acre shall be doubled. The seeding shall be repeated until a satisfactory stand is established as determined by the Authorized Officer. Evaluation of growth may not be made before completion of at least one full growing season after seeding.

Species to be planted in pounds of pure live seed* per acre:

Species	lb/acre
Plains lovegrass (Eragrostis intermedia)	0.5
Sand dropseed (Sporobolus cryptandrus)	1.0
Sideoats grama (Bouteloua curtipendula)	5.0
Plains bristlegrass (Setaria macrostachya)	2.0

*Pounds of pure live seed:

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

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

1. **FORMATION TOPS**

The estimated tops of important geologic markers are as follows:

FORMATION	SUB-SEA TVD	KBTVD	MD
Rustler		669	
Castile		2755	
Lamar		4576	
Bell Canyon		4630	
Cherry Canyon		5585	
Brushy Canyon		7179	
Bone Spring Limestone		8785	
Upr. Avalon		8837	
Top Bone Spring 1		9667	
Top Bone Spring 2		10287	
SBSG 3rd Carb		10732	
Top Bone Spring 3		11432	
Wolfcamp		11874	
Wolfcamp A2		12,480	
Lateral TD (Wolfcamp A2)		12,480	22,668

2. **ESTIMATED DEPTH OF WATER, OIL, GAS & OTHER MINERAL BEARING FORMATIONS**

The estimated depths at which the top and bottom of the anticipated water, oil, gas, or other mineral bearing formations are expected to be encountered are as follows:

Substance	Formation	Depth
Deepest Expected Base of Fresh Water		750
Water	Rustler	669
Water	Bell Canyon	4630
Water	Cherry Canyon	5585
Oil/Gas	Brushy Canyon	7179
Oil/Gas	Bone Spring Limestone	8785
Oil/Gas	Upr. Avalon	8837
Oil/Gas	Top Bone Spring 1	9667
Oil/Gas	Top Bone Spring 2	10287
Oil/Gas	Top Bone Spring 3	11432
Oil/Gas	Wolfcamp	11874
Oil/Gas	Wolfcamp A2	12,480

All shows of fresh water and minerals will be reported and protected.

3. **BOP EQUIPMENT**

Will have a minimum of a 10000 psi rig stack (see proposed schematic) for drill out below intermediate casing (Wolfcamp is not exposed until drillout of the intermediate casing). Stack will be tested as specified in the attached testing requirements. Batch drilling of the surface, intermediate, and production will take place. A full BOP test will be performed unless approval from BLM is received otherwise.

Chevron requests a variance to use a FMC UH2 Multibowl wellhead, which will be run through the rig foor on surface casing. BOPE will be nippled up and tested after cementing surface casing. Subsequent tests will be performed as needed, not to exceed 30 days. The field report from FMC and BOP test information will be provided in a subsequent report at the end of the well. Please see the attached wellhead schematic. An installation manual has been placed on file with the BLM office and remains unchanged from previous submittal. CoFlex choke hose will be used for all wells on the pad (see attached variance request and specs)

4. **CASING PROGRAM**

a. The proposed casing program will be as follows:

Purpose	From	To	Hole Size	Csg Size	Weight	Grade	Thread	Condition
Surface	0'	800'	17-1/2"	13-3/8"	54.5 #	J55	STC	New
Intermediate	0'	10,805'	12-1/4"	9-5/8"	43.5#	L80	LTC	New
Liner	10,505'	11,980'	8-1/2"	7-5/8"	29.7#	P110	W513	New
Production	0'	22,668'	6-3/4"	5.5 x 5	20 x 18#	P-110-ICY / P110IC	TXP BTC / W521	New

b. Casing design subject to revision based on geologic conditions encountered.

c. *****A "Worst Case" casing design for wells in a particular area is used below to calculate the Casing Safety Factors. If for any reason the casing design for a particular well requires setting casing deeper than the following "worst case" design, then the Casing Safety Factors will be recalcuated & sent to the BLM prior to drilling.**

d. **Chevron will fill casing at a minimum of every 20 jts (840') while running for intermediate and production casing in order to maintain collapse SF.**

SF Calculations based on the following "Worst Case" casing design:

Surface Casing: 800'
Intermediate Casing: 10,745' TVD
Intermediate Liner Casing: 11,920' TVD
Production Casing: 22,668' MD/12,480' TVD (10,069' VS @ 90 deg inc)

Casing String	Min SF Burst	Min SF Collapse	Min SF Tension	Min SF Tri-Axial
Surface	1.35	3.12	3.35	1.70
Intermediate	1.20	1.44	1.62	1.45
Liner	1.83	5.36	2.30	2.29
Production	1.11	1.22	1.74	1.35

Min SF is the smallest of a group of safety factors that include the following considerations:

	Surf	Int	Liner	Prod
Burst Design				
Pressure Test- Surface, Int, Prod Csg P external: Water P internal: Test psi + next section heaviest mud in csg	X	X	X	X
Displace to Gas- Surf Csg P external: Water P internal: Dry Gas from Next Csg Point	X			
Frac at Shoe, Gas to Surf- Int Csg P external: Water P internal: Dry Gas, 16 ppg Frac Gradient		X	X	
Stimulation (Frac) Pressures- Prod Csg P external: Water P internal: Max inj pressure w/ heaviest injected fluid				X
Tubing leak- Prod Csg (packer at KOP) P external: Water P internal: Leak just below surf, 8.7 ppg packer fluid				X
Collapse Design				
Full Evacuation P external: Water gradient in cement, mud above TOC P internal: none	X	X	X	X
Cementing- Surf, Int, Prod Csg P external: Wet cement P internal: water	X	X	X	X
Tension Design				
100k lb overpull	X	X	X	X

5. **CEMENTING PROGRAM**

Slurry	Type	Top	Bottom	Weight	Yield	%Excess	Sacks	Water	Additives
Surface				(ppg)	(sx/cu ft)	Open Hole		gal/sk	
Tail	Class C	0'	800'	14.8	1.33	100	872	6.38	Extender Antifoam Retarder
Intermediate									
Stage 2 Lead	50:50 Poz Class C	0'	4,355'	11.9	2.43	200	1494	13.75	Antifoam Extender Salt Retarder Viscosifier
Stage 2 Tail	Class C	4355	4,655'	14.8	1.33	50	106	6.36	Antifoam Retarder Viscosifier
Stage 1 Lead	50:50 Poz Class C	4,655'	10,305'	11.9	2.43	50	1092	13.75	Antifoam Retarder Viscosifier
Stage 1 Tail	Class C	10,305'	10,805'	14.8	1.33	50	205	6.36	Antifoam Retarder Dispersent
Liner									
Tail	Class C	10,505'	11,980'	14.8	1.38	35	128	6.65	
Production									
Tail	Class H	10,205'	22,668'	15.6	1.2	35	1535	5.05	Antifoam Dispersent Fluid Loss Retarder Viscosifier

1. Final cement volumes will be determined by caliper.
2. Surface casing shall have at least one centralizer installed on each of the bottom three joints starting with the shoe joint.

3. Production casing will have one horizontal type centralizer on every joint for the first 1000' from TD, then every other joint to EOB, and then every third joint to KOP. Bowspring type centralizers will be run from KOP to intermediate casing.

Chevron requests a variance to qualify the additional 300' of cement above the liner top as the required cement tieback interval with > 0.422 in clearance for the production casing cement job.

6. **MUD PROGRAM**

From	To	Type	Weight	F. Vis	Filtrate
0'	800'	Spud Mud	8.3 - 8.7	32 - 34	NC - NC
800'	10,805'	Oil Based Mud	8.7 - 9.2	28 - 30	25 - 30
10,805'	11,980'	Oil Based Mud	9.5-11.5	70 - 75	25 - 30
11,980'	22,668'	Oil Based Mud	11 - 13.8	70 - 75	25 - 30

A closed system will by utilized consisting of above ground steel tanks. All wastes accumulated during drilling operations will be contained in a portable trash cage and removed from location and deposited in an approved sanitary landfill. Sanitary wastes will be contained in a chemical porta-toilet and then hauled to an approved sanitary landfill.

All fluids and cuttings will be disposed of in accordance with New Mexico Oil Conservation Division rules and regulations.

A mud test shall be performed every 24 hours after mudding up to determine, as applicable: density, viscosity, gel strength, filtration, and pH.

Visual mud monitoring equipment shall be in place to detect volume changes indicating loss or gain of circulating fluid volume. When abnormal pressures are anticipated -- a pit volume totalizer (PVT), stroke counter, and flow sensor will be used to detect volume changes indicating loss or gain of circulating fluid volume.

A weighting agent and lost circulating material (LCM) will be onsite to mitigate pressure or lost circulation as hole conditions dictate.

7. **TESTING, LOGGING, AND CORING**

The anticipated type and amount of testing, logging, and coring are as follows:

a. Drill stem tests are not planned.
b. The logging program will be as follows:

TYPE	Logs	Interval	Timing	Vendor
Mudlogs	2 Man mudlog	Int Csg to TD	Drillout of Csg	TBD
LWD	MWD Gamma	Int and Prod Hole	While Drilling	TBD

c. Conventional whole core samples are not planned.
d. A Directional Survey will be run.

8. **ABNORMAL PRESSURES AND HYDROGEN SULFIDE**

a. No abnormal pressures or temperatures are expected. Estimated BHP is: **8956** psi
b. Hydrogen sulfide gas is not anticipated. An H2S Contingency plan is attached with this APD in the event that H2S is encountered

PLANNED WELLPATH REPORT (CSV version)
Prepared by Baker Hughes
Software System: WellArchitect® 5.0

REFERENCE WELLPATH IDENTIFICATION

Operator	Chevron U.S.A. Inc.
Area	Lea County, NM
Field	Bone Spring (Lea County, NM) NAD 27
Facility	Salado Draw Pad 18
Slot	SD 14 23 FED P18 10H
Well	SD 14 23 FED P18 10H
Wellbore	SD 14 23 FED P18 10H
Wellpath	SD 14 23 FED P18 10H Prelim 1
Sidetrack	(none)

REPORT SETUP INFORMATION

Projection System	NAD27 / TM New Mexico SP, Eastern Zone (3001), US feet
North Reference	Grid
Scale	0.999961
Convergence at slot	0.37° East
Software System	WellArchitect® 5.0
User	Tranlam
Report Generated	4/13/2018 at 2:49:37 PM
DataBase/Source file	WA_Midland/ev20.xml

WELLPATH LOCATION	Local North [ft]	Local East [ft]	Easting [US ft]	Northing [US ft]	Latitude	Longitude
Slot Location	0	25	711986	382198	32°02'56.151"N	103°38'56.902"W
Facility Reference Pt			711961	382198	32°02'56.153"N	103°38'57.192"W
Field Reference Pt			152400.3	0	30°59'42.846"N	105°26'33.659"W

WELLPATH DATUM

Calculation method	Minimum curvature
Horizontal Reference Point	Slot
Vertical Reference Point	Unknown Rig (KB)
MD Reference Point	Unknown Rig (KB)
Field Vertical Reference	Mean Sea Level
Unknown Rig (KB) to Facility Vertical Datum	0.00ft
Unknown Rig (KB) to Mean Sea Level	0.00ft
Unknown Rig (KB) to Ground Level at Slot (SD 14 23 FED P18 10H)	0.00ft
Section Origin	N 0.00, E 0.00 ft
Section Azimuth	180.03°

WELLPATH DATA † = interpolated/extrapolated station

	MD	Inclination	Azimuth	TVD	Vert Sect	North	East	Grid East	Grid North	Latitude	Longitude	DLS	Build Rate	Turn Rate	Comments
	[ft]	[°]	[°]	[ft]	[ft]	[ft]	[ft]	[US ft]	[US ft]			[°/100ft]	[°/100ft]	[°/100ft]	

	0	0	296.471	0	0	0	0	711986	382198	32°02'56.1	103°38'56.	0	0	0	Tie On
†	100	0	296.471	100	0	0	0	711986	382198	32°02'56.1	103°38'56.	0	0	0	
†	200	0	296.471	200	0	0	0	711986	382198	32°02'56.1	103°38'56.	0	0	0	
†	300	0	296.471	300	0	0	0	711986	382198	32°02'56.1	103°38'56.	0	0	0	
†	400	0	296.471	400	0	0	0	711986	382198	32°02'56.1	103°38'56.	0	0	0	
†	500	0	296.471	500	0	0	0	711986	382198	32°02'56.1	103°38'56.	0	0	0	
†	600	0	296.471	600	0	0	0	711986	382198	32°02'56.1	103°38'56.	0	0	0	
†	700	0	296.471	700	0	0	0	711986	382198	32°02'56.1	103°38'56.	0	0	0	
†	800	0	296.471	800	0	0	0	711986	382198	32°02'56.1	103°38'56.	0	0	0	
	900	0	296.471	900	0	0	0	711986	382198	32°02'56.1	103°38'56.	0	0	0	End of Tangent
†	1000	1.5	296.471	999.99	-0.58	0.58	-1.17	711984.8	382198.6	32°02'56.1	103°38'56.	1.5	1.5	-63.53	
†	1100	3	296.471	1099.91	-2.33	2.33	-4.69	711981.3	382200.3	32°02'56.1	103°38'56.	1.5	1.5	0	
†	1200	4.5	296.471	1199.69	-5.24	5.25	-10.54	711975.5	382203.3	32°02'56.2	103°38'57.	1.5	1.5	0	
†	1300	6	296.471	1299.27	-9.32	9.33	-18.73	711967.3	382207.3	32°02'56.2	103°38'57.	1.5	1.5	0	
†	1400	7.5	296.471	1398.57	-14.55	14.57	-29.25	711956.8	382212.6	32°02'56.2	103°38'57.	1.5	1.5	0	
†	1500	9	296.471	1497.54	-20.94	20.96	-42.1	711943.9	382219	32°02'56.3	103°38'57.	1.5	1.5	0	
†	1600	10.5	296.471	1596.09	-28.48	28.51	-57.26	711928.8	382226.5	32°02'56.4	103°38'57.	1.5	1.5	0	
	1633.33	11	296.471	1628.84	-31.25	31.28	-62.82	711923.2	382229.3	32°02'56.4	103°38'57.	1.5	1.5	0	End of Build
†	1700	11	296.471	1694.28	-36.91	36.95	-74.21	711911.8	382235	32°02'56.5	103°38'57.	0	0	0	
†	1800	11	296.471	1792.44	-45.41	45.46	-91.29	711894.7	382243.5	32°02'56.6	103°38'57.	0	0	0	
†	1900	11	296.471	1890.6	-53.91	53.96	-108.37	711877.6	382252	32°02'56.6	103°38'58.	0	0	0	
†	2000	11	296.471	1988.77	-62.4	62.47	-125.45	711860.6	382260.5	32°02'56.7	103°38'58.	0	0	0	
†	2100	11	296.471	2086.93	-70.9	70.97	-142.53	711843.5	382269	32°02'56.8	103°38'58.	0	0	0	
†	2200	11	296.471	2185.09	-79.39	79.48	-159.61	711826.4	382277.5	32°02'56.9	103°38'58.	0	0	0	
†	2300	11	296.471	2283.25	-87.89	87.98	-176.69	711809.3	382286	32°02'57.0	103°38'58.	0	0	0	
†	2400	11	296.471	2381.42	-96.39	96.49	-193.77	711792.2	382294.5	32°02'57.1	103°38'59.	0	0	0	
†	2500	11	296.471	2479.58	-104.88	104.99	-210.85	711775.2	382303	32°02'57.2	103°38'59.	0	0	0	
†	2600	11	296.471	2577.74	-113.38	113.5	-227.93	711758.1	382311.5	32°02'57.2	103°38'59.	0	0	0	
†	2700	11	296.471	2675.91	-121.87	122	-245.01	711741	382320	32°02'57.3	103°38'59.	0	0	0	
†	2800	11	296.471	2774.07	-130.37	130.51	-262.09	711723.9	382328.5	32°02'57.4	103°38'59.	0	0	0	
†	2900	11	296.471	2872.23	-138.87	139.01	-279.17	711706.8	382337	32°02'57.5	103°39'00.	0	0	0	
†	3000	11	296.471	2970.39	-147.36	147.52	-296.26	711689.8	382345.5	32°02'57.6	103°39'00.	0	0	0	
†	3100	11	296.471	3068.56	-155.86	156.02	-313.34	711672.7	382354	32°02'57.7	103°39'00.	0	0	0	
†	3200	11	296.471	3166.72	-164.36	164.53	-330.42	711655.6	382362.5	32°02'57.8	103°39'00.	0	0	0	
†	3300	11	296.471	3264.88	-172.85	173.03	-347.5	711638.5	382371	32°02'57.8	103°39'00.	0	0	0	
†	3400	11	296.471	3363.04	-181.35	181.54	-364.58	711621.4	382379.5	32°02'57.9	103°39'01.	0	0	0	
†	3500	11	296.471	3461.21	-189.84	190.04	-381.66	711604.4	382388	32°02'58.0	103°39'01.	0	0	0	
†	3600	11	296.471	3559.37	-198.34	198.55	-398.74	711587.3	382396.5	32°02'58.1	103°39'01.	0	0	0	
†	3700	11	296.471	3657.53	-206.84	207.05	-415.82	711570.2	382405.1	32°02'58.2	103°39'01.	0	0	0	
†	3800	11	296.471	3755.7	-215.33	215.56	-432.9	711553.1	382413.6	32°02'58.3	103°39'01.	0	0	0	
†	3900	11	296.471	3853.86	-223.83	224.06	-449.98	711536	382422.1	32°02'58.3	103°39'02.	0	0	0	
†	4000	11	296.471	3952.02	-232.32	232.57	-467.06	711519	382430.6	32°02'58.4	103°39'02.	0	0	0	
†	4100	11	296.471	4050.18	-240.82	241.07	-484.14	711501.9	382439.1	32°02'58.5	103°39'02.	0	0	0	
†	4200	11	296.471	4148.35	-249.32	249.58	-501.22	711484.8	382447.6	32°02'58.6	103°39'02.	0	0	0	
†	4300	11	296.471	4246.51	-257.81	258.08	-518.3	711467.7	382456.1	32°02'58.7	103°39'02.	0	0	0	
†	4400	11	296.471	4344.67	-266.31	266.59	-535.38	711450.6	382464.6	32°02'58.8	103°39'03.	0	0	0	
	4478.4	11	296.471	4421.63	-272.97	273.26	-548.77	711437.3	382471.3	32°02'58.8	103°39'03.	0	0	0	End of Tangent
†	4500	10.676	296.471	4442.85	-274.78	275.07	-552.41	711433.6	382473.1	32°02'58.9	103°39'03.	1.5	-1.5	0	
†	4600	9.176	296.471	4541.35	-282.45	282.75	-567.84	711418.2	382480.7	32°02'58.9	103°39'03.	1.5	-1.5	0	

†	4700	7.676	296.471	4640.26	-288.98	289.28	-580.96	711405.1	382487.3	32°02'59.0	103°39'03.	1.5	-1.5	0	
†	4800	6.176	296.471	4739.53	-294.35	294.66	-591.75	711394.3	382492.7	32°02'59.1	103°39'03.	1.5	-1.5	0	
†	4900	4.676	296.471	4839.08	-298.56	298.87	-600.21	711385.8	382496.9	32°02'59.1	103°39'03.	1.5	-1.5	0	
†	5000	3.176	296.471	4938.84	-301.61	301.92	-606.34	711379.7	382499.9	32°02'59.1	103°39'03.	1.5	-1.5	0	
†	5100	1.676	296.471	5038.75	-303.49	303.81	-610.13	711375.9	382501.8	32°02'59.1	103°39'03.	1.5	-1.5	0	
†	5200	0.176	296.471	5138.73	-304.21	304.53	-611.58	711374.5	382502.5	32°02'59.2	103°39'03.	1.5	-1.5	0	
	5211.73	0	180.03	5150.46	-304.22	304.54	-611.59	711374.4	382502.5	32°02'59.2	103°39'03.	1.5	-1.5	541.61	End of Drop
†	5300	0	180.03	5238.73	-304.22	304.54	-611.59	711374.4	382502.5	32°02'59.2	103°39'03.	0	0	0	
†	5400	0	180.03	5338.73	-304.22	304.54	-611.59	711374.4	382502.5	32°02'59.2	103°39'03.	0	0	0	
†	5500	0	180.03	5438.73	-304.22	304.54	-611.59	711374.4	382502.5	32°02'59.2	103°39'03.	0	0	0	
†	5600	0	180.03	5538.73	-304.22	304.54	-611.59	711374.4	382502.5	32°02'59.2	103°39'03.	0	0	0	
†	5700	0	180.03	5638.73	-304.22	304.54	-611.59	711374.4	382502.5	32°02'59.2	103°39'03.	0	0	0	
†	5800	0	180.03	5738.73	-304.22	304.54	-611.59	711374.4	382502.5	32°02'59.2	103°39'03.	0	0	0	
†	5900	0	180.03	5838.73	-304.22	304.54	-611.59	711374.4	382502.5	32°02'59.2	103°39'03.	0	0	0	
†	6000	0	180.03	5938.73	-304.22	304.54	-611.59	711374.4	382502.5	32°02'59.2	103°39'03.	0	0	0	
†	6100	0	180.03	6038.73	-304.22	304.54	-611.59	711374.4	382502.5	32°02'59.2	103°39'03.	0	0	0	
†	6200	0	180.03	6138.73	-304.22	304.54	-611.59	711374.4	382502.5	32°02'59.2	103°39'03.	0	0	0	
†	6300	0	180.03	6238.73	-304.22	304.54	-611.59	711374.4	382502.5	32°02'59.2	103°39'03.	0	0	0	
†	6400	0	180.03	6338.73	-304.22	304.54	-611.59	711374.4	382502.5	32°02'59.2	103°39'03.	0	0	0	
†	6500	0	180.03	6438.73	-304.22	304.54	-611.59	711374.4	382502.5	32°02'59.2	103°39'03.	0	0	0	
†	6600	0	180.03	6538.73	-304.22	304.54	-611.59	711374.4	382502.5	32°02'59.2	103°39'03.	0	0	0	
†	6700	0	180.03	6638.73	-304.22	304.54	-611.59	711374.4	382502.5	32°02'59.2	103°39'03.	0	0	0	
†	6800	0	180.03	6738.73	-304.22	304.54	-611.59	711374.4	382502.5	32°02'59.2	103°39'03.	0	0	0	
†	6900	0	180.03	6838.73	-304.22	304.54	-611.59	711374.4	382502.5	32°02'59.2	103°39'03.	0	0	0	
†	7000	0	180.03	6938.73	-304.22	304.54	-611.59	711374.4	382502.5	32°02'59.2	103°39'03.	0	0	0	
†	7100	0	180.03	7038.73	-304.22	304.54	-611.59	711374.4	382502.5	32°02'59.2	103°39'03.	0	0	0	
†	7200	0	180.03	7138.73	-304.22	304.54	-611.59	711374.4	382502.5	32°02'59.2	103°39'03.	0	0	0	
†	7300	0	180.03	7238.73	-304.22	304.54	-611.59	711374.4	382502.5	32°02'59.2	103°39'03.	0	0	0	
†	7400	0	180.03	7338.73	-304.22	304.54	-611.59	711374.4	382502.5	32°02'59.2	103°39'03.	0	0	0	
†	7500	0	180.03	7438.73	-304.22	304.54	-611.59	711374.4	382502.5	32°02'59.2	103°39'03.	0	0	0	
†	7600	0	180.03	7538.73	-304.22	304.54	-611.59	711374.4	382502.5	32°02'59.2	103°39'03.	0	0	0	
†	7700	0	180.03	7638.73	-304.22	304.54	-611.59	711374.4	382502.5	32°02'59.2	103°39'03.	0	0	0	
†	7800	0	180.03	7738.73	-304.22	304.54	-611.59	711374.4	382502.5	32°02'59.2	103°39'03.	0	0	0	
†	7900	0	180.03	7838.73	-304.22	304.54	-611.59	711374.4	382502.5	32°02'59.2	103°39'03.	0	0	0	
†	8000	0	180.03	7938.73	-304.22	304.54	-611.59	711374.4	382502.5	32°02'59.2	103°39'03.	0	0	0	
†	8100	0	180.03	8038.73	-304.22	304.54	-611.59	711374.4	382502.5	32°02'59.2	103°39'03.	0	0	0	
†	8200	0	180.03	8138.73	-304.22	304.54	-611.59	711374.4	382502.5	32°02'59.2	103°39'03.	0	0	0	
†	8300	0	180.03	8238.73	-304.22	304.54	-611.59	711374.4	382502.5	32°02'59.2	103°39'03.	0	0	0	
†	8400	0	180.03	8338.73	-304.22	304.54	-611.59	711374.4	382502.5	32°02'59.2	103°39'03.	0	0	0	
†	8500	0	180.03	8438.73	-304.22	304.54	-611.59	711374.4	382502.5	32°02'59.2	103°39'03.	0	0	0	
†	8600	0	180.03	8538.73	-304.22	304.54	-611.59	711374.4	382502.5	32°02'59.2	103°39'03.	0	0	0	
†	8700	0	180.03	8638.73	-304.22	304.54	-611.59	711374.4	382502.5	32°02'59.2	103°39'03.	0	0	0	
†	8800	0	180.03	8738.73	-304.22	304.54	-611.59	711374.4	382502.5	32°02'59.2	103°39'03.	0	0	0	
†	8900	0	180.03	8838.73	-304.22	304.54	-611.59	711374.4	382502.5	32°02'59.2	103°39'03.	0	0	0	
†	9000	0	180.03	8938.73	-304.22	304.54	-611.59	711374.4	382502.5	32°02'59.2	103°39'03.	0	0	0	
†	9100	0	180.03	9038.73	-304.22	304.54	-611.59	711374.4	382502.5	32°02'59.2	103°39'03.	0	0	0	
†	9200	0	180.03	9138.73	-304.22	304.54	-611.59	711374.4	382502.5	32°02'59.2	103°39'03.	0	0	0	
†	9300	0	180.03	9238.73	-304.22	304.54	-611.59	711374.4	382502.5	32°02'59.2	103°39'03.	0	0	0	
†	9400	0	180.03	9338.73	-304.22	304.54	-611.59	711374.4	382502.5	32°02'59.2	103°39'03.	0	0	0	

†	9500	0	180.03	9438.73	-304.22	304.54	-611.59	711374.4	382502.5	32°02'59.2	103°39'03.	0	0	0	
†	9600	0	180.03	9538.73	-304.22	304.54	-611.59	711374.4	382502.5	32°02'59.2	103°39'03.	0	0	0	
†	9700	0	180.03	9638.73	-304.22	304.54	-611.59	711374.4	382502.5	32°02'59.2	103°39'03.	0	0	0	
†	9800	0	180.03	9738.73	-304.22	304.54	-611.59	711374.4	382502.5	32°02'59.2	103°39'03.	0	0	0	
†	9900	0	180.03	9838.73	-304.22	304.54	-611.59	711374.4	382502.5	32°02'59.2	103°39'03.	0	0	0	
†	10000	0	180.03	9938.73	-304.22	304.54	-611.59	711374.4	382502.5	32°02'59.2	103°39'03.	0	0	0	
†	10100	0	180.03	10038.73	-304.22	304.54	-611.59	711374.4	382502.5	32°02'59.2	103°39'03.	0	0	0	
†	10200	0	180.03	10138.73	-304.22	304.54	-611.59	711374.4	382502.5	32°02'59.2	103°39'03.	0	0	0	
†	10300	0	180.03	10238.73	-304.22	304.54	-611.59	711374.4	382502.5	32°02'59.2	103°39'03.	0	0	0	
†	10400	0	180.03	10338.73	-304.22	304.54	-611.59	711374.4	382502.5	32°02'59.2	103°39'03.	0	0	0	
†	10500	0	180.03	10438.73	-304.22	304.54	-611.59	711374.4	382502.5	32°02'59.2	103°39'03.	0	0	0	
†	10600	0	180.03	10538.73	-304.22	304.54	-611.59	711374.4	382502.5	32°02'59.2	103°39'03.	0	0	0	
†	10700	0	180.03	10638.73	-304.22	304.54	-611.59	711374.4	382502.5	32°02'59.2	103°39'03.	0	0	0	
†	10800	0	180.03	10738.73	-304.22	304.54	-611.59	711374.4	382502.5	32°02'59.2	103°39'03.	0	0	0	
†	10900	0	180.03	10838.73	-304.22	304.54	-611.59	711374.4	382502.5	32°02'59.2	103°39'03.	0	0	0	
†	11000	0	180.03	10938.73	-304.22	304.54	-611.59	711374.4	382502.5	32°02'59.2	103°39'03.	0	0	0	
†	11100	0	180.03	11038.73	-304.22	304.54	-611.59	711374.4	382502.5	32°02'59.2	103°39'03.	0	0	0	
†	11200	0	180.03	11138.73	-304.22	304.54	-611.59	711374.4	382502.5	32°02'59.2	103°39'03.	0	0	0	
†	11300	0	180.03	11238.73	-304.22	304.54	-611.59	711374.4	382502.5	32°02'59.2	103°39'03.	0	0	0	
†	11400	0	180.03	11338.73	-304.22	304.54	-611.59	711374.4	382502.5	32°02'59.2	103°39'03.	0	0	0	
†	11500	0	180.03	11438.73	-304.22	304.54	-611.59	711374.4	382502.5	32°02'59.2	103°39'03.	0	0	0	
†	11600	0	180.03	11538.73	-304.22	304.54	-611.59	711374.4	382502.5	32°02'59.2	103°39'03.	0	0	0	
†	11700	0	180.03	11638.73	-304.22	304.54	-611.59	711374.4	382502.5	32°02'59.2	103°39'03.	0	0	0	
†	11800	0	180.03	11738.73	-304.22	304.54	-611.59	711374.4	382502.5	32°02'59.2	103°39'03.	0	0	0	
†	11900	0	180.03	11838.73	-304.22	304.54	-611.59	711374.4	382502.5	32°02'59.2	103°39'03.	0	0	0	
	11968.31	0	180.03	11907.04	-304.22	304.54	-611.59	711374.4	382502.5	32°02'59.2	103°39'03.	0	0	0	End of Tangent
†	12000	3.169	180.03	11938.72	-303.34	303.66	-611.59	711374.4	382501.7	32°02'59.1	103°39'03.	10	10	-567.86	
†	12100	13.169	180.03	12037.58	-289.15	289.47	-611.6	711374.4	382487.5	32°02'59.0	103°39'03.	10	10	0	
†	12200	23.169	180.03	12132.47	-258.01	258.33	-611.62	711374.4	382456.3	32°02'58.7	103°39'03.	10	10	0	
†	12300	33.169	180.03	12220.52	-210.86	211.18	-611.64	711374.4	382409.2	32°02'58.2	103°39'03.	10	10	0	
†	12400	43.169	180.03	12299.03	-149.14	149.46	-611.68	711374.4	382347.5	32°02'57.6	103°39'03.	10	10	0	
†	12500	53.169	180.03	12365.64	-74.72	75.04	-611.71	711374.3	382273	32°02'56.9	103°39'04.	10	10	0	
†	12600	63.169	180.03	12418.32	10.13	-9.81	-611.76	711374.3	382188.2	32°02'56.0	103°39'04.	10	10	0	
†	12700	73.169	180.03	12455.46	102.84	-102.52	-611.81	711374.2	382095.5	32°02'55.1	103°39'04.	10	10	0	
†	12800	83.169	180.03	12475.93	200.59	-200.27	-611.86	711374.2	381997.7	32°02'54.2	103°39'04.	10	10	0	
	12868.31	90	180.03	12480	268.74	-268.42	-611.89	711374.1	381929.6	32°02'53.5	103°39'04.	10	10	0	End of Build
†	12900	90	180.03	12480	300.43	-300.11	-611.91	711374.1	381897.9	32°02'53.2	103°39'04.	0	0	0	
†	13000	90	180.03	12480	400.43	-400.11	-611.96	711374.1	381797.9	32°02'52.2	103°39'04.	0	0	0	
†	13100	90	180.03	12480	500.43	-500.11	-612.02	711374	381697.9	32°02'51.2	103°39'04.	0	0	0	
†	13200	90	180.03	12480	600.43	-600.11	-612.07	711374	381597.9	32°02'50.2	103°39'04.	0	0	0	
†	13300	90	180.03	12480	700.43	-700.11	-612.12	711373.9	381497.9	32°02'49.2	103°39'04.	0	0	0	
†	13400	90	180.03	12480	800.43	-800.11	-612.17	711373.9	381397.9	32°02'48.2	103°39'04.	0	0	0	
†	13500	90	180.03	12480	900.43	-900.11	-612.23	711373.8	381297.9	32°02'47.2	103°39'04.	0	0	0	
†	13600	90	180.03	12480	1000.43	-1000.11	-612.28	711373.8	381197.9	32°02'46.2	103°39'04.	0	0	0	
†	13700	90	180.03	12480	1100.43	-1100.11	-612.33	711373.7	381097.9	32°02'45.3	103°39'04.	0	0	0	
†	13800	90	180.03	12480	1200.43	-1200.11	-612.38	711373.6	380997.9	32°02'44.3	103°39'04.	0	0	0	
†	13900	90	180.03	12480	1300.43	-1300.11	-612.43	711373.6	380897.9	32°02'43.3	103°39'04.	0	0	0	
†	14000	90	180.03	12480	1400.43	-1400.11	-612.49	711373.5	380798	32°02'42.3	103°39'04.	0	0	0	
†	14100	90	180.03	12480	1500.43	-1500.11	-612.54	711373.5	380698	32°02'41.3	103°39'04.	0	0	0	

†	14200	90	180.03	12480	1600.43	-1600.11	-612.59	711373.4	380598	32°02'40.3	103°39'04.	0	0	0	
†	14300	90	180.03	12480	1700.43	-1700.11	-612.64	711373.4	380498	32°02'39.3	103°39'04.	0	0	0	
†	14400	90	180.03	12480	1800.43	-1800.11	-612.7	711373.3	380398	32°02'38.3	103°39'04.	0	0	0	
†	14500	90	180.03	12480	1900.43	-1900.11	-612.75	711373.3	380298	32°02'37.3	103°39'04.	0	0	0	
†	14600	90	180.03	12480	2000.43	-2000.11	-612.8	711373.2	380198	32°02'36.3	103°39'04.	0	0	0	
†	14700	90	180.03	12480	2100.43	-2100.11	-612.85	711373.2	380098	32°02'35.4	103°39'04.	0	0	0	
†	14800	90	180.03	12480	2200.43	-2200.11	-612.91	711373.1	379998	32°02'34.4	103°39'04.	0	0	0	
†	14900	90	180.03	12480	2300.43	-2300.11	-612.96	711373.1	379898	32°02'33.4	103°39'04.	0	0	0	
†	15000	90	180.03	12480	2400.43	-2400.11	-613.01	711373	379798	32°02'32.4	103°39'04.	0	0	0	
†	15100	90	180.03	12480	2500.43	-2500.11	-613.06	711373	379698	32°02'31.4	103°39'04.	0	0	0	
†	15200	90	180.03	12480	2600.43	-2600.11	-613.12	711372.9	379598	32°02'30.4	103°39'04.	0	0	0	
†	15300	90	180.03	12480	2700.43	-2700.11	-613.17	711372.9	379498	32°02'29.4	103°39'04.	0	0	0	
†	15400	90	180.03	12480	2800.43	-2800.11	-613.22	711372.8	379398	32°02'28.4	103°39'04.	0	0	0	
†	15500	90	180.03	12480	2900.43	-2900.11	-613.27	711372.8	379298	32°02'27.4	103°39'04.	0	0	0	
†	15600	90	180.03	12480	3000.43	-3000.11	-613.32	711372.7	379198	32°02'26.5	103°39'04.	0	0	0	
†	15700	90	180.03	12480	3100.43	-3100.11	-613.38	711372.7	379098	32°02'25.5	103°39'04.	0	0	0	
†	15800	90	180.03	12480	3200.43	-3200.11	-613.43	711372.6	378998	32°02'24.5	103°39'04.	0	0	0	
†	15900	90	180.03	12480	3300.43	-3300.11	-613.48	711372.5	378898	32°02'23.5	103°39'04.	0	0	0	
†	16000	90	180.03	12480	3400.43	-3400.11	-613.53	711372.5	378798	32°02'22.5	103°39'04.	0	0	0	
†	16100	90	180.03	12480	3500.43	-3500.11	-613.59	711372.4	378698	32°02'21.5	103°39'04.	0	0	0	
†	16200	90	180.03	12480	3600.43	-3600.11	-613.64	711372.4	378598	32°02'20.5	103°39'04.	0	0	0	
†	16300	90	180.03	12480	3700.43	-3700.11	-613.69	711372.3	378498	32°02'19.5	103°39'04.	0	0	0	
†	16400	90	180.03	12480	3800.43	-3800.11	-613.74	711372.3	378398.1	32°02'18.5	103°39'04.	0	0	0	
†	16500	90	180.03	12480	3900.43	-3900.11	-613.8	711372.2	378298.1	32°02'17.5	103°39'04.	0	0	0	
†	16600	90	180.03	12480	4000.43	-4000.11	-613.85	711372.2	378198.1	32°02'16.6	103°39'04.	0	0	0	
†	16700	90	180.03	12480	4100.43	-4100.11	-613.9	711372.1	378098.1	32°02'15.6	103°39'04.	0	0	0	
†	16800	90	180.03	12480	4200.43	-4200.11	-613.95	711372.1	377998.1	32°02'14.6	103°39'04.	0	0	0	
†	16900	90	180.03	12480	4300.43	-4300.11	-614.01	711372	377898.1	32°02'13.6	103°39'04.	0	0	0	
†	17000	90	180.03	12480	4400.43	-4400.11	-614.06	711372	377798.1	32°02'12.6	103°39'04.	0	0	0	
†	17100	90	180.03	12480	4500.43	-4500.11	-614.11	711371.9	377698.1	32°02'11.6	103°39'04.	0	0	0	
†	17200	90	180.03	12480	4600.43	-4600.11	-614.16	711371.9	377598.1	32°02'10.6	103°39'04.	0	0	0	
†	17300	90	180.03	12480	4700.43	-4700.11	-614.21	711371.8	377498.1	32°02'09.6	103°39'04.	0	0	0	
†	17400	90	180.03	12480	4800.43	-4800.11	-614.27	711371.8	377398.1	32°02'08.6	103°39'04.	0	0	0	
†	17500	90	180.03	12480	4900.43	-4900.11	-614.32	711371.7	377298.1	32°02'07.7	103°39'04.	0	0	0	
†	17600	90	180.03	12480	5000.43	-5000.11	-614.37	711371.7	377198.1	32°02'06.7	103°39'04.	0	0	0	
†	17700	90	180.03	12480	5100.43	-5100.11	-614.42	711371.6	377098.1	32°02'05.7	103°39'04.	0	0	0	
†	17800	90	180.03	12480	5200.43	-5200.11	-614.48	711371.6	376998.1	32°02'04.7	103°39'04.	0	0	0	
†	17900	90	180.03	12480	5300.43	-5300.11	-614.53	711371.5	376898.1	32°02'03.7	103°39'04.	0	0	0	
†	18000	90	180.03	12480	5400.43	-5400.11	-614.58	711371.4	376798.1	32°02'02.7	103°39'04.	0	0	0	
†	18100	90	180.03	12480	5500.43	-5500.11	-614.63	711371.4	376698.1	32°02'01.7	103°39'04.	0	0	0	
†	18200	90	180.03	12480	5600.43	-5600.11	-614.69	711371.3	376598.1	32°02'00.7	103°39'04.	0	0	0	
†	18300	90	180.03	12480	5700.43	-5700.11	-614.74	711371.3	376498.1	32°01'59.7	103°39'04.	0	0	0	
†	18400	90	180.03	12480	5800.43	-5800.11	-614.79	711371.2	376398.1	32°01'58.7	103°39'04.	0	0	0	
†	18500	90	180.03	12480	5900.43	-5900.11	-614.84	711371.2	376298.1	32°01'57.8	103°39'04.	0	0	0	
†	18600	90	180.03	12480	6000.43	-6000.11	-614.9	711371.1	376198.1	32°01'56.8	103°39'04.	0	0	0	
†	18700	90	180.03	12480	6100.43	-6100.11	-614.95	711371.1	376098.1	32°01'55.8	103°39'04.	0	0	0	
†	18800	90	180.03	12480	6200.43	-6200.11	-615	711371	375998.2	32°01'54.8	103°39'04.	0	0	0	
†	18900	90	180.03	12480	6300.43	-6300.11	-615.05	711371	375898.2	32°01'53.8	103°39'04.	0	0	0	
†	19000	90	180.03	12480	6400.43	-6400.11	-615.1	711370.9	375798.2	32°01'52.8	103°39'04.	0	0	0	

†	19100	90	180.03	12480	6500.43	-6500.11	-615.16	711370.9	375698.2	32°01'51.8	103°39'04.	0	0	0	
†	19200	90	180.03	12480	6600.43	-6600.11	-615.21	711370.8	375598.2	32°01'50.8	103°39'04.	0	0	0	
†	19300	90	180.03	12480	6700.43	-6700.11	-615.26	711370.8	375498.2	32°01'49.8	103°39'04.	0	0	0	
†	19400	90	180.03	12480	6800.43	-6800.11	-615.31	711370.7	375398.2	32°01'48.8	103°39'04.	0	0	0	
†	19500	90	180.03	12480	6900.43	-6900.11	-615.37	711370.7	375298.2	32°01'47.9	103°39'04.	0	0	0	
†	19600	90	180.03	12480	7000.43	-7000.11	-615.42	711370.6	375198.2	32°01'46.9	103°39'04.	0	0	0	
†	19700	90	180.03	12480	7100.43	-7100.11	-615.47	711370.6	375098.2	32°01'45.9	103°39'04.	0	0	0	
†	19800	90	180.03	12480	7200.43	-7200.11	-615.52	711370.5	374998.2	32°01'44.9	103°39'04.	0	0	0	
†	19900	90	180.03	12480	7300.43	-7300.11	-615.58	711370.5	374898.2	32°01'43.9	103°39'04.	0	0	0	
†	20000	90	180.03	12480	7400.43	-7400.11	-615.63	711370.4	374798.2	32°01'42.9	103°39'04.	0	0	0	
†	20100	90	180.03	12480	7500.43	-7500.11	-615.68	711370.3	374698.2	32°01'41.9	103°39'04.	0	0	0	
†	20200	90	180.03	12480	7600.43	-7600.11	-615.73	711370.3	374598.2	32°01'40.9	103°39'04.	0	0	0	
†	20300	90	180.03	12480	7700.43	-7700.11	-615.79	711370.2	374498.2	32°01'39.9	103°39'04.	0	0	0	
†	20400	90	180.03	12480	7800.43	-7800.11	-615.84	711370.2	374398.2	32°01'39.0	103°39'04.	0	0	0	
†	20500	90	180.03	12480	7900.43	-7900.11	-615.89	711370.1	374298.2	32°01'38.0	103°39'04.	0	0	0	
†	20600	90	180.03	12480	8000.43	-8000.11	-615.94	711370.1	374198.2	32°01'37.0	103°39'04.	0	0	0	
†	20700	90	180.03	12480	8100.43	-8100.11	-615.99	711370	374098.2	32°01'36.0	103°39'04.	0	0	0	
†	20800	90	180.03	12480	8200.43	-8200.11	-616.05	711370	373998.2	32°01'35.0	103°39'04.	0	0	0	
†	20900	90	180.03	12480	8300.43	-8300.11	-616.1	711369.9	373898.2	32°01'34.0	103°39'04.	0	0	0	
†	21000	90	180.03	12480	8400.43	-8400.11	-616.15	711369.9	373798.2	32°01'33.0	103°39'04.	0	0	0	
†	21100	90	180.03	12480	8500.43	-8500.11	-616.2	711369.8	373698.2	32°01'32.0	103°39'04.	0	0	0	
†	21200	90	180.03	12480	8600.43	-8600.11	-616.26	711369.8	373598.3	32°01'31.0	103°39'04.	0	0	0	
†	21300	90	180.03	12480	8700.43	-8700.11	-616.31	711369.7	373498.3	32°01'30.0	103°39'04.	0	0	0	
†	21400	90	180.03	12480	8800.43	-8800.11	-616.36	711369.7	373398.3	32°01'29.1	103°39'04.	0	0	0	
†	21500	90	180.03	12480	8900.43	-8900.11	-616.41	711369.6	373298.3	32°01'28.1	103°39'04.	0	0	0	
†	21600	90	180.03	12480	9000.43	-9000.11	-616.47	711369.6	373198.3	32°01'27.1	103°39'04.	0	0	0	
†	21700	90	180.03	12480	9100.43	-9100.11	-616.52	711369.5	373098.3	32°01'26.1	103°39'04.	0	0	0	
†	21800	90	180.03	12480	9200.43	-9200.11	-616.57	711369.5	372998.3	32°01'25.1	103°39'04.	0	0	0	
†	21900	90	180.03	12480	9300.43	-9300.11	-616.62	711369.4	372898.3	32°01'24.1	103°39'04.	0	0	0	
†	22000	90	180.03	12480	9400.43	-9400.11	-616.68	711369.4	372798.3	32°01'23.1	103°39'04.	0	0	0	
†	22100	90	180.03	12480	9500.43	-9500.11	-616.73	711369.3	372698.3	32°01'22.1	103°39'04.	0	0	0	
†	22200	90	180.03	12480	9600.43	-9600.11	-616.78	711369.3	372598.3	32°01'21.1	103°39'04.	0	0	0	
†	22300	90	180.03	12480	9700.43	-9700.11	-616.83	711369.2	372498.3	32°01'20.2	103°39'04.	0	0	0	
†	22400	90	180.03	12480	9800.43	-9800.11	-616.89	711369.1	372398.3	32°01'19.2	103°39'04.	0	0	0	
†	22500	90	180.03	12480	9900.43	-9900.11	-616.94	711369.1	372298.3	32°01'18.2	103°39'04.	0	0	0	
†	22600	90	180.03	12480	10000.43	-10000.11	-616.99	711369	372198.3	32°01'17.2	103°39'04.	0	0	0	
	22668.31	90	180.03	12480	10068.74	-10068.42	-617.03	711369	372130	32°01'16.5	103°39'04.	0	0	0	End of Tangent

1

HOLE AND CASING SECTIONS Ref Wellbore: SD 14 23 FED P18 10H Ref Wellpath: SD 14 23 FED P18 10H Prelim 1

String/Diameter	Start MD [ft]	End MD [ft]	Interval [ft]	Start TVD [ft]	End TVD [ft]	Start N/S [ft]	Start E/W [ft]	End N/S [ft]	End E/W [ft]
13.375in Casing	0	800	800	0	800	0	0	0	0
9.625in Casing	0	11211.27	11211.27	0	11150	0	0	304.54	-611.59
7.625in Casing	0	12401.32	12401.32	0	12300	0	0	148.55	-611.68
5.5in Casing	0	22668.31	22668.31	0	12480	0	0	-10068.4	-617.03

TARGETS

Name	MD [ft]	TVD [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	Shape

SD 14 23 FED P18 11H PBHL rev 1		12094	-10065.4	-207.01	711779	372133	32°01'16.561"N	103°39'00.047"W	point
SD 14 23 FED P18 9H PBHL rev 1		12114	-10070.4	-1027.04	710959	372128	32°01'16.563"N	103°39'09.571"W	point
SD 14 23 FED P18 13H PBHL rev 1		12159	-10060.4	613.03	712599	372138	32°01'16.559"N	103°38'50.522"W	point
SD 14 23 FED P18 12H PBHL rev 1		12430	-10063.4	203.01	712189	372135	32°01'16.555"N	103°38'55.284"W	point
(1) SD 14 23 FED P18 10H PBHL rev 1	22668.31	12480	-10068.4	-617.03	711369	372130	32°01'16.557"N	103°39'04.809"W	point
SD 14 23 FED P18 14H PBHL rev 1		12511	-10058.4	1023.04	713009	372140	32°01'16.553"N	103°38'45.760"W	point

SURVEY PROGRAM Ref Wellbore: SD 14 23 FED P18 10H Ref Wellpath: SD 14 23 FED P18 10H Prelim 1

Start MD [ft]	End MD [ft]	›s Unc Model	Wellbore
0	800	BHI NaviTrak (Axial)	SD 14 23 FED P18 10H
800	11150	BHI NaviTrak (Axial)	SD 14 23 FED P18 10H
11150	22685.49	BHI AutoTrak Curve (X Short spacing)	SD 14 23 FED P18 10H

COMMENTS

Chevron U.S.A. Inc. (CUSA)
SUNDRY ATTACHMENT: SPUDDER RIG

DATA OPERATOR NAME: Chevron U.S.A. Inc.

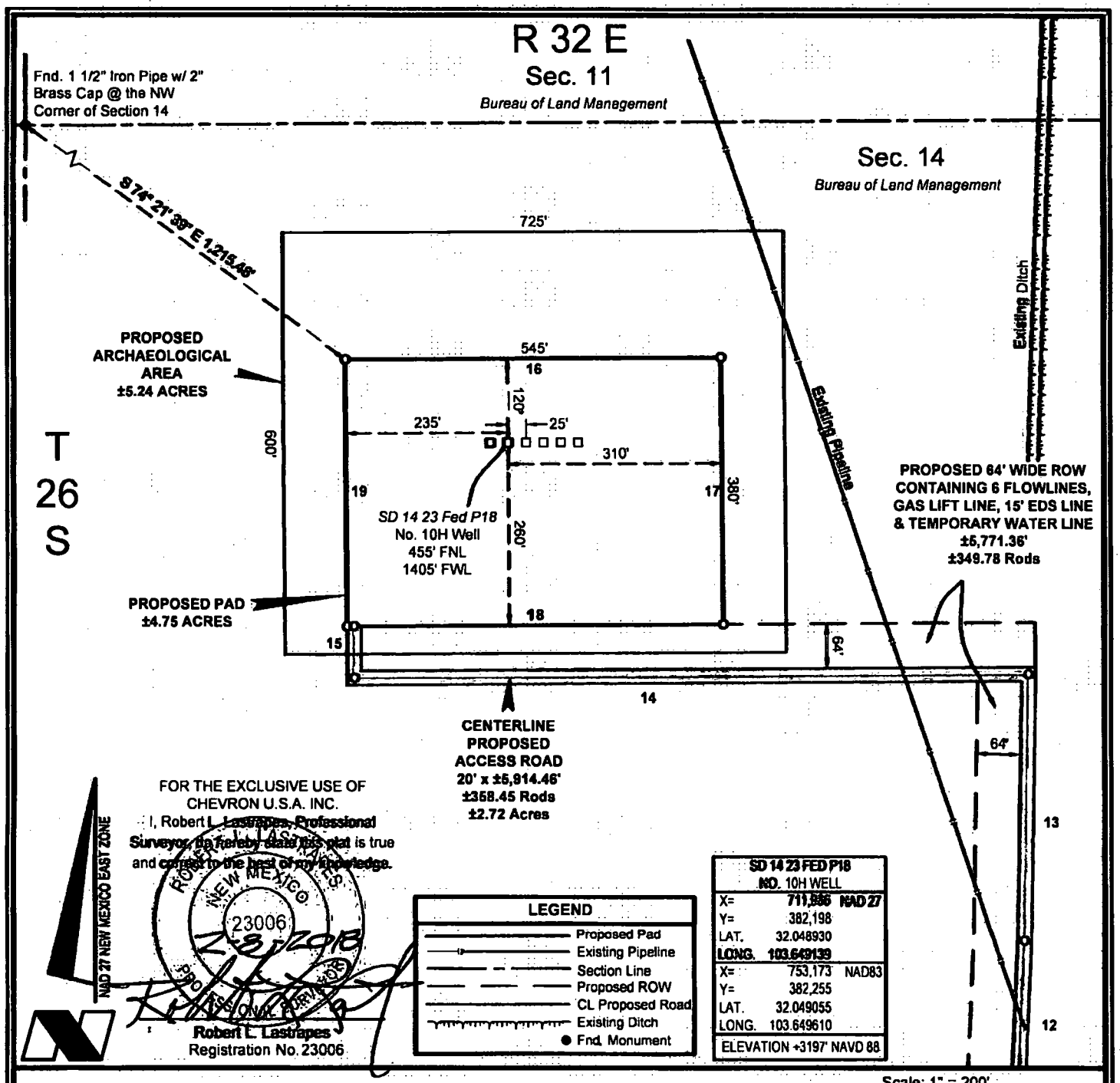
1. SUMMARY OF REQUEST:

CUSA respectfully requests approval for the following operations for the surface hole in the drill plan:

1. Utilize a spudder rig to pre-set surface casing for time and cost savings.

2. Description of Operations

1. Spudder rig will move in to drill the surface hole and pre-set surface casing on the well.
    a. After drilling the surface hole section, the spudder rig will run casing and cement following all the applicable rules and regulations (OnShore Order 2, all COAs and NMOCD regulations).
    b. The spudder rig will utilize fresh water-based mud to drill the surface hole to TD. Solids control will be handled entirely on a closed loop basis. No earth pits will be used.
2. The wellhead will be installed and then tested offline after the WOC time has been reached.
3. An abandonment cap at the same pressure rating as the wellhead will be installed to seal the wellbore. Pressure will be monitored with needle valves installed on one wing-valve.
    a. A means for intervention will be maintained while the drilling rig is not over the well.
4. Spudder rig operations are expected to take 2-3 days per well on the pad.
5. The BLM will be contacted and notified 24 hours prior to commencing spudder rig operations.
6. Drilling operations will begin with a larger rig and a BOP stack equal to or greater than the pressure rating that was permitted will be nippled up and tested on the wellhead before drilling operations resume on each well.
    a. The larger rig will move back onto the location within 90 days from the point at which the wells are secured and the spudder rig is moved off location.
    b. The BLM will be contacted / notified 24 hours before the larger rig moves back on the pre-set locations.
7. CUSA will have supervision on the rig to ensure compliance with all BLM and NMOCD regulations and to oversee operations.
8. Once the rig is removed, CUSA will secure the wellhead area by placing a guard rail around the cellar area.



WELL PLAT

Scale: 1" = 200'

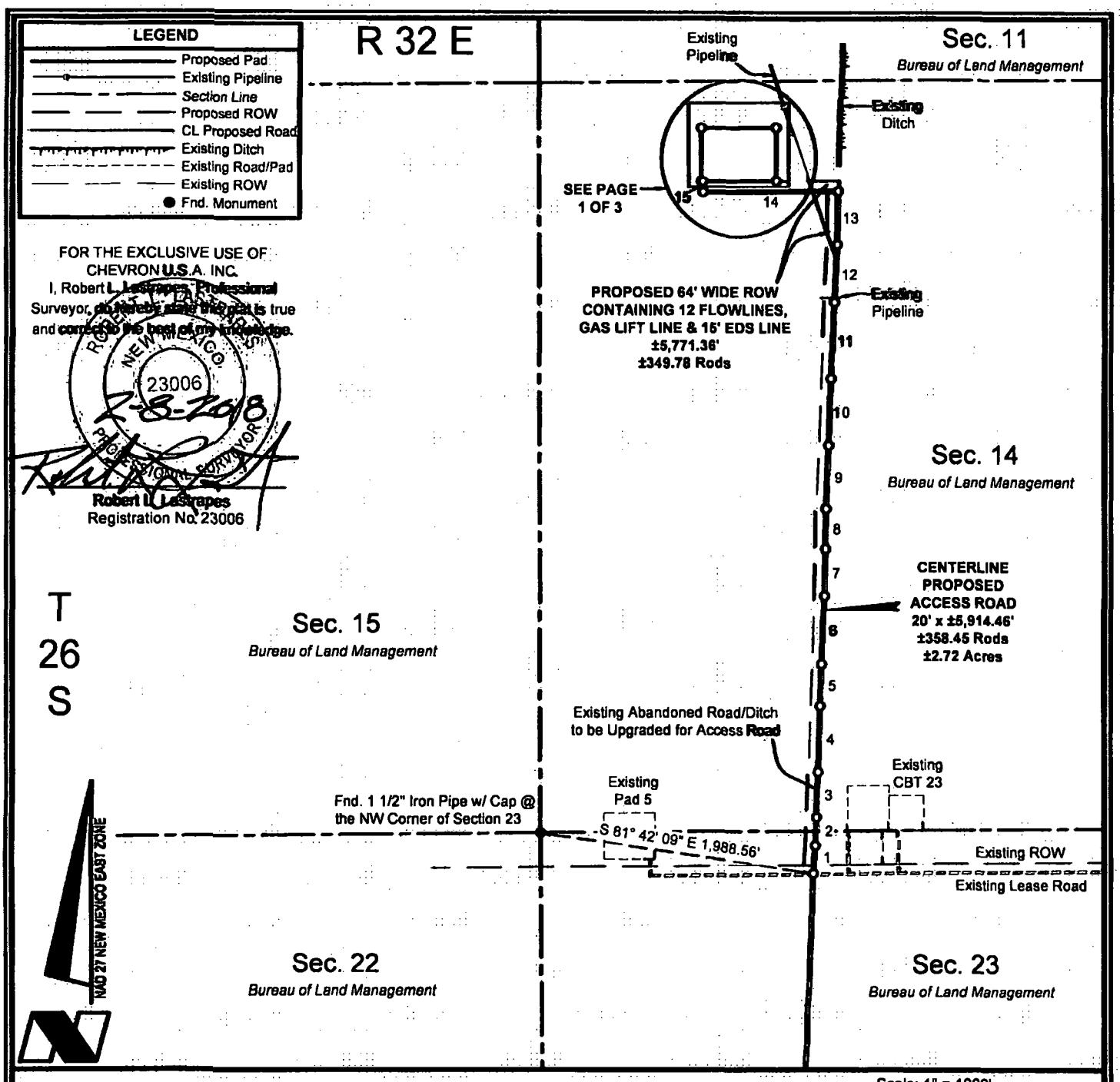
200' 0 100' 200'

CHEVRON U.S.A. INC.

PROPOSED PAD & ACCESS ROAD
SD 14 23 FED P18 NO. 10H WELL
SECTIONS 14 & 23, T26S-R32E
LEA COUNTY, NEW MEXICO

FENSTERMAKER
C. H. Fenstermaker & Associates, L.L.C.
135 Regency Sq. Lafayette, LA 70508
Ph. 337-237-2200 Fax. 337-232-3299
www.fenstermaker.com

DRAWN BY: DMB	REVISIONS			
	#	BY:	DATE:	DESCRIPTION:
PROJ. MGR.: VHV				
DATE: 01/15/2018				
FILENAME: T:\2017\2176219\DWG\SD 14 23 Fed P18 10H_Well Plat.dwg				



FOR THE EXCLUSIVE USE OF CHEVRON U.S.A. INC.

I, Robert L. LaStrapes, Professional Surveyor, do hereby state this plat is true and correct to the best of my knowledge.

ROBERT L. LASTRAPES NEW MEXICO 23006 PROFESSIONAL SURVEYOR

2-8-2018

Robert L. LaStrapes
Registration No. 23006

WELL PLAT

Scale: 1" = 1000'

1000' 0 500' 1000'

CHEVRON U.S.A. INC.

PROPOSED PAD & ACCESS ROAD
SD 14 23 FED P18 NO. 10H WELL
SECTIONS 14 & 23, T26S-R32E
LEA COUNTY, NEW MEXICO

FENSTERMAKER
C. H. Fenstermaker & Associates, L.L.C.
135 Regency Sq. Lafayette, LA 70508
Ph. 337-237-2200 Fax. 337-232-3299
www.fenstermaker.com

	REVISIONS			
DRAWN BY: DMB	#	BY:	DATE:	DESCRIPTION:
PROJ. MGR.: VHV				
DATE: 01/15/2018				
FILENAME: T:\2017\2176219\DWG\SD 14 23 Fed P18 10H_Well Plat.dwg				

CENTERLINE PROPOSED ACCESS ROAD		
COURSE	BEARING	DISTANCE
1	N 04° 23' 43" E	200.39'
2	N 02° 16' 06" E	202.77'
3	N 02° 12' 12" E	323.63'
4	N 01° 44' 36" E	470.28'
5	N 02° 21' 04" E	299.31'
6	N 02° 08' 00" E	483.86'
7	N 01° 24' 42" E	333.54'
8	N 00° 29' 22" E	287.50'
9	N 02° 43' 01" E	450.30'
10	N 02° 10' 55" E	475.05'
11	N 02° 14' 55" E	543.91'
12	N 02° 44' 25" E	411.97'
13	N 01° 01' 03" E	380.57'
14	S 89° 37' 01" W	977.38'
15	N 00° 22' 59" W	74.00'

PROPOSED PAD		
COURSE	BEARING	DISTANCE
16	N 89° 38' 27" E	545.00'
17	S 00° 21' 33" E	380.00'
18	S 89° 38' 27" W	545.00'
19	N 00° 21' 33" W	380.00'

NW PAD CORNER		NE PAD CORNER	
X= 711,750	NAD 27	X= 712,295	NAD 27
Y= 382,316		Y= 382,320	
LAT. 32.049260		LAT. 32.049260	
LONG. 103.649898		LONG. 103.648139	
X= 752,937	NAD83	X= 753,482	NAD83
Y= 382,374		Y= 382,377	
LAT. 32.049385		LAT. 32.049385	
LONG. 103.650368		LONG. 103.648609	
ELEVATION +3196' NAVD 88		ELEVATION +3199' NAVD 88	
SW PAD CORNER		SE PAD CORNER	
X= 711,753	NAD 27	X= 712,298	NAD 27
Y= 381,936		Y= 381,940	
LAT. 32.048215		LAT. 32.048215	
LONG. 103.649898		LONG. 103.648139	
X= 752,940	NAD83	X= 753,485	NAD83
Y= 381,994		Y= 381,997	
LAT. 32.048340		LAT. 32.048340	
LONG. 103.650368		LONG. 103.648609	
ELEVATION +3194' NAVD 88		ELEVATION +3195' NAVD 88	

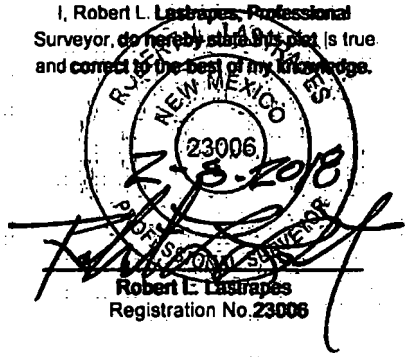
NW ARCH. AREA CORNER		NE ARCH. AREA CORNER	
X= 711,659	NAD 27	X= 712,384	NAD 27
Y= 382,496		Y= 382,500	
LAT. 32.049755		LAT. 32.049754	
LONG. 103.650188		LONG. 103.647848	
X= 752,846	NAD83	X= 753,571	NAD83
Y= 382,553		Y= 382,557	
LAT. 32.049880		LAT. 32.049879	
LONG. 103.650658		LONG. 103.648318	
ELEVATION +3197' NAVD 88		ELEVATION +3200 NAVD 88	
SW ARCH. AREA CORNER		SE ARCH. AREA CORNER	
X= 711,663	NAD 27	X= 712,388	NAD 27
Y= 381,896		Y= 381,900	
LAT. 32.048106		LAT. 32.048104	
LONG. 103.650189		LONG. 103.647849	
X= 752,850	NAD83	X= 753,575	NAD83
Y= 381,953		Y= 381,957	
LAT. 32.048231		LAT. 32.048229	
LONG. 103.650659		LONG. 103.648319	
ELEVATION +3192' NAVD 88		ELEVATION +3196' NAVD 88	

NOTE:
Please be advised, that while reasonable efforts are made to locate and verify pipelines and anomalies using our standard pipeline locating equipment, it is impossible to be 100 % effective. As such, we advise using caution when performing work as there is a possibility that pipelines and other hazards, such as fiber optic cables, PVC pipelines, etc. may exist undetected on site.

NOTE:
Many states maintain information centers that establish links between those who dig (excavators) and those who own and operate underground facilities (operators). It is advisable and in most states, law, for the contractor to contact the center for assistance in locating and marking underground utilities. For guidance, New Mexico One Call www.nmonecall.org

DISCLAIMER: At this time, C. H. Fenstermaker & Associates, L.L.C. has not performed nor was asked to perform any type of engineering, hydrological modeling, flood plain, or "No Rise" certification analyses, including but not limited to determining whether the project will impact flood hazards in connection with federal/FEMA, state, and/or local laws, ordinances and regulations. Accordingly, Fenstermaker makes no warranty or representation of any kind as to the foregoing issues, and persons or entities using this information shall do so at their own risk.

FOR THE EXCLUSIVE USE OF
CHEVRON U.S.A. INC.
I, Robert L. Lastrapes, Professional Surveyor, do hereby state this plat is true and correct to the best of my knowledge.



Robert L. Lastrapes
Registration No. 23006

WELL PLAT

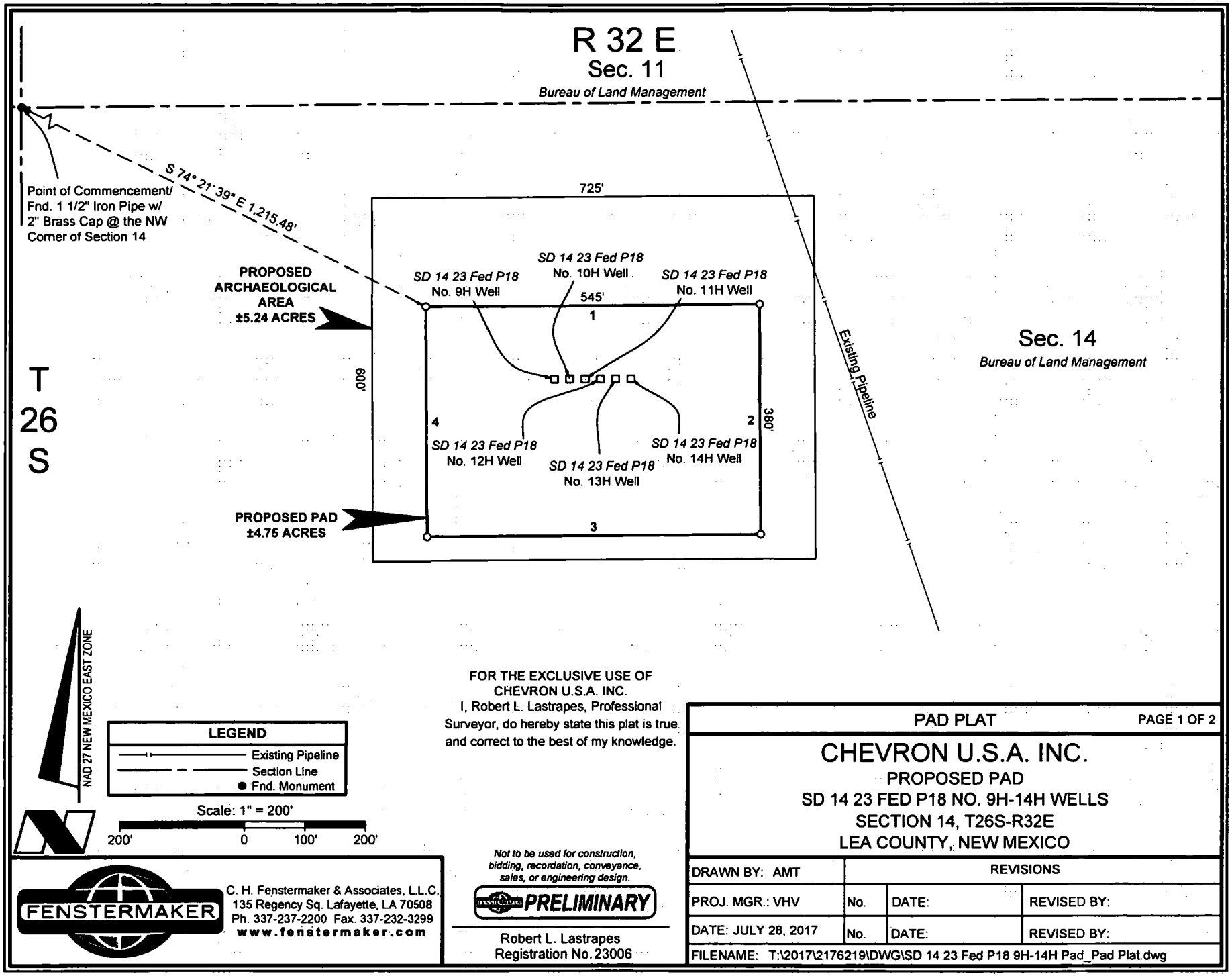
PAGE 3 OF 3

CHEVRON U.S.A. INC.

PROPOSED PAD & ACCESS ROAD
SD 14 23 FED P18 NO. 10H WELL
SECTIONS 14 & 23, T26S-R32E
LEA COUNTY, NEW MEXICO

FENSTERMAKER
C. H. Fenstermaker & Associates, L.L.C.
135 Regency Sq. Lafayette, LA 70508
Ph. 337-237-2200 Fax. 337-232-3299
www.fenstermaker.com

	REVISIONS			
DRAWN BY: DMB	#	BY:	DATE:	DESCRIPTION:
PROJ. MGR.: VHV				
DATE: 01/15/2018				
FILENAME: T:\2017\2176219\DWG\SD 14 23 Fed P18 10H_Well Plat.dwg				



FOR THE EXCLUSIVE USE OF
CHEVRON U.S.A. INC.
I, Robert L. Lastrapes, Professional Surveyor, do hereby state this plat is true and correct to the best of my knowledge.

PAD PLAT PAGE 1 OF 2

CHEVRON U.S.A. INC.

PROPOSED PAD
SD 14 23 FED P18 NO. 9H-14H WELLS
SECTION 14, T26S-R32E
LEA COUNTY, NEW MEXICO

FENSTERMAKER
C. H. Fenstermaker & Associates, L.L.C.
135 Regency Sq. Lafayette, LA 70508
Ph. 337-237-2200 Fax. 337-232-3299
www.fenstermaker.com

Not to be used for construction, bidding, recordation, conveyance, sales, or engineering design.

PRELIMINARY

Robert L. Lastrapes
Registration No. 23006

DRAWN BY: AMT	REVISIONS		
PROJ. MGR.: VHV	No.	DATE:	REVISED BY:
DATE: JULY 28, 2017	No.	DATE:	REVISED BY:
FILENAME: T:\2017\2176219\DWG\SD 14 23 Fed P18 9H-14H Pad_Pad Plat.dwg			

DISCLAIMER: At this time, C. H. Fenstermaker & Associates, L.L.C. has not performed nor was asked to perform any type of engineering, hydrological modeling, flood plain, or "No Rise" certification analyses, including but not limited to determining whether the project will impact flood hazards in connection with federal/FEMA, state, and/or local laws, ordinances and regulations. Accordingly, Fenstermaker makes no warranty or representation of any kind as to the foregoing issues, and persons or entities using this information shall do so at their own risk.

NOTE:
Please be advised, that while reasonable efforts are made to locate and verify pipelines and anomalies using our standard pipeline locating equipment, it is impossible to be 100 % effective. As such, we advise using caution when performing work as there is a possibility that pipelines and other hazards, such as fiber optic cables, PVC pipelines, etc. may exist undetected on site.

NOTE:
Many states maintain information centers that establish links between those who dig (excavators) and those who own and operate underground facilities (operators). It is advisable and in most states, law, for the contractor to contact the center for assistance in locating and marking underground utilities. For guidance, New Mexico One Call www.nmonecall.org

NW ARCH. AREA CORNER		NE ARCH. AREA CORNER	
X=	711,659 NAD 27	X=	712,384 NAD 27
Y=	382,496	Y=	382,500
LAT.	32.049755	LAT.	32.049754
LONG.	103.650188	LONG.	103.647848
X=	752,846 NAD83	X=	753,571 NAD83
Y=	382,553	Y=	382,557
LAT.	32.049880	LAT.	32.049879
LONG.	103.650658	LONG.	103.648318
ELEVATION +3197' NAVD 88		ELEVATION +3200 NAVD 88	
SW ARCH. AREA CORNER		SE ARCH. AREA CORNER	
X=	711,663 NAD 27	X=	712,388 NAD 27
Y=	381,896	Y=	381,900
LAT.	32.048106	LAT.	32.048104
LONG.	103.650189	LONG.	103.647849
X=	752,850 NAD83	X=	753,575 NAD83
Y=	381,953	Y=	381,957
LAT.	32.048231	LAT.	32.048229
LONG.	103.650659	LONG.	103.648319
ELEVATION +3192' NAVD 88		ELEVATION +3196' NAVD 88	

NW PAD CORNER		NE PAD CORNER	
X=	711,750 NAD 27	X=	712,295 NAD 27
Y=	382,316	Y=	382,320
LAT.	32.049260	LAT.	32.049260
LONG.	103.649898	LONG.	103.648139
X=	752,937 NAD83	X=	753,482 NAD83
Y=	382,374	Y=	382,377
LAT.	32.049385	LAT.	32.049385
LONG.	103.650368	LONG.	103.648609
ELEVATION +3196' NAVD 88		ELEVATION +3199' NAVD 88	
SW PAD CORNER		SE PAD CORNER	
X=	711,753 NAD 27	X=	712,298 NAD 27
Y=	381,936	Y=	381,940
LAT.	32.048215	LAT.	32.048215
LONG.	103.649898	LONG.	103.648139
X=	752,940 NAD83	X=	753,485 NAD83
Y=	381,994	Y=	381,997
LAT.	32.048340	LAT.	32.048340
LONG.	103.650368	LONG.	103.648609
ELEVATION +3194' NAVD 88		ELEVATION +3195' NAVD 88	

PROPOSED PAD		
COURSE	BEARING	DISTANCE
1	N 89° 38' 27" E	545.00'
2	S 00° 21' 33" E	380.00'
3	S 89° 38' 27" W	545.00'
4	N 00° 21' 33" W	380.00'

FOR THE EXCLUSIVE USE OF
CHEVRON U.S.A. INC.
I, Robert L. Lastrapes, Professional Surveyor, do hereby state this plat is true and correct to the best of my knowledge.

Not to be used for construction, bidding, recordation, conveyance, sales, or engineering design.

PRELIMINARY

Robert L. Lastrapes
Registration No. 23006

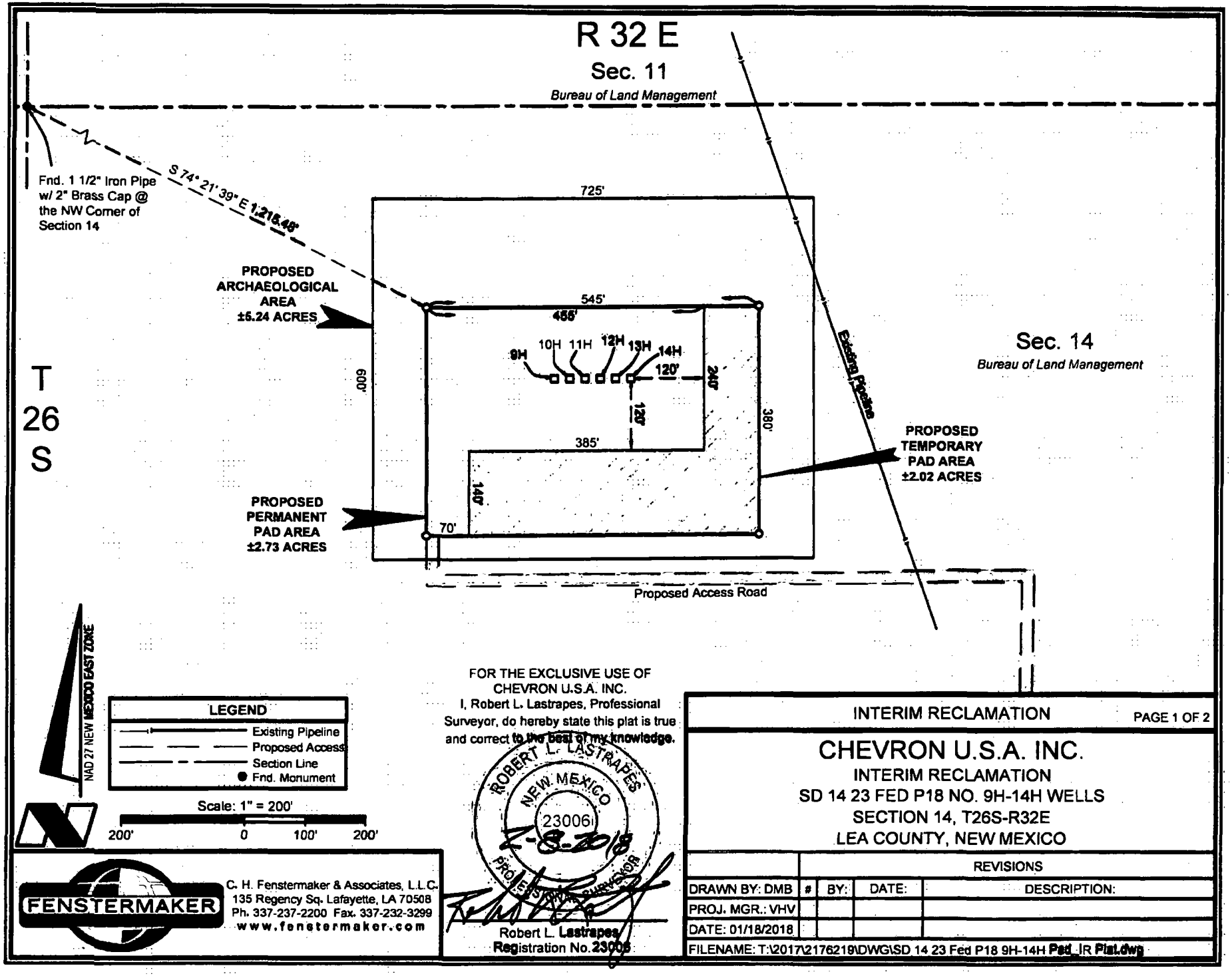
FENSTERMAKER
C. H. Fenstermaker & Associates, L.L.C.
135 Regency Sq. Lafayette, LA 70508
Ph. 337-237-2200 Fax. 337-232-3299
www.fenstermaker.com

PAD PLAT

CHEVRON U.S.A. INC.

PROPOSED PAD
SD 14 23 FED P18 NO. 9H-14H WELLS
SECTION 14, T26S-R32E
LEA COUNTY, NEW MEXICO

DRAWN BY: AMT	REVISIONS		
PROJ. MGR.: VHV	No.	DATE:	REVISED BY:
DATE: JULY 28, 2017	No.	DATE:	REVISED BY:
FILENAME: T:\2017\2176219\DWG\SD 14 23 Fed P18 9H-14H Pad_Pad Plat.dwg			


R 32 E
Sec. 11
Bureau of Land Management
Fnd. 1 1/2" Iron Pipe w/ 2" Brass Cap @ the NW Corner of Section 14
S 74° 21' 39" E 1,218.48'
725'
PROPOSED ARCHAEOLOGICAL AREA ±5.24 ACRES
545'
455'
9H
10H
11H
12H
13H
14H
120'
240'
600'
120'
380'
385'
140'
70'
Existing Pipeline
Sec. 14
Bureau of Land Management
T 26 S
PROPOSED TEMPORARY PAD AREA ±2.02 ACRES
PROPOSED PERMANENT PAD AREA ±2.73 ACRES
Proposed Access Road
NAD 27 NEW MEXICO EAST ZONE
LEGEND
Existing Pipeline
Proposed Access
Section Line
Fnd. Monument
Scale: 1" = 200'
200' 0 100' 200'
FOR THE EXCLUSIVE USE OF CHEVRON U.S.A. INC.
I, Robert L. Lastrapes, Professional Surveyor, do hereby state this plat is true and correct to the best of my knowledge.
ROBERT L. LASTRAPES
NEW MEXICO
23006
PROFESSIONAL SURVEYOR
1-8-2018
Robert L. Lastrapes
Registration No. 23006
FENSTERMAKER
C. H. Fenstermaker & Associates, L.L.C.
135 Regency Sq. Lafayette, LA 70508
Ph. 337-237-2200 Fax. 337-232-3299
www.fenstermaker.com
INTERIM RECLAMATION
PAGE 1 OF 2
CHEVRON U.S.A. INC.
INTERIM RECLAMATION
SD 14 23 FED P18 NO. 9H-14H WELLS
SECTION 14, T26S-R32E
LEA COUNTY, NEW MEXICO
REVISIONS
DRAWN BY: DMB
PROJ. MGR.: VHV
DATE: 01/18/2018
BY: DATE: DESCRIPTION:
FILENAME: T:\2017\2176219\DWG\SD 14 23 Fed P18 9H-14H Pad_IR Plat.dwg

DISCLAIMER: At this time, C. H. Fenstermaker & Associates, L.L.C. has not performed nor was asked to perform any type of engineering, hydrological modeling, flood plain, or "No Rise" certification analyses, including but not limited to determining whether the project will impact flood hazards in connection with federal/FEMA, state, and/or local laws, ordinances and regulations. Accordingly, Fenstermaker makes no warranty or representation of any kind as to the foregoing issues, and persons or entities using this information shall do so at their own risk.

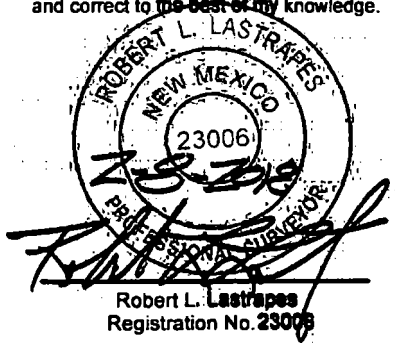
NOTE:
Please be advised, that while reasonable efforts are made to locate and verify pipelines and anomalies using our standard pipeline locating equipment, it is impossible to be 100 % effective. As such, we advise using caution when performing work as there is a possibility that pipelines and other hazards, such as fiber optic cables, PVC pipelines, etc. may exist undetected on site.

NOTE:
Many states maintain information centers that establish links between those who dig (excavators) and those who own and operate underground facilities (operators). It is advisable and in most states, law, for the contractor to contact the center for assistance in locating and marking underground utilities. For guidance, New Mexico One Call www.nmonecall.org

NW ARCH. AREA CORNER		NE ARCH. AREA CORNER	
X=	711,659 NAD 27	X=	712,384 NAD 27
Y=	382,496	Y=	382,500
LAT.	32.049755	LAT.	32.049754
LONG.	103.650188	LONG.	103.647848
X=	752,846 NAD83	X=	753,571 NAD83
Y=	382,553	Y=	382,557
LAT.	32.049880	LAT.	32.049879
LONG.	103.650658	LONG.	103.648318
ELEVATION +3197' NAVD 88		ELEVATION +3200 NAVD 88	
SW ARCH. AREA CORNER		SE ARCH. AREA CORNER	
X=	711,663 NAD 27	X=	712,388 NAD 27
Y=	381,896	Y=	381,900
LAT.	32.048106	LAT.	32.048104
LONG.	103.650189	LONG.	103.647849
X=	752,850 NAD83	X=	753,575 NAD83
Y=	381,953	Y=	381,957
LAT.	32.048231	LAT.	32.048229
LONG.	103.650659	LONG.	103.648319
ELEVATION +3192' NAVD 88		ELEVATION +3196' NAVD 88	

NW PAD CORNER		NE PAD CORNER	
X=	711,750 NAD 27	X=	712,295 NAD 27
Y=	382,316	Y=	382,320
LAT.	32.049260	LAT.	32.049260
LONG.	103.649898	LONG.	103.648139
X=	752,937 NAD83	X=	753,482 NAD83
Y=	382,374	Y=	382,377
LAT.	32.049385	LAT.	32.049385
LONG.	103.650368	LONG.	103.648609
ELEVATION +3195' NAVD 88		ELEVATION +3199' NAVD 88	
SW PAD CORNER		SE PAD CORNER	
X=	711,753 NAD 27	X=	712,298 NAD 27
Y=	381,936	Y=	381,940
LAT.	32.048215	LAT.	32.048215
LONG.	103.649898	LONG.	103.648139
X=	752,940 NAD83	X=	753,485 NAD83
Y=	381,994	Y=	381,997
LAT.	32.048340	LAT.	32.048340
LONG.	103.650368	LONG.	103.648609
ELEVATION +3194' NAVD 88		ELEVATION +3195' NAVD 88	

FOR THE EXCLUSIVE USE OF
CHEVRON U.S.A. INC.
I, Robert L. Lastrapes, Professional Surveyor, do hereby state this plat is true and correct to the best of my knowledge.



Robert L. Lastrapes
Registration No. 23006

FENSTERMAKER
C. H. Fenstermaker & Associates, L.L.C.
135 Regency Sq. Lafayette, LA 70508
Ph. 337-237-2200 Fax. 337-232-3299
www.fenstermaker.com

INTERIM RECLAMATION

CHEVRON U.S.A. INC.

INTERIM RECLAMATION
SD 14 23 FED P18 NO. 9H-14H WELLS
SECTION 14, T26S-R32E
LEA COUNTY, NEW MEXICO

	REVISIONS			
DRAWN BY: DMB	#	BY:	DATE:	DESCRIPTION:
PROJ. MGR.: VHV				
DATE: 01/18/2018				
FILENAME: T:\2017\2176219\DWG\SD 14 23 Fed P18 9H-14H Pad_IR Plat.dwg				

CHEVRON U.S.A. Inc.
SD 14 23 FED P18 10H
NMNM 118722
NMNM 118723
SECTION 14, T26S-R32E
SHL 455' FNL & 1,405' FWL

SECTION 23, T26S, R32E
BHL 180' FSL & 740' FWL

APD Surface Use Plan of Operations

Existing Roads (Road Plat Attached)

- The operator will improve or maintain existing roads in a condition the same as or better than before operations begin. The operator will repair pot holes, clear ditches, repair the crown, etc. All existing structures on the entire access route such as cattle guards, other range improvement projects, culverts, etc. will be properly repaired or replaced if they are damaged or have deteriorated beyond practical use. We will prevent and abate fugitive dust as needed, whether created by vehicular traffic, equipment operations, or wind events. BLM written approval will be acquired before application of surfactants, binding agents, or other dust suppression chemicals on roadways.
- Driving Directions – From Jal, New Mexico. The location is approximately 33 miles from the nearest town, which is Jal, New Mexico. From Jal, proceed west on Highway 128 approximately 14 miles and turn left (South) onto CR2 and go approximately 13 miles on CR2 until the road reaches the intersection with Dinwiddie Rd (stop sign with "private road" signage). Turn right (west) onto Dinwiddie Rd (Chevron has an agreement and easement for use of this road) and travel west approximately .3 miles, then bear left (south) onto Battle Axe Road (a continuation of CR2). Travel 5 miles on Battle Axe Road, following its bends, until you reach the Chevron lease road into Salado Development Area. Turn right (Northwesterly) and travel 8 miles on lease road to the well location.

New or Reconstructed Access Roads (Well Plat Attached)

- There will be approximately 5,914.16' of new road construction for the well pad and facilities.
- Road Width: The access road shall have a driving surface that creates the smallest possible surface disturbance and does not exceed 20'. The maximum width of surface disturbance shall not exceed 25'. (see "Road Cut/Fill" plat attached.)
- Maximum Grade: 3%
- Crown Design: Crowning shall be done on the access road driving surface. The road crown shall have a grade of approximately 2%. The road shall conform to cross section and plans for typical road construction found in the BLM Gold Book.

- Turnouts: 50-60'
- Ditch Design: Ditching will be constructed on both sides of road.
- Cattle guards: None suggestion
- Major Cuts and Fills: 2:1 during drilling and completions. Cuts and fills taken back to 3:1 at interim.
- Type of Surfacing Material: Caliche. The road will also have a dust abatement polymer coating to decrease dust as well as help maintain the road, Envirotac II.

Location of Existing Wells (Diagram Attached)

- 1-Mile radius map is attached

Location of Existing and/or Proposed Production Facilities (Work Area Detail Map Attached)

- Facilities:
  - Existing production facilities (CTB 23) are in the S2 of Sec. 23, T26S-R32E where oil and gas sales will take place.
  - Gas purchaser pipeline is existing at the tank battery.
  - Open top tanks or open containments will be netted.
  - Open vent exhaust stacks will be modified to prevent birds or bats from entering, discourage perching, roosting, and nesting.
  - Facilities will have a secondary containment 1.5 times the holding capacity of largest storage tank.
  - All above ground structures will be painted non-reflective shale green for blending with surrounding environment.
  - The tank battery will be connected to the existing water gathering system in the field for permanent water disposal.

Location of Proposed ROW (Well Plat Attached)

- Pipelines: 12 - 4" buried pipelines, approximately 6,649.04', will be laid from well running to lease road then adjacent to lease road to production facility in Section 23.
  - A ROW will not be required for these pipelines.
  - All construction activity will be confined to the approved ROW.
  - Pipeline will run parallel to the road and will stay within approved ROW.
- Pipelines: 2 - 4" buried gas lift pipelines, approximately 5,796.75', will be laid from well to the existing lease road and tie into the existing gas lift line running to Compressor facility in Section 23.
  - A ROW will not be required for these pipelines.

- All construction activity will be confined to the approved ROW.
- Pipeline will run parallel to existing disturbances and will stay within approved ROW.

- Power lines: A powerline, approximately measuring approximately 5,576.10' in length, will be installed from the existing powerline on the lease road and will be routed to the proposed well.
  - A ROW will not be required for this EDS line.
  - All construction activity will be confined to the approved ROW.
  - Power line will run parallel to the road and will stay within approved ROW.

Location and Types of Water Supply (Work Area Detail Map Attached)

- Existing frac ponds in Section 23, T26S-R32E will be utilized for fresh water and Section 13 T26S-R32E for recycled water.
- Fresh water will be obtained from a private water source.
- A temporary 10" expanding water transfer line will run south along the proposed lease road then west along existing lease road a total of approx. 10,321.65' from the well location to the existing frac pond in Section 23.
  - Fresh water line will run parallel to the existing lease road, then north within an existing pipeline right of way.
  - A BLM ROW will not be required for the water transfer line.

Construction Material

- Caliche will be used to construct well pad and roads. Material will be purchased from the private land owners (Oliver Kiehne) caliche pit located in Sec 27, T26, R33E, Lea County, NM.

- The proposed source of construction material will be located and purchased by Chevron U.S.A. Inc.
  - Notification shall be given to BLM at (575) 234-5909 at least 3 working days prior to commencing construction of access road and/or well pad.

Methods for Handling Waste

- Drilling fluids and produced oil and water from the well during drilling and completion operations will be stored safely and disposed of properly in an NMOCD approved disposal facility.

- Garbage and trash produced during drilling and completion operations will be collected in a trash container and disposed of properly at a state approved disposal facility. All trash on and around the well site will be collected for disposal.
- Human waste and grey water will be properly contained and disposed of properly at a state approved disposal facility.
- After drilling and completion operations, trash, chemicals, salts, frac sand and other waste material will be removed and disposed of properly at a state approved disposal facility.
- The well will be drilled utilizing a closed loop system. Drill cutting will be properly disposed of into steel tanks and taken to an NMOCD approved disposal facility.

Ancillary Facilities

None

Well Site Layout (Well Plat Attached)

- Well Plat
  - Exterior well pad dimensions are 380' x 545'.
  - Interior well pad dimensions from point of entry (well head) of the westernmost well are N-120', S-260', W-235', E-310'. The length to the east includes 25' spacing for next well on multi-well pad (six wells). Total disturbance area needed for construction of well pad will be 4.75 acres.
  - Topsoil placement is on the east where interim reclamation is planned to be completed upon completion of well and evaluation of best management practices.

Proposed Pad Cut & Fill (Plat Attached)

- Cut and fill: will be minimal.

Rig Layout (Attached)

Plans for Surface Reclamation (Pad Plat Attached)

Reclamation Objectives

- The objective of interim reclamation is to restore vegetative cover and a portion of the landform sufficient to maintain healthy, biologically active topsoil; control erosion; and minimize habitat and forage loss, visual impact, and weed infestation, during the life of the well or facilities.
- The long-term objective of final reclamation is to return the land to a condition similar to what existed prior to disturbance. This includes restoration of the landform and natural vegetative community, hydrologic systems, visual resources, and wildlife habitats. To ensure that the long-term objective will be reached

through human and natural processes, actions will be taken to ensure standards are met for site stability, visual quality, hydrological functioning, and vegetative productivity.

- The BLM will be notified at least 3 days prior to commencement of any reclamation procedures.
- If circumstances allow, interim reclamation and/or final reclamation actions will be completed no later than 6 months from when the final well on the location has been completed or plugged. We will gain written permission from the BLM if more time is needed.
- Reclamation will be performed by using the following procedures:

Interim Reclamation Procedures

- Within 6 months, Chevron will contact BLM Surface Management Specialists to devise the best strategies to reduce the size of the location. Current plans for interim reclamation include reducing the pad size to approximately 2.01 acres from the proposed size of 2.74 acres. Within 30 days of well completion, the well location and surrounding areas will be cleared of, and maintained free of, all materials, trash, and equipment not required for production. A plan will be submitted showing where interim reclamation will be completed to allow for safe operations, protection of the environment outside of drilled well, and following best management practices found in the BLM "Gold Book".
- In areas planned for interim reclamation, all the surfacing material will be removed and returned to the original mineral pit or recycled to repair or build roads and well pads.
- The areas planned for interim reclamation will then be recontoured to the original contour if feasible, or if not feasible, to an interim contour that blends with the surrounding topography as much as possible. Where applicable, the fill material of the well pad will be backfilled into the cut to bring the area back to the original contour. The interim cut and fill slopes prior to re-seeding will not be steeper than a 3:1 ratio, unless the adjacent native topography is steeper. Note: Constructed slopes may be much steeper during drilling, but will be recontoured to the above ratios during interim reclamation.
- Topsoil will be evenly re-spread and aggressively revegetated over the entire disturbed area not needed for all-weather operations including cuts & fills. To seed the area, the proper BLM seed mixture (BLM #2), free of noxious weeds, will be used.
- Proper erosion control methods will be used on the area to control erosion, runoff and siltation of the surrounding area.
- The interim reclamation will be monitored periodically to ensure that vegetation has reestablished

Final Reclamation (well pad, buried pipelines, and power lines, etc.)

- Prior to final reclamation procedures, the well pad, road, and surrounding area will be cleared of material, trash, and equipment.
- All surfacing material will be removed and returned to the original mineral pit or recycled to repair or build roads and well pads.
- All disturbed areas, including roads, pipelines, pads, production facilities, and interim reclaimed areas will be recontoured to the contour existing prior to initial construction or a contour that blends in distinguishably with the surrounding landscape. Topsoil that was spread over the interim reclamation areas will be stockpiled prior to recontouring. The topsoil will be redistributed evenly over the entire disturbed site to ensure successful revegetation.
- After all the disturbed areas have been properly prepared; the areas will be seeded with the proper BLM seed mixture (BLM #2), free of noxious weeds.
- Proper erosion control methods will be used on the entire area to control erosion, runoff and siltation of the surrounding area.

Surface Ownership

- Well pad and all other infrastructure is on Federal Surface.
- **Nearest Post Office:** Jal Post Office; 33 Miles East

Other Information

- On-site performed by BLM NRS: Paul Murphy 9/29/2017
- Cultural report attached: **N/A** Participating Agreement attached: **Yes**
- Erosion / Drainage: Drainage control system shall be constructed on the entire length of road using any of the following: ditches, side hill out-sloping and in-sloping, lead-off ditches, culvert installation, or low water crossings.
- Enclosure fencing will be installed around open cellar to prevent livestock or large wildlife from being trapped after installation. Fencing will remain in place while no activity is present and until backfilling takes place.
- Terrain: Landscape is flat
- Soil: Sandy loam
- Vegetation: Vegetation present in surrounding area includes mesquite, shrubs, and grass (needle-grass, burro grass, dropseed).
- Wildlife: No wildlife observed, but it is likely that deer, rabbits, coyotes, and rodents pass through the area.
- Surface Water: No surface water concerns.
- Cave Karst: Low Karst area with no caves or visual signs of caves found.
- Watershed Protection: The entire perimeter of the well pad will be bermed to prevent oil, salt, and other chemical contaminates from leaving the well pad.

CHEVRON U.S.A. Inc.
SD 14 23 FED P18 10H
NMNM 118722
NMNM 118723
SECTION 14, T26S-R32E SECTION 23, T26S, R32E
SHL 455' FNL & 1,405' FWL BHL 180' FSL & 740' FWL

- Water wells: No known water wells within the 1- mile radius.
- Residences and Buildings: No dwellings within the immediate vicinity of the proposed location.
- Well Signs: Well signs will be complying per federal and state requirements and specifications.

Chevron Representatives

Primary point of contact:
W Mark Woodard
432-687-7999

CHEVRON U.S.A. Inc.
SD 14 23 FED P18 10H
NMNM 118722
NMNM 118723
SECTION 14, T26S-R32E SECTION 23, T26S, R32E
SHL 455' FNL & 1,405' FWL BHL 180' FSL & 740' FWL

Chevron Functional Contacts

Project Manager Name: Sam Storrick Address: 6301 Deauville Midland, Texas 79706 Phone: (432) 687-7769 Email: storrick@chevron.com	**Drilling Engineer** Name: Kristen Drain Address: 1400 Smith Street Houston, TX 77002 Phone: (713) 372-6003 Email: kdrain@chevron.com
Surface Land Representative Name: W Mark Woodard Address: 6301 Deauville Midland, Texas 79706 Phone: (432) 687-7999 Email: markwoodard@Chevron.com	**Facility Lead** Name: Max Vilmar Address: 6301 Deauville Midland, Texas 79706 Phone: (432) 687-7327 Email: mvilmar@chevron.com
Geologist Name: Michael Smerilli Address: 6301 Deauville Midland, Texas 79706 Phone: (713) 687-7887 Email: michael.smerilli@chevron.com	**Regulatory Specialist** Name: Laura Becerra Address: 6301 Deauville Midland, Texas 79706 Office: (432) 687-7665 Email: lbecerra@chevron.com