NM OIL CONSERVATION
ARTESIA DISTRICT
OCT 04 2019
RECEIVED

Form 3160-3
(June 2015)

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

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

APPLICATION FOR PERMIT TO DRILL OR REENTER

5. Lease Serial No.
NMNM107369

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.
CICADA UNIT / NMNM137168X

8. Lease Name and Well No.
CICADA UNIT
39H 325142

2. Name of Operator
CHEVRON USA INCORPORATED

9. API Well No.
30-015-46348

3a. Address
6301 Deauville Blvd. Midland TX 79706

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

10. Field and Pool, or Exploratory
WILDCAT WOLFCAMP / WOLFCAMP, (C

4. Location of Well *(Report location clearly and in accordance with any State requirements.*)*

At surface SESW / 210 FSL / 1614 FWL / LAT 32.094429 / LONG -104.163835

At proposed prod. zone SWSW / 25 FSL / 1170 FWL / LAT 32.064003 / LONG -104.166137

11. Sec., T. R. M. or Blk. and Survey or Area
SEC 26 / T25S / R27E / NMP

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

12. County or Parish
EDDY

13. State
NM

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

16. No of acres in lease
1200

17. Spacing Unit dedicated to this well
640

18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft.
3345 feet

19. Proposed Depth
9912 feet / 21054 feet

20. BLM/BIA Bond No. in file
FED: CA0329

21. Elevations (Show whether DF, KDB, RT, GL, etc.)
3172 feet

22. Approximate date work will start*
04/02/2020

23. Estimated duration
147 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	05/03/2019
Title: Permitting Specialist		
Approved by *(Signature)* (Electronic Submission)	Name *(Printed/Typed)* Cody Layton / Ph: (575)234-5959	Date 09/27/2019
Title: Assistant Field Manager Lands & Minerals	Office: CARLSBAD	

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

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

APPROVED WITH CONDITIONS

Approval Date: 09/27/2019

RWP 10-7-19

NSL

(Continued on page 2)

*(Instructions on page 2)

INSTRUCTIONS

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

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

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

ITEM 14: Needed only when location of well cannot readily be found by road from the land or lease description. A plat, or plats, separate or on the reverse side, showing the roads to, and the surveyed location of, the wen, and any other required information, should be furnished when required by Federal agency offices.

ITEMS 15 AND 18: If well is to be, or has been directionany drilled, give distances for subsurface location of hole in any present or objective productive zone.

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

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

NOTICES

The Privacy Act of 1974 and regulation in 43 CFR 2.48(d) provide that you be furnished the following information in connection with information required by this application.
AUTHORITY: 30 U.S.C. 181 et seq., 25 U.S.C. 396; 43 CFR 3160
PRINCIPAL PURPOSES: The information will be used to: (1) process and evaluate your application for a permit to drill a new oil, gas, or service wen or to reenter a plugged and abandoned well; and (2) document, for administrative use, information for the management, disposal and use of National Resource Lands and resources including (a) analyzing your proposal to discover and extract the Federal or Indian resources encountered; (b) reviewing procedures and equipment and the projected impact on the land involved; and (c) evaluating the effects of the proposed operation on the surface and subsurface water and other environmental impacts.
ROUTINE USE: Information from the record and/or the record win be transferred to appropriate Federal, State, and local or foreign agencies, when relevant to civil, criminal or regulatory investigations or prosecution, in connection with congressional inquiries and for regulatory responsibilities.
EFFECT OF NOT PROVIDING INFORMATION: Filing of this application and disclosure of the information is mandatory only if you elect to initiate a drilling or reentry operation on an oil and gas lease.

The Paperwork Reduction Act of 1995 requires us to inform you that:
The BLM conects this information to anow evaluation of the technical, safety, and environmental factors involved with drilling for oil and/or gas on Federal and Indian oil and gas leases. This information will be used to analyze and approve applications. Response to this request is mandatory only if the operator elects to initiate drilling or reentry operations on an oil and gas lease. The BLM would like you to know that you do not have to respond to this or any other Federal agency-sponsored information collection unless it displays a currently valid OMB control number.

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

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Additional Operator Remarks

Location of Well

1. SHL: SESW / 210 FSL / 1614 FWL / TWSP: 25S / RANGE: 27E / SECTION: 26 / LAT: 32.094429 / LONG: -104.163835 (TVD: 0 feet, MD: 0 feet)
   PPP: NWNW / 100 FNL / 1170 FWL / TWSP: 25S / RANGE: 27E / SECTION: 35 / LAT: 32.093497 / LONG: -104.165248 (TVD: 9912 feet, MD: 9912 feet)
   BHL: SWSW / 25 FSL / 1170 FWL / TWSP: 26S / RANGE: 27E / SECTION: 2 / LAT: 32.064003 / LONG: -104.166137 (TVD: 9912 feet, MD: 21054 feet)

BLM Point of Contact

Name: Priscilla Perez
Title: Legal Instruments Examiner
Phone: 5752345934
Email: pperez@blm.gov

Review and Appeal Rights

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

PECOS DISTRICT
DRILLING CONDITIONS OF APPROVAL

OPERATOR'S NAME:	Chevron USA Incorporated
LEASE NO.:	NMNM107369
WELL NAME & NO.:	Cicada Unit 39H
SURFACE HOLE FOOTAGE:	210'/S & 1614'/W
BOTTOM HOLE FOOTAGE	25'/S & 1170'/W
LOCATION:	Section 26, T.25 S., R.27 E., NMPM
COUNTY:	Eddy 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
Other	☑ Fluid Filled	☐ Cement Squeeze	☐ Pilot Hole
Special Requirements	☐ Water Disposal	☐ COM	☑ Unit

A. HYDROGEN SULFIDE

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

B. CASING

Primary Casing Design:

1. The **13-3/8** inch surface casing shall be set at approximately **450** feet (a minimum of **70 feet (Eddy County)** into the Rustler Anhydrite and above the salt) and cemented to the surface.

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

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

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

2. The minimum required fill of cement behind the **9-5/8** inch intermediate casing is:

Option 1 (Single Stage):

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

Option 2:

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

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

b. Second stage above DV tool:

- Cement to surface. If cement does not circulate, contact the appropriate BLM office.
  Wait on cement (WOC) time for a primary cement job is to include the lead cement slurry due to cave/karst or potash.

❖ In **High 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.

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

Option 1 (Single Stage):

- Cement should tie-back at least **200 feet** into previous casing string. Operator shall provide method of verification.

Option 2:

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

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

b. Second stage above DV tool:

- Cement should tie-back at least **200 feet** into previous casing string. Operator shall provide method of verification.

C. PRESSURE CONTROL

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

2.

Option 1:

a. Minimum working pressure of the blowout preventer (BOP) and related equipment (BOPE) required for drilling below the surface casing shoe shall be **3000 (3M)** psi.

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

Option 2:

1. Operator has proposed a multi-bowl wellhead assembly. This assembly will only be tested when installed on the surface casing. Minimum working pressure of the blowout preventer (BOP) and related equipment (BOPE) required for drilling below the surface casing shoe shall be **5000 (5M)** psi.

    a. Wellhead shall be installed by manufacturer's representatives, submit documentation with subsequent sundry.
    b. If the welding is performed by a third party, the manufacturer's representative shall monitor the temperature to verify that it does not exceed the maximum temperature of the seal.

c. Manufacturer representative shall install the test plug for the initial BOP test.
d. If the cement does not circulate and one inch operations would have been possible with a standard wellhead, the well head shall be cut off, cementing operations performed and another wellhead installed.
e. Whenever any seal subject to test pressure is broken, all the tests in OOGO2.III.A.2.i must be followed.

D. SPECIAL REQUIREMENT (S)

Unit Wells

The well sign for a unit well shall include the unit number in addition to the surface and bottom hole lease numbers. This also applies to participating area numbers. If a participating area has not been established, the operator can use the general unit designation, but will replace the unit number with the participating area number when the sign is replaced.

Commercial Well Determination

A commercial well determination shall be submitted after production has been established for at least six months.

GENERAL REQUIREMENTS

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

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

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

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

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

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

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

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

A. CASING

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

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

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

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

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

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

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

B. PRESSURE CONTROL

1. All blowout preventer (BOP) and related equipment (BOPE) shall comply with well control requirements as described in Onshore Oil and Gas Order No. 2 and API RP 53 Sec. 17.

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

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

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

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

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

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

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

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

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

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

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

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

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

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

C. DRILLING MUD

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

D. WASTE MATERIAL AND FLUIDS

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

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

NMK9242019

PECOS DISTRICT
SURFACE USE
CONDITIONS OF APPROVAL
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CONDITIONS OF APPROVAL

OPERATOR'S NAME:	Chevron USA Incorporated
WELL NAME & NO.:	Cicada Unit 37H
SURFACE HOLE FOOTAGE:	210'/S & 1564'/W
BOTTOM HOLE FOOTAGE	25'/S & 330'/W
LOCATION:	Section 26, T.25 S., R.27 E., NMPM
COUNTY:	Eddy County, New Mexico

OPERATOR'S NAME:	Chevron USA Incorporated
WELL NAME & NO.:	Cicada Unit 38H
SURFACE HOLE FOOTAGE:	210'/S & 1589'/W
BOTTOM HOLE FOOTAGE	25'/S & 330'/W
LOCATION:	Section 26, T.25 S., R.27 E., NMPM
COUNTY:	Eddy County, New Mexico

OPERATOR'S NAME:	Chevron USA Incorporated
WELL NAME & NO.:	Cicada Unit 39H
SURFACE HOLE FOOTAGE:	210'/S & 1614'/W
BOTTOM HOLE FOOTAGE	25'/S & 1170'/W
LOCATION:	Section 26, T.25 S., R.27 E., NMPM
COUNTY:	Eddy County, New Mexico

OPERATOR'S NAME:	Chevron USA Incorporated
WELL NAME & NO.:	Cicada Unit 40H
SURFACE HOLE FOOTAGE:	210'/S & 1639'/W
BOTTOM HOLE FOOTAGE	25'/S & 1254'/W
LOCATION:	Section 26, T.25 S., R.27 E., NMPM
COUNTY:	Eddy County, New Mexico

Approval Date: 09/27/2019

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

I. GENERAL PROVISIONS

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

II. PERMIT EXPIRATION

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

III. ARCHAEOLOGICAL, PALEONTOLOGY & HISTORICAL SITES

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

IV. NOXIOUS WEEDS

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

acceptable weed control methods, which include following EPA and BLM requirements and policies.

V. SPECIAL REQUIREMENT(S)

Cave/Karst Surface Mitigation

The following stipulations will be applied to minimize impacts during construction, drilling and production:

Construction:

General Construction:

- No blasting
- The BLM, Carlsbad Field Office, will be informed immediately if any subsurface drainage channels, cave passages, or voids are penetrated during construction, and no additional construction shall occur until clearance has been issued by the Authorized Officer.
- All linear surface disturbance activities will avoid sinkholes and other karst features to lessen the possibility of encountering near surface voids during construction, minimize changes to runoff, and prevent untimely leaks and spills from entering the karst drainage system.
- All spills or leaks will be reported to the BLM immediately for their immediate and proper treatment.

Pad Construction:

- The pad will be constructed and leveled by adding the necessary fill and caliche – no blasting.
- 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 (i.e. an 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 Construction:

- The pad will be constructed and leveled by adding the necessary fill and caliche – no blasting.
- All tank battery locations and facilities will be lined and bermed.
- The liner should be at least 20 mil in thickness and 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.

Road Construction:

- Turnout ditches and drainage leadoffs will not be constructed in such a manner as to alter the natural flow of water into or out of cave or karst features.
- Special restoration stipulations or realignment may be required if subsurface features are discovered during construction.

Buried Pipeline/Cable Construction:

- Rerouting of the buried line(s) may be required if a subsurface void is encountered during construction to minimize the potential subsidence/collapse of the feature(s) as well as the possibility of leaks/spills entering the karst drainage system.

Powerline Construction:

- 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.
- Special restoration stipulations or realignment may be required if subsurface voids are encountered.

Surface Flowlines Installation:

- Flowlines will be routed around sinkholes and other karst features to minimize the possibility of leaks/spills from entering the karst drainage system.

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.

- A leak detection plan will be submitted to BLM that incorporates an automatic shut off system (see below) to minimize the effects of an undesirable event that could negatively sensitive cave/karst resources.
- Well heads, pipelines (surface and buried), storage tanks, and all supporting equipment should be monitored regularly after installation to promptly identify and fix leaks.

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 groundwater concerns:

Closed Loop System:

- A closed loop system using steel tanks will be utilized during drilling – no pits
- All fluids and cuttings will be hauled off-site and disposed of properly at an authorized site

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:

- The kick off point 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 between surface and the base of the cave occurrence zone will be logged and reported in the drilling report.
- If a void of four feet or more and circulation losses greater than 70 percent occur simultaneously while drilling in any cave-bearing zone, regardless of the type of drilling machinery used, 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:

- Additional plugging conditions of approval may be required upon well abandonment in high and medium karst potential occurrence zones.
- The BLM will assess the situation and work with the operator to ensure proper plugging of the wellbore.

Pressure Testing:

- The operator will perform annual pressure monitoring 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.

Watershed

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.

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.

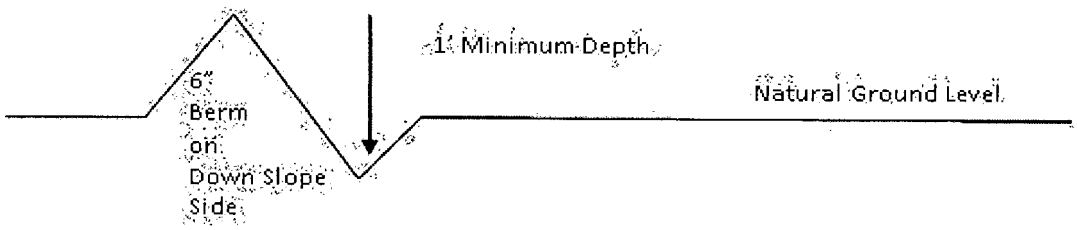
Ditching
Ditching shall be required on both sides of the road.

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.

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

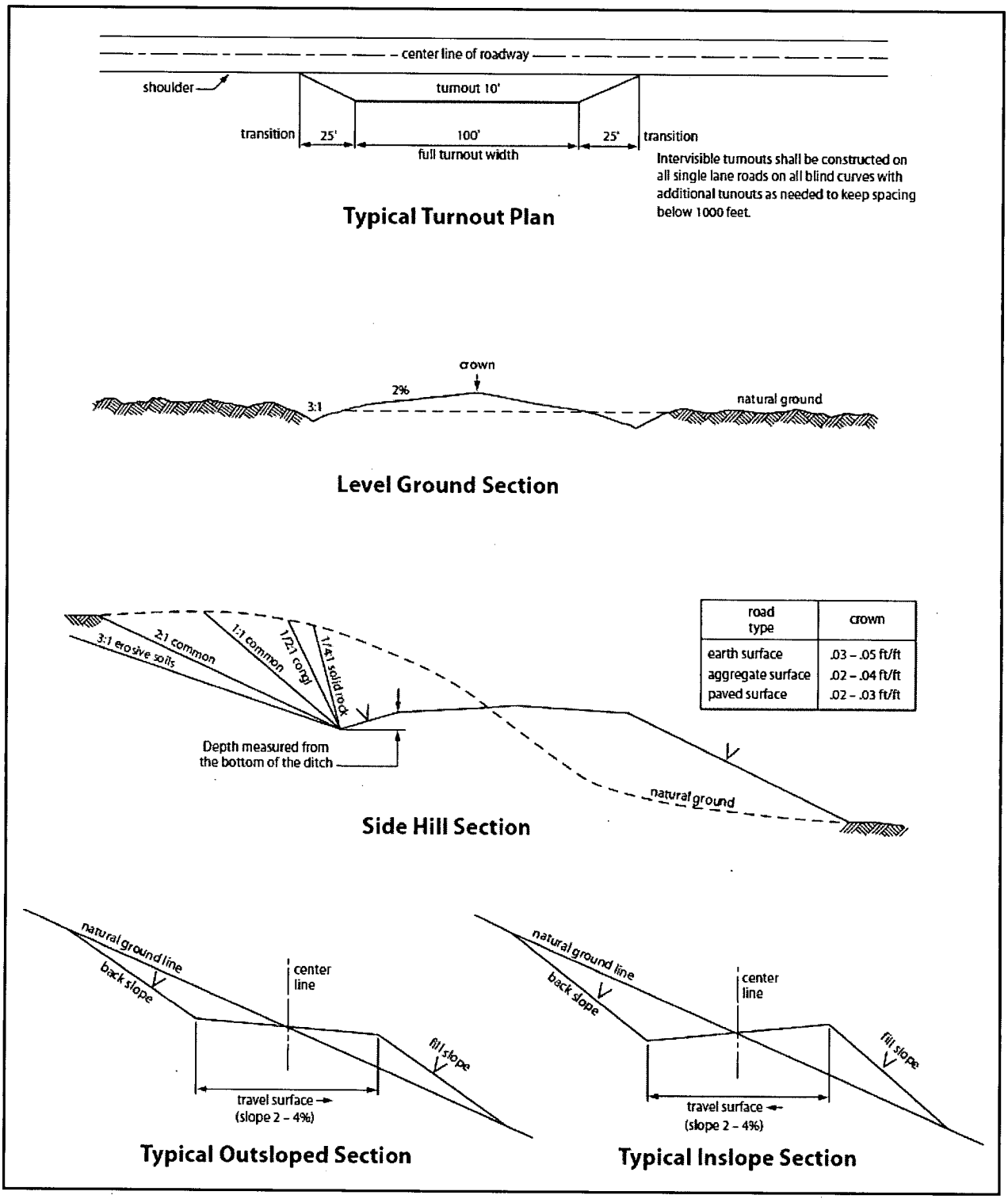


Figure 1. Cross-sections and plans for typical road sections representative of BLM resource or FS local and higher-class roads.

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 Grant and attachments, including stipulations, survey plat(s) and/or map(s), shall be on location during construction. BLM personnel may request to review 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. 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. Holder shall comply with all applicable Federal laws and regulations existing or hereafter enacted or promulgated. In any event, Holder shall comply with the Toxic Substances Control Act of 1976 as amended, 15 USC § 2601 *et seq.* (1982) with regard 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 in particular, 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. 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 provision applies without regard to whether a release is caused by Holder, its agent, or unrelated third parties.

4. Holder shall be liable for damage or injury to the United States to the extent provided by 43 CFR Sec. 2883.1-4. 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 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 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/she 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 Holder. Such action by the Authorized Officer shall not relieve Holder of any responsibility as provided herein.

6. All construction and maintenance activity shall 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 shall 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 shall be installed immediately adjacent to the outer surface pipeline. All construction and maintenance activity shall be confined to existing roads or right-of-ways.

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

8. 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 shall be "snaked" around hummocks and dunes rather than 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 shall be less than or equal to 4 inches and a working pressure below 125 psi.

STANDARD STIPULATIONS FOR 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.

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).

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

Midwest Hose
& Specialty, Inc.

Internal Hydrostatic Test Certificate

General Information		Hose Specifications	
Customer	PATTERSON UTI	Hose Assembly Type	Choke & Kill
MWH Sales Representative	ABYGAIL LOGAN	Certification	API 7K/FSL LEVEL2
Date Assembled	1/11/2018	Hose Grade	RED
Location Assembled	OKC	Hose Working Pressure	10000
Sales Order #	356503	Hose Lot # and Date Code	12860-09/17
Customer Purchase Order #	PO43901 RIG 257	Hose I.D. (Inches)	3.0"
Assembly Serial # (Pick Ticket #)	441774-1	Hose O.D. (Inches)	5.36"
Hose Assembly Length	60'	Armor (yes/no)	NO

Fittings			
End A		End B	
Stem (Part and Revision #)	R3.0X64AWB	Stem (Part and Revision #)	R3.0X64AWB
Stem (Heat #)	MM17710	Stem (Heat #)	MM17710
Ferrule (Part and Revision #)	RF3.0X5125	Ferrule (Part and Revision #)	RF3.0X5125
Ferrule (Heat #)	60864472	Ferrule (Heat #)	60864472
Connection Flange Hammer Union Part	4-1/16 10K	Connection (Part #)	4-1/16 10K
Connection (Heat #)		Connection (Heat #)	
Nut (Part #)		Nut (Part #)	
Nut (Heat #)		Nut (Heat #)	
Dies Used	5.37"	Dies Used	5.37"

Hydrostatic Test Requirements		
Test Pressure (psi)	15,000	Hose assembly was tested with ambient water temperature.
Test Pressure Hold Time (minutes)	16 1/4	

Date Tested	Tested By	Approved By
1/11/2018		

Midwest Hose
& Specialty, Inc.

Certificate of Conformity

Customer: **PATTERSON UTI**	*Customer P.O.#* **PO43901 RIG 257**
Sales Order # **356503**	*Date Assembled:* **1/11/2018**

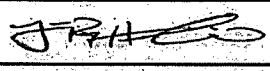
Specifications

Hose Assembly Type:	**Choke & Kill**	*Rig #*	**257**
Assembly Serial #	**441774-1**	*Hose Lot # and Date Code*	**12860-09/17**
Hose Working Pressure (psi)	**10000**	*Test Pressure (psi)*	**15000**
Hose Assembly Description:	**CKRED48-10K-6410K-6410K-60.00 FT-W/LIFTERS**		

We hereby certify that the above material supplied for the referenced purchase order to be true according to the requirements of the purchase order and current industry standards.

Supplier:
Midwest Hose & Specialty, Inc.
3312 S I-35 Service Rd
Oklahoma City, OK 73129

Comments:

Approved By	*Date*
	**1/11/2018**

Midwest Hose & Specialty, Inc.

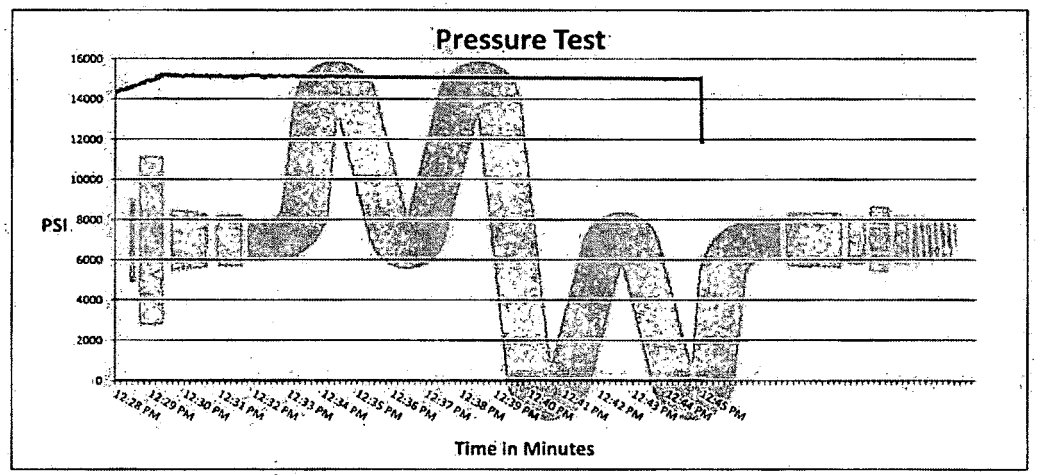
Internal Hydrostatic Test Graph

January 11, 2018

Customer: Patterson

Pick Ticket #: 441774

Hose Specifications		Verification	
Hose Type	Length	Type of Fitting	Coupling Method
C&K	60'	4 1/16 10K	Swage
I.D.	O.D.	Die Size	Final O.D.
3"	4.84"	5.37"	5.37"
Working Pressure	Burst Pressure	Hose Serial #	Hose Assembly Serial #
10000 PSI	Standard Safety Multiplier Applies	12860	441774-1



Test Pressure	Time Held at Test Pressure	Actual Burst Pressure	Peak Pressure
15000 PSI	16 1/4 Minutes		15351 PSI

Comments: Hose assembly pressure tested with water at ambient temperature.

Tested By: Zach Tillman

Approved By: James Hawkins

BLOWOUT PREVENTER SCHEMATIC

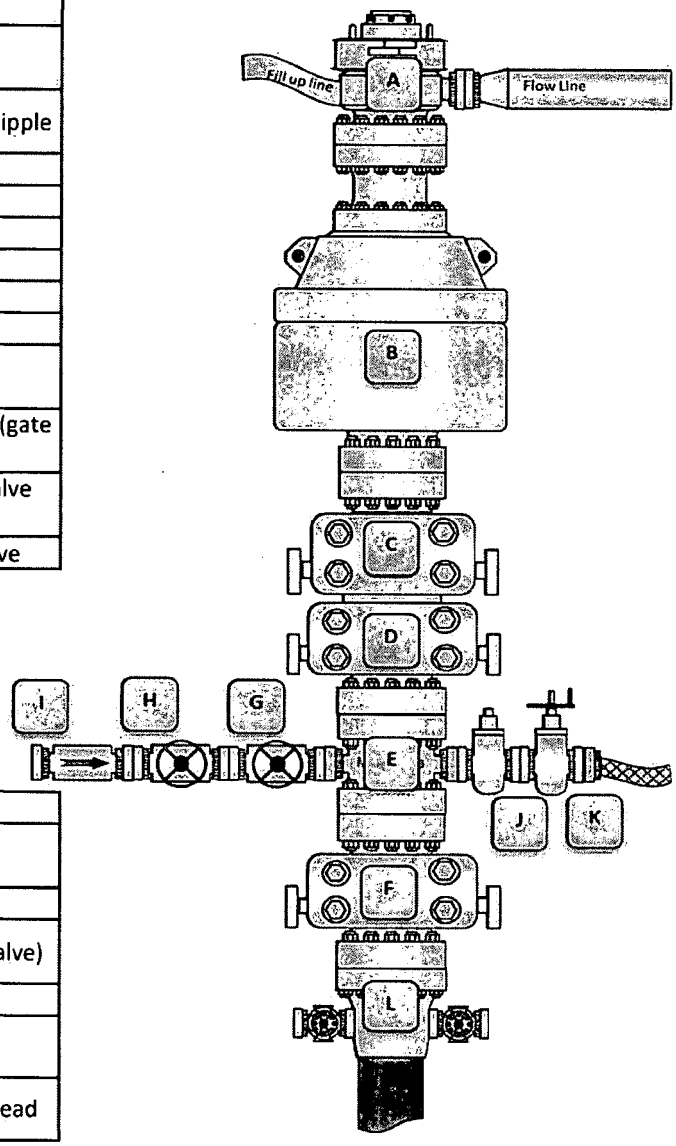
Operation:	Intermediate & Production
Minimum System operation pressure	5,000 psi

BOP Stack

Part	Size	Pressure Rating	Description
A	13-5/8"	N/A	Rotating Head/Bell nipple
B	13-5/8"	5,000	Annular
C	13-5/8"	5,000	Blind Ram
D	13-5/8"	5,000	Pipe Ram
E	13-5/8"	5,000	Mud Cross
F	13-5/8"	5,000	Pipe Ram

Kill Line

Part	Size	Pressure Rating	Description
G	2"	5,000	Inside Kill Line Valve (gate valve)
H	2"	5,000	Outside Kill Line Valve (gate valve)
I	2"	5,000	Kill Line Check valve



Choke line

Part	Size	Pressure Rating	Description
J	3"	5,000	HCR (gate valve)
K	3"	5,000	Manual HCR (gate valve)

Wellhead

Part	Size	Pressure Rating	Description
L	13-5/8"	5,000	FMC 5M/10M wellhead

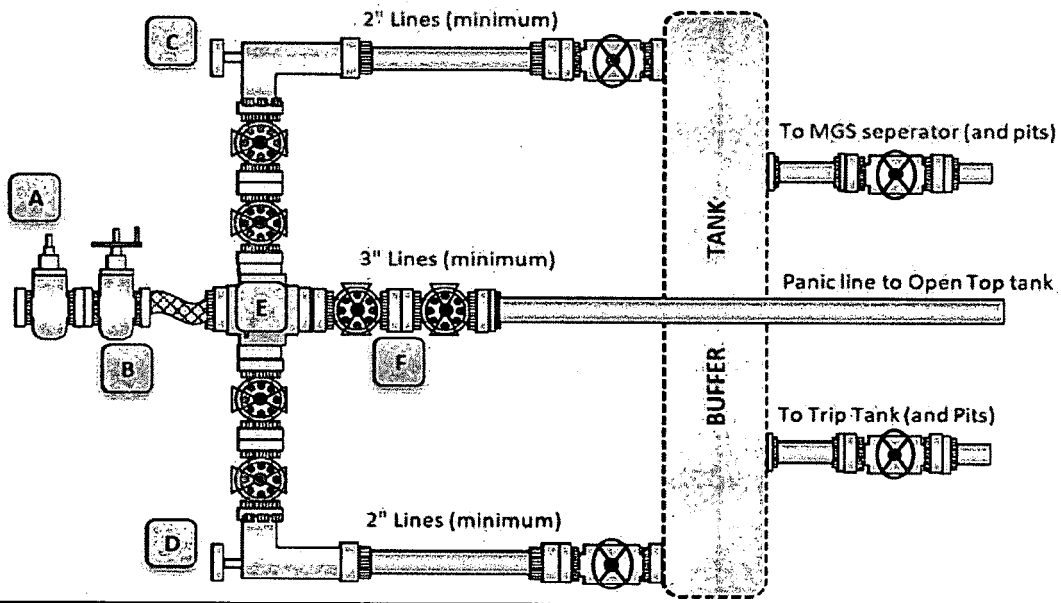
BOP Installation Checklist: *The following items must be verified and checked off prior to pressure testing BOP equipment*
The installed BOP equipment meets at least the minimum requirements (rating, type, size, configuration) as shown on this schematic. Components may be substituted for equivalent equipment rated to higher pressures. Additional components may be put into place as long as they meet or exceed the minimum pressure rating of the system.
All valves on the kill line and choke line will be full opening and will allow straight flow through.
The kill line and choke line will be straight unless turns use tee blocks or are targeted with running tees, and will be anchored to prevent whip and reduce vibration.
Manual (hand wheels) or automatic locking devices will be installed on all ram preventers. Hand wheels will also be install on all manual valves on the choke and kill line.
A valve will be installed in the closing line as close as possible to the annular preventer to act as a locking device. This valve will remain open unless accumulator is inoperative.
Upper kelly cock valve with handle will be available on rig floor along with saved valve and subs to fit all drill string connections in use.

CHOKE MANIFOLD SCHEMATIC

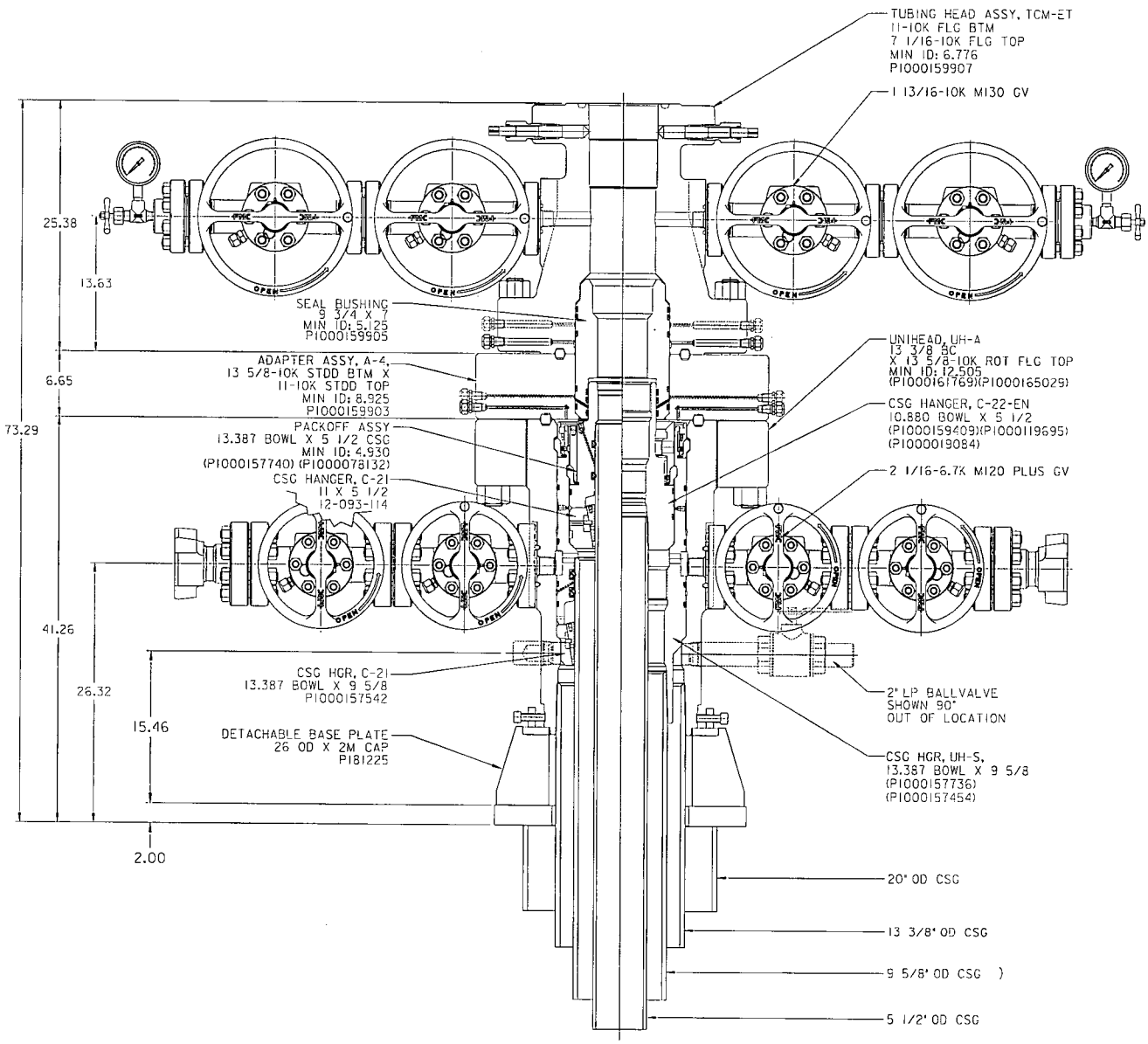
Operation:	Intermediate & Production
Minimum System operation pressure	5,000 psi

Choke Manifold

Part	Size	Pressure Rating	Description
A	3"	5,000	HCR (remotely operated)
B	3"	5,000	HCR (manually operated)
C	2"	5,000	Remotely operated choke
D	2"	5,000	Adjustable choke
E	3"	5,000	Crown valve with pressure gage
F	3"	5,000	Panic line valves



Choke Manifold Installation Checklist: *The following items must be verified and checked off prior to pressure testing BOP equipment*
The installed BOP equipment meets at least the minimum requirements (rating, type, size, configuration) as shown on this schematic. Components may be substituted for equivalent equipment rated to higher pressures. Additional components may be put into place as long as they meet or exceed the minimum pressure rating of the system.
Adjustable chokes may be remotely operated but will have backup hand pump for hydraulic actuation in case of loss of rig air or power.
Flare and panic lines will terminate a minimum of 150' from the wellhead. These lines will terminate at a location as per approved APD.
The choke line, kill line and choke manifold lines will be straight unless turns use tee blocks or targeted with running tees, and will be anchored to prevent whip and reduce vibrations. A variance will be submitted if a flexible choke line will be used.
All valves (except chokes) on choke line, kill line and choke manifold will be full opening and will allow straight through flow. This excludes any valves between the mud gas separator and shale shakers.
All manual valves will have hand wheels installed.
Flare systems will have an effective method for ignition.
All connections will be flanged, welded or clamped
If buffer tank is used, a valve will be used on all lines at any entry or exit point to or from the buffer tank.



6650 PSI UH-S

CHEVRON

20 X 13 3/8 X 9 5/8 X 5 1/2

QUOTELAYOUT
F110262
REF: DM100220685
DM100219485

SHEET 1 OF 5

REVISIONS		DESCRIPTION
A	1-22-16	
B	6-28-16	

SURFACE WELLHEAD LAYOUT,
UH-S,
20 X 13 3/8 X 9 5/8 X 5 1/2
CSG PROGRAM,
13 5/8-10K X 11-10K X 7 1/16-10K,
QUOTE FOR CHEVRON, ODESSA

DRAWN BY	D. NGUYEN	01-22-16
DRAFTING REVIEW	Z. MARQUEZ	06-28-16
DESIGN REVIEW	T. TANG	06-28-16
APPROVED BY	A. PLAZA	06-28-16

FMC Technologies

DRAWING NUMBER
DM10023344I

BLOWOUT PREVENTER SCHEMATIC

Operation:	Intermediate & Production
Minimum System operation pressure	5,000 psi

Minimum Requirements

Closing Unit and Accumulator Checklist

The following item must be performed, verified, and checked off at least once per well prior to low/high pressure testing of BOP equipment. This must be repeated after 6 months on the same well.

☐ **Precharge pressure for each accumulator bottle must fall within the range below. Bottles may be further charged with nitrogen gas only. Tested precharge pressures must be recorded for each individual bottle and kept on location through the end of the well. Test will be conducted prior to connecting unit to BOP stack.**

Check one that applies	Accumulator working pressure rating	Minimum acceptable operating pressure	Desired precharge pressure	Maximum acceptable precharge pressure	Minimum acceptable precharge pressure
☐	1500 psi	1500 psi	750 psi	800 psi	700 psi
☐	2000 psi	2000 psi	1000 psi	1100 psi	900 psi
☐	3000 psi	3000 psi	1000 psi	1100 psi	900 psi

☐ **Accumulator will have sufficient capacity to open the hydraulically-controlled choke line valve (if used), close all rams, close the annular preventer, and retain a minimum of 200 psi above the maximum acceptable precharge pressure (see table above) on the closing manifold without the use of the closing pumps. This test will be performed with test pressure recorded and kept on location through the end of the well**

☐ **Accumulator fluid reservoir will be double the usable fluid volume of the accumulator system capacity. Fluid level will be maintained at manufacturer's recommendations. Usable fluid volume will be recorded. Reservior capacity will be recorded. Reservoir fluid level will be recorded along with manufacturer's recommendation. All will be kept on location through the end of the well.**

☐ **Closing unit system will have two independent power sources (not counting accumulator bottles) to close the preventers.**

☐ **Power for the closing unit pumps will be available to the unit at all times so that the pumps will automatically start when the closing valve manifold pressure decreases to the pre-set level. It is recommended to check that air line to accumulator pump is "ON" during each tour change.**

☐ **With accumulator bottles isolated, closing unit will be capable of opening the hydraulically-operated choke line valve (if used) plus close the annular preventer on the smallest size drill pipe within 2 minutes and obtain a minimum of 200 psi above maximum acceptable precharge pressure (see table above) on the closing manifold. Test pressure and closing time will be recorded and kept on location through the end of the well.**

☐ **Master controls for the BOPE system will be located at the accumulator and will be capable of opening and closing all preventer and the choke line valve (if used)**

☐ **Remote controls for the BOPE system will be readily accessible (clear path) to the driller and located on the rig floor (not in the dog house). Remote controls will be capable of closing all preventers.**

☐ **Record accumulator tests in drilling reports and IADC sheet**

BOPE 5K Test Checklist

The following items must be checked off prior to beginning test:

- ☐ BLM will be given at least 4 hour notice prior to beginning BOPE testing.
- ☐ Valve on casing head below test plug will be open.
- ☐ Test will be performed using clear water.

The following items must be performed during the BOPE testing:

- ☐ BOPE will be pressure tested when initially installed, whenever any seal subject to test pressure is broken, following related repairs, and at a minimum of 30 day intervals. **Test pressure and times will be recorded by a 3rd party on a test charge and kept on location through the end of the well.**
- ☐ Test plug will be used.
- ☐ Ram type preventer and all related well control equipment will be tested to 250 psi (low) and 5,000 psi (high).
- ☐ Annular type preventer will be tested to 250 psi (low) and 3,500 psi (high).
- ☐ Valves will be tested fromt eh working pressure side with all downstream valves open. The check valve will be held open to test the kill line valve(s).
- ☐ Each pressure test will be held for 10 minutes with no allowable leak off.
- ☐ Master controls and remote controls to the closing unit (accumulator) must be function tested as part of the BOPE test.
- ☐ Record BOP tests and pressures in drilling reports and IADC sheet.

For the latest performance data, always visit our website: www.tenaris.com

May 31 2017 — Version vctp3.11
Authenticate

Tenaris

Connection: TenarisXP® BTC
Casing/Tubing: CAS
Coupling Option: REGULAR

Size: 5.500 in.
Wall: 0.361 in.
Weight: 20.00 lbs/ft
Grade: P110-IC
Min. Wall Thickness: 87.5 %

PIPE BODY DATA

GEOMETRY

Nominal OD	**5.500** in.	Nominal Weight	**20.00** lbs/ft	Standard Drift Diameter	**4.653** in.
Nominal ID	**4.778** in.	Wall Thickness	**0.361** in.	Special Drift Diameter	**N/A**
Plain End Weight	**19.83** lbs/ft				

PERFORMANCE

Body Yield Strength	**641** x 1000 lbs	Internal Yield	**12630** psi	SMYS	**110000** psi
Collapse	**12100** psi				

TENARISXP® BTC CONNECTION DATA

GEOMETRY

Connection OD	**6.100** in.	Coupling Length	**9.450** in.	Connection ID	**4.766** in.
Critical Section Area	**5.828** sq. in.	Threads per in.	**5.00**	Make-Up Loss	**4.204** in.

PERFORMANCE

Tension Efficiency	**100** %	Joint Yield Strength	**641** x 1000 lbs	Internal Pressure Capacity(1)	**12630** psi
Structural Compression Efficiency	**100** %	Structural Compression Strength	**641** x 1000 lbs	Structural Bending(2)	**92** °/100 ft
External Pressure Capacity	**12100** psi				

ESTIMATED MAKE-UP TORQUES(3)

Minimum	**11270** ft-lbs	Optimum	**12520** ft-lbs	Maximum	**13770** ft-lbs

OPERATIONAL LIMIT TORQUES

Operating Torque	**21500** ft-lbs	Yield Torque	**23900** ft-lbs		

BLANKING DIMENSIONS

Blanking Dimensions

(1) Internal Pressure Capacity related to structural resistance only. Internal pressure leak resistance as per section 10.3 API 5C3 / ISO 10400 - 2007.

(2) Structural rating, pure bending to yield (i.e no other loads applied)

(3) Torque values calculated for API Modified thread compounds with Friction Factor=1. For other thread compounds please contact us at licensees@oilfield.tenaris.com. Torque values may be further reviewed.

For additional information, please contact us at contact-tenarishydril@tenaris.com

Tenaris

Wed Jun 17 2015

Casing and Tubing Performance Dat

PIPE BODY DATA

GEOMETRY

Outside Diameter	**13.375 in**	Wall Thickness	**0.380 in**	API Drift Diameter	**12.459 in**
Nominal Weight	**54.50 lbs/ft**	Nominal ID	**12.615 in**	Alternative Drift Diameter	**n.a.**
Plain End Weight	**52.79 lbs/ft**	Nominal cross section	**15.513 in**		

PERFORMANCE

Steel Grade	**J55**	Minimum Yield	**55,000 psi**	Minimum Ultimate	**75,000 psi**
Tension Yield	**853,000 in**	Internal Pressure Yield	**2,730 psi**	Collapse Pressure	**1,130 psi**
Available Seamless	**Yes**	Available Welded	**Yes**		

CONNECTION DATA

TYPE: STC

GEOMETRY

Coupling Reg OD	**14.375 in**	Threads per in	**8**	Thread turns make up	**3.5**

PERFORMANCE

Steel Grade	**J55**	Coupling Min Yield	**55,000 psi**	Coupling Min Ultimate	**75,000 psi**
Joint Strength	**514,000 lbs**			Internal Pressure Resistance	**2,730 psi**

For the latest performance data, always visit our website: www.tenaris.com

February 08 2017

Connection: TenarisXP® BTC
Casing/Tubing: CAS
Coupling Option: REGULAR

Size: 9.625 in.
Wall: 0.435 in.
Weight: 43.50 lbs/ft
Grade: L80.1
Min. Wall Thickness: 87.5 %

PIPE BODY DATA

GEOMETRY

Nominal OD	**9.625** in.	Nominal Weight	**43.50** lbs/ft	Standard Drift Diameter	**8.599** in.
Nominal ID	**8.755** in.	Wall Thickness	**0.435** in.	Special Drift Diameter	**N/A**
Plain End Weight	**42.73** lbs/ft				

PERFORMANCE

Body Yield Strength	**1005** x 1000 lbs	Internal Yield	**6330** psi	SMYS	**80000** psi
Collapse	**3810** psi				

TENARISXP® BTC CONNECTION DATA

GEOMETRY

Connection OD	**10.625** in.	Coupling Length	**10.825** in.	Connection ID	**8.743** in.
Critical Section Area	**12.559** sq. in.	Threads per in.	**5.00**	Make-Up Loss	**4.891** in.

PERFORMANCE

Tension Efficiency	**100** %	Joint Yield Strength	**1005** x 1000 lbs	Internal Pressure Capacity[1]	**6330** psi
Structural Compression Efficiency	**100** %	Structural Compression Strength	**1005** x 1000 lbs	Structural Bending[2]	**38** °/100 ft
External Pressure Capacity	**3810** psi				

ESTIMATED MAKE-UP TORQUES[3]

Minimum	**20240** ft-lbs	Optimum	**22490** ft-lbs	Maximum	**24740** ft-lbs

OPERATIONAL LIMIT TORQUES

Operating Torque	**ASK**	Yield Torque	**45900** ft-lbs		

BLANKING DIMENSIONS

Blanking Dimensions

(1) Internal Pressure Capacity related to structural resistance only. Internal pressure leak resistance as per section 10.3 API 5C3 / ISO 10400 - 2007.

(2) Structural rating, pure bending to yield (i.e no other loads applied)

(3) Torque values calculated for API Modified thread compounds with Friction Factor=1. For other thread compounds please contact us at licensees@oilfield.tenaris.com. Torque values may be further reviewed.

For additional information, please contact us at contact-tenarishydril@tenaris.com

1. **FORMATION TOPS**

The estimated tops of important geologic markers are as follows:

FORMATION	SUB-SEA TVD	KBTVD	MD
Castile		954	
Lamar		2,290	
Bell Canyon		2,334	
Cherry Canyon		3,122	
Brushy Canyon		4,247	
Avalon		6,005	
First Bone Spring		6,852	
Second Bone Spring		7,293	
Third Bone Spring		8,632	
Wolfcamp A		8,974	
Wolfcamp C		9,783	
Wolfcamp C Target		9,912	21054

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		450
Water	Castile	954
Water	Cherry Canyon	3,122
Oil/Gas	Brushy Canyon	4,247
Oil/Gas	Avalon	6,005
Oil/Gas	First Bone Spring	6,852
Oil/Gas	Second Bone Spring	7,293
Oil/Gas	Third Bone Spring	8,632
Oil/Gas	Wolfcamp A	8,974
Oil/Gas	Wolfcamp C	9,783

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

3. **BOP EQUIPMENT**

Chevron will have a minimum of a 5,000 psi rig stack (see proposed schematic) for drill out below surface casing. The Wolfcamp is not exposed until drill out of the intermediate casing, and the stack will be tested as specified in the attached testing requirements for 5K Stacks. 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. Flex choke hose will be used for all wells on the pad (see attached specs). Chevron requests a variance to use a CoFlex hose with a metal protective covering that will be utilized between the BOP and Choke manifold. Please refer to the attached testing and specification documents. BOP test will be conducted by a third party.

Chevron requests a variance to use a FMC Technologies UH-S Multibowl wellhead, which will be run through the rig floor 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 Technologies 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.

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'	450'	17-1/2"	13-3/8"	54.5 #	J-55	BTC	New
Intermediate	0'	9,074'	12-1/4"	9-5/8"	43.5 #	L-80IC	LTC	New
Production	0'	21,054'	8-1/2"	5-1/2"	20.0 #	P-110	TXP BTC	New

b. Casing design subject to revision based on geologic conditions encountered and actual formation tops.

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 recalculated & 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: 450' TVD
Intermediate Casing: 9241' TVD
Intermediate Liner Casing: 10369' TVD
Production Casing: 21,291' MD/10,369' TVD

Casing String	Min SF Burst	Min SF Collapse	Min SF Tension	Min SF Tri-Axial
Surface	1.41	5.09	3.56	1.54
Intermediate	1.40	1.74	1.81	1.49
Production	1.11	1.53	2.35	1.20

For alternate casing design with contingency:

Casing String	Min SF Burst	Min SF Collapse	Min SF Tension	Min SF Tri-Axial
Intermediate Liner	2.16	2.07	2.11	2.51
Production	1.11	1.70	1.71	1.20

The following worst case load cases were considered for calculation of the above Min. Safety Factors:

Burst Design	Surf	Int	Liner	Prod
Pressure Test- Surface, Int, Prod Csg P extern Mud weight above TOC, PP below P intern Test psi + next section heaviest mud in csg	X	X	X	X
Displace to Gas- Surf Csg P extern Mud weight above TOC, PP below P intern Dry Gas from Next Csg Point	X			
Gas over mud (60/40) - Int Csg/Liner P extern Mud weight above TOC, PP below P intern 60% gas over 40% mud from hole TD PP		X	X	
Stimulation (Frac) Pressures- Prod Csg P extern Mud weight above TOC, PP below P intern Max inj pressure w/ heaviest injected fluid				X
Tubing leak- Prod Csg (packer at KOP) P extern Mud weight above TOC, PP below P intern Leak just below surf, 8.45 ppg packer fluid				X
Collapse Design	Surf	Int	Liner	Prod
Full Evacuation P extern Mud weight gradient P intern none	X	X	X	X
Cementing- Surf, Int, Prod Csg P extern Wet cement P intern displacement fluid - water	X	X	X	X
Tension Design	Surf	Int	Liner	Prod
100k lb overpull	X	X	X	X

Slurry	Type	Top	Bottom	Weight	Yield	%Excess	Sacks	Water	Volume	Additives
Surface				(ppg)	(cu ft/sk)	Open Hole		gal/sk	bbls	
Tail	Class C	0'	450'	14.8	1.33	50	491	6.32	116	Extender, Antifoam, Retarder
Intermediate Csg - Stage 1										
Lead	Class C	2,097'	8,074'	11.9	2.47	100	1515	13.95	667	Extender, Antifoam, Retarder, Viscosifier
Tail	Class C	8,074'	9,074'	14.8	1.33	50	381	6.30	90	Extender, Antifoam, Retarder, Viscosifier
Intermediate Csg - Stage 2 (DV tool @ +/- 2097')										
Lead	Class C	0'	1,597'	11.9	2.47	100	359	14.00	158	Extender, Antifoam, Retarder, Viscosifier
Tail	Class C	1,597'	2,097'	14.8	1.33	50	176	6.32	42	Extender, Antifoam, Retarder, Viscosifier
Production										
Lead	Class C	8,774'	20,054'	14.5	1.4	100	3644	6.77	910	Extender, Antifoam, Retarder, Viscosifier
Tail	Class H	20,054'	21,054'	15	2.19	50	214	9.57	84	Extender, Antifoam, 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. No
4. Intermediate casing cement job will be a 2 stage job with DV tool set at the base of Lamar.

From	To	Type	Weight	Viscosity	Filtrate	Notes
0'	450'	Spud Mud	8.3 - 8.9	28-30	N/C	
450'	9,074'	OBM	8.7 - 9.6	10-20	10-12	
9,074'	21,054'	OBM	9.0 - 13.6	10-15	15-25	Due to wellbore stability, the mud program may exceed the MW weight window needed to maintain overburden of pore pressure.

A closed system will be used 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
Mudlogs	2 man mudlog	Int Csg to TD	Drillout of Int Csg
LWD	MWD Gamma	Int. and Prod. Hole	While Drilling

c. Conventional whole core samples are not planned.
d. A directional survey will be run.

8. ABNORMAL PRESSURES AND HYDROGEN SULFIDE

a. No abnormal pressure or temperatures are expected. Estimated BHP is: 4,829 psi

b. Hydrogen sulfide gas is not anticipated. An H2S Contingency plan is attached with this APD in the event that H2S is encountered

H_2S Preparedness and Contingency Plan Summary

CICADA UNIT 37H, 38H, 39H, 40H

Training

MCBU Drilling and Completions H_2S training requirements are intended to define the minimum level of training required for employees, contractors and visitors to enter or perform work at MCBU Drilling and Completions locations that have known concentrations of H_2S.

Awareness Level

Employees and visitors to MCBU Drilling and Completions locations that have known concentrations of H_2S, who are not required to perform work in H_2S areas, will be provided with an awareness level of H_2S training prior to entering any H_2S areas. At a minimum, awareness level training will include:

1. Physical and chemical properties of H_2S
2. Health hazards of H_2S
3. Personal protective equipment
4. Information regarding potential sources of H_2S
5. Alarms and emergency evacuation procedures

Awareness level training will be developed and conducted by personnel who are qualified either by specific training, educational experience and/or work-related background.

Advanced Level H_2S Training

Employees and contractors required to work in areas that may contain H_2S will be provided with Advanced Level H_2S training prior to initial assignment. In addition to the Awareness Level requirements, Advanced Level H_2S training will include:

1. H_2S safe work practice procedures;
2. Emergency contingency plan procedures;
3. Methods to detect the presence or release of H_2S (e.g., alarms, monitoring equipment), including hands-on training with direct reading and personal monitoring H_2S equipment.
4. Basic overview of respiratory protective equipment suitable for use in H_2S environments. Note: Employees who work at sites that participate in the Chevron Respirator User program will require separate respirator training as required by the MCBU Respiratory Protection Program;
5. Basic overview of emergency rescue techniques, first aid, CPR and medical evaluation procedures. Employees who may be required to perform "standby" duties are required to receive additional first aid and CPR training, which is not covered in the Advanced Level H_2S training;
6. Proficiency examination covering all course material.

Advanced H_2S training courses will be instructed by personnel who have successfully completed an appropriate H_2S train-the-trainer development course (ANSI/ASSE Z390.1-2006) or who possess significant past experience through educational or work-related background.

H_2S Preparedness and Contingency Plan Summary

H_2S Training Certification

All employees and visitors will be issued an H_2S training certification card (or certificate) upon successful completion of the appropriate H_2S training course. Personnel working in an H_2S environment will carry a current H_2S training certification card as proof of having received the proper training on their person at all times.

Briefing Area

A minimum of two briefing areas will be established in locations that at least one area will be up-wind from the well at all times. Upon recognition of an emergency situation, all personnel should assemble at the designated upwind briefing areas for instructions.

H_2S Equipment

Respiratory Protection

a) Six 30 minute SCBAs – 2 at each briefing area and 2 in the Safety Trailer.

b) Eight 5 minute EBAs – 5 in the dog house at the rig floor, 1 at the accumulator, 1 at the shale shakers and 1 at the mud pits.

Visual Warning System

a) One color code sign, displaying all possible conditions, will be placed at the entrance to the location with a flag displaying the current condition.

b) Two windsocks will be on location, one on the dog house and one on the Drill Site Manager's Trailer.

H_2S Detection and Monitoring System

a) H_2S monitoring system (sensor head, warning light and siren) placed throughout rig.

- Drilling Rig Locations: at a minimum, in the area of the Shale shaker, rig floor, and bell nipple.
- Workover Rig Locations: at a minimum, in the area of the Cellar, rig floor and circulating tanks or shale shaker.

Well Control Equipment

a) Flare Line 150' from wellhead with igniter.

b) Choke manifold with a remotely operated choke.

c) Mud / gas separator

Mud Program

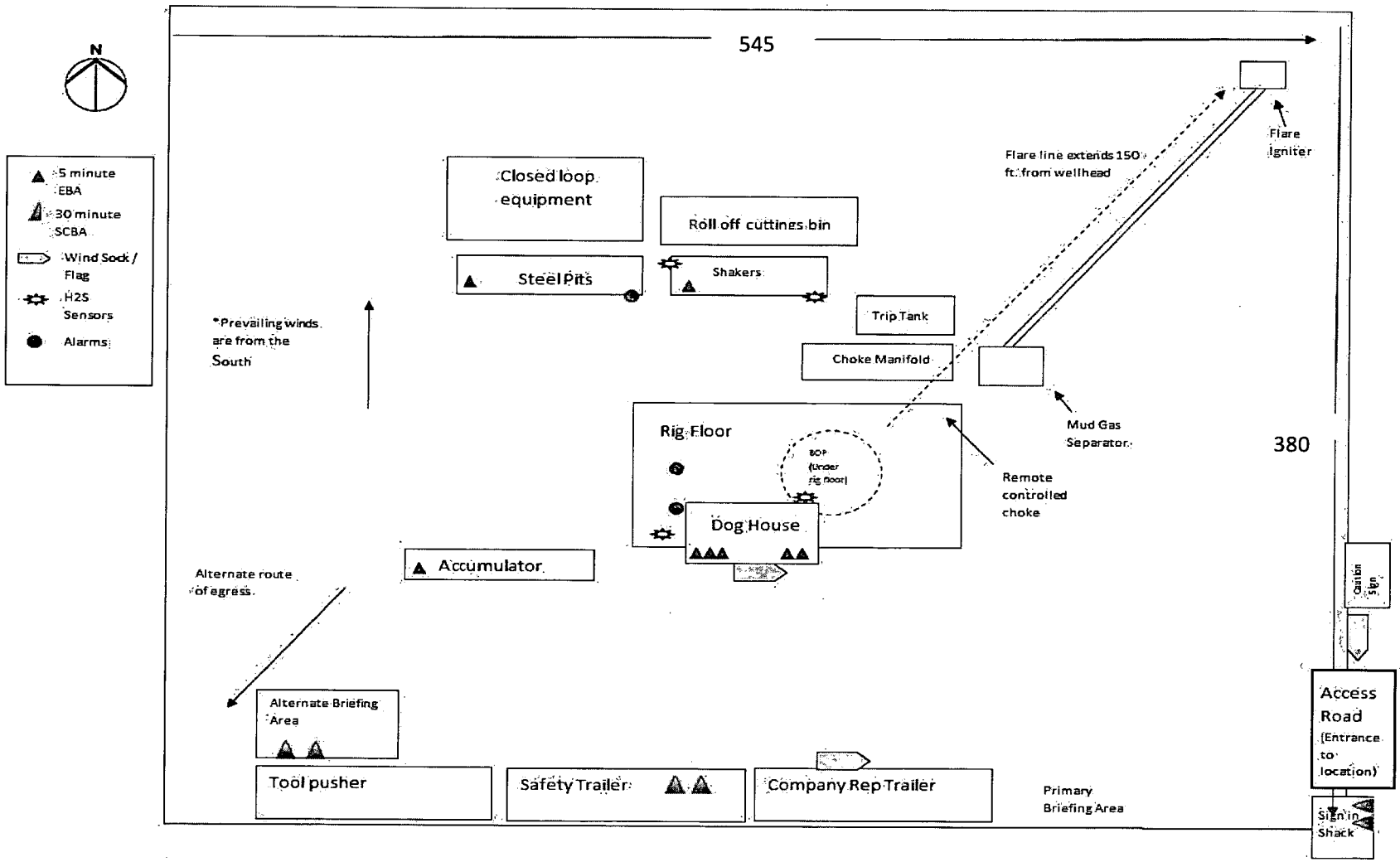
In the event of drilling, completions, workover and well servicing operations involving a hydrogen sulfide concentration of 100 ppm or greater the following shall be considered:

1. Use of a degasser
2. Use of a zinc based mud treatment
3. Increasing mud weight

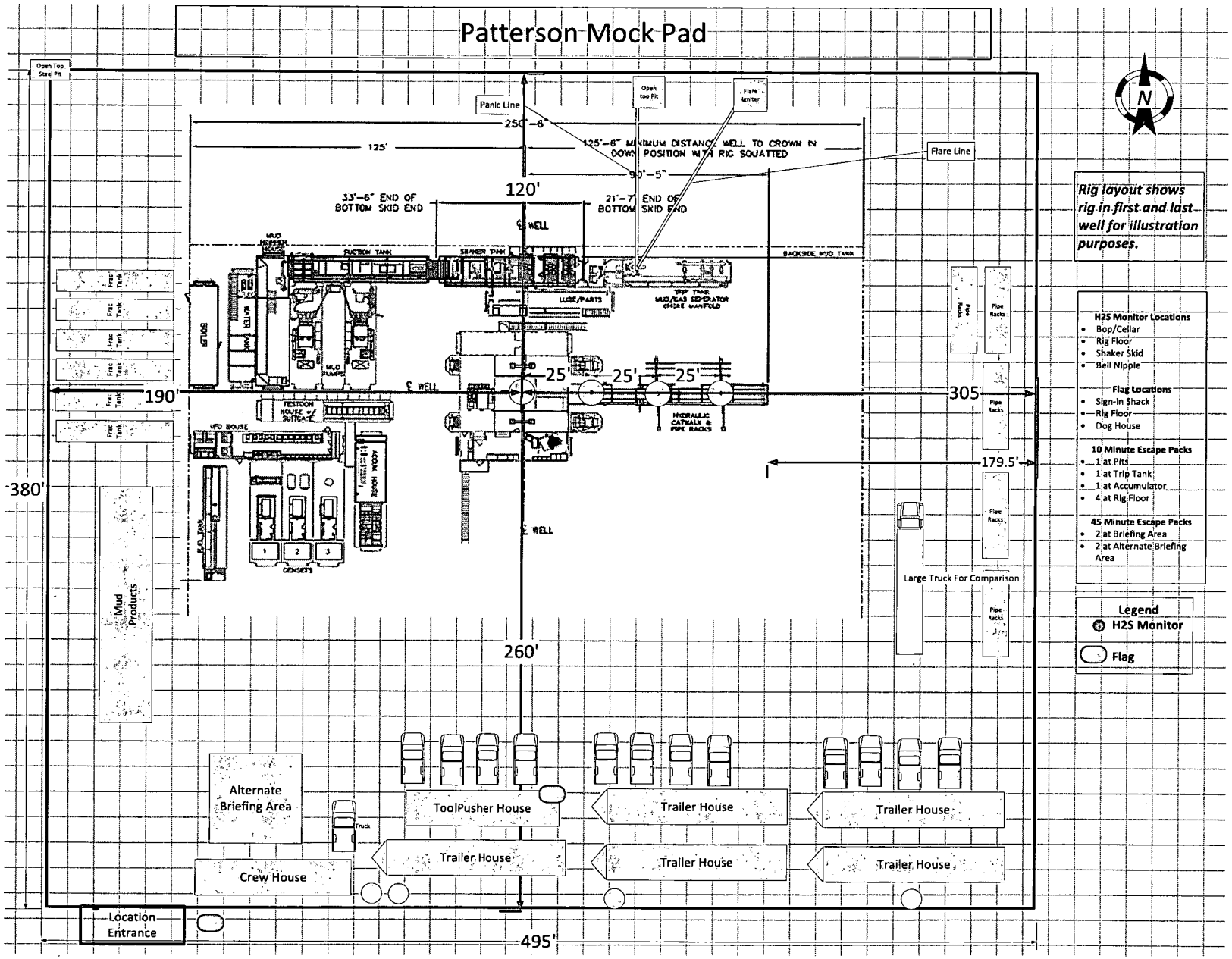
Public Safety - Emergency Assistance

Agency	Telephone Number
Eddy County Sheriff's Department	575-887-7551
Carlsbad Fire Department	575-885-3125
Carlsbad Medical Center	575-887-4100
Eddy County Emergency Management	575-885-3581
Poison Control Center	800-222-1222

H_2S Preparedness and Contingency Plan Summary



Patterson Mock Pad



N

Rig layout shows rig in first and last well for illustration purposes.

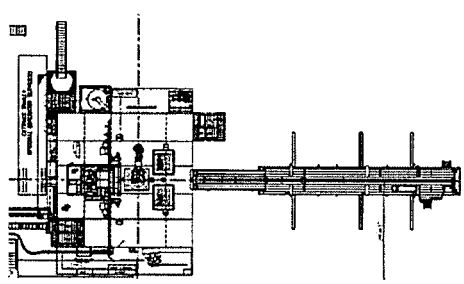
H2S Monitor Locations
- Bop/Cellar
- Rig Floor
- Shaker Skid
- Bell Nipple

Flag Locations
- Sign-In Shack
- Rig Floor
- Dog House

10 Minute Escape Packs
- 1 at Pits
- 1 at Trip Tank
- 1 at Accumulator
- 4 at Rig Floor

45 Minute Escape Packs
- 2 at Briefing Area
- 2 at Alternate Briefing Area

Legend
- H2S Monitor
- Flag



Schlumberger

Chevron

Chevron Cicada Unit 39H Rev0 kFc 09Apr19 Proposal Geodetic Report

(Def Plan)

Report Date:	April 12, 2019 - 12:49 AM	**Survey / DLS Computation:**	Minimum Curvature / Lubinski
Client:	Chevron	**Vertical Section Azimuth:**	181.390 ° (Grid North)
Field:	NM Eddy County (NAD 27)	**Vertical Section Origin:**	0.000 ft, 0.000 ft
Structure / Slot:	Chevron Cicada Unit Pkg 12 / 39H	**TVD Reference Datum:**	RKB = 28ft
Well:	Cicada Unit 039H	**TVD Reference Elevation:**	3200.000 ft above MSL
Borehole:	Cicada Unit 039H	**Seabed / Ground Elevation:**	3172.000 ft above MSL
UWI / API#:	Unknown / Unknown	**Magnetic Declination:**	7.196 °
Survey Name:	Chevron Cicada Unit 39H Rev0 kFc 09Apr19	**Total Gravity Field Strength:**	998.4396mgn (9.80665 Based)
Survey Date:	April 09, 2019	**Gravity Model:**	GARM
Tort / AHD / DDI / ERD Ratio:	130.531 ° / 11842.453 ft / 6.516 / 1.195	**Total Magnetic Field Strength:**	47836.580 nT
Coordinate Reference System:	NAD27 New Mexico State Plane, Eastern Zone, US Feet	**Magnetic Dip Angle:**	59.754 °
Location Lat / Long:	N 32° 5' 39.50637", W 104° 9' 48.03627"	**Declination Date:**	April 09, 2019
Location Grid N/E Y/X:	N 398074.000 ftUS, E 552642.000 ftUS	**Magnetic Declination Model:**	HDGM 2019
CRS Grid Convergence Angle:	0.0903 °	**North Reference:**	Grid North
Grid Scale Factor:	0.99991226	**Grid Convergence Used:**	0.0903 °
Version / Patch:	2.10.753.0	**Total Corr Mag North->Grid North:**	7.1053 °
		Local Coord Referenced To:	Well Head

Comments	MD (ft)	Incl (°)	Azim Grid (°)	TVD (ft)	VSEC (ft)	NS (ft)	EW (ft)	DLS (°/100ft)	Northing (ftUS)	Easting (ftUS)	Latitude (N/S ° ' ")	Longitude (E/W ° ' ")
Surface	0.00	0.00	0.00	0.00	0.00	0.00	0.00	N/A	398074.00	552642.00	N 32 5 39.51	W 104 9 48.04
	100.00	0.00	317.77	100.00	0.00	0.00	0.00	0.00	398074.00	552642.00	N 32 5 39.51	W 104 9 48.04
	200.00	0.00	317.77	200.00	0.00	0.00	0.00	0.00	398074.00	552642.00	N 32 5 39.51	W 104 9 48.04
	300.00	0.00	317.77	300.00	0.00	0.00	0.00	0.00	398074.00	552642.00	N 32 5 39.51	W 104 9 48.04
	400.00	0.00	317.77	400.00	0.00	0.00	0.00	0.00	398074.00	552642.00	N 32 5 39.51	W 104 9 48.04
13 3/8" Casing	*450.00*	*0.00*	*317.77*	*450.00*	*0.00*	*0.00*	*0.00*	*0.00*	*398074.00*	*552642.00*	*N 32 5 39.51*	*W 104 9 48.04*
	500.00	0.00	317.77	500.00	0.00	0.00	0.00	0.00	398074.00	552642.00	N 32 5 39.51	W 104 9 48.04
	600.00	0.00	317.77	600.00	0.00	0.00	0.00	0.00	398074.00	552642.00	N 32 5 39.51	W 104 9 48.04
	700.00	0.00	317.77	700.00	0.00	0.00	0.00	0.00	398074.00	552642.00	N 32 5 39.51	W 104 9 48.04
	800.00	0.00	317.77	800.00	0.00	0.00	0.00	0.00	398074.00	552642.00	N 32 5 39.51	W 104 9 48.04
	900.00	0.00	317.77	900.00	0.00	0.00	0.00	0.00	398074.00	552642.00	N 32 5 39.51	W 104 9 48.04
Castile (CSTL)	*954.00*	*0.00*	*317.77*	*954.00*	*0.00*	*0.00*	*0.00*	*0.00*	*398074.00*	*552642.00*	*N 32 5 39.51*	*W 104 9 48.04*
Build 1.5°/100ft	1000.00	0.00	317.77	1000.00	0.00	0.00	0.00	0.00	398074.00	552642.00	N 32 5 39.51	W 104 9 48.04
	1100.00	1.50	317.77	1099.99	-0.95	0.97	-0.88	1.50	398074.97	552641.12	N 32 5 39.52	W 104 9 48.05
	1200.00	3.00	317.77	1199.91	-3.79	3.88	-3.52	1.50	398077.88	552638.48	N 32 5 39.54	W 104 9 48.08
	1300.00	4.50	317.77	1299.69	-8.52	8.72	-7.91	1.50	398082.72	552634.09	N 32 5 39.59	W 104 9 48.13
	1400.00	6.00	317.77	1399.27	-15.15	15.49	-14.06	1.50	398089.49	552627.94	N 32 5 39.66	W 104 9 48.20
	1500.00	7.50	317.77	1498.57	-23.66	24.20	-21.96	1.50	398098.19	552620.04	N 32 5 39.75	W 104 9 48.29
	1600.00	9.00	317.77	1597.54	-34.04	34.82	-31.61	1.50	398108.82	552610.40	N 32 5 39.85	W 104 9 48.40
Hold	1633.36	9.50	317.77	1630.47	-37.93	38.79	-35.21	1.50	398112.79	552606.79	N 32 5 39.89	W 104 9 48.44
	1700.00	9.50	317.77	1696.19	-45.89	46.94	-42.60	0.00	398120.93	552599.40	N 32 5 39.97	W 104 9 48.53
	1800.00	9.50	317.77	1794.82	-57.84	59.16	-53.70	0.00	398133.15	552588.31	N 32 5 40.09	W 104 9 48.66
	1900.00	9.50	317.77	1893.44	-69.79	71.38	-64.79	0.00	398145.37	552577.22	N 32 5 40.21	W 104 9 48.79
	2000.00	9.50	317.77	1992.07	-81.74	83.60	-75.88	0.00	398157.59	552566.12	N 32 5 40.33	W 104 9 48.92
	2100.00	9.50	317.77	2090.70	-93.69	95.82	-86.98	0.00	398169.81	552555.03	N 32 5 40.46	W 104 9 49.05
	2200.00	9.50	317.77	2189.33	-105.63	108.05	-98.07	0.00	398182.04	552543.94	N 32 5 40.58	W 104 9 49.17
	2300.00	9.50	317.77	2287.96	-117.58	120.27	-109.16	0.00	398194.26	552532.85	N 32 5 40.70	W 104 9 49.30
Lamar (LMAR)	*2302.07*	*9.50*	*317.77*	*2290.00*	*-117.83*	*120.52*	*-109.39*	*0.00*	*398194.51*	*552532.62*	*N 32 5 40.70*	*W 104 9 49.31*
Bell Canyon (BLCN)	*2346.68*	*9.50*	*317.77*	*2334.00*	*-123.16*	*125.97*	*-114.34*	*0.00*	*398199.96*	*552527.67*	*N 32 5 40.75*	*W 104 9 49.36*
	2400.00	9.50	317.77	2386.59	-129.53	132.49	-120.26	0.00	398206.48	552521.75	N 32 5 40.82	W 104 9 49.43
	2500.00	9.50	317.77	2485.22	-141.48	144.71	-131.35	0.00	398218.70	552510.66	N 32 5 40.94	W 104 9 49.56
	2600.00	9.50	317.77	2583.84	-153.43	156.93	-142.44	0.00	398230.92	552499.57	N 32 5 41.06	W 104 9 49.69
	2700.00	9.50	317.77	2682.47	-165.38	169.15	-153.54	0.00	398243.14	552488.48	N 32 5 41.18	W 104 9 49.82
	2800.00	9.50	317.77	2781.10	-177.33	181.38	-164.63	0.00	398255.36	552477.38	N 32 5 41.30	W 104 9 49.95
	2900.00	9.50	317.77	2879.73	-189.28	193.60	-175.72	0.00	398267.58	552466.29	N 32 5 41.42	W 104 9 50.08
	3000.00	9.50	317.77	2978.36	-201.23	205.82	-186.82	0.00	398279.80	552455.20	N 32 5 41.55	W 104 9 50.20
	3100.00	9.50	317.77	3076.99	-213.18	218.04	-197.91	0.00	398292.02	552444.11	N 32 5 41.67	W 104 9 50.33
Cherry Canyon (CRCN)	*3145.64*	*9.50*	*317.77*	*3122.00*	*-218.63*	*223.62*	*-202.97*	*0.00*	*398297.60*	*552439.04*	*N 32 5 41.72*	*W 104 9 50.39*
	3200.00	9.50	317.77	3175.61	-225.12	230.26	-209.00	0.00	398304.24	552433.01	N 32 5 41.79	W 104 9 50.46
	3300.00	9.50	317.77	3274.24	-237.07	242.48	-220.10	0.00	398316.46	552421.92	N 32 5 41.91	W 104 9 50.59
	3400.00	9.50	317.77	3372.87	-249.02	254.71	-231.19	0.00	398328.68	552410.83	N 32 5 42.03	W 104 9 50.72
	3500.00	9.50	317.77	3471.50	-260.97	266.93	-242.29	0.00	398340.90	552399.74	N 32 5 42.15	W 104 9 50.85
	3600.00	9.50	317.77	3570.13	-272.92	279.15	-253.38	0.00	398353.12	552388.64	N 32 5 42.27	W 104 9 50.98
Drop 1.5°/100ft	3639.75	9.50	317.77	3609.33	-277.67	284.01	-257.79	0.00	398357.98	552384.23	N 32 5 42.32	W 104 9 51.03
	3700.00	8.60	317.77	3668.83	-284.53	291.02	-264.16	1.50	398365.00	552377.87	N 32 5 42.39	W 104 9 51.10
	3800.00	7.10	317.77	3767.89	-294.41	301.13	-273.33	1.50	398375.10	552368.69	N 32 5 42.49	W 104 9 51.21
	3900.00	5.60	317.77	3867.28	-302.42	309.32	-280.76	1.50	398383.29	552361.26	N 32 5 42.57	W 104 9 51.29
	4000.00	4.10	317.77	3966.92	-308.53	315.57	-286.44	1.50	398389.54	552355.59	N 32 5 42.63	W 104 9 51.36
	4100.00	2.60	317.77	4066.74	-312.76	319.90	-290.36	1.50	398393.87	552351.66	N 32 5 42.68	W 104 9 51.41
	4200.00	1.10	317.77	4166.69	-315.09	322.28	-292.53	1.50	398396.25	552349.50	N 32 5 42.70	W 104 9 51.43
Hold Vertical	4273.12	0.00	317.77	4239.80	-315.60	322.80	-293.00	1.50	398396.77	552349.03	N 32 5 42.71	W 104 9 51.44
Brushy Canyon (BCN)	*4280.32*	*0.00*	*317.77*	*4247.00*	*-315.60*	*322.80*	*-293.00*	*0.00*	*398396.77*	*552349.03*	*N 32 5 42.71*	*W 104 9 51.44*
	4300.00	0.00	317.77	4266.68	-315.60	322.80	-293.00	0.00	398396.77	552349.03	N 32 5 42.71	W 104 9 51.44
	4400.00	0.00	317.77	4366.68	-315.60	322.80	-293.00	0.00	398396.77	552349.03	N 32 5 42.71	W 104 9 51.44
	4500.00	0.00	317.77	4466.68	-315.60	322.80	-293.00	0.00	398396.77	552349.03	N 32 5 42.71	W 104 9 51.44
	4600.00	0.00	317.77	4566.68	-315.60	322.80	-293.00	0.00	398396.77	552349.03	N 32 5 42.71	W 104 9 51.44
	4700.00	0.00	317.77	4666.68	-315.60	322.80	-293.00	0.00	398396.77	552349.03	N 32 5 42.71	W 104 9 51.44
	4800.00	0.00	317.77	4766.68	-315.60	322.80	-293.00	0.00	398396.77	552349.03	N 32 5 42.71	W 104 9 51.44
	4900.00	0.00	317.77	4866.68	-315.60	322.80	-293.00	0.00	398396.77	552349.03	N 32 5 42.71	W 104 9 51.44
	5000.00	0.00	317.77	4966.68	-315.60	322.80	-293.00	0.00	398396.77	552349.03	N 32 5 42.71	W 104 9 51.44
	5100.00	0.00	317.77	5066.68	-315.60	322.80	-293.00	0.00	398396.77	552349.03	N 32 5 42.71	W 104 9 51.44
	5200.00	0.00	317.77	5166.68	-315.60	322.80	-293.00	0.00	398396.77	552349.03	N 32 5 42.71	W 104 9 51.44
	5300.00	0.00	317.77	5266.68	-315.60	322.80	-293.00	0.00	398396.77	552349.03	N 32 5 42.71	W 104 9 51.44
	5400.00	0.00	317.77	5366.68	-315.60	322.80	-293.00	0.00	398396.77	552349.03	N 32 5 42.71	W 104 9 51.44
	5500.00	0.00	317.77	5466.68	-315.60	322.80	-293.00	0.00	398396.77	552349.03	N 32 5 42.71	W 104 9 51.44
	5600.00	0.00	317.77	5566.68	-315.60	322.80	-293.00	0.00	398396.77	552349.03	N 32 5 42.71	W 104 9 51.44
	5700.00	0.00	317.77	5666.68	-315.60	322.80	-293.00	0.00	398396.77	552349.03	N 32 5 42.71	W 104 9 51.44
	5800.00	0.00	317.77	5766.68	-315.60	322.80	-293.00	0.00	398396.77	552349.03	N 32 5 42.71	W 104 9 51.44
	5900.00	0.00	317.77	5866.68	-315.60	322.80	-293.00	0.00	398396.77	552349.03	N 32 5 42.71	W 104 9 51.44
	6000.00	0.00	317.77	5966.68	-315.60	322.80	-293.00	0.00	398396.77	552349.03	N 32 5 42.71	W 104 9 51.44
Bone Spring (BSGL)	*6038.32*	*0.00*	*317.77*	*6005.00*	*-315.60*	*322.80*	*-293.00*	*0.00*	*398396.77*	*552349.03*	*N 32 5 42.71*	*W 104 9 51.44*
	6100.00	0.00	317.77	6066.68	-315.60	322.80	-293.00	0.00	398396.77	552349.03	N 32 5 42.71	W 104 9 51.44
Upper Avalon (AVN)	*6105.32*	*0.00*	*317.77*	*6072.00*	*-315.60*	*322.80*	*-293.00*	*0.00*	*398396.77*	*552349.03*	*N 32 5 42.71*	*W 104 9 51.44*
	6200.00	0.00	317.77	6166.68	-315.60	322.80	-293.00	0.00	398396.77	552349.03	N 32 5 42.71	W 104 9 51.44
	6300.00	0.00	317.77	6266.68	-315.60	322.80	-293.00	0.00	398396.77	552349.03	N 32 5 42.71	W 104 9 51.44
	6400.00	0.00	317.77	6366.68	-315.60	322.80	-293.00	0.00	398396.77	552349.03	N 32 5 42.71	W 104 9 51.44
	6500.00	0.00	317.77	6466.68	-315.60	322.80	-293.00	0.00	398396.77	552349.03	N 32 5 42.71	W 104 9 51.44
	6600.00	0.00	317.77	6566.68	-315.60	322.80	-293.00	0.00	398396.77	552349.03	N 32 5 42.71	W 104 9 51.44
	6700.00	0.00	317.77	6666.68	-315.60	322.80	-293.00	0.00	398396.77	552349.03	N 32 5 42.71	W 104 9 51.44
	6800.00	0.00	317.77	6766.68	-315.60	322.80	-293.00	0.00	398396.77	552349.03	N 32 5 42.71	W 104 9 51.44
Top Bone Spring 1 (FBS)	*6885.32*	*0.00*	*317.77*	*6852.00*	*-315.60*	*322.80*	*-293.00*	*0.00*	*398396.77*	*552349.03*	*N 32 5 42.71*	*W 104 9 51.44*
	6900.00	0.00	317.77	6866.68	-315.60	322.80	-293.00	0.00	398396.77	552349.03	N 32 5 42.71	W 104 9 51.44

Comments	MD (ft)	Incl (°)	Azim Grid (°)	TVD (ft)	VSEC (ft)	NS (ft)	EW (ft)	DLS (°/100ft)	Northing (ftUS)	Easting (ftUS)	Latitude (N/S ° ' ")	Longitude (E/W ° ' ")
	7000.00	0.00	317.77	6966.68	-315.60	322.80	-293.00	0.00	398396.77	552349.03	N 32 5 42.71	W 104 9 51.44
	7100.00	0.00	317.77	7066.68	-315.60	322.80	-293.00	0.00	398396.77	552349.03	N 32 5 42.71	W 104 9 51.44
	7200.00	0.00	317.77	7166.68	-315.60	322.80	-293.00	0.00	398396.77	552349.03	N 32 5 42.71	W 104 9 51.44
	7300.00	0.00	317.77	7266.68	-315.60	322.80	-293.00	0.00	398396.77	552349.03	N 32 5 42.71	W 104 9 51.44
Top Bone Spring 2 (SBU)	*7326.32*	*0.00*	*317.77*	*7293.00*	*-315.60*	*322.80*	*-293.00*	*0.00*	*398396.77*	*552349.03*	*N 32 5 42.71*	*W 104 9 51.44*
	7400.00	0.00	317.77	7366.68	-315.60	322.80	-293.00	0.00	398396.77	552349.03	N 32 5 42.71	W 104 9 51.44
	7500.00	0.00	317.77	7466.68	-315.60	322.80	-293.00	0.00	398396.77	552349.03	N 32 5 42.71	W 104 9 51.44
	7600.00	0.00	317.77	7566.68	-315.60	322.80	-293.00	0.00	398396.77	552349.03	N 32 5 42.71	W 104 9 51.44
	7700.00	0.00	317.77	7666.68	-315.60	322.80	-293.00	0.00	398396.77	552349.03	N 32 5 42.71	W 104 9 51.44
	7800.00	0.00	317.77	7766.68	-315.60	322.80	-293.00	0.00	398396.77	552349.03	N 32 5 42.71	W 104 9 51.44
	7900.00	0.00	317.77	7866.68	-315.60	322.80	-293.00	0.00	398396.77	552349.03	N 32 5 42.71	W 104 9 51.44
	8000.00	0.00	317.77	7966.68	-315.60	322.80	-293.00	0.00	398396.77	552349.03	N 32 5 42.71	W 104 9 51.44
	8100.00	0.00	317.77	8066.68	-315.60	322.80	-293.00	0.00	398396.77	552349.03	N 32 5 42.71	W 104 9 51.44
	8200.00	0.00	317.77	8166.68	-315.60	322.80	-293.00	0.00	398396.77	552349.03	N 32 5 42.71	W 104 9 51.44
	8300.00	0.00	317.77	8266.68	-315.60	322.80	-293.00	0.00	398396.77	552349.03	N 32 5 42.71	W 104 9 51.44
	8400.00	0.00	317.77	8366.68	-315.60	322.80	-293.00	0.00	398396.77	552349.03	N 32 5 42.71	W 104 9 51.44
	8500.00	0.00	317.77	8466.68	-315.60	322.80	-293.00	0.00	398396.77	552349.03	N 32 5 42.71	W 104 9 51.44
	8600.00	0.00	317.77	8566.68	-315.60	322.80	-293.00	0.00	398396.77	552349.03	N 32 5 42.71	W 104 9 51.44
Top Bone Spring 3 (TBS)	*8665.32*	*0.00*	*317.77*	*8632.00*	*-315.60*	*322.80*	*-293.00*	*0.00*	*398396.77*	*552349.03*	*N 32 5 42.71*	*W 104 9 51.44*
	8700.00	0.00	317.77	8666.68	-315.60	322.80	-293.00	0.00	398396.77	552349.03	N 32 5 42.71	W 104 9 51.44
	8800.00	0.00	317.77	8766.68	-315.60	322.80	-293.00	0.00	398396.77	552349.03	N 32 5 42.71	W 104 9 51.44
	8900.00	0.00	317.77	8866.68	-315.60	322.80	-293.00	0.00	398396.77	552349.03	N 32 5 42.71	W 104 9 51.44
Build 1.5°/100ft	8900.92	0.00	317.77	8867.60	-315.60	322.80	-293.00	0.00	398396.77	552349.03	N 32 5 42.71	W 104 9 51.44
	9000.00	1.49	186.65	8966.67	-314.32	321.52	-293.15	1.50	398395.49	552348.88	N 32 5 42.69	W 104 9 51.44
Wolfcamp A (WCA)	*9007.33*	*1.60*	*186.65*	*8974.00*	*-314.12*	*321.33*	*-293.17*	*1.50*	*398395.30*	*552348.85*	*N 32 5 42.69*	*W 104 9 51.44*
	9100.00	2.99	186.65	9066.59	-310.43	317.65	-293.60	1.50	398391.62	552348.43	N 32 5 42.65	W 104 9 51.44
	9200.00	4.49	186.65	9166.38	-303.94	311.18	-294.36	1.50	398385.15	552347.67	N 32 5 42.59	W 104 9 51.45
	9300.00	5.99	186.65	9265.96	-294.86	302.11	-295.41	1.50	398376.08	552346.61	N 32 5 42.50	W 104 9 51.46
Wolfcamp A Target	*9307.08*	*6.09*	*186.65*	*9273.00*	*-294.11*	*301.37*	*-295.50*	*1.50*	*398375.34*	*552346.53*	*N 32 5 42.49*	*W 104 9 51.47*
9 5/8" Casing	9334.25	6.50	186.65	9300.00	-291.15	298.41	-295.84	1.50	398372.38	552346.18	N 32 5 42.46	W 104 9 51.47
KOP, Build 8°/100ft	9382.00	6.50	186.65	9347.45	-285.76	293.04	-296.47	0.00	398367.02	552345.56	N 32 5 42.41	W 104 9 51.48
	9400.00	8.12	186.65	9365.30	-283.48	290.77	-296.73	9.00	398364.74	552345.29	N 32 5 42.39	W 104 9 51.48
	9500.00	17.12	186.65	9462.79	-261.75	269.09	-299.26	9.00	398343.06	552342.76	N 32 5 42.17	W 104 9 51.51
Wolfcamp B (WCB)	*9535.07*	*20.28*	*186.65*	*9496.00*	*-250.56*	*257.92*	*-300.56*	*9.00*	*398331.90*	*552341.46*	*N 32 5 42.06*	*W 104 9 51.53*
	9600.00	26.12	186.65	9555.65	-225.10	232.53	-303.52	9.00	398306.51	552338.50	N 32 5 41.81	W 104 9 51.56
	9700.00	35.12	186.65	9641.62	-174.43	181.99	-309.42	9.00	398255.97	552332.61	N 32 5 41.31	W 104 9 51.63
	9800.00	44.12	186.65	9718.57	-111.00	118.72	-316.79	9.00	398192.70	552325.23	N 32 5 40.69	W 104 9 51.72
Wolfcamp C (WCC)	*9897.32*	*52.88*	*186.65*	*9783.00*	*-38.48*	*46.38*	*-325.23*	*9.00*	*398120.38*	*552316.80*	*N 32 5 39.97*	*W 104 9 51.82*
	9900.00	53.12	186.65	9784.61	-36.35	44.26	-325.47	9.00	398118.26	552316.55	N 32 5 39.95	W 104 9 51.82
	10000.00	62.12	186.65	9838.11	47.65	-39.53	-335.24	9.00	398034.47	552306.79	N 32 5 39.12	W 104 9 51.93
Wolfcamp C Upper Target	*10033.53*	*65.14*	*186.65*	*9853.00*	*77.56*	*-69.37*	*-338.72*	*9.00*	*398004.64*	*552303.31*	*N 32 5 38.83*	*W 104 9 51.97*
	10100.00	71.12	186.65	9877.75	138.96	-130.61	-345.86	9.00	397943.40	552296.17	N 32 5 38.22	W 104 9 52.06
	10200.00	80.12	186.65	9902.56	235.32	-226.73	-357.07	9.00	397847.29	552284.96	N 32 5 37.27	W 104 9 52.19
	10300.00	89.12	186.65	9911.93	334.36	-325.52	-368.59	9.00	397748.51	552273.45	N 32 5 36.29	W 104 9 52.33
Wolfcamp C Lower Target	*10308.04*	*89.84*	*186.65*	*9912.00*	*342.37*	*-333.50*	*-369.52*	*9.00*	*397740.52*	*552272.52*	*N 32 5 36.21*	*W 104 9 52.34*
Landing Point	10309.78	90.00	186.65	9912.00	344.10	-335.23	-369.72	9.00	397738.80	552272.31	N 32 5 36.19	W 104 9 52.34
FTP Cross	*10309.85*	*90.00*	*186.65*	*9912.00*	*344.17*	*-335.30*	*-369.73*	*0.00*	*397738.73*	*552272.31*	*N 32 5 36.19*	*W 104 9 52.34*
	10400.00	90.00	186.65	9912.00	433.94	-424.84	-380.17	0.00	397649.19	552261.87	N 32 5 35.31	W 104 9 52.46
	10500.00	90.00	186.65	9912.00	533.52	-524.17	-391.75	0.00	397549.88	552250.29	N 32 5 34.33	W 104 9 52.60
	10600.00	90.00	186.65	9912.00	633.10	-623.50	-403.33	0.00	397450.56	552238.71	N 32 5 33.34	W 104 9 52.74
	10700.00	90.00	186.65	9912.00	732.68	-722.82	-414.91	0.00	397351.24	552227.13	N 32 5 32.36	W 104 9 52.87
	10800.00	90.00	186.65	9912.00	832.26	-822.15	-426.49	0.00	397251.92	552215.55	N 32 5 31.38	W 104 9 53.01
	10900.00	90.00	186.65	9912.00	931.83	-921.48	-438.07	0.00	397152.60	552203.97	N 32 5 30.39	W 104 9 53.15
Turn 2°/100ft	10951.13	90.00	186.65	9912.00	982.75	-972.27	-443.99	0.00	397101.82	552198.05	N 32 5 29.89	W 104 9 53.21
	11000.00	90.00	185.67	9912.00	1031.45	-1020.85	-449.24	2.00	397053.24	552192.80	N 32 5 29.41	W 104 9 53.28
	11100.00	90.00	183.67	9912.00	1131.28	-1120.51	-457.38	2.00	396953.59	552184.66	N 32 5 28.43	W 104 9 53.37
	11200.00	90.00	181.67	9912.00	1231.25	-1220.40	-462.04	2.00	396853.71	552180.00	N 32 5 27.44	W 104 9 53.43
	11201.13	90.00	181.65	9912.00	1232.38	-1221.53	-462.08	2.00	396852.58	552179.96	N 32 5 27.43	W 104 9 53.43
	11300.00	90.00	181.65	9912.00	1331.25	-1320.36	-464.92	0.00	396753.76	552177.12	N 32 5 26.45	W 104 9 53.46
	11400.00	90.00	181.65	9912.00	1431.25	-1420.32	-467.80	0.00	396653.81	552174.24	N 32 5 25.46	W 104 9 53.50
	11500.00	90.00	181.65	9912.00	1531.25	-1520.28	-470.68	0.00	396553.86	552171.36	N 32 5 24.47	W 104 9 53.54
	11600.00	90.00	181.65	9912.00	1631.25	-1620.24	-473.56	0.00	396453.91	552168.48	N 32 5 23.48	W 104 9 53.57
	11700.00	90.00	181.65	9912.00	1731.25	-1720.19	-476.44	0.00	396353.96	552165.60	N 32 5 22.49	W 104 9 53.61
	11800.00	90.00	181.65	9912.00	1831.24	-1820.15	-479.32	0.00	396254.01	552162.72	N 32 5 21.50	W 104 9 53.64
	11900.00	90.00	181.65	9912.00	1931.24	-1920.11	-482.20	0.00	396154.06	552159.84	N 32 5 20.51	W 104 9 53.68
	12000.00	90.00	181.65	9912.00	2031.24	-2020.07	-485.08	0.00	396054.11	552156.96	N 32 5 19.52	W 104 9 53.71
	12100.00	90.00	181.65	9912.00	2131.24	-2120.03	-487.96	0.00	395954.16	552154.08	N 32 5 18.53	W 104 9 53.75
	12200.00	90.00	181.65	9912.00	2231.24	-2219.99	-490.84	0.00	395854.21	552151.21	N 32 5 17.55	W 104 9 53.78
	12300.00	90.00	181.65	9912.00	2331.24	-2319.95	-493.72	0.00	395754.26	552148.33	N 32 5 16.56	W 104 9 53.82
	12400.00	90.00	181.65	9912.00	2431.24	-2419.90	-496.60	0.00	395654.31	552145.45	N 32 5 15.57	W 104 9 53.85
	12500.00	90.00	181.65	9912.00	2531.24	-2519.86	-499.48	0.00	395554.36	552142.57	N 32 5 14.58	W 104 9 53.89
	12600.00	90.00	181.65	9912.00	2631.24	-2619.82	-502.36	0.00	395454.41	552139.69	N 32 5 13.59	W 104 9 53.92
	12700.00	90.00	181.65	9912.00	2731.23	-2719.78	-505.24	0.00	395354.46	552136.81	N 32 5 12.60	W 104 9 53.96
	12800.00	90.00	181.65	9912.00	2831.23	-2819.74	-508.11	0.00	395254.52	552133.93	N 32 5 11.61	W 104 9 53.99
	12900.00	90.00	181.65	9912.00	2931.23	-2919.70	-510.99	0.00	395154.57	552131.05	N 32 5 10.62	W 104 9 54.03
	13000.00	90.00	181.65	9912.00	3031.23	-3019.65	-513.87	0.00	395054.62	552128.17	N 32 5 9.63	W 104 9 54.06
	13100.00	90.00	181.65	9912.00	3131.23	-3119.61	-516.75	0.00	394954.67	552125.29	N 32 5 8.64	W 104 9 54.10
	13200.00	90.00	181.65	9912.00	3231.23	-3219.57	-519.63	0.00	394854.72	552122.41	N 32 5 7.65	W 104 9 54.13
	13300.00	90.00	181.65	9912.00	3331.23	-3319.53	-522.51	0.00	394754.77	552119.53	N 32 5 6.67	W 104 9 54.17
	13400.00	90.00	181.65	9912.00	3431.23	-3419.49	-525.39	0.00	394654.82	552116.66	N 32 5 5.68	W 104 9 54.21
	13500.00	90.00	181.65	9912.00	3531.23	-3519.45	-528.27	0.00	394554.87	552113.78	N 32 5 4.69	W 104 9 54.24
	13600.00	90.00	181.65	9912.00	3631.23	-3619.41	-531.15	0.00	394454.92	552110.90	N 32 5 3.70	W 104 9 54.28
	13700.00	90.00	181.65	9912.00	3731.22	-3719.36	-534.03	0.00	394354.97	552108.02	N 32 5 2.71	W 104 9 54.31
	13800.00	90.00	181.65	9912.00	3831.22	-3819.32	-536.91	0.00	394255.02	552105.14	N 32 5 1.72	W 104 9 54.35
	13900.00	90.00	181.65	9912.00	3931.22	-3919.28	-539.79	0.00	394155.07	552102.26	N 32 5 0.73	W 104 9 54.38
	14000.00	90.00	181.65	9912.00	4031.22	-4019.24	-542.67	0.00	394055.12	552099.38	N 32 4 59.74	W 104 9 54.42
	14100.00	90.00	181.65	9912.00	4131.22	-4119.20	-545.55	0.00	393955.17	552096.50	N 32 4 58.75	W 104 9 54.45
	14200.00	90.00	181.65	9912.00	4231.22	-4219.16	-548.43	0.00	393855.22	552093.62	N 32 4 57.76	W 104 9 54.49
	14300.00	90.00	181.65	9912.00	4331.22	-4319.12	-551.31	0.00	393755.27	552090.74	N 32 4 56.77	W 104 9 54.52
	14400.00	90.00	181.65	9912.00	4431.22	-4419.07	-554.19	0.00	393655.32	552087.86	N 32 4 55.79	W 104 9 54.56
	14500.00	90.00	181.65	9912.00	4531.22	-4519.03	-557.06	0.00	393555.37	552084.99	N 32 4 54.80	W 104 9 54.59
	14600.00	90.00	181.65	9912.00	4631.22	-4618.99	-559.94	0.00	393455.42	552082.11	N 32 4 53.81	W 104 9 54.63
	14700.00	90.00	181.65	9912.00	4731.21	-4718.95	-562.82	0.00	393355.47	552079.23	N 32 4 52.82	W 104 9 54.66
	14800.00	90.00	181.65	9912.00	4831.21	-4818.91	-565.70	0.00	393255.52	552076.35	N 32 4 51.83	W 104 9 54.70
	14900.00	90.00	181.65	9912.00	4931.21	-4918.87	-568.58	0.00	393155.57	552073.47	N 32 4 50.84	W 104 9 54.73
	15000.00	90.00	181.65	9912.00	5031.21	-5018.83	-571.46	0.00	393055.62	552070.59	N 32 4 49.85	W 104 9 54.77
	15100.00	90.00	181.65	9912.00	5131.21	-5118.78	-574.34	0.00	392955.68	552067.71	N 32 4 48.86	W 104 9 54.81
	15200.00	90.00	181.65	9912.00	5231.21	-5218.74	-577.22	0.00	392855.73	552064.83	N 32 4 47.87	W 104 9 54.84
	15300.00	90.00	181.65	9912.00	5331.21	-5318.70	-580.10	0.00	392755.78	552061.95	N 32 4 46.88	W 104 9 54.88
	15400.00	90.00	181.65	9912.00	5431.21	-5418.66	-582.98	0.00	392655.83	552059.07	N 32 4 45.89	W 104 9 54.91
	15500.00	90.00	181.65	9912.00	5531.21	-5518.62	-585.86	0.00	392555.88	552056.19	N 32 4 44.91	W 104 9 54.95
	15600.00	90.00	181.65	9912.00	5631.20	-5618.58	-588.74	0.00	392455.93	552053.31	N 32 4 43.92	W 104 9 54.98
	15610.93	90.00	181.65	9912.00	5642.14	-5629.51	-589.05	0.00	392445.00	552053.00	N 32 4 43.81	W 104 9 54.99
	15637.43	90.00	181.12	9912.00	5668.64	-5656.00	-589.69	2.00	392418.51	552052.36	N 32 4 43.55	W 104 9 54.99
	15700.00	90.00	181.12	9912.00	5731.20	-5718.55	-590.92	0.00	392355.96	552051.14	N 32 4 42.93	W 104 9 55.01
	15800.00	90.00	181.12	9912.00	5831.20	-5818.53	-592.87	0.00	392255.99	552049.18	N 32 4 41.94	W 104 9 55.03
	15900.00	90.00	181.12	9912.00	5931.20	-5918.51	-594.83	0.00	392156.02	552047.23	N 32 4 40.95	W 104 9 55.06
	16000.00	90.00	181.12	9912.00	6031.20	-6018.50	-596.78	0.00	392056.04	552045.27	N 32 4 39.96	W 104 9 55.08
	16100.00	90.00	181.12	9912.00	6131.20	-6118.48	-598.73	0.00	391956.07	552043.32	N 32 4 38.97	W 104 9 55.11
	16200.00	90.00	181.12	9912.00	6231.20	-6218.46	-600.69	0.00	391856.10	552041.36	N 32 4 37.98	W 104 9 55.13
	16300.00	90.00	181.12	9912.00	6331.20	-6318.44	-602.64	0.00	391756.13	552039.41	N 32 4 36.99	W 104 9 55.16

Comments	MD (ft)	Incl (°)	Azim Grid (°)	TVD (ft)	VSEC (ft)	NS (ft)	EW (ft)	DLS (°/100ft)	Northing (ftUS)	Easting (ftUS)	Latitude (N/S ° ' ")	Longitude (E/W ° ' ")
	16400.00	90.00	181.12	9912.00	6431.20	-6418.42	-604.60	0.00	391656.16	552037.46	N 32 4 36.00	W 104 9 55.18
	16500.00	90.00	181.12	9912.00	6531.20	-6518.40	-606.55	0.00	391556.19	552035.50	N 32 4 35.01	W 104 9 55.20
	16600.00	90.00	181.12	9912.00	6631.19	-6618.38	-608.51	0.00	391456.21	552033.55	N 32 4 34.02	W 104 9 55.23
	16700.00	90.00	181.12	9912.00	6731.19	-6718.36	-610.46	0.00	391356.24	552031.59	N 32 4 33.03	W 104 9 55.25
	16800.00	90.00	181.12	9912.00	6831.19	-6818.34	-612.42	0.00	391256.27	552029.64	N 32 4 32.04	W 104 9 55.28
	16900.00	90.00	181.12	9912.00	6931.19	-6918.32	-614.37	0.00	391156.30	552027.68	N 32 4 31.05	W 104 9 55.30
	17000.00	90.00	181.12	9912.00	7031.19	-7018.30	-616.33	0.00	391056.33	552025.73	N 32 4 30.07	W 104 9 55.33
	17100.00	90.00	181.12	9912.00	7131.19	-7118.28	-618.28	0.00	390956.35	552023.77	N 32 4 29.08	W 104 9 55.35
	17200.00	90.00	181.12	9912.00	7231.19	-7218.27	-620.24	0.00	390856.38	552021.82	N 32 4 28.09	W 104 9 55.38
	17300.00	90.00	181.12	9912.00	7331.19	-7318.25	-622.19	0.00	390756.41	552019.87	N 32 4 27.10	W 104 9 55.40
	17400.00	90.00	181.12	9912.00	7431.19	-7418.23	-624.15	0.00	390656.44	552017.91	N 32 4 26.11	W 104 9 55.43
	17500.00	90.00	181.12	9912.00	7531.18	-7518.21	-626.10	0.00	390556.47	552015.96	N 32 4 25.12	W 104 9 55.45
	17600.00	90.00	181.12	9912.00	7631.18	-7618.19	-628.05	0.00	390456.49	552014.00	N 32 4 24.13	W 104 9 55.47
	17700.00	90.00	181.12	9912.00	7731.18	-7718.17	-630.01	0.00	390356.52	552012.05	N 32 4 23.14	W 104 9 55.50
	17800.00	90.00	181.12	9912.00	7831.18	-7818.15	-631.96	0.00	390256.55	552010.09	N 32 4 22.15	W 104 9 55.52
	17900.00	90.00	181.12	9912.00	7931.18	-7918.13	-633.92	0.00	390156.58	552008.14	N 32 4 21.16	W 104 9 55.55
	18000.00	90.00	181.12	9912.00	8031.18	-8018.11	-635.87	0.00	390056.61	552006.18	N 32 4 20.17	W 104 9 55.57
	18100.00	90.00	181.12	9912.00	8131.18	-8118.09	-637.83	0.00	389956.63	552004.23	N 32 4 19.18	W 104 9 55.60
	18200.00	90.00	181.12	9912.00	8231.18	-8218.07	-639.78	0.00	389856.66	552002.27	N 32 4 18.19	W 104 9 55.62
	18300.00	90.00	181.12	9912.00	8331.18	-8318.06	-641.74	0.00	389756.69	552000.32	N 32 4 17.20	W 104 9 55.65
	18400.00	90.00	181.12	9912.00	8431.17	-8418.04	-643.69	0.00	389656.72	551998.37	N 32 4 16.21	W 104 9 55.67
	18500.00	90.00	181.12	9912.00	8531.17	-8518.02	-645.65	0.00	389556.75	551996.41	N 32 4 15.22	W 104 9 55.70
	18600.00	90.00	181.12	9912.00	8631.17	-8618.00	-647.60	0.00	389456.77	551994.46	N 32 4 14.24	W 104 9 55.72
	18700.00	90.00	181.12	9912.00	8731.17	-8717.98	-649.56	0.00	389356.80	551992.50	N 32 4 13.25	W 104 9 55.74
	18800.00	90.00	181.12	9912.00	8831.17	-8817.96	-651.51	0.00	389256.83	551990.55	N 32 4 12.26	W 104 9 55.77
	18900.00	90.00	181.12	9912.00	8931.17	-8917.94	-653.46	0.00	389156.86	551988.59	N 32 4 11.27	W 104 9 55.79
	18925.00	90.00	181.12	9912.00	8956.17	-8942.94	-653.95	0.00	389131.87	551988.11	N 32 4 11.02	W 104 9 55.80
	19000.00	90.00	179.62	9912.00	9031.15	-9017.93	-654.44	2.00	389056.88	551987.62	N 32 4 10.28	W 104 9 55.81
	19100.00	90.00	177.62	9912.00	9131.03	-9117.90	-652.03	2.00	388956.92	551990.03	N 32 4 9.29	W 104 9 55.78
	19200.00	90.00	175.62	9912.00	9230.68	-9217.72	-646.13	2.00	388857.11	551995.92	N 32 4 8.30	W 104 9 55.71
	19300.00	90.00	173.62	9912.00	9329.98	-9317.27	-636.76	2.00	388757.56	552005.30	N 32 4 7.32	W 104 9 55.61
	19325.00	90.00	173.12	9912.00	9354.73	-9342.11	-633.87	2.00	388732.73	552008.18	N 32 4 7.07	W 104 9 55.57
	19400.00	90.00	173.12	9912.00	9428.95	-9416.57	-624.89	0.00	388658.28	552017.17	N 32 4 6.33	W 104 9 55.47
	19500.00	90.00	173.12	9912.00	9527.91	-9515.85	-612.91	0.00	388559.01	552029.15	N 32 4 5.35	W 104 9 55.33
	19600.00	90.00	173.12	9912.00	9626.87	-9615.13	-600.93	0.00	388459.74	552041.12	N 32 4 4.37	W 104 9 55.20
	19700.00	90.00	173.12	9912.00	9725.83	-9714.41	-588.95	0.00	388360.47	552053.10	N 32 4 3.38	W 104 9 55.06
	19800.00	90.00	173.12	9912.00	9824.79	-9813.69	-576.97	0.00	388261.19	552065.08	N 32 4 2.40	W 104 9 54.92
	19900.00	90.00	173.12	9912.00	9923.75	-9912.97	-564.99	0.00	388161.92	552077.06	N 32 4 1.42	W 104 9 54.78
	20000.00	90.00	173.12	9912.00	10022.71	-10012.25	-553.01	0.00	388062.65	552089.04	N 32 4 0.44	W 104 9 54.65
	20100.00	90.00	173.12	9912.00	10121.67	-10111.53	-541.03	0.00	387963.38	552101.01	N 32 3 59.45	W 104 9 54.51
	20110.00	90.00	173.12	9912.00	10131.57	-10121.45	-539.84	0.00	387953.45	552102.21	N 32 3 59.36	W 104 9 54.49
	20200.00	90.00	174.92	9912.00	10220.82	-10210.96	-530.46	2.00	387863.96	552111.59	N 32 3 58.47	W 104 9 54.39
	20300.00	90.00	176.92	9912.00	10320.36	-10310.70	-523.35	2.00	387764.22	552118.70	N 32 3 57.48	W 104 9 54.31
	20400.00	90.00	178.92	9912.00	10420.17	-10410.63	-519.72	2.00	387664.30	552122.33	N 32 3 56.49	W 104 9 54.27
	20500.00	90.00	180.92	9912.00	10520.14	-10510.63	-519.58	2.00	387564.32	552122.47	N 32 3 55.50	W 104 9 54.27
	20510.00	90.00	181.12	9912.00	10530.14	-10520.62	-519.76	2.00	387554.32	552122.29	N 32 3 55.41	W 104 9 54.27
	20600.00	90.00	181.12	9912.00	10620.14	-10610.61	-521.51	0.00	387464.34	552120.53	N 32 3 54.52	W 104 9 54.29
	20700.00	90.00	181.12	9912.00	10720.13	-10710.59	-523.47	0.00	387364.37	552118.58	N 32 3 53.53	W 104 9 54.32
	20800.00	90.00	181.12	9912.00	10820.13	-10810.57	-525.42	0.00	387264.40	552116.62	N 32 3 52.54	W 104 9 54.34
	20900.00	90.00	181.12	9912.00	10920.13	-10910.55	-527.38	0.00	387164.43	552114.67	N 32 3 51.55	W 104 9 54.36
LTP Cross	*20978.67*	*90.00*	*181.12*	*9912.00*	*10998.80*	*-10989.20*	*-528.92*	*0.00*	*387085.79*	*552113.13*	*N 32 3 50.77*	*W 104 9 54.38*
	21000.00	90.00	181.12	9912.00	11020.13	-11010.53	-529.33	0.00	387064.46	552112.71	N 32 3 50.56	W 104 9 54.39
Cicada Unit 39H - PBHL	21053.80	90.00	181.12	9912.00	11073.93	-11064.32	-530.38	0.00	387010.67	552111.66	N 32 3 50.03	W 104 9 54.40

Survey Type: Def Plan

Survey Error Model: ISCWSA Rev 3 *** 3-D 97.071% Confidence 3.0000 sigma

Survey Program:

Description	Part	MD From (ft)	MD To (ft)	EOU Freq (ft)	Hole Size (in)	Casing Diameter (in)	Expected Max Inclination (deg)	Survey Tool Type	Borehole / Survey
	1	0.000	28.000	1/100.000	30.000	30.000		B001Ma_MWD+HDGM-Depth Only	Cicada Unit 039H / Chevron Cicada Unit 39H Rev0 kFc 09Apr19
	1	28.000	21053.800	1/100.000	30.000	30.000		B001Ma_MWD+HDGM	Cicada Unit 039H / Chevron Cicada Unit 39H Rev0 kFc

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

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

1. SUMMARY OF REQUEST:

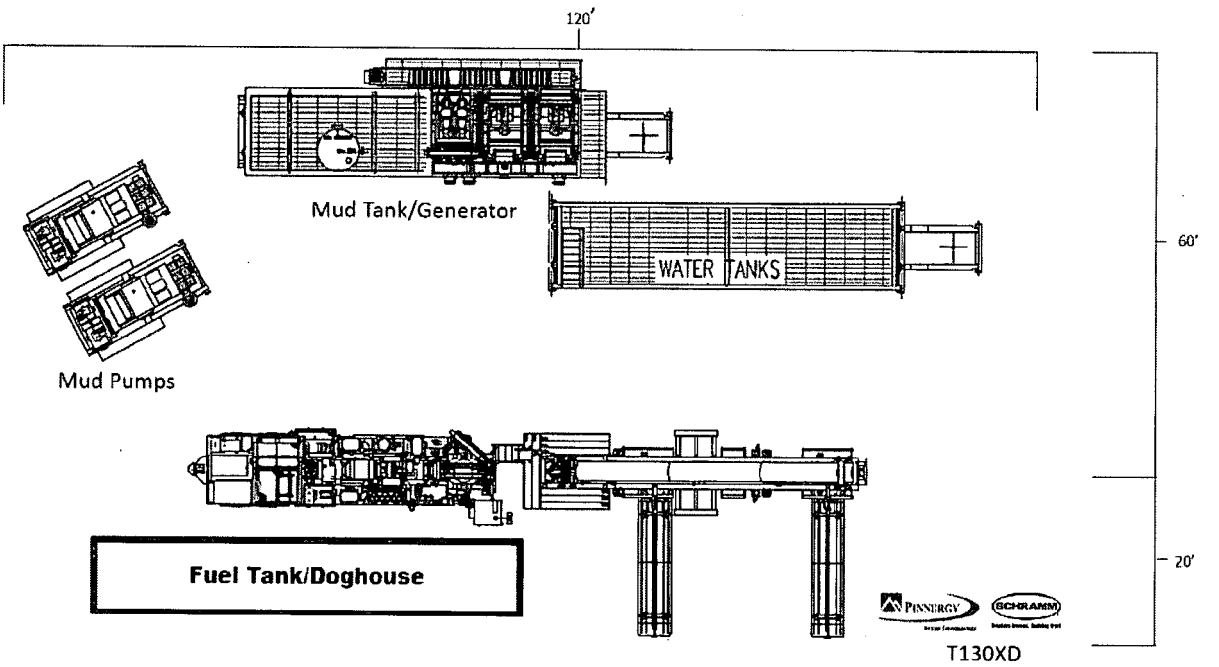
CUSA respectfully requests approval for the following operations for the surface hole in the drill plan:

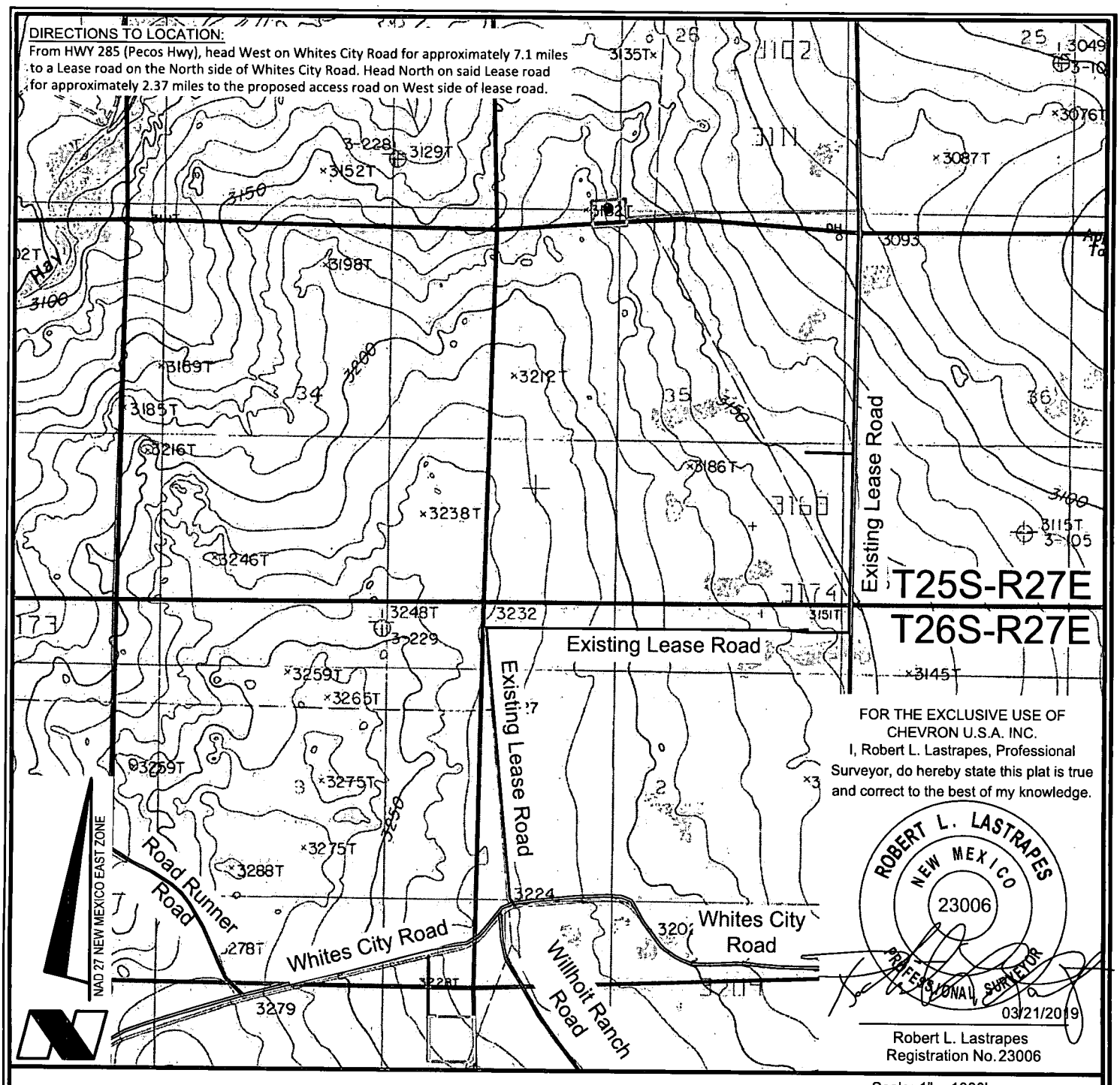
1. Utilize a spudder rig to pre-set surface casing for time and cost savings.

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.

Surface Rig Layout





ROAD PLAT

Scale: 1" = 1000'

2000' 0 1000' 2000'

LEGEND

- Proposed Well
- Proposed Access Road
- Proposed Drillsite
- Existing Road
- Section Line
- Existing Frac Pond

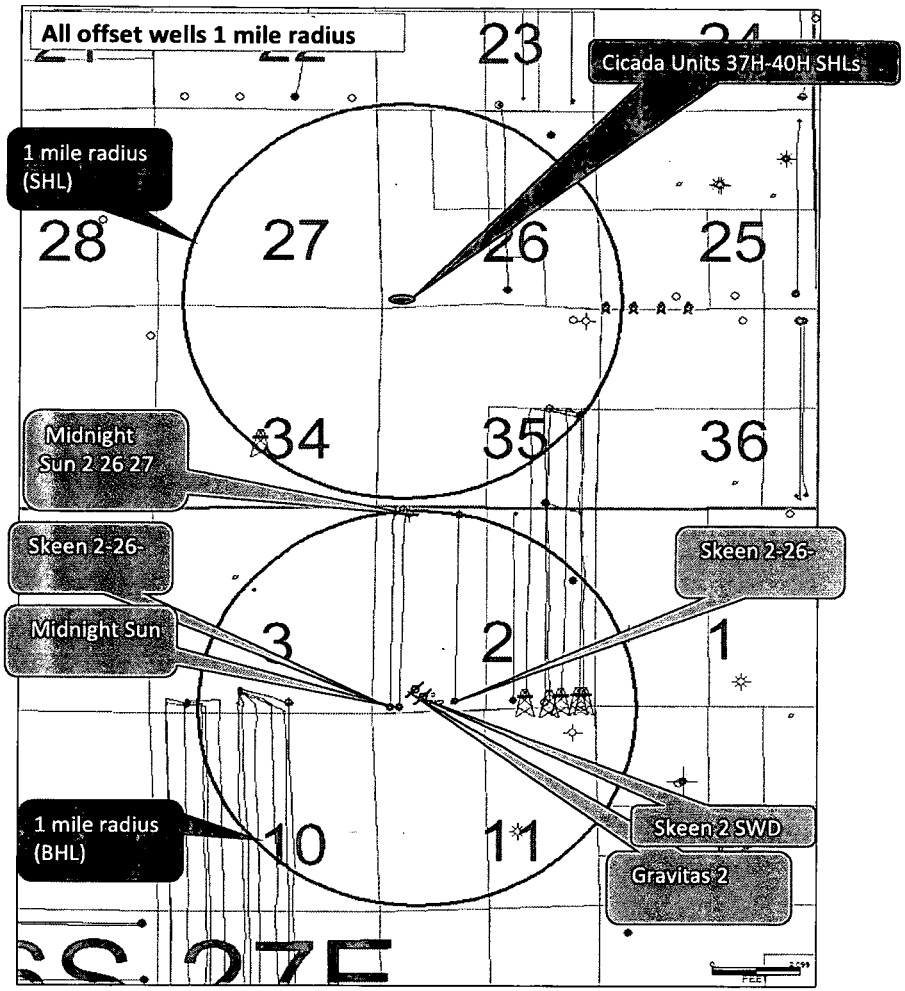
CHEVRON U.S.A. INC.

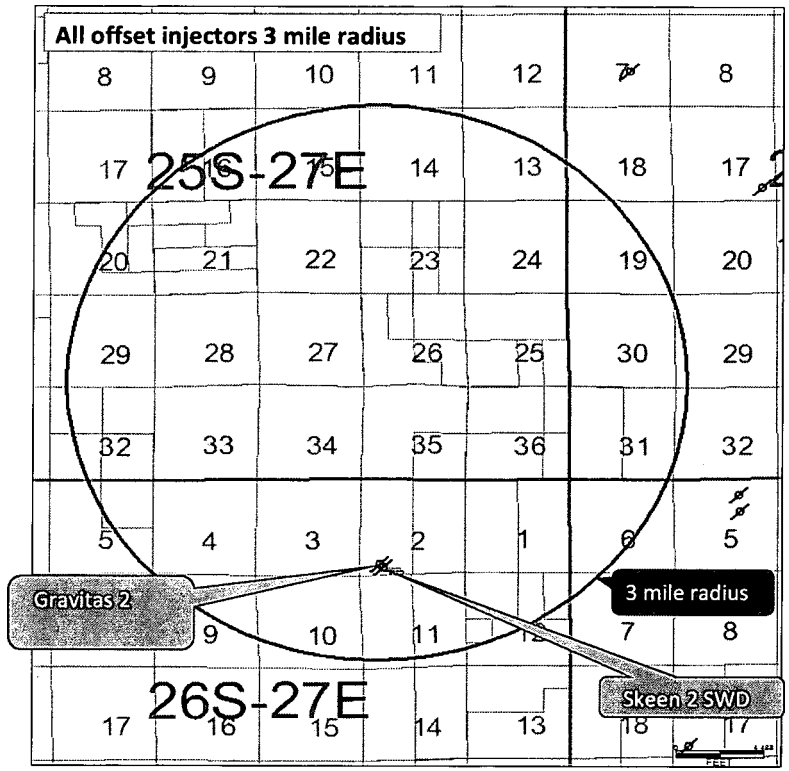
CICADA UNIT NO. 039H WELL
LOCATED 210' FSL AND 1614' FWL
SECTIONS 26 & 35, T25S-R27E
EDDY COUNTY, NEW MEXICO

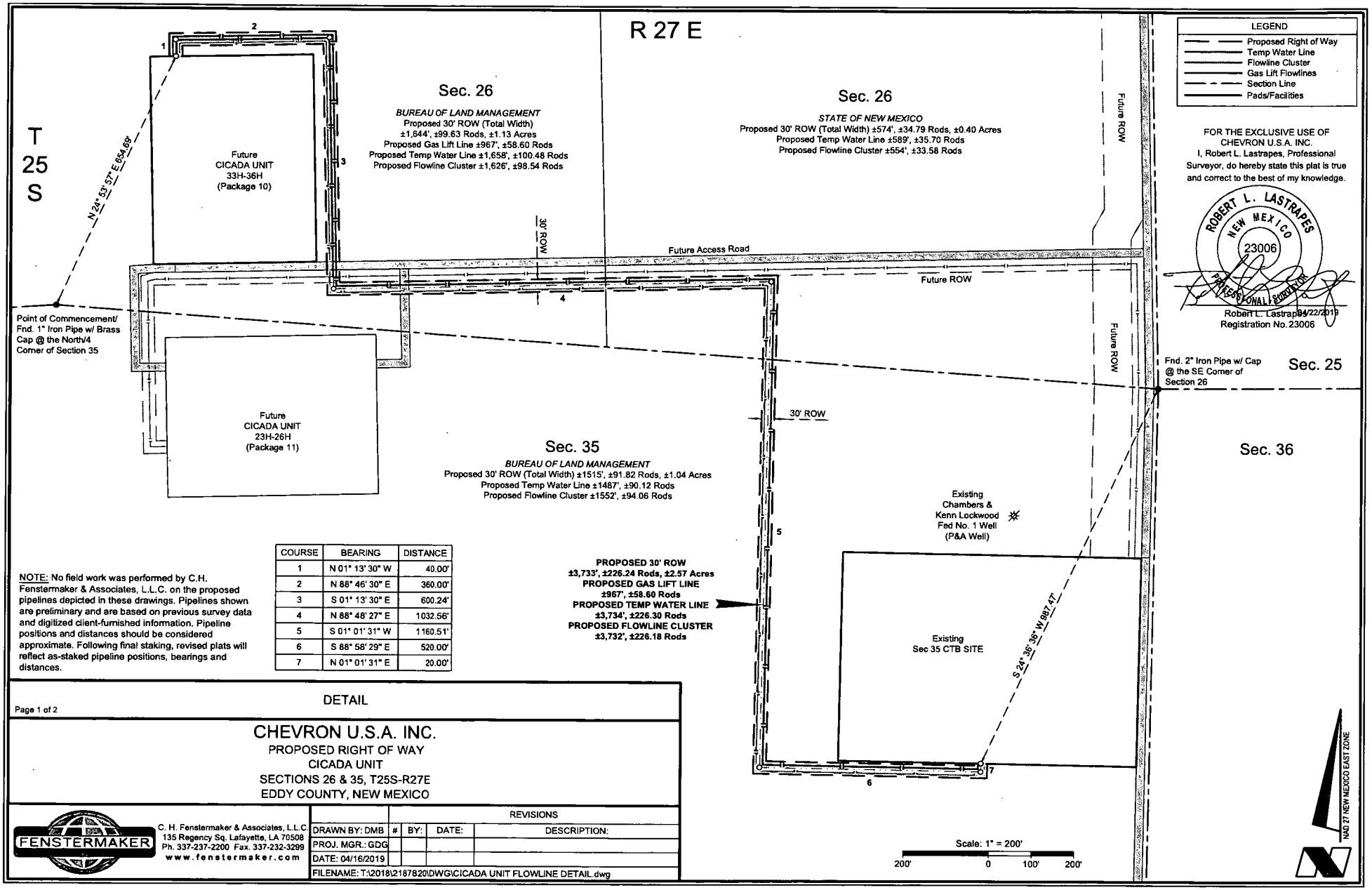
FENSTERMAKER
C. H. Fenstermaker & Associates, L.L.C.
135 Regency Sq. Lafayette, LA 70508
Ph. 337-237-2200 Fax. 337-232-3299
www.fenstermaker.com

	REVISIONS			
DRAWN BY: DMB	#	BY:	DATE:	DESCRIPTION:
PROJ. MGR.: GDG	1	ADF	03/20/2019	Pad shifted & well name change.
DATE: 11/28/2017				
FILENAME: T:\2017\2176159\DWG\Cicada Unit No.039H ADP.dwg				

API	Well Name	Well Number	Operator	Final Status	TD	TVD	SHL to SHL Distance--39H
30015011470000	LOCKWOOD	1	CHAMBERS&KENEDY-RITCHIE	DRY & ABANDONED	2414		3345
30015443470000	HH CE 35 2 FED 006	001H	CHEVRON U S A INCORPORATED	AT TOTAL DEPTH	10629	10560	4415
30015443470100	HH CE 35 2 FED 006	001H	CHEVRON U S A INCORPORATED	AT TOTAL DEPTH	17908	10287	4415
30015443460000	HH CE 35 2 FED 006	002H	CHEVRON U S A INCORPORATED	WELL START			4430
30015443500000	HH CE 35 2 FED 006	003H	CHEVRON U S A INCORPORATED	TREATD	17422		4450
30015443490000	HH CE 35 2 FED 006	004H	CHEVRON U S A INCORPORATED	TREATD	17709		4465
30015443450000	HH CE 35 2 FEDERAL 006	005H	CHEVRON U S A INCORPORATED	WELL START			4490
30015443480000	HH CE 35 2 FED 006	006H	CHEVRON U S A INCORPORATED	WELL START			4505
30015238480000	AMOCO FEDERAL	1	WOOD & LOCKER INCORPORATED	ABD-OW	7670		4970
30015379160000	COOKSEY `26` FEDERAL COM	1H	CHESAPEAKE OPERATING INCORPORATED	OIL PRODUCER	11025	6270	5275
30015410470000	SKEEN 2-26-27 STATE	2H	CHEVRON U S A INCORPORATED	OIL PRODUCER	12619	7792	5810
30015410477000	SKEEN 2-26-27 STATE	2H	CHEVRON U S A INCORPORATED	PILOT HOLE	8050	8047	5810
30015430400000	MIDNIGHT SUN 2 26 27	5H	CHEVRON U S A INCORPORATED	JUNKED & ABANDONED	6560	6552	5885
30015430400100	MIDNIGHT SUN 2 26 27	5H	CHEVRON U S A INCORPORATED	PILOT HOLE - WO	9199	9184	5885
30015430400200	MIDNIGHT SUN 2 26 27	5H	CHEVRON U S A INCORPORATED	OIL-WO	14126	8984	5885
30015410460000	SKEEN 2-26-27 STATE	1H	CHEVRON U S A INCORPORATED	OIL PRODUCER	12905	7746	5935
30015411170000	SKEEN 2-26-27 STATE	3H	CHEVRON U S A INCORPORATED	OIL PRODUCER	12556	7768	5990
30015439540000	SAGE 35 B2PA FED COM	1H	MEWBOURNE OIL COMPANY	WELL PERMIT			6125
30015411180000	SKEEN 2-26-27 STATE	4H	CHEVRON U S A INCORPORATED	OIL PRODUCER	12780	7788	6585
30015239990000	AZTEC STATE	1	MOORE WAYNE	D&A-OG	6910		8155
30015363410000	SCRABBLE BLE FEDERAL	1	YATES PETROLEUM CORPORATION	ABANDON LOCATION			9095
30015270440000	HEYCO FEDERAL	1	HANAGAN PETROLEUM CORPORATION	DRY & ABANDONED	6050		9975
30015438920000	GRAVITAS 2 STATE SWD	2	CHEVRON U S A INCORPORATED	SWDOP	14960	14952	10685
30015438920000	GRAVITAS 2 STATE SWD	2	CHEVRON U S A INCORPORATED	SWDOP	14960	14952	10685
30015417440000	SKEEN 2 SWD	1	CHEVRON U S A INCORPORATED	SWDOP	5600		10715
30015417440000	SKEEN 2 SWD	1	CHEVRON U S A INCORPORATED	SWDOP	5600		10715
30015439290000	HH SO 10 P3	016H	CHEVRON U S A INCORPORATED	PILOT HOLE	10676		11610
30015439290100	HH SO 10 P3	016H	CHEVRON U S A INCORPORATED	GAS-WO	20775	10120	11610
30015439300000	HH SO 10 P3	015H	CHEVRON U S A INCORPORATED	GAS PRODUCER	20470	10133	11630
30015439370000	HH SO 10 P3	008H	CHEVRON U S A INCORPORATED	GAS PRODUCER	20338	9851	11655
30015439360000	HH SO 10 P3	007H	CHEVRON U S A INCORPORATED	GAS PRODUCER	20330	9870	11680
30015439260000	HH SO 10 P3	024H	CHEVRON U S A INCORPORATED	AT TOTAL DEPTH	19400		11700
30015439320000	HH SO 10 P3	023H	CHEVRON U S A INCORPORATED	AT TOTAL DEPTH	19100		11725
30015011480000	FEDERAL 11	1	RITCHIE & REAVES	DRY & ABANDONED	2404		12025
30015443670000	HH SO 10 15 FED 002	6H	CHEVRON U S A INCORPORATED	WELL START			12475
30015443710000	HH SO 10 15 FED 002	5H	CHEVRON U S A INCORPORATED	WELL START			12500
30015443530000	HH SO 10 15 FED 002	4H	CHEVRON U S A INCORPORATED	WELL START			12520
30015443510000	HH SO 10 15 FED 002	003H	CHEVRON U S A INCORPORATED	AT TOTAL DEPTH	20266		12545
30015443540000	HH SO 10 15 FED 002	002H	CHEVRON U S A INCORPORATED	TREATD	19666		12565
30015443520000	HH SO 10 15 FED 002	1H	CHEVRON U S A INCORPORATED	TREATD	19554		12590
30015214560000	HAY HOLLOW U	1	GREAT WESTERN DRILLING COMPANY	ABD-GW	12966		14390
30015244620001	SRO SWD	103	MARBOB ENERGY CORPORATION	SWD-WO	5850		25715


All offset wells 1 mile radius
Cicada Units 37H-40H SHLs
1 mile radius (SHL)
Midnight Sun 2 26 27
Skeen 2-26-
Midnight Sun
Skeen 2-26-
1 mile radius (BHL)
Skeen 2 SWD
Gravitas 2
23
24
28
27
26
25
34
35
36
3
2
1
10
11


All offset injectors 3 mile radius
25S-27E
26S-27E
Gravitas 2
3 mile radius
Skeen 2 SWD



COURSE	BEARING	DISTANCE
1	N 01° 13' 30" W	40.00'
2	N 88° 46' 30" E	360.00'
3	S 01° 13' 30" E	600.24'
4	N 88° 48' 27" E	1032.56'
5	S 01° 01' 31" W	1160.51'
6	S 88° 58' 29" E	520.00'
7	N 01° 01' 31" E	20.00'

NOTE: No field work was performed by C.H. Fenstermaker & Associates, L.L.C. on the proposed pipelines depicted in these drawings. Pipelines shown are preliminary and are based on previous survey data and digitized client-furnished information. Pipeline positions and distances should be considered approximate. Following final staking, revised plats will reflect as-staked pipeline positions, bearings and distances.

Page 1 of 2

DETAIL

CHEVRON U.S.A. INC.

PROPOSED RIGHT OF WAY
CICADA UNIT
SECTIONS 26 & 35, T25S-R27E
EDDY 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.: GDG				
DATE: 04/16/2019				
FILENAME: T:\2018\2187820\DWG\CICADA UNIT FLOWLINE DETAIL.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:

1. 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.

2. 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.nm811.org

3. No field work was performed by C.H. Fenstermaker & Associates, L.L.C. on the proposed pipelines depicted in these drawings. Pipelines shown are preliminary and are based on previous survey data and digitized client-furnished information. Pipeline positions and distances should be considered approximate. Following final staking, revised plats will reflect as-staked pipeline positions, bearings and distances.

4. It is not a boundary survey. As such, this survey does not, nor was intended, to comply with the NMBLPEPS minimum standards of practice for a land boundary survey. Only limited measurements were made and lease lines were established and compiled from those measurements and records. This plat is strictly for the use of Chevron U.S.A. Inc. for acquiring permits for oil and gas exploration in the state of New Mexico.

METES AND BOUNDS DESCRIPTION OF A PROPOSED RIGHT OF WAY LOCATED IN SECTIONS 26 AND 35 OF T25S-R27E EDDY COUNTY, NEW MEXICO

CICADA UNIT RIGHT OF WAY

Description of the centerline of a proposed 30 feet wide by 3733 feet or 226.24 rods of right of way (15 feet each side of centerline) across Bureau of Land Management and State of New Mexico property located in sections 26 and 35 of Township 25 South, Range 27 East, and described as follows:

Commencing at the North quarter corner of said section 35 Township 25 South Range 27 East at a found 1" iron pipe with brass cap; Thence North 24 degrees 53 minutes 57 seconds East 654.69 feet to the **Point of Beginning**. Said **Point of Beginning** having the following coordinates: X = 553,978.52, Y = 398,527.09 (New Mexico State Plane Coordinate System, East Zone, NAD 27).

Thence North 01 degrees 13 minutes 30 seconds West 40.00 feet to a point;
Thence North 88 degrees 46 minutes 30 seconds East 360.00 feet to a point;
Thence South 01 degrees 13 minutes 30 seconds East 600.24 feet to a point;
Thence North 88 degrees 48 minutes 27 seconds East 1,032.56 feet to a point;
Thence South 01 degrees 01 minutes 31 seconds West 185.22 feet to a point on the common section line of said sections 26 and 35, T25S-R27E;
Thence South 01 degrees 01 minutes 31 seconds West 975.29 feet to a point;
Thence South 88 degrees 58 minutes 29 seconds East 520.00 feet to a point;

Thence North 01 degrees 01 minutes 31 seconds East 20.00 feet to the **Point of Ending**, having the following coordinates X= 555,882.25 and Y= 396,846.54 (New Mexico State Plane Coordinate System, East Zone, NAD 27).

The bearings recited hereon are oriented to New Mexico State Plane Coordinate System, East Zone, NAD 27.

This description represents a survey made on the ground for a right of way and intended solely for that purpose. This description does not represent a boundary survey.

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

04/22/2019
Robert L. Lastrapes
Registration No. 23006

Page 2 of 2

DETAIL

CHEVRON U.S.A. INC.

PROPOSED RIGHT OF WAY
CICADA UNIT
SECTIONS 26 & 35, T25S-R27E
EDDY 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.: GDG				
DATE: 04/16/2019				
FILENAME: T:\2018\2187820\DWG\CICADA UNIT FLOWLINE DETAIL.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.nm811.org

NW PAD CORNER		
X=	552,400	NAD 27
Y=	398,178	
LAT.	32.094594 N	
LONG.	104.164124 W	
X=	593,584	NAD83/86
Y=	398,235	
LAT.	32.094716 N	
LONG.	104.164617 W	
ELEV.	+3,181'	NAVD88

NE PAD CORNER		
X=	552,894	NAD 27
Y=	398,211	
LAT.	32.094682 N	
LONG.	104.162529 W	
X=	594,078	NAD83/86
Y=	398,268	
LAT.	32.094804 N	
LONG.	104.163022 W	
ELEV.	+3,158'	NAVD88

SW PAD CORNER		
X=	552,425	NAD 27
Y=	397,799	
LAT.	32.093552 N	
LONG.	104.164045 W	
X=	593,609	NAD83/86
Y=	397,856	
LAT.	32.093674 N	
LONG.	104.164538 W	
ELEV.	+3,180'	NAVD88

SE PAD CORNER		
X=	552,919	NAD 27
Y=	397,831	
LAT.	32.093639 N	
LONG.	104.162450 W	
X=	594,103	NAD83/86
Y=	397,889	
LAT.	32.093761 N	
LONG.	104.162943 W	
ELEV.	+3,165'	NAVD88

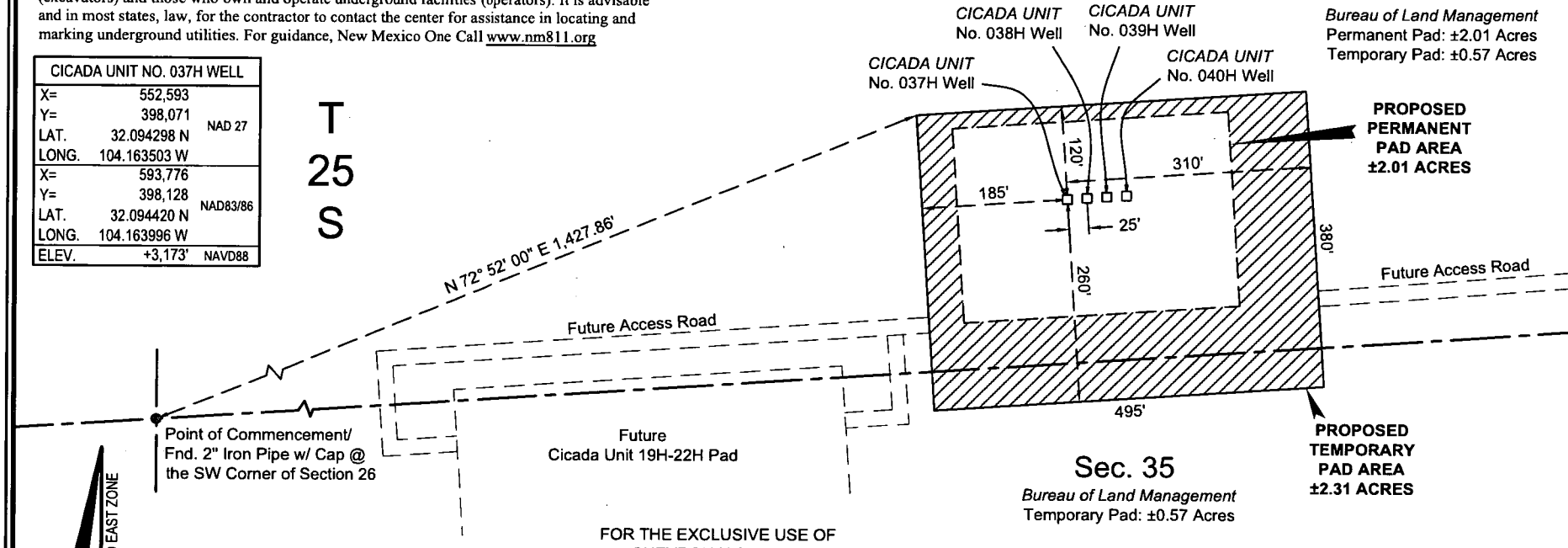
CICADA UNIT NO. 037H WELL		
X=	552,593	NAD 27
Y=	398,071	
LAT.	32.094298 N	
LONG.	104.163503 W	
X=	593,776	NAD83/86
Y=	398,128	
LAT.	32.094420 N	
LONG.	104.163996 W	
ELEV.	+3,173'	NAVD88

R 27 E

Sec. 26

Bureau of Land Management
Permanent Pad: ±2.01 Acres
Temporary Pad: ±0.57 Acres

T 25 S



Sec. 35

Bureau of Land Management
Temporary Pad: ±0.57 Acres

NAD 27 NEW MEXICO EAST ZONE

LEGEND

- Proposed Pad
- Future Pad/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

03/21/2019

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

SURFACE USE PLAT

CHEVRON U.S.A. INC.

INTERIM RECLAMATION
CICADA UNIT NO. 037H - 040H PAD
SECTIONS 26 & 35, T25S-R27E
EDDY COUNTY, NEW MEXICO

	REVISIONS			
DRAWN BY: DMB	#	BY:	DATE:	DESCRIPTION:
PROJ. MGR.: GDG				
DATE: 03/21/2019				

FILENAME: T:\2017\2176159\DWG\Cicada Unit Interim Reclamation.dwg

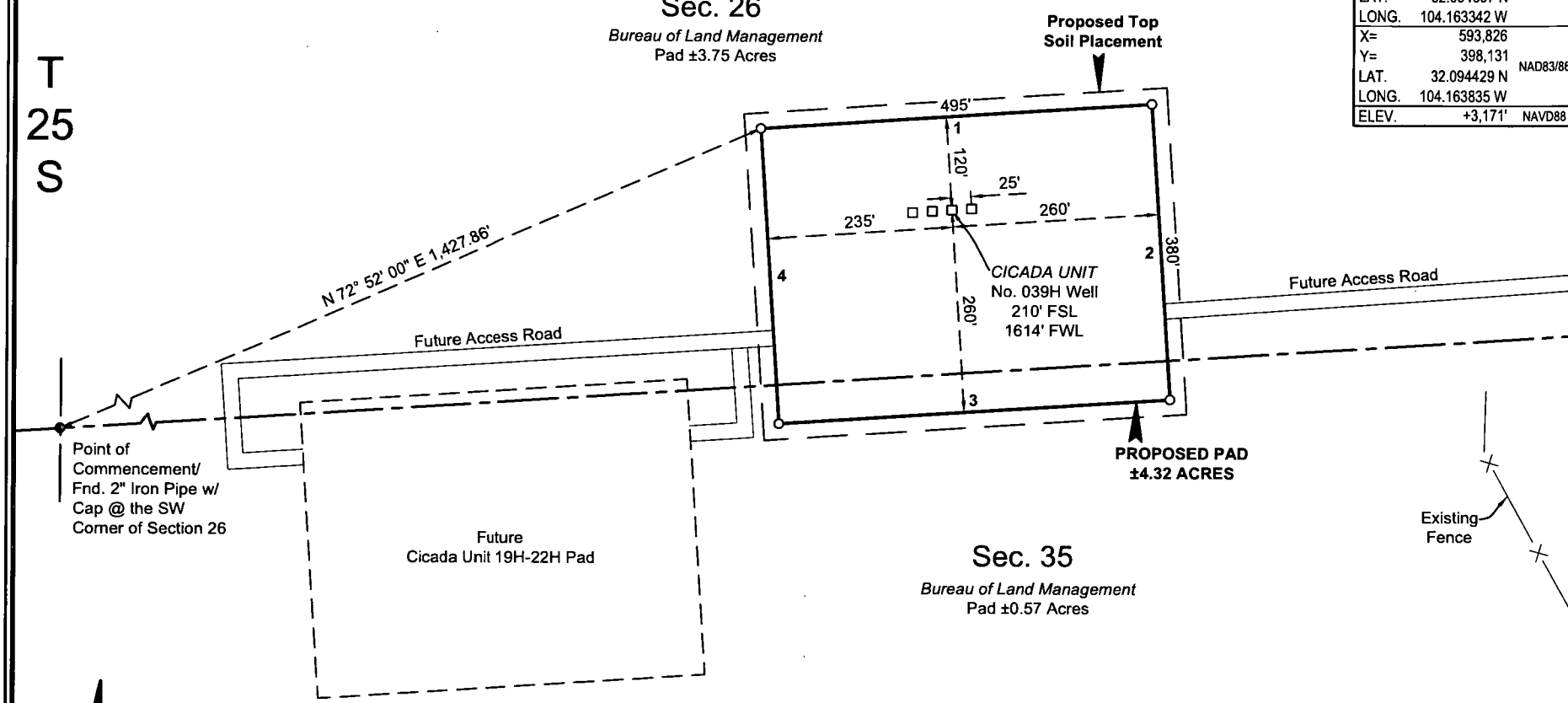
R 27 E

T 25 S

Sec. 26

Bureau of Land Management
Pad ±3.75 Acres

CICADA UNIT NO. 039H WELL		
X=	552,642	NAD 27
Y=	398,074	
LAT.	32.094307 N	
LONG.	104.163342 W	
X=	593,826	NAD83/86
Y=	398,131	
LAT.	32.094429 N	
LONG.	104.163835 W	
ELEV.	+3,171'	NAVD88



Sec. 35

Bureau of Land Management
Pad ±0.57 Acres

NAD 27 NEW MEXICO EAST ZONE

LEGEND

- Proposed Pad
- Future Pad
- Section Line
- Future Access
- Fnd. Monument

Scale: 1" = 100'

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

03/21/2019

Robert L. Lastrapes
Registration No. 23006

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Ph. 337-237-2200 Fax. 337-232-3299
www.fenstermaker.com

WELL PLAT

CHEVRON U.S.A. INC.

PROPOSED PAD
CICADA UNIT NO. 039H WELL
SECTIONS 26 & 35, T25S-R27E
EDDY COUNTY, NEW MEXICO

		REVISIONS		
DRAWN BY: DMB	#	BY:	DATE:	DESCRIPTION:
PROJ. MGR.: GDG	1	ADF	03/20/2019	Pad shifted & well name change.
DATE: 11/28/2017				
FILENAME: T:\2017\2176159\DWG\Cicada Unit No.039H Well 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.nm811.org

PROPOSED PAD		
COURSE	BEARING	DISTANCE
1	N 86° 13' 44" E	495.00'
2	S 03° 46' 16" E	380.00'
3	S 86° 13' 44" W	495.00'
4	N 03° 46' 16" W	380.00'

NW PAD CORNER			NE PAD CORNER		
X=	552,400	NAD 27	X=	552,894	NAD 27
Y=	398,178		Y=	398,211	
LAT.	32.094594 N		LAT.	32.094682 N	
LONG.	104.164124 W		LONG.	104.162529 W	
X=	593,584	NAD83/86	X=	594,078	NAD83/86
Y=	398,235		Y=	398,268	
LAT.	32.094716 N		LAT.	32.094804 N	
LONG.	104.164617 W		LONG.	104.163022 W	
ELEV.	+3,181'	NAVD88	ELEV.	+3,158'	NAVD88
SW PAD CORNER			SE PAD CORNER		
X=	552,425	NAD 27	X=	552,919	NAD 27
Y=	397,799		Y=	397,831	
LAT.	32.093552 N		LAT.	32.093639 N	
LONG.	104.164045 W		LONG.	104.162450 W	
X=	593,609	NAD83/86	X=	594,103	NAD83/86
Y=	397,856		Y=	397,889	
LAT.	32.093674 N		LAT.	32.093761 N	
LONG.	104.164538 W		LONG.	104.162943 W	
ELEV.	+3,180'	NAVD88	ELEV.	+3,165'	NAVD88

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
03/21/2019

Robert L. Lastrapes
Registration No. 23006

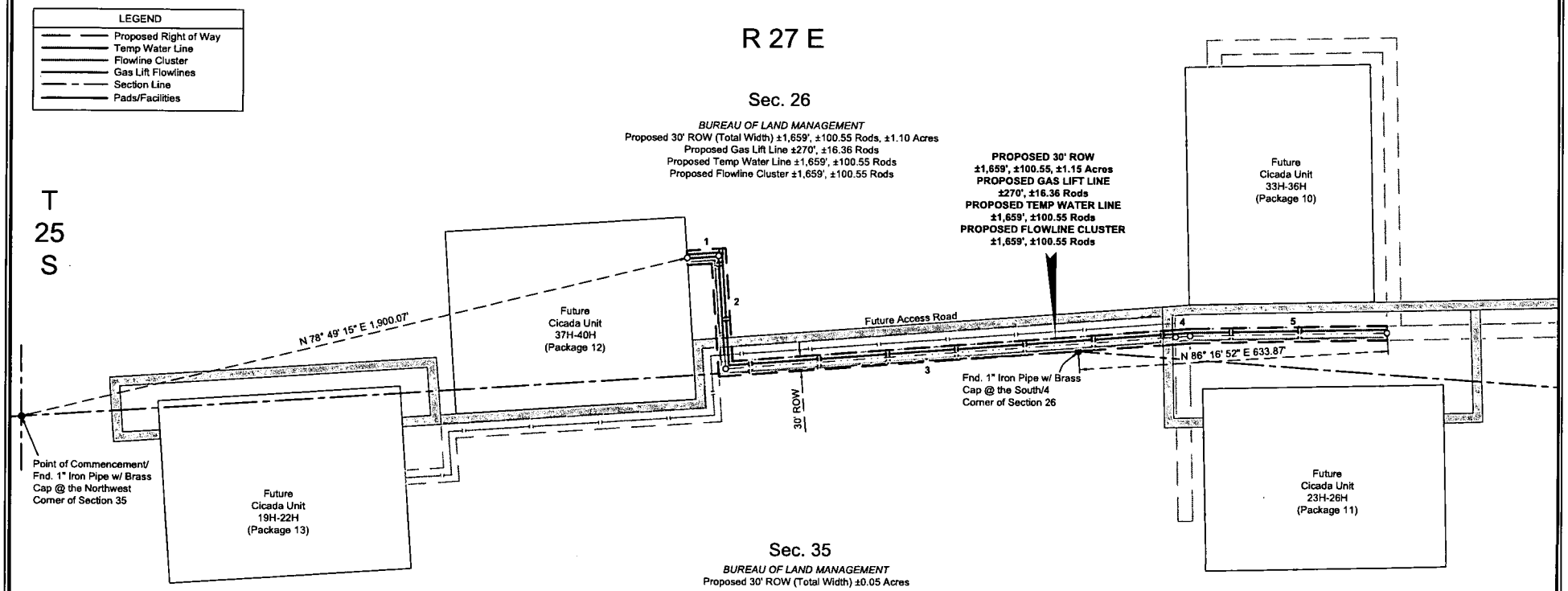
FENSTERMAKER
C. H. Fenstermaker & Associates, L.L.C.
135 Regency Sq. Lafayette, LA 70508
Ph. 337-237-2200 Fax. 337-232-3299
www.fenstermaker.com

WELL PLAT

CHEVRON U.S.A. INC.

PROPOSED PAD
CICADA UNIT NO. 039H WELL
SECTIONS 26 & 35, T25S-R27E
EDDY COUNTY, NEW MEXICO

	REVISIONS			
DRAWN BY: DMB	#	BY:	DATE:	DESCRIPTION:
PROJ. MGR.: GDG	1	ADF	03/20/2019	Pad shifted & well name change.
DATE: 11/28/2017				
FILENAME: T:\2017\2176159\DWG\Cicada Unit No.039H Well Plat.dwg				



COURSE	BEARING	DISTANCE
1	N 86° 13' 44" E	65.00'
2	S 03° 46' 16" E	235.78'
3	N 85° 43' 34" E	924.35'
4	N 85° 39' 55" E	29.73'
5	N 88° 48' 27" E	404.13'

NAD 27 NEW MEXICO EAST ZONE

NOTE: No field work was performed by C.H. Fenstermaker & Associates, L.L.C. on the proposed pipelines depicted in these drawings. Pipelines shown are preliminary and are based on previous survey data and digitized client-furnished information. Pipeline positions and distances should be considered approximate. Following final staking, revised plats will reflect as-staked pipeline positions, bearings and distances.

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 04/22/2019

Robert L. Lastrapes
Registration No. 23006

DETAIL

CHEVRON U.S.A. INC.

PROPOSED RIGHT OF WAY
CICADA UNIT
SECTIONS 26 & 35, T25S-R27E
EDDY 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.: GDG	1	DMB	04/22/2019	Revise access road
DATE: 04/16/2019				
FILENAME: T:\2017\2176159\DWG\CICADA UNIT FLOWLINE DETAIL.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:

1. 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.

2. 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

3. No field work was performed by C.H. Fenstermaker & Associates, L.L.C. on the proposed pipelines depicted in these drawings. Pipelines shown are preliminary and are based on previous survey data and digitized client-furnished information. Pipeline positions and distances should be considered approximate. Following final staking, revised plats will reflect as-staked pipeline positions, bearings and distances.

4. It is not a boundary survey. As such, this survey does not, nor was intended, to comply with the NBLPEPS minimum standards of practice for a land boundary survey. Only limited measurements were made and lease lines were established and compiled from those measurements and records. This plat is strictly for the use of Chevron U.S.A. Inc. for acquiring permits for oil and gas exploration in the state of New Mexico.

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

04/22/2019

Robert L. Lastrapes
Registration No. 23006

METES AND BOUNDS DESCRIPTION OF A PROPOSED RIGHT OF WAY LOCATED IN SECTIONS 26 AND 35 OF T25S-R27E EDDY COUNTY, NEW MEXICO

CICADA UNIT RIGHT OF WAY

Description of the centerline of a proposed 30 feet wide by 1,659 feet or 100.55 rods of right of way (15 feet each side of centerline) across Bureau of Land Management property located in Sections 26 and 35 of Township 25 South, Range 27 East, and described as follows:

Commencing at the Northwest corner of said Section 35 Township 25 South Range 27 East at a found 1" iron pipe with brass cap; Thence North 78 degrees 49 minutes 15 seconds East 1,900.07 feet to the **Point of Beginning**. Said **Point of Beginning** having the following coordinates: X = 552,899.57, Y = 398,125.82 (New Mexico State Plane Coordinate System, East Zone, NAD 27).

Thence North 86 degrees 13 minutes 44 seconds East 65.00 feet to a point;
Thence South 03 degrees 46 minutes 16 seconds East 235.78 feet to a point;
Thence North 85 degrees 43 minutes 34 seconds East 924.35 feet to a point;
Thence North 85 degrees 39 minutes 55 seconds East 29.73 feet to a point

Thence North 88 degrees 48 minutes 27 seconds East 404.13 feet to the **Point of Ending**, having the following coordinates X= 554,335.41 and Y= 397,974.37 (New Mexico State Plane Coordinate System, East Zone, NAD 27).

The bearings recited hereon are oriented to New Mexico State Plane Coordinate System, East Zone, NAD 27.

This description represents a survey made on the ground for a right of way and intended solely for that purpose. This description does not represent a boundary survey.

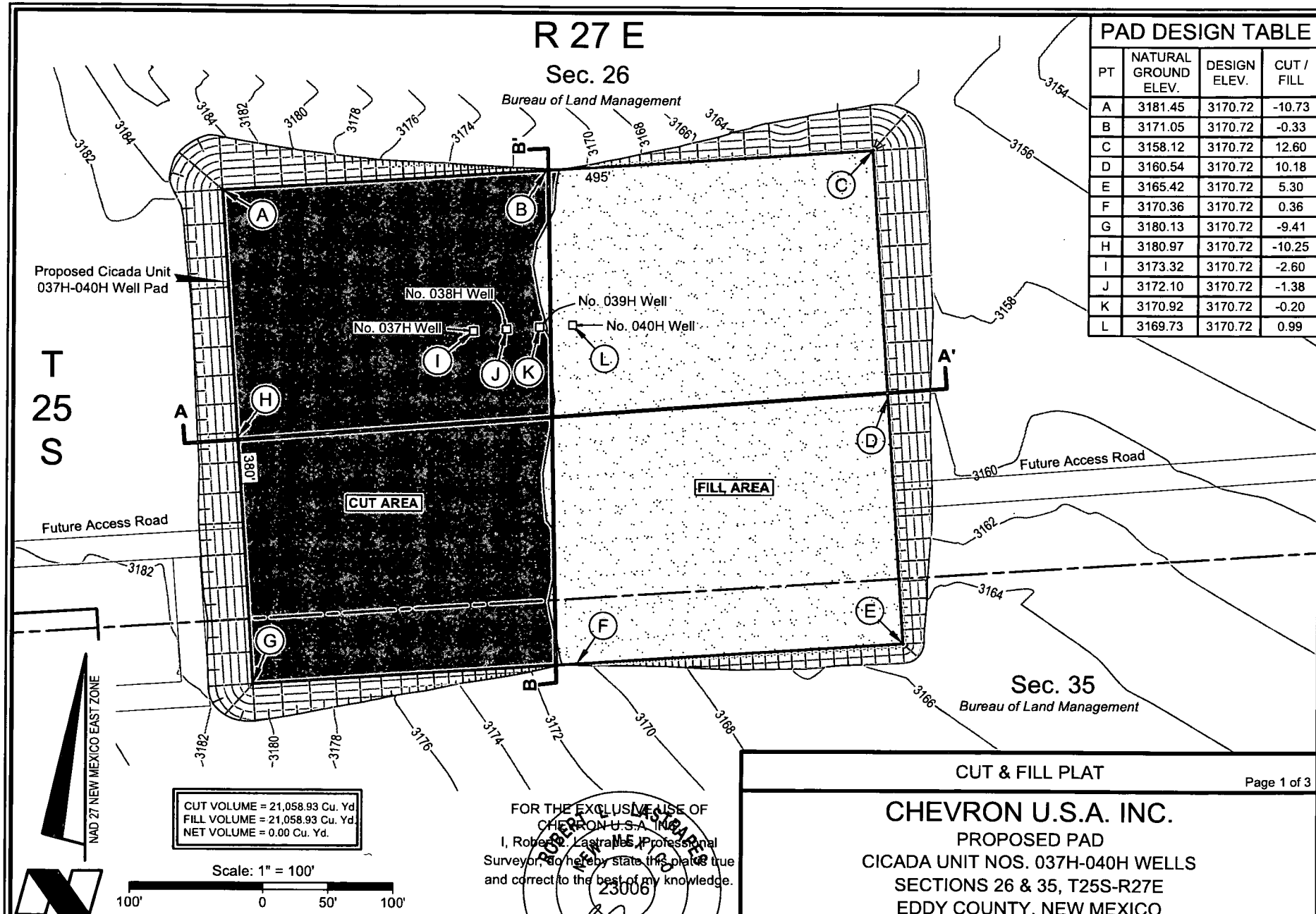
DETAIL

CHEVRON U.S.A. INC.

PROPOSED RIGHT OF WAY
CICADA UNIT
SECTIONS 26 & 35, T25S-R27E
EDDY 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.: GDG	1	DMB	04/22/2019	Revise access road
DATE: 04/16/2019				
FILENAME: T:\2017\2176159\DWG\CICADA UNIT FLOWLINE DETAIL.dwg				



PAD DESIGN TABLE

PT	NATURAL GROUND ELEV.	DESIGN ELEV.	CUT / FILL
A	3181.45	3170.72	-10.73
B	3171.05	3170.72	-0.33
C	3158.12	3170.72	12.60
D	3160.54	3170.72	10.18
E	3165.42	3170.72	5.30
F	3170.36	3170.72	0.36
G	3180.13	3170.72	-9.41
H	3180.97	3170.72	-10.25
I	3173.32	3170.72	-2.60
J	3172.10	3170.72	-1.38
K	3170.92	3170.72	-0.20
L	3169.73	3170.72	0.99

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 23006 PROFESSIONAL SURVEYOR

03/21/2019

Robert L. Lastrapes
Registration No. 23006

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C. H. Fenstermaker & Associates, L.L.C.
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Ph. 337-237-2200 Fax. 337-232-3299
www.fenstermaker.com

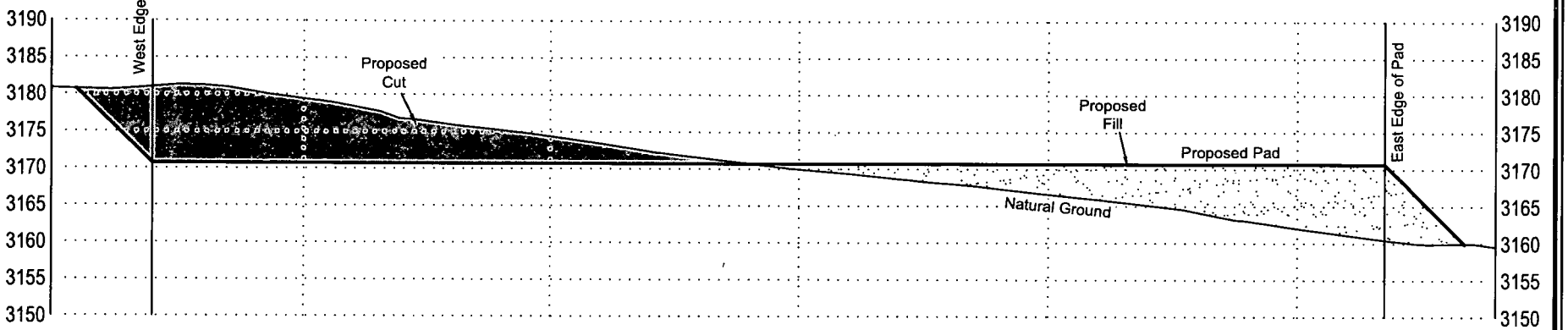
CUT & FILL PLAT

CHEVRON U.S.A. INC.

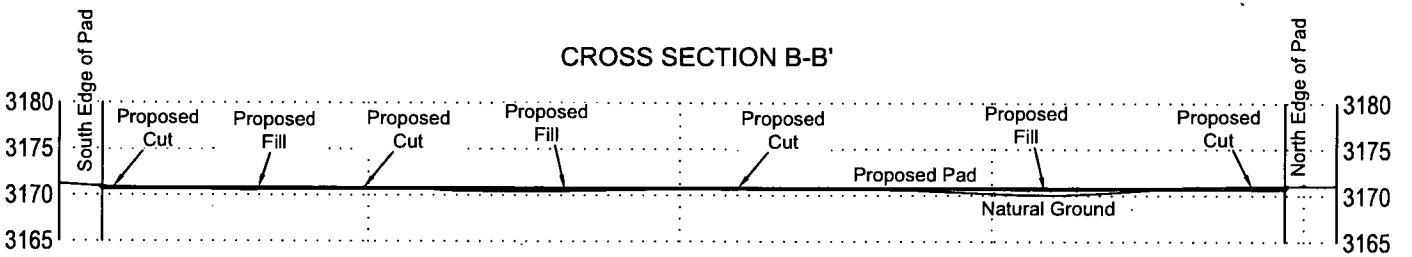
PROPOSED PAD
CICADA UNIT NOS. 037H-040H WELLS
SECTIONS 26 & 35, T25S-R27E
EDDY COUNTY, NEW MEXICO

	REVISIONS			
DRAWN BY: DMB	#	BY:	DATE:	DESCRIPTION:
PROJ. MGR.: GDG	1	DMB	03/19/2019	Pad shifted and well names changed
DATE: 11/28/2017				
FILENAME: T:\2017\2176159\DWG\CICADA UNIT 037H-040H CUT FILL.dwg				

CROSS SECTION A-A'



CROSS SECTION B-B'



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 23006 NEW MEXICO PROFESSIONAL SURVEYOR

03/21/2019

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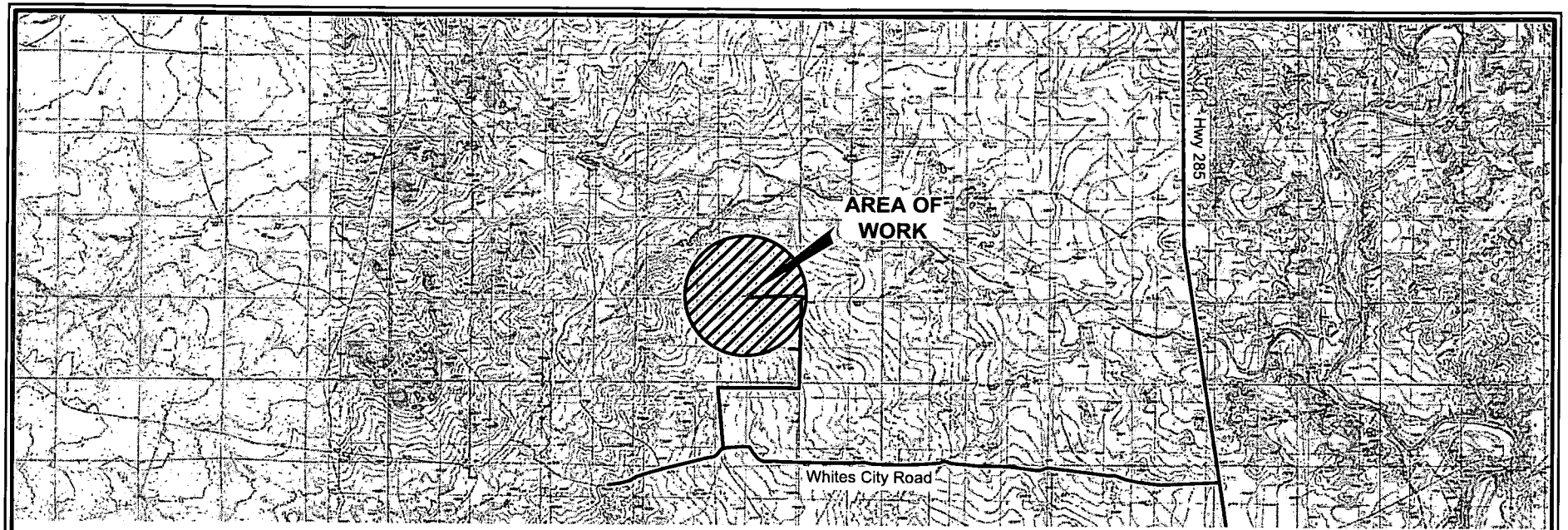
CUT & FILL PLAT

CHEVRON U.S.A. INC.

PROPOSED PAD
CICADA UNIT NOS. 037H-040H WELLS
SECTIONS 26 & 35, T25S-R27E
EDDY COUNTY, NEW MEXICO

	REVISIONS			
DRAWN BY: DMB	#	BY:	DATE:	DESCRIPTION:
PROJ. MGR.: GDG	1	DMB	03/19/2019	Pad shifted and well names changed
DATE: 11/28/2017				
FILENAME: T:\2017\2176159\DWG\CICADA UNIT 037H-040H CUT FILL.dwg				



NOTE:

1. 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.

2. The design pad elevation recommendation is based solely on a cut and fill (1:1 ratio) balance of the pad and does not include material required for the access roads. A detailed soil test and slope stability analysis shall be performed prior to construction to ensure proper compaction and working performance of the pad under the anticipated loadings. This material balance sheet does not constitute a foundation design and C. H. Fenstermaker & Associates, L.L.C. makes no warranty to the structural integrity of the site layout as shown. Fenstermaker also makes no recommendation or warranty about the layout relative to flood hazards, erosion control, or soil stability issues. Elevations refer to the North American Vertical Datum of 1988.

3.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.

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NAD 27 NEW MEXICO EAST ZONE

Scale: 1" = 10,000'

10,000' 0 5,000' 10,000'

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 23006 NEW MEXICO PROFESSIONAL SURVEYOR

03/21/2019

Robert L. Lastrapes
Registration No. 23006

FENSTERMAKER
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CUT & FILL PLAT

CHEVRON U.S.A. INC.

PROPOSED PAD
CICADA UNIT NOS. 037H-040H WELLS
SECTIONS 26 & 35, T25S-R27E
EDDY COUNTY, NEW MEXICO

	REVISIONS			
DRAWN BY: DMB	#	BY:	DATE:	DESCRIPTION:
PROJ. MGR.: GDG	1	DMB	03/19/2019	Pad shifted and well names changed
DATE: 11/28/2017				
FILENAME: T:\2017\2176159\DWG\CICADA UNIT 037H-040H CUT FILL.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.nm811.org

NW PAD CORNER		
X=	552,400	NAD 27
Y=	398,178	
LAT.	32.094594 N	
LONG.	104.164124 W	
X=	593,584	NAD83/86
Y=	398,235	
LAT.	32.094716 N	
LONG.	104.164617 W	
ELEV.	+3,181'	NAVD88

NE PAD CORNER		
X=	552,894	NAD 27
Y=	398,211	
LAT.	32.094682 N	
LONG.	104.162529 W	
X=	594,078	NAD83/86
Y=	398,268	
LAT.	32.094804 N	
LONG.	104.163022 W	
ELEV.	+3,158'	NAVD88

SW PAD CORNER		
X=	552,425	NAD 27
Y=	397,799	
LAT.	32.093552 N	
LONG.	104.164045 W	
X=	593,609	NAD83/86
Y=	397,856	
LAT.	32.093674 N	
LONG.	104.164538 W	
ELEV.	+3,180'	NAVD88

SE PAD CORNER		
X=	552,919	NAD 27
Y=	397,831	
LAT.	32.093639 N	
LONG.	104.162450 W	
X=	594,103	NAD83/86
Y=	397,889	
LAT.	32.093761 N	
LONG.	104.162943 W	
ELEV.	+3,165'	NAVD88

CICADA UNIT NO. 037H WELL		
X=	552,593	NAD 27
Y=	398,071	
LAT.	32.094298 N	
LONG.	104.163503 W	
X=	593,776	NAD83/86
Y=	398,128	
LAT.	32.094420 N	
LONG.	104.163996 W	
ELEV.	+3,173'	NAVD88

R 27 E

Sec. 26

Bureau of Land Management
Permanent Pad: ±2.01 Acres
Temporary Pad: ±0.57 Acres

T 25 S

CICADA UNIT No. 038H Well
CICADA UNIT No. 039H Well
CICADA UNIT No. 040H Well
CICADA UNIT No. 037H Well

PROPOSED PERMANENT PAD AREA ±2.01 ACRES

120'
310'
185'
25'
260'
380'
495'

N 72° 52' 00" E 1,427.86'

Future Access Road

Future Access Road

Point of Commencement/
Fnd. 2" Iron Pipe w/ Cap @
the SW Corner of Section 26

Future
Cicada Unit 19H-22H Pad

Sec. 35

Bureau of Land Management
Temporary Pad: ±0.57 Acres

PROPOSED TEMPORARY PAD AREA ±2.31 ACRES

NAD 27 NEW MEXICO EAST ZONE

LEGEND

- Proposed Pad
- Future Pad/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
03/21/2019

Robert L. Lastrapes
Registration No. 23006

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SURFACE USE PLAT

CHEVRON U.S.A. INC.

INTERIM RECLAMATION
CICADA UNIT NO. 037H - 040H PAD
SECTIONS 26 & 35, T25S-R27E
EDDY COUNTY, NEW MEXICO

	REVISIONS			
DRAWN BY: DMB	#	BY:	DATE:	DESCRIPTION:
PROJ. MGR.: GDG				
DATE: 03/21/2019				
FILENAME: T:\2017\2176159\DWG\Cicada Unit Interim Reclamation.dwg				

CHEVRON U.S.A. INC.
CICADA UNIT 39H – Package 12
NMNM 107369 (Cicada Unit – NMNM 137168X)
SECTION 26, T25S, R27E SECTION 2, T26S, R27E
39H – SHL 210' FSL & 1614' FEL BHL 25' FSL & 1170' FWL

APD Surface Use Plan of Operations

This Surface Use Plan of Operations has been designed to be reviewed in conjunction with Hayhurst Development Area (HDA) Master Development Plan

HDA Master Development Plan Reference Table
The contents referenced below apply to all HDA APD's

Existing Roads	Exhibit 1, MDP SUPO Page 1
Construction Materials	MDP SUPO Page 6
Methods for Handling Waste	MDP SUPO Page 6
Reclamation Objectives	MDP SUPO Page 6-8
Final Surface Reclamation	MDP SUPO Page 6-8

Driving Directions

- Driving Directions – From Malaga, New Mexico. The location is approximately 11.5 miles from the nearest town, which is Malaga, New Mexico. From Malaga, proceed South on Highway 285 approximately 11.5 miles and turn right (West) onto White City Rd and go approximately 6.5 miles on White City Road until the road reaches an intersection with a lease road in Section 2 (T26S R27E). Turn right onto this and travel .8 mi , then turn right and follow the lease road 1 mile East then 1.2 miles north. Turn left and travel .4 miles and the well location is on the right.

New or Reconstructed Access Roads – (MDP SUPO Pg. 1)

- There will be no new road construction for this proposal – The existing road is sufficient
- Ditches: See MDP
- Culverts: See MDP
- Road Cuts: See MDP

Location of Existing Wells

- 1-Mile radius map is attached

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Location of Existing and/or Proposed Production Facilities (MDP SUP Pg. 2)

- Facilities: Exisiting production facilities located in the NE corner of Sec. 35, T26S-R27E where oil and gas sales will take place.
    - The facility is 500' X 700'
    - Gas compression will occur within the proposed facility boundaries
    - Gas purchaser pipeline is in place 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.
    - Produced water will be sent from the facility to the future Dignitas SWD on State Lands in the SE/4 of Section 26 and/or the Chevron operated recycling facility and Disposal (Gravitas SWD) in Section 2 via existing infrastructure.
- Pipelines: See Detail
    - Pipelines Include:
        - 1,659' (100.59 rods) of Flowlines carrying production (buried)
        - 270' (16.36 rods) Gas Lift Line carrying pressurized gas (buried)
        - 1,659' (100.59 rods) Temporary Water line carrying fresh water (surface)
    - A ROW will not be necessary due to the Cicada Unit.
    - 20' temporary workspace will be utilized for construction

Location and Types of Water Supply (MDP SUPO Pg. 5)

- Existing ponds in Section 2, 9 & 10, T26S-R27E will be utilized for fresh water or recycled water.
- Fresh water will be obtained from a private water source.

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Construction Materials (MDP SUPO Pg. 6)

- Caliche will be sourced from a Chevron operated NMSLO pit in S2 NW4 Section 16 T26S R27E, or an alternate private pit in Section 13, T24S R27E in Eddy County, NM.

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.

Well Site Layout

- Surveyor Plat
    - Exterior well pad dimensions are 495' x 380'
    - Interior well pad dimensions from point of entry (well head) of the well are described on well plat, attached. Total disturbance area needed for construction of well pad will be approximately 4.3 acres
    - Topsoil placement is on the west where interim reclamation is planned to be completed upon completion of well and evaluation of best management practices.
    - Cut and fill: will be minimal.
- Rig Layout (see diagram)

Plans for Surface Reclamation (MDP SUPA Pg. 8)

Interim Reclamation Procedures

- Reclaimed pad size: 250' x 350' (approximately 2 acres)
- Reclaimed pad layout, topsoil location & erosion control features

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Surface Ownership

- BLM Surface
    - Surface Tenant – Forehand Ranches, Inc.
- **Nearest Post Office:** Malaga Post Office; 11.4 Miles north

Other Information

- On-site performed by BLM NRS: Paul Murphy 4/19/2018 (one of several visits with BLM personnel to address arc site and hydrology)
- Cultural report attached: **MDP** Participating Agreement attached: N/A

Chevron Representatives

Primary point of contact:
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