

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**

|  |                                       |   |
|--|---------------------------------------|---|
| 1a. Type of work: <input type="checkbox"/> DRILL <input type="checkbox"/> REENTER<br>1b. Type of Well: <input type="checkbox"/> Oil Well <input type="checkbox"/> Gas Well <input type="checkbox"/> Other<br>1c. Type of Completion: <input type="checkbox"/> Hydraulic Fracturing <input type="checkbox"/> Single Zone <input type="checkbox"/> Multiple Zone |                                       | 5. Lease Serial No.<br><br>6. If Indian, Allottee or Tribe Name<br><br>7. If Unit or CA Agreement, Name and No.<br><br>8. Lease Name and Well No.<br><br><div style="text-align: center; font-weight: bold; font-size: 1.2em;">[326056]</div> |
| 2. Name of Operator<br><div style="text-align: center; font-weight: bold; font-size: 1.2em;">[215099]</div>  |                                       | 9. API Well No. <div style="text-align: center; font-weight: bold; font-size: 1.2em;">30-025-50121</div>  |
| 3a. Address  | 3b. Phone No. (include area code)     | 10. Field and Pool, or Exploratory <div style="text-align: center; font-weight: bold; font-size: 1.2em;">[98309]</div>  |
| 4. Location of Well (Report location clearly and in accordance with any State requirements. *)<br>At surface<br>At proposed prod. zone   |                                       | 11. Sec., T. R. M. or Blk. and Survey or Area   |
| 14. Distance in miles and direction from nearest town or post office*  |                                       | 12. County or Parish<br>13. State   |
| 15. Distance from proposed* location to nearest property or lease line, ft. (Also to nearest drig. unit line, if any)  | 16. No of acres in lease              | 17. Spacing Unit dedicated to this well   |
| 18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft.   | 19. Proposed Depth                    | 20. BLM/BIA Bond No. in file  |
| 21. Elevations (Show whether DF, KDB, RT, GL, etc.)  | 22. Approximate date work will start* | 23. Estimated duration  |
| 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.<br>2. A Drilling Plan.<br>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).<br>5. Operator certification.<br>6. Such other site specific information and/or plans as may be requested by the BLM. |
|---|---|

|                         |                      |      |
|-------------------------|----------------------|------|
| 25. Signature           | Name (Printed/Typed) | Date |
| Title                   |                      |      |
| Approved by (Signature) | Name (Printed/Typed) | Date |
| Title                   |                      |      |
| Office                  |                      |      |

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.

**NGMP Rec 04/28/2022**

SL

(Continued on page 2)



**Approval Date: 10/22/2021**

**05/09/2022**

\*(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 well, and any other required information, should be furnished when required by Federal agency offices.

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

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

**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 well or to reenter a plugged and abandoned well; and (2) document, for administrative use, information for the management, disposal and use of National Resource Lands and resources including (a) analyzing your proposal to discover and extract the Federal or Indian resources encountered; (b) reviewing procedures and equipment and the projected impact on the land involved; and (c) evaluating the effects of the proposed operation on the surface and subsurface water and other environmental impacts.

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

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

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

The BLM connects this information to an 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 Connection Clearance Officer (WO-630), 1849 C Street, N.W., Mail Stop 401 LS, Washington, D.C. 20240.

## Additional Operator Remarks

### Location of Well

0. SHL: NENW / 195 FNL / 1540 FWL / TWSP: 24S / RANGE: 32E / SECTION: 12 / LAT: 32.238919 / LONG: -103.631836 ( TVD: 0 feet, MD: 0 feet )  
PPP: NENW / 0 FNL / 1430 FWL / TWSP: 24S / RANGE: 32E / SECTION: 13 / LAT: 32.224931 / LONG: -103.629942 ( TVD: 12300 feet, MD: 17197 feet )  
PPP: NESW / 2640 FNL / 1430 FWL / TWSP: 24S / RANGE: 32E / SECTION: 12 / LAT: 32.232197 / LONG: -103.629933 ( TVD: 12300 feet, MD: 14553 feet )  
PPP: NENW / 195 FNL / 1430 FWL / TWSP: 24S / RANGE: 32E / SECTION: 12 / LAT: 32.238919 / LONG: -103.631836 ( TVD: 12235 feet, MD: 12404 feet )  
BHL: SESW / 100 FSL / 1430 FWL / TWSP: 24S / RANGE: 32E / SECTION: 13 / LAT: 32.21069 / LONG: -103.632217 ( TVD: 12300 feet, MD: 22376 feet )

### BLM Point of Contact

Name: JORDAN NAVARRETTE

Title: LIE

Phone: (575) 234-5972

Email: jnavarrette@blm.gov

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### **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.

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**PECOS DISTRICT  
SURFACE USE  
CONDITIONS OF APPROVAL**

|                  |                        |
|------------------|------------------------|
| OPERATOR'S NAME: | Cimarex Energy Company |
| LEASE NO.:       | NMNM001917             |
| COUNTY:          | Lea County             |

**Wells:**

**Dos Equis 12-13 Fed Com #48H**

**Surface Hole Location: 255' FNL & 1580' FWL Section 12-24S-32E**

**Bottom Hole Location: 100' FSL & 1386' FWL Section 13-24S-32E**

**Dos Equis 12-13 Fed Com #49H**

**Surface Hole Location: 195' FNL & 1540' FWL Section 12-24S-32E**

**Bottom Hole Location: 100' FSL & 1430' FWL Section 13-24S-32E**

**Dos Equis 12-13 Fed Com #50H**

**Surface Hole Location: 195' FNL & 1520' FWL Section 12-24S-32E**

**Bottom Hole Location: 100' FSL & 1560' FWL Section 13-24S-32E**

**Dos Equis 12-13 Fed Com #51H**

**Surface Hole Location: 195' FNL & 1500' FWL Section 12-24S-32E**

**Bottom Hole Location: 100' FSL & 1540' FWL Section 13-24S-32E**

**Dos Equis 12-13 Fed Com #52H**

**Surface Hole Location: 195' FNL & 1480' FWL Section 12-24S-32E**

**Bottom Hole Location: 100' FSL & 1520' FWL Section 13-24S-32E**

**Dos Equis 12-13 Fed Com #75H**

**Surface Hole Location: 300' FNL & 2410' FWL Section 12-24S-32E**

**Bottom Hole Location: 100' FSL & 2000' FWL Section 13-24S-32E**

**Dos Equis 12-13 Fed Com #76H**

**Surface Hole Location: 300' FNL & 2430' FWL Section 12-24S-32E**

**Bottom Hole Location: 100' FSL & 2100' FWL Section 13-24S-32E**

**Dos Equis 12-13 Fed Com #77H**

**Surface Hole Location: 300' FNL & 2130' FWL Section 12-24S-32E**

**Bottom Hole Location: 100' FSL & 2130' FWL Section 13-24S-32E**

**TABLE OF CONTENTS**

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

- ☐ **General Provisions**
- ☐ **Permit Expiration**
- ☐ **Archaeology, Paleontology, and Historical Sites**
- ☐ **Noxious Weeds**
- ☒ **Special Requirements**
  - Watershed
- ☐ **Construction**
  - Notification

- Topsoil
- Closed Loop System
- Federal Mineral Material Pits
- Well Pads
- Roads
- ☐ Road Section Diagram
- ☒ Production (Post Drilling)
  - Well Structures & Facilities
- ☐ Interim Reclamation
- ☐ Final Abandonment & Reclamation

## **I. GENERAL PROVISIONS**

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

## **II. PERMIT EXPIRATION**

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

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

Any cultural resource (historic or prehistoric site or object) discovered by the holder, or any person working on the holder's behalf, on public or Federal land shall be immediately reported to the Authorized Officer. The 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 the proper mitigation measures will be made by the Authorized Officer after consulting with the holder.

OR

If the entire project is covered under the Permian Basin Programmatic Agreement (cultural resources only):

The proponent has contributed funds commensurate to the undertaking into an account for offsite mitigation. Participation in the PA serves as mitigation for the effects of this project on cultural resources. If any human skeletal remains, funerary objects, sacred objects, or objects of cultural patrimony are discovered at any time during construction, all construction activities shall halt and the BLM will be notified as soon as possible within 24 hours. Work shall not resume until a Notice to Proceed is issued by the BLM. See Stipulation 6 for more information.

If the proposed project is split between a Class III inventory and a Permian Basin Programmatic Agreement contribution, the portion of the project covered under Class III inventory should default to the first paragraph stipulations.

The holder is hereby obligated to comply with procedures established in the Native American Graves Protection and Repatriation Act (NAGPRA) to protect such cultural items as human remains, associated funerary objects, sacred objects, and objects of cultural patrimony discovered inadvertently during the course of project implementation. In the event that any of the cultural items listed above are discovered during the course of project work, the proponent shall immediately halt the disturbance and contact the BLM within 24 hours for instructions. The proponent or initiator of any project shall be held responsible for protecting, evaluating, reporting, excavating, treating, and disposing of these cultural items according to the procedures established by the BLM in consultation with Indian Tribes."

Any paleontological resource (historic or prehistoric site or object) discovered by the holder, or

any person working on the holder's behalf, on public or Federal land shall be immediately reported to the Authorized Officer. The 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 the proper mitigation measures will be made by the Authorized Officer after consulting with the holder.

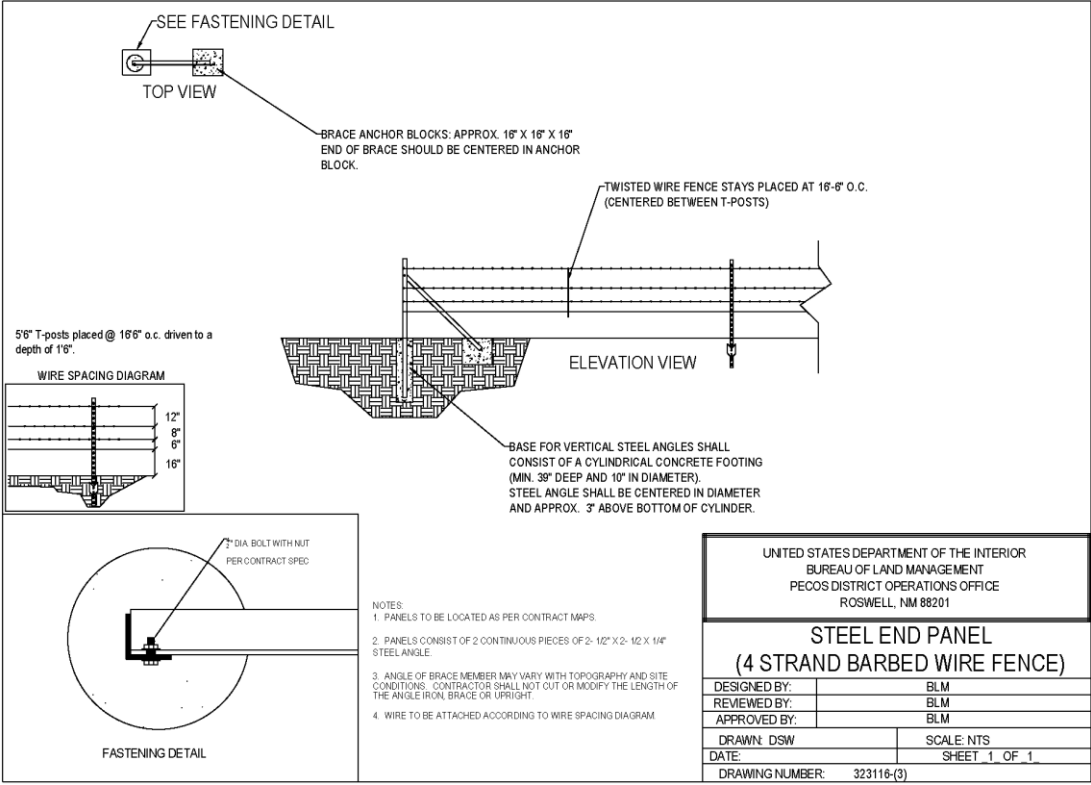
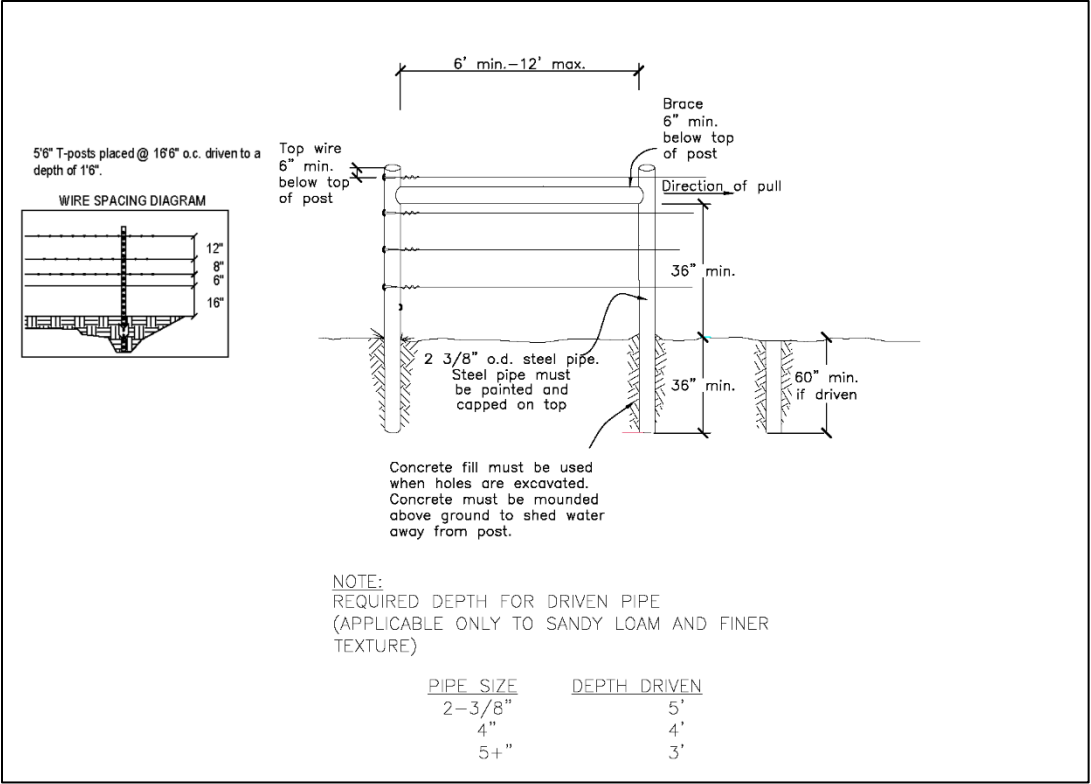
#### **IV. NOXIOUS WEEDS**

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)**

##### **Watershed:**

The entire well pad(s) will be bermed to prevent oil, salt, and other chemical contaminants from leaving the well pad. The compacted berm shall be constructed at a minimum of 12 inches with impermeable mineral material (e.g. caliche). Topsoil shall not be used to construct the berm. No water flow from the uphill side(s) of the pad shall be allowed to enter the well pad. The integrity of the berm shall be maintained around the surfaced pad throughout the life of the well and around the downsized pad after interim reclamation has been completed. Any water erosion that may occur due to the construction of the well pad during the life of the well will be quickly corrected and proper measures will be taken to prevent future erosion. Stockpiling of topsoil is required. The topsoil 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.



VI. CONSTRUCTION

A. NOTIFICATION

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

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

#### **B. TOPSOIL**

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

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

#### **C. CLOSED LOOP SYSTEM**

Tanks are required for drilling operations: No Pits.

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

#### **D. FEDERAL MINERAL MATERIALS PIT**

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

#### **E. WELL PAD SURFACING**

Surfacing of the well pad is not required.

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

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

##### **Exclosure Fencing**

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

#### **G. ON LEASE ACCESS ROADS**

##### **Road Width**

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

##### **Surfacing**

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

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

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

### **Crowning**

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

### **Ditching**

Ditching shall be required on both sides of the road.

### **Turnouts**

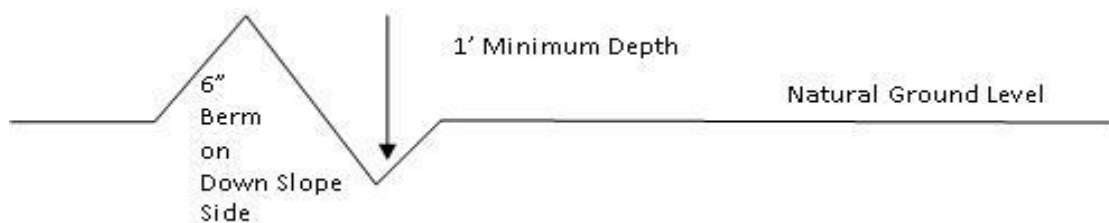
Vehicle turnouts shall be constructed on the road. Turnouts shall be intervisible with interval spacing distance less than 1000 feet. Turnouts shall conform to Figure 1; cross section and plans for typical road construction.

### **Drainage**

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

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

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



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

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

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

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

### 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

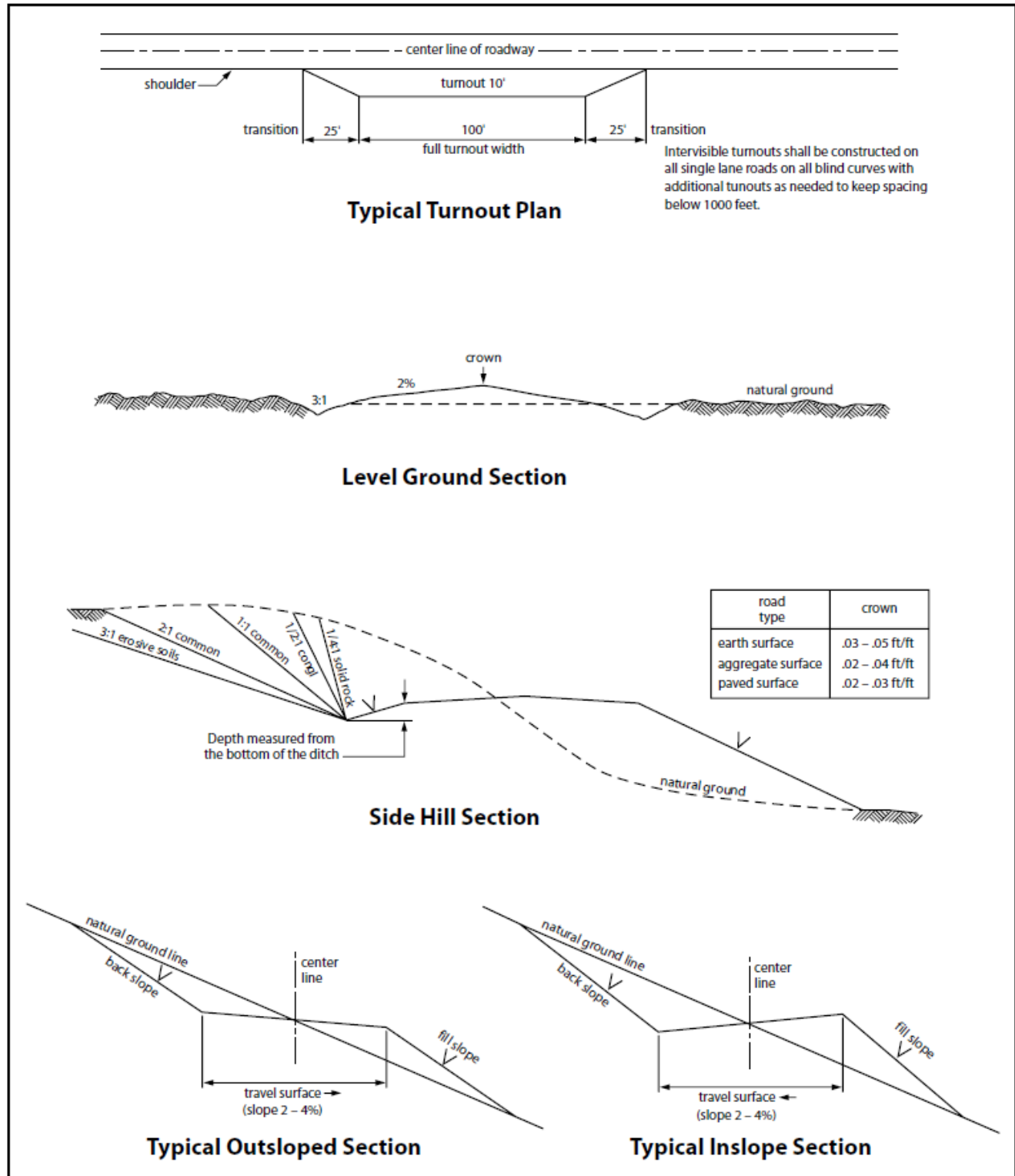


Figure 1. Cross-sections and plans for typical road sections representative of BLM resource or FS local and higher-class roads.

## 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).

## VIII. INTERIM RECLAMATION

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

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

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

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

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

#### **IX. FINAL ABANDONMENT & RECLAMATION**

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

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

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

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

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

**Seed Mixture 2, for Sandy Sites**

The holder shall seed all disturbed areas with the seed mixture listed below. The seed mixture shall be planted in the amounts specified in pounds of pure live seed (PLS)\* per acre. There shall be no primary or secondary noxious weeds in the seed mixture. Seed will be tested and the viability testing of seed will be done in accordance with State law (s) and within nine (9) months prior to purchase. Commercial seed will be either certified or registered seed. The seed container will be tagged in accordance with State law(s) and available for inspection by the authorized officer.

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

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

**Species**

|   | <u>lb/acre</u> |
|---|----------------|
| Sand dropseed ( <i>Sporobolus cryptandrus</i> )     | 1.0            |
| Sand love grass ( <i>Eragrostis trichodes</i> )     | 1.0            |
| Plains bristlegrass ( <i>Setaria macrostachya</i> ) | 2.0            |

\*Pounds of pure live seed:

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

## PECOS DISTRICT DRILLING CONDITIONS OF APPROVAL

|                         |                                    |
|-------------------------|------------------------------------|
| <b>OPERATOR'S NAME:</b> | <b>Cimarex</b>                     |
| <b>LEASE NO.:</b>       | <b>NMNM001917</b>                  |
| <b>LOCATION:</b>        | Section 12, T.24 S., R.32 E., NMPM |
| <b>COUNTY:</b>          | Lea County, New Mexico             |

|                              |                             |
|------------------------------|-----------------------------|
| <b>WELL NAME &amp; NO.:</b>  | Dos Equis 12-13 Fed Com 49H |
| <b>SURFACE HOLE FOOTAGE:</b> | 195'/N & 1540'/W            |
| <b>BOTTOM HOLE FOOTAGE:</b>  | 100'/S & 1430'/W            |

COA

|                      |  |  |                                     |
|----------------------|--|--|-------------------------------------|
| H2S                  | <input checked="" type="radio"/> Yes             | <input type="radio"/> No                   |                                     |
| Potash               | <input checked="" type="radio"/> None            | <input type="radio"/> Secretary            | <input type="radio"/> R-111-P       |
| Cave/Karst Potential | <input checked="" type="radio"/> Low             | <input type="radio"/> Medium               | <input type="radio"/> High          |
| Cave/Karst Potential | <input type="radio"/> Critical                   |  |                                     |
| Variance             | <input type="radio"/> None                       | <input checked="" type="radio"/> Flex Hose | <input type="radio"/> Other         |
| Wellhead             | <input type="radio"/> Conventional               | <input checked="" type="radio"/> Multibowl | <input type="radio"/> Both          |
| Other                | <input type="checkbox"/> 4 String Area           | <input type="checkbox"/> Capitan Reef      | <input type="checkbox"/> WIPP       |
| Other                | <input checked="" type="checkbox"/> Fluid Filled | <input type="checkbox"/> Cement Squeeze    | <input type="checkbox"/> Pilot Hole |
| Special Requirements | <input type="checkbox"/> Water Disposal          | <input checked="" type="checkbox"/> COM    | <input type="checkbox"/> Unit       |

### A. HYDROGEN SULFIDE

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

### B. CASING

1. The **10-3/4** inch surface casing shall be set at approximately **1520** feet (a minimum of **25 feet (Lea County)** into the Rustler Anhydrite and above the salt) and cemented to the surface.
  - a. If cement does not circulate to the surface, the appropriate BLM office shall be notified and a temperature survey utilizing an electronic type temperature survey with surface log readout will be used or a cement bond log shall be run to verify the top of the cement. Temperature survey will be run a minimum of six hours after pumping cement and ideally between 8-10 hours after completing the cement job.
  - b. Wait on cement (WOC) time for a primary cement job will be a minimum of **8**

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

**Intermediate casing must be kept 1/3<sup>rd</sup> fluid filled to meet BLM minimum collapse requirement.**

2. The minimum required fill of cement behind the **7-5/8** inch intermediate casing 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.**
3. The minimum required fill of cement behind the **5-1/2 x 5** inch production casing is:
  - Cement should tie-back at least **200 feet** into previous casing string. Operator shall provide method of verification.

**C. PRESSURE CONTROL**

1. **Variance approved to use flex line from BOP to choke manifold. Manufacturer's specification to be readily available. No external damage to flex line. Flex line to be installed as straight as possible (no hard bends).**
2. Operator has proposed a multi-bowl wellhead assembly. This assembly will only be tested when installed on the surface casing. Minimum working pressure of the blowout preventer (BOP) and related equipment (BOPE) required for drilling below the surface casing shoe shall be **10,000 (10M) psi. Variance is approved to use a 5000 (5M) Annular which shall be tested to 5000 (5M) psi.**

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

#### **D. SPECIAL REQUIREMENT (S)**

##### **Communitization Agreement**

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

## **GENERAL REQUIREMENTS**

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

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

☒ Eddy County

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

☒ Lea County

Call the Hobbs Field Station, 414 West Taylor, Hobbs NM 88240, (575)

393-3612

1. Unless the production casing has been run and cemented or the well has been properly plugged, the drilling rig shall not be removed from over the hole without prior approval.
  - a. In the event the operator has proposed to drill multiple wells utilizing a skid/walking rig. Operator shall secure the wellbore on the current well, after installing and testing the wellhead, by installing a blind flange of like pressure rating to the wellhead and a pressure gauge that can be monitored while drilling is performed on the other well(s).
  - b. When the operator proposes to set surface casing with Spudder Rig
    - Notify the BLM when moving in and removing the Spudder Rig.
    - Notify the BLM when moving in the 2<sup>nd</sup> Rig. Rig to be moved in within 90 days of notification that Spudder Rig has left the location.
    - BOP/BOPE test to be conducted per Onshore Oil and Gas Order No. 2 as soon as 2nd Rig is rigged up on well.
2. Floor controls are required for 3M or Greater systems. These controls will be on the rig floor, unobstructed, readily accessible to the driller and will be operational at all times during drilling and/or completion activities. Rig floor is defined as the area immediately around the rotary table; the area immediately above the substructure on which the draw works are located, this does not include the dog house or stairway area.
3. The record of the drilling rate along with the GR/N well log run from TD to surface (horizontal well – vertical portion of hole) shall be submitted to the BLM office as well as all other logs run on the borehole 30 days from completion. If available, a digital copy of the logs is to be submitted in addition to the paper copies. The Rustler top and top and bottom of Salt are to be recorded on the Completion Report.

#### A. CASING

1. Changes to the approved APD casing program need prior approval if the items substituted are of lesser grade or different casing size or are Non-API. The Operator can exchange the components of the proposal with that of superior strength (i.e. changing from J-55 to N-80, or from 36# to 40#). Changes to the approved cement program need prior approval if the altered cement plan has less volume or strength or if the changes are substantial (i.e. Multistage tool, ECP, etc.). The initial wellhead installed on the well will remain on the well with spools used as needed.
2. Wait on cement (WOC) for Potash Areas: After cementing but before commencing any tests, the casing string shall stand cemented under pressure until both of the following conditions have been met: 1) cement reaches a minimum compressive strength of 500 psi for all cement blends, 2) until cement has been in place at least 24

hours. WOC time will be recorded in the driller's log. The casing integrity 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 integrity 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.

**ZS080921**



U.S. Department of the Interior  
Bureau of Land Management

# Application for Permit to Drill

## APD Package Report

Date Printed:

|                    |              |
|--------------------|--------------|
| APD ID:            | Well Status: |
| APD Received Date: | Well Name:   |
| Operator:          | Well Number: |

### APD Package Report Contents

- Form 3160-3 : Error Generating Form
- Operator Certification Report : Error Generating Form
- Application Report : Error Generating Report
- Application Attachments
  - Well Plat: 2 file(s)
- Drilling Plan Report : Error Generating Report
- Drilling Plan Attachments
  - Blowout Prevention Choke Diagram Attachment: 2 file(s)
  - Blowout Prevention BOP Diagram Attachment: 2 file(s)
  - Casing Taperd String Specs: 3 file(s)
  - Casing Design Assumptions and Worksheet(s): 4 file(s)
  - Hydrogen sulfide drilling operations plan: 1 file(s)
  - Proposed horizontal/directional/multi-lateral plan submission: 2 file(s)
  - Other Facets: 3 file(s)
  - Other Variances: 2 file(s)
- SUPO Report : Error Generating Report
- SUPO Attachments
  - Existing Road Map: 1 file(s)
  - Attach Well map: 1 file(s)
  - Production Facilities map: 4 file(s)
  - Water source and transportation map: 1 file(s)
  - Well Site Layout Diagram: 2 file(s)
  - Recontouring attachment: 1 file(s)
  - Other SUPO Attachment: 1 file(s)
- PWD Report : Error Generating Report
- PWD Attachments
  - None

- Bond Report : Error Generating Form
- Bond Attachments
  - None

**District I**  
1625 N. French Dr., Hobbs, NM 88240  
Phone: (575) 393-6161 Fax: (575) 393-0720

**District II**  
811 S. First St., Artesia, NM 88210  
Phone: (575) 748-1283 Fax: (575) 748-9720

**District III**  
1000 Rio Brazos Road, Aztec, NM 87410  
Phone: (505) 334-6178 Fax: (505) 334-6170

**District IV**  
1220 S. St. Francis Dr., Santa Fe, NM 87505  
Phone: (505) 476-3460 Fax: (505) 476-3462

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

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

☐ AMENDED REPORT

## WELL LOCATION AND ACREAGE DEDICATION PLAT

|  |  |   |   |                                   |
|--|--|---|---|-----------------------------------|
| <sup>1</sup> API Number<br>30-025 30-025-50121 |  | <sup>2</sup> Pool Code<br>98309                           | <sup>3</sup> Pool Name<br>WC-025-G-08 S243213C;WOLFCAMP |                                   |
| <sup>4</sup> Property Code                     |  | <sup>5</sup> Property Name<br>DOS EQUIS 12-13 FEDERAL COM |   | <sup>6</sup> Well Number<br>49H   |
| <sup>7</sup> OGRID No.<br>215099               |  | <sup>8</sup> Operator Name<br>CIMAREX ENERGY CO.          |   | <sup>9</sup> Elevation<br>3608.2' |

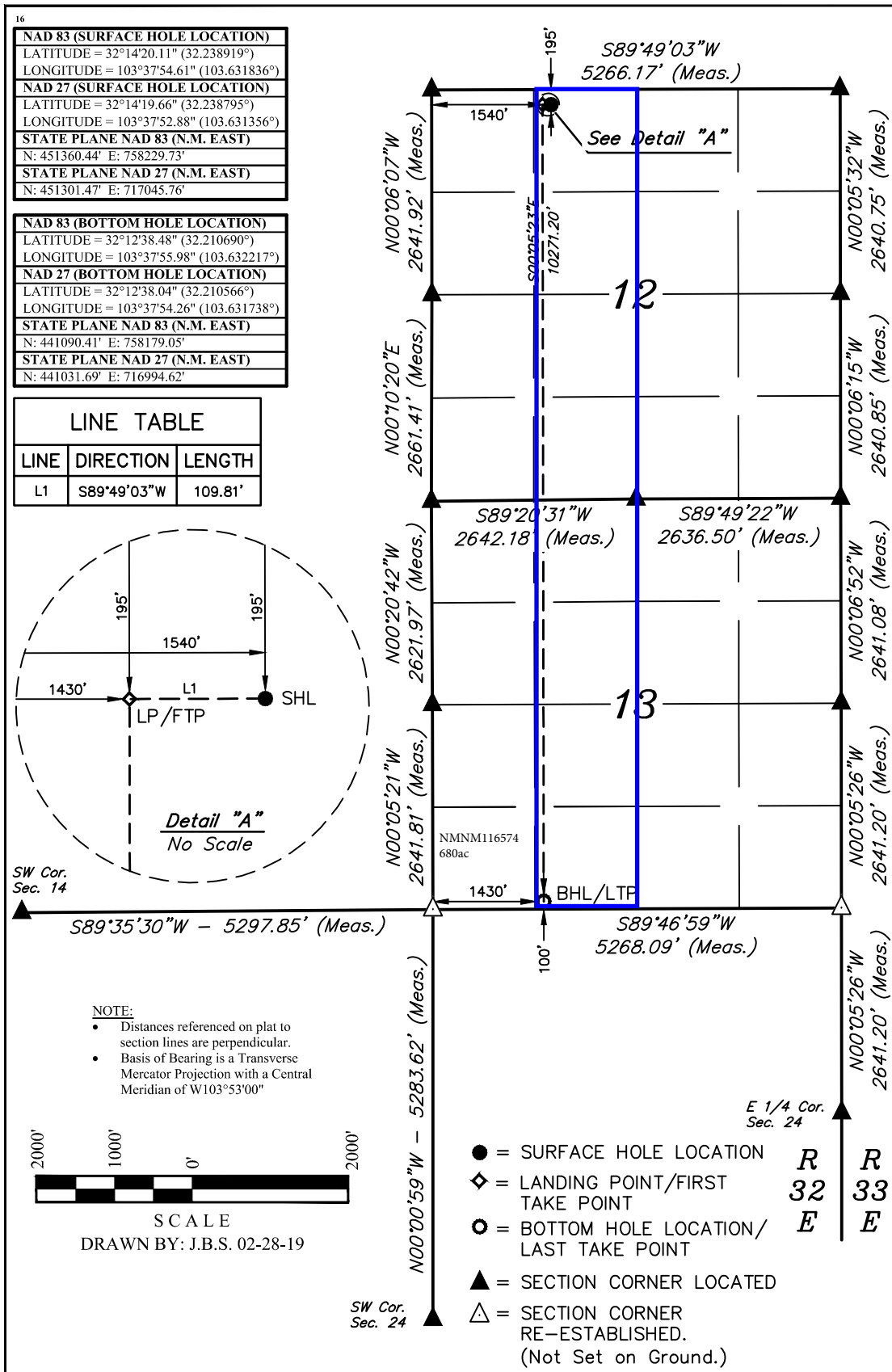
<sup>10</sup>Surface Location

|                    |               |                 |              |         |                      |                           |                       |                        |               |
|--------------------|---------------|-----------------|--------------|---------|----------------------|---------------------------|-----------------------|------------------------|---------------|
| UL or lot no.<br>C | Section<br>12 | Township<br>24S | Range<br>32E | Lot Idn | Feet from the<br>195 | North/South line<br>NORTH | Feet from the<br>1540 | East/West line<br>WEST | County<br>LEA |
|--------------------|---------------|-----------------|--------------|---------|----------------------|---------------------------|-----------------------|------------------------|---------------|

<sup>11</sup> Bottom Hole Location If Different From Surface

|                                      |               |                               |              |                                  |                      |                           |                       |                        |               |
|--------------------------------------|---------------|-------------------------------|--------------|----------------------------------|----------------------|---------------------------|-----------------------|------------------------|---------------|
| UL or lot no.<br>N                   | Section<br>13 | Township<br>24S               | Range<br>32E | Lot Idn                          | Feet from the<br>100 | North/South line<br>SOUTH | Feet from the<br>1430 | East/West line<br>WEST | County<br>LEA |
| <sup>12</sup> Dedicated Acres<br>320 |               | <sup>13</sup> Joint or Infill |              | <sup>14</sup> Consolidation Code |                      | <sup>15</sup> Order No.   |                       |                        |               |

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



## 17 OPERATOR CERTIFICATION

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

Signature Hope Knauth Date 5-4-20

Hope Knauls

## 18 SURVEYOR CERTIFICATION

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

April 23, 2018

Date of Survey \_\_\_\_\_  
Signature and Seal of Professional Surveyor: \_\_\_\_\_



Certificate Number:

**AMENDED REPORT**

## WELL LOCATION AND ACREAGE DEDICATION PLAT

|                                      |   |                                 |   |                                   |
|--------------------------------------|---|---------------------------------|---|-----------------------------------|
| <sup>1</sup> API Number              |   | <sup>2</sup> Pool Code<br>98309 | <sup>3</sup> Pool Name<br>WC-025-G-08 S243213C;WOLFCAMP |                                   |
| <sup>4</sup> Property Code<br>326056 | <sup>5</sup> Property Name<br>DOS EQUIS 12-13 FEDERAL COM |                                 |   | <sup>6</sup> Well Number<br>49H   |
| <sup>7</sup> OGRID No.<br>215099     | <sup>8</sup> Operator Name<br>CIMAREX ENERGY CO.          |                                 |   | <sup>9</sup> Elevation<br>3608.2' |

<sup>10</sup>Surface Location

|                    |               |                 |              |         |                      |                           |                       |                        |               |
|--------------------|---------------|-----------------|--------------|---------|----------------------|---------------------------|-----------------------|------------------------|---------------|
| UL or lot no.<br>C | Section<br>12 | Township<br>24S | Range<br>32E | Lot Idn | Feet from the<br>195 | North/South line<br>NORTH | Feet from the<br>1540 | East/West line<br>WEST | County<br>LEA |
|--------------------|---------------|-----------------|--------------|---------|----------------------|---------------------------|-----------------------|------------------------|---------------|

<sup>11</sup> Bottom Hole Location If Different From Surface

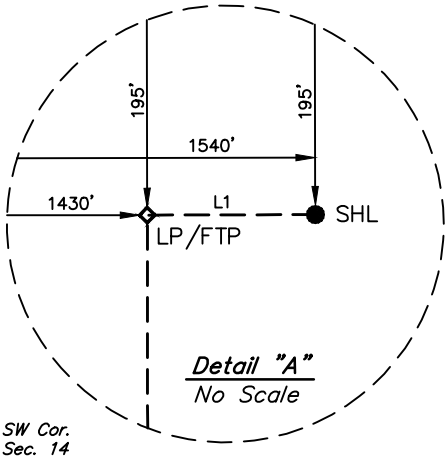
|                                      |               |                               |              |                                  |                      |                           |                       |                        |               |
|--------------------------------------|---------------|-------------------------------|--------------|----------------------------------|----------------------|---------------------------|-----------------------|------------------------|---------------|
| UL or lot no.<br>N                   | Section<br>13 | Township<br>24S               | Range<br>32E | Lot Idn                          | Feet from the<br>100 | North/South line<br>SOUTH | Feet from the<br>1430 | East/West line<br>WEST | County<br>LEA |
| <sup>12</sup> Dedicated Acres<br>320 |               | <sup>13</sup> Joint or Infill |              | <sup>14</sup> Consolidation Code |                      | <sup>15</sup> Order No.   |                       |                        |               |

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

|  |
|--|
| <b>NAD 83 (SURFACE HOLE LOCATION)</b>          |
| <b>LATITUDE = 32°14'20.11" (32.238919°)</b>    |
| <b>LONGITUDE = 103°37'54.61" (103.631836°)</b> |
| <b>NAD 27 (SURFACE HOLE LOCATION)</b>          |
| <b>LATITUDE = 32°14'19.66" (32.238795°)</b>    |
| <b>LONGITUDE = 103°37'52.88" (103.631356°)</b> |
| <b>STATE PLANE NAD 83 (N.M. EAST)</b>          |
| <b>N: 451360.44' E: 758229.73'</b>             |
| <b>STATE PLANE NAD 27 (N.M. EAST)</b>          |
| <b>N: 451301.47' E: 717045.76'</b>             |

|  |
|--|
| <b>NAD 83 (BOTTOM HOLE LOCATION)</b>           |
| <b>LATITUDE = 32°12'38.48" (32.210690°)</b>    |
| <b>LONGITUDE = 103°33'55.98" (103.632217°)</b> |
| <b>NAD 27 (BOTTOM HOLE LOCATION)</b>           |
| <b>LATITUDE = 32°12'38.04" (32.210566°)</b>    |
| <b>LONGITUDE = 103°37'54.26" (103.631738°)</b> |
| <b>STATE PLANE NAD 83 (N.M. EAST)</b>          |
| <b>N: 441090.41' E: 758179.05'</b>             |
| <b>STATE PLANE NAD 27 (N.M. EAST)</b>          |
| <b>N: 441031.69' E: 716994.62'</b>             |

| LINE TABLE |             |         |
|------------|-------------|---------|
| LINE       | DIRECTION   | LENGTH  |
| L1         | S89°49'03"W | 109.81' |

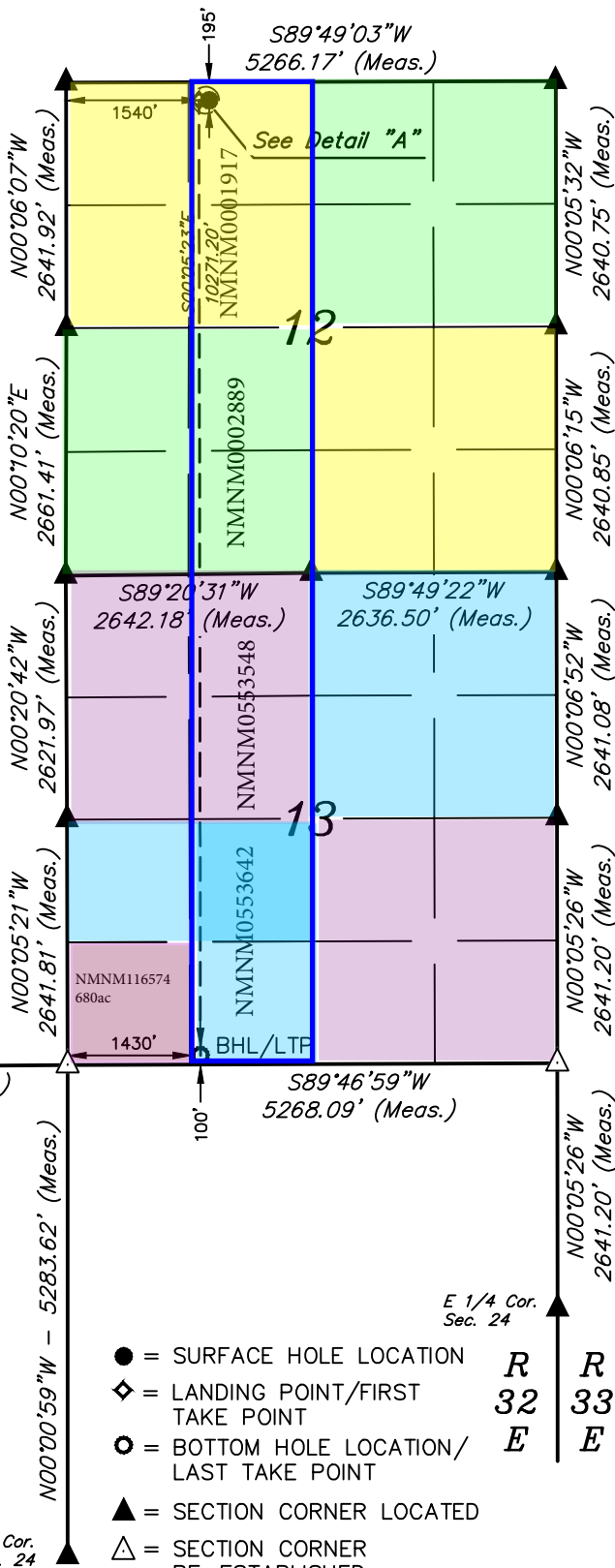


NOTE:

- Distances referenced on plat to section lines are perpendicular.
- Basis of Bearing is a Transverse Mercator Projection with a Central Meridian of W103°53'00"





SCALE  
DRAWN BY: J.B.S. 02-28-19



- = SURFACE HOLE LOCATION
- ◆ = LANDING POINT/FIRST TAKE POINT
- ⊙ = BOTTOM HOLE LOCATION/ LAST TAKE POINT
- ▲ = SECTION CORNER LOCATED
- △ = SECTION CORNER RE-ESTABLISHED.  
(Not Set on Ground.)

## 17 OPERATOR CERTIFICATION

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


  
 Signature Date

Hope Knauls  
Printed Name

hknauls@cimarex.com  
E-mail Address

## 18 SURVEYOR CERTIFICATION

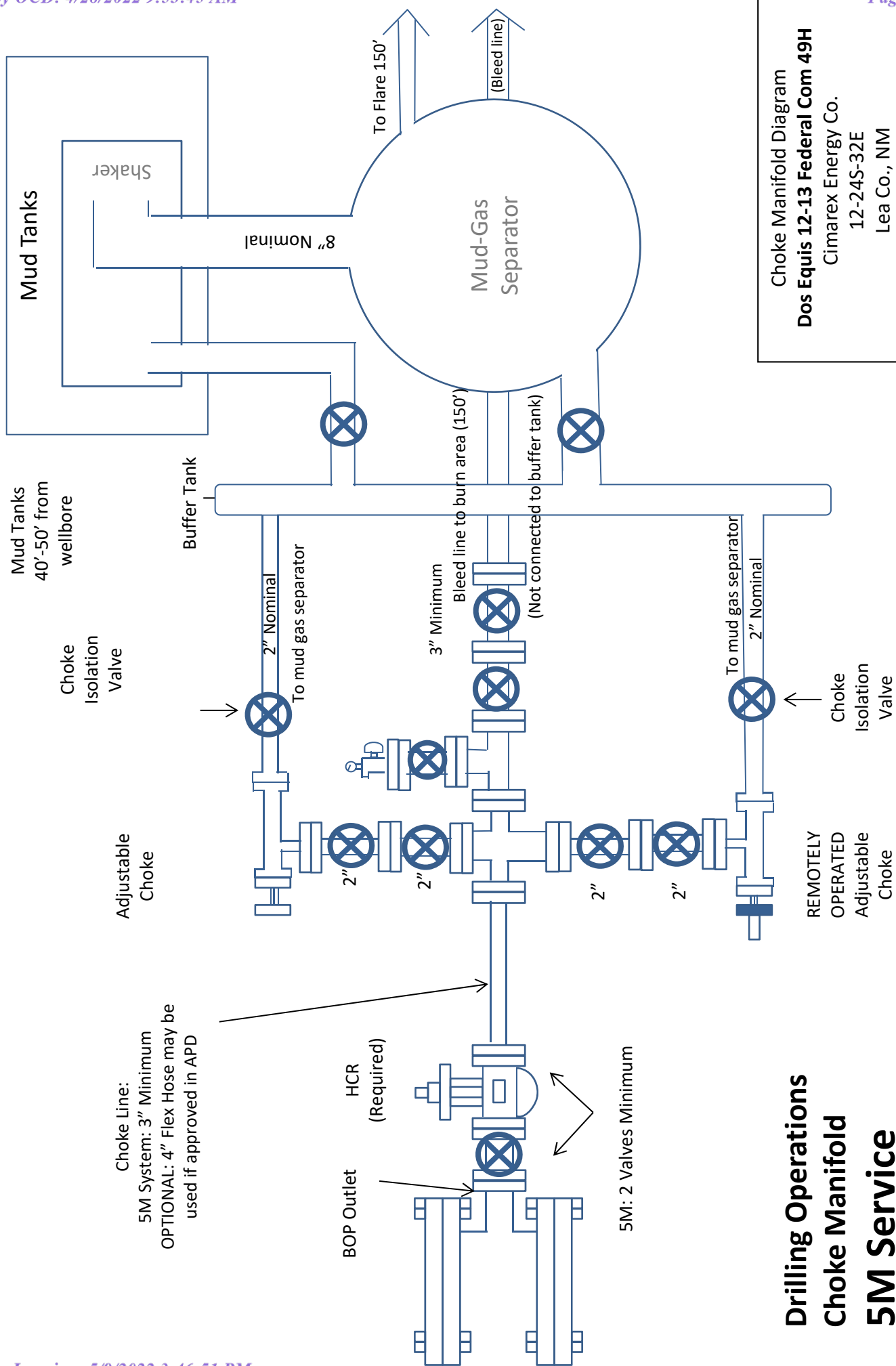
*I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my belief.*

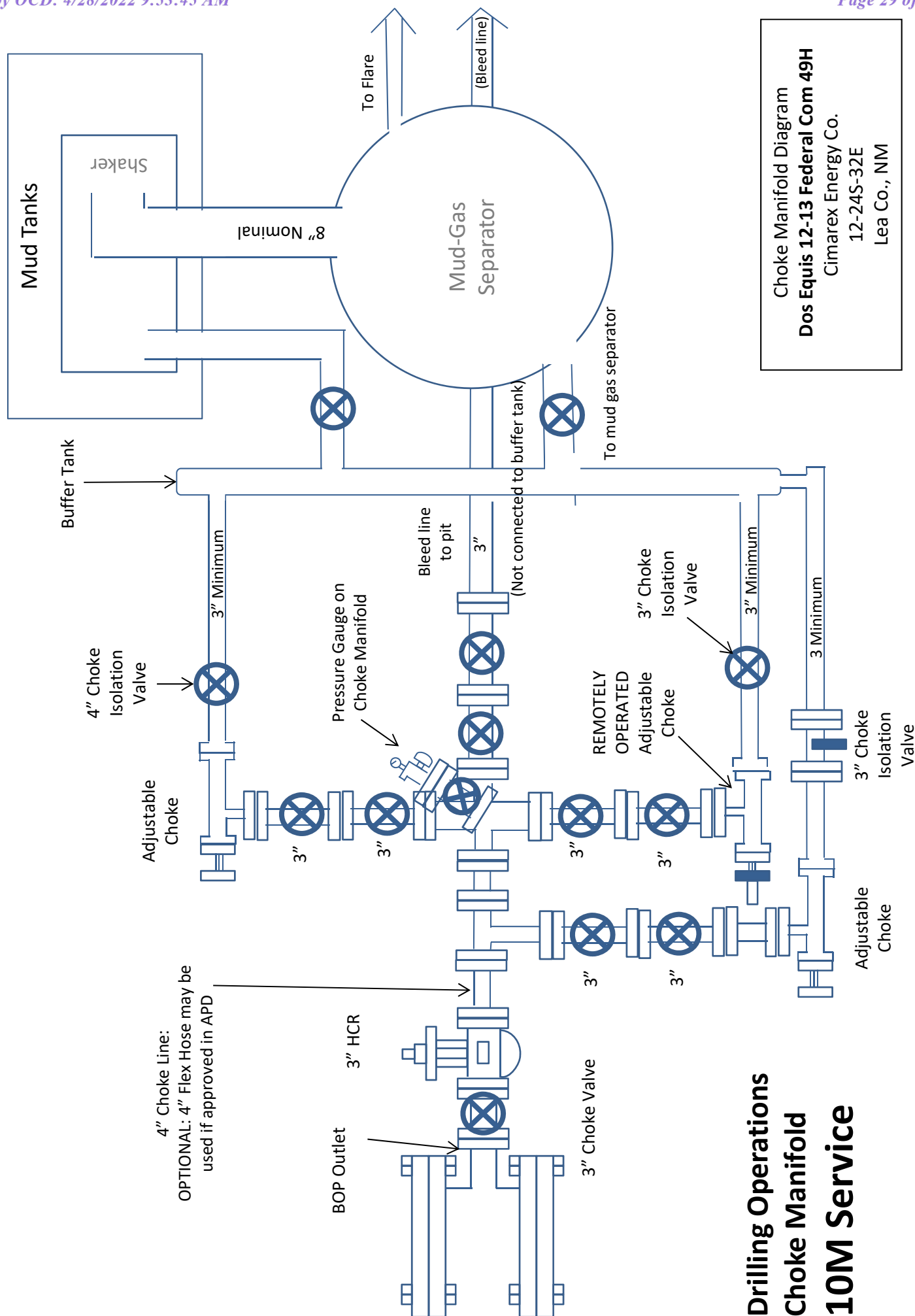
April 23, 2018

Date of Survey \_\_\_\_\_  
Signature and Seal of Professional Surveyor: \_\_\_\_\_



Certificate Number:





Drilling 9-7/8" hole below  
10-3/4" Casing

Fill Line

Flowline

5000# (5M)  
BOP

Annular Preventer

SRR &amp; A

Pipe Rams

Blind Rams

2" Minimum Kill Line

Kill Line

Drilling  
Spool

3" minimum choke line

Choke Line

2 Valves Minimum

(HCR Required)

2 Valves and a check valve

Wellhead  
Assembly

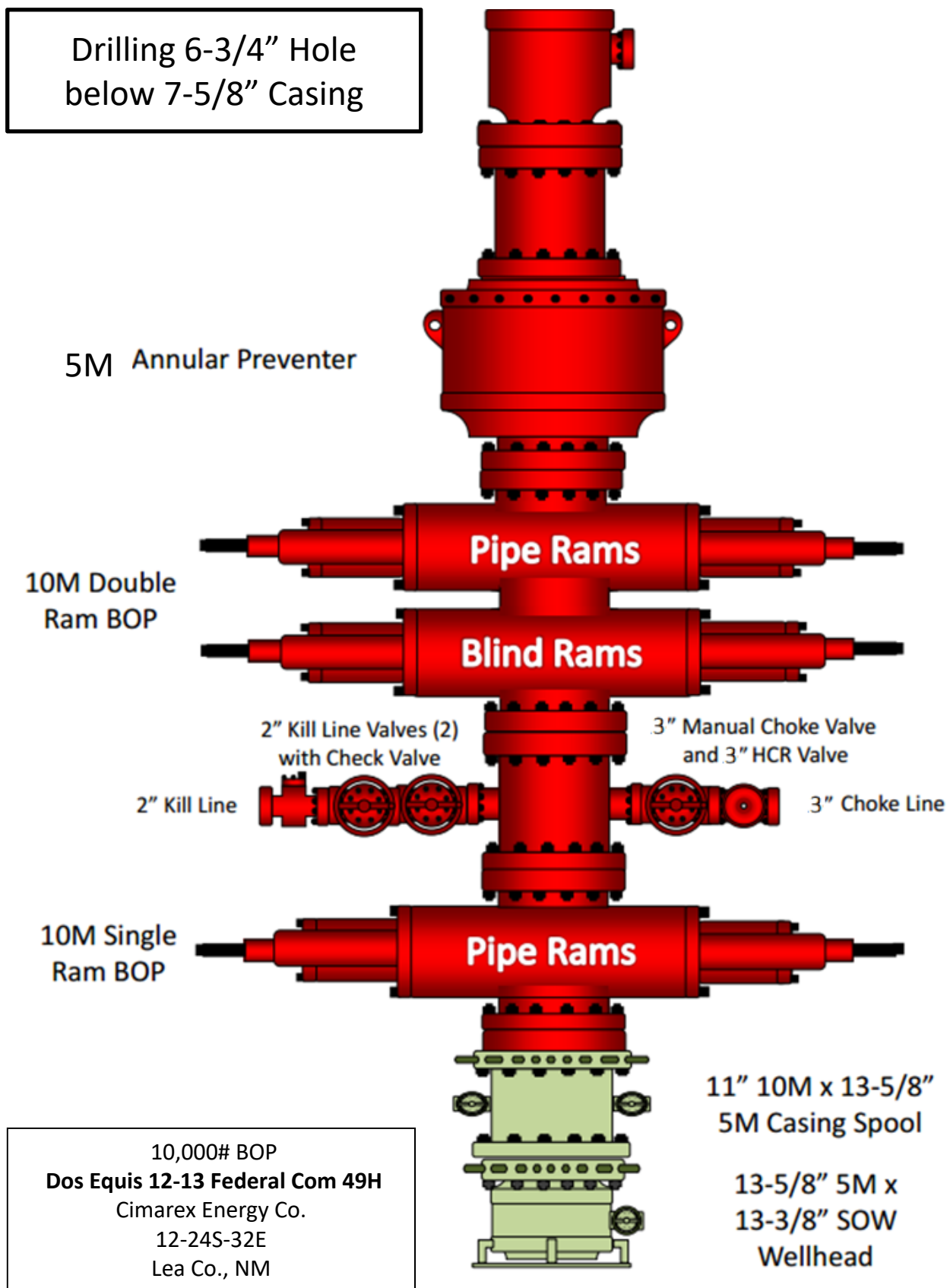
11" 5000 psi x 7-1/16" 10,000 psi  
Wellhead Assembly

Wellhead  
Assembly

13-5/8" 3000 psi x 11" 5000 psi  
Wellhead Assembly

13-5/8" 3000# psi x 13-3/8" SOW Casing Head

5000# BOP  
Dos Equis 12-13 Federal Com 49H  
Cimarex Energy Co.  
12-24S-32E  
Lea Co., NM





## Technical Data Sheet AXIS 5 1/2" 20# P110CY BTC

### TUBULAR PARAMETERS

|                        |          |
|------------------------|----------|
| Nominal OD, (inch)     | 5.500    |
| Wall Thickness, (inch) | .361     |
| Pipe Grade             | P110CY   |
| Coupling               | Regular  |
| Coupling Grade         | P110CY   |
| Drift                  | Standard |

### Pipe Body Properties

|                                   |        |
|-----------------------------------|--------|
| PE Weight, (lbs/ft)               | 19.83  |
| Nominal Weight, (lbs/ft)          | 20.00  |
| Nominal ID, (inch)                | 4.778  |
| Drift Diameter, (inch)            | 4.653  |
| Yield Strength in Tension, (klbs) | 641    |
| Internal Yield Pressure, (psi)    | 12,360 |
| Collapse Pressure, (psi)          | 11,100 |



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| Collapse Pressure, (psi)          | 11,100 |

## Dos Equis 12-13 Fed Com 49H

### Casing Assumptions

#### 2. Casing Program

| Hole Size                 | Casing Depth From | Casing Depth To | Setting Depth TVD | Casing Size | Weight (lb/ft) | Grade | Conn. | SF Collapse | SF Burst | SF Tension         |
|---------------------------|-------------------|-----------------|-------------------|-------------|----------------|-------|-------|-------------|----------|--------------------|
| 14 3/4                    | 0                 | 1235            | 1235              | 10-3/4"     | 40.50          | J-55  | BT&C  | 2.95        | 5.85     | 12.58              |
| 9 7/8                     | 0                 | 12456           | 12300             | 7-5/8"      | 29.70          | L-80  | LT&C  | 2.50        | 1.20     | 1.55               |
| 6 3/4                     | 0                 | 11732           | 11732             | 5-1/2"      | 20.00          | L-80  | LT&C  | 1.16        | 1.21     | 1.88               |
| 6 3/4                     | 11732             | 22377           | 12300             | 5"          | 18.00          | P-110 | BT&C  | 1.68        | 1.70     | 56.73              |
| BLM Minimum Safety Factor |                   |                 |                   |             |                |       |       | 1.125       | 1        | 1.6 Dry<br>1.8 Wet |

TVD was used on all calculations.

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

Request Variance for 5-1/2" x 7-5/8" annular clearance. The portion that does not meet clearance will not be cemented

## Dos Equis 12-13 Fed Com 49H

### Casing Assumptions

#### 2. Casing Program

| Hole Size                 | Casing Depth From | Casing Depth To | Setting Depth TVD | Casing Size | Weight (lb/ft) | Grade | Conn. | SF Collapse | SF Burst | SF Tension         |
|---------------------------|-------------------|-----------------|-------------------|-------------|----------------|-------|-------|-------------|----------|--------------------|
| 14 3/4                    | 0                 | 1235            | 1235              | 10-3/4"     | 40.50          | J-55  | BT&C  | 2.95        | 5.85     | 12.58              |
| 9 7/8                     | 0                 | 12456           | 12300             | 7-5/8"      | 29.70          | L-80  | LT&C  | 2.50        | 1.20     | 1.55               |
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### Casing Assumptions

#### 2. Casing Program

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|---------------------------|-------------------|-----------------|-------------------|-------------|----------------|-------|-------|-------------|----------|--------------------|
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Request Variance for 5-1/2" x 7-5/8" annular clearance. The portion that does not meet clearance will not be cemented

**Dos Equis 12-13 Federal Com 49H**

Cimarex Energy Co.

UL: C, Sec. 12, 24S, 32E

Lea Co., NM

- 1 All Company and Contract personnel admitted on location must be trained by a qualified H<sub>2</sub>S safety instructor to the following:
  - A. Characteristics of H<sub>2</sub>S
  - B. Physical effects and hazards
  - C. Principal and operation of H<sub>2</sub>S detectors, warning system and briefing areas.
  - D. Evacuation procedure, routes and first aid.
  - E. Proper use of safety equipment & life support systems
  - F. Essential personnel meeting Medical Evaluation criteria will receive additional training on the proper use of 30 minute pressure demand air packs.

H<sub>2</sub>S Detection and Alarm Systems:

  - A. H<sub>2</sub>S sensors/detectors to be located on the drilling rig floor, in the base of the sub structure/cellar area, on the mud pits in the shale shaker area. Additional H<sub>2</sub>S detectors may be placed as deemed necessary.
  - B. An audio alarm system will be installed on the derrick floor and in the top doghouse.
- 3 Windsock and/or wind streamers:
  - A. Windsock at mudpit area should be high enough to be visible.
  - B. Windsock on the rig floor and / or top doghouse should be high enough to be visible.
- 4 Condition Flags and Signs
  - A. Warning sign on access road to location.
  - B. Flags to be displayed on sign at entrance to location. Green flag indicates normal safe condition. Yellow flag indicates potential pressure and danger. Red flag indicates danger (H<sub>2</sub>S present in dangerous concentration). Only H<sub>2</sub>S trained and certified personnel admitted to location.
- 5 Well control equipment:
  - A. See exhibit "E-1"
- 6 Communication:
  - A. While working under masks chalkboards will be used for communication.
  - B. Hand signals will be used where chalk board is inappropriate.
  - C. Two way radio will be used to communicate off location in case of emergency help is required. In most cases cellular telephones will be available at most drilling foreman's trailer or living quarters.
- 7 Drillstem Testing:

No DSTs or cores are planned at this time.
- 8 Drilling contractor supervisor will be required to be familiar with the effects H<sub>2</sub>S has on tubular goods and other mechanical equipment.
- 9 If H<sub>2</sub>S is encountered, mud system will be altered if necessary to maintain control of formation. A mud gas separator will be brought into service along with H<sub>2</sub>S scavengers if necessary.

H<sub>2</sub>S Contingency Plan  
**Dos Equis 12-13 Federal Com 49H**  
Cimarex Energy Co.  
UL: C, Sec. 12, 24S, 32E  
Lea Co., NM

**Emergency Procedures**

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

- « Isolate the area and prevent entry by other persons into the 100 ppm ROE.
- « Evacuate any public places encompassed by the 100 ppm ROE.
- « Be equipped with H<sub>2</sub>S monitors and air packs in order to control the release.
- « Use the "buddy system" to ensure no injuries occur during the 432-620-1975
- « Take precautions to avoid personal injury during this operation.
- « Contact operator and/or local officials to aid in operation. See list of phone numbers attached.
- « Have received training in the:
  - Detection of H<sub>2</sub>S, and
  - Measures for protection against the gas,
  - Equipment used for protection and emergency response.

**Ignition of Gas Source**

Should control of the well be considered lost and ignition considered, take care to protect against exposure to Sulfur Dioxide (SO<sub>2</sub>). Intentional ignition must be coordinated with the NMOCD and local officials. Additionally, the NM State Police may become involved. NM State Police shall be the Incident Command on scene of any major release. Take care to protect downwind whenever there is an ignition of the gas.

**Characteristics of H<sub>2</sub>S and SO<sub>2</sub>**

Please see attached International Chemical Safety Cards.

**Contacting Authorities**

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

H<sub>2</sub>S Contingency Plan Emergency Contact

s Dos Equis 12-13 Federal Com 49H

Cimarex Energy Co.

UL: C, Sec. 12, 24S, 32E

Lea Co., NM

**Company Office**

|                                 |              |
|---------------------------------|--------------|
| Cimarex Energy Co. of Colorado  | 800-969-4789 |
| Co. Office and After-Hours Menu |              |

**Key Personnel**

| Name              | Title                       | Office       | Mobile       |
|-------------------|-----------------------------|--------------|--------------|
| Larry Seigrist    | Drilling Manager            | 432-620-1934 | 580-243-8485 |
| Charlie Pritchard | Drilling Superintendent     | 432-620-1975 | 432-238-7084 |
| Roy Shirley       | Construction Superintendent |              | 432-634-2136 |

**Artesia**

|                                      |                     |
|--------------------------------------|---------------------|
| Ambulance                            | 911                 |
| State Police                         | 575-746-2703        |
| City Police                          | 575-746-2703        |
| Sheriff's Office                     | 575-746-9888        |
| <b>Fire Department</b>               | <b>575-746-2701</b> |
| Local Emergency Planning Committee   | 575-746-2122        |
| New Mexico Oil Conservation Division | 575-748-1283        |

**Carlsbad**

|                                    |                     |
|------------------------------------|---------------------|
| Ambulance                          | 911                 |
| State Police                       | 575-885-3137        |
| City Police                        | 575-885-2111        |
| Sheriff's Office                   | 575-887-7551        |
| <b>Fire Department</b>             | <b>575-887-3798</b> |
| Local Emergency Planning Committee | 575-887-6544        |
| US Bureau of Land Management       | 575-887-6544        |

**Santa Fe**

|  |              |
|--|--------------|
| New Mexico Emergency Response Commission (Santa Fe)        | 505-476-9600 |
| New Mexico Emergency Response Commission (Santa Fe) 24 Hrs | 505-827-9126 |
| New Mexico State Emergency Operations Center               | 505-476-9635 |

**National**

|   |              |
|---|--------------|
| National Emergency Response Center (Washington, D.C.) | 800-424-8802 |
|---|--------------|

**Medical**

|   |              |
|---|--------------|
| Flight for Life - 4000 24th St.; Lubbock, TX                    | 806-743-9911 |
| Aerocare - R3, Box 49F; Lubbock, TX                             | 806-747-8923 |
| Med Flight Air Amb - 2301 Yale Blvd S.E., #D3; Albuquerque, NM  | 505-842-4433 |
| SB Air Med Service - 2505 Clark Carr Loop S.E.; Albuquerque, NM | 505-842-4949 |

**Other**

|                       |              |    |              |
|-----------------------|--------------|----|--------------|
| Boots & Coots IWC     | 800-256-9688 | or | 281-931-8884 |
| Cudd Pressure Control | 432-699-0139 | or | 432-563-3356 |
| Halliburton           | 575-746-2757 |    |              |
| B.J. Services         | 575-746-3569 |    |              |



# Cimarex Dos Equis 12-13 Federal Com #49H Rev1 RM 17Feb20 Proposal

## Geodetic Report

(Def Plan)



|  |   |
|--|---|
| <b>Report Date:</b> February 17, 2020 - 05:21 PM<br><b>Client:</b> Cimarex Energy<br><b>Field:</b> NM Lea County (NAD 83)<br><b>Structure / Slot:</b> Cimarex Dos Equis 12-13 Federal Com #49H / New Slot<br><b>Well:</b> Dos Equis 12-13 Federal Com #49H<br><b>Borehole:</b> Dos Equis 12-13 Federal Com #49H<br><b>UWI / API#:</b> Unknown / Unknown<br><b>Survey Name:</b> Cimarex Dos Equis 12-13 Federal Com #49H Rev1 RM 17Feb20<br><b>Survey Date:</b> December 26, 2019<br><b>Tort / AHD / DDI / ERD Ratio:</b> 106.793 ° / 10859.449 ft / 6.324 / 0.883<br><b>Coordinate Reference System:</b> NAD83 New Mexico State Plane, Eastern Zone, US Feet<br><b>Location Lat / Long:</b> N 32° 14' 20.10694", W 103° 37' 54.61139"<br><b>Location Grid N/E Y/X:</b> N 451360.440 ftUS, E 758229.730 ftUS<br><b>CRS Grid Convergence Angle:</b> 0.3742 °<br><b>Grid Scale Factor:</b> 0.99996297<br><b>Version / Patch:</b> 2.10.787.0 | <b>Survey / DLS Computation:</b> Minimum Curvature / Lubinski<br><b>Vertical Section Azimuth:</b> 179.670 ° (Grid North)<br><b>Vertical Section Origin:</b> 0.000 ft, 0.000 ft<br><b>TVD Reference Datum:</b> RKB<br><b>TVD Reference Elevation:</b> 3634.200 ft above MSL<br><b>Seabed / Ground Elevation:</b> 3608.200 ft above MSL<br><b>Magnetic Declination:</b> 6.617 °<br><b>Total Gravity Field Strength:</b> 998.4380mgn (9.80665 Based)<br><b>Gravity Model:</b> GARM<br><b>Total Magnetic Field Strength:</b> 47842.502 nT<br><b>Magnetic Dip Angle:</b> 59.880 °<br><b>Declination Date:</b> February 17, 2020<br><b>Magnetic Declination Model:</b> HDGM 2019<br><b>North Reference:</b> Grid North<br><b>Grid Convergence Used:</b> 0.3742 °<br><b>Total Corr Mag North-&gt;Grid North:</b> 6.2427 °<br><b>Local Coord Referenced To:</b> Well Head |
|--|---|

| Comments                     | MD<br>(ft) | Incl<br>(°) | Azim Grid<br>(°) | TVD<br>(ft) | VSEC<br>(ft) | NS<br>(ft) | EW<br>(ft) | DLS<br>(°/100ft) | Northing<br>(ftUS) | Easting<br>(ftUS) | Latitude<br>(N/S ° ' '') | Longitude<br>(E/W ° ' '') |
|------------------------------|------------|-------------|------------------|-------------|--------------|------------|------------|------------------|--------------------|-------------------|--------------------------|---------------------------|
| SHL [195' FNL,<br>1540' FWL] | 0.00       | 0.00        | 0.00             | 0.00        | 0.00         | 0.00       | 0.00       | N/A              | 451360.44          | 758229.73         | N 32 14 20.11            | W 103 37 54.61            |
|                              | 100.00     | 0.00        | 89.58            | 100.00      | 0.00         | 0.00       | 0.00       | 0.00             | 451360.44          | 758229.73         | N 32 14 20.11            | W 103 37 54.61            |
|                              | 200.00     | 0.00        | 89.58            | 200.00      | 0.00         | 0.00       | 0.00       | 0.00             | 451360.44          | 758229.73         | N 32 14 20.11            | W 103 37 54.61            |
|                              | 300.00     | 0.00        | 89.58            | 300.00      | 0.00         | 0.00       | 0.00       | 0.00             | 451360.44          | 758229.73         | N 32 14 20.11            | W 103 37 54.61            |
|                              | 400.00     | 0.00        | 89.58            | 400.00      | 0.00         | 0.00       | 0.00       | 0.00             | 451360.44          | 758229.73         | N 32 14 20.11            | W 103 37 54.61            |
|                              | 500.00     | 0.00        | 89.58            | 500.00      | 0.00         | 0.00       | 0.00       | 0.00             | 451360.44          | 758229.73         | N 32 14 20.11            | W 103 37 54.61            |
|                              | 600.00     | 0.00        | 89.58            | 600.00      | 0.00         | 0.00       | 0.00       | 0.00             | 451360.44          | 758229.73         | N 32 14 20.11            | W 103 37 54.61            |
|                              | 700.00     | 0.00        | 89.58            | 700.00      | 0.00         | 0.00       | 0.00       | 0.00             | 451360.44          | 758229.73         | N 32 14 20.11            | W 103 37 54.61            |
|                              | 800.00     | 0.00        | 89.58            | 800.00      | 0.00         | 0.00       | 0.00       | 0.00             | 451360.44          | 758229.73         | N 32 14 20.11            | W 103 37 54.61            |
|                              | 900.00     | 0.00        | 89.58            | 900.00      | 0.00         | 0.00       | 0.00       | 0.00             | 451360.44          | 758229.73         | N 32 14 20.11            | W 103 37 54.61            |
|                              | 1000.00    | 0.00        | 89.58            | 1000.00     | 0.00         | 0.00       | 0.00       | 0.00             | 451360.44          | 758229.73         | N 32 14 20.11            | W 103 37 54.61            |
|                              | 1100.00    | 0.00        | 89.58            | 1100.00     | 0.00         | 0.00       | 0.00       | 0.00             | 451360.44          | 758229.73         | N 32 14 20.11            | W 103 37 54.61            |
| Rustler                      | 1185.00    | 0.00        | 89.58            | 1185.00     | 0.00         | 0.00       | 0.00       | 0.00             | 451360.44          | 758229.73         | N 32 14 20.11            | W 103 37 54.61            |
|                              | 1200.00    | 0.00        | 89.58            | 1200.00     | 0.00         | 0.00       | 0.00       | 0.00             | 451360.44          | 758229.73         | N 32 14 20.11            | W 103 37 54.61            |
|                              | 1300.00    | 0.00        | 89.58            | 1300.00     | 0.00         | 0.00       | 0.00       | 0.00             | 451360.44          | 758229.73         | N 32 14 20.11            | W 103 37 54.61            |
|                              | 1400.00    | 0.00        | 89.58            | 1400.00     | 0.00         | 0.00       | 0.00       | 0.00             | 451360.44          | 758229.73         | N 32 14 20.11            | W 103 37 54.61            |
| Salado (Top<br>Salt)         | 1500.00    | 0.00        | 89.58            | 1500.00     | 0.00         | 0.00       | 0.00       | 0.00             | 451360.44          | 758229.73         | N 32 14 20.11            | W 103 37 54.61            |
|                              | 1600.00    | 0.00        | 89.58            | 1600.00     | 0.00         | 0.00       | 0.00       | 0.00             | 451360.44          | 758229.73         | N 32 14 20.11            | W 103 37 54.61            |
|                              | 1700.00    | 0.00        | 89.58            | 1700.00     | 0.00         | 0.00       | 0.00       | 0.00             | 451360.44          | 758229.73         | N 32 14 20.11            | W 103 37 54.61            |
|                              | 1800.00    | 0.00        | 89.58            | 1800.00     | 0.00         | 0.00       | 0.00       | 0.00             | 451360.44          | 758229.73         | N 32 14 20.11            | W 103 37 54.61            |
|                              | 1900.00    | 0.00        | 89.58            | 1900.00     | 0.00         | 0.00       | 0.00       | 0.00             | 451360.44          | 758229.73         | N 32 14 20.11            | W 103 37 54.61            |
| Nudge 2°/100'<br>DLS         | 2000.00    | 0.00        | 89.58            | 2000.00     | 0.00         | 0.00       | 0.00       | 0.00             | 451360.44          | 758229.73         | N 32 14 20.11            | W 103 37 54.61            |
|                              | 2100.00    | 2.00        | 89.58            | 2099.98     | 0.00         | 0.01       | 1.75       | 2.00             | 451360.45          | 758231.48         | N 32 14 20.11            | W 103 37 54.59            |
|                              | 2200.00    | 4.00        | 89.58            | 2199.84     | -0.01        | 0.05       | 6.98       | 2.00             | 451360.49          | 758236.71         | N 32 14 20.11            | W 103 37 54.53            |
|                              | 2300.00    | 6.00        | 89.58            | 2299.45     | -0.03        | 0.12       | 15.69      | 2.00             | 451360.56          | 758245.42         | N 32 14 20.11            | W 103 37 54.43            |

| Comments                        | MD<br>(ft) | Incl<br>(°) | Azim Grid<br>(°) | TVD<br>(ft) | VSEC<br>(ft) | NS<br>(ft) | EW<br>(ft) | DLS<br>(°/100ft) | Northing<br>(ftUS) | Easting<br>(ftUS) | Latitude<br>(N/S ° ' ") | Longitude<br>(E/W ° ' ") |
|---------------------------------|------------|-------------|------------------|-------------|--------------|------------|------------|------------------|--------------------|-------------------|-------------------------|--------------------------|
| Hold Nudge                      | 2400.00    | 8.00        | 89.58            | 2398.70     | -0.05        | 0.21       | 27.88      | 2.00             | 451360.65          | 758257.61         | N 32 14 20.11           | W 103 37 54.29           |
|                                 | 2419.82    | 8.40        | 89.58            | 2418.31     | -0.05        | 0.23       | 30.70      | 2.00             | 451360.67          | 758260.43         | N 32 14 20.11           | W 103 37 54.25           |
|                                 | 2500.00    | 8.40        | 89.58            | 2497.64     | -0.07        | 0.31       | 42.41      | 0.00             | 451360.75          | 758272.14         | N 32 14 20.11           | W 103 37 54.12           |
|                                 | 2600.00    | 8.40        | 89.58            | 2596.57     | -0.09        | 0.42       | 57.01      | 0.00             | 451360.86          | 758286.74         | N 32 14 20.11           | W 103 37 53.95           |
|                                 | 2700.00    | 8.40        | 89.58            | 2695.50     | -0.12        | 0.53       | 71.62      | 0.00             | 451360.97          | 758301.34         | N 32 14 20.11           | W 103 37 53.78           |
|                                 | 2800.00    | 8.40        | 89.58            | 2794.42     | -0.14        | 0.64       | 86.22      | 0.00             | 451361.08          | 758315.94         | N 32 14 20.11           | W 103 37 53.61           |
|                                 | 2900.00    | 8.40        | 89.58            | 2893.35     | -0.16        | 0.74       | 100.82     | 0.00             | 451361.18          | 758330.55         | N 32 14 20.11           | W 103 37 53.44           |
|                                 | 3000.00    | 8.40        | 89.58            | 2992.28     | -0.19        | 0.85       | 115.42     | 0.00             | 451361.29          | 758345.15         | N 32 14 20.11           | W 103 37 53.27           |
|                                 | 3100.00    | 8.40        | 89.58            | 3091.21     | -0.21        | 0.96       | 130.02     | 0.00             | 451361.40          | 758359.75         | N 32 14 20.11           | W 103 37 53.10           |
|                                 | 3200.00    | 8.40        | 89.58            | 3190.14     | -0.23        | 1.07       | 144.62     | 0.00             | 451361.51          | 758374.35         | N 32 14 20.11           | W 103 37 52.93           |
|                                 | 3300.00    | 8.40        | 89.58            | 3289.07     | -0.26        | 1.18       | 159.23     | 0.00             | 451361.62          | 758388.95         | N 32 14 20.11           | W 103 37 52.76           |
|                                 | 3400.00    | 8.40        | 89.58            | 3387.99     | -0.28        | 1.28       | 173.83     | 0.00             | 451361.72          | 758403.55         | N 32 14 20.11           | W 103 37 52.59           |
|                                 | 3500.00    | 8.40        | 89.58            | 3486.92     | -0.31        | 1.39       | 188.43     | 0.00             | 451361.83          | 758418.15         | N 32 14 20.11           | W 103 37 52.42           |
|                                 | 3600.00    | 8.40        | 89.58            | 3585.85     | -0.33        | 1.50       | 203.03     | 0.00             | 451361.94          | 758432.75         | N 32 14 20.11           | W 103 37 52.25           |
|                                 | 3700.00    | 8.40        | 89.58            | 3684.78     | -0.35        | 1.61       | 217.63     | 0.00             | 451362.05          | 758447.35         | N 32 14 20.11           | W 103 37 52.08           |
|                                 | 3800.00    | 8.40        | 89.58            | 3783.71     | -0.38        | 1.71       | 232.23     | 0.00             | 451362.15          | 758461.95         | N 32 14 20.11           | W 103 37 51.91           |
|                                 | 3900.00    | 8.40        | 89.58            | 3882.63     | -0.40        | 1.82       | 246.83     | 0.00             | 451362.26          | 758476.55         | N 32 14 20.11           | W 103 37 51.74           |
|                                 | 4000.00    | 8.40        | 89.58            | 3981.56     | -0.42        | 1.93       | 261.44     | 0.00             | 451362.37          | 758491.16         | N 32 14 20.11           | W 103 37 51.57           |
|                                 | 4100.00    | 8.40        | 89.58            | 4080.49     | -0.45        | 2.04       | 276.04     | 0.00             | 451362.48          | 758505.76         | N 32 14 20.11           | W 103 37 51.40           |
|                                 | 4200.00    | 8.40        | 89.58            | 4179.42     | -0.47        | 2.15       | 290.64     | 0.00             | 451362.59          | 758520.36         | N 32 14 20.11           | W 103 37 51.23           |
|                                 | 4300.00    | 8.40        | 89.58            | 4278.35     | -0.50        | 2.25       | 305.24     | 0.00             | 451362.69          | 758534.96         | N 32 14 20.11           | W 103 37 51.06           |
|                                 | 4400.00    | 8.40        | 89.58            | 4377.27     | -0.52        | 2.36       | 319.84     | 0.00             | 451362.80          | 758549.56         | N 32 14 20.11           | W 103 37 50.89           |
|                                 | 4500.00    | 8.40        | 89.58            | 4476.20     | -0.54        | 2.47       | 334.44     | 0.00             | 451362.91          | 758564.16         | N 32 14 20.11           | W 103 37 50.72           |
|                                 | 4600.00    | 8.40        | 89.58            | 4575.13     | -0.57        | 2.58       | 349.04     | 0.00             | 451363.02          | 758578.76         | N 32 14 20.11           | W 103 37 50.55           |
| Base fo Salt                    | 4675.68    | 8.40        | 89.58            | 4650.00     | -0.58        | 2.66       | 360.10     | 0.00             | 451363.10          | 758589.81         | N 32 14 20.11           | W 103 37 50.42           |
| Bell Canyon                     | 4700.00    | 8.40        | 89.58            | 4674.06     | -0.59        | 2.68       | 363.65     | 0.00             | 451363.12          | 758593.36         | N 32 14 20.11           | W 103 37 50.38           |
|                                 | 4800.00    | 8.40        | 89.58            | 4772.99     | -0.61        | 2.79       | 378.25     | 0.00             | 451363.23          | 758607.96         | N 32 14 20.11           | W 103 37 50.21           |
|                                 | 4900.00    | 8.40        | 89.58            | 4871.92     | -0.64        | 2.90       | 392.85     | 0.00             | 451363.34          | 758622.56         | N 32 14 20.11           | W 103 37 50.04           |
|                                 | 4975.90    | 8.40        | 89.58            | 4947.00     | -0.66        | 2.98       | 403.93     | 0.00             | 451363.42          | 758633.65         | N 32 14 20.11           | W 103 37 49.91           |
|                                 | 5000.00    | 8.40        | 89.58            | 4970.84     | -0.66        | 3.01       | 407.45     | 0.00             | 451363.45          | 758637.16         | N 32 14 20.11           | W 103 37 49.87           |
|                                 | 5100.00    | 8.40        | 89.58            | 5069.77     | -0.69        | 3.12       | 422.05     | 0.00             | 451363.56          | 758651.77         | N 32 14 20.11           | W 103 37 49.70           |
|                                 | 5200.00    | 8.40        | 89.58            | 5168.70     | -0.71        | 3.22       | 436.65     | 0.00             | 451363.66          | 758666.37         | N 32 14 20.11           | W 103 37 49.53           |
|                                 | 5300.00    | 8.40        | 89.58            | 5267.63     | -0.73        | 3.33       | 451.26     | 0.00             | 451363.77          | 758680.97         | N 32 14 20.11           | W 103 37 49.36           |
|                                 | 5400.00    | 8.40        | 89.58            | 5366.56     | -0.76        | 3.44       | 465.86     | 0.00             | 451363.88          | 758695.57         | N 32 14 20.11           | W 103 37 49.19           |
|                                 | 5500.00    | 8.40        | 89.58            | 5465.48     | -0.78        | 3.55       | 480.46     | 0.00             | 451363.99          | 758710.17         | N 32 14 20.11           | W 103 37 49.02           |
|                                 | 5600.00    | 8.40        | 89.58            | 5564.41     | -0.80        | 3.65       | 495.06     | 0.00             | 451364.09          | 758724.77         | N 32 14 20.11           | W 103 37 48.85           |
|                                 | 5700.00    | 8.40        | 89.58            | 5663.34     | -0.83        | 3.76       | 509.66     | 0.00             | 451364.20          | 758739.37         | N 32 14 20.11           | W 103 37 48.68           |
|                                 | 5800.00    | 8.40        | 89.58            | 5762.27     | -0.85        | 3.87       | 524.26     | 0.00             | 451364.31          | 758753.97         | N 32 14 20.11           | W 103 37 48.51           |
|                                 | 5900.00    | 8.40        | 89.58            | 5861.20     | -0.87        | 3.98       | 538.86     | 0.00             | 451364.42          | 758768.57         | N 32 14 20.11           | W 103 37 48.34           |
|                                 | 5912.94    | 8.40        | 89.58            | 5874.00     | -0.88        | 3.99       | 540.75     | 0.00             | 451364.43          | 758770.46         | N 32 14 20.11           | W 103 37 48.32           |
|                                 | 6000.00    | 8.40        | 89.58            | 5960.13     | -0.90        | 4.09       | 553.47     | 0.00             | 451364.53          | 758783.17         | N 32 14 20.11           | W 103 37 48.17           |
| Drop to Vertical<br>2°/100' DLS | 6040.31    | 8.40        | 89.58            | 6000.00     | -0.91        | 4.13       | 559.35     | 0.00             | 451364.57          | 758789.06         | N 32 14 20.11           | W 103 37 48.10           |
| Hold Vertical                   | 6100.00    | 7.20        | 89.58            | 6059.14     | -0.92        | 4.19       | 567.45     | 2.00             | 451364.63          | 758797.16         | N 32 14 20.11           | W 103 37 48.00           |
|                                 | 6200.00    | 5.20        | 89.58            | 6158.55     | -0.94        | 4.27       | 578.25     | 2.00             | 451364.71          | 758807.96         | N 32 14 20.11           | W 103 37 47.88           |
|                                 | 6300.00    | 3.20        | 89.58            | 6258.28     | -0.95        | 4.32       | 585.58     | 2.00             | 451364.76          | 758815.29         | N 32 14 20.11           | W 103 37 47.79           |
|                                 | 6400.00    | 1.20        | 89.58            | 6358.20     | -0.96        | 4.35       | 589.43     | 2.00             | 451364.79          | 758819.13         | N 32 14 20.11           | W 103 37 47.75           |
|                                 | 6460.12    | 0.00        | 89.58            | 6418.31     | -0.96        | 4.36       | 590.06     | 2.00             | 451364.80          | 758819.76         | N 32 14 20.11           | W 103 37 47.74           |
|                                 | 6500.00    | 0.00        | 89.58            | 6458.19     | -0.96        | 4.36       | 590.06     | 0.00             | 451364.80          | 758819.76         | N 32 14 20.11           | W 103 37 47.74           |
|                                 | 6600.00    | 0.00        | 89.58            | 6558.19     | -0.96        | 4.36       | 590.06     | 0.00             | 451364.80          | 758819.76         | N 32 14 20.11           | W 103 37 47.74           |
|                                 | 6700.00    | 0.00        | 89.58            | 6658.19     | -0.96        | 4.36       | 590.06     | 0.00             | 451364.80          | 758819.76         | N 32 14 20.11           | W 103 37 47.74           |
|                                 | 6800.00    | 0.00        | 89.58            | 6758.19     | -0.96        | 4.36       | 590.06     | 0.00             | 451364.80          | 758819.76         | N 32 14 20.11           | W 103 37 47.74           |
|                                 | 6900.00    | 0.00        | 89.58            | 6858.19     | -0.96        | 4.36       | 590.06     | 0.00             | 451364.80          | 758819.76         | N 32 14 20.11           | W 103 37 47.74           |
|                                 | 7000.00    | 0.00        | 89.58            | 6958.19     | -0.96        | 4.36       | 590.06     | 0.00             | 451364.80          | 758819.76         | N 32 14 20.11           | W 103 37 47.74           |
|                                 | 7100.00    | 0.00        | 89.58            | 7058.19     | -0.96        | 4.36       | 590.06     | 0.00             | 451364.80          | 758819.76         | N 32 14 20.11           | W 103 37 47.74           |
|                                 | 7200.00    | 0.00        | 89.58            | 7158.19     | -0.96        | 4.36       | 590.06     | 0.00             | 451364.80          | 758819.76         | N 32 14 20.11           | W 103 37 47.74           |
|                                 | 7300.00    | 0.00        | 89.58            | 7258.19     | -0.96        | 4.36       | 590.06     | 0.00             | 451364.80          | 758819.76         | N 32 14 20.11           | W 103 37 47.74           |
| Brushy Canyon                   | 7352.81    | 0.00        | 89.58            | 7311.00     | -0.96        | 4.36       | 590.06     | 0.00             | 451364.80          | 758819.76         | N 32 14 20.11           | W 103 37 47.74           |

| Comments                    | MD<br>(ft) | Incl<br>(°) | Azim Grid<br>(°) | TVD<br>(ft) | VSEC<br>(ft) | NS<br>(ft) | EW<br>(ft) | DLS<br>(°/100ft) | Northing<br>(ftUS) | Easting<br>(ftUS) | Latitude<br>(N/S ° ' ") | Longitude<br>(E/W ° ' ") |
|-----------------------------|------------|-------------|------------------|-------------|--------------|------------|------------|------------------|--------------------|-------------------|-------------------------|--------------------------|
|                             | 7400.00    | 0.00        | 89.58            | 7358.19     | -0.96        | 4.36       | 590.06     | 0.00             | 451364.80          | 758819.76         | N 32 14 20.11           | W 103 37 47.74           |
|                             | 7500.00    | 0.00        | 89.58            | 7458.19     | -0.96        | 4.36       | 590.06     | 0.00             | 451364.80          | 758819.76         | N 32 14 20.11           | W 103 37 47.74           |
|                             | 7600.00    | 0.00        | 89.58            | 7558.19     | -0.96        | 4.36       | 590.06     | 0.00             | 451364.80          | 758819.76         | N 32 14 20.11           | W 103 37 47.74           |
|                             | 7700.00    | 0.00        | 89.58            | 7658.19     | -0.96        | 4.36       | 590.06     | 0.00             | 451364.80          | 758819.76         | N 32 14 20.11           | W 103 37 47.74           |
|                             | 7800.00    | 0.00        | 89.58            | 7758.19     | -0.96        | 4.36       | 590.06     | 0.00             | 451364.80          | 758819.76         | N 32 14 20.11           | W 103 37 47.74           |
|                             | 7900.00    | 0.00        | 89.58            | 7858.19     | -0.96        | 4.36       | 590.06     | 0.00             | 451364.80          | 758819.76         | N 32 14 20.11           | W 103 37 47.74           |
|                             | 8000.00    | 0.00        | 89.58            | 7958.19     | -0.96        | 4.36       | 590.06     | 0.00             | 451364.80          | 758819.76         | N 32 14 20.11           | W 103 37 47.74           |
|                             | 8100.00    | 0.00        | 89.58            | 8058.19     | -0.96        | 4.36       | 590.06     | 0.00             | 451364.80          | 758819.76         | N 32 14 20.11           | W 103 37 47.74           |
|                             | 8200.00    | 0.00        | 89.58            | 8158.19     | -0.96        | 4.36       | 590.06     | 0.00             | 451364.80          | 758819.76         | N 32 14 20.11           | W 103 37 47.74           |
|                             | 8300.00    | 0.00        | 89.58            | 8258.19     | -0.96        | 4.36       | 590.06     | 0.00             | 451364.80          | 758819.76         | N 32 14 20.11           | W 103 37 47.74           |
|                             | 8400.00    | 0.00        | 89.58            | 8358.19     | -0.96        | 4.36       | 590.06     | 0.00             | 451364.80          | 758819.76         | N 32 14 20.11           | W 103 37 47.74           |
|                             | 8500.00    | 0.00        | 89.58            | 8458.19     | -0.96        | 4.36       | 590.06     | 0.00             | 451364.80          | 758819.76         | N 32 14 20.11           | W 103 37 47.74           |
|                             | 8600.00    | 0.00        | 89.58            | 8558.19     | -0.96        | 4.36       | 590.06     | 0.00             | 451364.80          | 758819.76         | N 32 14 20.11           | W 103 37 47.74           |
|                             | 8700.00    | 0.00        | 89.58            | 8658.19     | -0.96        | 4.36       | 590.06     | 0.00             | 451364.80          | 758819.76         | N 32 14 20.11           | W 103 37 47.74           |
|                             | 8800.00    | 0.00        | 89.58            | 8758.19     | -0.96        | 4.36       | 590.06     | 0.00             | 451364.80          | 758819.76         | N 32 14 20.11           | W 103 37 47.74           |
| Bone Spring                 | 8886.81    | 0.00        | 89.58            | 8845.00     | -0.96        | 4.36       | 590.06     | 0.00             | 451364.80          | 758819.76         | N 32 14 20.11           | W 103 37 47.74           |
|                             | 8900.00    | 0.00        | 89.58            | 8858.19     | -0.96        | 4.36       | 590.06     | 0.00             | 451364.80          | 758819.76         | N 32 14 20.11           | W 103 37 47.74           |
|                             | 9000.00    | 0.00        | 89.58            | 8958.19     | -0.96        | 4.36       | 590.06     | 0.00             | 451364.80          | 758819.76         | N 32 14 20.11           | W 103 37 47.74           |
|                             | 9100.00    | 0.00        | 89.58            | 9058.19     | -0.96        | 4.36       | 590.06     | 0.00             | 451364.80          | 758819.76         | N 32 14 20.11           | W 103 37 47.74           |
|                             | 9200.00    | 0.00        | 89.58            | 9158.19     | -0.96        | 4.36       | 590.06     | 0.00             | 451364.80          | 758819.76         | N 32 14 20.11           | W 103 37 47.74           |
|                             | 9300.00    | 0.00        | 89.58            | 9258.19     | -0.96        | 4.36       | 590.06     | 0.00             | 451364.80          | 758819.76         | N 32 14 20.11           | W 103 37 47.74           |
| Avalon                      | 9324.81    | 0.00        | 89.58            | 9283.00     | -0.96        | 4.36       | 590.06     | 0.00             | 451364.80          | 758819.76         | N 32 14 20.11           | W 103 37 47.74           |
|                             | 9400.00    | 0.00        | 89.58            | 9358.19     | -0.96        | 4.36       | 590.06     | 0.00             | 451364.80          | 758819.76         | N 32 14 20.11           | W 103 37 47.74           |
|                             | 9500.00    | 0.00        | 89.58            | 9458.19     | -0.96        | 4.36       | 590.06     | 0.00             | 451364.80          | 758819.76         | N 32 14 20.11           | W 103 37 47.74           |
|                             | 9600.00    | 0.00        | 89.58            | 9558.19     | -0.96        | 4.36       | 590.06     | 0.00             | 451364.80          | 758819.76         | N 32 14 20.11           | W 103 37 47.74           |
|                             | 9700.00    | 0.00        | 89.58            | 9658.19     | -0.96        | 4.36       | 590.06     | 0.00             | 451364.80          | 758819.76         | N 32 14 20.11           | W 103 37 47.74           |
|                             | 9800.00    | 0.00        | 89.58            | 9758.19     | -0.96        | 4.36       | 590.06     | 0.00             | 451364.80          | 758819.76         | N 32 14 20.11           | W 103 37 47.74           |
|                             | 9900.00    | 0.00        | 89.58            | 9858.19     | -0.96        | 4.36       | 590.06     | 0.00             | 451364.80          | 758819.76         | N 32 14 20.11           | W 103 37 47.74           |
|                             | 10000.00   | 0.00        | 89.58            | 9958.19     | -0.96        | 4.36       | 590.06     | 0.00             | 451364.80          | 758819.76         | N 32 14 20.11           | W 103 37 47.74           |
| 1st Bone Spring Sand        | 10021.81   | 0.00        | 89.58            | 9980.00     | -0.96        | 4.36       | 590.06     | 0.00             | 451364.80          | 758819.76         | N 32 14 20.11           | W 103 37 47.74           |
|                             | 10100.00   | 0.00        | 89.58            | 10058.19    | -0.96        | 4.36       | 590.06     | 0.00             | 451364.80          | 758819.76         | N 32 14 20.11           | W 103 37 47.74           |
|                             | 10200.00   | 0.00        | 89.58            | 10158.19    | -0.96        | 4.36       | 590.06     | 0.00             | 451364.80          | 758819.76         | N 32 14 20.11           | W 103 37 47.74           |
|                             | 10300.00   | 0.00        | 89.58            | 10258.19    | -0.96        | 4.36       | 590.06     | 0.00             | 451364.80          | 758819.76         | N 32 14 20.11           | W 103 37 47.74           |
|                             | 10400.00   | 0.00        | 89.58            | 10358.19    | -0.96        | 4.36       | 590.06     | 0.00             | 451364.80          | 758819.76         | N 32 14 20.11           | W 103 37 47.74           |
|                             | 10500.00   | 0.00        | 89.58            | 10458.19    | -0.96        | 4.36       | 590.06     | 0.00             | 451364.80          | 758819.76         | N 32 14 20.11           | W 103 37 47.74           |
|                             | 10600.00   | 0.00        | 89.58            | 10558.19    | -0.96        | 4.36       | 590.06     | 0.00             | 451364.80          | 758819.76         | N 32 14 20.11           | W 103 37 47.74           |
| 2nd Bone Spring Sand        | 10681.81   | 0.00        | 89.58            | 10640.00    | -0.96        | 4.36       | 590.06     | 0.00             | 451364.80          | 758819.76         | N 32 14 20.11           | W 103 37 47.74           |
|                             | 10700.00   | 0.00        | 89.58            | 10658.19    | -0.96        | 4.36       | 590.06     | 0.00             | 451364.80          | 758819.76         | N 32 14 20.11           | W 103 37 47.74           |
|                             | 10800.00   | 0.00        | 89.58            | 10758.19    | -0.96        | 4.36       | 590.06     | 0.00             | 451364.80          | 758819.76         | N 32 14 20.11           | W 103 37 47.74           |
|                             | 10900.00   | 0.00        | 89.58            | 10858.19    | -0.96        | 4.36       | 590.06     | 0.00             | 451364.80          | 758819.76         | N 32 14 20.11           | W 103 37 47.74           |
|                             | 11000.00   | 0.00        | 89.58            | 10958.19    | -0.96        | 4.36       | 590.06     | 0.00             | 451364.80          | 758819.76         | N 32 14 20.11           | W 103 37 47.74           |
|                             | 11100.00   | 0.00        | 89.58            | 11058.19    | -0.96        | 4.36       | 590.06     | 0.00             | 451364.80          | 758819.76         | N 32 14 20.11           | W 103 37 47.74           |
| 3rd Bone Spring Carb        | 11131.81   | 0.00        | 89.58            | 11090.00    | -0.96        | 4.36       | 590.06     | 0.00             | 451364.80          | 758819.76         | N 32 14 20.11           | W 103 37 47.74           |
|                             | 11200.00   | 0.00        | 89.58            | 11158.19    | -0.96        | 4.36       | 590.06     | 0.00             | 451364.80          | 758819.76         | N 32 14 20.11           | W 103 37 47.74           |
|                             | 11300.00   | 0.00        | 89.58            | 11258.19    | -0.96        | 4.36       | 590.06     | 0.00             | 451364.80          | 758819.76         | N 32 14 20.11           | W 103 37 47.74           |
|                             | 11400.00   | 0.00        | 89.58            | 11358.19    | -0.96        | 4.36       | 590.06     | 0.00             | 451364.80          | 758819.76         | N 32 14 20.11           | W 103 37 47.74           |
|                             | 11500.00   | 0.00        | 89.58            | 11458.19    | -0.96        | 4.36       | 590.06     | 0.00             | 451364.80          | 758819.76         | N 32 14 20.11           | W 103 37 47.74           |
|                             | 11600.00   | 0.00        | 89.58            | 11558.19    | -0.96        | 4.36       | 590.06     | 0.00             | 451364.80          | 758819.76         | N 32 14 20.11           | W 103 37 47.74           |
|                             | 11700.00   | 0.00        | 89.58            | 11658.19    | -0.96        | 4.36       | 590.06     | 0.00             | 451364.80          | 758819.76         | N 32 14 20.11           | W 103 37 47.74           |
|                             | 11800.00   | 0.00        | 89.58            | 11758.19    | -0.96        | 4.36       | 590.06     | 0.00             | 451364.80          | 758819.76         | N 32 14 20.11           | W 103 37 47.74           |
| KOP - Build<br>12"/100' DLS | 11831.80   | 0.00        | 89.58            | 11790.00    | -0.96        | 4.36       | 590.06     | 0.00             | 451364.80          | 758819.76         | N 32 14 20.11           | W 103 37 47.74           |
| 3rd Bone Spring Sand        | 11866.84   | 4.20        | 179.67           | 11825.00    | 0.33         | 3.07       | 590.06     | 12.00            | 451363.51          | 758819.77         | N 32 14 20.10           | W 103 37 47.74           |
|                             | 11900.00   | 8.18        | 179.67           | 11857.96    | 3.90         | -0.51      | 590.08     | 12.00            | 451359.93          | 758819.79         | N 32 14 20.06           | W 103 37 47.74           |

| Comments  | MD<br>(ft) | Incl<br>(°) | Azim Grid<br>(°) | TVD<br>(ft) | VSEC<br>(ft) | NS<br>(ft) | EW<br>(ft) | DLS<br>(°/100ft) | Northing<br>(ftUS) | Easting<br>(ftUS) | Latitude<br>(N/S ° ' ") | Longitude<br>(E/W ° ' ") |
|---|------------|-------------|------------------|-------------|--------------|------------|------------|------------------|--------------------|-------------------|-------------------------|--------------------------|
| Wolfcamp<br>Build 4°/100'<br>DLS                  | 12000.00   | 20.18       | 179.67           | 11954.74    | 28.36        | -24.96     | 590.22     | 12.00            | 451335.48          | 758819.93         | N 32 14 19.82           | W 103 37 47.74           |
|   | 12100.00   | 32.18       | 179.67           | 12044.31    | 72.41        | -69.01     | 590.48     | 12.00            | 451291.44          | 758820.19         | N 32 14 19.39           | W 103 37 47.74           |
|   | 12200.00   | 44.18       | 179.67           | 12122.77    | 134.11       | -130.71    | 590.83     | 12.00            | 451229.73          | 758820.54         | N 32 14 18.78           | W 103 37 47.74           |
|   | 12300.00   | 56.18       | 179.67           | 12186.69    | 210.78       | -207.38    | 591.28     | 12.00            | 451153.07          | 758820.98         | N 32 14 18.02           | W 103 37 47.74           |
|   | 12400.00   | 68.18       | 179.67           | 12233.27    | 299.06       | -295.66    | 591.78     | 12.00            | 451064.79          | 758821.49         | N 32 14 17.14           | W 103 37 47.74           |
|   | 12404.73   | 68.75       | 179.67           | 12235.00    | 303.46       | -300.06    | 591.81     | 12.00            | 451060.39          | 758821.52         | N 32 14 17.10           | W 103 37 47.74           |
|   | 12456.80   | 75.00       | 179.67           | 12251.19    | 352.93       | -349.53    | 592.09     | 12.00            | 451010.93          | 758821.80         | N 32 14 16.61           | W 103 37 47.74           |
|   | 12500.00   | 76.73       | 179.67           | 12261.74    | 394.82       | -391.41    | 592.34     | 4.00             | 450969.04          | 758822.04         | N 32 14 16.20           | W 103 37 47.75           |
|   | 12600.00   | 80.73       | 179.67           | 12281.28    | 492.87       | -489.46    | 592.90     | 4.00             | 450871.00          | 758822.61         | N 32 14 15.23           | W 103 37 47.75           |
|   | 12700.00   | 84.73       | 179.67           | 12293.94    | 592.04       | -588.63    | 593.47     | 4.00             | 450771.83          | 758823.18         | N 32 14 14.24           | W 103 37 47.75           |
| Landing Point                                     | 12800.00   | 88.73       | 179.67           | 12299.65    | 691.86       | -688.45    | 594.05     | 4.00             | 450672.02          | 758823.75         | N 32 14 13.26           | W 103 37 47.75           |
|   | 12831.80   | 90.00       | 179.67           | 12300.00    | 723.66       | -720.25    | 594.23     | 4.00             | 450640.22          | 758823.94         | N 32 14 12.94           | W 103 37 47.75           |
|   | 12900.00   | 90.00       | 179.67           | 12300.00    | 791.86       | -788.45    | 594.62     | 0.00             | 450572.03          | 758824.33         | N 32 14 12.27           | W 103 37 47.75           |
|   | 13000.00   | 90.00       | 179.67           | 12300.00    | 891.86       | -888.44    | 595.20     | 0.00             | 450472.03          | 758824.90         | N 32 14 11.28           | W 103 37 47.75           |
|   | 13100.00   | 90.00       | 179.67           | 12300.00    | 991.86       | -988.44    | 595.77     | 0.00             | 450372.04          | 758825.48         | N 32 14 10.29           | W 103 37 47.75           |
|   | 13200.00   | 90.00       | 179.67           | 12300.00    | 1091.86      | -1088.44   | 596.35     | 0.00             | 450272.04          | 758826.06         | N 32 14 9.30            | W 103 37 47.75           |
|   | 13300.00   | 90.00       | 179.67           | 12300.00    | 1191.86      | -1188.44   | 596.93     | 0.00             | 450172.05          | 758826.63         | N 32 14 8.31            | W 103 37 47.75           |
|   | 13400.00   | 90.00       | 179.67           | 12300.00    | 1291.86      | -1288.44   | 597.50     | 0.00             | 450072.05          | 758827.21         | N 32 14 7.32            | W 103 37 47.75           |
|   | 13500.00   | 90.00       | 179.67           | 12300.00    | 1391.86      | -1388.44   | 598.08     | 0.00             | 449972.06          | 758827.78         | N 32 14 6.33            | W 103 37 47.75           |
|   | 13600.00   | 90.00       | 179.67           | 12300.00    | 1491.86      | -1488.43   | 598.65     | 0.00             | 449872.06          | 758828.36         | N 32 14 5.34            | W 103 37 47.76           |
|   | 13700.00   | 90.00       | 179.67           | 12300.00    | 1591.86      | -1588.43   | 599.23     | 0.00             | 449772.07          | 758828.94         | N 32 14 4.35            | W 103 37 47.76           |
|   | 13800.00   | 90.00       | 179.67           | 12300.00    | 1691.86      | -1688.43   | 599.81     | 0.00             | 449672.08          | 758829.51         | N 32 14 3.36            | W 103 37 47.76           |
|   | 13900.00   | 90.00       | 179.67           | 12300.00    | 1791.86      | -1788.43   | 600.38     | 0.00             | 449572.08          | 758830.09         | N 32 14 2.37            | W 103 37 47.76           |
|   | 14000.00   | 90.00       | 179.67           | 12300.00    | 1891.86      | -1888.43   | 600.96     | 0.00             | 449472.09          | 758830.66         | N 32 14 1.38            | W 103 37 47.76           |
|   | 14100.00   | 90.00       | 179.67           | 12300.00    | 1991.86      | -1988.43   | 601.53     | 0.00             | 449372.09          | 758831.24         | N 32 14 0.39            | W 103 37 47.76           |
|   | 14200.00   | 90.00       | 179.67           | 12300.00    | 2091.86      | -2088.42   | 602.11     | 0.00             | 449272.10          | 758831.82         | N 32 13 59.40           | W 103 37 47.76           |
|   | 14300.00   | 90.00       | 179.67           | 12300.00    | 2191.86      | -2188.42   | 602.69     | 0.00             | 449172.10          | 758832.39         | N 32 13 58.41           | W 103 37 47.76           |
|   | 14400.00   | 90.00       | 179.67           | 12300.00    | 2291.86      | -2288.42   | 603.26     | 0.00             | 449072.11          | 758832.97         | N 32 13 57.42           | W 103 37 47.76           |
|   | 14500.00   | 90.00       | 179.67           | 12300.00    | 2391.86      | -2388.42   | 603.84     | 0.00             | 448972.11          | 758833.54         | N 32 13 56.43           | W 103 37 47.76           |
| Lease<br>NMNM0001917 -<br>NMNM0002889<br>Crossing | 14553.30   | 90.00       | 179.67           | 12300.00    | 2445.16      | -2441.72   | 604.14     | 0.00             | 448918.82          | 758833.85         | N 32 13 55.91           | W 103 37 47.76           |
|   | 14600.00   | 90.00       | 179.67           | 12300.00    | 2491.86      | -2488.42   | 604.41     | 0.00             | 448872.12          | 758834.12         | N 32 13 55.45           | W 103 37 47.76           |
|   | 14700.00   | 90.00       | 179.67           | 12300.00    | 2591.86      | -2588.42   | 604.99     | 0.00             | 448772.13          | 758834.70         | N 32 13 54.46           | W 103 37 47.77           |
|   | 14800.00   | 90.00       | 179.67           | 12300.00    | 2691.86      | -2688.41   | 605.57     | 0.00             | 448672.13          | 758835.27         | N 32 13 53.47           | W 103 37 47.77           |
|   | 14900.00   | 90.00       | 179.67           | 12300.00    | 2791.86      | -2788.41   | 606.14     | 0.00             | 448572.14          | 758835.85         | N 32 13 52.48           | W 103 37 47.77           |
|   | 15000.00   | 90.00       | 179.67           | 12300.00    | 2891.86      | -2888.41   | 606.72     | 0.00             | 448472.14          | 758836.42         | N 32 13 51.49           | W 103 37 47.77           |
|   | 15100.00   | 90.00       | 179.67           | 12300.00    | 2991.86      | -2988.41   | 607.29     | 0.00             | 448372.15          | 758837.00         | N 32 13 50.50           | W 103 37 47.77           |
|   | 15200.00   | 90.00       | 179.67           | 12300.00    | 3091.86      | -3088.41   | 607.87     | 0.00             | 448272.15          | 758837.58         | N 32 13 49.51           | W 103 37 47.77           |
|   | 15300.00   | 90.00       | 179.67           | 12300.00    | 3191.86      | -3188.41   | 608.45     | 0.00             | 448172.16          | 758838.15         | N 32 13 48.52           | W 103 37 47.77           |
|   | 15400.00   | 90.00       | 179.67           | 12300.00    | 3291.86      | -3288.40   | 609.02     | 0.00             | 448072.16          | 758838.73         | N 32 13 47.53           | W 103 37 47.77           |
|   | 15500.00   | 90.00       | 179.67           | 12300.00    | 3391.86      | -3388.40   | 609.60     | 0.00             | 447972.17          | 758839.30         | N 32 13 46.54           | W 103 37 47.77           |
|   | 15600.00   | 90.00       | 179.67           | 12300.00    | 3491.86      | -3488.40   | 610.17     | 0.00             | 447872.18          | 758839.88         | N 32 13 45.55           | W 103 37 47.77           |
|   | 15700.00   | 90.00       | 179.67           | 12300.00    | 3591.86      | -3588.40   | 610.75     | 0.00             | 447772.18          | 758840.46         | N 32 13 44.56           | W 103 37 47.77           |
|   | 15800.00   | 90.00       | 179.67           | 12300.00    | 3691.86      | -3688.40   | 611.33     | 0.00             | 447672.19          | 758841.03         | N 32 13 43.57           | W 103 37 47.78           |
|   | 15900.00   | 90.00       | 179.67           | 12300.00    | 3791.86      | -3788.40   | 611.90     | 0.00             | 447572.19          | 758841.61         | N 32 13 42.58           | W 103 37 47.78           |
|   | 16000.00   | 90.00       | 179.67           | 12300.00    | 3891.86      | -3888.39   | 612.48     | 0.00             | 447472.20          | 758842.18         | N 32 13 41.59           | W 103 37 47.78           |
|   | 16100.00   | 90.00       | 179.67           | 12300.00    | 3991.86      | -3988.39   | 613.05     | 0.00             | 447372.20          | 758842.76         | N 32 13 40.60           | W 103 37 47.78           |
|   | 16200.00   | 90.00       | 179.67           | 12300.00    | 4091.86      | -4088.39   | 613.63     | 0.00             | 447272.21          | 758843.34         | N 32 13 39.61           | W 103 37 47.78           |
|   | 16300.00   | 90.00       | 179.67           | 12300.00    | 4191.86      | -4188.39   | 614.21     | 0.00             | 447172.21          | 758843.91         | N 32 13 38.62           | W 103 37 47.78           |
|   | 16400.00   | 90.00       | 179.67           | 12300.00    | 4291.86      | -4288.39   | 614.78     | 0.00             | 447072.22          | 758844.49         | N 32 13 37.63           | W 103 37 47.78           |
|   | 16500.00   | 90.00       | 179.67           | 12300.00    | 4391.86      | -4388.39   | 615.36     | 0.00             | 446972.23          | 758845.06         | N 32 13 36.64           | W 103 37 47.78           |
|   | 16600.00   | 90.00       | 179.67           | 12300.00    | 4491.86      | -4488.38   | 615.93     | 0.00             | 446872.23          | 758845.64         | N 32 13 35.65           | W 103 37 47.78           |
|   | 16700.00   | 90.00       | 179.67           | 12300.00    | 4591.86      | -4588.38   | 616.51     | 0.00             | 446772.24          | 758846.22         | N 32 13 34.67           | W 103 37 47.78           |
|   | 16800.00   | 90.00       | 179.67           | 12300.00    | 4691.86      | -4688.38   | 617.09     | 0.00             | 446672.24          | 758846.79         | N 32 13 33.68           | W 103 37 47.78           |

| Comments  | MD<br>(ft) | Incl<br>(°) | Azim Grid<br>(°) | TVD<br>(ft) | VSEC<br>(ft) | NS<br>(ft) | EW<br>(ft) | DLS<br>(°/100ft) | Northing<br>(ftUS) | Easting<br>(ftUS) | Latitude<br>(N/S ° ' ") | Longitude<br>(E/W ° ' ") |
|---|------------|-------------|------------------|-------------|--------------|------------|------------|------------------|--------------------|-------------------|-------------------------|--------------------------|
|   | 16900.00   | 90.00       | 179.67           | 12300.00    | 4791.86      | -4788.38   | 617.66     | 0.00             | 446572.25          | 758847.37         | N 32 13 32.69           | W 103 37 47.79           |
|   | 17000.00   | 90.00       | 179.67           | 12300.00    | 4891.86      | -4888.38   | 618.24     | 0.00             | 446472.25          | 758847.94         | N 32 13 31.70           | W 103 37 47.79           |
|   | 17100.00   | 90.00       | 179.67           | 12300.00    | 4991.86      | -4988.38   | 618.81     | 0.00             | 446372.26          | 758848.52         | N 32 13 30.71           | W 103 37 47.79           |
| Lease<br>NMNM0002889 -<br>NMNM0553548<br>Crossing | 17197.00   | 90.00       | 179.67           | 12300.00    | 5088.86      | -5085.37   | 619.37     | 0.00             | 446275.26          | 758849.08         | N 32 13 29.75           | W 103 37 47.79           |
|   | 17200.00   | 90.00       | 179.67           | 12300.00    | 5091.86      | -5088.37   | 619.39     | 0.00             | 446272.26          | 758849.10         | N 32 13 29.72           | W 103 37 47.79           |
|   | 17300.00   | 90.00       | 179.67           | 12300.00    | 5191.86      | -5188.37   | 619.97     | 0.00             | 446172.27          | 758849.67         | N 32 13 28.73           | W 103 37 47.79           |
|   | 17400.00   | 90.00       | 179.67           | 12300.00    | 5291.86      | -5288.37   | 620.54     | 0.00             | 446072.28          | 758850.25         | N 32 13 27.74           | W 103 37 47.79           |
|   | 17500.00   | 90.00       | 179.67           | 12300.00    | 5391.86      | -5388.37   | 621.12     | 0.00             | 445972.28          | 758850.82         | N 32 13 26.75           | W 103 37 47.79           |
|   | 17600.00   | 90.00       | 179.67           | 12300.00    | 5491.86      | -5488.37   | 621.69     | 0.00             | 445872.29          | 758851.40         | N 32 13 25.76           | W 103 37 47.79           |
|   | 17700.00   | 90.00       | 179.67           | 12300.00    | 5591.86      | -5588.37   | 622.27     | 0.00             | 445772.29          | 758851.97         | N 32 13 24.77           | W 103 37 47.79           |
|   | 17800.00   | 90.00       | 179.67           | 12300.00    | 5691.86      | -5688.36   | 622.85     | 0.00             | 445672.30          | 758852.55         | N 32 13 23.78           | W 103 37 47.79           |
|   | 17900.00   | 90.00       | 179.67           | 12300.00    | 5791.86      | -5788.36   | 623.42     | 0.00             | 445572.30          | 758853.13         | N 32 13 22.79           | W 103 37 47.79           |
|   | 18000.00   | 90.00       | 179.67           | 12300.00    | 5891.86      | -5888.36   | 624.00     | 0.00             | 445472.31          | 758853.70         | N 32 13 21.80           | W 103 37 47.80           |
|   | 18100.00   | 90.00       | 179.67           | 12300.00    | 5991.86      | -5988.36   | 624.57     | 0.00             | 445372.31          | 758854.28         | N 32 13 20.81           | W 103 37 47.80           |
|   | 18200.00   | 90.00       | 179.67           | 12300.00    | 6091.86      | -6088.36   | 625.15     | 0.00             | 445272.32          | 758854.85         | N 32 13 19.82           | W 103 37 47.80           |
|   | 18300.00   | 90.00       | 179.67           | 12300.00    | 6191.86      | -6188.36   | 625.73     | 0.00             | 445172.33          | 758855.43         | N 32 13 18.83           | W 103 37 47.80           |
|   | 18400.00   | 90.00       | 179.67           | 12300.00    | 6291.86      | -6288.35   | 626.30     | 0.00             | 445072.33          | 758856.01         | N 32 13 17.84           | W 103 37 47.80           |
|   | 18500.00   | 90.00       | 179.67           | 12300.00    | 6391.86      | -6388.35   | 626.88     | 0.00             | 444972.34          | 758856.58         | N 32 13 16.85           | W 103 37 47.80           |
|   | 18600.00   | 90.00       | 179.67           | 12300.00    | 6491.86      | -6488.35   | 627.45     | 0.00             | 444872.34          | 758857.16         | N 32 13 15.86           | W 103 37 47.80           |
|   | 18700.00   | 90.00       | 179.67           | 12300.00    | 6591.86      | -6588.35   | 628.03     | 0.00             | 444772.35          | 758857.73         | N 32 13 14.88           | W 103 37 47.80           |
|   | 18800.00   | 90.00       | 179.67           | 12300.00    | 6691.86      | -6688.35   | 628.61     | 0.00             | 444672.35          | 758858.31         | N 32 13 13.89           | W 103 37 47.80           |
|   | 18900.00   | 90.00       | 179.67           | 12300.00    | 6791.86      | -6788.35   | 629.18     | 0.00             | 444572.36          | 758858.89         | N 32 13 12.90           | W 103 37 47.80           |
|   | 19000.00   | 90.00       | 179.67           | 12300.00    | 6891.86      | -6888.34   | 629.76     | 0.00             | 444472.36          | 758859.46         | N 32 13 11.91           | W 103 37 47.80           |
|   | 19100.00   | 90.00       | 179.67           | 12300.00    | 6991.86      | -6988.34   | 630.33     | 0.00             | 444372.37          | 758860.04         | N 32 13 10.92           | W 103 37 47.81           |
|   | 19200.00   | 90.00       | 179.67           | 12300.00    | 7091.86      | -7088.34   | 630.91     | 0.00             | 444272.38          | 758860.61         | N 32 13 9.93            | W 103 37 47.81           |
|   | 19300.00   | 90.00       | 179.67           | 12300.00    | 7191.86      | -7188.34   | 631.48     | 0.00             | 444172.38          | 758861.19         | N 32 13 8.94            | W 103 37 47.81           |
|   | 19400.00   | 90.00       | 179.67           | 12300.00    | 7291.86      | -7288.34   | 632.06     | 0.00             | 444072.39          | 758861.77         | N 32 13 7.95            | W 103 37 47.81           |
|   | 19500.00   | 90.00       | 179.67           | 12300.00    | 7391.86      | -7388.34   | 632.64     | 0.00             | 443972.39          | 758862.34         | N 32 13 6.96            | W 103 37 47.81           |
|   | 19600.00   | 90.00       | 179.67           | 12300.00    | 7491.86      | -7488.33   | 633.21     | 0.00             | 443872.40          | 758862.92         | N 32 13 5.97            | W 103 37 47.81           |
|   | 19700.00   | 90.00       | 179.67           | 12300.00    | 7591.86      | -7588.33   | 633.79     | 0.00             | 443772.40          | 758863.49         | N 32 13 4.98            | W 103 37 47.81           |
|   | 19800.00   | 90.00       | 179.67           | 12300.00    | 7691.86      | -7688.33   | 634.36     | 0.00             | 443672.41          | 758864.07         | N 32 13 3.99            | W 103 37 47.81           |
| Lease<br>NMNM0553548 -<br>NMNM0553642<br>Crossing | 19835.30   | 90.00       | 179.67           | 12300.00    | 7727.16      | -7723.63   | 634.57     | 0.00             | 443637.11          | 758864.27         | N 32 13 3.64            | W 103 37 47.81           |
|   | 19900.00   | 90.00       | 179.67           | 12300.00    | 7791.86      | -7788.33   | 634.94     | 0.00             | 443572.41          | 758864.65         | N 32 13 3.00            | W 103 37 47.81           |
|   | 20000.00   | 90.00       | 179.67           | 12300.00    | 7891.86      | -7888.33   | 635.52     | 0.00             | 443472.42          | 758865.22         | N 32 13 2.01            | W 103 37 47.81           |
|   | 20100.00   | 90.00       | 179.67           | 12300.00    | 7991.86      | -7988.33   | 636.09     | 0.00             | 443372.43          | 758865.80         | N 32 13 1.02            | W 103 37 47.81           |
|   | 20200.00   | 90.00       | 179.67           | 12300.00    | 8091.86      | -8088.32   | 636.67     | 0.00             | 443272.43          | 758866.37         | N 32 13 0.03            | W 103 37 47.82           |
|   | 20300.00   | 90.00       | 179.67           | 12300.00    | 8191.86      | -8188.32   | 637.24     | 0.00             | 443172.44          | 758866.95         | N 32 12 59.04           | W 103 37 47.82           |
|   | 20400.00   | 90.00       | 179.67           | 12300.00    | 8291.86      | -8288.32   | 637.82     | 0.00             | 443072.44          | 758867.53         | N 32 12 58.05           | W 103 37 47.82           |
|   | 20500.00   | 90.00       | 179.67           | 12300.00    | 8391.86      | -8388.32   | 638.40     | 0.00             | 442972.45          | 758868.10         | N 32 12 57.06           | W 103 37 47.82           |
|   | 20600.00   | 90.00       | 179.67           | 12300.00    | 8491.86      | -8488.32   | 638.97     | 0.00             | 442872.45          | 758868.68         | N 32 12 56.07           | W 103 37 47.82           |
|   | 20700.00   | 90.00       | 179.67           | 12300.00    | 8591.86      | -8588.32   | 639.55     | 0.00             | 442772.46          | 758869.25         | N 32 12 55.08           | W 103 37 47.82           |
|   | 20800.00   | 90.00       | 179.67           | 12300.00    | 8691.86      | -8688.31   | 640.12     | 0.00             | 442672.46          | 758869.83         | N 32 12 54.10           | W 103 37 47.82           |
|   | 20900.00   | 90.00       | 179.67           | 12300.00    | 8791.86      | -8788.31   | 640.70     | 0.00             | 442572.47          | 758870.41         | N 32 12 53.11           | W 103 37 47.82           |
|   | 21000.00   | 90.00       | 179.67           | 12300.00    | 8891.86      | -8888.31   | 641.28     | 0.00             | 442472.48          | 758870.98         | N 32 12 52.12           | W 103 37 47.82           |
|   | 21100.00   | 90.00       | 179.67           | 12300.00    | 8991.86      | -8988.31   | 641.85     | 0.00             | 442372.48          | 758871.56         | N 32 12 51.13           | W 103 37 47.82           |
|   | 21200.00   | 90.00       | 179.67           | 12300.00    | 9091.86      | -9088.31   | 642.43     | 0.00             | 442272.49          | 758872.13         | N 32 12 50.14           | W 103 37 47.82           |
|   | 21300.00   | 90.00       | 179.67           | 12300.00    | 9191.86      | -9188.31   | 643.00     | 0.00             | 442172.49          | 758872.71         | N 32 12 49.15           | W 103 37 47.83           |
|   | 21400.00   | 90.00       | 179.67           | 12300.00    | 9291.86      | -9288.30   | 643.58     | 0.00             | 442072.50          | 758873.29         | N 32 12 48.16           | W 103 37 47.83           |
|   | 21500.00   | 90.00       | 179.67           | 12300.00    | 9391.86      | -9388.30   | 644.16     | 0.00             | 441972.50          | 758873.86         | N 32 12 47.17           | W 103 37 47.83           |
|   | 21600.00   | 90.00       | 179.67           | 12300.00    | 9491.86      | -9488.30   | 644.73     | 0.00             | 441872.51          | 758874.44         | N 32 12 46.18           | W 103 37 47.83           |

| Comments   | MD<br>(ft) | Incl<br>(°) | Azim Grid<br>(°) | TVD<br>(ft) | VSEC<br>(ft) | NS<br>(ft) | EW<br>(ft) | DLS<br>(°/100ft) | Northing<br>(ftUS) | Easting<br>(ftUS) | Latitude<br>(N/S ° ' ") | Longitude<br>(E/W ° ' ") |
|--|------------|-------------|------------------|-------------|--------------|------------|------------|------------------|--------------------|-------------------|-------------------------|--------------------------|
|  | 21700.00   | 90.00       | 179.67           | 12300.00    | 9591.86      | -9588.30   | 645.31     | 0.00             | 441772.51          | 758875.01         | N 32 12 45.19           | W 103 37 47.83           |
|  | 21800.00   | 90.00       | 179.67           | 12300.00    | 9691.86      | -9688.30   | 645.88     | 0.00             | 441672.52          | 758875.59         | N 32 12 44.20           | W 103 37 47.83           |
|  | 21900.00   | 90.00       | 179.67           | 12300.00    | 9791.86      | -9788.30   | 646.46     | 0.00             | 441572.53          | 758876.17         | N 32 12 43.21           | W 103 37 47.83           |
|  | 22000.00   | 90.00       | 179.67           | 12300.00    | 9891.86      | -9888.29   | 647.04     | 0.00             | 441472.53          | 758876.74         | N 32 12 42.22           | W 103 37 47.83           |
|  | 22100.00   | 90.00       | 179.67           | 12300.00    | 9991.86      | -9988.29   | 647.61     | 0.00             | 441372.54          | 758877.32         | N 32 12 41.23           | W 103 37 47.83           |
|  | 22200.00   | 90.00       | 179.67           | 12300.00    | 10091.86     | -10088.29  | 648.19     | 0.00             | 441272.54          | 758877.89         | N 32 12 40.24           | W 103 37 47.83           |
|  | 22300.00   | 90.00       | 179.67           | 12300.00    | 10191.86     | -10188.29  | 648.76     | 0.00             | 441172.55          | 758878.47         | N 32 12 39.25           | W 103 37 47.83           |
| Cimarex Dos<br>Equis 12-13<br>Federal Com<br>#49H - PBHL<br>[100' FSL, 2130'<br>FWL] | 22376.56   | 90.00       | 179.67           | 12300.00    | 10268.42     | -10264.85  | 649.21     | 0.00             | 441095.99          | 758878.91         | N 32 12 38.49           | W 103 37 47.84           |

Survey Type: Def Plan

Survey Error Model: ISCWSA Rev 0 \*\*\* 3-D 95.000% Confidence 2.7955 sigma  
Survey Program:

| Description | Part | MD From<br>(ft) | MD To<br>(ft) | EOU Freq<br>(ft) | Hole Size<br>(in) | Casing Diameter<br>(in) | Expected Max<br>Inclination<br>(deg) | Survey Tool Type           | Borehole / Survey   |
|-------------|------|-----------------|---------------|------------------|-------------------|-------------------------|--------------------------------------|----------------------------|---|
|             | 1    | 0.000           | 26.000        | 1/100.000        | 17.500            | 13.375                  |                                      | NAL_MWD_IFR1+MS-Depth Only | Dos Equis 12-13 Federal Com<br>#49H / Cimarex Dos Equis 12-13<br>Federal Com #49H Rev1 RM |
|             | 1    | 26.000          | 22376.562     | 1/100.000        | 17.500            | 13.375                  |                                      | NAL_MWD_IFR1+MS            | Dos Equis 12-13 Federal Com<br>#49H / Cimarex Dos Equis 12-13                             |

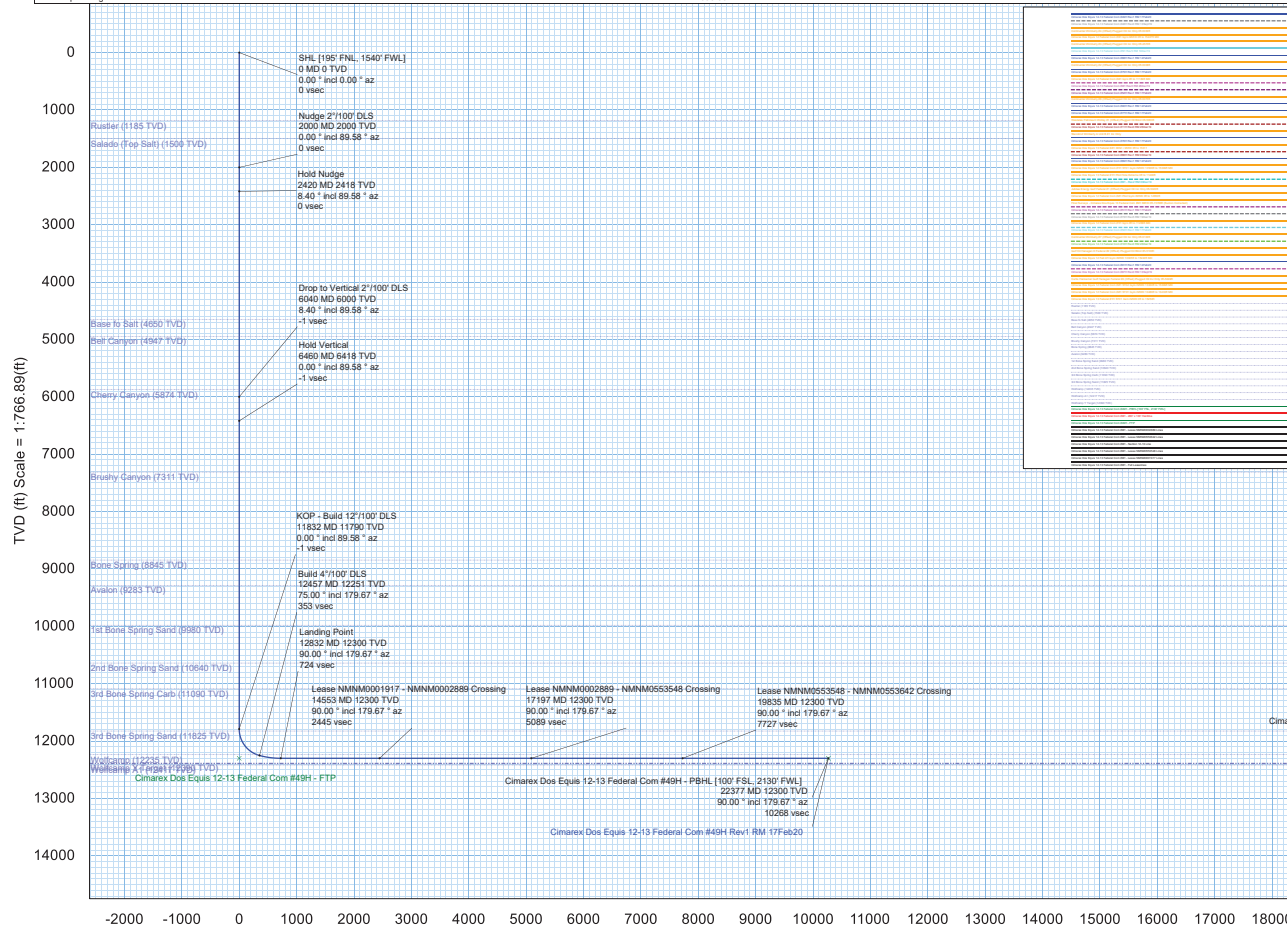
|   |                 |   |   |   |                        |  |                                  |
|---|-----------------|---|---|---|------------------------|--|----------------------------------|
| Borehole: <b>Dos Equis 12-13 Federal Com #49H</b> |                 | Well: <b>Dos Equis 12-13 Federal Com #49H</b> |   | Field: <b>NM Lea County (NAD 83)</b>            |                        | Structure: <b>Cimarex Dos Equis 12-13 Federal Com #49H</b>     |                                  |
| Gravity & Magnetic Parameters                     |                 | Surface Location                              |   | Grid Conv:                                      |                        | Miscellaneous  |                                  |
| Model: HDGM 2019                                  | Dip: 59.86°     | Date: 17-Feb-2020                             | NAD83 New Mexico State Plane, Eastern Zone, US Feet | Grid Conv: 0.3742°                              | Scale Fact: 0.99996297 | Slot: New Slot   | TVD Ref: RKB(3634.2ft above MSL) |
| MagDec: 6.617°                                    | FS: 47842.502nT | Gravity FS: 998.438mgN (9.80665 Based)        | Lat: N 32 14 20.11<br>Lon: W 103 37 54.61           | Northing: 451360.44HUS<br>Easting: 758229.73HUS |                        | Plan: Cimarex Dos Equis 12-13 Federal Com #49H Rev1 RM 17Feb20 |                                  |

| Critical Point  | MD       | INCL  | AZIM   | Critical Points | TVD      | VSEC      | N(+)/S(-) | E(+)/W(-) | DLS   |
|---|----------|-------|--------|-----------------|----------|-----------|-----------|-----------|-------|
| SHL [195° FNL, 1540° FWL]   | 0.00     | 0.00  | 0.00   | 0.00            | 0.00     | 0.00      | 0.00      | 0.00      | 0.00  |
| Rustler   | 1185.00  | 0.00  | 89.58  | 1185.00         | 0.00     | 0.00      | 0.00      | 0.00      | 0.00  |
| Salado (Top Salt)   | 1500.00  | 0.00  | 89.58  | 1500.00         | 0.00     | 0.00      | 0.00      | 0.00      | 0.00  |
| Nudge 2°/100° DLS   | 2000.00  | 0.00  | 89.58  | 2000.00         | 0.00     | 0.00      | 0.00      | 0.00      | 0.00  |
| Hold Nudge  | 2419.82  | 8.40  | 89.58  | 2418.31         | -0.05    | 0.23      | 0.23      | 30.70     | 2.00  |
| Base to Salt  | 4675.68  | 8.40  | 89.58  | 4650.00         | -0.58    | 2.66      | 2.66      | 360.10    | 0.00  |
| Ball Canyon   | 4975.90  | 8.40  | 89.58  | 4947.00         | -0.66    | 2.98      | 2.98      | 403.93    | 0.00  |
| Cherry Canyon   | 5912.94  | 8.40  | 89.58  | 5874.00         | -0.88    | 3.99      | 3.99      | 540.75    | 0.00  |
| Drop to Vertical 2°/100° DLS  | 6040.31  | 8.40  | 89.58  | 6000.00         | -0.91    | 4.13      | 4.13      | 559.35    | 0.00  |
| Hold Vertical   | 6460.12  | 0.00  | 89.58  | 6418.31         | -0.96    | 4.36      | 4.36      | 590.06    | 2.00  |
| Brushy Canyon   | 7352.81  | 0.00  | 89.58  | 7311.00         | -0.96    | 4.36      | 4.36      | 590.06    | 0.00  |
| Bone Spring   | 8865.81  | 0.00  | 89.58  | 8845.00         | -0.96    | 4.36      | 4.36      | 590.06    | 0.00  |
| Avalon  | 9324.81  | 0.00  | 89.58  | 9283.00         | -0.96    | 4.36      | 4.36      | 590.06    | 0.00  |
| 1st Bone Spring Sand  | 10021.81 | 0.00  | 89.58  | 9980.00         | -0.96    | 4.36      | 4.36      | 590.06    | 0.00  |
| 2nd Bone Spring Sand  | 10681.81 | 0.00  | 89.58  | 10640.00        | -0.96    | 4.36      | 4.36      | 590.06    | 0.00  |
| 3rd Bone Spring Sand  | 11131.81 | 0.00  | 89.58  | 11090.00        | -0.96    | 4.36      | 4.36      | 590.06    | 0.00  |
| KOP - Build 12°/100° DLS  | 11831.80 | 0.00  | 89.58  | 11790.00        | -0.96    | 4.36      | 4.36      | 590.06    | 0.00  |
| 3rd Bone Spring Sand  | 11866.84 | 4.20  | 179.67 | 11825.00        | 0.33     | 3.07      | 3.07      | 590.06    | 12.00 |
| Wolfcamp  | 12404.73 | 68.75 | 179.67 | 12235.00        | 303.46   | -300.06   | -300.06   | 591.81    | 12.00 |
| Build 4°/100° DLS   | 12466.80 | 75.00 | 179.67 | 12291.19        | 352.83   | -340.53   | -340.53   | 592.09    | 12.00 |
| Landing Point   | 12831.80 | 90.00 | 179.67 | 12300.00        | 723.66   | -720.25   | -720.25   | 594.23    | 4.00  |
| Lease NMNM0001917 - NMNM0002889 Crossing                              | 14553.30 | 90.00 | 179.67 | 12300.00        | 2445.16  | -2441.72  | -2441.72  | 604.14    | 0.00  |
| Lease NMNM0002889 - NMNM0553548 Crossing                              | 17197.00 | 90.00 | 179.67 | 12300.00        | 5089.86  | -5085.37  | -5085.37  | 619.37    | 0.00  |
| Lease NMNM0553548 - NMNM0553642 Crossing                              | 19835.30 | 90.00 | 179.67 | 12300.00        | 7727.16  | -7723.63  | -7723.63  | 634.57    | 0.00  |
| Cimarex Dos Equis 12-13 Federal Com #49H - PBLH [100° FSL, 2130° FWL] | 22376.56 | 90.00 | 179.67 | 12300.00        | 10268.42 | -10264.85 | -10264.85 | 649.21    | 0.00  |
| 2130° FWL   |          |       |        |                 |          |           |           |           |       |
| Wolfcamp #1   | NaN      |       |        | 12417.00        |          |           |           |           |       |
| Wolfcamp Y Target   | NaN      |       |        | 12390.00        |          |           |           |           |       |

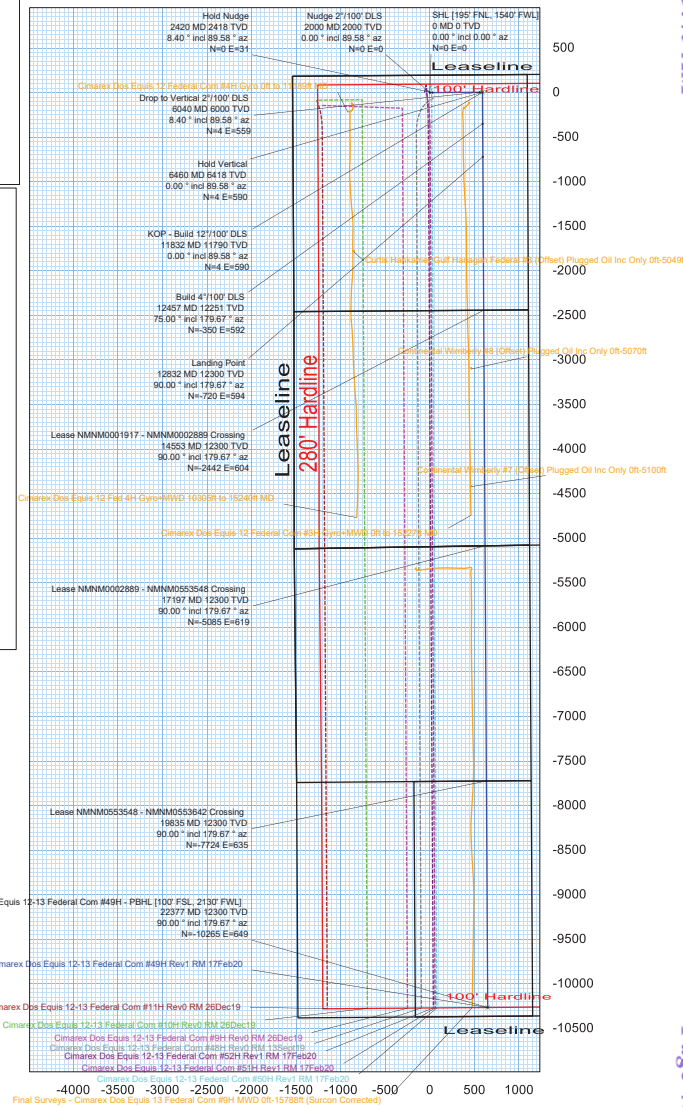


Grid North  
Tot Corr (M->G 6.243°)  
Mag Dec (6.617°)  
Grid Conv (0.374°)

|                   |  |
|-------------------|--|
| <b>CONTROLLED</b> |  |
| Plan ref          | CIMAREX DOS EQUIS 12-13 FEDERAL COM #49H REV1 RM 17Feb20 |
| Drawing ref       |  |
| Copy number       | of 3   |
| Date              | 17-Feb-2020  |
| 1 Client          |  |
| 2 Client          |  |
| 3 Office          |  |
| 4 Office          |  |
| Copy number       | for  |



Vertical Section (ft) Azim = 179.67° Scale = 1:766.89(ft) Origin = 0N/-S, 0E/-W



EW (ft) Scale = 1:493.68(ft)



# **Cimarex Dos Equis 12-13 Federal Com #49H Rev1 RM 17Feb20 Proposal Geodetic Report (Def Plan)**



**Report Date:** February 17, 2020 - 05:21 PM  
**Client:** Cimarex Energy  
**Field:** NM Lea County (NAD 83)  
**Structure / Slot:** Cimarex Dos Equis 12-13 Federal Com #49H / New Slot  
**Well:** Dos Equis 12-13 Federal Com #49H  
**Borehole:** Dos Equis 12-13 Federal Com #49H  
**UWI / API#:** Unknown / Unknown  
**Survey Name:** Cimarex Dos Equis 12-13 Federal Com #49H Rev1 RM 17Feb20  
**Survey Date:** December 26, 2019  
**Tort / AHD / DDI / ERD Ratio:** 106.793 ° / 10859.449 ft / 6.324 / 0.883  
**Coordinate Reference System:** NAD83 New Mexico State Plane, Eastern Zone, US Feet  
**Location Lat / Long:** N 32° 14' 20.10694", W 103° 37' 54.61139"  
**Location Grid N/E Y/X:** N 451360.440 ftUS, E 758229.730 ftUS  
**CRS Grid Convergence Angle:** 0.3742 °  
**Grid Scale Factor:** 0.99996297  
**Version / Patch:** 2.10.787.0

**Survey / DLS Computation:** Minimum Curvature / Lubinski  
**Vertical Section Azimuth:** 179.670 ° (Grid North)  
**Vertical Section Origin:** 0.000 ft, 0.000 ft  
**TVD Reference Datum:** RKB  
**TVD Reference Elevation:** 3634.200 ft above MSL  
**Seabed / Ground Elevation:** 3608.200 ft above MSL  
**Magnetic Declination:** 6.617 °  
**Total Gravity Field Strength:** 998.4380mgn (9.80665 Based)  
**Gravity Model:** GARM  
**Total Magnetic Field Strength:** 47842.502 nT  
**Magnetic Dip Angle:** 59.880 °  
**Declination Date:** February 17, 2020  
**Magnetic Declination Model:** HDGM 2019  
**North Reference:** Grid North  
**Grid Convergence Used:** 0.3742 °  
**Total Corr Mag North->Grid North:** 6.2427 °  
**Local Coord Referenced To:** Well Head

| Comments                     | MD<br>(ft) | Incl<br>(°) | Azim Grid<br>(°) | TVD<br>(ft) | VSEC<br>(ft) | NS<br>(ft) | EW<br>(ft) | DLS<br>(°/100ft) | Northing<br>(ftUS) | Easting<br>(ftUS) | Latitude<br>(N/S ° ' ") | Longitude<br>(E/W ° ' ") |
|------------------------------|------------|-------------|------------------|-------------|--------------|------------|------------|------------------|--------------------|-------------------|-------------------------|--------------------------|
| SHL [195' FNL,<br>1540' FWL] | 0.00       | 0.00        | 0.00             | 0.00        | 0.00         | 0.00       | 0.00       | N/A              | 451360.44          | 758229.73         | N 32 14 20.11           | W 103 37 54.61           |
| Nudge 2"/100'                | 2000.00    | 0.00        | 89.58            | 2000.00     | 0.00         | 0.00       | 0.00       | 0.00             | 451360.44          | 758229.73         | N 32 14 20.11           | W 103 37 54.61           |
| Hold Nudge                   | 2419.82    | 8.40        | 89.58            | 2418.31     | -0.05        | 0.23       | 30.70      | 2.00             | 451360.67          | 758260.43         | N 32 14 20.11           | W 103 37 54.25           |
| Drop to Vertical             | 6040.31    | 8.40        | 89.58            | 6000.00     | -0.91        | 4.13       | 559.35     | 0.00             | 451364.57          | 758789.06         | N 32 14 20.11           | W 103 37 48.10           |
| 2"/100' DLS                  | 6460.12    | 0.00        | 89.58            | 6418.31     | -0.96        | 4.36       | 590.06     | 2.00             | 451364.80          | 758819.76         | N 32 14 20.11           | W 103 37 47.74           |
| Hold Vertical                | 11831.80   | 0.00        | 89.58            | 11790.00    | -0.96        | 4.36       | 590.06     | 0.00             | 451364.80          | 758819.76         | N 32 14 20.11           | W 103 37 47.74           |
| KOP - Build                  | 12456.80   | 75.00       | 179.67           | 12251.19    | 352.93       | -349.53    | 592.09     | 12.00            | 451010.93          | 758821.80         | N 32 14 16.61           | W 103 37 47.74           |
| 12"/100' DLS                 | 12831.80   | 90.00       | 179.67           | 12300.00    | 723.66       | -720.25    | 594.23     | 4.00             | 450640.22          | 758823.94         | N 32 14 12.94           | W 103 37 47.75           |
| Build 4"/100'                |            |             |                  |             |              |            |            |                  |                    |                   |                         |                          |
| DLS                          |            |             |                  |             |              |            |            |                  |                    |                   |                         |                          |
| Landing Point                |            |             |                  |             |              |            |            |                  |                    |                   |                         |                          |
| Cimarex Dos                  |            |             |                  |             |              |            |            |                  |                    |                   |                         |                          |
| Equis 12-13                  |            |             |                  |             |              |            |            |                  |                    |                   |                         |                          |
| Federal Com                  |            |             |                  |             |              |            |            |                  |                    |                   |                         |                          |
| #49H - PBHL                  | 22376.56   | 90.00       | 179.67           | 12300.00    | 10268.42     | -10264.85  | 649.21     | 0.00             | 441095.99          | 758878.91         | N 32 12 38.49           | W 103 37 47.84           |
| [100' FSL, 2130'<br>FWL]     |            |             |                  |             |              |            |            |                  |                    |                   |                         |                          |

**Survey Type:** Def Plan

**Survey Error Model:** ISCWSA Rev 0 \*\*\* 3-D 95.000% Confidence 2.7955 sigma  
**Survey Program:**

| Description | Part | MD From<br>(ft) | MD To<br>(ft) | EOU Freq<br>(ft) | Hole Size<br>(in) | Casing Diameter<br>(in) | Expected Max<br>Inclination<br>(deg) | Survey Tool Type           | Borehole / Survey   |
|-------------|------|-----------------|---------------|------------------|-------------------|-------------------------|--------------------------------------|----------------------------|---|
|             | 1    | 0.000           | 26.000        | 1/100.000        | 17.500            | 13.375                  |                                      | NAL_MWD_IFR1+MS-Depth Only | Dos Equis 12-13 Federal Com<br>#49H / Cimarex Dos Equis 12-13<br>Federal Com #49H Rev1 RM |
|             | 1    | 26.000          | 22376.562     | 1/100.000        | 17.500            | 13.375                  |                                      | NAL_MWD_IFR1+MS            | Dos Equis 12-13 Federal Com<br>#49H / Cimarex Dos Equis 12-13                             |



## Cimarex Dos Equis 12-13 Federal Com #49H Rev1 RM 17Feb20 Anti-Collision Summary Report

**Analysis Date-24hr Time:** February 17, 2020 - 17:06

**Client:** Cimarex Energy

**Field:** NM Lea County (NAD 83)

**Structure:** Cimarex Dos Equis 12-13 Federal Com #49H

**Slot:** New Slot

**Well:** Dos Equis 12-13 Federal Com #49H

**Borehole:** Dos Equis 12-13 Federal Com #49H

**Scan MD Range:** 0.00ft ~ 22376.56ft

**Analysis Method:** 3D Least Distance

**Reference Trajectory:** Cimarex Dos Equis 12-13 Federal Com #49H Rev1 RM 17Feb20 (Def Plan)

**Depth Interval:** Every 10.00 Measured Depth (ft)

**Rule Set:** NAL Procedure: D&M AntiCollision Standard S002

**Min Pts:** All local minima indicated.

**Version / Patch:** 2.10.787.0

**Database \ Project:** us1153APP452.DIR.SLB.COM\DRILLING-NM Lea County 2.10

**Trajectory Error Model:** ISWISA0 3-D 95.000% Confidence 2.7955 sigma, for subject well. For offset wells, error model version is specified with each well respectively.

### Offset Trajectories Summary

#### Offset Selection Criteria

Wellhead distance scan: Not performed!

Selection filters: Definitive Surveys - Definitive Plans - Definitive surveys exclude definitive plans

- All Non-Def Surveys when no Def-Survey is set in a borehole - All Non-Def Plans when no Def-Plan is set in a borehole

| Offset Trajectory | Separation |          |          | Allow Dev. (ft) | Sep. Fact. | Controlling Rule | Reference Trajectory |          | Risk Level |       |       | Alert | Status |
|-------------------|------------|----------|----------|-----------------|------------|------------------|----------------------|----------|------------|-------|-------|-------|--------|
|                   | Ct-Ct (ft) | MAS (ft) | EOU (ft) |                 |            |                  | MD (ft)              | TVD (ft) | Alert      | Minor | Major |       |        |

Results highlighted: Sep-Factor separation <= 1.50 ft

|   |        |        |        |      |  |                |          |          |                 |  |  |               |  |
|---|--------|--------|--------|------|--|----------------|----------|----------|-----------------|--|--|---------------|--|
| Cimarex Dos Equis 12-13<br>Federal Com #50H Rev1 RM<br>17Feb20 (Def Plan) |        |        |        |      |  |                |          |          |                 |  |  |               |  |
|   |        |        |        |      |  |                |          |          |                 |  |  | Warning Alert |  |
| 19.99   | 16.25  | 18.70  | 3.74   | N/A  |  | MAS = 4.95 (m) | 0.00     | 0.00     | CtCt<=15m<15.00 |  |  | Enter Alert   |  |
| 19.99   | 16.25  | 18.70  | 3.74   | N/A  |  | MAS = 4.95 (m) | 26.00    | 26.00    |                 |  |  | WRP           |  |
| 19.99   | 19.55  | 6.53   | 0.45   | 1.54 |  | OSF1.50        | 2000.00  | 2000.00  |                 |  |  | MinPt-CtCt    |  |
| 20.03   | 19.68  | 6.48   | 0.35   | 1.53 |  | OSF1.50        | 2020.00  | 2020.00  |                 |  |  | MINPT-O-EQU   |  |
| 20.15   | 19.82  | 6.50   | 0.33   | 1.53 |  | OSF1.50        | 2040.00  | 2040.00  |                 |  |  | MinPts        |  |
| 73.41   | 23.09  | 57.59  | 50.32  | 4.96 |  | OSF1.50        | 2630.00  | 2626.25  | OSF>5.00        |  |  | Exit Alert    |  |
| 575.54  | 94.43  | 512.16 | 481.11 | 9.25 |  | OSF1.50        | 11840.00 | 11798.19 |                 |  |  | MINPT-O-EQU   |  |
| 575.58  | 94.49  | 512.16 | 481.09 | 9.24 |  | OSF1.50        | 11850.00 | 11808.19 |                 |  |  | MinPt-O-ADP   |  |
| 576.23  | 94.75  | 512.63 | 481.49 | 9.23 |  | OSF1.50        | 11900.00 | 11857.96 |                 |  |  | MinPt-O-SF    |  |
| 827.54  | 249.33 | 660.89 | 578.21 | 5.00 |  | OSF1.50        | 19860.00 | 12300.00 | OSF<5.00        |  |  | Enter Alert   |  |
| 827.54  | 326.64 | 609.37 | 500.92 | 3.81 |  | OSF1.50        | 22376.56 | 12300.00 |                 |  |  | MinPts        |  |

|   |        |         |         |       |  |                |          |          |                 |  |  |               |  |
|---|--------|---------|---------|-------|--|----------------|----------|----------|-----------------|--|--|---------------|--|
| Cimarex Dos Equis 12-13<br>Federal Com #51H Rev1 RM<br>17Feb20 (Def Plan) |        |         |         |       |  |                |          |          |                 |  |  |               |  |
|   |        |         |         |       |  |                |          |          |                 |  |  | Warning Alert |  |
| 39.99   | 32.25  | 38.71   | 7.74    | N/A   |  | MAS = 9.83 (m) | 0.00     | 0.00     | CtCt<=15m<15.00 |  |  | Enter Alert   |  |
| 39.99   | 32.25  | 38.71   | 7.74    | N/A   |  | MAS = 9.83 (m) | 26.00    | 26.00    |                 |  |  | WRP           |  |
| 39.99   | 32.25  | 26.53   | 7.74    | 3.18  |  | MAS = 9.83 (m) | 2000.00  | 2000.00  |                 |  |  | MinPts        |  |
| 40.01   | 32.25  | 26.50   | 7.76    | 3.17  |  | MAS = 9.83 (m) | 2010.00  | 2010.00  |                 |  |  | MINPT-O-EQU   |  |
| 40.27   | 32.25  | 26.62   | 8.02    | 3.15  |  | MAS = 9.83 (m) | 2040.00  | 2040.00  |                 |  |  | MinPt-O-SF    |  |
| 69.28   | 32.25  | 54.21   | 37.03   | 4.93  |  | MAS = 9.83 (m) | 2410.00  | 2408.60  | OSF>5.00        |  |  | Exit Alert    |  |
| 629.01  | 74.52  | 578.91  | 554.50  | 12.88 |  | OSF1.50        | 9230.00  | 9188.19  |                 |  |  | MinPt-O-SF    |  |
| 620.87  | 73.96  | 571.13  | 546.91  | 12.73 |  | OSF1.50        | 9440.00  | 9398.19  |                 |  |  | MinPt-O-SF    |  |
| 620.81  | 73.95  | 571.08  | 546.86  | 12.79 |  | OSF1.50        | 9450.00  | 9408.19  |                 |  |  | MinPts        |  |
| 2763.69   | 314.03 | 2553.91 | 2449.67 | 13.25 |  | OSF1.50        | 22376.56 | 12300.00 |                 |  |  | MinPts        |  |

|   |        |         |         |       |  |                 |          |          |          |  |  |               |  |
|---|--------|---------|---------|-------|--|-----------------|----------|----------|----------|--|--|---------------|--|
| Cimarex Dos Equis 12-13<br>Federal Com #52H Rev1 RM<br>17Feb20 (Def Plan) |        |         |         |       |  |                 |          |          |          |  |  |               |  |
|   |        |         |         |       |  |                 |          |          |          |  |  | Warning Alert |  |
| 59.98   | 32.81  | 58.70   | 27.18   | N/A   |  | MAS = 10.00 (m) | 0.00     | 0.00     |          |  |  | Surface       |  |
| 59.98   | 32.81  | 58.70   | 27.18   | N/A   |  | MAS = 10.00 (m) | 26.00    | 26.00    |          |  |  | WRP           |  |
| 59.98   | 32.81  | 46.90   | 27.18   | 4.98  |  | MAS = 10.00 (m) | 1940.00  | 1940.00  | OSF<5.00 |  |  | Enter Alert   |  |
| 59.98   | 32.81  | 46.53   | 27.18   | 4.82  |  | MAS = 10.00 (m) | 2000.00  | 2000.00  |          |  |  | MinPts        |  |
| 60.00   | 32.81  | 46.50   | 27.19   | 4.80  |  | MAS = 10.00 (m) | 2010.00  | 2010.00  |          |  |  | MINPT-O-EQU   |  |
| 60.61   | 32.81  | 46.87   | 27.80   | 4.76  |  | MAS = 10.00 (m) | 2060.00  | 2060.00  |          |  |  | MinPt-O-SF    |  |
| 65.64   | 32.81  | 51.43   | 32.83   | 4.98  |  | MAS = 10.00 (m) | 2180.00  | 2179.88  | OSF>5.00 |  |  | Exit Alert    |  |
| 635.95  | 71.89  | 587.60  | 564.07  | 13.43 |  | OSF1.50         | 9220.00  | 9178.19  |          |  |  | MinPt-O-SF    |  |
| 621.46  | 71.18  | 573.58  | 550.28  | 13.31 |  | OSF1.50         | 9480.00  | 9438.19  |          |  |  | MinPt-O-SF    |  |
| 621.42  | 71.17  | 573.55  | 550.26  | 13.31 |  | OSF1.50         | 9490.00  | 9448.19  |          |  |  | MinPts        |  |
| 2767.94   | 315.38 | 2557.28 | 2452.60 | 13.21 |  | OSF1.50         | 22376.56 | 12300.00 |          |  |  | MinPts        |  |

|  |        |        |        |       |  |                 |          |          |          |  |  |               |  |
|--|--------|--------|--------|-------|--|-----------------|----------|----------|----------|--|--|---------------|--|
| Cimarex Dos Equis 12-13<br>Federal Com #48H Rev0 RM<br>13Sept19 (Non-Def Plan) |        |        |        |       |  |                 |          |          |          |  |  |               |  |
|  |        |        |        |       |  |                 |          |          |          |  |  | Warning Alert |  |
| 72.12  | 32.81  | 70.83  | 39.31  | N/A   |  | MAS = 10.00 (m) | 0.00     | 0.00     |          |  |  | Surface       |  |
| 72.10  | 32.81  | 70.82  | 39.29  | N/A   |  | MAS = 10.00 (m) | 26.00    | 26.00    |          |  |  | WRP           |  |
| 66.67  | 32.81  | 52.22  | 33.87  | 4.97  |  | MAS = 10.00 (m) | 2250.00  | 2249.68  | OSF<5.00 |  |  | Enter Alert   |  |
| 59.99  | 32.81  | 44.64  | 27.18  | 4.17  |  | MAS = 10.00 (m) | 2480.00  | 2477.85  |          |  |  | MinPts        |  |
| 60.04  | 32.81  | 44.60  | 27.23  | 4.15  |  | MAS = 10.00 (m) | 2500.00  | 2497.64  |          |  |  | MINPT-O-EQU   |  |
| 60.37  | 32.81  | 44.81  | 27.56  | 4.14  |  | MAS = 10.00 (m) | 2530.00  | 2527.32  |          |  |  | MinPt-O-SF    |  |
| 79.43  | 32.81  | 62.48  | 46.62  | 4.99  |  | MAS = 10.00 (m) | 2840.00  | 2834.00  | OSF>5.00 |  |  | Exit Alert    |  |
| 553.34   | 97.38  | 488.04 | 456.04 | 8.62  |  | OSF1.50         | 11830.00 | 11788.19 |          |  |  | MinPts        |  |
| 553.35   | 97.30  | 488.05 | 456.04 | 8.62  |  | OSF1.50         | 11831.80 | 11790.00 |          |  |  | MinPt-O-SF    |  |
| 745.77   | 92.90  | 683.41 | 652.87 | 12.18 |  | OSF1.50         | 12570.00 | 12276.14 |          |  |  | MinPt-O-SF    |  |
| 746.15   | 224.89 | 595.79 | 521.26 | 5.00  |  | OSF1.50         | 19280.00 | 12300.00 | OSF<5.00 |  |  | Enter Alert   |  |
| 745.06   | 319.17 | 531.85 | 425.89 | 3.51  |  | OSF1.50         | 22376.56 | 12300.00 |          |  |  | MinPts        |  |

|  |        |         |         |       |  |                 |          |          |          |  |  |               |  |
|--|--------|---------|---------|-------|--|-----------------|----------|----------|----------|--|--|---------------|--|
| Cimarex Dos Equis 12-13<br>Federal Com #9H Rev0 RM<br>26Dec19 (Non-Def Plan) |        |         |         |       |  |                 |          |          |          |  |  |               |  |
|  |        |         |         |       |  |                 |          |          |          |  |  | Warning Alert |  |
| 1217.33  | 32.81  | 1216.04 | 1184.52 | N/A   |  | MAS = 10.00 (m) | 0.00     | 0.00     |          |  |  | Surface       |  |
| 1217.33  | 32.81  | 1216.04 | 1184.52 | N/A   |  | MAS = 10.00 (m) | 26.00    | 26.00    |          |  |  | WRP           |  |
| 916.84   | 59.76  | 876.38  | 857.08  | 23.70 |  | OSF1.50         | 8430.00  | 8388.19  |          |  |  | MinPt-O-SF    |  |
| 916.50   | 79.74  | 862.72  | 836.76  | 17.62 |  | OSF1.50         | 11860.00 | 11818.18 |          |  |  | MinPt-O-SF    |  |
| 899.89   | 75.75  | 848.76  | 824.13  | 18.23 |  | OSF1.50         | 12690.00 | 12292.99 |          |  |  | MinPt-CtCt    |  |
| 899.93   | 75.86  | 848.74  | 824.08  | 18.21 |  | OSF1.50         | 12770.00 | 12298.67 |          |  |  | MINPT-O-EQU   |  |
| 900.31   | 271.69 | 718.55  | 628.61  | 4.99  |  | OSF1.50         | 20690.00 | 12300.00 | OSF<5.00 |  |  | Enter Alert   |  |
| 900.31   | 324.69 | 683.22  | 575.62  | 4.17  |  | OSF1.50         | 22376.56 | 12300.00 |          |  |  | MinPts        |  |

|   |  |  |  |  |  |  |  |  |  |  |  |               |  |
|---|--|--|--|--|--|--|--|--|--|--|--|---------------|--|
| Cimarex Dos Equis 12-13<br>Federal Com #73H Rev5 RM<br>19Dec19 (Def Plan) |  |  |  |  |  |  |  |  |  |  |  |               |  |
|   |  |  |  |  |  |  |  |  |  |  |  | Warning Alert |  |

| Offset Trajectory | Separation |          |          | Allow Dev. (ft) | Sep. Fact. | Controlling Rule | Reference Trajectory |          | Risk Level |       |       | Alert | Status      |
|-------------------|------------|----------|----------|-----------------|------------|------------------|----------------------|----------|------------|-------|-------|-------|-------------|
|                   | Ct-Ct (ft) | MAS (ft) | EOU (ft) |                 |            |                  | MD (ft)              | TVD (ft) | Alert      | Minor | Major |       |             |
| 1385.79           | 32.81      | 1384.50  | 1352.98  | N/A             |            | MAS = 10.00 (m)  | 0.00                 | 0.00     |            |       |       |       | Surface     |
| 1385.78           | 32.81      | 1384.49  | 1352.97  | N/A             |            | MAS = 10.00 (m)  | 26.00                | 26.00    |            |       |       |       | WRP         |
| 903.83            | 49.65      | 870.14   | 854.18   | 28.28           |            | OSF1.50          | 6160.00              | 6118.74  |            |       |       |       | MinPt-O-SF  |
| 903.70            | 49.64      | 870.01   | 854.06   | 28.27           |            | OSF1.50          | 6190.00              | 6148.59  |            |       |       |       | MinPts      |
| 942.17            | 50.72      | 907.79   | 891.45   | 28.73           |            | OSF1.50          | 6730.00              | 6688.19  |            |       |       |       | MinPt-O-SF  |
| 951.91            | 90.66      | 890.90   | 861.25   | 16.02           |            | OSF1.50          | 11930.00             | 11887.50 |            |       |       |       | MinPt-O-SF  |
| 951.27            | 90.38      | 890.45   | 860.89   | 16.06           |            | OSF1.50          | 11980.00             | 11935.82 |            |       |       |       | MinPts      |
| 951.23            | 90.24      | 890.50   | 860.98   | 16.09           |            | OSF1.50          | 12000.00             | 11954.74 |            |       |       |       | MinPt-CtCt  |
| 1013.66           | 305.43     | 809.55   | 708.23   | 5.00            |            | OSF1.50          | 22040.00             | 12300.00 | OSF<5.00   |       |       |       | Enter Alert |
| 1013.72           | 315.96     | 802.59   | 697.76   | 4.83            |            | OSF1.50          | 22376.56             | 12300.00 |            |       |       |       | MinPts      |

Gulf Oil Hanagan D Federal #2  
(Offset) Plugged Oil Blind Off-  
5100ft (Def Survey)

|          |         |         |         |          |                 |          |          |          |  |  |  |  |             |
|----------|---------|---------|---------|----------|-----------------|----------|----------|----------|--|--|--|--|-------------|
| 4353.26  | 32.81   | 4351.97 | 4320.45 | N/A      | MAS = 10.00 (m) | 0.00     | 0.00     |          |  |  |  |  | Surface     |
| 4352.92  | 32.81   | 4351.59 | 4320.11 | 94615.69 | MAS = 10.00 (m) | 26.00    | 26.00    |          |  |  |  |  | MinPt-O-SF  |
| 4162.14  | 1249.70 | 3328.53 | 2912.44 | 5.00     | OSF1.50         | 4110.00  | 4090.38  | OSF<5.00 |  |  |  |  | Enter Alert |
| 4043.31  | 1587.38 | 2984.53 | 2455.93 | 3.82     | OSF1.50         | 5400.00  | 5366.56  |          |  |  |  |  | MinPt-O-SF  |
| 4040.45  | 1585.56 | 2982.88 | 2454.88 | 3.82     | OSF1.50         | 5480.00  | 5445.70  |          |  |  |  |  | MinPt-O-ADP |
| 4039.78  | 1584.72 | 2982.78 | 2455.06 | 3.83     | OSF1.50         | 5510.00  | 5475.38  |          |  |  |  |  | MINPT-O-EOU |
| 4039.09  | 1582.42 | 2983.63 | 2456.67 | 3.83     | OSF1.50         | 5580.00  | 5544.63  |          |  |  |  |  | MinPt-CtCt  |
| 4578.37  | 1374.60 | 3661.54 | 3203.77 | 5.00     | OSF1.50         | 7510.00  | 7468.19  | OSF<5.00 |  |  |  |  | Exit Alert  |
| 7547.98  | 527.93  | 7195.60 | 7020.05 | 21.49    | OSF1.50         | 15200.00 | 12300.00 |          |  |  |  |  |             |
| 7548.02  | 528.02  | 7195.58 | 7020.00 | 21.49    | OSF1.50         | 15220.00 | 12300.00 |          |  |  |  |  | MINPT-O-EOU |
| 7548.17  | 528.21  | 7195.61 | 7019.97 | 21.48    | OSF1.50         | 15250.00 | 12300.00 |          |  |  |  |  | MinPt-O-ADP |
| 10055.28 | 1134.63 | 9298.43 | 8920.65 | 13.31    | OSF1.50         | 21840.00 | 12300.00 |          |  |  |  |  | MinPt-O-SF  |
| 10417.57 | 1172.73 | 9635.32 | 9244.84 | 13.34    | OSF1.50         | 22376.56 | 12300.00 |          |  |  |  |  | TD          |

Cimarex Dos Equis 12 Federal  
Com #3H Gyro+MWD Off to  
1522ft MD (Def Survey)

|         |        |         |         |           |                 |          |          |             |
|---------|--------|---------|---------|-----------|-----------------|----------|----------|-------------|
| 463.12  | 32.81  | 461.14  | 430.31  | N/A       | MAS = 10.00 (m) | 0.00     | 0.00     | Surface     |
| 463.12  | 32.81  | 461.14  | 430.31  | 269540.37 | MAS = 10.00 (m) | 10.00    | 10.00    | MinPts      |
| 463.15  | 32.81  | 461.16  | 430.34  | 27370.72  | MAS = 10.00 (m) | 26.00    | 26.00    | WRP         |
| 455.99  | 32.81  | 447.31  | 423.18  | 67.77     | MAS = 10.00 (m) | 1420.00  | 1420.00  | MinPts      |
| 114.18  | 32.81  | 93.36   | 81.37   | 5.96      | MAS = 10.00 (m) | 5200.00  | 5168.70  | MinPts      |
| 114.21  | 32.81  | 93.31   | 81.40   | 5.94      | MAS = 10.00 (m) | 5220.00  | 5188.49  | MINPT-O-EOU |
| 115.59  | 32.81  | 94.28   | 82.79   | 5.87      | MAS = 10.00 (m) | 5320.00  | 5287.41  | MinPt-O-SF  |
| 228.18  | 38.06  | 202.15  | 190.13  | 9.41      | OSF1.50         | 7730.00  | 7688.19  | MinPt-O-SF  |
| 236.71  | 39.46  | 209.74  | 197.25  | 9.33      | OSF1.50         | 8050.00  | 8008.19  | MinPt-O-SF  |
| 266.19  | 49.44  | 232.57  | 216.75  | 8.35      | OSF1.50         | 10130.00 | 10088.19 | MinPt-CtCt  |
| 266.40  | 50.06  | 232.36  | 216.33  | 8.25      | OSF1.50         | 10240.00 | 10198.19 | MINPT-O-EOU |
| 266.59  | 50.29  | 232.40  | 216.30  | 8.22      | OSF1.50         | 10280.00 | 10238.19 | MinPt-O-ADP |
| 267.10  | 50.53  | 232.75  | 216.56  | 8.13      | OSF1.50         | 10330.00 | 10288.19 | MinPt-O-SF  |
| 1304.09 | 44.72  | 1273.62 | 1259.38 | 45.70     | OSF1.50         | 13410.00 | 12300.00 | MinPt-CtCt  |
| 1303.79 | 49.00  | 1270.46 | 1254.79 | 41.53     | OSF1.50         | 13580.00 | 12300.00 | MinPt-CtCt  |
| 1305.04 | 52.21  | 1269.57 | 1252.83 | 38.91     | OSF1.50         | 13710.00 | 12300.00 | MINPT-O-EOU |
| 1305.08 | 60.01  | 1264.42 | 1245.08 | 33.68     | OSF1.50         | 13990.00 | 12300.00 | MinPt-CtCt  |
| 1294.76 | 78.44  | 1241.80 | 1216.31 | 25.36     | OSF1.50         | 14640.00 | 12300.00 | MinPt-CtCt  |
| 1290.33 | 89.78  | 1229.82 | 1200.55 | 22.01     | OSF1.50         | 15030.00 | 12300.00 | MinPt-CtCt  |
| 1288.89 | 97.96  | 1222.92 | 1190.93 | 20.11     | OSF1.50         | 15310.00 | 12300.00 | MinPt-CtCt  |
| 1290.11 | 100.63 | 1222.36 | 1189.48 | 19.59     | OSF1.50         | 15410.00 | 12300.00 | MINPT-O-EOU |
| 1287.27 | 111.66 | 1212.18 | 1175.62 | 17.58     | OSF1.50         | 15770.00 | 12300.00 | MinPt-CtCt  |
| 1287.50 | 116.14 | 1209.42 | 1171.37 | 16.89     | OSF1.50         | 15920.00 | 12300.00 | MinPt-CtCt  |
| 1285.21 | 125.08 | 1201.17 | 1160.13 | 15.64     | OSF1.50         | 16220.00 | 12300.00 | MinPt-CtCt  |
| 1285.60 | 126.28 | 1200.75 | 1159.31 | 15.49     | OSF1.50         | 16270.00 | 12300.00 | MINPT-O-EOU |
| 1286.21 | 126.99 | 1200.88 | 1159.21 | 15.41     | OSF1.50         | 16300.00 | 12300.00 | MinPt-O-ADP |
| 1289.91 | 130.55 | 1202.21 | 1159.36 | 15.03     | OSF1.50         | 16420.00 | 12300.00 | MinPt-O-ADP |
| 1304.43 | 144.33 | 1207.55 | 1160.10 | 13.72     | OSF1.50         | 16850.00 | 12300.00 | MinPt-CtCt  |
| 1304.52 | 144.60 | 1207.46 | 1159.92 | 13.70     | OSF1.50         | 16870.00 | 12300.00 | MinPts      |
| 1307.96 | 145.42 | 1210.35 | 1162.53 | 13.66     | OSF1.50         | 16950.00 | 12300.00 | MinPt-O-SF  |
| 5674.61 | 87.33  | 5615.73 | 5587.28 | 99.69     | OSF1.50         | 22376.56 | 12300.00 | TD          |

Cimarex Dos Equis 12-13  
Federal Com #91H Rev1 RM  
14Feb20 (Def Plan)

|  |         |        |         |         |       |                 |          |          |  |  |  |  |            |
|--|---------|--------|---------|---------|-------|-----------------|----------|----------|--|--|--|--|------------|
|  | 2178.36 | 32.81  | 2177.08 | 2145.56 | N/A   | MAS = 10.00 (m) | 0.00     | 0.00     |  |  |  |  | Surface    |
|  | 2178.35 | 32.81  | 2177.06 | 2145.54 | N/A   | MAS = 10.00 (m) | 26.00    | 26.00    |  |  |  |  | WRP        |
|  | 828.93  | 61.44  | 787.00  | 767.49  | 21.17 | OSF1.50         | 9170.00  | 9128.19  |  |  |  |  | MinPt-CtCt |
|  | 828.93  | 61.48  | 786.98  | 767.45  | 21.15 | OSF1.50         | 9180.00  | 9138.19  |  |  |  |  | MinPts     |
|  | 828.95  | 61.49  | 786.99  | 767.47  | 21.13 | OSF1.50         | 9190.00  | 9148.19  |  |  |  |  | MinPt-O-SF |
|  | 2816.83 | 318.67 | 2603.96 | 2498.16 | 13.31 | OSF1.50         | 22376.56 | 12300.00 |  |  |  |  | MinPts     |

Cimarex Dos Equis 12 Fed 4H  
Gyro+MWD 10305ft to 15240ft  
MD (Def Survey)

|         |        |         |         |           |                 |          |          |             |
|---------|--------|---------|---------|-----------|-----------------|----------|----------|-------------|
| 881.59  | 32.81  | 879.61  | 848.79  | N/A       | MAS = 10.00 (m) | 0.00     | 0.00     | MinPts      |
| 881.60  | 32.81  | 879.61  | 848.79  | 155251.69 | MAS = 10.00 (m) | 26.00    | 26.00    | WRP         |
| 884.18  | 32.81  | 877.19  | 851.37  | 176.32    | MAS = 10.00 (m) | 1020.00  | 1020.00  | MINPT-O-EOU |
| 884.38  | 32.81  | 873.90  | 851.57  | 103.76    | MAS = 10.00 (m) | 1940.00  | 1940.00  | MinPts      |
| 884.42  | 32.81  | 873.62  | 851.61  | 100.08    | MAS = 10.00 (m) | 2010.00  | 2010.00  | MINPT-O-EOU |
| 906.33  | 32.81  | 894.93  | 873.53  | 95.92     | MAS = 10.00 (m) | 2350.00  | 2349.13  | MinPt-O-SF  |
| 914.40  | 32.81  | 902.93  | 881.60  | 96.05     | MAS = 10.00 (m) | 2410.00  | 2408.60  | MinPt-O-SF  |
| 963.03  | 32.81  | 951.03  | 930.22  | 95.86     | MAS = 10.00 (m) | 2740.00  | 2735.07  | MinPt-O-SF  |
| 1427.71 | 33.99  | 1404.39 | 1393.72 | 66.81     | OSF1.50         | 6040.31  | 6000.00  | MinPt-O-SF  |
| 1453.64 | 33.24  | 1430.82 | 1420.40 | 69.65     | OSF1.50         | 6760.00  | 6718.19  | MinPt-CtCt  |
| 1453.90 | 34.00  | 1430.57 | 1419.90 | 68.02     | OSF1.50         | 6980.00  | 6938.19  | MINPT-O-EOU |
| 1454.24 | 34.39  | 1430.66 | 1419.85 | 67.21     | OSF1.50         | 7090.00  | 7048.19  | MinPt-O-ADP |
| 1465.69 | 40.59  | 1437.97 | 1425.10 | 56.86     | OSF1.50         | 8500.00  | 8458.19  | MINPT-O-EOU |
| 1466.14 | 41.16  | 1438.04 | 1424.98 | 56.06     | OSF1.50         | 8600.00  | 8558.19  | MinPt-O-ADP |
| 1524.06 | 53.49  | 1487.74 | 1470.58 | 44.33     | OSF1.50         | 10840.00 | 10798.19 | MinPt-O-SF  |
| 1548.77 | 54.14  | 1512.02 | 1494.63 | 44.48     | OSF1.50         | 11010.00 | 10968.19 | MinPt-O-SF  |
| 1575.13 | 54.74  | 1537.97 | 1520.39 | 44.73     | OSF1.50         | 11140.00 | 11098.19 | MinPt-O-SF  |
| 2024.59 | 48.20  | 1991.79 | 1976.38 | 65.64     | OSF1.50         | 12880.00 | 12300.00 | MinPt-CtCt  |
| 2024.71 | 48.52  | 1991.70 | 1976.19 | 65.19     | OSF1.50         | 12910.00 | 12300.00 | MINPT-O-EOU |
| 2024.80 | 48.63  | 1991.72 | 1976.17 | 65.04     | OSF1.50         | 12920.00 | 12300.00 | MinPt-O-ADP |
| 2000.43 | 69.47  | 1953.46 | 1930.96 | 44.42     | OSF1.50         | 13610.00 | 12300.00 | MinPt-CtCt  |
| 2001.52 | 72.64  | 1952.43 | 1928.87 | 42.45     | OSF1.50         | 13730.00 | 12300.00 | MINPT-O-EOU |
| 2006.27 | 87.62  | 1947.20 | 1918.65 | 35.11     | OSF1.50         | 14110.00 | 12300.00 | MINPT-O-EOU |
| 2006.61 | 88.01  | 1947.28 | 1918.60 | 34.95     | OSF1.50         | 14130.00 | 12300.00 | MinPt-O-ADP |
| 2021.36 | 102.20 | 1952.56 | 1919.15 | 30.22     | OSF1.50         | 14480.00 | 12300.00 | MINPT-O-EOU |
| 1973.99 | 182.67 | 1851.55 | 1791.32 | 16.37     | OSF1.50         | 16340.00 | 12300.00 | MinPt-CtCt  |
| 1978.79 | 195.17 | 1848.01 | 1783.62 | 15.35     | OSF1.50         | 16670.00 | 12300.00 | MINPT-O-EOU |

| Offset Trajectory   | Separation |          |          | Allow Dev. (ft) | Sep. Fact. | Controlling Rule | Reference Trajectory |          | Risk Level |       |       | Alert       | Status |
|---|------------|----------|----------|-----------------|------------|------------------|----------------------|----------|------------|-------|-------|-------------|--------|
|   | Ct-Ct (ft) | MAS (ft) | EOU (ft) |                 |            |                  | MD (ft)              | TVD (ft) | Alert      | Minor | Major |             |        |
| 1982.88   | 200.15     | 1648.73  | 1782.73  | 14.99           |            | OSF1.50          | 16800.00             | 12300.00 |            |       |       | MinPt-O-ADP |        |
| 1988.68   | 244.32     | 1825.14  | 1744.35  | 12.30           |            | OSF1.50          | 16950.00             | 12300.00 |            |       |       | MinPts      |        |
| 5852.91   | 120.21     | 5772.11  | 5732.70  | 74.23           |            | OSF1.50          | 22376.56             | 12300.00 |            |       |       | TD          |        |
| Cimarex Dos Equis 12 Federal Com #4H Gyro Off to 11189ft MD (Def Survey)              |            |          |          |                 |            |                  |                      |          |            |       |       |             |        |
|   | 881.59     | 32.81    | 879.61   | 848.79          | N/A        | MAS = 10.00 (m)  | 0.00                 | 0.00     |            |       |       | MinPts      | Pass   |
| 881.60  | 32.81      | 879.61   | 848.79   | 155251.69       |            | MAS = 10.00 (m)  | 26.00                | 26.00    |            |       |       | WRP         |        |
| 884.18  | 32.81      | 877.13   | 851.37   | 176.32          |            | MAS = 10.00 (m)  | 1020.00              | 1020.00  |            |       |       | MINPT-O-EQU |        |
| 884.38  | 32.81      | 873.90   | 851.57   | 103.76          |            | MAS = 10.00 (m)  | 1940.00              | 1940.00  |            |       |       | MinPts      |        |
| 884.42  | 32.81      | 873.62   | 851.61   | 100.08          |            | MAS = 10.00 (m)  | 2010.00              | 2010.00  |            |       |       | MINPT-O-EQU |        |
| 906.33  | 32.81      | 894.93   | 873.53   | 95.92           |            | MAS = 10.00 (m)  | 2350.00              | 2349.13  |            |       |       | MinPt-O-SF  |        |
| 914.40  | 32.81      | 902.93   | 881.60   | 96.05           |            | MAS = 10.00 (m)  | 2410.00              | 2408.60  |            |       |       | MinPt-O-SF  |        |
| 963.03  | 32.81      | 951.03   | 930.22   | 95.89           |            | MAS = 10.00 (m)  | 2740.00              | 2735.07  |            |       |       | MinPt-O-SF  |        |
| 1427.71   | 33.99      | 1404.39  | 1393.72  | 66.81           |            | OSF1.50          | 6040.31              | 6000.00  |            |       |       | MinPt-O-SF  |        |
| 1453.64   | 33.24      | 1430.82  | 1420.40  | 69.65           |            | OSF1.50          | 6760.00              | 6718.19  |            |       |       | MinPt-CtCt  |        |
| 1453.90   | 34.00      | 1430.57  | 1419.90  | 68.02           |            | OSF1.50          | 6980.00              | 6938.19  |            |       |       | MINPT-O-EQU |        |
| 1454.24   | 34.39      | 1430.60  | 1419.85  | 67.21           |            | OSF1.50          | 7090.00              | 7048.19  |            |       |       | MinPt-O-ADP |        |
| 1465.69   | 40.58      | 1437.97  | 1425.10  | 56.86           |            | OSF1.50          | 8500.00              | 8458.19  |            |       |       | MINPT-O-EQU |        |
| 1466.14   | 41.16      | 1438.04  | 1424.98  | 56.06           |            | OSF1.50          | 8600.00              | 8558.19  |            |       |       | MinPt-O-ADP |        |
| 1529.07   | 56.85      | 1490.51  | 1472.22  | 41.75           |            | OSF1.50          | 11320.00             | 11278.19 |            |       |       | MinPt-O-SF  |        |
| 10226.83  | 67.95      | 10180.87 | 10158.88 | 232.48          |            | OSF1.50          | 22376.56             | 12300.00 |            |       |       | TD          |        |
| Cimarex Dos Equis 12-13 Federal Com #77H Rev1 RM 17Feb20 (Def Plan)                   |            |          |          |                 |            |                  |                      |          |            |       |       |             |        |
|   | 1280.26    | 32.81    | 1278.97  | 1247.45         | N/A        | MAS = 10.00 (m)  | 0.00                 | 0.00     |            |       |       | Surface     | Pass   |
| 1280.25   | 32.81      | 1278.97  | 1247.44  | N/A             |            | MAS = 10.00 (m)  | 26.00                | 26.00    |            |       |       | WRP         |        |
| 1006.27   | 87.64      | 947.32   | 918.63   | 17.51           |            | OSF1.50          | 11831.80             | 11790.00 |            |       |       | MinPt-CtCt  |        |
| 1006.36   | 87.97      | 947.19   | 918.40   | 17.45           |            | OSF1.50          | 11900.00             | 11857.96 |            |       |       | MinPts      |        |
| 1006.80   | 88.03      | 947.59   | 918.77   | 17.44           |            | OSF1.50          | 11970.00             | 11926.27 |            |       |       | MinPt-O-SF  |        |
| 1173.51   | 71.22      | 1125.60  | 1102.29  | 25.14           |            | OSF1.50          | 12830.00             | 12300.00 |            |       |       | MinPts      |        |
| 1173.51   | 71.22      | 1125.61  | 1102.30  | 25.14           |            | OSF1.50          | 12831.80             | 12300.00 |            |       |       | MinPt-CtCt  |        |
| 1174.95   | 309.47     | 968.20   | 865.48   | 5.71            |            | OSF1.50          | 22376.56             | 12300.00 |            |       |       | MinPts      |        |
| Cimarex Dos Equis 12-13 Federal Com #76H Rev1 RM 17Feb20 (Def Plan)                   |            |          |          |                 |            |                  |                      |          |            |       |       |             |        |
|   | 1300.19    | 32.81    | 1298.91  | 1267.38         | N/A        | MAS = 10.00 (m)  | 0.00                 | 0.00     |            |       |       | Surface     | Pass   |
| 1300.19   | 32.81      | 1298.90  | 1267.38  | N/A             |            | MAS = 10.00 (m)  | 26.00                | 26.00    |            |       |       | WRP         |        |
| 1036.56   | 63.83      | 993.47   | 972.72   | 24.95           |            | OSF1.50          | 9160.00              | 9118.19  |            |       |       | MinPt-CtCt  |        |
| 1036.61   | 64.04      | 993.38   | 972.57   | 24.87           |            | OSF1.50          | 9210.00              | 9168.19  |            |       |       | MINPT-O-EQU |        |
| 1036.63   | 64.07      | 993.39   | 972.56   | 24.85           |            | OSF1.50          | 9220.00              | 9178.19  |            |       |       | MinPt-O-ADP |        |
| 1036.67   | 64.10      | 993.40   | 972.57   | 24.83           |            | OSF1.50          | 9230.00              | 9188.19  |            |       |       | MinPt-O-SF  |        |
| 2888.89   | 324.78     | 2671.94  | 2564.11  | 13.39           |            | OSF1.50          | 22376.56             | 12300.00 |            |       |       | MinPts      |        |
| Cimarex Dos Equis 12 Federal Com #2H Pilot Gyro+MWD Off to 12650ft (Def Survey)       |            |          |          |                 |            |                  |                      |          |            |       |       |             |        |
|   | 1756.94    | 32.81    | 1754.96  | 1724.14         | N/A        | MAS = 10.00 (m)  | 0.00                 | 0.00     |            |       |       | Surface     | Pass   |
| 1756.92   | 32.81      | 1754.94  | 1724.11  | N/A             |            | MAS = 10.00 (m)  | 26.00                | 26.00    |            |       |       | WRP         |        |
| 1749.56   | 32.81      | 1738.80  | 1716.75  | 199.05          |            | MAS = 10.00 (m)  | 1620.00              | 1620.00  |            |       |       | MinPts      |        |
| 1749.63   | 32.81      | 1738.72  | 1716.82  | 195.61          |            | MAS = 10.00 (m)  | 1680.00              | 1680.00  |            |       |       | MINPT-O-EQU |        |
| 1749.65   | 32.81      | 1737.95  | 1716.84  | 179.87          |            | MAS = 10.00 (m)  | 1950.00              | 1950.00  |            |       |       | MinPts      |        |
| 1712.80   | 32.81      | 1700.23  | 1679.99  | 161.83          |            | MAS = 10.00 (m)  | 2460.00              | 2458.07  |            |       |       | MinPt-O-SF  |        |
| 1186.17   | 34.75      | 1162.13  | 1151.42  | 55.23           |            | OSF1.50          | 6100.00              | 6059.14  |            |       |       | MinPt-O-SF  |        |
| 1154.63   | 35.67      | 1130.02  | 1119.02  | 52.37           |            | OSF1.50          | 7220.00              | 7178.19  |            |       |       | MinPt-CtCt  |        |
| 1154.71   | 35.76      | 1129.98  | 1118.95  | 52.23           |            | OSF1.50          | 7240.00              | 7198.19  |            |       |       | MINPT-O-EQU |        |
| 1154.74   | 35.80      | 1129.99  | 1118.94  | 52.16           |            | OSF1.50          | 7250.00              | 7208.19  |            |       |       | MinPt-O-ADP |        |
| 1082.60   | 59.05      | 1042.27  | 1023.55  | 28.83           |            | OSF1.50          | 11900.00             | 11857.96 |            |       |       | MinPt-O-SF  |        |
| 1059.95   | 57.06      | 1020.94  | 1002.83  | 29.28           |            | OSF1.50          | 12260.00             | 12163.06 |            |       |       | MinPt-O-ADP |        |
| 1059.91   | 57.01      | 1020.94  | 1002.91  | 29.31           |            | OSF1.50          | 12270.00             | 12169.22 |            |       |       | MinPts      |        |
| 10169.00  | 69.83      | 10121.79 | 10099.17 | 224.78          |            | OSF1.50          | 22376.56             | 12300.00 |            |       |       | TD          |        |
| Cimarex Dos Equis 12 Federal Com #2H ST02 Gyro+MWD 13330ft to 15399ft MD (Def Survey) |            |          |          |                 |            |                  |                      |          |            |       |       |             |        |
|   | 1756.94    | 32.81    | 1754.96  | 1724.14         | N/A        | MAS = 10.00 (m)  | 0.00                 | 0.00     |            |       |       | Surface     | Pass   |
| 1756.92   | 32.81      | 1754.94  | 1724.11  | N/A             |            | MAS = 10.00 (m)  | 26.00                | 26.00    |            |       |       | WRP         |        |
| 1749.56   | 32.81      | 1738.80  | 1716.75  | 199.05          |            | MAS = 10.00 (m)  | 1620.00              | 1620.00  |            |       |       | MinPts      |        |
| 1749.63   | 32.81      | 1738.72  | 1716.82  | 195.61          |            | MAS = 10.00 (m)  | 1680.00              | 1680.00  |            |       |       | MINPT-O-EQU |        |
| 1749.65   | 32.81      | 1737.95  | 1716.84  | 179.87          |            | MAS = 10.00 (m)  | 1950.00              | 1950.00  |            |       |       | MinPts      |        |
| 1712.80   | 32.81      | 1700.23  | 1679.99  | 161.83          |            | MAS = 10.00 (m)  | 2460.00              | 2458.07  |            |       |       | MinPt-O-SF  |        |
| 1186.17   | 34.75      | 1162.13  | 1151.42  | 55.23           |            | OSF1.50          | 6100.00              | 6059.14  |            |       |       | MinPt-O-SF  |        |
| 1154.63   | 35.67      | 1130.02  | 1119.02  | 52.37           |            | OSF1.50          | 7220.00              | 7178.19  |            |       |       | MinPt-CtCt  |        |
| 1154.71   | 35.76      | 1129.98  | 1118.95  | 52.23           |            | OSF1.50          | 7240.00              | 7198.19  |            |       |       | MINPT-O-EQU |        |
| 1154.74   | 35.80      | 1129.99  | 1118.94  | 52.16           |            | OSF1.50          | 7250.00              | 7208.19  |            |       |       | MinPt-O-ADP |        |
| 1112.92   | 51.78      | 1077.47  | 1061.14  | 33.99           |            | OSF1.50          | 10570.00             | 10528.19 |            |       |       | MinPt-O-SF  |        |
| 1083.68   | 54.56      | 1046.36  | 1029.12  | 31.34           |            | OSF1.50          | 10880.00             | 10838.19 |            |       |       | MinPt-CtCt  |        |
| 1083.71   | 54.64      | 1046.34  | 1029.07  | 31.29           |            | OSF1.50          | 10890.00             | 10848.19 |            |       |       | MinPts      |        |
| 1089.04   | 55.29      | 1051.26  | 1033.75  | 31.02           |            | OSF1.50          | 11000.00             | 10958.19 |            |       |       | MinPt-O-SF  |        |
| 1611.09   | 55.26      | 1573.59  | 1555.83  | 45.30           |            | OSF1.50          | 12980.00             | 12300.00 |            |       |       | MinPt-CtCt  |        |
| 1615.90   | 65.91      | 1571.30  | 1549.99  | 37.87           |            | OSF1.50          | 13360.00             | 12300.00 |            |       |       | MINPT-O-EQU |        |
| 1615.20   | 86.19      | 1557.18  | 1529.11  | 28.74           |            | OSF1.50          | 13920.00             | 12300.00 |            |       |       | MinPt-CtCt  |        |
| 1616.01   | 88.56      | 1556.31  | 1527.45  | 27.96           |            | OSF1.50          | 14000.00             | 12300.00 |            |       |       | MINPT-O-EQU |        |
| 1617.31   | 90.07      | 1556.60  | 1527.24  | 27.51           |            | OSF1.50          | 14050.00             | 12300.00 |            |       |       | MinPt-O-ADP |        |
| 1672.34   | 124.26     | 1588.84  | 1548.08  | 20.49           |            | OSF1.50          | 14880.00             | 12300.00 |            |       |       | MinPts      |        |
| 1713.22   | 159.77     | 1606.05  | 1553.45  | 16.27           |            | OSF1.50          | 15630.00             | 12300.00 |            |       |       | MinPt-CtCt  |        |
| 1718.04   | 174.31     | 1601.18  | 1543.73  | 14.94           |            | OSF1.50          | 15990.00             | 12300.00 |            |       |       | MINPT-O-EQU |        |
| 1722.09   | 180.17     | 1601.31  | 1541.92  | 14.48           |            | OSF1.50          | 16130.00             | 12300.00 |            |       |       | MINPT-O-EQU |        |
| 1738.94   | 253.19     | 1569.53  | 1495.81  | 10.37           |            | OSF1.50          | 16870.00             | 12300.00 |            |       |       | MinPts      |        |
| 1740.74   | 253.61     | 1571.01  | 1487.13  | 10.36           |            | OSF1.50          | 16920.00             | 12300.00 |            |       |       | MinPt-O-SF  |        |
| 5810.35   | 126.97     | 5725.04  | 5683.38  | 69.70           |            | OSF1.50          | 22376.56             | 12300.00 |            |       |       | TD          |        |
| Cimarex Dos Equis 12 Federal Com #2H ST01 Gyro+MWD 10486ft to 13433ft MD (Def Survey) |            |          |          |                 |            |                  |                      |          |            |       |       |             |        |
|   | 1756.94    | 32.81    | 1754.96  | 1724.14         | N/A        | MAS = 10.00 (m)  | 0.00                 | 0.00     |            |       |       | Surface     | Pass   |
| 1756.92   | 32.81      | 1754.94  | 1724.11  | N/A             |            | MAS = 10.00 (m)  | 26.00                | 26.00    |            |       |       | WRP         |        |
| 1749.56   | 32.81      | 1738.80  | 1716.75  | 199.05          |            | MAS = 10.00 (m)  | 1620.00              | 1620.00  |            |       |       | MinPts      |        |
| 1749.63   | 32.81      | 1738.72  | 1716.82  | 195.61          |            | MAS = 10.00 (m)  | 1680.00              | 1680.00  |            |       |       | MINPT-O-EQU |        |
| 1749.65   | 32.81      | 1737.95  | 1716.84  | 179.87          |            | MAS = 10.00 (m)  | 1950.00              | 1950.00  |            |       |       | MinPts      |        |

| Offset Trajectory | Separation |          |          | Allow<br>Dev. (ft) | Sep.<br>Fact. | Controlling<br>Rule | Reference Trajectory |          | Risk Level |       |       | Alert       | Status |
|-------------------|------------|----------|----------|--------------------|---------------|---------------------|----------------------|----------|------------|-------|-------|-------------|--------|
|                   | Ct-Ct (ft) | MAS (ft) | EOU (ft) |                    |               |                     | MD (ft)              | TVD (ft) | Alert      | Minor | Major |             |        |
| 1712.80           | 32.81      | 1700.23  | 1679.99  | 161.83             |               | MAS = 10.00 (m)     | 2460.00              | 2458.07  |            |       |       | MinPt-O-SF  |        |
| 1186.17           | 34.75      | 1162.13  | 1151.42  | 55.23              |               | OSF1.50             | 6100.00              | 6059.14  |            |       |       | MinPt-O-SF  |        |
| 1154.69           | 35.67      | 1130.02  | 1119.02  | 52.37              |               | OSF1.50             | 7220.00              | 7178.19  |            |       |       | MinPt-CtCt  |        |
| 1154.71           | 35.76      | 1129.98  | 1118.95  | 52.23              |               | OSF1.50             | 7240.00              | 7198.19  |            |       |       | MINPT-O-EQU |        |
| 1154.74           | 35.80      | 1129.98  | 1118.94  | 52.16              |               | OSF1.50             | 7250.00              | 7208.19  |            |       |       | MinPt-O-ADP |        |
| 1112.92           | 51.78      | 1077.47  | 1061.14  | 33.93              |               | OSF1.50             | 10570.00             | 10528.19 |            |       |       | MinPt-O-SF  |        |
| 1083.68           | 54.56      | 1046.36  | 1029.12  | 31.34              |               | OSF1.50             | 10880.00             | 10838.19 |            |       |       | MinPt-CtCt  |        |
| 1083.71           | 54.64      | 1046.34  | 1029.07  | 31.29              |               | OSF1.50             | 10890.00             | 10848.19 |            |       |       | MinPts      |        |
| 1089.04           | 55.29      | 1051.26  | 1033.75  | 31.02              |               | OSF1.50             | 11000.00             | 10958.19 |            |       |       | MinPt-O-SF  |        |
| 1611.08           | 55.26      | 1573.59  | 1555.83  | 45.30              |               | OSF1.50             | 12980.00             | 12300.00 |            |       |       | MinPt-CtCt  |        |
| 1615.90           | 65.91      | 1571.30  | 1549.99  | 37.87              |               | OSF1.50             | 13360.00             | 12300.00 |            |       |       | MINPT-O-EQU |        |
| 1615.28           | 86.19      | 1557.18  | 1529.11  | 28.74              |               | OSF1.50             | 13920.00             | 12300.00 |            |       |       | MinPt-CtCt  |        |
| 1616.01           | 88.56      | 1556.31  | 1527.45  | 27.96              |               | OSF1.50             | 14000.00             | 12300.00 |            |       |       | MINPT-O-EQU |        |
| 1617.31           | 90.07      | 1556.60  | 1527.24  | 27.51              |               | OSF1.50             | 14050.00             | 12300.00 |            |       |       | MinPt-O-ADP |        |
| 1672.47           | 122.98     | 1589.83  | 1549.49  | 20.71              |               | OSF1.50             | 14880.00             | 12300.00 |            |       |       | MinPts      |        |
| 1679.27           | 179.51     | 1558.94  | 1499.76  | 14.17              |               | OSF1.50             | 14990.00             | 12300.00 |            |       |       | MinPts      |        |
| 1679.96           | 179.59     | 1559.57  | 1500.37  | 14.17              |               | OSF1.50             | 15000.00             | 12300.00 |            |       |       | MinPt-O-SF  |        |
| 7681.72           | 100.20     | 7614.26  | 7581.52  | 117.28             |               | OSF1.50             | 22376.56             | 12300.00 |            |       |       | TD          |        |

Cimarex Dos Equis 12-13  
Federal Com #75H Rev1 RM  
17Feb20 (Def Plan)

Pass

|         |        |         |         |       |  |                 |          |          |  |  |  |             |  |
|---------|--------|---------|---------|-------|--|-----------------|----------|----------|--|--|--|-------------|--|
| 1320.12 | 32.81  | 1318.83 | 1287.31 | N/A   |  | MAS = 10.00 (m) | 0.00     | 0.00     |  |  |  | Surface     |  |
| 1320.11 | 32.81  | 1318.83 | 1287.31 | N/A   |  | MAS = 10.00 (m) | 26.00    | 26.00    |  |  |  | WRP         |  |
| 1152.19 | 40.95  | 1124.39 | 1111.23 | 43.72 |  | OSF1.50         | 6350.00  | 6308.22  |  |  |  | MinPt-O-SF  |  |
| 1150.25 | 40.88  | 1122.50 | 1109.37 | 43.72 |  | OSF1.50         | 6430.00  | 6388.19  |  |  |  | MinPt-O-SF  |  |
| 1150.10 | 40.87  | 1122.35 | 1109.22 | 43.73 |  | OSF1.50         | 6460.00  | 6418.19  |  |  |  | MinPts      |  |
| 1150.10 | 58.49  | 1110.61 | 1091.60 | 30.22 |  | OSF1.50         | 9160.00  | 9118.19  |  |  |  | MinPt-CtCt  |  |
| 1150.11 | 58.60  | 1110.55 | 1091.51 | 30.16 |  | OSF1.50         | 9180.00  | 9138.19  |  |  |  | MINPT-O-EQU |  |
| 1150.15 | 58.64  | 1110.56 | 1091.51 | 30.14 |  | OSF1.50         | 9190.00  | 9148.19  |  |  |  | MinPt-O-ADP |  |
| 1150.89 | 58.84  | 1111.17 | 1092.05 | 30.05 |  | OSF1.50         | 9250.00  | 9208.19  |  |  |  | MinPt-O-SF  |  |
| 2926.21 | 324.38 | 2709.55 | 2601.88 | 13.58 |  | OSF1.50         | 22376.56 | 12300.00 |  |  |  | MinPts      |  |

Cimarex Dos Equis 12-13  
Federal Com #10H Rev0 RM  
26Dec19 (Non-Def Plan)

Pass

|         |        |         |         |       |  |                 |          |          |  |  |  |             |  |
|---------|--------|---------|---------|-------|--|-----------------|----------|----------|--|--|--|-------------|--|
| 1251.94 | 32.81  | 1250.66 | 1219.14 | N/A   |  | MAS = 10.00 (m) | 0.00     | 0.00     |  |  |  | Surface     |  |
| 1251.94 | 32.81  | 1250.66 | 1219.14 | N/A   |  | MAS = 10.00 (m) | 26.00    | 26.00    |  |  |  | WRP         |  |
| 1242.81 | 32.81  | 1228.85 | 1210.00 | 97.96 |  | MAS = 10.00 (m) | 2350.00  | 2349.13  |  |  |  | MinPts      |  |
| 1335.89 | 46.00  | 1304.79 | 1289.89 | 44.77 |  | OSF1.50         | 6040.31  | 6000.00  |  |  |  | MinPt-O-SF  |  |
| 1350.02 | 80.66  | 1295.82 | 1269.36 | 25.49 |  | OSF1.50         | 12060.00 | 12009.60 |  |  |  | MinPt-O-SF  |  |
| 1349.82 | 80.64  | 1295.63 | 1269.18 | 25.49 |  | OSF1.50         | 12100.00 | 12044.31 |  |  |  | MinPt-O-ADP |  |
| 1349.82 | 80.64  | 1295.63 | 1269.18 | 25.49 |  | OSF1.50         | 12110.00 | 12052.72 |  |  |  | MinPts      |  |
| 1477.57 | 329.29 | 1257.62 | 1148.29 | 6.75  |  | OSF1.50         | 22376.56 | 12300.00 |  |  |  | MinPts      |  |

Final Surveys - Cimarex Dos  
Equis 13 Federal Com #9H  
MWD 0ft-15788ft (Surcon  
Corrected) (Def Survey)

Pass

|         |        |         |         |           |  |                 |          |          |  |  |  |             |  |
|---------|--------|---------|---------|-----------|--|-----------------|----------|----------|--|--|--|-------------|--|
| 5340.44 | 32.81  | 5339.15 | 5307.63 | N/A       |  | MAS = 10.00 (m) | 0.00     | 0.00     |  |  |  | MinPts      |  |
| 5340.44 | 32.81  | 5339.13 | 5307.63 | 187490.65 |  | MAS = 10.00 (m) | 26.00    | 26.00    |  |  |  | WRP         |  |
| 5341.42 | 32.81  | 5337.86 | 5308.62 | 2348.97   |  | MAS = 10.00 (m) | 490.00   | 490.00   |  |  |  | MINPT-O-EQU |  |
| 5342.03 | 32.81  | 5337.32 | 5309.22 | 1560.18   |  | MAS = 10.00 (m) | 770.00   | 770.00   |  |  |  | MinPts      |  |
| 5341.99 | 32.81  | 5336.03 | 5309.18 | 1142.88   |  | MAS = 10.00 (m) | 1070.00  | 1070.00  |  |  |  | MinPts      |  |
| 5341.93 | 32.81  | 5335.48 | 5309.12 | 1034.13   |  | MAS = 10.00 (m) | 1170.00  | 1170.00  |  |  |  | MINPT-O-EQU |  |
| 5336.58 | 32.81  | 5326.40 | 5303.75 | 591.18    |  | MAS = 10.00 (m) | 2210.00  | 2209.81  |  |  |  | MinPts      |  |
| 5336.56 | 32.81  | 5326.40 | 5303.76 | 590.92    |  | MAS = 10.00 (m) | 2220.00  | 2219.78  |  |  |  | MINPT-O-EQU |  |
| 5336.60 | 32.81  | 5326.37 | 5303.79 | 586.44    |  | MAS = 10.00 (m) | 2330.00  | 2329.27  |  |  |  | MinPts      |  |
| 5336.60 | 32.81  | 5326.35 | 5303.79 | 585.34    |  | MAS = 10.00 (m) | 2350.00  | 2349.13  |  |  |  | MINPT-O-EQU |  |
| 5374.87 | 34.32  | 5351.65 | 5340.58 | 242.04    |  | OSF1.50         | 6100.00  | 6059.14  |  |  |  | MinPt-O-SF  |  |
| 5345.80 | 41.06  | 5318.08 | 5304.74 | 200.30    |  | OSF1.50         | 8380.00  | 8338.19  |  |  |  | MinPt-CtCt  |  |
| 5345.93 | 41.43  | 5317.97 | 5304.50 | 198.49    |  | OSF1.50         | 8450.00  | 8408.19  |  |  |  | MINPT-O-EQU |  |
| 5330.94 | 49.04  | 5297.89 | 5281.90 | 166.64    |  | OSF1.50         | 9800.00  | 9758.19  |  |  |  | MinPt-CtCt  |  |
| 5331.02 | 49.24  | 5297.84 | 5281.78 | 165.96    |  | OSF1.50         | 9840.00  | 9798.19  |  |  |  | MINPT-O-EQU |  |
| 5331.11 | 49.34  | 5297.86 | 5281.77 | 165.62    |  | OSF1.50         | 9860.00  | 9818.19  |  |  |  | MinPt-O-ADP |  |
| 5477.85 | 58.57  | 5438.46 | 5419.28 | 142.74    |  | OSF1.50         | 11831.80 | 11790.00 |  |  |  | MinPt-O-SF  |  |
| 1289.24 | 137.33 | 1197.35 | 1151.91 | 14.18     |  | OSF1.50         | 18310.00 | 12300.00 |  |  |  | MinPt-CtCt  |  |
| 1290.46 | 140.45 | 1196.48 | 1149.98 | 13.87     |  | OSF1.50         | 18440.00 | 12300.00 |  |  |  | MINPT-O-EQU |  |
| 1289.08 | 149.86 | 1188.83 | 1139.22 | 12.98     |  | OSF1.50         | 18820.00 | 12300.00 |  |  |  | MinPt-CtCt  |  |
| 1265.77 | 179.21 | 1145.96 | 1086.56 | 10.65     |  | OSF1.50         | 19960.00 | 12300.00 |  |  |  | MinPt-CtCt  |  |
| 1266.45 | 181.48 | 1145.13 | 1094.97 | 10.52     |  | OSF1.50         | 20050.00 | 12300.00 |  |  |  | MINPT-O-EQU |  |
| 1268.21 | 183.46 | 1145.55 | 1084.73 | 10.42     |  | OSF1.50         | 20130.00 | 12300.00 |  |  |  | MinPt-O-ADP |  |
| 1254.89 | 212.42 | 1112.94 | 1042.47 | 8.90      |  | OSF1.50         | 21180.00 | 12300.00 |  |  |  | MinPt-CtCt  |  |
| 1258.63 | 221.67 | 1110.51 | 1036.97 | 8.55      |  | OSF1.50         | 21520.00 | 12300.00 |  |  |  | MINPT-O-EQU |  |
| 1261.11 | 224.62 | 1111.03 | 1036.49 | 8.45      |  | OSF1.50         | 21630.00 | 12300.00 |  |  |  | MinPt-O-ADP |  |
| 1272.67 | 245.55 | 1108.63 | 1027.12 | 7.80      |  | OSF1.50         | 22376.56 | 12300.00 |  |  |  | MinPts      |  |

Cimarex Dos Equis 12-13  
Federal Com #11H Rev0 RM  
26Dec19 (Non-Def Plan)

Pass

|         |        |         |         |        |  |                 |          |          |  |  |  |             |  |
|---------|--------|---------|---------|--------|--|-----------------|----------|----------|--|--|--|-------------|--|
| 1271.97 | 32.81  | 1270.68 | 1239.16 | N/A    |  | MAS = 10.00 (m) | 0.00     | 0.00     |  |  |  | Surface     |  |
| 1271.97 | 32.81  | 1270.68 | 1239.16 | N/A    |  | MAS = 10.00 (m) | 26.00    | 26.00    |  |  |  | WRP         |  |
| 1271.97 | 32.81  | 1258.51 | 1239.16 | 104.42 |  | MAS = 10.00 (m) | 2000.00  | 2000.00  |  |  |  | MinPts      |  |
| 1271.98 | 32.81  | 1258.48 | 1239.18 | 104.02 |  | MAS = 10.00 (m) | 2010.00  | 2010.00  |  |  |  | MINPT-O-EQU |  |
| 1838.75 | 52.42  | 1803.38 | 1786.34 | 53.90  |  | OSF1.50         | 6100.00  | 6059.14  |  |  |  | MinPt-O-SF  |  |
| 1861.34 | 97.33  | 1796.03 | 1764.02 | 29.05  |  | OSF1.50         | 11831.80 | 11790.00 |  |  |  | MinPts      |  |
| 1818.84 | 94.50  | 1755.41 | 1724.34 | 29.25  |  | OSF1.50         | 12170.00 | 12100.61 |  |  |  | MinPt-O-SF  |  |
| 1799.81 | 92.83  | 1737.50 | 1706.98 | 29.47  |  | OSF1.50         | 12530.00 | 12268.32 |  |  |  | MinPt-O-ADP |  |
| 1799.78 | 92.80  | 1737.49 | 1706.99 | 29.48  |  | OSF1.50         | 12540.00 | 12270.38 |  |  |  | MINPT-O-EQU |  |
| 1799.78 | 92.75  | 1737.51 | 1707.02 | 29.49  |  | OSF1.50         | 12550.00 | 12272.37 |  |  |  | MinPt-CtCt  |  |
| 1799.98 | 318.80 | 1587.00 | 1481.15 | 8.50   |  | OSF1.50         | 22376.56 | 12300.00 |  |  |  | MinPts      |  |

Cimarex Dos Equis 12-13  
Federal Com #5H Rev5 RM  
19Dec19 (Def Plan)

Pass

|         |       |         |         |       |  |                 |         |         |  |  |  |             |  |
|---------|-------|---------|---------|-------|--|-----------------|---------|---------|--|--|--|-------------|--|
| 1405.65 | 32.81 | 1404.36 | 1372.84 | N/A   |  | MAS = 10.00 (m) | 0.00    | 0.00    |  |  |  | Surface     |  |
| 1405.64 | 32.81 | 1404.35 | 1372.83 | N/A   |  | MAS = 10.00 (m) | 26.00   | 26.00   |  |  |  | WRP         |  |
| 1279.30 | 32.81 | 1261.30 | 1246.49 | 76.82 |  | MAS = 10.00 (m) | 3400.00 | 3387.99 |  |  |  | MinPts      |  |
| 1279.32 | 32.81 | 1261.29 | 1246.51 | 76.71 |  | MAS = 10.00 (m) | 3410.00 | 3397.89 |  |  |  | MINPT-O-EQU |  |
| 1417.83 | 37.15 | 1392.64 | 1380.68 | 59.28 |  | OSF1.50         | 5040.00 | 5010.42 |  |  |  | MinPt-O-SF  |  |
| 1534.51 | 44.98 | 1504.09 | 1489.53 | 52.63 |  | OSF1.50         | 6100.00 | 6059.14 |  |  |  | MinPt-O-SF  |  |
| 1880.72 | 53.58 | 1844.57 | 1827.14 | 53.91 |  | OSF1.50         | 7550.00 | 7508.19 |  |  |  | MinPt-O-SF  |  |

| Offset Trajectory   | Separation |          |          | Allow Dev. (ft) | Sep. Fact. | Controlling Rule | Reference Trajectory |          | Risk Level |       |       | Alert       | Status |
|---|------------|----------|----------|-----------------|------------|------------------|----------------------|----------|------------|-------|-------|-------------|--------|
|   | Ct-Ct (ft) | MAS (ft) | EOU (ft) |                 |            |                  | MD (ft)              | TVD (ft) | Alert      | Minor | Major |             |        |
| 1906.59   | 81.06      | 1852.13  | 1825.54  | 35.83           |            | OSF1.50          | 11900.00             | 11857.96 |            |       |       | MinPt-O-SF  |        |
| 1906.24   | 80.95      | 1851.85  | 1825.30  | 35.87           |            | OSF1.50          | 11980.00             | 11935.82 |            |       |       | MinPt-O-ADP |        |
| 1906.14   | 80.82      | 1851.83  | 1825.32  | 35.93           |            | OSF1.50          | 12010.00             | 11964.08 |            |       |       | MINPT-O-EQU |        |
| 1906.02   | 80.19      | 1852.13  | 1825.83  | 36.21           |            | OSF1.50          | 12090.00             | 12035.79 |            |       |       | MinPt-CtCt  |        |
| 1912.53   | 318.22     | 1699.95  | 1594.31  | 9.05            |            | OSF1.50          | 22376.56             | 12300.00 |            |       |       | MinPts      |        |
| Cimarex Dos Equis 12-13<br>Federal Com #90H Rev1 RM<br>14Feb20 (Def Plan)                           |            |          |          |                 |            |                  |                      |          |            |       |       |             |        |
| 2198.34   | 32.81      | 2197.06  | 2165.53  | N/A             |            | MAS = 10.00 (m)  | 0.00                 | 0.00     |            |       |       | Surface     | Pass   |
| 2198.33   | 32.81      | 2197.04  | 2165.52  | N/A             |            | MAS = 10.00 (m)  | 26.00                | 26.00    |            |       |       | WRP         |        |
| 1609.18   | 74.28      | 1559.01  | 1534.89  | 33.33           |            | OSF1.50          | 9080.00              | 9038.19  |            |       |       | MinPts      |        |
| 1546.98   | 74.14      | 1496.87  | 1472.83  | 32.14           |            | OSF1.50          | 9570.00              | 9528.19  |            |       |       | MinPt-CtCt  |        |
| 1546.98   | 74.17      | 1496.86  | 1472.82  | 32.13           |            | OSF1.50          | 9580.00              | 9538.19  |            |       |       | MinPts      |        |
| 1547.87   | 74.26      | 1497.69  | 1473.61  | 32.10           |            | OSF1.50          | 9630.00              | 9588.19  |            |       |       | MinPt-O-SF  |        |
| 3075.99   | 321.52     | 2861.21  | 2754.48  | 14.40           |            | OSF1.50          | 22376.56             | 12300.00 |            |       |       | MinPts      |        |
| Cimarex Dos Equis 12-13<br>Federal Com #87H Rev0 RM<br>13Sept19 (Non-Def Plan)                      |            |          |          |                 |            |                  |                      |          |            |       |       |             |        |
| 2281.79   | 32.81      | 2280.50  | 2248.98  | N/A             |            | MAS = 10.00 (m)  | 0.00                 | 0.00     |            |       |       | Surface     | Pass   |
| 2281.78   | 32.81      | 2280.49  | 2248.97  | N/A             |            | MAS = 10.00 (m)  | 26.00                | 26.00    |            |       |       | WRP         |        |
| 1693.03   | 98.32      | 1626.83  | 1594.71  | 26.32           |            | OSF1.50          | 11920.00             | 11877.69 |            |       |       | MinPt-O-SF  |        |
| 1692.42   | 98.11      | 1626.36  | 1594.30  | 26.37           |            | OSF1.50          | 11980.00             | 11935.82 |            |       |       | MinPt-O-ADP |        |
| 1692.38   | 98.08      | 1626.35  | 1594.31  | 26.38           |            | OSF1.50          | 11990.00             | 11945.31 |            |       |       | MINPT-O-EQU |        |
| 1692.38   | 98.04      | 1626.36  | 1594.33  | 26.39           |            | OSF1.50          | 12000.00             | 11954.74 |            |       |       | MinPt-CtCt  |        |
| 1752.46   | 265.01     | 1575.20  | 1487.45  | 9.98            |            | OSF1.50          | 20680.00             | 12300.00 |            |       |       | MinPt-CtCt  |        |
| 1752.49   | 317.36     | 1540.33  | 1435.13  | 8.32            |            | OSF1.50          | 22376.56             | 12300.00 |            |       |       | MinPts      |        |
| Cimarex Dos Equis 13 Federal<br>#2H XEM + MWD 0ft to 15311<br>(Def Survey)                          |            |          |          |                 |            |                  |                      |          |            |       |       |             |        |
| 5601.99   | 32.81      | 5600.01  | 5589.18  | N/A             |            | MAS = 10.00 (m)  | 0.00                 | 0.00     |            |       |       | Surface     | Pass   |
| 5601.96   | 32.81      | 5599.98  | 5569.16  | N/A             |            | MAS = 10.00 (m)  | 10.00                | 10.00    |            |       |       | MinPt-O-SF  |        |
| 5601.96   | 32.81      | 5599.98  | 5569.15  | N/A             |            | MAS = 10.00 (m)  | 20.00                | 20.00    |            |       |       | MinPts      |        |
| 5601.96   | 32.81      | 5599.98  | 5569.15  | N/A             |            | MAS = 10.00 (m)  | 26.00                | 26.00    |            |       |       | WRP         |        |
| 5605.85   | 32.81      | 5596.58  | 5573.04  | 788.82          |            | MAS = 10.00 (m)  | 1270.00              | 1270.00  |            |       |       | MINPT-O-EQU |        |
| 5583.21   | 32.81      | 5566.85  | 5550.40  | 388.54          |            | MAS = 10.00 (m)  | 3620.00              | 3605.64  |            |       |       | MinPt-O-SF  |        |
| 5543.07   | 35.67      | 5518.61  | 5507.40  | 247.04          |            | OSF1.50          | 6100.00              | 6059.14  |            |       |       | MinPt-O-SF  |        |
| 5541.05   | 34.83      | 5517.15  | 5506.22  | 253.26          |            | OSF1.50          | 6280.00              | 6238.31  |            |       |       | MinPt-O-ADP |        |
| 5540.97   | 34.74      | 5517.13  | 5506.23  | 253.99          |            | OSF1.50          | 6300.00              | 6258.28  |            |       |       | MINPT-O-EQU |        |
| 5540.88   | 34.50      | 5517.21  | 5506.39  | 255.88          |            | OSF1.50          | 6350.00              | 6308.22  |            |       |       | MinPt-CtCt  |        |
| 5578.08   | 47.00      | 5546.10  | 5531.09  | 185.80          |            | OSF1.50          | 9360.00              | 9318.19  |            |       |       | MinPt-CtCt  |        |
| 5574.77   | 50.94      | 5540.15  | 5523.83  | 170.73          |            | OSF1.50          | 10130.00             | 10088.19 |            |       |       | MinPt-CtCt  |        |
| 5570.87   | 52.78      | 5535.02  | 5518.09  | 164.44          |            | OSF1.50          | 10560.00             | 10518.19 |            |       |       | MinPt-CtCt  |        |
| 5570.90   | 52.88      | 5534.98  | 5518.02  | 164.12          |            | OSF1.50          | 10580.00             | 10538.19 |            |       |       | MINPT-O-EQU |        |
| 5570.98   | 52.98      | 5535.00  | 5518.00  | 163.80          |            | OSF1.50          | 10600.00             | 10558.19 |            |       |       | MinPt-O-ADP |        |
| 5700.71   | 58.36      | 5661.14  | 5642.35  | 151.62          |            | OSF1.50          | 11831.80             | 11790.00 |            |       |       | MinPt-O-SF  |        |
| 1744.23   | 143.02     | 1648.22  | 1601.21  | 18.53           |            | OSF1.50          | 17980.00             | 12300.00 |            |       |       | MinPt-CtCt  |        |
| 1744.63   | 144.20     | 1647.84  | 1600.43  | 18.38           |            | OSF1.50          | 18020.00             | 12300.00 |            |       |       | MINPT-O-EQU |        |
| 1745.34   | 145.05     | 1647.98  | 1600.29  | 18.28           |            | OSF1.50          | 18050.00             | 12300.00 |            |       |       | MinPt-O-ADP |        |
| 1760.22   | 241.18     | 1598.77  | 1519.04  | 11.03           |            | OSF1.50          | 20910.00             | 12300.00 |            |       |       | MinPt-CtCt  |        |
| 1771.15   | 269.30     | 1590.96  | 1501.85  | 9.93            |            | OSF1.50          | 21640.00             | 12300.00 |            |       |       | MINPT-O-EQU |        |
| 1775.79   | 274.87     | 1591.89  | 1500.92  | 9.75            |            | OSF1.50          | 21790.00             | 12300.00 |            |       |       | MinPt-O-ADP |        |
| 1797.07   | 303.38     | 1594.15  | 1493.69  | 8.93            |            | OSF1.50          | 22230.00             | 12300.00 |            |       |       | MinPts      |        |
| 1799.17   | 303.81     | 1595.97  | 1495.36  | 8.93            |            | OSF1.50          | 22260.00             | 12300.00 |            |       |       | MinPt-O-SF  |        |
| 1812.06   | 304.75     | 1608.23  | 1507.30  | 8.97            |            | OSF1.50          | 22376.56             | 12300.00 |            |       |       | TD          |        |
| Curtis Hankamer Gulf Hanagan<br>Federal #3 (Offset) Plugged Oil<br>Inc Only 0ft-5049ft (Def Survey) |            |          |          |                 |            |                  |                      |          |            |       |       |             |        |
| 1979.09   | 32.81      | 1977.80  | 1946.28  | N/A             |            | MAS = 10.00 (m)  | 0.00                 | 0.00     |            |       |       | Surface     | Pass   |
| 1978.64   | 32.81      | 1977.30  | 1945.83  | 40084.74        |            | MAS = 10.00 (m)  | 26.00                | 26.00    |            |       |       | MinPt-O-SF  |        |
| 1973.95   | 37.45      | 1948.55  | 1936.50  | 81.83           |            | OSF1.50          | 650.00               | 650.00   |            |       |       | MinPt-CtCt  |        |
| 1972.25   | 102.57     | 1903.44  | 1889.68  | 29.19           |            | OSF1.50          | 1990.00              | 1990.00  |            |       |       | MinPt-CtCt  |        |
| 1975.20   | 111.26     | 1900.59  | 1863.93  | 26.92           |            | OSF1.50          | 2170.00              | 2169.90  |            |       |       | MINPT-O-EQU |        |
| 1980.30   | 117.41     | 1901.60  | 1862.89  | 25.56           |            | OSF1.50          | 2290.00              | 2289.50  |            |       |       | MinPt-O-ADP |        |
| 2202.35   | 264.91     | 2025.32  | 1937.45  | 12.52           |            | OSF1.50          | 5160.00              | 5129.13  |            |       |       | MinPt-O-SF  |        |
| 7349.17   | 66.67      | 7304.30  | 7282.50  | 168.57          |            | OSF1.50          | 13890.00             | 12300.00 |            |       |       | MinPt-CtCt  |        |
| 7349.51   | 67.57      | 7304.03  | 7281.93  | 166.28          |            | OSF1.50          | 13960.00             | 12300.00 |            |       |       | MINPT-O-EQU |        |
| 7350.00   | 68.14      | 7304.14  | 7281.86  | 164.89          |            | OSF1.50          | 14000.00             | 12300.00 |            |       |       | MinPt-O-ADP |        |
| 9918.06   | 230.89     | 9763.70  | 9687.16  | 64.79           |            | OSF1.50          | 20550.00             | 12300.00 |            |       |       | MinPt-O-SF  |        |
| 11226.51  | 254.54     | 11056.39 | 10971.97 | 66.49           |            | OSF1.50          | 22376.56             | 12300.00 |            |       |       | TD          |        |
| Cimarex Dos Equis 12-13<br>Federal Com #89H Rev1 RM<br>14Feb20 (Def Plan)                           |            |          |          |                 |            |                  |                      |          |            |       |       |             |        |
| 2218.31   | 32.81      | 2217.03  | 2185.50  | N/A             |            | MAS = 10.00 (m)  | 0.00                 | 0.00     |            |       |       | Surface     | Pass   |
| 2218.30   | 32.81      | 2217.01  | 2185.49  | N/A             |            | MAS = 10.00 (m)  | 26.00                | 26.00    |            |       |       | WRP         |        |
| 2193.44   | 32.81      | 2179.22  | 2160.63  | 169.47          |            | MAS = 10.00 (m)  | 2750.00              | 2744.96  |            |       |       | MinPts      |        |
| 2196.69   | 43.46      | 2167.29  | 2153.23  | 78.09           |            | OSF1.50          | 5880.00              | 5841.41  |            |       |       | MinPt-O-SF  |        |
| 2154.06   | 43.06      | 2124.89  | 2111.00  | 77.49           |            | OSF1.50          | 6280.00              | 6238.31  |            |       |       | MinPt-O-SF  |        |
| 2148.40   | 42.90      | 2119.34  | 2105.50  | 77.61           |            | OSF1.50          | 6460.00              | 6418.19  |            |       |       | MinPts      |        |
| 2148.40   | 59.89      | 2108.01  | 2088.51  | 55.06           |            | OSF1.50          | 9170.00              | 9128.19  |            |       |       | MinPt-CtCt  |        |
| 2148.43   | 60.01      | 2107.96  | 2088.42  | 54.95           |            | OSF1.50          | 9200.00              | 9158.19  |            |       |       | MINPT-O-EQU |        |
| 2148.50   | 60.08      | 2107.97  | 2088.41  | 54.88           |            | OSF1.50          | 9220.00              | 9178.19  |            |       |       | MinPt-O-ADP |        |
| 2158.39   | 60.45      | 2117.64  | 2097.94  | 54.78           |            | OSF1.50          | 9580.00              | 9538.19  |            |       |       | MinPt-O-SF  |        |
| 3443.97   | 330.77     | 3223.03  | 3113.20  | 15.67           |            | OSF1.50          | 22376.56             | 12300.00 |            |       |       | MinPts      |        |
| Cimarex Dos Equis 12-13<br>Federal Com #6H - Rev2 RM<br>03Dec19 (Def Plan)                          |            |          |          |                 |            |                  |                      |          |            |       |       |             |        |
| 2321.68   | 32.81      | 2320.39  | 2288.87  | N/A             |            | MAS = 10.00 (m)  | 0.00                 | 0.00     |            |       |       | Surface     | Pass   |
| 2321.67   | 32.81      | 2320.38  | 2288.86  | N/A             |            | MAS = 10.00 (m)  | 26.00                | 26.00    |            |       |       | WRP         |        |
| 2321.67   | 32.81      | 2311.37  | 2288.86  | 257.65          |            | MAS = 10.00 (m)  | 1500.00              | 1500.00  |            |       |       | MinPts      |        |
| 2321.71   | 32.81      | 2311.28  | 2288.90  | 253.74          |            | MAS = 10.00 (m)  | 1530.00              | 1530.00  |            |       |       | MINPT-O-EQU |        |
| 2353.59   | 32.81      | 2341.25  | 2320.78  | 212.79          |            | MAS = 10.00 (m)  | 2100.00              | 2099.98  |            |       |       | MinPt-O-SF  |        |
| 2328.23   | 39.79      | 2301.27  | 2288.44  | 90.69           |            | OSF1.50          | 5360.00              | 5326.99  |            |       |       | MinPt-O-SF  |        |
| 2207.78   | 43.02      | 2178.60  | 2164.76  | 79.72           |            | OSF1.50          | 6280.00              | 6238.31  |            |       |       | MinPt-O-SF  |        |
| 2202.13   | 42.86      | 2173.05  | 2159.27  | 79.84           |            | OSF1.50          | 6460.00              | 6418.19  |            |       |       | MinPts      |        |
| 2196.57   | 81.56      | 2141.69  | 2115.01  | 41.14           |            | OSF1.50          | 12180.00             | 12108.14 |            |       |       | MinPt-O-SF  |        |
| 2196.29   | 81.55      | 2141.42  | 2114.75  | 41.14           |            | OSF1.50          | 12210.00             | 12129.87 |            |       |       | MinPt-O-SF  |        |
| 2196.21   | 81.54      | 2141.35  | 2114.68  | 41.14           |            | OSF1.50          | 12230.00             | 12143.61 |            |       |       | MinPts      |        |
| 2196.21   | 81.53      | 2141.35  | 2114.68  | 41.14           |            | OSF1.50          | 12240.00             | 12150.25 |            |       |       | MinPt-CtCt  |        |

| Offset Trajectory   | Separation |          |          | Allow Dev. (ft) | Sep. Fact. | Controlling Rule | Reference Trajectory |          | Risk Level |       |       | Alert       | Status |
|---|------------|----------|----------|-----------------|------------|------------------|----------------------|----------|------------|-------|-------|-------------|--------|
|   | Ct-Ct (ft) | MAS (ft) | EOU (ft) |                 |            |                  | MD (ft)              | TVD (ft) | Alert      | Minor | Major |             |        |
| 2434.83   | 312.28     | 2226.21  | 2122.53  | 11.74           |            | OSF1.50          | 2237.56              | 12300.00 |            |       |       | MinPts      |        |
| Cimarex Dos Equis 12-13<br>Federal Com #88H Rev1 RM<br>14Feb20 (Def Plan)                   |            |          |          |                 |            |                  |                      |          |            |       |       |             | Pass   |
| 2238.29   | 32.81      | 2237.01  | 2205.48  | N/A             |            | MAS = 10.00 (m)  | 0.00                 | 0.00     |            |       |       | Surface     |        |
| 2238.28   | 32.81      | 2236.99  | 2205.47  | N/A             |            | MAS = 10.00 (m)  | 26.00                | 26.00    |            |       |       | WRP         |        |
| 2238.26   | 32.81      | 2226.73  | 2205.47  | 217.98          |            | MAS = 10.00 (m)  | 1700.00              | 1700.00  |            |       |       | MinPts      |        |
| 2238.32   | 32.81      | 2226.64  | 2205.52  | 215.05          |            | MAS = 10.00 (m)  | 1730.00              | 1730.00  |            |       |       | MINPT-O-EQU |        |
| 2256.84   | 32.81      | 2243.73  | 2224.03  | 190.87          |            | MAS = 10.00 (m)  | 2460.00              | 2458.07  |            |       |       | MinPts      |        |
| 2347.40   | 46.83      | 2315.75  | 2300.57  | 77.27           |            | OSF1.50          | 6250.00              | 6208.38  |            |       |       | MinPt-O-SF  |        |
| 2805.16   | 67.85      | 2759.50  | 2737.31  | 63.18           |            | OSF1.50          | 9020.00              | 8978.19  |            |       |       | MinPt-O-SF  |        |
| 2806.39   | 66.63      | 2761.55  | 2739.76  | 64.39           |            | OSF1.50          | 9240.00              | 9198.19  |            |       |       | MINPT-O-EQU |        |
| 2806.45   | 66.70      | 2761.56  | 2739.75  | 64.33           |            | OSF1.50          | 9260.00              | 9218.19  |            |       |       | MinPt-O-ADP |        |
| 2847.75   | 69.19      | 2801.19  | 2778.56  | 62.87           |            | OSF1.50          | 9980.00              | 9938.19  |            |       |       | MinPt-O-SF  |        |
| 3889.73   | 342.75     | 3660.80  | 3546.98  | 17.08           |            | OSF1.50          | 22376.56             | 12300.00 |            |       |       | MinPts      |        |
| Cimarex Dos Equis 12-13<br>Federal Com #86H Rev1 RM<br>03Dec19 (Def Plan)                   |            |          |          |                 |            |                  |                      |          |            |       |       |             | Pass   |
| 2301.74   | 32.81      | 2300.45  | 2268.93  | N/A             |            | MAS = 10.00 (m)  | 0.00                 | 0.00     |            |       |       | Surface     |        |
| 2301.73   | 32.81      | 2300.44  | 2268.92  | N/A             |            | MAS = 10.00 (m)  | 26.00                | 26.00    |            |       |       | WRP         |        |
| 2301.73   | 32.81      | 2291.43  | 2268.92  | 255.43          |            | MAS = 10.00 (m)  | 1500.00              | 1500.00  |            |       |       | MinPts      |        |
| 2301.77   | 32.81      | 2291.34  | 2268.96  | 251.42          |            | MAS = 10.00 (m)  | 1530.00              | 1530.00  |            |       |       | MINPT-O-EQU |        |
| 2377.56   | 47.79      | 2345.27  | 2329.77  | 76.65           |            | OSF1.50          | 6040.31              | 6000.00  |            |       |       | MinPt-O-ADP |        |
| 2393.77   | 48.61      | 2360.93  | 2345.16  | 75.83           |            | OSF1.50          | 6320.00              | 6278.25  |            |       |       | MinPt-O-SF  |        |
| 2410.57   | 48.93      | 2377.52  | 2361.64  | 75.83           |            | OSF1.50          | 6450.00              | 6408.19  |            |       |       | MinPt-O-SF  |        |
| 2804.89   | 69.28      | 2758.27  | 2735.61  | 61.85           |            | OSF1.50          | 8980.00              | 8938.19  |            |       |       | MinPt-O-SF  |        |
| 2807.67   | 84.56      | 2750.87  | 2723.11  | 50.55           |            | OSF1.50          | 11860.00             | 11818.18 |            |       |       | MINPT-O-EQU |        |
| 2807.69   | 84.59      | 2750.87  | 2723.10  | 50.53           |            | OSF1.50          | 11870.00             | 11828.15 |            |       |       | MinPt-O-ADP |        |
| 2807.82   | 84.68      | 2750.93  | 2723.13  | 50.48           |            | OSF1.50          | 11900.00             | 11857.96 |            |       |       | MinPt-O-SF  |        |
| 2807.42   | 80.41      | 2753.39  | 2727.01  | 53.20           |            | OSF1.50          | 12430.00             | 12243.53 |            |       |       | MINPT-O-EQU |        |
| 2806.84   | 79.72      | 2753.26  | 2727.12  | 53.65           |            | OSF1.50          | 12820.00             | 12299.95 |            |       |       | MinPt-CtCt  |        |
| 2808.51   | 323.21     | 2592.61  | 2485.30  | 13.08           |            | OSF1.50          | 22376.56             | 12300.00 |            |       |       | MinPts      |        |
| Cimarex Dos Equis 12 Federal<br>Com #1H Gyro Off to 11268ft<br>MD (Def Survey)              |            |          |          |                 |            |                  |                      |          |            |       |       |             | Pass   |
| 2925.28   | 32.81      | 2923.30  | 2892.47  | N/A             |            | MAS = 10.00 (m)  | 0.00                 | 0.00     |            |       |       | Surface     |        |
| 2925.28   | 32.81      | 2923.28  | 2892.45  | N/A             |            | MAS = 10.00 (m)  | 10.00                | 10.00    |            |       |       | MinPts      |        |
| 2925.26   | 32.81      | 2923.28  | 2892.46  | 791212.41       |            | MAS = 10.00 (m)  | 26.00                | 26.00    |            |       |       | WRP         |        |
| 2925.35   | 32.81      | 2923.24  | 2892.54  | 21889.78        |            | MAS = 10.00 (m)  | 70.00                | 70.00    |            |       |       | MINPT-O-EQU |        |
| 2930.33   | 32.81      | 2919.88  | 2897.52  | 345.67          |            | MAS = 10.00 (m)  | 1830.00              | 1830.00  |            |       |       | MinPts      |        |
| 2413.93   | 35.90      | 2389.15  | 2378.03  | 108.41          |            | OSF1.50          | 6100.00              | 6059.14  |            |       |       | MinPt-O-SF  |        |
| 2396.12   | 35.10      | 2371.86  | 2361.02  | 110.36          |            | OSF1.50          | 6410.00              | 6368.20  |            |       |       | MinPt-O-ADP |        |
| 2396.10   | 35.07      | 2371.86  | 2361.02  | 110.44          |            | OSF1.50          | 6420.00              | 6378.19  |            |       |       | MinPts      |        |
| 2353.33   | 52.88      | 2317.20  | 2300.46  | 70.21           |            | OSF1.50          | 10500.00             | 10458.19 |            |       |       | MinPt-CtCt  |        |
| 2353.35   | 52.94      | 2317.18  | 2300.41  | 70.08           |            | OSF1.50          | 10520.00             | 10478.19 |            |       |       | MINPT-O-EQU |        |
| 2353.38   | 52.98      | 2317.19  | 2300.40  | 70.01           |            | OSF1.50          | 10530.00             | 10488.19 |            |       |       | MinPt-O-ADP |        |
| 2394.98   | 59.21      | 2354.85  | 2335.78  | 62.72           |            | OSF1.50          | 11640.00             | 11598.19 |            |       |       | MinPt-O-SF  |        |
| 3013.21   | 68.16      | 2967.11  | 2945.05  | 68.25           |            | OSF1.50          | 13850.00             | 12300.00 |            |       |       | MinPt-O-SF  |        |
| 10409.87  | 95.35      | 10345.64 | 10314.52 | 167.20          |            | OSF1.50          | 22376.56             | 12300.00 |            |       |       | TD          |        |
| Cimarex Dos Equis 12 Federal<br>Com #1H ST01 Gyro+MWD<br>10506ft to 15399ft MD (Def Survey) |            |          |          |                 |            |                  |                      |          |            |       |       |             | Pass   |
| 2925.28   | 32.81      | 2923.30  | 2892.47  | N/A             |            | MAS = 10.00 (m)  | 0.00                 | 0.00     |            |       |       | Surface     |        |
| 2925.28   | 32.81      | 2923.28  | 2892.45  | N/A             |            | MAS = 10.00 (m)  | 10.00                | 10.00    |            |       |       | MinPts      |        |
| 2925.26   | 32.81      | 2923.28  | 2892.46  | 791212.41       |            | MAS = 10.00 (m)  | 26.00                | 26.00    |            |       |       | WRP         |        |
| 2925.35   | 32.81      | 2923.24  | 2892.54  | 21889.78        |            | MAS = 10.00 (m)  | 70.00                | 70.00    |            |       |       | MINPT-O-EQU |        |
| 2930.33   | 32.81      | 2919.88  | 2897.52  | 345.67          |            | MAS = 10.00 (m)  | 1830.00              | 1830.00  |            |       |       | MinPts      |        |
| 2413.93   | 35.90      | 2389.15  | 2378.03  | 108.41          |            | OSF1.50          | 6100.00              | 6059.14  |            |       |       | MinPt-O-SF  |        |
| 2396.12   | 35.10      | 2371.86  | 2361.02  | 110.36          |            | OSF1.50          | 6410.00              | 6368.20  |            |       |       | MinPt-O-ADP |        |
| 2396.10   | 35.07      | 2371.86  | 2361.02  | 110.44          |            | OSF1.50          | 6420.00              | 6378.19  |            |       |       | MinPts      |        |
| 2353.33   | 52.88      | 2317.20  | 2300.46  | 70.21           |            | OSF1.50          | 10500.00             | 10458.19 |            |       |       | MinPt-CtCt  |        |
| 2353.35   | 52.94      | 2317.18  | 2300.41  | 70.08           |            | OSF1.50          | 10520.00             | 10478.19 |            |       |       | MINPT-O-EQU |        |
| 2353.38   | 52.98      | 2317.19  | 2300.40  | 70.01           |            | OSF1.50          | 10530.00             | 10488.19 |            |       |       | MinPt-O-ADP |        |
| 2447.40   | 57.31      | 2408.53  | 2390.09  | 66.30           |            | OSF1.50          | 11450.00             | 11408.19 |            |       |       | MinPt-O-SF  |        |
| 2600.21   | 57.83      | 2560.99  | 2542.38  | 69.78           |            | OSF1.50          | 12000.00             | 11954.74 |            |       |       | MinPt-O-SF  |        |
| 2709.10   | 68.56      | 2662.73  | 2640.54  | 60.99           |            | OSF1.50          | 13160.00             | 12300.00 |            |       |       | MinPts      |        |
| 2736.94   | 94.81      | 2673.07  | 2642.13  | 44.19           |            | OSF1.50          | 13810.00             | 12300.00 |            |       |       | MINPT-O-EQU |        |
| 2740.72   | 107.88     | 2668.14  | 2632.84  | 38.79           |            | OSF1.50          | 14060.00             | 12300.00 |            |       |       | MinPt-CtCt  |        |
| 2741.05   | 115.10     | 2663.66  | 2625.95  | 36.32           |            | OSF1.50          | 14220.00             | 12300.00 |            |       |       | MinPt-CtCt  |        |
| 2752.10   | 163.06     | 2642.74  | 2589.04  | 25.61           |            | OSF1.50          | 15220.00             | 12300.00 |            |       |       | MinPt-CtCt  |        |
| 2757.04   | 201.31     | 2622.17  | 2555.72  | 20.73           |            | OSF1.50          | 15990.00             | 12300.00 |            |       |       | MinPt-CtCt  |        |
| 2745.38   | 265.25     | 2567.90  | 2480.14  | 15.63           |            | OSF1.50          | 16850.00             | 12300.00 |            |       |       | MinPt-CtCt  |        |
| 2745.50   | 265.48     | 2567.85  | 2480.01  | 15.62           |            | OSF1.50          | 16870.00             | 12300.00 |            |       |       | MINPT-O-EQU |        |
| 2745.61   | 265.61     | 2567.88  | 2480.01  | 15.61           |            | OSF1.50          | 16880.00             | 12300.00 |            |       |       | MinPt-O-ADP |        |
| 2752.31   | 267.05     | 2573.61  | 2485.26  | 15.56           |            | OSF1.50          | 17040.00             | 12300.00 |            |       |       | MinPt-O-SF  |        |
| 6175.38   | 173.29     | 6059.19  | 6002.09  | 54.05           |            | OSF1.50          | 22376.56             | 12300.00 |            |       |       | TD          |        |
| Continental Wimberly #4<br>(Offset) Plugged Oil Inc Only Off-<br>5030ft (Def Survey)        |            |          |          |                 |            |                  |                      |          |            |       |       |             | Pass   |
| 2727.44   | 32.81      | 2726.15  | 2694.63  | N/A             |            | MAS = 10.00 (m)  | 0.00                 | 0.00     |            |       |       | Surface     |        |
| 2727.22   | 32.81      | 2725.91  | 2694.42  | 110878.49       |            | MAS = 10.00 (m)  | 20.00                | 20.00    |            |       |       | MinPt-O-SF  |        |
| 2727.19   | 32.81      | 2725.88  | 2694.38  | 124056.61       |            | MAS = 10.00 (m)  | 26.00                | 26.00    |            |       |       | WRP         |        |
| 2727.16   | 32.81      | 2725.84  | 2694.35  | 80625.93        |            | MAS = 10.00 (m)  | 40.00                | 40.00    |            |       |       | MinPts      |        |
| 2728.08   | 65.61      | 2683.89  | 2662.45  | 63.59           |            | OSF1.50          | 1320.00              | 1320.00  |            |       |       | MinPt-CtCt  |        |
| 2412.52   | 260.34     | 2238.44  | 2152.18  | 13.98           |            | OSF1.50          | 5230.00              | 5198.38  |            |       |       | MinPt-O-SF  |        |
| 2410.08   | 259.70     | 2236.43  | 2150.38  | 14.00           |            | OSF1.50          | 5320.00              | 5287.41  |            |       |       | MinPt-O-ADP |        |
| 2410.02   | 259.61     | 2236.42  | 2150.41  | 14.00           |            | OSF1.50          | 5330.00              | 5297.31  |            |       |       | MINPT-O-EQU |        |
| 2410.00   | 259.51     | 2236.47  | 2150.48  | 14.01           |            | OSF1.50          | 5340.00              | 5307.20  |            |       |       | MinPt-CtCt  |        |
| 7362.93   | 71.99      | 7334.50  | 7310.94  | 156.61          |            | OSF1.50          | 13870.00             | 12300.00 |            |       |       | MinPt-CtCt  |        |
| 7383.31   | 73.17      | 7334.10  | 7310.14  | 154.04          |            | OSF1.50          | 13950.00             | 12300.00 |            |       |       | MINPT-O-EQU |        |
| 7384.00   | 73.97      | 7334.25  | 7310.02  | 152.35          |            | OSF1.50          | 14000.00             | 12300.00 |            |       |       | MinPt-O-ADP |        |
| 9873.49   | 233.29     | 9717.54  | 9640.20  | 63.83           |            | OSF1.50          | 20430.00             | 12300.00 |            |       |       | MinPt-O-SF  |        |
| 11260.44  | 258.25     | 11087.84 | 11002.19 | 65.72           |            | OSF1.50          | 22376.56             | 12300.00 |            |       |       | TD          |        |
| Cimarex Dos Equis 13 Federal<br>#1H Pilot Hole Extreme Off to<br>11400ft (Def Survey)       |            |          |          |                 |            |                  |                      |          |            |       |       |             | Pass   |
| 6213.66   | 32.81      | 6211.68  | 6180.85  | N/A             |            | MAS = 10.00 (m)  | 0.00                 | 0.00     |            |       |       | Surface     |        |
| 6213.59   | 32.81      | 6211.60  | 6180.78  | 837305.95       |            | MAS = 10.00 (m)  | 20.00                | 20.00    |            |       |       | MinPt-O-SF  |        |

| Offset Trajectory | Separation |          |          | Allow Dev. (ft) | Sep. Fact. | Controlling Rule | Reference Trajectory |          | Risk Level |       |       | Alert       | Status |
|-------------------|------------|----------|----------|-----------------|------------|------------------|----------------------|----------|------------|-------|-------|-------------|--------|
|                   | Ct-Ct (ft) | MAS (ft) | EOU (ft) |                 |            |                  | MD (ft)              | TVD (ft) | Alert      | Minor | Major |             |        |
| 6213.58           | 32.81      | 6211.59  | 6180.77  | N/A             |            | MAS = 10.00 (m)  | 26.00                | 26.00    |            |       |       | WRP         |        |
| 6213.54           | 32.81      | 6211.09  | 6180.73  | 12998.43        |            | MAS = 10.00 (m)  | 160.00               | 160.00   |            |       |       | MinPts      |        |
| 6214.68           | 32.81      | 6210.71  | 6181.87  | 3127.74         |            | MAS = 10.00 (m)  | 500.00               | 500.00   |            |       |       | MINPT-O-EQU |        |
| 6215.04           | 32.81      | 6210.38  | 6182.23  | 2320.32         |            | MAS = 10.00 (m)  | 660.00               | 660.00   |            |       |       | MinPts      |        |
| 6216.64           | 32.81      | 6209.60  | 6183.83  | 1226.17         |            | MAS = 10.00 (m)  | 1190.00              | 1190.00  |            |       |       | MINPT-O-EQU |        |
| 6217.08           | 32.81      | 6209.59  | 6184.27  | 1126.79         |            | MAS = 10.00 (m)  | 1290.00              | 1290.00  |            |       |       | MINPT-O-EQU |        |
| 6222.40           | 32.81      | 6211.52  | 6189.59  | 699.53          |            | MAS = 10.00 (m)  | 2100.00              | 2099.98  |            |       |       | MinPt-O-SF  |        |
| 5998.10           | 34.56      | 5974.32  | 5963.53  | 277.88          |            | OSF1.50          | 6100.00              | 6059.14  |            |       |       | MinPt-O-SF  |        |
| 5993.20           | 33.36      | 5970.23  | 5959.84  | 288.41          |            | OSF1.50          | 6340.00              | 6298.23  |            |       |       | MinPt-O-ADP |        |
| 5993.16           | 33.31      | 5970.22  | 5959.85  | 288.89          |            | OSF1.50          | 6350.00              | 6308.22  |            |       |       | MINPT-O-EQU |        |
| 5993.12           | 33.21      | 5970.25  | 5959.91  | 289.82          |            | OSF1.50          | 6370.00              | 6328.21  |            |       |       | MinPt-CtCt  |        |
| 6029.06           | 42.67      | 5999.90  | 5986.39  | 222.99          |            | OSF1.50          | 8870.00              | 8828.19  |            |       |       | MINPT-O-EQU |        |
| 6029.22           | 42.87      | 5999.94  | 5986.38  | 221.94          |            | OSF1.50          | 8910.00              | 8868.19  |            |       |       | MinPt-O-ADP |        |
| 6030.34           | 44.86      | 5999.73  | 5985.48  | 211.57          |            | OSF1.50          | 9280.00              | 9238.19  |            |       |       | MINPT-O-EQU |        |
| 6030.52           | 45.09      | 5999.76  | 5985.44  | 210.48          |            | OSF1.50          | 9320.00              | 9278.19  |            |       |       | MinPt-O-ADP |        |
| 6030.12           | 48.40      | 5997.14  | 5981.72  | 195.38          |            | OSF1.50          | 9980.00              | 9938.19  |            |       |       | MinPt-CtCt  |        |
| 6030.25           | 48.80      | 5997.01  | 5981.45  | 193.72          |            | OSF1.50          | 10050.00             | 10008.19 |            |       |       | MINPT-O-EQU |        |
| 6030.40           | 48.97      | 5997.05  | 5981.43  | 193.01          |            | OSF1.50          | 10080.00             | 10038.19 |            |       |       | MinPt-O-ADP |        |
| 6035.48           | 55.96      | 5997.47  | 5979.52  | 168.06          |            | OSF1.50          | 11370.00             | 11328.19 |            |       |       | MinPt-CtCt  |        |
| 6035.61           | 56.30      | 5997.37  | 5979.31  | 167.01          |            | OSF1.50          | 11430.00             | 11388.19 |            |       |       | MINPT-O-EQU |        |
| 6036.01           | 57.52      | 5996.96  | 5978.49  | 163.34          |            | OSF1.50          | 11510.00             | 11468.19 |            |       |       | MinPts      |        |
| 6046.57           | 59.09      | 6006.50  | 5987.48  | 158.90          |            | OSF1.50          | 11831.80             | 11790.00 |            |       |       | MinPt-O-SF  |        |
| 2639.84           | 130.79     | 2551.99  | 2509.05  | 30.72           |            | OSF1.50          | 17600.00             | 12300.00 |            |       |       | MinPt-CtCt  |        |
| 2640.23           | 132.17     | 2551.46  | 2508.06  | 30.40           |            | OSF1.50          | 17650.00             | 12300.00 |            |       |       | MINPT-O-EQU |        |
| 2640.92           | 132.98     | 2551.61  | 2507.94  | 30.22           |            | OSF1.50          | 17680.00             | 12300.00 |            |       |       | MinPt-O-ADP |        |
| 2745.86           | 147.19     | 2647.08  | 2598.67  | 28.34           |            | OSF1.50          | 18360.00             | 12300.00 |            |       |       | MinPt-O-SF  |        |
| 5453.69           | 140.04     | 5359.67  | 5313.65  | 59.23           |            | OSF1.50          | 22376.56             | 12300.00 |            |       |       | TD          |        |

Continental Wimberly #2  
(Offset) Plugged Oil Inc Only Off:  
5038ft (Def Survey)

Pass

|          |        |          |          |           |  |                 |          |          |  |  |  |             |  |
|----------|--------|----------|----------|-----------|--|-----------------|----------|----------|--|--|--|-------------|--|
| 3103.89  | 32.81  | 3102.61  | 3071.09  | N/A       |  | MAS = 10.00 (m) | 0.00     | 0.00     |  |  |  | Surface     |  |
| 3103.72  | 32.81  | 3102.41  | 3070.91  | 160312.73 |  | MAS = 10.00 (m) | 20.00    | 20.00    |  |  |  | MinPt-O-SF  |  |
| 3103.69  | 32.81  | 3102.39  | 3070.88  | 189377.08 |  | MAS = 10.00 (m) | 26.00    | 26.00    |  |  |  | WRP         |  |
| 3103.67  | 32.81  | 3102.33  | 3070.86  | 55427.44  |  | MAS = 10.00 (m) | 40.00    | 40.00    |  |  |  | MinPts      |  |
| 3097.70  | 71.32  | 3049.73  | 3026.38  | 66.32     |  | OSF1.50         | 1480.00  | 1480.00  |  |  |  | MinPt-CtCt  |  |
| 2663.42  | 256.63 | 2491.77  | 2406.79  | 15.66     |  | OSF1.50         | 5310.00  | 5277.52  |  |  |  | MinPt-O-SF  |  |
| 2657.42  | 255.23 | 2486.70  | 2402.19  | 15.71     |  | OSF1.50         | 5460.00  | 5425.91  |  |  |  | MinPt-O-ADP |  |
| 2657.32  | 255.10 | 2486.69  | 2402.21  | 15.72     |  | OSF1.50         | 5470.00  | 5435.81  |  |  |  | MINPT-O-EQU |  |
| 2657.23  | 254.85 | 2486.77  | 2402.39  | 15.73     |  | OSF1.50         | 5490.00  | 5455.59  |  |  |  | MinPt-CtCt  |  |
| 10262.43 | 228.50 | 10109.66 | 10033.92 | 67.74     |  | OSF1.50         | 19400.00 | 12300.00 |  |  |  | MinPt-O-SF  |  |
| 12448.64 | 262.16 | 12273.44 | 12186.48 | 71.57     |  | OSF1.50         | 22376.56 | 12300.00 |  |  |  | TD          |  |

Cimarex Dos Equis 13 Federal  
#1H ST01 Xem+MWD Off to  
15250ft (Def Survey)

Pass

|         |        |         |         |           |  |                 |          |          |  |  |  |             |  |
|---------|--------|---------|---------|-----------|--|-----------------|----------|----------|--|--|--|-------------|--|
| 6213.66 | 32.81  | 6211.68 | 6180.85 | N/A       |  | MAS = 10.00 (m) | 0.00     | 0.00     |  |  |  | Surface     |  |
| 6213.59 | 32.81  | 6211.60 | 6180.78 | 837305.99 |  | MAS = 10.00 (m) | 20.00    | 20.00    |  |  |  | MinPt-O-SF  |  |
| 6213.58 | 32.81  | 6211.59 | 6180.77 | N/A       |  | MAS = 10.00 (m) | 26.00    | 26.00    |  |  |  | WRP         |  |
| 6213.54 | 32.81  | 6211.09 | 6180.73 | 12998.43  |  | MAS = 10.00 (m) | 160.00   | 160.00   |  |  |  | MinPts      |  |
| 6214.68 | 32.81  | 6210.71 | 6181.87 | 3127.74   |  | MAS = 10.00 (m) | 500.00   | 500.00   |  |  |  | MINPT-O-EQU |  |
| 6215.04 | 32.81  | 6210.38 | 6182.23 | 2320.32   |  | MAS = 10.00 (m) | 660.00   | 660.00   |  |  |  | MinPts      |  |
| 6216.64 | 32.81  | 6209.60 | 6183.83 | 1226.17   |  | MAS = 10.00 (m) | 1190.00  | 1190.00  |  |  |  | MINPT-O-EQU |  |
| 6217.08 | 32.81  | 6209.59 | 6184.27 | 1126.79   |  | MAS = 10.00 (m) | 1290.00  | 1290.00  |  |  |  | MINPT-O-EQU |  |
| 6222.40 | 32.81  | 6211.52 | 6189.59 | 699.53    |  | MAS = 10.00 (m) | 2100.00  | 2099.98  |  |  |  | MinPt-O-SF  |  |
| 5998.10 | 34.56  | 5974.32 | 5963.53 | 277.88    |  | OSF1.50         | 6100.00  | 6059.14  |  |  |  | MinPt-O-SF  |  |
| 5993.20 | 33.36  | 5970.23 | 5959.84 | 288.41    |  | OSF1.50         | 6340.00  | 6298.23  |  |  |  | MinPt-O-ADP |  |
| 5993.16 | 33.31  | 5970.22 | 5959.85 | 288.89    |  | OSF1.50         | 6350.00  | 6308.22  |  |  |  | MINPT-O-EQU |  |
| 5993.12 | 33.21  | 5970.25 | 5959.91 | 289.82    |  | OSF1.50         | 6370.00  | 6328.21  |  |  |  | MinPt-CtCt  |  |
| 6029.06 | 42.67  | 5999.90 | 5986.39 | 222.99    |  | OSF1.50         | 8870.00  | 8828.19  |  |  |  | MINPT-O-EQU |  |
| 6029.22 | 42.87  | 5999.94 | 5986.38 | 221.94    |  | OSF1.50         | 8910.00  | 8868.19  |  |  |  | MinPt-O-ADP |  |
| 6030.34 | 44.86  | 5999.73 | 5985.48 | 211.57    |  | OSF1.50         | 9280.00  | 9238.19  |  |  |  | MINPT-O-EQU |  |
| 6030.52 | 45.09  | 5999.76 | 5985.44 | 210.48    |  | OSF1.50         | 9320.00  | 9278.19  |  |  |  | MinPt-O-ADP |  |
| 6030.12 | 48.40  | 5997.14 | 5981.72 | 195.38    |  | OSF1.50         | 9980.00  | 9938.19  |  |  |  | MinPt-CtCt  |  |
| 6030.25 | 48.80  | 5997.01 | 5981.45 | 193.72    |  | OSF1.50         | 10050.00 | 10008.19 |  |  |  | MINPT-O-EQU |  |
| 6030.40 | 48.97  | 5997.05 | 5981.43 | 193.01    |  | OSF1.50         | 10080.00 | 10038.19 |  |  |  | MinPt-O-ADP |  |
| 6161.47 | 57.32  | 6122.60 | 6104.15 | 166.98    |  | OSF1.50         | 11831.80 | 11790.00 |  |  |  | MinPt-O-SF  |  |
| 2792.93 | 155.19 | 2688.81 | 2637.74 | 27.32     |  | OSF1.50         | 18410.00 | 12300.00 |  |  |  | MinPt-CtCt  |  |
| 2794.25 | 159.13 | 2687.50 | 2635.12 | 26.65     |  | OSF1.50         | 18540.00 | 12300.00 |  |  |  | MINPT-O-EQU |  |
| 2795.76 | 160.94 | 2687.81 | 2634.82 | 26.36     |  | OSF1.50         | 18600.00 | 12300.00 |  |  |  | MinPt-O-ADP |  |
| 2797.39 | 197.19 | 2665.27 | 2600.20 | 21.48     |  | OSF1.50         | 19540.00 | 12300.00 |  |  |  | MinPt-CtCt  |  |
| 2802.05 | 210.58 | 2661.00 | 2591.47 | 20.14     |  | OSF1.50         | 19890.00 | 12300.00 |  |  |  | MINPT-O-EQU |  |
| 2806.40 | 216.57 | 2661.38 | 2589.83 | 19.60     |  | OSF1.50         | 20040.00 | 12300.00 |  |  |  | MinPt-O-ADP |  |
| 2825.36 | 252.34 | 2656.48 | 2573.02 | 16.92     |  | OSF1.50         | 20840.00 | 12300.00 |  |  |  | MINPT-O-EQU |  |
| 2815.72 | 346.20 | 2584.26 | 2469.52 | 12.26     |  | OSF1.50         | 22100.00 | 12300.00 |  |  |  | MinPt-CtCt  |  |
| 2815.89 | 346.75 | 2584.00 | 2469.14 | 12.24     |  | OSF1.50         | 22130.00 | 12300.00 |  |  |  | MINPT-O-EQU |  |
| 2816.18 | 347.10 | 2584.12 | 2469.08 | 12.23     |  | OSF1.50         | 22150.00 | 12300.00 |  |  |  | MinPt-O-ADP |  |
| 2824.38 | 349.39 | 2590.80 | 2474.99 | 12.19     |  | OSF1.50         | 22320.00 | 12300.00 |  |  |  | MinPt-O-SF  |  |
| 2829.37 | 349.89 | 2595.45 | 2479.48 | 12.19     |  | OSF1.50         | 22376.56 | 12300.00 |  |  |  | TD          |  |

Continental Wimberly #8  
(Offset) Plugged Oil Inc Only Off:  
5070ft (Def Survey)

Pass

|          |        |         |         |           |  |                 |          |          |  |  |  |             |  |
|----------|--------|---------|---------|-----------|--|-----------------|----------|----------|--|--|--|-------------|--|
| 3127.29  | 32.81  | 3126.00 | 3094.48 | N/A       |  | MAS = 10.00 (m) | 0.00     | 0.00     |  |  |  | Surface     |  |
| 3127.09  | 32.81  | 3125.78 | 3094.28 | 137546.81 |  | MAS = 10.00 (m) | 20.00    | 20.00    |  |  |  | MinPt-O-SF  |  |
| 3127.06  | 32.81  | 3125.75 | 3094.25 | 150041.16 |  | MAS = 10.00 (m) | 26.00    | 26.00    |  |  |  | WRP         |  |
| 3127.03  | 32.81  | 3125.71 | 3094.22 | 100474.64 |  | MAS = 10.00 (m) | 40.00    | 40.00    |  |  |  | MinPts      |  |
| 3128.85  | 57.54  | 3090.06 | 3071.31 | 83.39     |  | OSF1.50         | 1220.00  | 1220.00  |  |  |  | MinPt-CtCt  |  |
| 3100.07  | 182.59 | 2977.90 | 2917.47 | 25.64     |  | OSF1.50         | 3690.00  | 3674.88  |  |  |  | MinPt-O-SF  |  |
| 3093.85  | 236.33 | 2935.86 | 2857.52 | 19.74     |  | OSF1.50         | 4710.00  | 4683.95  |  |  |  | MinPt-CtCt  |  |
| 3095.99  | 242.87 | 2933.65 | 2853.12 | 19.22     |  | OSF1.50         | 4900.00  | 4871.92  |  |  |  | MINPT-O-EQU |  |
| 3098.48  | 245.90 | 2934.12 | 2852.58 | 18.99     |  | OSF1.50         | 4990.00  | 4960.95  |  |  |  | MinPt-O-ADP |  |
| 3104.83  | 259.48 | 2931.41 | 2845.34 | 18.03     |  | OSF1.50         | 5150.00  | 5119.24  |  |  |  | MinPts      |  |
| 3104.87  | 259.49 | 2931.45 | 2845.38 | 18.03     |  | OSF1.50         | 5160.00  | 5129.13  |  |  |  | MinPt-O-SF  |  |
| 7191.65  | 72.20  | 7143.10 | 7119.46 | 152.09    |  | OSF1.50         | 15210.00 | 12300.00 |  |  |  | MinPt-CtCt  |  |
| 7192.63  | 74.94  | 7142.24 | 7117.69 | 146.46    |  | OSF1.50         | 15330.00 | 12300.00 |  |  |  | MINPT-O-EQU |  |
| 7193.86  | 76.39  | 7142.50 | 7117.47 | 143.65    |  | OSF1.50         | 15390.00 | 12300.00 |  |  |  | MinPt-O-ADP |  |
| 9474.26  | 234.90 | 9317.23 | 9239.36 | 60.82     |  | OSF1.50         | 21380.00 | 12300.00 |  |  |  | MinPt-O-SF  |  |
| 10151.25 | 249.25 | 9884.66 | 9902.01 | 61.40     |  | OSF1.50         | 22376.56 | 12300.00 |  |  |  | TD          |  |

Continental Wimberly #3  
(Offset) Plugged Oil Inc Only Off:  
3570ft (Def Survey)

Pass

|         |       |         |         |     |  |                 |      |      |  |  |  |         |  |
|---------|-------|---------|---------|-----|--|-----------------|------|------|--|--|--|---------|--|
| 3538.79 | 32.81 | 3537.50 | 3505.98 | N/A |  | MAS = 10.00 (m) | 0.00 | 0.00 |  |  |  | Surface |  |
|---------|-------|---------|---------|-----|--|-----------------|------|------|--|--|--|---------|--|

| Offset Trajectory | Separation |          |          | Allow<br>Dev. (ft) | Sep.<br>Fact. | Controlling<br>Rule | Reference Trajectory |          | Risk Level |       |       | Alert       | Status |
|-------------------|------------|----------|----------|--------------------|---------------|---------------------|----------------------|----------|------------|-------|-------|-------------|--------|
|                   | Ct-Ct (ft) | MAS (ft) | EOU (ft) |                    |               |                     | MD (ft)              | TVD (ft) | Alert      | Minor | Major |             |        |
| 3538.41           | 32.81      | 3537.06  | 3505.60  | 72171.22           |               | MAS = 10.00 (m)     | 26.00                | 26.00    |            |       |       | MinPt-O-SF  |        |
| 3538.21           | 32.81      | 3536.78  | 3505.40  | 25855.77           |               | MAS = 10.00 (m)     | 70.00                | 70.00    |            |       |       | MinPts      |        |
| 3535.93           | 61.83      | 3494.29  | 3474.11  | 87.58              |               | OSF1.50             | 1340.00              | 1340.00  |            |       |       | MinPt-CtCt  |        |
| 3174.04           | 262.33     | 2998.62  | 2911.72  | 18.25              |               | OSF1.50             | 5390.00              | 5356.66  |            |       |       | MinPt-O-SF  |        |
| 3170.01           | 261.45     | 2995.18  | 2908.56  | 18.29              |               | OSF1.50             | 5530.00              | 5495.16  |            |       |       | MinPts      |        |
| 3169.94           | 261.28     | 2995.22  | 2908.66  | 18.30              |               | OSF1.50             | 5550.00              | 5514.95  |            |       |       | MinPt-CtCt  |        |
| 7589.19           | 102.30     | 7520.56  | 7486.89  | 112.68             |               | OSF1.50             | 13880.00             | 12300.00 |            |       |       | MinPt-CtCt  |        |
| 7589.41           | 102.92     | 7520.38  | 7486.50  | 112.00             |               | OSF1.50             | 13940.00             | 12300.00 |            |       |       | MINPT-O-EOU |        |
| 7589.70           | 103.24     | 7520.45  | 7486.46  | 111.64             |               | OSF1.50             | 13970.00             | 12300.00 |            |       |       | MinPt-O-ADP |        |
| 9907.07           | 237.74     | 9748.15  | 9669.33  | 62.64              |               | OSF1.50             | 20250.00             | 12300.00 |            |       |       | MinPt-O-SF  |        |
| 11391.10          | 264.45     | 11214.37 | 11126.65 | 64.92              |               | OSF1.50             | 22376.56             | 12300.00 |            |       |       | TD          |        |

Jubilee Energy Gulf Federal #1  
(Offset) Plugged Oil Inc Only Off:  
5020ft (Def Survey)

Pass

|          |        |          |          |           |  |                 |          |          |  |  |  |             |  |
|----------|--------|----------|----------|-----------|--|-----------------|----------|----------|--|--|--|-------------|--|
| 3885.87  | 32.81  | 3884.58  | 3853.06  | N/A       |  | MAS = 10.00 (m) | 0.00     | 0.00     |  |  |  | Surface     |  |
| 3885.64  | 32.81  | 3884.33  | 3852.83  | 157567.82 |  | MAS = 10.00 (m) | 26.00    | 26.00    |  |  |  | MinPt-O-SF  |  |
| 3885.58  | 32.81  | 3884.28  | 3852.77  | 54652.59  |  | MAS = 10.00 (m) | 50.00    | 50.00    |  |  |  | MinPts      |  |
| 3884.63  | 99.76  | 3817.94  | 3785.12  | 59.16     |  | OSF1.50         | 1980.00  | 1980.00  |  |  |  | MinPt-CtCt  |  |
| 3594.56  | 261.64 | 3419.63  | 3332.84  | 20.72     |  | OSF1.50         | 5290.00  | 5257.74  |  |  |  | MinPt-O-SF  |  |
| 3591.82  | 261.13 | 3417.22  | 3330.63  | 20.75     |  | OSF1.50         | 5410.00  | 5376.45  |  |  |  | MinPt-O-ADP |  |
| 3591.77  | 261.07 | 3417.21  | 3330.69  | 20.75     |  | OSF1.50         | 5420.00  | 5386.34  |  |  |  | MINPT-O-EOU |  |
| 3591.74  | 261.01 | 3417.22  | 3330.73  | 20.75     |  | OSF1.50         | 5430.00  | 5396.24  |  |  |  | MinPt-CtCt  |  |
| 7543.67  | 102.18 | 7475.12  | 7441.49  | 112.14    |  | OSF1.50         | 14880.00 | 12300.00 |  |  |  | MinPt-CtCt  |  |
| 7544.09  | 103.41 | 7474.72  | 7440.68  | 110.79    |  | OSF1.50         | 14960.00 | 12300.00 |  |  |  | MINPT-O-EOU |  |
| 7544.62  | 104.06 | 7474.82  | 7440.57  | 110.10    |  | OSF1.50         | 15000.00 | 12300.00 |  |  |  | MinPt-O-ADP |  |
| 9733.06  | 241.77 | 9571.46  | 9491.30  | 60.70     |  | OSF1.50         | 21030.00 | 12300.00 |  |  |  | MinPt-O-SF  |  |
| 10635.28 | 260.18 | 10461.40 | 10375.10 | 61.61     |  | OSF1.50         | 22376.56 | 12300.00 |  |  |  | TD          |  |

Continental Wimberly #7  
(Offset) Plugged Oil Inc Only Off:  
5100ft (Def Survey)

Pass

|         |        |         |         |           |  |                 |          |          |  |  |  |             |  |
|---------|--------|---------|---------|-----------|--|-----------------|----------|----------|--|--|--|-------------|--|
| 4437.63 | 32.81  | 4436.34 | 4404.82 | N/A       |  | MAS = 10.00 (m) | 0.00     | 0.00     |  |  |  | Surface     |  |
| 4437.58 | 32.81  | 4436.28 | 4404.77 | 655510.28 |  | MAS = 10.00 (m) | 10.00    | 10.00    |  |  |  | MinPt-O-SF  |  |
| 4437.54 | 32.81  | 4436.26 | 4404.74 | N/A       |  | MAS = 10.00 (m) | 26.00    | 26.00    |  |  |  | WRP         |  |
| 4437.54 | 32.81  | 4436.21 | 4404.74 | 89774.34  |  | MAS = 10.00 (m) | 30.00    | 30.00    |  |  |  | MinPts      |  |
| 4437.52 | 40.25  | 4410.26 | 4397.27 | 170.80    |  | OSF1.50         | 890.00   | 890.00   |  |  |  | MinPt-CtCt  |  |
| 4437.10 | 76.94  | 4385.37 | 4360.15 | 87.94     |  | OSF1.50         | 1590.00  | 1590.00  |  |  |  | MinPt-CtCt  |  |
| 4430.04 | 138.70 | 4337.15 | 4291.34 | 48.35     |  | OSF1.50         | 2840.00  | 2834.00  |  |  |  | MinPt-CtCt  |  |
| 4418.91 | 184.93 | 4295.19 | 4233.98 | 36.09     |  | OSF1.50         | 3720.00  | 3704.56  |  |  |  | MinPt-CtCt  |  |
| 4418.10 | 238.60 | 4258.61 | 4179.50 | 27.92     |  | OSF1.50         | 4740.00  | 4713.63  |  |  |  | MinPt-CtCt  |  |
| 4421.75 | 249.73 | 4254.84 | 4172.03 | 26.69     |  | OSF1.50         | 5050.00  | 5020.31  |  |  |  | MINPT-O-EOU |  |
| 4423.34 | 260.92 | 4248.96 | 4162.42 | 25.55     |  | OSF1.50         | 5160.00  | 5129.13  |  |  |  | MinPts      |  |
| 4423.45 | 260.94 | 4249.07 | 4162.52 | 25.55     |  | OSF1.50         | 5190.00  | 5158.81  |  |  |  | MinPt-O-SF  |  |
| 7175.02 | 100.00 | 7107.93 | 7075.02 | 109.01    |  | OSF1.50         | 16530.00 | 12300.00 |  |  |  | MinPt-CtCt  |  |
| 7175.85 | 102.52 | 7107.08 | 7073.33 | 106.31    |  | OSF1.50         | 16640.00 | 12300.00 |  |  |  | MINPT-O-EOU |  |
| 7177.01 | 103.95 | 7107.29 | 7073.06 | 104.84    |  | OSF1.50         | 16700.00 | 12300.00 |  |  |  | MinPt-O-ADP |  |
| 9138.26 | 243.03 | 8975.81 | 8895.23 | 56.69     |  | OSF1.50         | 22190.00 | 12300.00 |  |  |  | MinPt-O-SF  |  |
| 9254.96 | 246.02 | 9090.51 | 9008.93 | 56.72     |  | OSF1.50         | 22376.56 | 12300.00 |  |  |  | TD          |  |

Standind Wimberly A Unit B #1  
Inc Only (Def Survey)

Pass

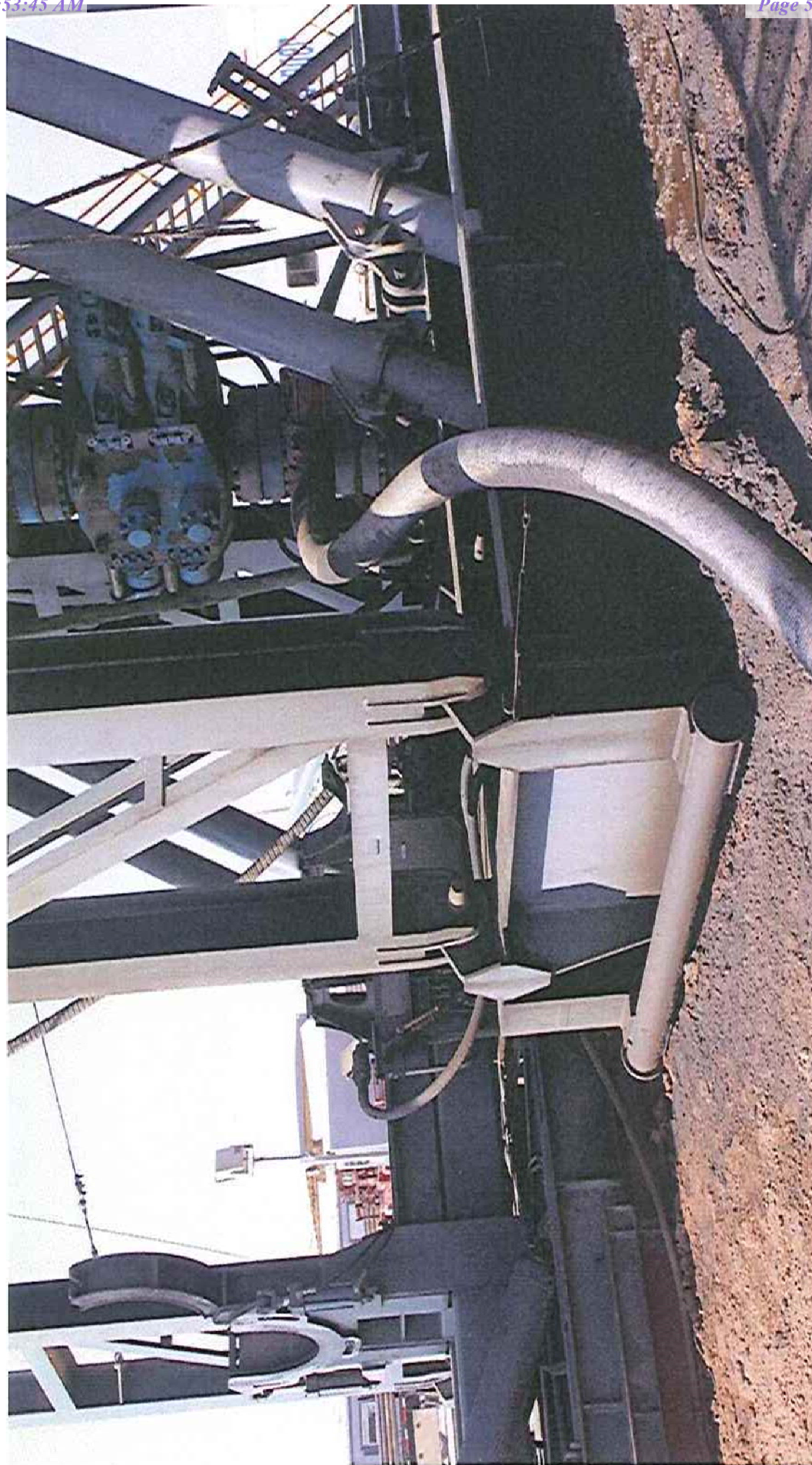
|         |        |         |         |           |  |                 |          |          |  |  |  |             |  |
|---------|--------|---------|---------|-----------|--|-----------------|----------|----------|--|--|--|-------------|--|
| 6002.66 | 32.81  | 6000.68 | 5969.85 | N/A       |  | MAS = 10.00 (m) | 0.00     | 0.00     |  |  |  | Surface     |  |
| 6002.56 | 32.81  | 6000.57 | 5969.76 | 537206.23 |  | MAS = 10.00 (m) | 20.00    | 20.00    |  |  |  | MinPt-O-SF  |  |
| 6002.55 | 32.81  | 6000.56 | 5969.74 | 601066.70 |  | MAS = 10.00 (m) | 26.00    | 26.00    |  |  |  | WRP         |  |
| 5786.40 | 553.86 | 5416.44 | 5232.54 | 15.73     |  | OSF1.50         | 5150.00  | 5119.24  |  |  |  | MinPt-O-SF  |  |
| 5784.58 | 553.43 | 5414.91 | 5231.15 | 15.73     |  | OSF1.50         | 5270.00  | 5237.95  |  |  |  | MinPt-O-ADP |  |
| 5784.54 | 553.39 | 5414.90 | 5231.15 | 15.73     |  | OSF1.50         | 5280.00  | 5247.84  |  |  |  | MINPT-O-EOU |  |
| 5784.52 | 553.29 | 5414.94 | 5231.22 | 15.74     |  | OSF1.50         | 5300.00  | 5267.63  |  |  |  | MinPt-CtCt  |  |
| 7292.40 | 148.19 | 7192.94 | 7144.21 | 74.79     |  | OSF1.50         | 17760.00 | 12300.00 |  |  |  | MinPt-CtCt  |  |
| 7293.94 | 152.50 | 7191.61 | 7141.44 | 72.67     |  | OSF1.50         | 17910.00 | 12300.00 |  |  |  | MINPT-O-EOU |  |
| 7296.68 | 155.78 | 7192.17 | 7140.90 | 71.15     |  | OSF1.50         | 18010.00 | 12300.00 |  |  |  | MinPt-O-ADP |  |
| 8630.78 | 371.39 | 8382.53 | 8259.39 | 35.04     |  | OSF1.50         | 22376.56 | 12300.00 |  |  |  | MinPt-O-SF  |  |

Westates Petroleum Wolley #1  
(Offset) Plugged Oil Blind Off:  
5063ft (Def Survey)

Pass

|          |         |          |          |           |  |                 |          |          |  |  |  |             |  |
|----------|---------|----------|----------|-----------|--|-----------------|----------|----------|--|--|--|-------------|--|
| 10165.76 | 32.81   | 10164.47 | 10132.95 | N/A       |  | MAS = 10.00 (m) | 0.00     | 0.00     |  |  |  | Surface     |  |
| 10165.65 | 32.81   | 10164.35 | 10132.84 | 779473.11 |  | MAS = 10.00 (m) | 26.00    | 26.00    |  |  |  | WRP         |  |
| 10039.85 | 1577.15 | 8987.95  | 8462.70  | 9.56      |  | OSF1.50         | 5350.00  | 5317.09  |  |  |  | MinPt-O-SF  |  |
| 10038.35 | 1576.63 | 8986.80  | 8461.72  | 9.56      |  | OSF1.50         | 5480.00  | 5445.70  |  |  |  | MinPt-O-ADP |  |
| 10038.27 | 1576.55 | 8986.73  | 8461.74  | 9.56      |  | OSF1.50         | 5500.00  | 5465.48  |  |  |  | MINPT-O-EOU |  |
| 10038.22 | 1576.36 | 8986.85  | 8461.86  | 9.56      |  | OSF1.50         | 5530.00  | 5495.16  |  |  |  | MinPts      |  |
| 10122.47 | 1113.35 | 9379.81  | 9009.12  | 13.63     |  | OSF1.50         | 15110.00 | 12300.00 |  |  |  | MinPt-CtCt  |  |
| 7594.28  | 558.10  | 7221.78  | 7036.18  | 20.45     |  | OSF1.50         | 21800.00 | 12300.00 |  |  |  | MinPt-CtCt  |  |
| 7594.58  | 558.90  | 7221.55  | 7035.68  | 20.43     |  | OSF1.50         | 21870.00 | 12300.00 |  |  |  | MINPT-O-EOU |  |
| 7595.71  | 560.22  | 7221.79  | 7035.48  | 20.38     |  | OSF1.50         | 21950.00 | 12300.00 |  |  |  | MinPt-O-ADP |  |
| 7615.93  | 574.41  | 7232.56  | 7041.52  | 19.93     |  | OSF1.50         | 22376.56 | 12300.00 |  |  |  | MinPt-O-SF  |  |

Co-Flex Hose  
**Dos Equis 12-13 Federal Com 49H**  
Cimarex Energy Co.  
12-24S-32E  
Lea Co., NM



Co-Flex Hose Hydrostatic Test  
 Dos Equis 12-13 Federal Com 49H  
 Cimarex Energy Co.  
 12-24S-32E  
 Lea Co., NM



## Midwest Hose & Specialty, Inc.

| INTERNAL HYDROSTATIC TEST REPORT  |                       |                            |  |
|---|-----------------------|----------------------------|--|
| Customer:   |                       | P.O. Number:               |  |
| Oderco Inc  |                       | odyd-271                   |  |
| HOSE SPECIFICATIONS   |                       |                            |  |
| Type: Stainless Steel Armor<br>Choke & Kill Hose                        |                       | Hose Length: 45'ft.        |  |
| I.D. 4 INCHES   |                       | O.D. 9 INCHES              |  |
| WORKING PRESSURE  | TEST PRESSURE         | BURST PRESSURE             |  |
| 10,000 PSI  | 15,000 PSI            | 0 PSI                      |  |
| COUPLINGS   |                       |                            |  |
| Stem Part No.   |                       | Ferrule No.                |  |
| OKC<br>OKC  |                       | OKC<br>OKC                 |  |
| Type of Coupling:<br>Swage-It   |                       |                            |  |
| PROCEDURE   |                       |                            |  |
| <u>Hose assembly pressure tested with water at ambient temperature.</u> |                       |                            |  |
| TIME HELD AT TEST PRESSURE  |                       | ACTUAL BURST PRESSURE:     |  |
| 15 MIN.   |                       | 0 PSI                      |  |
| Hose Assembly Serial Number:<br>79793                                   |                       | Hose Serial Number:<br>OKC |  |
| Comments:   |                       |                            |  |
| Date:   | Tested:               | Approved:                  |  |
| 3/8/2011  | <i>A. Jaime Serna</i> | <i>Kevin Red</i>           |  |

Co-Flex Hose Hydrostatic Test  
 Dos Equis 12-13 Federal Com 49H  
 Cimarex Energy Co.  
 12-24S-32E  
 Lea Co., NM

March 3, 2011

## Internal Hydrostatic Test Graph

Customer: Houston

Pick Ticket #: 94260

Midwest Hose  
& Specialty, Inc.Hose Specifications

Hose Type

C &amp; K

Length

45'

Verification

Type of Fitting

4 1/16 10K

Coupling Method

Swage

I.D.

4"

O.D.

6.09"

Die Size

6.38"

Final O.D.

6.25"

Working Pressure

10000 PSI

Burst Pressure

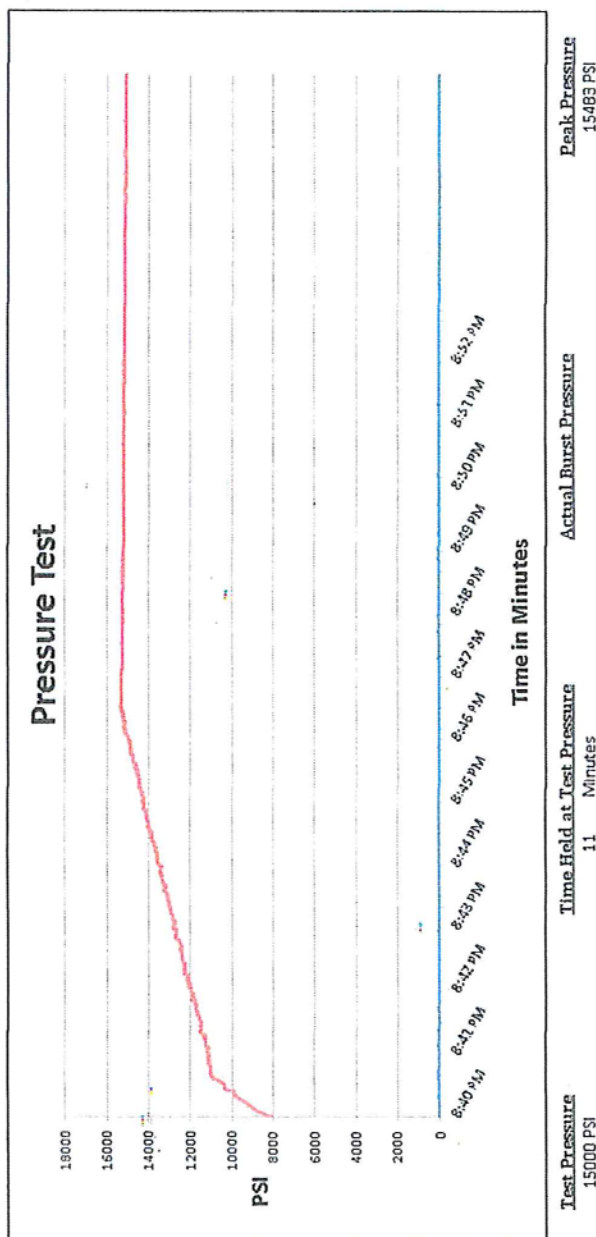
Standard Safety Multiplier Applies

Hose Serial #

5544

Hose Assembly Serial #

79793

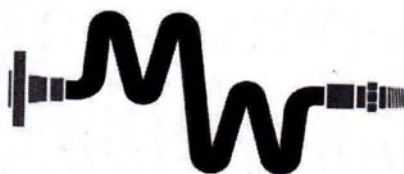


Comments: Hose assembly pressure tested with water at ambient temperature.

Tested By: Zac McConnell

Approved By: Kim Thomas

Co-Flex Hose  
Dos Equis 12-13 Federal Com 49H  
Cimarex Energy Co.  
12-24S-32E  
Lea Co., NM



## Midwest Hose & Specialty, Inc.

### Certificate of Conformity

Customer:

DEM

PO

ODYD-271

### SPECIFICATIONS

Sales Order

79793

Dated:

3/8/2011

We hereby certify that the 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.  
10640 Tanner Road  
Houston, Texas 77041

Comments:

Approved:

*Samuel Garcia*

Date:

3/8/2011



Co-Flex Hose  
Dos Equis 12-13 Federal Com 49H  
Cimarex Energy Co.  
12-24S-32E  
Lea Co., NM

## Specification Sheet Choke & Kill Hose

The Midwest Hose & Specialty Choke & Kill hose is manufactured with only premium components. The reinforcement cables, inner liner and cover are made of the highest quality material to handle the tough drilling applications of today's industry. The end connections are available with API flanges, API male threads, hubs, hammer unions or other special fittings upon request. Hose assembly is manufactured to API 7K. This assembly is wrapped with fire resistant vermiculite coated fiberglass insulation, rated at 2000 degrees with stainless steel armor cover.

|                               |  |
|-------------------------------|--|
| <b>Working Pressure:</b>      | 5,000 or 10,000 psi working pressure   |
| <b>Test Pressure:</b>         | 10,000 or 15,000 psi test pressure   |
| <b>Reinforcement:</b>         | Multiple steel cables  |
| <b>Cover:</b>                 | Stainless Steel Armor  |
| <b>Inner Tube:</b>            | Petroleum resistant, Abrasion resistant  |
| <b>End Fitting:</b>           | API flanges, API male threads, threaded or butt weld hammer unions, unbolt and other special connections |
| <b>Maximum Length:</b>        | 110 Feet   |
| <b>ID:</b>                    | 2-1/2", 3", 3-1/2", 4"   |
| <b>Operating Temperature:</b> | -22 deg F to +180 deg F (-30 deg C to +82 deg C)   |

P.O. Box 96558 - 1421 S.E. 29<sup>th</sup> St. Oklahoma City, OK 73143 \* (405) 670-6718 \* Fax: (405) 670-6816

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

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

Submit Original  
to Appropriate  
District Office

### GAS CAPTURE PLAN

Date: 4/30/20

☒ Original Operator & OGRID No.: Cimarex Energy Co- 215099  
☐ Amended - Reason for Amendment: \_\_\_\_\_

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

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

#### Well(s)/Production Facility – Name of facility

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

| Well Name                      | API     | Well Location (ULSTR) | Footages                | Expected MCF/D | Flared or Vented | Comments |
|--------------------------------|---------|-----------------------|-------------------------|----------------|------------------|----------|
| Dos Equis 12-13<br>Fed Com 49H | Pending | 12-24S-32E            | 195' FNL &<br>1540' FWL | 5000           |                  |          |
|                                |         |                       |                         |                |                  |          |

#### Gathering System and Pipeline Notification

Well(s) will be connected to a production facility after flowback operations are complete, if gas transporter system is in place. The gas produced from production facility is dedicated to Gas Transporter and will be connected to Gas Transporter low/high pressure gathering system located in Lea County, New Mexico. It will require 500 ' of pipeline to connect the facility to low/high pressure gathering system. Operator provides (periodically) to Gas Transporter a drilling, completion and estimated first production date for wells that are scheduled to be drilled in the foreseeable future. In addition, Operator and Gas Transporter have periodic conference calls to discuss changes to drilling and completion schedules. Gas from these wells will be processed at Gas Transporter Processing Plant located in Sec 13-24S-33E, Lea County, New Mexico. The actual flow of the gas will be based on compression operating parameters and gathering system pressures.

#### Flowback Strategy

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

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

#### Alternatives to Reduce Flaring

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

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

**1. Geological Formations**

TVD of target 12,300

Pilot Hole TD N/A

MD at TD 22,377

Deepest expected fresh water

| Formation       | Depth (TVD) from KB | Water/Mineral Bearing/Target Zone | Hazards |
|-----------------|---------------------|-----------------------------------|---------|
| Rustler         | 1185                | Useable Water                     |         |
| Salado          | 1500                | N/A                               |         |
| Base of Salt    | 4650                | N/A                               |         |
| Bell Canyon     | 4947                | N/A                               |         |
| Cherry Canyon   | 5874                | N/A                               |         |
| Brushy Canyon   | 7311                | Hydrocarbons                      |         |
| Bone Spring     | 8845                | Hydrocarbons                      |         |
| 1st Bone Spring | 9980                | Hydrocarbons                      |         |
| 2nd Bone Spring | 10640               | Hydrocarbons                      |         |
| 3rd Bone Spring | 11090               | Hydrocarbons                      |         |
| Wolfcamp        | 12235               | Hydrocarbons                      |         |

**2. Casing Program**

| Hole Size                 | Casing Depth From | Casing Depth To | Setting Depth TVD | Casing Size | Weight (lb/ft) | Grade | Conn. | SF Collapse | SF Burst | SF Tension         |
|---------------------------|-------------------|-----------------|-------------------|-------------|----------------|-------|-------|-------------|----------|--------------------|
| 14 3/4                    | 0                 | 1235            | 1235              | 10-3/4"     | 40.50          | J-55  | BT&C  | 2.95        | 5.85     | 12.58              |
| 9 7/8                     | 0                 | 12456           | 12300             | 7-5/8"      | 29.70          | L-80  | LT&C  | 2.50        | 1.20     | 1.55               |
| 6 3/4                     | 0                 | 11732           | 11732             | 5-1/2"      | 20.00          | L-80  | LT&C  | 1.16        | 1.21     | 1.88               |
| 6 3/4                     | 11732             | 22377           | 12300             | 5"          | 18.00          | P-110 | BT&C  | 1.68        | 1.70     | 56.73              |
| BLM Minimum Safety Factor |                   |                 |                   |             |                |       |       | 1.125       | 1        | 1.6 Dry<br>1.8 Wet |

TVD was used on all calculations.

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

Request Variance for 5-1/2" x 7-5/8" annular clearance. The portion that does not meet clearance will not be cemented

## Cimarex Energy Co., Dos Equis 12-13 Federal Com 49H

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

**3. Cementing Program**

| Casing               | # Sk | Wt.<br>lb/gal | Yld<br>ft <sup>3</sup> /sack | H <sub>2</sub> O<br>gal/sk | 500# Comp.<br>Strength<br>(hours) | Slurry Description   |
|----------------------|------|---------------|------------------------------|----------------------------|-----------------------------------|--|
| Surface              | 480  | 13.50         | 1.72                         | 9.15                       | 15.5                              | Lead: Class C + Bentonite  |
|                      | 128  | 14.80         | 1.34                         | 6.32                       | 9.5                               | Tail: Class C + LCM  |
|                      |      |               |                              |                            |                                   |  |
| Intermediate Stage 1 | 581  | 10.30         | 3.64                         | 22.18                      |                                   | Lead: Tuned Light + LCM  |
|                      | 200  | 14.80         | 1.34                         | 6.32                       | 9.5                               | Tail: Class C + LCM  |
|                      |      |               |                              |                            |                                   |  |
| Intermediate Stage 2 | 782  | 12.90         | 1.88                         | 9.65                       | 12                                | Lead: 35:65 (Poz:C) + Salt + Bentonite                                 |
|                      |      |               |                              |                            |                                   |  |
| Production           | 847  | 14.20         | 1.30                         | 5.86                       | 14:30                             | Tail: 50:50 (Poz:H) + Salt + Bentonite + Fluid Loss + Dispersant + SMS |
|                      |      |               |                              |                            |                                   |  |

DV tool with possible annular casing packer as needed is proposed at a depth of +/- 4,900'.

| Casing String        | TOC   | % Excess |
|----------------------|-------|----------|
| Surface              | 0     | 45       |
| Intermediate Stage 1 | 4900  | 47       |
| Intermediate Stage 2 | 0     | 37       |
| Production           | 12256 | 25       |

Cimarex request the ability to perform casing integrity tests after plug bump of cement job.

**4. Pressure Control Equipment**

| A variance is requested for the use of a diverter on the surface casing. See attached for schematic. |        |                 |            |   |                         |
|--|--------|-----------------|------------|---|-------------------------|
| BOP installed and tested before drilling which hole?   | Size   | Min Required WP | Type       |   | Tested To               |
| 9 7/8  | 13 5/8 | 5M              | Annular    | X | 5M                      |
|  |        |                 | Blind Ram  |   |                         |
|  |        |                 | Pipe Ram   | X |                         |
|  |        |                 | Double Ram | X |                         |
|  |        |                 | Other      |   |                         |
| 6 3/4  | 13 5/8 | 10M             | Annular    | X | 50% of working pressure |
|  |        |                 | Blind Ram  |   | 10M                     |
|  |        |                 | Pipe Ram   | X |                         |
|  |        |                 | Double Ram | X |                         |
|  |        |                 | Other      |   |                         |

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

Pipe rams will be operationally checked each 24 hour period. Blind rams will be operationally checked on each trip out of the hole. These checks will be noted on the daily tour sheets. Other accessories to the BOP equipment will include a Kelly cock and floor safety valve (inside BOP) and choke lines and choke manifold. See attached schematics.

|   |   |
|---|---|
| X | Formation integrity test will be performed per Onshore Order #2.<br>On Exploratory wells or on that portion of any well approved for a 5M BOPE system or greater, a pressure integrity test of each casing shoe shall be performed. Will be tested in accordance with Onshore Oil and Gas Order #2 III.B.1.i. |
| X | A variance is requested for the use of a flexible choke line from the BOP to Choke Manifold. See attached for specs and hydrostatic test chart.   |
| N | Are anchors required by manufacturer?   |

**5. Mud Program**

| Depth            | Type                  | Weight (ppg)  | Viscosity | Water Loss |
|------------------|-----------------------|---------------|-----------|------------|
| 0' to 1235'      | Fresh Water           | 7.83 - 8.33   | 28        | N/C        |
| 1235' to 12456'  | Brine Diesel Emulsion | 8.50 - 9.00   | 30-35     | N/C        |
| 12456' to 22377' | OBM                   | 12.00 - 12.50 | 50-70     | N/C        |

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

The Brine Emulsion is completely saturated brine fluid that ties diesel into itself to lower the weight of the fluid. The drilling fluid is completely salt saturated.

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

**6. Logging and Testing Procedures**

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

| Additional Logs Planned | Interval |
|-------------------------|----------|
|-------------------------|----------|

**7. Drilling Conditions**

| Condition                  |          |
|----------------------------|----------|
| BH Pressure at deepest TVD | 7995 psi |
| Abnormal Temperature       | No       |

Hydrogen Sulfide (H<sub>2</sub>S) monitors will be installed prior to drilling out the surface shoe. If H<sub>2</sub>S is detected in concentrations greater than 100 ppm, the operator will comply with the provisions of Onshore Oil and Gas Order #6. If Hydrogen Sulfide is encountered, measured values and formations will be provided to the BLM.

|  |                                   |
|--|-----------------------------------|
|  | H <sub>2</sub> S is present       |
|  | H <sub>2</sub> S plan is attached |

**8. Other Facets of Operation****9. Wellhead**

A multi-bowl wellhead system will be utilized.

After running the 10-3/4" surface casing, a 13 5/8" BOP/BOPE system with a minimum working pressure of 10000 psi will be installed on the wellhead system and will be pressure tested to 250 psi low followed by a 10000 psi test. Annular will be tested to 50% of working pressure. The pressure test will be repeated at least every 30 days, as per Onshore Order No. 2.

The multi-bowl wellhead will be installed by vendor's representative. A copy of the installation instructions has been sent to the BLM field office.

The wellhead will be installed by a third-party welder while being monitored by the wellhead vendor representative.

All BOP equipment will be tested utilizing a conventional test plug. Not a cup or J-packer type.

A solid steel body pack-off will be utilized after running and cementing the intermediate casing. After installation the pack-off and lower flange will be pressure tested to 10000 psi.

All casing strings will be tested as per Onshore Order No.2 to at least 0.22 psi/ft or 1,500 whichever is greater and not to exceed 70% of casing burst.

If well conditions dictate conventional slips will be set and BOPE will be tested to appropriate pressures based on permitted pressure requirements.



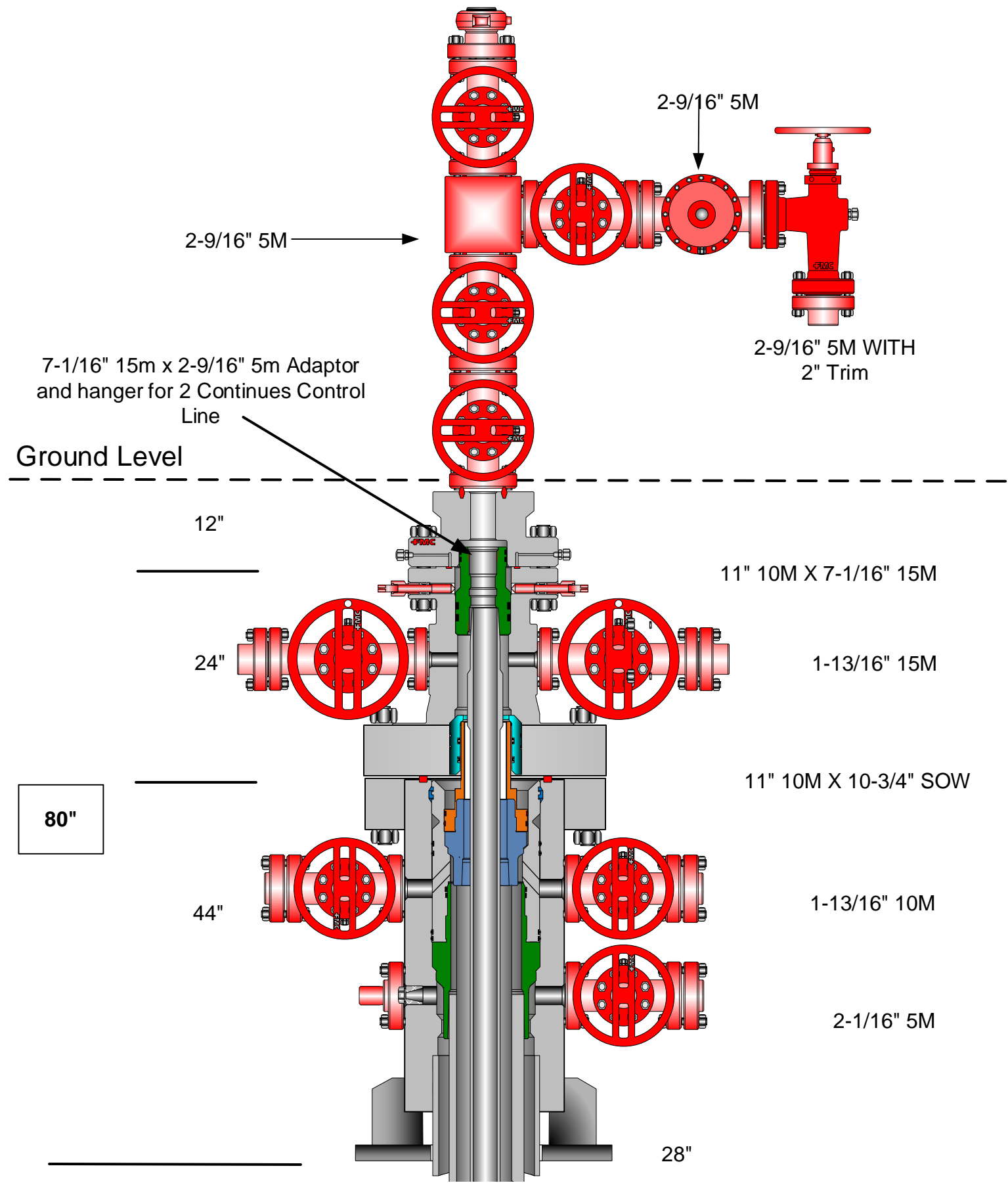


Dos Equis 12-13 Fed Com #49H

CACTUS FOR SERVICE  
WEARBUSHING  
IN CASING HEAD &  
CASING SPOOL

LEA CO., NM

Multi-bowl Wellhead Diagram



2. Casing Program

| Hole Size                 | Casing Depth From | Casing Depth To | Setting Depth TVD | Casing Size | Weight (lb/ft) | Grade | Conn. | SF Collapse | SF Burst | SF Tension         |
|---------------------------|-------------------|-----------------|-------------------|-------------|----------------|-------|-------|-------------|----------|--------------------|
| 14 3/4                    | 0                 | 1235            | 1235              | 10-3/4"     | 40.50          | J-55  | BT&C  | 2.95        | 5.85     | 12.58              |
| 9 7/8                     | 0                 | 12456           | 12300             | 7-5/8"      | 29.70          | L-80  | LT&C  | 2.50        | 1.20     | 1.55               |
| 6 3/4                     | 0                 | 11732           | 11732             | 5-1/2"      | 20.00          | L-80  | LT&C  | 1.16        | 1.21     | 1.88               |
| 6 3/4                     | 11732             | 22377           | 12300             | 5"          | 18.00          | P-110 | BT&C  | 1.68        | 1.70     | 56.73              |
| BLM Minimum Safety Factor |                   |                 |                   |             |                |       |       | 1.125       | 1        | 1.6 Dry<br>1.8 Wet |



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# Cimarex 10M Well Control Plan

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Version 1.0

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## BOPE Preventer Utilization

The table below displays all BHA components, drill pipe, casing, or open hole that could be present during a required shut in and the associated preventer component that would provide a barrier to flow. It is specific to the hole section that requires a 10M system. The mud system being utilized in the hole will always assumed to be the first barrier to flow. The below table, combined with the mud program, documents that two barriers to flow can be maintained at all times, independent of the rating of the annular preventer.

| Drill String Element                   | OD         | Preventer  | RWP |
|--|------------|--|-----|
| 4" Drillpipe                           | 4"         | Lower Ram 3 1/2" - 5 1/2" VBR*<br>Upper Ram 3 1/2" - 5 1/2" VBR* | 10M |
| 4.5" Drillpipe                         | 4.5"       | Lower Ram 3 1/2" - 5 1/2" VBR*<br>Upper Ram 3 1/2" - 5 1/2" VBR* | 10M |
| 4" HWDP Drillpipe                      | 4"         | Lower Ram 3 1/2" - 5 1/2" VBR*<br>Upper Ram 3 1/2" - 5 1/2" VBR* | 10M |
| 4.5" HWDP Drillpipe                    | 4.5"       | Lower Ram 3 1/2" - 5 1/2" VBR*<br>Upper Ram 3 1/2" - 5 1/2" VBR* | 10M |
| Drill Collars (including non-magnetic) | 4.75-5.25" | Lower Ram 3 1/2" - 5 1/2" VBR*<br>Upper Ram 3 1/2" - 5 1/2" VBR* | 10M |
| Production Casing                      | 5.5"       | Lower Ram 3 1/2" - 5 1/2" VBR*<br>Upper Ram 3 1/2" - 5 1/2" VBR* | 10M |
| Production Casing                      | 5"         | Lower Ram 3 1/2" - 5 1/2" VBR*<br>Upper Ram 3 1/2" - 5 1/2" VBR* | 10M |
| Production Casing                      | 4.5"       | Lower Ram 3 1/2" - 5 1/2" VBR*<br>Upper Ram 3 1/2" - 5 1/2" VBR* | 10M |
| ALL                                    | 0-13 5/8"  | Annular  | 5M  |
| Open Hole                              |            | Blind Rams   | 10M |

\*VBR – Variable Bore Ram

## Well Control Procedures

Proper well control response is highly specific to current well conditions and must be adapted based on environment as needed. The procedures below are given in “common” operating conditions to cover the basic and most necessary operations required during the wellbore construction. These include drilling ahead, tripping pipe, tripping BHA, running casing, and pipe out of the hole/open hole. In some of the procedures below, there will be a switch of control from the lesser RWP annular to the appropriate 10M RWP ram. The pressure at which this is done is variable based on overall well conditions that must be evaluated situationally. The pressure that control is switched may be equal to or less than the RWP but at no time will the pressure on the annular preventer exceed the RWP of the annular. The annular will be tested to 5,000 psi. This will be the RWP of the annular preventer.

### Shutting In While Drilling

1. Sound alarm to alert crew
2. Space out drill string
3. Shut down pumps
4. Shut in uppermost BOPE preventer (typically the annular preventer) and open HCR.
5. Verify well is shut-in and flow has stopped
6. Notify supervisory personnel
7. Record data (SIDP, SICP, Pit Gain, and Time)
8. Hold pre-job safety meeting and discuss kill procedure

9. If pressure is anticipated to climb to the RWP of the annular preventer during kill procedure, swap control of the well to the upper pipe ram

***Shutting In While Tripping***

1. Sound alarm and alert crew
2. Install open, full open safety valve and close valve
3. Shut in uppermost BOPE preventer (typically the annular preventer) and open HCR.
4. Verify well is shut-in and flow has stopped
5. Notify supervisory personnel
6. Record data (SIDP, SICP, Pit Gain, and Time)
7. Hold pre-job safety meeting and discuss kill procedure
8. If pressure is anticipated to climb to the RWP of the annular preventer during kill procedure, swap control of the well to the upper pipe ram

***Shutting In While Running Casing***

1. Sound alarm and alert crew
2. Install circulating swedge. Close high pressure, low torque valves.
3. Shut in uppermost BOPE preventer (typically the annular preventer) and open HCR.
4. Verify well is shut-in and flow has stopped
5. Notify supervisory personnel
6. Record data (SIDP, SICP, Pit Gain, and Time)
7. Hold Pre-job safety meeting and discuss kill procedure
8. If pressure is anticipated to climb to the RWP of the annular preventer during kill procedure, swap control of the well to the upper pipe ram

***Shutting in while out of hole***

1. Sound alarm
2. Shut-in well: close blind rams
3. Verify well is shut-in and monitor pressures
4. Notify supervisory personnel
5. Record data (SIDP, SICP, Pit Gain, and Time)
6. Hold Pre-job safety meeting and discuss kill procedure

***Shutting in prior to pulling BHA through stack***

1. Prior to pulling last joint of drill pipe thru the stack space out and check flow. If flowing see steps below.
2. Sound alarm and alert crew
3. Install open, full open safety valve and close valve
4. Shut in upper pipe ram and open HCR.

5. Verify well is shut-in and flow has stopped
6. Notify supervisory personnel
7. Record data (SIDP, SICP, Pit Gain, and Time)
8. Hold pre-job safety meeting and discuss kill procedure

***Shutting in while BHA is in the stack and ram preventer and combo immediately available***

1. Sound alarm and alert crew
2. Stab Crossover and install open, full open safety valve and close valve
3. Space out drill string with upset just beneath the compatible pipe ram.
4. Shut in upper compatible pipe ram and open HCR.
5. Verify well is shut-in and flow has stopped
6. Notify supervisory personnel
7. Record data (SIDP, SICP, Pit Gain, and Time)
8. Hold pre-job safety meeting and discuss kill procedure

***Shutting in while BHA is in the stack and no ram preventer or combo immediately available***

1. Sound alarm and alert crew
2. If possible pick up high enough, to pull string clear and follow "Open Hole" scenario
3. If not possible to pick up high enough:
  1. Stab Crossover, make up one joint/stand of drill pipe, and install open, full open safety valve and close valve
4. Space out drill string with upset just beneath the compatible pipe ram.
5. Shut in upper compatible pipe ram and open HCR.
6. Verify well is shut-in and flow has stopped
7. Notify supervisory personnel
8. Record data (SIDP, SICP, Pit Gain, and Time)
9. Hold pre-job safety meeting and discuss kill procedure

State of New Mexico  
Energy, Minerals and Natural Resources Department

Submit Electronically  
Via E-permitting

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

## NATURAL GAS MANAGEMENT PLAN

This Natural Gas Management Plan must be submitted with each Application for Permit to Drill (APD) for a new or recompleted well.

### **Section 1 – Plan Description** **Effective May 25, 2021**

**I. Operator:** Cimarex Energy Company **OGRID:** 215099 **Date:** 4 / 28 / 2022

**II. Type:** ☒ Original ☐ Amendment due to ☐ 19.15.27.9.D(6)(a) NMAC ☐ 19.15.27.9.D(6)(b) NMAC ☐ Other.

If Other, please describe: \_\_\_\_\_

**III. Well(s):** Provide the following information for each new or recompleted well or set of wells proposed to be drilled or proposed to be recompleted from a single well pad or connected to a central delivery point.

| Well Name                   | API | ULSTR                 | Footages           | Anticipated Oil BBL/D | Anticipated Gas MCF/D | Anticipated Produced Water BBL/D |
|-----------------------------|-----|-----------------------|--------------------|-----------------------|-----------------------|----------------------------------|
| Dos Equis 12-13 Federal Com | 49H | C, Sec 12, T24S, R32E | 195 FNL/ 1540 F/WL | 1200                  | 8400                  | 5000                             |
|                             |     |                       |                    |                       |                       |                                  |

**IV. Central Delivery Point Name:** Dos Equis 12-13 CTB CDP Sales [See 19.15.27.9(D)(1) NMAC]

**V. Anticipated Schedule:** Provide the following information for each new or recompleted well or set of wells proposed to be drilled or proposed to be recompleted from a single well pad or connected to a central delivery point.

| Well Name                   | API | Spud Date | TD Reached Date | Completion Commencement Date | Initial Flow Back Date | First Production Date |
|-----------------------------|-----|-----------|-----------------|------------------------------|------------------------|-----------------------|
| Dos Equis 12-13 Federal Com | 49H | 1/1/2023  | 3/1/2023        | 6/1/2023                     | 8/1/2023               | 8/1/2023              |
|                             |     |           |                 |                              |                        |                       |

**VI. Separation Equipment:** ☒ Attach a complete description of how Operator will size separation equipment to optimize gas capture.

**VII. Operational Practices:** ☒ Attach a complete description of the actions Operator will take to comply with the requirements of Subsection A through F of 19.15.27.8 NMAC.

**VIII. Best Management Practices:** ☒ Attach a complete description of Operator's best management practices to minimize venting during active and planned maintenance.

## **Section 2 – Enhanced Plan**

### **EFFECTIVE APRIL 1, 2022**

Beginning April 1, 2022, an operator that is not in compliance with its statewide natural gas capture requirement for the applicable reporting area must complete this section.

☒ Operator certifies that it is not required to complete this section because Operator is in compliance with its statewide natural gas capture requirement for the applicable reporting area.

#### **IX. Anticipated Natural Gas Production:**

| Well | API | Anticipated Average Natural Gas Rate MCF/D | Anticipated Volume of Natural Gas for the First Year MCF |
|------|-----|--|--|
|      |     |  |  |
|      |     |  |  |

#### **X. Natural Gas Gathering System (NGGS):**

| Operator | System | ULSTR of Tie-in | Anticipated Gathering Start Date | Available Maximum Daily Capacity of System Segment Tie-in |
|----------|--------|-----------------|----------------------------------|---|
|          |        |                 |                                  |   |
|          |        |                 |                                  |   |

**XI. Map.** ☐ Attach an accurate and legible map depicting the location of the well(s), the anticipated pipeline route(s) connecting the production operations to the existing or planned interconnect of the natural gas gathering system(s), and the maximum daily capacity of the segment or portion of the natural gas gathering system(s) to which the well(s) will be connected.

**XII. Line Capacity.** The natural gas gathering system ☐ will ☐ will not have capacity to gather 100% of the anticipated natural gas production volume from the well prior to the date of first production.

**XIII. Line Pressure.** Operator ☐ does ☐ does not anticipate that its existing well(s) connected to the same segment, or portion, of the natural gas gathering system(s) described above will continue to meet anticipated increases in line pressure caused by the new well(s).

☐ Attach Operator's plan to manage production in response to the increased line pressure.

**XIV. Confidentiality:** ☐ Operator asserts confidentiality pursuant to Section 71-2-8 NMSA 1978 for the information provided in Section 2 as provided in Paragraph (2) of Subsection D of 19.15.27.9 NMAC, and attaches a full description of the specific information for which confidentiality is asserted and the basis for such assertion.

### **Section 3 - Certifications**

**Effective May 25, 2021**

Operator certifies that, after reasonable inquiry and based on the available information at the time of submittal:

☒ Operator will be able to connect the well(s) to a natural gas gathering system in the general area with sufficient capacity to transport one hundred percent of the anticipated volume of natural gas produced from the well(s) commencing on the date of first production, taking into account the current and anticipated volumes of produced natural gas from other wells connected to the pipeline gathering system; or

☐ Operator will not be able to connect to a natural gas gathering system in the general area with sufficient capacity to transport one hundred percent of the anticipated volume of natural gas produced from the well(s) commencing on the date of first production, taking into account the current and anticipated volumes of produced natural gas from other wells connected to the pipeline gathering system.

***If Operator checks this box, Operator will select one of the following:***

**Well Shut-In.** ☐ Operator will shut-in and not produce the well until it submits the certification required by Paragraph (4) of Subsection D of 19.15.27.9 NMAC; or

**Venting and Flaring Plan.** ☐ Operator has attached a venting and flaring plan that evaluates and selects one or more of the potential alternative beneficial uses for the natural gas until a natural gas gathering system is available, including:

- (a) power generation on lease;
- (b) power generation for grid;
- (c) compression on lease;
- (d) liquids removal on lease;
- (e) reinjection for underground storage;
- (f) reinjection for temporary storage;
- (g) reinjection for enhanced oil recovery;
- (h) fuel cell production; and
- (i) other alternative beneficial uses approved by the division.

### **Section 4 - Notices**


1. If, at any time after Operator submits this Natural Gas Management Plan and before the well is spud:

(a) Operator becomes aware that the natural gas gathering system it planned to connect the well(s) to has become unavailable or will not have capacity to transport one hundred percent of the production from the well(s), no later than 20 days after becoming aware of such information, Operator shall submit for OCD's approval a new or revised venting and flaring plan containing the information specified in Paragraph (5) of Subsection D of 19.15.27.9 NMAC; or

(b) Operator becomes aware that it has, cumulatively for the year, become out of compliance with its baseline natural gas capture rate or natural gas capture requirement, no later than 20 days after becoming aware of such information, Operator shall submit for OCD's approval a new or revised Natural Gas Management Plan for each well it plans to spud during the next 90 days containing the information specified in Paragraph (2) of Subsection D of 19.15.27.9 NMAC, and shall file an update for each Natural Gas Management Plan until Operator is back in compliance with its baseline natural gas capture rate or natural gas capture requirement.

2. OCD may deny or conditionally approve an APD if Operator does not make a certification, fails to submit an adequate venting and flaring plan which includes alternative beneficial uses for the anticipated volume of natural gas produced, or if OCD determines that Operator will not have adequate natural gas takeaway capacity at the time a well will be spud.

I certify that, after reasonable inquiry, the statements in and attached to this Natural Gas Management Plan are true and correct to the best of my knowledge and acknowledge that a false statement may be subject to civil and criminal penalties under the Oil and Gas Act.

|  |
|--|
| Signature:      |
| Printed Name: Sarah Jordan   |
| Title: Regulatory Analyst  |
| E-mail Address: sarah.jordan@coterra.com   |
| Date: 4/28/2022  |
| Phone: 432/620-1909  |
| <b>OIL CONSERVATION DIVISION</b><br><b>(Only applicable when submitted as a standalone form)</b> |
| Approved By:   |
| Title:   |
| Approval Date:   |
| Conditions of Approval:  |

***From State of New Mexico, Natural Gas Management Plan***

**VI. Separation Equipment:** Attach a complete description of how Operator will size separation equipment to optimize gas capture.

**XEC Standard Response**

Standard facility gas process flow begins at the inlet separator. These vessels are designed based off of forecasted rates and residence times in accordance with, and often greater than, API 12J. The separated gas is then routed to an additional separation vessel (ie sales scrubber) in order to extract liquids that may have carried over or developed due to the decrease in pressure. The sales scrubber is sized based on API 521. From the sales scrubber, the gas leaves the facility and enters the gas midstream gathering network.

## **Cimarex**

### **VII. Operational Practices**

Cimarex values the sustainable development of New Mexico's natural resources. Venting and flaring of natural gas is a source of waste in the industry, and Cimarex will ensure that its values are aligned with those of NMOCD. As such, Cimarex plans to take pointed steps to ensure compliance with Subsection A through F of 19.15.27.8 NMAC.

Specifically, below are the steps Cimarex will plan to follow under routine well commissioning and operations.

1. Capture or combust natural gas during drilling operations where technically feasible, using the best industry practices and control technologies.
  - a. All flares during these operations will be a minimum of 100ft away from the nearest surface-hole location.
2. All gas present during post-completion drill-out and flow back will be routed through separation equipment, and, if technically feasible, flare unsellable vapors rather than vent. Lastly, formal sales separator commissioning to process well-stream fluids and send gas to a gas flow line/collection system or use the gas for on-site fuel or beneficial usage, gas as soon as is safe and technically feasible.
3. Cimarex will ensure the flare or combustion equipment is properly sized to handle expected flow rates, ensure this equipment is equipped with an automatic or continuous ignition source, and ensure this equipment is designed for proper combustion efficiency.
4. If Cimarex must flare because gas is not meeting pipeline specifications, Cimarex will limit flaring to <60 days, analyze gas composition at least twice per week, and route gas into a gathering pipeline as soon as pipeline specifications are met.
5. Under routine production operations, Cimarex will not flare/vent unless:
  - a. Venting or flaring occurs due to an emergency or equipment malfunction.
  - b. Venting or flaring occurs as a result of unloading practices, and an operator is onsite (or within 30 minutes of drive time and posts contact information at the wellsite) until the end of unloading practice.
  - c. The venting or flaring occurs during automated plungerlift operations, in which case the Cimarex operator will work to optimize the plungerlift system to minimize venting/flaring.
  - d. The venting or flaring occurs during downhole well maintenance, in which case Cimarex will work to minimize venting or flaring operations to the extent that it does not pose a risk to safe operations.
  - e. The well is an exploratory well, the division has approved the well as an exploratory well, venting or flaring is limited to 12 months, as approved by the division, and venting/flaring does not cause Cimarex to breach its State-wide 98% gas capture requirement.
  - f. Venting or flaring occurs because the stock tanks or other low-pressure vessels are being gauged, sampled, or liquids are being loaded out.
  - g. The venting or flaring occurs because pressurized vessels are being maintained and are being blown-down or depressurized.
  - h. Venting or flaring occurs as a result of normal dehydration unit operations.

- i. Venting or flaring occurs as a result of bradenhead testing.
  - j. Venting or flaring occurs as a result of normal compressor operations, including general compressor operations, compressor engines and turbines.
  - k. Venting or flaring occurs as a result of a packer leakage test.
  - l. Venting or flaring occurs as a result of a production test lasting less than 24 hours unless otherwise approved by the division.
  - m. Venting or flaring occurs as a result of new equipment commissioning and is necessary to purge impurities from the pipeline or production equipment.
6. Cimarex will maintain its equipment in accordance with its Operations and Maintenance Program, to ensure venting or flaring events are minimized and that equipment is properly functioning.
7. Cimarex will install automatic tank gauging equipment on all production facilities constructed after May 25, 2021, to ensure minimal emissions from tank gauging practices.
8. By November 25, 2022, all Cimarex facilities equipped with flares or combustors will be equipped with continuous pilots or automatic igniters, and technology to ensure proper function, i.e. thermocouple, fire-eye, etc...
9. Cimarex will perform AVO (audio, visual, olfactory) facility inspections in accordance with NMOCD requirements. Specifically, Cimarex will:
  - a. Perform weekly inspections during the first year of production, and so long as production is greater than 60 MCFD.
  - b. If production is less than 60 MCFD, Cimarex will perform weekly AVO inspections when an operator is present on location, and inspections at least once per calendar month with at least 20 calendar days between inspections.
10. Cimarex will measure or estimate the volume of vented, flared or beneficially used natural gas, regardless of the reason or authorization for such venting or flaring.
11. On all facilities constructed after May 25, 2021, Cimarex will install metering where feasible and in accordance with available technology and best engineering practices, in an effort to measure how much gas could have been vented or flared.
  - a. In areas where metering is not technically feasible, such as low-pressure/low volume venting or flaring applications, engineering estimates will be used such that the methodology could be independently verified.
12. Cimarex will fulfill the division's requirements for reporting and filing of venting or flaring that exceeds 50 MCF in volume or last eight hours or more cumulatively within any 24-hour period.

## VIII. Best Management Practices to minimize venting during active and planned maintenance

Cimarex strives to ensure minimal venting occurs during active and planned maintenance activities. Below is a description of common maintenance practices, and the steps Cimarex takes to limit venting exposure.

- **Workovers:**
  - Always strive to kill well when performing downhole maintenance.
  - If vapors or trapped pressure is present and must be relieved then:
    - Initial blowdown to production facility:
      - Route vapors to LP flare if possible/applicable
    - Blowdown to portable gas buster tank:
      - Vent to existing or portable flare if applicable.
- **Stock tank servicing:**
  - Minimize time spent with thief hatches open.
  - When cleaning or servicing via manway, suck tank bottoms to ensure minimal volatiles exposed to atmosphere.
    - Connect vacuum truck to low pressure flare while cleaning bottoms to limit venting.
  - Isolate the vent lines and overflows on the tank being serviced from other tanks.
- **Pressure vessel/compressor servicing and associated blowdowns:**
  - Route to flare where possible.
  - Blow vessel down to minimum available pressure via pipeline, prior to venting vessel.
  - Preemptively changing anodes to reduce failures and extended corrosion related servicing.
  - When cleaning or servicing via manway, suck vessel bottoms to ensure minimal volatiles exposed to atmosphere.
- **Flare/combustor maintenance:**
  - Minimize downtime by coordinating with vendor and Cimarex staff travel logistics.
  - Utilizing preventative and predictive maintenance programs to replace high wear components before failure.
  - Because the flare/combustor is the primary equipment used to limit venting practices, ensure flare/combustor is properly maintained and fully operational at all times via routine maintenance, temperature telemetry, onsite visual inspections.

*The Cimarex expectation is to limit all venting exposure. Equipment that may not be listed on this document is still expected to be maintained and associated venting during such maintenance minimized.*

**District I**

1625 N. French Dr., Hobbs, NM 88240  
 Phone:(575) 393-6161 Fax:(575) 393-0720

**District II**

811 S. First St., Artesia, NM 88210  
 Phone:(575) 748-1283 Fax:(575) 748-9720

**District III**

1000 Rio Brazos Rd., Aztec, NM 87410  
 Phone:(505) 334-6178 Fax:(505) 334-6170

**District IV**

1220 S. St Francis Dr., Santa Fe, NM 87505  
 Phone:(505) 476-3470 Fax:(505) 476-3462

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

CONDITIONS

Action 102373

**CONDITIONS**

|  |   |
|--|---|
| Operator:<br>CIMAREX ENERGY CO.<br>600 N. Marienfeld Street<br>Midland, TX 79701 | OGRID:<br>215099  |
|  | Action Number:<br>102373  |
|  | Action Type:<br>[C-101] BLM - Federal/Indian Land Lease (Form 3160-3) |

**CONDITIONS**

| Created By | Condition  | Condition Date |
|------------|--|----------------|
| pkautz     | Will require a File As Drilled C-102 and a Directional Survey with the C-104   | 5/9/2022       |
| pkautz     | Once the well is spud, to prevent ground water contamination through whole or partial conduits from the surface, the operator shall drill without interruption through the fresh water zone or zones and shall immediately set in cement the water protection string | 5/9/2022       |
| pkautz     | Oil base muds are not to be used until fresh water zones are cased and cemented providing isolation from the oil or diesel. This includes synthetic oils. Oil based mud, drilling fluids and solids must be contained in a steel closed loop system                  | 5/9/2022       |
| pkautz     | Cement is required to circulate on both surface and intermediate1 strings of casing  | 5/9/2022       |