

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 1b. Type of Well: <input type="checkbox"/> Oil Well <input type="checkbox"/> Gas Well <input type="checkbox"/> Other 1c. Type of Completion: <input type="checkbox"/> Hydraulic Fracturing <input type="checkbox"/> Single Zone <input type="checkbox"/> Multiple Zone		5. Lease Serial No. 6. If Indian, Allottee or Tribe Name 7. If Unit or CA Agreement, Name and No. 8. Lease Name and Well No. <div style="text-align: center; font-weight: bold; font-size: 1.2em;">[326056]</div>
2. Name of Operator <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;">30-025-50123</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;">[96674]</div>
4. Location of Well (Report location clearly and in accordance with any State requirements. *) At surface 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 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.
2. A Drilling Plan.
3. A Surface Use Plan (if the location is on National Forest System Lands, the SUPO must be filed with the appropriate Forest Service Office). | 4. Bond to cover the operations unless covered by an existing bond on file (see Item 20 above).
5. Operator certification.
6. Such other site specific information and/or plans as may be requested by the BLM. |
|---|---|

25. Signature	Name (Printed/Typed)	Date
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

KZ
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.

**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

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

- ☐ 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.

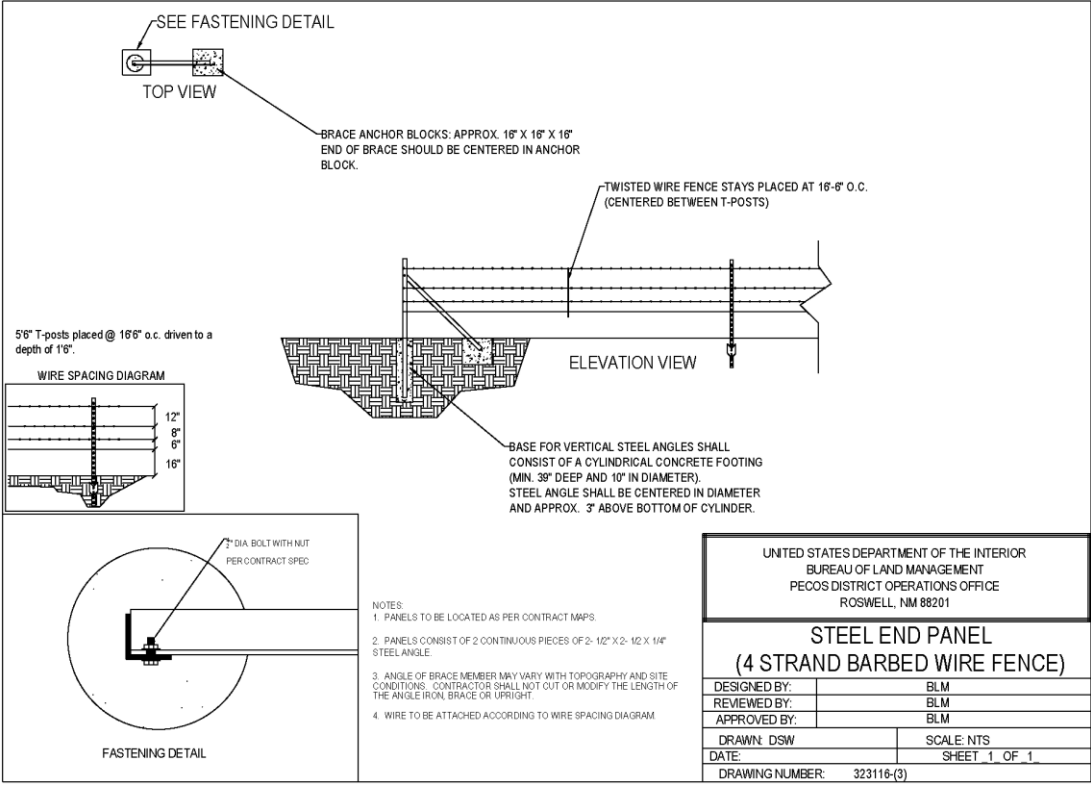
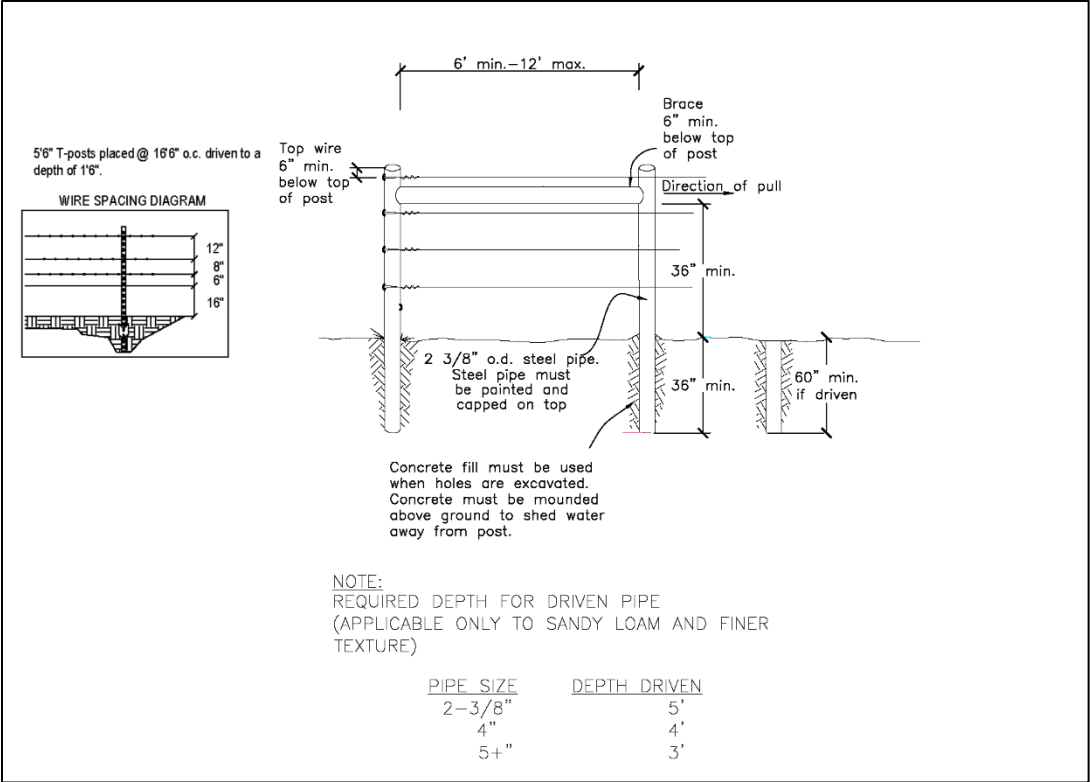
IV. NOXIOUS WEEDS

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

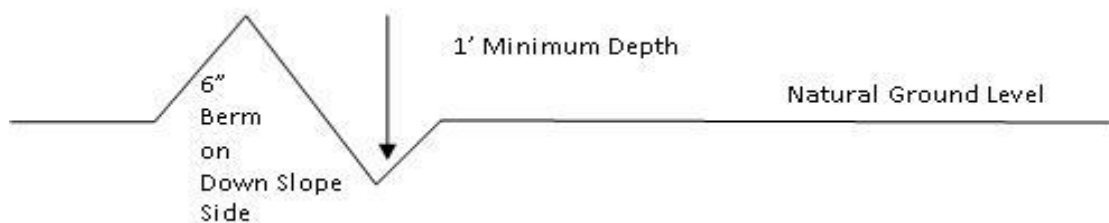
Vehicle turnouts shall be constructed on the road. Turnouts shall be intervisible with interval spacing distance less than 1000 feet. Turnouts shall conform to Figure 1; cross section and plans for typical road construction.

Drainage

Drainage control systems shall be constructed on the entire length of road (e.g. ditches, sidehill outcropping 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

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

WELL NAME & NO.:	Dos Equis 12-13 Fed Com 51H
SURFACE HOLE FOOTAGE:	195'N & 1500'W
BOTTOM HOLE FOOTAGE:	100'N & 1540'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** formation. As a result, the Hydrogen Sulfide area must meet Onshore Order 6 requirements, which includes equipment and personnel/public protection items. If Hydrogen Sulfide is encountered, please provide measured values and formations to the BLM.

B. CASING

1. The **13-3/8** inch surface casing shall be set at approximately **1520** feet (a minimum of **25 feet (Lea County)** into the Rustler Anhydrite and above the salt) and cemented to the surface. **Excess calculates to 18%. Additional cement maybe required.**
 - 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 1/3rd fluid filled to meet BLM minimum collapse requirement.

2. The minimum required fill of cement behind the **9-5/8** inch intermediate casing is:
 - Cement to surface. If cement does not circulate see B.1.a, c-d above.

Wait on cement (WOC) time for a primary cement job is to include the lead cement slurry due to cave/karst or potash.

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

C. PRESSURE CONTROL

1. **Variance approved to use flex line from BOP to choke manifold. Manufacturer's specification to be readily available. No external damage to flex line. Flex line to be installed as straight as possible (no hard bends).**
2. Operator has proposed a multi-bowl wellhead assembly. This assembly will only be tested when installed on the surface casing. Minimum working pressure of the blowout preventer (BOP) and related equipment (BOPE) required for drilling below the surface casing shoe shall be **5000 (5M) psi**.
 - a. Wellhead shall be installed by manufacturer's representatives, submit documentation with subsequent sundry.
 - b. If the welding is performed by a third party, the manufacturer's representative shall monitor the temperature to verify that it does not exceed the maximum temperature of the seal.
 - c. Manufacturer representative shall install the test plug for the initial BOP test.
 - d. If the cement does not circulate and one inch operations would have been possible with a standard wellhead, the well head shall be cut off, cementing operations performed and another wellhead installed.
 - e. Whenever any seal subject to test pressure is broken, all the tests in OOGO2.III.A.2.i must be followed.

D. SPECIAL REQUIREMENT (S)**Communitization Agreement**

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

GENERAL REQUIREMENTS

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

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

☒ Eddy County

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

☒ Lea County

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

1. Unless the production casing has been run and cemented or the well has been properly plugged, the drilling rig shall not be removed from over the hole without prior approval.
 - a. In the event the operator has proposed to drill multiple wells utilizing a skid/walking rig. Operator shall secure the wellbore on the current well, after installing and testing the wellhead, by installing a blind flange of like pressure rating to the wellhead and a pressure gauge that can be monitored while drilling is performed on the other well(s).
 - b. When the operator proposes to set surface casing with Spudder Rig
 - Notify the BLM when moving in and removing the Spudder Rig.

- Notify the BLM when moving in the 2nd Rig. Rig to be moved in within 90 days of notification that Spudder Rig has left the location.
 - BOP/BOPE test to be conducted per Onshore Oil and Gas Order No. 2 as soon as 2nd Rig is rigged up on well.
2. Floor controls are required for 3M or Greater systems. These controls will be on the rig floor, unobstructed, readily accessible to the driller and will be operational at all times during drilling and/or completion activities. Rig floor is defined as the area immediately around the rotary table; the area immediately above the substructure on which the draw works are located, this does not include the dog house or stairway area.
 3. The record of the drilling rate along with the GR/N well log run from TD to surface (horizontal well – vertical portion of hole) shall be submitted to the BLM office as well as all other logs run on the borehole 30 days from completion. If available, a digital copy of the logs is to be submitted in addition to the paper copies. The Rustler top and top and bottom of Salt are to be recorded on the Completion Report.

A. CASING

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

ZS080321



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

Application for Permit to Drill

APD Package Report

Date Printed:

APD ID:
APD Received Date:
Operator:

Well Status:
Well Name:
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 Spec Documents: 1 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: 2 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)
- 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

¹ API Number 30-025-50123		² Pool Code 96674	³ Pool Name TRIPLE X:BONE SPRING, WEST
⁴ Property Code 326056	⁵ Property Name DOS EQUIS 12-13 FEDERAL COM		⁶ Well Number 51H
⁷ OGRID No. 215099	⁸ Operator Name CIMAREX ENERGY CO.		⁹ Elevation 3608.2'

¹⁰ Surface Location

UL or lot no. C	Section 12	Township 24S	Range 32E	Lot Idn	Feet from the 195	North/South line NORTH	Feet from the 1500	East/West line WEST	County LEA
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¹¹ Bottom Hole Location If Different From Surface

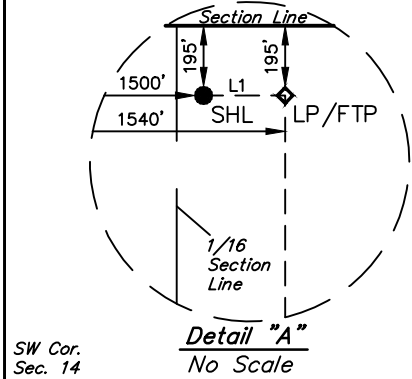
UL or lot no. N	Section 13	Township 24S	Range 32E	Lot Idn	Feet from the 100	North/South line SOUTH	Feet from the 1540	East/West line WEST	County LEA
¹² Dedicated Acres 320		¹³ Joint or Infill		¹⁴ Consolidation Code		¹⁵ Order No.			

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.

16
NAD 83 (SURFACE HOLE LOCATION)
LATITUDE = 32°14'20.11" (32.238919°)
LONGITUDE = 103°37'55.08" (103.631966°)
NAD 27 (SURFACE HOLE LOCATION)
LATITUDE = 32°14'19.66" (32.238795°)
LONGITUDE = 103°37'53.35" (103.631485°)
STATE PLANE NAD 83 (N.M. EAST)
N: 451360.15' E: 758189.74'
STATE PLANE NAD 27 (N.M. EAST)
N: 451301.18' E: 717005.77'

NAD 83 (LP/FTP)
LATITUDE = 32°14'20.11" (32.238919°)
LONGITUDE = 103°37'54.61" (103.631836°)
NAD 27 (LP/FTP)
LATITUDE = 32°14'19.66" (32.238795°)
LONGITUDE = 103°37'52.88" (103.631355°)
STATE PLANE NAD 83 (N.M. EAST)
N: 451360.44' E: 758229.92'
STATE PLANE NAD 27 (N.M. EAST)
N: 451301.47' E: 717045.95'

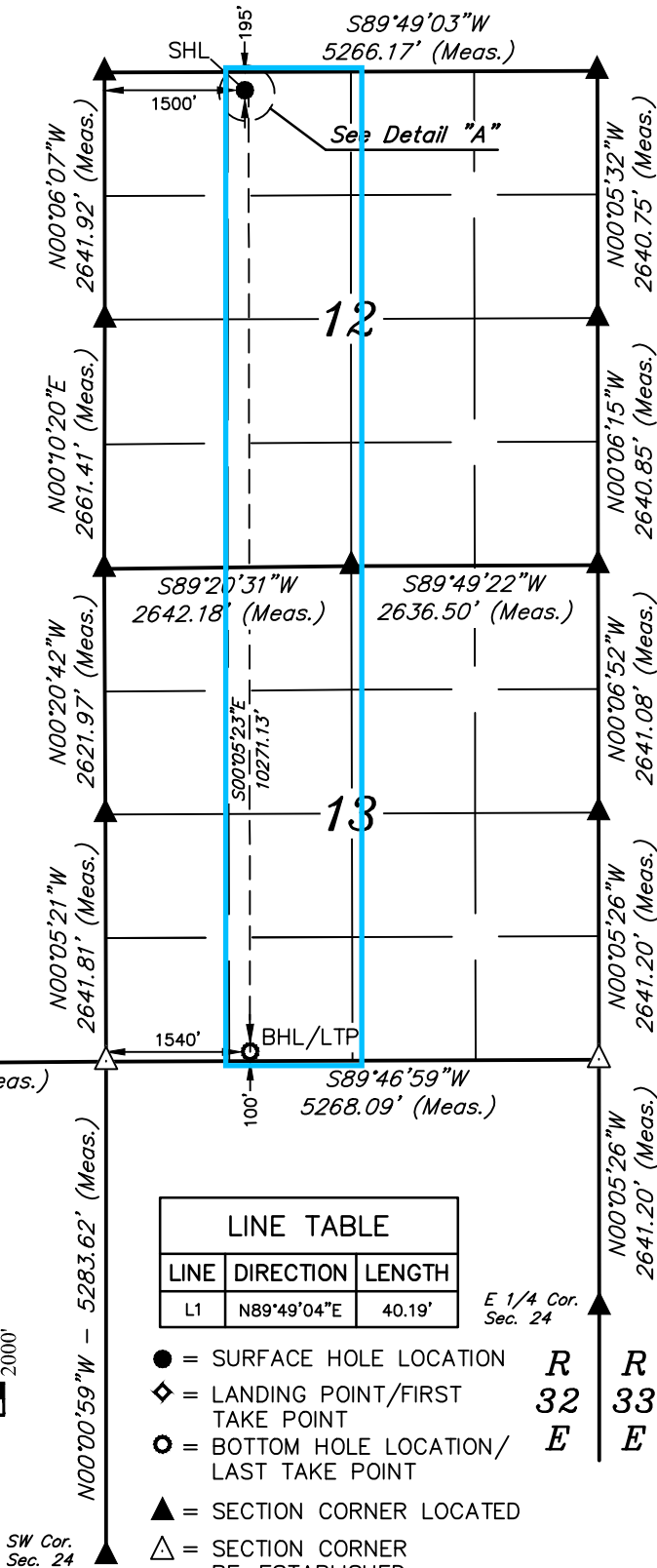
NAD 83 (BHL/LTP)
LATITUDE = 32°12'38.49" (32.210691°)
LONGITUDE = 103°37'54.70" (103.631862°)
NAD 27 (BHL/LTP)
LATITUDE = 32°12'38.04" (32.210567°)
LONGITUDE = 103°37'52.98" (103.631383°)
STATE PLANE NAD 83 (N.M. EAST)
N: 441091.29' E: 758289.03'
STATE PLANE NAD 27 (N.M. EAST)
N: 441032.57' E: 717104.60'



- 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" (NAD 83)



SCALE
DRAWN BY: R.J. 12-13-19
REV: 1 S.T.O. 01-31-20
(WELLBORE CHANGE)



LINE TABLE		
LINE	DIRECTION	LENGTH
L1	N89°49'04"E	40.19'

- = 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.

Amithy Crawford 5/15/20
Signature Date

Amithy Crawford
Printed Name

Acrawford@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

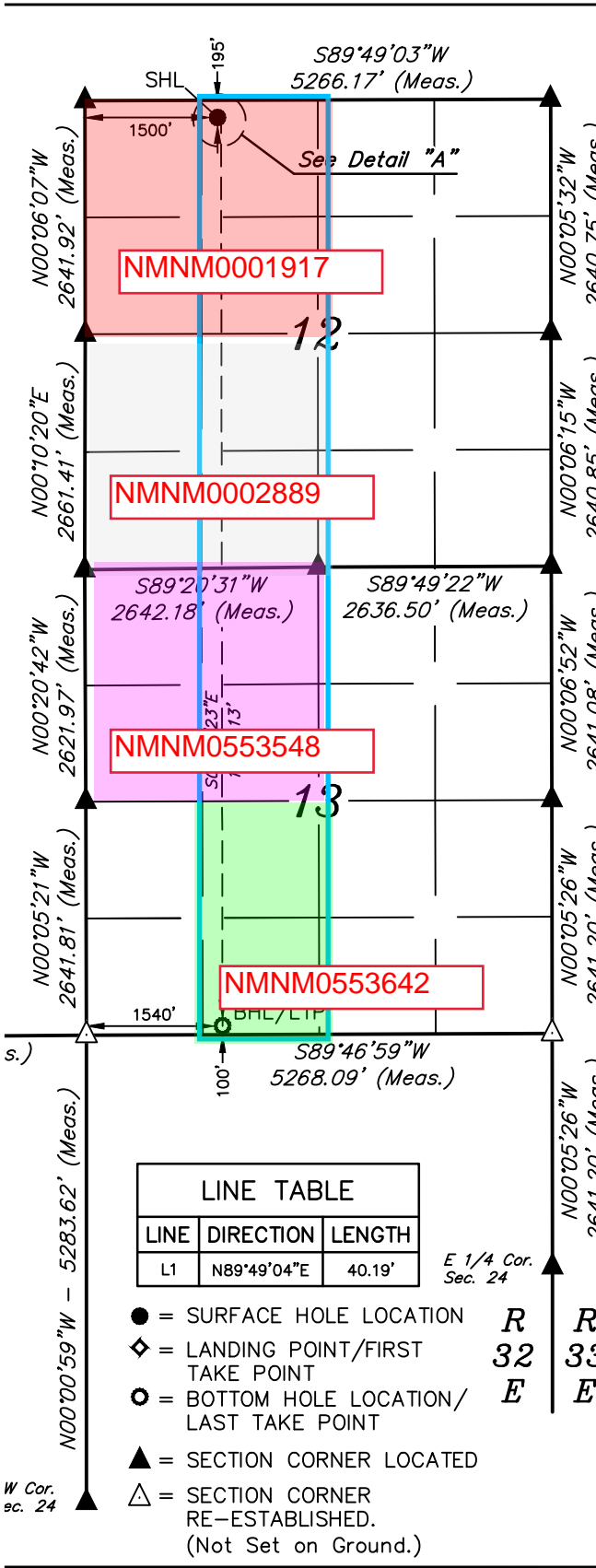
Date of Survey _____
Signature and Seal of Professional Surveyor: _____

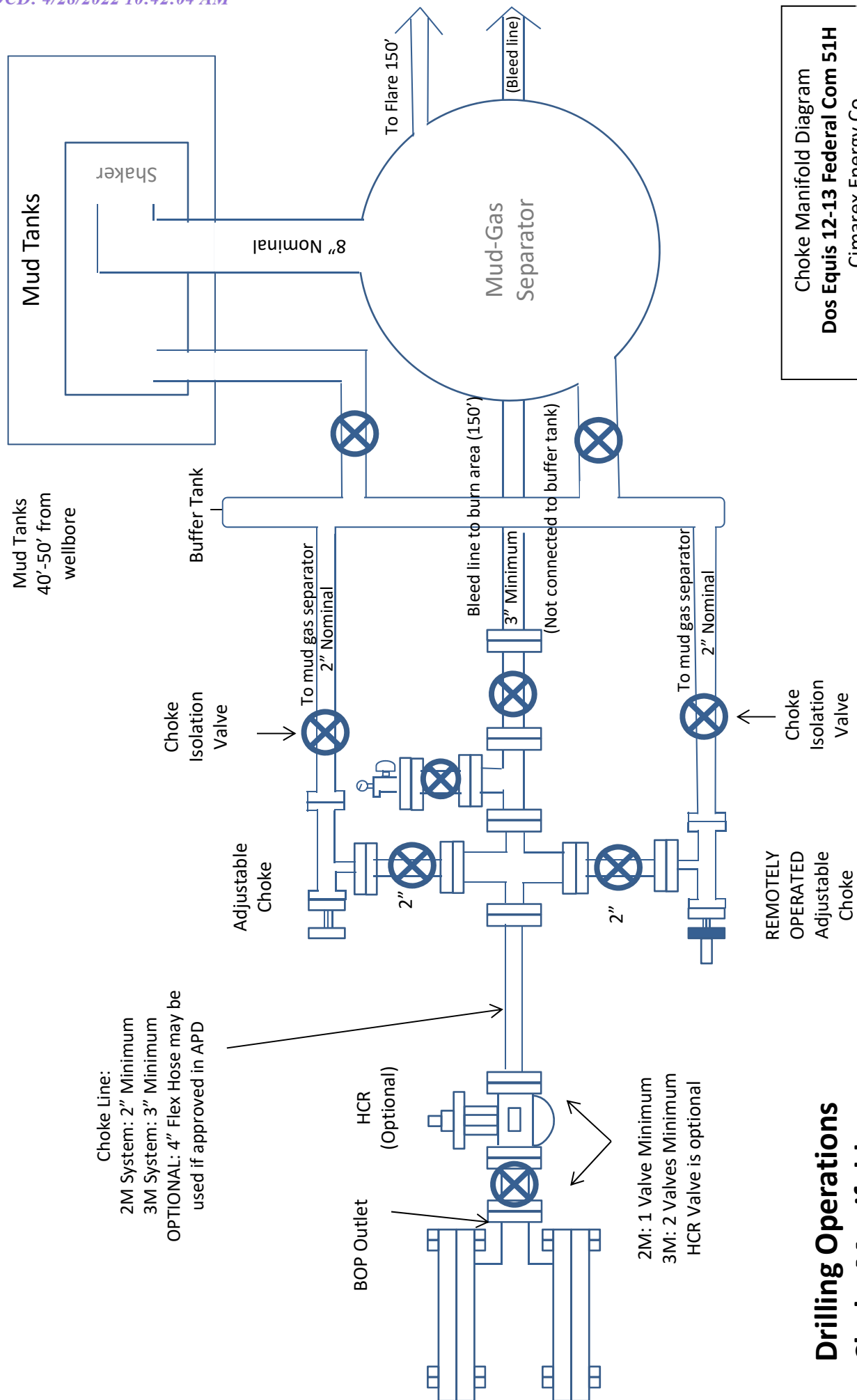


Certificate Number:

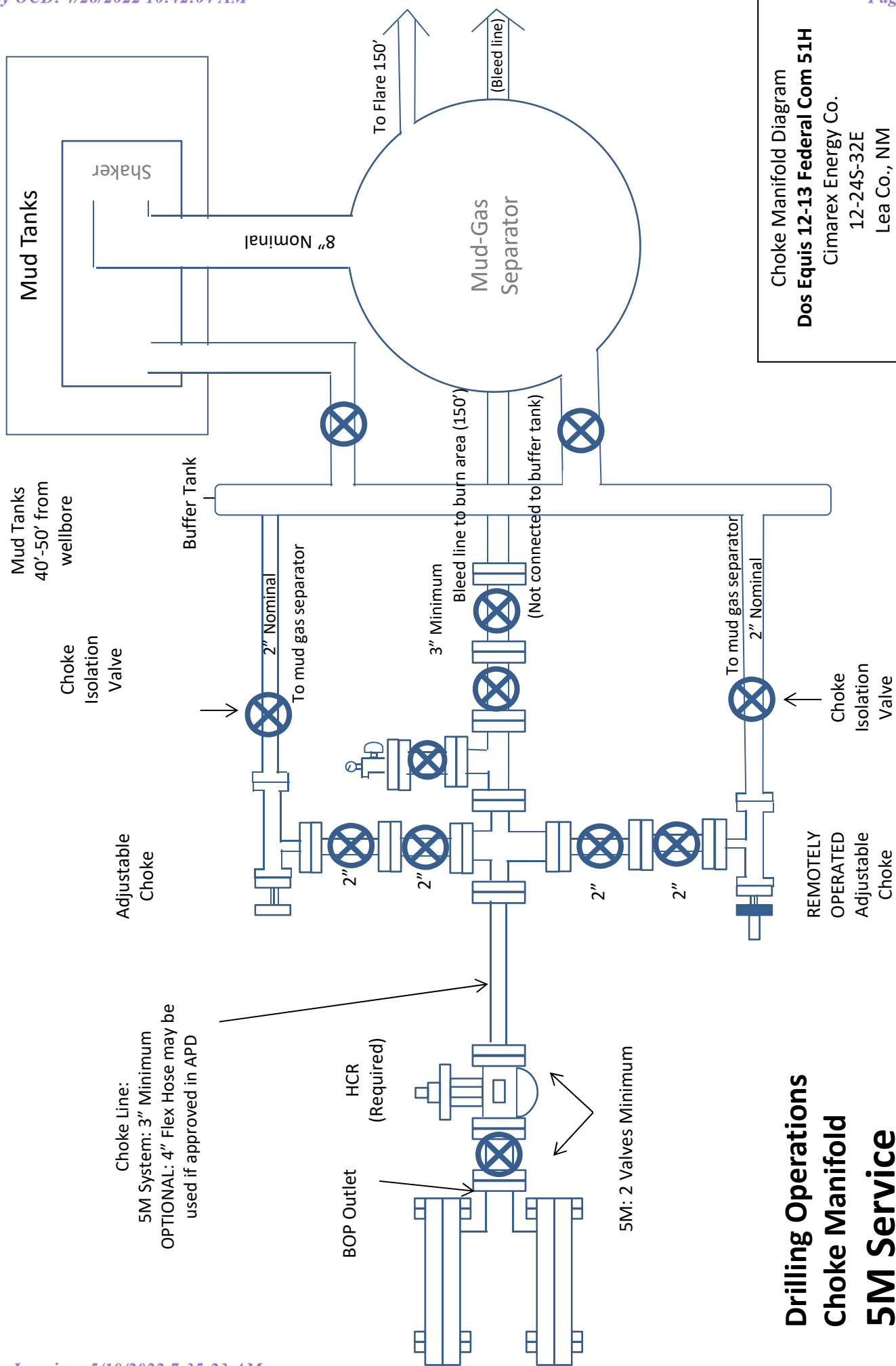
DOS EQUIS 12-13 FED COM 51H

LEASE MAP

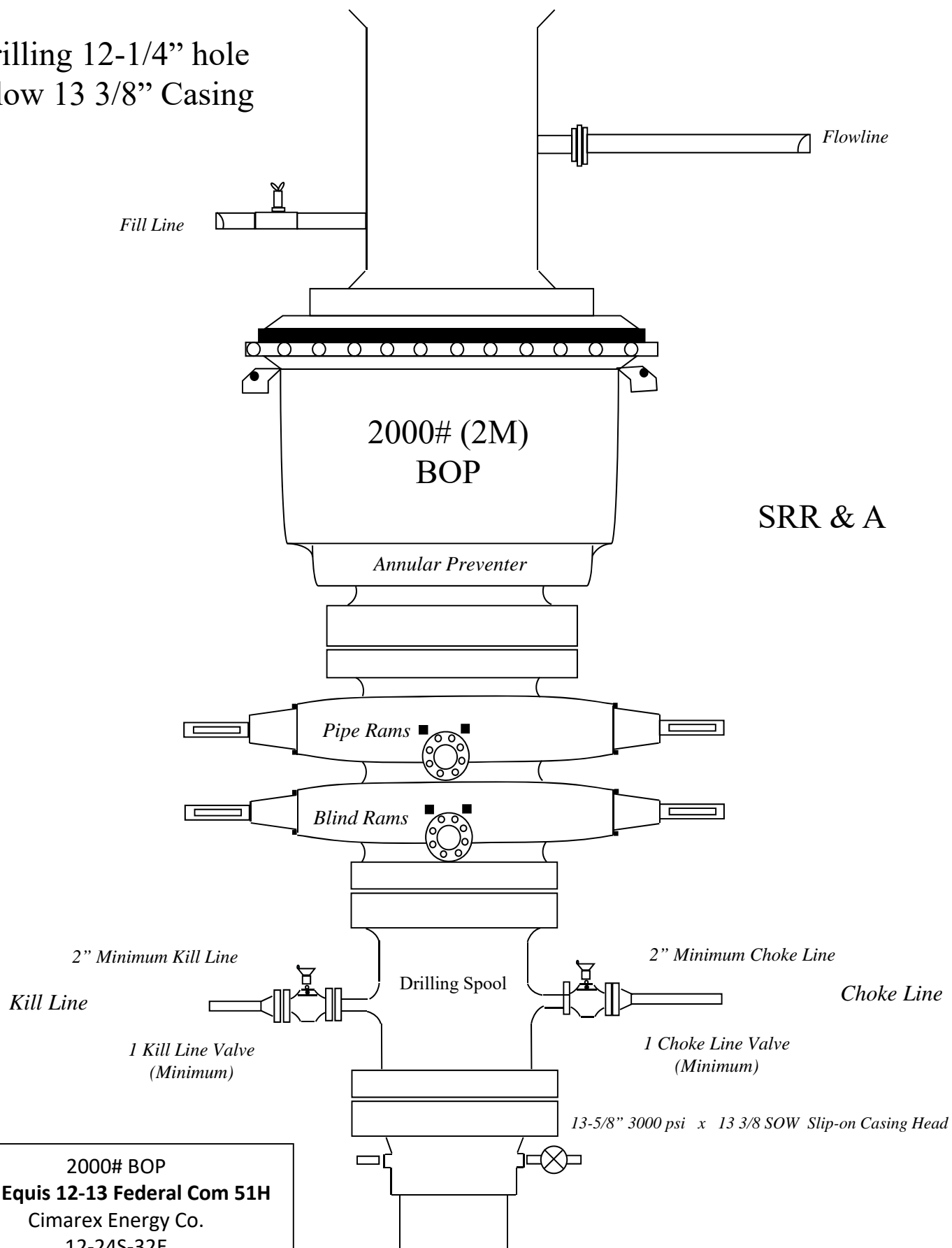




Choke Manifold Diagram
Dos Equis 12-13 Federal Com 51H
 Cimarex Energy Co.
 12-24S-32E
 Lea Co., NM

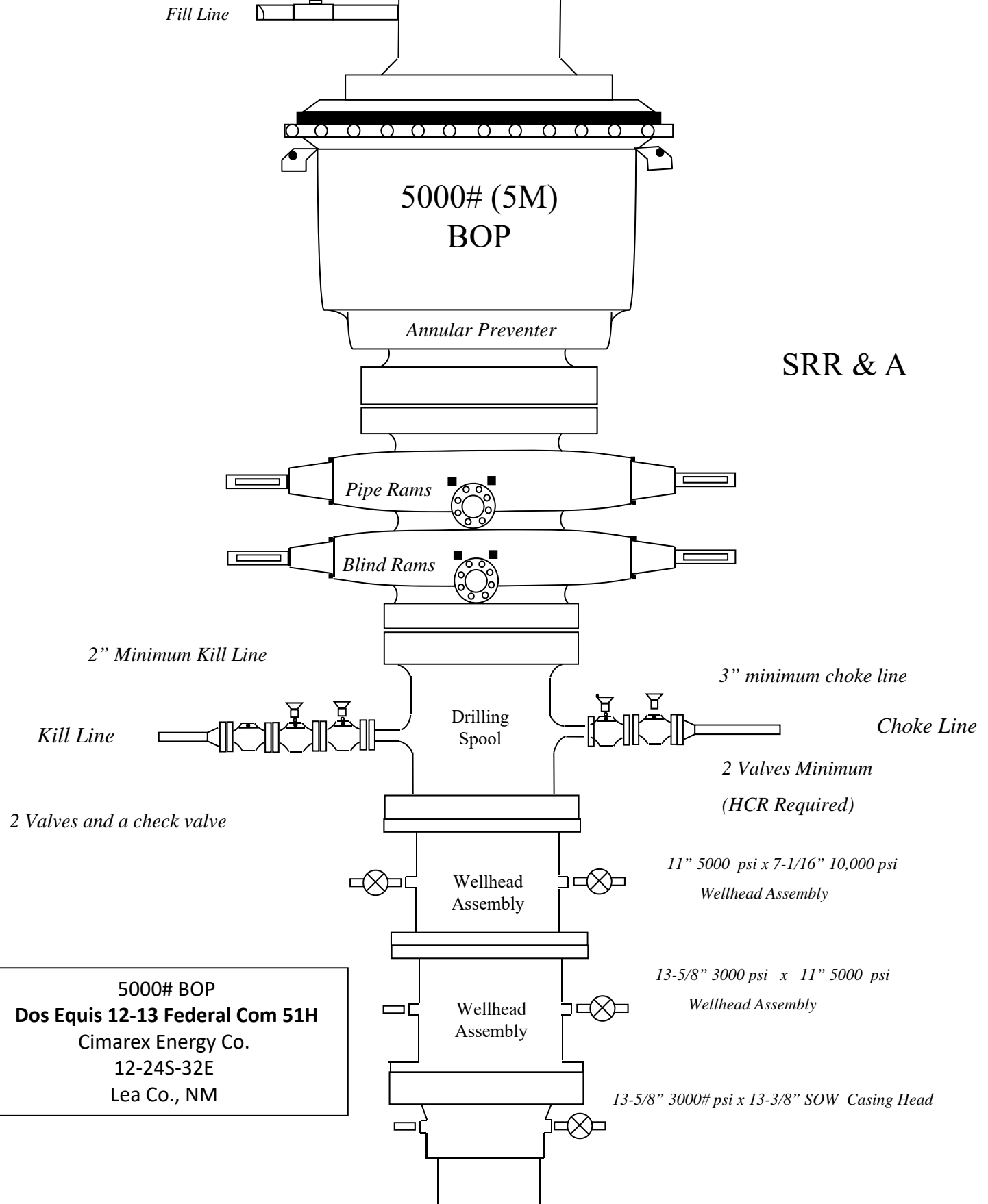


Drilling 12-1/4" hole
below 13 3/8" Casing



2000# BOP
Dos Equis 12-13 Federal Com 51H
Cimarex Energy Co.
12-24S-32E
Lea Co., NM

Drilling 8 3/4" hole below
9 5/8" Casing



[Print](#)



Dos Equis 12-13 Fed Com 51H Surface Casing Spec Sheet

OCTG Performance Data

Casing Performance

Availability: ERW

Pipe Body Geometry

Outside Diameter:	13.375 in	Inside Diameter:	12.715 in
Wall Thickness:	0.330 in	Cross Section Area:	13.524 sq in
Nominal Weight:	48.00 lb/ft	Drift Diameter:	12.559 in
Plain End Weight:	46.02 lb/ft	Alternate Drift Diameter:	-

Pipe Body Performance

Grade:	H40	Collapse Strength (ERW):	740 psi
Pipe Body Yield Strength:	541000 lbf	Collapse Strength (SMLS):	-

SC Connection

Connection Geometry

	Optimum	Minimum	Maximum
Make Up Torque:	3220 lb·ft	2420 lb·ft	4030 lb·ft
Coupling Outside Diameter:	14.375 in		

Connection Performance

Grade:	H40	Minimum Internal Yield Pressure:	1730 psi
Joint Strength:	322000 lbf		

LC Connection

Connection Geometry

	Optimum	Minimum	Maximum
Make Up Torque:	-	-	-
Coupling Outside Diameter:	14.375 in		

Connection Performance

Grade:	H40	Minimum Internal Yield Pressure:	-
Joint Strength:	-		

BC Connection

Connection Geometry

	Optimum	Minimum	Maximum
Make Up Torque:	-	-	-
Coupling Outside Diameter:	14.375 in		

Connection Performance

Grade:	H40	Minimum Internal Yield Pressure:	-
Joint Strength:	-		

PE Connection

Connection Geometry

	Optimum	Minimum	Maximum
Make Up Torque:	-	-	-
Coupling Outside Diameter:	14.375 in		

Connection Performance

Grade:	H40	Minimum Internal Yield Pressure:	1730 psi
Joint Strength:	-		

Dos Equis 12-13 Fed Com 51H
Casing Assumptions

Hole Size	Casing Depth From	Casing Depth To	Setting Depth TVD	Casing Size	Weight (lb/ft)	Grade	Conn.	SF Collapse	SF Burst	SF Tension
17 1/2	0	1235	1235	13-3/8"	48.00	H-40/J-55 Hybrid	ST&C	1.38	3.23	5.43
12 1/4	0	4900	4900	9-5/8"	40.00	J-55	BT&C	1.50	1.51	3.21
8 3/4	0	9119	9119	5-1/2"	20.00	L-80	LT&C	2.07	2.15	2.17
8 3/4	9119	19665	9600	5-1/2"	20.00	L-80	BT&C	1.97	2.00	48.44
BLM Minimum Safety Factor								1.125	1	1.6 Dry 1.8 Wet

TVD was used on all calculations.

Dos Equis 12-13 Fed Com 51H

Casing Assumptions

Hole Size	Casing Depth From	Casing Depth To	Setting Depth TVD	Casing Size	Weight (lb/ft)	Grade	Conn.	SF Collapse	SF Burst	SF Tension
17 1/2	0	1235	1235	13-3/8"	48.00	H-40/J-55 Hybrid	ST&C	1.38	3.23	5.43
12 1/4	0	4900	4900	9-5/8"	40.00	J-55	BT&C	1.50	1.51	3.21
8 3/4	0	9119	9119	5-1/2"	20.00	L-80	LT&C	2.07	2.15	2.17
8 3/4	9119	19665	9600	5-1/2"	20.00	L-80	BT&C	1.97	2.00	48.44
BLM Minimum Safety Factor								1.125	1	1.6 Dry 1.8 Wet

TVD was used on all calculations.

Dos Equis 12-13 Fed Com 51H

Casing Assumptions

Hole Size	Casing Depth From	Casing Depth To	Setting Depth TVD	Casing Size	Weight (lb/ft)	Grade	Conn.	SF Collapse	SF Burst	SF Tension
17 1/2	0	1235	1235	13-3/8"	48.00	H-40/J-55 Hybrid	ST&C	1.38	3.23	5.43
12 1/4	0	4900	4900	9-5/8"	40.00	J-55	BT&C	1.50	1.51	3.21
8 3/4	0	9119	9119	5-1/2"	20.00	L-80	LT&C	2.07	2.15	2.17
8 3/4	9119	19665	9600	5-1/2"	20.00	L-80	BT&C	1.97	2.00	48.44
BLM Minimum Safety Factor								1.125	1	1.6 Dry 1.8 Wet

TVD was used on all calculations.

Dos Equis 12-13 Fed Com 51H

Casing Assumptions

Hole Size	Casing Depth From	Casing Depth To	Setting Depth TVD	Casing Size	Weight (lb/ft)	Grade	Conn.	SF Collapse	SF Burst	SF Tension
17 1/2	0	1235	1235	13-3/8"	48.00	H-40/J-55 Hybrid	ST&C	1.38	3.23	5.43
12 1/4	0	4900	4900	9-5/8"	40.00	J-55	BT&C	1.50	1.51	3.21
8 3/4	0	9119	9119	5-1/2"	20.00	L-80	LT&C	2.07	2.15	2.17
8 3/4	9119	19665	9600	5-1/2"	20.00	L-80	BT&C	1.97	2.00	48.44
BLM Minimum Safety Factor								1.125	1	1.6 Dry 1.8 Wet

TVD was used on all calculations.

Hydrogen Sulfide Drilling Operations Plan

Dos Equis 12-13 Federal Com 51H

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 H₂S safety instructor to the following:
 - A. Characteristics of H₂S
 - B. Physical effects and hazards
 - C. Principal and operation of H₂S 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.

H₂S Detection and Alarm Systems:

 - A. H₂S 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 H₂S 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 (H₂S present in dangerous concentration). Only H₂S 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 H₂S has on tubular goods and other mechanical equipment.
- 9 If H₂S 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 H₂S scavengers if necessary.

H₂S Contingency Plan
Dos Equis 12-13 Federal Com 51H
Cimarex Energy Co.
UL: C, Sec. 12, 24S, 32E
Lea Co., NM

Emergency Procedures

In the event of a release of gas containing H₂S, 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 H₂S 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 H₂S, 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 (SO₂). 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 H₂S and SO₂

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).

H₂S Contingency Plan Emergency Contact
 s Dos Equis 12-13 Federal Com 51H
 Cimarex Energy Co.
 UL: C, Sec. 12, 24S, 32E
 Lea Co., NM

<u>Company Office</u>			
Cimarex Energy Co. of Colorado		800-969-4789	
Co. Office and After-Hours Menu			
<u>Key Personnel</u>			
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
<u>Artesia</u>			
Ambulance		911	
State Police		575-746-2703	
City Police		575-746-2703	
Sheriff's Office		575-746-9888	
Fire Department		575-746-2701	
Local Emergency Planning Committee		575-746-2122	
New Mexico Oil Conservation Division		575-748-1283	
<u>Carlsbad</u>			
Ambulance		911	
State Police		575-885-3137	
City Police		575-885-2111	
Sheriff's Office		575-887-7551	
Fire Department		575-887-3798	
Local Emergency Planning Committee		575-887-6544	
US Bureau of Land Management		575-887-6544	
<u>Santa Fe</u>			
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	
<u>National</u>			
National Emergency Response Center (Washington, D.C.)		800-424-8802	
<u>Medical</u>			
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	
<u>Other</u>			
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 #51H Rev1 RM 17Feb20 Anti-Collision Summary Report

Analysis Date-24hr Time: February 17, 2020 - 16:27

Client: Cimarex Energy

Field: NM Lea County (NAD 83)

Structure: Cimarex Dos Equis 12-13 Federal Com #51H

Slot: New Slot

Well: Dos Equis 12-13 Federal Com #51H

Borehole: Dos Equis 12-13 Federal Com #51H

Scan MD Range: 0.00ft ~ 19665.59ft

Analysis Method: 3D Least Distance

Reference Trajectory: Cimarex Dos Equis 12-13 Federal Com #51H 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: ISCSA0 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:

Selection filters:

Not performed!
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 Federal Com #52H Rev1 RM 17Feb20 (Def Plan)													Fail Major
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19.99	16.25	18.71	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	20.02	6.22	-0.02	1.50	OSF1.50	2050.00	2050.00			OSF<1.50		Enter Minor	
19.52	25.75	1.93	-6.23	1.12	OSF1.50	2660.00	2660.00					MinPt-CtCt	
19.62	26.00	1.84	-6.40	1.11	OSF1.50	2690.00	2690.00					MinPts	
19.70	26.12	1.86	-6.42	1.11	OSF1.50	2700.00	2700.00					MinPt-O-ADP	
27.71	27.95	8.65	-0.24	1.49	OSF1.50	2900.00	2900.00			OSF>1.50		Exit Minor	
85.41	84.51	28.63	0.89	1.52	OSF1.50	9120.00	9120.00					MinPts	
84.29	82.82	28.63	1.47	1.53	OSF1.50	9200.00	9199.62					MINPT-O-EOU	
41.35	41.88	13.01	-0.52	1.48	OSF1.50	9610.00	9528.87			OSF<1.50		Enter Minor	
31.54	46.68	0.00	-15.14	1.00	OSF1.50	9680.00	9561.03				OSF<1.00	Enter Major	
19.87	78.31	-32.77	-58.45	0.36	OSF1.50	9830.00	9597.90					MinPt-CtCt	
19.89	78.54	-32.90	-58.65	0.36	OSF1.50	9840.00	9598.73					MinPt-O-SF	
19.94	78.61	-32.90	-58.68	0.36	OSF1.50	9850.00	9599.35					MinPts	
20.00	318.84	-192.99	-298.84	0.09	OSF1.50	19665.59	9600.00					MinPts	

Cimarex Dos Equis 12-13 Federal Com #48H Rev0 RM 13Sept19 (Non-Def Plan)													Fail Minor
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100.00	32.81	98.72	67.19	N/A	MAS = 10.00 (m)	0.00	0.00					Surface	
99.99	32.81	98.70	67.18	N/A	MAS = 10.00 (m)	26.00	26.00					WRP	
99.99	32.81	78.93	67.18	4.99	MAS = 10.00 (m)	3210.00	3210.00			OSF<5.00		Enter Alert	
86.25	87.06	27.77	-0.81	1.49	OSF1.50	9260.00	9258.00			OSF<1.50		Enter Minor	
68.47	86.96	10.06	-18.50	1.18	OSF1.50	9390.00	9375.82					MinPts	
85.24	87.07	26.77	-1.83	1.47	OSF1.50	9470.00	9439.50			OSF>1.50		Exit Minor	
279.69	87.54	220.90	192.14	4.84	OSF1.50	9730.00	9578.32			OSF>5.00		Exit Alert	
2745.82	314.66	2535.62	2431.16	13.14	OSF1.50	19665.59	9600.00					MinPts	

Cimarex Dos Equis 12-13 Federal Com #50H Rev1 RM 17Feb20 (Def Plan)													Warning Alert
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20.00	16.26	18.71	3.74	N/A	MAS = 4.96 (m)	0.00	0.00	CtCt<=15m<15.00				Enter Alert	
20.00	16.26	18.71	3.74	N/A	MAS = 4.96 (m)	26.00	26.00					WRP	
20.00	19.55	6.54	0.46	1.54	OSF1.50	2000.00	2000.00					MinPt-CtCt	
20.13	19.91	6.42	0.22	1.52	OSF1.50	2040.00	2040.00					MINPT-O-EOU	
20.29	20.09	6.46	0.19	1.52	OSF1.50	2060.00	2060.00					MinPts	
93.29	28.90	73.59	64.39	5.00	OSF1.50	3050.00	3050.00			OSF>5.00		Exit Alert	
100.99	31.21	79.76	69.78	5.00	OSF1.50	3480.00	3480.00			OSF<5.00		Enter Alert	
100.99	84.21	44.43	16.79	1.80	OSF1.50	9120.00	9120.00					MinPts	
277.30	84.85	220.31	192.45	4.95	OSF1.50	9570.00	9506.56			OSF>5.00		Exit Alert	
3300.06	316.51	3088.62	2983.55	15.70	OSF1.50	19665.59	9600.00					MinPts	

Cimarex Dos Equis 12-13 Federal Com #49H Rev1 RM 17Feb20 (Def Plan)													Warning Alert
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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-EOU	
40.27	32.25	26.62	8.02	3.15	MAS = 9.83 (m)	2040.00	2040.00					MinPt-O-SF	
68.78	32.25	53.84	36.53	4.94	MAS = 9.83 (m)	2410.00	2410.00			OSF>5.00		Exit Alert	
621.06	74.01	571.30	547.06	12.79	OSF1.50	9410.00	9392.47					MinPt-O-SF	
620.81	73.98	571.08	546.86	12.79	OSF1.50	9430.00	9408.66					MinPts	
2763.69	314.04	2553.90	2449.65	13.25	OSF1.50	19665.59	9600.00					MinPts	

Gulf Oil Hanagan D Federal #2 (Offset) Plugged Oil Blind Off- 5100ft (Def Survey)													Warning Alert
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4381.49	32.81	4380.20	4348.68	N/A	MAS = 10.00 (m)	0.00	0.00					Surface	
4381.15	32.81	4379.82	4348.34	95847.09	MAS = 10.00 (m)	26.00	26.00					MinPt-O-SF	
4380.93	1315.56	3503.46	3065.37	5.00	OSF1.50	4300.00	4300.00			OSF<5.00		Enter Alert	
4380.93	1589.06	3321.12	2791.87	4.14	OSF1.50	5170.00	5170.00					MinPt-CtCt	
4380.94	1589.06	3321.12	2791.85	4.14	OSF1.50	5180.00	5180.00					MinPts	
4815.82	1446.03	3851.37	3369.79	5.00	OSF1.50	7170.00	7170.00			OSF>5.00		Exit Alert	
5388.07	907.68	4782.52	4480.38	8.91	OSF1.50	12480.00	9600.00					MinPt-CtCt	
5388.07	907.70	4782.51	4480.37	8.91	OSF1.50	12490.00	9600.00					MINPT-O-EOU	
5388.09	907.73	4782.51	4480.37	8.91	OSF1.50	12500.00	9600.00					MinPt-O-ADP	
6264.54	1130.81	5510.24	5133.73	8.32	OSF1.50	15680.00	9600.00					MinPt-O-SF	
8977.96	1390.14	8050.77	7587.82	9.70	OSF1.50	19665.59	9600.00					TD	

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		
Cimarex Dos Equis 12-13 Federal Com #9H Rev0 RM 26Dec19 (Non-Def Plan)													
	1177.59	32.81	1176.30	1144.78	N/A	MAS = 10.00 (m)	0.00	0.00					Pass
	1177.59	32.81	1176.30	1144.78	N/A	MAS = 10.00 (m)	26.00	26.00					Surface
	295.15	76.92	243.03	218.23	5.90	OSF1.50	9470.00	9439.50					WRP
	294.80	76.80	242.77	218.00	5.90	OSF1.50	9490.00	9454.11					MinPt-O-SF
	2745.25	317.77	2532.98	2427.48	13.01	OSF1.50	19665.59	9600.00					MinPts
													MinPts

Cimarex Dos Equis 12 Federal Com #3H Gyro-MWD Off to 15227ft MD (Def Survey)													
	501.82	32.81	499.84	469.01	N/A	MAS = 10.00 (m)	0.00	0.00					Pass
	501.82	32.81	499.83	469.01	292471.16	MAS = 10.00 (m)	10.00	10.00					Surface
	501.85	32.81	499.85	469.04	30008.01	MAS = 10.00 (m)	26.00	26.00					MinPts
	494.77	32.81	486.10	461.97	73.61	MAS = 10.00 (m)	1420.00	1420.00					WRP
	495.92	32.81	484.37	463.11	51.63	MAS = 10.00 (m)	2200.00	2200.00					MinPts
	493.40	32.81	477.83	460.68	35.93	MAS = 10.00 (m)	3070.00	3070.00					MINPT-O-EQU
	493.34	32.81	475.65	460.53	31.28	MAS = 10.00 (m)	3510.00	3510.00					MinPts
	493.44	32.81	475.54	460.63	30.86	MAS = 10.00 (m)	3560.00	3560.00					MinPts
	492.91	32.81	473.44	460.10	28.08	MAS = 10.00 (m)	3910.00	3910.00					MINPT-O-EQU
	492.94	32.81	473.39	460.13	27.94	MAS = 10.00 (m)	3930.00	3930.00					MinPts
	493.77	32.81	472.12	460.96	24.99	MAS = 10.00 (m)	4400.00	4400.00					MINPT-O-EQU
	493.81	32.81	472.08	461.01	24.89	MAS = 10.00 (m)	4420.00	4420.00					MinPts
	394.63	60.63	353.49	333.99	10.07	OSF1.50	9560.00	9500.56					MINPT-O-EQU
	393.92	60.49	352.87	333.43	10.08	OSF1.50	9580.00	9512.40					MinPt-O-SF
	393.86	60.41	352.87	333.45	10.09	OSF1.50	9590.00	9518.06					MinPt-O-ADP
	1463.54	57.89	1424.29	1405.65	39.21	OSF1.50	11080.00	9600.00					MinPts
	1464.57	64.72	1420.77	1399.86	34.97	OSF1.50	11320.00	9600.00					MinPt-CtCt
	1466.16	69.23	1419.35	1396.93	32.66	OSF1.50	11490.00	9600.00					MinPt-CtCt
	1469.16	73.70	1419.36	1395.46	30.68	OSF1.50	11640.00	9600.00					MINPT-O-EQU
	1472.10	77.53	1419.76	1394.57	29.19	OSF1.50	11770.00	9600.00					MINPT-O-EQU
	1475.09	86.77	1416.59	1388.32	26.06	OSF1.50	12040.00	9600.00					MinPt-O-ADP
	1475.55	88.49	1415.89	1387.06	25.55	OSF1.50	12110.00	9600.00					MinPt-CtCt
	1476.15	89.18	1416.03	1386.96	25.36	OSF1.50	12140.00	9600.00					MINPT-O-EQU
	1481.28	99.61	1414.20	1381.65	22.73	OSF1.50	12440.00	9600.00					MinPt-O-ADP
	1482.00	101.96	1413.40	1380.09	22.22	OSF1.50	12530.00	9600.00					MinPt-CtCt
	1480.04	111.77	1404.86	1368.27	20.19	OSF1.50	12820.00	9600.00					MINPT-O-EQU
	1480.35	112.89	1404.43	1367.45	19.99	OSF1.50	12870.00	9600.00					MinPt-O-ADP
	1480.90	113.55	1404.54	1367.35	19.88	OSF1.50	12900.00	9600.00					MinPt-CtCt
	1484.96	121.98	1402.98	1362.97	18.54	OSF1.50	13140.00	9600.00					MinPt-CtCt
	1484.61	127.88	1398.70	1356.73	17.66	OSF1.50	13320.00	9600.00					MINPT-O-EQU
	1485.10	129.34	1398.22	1355.76	17.47	OSF1.50	13380.00	9600.00					MinPt-O-ADP
	1485.70	130.06	1398.34	1355.64	17.38	OSF1.50	13410.00	9600.00					MinPt-CtCt
	1469.88	152.39	1367.63	1317.49	14.64	OSF1.50	14060.00	9600.00					MINPT-O-EQU
	1470.72	158.73	1364.24	1311.98	14.05	OSF1.50	14160.00	9600.00					MinPt-O-ADP
	1473.89	159.55	1366.86	1314.34	14.01	OSF1.50	14240.00	9600.00					MinPt-CtCt
	5716.36	90.40	5655.44	5625.96	96.94	OSF1.50	19665.59	9600.00					MinPts
													TD

Final Surveys - Cimarex Dos Equis 13 Federal Com #9H MWD Off-15788ft (Surcon Corrected) (Def Survey)													
	5339.02	32.81	5337.74	5306.22	N/A	MAS = 10.00 (m)	0.00	0.00					Pass
	5339.03	32.81	5337.71	5306.22	187626.98	MAS = 10.00 (m)	26.00	26.00					MinPts
	5340.02	32.81	5336.46	5307.21	2348.36	MAS = 10.00 (m)	490.00	490.00					WRP
	5340.63	32.81	5335.92	5307.82	1559.76	MAS = 10.00 (m)	770.00	770.00					MINPT-O-EQU
	5340.60	32.81	5334.64	5307.79	1142.62	MAS = 10.00 (m)	1070.00	1070.00					MinPts
	5340.54	32.81	5334.06	5307.74	1033.89	MAS = 10.00 (m)	1170.00	1170.00					MinPts
	5334.19	32.81	5322.24	5301.38	493.02	MAS = 10.00 (m)	2470.00	2470.00					MINPT-O-EQU
	5334.41	32.81	5321.62	5301.60	457.76	MAS = 10.00 (m)	2660.00	2660.00					MinPts
	5334.68	32.81	5321.36	5301.87	437.88	MAS = 10.00 (m)	2780.00	2780.00					MinPts
	5351.48	32.81	5331.91	5318.67	290.19	MAS = 10.00 (m)	4190.00	4190.00					MINPT-O-EQU
	5351.74	32.81	5331.77	5318.93	283.91	MAS = 10.00 (m)	4280.00	4280.00					MinPts
	5335.96	46.94	5304.32	5289.02	174.29	OSF1.50	6870.00	6870.00					MINPT-O-EQU
	5336.50	48.41	5303.88	5288.09	168.89	OSF1.50	7080.00	7080.00					MinPt-CtCt
	5337.23	49.27	5304.04	5287.96	165.90	OSF1.50	7200.00	7200.00					MINPT-O-EQU
	5343.83	63.06	5301.45	5280.77	129.19	OSF1.50	9200.00	9199.62					MinPt-O-ADP
	425.78	119.64	345.68	306.15	5.37	OSF1.50	14720.00	9600.00					MinPt-O-SF
	425.80	119.86	345.55	305.94	5.36	OSF1.50	14730.00	9600.00					MinPt-CtCt
	426.05	120.03	345.69	306.02	5.38	OSF1.50	14740.00	9600.00					MinPts
	1485.90	151.52	1384.54	1334.37	14.80	OSF1.50	16230.00	9600.00					MinPt-O-SF
	1487.87	155.51	1383.85	1332.35	14.44	OSF1.50	16390.00	9600.00					MINPT-O-EQU
	1488.82	156.63	1384.05	1332.18	14.34	OSF1.50	16440.00	9600.00					MINPT-O-EQU
	1490.95	161.84	1382.71	1329.10	13.90	OSF1.50	16640.00	9600.00					MinPt-O-ADP
	1491.50	162.49	1382.84	1329.01	13.85	OSF1.50	16670.00	9600.00					MinPt-CtCt
	1496.90	188.95	1370.59	1307.95	11.94	OSF1.50	17660.00	9600.00					MINPT-O-EQU
	1497.15	189.79	1370.28	1307.36	11.89	OSF1.50	17700.00	9600.00					MinPt-O-ADP
	1497.66	190.41	1370.38	1307.25	11.85	OSF1.50	17730.00	9600.00					MinPt-CtCt
	1496.82	239.23	1337.00	1257.60	9.42	OSF1.50	19480.00	9600.00					MinPts
	1498.18	244.25	1335.01	1253.93	9.23	OSF1.50	19665.59	9600.00					MinPts

Cimarex Dos Equis 12-13 Federal Com #10H Rev0 RM 26Dec19 (Non-Def Plan)													
	1212.03	32.81	1210.74	1179.22	N/A	MAS = 10.00 (m)	0.00	0.00					Pass
	1212.03	32.81	1210.74	1179.22	N/A	MAS = 10.00 (m)	26.00	26.00					Surface
	723.75	75.03	673.12	648.73	14.79	OSF1.50	9119.88	9119.88					WRP
	723.76	75.06	673.11	648.70	14.79	OSF1.50	9130.00	9130.00					MinPt-CtCt
	723.78	75.08	673.12	648.70	14.78	OSF1.50	9140.00	9139.99					MINPT-O-EQU
	724.25	75.25	673.47	649.00	14.76	OSF1.50	9200.00	9199.62					MinPt-O-ADP
	3367.34	318.31	3174.70	3069.03	16.02	OSF1.50	19665.59	9600.00					MinPt-CtCt
													MinPts

Cimarex Dos Equis 12 Federal Com #4H Gyro Off to 11189ft MD (Def Survey)													
	842.01	32.81	840.04	809.21	N/A	MAS = 10.00 (m)	0.00	0.00					Pass
	842.02	32.81	840.03	809.21	147861.67	MAS = 10.00 (m)	26.00	26.00					MinPts
	844.62	32.81	837.63	811.81	168.12	MAS = 10.00 (m)	1020.00	1020.00					WRP
	844.82	32.81	834.34	812.01	99.09	MAS = 10.00 (m)	1940.00	1940.00					MINPT-O-EQU
	846.82	32.81	831.25	814.01	62.18	MAS = 10.00 (m)	3020.00	3020.00					MinPts
	848.84	32.81	829.56	816.03	48.97	MAS = 10.00 (m)	3840.00	3840.00					MINPT-O-EQU

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		
828.35	46.18	796.82	782.19	28.05		OSF1.50	6670.00	6670.00				MinPt-CtCt	
829.08	48.32	796.21	780.76	26.77		OSF1.50	6990.00	6990.00				MINPT-O-EQU	
830.13	49.60	796.40	780.53	26.08		OSF1.50	7180.00	7180.00				MinPt-O-ADP	
842.97	58.15	803.55	784.82	22.46		OSF1.50	8430.00	8430.00				MINPT-O-EQU	
843.81	59.18	803.70	784.63	22.08		OSF1.50	8570.00	8570.00				MinPt-O-ADP	
849.83	63.07	807.12	786.76	20.82		OSF1.50	9119.88	9119.88				MinPt-O-SF	
10111.12	67.08	10065.74	10044.04	232.92		OSF1.50	19665.59	9600.00				TD	

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

												Pass	
842.01	32.81	840.04	809.21	N/A		MAS = 10.00 (m)	0.00	0.00				MinPts	
842.02	32.81	840.03	809.21	147861.67		MAS = 10.00 (m)	26.00	26.00				WRP	
844.62	32.81	837.63	811.81	168.12		MAS = 10.00 (m)	1020.00	1020.00				MINPT-O-EQU	
844.82	32.81	834.34	812.01	99.09		MAS = 10.00 (m)	1940.00	1940.00				MinPts	
846.82	32.81	831.25	814.01	62.18		MAS = 10.00 (m)	3020.00	3020.00				MinPts	
848.84	32.81	829.56	816.03	48.97		MAS = 10.00 (m)	3840.00	3840.00				MINPT-O-EQU	
828.35	46.18	796.82	782.19	28.05		OSF1.50	6670.00	6670.00				MinPt-CtCt	
829.08	48.32	796.21	780.76	26.77		OSF1.50	6990.00	6990.00				MINPT-O-EQU	
830.13	49.60	796.40	780.53	26.08		OSF1.50	7180.00	7180.00				MinPt-O-ADP	
842.97	58.15	803.55	784.82	22.46		OSF1.50	8430.00	8430.00				MINPT-O-EQU	
843.81	59.18	803.70	784.63	22.08		OSF1.50	8570.00	8570.00				MinPt-O-ADP	
849.83	63.07	807.12	786.76	20.82		OSF1.50	9119.88	9119.88				MinPt-O-SF	
1593.96	65.20	1549.84	1528.76	37.77		OSF1.50	10970.00	9600.00				MINPT-O-EQU	
1593.13	80.03	1539.12	1513.10	30.58		OSF1.50	11380.00	9600.00				MinPt-CtCt	
1593.53	81.15	1538.77	1512.38	30.15		OSF1.50	11430.00	9600.00				MINPT-O-EQU	
1594.11	81.83	1538.90	1512.28	29.91		OSF1.50	11460.00	9600.00				MinPt-O-ADP	
1571.24	137.34	1479.02	1433.90	17.39		OSF1.50	12970.00	9600.00				MinPt-CtCt	
1567.84	162.04	1459.15	1405.79	14.67		OSF1.50	13640.00	9600.00				MinPt-CtCt	
1572.36	176.91	1453.72	1395.39	13.46		OSF1.50	14050.00	9600.00				MINPT-O-EQU	
1575.94	207.19	1437.20	1368.82	11.51		OSF1.50	14200.00	9600.00				MinPts	
1577.00	207.32	1438.13	1369.68	11.51		OSF1.50	14230.00	9600.00				MinPt-O-SF	
5727.49	102.01	5658.83	5625.49	85.86		OSF1.50	19665.59	9600.00				TD	

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

												Pass	
1232.05	32.81	1230.76	1199.24	N/A		MAS = 10.00 (m)	0.00	0.00				Surface	
1232.05	32.81	1230.76	1199.24	N/A		MAS = 10.00 (m)	26.00	26.00				WRP	
1232.05	86.65	1173.85	1145.39	21.63		OSF1.50	9119.88	9119.88				MinPt-CtCt	
1232.06	86.70	1173.83	1145.36	21.61		OSF1.50	9130.00	9130.00				MINPT-O-EQU	
1232.09	86.75	1173.83	1145.34	21.60		OSF1.50	9140.00	9139.99				MinPt-O-ADP	
1232.82	87.03	1174.37	1145.79	21.54		OSF1.50	9200.00	9199.62				MinPt-O-SF	
2984.43	315.07	2773.95	2669.35	14.26		OSF1.50	19665.59	9600.00				MinPts	

Cimarex Dos Equis 12-13
Federal Com #77H 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	
1320.11	32.81	1301.64	1287.31	76.73		MAS = 10.00 (m)	2800.00	2800.00				MinPts	
1320.14	32.81	1301.57	1287.34	76.29		MAS = 10.00 (m)	2820.00	2820.00				MINPT-O-EQU	
1630.85	49.77	1597.24	1581.08	50.41		OSF1.50	5740.00	5740.00				MinPt-O-SF	
1635.21	79.04	1582.09	1556.17	31.52		OSF1.50	9200.00	9199.62				MinPt-O-SF	
1621.91	78.61	1569.07	1543.30	31.44		OSF1.50	9460.00	9431.99				MinPt-O-SF	
1620.62	78.54	1567.86	1542.12	31.46		OSF1.50	9520.00	9474.94				MinPts	
3669.91	313.00	3460.81	3356.91	17.65		OSF1.50	19665.59	9600.00				MinPts	

Cimarex Dos Equis 12-13
Federal Com #76H Rev1 RM
17Feb20 (Def Plan)

												Pass	
1340.06	32.81	1338.77	1307.25	N/A		MAS = 10.00 (m)	0.00	0.00				Surface	
1340.05	32.81	1338.77	1307.24	N/A		MAS = 10.00 (m)	26.00	26.00				WRP	
1340.05	32.81	1323.46	1307.24	87.49		MAS = 10.00 (m)	2500.00	2500.00				MinPts	
1340.08	32.81	1323.40	1307.27	86.94		MAS = 10.00 (m)	2520.00	2520.00				MINPT-O-EQU	
1660.02	44.79	1629.73	1615.23	57.20		OSF1.50	5260.00	5260.00				MinPt-O-SF	
1665.77	77.62	1613.59	1588.14	32.71		OSF1.50	9180.00	9179.84				MinPt-O-SF	
1626.15	72.31	1577.51	1553.84	34.32		OSF1.50	9860.00	9599.77				MinPts	
1626.13	72.24	1577.53	1553.88	34.35		OSF1.50	9874.96	9600.00				MinPt-CtCt	
1627.85	318.43	1415.14	1309.42	7.69		OSF1.50	19665.59	9600.00				MinPts	

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

												Pass	
1359.99	32.81	1358.70	1327.18	N/A		MAS = 10.00 (m)	0.00	0.00				Surface	
1359.98	32.81	1358.70	1327.18	N/A		MAS = 10.00 (m)	26.00	26.00				WRP	
1359.98	32.81	1343.40	1327.18	88.79		MAS = 10.00 (m)	2500.00	2500.00				MinPts	
1360.01	32.81	1343.34	1327.21	88.28		MAS = 10.00 (m)	2520.00	2520.00				MINPT-O-EQU	
1772.30	46.76	1740.70	1725.54	58.42		OSF1.50	5820.00	5820.00				MinPt-O-SF	
1773.70	73.44	1724.31	1700.26	36.85		OSF1.50	9200.00	9199.62				MinPt-O-SF	
1726.20	68.77	1679.92	1657.43	38.34		OSF1.50	9910.00	9600.00				MinPt-O-ADP	
1726.18	68.71	1679.92	1657.43	38.36		OSF1.50	9920.00	9600.00				MINPT-O-EQU	
1726.13	68.59	1679.97	1657.54	38.44		OSF1.50	9980.00	9600.00				MinPt-CtCt	
1727.84	319.23	1514.56	1408.61	8.15		OSF1.50	19665.59	9600.00				MinPts	

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

												Pass	
2218.31	32.81	2217.02	2185.50	N/A		MAS = 10.00 (m)	0.00	0.00				Surface	
2218.30	32.81	2217.01	2185.49	N/A		MAS = 10.00 (m)	26.00	26.00				WRP	
1457.73	75.56	1406.61	1382.18	29.78		OSF1.50	9130.00	9130.00				MinPt-O-SF	
1416.18	70.90	1368.14	1345.28	30.93		OSF1.50	9860.00	9599.77				MinPt-O-ADP	
1416.16	70.87	1368.14	1345.29	30.94		OSF1.50	9870.00	9599.97				MINPT-O-EQU	
1416.16	70.86	1368.15	1345.31	30.95		OSF1.50	9874.96	9600.00				MinPt-CtCt	
1417.90	321.64	1202.70	1096.28	6.65		OSF1.50	19665.59	9600.00				MinPts	

Cimarex Dos Equis 12-13
Federal Com #73H Rev5 RM
19Dec19 (Def Plan)

												Pass	
1425.50	32.81	1424.22	1392.69	N/A		MAS = 10.00 (m)	0.00	0.00				Surface	
1425.50	32.81	1424.21	1392.69	N/A		MAS = 10.00 (m)	26.00	26.00				WRP	
1425.50	47.80	1393.20	1377.69	45.92		OSF1.50	5000.00	5000.00				MinPt-CtCt	
1425.57	48.02	1393.13	1377.55	45.71		OSF1.50	5030.00	5030.00				MINPT-O-EQU	
1425.64	48.09	1393.15	1377.54	45.65		OSF1.50	5040.00	5040.00				MinPt-O-ADP	
1580.59	60.27	1539.98	1520.31	40.13		OSF1.50	6900.00	6900.00				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		
1551.56	80.32	1497.59	1471.24	29.42		OSF1.50	9550.00	9494.40				MinPt-O-SF	
1550.45	80.22	1496.55	1470.24	29.44		OSF1.50	9600.00	9523.56				MinPts	
1550.45	80.20	1496.56	1470.25	29.45		OSF1.50	9610.00	9528.87				MinPt-CtCt	
3230.96	311.78	3022.68	2919.18	15.60		OSF1.50	19665.59	9600.00				MinPts	
Cimarex Dos Equis 12-13 Federal Com #5H Rev5 RM 19Dec19 (Def Plan)													Pass
1445.37	32.81	1444.09	1412.56	N/A		MAS = 10.00 (m)	0.00	0.00				Surface	
1445.37	32.81	1444.08	1412.56	N/A		MAS = 10.00 (m)	26.00	26.00				WRP	
1445.37	32.81	1427.21	1412.56	85.59		MAS = 10.00 (m)	2750.00	2750.00				MinPts	
1445.39	32.81	1427.14	1412.58	85.10		MAS = 10.00 (m)	2770.00	2770.00				MINPT-O-EOU	
1881.40	42.76	1852.46	1838.64	68.00		OSF1.50	5110.00	5110.00				MinPt-O-SF	
2533.78	65.25	2489.86	2468.53	59.39		OSF1.50	7690.00	7690.00				MinPt-O-SF	
2535.30	75.66	2484.43	2459.63	51.10		OSF1.50	9200.00	9199.62				MinPt-O-SF	
2510.83	74.41	2460.80	2436.42	51.48		OSF1.50	9610.00	9528.87				MinPts	
2510.82	74.38	2460.81	2436.44	51.50		OSF1.50	9620.00	9534.02				MinPt-CtCt	
3777.82	308.27	3571.87	3469.54	18.45		OSF1.50	19665.59	9600.00				MinPts	
Cimarex Dos Equis 13 Federal #2H XEM + MWD Off to 15311 (Def Survey)													Pass
5613.86	32.81	5611.88	5581.06	N/A		MAS = 10.00 (m)	0.00	0.00				Surface	
5613.84	32.81	5611.86	5581.03	N/A		MAS = 10.00 (m)	10.00	10.00				MinPt-O-SF	
5613.84	32.81	5611.86	5581.03	N/A		MAS = 10.00 (m)	20.00	20.00				MinPts	
5613.84	32.81	5611.86	5581.03	N/A		MAS = 10.00 (m)	26.00	26.00				WRP	
5617.76	32.81	5608.43	5584.95	763.87		MAS = 10.00 (m)	1280.00	1280.00				MINPT-O-EOU	
5728.21	63.94	5684.93	5664.27	138.64		OSF1.50	9200.00	9199.62				MinPt-O-SF	
1689.05	123.34	1606.15	1565.71	20.86		OSF1.50	14860.00	9600.00				MinPt-CtCt	
1689.25	123.91	1605.98	1565.34	20.76		OSF1.50	14890.00	9600.00				MINPT-O-EOU	
1689.43	124.10	1606.04	1565.33	20.73		OSF1.50	14900.00	9600.00				MinPt-O-ADP	
1709.88	127.69	1624.10	1582.19	20.38		OSF1.50	15130.00	9600.00				MinPt-O-SF	
2217.34	234.17	2060.56	1983.17	14.31		OSF1.50	18030.00	9600.00				MinPt-CtCt	
2233.51	312.71	2024.38	1920.80	10.77		OSF1.50	19430.00	9600.00				MINPT-O-EOU	
2233.64	312.86	2024.41	1920.78	10.77		OSF1.50	19440.00	9600.00				MinPt-O-ADP	
2237.38	314.03	2027.36	1923.34	10.75		OSF1.50	19540.00	9600.00				MinPt-O-SF	
2248.37	314.68	2037.93	1933.70	10.78		OSF1.50	19665.59	9600.00				TD	
Cimarex Dos Equis 12 Federal Com #2H Pilot Gyro+MWD Off to 12650ft (Def Survey)													Pass
1796.84	32.81	1794.86	1764.03	N/A		MAS = 10.00 (m)	0.00	0.00				Surface	
1796.82	32.81	1794.84	1764.01	N/A		MAS = 10.00 (m)	26.00	26.00				WRP	
1789.45	32.81	1778.68	1756.64	203.52		MAS = 10.00 (m)	1620.00	1620.00				MinPts	
1789.54	32.81	1778.60	1756.74	199.41		MAS = 10.00 (m)	1690.00	1690.00				MINPT-O-EOU	
1789.53	32.81	1777.83	1756.72	183.91		MAS = 10.00 (m)	1950.00	1950.00				MinPts	
1788.83	32.81	1775.23	1756.03	153.70		MAS = 10.00 (m)	2350.00	2350.00				MinPts	
1788.92	32.81	1775.13	1756.12	151.29		MAS = 10.00 (m)	2410.00	2410.00				MINPT-O-EOU	
1784.85	32.81	1766.95	1752.04	111.98		MAS = 10.00 (m)	3330.00	3330.00				MinPts	
1784.94	32.81	1766.87	1752.13	110.81		MAS = 10.00 (m)	3380.00	3380.00				MINPT-O-EOU	
1788.63	32.81	1768.11	1755.83	96.36		MAS = 10.00 (m)	4090.00	4090.00				MINPT-O-EOU	
1783.30	49.77	1749.45	1733.53	55.94		OSF1.50	7180.00	7180.00				MinPt-CtCt	
1783.40	50.04	1749.37	1733.35	55.63		OSF1.50	7220.00	7220.00				MINPT-O-EOU	
1783.46	50.11	1749.39	1733.34	55.55		OSF1.50	7230.00	7230.00				MinPt-O-ADP	
1780.22	62.76	1737.71	1717.46	43.91		OSF1.50	9200.00	9199.62				MinPt-O-SF	
1739.74	59.94	1699.09	1679.80	45.04		OSF1.50	9640.00	9543.76				MinPt-O-ADP	
1739.70	59.88	1699.09	1679.82	45.08		OSF1.50	9650.00	9548.36				MinPts	
10279.93	72.78	10230.75	10207.15	217.76		OSF1.50	19665.59	9600.00				TD	
Cimarex Dos Equis 12 Federal Com #2H ST01 Gyro+MWD 10486ft to 13433ft MD (Def Survey)													Pass
1796.84	32.81	1794.86	1764.03	N/A		MAS = 10.00 (m)	0.00	0.00				Surface	
1796.82	32.81	1794.84	1764.01	N/A		MAS = 10.00 (m)	26.00	26.00				WRP	
1789.45	32.81	1778.68	1756.64	203.52		MAS = 10.00 (m)	1620.00	1620.00				MinPts	
1789.54	32.81	1778.60	1756.74	199.41		MAS = 10.00 (m)	1690.00	1690.00				MINPT-O-EOU	
1789.53	32.81	1777.83	1756.72	183.91		MAS = 10.00 (m)	1950.00	1950.00				MinPts	
1788.83	32.81	1775.23	1756.03	153.70		MAS = 10.00 (m)	2350.00	2350.00				MinPts	
1788.92	32.81	1775.13	1756.12	151.29		MAS = 10.00 (m)	2410.00	2410.00				MINPT-O-EOU	
1784.85	32.81	1766.95	1752.04	111.98		MAS = 10.00 (m)	3330.00	3330.00				MinPts	
1784.94	32.81	1766.87	1752.13	110.81		MAS = 10.00 (m)	3380.00	3380.00				MINPT-O-EOU	
1788.63	32.81	1768.11	1755.83	96.36		MAS = 10.00 (m)	4090.00	4090.00				MINPT-O-EOU	
1783.30	49.77	1749.45	1733.53	55.94		OSF1.50	7180.00	7180.00				MinPt-CtCt	
1783.40	50.04	1749.37	1733.35	55.63		OSF1.50	7220.00	7220.00				MINPT-O-EOU	
1783.46	50.11	1749.39	1733.34	55.55		OSF1.50	7230.00	7230.00				MinPt-O-ADP	
1780.22	62.76	1737.71	1717.46	43.91		OSF1.50	9200.00	9199.62				MinPt-O-SF	
1739.74	59.94	1699.09	1679.80	45.04		OSF1.50	9640.00	9543.76				MinPt-O-ADP	
1739.70	59.88	1699.09	1679.82	45.08		OSF1.50	9650.00	9548.36				MinPts	
2163.94	77.75	2111.45	2086.19	42.80		OSF1.50	10930.00	9600.00				MINPT-O-EOU	
2164.71	78.75	2111.55	2085.96	42.26		OSF1.50	10970.00	9600.00				MinPt-O-ADP	
2194.20	92.20	2132.08	2102.01	36.45		OSF1.50	11460.00	9600.00				MinPt-O-ADP	
2208.08	103.68	2138.30	2104.40	32.54		OSF1.50	11650.00	9600.00				MinPts	
2214.18	108.13	2141.43	2106.05	31.26		OSF1.50	11760.00	9600.00				MinPts	
2215.21	109.17	2141.77	2106.04	30.97		OSF1.50	11780.00	9600.00				MinPt-O-ADP	
2225.32	118.22	2145.84	2107.09	28.69		OSF1.50	11970.00	9600.00				MinPts	
2230.48	195.62	2099.40	2034.86	17.26		OSF1.50	12190.00	9600.00				MinPts	
2233.20	196.13	2101.79	2037.07	17.24		OSF1.50	12280.00	9600.00				MinPt-O-SF	
7822.73	105.49	7751.74	7717.24	113.33		OSF1.50	19665.59	9600.00				TD	
Cimarex Dos Equis 12 Federal Com #2H ST02 Gyro+MWD 13330ft to 15399ft MD (Def Survey)													Pass
1796.84	32.81	1794.86	1764.03	N/A		MAS = 10.00 (m)	0.00	0.00				Surface	
1796.82	32.81	1794.84	1764.01	N/A		MAS = 10.00 (m)	26.00	26.00				WRP	
1789.45	32.81	1778.68	1756.64	203.52		MAS = 10.00 (m)	1620.00	1620.00				MinPts	
1789.54	32.81	1778.60	1756.74	199.41		MAS = 10.00 (m)	1690.00	1690.00				MINPT-O-EOU	
1789.53	32.81	1777.83	1756.72	183.91		MAS = 10.00 (m)	1950.00	1950.00				MinPts	
1788.83	32.81	1775.23	1756.03	153.70		MAS = 10.00 (m)	2350.00	2350.00				MinPts	
1788.92	32.81	1775.13	1756.12	151.29		MAS = 10.00 (m)	2410.00	2410.00				MINPT-O-EOU	
1784.85	32.81	1766.95	1752.04	111.98		MAS = 10.00 (m)	3330.00	3330.00				MinPts	
1784.94	32.81	1766.87	1752.13	110.81		MAS = 10.00 (m)	3380.00	3380.00				MINPT-O-EOU	
1788.63	32.81	1768.11	1755.83	96.36		MAS = 10.00 (m)	4090.00	4090.00				MINPT-O-EOU	

Offset Trajectory	Separation			Allow Dev. (ft)	Sep. Fact.	Controlling Rule	Reference Trajectory		Risk Level			Alert	Status
	Cl-Ct (ft)	MAS (ft)	EOU (ft)				MD (ft)	TVD (ft)	Alert	Minor	Major		
1783.30	49.77	1749.45	1733.53	55.94		OSF1.50	7180.00	7180.00				MinPt-CtCt	
1783.40	50.04	1749.37	1733.35	55.63		OSF1.50	7220.00	7220.00				MinPt-O-EOU	
1783.46	50.11	1749.38	1733.34	55.55		OSF1.50	7230.00	7230.00				MinPt-O-ADP	
1780.22	62.76	1737.71	1717.48	43.91		OSF1.50	9200.00	9199.62				MinPt-O-SF	
1739.74	59.94	1699.09	1679.80	45.04		OSF1.50	9640.00	9543.76				MinPt-O-ADP	
1739.70	59.88	1699.09	1679.82	45.08		OSF1.50	9650.00	9548.36				MinPts	
2163.94	77.75	2111.44	2086.19	42.80		OSF1.50	10930.00	9600.00				MINPT-O-EOU	
2164.71	78.75	2111.55	2085.96	42.26		OSF1.50	10970.00	9600.00				MinPt-O-ADP	
2194.20	92.20	2132.08	2102.01	36.45		OSF1.50	11460.00	9600.00				MinPt-O-ADP	
2208.08	103.68	2138.31	2104.40	32.54		OSF1.50	11650.00	9600.00				MinPts	
2214.18	108.13	2141.43	2106.05	31.26		OSF1.50	11780.00	9600.00				MinPts	
2215.21	109.17	2141.77	2106.04	30.97		OSF1.50	11780.00	9600.00				MinPt-O-ADP	
2225.32	118.22	2145.84	2107.09	28.69		OSF1.50	11970.00	9600.00				MinPts	
2229.87	126.38	2144.95	2103.49	26.86		OSF1.50	12100.00	9600.00				MinPts	
2280.76	160.56	2173.06	2120.20	21.56		OSF1.50	12900.00	9600.00				MINPT-O-EOU	
2281.25	161.13	2173.17	2120.12	21.48		OSF1.50	12910.00	9600.00				MinPt-O-ADP	
2284.46	201.89	2149.21	2082.57	17.13		OSF1.50	13690.00	9600.00				MinPt-CtCt	
2285.24	204.33	2148.36	2080.91	16.93		OSF1.50	13780.00	9600.00				MINPT-O-EOU	
2289.81	271.57	2108.10	2018.24	12.73		OSF1.50	14140.00	9600.00				MinPts	
2291.49	272.01	2109.49	2019.48	12.72		OSF1.50	14210.00	9600.00				MinPt-O-SF	
5999.58	143.44	5903.29	5856.14	63.60		OSF1.50	19665.59	9600.00				TD	

Curtis Hankamer Gulf Hanagan
Federal #3 (Offset) Plugged Oil
Inc Only 0ft-5049ft (Def Survey)

Pass

1961.56	32.81	1960.28	1928.75	N/A	MAS = 10.00 (m)	0.00	0.00					Surface	
1961.11	32.81	1959.77	1928.30	39377.40	MAS = 10.00 (m)	26.00	26.00					MinPt-O-SF	
1956.60	36.93	1931.56	1919.68	82.30	OSF1.50	640.00	640.00					MinPt-CtCt	
1954.88	102.55	1886.09	1852.33	28.94	OSF1.50	1990.00	1990.00					MinPt-CtCt	
1947.73	185.08	1823.91	1762.65	15.89	OSF1.50	3540.00	3540.00					MinPt-CtCt	
1950.80	240.98	1789.72	1709.82	12.20	OSF1.50	4610.00	4610.00					MinPt-CtCt	
1952.31	245.58	1788.16	1706.73	11.98	OSF1.50	4740.00	4740.00					MINPT-O-EOU	
1954.08	247.65	1788.55	1706.43	11.89	OSF1.50	4800.00	4800.00					MinPt-O-ADP	
1962.43	265.74	1784.84	1696.69	11.12	OSF1.50	5120.00	5120.00					MinPts	
4586.06	64.66	4542.52	4521.39	108.51	OSF1.50	11180.00	9600.00					MinPt-CtCt	
4586.36	65.40	4542.33	4520.95	107.27	OSF1.50	11230.00	9600.00					MINPT-O-EOU	
4586.80	65.91	4542.43	4520.88	106.43	OSF1.50	11260.00	9600.00					MinPt-O-ADP	
6206.82	211.98	6065.07	5994.84	44.18	OSF1.50	15360.00	9600.00					MinPt-O-SF	
9647.70	265.18	9470.49	9382.52	54.83	OSF1.50	19665.59	9600.00					TD	

Cimarex Dos Equis 12-13
Federal Com #90H Rev1 RM
14Feb20 (Def Plan)

Pass

2238.29	32.81	2237.00	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	
2238.28	85.02	2181.17	2153.26	40.07	OSF1.50	8950.00	8950.00					MinPts	
2092.55	82.36	2037.11	2010.20	38.84	OSF1.50	9690.00	9564.88					MinPt-O-SF	
2088.99	82.23	2033.63	2006.76	38.84	OSF1.50	9720.00	9575.26					MinPt-O-SF	
2076.11	81.36	2021.31	1994.72	39.01	OSF1.50	9980.00	9600.00					MinPts	
2076.10	81.36	2021.32	1994.75	39.03	OSF1.50	9990.00	9600.00					MinPt-CtCt	
2077.80	316.65	1866.16	1761.15	9.89	OSF1.50	19665.59	9600.00					MinPts	

Cimarex Dos Equis 12-13
Federal Com #89H Rev1 RM
14Feb20 (Def Plan)

Pass

2258.26	32.81	2256.97	2225.45	N/A	MAS = 10.00 (m)	0.00	0.00					Surface	
2258.25	32.81	2256.96	2225.44	N/A	MAS = 10.00 (m)	26.00	26.00					WRP	
2258.25	32.81	2244.81	2225.44	185.79	MAS = 10.00 (m)	2000.00	2000.00					MinPts	
2258.30	32.81	2244.72	2225.49	183.69	MAS = 10.00 (m)	2030.00	2030.00					MINPT-O-EOU	
2777.41	49.44	2744.03	2727.98	86.48	OSF1.50	5920.00	5920.00					MinPt-O-SF	
2777.17	74.56	2727.03	2702.61	56.82	OSF1.50	9180.00	9179.84					MinPt-O-SF	
2736.01	69.87	2689.00	2666.14	59.81	OSF1.50	9860.00	9599.77					MinPt-O-ADP	
2735.98	69.84	2689.00	2666.15	59.84	OSF1.50	9870.00	9599.97					MINPT-O-EOU	
2735.98	69.82	2689.01	2666.16	59.86	OSF1.50	9874.96	9600.00					MinPt-CtCt	
2737.71	319.78	2524.11	2417.95	12.89	OSF1.50	19665.59	9600.00					MinPts	

Cimarex Dos Equis 12-13
Federal Com #88H Rev1 RM
14Feb20 (Def Plan)

Pass

2278.24	32.81	2276.95	2245.43	N/A	MAS = 10.00 (m)	0.00	0.00					Surface	
2278.23	32.81	2276.94	2245.42	N/A	MAS = 10.00 (m)	26.00	26.00					WRP	
2278.23	32.81	2266.68	2245.42	221.88	MAS = 10.00 (m)	1700.00	1700.00					MinPts	
2278.27	32.81	2266.58	2245.47	218.89	MAS = 10.00 (m)	1730.00	1730.00					MINPT-O-EOU	
3434.87	80.27	3380.93	3354.61	65.21	OSF1.50	9030.00	9030.00					MinPt-O-SF	
3435.10	79.94	3381.37	3355.15	65.43	OSF1.50	9200.00	9199.62					MinPt-O-SF	
3395.89	76.77	3344.29	3319.12	67.46	OSF1.50	9870.00	9599.97					MinPts	
3395.89	76.76	3344.29	3319.13	67.46	OSF1.50	9874.96	9600.00					MinPt-CtCt	
3397.62	326.02	3179.84	3071.60	15.69	OSF1.50	19665.59	9600.00					MinPts	

Cimarex Dos Equis 12-13
Federal Com #87H Rev0 RM
13Sept19 (Non-Def Plan)

Pass

2321.68	32.81	2320.39	2288.87	N/A	MAS = 10.00 (m)	0.00	0.00					Surface	
2321.67	32.81	2320.38	2288.86	N/A	MAS = 10.00 (m)	26.00	26.00					WRP	
2285.17	86.75	2226.89	2198.43	40.11	OSF1.50	9620.00	9534.02					MinPt-O-SF	
2284.25	86.66	2226.03	2197.59	40.13	OSF1.50	9670.00	9557.00					MinPts	
3610.44	312.61	3401.61	3297.83	17.39	OSF1.50	19660.00	9600.00					MinPt-CtCt	
3610.45	312.60	3401.57	3297.77	17.39	OSF1.50	19665.59	9600.00					MinPts	

Cimarex Dos Equis 12-13
Federal Com #86H Rev1 RM
03Dec19 (Def Plan)

Pass

2341.63	32.81	2340.34	2308.82	N/A	MAS = 10.00 (m)	0.00	0.00					Surface	
2341.62	32.81	2340.33	2308.81	N/A	MAS = 10.00 (m)	26.00	26.00					WRP	
2341.62	32.81	2331.32	2308.81	259.86	MAS = 10.00 (m)	1500.00	1500.00					MinPts	
2341.66	32.81	2331.23	2308.85	255.79	MAS = 10.00 (m)	1530.00	1530.00					MINPT-O-EOU	
3436.63	81.54	3381.84	3355.09	64.21	OSF1.50	9000.00	9000.00					MinPt-O-SF	
3436.44	81.39	3381.75	3355.05	64.32	OSF1.50	9200.00	9199.62					MinPt-O-SF	
3419.91	80.16	3366.04	3339.75	65.02	OSF1.50	9570.00	9506.56					MinPts	
3419.90	80.12	3366.06	3339.78	65.05	OSF1.50	9580.00	9512.40					MinPt-CtCt	
4382.29	308.70	4176.06	4073.59	21.38	OSF1.50	19665.59	9600.00					MinPts	

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			
Cimarex Dos Equis 12-13 Federal Com #6H - Rev2 RM 03Dec19 (Def Plan)														
	2361.57	32.81	2360.29	2328.76	N/A	MAS = 10.00 (m)	0.00	0.00				Surface	Pass	
	2361.56	32.81	2360.27	2328.75	N/A	MAS = 10.00 (m)	26.00	26.00				WRP		
	2361.56	32.81	2351.27	2328.75	262.08	MAS = 10.00 (m)	1500.00	1500.00				MinPts		
	2361.61	32.81	2351.18	2328.80	258.11	MAS = 10.00 (m)	1530.00	1530.00				MINPT-O-EOU		
	2829.91	45.53	2799.13	2784.38	95.83	OSF1.50	5380.00	5380.00				MinPt-O-SF		
	2829.29	74.73	2779.04	2754.56	57.76	OSF1.50	9200.00	9199.62				MinPt-O-SF		
	2809.08	74.10	2759.25	2734.98	57.84	OSF1.50	9440.00	9416.56				MinPt-O-SF		
	2793.85	73.42	2744.48	2720.43	58.07	OSF1.50	9680.00	9561.03				MinPt-O-ADP		
	2793.82	73.39	2744.47	2720.43	58.10	OSF1.50	9690.00	9564.88				MinPts		
	4430.61	308.53	4224.49	4122.08	21.62	OSF1.50	19665.59	9600.00				MinPts		
Continental Wimberly #4 (Offset) Plugged Oil Inc Only Off- 5030ft (Def Survey)														
	2758.02	32.81	2756.73	2725.21	N/A	MAS = 10.00 (m)	0.00	0.00				Surface		Pass
	2757.81	32.81	2756.50	2725.00	113379.98	MAS = 10.00 (m)	20.00	20.00				MinPt-O-SF		
	2757.77	32.81	2756.47	2724.96	126855.46	MAS = 10.00 (m)	26.00	26.00				WRP		
	2757.74	32.81	2756.42	2724.93	81541.03	MAS = 10.00 (m)	40.00	40.00				MinPts		
	2758.65	65.60	2714.49	2693.05	64.31	OSF1.50	1320.00	1320.00				MinPt-CtCt		
	2757.50	107.31	2685.53	2650.19	38.99	OSF1.50	2120.00	2120.00				MinPt-CtCt		
	2756.60	161.58	2648.45	2595.02	25.78	OSF1.50	3160.00	3160.00				MinPt-CtCt		
	2756.59	208.00	2617.49	2548.59	19.99	OSF1.50	4040.00	4040.00				MinPt-CtCt		
	2758.20	261.20	2583.64	2497.00	15.91	OSF1.50	5070.00	5070.00				MinPts		
	2758.22	261.21	2583.65	2497.01	15.91	OSF1.50	5080.00	5080.00				MinPt-O-SF		
	4985.27	117.49	4906.51	4867.78	64.33	OSF1.50	11160.00	9600.00				MinPt-CtCt		
	4985.35	117.72	4906.44	4867.63	64.21	OSF1.50	11190.00	9600.00				MINPT-O-EOU		
	4985.42	117.79	4906.46	4867.62	64.17	OSF1.50	11200.00	9600.00				MinPt-O-ADP		
	6359.26	212.97	6216.85	6146.29	45.05	OSF1.50	15110.00	9600.00				MinPt-O-SF		
	9857.23	265.69	9679.68	9591.54	55.91	OSF1.50	19665.59	9600.00				TD		
Cimarex Dos Equis 12 Federal Com #1H Gyro Off to 11268ft MD (Def Survey)														
	2965.24	32.81	2963.26	2932.43	N/A	MAS = 10.00 (m)	0.00	0.00				Surface	Pass	
	2965.22	32.81	2963.24	2932.41	N/A	MAS = 10.00 (m)	10.00	10.00				MinPts		
	2965.22	32.81	2963.24	2932.41	804045.73	MAS = 10.00 (m)	26.00	26.00				WRP		
	2965.31	32.81	2963.20	2932.50	22222.83	MAS = 10.00 (m)	70.00	70.00				MINPT-O-EOU		
	2970.29	32.81	2959.84	2937.48	350.37	MAS = 10.00 (m)	1830.00	1830.00				MinPts		
	2954.28	32.81	2933.32	2921.47	155.53	MAS = 10.00 (m)	4170.00	4170.00				MinPts		
	2954.34	32.81	2933.26	2921.53	154.62	MAS = 10.00 (m)	4200.00	4200.00				MINPT-O-EOU		
	3040.38	65.03	2996.30	2975.35	72.49	OSF1.50	9119.88	9119.88				MinPt-O-SF		
	3036.39	65.07	2992.25	2971.32	72.46	OSF1.50	9200.00	9199.62				MinPt-O-SF		
	2979.78	61.68	2937.83	2918.10	75.43	OSF1.50	9730.00	9578.32				MinPts		
	10512.35	88.83	10452.48	10423.53	181.53	OSF1.50	19665.59	9600.00				TD		
Cimarex Dos Equis 12 Federal Com #1H ST01 Gyro+MWD 10508ft to 15399ft MD (Def Survey)														
	2965.24	32.81	2963.26	2932.43	N/A	MAS = 10.00 (m)	0.00	0.00				Surface		Pass
	2965.22	32.81	2963.24	2932.41	N/A	MAS = 10.00 (m)	10.00	10.00				MinPts		
	2965.22	32.81	2963.24	2932.41	804045.73	MAS = 10.00 (m)	26.00	26.00				WRP		
	2965.31	32.81	2963.20	2932.50	22222.83	MAS = 10.00 (m)	70.00	70.00				MINPT-O-EOU		
	2970.29	32.81	2959.84	2937.48	350.37	MAS = 10.00 (m)	1830.00	1830.00				MinPts		
	2954.28	32.81	2933.32	2921.47	155.53	MAS = 10.00 (m)	4170.00	4170.00				MinPts		
	2954.34	32.81	2933.26	2921.53	154.62	MAS = 10.00 (m)	4200.00	4200.00				MINPT-O-EOU		
	3040.38	65.03	2996.30	2975.35	72.49	OSF1.50	9119.88	9119.88				MinPt-O-SF		
	3036.39	65.07	2992.25	2971.32	72.46	OSF1.50	9200.00	9199.62				MinPt-O-SF		
	2979.78	61.68	2937.83	2918.10	75.43	OSF1.50	9730.00	9578.32				MinPts		
	3401.46	171.30	3286.60	3230.16	30.12	OSF1.50	12750.00	9600.00				MinPt-CtCt		
	3402.57	174.73	3285.43	3227.84	29.53	OSF1.50	12870.00	9600.00				MINPT-O-EOU		
	3410.78	204.87	3273.54	3205.91	25.20	OSF1.50	13430.00	9600.00				MinPt-CtCt		
	3403.84	260.97	3229.20	3142.87	19.70	OSF1.50	14130.00	9600.00				MinPt-CtCt		
	3403.88	261.14	3229.12	3142.74	19.69	OSF1.50	14150.00	9600.00				MINPT-O-EOU		
	3403.94	261.23	3229.13	3142.72	19.68	OSF1.50	14160.00	9600.00				MinPt-O-ADP		
	3410.76	262.47	3235.12	3148.29	19.63	OSF1.50	14350.00	9600.00				MinPt-O-SF		
	6496.05	182.77	6373.54	6313.27	53.88	OSF1.50	19665.59	9600.00				TD		
Cimarex Dos Equis 13 Federal #1H ST01 Xem+MWD Off to 15250ft (Def Survey)														
	6233.49	32.81	6231.51	6200.68	N/A	MAS = 10.00 (m)	0.00	0.00				Surface	Pass	
	6233.41	32.81	6231.42	6200.60	842658.50	MAS = 10.00 (m)	20.00	20.00				MinPt-O-SF		
	6233.40	32.81	6231.42	6200.59	N/A	MAS = 10.00 (m)	26.00	26.00				WRP		
	6233.37	32.81	6230.92	6200.56	13040.38	MAS = 10.00 (m)	160.00	160.00				MinPts		
	6234.51	32.81	6230.55	6201.70	3137.81	MAS = 10.00 (m)	500.00	500.00				MINPT-O-EOU		
	6234.87	32.81	6230.21	6202.06	2327.73	MAS = 10.00 (m)	660.00	660.00				MinPts		
	6236.91	32.81	6229.41	6204.10	1130.38	MAS = 10.00 (m)	1290.00	1290.00				MINPT-O-EOU		
	6245.81	32.81	6227.13	6213.00	373.86	MAS = 10.00 (m)	3820.00	3820.00				MinPts		
	6245.32	32.81	6224.74	6212.51	335.60	MAS = 10.00 (m)	4240.00	4240.00				MinPts		
	6245.55	32.81	6224.52	6212.74	327.79	MAS = 10.00 (m)	4340.00	4340.00				MINPT-O-EOU		
	6320.79	61.08	6279.41	6259.71	160.37	OSF1.50	8900.00	8900.00				MINPT-O-EOU		
	6314.28	62.66	6271.85	6251.63	156.03	OSF1.50	9200.00	9199.62				MinPt-O-SF		
	3112.70	122.84	3030.13	2989.86	38.62	OSF1.50	14870.00	9600.00				MinPt-CtCt		
	3113.04	123.80	3029.84	2989.24	38.31	OSF1.50	14920.00	9600.00				MINPT-O-EOU		
	3113.40	124.21	3029.94	2989.19	38.18	OSF1.50	14940.00	9600.00				MinPt-O-ADP		
	3230.89	136.82	3139.02	3094.07	35.92	OSF1.50	15740.00	9600.00				MinPt-O-SF		
	3394.47	188.62	3268.07	3205.85	27.26	OSF1.50	16820.00	9600.00				MinPt-CtCt		
	3399.32	203.62	3262.91	3195.70	25.27	OSF1.50	17220.00	9600.00				MINPT-O-EOU		
	3402.47	207.89	3263.21	3194.58	24.77	OSF1.50	17330.00	9600.00				MinPt-O-ADP		
	3399.71	266.68	3210.82	3122.59	19.20	OSF1.50	18530.00	9600.00				MinPt-CtCt		
	3390.76	270.91	3209.48	3119.82	18.90	OSF1.50	18670.00	9600.00				MINPT-O-EOU		
	3394.91	275.63	3210.50	3119.28	18.60	OSF1.50	18810.00	9600.00				MinPt-O-ADP		
	3409.40	343.61	3179.67	3065.79	14.96	OSF1.50	19460.00	9600.00				MinPts		
	3417.29	345.20	3186.49	3072.09	14.93	OSF1.50	19630.00	9600.00				MinPt-O-SF		
	3420.00	345.43	3189.06	3074.57	14.93	OSF1.50	19665.59	9600.00				TD		
Cimarex Dos Equis 13 Federal #1H Pilot Hole Extreme Off to 11400ft (Def Survey)														
												Pass		

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		
6233.41	32.81	6231.42	6200.60	842658.53		MAS = 10.00 (m)	20.00	20.00				MinPt-O-SF	
6233.40	32.81	6231.42	6200.59	N/A		MAS = 10.00 (m)	26.00	26.00				WRP	
6233.37	32.81	6230.92	6200.56	13040.38		MAS = 10.00 (m)	160.00	160.00				MinPts	
6234.51	32.81	6230.55	6201.70	3137.81		MAS = 10.00 (m)	500.00	500.00				MINPT-O-EOU	
6234.87	32.81	6230.21	6202.06	2327.73		MAS = 10.00 (m)	660.00	660.00				MinPts	
6236.91	32.81	6229.41	6204.10	1130.38		MAS = 10.00 (m)	1290.00	1290.00				MINPT-O-EOU	
6245.81	32.81	6227.13	6213.00	373.86		MAS = 10.00 (m)	3820.00	3820.00				MinPts	
6245.32	32.81	6224.74	6212.51	335.60		MAS = 10.00 (m)	4240.00	4240.00				MinPts	
6245.55	32.81	6224.52	6212.74	327.79		MAS = 10.00 (m)	4340.00	4340.00				MINPT-O-EOU	
6320.79	61.08	6279.41	6259.71	160.37		OSF1.50	8900.00	8900.00				MINPT-O-EOU	
6314.28	62.66	6271.85	6251.63	156.03		OSF1.50	9200.00	9199.62				MinPt-O-SF	
3112.70	122.84	3030.13	2989.86	38.62		OSF1.50	14870.00	9600.00				MinPt-CtCt	
3113.04	123.80	3029.84	2989.24	38.31		OSF1.50	14920.00	9600.00				MINPT-O-EOU	
3113.40	124.21	3029.94	2989.19	38.18		OSF1.50	14940.00	9600.00				MinPt-O-ADP	
3230.89	136.82	3139.02	3094.07	35.92		OSF1.50	15740.00	9600.00				MinPt-O-SF	
5713.70	134.75	5623.21	5578.95	64.53		OSF1.50	19665.59	9600.00				TD	

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

Pass

3133.09	32.81	3131.81	3100.28	N/A		MAS = 10.00 (m)	0.00	0.00				Surface	
3132.90	32.81	3131.59	3100.06	138058.18		MAS = 10.00 (m)	20.00	20.00				MinPt-O-SF	
3132.87	32.81	3131.56	3100.06	150598.97		MAS = 10.00 (m)	26.00	26.00				WRP	
3132.83	32.81	3131.52	3100.03	100661.33		MAS = 10.00 (m)	40.00	40.00				MinPts	
3134.71	57.51	3095.94	3077.20	83.60		OSF1.50	1220.00	1220.00				MinPt-CtCt	
3133.46	113.78	3057.17	3019.67	41.76		OSF1.50	2310.00	2310.00				MinPt-CtCt	
3127.77	174.29	3011.15	2953.49	27.11		OSF1.50	3470.00	3470.00				MinPt-CtCt	
3129.91	231.67	2975.04	2898.25	20.37		OSF1.50	4570.00	4570.00				MinPt-CtCt	
3132.56	242.78	2970.30	2889.81	19.45		OSF1.50	4850.00	4850.00				MINPT-O-EOU	
3135.79	246.60	2970.56	2889.19	19.17		OSF1.50	4960.00	4960.00				MinPt-O-ADP	
3141.91	260.30	2967.95	2881.61	18.19		OSF1.50	5110.00	5110.00				MinPts	
3141.98	260.32	2968.00	2881.66	18.19		OSF1.50	5130.00	5130.00				MinPt-O-SF	
4512.36	74.01	4462.60	4438.35	93.04		OSF1.50	12500.00	9600.00				MinPt-CtCt	
4512.91	75.63	4462.06	4437.28	91.03		OSF1.50	12570.00	9600.00				MINPT-O-EOU	
4513.96	76.91	4462.26	4437.06	89.51		OSF1.50	12620.00	9600.00				MinPt-O-ADP	
5964.22	213.01	5821.79	5751.22	42.23		OSF1.50	16400.00	9600.00				MinPt-O-SF	
8468.06	258.66	8295.19	8209.40	49.34		OSF1.50	19665.59	9600.00				TD	

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

Pass

3143.47	32.81	3142.19	3110.66	N/A		MAS = 10.00 (m)	0.00	0.00				Surface	
3143.30	32.81	3141.99	3110.49	164428.63		MAS = 10.00 (m)	20.00	20.00				MinPt-O-SF	
3143.27	32.81	3141.97	3110.46	194239.23		MAS = 10.00 (m)	26.00	26.00				WRP	
3143.23	32.81	3141.91	3110.44	56160.32		MAS = 10.00 (m)	40.00	40.00				MinPts	
3137.23	71.32	3089.31	3065.97	67.17		OSF1.50	1480.00	1480.00				MinPt-CtCt	
3136.60	129.95	3049.54	3006.65	36.55		OSF1.50	2610.00	2610.00				MinPt-CtCt	
3145.07	221.78	2996.79	2923.29	21.39		OSF1.50	4370.00	4370.00				MinPt-CtCt	
3148.60	232.30	2993.30	2916.30	20.44		OSF1.50	4640.00	4640.00				MINPT-O-EOU	
3142.52	257.69	2970.30	2884.83	18.38		OSF1.50	5070.00	5070.00				MinPt-CtCt	
3142.52	257.69	2970.29	2884.83	18.38		OSF1.50	5080.00	5080.00				MinPts	
3142.55	257.70	2970.32	2884.85	18.38		OSF1.50	5090.00	5090.00				MinPt-O-SF	
6673.83	208.44	6534.44	6465.38	48.31		OSF1.50	13660.00	9600.00				MinPt-O-SF	
11249.10	267.15	11070.57	10981.95	63.46		OSF1.50	19665.59	9600.00				TD	

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

Pass

3573.49	32.81	3572.21	3540.68	N/A		MAS = 10.00 (m)	0.00	0.00				Surface	
3573.12	32.81	3571.78	3540.31	73594.28		MAS = 10.00 (m)	26.00	26.00				MinPt-O-SF	
3572.92	32.81	3571.49	3540.11	26125.59		MAS = 10.00 (m)	70.00	70.00				MinPts	
3570.63	61.82	3528.99	3508.81	88.45		OSF1.50	1340.00	1340.00				MinPt-CtCt	
3570.20	119.98	3489.79	3450.22	45.10		OSF1.50	2460.00	2460.00				MinPt-CtCt	
3572.84	127.78	3487.23	3445.06	42.35		OSF1.50	2690.00	2690.00				MINPT-O-EOU	
3588.84	200.87	3454.50	3387.98	26.96		OSF1.50	3960.00	3960.00				MinPt-CtCt	
3589.11	201.64	3454.25	3387.47	26.86		OSF1.50	4010.00	4010.00				MINPT-O-EOU	
3589.36	201.95	3454.30	3387.41	26.82		OSF1.50	4030.00	4030.00				MinPt-O-ADP	
3586.02	241.24	3424.76	3344.78	22.41		OSF1.50	4750.00	4750.00				MinPt-CtCt	
3586.97	243.98	3423.83	3342.99	22.16		OSF1.50	4860.00	4860.00				MINPT-O-EOU	
3588.02	245.20	3424.12	3342.82	22.06		OSF1.50	4910.00	4910.00				MinPt-O-ADP	
3594.65	263.22	3418.74	3331.43	20.58		OSF1.50	5140.00	5140.00				MinPts	
3594.83	263.25	3418.91	3331.58	20.58		OSF1.50	5170.00	5170.00				MinPt-O-SF	
5429.43	157.89	5323.74	5271.54	51.99		OSF1.50	11170.00	9600.00				MinPt-CtCt	
5429.47	157.90	5323.71	5271.48	51.96		OSF1.50	11190.00	9600.00				MINPT-O-EOU	
5429.51	158.04	5323.73	5271.48	51.94		OSF1.50	11200.00	9600.00				MinPt-O-ADP	
6476.35	218.07	6330.54	6258.28	44.80		OSF1.50	14700.00	9600.00				MinPt-O-SF	
10082.77	271.87	9901.09	9810.89	55.89		OSF1.50	19665.59	9600.00				TD	

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

Pass

3914.10	32.81	3912.81	3881.29	N/A		MAS = 10.00 (m)	0.00	0.00				Surface	
3913.87	32.81	3912.56	3881.06	159865.90		MAS = 10.00 (m)	26.00	26.00				MinPt-O-SF	
3913.81	32.81	3912.45	3881.00	55072.61		MAS = 10.00 (m)	50.00	50.00				MinPts	
3913.08	99.74	3846.16	3813.35	59.60		OSF1.50	1980.00	1980.00				MinPt-CtCt	
3908.91	203.73	3772.66	3705.18	28.96		OSF1.50	3950.00	3950.00				MinPt-CtCt	
3918.33	262.46	3742.94	3655.88	22.50		OSF1.50	5070.00	5070.00				MinPts	
3918.40	262.46	3743.00	3655.94	22.50		OSF1.50	5090.00	5090.00				MinPt-O-SF	
5292.14	149.07	5192.33	5143.07	53.70		OSF1.50	12170.00	9600.00				MinPt-CtCt	
5292.24	149.34	5192.25	5142.90	53.61		OSF1.50	12200.00	9600.00				MINPT-O-EOU	
5292.40	149.52	5192.29	5142.88	53.54		OSF1.50	12220.00	9600.00				MinPt-O-ADP	
6385.12	221.40	6237.09	6163.72	43.50		OSF1.50	15740.00	9600.00				MinPt-O-SF	
9177.61	268.91	8997.91	8908.70	51.43		OSF1.50	19665.59	9600.00				TD	

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

Pass

4441.69	32.81	4440.41	4408.88	N/A		MAS = 10.00 (m)	0.00	0.00				Surface	
4441.64	32.81	4440.35	4408.83	656711.62		MAS = 10.00 (m)	10.00	10.00				MinPt-O-SF	
4441.61	32.81	4440.32	4408.80	N/A		MAS = 10.00 (m)	26.00	26.00				WRP	
4441.61	32.81	4440.27	4408.80	89920.86		MAS = 10.00 (m)	30.00	30.00				MinPts	
4441.53	40.23	4414.34	4401.35	171.01		OSF1.50	890.00	890.00				MinPt-CtCt	
4441.18	76.92	4389.47	4364.26	88.05		OSF1.50	1590.00	1590.00				MinPt-CtCt	
4440.68	128.49	4354.59	4312.18	52.35		OSF1.50	2580.00	2580.00				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		
4438.23	178.21	4318.99	4260.02	37.62		OSF1.50	3530.00	3530.00				MinPt-CtCt	
4442.95	237.53	4284.17	4205.42	28.20		OSF1.50	4670.00	4670.00				MinPt-CtCt	
4447.32	250.53	4279.87	4196.79	26.76		OSF1.50	5020.00	5020.00				MINPT-O-EQU	
4448.63	261.74	4273.71	4186.89	25.61		OSF1.50	5130.00	5130.00				MinPts	
4448.76	261.76	4273.82	4186.99	25.61		OSF1.50	5160.00	5160.00				MinPt-O-SF	
4495.12	100.58	4427.64	4394.55	67.89		OSF1.50	13820.00	9600.00				MinPt-CtCt	
4495.69	102.25	4427.10	4393.44	66.77		OSF1.50	13890.00	9600.00				MINPT-O-EQU	
4496.77	103.54	4427.31	4393.23	65.95		OSF1.50	13940.00	9600.00				MinPt-O-ADP	
5728.82	219.31	5582.18	5509.51	39.41		OSF1.50	17370.00	9600.00				MinPt-O-SF	
7375.27	256.56	7203.81	7118.72	43.33		OSF1.50	19665.59	9600.00				TD	
Standind Wimberly A Unit B #1 Inc Only (Def Survey)													Pass
6014.41	32.81	6012.43	5981.60	N/A		MAS = 10.00 (m)	0.00	0.00				Surface	
6014.31	32.81	6012.32	5981.50	539311.17		MAS = 10.00 (m)	20.00	20.00				MinPt-O-SF	
6014.29	32.81	6012.30	5981.49	603421.84		MAS = 10.00 (m)	26.00	26.00				WRP	
5904.08	554.32	5533.84	5349.75	16.03		OSF1.50	5020.00	5020.00				MinPt-O-SF	
5903.70	554.24	5533.52	5349.48	16.03		OSF1.50	5080.00	5080.00				MinPts	
5903.69	554.22	5533.53	5349.48	16.03		OSF1.50	5090.00	5090.00				MinPt-CtCt	
6457.21	388.22	6197.74	6068.99	25.07		OSF1.50	10740.00	9600.00				MinPt-O-SF	
4810.17	220.17	4662.73	4590.00	33.06		OSF1.50	15050.00	9600.00				MinPt-CtCt	
4810.71	221.64	4662.29	4589.07	32.84		OSF1.50	15120.00	9600.00				MINPT-O-EQU	
4811.72	222.85	4662.49	4588.87	32.66		OSF1.50	15170.00	9600.00				MinPt-O-ADP	
6143.80	417.83	5864.59	5725.97	22.13		OSF1.50	18870.00	9600.00				MinPt-O-SF	
6667.90	447.80	6368.71	6220.11	22.43		OSF1.50	19665.59	9600.00				TD	
Westates Petroleum Wolley #1 (Offset) Plugged Oil Blind Off- 5063ft (Def Survey)													Pass
10177.81	32.81	10176.52	10145.00	N/A		MAS = 10.00 (m)	0.00	0.00				Surface	
10177.70	32.81	10176.40	10144.89	781322.02		MAS = 10.00 (m)	26.00	26.00				WRP	
10177.68	1574.88	9127.31	8602.77	9.70		OSF1.50	5110.00	5110.00				MinPt-CtCt	
10177.66	1577.46	9125.59	8600.20	9.69		OSF1.50	5120.00	5120.00				MinPts	
6269.28	1109.88	5528.93	5159.40	8.48		OSF1.50	15950.00	9600.00				MinPt-O-SF	
5426.09	914.21	4816.15	4511.85	8.91		OSF1.50	19090.00	9600.00				MinPt-CtCt	
5426.14	914.40	4816.11	4511.74	8.91		OSF1.50	19120.00	9600.00				MINPT-O-EQU	
5426.28	914.56	4816.15	4511.72	8.91		OSF1.50	19140.00	9600.00				MinPt-O-ADP	
5456.46	927.39	4837.77	4529.07	8.84		OSF1.50	19665.59	9600.00				MinPt-O-SF	



Cimarex Dos Equis 12-13 Federal Com #51H Rev1 RM 17Feb20 Proposal

Geodetic Report

(Def Plan)



Report Date:	February 17, 2020 - 04:27 PM	Survey / DLS Computation:	Minimum Curvature / Lubinski
Client:	Cimarex Energy	Vertical Section Azimuth:	179.670 ° (Grid North)
Field:	NM Lea County (NAD 83)	Vertical Section Origin:	0.000 ft, 0.000 ft
Structure / Slot:	Cimarex Dos Equis 12-13 Federal Com #51H / New Slot	TVD Reference Datum:	RKB
Well:	Dos Equis 12-13 Federal Com #51H	TVD Reference Elevation:	3634.200 ft above MSL
Borehole:	Dos Equis 12-13 Federal Com #51H	Seabed / Ground Elevation:	3608.200 ft above MSL
UWI / API#:	Unknown / Unknown	Magnetic Declination:	6.617 °
Survey Name:	Cimarex Dos Equis 12-13 Federal Com #51H Rev1 RM 17Feb20	Total Gravity Field Strength:	998.4380mgn (9.80665 Based)
Survey Date:	December 27, 2019	Gravity Model:	GARM
Tort / AHD / DDI / ERD Ratio:	90.610 ° / 10272.189 ft / 6.280 / 1.070	Total Magnetic Field Strength:	47842.501 nT
Coordinate Reference System:	NAD83 New Mexico State Plane, Eastern Zone, US Feet	Magnetic Dip Angle:	59.880 °
Location Lat / Long:	N 32° 14' 20.10665", W 103° 37' 55.07700"	Declination Date:	February 17, 2020
Location Grid N/E Y/X:	N 451360.150 ftUS, E 758189.740 ftUS	Magnetic Declination Model:	HDGM 2019
CRS Grid Convergence Angle:	0.3742 °	North Reference:	Grid North
Grid Scale Factor:	0.99996295	Grid Convergence Used:	0.3742 °
Version / Patch:	2.10.787.0	Total Corr Mag North->Grid North:	6.2428 °
		Local Coord Referenced To:	Well Head

Comments	MD (ft)	Incl (°)	Azim Grid (°)	TVD (ft)	VSEC (ft)	NS (ft)	EW (ft)	DLS (°/100ft)	Northing (ftUS)	Easting (ftUS)	Latitude (N/S ° ' '')	Longitude (E/W ° ' '')
SHL [195' FNL, 1500' FWL]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	N/A	451360.15	758189.74	N 32 14 20.11	W 103 37 55.08
	100.00	0.00	169.65	100.00	0.00	0.00	0.00	0.00	451360.15	758189.74	N 32 14 20.11	W 103 37 55.08
	200.00	0.00	169.65	200.00	0.00	0.00	0.00	0.00	451360.15	758189.74	N 32 14 20.11	W 103 37 55.08
	300.00	0.00	169.65	300.00	0.00	0.00	0.00	0.00	451360.15	758189.74	N 32 14 20.11	W 103 37 55.08
	400.00	0.00	169.65	400.00	0.00	0.00	0.00	0.00	451360.15	758189.74	N 32 14 20.11	W 103 37 55.08
	500.00	0.00	169.65	500.00	0.00	0.00	0.00	0.00	451360.15	758189.74	N 32 14 20.11	W 103 37 55.08
	600.00	0.00	169.65	600.00	0.00	0.00	0.00	0.00	451360.15	758189.74	N 32 14 20.11	W 103 37 55.08
	700.00	0.00	169.65	700.00	0.00	0.00	0.00	0.00	451360.15	758189.74	N 32 14 20.11	W 103 37 55.08
	800.00	0.00	169.65	800.00	0.00	0.00	0.00	0.00	451360.15	758189.74	N 32 14 20.11	W 103 37 55.08
	900.00	0.00	169.65	900.00	0.00	0.00	0.00	0.00	451360.15	758189.74	N 32 14 20.11	W 103 37 55.08
	1000.00	0.00	169.65	1000.00	0.00	0.00	0.00	0.00	451360.15	758189.74	N 32 14 20.11	W 103 37 55.08
	1100.00	0.00	169.65	1100.00	0.00	0.00	0.00	0.00	451360.15	758189.74	N 32 14 20.11	W 103 37 55.08
Rustler	1185.00	0.00	169.65	1185.00	0.00	0.00	0.00	0.00	451360.15	758189.74	N 32 14 20.11	W 103 37 55.08
	1200.00	0.00	169.65	1200.00	0.00	0.00	0.00	0.00	451360.15	758189.74	N 32 14 20.11	W 103 37 55.08
	1300.00	0.00	169.65	1300.00	0.00	0.00	0.00	0.00	451360.15	758189.74	N 32 14 20.11	W 103 37 55.08
	1400.00	0.00	169.65	1400.00	0.00	0.00	0.00	0.00	451360.15	758189.74	N 32 14 20.11	W 103 37 55.08
Salado (Top Salt)	1500.00	0.00	169.65	1500.00	0.00	0.00	0.00	0.00	451360.15	758189.74	N 32 14 20.11	W 103 37 55.08
	1600.00	0.00	169.65	1600.00	0.00	0.00	0.00	0.00	451360.15	758189.74	N 32 14 20.11	W 103 37 55.08
	1700.00	0.00	169.65	1700.00	0.00	0.00	0.00	0.00	451360.15	758189.74	N 32 14 20.11	W 103 37 55.08
	1800.00	0.00	169.65	1800.00	0.00	0.00	0.00	0.00	451360.15	758189.74	N 32 14 20.11	W 103 37 55.08
	1900.00	0.00	169.65	1900.00	0.00	0.00	0.00	0.00	451360.15	758189.74	N 32 14 20.11	W 103 37 55.08
	2000.00	0.00	169.65	2000.00	0.00	0.00	0.00	0.00	451360.15	758189.74	N 32 14 20.11	W 103 37 55.08
	2100.00	0.00	169.65	2100.00	0.00	0.00	0.00	0.00	451360.15	758189.74	N 32 14 20.11	W 103 37 55.08
	2200.00	0.00	169.65	2200.00	0.00	0.00	0.00	0.00	451360.15	758189.74	N 32 14 20.11	W 103 37 55.08
	2300.00	0.00	169.65	2300.00	0.00	0.00	0.00	0.00	451360.15	758189.74	N 32 14 20.11	W 103 37 55.08
	2400.00	0.00	169.65	2400.00	0.00	0.00	0.00	0.00	451360.15	758189.74	N 32 14 20.11	W 103 37 55.08

Comments	MD (ft)	Incl (°)	Azim Grid (°)	TVD (ft)	VSEC (ft)	NS (ft)	EW (ft)	DLS (°/100ft)	Northing (ftUS)	Easting (ftUS)	Latitude (N/S ° ' ")	Longitude (E/W ° ' ")
	2500.00	0.00	169.65	2500.00	0.00	0.00	0.00	0.00	451360.15	758189.74	N 32 14 20.11	W 103 37 55.08
	2600.00	0.00	169.65	2600.00	0.00	0.00	0.00	0.00	451360.15	758189.74	N 32 14 20.11	W 103 37 55.08
	2700.00	0.00	169.65	2700.00	0.00	0.00	0.00	0.00	451360.15	758189.74	N 32 14 20.11	W 103 37 55.08
	2800.00	0.00	169.65	2800.00	0.00	0.00	0.00	0.00	451360.15	758189.74	N 32 14 20.11	W 103 37 55.08
	2900.00	0.00	169.65	2900.00	0.00	0.00	0.00	0.00	451360.15	758189.74	N 32 14 20.11	W 103 37 55.08
	3000.00	0.00	169.65	3000.00	0.00	0.00	0.00	0.00	451360.15	758189.74	N 32 14 20.11	W 103 37 55.08
	3100.00	0.00	169.65	3100.00	0.00	0.00	0.00	0.00	451360.15	758189.74	N 32 14 20.11	W 103 37 55.08
	3200.00	0.00	169.65	3200.00	0.00	0.00	0.00	0.00	451360.15	758189.74	N 32 14 20.11	W 103 37 55.08
	3300.00	0.00	169.65	3300.00	0.00	0.00	0.00	0.00	451360.15	758189.74	N 32 14 20.11	W 103 37 55.08
	3400.00	0.00	169.65	3400.00	0.00	0.00	0.00	0.00	451360.15	758189.74	N 32 14 20.11	W 103 37 55.08
	3500.00	0.00	169.65	3500.00	0.00	0.00	0.00	0.00	451360.15	758189.74	N 32 14 20.11	W 103 37 55.08
	3600.00	0.00	169.65	3600.00	0.00	0.00	0.00	0.00	451360.15	758189.74	N 32 14 20.11	W 103 37 55.08
	3700.00	0.00	169.65	3700.00	0.00	0.00	0.00	0.00	451360.15	758189.74	N 32 14 20.11	W 103 37 55.08
	3800.00	0.00	169.65	3800.00	0.00	0.00	0.00	0.00	451360.15	758189.74	N 32 14 20.11	W 103 37 55.08
	3900.00	0.00	169.65	3900.00	0.00	0.00	0.00	0.00	451360.15	758189.74	N 32 14 20.11	W 103 37 55.08
	4000.00	0.00	169.65	4000.00	0.00	0.00	0.00	0.00	451360.15	758189.74	N 32 14 20.11	W 103 37 55.08
	4100.00	0.00	169.65	4100.00	0.00	0.00	0.00	0.00	451360.15	758189.74	N 32 14 20.11	W 103 37 55.08
	4200.00	0.00	169.65	4200.00	0.00	0.00	0.00	0.00	451360.15	758189.74	N 32 14 20.11	W 103 37 55.08
	4300.00	0.00	169.65	4300.00	0.00	0.00	0.00	0.00	451360.15	758189.74	N 32 14 20.11	W 103 37 55.08
	4400.00	0.00	169.65	4400.00	0.00	0.00	0.00	0.00	451360.15	758189.74	N 32 14 20.11	W 103 37 55.08
	4500.00	0.00	169.65	4500.00	0.00	0.00	0.00	0.00	451360.15	758189.74	N 32 14 20.11	W 103 37 55.08
Base fo Salt	4600.00	0.00	169.65	4600.00	0.00	0.00	0.00	0.00	451360.15	758189.74	N 32 14 20.11	W 103 37 55.08
	4650.00	0.00	169.65	4650.00	0.00	0.00	0.00	0.00	451360.15	758189.74	N 32 14 20.11	W 103 37 55.08
	4700.00	0.00	169.65	4700.00	0.00	0.00	0.00	0.00	451360.15	758189.74	N 32 14 20.11	W 103 37 55.08
	4800.00	0.00	169.65	4800.00	0.00	0.00	0.00	0.00	451360.15	758189.74	N 32 14 20.11	W 103 37 55.08
Bell Canyon	4900.00	0.00	169.65	4900.00	0.00	0.00	0.00	0.00	451360.15	758189.74	N 32 14 20.11	W 103 37 55.08
	4947.00	0.00	169.65	4947.00	0.00	0.00	0.00	0.00	451360.15	758189.74	N 32 14 20.11	W 103 37 55.08
	5000.00	0.00	169.65	5000.00	0.00	0.00	0.00	0.00	451360.15	758189.74	N 32 14 20.11	W 103 37 55.08
	5100.00	0.00	169.65	5100.00	0.00	0.00	0.00	0.00	451360.15	758189.74	N 32 14 20.11	W 103 37 55.08
	5200.00	0.00	169.65	5200.00	0.00	0.00	0.00	0.00	451360.15	758189.74	N 32 14 20.11	W 103 37 55.08
	5300.00	0.00	169.65	5300.00	0.00	0.00	0.00	0.00	451360.15	758189.74	N 32 14 20.11	W 103 37 55.08
	5400.00	0.00	169.65	5400.00	0.00	0.00	0.00	0.00	451360.15	758189.74	N 32 14 20.11	W 103 37 55.08
	5500.00	0.00	169.65	5500.00	0.00	0.00	0.00	0.00	451360.15	758189.74	N 32 14 20.11	W 103 37 55.08
	5600.00	0.00	169.65	5600.00	0.00	0.00	0.00	0.00	451360.15	758189.74	N 32 14 20.11	W 103 37 55.08
	5700.00	0.00	169.65	5700.00	0.00	0.00	0.00	0.00	451360.15	758189.74	N 32 14 20.11	W 103 37 55.08
Cherry Canyon	5800.00	0.00	169.65	5800.00	0.00	0.00	0.00	0.00	451360.15	758189.74	N 32 14 20.11	W 103 37 55.08
	5874.00	0.00	169.65	5874.00	0.00	0.00	0.00	0.00	451360.15	758189.74	N 32 14 20.11	W 103 37 55.08
	5900.00	0.00	169.65	5900.00	0.00	0.00	0.00	0.00	451360.15	758189.74	N 32 14 20.11	W 103 37 55.08
	6000.00	0.00	169.65	6000.00	0.00	0.00	0.00	0.00	451360.15	758189.74	N 32 14 20.11	W 103 37 55.08
	6100.00	0.00	169.65	6100.00	0.00	0.00	0.00	0.00	451360.15	758189.74	N 32 14 20.11	W 103 37 55.08
	6200.00	0.00	169.65	6200.00	0.00	0.00	0.00	0.00	451360.15	758189.74	N 32 14 20.11	W 103 37 55.08
	6300.00	0.00	169.65	6300.00	0.00	0.00	0.00	0.00	451360.15	758189.74	N 32 14 20.11	W 103 37 55.08
	6400.00	0.00	169.65	6400.00	0.00	0.00	0.00	0.00	451360.15	758189.74	N 32 14 20.11	W 103 37 55.08
	6500.00	0.00	169.65	6500.00	0.00	0.00	0.00	0.00	451360.15	758189.74	N 32 14 20.11	W 103 37 55.08
	6600.00	0.00	169.65	6600.00	0.00	0.00	0.00	0.00	451360.15	758189.74	N 32 14 20.11	W 103 37 55.08
	6700.00	0.00	169.65	6700.00	0.00	0.00	0.00	0.00	451360.15	758189.74	N 32 14 20.11	W 103 37 55.08
	6800.00	0.00	169.65	6800.00	0.00	0.00	0.00	0.00	451360.15	758189.74	N 32 14 20.11	W 103 37 55.08
	6900.00	0.00	169.65	6900.00	0.00	0.00	0.00	0.00	451360.15	758189.74	N 32 14 20.11	W 103 37 55.08
	7000.00	0.00	169.65	7000.00	0.00	0.00	0.00	0.00	451360.15	758189.74	N 32 14 20.11	W 103 37 55.08
	7100.00	0.00	169.65	7100.00	0.00	0.00	0.00	0.00	451360.15	758189.74	N 32 14 20.11	W 103 37 55.08
	7200.00	0.00	169.65	7200.00	0.00	0.00	0.00	0.00	451360.15	758189.74	N 32 14 20.11	W 103 37 55.08
Brushy Canyon	7300.00	0.00	169.65	7300.00	0.00	0.00	0.00	0.00	451360.15	758189.74	N 32 14 20.11	W 103 37 55.08
	7311.00	0.00	169.65	7311.00	0.00	0.00	0.00	0.00	451360.15	758189.74	N 32 14 20.11	W 103 37 55.08
	7400.00	0.00	169.65	7400.00	0.00	0.00	0.00	0.00	451360.15	758189.74	N 32 14 20.11	W 103 37 55.08
	7500.00	0.00	169.65	7500.00	0.00	0.00	0.00	0.00	451360.15	758189.74	N 32 14 20.11	W 103 37 55.08
	7600.00	0.00	169.65	7600.00	0.00	0.00	0.00	0.00	451360.15	758189.74	N 32 14 20.11	W 103 37 55.08
	7700.00	0.00	169.65	7700.00	0.00	0.00	0.00	0.00	451360.15	758189.74	N 32 14 20.11	W 103 37 55.08
	7800.00	0.00	169.65	7800.00	0.00	0.00	0.00	0.00	451360.15	758189.74	N 32 14 20.11	W 103 37 55.08

Comments	MD (ft)	Incl (°)	Azim Grid (°)	TVD (ft)	VSEC (ft)	NS (ft)	EW (ft)	DLS (°/100ft)	Northing (ftUS)	Easting (ftUS)	Latitude (N/S ° ' ")	Longitude (E/W ° ' ")
	7900.00	0.00	169.65	7900.00	0.00	0.00	0.00	0.00	451360.15	758189.74	N 32 14 20.11	W 103 37 55.08
	8000.00	0.00	169.65	8000.00	0.00	0.00	0.00	0.00	451360.15	758189.74	N 32 14 20.11	W 103 37 55.08
	8100.00	0.00	169.65	8100.00	0.00	0.00	0.00	0.00	451360.15	758189.74	N 32 14 20.11	W 103 37 55.08
	8200.00	0.00	169.65	8200.00	0.00	0.00	0.00	0.00	451360.15	758189.74	N 32 14 20.11	W 103 37 55.08
	8300.00	0.00	169.65	8300.00	0.00	0.00	0.00	0.00	451360.15	758189.74	N 32 14 20.11	W 103 37 55.08
	8400.00	0.00	169.65	8400.00	0.00	0.00	0.00	0.00	451360.15	758189.74	N 32 14 20.11	W 103 37 55.08
	8500.00	0.00	169.65	8500.00	0.00	0.00	0.00	0.00	451360.15	758189.74	N 32 14 20.11	W 103 37 55.08
	8600.00	0.00	169.65	8600.00	0.00	0.00	0.00	0.00	451360.15	758189.74	N 32 14 20.11	W 103 37 55.08
	8700.00	0.00	169.65	8700.00	0.00	0.00	0.00	0.00	451360.15	758189.74	N 32 14 20.11	W 103 37 55.08
	8800.00	0.00	169.65	8800.00	0.00	0.00	0.00	0.00	451360.15	758189.74	N 32 14 20.11	W 103 37 55.08
Bone Spring	8845.00	0.00	169.65	8845.00	0.00	0.00	0.00	0.00	451360.15	758189.74	N 32 14 20.11	W 103 37 55.08
	8900.00	0.00	169.65	8900.00	0.00	0.00	0.00	0.00	451360.15	758189.74	N 32 14 20.11	W 103 37 55.08
	9000.00	0.00	169.65	9000.00	0.00	0.00	0.00	0.00	451360.15	758189.74	N 32 14 20.11	W 103 37 55.08
	9100.00	0.00	169.65	9100.00	0.00	0.00	0.00	0.00	451360.15	758189.74	N 32 14 20.11	W 103 37 55.08
KOP - Build 12°/100' DLS	9119.88	0.00	169.65	9119.88	0.00	0.00	0.00	0.00	451360.15	758189.74	N 32 14 20.11	W 103 37 55.08
	9200.00	9.61	169.65	9199.62	6.60	-6.60	1.20	12.00	451353.55	758190.94	N 32 14 20.04	W 103 37 55.06
Avalon	9286.35	19.98	169.65	9283.00	28.29	-28.26	5.16	12.00	451331.89	758194.90	N 32 14 19.83	W 103 37 55.02
	9300.00	21.61	169.65	9295.76	33.06	-33.03	6.03	12.00	451327.13	758195.77	N 32 14 19.78	W 103 37 55.01
	9400.00	33.61	169.65	9384.21	78.62	-78.54	14.34	12.00	451281.61	758204.08	N 32 14 19.33	W 103 37 54.92
Build & Turn 12°/100' DLS	9411.55	35.00	169.65	9393.75	85.03	-84.94	15.51	12.00	451275.21	758205.25	N 32 14 19.27	W 103 37 54.90
	9500.00	45.42	172.78	9461.21	141.45	-141.31	24.06	12.00	451218.84	758213.80	N 32 14 18.71	W 103 37 54.81
	9600.00	57.28	175.18	9523.56	219.02	-218.84	32.10	12.00	451141.32	758221.84	N 32 14 17.94	W 103 37 54.72
	9700.00	69.17	177.01	9568.53	307.97	-307.75	38.09	12.00	451052.41	758227.83	N 32 14 17.06	W 103 37 54.66
	9800.00	81.07	178.57	9594.17	404.38	-404.15	41.77	12.00	450956.02	758231.51	N 32 14 16.10	W 103 37 54.62
Landing Point	9874.96	90.00	179.67	9600.00	479.04	-478.80	42.91	12.00	450881.37	758232.65	N 32 14 15.37	W 103 37 54.61
	9900.00	90.00	179.67	9600.00	504.08	-503.84	43.05	0.00	450856.33	758232.79	N 32 14 15.12	W 103 37 54.61
	10000.00	90.00	179.67	9600.00	604.08	-603.83	43.63	0.00	450756.34	758233.37	N 32 14 14.13	W 103 37 54.61
	10100.00	90.00	179.67	9600.00	704.08	-703.83	44.21	0.00	450656.34	758233.94	N 32 14 13.14	W 103 37 54.62
	10200.00	90.00	179.67	9600.00	804.08	-803.83	44.78	0.00	450556.35	758234.52	N 32 14 12.15	W 103 37 54.62
	10300.00	90.00	179.67	9600.00	904.08	-903.83	45.36	0.00	450456.36	758235.10	N 32 14 11.16	W 103 37 54.62
	10400.00	90.00	179.67	9600.00	1004.08	-1003.83	45.93	0.00	450356.36	758235.67	N 32 14 10.17	W 103 37 54.62
	10500.00	90.00	179.67	9600.00	1104.08	-1103.83	46.51	0.00	450256.37	758236.25	N 32 14 9.18	W 103 37 54.62
	10600.00	90.00	179.67	9600.00	1204.08	-1203.82	47.09	0.00	450156.37	758236.82	N 32 14 8.19	W 103 37 54.62
	10700.00	90.00	179.67	9600.00	1304.08	-1303.82	47.66	0.00	450056.38	758237.40	N 32 14 7.20	W 103 37 54.62
	10800.00	90.00	179.67	9600.00	1404.08	-1403.82	48.24	0.00	449956.38	758237.98	N 32 14 6.21	W 103 37 54.62
	10900.00	90.00	179.67	9600.00	1504.08	-1503.82	48.81	0.00	449856.39	758238.55	N 32 14 5.22	W 103 37 54.62
	11000.00	90.00	179.67	9600.00	1604.08	-1603.82	49.39	0.00	449756.39	758239.13	N 32 14 4.23	W 103 37 54.62
	11100.00	90.00	179.67	9600.00	1704.08	-1703.82	49.97	0.00	449656.40	758239.70	N 32 14 3.24	W 103 37 54.62
	11200.00	90.00	179.67	9600.00	1804.08	-1803.81	50.54	0.00	449556.41	758240.28	N 32 14 2.25	W 103 37 54.63
	11300.00	90.00	179.67	9600.00	1904.08	-1903.81	51.12	0.00	449456.41	758240.85	N 32 14 1.27	W 103 37 54.63
	11400.00	90.00	179.67	9600.00	2004.08	-2003.81	51.69	0.00	449356.42	758241.43	N 32 14 0.28	W 103 37 54.63
	11500.00	90.00	179.67	9600.00	2104.08	-2103.81	52.27	0.00	449256.42	758242.01	N 32 13 59.29	W 103 37 54.63
	11600.00	90.00	179.67	9600.00	2204.08	-2203.81	52.84	0.00	449156.43	758242.58	N 32 13 58.30	W 103 37 54.63
	11700.00	90.00	179.67	9600.00	2304.08	-2303.81	53.42	0.00	449056.43	758243.16	N 32 13 57.31	W 103 37 54.63
	11800.00	90.00	179.67	9600.00	2404.08	-2403.80	54.00	0.00	448956.44	758243.73	N 32 13 56.32	W 103 37 54.63
Lease NMNM0001917 - NMNM0002889 Crossing	11842.10	90.00	179.67	9600.00	2446.18	-2445.90	54.24	0.00	448914.34	758243.98	N 32 13 55.90	W 103 37 54.63
	11900.00	90.00	179.67	9600.00	2504.08	-2503.80	54.57	0.00	448856.44	758244.31	N 32 13 55.33	W 103 37 54.63
	12000.00	90.00	179.67	9600.00	2604.08	-2603.80	55.15	0.00	448756.45	758244.89	N 32 13 54.34	W 103 37 54.63
	12100.00	90.00	179.67	9600.00	2704.08	-2703.80	55.72	0.00	448656.46	758245.46	N 32 13 53.35	W 103 37 54.63
	12200.00	90.00	179.67	9600.00	2804.08	-2803.80	56.30	0.00	448556.46	758246.04	N 32 13 52.36	W 103 37 54.63
	12300.00	90.00	179.67	9600.00	2904.08	-2903.80	56.88	0.00	448456.47	758246.61	N 32 13 51.37	W 103 37 54.64
	12400.00	90.00	179.67	9600.00	3004.08	-3003.80	57.45	0.00	448356.47	758247.19	N 32 13 50.38	W 103 37 54.64

Comments	MD (ft)	Incl (°)	Azim Grid (°)	TVD (ft)	VSEC (ft)	NS (ft)	EW (ft)	DLS (°/100ft)	Northing (ftUS)	Easting (ftUS)	Latitude (N/S ° ' ")	Longitude (E/W ° ' ")
	12500.00	90.00	179.67	9600.00	3104.08	-3103.79	58.03	0.00	448256.48	758247.77	N 32 13 49.39	W 103 37 54.64
	12600.00	90.00	179.67	9600.00	3204.08	-3203.79	58.60	0.00	448156.48	758248.34	N 32 13 48.40	W 103 37 54.64
	12700.00	90.00	179.67	9600.00	3304.08	-3303.79	59.18	0.00	448056.49	758248.92	N 32 13 47.41	W 103 37 54.64
	12800.00	90.00	179.67	9600.00	3404.08	-3403.79	59.76	0.00	447956.49	758249.49	N 32 13 46.42	W 103 37 54.64
	12900.00	90.00	179.67	9600.00	3504.08	-3503.79	60.33	0.00	447856.50	758250.07	N 32 13 45.43	W 103 37 54.64
	13000.00	90.00	179.67	9600.00	3604.08	-3603.79	60.91	0.00	447756.51	758250.64	N 32 13 44.44	W 103 37 54.64
	13100.00	90.00	179.67	9600.00	3704.08	-3703.78	61.48	0.00	447656.51	758251.22	N 32 13 43.45	W 103 37 54.64
	13200.00	90.00	179.67	9600.00	3804.08	-3803.78	62.06	0.00	447556.52	758251.80	N 32 13 42.46	W 103 37 54.64
	13300.00	90.00	179.67	9600.00	3904.08	-3903.78	62.63	0.00	447456.52	758252.37	N 32 13 41.48	W 103 37 54.64
	13400.00	90.00	179.67	9600.00	4004.08	-4003.78	63.21	0.00	447356.53	758252.95	N 32 13 40.49	W 103 37 54.65
	13500.00	90.00	179.67	9600.00	4104.08	-4103.78	63.79	0.00	447256.53	758253.52	N 32 13 39.50	W 103 37 54.65
	13600.00	90.00	179.67	9600.00	4204.08	-4203.78	64.36	0.00	447156.54	758254.10	N 32 13 38.51	W 103 37 54.65
	13700.00	90.00	179.67	9600.00	4304.08	-4303.77	64.94	0.00	447056.54	758254.68	N 32 13 37.52	W 103 37 54.65
	13800.00	90.00	179.67	9600.00	4404.08	-4403.77	65.51	0.00	446956.55	758255.25	N 32 13 36.53	W 103 37 54.65
	13900.00	90.00	179.67	9600.00	4504.08	-4503.77	66.09	0.00	446856.56	758255.83	N 32 13 35.54	W 103 37 54.65
	14000.00	90.00	179.67	9600.00	4604.08	-4603.77	66.67	0.00	446756.56	758256.40	N 32 13 34.55	W 103 37 54.65
	14100.00	90.00	179.67	9600.00	4704.08	-4703.77	67.24	0.00	446656.57	758256.98	N 32 13 33.56	W 103 37 54.65
	14200.00	90.00	179.67	9600.00	4804.08	-4803.77	67.82	0.00	446556.57	758257.56	N 32 13 32.57	W 103 37 54.65
	14300.00	90.00	179.67	9600.00	4904.08	-4903.76	68.39	0.00	446456.58	758258.13	N 32 13 31.58	W 103 37 54.65
	14400.00	90.00	179.67	9600.00	5004.08	-5003.76	68.97	0.00	446356.58	758258.71	N 32 13 30.59	W 103 37 54.65
Lease												
NMNM0002889 - NMNM0553548 Crossing	14490.60	90.00	179.67	9600.00	5094.68	-5094.36	69.49	0.00	446265.99	758259.23	N 32 13 29.69	W 103 37 54.66
	14500.00	90.00	179.67	9600.00	5104.08	-5103.76	69.55	0.00	446256.59	758259.28	N 32 13 29.60	W 103 37 54.66
	14600.00	90.00	179.67	9600.00	5204.08	-5203.76	70.12	0.00	446156.59	758259.86	N 32 13 28.61	W 103 37 54.66
	14700.00	90.00	179.67	9600.00	5304.08	-5303.76	70.70	0.00	446056.60	758260.43	N 32 13 27.62	W 103 37 54.66
	14800.00	90.00	179.67	9600.00	5404.08	-5403.76	71.27	0.00	445956.61	758261.01	N 32 13 26.63	W 103 37 54.66
	14900.00	90.00	179.67	9600.00	5504.08	-5503.75	71.85	0.00	445856.61	758261.59	N 32 13 25.64	W 103 37 54.66
	15000.00	90.00	179.67	9600.00	5604.08	-5603.75	72.43	0.00	445756.62	758262.16	N 32 13 24.65	W 103 37 54.66
	15100.00	90.00	179.67	9600.00	5704.08	-5703.75	73.00	0.00	445656.62	758262.74	N 32 13 23.66	W 103 37 54.66
	15200.00	90.00	179.67	9600.00	5804.08	-5803.75	73.58	0.00	445556.63	758263.31	N 32 13 22.67	W 103 37 54.66
	15300.00	90.00	179.67	9600.00	5904.08	-5903.75	74.15	0.00	445456.63	758263.89	N 32 13 21.68	W 103 37 54.66
	15400.00	90.00	179.67	9600.00	6004.08	-6003.75	74.73	0.00	445356.64	758264.47	N 32 13 20.70	W 103 37 54.66
	15500.00	90.00	179.67	9600.00	6104.08	-6103.74	75.30	0.00	445256.64	758265.04	N 32 13 19.71	W 103 37 54.66
	15600.00	90.00	179.67	9600.00	6204.08	-6203.74	75.88	0.00	445156.65	758265.62	N 32 13 18.72	W 103 37 54.67
	15700.00	90.00	179.67	9600.00	6304.08	-6303.74	76.46	0.00	445056.66	758266.19	N 32 13 17.73	W 103 37 54.67
	15800.00	90.00	179.67	9600.00	6404.08	-6403.74	77.03	0.00	444956.66	758266.77	N 32 13 16.74	W 103 37 54.67
	15900.00	90.00	179.67	9600.00	6504.08	-6503.74	77.61	0.00	444856.67	758267.35	N 32 13 15.75	W 103 37 54.67
	16000.00	90.00	179.67	9600.00	6604.08	-6603.74	78.18	0.00	444756.67	758267.92	N 32 13 14.76	W 103 37 54.67
	16100.00	90.00	179.67	9600.00	6704.08	-6703.73	78.76	0.00	444656.68	758268.50	N 32 13 13.77	W 103 37 54.67
	16200.00	90.00	179.67	9600.00	6804.08	-6803.73	79.34	0.00	444556.68	758269.07	N 32 13 12.78	W 103 37 54.67
	16300.00	90.00	179.67	9600.00	6904.08	-6903.73	79.91	0.00	444456.69	758269.65	N 32 13 11.79	W 103 37 54.67
	16400.00	90.00	179.67	9600.00	7004.08	-7003.73	80.49	0.00	444356.69	758270.22	N 32 13 10.80	W 103 37 54.67
	16500.00	90.00	179.67	9600.00	7104.08	-7103.73	81.06	0.00	444256.70	758270.80	N 32 13 9.81	W 103 37 54.67
	16600.00	90.00	179.67	9600.00	7204.08	-7203.73	81.64	0.00	444156.71	758271.38	N 32 13 8.82	W 103 37 54.67
	16700.00	90.00	179.67	9600.00	7304.08	-7303.72	82.22	0.00	444056.71	758271.95	N 32 13 7.83	W 103 37 54.68
	16800.00	90.00	179.67	9600.00	7404.08	-7403.72	82.79	0.00	443956.72	758272.53	N 32 13 6.84	W 103 37 54.68
	16900.00	90.00	179.67	9600.00	7504.08	-7503.72	83.37	0.00	443856.72	758273.10	N 32 13 5.85	W 103 37 54.68
	17000.00	90.00	179.67	9600.00	7604.08	-7603.72	83.94	0.00	443756.73	758273.68	N 32 13 4.86	W 103 37 54.68
	17100.00	90.00	179.67	9600.00	7704.08	-7703.72	84.52	0.00	443656.73	758274.26	N 32 13 3.87	W 103 37 54.68
Lease												
NMNM0553548 - NMNM0553642 Crossing	17124.30	90.00	179.67	9600.00	7728.38	-7728.02	84.66	0.00	443632.44	758274.40	N 32 13 3.63	W 103 37 54.68
	17200.00	90.00	179.67	9600.00	7804.08	-7803.72	85.09	0.00	443556.74	758274.83	N 32 13 2.88	W 103 37 54.68

Comments	MD (ft)	Incl (°)	Azim Grid (°)	TVD (ft)	VSEC (ft)	NS (ft)	EW (ft)	DLS (°/100ft)	Northing (ftUS)	Easting (ftUS)	Latitude (N/S ° ' ")	Longitude (E/W ° ' ")
	17300.00	90.00	179.67	9600.00	7904.08	-7903.71	85.67	0.00	443456.74	758275.41	N 32 13 1.89	W 103 37 54.68
	17400.00	90.00	179.67	9600.00	8004.08	-8003.71	86.25	0.00	443356.75	758275.98	N 32 13 0.90	W 103 37 54.68
	17500.00	90.00	179.67	9600.00	8104.08	-8103.71	86.82	0.00	443256.76	758276.56	N 32 12 59.92	W 103 37 54.68
	17600.00	90.00	179.67	9600.00	8204.08	-8203.71	87.40	0.00	443156.76	758277.13	N 32 12 58.93	W 103 37 54.68
	17700.00	90.00	179.67	9600.00	8304.08	-8303.71	87.97	0.00	443056.77	758277.71	N 32 12 57.94	W 103 37 54.68
	17800.00	90.00	179.67	9600.00	8404.08	-8403.71	88.55	0.00	442956.77	758278.29	N 32 12 56.95	W 103 37 54.68
	17900.00	90.00	179.67	9600.00	8504.08	-8503.70	89.13	0.00	442856.78	758278.86	N 32 12 55.96	W 103 37 54.69
	18000.00	90.00	179.67	9600.00	8604.08	-8603.70	89.70	0.00	442756.78	758279.44	N 32 12 54.97	W 103 37 54.69
	18100.00	90.00	179.67	9600.00	8704.08	-8703.70	90.28	0.00	442656.79	758280.01	N 32 12 53.98	W 103 37 54.69
	18200.00	90.00	179.67	9600.00	8804.08	-8803.70	90.85	0.00	442556.79	758280.59	N 32 12 52.99	W 103 37 54.69
	18300.00	90.00	179.67	9600.00	8904.08	-8903.70	91.43	0.00	442456.80	758281.17	N 32 12 52.00	W 103 37 54.69
	18400.00	90.00	179.67	9600.00	9004.08	-9003.70	92.01	0.00	442356.81	758281.74	N 32 12 51.01	W 103 37 54.69
	18500.00	90.00	179.67	9600.00	9104.08	-9103.69	92.58	0.00	442256.81	758282.32	N 32 12 50.02	W 103 37 54.69
	18600.00	90.00	179.67	9600.00	9204.08	-9203.69	93.16	0.00	442156.82	758282.89	N 32 12 49.03	W 103 37 54.69
	18700.00	90.00	179.67	9600.00	9304.08	-9303.69	93.73	0.00	442056.82	758283.47	N 32 12 48.04	W 103 37 54.69
	18800.00	90.00	179.67	9600.00	9404.08	-9403.69	94.31	0.00	441956.83	758284.05	N 32 12 47.05	W 103 37 54.69
	18900.00	90.00	179.67	9600.00	9504.08	-9503.69	94.88	0.00	441856.83	758284.62	N 32 12 46.06	W 103 37 54.69
	19000.00	90.00	179.67	9600.00	9604.08	-9603.69	95.46	0.00	441756.84	758285.20	N 32 12 45.07	W 103 37 54.70
	19100.00	90.00	179.67	9600.00	9704.08	-9703.68	96.04	0.00	441656.85	758285.77	N 32 12 44.08	W 103 37 54.70
	19200.00	90.00	179.67	9600.00	9804.08	-9803.68	96.61	0.00	441556.85	758286.35	N 32 12 43.09	W 103 37 54.70
	19300.00	90.00	179.67	9600.00	9904.08	-9903.68	97.19	0.00	441456.86	758286.92	N 32 12 42.10	W 103 37 54.70
	19400.00	90.00	179.67	9600.00	10004.08	-10003.68	97.76	0.00	441356.86	758287.50	N 32 12 41.11	W 103 37 54.70
	19500.00	90.00	179.67	9600.00	10104.08	-10103.68	98.34	0.00	441256.87	758288.08	N 32 12 40.13	W 103 37 54.70
	19600.00	90.00	179.67	9600.00	10204.08	-10203.68	98.92	0.00	441156.87	758288.65	N 32 12 39.14	W 103 37 54.70

Cimarex Dos
Equis 12-13
Federal Com
#51H - PBHL
[100' FSL, 1540'
FWL]

19665.59 90.00 179.67 9600.00 10269.66 -10269.26 99.29 0.00 441091.29 758289.03 N 32 12 38.49 W 103 37 54.70

Survey Type: Def Plan

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

Survey Program:

Description	Part	MD From (ft)	MD To (ft)	EOU Freq (ft)	Hole Size (in)	Casing Diameter (in)	Expected Max Inclination (deg)	Survey Tool Type	Borehole / Survey
	1	0.000	26.000	1/100.000	17.500	13.375		NAL_MWD_IFR1+MS-Depth Only	Dos Equis 12-13 Federal Com #51H / Cimarex Dos Equis 12-13 Federal Com #51H Rev1 RM
	1	26.000	19665.587	1/100.000	17.500	13.375		NAL_MWD_IFR1+MS	Dos Equis 12-13 Federal Com #51H / Cimarex Dos Equis 12-13



Cimarex Dos Equis 12-13 Federal Com #51H Rev1 RM 17Feb20 Proposal Geodetic Report (Def Plan)



Report Date: February 17, 2020 - 04:27 PM
Client: Cimarex Energy
Field: NM Lea County (NAD 83)
Structure / Slot: Cimarex Dos Equis 12-13 Federal Com #51H / New Slot
Well: Dos Equis 12-13 Federal Com #51H
Borehole: Dos Equis 12-13 Federal Com #51H
UWI / API#: Unknown / Unknown
Survey Name: Cimarex Dos Equis 12-13 Federal Com #51H Rev1 RM 17Feb20
Survey Date: December 27, 2019
Tort / AHD / DDI / ERD Ratio: 90.610 ° / 10272.189 ft / 6.280 / 1.070
Coordinate Reference System: NAD83 New Mexico State Plane, Eastern Zone, US Feet
Location Lat / Long: N 32° 14' 20.10665", W 103° 37' 55.07700"
Location Grid N/E Y/X: N 451360.150 ftUS, E 758189.740 ftUS
CRS Grid Convergence Angle: 0.3742 °
Grid Scale Factor: 0.99996295
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: 47842.501 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: 6.2428 °
Local Coord Referenced To: Well Head

Comments	MD (ft)	Incl (°)	Azim Grid (°)	TVD (ft)	VSEC (ft)	NS (ft)	EW (ft)	DLS (°/100ft)	Northing (ftUS)	Easting (ftUS)	Latitude (N/S ° ' ")	Longitude (E/W ° ' ")
SHL [195' FNL, 1500' FWL]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	N/A	451360.15	758189.74	N 32 14 20.11	W 103 37 55.08
KOP - Build 12"/100' DLS	9119.88	0.00	169.65	9119.88	0.00	0.00	0.00	0.00	451360.15	758189.74	N 32 14 20.11	W 103 37 55.08
Build & Turn 12"/100' DLS	9411.55	35.00	169.65	9393.75	85.03	-84.94	15.51	12.00	451275.21	758205.25	N 32 14 19.27	W 103 37 54.90
Landing Point Cimarex Dos Equis 12-13 Federal Com #51H - PBHL [100' FSL, 1540' FWL]	9874.96	90.00	179.67	9600.00	479.04	-478.80	42.91	12.00	450881.37	758232.65	N 32 14 15.37	W 103 37 54.61
	19665.59	90.00	179.67	9600.00	10269.66	-10269.26	99.29	0.00	441091.29	758289.03	N 32 12 38.49	W 103 37 54.70

Survey Type: Def Plan

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

Survey Program:

Description	Part	MD From (ft)	MD To (ft)	EOU Freq (ft)	Hole Size (in)	Casing Diameter (in)	Expected Max Inclination (deg)	Survey Tool Type	Borehole / Survey
	1	0.000	26.000	1/100.000	17.500	13.375		NAL_MWD_IFR1+MS-Depth Only	Dos Equis 12-13 Federal Com #51H / Cimarex Dos Equis 12-13 Federal Com #51H Rev1 RM
	1	26.000	19665.587	1/100.000	17.500	13.375		NAL_MWD_IFR1+MS	Dos Equis 12-13 Federal Com #51H / Cimarex Dos Equis 12-13



Cimarex Energy

Rev 1



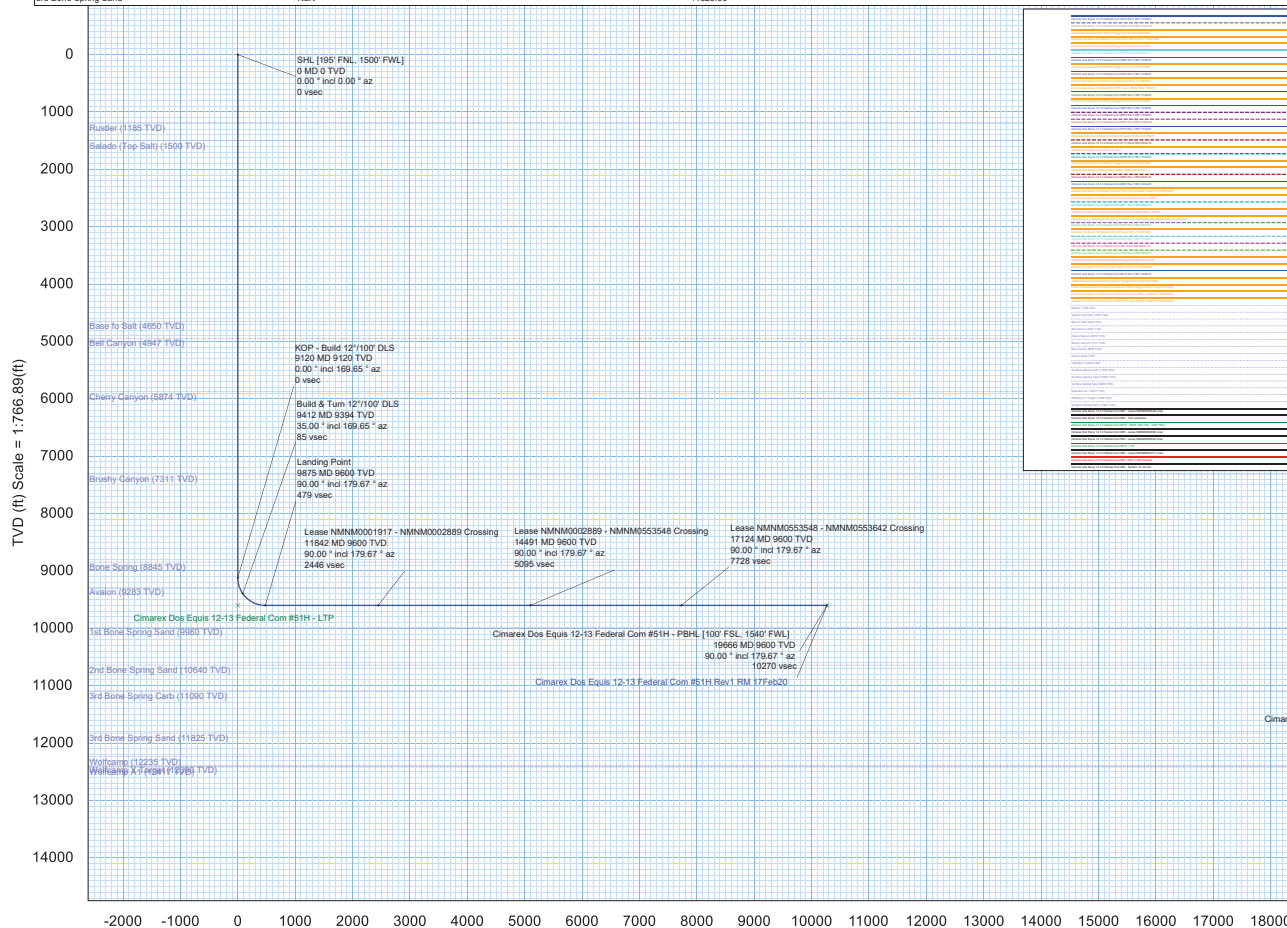
Borehole:	Well:	Field:	Structure:
Dos Equis 12-13 Federal Com #51H	Dos Equis 12-13 Federal Com #51H	NM Lea County (NAD 83)	Cimarex Dos Equis 12-13 Federal Com #51H

Gravity & Magnetic Parameters	Dip:	59.88°	Date:	17-Feb-2020	Surface Location	NAD83 New Mexico State Plane, Eastern Zone, US Feet	Grid Conv:	0.3742°	Miscellaneous
Model: HDGM 2019	FS:	47842.501nT	Gravity FS:	998.438mgm (9.80665 Based)	Lat: N 32 14 20.11	Northing: 451360.15HUS	Scale Fact:	0.99996295	Slot: New Slot
MagDec:					Long: W 103 37 55.08	Easting: 758189.74HUS			Plan: Cimarex Dos Equis 12-13 Federal Com #51H Rev1 RM 17Feb20

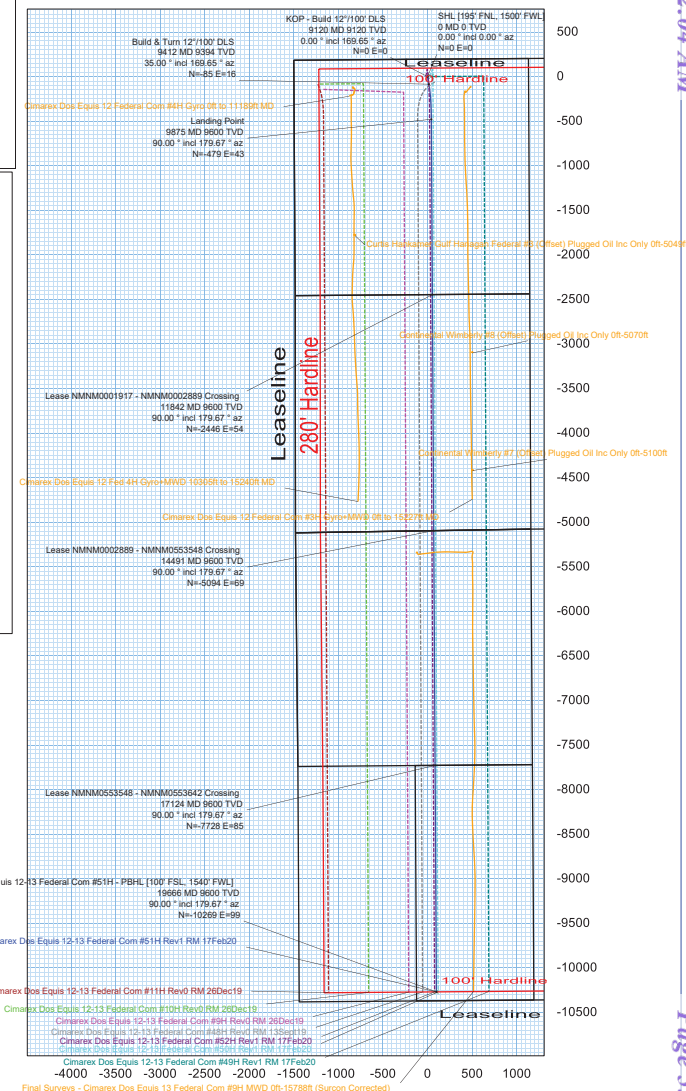
Critical Point	MD	INCL	AZIM	TVD	VSEC	N(+)S(-)	E(+)W(-)	DLS
SHL (195° FNL, 1500° FWL)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rustler	1185.00	0.00	169.65	1185.00	0.00	0.00	0.00	0.00
Salado (Top Salt)	1500.00	0.00	169.65	1500.00	0.00	0.00	0.00	0.00
Base to Salt	4650.00	0.00	169.65	4650.00	0.00	0.00	0.00	0.00
Bell Canyon	4947.00	0.00	169.65	4947.00	0.00	0.00	0.00	0.00
Cherry Canyon	5874.00	0.00	169.65	5874.00	0.00	0.00	0.00	0.00
Brushy Canyon	7311.00	0.00	169.65	7311.00	0.00	0.00	0.00	0.00
Bone Spring	8845.00	0.00	169.65	8845.00	0.00	0.00	0.00	0.00
KOP - Build 12°/100° DLS	9119.88	0.00	169.65	9119.88	0.00	0.00	0.00	0.00
Avalon	9286.35	19.98	169.65	9283.00	28.29	-28.26	5.16	12.00
Build & Turn 12°/100° DLS	9411.55	35.00	169.65	9393.75	85.03	-84.94	15.51	12.00
Landing Point	9874.96	90.00	179.67	9600.00	479.04	-478.80	42.91	12.00
Lease NMNM0001917 - NMNM0002889 Crossing	11842.10	90.00	179.67	9600.00	2446.18	-2445.90	54.24	0.00
Lease NMNM0002889 - NMNM0553548 Crossing	14490.60	90.00	179.67	9600.00	5094.68	-5094.36	69.49	0.00
Lease NMNM0553548 - NMNM0553642 Crossing	17124.30	90.00	179.67	9600.00	7728.38	-7728.02	84.66	0.00
Cimarex Dos Equis 12-13 Federal Com #51H - PBHL (100° FSL, 1540° FWL)	19665.39	90.00	179.67	9600.00	10269.86	-10269.26	99.29	0.00
Wolfcamp	NaN			12235.00				
3rd Bone Spring Carb	NaN			11090.00				
2nd Bone Spring Sand	NaN			10640.00				
1st Bone Spring Sand	NaN			9980.00				
Wolfcamp A1	NaN			12417.00				
Wolfcamp Y Target	NaN			12390.00				
3rd Bone Spring Sand	NaN			11825.00				

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

CONTROLLED
Drawn ref: 17Feb20
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)

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 Fed Com 49H	Pending	12-24S-32E	195' FNL & 1500' 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 LUCID and will be connected to LUCID 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. CIMAREX provides (periodically) to LUCID a drilling, completion and estimated first production date for wells that are scheduled to be drilled in the foreseeable future. In addition, CIMAREX and LUCID have periodic conference calls to discuss changes to drilling and completion schedules. Gas from these wells will be processed at LUCID 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 LUCID system at that time. Based on current information, it is CIMAREX 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 9,600

Pilot Hole TD N/A

MD at TD 19,665

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	
Upper Avalon Shale	9283	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
17 1/2	0	1235	1235	13-3/8"	48.00	H-40/J-55 Hybrid	ST&C	1.38	3.23	5.43
12 1/4	0	4900	4900	9-5/8"	40.00	J-55	BT&C	1.50	1.51	3.21
8 3/4	0	9119	9119	5-1/2"	20.00	L-80	LT&C	2.07	2.15	2.17
8 3/4	9119	19665	9600	5-1/2"	20.00	L-80	BT&C	1.97	2.00	48.44
BLM Minimum Safety Factor								1.125	1	1.6 Dry 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

	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.	N
Does the above casing design meet or exceed BLM's minimum standards? If not provide justification (loading assumptions, casing design criteria).	Y
Will the intermediate pipe be kept at a minimum 1/3 fluid filled to avoid approaching the collapse pressure rating of the casing?	Y
Is well located within Capitan Reef?	N
If yes, does production casing cement tie back a minimum of 50' above the Reef?	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. lb/gal	Yld ft ³ /sack	H ₂ O gal/sk	500# Comp. Strength (hours)	Slurry Description
Surface	599	13.50	1.72	9.15	15.5	Lead: Class C + Bentonite
	160	14.80	1.34	6.32	9.5	Tail: Class C + LCM
Intermediate	919	12.90	1.88	9.65	12	Lead: 35:65 (Poz:C) + Salt + Bentonite
	286	14.80	1.34	6.32	9.5	Tail: Class C + LCM
Production	381	10.30	3.64	22.18		Lead: Tuned Light + LCM
	2562	14.20	1.30	5.86	14:30	Tail: 50:50 (Poz:H) + Salt + Bentonite + Fluid Loss + Dispersant + SMS

Casing String	TOC	% Excess
Surface	0	45
Intermediate	0	51
Production	4700	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
12 1/4	13 5/8	2M	Annular	X	2M
			Blind Ram		
			Pipe Ram		
			Double Ram	X	
			Other		
8 3/4	13 5/8	5M	Annular	X	5M
			Blind Ram		
			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.

	Formation integrity test will be performed per Onshore Order #2. On Exploratory wells or on that portion of any well approved for a 5M BOPE system or greater, a pressure integrity test of each casing shoe shall be performed. Will be tested in accordance with Onshore Oil and Gas Order #2 III.B.1.i.				
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 4900'	Brine Water	9.80 - 10.30	30-32	N/C
4900' to 19665'	Cut Brine or OBM	8.50 - 9.00	27-70	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.

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	
	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	4492 psi
Abnormal Temperature	No

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

	H ₂ S is present
	H ₂ S plan is attached

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

A multi-bowl wellhead system will be utilized.

After running the 13-3/8" surface casing, a 13 5/8" BOP/BOPE system with a minimum working pressure of 5000 psi will be installed on the wellhead system and will be pressure tested to 250 psi low followed by a 5000 psi test. Annular will be tested to 100% 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.

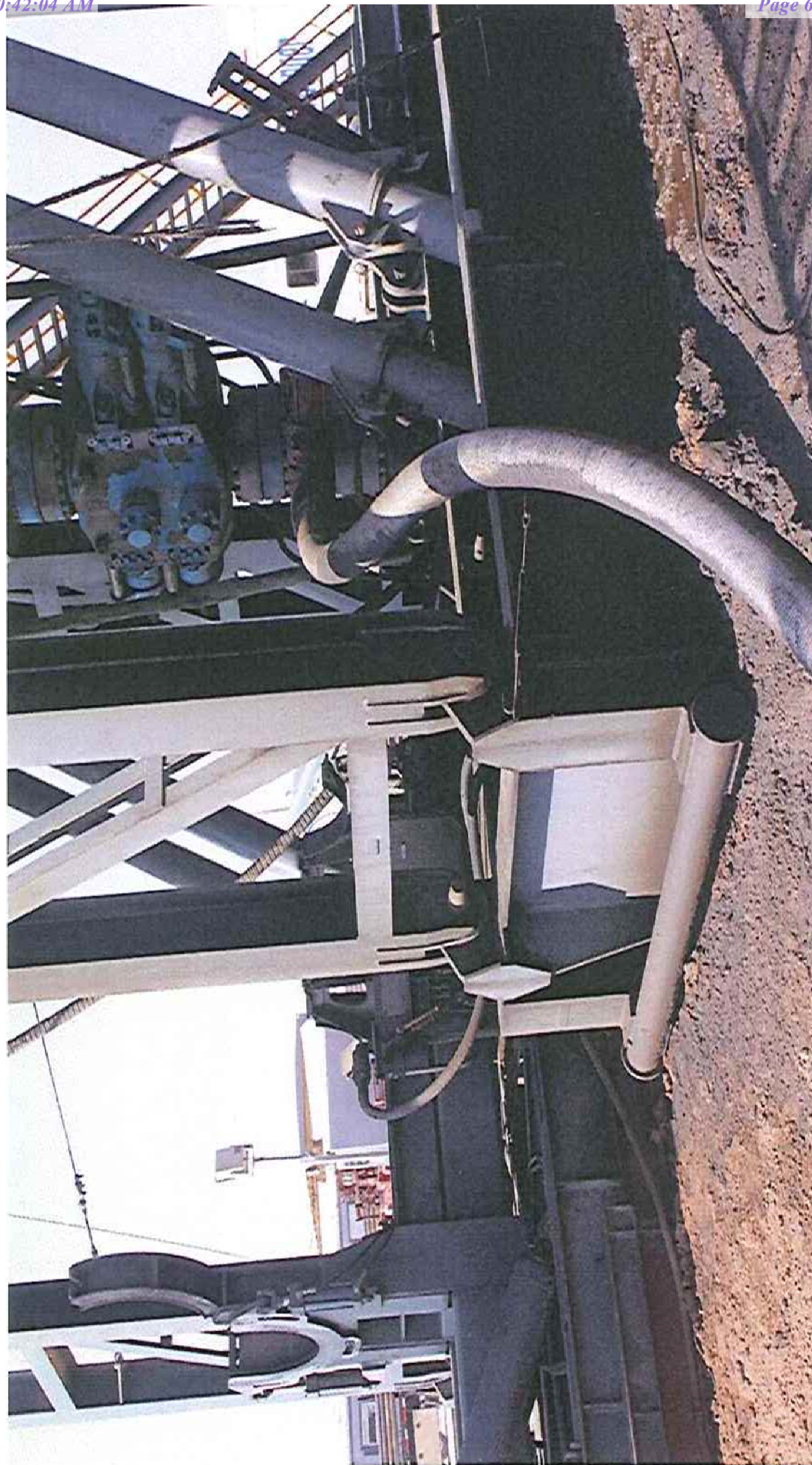
All BOP equipment will be tested utilizing a conventional test plug. Not a cup or J-packer type.

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 5000 psi.

All casing strings will be tested as per Onshore Order No.2 to atleast 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.

Co-Flex Hose
Dos Equis 12-13 Federal Com 51H
Cimarex Energy Co.
12-24S-32E
Lea Co., NM



Co-Flex Hose Hydrostatic Test
 Dos Equis 12-13 Federal Com 51H
 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 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 OKC		OKC OKC	
Type of Coupling:			
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:		Hose Serial Number:	
79793		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 51H
 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 & 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

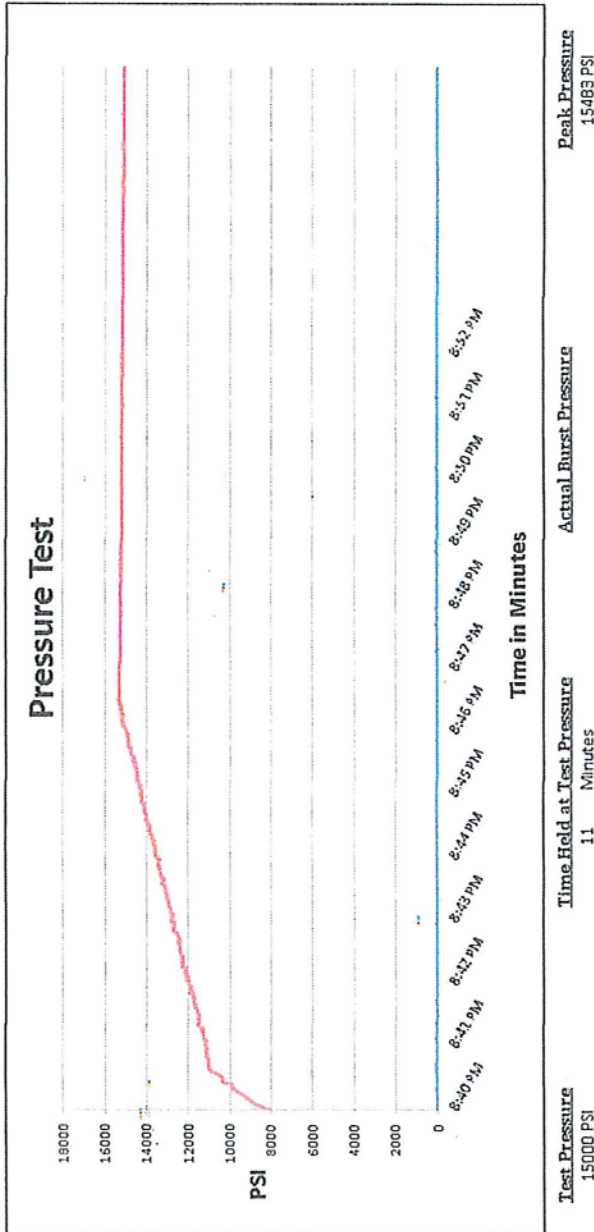
Standard Safety Multiplier Applies

Hose Serial #

5544

Hose Assembly Serial #

79793

Test Pressure
15000 PSITime Held at Test Pressure
11 Minutes

Actual Burst Pressure

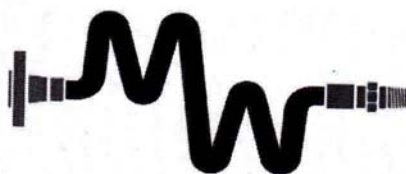
Peak Pressure
15483 PSI

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 51H
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 51H
Cimarex Energy Co.
12-24S-32E
Lea Co., NM

Specification Sheet Choke & Kill Hose

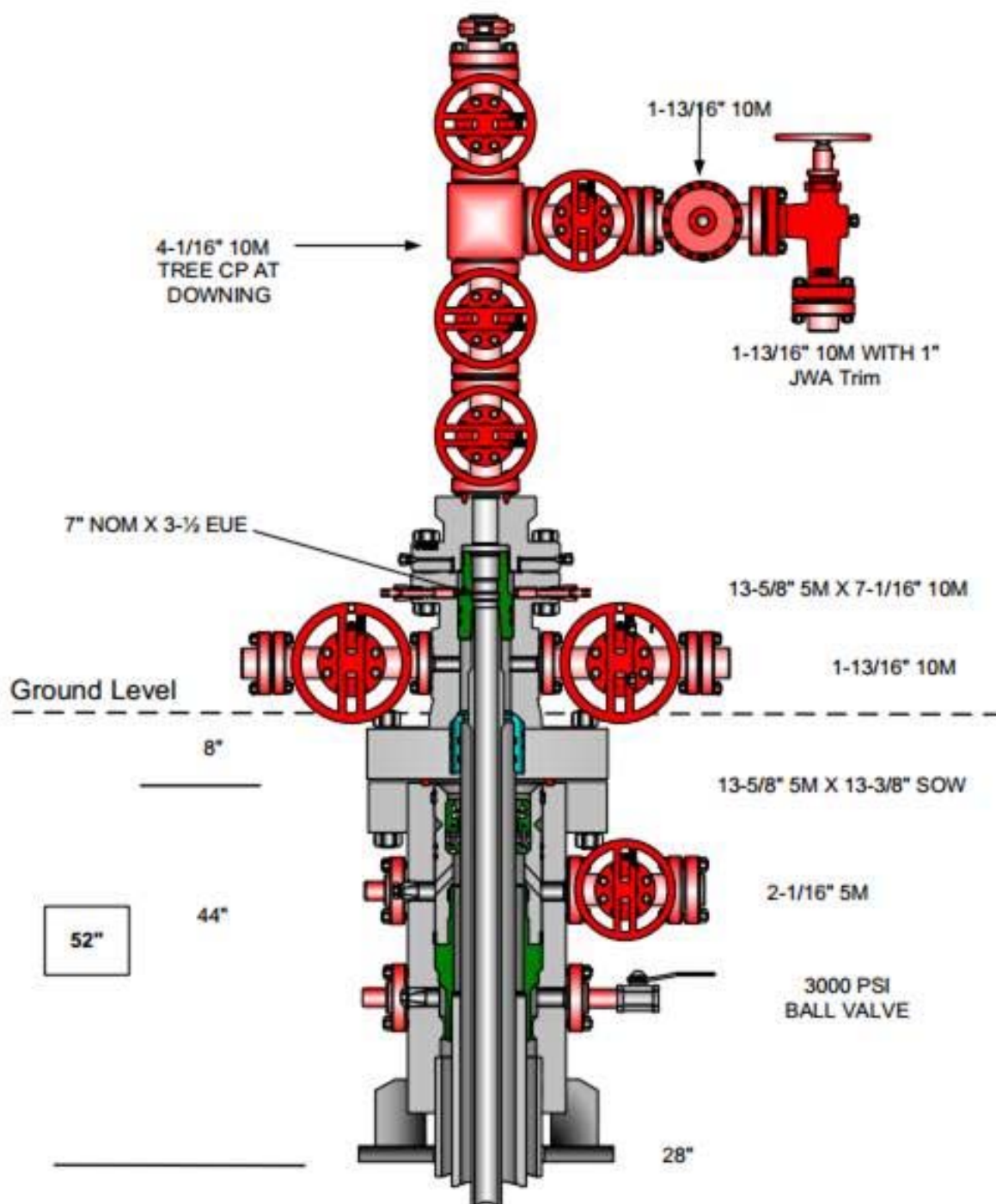
The Midwest Hose & Specialty Choke & Kill hose is manufactured with only premium components. The reinforcement cables, inner liner and cover are made of the highest quality material to handle the tough drilling applications of today's industry. The end connections are available with API flanges, API 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.

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

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

Multi-bowl Wellhead Diagram

Dos Equis 12-13 Fed Com 51H



Hole Size	Casing Depth From	Casing Depth To	Setting Depth TVD	Casing Size	Weight (lb/ft)	Grade	Conn.	SF Collapse	SF Burst	SF Tension
17 1/2	0	1235	1235	13-3/8"	48.00	H-40/J-55 Hybrid	ST&C	1.38	3.23	5.43
12 1/4	0	4900	4900	9-5/8"	40.00	J-55	BT&C	1.50	1.51	3.21
8 3/4	0	9119	9119	5-1/2"	20.00	L-80	LT&C	2.07	2.15	2.17
8 3/4	9119	19665	9600	5-1/2"	20.00	L-80	BT&C	1.97	2.00	48.44
BLM Minimum Safety Factor								1.125	1	1.6 Dry 1.8 Wet

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

Submit Electronically
Via E-permitting

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 / 82 / 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 Fed Com 51H		C, Sec 12, T24S, R32E	195 FNL/1500 FWL	1200	1800	1300

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 Fed Com 51H		1/1/2024	3/1/20024	6/1/2024	8/1/2024	8/1/2024

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
OIL CONSERVATION DIVISION (Only applicable when submitted as a standalone form)
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

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 Phone:(575) 393-6161 Fax:(575) 393-0720

District II

811 S. First St., Artesia, NM 88210
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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 102407

CONDITIONS

Operator: CIMAREX ENERGY CO. 600 N. Marienfeld Street Midland, TX 79701	OGRID: 215099
	Action Number: 102407
	Action Type: [C-101] BLM - Federal/Indian Land Lease (Form 3160-3)

CONDITIONS

Created By	Condition	Condition Date
pkautz	Will require a File As Drilled C-102 and a Directional Survey with the C-104	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