Form 3160-3
(June 2015)

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

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

APPLICATION FOR PERMIT TO DRILL OR REENTER

5. Lease Serial No.: NMNM87274

6. If Indian, Allotee or Tribe Name:

1a. Type of work: ☑ DRILL ☐ REENTER

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

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

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

8. Lease Name and Well No.: TOPAZ 30 FEDERAL COM 2H

2. Name of Operator: MARATHON OIL PERMIAN LLC

9. API Well No.:

3a. Address: 990 TOWN & COUNTRY BLVD, HOUSTON, TX 77024

3b. Phone No. *(include area code)*: (713) 296-2113

10. Field and Pool, or Exploratory: WC-025 G-08 S213304D/BONE SPRING

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

At surface: NWNW / 558 FNL / 1252 FWL / LAT 32.5353279 / LONG -103.6041182

At proposed prod. zone: SESE / 100 FSL / 660 FEL / LAT 32.5371625 / LONG -103.5931612

11. Sec., T. R. M. or Blk. and Survey or Area: SEC 31/T20S/R34E/NMP

14. Distance in miles and direction from nearest town or post office*: 29 miles

12. County or Parish: LEA

13. State: NM

15. Distance from proposed* location to nearest property or lease line, ft. (Also to nearest drig. unit line, if any): 100 feet

16. No of acres in lease:

17. Spacing Unit dedicated to this well: 640.56

18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft.: 30 feet

19. Proposed Depth: 9700 feet / 21261 feet

20. BLM/BIA Bond No. in file: FED: NMB001555

21. Elevations (Show whether DF, KDB, RT, GL, etc.): 3693 feet

22. Approximate date work will start*: 09/30/2025

23. Estimated duration: 29 days

24. Attachments

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

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

25. Signature: (Electronic Submission)

Name *(Printed/Typed)*: MELISSA SZUDERA / Ph: (713) 929-6600

Date: 10/26/2021

Title: REGULATORY COMPLIANCE REPRESENTATIVE

Approved by *(Signature)*: (Electronic Submission)

Name *(Printed/Typed)*: CODY LAYTON / Ph: (575) 234-5959

Date: 07/25/2025

Title: Assistant Field Manager Lands & Minerals

Office: Carlsbad Field 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.

APPROVED WITH CONDITIONS

(Continued on page 2)

*(Instructions on page 2)

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Additional Operator Remarks

Location of Well

0. SHL: NWNW / 558 FNL / 1252 FWL / TWSP: 20S / RANGE: 34E / SECTION: 31 / LAT: 32.5353279 / LONG: -103.6041182 (TVD: 0 feet, MD: 0 feet)

PPP: SESW / 100 FSL / 1980 FWL / TWSP: 20S / RANGE: 34E / SECTION: 30 / LAT: 32.5371418 / LONG: -103.6017578 (TVD: 9553 feet, MD: 9700 feet)

PPP: NWNE / 273 FNL / 2640 FEL / TWSP: 20S / RANGE: 34E / SECTION: 30 / LAT: 32.5506254 / LONG: -103.599603 (TVD: 9700 feet, MD: 14744 feet)

PPP: NENW / 1319 FNL / 1984 FWL / TWSP: 20S / RANGE: 34E / SECTION: 30 / LAT: 32.5477448 / LONG: -103.6017452 (TVD: 9700 feet, MD: 13455 feet)

BHL: SESE / 100 FSL / 660 FEL / TWSP: 20S / RANGE: 34E / SECTION: 30 / LAT: 32.5371625 / LONG: -103.5931612 (TVD: 9700 feet, MD: 21261 feet)

BLM Point of Contact

Name: JORDAN NAVARRETTE
Title: LIE
Phone: (575) 234-5972
Email: JNAVARRETTE@BLM.GOV

PECOS DISTRICT
SURFACE USE
CONDITIONS OF APPROVAL

OPERATOR'S NAME:	Marathon Oil Company
LEASE NO.:	NMNM 041769
COUNTY:	Lea County

Wells:

Legal Description:

Topaz WC Fed Com 301H
Surface Hole Location: 558' FNL & 1252' FWL, Section 31, T. 20 S., R. 34 E.
Bottom Hole Location: 100' FSL & 660' FEL, Section 30, T. 20 S, R 34 E.

Topaz WC Fed Com 501H
Surface Hole Location: 543' FNL & 1194' FWL, Section 31, T. 20 S., R. 34 E.
Bottom Hole Location: 100' FSL & 1980' FEL, Section 30, T. 20 S, R 34 E.

Topaz BS Fed Com 601H
Surface Hole Location: 536' FNL & 1165' FWL, Section 31, T. 20 S., R. 34 E.
Bottom Hole Location: 100' FSL & 1980' FEL, Section 30, T. 20 S, R 34 E.

Topaz BS Fed Com 701H
Surface Hole Location: 551' FNL & 1223' FWL, Section 31, T. 20 S., R. 34 E.
Bottom Hole Location: 100' FSL & 660' FEL, Section 30, T. 20 S, R 34 E.

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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.

☐**Final Abandonment & Reclamation**

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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.

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

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

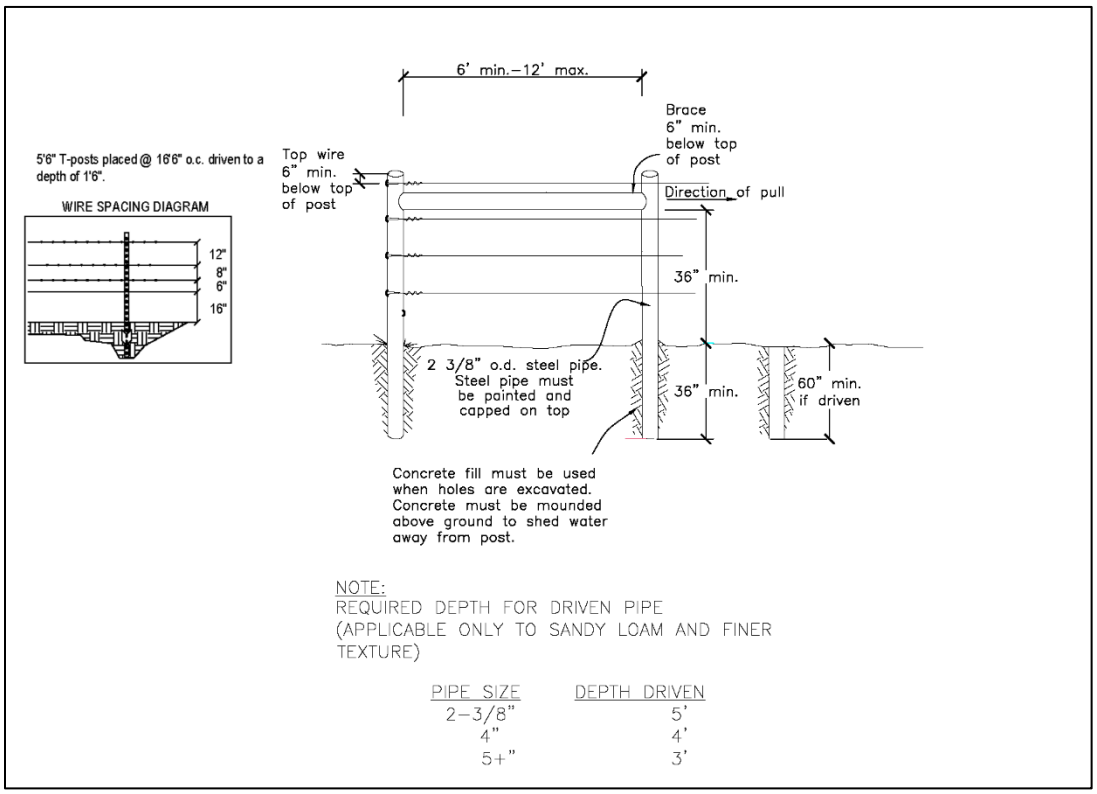
Prior to pipeline installation/construction a leak detection plan will be developed. The method(s) could incorporate gauges to detect pressure drops, situating valves and lines so they can be visually inspected periodically or installing electronic sensors to alarm when a leak is present. The leak detection plan will incorporate an automatic shut off system that will be installed for proposed pipelines to minimize the effects of an undesirable event.

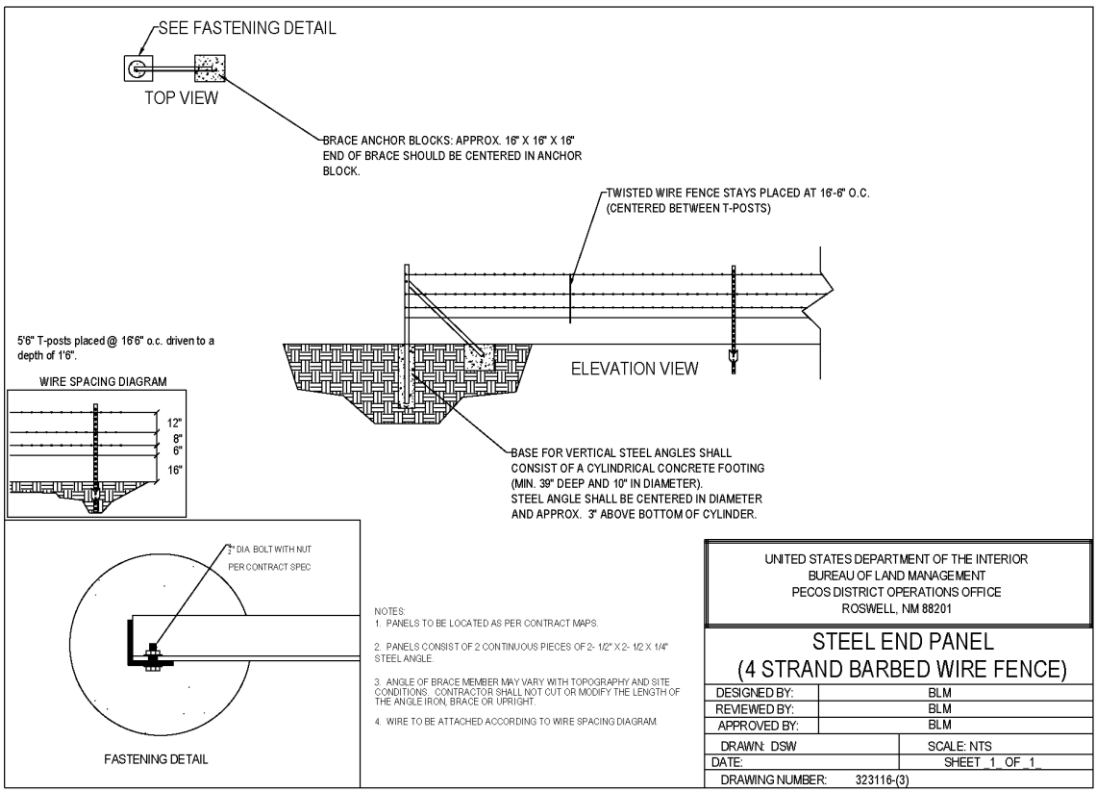
ELECTRIC LINE(S):
Any water erosion that may occur due to the construction of overhead electric line and during the life of the power line will be quickly corrected and proper measures will be taken to prevent future erosion. A power pole should not be placed in drainages, playas, wetlands, riparian areas, or floodplains and must span across the features at a distance away that would not promote further erosion.

Range:

Cattleguards
Where a permanent cattleguard is approved, an appropriately sized cattleguard(s) sufficient to carry out the project shall be installed and maintained at fence crossing(s). Any existing cattleguard(s) on the access road shall be repaired or replaced if they are damaged or have deteriorated beyond practical use. The operator shall be responsible for the condition of the existing cattleguard(s) that are in place and are utilized during lease operations. A gate shall be constructed on one side of the cattleguard and fastened securely to H-braces.

Fence Requirement
Where entry granted across a fence line, the fence must be H-braced or angle iron braced and tied off on both sides of the passageway prior to cutting. Once the work is completed, the fence will be restored to its prior condition, or better. The operator shall consult the private surface landowner or the grazing allotment holder prior to cutting any fence(s).





Livestock Watering Requirement
Any damage to structures that provide water to livestock throughout the life of the well, caused by operations from the well site, must be immediately corrected by the operator. The operator must notify the BLM office (575-234-5972) and the private surface landowner or the grazing allotment holder if any damage occurs to structures that provide water to livestock.

Timing Limitation Stipulation/Condition of Approval for Lesser Prairie-Chicken:

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

Timing Limitation Exceptions:

The Carlsbad Field Office will publish an annual map of where the LPC timing and noise stipulations and conditions of approval (Limitations) will apply for the identified year (between March 1 and June 15) based on the latest survey information. The LPC Timing Area map will identify areas which are Habitat Areas (HA), Isolated Population Area (IPA), and Primary Population Area (PPA). The LPC Timing Area map will also have an area in red crosshatch. The red crosshatch area is the only area where an operator is required to submit a request for

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exception to the LPC Limitations. If an operator is operating outside the red crosshatch area, the LPC Limitations do not apply for that year and an exception to LPC Limitations is not required.

Ground-level Abandoned Well Marker to avoid raptor perching:

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

VRM IV:

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

Potash Resources

Lessees must comply with the 2012Secretarial Potash Order. The Order is designed to manage the efficient development of oil, gas, and potash resources. Section 6 of the Order provides general provisions which must be followed to minimize conflict between the industries and ensure the safety of operations.

To minimize impacts to potash resources, the proposed well is confined within the boundaries of the established Topaz Drill Island within approved Topaz Development Area.

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 twenty (20) feet in width. The maximum width of surface disturbance, when constructing the access road, shall not exceed thirty (30) feet.

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

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

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

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

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

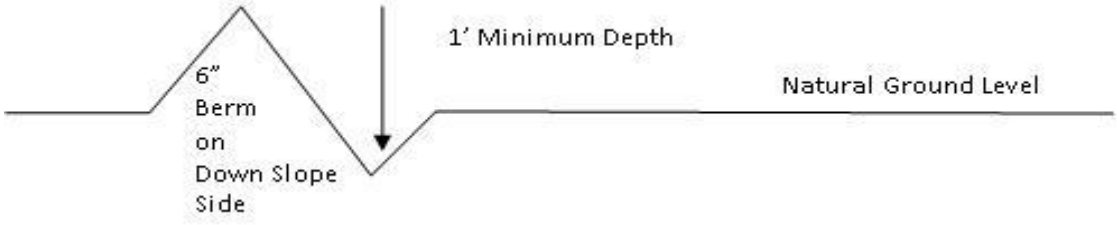
Turnouts

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

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

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

Cross Section of a Typical Lead-off Ditch



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

Formula for Spacing Interval of Lead-off Ditches

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

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

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

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Construction Steps

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

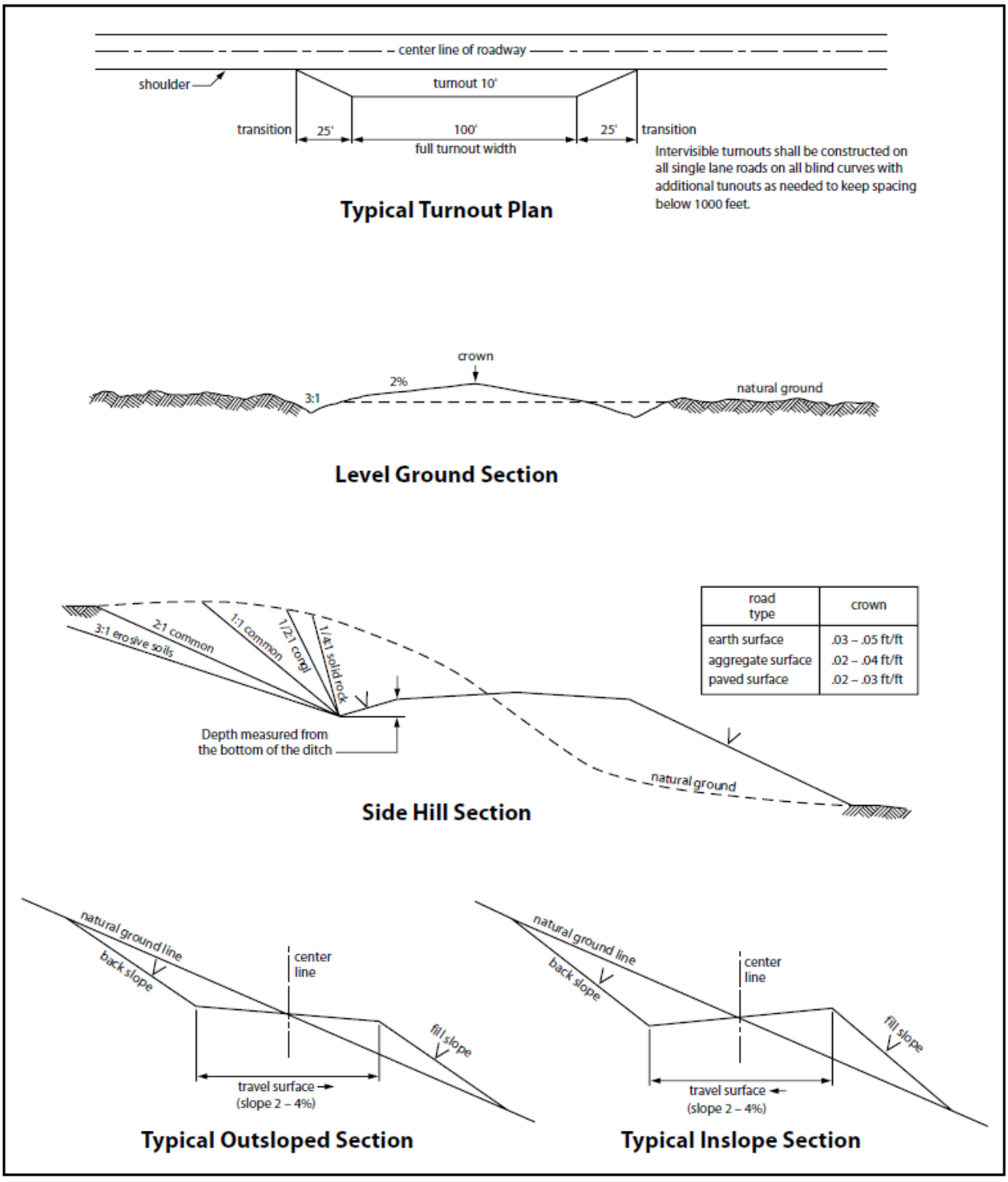

Figure 1. Cross-sections and plans for typical road sections representative of BLM resource or FS local and higher-class roads.

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VII. PRODUCTION (POST DRILLING)

A. WELL STRUCTURES & FACILITIES

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

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

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

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

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

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

B. PIPELINES

BURIED PIPELINE STIPULATIONS

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

☐Seed Mixture 1
☐Seed Mixture 2
☒Seed Mixture 2/LPC
☐Seed Mixture 3
☐Seed Mixture 4
☐Seed Mixture Aplomado Falcon Mixture

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

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

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

16. Any cultural 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 17 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.

17. 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."

18. 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.

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

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

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

C. ELECTRIC LINES

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

STANDARD STIPULATIONS FOR OVERHEAD ELECTRIC DISTRIBUTION LINES

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

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

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

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

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

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

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

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

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

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

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

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

10. Any cultural 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 11 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.

11. 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."

12. 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.

13. Special Stipulations:
For reclamation remove poles, lines, transformer, etc. and dispose of properly.

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Fill in any holes from the poles removed.

VIII. INTERIM RECLAMATION

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

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

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

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

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

IX. FINAL ABANDONMENT & RECLAMATION

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

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

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

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

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 for LPC Sand/Shinnery Sites

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

Seed 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). 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. Seeding shall be repeated until a satisfactory stand is established as determined by the Authorized Officer. Evaluation of growth may not be made before completion of at least one full growing season after seeding.

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

Species	lb/acre
Plains Bristlegrass	5lbs/A
Sand Bluestem	5lbs/A
Little Bluestem	3lbs/A
Big Bluestem	6lbs/A
Plains Coreopsis	2lbs/A
Sand Dropseed	1lbs/A

*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:	Marathon Oil Permian LLC
WELL NAME & NO.:	Topaz Fed Com 2H
LOCATION:	Sec 31-20S-34E-NMP
COUNTY:	Lea County, New Mexico

COA

H_2S	○ No		◉ Yes	
Potash / WIPP	○ None	○ Secretary	◉ R-111-Q	☐ Open Annulus
	4-String Design: Open 2nd Int x Production Casing (ICP 2 above Relief Zone)			☐ WIPP
Cave / Karst	◉ Low	○ Medium	○ High	○ Critical
Wellhead	○ Conventional	◉ Multibowl	○ Both	○ Diverter
Cementing	☐ Primary Squeeze	☐ Cont. Squeeze	☐ EchoMeter	☐ DV Tool
Special Req	☑ Capitan Reef	☐ Water Disposal	☑ COM	☐ Unit
Waste Prev.	○ Self-Certification	○ Waste Min. Plan	◉ APD Submitted prior to 06/10/2024	
Additional Language	☑ Flex Hose	☐ Casing Clearance	☐ Pilot Hole	☐ Break Testing
	☑ Four-String	☐ Offline Cementing	☐ Fluid-Filled	

A. HYDROGEN SULFIDE

A Hydrogen Sulfide (H2S) Drilling Plan shall be activated 500 feet prior to drilling into the **Cherry Canyon and Brushy Canyon** formations. As a result, the Hydrogen Sulfide area must meet all requirements from 43 CFR 3176, which includes equipment and personnel/public protection items. If Hydrogen Sulfide is encountered, please provide measured values and formations to the BLM.

APD is within the R-111-Q defined boundary. Operator must follow all procedures and requirements listed within the updated order.

B. CASING

1. The **13-3/8** inch surface casing shall be set at approximately **1521** feet (a minimum of 25 feet (Lea County) into the Rustler Anhydrite, above the salt, and below usable fresh water) and cemented to the surface.
   a. If cement does not circulate to the surface, the appropriate BLM office shall be notified and a temperature survey utilizing an electronic-type temperature survey with surface log readout will be used or a cement bond log shall be run to verify the top of the cement. Temperature survey will be run a minimum of six hours after pumping cement and ideally between 8-10 hours after completing the cement job.
   b. Wait on cement (WOC) time for a primary cement job will be a minimum of **8 hours** or **500 pounds compressive strength**, whichever is greater. (This is to include the lead cement)

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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.

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, Capitan Reef, or potash.**

❖ **Special Capitan Reef Requirements:** Ensure freshwater-based mud is used across the Capitan interval.

3. The minimum required fill of cement behind the **7-5/8** inch intermediate casing is:
   - Cement should tie-back **500 feet or 50 feet on top of the Capitan Reef, whichever is closer to surface** into the previous casing but not higher than USGS Marker Bed No. 126. **Operator must verify top of cement per R-111-Q requirements.** Submit results to the BLM. If cement does not circulate, contact the appropriate BLM office. **Wait on cement (WOC) time for a primary cement job is to include the lead cement slurry due to cave/karst, Capitan Reef, or potash.**

4. The minimum required fill of cement behind the **5-1/2** inch production casing is:
   - Cement should tie-back **500 feet or 50 feet on top of the Capitan Reef, whichever is closer to surface** into the previous casing but not higher than USGS Marker Bed No. 126. **Operator must verify top of cement per R-111-Q requirements.** Submit results to the BLM. If cement does not circulate, contact the appropriate BLM office. **Wait on cement (WOC) time for a primary cement job is to include the lead cement slurry due to cave/karst, Capitan Reef, or potash.**

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. Minimum working pressure of the blowout preventer (BOP) and related equipment (BOPE) required for drilling below the surface casing shoe shall be **10,000 (10M)** psi. **Variance is approved to use a 5000 (5M) Annular which shall be tested to 5000 (5M) psi.**

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

d. If the cement does not circulate and one-inch operations would have been possible with a standard wellhead, the well head shall be cut off, cementing operations performed and another wellhead installed.
e. Whenever any seal subject to test pressure is broken, all the tests in 43 CFR 3172 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.
- The operator will submit an as-drilled survey well plat of the well completion, but are not limited to, those specified in 43 CFR 3171 and 3172.
- 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)

Contact Lea County Petroleum Engineering Inspection Staff:
Call the Hobbs Field Station, 414 West Taylor, Hobbs NM 88240, (575) 689-5981

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
        i. Notify the BLM when moving in and removing the Spudder Rig.
        ii. 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.
        iii. BOP/BOPE test to be conducted per **43 CFR 3172** 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. For intervals in which cement to surface is required, cement to surface should be verified with a visual check and density or pH check to differentiate cement from spacer and drilling mud. The results should be documented in the driller's log and daily reports.

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 of both lead and tail cement, 2) until cement has been in place at least 8 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-Q 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 **43 CFR 3172**.
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:
    i. Wellhead shall be installed by manufacturer's representatives, submit documentation with subsequent sundry.
    ii. 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.
    iii. Manufacturer representative shall install the test plug for the initial BOP test.
    iv. Whenever any seal subject to test pressure is broken, all the tests in 43 CFR 3172.6(b)(9) must be followed.
    v. 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.
    i. 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 cement), 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).
    ii. 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 cement plug. The BOPE test can be initiated after bumping the cement plug with the casing valve open. (only applies to single stage cement jobs, prior to the cement setting up.)
    iii. The tests shall be done by an independent service company utilizing a test plug not a cup or J-packer and can be initiated immediately with the casing valve open. The operator also has the option of utilizing an independent tester to test without a plug (i.e. against the casing) pursuant to **43 CFR 3172** 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 8 hours or 500 pounds compressive strength, whichever is greater, prior to initiating the test (see casing segment as lead cement may be critical item).

iv. 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.

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

vi. 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.

vii. 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.

viii. 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 **43 CFR 3172**.

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.

AFMSS

U.S. Department of the Interior
BUREAU OF LAND MANAGEMENT

Operator Certification Data Report

08/04/2025

Operator

I hereby certify that I, or someone under my direct supervision, have inspected the drill site and access route proposed herein; that I am familiar with the conditions which currently exist; that I have full knowledge of state and Federal laws applicable to this operation; that the statements made in this APD package are, to the best of my knowledge, true and correct; and that the work associated with the operations proposed herein will be performed in conformity with this APD package and the terms and conditions under which it is approved. I also certify that I, or the company I represent, am responsible for the operations conducted under this application. These statements are subject to the provisions of 18 U.S.C. 1001 for the filing of false statements.

NAME: **Signed on:** 03/01/2024

Title:

Street Address:

City: **State:** **Zip:**

Phone:

Email address:

Field

Representative Name:

Street Address:

City: **State:** **Zip:**

Phone:

Email address:

AFMSS
U.S. Department of the Interior
BUREAU OF LAND MANAGEMENT

Application Data
08/04/2025

APD ID: 10400081220
Submission Date: 10/26/2021
Operator Name: MARATHON OIL PERMIAN LLC
Well Name: TOPAZ 30 FEDERAL COM
Well Number: 2H
Well Type: OIL WELL
Well Work Type: Drill

Highlighted data reflects the most recent changes
Show Final Text

Section 1 - General

APD ID: 10400081220
Tie to previous NOS? N
Submission Date: 10/26/2021
BLM Office: Carlsbad
User: MELISSA SZUDERA
Title: REGULATORY COMPLIANCE REPRESENTATIVE
Federal/Indian APD: FED
Is the first lease penetrated for production Federal or Indian? FED
Lease number: NMNM87274
Lease Acres:
Surface access agreement in place?
Allotted?
Reservation:
Agreement in place? NO
Federal or Indian agreement:
Agreement number:
Agreement name:
Keep application confidential? Y
Permitting Agent? NO
APD Operator: MARATHON OIL PERMIAN LLC
Operator letter of

Operator Info

Operator Organization Name: MARATHON OIL PERMIAN LLC
Operator Address: 990 TOWN & COUNTRY BLVD
Zip: 77024
Operator PO Box:
Operator City: HOUSTON
State: TX
Operator Phone: (713)929-6600
Operator Internet Address:

Section 2 - Well Information

Well in Master Development Plan? NO
Master Development Plan name:
Well in Master SUPO? NO
Master SUPO name:
Well in Master Drilling Plan? NO
Master Drilling Plan name:
Well Name: TOPAZ 30 FEDERAL COM
Well Number: 2H
Well API Number:
Field/Pool or Exploratory? Field and Pool
Field Name: WC-025 G-08 S213304D
Pool Name: BONE SPRING

Operator Name: MARATHON OIL PERMIAN LLC

Well Name: TOPAZ 30 FEDERAL COM **Well Number:** 2H

Is the proposed well in an area containing other mineral resources? NATURAL GAS,OIL

Is the proposed well in a Helium production area? N **Use Existing Well Pad?** N **New surface disturbance?**

Type of Well Pad: SINGLE WELL **Multiple Well Pad Name:** **Number:**

Well Class: HORIZONTAL **Number of Legs:** 1

Well Work Type: Drill

Well Type: OIL WELL

Describe Well Type:

Well sub-Type: INFILL

Describe sub-type:

Distance to town: 29 Miles **Distance to nearest well:** 30 FT **Distance to lease line:** 100 FT

Reservoir well spacing assigned acres Measurement: 640.56 Acres

Well plat: Topaz_301H_Pay.gov_info_20240301160649_20240321211102.pdf

A2_Topaz_fed_com_301H_C102_20250429070534.pdf

Well work start Date: 09/30/2025 **Duration:** 29 DAYS

Section 3 - Well Location Table

Survey Type: RECTANGULAR

Describe Survey Type:

Datum: NAD83 **Vertical Datum:** NAVD88

Survey number: 11403 **Reference Datum:** GROUND LEVEL

Wellbore	NS-Foot	NS Indicator	EW-Foot	EW Indicator	Twsp	Range	Section	Aliquot/Lot/Tract	Latitude	Longitude	County	State	Meridian	Lease Type	Lease Number	Elevation	MD	TVD	Will this well produce from this
SHL Leg #1	558	FNL	1252	FWL	20S	34E	31	Aliquot NWNW	32.5353279	-103.6041182	LEA	NEW MEXICO	NEW MEXICO	F	NMNM 41769	3695			N
KOP Leg #1	100	FSL	1980	FWL	20S	34E	30	Aliquot SESW	32.5374181	-103.6017578	LEA	NEW MEXICO	NEW MEXICO	F	NMNM 87274	-5858	9700	9553	N

Operator Name: MARATHON OIL PERMIAN LLC

Well Name: TOPAZ 30 FEDERAL COM **Well Number:** 2H

Wellbore	NS-Foot	NS Indicator	EW-Foot	EW Indicator	Twsp	Range	Section	Aliquot/Lot/Tract	Latitude	Longitude	County	State	Meridian	Lease Type	Lease Number	Elevation	MD	TVD	Will this well produce from this
PPP Leg #1-1	100	FSL	1980	FWL	20S	34E	30	Aliquot SESW	32.5371418	-103.6017578	LEA	NEW MEXICO	NEW MEXICO	F	NMNM 87274	-5858	9700	9553	Y
PPP Leg #1-2	1319	FNL	1984	FWL	20S	34E	30	Aliquot NENW	32.5477448	-103.6017452	LEA	NEW MEXICO	NEW MEXICO	F	NMNM 86168	-6005	13455	9700	Y
PPP Leg #1-3	273	FNL	2640	FEL	20S	34E	30	Aliquot NWNE	32.5506254	-103.599603	LEA	NEW MEXICO	NEW MEXICO	F	NMNM 38467	-6005	14744	9700	Y
EXIT Leg #1	100	FSL	660	FEL	20S	34E	30	Aliquot SESE	32.5371625	-103.5931612	LEA	NEW MEXICO	NEW MEXICO	F	NMNM 86168	-6005	21261	9700	Y
BHL Leg #1	100	FSL	660	FEL	20S	34E	30	Aliquot SESE	32.5371625	-103.5931612	LEA	NEW MEXICO	NEW MEXICO	F	NMNM 86168	-6005	21261	9700	N

Pay.gov Trcking ID: 26TP0LU1

Please note we changed the well name:

From: Topaz 30 Federal Com #2H

To: Topaz Fed Com #301H.

C-102 Updated by Subsequent Name Change

Santa Fe Main Office
Phone: (505) 476-3441
General Information
Phone: (505) 629-6116

Online Phone Directory Visit:
https://www.emnrd.nm.gov/ocd/contact-us/

State of New Mexico
Energy, Minerals & Natural Resources Department

OIL CONSERVATION DIVISION

C-102
Revised July 9, 2024
Submit Electronically via OCD Permitting

Submittal Type: ☒ Initial Submittal ☐ Amended Report ☐ As Drilled

WELL LOCATION INFORMATION

API Number	Pool Code	Pool Name
30-025-	97895	WC-025 G-08 S213304D; BONE SPRING

Property Code	Property Name	Well Number
318310	TOPAZ 30 FEDERAL COM	2H

OGRID No.	Operator Name	Ground Level Elevation
372098	MARATHON OIL PERMIAN LLC	3693'

Surface Owner: ☐ State ☐ Fee ☐ Tribal ☒ Federal
Mineral Owner: ☐ State ☐ Fee ☐ Tribal ☒ Federal

Surface Location

UL	Section	Township	Range	Lot	Ft. from N/S	Ft. from E/W	Latitude	Longitude	County
L1	31	20S	34E	1	558' NORTH	1252' WEST	32.53532792N	103.60411821W	LEA

Bottom Hole Location

UL	Section	Township	Range	Lot	Ft. from N/S	Ft. from E/W	Latitude	Longitude	County
P	30	20S	34E		100' SOUTH	660' EAST	32.53716256N	103.59316127W	LEA

Dedicated Acres	Infill or Defining Well	Defining Well API	Overlapping Spacing Unit (Y/N)	Consolidation Code
640.56	DEFINING	N/A	Y	C

Order Numbers. N/A
Well setbacks are under Common Ownership: ☒Yes ☐No

Kick Off Point (KOP)

UL	Section	Township	Range	Lot	Ft. from N/S	Ft. from E/W	Latitude	Longitude	County
N	30	20S	34E		100' SOUTH	1980' WEST	32.53714181N	103.60175780W	LEA

First Take Point (FTP)

UL	Section	Township	Range	Lot	Ft. from N/S	Ft. from E/W	Latitude	Longitude	County
N	30	20S	34E		100' SOUTH	1980' WEST	32.53714181N	103.60175780W	LEA

Last Take Point (LTP)

UL	Section	Township	Range	Lot	Ft. from N/S	Ft. from E/W	Latitude	Longitude	County
P	30	20S	34E		100' SOUTH	660' EAST	32.53716256N	103.59316127W	LEA

Unitized Area or Area of Uniform Interest	Spacing Unit Type ☒ Horizontal ☐ Vertical	Ground Floor Elevation:
COM		3693'

OPERATOR CERTIFICATIONS

I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief, and, if the well is a vertical or directional well, 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 a working interest or unleased mineral interest, or to a voluntary pooling agreement or a compulsory pooling order heretofore entered by the division.

If this well is a horizontal well, I further certify that this organization has received the consent of at least one lessee or owner of a working interest or unleased mineral interest in each tract (in the target pool or formation) in which any part of the well's completed interval will be located or obtained a compulsory pooling order from the division.

09/16/2025
Signature Date

Robyn Russell
Printed Name

Robyn.M.Russell@conocophillips.com
Email Address

SURVEYOR CERTIFICATIONS

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.

Signature and Seal of Professional Surveyor

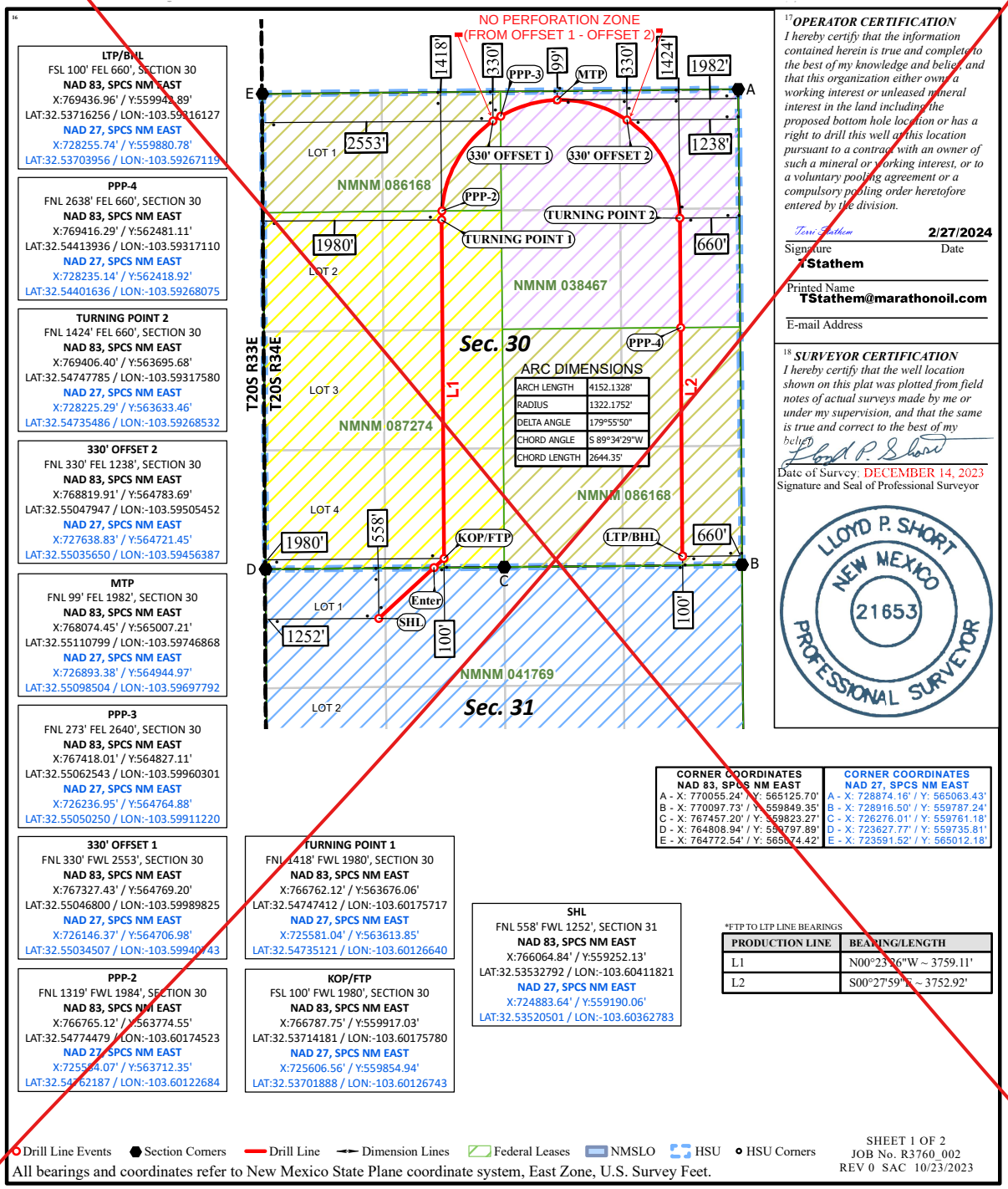
Certificate Number | Date of Survey

Note: 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.

ACREAGE DEDICATION PLATS

This grid represents a standard section. You may superimpose a non-standard section, or larger area, over this grid. Operators must outline the dedicated acreage in a red box, clearly show the well surface location and bottom hole location, if it is directionally drilled, with the dimensions from the section lines in the cardinal directions. If this is a horizontal wellbore show on this plat the location of the First Take Point and Last Take Point, and the point within the Completed interval (other than the First Take Point or Last Take Point) that is closest to any outer boundary of the tract.

Surveyors shall use the latest United States government survey or dependent resurvey. Well locations will be in reference to the New Mexico Principal Meridian. If the land is not surveyed, contact the OCD Engineering Bureau. Independent subdivision surveys will not be acceptable.



LTP/BHL
FSL 100' FEL 660', SECTION 30
NAD 83, SPCS NM EAST
X:769436.96' / Y:559943.89'
LAT:32.53716256 / LON:-103.59316127
NAD 27, SPCS NM EAST
X:728255.74' / Y:559880.78'
LAT:32.53703956 / LON:-103.59267119

PPP-4
FNL 2638' FEL 660', SECTION 30
NAD 83, SPCS NM EAST
X:769416.29' / Y:562481.11'
LAT:32.54413936 / LON:-103.59317110
NAD 27, SPCS NM EAST
X:728235.14' / Y:562418.92'
LAT:32.54401636 / LON:-103.59268075

TURNING POINT 2
FNL 1424' FEL 660', SECTION 30
NAD 83, SPCS NM EAST
X:769406.40' / Y:563695.68'
LAT:32.54747785 / LON:-103.59317580
NAD 27, SPCS NM EAST
X:728225.29' / Y:563633.46'
LAT:32.54735486 / LON:-103.59268532

330' OFFSET 2
FNL 330' FEL 1238', SECTION 30
NAD 83, SPCS NM EAST
X:768819.91' / Y:564783.69'
LAT:32.55047947 / LON:-103.59505452
NAD 27, SPCS NM EAST
X:727638.83' / Y:564721.45'
LAT:32.55035650 / LON:-103.59456387

MTP
FNL 99' FEL 1982', SECTION 30
NAD 83, SPCS NM EAST
X:768074.45' / Y:565007.21'
LAT:32.55110799 / LON:-103.59746868
NAD 27, SPCS NM EAST
X:726893.38' / Y:564944.97'
LAT:32.55098504 / LON:-103.59697792

PPP-3
FNL 273' FEL 2640', SECTION 30
NAD 83, SPCS NM EAST
X:767418.01' / Y:564827.11'
LAT:32.55062543 / LON:-103.59960301
NAD 27, SPCS NM EAST
X:726236.95' / Y:564764.88'
LAT:32.55050250 / LON:-103.59911220

330' OFFSET 1
FNL 330' FWL 2553', SECTION 30
NAD 83, SPCS NM EAST
X:767327.43' / Y:564769.20'
LAT:32.55046800 / LON:-103.59989825
NAD 27, SPCS NM EAST
X:726146.37' / Y:564706.98'
LAT:32.55034507 / LON:-103.59940143

PPP-2
FNL 1319' FWL 1984', SECTION 30
NAD 83, SPCS NM EAST
X:766765.12' / Y:563774.55'
LAT:32.54774479 / LON:-103.60174523
NAD 27, SPCS NM EAST
X:725584.07' / Y:563712.35'
LAT:32.54762187 / LON:-103.60122684

TURNING POINT 1
FNL 1418' FWL 1980', SECTION 30
NAD 83, SPCS NM EAST
X:766762.12' / Y:563676.06'
LAT:32.54747412 / LON:-103.60175717
NAD 27, SPCS NM EAST
X:725581.04' / Y:563613.85'
LAT:32.54735121 / LON:-103.60126640

KOP/FTP
FSL 100' FWL 1980', SECTION 30
NAD 83, SPCS NM EAST
X:766787.75' / Y:559917.03'
LAT:32.53714181 / LON:-103.60175780
NAD 27, SPCS NM EAST
X:725606.56' / Y:559854.94'
LAT:32.53701888 / LON:-103.60126743

SHL
FNL 558' FWL 1252', SECTION 31
NAD 83, SPCS NM EAST
X:766064.84' / Y:559252.13'
LAT:32.53532792 / LON:-103.60411821
NAD 27, SPCS NM EAST
X:724883.64' / Y:559190.06'
LAT:32.53520501 / LON:-103.60362783

CORNER COORDINATES NAD 83, SPCS NM EAST
A - X: 770055.24' / Y: 565125.70'
B - X: 770097.73' / Y: 559849.35'
C - X: 767457.20' / Y: 559823.27'
D - X: 764808.94' / Y: 559797.89'
E - X: 764772.54' / Y: 565074.42'

CORNER COORDINATES NAD 27, SPCS NM EAST
A - X: 728874.16' / Y: 565063.43'
B - X: 728916.50' / Y: 559787.24'
C - X: 726276.01' / Y: 559761.18'
D - X: 723627.77' / Y: 559735.81'
E - X: 723591.52' / Y: 565012.18'

*FTP TO LTP LINE BEARINGS

PRODUCTION LINE	BEARING/LENGTH
L1	N00°23'26"W ~ 3759.11'
L2	S00°27'59"E ~ 3752.92'

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.

Terri Stathem — 2/27/2024
Signature — Date
TStathem
Printed Name
TStathem@marathonoil.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.

Date of Survey: DECEMBER 14, 2023
Signature and Seal of Professional Surveyor

LLOYD P. SHORT NEW MEXICO 21653 PROFESSIONAL SURVEYOR

Drill Line Events | Section Corners | Drill Line | Dimension Lines | Federal Leases | NMSLO | HSU | HSU Corners

All bearings and coordinates refer to New Mexico State Plane coordinate system, East Zone, U.S. Survey Feet.

Distances/areas shown are NAD 83 grid measurements. Combined Scale Factor: 0.99978980 and a Convergence Angle: 0.390032294°

SHEET 1 OF 2
JOB No. R3760_002
REV 0 SAC 10/23/2023

AFMSS
U.S. Department of the Interior
BUREAU OF LAND MANAGEMENT

Drilling Plan Data Report
08/04/2025

APD ID: 10400081220
Submission Date: 10/26/2021
Operator Name: MARATHON OIL PERMIAN LLC
Well Name: TOPAZ 30 FEDERAL COM
Well Number: 2H
Well Type: OIL WELL
Well Work Type: Drill

Highlighted data reflects the most recent changes

Show Final Text

Section 1 - Geologic Formations

Formation ID	Formation Name	Elevation	True Vertical	Measured Depth	Lithologies	Mineral Resources	Producing Formatio
16094597	PERMIAN	3695	0	0	ANHYDRITE	NONE	N
16094617	RUSTLER	2162	1533	1533	ANHYDRITE	OTHER : BRINE	N
16094612	YATES	361	3334	3334	SANDSTONE	OIL	N
16094609	CAPITAN REEF	92	3603	3603	LIMESTONE	OTHER : BRINE	N
16094602	LAMAR	-1447	5142	5142	SANDSTONE, SHALE	NONE	N
16094596	BELL CANYON	-2007	5702	5702	SANDSTONE	OIL	N
16094618	CHERRY CANYON	-2053	5748	5748	SANDSTONE	OIL	N
16094619	BRUSHY CANYON	-3276	6971	6971	SANDSTONE	OIL	N
16094607	BONE SPRING LIME	-4954	8649	8649	LIMESTONE	NONE	N
16094613	UPPER AVALON SHALE	-5069	8764	8764	SHALE	OIL	N
16094614	BONE SPRING 1ST	-5981	9676	9676	SANDSTONE	OIL	Y
16094615	BONE SPRING 2ND	-6226	9921	9921	SANDSTONE	OIL	Y
16094616	BONE SPRING 3RD	-7005	10700	10700	SANDSTONE	OIL	Y

Section 2 - Blowout Prevention

Operator Name: MARATHON OIL PERMIAN LLC

Well Name: TOPAZ 30 FEDERAL COM **Well Number:** 2H

Pressure Rating (PSI): 10M **Rating Depth:** 20000

Equipment: 13 5/8 5M Annular & BOP Stack with a Min Required WP will be installed and tested before drilling the 14 3/4", 9 7/8", and 6 3/4" holes.
Requesting Variance? YES

Variance request: 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.
Testing Procedure: BOP/BOPE will be tested to 250 psi low and a high of 100% of WP for the Annular and 10,000 psi for the BOP Stack. Testing will be conducted by an independent service company per Onshore Order 2 requirements. The System may be upgraded to a higher pressure but still tested to the working pressure listed in the Equipment Description 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, full opening 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. A multibowl wellhead is being used. The BOP will be tested per Onshore Order #2 after installation on the surface casing which will cover testing requirements for a maximum of 30 days. If any seal subject to test pressure is broken the system must be tested. See attached schematic.

Choke Diagram Attachment:

D8_MRO_Choke_Manifold_20240301172826_20240321212346.pdf

D8_MRO_Flex_Hose_20250102153351_20250605120445.pdf

BOP Diagram Attachment:

D8_MRO_10M_BOP_20240301172852_20240321212347.pdf

Section 3 - Casing

Casing ID	String Type	Hole Size	Csg Size	Condition	Standard	Tapered String	Top Set MD	Bottom Set MD	Top Set TVD	Bottom Set TVD	Top Set MSL	Bottom Set MSL	Calculated casing length MD	Grade	Weight	Joint Type	Collapse SF	Burst SF	Joint SF Type	Joint SF	Body SF Type	Body SF
1	SURFACE	16	13.375	NEW	API	N	0	1521	0	1521	3693	2172	1558	J-55	54.5	ST&C	5.22	99.99	BUOY	4.52	BUOY	4.52
2	INTERMEDIATE	9.625	9.625	NEW	API	N	0	3298	0	3298	3693	395	3603	P-110	40	BUTT	1.2	1.42	BUOY	2.44	BUOY	2.44
3	INTERMEDIATE	8.75	7.625	NEW	NON API	N	0	9120	0	9120	3693	-5334	9120	P-110	29.7	OTHER - fjm	2	1.24	BUOY	2.83	BUOY	2.83
4	PRODUCTION	6.75	5.5	NEW	NON API	N	0	21261	0	9700	3693	-6007	21261	P-110	23	OTHER - TLW	2.53	1.26	BUOY	2.22	BUOY	2.22

Operator Name: MARATHON OIL PERMIAN LLC

Well Name: TOPAZ 30 FEDERAL COM **Well Number:** 2H

Casing Attachments

Casing ID: 1 **String** SURFACE

Inspection Document:

Spec Document:

Tapered String Spec:

Casing Design Assumptions and Worksheet(s):

D8_Topaz_FC_301H_Csg_Assump_20240301173002_20240321212347.pdf

Casing ID: 2 **String** INTERMEDIATE

Inspection Document:

Spec Document:

Tapered String Spec:

Casing Design Assumptions and Worksheet(s):

D8_Topaz_FC_301H_Csg_Assump_20240301173114_20240321212347.pdf

Casing ID: 3 **String** INTERMEDIATE

Inspection Document:

Spec Document:

Specs_7.6250_29.7000_P110_HP_20240301173420_20240321212348.pdf

Tapered String Spec:

Casing Design Assumptions and Worksheet(s):

D8_Topaz_FC_301H_Csg_Assump_20240301173456_20240321212348.pdf

Operator Name: MARATHON OIL PERMIAN LLC

Well Name: TOPAZ 30 FEDERAL COM **Well Number:** 2H

Casing Attachments

Casing ID: 4 **String** PRODUCTION

Inspection Document:

Spec Document:

5.500_23.00_Benteler_P110_CY_TLW_CDS_20240301173524_20240321212349.pdf

Tapered String Spec:

Casing Design Assumptions and Worksheet(s):

D8_Topaz_FC_301H_Csg_Assump_20240301173311_20240321212348.pdf

Section 4 - Cement

String Type	Lead/Tail	Stage Tool Depth	Top MD	Bottom MD	Quantity(sx)	Yield	Density	Cu Ft	Excess%	Cement type	Additives
SURFACE	Lead		0	1371	584	2.12	12.5	1239	25	Class C	Extender, Accelerator
SURFACE	Tail		1371	1521	99	1.32	14.8	130	25	Class C	Accelerator
INTERMEDIATE	Lead		0	2796	546	2.18	12.4	1190	25	CLASS C	EXTENDER, ACCELERATOR.
INTERMEDIATE	Tail		2796	3298	147	1.33	14.8	196	25	CLASS C	RETARDER
INTERMEDIATE	Lead		0	8620	273	4.09	10.5	1116	25	Class H	Extender
INTERMEDIATE	Tail		8620	9120	45	1.4	14.5	63	25	Class H	Viscosifier, Fluid Loss
PRODUCTION	Lead		8562	21261	1191	1.68	13	2001	25	Class H	Retarter, Extender, Fluid Loss, Suspension Agent

Operator Name: MARATHON OIL PERMIAN LLC

Well Name: TOPAZ 30 FEDERAL COM **Well Number:** 2H

Section 5 - Circulating Medium

Mud System Type: Closed

Will an air or gas system be Used? NO

Description of the equipment for the circulating system in accordance with 43 CFR 3172:

Diagram of the equipment for the circulating system in accordance with 43 CFR 3172:

Describe what will be on location to control well or mitigate other conditions: The necessary mud products for additional weight and fluid loss control will be on location at all times.

Describe the mud monitoring system utilized: Losses or gains in the mud system will be monitored visually/manually as well as with an electronic PVT.

Circulating Medium Table

Top Depth	Bottom Depth	Mud Type	Min Weight (lbs/gal)	Max Weight (lbs/gal)	Density (lbs/cu ft)	Gel Strength (lbs/100 sqft)	PH	Viscosity (CP)	Salinity (ppm)	Filtration (cc)	Additional Characteristics
0	1521	WATER-BASED MUD	8.4	8.8							
1521	9027	OTHER : Brine	9.2	10.2							
9027	21261	OIL-BASED MUD	10.5	12.5							

Section 6 - Test, Logging, Coring

List of production tests including testing procedures, equipment and safety measures:

None planned.

List of open and cased hole logs run in the well:

GAMMA RAY LOG,DIRECTIONAL SURVEY,MEASUREMENT WHILE DRILLING,

Coring operation description for the well:

None Planned.

Operator Name: MARATHON OIL PERMIAN LLC

Well Name: TOPAZ 30 FEDERAL COM **Well Number:** 2H

Section 7 - Pressure

Anticipated Bottom Hole Pressure: 5068 **Anticipated Surface Pressure:** 2933

Anticipated Bottom Hole Temperature(F): 170

Anticipated abnormal pressures, temperatures, or potential geologic hazards? NO

Describe:

Contingency Plans geoharzards description:

Contingency Plans geohazards

Hydrogen Sulfide drilling operations plan required? YES

Hydrogen sulfide drilling operations

D7_Topaz_FC_H2S_Plan_20240301174318_20240321212349.pdf

Section 8 - Other Information

Proposed horizontal/directional/multi-lateral plan submission:

TOPAZ_FED_COM_301H_PERMIT_PLAN_20250311104146.pdf

Other proposed operations facets description:

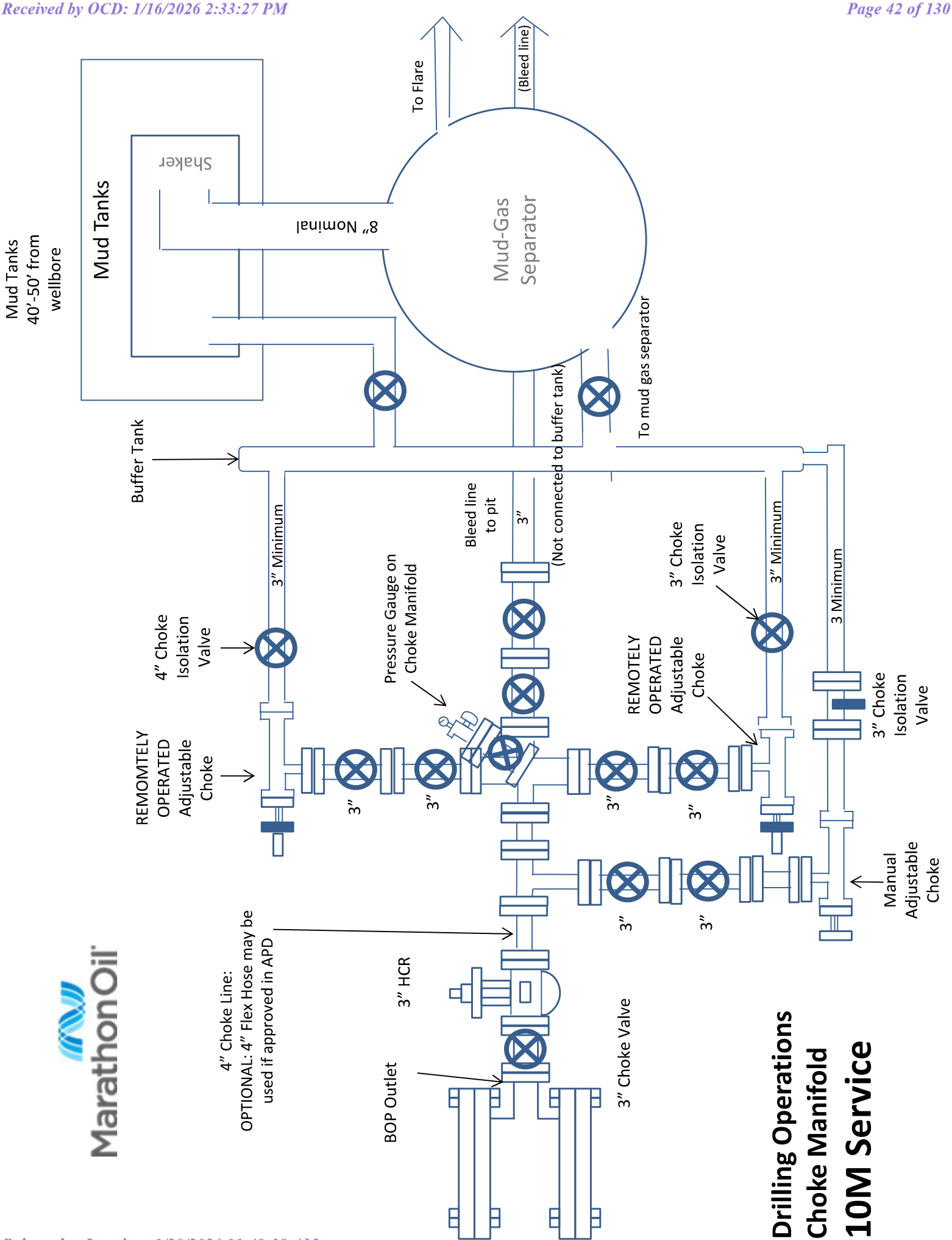
Other proposed operations facets attachment:

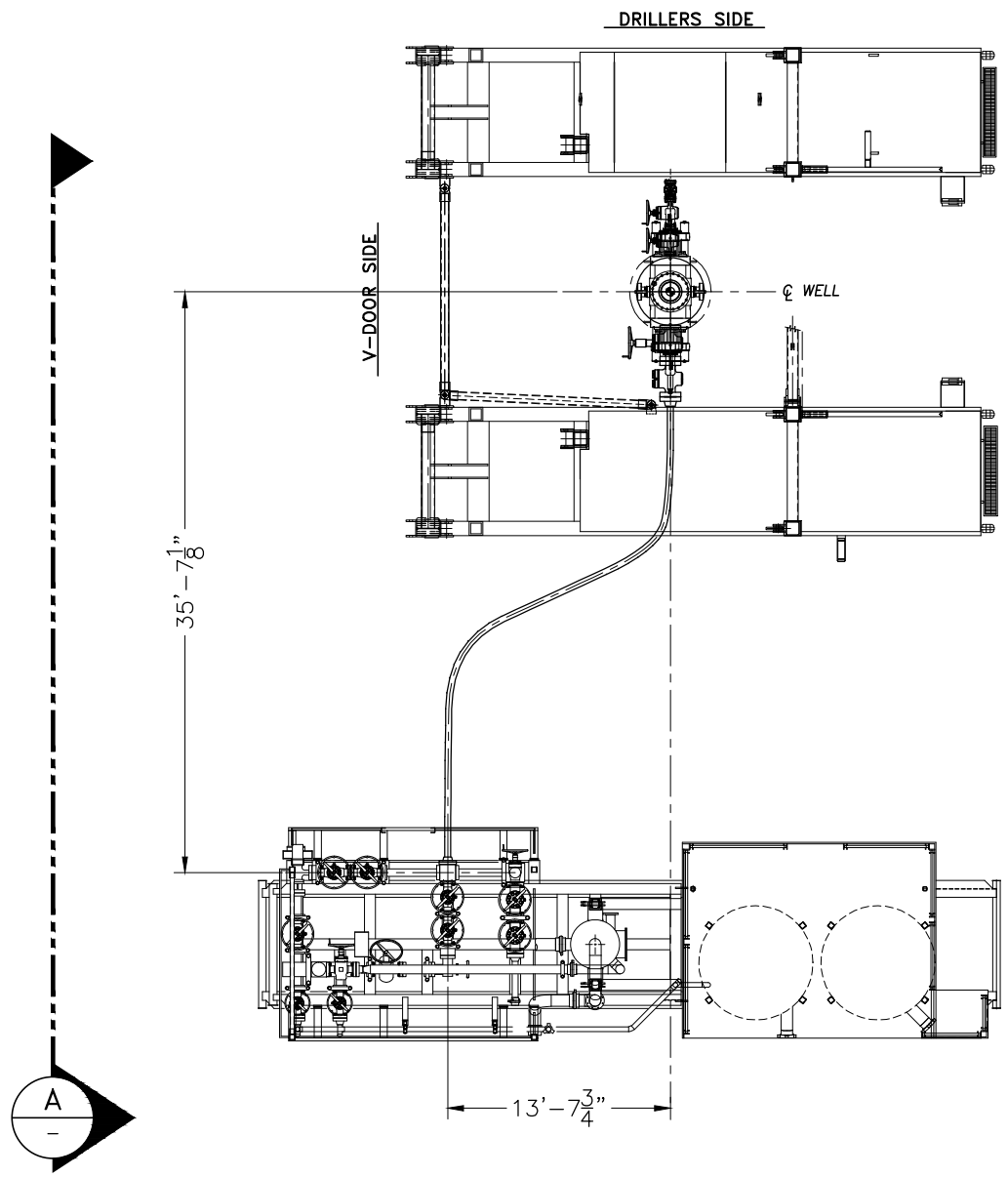
D8_MRO_Well_Control_Plan_20240301174413_20240321212350.pdf
D8_MRO_Wellhead_Diagram_20240301174422_20240321212351.pdf
D8_Topaz_FC_Rig_Layout_Diagram_20240301174430_20240321212351.pdf
D8_Topaz_FC_301H_Drill_Plan_R_20250102154341.pdf

Other Variance request(s)?: Y

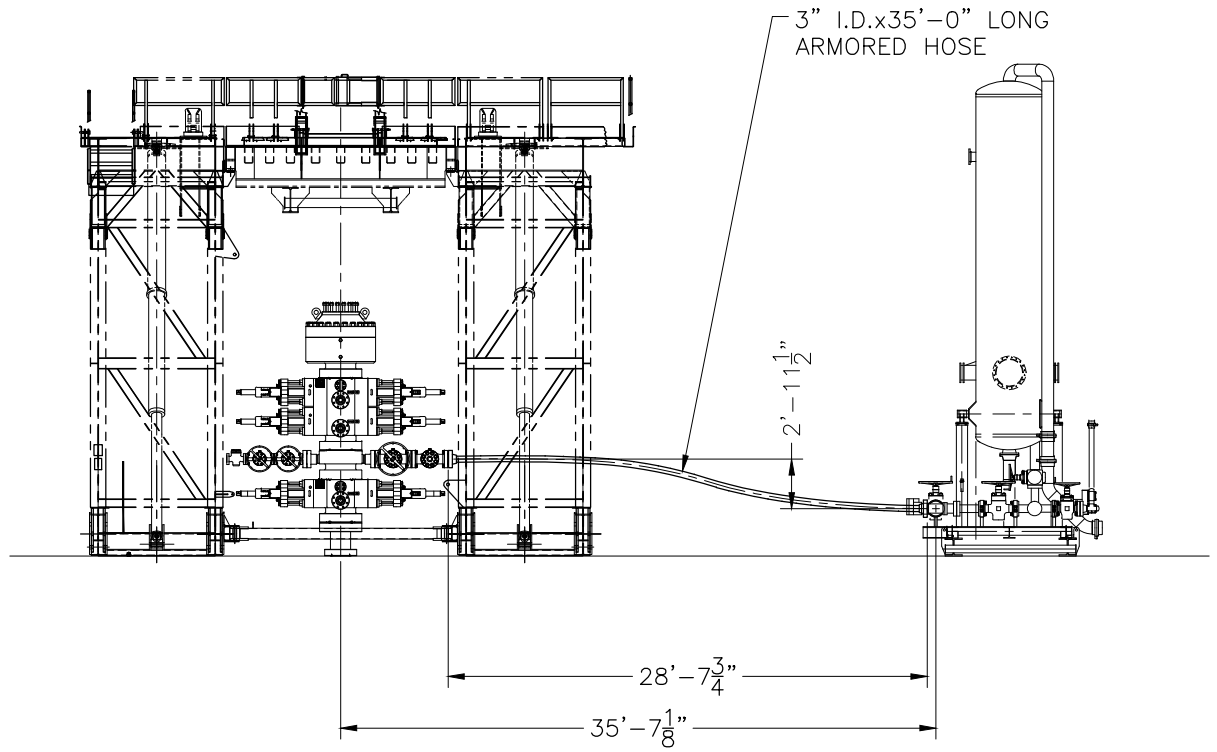
Other Variance attachment:

D8_MRO_Cement_Variance_Request_20240301174440_20240321212518.pdf
D8_MRO_BOP_Break_Test_Variance_20240301174453_20240321212518.pdf
D8_MRO_Variance_Request_20240301174518_20240321212519.pdf
D8_Topaz__Drill_Plan_WBS_20250102154403.pdf


Mud Tanks
40'-50' from wellbore
Mud Tanks
Shaker
8" Nominal
Mud-Gas Separator
To Flare
(Bleed line)
To mud gas separator
(Not connected to buffer tank)
Buffer Tank
3" Minimum
4" Choke Isolation Valve
REMOMTELY OPERATED Adjustable Choke
Pressure Gauge on Choke Manifold
Bleed line to pit
3"
3" Choke Isolation Valve
REMOTELY OPERATED Adjustable Choke
3 Minimum
3" Choke Isolation Valve
Manual Adjustable Choke
4" Choke Line:
OPTIONAL: 4" Flex Hose may be used if approved in APD
3" HCR
BOP Outlet
3" Choke Valve
MarathonOil
Drilling Operations
Choke Manifold
10M Service



PLAN VIEW



SECTION "A"

ISSUED FOR FABRICATION
December-19-2007
DRAFTSMAN
ENGINEER

REV	DATE	DESCRIPTION	BY
A	12/18/07	REMOVED SHEET TOTAL CALLOUT	JAV

ENGINEERING APPROVAL	DATE

HELMERICH & PAYNE
INTERNATIONAL DRILLING CO.

TITLE: CHOKE LINE SYSTEM
FLEXRIG3

CUSTOMER:

PROJECT:

DRAWN:	DATE:	DWG. NO.:	REV:
JBG	4-10-07	210-P1-07	A

SCALE: 3/16"=1' SHEET: 2 OF 8

LETONE

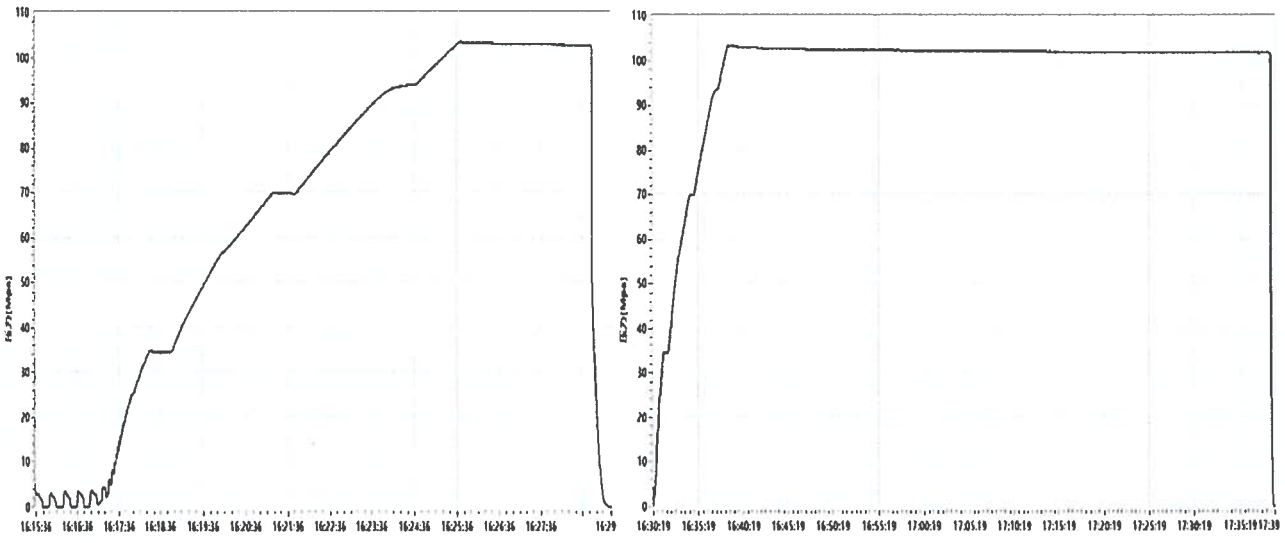
LUOHE LETONE HYDRAULICS TECHNOLOGY CO.,LTD

HYDROSTATIC TESTING REPORT

LTYY/QR-5.7.1-28 №: 230826004

Product Name	Choke And Kill Hose	Standard	API Spec 16C 3rd edition
Product Specification	3″×10000psi×35ft (10.67m)	Serial Number	7660134
Inspection Equipment	MTU-BS-1600-3200-E	Test medium	Water
Inspection Department	Q.C. Department	Inspection Date	2023.08.17
Rate of length change			
Standard requirements	At working pressure ,the rate of length change should not more than ±2%		
Testing result	10000psi (69.0MPa) ,Rate of length change 0.9%		
Hydrostatic testing			
Standard requirements	At 1.5 times working pressure, the initial pressure-holding period of not less than three minutes, the second pressure-holding period of not less than one hour, no leaks.		
Testing result	15000psi (103.5MPa), 3 min for the first time, 60 min for the second time, no leakage		

Graph of pressure testing:



Conclusion	The inspected items meet standard requirements of API Spec 16C 3rd edition				
Approver	Jiaolong Chen	Auditor	Hliqing Dong	Inspector	Zhansheng Wang

LETONE

LUOHE LETONE HYDRAULICS TECHNOLOGY CO.,LTD

CERTIFICATE OF QUALITY

LTYY/QR-5.7.1-19B №: LT2023-126-001

Customer Name	Austin Hose		
Product Name	Choke And Kill Hose		
Product Specification	3″×10000psi×35ft (10.67m)	Quantity	12PCS
Serial Number	7660131~7660142	FSL	FSL3
Temperature Range	-29℃～+121℃	Standard	API Spec 16C 3rd edition
Inspection Department	Q.C. Department	Inspection date	2023.08.26

Inspection Items	Inspection results
Appearance Checking	In accordance with API Spec 16C 3rd edition
Size and Lengths	In accordance with API Spec 16C 3rd edition
Dimensions and Tolerances	In accordance with API Spec 16C 3rd edition
End Connections: 4-1/16″×10000psi Integral flange for sour gas service	In accordance with API Spec 6A 21st edition
End Connections: 4-1/16″×10000psi Integral flange for sour gas service	In accordance with API Spec 17D 3rd edition
Hydrostatic Testing	In accordance with API Spec 16C 3rd edition
product Marking	In accordance with API Spec 16C 3rd edition
Inspection conclusion	The inspected items meet standard requirements of API Spec 16C 3rd edition
Remarks	

Approver	Jiawang Chen	Auditor	Hliqing Dong	Inspector	Zhansheng Wang

LETONE

LUOHE LETONE HYDRAULICS TECHNOLOGY CO.,LTD

CERTIFICATE OF CONFORMANCE

№:LT230826013

Product Name: Choke And Kill Hose

Product Specification: 3″×10000psi×35ft(10.67m)

Serial Number: 7660131~7660142

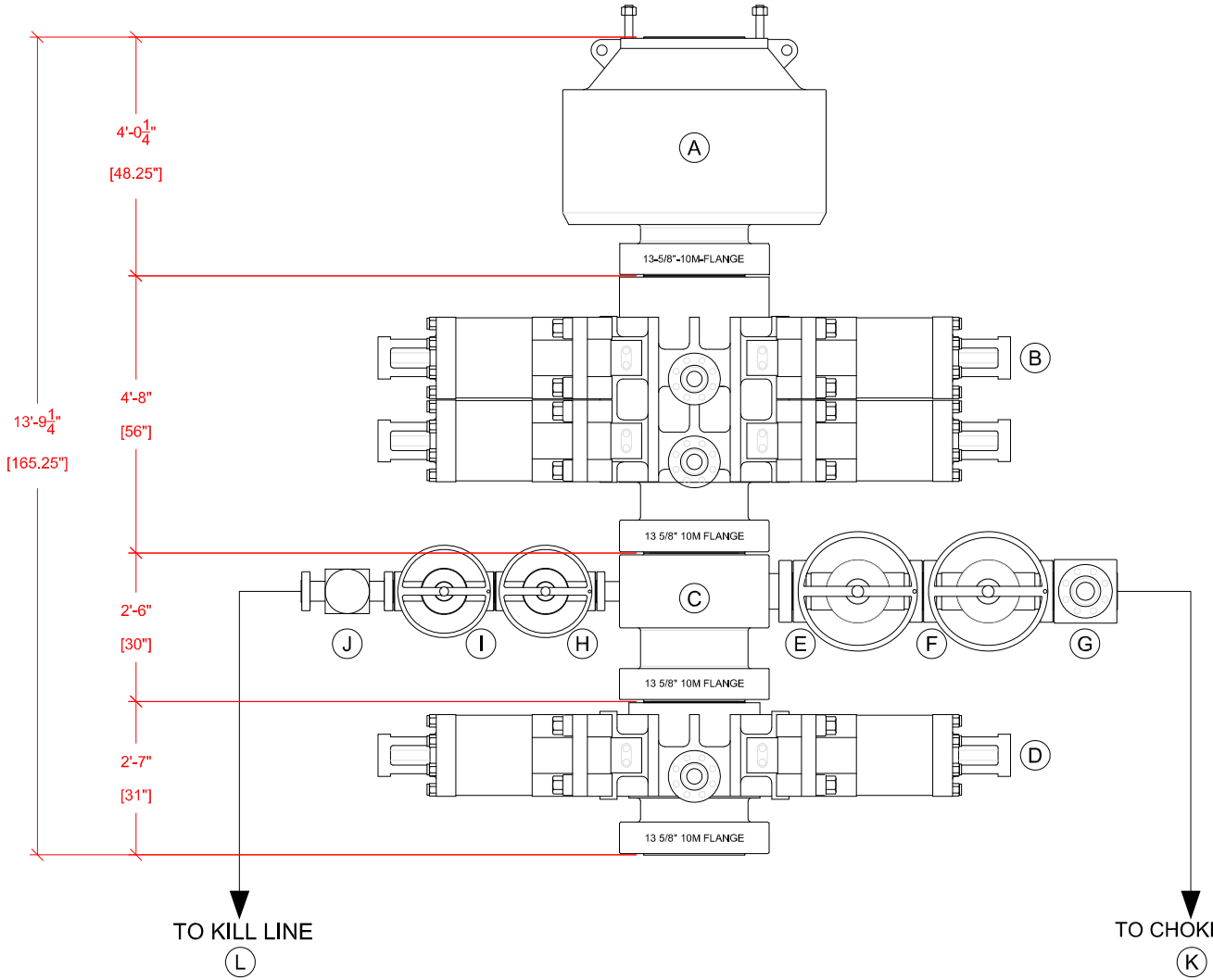
End Connections: 4-1/16″×10000psi Integral flange for sour gas service

The Choke And Kill Hose assembly was produced by LUOHE LETONE HYDRAULICS TECHNOLOGY CO.,LTD . in Aug 2023, and inspected by LUOHE LETONE HYDRAULICS TECHNOLOGY CO.,LTD. according to API Spec 16C 3rd edition on Aug 26, 2023. The overall condition is good. This is to certify that the Choke And Kill Hose complies with all current standards and specifications for API Spec 16C 3rd edition .

QC Manager: Jiaolong Chen Date:Aug 26, 2023

BOP INFORMATION

ITEM	DESCRIPTION	MAKE	MODEL
A	ANNULAR BOP	CAMERON	13 5/8" 5M T90
B	DOUBLE RAM BOP	CAMERON	13 5/8" 10M U
C	MUD CROSS	CAMERON	13 5/8" 10M
D	SINGLE RAM BOP	CAMERON	13 5/8" 10M U
E	WING VALVE	CAMERON	4 1/16" 10M FLS MANUAL
F	HCR VALVE	CAMERON	4 1/16" 10M HCR
G	CHOKE BLOCK	CAMERON	4 1/16" 10M
H	KILL VALVE	CAMERON	2 1/16" 10M FLS MANUAL
I	KILL VALVE	CAMERON	2 1/16" 10M FLS MANUAL
J	CHECK VALVE	CAMERON	2 1/16" 10M "R" CHECK
K	CHOKE LINE	GATES	4 1/16" 10M FR
L	KILL LINE	GATES	2 1/16" 10M FR
M			



SYM	DATE	REVISION	BY

TOLERANCE UNLESS OTHERWISE SPECIFIED
DIMENSIONS IN INCHES

DECIMAL DIMENSION		
CONCENTRICITY		
X.X	± .1	.1 F.I.R.
X.XX	± .06	.06 F.I.R.
X.XXX	± .010	.010 F.I.R.

ANGLES ± .5 DEGREES

ACAD FILE: CAC170-A-005-00-RO

CUSTOMER INFO:

FILE: R-170_BOP_MARATHON.dwg

DWG BY	IJA	7/13/2021
CHK BY		
APP BY		

SCALE: NTS

CACTUS Drilling Co., L.L.C.
Oklahoma City, OK, U.S.A.
Tel: 405-577-5347 Fax: 405-577-9306

TITLE:
RIG 170
BOP STACK-UP

SIZE B | CAC170-A005 | SHEET 1

TEC-LOCK WEDGE

5.500" 23 LB/FT (.415"Wall)
BENTELER P110 CY

Pipe Body Data

Nominal OD:	5.500	in
Nominal Wall:	.415	in
Nominal Weight:	23.00	lb/ft
Plain End Weight:	22.56	lb/ft
Material Grade:	P110 CY	
Mill/Specification:	BENTELER	
Yield Strength:	125,000	psi
Tensile Strength:	130,000	psi
Nominal ID:	4.670	in
API Drift Diameter:	4.545	in
Special Drift Diameter:	None	in
RBW:	87.5 %	
Body Yield:	829,000	lbf
Burst:	16,510	psi
Collapse:	16,910	psi

Connection Data

Standard OD:	5.950	in
Pin Bored ID:	4.670	in
Critical Section Area:	6.457	in²
Tensile Efficiency:	97.4 %	
Compressive Efficiency:	100 %	
Longitudinal Yield Strength:	807,000	lbf
Compressive Limit:	829,000	lbf
Internal Pressure Rating:	16,510	psi
External Pressure Rating:	16,910	psi
Maximum Bend:	101.5	°/100ft

Operational Data

Minimum Makeup Torque:	16,400	ft*lbf
Optimum Makeup Torque:	20,500	ft*lbf
Maximum Makeup Torque:	44,300	ft*lbf
Minimum Yield:	49,200	ft*lbf
Makeup Loss:	5.97	in

Notes

Operational Torque is equivalent to the Maximum Make-Up Torque

Generated on Mar 12, 2019

HUNTING

U. S. Steel Tubular Products

8/19/2021 11:07:53 AM

7.625" 29.70lb/ft (0.375" Wall) P110 HP USS-LIBERTY FJM®

MECHANICAL PROPERTIES	Pipe	USS-LIBERTY FJM®		--
Minimum Yield Strength	125,000	--	psi	--
Maximum Yield Strength	140,000	--	psi	--
Minimum Tensile Strength	130,000	--	psi	--
DIMENSIONS	**Pipe**	**USS-LIBERTY FJM®**		**--**
Outside Diameter	7.625	7.625	in.	--
Wall Thickness	0.375	--	in.	--
Inside Diameter	6.875	6.789	in.	--
Standard Drift	6.750	6.750	in.	--
Alternate Drift	--	--	in.	--
Nominal Linear Weight, T&C	29.70	--	lb/ft	--
Plain End Weight	29.06	--	lb/ft	--
SECTION AREA	**Pipe**	**USS-LIBERTY FJM®**		**--**
Critical Area	8.541	5.074	sq. in.	--
Joint Efficiency	--	59.4	%	--
PERFORMANCE	**Pipe**	**USS-LIBERTY FJM®**		**--**
Minimum Collapse Pressure	7,260	7,260	psi	--
Minimum Internal Yield Pressure	10,750	10,750	psi	--
Minimum Pipe Body Yield Strength	1,068,000	--	lb	--
Joint Strength	--	634,000	lb	--
Compression Rating	--	634,000	lb	--
Reference Length	--	14,555	ft	--
Maximum Uniaxial Bend Rating	--	44.6	deg/100 ft	--
MAKE-UP DATA	**Pipe**	**USS-LIBERTY FJM®**		**--**
Make-Up Loss	--	3.92	in.	--
Minimum Make-Up Torque	--	11,600	ft-lb	--
Maximum Make-Up Torque	--	16,700	ft-lb	--

UNCONTROLLED

Notes

1. Other than proprietary collapse and connection values, performance properties have been calculated using standard equations defined by API 5C3 and do not incorporate any additional design or safety factors. Calculations assume nominal pipe OD, nominal wall thickness and Specified Minimum Yield Strength (SMYS).
2. Compressive & Tensile Connection Efficiencies are calculated by dividing the connection critical area by the pipe body area.
3. Uniaxial bending rating shown is structural only, and equal to compression efficiency.
4. USS-LIBERTY FJM™ connections are optimized for each combination of OD and wall thickness and cannot be interchanged.
5. Torques have been calculated assuming a thread compound friction factor of 1.0 and are recommended only. Field make-up torques may require adjustment based on actual field conditions (e.g. make-up speed, temperature, thread compound, etc.).
6. Reference length is calculated by joint strength divided by nominal plain end weight with 1.5 safety factor.
7. Connection external pressure leak resistance has been verified to 100% API pipe body collapse pressure following the guidelines of API 5C5 Cal III.

U. S. Steel Tubular Products
460 Wildwood Forest Drive, Suite 300S
Spring, Texas 77380

1-877-893-9461
connections@uss.com
www.usstubular.com

Marathon Oil

Topaz Fed Com 301H

String Type	Hole Size	Casing Size	Top Set MD	Bottom Set MD	Top Set TVD	Bottom Set TVD	Top Set MSL	Bottom Set MSL	Weight (lbs/ft)	Grade	Joint Type	Collapse SF	Burst SF	Joint SF Type	Joint SF	Body SF Type	Body SF
Surface	17.5	13.375	0	1558	0	1558	3693	2135	54.5	J55	BTC	5.22	1.81	BUOY	4.52	BUOY	4.52
Intermediate I	12.25	9.625	0	3603	0	3603	3693	90	40	P110HC	BTC	1.20	1.42	BUOY	2.44	BUOY	2.44
Intermediate II	8.75	7.625	0	9120	0	9027	3693	-5334	29.7	P110	USS Liberty	2.00	1.24	BUOY	2.83	BUOY	2.83
Production	6.75	5.5	0	21261	0	9700	3693	-6007	23	P110HC	TLW	2.53	1.26	BUOY	2.22	BUOY	2.22
All casing strings will be tested in accordance with 43 CFR 3172.												Safety Factors will Meet or Exceed					

Marathon Oil

Topaz Fed Com 301H

String Type	Hole Size	Casing Size	Top Set MD	Bottom Set MD	Top Set TVD	Bottom Set TVD	Top Set MSL	Bottom Set MSL	Weight (lbs/ft)	Grade	Joint Type	Collapse SF	Burst SF	Joint SF Type	Joint SF	Body SF Type	Body SF
Surface	17.5	13.375	0	1558	0	1558	3693	2135	54.5	J55	BTC	5.22	1.81	BUOY	4.52	BUOY	4.52
Intermediate I	12.25	9.625	0	3603	0	3603	3693	90	40	P110HC	BTC	1.20	1.42	BUOY	2.44	BUOY	2.44
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Marathon Oil

Topaz Fed Com 301H

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Marathon Oil

Topaz Fed Com 301H

String Type	Hole Size	Casing Size	Top Set MD	Bottom Set MD	Top Set TVD	Bottom Set TVD	Top Set MSL	Bottom Set MSL	Weight (lbs/ft)	Grade	Joint Type	Collapse SF	Burst SF	Joint SF Type	Joint SF	Body SF Type	Body SF
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Intermediate II	8.75	7.625	0	9120	0	9027	3693	-5334	29.7	P110	USS Liberty	2.00	1.24	BUOY	2.83	BUOY	2.83
Production	6.75	5.5	0	21261	0	9700	3693	-6007	23	P110HC	TLW	2.53	1.26	BUOY	2.22	BUOY	2.22
All casing strings will be tested in accordance with 43 CFR 3172.												Safety Factors will Meet or Exceed					

990 Town & Country Boulevard
Houston, Tx 77024

Hydrogen Sulfide (H_2S)
Contingency Plan

Topaz Federal Com 301H
558' FNL & 1252' FWL Sec. 31 T-20S R-34E

Topaz Federal Com 501H
543' FNL & 1194' FWL Sec. 31 T-20S R-34E

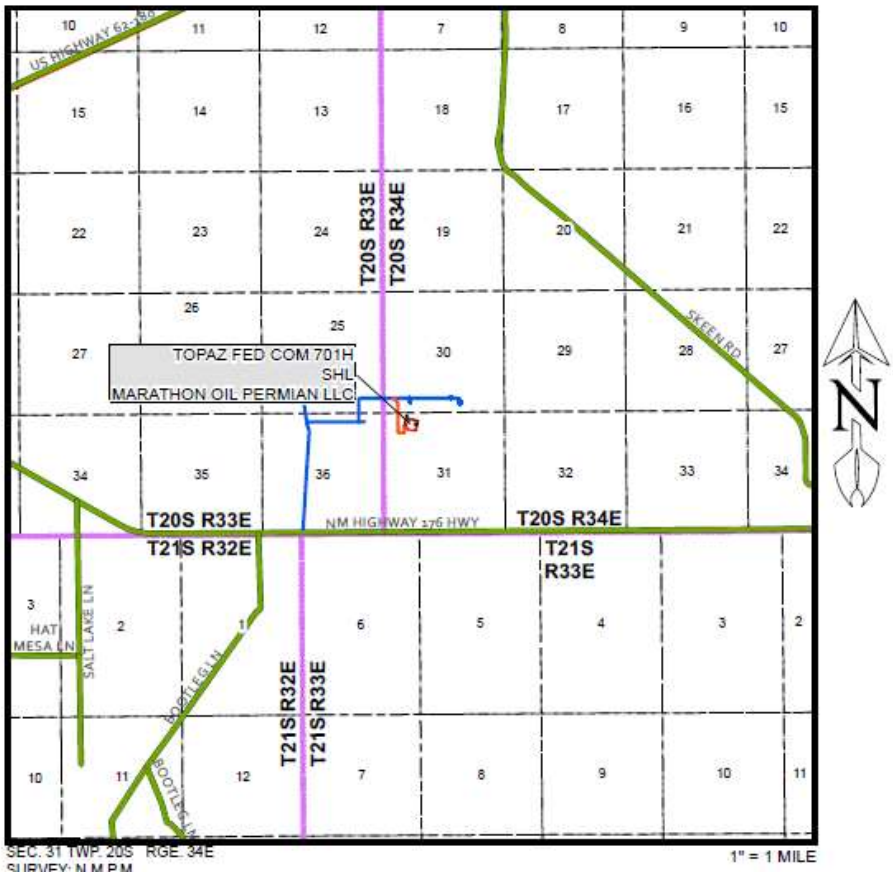
Topaz Federal Com 601H
536' FNL & 1165' FWL Sec. 31 T-20S R-34E

Topaz Federal Com 701H
551' FNL & 1223' FWL Sec. 3T-20S R-34E

Lea County NM

Marathon Oil Permian, LLC
Topaz Federal Com 301H, 501H, 601H, 701H

This is an open drilling site. H2S monitoring equipment and emergency response equipment will be used within 500' of zones known to contain H2S, including warning signs, wind indicators and H2S monitor.



Escape

Crews shall escape upwind of escaping gas in the event of an emergency release of gas. Escape can be facilitated from the location entrance road. Crews should then block the entrance to the location from the lease road so as not to allow anyone traversing into a hazardous area. The blockade should be at a safe distance outside of the ROE. There are no homes or buildings in or near the ROE.

Assumed 100 ppm ROE = 3000'
100 ppm H2S concentration shall trigger activation of this plan.

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 response
- Take precautions to avoid personal injury during this operation.
- Contact operator and/or local officials to aid in operation. See list of phone numbers attached.
- Have received training in the
    - Detection of 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 H2 S and SO2

Common Name	Chemical Formula	Specific Gravity	Threshold Limit	Hazardous Limit	Lethal Concentration
Hydrogen Sulfide	H_2S	1.189 Air = 1	10 ppm	100 ppm/hr	600 ppm
Sulfur Dioxide	SO_2	2.21 Air = 1	2 ppm	N/A	1000 ppm

Contacting Authorities

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

Marathon Oil Permian, LLC

Hydrogen Sulfide Drilling Operation Plan

I. HYDROGEN SULFIDE (H2S) TRAINING

All personnel, whether regularly assigned, contracted, or employed on an unscheduled basis, will receive training from a qualified instructor in the following areas prior to commencing drilling operations on this well:

- The hazards and characteristics of hydrogen sulfide (H2S)
- The proper use and maintenance of personal protective equipment and life support systems.
- The proper use of H2S detectors, alarms, warning systems, briefing areas, evacuation procedures, and prevailing winds.
- The proper techniques for first aid and rescue procedures.

In addition, supervisory personnel will be trained in the following areas:

- The effects of H2S metal components. If high tensile tubulars are to be used, personnel will be trained in their special maintenance requirements.
- Corrective action and shut-in procedures when drilling or reworking a well and blowout prevention and well control procedures.
- The contents and requirements of the H2S Drilling Operations Plan.
- There will be weekly H2S and well control drills for all personnel in each crew.

II. HYDROGEN SULFIDE TRAINING

Note: All H2S safety equipment and systems will be installed, tested, and operational when drilling reaches a depth of 500 feet above, or three days prior to penetrating the first zone containing or reasonably expected to contain H2S.

- Well Control Equipment
  - Flare line
  - Choke manifold - Remotely Operated
  - Blind rams and pipe rams to accommodate all pipe sizes with properly sized closing unit

  - Auxiliary equipment may include if applicable: annular preventer and rotating head.
  - Mud/Gas Separator
- Protective equipment for essential personnel:
  - 30-minute SCBA units located at briefing areas, as indicated on well site diagram, with escape units available in the top doghouse. As it may be difficult to communicate audibly while wearing these units, hand signals shall be utilized.
  - Fire extinguishers are located at various locations around the rig. First Aid supplies are located in the top doghouse and the rig manger's office.
- H2S detection and monitoring equipment:
  - Portable H2S monitors positioned on location for best coverage and response. These units have warning lights which activate when H2S levels reach 10 ppm and audible sirens which activate at 15 ppm. Sensor locations:
    - Bell nipple
    - Rig floor
    - Cellar
    - Possum Belly/Shale shaker
    - Choke manifold
- Visual warning systems:
  - Wind direction indicators as shown on well site diagram
  - Caution/Danger signs shall be posted on roads providing direct access to locations. Signs will be painted a high visibility yellow with black lettering of sufficient size to be reasonable distance from the immediate location. Bilingual signs will be used when appropriate.
- Mud program:
  - The mud program has been designed to minimize the volume of H2S circulated to surface. Proper mud weight, safe drilling practices and the use of H2S scavengers will minimize hazards when penetrating H2S bearing zones.

- Metallurgy:
  - All drill strings, casings, tubing, wellhead, blowout preventer, drilling spool, kill lines, choke manifold lines, and valves shall be H2S trim.
  - All elastomers used for packing and seals shall be H2S trim.
- Communication:
  - Company personnel have/use cellular telephones in the field.
  - Land line (telephone) communications at Office
- Well testing:
  - Drill stem testing will be performed with a minimum number of personnel in the immediate vicinity, which are necessary to safety and adequately conduct the test. The drill stem testing will be conducted during daylight hours and formation fluids will not be flowed to the surface. All drill-stem-testing operations conducted in an H2S environment will use the closed chamber method of testing.
  - There will be no drill stem testing.

EMERGENCY & MEDICAL FACILITIES

Marathon Oil Corporation Emergency Numbers			
Anders Storaune	Drilling Manager	astoraune@marathonoil.com	713-296-2985
Allen Livingston	Drilling Superintendent	alivingston@marathonoil.com	832-680-2348
Joshua Love	Drilling Superintendent	jlove@marathonoil.com	405-657-6126
Steve Donley	Drilling Engineer	sdonley@marathonoil.com	405-593-4331
Court Nelson	Drilling Engineer	cnelson1@marathonoil.com	406-565-0604
Scott Schmidt	Drilling Engineer	sschmidt1@marathonoil.com	405-249-6843
John Burt	HES Supervisor	jburt@marathonoil.com	713-296-2903
Unit Rig 409	Company Man	unit409@marathonoil.com	
Precision Rig 580	Company Man	precision580@marathonoil.com	
Cactus Rig 169	Company Man	cactus169@marathonoil.com	
Cactus Rig 170	Company Man	cactus170@marathonoil.com	
Cactus Rig 171	Company Man	cactus171@marathonoil.com	

Emergency Services Area Numbers: Or Call 911			
Sheriff (Eddy County, NM)	575-887-7551	New Mexico Poison Control	800-222-1222
Sheriff (Lea County, NM)	575-396-3611	Border Patrol (Las Cruces, NM)	575-528-6600
New Mexico State Police	575-392-5580/5588	Energy Minerals & Natural Resources Dept.	575-748-1283
Carlsbad Medical Center	575-887-4100	Environmental Health Dept.	505-476-8600
Lea Regional Medical Center	575-492-5000	OSHA (Santa Fe, NM)	505-827-2855
Police (Carlsbad, NM)	575-885-2111		
Police (Hobbs, NM)	575-392-9265		
Fire (Carlsbad, NM)	575-885-3124		
Fire (Hobbs, NM)	575-397-9308		
Ambulance Service	911	TOTAL SAFETY H2S – SAFETY SERVICES For Life Flight 1st dial 911, nearest helicopter will be determined	432-561-5049

DELAWARE BASIN EAST

ZEUS_NME
TOPAZ FED COM
_TOPAZ FED COM 301H

OWB

Plan: PWP0

Standard Planning Report

10 March, 2025

ConocoPhillips

Planning Report

Database:	EDT 17 Permian Prod	**Local Co-ordinate Reference:**	Well _TOPAZ FED COM 301H
Company:	DELAWARE BASIN EAST	**TVD Reference:**	GL @ 3693.0usft
Project:	ZEUS_NME	**MD Reference:**	GL @ 3693.0usft
Site:	TOPAZ FED COM	**North Reference:**	Grid
Well:	_TOPAZ FED COM 301H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	OWB		
Design:	PWP0		

Project ZEUS_NME

Map System:	US State Plane 1927 (Exact solution)	**System Datum:**	Mean Sea Level
Geo Datum:	NAD 1927 (NADCON CONUS)		
Map Zone:	New Mexico East 3001		

Site TOPAZ FED COM

Site Position:		**Northing:**	559,867.86 usft	**Latitude:**	32° 32' 13.305 N
From:	Map	**Easting:**	726,935.81 usft	**Longitude:**	103° 35' 49.035 W
Position Uncertainty:	0.0 usft	**Slot Radius:**	13-3/16 "		

Well _TOPAZ FED COM 301H

Well Position	**+N/-S**	0.0 usft	**Northing:**	559,190.06 usft	**Latitude:**	32° 32' 6.738 N
	+E/-W	0.0 usft	**Easting:**	724,883.64 usft	**Longitude:**	103° 36' 13.060 W
Position Uncertainty		0.0 usft	**Wellhead Elevation:**	usft	**Ground Level:**	3,693.0 usft
Grid Convergence:		0.39 °				

Wellbore OWB

Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	BGGM2024	3/10/2025	6.38	60.29	47,443.90361657

Design PWP0

Audit Notes:

Version:		**Phase:**	PLAN	**Tie On Depth:**	0.0

Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (°)
	0.0	0.0	0.0	78.42

Plan Survey Tool Program **Date** 3/10/2025

	Depth From (usft)	Depth To (usft)	Survey (Wellbore)	Tool Name	Remarks
1	0.0	21,171.8	PWP0 (OWB)	r.5 MWD+IFR1 OWSG MWD + IFR1 rev.5	

ConocoPhillips

Planning Report

Database:	EDT 17 Permian Prod	**Local Co-ordinate Reference:**	Well _TOPAZ FED COM 301H
Company:	DELAWARE BASIN EAST	**TVD Reference:**	GL @ 3693.0usft
Project:	ZEUS_NME	**MD Reference:**	GL @ 3693.0usft
Site:	TOPAZ FED COM	**North Reference:**	Grid
Well:	_TOPAZ FED COM 301H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	OWB		
Design:	PWP0		

Plan Sections

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	TFO (°)	Target
0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.00	0.00	
2,800.0	0.00	0.00	2,800.0	0.0	0.0	0.00	0.00	0.00	0.00	
3,133.3	5.00	10.00	3,132.9	14.3	2.5	1.50	1.50	0.00	10.00	
3,698.7	14.99	45.81	3,689.4	89.8	59.4	2.00	1.77	6.33	50.50	
6,523.7	14.99	45.81	6,418.3	599.0	583.2	0.00	0.00	0.00	0.00	
8,022.4	0.00	0.00	7,900.0	734.9	722.9	1.00	-1.00	0.00	180.00	
9,249.4	0.00	0.00	9,127.0	734.9	722.9	0.00	0.00	0.00	0.00	
10,149.4	90.00	359.60	9,700.0	1,307.8	719.0	10.00	10.00	-0.04	359.60	
13,264.4	90.00	359.60	9,700.0	4,422.7	697.4	0.00	0.00	0.00	0.00	
17,420.6	90.00	179.57	9,700.1	4,441.8	3,343.8	4.33	0.00	4.33	90.00	
21,171.8	90.00	179.57	9,700.0	690.7	3,372.1	0.00	0.00	0.00	0.00	PBHL_TOPAZ FED C

ConocoPhillips

Planning Report

Database:	EDT 17 Permian Prod	**Local Co-ordinate Reference:**	Well _TOPAZ FED COM 301H
Company:	DELAWARE BASIN EAST	**TVD Reference:**	GL @ 3693.0usft
Project:	ZEUS_NME	**MD Reference:**	GL @ 3693.0usft
Site:	TOPAZ FED COM	**North Reference:**	Grid
Well:	_TOPAZ FED COM 301H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	OWB		
Design:	PWP0		

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
0.0	0.00	0.00	0.0	0.0	0.0	0.0	0.00	0.00	0.00
100.0	0.00	0.00	100.0	0.0	0.0	0.0	0.00	0.00	0.00
200.0	0.00	0.00	200.0	0.0	0.0	0.0	0.00	0.00	0.00
300.0	0.00	0.00	300.0	0.0	0.0	0.0	0.00	0.00	0.00
400.0	0.00	0.00	400.0	0.0	0.0	0.0	0.00	0.00	0.00
500.0	0.00	0.00	500.0	0.0	0.0	0.0	0.00	0.00	0.00
600.0	0.00	0.00	600.0	0.0	0.0	0.0	0.00	0.00	0.00
700.0	0.00	0.00	700.0	0.0	0.0	0.0	0.00	0.00	0.00
800.0	0.00	0.00	800.0	0.0	0.0	0.0	0.00	0.00	0.00
900.0	0.00	0.00	900.0	0.0	0.0	0.0	0.00	0.00	0.00
1,000.0	0.00	0.00	1,000.0	0.0	0.0	0.0	0.00	0.00	0.00
1,100.0	0.00	0.00	1,100.0	0.0	0.0	0.0	0.00	0.00	0.00
1,200.0	0.00	0.00	1,200.0	0.0	0.0	0.0	0.00	0.00	0.00
1,300.0	0.00	0.00	1,300.0	0.0	0.0	0.0	0.00	0.00	0.00
1,400.0	0.00	0.00	1,400.0	0.0	0.0	0.0	0.00	0.00	0.00
1,500.0	0.00	0.00	1,500.0	0.0	0.0	0.0	0.00	0.00	0.00
1,600.0	0.00	0.00	1,600.0	0.0	0.0	0.0	0.00	0.00	0.00
1,700.0	0.00	0.00	1,700.0	0.0	0.0	0.0	0.00	0.00	0.00
1,800.0	0.00	0.00	1,800.0	0.0	0.0	0.0	0.00	0.00	0.00
1,900.0	0.00	0.00	1,900.0	0.0	0.0	0.0	0.00	0.00	0.00
2,000.0	0.00	0.00	2,000.0	0.0	0.0	0.0	0.00	0.00	0.00
2,100.0	0.00	0.00	2,100.0	0.0	0.0	0.0	0.00	0.00	0.00
2,200.0	0.00	0.00	2,200.0	0.0	0.0	0.0	0.00	0.00	0.00
2,300.0	0.00	0.00	2,300.0	0.0	0.0	0.0	0.00	0.00	0.00
2,400.0	0.00	0.00	2,400.0	0.0	0.0	0.0	0.00	0.00	0.00
2,500.0	0.00	0.00	2,500.0	0.0	0.0	0.0	0.00	0.00	0.00
2,600.0	0.00	0.00	2,600.0	0.0	0.0	0.0	0.00	0.00	0.00
2,700.0	0.00	0.00	2,700.0	0.0	0.0	0.0	0.00	0.00	0.00
2,800.0	0.00	0.00	2,800.0	0.0	0.0	0.0	0.00	0.00	0.00
2,900.0	1.50	10.00	2,900.0	1.3	0.2	0.5	1.50	1.50	0.00
3,000.0	3.00	10.00	2,999.9	5.2	0.9	1.9	1.50	1.50	0.00
3,100.0	4.50	10.00	3,099.7	11.6	2.0	4.3	1.50	1.50	0.00
3,133.3	5.00	10.00	3,132.9	14.3	2.5	5.3	1.50	1.50	0.00
3,200.0	5.94	19.99	3,199.3	20.4	4.2	8.2	2.00	1.41	14.99
3,300.0	7.57	29.91	3,298.6	31.0	9.3	15.3	2.00	1.63	9.92
3,400.0	9.35	36.21	3,397.5	43.2	17.3	25.7	2.00	1.78	6.30
3,500.0	11.20	40.48	3,495.9	57.2	28.4	39.3	2.00	1.85	4.27
3,600.0	13.09	43.54	3,593.6	72.8	42.5	56.3	2.00	1.89	3.06
3,698.7	14.99	45.81	3,689.4	89.8	59.4	76.2	2.00	1.92	2.30
3,700.0	14.99	45.81	3,690.6	90.0	59.6	76.5	0.00	0.00	0.00
3,800.0	14.99	45.81	3,787.2	108.0	78.2	98.3	0.00	0.00	0.00
3,900.0	14.99	45.81	3,883.8	126.1	96.7	120.1	0.00	0.00	0.00
4,000.0	14.99	45.81	3,980.4	144.1	115.3	141.8	0.00	0.00	0.00
4,100.0	14.99	45.81	4,077.0	162.1	133.8	163.6	0.00	0.00	0.00
4,200.0	14.99	45.81	4,173.6	180.1	152.3	185.4	0.00	0.00	0.00
4,300.0	14.99	45.81	4,270.2	198.2	170.9	207.2	0.00	0.00	0.00
4,400.0	14.99	45.81	4,366.8	216.2	189.4	229.0	0.00	0.00	0.00
4,500.0	14.99	45.81	4,463.4	234.2	208.0	250.7	0.00	0.00	0.00
4,600.0	14.99	45.81	4,560.0	252.3	226.5	272.5	0.00	0.00	0.00
4,700.0	14.99	45.81	4,656.6	270.3	245.0	294.3	0.00	0.00	0.00
4,800.0	14.99	45.81	4,753.2	288.3	263.6	316.1	0.00	0.00	0.00
4,900.0	14.99	45.81	4,849.8	306.3	282.1	337.9	0.00	0.00	0.00
5,000.0	14.99	45.81	4,946.4	324.4	300.7	359.6	0.00	0.00	0.00
5,100.0	14.99	45.81	5,043.0	342.4	319.2	381.4	0.00	0.00	0.00

ConocoPhillips

Planning Report

Database:	EDT 17 Permian Prod	**Local Co-ordinate Reference:**	Well _TOPAZ FED COM 301H
Company:	DELAWARE BASIN EAST	**TVD Reference:**	GL @ 3693.0usft
Project:	ZEUS_NME	**MD Reference:**	GL @ 3693.0usft
Site:	TOPAZ FED COM	**North Reference:**	Grid
Well:	_TOPAZ FED COM 301H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	OWB		
Design:	PWP0		

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
5,200.0	14.99	45.81	5,139.6	360.4	337.8	403.2	0.00	0.00	0.00
5,300.0	14.99	45.81	5,236.2	378.4	356.3	425.0	0.00	0.00	0.00
5,400.0	14.99	45.81	5,332.8	396.5	374.8	446.8	0.00	0.00	0.00
5,500.0	14.99	45.81	5,429.4	414.5	393.4	468.5	0.00	0.00	0.00
5,600.0	14.99	45.81	5,526.0	432.5	411.9	490.3	0.00	0.00	0.00
5,700.0	14.99	45.81	5,622.6	450.5	430.5	512.1	0.00	0.00	0.00
5,800.0	14.99	45.81	5,719.2	468.6	449.0	533.9	0.00	0.00	0.00
5,900.0	14.99	45.81	5,815.8	486.6	467.5	555.7	0.00	0.00	0.00
6,000.0	14.99	45.81	5,912.4	504.6	486.1	577.5	0.00	0.00	0.00
6,100.0	14.99	45.81	6,009.0	522.7	504.6	599.2	0.00	0.00	0.00
6,200.0	14.99	45.81	6,105.6	540.7	523.2	621.0	0.00	0.00	0.00
6,300.0	14.99	45.81	6,202.2	558.7	541.7	642.8	0.00	0.00	0.00
6,400.0	14.99	45.81	6,298.8	576.7	560.2	664.6	0.00	0.00	0.00
6,500.0	14.99	45.81	6,395.4	594.8	578.8	686.4	0.00	0.00	0.00
6,523.7	14.99	45.81	6,418.3	599.0	583.2	691.5	0.00	0.00	0.00
6,600.0	14.22	45.81	6,492.1	612.4	597.0	707.7	1.00	-1.00	0.00
6,700.0	13.22	45.81	6,589.3	629.0	614.0	727.7	1.00	-1.00	0.00
6,800.0	12.22	45.81	6,686.8	644.3	629.8	746.3	1.00	-1.00	0.00
6,900.0	11.22	45.81	6,784.7	658.5	644.3	763.4	1.00	-1.00	0.00
7,000.0	10.22	45.81	6,883.0	671.5	657.7	779.1	1.00	-1.00	0.00
7,100.0	9.22	45.81	6,981.5	683.3	669.8	793.3	1.00	-1.00	0.00
7,200.0	8.22	45.81	7,080.4	693.8	680.7	806.1	1.00	-1.00	0.00
7,300.0	7.22	45.81	7,179.5	703.2	690.3	817.4	1.00	-1.00	0.00
7,400.0	6.22	45.81	7,278.8	711.4	698.7	827.2	1.00	-1.00	0.00
7,500.0	5.22	45.81	7,378.3	718.3	705.9	835.6	1.00	-1.00	0.00
7,600.0	4.22	45.81	7,478.0	724.0	711.8	842.6	1.00	-1.00	0.00
7,700.0	3.22	45.81	7,577.7	728.6	716.4	848.0	1.00	-1.00	0.00
7,800.0	2.22	45.81	7,677.6	731.9	719.8	852.0	1.00	-1.00	0.00
7,900.0	1.22	45.81	7,777.6	734.0	722.0	854.6	1.00	-1.00	0.00
8,000.0	0.22	45.81	7,877.6	734.9	722.9	855.6	1.00	-1.00	0.00
8,022.4	0.00	0.00	7,900.0	734.9	722.9	855.7	1.00	-1.00	0.00
8,100.0	0.00	0.00	7,977.6	734.9	722.9	855.7	0.00	0.00	0.00
8,200.0	0.00	0.00	8,077.6	734.9	722.9	855.7	0.00	0.00	0.00
8,300.0	0.00	0.00	8,177.6	734.9	722.9	855.7	0.00	0.00	0.00
8,400.0	0.00	0.00	8,277.6	734.9	722.9	855.7	0.00	0.00	0.00
8,500.0	0.00	0.00	8,377.6	734.9	722.9	855.7	0.00	0.00	0.00
8,600.0	0.00	0.00	8,477.6	734.9	722.9	855.7	0.00	0.00	0.00
8,700.0	0.00	0.00	8,577.6	734.9	722.9	855.7	0.00	0.00	0.00
8,800.0	0.00	0.00	8,677.6	734.9	722.9	855.7	0.00	0.00	0.00
8,900.0	0.00	0.00	8,777.6	734.9	722.9	855.7	0.00	0.00	0.00
9,000.0	0.00	0.00	8,877.6	734.9	722.9	855.7	0.00	0.00	0.00
9,100.0	0.00	0.00	8,977.6	734.9	722.9	855.7	0.00	0.00	0.00
9,200.0	0.00	0.00	9,077.6	734.9	722.9	855.7	0.00	0.00	0.00
9,249.4	0.00	0.00	9,127.0	734.9	722.9	855.7	0.00	0.00	0.00
9,300.0	5.06	359.60	9,177.5	737.1	722.9	856.1	10.00	10.00	0.00
9,350.0	10.06	359.60	9,227.1	743.7	722.9	857.4	10.00	10.00	0.00
9,400.0	15.06	359.60	9,275.8	754.6	722.8	859.5	10.00	10.00	0.00
9,450.0	20.06	359.60	9,323.5	769.6	722.7	862.4	10.00	10.00	0.00
9,500.0	25.06	359.60	9,369.7	788.8	722.5	866.1	10.00	10.00	0.00
9,550.0	30.06	359.60	9,414.0	811.9	722.4	870.6	10.00	10.00	0.00
9,600.0	35.06	359.60	9,456.1	838.8	722.2	875.8	10.00	10.00	0.00
9,650.0	40.06	359.60	9,495.7	869.3	722.0	881.7	10.00	10.00	0.00
9,700.0	45.06	359.60	9,532.5	903.1	721.8	888.3	10.00	10.00	0.00
9,750.0	50.06	359.60	9,566.3	940.0	721.5	895.5	10.00	10.00	0.00

ConocoPhillips

Planning Report

Database:	EDT 17 Permian Prod	**Local Co-ordinate Reference:**	Well _TOPAZ FED COM 301H
Company:	DELAWARE BASIN EAST	**TVD Reference:**	GL @ 3693.0usft
Project:	ZEUS_NME	**MD Reference:**	GL @ 3693.0usft
Site:	TOPAZ FED COM	**North Reference:**	Grid
Well:	_TOPAZ FED COM 301H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	OWB		
Design:	PWP0		

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
9,800.0	55.06	359.60	9,596.7	979.7	721.2	903.1	10.00	10.00	0.00
9,850.0	60.06	359.60	9,623.5	1,021.9	720.9	911.3	10.00	10.00	0.00
9,900.0	65.06	359.60	9,646.5	1,066.2	720.6	919.9	10.00	10.00	0.00
9,950.0	70.06	359.60	9,665.6	1,112.4	720.3	928.9	10.00	10.00	0.00
10,000.0	75.06	359.60	9,680.6	1,160.1	720.0	938.1	10.00	10.00	0.00
10,050.0	80.06	359.60	9,691.4	1,208.9	719.6	947.6	10.00	10.00	0.00
10,100.0	85.06	359.60	9,697.8	1,258.5	719.3	957.2	10.00	10.00	0.00
10,149.4	90.00	359.60	9,700.0	1,307.8	719.0	966.8	10.00	10.00	0.00
10,200.0	90.00	359.60	9,700.0	1,358.4	718.6	976.6	0.00	0.00	0.00
10,300.0	90.00	359.60	9,700.0	1,458.4	717.9	996.0	0.00	0.00	0.00
10,400.0	90.00	359.60	9,700.0	1,558.4	717.2	1,015.4	0.00	0.00	0.00
10,500.0	90.00	359.60	9,700.0	1,658.4	716.5	1,034.7	0.00	0.00	0.00
10,600.0	90.00	359.60	9,700.0	1,758.4	715.8	1,054.1	0.00	0.00	0.00
10,700.0	90.00	359.60	9,700.0	1,858.4	715.1	1,073.5	0.00	0.00	0.00
10,800.0	90.00	359.60	9,700.0	1,958.4	714.5	1,092.9	0.00	0.00	0.00
10,900.0	90.00	359.60	9,700.0	2,058.4	713.8	1,112.3	0.00	0.00	0.00
11,000.0	90.00	359.60	9,700.0	2,158.4	713.1	1,131.7	0.00	0.00	0.00
11,100.0	90.00	359.60	9,700.0	2,258.4	712.4	1,151.1	0.00	0.00	0.00
11,200.0	90.00	359.60	9,700.0	2,358.4	711.7	1,170.5	0.00	0.00	0.00
11,300.0	90.00	359.60	9,700.0	2,458.4	711.0	1,189.8	0.00	0.00	0.00
11,400.0	90.00	359.60	9,700.0	2,558.4	710.3	1,209.2	0.00	0.00	0.00
11,500.0	90.00	359.60	9,700.0	2,658.4	709.6	1,228.6	0.00	0.00	0.00
11,600.0	90.00	359.60	9,700.0	2,758.4	708.9	1,248.0	0.00	0.00	0.00
11,700.0	90.00	359.60	9,700.0	2,858.4	708.2	1,267.4	0.00	0.00	0.00
11,800.0	90.00	359.60	9,700.0	2,958.4	707.5	1,286.8	0.00	0.00	0.00
11,900.0	90.00	359.60	9,700.0	3,058.4	706.8	1,306.2	0.00	0.00	0.00
12,000.0	90.00	359.60	9,700.0	3,158.4	706.1	1,325.6	0.00	0.00	0.00
12,100.0	90.00	359.60	9,700.0	3,258.4	705.5	1,345.0	0.00	0.00	0.00
12,200.0	90.00	359.60	9,700.0	3,358.4	704.8	1,364.3	0.00	0.00	0.00
12,300.0	90.00	359.60	9,700.0	3,458.4	704.1	1,383.7	0.00	0.00	0.00
12,400.0	90.00	359.60	9,700.0	3,558.4	703.4	1,403.1	0.00	0.00	0.00
12,500.0	90.00	359.60	9,700.0	3,658.4	702.7	1,422.5	0.00	0.00	0.00
12,600.0	90.00	359.60	9,700.0	3,758.4	702.0	1,441.9	0.00	0.00	0.00
12,700.0	90.00	359.60	9,700.0	3,858.4	701.3	1,461.3	0.00	0.00	0.00
12,800.0	90.00	359.60	9,700.0	3,958.3	700.6	1,480.7	0.00	0.00	0.00
12,900.0	90.00	359.60	9,700.0	4,058.3	699.9	1,500.1	0.00	0.00	0.00
13,000.0	90.00	359.60	9,700.0	4,158.3	699.2	1,519.5	0.00	0.00	0.00
13,100.0	90.00	359.60	9,700.0	4,258.3	698.5	1,538.8	0.00	0.00	0.00
13,200.0	90.00	359.60	9,700.0	4,358.3	697.8	1,558.2	0.00	0.00	0.00
13,264.4	90.00	359.60	9,700.0	4,422.7	697.4	1,570.7	0.00	0.00	0.00
13,300.0	90.00	1.15	9,700.0	4,458.3	697.6	1,578.1	4.33	0.00	4.33
13,400.0	90.00	5.48	9,700.0	4,558.1	703.4	1,603.8	4.33	0.00	4.33
13,500.0	90.00	9.81	9,700.0	4,657.2	716.7	1,636.7	4.33	0.00	4.33
13,600.0	90.00	14.14	9,700.0	4,755.0	737.4	1,676.6	4.33	0.00	4.33
13,700.0	90.00	18.47	9,700.0	4,851.0	765.5	1,723.4	4.33	0.00	4.33
13,800.0	90.00	22.80	9,700.0	4,944.6	800.7	1,776.7	4.33	0.00	4.33
13,900.0	90.00	27.13	9,700.0	5,035.2	842.9	1,836.2	4.33	0.00	4.33
14,000.0	90.00	31.46	9,700.0	5,122.4	891.8	1,901.6	4.33	0.00	4.33
14,100.0	90.00	35.79	9,700.0	5,205.6	947.2	1,972.5	4.33	0.00	4.33
14,200.0	90.00	40.12	9,700.0	5,284.5	1,008.7	2,048.6	4.33	0.00	4.33
14,300.0	90.00	44.45	9,700.0	5,358.4	1,075.9	2,129.3	4.33	0.00	4.33
14,400.0	90.00	48.78	9,700.0	5,427.1	1,148.6	2,214.3	4.33	0.00	4.33
14,500.0	90.00	53.11	9,700.0	5,490.1	1,226.2	2,303.0	4.33	0.00	4.33
14,600.0	90.00	57.44	9,700.0	5,547.1	1,308.4	2,394.9	4.33	0.00	4.33

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Planning Report

Database:	EDT 17 Permian Prod	**Local Co-ordinate Reference:**	Well _TOPAZ FED COM 301H
Company:	DELAWARE BASIN EAST	**TVD Reference:**	GL @ 3693.0usft
Project:	ZEUS_NME	**MD Reference:**	GL @ 3693.0usft
Site:	TOPAZ FED COM	**North Reference:**	Grid
Well:	_TOPAZ FED COM 301H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	OWB		
Design:	PWP0		

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
14,700.0	90.00	61.77	9,700.0	5,597.7	1,394.6	2,489.5	4.33	0.00	4.33
14,800.0	90.00	66.10	9,700.0	5,641.6	1,484.4	2,586.3	4.33	0.00	4.33
14,900.0	90.00	70.43	9,700.0	5,678.6	1,577.3	2,684.7	4.33	0.00	4.33
15,000.0	90.00	74.76	9,700.0	5,708.5	1,672.7	2,784.2	4.33	0.00	4.33
15,100.0	90.00	79.09	9,700.0	5,731.2	1,770.1	2,884.1	4.33	0.00	4.33
15,200.0	90.00	83.42	9,700.0	5,746.4	1,868.9	2,984.0	4.33	0.00	4.33
15,300.0	90.00	87.75	9,700.0	5,754.1	1,968.6	3,083.2	4.33	0.00	4.33
15,400.0	90.00	92.08	9,700.0	5,754.2	2,068.5	3,181.2	4.33	0.00	4.33
15,500.0	90.00	96.41	9,700.0	5,746.8	2,168.2	3,277.3	4.33	0.00	4.33
15,600.0	90.00	100.74	9,700.0	5,731.9	2,267.1	3,371.2	4.33	0.00	4.33
15,700.0	90.00	105.07	9,700.0	5,709.6	2,364.6	3,462.2	4.33	0.00	4.33
15,800.0	90.00	109.40	9,700.1	5,680.0	2,460.0	3,549.8	4.33	0.00	4.33
15,900.0	90.00	113.73	9,700.1	5,643.2	2,553.0	3,633.5	4.33	0.00	4.33
16,000.0	90.00	118.06	9,700.1	5,599.6	2,643.0	3,712.9	4.33	0.00	4.33
16,100.0	90.00	122.39	9,700.1	5,549.3	2,729.4	3,787.4	4.33	0.00	4.33
16,200.0	90.00	126.72	9,700.1	5,492.6	2,811.7	3,856.7	4.33	0.00	4.33
16,300.0	90.00	131.05	9,700.1	5,429.8	2,889.5	3,920.3	4.33	0.00	4.33
16,400.0	90.00	135.38	9,700.1	5,361.3	2,962.4	3,978.0	4.33	0.00	4.33
16,500.0	90.00	139.71	9,700.1	5,287.6	3,029.9	4,029.3	4.33	0.00	4.33
16,600.0	90.00	144.04	9,700.1	5,208.9	3,091.6	4,074.0	4.33	0.00	4.33
16,700.0	90.00	148.37	9,700.1	5,125.9	3,147.2	4,111.8	4.33	0.00	4.33
16,800.0	90.00	152.70	9,700.1	5,038.8	3,196.4	4,142.5	4.33	0.00	4.33
16,900.0	90.00	157.03	9,700.1	4,948.3	3,238.9	4,166.0	4.33	0.00	4.33
17,000.0	90.00	161.36	9,700.1	4,854.9	3,274.4	4,182.0	4.33	0.00	4.33
17,100.0	90.00	165.69	9,700.1	4,759.0	3,302.7	4,190.5	4.33	0.00	4.33
17,200.0	90.00	170.02	9,700.1	4,661.3	3,323.8	4,191.5	4.33	0.00	4.33
17,300.0	90.00	174.35	9,700.1	4,562.2	3,337.4	4,185.0	4.33	0.00	4.33
17,400.0	90.00	178.68	9,700.1	4,462.4	3,343.5	4,170.9	4.33	0.00	4.33
17,420.6	90.00	179.57	9,700.1	4,441.8	3,343.8	4,167.1	4.33	0.00	4.33
17,500.0	90.00	179.57	9,700.0	4,362.4	3,344.4	4,151.8	0.00	0.00	0.00
17,600.0	90.00	179.57	9,700.0	4,262.4	3,345.1	4,132.4	0.00	0.00	0.00
17,700.0	90.00	179.57	9,700.0	4,162.4	3,345.9	4,113.1	0.00	0.00	0.00
17,800.0	90.00	179.57	9,700.0	4,062.4	3,346.7	4,093.8	0.00	0.00	0.00
17,900.0	90.00	179.57	9,700.0	3,962.4	3,347.4	4,074.4	0.00	0.00	0.00
18,000.0	90.00	179.57	9,700.0	3,862.4	3,348.2	4,055.1	0.00	0.00	0.00
18,100.0	90.00	179.57	9,700.0	3,762.4	3,348.9	4,035.8	0.00	0.00	0.00
18,200.0	90.00	179.57	9,700.0	3,662.4	3,349.7	4,016.5	0.00	0.00	0.00
18,300.0	90.00	179.57	9,700.0	3,562.4	3,350.4	3,997.1	0.00	0.00	0.00
18,400.0	90.00	179.57	9,700.0	3,462.4	3,351.2	3,977.8	0.00	0.00	0.00
18,500.0	90.00	179.57	9,700.0	3,362.4	3,351.9	3,958.5	0.00	0.00	0.00
18,600.0	90.00	179.57	9,700.0	3,262.5	3,352.7	3,939.2	0.00	0.00	0.00
18,700.0	90.00	179.57	9,700.0	3,162.5	3,353.4	3,919.8	0.00	0.00	0.00
18,800.0	90.00	179.57	9,700.0	3,062.5	3,354.2	3,900.5	0.00	0.00	0.00
18,900.0	90.00	179.57	9,700.0	2,962.5	3,355.0	3,881.2	0.00	0.00	0.00
19,000.0	90.00	179.57	9,700.0	2,862.5	3,355.7	3,861.9	0.00	0.00	0.00
19,100.0	90.00	179.57	9,700.0	2,762.5	3,356.5	3,842.5	0.00	0.00	0.00
19,200.0	90.00	179.57	9,700.0	2,662.5	3,357.2	3,823.2	0.00	0.00	0.00
19,300.0	90.00	179.57	9,700.0	2,562.5	3,358.0	3,803.9	0.00	0.00	0.00
19,400.0	90.00	179.57	9,700.0	2,462.5	3,358.7	3,784.5	0.00	0.00	0.00
19,500.0	90.00	179.57	9,700.0	2,362.5	3,359.5	3,765.2	0.00	0.00	0.00
19,600.0	90.00	179.57	9,700.0	2,262.5	3,360.2	3,745.9	0.00	0.00	0.00
19,700.0	90.00	179.57	9,700.0	2,162.5	3,361.0	3,726.6	0.00	0.00	0.00
19,800.0	90.00	179.57	9,700.0	2,062.5	3,361.7	3,707.2	0.00	0.00	0.00
19,900.0	90.00	179.57	9,700.0	1,962.5	3,362.5	3,687.9	0.00	0.00	0.00

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Planning Report

Database:	EDT 17 Permian Prod	**Local Co-ordinate Reference:**	Well _TOPAZ FED COM 301H
Company:	DELAWARE BASIN EAST	**TVD Reference:**	GL @ 3693.0usft
Project:	ZEUS_NME	**MD Reference:**	GL @ 3693.0usft
Site:	TOPAZ FED COM	**North Reference:**	Grid
Well:	_TOPAZ FED COM 301H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	OWB		
Design:	PWP0		

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
20,000.0	90.00	179.57	9,700.0	1,862.5	3,363.3	3,668.6	0.00	0.00	0.00
20,100.0	90.00	179.57	9,700.0	1,762.5	3,364.0	3,649.3	0.00	0.00	0.00
20,200.0	90.00	179.57	9,700.0	1,662.5	3,364.8	3,629.9	0.00	0.00	0.00
20,300.0	90.00	179.57	9,700.0	1,562.5	3,365.5	3,610.6	0.00	0.00	0.00
20,400.0	90.00	179.57	9,700.0	1,462.5	3,366.3	3,591.3	0.00	0.00	0.00
20,500.0	90.00	179.57	9,700.0	1,362.5	3,367.0	3,572.0	0.00	0.00	0.00
20,600.0	90.00	179.57	9,700.0	1,262.5	3,367.8	3,552.6	0.00	0.00	0.00
20,700.0	90.00	179.57	9,700.0	1,162.5	3,368.5	3,533.3	0.00	0.00	0.00
20,800.0	90.00	179.57	9,700.0	1,062.5	3,369.3	3,514.0	0.00	0.00	0.00
20,900.0	90.00	179.57	9,700.0	962.5	3,370.0	3,494.6	0.00	0.00	0.00
21,000.0	90.00	179.57	9,700.0	862.5	3,370.8	3,475.3	0.00	0.00	0.00
21,100.0	90.00	179.57	9,700.0	762.5	3,371.6	3,456.0	0.00	0.00	0.00
21,171.8	90.00	179.57	9,700.0	690.7	3,372.1	3,442.1	0.00	0.00	0.00

Design Targets

Target Name - hit/miss target - Shape	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude
PBHL_TOPAZ FED COM - plan hits target center - Point	0.00	0.00	9,700.0	690.7	3,372.1	559,880.78	728,255.74	32° 32' 13.342 N	103° 35' 33.616 W
FTP_TOPAZ FED COM - plan misses target center by 288.3usft at 9662.2usft MD (9505.0 TVD, 877.3 N, 721.9 E) - Point	0.00	0.00	9,700.0	664.9	722.9	559,854.94	725,606.56	32° 32' 13.268 N	103° 36' 4.563 W
POI 3_TOPAZ FED COM - plan misses target center by 2.1usft at 17419.0usft MD (9700.1 TVD, 4443.4 N, 3343.8 E) - Point	0.00	0.00	9,700.0	4,443.4	3,341.6	563,633.46	728,225.29	32° 32' 50.477 N	103° 35' 33.667 W
POI 2_TOPAZ FED COM - plan misses target center by 0.1usft at 15341.2usft MD (9700.0 TVD, 5755.0 N, 2009.7 E) - Point	0.00	0.00	9,700.0	5,754.9	2,009.7	564,944.97	726,893.38	32° 33' 3.546 N	103° 35' 49.121 W
POI 1_TOPAZ FED COM - plan hits target center - Point	0.00	0.00	9,700.0	4,423.8	697.4	563,613.85	725,581.04	32° 32' 50.464 N	103° 36' 4.559 W

Casing Points

Measured Depth (usft)	Vertical Depth (usft)	Name	Casing Diameter (")	Hole Diameter (")
21,171.9	9,700.0	5-1/2" Production Casing	5-1/2	6

1. Drilling Well Control Plan

1.1 Well Control - CERTIFICATIONS

Required IADC/IWCF Well Control Certifications Supervisor Level:

Any personnel who supervises or operates the BOP must possess a valid current IADC training certification and photo identification. This would include the onsite drilling supervisor, tool pusher/rig manager, driller, and any personnel that will be acting in these capacities. Another example of this may be a wireline or snubbing crew rigged up on the rig to assist the rig, the operator of each system must also have a valid control certification for their level of operation.

BLM recognizes IADC training as the industry approved accredited training. Online self-certifications will not be acceptable. Enforcement actions for the lack of a valid Supervisory Level certificate shall be prompt action to correct the deficiency. **Enforcement actions include but are not limited to immediate replacement of personnel lacking certifications, drilling operations being shut down or installment of a 10M annular.**

IADC Driller Level for all Drillers and general knowledge for the Assistant Driller, Derrick Hands, Floor Hands and Motor Hands is recognized by the BLM; however, a Driller Level certification will need to be presented only if acting in a temporary Driller Level certification capacity.

Well Control-Position/Roles

IADC Well control training and certification is targeted toward each role, e.g., Supervisor Level toward those who direct, Driller Level to those who act, Introductory to those who need to know.

- **Supervisor Level**
  - Specifies and has oversight that the correct actions are carried out
  - Role is to supervise well control equipment, training, testing, and well control events
  - Directs the testing of BOP and other well control equipment
  - Regularly direct well control crew drills
  - Land based rigs – usually runs the choke during a well kill operation
  - Due to role on the rig, training and certification is targeted more toward management of well control and managing an influx out of the well

- **Driller Level**
  - Performs an action to prevent or respond to well control accident
  - Role is to monitor the well via electronic devices while drilling and detect unplanned influxes
  - Assist with the testing of BOP and other well control equipment
  - Regularly assist with well control crew drills
  - When influx is detected, responsible to close the BOP
  - Due to role on the rig, training and certification is targeted more toward monitoring and shutting the well in (closing the BOP) when an influx is detected

(Well Control-Positions/Roles Continued)

- **Derrick Hand, Assistant Driller Introductory Level**
  - Role is to assist Driller with kick detection by physically monitoring the well at the mixing pits/tanks
  - Regularly record mud weights/viscosity for analysis by the Supervisor level and mud engineer so pre-influx signs can be detected
  - Mix required kill fluids as directed by Supervisor or Driller
  - Due to role on the rig, training and certification is targeted more toward monitoring for influxes, either via mud samples or visual signs on the pits/tanks

- **Motorman, Floor Hand Introductory Level**
  - Role is to assist the Supervisor, Driller, or Derrick Hand with detecting influxes
  - Be certain all valves are aligned for proper well control as directed by Supervisor
  - Perform Supervisor or Driller assigned tasks during a well control event
  - Due to role on the rig, training and certification is targeted more toward monitoring for influxes

1.2 WELL CONTROL-COMPONENT AND PREVENTER COMPATIBILITY CHECKLIST

The table below, which covers the drilling and casing of the 10M Stack portion of the well, outlines the tubulars and the compatible preventers in use. This table, combined with the mud program, documents that two barriers to flow can be maintained at all times, independent of the rating of the annular preventer.

- Example 6-1/8" Production hole section, 10M requirement

Component	OD	Preventer	RWP
Drill pipe	4"	Upper and Lower 3.5-5.5" VBRs	10M
HWDP	4"	Upper and Lower 3.5-5.5" VBRs	10M
Drill collars and MWD tools	4.75-5"	Upper and Lower 3.5-5.5" VBRs	10M
Mud Motor	4.75-5.25"	Upper and Lower 3.5-5.5" VBRs	10M
Production casing	4.5"	Upper and Lower 3.5-5.5" VBRs	10M
ALL	0-13-5/8"	Annular	5M
Open-hole	-	Blind Rams	10M

- VBR = Variable Bore Ram. Compatible range listed in chart.

1.3 WELL CONTROL-BOP TESTING

BOP Test will be completed per Onshore Oil and Gas Order #2 Well Control requirements. The 5M Annular Preventer on a required 10M BOP stack will be tested to 70 % of rated working

pressure including a 10 minute low pressure test. Pressure shall be maintained at least 10 minutes.

1.4 WELL CONTROL - DRILLS

The following drills are conducted and recorded in the Daily Drilling Report and the Contractor's reporting system while engaged in drilling operations:

Type	Frequency	Objective	Comments
Shallow gas kick drill - drilling	Once per well with crew on tour	Response training to a shallow gas influx	To be done prior to drilling surface hole if shallow gas is noted
Kick drill - drilling	Once per week per crew	Response training to an influx while drilling (bit on bottom)	Only one kick drill per week per crew is required, alternating between drilling and tripping.
Kick drill - tripping	Once per week per crew	Response training to an influx while tripping (bit off bottom). Practice stabbing TIW valve	

1.5 WELL CONTROL – MONITORING

- Drilling operations which utilize static fluid levels in the wellbore as the active barrier element, a means of accurately monitoring fill-up and displacement volumes during trips are available to the driller and operator. A recirculating trip tank is installed and equipped with a volume indicator easily read from the driller's / operator's position. This data is recorded on a calibrated chart recorder or digitally. The actual volumes are compared to the calculated volumes.
- The On-Site Supervisor ensures hole-filling and pit monitoring procedures are established and documented for every rig operation.
- The well is kept full of fluid with a known density and monitored at all times even when out of the hole.
- Flow checks are a minimum of 15 minutes.
- A flow check is made:
  - In the event of a drilling break.
  - After indications of down hole gains or losses.
  - Prior to all trips out of the hole.
  - After pulling into the casing shoe.
  - Before the BHA enters the BOP stack.
  - If trip displacement is incorrect.

Well Control-Monitoring (Continued)

- Prior to dropping a survey instrument.
- Prior to dropping a core ball.

  - After a well kill operation.
  - When the mud density is reduced in the well.
- Flow checks may be made at any time at the sole discretion of the driller or his designate. The Onsite Supervisor ensures that personnel are aware of this authority and the authority to close the well in immediately without further consultation.
- Record slow circulating rates (SCR) after each crew change, bit trip, and 500' of new hole drilled and after any variance greater than 0.2 ppg in MW. Slow pump rate recordings should include return flow percent, TVD, MD & pressure. SCR's will be done on all pumps at 30, 40 & 50 SPM. Pressures will be recorded at the choke panel. SCR will be recorded in the IADC daily report and ORB Wellview daily report
- Drilling blind (i.e. without returns) is permissible only in known lithology where the absence of hydrocarbons has been predetermined and written approval of the Drilling Manager.
- All open hole logs to be run with pack-off or lubricator.
- The Drilling Contractor has a fully working pit level totalizer / monitoring system with read out for the driller and an audible alarm set to 10 BBL gain / loss volume. Systems are selectable to enable monitoring of all pits in use. Pit volumes are monitored at all times, especially when transferring fluids. Both systems data is recorded on a calibrated chart recorder or electronically.
- The Drilling Contractor has a fully working return mud flow indicator with drillers display and an audible alarm, and is adjustable to record any variance in return volumes.

1.6 WELL CONTROL – SHUT IN

- The "hard shut in" method (i.e. against a closed choke using either an annular or ram type preventer) is the Company standard.
- The HCR(s) or failsafe valves are left closed during drilling to prevent any erosion and buildup of solids. The adjustable choke should also be left closed.
- The rig specific shut in procedure, the BOP configuration along with space-out position for the tool joints is posted in the Driller's control cabin or doghouse.
- No well kill operation commences until there is a plan agreed by the Superintendent, On-Site Supervisor and the Drilling Manager.
- During a well kill by circulation, constant bottom hole pressure is maintained throughout.
- Kill sheets are maintained by the Driller and posted in the Driller's control cabin or doghouse. The sheet is updated at a minimum every 500 feet.

2. SHUT-IN PROCEDURES:

2.1 PROCEDURE WHILE DRILLING

- Sound alarm (alert crew)

- Space out drill string – Stop rotating, pick the drill string up off bottom, and space out to ensure no tool joint is located in the BOP element selected for initial closure.
- Shut down pumps (stop pumps and observe well.)
- Shut-in Well - If flow is suspected or confirmed, close uppermost applicable BOP element. (HCR and choke will already be in the closed position.)
    - **Note:** Either the uppermost pipe ram or annular preventer can be used.
- Confirm shut-in
- Notify toolpusher/company representative
- Gather all relevant data required:
    - SIDPP and SICP
    - Hole Depth and Hole TVD
    - Pit gain
    - Time
    - Kick Volume
    - Pipe depth
    - MW in, MW out
    - SPR's (Slow Pump Rate's)
- Regroup and identify forward plan (let well stabilize, update kill sheet, inventory mud additives and mud volumes on location)
- Company Representative, Drilling Superintendent, Drilling Engineer and Drilling Manager will discuss well control kill method to be utilized. A verbal Risk Assessment and preferred kill method will be finalized. Initial Risk Assessment will be finalized within 1 hour of initial shut in.
- No well kill operation commences until there is a plan agreed by the Superintendent, On-Site Supervisor and the Drilling Contractor PIC.
- Recheck all pressures and fluid volume on accumulator unit
- If pressure has built or is anticipated during the kill to reach 1,000 psi or greater, the annular preventer will not be used as the primary pressure control device and operations will swap to the upper BOP pipe ram.

2.2 PROCEDURE WHILE TRIPPING

- Sound alarm (alert crew)
- Stab full opening safety valve in the drill string and close.
- Space out drill string (ensure no tool joint is located in the BOP element selected for initial closure).
- Shut down pumps (stop pumps and observe well.)
- Shut-in Well - If flow is suspected or confirmed, close uppermost applicable BOP element. (HCR and choke will already be in the closed position.)
    - **Note:** Either the uppermost pipe ram or annular preventer can be used.
- Confirm shut-in
- Notify tool pusher/company representative
- Gather all relevant data required:
    - SIDPP and SICP
    - Hole Depth and Hole TVD
    - Pit gain

Procedure While Tripping (Continued)

- Time
- Kick Volume
- Pipe depth

- MW in, MW out
- SPR's (Slow Pump Rate's)

- Regroup and identify forward plan (let well stabilize, update kill sheet, inventory mud additives and mud volumes on location)
- Company Representative, Drilling Superintendent, Drilling Engineer and Drilling Manager will discuss well control kill method to be utilized. A verbal Risk Assessment and preferred kill method will be finalized. Initial Risk Assessment will be finalized within 1 hour of initial shut in.
- No well kill operation commences until there is a plan agreed by the Superintendent, On-Site Supervisor and the Drilling Contractor PIC.
- Recheck all pressures and fluid volume on accumulator unit
- If pressure has built or is anticipated during the kill to reach 1,000 psi or greater, the annular preventer will not be used as the primary pressure control device and operations will swap to the upper BOP pipe ram.

2.3 PROCEDURE WHILE RUNNING CASING

- Sound alarm (alert crew)
- Stab crossover and full opening safety valve and close
- Space out casing (ensure no coupling is located in the BOP element selected for initial closure).
- Shut down pumps (stop pumps and observe well.)
- Shut-in Well - If flow is suspected or confirmed, close uppermost applicable BOP element. (HCR and choke will already be in the closed position.)
  - **Note:** Either the uppermost pipe ram or annular preventer can be used.
- Confirm shut-in
- Notify tool pusher/company representative
- Gather all relevant data required:
  - SIDPP and SICP
  - Hole Depth and Hole TVD
  - Pit gain
  - Time
  - Kick Volume
  - Pipe depth
  - MW in, MW out
  - SPR's (Slow Pump Rate's)
- Regroup and identify forward plan (let well stabilize, update kill sheet, inventory mud additives and mud volumes on location)
- Company Representative, Drilling Superintendent, Drilling Engineer and Drilling Manager will discuss well control kill method to be utilized. A verbal Risk Assessment and preferred kill method will be finalized. Initial Risk Assessment will be finalized within 1 hour of initial shut in.
- No well kill operation commences until there is a plan agreed by the Superintendent, On-Site Supervisor and the Drilling Contractor PIC.
- Recheck all pressures and fluid volume on accumulator unit
- If pressure has built or is anticipated during the kill to reach 1,000 psi or greater, the annular preventer will not be used as the primary pressure control device and operations will swap to the upper BOP pipe ram.

2.4 PROCEDURE WITH NO PIPE IN HOLE (OPEN HOLE)

- Sound alarm (alert crew)
- Shut-in with blind rams or BSR. (HCR and choke will already be in the closed position.)
- Confirm shut-in

- Notify toolpusher/company representative
- Gather all relevant data required:
  - Shut-In Pressure
  - Hole Depth and Hole TVD
  - Pit gain
  - Time
  - Kick Volume
  - MW in, MW out
  - SPR's (Slow Pump Rate's)
- Regroup and identify forward plan (let well stabilize, update kill sheet, inventory mud additives and mud volumes on location)
- Company Representative, Drilling Superintendent, Drilling Engineer and Drilling Manager will discuss well control kill method to be utilized. A verbal Risk Assessment and preferred kill method will be finalized. Initial Risk Assessment will be finalized within 1 hour of initial shut in.
- No well kill operation commences until there is a plan agreed by the Superintendent, On-Site Supervisor and the Drilling Contractor PIC.
- Recheck all pressures and fluid volume on accumulator unit.

2.5 PROCEDURE WHILE PULLING BHA THRU STACK

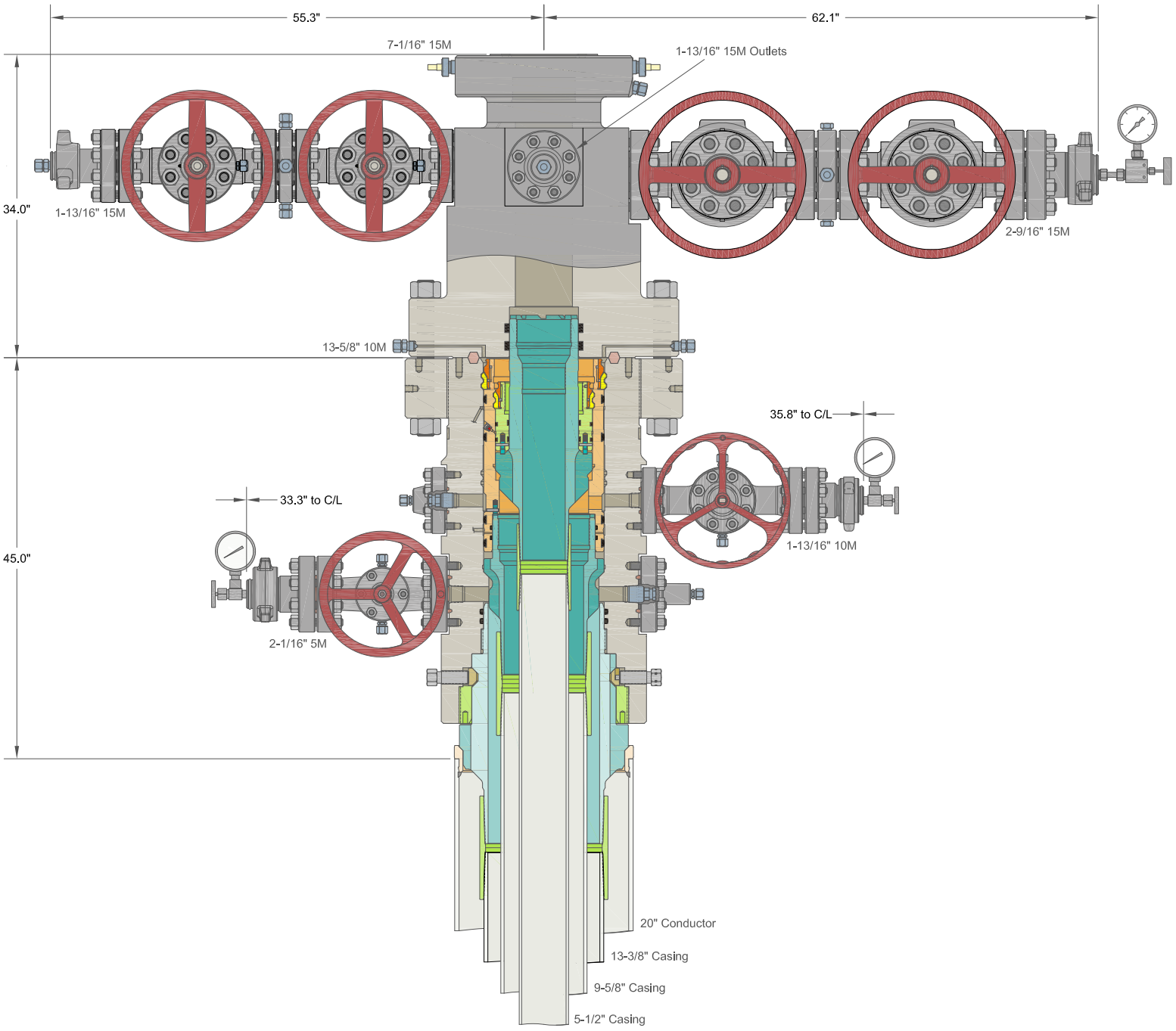
- PRIOR to pulling last joint of drill pipe thru the stack.
- Perform flow check, if flowing.
- Sound alarm (alert crew).
- Stab full opening safety valve and close
- Space out drill string with tool joint just beneath the upper pipe ram.
- Shut-in using upper pipe ram. (HCR and choke will already be in the closed position).
- Confirm shut-in.
- Notify toolpusher/company representative
- Read and record the following:
  - SIDPP and SICP
  - Pit gain
  - Time
- Regroup and identify forward plan

- **With BHA in the stack and compatible ram preventer and pipe combo immediately available**.
  - Sound alarm (alert crew)
  - Stab crossover and full opening safety valve and close
  - Space out drill string with upset just beneath the compatible pipe ram.
  - Shut-in using compatible pipe ram. (HCR and choke will already be in the closed position.)
  - Confirm shut-in
  - Notify toolpusher/company representative
  - Read and record the following:
    - SIDPP and SICP
    - Pit gain

Procedures While Pulling BHA thru Stack (Continued)

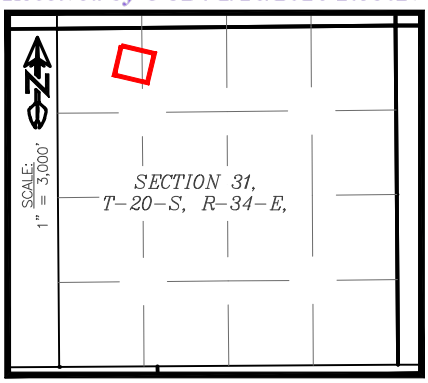
    - Time
  - Regroup and identify forward plan

- **With BHA in the stack and NO compatible ram preventer and pipe combo immediately available**.
    - Sound alarm (alert crew)
    - If possible to pick up high enough, pull string clear of the stack and follow “Open Hole” scenario.
    - If impossible to pick up high enough to pull the string clear of the stack:
    - Stab crossover, make up one joint/stand of drill pipe, and full opening safety valve and close
    - Space out drill string with tool joint just beneath the upper pipe ram.
    - Shut-in using upper pipe ram. (HCR and choke will already be in the closed position.)
    - Confirm shut-in
    - Notify toolpusher/company representative
    - Read and record the following:
        - SIDPP and SICP
        - Pit gain
        - Time



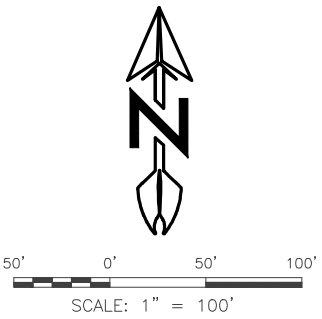
ALL DIMENSIONS APPROXIMATE

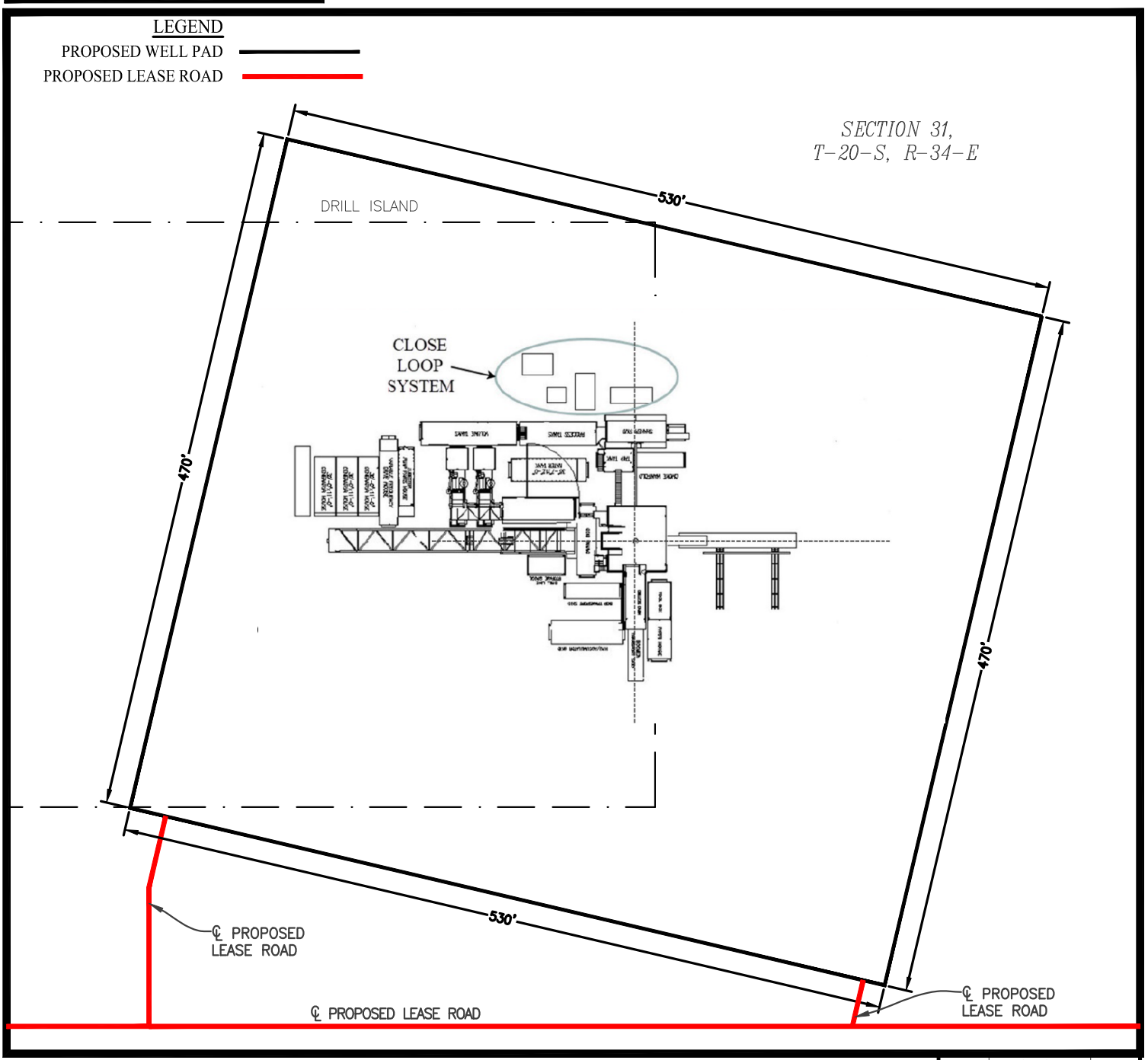
CACTUS WELLHEAD LLC	MARATHON OIL & GAS		
20" x 13-3/8" x 9-5/8" x 5-1/2" MBU-3T-CFL-R-DBLO System With 13-5/8" 10M x 7-1/16" 15M CTH-DBLHPS-SB Tubing Head And 9-5/8" & 5-1/2" Mandrel Casing Hangers	DRAWN	DLE	20OCT21
	APPRV		
	DRAWING NO.	HBE0000621	



RIG LAYOUT

TOPAZ FED COM
SEC. 31, TWP. 20-S, RGE. 34-E
SURVEY: N.M.P.M.
COUNTY: LEA
OPERATOR: MARATHON OIL PERMIAN LLC
U.S.G.S. TOPOGRAPHIC MAP: LEA, N.M.





REV.	DATE	BY
2	10/27/2023	DEF

NOTE:
THIS IS NOT A BOUNDARY SURVEY, APPARENT PROPERTY CORNERS AND PROPERTY LINES ARE SHOWN FOR INFORMATION ONLY. BOUNDARY DATA SHOWN IS FROM STATE OF NEW MEXICO OIL CONSERVATION DIVISION FORM C-102 INCLUDED IN THIS SUBMITTAL.

PREPARED BY:
DELTA FIELD SERVICES, LLC
510 TRENTON ST.
WEST MONROE, LA 71291
318-323-6900 OFFICE
JOB No. R3760_002

MARATHON OIL PERMIAN, LLC.

DRILLING AND OPERATIONS PLAN

WELL NAME & NUMBER: **TOPAZ FED COM 301H**

LOCATION: SECTION **31** TOWNSHIP **20S** RANGE **34E**

LEA COUNTY, **NEW MEXICO**

Section 1: GEOLOGICAL FORMATIONS

Name of Surface Formation: Permian

Elevation: 3693 *feet*

Estimated Tops of Important Geological Markers:

Formation	TVD (ft)	MD (ft)	Elevation (ft SS)	Lithologies	Mineral Resources	Producing Formation?
Rustler	1496	1496	2197	Anhydrite	Brine	No
Salado (Top Salt)	1864	1864	1829	Salt/Anhydrite	Brine	No
Base of Salt	3069	3069	624	Salt/Anhydrite	Brine	No
Yates	3298	3298	395	Salt/Anhydrite	Brine	No
Seven Rivers	3514	3514	179	Salt/Anhydrite	Brine	No
Capitan Reef	3567	3567	126	Salt/Anhydrite	Brine	No
Lamar	3900	3900	-207	Sandstone/Shale	None	No
Bell Canyon	5667	5667	-1974	Sandstone	Oil	No
Cherry Canyon	5704	5704	-2011	Sandstone	Oil	No
Brushy Canyon	6935	6935	-3242	Sandstone	Oil	No
Bone Spring Lime	8612	8612	-4919	Limestone	None	No
Upper Avalon Shale	9091	9091	-5398	Shale	Oil	Yes
1st Bone Spring Sand	9640	9640	-5947	Sandstone	Oil	Yes
2nd Bone Spring Carbonate	9884	9884	-6191	Limestone/Shale	None	No
2nd Bone Spring Sand	10152	10152	-6459	Sandstone	Oil	Yes
3rd Bone Spring Carbonate	10664	10664	-6971	Limestone	Oil	No
3rd Bone Spring Sand	10979	10979	-7286	Sandstone	Oil	Yes
Wolfcamp	11242	11242	-7549	Sandstone/Shale/Carbonates	Natural Gas / Oil	Yes
Wolfcamp A	11351	11351	-7658	Sandstone/Shale/Carbonates	Natural Gas / Oil	Yes
Wolfcamp B	11462	11462	-7769	Sandstone/Shale/Carbonates	Natural Gas / Oil	No
Wolfcamp C	11682	11682	-7989	Sandstone/Shale/Carbonates	Natural Gas / Oil	No
Wolfcamp D	11802	11802	-8109	Sandstone/Shale/Carbonates	Natural Gas / Oil	No

Section 2: BLOWOUT PREVENTER TESTING PROCEDURE

Pressure Rating (PSI): 10M

Rating Depth: 10000

Equipment: 13 5/8 BOP Annular (5,000 psi WP) and BOP Stack (10,000 psi WP) will be installed and tested before drilling all holes.

Requesting Variance? Yes

Variance Request: A variance is requested for the following: 1) Flexible choke line from the BOP to Choke Manifold. See attached for specs and hydrostatic test chart. 2) Cement variance request is attached for review & approval. 3) BOP break test variance is attached for review and approval.

Testing Procedure: BOP/BOPE will be tested to 250 psi low and a high of 100% WP for the Annular and 5,000psi for the BOP Stack before drilling the intermediate holes, 10,000psi for the BOP Stacking before drilling the production hole. Testing will be conducted by an independent service company per 43 CFR 3172 requirements. The System may be upgraded to a higher pressure but still tested to the working pressure listed in the Equipment Description above. If the system is upgraded all the components installed will be functional and tested.

Pipe rams and Blind rams will be operationally checked on each trip out of the hole, but not to exceed more than once per day. These checks will be noted on the daily tour sheets. Other accessories to the BOP equipment will include a Kelly cock, full opening safety valve / inside BOP and choke lines and choke manifold. See attached schematics.

Formation integrity test will be performed per 43 CFR 3172. 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 43 CFR 3172. A multibowl wellhead is being used. The BOP will be tested per 43 CFR 3172 after installation on the surface casing which will cover testing requirements for a maximum of 30 days. If any seal subject to test pressure is broken the system must be tested. See attached schematic.

Section 3: CASING PROGRAM

String Type	Hole Size	Casing Size	Top Set MD	Bottom Set MD	Top Set TVD	Bottom Set TVD	Top Set MSL	Bottom Set MSL	Weight (lbs/ft)	Grade	Joint Type	Collapse SF	Burst SF	Joint SF Type	Joint SF	Body SF Type	Body SF
Surface	17.5	13.375	0	1521	0	1521	3693	2172	54.5	J55	BTC	5.22	1.81	BUOY	4.52	BUOY	4.52
Intermediate I	12.25	9.625	0	3298	0	3298	3693	395	40	P110HC	BTC	1.20	1.42	BUOY	2.44	BUOY	2.44
Intermediate II	8.75	7.625	0	9120	0	9027	3693	-5334	29.7	P110	USS Liberty	2.00	1.24	BUOY	2.83	BUOY	2.83
Production	6.75	5.5	0	21261	0	9700	3693	-6007	23	P110HC	TLW	2.53	1.26	BUOY	2.22	BUOY	2.22

All casing strings will be tested in accordance with 43 CFR 3172. Safety Factors will Meet or Exceed

Casing Condition: New
Casing Standard: API
Tapered String? No

	Yes or No
Is casing new? If used, attach certification as required in 43 CFR 3171.	Yes
Does casing meet API specifications? If no, attach casing specification sheet.	Yes
Is premium or uncommon casing planned? If yes attach casing specification sheet.	No
Does the above casing design meet or exceed BLM's minimum standards? If not provide justification (loading assumptions, casing design criteria).	Yes
Will the intermediate pipe be kept at a minimum 1/3 fluid filled to avoid approaching the collapse pressure rating of the casing?	Yes
Is well located within Capitan Reef?	Yes
If yes, does production casing cement tie back a minimum of 50' above the Reef?	No
Is proposed well within the designated four string boundary?	Yes
Is well located in R-111-Q and SOPA?	Yes
Is the second string set 100' to 600' below the base of salt?	
Is well located in SOPA but not in R-111-Q?	No
If yes, are the first 2 strings cemented to surface and third string cement tied back 500' into previous casing?	
Is well located in high Cave/Karst?	No
If yes, are there two strings cemented to surface?	
If yes, is there a contingency casing if lost circulation occurs?	
Is well located in critical Cave/Karst?	No
If yes, are there three strings cemented to surface?	

Section 4: CEMENT PROGRAM

String Type	Lead/Tail	Top MD	Bottom MD	Quantity (sks)	Yield (ft³/sks)	Density (ppg)	Slurry Volume (ft³)	Excess (%)	Cement Type	Additives
Surface	Lead	0	1371	584	2.12	12.5	1239	25	Class C	Extender,Accelerator,LCM
Surface	Tail	1371	1521	99	1.32	14.8	130	25	Class C	Accelerator
Intermediate I	Lead	0	2798	546	2.18	12.4	1190	25	Class C	Extender,Accelerator,LCM
Intermediate I	Tail	2798	3298	147	1.33	14.8	196	25	Class C	Retarder
Intermediate II	Lead	0	8620	273	4.09	10.5	1116	25	Class H	Extender
Intermediate II	Tail	8620	9120	45	1.4	14.5	63	25	Class H	Viscosifier, Fluid Loss
Production	Tail	8562	21261	1191	1.68	13	2001	25	Class H	Retarder, Extender, Fluid Loss, Suspension Agent

Stage tool depth(s) will be adjusted based on hole conditions and cement volumes will be adjusted proportionally. Stage tool will be set a minimum of 50 feet below the salt. Lab reports with the 500 psi compressive strength time for the cement will be onsite for review.

Within 180 days after frac a bradenhead cement squeeze will be performed to achieve tie back requirements.

Pilot Hole? No
Pilot Hole Depth: N/A
KOP Depth: N/A
Plugging Procedure for Pilot Hole: N/A

Plug Top	Plug Bottom	Excess (%)	Quantity (sx)	Density (ppg)	Yield (ft3/sks)	Water gal/sk	Slurry Description and Cement Type

Section 5: CIRCULATING MEDIUM

Mud System Type: Closed
Will an air or gas system be used? No

Describe what will be on location to control well or mitigate other conditions:
The necessary mud products for additional weight and fluid loss control will be on location at all times.

Describe the mud monitoring system utilized:
Losses or gains in the mud system will be monitored visually/manually as well as with an electronic PVT.

Circulating Medium Table:

Top Depth	Bottom Depth	Mud Type	Min. Weight (ppg)	Max Weight (ppg)
0	1521	Water Based Mud	8.4	8.8
1521	9027	Brine Based Mud	9.2	10.2
9027	21261	Oil Based Mud	10.5	12.5

Section 6: TESTING, LOGGING, CORING

List of production tests including testing procedures, equipment and safety measures:
GR from TD to surface (horizontal well - vertical portion of hole)

List of open and cased hole logs run in the well:
GR while drilling from Intermediate casing shoe to TD.

Coring operation description for the well:
None

Section 7: ANTICIPATED PRESSURE

Anticipated Bottom Hole Pressure: **6305** PSI
Anticipated Bottom Hole Temperature: **195** ˚F
Anticipated Abnormal Pressure? **No**
Anticipated Abnormal Temperature? **No**

Potential Hazards:
H2S detection equipment will be in operation after drilling out the surface casing shoe until the production casing has been cemented. Breathing equipment will be on location from drilling out the surface shoe until production casing is cemented. If H2S is encountered the operator will comply with 43 CFR 3176. Adequate flare lines will be installed off the mud/gas separator where gas may be flared safely. All personnel will be familiar with all aspects of safe operation of equipment being used to drill this well. See attached H2S Contingency Plan.

Section 8: OTHER INFORMATION

Auxiliary Well Control and Monitoring Equipment:
A Kelly cock will be in the drill string at all times. A full opening drill pipe stabbing valve having the appropriate connections will be on the rig floor unobstructed and readily accessible at all times.
Hydrogen Sulfide detection equipment will be in operation after drilling out the surface casing shoe until the production casing is cemented. Breathing equipment will be on location upon drilling the surface casing shoe until total depth is reached. If Hydrogen Sulfide is encountered, measured amounts and formations will be reported to the BLM.

Anticipated Starting Date and Duration of Operations:
Road and location construction will begin after the BLM has approved the APD. Anticipated spud date will be as soon as possible after BLM approval and as soon as a rig will be available. Move in operations and drilling is expected to take 30 days.

Cement Variance Request

Marathon Oil Permian requests to pump a two stage cement job on the 9 5/8" intermediate casing in the event the primary stage is not circulated to surface.

If cement is not circulated to surface on the primary cement job, the second stage will be performed as a bradenhead squeeze until cement reaches surface.

Following the first stage, we will ensure the cement job was cemented properly and the well is static with floats holding. We will also ensure there is no pressure on the csg annulus as with all other casing strings where batch drilling operations occur. Before moving off the rig the TA cap will be installed as per standard batch drilling ops.

If there are indications that there are gaps in cement coverage after the bradenhead squeeze, a CBL will be run to identify where the gaps are. After the bradenhead squeeze, the lines will NOT be washed into the annulus. The annulus will be topped off approximately an hour after the bradenhead job with cement and verified circulated to surface. If confidence is lacking on the TOC, an echo meter or CBL will be run to verify TOC. BLM Engineer will be notified of such issues.

BOP Break Test Variance Request

Executive Summary

- Request for a Variance allowing break testing of the blowout preventer equipment. Marathon requests to only test broken pressure seals on the BOP and function test BOP when skidding between wells on a pad
- Currently CFR Title 43 Part 3170 states that a test shall be performed “whenever any seal subject to test pressure is broken” and BLM interprets this as requiring a full BOP test
- API 53 states that for pad drilling operations, ONLY the connections that have a pressure seal broken are required to be tested
- Marathon feels break testing meets and or exceeds CFR Title 43 and API 53 required standards and is good drilling practice. It also may reduce wear and tear on BOP components.

BOP Break Test Variance Request

Background

- API Standard 53, “Well Control Equipment Systems for Drilling Wells 5th addition, Dec 2018, Annex C Table C.4) states “ For pad drilling operations, moving from one wellhead to another within the 21days, pressure testing is required for pressure – containing and pressure controlling connection when the integrity of a pressure seal is broken.
- Marathon’s rigs utilize quick connects to allow the release of the BOP from wellhead to wellhead without breaking any BOP stack components. This technology allows for break testing
- BLM has previously approved this variance of break testing for other operators in the area

Table C.4—Initial Pressure Testing, Surface BOP Stacks

Component to be Pressure Tested	Pressure Test—Low Pressure[ac] psig (MPa)	Pressure Test—High Pressure[ac]	
		Change Out of Component, Elastomer, or Ring Gasket	No Change Out of Component, Elastomer, or Ring Gasket
Annular preventer[b]	250 to 350 (1.72 to 2.41)	RWP of annular preventer	MASP or 70% annular RWP, whichever is lower.
Fixed pipe, variable bore, blind, and BSR preventers[bd]	250 to 350 (1.72 to 2.41)	RWP of ram preventer or wellhead system, whichever is lower	ITP
Choke and kill line and BOP side outlet valves below ram preventers (both sides)	250 to 350 (1.72 to 2.41)	RWP of side outlet valve or wellhead system, whichever is lower	ITP
Choke manifold—upstream of chokes[e]	250 to 350 (1.72 to 2.41)	RWP of ram preventers or wellhead system, whichever is lower	ITP
Choke manifold—downstream of chokes[e]	250 to 350 (1.72 to 2.41)	RWP of valve(s), line(s), or MASP for the well program, whichever is lower	
Kelly, kelly valves, drill pipe safety valves, IBOPs	250 to 350 (1.72 to 2.41)	MASP for the well program	

[a] Pressure test evaluation periods shall be a minimum of five minutes.
No visible leaks.
The pressure shall remain stable during the evaluation period. The pressure shall not decrease below the intended test pressure.

[b] Annular(s) and VBR(s) shall be pressure tested on the largest and smallest OD drill pipe to be used in well program.

[c] For pad drilling operations, moving from one wellhead to another within the 21 days, pressure testing is required for pressure-containing and pressure-controlling connections when the integrity of a pressure seal is broken.

[d] For surface offshore operations, the ram BOPs shall be pressure tested with the ram locks engaged and the closing and locking pressure vented during the initial test. For land operations, the ram BOPs shall be pressure tested with the ram locks engaged and the closing and locking pressure vented at commissioning and annually.

[e] Adjustable chokes are not required to be full sealing devices. Pressure testing against a closed choke is not required.

Procedures

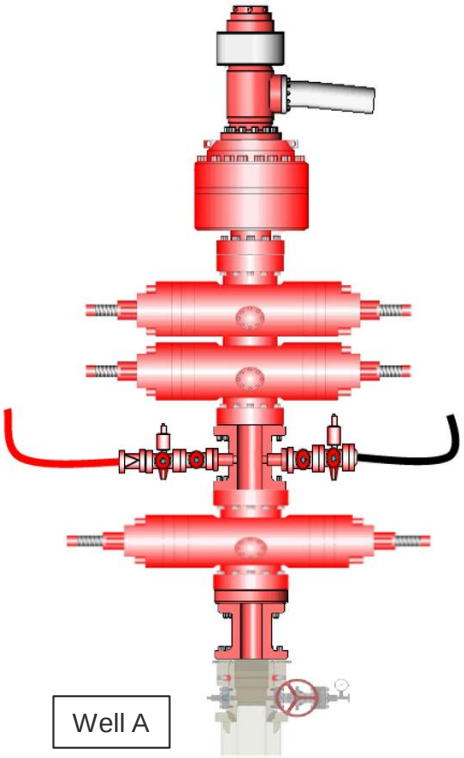
Procedural Steps

1. Marathon will use this document for break testing plan for New Mexico Delaware Basin.
2. Marathon will perform BOP break testing on well pads where multiple intermediate sections can be drilled and cased within the 21 day test window and will meet the following criteria:
   a) A full BOP test will be conducted on the first well on the pad
   b) The deepest intermediate well on the pad will be drilled first
   c) A Full BOP test will be required prior to drilling any production hole
3. After completing the first full BOP test and drilling the intermediate section, two breaks will be performed on the BOP.
   a) BOP quick connect and wellhead
   b) HCV and Choke line connection
4. The BOP will be lifted from well A to well B
5. The two connections stated above will be reconnected
6. Test plug will be installed into wellhead utilizing drillpipe or test joint
7. Shell test will be performed against the upper pipe rams and testing the two breaks consisting of the following tests
   a) 250psi low test and high test performed to 5,000 (well and sundry specific)
8. Function test will then be performed on the lower pipe rams, blind rams, and annular (performed each trip or every 7 days - whichever is more frequent)
9. This process will be repeated for other wells on the pad while being in the 21 day BOP test window

Sequence

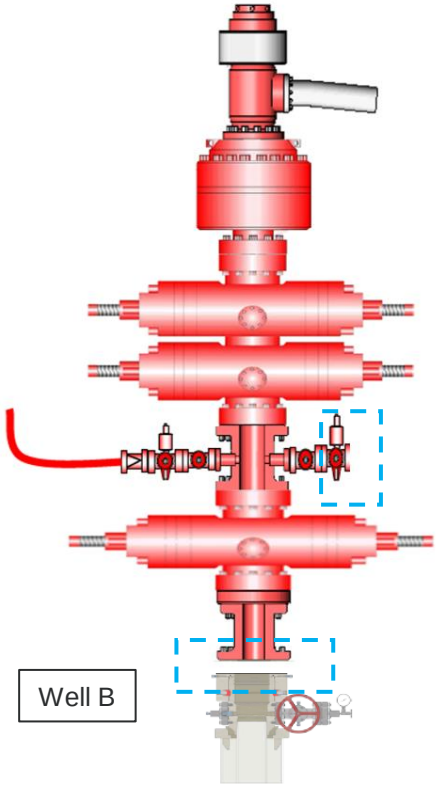
Diagram

Well A: BOP installed on Well A



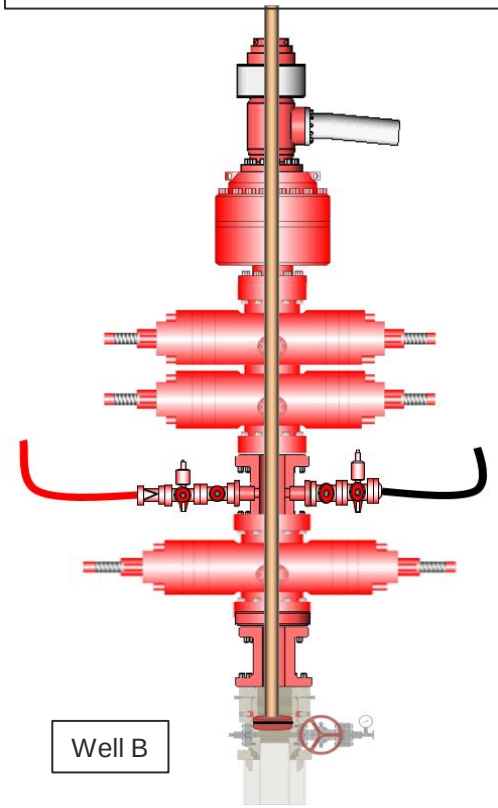
Well A

BOP picked up and moved from Well A to Well B. Disconnected at the **quick connect** and the **choke line valve**



Well B

Well B: Quick connect and choke line reconnected. Test plug installed.



Well B

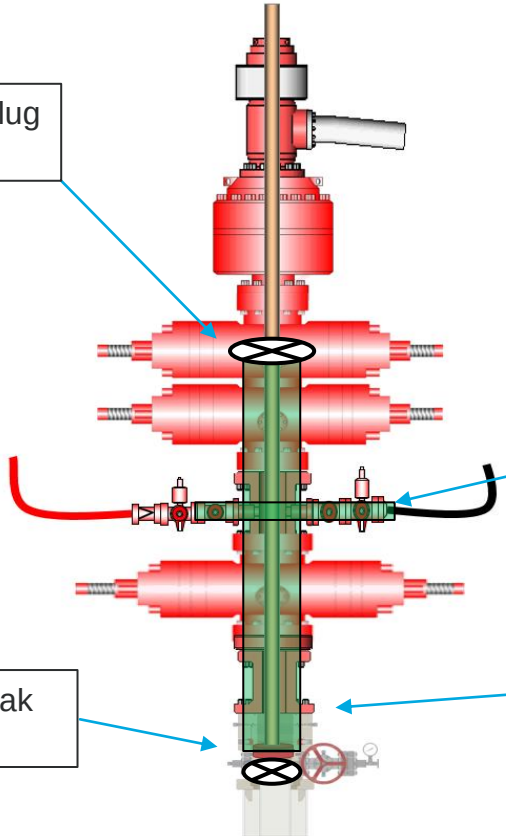
Procedures

Diagram

Pipe Ram closed on test plug assembly for break test

Pressure Containment
Pressure containment is outline by the green highlight

Testing against the closed pipe ram and the BOP test plug



Break Test
The break test will consist of one test that tests both breaks (quick connect/wellhead and choke line/HCV simultaneously after each skid

Connection between the HCV and choke line will be broken and then retested after each skid during the break test

Connection between the wellhead and BOP (quick connect) will be broken and then retested after each skid during the break test

Test Plug installed for break test

Marathon Oil

Summary

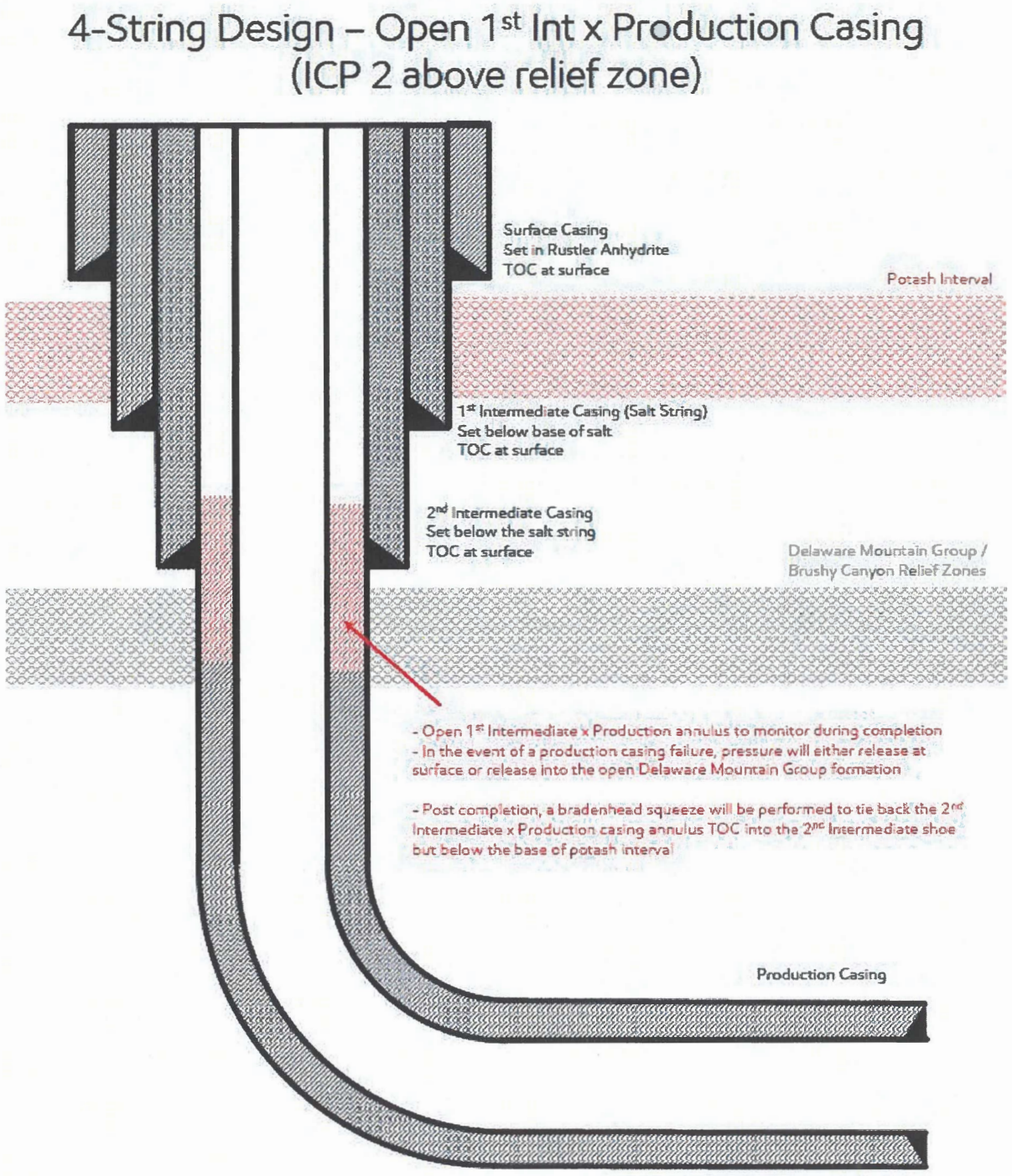
- A variance is requested to only test the broken pressure seals on the BOP equipment when moving from wellhead to wellhead. This is in full compliance with API Standard 53
- Marathon will meet the following criteria when break testing:
  - Time of last BOP test was less than 21 days
  - A full BOP test was conducted on the first well on the pad
  - The first intermediate hole section on the pad will be the deepest intermediate hole section.
  - Break testing will not occur on intermediate sections of over 5000 psi MASP

Batch Drilling Plan

- Marathon Oil Permian LLC. respectfully requests the option to “batch” drill sections of a well with intentions of returning to the well for later completion.
- When it is determined that the use of a “batch” drilling process to increase overall efficiency and reduce rig time on location, the following steps will be utilized to ensure compliant well control before releasing drilling rig during the batch process.
- Succeeding a successful cement job, fluid levels will be monitored in both the annulus and casing string to be verified static.
- A mandrel hanger packoff will be ran and installed in the multi-bowl wellhead isolating and creating a barrier on the annulus. This packoff will be tested to 5,000 PSI validating the seals.
- At this point the well is secure and the drilling adapter will be removed from the wellhead.
- A 13-5/8” 5M temporary abandonment cap will be installed on the wellhead by stud and nut flange. The seals of the TA cap will then be pressure tested to 5,000 PSI.
- The drilling rig will skid to the next well on the pad to continue the batch drilling process.
- When returning to the well with the TA cap, the TA cap will be removed and the BOP will be nippled up on the wellhead.
- A BOP test will then be conducted according to Onshore Order #2 and drilling operations will resume on the subject well.

Request for Surface Rig

- Marathon Oil Permian LLC. Requests the option to contract a surface rig to drill, set surface casing and cement on the subject well. If the timing between rigs is such that Marathon Oil Permian LLC. would not be able to preset the surface section, the primary drilling rig will drill the well in its entirety per the APD.



[Figure E] 4 String – Uncemented Annulus between 2nd Intermediate and Production Casing Strings

Marathon Oil Permian LLC is aware of the R111-Q update and will comply with the requirements including (but not limited to):
1)Alignment with KPLA requirements per schematic above, leaving open annulus for pressure monitoring during frac and utilizing new casing that meets API standards.
2)Contingency plans in place to divert formation fluids away from the salt interval in event of production casing failure
3)Bradenhead squeeze to be completed within 180 days to tie back TOC to salt string at least 500 ft but with top below Marker Bed 126
4)Production cement to be tied back no less than 500 ft inside previous casing shoe
5)While drilling salt interval, separation distance to any active/inactive producing offset well will be ensured such that SF > 1.0; Anti Collision reports will be provided in the APD packages for review where SF < 1.5 against any applicable offset well, or where center to center separation against a blind or inclination only surveyed offset well is less than 500 ft.

AFMSS
U.S. Department of the Interior
BUREAU OF LAND MANAGEMENT

SUPO Data Report
08/04/2025

APD ID: 10400081220
Submission Date: 10/26/2021
Operator Name: MARATHON OIL PERMIAN LLC
Well Name: TOPAZ 30 FEDERAL COM
Well Number: 2H
Well Type: OIL WELL
Well Work Type: Drill

Highlighted data reflects the most recent changes
Show Final Text

Section 1 - Existing Roads

Will existing roads be used? YES

Existing Road Map:

S1_Topaz_FC_Public_Access_Map_20240301174537_20240321212519.pdf

Existing Road Purpose: ACCESS,FLUID TRANSPORT

Row(s) Exist? NO

ROW ID(s)

ID:

Do the existing roads need to be improved? NO

Existing Road Improvement Description:

Existing Road Improvement Attachment:

Section 2 - New or Reconstructed Access Roads

Will new roads be needed? YES

New Road Map:

S2_Topaz_FC_New_Road_20240301174556_20240321212519.pdf
S2_Topaz_FC_New_Road_Facility_20240301174604_20240321212520.pdf

New road type: LOCAL

Length: 2761.19 Feet

Width (ft.): 30

Max slope (%): 3

Max grade (%): 3

Army Corp of Engineers (ACOE) permit required? N

ACOE Permit Number(s):

New road travel width: 20

New road access erosion control: Road will be crowned to allow proper water drainage and BMP will be used to control erosion.

New road access plan or profile prepared? N

New road access plan

Operator Name: MARATHON OIL PERMIAN LLC

Well Name: TOPAZ 30 FEDERAL COM **Well Number:** 2H

Access road engineering design? N

Access road engineering design

Turnout? N

Access surfacing type: OTHER

Access topsoil source: ONSITE

Access surfacing type description: Caliche

Access onsite topsoil source depth: 6

Offsite topsoil source description:

Onsite topsoil removal process: Strip a minimum of 6" topsoil and temporarily pile while road is being constructed. After the road has been constructed, the topsoil will be spread and seeded along the road ditch in Marathon's ROW.

Access other construction information:

Access miscellaneous information:

Number of access turnouts:

Access turnout map:

Drainage Control

New road drainage crossing: OTHER

Other Description: Crowing of the road and ditching to control storm water.

Drainage Control comments: The access road driving surface will be crowned with a max grade of 3% and ditching along side the road will be created to direct and control storm water. The road shall conform to cross section and plans for typical road construction found in the BLM Gold Book.
Road Drainage Control Structures (DCS) description: See attachment.

Road Drainage Control Structures (DCS) attachment:

Access Additional Attachments

Section 3 - Location of Existing Wells

Existing Wells Map? YES

Existing Well map Attachment:

S3_Topaz_FC_One_Mile_Radius_Map_20240301174656_20240321212520.pdf

Section 4 - Location of Existing and/or Proposed Production Facilities

Submit or defer a Proposed Production Facilities plan? SUBMIT

Production Facilities description: 490'X300' pad SW of drill pad, 244.44' new road,5448.36 OHP. Flowline specifications: 1: 6" buried, poly flowline. Length: 908.02' Working pressure: 80 psi, transporting oil, gas, and water from well to facility.

Operator Name: MARATHON OIL PERMIAN LLC

Well Name: TOPAZ 30 FEDERAL COM **Well Number:** 2H

Production Facilities map:

S4_Topaz_FC_Facility_Diagram_20240301174718_20240321212420.pdf
S4_Topaz_FC_Flowline_Plat_20240502051859.pdf
S4_Topaz_FC_OHP_20240502051910.pdf
S2_Topaz_FC_New_Road_Facility_20240502051921.pdf

Section 5 - Location and Types of Water Supply

Water Source Table

Water source type: GW WELL

Water source use type: DUST CONTROL
SURFACE CASING
INTERMEDIATE/PRODUCTION CASING
STIMULATION

Source latitude: 32.610876 **Source longitude:** -103.784658

Source datum: NAD83

City:

Water source permit type: PRIVATE CONTRACT

Water source transport method: PIPELINE

Source land ownership: PRIVATE

Source transportation land ownership: PRIVATE

Water source volume (barrels): 147500 **Source volume (acre-feet):** 19.01173171

Source volume (gal): 6195000

Water source type: GW WELL

Water source use type: DUST CONTROL
SURFACE CASING
INTERMEDIATE/PRODUCTION CASING
STIMULATION

Source latitude: 32.566905 **Source longitude:** -103.767299

Source datum: NAD83

City:

Water source permit type: PRIVATE CONTRACT

Operator Name: MARATHON OIL PERMIAN LLC

Well Name: TOPAZ 30 FEDERAL COM **Well Number:** 2H

Water source transport method: PIPELINE

Source land ownership: PRIVATE

Source transportation land ownership: PRIVATE

Water source volume (barrels): 147500 **Source volume (acre-feet):** 19.01173171

Water source and transportation

S5_Topaz_FC_Water_Source_Map_20240301174833_20240321212421.pdf

Water source comments: Pond 1 - Private Pond Located in Lot 3 (or the SWSE qtr/qtr) of Section 32, Township 19S, Range 32E, Lea County, New Mexico, NAD 83 Latitude 32.610876 & Longitude -103.784658. Pond 2 - Private Pond Located in the SWSE qtr/qtr of Section 16, Township 20S, Range 32E, Lea County, New Mexico, NAD 83 Latitude 32.566905 & Longitude -103.767299.
New water well? N

New Water Well Info

Well latitude: **Well Longitude:** **Well datum:**

Well target aquifer:

Est. depth to top of aquifer(ft): **Est thickness of aquifer:**

Aquifer comments:

Aquifer documentation:

Well depth (ft): **Well casing type:**

Well casing outside diameter (in.): **Well casing inside diameter (in.):**

New water well casing? **Used casing source:**

Drilling method: **Drill material:**

Grout material: **Grout depth:**

Casing length (ft.): **Casing top depth (ft.):**

Well Production type: **Completion Method:**

Water well additional information:

State appropriation permit:

Additional information attachment:

Section 6 - Construction Materials

Using any construction materials: YES

Construction Materials description: Pit 1 - Caliche will be used to construct well pad and roads. Material will be purchased from BLM caliche pit located in Sec 27, T20S, and R31E, Lea County , NM.GPS 32.5453 N , -103.8524 W Pit 2 - Caliche will be used to construct well pad and roads. Material will be purchased from caliche pit located in Sec 32, T20S, R32E, Lea County, NM. Gps 32.5271 N ; -103.7863 W The proposed source of construction material will be located and purchased by construction contractor. Notification shall be given to BLM at (575) 234-5909 at least 3 working days prior to commencing construction of well pad or related infrastructure.

Operator Name: MARATHON OIL PERMIAN LLC

Well Name: TOPAZ 30 FEDERAL COM **Well Number:** 2H

Construction Materials source location

Section 7 - Methods for Handling

Waste type: DRILLING

Waste content description: Drilling fluids and produced oil and water from the well during drilling operations.

Amount of waste: 1000 barrels

Waste disposal frequency : Daily

Safe containment description: Lined Steel Tanks

Safe containmant attachment:

Waste disposal type: HAUL TO COMMERCIAL FACILITY **Disposal location ownership:** COMMERCIAL
Disposal type description:

Disposal location description: Waste will be stored safely and disposed of properly in an NMOCD approved disposal facility @ R360 Disposal & Waste Mgmt- Carlsbad, NM..

Waste type: COMPLETIONS/STIMULATION

Waste content description: Oil and water from drilling operations.

Amount of waste: 1000 barrels

Waste disposal frequency : Daily

Safe containment description: Steel Tanks.

Safe containmant attachment:

Waste disposal type: HAUL TO COMMERCIAL FACILITY **Disposal location ownership:** COMMERCIAL
Disposal type description:

Disposal location description: Waste will be stored safely and disposed of properly in an NMOCD approved disposal facility @ R360 Disposal & Waste Mgmt - Carlsbad, NM.

Waste type: GARBAGE

Waste content description: Garbage and Trash (solid waste).

Amount of waste: 1200 pounds

Waste disposal frequency : Weekly

Safe containment description: All garbage will be stored in secure containers with lids.

Safe containmant attachment:

Waste disposal type: HAUL TO COMMERCIAL FACILITY **Disposal location ownership:** COMMERCIAL
Disposal type description:

Disposal location description: All garbage will be collected and disposed of properly at a State approved disposal facility @R360 Disposal & Waste Mgmt - Carlsbad, NM..

Operator Name: MARATHON OIL PERMIAN LLC

Well Name: TOPAZ 30 FEDERAL COM **Well Number:** 2H

Waste type: SEWAGE

Waste content description: Human waste and grey water.

Amount of waste: 600 barrels

Waste disposal frequency : Weekly

Safe containment description: Portable toilets and sewage tanks.

Safe containmant attachment:

Waste disposal type: HAUL TO COMMERCIAL FACILITY **Disposal location ownership:** COMMERCIAL

Disposal type description:

Disposal location description: All sewage waste will be managed by a third party contractor (ABS) and disposed of properly at a state approved disposal facility.

Reserve Pit

Reserve Pit being used? NO

Temporary disposal of produced water into reserve pit? NO

Reserve pit length (ft.) **Reserve pit width (ft.)**

Reserve pit depth (ft.) **Reserve pit volume (cu. yd.)**

Is at least 50% of the reserve pit in cut?

Reserve pit liner

Reserve pit liner specifications and installation description

Cuttings Area

Cuttings Area being used? NO

Are you storing cuttings on location? N

Description of cuttings location

Cuttings area length (ft.) **Cuttings area width (ft.)**

Cuttings area depth (ft.) **Cuttings area volume (cu. yd.)**

Is at least 50% of the cuttings area in cut?

Cuttings area liner

Cuttings area liner specifications and installation description

Operator Name: MARATHON OIL PERMIAN LLC

Well Name: TOPAZ 30 FEDERAL COM **Well Number:** 2H

Section 8 - Ancillary

Are you requesting any Ancillary Facilities?: N

Ancillary Facilities

Comments:

Section 9 - Well Site

Well Site Layout Diagram:

S9_Topaz_FC_Well_Site_Diagram_20240301175043_20240321212421.pdf

Comments:

Section 10 - Plans for Surface

Type of disturbance: New Surface Disturbance

Multiple Well Pad Name:

Multiple Well Pad Number:

Recontouring

Topaz_30_2H_IR_20240207163232.pdf

Drainage/Erosion control construction: During construction, BMP will be used to control erosion, runoff and siltation of surrounding areas. This will include diversion of stormwater and the installation of silt fence on slopes, see attachment. In addition, the access road driving surface will be crowned with a max grade of 3% and ditching along side the road will be created to direct and control storm water. All construction will conform to the standards outlined in the BLM Gold Book.

Drainage/Erosion control reclamation: During Reclamation, BMP will be used to control erosion, runoff and siltation of surrounding areas. This will include diversion of stormwater and the installation of silt fence on slopes, see attachment. In addition, the access road driving surface will be crowned with a max grade of 3% and ditching along side the road will be created to direct and control storm water. All reclamation will conform to the standards outlined in the BLM Gold Book.

Well pad proposed disturbance (acres): 5.72	**Well pad interim reclamation (acres):** 0	**Well pad long term disturbance (acres):** 5.72
Road proposed disturbance (acres): 2.12	**Road interim reclamation (acres):** 0	**Road long term disturbance (acres):** 2.12
Powerline proposed disturbance (acres): 3.79	**Powerline interim reclamation (acres):** 0	**Powerline long term disturbance (acres):** 3.79
Pipeline proposed disturbance (acres): 0.63	**Pipeline interim reclamation (acres):** 0	**Pipeline long term disturbance (acres):** 0.63
Other proposed disturbance (acres): 0	**Other interim reclamation (acres):** 0	**Other long term disturbance (acres):** 0
Total proposed disturbance: 12.26	**Total interim reclamation:** 0	**Total long term disturbance:** 12.26

Disturbance Comments:

Reconstruction method: The objective of interim reclamation is to restore vegetative cover and a portion of the landform sufficient to maintain healthy, biologically active topsoil; control erosion; and minimize habitat and forage loss, visual impact, and weed infestation, during the life of the well or facilities. The BLM

Operator Name: MARATHON OIL PERMIAN LLC

Well Name: TOPAZ 30 FEDERAL COM **Well Number:** 2H

will be notified at least 3 days prior to commencement of any reclamation procedures. If circumstances allow, interim reclamation and/or final reclamation actions will be completed no later than 6 months from when the final well on the location has been completed or plugged. We will gain written permission from the BLM if more time is needed. Reclamation will be performed using the following procedures: INTERIM RECLAMATION Within 6 months of first production of the last well drilled, the well location and surrounding areas will be cleared of, and maintained free of, all materials, trash, and equipment not required for production. A plan will be submitted showing where interim reclamation will be completed in order to allow for safe operations, protection of the environment outside of drilled well, and following best management practices found in the BLM Gold Book. In areas planned for interim reclamation, all the surfacing material will be removed and returned to the original mineral pit or recycled to repair or build roads and well pads. The areas planned for interim reclamation will then be re-contoured to the original contour if feasible, or if not feasible, to an interim contour that blends with the surrounding topography as much as possible. Where applicable, the fill material of the well pad will be back-filled into the cut to bring the area back to the original contour. The interim cut and fill slopes prior to re-seeding will not be steeper than a 3:1 ratio, unless the adjacent native topography is steeper. Note: Constructed slopes may be much steeper during drilling, but will be re-contoured to the above ratios during interim reclamation. Topsoil will be evenly re-spread and aggressively re-vegetated over the entire disturbed area not needed for all weather operations including cuts & fills. To seed the area, the proper BLM seed mixture (free of noxious weeds) will be used. Proper erosion control methods will be used on the area to control erosion, runoff and siltation of the surrounding area. The interim reclamation will be monitored periodically to ensure that vegetation has reestablished. FINAL RECLAMATION Prior to final reclamation procedures, the well pad, road, and surrounding area will be cleared of material, trash, and equipment. All surfacing material will be removed and returned to the original mineral pit or recycled to repair or build roads and well pads. All disturbed areas, including roads, pipelines, pads, production facilities, and interim reclaimed areas will be re-contoured to the contour existing prior to initial construction or a contour that blends in distinguishably with the surrounding landscape. Topsoil that was spread over the interim reclamation areas will be stockpiled prior to re-contouring. The topsoil will be redistributed evenly over the entire disturbed site to ensure successful revegetation. After all the disturbed areas have been properly prepared; the areas will be seeded with the proper BLM LPC seed mixture free of noxious weeds. Proper erosion control methods will be used on the entire area to control erosion, runoff and siltation of the surrounding area

Topsoil redistribution: The topsoil will be evenly distributed across all reclaimed areas, ripped across the slopes, and seeded accordingly. During final reclamation, Marathon will grab and evenly redistribute topsoil across the entire disturbed area, disc plowing if needed, and seeded accordingly.
Soil treatment: Topsoil will be stockpiled until interim reclamation. Topsoil and subsoil (fill) will be piled separately. The topsoil will be seeded after being spread across IR area.
Existing Vegetation at the well pad: Sandy, Shallow Plant Communities

Existing Vegetation at the well pad

Existing Vegetation Community at the road: Sandy, Shallow Plant Communities

Existing Vegetation Community at the road

Existing Vegetation Community at the pipeline: N/A

Existing Vegetation Community at the pipeline

Existing Vegetation Community at other disturbances: N/A

Existing Vegetation Community at other disturbances

Non native seed used? N

Non native seed description:

Seedling transplant description:

Operator Name: MARATHON OIL PERMIAN LLC

Well Name: TOPAZ 30 FEDERAL COM **Well Number:** 2H

Will seedlings be transplanted for this project? N

Seedling transplant description attachment:

Will seed be harvested for use in site reclamation? N

Seed harvest description:

Seed harvest description attachment:

Seed

Seed Table

Seed type: OTHER **Seed source:**

Seed name: BLM Mix

Source name: **Source address:**

Source phone:

Seed cultivar: Broadcast

Seed use location: NEW ACCESS ROAD,WELL PAD

PLS pounds per acre: 16 **Proposed seeding season:** AUTUMN

Total pounds/Acre:

Seed Summary

Seed Type	Pounds/Acre
OTHER	16

Seed reclamation

Operator Contact/Responsible Official

First Name: Terri **Last Name:** Stathem

Phone: (713)817-0224 **Email:**

Seedbed prep: Rip native topsoil stockpiled during construction activities across the slope.

Seed BMP:

Seed method:

Existing invasive species? N

Existing invasive species treatment description:

Existing invasive species treatment

Weed treatment plan description: Marathon Oil will control weeds per Federal, County and State regulations by contracting a certified third party sprayer.

Weed treatment plan

Operator Name: MARATHON OIL PERMIAN LLC

Well Name: TOPAZ 30 FEDERAL COM **Well Number:** 2H

Monitoring plan description: Monitor & Maintain all disturbed areas per Gold Book Standards.

Monitoring plan

Success standards: Marathon Oil will monitor all disturbed areas monthly for noxious weeds & erosion through routine inspections. All necessary maintenance will be taken care of promptly.
Pit closure description: N/A

Pit closure attachment:

Section 11 - Surface

Disturbance type: WELL PAD

Describe:

Surface Owner: BUREAU OF LAND MANAGEMENT

Other surface owner description:

BIA Local Office:

BOR Local Office:

COE Local Office:

DOD Local Office:

NPS Local Office:

State Local Office:

Military Local Office:

USFWS Local Office:

Other Local Office:

USFS Region:

USFS Forest/Grassland: **USFS Ranger District:**

Disturbance type: NEW ACCESS ROAD

Describe:

Surface Owner: BUREAU OF LAND MANAGEMENT

Other surface owner description:

BIA Local Office:

BOR Local Office:

COE Local Office:

DOD Local Office:

Operator Name: MARATHON OIL PERMIAN LLC

Well Name: TOPAZ 30 FEDERAL COM **Well Number:** 2H

NPS Local Office:

State Local Office:

Military Local Office:

USFWS Local Office:

Other Local Office:

USFS Region:

USFS Forest/Grassland: **USFS Ranger District:**

Disturbance type: EXISTING ACCESS ROAD

Describe:

Surface Owner: BUREAU OF LAND MANAGEMENT

Other surface owner description:

BIA Local Office:

BOR Local Office:

COE Local Office:

DOD Local Office:

NPS Local Office:

State Local Office:

Military Local Office:

USFWS Local Office:

Other Local Office:

USFS Region:

USFS Forest/Grassland: **USFS Ranger District:**

Disturbance type: OTHER

Describe: CTB

Surface Owner: BUREAU OF LAND MANAGEMENT

Other surface owner description:

BIA Local Office:

Operator Name: MARATHON OIL PERMIAN LLC

Well Name: TOPAZ 30 FEDERAL COM **Well Number:** 2H

BOR Local Office:

COE Local Office:

DOD Local Office:

NPS Local Office:

State Local Office:

Military Local Office:

USFWS Local Office:

Other Local Office:

USFS Region:

USFS Forest/Grassland: **USFS Ranger District:**

Section 12 - Other

Right of Way needed? Y **Use APD as ROW?** Y

ROW Type(s): 281001 ROW - ROADS,285003 ROW – POWER TRANS

ROW

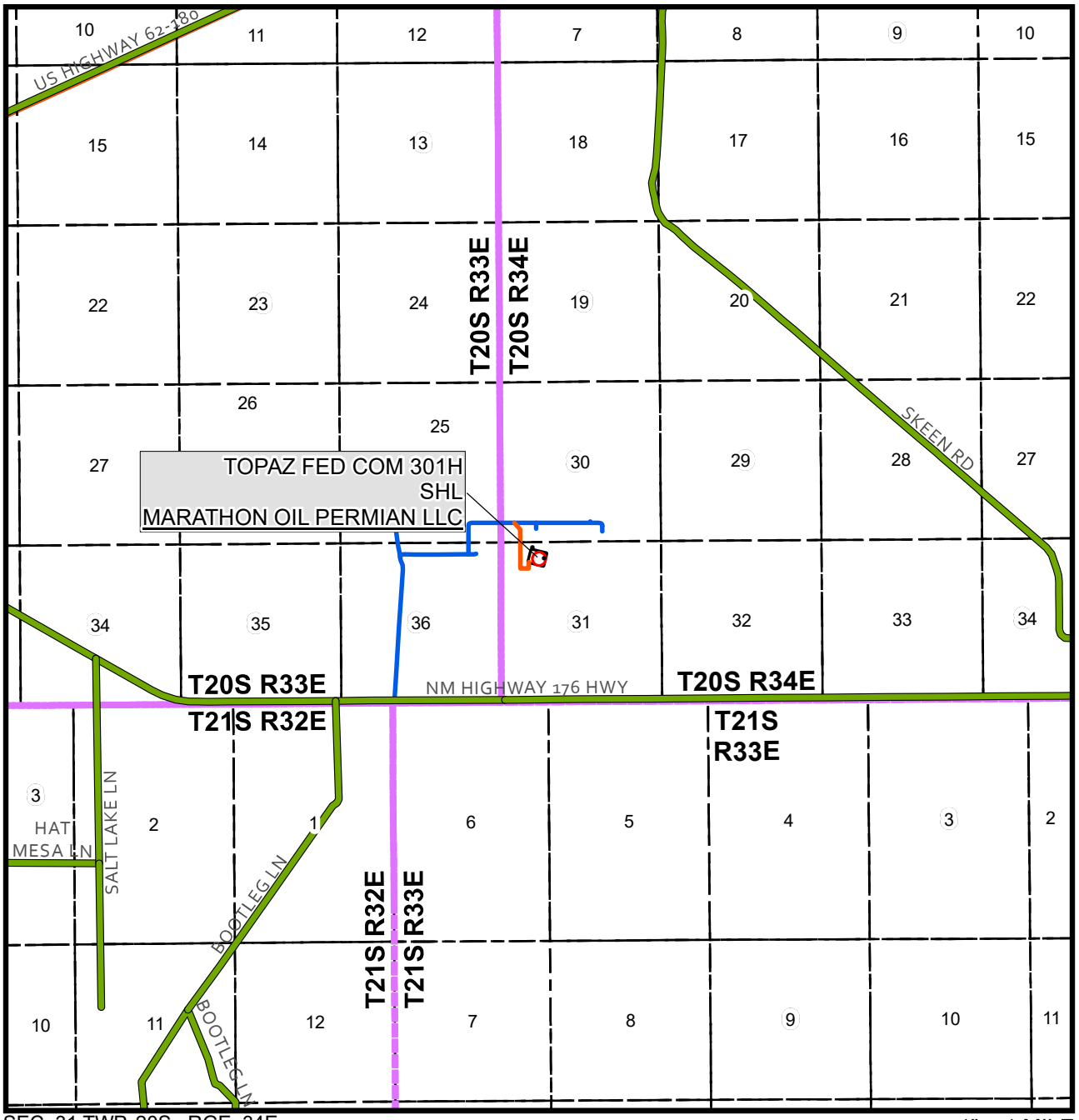
SUPO Additional Information:

Use a previously conducted onsite? Y

Previous Onsite information: Onsite: 10/2/2023 Ben Kartchner, Barry Hunt, Mel Sanjari, Dwaine Moore, & Terri Stathem on location

Other SUPO

VICINITY MAP



SEC. 31 TWP. 20S RGE. 34E
SURVEY: N.M.P.M.
COUNTY: LEA
OPERATOR: MARATHON OIL PERMIAN LLC
DESCRIPTION: 558' FNL & 1252' FWL
ELEVATION: 3693'
LEASE: TOPAZ FED COM
U.S.G.S. TOPOGRAPHIC MAP: LEA, NM.

1" = 1 MILE

FROM THE MARATHON OFFICE AT 4111 TIDWELL ROAD, OTIS, NEW MEXICO HEAD SOUTH ON TIDWELL ROAD TOWARD U.S. HIGHWAY 285 NORTH FOR 0.2 MILES. TURN RIGHT ONTO U.S. HWY 285 NORTH, HEADING NORTH, FOR 2.6 MILES. KEEP RIGHT TO CONTINUE ON SOUTH CANAL STREET FOR 0.1 MILES. SLIGHT RIGHT TO STAY ON S CANAL STREET FOR 0.7 MILES. SLIGHT RIGHT INTO S CANYON STREET FOR 0.7 MILES. TURN RIGHT ONTO U.S. HIGHWAY 62/180 FOR 32.3 MILES. TURN RIGHT ONTO NM HIGHWAY 176 E, HEADING SOUTHEAST, FOR 6.8 MILES TO A CALICHE ROAD. TURN LEFT ONTO CALICHE LEASE ROAD, HEADING NORTH, FOR 0.9 MILES TO A CALICHE ROAD. TURN RIGHT ONTO CALICHE ROAD, HEADING EAST, ON THE NORTH SIDE OF THE FRAC TANK, FOR 0.44 MILES TO A CALICHE ROAD. TURN LEFT ONTO CALICHE ROAD, HEADING NORTH THEN EAST, FOR 0.47 MILES TO THE PROPOSED LEASE ROAD FOR THE TOPAZ 30 FED COM WELL LOCTION PAD. TURN RIGHT ONTO PROPOSED LEASE ROAD, HEADING SOUTH, FOR 0.30 MILES. TURN LEFT, HEADING EAST, AND CONTINUE ON SAID PROPOSED LEASE ROAD, FOR 0.05 MILES. TURN LEFT, HEADING NORTH, CONTINUING ON SAID PROPOSED LEASE ROAD, ENTERING THE SOUTHWEST CORNER OF THE AFORE MENTIONED TOPAZ 30 FED COM WELL LOCTION PAD.

DELTA FIELD SERVICES

SHEET 2 OF 2

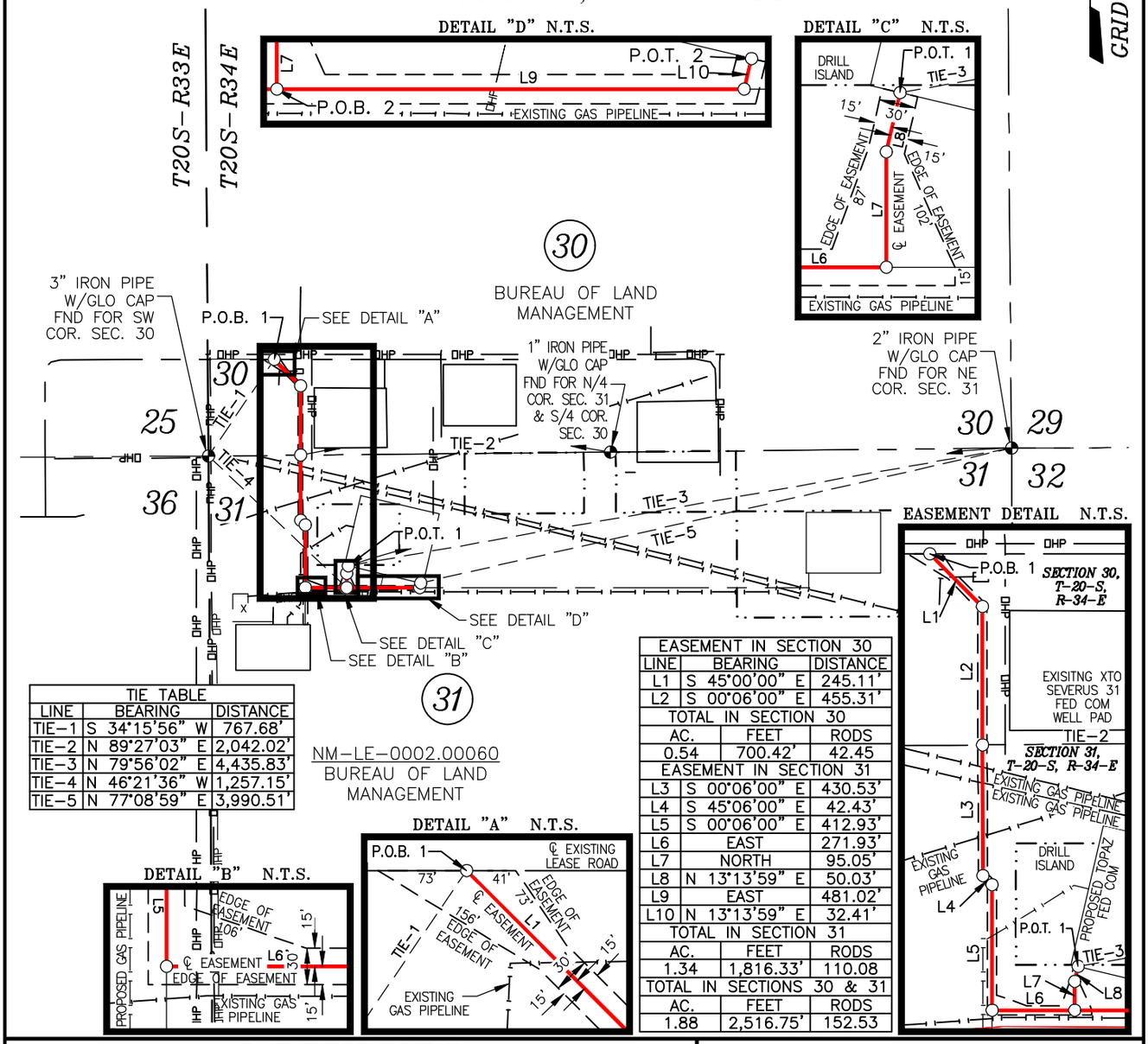
PREPARED BY:
DELTA FIELD SERVICES, LLC
510 TRENTON STREET, WEST MONROE, LA 71291
318-323-6900 OFFICE
JOB No. R3760_002

JOB No. R3760_002
TRACT No. NM-LE-0002.00060

TOPAZ FEDERAL COM
PROPOSED LEASE ROAD EASEMENT
SECTIONS 30 & 31, T-20-S, R-34-E, N.M.P.M., LEA COUNTY, NEW MEXICO

500' 0' 500' 1,000'
SCALE: 1" = 1,000'

N GRID NORTH



TIE TABLE		
LINE	BEARING	DISTANCE
TIE-1	S 34°15'56" W	767.68'
TIE-2	N 89°27'03" E	2,042.02'
TIE-3	N 79°56'02" E	4,435.83'
TIE-4	N 46°21'36" W	1,257.15'
TIE-5	N 77°08'59" E	3,990.51'

EASEMENT IN SECTION 30		
LINE	BEARING	DISTANCE
L1	S 45°00'00" E	245.11'
L2	S 00°06'00" E	455.31'
TOTAL IN SECTION 30		
AC.	FEET	RODS
0.54	700.42'	42.45
EASEMENT IN SECTION 31		
L3	S 00°06'00" E	430.53'
L4	S 45°06'00" E	42.43'
L5	S 00°06'00" E	412.93'
L6	EAST	271.93'
L7	NORTH	95.05'
L8	N 13°13'59" E	50.03'
L9	EAST	481.02'
L10	N 13°13'59" E	32.41'
TOTAL IN SECTION 31		
AC.	FEET	RODS
1.34	1,816.33'	110.08
TOTAL IN SECTIONS 30 & 31		
AC.	FEET	RODS
1.88	2,516.75'	152.53

EASEMENT DESCRIPTION

THE LENGTH OF THE HEREIN DESCRIBED 30 FOOT WIDE PROPOSED LEASE ROAD EASEMENT CROSSING SAID SECTIONS 30 & 31
SECTION 30: BEING 700.42 FEET (42.45 RODS) AND CONTAINS 0.54 ACRE OF LAND;
SECTION 31: BEING 1,816.33 FEET (110.08 RODS) AND CONTAINS 1.34 ACRES OF LAND;
SECTIONS 30 & 31, TOWNSHIP 20 SOUTH, RANGE 34 EAST, NEW MEXICO PRINCIPAL MERIDIAN, LEA COUNTY, NEW MEXICO.

Marathon Oil Permian LLC

CENTERLINE EASEMENT TOTALS AS SHOWN IN PLAN ABOVE

PERMANENT EASEMENT ACREAGE	1.88
CENTERLINE FOOTAGE	2,516.75'
CENTERLINE RODS	152.53

LEGEND

- PERMANENT EASEMENT
- EXISTING WATER LINE
- CENTERLINE OF LEASE ROAD
- FENCE
- PAD LINE
- LOT/QUARTER LINE
- PROPOSED CENTERLINE
- EXISTING PIPELINES
- OVERHEAD POWERLINE
- SURVEY/SECTION LINE
- TOWNSHIP/RANGE LINE
- DRILL ISLAND
- FOUND MONUMENT

STAMP

DECEMBER 14, 2023

DAVID W. MYERS NEW MEXICO 11403 PROFESSIONAL SURVEYOR

DAVID W. MYERS 11403

CERTIFICATION

I, DAVID W. MYERS, NEW MEXICO PROFESSIONAL SURVEYOR NO. 11403, DO HEREBY CERTIFY THAT THIS EASEMENT SURVEY PLAT AND THE ACTUAL SURVEY ON THE GROUND UPON WHICH IT IS BASED WERE PERFORMED BY ME OR UNDER MY DIRECT SUPERVISION; THAT I AM RESPONSIBLE FOR THIS SURVEY; THAT THIS SURVEY MEETS THE MINIMUM STANDARDS FOR SURVEYING IN NEW MEXICO; AND THAT IT IS TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF. I FURTHER CERTIFY THAT THIS SURVEY IS NOT A LAND DIVISION OR SUBDIVISION AS DEFINED IN THE NEW MEXICO SUBDIVISION ACT AND THAT THIS INSTRUMENT IS AN EASEMENT SURVEY PLAT CROSSING AN EXISTING TRACT OR TRACTS.

NOTES

BASIS OF BEARING

ALL BEARINGS AND COORDINATES REFER TO NAD 83, NEW MEXICO STATE PLANE COORDINATE SYSTEM, EAST ZONE, U.S. SURVEY FEET. (ALL BEARINGS, DISTANCES, COORDINATES AND AREAS ARE GRID MEASUREMENTS UTILIZING A COMBINED SCALE FACTOR OF 0.999789804 AND A CONVERGENCE ANGLE OF 0.390032294°.)

PLAT FOR A PROPOSED LEASE ROAD EASEMENT CROSSING THE PROPERTY OF

BUREAU OF LAND MANAGEMENT

LEA COUNTY, NEW MEXICO

DATE SURVEYED: 10/11/2023

REV.	DATE	DESCRIPTION	BY	CHKD
2	12/01/2023	ADDED SECOND ROAD TO PAD	TCS	MWS

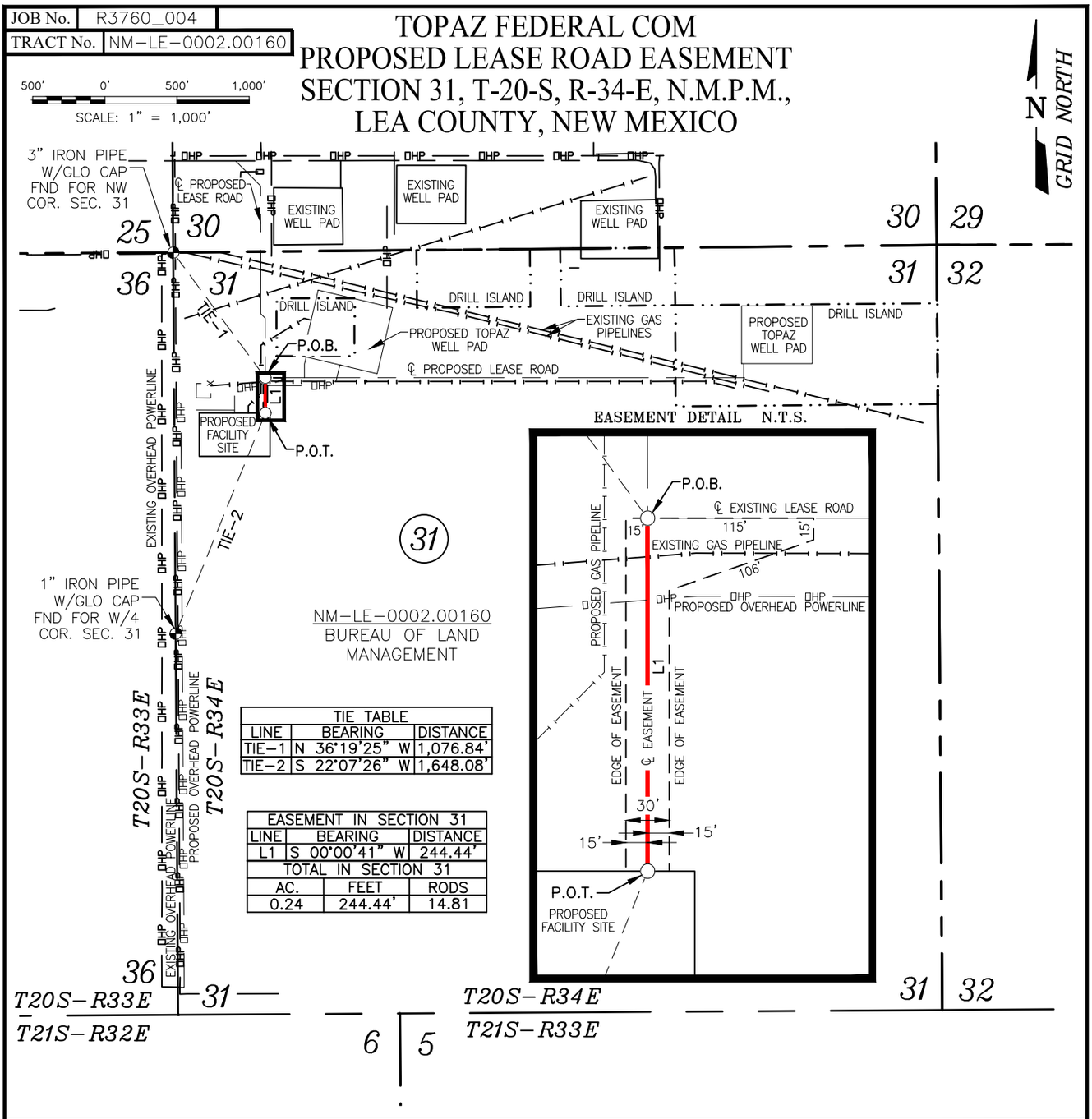
SHEET 1 OF 1
DRAWN BY: BFF
DATE DRAWN: 04/10/2019
CHECKED BY: MWS

DELTA FIELD SERVICES, LLC
510 TRENTON STREET
WEST MONROE, LA 71291
(318) 323-6900

JOB No. R3760_004
TRACT No. NM-LE-0002.00160

TOPAZ FEDERAL COM
PROPOSED LEASE ROAD EASEMENT
SECTION 31, T-20-S, R-34-E, N.M.P.M.,
LEA COUNTY, NEW MEXICO

500' 0' 500' 1,000'
SCALE: 1" = 1,000'



EASEMENT DETAIL N.T.S.

TIE TABLE		
LINE	BEARING	DISTANCE
TIE-1	N 36°19'25" W	1,076.84'
TIE-2	S 22°07'26" W	1,648.08'

EASEMENT IN SECTION 31		
LINE	BEARING	DISTANCE
L1	S 00°00'41" W	244.44'
TOTAL IN SECTION 31		
AC.	FEET	RODS
0.24	244.44'	14.81

EASEMENT DESCRIPTION

THE LENGTH OF THE HEREIN DESCRIBED 30 FOOT WIDE PROPOSED LEASE ROAD EASEMENT CROSSING SAID SECTION 31
BEING 244.44 FEET (14.81 RODS) AND CONTAINS 0.24 ACRE OF LAND;
SECTION 31, TOWNSHIP 20 SOUTH, RANGE 34 EAST, NEW MEXICO PRINCIPAL MERIDIAN,
LEA COUNTY, NEW MEXICO.

Marathon Oil Permian LLC

CENTERLINE EASEMENT TOTALS AS SHOWN IN PLAN ABOVE	
PERMANENT EASEMENT ACREAGE	0.24
CENTERLINE FOOTAGE	244.44'
CENTERLINE RODS	14.81

LEGEND

- PERMANENT EASEMENT
- EXISTING WATER LINE
- CENTERLINE OF LEASE ROAD
- FENCE
- PAD LINE
- LOT/QUARTER LINE
- PROPOSED CENTERLINE
- EXISTING PIPELINES
- OVERHEAD POWERLINE
- SURVEY/SECTION LINE
- TOWNSHIP/RANGE LINE
- DRILL ISLAND
- FOUND MONUMENT

STAMP

DAVID W. MYERS NEW MEXICO 11403 PROFESSIONAL SURVEYOR

DECEMBER 15, 2023

DAVID W. MYERS 11403

CERTIFICATION

I, DAVID W. MYERS, NEW MEXICO PROFESSIONAL SURVEYOR NO. 11403, DO HEREBY CERTIFY THAT THIS EASEMENT SURVEY PLAT AND THE ACTUAL SURVEY ON THE GROUND UPON WHICH IT IS BASED WERE PERFORMED BY ME OR UNDER MY DIRECT SUPERVISION; THAT I AM RESPONSIBLE FOR THIS SURVEY; THAT THIS SURVEY MEETS THE MINIMUM STANDARDS FOR SURVEYING IN NEW MEXICO; AND THAT IT IS TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF. I FURTHER CERTIFY THAT THIS SURVEY IS NOT A LAND DIVISION OR SUBDIVISION AS DEFINED IN THE NEW MEXICO SUBDIVISION ACT AND THAT THIS INSTRUMENT IS AN EASEMENT SURVEY PLAT CROSSING AN EXISTING TRACT OR TRACTS.

NOTES

BASIS OF BEARING

ALL BEARINGS AND COORDINATES REFER TO NAD 83, NEW MEXICO STATE PLANE COORDINATE SYSTEM, EAST ZONE, U.S. SURVEY FEET. (ALL BEARINGS, DISTANCES, COORDINATES AND AREAS ARE GRID MEASUREMENTS UTILIZING A COMBINED SCALE FACTOR OF 0.999789804 AND A CONVERGENCE ANGLE OF 0.390032294°.)

PLAT FOR A PROPOSED LEASE ROAD EASEMENT
CROSSING THE PROPERTY OF

BUREAU OF LAND MANAGEMENT

LEA COUNTY, NEW MEXICO

DATE SURVEYED: 10/11/2023

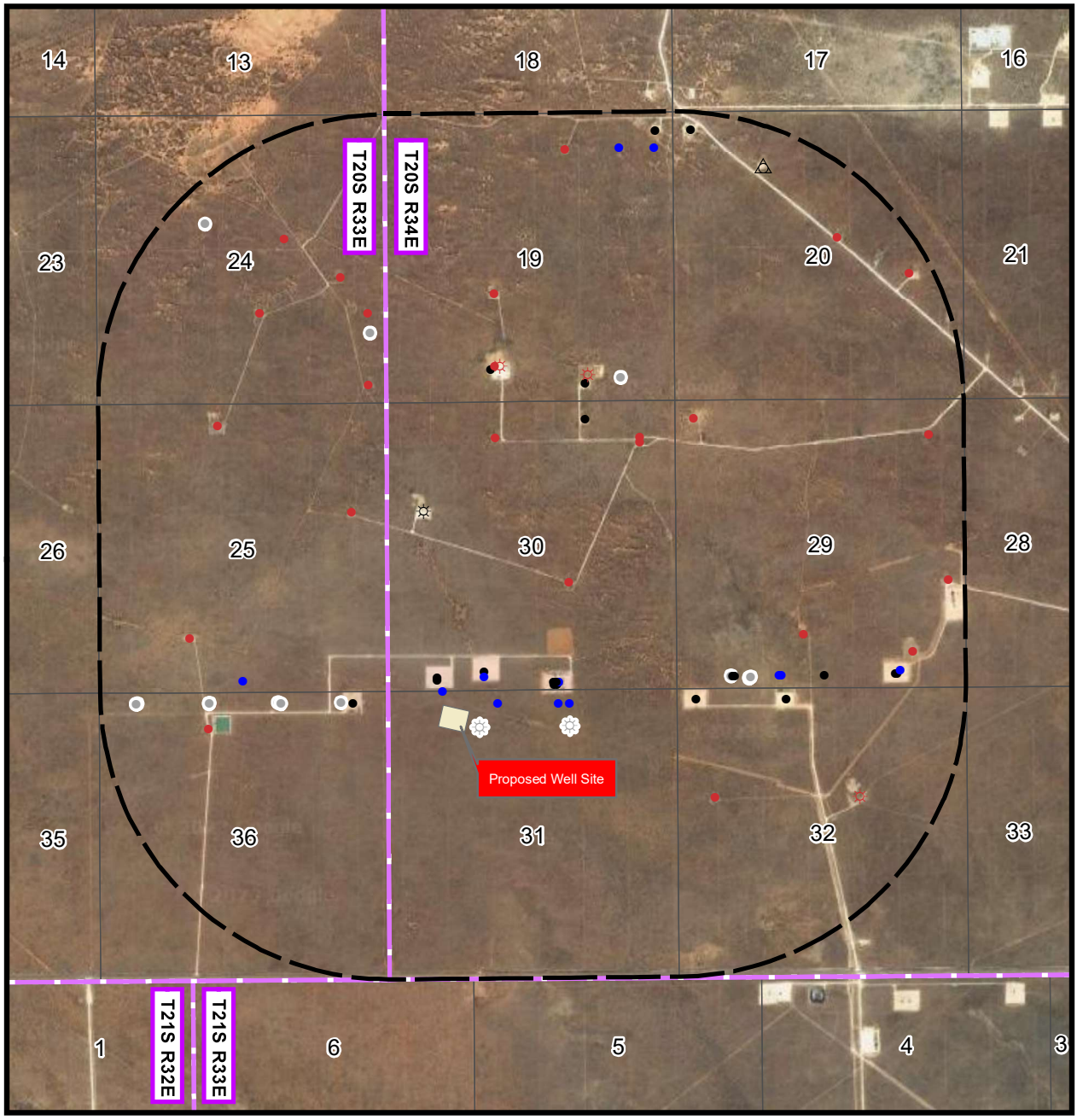
REV.	DATE	DESCRIPTION	BY	CHKD
1	11/01/2023	RE-ROUTE	DEF	MWS

SHEET 1 OF 1
DRAWN BY: ANC
DATE DRAWN: 04/18/2019
CHECKED BY: MWS

DELTA FIELD SERVICES, LLC
510 TRENTON STREET
WEST MONROE, LA 71291
(318) 323-6900

ONE-MILE RADIUS MAP

TOPAZ FED COM
SEC. 31 TWP. 20-S, RGE. 34-E
SURVEY: N.M.P.M.
COUNTY: LEA
OPERATOR: MARATHON OIL PERMIAN LLC
U.S.G.S. TOPOGRAPHIC MAP: LEA, NM.



REV 3 SPT 10/27/2023

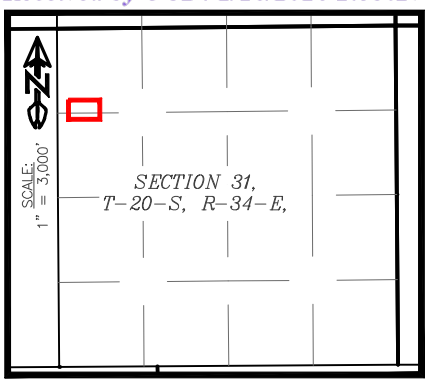
1 " = 3,000 '

WELL_PAD	Gas, Active	Oil, Active	Oil, Plugged
1_MILE	Gas, Cancelled	Oil, Cancelled	Salt Water Injection, Active
TWNRNG	Gas, Plugged	Oil, New	
SECTIONS			

DELTA FIELD SERVICES

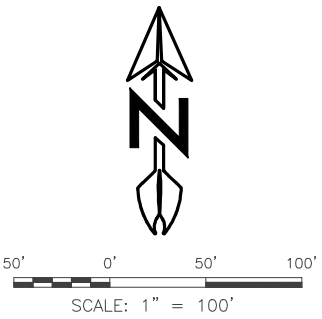
SHEET 1 OF 5

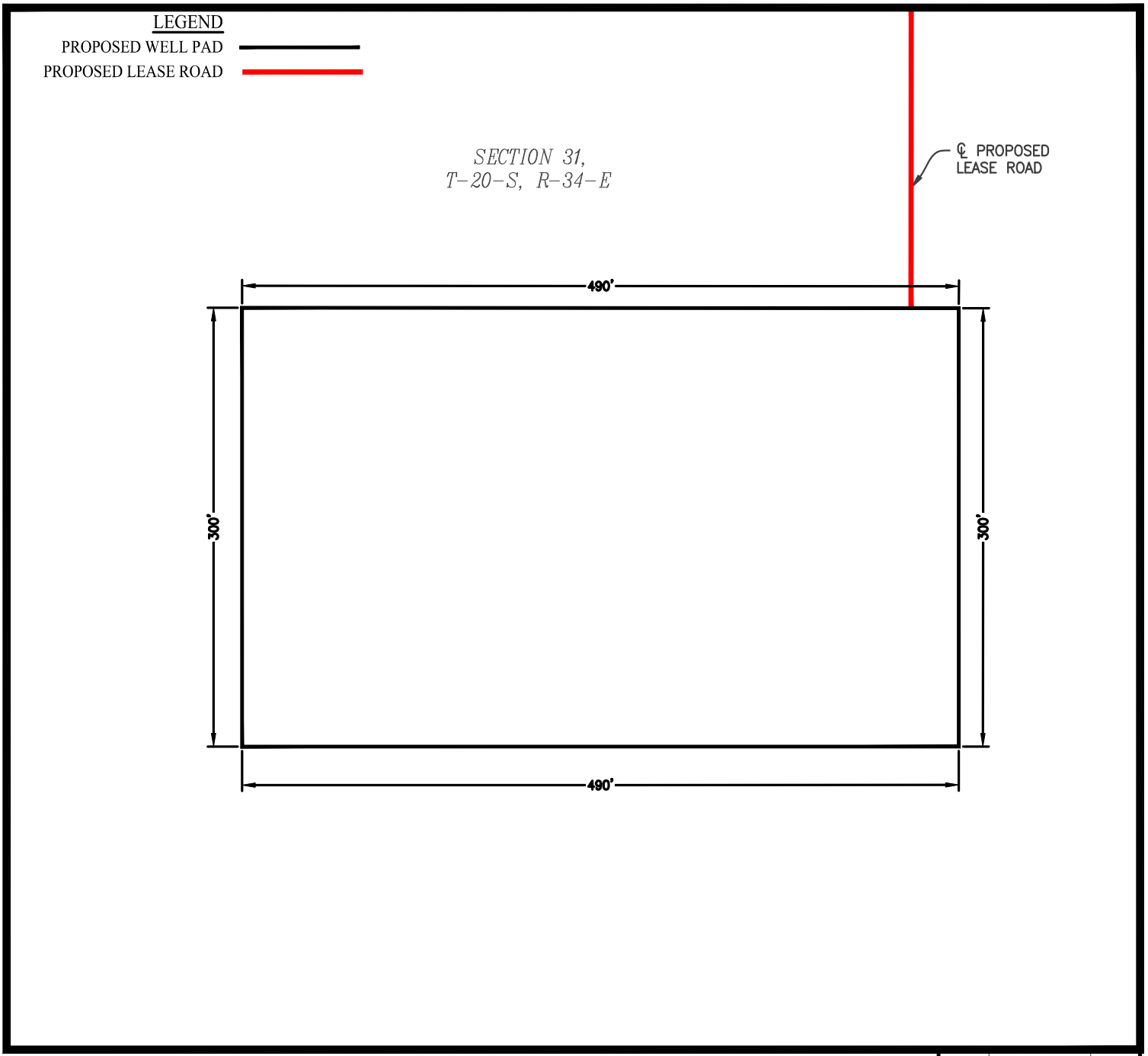
PREPARED BY:
DELTA FIELD SERVICES, LLC
510 TRENTON STREET, WEST MONROE, LA 71291
318-323-6900 OFFICE
JOB No. R3760_002



FACILITY LAYOUT

TOPAZ FED COM
SEC. 31, TWP. 20-S, RGE. 34-E
SURVEY: N.M.P.M.
COUNTY: LEA
OPERATOR: MARATHON OIL PERMIAN LLC
U.S.G.S. TOPOGRAPHIC MAP: LEA, N.M.





REV.	DATE	BY
3	10/27/2023	DEF

NOTE:
THIS IS NOT A BOUNDARY SURVEY, APPARENT PROPERTY CORNERS AND PROPERTY LINES ARE SHOWN FOR INFORMATION ONLY. BOUNDARY DATA SHOWN IS FROM STATE OF NEW MEXICO OIL CONSERVATION DIVISION FORM C-102 INCLUDED IN THIS SUBMITTAL.

SHEET 5 OF 5

PREPARED BY:
DELTA FIELD SERVICES, LLC
510 TRENTON ST.
WEST MONROE, LA 71291
318-323-6900 OFFICE
JOB No. R3760_002

JOB No.	R3760_006
TRACT No.	NM-LE-0002.00000

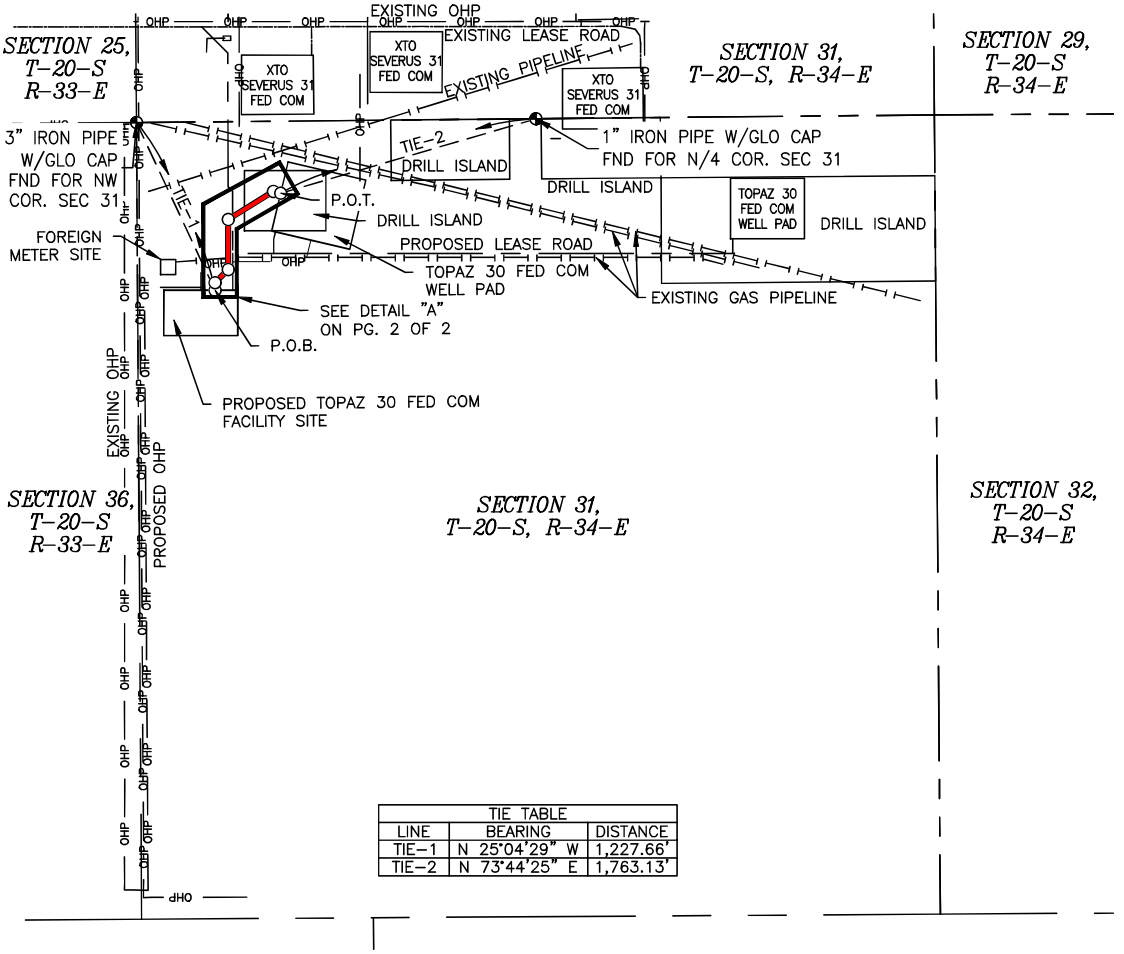
TOPAZ 30 FED COM

Flowline Plat

SECTION 31, T-20-S, R-34-E, N.M.P.M.,
LEA COUNTY, NEW MEXICO

500' 0' 500' 1000'
SCALE: 1" = 1000'

N GRID NORTH



TIE TABLE		
LINE	BEARING	DISTANCE
TIE-1	N 25°04'29" W	1,227.66'
TIE-2	N 73°44'25" E	1,763.13'

EASEMENT DESCRIPTION

THE LENGTH OF THE HEREIN DESCRIBED 30 FOOT WIDE PROPOSED PIPELINE EASEMENT CROSSING SAID SECTION 31; BEING 908.02 FEET (55.03 RODS) AND CONTAINING 0.63 ACRE OF LAND; SECTION 31, TOWNSHIP 20 SOUTH, RANGE 34 EAST, NEW MEXICO PRINCIPAL MERIDIAN, LEA COUNTY, NEW MEXICO.

CENTERLINE EASEMENT TOTALS AS SHOWN IN PLAN ABOVE

PERMANENT EASEMENT ACREAGE	0.63
CENTERLINE FOOTAGE	908.02'
CENTERLINE RODS	55.03

STAMP

DECEMBER 15, 2023

DAVID W. MYERS NEW MEXICO 11403 PROFESSIONAL SURVEYOR

DAVID W. MYERS 11403

CERTIFICATION

I, DAVID W. MYERS NEW MEXICO PROFESSIONAL SURVEYOR NO. 11403, DO HEREBY CERTIFY THAT THIS EASEMENT SURVEY PLAT AND THE ACTUAL SURVEY ON THE GROUND UPON WHICH IT IS BASED WERE PERFORMED BY ME OR UNDER MY DIRECT SUPERVISION; THAT I AM RESPONSIBLE FOR THIS SURVEY; THAT THIS SURVEY MEETS THE MINIMUM STANDARDS FOR SURVEYING IN NEW MEXICO; AND THAT IT IS TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF. I FURTHER CERTIFY THAT THIS SURVEY IS NOT A LAND DIVISION OR SUBDIVISION AS DEFINED IN THE NEW MEXICO SUBDIVISION ACT AND THAT THIS INSTRUMENT IS AN EASEMENT SURVEY PLAT CROSSING AN EXISTING TRACT OR TRACTS.

NOTES

BASIS OF BEARING

ALL BEARINGS AND COORDINATES REFER TO NAD 83, NEW MEXICO STATE PLANE COORDINATE SYSTEM, EAST ZONE, U.S. SURVEY FEET. (ALL BEARINGS, DISTANCES, COORDINATES AND AREAS ARE GRID MEASUREMENTS UTILIZING A COMBINED SCALE FACTOR OF 0.99978980 AND A CONVERGENCE ANGLE OF 0.39003229.)

Marathon Oil Permian LLC

LEGEND

- PERMANENT EASEMENT
- W W W — EXISTING WATERLINE
- CENTERLINE OF LEASE ROAD
- x x x — FENCE
- PAD LINE
- DRAINAGE DITCH
- PROPOSED CENTERLINE
- EXISTING PIPELINES
- OHP OHP — OVERHEAD POWERLINE
- SURVEY/SECTION LINE
- FOUND MONUMENT

PLAT FOR A PROPOSED GAS PIPELINE EASEMENT
CROSSING THE PROPERTY OF

BUREAU OF LAND MANAGEMENT

LEA COUNTY, NEW MEXICO

DATE SURVEYED: 10/16/2023

REV.	DATE	DESCRIPTION	BY	CHKD
1	10/31/2023	ROUTE CHANGE	TCS	MWS

SHEET 1 OF 2
DRAWN BY: TCS
DATE DRAWN: 10/30/2023
CHECKED BY: MWS

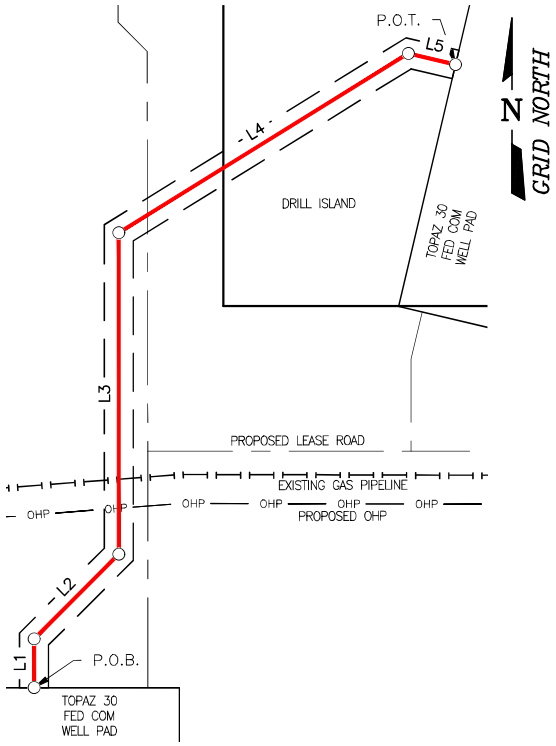
E-ENGINEERING & SURVEYING, LLC
510 TRENTON ST.
WEST MONROE, LA 71291
(318) 323-6900
FAX (318) 362-0064

JOB No.	R3760_006
TRACT No.	NM-LE-0002.00000

TOPAZ 30 FED COM

SECTION 31, T-20-S, R-34-E, N.M.P.M., LEA COUNTY, NEW MEXICO

DETAIL "A" N.T.S.



TOPAZ 30 FED COM PIPELINE EASEMENT		
LINE	BEARING	DISTANCE
SECTION 31		
L1	NORTH	50.20'
L2	N 45°00'00" E	123.84'
L3	NORTH	332.13'
L4	N 58°13'59" E	351.85'
L5	S 76°46'01" E	50.00'
SECTION TOTAL		
0.63 ACRE	908.02 FEET	55.03 RODS

Marathon Oil Permian LLC

STAMP

DECEMBER 15, 2023

DAVID W. MYERS NEW MEXICO 11403 PROFESSIONAL SURVEYOR

DAVID W. MYERS 11403

CERTIFICATION

I, DAVID W. MYERS NEW MEXICO PROFESSIONAL SURVEYOR NO. 11403, DO HEREBY CERTIFY THAT THIS EASEMENT SURVEY PLAT AND THE ACTUAL SURVEY ON THE GROUND UPON WHICH IT IS BASED WERE PERFORMED BY ME OR UNDER MY DIRECT SUPERVISION; THAT I AM RESPONSIBLE FOR THIS SURVEY; THAT THIS SURVEY MEETS THE MINIMUM STANDARDS FOR SURVEYING IN NEW MEXICO; AND THAT IT IS TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF. I FURTHER CERTIFY THAT THIS SURVEY IS NOT A LAND DIVISION OR SUBDIVISION AS DEFINED IN THE NEW MEXICO SUBDIVISION ACT AND THAT THIS INSTRUMENT IS AN EASEMENT SURVEY PLAT CROSSING AN EXISTING TRACT OR TRACTS.

NOTES

BASIS OF BEARING

ALL BEARINGS AND COORDINATES REFER TO NAD 83, NEW MEXICO STATE PLANE COORDINATE SYSTEM, EAST ZONE, U.S. SURVEY FEET. (ALL BEARINGS, DISTANCES, COORDINATES AND AREAS ARE GRID MEASUREMENTS UTILIZING A COMBINED SCALE FACTOR OF 0.99978980 AND A CONVERGENCE ANGLE OF 0.39003229.)

LEGEND

- PERMANENT EASEMENT
- W W W — EXISTING WATERLINE
- CENTERLINE OF LEASE ROAD
- x x x — FENCE
- PAD LINE
- DRAINAGE DITCH
- PROPOSED CENTERLINE
- EXISTING PIPELINES
- OHP OHP — OVERHEAD POWERLINE
- SURVEY/SECTION LINE
- FOUND MONUMENT

PLAT FOR A PROPOSED GAS PIPELINE EASEMENT CROSSING THE PROPERTY OF

BUREAU OF LAND MANAGEMENT

LEA COUNTY, NEW MEXICO

DATE SURVEYED: 10/16/2023

REV.	DATE	DESCRIPTION	BY	CHKD
1	10/31/2023	ROUTE CHANGE	TCS	MWS

SHEET 2 OF 2

DRAWN BY: TCS

DATE DRAWN: 10/30/2023

CHECKED BY: MWS

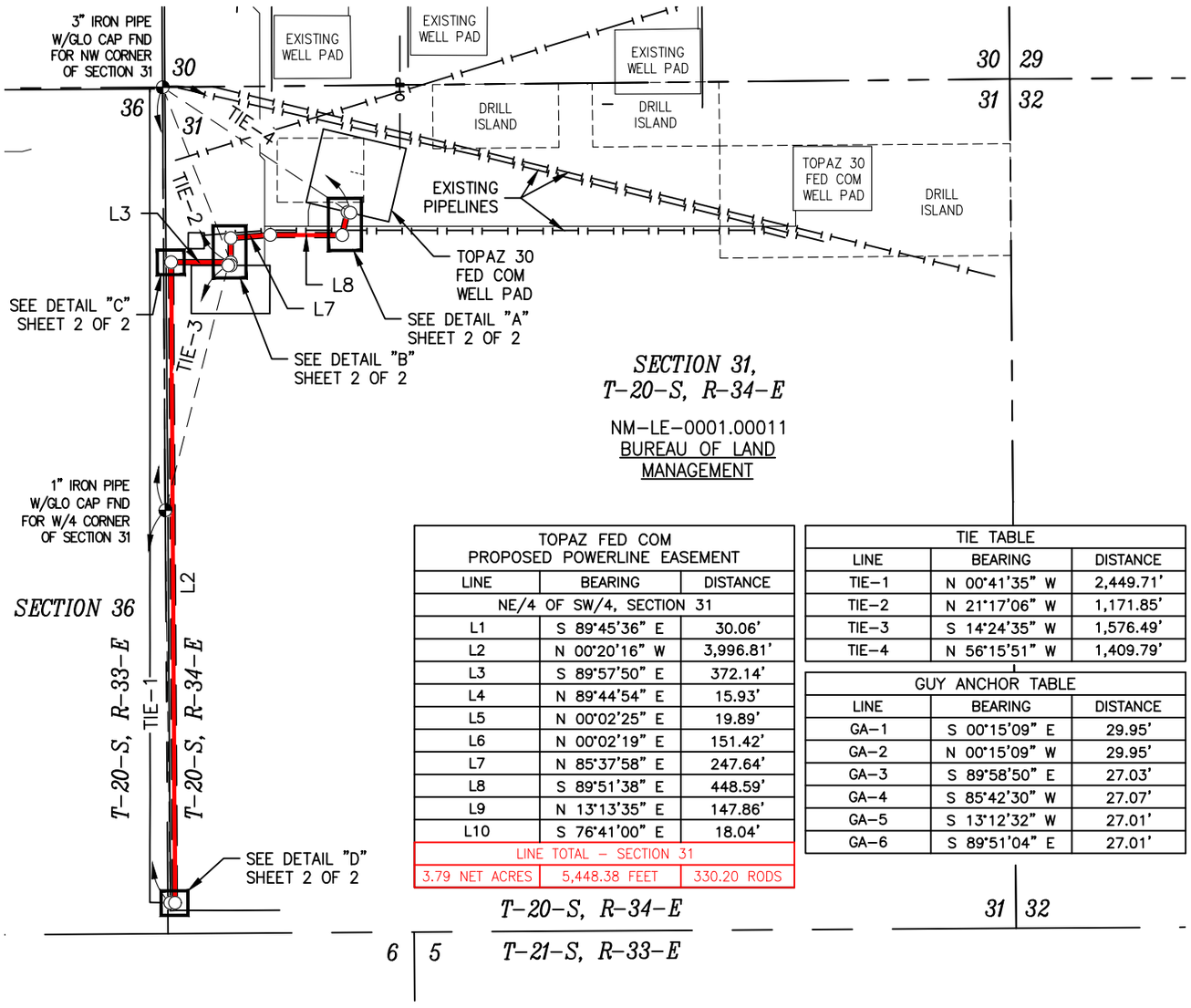
510 TRENTON ST.
WEST MONROE, LA 71291
(318) 323-6900
FAX (318) 362-0064

JOB No.	R3760_005
TRACT No.	NM-LE-0001.00011

TOPAZ FED COM
PROPOSED OVERHEAD POWERLINE EASEMENT
SECTION 31, T-20-S, R-34-E, N.M.P.M.,
LEA COUNTY, NEW MEXICO

N GRID NORTH

500' 0' 500' 1000'
SCALE: 1" = 1000'



TOPAZ FED COM PROPOSED POWERLINE EASEMENT		
LINE	BEARING	DISTANCE
NE/4 OF SW/4, SECTION 31		
L1	S 89°45'36" E	30.06'
L2	N 00°20'16" W	3,996.81'
L3	S 89°57'50" E	372.14'
L4	N 89°44'54" E	15.93'
L5	N 00°02'25" E	19.89'
L6	N 00°02'19" E	151.42'
L7	N 85°37'58" E	247.64'
L8	S 89°51'38" E	448.59'
L9	N 13°13'35" E	147.86'
L10	S 76°41'00" E	18.04'
LINE TOTAL – SECTION 31		
3.79 NET ACRES	5,448.38 FEET	330.20 RODS

TIE TABLE		
LINE	BEARING	DISTANCE
TIE-1	N 00°41'35" W	2,449.71'
TIE-2	N 21°17'06" W	1,171.85'
TIE-3	S 14°24'35" W	1,576.49'
TIE-4	N 56°15'51" W	1,409.79'

GUY ANCHOR TABLE		
LINE	BEARING	DISTANCE
GA-1	S 00°15'09" E	29.95'
GA-2	N 00°15'09" W	29.95'
GA-3	S 89°58'50" E	27.03'
GA-4	S 85°42'30" W	27.07'
GA-5	S 13°12'32" W	27.01'
GA-6	S 89°51'04" E	27.01'

EASEMENT DESCRIPTION

THE LENGTH OF THE HEREIN DESCRIBED 30 FOOT WIDE PROPOSED OVERHEAD POWERLINE EASEMENT CROSSING SAID SECTION 31; BEING 5,448.38 FEET (330.20 RODS) AND CONTAINING 3.79 NET ACRES OF LAND; SECTION 31, TOWNSHIP 20 SOUTH, RANGE 34 EAST, NEW MEXICO PRINCIPAL MERIDIAN, LEA COUNTY, NEW MEXICO.

Marathon Oil Permian LLC

CENTERLINE EASEMENT TOTALS AS SHOWN IN PLAN ABOVE

PERMANENT EASEMENT NET ACREAGE	3.79
CENTERLINE FOOTAGE	5,448.38'
CENTERLINE RODS	330.20

LEGEND

- PERMANENT EASEMENT
- W W W — EXISTING WATERLINE
- CENTERLINE OF LEASE ROAD
- x x x — FENCE
- PAD LINE
- . . . — DRAINAGE DITCH
- PROPOSED CENTERLINE
- EXISTING PIPELINES
- OHP OHP — OVERHEAD POWERLINE
- SURVEY/SECTION LINE
- FOUND MONUMENT

STAMP

DECEMBER 15, 2023

DAVID W. MYERS NEW MEXICO 11403 PROFESSIONAL SURVEYOR

DAVID W. MYERS 11403

CERTIFICATION

I, DAVID W. MYERS NEW MEXICO PROFESSIONAL SURVEYOR NO. 11403, DO HEREBY CERTIFY THAT THIS EASEMENT SURVEY PLAT AND THE ACTUAL SURVEY ON THE GROUND UPON WHICH IT IS BASED WERE PERFORMED BY ME OR UNDER MY DIRECT SUPERVISION; THAT I AM RESPONSIBLE FOR THIS SURVEY; THAT THIS SURVEY MEETS THE MINIMUM STANDARDS FOR SURVEYING IN NEW MEXICO; AND THAT IT IS TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF. I FURTHER CERTIFY THAT THIS SURVEY IS NOT A LAND DIVISION OR SUBDIVISION AS DEFINED IN THE NEW MEXICO SUBDIVISION ACT AND THAT THIS INSTRUMENT IS AN EASEMENT SURVEY PLAT CROSSING AN EXISTING TRACT OR TRACTS.

PLAT FOR A PROPOSED POWERLINE EASEMENT CROSSING THE PROPERTY OF

BUREAU OF LAND MANAGEMENT

LEA COUNTY, NEW MEXICO

DATE SURVEYED: 10/16/2023

NOTES

BASIS OF BEARING

ALL BEARINGS AND COORDINATES REFER TO NAD 83, NEW MEXICO STATE PLANE COORDINATE SYSTEM, EAST ZONE, U.S. SURVEY FEET. (ALL BEARINGS, DISTANCES, COORDINATES AND AREAS ARE GRID MEASUREMENTS UTILIZING A COMBINED SCALE FACTOR OF 0.999789804 AND A CONVERGENCE ANGLE OF 0.390032294°.)

REV.	DATE	DESCRIPTION	BY	CHKD

SHEET 1 OF 2
DRAWN BY: JCS
DATE DRAWN: 11/01/2023
CHECKED BY: MWS

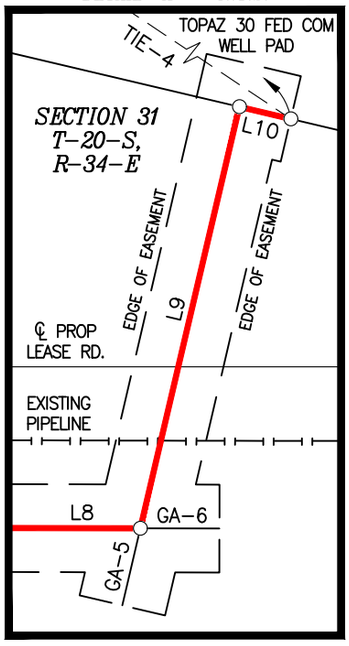
DELTA FIELD SERVICES
510 TRENTON ST.
WEST MONROE, LA 71291
(318) 323-6900

JOB No.	R3760_005
TRACT No.	NM-LE-0001.00011

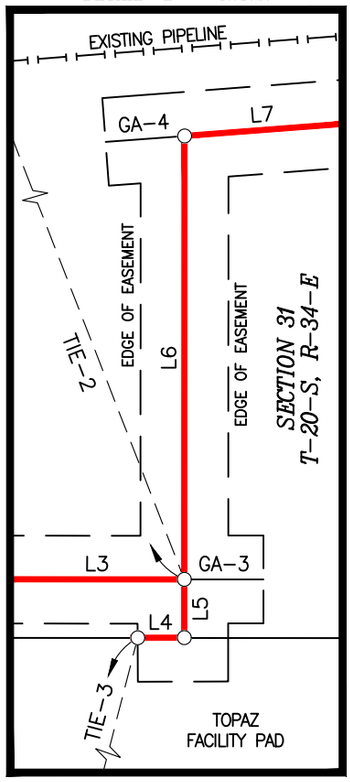
TOPAZ FED COM
PROPOSED OVERHEAD POWERLINE EASEMENT
SECTION 31, T-20-S, R-34-E, N.M.P.M.,
LEA COUNTY, NEW MEXICO

N GRID NORTH

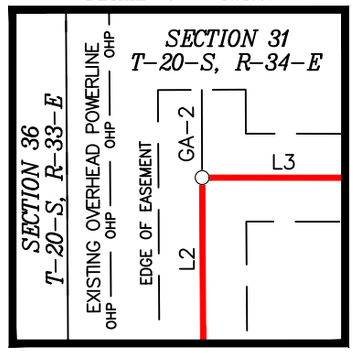
DETAIL "A" ~ N.T.S.



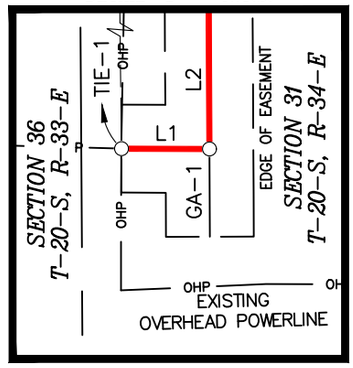
DETAIL "B" ~ N.T.S.



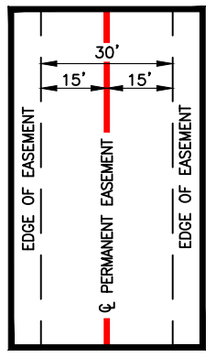
DETAIL "C" ~ N.T.S.



DETAIL "D" ~ N.T.S.



TYPICAL DETAIL N.T.S.



Marathon Oil Permian LLC

STAMP

DECEMBER 15, 2023

DAVID W. MYERS NEW MEXICO 11403 PROFESSIONAL SURVEYOR

DAVID W. MYERS 11403

LEGEND

— — — — —	PERMANENT EASEMENT
W W W	EXISTING WATERLINE
— — —	CENTERLINE OF LEASE ROAD
x x x	FENCE
	PAD LINE
. . .	DRAINAGE DITCH
	PROPOSED CENTERLINE
	EXISTING PIPELINES
OHP OHP	OVERHEAD POWERLINE
— — —	SURVEY/SECTION LINE
◒	FOUND MONUMENT

CERTIFICATION

I, DAVID W. MYERS NEW MEXICO PROFESSIONAL SURVEYOR NO. 11403, DO HEREBY CERTIFY THAT THIS EASEMENT SURVEY PLAT AND THE ACTUAL SURVEY ON THE GROUND UPON WHICH IT IS BASED WERE PERFORMED BY ME OR UNDER MY DIRECT SUPERVISION; THAT I AM RESPONSIBLE FOR THIS SURVEY; THAT THIS SURVEY MEETS THE MINIMUM STANDARDS FOR SURVEYING IN NEW MEXICO; AND THAT IT IS TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF. I FURTHER CERTIFY THAT THIS SURVEY IS NOT A LAND DIVISION OR SUBDIVISION AS DEFINED IN THE NEW MEXICO SUBDIVISION ACT AND THAT THIS INSTRUMENT IS AN EASEMENT SURVEY PLAT CROSSING AN EXISTING TRACT OR TRACTS.

PLAT FOR A PROPOSED POWERLINE EASEMENT
CROSSING THE PROPERTY OF

BUREAU OF LAND MANAGEMENT

LEA COUNTY, NEW MEXICO

DATE SURVEYED: 10/16/2023

NOTES

BASIS OF BEARING

ALL BEARINGS AND COORDINATES REFER TO NAD 83, NEW MEXICO STATE PLANE COORDINATE SYSTEM, EAST ZONE, U.S. SURVEY FEET. (ALL BEARINGS, DISTANCES, COORDINATES AND AREAS ARE GRID MEASUREMENTS UTILIZING A COMBINED SCALE FACTOR OF 0.999789804 AND A CONVERGENCE ANGLE OF 0.390032294°.)

REV.	DATE	DESCRIPTION	BY	CHKD

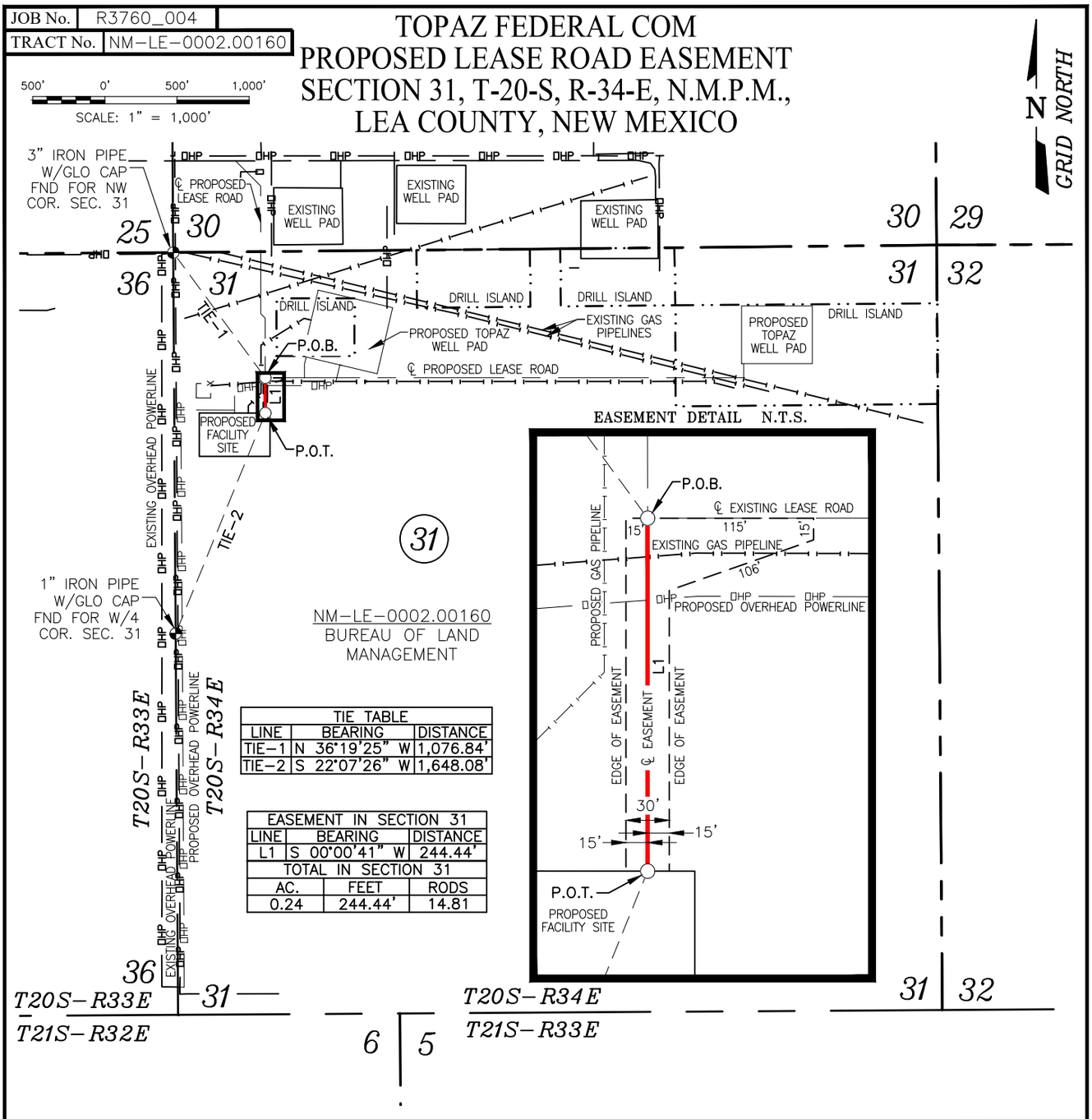
SHEET 2 OF 2	
DRAWN BY: JCS	
DATE DRAWN: 11/01/2023	
CHECKED BY: MWS	

510 TRENTON ST.
WEST MONROE, LA 71291
(318) 323-6900

JOB No. R3760_004
TRACT No. NM-LE-0002.00160

TOPAZ FEDERAL COM
PROPOSED LEASE ROAD EASEMENT
SECTION 31, T-20-S, R-34-E, N.M.P.M.,
LEA COUNTY, NEW MEXICO

500' 0' 500' 1,000'
SCALE: 1" = 1,000'



EASEMENT DETAIL N.T.S.

TIE TABLE		
LINE	BEARING	DISTANCE
TIE-1	N 36°19'25" W	1,076.84'
TIE-2	S 22°07'26" W	1,648.08'

EASEMENT IN SECTION 31		
LINE	BEARING	DISTANCE
L1	S 00°00'41" W	244.44'
TOTAL IN SECTION 31		
AC.	FEET	RODS
0.24	244.44'	14.81

EASEMENT DESCRIPTION

THE LENGTH OF THE HEREIN DESCRIBED 30 FOOT WIDE PROPOSED LEASE ROAD EASEMENT CROSSING SAID SECTION 31
BEING 244.44 FEET (14.81 RODS) AND CONTAINS 0.24 ACRE OF LAND;
SECTION 31, TOWNSHIP 20 SOUTH, RANGE 34 EAST, NEW MEXICO PRINCIPAL MERIDIAN,
LEA COUNTY, NEW MEXICO.

Marathon Oil Permian LLC

CENTERLINE EASEMENT TOTALS AS SHOWN IN PLAN ABOVE	
PERMANENT EASEMENT ACREAGE	0.24
CENTERLINE FOOTAGE	244.44'
CENTERLINE RODS	14.81

LEGEND

- PERMANENT EASEMENT
- EXISTING WATER LINE
- CENTERLINE OF LEASE ROAD
- FENCE
- PAD LINE
- LOT/QUARTER LINE
- PROPOSED CENTERLINE
- EXISTING PIPELINES
- OVERHEAD POWERLINE
- SURVEY/SECTION LINE
- TOWNSHIP/RANGE LINE
- DRILL ISLAND
- FOUND MONUMENT

STAMP

DECEMBER 15, 2023

DAVID W. MYERS NEW MEXICO 11403 PROFESSIONAL SURVEYOR

DAVID W. MYERS 11403

CERTIFICATION

I, DAVID W. MYERS, NEW MEXICO PROFESSIONAL SURVEYOR NO. 11403, DO HEREBY CERTIFY THAT THIS EASEMENT SURVEY PLAT AND THE ACTUAL SURVEY ON THE GROUND UPON WHICH IT IS BASED WERE PERFORMED BY ME OR UNDER MY DIRECT SUPERVISION; THAT I AM RESPONSIBLE FOR THIS SURVEY; THAT THIS SURVEY MEETS THE MINIMUM STANDARDS FOR SURVEYING IN NEW MEXICO; AND THAT IT IS TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF. I FURTHER CERTIFY THAT THIS SURVEY IS NOT A LAND DIVISION OR SUBDIVISION AS DEFINED IN THE NEW MEXICO SUBDIVISION ACT AND THAT THIS INSTRUMENT IS AN EASEMENT SURVEY PLAT CROSSING AN EXISTING TRACT OR TRACTS.

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PLAT FOR A PROPOSED LEASE ROAD EASEMENT
CROSSING THE PROPERTY OF

BUREAU OF LAND MANAGEMENT

LEA COUNTY, NEW MEXICO

DATE SURVEYED: 10/11/2023

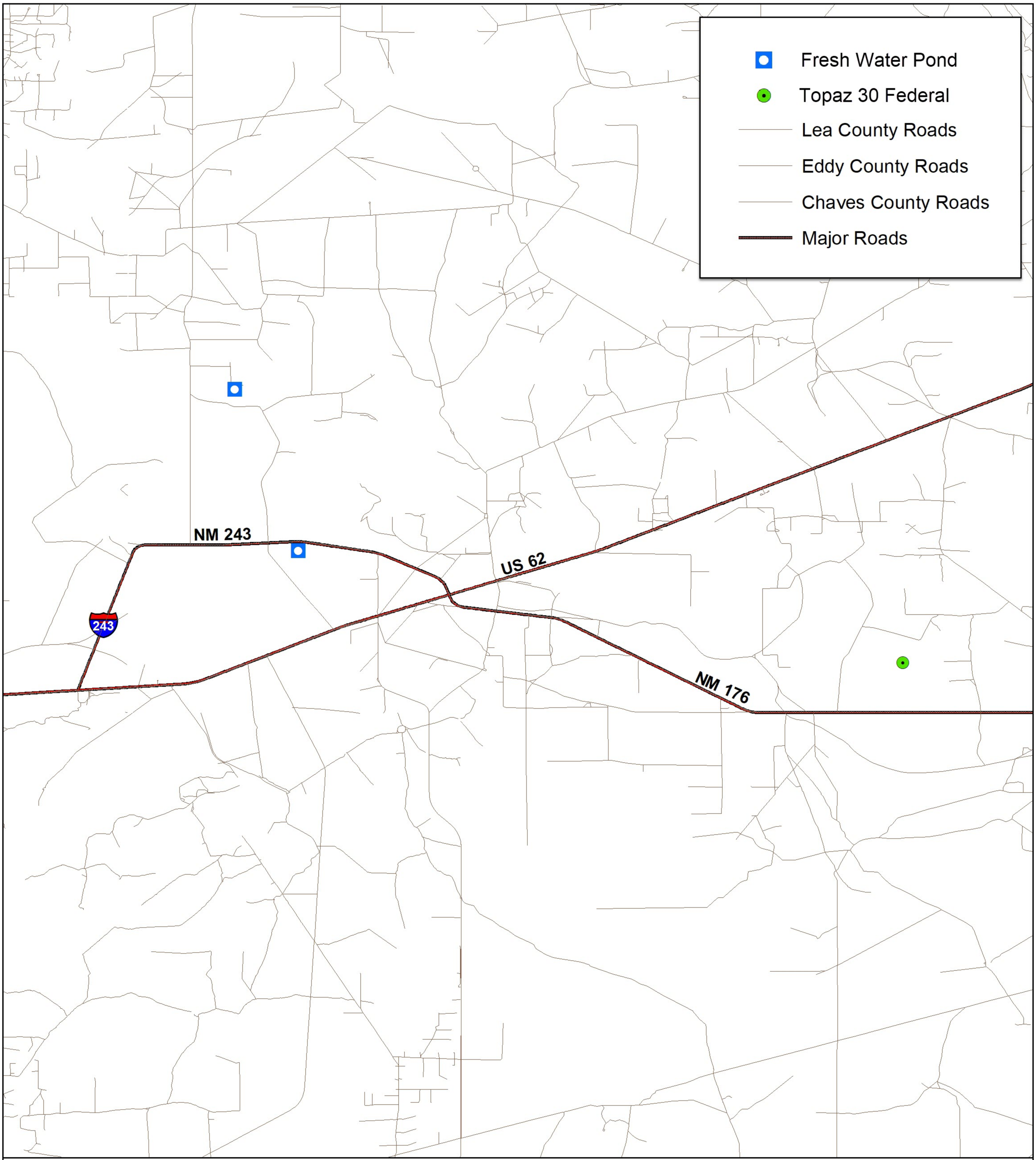
REV.	DATE	DESCRIPTION	BY	CHKD
1	11/01/2023	RE-ROUTE	DEF	MWS

SHEET 1 OF 1
DRAWN BY: ANC
DATE DRAWN: 04/18/2019
CHECKED BY: MWS

DELTA FIELD SERVICES, LLC
510 TRENTON STREET
WEST MONROE, LA 71291
(318) 323-6900

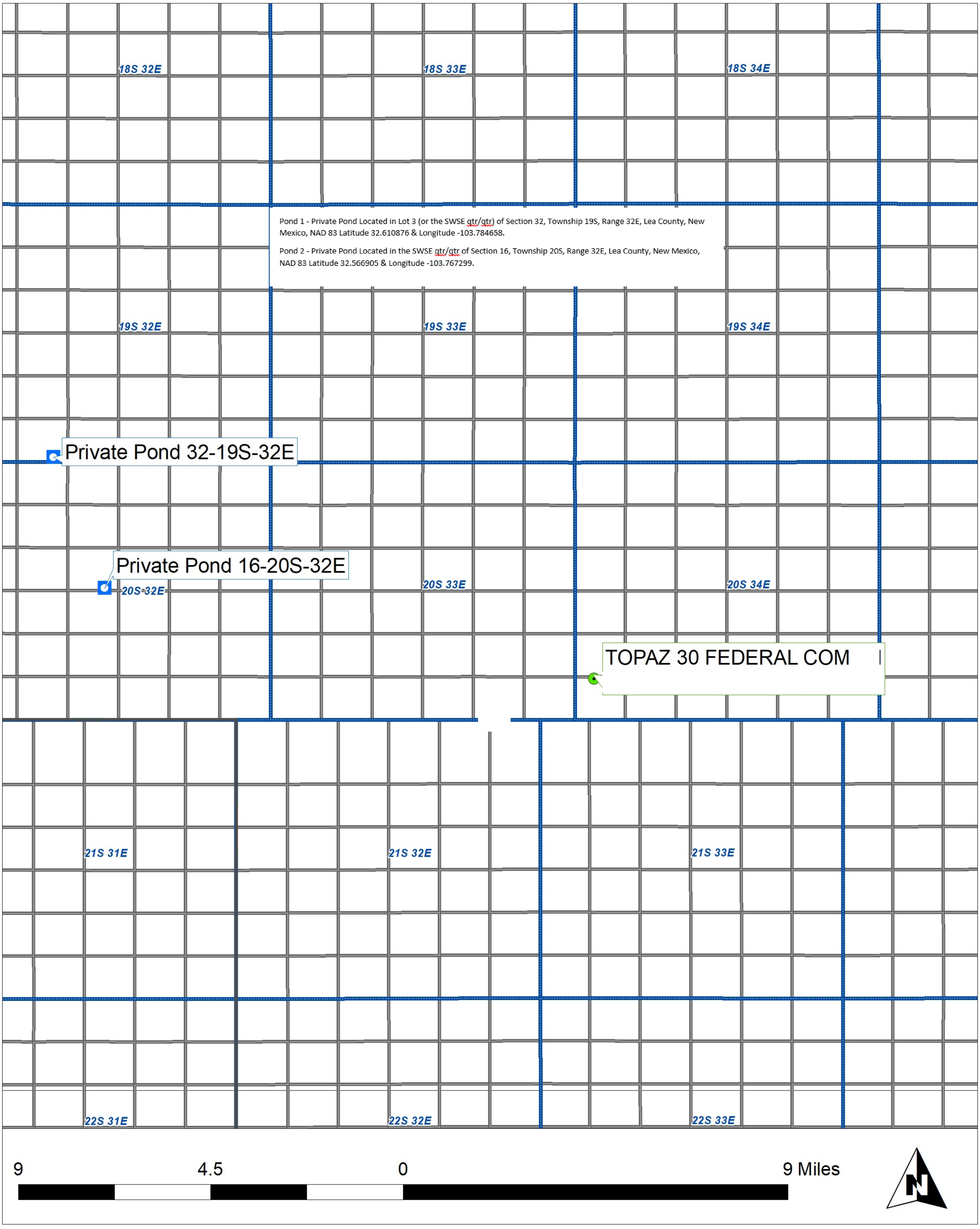
LOCATION & TYPES OF WATER SUPPLY

MARATHON OIL PERMIAN, LLC.
TOPAZ 30 FEDERAL COM
SEC. 31 TWP. 20S RNG. 34E
LEA COUNTY, NEW MEXICO



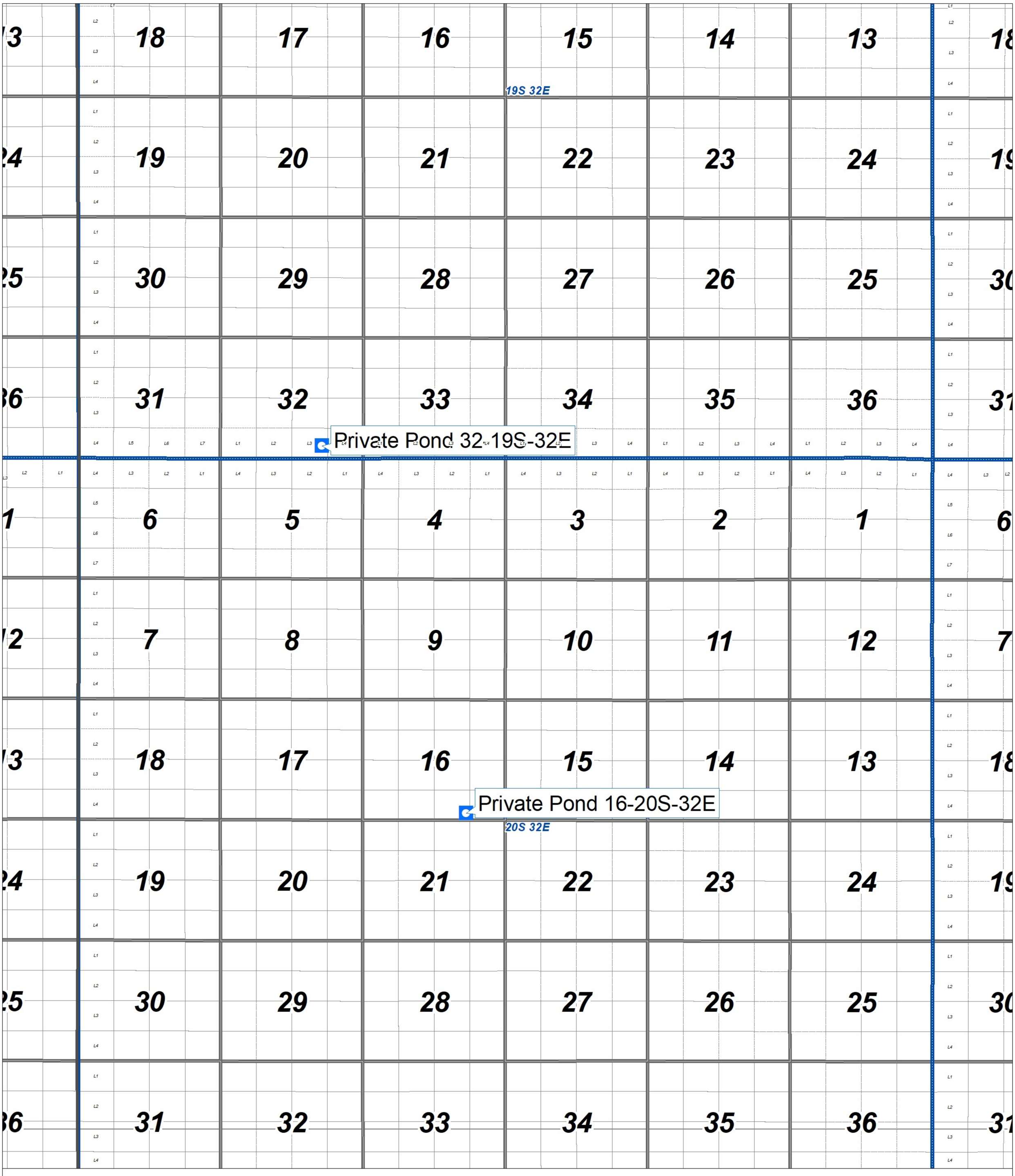
LOCATION & TYPES OF WATER SUPPLY

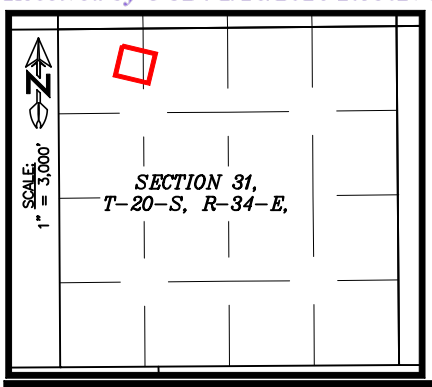
MARATHON OIL PERMIAN, LLC.
TOPAZ 30 FEDERAL COM
SEC. 31 TWP. 20S RNG. 34E
LEA COUNTY, NEW MEXICO



LOCATION & TYPES OF WATER SUPPLY

MARATHON OIL PERMIAN, LLC.
TOPAZ 30 FEDERAL COM
SEC. 31 TWP. 20S RNG. 34E
LEA COUNTY, NEW MEXICO





WELL PAD LOCATION PLAT

TOPAZ FED COM
SEC. 31, TWP. 20-S, RGE. 34-E
SURVEY: N.M.P.M.
COUNTY: LEA
OPERATOR: MARATHON OIL PERMIAN LLC
U.S.G.S. TOPOGRAPHIC MAP: LEA, N.M.

N

75' 0' 75' 150'
SCALE: 1" = 150'

PROPOSED PAD		
LINE	BEARING	DISTANCE
L1	S 76°46'01" E	530.00'
L2	S 13°13'59" W	470.00'
L3	N 76°46'01" W	530.00'
L4	N 13°13'59" E	470.00'

TIE TABLE		
TIE	BEARING	DISTANCE
TIE-1	N 75°27'16" W	1,037.75'
TIE-2	N 70°08'31" E	1,199.15'

NAD 83		
A	E:(X)765813.43 N:(Y)559537.25	LAT:32.53611632 LON:-103.60492762
B	E:(X)766329.36 N:(Y)559415.93	LAT:32.53577314 LON:-103.60325629
C	E:(X)766221.77 N:(Y)558958.41	LAT:32.53451765 LON:-103.60361556
D	E:(X)765705.84 N:(Y)559079.73	LAT:32.53486082 LON:-103.60528686

NAD 27		
A	E:(X)724632.24 N:(Y)559475.17	LAT:32.53599340 LON:-103.60443718
B	E:(X)725148.16 N:(Y)559353.85	LAT:32.53565023 LON:-103.60276592
C	E:(X)725040.56 N:(Y)558896.35	LAT:32.53439474 LON:-103.60312521
D	E:(X)724524.64 N:(Y)559017.67	LAT:32.53473791 LON:-103.60479646

EXISTING GAS PIPELINE
TIE-1
3" IRON PIPE W/GLO CAP FND FOR NW COR. OF SEC. 31
100'
100'
A
3691.4'
P.O.B. DRILL ISLAND
730'
ARCH LIMITS
EXISTING GAS PIPELINE
EXISTING GAS PIPELINE
530'
1" IRON PIPE W/GLO CAP FND FOR N/4 COR. OF SEC. 31
L1
100'
B
TIE-2
3693.5'
100'
220'
670'
470'
L4
190'
30' DISTANCE BETWEEN WELLS
100H
601H
501H
701H
301H
220'
L2
470'
670'
PROPOSED GAS PIPELINE
TOTAL WELL PAD AREA = 5.72 ACRES
250'
3695.7'
100'
D
L3
100'
℄ PROPOSED LEASE ROAD
℄ PROPOSED LEASE ROAD
530'
OHP
3696.1'
C
100'
℄ PROPOSED LEASE ROAD
℄ PROPOSED LEASE ROAD
EXISTING GAS PIPELINE
OHP
OHP
OHP
730'
PROPOSED OVERHEAD POWERLINE
100'

SECTION 31,
T-20-S, R-34-E

4	02/27/2024	ANC
REV.	DATE	BY

NOTE:
THIS IS NOT A BOUNDARY SURVEY, APPARENT PROPERTY CORNERS AND PROPERTY LINES ARE SHOWN FOR INFORMATION ONLY. BOUNDARY DATA SHOWN IS FROM STATE OF NEW MEXICO OIL CONSERVATION DIVISION FORM C-102 INCLUDED IN THIS SUBMITTAL.

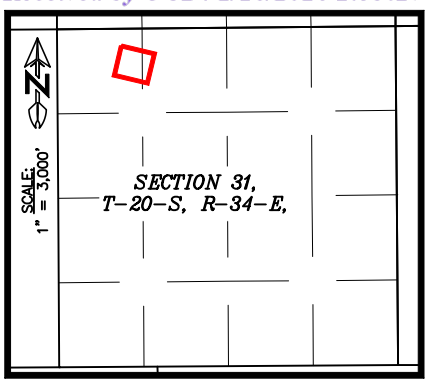
I, DAVID W. MYERS, NEW MEXICO PROFESSIONAL SURVEYOR NO. 11403, DO HEREBY CERTIFY THAT THIS EASEMENT SURVEY PLAT AND THE ACTUAL SURVEY ON THE GROUND UPON WHICH IT IS BASED WERE PERFORMED BY ME OR UNDER MY DIRECT SUPERVISION; THAT I AM RESPONSIBLE FOR THIS SURVEY; THAT THIS SURVEY MEETS THE MINIMUM STANDARDS FOR SURVEYING IN NEW MEXICO; AND THAT IT IS TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF. I FUTHER CERTIFY THAT THIS SURVEY IS NOT A LAND DIVISION OR SUBDIVISION AS DEFINED IN THE NEW MEXICO SUBDIVISION ACT AND THAT THIS INSTRUMENT IS AN EASEMENT SURVEY PLAT CROSSING AN EXISTING TRACT OR TRACTS.

DAVID W. MYERS NEW MEXICO 11403 PROFESSIONAL SURVEYOR

FEBRUARY 27, 2024

SHEET 2 OF 5

PREPARED BY:
DELTA FIELD SERVICES, LLC
510 TRENTON ST.
WEST MONROE, LA 71291
318-323-6900 OFFICE
JOB No. R3760_002



WELL LOCATION PLAT

TOPAZ FED COM
SEC. 31, TWP. 20-S, RGE. 34-E
SURVEY: N.M.P.M.
COUNTY: LEA
OPERATOR: MARATHON OIL PERMIAN LLC
U.S.G.S. TOPOGRAPHIC MAP: LEA, N.M.

TOPAZ FED COM 601H
MARATHON OIL PERMIAN LLC
536' FNL 1165' FWL, SECTION 31
NAD 83, SPCS NM EAST
X: 765977.23' / Y: 559272.74'
LAT: 32.53538619N / LON: 103.60440202W
NAD 27, SPCS NM EAST
X: 724796.03' / Y: 559210.67'
LAT: 32.53526329N / LON: 103.60391163W
ELEVATION = 3,692'

TOPAZ FED COM 501H
MARATHON OIL PERMIAN LLC
543' FNL 1194' FWL, SECTION 31
NAD 83, SPCS NM EAST
X: 766006.43' / Y: 559265.87'
LAT: 32.53536677N / LON: 103.60430742W
NAD 27, SPCS NM EAST
X: 724825.23' / Y: 559203.80'
LAT: 32.53524386N / LON: 103.60381703W
ELEVATION = 3,693'

TOPAZ FED COM 701H
MARATHON OIL PERMIAN LLC
551' FNL 1223' FWL, SECTION 31
NAD 83, SPCS NM EAST
X: 766035.63' / Y: 559259.00'
LAT: 32.53534734N / LON: 103.60421281W
NAD 27, SPCS NM EAST
X: 724854.43' / Y: 559196.93'
LAT: 32.53522444N / LON: 103.60372243W
ELEVATION = 3,692'

TOPAZ FED COM 301H
MARATHON OIL PERMIAN LLC
558' FNL 1252' FWL, SECTION 31
NAD 83, SPCS NM EAST
X: 766064.84' / Y: 559252.13'
LAT: 32.53532792N / LON: 103.60411821W
NAD 27, SPCS NM EAST
X: 724883.64' / Y: 559190.06'
LAT: 32.53520501N / LON: 103.60362783W
ELEVATION = 3,693'

TOPAZ FED COM 100H
MARATHON OIL PERMIAN LLC
529' FNL 1136' FWL, SECTION 31
NAD 83, SPCS NM EAST
X: 765948.02' / Y: 559279.60'
LAT: 32.53540561N / LON: 103.60449663W
NAD 27, SPCS NM EAST
X: 724766.82' / Y: 559217.53'
LAT: 32.53528270N / LON: 103.60400624W
ELEVATION = 3,692'

DAVID W. MYERS
NEW MEXICO
11403
PROFESSIONAL SURVEYOR

FEBRUARY 27, 2024

DAVID W. MYERS 11403

NOTE:
THIS IS NOT A BOUNDARY SURVEY, APPARENT PROPERTY CORNERS AND PROPERTY LINES ARE SHOWN FOR INFORMATION ONLY. BOUNDARY DATA SHOWN IS FROM STATE OF NEW MEXICO OIL CONSERVATION DIVISION FORM C-102 INCLUDED IN THIS SUBMITTAL.

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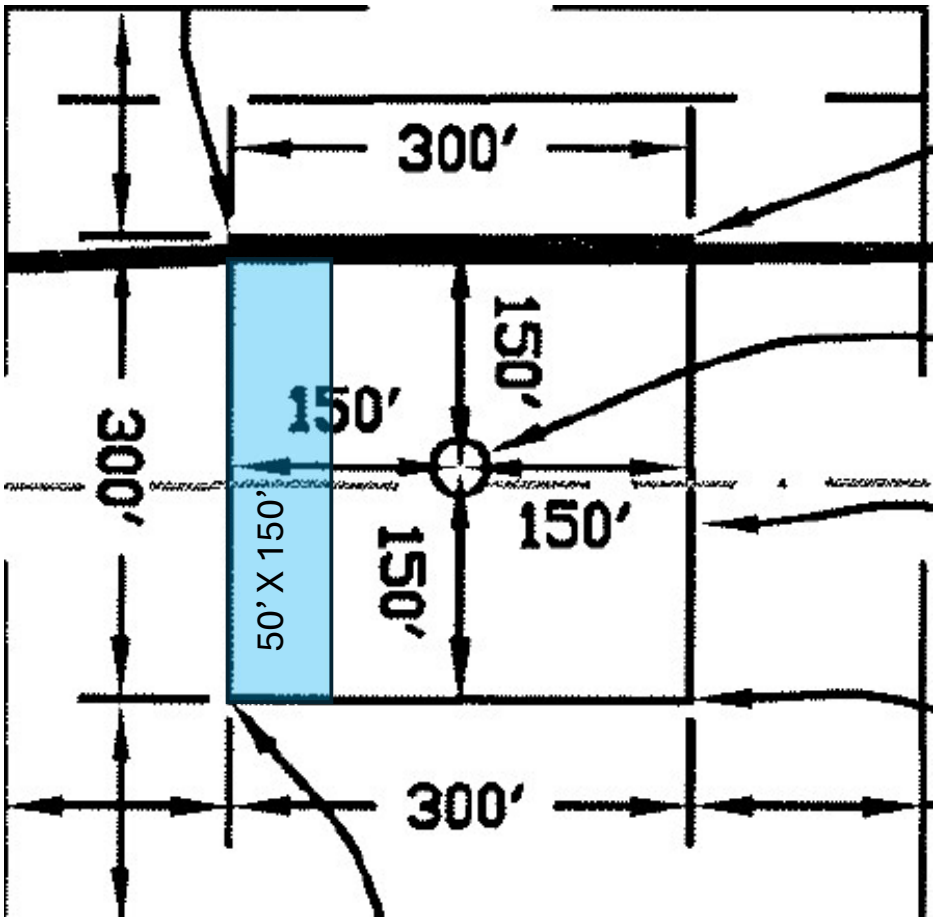
PREPARED BY:
DELTA FIELD SERVICES, LLC
510 TRENTON ST.
WEST MONROE, LA 71291
318-323-6900 OFFICE
JOB No. R3760_002

Interim Reclamation



Topaz 30 Federal Com 2H

AFMSS
U.S. Department of the Interior
BUREAU OF LAND MANAGEMENT

PWD Data Report
08/04/2025

APD ID: 10400081220 **Submission Date:** 10/26/2021

Operator Name: MARATHON OIL PERMIAN LLC

Well Name: TOPAZ 30 FEDERAL COM **Well Number:** 2H

Well Type: OIL WELL **Well Work Type:** Drill

Section 1 - General

Would you like to address long-term produced water disposal? NO

Section 2 - Lined

Would you like to utilize Lined Pit PWD options? N

Produced Water Disposal (PWD) Location:

PWD surface owner: **PWD disturbance (acres):**

Other PWD Surface Owner Description:

Lined pit PWD on or off channel:

Lined pit PWD discharge volume (bbl/day):

Lined pit

Pit liner description:

Pit liner manufacturers

Precipitated solids disposal:

Decribe precipitated solids disposal:

Precipitated solids disposal

Lined pit precipitated solids disposal schedule:

Lined pit precipitated solids disposal schedule

Lined pit reclamation description:

Lined pit reclamation

Leak detection system description:

Leak detection system

Operator Name: MARATHON OIL PERMIAN LLC

Well Name: TOPAZ 30 FEDERAL COM **Well Number:** 2H

Lined pit Monitor description:

Lined pit Monitor

Lined pit: do you have a reclamation bond for the pit?

Is the reclamation bond a rider under the BLM bond?

Lined pit bond number:

Lined pit bond amount:

Additional bond information

Section 3 - Unlined

Would you like to utilize Unlined Pit PWD options? N

Produced Water Disposal (PWD) Location:

PWD disturbance (acres): **PWD surface owner:**

Other PWD Surface Owner Description:

Unlined pit PWD on or off channel:

Unlined pit PWD discharge volume (bbl/day):

Unlined pit

Precipitated solids disposal:

Decribe precipitated solids disposal:

Precipitated solids disposal

Unlined pit precipitated solids disposal schedule:

Unlined pit precipitated solids disposal schedule

Unlined pit reclamation description:

Unlined pit reclamation

Unlined pit Monitor description:

Unlined pit Monitor

Do you propose to put the produced water to beneficial use?

Beneficial use user

Estimated depth of the shallowest aquifer (feet):

Precipitated Solids Permit

Does the produced water have an annual average Total Dissolved Solids (TDS) concentration equal to or less than that of the existing water to be protected?

TDS lab results:

Geologic and hydrologic

Operator Name: MARATHON OIL PERMIAN LLC

Well Name: TOPAZ 30 FEDERAL COM **Well Number:** 2H

State

Unlined Produced Water Pit Estimated

Unlined pit: do you have a reclamation bond for the pit?

Is the reclamation bond a rider under the BLM bond?

Unlined pit bond number:

Unlined pit bond amount:

Additional bond information

Section 4 -

Would you like to utilize Injection PWD options? N

Produced Water Disposal (PWD) Location:

PWD surface owner: **PWD disturbance (acres):**

Other PWD Surface Owner Description:

Injection PWD discharge volume (bbl/day):

Injection well mineral owner:

Injection well type:

Injection well number: **Injection well name:**

Assigned injection well API number? **Injection well API number:**

Injection well new surface disturbance (acres):

Minerals protection information:

Mineral protection

Underground Injection Control (UIC) Permit?

UIC Permit

Section 5 - Surface

Would you like to utilize Surface Discharge PWD options? N

Produced Water Disposal (PWD) Location:

PWD surface owner: **PWD disturbance (acres):**

Other PWD Surface Owner Description :

Surface discharge PWD discharge volume (bbl/day):

Surface Discharge NPDES Permit?

Surface Discharge NPDES Permit attachment:

Surface Discharge site facilities information:

Surface discharge site facilities map:

Operator Name: MARATHON OIL PERMIAN LLC

Well Name: TOPAZ 30 FEDERAL COM **Well Number:** 2H

Section 6 -

Would you like to utilize Other PWD options? N

Produced Water Disposal (PWD) Location:

PWD surface owner: **PWD disturbance (acres):**

PWD Surface Owner Description:

Other PWD discharge volume (bbl/day):

Other PWD type description:

Other PWD type

Have other regulatory requirements been met?

Other regulatory requirements

AFMSS

U.S. Department of the Interior
BUREAU OF LAND MANAGEMENT

Bond Info Data

08/04/2025

APD ID: 10400081220

Submission Date: 10/26/2021

Operator Name: MARATHON OIL PERMIAN LLC

Well Name: TOPAZ 30 FEDERAL COM

Well Number: 2H

Well Type: OIL WELL

Well Work Type: Drill

Highlighted data reflects the most recent changes

Show Final Text

Bond

Federal/Indian APD: FED

BLM Bond number: NMB001555

BIA Bond number:

Do you have a reclamation bond? NO

Is the reclamation bond a rider under the BLM bond?

Is the reclamation bond BLM or Forest Service?

BLM reclamation bond number:

Forest Service reclamation bond number:

Forest Service reclamation bond attachment:

Reclamation bond amount:

Reclamation bond rider amount:

Additional reclamation bond information attachment:

U.S. Department of the Interior
BUREAU OF LAND MANAGEMENT

Sundry Print Report

12/18/2025

Well Name: TOPAZ 30 FEDERAL COM

Well Location: T20S / R34E / SEC 31 / NWNW / 32.5353279 / -103.6041182

County or Parish/State: LEA / NM

Well Number: 2H

Type of Well: OIL WELL

Allottee or Tribe Name:

Lease Number: NMNM87274

Unit or CA Name:

Unit or CA Number:

US Well Number:

Operator: MARATHON OIL PERMIAN LLC

Notice of Intent

Sundry ID: 2876505

Type of Submission: Notice of Intent

Type of Action: APD Change

Date Sundry Submitted: 10/01/2025

Time Sundry Submitted: 06:59

Date proposed operation will begin: 10/01/2025

Procedure Description: Marathon Oil Permian LLC respectfully requests to change the name of this well From: Topaz 30 Federal Com 2H (APD ID 10400081220) To: Topaz Federal Com 301H Attached is an updated C102 reflecting this change.

NOI Attachments

Procedure Description

Topaz_Federal_Com_301H_C102_20251021072525.pdf

Well Name: TOPAZ 30 FEDERAL COM | **Well Location:** T20S / R34E / SEC 31 / NWNW / 32.5353279 / -103.6041182 | **County or Parish/State:** LEA / NM

Well Number: 2H | **Type of Well:** OIL WELL | **Allottee or Tribe Name:**

Lease Number: NMNM87274 | **Unit or CA Name:** | **Unit or CA Number:**

US Well Number: | **Operator:** MARATHON OIL PERMIAN LLC

Operator

I certify that the foregoing is true and correct. 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. Electronic submission of Sundry Notices through this system satisfies regulations requiring a

Operator Electronic Signature: ROBYN RUSSELL

Signed on: DEC 05, 2025 10:43 AM

Name: MARATHON OIL PERMIAN LLC

Title: Regulatory Compliance Lead

Street Address: 600 W ILLINOIS AVE

City: MIDLAND **State:** TX

Phone: (432) 685-4385

Email address: ROBYN.M.RUSSELL@CONOCOPHILLIPS.COM

Field

Representative Name:

Street Address:

City: **State:** **Zip:**

Phone:

Email address:

BLM Point of Contact

BLM POC Name: JANET D ESTES

BLM POC Title: ADJUDICATOR

BLM POC Phone: 5752346233

BLM POC Email Address: JESTES@BLM.GOV

Disposition: Approved

Disposition Date: 12/18/2025

Signature: DAWN ESTES

Santa Fe Main Office
Phone: (505) 476-3441
General Information
Phone: (505) 629-6116

Online Phone Directory Visit:
https://www.emnrd.nm.gov/ocd/contact-us/

State of New Mexico
Energy, Minerals & Natural Resources Department
OIL CONSERVATION DIVISION

C-102
Revised July 9, 2024
Submit Electronically via OCD Permitting

Submittal Type: ☒ Initial Submittal ☐ Amended Report ☐ As Drilled

WELL LOCATION INFORMATION

API Number	Pool Code	Pool Name
30-025- 55821	97895	WC-025 G-08 S213304D; BONE SPRING

Property Code	Property Name	Well Number
~~318310~~ 338337	TOPAZ FEDERAL COM	301H

OGRID No.	Operator Name	Ground Level Elevation
372098	MARATHON OIL PERMIAN LLC	3693'

Surface Owner: ☐ State ☐ Fee ☐ Tribal ☒ Federal
Mineral Owner: ☐ State ☐ Fee ☐ Tribal ☒ Federal

Surface Location

UL	Section	Township	Range	Lot	Ft. from N/S	Ft. from E/W	Latitude	Longitude	County
L1	31	20S	34E	1	558' NORTH	1252' WEST	32.53532792N	103.60411821W	LEA

Bottom Hole Location

UL	Section	Township	Range	Lot	Ft. from N/S	Ft. from E/W	Latitude	Longitude	County
P	30	20S	34E		100' SOUTH	660' EAST	32.53716256N	103.59316127W	LEA

Dedicated Acres	Infill or Defining Well	Defining Well API	Overlapping Spacing Unit (Y/N)	Consolidation Code
640.56	DEFINING	N/A	Y	C

Order Numbers. N/A
Well setbacks are under Common Ownership: ☒Yes ☐No

Kick Off Point (KOP)

UL	Section	Township	Range	Lot	Ft. from N/S	Ft. from E/W	Latitude	Longitude	County
N	30	20S	34E		100' SOUTH	1980' WEST	32.53714181N	103.60175780W	LEA

First Take Point (FTP)

UL	Section	Township	Range	Lot	Ft. from N/S	Ft. from E/W	Latitude	Longitude	County
N	30	20S	34E		100' SOUTH	1980' WEST	32.53714181N	103.60175780W	LEA

Last Take Point (LTP)

UL	Section	Township	Range	Lot	Ft. from N/S	Ft. from E/W	Latitude	Longitude	County
P	30	20S	34E		100' SOUTH	660' EAST	32.53716256N	103.59316127W	LEA

Unitized Area or Area of Uniform Interest	Spacing Unit Type ☒ Horizontal ☐ Vertical	Ground Floor Elevation:
COM		3693'

OPERATOR CERTIFICATIONS

I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief, and, if the well is a vertical or directional well, 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 a working interest or unleased mineral interest, or to a voluntary pooling agreement or a compulsory pooling order heretofore entered by the division.

If this well is a horizontal well, I further certify that this organization has received the consent of at least one lessee or owner of a working interest or unleased mineral interest in each tract (in the target pool or formation) in which any part of the well's completed interval will be located or obtained a compulsory pooling order from the division.

09/16/2025
Signature Date

Robyn Russell
Printed Name

Robyn.M.Russell@conocophillips.com
Email Address

SURVEYOR CERTIFICATIONS

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.

Signature and Seal of Professional Surveyor

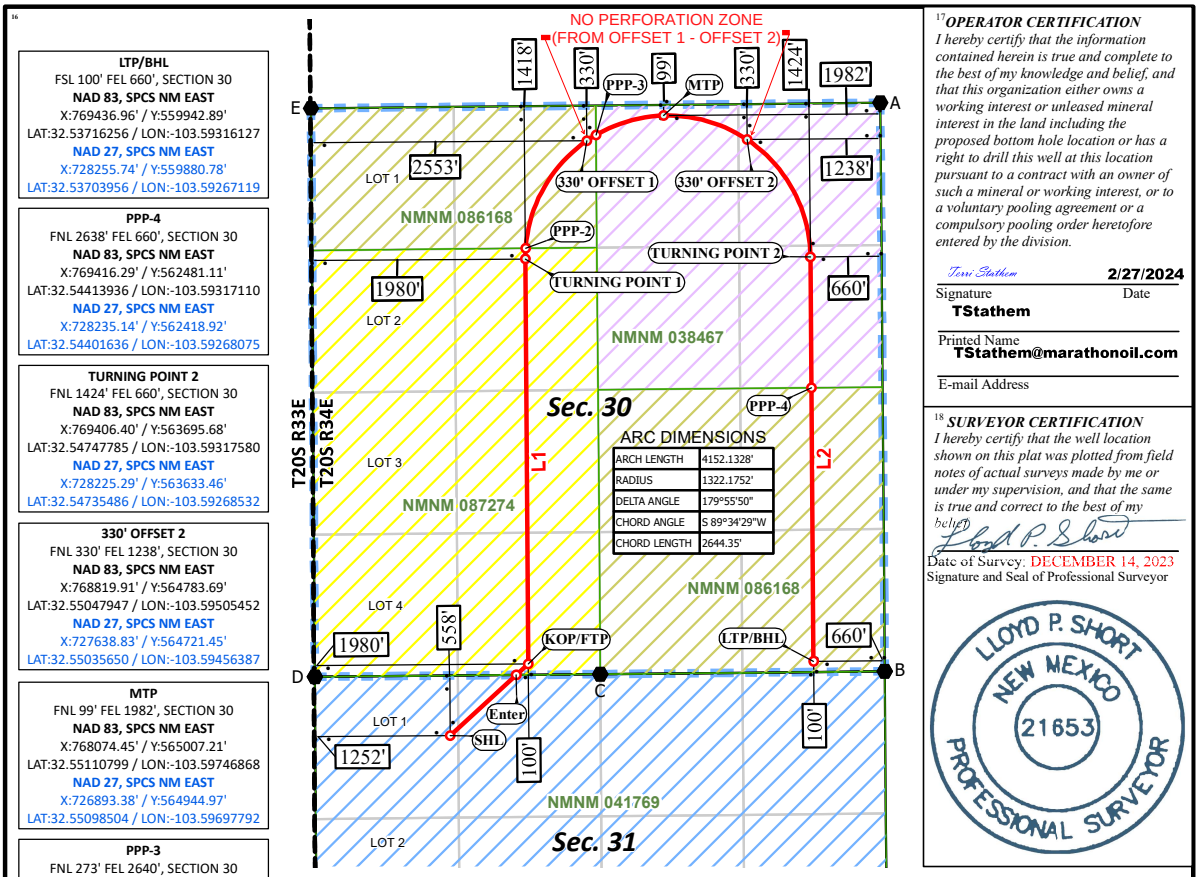
Certificate Number | Date of Survey

Note: 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.

ACREAGE DEDICATION PLATS

This grid represents a standard section. You may superimpose a non-standard section, or larger area, over this grid. Operators must outline the dedicated acreage in a red box, clearly show the well surface location and bottom hole location, if it is directionally drilled, with the dimensions from the section lines in the cardinal directions. If this is a horizontal wellbore show on this plat the location of the First Take Point and Last Take Point, and the point within the Completed interval (other than the First Take Point or Last Take Point) that is closest to any outer boundary of the tract.

Surveyors shall use the latest United States government survey or dependent resurvey. Well locations will be in reference to the New Mexico Principal Meridian. If the land is not surveyed, contact the OCD Engineering Bureau. Independent subdivision surveys will not be acceptable.



LTP/BHL
FSL 100' FEL 660', SECTION 30
NAD 83, SPCS NM EAST
X:769436.96' / Y:559942.89'
LAT:32.53716256 / LON:-103.59316127
NAD 27, SPCS NM EAST
X:728255.74' / Y:559880.78'
LAT:32.53703956 / LON:-103.59267119

PPP-4
FNL 2638' FEL 660', SECTION 30
NAD 83, SPCS NM EAST
X:769416.29' / Y:562481.11'
LAT:32.54413936 / LON:-103.59317110
NAD 27, SPCS NM EAST
X:728235.14' / Y:562418.92'
LAT:32.54401636 / LON:-103.59268075

TURNING POINT 2
FNL 1424' FEL 660', SECTION 30
NAD 83, SPCS NM EAST
X:769406.40' / Y:563695.68'
LAT:32.54747785 / LON:-103.59317580
NAD 27, SPCS NM EAST
X:728225.29' / Y:563633.46'
LAT:32.54735486 / LON:-103.59268532

330' OFFSET 2
FNL 330' FEL 1238', SECTION 30
NAD 83, SPCS NM EAST
X:768819.91' / Y:564783.69'
LAT:32.55047947 / LON:-103.59505452
NAD 27, SPCS NM EAST
X:727638.83' / Y:564721.45'
LAT:32.55035650 / LON:-103.59456387

MTP
FNL 99' FEL 1982', SECTION 30
NAD 83, SPCS NM EAST
X:768074.45' / Y:565007.21'
LAT:32.55110799 / LON:-103.59746868
NAD 27, SPCS NM EAST
X:726893.38' / Y:564944.97'
LAT:32.55098504 / LON:-103.59697792

PPP-3
FNL 273' FEL 2640', SECTION 30
NAD 83, SPCS NM EAST
X:767418.01' / Y:564827.11'
LAT:32.55062543 / LON:-103.59960301
NAD 27, SPCS NM EAST
X:726236.95' / Y:564764.88'
LAT:32.55050250 / LON:-103.59911220

330' OFFSET 1
FNL 330' FWL 2553', SECTION 30
NAD 83, SPCS NM EAST
X:767327.43' / Y:564769.20'
LAT:32.55046800 / LON:-103.59989825
NAD 27, SPCS NM EAST
X:726146.37' / Y:564706.98'
LAT:32.55034507 / LON:-103.59940743

PPP-2
FNL 1319' FWL 1984', SECTION 30
NAD 83, SPCS NM EAST
X:766765.12' / Y:563774.55'
LAT:32.54774479 / LON:-103.60174523
NAD 27, SPCS NM EAST
X:725584.07' / Y:563712.35'
LAT:32.54762187 / LON:-103.60122684

TURNING POINT 1
FNL 1418' FWL 1980', SECTION 30
NAD 83, SPCS NM EAST
X:766762.12' / Y:563676.06'
LAT:32.54747412 / LON:-103.60175717
NAD 27, SPCS NM EAST
X:725581.04' / Y:563613.85'
LAT:32.54735121 / LON:-103.60126640

KOP/FTP
FSL 100' FWL 1980', SECTION 30
NAD 83, SPCS NM EAST
X:766787.75' / Y:559917.03'
LAT:32.53714181 / LON:-103.60175780
NAD 27, SPCS NM EAST
X:725606.56' / Y:559854.94'
LAT:32.53701888 / LON:-103.60126743

SHL
FNL 558' FWL 1252', SECTION 31
NAD 83, SPCS NM EAST
X:766064.84' / Y:559252.13'
LAT:32.53532792 / LON:-103.60411821
NAD 27, SPCS NM EAST
X:724883.64' / Y:559190.06'
LAT:32.53520501 / LON:-103.60362783

[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.

Terri Stathem — 2/27/2024
Signature — Date
TStathem
Printed Name
TStathem@marathonoil.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.

Date of Survey: DECEMBER 14, 2023
Signature and Seal of Professional Surveyor

LLOYD P. SHORT — NEW MEXICO — 21653 — PROFESSIONAL SURVEYOR

CORNER COORDINATES NAD 83, SPCS NM EAST	CORNER COORDINATES NAD 27, SPCS NM EAST
A - X: 770055.24' / Y: 565125.70'	A - X: 728874.16' / Y: 565063.43'
B - X: 770097.73' / Y: 559849.35'	B - X: 728916.50' / Y: 559787.24'
C - X: 767457.20' / Y: 559823.27'	C - X: 726276.01' / Y: 559761.18'
D - X: 764808.94' / Y: 559797.89'	D - X: 723627.77' / Y: 559735.81'
E - X: 764772.54' / Y: 565074.42'	E - X: 723591.52' / Y: 565012.18'

*FTP TO LTP LINE BEARINGS

PRODUCTION LINE	BEARING/LENGTH
L1	N00°23'26"W ~ 3759.11'
L2	S00°27'59"E ~ 3752.92'

Drill Line Events · Section Corners · Drill Line · Dimension Lines · Federal Leases · NMSLO · HSU · HSU Corners

All bearings and coordinates refer to New Mexico State Plane coordinate system, East Zone, U.S. Survey Feet.

Distances/areas shown are NAD 83 grid measurements. Combined Scale Factor: 0.99978980 and a Convergence Angle: 0.390032294°

SHEET 1 OF 2
JOB No. R3760_002
REV 0 SAC 10/23/2023

Sante Fe Main Office
Phone: (505) 476-3441

General Information
Phone: (505) 629-6116

Online Phone Directory
https://www.emnrd.nm.gov/ocd/contact-us

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

ACKNOWLEDGMENTS

Operator: MARATHON OIL PERMIAN LLC 600 W Illinois Ave Midland, TX 79701	OGRID: 372098
	Action Number: 544111
	Action Type: [C-101] BLM - Federal/Indian Land Lease (Form 3160-3)

ACKNOWLEDGMENTS

☑	I hereby certify that no additives containing PFAS chemicals will be added to the completion or recompletion of this well.

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Phone: (505) 476-3441

General Information
Phone: (505) 629-6116

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

CONDITIONS

Operator: MARATHON OIL PERMIAN LLC 600 W Illinois Ave Midland, TX 79701	OGRID: 372098
	Action Number: 544111
	Action Type: [C-101] BLM - Federal/Indian Land Lease (Form 3160-3)

CONDITIONS

Created By	Condition	Condition Date
rrussell01	Cement is required to circulate on both surface and intermediate1 strings of casing.	1/16/2026
matthew.gomez	If cement does not circulate to surface on any string, a Cement Bond Log (CBL) is required for that string of casing. If a CBL is unable to indicate sufficient cement coverage due to a lighter cement, a USI log may also be required. If strata isolation is not achieved, remediation will be required before further operations may commence.	1/20/2026
matthew.gomez	All conducted logs must be submitted to the OCD.	1/20/2026
matthew.gomez	Cement must be in place for at least eight hours and achieve a minimum compressive strength of 500 PSI before performing any further operations on the well.	1/20/2026
matthew.gomez	Administrative order required for non-standard spacing unit prior to production.	1/20/2026
matthew.gomez	Only freshwater based mud shall be utilized across the Capitan interval.	1/20/2026
matthew.gomez	This well is proposed to be within the R-111-Q defined boundary. Operator must follow all procedures and requirements listed within the order.	1/20/2026
matthew.gomez	Surface casing shall be set a minimum of 25' into the Rustler Anhydrite, above the salt, and below usable fresh water and cemented to the surface. If salt is encountered set casing at least 25 ft. above the salt.	1/20/2026
matthew.gomez	Notify the OCD 24 hours prior to casing & cement.	1/20/2026
matthew.gomez	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.	1/20/2026
matthew.gomez	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.	1/20/2026
matthew.gomez	File As Drilled C-102 and a directional Survey with C-104 completion packet.	1/20/2026