

Form 3160-5  
(June 2019)UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENTFORM APPROVED  
OMB No. 1004-0137  
Expires: October 31, 2021**SUNDRY NOTICES AND REPORTS ON WELLS**  
**Do not use this form for proposals to drill or to re-enter an abandoned well. Use Form 3160-3 (APD) for such proposals.**5. Lease Serial No. **NMNM119276**

6. If Indian, Allottee or Tribe Name

**SUBMIT IN TRIPLICATE - Other instructions on page 2**

1. Type of Well

☒ Oil Well ☐ Gas Well ☐ Other2. Name of Operator **EOG RESOURCES INCORPORATED**3a. Address **1111 BAGBY SKY LOBBY 2, HOUSTON, TX 770** 3b. Phone No. (include area code)  
(713) 651-70004. Location of Well (Footage, Sec., T., R., M., or Survey Description)  
**SEC 10/T24S/R32E/NMP**

7. If Unit of CA/Agreement, Name and/or No.

8. Well Name and No. **MODELO 10 FED COM/603H**9. API Well No. **3002551809**10. Field and Pool or Exploratory Area  
**TRISTE DRAW; BONE SPRING/BONE SPRING**11. Country or Parish, State  
**LEA/NM****12. CHECK THE APPROPRIATE BOX(ES) TO INDICATE NATURE OF NOTICE, REPORT OR OTHER DATA**

| TYPE OF SUBMISSION                                   | TYPE OF ACTION                                   |   |  |   |  |
|--|--|---|--|---|--|
| <input checked="" type="checkbox"/> Notice of Intent | <input type="checkbox"/> Acidize                 | <input type="checkbox"/> Deepen               | <input type="checkbox"/> Production (Start/Resume) | <input type="checkbox"/> Water Shut-Off |  |
| <input type="checkbox"/> Subsequent Report           | <input type="checkbox"/> Alter Casing            | <input type="checkbox"/> Hydraulic Fracturing | <input type="checkbox"/> Reclamation               | <input type="checkbox"/> Well Integrity |  |
| <input type="checkbox"/> Final Abandonment Notice    | <input type="checkbox"/> Casing Repair           | <input type="checkbox"/> New Construction     | <input type="checkbox"/> Recomplete                | <input type="checkbox"/> Other          |  |
|  | <input checked="" type="checkbox"/> Change Plans | <input type="checkbox"/> Plug and Abandon     | <input type="checkbox"/> Temporarily Abandon       |   |  |
|  | <input type="checkbox"/> Convert to Injection    | <input type="checkbox"/> Plug Back            | <input type="checkbox"/> Water Disposal            |   |  |

13. Describe Proposed or Completed Operation: Clearly state all pertinent details, including estimated starting date of any proposed work and approximate duration thereof. If the proposal is to deepen directionally or recompleat horizontally, give subsurface locations and measured and true vertical depths of all pertinent markers and zones. Attach the Bond under which the work will be performed or provide the Bond No. on file with BLM/BIA. Required subsequent reports must be filed within 30 days following completion of the involved operations. If the operation results in a multiple completion or recompleat in a new interval, a Form 3160-4 must be filed once testing has been completed. Final Abandonment Notices must be filed only after all requirements, including reclamation, have been completed and the operator has detennined that the site is ready for final inspection.)

Modelo 10 Fed Com 603H API #: 30-025-51809

EOG respectfully requests an amendment to our approved APD for this well to reflect the following changes:

Change BHL from T-24-S, R-32-E, Sec 15, 2538' FNL, 2580' FEL, Lea Co., NM,  
to T-24-S, R-32-E, Sec 15, 2538' FNL, 1600' FEL, Lea Co., N.M.

Update casing and cement program to current design.

14. I hereby certify that the foregoing is true and correct. Name (Printed/Typed)  
**CRAIG RICHARDSON / Ph: (432) 686-3600**Title **Regulatory Specialist**(Electronic Submission)  
SignatureDate **08/29/2023****THE SPACE FOR FEDERAL OR STATE OFFICE USE**

Approved by

**KEITH P IMMATTY / Ph: (575) 988-4722 / Approved**Title **ENGINEER**Date **09/19/2023**

Conditions of approval, if any, are attached. Approval of this notice 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.

Office **CARLSBAD**

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.

(Instructions on page 2)

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

**Modelo 10 Fed Com 603H****Revised Permit Information 08/01/2023:**

Well Name: Modelo 10 Fed Com 603H

Location: SHL: 491' FNL &amp; 2037' FEL, Section 10, T-24-S, R-32-E, Lea Co., N.M.

BHL: 2538' FNL &amp; 1600' FEL, Section 15, T-24-S, R-32-E, Lea Co., N.M.

**Casing Program:**

| Hole Size | Interval MD |         | Interval TVD |         | Csg OD | Weight | Grade   | Conn          |
|-----------|-------------|---------|--------------|---------|--------|--------|---------|---------------|
|           | From (ft)   | To (ft) | From (ft)    | To (ft) |        |        |         |               |
| 12.25"    | 0           | 1,000   | 0            | 1,000   | 9-5/8" | 36#    | J-55    | LTC           |
| 8-3/4"    | 0           | 10,856  | 0            | 10,820  | 7-5/8" | 29.7#  | HCP-110 | FXL           |
| 6-3/4"    | 0           | 10,356  | 0            | 10,320  | 5-1/2" | 20#    | P110-EC | DWC/C IS MS   |
| 6-3/4"    | 10,356      | 10,856  | 10,320       | 10,820  | 5-1/2" | 20#    | P110-EC | Vam Sprint SF |
| 6-3/4"    | 10,856      | 19,366  | 10,820       | 11,760  | 5-1/2" | 20#    | P110-EC | DWC/C IS MS   |

Variance is requested to waive the centralizer requirements for the 7-5/8" casing in the 8-3/4" hole size. An expansion additive will be utilized, in the cement slurry, for the entire length of the 8-3/4" hole interval to maximize cement bond and zonal isolation.

Variance is also requested to waive any centralizer requirements for the 5-1/2" casing in the 6-3/4" hole size. An expansion additive will be utilized, in the cement slurry, for the entire length of the 6-3/4" hole interval to maximize cement bond and zonal isolation.

Variance is also requested to waive the annular clearance requirements for the 5-1/2" casing by 7-5/8" casing annulus to the proposed top of cement.

EOG requests permission to allow deviation from the 0.422" annulus clearance requirement from Onshore Order #2 under the following conditions:

- Annular clearance to meet or exceed 0.422" between intermediate casing ID and production casing coupling only on the first 500' overlap between both casing strings.
- Annular clearance less than 0.422" is acceptable for the production open hole section.

**Cementing Program:**

| Depth             | No. Sacks | Wt. ppg | Yld Ft3/sk | Slurry Description   |
|-------------------|-----------|---------|------------|--|
| 1,000'<br>9-5/8"  | 210       | 13.5    | 1.73       | Lead: Class C + 4.0% Bentonite Gel + 0.5% CaCl <sub>2</sub> + 0.25 lb/sk Cello-Flake (TOC @ Surface) |
|                   | 50        | 14.8    | 1.34       | Tail: Class C + 0.6% FL-62 + 0.25 lb/sk Cello-Flake + 0.2% Sodium Metasilicate (TOC @ 800')          |
| 10,820'<br>7-5/8" | 480       | 14.2    | 1.11       | 1st Stage (Tail): Class C + 0.6% Halad-9 + 0.45% HR-601 + 3% Microbond (TOC @ 6,730')                |
|                   | 1150      | 14.8    | 1.5        | 2nd Stage (Bradenhead squeeze): Class C + 3% Salt + 1% PreMag-M + 6% Bentonite Gel (TOC @ surface)   |
| 19,366'<br>5-1/2" | 1500      | 13.2    | 1.41       | Lead: Class H + 0.4% Halad-344 + 0.35% HR-601 + 3% Microbond (TOC @ 10,320')                         |

**Modelo 10 Fed Com 603H**

| Additive            | Purpose                                 |
|---------------------|---|
| Bentonite Gel       | Lightweight/Lost circulation prevention |
| Calcium Chloride    | Accelerator                             |
| Cello-flake         | Lost circulation prevention             |
| Sodium Metasilicate | Accelerator                             |
| MagOx               | Expansive agent                         |
| Pre-Mag-M           | Expansive agent                         |
| Sodium Chloride     | Accelerator                             |
| FL-62               | Fluid loss control                      |
| Halad-344           | Fluid loss control                      |
| Halad-9             | Fluid loss control                      |
| HR-601              | Retarder                                |
| Microbond           | Expansive Agent                         |

EOG requests variance from minimum standards to pump a two stage cement job on the 7-5/8" intermediate casing string with the first stage being pumped conventionally with the calculated top of cement at the Brushy Canyon (6,933') and the second stage performed as a 1000 sack bradenhead squeeze with planned cement from the Brushy Canyon to surface. If necessary, a top out consisting of 150 sacks of Class C cement + 3% Salt + 1% PreMag-M + 6% Bentonite Gel (2.30 yld, 12.91 ppg) will be executed as a contingency. Top will be verified by Echo-meter.

EOG will include the Echo-meter verified fluid top and the volume of displacement fluid above the cement slurry in the annulus in all post-drill sundries on wells utilizing this cement program.

EOG will report to the BLM the volume of fluid (limited to 5 bbls) used to flush intermediate casing valves following backside cementing procedures.

**Mud Program:**

| Measured Depth               | Type        | Weight (ppg) | Viscosity | Water Loss |
|------------------------------|-------------|--------------|-----------|------------|
| 0 – 1,000'                   | Fresh - Gel | 8.6-8.8      | 28-34     | N/c        |
| 1,000' – 10,820'             | Brine       | 10.0-10.2    | 28-34     | N/c        |
| 10,820' – 11,318'            | Oil Base    | 8.7-9.4      | 58-68     | N/c - 6    |
| 11,318' – 19,366'<br>Lateral | Oil Base    | 10.0-14.0    | 58-68     | 4 - 6      |



## Modelo 10 Fed Com 603H

### TUBING REQUIREMENTS

EOG respectively requests an exception to the following NMOCD rule:

- 19.15.16.10 Casing AND TUBING REQUIREMENTS:  
J (3): "The operator shall set tubing as near the bottom as practical and tubing perforations shall not be more than 250 feet above top of pay zone."

With horizontal flowing and gas lifted wells an end of tubing depth placed at or slightly above KOP is a conservative way to ensure the tubing stays clean from debris, plugging, and allows for fewer well interventions post offset completion. The deeper the tubulars are run into the curve, the higher the probability is that the tubing will become stuck in sand and or well debris as the well produces over time. An additional consideration for EOT placement during artificial lift installations is avoiding the high dog leg severity and inclinations found in the curve section of the wellbore to help improve reliability and performance. Dog leg severity and inclinations tend not to hamper gas lifted or flowing wells, but they do effect other forms of artificial lift like rod pump or ESP (electric submersible pump). Keeping the EOT above KOP is an industry best practice for those respective forms of artificial lift.



## Modelo 10 Fed Com 603H

491' FNL  
2037' FEL  
Section 10  
T-24-S, R-32-E

Revised Wellbore

KB: 3667'  
GL: 3642'

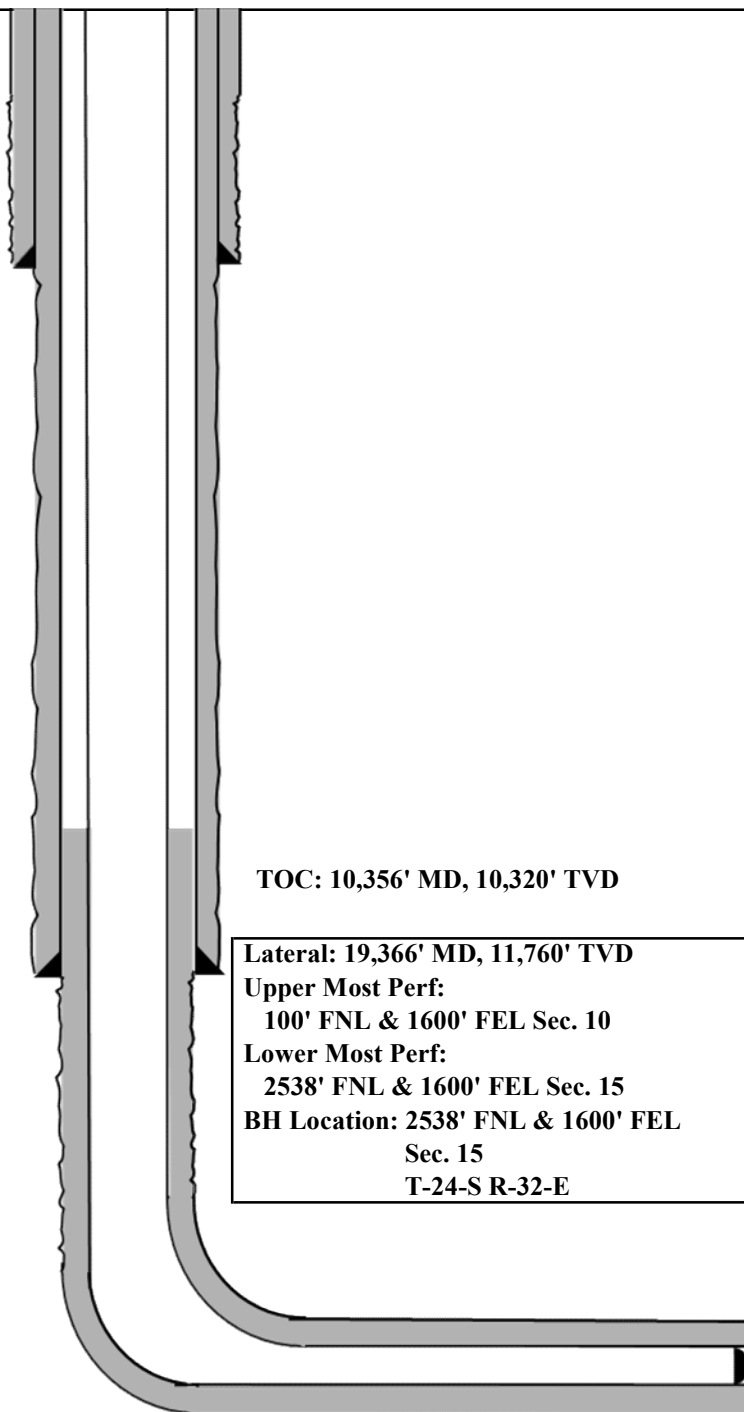
API: 30-025-51809

**Bit Size: 12.25"**  
9-5/8", 36#, J-55, LTC,  
@ 0' - 1,000'

**Bit Size: 8-3/4"**  
7-5/8", 29.7#, HCP-110, FXL,  
@ 0' - 10,856'

**Bit Size: 6-3/4"**  
5-1/2", 20.#, P110-EC, DWC/C IS MS  
@ 0' - 10,320'  
5-1/2", 20.#, P110-EC, Vam Sprint SF  
@ 10,320' - 10,820'  
5-1/2", 20.#, P110-EC, DWC/C IS MS  
@ 10,820' - 19,366'

KOP: 11,318' MD, 11,282' TVD  
EOC: 12,068' MD, 11,760' TVD



TOC: 10,356' MD, 10,320' TVD

Lateral: 19,366' MD, 11,760' TVD  
Upper Most Perf:  
100' FNL & 1600' FEL Sec. 10  
Lower Most Perf:  
2538' FNL & 1600' FEL Sec. 15  
BH Location: 2538' FNL & 1600' FEL  
Sec. 15  
T-24-S R-32-E



## Modelo 10 Fed Com 603H

**Design B****4. CASING PROGRAM**

| Hole Size | Interval MD |         | Interval TVD |         | Csg OD  | Weight | Grade   | Conn       |
|-----------|-------------|---------|--------------|---------|---------|--------|---------|------------|
|           | From (ft)   | To (ft) | From (ft)    | To (ft) |         |        |         |            |
| 13"       | 0           | 1,000   | 0            | 1,000   | 10-3/4" | 40.5#  | J-55    | STC        |
| 9-7/8"    | 0           | 10,856  | 0            | 10,820  | 8-3/4"  | 38.5#  | P110-EC | SLIJ II NA |
| 7-7/8"    | 0           | 19,366  | 0            | 11,760  | 6"      | 22.3#  | P110-EC | DWC/C IS   |

Variance is requested to waive the centralizer requirements for the 8-3/4" casing in the 9-7/8" hole size. An expansion additive will be utilized, in the cement slurry, for the entire length of the 9-7/8" hole interval to maximize cement bond and zonal isolation.

Variance is also requested to waive any centralizer requirements for the 6" casing in the 7-7/8" hole size. An expansion additive will be utilized, in the cement slurry, for the entire length of the 7-7/8" hole interval to maximize cement bond and zonal isolation.

Variance is also requested to waive the annular clearance requirements for the 6" casing by 8-3/4" casing annulus to the proposed top of cement.

EOG requests permission to allow deviation from the 0.422" annulus clearance requirement from Onshore Order #2 under the following conditions:

- Annular clearance to meet or exceed 0.422" between intermediate casing ID and production casing coupling only on the first 500' overlap between both casing strings.
- Annular clearance less than 0.422" is acceptable for the production open hole section.

**Cementing Program:**

| Depth             | No. Sacks | Wt. ppg | Yld Ft3/sk | Slurry Description   |
|-------------------|-----------|---------|------------|--|
| 1,000'<br>10-3/4" | 270       | 13.5    | 1.73       | Lead: Class C + 4.0% Bentonite Gel + 0.5% CaCl <sub>2</sub> + 0.25 lb/sk Cello-Flake (TOC @ Surface) |
|                   | 70        | 14.8    | 1.34       | Tail: Class C + 0.6% FL-62 + 0.25 lb/sk Cello-Flake + 0.2% Sodium Metasilicate (TOC @ 800')          |
| 10,820'<br>8-3/4" | 550       | 14.2    | 1.11       | 1st Stage (Tail): Class C + 0.6% Halad-9 + 0.45% HR-601 + 3% Microbond (TOC @ 6,730')                |
|                   | 1310      | 14.8    | 1.5        | 2nd Stage (Bradenhead squeeze): Class C + 3% Salt + 1% PreMag-M + 6% Bentonite Gel (TOC @ surface)   |
| 19,366'<br>6"     | 1190      | 13.2    | 1.31       | Lead: Class H + 0.4% Halad-344 + 0.35% HR-601 + 3% Microbond (TOC @ 10,320')                         |





### **Modelo 10 Fed Com 603H**

EOG requests variance from minimum standards to pump a two stage cement job on the 8-3/4" intermediate casing string with the first stage being pumped conventionally with the calculated top of cement at the Brushy Canyon (6,933') and the second stage performed as a 1000 sack bradenhead squeeze with planned cement from the Brushy Canyon to surface. If necessary, a top out consisting of 307 sacks of Class C cement + 3% Salt + 1% PreMag-M + 6% Bentonite Gel (2.30 yld, 12.91 ppg) will be executed as a contingency. Top will be verified by Echo-meter.

EOG will include the Echo-meter verified fluid top and the volume of displacement fluid above the cement slurry in the annulus in all post-drill sundries on wells utilizing this cement program.

EOG will report to the BLM the volume of fluid (limited to 5 bbls) used to flush intermediate casing valves following backside cementing procedures.





## Modelo 10 Fed Com 603H

491' FNL  
2037' FEL  
Section 10  
T-24-S, R-32-E

Proposed Wellbore

KB: 3667'  
GL: 3642'

API: 30-025-51809

Bit Size: 13"  
10-3/4", 40.5#, J-55, STC,  
@ 0' - 1,000'

Bit Size: 9-7/8"  
8-3/4" 38.5#, P110-EC, SLIJ II NA,  
@ 0' - 10,856'

Bit Size: 7-7/8"  
6", 22.3#, P110-EC, DWC/C IS,  
@ 0' - 19,366'

TOC: 10,356' MD, 10,320' TVD

Lateral: 19,366' MD, 11,760' TVD  
Upper Most Perf:  
100' FNL & 1600' FEL Sec. 10  
Lower Most Perf:  
2538' FNL & 1600' FEL Sec. 15  
BH Location: 2538' FNL & 1600' FEL  
Sec. 15  
T-24-S R-32-E

KOP: 11,318' MD, 11,282' TVD  
EOC: 12,068' MD, 11,760' TVD



## Modelo 10 Fed Com 603H

**GEOLOGIC NAME OF SURFACE FORMATION:**

Permian

**ESTIMATED TOPS OF IMPORTANT GEOLOGICAL MARKERS:**

|                        |         |
|------------------------|---------|
| Rustler                | 896'    |
| Tamarisk Anhydrite     | 977'    |
| Top of Salt            | 1,208'  |
| Base of Salt           | 4,491'  |
| Lamar                  | 4,643'  |
| Bell Canyon            | 4,682'  |
| Cherry Canyon          | 5,574'  |
| Brushy Canyon          | 6,933'  |
| Bone Spring Lime       | 8,559'  |
| Leonard (Avalon) Shale | 8,680'  |
| 1st Bone Spring Sand   | 9,678'  |
| 2nd Bone Spring Shale  | 9,887'  |
| 2nd Bone Spring Sand   | 10,250' |
| 3rd Bone Spring Carb   | 10,721' |
| 3rd Bone Spring Sand   | 11,302' |
| Wolfcamp               | 11,791' |
| TD                     | 11,760' |

**ESTIMATED DEPTHS OF ANTICIPATED FRESH WATER, OIL OR GAS:**

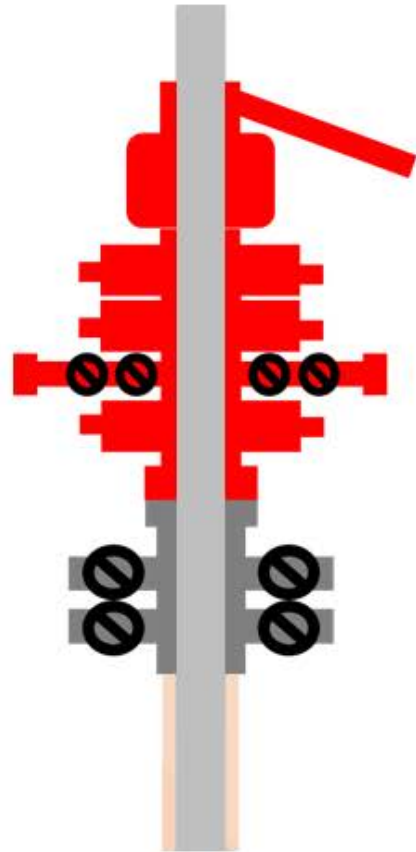
|                        |         |             |
|------------------------|---------|-------------|
| Upper Permian Sands    | 0- 400' | Fresh Water |
| Bell Canyon            | 4,682'  | Oil         |
| Cherry Canyon          | 5,574'  | Oil         |
| Brushy Canyon          | 6,933'  | Oil         |
| Leonard (Avalon) Shale | 8,680'  | Oil         |
| 1st Bone Spring Sand   | 9,678'  | Oil         |
| 2nd Bone Spring Shale  | 9,887'  | Oil         |
| 2nd Bone Spring Sand   | 10,250' | Oil         |

**Break-test BOP & Offline Cementing:**

EOG Resources Inc. (EOG) respectfully requests a variance from the minimum standards for well control equipment testing of ECFR Title 43 Part 3172.6(b)(9)(iv) to allow a testing schedule of the blow out preventer (BOP) and blow out prevention equipment (BOPE) along with Batch Drilling & Offline cement operations to include the following:

- Full BOPE test at first installation on the pad.
- Full BOPE test every 21 days.
- This test will be conducted for 5M rated hole intervals only.
- Each rig requesting the break-test variance is capable of picking up the BOP without damaging components using winches, following API Standard 53, Well Control Equipment Systems for Drilling Wells (Fifth edition, December 2018, Annex C. Table C.4) which recognizes break testing as an acceptable practice.
- Function tests will be performed on the following BOP elements:
  - Annular ð during each full BOPE test
  - Upper Pipe Rams ð On trip ins where FIT required
  - Blind Rams ð Every trip
  - Lower Pipe Rams ð during each full BOPE test
- Break testing BOP and BOPE coupled with batch drilling operations and option to offline cement and/or remediate (if needed) any surface or intermediate sections, according to attached offline cementing support documentation.
- After the well section is secured, the BOP will be disconnected from the wellhead and walked with the rig to another well on the pad.
- TA cap will also be installed per Wellhead vendor procedure and pressure inside the casing will be monitored via the valve on the TA cap as per standard batch drilling ops.

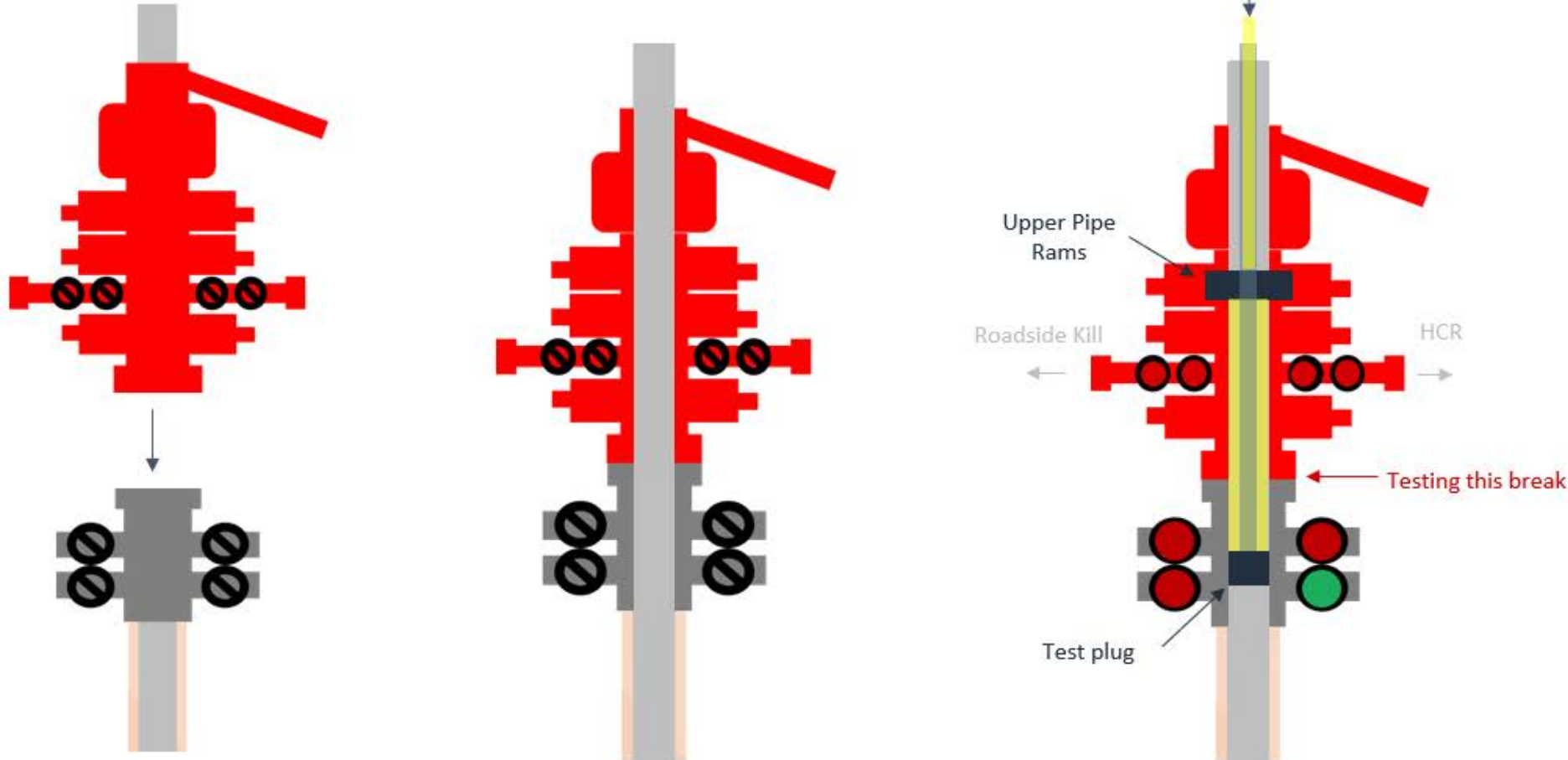
# Break Test Diagram (HCR valve)



## Steps

1. Set plug in wellhead (lower barrier)
2. Close Blind Rams (upper barrier)
3. Close roadside kill
4. Open HCR (pressure application)
5. Open wellhead valves below test plug to ensure if leak past test plug, pressure won't be applied to wellbore
6. Tie BOP testers high pressure line to main choke manifold crown valve
7. Pressure up to test break
8. Bleed test pressure from BOP testing unit

# Break Test Diagram (Test Joint)



## Steps

1. Set plug in with test joint wellhead (lower barrier)
2. Close Upper Pipe Rams (upper barrier)
3. Close roadside kill
4. Close HCR
5. Open wellhead valves below test plug to ensure if leak past test plug, pressure won't be applied to wellbore
6. Tie BOP testers high pressure line to top of test joint
7. Pressure up to test break
8. Bleed test pressure from BOP testing unit



## Offline Intermediate Cementing Procedure

2/24/2022

**Cement Program**

1. No changes to the cement program will take place for offline cementing.

**Summarized Operational Procedure for Intermediate Casing**

1. Run casing as per normal operations. While running casing, conduct negative pressure test and confirm integrity of the float equipment back pressure valves.
  - a. Float equipment is equipped with two back pressure valves rated to a minimum of 5,000 psi.
2. Land production casing on mandrel hanger through BOP.
  - a. If casing is unable to be landed with a mandrel hanger, then the **casing will be cemented online**.
3. Break circulation and confirm no restrictions.
  - a. Ensure no blockage of float equipment and appropriate annular returns.
  - b. Perform flow check to confirm well is static.
4. Set pack-off
  - a. If utilizing a fluted/ported mandrel hanger, ensure well is static on the annulus and inside the casing by filling the pipe with kill weight fluid, remove landing joint, and set annular packoff through BOP. Pressure test to 5,000 psi for 10 min.
  - b. If utilizing a solid mandrel hanger, ensure well is static on the annulus and inside the casing by filling the pipe with kill weight fluid. Pressure test seals to 5,000 psi for 10 min. Remove landing joint through BOP.
5. After confirmation of both annular barriers and the two casing barriers, install TA plug and pressure test to 5,000 psi for 10 min. Notify the BLM with intent to proceed with nipple down and offline cementing.
  - a. Minimum 4 hrs notice.
6. With the well secured and BLM notified, nipple down BOP and secure on hydraulic carrier or cradle.
  - a. **Note, if any of the barriers fail to test, the BOP stack will not be nipped down until after the cement job has concluded and both lead and tail slurry have reached 500 psi.**
7. Skid/Walk rig off current well.
8. Confirm well is static before removing TA Plug.
  - a. Cementing operations will not proceed until well is under control. (If well is not static, notify BLM and proceed to kill)
  - b. Casing outlet valves will provide access to both the casing ID and annulus. Rig or third party pump truck will kill well prior to cementing.
  - c. Well control plan can be seen in Section B, Well Control Procedures.
  - d. If need be, rig can be moved back over well and BOP nipped back up for any further remediation.



## Offline Intermediate Cementing Procedure

2/24/2022

- e. Diagram for rig positioning relative to offline cementing can be seen in Figure 4.
9. Rig up return lines to take returns from wellhead to pits and rig choke.
  - a. Test all connections and lines from wellhead to choke manifold to 5,000 psi high for 10 min.
  - b. If either test fails, perform corrections and retest before proceeding.
  - c. Return line schematics can be seen in Figure 3.
10. Remove TA Plug from the casing.
11. Install offline cement tool.
  - a. Current offline cement tool schematics can be seen in Figure 1 (Cameron) and Figure 2 (Cactus).
12. Rig up cement head and cementing lines.
  - a. Pressure test cement lines against cement head to 80% of casing burst for 10 min.
13. Break circulation on well to confirm no restrictions.
  - a. If gas is present on circulation, well will be shut in and returns rerouted through gas buster.
  - b. Max anticipated time before circulating with cement truck is 6 hrs.
14. Pump cement job as per plan.
  - a. At plug bump, test casing to 0.22 psi/ft or 1500 psi, whichever is greater.
  - b. If plug does not bump on calculated, shut down and wait 8 hrs or 500 psi compressive strength, whichever is greater before testing casing.
15. Confirm well is static and floats are holding after cement job.
  - a. With floats holding and backside static:
    - i. Remove cement head.
  - b. If floats are leaking:
    - i. Shut-in well and WOC (Wait on Cement) until tail slurry reaches 500 psi compressive strength and the casing is static prior to removing cement head.
  - c. If there is flow on the backside:
    - i. Shut in well and WOC until tail slurry reaches 500 psi compressive strength. Ensure that the casing is static prior to removing cement head.
16. Remove offline cement tool.
17. Install night cap with pressure gauge for monitoring.
18. Test night cap to 5,000 psi for 10 min.





Offline Intermediate Cementing Procedure

2/24/2022

## Example Well Control Plan Content

### A. Well Control Component Table

The table below, which covers the cementing of the **5M MASP (Maximum Allowable Surface Pressure) portion of the well**, outlines the well control component rating in use. This table, combined with the mud program, documents that two barriers to flow can be maintained at all times, independent of the BOP nipped up to the wellhead.

Intermediate hole section, 5M requirement

| Component                | RWP |
|--------------------------|-----|
| Pack-off                 | 10M |
| Casing Wellhead Valves   | 10M |
| Annular Wellhead Valves  | 5M  |
| TA Plug                  | 10M |
| Float Valves             | 5M  |
| 2" 1502 Lo-Torque Valves | 15M |

### B. Well Control Procedures

Well control procedures are specific to the rig equipment and the operation at the time the kick occurs. Below are the minimal high-level tasks prescribed to assure a proper shut-in while circulating and cementing through the Offline Cement Adapter.

#### General Procedure While Circulating

1. Sound alarm (alert crew).
2. Shut down pumps.
3. Shut-in Well (close valves to rig pits and open valve to rig choke line. Rig choke will already be in the closed position).
4. Confirm shut-in.
5. Notify tool pusher/company representative.



## Offline Intermediate Cementing Procedure

2/24/2022

6. Read and record the following:
  - a. SICP (Shut in Casing Pressure) and AP (Annular Pressure)
  - b. Pit gain
  - c. Time
  - d. Regroup and identify forward plan to continue circulating out kick via rig choke and mud/gas separator. Circulate and adjust mud density as needed to control well.

### General Procedure While Cementing

1. Sound alarm (alert crew).
2. Shut down pumps.
3. Shut-in Well (close valves to rig pits and open valve to rig choke line. Rig choke will already be in the closed position).
4. Confirm shut-in.
5. Notify tool pusher/company representative.
6. Open rig choke and begin pumping again taking returns through choke manifold and mud/gas separator.
7. Continue to place cement until plug bumps.
8. At plug bump close rig choke and cement head.
9. Read and record the following
  - a. SICP and AP
  - b. Pit gain
  - c. Time
  - d. Shut-in annulus valves on wellhead

### General Procedure After Cementing

1. Sound alarm (alert crew).
2. Shut-in Well (close valves to rig pits and open valve to rig choke line. Rig choke will already be in the closed position).
3. Confirm shut-in.
4. Notify tool pusher/company representative.
5. Read and record the following:
  - a. SICP and AP
  - b. Pit gain
  - c. Time
  - d. Shut-in annulus valves on wellhead



## Offline Intermediate Cementing Procedure

2/24/2022

Figure 1: Cameron TA Plug and Offline Adapter Schematic





## Offline Intermediate Cementing Procedure

2/24/2022

Figure 2: Cactus TA Plug and Offline Adapter Schematic





## Offline Intermediate Cementing Procedure

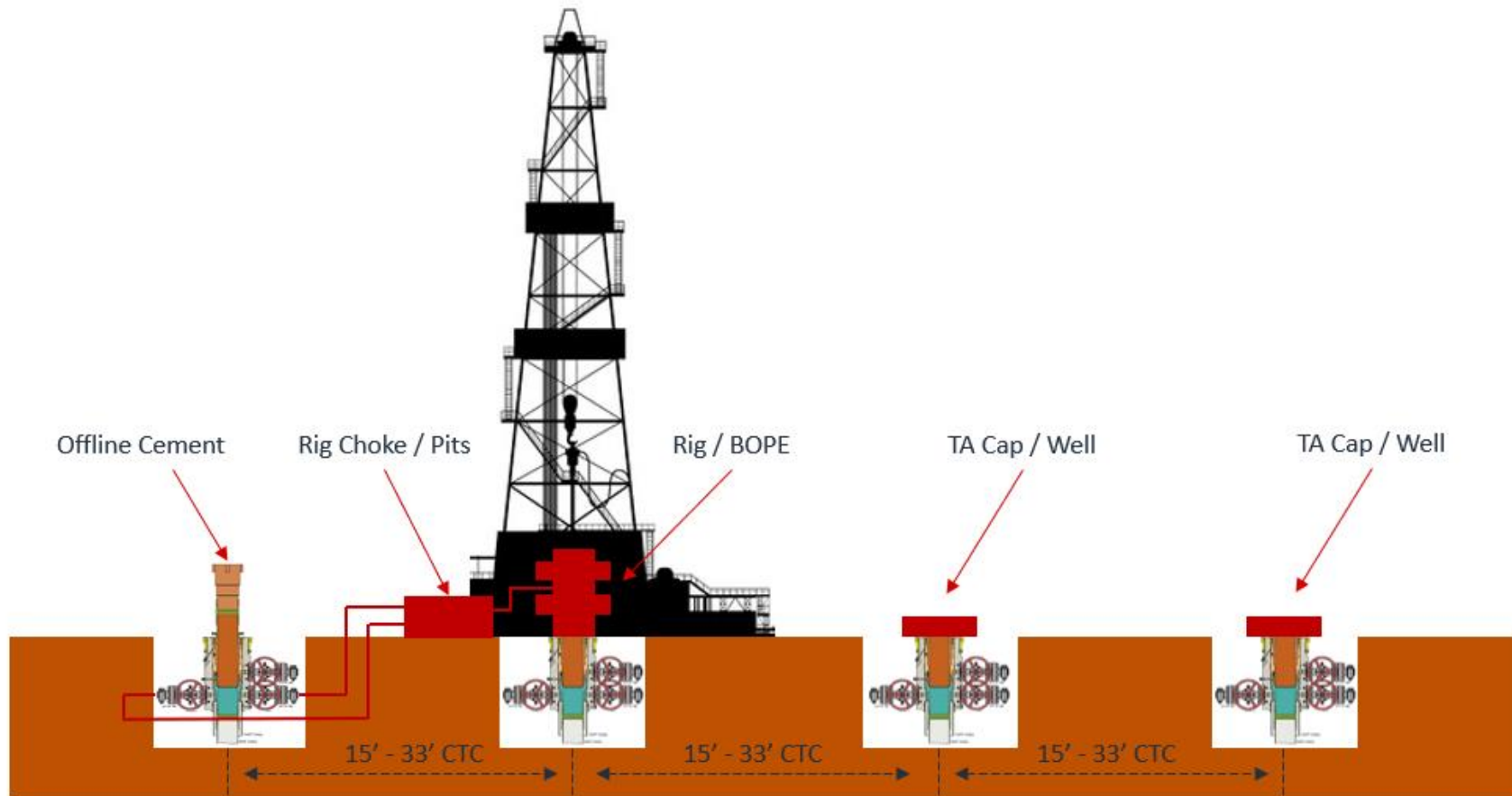
2/24/2022

Figure 3: Back Yard Rig Up





### Figure 4: Rig Placement Diagram





## Midland

Lea County, NM (NAD 83 NME)

Modelo 10 Fed Com

#603H

OH

Plan: Plan #0.1 RT

## Standard Planning Report

25 August, 2023





## Planning Report

|                  |                             |                                     |                       |
|------------------|-----------------------------|-------------------------------------|-----------------------|
| <b>Database:</b> | PEDM                        | <b>Local Co-ordinate Reference:</b> | Well #603H            |
| <b>Company:</b>  | Midland                     | <b>TVD Reference:</b>               | kb = 26' @ 3668.0usft |
| <b>Project:</b>  | Lea County, NM (NAD 83 NME) | <b>MD Reference:</b>                | kb = 26' @ 3668.0usft |
| <b>Site:</b>     | Modelo 10 Fed Com           | <b>North Reference:</b>             | Grid                  |
| <b>Well:</b>     | #603H                       | <b>Survey Calculation Method:</b>   | Minimum Curvature     |
| <b>Wellbore:</b> | OH                          |                                     |                       |
| <b>Design:</b>   | Plan #0.1 RT                |                                     |                       |

|                    |                             |                      |                |
|--------------------|-----------------------------|----------------------|----------------|
| <b>Project</b>     | Lea County, NM (NAD 83 NME) |                      |                |
| <b>Map System:</b> | US State Plane 1983         | <b>System Datum:</b> | Mean Sea Level |
| <b>Geo Datum:</b>  | North American Datum 1983   |                      |                |
| <b>Map Zone:</b>   | New Mexico Eastern Zone     |                      |                |

|                       |                   |              |                 |            |                   |
|-----------------------|-------------------|--------------|-----------------|------------|-------------------|
| Site                  | Modelo 10 Fed Com |              |                 |            |                   |
| Site Position:        |                   | Northing:    | 451,286.00 usft | Latitude:  | 32° 14' 19.830 N  |
| From:                 | Map               | Easting:     | 750,991.00 usft | Longitude: | 103° 39' 18.896 W |
| Position Uncertainty: | 0.0 usft          | Slot Radius: | 13-3/16 "       |            |                   |

|                      |       |          |                     |                 |               |                   |
|----------------------|-------|----------|---------------------|-----------------|---------------|-------------------|
| Well                 | #603H |          |                     |                 |               |                   |
| Well Position        | +N/-S | 0.0 usft | Northing:           | 450,972.00 usft | Latitude:     | 32° 14' 16.825 N  |
|                      | +E/-W | 0.0 usft | Easting:            | 749,356.00 usft | Longitude:    | 103° 39' 37.955 W |
| Position Uncertainty |       | 0.0 usft | Wellhead Elevation: | usft            | Ground Level: | 3,642.0 usft      |
| Grid Convergence:    |       | 0.36 °   |                     |                 |               |                   |

|                  |                   |                    |                        |                      |                            |
|------------------|-------------------|--------------------|------------------------|----------------------|----------------------------|
| <b>Wellbore</b>  | OH                |                    |                        |                      |                            |
| <b>Magnetics</b> | <b>Model Name</b> | <b>Sample Date</b> | <b>Declination (°)</b> | <b>Dip Angle (°)</b> | <b>Field Strength (nT)</b> |
|                  | IGRF2020          | 8/25/2023          | 6.33                   | 59.83                | 47,262.98987509            |

|                          |                                |                     |                      |                      |  |
|--------------------------|--------------------------------|---------------------|----------------------|----------------------|--|
| <b>Design</b>            | Plan #0.1 RT                   |                     |                      |                      |  |
| <b>Audit Notes:</b>      |                                |                     |                      |                      |  |
| <b>Version:</b>          | <b>Phase:</b>                  | PLAN                | <b>Tie On Depth:</b> | 0.0                  |  |
| <b>Vertical Section:</b> | <b>Depth From (TVD) (usft)</b> | <b>+N/-S (usft)</b> | <b>+E/-W (usft)</b>  | <b>Direction (°)</b> |  |
|                          | 0.0                            | 0.0                 | 0.0                  | 176.25               |  |

|                                 |                        |                          |                   |                |  |
|---------------------------------|------------------------|--------------------------|-------------------|----------------|--|
| <b>Plan Survey Tool Program</b> | <b>Date</b>            | 8/25/2023                |                   |                |  |
| <b>Depth From (usft)</b>        | <b>Depth To (usft)</b> | <b>Survey (Wellbore)</b> | <b>Tool Name</b>  | <b>Remarks</b> |  |
| 1                               | 0.0                    | 19,366.3                 | Plan #0.1 RT (OH) | EOG MWD+IFR1   |  |
|                                 |                        |                          |                   | MWD + IFR1     |  |



## Planning Report

|                  |                             |                                     |                       |
|------------------|-----------------------------|-------------------------------------|-----------------------|
| <b>Database:</b> | PEDM                        | <b>Local Co-ordinate Reference:</b> | Well #603H            |
| <b>Company:</b>  | Midland                     | <b>TVD Reference:</b>               | kb = 26' @ 3668.0usft |
| <b>Project:</b>  | Lea County, NM (NAD 83 NME) | <b>MD Reference:</b>                | kb = 26' @ 3668.0usft |
| <b>Site:</b>     | Modelo 10 Fed Com           | <b>North Reference:</b>             | Grid                  |
| <b>Well:</b>     | #603H                       | <b>Survey Calculation Method:</b>   | Minimum Curvature     |
| <b>Wellbore:</b> | OH                          |                                     |                       |
| <b>Design:</b>   | Plan #0.1 RT                |                                     |                       |

| 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    |                      |
| 1,208.0               | 0.00            | 0.00        | 1,208.0               | 0.0          | 0.0          | 0.00                    | 0.00                   | 0.00                  | 0.00    |                      |
| 1,537.4               | 6.59            | 44.15       | 1,536.6               | 13.6         | 13.2         | 2.00                    | 2.00                   | 0.00                  | 44.15   |                      |
| 6,638.8               | 6.59            | 44.15       | 6,604.4               | 433.4        | 420.8        | 0.00                    | 0.00                   | 0.00                  | 0.00    |                      |
| 6,968.1               | 0.00            | 0.00        | 6,933.0               | 447.0        | 434.0        | 2.00                    | -2.00                  | 0.00                  | 180.00  |                      |
| 11,317.6              | 0.00            | 0.00        | 11,282.5              | 447.0        | 434.0        | 0.00                    | 0.00                   | 0.00                  | 0.00    | KOP(Modelo 10 Fed C  |
| 11,538.1              | 26.46           | 178.85      | 11,495.2              | 397.0        | 435.0        | 12.00                   | 12.00                  | 81.13                 | 178.85  | FTP(Modelo 10 Fed C  |
| 12,067.6              | 90.00           | 179.71      | 11,759.9              | -30.4        | 439.1        | 12.00                   | 12.00                  | 0.16                  | 0.95    |                      |
| 14,186.2              | 90.00           | 179.71      | 11,760.0              | -2,149.0     | 450.0        | 0.00                    | 0.00                   | 0.00                  | 0.00    | Fed Perf 1(Modelo 10 |
| 16,829.2              | 90.00           | 179.60      | 11,760.0              | -4,792.0     | 466.0        | 0.00                    | 0.00                   | 0.00                  | -87.68  | Fed Perf 2(Modelo 10 |
| 19,366.3              | 90.00           | 179.72      | 11,760.0              | -7,329.0     | 481.0        | 0.00                    | 0.00                   | 0.00                  | 92.02   | PBHL(Modelo 10 Fed   |



## Planning Report

|                  |                             |                                     |                       |
|------------------|-----------------------------|-------------------------------------|-----------------------|
| <b>Database:</b> | PEDM                        | <b>Local Co-ordinate Reference:</b> | Well #603H            |
| <b>Company:</b>  | Midland                     | <b>TVD Reference:</b>               | kb = 26' @ 3668.0usft |
| <b>Project:</b>  | Lea County, NM (NAD 83 NME) | <b>MD Reference:</b>                | kb = 26' @ 3668.0usft |
| <b>Site:</b>     | Modelo 10 Fed Com           | <b>North Reference:</b>             | Grid                  |
| <b>Well:</b>     | #603H                       | <b>Survey Calculation Method:</b>   | Minimum Curvature     |
| <b>Wellbore:</b> | OH                          |                                     |                       |
| <b>Design:</b>   | Plan #0.1 RT                |                                     |                       |

| 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                  |
| 1,208.0               | 0.00            | 0.00        | 1,208.0               | 0.0          | 0.0          | 0.0                     | 0.00                    | 0.00                   | 0.00                  |
| 1,300.0               | 1.84            | 44.15       | 1,300.0               | 1.1          | 1.0          | -1.0                    | 2.00                    | 2.00                   | 0.00                  |
| 1,400.0               | 3.84            | 44.15       | 1,399.9               | 4.6          | 4.5          | -4.3                    | 2.00                    | 2.00                   | 0.00                  |
| 1,500.0               | 5.84            | 44.15       | 1,499.5               | 10.7         | 10.4         | -10.0                   | 2.00                    | 2.00                   | 0.00                  |
| 1,537.4               | 6.59            | 44.15       | 1,536.6               | 13.6         | 13.2         | -12.7                   | 2.00                    | 2.00                   | 0.00                  |
| 1,600.0               | 6.59            | 44.15       | 1,598.9               | 18.7         | 18.2         | -17.5                   | 0.00                    | 0.00                   | 0.00                  |
| 1,700.0               | 6.59            | 44.15       | 1,698.2               | 27.0         | 26.2         | -25.2                   | 0.00                    | 0.00                   | 0.00                  |
| 1,800.0               | 6.59            | 44.15       | 1,797.5               | 35.2         | 34.2         | -32.9                   | 0.00                    | 0.00                   | 0.00                  |
| 1,900.0               | 6.59            | 44.15       | 1,896.9               | 43.4         | 42.2         | -40.6                   | 0.00                    | 0.00                   | 0.00                  |
| 2,000.0               | 6.59            | 44.15       | 1,996.2               | 51.6         | 50.1         | -48.3                   | 0.00                    | 0.00                   | 0.00                  |
| 2,100.0               | 6.59            | 44.15       | 2,095.6               | 59.9         | 58.1         | -55.9                   | 0.00                    | 0.00                   | 0.00                  |
| 2,200.0               | 6.59            | 44.15       | 2,194.9               | 68.1         | 66.1         | -63.6                   | 0.00                    | 0.00                   | 0.00                  |
| 2,300.0               | 6.59            | 44.15       | 2,294.2               | 76.3         | 74.1         | -71.3                   | 0.00                    | 0.00                   | 0.00                  |
| 2,400.0               | 6.59            | 44.15       | 2,393.6               | 84.6         | 82.1         | -79.0                   | 0.00                    | 0.00                   | 0.00                  |
| 2,500.0               | 6.59            | 44.15       | 2,492.9               | 92.8         | 90.1         | -86.7                   | 0.00                    | 0.00                   | 0.00                  |
| 2,600.0               | 6.59            | 44.15       | 2,592.3               | 101.0        | 98.1         | -94.4                   | 0.00                    | 0.00                   | 0.00                  |
| 2,700.0               | 6.59            | 44.15       | 2,691.6               | 109.3        | 106.1        | -102.1                  | 0.00                    | 0.00                   | 0.00                  |
| 2,800.0               | 6.59            | 44.15       | 2,790.9               | 117.5        | 114.1        | -109.8                  | 0.00                    | 0.00                   | 0.00                  |
| 2,900.0               | 6.59            | 44.15       | 2,890.3               | 125.7        | 122.1        | -117.5                  | 0.00                    | 0.00                   | 0.00                  |
| 3,000.0               | 6.59            | 44.15       | 2,989.6               | 133.9        | 130.1        | -125.1                  | 0.00                    | 0.00                   | 0.00                  |
| 3,100.0               | 6.59            | 44.15       | 3,089.0               | 142.2        | 138.0        | -132.8                  | 0.00                    | 0.00                   | 0.00                  |
| 3,200.0               | 6.59            | 44.15       | 3,188.3               | 150.4        | 146.0        | -140.5                  | 0.00                    | 0.00                   | 0.00                  |
| 3,300.0               | 6.59            | 44.15       | 3,287.6               | 158.6        | 154.0        | -148.2                  | 0.00                    | 0.00                   | 0.00                  |
| 3,400.0               | 6.59            | 44.15       | 3,387.0               | 166.9        | 162.0        | -155.9                  | 0.00                    | 0.00                   | 0.00                  |
| 3,500.0               | 6.59            | 44.15       | 3,486.3               | 175.1        | 170.0        | -163.6                  | 0.00                    | 0.00                   | 0.00                  |
| 3,600.0               | 6.59            | 44.15       | 3,585.7               | 183.3        | 178.0        | -171.3                  | 0.00                    | 0.00                   | 0.00                  |
| 3,700.0               | 6.59            | 44.15       | 3,685.0               | 191.6        | 186.0        | -179.0                  | 0.00                    | 0.00                   | 0.00                  |
| 3,800.0               | 6.59            | 44.15       | 3,784.3               | 199.8        | 194.0        | -186.7                  | 0.00                    | 0.00                   | 0.00                  |
| 3,900.0               | 6.59            | 44.15       | 3,883.7               | 208.0        | 202.0        | -194.3                  | 0.00                    | 0.00                   | 0.00                  |
| 4,000.0               | 6.59            | 44.15       | 3,983.0               | 216.3        | 210.0        | -202.0                  | 0.00                    | 0.00                   | 0.00                  |
| 4,100.0               | 6.59            | 44.15       | 4,082.4               | 224.5        | 218.0        | -209.7                  | 0.00                    | 0.00                   | 0.00                  |
| 4,200.0               | 6.59            | 44.15       | 4,181.7               | 232.7        | 225.9        | -217.4                  | 0.00                    | 0.00                   | 0.00                  |
| 4,300.0               | 6.59            | 44.15       | 4,281.0               | 240.9        | 233.9        | -225.1                  | 0.00                    | 0.00                   | 0.00                  |
| 4,400.0               | 6.59            | 44.15       | 4,380.4               | 249.2        | 241.9        | -232.8                  | 0.00                    | 0.00                   | 0.00                  |
| 4,500.0               | 6.59            | 44.15       | 4,479.7               | 257.4        | 249.9        | -240.5                  | 0.00                    | 0.00                   | 0.00                  |
| 4,600.0               | 6.59            | 44.15       | 4,579.1               | 265.6        | 257.9        | -248.2                  | 0.00                    | 0.00                   | 0.00                  |
| 4,700.0               | 6.59            | 44.15       | 4,678.4               | 273.9        | 265.9        | -255.9                  | 0.00                    | 0.00                   | 0.00                  |
| 4,800.0               | 6.59            | 44.15       | 4,777.7               | 282.1        | 273.9        | -263.6                  | 0.00                    | 0.00                   | 0.00                  |
| 4,900.0               | 6.59            | 44.15       | 4,877.1               | 290.3        | 281.9        | -271.2                  | 0.00                    | 0.00                   | 0.00                  |
| 5,000.0               | 6.59            | 44.15       | 4,976.4               | 298.6        | 289.9        | -278.9                  | 0.00                    | 0.00                   | 0.00                  |
| 5,100.0               | 6.59            | 44.15       | 5,075.8               | 306.8        | 297.9        | -286.6                  | 0.00                    | 0.00                   | 0.00                  |
| 5,200.0               | 6.59            | 44.15       | 5,175.1               | 315.0        | 305.9        | -294.3                  | 0.00                    | 0.00                   | 0.00                  |



## Planning Report

|                  |                             |                                     |                       |
|------------------|-----------------------------|-------------------------------------|-----------------------|
| <b>Database:</b> | PEDM                        | <b>Local Co-ordinate Reference:</b> | Well #603H            |
| <b>Company:</b>  | Midland                     | <b>TVD Reference:</b>               | kb = 26' @ 3668.0usft |
| <b>Project:</b>  | Lea County, NM (NAD 83 NME) | <b>MD Reference:</b>                | kb = 26' @ 3668.0usft |
| <b>Site:</b>     | Modelo 10 Fed Com           | <b>North Reference:</b>             | Grid                  |
| <b>Well:</b>     | #603H                       | <b>Survey Calculation Method:</b>   | Minimum Curvature     |
| <b>Wellbore:</b> | OH                          |                                     |                       |
| <b>Design:</b>   | Plan #0.1 RT                |                                     |                       |

| 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) |  |
| 5,300.0               | 6.59            | 44.15       | 5,274.4               | 323.2        | 313.8        | -302.0                  | 0.00                    | 0.00                   | 0.00                  |  |
| 5,400.0               | 6.59            | 44.15       | 5,373.8               | 331.5        | 321.8        | -309.7                  | 0.00                    | 0.00                   | 0.00                  |  |
| 5,500.0               | 6.59            | 44.15       | 5,473.1               | 339.7        | 329.8        | -317.4                  | 0.00                    | 0.00                   | 0.00                  |  |
| 5,600.0               | 6.59            | 44.15       | 5,572.5               | 347.9        | 337.8        | -325.1                  | 0.00                    | 0.00                   | 0.00                  |  |
| 5,700.0               | 6.59            | 44.15       | 5,671.8               | 356.2        | 345.8        | -332.8                  | 0.00                    | 0.00                   | 0.00                  |  |
| 5,800.0               | 6.59            | 44.15       | 5,771.1               | 364.4        | 353.8        | -340.4                  | 0.00                    | 0.00                   | 0.00                  |  |
| 5,900.0               | 6.59            | 44.15       | 5,870.5               | 372.6        | 361.8        | -348.1                  | 0.00                    | 0.00                   | 0.00                  |  |
| 6,000.0               | 6.59            | 44.15       | 5,969.8               | 380.9        | 369.8        | -355.8                  | 0.00                    | 0.00                   | 0.00                  |  |
| 6,100.0               | 6.59            | 44.15       | 6,069.2               | 389.1        | 377.8        | -363.5                  | 0.00                    | 0.00                   | 0.00                  |  |
| 6,200.0               | 6.59            | 44.15       | 6,168.5               | 397.3        | 385.8        | -371.2                  | 0.00                    | 0.00                   | 0.00                  |  |
| 6,300.0               | 6.59            | 44.15       | 6,267.8               | 405.5        | 393.8        | -378.9                  | 0.00                    | 0.00                   | 0.00                  |  |
| 6,400.0               | 6.59            | 44.15       | 6,367.2               | 413.8        | 401.7        | -386.6                  | 0.00                    | 0.00                   | 0.00                  |  |
| 6,500.0               | 6.59            | 44.15       | 6,466.5               | 422.0        | 409.7        | -394.3                  | 0.00                    | 0.00                   | 0.00                  |  |
| 6,600.0               | 6.59            | 44.15       | 6,565.9               | 430.2        | 417.7        | -402.0                  | 0.00                    | 0.00                   | 0.00                  |  |
| 6,638.8               | 6.59            | 44.15       | 6,604.4               | 433.4        | 420.8        | -404.9                  | 0.00                    | 0.00                   | 0.00                  |  |
| 6,700.0               | 5.36            | 44.15       | 6,665.3               | 438.0        | 425.3        | -409.2                  | 2.00                    | -2.00                  | 0.00                  |  |
| 6,800.0               | 3.36            | 44.15       | 6,765.0               | 443.5        | 430.6        | -414.3                  | 2.00                    | -2.00                  | 0.00                  |  |
| 6,900.0               | 1.36            | 44.15       | 6,864.9               | 446.4        | 433.4        | -417.1                  | 2.00                    | -2.00                  | 0.00                  |  |
| 6,968.1               | 0.00            | 0.00        | 6,933.0               | 447.0        | 434.0        | -417.6                  | 2.00                    | -2.00                  | 0.00                  |  |
| 7,000.0               | 0.00            | 0.00        | 6,964.9               | 447.0        | 434.0        | -417.6                  | 0.00                    | 0.00                   | 0.00                  |  |
| 7,100.0               | 0.00            | 0.00        | 7,064.9               | 447.0        | 434.0        | -417.6                  | 0.00                    | 0.00                   | 0.00                  |  |
| 7,200.0               | 0.00            | 0.00        | 7,164.9               | 447.0        | 434.0        | -417.6                  | 0.00                    | 0.00                   | 0.00                  |  |
| 7,300.0               | 0.00            | 0.00        | 7,264.9               | 447.0        | 434.0        | -417.6                  | 0.00                    | 0.00                   | 0.00                  |  |
| 7,400.0               | 0.00            | 0.00        | 7,364.9               | 447.0        | 434.0        | -417.6                  | 0.00                    | 0.00                   | 0.00                  |  |
| 7,500.0               | 0.00            | 0.00        | 7,464.9               | 447.0        | 434.0        | -417.6                  | 0.00                    | 0.00                   | 0.00                  |  |
| 7,600.0               | 0.00            | 0.00        | 7,564.9               | 447.0        | 434.0        | -417.6                  | 0.00                    | 0.00                   | 0.00                  |  |
| 7,700.0               | 0.00            | 0.00        | 7,664.9               | 447.0        | 434.0        | -417.6                  | 0.00                    | 0.00                   | 0.00                  |  |
| 7,800.0               | 0.00            | 0.00        | 7,764.9               | 447.0        | 434.0        | -417.6                  | 0.00                    | 0.00                   | 0.00                  |  |
| 7,900.0               | 0.00            | 0.00        | 7,864.9               | 447.0        | 434.0        | -417.6                  | 0.00                    | 0.00                   | 0.00                  |  |
| 8,000.0               | 0.00            | 0.00        | 7,964.9               | 447.0        | 434.0        | -417.6                  | 0.00                    | 0.00                   | 0.00                  |  |
| 8,100.0               | 0.00            | 0.00        | 8,064.9               | 447.0        | 434.0        | -417.6                  | 0.00                    | 0.00                   | 0.00                  |  |
| 8,200.0               | 0.00            | 0.00        | 8,164.9               | 447.0        | 434.0        | -417.6                  | 0.00                    | 0.00                   | 0.00                  |  |
| 8,300.0               | 0.00            | 0.00        | 8,264.9               | 447.0        | 434.0        | -417.6                  | 0.00                    | 0.00                   | 0.00                  |  |
| 8,400.0               | 0.00            | 0.00        | 8,364.9               | 447.0        | 434.0        | -417.6                  | 0.00                    | 0.00                   | 0.00                  |  |
| 8,500.0               | 0.00            | 0.00        | 8,464.9               | 447.0        | 434.0        | -417.6                  | 0.00                    | 0.00                   | 0.00                  |  |
| 8,600.0               | 0.00            | 0.00        | 8,564.9               | 447.0        | 434.0        | -417.6                  | 0.00                    | 0.00                   | 0.00                  |  |
| 8,700.0               | 0.00            | 0.00        | 8,664.9               | 447.0        | 434.0        | -417.6                  | 0.00                    | 0.00                   | 0.00                  |  |
| 8,800.0               | 0.00            | 0.00        | 8,764.9               | 447.0        | 434.0        | -417.6                  | 0.00                    | 0.00                   | 0.00                  |  |
| 8,900.0               | 0.00            | 0.00        | 8,864.9               | 447.0        | 434.0        | -417.6                  | 0.00                    | 0.00                   | 0.00                  |  |
| 9,000.0               | 0.00            | 0.00        | 8,964.9               | 447.0        | 434.0        | -417.6                  | 0.00                    | 0.00                   | 0.00                  |  |
| 9,100.0               | 0.00            | 0.00        | 9,064.9               | 447.0        | 434.0        | -417.6                  | 0.00                    | 0.00                   | 0.00                  |  |
| 9,200.0               | 0.00            | 0.00        | 9,164.9               | 447.0        | 434.0        | -417.6                  | 0.00                    | 0.00                   | 0.00                  |  |
| 9,300.0               | 0.00            | 0.00        | 9,264.9               | 447.0        | 434.0        | -417.6                  | 0.00                    | 0.00                   | 0.00                  |  |
| 9,400.0               | 0.00            | 0.00        | 9,364.9               | 447.0        | 434.0        | -417.6                  | 0.00                    | 0.00                   | 0.00                  |  |
| 9,500.0               | 0.00            | 0.00        | 9,464.9               | 447.0        | 434.0        | -417.6                  | 0.00                    | 0.00                   | 0.00                  |  |
| 9,600.0               | 0.00            | 0.00        | 9,564.9               | 447.0        | 434.0        | -417.6                  | 0.00                    | 0.00                   | 0.00                  |  |
| 9,700.0               | 0.00            | 0.00        | 9,664.9               | 447.0        | 434.0        | -417.6                  | 0.00                    | 0.00                   | 0.00                  |  |
| 9,800.0               | 0.00            | 0.00        | 9,764.9               | 447.0        | 434.0        | -417.6                  | 0.00                    | 0.00                   | 0.00                  |  |
| 9,900.0               | 0.00            | 0.00        | 9,864.9               | 447.0        | 434.0        | -417.6                  | 0.00                    | 0.00                   | 0.00                  |  |
| 10,000.0              | 0.00            | 0.00        | 9,964.9               | 447.0        | 434.0        | -417.6                  | 0.00                    | 0.00                   | 0.00                  |  |
| 10,100.0              | 0.00            | 0.00        | 10,064.9              | 447.0        | 434.0        | -417.6                  | 0.00                    | 0.00                   | 0.00                  |  |
| 10,200.0              | 0.00            | 0.00        | 10,164.9              | 447.0        | 434.0        | -417.6                  | 0.00                    | 0.00                   | 0.00                  |  |
| 10,300.0              | 0.00            | 0.00        | 10,264.9              | 447.0        | 434.0        | -417.6                  | 0.00                    | 0.00                   | 0.00                  |  |
| 10,400.0              | 0.00            | 0.00        | 10,364.9              | 447.0        | 434.0        | -417.6                  | 0.00                    | 0.00                   | 0.00                  |  |



## Planning Report

|                  |                             |                                     |                       |
|------------------|-----------------------------|-------------------------------------|-----------------------|
| <b>Database:</b> | PEDM                        | <b>Local Co-ordinate Reference:</b> | Well #603H            |
| <b>Company:</b>  | Midland                     | <b>TVD Reference:</b>               | kb = 26' @ 3668.0usft |
| <b>Project:</b>  | Lea County, NM (NAD 83 NME) | <b>MD Reference:</b>                | kb = 26' @ 3668.0usft |
| <b>Site:</b>     | Modelo 10 Fed Com           | <b>North Reference:</b>             | Grid                  |
| <b>Well:</b>     | #603H                       | <b>Survey Calculation Method:</b>   | Minimum Curvature     |
| <b>Wellbore:</b> | OH                          |                                     |                       |
| <b>Design:</b>   | Plan #0.1 RT                |                                     |                       |

| 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) |
| 10,500.0              | 0.00            | 0.00        | 10,464.9              | 447.0        | 434.0        | -417.6                  | 0.00                    | 0.00                   | 0.00                  |
| 10,600.0              | 0.00            | 0.00        | 10,564.9              | 447.0        | 434.0        | -417.6                  | 0.00                    | 0.00                   | 0.00                  |
| 10,700.0              | 0.00            | 0.00        | 10,664.9              | 447.0        | 434.0        | -417.6                  | 0.00                    | 0.00                   | 0.00                  |
| 10,800.0              | 0.00            | 0.00        | 10,764.9              | 447.0        | 434.0        | -417.6                  | 0.00                    | 0.00                   | 0.00                  |
| 10,900.0              | 0.00            | 0.00        | 10,864.9              | 447.0        | 434.0        | -417.6                  | 0.00                    | 0.00                   | 0.00                  |
| 11,000.0              | 0.00            | 0.00        | 10,964.9              | 447.0        | 434.0        | -417.6                  | 0.00                    | 0.00                   | 0.00                  |
| 11,100.0              | 0.00            | 0.00        | 11,064.9              | 447.0        | 434.0        | -417.6                  | 0.00                    | 0.00                   | 0.00                  |
| 11,200.0              | 0.00            | 0.00        | 11,164.9              | 447.0        | 434.0        | -417.6                  | 0.00                    | 0.00                   | 0.00                  |
| 11,300.0              | 0.00            | 0.00        | 11,264.9              | 447.0        | 434.0        | -417.6                  | 0.00                    | 0.00                   | 0.00                  |
| 11,317.6              | 0.00            | 0.00        | 11,282.5              | 447.0        | 434.0        | -417.6                  | 0.00                    | 0.00                   | 0.00                  |
| 11,325.0              | 0.89            | 178.85      | 11,289.9              | 446.9        | 434.0        | -417.6                  | 12.00                   | 12.00                  | 0.00                  |
| 11,350.0              | 3.89            | 178.85      | 11,314.8              | 445.9        | 434.0        | -416.5                  | 12.00                   | 12.00                  | 0.00                  |
| 11,375.0              | 6.89            | 178.85      | 11,339.7              | 443.6        | 434.1        | -414.2                  | 12.00                   | 12.00                  | 0.00                  |
| 11,400.0              | 9.89            | 178.85      | 11,364.5              | 439.9        | 434.1        | -410.5                  | 12.00                   | 12.00                  | 0.00                  |
| 11,425.0              | 12.89           | 178.85      | 11,389.0              | 435.0        | 434.2        | -405.6                  | 12.00                   | 12.00                  | 0.00                  |
| 11,450.0              | 15.89           | 178.85      | 11,413.2              | 428.8        | 434.4        | -399.4                  | 12.00                   | 12.00                  | 0.00                  |
| 11,475.0              | 18.89           | 178.85      | 11,437.0              | 421.3        | 434.5        | -391.9                  | 12.00                   | 12.00                  | 0.00                  |
| 11,500.0              | 21.89           | 178.85      | 11,460.5              | 412.6        | 434.7        | -383.2                  | 12.00                   | 12.00                  | 0.00                  |
| 11,525.0              | 24.89           | 178.85      | 11,483.4              | 402.7        | 434.9        | -373.3                  | 12.00                   | 12.00                  | 0.00                  |
| 11,538.1              | 26.46           | 178.85      | 11,495.2              | 397.0        | 435.0        | -367.7                  | 12.00                   | 12.00                  | 0.00                  |
| 11,550.0              | 27.89           | 178.91      | 11,505.8              | 391.6        | 435.1        | -362.2                  | 12.00                   | 12.00                  | 0.43                  |
| 11,575.0              | 30.89           | 179.00      | 11,527.6              | 379.3        | 435.3        | -350.0                  | 12.00                   | 12.00                  | 0.37                  |
| 11,600.0              | 33.89           | 179.08      | 11,548.7              | 365.9        | 435.6        | -336.6                  | 12.00                   | 12.00                  | 0.31                  |
| 11,625.0              | 36.89           | 179.14      | 11,569.1              | 351.4        | 435.8        | -322.1                  | 12.00                   | 12.00                  | 0.27                  |
| 11,650.0              | 39.89           | 179.20      | 11,588.7              | 335.9        | 436.0        | -306.6                  | 12.00                   | 12.00                  | 0.23                  |
| 11,675.0              | 42.89           | 179.25      | 11,607.4              | 319.4        | 436.2        | -290.1                  | 12.00                   | 12.00                  | 0.20                  |
| 11,700.0              | 45.89           | 179.30      | 11,625.3              | 301.9        | 436.5        | -272.7                  | 12.00                   | 12.00                  | 0.18                  |
| 11,725.0              | 48.89           | 179.34      | 11,642.2              | 283.5        | 436.7        | -254.3                  | 12.00                   | 12.00                  | 0.16                  |
| 11,750.0              | 51.89           | 179.37      | 11,658.1              | 264.2        | 436.9        | -235.1                  | 12.00                   | 12.00                  | 0.15                  |
| 11,775.0              | 54.89           | 179.41      | 11,673.0              | 244.2        | 437.1        | -215.0                  | 12.00                   | 12.00                  | 0.14                  |
| 11,800.0              | 57.89           | 179.44      | 11,686.9              | 223.4        | 437.3        | -194.2                  | 12.00                   | 12.00                  | 0.13                  |
| 11,825.0              | 60.89           | 179.47      | 11,699.6              | 201.8        | 437.5        | -172.8                  | 12.00                   | 12.00                  | 0.12                  |
| 11,850.0              | 63.89           | 179.50      | 11,711.2              | 179.7        | 437.7        | -150.6                  | 12.00                   | 12.00                  | 0.11                  |
| 11,875.0              | 66.89           | 179.53      | 11,721.6              | 157.0        | 437.9        | -128.0                  | 12.00                   | 12.00                  | 0.11                  |
| 11,900.0              | 69.89           | 179.55      | 11,730.8              | 133.7        | 438.1        | -104.8                  | 12.00                   | 12.00                  | 0.10                  |
| 11,925.0              | 72.89           | 179.58      | 11,738.8              | 110.0        | 438.3        | -81.1                   | 12.00                   | 12.00                  | 0.10                  |
| 11,950.0              | 75.89           | 179.60      | 11,745.5              | 86.0         | 438.4        | -57.1                   | 12.00                   | 12.00                  | 0.10                  |
| 11,975.0              | 78.89           | 179.62      | 11,751.0              | 61.6         | 438.6        | -32.7                   | 12.00                   | 12.00                  | 0.09                  |
| 12,000.0              | 81.89           | 179.65      | 11,755.1              | 36.9         | 438.8        | -8.1                    | 12.00                   | 12.00                  | 0.09                  |
| 12,025.0              | 84.89           | 179.67      | 11,758.0              | 12.1         | 438.9        | 16.7                    | 12.00                   | 12.00                  | 0.09                  |
| 12,050.0              | 87.89           | 179.69      | 11,759.6              | -12.9        | 439.1        | 41.6                    | 12.00                   | 12.00                  | 0.09                  |
| 12,067.6              | 90.00           | 179.71      | 11,759.9              | -30.4        | 439.1        | 59.1                    | 12.00                   | 12.00                  | 0.09                  |
| 12,100.0              | 90.00           | 179.71      | 11,759.9              | -62.8        | 439.3        | 91.5                    | 0.00                    | 0.00                   | 0.00                  |
| 12,200.0              | 90.00           | 179.71      | 11,759.9              | -162.8       | 439.8        | 191.3                   | 0.00                    | 0.00                   | 0.00                  |
| 12,300.0              | 90.00           | 179.71      | 11,759.9              | -262.8       | 440.3        | 291.1                   | 0.00                    | 0.00                   | 0.00                  |
| 12,400.0              | 90.00           | 179.71      | 11,759.9              | -362.8       | 440.9        | 390.9                   | 0.00                    | 0.00                   | 0.00                  |
| 12,500.0              | 90.00           | 179.71      | 11,759.9              | -462.8       | 441.4        | 490.8                   | 0.00                    | 0.00                   | 0.00                  |
| 12,600.0              | 90.00           | 179.71      | 11,759.9              | -562.8       | 441.9        | 590.6                   | 0.00                    | 0.00                   | 0.00                  |
| 12,700.0              | 90.00           | 179.71      | 11,759.9              | -662.8       | 442.4        | 690.4                   | 0.00                    | 0.00                   | 0.00                  |
| 12,800.0              | 90.00           | 179.71      | 11,759.9              | -762.8       | 442.9        | 790.2                   | 0.00                    | 0.00                   | 0.00                  |
| 12,900.0              | 90.00           | 179.71      | 11,760.0              | -862.8       | 443.4        | 890.0                   | 0.00                    | 0.00                   | 0.00                  |
| 13,000.0              | 90.00           | 179.71      | 11,760.0              | -962.8       | 443.9        | 989.8                   | 0.00                    | 0.00                   | 0.00                  |
| 13,100.0              | 90.00           | 179.71      | 11,760.0              | -1,062.8     | 444.4        | 1,089.7                 | 0.00                    | 0.00                   | 0.00                  |
| 13,200.0              | 90.00           | 179.71      | 11,760.0              | -1,162.8     | 444.9        | 1,189.5                 | 0.00                    | 0.00                   | 0.00                  |



## Planning Report

|                  |                             |                                     |                       |
|------------------|-----------------------------|-------------------------------------|-----------------------|
| <b>Database:</b> | PEDM                        | <b>Local Co-ordinate Reference:</b> | Well #603H            |
| <b>Company:</b>  | Midland                     | <b>TVD Reference:</b>               | kb = 26' @ 3668.0usft |
| <b>Project:</b>  | Lea County, NM (NAD 83 NME) | <b>MD Reference:</b>                | kb = 26' @ 3668.0usft |
| <b>Site:</b>     | Modelo 10 Fed Com           | <b>North Reference:</b>             | Grid                  |
| <b>Well:</b>     | #603H                       | <b>Survey Calculation Method:</b>   | Minimum Curvature     |
| <b>Wellbore:</b> | OH                          |                                     |                       |
| <b>Design:</b>   | Plan #0.1 RT                |                                     |                       |

| 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) |
| 13,300.0              | 90.00           | 179.71      | 11,760.0              | -1,262.8     | 445.5        | 1,289.3                 | 0.00                    | 0.00                   | 0.00                  |
| 13,400.0              | 90.00           | 179.71      | 11,760.0              | -1,362.8     | 446.0        | 1,389.1                 | 0.00                    | 0.00                   | 0.00                  |
| 13,500.0              | 90.00           | 179.71      | 11,760.0              | -1,462.8     | 446.5        | 1,488.9                 | 0.00                    | 0.00                   | 0.00                  |
| 13,600.0              | 90.00           | 179.71      | 11,760.0              | -1,562.8     | 447.0        | 1,588.7                 | 0.00                    | 0.00                   | 0.00                  |
| 13,700.0              | 90.00           | 179.71      | 11,760.0              | -1,662.8     | 447.5        | 1,688.6                 | 0.00                    | 0.00                   | 0.00                  |
| 13,800.0              | 90.00           | 179.71      | 11,760.0              | -1,762.8     | 448.0        | 1,788.4                 | 0.00                    | 0.00                   | 0.00                  |
| 13,900.0              | 90.00           | 179.71      | 11,760.0              | -1,862.8     | 448.5        | 1,888.2                 | 0.00                    | 0.00                   | 0.00                  |
| 14,000.0              | 90.00           | 179.71      | 11,760.0              | -1,962.8     | 449.0        | 1,988.0                 | 0.00                    | 0.00                   | 0.00                  |
| 14,100.0              | 90.00           | 179.71      | 11,760.0              | -2,062.8     | 449.6        | 2,087.8                 | 0.00                    | 0.00                   | 0.00                  |
| 14,186.2              | 90.00           | 179.71      | 11,760.0              | -2,149.0     | 450.0        | 2,173.9                 | 0.00                    | 0.00                   | 0.00                  |
| 14,200.0              | 90.00           | 179.71      | 11,760.0              | -2,162.8     | 450.1        | 2,187.7                 | 0.00                    | 0.00                   | 0.00                  |
| 14,300.0              | 90.00           | 179.70      | 11,760.0              | -2,262.8     | 450.6        | 2,287.5                 | 0.00                    | 0.00                   | 0.00                  |
| 14,400.0              | 90.00           | 179.70      | 11,760.0              | -2,362.8     | 451.1        | 2,387.3                 | 0.00                    | 0.00                   | 0.00                  |
| 14,500.0              | 90.00           | 179.69      | 11,760.0              | -2,462.8     | 451.6        | 2,487.1                 | 0.00                    | 0.00                   | 0.00                  |
| 14,600.0              | 90.00           | 179.69      | 11,760.0              | -2,562.8     | 452.2        | 2,586.9                 | 0.00                    | 0.00                   | 0.00                  |
| 14,700.0              | 90.00           | 179.69      | 11,760.0              | -2,662.8     | 452.7        | 2,686.7                 | 0.00                    | 0.00                   | 0.00                  |
| 14,800.0              | 90.00           | 179.68      | 11,760.0              | -2,762.8     | 453.3        | 2,786.6                 | 0.00                    | 0.00                   | 0.00                  |
| 14,900.0              | 90.00           | 179.68      | 11,760.0              | -2,862.8     | 453.8        | 2,886.4                 | 0.00                    | 0.00                   | 0.00                  |
| 15,000.0              | 90.00           | 179.67      | 11,760.0              | -2,962.8     | 454.4        | 2,986.2                 | 0.00                    | 0.00                   | 0.00                  |
| 15,100.0              | 90.00           | 179.67      | 11,760.0              | -3,062.8     | 455.0        | 3,086.0                 | 0.00                    | 0.00                   | 0.00                  |
| 15,200.0              | 90.00           | 179.67      | 11,760.0              | -3,162.8     | 455.6        | 3,185.8                 | 0.00                    | 0.00                   | 0.00                  |
| 15,300.0              | 90.00           | 179.66      | 11,760.0              | -3,262.8     | 456.1        | 3,285.7                 | 0.00                    | 0.00                   | 0.00                  |
| 15,400.0              | 90.00           | 179.66      | 11,760.0              | -3,362.8     | 456.7        | 3,385.5                 | 0.00                    | 0.00                   | 0.00                  |
| 15,500.0              | 90.00           | 179.65      | 11,760.0              | -3,462.8     | 457.3        | 3,485.3                 | 0.00                    | 0.00                   | 0.00                  |
| 15,600.0              | 90.00           | 179.65      | 11,760.0              | -3,562.8     | 457.9        | 3,585.1                 | 0.00                    | 0.00                   | 0.00                  |
| 15,700.0              | 90.00           | 179.65      | 11,760.0              | -3,662.8     | 458.6        | 3,685.0                 | 0.00                    | 0.00                   | 0.00                  |
| 15,800.0              | 90.00           | 179.64      | 11,760.0              | -3,762.8     | 459.2        | 3,784.8                 | 0.00                    | 0.00                   | 0.00                  |
| 15,900.0              | 90.00           | 179.64      | 11,760.0              | -3,862.8     | 459.8        | 3,884.6                 | 0.00                    | 0.00                   | 0.00                  |
| 16,000.0              | 90.00           | 179.63      | 11,760.0              | -3,962.8     | 460.4        | 3,984.4                 | 0.00                    | 0.00                   | 0.00                  |
| 16,100.0              | 90.00           | 179.63      | 11,760.0              | -4,062.8     | 461.1        | 4,084.3                 | 0.00                    | 0.00                   | 0.00                  |
| 16,200.0              | 90.00           | 179.63      | 11,760.0              | -4,162.8     | 461.7        | 4,184.1                 | 0.00                    | 0.00                   | 0.00                  |
| 16,300.0              | 90.00           | 179.62      | 11,760.0              | -4,262.8     | 462.4        | 4,283.9                 | 0.00                    | 0.00                   | 0.00                  |
| 16,400.0              | 90.00           | 179.62      | 11,760.0              | -4,362.8     | 463.1        | 4,383.7                 | 0.00                    | 0.00                   | 0.00                  |
| 16,500.0              | 90.00           | 179.61      | 11,760.0              | -4,462.8     | 463.7        | 4,483.6                 | 0.00                    | 0.00                   | 0.00                  |
| 16,600.0              | 90.00           | 179.61      | 11,760.0              | -4,562.8     | 464.4        | 4,583.4                 | 0.00                    | 0.00                   | 0.00                  |
| 16,700.0              | 90.00           | 179.60      | 11,760.0              | -4,662.8     | 465.1        | 4,683.2                 | 0.00                    | 0.00                   | 0.00                  |
| 16,800.0              | 90.00           | 179.60      | 11,760.0              | -4,762.8     | 465.8        | 4,783.1                 | 0.00                    | 0.00                   | 0.00                  |
| 16,829.2              | 90.00           | 179.60      | 11,760.0              | -4,792.0     | 466.0        | 4,812.2                 | 0.00                    | 0.00                   | 0.00                  |
| 16,900.0              | 90.00           | 179.60      | 11,760.0              | -4,862.8     | 466.5        | 4,882.9                 | 0.00                    | 0.00                   | 0.00                  |
| 17,000.0              | 90.00           | 179.61      | 11,760.0              | -4,962.8     | 467.2        | 4,982.7                 | 0.00                    | 0.00                   | 0.00                  |
| 17,100.0              | 90.00           | 179.61      | 11,760.0              | -5,062.8     | 467.9        | 5,082.5                 | 0.00                    | 0.00                   | 0.00                  |
| 17,200.0              | 90.00           | 179.62      | 11,760.0              | -5,162.8     | 468.5        | 5,182.4                 | 0.00                    | 0.00                   | 0.00                  |
| 17,300.0              | 90.00           | 179.62      | 11,760.0              | -5,262.8     | 469.2        | 5,282.2                 | 0.00                    | 0.00                   | 0.00                  |
| 17,400.0              | 90.00           | 179.63      | 11,760.0              | -5,362.8     | 469.8        | 5,382.0                 | 0.00                    | 0.00                   | 0.00                  |
| 17,500.0              | 90.00           | 179.63      | 11,760.0              | -5,462.8     | 470.5        | 5,481.8                 | 0.00                    | 0.00                   | 0.00                  |
| 17,600.0              | 90.00           | 179.64      | 11,760.0              | -5,562.8     | 471.1        | 5,581.7                 | 0.00                    | 0.00                   | 0.00                  |
| 17,700.0              | 90.00           | 179.64      | 11,760.0              | -5,662.8     | 471.8        | 5,681.5                 | 0.00                    | 0.00                   | 0.00                  |
| 17,800.0              | 90.00           | 179.65      | 11,760.0              | -5,762.7     | 472.4        | 5,781.3                 | 0.00                    | 0.00                   | 0.00                  |
| 17,900.0              | 90.00           | 179.65      | 11,760.0              | -5,862.7     | 473.0        | 5,881.1                 | 0.00                    | 0.00                   | 0.00                  |
| 18,000.0              | 90.00           | 179.66      | 11,760.0              | -5,962.7     | 473.6        | 5,981.0                 | 0.00                    | 0.00                   | 0.00                  |
| 18,100.0              | 90.00           | 179.66      | 11,760.0              | -6,062.7     | 474.2        | 6,080.8                 | 0.00                    | 0.00                   | 0.00                  |
| 18,200.0              | 90.00           | 179.67      | 11,760.0              | -6,162.7     | 474.8        | 6,180.6                 | 0.00                    | 0.00                   | 0.00                  |
| 18,300.0              | 90.00           | 179.67      | 11,760.0              | -6,262.7     | 475.4        | 6,280.4                 | 0.00                    | 0.00                   | 0.00                  |
| 18,400.0              | 90.00           | 179.68      | 11,760.0              | -6,362.7     | 475.9        | 6,380.2                 | 0.00                    | 0.00                   | 0.00                  |



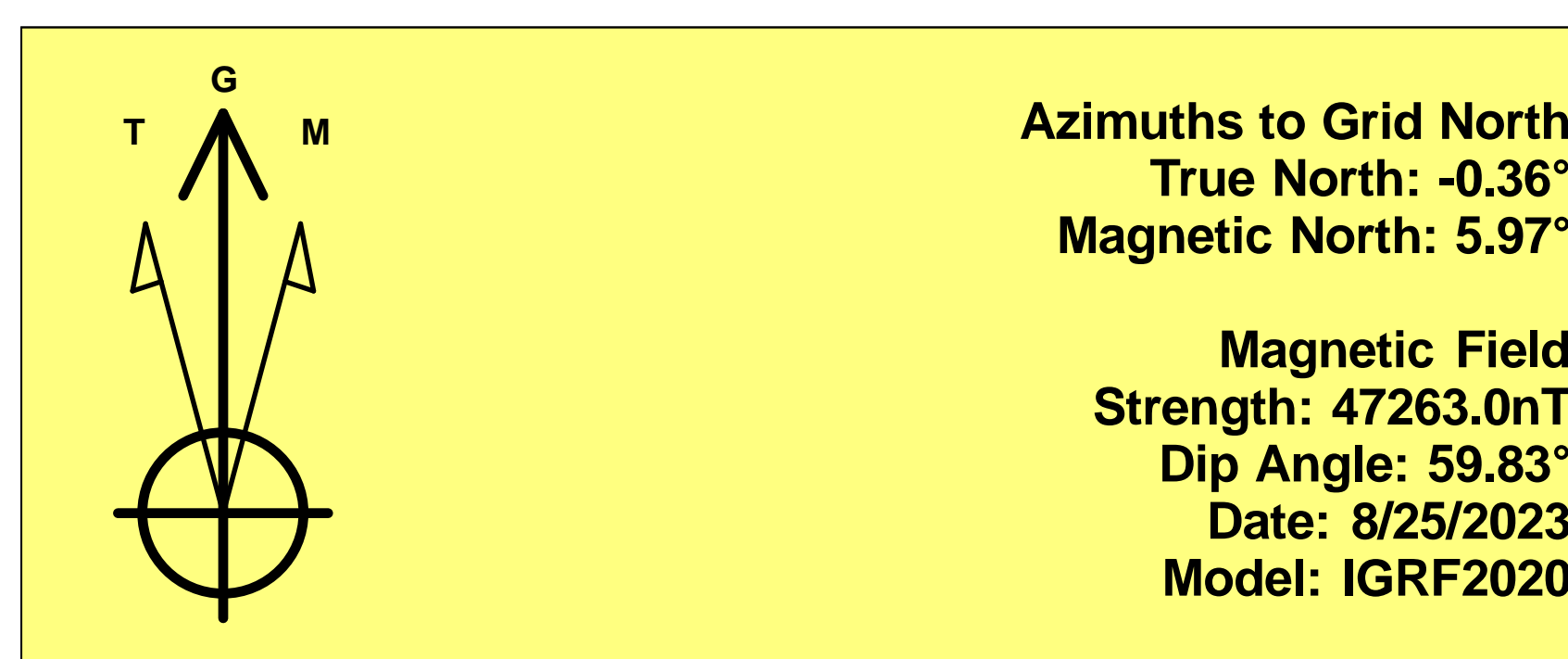
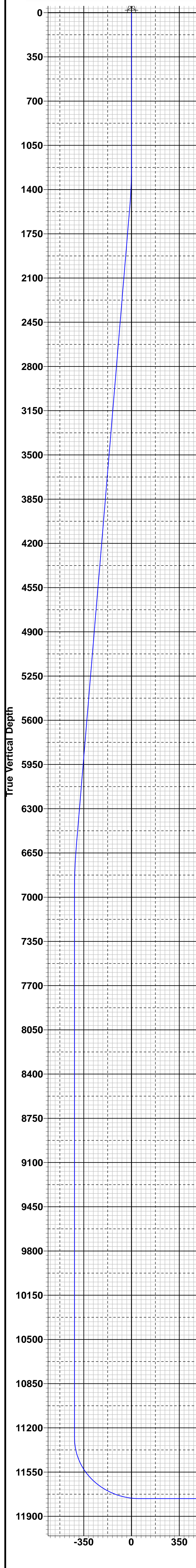
## Planning Report

|                  |                             |                                     |                       |
|------------------|-----------------------------|-------------------------------------|-----------------------|
| <b>Database:</b> | PEDM                        | <b>Local Co-ordinate Reference:</b> | Well #603H            |
| <b>Company:</b>  | Midland                     | <b>TVD Reference:</b>               | kb = 26' @ 3668.0usft |
| <b>Project:</b>  | Lea County, NM (NAD 83 NME) | <b>MD Reference:</b>                | kb = 26' @ 3668.0usft |
| <b>Site:</b>     | Modelo 10 Fed Com           | <b>North Reference:</b>             | Grid                  |
| <b>Well:</b>     | #603H                       | <b>Survey Calculation Method:</b>   | Minimum Curvature     |
| <b>Wellbore:</b> | OH                          |                                     |                       |
| <b>Design:</b>   | Plan #0.1 RT                |                                     |                       |

| 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) |  |
| 18,500.0              | 90.00           | 179.68      | 11,760.0              | -6,462.7     | 476.5        | 6,480.1                 | 0.00                    | 0.00                   | 0.00                  |  |
| 18,600.0              | 90.00           | 179.69      | 11,760.0              | -6,562.7     | 477.0        | 6,579.9                 | 0.00                    | 0.00                   | 0.00                  |  |
| 18,700.0              | 90.00           | 179.69      | 11,760.0              | -6,662.7     | 477.6        | 6,679.7                 | 0.00                    | 0.00                   | 0.00                  |  |
| 18,800.0              | 90.00           | 179.70      | 11,760.0              | -6,762.7     | 478.1        | 6,779.5                 | 0.00                    | 0.00                   | 0.00                  |  |
| 18,900.0              | 90.00           | 179.70      | 11,760.0              | -6,862.7     | 478.7        | 6,879.3                 | 0.00                    | 0.00                   | 0.00                  |  |
| 19,000.0              | 90.00           | 179.70      | 11,760.0              | -6,962.7     | 479.2        | 6,979.2                 | 0.00                    | 0.00                   | 0.00                  |  |
| 19,100.0              | 90.00           | 179.71      | 11,760.0              | -7,062.7     | 479.7        | 7,079.0                 | 0.00                    | 0.00                   | 0.00                  |  |
| 19,200.0              | 90.00           | 179.71      | 11,760.0              | -7,162.7     | 480.2        | 7,178.8                 | 0.00                    | 0.00                   | 0.00                  |  |
| 19,300.0              | 90.00           | 179.72      | 11,760.0              | -7,262.7     | 480.7        | 7,278.6                 | 0.00                    | 0.00                   | 0.00                  |  |
| 19,366.3              | 90.00           | 179.72      | 11,760.0              | -7,329.0     | 481.0        | 7,344.8                 | 0.00                    | 0.00                   | 0.00                  |  |

| Design Targets   |               |              |            |              |              |                 |                |                  |                   |  |
|--|---------------|--------------|------------|--------------|--------------|-----------------|----------------|------------------|-------------------|--|
| Target Name<br>- hit/miss target<br>- Shape                    | Dip Angle (°) | Dip Dir. (°) | TVD (usft) | +N/-S (usft) | +E/-W (usft) | Northing (usft) | Easting (usft) | Latitude         | Longitude         |  |
| KOP(Modelo 10 Fed Co<br>- plan hits target center<br>- Point   | 0.00          | 0.00         | 11,282.5   | 447.0        | 434.0        | 451,419.00      | 749,790.00     | 32° 14' 21.221 N | 103° 39' 32.869 W |  |
| FTP(Modelo 10 Fed Cor<br>- plan hits target center<br>- Point  | 0.00          | 0.00         | 11,495.2   | 397.0        | 435.0        | 451,369.00      | 749,791.00     | 32° 14' 20.726 N | 103° 39' 32.861 W |  |
| PBHL(Modelo 10 Fed C<br>- plan hits target center<br>- Point   | 0.00          | 0.00         | 11,760.0   | -7,329.0     | 481.0        | 443,643.00      | 749,837.00     | 32° 13' 4.272 N  | 103° 39' 32.890 W |  |
| Fed Perf 2(Modelo 10 F<br>- plan hits target center<br>- Point | 0.00          | 0.00         | 11,760.0   | -4,792.0     | 466.0        | 446,180.00      | 749,822.00     | 32° 13' 29.377 N | 103° 39' 32.880 W |  |
| Fed Perf 1(Modelo 10 F<br>- plan hits target center<br>- Point | 0.00          | 0.00         | 11,760.0   | -2,149.0     | 450.0        | 448,823.00      | 749,806.00     | 32° 13' 55.532 N | 103° 39' 32.873 W |  |





To convert a Magnetic Direction to a Grid Direction, Add 5.97°  
 To convert a Magnetic Direction to a True Direction, Add 6.33° East  
 To convert a True Direction to a Grid Direction, Subtract 0.36°

## Lea County, NM (NAD 83 NME)

**Modelo 10 Fed Com      #603H**

## Plan #0.1 RT

**PROJECT DETAILS:** Lea County, NM (NAD 83 NME)

**Geodetic System:** US State Plane 1983  
**Datum:** North American Datum 1983  
**Ellipsoid:** GRS 1980  
**Zone:** New Mexico Eastern Zone  
**System Datum:** Mean Sea Level

**WELL DETAILS: #603H**

3642.0  
 kb = 26' @ 3668.0usft  
 Northing 450972.00 Easting 749356.00 Latitude 32° 14' 16.825 N Longitude 103° 39' 37.955 W

## SECTION DETAILS

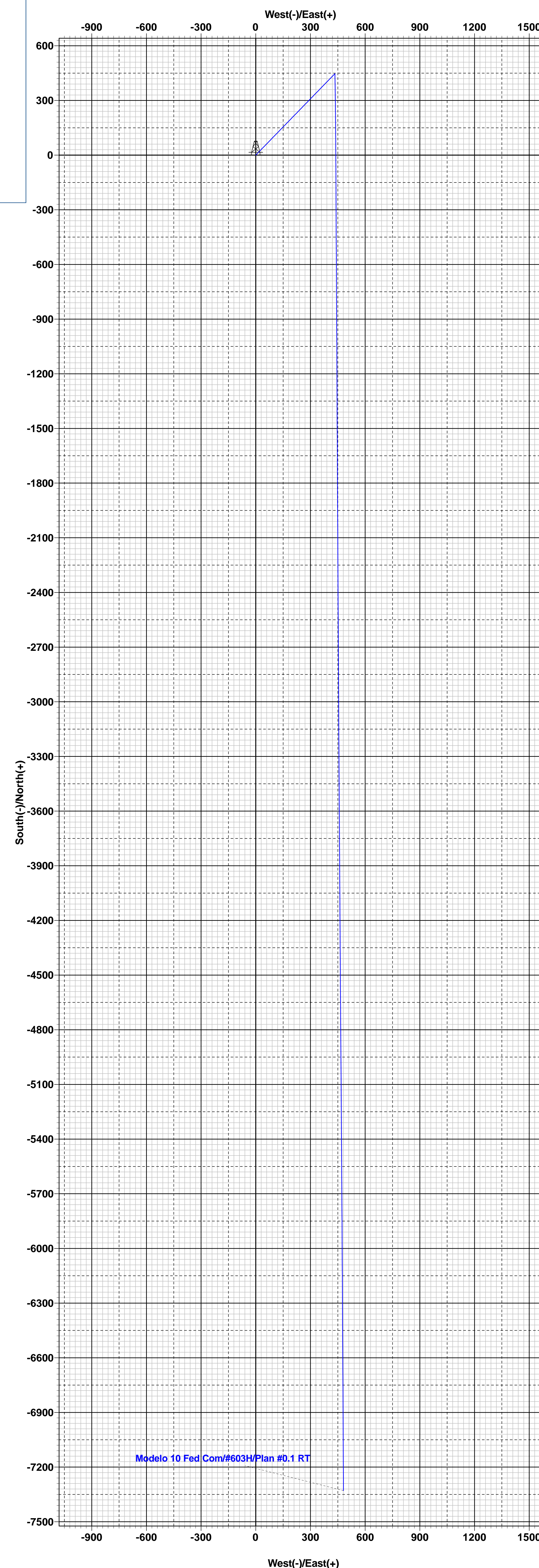
| Sec | MD      | Inc   | Azi    | TVD     | +N/-S   | +E/-W | Dleg  | TFace  | VSect  | Target                              |
|-----|---------|-------|--------|---------|---------|-------|-------|--------|--------|-------------------------------------|
| 1   | 0.0     | 0.00  | 0.00   | 0.0     | 0.0     | 0.0   | 0.00  | 0.00   | 0.0    |                                     |
| 2   | 1208.0  | 0.00  | 0.00   | 1208.0  | 0.0     | 0.0   | 0.00  | 0.00   | 0.0    |                                     |
| 3   | 1537.4  | 6.59  | 44.15  | 1536.6  | 13.6    | 13.2  | 2.00  | 44.15  | -12.7  |                                     |
| 4   | 6638.8  | 6.59  | 44.15  | 6604.4  | 433.4   | 420.8 | 0.00  | 0.00   | -404.9 |                                     |
| 5   | 6968.1  | 0.00  | 0.00   | 6933.0  | 447.0   | 434.0 | 2.00  | 180.00 | -417.6 |                                     |
| 6   | 11317.6 | 0.00  | 0.00   | 11282.5 | 447.0   | 434.0 | 0.00  | 0.00   | -417.6 | KOP(Modelo 10 Fed Com #603H)        |
| 7   | 11538.1 | 26.46 | 178.85 | 11495.2 | 397.0   | 435.0 | 12.00 | 178.85 | -367.7 | FTP(Modelo 10 Fed Com #603H)        |
| 8   | 12067.6 | 90.00 | 179.71 | 11759.9 | -30.4   | 439.1 | 12.00 | 0.95   | 59.1   |                                     |
| 9   | 14186.2 | 90.00 | 179.71 | 11760.0 | -2149.0 | 450.0 | 0.00  | 0.00   | 2173.9 | Fed Perf 1(Modelo 10 Fed Com #603H) |
| 10  | 16829.2 | 90.00 | 179.60 | 11760.0 | -4792.0 | 466.0 | 0.00  | -87.68 | 4812.2 | Fed Perf 2(Modelo 10 Fed Com #603H) |
| 11  | 19366.3 | 90.00 | 179.72 | 11760.0 | -7329.0 | 481.0 | 0.00  | 92.02  | 7344.8 | PBHL(Modelo 10 Fed Com #603H)       |

## CASING DETAILS

No casing data is available

### WELLBORE TARGET DETAILS (MAP CO-ORDINATES)

| Name                                | TVD     | +N-S    | +E-W  | Northing | Easting  |
|-------------------------------------|---------|---------|-------|----------|----------|
| KOP(Modelo 10 Fed Com #603H)        | 11282.5 | 447.0   | 434.0 | 451419.0 | 749790.0 |
| FTP(Modelo 10 Fed Com #603H)        | 11495.2 | 397.0   | 435.0 | 451369.0 | 749791.0 |
| Fed Perf 1(Modelo 10 Fed Com #603H) | 11760.0 | -2149.0 | 450.0 | 448823.0 | 749806.0 |
| Fed Perf 2(Modelo 10 Fed Com #603H) | 11760.0 | -4792.0 | 466.0 | 446180.0 | 749822.0 |
| PBHL(Modelo 10 Fed Com #603H)       | 11760.0 | -7329.0 | 481.0 | 436343.0 | 749837.0 |



**District I**  
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Phone:(575) 393-6161 Fax:(575) 393-0720  
**District II**  
811 S. First St., Artesia, NM 88210  
Phone:(575) 748-1283 Fax:(575) 748-9720  
**District III**  
1000 Rio Brazos Rd., Aztec, NM 87410  
Phone:(505) 334-6178 Fax:(505) 334-6170  
**District IV**  
1220 S. St Francis Dr., Santa Fe, NM 87505  
Phone:(505) 476-3470 Fax:(505) 476-3462

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

CONDITIONS  
  
Action 267268

CONDITIONS

|  |  |
|--|--|
| Operator:<br>EOG RESOURCES INC<br>P.O. Box 2267<br>Midland, TX 79702 | OGRID:<br>7377                                       |
|  | Action Number:<br>267268                             |
|  | Action Type:<br>[C-103] NOI Change of Plans (C-103A) |

CONDITIONS

| Created By | Condition | Condition Date |
|------------|-----------|----------------|
| pkautz     | None      | 10/27/2023     |