Form 3160-3 FORM APPROVED OMB No. 1004-0137 (June 2015) Expires: January 31, 2018 **UNITED STATES** DEPARTMENT OF THE INTERIOR 5. Lease Serial No. NMNM134867 **BUREAU OF LAND MANAGEMENT** APPLICATION FOR PERMIT TO DRILL OR REENTER 6. If Indian, Allotee or Tribe Name 7. If Unit or CA Agreement, Name and No. **✓** DRILL REENTER 1a. Type of work: 1b. Type of Well: Oil Well ✓ Gas Well Other 8. Lease Name and Well No. 1c. Type of Completion: Hydraulic Fracturing Single Zone ✓ Multiple Zone HOSS 2/11 FED COM 2. Name of Operator 9. API Well No. MEWBOURNE OIL COMPANY 30**-015-5**6981 10. Field and Pool, or Exploratory 3a. Address 3b. Phone No. (include area code) north/BONE SPRING P O BOX 5270, HOBBS, NM 88241 (575) 393-5905 4. Location of Well (Report location clearly and in accordance with any State requirements.\*) 11. Sec., T. R. M. or Blk. and Survey or Area SEC 2/T25S/R28E/NMP At surface LOT 2 / 800 FNL / 1540 FEL / LAT 32.1643049 / LONG -104.0543577 At proposed prod. zone SWSE / 100 FSL / 2250 FEL / LAT 32.1377039 / LONG -104.0566877 14. Distance in miles and direction from nearest town or post office\* 12. County or Parish 13. State **EDDY** NM 30 miles 15. Distance from proposed\* 16. No of acres in lease 17. Spacing Unit dedicated to this well 320 feet location to nearest property or lease line, ft. 320.0 (Also to nearest drig. unit line, if any) 18. Distance from proposed location\* 19. Proposed Depth 20. BLM/BIA Bond No. in file to nearest well, drilling, completed, 20 feet 8733 feet / 19035 feet FED: NM1693 applied for, on this lease, ft. 21. Elevations (Show whether DF, KDB, RT, GL, etc.) 22. Approximate date work will start\* 23. Estimated duration 2953 feet 07/09/2024 60 days 24. Attachments The following, completed in accordance with the requirements of Onshore Oil and Gas Order No. 1, and the Hydraulic Fracturing rule per 43 CFR 3162.3-3 (as applicable) 1. Well plat certified by a registered surveyor. 4. Bond to cover the operations unless covered by an existing bond on file (see Item 20 above). 2. A Drilling Plan. 3. A Surface Use Plan (if the location is on National Forest System Lands, the 5. Operator certification. SUPO must be filed with the appropriate Forest Service Office). 6. Such other site specific information and/or plans as may be requested by the Name (Printed/Typed) Date 25. Signature BRADLEY BISHOP / Ph: (575) 393-5905 12/16/2024 (Electronic Submission) Title Regulatory Approved by (Signature) Date Name (Printed/Typed) (Electronic Submission) CODY LAYTON / Ph: (575) 234-5959 05/19/2025 Title Office Assistant Field Manager Lands & Minerals Carlsbad Field Office Application approval does not warrant or certify that the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon. Conditions of approval, if any, are attached. Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, make it a crime for any person knowingly and willfully to make to any department or agency

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of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

\*(Instructions on page 2)

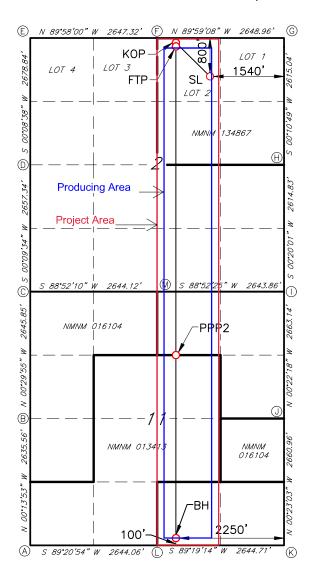
| C-102 Submit Electronically Via OCD Permitting  |                            |  | Ener                |                 |                            | w Mexico al Resources Department FION DIVISION       |                      |            | Revised July 9, 2024  Submittal Type:    Initial Submittal |                         |                       |  |
|---|----------------------------|--|---------------------|-----------------|----------------------------|--|----------------------|------------|--|-------------------------|-----------------------|--|
|   |                            |  |                     |                 |                            |  |                      | Type.      | •  | ☐ As Drilled            |                       |  |
|   |                            |  |                     |                 | WELL LOCAT                 | ION INFORMATIC                                       | N                    |            |  |                         |                       |  |
|   | 30-015-                    | 56981                                      | Pool Code           |                 | 3610                       | Pool Name<br>San Lorer                               | nzo; BONE            | SPRI       | NG,  | NORTH                   |                       |  |
| Property  | Code 337389                |  | Property Na         | ame             | HOS                        | S 2/11 FED   | СОМ                  |            | Well   | Number 55               | 55H                   |  |
| OGRID   | No.                        | 14744                                      | Operator Na         | ame             | MEWBO                      | URNE OIL C   | OMPANY               |            | Grou   | nd Level Elevation      | 2953'                 |  |
| Surface   |                            | State  Fee [                               | ⊥<br>∃Tribal □ F    | ederal          | 1121120                    | Mineral Owner:                                       |                      | ☐ Tribal   | □ Fed  | leral                   |                       |  |
|   |                            |  |                     |                 | Surfa                      | ace Location   |                      |            |  |                         |                       |  |
| UL  | Section                    | Township                                   | Range               | Lot             | Ft. from N/S               | Ft. from E/W   | Latitude             |            | Longi  | itude                   | County                |  |
| В   | 2                          | 25S  | 28E                 | 2               | 800 FNL                    | 1540 FEL   | 32.16430             | 49°N       | 104.   | .0543577°W              | EDDY                  |  |
|   |                            |  |                     |                 | Bottom                     | Hole Location  |                      |            |  |                         |                       |  |
| UL  | Section                    | Township                                   | Range               | Lot             | Ft. from N/S               | Ft. from E/W   | Latitude             |            | Longi  |                         | County                |  |
| 0   | 11                         | 25S  | 28E                 |                 | 100 FSL                    | 2250 FEL   | 32.13770             | 39°N       | 104.   | .0566877°W              | EDDY                  |  |
|   |                            | ı  |                     |                 |                            |  |                      |            |  |                         |                       |  |
|   | ed Acres<br>3 <b>20</b>    | Infill or Defi                             | ning Well           | 1 ~             | Well API<br>FED COM 408H   | Overlapping Spacing Unit (Y/N) Consolidation Code    |                      |            |  |                         |                       |  |
| Order N   |                            | 1111111111                                 |                     |                 |                            | Well setbacks are under Common Ownership: ☐ Yes ☐ No |                      |            |  |                         |                       |  |
|   |                            |  |                     |                 |                            |  |                      |            |  |                         |                       |  |
|   | la .:                      | m 1:                                       | Ta                  | T               | 1                          | ff Point (KOP)                                       | T 1                  |            |  |                         | G .                   |  |
| UL<br><b>B</b>  | Section 2                  | Township <b>25S</b>                        | Range <b>28E</b>    | Lot 2           | Ft. from N/S <b>10 FNL</b> | Ft. from E/W <b>2250 FEL</b>                         | Latitude             | 1 5 º NT   | Longi  |                         | County<br><b>EDDY</b> |  |
| В   | ~                          | 205  | ZOE                 | _ ~             |                            | ke Point (FTP)                                       | 32.1664815°N         |            | 104.   | .0300370 W              | FDD1                  |  |
| UL  | Section                    | Township                                   | Range               | Lot             | Ft. from N/S               | Ft. from E/W   | Latitude             |            | Longi  | itude                   | County                |  |
| В   | 2                          | 25S  | 28E                 | 2               | 100 FNL                    | 2250 FEL   | 32.16623             | 41°W       | _  | .0566386°W              | EDDY                  |  |
|   |                            |  |                     | 1               |                            | ke Point (LTP)                                       |                      |            |  |                         |                       |  |
| UL  | Section                    | Township                                   | Range               | Lot             | Ft. from N/S               | Ft. from E/W   | Latitude             |            | Longi  | itude                   | County                |  |
| 0   | 11                         | 25S  | 28E                 |                 | 100 FSL                    | 2250 FEL   | 32.13770391          | N          |  | 0566877W                | EDDY                  |  |
|   |                            |  | .1                  |                 |                            | 1  |                      |            |  |                         |                       |  |
| Unitized  | l Area or Aı               | ea of Uniform                              | Interest            | Spacing         | Unit Type 🛭 Hor            | zontal 🗆 Vertical                                    | Groun                | nd Floor   | Elevati  | on:                     |                       |  |
|   |                            |  |                     |                 |                            |  |                      |            |  |                         |                       |  |
| OPER/   | ATOR CER                   | TIFICATIONS                                | <br>S               |                 |                            | SURVEYOR CER   | TIFICATIONS          |            |  |                         |                       |  |
|   |                            |  |                     | rue and com     | plete to the best of       | I hereby certify that th                             | e well location skov | vn on this | plat was   | s plotted from field no | tes of actual         |  |
| my know   | ledge and beli             | ef, and , if the wel<br>is a working inter | ll is a vertical or | directional v   | vell, that this            | surveys made by me u<br>my belief.                   | nder my supervision  | and that   | hesam  | e is true and correct t | o the best of         |  |
| including   | the proposed               | bottom hole locat                          | tion or has a righ  | ht to drill thi | s well at this             | my octicj.   |                      | N ME       |  |                         |                       |  |
| location pursuant to a contract with an owner of a working interest or unleased mineral interest, or to a voluntary pooling agreement or a compulsory pooling order heretofore          |                            |  |                     |                 |                            |  | <b>19680</b>         | 10 /       | 7  |                         |                       |  |
| entered by the division.  |                            |  |                     |                 |                            | PROT   | 19000                | ן ל        | K C  |                         |                       |  |
| If this well is a horizontal well, I further certify that this organization has received the consent of at least one lessee or owner of a working interest or unleased mineral interest |                            |  |                     |                 |                            |  |                      |            | <del>~</del> /   |                         |                       |  |
| in each tract (in the target pool or formation) in which any part of the well's completed interval will be located or obtained a compulsory pooling order from the division.            |                            |  |                     |                 |                            | 100/   | DNAL 9               | SUR        |  |                         |                       |  |
| Bre   | tt Mi                      | ller                                       | 12/10/              | <u> 2024</u>    |                            |  |                      | TAAL       |  |                         |                       |  |
| Signature   | <br>N //:II a ::a          |  | Date                |                 |                            | Signature and Seal of Prof                           | essional Surveyor    | +          |  |                         |                       |  |
| Brett<br>Printed Na   |                            |  |                     |                 |                            | Certificate Number                                   | Date of Surve        | y          |  |                         |                       |  |
|   |                            | mewhou                                     | irne com            |                 |                            | 19680  |                      |            | 4 /0   | 0./0004                 |                       |  |
| Email Add   | brett.miller@mewbourne.com |  |                     |                 |                            |  |                      | 11/20/2024 |  |                         |                       |  |

#### ACREAGE DEDICATION PLATS

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

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

## HOSS 2/11 FED COM #555H



N: 423621.1 - E: 627662.2 LAT: 32.1643049° N LONG: 104.0543577° W KICK OFF POINT (KOP) 10' FNL & 2250' FEL SEC N: 424411.0 - E: 626954.9 LAT: 32.1664815\* N LONG: 104.0566370° W FIRST TAKE POINT (FTP) 100' FNL & 2250' FEL SEC. N: 424321.1 - E: 626954.6 LAT: 32.1662341\* N LONG: 104.0566386\* W PROPOSED PENETRATION POINT 2 (PPP2) 1328' FNL - 2229' FEL SEC. N: 417820.4 - E: 626961.8 LAT: 32.1483643' N LONG: 104.0566694' W BOTTOM HOLE (BH) N: 413942.3 - E: 626966.1 LAT: 32.1377039 N LONG: 104.0566877° W CORNER DATA
NAD 83 GRID — NM EAST A: FOUND BRASS CAP "1940" N: 413807.6 - E: 623928.9 B: FOUND BRASS CAP "1940" N: 416442.5 - E: 623918.2 C: FOUND BRASS CAP "1940" N: 419087.7 - E: 623895.2 D: FOUND BRASS CAP "1940" N: 421744.4 - E: 623902.6 E: FOUND BRASS CAP "1940" N: 424422.7 - E: 623909.3 F: FOUND BRASS CAP "1940" N: 424421.1 - E: 626556.0 G: FOUND BRASS CAP "1940" N: 424420.5 - E: 629204.4 H: FOUND BRASS CAP "1940" N: 421806.0 - E: 629196.2 I: FOUND BRASS CAP "1940" N: 419191.8 - E: 629181.0 J: FOUND BRASS CAP "1940" N: 416529.3 - E: 629198.2 K: FOUND BRASS CAP "1940" N: 413869.0 - E: 629216.1 L: FOUND BRASS CAP "1940" N: 413837.7 - E: 626572.1 M: FOUND BRASS CAP "1942" N: 419139.9 - E: 626538.2

GEODETIC DATA NAD 83 GRID — NM EAST

SURFACE LOCATION (SL)

## State of New Mexico Energy, Minerals and Natural Resources Department

Submit Electronically Via E-permitting

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

|   | IN.                                  | ATURAL GA                   | AS MANAC            | ENIENI P                   | LAN                      |  |
|---|--------------------------------------|-----------------------------|---------------------|----------------------------|--------------------------|--|
| This Natural Gas Manag                            | gement Plan mı                       | ust be submitted w          | ith each Applicati  | ion for Permit to I        | Orill (APD) for a 1      | new or recompleted well.   |
|   |                                      |                             | 1 – Plan De         |                            |                          |  |
| I. Operator: Me                                   | wbourne C                            | Oil Co.                     | OGRID:              | 14744                      | Date: _                  | 11/6/24  |
| II. Type: 🗶 Original [                            | ☐ Amendment                          | due to □ 19.15.27.          | .9.D(6)(a) NMAC     | C □ 19.15.27.9.D(          | (6)(b) NMAC □ (          | Other.   |
| If Other, please describe                         | e:                                   |                             |                     |                            |                          |  |
| III. Well(s): Provide the be recompleted from a s |                                      |                             |                     |                            | wells proposed to        | be drilled or proposed to  |
| Well Name   | API                                  | ULSTR                       | Footages            | Anticipated<br>Oil BBL/D   | Anticipated<br>Gas MCF/D | Anticipated<br>Produced Water<br>BBL/D                                       |
| HOSS 2/11 FED COM 555                             | Н                                    | A 2 25S 28E                 | 360' FNL x 700' FEL | 1500                       | 5000                     | 1000   |
|   |                                      |                             |                     | Y1-400 Y2-300 Y3-200       | Y1-1500 Y2-1000 Y3-70    | ) Y1-300 Y2-200 Y3-150   |
| IV. Central Delivery P                            | oint Name:                           | HOSS                        | 2/11 FED COM 5      | 555H                       | [See 1                   | 9.15.27.9(D)(1) NMAC]  |
| V. Anticipated Schedu<br>proposed to be recomple  |                                      |                             |                     |                            | vell or set of wells     | proposed to be drilled or  |
| Well Name   | API                                  | Spud Date                   | TD Reached<br>Date  | Completion<br>Commencement |                          |  |
| HOSS 2/11 FED COM 555                             | H                                    | 3/6/25                      | 4/6/25              | 5/6/25                     | 5/21/2                   | 25 5/26/25   |
| VII. Operational Prac<br>Subsection A through F   | etices: 🖾 Attac<br>f of 19.15.27.8 I | h a complete descr<br>NMAC. | ription of the act  | ions Operator wil          | I take to comply         | t to optimize gas capture. with the requirements of ices to minimize venting |

## Section 2 – Enhanced Plan EFFECTIVE APRIL 1, 2022

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

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

| Well              |   | API Anticipated Average<br>Natural Gas Rate MCF/D |                       | Anticipated Volume of Natural Gas for the First Year MCF |  |  |  |  |  |  |  |  |
|-------------------|---|---|-----------------------|--|--|--|--|--|--|--|--|--|
|                   |   |   |                       |  |  |  |  |  |  |  |  |  |
| X. Natural Gas Ga | X. Natural Gas Gathering System (NGGS): |   |                       |  |  |  |  |  |  |  |  |  |
| Operator          | System                                  | ULSTR of Tie-in                                   | Anticipated Gathering | Available Maximum Daily Capacity                         |  |  |  |  |  |  |  |  |

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

| XI. Map. $\square$ Attach an accurate and legible map depicting the location of the well(s), the anticipated pipeline route(s) connecting | g the |
|---|-------|
| production operations to the existing or planned interconnect of the natural gas gathering system(s), and the maximum daily capacit       | ty of |
| the segment or portion of the natural gas gathering system(s) to which the well(s) will be connected.                                     |       |

| XII. Line Capacity. The natural gas gathering system       | $\square$ will $\square$ will not have capa | acity to gather 100% of the | e anticipated natural gas |
|--|---|-----------------------------|---------------------------|
| production volume from the well prior to the date of first | st production.                              |                             |                           |

| <b>XIII.</b> Line Pressure. Operator $\square$ does $\square$ does not anticipate that its existing well(s) connected to the same segment, | or portion, | of the |
|--|-------------|--------|
| natural gas gathering system(s) described above will continue to meet anticipated increases in line pressure caused by                     | the new we  | ll(s). |

| A 441- | 0        | 2 1 4    |          |            | :           | . 4. 41. | . :         | 1:            |
|--------|----------|----------|----------|------------|-------------|----------|-------------|---------------|
| Attach | Oberator | s bian i | o manage | production | in response | շ ա ա    | e increased | line pressure |

| XIV. Co   | nfidentiality: 🗆  | Operator asse     | rts confidentiality | pursuant to  | Section  | 71-2-8    | NMSA      | 1978 f  | or the  | in formation   | provided in |
|-----------|-------------------|-------------------|---------------------|--------------|----------|-----------|-----------|---------|---------|----------------|-------------|
| Section 2 | as provided in F  | Paragraph (2) of  | Subsection D of 1   | 9.15.27.9 NN | AAC, and | d attache | es a full | descrip | tion of | f the specific | information |
| for which | n confidentiality | is asserted and t | he basis for such a | assertion.   |          |           |           |         |         |                |             |

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# Section 3 - Certifications <u>Effective May</u> 25, 2021

Operator certifies that, after reasonable inquiry and based on the available information at the time of submittal: 🖾 Operator will be able to connect the well(s) to a natural gas gathering system in the general area with sufficient capacity to transport one hundred percent of the anticipated volume of natural gas produced from the well(s) commencing on the date of first production, taking into account the current and anticipated volumes of produced natural gas from other wells connected to the pipeline gathering system; or ☐ Operator will not be able to connect to a natural gas gathering system in the general area with sufficient capacity to transport one hundred percent of the anticipated volume of natural gas produced from the well(s) commencing on the date of first production, taking into account the current and anticipated volumes of produced natural gas from other wells connected to the pipeline gathering system. If Operator checks this box, Operator will select one of the following: Well Shut-In. ☐ Operator will shut-in and not produce the well until it submits the certification required by Paragraph (4) of Subsection D of 19.15.27.9 NMAC; or Venting and Flaring Plan. 

Operator has attached a venting and flaring plan that evaluates and selects one or more of the potential alternative beneficial uses for the natural gas until a natural gas gathering system is available, including: power generation on lease; (a) (b) power generation for grid; compression on lease; (c) liquids removal on lease; (d) reinjection for underground storage; (e) reinjection for temporary storage; **(f)** 

- reinjection for enhanced oil recovery; **(g)**
- fuel cell production; and (h)
- other alternative beneficial uses approved by the division.

## **Section 4 - Notices**

- 1. If, at any time after Operator submits this Natural Gas Management Plan and before the well is spud:
- Operator becomes aware that the natural gas gathering system it planned to connect the well(s) to has become unavailable or will not have capacity to transport one hundred percent of the production from the well(s), no later than 20 days after becoming aware of such information, Operator shall submit for OCD's approval a new or revised venting and flaring plan containing the information specified in Paragraph (5) of Subsection D of 19.15.27.9 NMAC; or
- Operator becomes aware that it has, cumulatively for the year, become out of compliance with its baseline natural gas capture rate or natural gas capture requirement, no later than 20 days after becoming aware of such information, Operator shall submit for OCD's approval a new or revised Natural Gas Management Plan for each well it plans to spud during the next 90 days containing the information specified in Paragraph (2) of Subsection D of 19.15.27.9 NMAC, and shall file an update for each Natural Gas Management Plan until Operator is back in compliance with its baseline natural gas capture rate or natural gas capture requirement.
- 2. OCD may deny or conditionally approve an APD if Operator does not make a certification, fails to submit an adequate venting and flaring plan which includes alternative beneficial uses for the anticipated volume of natural gas produced, or if OCD determines that Operator will not have adequate natural gas takeaway capacity at the time a well will be spud.

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

| Signature:       | Bradley Bishop  |
|------------------|---|
| Printed Name:    | BRADLEY BISHOP  |
| Title:           | REGULATORY MANAGER                                    |
| E-mail Address:  | BBISHOP@MEWBOURNE.COM                                 |
| Date:            | 11/6/24   |
| Phone:           | 575-393-5905  |
|                  | OIL CONSERVATION DIVISION                             |
|                  | (Only applicable when submitted as a standalone form) |
| Approved By:     |   |
| Title:           |   |
| Approval Date:   |   |
| Conditions of Ap | proval:   |
|                  |   |

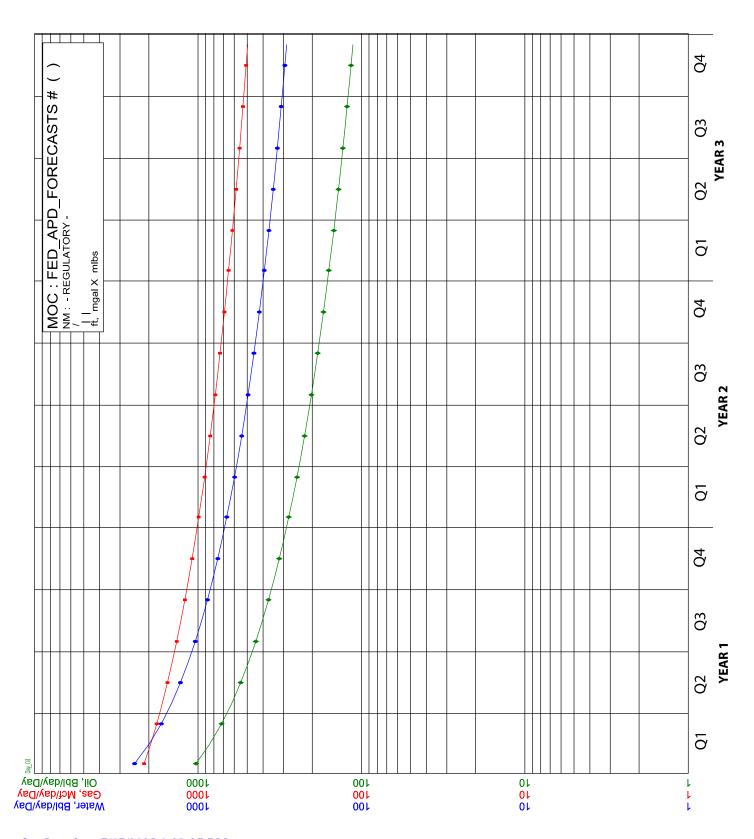
## Mewbourne Oil Company

### Natural Gas Management Plan – Attachment

- VI. Separation equipment will be sized by construction engineering staff based on stated manufacturer daily throughput capacities and anticipated daily production rates to ensure adequate capacity. Closed vent system piping, compression needs, and VRUs will be sized utilizing ProMax modelling software to ensure adequate capacity for anticipated production volumes and conditions.
- VII. Mewbourne Oil Company (MOC) will take following actions to comply with the regulations listed in 19.15.27.8:
  - A. MOC will maximize the recovery of natural gas by minimizing the waste, as defined by 19.15.2 NMAC, of natural gas through venting and flaring. MOC will ensure that well(s) will be connected to a natural gas gathering system with sufficient capacity to transport natural gas. If there is no adequate takeaway for the gas, well(s) will be shut in until the natural gas gathering system is available.
  - B. All drilling operations will be equipped with a rig flare located at least 100 ft from the nearest surface hole. Rig flare will be utilized to combust any natural gas that is brought to surface during normal drilling operations. In the case of emergency venting or flaring the volumes will be estimated and reported appropriately.
  - C. During completion operations any natural gas brought to surface will be flared. Immediately following the finish of completion operations, all well flow will be directed to permanent separation equipment. Produced natural gas from separation equipment will be sent to sales. It is not anticipated that gas will not meet pipeline standards. However, if natural gas does not meet gathering pipeline quality specifications, MOC will flare the natural gas for 60 days or until the natural gas meets the pipeline quality specifications, whichever is sooner. MOC will ensure that the flare is sized properly and is equipped with automatic igniter or continuous pilot. The gas sample will analyzed twice per week and the gas will be routed into a gathering system as soon as pipeline specifications are met.
  - D. Natural gas will not be flared with the exceptions and provisions listed in the 19.15.27.8 D.(1) through (4). If there is no adequate takeaway for the separator gas, well(s) will be shut in until the natural gas gathering system is available with exception of emergency or malfunction situations. Venting and/or flaring volumes will be estimated and reported appropriately.
  - E. MOC will comply with the performance standards requirements and provisions listed in 19.15.27.8 E.(1) through (8). All equipment will be designed and sized to handle maximum anticipated pressures and throughputs in order to minimize the waste. Production storage tanks constructed after May 25, 2021 will be equipped with automatic gauging system. Flares constructed after May 25, 2021 will be equipped with automatic igniter or continuous pilot. Flares will be located at least 100' from the well and storage tanks unless otherwise approved by the division. MOC will conduct AVO inspections as described in 19.15.27.8 E (5) (a) with frequencies specified in 19.15.27.8 E (5) (b) and (c). All emergencies will be resolved as quickly and safely as feasible to minimize waste.
  - F. The volume of natural gas that is vented or flared as the result of malfunction or emergency during drilling and completions operations will be estimated. The volume of natural gas that is vented, flared or beneficially used during production operations, will be measured or estimated. MOC will install equipment to measure

the volume of natural gas flared from existing process piping or a flowline piped from equipment such as high pressure separators, heater treaters, or vapor recovery units associated with a well or facility associated with a well authorized by an APD issued after May 25, 2021 that has an average daily production greater than 60 Mcf/day. If metering is not practicable due to circumstances such as low flow rate or low pressure venting and flaring, MOC will estimate the volume of vented or flared natural gas. Measuring equipment will conform to industry standards and will not be designed or equipped with a manifold that allows the diversion of natural gas around the metering element except for the sole purpose of inspecting and servicing the measurement equipment.

VIII. For maintenance activities involving production equipment and compression, venting will be limited to the depressurization of the subject equipment to ensure safe working conditions. For maintenance of production and compression equipment the associated producing wells will be shut in to eliminate venting. For maintenance of VRUs all gas normally routed to the VRU will be routed to flare to eliminate venting.





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

# Drilling Plan Data Report

**APD ID:** 10400099833 **Submission Date:** 12/16/2024

**Operator Name: MEWBOURNE OIL COMPANY** 

Well Name: HOSS 2/11 FED COM Well Number: 555H

Well Type: CONVENTIONAL GAS WELL Well Work Type: Drill

Highlighted data reflects the most recent changes

Show Final Text

## **Section 1 - Geologic Formations**

| Formation ID | Formation Name         | Elevation | True Vertical |             |                                 | Mineral Resources | Producing<br>Formatio |
|--------------|------------------------|-----------|---------------|-------------|---------------------------------|-------------------|-----------------------|
| 15646672     | Formation Name UNKNOWN | 2999      | 28            | Depth<br>28 | Lithologies<br>OTHER : Top Soil | NONE              | N                     |
|              |                        |           |               |             |                                 |                   |                       |
| 15646686     | TOP OF SALT            | 1819      | 1180          | 1180        | SALT                            | NONE              | N                     |
| 15646673     | BOTTOM SALT            | 584       | 2415          | 2415        | SALT                            | NONE              | N                     |
| 15646680     | LAMAR                  | 374       | 2625          | 2625        | DOLOMITE,<br>LIMESTONE          | NATURAL GAS, OIL  | N                     |
| 15646688     | BELL CANYON            | 349       | 2650          | 2650        | SANDSTONE                       | NATURAL GAS, OIL  | N                     |
| 15646689     | CHERRY CANYON          | -546      | 3545          | 3545        | SANDSTONE                       | NATURAL GAS, OIL  | N                     |
| 15646690     | MANZANITA              | -671      | 3670          | 3670        | LIMESTONE                       | NATURAL GAS, OIL  | N                     |
| 15646691     | BRUSHY CANYON LOWER    | -1853     | 4852          | 4852        | SANDSTONE                       | NATURAL GAS, OIL  | N                     |
| 15646675     | BONE SPRING            | -3386     | 6385          | 6385        | LIMESTONE                       | NATURAL GAS, OIL  | Y                     |
| 15646682     | BONE SPRING 1ST        | -4336     | 7335          | 7335        | SANDSTONE                       | NATURAL GAS, OIL  | Y                     |
| 15646679     | BONE SPRING 2ND        | -5126     | 8125          | 8125        | SANDSTONE                       | NATURAL GAS, OIL  | Y                     |
| 15646692     | BONE SPRING 3RD        | -6176     | 9175          | 9175        | SANDSTONE                       | NATURAL GAS, OIL  | Y                     |
| 15646693     | WOLFCAMP               | -6556     | 9555          | 9555        | LIMESTONE,<br>SANDSTONE, SHALE  | NATURAL GAS, OIL  | Y                     |

## **Section 2 - Blowout Prevention**

Well Name: HOSS 2/11 FED COM Well Number: 555H

Pressure Rating (PSI): 5M Rating Depth: 19035

**Equipment:** Annular, Pipe Rams, Blind Rams, Other accessories to the BOP equipment will include a Kelly cock and floor safety valve (inside BOP) and choke lines and choke manifold. See attached schematics.

Requesting Variance? YES

**Variance request:** A variance is requested for the use of a variable choke line from the BOP to the choke manifold. See attached for hydrostatic test chart. Anchors are not required by manufacturer. Variance is requested to use a multi bowl wellhead. Variance is requested to perform break testing according to attached procedure. If a breaktesting variance is approved & incorporated, API Standard 53 will be incorporated and testing annular BOP to 70% of RWP or 100% of MASP, whichever is greater, will be performed.

**Testing Procedure:** BOP/BOPE will be tested by an independent service company to 250 psi low and the high pressure indicated above per 43 CFR Part 3172 requirements. The System may be upgraded to a higher pressure but still tested to the working pressure listed in the table above. If the system is upgraded all the components installed will be functional and tested. Pipe rams will be operationally checked each 24 hour period. Blind rams will be operationally checked on each trip out of the hole. These checks will be noted on the daily tour sheets.

#### **Choke Diagram Attachment:**

5M BOPE Choke Diagram 20241211131933.pdf

Flex\_Line\_Specs\_API\_16C\_20241211131939.pdf

#### **BOP Diagram Attachment:**

5M BOPE Schematic 20241211131954.pdf

Cactus\_5K\_WH\_20241211132002.pdf

## **Section 3 - Casing**

| Casing ID | String Type      | Hole Size          | Csg Size | Condition | Standard | Tapered String | Top Set MD | Bottom Set MD | Top Set TVD | Bottom Set TVD | Top Set MSL | Bottom Set MSL | Calculated casing<br>length MD | Grade                     | Weight | Joint Type         | Collapse SF | Burst SF | Joint SF Type | Joint SF  | Body SF Type | Body SF   |
|-----------|------------------|--------------------|----------|-----------|----------|----------------|------------|---------------|-------------|----------------|-------------|----------------|--------------------------------|---------------------------|--------|--------------------|-------------|----------|---------------|-----------|--------------|-----------|
| 1         | SURFACE          | 17.5               | 13.375   | NEW       | API      | Ν              | 0          | 450           | 0           | 450            | 2953        | 2503           | 450                            | H-40                      | 48     | ST&C               | 3.83        | 8.6      | DRY           | 14.9<br>1 | DRY          | 25.0<br>5 |
| 2         | INTERMED<br>IATE | 12 <b>.</b> 2<br>5 | 9.625    | NEW       | API      | N              | 0          | 2550          | 0           | 2550           | 3111        | 403            | 2550                           | J-55                      | 36     | LT&C               | 1.45        | 2.53     | DRY           | 4.93      | DRY          | 6.14      |
| 3         | PRODUCTI<br>ON   | 8.75               | 7.0      | NEW       | API      | N              | 0          | 8336          | 0           | 8165           | 3111        | -5212          | 8336                           | P-<br>110                 | 26     | LT&C               | 1.54        | 2.47     | DRY           | 3.2       | DRY          | 3.83      |
| 4         | PRODUCTI<br>ON   | 4.5                | 4.5      | NEW       | API      | N              | 8240       | 19035         | 8165        | 8733           | -5212       | -5780          | 10795                          | OTH<br>ER -<br>RYS<br>110 | 13.5   | OTHER -<br>DCD HTQ | 2.04        | 2.37     | DRY           | 2.28      | DRY          | 2.84      |

#### **Casing Attachments**

Well Name: HOSS 2/11 FED COM Well Number: 555H

| Casing | <b>Attachments</b> |
|--------|--------------------|
|--------|--------------------|

Casing ID: 1

String

SURFACE

**Inspection Document:** 

**Spec Document:** 

**Tapered String Spec:** 

Casing Design Assumptions and Worksheet(s):

 $13.375 in\_48\_\_H40\_STC\_Csg\_20241211132128.pdf$ 

Casing ID: 2

String

INTERMEDIATE

**Inspection Document:** 

**Spec Document:** 

**Tapered String Spec:** 

Casing Design Assumptions and Worksheet(s):

9.625in\_36\_\_J55\_LTC\_Csg\_20241211132149.pdf

Casing ID: 3

String

**PRODUCTION** 

**Inspection Document:** 

**Spec Document:** 

**Tapered String Spec:** 

Casing Design Assumptions and Worksheet(s):

7in\_26\_\_P110\_LTC\_Csg\_20241211132211.pdf

Well Name: HOSS 2/11 FED COM Well Number: 555H

## **Casing Attachments**

Casing ID: 4

String

**PRODUCTION** 

**Inspection Document:** 

**Spec Document:** 

**Tapered String Spec:** 

Casing Design Assumptions and Worksheet(s):

4.5in\_13.5\_\_RYS110\_CDC\_HTQ\_Csg\_20241211132325.pdf

## **Section 4 - Cement**

| String Type | Lead/Tail | Stage Tool<br>Depth | Top MD | Bottom MD | Quantity(sx) | Yield | Density | Cu Ft | Excess% | Cement type | Additives |
|-------------|-----------|---------------------|--------|-----------|--------------|-------|---------|-------|---------|-------------|-----------|
| PRODUCTION  | Lead      |                     | 0      | 0         | 0            | 0     | 0       | 0     | 0       | 0           | 0         |

| SURFACE      | Lead | 7    | 0    | 261       | 170  | 2.12 | 12.5 | 370  | 100 | Class C | Salt, Gel, Extender,<br>LCM           |
|--------------|------|------|------|-----------|------|------|------|------|-----|---------|---------------------------------------|
| SURFACE      | Tail |      | 261  | 450       | 200  | 1.34 | 14.8 | 268  | 100 | Class C | Retarder                              |
| INTERMEDIATE | Lead |      | 0    | 1879      | 350  | 2.12 | 12.5 | 750  | 25  | Class C | Salt, Gel, Extender,<br>LCM           |
| INTERMEDIATE | Tail |      | 1879 | 2550      | 200  | 1.34 | 14.8 | 268  | 25  | Class C | Retarder                              |
| PRODUCTION   | Lead | 3670 | 2350 | 3000      | 60   | 2.12 | 12.5 | 130  | 25  | Class C | Salt, Gel, Extender,<br>LCM, Defoamer |
| PRODUCTION   | Tail |      | 3000 | 3670      | 100  | 1.34 | 14.8 | 134  | 25  | Class C | Retarder, Fluid Loss,<br>Defoamer     |
| PRODUCTION   | Lead | 3670 | 3670 | 7185      | 230  | 2.12 | 12.5 | 490  | 25  | Class C | Salt, Gel, Extender,<br>LCM, Defoamer |
| PRODUCTION   | Tail |      | 7185 | 1903<br>5 | 1400 | 1.18 | 15.6 | 1652 | 25  | Class H | Retarder, Fluid Loss,<br>Defoamer     |

Well Name: HOSS 2/11 FED COM Well Number: 555H

## **Section 5 - Circulating Medium**

Mud System Type: Closed

Will an air or gas system be Used? NO

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

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

**Describe what will be on location to control well or mitigate other conditions:** Formation integrity test will be performed per 43 CFR Part 3172. On Exploratory wells or on that portion of any well approved for a 5M BOPE system or greater, a pressure integrity test of each casing shoe shall be performed. Will be tested in accordance with 43 CFR Part 3172.

Describe the mud monitoring system utilized: Pason/PVT/Visual Monitoring

## **Circulating Medium Table**

| Top Depth | Bottom Depth | Mud Type           | Min Weight (lbs/gal) | Max Weight (lbs/gal) | Density (lbs/cu ft) | Gel Strength (lbs/100 sqft) | РН | Viscosity (CP) | Salinity (ppm) | Filtration (cc) | Additional Characteristics |
|-----------|--------------|--------------------|----------------------|----------------------|---------------------|-----------------------------|----|----------------|----------------|-----------------|----------------------------|
| 0         | 450          | SPUD MUD           | 8.4                  | 8.6                  | V.                  | 9                           |    |                |                |                 |                            |
| 450       | 2550         | SALT<br>SATURATED  | 10                   | 10.2                 |                     |                             |    |                |                |                 |                            |
| 2550      | 8240         | WATER-BASED<br>MUD | 8.6                  | 9.7                  |                     |                             |    |                |                |                 |                            |
| 8240      | 1903<br>5    | OIL-BASED<br>MUD   | 10                   | 12                   |                     |                             |    |                |                |                 |                            |

Well Name: HOSS 2/11 FED COM Well Number: 555H

## Section 6 - Test, Logging, Coring

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

No logs are planned based on well control or offset log information. Offset Well: Hoss 2/11 Fed Com #858H

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

MEASUREMENT WHILE DRILLING, MUD LOG/GEOLOGIC LITHOLOGY LOG, DIRECTIONAL SURVEY,

Coring operation description for the well:

None

#### **Section 7 - Pressure**

Anticipated Bottom Hole Pressure: 5453 Anticipated Surface Pressure: 3531

**Anticipated Bottom Hole Temperature(F): 140** 

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

Describe:

Contingency Plans geoharzards description:

Contingency Plans geohazards

Hydrogen Sulfide drilling operations plan required? YES

Hydrogen sulfide drilling operations

H2S\_Plan\_20240709104808.pdf

## **Section 8 - Other Information**

Proposed horizontal/directional/multi-lateral plan submission:

HOSS\_2\_11\_FED\_COM\_555H\_Dir\_Plan\_20241211132841.pdf HOSS\_2\_11\_FED\_COM\_555H\_Dir\_Plot\_20241211132849.pdf

Other proposed operations facets description:

Other proposed operations facets attachment:

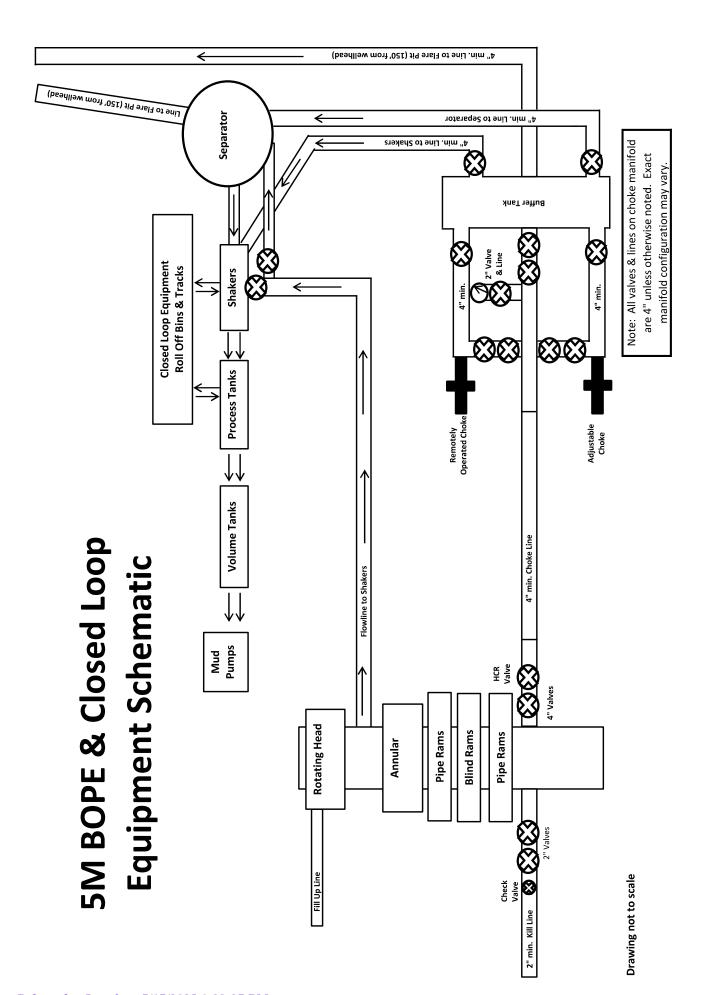
HOSS\_2\_11\_FED\_COM\_555H\_NGMP\_20241107105740.pdf EDDYBS2.0\_20241107105836.pdf Hoss\_2\_11\_Fed\_Com\_\_555H\_Drlg\_Program\_20241211132916.pdf Hoss\_2\_11\_Fed\_Com\_\_555H\_AddInfo\_20241211132921.pdf

Other Variance request(s)?:

Other Variance attachment:

MOC\_Break\_Testing\_Variance\_20240709104919.pdf
MOC\_Offline\_Cementing\_Variance\_20240709104919.pdf







## LUOHE LETONE HYDRAULICS TECHNOLOGY CO.,LTD

## HYDROSTATIC TESTING REPORT

LTYY/QR-5.7.1-28

№: 230826015

| Product Name                             |                                |   |  |                    | · · · · · · · · · · · · · · · · · · · |                            |  |  |  |
|--|--------------------------------|---|--|--------------------|---------------------------------------|----------------------------|--|--|--|
|  | Cho                            |   | Standard   |                    | API Spec 16C 3 <sup>rd</sup> edition  |                            |  |  |  |
| Product Specification                    | 3″×1000                        | )   | Serial Num   | ber                | 7660144                               |                            |  |  |  |
| Inspection Equipment                     | MTU                            |   | Test mediu   | ım                 | Water                                 |                            |  |  |  |
| Inspection Department                    | : C                            |   | Inspection I   | Date               | 2023.08.26                            |                            |  |  |  |
|  |                                | Rate of len   | ngth change  | *                  | •                                     |                            |  |  |  |
| Standard requirements                    | At working pro                 | essure, the rate of len   | ngth change  | should not m       | ore than                              | ±2%                        |  |  |  |
| Testing result                           | 10000psi (69.0                 | MPa) ,Rate of length  | h change 0   | .7%                |                                       |                            |  |  |  |
| ///                                      |                                | Hydrostat   | tic testing  |                    |                                       |                            |  |  |  |
| Standard requirements                    |                                | orking pressure, the<br>ssure-holding period  |  |                    |                                       | ot less than three minutes |  |  |  |
| Testing result                           | 15000psi (103                  | 15000psi (103.5MPa), 3 min for the first time, 60 min for the second time, no leakage |  |                    |                                       |                            |  |  |  |
| Graph of pressure testin                 | g:                             |   |  |                    |                                       | About 51                   |  |  |  |
| 110                                      |                                |   | 110  |                    |                                       |                            |  |  |  |
| 100                                      |                                |   | 110<br>100<br>90<br>83<br>70<br>66<br>17<br>84<br>15<br>10 |                    |                                       |                            |  |  |  |
| 100 - 90 - 90 - 90 - 90 - 90 - 90 - 90 - | महंद्य महंद्य महंद्य महंद्य सह | N.21 22:00:21 22:00:21 22:00:21 22:00:21 22:00  | 50 - 50 - 50 - 50 - 50 - 50 - 50 - 50 -                    | SI 23×19-58 23-59: | - 2015 (2005)                         | 001454 002454 003654 00:   |  |  |  |
| 100   90   90   90   90   90   90   90   | महंद्य महंद्य महंद्य महंद्य सह |   | 50 - 50 - 50 - 50 - 50 - 50 - 50 - 50 -                    | SI 23×19-58 23-59: | S\$ 00:09:S\$                         | 355000HC (100              |  |  |  |



## LUOHE LETONE HYDRAULICS TECHNOLOGY CO.,LTD

## **CERTIFICATE OF QUALITY**

## LTYY/QR-5.7.1-19B

№: LT2023-126-002

| Customer Name         | A                         |                 |                                      |
|-----------------------|---------------------------|-----------------|--------------------------------------|
| Product Name          | Chok                      |                 |                                      |
| Product Specification | 3"×10000psi×60ft (18.29m) | Quantity        | 2PCS                                 |
| Serial Number         | 7660143~7660144           | FSL             | FSL3                                 |
| Temperature Range     | -29℃~+121℃                | Standard        | API Spec 16C 3 <sup>rd</sup> edition |
| Inspection Department | Q.C. Department           | Inspection date | 2023.08.26                           |

|                     | Inspection                      | Items      |                     |       | Inspection results                                      |                   |                             |  |  |
|---------------------|---------------------------------|------------|---------------------|-------|---|-------------------|-----------------------------|--|--|
|                     | Appearance Ch                   | necking    |                     |       | In accordance with API Spec 16C 3 <sup>rd</sup> edition |                   |                             |  |  |
|                     | Size and Len                    | ngths      |                     |       | In accordance with API Spec 16C 3 <sup>rd</sup> edition |                   |                             |  |  |
| Γ                   | Dimensions and T                | Tolerance  | es                  |       | In accorda  | nce with API Spec | 16C 3 <sup>rd</sup> edition |  |  |
| End Connections: 4- | 1/16"×10000psi Inte             | egral flan | ge for sour gas ser | vice  | In accorda  | nce with API Spec | 6A 21st edition             |  |  |
| End Connections: 4- | 1/16"×10000psi Inte             | egral flan | ge for sour gas ser | vice  | In accordance with API Spec 17D 3 <sup>rd</sup> edition |                   |                             |  |  |
|                     | Hydrostatic To                  | esting     |                     |       | In accordance with API Spec 16C 3rd edition             |                   |                             |  |  |
|                     | product Mar                     | king       |                     |       | In accordance with API Spec 16C 3 <sup>rd</sup> edition |                   |                             |  |  |
| Inspection con      | nclusion                        | Ti         | he inspected ite    | ms me | eet standard require                                    | ments of API Spec | 16C 3 <sup>rd</sup> edition |  |  |
| Remark              | rs .                            |            |                     |       |   |                   |                             |  |  |
| Approver            | Approver Jian long Chen Auditor |            |                     |       |   | Inspector         | Zhansheng Wang              |  |  |



## LUOHE LETONE HYDRAULICS TECHNOLOGY CO.,LTD

### CERTIFICATE OF CONFORMANCE

№:LT230826016

Product Name: Choke And Kill Hose

Product Specification: 3"×10000psi×60ft (18.29m)

Serial Number: 7660143~7660144

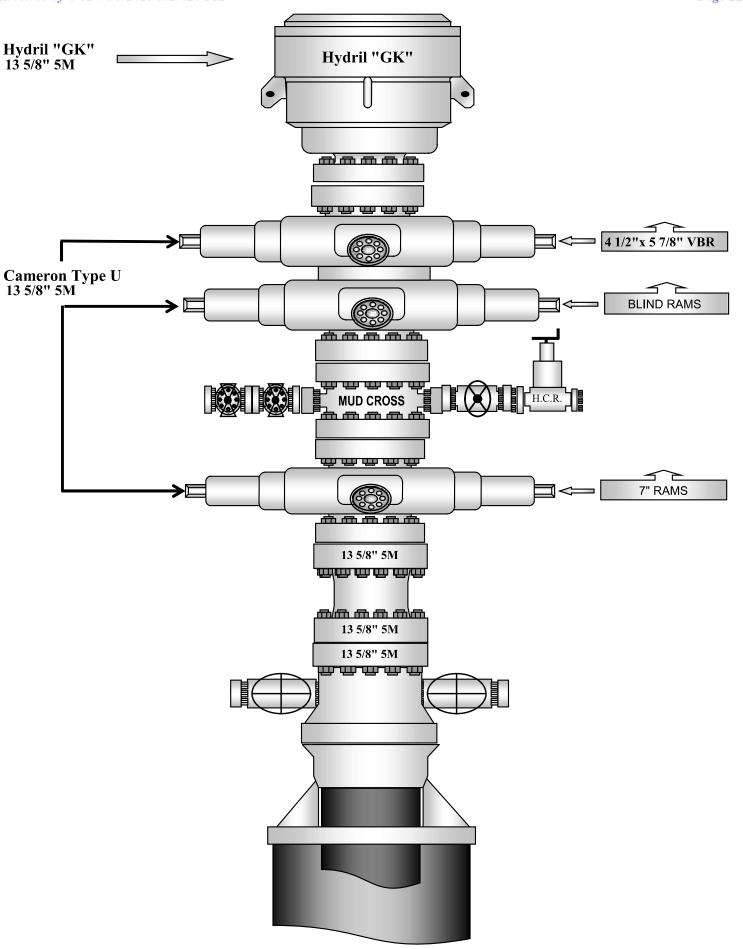
End Connections: 4-1/16"×10000psi Integral flange for sour gas service

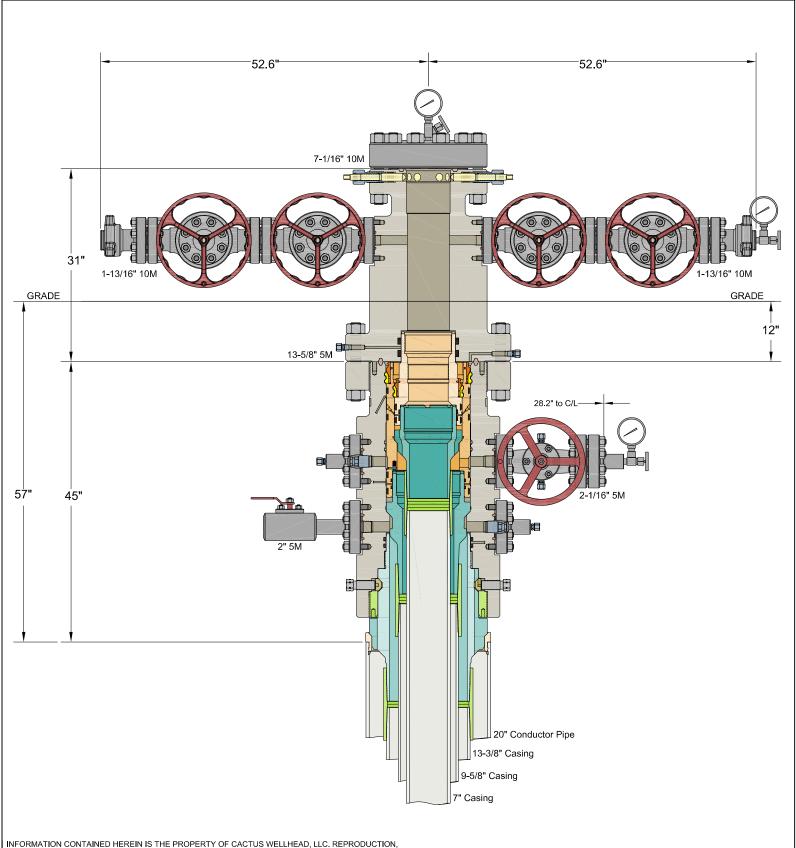
The Choke And Kill Hose assembly was produced by LUOHE LETONE HYDRAULICS TECHNOLOGY CO.,LTD. in Aug 2023, and inspected by LUOHE LETONE HYDRAULICS TECHNOLOGY CO.,LTD. according to API Spec 16C 3<sup>rd</sup> edition on Aug 26, 2023. The overall condition is good. This is to certify that the Choke And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

Jiaulong Chen

QC Manager:

Date: Aug 26, 2023





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## CACTUS WELLHEAD LLC

20" x 13-3/8" x 9-5/8" x 7" MBU-3T-CFL-R-DBLO Wellhead System With 9-5/8" & 7" Fluted Mandrel Casing Hangers And 13-5/8" 5M x 7-1/16" 10M CTH-DBLHPS Tubing Head

# ALL DIMENSIONS APPROXIMATE MEWBOURNE OIL COMPANY

DRAWN DLE 18APR22
APPRV

**NEW MEXICO** 

DRAWING NO. HBE0000660

Released to Imaging: 7/17/2025 1:38:37 PM

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**API STC** 

| Coupling        | Pipe Body       |
|-----------------|-----------------|
| Grade: H40      | Grade: H40      |
| Body: -         | 1st Band: Black |
| 1st Band: Black | 2nd Band: -     |
| 2nd Band: -     | 3rd Band: -     |
| 3rd Band: -     | 4th Band: -     |

| Outside Diameter     | 13.375 in. | Wall Thickness  | 0.330 in.    | Grade | H40    |
|----------------------|------------|-----------------|--------------|-------|--------|
| Min. Wall Thickness  | 87.50 %    | Pipe Body Drift | API Standard | Туре  | Casing |
| Connection OD Option | Regular    |                 |              |       |        |

#### Pipe Body Data

| Geometry       |            |                  |             |
|----------------|------------|------------------|-------------|
| Nominal OD     | 13,375 in. | Drift            | 12.559 in.  |
| Wall Thickness | 0.330 in.  | Plain End Weight | 46.02 lb/ft |
| Nominal Weight | 48 lb/ft   | OD Tolerance     | API         |
| Nominal ID     | 12.715 in. |                  |             |

| Performance                  |              |
|------------------------------|--------------|
| SMYS                         | 40,000 psi   |
| Min UTS                      | 60,000 psi   |
| Body Yield Strength          | 541 x1000 lb |
| Min. Internal Yield Pressure | 1730 psi     |
| Collapse Pressure            | 740 psi      |
| Max. Allowed Bending         | 14 °/100 ft  |

#### **Connection Data**

| Geometry             |            | Performance                |              | Make-Up Torques |            |
|----------------------|------------|----------------------------|--------------|-----------------|------------|
| Thread per In        | 8          | Joint Strength             | 322 x1000 lb | Minimum Torque  | 2420 ft-lb |
| Connection OD        | 14.375 in. | Coupling Face Load         | 377 x1000 lb | Optimum Torque  | 3220 ft-lb |
| Hand Tight Stand Off | 3.500 in.  | Internal Pressure Capacity | 1730 psi     | Maximum Torque  | 4030 ft-lb |

#### Notes

For products according to API Standards 5CT & 5B; Performance calculated considering API Technical Report 5C3 (Sections 9 & 10) equations.

For geometrical and steel grades combinations not considered in the API Standards 5CT and/or 5B; Performance calculations indirectly derived from API Technical Report 5C3 (Sections 9 & 10) equations.

Couplings OD are shown according to current API 5CT 10th Edition.

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■ Tenaris

API LTC

 Coupling
 Pipe Body

 Grade: J55 (Casing)
 Grade: J55 (Casing)

 Body: Bright Green
 1st Band: Bright Green

 1st Band: White
 2nd Band: 

 2nd Band: 3rd Band: 

 3rd Band: 4th Band:

| Outside Diameter     | 9.625 in. | Wall Thickness  | 0.352 in.    | Grade | J55 (Casing) |
|----------------------|-----------|-----------------|--------------|-------|--------------|
| Min. Wall Thickness  | 87.50 %   | Pipe Body Drift | API Standard | Туре  | Casing       |
| Connection OD Option | Regular   |                 |              |       |              |

#### Pipe Body Data

| Geometry       |           |                  |             |
|----------------|-----------|------------------|-------------|
| Nominal OD     | 9.625 in. | Drift            | 8.765 in.   |
| Wall Thickness | 0.352 in. | Plain End Weight | 34.89 lb/ft |
| Nominal Weight | 36 lb/ft  | OD Tolerance     | API         |
| Nominal ID     | 8.921 in. |                  |             |

| 55,000 psi   |
|--------------|
| 75,000 psi   |
| 564 x1000 lb |
| 3520 psi     |
| 2020 psi     |
| 26 °/100 ft  |
|              |

#### **Connection Data**

| Hand Tight Stand Off | 3.500 in.  | Internal Pressure Capacity | 3520 psi     | Maximum Torque  | 5660 ft-lb |
|----------------------|------------|----------------------------|--------------|-----------------|------------|
| Connection OD        | 10.625 in. | Coupling Face Load         | 433 x1000 lb | Optimum Torque  | 4530 ft-lb |
| Thread per In        | 8          | Joint Strength             | 453 x1000 lb | Minimum Torque  | 3400 ft-lb |
| Geometry             |            | Performance                |              | Make-Up Torques |            |

#### Notes

For products according to API Standards 5CT & 5B; Performance calculated considering API Technical Report 5C3 (Sections 9 & 10) equations.

For geometrical and steel grades combinations not considered in the API Standards 5CT and/or 5B; Performance calculations indirectly derived from API Technical Report 5C3 (Sections 9 & 10) equations.

Couplings OD are shown according to current API 5CT 10th Edition.

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| Coupling    | Pipe Body       |
|-------------|-----------------|
| Grade: P110 | Grade: P110     |
| Body: White | 1st Band: White |
| 1st Band: - | 2nd Band: -     |
| 2nd Band: - | 3rd Band: -     |
| 3rd Band: - | 4th Band: -     |

| Outside Diameter     | 7.000 in. | Wall Thickness  | 0.362 in.    | Grade | P110   |
|----------------------|-----------|-----------------|--------------|-------|--------|
| Min. Wall Thickness  | 87.50 %   | Pipe Body Drift | API Standard | Туре  | Casing |
| Connection OD Option | Regular   |                 |              |       |        |

#### Pipe Body Data

| Geometry       |           |                  |             |
|----------------|-----------|------------------|-------------|
| Nominal OD     | 7.000 in. | Drift            | 6.151 in.   |
| Wall Thickness | 0.362 in. | Plain End Weight | 25.69 lb/ft |
| Nominal Weight | 26 lb/ft  | OD Tolerance     | API         |
| Nominal ID     | 6.276 in. |                  |             |

| Performance                  |              |
|------------------------------|--------------|
| SMYS                         | 110,000 psi  |
| Min UTS                      | 125,000 psi  |
| Body Yield Strength          | 830 x1000 lb |
| Min. Internal Yield Pressure | 9960 psi     |
| Collapse Pressure            | 6230 psi     |
| Max. Allowed Bending         | 72 °/100 ft  |

#### **Connection Data**

| Geometry             |           | Performance                |              | Make-Up Torques |            |
|----------------------|-----------|----------------------------|--------------|-----------------|------------|
| Thread per In        | 8         | Joint Strength             | 693 x1000 lb | Minimum Torque  | 5200 ft-lb |
| Connection OD        | 7.875 in. | Coupling Face Load         | 799 x1000 lb | Optimum Torque  | 6930 ft-lb |
| Hand Tight Stand Off | 3 in.     | Internal Pressure Capacity | 9960 psi     | Maximum Torque  | 8660 ft-lb |
| N                    |           |                            |              |                 |            |

#### Notes

For products according to API Standards 5CT & 5B; Performance calculated considering API Technical Report 5C3 (Sections 9 & 10) equations.

For geometrical and steel grades combinations not considered in the API Standards 5CT and/or 5B; Performance calculations indirectly derived from API Technical Report 5C3 (Sections 9 & 10) equations.

Couplings OD are shown according to current API 5CT 10th Edition,

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## **U. S. Steel Tubular Products** 4.500" 13.50lb/ft (0.290" Wall)

## USS RYS110 USS-CDC HTQ®

| Minimum Yield Strength   110,000  |                                   |         |                          |            |
|---|-----------------------------------|---------|--------------------------|------------|
| Maximum Yield Strength         125,000          psi           Minimum Tensile Strength         120,000          psi           IMENSIONS         Pipe         USS-CDC HTQ®            Outside Diameter         4,500         5,250         in.           Wall Thickness         0,290          in.           Inside Diameter         3,920         3,920         in.           Standard Drift         3,795         3,795         in.           Alternate Drift           lb/ft           Nominal Linear Weight, T&C         13,50          lb/ft           Plain End Weight         13.05          lb/ft           ECTION AREA         Pipe         USS-CDC HTQ®           Critical Area         3,836         3,836         sq. in.           Joint Efficiency          100.0         %           ERFORMANCE         Pipe         USS-CDC HTQ®           Minimum Collapse Pressure         10,680         psi           External Pressure Leak Resistance          8,540         psi           Minimum Pipe Body Yield Strength         422,200          lb           Joint St   | MECHANICAL PROPERTIES             | Pipe    | USS-CDC HTQ <sup>®</sup> |            |
| Minimum Tensile Strength         120,000         -         psi           IMENSIONS         Pipe         USS-CDC HTQ®           Outside Diameter         4.500         5.250         in.           Wall Thickness         0.290         5.250         in.           Inside Diameter         3.920         3.920         in.           Standard Drift         3.795         3.795         in.           Alternate Drift          in.         in.           Nominal Linear Weight, T&C         13.50          lb/ft           Plain End Weight         13.05          lb/ft           ECTION AREA         Pipe         USS-CDC HTQ®         USS-CDC HTQ®           Critical Area         3.836         3.836         sq. in.           Joint Efficiency          100.0         %           ERFORMANCE         Pipe         USS-CDC HTQ®           Minimum Collapse Pressure         10.680         psi           External Pressure Leak Resistance          8,540         psi           Minimum Internal Yield Pressure         12,420         12,420         psi           Joint Strength          427,800         lb           Com | Minimum Yield Strength            | 110,000 |                          | psi        |
| IMENSIONS         Pipe         USS-CDC HTQ®           Outside Diameter         4.500         5.250         in.           Wall Thickness         0.290          in.           Inside Diameter         3.920         3.920         in.           Standard Drift         3.795         3.795         in.           Alternate Drift           lb/ft           Nominal Linear Weight, T&C         13.50          lb/ft           Plain End Weight         13.05          lb/ft           ECTION AREA         Pipe         USS-CDC HTQ®         USS-CDC HTQ®           Critical Area         3.836         3.836         sq. in.           Joint Efficiency          100.0         %           ERFORMANCE         Pipe         USS-CDC HTQ®           Minimum Collapse Pressure         10,680         psi           External Pressure Leak Resistance          8,540         psi           Minimum Internal Yield Pressure         12,420         12,420         psi           Minimum Pipe Body Yield Strength         422,000          lb           Joint Strength          427,800         lb           <                           | Maximum Yield Strength            | 125,000 |                          | psi        |
| Outside Diameter       4.500       5.250       in.         Wall Thickness       0.290        in.         Inside Diameter       3.920       3.920       in.         Standard Drift       3.795       3.795       in.         Alternate Drift         lb/ft         Nominal Linear Weight, T&C       13.50        lb/ft         Plain End Weight       13.05        lb/ft         ECTION AREA       Pipe       USS-CDC HTQ®         Critical Area       3.836       3.836       sq. in.         Joint Efficiency        100.0       %         ERFORMANCE       Pipe       USS-CDC HTQ®         Minimum Collapse Pressure       10,680       10,680       psi         External Pressure Leak Resistance        8,540       psi         Minimum Internal Yield Pressure       12,420       12,420       psi         Minimum Pipe Body Yield Strength       422,000        Ib         Compression Rating        427,800       Ib         Reference Length        256,700       Ib         Maximum Uniaxial Bend Rating        68.2<  | Minimum Tensile Strength          | 120,000 |                          | psi        |
| Wall Thickness         0.290          in.           Inside Diameter         3.920         3.920         in.           Standard Drift         3.795         3.795         in.           Alternate Drift           in.           Nominal Linear Weight, T&C         13.50          lb/ft           Plain End Weight         13.05          lb/ft           ECTION AREA         Pipe         USS-CDC HTQ®           Critical Area         3.836         3.836         sq. in.           Joint Efficiency          100.0         %           ERFORMANCE         Pipe         USS-CDC HTQ®           Minimum Collapse Pressure         10,680         10,680         psi           External Pressure Leak Resistance          8,540         psi           Minimum Internal Yield Pressure         12,420         12,420         psi           Minimum Pipe Body Yield Strength         422,000          lb           Joint Strength          427,800         lb           Compression Rating          256,700         lb           Reference Length          68.2         deg/100 ft   | DIMENSIONS                        | Pipe    | USS-CDC HTQ <sup>®</sup> |            |
| Inside Diameter         3.920         3.920         in.           Standard Drift         3.795         3.795         in.           Alternate Drift          in.           Nominal Linear Weight, T&C         13.50          lb/ft           Plain End Weight         13.05          lb/ft           ECTION AREA         Pipe         USS-CDC HTQ®         USS-CDC HTQ®           Critical Area         3.836         3.836         sq. in.           Joint Efficiency          100.0         %           ERFORMANCE         Pipe         USS-CDC HTQ®           Minimum Collapse Pressure         10,680         10,680         psi           External Pressure Leak Resistance          8,540         psi           Minimum Internal Yield Pressure         12,420         12,420         psi           Minimum Pipe Body Yield Strength         422,000          lb           Joint Strength          427,800         lb           Compression Rating          256,700         lb           Reference Length          68.2         deg/100 ft           Make-Up DATA         Pipe         USS-CDC HTQ®                          | Outside Diameter                  | 4.500   | 5.250                    | in.        |
| Standard Drift         3.795         3.795         in.           Alternate Drift           in.           Nominal Linear Weight, T&C         13.50          Ib/ft           Plain End Weight         13.05          Ib/ft           ECTION AREA         Pipe         USS-CDC HTQ®         USS-CDC HTQ®           Critical Area         3.836         3.836         sq. in.           Joint Efficiency          100.0         %           ERFORMANCE         Pipe         USS-CDC HTQ®           Minimum Collapse Pressure         10,680         psi           External Pressure Leak Resistance          8,540         psi           Minimum Internal Yield Pressure         12,420         12,420         psi           Minimum Pipe Body Yield Strength         422,000          lb           Joint Strength          427,800         lb           Compression Rating          256,700         lb           Reference Length          68.2         deg/100 ft           AKE-UP DATA         Pipe         USS-CDC HTQ®           Make-Up Loss          4.444         in.   | Wall Thickness                    | 0.290   |                          | in.        |
| Alternate Drift           Ib/ft           Nominal Linear Weight, T&C         13.50          Ib/ft           Plain End Weight         13.05          Ib/ft           ECTION AREA         Pipe         USS-CDC HTQ®         USS-CDC HTQ®           Critical Area         3.836         3.836         sq. in.           Joint Efficiency          100.0         %           ERFORMANCE         Pipe         USS-CDC HTQ®           Minimum Collapse Pressure         10,680         psi           External Pressure Leak Resistance          8,540         psi           Minimum Internal Yield Pressure         12,420         12,420         psi           Minimum Pipe Body Yield Strength         422,000          Ib           Joint Strength          427,800         Ib           Compression Rating          256,700         Ib           Reference Length          68.2         deg/100 ft           AKE-UP DATA         Pipe         USS-CDC HTQ®           Make-Up Loss          4.44         in.           Minimum Make-Up Torque          7,000         ft-lb   | Inside Diameter                   | 3.920   | 3.920                    | in.        |
| Nominal Linear Weight, T&C  | Standard Drift                    | 3.795   | 3.795                    | in.        |
| Plain End Weight         13.05          Ib/ft           ECTION AREA         Pipe         USS-CDC HTQ®           Critical Area         3,836         3,836         sq. in.           Joint Efficiency          100.0         %           ERFORMANCE         Pipe         USS-CDC HTQ®           Minimum Collapse Pressure         10,680         psi           External Pressure Leak Resistance          8,540         psi           Minimum Internal Yield Pressure         12,420         12,420         psi           Minimum Pipe Body Yield Strength         422,000          lb           Joint Strength          427,800         lb           Compression Rating          256,700         lb           Reference Length          21,126         ft           Maximum Uniaxial Bend Rating          68.2         deg/100 ft           AKE-UP DATA         Pipe         USS-CDC HTQ®           Make-Up Loss          4.44         in.           Minimum Make-Up Torque          7,000         ft-lb  | Alternate Drift                   |         |                          | in.        |
| Critical Area 3,836 3,836 sq. in. Joint Efficiency 100.0 %  ERFORMANCE Pipe USS-CDC HTQ®  Minimum Collapse Pressure 10,680 10,680 psi External Pressure Leak Resistance 8,540 psi Minimum Internal Yield Pressure 12,420 12,420 psi Minimum Pipe Body Yield Strength 422,000 Ib Joint Strength 427,800 Ib Compression Rating 256,700 Ib Reference Length 21,126 ft Maximum Uniaxial Bend Rating 68.2 deg/100 ft  AKE-UP DATA Pipe USS-CDC HTQ®  Make-Up Loss 4,444 in. Minimum Make-Up Torque 7,000 ft-lb Maximum Make-Up Torque 10,000 ft-lb   | Nominal Linear Weight, T&C        | 13.50   |                          | lb/ft      |
| Critical Area 3,836 3,836 sq. in.  Joint Efficiency 100.0 %  ERFORMANCE Pipe USS-CDC HTQ®  Minimum Collapse Pressure 10,680 10,680 psi External Pressure Leak Resistance 8,540 psi Minimum Internal Yield Pressure 12,420 12,420 psi Minimum Pipe Body Yield Strength 422,000 Ib  Joint Strength 427,800 Ib  Compression Rating 256,700 Ib  Reference Length 21,126 ft  Maximum Uniaxial Bend Rating 68.2 deg/100 ft  AKE-UP DATA Pipe USS-CDC HTQ®  Make-Up Loss 4.44 in.  Minimum Make-Up Torque 7,000 ft-Ib  Maximum Make-Up Torque 10,000 ft-Ib   | Plain End Weight                  | 13.05   |                          | lb/ft      |
| Doint Efficiency   Fipe   USS-CDC HTQ®  | SECTION AREA                      | Pipe    | USS-CDC HTQ <sup>®</sup> |            |
| Minimum Collapse Pressure 10,680 10,680 psi External Pressure Leak Resistance 8,540 psi Minimum Internal Yield Pressure 12,420 12,420 psi Minimum Pipe Body Yield Strength 422,000 Ib Joint Strength 427,800 Ib Compression Rating 256,700 Ib Reference Length 21,126 ft Maximum Uniaxial Bend Rating 68.2 deg/100 ft   AKE-UP DATA Pipe USS-CDC HTQ®  Make-Up Loss 4.44 in. Minimum Make-Up Torque 7,000 ft-Ib Maximum Make-Up Torque 10,000 ft-Ib   | Critical Area                     | 3.836   | 3,836                    | sq. in.    |
| Minimum Collapse Pressure 10,680 10,680 psi  External Pressure Leak Resistance 8,540 psi  Minimum Internal Yield Pressure 12,420 12,420 psi  Minimum Pipe Body Yield Strength 422,000 Ib  Joint Strength 427,800 Ib  Compression Rating 256,700 Ib  Reference Length 21,126 ft  Maximum Uniaxial Bend Rating 68.2 deg/100 ft  AKE-UP DATA Pipe USS-CDC HTQ®  Make-Up Loss 4.44 in.  Minimum Make-Up Torque 7,000 ft-Ib  Maximum Make-Up Torque 10,000 ft-Ib   | Joint Efficiency                  |         | 100.0                    | %          |
| External Pressure Leak Resistance        8,540       psi         Minimum Internal Yield Pressure       12,420       12,420       psi         Minimum Pipe Body Yield Strength       422,000        lb         Joint Strength        427,800       lb         Compression Rating        256,700       lb         Reference Length        21,126       ft         Maximum Uniaxial Bend Rating        68.2       deg/100 ft         AKE-UP DATA       Pipe       USS-CDC HTQ®         Make-Up Loss        4.44       in.         Minimum Make-Up Torque        7,000       ft-lb         Maximum Make-Up Torque        10,000       ft-lb   | PERFORMANCE                       | Pipe    | USS-CDC HTQ <sup>®</sup> |            |
| Minimum Internal Yield Pressure       12,420       12,420       psi         Minimum Pipe Body Yield Strength       422,000        lb         Joint Strength        427,800       lb         Compression Rating        256,700       lb         Reference Length        21,126       ft         Maximum Uniaxial Bend Rating        68.2       deg/100 ft         AKE-UP DATA       Pipe       USS-CDC HTQ®         Make-Up Loss        4.44       in.         Minimum Make-Up Torque        7,000       ft-lb         Maximum Make-Up Torque        10,000       ft-lb  | Minimum Collapse Pressure         | 10,680  | 10,680                   | psi        |
| Minimum Pipe Body Yield Strength         422,000          Ib           Joint Strength          427,800         Ib           Compression Rating          256,700         Ib           Reference Length          21,126         ft           Maximum Uniaxial Bend Rating          68.2         deg/100 ft           AKE-UP DATA         Pipe         USS-CDC HTQ®           Make-Up Loss          4.44         in.           Minimum Make-Up Torque          7,000         ft-Ib           Maximum Make-Up Torque          10,000         ft-Ib  | External Pressure Leak Resistance |         | 8,540                    | psi        |
| Joint Strength          427,800         Ib           Compression Rating          256,700         Ib           Reference Length          21,126         ft           Maximum Uniaxial Bend Rating          68.2         deg/100 ft           AKE-UP DATA         Pipe         USS-CDC HTQ®           Make-Up Loss          4.44         in.           Minimum Make-Up Torque          7,000         ft-lb           Maximum Make-Up Torque          10,000         ft-lb   | Minimum Internal Yield Pressure   | 12,420  | 12,420                   | psi        |
| Compression Rating          256,700         Ib           Reference Length          21,126         ft           Maximum Uniaxial Bend Rating          68.2         deg/100 ft           AKE-UP DATA         Pipe         USS-CDC HTQ®           Make-Up Loss          4.44         in.           Minimum Make-Up Torque          7,000         ft-Ib           Maximum Make-Up Torque          10,000         ft-Ib  | Minimum Pipe Body Yield Strength  | 422,000 |                          | lb         |
| Reference Length          21,126         ft           Maximum Uniaxial Bend Rating          68.2         deg/100 ft           AKE-UP DATA         Pipe         USS-CDC HTQ®           Make-Up Loss          4.44         in.           Minimum Make-Up Torque          7,000         ft-lb           Maximum Make-Up Torque          10,000         ft-lb   | Joint Strength                    |         | 427,800                  | lb         |
| Maximum Uniaxial Bend Rating68.2deg/100 ftAKE-UP DATAPipeUSS-CDC HTQ®Make-Up Loss4.44in.Minimum Make-Up Torque7,000ft-lbMaximum Make-Up Torque10,000ft-lb   | Compression Rating                |         | 256,700                  | lb         |
| AKE-UP DATA         Pipe         USS-CDC HTQ®           Make-Up Loss          4.44         in.           Minimum Make-Up Torque          7,000         ft-lb           Maximum Make-Up Torque          10,000         ft-lb   | Reference Length                  |         | 21,126                   | ft         |
| Make-Up Loss        4.44       in.         Minimum Make-Up Torque        7,000       ft-lb         Maximum Make-Up Torque        10,000       ft-lb   | Maximum Uniaxial Bend Rating      |         | 68.2                     | deg/100 ft |
| Minimum Make-Up Torque 7,000 ft-lb Maximum Make-Up Torque 10,000 ft-lb  | MAKE-UP DATA                      | Pipe    | USS-CDC HTQ <sup>®</sup> |            |
| Maximum Make-Up Torque 10,000 ft-lb   | Make-Up Loss                      |         | 4.44                     | in.        |
|   | Minimum Make Lln Torque           |         | 7,000                    | ft-lb      |
| Connection Yield Torque 12,400 ft-lb  | Millimum Make-op Torque           |         |                          |            |
|   | ·                                 |         | 10,000                   | ft-lb      |

## **Notes**

- 1. Other than proprietary collapse and connection values, performance properties have been calculated using standard equations defined by API 5C3 and do not incorporate any additional design or safety factors. Calculations assume nominal pipe OD, nominal wall thickness and Specified Minimum Yield Strength (SMYS).
- 2. Uniaxial bending rating shown is structural only, and equal to compression efficiency.
- 3. Torques have been calculated assuming a thread compound friction factor of 1.0 and are recommended only. Field make-up torques may require adjustment based on actual field conditions (e.g. make-up speed, temperature, thread compound, etc.).
- 4. Reference length is calculated by joint strength divided by nominal threaded and coupled weight with 1.5 safety factor.
- 5. Connection external pressure leak resistance has been verified to 80% API pipe body collapse pressure following the guidelines of API 5C5 Cal II.

#### **Legal Notice**

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SHL: 800' FNL 1540' FEL (Sec 2) BHL: 100' FSL 2250' FEL (Sec 11)

Well Location GL: 2953'

| Point | Calls                                | Leases     | Aliquot | Section | Township | Range | County | Lat        | Long          | TVD    | MD      |
|-------|--------------------------------------|------------|---------|---------|----------|-------|--------|------------|---------------|--------|---------|
| SHL   | SHL: 800' FNL & 1540' FEL (Sec 2)    | NMNM134867 | 0       | 2       | 25S      | 28E   | Eddy   | 32.1643049 | - 104.0543577 | 0'     | 0'      |
| KOP   | KOP: 10' FNL & 2250' FEL (Sec 2)     | NMNM134867 | 0       | 2       | 25S      | 28E   | Eddy   | 32.1664815 | - 104.0566370 | 8,165' | 8,240'  |
| FTP   | FTP: 100' FNL & 2250' FEL (Sec 2)    | NMNM134867 | 0       | 2       | 25S      | 28E   | Eddy   | 32.1662341 | - 104.0566386 | 8,473' | 8,565'  |
| PPP2  | PPP2: 1328' FNL & 2229' FEL (Sec 11) | NMNM016104 | SWNE    | 11      | 25S      | 28E   | Eddy   | 32.1483643 | - 104.0566694 | 8,735' | 15,157' |
| BHL   | BHL: 100' FSL & 2250' FEL (Sec 11)   | Fee        | SWSE    | 11      | 25S      | 28E   | Eddy   | 32.1377039 | - 104.0566877 | 8,733' | 19,035' |

#### GEOLOGY

| Formation      | Est. Top (TVD) | Lithology | Mineral Resources | Formation           | Est. Top (TVD) | Lithology                 | Mineral Resources |
|----------------|----------------|-----------|-------------------|---------------------|----------------|---------------------------|-------------------|
| Rustler        |                |           |                   | Yeso                |                |                           |                   |
| Castile        |                |           |                   | Delaware (Lamar)    | 2625'          | Limestone/Dolomite        | Oil/Natural Gas   |
| Salt Top       | 1180'          | Salt      | None              | Bell Canyon         | 2650'          | Sandstone                 | Oil/Natural Gas   |
| Marker Bed 126 |                |           |                   | Cherry Canyon       | 3545'          | Sandstone                 | Oil/Natural Gas   |
| Salt Base      | 2415'          | Salt      | None              | Manzanita Marker    | 3670'          | Limestone                 | Oil/Natural Gas   |
| Yates          |                |           |                   | Basal Brushy Canyon | 4852'          | Sandstone                 | Oil/Natural Gas   |
| Seven Rivers   |                |           |                   | Bone Spring         | 6385'          | Limestone                 | Oil/Natural Gas   |
| Queen          |                |           |                   | 1st Bone Spring     | 7335'          | Sandstone                 | Oil/Natural Gas   |
| Capitan        |                |           |                   | 2nd Bone Spring     | 8125'          | Sandstone                 | Oil/Natural Gas   |
| Grayburg       |                |           |                   | 3rd Bone Spring     | 9175'          | Sandstone                 | Oil/Natural Gas   |
| San Andres     |                |           |                   | Wolfcamp            | 9555'          | Shale/Sandstone/Limestone | Oil/Natural Gas   |

|              |                  | Casing Progr | ram Design A |        | BLM Minimum Safety Factors | 1.125                     | 1.0         | 1.6 Dry<br>1.8 Wet | 1.6 Dry<br>1.8 Wet |                    |
|--------------|------------------|--------------|--------------|--------|----------------------------|---------------------------|-------------|--------------------|--------------------|--------------------|
| String       | String Hole Size |              | Top TVD      | Bot MD | Bot TVD                    | Csg. Size                 | SF Collapse | SF Burst           | SF Jt<br>Tension   | SF Body<br>Tension |
| Surface      | 17.5"            | 0'           | 0'           | 450'   | 450'                       | 13.375" 48# H40 STC       | 3.83        | 8.60               | 14.91              | 25.05              |
| Intermediate | 12.25"           | 0'           | 0'           | 2550'  | 2550'                      | 9.625" 36# J55 LTC        | 1.50        | 2.60               | 4.93               | 6.14               |
| Production   | 8.75"            | 0'           | 0'           | 8240'  | 8165'                      | 7" 26# P110 LTC           | 1.51        | 2.42               | 3.23               | 3.87               |
| Production   | 8.5"             | 8240'        | 8165'        | 19035' | 8733'                      | 4.5" 13.5# RYS110 CDC HTQ | 1.96        | 2.28               | 2.94               | 2.90               |

## All casing strings will be tested in accordance with 43 CFR Part 3172. Must have table for contingency casing.

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

SHL: 800' FNL 1540' FEL (Sec 2) BHL: 100' FSL 2250' FEL (Sec 11)

Design A - Cement Program

| Csg. Size          |      | # Sacks | Wt., lb/gal | Yield, ft <sup>3</sup> /sack | TOC/BOC        | Volume, ft <sup>3</sup> | % Excess | Slurry Description                          |
|--------------------|------|---------|-------------|------------------------------|----------------|-------------------------|----------|---|
| 13.375 in          | LEAD | 170     | 12.5        | 2.12                         | 0' - 261'      | 370                     | 100%     | Class C: Salt, Gel, Extender, LCM           |
| 13.375 III         | TAIL | 200     | 14.8        | 1.34                         | 261' - 450'    | 268                     | 10076    | Class C: Retarder                           |
| 9.625 in           | LEAD | 350     | 12.5        | 2.12                         | 0' - 1879'     | 750                     | 25%      | Class C: Salt, Gel, Extender, LCM           |
| 9.025 III          | TAIL | 200     | 14.8        | 1.34                         | 1879' - 2550'  | 268                     | 2376     | Class C: Retarder                           |
| 7 in - 4.5 in      | LEAD | 230     | 12.5        | 2.12                         | 3670' - 7185'  | 490                     | 25%      | Class C: Salt, Gel, Extender, LCM, Defoamer |
| / III - 4.5 III    | TAIL | 1400    | 15.6        | 1.18                         | 7185' - 19035' | 1652                    | 2376     | Class H: Retarder, Fluid Loss, Defoamer     |
| 7" DV Tool @ 3670' |      |         |             |                              |                |                         |          |   |
| 2-16-71-           | LEAD | 60      | 12.5        | 2.12                         | 2350' - 3000'  | 130                     | 25%      | Class C: Salt, Gel, Extender, LCM, Defoamer |
| 2nd Stg 7 in       | TAIL | 100     | 14.8        | 1.34                         | 3000' - 3670'  | 134                     | 25%      | Class C: Retarder, Fluid Loss, Defoamer     |

#### **Pressure Control Equipment**

| BOP installed and<br>tested before<br>drilling hole, in: | Size, in | System<br>Rated WP |        | Туре     |   | Tested to:  | Rating<br>Depth |  |
|--|----------|--------------------|--------|----------|---|-------------|-----------------|--|
|  |          | 5M                 |        | Annular  | X | 2500#/3500# |                 |  |
|  |          |                    | Bl     | lind Ram | X |             |                 |  |
| 12.25  | 13.375   | 5M                 | P      | ipe Ram  | X | 5000#       | 19,035'         |  |
|  |          | SIVI               | Do     | uble Ram |   | 3000#       |                 |  |
|  |          |                    | Other* |          |   |             |                 |  |

<sup>\*</sup>Specify if additional ram is utilized.

Equipment: Annular, Pipe Rams, Blind Rams, Other accessories to the BOP equipment will include a Kelly cock and floor safety valve (inside BOP) and choke lines and choke manifold. See attached schematics.

Variance Request: A variance is requested for the use of a flexible choke line from the BOP to the choke manifold. See attached for hydrostatic test chart. Anchors are not required by manufacturer. Variance is requested to use a multi bowl wellhead. Variance is requested to perform break testing according to attached procedure. If a breaktesting variance is approved & incorporated, API Standard 53 will be incorporated and testing annular BOP to 70% of RWP or 100% of MASP, whichever is greater, will be performed.

Testing Procedure: BOP/BOPE will be tested by an independent service company to 250 psi low and the high pressure indicated above per 43 CFR Part 3172 requirements. The System may be upgraded to a higher pressure but still tested to the working pressure listed in the table above. If the system is upgraded all the components installed will be functional and tested. Pipe rams will be operationally checked each 24 hour period. Blind rams will be operationally checked on each trip out of the hole. These checks will be noted on the daily tour sheets.

| Y | Formation integrity test will be performed per 43 CFR Part 3172.  On Exploratory wells or on that portion of any well approved for a 5M BOPE system or greater, a pressure integrity test of each casing shoe shall be performed. Will be tested in accordance with 43 CFR Part 3172. |
|---|---|
| N | Mewbourne Oil Company request a variance to use a 5000 psi annular BOP with a 10,000 psi BOP stack.   |

#### Mud Program

| Depth (MD)    | Mud Wt.,<br>lb/gal | Mud Type    |
|---------------|--------------------|-------------|
| 0' - 450'     | 8.4 - 8.6          | Fresh Water |
| 450' - 2550'  | 10.0 - 10.2        | Brine       |
| 2550' - 8240' | 8.6 - 9.7          | Cut-Brine   |
| 9240! 10025!  | 10.0 12            | ODM         |

8240' - 19035' 10.0 - 12. OBM

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

| What will be used to monitor the loss or gain of fluid?  | Pason/PVT/Visual Monitoring             |
|--|---|
| " hat " in be used to monitor the loss of gain of fidia. | 1 dools 1 + 17 + loads 1 + 10 into into |

SHL: 800' FNL 1540' FEL (Sec 2) BHL: 100' FSL 2250' FEL (Sec 11)

#### Logging and Testing Procedures

|   | Logging | s, Coring and Testing.   |
|---|---------|--|
|   | N       | Will run GR/CNL from KOP (8240') to surface (horizontal well – vertical portion of hole). Stated logs run will be in the Completion Report and submitted to the BLM. |
| r | Y       | No logs are planned based on well control or offset log information. Offset Well: Hoss 2/11 Fed Com 858H   |
|   | N       | Coring? If yes, explain:   |

#### Open & Cased Hole Logs Run In the Well

| Caliper                                   |   | Cement Bond Log            | CNL/FDC                           |
|---|---|----------------------------|-----------------------------------|
| Compensated Densilog                      |   | Compensated Neutron Log    | Computer Generated Log            |
| Dip Meter Log                             | V | Directional Survey         | Dual Induction/Microresistivity   |
| Dual Lateral Log/Microspherically Focused |   | Electric Log               | Formation Density Compensated Log |
| Gamma Ray Log                             | V | Measurement While Drilling | Mud Log/Geological Lithology Log  |
| Other                                     |   | Porosity-Resistivity Log   | Sidewall Neutron Log              |
| Sonic Log                                 |   | Spontaneous Potential Log  | Temperature Log                   |

#### **Drilling Conditions**

| Condition                                    | Specify what type and where? |
|--|------------------------------|
| BH Pressure at deepest TVD                   | 5453 psi                     |
| BH Temperature                               | 140                          |
| Abnormal Temp, Pressure, or Geologic Hazards | No                           |

Mitigation measure for abnormal conditions. Describe. Lost circulation material/sweeps/mud scavengers in surface hole. Weighted mud for possible over-pressure in Wolfcamp formation.

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

|   | H2S is present    |
|---|-------------------|
| Y | H2S Plan attached |

SHL: 800' FNL 1540' FEL (Sec 2) BHL: 100' FSL 2250' FEL (Sec 11)

#### Other facets of operation

Mewbourne Oil Company also requests approval to implement additional designs as described below &/or in other attachments. BLM will be notified of elected design.

Offline Cementing Variance: Variance is requested to perform offline cementing according to the attached procedure. R-111Q: Mewbourne proposes performing Open Hole Cementing per R-111Q Guidelines if well is in Potash.

|              | Casing Program Design B BLM Minir |                            |         |        |         | BLM Minimum Safety Factors | 1.125       | 1.0      | 1.6 Dry | 1.6 Dry |
|--------------|-----------------------------------|----------------------------|---------|--------|---------|----------------------------|-------------|----------|---------|---------|
|              |                                   | BEM Minimum Safety Factors | 1.125   | 1.0    | 1.8 Wet | 1.8 Wet                    |             |          |         |         |
| String       | Hole Size                         | Top MD                     | Top TVD | Bot MD | Bot TVD | Csg. Size                  | SF Collapse | SF Burst | SF Jt   | SF Body |
| Surface      | 17.5"                             | 0'                         | 0'      | 450'   | 450'    | 13.375" 48# H40 STC        | 3.83        | 8.60     | 14.91   | 25.05   |
| Intermediate | 12.25"                            | 0'                         | 0'      | 2550'  | 2550'   | 9.625" 36# J55 LTC         | 1.50        | 2.60     | 4.93    | 6.14    |
| Production   | 8.75"                             | 0'                         | 0'      | 8240'  | 8165'   | 7" 26# P110 LTC            | 1.51        | 2.42     | 3.23    | 3.87    |
| Liner        | 8.5"                              | 8040'                      | 7971'   | 19035' | 8733'   | 4.5" 13.5# P110 LTC        | 1.96        | 2.28     | 2.28    | 2.84    |

#### All casing strings will be tested in accordance with 43 CFR Part 3172. Must have table for contingency casing.

| All casing strings will be tested in accordance with 45 CFR 1 at C5172. Must have table for contingency casing.                                  |        |
|--|--------|
|  | Y or N |
| Is casing new? If used, attach certification as required in Onshore Order #1   | Y      |
| Is casing API approved? If no, attach casing specification sheet.  | Y      |
| Is premium or uncommon casing planned? If yes attach casing specification sheet.   | N      |
| Does the above easing design meet or exceed BLM's minimum standards? If not provide justification (loading assumptions, easing design criteria). | Y      |
| Will the pipe be kept at a minimum 1/3 fluid filled to avoid approaching the collapse pressure rating of the casing?                             | Y      |
| Is well located within Capitan Reef?   | N      |
| If yes, does production easing cement tie back a minimum of 50' above the Reef?  |        |
| Is well within the designated 4 string boundary.   | N      |
| Is well located in SOPA but not in R-111-Q?  | N      |
| If yes, are the first 2 strings cemented to surface and 3 <sup>rd</sup> string cement tied back 500° into previous easing?                       |        |
| Is well located in R-111-Q and SOPA?   | N      |
| If yes, are the first three strings comented to surface?   |        |
| Is 2 <sup>nd</sup> string set 100' to 600' below the base of salt?   |        |
| Is an open annulus used to satisfy R-111-Q? If yes, see cement design.   |        |
| Is an engineered weak point used to satisfy R-111-Q?   |        |
| If yes, at what depth is the weak point planned?   |        |
| Is well located in high Cave/Karst?  | N      |
| If yes, are there two strings cemented to surface?   |        |
| (For 2 string wells) If yes, is there a contingency easing if lost circulation occurs?   |        |
| Is well located in critical Cave/Karst?  | N      |
| If yes, are there three strings cemented to surface?   | 11     |

#### Design B - Cement Program

| Csg. Size      |      | # Sacks | Wt., lb/gal | Yield, ft <sup>3</sup> /sack | TOC/BOC        | Volume, ft <sup>3</sup> | % Excess | Slurry Description  |
|----------------|------|---------|-------------|------------------------------|----------------|-------------------------|----------|---|
| 13,375 in      | LEAD | 170     | 12.5        | 2.12                         | 0' - 261'      | 370                     | 100%     | Class C: Salt, Gel, Extender, LCM   |
| 13.375 III     | TAIL | 200     | 14.8        | 1.34                         | 261' - 450'    | 268                     | 100%     | Class C: Retarder   |
| 9.625 in       | LEAD | 350     | 12.5        | 2.12                         | 0' - 1879'     | 750                     | 25%      | Class C: Salt, Gel, Extender, LCM   |
| 9.025 III      | TAIL | 200     | 14.8        | 1.34                         | 1879' - 2550'  | 268                     | 2376     | Class C: Retarder   |
| 1st Stg 7 in   | LEAD | 190     | 12.5        | 2.12                         | 3670' - 5794'  | 410                     | 25%      | Class C: Salt, Gel, Extender, LCM, Defoamer   |
| 1st Stg / III  | TAIL | 400     | 15.6        | 1.18                         | 5794' - 8240'  | 472                     | 2376     | Class H: Retarder, Fluid Loss, Defoamer   |
|                |      |         |             |                              | 7'             | ' DV Tool @ 3670'       |          |   |
| 2nd Stg 7 in   | LEAD | 60      | 12.5        | 2.12                         | 2350' - 3000'  | 130                     | 25%      | Class C: Salt, Gel, Extender, LCM, Defoamer   |
| Ziiu Sig / iii | TAIL | 100     | 14.8        | 1.34                         | 3000' - 3670'  | 134                     | 2376     | Class C: Retarder, Fluid Loss, Defoamer   |
| 4.5 in         | LEAD | 700     | 13.5        | 1.85                         | 8040' - 19035' | 1300                    | 25%      | Class H: Salt, Gel, Fluid Loss, Retarder, Dispersant, Defoamer, Anti-<br>settling Agent |

## **Mewbourne Oil Company**

Eddy County, New Mexico NAD 83 Hoss 2/11 Fed Com #555H Sec 02, T25S, R28E

SHL: 800' FNL & 1540' FEL (Sec 2) BHL: 100' FSL & 2250' FEL (Sec 11)

Plan: Design #1

## **Standard Planning Report**

10 December, 2024

Database: Hobbs

Company: Mewbourne Oil Company
Project: Eddy County, New Mexico NAD 83

 Site:
 Hoss 2/11 Fed Com #555H

 Well:
 Sec 02, T25S, R28E

Wellbore: BHL: 100' FSL & 2250' FEL (Sec 11)

Design: Design #1

Local Co-ordinate Reference:

TVD Reference:
MD Reference:
North Reference:

Survey Calculation Method:

Site Hoss 2/11 Fed Com #555H

WELL @ 2981.0usft (Original Well Elev) WELL @ 2981.0usft (Original Well Elev)

Grid

Minimum Curvature

Project Eddy County, New Mexico NAD 83

Map System: US State Plane 1983
Geo Datum: North American Datum 1983
Map Zone: New Mexico Eastern Zone

System Datum:

Ground Level

Site Hoss 2/11 Fed Com #555H

 Site Position:
 Northing:
 423,621.10 usft
 Latitude:
 32.1643050

 From:
 Map
 Easting:
 627,662.20 usft
 Longitude:
 -104.0543577

Position Uncertainty: 0.0 usft Slot Radius: 13-3/16

Well Sec 02, T25S, R28E

 Well Position
 +N/-S
 0.0 usft
 Northing:
 423,621.10 usft
 Latitude:
 32.1643050

 +E/-W
 0.0 usft
 Easting:
 627,662.20 usft
 Longitude:
 -104.0543577

Position Uncertainty0.0 usftWellhead Elevation:2,981.0 usftGround Level:2,953.0 usft

Grid Convergence: 0.15 °

Wellbore BHL: 100' FSL & 2250' FEL (Sec 11)

 Magnetics
 Model Name
 Sample Date
 Declination (°)
 Dip Angle (°)
 Field Strength (nT)

 IGRF2010
 12/31/2014
 7.37
 59.96
 48,152.43663946

Design #1

Audit Notes:

Version:Phase:PROTOTYPETie On Depth:0.0

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

 0.0
 0.0
 0.0
 0.0
 184.11

Plan Survey Tool Program Date 12/10/2024

Depth From Depth To

(usft) (usft) Survey (Wellbore) Tool Name Remarks

1 0.0 19,035.9 Design #1 (BHL: 100' FSL & 2250

| Plan Sections               |                    |                |                             |                 |                 |                               |                              |                             |            |                      |
|-----------------------------|--------------------|----------------|-----------------------------|-----------------|-----------------|-------------------------------|------------------------------|-----------------------------|------------|----------------------|
| Measured<br>Depth<br>(usft) | Inclination<br>(°) | Azimuth<br>(°) | Vertical<br>Depth<br>(usft) | +N/-S<br>(usft) | +E/-W<br>(usft) | Dogleg<br>Rate<br>(°/100usft) | Build<br>Rate<br>(°/100usft) | Turn<br>Rate<br>(°/100usft) | TFO<br>(°) | Target               |
| 0.0                         | 0.00               | 0.00           | 0.0                         | 0.0             | 0.0             | 0.00                          | 0.00                         | 0.00                        | 0.00       |                      |
| 450.0                       | 0.00               | 0.00           | 450.0                       | 0.0             | 0.0             | 0.00                          | 0.00                         | 0.00                        | 0.00       |                      |
| 863.1                       | 8.26               | 318.16         | 861.7                       | 22.2            | -19.8           | 2.00                          | 2.00                         | 0.00                        | 318.16     |                      |
| 7,827.0                     | 8.26               | 318.16         | 7,753.3                     | 767.7           | -687.5          | 0.00                          | 0.00                         | 0.00                        | 0.00       |                      |
| 8,240.2                     | 0.00               | 0.00           | 8,165.0                     | 789.9           | -707.3          | 2.00                          | -2.00                        | 0.00                        | 180,00     | KOP: 10' FNL & 2250' |
| 9,140.5                     | 90.03              | 179.94         | 8,738.0                     | 216.6           | -706.7          | 10.00                         | 10.00                        | 0.00                        | 179.94     |                      |
| 19,035.9                    | 90.03              | 179.94         | 8,733.0                     | -9,678.8        | -696.1          | 0.00                          | 0.00                         | 0.00                        | 0.00       | BHL: 100' FSL & 2250 |

Database: Hobbs

Company: Mewbourne Oil Company
Project: Eddy County, New Mexico NAD 83
Site: Hoss 2/11 Fed Com #555H
Well: Sec 02, T25S, R28E

Wellbore: BHL: 100' FSL & 2250' FEL (Sec 11)

Design: Design #1

Local Co-ordinate Reference:

TVD Reference: MD Reference: North Reference:

Survey Calculation Method:

Site Hoss 2/11 Fed Com #555H

WELL @ 2981.0usft (Original Well Elev) WELL @ 2981.0usft (Original Well Elev)

Grid

Minimum Curvature

| d Survey                    |                    |                  |                             |                 |                 |                               |                               |                              |                             |
|-----------------------------|--------------------|------------------|-----------------------------|-----------------|-----------------|-------------------------------|-------------------------------|------------------------------|-----------------------------|
| Measured<br>Depth<br>(usft) | Inclination<br>(°) | Azimuth<br>(°)   | Vertical<br>Depth<br>(usft) | +N/-S<br>(usft) | +E/-W<br>(usft) | Vertical<br>Section<br>(usft) | Dogleg<br>Rate<br>(°/100usft) | Build<br>Rate<br>(°/100usft) | Turn<br>Rate<br>(°/100usft) |
|                             |                    |                  |                             | ` '             | , ,             |                               |                               |                              |                             |
| 0.0                         | 0.00               | 0.00             | 0.0                         | 0.0             | 0.0             | 0.0                           | 0.00                          | 0.00                         | 0.00                        |
|                             | NL & 1540' FEL (   |                  |                             |                 |                 |                               |                               |                              |                             |
| 50.0                        | 0.00               | 0.00             | 50.0                        | 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                        |
| 150.0                       | 0.00               | 0.00             | 150.0                       | 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                        |
| 250.0                       | 0.00               | 0.00             | 250.0                       | 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                        |
| 350.0                       | 0.00               | 0.00             | 350.0                       | 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                        |
| 450.0                       | 0.00               | 0.00             | 450.0                       | 0.0             | 0.0             | 0.0                           | 0.00                          | 0.00                         | 0.00                        |
| 500.0                       | 1.00               | 318.16           | 500.0                       | 0.3             | -0.3            | -0.3                          | 2.00                          | 2.00                         | 0.00                        |
| 550.0                       | 2.00               | 318.16           | 550.0                       | 1.3             | -1.2            | -1.2                          | 2.00                          | 2.00                         | 0.00                        |
| 600.0                       | 3.00               | 318.16           | 599.9                       | 2.9             | -2.6            | -2.7                          | 2.00                          | 2.00                         | 0.00                        |
| 650.0                       | 4.00               | 318.16           | 649.8                       | 5.2             | -4.7            | -4.9                          | 2.00                          | 2.00                         | 0.00                        |
| 700.0                       | 5.00               | 318.16           | 699.7                       | 8.1             | -7.3            | -7.6                          | 2.00                          | 2.00                         | 0.00                        |
| 750.0                       | 6.00               | 318.16           | 749.5                       | 11.7            | -10.5           | -10.9                         | 2.00                          | 2.00                         | 0.00                        |
| 800.0                       | 7.00               | 318.16           | 799.1                       | 15.9            | -14.2           | -14.8                         | 2.00                          | 2.00                         | 0.00                        |
| 850.0                       | 8.00               | 318.16           | 848.7                       | 20.8            | -18.6           | -19.4                         | 2.00                          | 2.00                         | 0.00                        |
| 863.1                       | 8.26               | 318.16           | 861.7                       | 22.2            | -19.8           | -20.7                         | 2.00                          | 2.00                         | 0.00                        |
| 900.0                       | 8.26               | 318.16           | 898.2                       | 26.1            | -23.4           | -24.4                         | 0.00                          | 0.00                         | 0.00                        |
| 950.0                       | 8.26               | 318.16           | 947.7                       | 31.5            | -28.2           | -29.4                         | 0.00                          | 0.00                         | 0.00                        |
| 1,000.0                     | 8.26               | 318.16           | 997.1                       | 36.8            | -33.0           | -34.3                         | 0.00                          | 0.00                         | 0.00                        |
| 1,050.0                     | 8.26               | 318.16           | 1,046.6                     | 42.2            | -37.8           | -39.3                         | 0.00                          | 0.00                         | 0.00                        |
| 1,100.0                     | 8.26               | 318.16           | 1,096.1                     | 47.5            | -42.5           | <del>-44</del> .3             | 0.00                          | 0.00                         | 0.00                        |
| 1,150.0                     | 8.26               | 318.16           | 1,145.6                     | 52.9            | -47.3           | -49.3                         | 0.00                          | 0.00                         | 0.00                        |
| 1,200.0                     | 8.26               | 318.16           | 1,195.1                     | 58.2            | -52.1           | -54.3                         | 0.00                          | 0.00                         | 0.00                        |
| 1,250.0                     | 8.26               | 318.16           | 1,195.1                     | 63.6            | -52.1<br>-56.9  | -54.3<br>-59.3                | 0.00                          | 0.00                         | 0.00                        |
| 1,300.0                     | 8.26               | 318.16           | 1,294.0                     | 68.9            | -50.9<br>-61.7  | -59.3<br>-64.3                | 0.00                          | 0.00                         | 0.00                        |
| 1,350.0                     | 8.26               | 318.16           | 1,343.5                     | 74.3            | -66.5           | -69.3                         | 0.00                          | 0.00                         | 0.00                        |
| 1,400.0                     | 8.26               | 318.16           | 1,393.0                     | 79.6            | -71.3           | -74.3                         | 0.00                          | 0.00                         | 0.00                        |
|                             |                    |                  |                             |                 |                 |                               |                               |                              |                             |
| 1,450.0                     | 8.26               | 318.16           | 1,442.5                     | 85.0            | -76.1           | -79.3                         | 0.00                          | 0.00                         | 0.00                        |
| 1,500.0                     | 8.26               | 318.16           | 1,492.0                     | 90.3            | -80.9           | -84.3                         | 0.00                          | 0.00                         | 0.00                        |
| 1,550.0                     | 8.26               | 318.16           | 1,541.4<br>1,590.9          | 95.7            | -85.7<br>-90.5  | -89.3                         | 0.00                          | 0.00                         | 0.00                        |
| 1,600.0<br>1,650.0          | 8.26<br>8.26       | 318.16<br>318.16 | 1,590.9                     | 101.0<br>106.4  | -90.5<br>-95.3  | -94.3<br>-99.3                | 0.00<br>0.00                  | 0.00<br>0.00                 | 0.00<br>0.00                |
|                             |                    |                  |                             |                 |                 |                               |                               |                              |                             |
| 1,700.0                     | 8.26               | 318.16           | 1,689.9                     | 111.8           | -100.1          | -104.3                        | 0.00                          | 0.00                         | 0.00                        |
| 1,750.0                     | 8.26               | 318.16           | 1,739.4                     | 117.1           | -104.9          | -109.3                        | 0.00                          | 0.00                         | 0.00                        |
| 1,800.0                     | 8.26               | 318.16           | 1,788.8                     | 122.5           | -109.7          | -114.3                        | 0.00                          | 0.00                         | 0.00                        |
| 1,850.0                     | 8.26               | 318.16           | 1,838.3                     | 127.8           | -114.4          | -119.3                        | 0.00                          | 0.00                         | 0.00                        |
| 1,900.0                     | 8.26               | 318.16           | 1,887.8                     | 133.2           | -119.2          | -124.3                        | 0.00                          | 0.00                         | 0.00                        |
| 1,950.0                     | 8.26               | 318.16           | 1,937.3                     | 138.5           | -124.0          | -129.3                        | 0.00                          | 0.00                         | 0.00                        |
| 2,000.0                     | 8.26               | 318.16           | 1,986.8                     | 143.9           | -128.8          | -134.3                        | 0.00                          | 0.00                         | 0.00                        |
| 2,050.0                     | 8.26               | 318.16           | 2,036.2                     | 149.2           | -133.6          | -139.3                        | 0.00                          | 0.00                         | 0.00                        |
| 2,100.0                     | 8.26               | 318.16           | 2,085.7                     | 154.6           | -138.4          | -144.3                        | 0.00                          | 0.00                         | 0.00                        |
| 2,150.0                     | 8.26               | 318.16           | 2,135.2                     | 159.9           | -143.2          | -149.2                        | 0.00                          | 0.00                         | 0.00                        |
| 2,200.0                     | 8.26               | 318.16           | 2,184.7                     | 165.3           | -148.0          | -154.2                        | 0.00                          | 0.00                         | 0.00                        |
| 2,250.0                     | 8.26               | 318.16           | 2,234.2                     | 170.6           | -152.8          | -159.2                        | 0.00                          | 0.00                         | 0.00                        |
| 2,300.0                     | 8.26               | 318.16           | 2,283.7                     | 176.0           | -157.6          | -164.2                        | 0.00                          | 0.00                         | 0.00                        |
| 2,350.0                     | 8.26               | 318.16           | 2,333.1                     | 181.3           | -162.4          | -169.2                        | 0.00                          | 0.00                         | 0.00                        |
| 2,400.0                     | 8.26               | 318.16           | 2,382.6                     | 186.7           | -167.2          | -174.2                        | 0.00                          | 0.00                         | 0.00                        |
| 2,450.0                     | 8.26               | 318.16           | 2,432.1                     | 192.1           | -172.0          | -179.2                        | 0.00                          | 0.00                         | 0.00                        |
| 2,500.0                     | 8.26               | 318.16           | 2,481.6                     | 197.4           | -176.8          | -173.2                        | 0.00                          | 0.00                         | 0.00                        |
| 2,550.0                     | 8.26               | 318.16           | 2,531.1                     | 202.8           | -181.6          | -189.2                        | 0.00                          | 0.00                         | 0.00                        |

Hobbs Database:

Company: Mewbourne Oil Company Eddy County, New Mexico NAD 83 Project: Hoss 2/11 Fed Com #555H Site:

Well: Sec 02, T25S, R28E Wellbore: BHL: 100' FSL & 2250' FEL (Sec 11) Local Co-ordinate Reference:

TVD Reference: MD Reference: North Reference:

**Survey Calculation Method:** 

Site Hoss 2/11 Fed Com #555H

WELL @ 2981.0usft (Original Well Elev) WELL @ 2981.0usft (Original Well Elev)

Minimum Curvature

| Design:               | Design #1          |                  |                             |                 |                  |                               |                               |                              |                             |
|-----------------------|--------------------|------------------|-----------------------------|-----------------|------------------|-------------------------------|-------------------------------|------------------------------|-----------------------------|
| Planned Survey        |                    |                  |                             |                 |                  |                               |                               |                              |                             |
| Measured Depth (usft) | Inclination<br>(°) | Azimuth<br>(°)   | Vertical<br>Depth<br>(usft) | +N/-S<br>(usft) | +E/-W<br>(usft)  | Vertical<br>Section<br>(usft) | Dogleg<br>Rate<br>(°/100usft) | Build<br>Rate<br>(°/100usft) | Turn<br>Rate<br>(°/100usft) |
| , ,                   |                    |                  |                             |                 |                  | , ,                           | ,                             | , ,                          | , ,                         |
| 2,600.0<br>2,650.0    | 8.26<br>8.26       | 318.16<br>318.16 | 2,580.5<br>2,630.0          | 208.1<br>213.5  | -186.4<br>-191.1 | -194.2<br>-199.2              | 0.00<br>0.00                  | 0.00<br>0.00                 | 0.00<br>0.00                |
|                       |                    |                  |                             |                 |                  |                               |                               |                              |                             |
| 2,700.0               | 8.26               | 318.16           | 2,679.5                     | 218.8           | -195.9           | -204.2                        | 0.00                          | 0.00                         | 0.00                        |
| 2,750.0               | 8.26               | 318.16           | 2,729.0                     | 224.2           | -200.7           | -209.2                        | 0.00                          | 0.00                         | 0.00                        |
| 2,800.0<br>2,850.0    | 8.26<br>8.26       | 318.16<br>318.16 | 2,778.5<br>2,827.9          | 229.5<br>234.9  | -205.5<br>-210.3 | -214.2<br>-219.2              | 0.00<br>0.00                  | 0.00<br>0.00                 | 0.00<br>0.00                |
| 2,900.0               | 8.26               | 318.16           | 2,877.4                     | 240.2           | -215.1           | -224.2                        | 0.00                          | 0.00                         | 0.00                        |
|                       |                    |                  |                             |                 |                  |                               |                               |                              |                             |
| 2,950.0<br>3,000.0    | 8.26<br>8.26       | 318.16<br>318.16 | 2,926.9<br>2,976.4          | 245.6<br>250.9  | -219.9<br>-224.7 | -229.2<br>-234.2              | 0.00<br>0.00                  | 0.00<br>0.00                 | 0.00<br>0.00                |
| 3,050.0               | 8.26               | 318.16           | 3,025.9                     | 256.3           | -224.7<br>-229.5 | -234.2<br>-239.2              | 0.00                          | 0.00                         | 0.00                        |
| 3,100.0               | 8.26               | 318.16           | 3,075.3                     | 261.6           | -234.3           | -244.2                        | 0.00                          | 0.00                         | 0.00                        |
| 3,150.0               | 8.26               | 318.16           | 3,124.8                     | 267.0           | -239.1           | -249.2                        | 0.00                          | 0.00                         | 0.00                        |
|                       |                    |                  |                             |                 |                  |                               |                               |                              |                             |
| 3,200.0<br>3,250.0    | 8.26<br>8.26       | 318.16<br>318.16 | 3,174.3<br>3,223.8          | 272.4<br>277.7  | -243.9<br>-248.7 | -254.2<br>-259.2              | 0.00<br>0.00                  | 0.00<br>0.00                 | 0.00<br>0.00                |
| 3,250.0               | 8.26               | 318.16           | 3,223.8<br>3.273.3          | 277.7<br>283.1  | -246.7<br>-253.5 | -259.2<br>-264.1              | 0.00                          | 0.00                         | 0.00                        |
| 3,350.0               | 8.26               | 318.16           | 3,273.3<br>3,322.8          | 288.4           | -253.5<br>-258.3 | -264.1<br>-269.1              | 0.00                          | 0.00                         | 0.00                        |
| 3,400.0               | 8.26               | 318.16           | 3,372.2                     | 293.8           | -263.0           | -274 1                        | 0.00                          | 0.00                         | 0.00                        |
| 3,450.0               | 8.26               | 318.16           | 3,421.7                     | 299.1           | -267.8           | -279.1                        | 0.00                          | 0.00                         | 0.00                        |
| 3,500.0               | 8.26               | 318.16           | 3,471.2                     | 304.5           | -207.6<br>-272.6 | -279.1<br>-284.1              | 0.00                          | 0.00                         | 0.00                        |
| 3,550.0               | 8.26               | 318.16           | 3,520.7                     | 309.8           | -277.4           | -289.1                        | 0.00                          | 0.00                         | 0.00                        |
| 3,600.0               | 8.26               | 318.16           | 3,570.2                     | 315.2           | -282.2           | -294.1                        | 0.00                          | 0.00                         | 0.00                        |
| 3,650.0               | 8.26               | 318.16           | 3,619.6                     | 320.5           | -287.0           | -299.1                        | 0.00                          | 0.00                         | 0.00                        |
| 3,700.0               | 8.26               | 318.16           | 3,669.1                     | 325.9           | -291.8           | -304.1                        | 0.00                          | 0.00                         | 0.00                        |
| 3,750.0<br>3,750.0    | 8.26               | 318.16           | 3,718.6                     | 325.9<br>331.2  | -291.6<br>-296.6 | -304.1<br>-309.1              | 0.00                          | 0.00                         | 0.00                        |
| 3,800.0               | 8.26               | 318.16           | 3,768.1                     | 336.6           | -301.4           | -314.1                        | 0.00                          | 0.00                         | 0.00                        |
| 3,850.0               | 8.26               | 318.16           | 3,817.6                     | 341.9           | -306.2           | -319.1                        | 0.00                          | 0.00                         | 0.00                        |
| 3,900.0               | 8.26               | 318.16           | 3,867.0                     | 347.3           | -311.0           | -324.1                        | 0.00                          | 0.00                         | 0.00                        |
| 3,950.0               | 8.26               | 318.16           | 3,916.5                     | 352.7           | -315.8           | -329.1                        | 0.00                          | 0.00                         | 0.00                        |
| 4,000.0               | 8.26               | 318.16           | 3,966.0                     | 358.0           | -313.6           | -329.1                        | 0.00                          | 0.00                         | 0.00                        |
| 4,050.0               | 8.26               | 318.16           | 4,015.5                     | 363.4           | -325.4           | -339.1                        | 0.00                          | 0.00                         | 0.00                        |
| 4,100.0               | 8.26               | 318.16           | 4,065.0                     | 368.7           | -330.2           | -344.1                        | 0.00                          | 0.00                         | 0.00                        |
| 4,150.0               | 8.26               | 318.16           | 4,114.4                     | 374.1           | -334.9           | -349.1                        | 0.00                          | 0.00                         | 0.00                        |
| 4,200.0               | 8.26               | 318.16           | 4,163.9                     | 379.4           | -339.7           | -354.1                        | 0.00                          | 0.00                         | 0.00                        |
| 4,250.0               | 8.26               | 318.16           | 4,213.4                     | 384.8           | -344.5           | -359.1                        | 0.00                          | 0.00                         | 0.00                        |
| 4,300.0               | 8.26               | 318.16           | 4,262.9                     | 390.1           | -349.3           | -364.1                        | 0.00                          | 0.00                         | 0.00                        |
| 4,350.0               | 8.26               | 318.16           | 4,312.4                     | 395.5           | -354.1           | -369.1                        | 0.00                          | 0.00                         | 0.00                        |
| 4,400.0               | 8.26               | 318.16           | 4,361.9                     | 400.8           | -358.9           | -374.1                        | 0.00                          | 0.00                         | 0.00                        |
| 4,450.0               | 8.26               | 318.16           | 4,411.3                     | 406.2           | -363.7           | -379.0                        | 0.00                          | 0.00                         | 0.00                        |
| 4,500.0               | 8.26               | 318.16           | 4,460.8                     | 411.5           | -368.5           | -384.0                        | 0.00                          | 0.00                         | 0.00                        |
| 4,550.0               | 8.26               | 318.16           | 4,510.3                     | 416.9           | -373.3           | -389.0                        | 0.00                          | 0.00                         | 0.00                        |
| 4,600.0               | 8.26               | 318.16           | 4,559.8                     | 422.2           | -378.1           | -394.0                        | 0.00                          | 0.00                         | 0.00                        |
| 4,650.0               | 8.26               | 318.16           | 4,609.3                     | 427.6           | -382.9           | -399.0                        | 0.00                          | 0.00                         | 0.00                        |
| 4,700.0               | 8.26               | 318.16           | 4,658.7                     | 433.0           | -387.7           | -404.0                        | 0.00                          | 0.00                         | 0.00                        |
| 4,750.0               | 8.26               | 318.16           | 4,708.2                     | 438.3           | -392.5           | -409.0                        | 0.00                          | 0.00                         | 0.00                        |
| 4,800.0               | 8.26               | 318.16           | 4,757.7                     | 443.7           | -397.3           | -414.0                        | 0.00                          | 0.00                         | 0.00                        |
| 4,850.0               | 8.26               | 318.16           | 4,807.2                     | 449.0           | -402.1           | -419.0                        | 0.00                          | 0.00                         | 0.00                        |
| 4,900.0               | 8.26               | 318.16           | 4,856.7                     | 454.4           | -406.9           | -424.0                        | 0.00                          | 0.00                         | 0.00                        |
| 4,950.0               | 8.26               | 318.16           | 4,906.1                     | 459.7           | -411.6           | -429.0                        | 0.00                          | 0.00                         | 0.00                        |
| 5,000.0               | 8.26               | 318.16           | 4,955.6                     | 465.1           | -416.4           | -434.0                        | 0.00                          | 0.00                         | 0.00                        |
| 5,050.0               | 8.26               | 318.16           | 5,005.1                     | 470.4           | -421.2           | -439.0                        | 0.00                          | 0.00                         | 0.00                        |
| 5,100.0               | 8.26               | 318.16           | 5,054.6                     | 475.8           | -426.0           | -444.0                        | 0.00                          | 0.00                         | 0.00                        |
| 5,150.0               | 8.26               | 318.16           | 5,104.1                     | 481.1           | -430.8           | -449.0                        | 0.00                          | 0.00                         | 0.00                        |
| 5,200.0               | 8.26               | 318.16           | 5,153.5                     | 486.5           | -435.6           | -454.0                        | 0.00                          | 0.00                         | 0.00                        |
| 5,250.0               | 8.26               | 318.16           | 5,203.0                     | 491.8           | -440.4           | -459.0                        | 0.00                          | 0.00                         | 0.00                        |

Database: Hobbs

Site: Well:

Company: Mewbourne Oil Company
Project: Eddy County, New Mexico

Eddy County, New Mexico NAD 83 Hoss 2/11 Fed Com #555H Sec 02, T25S, R28E

**Wellbore:** BHL: 100' FSL & 2250' FEL (Sec 11)

Design: Design #1

Local Co-ordinate Reference:

TVD Reference:
MD Reference:
North Reference:

Survey Calculation Method:

Site Hoss 2/11 Fed Com #555H

WELL @ 2981.0usft (Original Well Elev) WELL @ 2981.0usft (Original Well Elev)

Grid

Minimum Curvature

| Planned Survey              |                    |                  |                             |                 |                  |                               |                               |                              |                             |
|-----------------------------|--------------------|------------------|-----------------------------|-----------------|------------------|-------------------------------|-------------------------------|------------------------------|-----------------------------|
| ,,                          |                    |                  |                             |                 |                  |                               |                               |                              |                             |
| Measured<br>Depth<br>(usft) | Inclination<br>(°) | Azimuth<br>(°)   | Vertical<br>Depth<br>(usft) | +N/-S<br>(usft) | +E/-W<br>(usft)  | Vertical<br>Section<br>(usft) | Dogleg<br>Rate<br>(°/100usft) | Build<br>Rate<br>(°/100usft) | Turn<br>Rate<br>(°/100usft) |
| 5,300.0                     | 8.26               | 318.16           | 5,252.5                     | 497.2           | -445.2           | -464.0                        | 0.00                          | 0.00                         | 0.00                        |
| 5,350.0                     | 8.26               | 318.16           | 5,302.0                     | 502.5           | -450.0           | -469.0                        | 0.00                          | 0.00                         | 0.00                        |
| 5,400.0                     | 8.26               | 318.16           | 5,351.5                     | 507.9           | -454.8           | -474.0                        | 0.00                          | 0.00                         | 0.00                        |
| 5,450.0                     | 8.26               | 318.16           | 5,401.0                     | 513.2           | -459.6           | -479.0                        | 0.00                          | 0.00                         | 0.00                        |
| 5,500.0                     | 8.26               | 318.16           | 5,450.4                     | 518.6           | -464.4           | -484.0                        | 0.00                          | 0.00                         | 0.00                        |
| 5,550.0                     | 8.26               | 318.16           | 5,499.9                     | 524.0           | -469.2           | -489.0                        | 0.00                          | 0.00                         | 0.00                        |
| 5,600.0                     | 8.26               | 318.16           | 5,549.4                     | 529.3           | -474.0           | -493.9                        | 0.00                          | 0.00                         | 0.00                        |
| 5,650.0                     | 8.26               | 318.16           | 5,598.9                     | 534.7           | -478.8           | -498.9                        | 0.00                          | 0.00                         | 0.00                        |
| 5,700.0                     | 8.26               | 318.16           | 5,648.4                     | 540.0           | -483.5           | -503.9                        | 0.00                          | 0.00                         | 0.00                        |
| 5,750.0                     | 8.26               | 318.16           | 5,697.8                     | 545.4           | -488.3           | -508.9                        | 0.00                          | 0.00                         | 0.00                        |
| 5,800.0                     | 8.26               | 318.16           | 5,747.3                     | 550.7           | -493.1           | -513.9                        | 0.00                          | 0.00                         | 0.00                        |
| 5,850.0                     | 8.26               | 318.16           | 5,796.8                     | 556.1           | -497.9           | -518.9                        | 0.00                          | 0.00                         | 0.00                        |
| 5,900.0                     | 8.26               | 318.16           | 5,846.3                     | 561.4           | -502.7           | -523.9                        | 0.00                          | 0.00                         | 0.00                        |
| 5,950.0                     | 8.26               | 318.16           | 5,895.8                     | 566.8           | -507.5           | -528.9                        | 0.00                          | 0.00                         | 0.00                        |
| 6,000.0                     | 8.26               | 318.16           | 5,945.2                     | 572.1           | -512.3           | -533.9                        | 0.00                          | 0.00                         | 0.00                        |
| 6,050.0                     | 8.26               | 318.16           | 5,994.7                     | 577.5           | -517.1           | -538.9                        | 0.00                          | 0.00                         | 0.00                        |
| 6,100.0                     | 8.26               | 318.16           | 6,044.2                     | 582.8           | -521.9           | -543.9                        | 0.00                          | 0.00                         | 0.00                        |
| 6,150.0                     | 8.26               | 318.16           | 6,093.7                     | 588.2           | -526.7           | -548.9                        | 0.00                          | 0.00                         | 0.00                        |
| 6,200.0                     | 8.26               | 318.16           | 6.143.2                     | 593.5           | -531.5           | -553.9                        | 0.00                          | 0.00                         | 0.00                        |
| 6,250.0                     | 8.26               | 318.16           | 6,192.6                     | 598.9           | -536.3           | -558.9                        | 0.00                          | 0.00                         | 0.00                        |
| 6,300.0                     | 8.26               | 318.16           | 6,242.1                     | 604.3           | -541.1           | -563.9                        | 0.00                          | 0.00                         | 0.00                        |
| 6,350.0                     | 8.26               | 318.16           | 6,291.6                     | 609.6           | -545.9           | -568.9                        | 0.00                          | 0.00                         | 0.00                        |
| 6,400.0                     | 8.26               | 318.16           | 6,341.1                     | 615.0           | -550.7           | -573.9                        | 0.00                          | 0.00                         | 0.00                        |
| 6,450.0                     | 8.26               | 318.16           | 6,390.6                     | 620.3           | -555.4           | -578.9                        | 0.00                          | 0.00                         | 0.00                        |
| 6,500.0                     | 8.26               | 318.16           | 6,440.1                     | 625.7           | -560.2           | -583.9                        | 0.00                          | 0.00                         | 0.00                        |
| 6,550.0                     | 8.26               | 318.16           | 6,489.5                     | 631.0           | -565.0           | -588.9                        | 0.00                          | 0.00                         | 0.00                        |
| 6,600.0                     | 8.26               | 318.16           | 6,539.0                     | 636.4           | -569.8           | -593.9                        | 0.00                          | 0.00                         | 0.00                        |
| 6,650.0                     | 8.26               | 318.16           | 6,588.5                     | 641.7           | -574.6           | -598.9                        | 0.00                          | 0.00                         | 0.00                        |
| 6,700.0                     | 8.26               | 318.16           | 6,638.0                     | 647.1           | -579.4           | -603.8                        | 0.00                          | 0.00                         | 0.00                        |
| 6,750.0                     | 8.26               | 318.16           | 6,687.5                     | 652.4           | -584.2           | -608.8                        | 0.00                          | 0.00                         | 0.00                        |
| 6,800.0                     | 8.26               | 318.16           | 6,736.9                     | 657.8           | -589.0           | -613.8                        | 0.00                          | 0.00                         | 0.00                        |
| 6,850.0                     | 8.26               | 318.16           | 6,786.4                     | 663.1           | -593.8           | -618.8                        | 0.00                          | 0.00                         | 0.00                        |
| 6,900.0                     | 8.26               | 318.16           | 6,835.9                     | 668.5           | -598.6           | -623.8                        | 0.00                          | 0.00                         | 0.00                        |
| 6,950.0                     | 8.26               | 318.16           | 6,885.4                     | 673.8           | -603.4           | -628.8                        | 0.00                          | 0.00                         | 0.00                        |
| 7,000.0                     | 8.26               | 318.16           | 6,934.9                     | 679.2           | -608.2           | -626.6<br>-633.8              | 0.00                          | 0.00                         | 0.00                        |
| 7,050.0                     | 8.26               | 318.16           | 6,984.3                     | 684.6           | -613.0           | -638.8                        | 0.00                          | 0.00                         | 0.00                        |
| 7,100.0                     | 8.26               | 318.16           | 7,033.8                     | 689.9           | -617.8           | -643.8                        | 0.00                          | 0.00                         | 0.00                        |
| 7,150.0                     | 8.26               | 318.16           | 7,083.3                     | 695.3           | -622.6           | -648.8                        | 0.00                          | 0.00                         | 0.00                        |
| 7,200.0                     | 8,26               | 318.16           | 7.132.8                     | 700.6           | -627.4           | -653.8                        | 0.00                          | 0.00                         | 0.00                        |
| 7,200.0<br>7,250.0          | 8.26<br>8.26       | 318.16           | 7,132.8<br>7,182.3          | 700.6<br>706.0  | -627.4<br>-632.1 | -658.8                        | 0.00                          | 0.00                         | 0.00                        |
| 7,250.0<br>7,300.0          | 8.26               | 318.16           | 7,162.3<br>7,231.7          | 706.0<br>711.3  | -636.9           | -663.8                        | 0.00                          | 0.00                         | 0.00                        |
| 7,350.0                     | 8.26               | 318.16           | 7,281.2                     | 716.7           | -641.7           | -668.8                        | 0.00                          | 0.00                         | 0.00                        |
| 7,400.0                     | 8.26               | 318.16           | 7,330.7                     | 722.0           | -646.5           | -673.8                        | 0.00                          | 0.00                         | 0.00                        |
|                             |                    |                  |                             |                 |                  |                               |                               |                              |                             |
| 7,450.0                     | 8.26<br>8.26       | 318.16           | 7,380.2                     | 727.4<br>732.7  | -651.3           | -678.8                        | 0.00                          | 0.00                         | 0.00                        |
| 7,500.0<br>7,550.0          | 8.26<br>8.26       | 318.16<br>318.16 | 7,429.7<br>7,479.2          | 732.7<br>738.1  | -656.1<br>-660.9 | -683.8<br>-688.8              | 0.00<br>0.00                  | 0.00<br>0.00                 | 0.00<br>0.00                |
| 7,550.0<br>7,600.0          | 8.26               | 318.16           | 7,479.2<br>7,528.6          | 736.1<br>743.4  | -665.7           | -693.8                        | 0.00                          | 0.00                         | 0.00                        |
| 7,650.0                     | 8.26               | 318.16           | 7,578.1                     | 748.8           | -670.5           | -698.8                        | 0.00                          | 0.00                         | 0.00                        |
|                             |                    |                  |                             |                 |                  |                               |                               |                              |                             |
| 7,700.0<br>7,750.0          | 8.26               | 318.16           | 7,627.6                     | 754.1           | -675.3           | -703.8                        | 0.00                          | 0.00                         | 0.00                        |
| 7,750.0<br>7,800.0          | 8.26<br>8.26       | 318.16<br>318.16 | 7,677.1<br>7,726.6          | 759.5<br>764.9  | -680.1<br>-684.9 | -708.8<br>-713.8              | 0.00<br>0.00                  | 0.00<br>0.00                 | 0.00<br>0.00                |
| 7,800.0<br>7,827.0          | 8.26               | 318.16           | 7,726.6<br>7,753.3          | 764.9<br>767.7  | -687.5           | -713.8<br>-716.5              | 0.00                          | 0.00                         | 0.00                        |
| 7,827.0<br>7,850.0          | 7.80               | 318.16           | 7,735.3<br>7,776.1          | 770.1           | -689.6           | -718.7                        | 2.00                          | -2.00                        | 0.00                        |
| ŕ                           |                    |                  |                             |                 |                  |                               |                               |                              |                             |
| 7,900.0                     | 6.80               | 318.16           | 7,825.6                     | 774.9           | -693.8           | -723.1                        | 2.00                          | -2.00                        | 0.00                        |

Database: Hobbs

Company: Mewbourne Oil Company
Project: Eddy County, New Mexico NAD 83
Site: Hoss 2/11 Fed Com #555H
Well: Sec 02, T25S, R28E

 Well:
 Sec 02, T25S, R28E

 Wellbore:
 BHL: 100' FSL & 2250' FEL (Sec 11)

Design: Design #1

Local Co-ordinate Reference:

TVD Reference: MD Reference: North Reference:

Survey Calculation Method:

Site Hoss 2/11 Fed Com #555H

WELL @ 2981.0usft (Original Well Elev) WELL @ 2981.0usft (Original Well Elev)

Grid

| anned Survey               |                       |                |                             |                    |                    |                               |                               |                              |                             |
|----------------------------|-----------------------|----------------|-----------------------------|--------------------|--------------------|-------------------------------|-------------------------------|------------------------------|-----------------------------|
| Measure<br>Depth<br>(usft) | Inclination           | Azimuth<br>(°) | Vertical<br>Depth<br>(usft) | +N/-S<br>(usft)    | +E/-W<br>(usft)    | Vertical<br>Section<br>(usft) | Dogleg<br>Rate<br>(°/100usft) | Build<br>Rate<br>(°/100usft) | Turn<br>Rate<br>(°/100usft) |
| 7 95                       | 50.0 5.80             | 318.16         | 7,875.3                     | 779.0              | -697.5             | -726.9                        | 2.00                          | -2.00                        | 0.00                        |
| .,                         | 00.0 4.80             | 318.16         | 7,925.1                     | 782.4              | -700.6             | -730.1                        | 2.00                          | <del>-</del> 2.00            | 0.00                        |
|                            |                       |                |                             |                    |                    |                               |                               |                              |                             |
| 8,05                       |                       | 318.16         | 7,975.0                     | 785.2              | -703.1             | -732.7                        | 2.00                          | -2.00                        | 0.00                        |
| 8,10                       | 00.0 2.80             | 318.16         | 8,024.9                     | 787.3              | -705.0             | -734.7                        | 2.00                          | -2.00                        | 0.00                        |
|                            |                       |                |                             |                    |                    |                               |                               |                              |                             |
| 8,15                       | 50.0 1.80             | 318.16         | 8,074.9                     | 788.8              | -706.4             | -736.1                        | 2.00                          | -2.00                        | 0.00                        |
| 8.20                       | 08.0                  | 318.16         | 8,124.8                     | 789.7              | -707.1             | -736.9                        | 2.00                          | -2.00                        | 0.00                        |
|                            | 40.2 0.00             | 0.00           | 8,165.0                     | 789.9              | -707.3             | -737.1                        | 2.00                          | -2.00                        | 0.00                        |
|                            |                       |                | 0,100.0                     | 700.0              | 707.0              | 707.1                         | 2.00                          | 2.00                         | 0.00                        |
|                            | 0' FNL & 2250' FEL (  |                |                             |                    |                    |                               |                               |                              |                             |
| 8,25                       | 50.0 0.98             | 179.94         | 8,174.8                     | 789.8              | -707.3             | -737.0                        | 10.00                         | 10.00                        | 0.00                        |
| 8,30                       | 00.0 5.98             | 179.94         | 8,224.7                     | 786.8              | -707.3             | -734.0                        | 10.00                         | 10.00                        | 0.00                        |
| ,                          |                       |                |                             |                    |                    |                               |                               |                              |                             |
| 8,35                       | 50.0 10.98            | 179.94         | 8,274.2                     | 779.4              | -707.3             | -726.7                        | 10.00                         | 10.00                        | 0.00                        |
| 8.40                       | 00.0 15.98            | 179.94         | 8,322.8                     | 767.7              | -707.3             | -715.0                        | 10.00                         | 10.00                        | 0.00                        |
| 8,45                       |                       | 179.94         | 8,370.2                     | 751.9              | -707.3             | -699.2                        | 10.00                         | 10.00                        | 0.00                        |
|                            |                       |                |                             |                    |                    |                               |                               |                              |                             |
|                            | 00.0 25.98            | 179.94         | 8,416.0                     | 732.0              | <del>-</del> 707.2 | <b>-</b> 679.4                | 10.00                         | 10.00                        | 0.00                        |
| 8,55                       | 50.0 30.98            | 179.94         | 8,460.0                     | 708.1              | -707.2             | -655.6                        | 10.00                         | 10.00                        | 0.00                        |
| 0 56                       | 65.5 32.53            | 179.94         | 8,473.1                     | 700.0              | -707.2             | -647.5                        | 10.00                         | 10.00                        | 0.00                        |
|                            |                       |                | 0,4/3.1                     | 700.0              | -/0/.2             | -047.5                        | 10.00                         | 10.00                        | 0.00                        |
|                            | 00' FNL & 2250' FEL   | •              |                             |                    |                    |                               |                               |                              |                             |
| 8,60                       | 00.0 35.98            | 179.94         | 8,501.7                     | 680.6              | -707.2             | -628.1                        | 10.00                         | 10.00                        | 0.00                        |
| 8,65                       | 50.0 40.98            | 179.94         | 8,540.8                     | 649.5              | -707.1             | -597.1                        | 10.00                         | 10.00                        | 0.00                        |
| 8,70                       |                       | 179.94         | 8,577.1                     | 615.1              | -707.1             | -562.8                        | 10.00                         | 10.00                        | 0.00                        |
|                            |                       |                |                             |                    |                    |                               |                               |                              |                             |
| 8,75                       | 50.0 50.98            | 179.94         | 8,610.2                     | 577.6              | -707.1             | -525.4                        | 10.00                         | 10.00                        | 0.00                        |
| 8 80                       | 00.0 55.98            | 179.94         | 8,639.9                     | 537.5              | -707.0             | -485.4                        | 10.00                         | 10.00                        | 0.00                        |
|                            |                       |                | ,                           |                    |                    |                               |                               |                              |                             |
|                            | 50.0 60.98            | 179.94         | 8,666.1                     | 494.9              | <del>-</del> 707.0 | <b>-</b> 442.9                | 10.00                         | 10.00                        | 0.00                        |
| 8,90                       | 00.0 65.98            | 179.94         | 8,688.4                     | 450.1              | <del>-</del> 706.9 | -398.3                        | 10.00                         | 10.00                        | 0.00                        |
| 8,95                       | 50.0 70.98            | 179.94         | 8,706.7                     | 403.6              | -706.9             | -351.9                        | 10.00                         | 10.00                        | 0.00                        |
|                            | 00.0 75.98            | 179.94         | 8,720.9                     | 355.7              | -706.8             | -304.1                        | 10.00                         | 10.00                        | 0.00                        |
| ,                          |                       |                |                             |                    |                    |                               |                               |                              |                             |
| 9,05                       | 50.0 80.98            | 179.94         | 8,730.9                     | 306.7              | -706.8             | -255.3                        | 10.00                         | 10.00                        | 0.00                        |
| 9.10                       | 00.0 85.98            | 179.94         | 8,736.6                     | 257.1              | -706.7             | -205.7                        | 10.00                         | 10.00                        | 0.00                        |
|                            | 40.2 90.00            | 179.94         | 8,738.0                     | 216.9              | -706.7             | -165.7                        | 10.00                         | 10.00                        | 0.00                        |
|                            |                       |                | 0,700.0                     | 210.0              | 700.7              | 100.7                         | 10.00                         | 10.00                        | 0.00                        |
|                            | 3' FNL & 2250' FEL (S | •              |                             |                    |                    |                               |                               |                              |                             |
| 9,14                       | 40.5 90.03            | 179.94         | 8,738.0                     | 216.6              | -706.7             | -165.4                        | 10.00                         | 10.00                        | 0.00                        |
| 9.15                       | 50.0 90.03            | 179.94         | 8,738.0                     | 207.1              | -706.7             | -155.9                        | 0.00                          | 0.00                         | 0.00                        |
|                            |                       |                |                             |                    |                    |                               |                               |                              |                             |
|                            | 00.0 90.03            | 179.94         | 8,738.0                     | 157.1              | -706.6             | -106.0                        | 0.00                          | 0.00                         | 0.00                        |
| 9.25                       | 50.0 90.03            | 179.94         | 8,737.9                     | 107.1              | -706.6             | -56.2                         | 0.00                          | 0.00                         | 0.00                        |
|                            | 00.0 90.03            | 179.94         | 8,737.9                     | 57.1               | -706.5             | -6.3                          | 0.00                          | 0.00                         | 0.00                        |
|                            | 50.0 90.03            | 179.94         | 8,737.9                     | 7.1                | -706.5             | 43.6                          | 0.00                          | 0.00                         | 0.00                        |
|                            |                       |                |                             |                    |                    |                               |                               |                              |                             |
| 9,40                       | 00.0 90.03            | 179.94         | 8,737.9                     | -42.9              | -706.4             | 93.4                          | 0.00                          | 0.00                         | 0.00                        |
| 9 15                       | 50.0 90.03            | 179.94         | 8,737.8                     | -92.9              | -706.4             | 143.3                         | 0.00                          | 0.00                         | 0.00                        |
|                            |                       |                |                             |                    |                    |                               |                               |                              |                             |
|                            | 00.0 90.03            | 179.94         | 8,737.8                     | -142.9             | -706.3             | 193.2                         | 0.00                          | 0.00                         | 0.00                        |
| ,                          | 50.0 90.03            | 179.94         | 8,737.8                     | -192.9             | -706.2             | 243.0                         | 0.00                          | 0.00                         | 0.00                        |
|                            | 00.0 90.03            | 179.94         | 8,737.8                     | -242.9             | -706.2             | 292.9                         | 0.00                          | 0.00                         | 0.00                        |
| 9,65                       | 50.0 90.03            | 179.94         | 8,737.7                     | -292.9             | -706.1             | 342.8                         | 0.00                          | 0.00                         | 0.00                        |
|                            |                       |                |                             |                    |                    |                               |                               |                              |                             |
| ,                          | 00.0 90.03            | 179.94         | 8,737.7                     | -342.9             | -706.1             | 392.6                         | 0.00                          | 0.00                         | 0.00                        |
| 9,75                       | 50.0 90.03            | 179.94         | 8,737.7                     | -392.9             | -706.0             | 442.5                         | 0.00                          | 0.00                         | 0.00                        |
| 9 80                       | 00.0 90.03            | 179.94         | 8,737.7                     | -442.9             | -706.0             | 492.4                         | 0.00                          | 0.00                         | 0.00                        |
| ,                          | 50.0 90.03            | 179.94         | 8,737.6                     | -492.9             | -705.9             | 542.3                         | 0.00                          | 0.00                         | 0.00                        |
|                            |                       |                |                             |                    |                    |                               |                               |                              |                             |
| 9,90                       | 00.0 90.03            | 179.94         | 8,737.6                     | -542.9             | -705.9             | 592.1                         | 0.00                          | 0.00                         | 0.00                        |
| 9,95                       | 50.0 90.03            | 179.94         | 8,737.6                     | -592.9             | -705.8             | 642.0                         | 0.00                          | 0.00                         | 0.00                        |
|                            |                       |                |                             |                    |                    |                               |                               |                              |                             |
| 10,00                      |                       | 179.94         | 8,737.6                     | -642.9             | -705.8             | 691.9                         | 0.00                          | 0.00                         | 0.00                        |
| 10,05                      |                       | 179.94         | 8,737.5                     | -692.9             | -705.7             | 741.7                         | 0.00                          | 0.00                         | 0.00                        |
| 10,10                      | 00.0 90.03            | 179.94         | 8,737.5                     | <del>-</del> 742.9 | -705.7             | 791.6                         | 0.00                          | 0.00                         | 0.00                        |
|                            |                       | 179.94         | 8,737.5                     | -792.9             | -705.6             | 841.5                         | 0.00                          | 0.00                         | 0.00                        |
| 10,15                      | 30.0 90.03            |                |                             |                    |                    |                               |                               |                              |                             |
| 10,15<br>10,20             |                       | 179.94         | 8,737.5                     | -842.9             | -705.6             | 891.3                         | 0.00                          | 0.00                         | 0.00                        |

Database: Hobbs

Company: Mewbourne Oil Company
Project: Eddy County, New Mexico NAD 83

 Site:
 Hoss 2/11 Fed Com #555H

 Well:
 Sec 02, T25S, R28E

**Wellbore:** BHL: 100' FSL & 2250' FEL (Sec 11)

Design: Design #1

Local Co-ordinate Reference:

TVD Reference:
MD Reference:
North Reference:

Survey Calculation Method:

Site Hoss 2/11 Fed Com #555H

WELL @ 2981.0usft (Original Well Elev) WELL @ 2981.0usft (Original Well Elev)

Grid

| Jesign:                     | Design #1          |                  |                             |                      |                  |                               |                               |                              |                             |
|-----------------------------|--------------------|------------------|-----------------------------|----------------------|------------------|-------------------------------|-------------------------------|------------------------------|-----------------------------|
| Planned Survey              |                    |                  |                             |                      |                  |                               |                               |                              |                             |
| Measured<br>Depth<br>(usft) | Inclination<br>(°) | Azimuth<br>(°)   | Vertical<br>Depth<br>(usft) | +N/-S<br>(usft)      | +E/-W<br>(usft)  | Vertical<br>Section<br>(usft) | Dogleg<br>Rate<br>(°/100usft) | Build<br>Rate<br>(°/100usft) | Turn<br>Rate<br>(°/100usft) |
| 10,250.0                    | 90.03              | 179.94           | 8,737.4                     | -892.9               | -705.5           | 941.2                         | 0.00                          | 0.00                         | 0.00                        |
| 10,300.0                    | 90.03              | 179.94           | 8,737.4                     | -942.9               | -705.4           | 991.1                         | 0.00                          | 0.00                         | 0.00                        |
| 10,350.0                    | 90.03              | 179.94           | 8,737.4                     | -992.9               | -705.4           | 1,040.9                       | 0.00                          | 0.00                         | 0.00                        |
| 10,400.0                    | 90.03              | 179.94           | 8,737.4                     | -1,042.9             | -705.3           | 1,090.8                       | 0.00                          | 0.00                         | 0.00                        |
| 10,450.0                    | 90.03              | 179.94           | 8,737.3                     | -1,092.9             | -705.3           | 1,140.7                       | 0.00                          | 0.00                         | 0.00                        |
| 10,430.0                    | 90.03              | 179.94           | 8,737.3                     |                      | -705.3<br>-705.2 | 1,140.7                       | 0.00                          | 0.00                         | 0.00                        |
|                             |                    |                  |                             | -1,142.9<br>1,102.0  |                  |                               |                               |                              |                             |
| 10,550.0                    | 90.03              | 179.94           | 8,737.3                     | -1,192.9             | -705.2           | 1,240.4                       | 0.00                          | 0.00                         | 0.00                        |
| 10,600.0                    | 90.03              | 179.94           | 8,737.3                     | -1,242.9             | -705.1           | 1,290.3                       | 0.00                          | 0.00                         | 0.00                        |
| 10,650.0                    | 90.03              | 179.94           | 8,737.2                     | -1,292.9             | -705.1           | 1,340.1                       | 0.00                          | 0.00                         | 0.00                        |
| 10,700.0                    | 90.03              | 179.94           | 8,737.2                     | -1,342.9             | -705.0           | 1,390.0                       | 0.00                          | 0.00                         | 0.00                        |
| 10,750.0                    | 90.03              | 179.94           | 8,737.2                     | -1,392.9             | -705.0           | 1,439.9                       | 0.00                          | 0.00                         | 0.00                        |
| 10,800.0                    | 90.03              | 179.94           | 8,737.2                     | -1,442.9             | -704.9           | 1,489.7                       | 0.00                          | 0.00                         | 0.00                        |
| 10,850.0                    | 90.03              | 179.94           | 8,737.1                     | -1,492.9             | -704.9           | 1,539.6                       | 0.00                          | 0.00                         | 0.00                        |
| 10,900.0                    | 90.03              | 179.94           | 8,737.1                     | -1,542.9             | -704.8           | 1,589.5                       | 0.00                          | 0.00                         | 0.00                        |
| 10.050.0                    |                    | 170.04           |                             |                      |                  |                               |                               | 0.00                         |                             |
| 10,950.0<br>11,000.0        | 90.03<br>90.03     | 179.94<br>179.94 | 8,737.1<br>8,737.1          | -1,592.9<br>-1,642.9 | -704.8<br>-704.7 | 1,639.3<br>1,689.2            | 0.00<br>0.00                  | 0.00<br>0.00                 | 0.00<br>0.00                |
|                             |                    |                  |                             |                      | -704.7           | 1,689.2                       |                               |                              |                             |
| 11,050.0                    | 90.03              | 179.94           | 8,737.0                     | -1,692.9             | -704.6           | ,                             | 0.00                          | 0.00                         | 0.00                        |
| 11,100.0                    | 90.03              | 179.94           | 8,737.0                     | -1,742.9<br>1,702.0  | -704.6           | 1,788.9                       | 0.00                          | 0.00                         | 0.00                        |
| 11,150.0                    | 90.03              | 179.94           | 8,737.0                     | -1,792.9             | -704.5           | 1,838.8                       | 0.00                          | 0.00                         | 0.00                        |
| 11,200.0                    | 90.03              | 179.94           | 8,737.0                     | -1,842.9             | -704.5           | 1,888.7                       | 0.00                          | 0.00                         | 0.00                        |
| 11,250.0                    | 90.03              | 179.94           | 8,736.9                     | -1,892.9             | -704.4           | 1,938.5                       | 0.00                          | 0.00                         | 0.00                        |
| 11,300.0                    | 90.03              | 179.94           | 8,736.9                     | -1,942.9             | -704.4           | 1,988.4                       | 0.00                          | 0.00                         | 0.00                        |
| 11,350.0                    | 90.03              | 179.94           | 8,736.9                     | -1,992.9             | -704.3           | 2,038.3                       | 0.00                          | 0.00                         | 0.00                        |
| 11,400.0                    | 90.03              | 179.94           | 8,736.9                     | -2,042.9             | -704.3           | 2,088.1                       | 0.00                          | 0.00                         | 0.00                        |
| 11,450.0                    | 90.03              | 179.94           | 8,736.8                     | -2,092.9             | -704.2           | 2,138.0                       | 0.00                          | 0.00                         | 0.00                        |
| 11,500.0                    | 90.03              | 179.94           | 8,736.8                     | -2,142.9             | -704.2           | 2,187.9                       | 0.00                          | 0.00                         | 0.00                        |
| 11,550.0                    | 90.03              | 179.94           | 8,736.8                     | -2,192.9             | -704.1           | 2,107.3                       | 0.00                          | 0.00                         | 0.00                        |
| 11,600.0                    | 90.03              | 179.94           | 8,736.8                     | -2,242.9             | -704.1           | 2,287.6                       | 0.00                          | 0.00                         | 0.00                        |
| 11,650.0                    | 90.03              | 179.94           | 8,736.7                     | -2,292.9             | -704.0           | 2,337.5                       | 0.00                          | 0.00                         | 0.00                        |
|                             |                    |                  |                             |                      |                  |                               |                               |                              |                             |
| 11,700.0                    | 90.03              | 179.94           | 8,736.7                     | -2,342.9             | -703.9           | 2,387.3                       | 0.00                          | 0.00                         | 0.00                        |
| 11,750.0                    | 90.03              | 179.94           | 8,736.7                     | -2,392.9             | -703.9           | 2,437.2                       | 0.00                          | 0.00                         | 0.00                        |
| 11,800.0                    | 90.03              | 179.94           | 8,736.7                     | -2,442.9             | -703.8           | 2,487.1                       | 0.00                          | 0.00                         | 0.00                        |
| 11,850.0                    | 90.03              | 179.94           | 8,736.6                     | -2,492.9             | -703.8           | 2,536.9                       | 0.00                          | 0.00                         | 0.00                        |
| 11,900.0                    | 90.03              | 179.94           | 8,736.6                     | -2,542.9             | -703.7           | 2,586.8                       | 0.00                          | 0.00                         | 0.00                        |
| 11,950.0                    | 90.03              | 179.94           | 8,736.6                     | -2,592.9             | -703.7           | 2,636.7                       | 0.00                          | 0.00                         | 0.00                        |
| 12,000.0                    | 90.03              | 179.94           | 8,736.6                     | -2,642.9             | -703.6           | 2,686.5                       | 0.00                          | 0.00                         | 0.00                        |
| 12,050.0                    | 90.03              | 179.94           | 8,736.5                     | -2,692.9             | -703.6           | 2,736.4                       | 0.00                          | 0.00                         | 0.00                        |
| 12,100.0                    | 90.03              | 179.94           | 8,736.5                     | -2,742.9             | -703.5           | 2,786.3                       | 0.00                          | 0.00                         | 0.00                        |
| 12,150.0                    | 90.03              | 179.94           | 8,736.5                     | -2,792.9             | -703.5           | 2,836.1                       | 0.00                          | 0.00                         | 0.00                        |
|                             |                    |                  |                             |                      |                  |                               |                               |                              |                             |
| 12,200.0                    | 90.03              | 179.94           | 8,736.5                     | -2,842.9             | -703.4           | 2,886.0                       | 0.00                          | 0.00                         | 0.00                        |
| 12,250.0                    | 90.03              | 179.94           | 8,736.4                     | -2,892.9             | -703.4           | 2,935.9                       | 0.00                          | 0.00                         | 0.00                        |
| 12,300.0                    | 90.03              | 179.94           | 8,736.4                     | -2,942.9             | -703.3           | 2,985.7                       | 0.00                          | 0.00                         | 0.00                        |
| 12,350.0                    | 90.03              | 179.94           | 8,736.4                     | -2,992.9             | -703.3           | 3,035.6                       | 0.00                          | 0.00                         | 0.00                        |
| 12,400.0                    | 90.03              | 179.94           | 8,736.4                     | -3,042.9             | -703.2           | 3,085.5                       | 0.00                          | 0.00                         | 0.00                        |
| 12,450.0                    | 90.03              | 179.94           | 8,736.3                     | -3,092.9             | -703.1           | 3,135.4                       | 0.00                          | 0.00                         | 0.00                        |
| 12,500.0                    | 90.03              | 179.94           | 8,736.3                     | -3,142.9             | -703.1           | 3,185.2                       | 0.00                          | 0.00                         | 0.00                        |
| 12,550.0                    | 90.03              | 179.94           | 8,736.3                     | -3,192.9             | -703.0           | 3,235.1                       | 0.00                          | 0.00                         | 0.00                        |
| 12,600.0                    | 90.03              | 179.94           | 8,736.3                     | -3,242.9             | -703.0           | 3,285.0                       | 0.00                          | 0.00                         | 0.00                        |
| 12,650.0                    | 90.03              | 179.94           | 8,736.2                     | -3,292.9             | -702.9           | 3,334.8                       | 0.00                          | 0.00                         | 0.00                        |
|                             |                    |                  |                             |                      |                  |                               |                               |                              |                             |
| 12,700.0                    | 90.03              | 179.94           | 8,736.2                     | -3,342.9             | -702.9           | 3,384.7                       | 0.00                          | 0.00                         | 0.00                        |
| 12,750.0                    | 90.03              | 179.94           | 8,736.2                     | -3,392.9             | -702.8           | 3,434.6                       | 0.00                          | 0.00                         | 0.00                        |
| 12,800.0                    | 90.03              | 179.94           | 8,736.2                     | -3,442.9             | -702.8           | 3,484.4                       | 0.00                          | 0.00                         | 0.00                        |
| 12,850.0                    | 90.03              | 179.94           | 8,736.1                     | -3,492.9             | -702.7           | 3,534.3                       | 0.00                          | 0.00                         | 0.00                        |
| 12,900.0                    | 90.03              | 179.94           | 8,736.1                     | -3,542.9             | -702.7           | 3,584.2                       | 0.00                          | 0.00                         | 0.00                        |

Database: Hobbs

Company: Mewbourne Oil Company
Project: Eddy County, New Mexico NAD 83
Site: Hoss 2/11 Fed Com #555H
Well: Sec 02, T25S, R28E

Wellbore: BHL: 100' FSL & 2250' FEL (Sec 11)

Design: Design #1

Local Co-ordinate Reference:

TVD Reference: MD Reference: North Reference:

Survey Calculation Method:

Site Hoss 2/11 Fed Com #555H

WELL @ 2981.0usft (Original Well Elev) WELL @ 2981.0usft (Original Well Elev)

Grid

| lanned Survey |                 |         |          |          |        |          |              |              |              |
|---------------|-----------------|---------|----------|----------|--------|----------|--------------|--------------|--------------|
|               |                 |         |          |          |        |          |              |              |              |
| Measured      |                 |         | Vertical |          |        | Vertical | Dogleg       | Build        | Turn         |
| Depth         | Inclination     | Azimuth | Depth    | +N/-S    | +E/-W  | Section  | Rate         | Rate         | Rate         |
| •             |                 |         | •        |          |        |          | (°/100usft)  | (°/100usft)  | (°/100usft)  |
| (usft)        | (°)             | (°)     | (usft)   | (usft)   | (usft) | (usft)   | ( / loousit) | ( / loousit) | ( / loousit) |
| 12,950.0      | 90.03           | 179.94  | 8,736.1  | -3,592.9 | -702.6 | 3,634.0  | 0.00         | 0.00         | 0.00         |
| 13,000.0      | 90.03           | 179.94  | 8,736.0  | -3,642.9 | -702.6 | 3,683.9  | 0.00         | 0.00         | 0.00         |
| 13,050.0      | 90.03           | 179.94  | 8,736.0  | -3,692.9 | -702.5 | 3,733.8  | 0.00         | 0.00         | 0.00         |
|               |                 |         |          |          |        |          |              |              |              |
| 13,100.0      | 90.03           | 179.94  | 8,736.0  | -3,742.9 | -702.5 | 3,783.6  | 0.00         | 0.00         | 0.00         |
| 13,150.0      | 90.03           | 179.94  | 8,736.0  | -3,792.9 | -702.4 | 3,833.5  | 0.00         | 0.00         | 0.00         |
| 13,200.0      | 90.03           | 179.94  | 8,735.9  | -3,842.9 | -702.3 | 3,883.4  | 0.00         | 0.00         | 0.00         |
| 13,250.0      | 90.03           | 179.94  | 8,735.9  | -3,892.9 | -702.3 | 3,933.2  | 0.00         | 0.00         | 0.00         |
|               |                 |         |          |          |        |          |              |              |              |
| 13,300.0      | 90.03           | 179.94  | 8,735.9  | -3,942.9 | -702.2 | 3,983.1  | 0.00         | 0.00         | 0.00         |
| 13,350.0      | 90.03           | 179.94  | 8,735.9  | -3,992.9 | -702.2 | 4,033.0  | 0.00         | 0.00         | 0.00         |
| 13,400.0      | 90.03           | 179.94  | 8,735.8  | -4,042.9 | -702.1 | 4,082.8  | 0.00         | 0.00         | 0.00         |
|               |                 |         |          |          |        |          |              |              |              |
| 13,450.0      | 90.03           | 179.94  | 8,735.8  | -4,092.9 | -702.1 | 4,132.7  | 0.00         | 0.00         | 0.00         |
| 13,500.0      | 90.03           | 179.94  | 8,735.8  | -4,142.9 | -702.0 | 4,182.6  | 0.00         | 0.00         | 0.00         |
| 13,550.0      | 90.03           | 179.94  | 8,735.8  | -4,192.9 | -702.0 | 4,232.4  | 0.00         | 0.00         | 0.00         |
| 13,600.0      | 90.03           | 179.94  | 8,735.7  | -4,242.9 | -701.9 | 4,282.3  | 0.00         | 0.00         | 0.00         |
| 13,650.0      | 90.03           | 179.94  | 8,735.7  | -4,292.9 | -701.9 | 4,332.2  | 0.00         | 0.00         | 0.00         |
| · ·           |                 |         |          |          |        |          |              |              |              |
| 13,700.0      | 90.03           | 179.94  | 8,735.7  | -4,342.9 | -701.8 | 4,382.0  | 0.00         | 0.00         | 0.00         |
| 13,750.0      | 90.03           | 179.94  | 8,735.7  | -4,392.9 | -701.8 | 4,431.9  | 0.00         | 0.00         | 0.00         |
| 13,800.0      | 90.03           | 179.94  | 8,735.6  | -4,442.9 | -701.7 | 4,481.8  | 0.00         | 0.00         | 0.00         |
|               |                 |         |          |          |        |          |              |              |              |
| 13,850.0      | 90.03           | 179.94  | 8,735.6  | -4,492.9 | -701.6 | 4,531.6  | 0.00         | 0.00         | 0.00         |
| 13,900.0      | 90.03           | 179.94  | 8,735.6  | -4,542.9 | -701.6 | 4,581.5  | 0.00         | 0.00         | 0.00         |
| 13,950.0      | 90.03           | 179.94  | 8,735.6  | -4,592.9 | -701.5 | 4.631.4  | 0.00         | 0.00         | 0.00         |
| 14,000.0      | 90.03           | 179.94  | 8,735.5  | -4,642.9 | -701.5 | 4,681.2  | 0.00         | 0.00         | 0.00         |
|               |                 |         |          |          |        |          |              |              |              |
| 14,050.0      | 90.03           | 179.94  | 8,735.5  | -4,692.9 | -701.4 | 4,731.1  | 0.00         | 0.00         | 0.00         |
| 14,100.0      | 90.03           | 179.94  | 8,735.5  | -4,742.9 | -701.4 | 4,781.0  | 0.00         | 0.00         | 0.00         |
| 14,150.0      | 90.03           | 179.94  | 8,735.5  | -4,792.9 | -701.3 | 4,830.8  | 0.00         | 0.00         | 0.00         |
| 14,200.0      | 90.03           | 179.94  | 8,735.4  | -4,842.9 | -701.3 | 4,880.7  | 0.00         | 0.00         | 0.00         |
|               |                 |         |          |          |        |          |              |              |              |
| 14,250.0      | 90.03           | 179.94  | 8,735.4  | -4,892.9 | -701.2 | 4,930.6  | 0.00         | 0.00         | 0.00         |
| 14,300.0      | 90.03           | 179.94  | 8,735.4  | -4,942.9 | -701.2 | 4,980.4  | 0.00         | 0.00         | 0.00         |
| 14,350.0      | 90.03           | 179.94  | 8,735.4  | -4,992.9 | -701.1 | 5,030.3  | 0.00         | 0.00         | 0.00         |
| 14,400.0      | 90.03           | 179.94  | 8,735.3  | -5,042.9 | -701.1 | 5,080.2  | 0.00         | 0.00         | 0.00         |
|               |                 |         |          |          |        |          |              |              |              |
| 14,450.0      | 90.03           | 179.94  | 8,735.3  | -5,092.9 | -701.0 | 5,130.0  | 0.00         | 0.00         | 0.00         |
| 14,500.0      | 90.03           | 179.94  | 8,735.3  | -5,142.9 | -701.0 | 5,179.9  | 0.00         | 0.00         | 0.00         |
| 14,550.0      | 90.03           | 179.94  | 8,735.3  | -5,192.9 | -700.9 | 5,229.8  | 0.00         | 0.00         | 0.00         |
|               |                 |         |          |          |        |          |              |              |              |
| 14,600.0      | 90.03           | 179.94  | 8,735.2  | -5,242.9 | -700.8 | 5,279.6  | 0.00         | 0.00         | 0.00         |
| 14,650.0      | 90.03           | 179.94  | 8,735.2  | -5,292.9 | -700.8 | 5,329.5  | 0.00         | 0.00         | 0.00         |
| 14,700.0      | 90.03           | 179.94  | 8,735.2  | -5,342.9 | -700.7 | 5,379.4  | 0.00         | 0.00         | 0.00         |
|               |                 |         |          | · ·      |        |          |              |              |              |
| 14,750.0      | 90.03           | 179.94  | 8,735.2  | -5,392.9 | -700.7 | 5,429.2  | 0.00         | 0.00         | 0.00         |
| 14,800.0      | 90.03           | 179.94  | 8,735.1  | -5,442.9 | -700.6 | 5,479.1  | 0.00         | 0.00         | 0.00         |
| 14,850.0      | 90.03           | 179.94  | 8,735.1  | -5,492.9 | -700.6 | 5,529.0  | 0.00         | 0.00         | 0.00         |
| 14,900.0      | 90.03           | 179.94  | 8,735.1  | -5,542.9 | -700.5 | 5,578.8  | 0.00         | 0.00         | 0.00         |
|               |                 |         |          |          |        |          |              |              |              |
| 14,950.0      | 90.03           | 179.94  | 8,735.1  | -5,592.9 | -700.5 | 5,628.7  | 0.00         | 0.00         | 0.00         |
| 15,000.0      | 90.03           | 179.94  | 8,735.0  | -5,642.9 | -700.4 | 5,678.6  | 0.00         | 0.00         | 0.00         |
| 15,050.0      | 90.03           | 179.94  | 8,735.0  | -5,692.9 | -700.4 | 5,728.5  | 0.00         | 0.00         | 0.00         |
| 15,100.0      | 90.03           | 179.94  | 8,735.0  | -5,742.9 | -700.3 | 5,778.3  | 0.00         | 0.00         | 0.00         |
|               |                 |         |          |          |        |          |              |              |              |
| 15,150.0      | 90.03           | 179.94  | 8,735.0  | -5,792.9 | -700.3 | 5,828.2  | 0.00         | 0.00         | 0.00         |
| 15,157.8      | 90.03           | 179.94  | 8,735.0  | -5,800.7 | -700.2 | 5,836.0  | 0.00         | 0.00         | 0.00         |
|               | FNL & 2229' FEI |         | ,        | ,        |        | ,        |              |              |              |
| 15.200.0      |                 |         | 8 724 0  | 5 842 0  | 700.2  | 5,878.1  | 0.00         | 0.00         | 0.00         |
| ,             | 90.03           | 179.94  | 8,734.9  | -5,842.9 | -700.2 |          | 0.00         |              |              |
| 15,250.0      | 90.03           | 179.94  | 8,734.9  | -5,892.9 | -700.2 | 5,927.9  | 0.00         | 0.00         | 0.00         |
| 15,300.0      | 90.03           | 179.94  | 8,734.9  | -5,942.9 | -700.1 | 5,977.8  | 0.00         | 0.00         | 0.00         |
| 15,350.0      | 90.03           | 179.94  | 8,734.9  | -5,992.9 | -700.0 | 6,027.7  | 0.00         | 0.00         | 0.00         |
|               |                 |         |          |          |        |          |              |              |              |
| 15,400.0      | 90.03           | 179.94  | 8,734.8  | -6,042.9 | -700.0 | 6,077.5  | 0.00         | 0.00         | 0.00         |
| 15,450.0      | 90.03           | 179.94  | 8,734.8  | -6,092.9 | -699.9 | 6,127.4  | 0.00         | 0.00         | 0.00         |
| 15,500.0      | 90.03           | 179.94  | 8,734.8  | -6,142.9 | -699.9 | 6,177.3  | 0.00         | 0.00         | 0.00         |

Database: Hobbs

Company: Mewbourne Oil Company
Project: Eddy County, New Mexico NAD 83
Site: Hoss 2/11 Fed Com #555H
Well: Sec 02, T25S, R28E

Wellbore: BHL: 100' FSL & 2250' FEL (Sec 11)

Design: Design #1

Local Co-ordinate Reference:

TVD Reference: MD Reference: North Reference:

Survey Calculation Method:

Site Hoss 2/11 Fed Com #555H

WELL @ 2981.0usft (Original Well Elev) WELL @ 2981.0usft (Original Well Elev)

Grid

| Design:                     | Design #1          |                  |                             |                      |                  |                               |                               |                              |                             |
|-----------------------------|--------------------|------------------|-----------------------------|----------------------|------------------|-------------------------------|-------------------------------|------------------------------|-----------------------------|
| Planned Survey              |                    |                  |                             |                      |                  |                               |                               |                              |                             |
| Measured<br>Depth<br>(usft) | Inclination<br>(°) | Azimuth<br>(°)   | Vertical<br>Depth<br>(usft) | +N/-S<br>(usft)      | +E/-W<br>(usft)  | Vertical<br>Section<br>(usft) | Dogleg<br>Rate<br>(°/100usft) | Build<br>Rate<br>(°/100usft) | Turn<br>Rate<br>(°/100usft) |
| 15,550.0                    | 90.03              | 179.94           | 8,734.8                     | -6,192.9             | -699.8           | 6,227.1                       | 0.00                          | 0.00                         | 0.00                        |
| 15,600.0                    | 90.03              | 179.94           | 8,734.7                     | -6,242.9             | -699.8           | 6,277.0                       | 0.00                          | 0.00                         | 0.00                        |
| 15,650.0                    | 90.03              | 179.94           | 8,734.7                     | -6,292.9             | -699.7           | 6,326.9                       | 0.00                          | 0.00                         | 0.00                        |
| 15,700.0                    | 90.03              | 179.94           | 8,734.7                     | -6,342.9             | -699.7           | 6,376.7                       | 0.00                          | 0.00                         | 0.00                        |
| 15,750.0                    | 90.03              | 179.94           | 8,734.7                     | -6,392.9             | -699.6           | 6,426.6                       | 0.00                          | 0.00                         | 0.00                        |
| 15,800.0                    | 90.03              | 179.94           | 8,734.6                     | -6,442.9             | -699.6           | 6,476.5                       | 0.00                          | 0.00                         | 0.00                        |
| 15,850.0                    | 90.03              | 179.94           | 8,734.6                     | -6,492.9             | -699.5           | 6,526.3                       | 0.00                          | 0.00                         | 0.00                        |
| 15,900.0                    | 90.03              | 179.94           | 8,734.6                     | -6,542.9             | -699.5           | 6,576.2                       | 0.00                          | 0.00                         | 0.00                        |
| 15,950.0                    | 90.03              | 179.94           | 8,734.6                     | -6,592.9             | -699.4           | 6,626.1                       | 0.00                          | 0.00                         | 0.00                        |
| 16,000.0                    | 90.03              | 179.94           | 8,734.5                     | -6,642.9             | -699.3           | 6,675.9                       | 0.00                          | 0.00                         | 0.00                        |
| 16,050.0                    | 90.03              | 179.94           | 8,734.5                     | -6,692.9             | -699.3           | 6,725.8                       | 0.00                          | 0.00                         | 0.00                        |
| 16,100.0                    | 90.03              | 179.94           | 8,734.5                     | -6,742.9             | -699.2           | 6,775.7                       | 0.00                          | 0.00                         | 0.00                        |
| 16,150.0                    | 90.03              | 179.94           | 8,734.5                     | -6,792.9             | -699.2           | 6,825.5                       | 0.00                          | 0.00                         | 0.00                        |
| 16,200.0                    | 90.03              | 179.94           | 8,734.4                     | -6,842.9             | -699.1           | 6,875.4                       | 0.00                          | 0.00                         | 0.00                        |
| 16,250.0                    | 90.03              | 179.94           | 8,734.4                     | -6,892.9             | -699.1           | 6,925.3                       | 0.00                          | 0.00                         | 0.00                        |
| 16,300.0<br>16.350.0        | 90.03<br>90.03     | 179.94<br>179.94 | 8,734.4<br>8.734.4          | -6,942.9<br>-6,992.9 | -699.0<br>-699.0 | 6,975.1<br>7,025.0            | 0.00<br>0.00                  | 0.00<br>0.00                 | 0.00<br>0.00                |
| ,                           |                    |                  | ,                           |                      |                  |                               |                               |                              |                             |
| 16,400.0                    | 90.03              | 179.94           | 8,734.3                     | -7,042.9             | -698.9           | 7,074.9                       | 0.00                          | 0.00                         | 0.00                        |
| 16,450.0                    | 90.03              | 179.94           | 8,734.3                     | -7,092.9             | -698.9           | 7,124.7                       | 0.00                          | 0.00                         | 0.00                        |
| 16,500.0                    | 90.03              | 179.94           | 8,734.3                     | -7,142.9<br>7,100.0  | -698.8           | 7,174.6                       | 0.00                          | 0.00                         | 0.00                        |
| 16,550.0                    | 90.03              | 179.94           | 8,734.3                     | -7,192.9             | -698.8           | 7,224.5                       | 0.00                          | 0.00                         | 0.00                        |
| 16,600.0                    | 90.03              | 179.94           | 8,734.2                     | -7,242.9             | -698.7           | 7,274.3                       | 0.00                          | 0.00                         | 0.00                        |
| 16,650.0                    | 90.03              | 179.94           | 8,734.2                     | -7,292.9             | -698.7           | 7,324.2                       | 0.00                          | 0.00                         | 0.00                        |
| 16,700.0                    | 90.03              | 179.94           | 8,734.2                     | -7,342.9             | -698.6           | 7,374.1                       | 0.00                          | 0.00                         | 0.00                        |
| 16,750.0                    | 90.03              | 179.94           | 8,734.2                     | -7,392.9             | -698.5           | 7,423.9                       | 0.00                          | 0.00                         | 0.00                        |
| 16,800.0<br>16,850.0        | 90.03<br>90.03     | 179.94<br>179.94 | 8,734.1<br>8,734.1          | -7,442.9<br>-7,492.9 | -698.5<br>-698.4 | 7,473.8<br>7,523.7            | 0.00<br>0.00                  | 0.00<br>0.00                 | 0.00<br>0.00                |
|                             |                    |                  |                             |                      |                  |                               |                               |                              |                             |
| 16,900.0                    | 90.03              | 179.94           | 8,734.1                     | -7,542.9             | -698.4           | 7,573.5                       | 0.00                          | 0.00                         | 0.00                        |
| 16,950.0                    | 90.03              | 179.94           | 8,734.1                     | -7,592.9             | -698.3           | 7,623.4                       | 0.00                          | 0.00                         | 0.00                        |
| 17,000.0                    | 90.03              | 179.94           | 8,734.0                     | -7,642.9<br>7,600.0  | -698.3           | 7,673.3                       | 0.00                          | 0.00                         | 0.00                        |
| 17,050.0<br>17,100.0        | 90.03<br>90.03     | 179.94<br>179.94 | 8,734.0<br>8,734.0          | -7,692.9<br>-7,742.9 | -698.2<br>-698.2 | 7,723.1<br>7,773.0            | 0.00<br>0.00                  | 0.00<br>0.00                 | 0.00<br>0.00                |
|                             |                    |                  |                             |                      |                  |                               |                               |                              |                             |
| 17,150.0                    | 90.03              | 179.94           | 8,734.0                     | -7,792.9             | -698.1           | 7,822.9                       | 0.00                          | 0.00                         | 0.00                        |
| 17,200.0                    | 90.03              | 179.94           | 8,733.9                     | -7,842.9             | -698.1           | 7,872.7                       | 0.00                          | 0.00                         | 0.00                        |
| 17,250.0                    | 90.03              | 179.94           | 8,733.9                     | -7,892.9             | -698.0           | 7,922.6                       | 0.00                          | 0.00                         | 0.00                        |
| 17,300.0                    | 90.03              | 179.94           | 8,733.9<br>8,733.0          | -7,942.9             | -698.0           | 7,972.5                       | 0.00                          | 0.00                         | 0.00                        |
| 17,350.0                    | 90.03              | 179.94           | 8,733.9                     | -7,992.9             | -697.9           | 8,022.3                       | 0.00                          | 0.00                         | 0.00                        |
| 17,400.0                    | 90.03              | 179.94           | 8,733.8                     | -8,042.9             | -697.9           | 8,072.2                       | 0.00                          | 0.00                         | 0.00                        |
| 17,450.0                    | 90.03              | 179.94           | 8,733.8                     | -8,092.9             | -697.8           | 8,122.1                       | 0.00                          | 0.00                         | 0.00                        |
| 17,500.0                    | 90.03              | 179.94           | 8,733.8                     | -8,142.9             | -697.7           | 8,171.9                       | 0.00                          | 0.00                         | 0.00                        |
| 17,550.0<br>17,600.0        | 90.03<br>90.03     | 179.94<br>179.94 | 8,733.8<br>8,733.7          | -8,192.9             | -697.7<br>-697.6 | 8,221.8<br>8,271.7            | 0.00<br>0.00                  | 0.00<br>0.00                 | 0.00<br>0.00                |
|                             |                    |                  | 8,733.7                     | -8,242.9             |                  |                               |                               |                              |                             |
| 17,650.0                    | 90.03              | 179.94           | 8,733.7                     | -8,292.9             | -697.6           | 8,321.6                       | 0.00                          | 0.00                         | 0.00                        |
| 17,700.0                    | 90.03              | 179.94           | 8,733.7                     | -8,342.9             | -697.5           | 8,371.4                       | 0.00                          | 0.00                         | 0.00                        |
| 17,750.0                    | 90.03              | 179.94           | 8,733.6                     | -8,392.9<br>8 443.0  | -697.5           | 8,421.3                       | 0.00                          | 0.00                         | 0.00                        |
| 17,800.0<br>17,850.0        | 90.03<br>90.03     | 179.94<br>179.94 | 8,733.6<br>8,733.6          | -8,442.9<br>-8,492.9 | -697.4<br>-697.4 | 8,471.2<br>8,521.0            | 0.00<br>0.00                  | 0.00<br>0.00                 | 0.00<br>0.00                |
|                             |                    |                  |                             |                      |                  |                               |                               |                              |                             |
| 17,900.0                    | 90.03              | 179.94           | 8,733.6                     | -8,542.9             | -697.3           | 8,570.9                       | 0.00                          | 0.00                         | 0.00                        |
| 17,950.0                    | 90.03              | 179.94           | 8,733.5                     | -8,592.9             | -697.3           | 8,620.8                       | 0.00                          | 0.00                         | 0.00                        |
| 18,000.0                    | 90.03              | 179.94           | 8,733.5                     | -8,642.9<br>8,603.0  | -697.2           | 8,670.6<br>8,720.5            | 0.00                          | 0.00                         | 0.00                        |
| 18,050.0<br>18,100.0        | 90.03<br>90.03     | 179.94<br>179.94 | 8,733.5<br>8,733.5          | -8,692.9<br>-8,742.9 | -697.2<br>-697.1 | 8,720.5<br>8,770.4            | 0.00<br>0.00                  | 0.00<br>0.00                 | 0.00<br>0.00                |
|                             |                    |                  |                             |                      |                  |                               |                               |                              |                             |
| 18,150.0                    | 90.03              | 179.94           | 8,733.4                     | -8,792.9             | -697.0           | 8,820.2                       | 0.00                          | 0.00                         | 0.00                        |
| 18,200.0                    | 90.03              | 179.94           | 8,733.4                     | -8,842.9             | -697.0           | 8,870.1                       | 0.00                          | 0.00                         | 0.00                        |

Database: Hobbs

Company: Mewbourne Oil Company
Project: Eddy County, New Mexico NAD 83
Site: Hoss 2/11 Fed Com #555H
Well: Sec 02, T25S, R28E

Wellbore: BHL: 100' FSL & 2250' FEL (Sec 11)

Design: Design #1

Local Co-ordinate Reference:

TVD Reference:
MD Reference:
North Reference:

Survey Calculation Method:

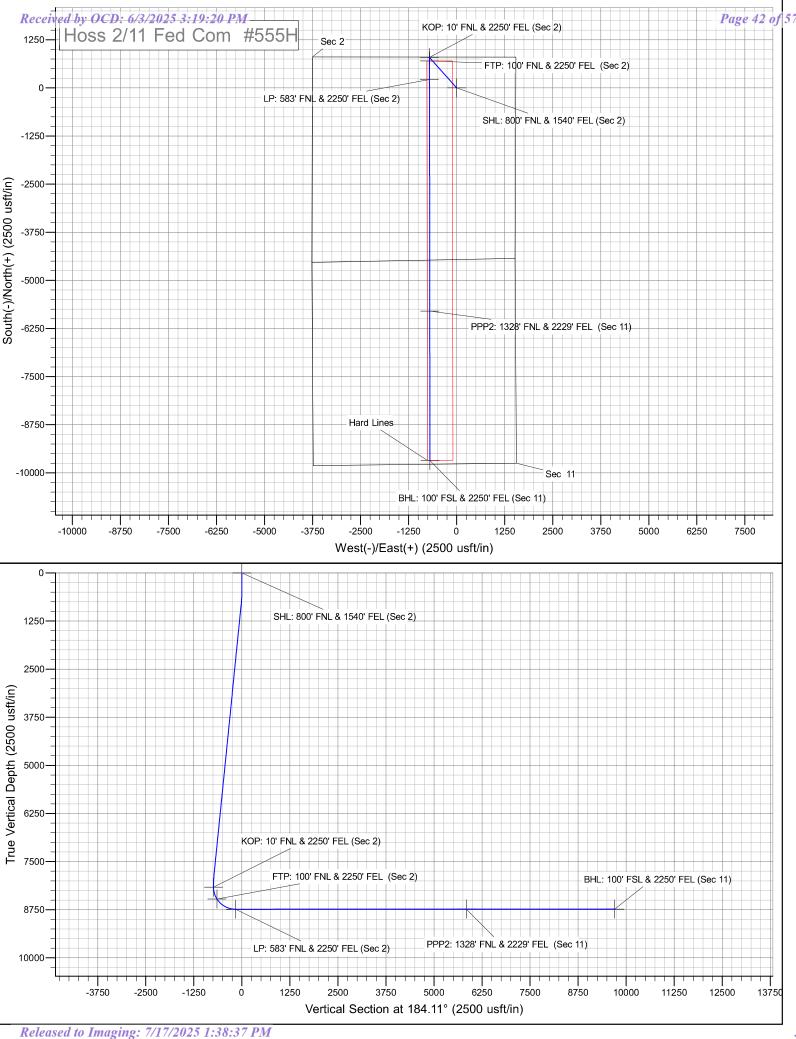
Site Hoss 2/11 Fed Com #555H

WELL @ 2981.0usft (Original Well Elev) WELL @ 2981.0usft (Original Well Elev)

Grid

| nned Survey                 |                    |                |                             |                 |                 |                               |                               |                              |                             |
|-----------------------------|--------------------|----------------|-----------------------------|-----------------|-----------------|-------------------------------|-------------------------------|------------------------------|-----------------------------|
| Measured<br>Depth<br>(usft) | Inclination<br>(°) | Azimuth<br>(°) | Vertical<br>Depth<br>(usft) | +N/-S<br>(usft) | +E/-W<br>(usft) | Vertical<br>Section<br>(usft) | Dogleg<br>Rate<br>(°/100usft) | Build<br>Rate<br>(°/100usft) | Turn<br>Rate<br>(°/100usft) |
| 18,250.0                    | 90.03              | 179.94         | 8,733.4                     | -8,892.9        | -696.9          | 8,920.0                       | 0.00                          | 0.00                         | 0.00                        |
| 18,300.0                    | 90.03              | 179.94         | 8,733.4                     | -8,942.9        | -696.9          | 8,969.8                       | 0.00                          | 0.00                         | 0.00                        |
| 18,350.0                    | 90.03              | 179.94         | 8,733.3                     | -8,992.9        | -696.8          | 9,019.7                       | 0.00                          | 0.00                         | 0.00                        |
| 18,400.0                    | 90.03              | 179.94         | 8,733.3                     | -9,042.9        | -696.8          | 9,069.6                       | 0.00                          | 0.00                         | 0.00                        |
| 18,450.0                    | 90.03              | 179.94         | 8,733.3                     | -9,092.9        | -696.7          | 9,119.4                       | 0.00                          | 0.00                         | 0.00                        |
| 18,500.0                    | 90.03              | 179.94         | 8,733.3                     | -9,142.9        | -696.7          | 9,169.3                       | 0.00                          | 0.00                         | 0.00                        |
| 18,550.0                    | 90.03              | 179.94         | 8,733.2                     | -9,192.9        | -696.6          | 9,219.2                       | 0.00                          | 0.00                         | 0.00                        |
| 18,600.0                    | 90.03              | 179.94         | 8,733.2                     | -9,242.9        | -696.6          | 9,269.0                       | 0.00                          | 0.00                         | 0.00                        |
| 18,650.0                    | 90.03              | 179.94         | 8,733.2                     | -9,292.9        | -696.5          | 9,318.9                       | 0.00                          | 0.00                         | 0.00                        |
| 18,700.0                    | 90.03              | 179.94         | 8,733.2                     | -9,342.9        | -696.5          | 9,368.8                       | 0.00                          | 0.00                         | 0.00                        |
| 18,750.0                    | 90.03              | 179.94         | 8,733.1                     | -9,392.9        | -696.4          | 9,418.6                       | 0.00                          | 0.00                         | 0.00                        |
| 18,800.0                    | 90.03              | 179.94         | 8,733.1                     | -9,442.9        | -696.4          | 9,468.5                       | 0.00                          | 0.00                         | 0.00                        |
| 18,850.0                    | 90.03              | 179.94         | 8,733.1                     | -9,492.9        | -696.3          | 9,518.4                       | 0.00                          | 0.00                         | 0.00                        |
| 18,900.0                    | 90.03              | 179.94         | 8,733.1                     | -9,542.9        | -696.2          | 9,568.2                       | 0.00                          | 0.00                         | 0.00                        |
| 18,950.0                    | 90.03              | 179.94         | 8,733.0                     | -9,592.9        | -696.2          | 9,618.1                       | 0.00                          | 0.00                         | 0.00                        |
| 19,000.0                    | 90.03              | 179.94         | 8,733.0                     | -9,642.9        | -696.1          | 9,668.0                       | 0.00                          | 0.00                         | 0.00                        |
| 19,035.9                    | 90.03              | 179.94         | 8,733.0                     | -9,678.8        | -696.1          | 9,703.8                       | 0.00                          | 0.00                         | 0.00                        |
| BHL: 100' FS                | SL & 2250' FEL (   | Sec 11)        |                             |                 |                 |                               |                               |                              |                             |

| Design Targets   |                  |                        |                         |                        |                                   |                    |                   |            |              |
|--|------------------|------------------------|-------------------------|------------------------|-----------------------------------|--------------------|-------------------|------------|--------------|
| Target Name - hit/miss target - Shape                      | Dip Angle<br>(°) | Dip Dir.<br>(°)        | TVD<br>(usft)           | +N/-S<br>(usft)        | +E/-W<br>(usft)                   | Northing<br>(usft) | Easting<br>(usft) | Latitude   | Longitude    |
| SHL: 800' FNL & 1540'<br>- plan hits target ce<br>- Point  |                  | 0.00                   | 0.0                     | 0.0                    | 0.0                               | 423,621.10         | 627,662.20        | 32.1643050 | -104.0543577 |
| KOP: 10' FNL & 2250' l<br>- plan hits target ce<br>- Point |                  | 0.00                   | 8,165.0                 | 789.9                  | <b>-</b> 707.3                    | 424,411.00         | 626,954.90        | 32.1664814 | -104.0566369 |
| FTP: 100' FNL & 2250'<br>- plan hits target ce<br>- Point  |                  | 0.00                   | 8,473.1                 | 700.0                  | -707.2                            | 424,321.10         | 626,955.00        | 32.1662343 | -104.0566373 |
| BHL: 100' FSL & 2250'<br>- plan hits target ce<br>- Point  |                  | 0.00                   | 8,733.0                 | -9,678.8               | -696.1                            | 413,942.30         | 626,966.10        | 32.1377039 | -104.0566876 |
| PPP2: 1328' FNL & 222<br>- plan hits target ce<br>- Point  |                  | 0.00                   | 8,735.0                 | -5,800.7               | -700.2                            | 417,820.40         | 626,961.96        | 32.1483644 | -104.0566688 |
| LP: 583' FNL & 2250' F<br>- plan misses targe<br>- Point   |                  | 0.00<br>usft at 9140.2 | 8,738.0<br>Pusft MD (87 | 216.9<br>38.0 TVD, 216 | -709.6<br>3.9 <b>N</b> , -706.7 E | 423,838.00<br>E)   | 626,952.60        | 32.1649063 | -104.0566491 |



# Mewbourne Oil Company, Hoss 2/11 Fed Com 555H Sec 2, T25S, R28E

SHL: 360' FNL 700' FEL (Sec 2) BHL: 100' FSL 2250' FEL (Sec 11)

| Operator Name:        | Property Name:    | Well Number |
|-----------------------|-------------------|-------------|
| Mewbourne Oil Company | Hoss 2/11 Fed Com | 555H        |

#### Kick Off Point (KOP)

| UL         | Section | Township | Range | Lot | Feet       | From N/S | Feet  | From E/W | County |
|------------|---------|----------|-------|-----|------------|----------|-------|----------|--------|
| В          | 2       | 25       | 28    | -   | 10'        | FNL      | 2250' | FEL      | Eddy   |
|            |         | Latitude |       |     |            | Long     | itude |          | NAD    |
| 32.1664815 | 5       |          |       |     | -104.05663 | 370      |       |          | 83     |

First Take Point (FTP)

| UL         | Section | Township | Range | Lot | Feet       | From N/S | Feet  | From E/W | County |
|------------|---------|----------|-------|-----|------------|----------|-------|----------|--------|
| В          | 2       | 25       | 28    | -   | 100'       | FNL      | 2250' | FEL      | Eddy   |
|            |         | Latitude |       |     |            | Long     | itude |          | NAD    |
| 32.1662341 | l       |          |       |     | -104.05663 | 86       |       |          | 83     |

Last Take Point (LTP)

| Lust Tune 1 | Ome (E11 | ,        |       |     |            |          |       |          |        |
|-------------|----------|----------|-------|-----|------------|----------|-------|----------|--------|
| UL          | Section  | Township | Range | Lot | Feet       | From N/S | Feet  | From E/W | County |
| О           | 11       | 25       | 28    | _   | 100'       | FSL      | 2250' | FEL      | Eddy   |
|             |          | Latitude |       |     |            | Long     | itude |          | NAD    |
| 32.1377039  | )        |          |       |     | -104.05668 | 377      |       |          | 83     |

| Is this well an infill well?   | Spacing Unit?  |             |
|--|--|-------------|
| If infill is yes please provide API if available, C<br>Spacing Unit. | Operator Name and well number for Defining well for Horizontal |             |
| API#   |  |             |
| Operator Name:   | Property Name:   | Well Number |
|  |  |             |

# PECOS DISTRICT DRILLING CONDITIONS OF APPROVAL

**OPERATOR'S NAME:** MEWBOURNE OIL COMPANY **WELL NAME & NO.:** HOSS 2/11 FED COM 555H

**APD ID:** 10400099833

**LOCATION:** Section 2, T.25 S., R.28 E. NMP.

COUNTY: Eddy County, New Mexico

COA

| $H_2S$       | C                    | No                | •                 | Yes                        |
|--------------|----------------------|-------------------|-------------------|----------------------------|
| Potash /     | None                 | Secretary         | C R-111-Q         | Open Annulus               |
| WIPP         |                      |                   |                   | ■ WIPP                     |
| Cave / Karst | C Low                | Medium            | • High            | Critical                   |
| Wellhead     | Conventional         | Multibowl         | Both              | <ul><li>Diverter</li></ul> |
| Cementing    | Primary Squeeze      | Cont. Squeeze     | EchoMeter         | DV Tool                    |
| Special Req  | Capitan Reef         | Water Disposal    | COM               | Unit                       |
| Waste Prev.  | C Self-Certification | Waste Min. Plan   | C APD Submitted p | prior to 06/10/2024        |
| Additional   | Flex Hose            | Casing Clearance  | Pilot Hole        | Break Testing              |
| Language     | Four-String          | Offline Cementing | Fluid-Filled      |                            |

#### A. HYDROGEN SULFIDE

A Hydrogen Sulfide (H<sub>2</sub>S) Drilling Plan shall be activated **AT SPUD**. As a result, the Hydrogen Sulfide area must meet **43 CFR 3176** requirements, which includes equipment and personnel/public protection items. If Hydrogen Sulfide is encountered, please provide measured values and formations to the BLM.

#### **B. CASING DESIGN**

#### **Primary Casing Design**

- 1. The 13-3/8 inch surface casing shall be set at approximately 450 ft. (a minimum of 70 feet (Eddy County) into the Rustler Anhydrite and above the salt) and cemented to the surface. If salt is encountered, set casing at least 25 feet above the salt.
  - a. If cement does not circulate to the surface, the appropriate BLM office shall be notified and a temperature survey utilizing an electronic-type temperature survey with surface log readout will be used or a cement bond log shall be run to verify the top of the cement. Temperature survey will be run a minimum of six hours after pumping cement and ideally between 8-10 hours after completing the cement job.
  - b. Wait on cement (WOC) time for a primary cement job will be a minimum of  $\underline{8}$

- **hours** or **500 psi compressive strength**, whichever is greater. (This is to include the lead cement)
- c. Wait on cement (WOC) time for a remedial job will be a minimum of 4 hours after bringing cement to surface or 500 psi compressive strength, whichever is greater.
- d. If cement falls back, remedial cementing will be done prior to drilling out that string.
- 2. The 9-5/8 inch intermediate casing shall be set in a competent bed at approximately 2,550 ft. The minimum required fill of cement behind the 9-5/8 inch intermediate casing is:
  - Cement to surface. If cement does not circulate see B.1.a, c-d above. Wait on cement (WOC) time for a primary cement job is to include the lead cement slurry due to cave/karst.

**Note:** Excess cement is below the BLM's recommendation of 25%. More cement might be needed.

- ❖ In High Cave/Karst Areas if cement does not circulate to surface on the first two casing strings, the cement on the 3<sup>rd</sup> casing string must come to surface.
- **3.** Operator has proposed to set **7 in.** x **4-1/2 in** tapered production casing at approximately **19,035 ft.** (8,733 ft. TVD). Hole and casing size change at the KOP, approximately at 8,240 ft. The minimum required fill of cement behind the tapered production casing is:
  - **Option 1 (Single Stage):** Cement should tie-back **at least 200 feet** into previous casing string. Operator shall provide method of verification.
  - **Option 2 (Two-stage):** Operator has proposed a DV tool, the depth may be adjusted as long as the cement is changed proportionally. The DV tool may be cancelled if cement circulates to surface on the first stage.
    - a. **First stage to DV tool:** Cement to circulate. If cement does not circulate off the DV tool, contact the appropriate BLM office before proceeding with second stage cement job.
    - b. **Second stage above DV tool:** Cement should tie-back **at least 200 feet** into previous casing string. Operator shall provide method of verification. If cement does not circulate, contact the appropriate BLM office.

**Note**: Cement volume for the 1<sup>st</sup> stage is insufficient. More cement is needed.

#### **Alternate Casing Design**

- 1. The 13-3/8 inch surface casing shall be set at approximately 450 ft. (a minimum of 70 feet (Eddy County) into the Rustler Anhydrite and above the salt) and cemented to the surface. If salt is encountered, set casing at least 25 feet above the salt.
  - a. If cement does not circulate to the surface, the appropriate BLM office shall

be notified and a temperature survey utilizing an electronic-type temperature survey with surface log readout will be used or a cement bond log shall be run to verify the top of the cement. Temperature survey will be run a minimum of six hours after pumping cement and ideally between 8-10 hours after completing the cement job.

- b. Wait on cement (WOC) time for a primary cement job will be a minimum of **8** hours or **500 psi compressive strength**, whichever is greater. (This is to include the lead cement)
- c. Wait on cement (WOC) time for a remedial job will be a minimum of 4 hours after bringing cement to surface or 500 psi compressive strength, whichever is greater.
- d. If cement falls back, remedial cementing will be done prior to drilling out that string.
- 2. The 9-5/8 inch intermediate casing shall be set in a competent bed at approximately 2,550 ft. The minimum required fill of cement behind the 9-5/8 inch intermediate casing is:
  - Cement to surface. If cement does not circulate see B.1.a, c-d above. Wait on cement (WOC) time for a primary cement job is to include the lead cement slurry due to cave/karst.

**Note:** Excess cement is below the BLM's recommendation of 25%. More cement might be needed.

- ❖ In High Cave/Karst Areas if cement does not circulate to surface on the first two casing strings, the cement on the 3<sup>rd</sup> casing string must come to surface.
- 3. Operator has proposed to set 7 in. production casing at approximately 8,240 ft. (8,165 ft. TVD). The minimum required fill of cement behind the 7 in. production casing is:

**Option 1 (Single Stage):** Cement should tie-back **at least 200 feet** into previous casing string. Operator shall provide method of verification. Wait on cement (WOC) time for a primary cement job is to include the lead cement slurry due to **Cave/Karst**.

**Option 2 (Two-stage):** Operator has proposed a DV tool, the depth may be adjusted as long as the cement is changed proportionally. The DV tool may be cancelled if cement circulates to surface on the first stage.

- a. **First stage to DV tool:** Cement to circulate. If cement does not circulate off the DV tool, contact the appropriate BLM office before proceeding with second stage cement job.
- b. Second stage above DV tool: Cement should tie-back at least 200 feet into previous casing string. Operator shall provide method of verification. If cement does not circulate, contact the appropriate BLM office. Wait on cement (WOC) time for a primary cement job is to include the lead cement slurry due to Cave/Karst.

- 4. The minimum required fill of cement behind the 4-1/2 in. production liner is:
  - Cement should tie-back at least 100 feet into previous casing string. Operator shall provide method of verification.

**Note**: Cement volume is insufficient. More cement is needed.

# **Offline Cementing**

Operator has been (**Approved**) to pump the proposed cement program offline in the **Surface and intermediate(s) intervals**. Offline cementing should commence within 24 hours of landing the casing for the interval. Notify the BLM 4hrs prior to the commencement of any offline cementing procedure at **Eddy County:** 575-361-2822.

#### C. PRESSURE CONTROL

- 1. Variance approved to use **flex line** from BOP to choke manifold. Manufacturer's specification to be readily available. No external damage to flex line. Flex line to be installed as straight as possible (no hard bends).
- 2. Operator has proposed a multi-bowl wellhead assembly. This assembly will only be tested when installed on the surface casing. Minimum working pressure of the blowout preventer (BOP) and related equipment (BOPE) required for drilling below the surface casing shoe shall be 5000 (5M) psi. Before drilling the surface casing shoe out, the BOP/BOPE shall be pressure-tested in accordance with title 43 CFR 3172.
  - a. Wellhead shall be installed by manufacturer's representatives, submit documentation with subsequent sundry.
  - b. If the welding is performed by a third party, the manufacturer's representative shall monitor the temperature to verify that it does not exceed the maximum temperature of the seal.
  - c. Manufacturer representative shall install the test plug for the initial BOP test.
  - d. If the cement does not circulate and one-inch operations would have been possible with a standard wellhead, the well head shall be cut off, cementing operations performed and another wellhead installed.
  - e. Whenever any seal subject to test pressure is broken, all the tests in the title 43 CFR 3172.6(b)(9) must be followed.

#### **BOPE Break Testing Variance (Using a 10M BOP/BOPE)**

- BOPE Break Testing is ONLY permitted for intervals requiring a 5M BOPE or less. (Annular preventer must be tested to a minimum of 70% of BOPE working pressure and shall be higher than the MASP.)
- BOPE Break Testing is NOT permitted to drilling the production hole section.
- Variance only pertains to the intermediate hole-sections and no deeper than the Bone Springs formation.
- While in transfer between wells, the BOPE shall be secured by the hydraulic carrier or cradle.
- Any well control event while drilling require notification to the BLM Petroleum

Engineer (575-706-2779) prior to the commencement of any BOPE Break Testing operations.

- A full BOPE test is required prior to drilling the first deep intermediate hole section. If any subsequent hole interval is deeper than the first, a full BOPE test will be required. (200' TVD tolerance between intermediate shoes is allowable).
- The BLM is to be contacted (575-361-2822 Eddy County) 4 hours prior to BOPE
- As a minimum, a full BOPE test shall be performed at 21-day intervals.
- In the event any repairs or replacement of the BOPE is required, the BOPE shall test as per 43 CFR 3172.
- If in the event break testing is not utilized, then a full BOPE test would be conducted.

# D. SPECIAL REQUIREMENT (S)

# **Communitization Agreement**

- Operator will submit a Communitization Agreement to the Santa Fe Office, 301 Dinosaur Trail Santa Fe, New Mexico 87508, at least 90 days before the anticipated date of first production from a well subject to a spacing order issued by the New Mexico Oil Conservation Division. The Communitization Agreement will include the signatures of all working interest owners in all Federal and Indian leases subject to the Communitization Agreement (i.e., operating rights owners and lessees of record), or certification that the operator has obtained the written signatures of all such owners and will make those signatures available to the BLM immediately upon request.
- The operator will submit an as-drilled survey well plat of the well completion, but are not limited to, those specified in 43 CFR 3171 and 3172.
- In addition, the well sign shall include the surface and bottom hole lease numbers. When the Communitization Agreement number is known, it shall also be on the sign.

# **GENERAL REQUIREMENTS**

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

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

#### **Contact Eddy County Petroleum Engineering Inspection Staff:**

Email or call the Carlsbad Field Office, 620 East Greene St., Carlsbad, NM 88220; BLM NM CFO DrillingNotifications@BLM.GOV; (575) 361-2822.

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

- a. In the event the operator has proposed to drill multiple wells utilizing a skid/walking rig. Operator shall secure the wellbore on the current well, after installing and testing the wellhead, by installing a blind flange of like pressure rating to the wellhead and a pressure gauge that can be monitored while drilling is performed on the other well(s).
- b. When the operator proposes to set surface casing with Spudder Rig
  - i. Notify the BLM when moving in and removing the Spudder Rig.
  - ii. Notify the BLM when moving in the 2<sup>nd</sup> Rig. Rig to be moved in within 90 days of notification that Spudder Rig has left the location.
  - iii. BOP/BOPE test to be conducted per **43 CFR 3172** as soon as 2<sup>nd</sup> Rig is rigged up on well.
- 2. Floor controls are required for 3M or Greater systems. These controls will be on the rig floor, unobstructed, readily accessible to the driller and will be operational at all times during drilling and/or completion activities. Rig floor is defined as the area immediately around the rotary table; the area immediately above the substructure on which the draw works are located, this does not include the doghouse or stairway area.
- 3. For intervals in which cement to surface is required, cement to surface should be verified with a visual check and density or pH check to differentiate cement from spacer and drilling mud. The results should be documented in the driller's log and daily reports.

# A. CASING

- 1. Changes to the approved APD casing program need prior approval if the items substituted are of lesser grade or different casing size or are Non-API. The Operator can exchange the components of the proposal with that of superior strength (i.e. changing from J-55 to N-80, or from 36# to 40#). Changes to the approved cement program need prior approval if the altered cement plan has less volume or strength or if the changes are substantial (i.e. Multistage tool, ECP, etc.). The initial wellhead installed on the well will remain on the well with spools used as needed.
- 2. Wait on cement (WOC) for Potash Areas: After cementing but before commencing any tests, the casing string shall stand cemented under pressure until both of the following conditions have been met: 1) cement reaches a minimum compressive strength of 500 psi for all cement blends of both lead and tail cement, 2) until cement has been in place at least 8 hours. WOC time will be recorded in the driller's log. The casing integrity test can be done (prior to the cement setting up) immediately after bumping the plug.
- 3. Wait on cement (WOC) for Water Basin: After cementing but before commencing any tests, the casing string shall stand cemented under pressure until

both of the following conditions have been met: 1) cement reaches a minimum compressive strength of 500 psi at the shoe, 2) until cement has been in place at least 8 hours. WOC time will be recorded in the driller's log. See individual casing strings for details regarding lead cement slurry requirements. The casing integrity test can be done (prior to the cement setting up) immediately after bumping the plug.

- **4.** Provide compressive strengths including hours to reach required 500 pounds compressive strength prior to cementing each casing string. Have well specific cement details onsite prior to pumping the cement for each casing string.
- **5.** No pea gravel permitted for remedial or fall back remedial without prior authorization from the BLM engineer.
- **6.** On that portion of any well approved for a 5M BOPE system or greater, a pressure integrity test of each casing shoe shall be performed. Formation at the shoe shall be tested to a minimum of the mud weight equivalent anticipated to control the formation pressure to the next casing depth or at total depth of the well. This test shall be performed before drilling more than 20 feet of new hole.
- 7. If hardband drill pipe is rotated inside casing, returns will be monitored for metal. If metal is found in samples, drill pipe will be pulled and rubber protectors which have a larger diameter than the tool joints of the drill pipe will be installed prior to continuing drilling operations.
- **8.** Whenever a casing string is cemented in the R-111-Q potash area, the NMOCD requirements shall be followed.

#### **B. PRESSURE CONTROL**

- 1. All blowout preventer (BOP) and related equipment (BOPE) shall comply with well control requirements as described in 43 CFR 3172.
- 2. If a variance is approved for a flexible hose to be installed from the BOP to the choke manifold, the following requirements apply: The flex line must meet the requirements of API 16C. Check condition of flexible line from BOP to choke manifold, replace if exterior is damaged or if line fails test. Line to be as straight as possible with no hard bends and is to be anchored according to Manufacturer's requirements. The flexible hose can be exchanged with a hose of equal size and equal or greater pressure rating. Anchor requirements, specification sheet and hydrostatic pressure test certification matching the hose in service, to be onsite for review. These documents shall be posted in the company man's trailer and on the rig floor.
- **3.** 5M or higher system requires an HCR valve, remote kill line and annular to match. The remote kill line is to be installed prior to testing the system and tested to stack pressure.

- **4.** If the operator has proposed a multi-bowl wellhead assembly in the APD. The following requirements must be met:
  - i. Wellhead shall be installed by manufacturer's representatives, submit documentation with subsequent sundry.
  - ii. If the welding is performed by a third party, the manufacturer's representative shall monitor the temperature to verify that it does not exceed the maximum temperature of the seal.
  - iii. Manufacturer representative shall install the test plug for the initial BOP test.
  - iv. Whenever any seal subject to test pressure is broken, all the tests in 43 CFR 3172.6(b)(9) must be followed.
  - v. If the cement does not circulate and one-inch operations would have been possible with a standard wellhead, the well head shall be cut off, cementing operations performed and another wellhead installed.
- **5.** The appropriate BLM office shall be notified a minimum of 4 hours in advance for a representative to witness the tests.
  - i. In a water basin, for all casing strings utilizing slips, these are to be set as soon as the crew and rig are ready and any fallback cement remediation has been done. The casing cut-off and BOP installation can be initiated four hours after installing the slips, which will be approximately six hours after bumping the plug. For those casing strings not using slips, the minimum wait time before cut-off is eight hours after bumping the plug. BOP/BOPE testing can begin after cut-off or once cement reaches 500 psi compressive strength (including lead cement), whichever is greater. However, if the float does not hold, cut-off cannot be initiated until cement reaches 500 psi compressive strength (including lead when specified).
  - ii. In potash areas, for all casing strings utilizing slips, these are to be set as soon as the crew and rig are ready and any fallback cement remediation has been done. For all casing strings, casing cut-off and BOP installation can be initiated at twelve hours after bumping the cement plug. The BOPE test can be initiated after bumping the cement plug with the casing valve open. (Only applies to single stage cement jobs, prior to the cement setting up.)
  - iii. The tests shall be done by an independent service company utilizing a test plug not a cup or J-packer and can be initiated immediately with the casing valve open. The operator also has the option of utilizing an independent tester to test without a plug (i.e. against the casing) pursuant to **43 CFR 3172** with the pressure not to exceed 70% of the burst rating for the casing. Any test against the casing must meet the WOC time for 8 hours or 500 pounds compressive strength, whichever is greater, prior to initiating the test (see casing segment as lead cement may be critical item).

- iv. The test shall be run on a 5000-psi chart for a 2-3M BOP/BOP, on a 10000 psi chart for a 5M BOP/BOPE and on a 15000 psi chart for a 10M BOP/BOPE. If a linear chart is used, it shall be a one-hour chart. A circular chart shall have a maximum 2-hour clock. If a twelve hour or twenty-four-hour chart is used, tester shall make a notation that it is run with a two hour clock.
- v. The results of the test shall be reported to the appropriate BLM office.
- vi. All tests are required to be recorded on a calibrated test chart. A copy of the BOP/BOPE test chart and a copy of independent service company test will be submitted to the appropriate BLM office.
- vii. The BOP/BOPE test shall include a low-pressure test from 250 to 300 psi. The test will be held for a minimum of 10 minutes if test is done with a test plug and 30 minutes without a test plug. This test shall be performed prior to the test at full stack pressure.
- viii. BOP/BOPE must be tested by an independent service company within 500 feet of the top of the Wolfcamp formation if the time between the setting of the intermediate casing and reaching this depth exceeds 20 days. This test does not exclude the test prior to drilling out the casing shoe as per 43 CFR 3172.

#### C. DRILLING MUD

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

#### D. WASTE MATERIAL AND FLUIDS

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

SA 05/07/2025

# Hydrogen Sulfide Drilling Operations Plan Mewbourne Oil Company

#### 1. General Requirements

Rule 118 does not apply to this well because MOC has researched this area and no high concentrations of H2S were found. MOC will have on location and working all H2S safety equipment before the Delaware formation for purposes of safety and insurance requirements.

# 2. Hydrogen Sulfide Training

All personnel, whether regularly assigned, contracted, or employed on an unscheduled basis, will have received training from a qualified instructor in the following areas prior to entering the drilling pad area of the well:

- 1. The hazards and characteristics of hydrogen sulfide gas.
- 2. The proper use of personal protective equipment and life support systems.
- 3. The proper use of hydrogen sulfide detectors, alarms, warning systems, briefing areas, evacuation procedures.
- 4. The proper techniques for first aid and rescue operations.

Additionally, supervisory personnel will be trained in the following areas:

- The effects of hydrogen sulfide on metal components. If high tensile tubular systems are utilized, supervisory personnel will be trained in their special maintenance requirements.
- 2 Corrective action and shut in procedures, blowout prevention, and well control procedures while drilling a well.
- The contents of the Hydrogen Sulfide Drilling Operations Plan.

There will be an initial training session prior to encountering a know hydrogen sulfide source. The initial training session shall include a review of the site specific Hydrogen Sulfide Drilling Operations Plan.

#### 3. Hydrogen Sulfide Safety Equipment and Systems

All hydrogen sulfide safety equipment and systems will be installed, tested, and operational prior to drilling below the 9 5/8" intermediate casing.

#### 1. Well Control Equipment

- A. Choke manifold with minimum of one adjustable choke/remote choke.
- B. Blowout preventers equipped with blind rams and pipe rams to accommodate all pipe sizes with properly sized closing unit
- C. Auxiliary equipment including annular type blowout preventer.
- 2. <u>Protective Equipment for Essential Personnel</u>

Thirty minute self contained work unit located in the dog house and at briefing areas.

Additionally: If H2S is encountered in concentrations less than 10 ppm, fans will be placed in work areas to prevent the accumulation of hazardous amounts of poisonous gas. If higher concentrations of H2S are detected the well will be shut in and a rotating head, mud/gas separator, remote choke and flare line with igniter will be installed.

# 3. <u>Hydrogen Sulfide Protection and Monitoring Equipment</u>

Two portable hydrogen sulfide monitors positioned on location for optimum coverage and detection. The units shall have audible sirens to notify personnel when hydrogen sulfide levels exceed 20 PPM.

# 4. <u>Visual Warning Systems</u>

- A. Wind direction indicators as indicated on the wellsite diagram.
- B. Caution signs shall be posted on roads providing access to location. Signs shall be painted a high visibility color with lettering of sufficient size to be readable at reasonable distances from potentially contaminated areas.

# 4. Mud Program

The mud program has been designed to minimize the amount of hydrogen sulfide entrained in the mud system. Proper mud weight, safe drilling practices, and the use of hydrogen sulfide scavengers will minimize hazards while drilling the well.

# 5. Metallurgy

All tubular systems, wellheads, blowout preventers, drilling spools, kill lines, choke manifolds, and valves shall be suitable for service in a hydrogen sulfide environment when chemically treated.

#### 6. Communications

State & County Officials phone numbers are posted on rig floor and supervisors trailer. Communications in company vehicles and toolpushers are either two way radios or cellular phones.

# 7. Well Testing

Drill stem testing is not an anticipated requirement for evaluation of this well. If a drill stem test is required, it will be conducted with a minimum number of personnel in the immediate vicinity. The test will be conducted during daylight hours only.

#### 8. Emergency Phone Numbers

| Eddy County Sheriff's Office                    | 911 or 575-887-7551           |
|---|-------------------------------|
| Ambulance Service                               | 911 or 575-885-2111           |
| Carlsbad Fire Dept                              | 911 or 575-885-2111           |
| Loco Hills Volunteer Fire Dept.                 | 911 or 575-677-3266           |
| Closest Medical Facility - Columbia Medical Cer | nter of Carlsbad 575-492-5000 |

| Mewbourne Oil Company          | Hobbs District Office<br>Fax<br>2 <sup>nd</sup> Fax | 575-393-5905<br>575-397-6252<br>575-393-7259 |
|--------------------------------|---|--|
| District Manager               | Robin Terrell                                       | 575-390-4816                                 |
| <b>Drilling Superintendent</b> | Frosty Lathan                                       | 575-390-4103                                 |
|                                | <b>Bradley Bishop</b>                               | 575-390-6838                                 |
| <b>Drilling Foreman</b>        | Wesley Noseff                                       | 575-441-0729                                 |

**Operator Name: MEWBOURNE OIL COMPANY** 

Well Name: HOSS 2/11 FED COM Well Number: 555H

Waste disposal type: HAUL TO COMMERCIAL Disposal location ownership: PRIVATE

**FACILITY** 

Disposal type description:

Disposal location description: NMOCD approved waste disposal locations are CRI or Lea Land, both facilities are located

on HWY 62/180, Sec. 27 T20S R32E.

Waste type: GARBAGE

Waste content description: Garbage & trash

Amount of waste: 1500 pounds

Waste disposal frequency : One Time Only

Safe containment description: Enclosed trash trailer

Safe containment attachment:

Waste disposal type: HAUL TO COMMERCIAL Disposal location ownership: PRIVATE

**FACILITY** 

Disposal type description:

Disposal location description: Waste Management facility in Carlsbad.

#### **Reserve Pit**

Reserve Pit being used? NO

Temporary disposal of produced water into reserve pit? NO

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

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

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

Reserve pit liner

Reserve pit liner specifications and installation description

# **Cuttings Area**

Cuttings Area being used? NO

Are you storing cuttings on location? N

**Description of cuttings location** 

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

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

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

**Cuttings area liner** 

Cuttings area liner specifications and installation description

**Operator Name: MEWBOURNE OIL COMPANY** 

Well Name: HOSS 2/11 FED COM Well Number: 555H

# **Section 8 - Ancillary**

Are you requesting any Ancillary Facilities?: N

**Ancillary Facilities** 

Comments:

Section 9 - Well Site

Well Site Layout Diagram:

HOSS\_2\_11\_FED\_COM\_555H\_WellSiteLayout\_20241210104855.pdf

Comments: NONE

Section 10 - Plans for Surface

Type of disturbance: New Surface Disturbance Multiple Well Pad Name: Hoss 2/11 Fed Com 406H 458H 555H

557H 858H

**Multiple Well Pad Number:** 5

Recontouring

Drainage/Erosion control construction: None

Drainage/Erosion control reclamation: None

Well pad proposed disturbance Well pad interim reclamation (acres): Well pad long term disturbance

(acres): 4.6 1.15 (acres): 3.45

Road proposed disturbance (acres): Road interim reclamation (acres): 0 Road long term disturbance (acres): 0

Powerline proposed disturbance Powerline interim reclamation (acres): Powerline long term disturbance

(acres): 0 (acres): 0

Pipeline proposed disturbance Pipeline interim reclamation (acres): 0 Pipeline long term disturbance

(acres): 0

Other proposed disturbance (acres): 0 Other interim reclamation (acres): 0 Other long term disturbance (acres): 0

Total proposed disturbance: 4.6 Total interim reclamation: 1.15 Total long term disturbance: 3.45

**Disturbance Comments:** In areas to be heavily disturbed, the top 6 inches of soil material, will be stripped and stockpiled on the perimeter of the well location to keep topsoil viable, and to make redistribution of topsoil more efficient during interim reclamation. Stockpiled topsoil should include vegetative material. Topsoil will be clearly segregated and stored separately from subsoils. Contaminated soil will not be stockpiled, but properly treated and handled prior to topsoil salvaging.

**Reconstruction method:** The areas planned for interim reclamation will then be recontoured to the original contour if feasible, or if not feasible, to an interim contour that blends with the surrounding topography as much as possible. Where applicable, the fill material of the well pad will be backfilled into the cut to bring the area back to the original contour. The interim cut and fill slopes prior to re-seeding will not be steeper than a 3:1 ratio, unless the adjacent native topography is steeper. Note: Constructed slopes may be much steeper during drilling, but will be recontoured to the above ratios during interim reclamation.

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

General Information Phone: (505) 629-6116

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

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

CONDITIONS

Action 470470

#### **CONDITIONS**

| Operator:        | OGRID:  |
|------------------|---|
| MEWBOURNE OIL CO | 14744   |
| P.O. Box 5270    | Action Number:  |
| Hobbs, NM 88241  | 470470  |
|                  | Action Type:  |
|                  | [C-101] BLM - Federal/Indian Land Lease (Form 3160-3) |

#### CONDITIONS

| Created By  | Condition   | Condition<br>Date |
|-------------|---|-------------------|
| mleal       | Cement is required to circulate on both surface and intermediate1 strings of casing.  | 6/3/2025          |
| mleal       | If cement does not circulate on any string, a Cement Bond Log (CBL) is required for that string of casing.  | 6/3/2025          |
| ward.rikala | Notify the OCD 24 hours prior to casing & cement.   | 7/17/2025         |
| ward.rikala | File As Drilled C-102 and a directional Survey with C-104 completion packet.  | 7/17/2025         |
| ward.rikala | Once the well is spud, to prevent ground water contamination through whole or partial conduits from the surface, the operator shall drill without interruption through the fresh water zone or zones and shall immediately set in cement the water protection string. | 7/17/2025         |
| ward.rikala | Oil base muds are not to be used until fresh water zones are cased and cemented providing isolation from the oil or diesel. This includes synthetic oils. Oil based mud, drilling fluids and solids must be contained in a steel closed loop system.                  | 7/17/2025         |