

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

APPLICATION FOR PERMIT TO DRILL OR DEEPEN

1a. TYPE OF WORK  
DRILL ☒ DEEPEN ☐

b. TYPE OF WELL  
OIL WELL ☒ GAS WELL ☐ OTHER ☐ SINGLE ZONE ☒ MULTIPLE ZONE ☐

2. NAME OF OPERATOR  
Meridian Oil Inc.

3. ADDRESS AND TELEPHONE NO.  
P.O. Box 51810 Midland, Tx 79710-1810

4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.)  
At surface 990' FSL & 2310' FWL  
At proposed prod. zone

14. DISTANCE IN MILES AND DIRECTION FROM NEAREST TOWN OR POST OFFICE\*  
28 miles west of Eunice, New Mexico

15. DISTANCE FROM PROPOSED\* LOCATION TO NEAREST PROPERTY OR LEASE LINE, FT.  
(Also to nearest drilg. unit line, if any) 990'

16. NO. OF ACRES IN LEASE  
560

17. NO. OF ACRES ASSIGNED TO THIS WELL  
40

18. DISTANCE FROM PROPOSED LOCATION\* TO NEAREST WELL, DRILLING, COMPLETED, OR APPLIED FOR, ON THIS LEASE, FT.  
1406'

19. PROPOSED DEPTH  
9000'

20. ROTARY OR CABLE TOOLS  
Rotary

21. ELEVATIONS (Show whether DF, RT, GR, etc.)  
3700'

22. APPROX. DATE WORK WILL START\*  
Upon Approval

23. PROPOSED CASING AND CEMENTING PROGRAM

| SIZE OF HOLE | GRADE, SIZE OF CASING | WEIGHT PER FOOT | SETTING DEPTH | QUANTITY OF CEMENT       |
|--------------|-----------------------|-----------------|---------------|--------------------------|
| 17 1/2"      | 13 3/8"               | 48#             | 850'          | 800 SXS <b>CIRCULATE</b> |
| 12 1/4"      | 8 5/8"                | 28#/32#         | 4600'         | 1600 SXS                 |
| 7 7/8"       | 5 1/2"                | 17#             | 9000'         | 1400 SXS                 |

No Hydrogen Sulfide Requirements  
No Prairie Chicken Restrictions.

Have applied for Unorthodox Location with the OCD/Santa Fe

Contact Person: Donna Williams  
915-688-6943

Approval Subject to  
General Requirements and  
Special Stipulations  
Attached

OPER. OGRID NO. 20485  
PROPERTY NO. 13136  
POOL CODE 51689  
EFF. DATE 9-9-94  
API NO. 30-025-32660

IN ABOVE SPACE DESCRIBE PROPOSED PROGRAM: If proposal is to deepen, give data on present productive zone and proposed new productive zone. If proposal is to drill or deepen directionally, give pertinent data on subsurface locations and measured and true vertical depths. Give blowout preventer program, if any.

24. SIGNED Donna Williams TITLE Production Assistant DATE 7/22/94  
(This space for Federal or State office use)

PERMIT NO. \_\_\_\_\_ APPROVAL DATE \_\_\_\_\_  
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:

APPROVED BY Scott Powers TITLE (acting) AREA MANAGER DATE 9-1-94

\*See Instructions On Reverse Side

# INSTRUCTIONS

GENERAL: This form is designed for submitting proposals to perform certain well operations, as indicated, on all types of lands and leases for appropriate action by either a Federal or a State agency, or both, pursuant to applicable Federal and/or State laws and regulations. Any necessary special instructions concerning the use of this form and the number of copies to be submitted, particularly with regard to local, area, or regional procedures and practices, either are shown below or will be issued by, or may be obtained from, the local Federal and/or State office.

ITEM 1: If the proposal is to redrill to the same reservoir at a different subsurface location or to a new reservoir, use this form with appropriate notations. Consult applicable State or Federal regulations concerning subsequent work proposals or reports on the well.

ITEM 4: If there are no applicable State requirements, locations on Federal or Indian land or lease description. A plat, or plats, separate or on this reverse side, showing the roads to, and the surveyed location of, the well, and any other required information, should be furnished when required by Federal or State agency offices.

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

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

## NOTICE

The Privacy Act of 1974 and the regulation in 43 CFR 2.48(d) provide that you be furnished the following information in connection with information required by this application.

AUTHORITY: 30 U.S.C. 181 et seq., 25 U.S.C. 396; 43 CFR Part 3160.

PRINCIPAL PURPOSE: The information is to be used to process and evaluate your application for permit to drill or deepen an oil or gas well.

ROUTINE USES: (1) The analysis of the applicant's proposal to discover and extract the Federal or Indian resources encountered. (2) The review of procedures and equipment and the projected impact on the land involved. (3) The evaluation of the effects of proposed operation on surface and subsurface water and other environmental impacts. (4)(5) Information from the record and/or the record will be transferred to appropriate Federal, State, local or foreign agencies, when relevant to civil, criminal or regulatory investigations or prosecutions, as well as routine regulatory responsibility.

EFFECT OF NOT PROVIDING INFORMATION: Filing of this application and disclosure of the information is mandatory only if the operator elects to initiate drilling operation on an oil and gas lease.

## BURDEN HOURS STATEMENT

Public reporting burden for this form is estimated to average 30 minutes per response, including the time for reviewing instructions, gathering and maintaining data, and completing and reviewing the form. Direct comments regarding the burden estimate or any other aspect of this form to U.S. Department of the Interior, Bureau of Land Management, (Alternate) Bureau Clearance Office, (WO-771), 1849 C Street, N.W., Washington, D.C. 20240, and the Office of Management and Budget, Paperwork Reduction Project (1004-0136), Washington, D.C. 20503.

The Paperwork Reduction Act of 1980 (44 U.S.C. 3501 et seq) requires us to inform you that:

This information is being collected to allow evaluation of the technical, safety, and environmental factors involved with drilling for oil and/or gas on Federal and Indian oil and gas leases.

This information will be used to analyze and approve applications.

Response to this request is mandatory only if the operator elects to initiate drilling operations on an oil and gas lease.

District I  
PO Box 1980, Hobbs, NM 88241-1980  
District II  
PO Drawer DD, Artesia, NM 88211-0719  
District III  
1000 Rio Brazos Rd., Aztec, NM 87410  
District IV  
PO Box 2088, Santa Fe, NM 87504-2088

State of New Mexico  
Energy, Minerals & Natural Resources Department

OIL CONSERVATION DIVISION  
PO Box 2088  
Santa Fe, NM 87504-2088

Form C-102  
Revised February 21, 1994  
Instructions on back  
Submit to Appropriate District Office  
State Lease - 4 Copies  
Fee Lease - 3 Copies

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

|                                       |  |                                                         |  |                                                  |                                |
|---------------------------------------|--|---------------------------------------------------------|--|--------------------------------------------------|--------------------------------|
| <sup>1</sup> API Number<br>Unassigned |  | <sup>2</sup> Pool Code                                  |  | <sup>3</sup> Pool Name<br>West Red Tank Delaware |                                |
| <sup>4</sup> Property Code            |  | <sup>5</sup> Property Name<br>CHECKERBOARD "23" FEDERAL |  |                                                  | <sup>6</sup> Well Number<br>9  |
| <sup>7</sup> OGRID No.<br>26485       |  | <sup>8</sup> Operator Name<br>MERIDIAN OIL INC.         |  |                                                  | <sup>9</sup> Elevation<br>3700 |

<sup>10</sup> Surface Location

|                    |               |                  |               |         |                      |                           |                       |                        |               |
|--------------------|---------------|------------------|---------------|---------|----------------------|---------------------------|-----------------------|------------------------|---------------|
| UL or lot no.<br>N | Section<br>23 | Township<br>22 S | Range<br>32 E | Lot Idn | Feet from the<br>990 | North/South line<br>SOUTH | Feet from the<br>2310 | East/West line<br>WEST | County<br>LEA |
|--------------------|---------------|------------------|---------------|---------|----------------------|---------------------------|-----------------------|------------------------|---------------|

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

|                                  |                    |          |       |         |               |                  |               |                |        |
|----------------------------------|--------------------|----------|-------|---------|---------------|------------------|---------------|----------------|--------|
| UL or lot no.<br>Same as Surface | Section<br>Surface | Township | Range | Lot Idn | Feet from the | North/South line | Feet from the | East/West line | County |
|----------------------------------|--------------------|----------|-------|---------|---------------|------------------|---------------|----------------|--------|

|                                     |                               |                                  |                         |
|-------------------------------------|-------------------------------|----------------------------------|-------------------------|
| <sup>12</sup> Dedicated Acres<br>40 | <sup>13</sup> Joint or Infill | <sup>14</sup> Consolidation Code | <sup>15</sup> Order No. |
|-------------------------------------|-------------------------------|----------------------------------|-------------------------|

NO ALLOWABLE WILL BE ASSIGNED TO THIS COMPLETION UNTIL ALL INTERESTS HAVE BEEN CONSOLIDATED  
OR A NON-STANDARD UNIT HAS BEEN APPROVED BY THE DIVISION

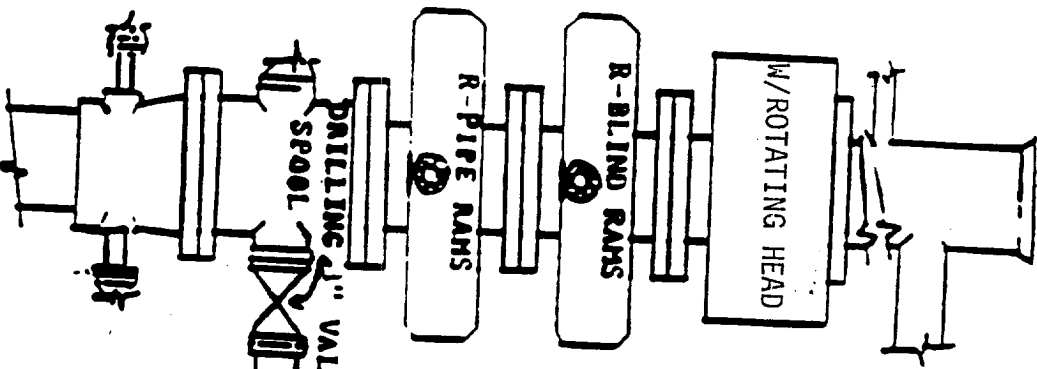
|                                                                                                                                                                                                                                                                                                                                                                                                                                    |  |  |  |                                                                                                                                                                                                                                                                                            |  |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|--|--|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|
|                                                                                                                                                                                                                                                                                                                                                                                                                                    |  |  |  | <p><sup>17</sup> OPERATOR CERTIFICATION</p> <p>I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief</p> <p></p> <p>Signature<br/>Donna Williams<br/>Printed Name<br/>Production Assistant<br/>Title<br/>7/22/94<br/>Date</p> |  |
| <p><sup>18</sup> SURVEYOR CERTIFICATION</p> <p>I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my belief.</p> <p>JULY 18, 1994</p> <p>Date of Survey</p> <p>Signature and Seal of Professional Surveyor</p> <p></p> <p>WILLIAM E. MAHNKE<br/>8466</p> <p>Certificate Number</p> |  |  |  |                                                                                                                                                                                                                                                                                            |  |

487-2750

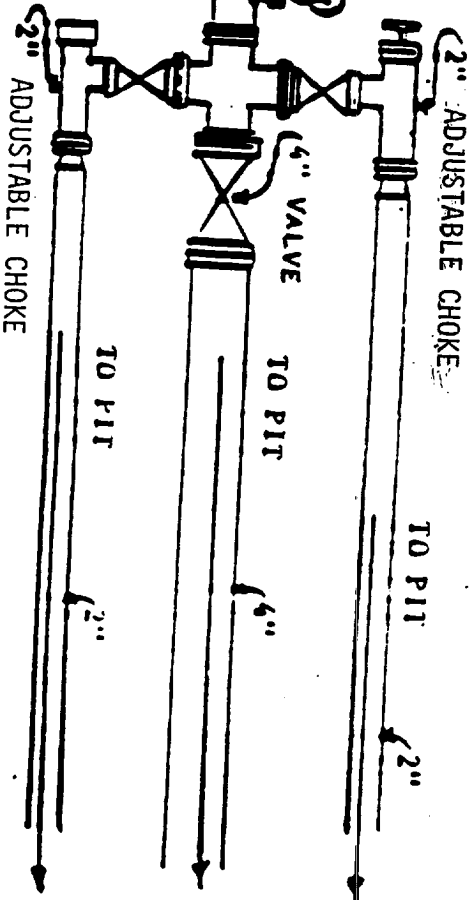
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DOUBLE RAM



BLOW OUT PREVENTION EQUIPMENT  
10" 900s ALL FLANGED CONNECTIONS  
3000# WORKING PRESSURE



|                                 |                                                      |
|---------------------------------|------------------------------------------------------|
| <b>OPERATORS NAME:</b>          | <b>Meridian Oil Inc.</b>                             |
| <b>LEASE NAME AND WELL NO.:</b> | <b>Checkerboard "23" Federal No. 9</b>               |
| <b>LOCATION:</b>                | <b>990' FSL &amp; 2310' FWL, Sec. 23, T22S, R32E</b> |
| <b>FIELD NAME:</b>              | <b>West Red Tank Delaware</b>                        |
| <b>COUNTY:</b>                  | <b>Lea County, NM</b>                                |
| <b>LEASE NUMBER:</b>            | <b>NM-81633</b>                                      |

The following information is to supplement BLM form 3160-3 Application for permit to drill in accordance with Onshore Oil and Gas Order No. 1:

### 9 - POINT DRILLING PLAN

1. Name and estimated tops of important geologic formation/marker horizons.

| <u>FORMATION</u>         | <u>DEPTH</u> |
|--------------------------|--------------|
| Rustler                  | 970'         |
| T/Salt                   | 1100'        |
| B/Salt                   | 4500'        |
| Delaware Sandstone       | 4850'        |
| BoneSpring, LS/Sandstone | 8730'        |

2. Estimated depths at which the top and bottom of formations potentially containing usable water, oil, gas, or prospectively valuable deposits of other minerals are expected to be encountered and the operator's plans for protecting such resources.

|          |             |
|----------|-------------|
| Delaware | 4850' (Oil) |
|----------|-------------|

3. The operator's minimum specifications for Blowout Preventer (BOP) and related equipment to be used and schematic diagrams thereof showing sizes, pressure ratings, and the testing procedures and testing frequency. BOP and BOP - related equipment (BOPE) schematics shall include schematics of choke manifold equipment. Accumulator systems and remote controls shall be utilized.

13 5/8" 1.5M annular BOP w/rotating head to be installed on the 13 3/8" casing. Tested to 750 psi before drilling the 13 3/8" casing shoe.

11" 3M BOP stack to be installed on the 8 5/8" casing. The BOP stack will consist of one blind ram BOP, one pipe ram BOP, and a rotating head. Tested to 3000 psi before drilling the 8 5/8" casing shoe.

4. The proposed casing program including size, grade, weights, type of thread and coupling, and the setting depth of each string and its condition (new or acceptably reconditioned). For exploratory wells, or for wells as otherwise specified by the authorized officer, the operator shall include the minimum design factors for tensions, burst, and collapse that are incorporated into the casing design. In cases where tapered casing strings are utilized, the operator shall also include and/or setting depths of each portion.
  - 17½" hole, 13 3/8" H-40 48# STC csg set @ 850'.
  - 12¼" hole, 3200' 8 5/8" 28# K-55 BTC, 1400' 8 5/8" 32# K-55 LTC csg.set depth @4600'.
  - 7 7/8" hole, 5 1/2" K-55 17# ltc csg @ 9000'.
5. The amount and type(s) of cement, including anticipated additives to be used in setting each casing string, shall be described. If stage cementing techniques are to be employed, the setting depth of the stage collars and amount and type of cement, including additives, and preflush amounts to be used in each stage, shall be given. The expected linear fill-up of each cemented string, or each stage when utilizing stage-cementing techniques, shall also be given.
  - a. 13 3/8" csg: Cmt w/600sxs. Class "C" + 4% gel & 2% CaCl<sub>2</sub> + ¼ pps Flocele; tail w/ 200 sxs Class "C" +2% CaCl<sub>2</sub>. Circ. to surface.
  - b. 8 5/8" csg: Stage 1: Lead w/400 sxs Class 'C' Lite + 9 pps salt + 5 pps gilsonite + 1 pps econolite + 1/4 pps flocele, tail w/250 sxs Class 'C' + 2% CaCl<sub>2</sub>. Second Stage: Lead w/750 sxs Class 'C' Lite + 9 pps salt + 1/4 pps flocele, tail w/200 sxs Class 'C' + 2% CaCl<sub>2</sub>. DV Tool @ 2500'. Circ to surface.
  - c. 5½" csg: Cmt. w/ 1st Stage: 600 sx Class 'H' 50/50 POZ +2% gel +.5% Halad-9, +3 pps KCL, +¼ pps Flocele displace to seal plug. Second Stage: Lead w/700 sxs Class 'H' Lite + .6% Halad-9, Tail w/100 sxs Class 'H'. Bring TOC @ +/-4400'.
6. The anticipated characteristics, additives, use, and testing of drilling mud to be employed, along with the types and quantities of mud products to be maintained, shall be given. When air or gas drilling is proposed, the operator shall submit the following specific information:

**Mud Program:**

0-850' fresh water, gel and lime system, MW 8.6 - 9.0, viscosity 32-34  
850-4600' Brine, MW 10.0 - 10.1, (+ 160,000 cl-), viscosity 27-28  
4600-8800' fresh water, MW 8.4 - 8.5, viscosity 29-30

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U.S. DEPARTMENT OF JUSTICE  
FEDERAL BUREAU OF INVESTIGATION



8800-8900' FW/Bentonite/Drispac, MW 8.5-8.8, viscosity 31-33

7. The anticipated testing, logging, and coring procedures to be used, including drill stem testing procedures, equipment, and safety measures.

- a. DST Program: None
- b. Core: None
- c. Mud Logging: Two-man unit 4600' to TD.
- d. Logs to be run: CNL-LDT/GR/CAL: TD to ICP (CNL/GR to surface)  
DIL/SFL/GR:TD-ICP

8. The expected bottom-hole pressure and any anticipated abnormal pressures, temperatures or potential hazards that are expected to be encountered, such as lost circulation zones and hydrogen sulfide. The operator's plans for mitigating such hazards shall be discussed. Should the potential to encounter hydrogen sulfide exist, the mitigation procedures shall comply with the provisions of Onshore Oil and Gas Order No. 6.

No abnormal pressures are anticipated. bottom hole pressures at TD expected to be 4300 psi. Bottom hole temperature 140° F. There is no anticipated Hydrogen Sulfide in this known drilling area

9. Any other facets of the proposed operation which the operator wishes for BLM to consider in reviewing the application.

Anticipated drilling time expected to be 16 days from surface to TD.

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