

ATS-15-974

Form 3160-3  
(March 2012)

JUN 30 2016

FORM APPROVED  
OMB No. 1004-0137  
Expires October 31, 2014

UNITED STATES  
DEPARTMENT OF THE INTERIOR **RECEIVED**  
BUREAU OF LAND MANAGEMENT

**APPLICATION FOR PERMIT TO DRILL OR REENTER**

|  |   |   |
|--|---|---|
| 1a. Type of work: <input checked="" type="checkbox"/> DRILL <input type="checkbox"/> REENTER   |   | 7. If Unit or CA Agreement, Name and No.                            |
| 1b. Type of Well: <input checked="" type="checkbox"/> Oil Well <input type="checkbox"/> Gas Well <input type="checkbox"/> Other <input checked="" type="checkbox"/> Single Zone <input type="checkbox"/> Multiple Zone |   | 8. Lease Name and Well No. (316475)<br>Jennings 27 B2AP Fed Com #2H |
| 2. Name of Operator Mewbourne Oil Company (14744)  |   | 9. API Well No.<br>30-025-43342 (97903)                             |
| 3a. Address PO Box 5270<br>Hobbs, NM 88241   | 3b. Phone No. (include area code)<br>575-393-5905 | 10. Field and Pool, or Exploratory<br>WC-025 G08 52582356; LWR BS   |
| 4. Location of Well (Report location clearly and in accordance with any State requirements.)*<br>At surface 185' FNL & 660' FEL, Sec 27 T25S R32E<br>At proposed prod. zone 330' FSL & 660' FEL, Sec 27 T25S R32E      |   | 11. Sec., T. R. M. or Blk. and Survey or Area<br>Sec 27 T25S R32E   |
| 14. Distance in miles and direction from nearest town or post office*<br>27 miles W of Jal, NM   |   | 12. County or Parish<br>Lea   |
| 15. Distance from proposed* location to nearest property or lease line, ft. (Also to nearest drig. unit line, if any)<br>185'  |   | 13. State<br>NM   |
| 16. No. of acres in lease<br>NMNM115421 - 80 acres<br>NM0359295A - 880 acres   |   | 17. Spacing Unit dedicated to this well<br>160                      |
| 18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft.<br>80' - Jennings 27 W1AP Fed Com #3H   |   | 20. BLM/BIA Bond No. on file<br>NM1693 nationwide & NMB-000919      |
| 21. Elevations (Show whether DF, KDB, RT, GL, etc.)<br>3400' - GL  |   | 22. Approximate date work will start*<br>11/29/2015                 |
|  |   | 23. Estimated duration<br>60 days                                   |

**UNORTHODOX  
LOCATION**

24. Attachments

The following, completed in accordance with the requirements of Onshore Oil and Gas Order No.1, must be attached to this form:

- |  |   |
|--|---|
| 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.  | 5. Operator certification   |
| 3. A Surface Use Plan (if the location is on National Forest System Lands, the SUPO must be filed with the appropriate Forest Service Office). | 6. Such other site specific information and/or plans as may be required by the BLM.             |

|   |  |                    |
|---|--|--------------------|
| 25. Signature  | Name (Printed/Typed)<br>Bradley Bishop | Date<br>09/29/2015 |
|---|--|--------------------|

Title

|  |                      |                         |
|--|----------------------|-------------------------|
| Approved by (Signature) <b>James A. Amos</b> | Name (Printed/Typed) | Date <b>JUN 27 2016</b> |
|--|----------------------|-------------------------|

|                            |                                     |
|----------------------------|-------------------------------------|
| Title <b>FIELD MANAGER</b> | Office <b>CARLSBAD FIELD OFFICE</b> |
|----------------------------|-------------------------------------|

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. **APPROVAL FOR TWO YEARS**

Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, make States any false, fictitious or fraudulent statements or representat

(Continued on page 2)

See attached NMOCD  
Conditions of Approval

any department or agency of the United

\*(Instructions on page 2)

**Carlsbad Controlled Water Basin**

*K2*  
*02/01/16*

**SEE ATTACHED FOR  
CONDITIONS OF APPROVAL**

**Approval Subject to General Requirements  
& Special Stipulations Attached**

**Mewbourne Oil Company, Jennings 27 B2AP Fed Com #2H**  
**Sec 27, T25S, R32E**  
**SL: 185' FNL & 660' FEL**  
**BHL: 330' FSL & 660' FEL**

**1. Geologic Formations**

|               |        |                               |      |
|---------------|--------|-------------------------------|------|
| TVD of target | 10777' | Pilot hole depth              | NA   |
| MD at TD:     | 15250' | Deepest expected fresh water: | 275' |

**Basin**

| Formation                        | Depth (TVD) from KB | Water/Mineral Bearing/ Target Zone? | Hazards* |
|----------------------------------|---------------------|-------------------------------------|----------|
| Quaternary Fill                  | Surface             |                                     |          |
| Rustler                          | 739                 |                                     |          |
| Top of Salt                      | 1110                | Salt                                |          |
| Castile                          |                     |                                     |          |
| Base of Salt                     | 4447                |                                     |          |
| Yates                            |                     |                                     |          |
| Lamar                            | 4670                |                                     |          |
| Cherry Canyon                    | 5722                |                                     |          |
| Manzanita Marker                 | 5873                |                                     |          |
| Brushy Canyon                    | 7450                |                                     |          |
| Bone Spring                      | 8712                | Oil/Gas                             |          |
| 1 <sup>st</sup> Bone Spring Sand | 9732                |                                     |          |
| 2 <sup>nd</sup> Bone Spring Sand | 10287               | Target Zone                         |          |
| 3 <sup>rd</sup> Bone Spring Sand |                     |                                     |          |
| Abo                              |                     |                                     |          |
| Wolfcamp                         |                     | Will Not Penetrate                  |          |
| Devonian                         |                     |                                     |          |
| Fusselman                        |                     |                                     |          |
| Ellenburger                      |                     |                                     |          |
| Granite Wash                     |                     |                                     |          |

\*H2S, water flows, loss of circulation, abnormal pressures, etc.

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**2. Casing Program**

*See COA*

| Hole Size                 | Casing Interval |                  | Csg. Size | Weight (lbs) | Grade | Conn. | SF Collapse | SF Burst | SF Tension         |
|---------------------------|-----------------|------------------|-----------|--------------|-------|-------|-------------|----------|--------------------|
|                           | From            | To               |           |              |       |       |             |          |                    |
| 17.5"                     | 0'              | <i>765' 850'</i> | 13.375"   | 48           | H40   | STC   | 1.86        | 4.35     | 8.77               |
| 12.25"                    | 0'              | 3453'            | 9.625"    | 36           | J55   | LTC   | 1.13        | 1.96     | 2.67               |
| 12.25"                    | 3453'           | 4393'            | 9.625"    | 40           | J55   | LTC   | 1.13        | 1.73     | 11.43              |
| 12.25"                    | 4393'           | 4590'            | 9.625"    | 40           | N80   | LTC   | 1.29        | 2.41     | 93.61              |
| 8.75"                     | 0'              | 740'             | 5.5"      | 17           | P110  | BTC   | 19.43       | 19.43    | 2.11               |
| 8.75"                     | 740'            | 10213'           | 5.5"      | 17           | P110  | LTC   | 1.41        | 2.00     | 1.80               |
| 8.75"                     | 10213'          | 10953'           | 5.5"      | 17           | P110  | BTC   | 1.35        | 1.91     | 6.38               |
| 8.75"                     | 10953'          | 15250'           | 5.5"      | 17           | P110  | LTC   | 1.33        | 1.90     | 6.08               |
| BLM Minimum Safety Factor |                 |                  |           |              |       |       | 1.125       | 1        | 1.6 Dry<br>1.8 Wet |

All casing strings will be tested in accordance with Onshore Oil and Gas Order #2 III.B.1.h

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 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.   |        |
| Is well located in SOPA but not in R-111-P?  | 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-P 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 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?   |        |
| Is well located in critical Cave/Karst?  | N      |
| If yes, are there three strings cemented to surface?   |        |

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**3. Cementing Program**

| Casing | # Sks | Wt. lb/gal | Yld ft <sup>3</sup> /sack | H <sub>2</sub> O gal/sk | 500# Comp. Strength (hours) | Slurry Description  |
|--------|-------|------------|---------------------------|-------------------------|-----------------------------|---|
| Surf.  | 380   | 12.5       | 2.12                      | 11                      | 10                          | Class C + 0.005pps Static Free + 1% CaCl <sub>2</sub> + 0.25 pps CelloFlake + 0.005 gps FP-6L |
|        | 200   | 14.8       | 1.34                      | 6.3                     | 8                           | Tail: Class C + 0.25 lb/sk Cello Flake + 0.005 lb/sk Static Free                              |
| Inter. | 725   | 12.5       | 2.12                      | 11                      | 10                          | Lead: Class C (35:65:4) + 5% Sodium Chloride +5#/sk LCM +0.25lb/sk Cello-Flake                |
|        | 200   | 14.8       | 1.34                      | 6.3                     | 8                           | Tail: Class C + 0.25 lb/sk Cello Flake + 0.005 lb/sk Static Free                              |
| Prod   | 1155  | 11.2       | 2.97                      | 18                      | 16                          | Class C (60:40:0)+4% MPA5+1.2% BA10A+10#/sk BA90+5%A10+0.65%ASA301+1.5%SMS+1.2%R21            |

See COA

A copy of cement test will be available on location at time of cement job providing pump times & compressive strengths.

| Casing String | TOC   | % Excess |
|---------------|-------|----------|
| Surface       | 0'    | 100%     |
| Intermediate  | 0'    | 25%      |
| Production    | 4390' | 25%      |

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**4. Pressure Control Equipment**

|                |
|----------------|
| Variance: None |
|----------------|

| BOP installed and tested before drilling which hole? | Size?   | System Rated WP     | Type       | ✓ | Tested to:                |
|--|---------|---------------------|------------|---|---------------------------|
| 12-1/4"  | 13-5/8" | 3M                  | Annular    | X | 1500#                     |
|  |         |                     | Blind Ram  |   |                           |
|  |         |                     | Pipe Ram   |   |                           |
|  |         |                     | Double Ram |   |                           |
|  |         |                     | Other*     |   |                           |
| 8-3/4"   | 11"     | 5M<br><del>3M</del> | Annular    | X | 1500#                     |
|  |         |                     | Blind Ram  | X | 5000#<br><del>3000#</del> |
|  |         |                     | Pipe Ram   | X |                           |
|  |         |                     | Double Ram |   |                           |
|  |         |                     | Other*     |   |                           |

See COA

\*Specify if additional ram is utilized.

BOP/BOPE will be tested by an independent service company to 250 psi low and the high pressure indicated above per Onshore Order 2 requirements. The System may be upgraded to a higher pressure but still tested to the working pressure listed in the table above. If the system is upgraded all the components installed will be functional and tested.

Pipe rams will be operationally checked each 24 hour period. Blind rams will be operationally checked on each trip out of the hole. These checks will be noted on the daily tour sheets. Other accessories to the BOP equipment will include a Kelly cock and floor safety valve (inside BOP) and choke lines and choke manifold. See attached schematics.

|   |  |
|---|--|
| X | Formation integrity test will be performed per Onshore Order #2. On Exploratory wells or on that portion of any well approved for a 5M BOPE system or greater, a pressure integrity test of each casing shoe shall be performed. Will be tested in accordance with Onshore Oil and Gas Order #2 III.B.1.i. |
| Y | A variance is requested for the use of a flexible choke line from the BOP to Choke Manifold. See attached for specs and hydrostatic test chart.  |
| N | Are anchors required by manufacturer?  |

See COA

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|          |   |
|----------|---|
| <b>N</b> | <p>A multibowl wellhead is being used. The BOP will be tested per Onshore Order #2 after installation on the surface casing which will cover testing requirements for a maximum of 30 days. If any seal subject to test pressure is broken the system must be tested.</p> <ul style="list-style-type: none"> <li>• Provide description here</li> </ul> <p>See attached schematic.</p> |
|----------|---|

**5. Mud Program**

See  
COA

| Depth          |                    | Type            | Weight (ppg) | Viscosity | Water Loss |
|----------------|--------------------|-----------------|--------------|-----------|------------|
| From           | To                 |                 |              |           |            |
| 0              | 765 <sup>850</sup> | FW Gel          | 8.6-8.8      | 28-34     | N/C        |
| <del>765</del> | 4590               | Saturated Brine | 10.0         | 28-34     | N/C        |
| 4590           | 10213              | Cut Brine       | 8.6-9.5      | 28-34     | N/C        |
| 10213          | 15250              | FW w/Polymer    | 8.6-9.5      | 30-40     | <20cc      |

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? | Visual Monitoring |
|---|-------------------|

**6. Logging and Testing Procedures**

| Logging, Coring and Testing. |   |
|------------------------------|---|
| <b>X</b>                     | Will run GR/CNL from KOP (10213') to surface (horizontal well – vertical portion of hole). Stated logs run will be in the Completion Report and submitted to the BLM. |
|                              | No Logs are planned based on well control or offset log information.  |
|                              | Drill stem test? If yes, explain  |
|                              | Coring? If yes, explain   |

| Additional logs planned | Interval          |
|-------------------------|-------------------|
| <b>X</b> Gamma Ray      | 10213'(KOP) to TD |
| Density                 |                   |
| CBL                     |                   |
| Mud log                 |                   |
| PEX                     |                   |

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**7. Drilling Conditions**

| Condition                  | Specify what type and where? |
|----------------------------|------------------------------|
| BH Pressure at deepest TVD | 4667 psi                     |
| Abnormal Temperature       | No                           |

Mitigation measure for abnormal conditions. Describe. **Lost circulation material/sweeps/mud scavengers in surface hole.**

*See COA*

Hydrogen Sulfide (H<sub>2</sub>S) monitors will be installed prior to drilling out the surface shoe. If H<sub>2</sub>S is detected in concentrations greater than 100 ppm, the operator will comply with the provisions of Onshore Oil and Gas Order #6. If Hydrogen Sulfide is encountered, measured values and formations will be provided to the BLM.

|   |                                |
|---|--------------------------------|
|   | H <sub>2</sub> S is present    |
| X | H <sub>2</sub> S Plan attached |

**8. Other facets of operation**

Is this a walking operation? If yes, describe. **NO**

Will be pre-setting casing? If yes, describe. **NO**

Attachments

Directional Plan

Other, describe