

District I  
1625 N. French Dr. Hobbs NM 88240  
Phone: (575) 393-6161 Fax: (575) 393-0720  
District II  
811 S. First St., Artesia, NM 88210  
Phone: (575) 748-1283 Fax: (575) 748-9720  
District III  
1000 Rio Brazos Road, Aztec, NM 87410  
Phone: (505) 334-6174 Fax: (505) 334-6170  
District IV  
1220 S. St. Francis Dr., Santa Fe, NM 87505  
Phone: (505) 476-3460 Fax: (505) 476-3462

# State of New Mexico

Form C-101  
Revised July 18, 2013

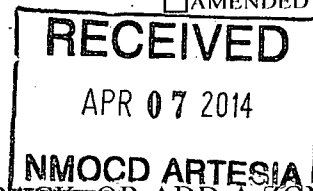
## Energy Minerals and Natural Resources

### Oil Conservation Division

1220 South St. Francis Dr.

Santa Fe, NM 87505

☐ AMENDED REPORT



### APPLICATION FOR PERMIT TO DRILL, RE-ENTER, DEEPEN, PLUGBACK, OR ADD-A-ZONE

|                                                                                              |                               |                        |
|----------------------------------------------------------------------------------------------|-------------------------------|------------------------|
| Operator Name and Address<br>Mack Energy Corporation<br>P.O. Box 960, Artesia, NM 88211-0960 |                               | UGRID Number<br>013837 |
| Property Code<br>40470                                                                       | Property Name<br>Hermit State | Well No.<br>1          |

#### Surface Location

| UL - Lot | Section | Township | Range | Lot Idn | Feet from | N/S Line | Feet From | E/W Line | County |
|----------|---------|----------|-------|---------|-----------|----------|-----------|----------|--------|
| I        | 32      | 23S      | 26E   |         | 1980      | South    | 660       | East     | Eddy   |

#### Proposed Bottom Hole Location

| UL - Lot | Section | Township | Range | Lot Idn | Feet from | N/S Line | Feet From | E/W Line | County |
|----------|---------|----------|-------|---------|-----------|----------|-----------|----------|--------|
|          |         |          |       |         |           |          |           |          |        |

#### Pool Information

|                                                                                   |                    |
|-----------------------------------------------------------------------------------|--------------------|
| Pool Name<br><del>WC-0156-04 S232628 M</del><br>WC-025 G-06 S183518A; Bone Spring | Pool Code<br>98056 |
|-----------------------------------------------------------------------------------|--------------------|

#### Additional Well Information

| Work Type             | Well Type      | Cable/Rotary                           | Lease Type | Ground Level Elevation            |
|-----------------------|----------------|----------------------------------------|------------|-----------------------------------|
| Re-Entry              | Oil Well       |                                        | S          | 3438'                             |
| Multiple              | Proposed Depth | Formation                              | Contractor | Spud Date                         |
| NO                    | 10,279'        | Bone Spring                            |            | 3/31/2014                         |
| Depth to Ground water |                | Distance from nearest fresh water well |            | Distance to nearest surface water |

☒ We will be using a closed-loop system in lieu of lined pits

#### Proposed Casing and Cement Program

| Type | Hole Size | Casing Size | Casing Weight/ft | Setting Depth | Sacks of Cement   | Estimated TOC |
|------|-----------|-------------|------------------|---------------|-------------------|---------------|
| H-40 | 17 1/2    | 13 3/8      | 48               | 432'          | 400sx (existing)  | 0             |
| K-55 | 12 1/4    | 8 5/8       | 24               | 2300'         | 1000sx (existing) | 0             |
| N-80 | 7 7/8     | 5 1/2       | 17               | 10657'        | 1100sx (existing) | 5800'         |

#### Casing/Cement Program: Additional Comments

|                                                                                                                       |
|-----------------------------------------------------------------------------------------------------------------------|
| Mack Energy Corporation proposes to re-enter drill out cement plugs to 10,279', perforate and put well on production. |
|-----------------------------------------------------------------------------------------------------------------------|

#### Proposed Blowout Prevention Program

| Type       | Working Pressure | Test Pressure | Manufacturer |
|------------|------------------|---------------|--------------|
| Double Ram | 3000             | 3000          |              |

|                                                                                                                                                                                                                                                                                                                              |                    |                                                   |  |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------|---------------------------------------------------|--|
| I hereby certify that the information given above is true and complete to the best of my knowledge and belief.<br>I further certify that I have complied with 19.15.14.9 (A) NMAC <input checked="" type="checkbox"/> and/or 19.15.14.9 (B) NMAC <input type="checkbox"/> , if applicable.<br>Signature: <i>Deana Weaver</i> |                    | OIL CONSERVATION DIVISION                         |  |
| Printed name Deana Weaver                                                                                                                                                                                                                                                                                                    |                    | Approved By: <i>J. E. Shepard</i>                 |  |
| Title Production Clerk                                                                                                                                                                                                                                                                                                       |                    | Title "Geologist"                                 |  |
| E-mail Address dweaver@mec.com                                                                                                                                                                                                                                                                                               |                    | Approved Date: 4-7-2014 Expiration Date: 4-7-2016 |  |
| Date 4.4.14                                                                                                                                                                                                                                                                                                                  | Phone 575-748-1288 | Conditions of Approval Attached                   |  |

District I  
1625 N. French Dr., Hobbs, NM 88240  
Phone: (575) 392-6161 Fax: (575) 392-0720  
District II  
311 S. First St., Artesia, NM 88210  
Phone: (575) 748-1282 Fax: (575) 748-0720  
District III  
1000 Rio Brazos Road, Aztec, NM 87410  
Phone: (505) 334-6178 Fax: (505) 334-6170  
District IV  
1220 S. St. Francis Dr., Santa Fe, NM 87505  
Phone: (505) 476-3460 Fax: (505) 476-3462

State of New Mexico  
Energy, Minerals & Natural Resources Department  
OIL CONSERVATION DIVISION  
1220 South St. Francis Dr.  
Santa Fe, NM 87505

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

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

|                                         |                                                       |                                                                                          |
|-----------------------------------------|-------------------------------------------------------|------------------------------------------------------------------------------------------|
| <sup>1</sup> API Number<br>30-015-30295 | <sup>2</sup> Pool Code<br>98056 ✓                     | <sup>3</sup> Well Name<br>WC-015 G-04 S2326 28M; BS<br>WC-025 G-06 S183518A; Bone Spring |
| <sup>4</sup> Property Code<br>40470     | <sup>5</sup> Property Name<br>HERMIT STATE            |                                                                                          |
| <sup>7</sup> OGRID No.<br>13837         | <sup>8</sup> Operator Name<br>MACK ENERGY CORPORATION |                                                                                          |
|                                         |                                                       | <sup>6</sup> Well Number<br>1                                                            |
|                                         |                                                       | <sup>9</sup> Elevation<br>3438.0                                                         |

<sup>10</sup> Surface Location

| UL or lot no. | Section | Township | Range | Lot Idn | Feet from the | North/South line | Feet from the | East/West line | County |
|---------------|---------|----------|-------|---------|---------------|------------------|---------------|----------------|--------|
| 1             | 32      | 23 S     | 26 E  |         | 1980          | SOUTH            | 660           | EAST           | EDDY   |

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

| UL or lot no. | Section | 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>N88°51'53"E 2665.77 FT</p> <p>NW CORNER SEC. 32<br/>LAT. = 32.2676025°N<br/>LONG. = 104.3241289°W<br/>NMSP EAST (FT)<br/>N = 461086.97<br/>E = 544182.45</p>                                                                                                                                                                    |  | <p>N88°52'29"E 2666.14 FT</p> <p>N O CORNER SEC. 32<br/>LAT. = 32.2677468°N<br/>LONG. = 104.3155080°W<br/>NMSP EAST (FT)<br/>N = 461139.78<br/>E = 546847.02</p> |  | <p>NE CORNER SEC. 32<br/>LAT. = 32.2678892°N<br/>LONG. = 104.3068859°W<br/>NMSP EAST (FT)<br/>N = 461192.13<br/>E = 549511.97</p> |  |
| <p>NOTE: LATITUDE AND LONGITUDE COORDINATES ARE SHOWN USING THE NORTH AMERICAN DATUM OF 1983 (NAD83) IN DEGREES, MINUTES AND DECIMAL SECONDS FORMAT. LISTED NEW MEXICO STATE PLANE EAST COORDINATES ARE GRID (NAD83). BASIS OF BEARING AND DISTANCES USED ARE NEW MEXICO STATE PLANE EAST COORDINATES MODIFIED TO THE SURFACE.</p> |  |                                                                                                                                                                  |  |                                                                                                                                   |  |
| <p>W O CORNER SEC. 32<br/>LAT. = 32.2603694°N<br/>LONG. = 104.3240272°W<br/>NMSP EAST (FT)<br/>N = 458455.68<br/>E = 544214.10</p>                                                                                                                                                                                                 |  | <p>E O CORNER SEC. 32<br/>LAT. = 32.2606410°N<br/>LONG. = 104.3068177°W<br/>NMSP EAST (FT)<br/>N = 458555.36<br/>E = 549533.71</p>                               |  | <p>SURFACE LOCATION</p>                                                                                                           |  |
| <p>HERMIT STATE #1<br/>ELEV. = 3438.0'<br/>LAT. = 32.2588238°N (NAD83)<br/>LONG. = 104.3089358°W<br/>NMSP EAST (FT)<br/>N = 457894.15<br/>E = 548879.13</p>                                                                                                                                                                        |  |                                                                                                                                                                  |  |                                                                                                                                   |  |
| <p>SW CORNER SEC. 32<br/>LAT. = 32.2533189°N<br/>LONG. = 104.3239262°W<br/>NMSP EAST (FT)<br/>N = 455890.82<br/>E = 544245.55</p>                                                                                                                                                                                                  |  | <p>S O CORNER SEC. 32<br/>LAT. = 32.2533632°N<br/>LONG. = 104.3153580°W<br/>NMSP EAST (FT)<br/>N = 455907.27<br/>E = 546894.28</p>                               |  | <p>SE CORNER SEC. 32<br/>LAT. = 32.2533902°N<br/>LONG. = 104.3067497°W<br/>NMSP EAST (FT)<br/>N = 455917.65<br/>E = 549555.37</p> |  |
| S89°38'39"W 2649.45 FT                                                                                                                                                                                                                                                                                                             |  | S89°46'36"W 2661.79 FT                                                                                                                                           |  | S00°28'14"E 2638.47 FT                                                                                                            |  |

**<sup>17</sup> OPERATOR CERTIFICATION**

I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief, and that this organization either owns a working interest or unleased mineral interest in the land including the proposed bottom hole location or has a right to drill this well at this location pursuant to a contract with an owner of such a mineral or working interest, or to a voluntary pooling agreement or a compulsory pooling order heretofore entered by the division.

Signature: Deana Weaver 4.4.14 Date: \_\_\_\_\_

Printed Name: Deana Weaver

E-mail Address: dweaver@mec.com

**<sup>18</sup> SURVEYOR CERTIFICATION**

I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my belief.

JANUARY 29 2014

Date of Survey: 12797

Signature and Seal of Professional Surveyor: [Signature]

Certificate Number: FILMON F. JARAMILLO, PLS 12797

SURVEY NO. 2585A

# Mack Energy Corporation

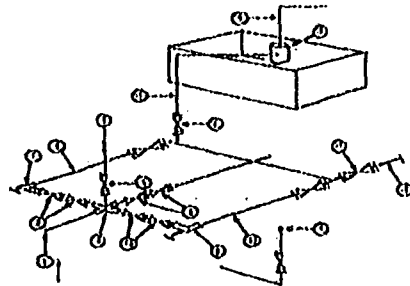
Exhibit #2

## MINIMUM CHOKES MANIFOLD

3,000, 5,000, and 10,000 PSI Working Pressure

3M will be used

3 MWP • 5 MWP • 10 MWP



Mud Pit

Reserve Pit

\* Location of separator optional

Below Substructure

### Minimum requirements

| No. |                                                  | 3,000 MWP |         |        | 5,000 MWP |         |        | 10,000 MWP |         |        |
|-----|--------------------------------------------------|-----------|---------|--------|-----------|---------|--------|------------|---------|--------|
|     |                                                  | I.D.      | Nominal | Rating | I.D.      | Nominal | Rating | I.D.       | Nominal | Rating |
| 1   | Line from drilling Spool                         |           | 3"      | 3,000  |           | 3"      | 5,000  |            | 3"      | 10,000 |
| 2   | Cross 3" x 3" x 3" x 2"                          |           |         | 3,000  |           |         | 5,000  |            |         |        |
| 2   | Cross 3" x 3" x 3" x 2"                          |           |         |        |           |         |        |            |         | 10,000 |
| 3   | Valve Gate Plug                                  | 3 1/8     |         | 3,000  | 3 1/8     |         | 5,000  | 3 1/8      |         | 10,000 |
| 4   | Valve Gate Plug                                  | 1 13/16   |         | 3,000  | 1 13/16   |         | 5,000  | 1 13/16    |         | 10,000 |
| 4a  | Valves (1)                                       | 2 1/16    |         | 3,000  | 2 1/16    |         | 5,000  | 2 1/16     |         | 10,000 |
| 5   | Pressure Gauge                                   |           |         | 3,000  |           |         | 5,000  |            |         | 10,000 |
| 6   | Valve Gate Plug                                  | 3 1/8     |         | 3,000  | 3 1/8     |         | 5,000  | 3 1/8      |         | 10,000 |
| 7   | Adjustable Choke (3)                             | 2"        |         | 3,000  | 2"        |         | 5,000  | 2"         |         | 10,000 |
| 8   | Adjustable Choke                                 | 1"        |         | 3,000  | 1"        |         | 5,000  | 2"         |         | 10,000 |
| 9   | Line                                             |           | 3"      | 3,000  |           | 3"      | 5,000  |            | 3"      | 10,000 |
| 10  | Line                                             |           | 2"      | 3,000  |           | 2"      | 5,000  |            | 2"      | 10,000 |
| 11  | Valve Gate Plug                                  | 3 1/8     |         | 3,000  | 3 1/8     |         | 5,000  | 3 1/8      |         | 10,000 |
| 12  | Line                                             |           | 3"      | 1,000  |           | 3"      | 1,000  |            | 3"      | 2,000  |
| 13  | Line                                             |           | 3"      | 1,000  |           | 3"      | 1,000  |            | 3"      | 2,000  |
| 14  | Remote reading compound Standpipe pressure gauge |           |         | 3,000  |           |         | 5,000  |            |         | 10,000 |
| 15  | One Separator                                    |           | 2' x 5' |        |           | 2' x 5' |        |            | 2' x 5' |        |
| 16  | Line                                             |           | 4"      | 1,000  |           | 4"      | 1,000  |            | 4"      | 2,000  |
| 17  | Valve Gate Plug                                  | 3 1/8     |         | 3,000  | 3 1/8     |         | 5,000  | 3 1/8      |         | 10,000 |

(1) Only one required in Class 3M

(2) Gate valves only shall be used for Class 10 M

(3) Remote operated hydraulic choke required on 5,000 psi and 10,000 psi for drilling.

### EQUIPMENT SPECIFICATIONS AND INSTALLATION INSTRUCTION

- All connections in choke manifold shall be welded, studded, flanged or Cameron clamp of comparable rating.
- All flanges shall be API 6B or 6BX and ring gaskets shall be API RX or BX. Use only BX for 10 MWP.
- All lines shall be securely anchored.
- Chokes shall be equipped with tungsten carbide seats and needles, and replacements shall be available.
- alternate with automatic chokes, a choke manifold pressure gauge shall be located on the rig floor in conjunction with the standpipe pressure gauge.
- Line from drilling spool to choke manifold should be as straight as possible. Lines downstream from chokes shall make turns by large bends or 90 degree bends using bull plugged tees

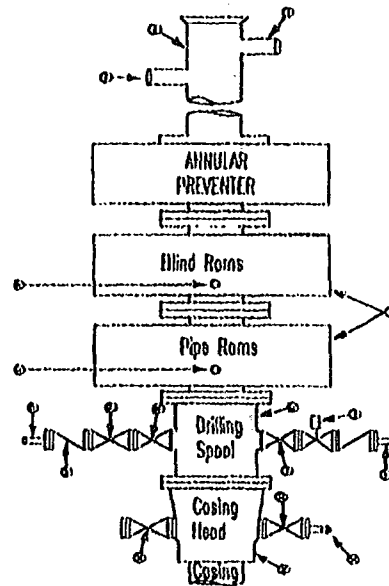
**Mack Energy Corporation**  
**Minimum Blowout Preventer Requirements**  
**3000 psi Working Pressure**  
**13 3/8 inch- 3 MWP**  
**11 inch - 3 MWP**  
**EXHIBIT #1**

**Stack Requirements**

| NO. | Items                                                                            | Min. I.D. | Min. Nominal |
|-----|----------------------------------------------------------------------------------|-----------|--------------|
| 1   | Flowline                                                                         |           | 2"           |
| 2   | Fill up line                                                                     |           | 2"           |
| 3   | Drilling nipple                                                                  |           |              |
| 4   | Annular preventer                                                                |           |              |
| 5   | Two single or one dual hydraulically operated rams                               |           |              |
| 6a  | Drilling spool with 2" min. kill line and 3" min. choke line outlets             |           | 2" Choke     |
| 6b  | 2" min. kill line and 3" min. choke line outlets in ram. (Alternate to 6a above) |           |              |
| 7   | Valve Gate Plug                                                                  | 3 1/8     |              |
| 8   | Gate valve-power operated                                                        | 3 1/8     |              |
| 9   | Line to choke manifold                                                           |           | 3"           |
| 10  | Valve Gate Plug                                                                  | 2 1/16    |              |
| 11  | Choke valve                                                                      | 2 1/16    |              |
| 12  | Casing head                                                                      |           |              |
| 13  | Valve Gate Plug                                                                  | 1 13/16   |              |
| 14  | Pressure gauge with needle valve                                                 |           |              |
| 15  | Kill line to rig mud pump manifold                                               |           | 2"           |

**OPTIONAL**

|    |               |         |  |
|----|---------------|---------|--|
| 16 | Plugged Valve | 1 13/16 |  |
|----|---------------|---------|--|



**CONTRACTOR'S OPTION TO FURNISH:**

1. All equipment and connections above blindhead or casinghead. Working pressure of preventers to be 2000 psi minimum.
2. Automatic accumulator (80 gallons, minimum) capable of closing BOP in 30 seconds or less and, holding them closed against full rated working pressure.
3. BOP controls, to be located near driller's position.
4. Kelly equipped with Kelly cock.
5. Inside blowout preventer or its equivalent on derrick floor at all times with proper threads to fit pipe being used.
6. Kelly saver-sub equipped with rubber casing protector at all times.
7. Plug type blowout preventer tester.
8. Extra set pipe rams to fit drill pipe in use on location at all times.
9. Type RX ring gaskets in place of Type R.

**MEC TO FURNISH:**

1. Blindhead or casing head and side valves.
2. Wear bushing, if required.

10.

ME

**GENERAL NOTES:**

1. Deviations from this drawing may be made only with the express permission of MEC's Drilling Manager.
2. All connections, valves, fittings, piping, etc., subject to well or pump pressure must be flanged (suitable clamp connections acceptable) and have minimum working pressure equal to rated working pressure of preventers up through choke valves must be full opening and suitable for high pressure mud service.
3. Controls to be of standard design and each marked, showing opening and closing position.
4. Chokes will be positioned so as not to hamper or delay changing of choke beans.

- Replaceable parts for adjustable choke, or bean sizes, retainers, and choke wrenches to be conveniently located for immediate use.
5. All valves to be equipped with hand-wheels or handles ready for immediate use.
  6. Choke lines must be suitably anchored.
  7. Handwheels and extensions to be connected and ready for use.
  8. Valves adjacent to drilling spool to be kept open. Use outside valves except for emergency.
  9. All seamless steel control piping (2000 psi working pressure) to have flexible joints to avoid stress. Hoses will be permitted.
  10. Casinghead connections shall not be used except in case of emergency.
  11. Does not use kill line for routine fill up operations.