

District I  
1625 N. French Dr., Hobbs, NM 88240  
District II  
1301 W Grand Avenue, Artesia, NM 88210  
District III  
1000 Rio Brazos Road, Aztec, NM 87410  
District IV  
1220 S St Francis Dr, Santa Fe, NM 87505

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

Form C-101  
June 16, 2008

Submit to appropriate District Office

☐ AMENDED REPORT

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HOBBSOCD

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

|  |  |   |
|--|--|---|
| <sup>1</sup> Operator Name and Address<br>Chesapeake Operating, Inc<br>P O Box 18496<br>Oklahoma City, OK 73154-0496 |  | <sup>2</sup> OGRID Number<br>147179 ✓     |
|  |  | <sup>3</sup> API Number<br>30 - 025-25493 |
| <sup>4</sup> Property Code<br>33710  | <sup>5</sup> Property Name<br>State BG | <sup>6</sup> Well No<br>2 ✓               |
| <sup>9</sup> Proposed Pool 1<br>SWD, Queen (Quail Queen Unit)  |  | <sup>10</sup> Proposed Pool 2             |

|                               |               |                      |                  |         |                        |                       |                        |                     |                 |
|-------------------------------|---------------|----------------------|------------------|---------|------------------------|-----------------------|------------------------|---------------------|-----------------|
| <sup>7</sup> Surface Location |               |                      |                  |         |                        |                       |                        |                     |                 |
| UL or lot no<br>G             | Section<br>14 | Township<br>19 South | Range<br>34 East | Lot Idn | Feet from the<br>1980' | North/South line<br>N | Feet from the<br>1680' | East/West line<br>E | County<br>Lea ✓ |

|  |         |          |       |         |               |                  |               |                |        |
|--|---------|----------|-------|---------|---------------|------------------|---------------|----------------|--------|
| <sup>8</sup> Proposed 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 |

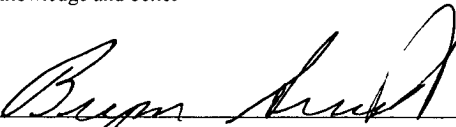

|                                   |                                       |                                  |                                      |   |
|-----------------------------------|---------------------------------------|----------------------------------|--------------------------------------|---|
| Additional Well Information       |                                       |                                  |                                      |   |
| <sup>11</sup> Work Type Code<br>P | <sup>12</sup> Well Type Code<br>I     | <sup>13</sup> Cable/Rotary       | <sup>14</sup> Lease Type Code<br>S ✓ | <sup>15</sup> Ground Level Elevation<br>3957' |
| <sup>16</sup> Multiple<br>N       | <sup>17</sup> Proposed Depth<br>6200' | <sup>18</sup> Formation<br>Queen | <sup>19</sup> Contractor             | <sup>20</sup> Spud Date<br>ASAP               |

|  |             |                    |                   |                 |               |
|--|-------------|--------------------|-------------------|-----------------|---------------|
| <sup>21</sup> Proposed Casing and Cement Program |             |                    | Current Well Bore |                 |               |
| Hole Size  | Casing Size | Casing weight/foot | Setting Depth     | Sacks of Cement | Estimated TOC |
| 12 1/4"  | 9 5/8"      | 36#                | 415'              | 190 sxs         | 0'            |
| 7 7/8"   | 4 1/2"      | 10 5#              | 5570'             | 1205 sxs        | 0'            |
|  |             |                    |                   |                 |               |
|  |             |                    |                   |                 |               |
|  |             |                    |                   |                 |               |

<sup>22</sup> Describe the proposed program If this application is to DEEPEN or PLUG BACK, give the data on the present productive zone and proposed new productive zone. Describe the blowout prevention program, if any. Use additional sheets if necessary.  
Please find the procedure to convert this well to an injection well for the Quail Queen Unit  
Included is a Convert to Injection Procedure, Current Well Bore Diagram, NMOCD's C-102 and C-144(CLEZ) Pit Permit

R Order 12952

Permit Expires 2 Years From Approval  
Date Unless Drilling Underway  
Plugback

|   |                      |   |                 |
|---|----------------------|---|-----------------|
| <sup>23</sup> I hereby certify that the information given above is true and complete to the best of my knowledge and belief |                      | OIL CONSERVATION DIVISION   |                 |
| Signature<br>                            |                      | Approved by<br> |                 |
| Printed name Bryan Arrant   |                      | Title<br>PETROLEUM ENGINEER   |                 |
| Title Senior Regulatory Compliance Specialist   |                      | Approval Date   | Expiration Date |
| E-mail Address bryan.arrant@chk.com   |                      | JUN 23 2009   |                 |
| Date, 6/2/2009  | Phone (405) 935-3782 | Conditions of Approval Attached <input type="checkbox"/>  |                 |

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## State of New Mexico

Energy, Minerals &amp; Natural Resources Department

CONSERVATION DIVISION

1220 South St. Francis Dr.

Santa Fe, NM 87505

Form C-102

Revised October 12, 2005

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>30-025-25493 | <sup>2</sup> Pool Code<br>96117                          | <sup>3</sup> Pool Name<br>SWD; Queen (Quail Queen Unit) |
| <sup>4</sup> Property Code<br>.         | <sup>5</sup> Property Name<br>State BG                   | <sup>6</sup> Well Number<br>2                           |
| <sup>7</sup> OGRID No.<br>147179        | <sup>8</sup> Operator Name<br>Chesapeake Operating, Inc. | <sup>9</sup> Elevation<br>3957'                         |

<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 |
|---------------|---------|----------|-------|---------|---------------|------------------|---------------|----------------|--------|
| G             | 14      | 19S      | 34E   |         | 1980'         | North            | 1680'         | East           | Lea    |

<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 | <sup>13</sup> Joint or Infill | <sup>14</sup> Consolidation Code | <sup>15</sup> Order No.<br>R-12952 |
|                               |                               |                                  |                                    |

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.

|                   |   |  |
|-------------------|---|--|
| <sup>16</sup><br> | <sup>17</sup> <b>OPERATOR CERTIFICATION</b><br>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<br><br>Signature Date 6/02/2009<br>Bryan Arrant<br>Printed Name |  |
|                   | <sup>18</sup> <b>SURVEYOR CERTIFICATION</b><br>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<br>Date of Survey<br>Signature and Seal of Professional Surveyor<br>Please Refer to Original Plat<br>Certificate Number   |  |
|                   |   |  |
|                   |   |  |



# Current Wellbore Schematic

STATE BG 2

Field: QUAIL QUEEN  
County: LEA  
State: NEW MEXICO  
Elevation: GL 3,957.40 KB 3,967.00  
KB Height: 9.60

Location: SEC 14, 19S-34E, 1980 FNL & 1680 FEL

Spud Date: 3/28/1977  
Initial Compl. Date:  
API #: 3002525493  
CHK Property #: 891056  
1st Prod Date: 5/1/1977  
PBTD: Original Hole - 5531.0  
TD: 5,570.0

Well Config: - Original Hole, 6/2/2009 9 07 32 AM

Schematic - Actual

## Well History

| Date      | Event  |
|-----------|--|
| 4/30/1977 | PERF @ 5178'-86' w/ 2 jsf, 16 holes. ACDZ w/ 1000 gal 15% NeFe |
| 5/2/1977  | FRAC w/ 20000 gal gld wtr, 15000# 20/40 sd & 21000# 10/20 sd   |
| 5/8/1977  | Tubing - Production set at 5,050 0ftKB on 5/8/1977             |

9 5/8" 36# Surf Csg  
Cmt w/ 190 sx. Circ

DV Tool

Polished Rod, 1 1/4, 24

Rod Sub, 7/8, 34

Sucker Rod, 7/8, 1,534

Tubing, 2 3/8, 5,047

Sucker Rod, 3/4, 5,059

Packer, 2 3/8, 5,050

Rod Insert Pump, 1 1/4, 5,077

Gas Anchor, 1 1/4, 5,085

5,178, 5,186

PBTD, 5,531

4 1/2" 10/5# Prod Csg  
Cmt w/ 1205 sx  
TD, 5,570, 4/27/1977



**State BG 2  
Convert to Injection  
Lea County, New Mexico**

**Date:** November 14, 2007

**Location:** 1,980' FNL & 1,680' FEL Sec. 14-T19S-R34E

**Production Casing:** 4-1/2", 10.5#, 0-5,570', ID-4.052", Drift-3.927", Burst-4,790#

**PBTD/TD:** 5,531' / 5,570'

**Existing Perfs:** Queen 5,178' – 5,186'

**Procedure**

1. MIRU workover rig. TOH w/7/8" and 3/4" rods and pump and BHA. ND WH. NU BOP. TOH w/2-3/8" production tubing.
2. MIRU wireline unit. RIH and perforate Queen as follows:

|       |                 |     |       |           |
|-------|-----------------|-----|-------|-----------|
| Queen | 5,214' – 5,226' | 12' | 2 SPF | 24 holes  |
| Queen | 5,204' – 5,206' | 2'  | 2 SPF | 4 holes   |
| Queen | 5,178' – 5,186' | 8'  | 2 SPF | 16 holes  |
| Queen | 5,159' – 5,169' | 10' | 2 SPF | 20 holes  |
| Queen | 5,141' – 5,154' | 13' | 2 SPF | 26 holes  |
| Queen | 5,124' – 5,136' | 12' | 2 SPF | 24 holes  |
|       |                 | 57' |       | 114 holes |

Correlate to CN/FD log from 4/26/77. RDMO Wireline unit.

3. PU 4-1/2" x 2-3/8" treating packer and 2-3/8" tubing and TIH to 5,226' and spot 15% HCl acid across Queen interval (5,124' – 5,226'). PUH and set packer at ~5,050'.
4. MIRU acid service and acidize Queen (5,124' – 5,226') with 5,000 gals of 15% HCl acid using rock salt as diversion. Shut down and record ISIP, 5 min, 10 min and 15 min pressures. RDMO acid service.
5. Flow back well to recover spent acid. Once well is dead, unset treating packer and TOH.
6. TIH w/4-1/2" x 2-3/8" injection packer and 2-3/8" TK-99 plastic coated tubing to ~5,050'. Circulate packer fluid and set packer. Test backside to 500 psi for 15 minutes.
7. ND BOP. NU WH. RDMO workover rig.
8. Once injection permit is received, begin injection.