

**District I**

1625 N. French Dr., Hobbs, NM 88240

**District II**

811 South First, Artesia, NM 88210

**District III**

1000 Rio Brazos Road, Aztec, NM 87410

**District IV**

2040 South Pacheco, Santa Fe, NM 87505

**State of New Mexico**  
**Energy Minerals and Natural Resources**

**Oil Conservation Division**  
 2040 South Pacheco  
 Santa Fe, NM 87505

Form C-101

Revised March 17, 1999

Submit to appropriate District Office

State Lease - 6 Copies

Fee Lease - 5 Copies

AMENDED REPORT

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

|   |  |  |
|---|--|--|
| <sup>1</sup> Operator Name and Address<br><b>Amoco Production Company</b><br><b>P. O. Box 3092</b><br><b>Houston, Texas 77253</b> |  | <sup>2</sup> OGRID Number<br><b>000778</b>     |
| <sup>3</sup> Property Code<br><b>000300</b>   | <sup>5</sup> Property Name<br><b>Barnes LS</b> | <sup>4</sup> API Number<br><b>30-045-30307</b> |
|   |  | <sup>6</sup> Well No.<br><b>4B</b>             |

<sup>7</sup> Surface Location

|                           |                      |                        |                     |         |                               |                                  |                              |                               |                           |
|---------------------------|----------------------|------------------------|---------------------|---------|-------------------------------|----------------------------------|------------------------------|-------------------------------|---------------------------|
| UL or lot no.<br><b>E</b> | Section<br><b>26</b> | Township<br><b>32N</b> | Range<br><b>11W</b> | Lot Idn | Feet from the<br><b>1900'</b> | North/South line<br><b>North</b> | Feet from the<br><b>810'</b> | East/West line<br><b>West</b> | County<br><b>San Juan</b> |
|---------------------------|----------------------|------------------------|---------------------|---------|-------------------------------|----------------------------------|------------------------------|-------------------------------|---------------------------|

<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 |
|---------------|---------|----------|-------|---------|---------------|------------------|---------------|----------------|--------|

<sup>9</sup> Proposed Pool 1**Blanco Mesaverde**<sup>10</sup> Proposed Pool 2

|  |  |   |   |  |
|--|--|---|---|--|
| <sup>11</sup> Work Type Code<br><b>N - New Drill</b> | <sup>12</sup> Well Type Code<br><b>Gas</b>       | <sup>13</sup> Cable/Rotary<br><b>Rotary/Top Drive</b> | <sup>14</sup> Lease Type Code<br><b>Fee</b> | <sup>15</sup> Ground Level Elevation<br><b>6545'</b> |
| <sup>16</sup> Multiple<br><b>No</b>                  | <sup>17</sup> Proposed Depth<br><b>TVD 5984'</b> | <sup>18</sup> Formation<br><b>Mesaverde</b>           | <sup>19</sup> Contractor<br><b>Aztec</b>    | <sup>20</sup> Spud Date<br><b>08/26/00</b>           |

<sup>21</sup> Proposed Casing and Cement Program

| Hole Size   | Casing Size | Casing weight/foot | Setting Depth | Sacks of Cement | Estimated TOC |
|-------------|-------------|--------------------|---------------|-----------------|---------------|
| (1) 12 1/4" | 9 5/8"      | 32.3#              | 135'          | 150 SXS CLS B   | Surface       |
| (2) 8 3/4"  | 7"          | 20#                | 2775'         | 325 SXS CLS B   | Surface       |
| (3) 6 1/4"  | 4 1/2"      | 10.5#              | 5984'         | 360 SXS CLS A   | 2675'         |
|             |             |                    |               |                 |               |
|             |             |                    |               |                 |               |

<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.

**OBJECTIVE: Drill 100' into the Mancos Shale, set 4 1/2" Liner across Mesaverde, Stimulate Cliff House, Menefee, and Point Lookout intervals. Run Cased Hole (GR-CCL-TDT) logs: TDT from PBDT to TOL. GR-CCL from PDTB to Surface.**

**(1) Circulate Cement to Surface (2) Set Casing 50' above Fruitland. (3) Liner Lap should be minimum of 100'.**

**Mud Program: 0' - 135' Type - Spud Weight 8.6 - 9.2**

**135' - 2775' Type - Water/LSND Weight 8.6 - 9.2**

**2775' - TD Type - Gas/Air/Mist Volume sufficient to maintain a stable & clean wellbore**

**The hole will require sweeps to keep unloaded while fresh water drilling. Let hole conditions dictate frequency Top set Fruitland to minimize lost circulation, air volume to maintain hole stability**

**Completion: Rigless, 2 -3 Stage Limited Entry Hydraulic Frac.**

<sup>23</sup> I hereby certify that the information given above is true and complete to the best of my knowledge and belief.

Signature: *Melissa Velasco-Price*

Printed name: **Melissa Velasco-Price**

Title: **Permitting Assistant**

Date: **07/24/2000**

Phone: **281-366-2548**

### OIL CONSERVATION DIVISION

Approved by: *[Signature]*

Title: **DEPUTY OIL & GAS INSPECTOR, DIST. #3**

Approval Date: **7-27-00**

Expiration Date: **JUL 27 2001**

Conditions of Approval:

Attached

District I  
PO Box 1980, Hobbs NM 88241-1980  
District II  
PO Drawer KK, Artesia, NM 87211-0719  
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>30-045-30307 | <sup>2</sup> Pool Code<br>72319-                       | <sup>3</sup> Pool Name<br>Blanco Mesa Verde |
| <sup>4</sup> Property Code<br>000300    | <sup>5</sup> Property Name<br>BARNES LS                | <sup>6</sup> Well Number<br># 4B            |
| <sup>7</sup> OGRID No.<br>000-778       | <sup>8</sup> Operator Name<br>AMOCO PRODUCTION COMPANY | <sup>9</sup> Elevation<br>6545              |

<sup>10</sup> Surface Location

|                    |               |                  |               |         |                       |                           |                      |                        |                    |
|--------------------|---------------|------------------|---------------|---------|-----------------------|---------------------------|----------------------|------------------------|--------------------|
| UL or Lot No.<br>E | Section<br>26 | Township<br>32 N | Range<br>11 W | Lot Idn | Feet from the<br>1900 | North/South line<br>NORTH | Feet from the<br>810 | East/West line<br>WEST | County<br>SAN JUAN |
|--------------------|---------------|------------------|---------------|---------|-----------------------|---------------------------|----------------------|------------------------|--------------------|

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

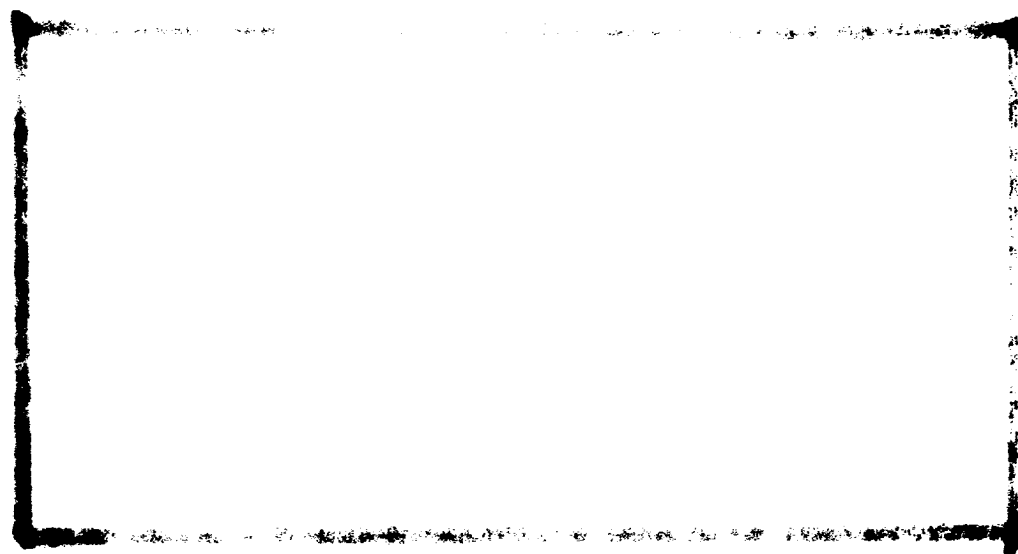
|                            |         |          |       |         |               |                  |               |                |        |
|----------------------------|---------|----------|-------|---------|---------------|------------------|---------------|----------------|--------|
| <sup>7</sup> 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>320.0 | <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

|    |         |       |      |   |   |  |
|----|---------|-------|------|---|---|--|
| 16 | 5041(R) | 1900' | 810' | JUL 2000<br>RECEIVED<br>OIL CON. DIV<br>DIST. 3 | <sup>17</sup> OPERATOR CERTIFICATION<br>I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief.<br>Signature<br>Melissa Velasco Price<br>Printed Name<br>Melissa Velasco Price<br>Title<br>PERMITTING ASST<br>Date<br>7-24-00   |  |
|    |         |       |      |   | <sup>18</sup> SURVEYOR CERTIFICATION<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>June 28, 2000<br>Signature and Seal of Professional Surveyor<br>7016<br>Certificate Number |  |

BLM Record



**Amoco Production Company  
BOP Pressure Testing Requirements**

**Well Name:** Barnes LS 4B  
**County:** San Juan

**State:** New Mexico

| Formation       | TVD   | Anticipated<br>Bottom Hole Pressure | Maximum Anticipated<br>Surface Pressure ** |
|-----------------|-------|-------------------------------------|--|
| Ojo Alamo       | 2006' |                                     |  |
| Kirtland        | 2243' |                                     |  |
| Fruitland Coal  | 2825' |                                     |  |
| Pictured Cliffs | 3310' |                                     |  |
| Lewis Shale     | 3447' |                                     |  |
| Cliff House     | 5114' | 500                                 | 0  |
| Menefee Shale   | 5208' |                                     |  |
| Point Lookout   | 5612' | 600                                 | 0  |
| Mancos          | 5884' |                                     |  |

**\*\* Note:** Determined using the following formula:  $ABHP - (.22 * TVD) = ASP$

|   |
|---|
| <b>Requested BOP Pressure Test Exception: 750 PSI</b> |
|---|

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**SAN JUAN BASIN  
Mesaverde Formation  
Pressure Control Equipment**

**Background**

The objective Mesaverde formation maximum surface pressure is anticipated to be less than 1000 PSI, based on shut-in surface pressures from adjacent wells. Pressure control equipment working pressure minimum requirements are therefore 2000 PSI. Equipment to be used will conform to API RP-53 (Figure 2.C.2) for a 2000 PSI system per Federal Onshore Order No. 2. Due to available conventional equipment within the area, 3000 PSI rated pressure control equipment will typically be utilized in a double ram type arrangement. Regional drilling rights to be utilized have substructure height limitations which exclude the use of annular preventers; therefore a rotating head will be installed above these rams. This pressure control equipment will be utilized for conventional drilling below conductor to total depth. No abnormal temperature, pressure, or Hydrogen Sulfide gas is anticipated.

**Equipment Specification**

**Interval**

**BOP Equipment**

|  |  |
|--|--|
| <b>Below conductor casing to total depth</b> | <b>11" nominal or 7 1/16", 3000 PSI double ram preventer with rotating head.</b> |
|--|--|

All ram type preventers and related control equipment will be hydraulically tested to 250 PSI (low pressure) and 750 PSI (high pressure), upon installation, following any repairs or equipment replacements, or at 30 day intervals. Accessories to BOP equipment will include Kelly cock, upper Kelly cock with a handle available, floor safety valves and choke manifold which will also be tested to equivalent pressure at the appropriate intervals.

APD MAP # 1