

District I  
PO Box 1980, Hobbs, NM 88241-1980  
District II  
811 S. 1st Street, Artesia, NM 88210-2834  
District III  
1000 Rio Brazos Rd., Aztec, NM 87410  
District IV  
2040 South Pacheco, Santa Fe, NM 87505

State of New Mexico  
Energy, Minerals & Natural Resources Department

OIL CONSERVATION DIVISION  
2040 South Pacheco  
Santa Fe, NM 87505

Form C-101

Revised October 18, 1994

Instructions on back

Submit to Appropriate District Office

State Lease - 6 Copies

Fee Lease - 5 Copies

RECEIVED  
OIL CONSERVATION DIVISION  
ARTESIA

☐ AMENDED REPORT

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

|  |  |   |
|--|--|---|
| <sup>1</sup> Operator name and Address<br>ARCO PERMIAN<br>P.O. BOX 1610<br>MIDLAND, TX 79702 |  | <sup>2</sup> OGRID Number<br>000990     |
| <sup>4</sup> Property Code<br>22954  |  | <sup>3</sup> API Number<br>30-015-22821 |
| <sup>5</sup> Property Name<br>WASHINGTON "33" STATE  |  | <sup>6</sup> Well No.<br>17             |

| <sup>7</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 |
| J                             | 33      | 17S      | 28E   |          | 1900          | SOUTH            | 1450          | EAST           | EDDY   |

| <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<br>ARTESIA (Q-G-SA)                     |         |          |       |          | <sup>10</sup> Proposed Pool 2<br>323c |                  |               |                |        |

|  |                                      |                                       |                                    |   |
|--|--------------------------------------|---------------------------------------|------------------------------------|---|
| <sup>11</sup> Work Type Code<br>R P.B. | <sup>12</sup> Well Type Code<br>0    | <sup>13</sup> Cable/Rotary<br>R       | <sup>14</sup> Lease Type Code<br>S | <sup>15</sup> Ground Level Elevation<br>3663' |
| <sup>16</sup> Multiple<br>NO           | <sup>17</sup> Proposed Depth<br>3200 | <sup>18</sup> Formation<br>SAN ANDRES | <sup>19</sup> Contractor           | <sup>20</sup> Spud Date<br>7/98               |

| <sup>21</sup> Proposed Casing and Cement Program |             |                    |               |                 |               |
|--|-------------|--------------------|---------------|-----------------|---------------|
| Hole Size  | Casing Size | Casing weight/foot | Setting Depth | Sacks of Cement | Estimated TOC |
| 11   | 8-5/8       | 24#                | 751'          | 400             | SURF.         |
| 7-7/8  | 5-1/2       | 15.5               | 6370          | 1900            | SURF.         |
|  |             |                    |               |                 |               |
|  |             |                    |               |                 |               |
|  |             |                    |               |                 |               |

<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

ORIGINALLY DRILLED AND COMPLETED AS THE EMPIRE ABO UNIT G-315 IN 1979.  
TD @ 6370'. TESTED ABO 5794'-6280'. WELL IS CURRENTLY PUMPING FROM PERFS  
5794'-5928'. PROPOSED TO ABANDON THE ABO AND TEST THE QUEEN-GRAYBURG-SAN ANDRES.  
SET CIBP @ 5750' W/35" CEMENT ON TOP. RUN CNL GAMMA FAY-CCL AND PERF THE  
Q-G-SA AS INDICATED BY LOG. TEST AND FRAC AS NEEDED.

NSL- 4060

6-19-98

|  |                                   |                         |
|--|-----------------------------------|-------------------------|
| <sup>23</sup> I hereby certify that the information given above is true and complete to the best of my knowledge and belief.<br>Signature: <i>Elizabeth A. Casbeer</i> | OIL CONSERVATION DIVISION         |                         |
|  | Approved by: <i>Jim W. Brown</i>  | B6X                     |
| Printed name: ELIZABETH A. CASBEER   | Title: <i>District Supervisor</i> |                         |
| Title: REG./COMP. ANALYST  | Approval Date: 7-6-98             | Expiration Date: 7-6-99 |

DISTRICT I  
P.O. Box 1980, Hobbs, NM 88241-1980

State of New Mexico  
Energy, Minerals and Natural Resources Depa.

Form C-102  
Revised February 10, 1994  
Submit to Appropriate District Office  
State Lease - 4 Copies  
Fee Lease - 3 Copies

DISTRICT II  
P.O. Drawer DD, Artesia, NM 88211-0719

DISTRICT III  
1000 Rio Brazos Rd., Aztec, NM 87410

DISTRICT IV  
P.O. BOX 2088, SANTA FE, N.M. 87504-2088

OIL CONSERVATION DIVISION  
P.O. Box 2088  
Santa Fe, New Mexico 87504-2088

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

|                                   |   |                                      |
|-----------------------------------|---|--------------------------------------|
| API Number<br><b>30-015-22921</b> | Pool Code                                   | Pool Name<br><b>ARTESIA (Q-C-SA)</b> |
| Property Code<br><b>22954</b>     | Property Name<br><b>WASHINGTON 33 STATE</b> | Well Number<br><b>17</b>             |
| OGRID No.<br><b>000990</b>        | Operator Name<br><b>ARCO PERMIAN</b>        | Elevation<br><b>3663</b>             |

Surface Location

|                           |                      |                         |                      |         |                              |                                  |                              |                               |                       |
|---------------------------|----------------------|-------------------------|----------------------|---------|------------------------------|----------------------------------|------------------------------|-------------------------------|-----------------------|
| UL or lot No.<br><b>J</b> | Section<br><b>33</b> | Township<br><b>17 S</b> | Range<br><b>28 E</b> | Lot Idn | Feet from the<br><b>1900</b> | North/South line<br><b>SOUTH</b> | Feet from the<br><b>1450</b> | East/West line<br><b>EAST</b> | County<br><b>EDDY</b> |
|---------------------------|----------------------|-------------------------|----------------------|---------|------------------------------|----------------------------------|------------------------------|-------------------------------|-----------------------|

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 |
| Dedicated Acres<br><b>40</b> | Joint or Infill | Consolidation Code | 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>OPERATOR CERTIFICATION</p> <p>I hereby certify the the information contained herein is true and complete to the best of my knowledge and belief.</p> <p><i>Elizabeth A. Casbeer</i><br/>Signature<br/><b>ELIZABETH A. CASBEER</b><br/>Printed Name<br/><b>RES. /COMP.</b><br/>Title<br/><b>5/20/98</b><br/>Date</p> |  |
| <p>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><b>MARCH 3, 1998</b></p> <p>Date Surveyed<br/>Signature <i>Ronald J. Edson</i><br/>Professional Surveyor<br/><b>NEW MEXICO</b><br/><b>3239</b><br/><b>5-4-98</b></p> <p>Cert. No. <b>RONALD J. EDSON</b> <b>3239</b><br/><b>12641</b><br/><b>12185</b></p> |  |  |  |  |  |





**ARCO Permian**  
600 North Marienfeld  
Midland TX 79701-4373  
Post Office Box 1610  
Midland TX 79702-1610  
Telephone 915 688 5570

**Elizabeth A. Casbeer**  
Regulatory/Compliance Analyst

RECEIVED  
OCD - ARTESIA

May 20, 1998

**Oil Conservation Division**  
2040 South Pacheco  
Santa Fe, New Mexico 87505

Gentlemen:

Under the provisions of NMOCD Rule 104.F(d), ARCO Permian requests administrative approval for unorthodox location for its Washington "33" State #17, a recompletion of previously drilled well in the Empire Abo Unit, to the Artesia (Queen-Grayburg-San Andres) Field. The location of this well, formerly known as the EAU #G-315 is 1900'FSL and 1450'FEL of Section 33, T17S, R28E, Eddy County, New Mexico. This well is an unorthodox location.

As required, we are submitting a plat showing the subject 40-acre spacing unit with the unorthodox location and other supporting attachments. Since this unorthodox location is completely surrounded by other ARCO tracts in the same lease, there will be no impact on any other party.

Should you have any questions, please do not hesitate to call me at 915-688-5570 or Dave Pearcy at 915-688-5355. Thank you for your assistance in this matter.

Sincerely,

**Elizabeth A. Casbeer**  
Regulatory/Compliance Analyst

EAC:lc

cc: NMOCD, Artesia, New Mexico

Enclosures

# NEW MEXICO OIL CONSERVATION DIVISION

- Engineering Bureau -

## ADMINISTRATIVE APPLICATION COVERSHEET

THIS COVERSHEET IS MANDATORY FOR ALL ADMINISTRATIVE APPLICATIONS FOR EXCEPTIONS TO DIVISION RULES AND REGULATIONS

### Application Acronyms:

[NSP-Non-Standard Proration Unit] [NSL-Non-Standard Location]  
 [DD-Directional Drilling] [SD-Simultaneous Dedication]  
 [DHC-Downhole Commingling] [CTB-Lease Commingling] [PLC-Pool/Lease Commingling]  
 [PC-Pool Commingling] [OLS - Off-Lease Storage] [OLM-Off-Lease Measurement]  
 [WFX-Waterflood Expansion] [PMX-Pressure Maintenance Expansion]  
 [SWD-Salt Water Disposal] [IPI-Injection Pressure Increase]  
 [EOR-Qualified Enhanced Oil Recovery Certification] [PPR-Positive Production Response]

### [1] TYPE OF APPLICATION - Check Those Which Apply for [A]

[A] Location - Spacing Unit - Directional Drilling

☒ NSL ☐ NSP ☐ DD ☐ SD

Check One Only for [B] or [C]

[B] Commingling - Storage - Measurement

☐ DHC ☐ CTB ☐ PLC ☐ PC ☐ OLS ☐ OLM

[C] Injection - Disposal - Pressure Increase - Enhanced Oil Recovery

☐ WFX ☐ PMX ☐ SWD ☐ IPI ☐ EOR ☐ PPR

### [2] NOTIFICATION REQUIRED TO: - Check Those Which Apply, or ☒ Does Not Apply

[A] ☐ Working, Royalty or Overriding Royalty Interest Owners

[B] ☐ Offset Operators, Leaseholders or Surface Owner

[C] ☐ Application is One Which Requires Published Legal Notice

[D] ☐ Notification and/or Concurrent Approval by BLM or SLO  
 U.S. Bureau of Land Management - Commissioner of Public Lands, State Land Office

[E] ☐ For all of the above, Proof of Notification or Publication is Attached, and/or,

[F] ☐ Waivers are Attached

### [3] INFORMATION / DATA SUBMITTED IS COMPLETE - Statement of Understanding

I hereby certify that I, or personnel under my supervision, have read and complied with all applicable Rules and Regulations of the Oil Conservation Division. Further, I assert that the attached application for administrative approval is accurate and complete to the best of my knowledge and where applicable, verify that all interest (WI, RI, ORRI) is common. I further verify that all applicable API Numbers are included. I understand that any omission of data, information or notification is cause to have the application package returned with no action taken.

Note: Statement must be completed by an individual with supervisory capacity.

ELIZABETH A. CASBEER  
 Print or Type Name

*Elizabeth A. Casbeer*  
 Signature

REG / Comp.  
 Title

5/20/98  
 Date

**Geologic and Engineering Discussion for Washington "33" State #17  
Unit J of Section 33, T17S, R28E, Eddy County, New Mexico**

ARCO Permian requests administrative approval for unorthodox location for Washington 33 State #17 in the Artesia (Q-G-SA) Field, as a recompletion of a well drilled to a deeper horizon. This wellbore is required for geologic reasons, and will be simultaneously dedicated along with #18 to Unit Letter J of Section 33.

ARCO will require 2 strategically spaced wellspots in each 40-acre tract to recover reserves in the Artesia pool. Our well pattern dictates a wellbore in the NE quadrant and SW quadrant of each 40 acres, and recompletion of these Empire (Abo) wellbores, which are 1117 ft. apart, will prevent wasteful drilling expense.

At a future date, we anticipate a waterflood could be initiated to effectively sweep both dolomite and sand reservoirs. Optimum results can only be achieved with good spacing of the primary wells. Core results show the Queen-Grayburg-San Andres "sand" pays should yield 130 MBO per 40 acres, but the modest 35 MBO recovered from "sand" well on and surrounding our lease indicates that 10-20 acre drainage for these pays is reasonable.

We have therefore determined that two wells per 40 acres, with 700 ft. minimum between wells, will effectively drain this reservoir and protect correlative rights. Where inexpensive recompletions are available, 500 ft between wells will avoid wasteful drilling. "Ten-acre" locations in the same half of any 40-acre unit should be avoided until waterflood startup. With current technology, the drainage radius for these San Andres wells is probably 10 acres, so we do not expect to be affecting any offset owner's correlative rights with these unorthodox locations.