

4/1/99 4/20/99 MS KW NSL

ABOVE THIS LINE FOR DIVISION USE ONLY

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

APR - 1 1999

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

[ ] 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.

LAURIE CHERRY  
Print or Type Name

Laurie Cherry  
Signature

REG. / COMP. ASST.  
Title

3/20/99  
Date



**ARCO Permian**  
600 N Marienfeld  
Midland TX 79701  
Post Office Box 1610  
Midland TX 79702  
Telephone 915 688 5200

March 18, 1999

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 #26, a recompletion of a previously drilled well in the in the Artesia (Queen-Grayburg-San Andres) Field to the Artesia (Glorieta-Yeso) field . Plans are to downhole commingle both of these zones. The location for this well is 150'FSL and 1650'FWL of Section 33, T17S, R28E, Eddy County, New Mexico. This well was drilled at an approved unorthodox location for the Artesia (Queen-Grayburg-San Andres) field, division order no. NSL-915-B dated June 19, 1998.

As required, we are submitting a plat showing the subject 40-acre spacing unit with the unorthodox location, a map identifying the adjoining and diagonal encroached-upon leases and wells, and a list of affected parties.

Should you have any questions, please do not hesitate to call Donald Knipe at 915-688-5316. Thank you for your assistance in this matter.

Sincerely,

Laurie Cherry  
Regulatory/Compliance Assistant

EAC:lc

cc: NMOCD, Artesia, New Mexico

Enclosures

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, 199  
Instructions on bac  
Submit to Appropriate District O  
State Lease - 6 Copie  
Fee Lease - 5 Copie

☐ AMENDED REPORT

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

<sup>1</sup> Operator name and Address ARCO PERMIAN P.O. BOX 1610 MIDLAND, TX 79702		<sup>2</sup> OGRID Number 000990
		<sup>3</sup> API Number 30-0 15-22464
<sup>4</sup> Property Code 22954	<sup>5</sup> Property Name WASHINGTON "33" STATE	<sup>6</sup> Well No. 26

<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
N	33	17S	28E		150	SOUTH	1650	WEST	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 ARTESIA (Q-G-SA)					<sup>10</sup> Proposed Pool 2 ARTESIA (GLORIETA-YESO)				

<sup>11</sup> Work Type Code R	<sup>12</sup> Well Type Code 0	<sup>13</sup> Cable/Rotary R	<sup>14</sup> Lease Type Code S	<sup>15</sup> Ground Level Elevation 3660
<sup>16</sup> Multiple NO	<sup>17</sup> Proposed Depth 3200	<sup>18</sup> Formation SAN ANDRES/YESO	<sup>19</sup> Contractor	<sup>20</sup> Spud Date 5/99

<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#	595	350	SURF
7-7/8	5-1/2	15.5	6368'	1250	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.

DRILLED AND COMPLETED AS THE WASHINGTON "33" STATE #26 IN 1998 IN THE ARTESIA (Q-GB-SA) FIELD.  
TD @ 6368'. PLANS ARE TO RECOMPLETE BY PERFORATING AND TESTING THE YESO ZONE AND COMMINGLE THE  
SAN ANDRES AND YESO ZONES.

<sup>23</sup> I hereby certify that the information given above is true and complete to the best of my knowledge and belief. Signature: <i>Laurie Cherry</i>	OIL CONSERVATION DIVISION	
Printed name: LAURIE CHERRY	Approved by:	
Title: REG./COMP. ASST.	Title:	
	Approval Date:	Expiration Date:

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

State of New Mexico

Energy, Minerals and Natural Resources Department

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 30-015-22464	Pool Code 03230	Pool Name ARTESIA (A-G-SA)
Property Code 22954	Property Name WASHINGTON 33 STATE	Well Number 26
OGRID No. 000990	Operator Name ARCO PERMIAN	Elevation 3060

Surface Location

UL or lot No. N	Section 33	Township 17 S	Range 28 E	Lot Idn	Feet from the 150	North/South line SOUTH	Feet from the 1650	East/West line WEST	County EDDY
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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 40	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

5	3	1
6	4	2
7	11	13
8	12	14
21	19	17
22	18	
23	25	
20	150'	

OPERATOR CERTIFICATION

I hereby certify the the information contained herein is true and complete to the best of my knowledge and belief.

Laurie Cherry

Signature

LAURIE CHERRY

Printed Name

REG/COMP. ASST.

Title

3/19/99

Date

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.

MARCH 3, 1998

Date Surveyed

Signature of Surveyor

Professional Surveyor

NEW MEXICO

3239

5-4-98

12641

12185

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

State of New Mexico  
Energy, Minerals and Natural Resources Department

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 30-015-22464	Pool Code 96830	Pool Name ARTESIA (GLORIETA-YESO)
Property Code 22954	Property Name WASHINGTON 33 STATE	Well Number 26
OGRID No. 00990	Operator Name ARCO PERMIAN	Elevation 3660

Surface Location

UL or lot No. N	Section 33	Township 17 S	Range 28 E	Lot Idn	Feet from the 150	North/South line SOUTH	Feet from the 1650	East/West line WEST	County EDDY
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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 40	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><b>OPERATOR CERTIFICATION</b></p> <p>I hereby certify the the information contained hereth is true and complete to the best of my knowledge and belief.</p> <p><i>Laurie Cherry</i> Signature LAURIE CHERRY Printed Name REG. /COMP. ASST. Title 3/19/99 Date</p>
<p><b>SURVEYOR CERTIFICATION</b></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>FEBRUARY 26, 1998</p> <p>Date Surveyed CDG</p> <p>Signature &amp; Seal of Professional Surveyor <i>Ronald E. Edson</i> 3-04-98 3239 98-11-0554 Certificate No. RONALD E. EDSON 3239 GARY EDSON 12641</p>				

**Geologic and Engineering Discussion  
Amended Unorthodox Recompletions at Artesia (Glorieta-Yeso) Field  
(ARCO's Washington "33" State # 26)  
Section 33, T17S, R 28E, Eddy Co, NM**

Summary:

ARCO Permian requests approval for recompletion of the cited unorthodox Washington "33" State well into the Artesia (Glorieta-Yeso) Pool. We now plan to recomplete this well in the Glorieta-Yeso, also and commingle the Yeso with the Artesia (Q-G-SA) Pool. Recompletions of these old Abo wells are required for geologic, economic, and engineering reasons. All interests on this 600-acre State Land Office Lease No. X-00647 lease are common, and ARCO holds 100% of all rights down to the top of Abo shale.

Background of ARCO NSL Requests in the Area:

ARCO was granted NMOCDD approval for re-completing each of these wells to the Artesia (Queen-Grayburg-San Andres) Pool by NSL 915-B.

Division Administrative Orders NSL-915-A, NSL-4003, NSL-4007, NSL-4035, NSL-4060, and NSL-4036 have also been granted for other unorthodox Artesia (Queen-Grayburg-San Andres) locations on the same lease.

Washington #9 and #14 , and Other Wells' Results:

In June 1998, ARCO completed Washington #9 in unit letter F of Section 33 for 28 BOPD, 65 MCFD and 716 BWPD, but the well has declined to about 10 BOPD. A copy of this log showing the Yeso dolomite pay is attached. Washington #14 in Unit letter H was also completed in June from the Yeso, and potentialed for 9 BOPD, 25 MCFD, and 863 BWPD, and now pumping around 40 BOPD. This new field has been designated the Artesia (Glorieta-Yeso) Pool. These wells also have uphole San Andres pay, as shown on the second attached log. Washington #1, 3, 5, 15, 18, and 28 are currently testing in the Artesia (San Andres).

Geology:

The Yeso (the upper part of which is sometimes called the Paddock Formation) is a fine-crystalline, anhydritic, slightly vuggy dolomite that lies under the Glorieta sand. The lower Yeso (which we are not producing from) is sometimes called the Blinbry, Tubb, and Drinkard in Lea County. A structure map of the top Glorieta sand, which is a better geologic marker than the Yeso, has been provided. This map shows up to 5-degree dip to the SE in Section 33, with the "crest" of the structure plunging due east, one mile north of us in Section 28. The gross 250' of Yeso pay we produce from is the same dolomite interval as found at Atoka (Glorieta/Yeso) Field, East Empire (Yeso) Field, and is the deeper Grayburg-Jackson (4000' San Andres) pay. This dolomite rarely produces without a major frac job.

The San Andres dolomite is an established pay from offset wells adjacent to our Washington lease, and maps showing top San Andres Structure and Gross Pay are included. The San Andres structure dips SE and is similar to the Glorieta structure. Gross San Andres pay interval across Section 33 ranges from 500 to 600'.

Engineering Justification for Revised NSL Request:

ARCO will need 2 strategically spaced wells in each 40-acre tract to recover 50 MBO per well in the Artesia (Q-G-SA) Field. The Glorieta-Yeso pay, with about 35 MBO per 20-acre location, is marginally economic, but only if completion cost is minimized. With current technology, the drainage radius for San Andres or Yeso completions is 10 acres or less, so we do not expect to be affecting any offset owner's correlative rights with these unorthodox recompletions.

Production Planning:

We plan to soon apply to vertically expand the Artesia (Q-G-SA) Field to include the Yeso, and thus enable co-mingling Yeso with San Andres to keep the wells economic, as was done at Grayburg-Jackson Field by Marbob.

Conclusion

ARCO respectfully requests approval to recomplete this well to the Glorieta-Yeso pay. Offset operators of San Andres and Yeso rights have been notified.

# Section 33 (below)

T17S R28E

27

29  
KERSEY  
CO.

Mack Chase

CONOCO  
FINA

Arco, et al

MARBOB  
Pen-roe

MARBOB To 3500'  
ALURA

KERSEY

E

32

F

G

KERSEY

H

Castle & Wigzell

Marbob

Kersey

Kersey

Kersey

Kersey

Amari-ble (fin)

0 330' 660'

1" = 1000'  
660

- ▽ San Andres recomplete candidates
- + San Andres Locations
- Primary Yaso Locations
- R Recomplete alternative in Yaso
- ⊕ Possible/contingent Yaso TD

DBP 2/19/98



STATE OF TEXAS

COUNTY OF MIDLAND

**BEFORE ME**, the undersigned authority on this day personally appeared Laurie Cherry, a Regulatory Compliance Assistant with **ARCO Permian**, who being by me duly sworn, deposes and states that the persons listed on the foregoing attached list has been sent a copy on March 18, 1999, Oil Conservation Division Form C-101 (and supporting documentation) entitled, "Application For Permit to Drill or Deepen" for the Washington "33" State #26.

**ARCO Permian**

Laurie Cherry  
Laurie Cherry

**SUBSCRIBED AND SWORN TO** before me on March 18, 1999, to certify which witness my hand and seal of office.



LEIGH ANN LANE

Notary Public, State of Texas

My Commission Expires: 12-12-2000

Leigh Ann Lane  
**NOTARY PUBLIC, STATE OF TEXAS**

**OFFSET OPERATORS  
WASHINGTON "33" STATE #26**

**Bulldog Energy Corp.  
P. O. Box 668  
Artesia, New Mexico 88210**

**Altura Energy Ltd.  
P. O. Box 4294  
Houston, Texas 77210**

**Jackie Brewer dba Sandlott Energy  
1504 W. Madison  
Lovington, New Mexico 88260**

**Fina Oil and Chemical Company  
Attn: Mr. Keith Turner  
P. O. Box 62102  
Houston, Texas 77205-2101**

**Tom L. Ingram  
100 S. Kentucky  
Roswell, New Mexico 88201**

**PC, Ltd.  
P. O. Box 911  
Breckenridge, Texas 76024**

**Eugene E. Nearburg Estate  
C/o Gretchen Nearburg  
1608 Lakeway Blvd.  
Austin, Texas 78734**

**Ben A. Copass, Jr.  
P. O. Box 606  
Cisco, Texas 76437**

**Altura Energy, Ltd.  
P. O. Box 4294  
Houston, Texas 77210**

