

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

Revised October 18, 1994

Instructions on back  
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 ARCO PERMIAN P.O. BOX 1610 MIDLAND, TX 79702		<sup>2</sup> OGRID Number 000990
<sup>4</sup> Property Code 22954	<sup>5</sup> Property Name WASHINGTON "33" STATE	<sup>3</sup> API Number 30-015-30277
		<sup>6</sup> Well No. 5

<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
C	33	17S	28E		260	NORTH	2270	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) 3230	<sup>10</sup> Proposed Pool 2 ARTESIA (Q-G-SA)
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<sup>11</sup> Work Type Code N	<sup>12</sup> Well Type Code O	<sup>13</sup> Cable/Rotary R	<sup>14</sup> Lease Type Code S	<sup>15</sup> Ground Level Elevation 3675'
<sup>16</sup> Multiple NO	<sup>17</sup> Proposed Depth 3100	<sup>18</sup> Formation SAN ANDRES	<sup>19</sup> Contractor	<sup>20</sup> Spud Date 6-98

<sup>21</sup> Proposed Casing and Cement Program					
Hole Size	Casing Size	Casing weight/foot	Setting Depth	Sacks of Cement	Estimated TOC
12-1/4	8-5/8	24#	500	450	CIRC. TO SURE.
7-7/8	5-1/2	15.5#	3100	1200	CIRC. TO SURE.
				Post TD-1	
				6-19-98	
				AFT & Loc	

<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

DRILL SURFACE HOLE W/FRESH WATER TO 500'. SET & CEMENT 8-5/8" CASING.  
DRILL 7-7/8" HOLE TO 2000; W/SATURATED BRINE. DRILL 3100' TD W/SACT GEL  
USING PRE-HYDRATED FW GEL SWEEPS, FL +/- 15 CC. LOG WELL, RUN & CEMENT 5-1/2"  
CASING. COMPLETE AND TEST SAN ANDRES FORMATION.

SUBJECT WELL PLANNED AS A 3100' STRAIGHT HOLE.  
3000 PSI BOPE WILL BE USED FROM 500' TO TD.

18 Hours WOC on 8 5/8" casing

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

Signature: Elizabeth A. Casbeer

Printed name: ELIZABETH A. CASBEER

Title: REG./COMPLIANCE

OIL CONSERVATION DIVISION

Approved by: Jim W. Burns (B6A)

Title: District Supervisor

Approval Date: 6-5-98 Expiration Date: 6-5-99

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

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

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

OIL CONSERVATION DIVISION

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

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

API Number	Pool Code	Pool Name <b>ARTESIA (Q-G-SA)</b>
Property Code <b>22954</b>	Property Name <b>WASHINGTON 33 STATE</b>	Well Number <b>5</b>
OGRID No. <b>000990</b>	Operator Name <b>ARCO PERMIAN</b>	Elevation <b>3675'</b>

Surface Location

UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
<b>C</b>	<b>33</b>	<b>17 S</b>	<b>28 E</b>		<b>260</b>	<b>NORTH</b>	<b>2270</b>	<b>WEST</b>	<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 <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

				<b>OPERATOR CERTIFICATION</b>  I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief.  <b>Elizabeth A. Casbeer</b> Signature <b>ELIZABETH A. CASBEEK</b> Printed Name <b>REG/COMP.</b> Title <b>4/22/98</b> Date	
<b>SURVEYOR CERTIFICATION</b>  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.  <b>FEBRUARY 26, 1998</b> Date Surveyed <b>CDG</b> Signature <b>RONALD E. EDSON</b> Professional Surveyor <b>3239</b> Certificate No. <b>88-11-0348</b> New Mexico <b>3-0498</b> Date <b>12641</b>					

## ARCO Permian

## General Purpose Worksheet

Subject	Ideal Washington #5		Page No.	or
File			By	Date 3/5/98

↑  
N

OLD LEASE Rd

ORIGINAL FELL 40' NORTH of  
what appears to be a drainage  
ditchStaked ALT 'A' 100' north of  
ORIGINAL

Pits on S/W corner

Rd on N/E corner

Approx 300' of new rd  
old rd needs top'd

County Rd

FINAL LSC  
260 FNL  
2270 FWLALT 'A'  
230 FNL  
2310 FWLORIGINAL  
330 FNL  
2310 FWL

Ditch 15' wide! 5' deep

Fence

50'

1320'

26

Hwy 82

NOT TO SCALE



T17S-R28E

E

F

G

H

ARCO Permian  
GROSS PAY, SAN ANDRES DOLO.  
Washington 33 Lease  
Sec. 33 T17S-R28E  
Eddy Co. NM  
Abo And San Andres Well Locations  
DBP 3/98



San Andres recomplete Candidates



San Andres Locations



Primary Yeso Locations



Recomplete alternate in Yeso



Possible / contingent Yeso TD



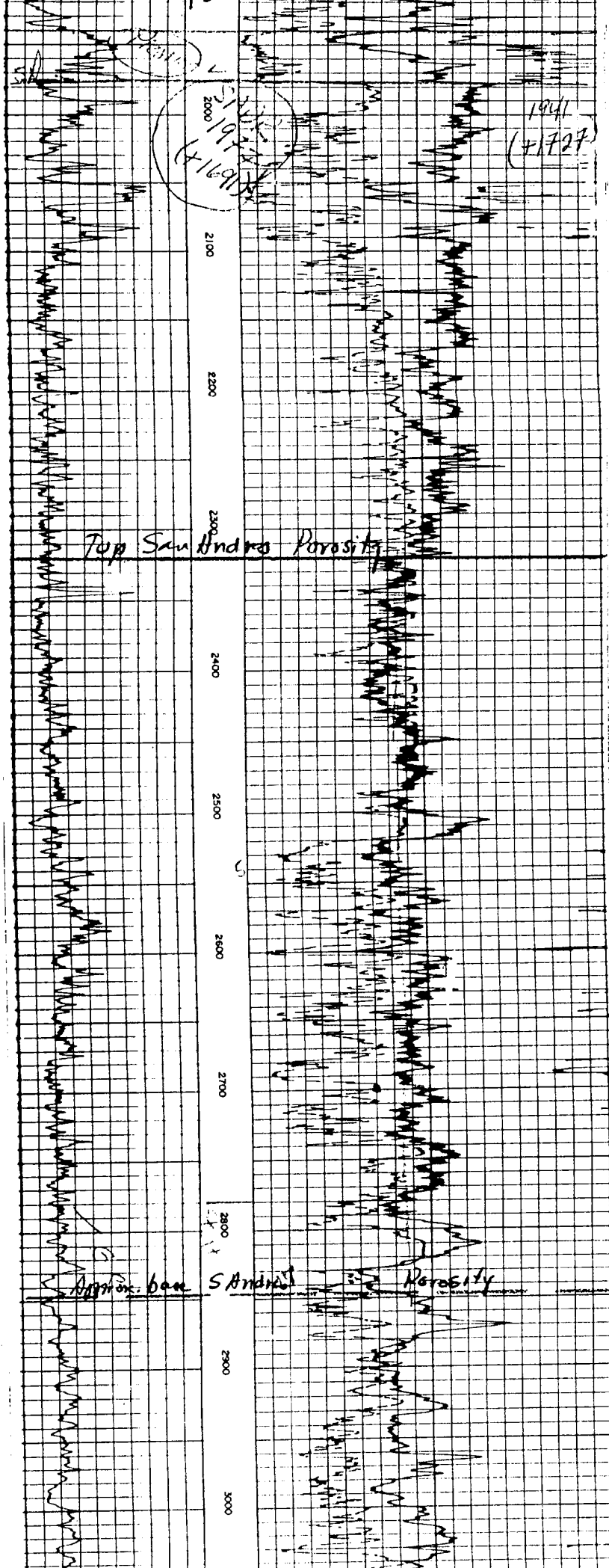
Relevant San Andres wells  
Showing well #

1" = 1000'

3001501689

PAN GEO ATLAS CORP.  
PGAC  
Gamma Ray Neutron  
Lateralog Survey

FILE NO.	COMPANY	SINCLAIR OIL & GAS COMPANY	
	WELL	M. YATES B. ARC # 5	
	FIELD	EMPIRE ADD	
	COUNTY	EDDY	STATE NEW MEXICO
	LOCATION:	1980' FN & W LINE	Other Services NONE
	SEC. 33	TWP. 17S	R. 28-E





**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

April 22, 1998

**CERTIFIED RETURN RECEIPT MAIL**

**Marbob Energy Corporation**  
**P. O. Box 227**  
**Artesia, New Mexico 88211**

**Ladies and Gentlemen:**

**This letter will serve as notice that ARCO Permian has requested administrative approval from the NMOCDD for an unorthodox location for Washington "33" State #5 under Rule 104.F. (3), due to topographical and geographical conditions.**

**Should your company have any objection , it must be filed in writing within twenty (20) days from the date of this notice. The Division Director may approve the unorthodox location if no objection to the unorthodox location has been made within 20 days after the application has been received.**

**Sincerely,**

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

**EAC:lc**



**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

**April 22, 1998**

**CERTIFIED RETURN RECEIPT MAIL**

**Mr. Mack Chase**  
**P. O. Box 1767**  
**Artesia, New Mexico 88211**

**Ladies and Gentlemen:**

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

**EAC:lc**





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

April 22, 1998

**CERTIFIED RETURN RECEIPT MAIL**

Conoco, Inc.  
10 Desta Drive  
Midland, Texas 79705

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Elizabeth A. Casbeer  
Regulatory/Compliance Analyst

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Midland TX 79701-4373  
Post Office Box 1610  
Midland TX 79702-1610  
Telephone 915 688 5570

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

April 22, 1998

**CERTIFIED RETURN RECEIPT MAIL**

**Fina Oil & Chemical Co.**  
**P. O. Box 62102**  
**Houston, Texas 77205**

**Ladies and Gentlemen:**

This letter will serve as notice that ARCO Permian has requested administrative approval from the NMOCD for an unorthodox location for Washington "33" State #5 under Rule 104.F. (3), due to topographical and geographical conditions.

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Sincerely,

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

EAC:lc



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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

April 22, 1998

**CERTIFIED RETURN RECEIPT MAIL**

Yates Petroleum Corp.  
105 S. 4<sup>th</sup> Street  
Artesia, New Mexico 88210

Ladies and Gentlemen:

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Sincerely,

Elizabeth A. Casbeer  
Regulatory/Compliance Analyst

EAC:lc



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

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

April 22, 1998

**CERTIFIED RETURN RECEIPT MAIL**

**Louis Dreyfus Gas Holdings**  
14000 Quail Springs Parkway, Suite 600  
Oklahoma City, Oklahoma 73134

**Ladies and Gentlemen:**

This letter will serve as notice that ARCO Permian has requested administrative approval from the NMOCDC for an unorthodox location for Washington "33" State #5 under Rule 104.F. (3), due to topographical and geographical conditions.

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Sincerely,

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

EAC:lc



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600 North Marientfeld  
Midland TX 79701-4373  
Post Office Box 1610  
Midland TX 79702-1610  
Telephone 915 688 5570

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

April 22, 1998

**CERTIFIED RETURN RECEIPT MAIL**

**Marathon Oil Co.**  
**P. O. Box 552**  
**Midland, Texas 79702**

**Ladies and Gentlemen:**

**This letter will serve as notice that ARCO Permian has requested administrative approval from the NMOCD for an unorthodox location for Washington "33" State #5 under Rule 104.F. (3), due to topographical and geographical conditions.**

**Should your company have any objection , it must be filed in writing within twenty (20) days from the date of this notice. The Division Director may approve the unorthodox location if no objection to the unorthodox location has been made within 20 days after the application has been received.**

**Sincerely,**

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

**EAC:lc**

**OFFSET OPERATORS  
WASHINGTON "33" STATE #5**

**ARCO Permian  
P. O. Box 1610  
Midland, Texas 79702**

**Marbob Energy Corp.  
P. O. Box 227  
Artesia, New Mexico 88211**

**Mack Chase, Trustee of Mack C. & Marilyn Y. Chase Trust-Operator d/b/a Mack Energy Corp.  
P. O. Box 1767  
Artesia, New Mexico 88211**

**Conoco, Inc.  
10 Desta Drive  
Midland, Texas 79705**

**Fina Oil & Chemical Company  
P. O. Box 62102  
Houston, Texas 77205**

**Yates Petroleum Corp.  
105 S. 4<sup>th</sup> Street  
Artesia, New Mexico 88210**

**Louis Dreyfus Gas Holdings  
14000 Quail Springs Parkway, Suite 600  
Oklahoma City, Oklahoma 73134**

**Marathon Oil Company  
P. O. Box 552  
Midland, Texas 79702**

**Geological and Engineering Attachment  
Washington "33" State #5**

ARCO Permian requests administrative approval for unorthodox location for Washington 33 State #5 in the Artesia (Q-G-SA) Field.

As shown on the engineer's sketch plat, ARCO attempted to obtain an orthodox location for this well at 330' FNL, but was prevented access by the US Highway 82 bar ditch. We have shifted the location north the minimum distance to give us a 100-115' setback required for the small United rig we will use. The attached topo map further verifies the position of the highway, and shows how we have "crowded" the north side of the ditch as much as possible to minimize unorthodoxy.

ARCO will require 2 strategically-spaced wellspots in each 40-acre tract to recover reserves in the Artesia pool. One San Andres test has already been permitted in the SW corner of Drilling Unit C, but we need a location in the NE corner of each unit to fully exploit these pays. Any well on the south side of US Highway 82 would be too close to our other locations to effectively recover updip oil, and would leave undrained a significant portion of our reserves. Directional drilling of these low producing-rate wells cannot be economically justified, since this would add approximately \$100,000 to our cost for only 50 MBO reserves.

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" wells 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 between wells wherever possible, would effectively drain this reservoir and protect correlative rights. Where inexpensive recompletions are available, 550 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 this unorthodox location.