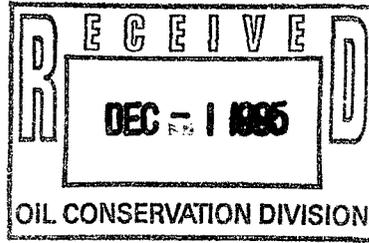




**ARCO Permian**  
600 N Marienfeld  
Midland TX 79701  
Post Office Box 1610  
Midland TX 79702  
Telephone 915 688 5200



November 29, 1995

Mr. Michael Stogner  
New Mexico Oil Conservation Division  
2040 South Pacheco  
Santa Fe, NM 87505

**Re: Application for Unorthodox Location  
DOROTHY 36 STATE COM #1  
Empire (Morrow) Gas Pool  
West half Sec. 36, T 17 SR 28 E, Eddy County, NM**

Dear Mr. Stogner:

ARCO Permian respectfully requests approval for an unorthodox Morrow gas well, the ARCO Dorothy 36 State Com #1. This well is staked 1163 FSL, 1647 FWL of Sec 36, T17S R28E, for geological reasons. Any standard location in the west-half 320-acre proration unit would likely result in economic waste and minimal potential of finding the most productive Morrow sands. The east half of the section is already dedicated to another non-standard Morrow producer in Amoco's Empire South Deep Unit, which produced from another sand body in the same stratigraphic interval.

Notification to all offset operators has been made by certified mail under the provisions of Rule 104 (F) IV. We request that this unorthodox location be administratively approved if no objections are received within the cited 20 days, or earlier if waivers are received.

Enclosed are Form C-102, a land plat showing all offset operators, a list of these operators, Morrow Cross-section A-A', and a Net Pay map for the Lower Morrow "C" Sand (showing all wells over 9000').

The Integrated Net Pay Map of the Lower Morrow "C" sand shows that NW-to-SE trends for productive "C" sands in this area are well-established. The two producers in Section 25 along with Well #23470 in Section 36 have together produced nearly 35 BCF with 300 MBC from the Lower Morrow "BV Channel" reservoir, which is within our "C" sand interval. To the west, wells #24059 in Section 35 and #24665 in Section 2 have produced 2.5 and 5.4 BCF respectively from a thinner "C" sand distributary channel. Cross-section A-A' through #24059 in Sec 35 and #23470 in Sec 36 demonstrates these correlations. All three "BV Channel" wells and Sec 35 are nearly depleted, but #24665 in Sec 2 produced 9687 MCF in March, 1995.

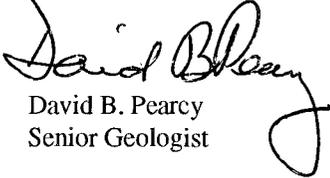
Our proprietary 3D survey indicates that a new "C" sand "thick" is best developed at our unorthodox location. Orthodox locations such as 2310 FSL and 660 FWL were carefully considered, but our 3D indicates that sand quality or porosity deteriorates in the northern two-thirds of the proration unit. ARCO believes that the orthodox location **alone** offers acceptable risk, and that any other wellsite in the proration unit would present **untenable** risk. As an example, note how only 1600' between wells #22543 and #23470 in Sec 36 accounts for geologic failure in one well, compared to 50 ft of excellent pay with nearly 8 BCF in the other. Even at the optimum location, ARCO and partners are taking substantial risk of missing all Morrow pay sands and obtaining a dry hole.

Page 2  
Mr. Michael Stogner  
November 29, 1995

ARCO Permian believes approval of the Dorothy location would be in the best interest of conservation, would protect correlative rights, and would allow for the most complete recovery of gas-in-place.

Thank you for your assistance. Please call me at (915) 688-5355 if you need further information.

Sincerely,



David B. Percy  
Senior Geologist

cc: New Mexico Oil Conservation Division  
811 South First Street  
Artesia, NM 88210

enclosures

dbp 11-27-95  
dorotocd.doc

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

OIL CONSERVATION DIVISION  
P.O. Box 2088

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

Santa Fe, New Mexico 87504-2088

AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

API Number	Pool Code	Pool Name EMPIRE MORROW
Property Code	Property Name DOROTHY 36 STATE COM.	Well Number 1
OGRID No. 000990	Operator Name ARCO PERMIAN	Elevation 3674' GR

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	36	17 S	28 E		1163	SOUTH	1647	WEST	EDDY

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 320	Joint or Infill	Consolidation Code Com	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 herein is true and complete to the best of my knowledge and belief.</p> <p><i>Ken W. Gosnell</i> Signature</p> <p>Ken W. Gosnell Printed Name</p> <p>Agent Title</p> <p>November 29, 1995 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>NOVEMBER 7, 1995 Date Surveyed</p> <p>Signature &amp; Seal of Professional Surveyor <i>[Signature]</i></p> <p>NEW MEXICO 3239 W.O. Num 95-101749</p> <p>Certificate No. JOHN W. WEST 676 RONALD EIDSON 3239 PROFESSIONAL SURVEYOR 12641</p>



**Parties for Notice Concerning Unorthodox Location in:**

**Township 17 South, Range 28 East, N.M.P.M.**

**Section 36: W/2**

Mr. Larry West  
Amoco Production Company  
501 Westlake Park Boulevard  
Houston, Texas 77253

Brothers Production Company  
6 Desta Drive, Suite 5700  
Midland, Texas 79705

Doyle Hartman  
3811 Turtle Creek Blvd.  
Suite 730  
Dallas, Texas 75219

Ms. Carol Myers  
Louis Dreyfus Gas Holdings, Inc.  
14000 Quail Springs Parkway, #600  
Oklahoma City, Oklahoma 73134

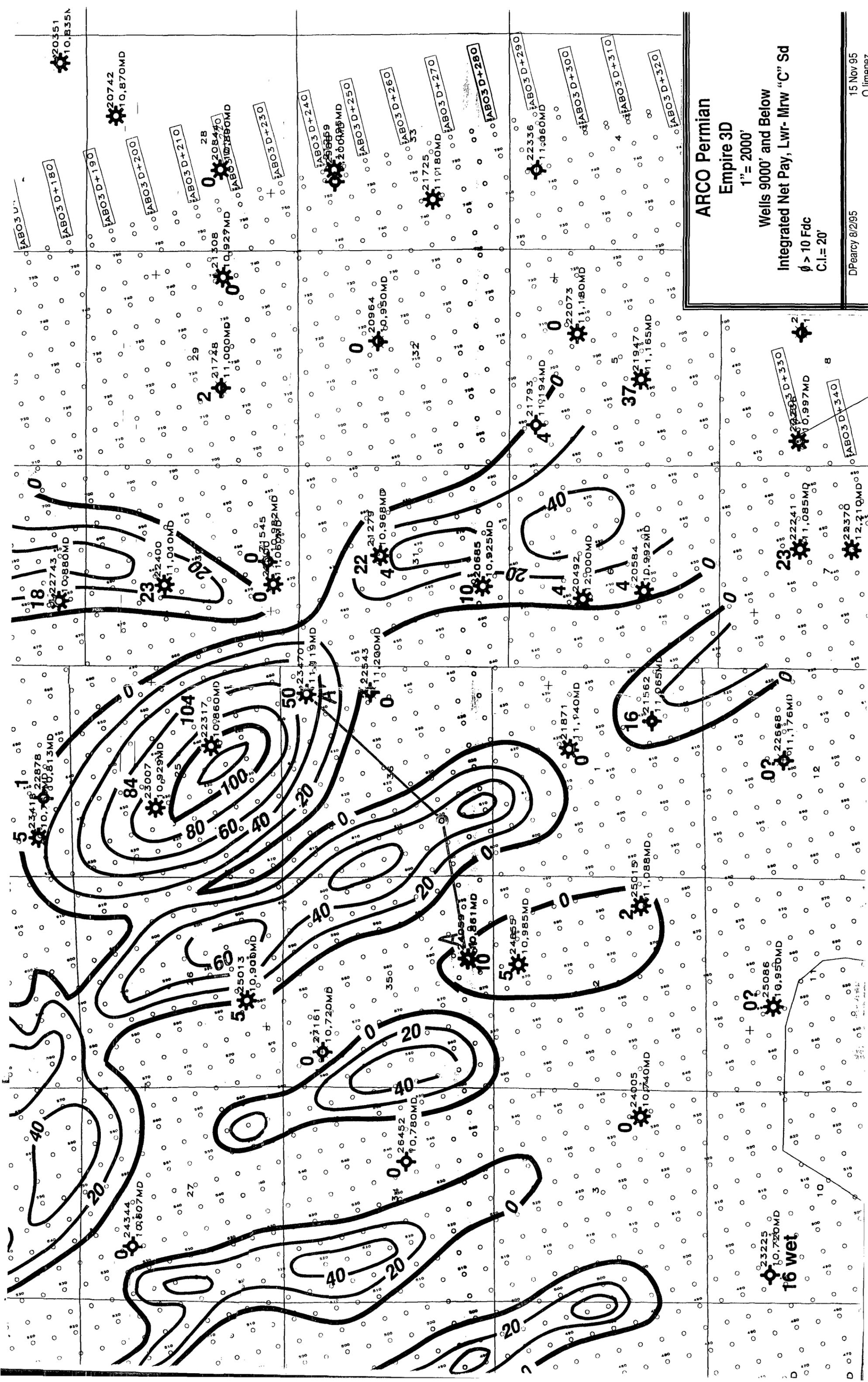
Mr. Randal Wilson  
Marathon Oil Company  
P. O. Box 552  
Midland, Texas 79702

Parker & Parsley Acquisition Company  
P. O. Box 3178  
Midland, Texas 79702

Texas Independent Exploration, Inc.  
1300 Main, Suite 1435  
Houston, Texas 77063

Mr. Robert H. Bullock  
Yates Petroleum Corporation  
105 South 4th Street  
Artesia, New Mexico 88210





**ARCO Permian**

**Empire 3D**

1" = 2000'

Wells 9000' and Below

Integrated Net Pay, Lwr- Mrw "C" Sd

$\phi > 10$  Fdc

C.I. = 20'

DPearcy 8/2/95

15 Nov 95

C Jimenez

---

# Facsimile Cover Sheet

**To:** Mike Stogner  
**Company:** NMOC  
**Phone:**  
**Fax:** 505-827-8177

**From:** Dave Pearcy  
**Company:** ARCO  
**Phone:** 915-688-5355  
**Fax:**

**Date:** 11/30/95

**Pages including this  
cover page:** 2

## Comments:

Here is the C-101 to go with the  
Unorthodox location request we mailed  
you on 11/29. The well objective is  
Morrow, not Abo, so the Unit outline  
you mentioned is not appropriate, I think.  
Copies of all you got were sent to OCD -  
Arteria, too.

If there's any way we can smooth the  
waters for approval, please let me know.

D Pearcy

State of New Mexico  
Energy, Minerals & Natural Resources Department

Form C-101  
Revised February 10, 1994  
Instructions on back  
Submit to Appropriate District Office  
State Lease - 6 Copies  
Fee Lease - 5 Copies

District I  
PO Box 1900, Hobbs, NM 88241-1900  
District II  
PO Drawer DD, Artesia, NM 88211-0719  
District III  
1000 Elb Bronzes Rd., Aztec, NM 87410  
District IV  
PO Box 2088, Santa Fe, NM 87504-2088

**OIL CONSERVATION DIVISION**  
**P.O. Box 2088**  
**Santa Fe, NM 87504-2088**

AMENDED REPORT

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

<sup>1</sup> Operator name and Address <b>ARCO PERMIAN P.O. BOX 1610 MIDLAND, TX 79702</b>		<sup>2</sup> OGRID Number <b>000990</b>
<sup>4</sup> Property Code		<sup>3</sup> API Number <b>30-0</b>
<sup>5</sup> Property Name <b>DOROTHY 36 STATE COM</b>		<sup>6</sup> Well Number <b>1</b>

<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
<b>N</b>	<b>36</b>	<b>17S</b>	<b>28E</b>		<b>1163</b>	<b>SOUTH</b>	<b>1647</b>	<b>WEST</b>	<b>EDDY</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

<sup>10</sup> Proposed Pool 2

**EMPIRE MORROW**

<sup>11</sup> Work Type Code <b>N</b>	<sup>12</sup> Well Type Code <b>G</b>	<sup>13</sup> Cable/Rotary <b>R</b>	<sup>14</sup> Lease Type Code <b>S</b>	<sup>15</sup> Ground Level Elevation <b>3674</b>
<sup>16</sup> Multiple <b>NO</b>	<sup>17</sup> Proposed Depth <b>11000</b>	<sup>18</sup> Formations <b>MORROW</b>	<sup>19</sup> Contractor	<sup>20</sup> Spud Date <b>01-15-95</b>

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

Hole Size	Casing Size	Casing weight/foot	Setting Depth	Sacks of Cement	Estimated TOC
<b>17 1/2</b>	<b>13 3/8</b>	<b>54.5</b>	<b>500</b>	<b>525</b>	<b>SURF</b>
<b>12 1/4</b>	<b>8 5/8</b>	<b>24</b>	<b>2600</b>	<b>940</b>	<b>SURF</b>
<b>7 7/8</b>	<b>5 1/2</b>	<b>15.5/17</b>	<b>11,000</b>	<b>1200</b>	<b>5000</b>

<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

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

Signature: *Ken W. Gosnell*

Printed name: **KEN W. GOSNELL**

Title: **AGENT**

Date: **11-29-95**

Phone: **915 688-5672**

**OIL CONSERVATION DIVISION**

Approved by:

Title:

Approval Date:

Expiration Date:

Conditions of Approval:

Attached

DOYLE HARTMAN

Oil Operator

3811 TURTLE CREEK BLVD, SUITE 730  
DALLAS, TEXAS 75219  
OIL CONSERVATION DIVISION  
RECEIVED

FILE COPY

(214) 520-1800  
FAX DECEMBER 7 AM 8 52  
(214) 520-0811-FAX

December 4, 1995

ARCO Permian  
600 North Marienfeld  
Midland, Texas 79701-4373

Attention: Lee M. Scarborough  
Sr. Landman

Re: Request for Unorthodox Location  
Dorothy State "Com" No. 1  
1163' FSL and 1647" FWL (N)  
Section 36, T-17-S, R-28-E, NMPM  
Eddy County, New Mexico

VIA: US. Mail  
Fax 915-688-5894

Mr. Scarborough:

We are in receipt of your letter dated November 29, 1995 (received in our office December 4, 1995) corresponding to ARCO's proposed Dorothy State "Com" No. 1 Empire, South Morrow well to be situated at an unorthodox location consisting of 1163 FLS and 1647 FWL (N), Section 36, T-17-S, R-28-E, NMPM, Eddy County, New Mexico.

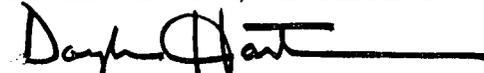
We hereby waive any right to object to ARCO's Proposed unorthodox Morrow location, but, in order to keep our Empire, South Morrow records as complete as possible, we respectfully ask that ARCO furnish us with a copy of the following as to the subject well.

1. NMOCD reports, requests, and notices.
2. Drilling, completion, testing and pressure reports.
3. Geological reports.
4. Mud, sample, and coring logs.
5. Well logs.
6. DST and FIT reports and logs.

Should you require any further assistance, please do not hesitate to contact us at (214)520-1800.

Very truly yours

DOYLE HARTMAN, OIL OPERATOR

  
Doyle Hartman

DH/jb

cc: Dave Percy  
Senior Geologist  
ARCO Permian  
600 North Marienfeld  
Midland, Texas 79701  
Fax (915)688-5894

William J. LeMay, Director  
New Mexico Oil Conservation Division  
P.O. Box 2088  
2040 S. Pacheco  
Santa Fe, New Mexico 87505  
Fax (505) 827-8177



**ARCO Permian**  
 600 North Marienfeld  
 Midland TX 79701-4373  
 PO Box 1610  
 Midland TX 79702-1610  
 Telephone 915 688 5200

November 28, 1995

Doyle Hartman  
 3811 Turtle Creek Blvd., Suite 730  
 Dallas, Texas 75219

**CERTIFIED MAIL**  
**Return Receipt Requested**

Re: Offset Operator Notification of  
 Unorthodox Location  
 Dorothy State Com #1  
 T17S, R28E, Section 36  
 1163' FSL and 1647' FWL  
 Eddy County, New Mexico

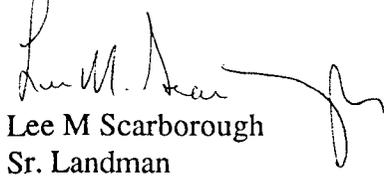
Ladies and Gentlemen:

ARCO Permian plans to drill the captioned well at the unorthodox location set for the above. This location is unorthodox because it does not comply with the well spacing requirement set forth in New Mexico Oil Conservation Division Rule 104.C(2)(a).

If you have no objections to this unorthodox location, please signify your approval below and return one executed copy of this letter, stamped envelope enclosed, to the undersigned.

Should you have any questions concerning this matter, please contact the undersigned at (915) 688-5270.

Very truly yours,

  
 Lee M Scarborough  
 Sr. Landman

LMS/sb

The undersigned hereby waives any objection to the unorthodox location proposed by ARCO Permian.

Company: Doyle Hartman  
 Name: Doyle Hartman  
 Title: \_\_\_\_\_  
 Date: 11/4/95

**RECEIVED**  
 DEC 4 1995  
 BY: \_\_\_\_\_

DOYLE HARTMAN

Oil Operator

3811 TURTLE CREEK BLVD., SUITE 730  
DALLAS, TEXAS 75219

(214) 520-1800

(214) 520-0811 FAX

FILE COPY

December 4, 1995

ARCO Permian  
600 North Marienfeld  
Midland, Texas 79701-4373

Attention: Lee M. Scarborough  
Sr. Landman

Re: Request for Unorthodox Location  
Dorothy State "Com" No. 1  
1163' FSL and 1647" FWL (N)  
Section 36, T-17-S, R-28-E, NMPM  
Eddy County, New Mexico

VIA: US. Mail  
Fax 915-688-5894

Mr. Scarborough:

We are in receipt of your letter dated November 29, 1995 (received in our office December 4, 1995) corresponding to ARCO's proposed Dorothy State "Com" No. 1 Empire, South Morrow well to be situated at an unorthodox location consisting of 1163 FLS and 1647 FWL (N), Section 36, T-17-S, R-28-E, NMPM, Eddy County, New Mexico.

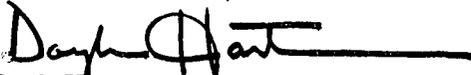
We hereby waive any right to object to ARCO's Proposed unorthodox Morrow location, but, in order to keep our Empire, South Morrow records as complete as possible, we respectfully ask that ARCO furnish us with a copy of the following as to the subject well.

1. NMOCD reports, requests, and notices.
2. Drilling, completion, testing and pressure reports.
3. Geological reports.
4. Mud, sample, and coring logs.
5. Well logs.
6. DST and FIT reports and logs.

Should you require any further assistance, please do not hesitate to contact us at (214)520-1800.

Very truly yours

DOYLE HARTMAN, OIL OPERATOR

  
Doyle Hartman

DH/jb

cc: Dave Pearcy  
Senior Geologist  
ARCO Permian  
600 North Marienfeld  
Midland, Texas 79701  
Fax (915)688-5894

William J. LeMay, Director  
New Mexico Oil Conservation Division  
P.O. Box 2088  
2040 S. Pacheco  
Santa Fe, New Mexico 87505  
Fax (505) 827-8177



**ARCO Permian**  
 600 North Marienfeld  
 Midland TX 79701-4373  
 PO Box 1610  
 Midland TX 79702-1610  
 Telephone 915 688 5200

November 28, 1995

Doyle Hartman  
 3811 Turtle Creek Blvd., Suite 730  
 Dallas, Texas 75219

**CERTIFIED MAIL**  
**Return Receipt Requested**

Re: Offset Operator Notification of  
 Unorthodox Location  
 Dorothy State Com #1  
 T17S, R28E, Section 36  
 1163' FSL and 1647' FWL  
 Eddy County, New Mexico

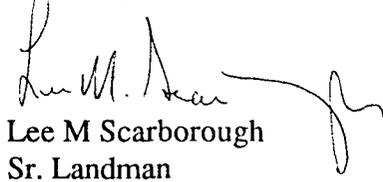
Ladies and Gentlemen:

ARCO Permian plans to drill the captioned well at the unorthodox location set for the above. This location is unorthodox because it does not comply with the well spacing requirement set forth in New Mexico Oil Conservation Division Rule 104.C(2)(a).

If you have no objections to this unorthodox location, please signify your approval below and return one executed copy of this letter, stamped envelope enclosed, to the undersigned.

Should you have any questions concerning this matter, please contact the undersigned at (915) 688-5270.

Very truly yours,

  
 Lee M Scarborough  
 Sr. Landman

LMS/sb

The undersigned hereby waives any objection to the unorthodox location proposed by ARCO Permian.

Company: Doyle Hartman  
 Name: Doyle Hartman  
 Title: \_\_\_\_\_  
 Date: 11/28/95

**RECEIVED**  
 DEC 4 1995  
 BY: \_\_\_\_\_

County Eddy

Pool South Empire - Morrow Gas

TOWNSHIP 17 South

Range 28 East

NMPM

6	5	4	3	2	1
7	8	9	10	11	12
18	17	16	15	14	13
19	20	21	22	23	24
30	29	28	27	26	25
31	32	33	34	35	36

Ext:  $\frac{1}{2}$  Sec 25 (R-5838, 11-1-78) Ext:  $\frac{1}{2}$  Sec 36 (R-5911, 2-1-79)

Ext:  $\frac{1}{2}$  Sec 25 (R-6274, 3-1-80) Ext:  $\frac{1}{2}$  Sec 24 (R-6576, 2-10-81)

Ext: Sec: 35,  $\frac{1}{2}$ , Sec: 36,  $\frac{1}{2}$  (R-7076-9-27-82)

Ext:  $\frac{1}{2}$  Sec. 13 (R-7334, 8-19-83)