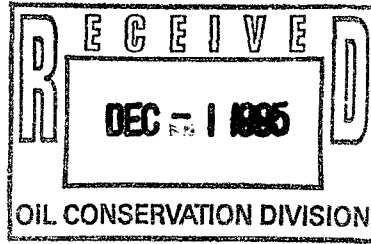




ARCO Permian
600 N Marienfeld
Midland TX 79701
Post Office Box 1610
Midland TX 79702
Telephone 915 688 5200



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.

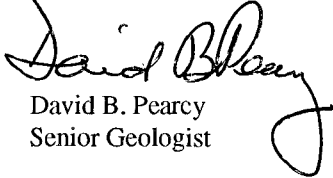
Our proprietary 3D survey indicates that a new "C" sand "thick" is best developed at our unorthodox location. Orthodox locations such as 2310 FSL and 660 FWL were carefully considered, but our 3D indicates that sand quality or porosity deteriorates in the northern two-thirds of the proration unit. ARCO 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

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	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

<div>ARCO, et al</div> <div>1647'</div> <div>ARCO</div> <div>1163'</div> <div>Sun Oper Part.</div>	<div>OPERATOR CERTIFICATION</div> <div>I hereby certify the the information contained herein is true and complete to the best of my knowledge and belief.</div> <div>Ken W. Gosnell</div> <div>Signature</div> <div>Ken W. Gosnell</div> <div>Printed Name</div> <div>Agent</div> <div>Title</div> <div>November 29, 1995</div> <div>Date</div> <div>SURVEYOR CERTIFICATION</div> <div>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.</div> <div>NOVEMBER 7, 1995</div> <div>Date Surveyed</div> <div>Signature & Seal of Professional Surveyor</div> <div>3139</div> <div>11-10-95</div> <div>W.O. Cum 95-10 1749</div> <div>Certificate No. JOHN W. WEST 676</div> <div>RONALD E. EIDSON 3239</div> <div>PROFESSIONAL SURVEYOR 12641</div>
--	--

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



30-015-24059

ARCO Oil & Gas Co.

"BX" State No. 1

Eddy Co.

Sec. 35, 17S-28E

KB. 3670.5

TD. 10,874



Dorothy State Com

No. 1

Eddy Co.

Sec. 36, 17S-28E

KB. 3689 est

PTD. 11,110



30-015-23470

Amoco Prod. Co.

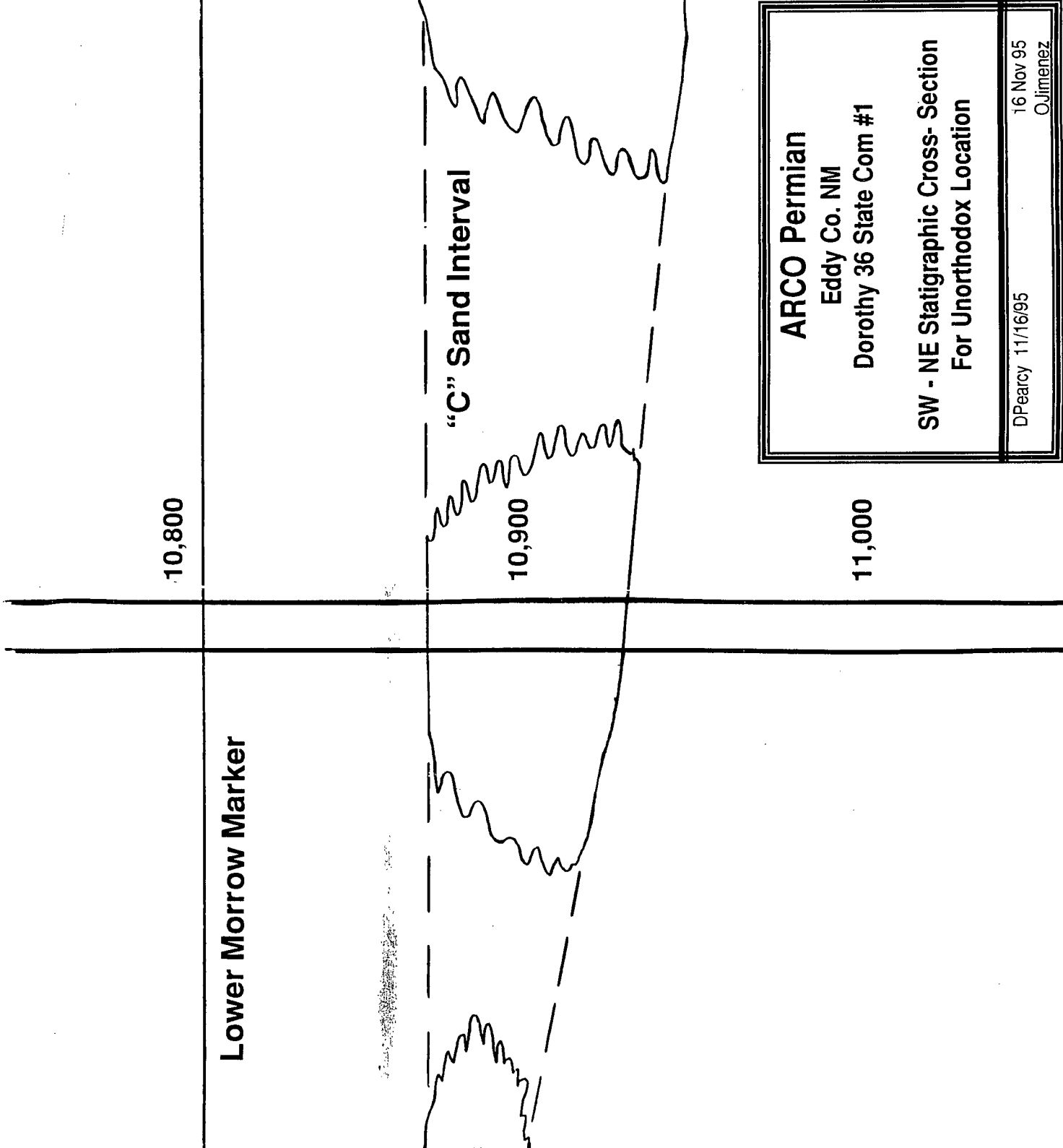
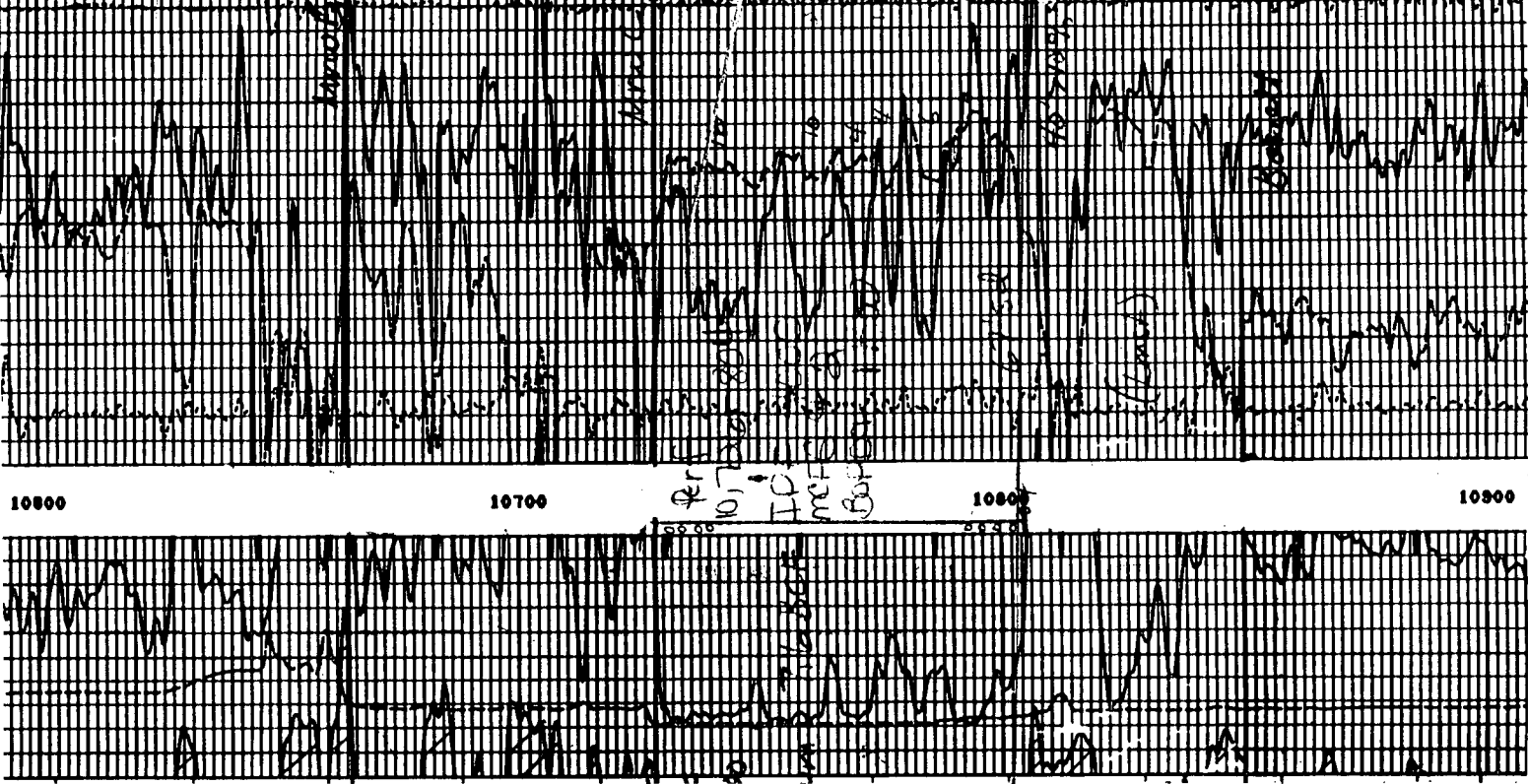
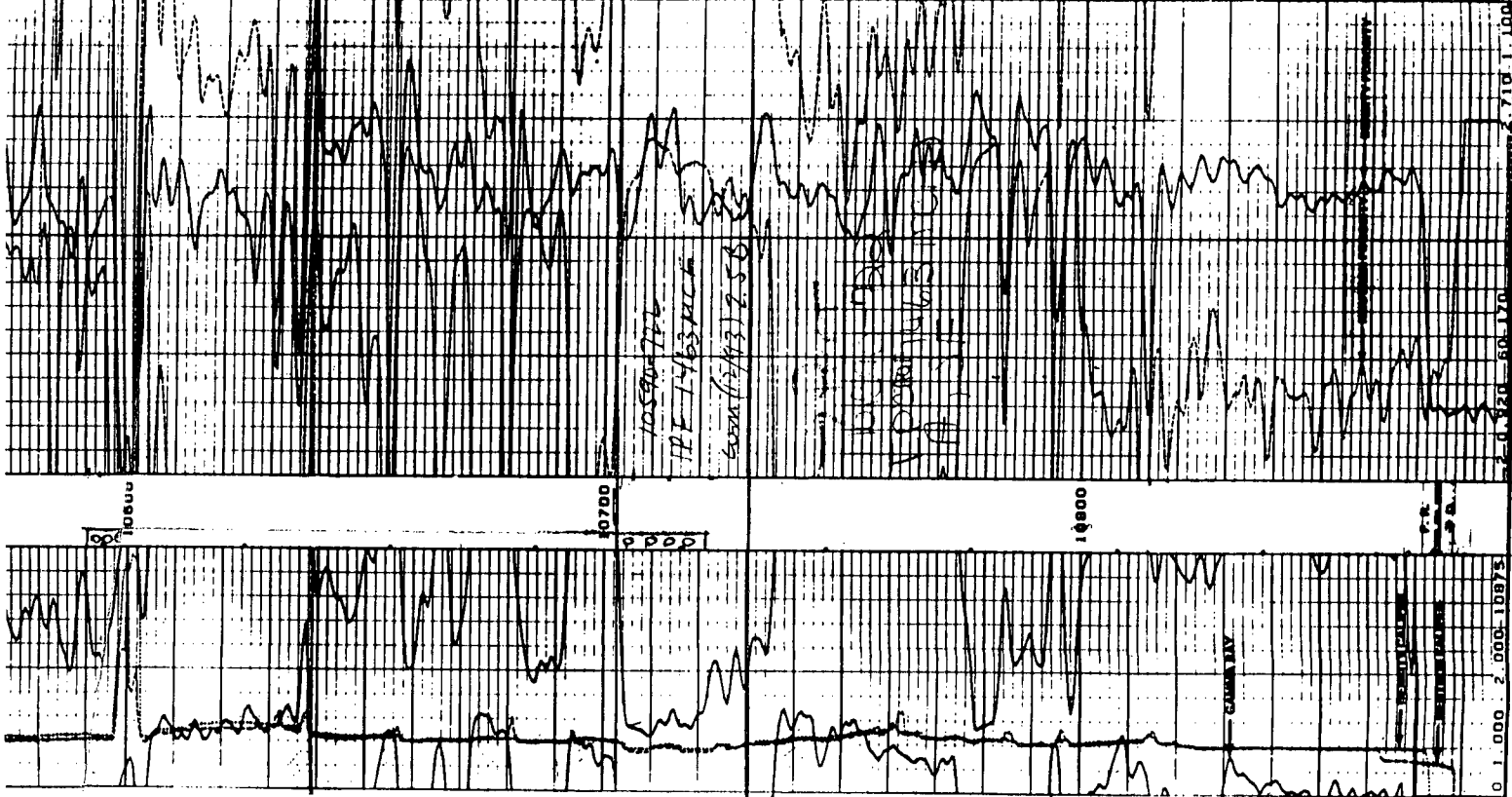
Empire So. Deep Ut. #21

Eddy Co.

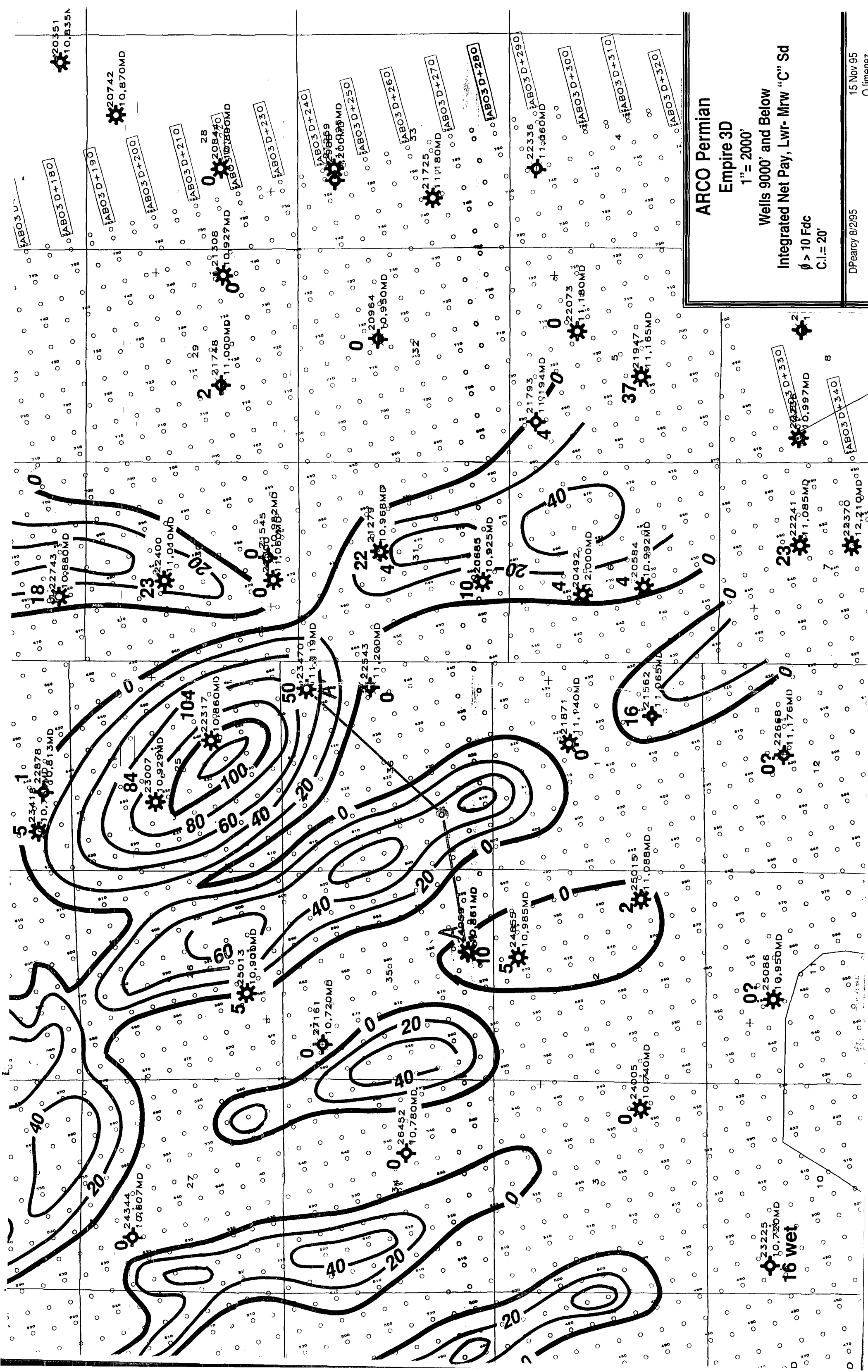
Sec. 36, 17S-28E

KB. 3698.3

TD. 11,111



ARCO Permian
Eddy Co. NM
Dorothy 36 State Com #1
SW - NE Statigraphic Cross-Section
For Unorthodox Location
DPearcy 11/16/95
16 Nov 95
Ojimenez



ARCO Permian

Empire 3D

1" = 2000'

Wells 9000' and Below

Integrated Net Pay, Lwr- Mrw "C" Sd

$\phi > 10 \text{ Fdc}$

C.I.= 20'

DPearcy 8/2/95

15 Nov 95

Olimenez

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

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

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, Arco, NM 88211-0719
District III
1000 Elko Branch Rd., Aztec, NM 87410
District IV
PO Box 2088, Santa Fe, NM 87504-2088

☐ AMENDED REPORT

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

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

⁷ 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	17S	28E		1163	SOUTH	1647	WEST	EDDY

⁸ 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
⁹ Proposed Pool 1 EMPIRE MORROW					¹⁰ Proposed Pool 2				

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

²¹ Proposed Casing and Cement Program					
Hole Size	Casing Size	Casing weight/foot	Setting Depth	Sacks of Cement	Estimated TOC
17 1/2	13 3/8	54.5	500	525	SURF
12 1/4	8 5/8	24	2600	940	SURF
7 7/8	5 1/2	15.5/17	11,000	1200	5000

²² 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

²³ 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

(214) 520-1800
(214) 520-0811-FAX

RECEIVED

FILE COPY

DEC 7 AM 8 52

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.

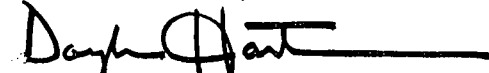
We hereby waive any right to object to ARCO's Proposed unorthodox Morrow location, but, in order to keep our Empire, South Morrow records as complete as possible, we respectfully ask that ARCO furnish us with a copy of the following as to the subject well.

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

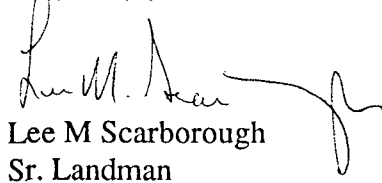
Ladies and Gentlemen:

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.

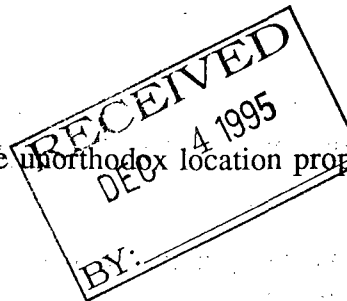
Very truly yours,


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



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

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600 North Marienfeld
Midland, Texas 79701-4373

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Sr. Landman

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VIA: US. Mail
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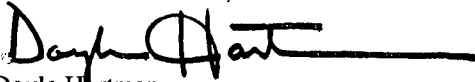
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DOYLE HARTMAN, OIL OPERATOR


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
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2040 S. Pacheco
Santa Fe, New Mexico 87505
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Midland TX 79701-4373
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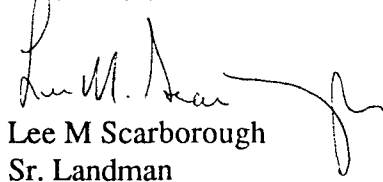
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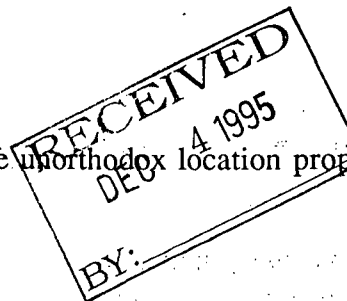
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Sr. Landman

LMS/sb

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Company: Doyle Hartman
Name: Doyle Hartman
Title: _____
Date: 11/4/95



County EddyPool South Empire - Morrow GasTOWNSHIP 17 SouthRange 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)