



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

OIL CONSERVATION DIVISION
RECEIVED

1996 APR 1 AM 8 52

March 29, 1996

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

**Re: Application for Unorthodox Location
DINAH 23 FED COM #1
Empire (Morrow) Gas Pool
West half Sec. 23, T 17 S, R 28 E, Eddy County, NM**

Dear Mr. Stogner:

ARCO Permian respectfully requests administrative approval for an unorthodox Morrow gas well, the ARCO Dinah 23 Fed Com #1. This well is staked on Fee lands, 1077 FSL and 660 FWL of Sec 23, T17S R28E, for geological reasons. All possible standard locations in the west-half 320-acre proration unit were carefully considered but were deemed undrillable due to high potential for economic waste and poorer-quality Morrow sands. We further request this well location be approved for all formations developed on 320-acre spacing in the West half of Section 23.

Notification to the offset operators to the south, southeast, and southwest was made by certified mail on March 29, 1996, including a copy of this application letter with all attachments. 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 Forms C-101 and C-102, a land plat showing all offset operators, a list of the encroached-upon operators, and a Net Pay Map for the Lower Morrow "C" Sand (showing all wells over 9000'). No structure map is presented.

The Integrated Net Pay Map of the Lower Morrow "C" sand shows a general Northwest-Southeast trend for highly-variable fluvial "C" sands in this area. Our location must be construed as high-risk, since none of the wells in this area have encountered the pay-quality sand we are targeting. Well #25013 one mile south in Sec 26 tested "tight" in the "C interval and was completed in the Atoka for 0.5 BCF. Well #23217 in Section 23 produced 0.3 BCF from the Atoka and is inactive. The three other Morrow-depth dry holes in Sections 22, 23, and 27 were never completed in the Morrow.

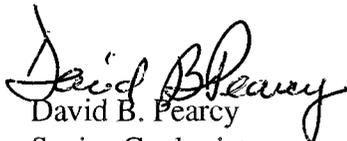
Mr. Michael Stogner
March 29, 1996
Page 2

Our stratigraphic analysis indicates the "C" sand reservoir is best-developed at our unorthodox location. Any standard location such as 1650 FSL places us dangerously close to a northern "zero-edge" where the Lower Morrow sands are known to be absent. ARCO believes that the unorthodox location **alone** offers acceptable risk, and that any other wellsite in the proration unit would present untenable risk. All the nearby Morrow dry holes amply demonstrate the economic hazards of drilling in this area. Even at the optimum location, ARCO and partners are taking substantial risk of finding tight sands or missing gas pays altogether.

ARCO Permian believes approval of the unorthodox Dinah 23 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. Pearcy
Senior Geologist

DBP:elt
word/senm/pearcy/dinahocd.doc

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

Enclosures: Landplat
List of affected parties to S, SE, & SW
Geologic map
C-101, C-102
Notification letters

District I
PO Box 1980, Hobbs, NM 88241-1980
District II
PO Drawer DD, Artesia, NM 88211-0719
District III
1000 Rio Brazos 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

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

¹ Operator name and Address		² OGRID Number
ARCO PERMIAN P.O. BOX 1610 MIDLAND, TX 79702		000990
		³ API Number
		30-0
⁴ Property Code	⁵ Property Name	⁶ Well Number
	DINAH 23 FED COM	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
M	23	17S	28E		1077	SOUTH	660	EAST	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					¹⁰ Proposed Pool 2				
EMPIRE, SOUTH, MORROW									

¹¹ Work Type Code	¹² Well Type Code	¹³ Cable/Rotary	¹⁴ Lease Type Code	¹⁵ Ground Level Elevation
N	G	R	S	3590
¹⁶ Multiple	¹⁷ Proposed Depth	¹⁸ Formations	¹⁹ Contractor	²⁰ Spud Date
NO	10800	MORROW		04-20-96

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	SURE
12 1/4	8 5/8	24	2600	940	SURE
7 7/8	5 1/2	15.5/17	10800	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.		OIL CONSERVATION DIVISION	
Signature: <i>Ken W. Gosnell</i>		Approved by:	
Printed name: KEN W. GOSNELL		Title:	
Title: AGENT		Approval Date:	Expiration Date:
Date: 03-28-96	Phone: 915 688-5672	Conditions of Approval: Attached <input type="checkbox"/>	

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

Santa Fe, New Mexico 87504-2088

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

AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

API Number	Pool Code	Pool Name Empire, South, Morrow
Property Code	Property Name DINAH 23 FED COM	Well Number 1
OGRID No. 000990	Operator Name ARCO PERMIAN	Elevation 3590

Surface Location

UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
M	23	17 S	28 E		1077	SOUTH	660	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	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>N = 660538.9 E = 555536.3</p> <p>← 660' →</p> <p>↓ 1077' ↓</p>	<p>OPERATOR CERTIFICATION</p> <p><i>I hereby certify the the information contained herein is true and complete to the best of my knowledge and belief.</i></p> <p><i>Ken W. Gosnell</i> Signature</p> <p>Ken W. Gosnell Printed Name</p> <p>Agent</p> <p>Title</p> <p>March 28, 1996 Date</p>	
	<p>SURVEYOR CERTIFICATION</p> <p><i>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.</i></p> <p>MARCH 1, 1996 Date Surveyed</p> <p>Signature & Seal of Professional Surveyor <i>Ronald J. Sidson</i> R.Q. Num. 96-1150304</p> <p>Certificate No. JOHN W. WEST 676 RONALD J. SIDSON 3239 GARY W. SIDSON 12641</p>	

ARCO Permian

Dinah 23 Fed. Com. Prospect

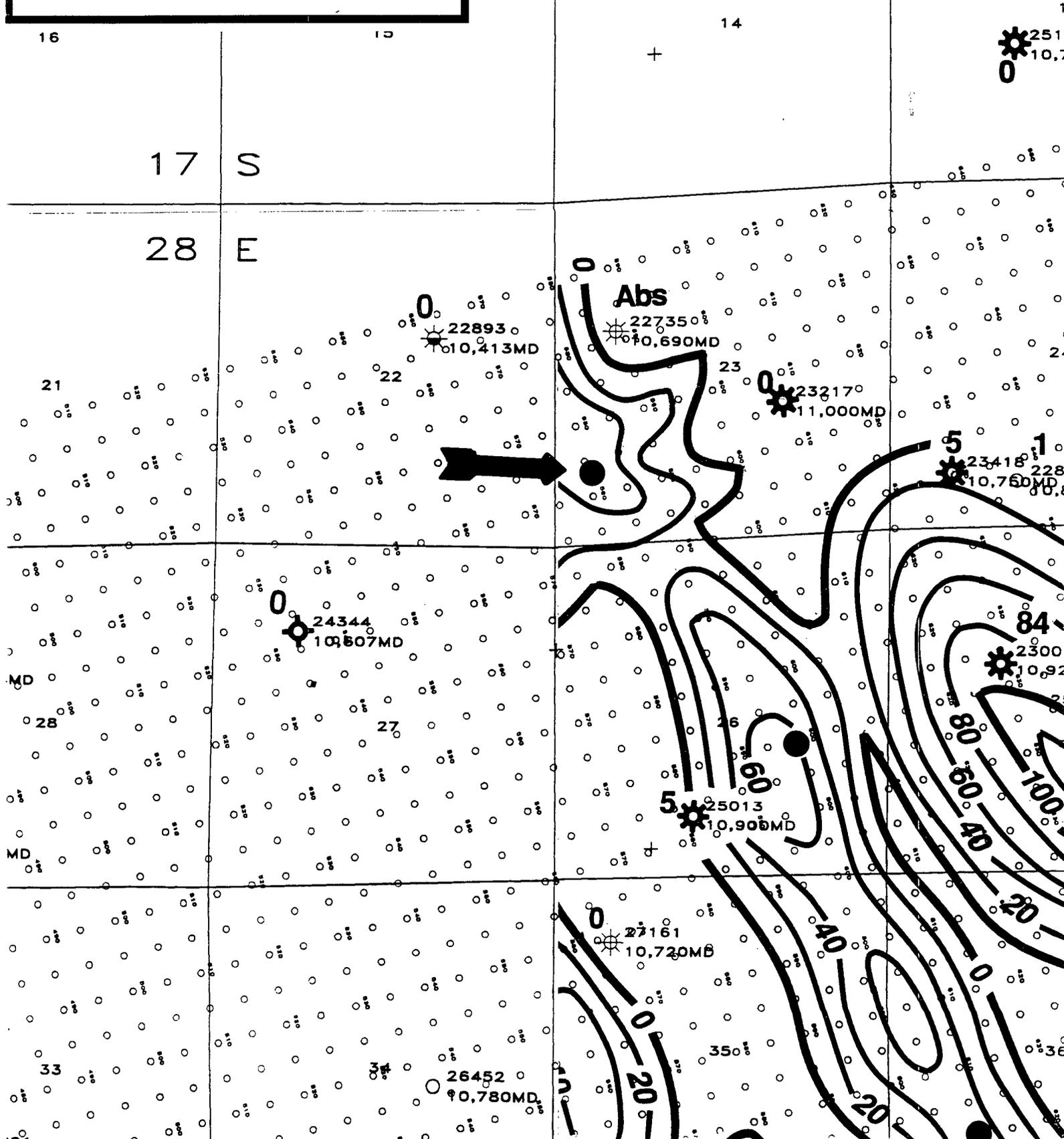
T-17S-R-28E

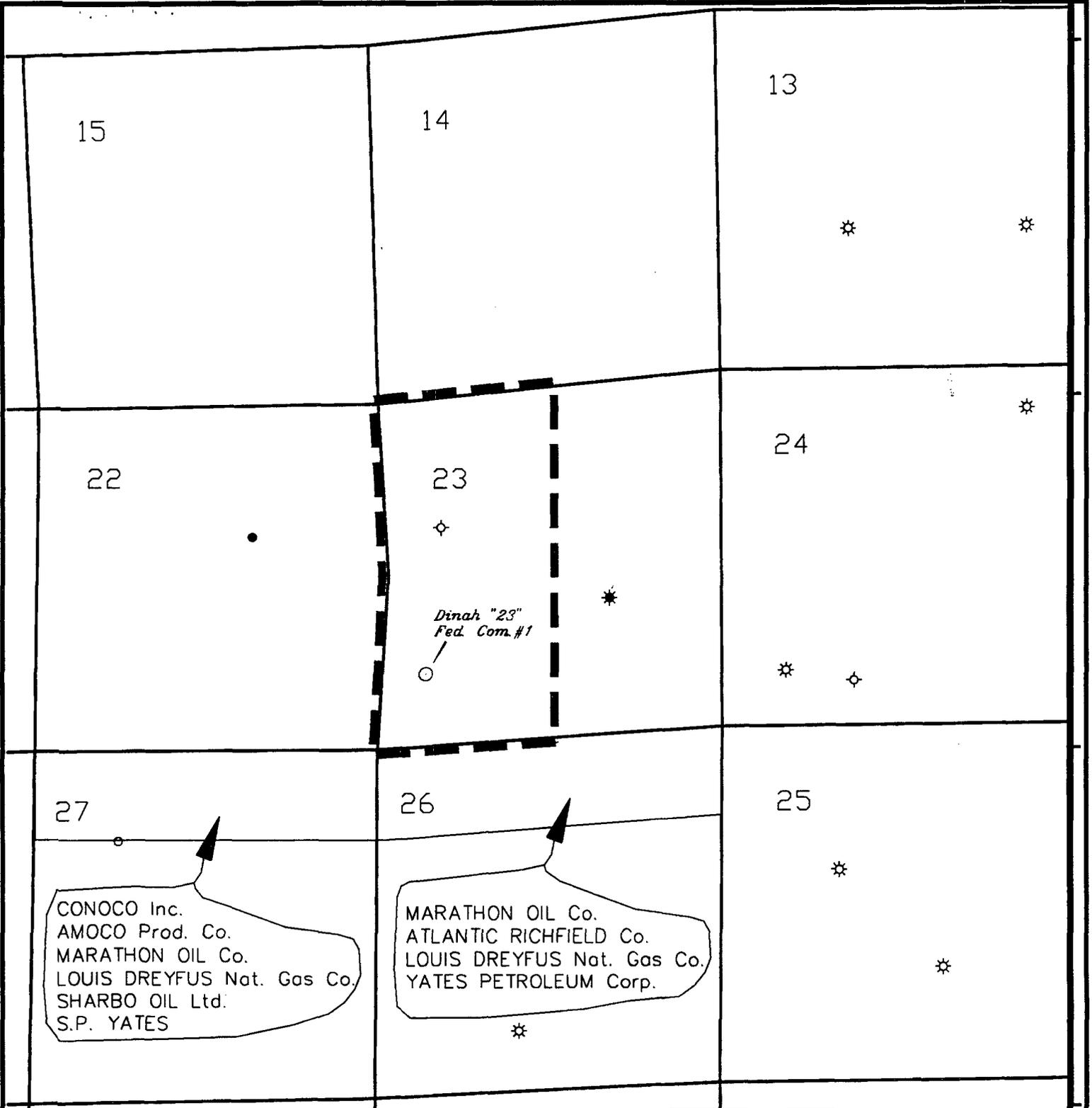
Wells 9000' and Below

Integrated Net Pay, Lwr-Mrw "C" Sd

C.I. 20'
DBP

1" = 2000'
2/28/96





27

CONOCO Inc.
 AMOCO Prod. Co.
 MARATHON OIL Co.
 LOUIS DREYFUS Nat. Gas Co.
 SHARBO OIL Ltd.
 S.P. YATES

26

MARATHON OIL Co.
 ATLANTIC RICHFIELD Co.
 LOUIS DREYFUS Nat. Gas Co.
 YATES PETROLEUM Corp.

Dinah "23"
 Fed. Com. #1

ARCO Permian 
 a Unit of Atlantic Richfield Company

EMPIRE ABO AREA
 Eddy County, New Mexico

Dinah "23" Fed. Com. #1
Sec. 23, T 17 S R 28 E

1077' FSL & 660' FWL
 (wells shown are MORROW penetrations)

By: Lee Scarborough	Drawn By: KAM	Date: 3-28-96
Date: 3-28-96	Revised By:	Date:
Dept: Land Admin.	Dwg No.: EMPRTXT nm\maps	

Offset Operator Notification
Unorthodox Location
Dinah 23 Federal Com No. 1
Township 17 South, Range 28 East
Section 23, 1077' FSL, 660' FWL
Eddy County, New Mexico

Yates Petroleum Corporation
105 South Fourth Street
Artesia, New Mexico 88210
Attention: Mr. Robert H. Bullock

Louis Dreyfus Natural Gas Corporation
14000 Quail Springs Parkway, Suite 600
Oklahoma City, Oklahoma 73134
Attention: Land Manager

Marathon Oil Company
Post Office Box 552
Midland, Texas 79702-0552
Attention: Mr. Randal Wilson

Amoco Production Company
501 WestLake Boulevard
Houston, Texas 77253
Attention: Mr. Jerry West

Sharbro Oil Ltd., Co.
Post Office Box 1668
Artesia, New Mexico 88210-0840

St. Clair Peyton Yates, Jr.
110 South Fourth Street
Artesia, New Mexico 88210

Conoco Inc.
10 Desta Drive West
Midland, Texas 79705
Attention: Mr. Warren Richardson



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

March 29, 1996

**Yates Petroleum Corporation
105 South Fourth Street
Artesia, New Mexico 88210**

**CERTIFIED MAIL
Return Receipt Requested**

Attention: Mr. Robert H. Bullock

**Re: Offset Operator Notification
Unorthodox Location
Dinah 23 Federal Com No. 1
Township 17 South, Range 28 East
Section 23, 1077' FSL, 660' FWL
Eddy County, New Mexico**

Ladies and Gentlemen:

ARCO Permian, a unit of Atlantic Richfield Company, plans to drill the Dinah Federal Com No. 1 Well at the unorthodox location described above. This location does not comply with the well spacing requirements set forth in New Mexico Oil Conservation Division Rule 104.C(2)(a) (Revised 1/96).

If you have no objections to this unorthodox location, please signify your approval by signing one copy of this letter in the space provided below and returning same to the undersigned. Any objection must be filed in writing with the New Mexico Oil Conservation Division within twenty (20) days from the date of this notice.

Very truly yours,

**Lee M. Scarborough
Land Director, SE New Mexico**

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

Company: Yates Petroleum Corporation

Name: _____

Title: _____

Date: _____



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

March 29, 1996

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

**CERTIFIED MAIL
 Return Receipt Requested**

Attention: Land Manager

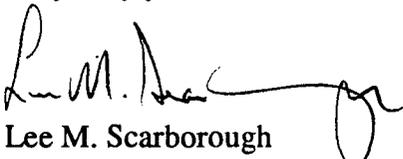
**Re: Offset Operator Notification
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 Township 17 South, Range 28 East
 Section 23, 1077' FSL, 660' FWL
 Eddy County, New Mexico**

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Company: Louis Dreyfus Natural Gas Corporation

Name: _____

Title: _____

Date: _____



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

March 29, 1996

**Marathon Oil Company
 Post Office Box 552
 Midland, Texas 79702-0552**

**CERTIFIED MAIL
 Return Receipt Requested**

Attention: Mr. Randal Wilson

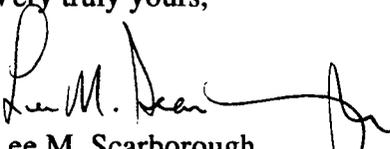
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 Land Director, SE New Mexico

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Company: Marathon Oil Company

Name: _____

Title: _____

Date: _____



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

March 29, 1996

**Amoco Production Company
501 WestLake Boulevard
Houston, Texas 77253**

**CERTIFIED MAIL
Return Receipt Requested**

Attention: Mr. Jerry West

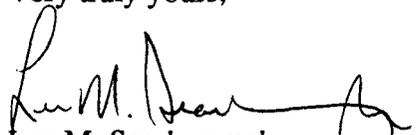
**Re: Offset Operator Notification
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Eddy County, New Mexico**

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Land Director, SE New Mexico

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

Company: Amoco Production Company

Name: _____

Title: _____

Date: _____



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

March 29, 1996

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Return Receipt Requested

Sharbro Oil Ltd., Co.
Post Office Box 1668
Artesia, New Mexico 88210-0840

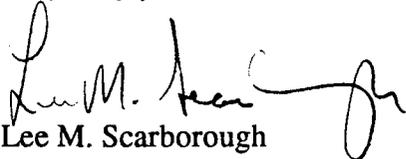
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Lee M. Scarborough
 Land Director, SE New Mexico

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

Company: Sharbro Oil Ltd., Co.

Name: _____

Title: _____

Date: _____



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

March 29, 1996

CERTIFIED MAIL
Return Receipt Requested

St. Clair Peyton Yates, Jr.
110 South Fourth Street
Artesia, New Mexico 88210

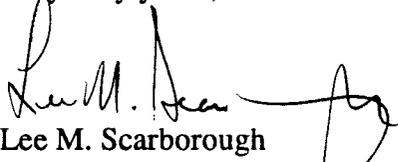
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Dinah 23 Federal Com No. 1
Township 17 South, Range 28 East
Section 23, 1077' FSL, 660' FWL
Eddy County, New Mexico

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 Land Director, SE New Mexico

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Company: St. Clair Peyton Yates, Jr

Name: _____

Title: _____

Date: _____



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

March 29, 1996

CERTIFIED MAIL
Return Receipt Requested

Conoco Inc.
10 Desta Drive West
Midland, Texas 79705

Attention: Mr. Warren Richardson

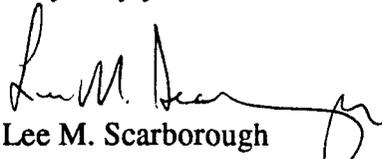
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Very truly yours,


Lee M. Scarborough
Land Director, SE New Mexico

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

Company: Conoco Inc.

Name: _____

Title: _____

Date: _____

CMD :
OG6C101

ONGARD
C101-APPLICATION FOR PERMIT TO DRILL

01/02/97 16:20:18
OGOMES -EMFR

OGRID Idn : 990 API Well No: 30 15 28946 APD Status(A/C/P): A
Opr Name, Addr: ARCO PERMIAN Aprvl/Cncl Date : 04-25-1996
PO BOX 1710
HOBBS,NM 88240

Prop Idn: 18890 DINAH 23 FEDERAL COM Well No: 1

	U/L	Sec	Township	Range	Lot	Idn	North/South	East/West
Surface Locn : M	23	17S	28E				FTG 1077 F S	FTG 660 F W
OCD U/L : M		API	County :	15				

Work typ(N/E/D/P/A) : N Well typ(O/G/M/I/S/W/C): G Cable/Rotary (C/R) : R
Lease typ(F/S/P/N/J/U/I): S Ground Level Elevation : 3590

State Lease No: Multiple Comp (Y/N) : N
Prpsd Depth : 10800 Prpsd Frmtn : MORROW

E0009: Enter data to modify record

PF01 HELP	PF02	PF03 EXIT	PF04 GoTo	PF05	PF06 CONFIRM
PF07	PF08	PF09 PRINT	PF10 C102	PF11 HISTORY	PF12

CMD :
OG6CLOG

ONGARD
C105-WELL COMPLETION OR RECOMP CASING LOG

01/02/97 16:20:07
OGOMES -EMFR

OGRID Identifier : 990 ARCO PERMIAN
Prop Identifier : 18890 DINAH 23 FEDERAL COM
API Well Identifier : 30 15 28946 Well No : 001
Surface Locn - UL : M Sec : 23 Twp : 17S Range : 28E Lot Idn :
Multiple comp (S/M/C) : N TVD Depth (Feet) : MVD Depth (Feet):
Spud Date : P/A Date :
Casing/Linear Record:

S Size Grade Weight Depth(ft) Depth(ft) Hole Size Cement ---- TOC ----
(inches) (lb/ft) Top-Liner Bot-Liner (inches) (Sacks) (feet) Code

E0004: No matching record found. Enter data to create.

PF01 HELP PF02 PF03 EXIT PF04 GoTo PF05 PF06 CONFIRM
PF07 PF08 PF09 COMMENT PF10 TLOG PF11 PF12

Facsimile Cover Sheet

To: Michael Stogner
Company: New Mexico Oil Conservation
Division
Phone:
Fax: 505/827-8177

From: Dave Percy
Company: ARCO Permian
Phone: 915/688-5355
Fax: 915/688-5246

Rec. March 29, 1996

Date: 03/29/96
**Pages including this
cover page:** 15

Comments:



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

March 29, 1996

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

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Empire (Morrow) Gas Pool
West half Sec. 23, T 17 S, R 28 E, Eddy County, NM**

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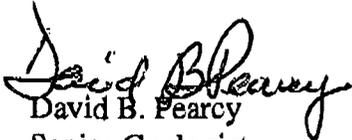
Mr. Michael Stogner
March 29, 1996
Page 2

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

Sincerely,


David B. Pearcy
Senior Geologist

DBP:elt
word/senm/pearcy/dinahocd.doc

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

Enclosures: Landplat
List of affected parties to S, SE, & SW
Geologic map
C-101, C-102
Notification letters

District I
PO Box 1960, Hobbs, NM 88241-1960
District II
PO Drawer DD, Artesia, NM 88211-0719
District III
1009 Rio Brueos 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

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

¹ Operator name and Address		² OGRID Number
ARCO PERMIAN P.O. BOX 1610 MIDLAND, TX 79702		000990
		³ API Number
		30-0
⁴ Property Code	⁵ Property Name	⁶ Well Number
	DINAH 23 FED COM	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
M	23	17S	28E		1077	SOUTH	660	EAST	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					¹⁰ Proposed Pool 2				
EMPIRE SOUTH MORROW									

¹¹ Work Type Code	¹² Well Type Code	¹³ Cable/Rotary	¹⁴ Lease Type Code	¹⁵ Ground Level Elevation
N	G	R	S	3590
¹⁶ Multiple	¹⁷ Proposed Depth	¹⁸ Formations	¹⁹ Contractor	²⁰ Spud Date
NO	10800	MORROW		04-20-96

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	SURE
12 1/4	8 5/8	24	2600	940	SURE
7 7/8	5 1/2	15.5/17	10800	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.		OIL CONSERVATION DIVISION	
Signature: <i>Ken W. Gosnell</i>			
Printed name: KEN W. GOSNELL		Approved by:	
Title: AGENT		Title:	
Date: 03-28-96		Approval Date: Expiration Date:	
Phone: 915 688-5672		Conditions of Approval: Attached <input type="checkbox"/>	

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, 1984
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, South, Morrow
Property Code	Property Name DINAH 23 FED COM	Well Number 1
OGRID No. 000990	Operator Name ARCO PERMIAN	Elevation 3590

Surface Location

UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
M	23	17 S	28 E		1077	SOUTH	660	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	Order No.
------------------------	-----------------	--------------------	-----------

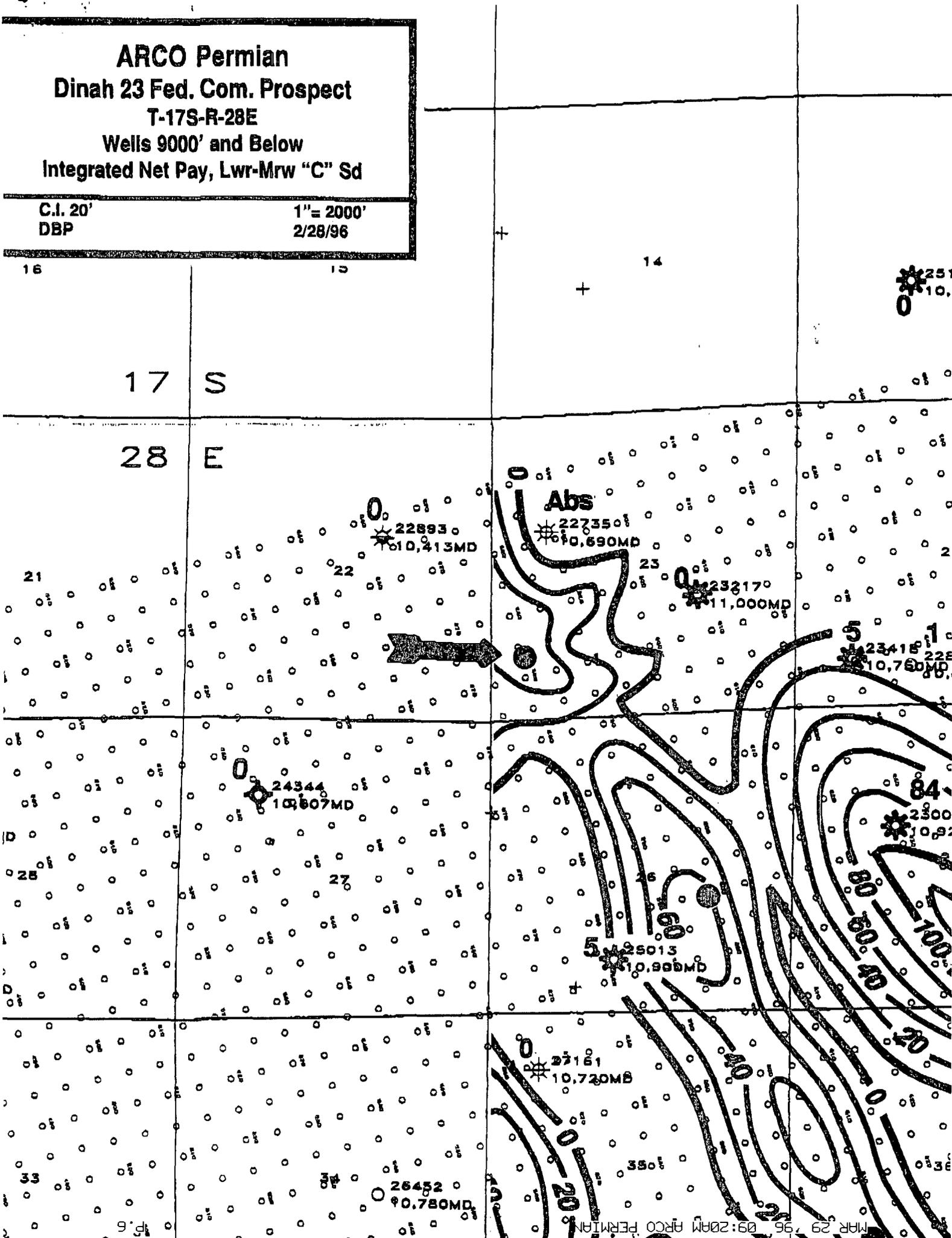
NO ALLOWABLE WILL BE ASSIGNED TO THIS COMPLETION UNTIL ALL INTERESTS HAVE BEEN CONSOLIDATED OR A NON-STANDARD UNIT HAS BEEN APPROVED BY THE DIVISION

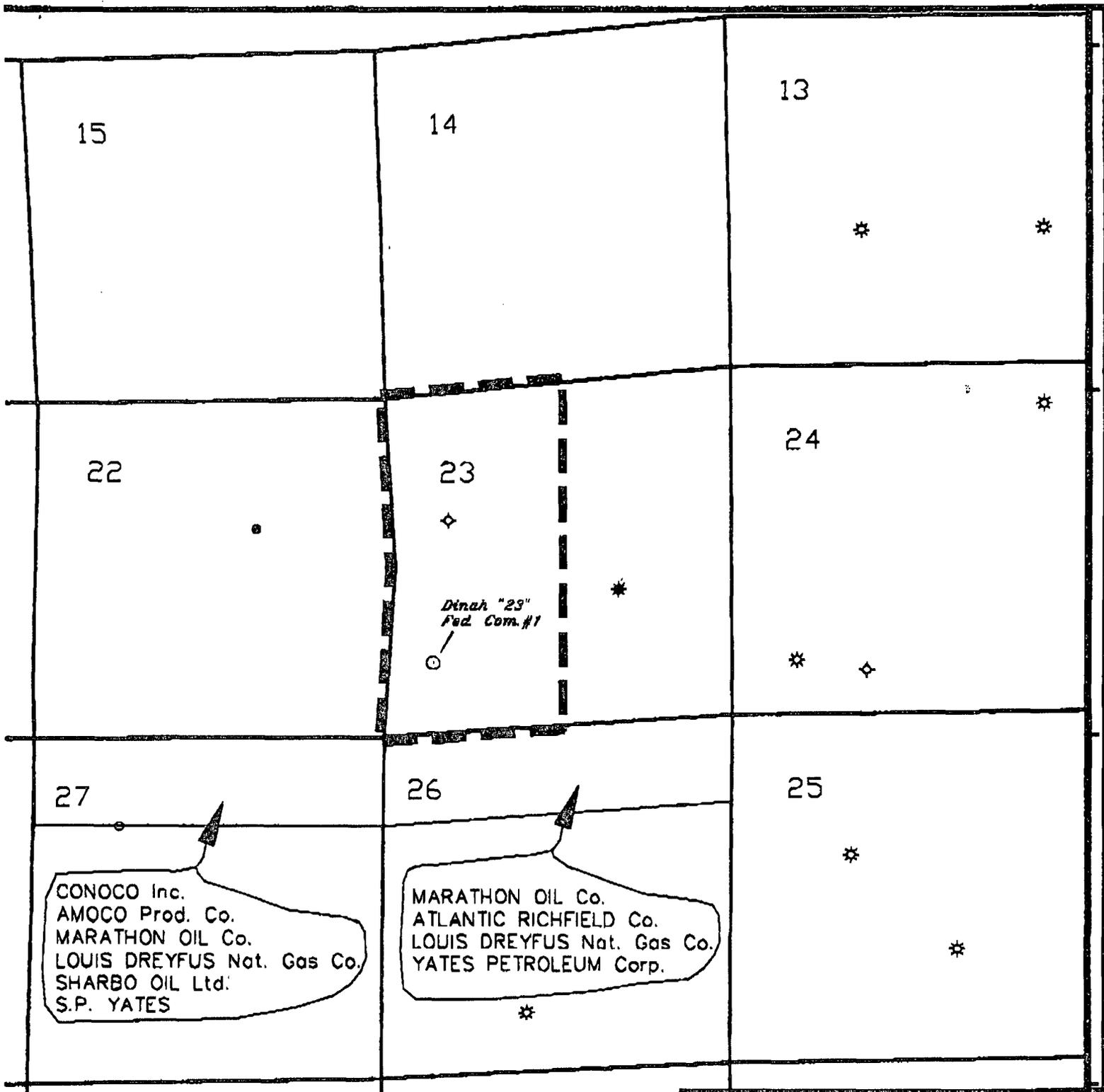
	<p>OPERATOR CERTIFICATION</p> <p>I hereby certify the the information contained herein is true and complete to the best of my knowledge and belief.</p> <p><i>Ken W Gosnell</i> Signature</p> <p>Ken W. Gosnell Printed Name</p> <p>Agent</p> <p>Title</p> <p>March 28, 1996 Date</p>
	<p>SURVEYOR CERTIFICATION</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>MARCH 1, 1996 Date Surveyed</p> <p>Signature & Seal of Professional Surveyor <i>Ronald J. Edson</i></p> <p>Professional Surveyor No. 3405-96 B.O. Num. 96-11-2304</p> <p>Certificate No. JOHN W. GOSNELL 878 RONALD J. EDSON 3239 SURVEYOR 12641</p>

ARCO Permian
Dinah 23 Fed. Com. Prospect
T-17S-R-28E
Wells 9000' and Below
Integrated Net Pay, Lwr-Mrw "C" Sd

C.I. 20'
 DBP

1" = 2000'
 2/28/96





CONOCO Inc.
 AMOCO Prod. Co.
 MARATHON OIL Co.
 LOUIS DREYFUS Nat. Gas Co.
 SHARBO OIL Ltd.
 S.P. YATES

MARATHON OIL Co.
 ATLANTIC RICHFIELD Co.
 LOUIS DREYFUS Nat. Gas Co.
 YATES PETROLEUM Corp.

Dinah "23"
 Fed. Com. #1

ARCO Permian
 a Unit of Atlantic Richfield Company

EMPIRE ABO AREA
 Eddy County, New Mexico

Dinah "23" Fed. Com. #1
Sec. 23, T 17 S R 28 E

1077' FSL & 660' FWL
 (wells shown are MORROW penetrations)

By: Les Scarborough	Drawn By: KAM	Date: 3-28-85
Date: 3-28-85	Revised By:	Date:
Dept: Land Admin.	Org No: ENPRTXT nm\maps	

**Offset Operator Notification
Unorthodox Location
Dinah 23 Federal Com No. 1
Township 17 South, Range 28 East
Section 23, 1077' FSL, 660' FWL
Eddy County, New Mexico**

**Yates Petroleum Corporation
105 South Fourth Street
Artesia, New Mexico 88210
Attention: Mr. Robert H. Bullock**

**Louis Dreyfus Natural Gas Corporation
14000 Quail Springs Parkway, Suite 600
Oklahoma City, Oklahoma 73134
Attention: Land Manager**

**Marathon Oil Company
Post Office Box 552
Midland, Texas 79702-0552
Attention: Mr. Randal Wilson**

**Amoco Production Company
501 WestLake Boulevard
Houston, Texas 77253
Attention: Mr. Jerry West**

**Sharbro Oil Ltd., Co.
Post Office Box 1668
Artesia, New Mexico 88210-0840**

**St. Clair Peyton Yates, Jr.
110 South Fourth Street
Artesia, New Mexico 88210**

**Conoco Inc.
10 Desta Drive West
Midland, Texas 79705
Attention: Mr. Warren Richardson**



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

March 29, 1996

CERTIFIED MAIL
Return Receipt Requested

Yates Petroleum Corporation
105 South Fourth Street
Artesia, New Mexico 88210

Attention: Mr. Robert H. Bullock

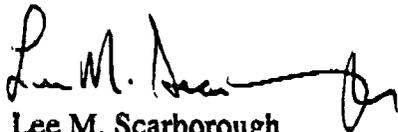
Re: Offset Operator Notification
Unorthodox Location
Dinah 23 Federal Com No. 1
Township 17 South, Range 28 East
Section 23, 1077' FSL, 660' FWL
Eddy County, New Mexico

Ladies and Gentlemen:

ARCO Permian, a unit of Atlantic Richfield Company, plans to drill the Dinah Federal Com No. 1 Well at the unorthodox location described above. This location does not comply with the well spacing requirements set forth in New Mexico Oil Conservation Division Rule 104.C(2)(a) (Revised 1/96).

If you have no objections to this unorthodox location, please signify your approval by signing one copy of this letter in the space provided below and returning same to the undersigned. Any objection must be filed in writing with the New Mexico Oil Conservation Division within twenty (20) days from the date of this notice.

Very truly yours,


Lee M. Scarborough
Land Director, SE New Mexico

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

Company: Yates Petroleum Corporation

Name: _____

Title: _____

Date: _____



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

March 29, 1996

Louis Dreyfus Natural Gas Corporation
 14000 Quail Springs Parkway, Suite 600
 Oklahoma City, Oklahoma 73134

CERTIFIED MAIL
Return Receipt Requested

Attention: Land Manager

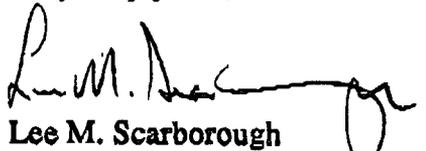
Re: Offset Operator Notification
Unorthodox Location
Dinah 23 Federal Com No. 1
Township 17 South, Range 28 East
Section 23, 1077' FSL, 660' FWL
Eddy County, New Mexico

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Very truly yours,


Lee M. Scarborough
Land Director, SE New Mexico

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

Company: Louis Dreyfus Natural Gas Corporation

Name: _____

Title: _____

Date: _____



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

March 29, 1996

**Marathon Oil Company
 Post Office Box 552
 Midland, Texas 79702-0552**

**CERTIFIED MAIL
 Return Receipt Requested**

Attention: Mr. Randal Wilson

**Re: Offset Operator Notification
 Unorthodox Location
 Dinah 23 Federal Corn No. 1
 Township 17 South, Range 28 East
 Section 23, 1077' FSL, 660' FWL
 Eddy County, New Mexico**

Ladies and Gentlemen:

ARCO Permian, a unit of Atlantic Richfield Company, plans to drill the Dinah Federal Corn No. 1 Well at the unorthodox location described above. This location does not comply with the well spacing requirements set forth in New Mexico Oil Conservation Division Rule 104.C(2)(a) (Revised 1/96).

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Very truly yours,

**Lee M. Scarborough
 Land Director, SE New Mexico**

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

Company: Marathon Oil Company

Name: _____

Title: _____

Date: _____



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

March 29, 1996

**Amoco Production Company
 501 WestLake Boulevard
 Houston, Texas 77253**

**CERTIFIED MAIL
 Return Receipt Requested**

Attention: Mr. Jerry West

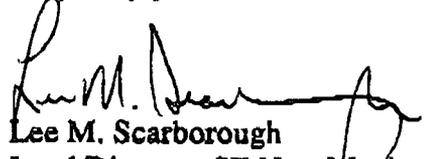
**Re: Offset Operator Notification
 Unorthodox Location
 Dinah 23 Federal Com No. 1
 Township 17 South, Range 28 East
 Section 23, 1077' FSL, 660' FWL
 Eddy County, New Mexico**

Ladies and Gentlemen:

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Very truly yours,


**Lee M. Scarborough
 Land Director, SE New Mexico**

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

Company: Amoco Production Company

Name: _____

Title: _____

Date: _____



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

March 29, 1996

Sharbro Oil Ltd., Co.
Post Office Box 1668
Artesia, New Mexico 88210-0840

CERTIFIED MAIL
Return Receipt Requested

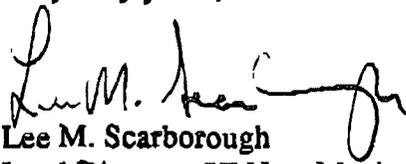
Re: Offset Operator Notification
Unorthodox Location
Dinah 23 Federal Com No. 1
Township 17 South, Range 28 East
Section 23, 1077' FSL, 660' FWL
Eddy County, New Mexico

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Very truly yours,


Lee M. Scarborough
Land Director, SE New Mexico

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

Company: Sharbro Oil Ltd., Co.

Name: _____

Title: _____

Date: _____



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

March 29, 1996

**St. Clair Peyton Yates, Jr.
 110 South Fourth Street
 Artesia, New Mexico 88210**

**CERTIFIED MAIL
 Return Receipt Requested**

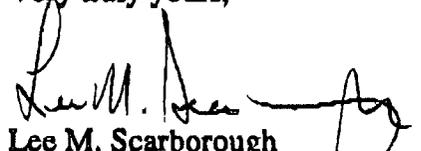
**Re: Offset Operator Notification
 Unorthodox Location
 Dinah 23 Federal Com No. 1
 Township 17 South, Range 28 East
 Section 23, 1077' FSL, 660' FWL
 Eddy County, New Mexico**

Ladies and Gentlemen:

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Very truly yours,


**Lee M. Scarborough
 Land Director, SE New Mexico**

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

Company: St. Clair Peyton Yates, Jr

Name: _____

Title: _____

Date: _____



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

March 29, 1996

Conoco Inc.
10 Desta Drive West
Midland, Texas 79705

CERTIFIED MAIL
Return Receipt Requested

Attention: Mr. Warren Richardson

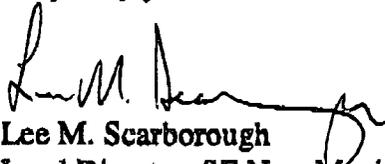
Re: Offset Operator Notification
Unorthodox Location
Dinah 23 Federal Com No. 1
Township 17 South, Range 28 East
Section 23, 1077' FSL, 660' FWL
Eddy County, New Mexico

Ladies and Gentlemen:

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Very truly yours,


Lee M. Scarborough
Land Director, SE New Mexico

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

Company: Conoco Inc.

Name: _____

Title: _____

Date: _____

Mr. Michael Stogner FAX 505 827-8177
New Mexico Oil Conservation Division
2040 South Pacheco
Santa Fe, NM 87505

DRAFT 3/26/96. Your comments, please, Mike?
From ARCO Permian, Midland; Attn Dave Percy 915/688-5355, fax 688-5246

Re: Application for Unorthodox Location
DINAH 23 FED COM #1
Empire (Morrow) Gas Pool
West half Sec. 23, T 17 S, R 28 E, Eddy County, NM

Dear Mr. Stogner:

ARCO Permian respectfully requests administrative approval for an unorthodox Morrow gas well, the ARCO Dinah 23 Fed Com #1. This well is staked on Fee lands, 1077 FSL and 660 FWL of Sec 23, T17S R28E, for geological reasons. All possible standard locations in the west-half 320-acre proration unit were carefully considered, but were deemed undrillable due to high potential for economic waste and poorer-quality Morrow sands.

Notification to the offset operators to the south, southeast, and southwest, was made by certified mail on -- TBA--including a copy of this application letter with the required plat. 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 Forms C-101 and C-102, a land plat showing all offset operators, a list of the encroached-upon operators, 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 a general Northwest-Southeast trend for highly-variable fluvial "C" sands in this area. Our location must be construed as high-risk, since none of the wells in this area have encountered the pay-quality sand we are targetting. Well #25013 one mile south in Sec 26 tested "tight" in the "C interval, and was completed in the Atoka for 0.5 BCF. Well #23217 in Section 26 produced 0.3 BCF from the Atoka, and is inactive. The three other Morrow-depth dry holes in Sections 22, 23, and 27 were never completed in the Morrow.

Our stratigraphic analysis indicates the "C" sand reservoir is best-developed at our unorthodox location. Any farther north in the section puts us in rough terrain and closer to a northern "zero-edge" where the Lower Morrow sands are known to be absent. ARCO believes that the unorthodox location **alone** offers acceptable risk, and that any other wellsite in the proration unit would present untenable risk. All the nearby dry holes amply demonstrate the economic hazards of drilling in this area. Even at the optimum location, ARCO and partners are taking substantial risk of finding tight sands or missing the Morrow pay altogether.

ARCO Permian believes approval of the unorthodox Dinah 23 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,

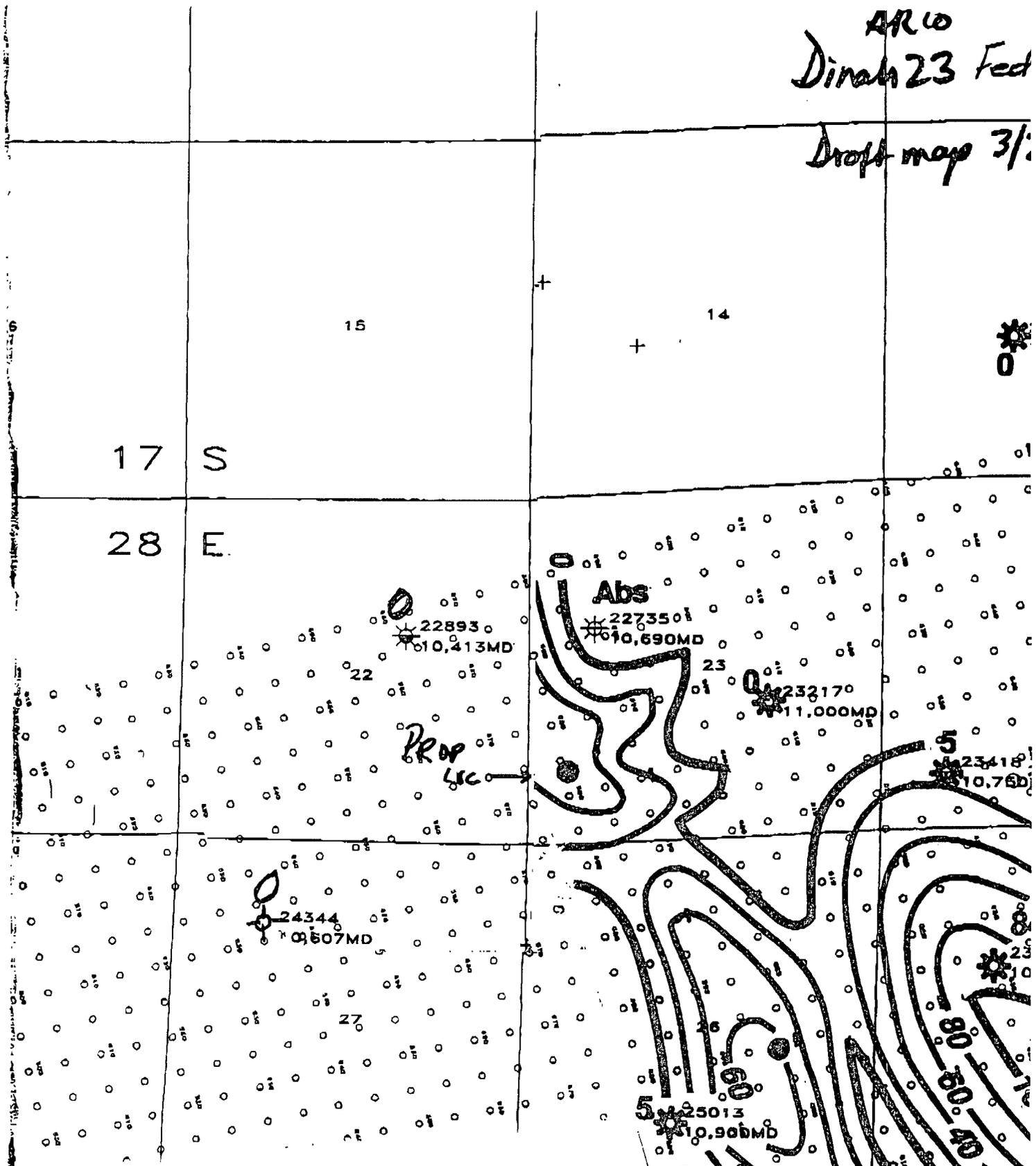
David B. Percy
Senior Geologist

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

enclosures: Landplat TBA
List of affected parties to S, SE, & SW
Geologic map
C-101, C-102
No cross section?

dinahocd.doc

AR 10
Dirah 23 Fed
Draft map 3/



17 S

28 E

15

14

22893
10,413MD

Abs
227350
10,690MD

232170
11,000MD

Prop
Lic

24344
9,507MD

23418
10,760

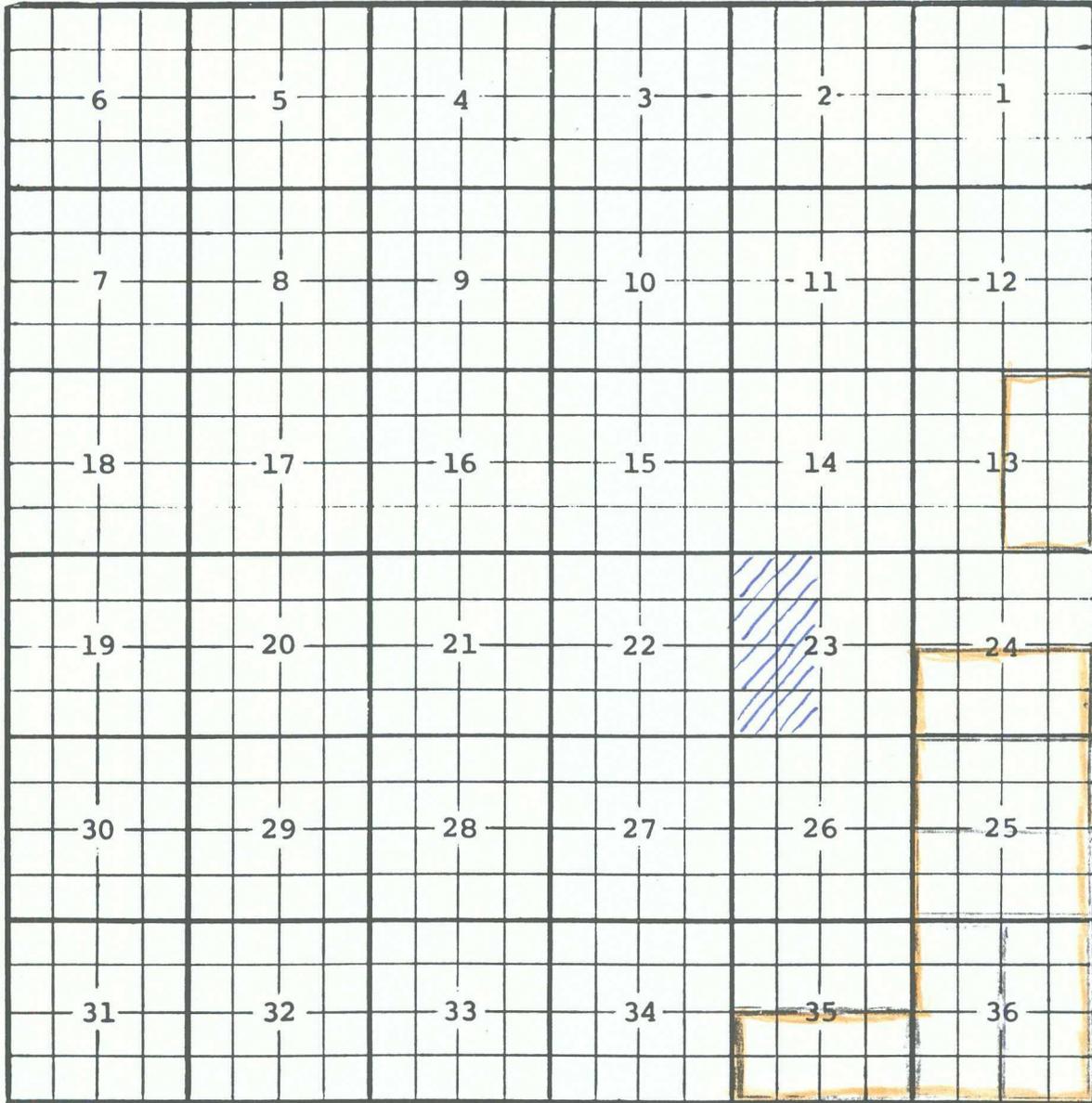
25013
10,900MD

County Eddy Pool South Empire - Morrow Gas

TOWNSHIP 17 South

Range 28 East

NMPM



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)

