



STATE OF NEW MEXICO  
 ENERGY AND MINERALS DEPARTMENT  
 OIL CONSERVATION DIVISION

BRUCE KING  
 GOVERNOR  
 LARRY KEHOE  
 SECRETARY

April 20, 1982

POST OFFICE BOX 2088  
 STATE LAND OFFICE BUILDING  
 SANTA FE, NEW MEXICO 87501  
 (505) 827-2434

Mesa Petroleum Co.  
 P.O. Box 2009  
 Amarillo, Texas 79189-2009  
 Exxon Company, USA  
 P. O. Box 1600  
 Midland, Texas 79702

Attention: ~~Melba Kripling~~ R.E. Mathis

Administrative Order NSP-<sup>1403</sup>~~1305~~(L)

Gentlemen:

270.5

Reference is made to your application for a ~~296.5~~ acre non-standard proration unit consisting of the following acreage in the ~~Atoka-Morrow Pool and Burton Flat Field:~~ ~~Diamond~~

Diamond Mound Atoka-Morrow Gas Pool;  
 EDDY COUNTY, NEW MEXICO  
 TOWNSHIP 16 SOUTH, RANGE 28 EAST, NMPM  
 Section 4: Lots 3-6 and 11-14

to be It is my understanding that this unit is to be dedicated to your ~~Burton Flat~~ <sup>DEPS</sup> Federal ~~Comm.~~ Well No. 2 located at an unorthodox location ~~1917~~ <sup>1785</sup> feet from the North line and 660 feet from the West line of said Section 4

By authority granted me under the provisions of Rule 104 D II, the above non-standard proration unit is hereby approved.

Sincerely,

JOE D. RAMEY,  
 Director

JDR/RLS/dr

cc: Oil Conservation Division - Artesia  
 Oil & Gas Engineering Committee - Hobbs  
 Minerals Management Service - Artesia

hereby approved under provisions of Rule 104F.



RECEIVED  
SEP - 6 1983  
OIL CONSERVATION DIVISION  
SANTA FE

September 1, 1983

Mr. R. L. Stamets  
Energy and Minerals Department  
New Mexico Oil Conservation Division  
P. O. Box 2088  
Santa Fe, New Mexico 87501

*NSP (L) 1405  
6-13-86 and  
11-14  
Rule 104 D II and  
Rule 104 F  
9-26-83*

Dear Mr. Stamets:

Subject: Unorthodox Location and Non-standard  
Proration Unit in the Diamond Mound  
Atoka-Morrow Gas Pool  
Mesa Petroleum Co.  
Depco Federal #2  
990' FNL & 660' FWL  
Sec. 4, T16S, R28E  
Eddy County, New Mexico

Application is hereby made for administrative approval of a 270.5 acre non-standard proration unit due to variation in the legal subdivision of the U.S. Public Land Survey and for an unorthodox location due to geology.

Exhibit I is the One Mile Radius Land Map showing Mesa Petroleum Co., Tenneco, and Amoco Production as being offset operators to the Depco lease and Exhibits II and III are Designation of Operator naming Mesa Petroleum Co. as operator of subject well. Exhibit IV is a plat showing the survey anomaly. Exhibit V is a geological statement explaining the necessity for the non-standard location.

By copy of this letter, offset operators are notified by certified mail of this request.

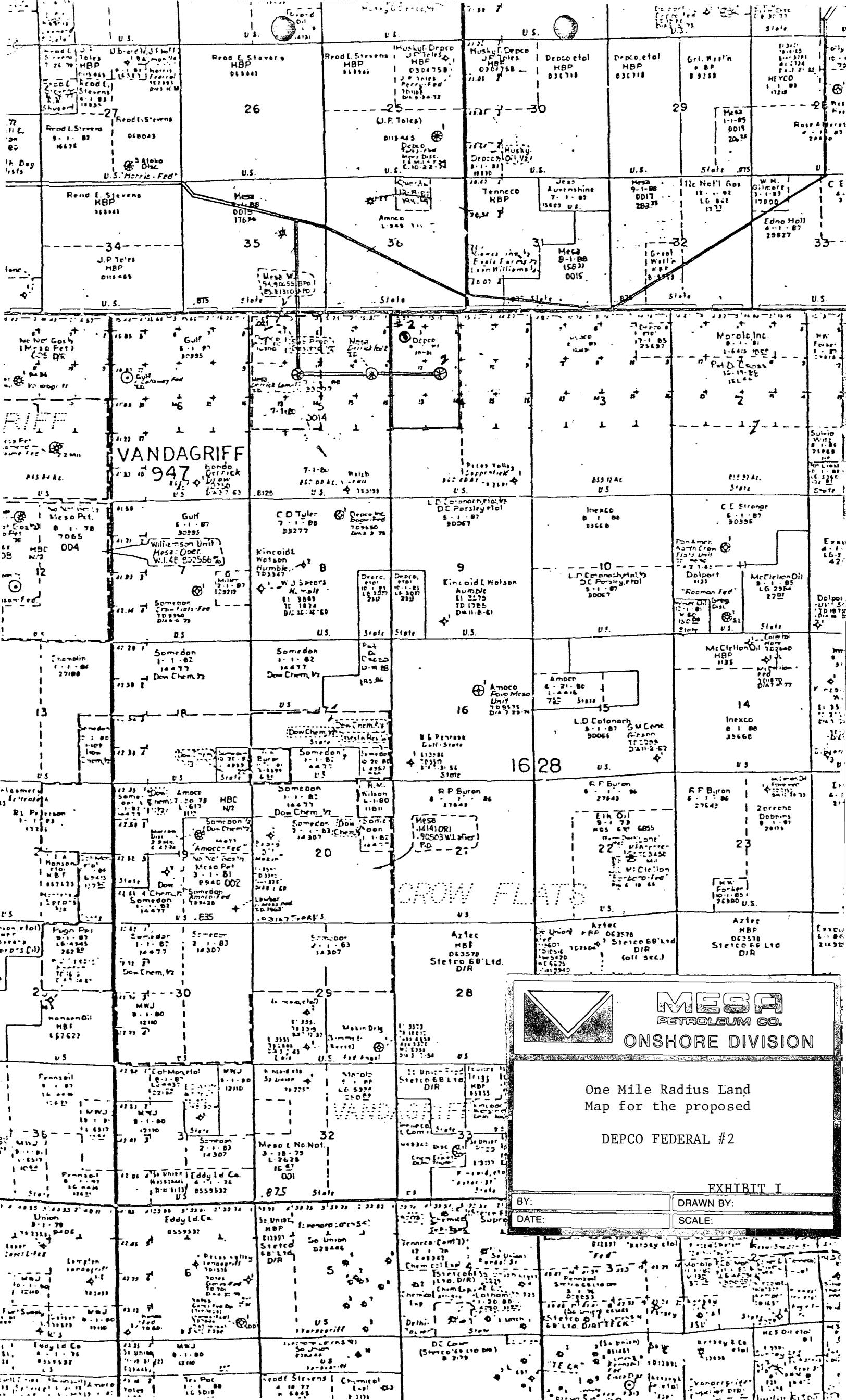
Yours truly,

*R. E. Mathis*

R. E. Mathis  
Regulatory Coordinator  
Onshore Operations Division

Attachments

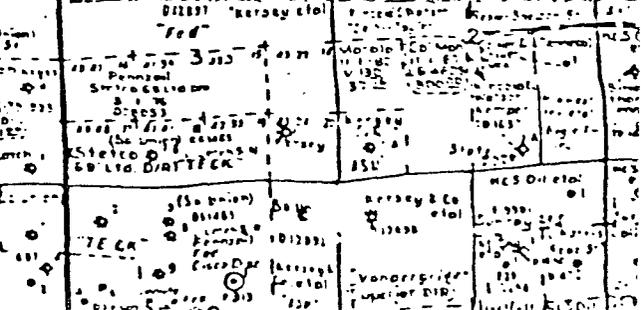
XC: NMOCD-A, BLM-R, Cen Rcds, Ops (File),  
Midland, Roswell, Partners, Amoco, Tenneco



One Mile Radius Land Map for the proposed  
DEPCO FEDERAL #2

EXHIBIT I

BY: \_\_\_\_\_ DRAWN BY: \_\_\_\_\_  
DATE: \_\_\_\_\_ SCALE: \_\_\_\_\_



### DESIGNATION OF OPERATOR

The undersigned is, on the records of the Bureau of Land Management, holder of lease

DISTRICT LAND OFFICE: Santa Fe, New Mexico  
SERIAL NO.: NM-18831

and hereby designates

NAME: Mesa Petroleum Company  
ADDRESS: Suite 1000 Vaughn Building  
400 W Texas Avenue  
Midland, Texas 79701

as his operator and local agent, with full authority to act in his behalf in complying with the terms of the lease and regulations applicable thereto and on whom the supervisor or his representative may serve written or oral instructions in securing compliance with the Operating Regulations with respect to (describe acreage to which this designation is applicable):

Township 16 South, Range 28 East, NMPM  
Sec 4: Lots 3-6, 11-14

RECEIVED  
SEP - 6 1983  
OIL CONSERVATION DIVISION  
SANTA FE

It is understood that this designation of operator does not relieve the lessee of responsibility for compliance with the terms of the lease and the Operating Regulations. It is also understood that this designation of operator does not constitute an assignment of any interest in the lease.

In case of default on the part of the designated operator, the lessee will make full and prompt compliance with all regulations, lease terms, or orders of the Secretary of the Interior or his representative.

The lessee agrees promptly to notify the supervisor of any change in the designated operator.

DEPCO, Inc.

By: C. D. Crump  
(Signature of lessee)  
C. D. Crump, Vice President  
1000 Petroleum Building, 110-16th St  
Denver, Colorado 80202  
(Address)

February 15, 1980  
(Date)

# DESIGNATION OF OPERATOR

**RECEIVED**  
SEP - 6 1983  
OIL CONSERVATION DIVISION  
SANTA FE

The undersigned is, on the records of the Bureau of Land Management, holder of lease

DISTRICT LAND OFFICE: Roswell, New Mexico  
SERIAL NO.: NM-18831

**RECEIVED**

FEB 27 1980

U.S. GEOLOGICAL SURVEY  
ARTESIA, NEW MEXICO

and hereby designates

NAME: Mesa Petroleum Co.  
ADDRESS: Suite 1000, Vaughn Building  
Midland, Texas 79701

as his operator and local agent, with full authority to act in his behalf in complying with the terms of the lease and regulations applicable thereto and on whom the supervisor or his representative may serve written or oral instructions in securing compliance with the Operating Regulations with respect to (describe acreage to which this designation is applicable):

Lots 3 thru 6, Lots 11 thru 14  
Section 4-T16S-R28E, NMPM  
Eddy County, New Mexico

It is understood that this designation of operator does not relieve the lessee of responsibility for compliance with the terms of the lease and the Operating Regulations. It is also understood that this designation of operator does not constitute an assignment of any interest in the lease.

In case of default on the part of the designated operator, the lessee will make full and prompt compliance with all regulations, lease terms, or orders of the Secretary of the Interior or his representative.

The lessee agrees promptly to notify the supervisor of any change in the designated operator.

*Jake L. Hamon*  
.....  
(Signature of lessee)

Jake L. Hamon  
.....  
P. O. Box 663, Dallas, Texas 75221  
.....  
(Address)

*Feb 27, 1980*  
.....  
(Date)

OIL CONSERVATION DIVISION

STATE OF NEW MEXICO  
ENERGY AND MINERALS DEPARTMENT

P. O. BOX 2088  
SANTA FE, NEW MEXICO 87501

Form C-102  
Revised 10-1-78

All distances must be from the outer boundaries of the Section.

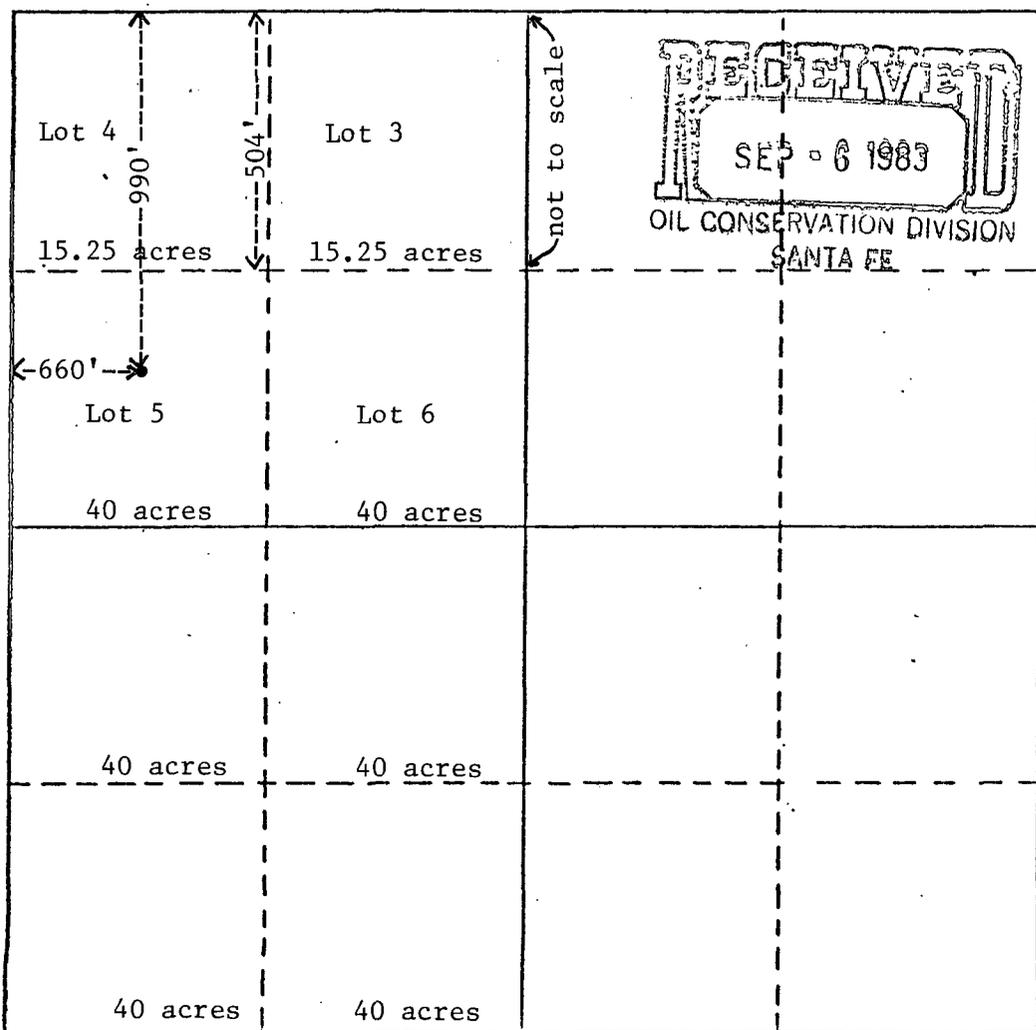
Operator Mesa Petroleum Co.			Lease Depco Federal		Well No. 2
Unit Letter D	Section 4	Township 16 South	Range 28 East	County Eddy	
Actual Footage Location of Well: 990 feet from the North line and 660 feet from the West line					
Ground Level Elev.	Producing Formation Morrow		Pool Diamond Mound Atoka-Morrow		Dedicated Acreage: 270.5 Acres

1. Outline the acreage dedicated to the subject well by colored pencil or hachure marks on the plat below.
2. If more than one lease is dedicated to the well, outline each and identify the ownership thereof (both as to working interest and royalty).
3. If more than one lease of different ownership is dedicated to the well, have the interests of all owners been consolidated by communitization, unitization, force-pooling, etc?

Yes  No If answer is "yes," type of consolidation \_\_\_\_\_

If answer is "no," list the owners and tract descriptions which have actually been consolidated. (Use reverse side of this form if necessary.) \_\_\_\_\_

No allowable will be assigned to the well until all interests have been consolidated (by communitization, unitization, forced-pooling, or otherwise) or until a non-standard unit, eliminating such interests, has been approved by the Division.



CERTIFICATION

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

*R. E. Mathis*

Name  
R. E. Mathis  
Position  
Regulatory Coordinator  
Company  
Mesa Petroleum Co.  
Date  
9-1-83

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 knowledge and belief.

EXHIBIT IV

Date Surveyed  
Registered Professional Engineer and/or Land Surveyor  
Certificate No.

0 330 660 990 1320 1680 1980 2310 2640 2000 1500 1000 500 0



Geologic Conditions Requiring Unorthodox Location

Mesa, Depco Federal #2  
990' FNL, 660' FWL,  
Section 4, T16S, R28E  
Eddy County, New Mexico

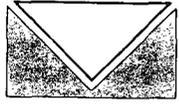
Mesa proposes to drill at this unorthodox location because only at this location or farther northwest in Section 4 can we expect Morrow sandstones that are sufficiently thick and structurally high to be economic.

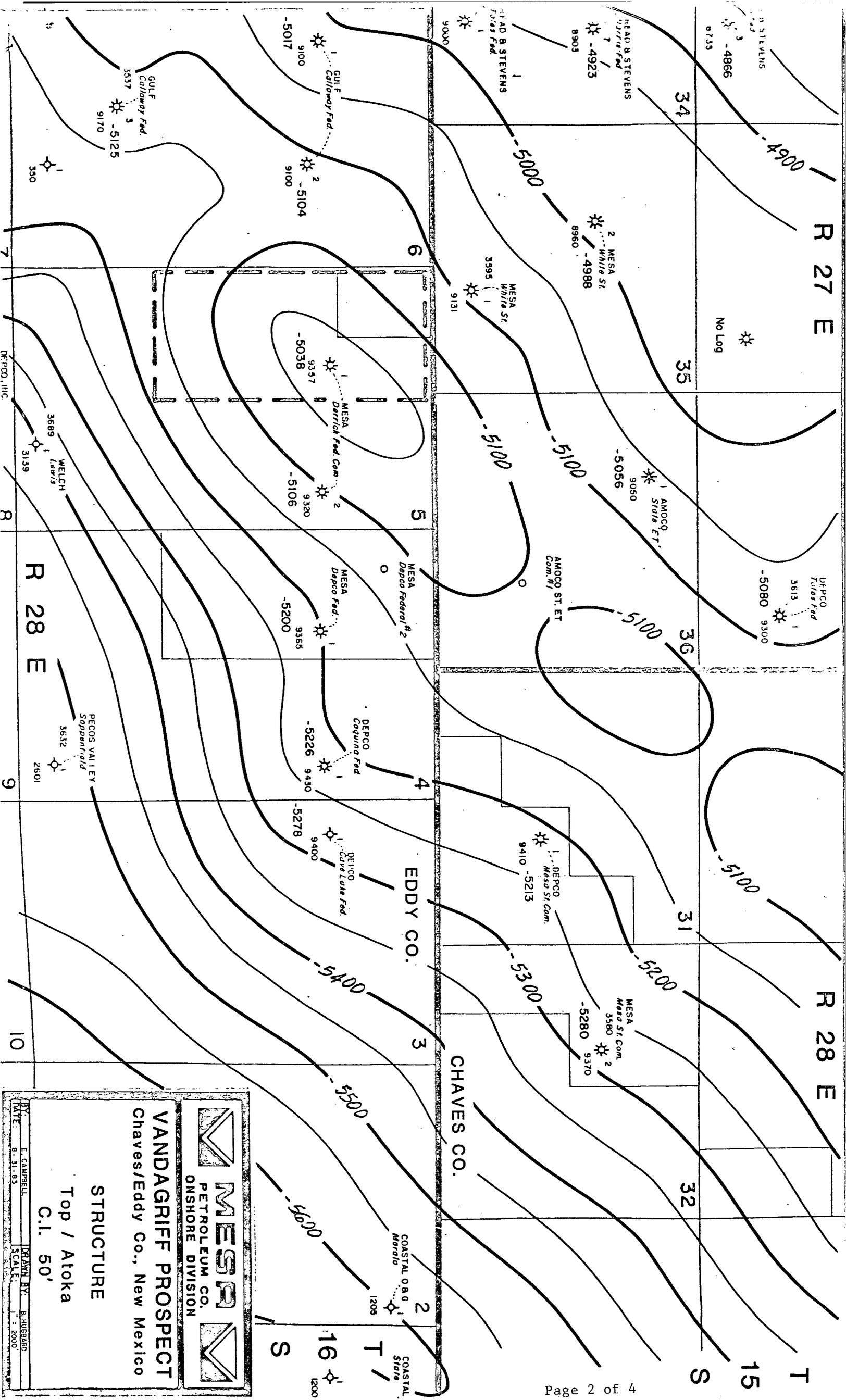
Mesa drilled the Depco Federal #1 at a location 2160' FNL, 1980' FWL, Section 4, T16S, R28E. This well penetrated an Atoka-Morrow section that had very little productive sandstone. This well is uneconomic.

Isopach maps of the productive Morrow sandstones in the area show that the only place within Section 4 that an economic Atoka-Morrow well could be drilled is in the northwest corner of the Section, less than 1980 feet from the north line.

This is demonstrated on the attached maps and cross section. Economically productive sands penetrated in the Mesa Derrick Federal #2 and not present in the Mesa Depco Federal #1, trend to the northeast from the Derrick #2 and are thick at Mesa's proposed location. Furthermore, our proposed location is projected to be at a structural position sufficiently higher than the Mesa Depco Federal #1 to be above the gas-water contact of the E sandstone. No orthodox locations within the section will be sufficiently higher than the Mesa Depco Federal #1.

*Edith Campbell*  
Edith Campbell  
Exploitation Geologist

	<b>MESA</b> PETROLEUM CO. ONSHORE DIVISION
EXHIBIT V	
Page 1 of 4	
BY:	DRAWN BY:
DATE:	SCALE:



R 27 E

R 28 E

R 28 E

T  
S  
15

**MESPA**  
**PETROLEUM CO.**  
**ONSHORE DIVISION**

**VANDAGRIFF PROSPECT**  
 Chaves/Eddy Co., New Mexico

**STRUCTURE**  
 Top / Atoka  
 C.I. 50'

BY DATE: E. CAMPBELL 8-31-93  
 DRAWN BY: B. HUBBARD  
 SCALE: 1" = 2000'

R 27 E

R 28 E

STEVENSON  
M735

34

35

36

31

32

HEAD & STEVENSON  
M735

8903

6/0  
2 MESA  
White St.  
8960

HEAD & STEVENSON  
M735

MESA  
White St.  
3595  
9131

AMOCO ST. ET  
Com #1  
26/8

7/0  
1 AMOCO  
State ET  
9050

DEPCO  
Tules Fed.  
4/2

3613  
9300

DEPCO  
Mesa St. Com.  
9410  
14/9

MESA  
Mesa St. Com.  
3580  
19/10  
9370

CHAVES CO.

EDDY CO.

COASTAL O&G  
Mardio  
1206

COASTAL  
State  
1200

GULF  
Calloway Fed.  
9100  
0/0  
2  
4/0  
9100

MESA  
Derick Fed. Com.  
22/14  
9357  
9320

MESA  
Depco Fed.  
0/0  
9365

DEPCO  
Covina Fed.  
22/12  
9430

DEPCO  
Cave Lake Fed.  
9/2  
9400

GULF  
Calloway Fed.  
3537

9170

350

WELCH  
Lawrs  
3689  
3139

PECOS VALLEY  
Soppentfeld  
3632  
2601

R 28 E

10

BY: E. CAMPBELL  
DATE: 8-31-83

DRAWN BY: B. HUBBARD  
SCALE: 1" = 2000'



PETROLEUM CO.  
ONSHORE DIVISION

VANDAGRIFF PROSPECT  
Chaves/Eddy Co., New Mexico

ISOPACH

Porous Sand  
'E' Sandstone

C.I. = 5'

T  
15  
S

1

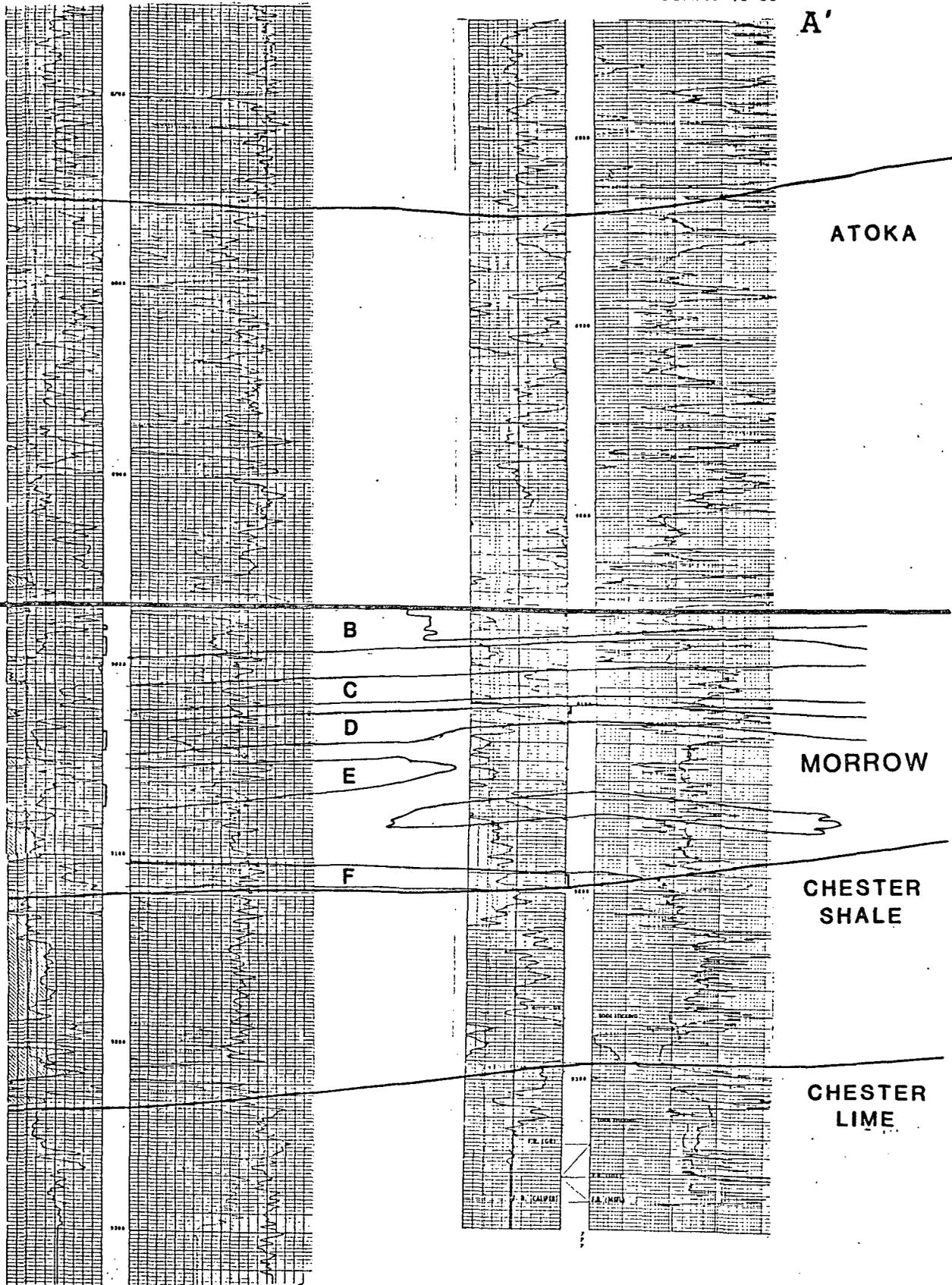
MESA PETROLEUM CO.  
#2 Derrick Federal  
Eddy Co., New Mexico

ELEV. K.B. 3669'  
T.D. 9320'  
SPUD: 2-19-80  
5-T16S-R28E  
COMP: 4-23-80

2

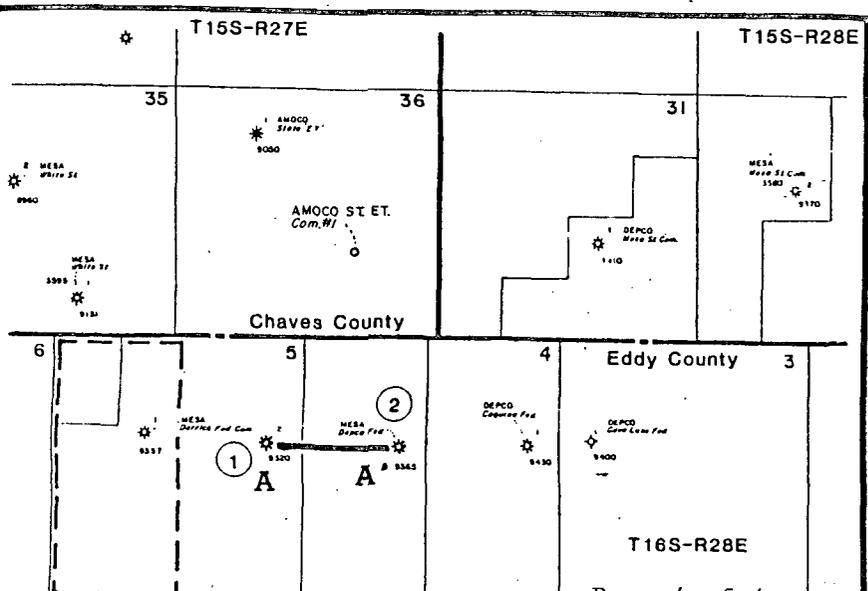
MESA PETROLEUM CO.  
#1 Depco Federal  
Eddy Co., New Mexico

ELEV. K.B. 3639'  
T.D. 9365'  
SPUD: 4-16-80  
4-T16S-R28E  
COMP: 6-10-80



PERF: 8978'-80', 8984'-94',  
9034'-44', 9062'-74' W/1SPF  
IPCAOF: 10.461 MMCFGPD,  
GOR 82.135  
SIWHP: 2515#  
SIBHP: 2528#

PERF: 9100'-04', 9190'-97' W/1SPF  
IPCAOF: 3.177 MMCFGPD,  
GOR 63.311  
SIWHP: 3160#  
SIBHP: 3173#  
W/1SPF



**MESA**  
PETROLEUM CO.  
ONSHORE OPERATIONS DIVISION

**VANDAGRIFF PROSPECT**  
Chaves/Eddy Co., New Mexico

**STRATIGRAPHIC  
CROSS SECTION**

E. CAMPBELL DRAWN BY B. HUBBARD  
9-1-83



**Amoco Production Company (USA)**

Houston Region-West  
501 WestLake Park Boulevard  
Post Office Box 3092  
Houston, Texas 77253

R. G. Smith  
Regional Engineering  
Manager-West

September 19, 1983

*Revised  
Application  
coming out  
in 10/1/83*

File: JCA-986.51NM-3280

Re: Application for Unorthodox Location  
and Non-standard Proration Unit  
Mesa Petroleum Company  
Eddy County, New Mexico

State of New Mexico  
Energy and Minerals Department  
Oil Conservation Division  
State Land Office Building  
Old Santa Fe Trail  
P.O. Box 2088  
Santa Fe, NM 87501

Attention: Mr. Joe D. Ramey

Gentlemen:

Amoco Production Company is in receipt of the subject application dated September 1, 1983 addressed to the attention of Mr. R. L. Stamets. Said application requests administrative approval of a 270.5-acre non-standard proration unit and an unorthodox location at 990' FNL x 660' FWL of Section 4, T-16-S, R-28-E for Mesa's proposed Depco Federal Well No. 2. Amoco must object to the unorthodox location portion of this application because of the potential for uncompensated drainage from its adjacent lease.

The well which is subject to this application is an immediate offset to the Amoco State "ET" lease and is targeted for completion in the same reservoir from which said lease produces. Therefore, in all likelihood, approval of the requested unorthodox location would result in confiscation of reserves from the Amoco lease.

Amoco is willing to withdraw objection to authorization of an unorthodox location if the Applicant will move the proposed well to a site at least 1485' FNL of the section; still 495' north of the nearest orthodox location. According to the geological exhibits submitted in the subject application, this compromise location provides the Applicant with a site

File: JCA-986.51-NM-3280  
September 19, 1983  
Page 2

at which they would obtain a reservoir position (i.e., structural as well as net sand) essentially equivalent to the recently drilled Amoco State "ET" Com Well No. 1. However, if the Applicant is adamant about drilling at the requested location, Amoco must insist that administrative approval of the subject application be denied and the matter be set for hearing.

If you have any question concerning this matter, please contact Larry Sheppard (713/556-3941) in Amoco's Houston Region-West Proration Section.

Yours very truly,



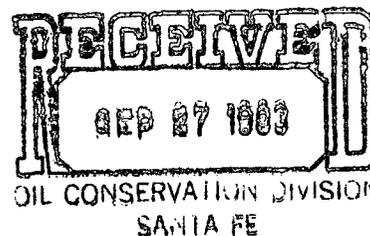
LWS/mes  
885/Z

cc: Mesa Petroleum Company  
P.O. Box 2009  
Amarillo, TX 79189

Attention: Mr. R. E. Mathis

New Mexico Oil Conservation Division  
P.O. Drawer DD  
Artesia, NM 88210

Attention: Mr. L. A. Clements



September 22, 1983

Mr. R. L. Stamets  
Energy and Minerals Department  
New Mexico Oil Conservation Division  
P. O. Box 2088  
Santa Fe, New Mexico 87501

*NSP (L)  
1403  
lots 3-6 and  
11-14 270.5 acre  
Rule 104 D II NSP  
and Rule 104 F  
Waiver in  
Immediate*

Dear Mr. Stamets:

Subject: Unorthodox Location for  
Mesa Petroleum Co.  
Depco Federal #2  
Eddy County, New Mexico

Mesa Petroleum Co. has been informed by copy of a letter addressed to your office dated 9-19-83 regarding subject application that Amoco Production Company (USA) is willing to withdraw objection to authorization of an unorthodox location if moved to a site at least 1485' FNL of the section.

Notice is hereby given that Mesa Petroleum Co. has amended its APD to apply for a well to be drilled 1485' FNL & 660' FWL, Sec. 4, T16S, R28E as shown by attached plat.

It is further requested that since Mesa Petroleum Co. et al and Amoco et al are the only affected parties under this application, an Administrative Order be issued immediately so that drilling may commence.

Yours truly,

R. E. Mathis  
Regulatory Coordinator  
Onshore Operations Division

Attachment

- xc: NMOCD-Artesia
- BLM-Roswell
- Central Records
- Operations File
- Midland Office
- Roswell Office
- Amoco
- Partners

NEW MEXICO OIL CONSERVATION COMMISSION  
WELL LOCATION AND ACREAGE DEDICATION PLAT

Form C-102  
Superseded C-128  
Effective 1-4-83

All distances must be from the outer boundaries of the Section

MESA PETROLEUM CO			DEPCO FEDERAL			Well No. 2		
Map Letter: E	Section: 4	Township: 16 SOUTH	Range: 28 EAST	County: EDDY				
Actual Footage Location of Well: 990 feet from the NORTH line and 660 feet from the WEST line								
Ground Level Elev. 3653.0	Producing Formation: Morrow		Pool: Diamond Mound Atoka-Morrow			Dedicated Acreage: 270.5 Acres		

1. Outline the acreage dedicated to the subject well by colored pencil or hachure marks on the plat below.
2. If more than one lease is dedicated to the well, outline each and identify the ownership thereof (both as to working interest and royalty).
3. If more than one lease of different ownership is dedicated to the well, have the interests of all owners been consolidated by communitization, unitization, force-pooling, etc?

Yes  No If answer is "yes" type of consolidation \_\_\_\_\_

If answer is "no" list the owners and tract descriptions which have actually been consolidated (Use reverse side of this form if necessary.) \_\_\_\_\_

No allowable will be assigned to the well until all interests have been consolidated (by communitization, unitization, forced-pooling, or otherwise) or until a non-standard unit, eliminating such interests, has been approved by the Commission.

CERTIFICATION

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

Name: R. E. Mathis  
 Position: Regulatory Coordinator  
 Company: Mesa Petroleum Co  
 Date: 9-21-83

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 knowledge and belief.

Date Surveyed: 9/1/83

Registered Professional Engineer and/or Land Surveyor

*John W. West*  
 Certificate No. JOHN W. WEST 676  
 PATRICK A. ROMERO 6868  
 Ronald J. Eidson 3239

