

~~NSL-GEOL. 3~~

NSL-GEOL. 3

June 6, 1996

5-20-96

6-10-96

6-10-96

Enron Oil & Gas Company  
P.O. Box 2267  
Midland, Texas 79702

Attention: Patrick J. Tower

3680  
Administrative Order NSL\*\*\*\*

Dear Mr. Tower:

Reference is made to your application dated May 14, 1996 to drill your proposed Duggan "12" Federal Com Well No. 1 at an unorthodox gas well location 2162 feet from the North line and 784 feet from the East line (Unit H) of Section 12, Township 18 South, Range 29 East, NMPM, to test the Undesignated Sand Tank-Morrow Gas Pool, Eddy County, New Mexico.

The application has been duly filed under the provisions of Rule 104.F of the General Rules and Regulations of the New Mexico Oil Conservation Division ("Division"), revised by Division Order No. R-10533, issued by the Oil Conservation Commission in Case 11,351 on January 18, 1996.

The geologic interpretation submitted with this application indicates that a well drilled at the proposed unorthodox gas well location will be at a more favorable geologic position within the Morrow formation than a well drilled at a location considered to be standard.

The N/2 of said Section 12 shall be dedicated to the well to form a non-standard 320-acre gas spacing and proration unit for the subject pool.

By the authority granted me under the provisions of Division General Rule 104.F(2), the above-described unorthodox gas well location is hereby approved.

Sincerely,

William J. LeMay  
Director

WJL/MES/kv

cc: Oil Conservation Division - Artesia  
U. S. Bureau of Land Management - Carlsbad

6-10

*Sand Tank  
Morrow  
Gas Pool*

**ENRON**  
**Oil & Gas Company**

P. O. Box 2267 Midland, Texas 79702 (915) 686-3600

May 14, 1996

**RECEIVED**

CERTIFIED MAIL -  
RETURN RECEIPT REQUESTED

Mr. William J. Lemay  
Oil Conservation Division  
New Mexico Department of Energy  
Minerals and Natural Resources  
2040 South Pacheco  
Santa Fe, New Mexico 87505

MAY 20 1996

Oil Conservation Division

Re: Application of Enron Oil & Gas  
Company for administrative approval of  
an unorthodox gas well.

Dear Mr. Lemay:

Enclosed please find the Application of Enron Oil & Gas Company for administrative approval of an Unorthodox Location for the drilling of Enron's Duggan "12" Fed Com No.1 as a Morrow gas well.

By separate letter (copy attached) Enron has sent notification via certified return receipt mail to the affected parties by submitting a copy of this application and a plat required by OCD rules. A sworn statement attesting to this notification is hereby enclosed for your files.

Your due consideration to this Application is most appreciated. Should you have any questions, please feel free to call me at 915/686-3758.

Sincerely,

ENRON OIL & GAS COMPANY



Patrick J. Tower  
Project Landman

PJT:ms  
enclosures

BEFORE THE  
OIL CONSERVATION DIVISION  
NEW MEXICO DEPARTMENT OF ENERGY, MINERALS AND NATURAL RESOURCES

IN THE MATTER OF THE APPLICATION  
OF ENRON OIL & GAS COMPANY FOR  
ADMINISTRATIVE APPROVAL OF AN  
UNORTHODOX WELL LOCATION FOR ITS  
DUGGAN "12" FED. COM NO. 1 MORROW  
WELL LOCATED 2,162 FEET FROM THE  
NORTH LINE AND 784 FEET FROM THE  
EAST LINE OF SECTION 12, TOWNSHIP 18  
SOUTH, RANGE 29 EAST,  
EDDY COUNTY, NEW MEXICO.

CASE NO. \_\_\_\_\_

AFFIDAVIT

STATE OF TEXAS           §  
  § ss.  
COUNTY OF MIDLAND   §

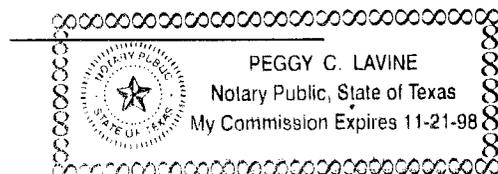
Patrick J. Tower, authorized representative of Enron Oil & Gas Company ("Enron"), the Applicant herein, being first duly sworn, upon oath, states that on or before this application was submitted to the New Mexico Oil Conservation Division, and in accordance with the notice provisions of Division Rule 104, Enron has sent notification to the affected parties by submitting a copy of the application, including a copy of the plat described in Rule 104.F(3) by certified or registered mail, return receipt, in accordance with Rule 1207 (A)(5) advising them that if they have an objection it must be filed in writing within twenty (20) days from the date notice was sent.

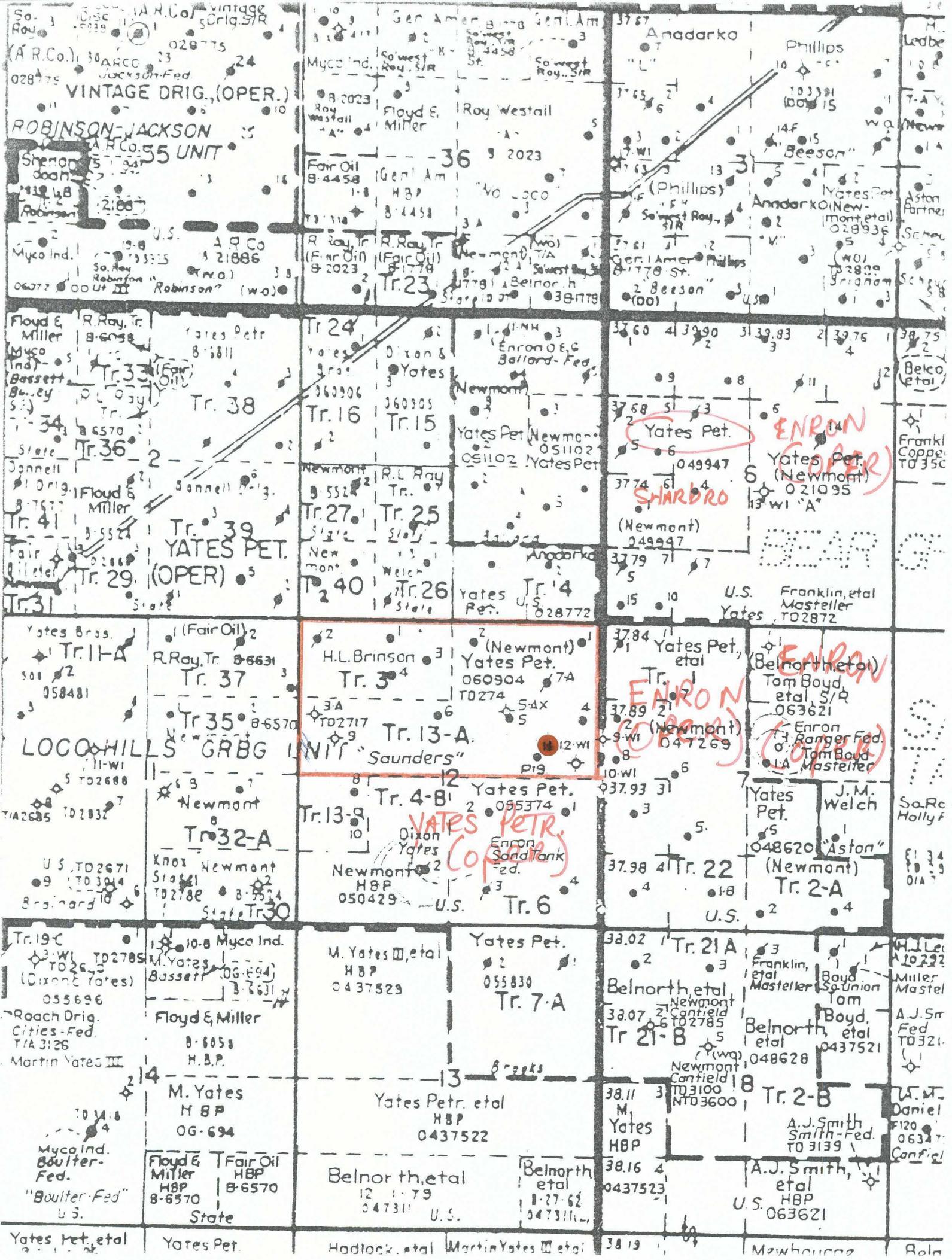
  
\_\_\_\_\_  
Patrick J. Tower

SUBSCRIBED AND SWORN to before me this 14th day of May, 1996.

  
\_\_\_\_\_  
Notary Public

My Commission Expires:





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(Fair Oil)  
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Tr. 23

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Anadarko (Newmont)  
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Tr. 41  
Fair Oil  
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Tr. 31  
R. Roy. Tr.  
8-6058  
Yates Petr.  
8-6811  
Tr. 33 (Fair Oil)  
Tr. 38  
Tr. 36  
Jonnell  
8-5524  
Tr. 39  
YATES PET.  
(OPER)  
Tr. 29  
Tr. 31

Tr. 24  
Yates  
360906  
Tr. 16  
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Tr. 15  
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(OPER)  
Enron Sand Tank  
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Tr. 6  
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(Newmont)  
J.M. Welch  
Sa. Ro  
Holly F  
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Tr. 19-C  
3-WI T02785  
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(Dixon Yates)  
055696  
Roach Drig.  
Cities-Fed.  
T/A 3126  
Martin Yates III  
10-8 Myco Ind.  
M. Yates  
Bassett  
OG-694  
8-631  
Floyd E. Miller  
8-6058  
H.B.P.  
M. Yates  
HBP  
OG-694  
Floyd E. Miller  
HBP  
8-6570  
Fair Oil  
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Yates Petr.  
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Belnorth, etal  
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Boyd  
So. Union  
Tom  
Belnorth, etal  
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Belnorth, etal  
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Tr. 21-A  
Tr. 21-B  
Tr. 2-B  
A.J. Smith  
Smith-Fed.  
T03139  
A.J. Smith, etal  
HBP  
063621  
W.M. Daniel  
F120  
06347  
Canfield

Yates Petr. etal  
Yates Petr.  
Hadlock, etal  
Martin Yates III etal  
38.19  
Mewbourne  
Rola

**ENRON**  
**Oil & Gas Company**

P. O. Box 2267 Midland, Texas 79702 (915) 686-3600

May 14, 1996

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

ADDRESSEE LIST ATTACHED

Re: Application for Unorthodox  
Location Drilling Permit  
Duggan "12" Fed. Com #1 Well  
N/2 of Section 12-18S-29E  
Eddy County, New Mexico

Ladies and Gentlemen:

Enron Oil & Gas Company (Enron) proposes the drilling of the captioned test well at a location 2,162' FNL & 784' FEL of Section 12-18S-29E to a depth sufficient to test the Morrow formation, at an approximate total depth of 11,800'. In this regard, please find a plat showing the subject spacing unit (N/2), its proposed unorthodox well location, and offsetting spacing unit and leases. This well is being drilled at this location in order to move updip from the wet Morrow Sand encountered in Enron's Ranger "7" and Sand Tank "7" wells in Section 7-18S-30E, while maintaining sand thickness.

Enron hereby seeks an exception to the well location requirements of the New Mexico Oil Conservation Division Rule 104.C and has applied pursuant to Division Rule 104F.(2) for administrative approval of an Unorthodox Location Drilling Permit for all formations through the base of the Morrow formation which may be developed on 320 acre proration units.

Enron has determined that the drilling of the proposed test well at the specified location is necessary and prudent in order to recover oil and gas reserves underlying the above referenced Section 7.

If you have no objection to the above location please date and sign the attached Waiver of Objection and return one executed copy to the undersigned in the enclosed self addressed envelope.

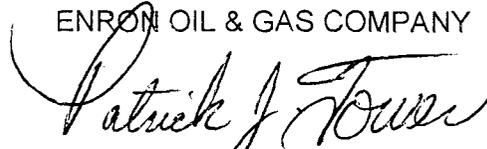
Should you have an objection to Enron's unorthodox location, it must be filed in writing within twenty (20) days from the date of this notice.

Page Two  
Duggan "12" Fed. Com #1  
May 14, 1996

Should you have any questions regarding the above or wish to discuss this matter further, please do not hesitate to call. Your early and favorable reply will be most appreciated.

Sincerely,

ENRON OIL & GAS COMPANY

A handwritten signature in black ink, reading "Patrick J. Tower". The signature is written in a cursive style with a large, looping initial "P".

Patrick J. Tower  
Project Landman

PJT:ms  
enclosures

ADDRESS LIST  
DUGGAN "12" FED COM NO. 1 WELL  
EDDY COUNTY, NEW MEXICO

Yates Petroleum Corporation  
John A. Yates  
St. Clair Payton Yates, Jr.  
Richard Yates  
S. P. Yates & E. H. 1976 Trust  
Marico Exploration, Inc.  
Sharbro Oil Ltd. Co.  
Martin Yates III Estate  
Estate of Lillie M. Yates  
105 South Fourth Street  
Artesia, NM 88210  
Attn: Robert Bullock

Harvey E. Yates Company  
P. O. Box 1933  
Roswell, NM 88202  
Attn: Shari Darr

Jalapeno Corporation  
P. O. Box 1608  
Albuquerque, NM 87103-1608  
Attn: Don Bell

Cibola Energy Corporation  
P. O. Box 1608  
Albuquerque, NM 87103-1608  
Attn: Don Bell

Yates Energy Corporation  
P. O. Box 2323  
Roswell, NM 88202-2323  
Attn: Sharon R. Hamilton, Landman

**ENRON**  
**Oil & Gas Company**

P. O. Box 2267 Midland, Texas 79702 (915) 686-3600

May 14, 1996

Mr. William J. Lemay  
New Mexico Oil Conservation Division  
P. O. Box 2088  
Santa Fe, New Mexico 87501

Re: Application for Unorthodox  
Location Drilling Permit  
Sand Tank Prospect  
Duggan "12" Fed. Com No. 1 Well  
N/2 Section 12-18S-29E N.M.P.M.  
Eddy County, New Mexico

Gentlemen:

Cibola Energy Corporation, as an offset operator or owner of operating rights, has been advised of Enron Oil & Gas Company's intent to drill the above referenced Morrow well at a location of 2,162' FNL & 784' FEL of Section 12-18S-29E, Eddy County, New Mexico.

This letter is to advise that Cibola Energy Corporation, has no objection to the granting of a permit to drill at this location and hereby waives objection and notice of hearing on this application.

Sincerely,

ENRON OIL & GAS COMPANY



Patrick J. Tower  
Project Landman

CIBOLA ENERGY CORPORATION

By: \_\_\_\_\_  
Title: \_\_\_\_\_  
Date: \_\_\_\_\_

**ENRON**  
**Oil & Gas Company**

P. O. Box 2267 Midland, Texas 79702 (915) 686-3600

May 14, 1996

Mr. William J. Lemay  
New Mexico Oil Conservation Division  
P. O. Box 2088  
Santa Fe, New Mexico 87501

Re: Application for Unorthodox  
Location Drilling Permit  
Sand Tank Prospect  
Duggan "12" Fed. Com No. 1 Well  
N/2 Section 12-18S-29E N.M.P.M.  
Eddy County, New Mexico

Gentlemen:

Yates Energy Corporation, as an offset operator or owner of operating rights, has been advised of Enron Oil & Gas Company's intent to drill the above referenced Morrow well at a location of 2,162' FNL & 784' FEL of Section 12-18S-29E, Eddy County, New Mexico.

This letter is to advise that Yates Energy Corporation, has no objection to the granting of a permit to drill at this location and hereby waives objection and notice of hearing on this application.

Sincerely,

ENRON OIL & GAS COMPANY



Patrick J. Tower  
Project Landman

YATES ENERGY CORPORATION

By: \_\_\_\_\_  
Title: \_\_\_\_\_  
Date: \_\_\_\_\_

**ENRON**  
**Oil & Gas Company**

P. O. Box 2267 Midland, Texas 79702 (915) 686-3600

May 14, 1996

Mr. William J. Lemay  
New Mexico Oil Conservation Division  
P. O. Box 2088  
Santa Fe, New Mexico 87501

Re: Application for Unorthodox  
Location Drilling Permit  
Sand Tank Prospect  
Duggan "12" Fed. Com No. 1 Well  
N/2 Section 12-18S-29E N.M.P.M.  
Eddy County, New Mexico

Gentlemen:

Harvey E. Yates Company, as an offset operator or owner of operating rights, has been advised of Enron Oil & Gas Company's intent to drill the above referenced Morrow well at a location of 2,162' FNL & 784' FEL of Section 12-18S-29E, Eddy County, New Mexico.

This letter is to advise that Harvey E. Yates Company, has no objection to the granting of a permit to drill at this location and hereby waives objection and notice of hearing on this application.

Sincerely,

ENRON OIL & GAS COMPANY



Patrick J. Tower  
Project Landman

HARVEY E. YATES COMPANY

By: \_\_\_\_\_  
Title: \_\_\_\_\_  
Date: \_\_\_\_\_

**ENRON**  
**Oil & Gas Company**

P. O. Box 2267 Midland, Texas 79702 (915) 686-3600

May 14, 1996

Mr. William J. Lemay  
New Mexico Oil Conservation Division  
P. O. Box 2088  
Santa Fe, New Mexico 87501

Re: Application for Unorthodox  
Location Drilling Permit  
Sand Tank Prospect  
Duggan "12" Fed. Com No. 1 Well  
N/2 Section 12-18S-29E N.M.P.M.  
Eddy County, New Mexico

Gentlemen:

Jalapeno Corporation, as an offset operator or owner of operating rights, has been advised of Enron Oil & Gas Company's intent to drill the above referenced Morrow well at a location of 2,162' FNL & 784' FEL of Section 12-18S-29E, Eddy County, New Mexico.

This letter is to advise that Jalapeno Corporation, has no objection to the granting of a permit to drill at this location and hereby waives objection and notice of hearing on this application.

Sincerely,

ENRON OIL & GAS COMPANY



Patrick J. Tower  
Project Landman

JALAPENO CORPORATION

By: \_\_\_\_\_  
Title: \_\_\_\_\_  
Date: \_\_\_\_\_

**ENRON**  
**Oil & Gas Company**

P. O. Box 2267 Midland, Texas 79702 (915) 686-3600

May 14, 1996

Mr. William J. Lemay  
New Mexico Oil Conservation Division  
P. O. Box 2088  
Santa Fe, New Mexico 87501

Re: Application for Unorthodox  
Location Drilling Permit  
Sand Tank Prospect  
Duggan "12" Fed. Com No. 1 Well  
N/2 Section 12-18S-29E N.M.P.M.  
Eddy County, New Mexico

Gentlemen:

Yates Petroleum Corporation, John A. Yates, St. Clair Payton Yates, Jr., Richard Yates, S. P. Yates & E. H. 1976 Trust, Marico Exploration, Inc., Sharbro Oil Ltd. Co., Martin Yates III Estate, and Estate of Lillie M. Yates, as an offset operator or owner of operating rights, has been advised of Enron Oil & Gas Company's intent to drill the above referenced Morrow well at a location of 2,162' FNL & 784' FEL of Section 12-18S-29E, Eddy County, New Mexico.

This letter is to advise that Yates Petroleum Corporation, John A. Yates, St. Clair Payton Yates, Jr., Richard Yates, S. P. Yates & E. H. 1976 Trust, Marico Exploration, Inc., Sharbro Oil Ltd. Co., Martin Yates III Estate, and Estate of Lillie M. Yates has no objection to the granting of a permit to drill at this location and hereby waives objection and notice of hearing on this application.

Sincerely,

ENRON OIL & GAS COMPANY



Patrick J. Tower  
Project Landman

Yates Petroleum Corporation  
John A. Yates, St. Clair Payton Yates,  
Richard Yates, S.P. Yates &  
E.H. 1976 Trust,  
Marico Exploration, Inc.,  
Sharbro Oil Ltd. Co.,  
Martin Yates III Estate  
Estate of Lillie M. Yates  
Page Two

YATES PETROLEUM CORPORATION

By: \_\_\_\_\_  
Title: \_\_\_\_\_  
Date: \_\_\_\_\_

\_\_\_\_\_  
JOHN A. YATES

\_\_\_\_\_  
ST. CLAIR PAYTON YATES, JR.

S. P. YATES & E. H. 1976 TRUST

By: \_\_\_\_\_  
Title: \_\_\_\_\_  
Date: \_\_\_\_\_

\_\_\_\_\_  
RICHARD YATES

MARICO EXPLORATION, INC.

By: \_\_\_\_\_  
Title: \_\_\_\_\_  
Date: \_\_\_\_\_

SHARBRO OIL LTD. CO.

By: \_\_\_\_\_  
Title: \_\_\_\_\_  
Date: \_\_\_\_\_

MARTIN YATES III ESTATE

By: \_\_\_\_\_  
Title: \_\_\_\_\_  
Date: \_\_\_\_\_

ESTATE OF LILLIE M. YATES

By: \_\_\_\_\_  
Title: \_\_\_\_\_  
Date: \_\_\_\_\_

Enron Oil & Gas Company is seeking approval for an unorthodox location in the Sand Tank area Eddy County, New Mexico, based on geologic reasons. Enron recently drilled two Morrow sand wells in Section 7-18S-30E. The Ranger "7" Federal Com. No. 1 (NE/4 Section 7) is a producing Morrow gas well, while the Sand Tank "7" Federal Com. No. 1 (NW/4 Section 7) is waiting on completion in the Morrow. The proposed unorthodox location for the Duggan "12" Federal Com. No. 1 (N/2 proration unit, 2,162' FNL & 784" FEL Section 12-18S-29E) is a southwest offset to Enron's Sand Tank "7" well.

Enron's wells in Section 7 penetrated several sands in the middle Morrow. These clastics are interpreted as a NE-SW trending beach to nearshore system of discontinuous marine sands. In the Ranger "7" wellbore, a wet middle Morrow sand was encountered between two gas bearing sands (refer to cross-section). This sand is referred to as the Ranger sand and based on electric logs has an average water saturation of 80%. Enron then drilled the Sand Tank "7" well at an unorthodox location (refer to Administrative Order NSL-3644) in an attempt to move updip from the Ranger "7" test and find the Ranger sand water free. This attempt was partially successful as the upper most five feet of the Ranger sand calculates productive, while the remainder of the sand has a 40-60% water saturation based on electric logs (refer to cross-section). This is a significant improvement over the 80% waters in the Ranger "7" well. The Ranger sand in the Sand Tank "7" Federal Com. No. 1 is 37' high to the Ranger "7" Federal Com. No. 1 (refer to structure map).

An estimated gas/water contact for the Ranger sand is placed at -7,680' on that sands accompanying structure map. This is 23' high to that part of the Ranger sand that is wet in the Sand Tank "7" wellbore (refer to cross-section) and is considered high enough to place all of the sand above water. The estimated gas/water contact was then overlain on the isopach of that Ranger sand body defined by the Enron wells in Section 7 and the Yates Petroleum, Sand Tank APS Federal Com. No. 1 (S/2 Section 12-18S-29E); hence defining the productive limits of that sand body (refer to isopach map). Yates production tested low gas rates from the Ranger sand in their well in Section 12 and the well is currently waiting on pipeline connection.

Using the estimated gas/water contact of -7,680' places the proposed unorthodox location of the Duggan "12" Federal Com. No. 1 above water for all of the Ranger sand, but more importantly this location is in the thickest part of the Ranger sand (refer to isopach map). The orthodox location of 1,980' FNL & 1,980' FEL (orange dot on maps) is at risk for sand thickness and sand quality at the edge of the clastic pod. Enron believes the proposed unorthodox location will allow the participating parties to effectively recover hydrocarbons under the lease, protect correlative rights and prevent waste.





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