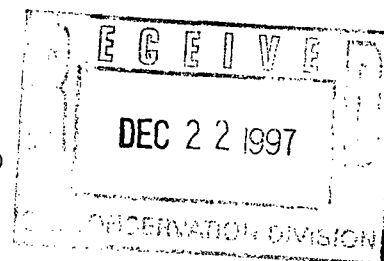


NSL 1/12/97

**ENRON**  
Oil & Gas Company

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

December 18, 1997



CERTIFIED MAIL  
RETURN RECEIPT REQUESTED

Mr. Michael L. Stogner  
Oil Conservation Division  
New Mexico Department of Energy  
Minerals & Natural Resources  
2040 South Pacheco  
Santa Fe, New Mexico 87505

Re: Application of Enron Oil & Gas Company for  
Administrative Approval of an Unorthodox Gas  
Well

Dear Mr. Stogner:

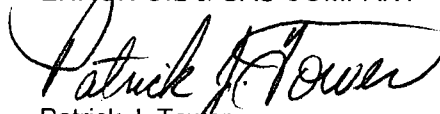
Enclosed please find the Application of Enron Oil & Gas Company for administrative approval of an Unorthodox Location for the drilling of Enron's Sand Tank "31" Fed Com No. 2 as a Morrow/Chester gas well located 990' FSL and 1200' FWL, Section 31, T-17-S, R-30-E, N.M.P.M., Eddy County, New Mexico.

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

PJTjr

Enclosures

u:\landtemp\pjt\stogner.doc

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

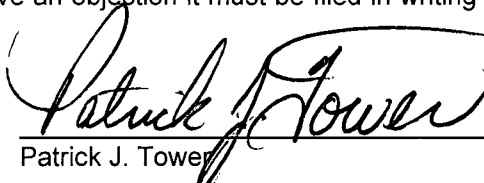
IN THE MATTER OF THE APPLICATION  
OF ENRON OIL & GAS COMPANY FOR  
ADMINISTRATIVE APPROVAL OF AN  
UNORTHODOX WELL LOCATION FOR ITS  
SAND TANK "31" FED COM NO. 2  
MORROW/CHESTER WELL LOCATED  
990 FEET FROM THE SOUTH LINE AND 1200  
FEET FROM THE WEST LINE OF SECTION 31,  
TOWNSHIP 17 SOUTH, RANGE 30 EAST, N.M.P.M.,  
EDDY COUNTY, NEW MEXICO

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

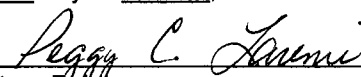
AFFIDAVIT

STATE OF TEXAS                     )  
  ) ss.  
COUNTY OF MIDLAND            )

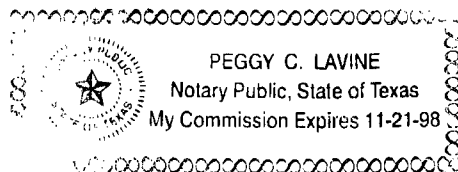
Patrick J. Tower, authorized representative of Enron Oil & Gas Company ("Enron"), the Applicant herein, being first duly sworn, upon oath, states that on or before this application was submitted to the New Mexico oil Conservation Division, and in accordance with the notice provisions of Division Rule 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

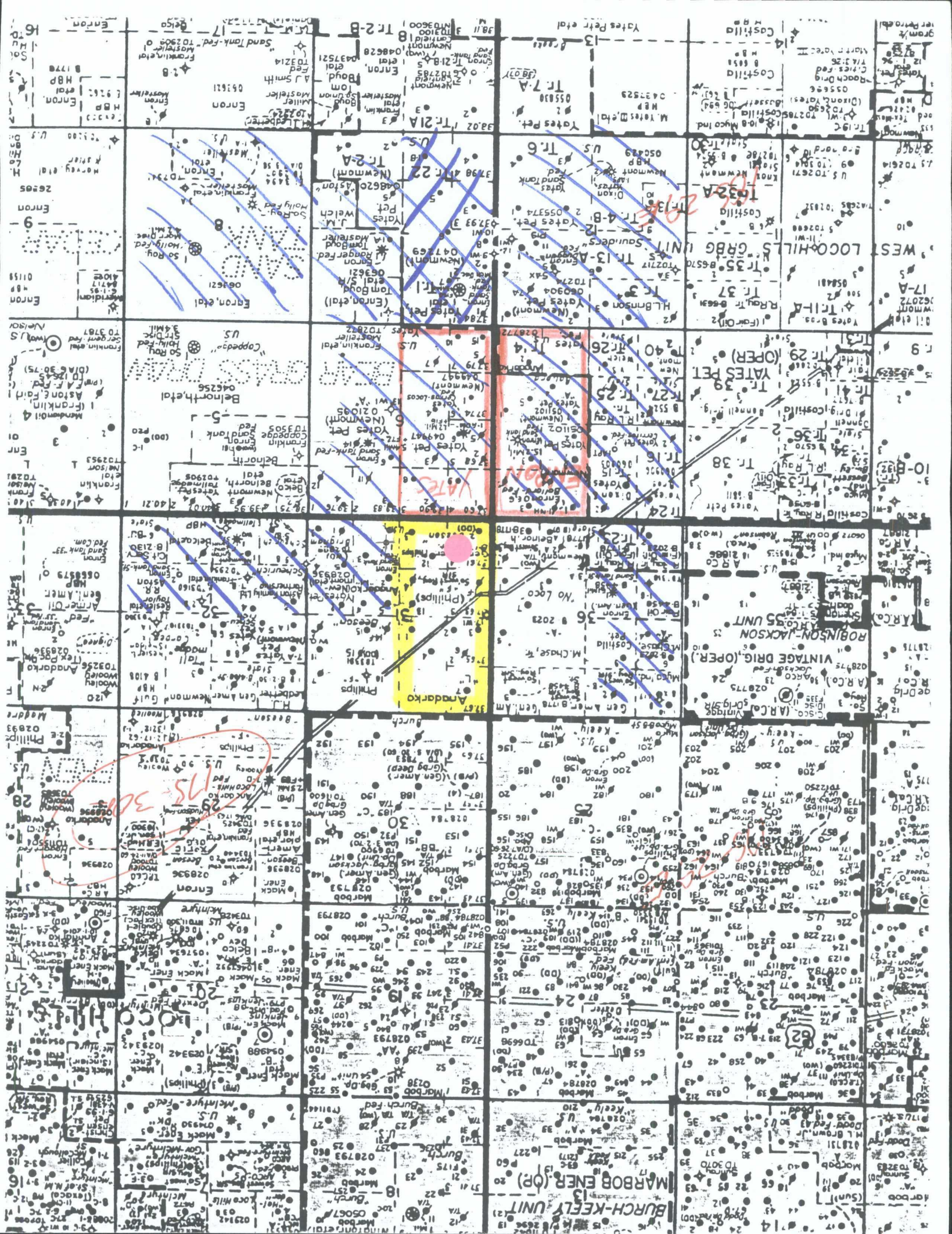
SUBSCRIBED AND SWORN to before me this 18th day of Dec., 1997.

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

My Commission expires:









## GEOLOGIC DISCUSSION

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 completed the Sand Tank "1" Federal Com. No. 1 (NE/4 Section 1-18S-29E) one year ago as a Morrow gas well in the Sand Tank Field. The proposed unorthodox location for the Sand Tank "31" Federal Com. No. 2 (W/2 proration unit / 990' FSL & 1,200' FWL Section 31-17S-30E) is a northeast offset to the year old completion.

Enron's Sand Tank "1" Federal Com. No. 1 is productive from middle and lower Morrow sands (refer to x-section A-A'). Although the proposed well will be drilled to the Mississippian Chester, the primary objective is the middle Morrow sand package. These middle Morrow clastics are interpreted as a NE-SW trending beach to nearshore system of discontinuous marine sands. The productive fairway of these barrier systems is limited to the width of preserved porosity, generally a half mile or less. The lower Morrow will also be penetrated but is not prospective at the proposed location.

The middle Morrow sand interval found in the Sand Tank "1" Federal Com. No. 1, referred to as the 31 sand (reference to Section 31) for this discussion, consists of two units which are correlative with wells in the immediate area. These two sands are identified on the accompanying cross-sections as the 31 "A" sand and the 31 "B" sand. Based on the Sand Tank "1" electric log and production history, the 31 "B" sand is the best developed (net sand / porosity) and considered by far to have the best potential in the proposed offset. Both 31 sands thin east and west from the Sand Tank "1" Federal Com. No. 1 (refer to x-section A-A') with zero to thin, tight sand present in the Yates, Cerros Locos and Cerritos wells in the NE/4 Section 6 and NW/4 Section 1 respectively (refer to isopach maps). Cross-section B-B' demonstrates the presence of the 31 sand package in the Anadarko Petroleum Loco Hills Federal Com. No. 1 (SW/4 Section 29-17S-30E) which establishes the characteristic NE-SW trend common to the middle Morrow. Anadarko attempted completion in the 31 "A" sand, but was unsuccessful and the 31 "B" sand was not tested.

It has been established from well control that the 31 "A" and "B" sands have a narrow, NE-SW orientation (refer to isopach maps). The thick axis of these two trends are mapped along an approximate strike line between the EOG, Sand Tank "1" producer (Section 1) and the Anadarko well (Section 29). Subsurface work indicates preserved porosity in the middle Morrow sand trends is confined to the thickest part of these sand fairways; hence, Enron believes the proposed unorthodox location will allow the participating parties to effectively recover hydrocarbons under the lease, protect correlative rights and prevent waste.

GRAYBURG DEEP UNIT

14  
11400

GRAYBURG DEEP UT

8  
11584

HUDSON FEDERAL

**SAN ANDRES**  
**19 MBO**  
**2 MMCF** 11410

LOCO HILLS FED COM 29

1  
11400  
**U/MORROW**  
**818 MMCF**  
**14 MBC**

25

30

SAND TANK 36 STATE COM

1  
11800  
**L/MORROW**  
**3,335 MMCF**  
**87 MBC**

SAND TANK 31 FED. COM  
2 SAND TANK 31 FED COM

① 37.67  
② 37.65  
③ 37.63  
④ 37.61

11800

1  
13600

SAND TANK 32 STATE COM

2  
11750  
SAND TANK '32' STAT  
1  
11725  
**L/MORROW**  
**94 MMCF**  
**1 MBC**

CERRITOS APT FED COM

1  
11660  
**L/MORROW**  
**620 MMCF**  
**12 MBC**

SAND TANK 1 FED COM

1  
11630  
**M&L/MORROW**  
**2,386 MMCF**  
**83 MBC**

CERROS LOCOS 'AQM' F. C.

1  
11690  
**M&L/MORROW**  
**372 MMCF**  
**7 MBC**

SAND TANK '6' FEDER

1  
11765  
**L/MORROW**  
**685 MMCF**  
**15 MBC**  
**ATOKA**  
**474 MMCF**  
**9 MBC**

SAND TANK '5' FEDER

1  
11747  
**STRAWN**  
**122 MMCF**  
**25 MBC**

5

HOLLY "5" FEDERAL

1  
11671  
**STRAWN**  
**1,264 MMCF**  
**151 MBC**

2  
37  
4  
148

37.67  
37.65  
75.32  
37.63  
112.95  
37.61  
150.56

Enron Oil & Gas

SAND TANK PROSPECT  
EDDY COUNTY, NEW MEXICO  
CUM PRODUCTION MAP (THRU 11/97)

ZINZ

SENM:SDTK

12/16/97

Scale 1:24000.

BLZ\HEAR\31CPROD.GP

GRAYBURG DEEP UNIT

14  
11400  
**-7403**

GRAYBURG DEEP UT

8  
11584  
**-7558**

HUDSON FEDERAL

1  
11410  
**-7625**

LOCO HILLS FED COM

29  
11400  
**B' -7631**

SAND TANK 36 STATE COM

1  
11800  
**-7549**

SAND TANK 31 FED. COM  
2 SAND TANK 31 FED COM

11800  
1  
13600  
**-7624**

SAND TANK 32 STATE COM

2  
11750  
**-7764**

SAND TANK '32' STAT

11725  
**-7709**

CERRITOS APT FED COM

**A**  
11660  
**-7615**

SAND TANK 1 FED COM

**B**  
11630  
**-7632**

CERRITOS LOCOS 'AQM' F. C.

11690  
**A'**  
**-7660**

SAND TANK '6' FEDER

1  
11765  
**-7676**

SAND TANK '5' FEDER

1  
11747  
**-7774**

HOLLY '5" FEDERAL

1  
11671  
**-7853**

Enron Oil & Gas

SAND TANK PROSPECT  
EDDY COUNTY, NEW MEXICO  
LOWER MORROW STRUCTURE

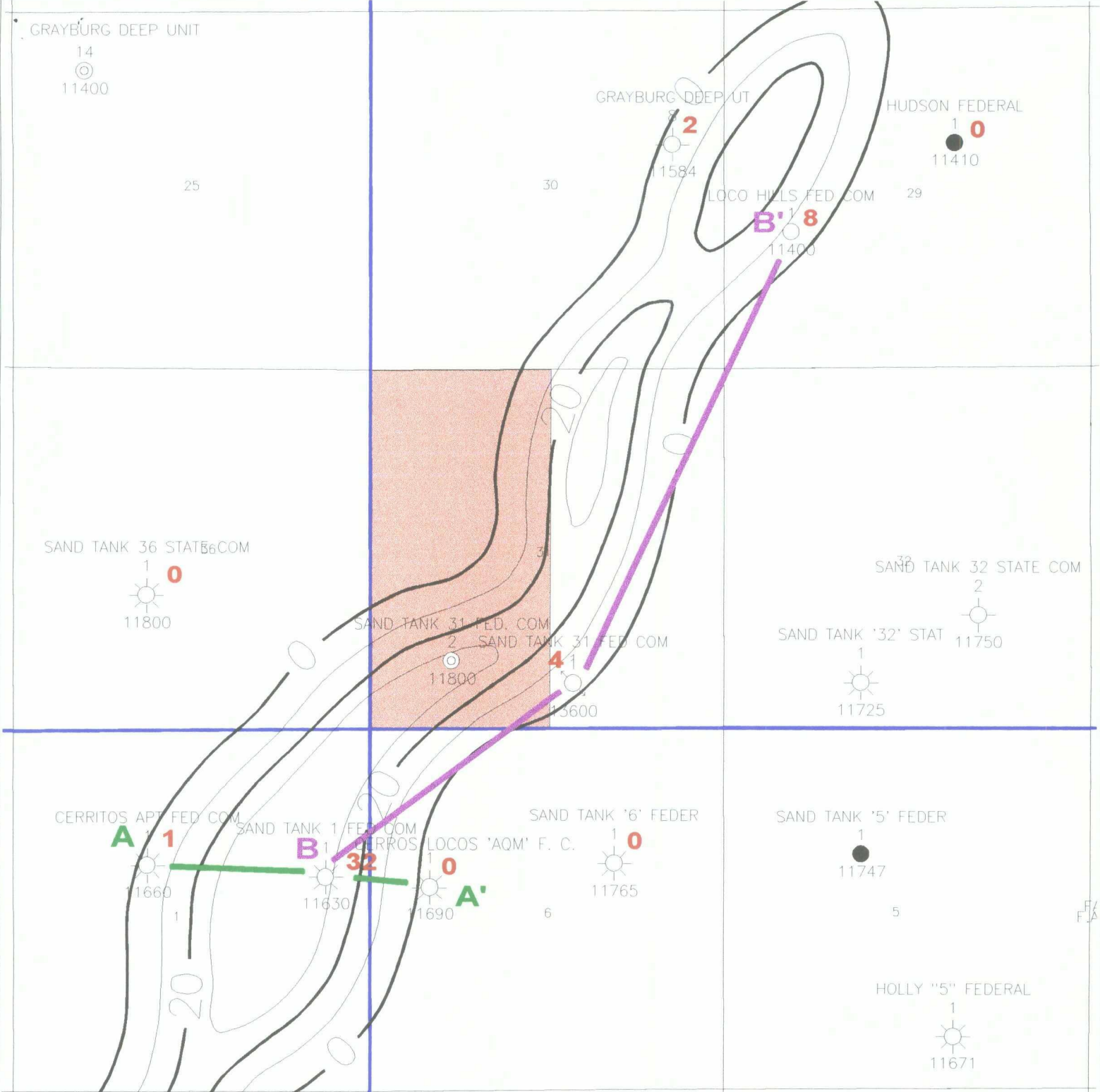
ZINZ

CI = 50'

12/16/97

SENM:SDTK

Scale 1:24000.



Enron Oil & Gas		
SAND TANK PROSPECT EDDY COUNTY, NEW MEXICO NET SAND ISOPACH - 31 "B" SAND		
ZINZ	Cl = 10'	12/16/97
SEN\SDTK	Scale 1:24000.	BLZ\HEAR\31BSAND.GP



GRAYBURG DEEP UNIT

14  
11400

25

30

GRAYBURG DEEP UT

8  
4  
11584

HUDSON FEDERAL

1  
3  
11410

LOCO HILLS FED COM

B' 1  
22  
11400

SAND TANK 36 STATE COM

8  
1  
11800

SAND TANK 31 FED COM

2  
11800  
1  
17600

SAND TANK 32 STATE COM

2  
11750

SAND TANK '32' STAT

1  
11725

CERRITOS APT FED COM

A 1  
3  
1660

SAND TANK 1 FED COM

B 1  
19  
11630

SAND TANK '6' FEDER

1  
0  
11765

CERRITOS LOCOS 'AQM' F. C.

1  
6  
1690

SAND TANK '5' FEDER

1  
11747

HOLLY '5' FEDERAL

1  
11671

Enron Oil & Gas

SAND TANK PROSPECT  
EDDY COUNTY, NEW MEXICO  
NET SAND ISOPACH - 31 "A" SAND

ZINZ

Cl = 10'

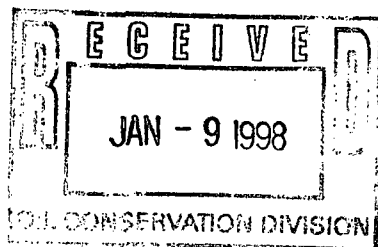
12/16/97

SENM:SDTK

Scale 1:24000.

BLZ/HEAR/31ASD





December 17, 1997

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

Re: Application for Unorthodox Gas Well  
Location Drilling Permit  
Sand Tank "31" Fed Com No. 2 Well  
W/2 Section 31-17S-30E, N.M.P.M.  
Eddy County, New Mexico  
Sand Tank Prospect

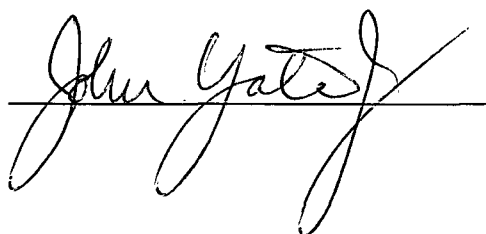
Gentlemen:

Yates Petroleum Corporation, as an offset operator has been advised of Enron Oil & Gas Company's intent to drill the above referenced Morrow/Chester gas well at a location of 990' FSL & 1200' FWL of Section 31-17S-30E, Eddy County, New Mexico.

This letter is to advise that Yates Petroleum 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.

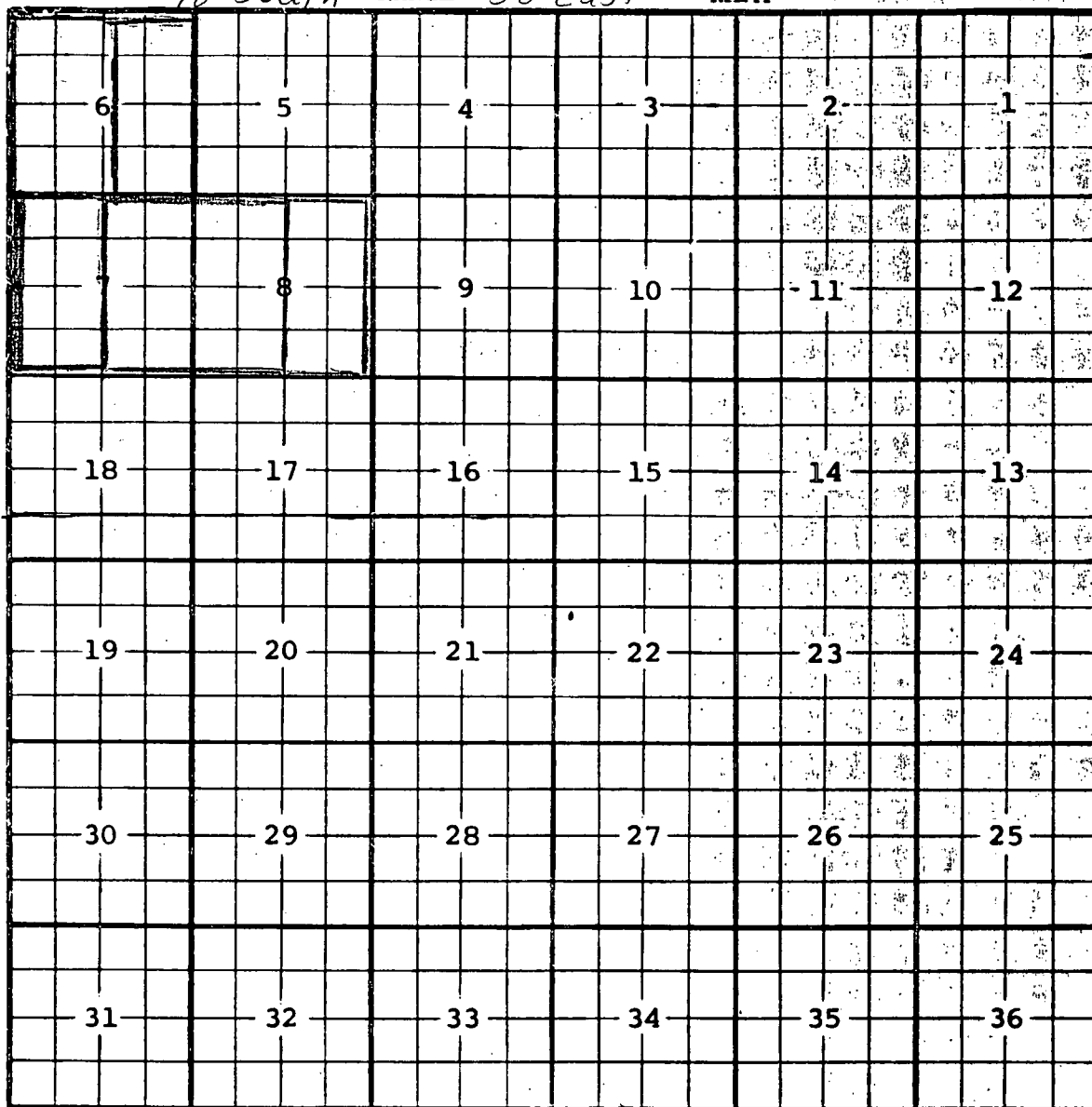
Sincerely,

YATES PETROLEUM CORPORATION

By: A handwritten signature in dark ink, appearing to read "John Yates", written over a horizontal line. The signature is fluid and cursive.

COUNTY *Eddy*POOL *Sand Tank-Morrow Gas*TOWNSHIP *18 South* RANGE *30 East*

NMPM



Description: E/2 Sec. 8 (R-7708, 10-25-84)

Ext: E/2 Sec. 7, W/2 Sec. 8 (R-1059, 5-8-96) Ext: W/2 Sec. 7 (R-10619, 7-2-96)

Ext: E/2 Sec. 6 (R-10724, 1-8-97) Ext: W/2 Sec. 6 (R-10822, 6-18-97)

County Eddy Pool Sand Tank-Morrow Gas

TOWNSHIP 18 South Range 29 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:  $\frac{5}{2}$  Sec. 12 (R-10680, 10-8-96) Ext:  $\frac{N}{2}$  Sec. 12 (R-10713, 11-26-96)

Ext: All Sec. 1 (R-10282, 4-9-92)



County Eddy

Pool Sand Tank-morrow Gas

TOWNSHIP 17 South

Range 30 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	

EXA. SE 1/4 Sec. 31, S 1/2 Sec. 32 (A-10724, 1-8-97)

County Eddy Pool Sand Tank-Morrow Gas

TOWNSHIP 17 South Range 29 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: W/2 Sec. 36 (R-10844, 7-16-92)

County Eddy Pool Sand Tank-Chester Gas

TOWNSHIP

18 South

Range

30 East

NMPM

6	5	4	3	2	1	
	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	

Description: W/2 Sec. 7 (R-10642, 8-19-96)