

NSL

6/25/98

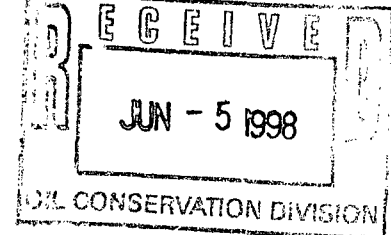
**Enron Oil & Gas  
Company**

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

June 2, 1998

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 Enron "9" State Com No. 2 as a Wolfcamp gas well located 1000' FNL and 1100' FEL, Section 9, T-24-S, R-33-E, N.M.P.M., Lea County, New Mexico. The planned spacing unit for this test will be the N/2 of this Section 9.

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 &amp; GAS COMPANY

A handwritten signature in black ink, appearing to read "Patrick J. Tower".

Patrick J. Tower  
Project Landman

Enclosures

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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  
ENRON "9" STATE COM NO. 2 WOLFCAMP  
WELL LOCATED 1000 FEET FROM THE  
NORTH LINE AND 1100 FEET FROM THE  
EAST LINE OF SECTION 9, TOWNSHIP 24  
SOUTH, RANGE 33 EAST,  
LEA COUNTY, NEW MEXICO.

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

AFFIDAVIT

STATE OF TEXAS           §  
                                  § ss.  
COUNTY OF MIDLAND   §

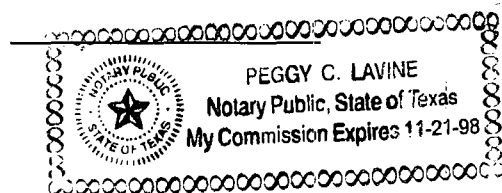
Patrick J. Tower, authorized representative of Enron Oil & Gas Company ("Enron"), the Applicant herein, being first duly sworn, upon oath, states that on or before this application was submitted to the New Mexico Oil Conservation Division, and in accordance with the notice provisions of Division Rule 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 2nd day of June, 1998.

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

My Commission Expires:





**Enron Oil & Gas  
Company**

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

June 1, 1998

Mr. Michael Stogner  
New Mexico Oil Conservation Division  
P. O. Box 2088  
Santa Fe, New Mexico 87501

Re: Application for Unorthodox  
Location Drilling Permit  
Enron "9" State Com No. 2 Well  
Section 9-24S-33E N.M.P.M.  
Lea County, New Mexico

Gentlemen:

Santa Fe Energy Resources, Inc., as an offset operator or owner of operating rights, has been advised of Enron Oil & Gas Company's intent to drill the above referenced Wolfcamp well at a location of 1000' FNL & 1100' FEL of Section 9-24S-33E, Lea County, New Mexico.

This letter is to advise that Santa Fe Energy Resources, Inc., 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

SANTA FE ENERGY RESOURCES, INC.

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

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Southwestern Ener.  
Santa Fe  
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## Geologic Discussion

Enron Oil & Gas Company is seeking approval for an unorthodox location in the Johnson Ranch area Lea County, New Mexico, based on geological and geophysical reasons. The proposed unorthodox location for the Enron "9" State Com #2 (N/2 spacing unit / 1000 FNL & 1100 FEL Section 9-T24S-R33E) is a northeast offset to the Enron State Com "9" #1 which was drilled and completed in January 1998 by Murchison Oil & Gas (reference Exhibit 2). The Enron State Com "9" #1 was completed in the Wolfcamp for approximately 2.5 MMcf/gpd & 370 Bcpd. The proposed location is within the Johnson Ranch (Wolfcamp) Field, which currently has eight producers. Production in the Johnson Ranch Field (reference Exhibit 1) is from three detrital carbonate zones in the Lower Wolfcamp. Enron Oil & Gas has designated these pays the Upper, Middle and Lower zones.

The Enron "9" State Com #2 is targeting the Upper Wolfcamp detrital carbonate zone, which is productive in the Enron State Com "9" #1 and is present but non-productive in the Getty, HNG State 4-F #1 (1980 FNL & 1650 FWL Section 4-T24S-R33E). Enron's mapping in the area indicates the productive Upper detrital zone trends NE to SW through the field area into a local Wolfcamp sub-basin (reference Exhibit 2).

The HNG 4-F well has a thick Upper detrital zone (reference Exhibit 1), but is located within an interpreted fault zone (reference Exhibit 3) and consequently lacks the over-pressuring needed to be a commercial producer. The Wolfcamp was DST'd from 13,188'-300' during drilling operations. Although there was a strong blow at surface no gas flow was measured and the IFP and FFP was 1,684-1,998#. Recovery was 3,300' water cushion and 1,000' of mud. The ISIP and FSIP of 7,396# and 7,354# respectively, is of special interest because the Wolfcamp producers in this area have original BHP of approximately 10,500#. The Wolfcamp was perforated from 13,250'-337' during recompletion operations. After a total of 1,000 gallons acid stimulation the zone failed to flow gas and was abandoned. A regional study indicates that the over-pressured reservoirs produce commercial quantities of gas yet the normal pressured reservoir produce poorly if at all. We believe the lack of over-pressuring in the 4-F well may have been due to leakage along the fault plane.

**Geologic Discussion**  
**Page 2**

It is Enron Oil & Gas concern for a bounding northwest to southeast trending fault system to the west of the proposed location which has led us to request an unorthodox location (reference Exhibit 3 & 4). This fault system appears to have a wrench component adding to its' complexity (reference Exhibit 4). Evidence for the presence of this western fault zone includes terminations of seismic reflectors, apparent offset of the Atoka Carbonate reflector and seismic character change evidenced in the Strawn and several other reflectors (reference Exhibit 4).

Exhibit 1 is a type log for the area

Exhibit 2 is an isopach of the Upper Johnson Ranch Wolfcamp Pay

Exhibit 3 is an integrated structure map on the Pennsylvanian Marker

Exhibit 4 is an east-west seismic line through the proposed location.

### INTENTIONAL OMISSIONS

The following document(s) have been intentionally omitted from this file due to the indicated reasons.

FILE # NSL 4055

### DESCRIPTION OF OMITTED DOCUMENTS

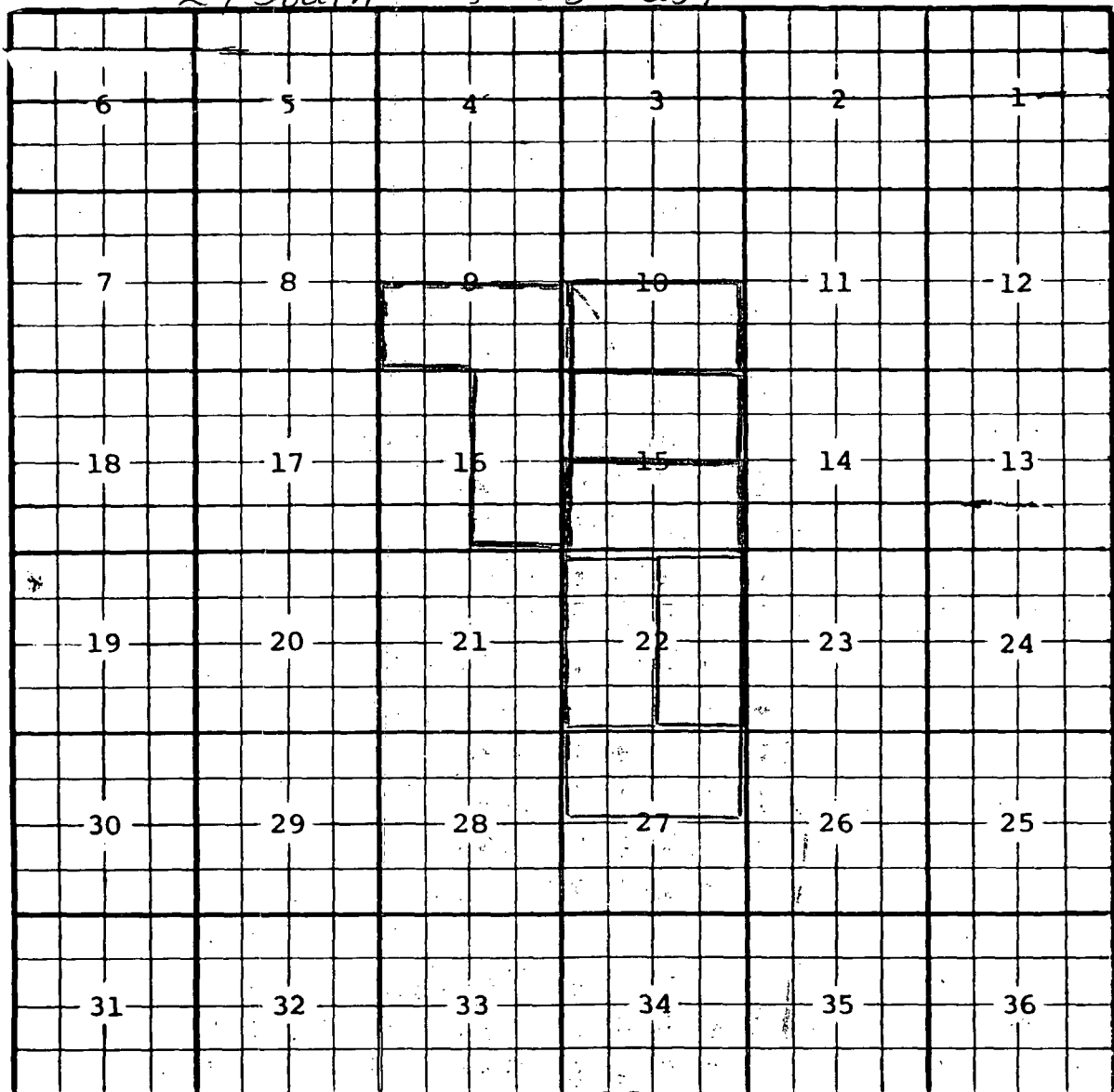
OMITTED DOCUMENT

REASON OMITTED

Exhibit 1 "Atoka Completion 5/80 HNB State 4-F # 1 too large to copy

County Lea Pool Johnson Ranch-Wolfcamp Gas

TOWNSHIP 24 South Range 33 East NMPM



Description:  $\frac{E}{2}$  Sec. 22 (R-8075, 11-8-85)  
Correct Range from 32 to 33 (R-8125, 1-14-86)  
Ext:  $\frac{W}{2}$  Sec. 22 (R-8193, 3-21-86) Ext:  $\frac{N}{2}$  Sec. 27 (R-8299, 9-4-86)  
Ext:  $\frac{S}{2}$  Sec. 15 (R-10641, 8-19-96) Ext:  $\frac{N}{2}$  Sec. 15 (R-10776, 2-28-97)  
Ext:  $\frac{3}{2}$  Sec. 10 (R-10795, 4-28-97) Ext:  $\frac{S}{2}$  Sec. 9,  $\frac{E}{2}$  Sec. 16 (R-10972, 4-13-98)



P. O. BOX 2267  
4000 N. BIG SPRING ST., SUITE 500  
MIDLAND, TEXAS 79705  
(915) 686-3600

FAX NO: 915 - 686 - 3773

X URGENT      CONFIDENTIAL      REPLY REQUESTED

**MESSAGE:** In regards to our recent application.

**Santa Fe Energy Resources, Inc.****RECEIVED**

JUN 8 1998

LAND DEPT.

June 5, 1998

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

ATTN: Patrick J. Tower

Re: **Enron "9" State Com #2**  
Sec. 9, T-24-S, R-33-E  
Lea County, New Mexico  
**SFERI Cont. #NM-30,227-002**  
**Cut-Throat Prospect - #NM-0399**

Gentlemen:

Enclosed please find our executed Waiver for the unorthodox location on the above captioned well. This waiver has been executed on behalf of Santa Fe by our Attorney-in-Fact, R.I. Arnold. Should you need anything further, please contact me at 686-6677.

Yours very truly,

Meg Muhlinghouse  
Senior Landman

MM/efw  
1 Encl a/s

EWOR2575

Central Division  
550 W. Texas, Suite 1330  
Midland, Texas 79701  
915/687-3551

**Enron Oil & Gas  
Company**

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

June 1, 1998

## CERTIFIED MAIL

Mr. Michael Stogner  
New Mexico Oil Conservation Division  
P. O. Box 2088  
Santa Fe, New Mexico 87501

Re: Application for Unorthodox  
Location Drilling Permit  
Enron "9" State Com No. 2 Well  
Section 9-24S-33E N.M.P.M.  
Lea County, New Mexico

Gentlemen:

Santa Fe Energy Resources, Inc., as an offset operator or owner of operating rights, has been advised of Enron Oil & Gas Company's intent to drill the above referenced Wolfcamp well at a location of 1000' FNL & 1100' FEL of Section 9-24S-33E, Lea County, New Mexico.

This letter is to advise that Santa Fe Energy Resources, Inc., 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 &amp; GAS COMPANY

Patrick J. Tower  
Project Landman

SANTA FE ENERGY RESOURCES, INC.

By:

Title: R. L. Arnold, Attorney-in-Fact

Date: 6/5/98

APPROVED


U:\pat\santafe.doc

Natural gas. Electricity. Endless possibilities.™

**TRANSMITTAL COVER SHEET**

**OIL CONSERVATION DIVISION  
ENGINEERING BUREAU  
(505) 827-7131 (OFFICE)  
(505) 827-1389 (FAX)**

**PLEASE DELIVER THIS FAX TO:**

**TO:** Linda Johnston  
**FROM:** Stogner  
**SUBJECT:** NSL-4055  
**DATE:** 6-24-98  
**PAGES:** 2 (INCLUDING COVER SHEET)

**IF YOU HAVE ANY PROBLEMS RECEIVING THIS FAX, PLEASE CALL THE  
OFFICE NUMBER ABOVE.**

**TRANSMITTAL COVER SHEET**

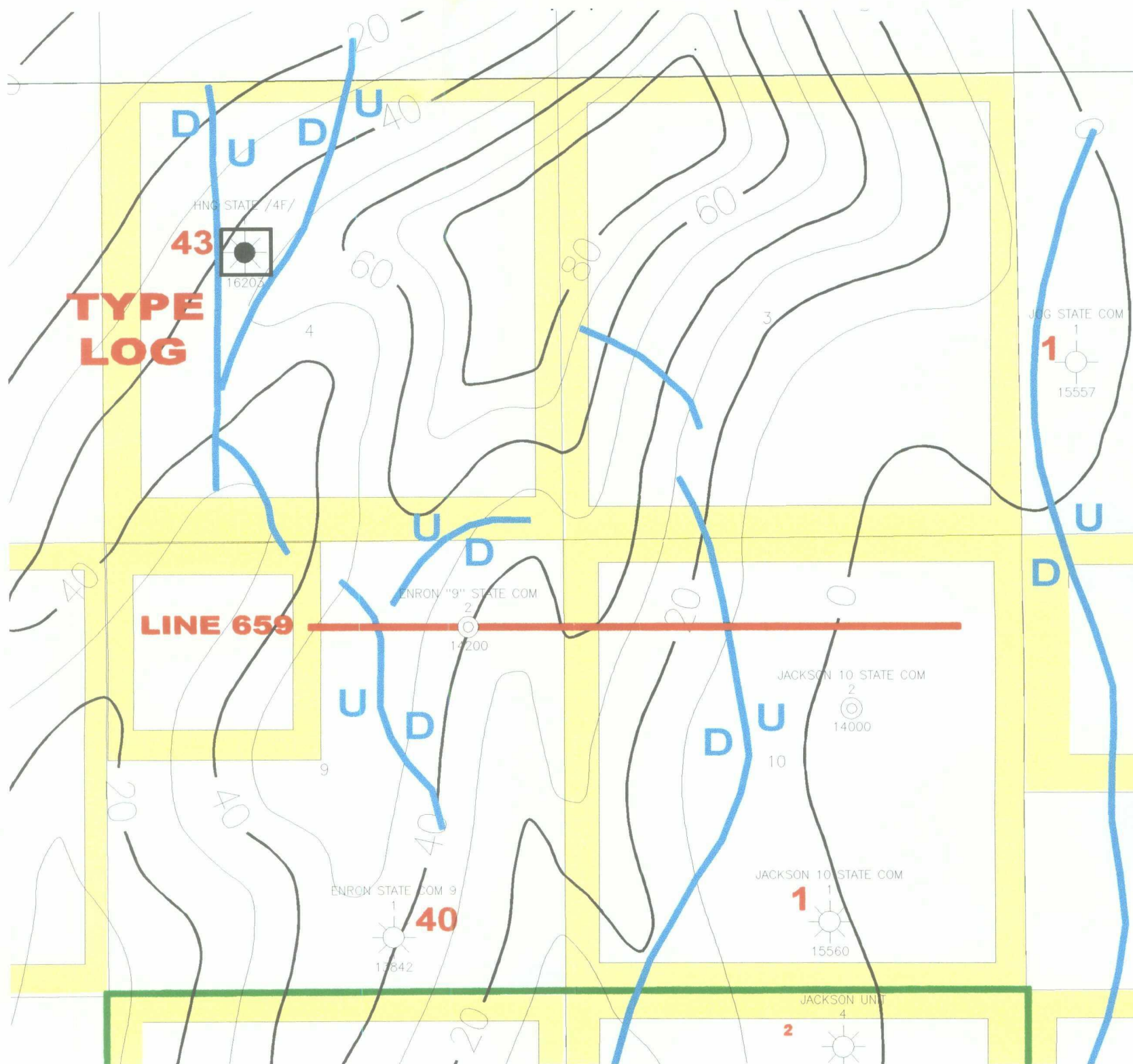
**OIL CONSERVATION DIVISION  
ENGINEERING BUREAU  
(505) 827-7131 (OFFICE)  
(505) 827-1389 (FAX)**

**PLEASE DELIVER THIS FAX TO:**

**TO:** Marie Peterson  
**FROM:** Stagner  
**SUBJECT:** NSL-4055  
**DATE:** 6-24-98  
**PAGES:** 2 (INCLUDING COVER SHEET)

**IF YOU HAVE ANY PROBLEMS RECEIVING THIS FAX, PLEASE CALL THE  
OFFICE NUMBER ABOVE.**

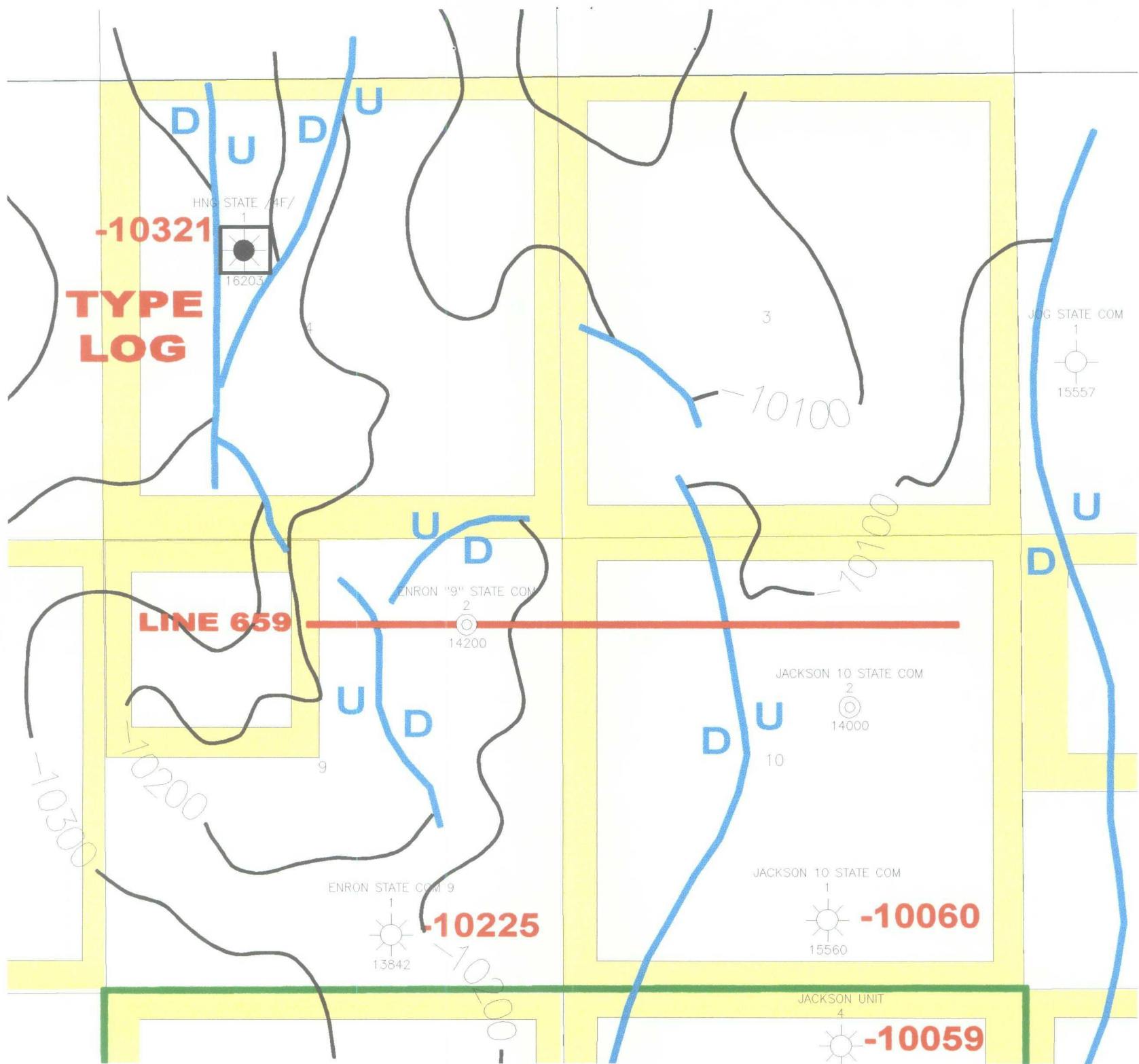
915  
686-3773



## EXHIBIT #2

Enron Oil & Gas		
PITCHFORK RANCH AREA LEA COUNTY, NEW MEXICO UPPER JOHNSON WOLFCAMP PAY ISOPACH		
TAB/BLZ	CI = 100'	6/3/98
SENW:PFK3D	Scale 1:18000.	

T:\PROJECTS\TAB\PFK\UJOHN.GPF



**EXHIBIT #3**

Enron Oil & Gas		
PITCHFORK RANCH AREA LEA COUNTY, NEW MEXICO PENN MARKER STRUCTURE MAP		
TAB/BLZ	Cl = 100'	6/3/98
SENMPFK3D	Scale 1:18000.	

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WEST

EAST

Proposed Location  
Enron "9" State Com #2

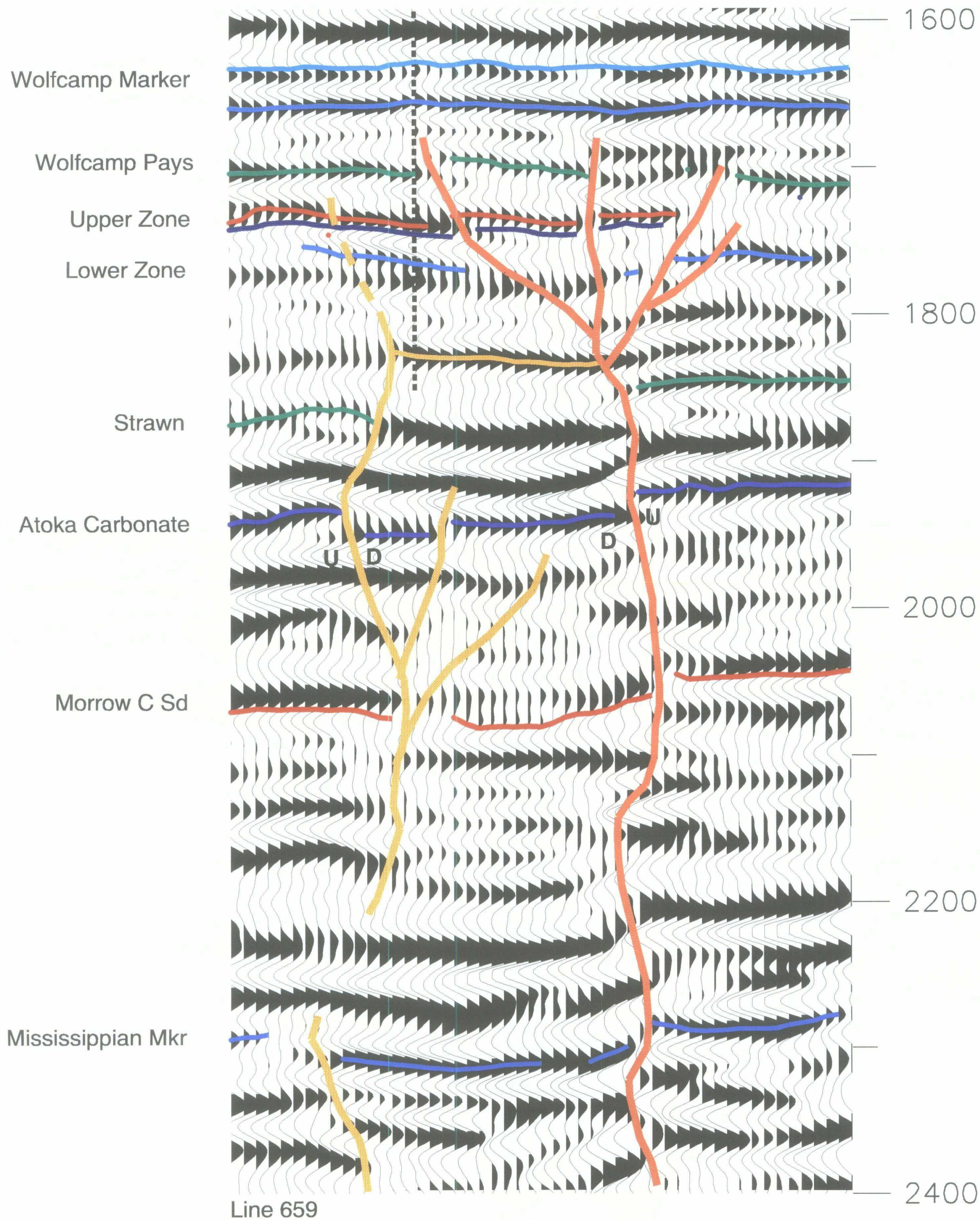


Exhibit #4