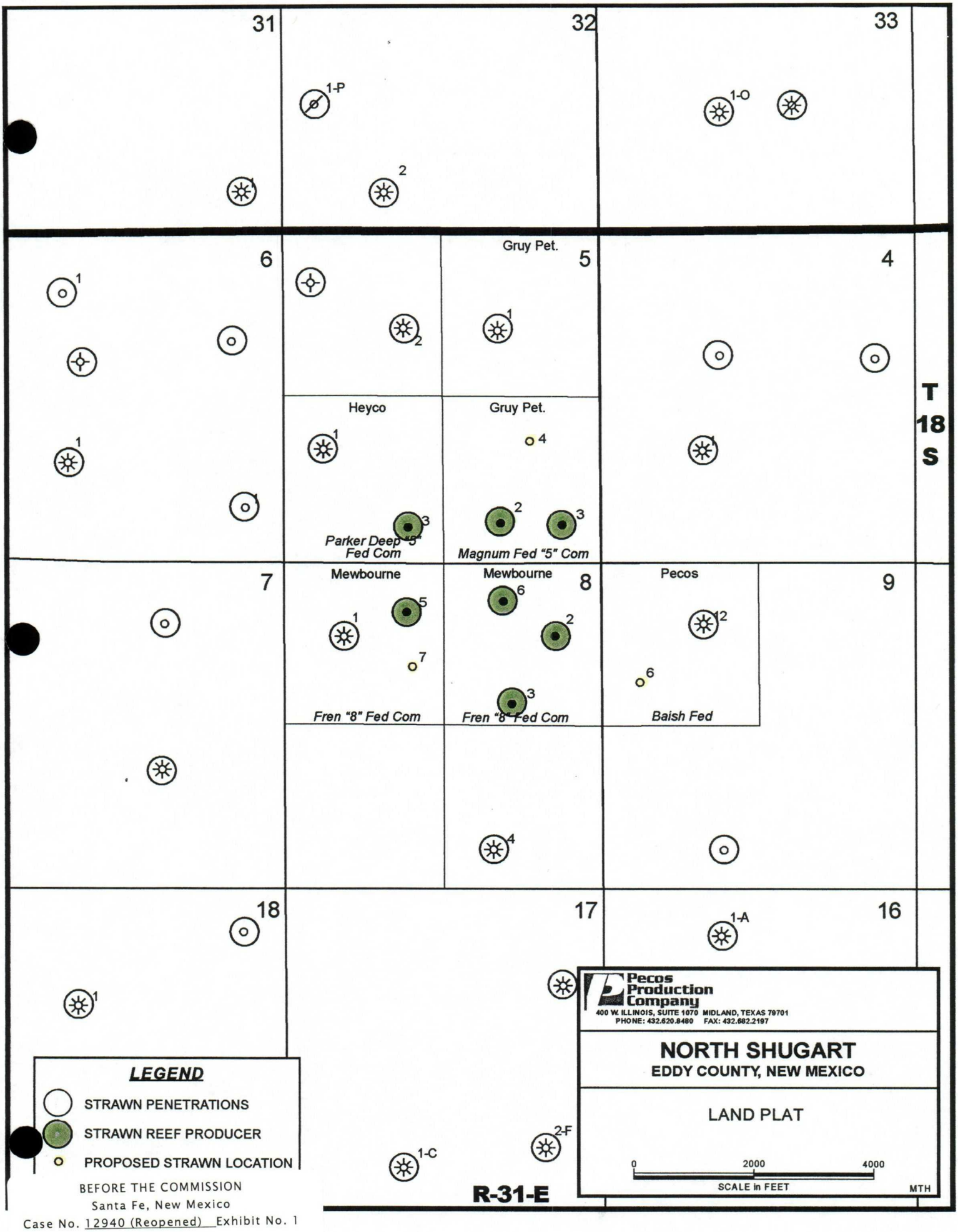
BEFORE THE
OIL CONSERVATION DIVISION
Santa Fe, New Mexico

Case No. 12940 (Reopened)

Submitted by:
Gruy Petroleum Management Company
Harvey E. Yates Company
Pecos Production Company

Hearing Date: November 20, 2003



LEGEND

- STRAWN PENETRATIONS
- STRAWN REEF PRODUCER
- PROPOSED STRAWN LOCATION

BEFORE THE COMMISSION
Santa Fe, New Mexico
Case No. 12940 (Reopened) Exhibit No. 1
Submitted by:
OPPOSITION
Hearing Date: November 20, 2003

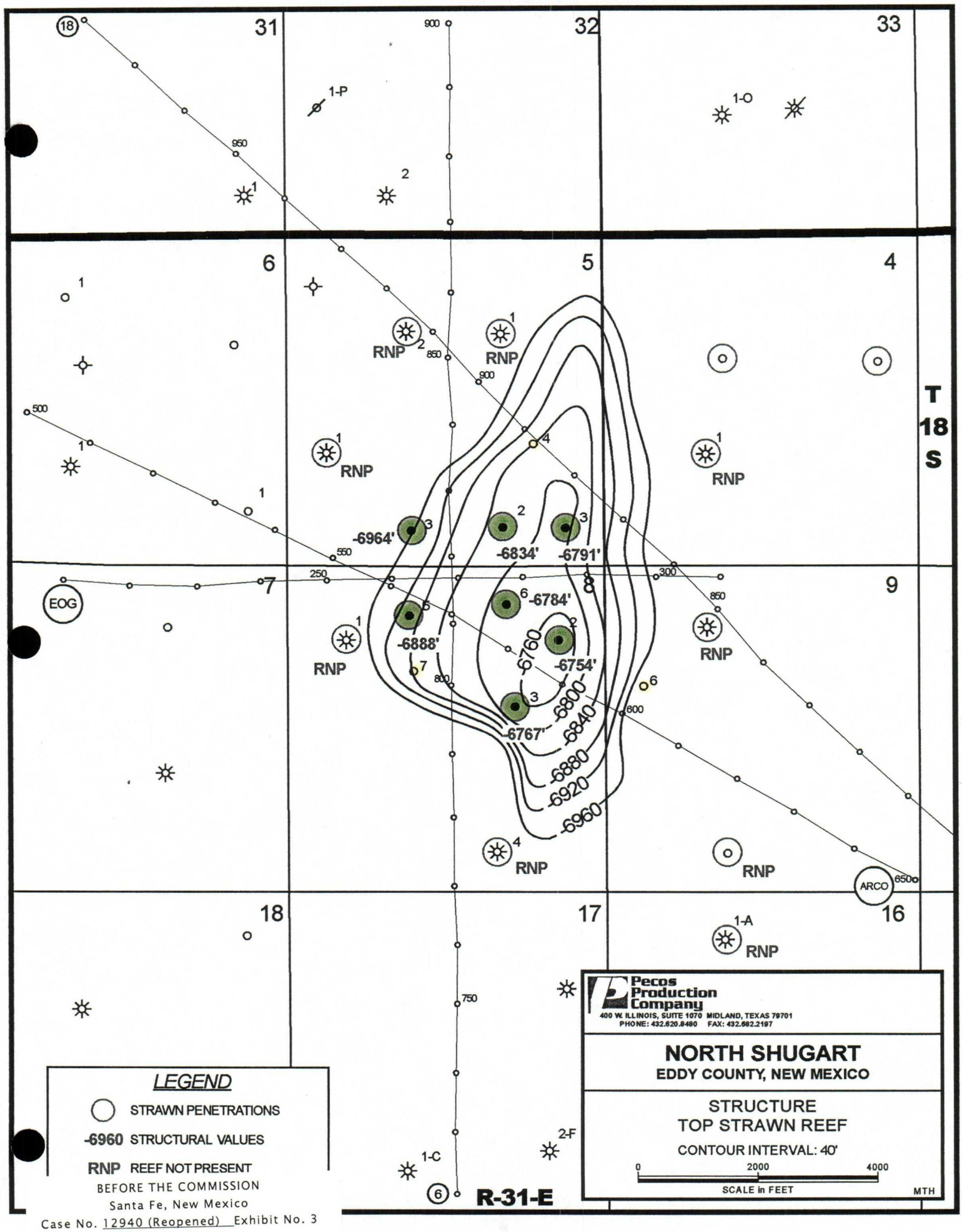
Pecos Production Company
400 W. ILLINOIS, SUITE 1070 MIDLAND, TEXAS 79701
PHONE: 432.620.8480 FAX: 432.682.2197

NORTH SHUGART
EDDY COUNTY, NEW MEXICO

LAND PLAT

0 2000 4000
SCALE in FEET

MTH



LEGEND

STRAWN PENETRATIONS

-6960 STRUCTURAL VALUES

RNP REEF NOT PRESENT

BEFORE THE COMMISSION
Santa Fe, New Mexico
Case No. 12940 (Reopened) Exhibit No. 3
Submitted by:
OPPOSITION
Hearing Date: November 20, 2003

Pecos Production Company
400 W. ILLINOIS, SUITE 1070 MIDLAND, TEXAS 79701
PHONE: 432.620.8480 FAX: 432.682.2197

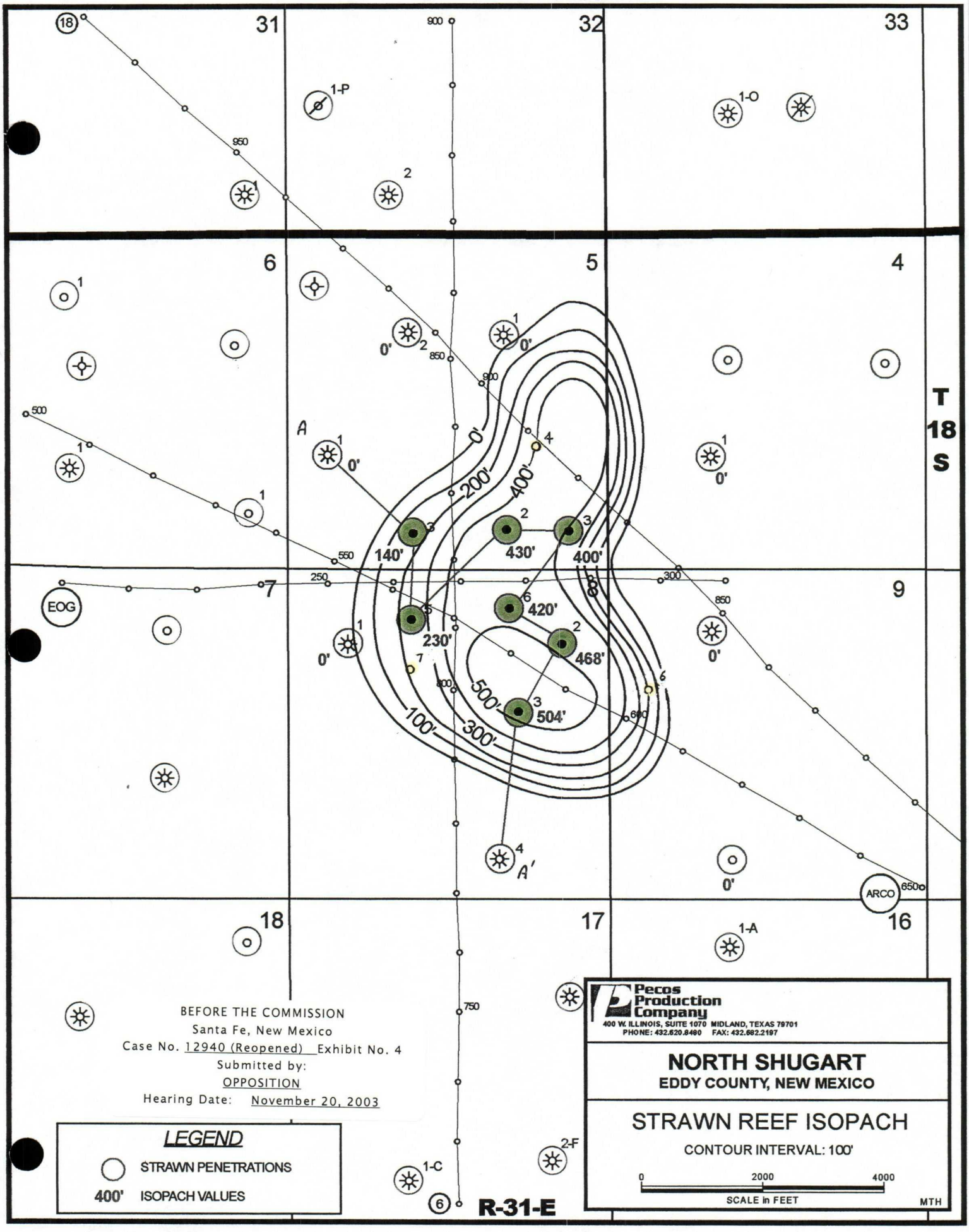
NORTH SHUGART
EDDY COUNTY, NEW MEXICO

STRUCTURE
TOP STRAWN REEF

CONTOUR INTERVAL: 40'

0 2000 4000
SCALE in FEET

MTH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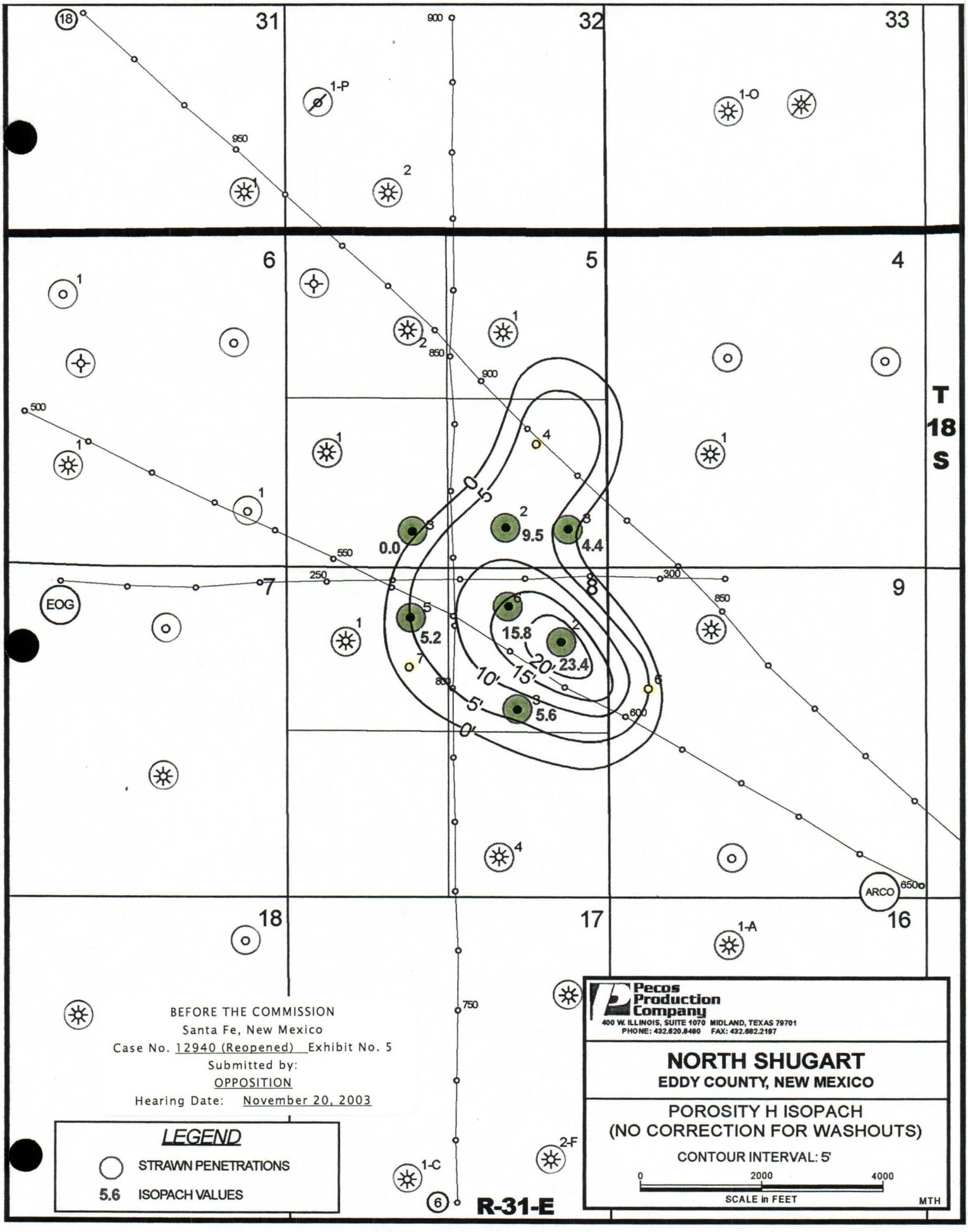
EOG
ARCO
1-P
1-O
1-A
1-C
2-F
A
A'
0'
140'
430'
400'
230'
420'
468'
504'
100'
200'
300'
400'
500'
BEFORE THE COMMISSION
Santa Fe, New Mexico
Case No. 12940 (Reopened) Exhibit No. 4
Submitted by:
OPPOSITION
Hearing Date: November 20, 2003
LEGEND
STRAWN PENETRATIONS
400' ISOPACH VALUES
R-31-E
Pecos Production Company
400 W. ILLINOIS, SUITE 1070 MIDLAND, TEXAS 79701
PHONE: 432.620.8480 FAX: 432.682.2197
NORTH SHUGART
EDDY COUNTY, NEW MEXICO
STRAWN REEF ISOPACH
CONTOUR INTERVAL: 100'
0 2000 4000
SCALE in FEET
MTH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EOG
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1-C
2-F
0.0
9.5
4.4
5.2
15.8
23.4
5.6
0'
5'
10'
15'
20'
BEFORE THE COMMISSION
Santa Fe, New Mexico
Case No. 12940 (Reopened) Exhibit No. 5
Submitted by:
OPPOSITION
Hearing Date: November 20, 2003
LEGEND
STRAWN PENETRATIONS
5.6 ISOPACH VALUES
Pecos Production Company
400 W. ILLINOIS, SUITE 1070 MIDLAND, TEXAS 79701
PHONE: 432.620.8480 FAX: 432.682.2197
NORTH SHUGART
EDDY COUNTY, NEW MEXICO
POROSITY H ISOPACH
(NO CORRECTION FOR WASHOUTS)
CONTOUR INTERVAL: 5'
0 2000 4000
SCALE in FEET
MTH

Shugart Strawn Calculation of Original Oil in Place

by Volumetric Method Using the Trapezoid Rule

Shugart Strawn Reef

Trapezoid Rule V=I{(A0/2)+A1+...+An-1 +(An/2)}+hnAn	(1) 0 ft	(2) 1/2 x (1)	(3) 5 ft	(4) 10 ft	(3) 15 ft	(4) 20 ft	(5) 25 ft	(6) 1/2 Last Area	(7) Total	(8) Avg h above max iso	(9) Vol above max iso	(10) Gross sand volume (7)x5+(9)
	Areas enclosed by respective isopach lines, acres											
Fren 8-2, 8-3, 8-6	156.2	78.1	140.3	102.3	49.5	16.9	0.0	8.5	378.7	1.70	28.8	1,922.1
Fren 8-5	47.2	23.6	21.4	0.0	0.0	0.0	0.0	10.7	34.3	2.00	42.8	214.3
Magnum Fed Com 5-2, 5-3	125.5	62.7	90.7	1.5	0.0	0.0	0.0	0.7	154.2	2.00	2.9	774.1
Parker Deep Fed Com 5-3	11.9	6.0	3.8	0.0	0.0	0.0	0.0	1.9	7.9	1.25	4.8	44.2
Total Shugart Reef	422.8	211.4	282.5	106.9	50.0	16.9	0.0	8.5	659.3	1.70	28.8	3,325.4

OOIP = [7758Ahϕ(1-Sw)]/Boi	Total Reef	Fren 8-2&8-3	Fren 8-5	Mag Fed 5	Parker Deep 5
Ahϕ =	3,325.4	1,922.1	214.3	774.1	44.2
Sw =	0.20	0.20	0.20	0.20	0.20
Boi =	2.887	2.887	2.887	2.887	2.887
OOIP =	**7,148,802**	4,131,998	460,728	1,664,048	94,930

BEFORE THE COMMISSION
Santa Fe, New Mexico
Case No. 12940 (Reopened) Exhibit No. 6
Submitted by:
OPPOSITION
Hearing Date: November 20, 2003

Shugart Strawn Pool

Summary of Bottom Hole Pressure History
Normalized to -6900' Subsea Datum

Total Reef Production Data

	Oil	Gas	Water	GOR	Cum Oil	Cum Gas	Cum MCFE	Cum GOR
Initial	0	0	0	0	0	0	0	0
Aug-02	1,251	2,538	251	2,029	1,251	2,538	10,044	2,029
Sep-02	27,765	78,261	586	2,819	29,016	80,799	254,895	2,785
Oct-02	19,597	59,777	68	3,050	48,613	140,576	432,254	2,892
Nov-02	35,961	97,695	262	2,717	84,574	238,271	745,715	2,817
Dec-02	44,262	140,130	261	3,166	128,836	378,401	1,151,417	2,937
Jan-03	56,551	196,593	10	3,476	185,387	574,994	1,687,316	3,102
Feb-03	64,979	248,435	113	3,823	250,366	823,429	2,325,625	3,289
Mar-03	69,644	309,263	31	4,441	320,010	1,132,692	3,052,752	3,540
Apr-03	62,881	305,779	78	4,863	382,891	1,438,471	3,735,817	3,757
May-03	58,831	314,920	237	5,353	441,722	1,753,391	4,403,723	3,969
Jun-03	64,984	356,665	34	5,489	506,706	2,110,056	5,150,292	4,164
Jul-03	61,676	361,930	44	5,868	568,382	2,471,986	5,882,278	4,349
Aug-03	47,893	272,662	13	5,693	616,275	2,744,648	6,442,298	4,454
Sep-03	34,621	202,067	31	5,837	650,896	2,946,715	6,852,091	4,527
Oct-03	35,349	229,127	0	6,482	686,245	3,175,842	7,293,312	4,628
Nov-03	0	0	0	0	686,245	3,175,842	7,293,312	4,628
Dec-03	0	0	0	0	686,245	3,175,842	7,293,312	4,628

Bottom Hole Pressure Data Summary

Est Reef BHP	Fren 8-2	Fren 8-3	Fren 8-5	Fren 8-6	Mag 5-2	Mag 5-3	Parker 5-3
5,393		5,393					
4,775	4,822	2,313	4,528		4,775		
						4,252	454
3,592	3,592	2,115	2,874		2,915	2,689	
3,202	3,202	3,110	2,722				
3,159				3,159			

Color code for type of test

- DST
- Static - Built up
- Static - Building
- Good Build Up
- Failed Build Up

BEFORE THE COMMISSION
Santa Fe, New Mexico
Case No. 12940 (Reopened) Exhibit No. 7
Submitted by:
OPPOSITION
Hearing Date: November 20, 2003

Shugart Strawn Calculation of Original Oil in Place

by Material Balance Below Bubble Point

	P_{res}	Cum Oil N_p	Cum Oil Below p_b N_{pb}	Cum GOR Below p_b R_p	Cum Wtr Below p_b W_{pb}	B_o	R_s	Z	B_g	N'	N
Bubble point	4,583	128,836			1,428	2.602	2893	0.870	0.000588		
Fren 8-2 Static (5/31/03)	3,592	441,722	312,886	4,395	469	1.574	1203	0.830	0.000715	6,668,705	6,797,541
Fren 8-2 Buildup (9/26/03)	3,202	650,896	522,060	4,583	591	1.520	1094	0.807	0.00078	6,890,549	7,019,385
Fren 8-6 Static (10/28/03)	3,159	686,245	557,409	4,763	591	1.514	1082	0.810	0.000794	7,075,918	7,204,754
										Average =	**7,007,227**

p_b = bubble point pressure = 4,583 psi

p_a = atmospheric pressure = 14.7 psi

B_{ob} = 2.602 RVB/STB

R_{sb} = 2,893 SCF/STB

T_f = 615 °R

CVD Data

Press	B_o	R_s	Z
4583	2.602	2893	
3700	1.589	1233	0.834
2900	1.478	1010	0.802

$$B_g = \frac{p_a}{p} \times \frac{T_f}{520} \times \frac{Z}{5.615}$$

$$N = \frac{N_pB_o + N_pB_g(R_p - R_s) + W_p - W_e}{(B_o - B_{oi}) + (R_{si} - R_s)B_g + mB_{oi}[(B_g/B_{gi}) - 1]}$$

With no water influx and no gas cap =>

$$N' = \frac{Np[Bo + Bg(Rp - Rs)] + Wp}{(Bo - Bob) + (Rsb - Rs)Bg}$$

Where :

N = initial oil in place, STB

B_g = gas formation-volume factor, RVB/SCF

W_e = cumulative water influx, bbl

B_{oi} = oil formation-volume factor at initial reservoir conditions, RVB/STB

R_{si} = solution gas oil ratio at initial reservoir conditions, SCF/STB

R_p = cumulative gas oil ratio, SCF/STB

B_{gi} = gas formation-volume factor at initial reservoir conditions, RVB/SCF

m = ratio of initial reservoir pore volume occupied by free gas to that occupied by oil

i = subscript referring to initial reservoir conditions

b = subscript referring to bubble point conditions

T_f = reservoir temperature, °R

= STB oil in place at bubble point reservoir conditions and

$N = N' + N_{pb}$

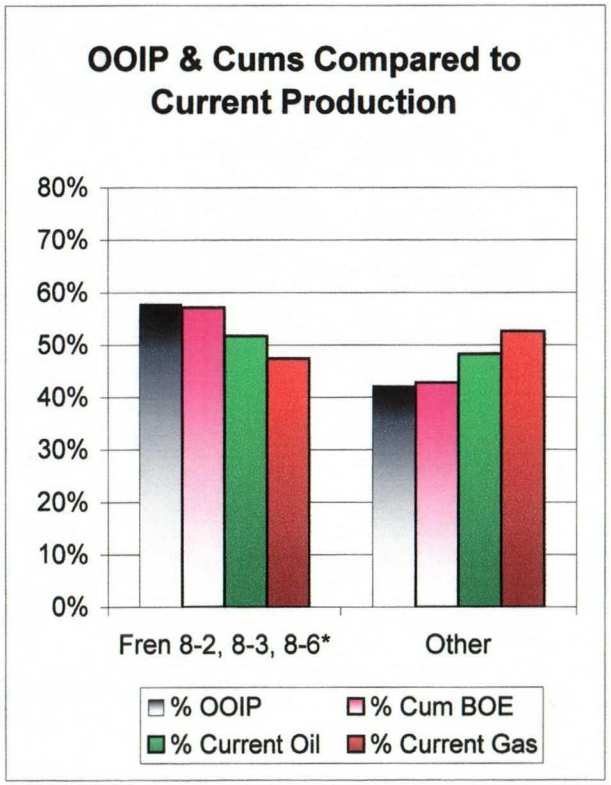
N_{pb} = STB oil produced above bubble point

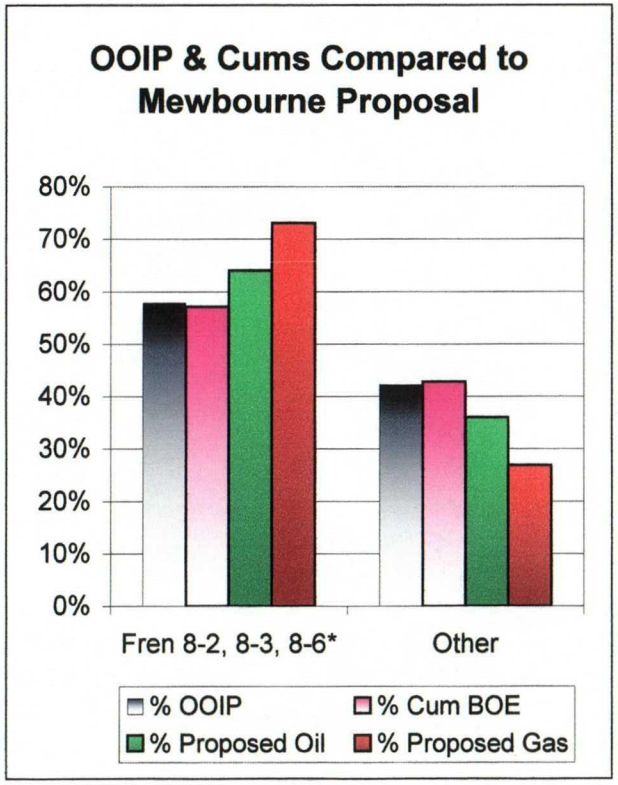
BEFORE THE COMMISSION
Santa Fe, New Mexico
Case No. 12940 (Reopened) Exhibit No. 8
Submitted by:
OPPOSITION
Hearing Date: November 20, 2003

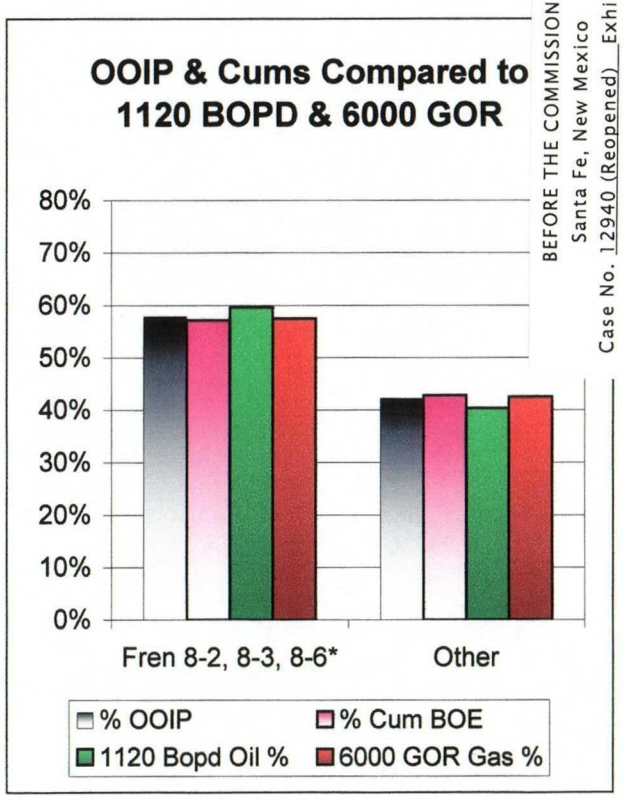
Shugart Strawn Pool
OOIP and Cum Production Compared to Current and Proposed Production

	OOIP		Current Production				Cum Production		Mewbourne Proposed Production				1120 BOPD & 6000 GOR Limit			
	Bbl	% Bbl	BOPD	%BOPD	MCFD	%MCFD	BOE	%BOE	BOPD	%BOPD	MCFD	%MCFD	BOPD	%BOPD	MCFD	%MCFD
Fren 8-2, 8-3, 8-6*	4,131,998	57.8%	813	51.7%	4,480	47.4%	694,923	57.2%	1,350	64.0%	13,500	73.1%	1,120	59.6%	6,720	57.5%
Other	3,016,805	42.2%	759	48.3%	4,972	52.6%	520,629	42.8%	759	36.0%	4,972	26.9%	759	40.4%	4,972	42.5%
	7,148,802	100.0%	1,572	100.0%	9,452	100.0%	1,215,552	100.0%	2,109	100.0%	18,472	100.0%	1,879	100.0%	11,692	100.0%

** Current production allowable rates under GOR limit with current perforation scheme.*







BEFORE THE COMMISSION
Santa Fe, New Mexico
Case No. 12940 (Reopened) Exhibit No. 9
Submitted by:
OPPOSITION
Hearing Date: November 20, 2003

POOL DEPTH RANGE	DEPTH BRACKET ALLOWABLE		
	40 Acres	80 Acres	160 Acres
0 to 4,999 feet	80 bbls.	160 bbls.	
5,000 to 5,999 "	107 "	187 "	347 bbls.
6,000 to 6,999 "	142 "	222 "	382 "
7,000 to 7,999 "	187 "	267 "	427 "
8,000 to 8,999 "	230 "	310 "	470 "
9,000 to 9,999 "	275 "	355 "	515 "
10,000 to 10,999 "	320 "	400 "	560 "
11,000 to 11,999 "	365 "	445 "	605 "
12,000 to 12,999 "	410 "	490 "	650 "
13,000 to 13,999 "	455 "	535 "	695 "
14,000 to 14,999 "	500 "	580 "	740 "
15,000 to 15,999 "	545 "	625 "	785 "
16,000 to 16,999 "	590 "	670 "	830 "
17,000 to 17,999 "	635 "	715 "	875 "

[9-1-72...2-1-96]

505.B. The 40-acre depth bracket allowables shall apply to all undesignated wells not governed by special pool rules and to all pools developed on the normal 40-acre statewide spacing unit. [9-1-72...2-1-96]

505.C. The 80-acre and 160-acre depth bracket allowables shall apply to wells governed by applicable special pool rules promulgated by the Division as an exception to the normal 40-acre statewide spacing unit. [9-1-72...2-1-96]

505.D. The Division may, where the same is deemed appropriate, assign to a given pool a special depth bracket allowable at variance to the depth bracket allowable normally assigned to a pool of similar depth and spacing. Such special allowable may be more or less than the regular depth bracket allowable and shall be assigned only after notice and hearing. [9-1-72...2-1-96]

505.E. In assigning a lesser than regular depth bracket allowable, the Division may consider, among other pertinent factors, reservoir damage, casinghead gas production and disposition, water production and disposition, transportation facilities, the prevention of surface or underground waste, and the protection of correlative rights. [9-1-72...2-1-96]

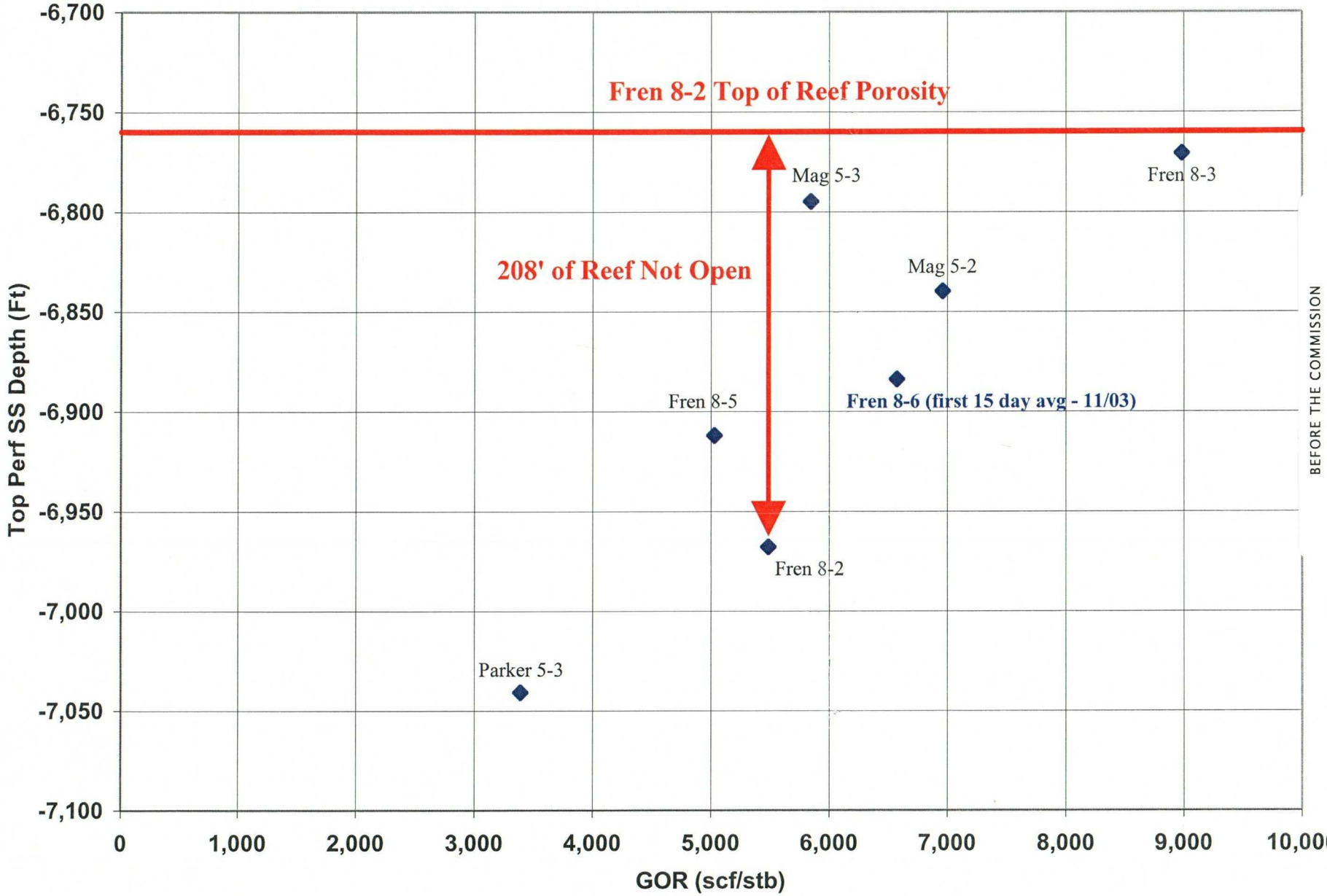
505.F. Assignment of a greater than regular depth bracket allowable shall be made only after sufficient reservoir information is available to ensure that said allowable can be produced without damage to the reservoir and without causing surface or underground waste. The Division shall also consider the availability of crude oil transportation and marketing facilities, casinghead gas transportation, processing, and marketing facilities, water disposal facilities, the protection of correlative rights, and other pertinent factors. [9-1-72...2-1-96]

506 GAS-OIL RATIO LIMITATION

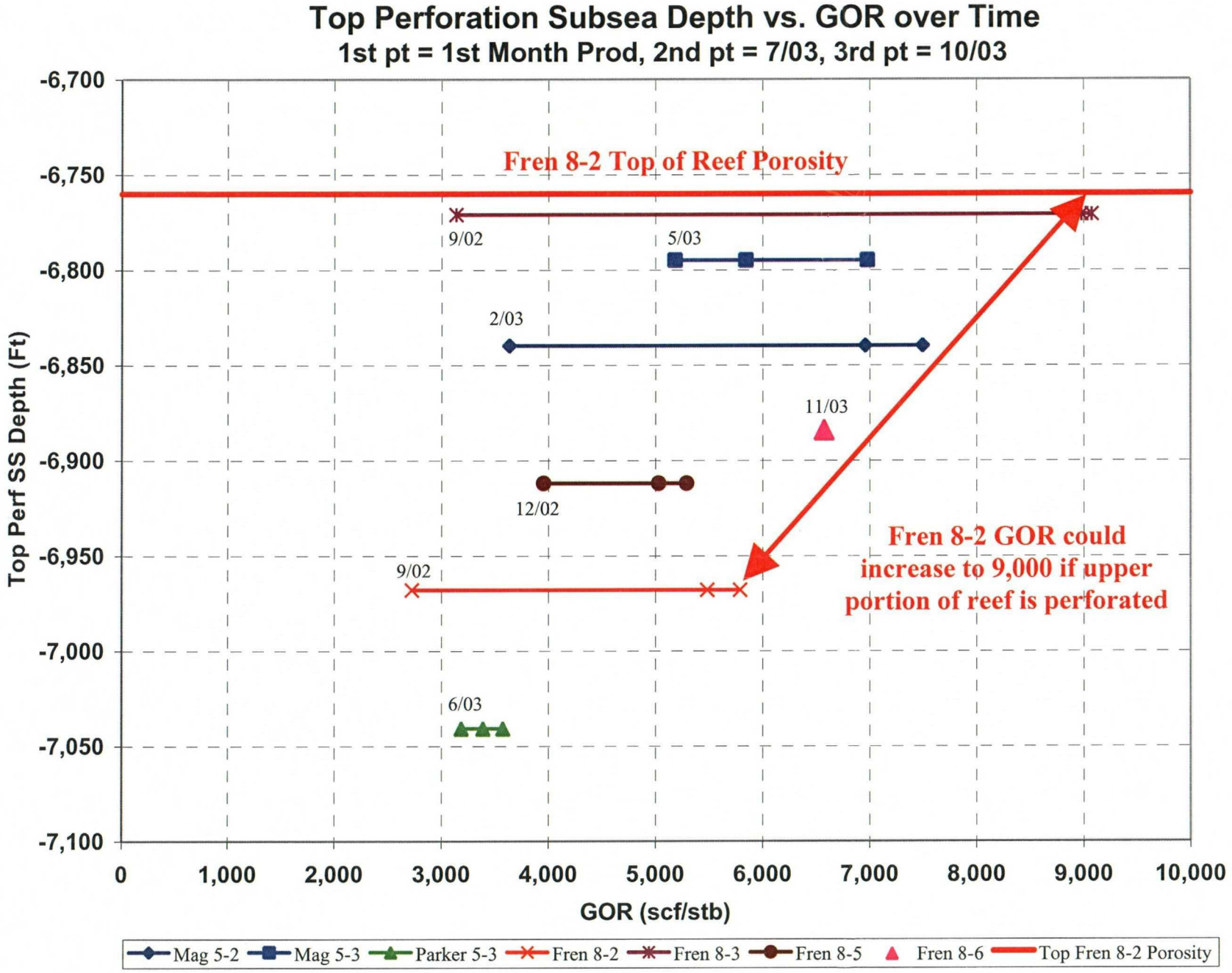
506. A. In allocated pools containing a well or wells producing from a reservoir which contains both oil and gas, each proration unit shall be permitted to produce only that volume of gas equivalent to the applicable limiting gas-oil ratio multiplied by the top unit oil allowable for the pool. In the event the Division has not set a gas-oil ratio limit for a particular oil pool, the limiting gas-oil ratio shall be 2,000 cubic feet of gas for each barrel of oil produced. In allocated oil pools all producing wells, whether oil or casinghead gas, shall be placed on the oil proration schedule. [1-1-50...2-1-96]

506.B. Unless heretofore or hereafter specifically exempted by order of the Division issued after hearing, a gas-oil ratio limitation shall be placed on all allocated oil pools, and all proration units having a gas-oil ratio exceeding the limit for the pool shall be penalized in accordance with the following procedure:

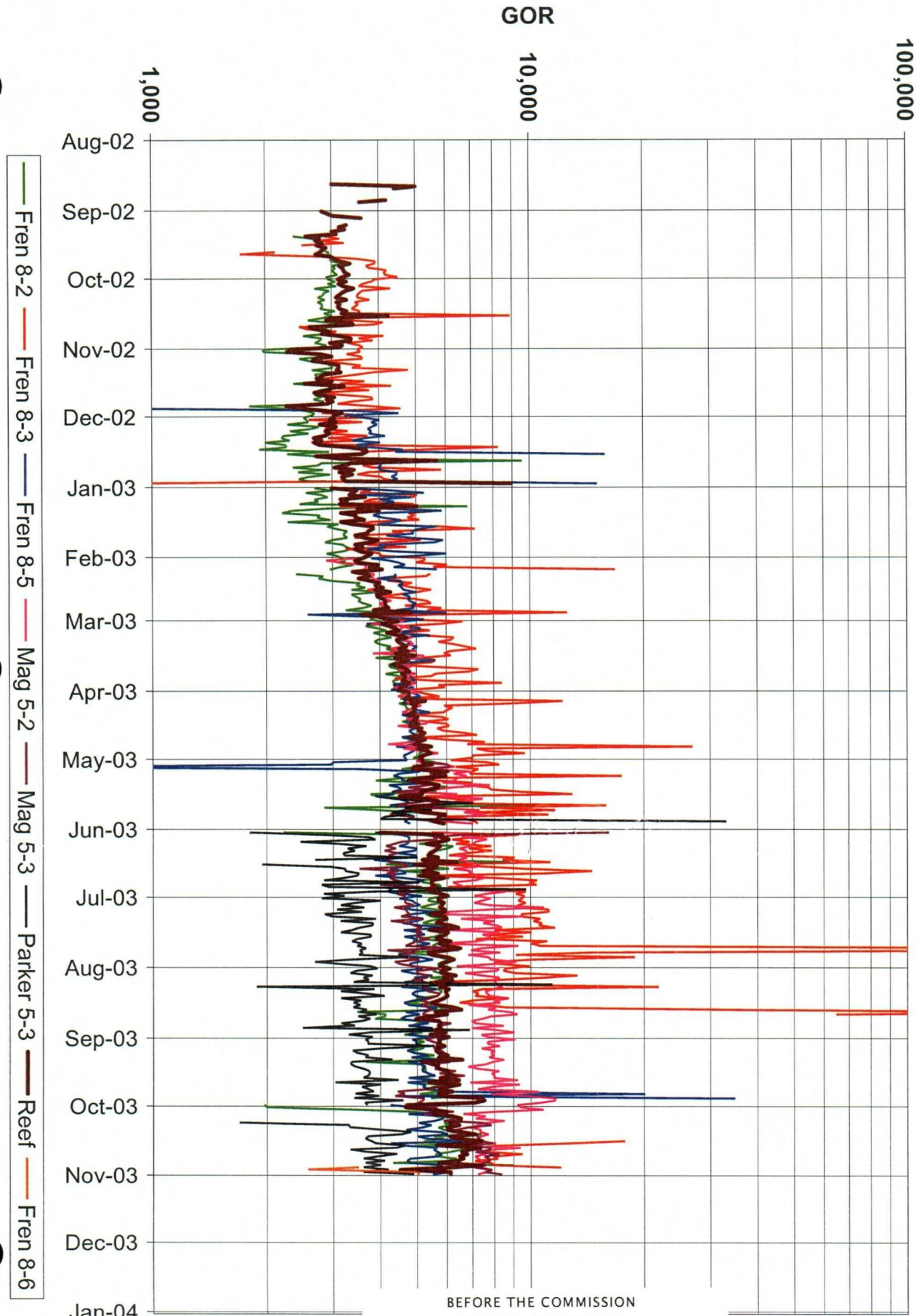
Top Perforation Subsea Depth vs. July 2003 GOR



BEFORE THE COMMISSION
Santa Fe, New Mexico
Case No. 12940 (Reopened) Exhibit No. 11
Submitted by:
OPPOSITION
Hearing Date: November 20, 2003



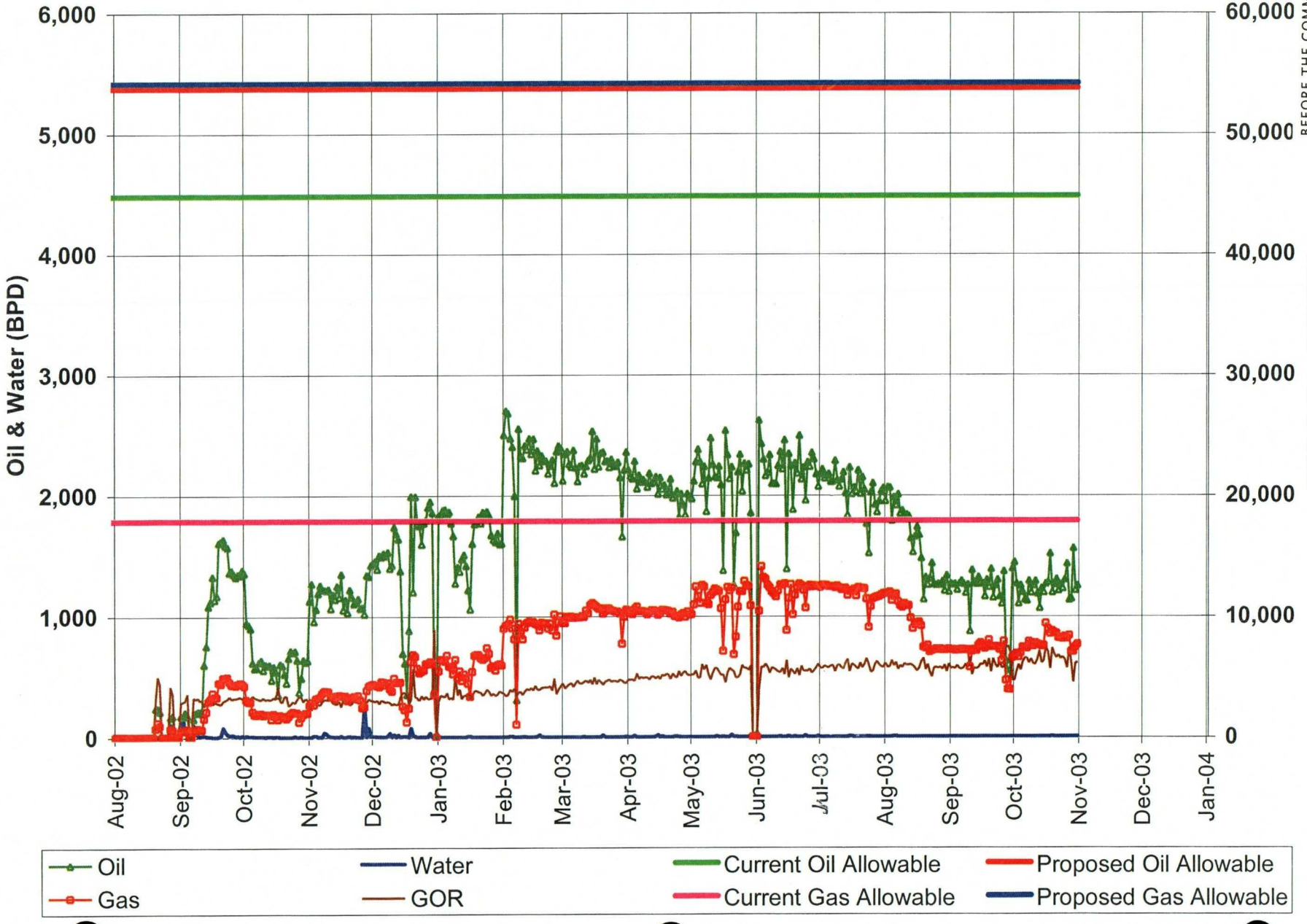
BEFORE THE COMMISSION
Santa Fe, New Mexico
Case No. 12940 (Reopened) Exhibit No. 12
Submitted by:
OPPOSITION
Hearing Date: November 20, 2003



Combined GOR Graph for Strawn Reef Wells

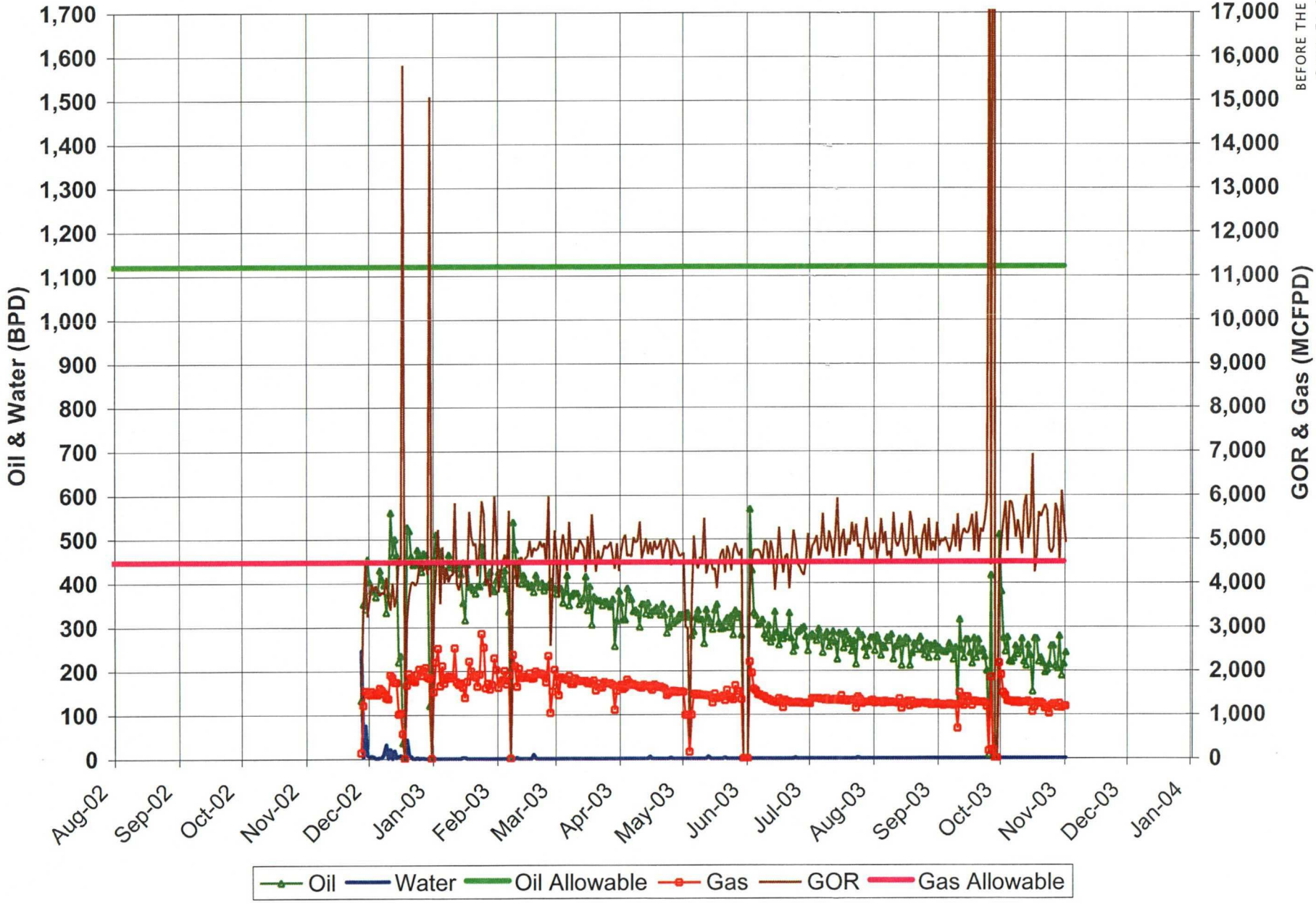
BEFORE THE COMMISSION
Santa Fe, New Mexico
Case No. 12940 (Reopened) Exhibit No. 13
Submitted by:
OPPOSITION
Hearing Date: November 20, 2003

Total Reef Production With Current &Proposed Allowables



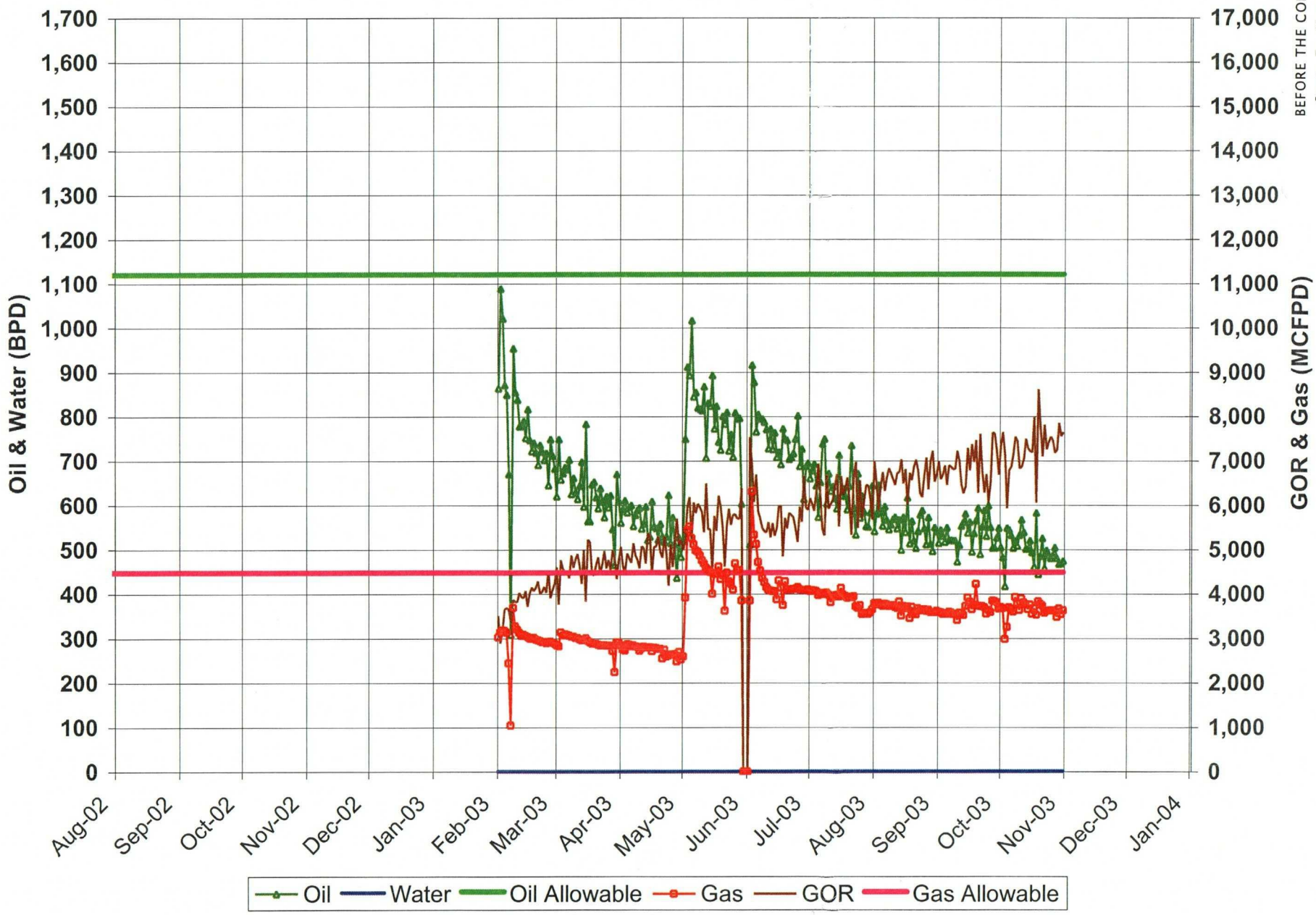
BEFORE THE COMMISSION
Santa Fe, New Mexico
Case No. 12940 (Reopened) Exhibit No.14
Submitted by:
OPPOSITION
Hearing Date: November 20, 2003

FREN 8 FEDERAL #5
NW/4 of Section 8

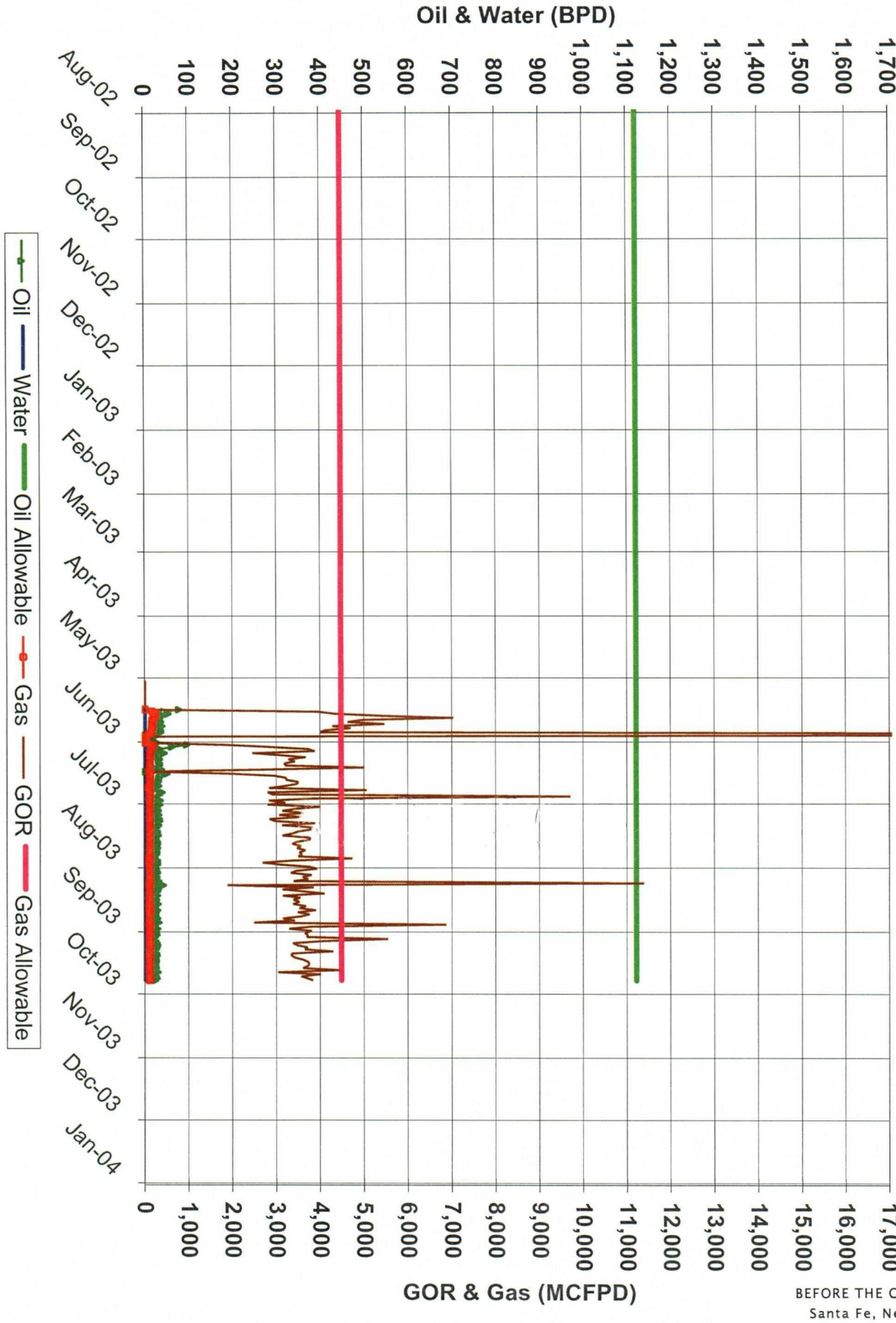


BEFORE THE COMMISSION
Santa Fe, New Mexico
Case No. 12940 (Reopened) Exhibit No. 15
Submitted by:
OPPOSITION
Hearing Date: November 20, 2003

MAGNUM 5 FED #2 & #3
SE/4 of Section 5

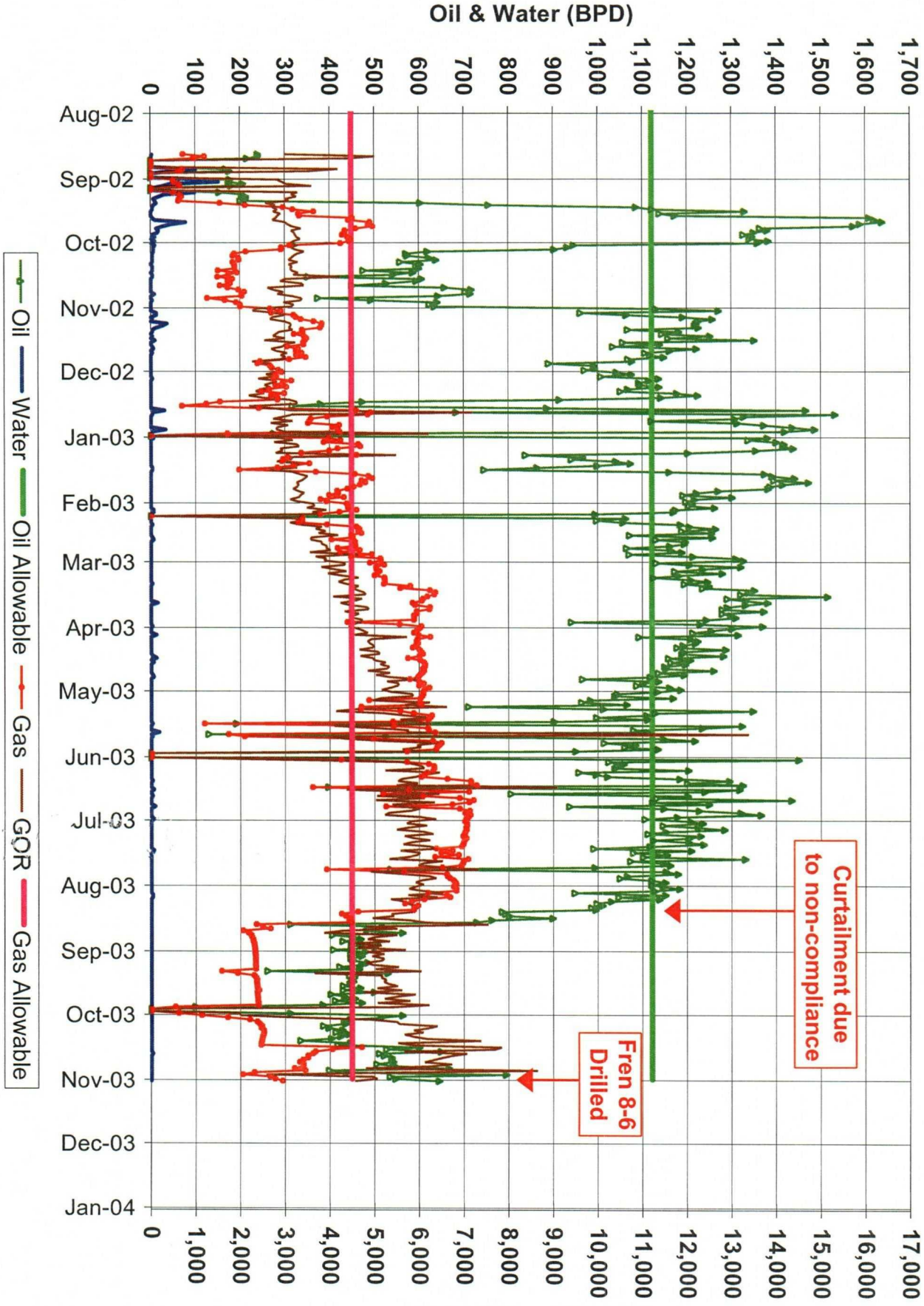


BEFORE THE COMMISSION
Santa Fe, New Mexico
Case No. 12940 (Reopened) Exhibit No.16
Submitted by:
OPPOSITION
Hearing Date: November 20, 2003



BEFORE THE COMMISSION
Santa Fe, New Mexico
Case No. 12940 (Reopened) Exhibit No. 17
Submitted by:
OPPOSITION
Hearing Date: November 20, 2003

FREN 8 FEDERAL #2, #3 & #6
NE/4 of Section 8



BEFORE THE COMMISSION
Santa Fe, New Mexico
Case No. 12940 (Reopened) Exhibit No. 18
Submitted by:
OPPOSITION
Hearing Date: November 20, 2003