

1P1-13 N/R

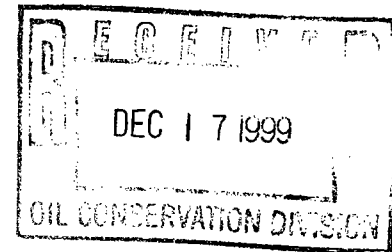

WALSH

ENGINEERING & PRODUCTION CORP.

Petroleum Engineering Consulting
Lease Management
Contract Pumping

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**New Mexico Oil Conservation Division
Attn. David Catanach
2040 So. Pacheco
Santa Fe, New Mexico**



RE: Frontier #1A, Step Rate Test Results

Dear Mr. Catanach

Please find enclosed a copy of the data from the "step-rate injection test" that was done on Pendragon Energy Partner's Frontier #1A Disposal well. Please find the following:

1. Print out of surface pressures.
2. Print out of bottom hole pressures.
3. A summary of the pressures vs. rates.
4. A graph of the pressures vs. rates.

The test was performed on December 6, 1999 and was witnessed by representatives from the NMOCD (Denny Foutz and Bruce Martin) and representatives from the EPA and Navajo EPA (Jim Walker). American Energy Services provided the pumping services and recorded all surface pressures. Tefteller Inc. provided the bottom hole pressure gauge and corresponding pressure data.

Each injection interval was pumped at a constant rate for 15 min.

The well had been shut in for 28 hrs. prior to testing and the surface pressure was 52 psig.

Based on the test results Pendragon Energy is requesting that the maximum allowable injection pressure be raised to **980 psig (surface pressure)**. The pressure was derived from the observed PP (parting pressure) of 945 psi (bottom hole pressure minus hydrostatic pressure). A fracture gradient was calculated by : (PP + HH)/depth to top perf

$$(945 \text{ psi} + 1607 \text{ psi}) / 3712 \text{ ft} = 0.69 \text{ psi/ft.}$$

Using 0.69 psi/ft to calculate a corresponding STP (surface treating pressure) @ 0.6 bpm (the rate of the injection pump) : STP = depth to top perf x FG (frac gradient) - HH (hydrostatic head) + FL (friction loss in tubulars).

$$3712 \text{ ft} \times 0.69 \text{ psi/ft} - 1607 \text{ psi} + 26 \text{ psi} = 980 \text{ psi}$$

If you have any questions or need any additional information please feel free to call me anytime at 505-327-4892 or Al Nicol 303-296-9402.

Sincerely,

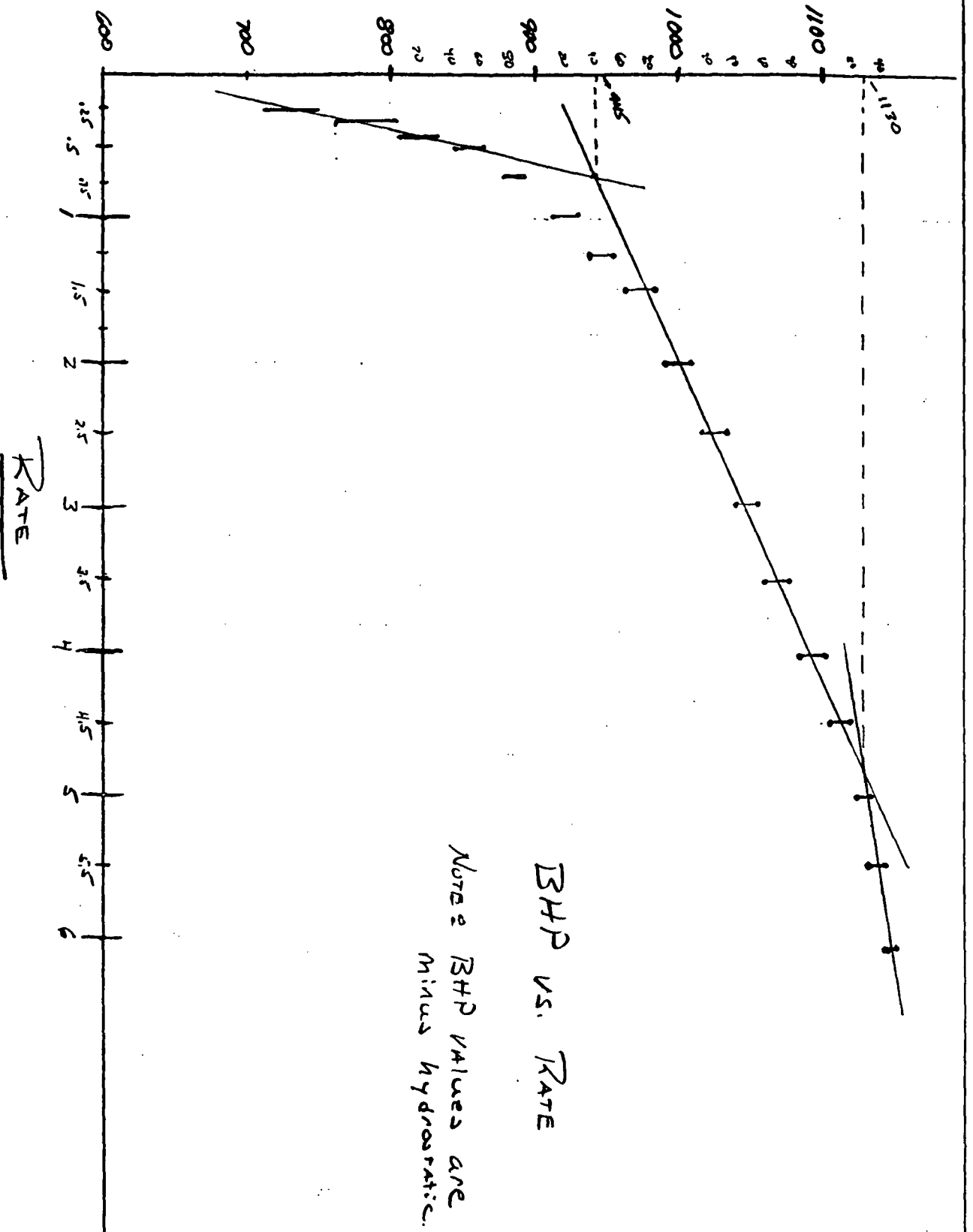


John C. Thompson
Engineer

cc: Al Nicol
NMOCD (Aztec Office)
NMOCD (Santa Fe Office)
EPA/Navajo EPA

Pendragon Energy Partners				
Frontier #1A Disposal Well				
STEP RATE TEST -12/6/99				
	Note: each interval was 15 min. long. The values shown for surface pressure are			
	the average pressures & rates established during each interval.			
Rate	Surface Pressure	BH Pressure	BHP minus Hydrostatic	
(bpm)	(psi)	(psi)	(psi)	
0.27	751.74	2323-2355	716-748	
0.36	800	2368-2415	761-808	
0.45	842.81	2422-2441	815-834	
0.54	879.67	2452-2470	845-863	
0.73	911.03	2484-2500	877-893	
0.99	968.71	2522-2539	915-932	
1.27	1042.76	2546-2563	939-956	
1.56	1108.71	2569-2590	962-983	
2	1216.9	2595-2617	988-1010	
2.5	1358.71	2624-2641	1017-1034	
2.98	1506.13	2647-2661	1040-1054	
3.6	1725.52	2667-2685	1060-1078	
4.04	1909.31	2691-2708	1084-1101	
4.56	2141.67	2712-2727	1105-1120	
5.05	2338.06	2730-2739	1123-1132	
5.52	2563	2743-2749	1136-1142	
6.22	2917.86	2750-2754	1143-1147	

Pressure



BHP vs. RATE

Note: BHP values are minus hydrostatic.

American Energy Services

PENDING

Customer : ~~Frontier Oil & Gas~~
 Well Name : Frontier A#1
 Formation : ~~Gallop~~ PLO
 Job Date : 12/6/99
 Comment : Step Rate

TIME PRESSURE A SLURRY RATE
 0.000 [Channel Precisions]

0.500	680	0
1.000	300	0
1.500	600	0.51
2.000	870	0.13
2.500	990	0.2
3.000	680	0.51
3.500	710	0.47
4.000	720	0.46
4.500	650	0
5.000	720	0.46
5.500	740	0.41
6.000	740	0.36

6.500	730	0.26
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7.000	720	0.27
7.500	730	0.27
8.000	740	0.26
8.500	740	0.26
9.000	730	0.27
9.500	750	0.27
10.000	730	0.26
10.500	750	0.26
11.000	740	0.27
11.500	750	0.27
12.000	750	0.27
12.500	740	0.26
13.000	760	0.26
13.500	760	0.26
14.000	780	0.28
14.500	770	0.27
15.000	770	0.27
15.500	750	0.28
16.000	770	0.27
16.500	780	0.27
17.000	780	0.27
17.500	770	0.26
18.000	780	0.35

18.500	770	0.36
19.000	800	0.36
19.500	780	0.36
20.000	780	0.36
20.500	800	0.36
21.000	780	0.36
21.500	790	0.37
22.000	800	0.37
22.500	810	0.37
23.000	810	0.37
23.500	800	0.37

24.000	800	0.37
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24.500	800	0.37
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25.000	800	0.37
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25.500	800	0.37
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26.000	800	0.37
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26.500	800	0.37
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27.000	800	0.37
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27.500	800	0.37
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28.000	800	0.37
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28.500	800	0.37
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29.000	800	0.37
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29.500	800	0.37
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30.000	800	0.37
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30.500	800	0.37
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31.000	800	0.37
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31.500	800	0.37
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32.000	800	0.37
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32.500	800	0.37
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33.000	800	0.37
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33.500	800	0.37
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34.000	800	0.37
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34.500	800	0.37
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35.000	800	0.37
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35.500	800	0.37
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36.000	800	0.37
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36.500	800	0.37
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37.000	800	0.37
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37.500	800	0.37
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38.000	800	0.37
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38.500	800	0.37
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39.000	800	0.37
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39.500	800	0.37
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2-12-1 751.74 .27

2-12-2 800 - .26

2-12-3 842.81 .45

2-12-4 879.67 .64

5 911.03 .73

6 968.71 .99

7 1042.76 1.27

8 1108.71 1.56

9 1216.90 2.00

10 1358.71 2.50

11 1506.13 2.92

12 1725.52 3.60

13 1909.31 4.04

14 2141.67 4.56

15 2338.00 5.05

16 2563.00 5.52

17 2917.80 6.22

.26 bpm
720 - 780

American Energy Services

Customer : ~~Frontier Oil & Gas~~
 Well Name : Frontier A#1
 Formation : Gallup
 Job Date : 12/6/99
 Comment : Step Rate

PENORATOR

TIME	PRESSURE A	SLURRY RATE
24.000	800	0.37
24.500	790	0.37
25.000	800	0.36
25.500	790	0.36
26.000	810	0.36
26.500	810	0.36
27.000	810	0.36
27.500	810	0.37
28.000	810	0.37
28.500	810	0.37
29.000	820	0.37
29.500	810	0.37
30.000	820	0.36
30.500	800	0.36
31.000	800	0.36
31.500	830	0.37
32.000	820	0.4
32.500	830	0.44
33.000	820	0.45
33.500	840	0.44
34.000	840	0.44
34.500	840	0.44
35.000	840	0.44
35.500	840	0.44
36.000	840	0.44
36.500	840	0.45
37.000	840	0.45
37.500	840	0.44
38.000	840	0.45
38.500	840	0.45
39.000	840	0.45
39.500	840	0.45
40.000	840	0.45
40.500	850	0.45
41.000	840	0.46
41.500	850	0.45
42.000	850	0.45
42.500	850	0.46
43.000	850	0.45
43.500	850	0.45
44.000	850	0.44
44.500	850	0.44
45.000	850	0.44
45.500	850	0.45
46.000	850	0.44
46.500	860	0.44
47.000	840	0.45
47.500	850	0.45

36 bpm
 760 - 820



American Energy Services

P.3002000-4

Customer : ~~Morton Oil & Gas~~
 Well Name : Frontier A#1
 Formation : Gattup *P20*
 Job Date : 12/6/99
 Comment : Step Rate

TIME	PRESSURE A	SLURRY RATE
48.000	920	0.52
48.500	880	0.56
49.000	870	0.55
49.500	880	0.55
50.000	870	0.55
50.500	860	0.54
51.000	860	0.55
51.500	900	0.54
52.000	900	0.54
52.500	860	0.54
53.000	860	0.54
53.500	890	0.54
54.000	860	0.55
54.500	870	0.53
55.000	880	0.54
55.500	880	0.54
56.000	880	0.54
56.500	880	0.54
57.000	870	0.54
57.500	870	0.53
58.000	910	0.53
58.500	880	0.54
59.000	870	0.54
59.500	870	0.54
60.000	880	0.54
60.500	880	0.54
61.000	880	0.54
61.500	890	0.54
62.000	870	0.54
62.500	920	0.55
63.000	850	0.72
63.500	870	0.72
64.000	940	0.71
64.500	980	0.73
65.000	850	0.72
65.500	890	0.72
66.000	860	0.72
66.500	960	0.73
67.000	900	0.72
67.500	900	0.72
68.000	970	0.73
68.500	920	0.73
69.000	870	0.73
69.500	870	0.74
70.000	890	0.74
70.500	880	0.73
71.000	870	0.73
71.500	880	0.76

American Energy Services

PENDRAGON

Customer : ~~Merton Oil & Gas~~
 Well Name : Frontier A#1
 Formation : ~~Salt~~ P-2
 Job Date : 12/6/99
 Comment : Step Rate

TIME	PRESSURE A	SLURRY RATE
72.000	880	0.75
72.500	960	0.74
73.000	910	0.74
73.500	880	0.75
74.000	880	0.73
74.500	980	0.74
75.000	920	0.73
75.500	940	0.74
76.000	960	0.74
76.500	980	0.75
77.000	980	0.74
77.500	950	0.98
78.000	950	1
78.500	960	0.99
79.000	960	0.99
79.500	960	0.99
80.000	970	0.98
80.500	970	1
81.000	970	0.99
81.500	970	0.98
82.000	970	0.99
82.500	970	0.99
83.000	970	0.99
83.500	970	1
84.000	970	0.99
84.500	970	0.99
85.000	970	1.01
85.500	970	0.98
86.000	970	1
86.500	970	0.98
87.000	980	1
87.500	970	1
88.000	970	1
88.500	970	1
89.000	980	1
89.500	970	0.99
90.000	970	1.01
90.500	980	0.99
91.000	970	1
91.500	970	0.99
92.000	980	0.99
92.500	960	1
93.000	1070	1.26
93.500	1060	1.26
94.000	1070	1.27
94.500	1050	1.27
95.000	1020	1.27
95.500	1000	1.26

American Energy Services**PENDRAGON**

Customer : ~~Monterey Gas~~
Well Name : Frontier A#1
Formation : ~~Gallup~~ PZ
Job Date : 12/6/99
Comment : Step Rate

TIME	PRESSURE A	SLURRY RATE
96.000	1070	1.28
96.500	1000	1.27
97.000	1080	1.28
97.500	1020	1.26
98.000	1040	1.27
98.500	1070	1.27
99.000	1010	1.28
99.500	1060	1.27
100.000	1060	1.28
100.500	1010	1.27
101.000	1080	1.27
101.500	1050	1.27
102.000	1010	1.27
102.500	1050	1.28
103.000	1010	1.27
103.500	1080	1.28
104.000	1030	1.28
104.500	1010	1.28
105.000	1080	1.28
105.500	1020	1.27
106.000	1010	1.27
106.500	1080	1.28
107.000	1040	1.28
107.500	1090	1.49
108.000	1070	1.57
108.500	1120	1.58
109.000	1070	1.56
109.500	1100	1.55
110.000	1080	1.56
110.500	1110	1.55
111.000	1120	1.57
111.500	1110	1.56
112.000	1120	1.57
112.500	1110	1.57
113.000	1110	1.56
113.500	1080	1.56
114.000	1100	1.57
114.500	1100	1.55
115.000	1120	1.57
115.500	1120	1.57
116.000	1120	1.55
116.500	1120	1.57
117.000	1110	1.57
117.500	1110	1.56
118.000	1120	1.57
118.500	1130	1.58
119.000	1110	1.56
119.500	1120	1.57

American Energy Services

PENDRAUN

Customer : ~~Motion Oil & Gas~~

Well Name : Frontier A#1

Formation : ~~Gallup~~ PLU

Job Date : 12/6/99

Comment : Step Rate

TIME	PRESSURE A	SLURRY RATE
120.000	1120	1.56
120.500	1130	1.57
121.000	1120	1.56
121.500	1130	1.57
122.000	1090	1.57
122.500	1110	1.57
123.000	1190	1.96
123.500	1210	1.98
124.000	1210	1.99
124.500	1220	1.99
125.000	1220	1.98
125.500	1220	2
126.000	1210	2.02
126.500	1200	2.01
127.000	1220	2
127.500	1220	1.99
128.000	1220	1.99
128.500	1220	1.98
129.000	1220	1.99
129.500	1220	2.01
130.000	1210	2.02
130.500	1210	2
131.000	1220	1.99
131.500	1220	2
132.000	1220	1.99
132.500	1220	2
133.000	1220	2.01
133.500	1210	2.02
134.000	1210	2.01
134.500	1220	2
135.000	1220	1.99
135.500	1230	1.98
136.000	1230	2
136.500	1220	2.01
137.000	1230	1.98
137.500	1320	2.24
138.000	1340	2.46
138.500	1340	2.48
139.000	1330	2.49
139.500	1340	2.49
140.000	1340	2.5
140.500	1360	2.5
141.000	1340	2.5
141.500	1360	2.52
142.000	1340	2.51
142.500	1360	2.52
143.000	1360	2.51
143.500	1360	2.5

American Energy Services

D 514 A 2 A 6 0 4

Customer : ~~Monitor Oil & Gas~~
Well Name : Frontier A#1
Formation : ~~Gallop~~ P 20
Job Date : 12/6/99
Comment : Step Rate

TIME	PRESSURE A	SLURRY RATE
144.000	1350	2.51
144.500	1360	2.51
145.000	1360	2.52
145.500	1370	2.52
146.000	1370	2.5
146.500	1360	2.49
147.000	1350	2.49
147.500	1350	2.5
148.000	1380	2.49
148.500	1370	2.49
149.000	1380	2.51
149.500	1380	2.51
150.000	1380	2.5
150.500	1350	2.49
151.000	1380	2.5
151.500	1380	2.5
152.000	1370	2.51
152.500	1390	2.6
153.000	1500	3.19
153.500	1510	2.94
154.000	1510	2.97
154.500	1500	2.97
155.000	1500	2.96
155.500	1500	2.96
156.000	1500	2.96
156.500	1500	2.96
157.000	1500	2.96
157.500	1500	2.96
158.000	1510	2.96
158.500	1490	2.97
159.000	1510	2.97
159.500	1490	2.97
160.000	1510	2.97
160.500	1510	2.97
161.000	1500	2.96
161.500	1490	2.96
162.000	1510	2.96
162.500	1510	2.97
163.000	1510	2.97
163.500	1510	2.97
164.000	1510	2.98
164.500	1500	2.96
165.000	1510	2.97
165.500	1520	2.96
166.000	1520	2.96
166.500	1510	2.96
167.000	1490	2.97
167.500	1520	2.96

American Energy Services

Customer : ~~Menton Oil & Gas~~ *PENARAGU*
 Well Name : Frontier A#1
 Formation : ~~Gallup~~ *P20*
 Job Date : 12/6/99
 Comment : Step Rate

TIME	PRESSURE A	SLURRY RATE
168.000	1540	3.13
168.500	1710	3.57
169.000	1720	3.58
169.500	1700	3.58
170.000	1710	3.58
170.500	1720	3.58
171.000	1730	3.59
171.500	1700	3.59
172.000	1740	3.59
172.500	1740	3.6
173.000	1720	3.6
173.500	1690	3.6
174.000	1710	3.6
174.500	1740	3.6
175.000	1690	3.61
175.500	1700	3.61
176.000	1720	3.61
176.500	1700	3.6
177.000	1740	3.6
177.500	1760	3.6
178.000	1720	3.6
178.500	1700	3.6
179.000	1720	3.61
179.500	1750	3.6
180.000	1730	3.6
180.500	1780	3.61
181.000	1760	3.61
181.500	1740	3.61
182.000	1770	3.61
182.500	1730	3.61
183.000	1850	3.87
183.500	1860	3.93
184.000	1900	4.03
184.500	1900	4.04
185.000	1910	4.05
185.500	1910	4.05
186.000	1910	4.05
186.500	1920	4.05
187.000	1900	4.05
187.500	1910	4.06
188.000	1920	4.05
188.500	1890	4.06
189.000	1920	4.05
189.500	1910	4.05
190.000	1890	4.06
190.500	1920	4.06
191.000	1910	4.05
191.500	1890	4.06

American Energy Services

Frontier
Customer : ~~Marathon Oil & Gas~~
Well Name : Frontier A#1
Formation : ~~Galena~~ *Permian*
Job Date : 12/8/99
Comment : Step Rate

TIME	PRESSURE A	SLURRY RATE
192.000	1930	4.06
192.500	1940	4.05
193.000	1920	4.06
193.500	1950	4.05
194.000	1930	4.05
194.500	1900	4.05
195.000	1930	4.05
195.500	1900	4.06
196.000	1930	4.06
196.500	1900	4.06
197.000	1920	4.06
197.500	2090	4.25
198.000	2070	4.43
198.500	2140	4.54
199.000	2150	4.56
199.500	2160	4.56
200.000	2160	4.56
200.500	2150	4.56
201.000	2120	4.56
201.500	2140	4.55
202.000	2130	4.55
202.500	2120	4.56
203.000	2120	4.55
203.500	2130	4.56
204.000	2150	4.58
204.500	2160	4.58
205.000	2160	4.58
205.500	2130	4.58
206.000	2150	4.59
206.500	2140	4.59
207.000	2110	4.59
207.500	2140	4.59
208.000	2130	4.59
208.500	2170	4.59
209.000	2120	4.59
209.500	2170	4.59
210.000	2180	4.61
210.500	2140	4.62
211.000	2200	4.61
211.500	2140	4.61
212.000	2180	4.61
212.500	2330	5.03
213.000	2350	5.05
213.500	2350	5.05
214.000	2340	5.05
214.500	2350	5.05
215.000	2370	5.05
215.500	2340	5.05

American Energy Services

PONORA

Customer : ~~Mentor Oil & Gas~~
 Well Name : Frontier A#1
 Formation : ~~Gallup~~ P L S
 Job Date : 12/6/99
 Comment : Step Rate

TIME	PRESSURE A	SLURRY RATE
216.000	2320	5.04
216.500	2340	5.05
217.000	2330	5.05
217.500	2340	5.05
218.000	2370	5.04
218.500	2380	5.05
219.000	2370	5.05
219.500	2350	5.05
220.000	2300	5.07
220.500	2310	5.04
221.000	2340	5.05
221.500	2320	5.05
222.000	2330	5.04
222.500	2320	5.05
223.000	2360	5.05
223.500	2360	5.04
224.000	2340	5.04
224.500	2300	5.04
225.000	2320	5.04
225.500	2300	5.05
226.000	2340	5.04
226.500	2320	5.04
227.000	2350	5.05
227.500	2340	5.05
228.000	2760	5.58
228.500	2550	5.46
229.000	2540	5.51
229.500	2550	5.51
230.000	2550	5.52
230.500	2550	5.52
231.000	2540	5.52
231.500	2520	5.52
232.000	2540	5.52
232.500	2570	5.52
233.000	2570	5.52
233.500	2550	5.52
234.000	2570	5.53
234.500	2560	5.52
235.000	2590	5.52
235.500	2540	5.52
236.000	2580	5.53
236.500	2560	5.53
237.000	2570	5.53
237.500	2580	5.53
238.000	2570	5.53
238.500	2560	5.53
239.000	2570	5.53
239.500	2550	5.52

American Energy Services

PENDRAGON
Customer : ~~Merton Oil & Gas~~
Well Name : Frontier A#1
Formation : ~~Gallup~~ *PLS*
Job Date : 12/6/99
Comment : Step Rate

TIME	PRESSURE A	SLURRY RATE
240.000	2540	5.52
240.500	2540	5.51
241.000	2540	5.51
241.500	2560	5.54
242.000	2550	5.56
242.500	2570	5.56
243.000	2890	6.16
243.500	2840	6.12
244.000	2880	6.13
244.500	2890	6.19
245.000	2900	6.2
245.500	2930	6.23
246.000	2920	6.25
246.500	2910	6.24
247.000	2880	6.13
247.500	2950	6.28
248.000	2940	6.27
248.500	2970	6.3
249.000	2980	6.31
249.500	2970	6.32
250.000	2860	6.12
250.500	2800	6.01
251.000	2710	5.85
251.500	1660	4.5
252.000	1880	3.87
252.500	1970	4.07
253.000	2000	4.1
253.500	2730	5.83
254.000	2720	5.87
254.500	2760	5.92
255.000	2770	5.98
255.500	2810	5.99
256.000	2800	5.98
256.500	2820	6
257.000	2780	6.02
257.500	2820	5.98
258.000	2790	5.94
258.500	2780	5.94
259.000	2770	5.96
259.500	2800	5.99
260.000	2790	6
260.500	2800	5.99
261.000	2790	6
261.500	2790	6.01
262.000	2810	6.02
262.500	2820	6.03
263.000	2830	6.03
263.500	2800	6.03

American Energy Services

FENDRAG

Customer : ~~Monter Oil & Gas~~

Well Name : Frontier A#1

Formation : ~~Gallop~~ *D-5*

Job Date : 12/6/99

Comment : Step Rate

TIME	PRESSURE A	SLURRY RATE
264.000	2850	6.03
264.500	1120	0
265.000	1120	0
265.500	1120	0
266.000	1120	0
266.500	1110	0
267.000	1110	0
267.500	1120	0
268.000	1110	0
268.017	1110	0
268.033	1110	0
268.050	1110	0
268.067	1110	0
268.083	1110	0
268.100	1110	0
268.117	1110	0
268.133	1110	0
268.150	1110	0
268.167	1110	0
268.183	1110	0
268.200	1100	0
268.217	1100	0
268.233	1100	0
268.250	1100	0
268.267	1090	0
268.283	1090	0
268.300	1090	0
268.317	1090	0
163557	1080	0
163558	1080	0
163559	1010	0
163600	920	0
163601	910	0
163602	910	0
163603	900	0
163604	20	0
163605	-14	0
163606	0	0
163608	0	0
163609	0	0
163610	0	0
163611	-1	0
163612	-1	0
163613	-1	0
163614	-1	0
163615	0	0
163616	0	0

Page A

Customer PENDRAGON ENERGY PARTNERS, INC.
Street 7415 E. MAIN
City/State..... FARMINGTON, NM 87402
Country USA
Service Company TEFTELLER, INC.

Well Name	FRONTIER 'A' NO. 1
Well Location	SAN JUAN COUNTY, NM
Field / Pool	MESA VERDE FIELD
Status (Oil, Gas, Other)	GAS

Test Type	STEP RATE AND INJECTION TEST
Date of Test	12-6-99
Producing Interval	3712' - 3856'
Recorder Depth	3702'
Recorder Position	3702'
Shut In Date	Start: 12-6-99
	Stop: 12-6-99
	Duration: 10 HOURS

Bottom Hole Temperature DURATION:

Gauge Identification

```
Gauge Manufacturer ..... MICRO-SMART SYSTEMS
Serial Number ..... 111
Model Number ..... SP2000
Pressure Range .....
Battery Type .....
Calibration I.D. ....
Last Calibration ..... 6/23/99
```

Gauge Setup Parameters

```

Probe Set Up Time ..... 12/ 6/99    8:47: 0
Time Delay to First Reading ....
Test Type Selection ..... STEP RATE AND INJECTION TEST
Test Duration Selection ..... 10 HOURS

```


WELL NAME : FRONTIER 'A' NO. 1

DATE : 12/07/99

WELL LOCATION : SAN JUAN COUNTY, NM

FILE REF: F111C07.DAT

Date MM/DD	Time hh:mm:ss	Test Time mmmmmm.mmmmm	Pressure Psig	Temp Deg F	deltaP Psi	Comment Ga. Press Ref. to 14.7 Psi Atm.
12/06	08:47:00	.0000	.01	58.74		
12/06	08:49:15	2.2500	.01	58.74	.00	
12/06	08:49:30	2.5000	.01	58.51	.00	
12/06	08:49:45	2.7500	.01	58.27	.00	
12/06	08:50:00	3.0000	.01	58.03	.00	
12/06	08:50:15	3.2500	.01	57.79	.00	
12/06	08:50:30	3.5000	.01	57.56	.00	
12/06	08:50:45	3.7500	.01	57.32	.00	
12/06	08:51:00	4.0000	.01	57.09	.00	
12/06	08:51:15	4.2500	.01	56.85	.00	
12/06	08:51:30	4.5000	.01	56.62	.00	
12/06	08:51:45	4.7500	.01	56.38	.00	
12/06	08:52:00	5.0000	.01	56.14	.00	
12/06	08:53:00	6.0000	.01	55.33	.00	
12/06	08:54:00	7.0000	.01	54.64	.00	
12/06	08:55:00	8.0000	.01	53.94	.00	
12/06	08:56:00	9.0000	.01	53.25	.00	
12/06	08:57:00	10.0000	.01	52.65	.00	
12/06	08:58:00	11.0000	.01	52.12	.00	
12/06	08:59:00	12.0000	.01	51.59	.00	
12/06	09:00:00	13.0000	.01	51.06	.00	
12/06	09:01:00	14.0000	.01	50.60	.00	
12/06	09:02:00	15.0000	.01	50.16	.00	
12/06	09:03:00	16.0000	.01	49.73	.00	
12/06	09:04:00	17.0000	.01	49.30	.00	
12/06	09:05:00	18.0000	.01	48.92	.00	
12/06	09:06:00	19.0000	.01	48.56	.00	
12/06	09:07:00	20.0000	.01	48.20	.00	
12/06	09:08:00	21.0000	.01	47.84	.00	
12/06	09:09:00	22.0000	.01	47.53	.00	
12/06	09:10:00	23.0000	.01	47.24	.00	
12/06	09:11:00	24.0000	.01	46.96	.00	
12/06	09:12:00	25.0000	.01	46.68	.00	
12/06	09:13:00	26.0000	.01	46.42	.00	
12/06	09:14:00	27.0000	.01	46.21	.00	
12/06	09:15:00	28.0000	.01	46.00	.00	
12/06	09:16:00	29.0000	.01	45.79	.00	
12/06	09:17:00	30.0000	.01	45.60	.00	
12/06	09:18:00	31.0000	.01	45.44	.00	
12/06	09:19:00	32.0000	.01	45.30	.00	
12/06	09:20:00	33.0000	.01	45.14	.00	
12/06	09:21:00	34.0000	.01	45.02	.00	
12/06	09:22:00	35.0000	.01	44.92	.00	
12/06	09:23:00	36.0000	.01	44.82	.00	
12/06	09:24:00	37.0000	.01	44.72	.00	
12/06	09:25:00	38.0000	.01	44.63	.00	
12/06	09:26:00	39.0000	.01	44.58	.00	
12/06	09:27:00	40.0000	.01	44.53	.00	
12/06	09:28:00	41.0000	.01	44.48	.00	
12/06	09:29:00	42.0000	.01	44.46	.00	
12/06	09:30:00	43.0000	.01	44.46	.00	
12/06	09:31:00	44.0000	.01	44.45	.00	
12/06	09:32:00	45.0000	.01	44.44	.00	
12/06	09:33:00	46.0000	.01	44.44	.00	
12/06	09:34:00	47.0000	.01	44.47	.00	
12/06	09:35:00	48.0000	.01	44.50	.00	
12/06	09:36:00	49.0000	.01	44.53	.00	
12/06	09:37:00	50.0000	.01	44.56	.00	
12/06	09:38:00	51.0000	.01	44.61	.00	
12/06	09:39:00	52.0000	.01	44.66	.00	
12/06	09:40:00	53.0000	.01	44.71	.00	
12/06	09:41:00	54.0000	.01	44.79	.00	
12/06	09:42:00	55.0000	.01	44.88	.00	
12/06	09:43:00	56.0000	.01	44.97	.00	
12/06	09:44:00	57.0000	.01	45.06	.00	

WELL NAME : FRONTIER 'A' NO. 1

DATE : 12/07/99

WELL LOCATION : SAN JUAN COUNTY, NM

FILE REF: F111C07.DAT

Date MM/DD	Time hh:mm:ss	Test Time mmmmmm.mmmmm	Pressure Psig	Temp Deg F	deltaP Psi	Comment Ga. Press Ref. to 14.7 Psi Atm.
12/06	09:45:00	58.0000	.01	45.18	.00	
12/06	09:46:00	59.0000	.01	45.31	.00	
12/06	09:47:00	60.0000	.01	45.43	.00	
12/06	09:48:00	61.0000	.01	45.56	.00	
12/06	09:49:00	62.0000	.01	45.67	.00	
12/06	09:50:00	63.0000	.01	45.81	.00	
12/06	09:51:00	64.0000	.01	45.94	.00	
12/06	09:52:00	65.0000	.01	46.08	.00	
12/06	09:53:00	66.0000	.01	46.22	.00	
12/06	09:54:00	67.0000	.01	46.37	.00	
12/06	09:55:00	68.0000	.01	46.52	.00	
12/06	09:56:00	69.0000	.01	46.67	.00	
12/06	09:57:00	70.0000	.01	46.83	.00	
12/06	09:58:00	71.0000	.01	47.02	.00	
12/06	09:59:00	72.0000	.01	47.20	.00	
12/06	10:00:00	73.0000	.01	47.38	.00	
12/06	10:01:00	74.0000	.01	47.58	.00	
12/06	10:02:00	75.0000	.01	47.80	.00	
12/06	10:03:00	76.0000	.01	48.02	.00	
12/06	10:04:00	77.0000	.01	48.24	.00	
12/06	10:05:00	78.0000	.01	48.48	.00	
12/06	10:06:00	79.0000	.01	48.73	.00	
12/06	10:07:00	80.0000	.01	48.98	.00	
12/06	10:08:00	81.0000	.01	49.22	.00	
12/06	10:09:00	82.0000	.01	49.49	.00	
12/06	10:10:00	83.0000	.01	49.73	.00	
12/06	10:11:00	84.0000	.01	49.98	.00	
12/06	10:12:00	85.0000	.01	50.23	.00	
12/06	10:13:00	86.0000	.01	50.49	.00	
12/06	10:14:00	87.0000	.01	50.74	.00	
12/06	10:15:00	88.0000	.01	51.00	.00	
12/06	10:16:00	89.0000	.01	51.25	.00	
12/06	10:17:00	90.0000	.01	51.51	.00	
12/06	10:18:00	91.0000	.01	51.78	.00	
12/06	10:19:00	92.0000	.01	52.04	.00	
12/06	10:20:00	93.0000	.01	52.30	.00	
12/06	10:21:00	94.0000	.01	52.58	.00	
12/06	10:22:00	95.0000	2504.83	52.21	2504.82	PRESSURE TEST SURFACE EQUIPMENT
12/06	10:23:00	96.0000	.01	51.84	-2504.82	
12/06	10:24:00	97.0000	.01	51.47	.00	
12/06	10:25:00	98.0000	287.60	50.92	287.59	
12/06	10:26:00	99.0000	442.65	51.60	155.05	
12/06	10:27:00	100.0000	552.29	52.28	109.64	
12/06	10:28:00	101.0000	689.23	52.96	136.94	
12/06	10:29:00	102.0000	885.48	54.76	196.25	
12/06	10:30:00	103.0000	1087.35	58.05	201.87	
12/06	10:31:00	104.0000	1292.50	61.33	205.14	
12/06	10:32:00	105.0000	1495.65	64.61	203.16	
12/06	10:33:00	106.0000	1694.19	69.09	198.53	
12/06	10:34:00	107.0000	1843.35	74.11	149.17	
12/06	10:35:00	108.0000	1999.14	79.13	155.79	
12/06	10:36:00	109.0000	2176.06	84.15	176.92	
12/06	10:37:00	110.0000	2207.70	91.38	31.64	
12/06	10:38:00	111.0000	2092.23	97.62	-115.47	
12/06	10:39:00	112.0000	1947.64	103.85	-144.59	
12/06	10:40:00	113.0000	1892.70	110.10	-54.94	
12/06	10:41:00	114.0000	1902.46	110.51	9.76	
12/06	10:42:00	115.0000	1906.38	108.60	3.92	
12/06	10:43:00	116.0000	1907.08	106.68	.70	
12/06	10:44:00	117.0000	1907.49	104.77	.41	
12/06	10:45:00	118.0000	1906.64	102.70	-.84	
12/06	10:46:00	119.0000	1906.51	101.12	-.13	
12/06	10:47:00	120.0000	1905.90	99.54	-.61	INSTRUMENTS @ 3702'
12/06	10:48:00	121.0000	1905.29	97.96	-.61	
12/06	10:49:00	122.0000	1904.69	96.86	-.60	

WELL NAME : FRONTIER 'A' NO. 1

DATE : 12/07/99

WELL LOCATION : SAN JUAN COUNTY, NM

FILE REF: F111C07.DAT

Date MM/DD	Time hh:mm:ss	Test Time mmmmmmmm.mmmmm	Pressure Psig	Temp Deg F	deltaP Psi	Comment Ga. Press Ref. to 14.7 Psi Atm.
12/06	10:50:00	123.0000	1904.18	96.11	-.51	
12/06	10:51:00	124.0000	1903.73	95.36	-.45	
12/06	10:52:00	125.0000	1903.42	94.61	-.31	
12/06	10:53:00	126.0000	1903.01	94.12	-.41	
12/06	10:54:00	127.0000	1902.97	93.78	-.04	
12/06	10:55:00	128.0000	1902.90	93.46	-.08	
12/06	10:56:00	129.0000	1902.80	93.13	-.09	
12/06	10:57:00	130.0000	1902.69	92.91	-.11	
12/06	10:58:00	131.0000	1902.57	92.78	-.12	
12/06	10:59:00	132.0000	1902.49	92.64	-.09	
12/06	11:00:00	133.0000	1902.49	92.50	.00	
12/06	11:01:00	134.0000	1902.47	92.42	-.02	
12/06	11:02:00	135.0000	1902.43	92.36	-.05	
12/06	11:03:00	136.0000	1902.39	92.30	-.04	
12/06	11:04:00	137.0000	1902.36	92.25	-.03	
12/06	11:05:00	138.0000	1902.33	92.21	-.03	
12/06	11:06:00	139.0000	1902.31	92.20	-.02	
12/06	11:07:00	140.0000	1902.30	92.18	-.01	
12/06	11:08:00	141.0000	1902.30	92.16	-.01	
12/06	11:09:00	142.0000	1902.29	92.15	-.01	
12/06	11:10:00	143.0000	1902.29	92.15	.00	
12/06	11:11:00	144.0000	1902.29	92.14	.01	
12/06	11:12:00	145.0000	1902.30	92.13	.00	
12/06	11:13:00	146.0000	1902.30	92.13	.01	
12/06	11:14:00	147.0000	1902.35	92.13	.05	
12/06	11:15:00	148.0000	1902.37	92.13	.02	
12/06	11:16:00	149.0000	1903.48	92.14	1.10	BEGIN STEP RATE TEST
12/06	11:17:00	150.0000	2167.13	92.15	263.65	ESTABLISHED RATE
12/06	11:18:00	151.0000	2237.01	92.32	69.88	
12/06	11:19:00	152.0000	2305.24	92.49	68.23	
12/06	11:20:00	153.0000	2306.83	92.67	1.59	
12/06	11:21:00	154.0000	2327.26	93.15	20.43	
12/06	11:22:00	155.0000	2322.56	93.83	-4.70	RATE #1 - .27 BPM
12/06	11:23:00	156.0000	2325.86	94.52	3.31	↓
12/06	11:24:00	157.0000	2330.69	95.21	4.83	
12/06	11:25:00	158.0000	2335.50	95.94	4.81	
12/06	11:26:00	159.0000	2339.46	96.58	3.95	
12/06	11:27:00	160.0000	2343.02	97.22	3.57	
12/06	11:28:00	161.0000	2345.83	97.86	2.81	
12/06	11:29:00	162.0000	2349.70	98.37	3.87	
12/06	11:30:00	163.0000	2353.11	98.77	3.40	
12/06	11:31:00	164.0000	2355.24	99.18	2.13	
12/06	11:32:00	165.0000	2358.38	99.59	3.14	RATE #2 - .35 BPM
12/06	11:33:00	166.0000	2367.52	99.91	9.14	↓
12/06	11:34:00	167.0000	2376.19	100.15	8.67	.36
12/06	11:35:00	168.0000	2381.69	100.37	5.50	↓
12/06	11:36:00	169.0000	2386.29	100.61	4.60	
12/06	11:37:00	170.0000	2391.19	100.74	4.90	
12/06	11:38:00	171.0000	2394.47	100.78	3.28	
12/06	11:39:00	172.0000	2398.01	100.82	3.54	
12/06	11:40:00	173.0000	2400.66	100.86	2.65	
12/06	11:41:00	174.0000	2402.82	100.84	2.17	
12/06	11:42:00	175.0000	2404.62	100.79	1.80	
12/06	11:43:00	176.0000	2407.05	100.74	2.43	
12/06	11:44:00	177.0000	2409.23	100.69	2.18	
12/06	11:45:00	178.0000	2410.79	100.60	1.56	
12/06	11:46:00	179.0000	2412.34	100.51	1.56	
12/06	11:47:00	180.0000	2415.05	100.42	2.70	RATE #3 - .45 BPM
12/06	11:48:00	181.0000	2422.19	100.33	7.14	↓
12/06	11:49:00	182.0000	2426.03	100.25	3.84	
12/06	11:50:00	183.0000	2429.13	100.13	3.09	
12/06	11:51:00	184.0000	2431.20	100.03	2.07	↓
12/06	11:52:00	185.0000	2432.51	99.91	1.32	
12/06	11:53:00	186.0000	2433.95	99.81	1.44	
12/06	11:54:00	187.0000	2435.40	99.69	1.45	

WELL NAME : FRONTIER 'A' NO. 1

DATE : 12/07/99

WELL LOCATION : SAN JUAN COUNTY, NM

FILE REF: F111C07.DAT

Date MM/DD	Time hh:mm:ss	Test Time mmmmmm.mmmmm	Pressure Psig	Temp Deg F	deltaP Psi	Comment Ga. Press Ref. to 14.7 Psi Atm.
12/06	11:55:00	188.0000	2436.59	99.57	1.19	
12/06	11:56:00	189.0000	2437.11	99.44	.52	
12/06	11:57:00	190.0000	2439.23	99.32	2.12	
12/06	11:58:00	191.0000	2439.61	99.20	.39	
12/06	11:59:00	192.0000	2440.30	99.08	.68	
12/06	12:00:00	193.0000	2440.91	98.97	.61	
12/06	12:01:00	194.0000	2441.53	98.86	.62	
12/06	12:02:00	195.0000	2443.02	98.74	1.49	
12/06	12:03:00	196.0000	2452.72	98.61	9.70	RATE #4 - .65 BPM
12/06	12:04:00	197.0000	2458.49	98.50	5.77	
12/06	12:05:00	198.0000	2459.93	98.38	1.44	
12/06	12:06:00	199.0000	2461.63	98.25	1.71	
12/06	12:07:00	200.0000	2462.96	98.12	1.32	
12/06	12:08:00	201.0000	2464.41	97.98	1.45	
12/06	12:09:00	202.0000	2465.60	97.86	1.19	
12/06	12:10:00	203.0000	2465.79	97.74	.18	
12/06	12:11:00	204.0000	2467.35	97.62	1.57	
12/06	12:12:00	205.0000	2467.67	97.50	.32	
12/06	12:13:00	206.0000	2468.37	97.38	.70	
12/06	12:14:00	207.0000	2469.04	97.25	.68	
12/06	12:15:00	208.0000	2469.00	97.13	-.05	
12/06	12:16:00	209.0000	2469.50	97.00	.50	
12/06	12:17:00	210.0000	2469.76	96.86	.26	
12/06	12:18:00	211.0000	2478.52	96.72	8.77	RATE #5 - .73 BPM
12/06	12:19:00	212.0000	2484.68	96.58	6.16	
12/06	12:20:00	213.0000	2487.03	96.44	2.35	
12/06	12:21:00	214.0000	2488.75	96.28	1.72	
12/06	12:22:00	215.0000	2489.95	96.13	1.21	
12/06	12:23:00	216.0000	2490.36	95.97	.40	
12/06	12:24:00	217.0000	2492.88	95.82	2.52	
12/06	12:25:00	218.0000	2494.09	95.66	1.21	
12/06	12:26:00	219.0000	2494.50	95.49	.41	
12/06	12:27:00	220.0000	2495.34	95.32	.84	
12/06	12:28:00	221.0000	2496.30	95.15	.96	
12/06	12:29:00	222.0000	2497.20	94.95	.91	
12/06	12:30:00	223.0000	2498.13	94.73	.92	
12/06	12:31:00	224.0000	2499.04	94.51	.92	
12/06	12:32:00	225.0000	2499.69	94.29	.65	
12/06	12:33:00	226.0000	2511.29	94.06	11.59	RATE #6 - .99 BPM
12/06	12:34:00	227.0000	2516.61	93.81	5.32	
12/06	12:35:00	228.0000	2519.26	93.56	2.65	
12/06	12:36:00	229.0000	2522.03	93.32	2.77	
12/06	12:37:00	230.0000	2523.80	93.05	1.77	
12/06	12:38:00	231.0000	2525.82	92.79	2.02	
12/06	12:39:00	232.0000	2526.47	92.52	.65	
12/06	12:40:00	233.0000	2528.72	92.25	2.25	
12/06	12:41:00	234.0000	2529.23	91.98	.52	
12/06	12:42:00	235.0000	2530.88	91.64	1.64	
12/06	12:43:00	236.0000	2531.29	91.32	.41	
12/06	12:44:00	237.0000	2532.21	90.99	.92	
12/06	12:45:00	238.0000	2533.03	90.65	.82	
12/06	12:46:00	239.0000	2533.82	90.32	.79	
12/06	12:47:00	240.0000	2535.53	89.98	1.71	
12/06	12:48:00	241.0000	2539.24	89.65	3.71	RATE #7 - 1.25 BPM
12/06	12:49:00	242.0000	2546.25	89.33	7.01	
12/06	12:50:00	243.0000	2549.31	89.02	3.06	
12/06	12:51:00	244.0000	2551.61	88.71	2.30	
12/06	12:52:00	245.0000	2552.28	88.40	.67	
12/06	12:53:00	246.0000	2554.04	88.09	1.76	
12/06	12:54:00	247.0000	2555.84	87.74	1.81	
12/06	12:55:00	248.0000	2556.26	87.40	.42	
12/06	12:56:00	249.0000	2556.99	87.05	.73	
12/06	12:57:00	250.0000	2558.59	86.68	1.60	
12/06	12:58:00	251.0000	2559.11	86.25	.52	
12/06	12:59:00	252.0000	2561.37	85.84	2.26	

WELL NAME : FRONTIER 'A' NO. 1

DATE : 12/07/99

WELL LOCATION : SAN JUAN COUNTY, NM

FILE REF: F111C07.DAT

Date MM/DD	Time hh:mm:ss	Test Time mmmmmm.mmmmm	Pressure Psig	Temp Deg F	deltaP Psi	Comment Ga. Press Ref. to 14.7 Psi Atm.
12/06	13:00:00	253.0000	2561.28	85.41	-.09	
12/06	13:01:00	254.0000	2563.13	85.01	1.84	
12/06	13:02:00	255.0000	2563.36	84.62	.23	
12/06	13:03:00	256.0000	2568.81	84.24	5.45	
12/06	13:04:00	257.0000	2571.91	83.85	3.10	RATE #8 - 1.56 BPM
12/06	13:05:00	258.0000	2574.74	83.49	2.83	
12/06	13:06:00	259.0000	2577.32	83.14	2.57	
12/06	13:07:00	260.0000	2578.62	82.78	1.30	
12/06	13:08:00	261.0000	2580.17	82.43	1.55	
12/06	13:09:00	262.0000	2582.13	82.04	1.95	
12/06	13:10:00	263.0000	2583.84	81.61	1.72	
12/06	13:11:00	264.0000	2585.30	81.19	1.46	
12/06	13:12:00	265.0000	2585.83	80.75	.53	
12/06	13:13:00	266.0000	2587.59	80.31	1.77	
12/06	13:14:00	267.0000	2589.05	79.89	1.46	
12/06	13:15:00	268.0000	2589.43	79.47	.38	
12/06	13:16:00	269.0000	2590.00	79.05	.56	
12/06	13:17:00	270.0000	2591.49	78.66	1.50	RATE #9 - 2.00 BPM
12/06	13:18:00	271.0000	2595.34	78.32	3.85	
12/06	13:19:00	272.0000	2599.58	77.97	4.24	
12/06	13:20:00	273.0000	2603.69	77.63	4.11	
12/06	13:21:00	274.0000	2605.36	77.30	1.68	
12/06	13:22:00	275.0000	2607.95	76.93	2.59	
12/06	13:23:00	276.0000	2609.77	76.56	1.82	
12/06	13:24:00	277.0000	2611.72	76.19	1.95	
12/06	13:25:00	278.0000	2612.47	75.72	.74	
12/06	13:26:00	279.0000	2613.50	75.22	1.04	
12/06	13:27:00	280.0000	2615.17	74.72	1.67	
12/06	13:28:00	281.0000	2615.18	74.22	.01	
12/06	13:29:00	282.0000	2615.61	73.74	.43	
12/06	13:30:00	283.0000	2616.71	73.30	1.10	
12/06	13:31:00	284.0000	2617.12	72.87	.41	
12/06	13:32:00	285.0000	2617.70	72.43	.58	RATE #10 - 2.50 BPM
12/06	13:33:00	286.0000	2621.94	72.07	4.23	
12/06	13:34:00	287.0000	2624.90	71.74	2.96	
12/06	13:35:00	288.0000	2627.98	71.41	3.09	
12/06	13:36:00	289.0000	2628.46	71.08	.48	
12/06	13:37:00	290.0000	2630.46	70.72	1.99	
12/06	13:38:00	291.0000	2632.05	70.28	1.60	
12/06	13:39:00	292.0000	2634.29	69.83	2.24	
12/06	13:40:00	293.0000	2634.14	69.40	-.15	
12/06	13:41:00	294.0000	2635.33	68.91	1.19	
12/06	13:42:00	295.0000	2636.07	68.46	.74	
12/06	13:43:00	296.0000	2637.22	68.01	1.15	
12/06	13:44:00	297.0000	2638.11	67.55	.89	
12/06	13:45:00	298.0000	2639.93	67.17	1.81	
12/06	13:46:00	299.0000	2640.48	66.84	.55	
12/06	13:47:00	300.0000	2640.77	66.52	.30	RATE #11 - 3.00 BPM
12/06	13:48:00	301.0000	2642.66	66.19	1.88	
12/06	13:49:00	302.0000	2647.01	65.89	4.35	
12/06	13:50:00	303.0000	2647.67	65.63	.66	
12/06	13:51:00	304.0000	2650.07	65.35	2.40	
12/06	13:52:00	305.0000	2650.46	65.08	.39	
12/06	13:53:00	306.0000	2653.14	64.77	2.68	
12/06	13:54:00	307.0000	2654.69	64.44	1.55	
12/06	13:55:00	308.0000	2655.24	64.11	.55	
12/06	13:56:00	309.0000	2656.30	63.78	1.06	
12/06	13:57:00	310.0000	2656.66	63.46	.36	
12/06	13:58:00	311.0000	2657.38	63.19	.71	
12/06	13:59:00	312.0000	2659.46	62.92	2.08	
12/06	14:00:00	313.0000	2660.29	62.65	.83	
12/06	14:01:00	314.0000	2660.51	62.42	.22	
12/06	14:02:00	315.0000	2660.71	62.24	.20	RATE #12 - 3.56 BPM
12/06	14:03:00	316.0000	2662.91	62.05	2.20	
12/06	14:04:00	317.0000	2667.35	61.86	4.44	

WELL NAME : FRONTIER 'A' NO. 1

DATE : 12/07/99

WELL LOCATION : SAN JUAN COUNTY, NM

FILE REF: F111C07.DAT

Date MM/DD	Time hh:mm:ss	Test Time mmmmmm.mmmmm	Pressure Psig	Temp Deg F	deltaP Psi	Comment Ga. Press Ref. to 14.7 Psi Atm.
12/06	14:05:00	318.0000	2670.13	61.67	2.78	
12/06	14:06:00	319.0000	2672.41	61.45	2.28	
12/06	14:07:00	320.0000	2673.80	61.21	1.39	
12/06	14:08:00	321.0000	2675.43	60.99	1.64	
12/06	14:09:00	322.0000	2677.62	60.68	2.19	
12/06	14:10:00	323.0000	2678.02	60.39	.40	
12/06	14:11:00	324.0000	2680.19	60.09	2.17	
12/06	14:12:00	325.0000	2680.86	59.79	.67	
12/06	14:13:00	326.0000	2682.86	59.55	2.00	
12/06	14:14:00	327.0000	2683.16	59.34	.29	
12/06	14:15:00	328.0000	2684.71	59.14	1.55	
12/06	14:16:00	329.0000	2685.14	58.94	.43	
12/06	14:17:00	330.0000	2685.78	58.78	.64	RATE #13 - 4.00 BPM
12/06	14:18:00	331.0000	2688.26	58.65	2.48	
12/06	14:19:00	332.0000	2691.14	58.52	2.88	
12/06	14:20:00	333.0000	2691.68	58.39	.53	
12/06	14:21:00	334.0000	2695.74	58.29	4.06	
12/06	14:22:00	335.0000	2696.12	58.21	.38	
12/06	14:23:00	336.0000	2696.93	58.13	.81	
12/06	14:24:00	337.0000	2698.80	58.04	1.88	
12/06	14:25:00	338.0000	2700.11	57.98	1.31	
12/06	14:26:00	339.0000	2701.42	57.94	1.30	
12/06	14:27:00	340.0000	2702.97	57.92	1.55	
12/06	14:28:00	341.0000	2703.53	57.88	.56	
12/06	14:29:00	342.0000	2705.29	57.89	1.76	
12/06	14:30:00	343.0000	2707.35	57.88	2.06	
12/06	14:31:00	344.0000	2707.55	57.88	.20	RATE #14 - 4.51 BPM
12/06	14:32:00	345.0000	2710.18	57.87	2.63	
12/06	14:33:00	346.0000	2712.23	57.88	2.05	
12/06	14:34:00	347.0000	2713.86	57.97	1.63	
12/06	14:35:00	348.0000	2716.51	58.07	2.65	
12/06	14:36:00	349.0000	2719.81	58.16	3.30	
12/06	14:37:00	350.0000	2719.92	58.22	.11	
12/06	14:38:00	351.0000	2721.19	58.25	1.26	
12/06	14:39:00	352.0000	2721.23	58.30	.05	
12/06	14:40:00	353.0000	2721.73	58.33	.50	
12/06	14:41:00	354.0000	2721.86	58.49	.13	
12/06	14:42:00	355.0000	2722.47	58.62	.61	
12/06	14:43:00	356.0000	2724.43	58.75	1.97	
12/06	14:44:00	357.0000	2724.17	58.88	-.26	
12/06	14:45:00	358.0000	2724.34	59.00	.17	
12/06	14:46:00	359.0000	2725.94	59.12	1.59	
12/06	14:47:00	360.0000	2727.30	59.23	1.36	RATE #15 - 5.05 BPM
12/06	14:48:00	361.0000	2727.79	59.34	.49	
12/06	14:49:00	362.0000	2730.70	59.38	2.91	
12/06	14:50:00	363.0000	2733.49	59.45	2.79	
12/06	14:51:00	364.0000	2733.12	59.52	-.37	
12/06	14:52:00	365.0000	2734.84	59.59	1.72	
12/06	14:53:00	366.0000	2734.94	59.69	.09	
12/06	14:54:00	367.0000	2736.68	59.80	1.74	
12/06	14:55:00	368.0000	2736.08	59.92	-.60	
12/06	14:56:00	369.0000	2737.98	60.03	1.91	
12/06	14:57:00	370.0000	2738.49	60.14	.50	
12/06	14:58:00	371.0000	2738.70	60.18	.21	
12/06	14:59:00	372.0000	2738.23	60.23	-.46	
12/06	15:00:00	373.0000	2738.07	60.27	-.16	
12/06	15:01:00	374.0000	2738.60	60.13	.53	
12/06	15:02:00	375.0000	2739.27	59.91	.67	RATE #16 - 5.51 BPM
12/06	15:03:00	376.0000	2742.64	59.67	3.37	
12/06	15:04:00	377.0000	2743.08	59.45	.44	
12/06	15:05:00	378.0000	2743.78	59.17	.70	
12/06	15:06:00	379.0000	2747.14	58.80	3.36	
12/06	15:07:00	380.0000	2747.11	58.42	-.03	
12/06	15:08:00	381.0000	2746.89	58.06	-.22	
12/06	15:09:00	382.0000	2748.37	57.79	1.48	

WELL NAME : FRONTIER 'A' NO. 1

DATE : 12/07/99

WELL LOCATION : SAN JUAN COUNTY, NM

FILE REF: F111C07.DAT

Date	Time	Test Time	Pressure	Temp	deltaP	Comment
MM/DD	hh:mm:ss	mmmmmm.mmmmm	Psig	Deg F	Psi	Ga. Press Ref. to 14.7 Psi Atm.
12/06	15:10:00	383.0000	2748.85	57.48	.48	
12/06	15:11:00	384.0000	2749.02	57.17	.17	
12/06	15:12:00	385.0000	2748.71	56.86	-.31	
12/06	15:13:00	386.0000	2748.86	56.57	.15	
12/06	15:14:00	387.0000	2748.55	56.45	-.31	
12/06	15:15:00	388.0000	2747.78	56.33	-.77	
12/06	15:16:00	389.0000	2747.26	56.21	-.52	
12/06	15:17:00	390.0000	2745.11	56.18	-2.16	RATE #17 - 6.10 BPM
12/06	15:18:00	391.0000	2745.27	56.11	.17	
12/06	15:19:00	392.0000	2747.35	56.04	2.08	
12/06	15:20:00	393.0000	2748.93	55.97	1.57	
12/06	15:21:00	394.0000	2750.55	55.80	1.62	
12/06	15:22:00	395.0000	2751.90	55.65	1.35	
12/06	15:23:00	396.0000	2753.12	55.51	1.22	
12/06	15:24:00	397.0000	2753.73	55.37	.61	RATE #18 - 5.75 BPM
12/06	15:25:00	398.0000	2754.73	55.27	1.00	
12/06	15:26:00	399.0000	2752.99	55.22	-1.74	
12/06	15:27:00	400.0000	2747.50	55.15	-5.50	RATE #19 - 6.00 BPM
12/06	15:28:00	401.0000	2743.53	55.10	-3.96	
12/06	15:29:00	402.0000	2745.23	55.05	1.69	
12/06	15:30:00	403.0000	2748.19	55.03	2.97	
12/06	15:31:00	404.0000	2750.77	55.02	2.57	
12/06	15:32:00	405.0000	2751.93	55.00	1.17	
12/06	15:33:00	406.0000	2754.42	54.91	2.48	
12/06	15:34:00	407.0000	2753.98	54.83	-.44	
12/06	15:35:00	408.0000	2755.91	54.74	1.93	
12/06	15:36:00	409.0000	2756.35	54.67	.44	
12/06	15:37:00	410.0000	2758.42	54.58	2.08	
12/06	15:38:00	411.0000	2759.74	54.50	1.32	RATE #20 - 6.00 BPM - END PUMP TEST
12/06	15:39:00	412.0000	2760.32	54.42	.58	
12/06	15:40:00	413.0000	2740.28	54.33	-20.05	
12/06	15:41:00	414.0000	2722.56	54.28	-17.72	
12/06	15:42:00	415.0000	2633.01	54.45	-89.55	
12/06	15:43:00	416.0000	2382.33	54.63	-250.68	
12/06	15:44:00	417.0000	2123.28	54.81	-259.05	
12/06	15:45:00	418.0000	1859.30	55.12	-263.98	
12/06	15:46:00	419.0000	1592.45	54.85	-266.85	
12/06	15:47:00	420.0000	1321.92	54.59	-270.53	
12/06	15:48:00	421.0000	1074.16	54.32	-247.76	
12/06	15:49:00	422.0000	1014.49	53.32	-59.67	
12/06	15:50:00	423.0000	.01	52.50	-1014.48	
12/06	15:51:00	424.0000	.01	51.68	.00	
12/06	15:52:00	425.0000	.01	50.86	.00	
12/06	15:53:00	426.0000	.01	50.35	.00	
12/06	15:54:00	427.0000	.01	49.90	.00	
12/06	15:55:00	428.0000	.01	49.44	.00	
12/06	15:56:00	429.0000	.01	48.98	.00	
12/06	15:57:00	430.0000	.01	48.69	.00	
12/06	15:58:00	431.0000	.01	48.53	.00	
12/06	15:59:00	432.0000	.01	48.38	.00	
12/06	16:00:00	433.0000	.01	48.22	.00	
12/06	16:01:00	434.0000	.01	48.12	.00	
12/06	16:02:00	435.0000	.01	48.08	.00	
12/06	16:03:00	436.0000	.01	48.03	.00	
12/06	16:04:00	437.0000	.01	47.99	.00	
12/06	16:05:00	438.0000	.01	47.97	.00	
12/06	16:06:00	439.0000	.01	47.97	.00	
12/06	16:07:00	440.0000	.01	47.97	.00	
12/06	16:08:00	441.0000	.01	47.97	.00	
12/06	16:09:00	442.0000	.01	47.99	.00	
12/06	16:10:00	443.0000	.01	48.03	.00	
12/06	16:11:00	444.0000	.01	48.06	.00	
12/06	16:12:00	445.0000	.01	48.10	.00	
12/06	16:13:00	446.0000	.01	48.14	.00	
12/06	16:14:00	447.0000	.01	48.17	.00	

COMPANY: PENDRAGON ENERGY PARTNERS, INC.

PAGE 8 OF 8

WELL NAME : FRONTIER 'A' NO. 1

DATE : 12/07/99

WELL LOCATION : SAN JUAN COUNTY, NM

FILE REF: F111C07.DAT

Date MM/DD	Time hh:mm:ss	Test Time mmmmmmmm.mmmmm	Pressure Psig	Temp Deg F	deltaP Psi	Comment Ga. Press Ref. to 14.7 Psi Atm.
12/06	16:15:00	448.0000	.01	48.20	.00	
12/06	16:16:00	449.0000	.01	48.23	.00	
12/06	16:17:00	450.0000	.01	48.26	.00	
12/06	16:18:00	451.0000	.01	48.26	.00	
12/06	16:19:00	452.0000	.01	48.27	.00	
12/06	16:20:00	453.0000	.01	48.28	.00	
12/06	16:21:00	454.0000	.01	48.29	.00	
12/06	16:22:00	455.0000	.01	48.28	.00	
12/06	16:23:00	456.0000	.01	48.28	.00	
12/06	16:24:00	457.0000	.01	48.27	.00	
12/06	16:25:00	458.0000	.01	48.25	.00	
12/06	16:26:00	459.0000	.01	48.20	.00	
12/06	16:27:00	460.0000	.01	48.15	.00	
12/06	16:28:00	461.0000	.01	48.10	.00	
12/06	16:29:00	462.0000	.01	48.06	.00	
12/06	16:30:00	463.0000	.01	48.01	.00	
12/06	16:31:00	464.0000	.01	47.96	.00	
12/06	16:32:00	465.0000	.01	47.91	.00	
12/06	16:33:00	466.0000	.01	47.87	.00	
12/06	16:34:00	467.0000	.01	47.82	.00	
12/06	16:35:00	468.0000	.01	47.77	.00	
12/06	16:36:00	469.0000	.01	47.72	.00	
12/06	16:37:00	470.0000	.01	47.68	.00	
12/06	16:38:00	471.0000	.01	47.65	.00	
12/06	16:39:00	472.0000	.01	47.63	.00	
12/06	16:40:00	473.0000	.01	47.60	.00	
12/06	16:41:00	474.0000	.01	47.55	.00	
12/06	16:42:00	475.0000	.01	47.56	.00	
12/06	16:43:00	476.0000	.01	47.56	.00	
12/06	16:44:00	477.0000	.01	47.57	.00	
12/06	16:45:00	478.0000	.01	47.70	.00	
12/06	16:46:00	479.0000	.01	47.92	.00	
12/06	16:47:00	480.0000	.01	48.13	.00	
12/06	16:48:00	481.0000	.01	48.35	.00	

 *
 * EVENT SUMMARY *
 *

COMPANY : PENDRAGON ENERGY PARTNERS, INC.

PAGE : B1

WELL NAME : FRONTIER 'A' NO. 1

DATE : 12/07/99

WELL LOCATION : SAN JUAN COUNTY, NM

FILE REF: F111C07.DAT

Date MM/DD	Time hh:mm:ss	Test Time mmmmmm.mmmmm	Key Event	Pressure Psig	Temp Deg F
12/06	10:22:00	95.0000	PRESSURE TEST SURFACE EQUIPMENT	2504.83	52.21
12/06	10:47:00	120.0000	INSTRUMENTS @ 3702'	1905.90	99.54
12/06	11:15:00	148.0000	BEGIN STEP RATE TEST	1902.37	92.13
12/06	11:16:00	149.0000	ESTABLISHED RATE	1903.48	92.14
12/06	11:22:00	155.0000	RATE #1 - .27 BPM	2322.56	93.83
12/06	11:32:00	165.0000	RATE #2 - .35 BPM	2358.38	99.59
12/06	11:47:00	180.0000	RATE #3 - .45 BPM	2415.05	100.42
12/06	12:02:00	195.0000	RATE #4 - .65 BPM	2443.02	98.74
12/06	12:17:00	210.0000	RATE #5 - .73 BPM	2469.76	96.86
12/06	12:32:00	225.0000	RATE #6 - .99 BPM	2499.69	94.29
12/06	12:48:00	241.0000	RATE #7 - 1.25 BPM	2539.24	89.65
12/06	13:03:00	256.0000	RATE #8 - 1.56 BPM	2568.81	84.24
12/06	13:17:00	270.0000	RATE #9 - 2.00 BPM	2591.49	78.66
12/06	13:32:00	285.0000	RATE #10 - 2.50 BPM	2617.70	72.43
12/06	13:47:00	300.0000	RATE #11 - 3.00 BPM	2640.77	66.52
12/06	14:02:00	315.0000	RATE #12 - 3.56 BPM	2660.71	62.24
12/06	14:17:00	330.0000	RATE #13 - 4.00 BPM	2685.78	58.78
12/06	14:31:00	344.0000	RATE #14 - 4.51 BPM	2707.55	57.88
12/06	14:47:00	360.0000	RATE #15 - 5.05 BPM	2727.30	59.23
12/06	15:02:00	375.0000	RATE #16 - 5.51 BPM	2739.27	59.91
12/06	15:17:00	390.0000	RATE #17 - 6.10 BPM	2745.11	56.18
12/06	15:24:00	397.0000	RATE #18 - 5.75 BPM	2753.73	55.37
12/06	15:27:00	400.0000	RATE #19 - 6.00 BPM	2747.50	55.15
12/06	15:38:00	411.0000	RATE #20 - 6.00 BPM - END PUMP TEST	2759.74	54.50

715.54
 751.38
 808.05