

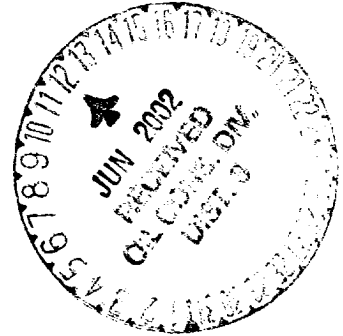
Description : Merrion Oil & Gas

Step Rate Test / Flush #1 / June 12, 2002

PAGE :1 Data every 0.50 min. Datafile C:\SMARTS\DATADIR\FLUSH1.DAT

+++++
ELAPSED Calc A SLURRY Braden
TIME BH Pressure PUMP Head
 Press TREATING RATE .
 psi PSI BPM PSI
=====

0.500	1246	50.00000	0.20000	62.00000
1.014	1246	50.00000	0.25000	62.00000
1.514	1246	50.00000	0.22000	63.00000
2.014	1246	50.00000	0.21000	62.00000
2.514	1246	50.00000	0.21000	63.00000
3.014	1254	60.00000	0.59000	63.00000
3.532	1256	60.00000	0.18000	63.00000
4.047	1247	50.00000	0.19000	63.00000
4.548	1246	50.00000	0.21000	63.00000
5.064	1246	50.00000	0.18000	63.00000
5.579	1246	50.00000	0.20000	64.00000
6.079	1246	50.00000	0.26000	64.00000
6.580	1246	50.00000	0.21000	64.00000
7.080	1246	50.00000	0.21000	64.00000
7.597	1246	50.00000	0.23000	64.00000
8.097	1246	50.00000	0.22000	64.00000
8.612	1246	50.00000	0.21000	65.00000
9.112	1246	50.00000	0.21000	65.00000
9.612	1246	50.00000	0.21000	65.00000
10.113	1246	50.00000	0.20000	65.00000
10.629	1246	50.00000	0.21000	65.00000
11.145	1246	50.00000	0.20000	65.00000
11.645	1246	50.00000	0.19000	66.00000
12.145	1246	50.00000	0.19000	66.00000
12.646	1246	50.00000	0.18000	66.00000
13.161	1246	50.00000	0.18000	66.00000
13.662	1246	50.00000	0.22000	67.00000
14.162	1246	50.00000	0.21000	67.00000
14.677	1256	60.00000	0.32000	67.00000
15.177	1261	60.00000	0.33000	68.00000
15.677	1265	70.00000	0.34000	67.00000
16.194	1277	90.00000	0.54000	67.00000
16.694	1292	100.00000	0.59000	68.00000
17.210	1313	120.00000	0.67000	68.00000
17.710	1318	130.00000	0.63000	68.00000
18.210	1327	130.00000	0.73000	68.00000
18.727	1333	140.00000	0.68000	68.00000
19.243	1338	150.00000	0.69000	68.00000
19.759	1338	150.00000	0.71000	69.00000
20.259	1340	150.00000	0.68000	69.00000



Description : Merrion Oil & Gas

Step Rate Test / Flush #1 / June 12, 2002

PAGE :2 Data every 0.50 min. Datafile C:\SMARTS\DATADIR\FLUSH1.DAT

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ELAPSED	Calc	A	SLURRY	Braden
TIME	BH	Pressure	PUMP	Head
min.	Press	TREATING	RATE	.
	psi	PSI	BPM	PSI

=====

20.760	1345	160.00000	0.72000	69.00000
21.267	1352	160.00000	0.72000	69.00000
21.775	1351	160.00000	0.71000	69.00000
22.275	1352	160.00000	0.73000	69.00000
22.775	1354	160.00000	0.70000	69.00000

23.276	1354	160.00000	0.70000	70.00000
23.783	1358	170.00000	0.70000	70.00000
24.283	1353	160.00000	0.70000	70.00000
24.791	1360	170.00000	0.70000	70.00000
25.300	1354	160.00000	0.70000	70.00000

25.816	1358	170.00000	0.67000	71.00000
26.316	1360	170.00000	0.67000	71.00000
26.832	1362	170.00000	0.68000	71.00000
27.332	1362	170.00000	0.69000	71.00000
27.832	1362	170.00000	0.67000	71.00000

28.332	1368	180.00000	0.76000	71.00000
28.849	1373	180.00000	0.76000	71.00000
29.381	1383	200.00000	0.79000	71.00000
29.882	1447	270.00000	1.30000	71.00000
30.382	1471	290.00000	1.33000	71.00000

30.882	1482	310.00000	1.34000	71.00000
31.397	1491	310.00000	1.33000	72.00000
31.898	1498	320.00000	1.35000	72.00000
32.414	1498	310.00000	1.37000	72.00000
32.914	1503	330.00000	1.39000	72.00000

33.414	1485	300.00000	0.94000	72.00000
33.914	1490	320.00000	1.27000	72.00000
34.414	1498	320.00000	1.32000	72.00000
34.930	1508	330.00000	1.38000	72.00000
35.430	1516	330.00000	1.41000	73.00000

35.947	1518	340.00000	1.43000	73.00000
36.463	1523	350.00000	1.37000	73.00000
36.963	1519	340.00000	1.33000	73.00000
37.463	1524	350.00000	1.38000	73.00000
37.963	1521	350.00000	1.32000	73.00000

38.480	1521	340.00000	1.30000	74.00000
38.995	1521	340.00000	1.31000	74.00000
39.495	1523	340.00000	1.35000	74.00000
39.995	1528	350.00000	1.37000	74.00000
40.496	1530	350.00000	1.38000	74.00000

Description : Merrion Oil & Gas

Step Rate Test / Flush #1 / June 12, 2002

PAGE :3 Data every 0.50 min. Datafile C:\SMARTS\DATADIR\FLUSH1.DAT

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ELAPSED      Calc      A      SLURRY      Braden
  TIME      BH  Pressure  PUMP      Head
           Press  TREATING  RATE      .
           min.   psi      PSI      BPM      PSI
=====

41.011      1537 370.00000  1.39000  74.00000
41.512      1530 350.00000  1.23000  74.00000
42.012      1524 340.00000  1.25000  75.00000
42.528      1527 350.00000  1.28000  75.00000
43.028      1528 360.00000  1.29000  75.00000

43.545      1531 360.00000  1.35000  75.00000
44.061      1534 360.00000  1.35000  75.00000
44.577      1498 320.00000  0.66000  76.00000
45.095      1544 410.00000  1.81000  76.00000
45.611      1583 460.00000  1.91000  76.00000

46.126      1600 460.00000  1.75000  76.00000
46.626      1597 460.00000  1.91000  77.00000
47.126      1606 440.00000  1.53000  76.00000
47.626      1594 440.00000  1.74000  76.00000
48.126      1599 440.00000  1.84000  76.00000

48.643      1603 440.00000  1.87000  77.00000
49.143      1612 460.00000  1.91000  77.00000
49.643      1607 450.00000  1.79000  77.00000
50.159      1615 480.00000  1.87000  77.00000
50.659      1622 480.00000  1.85000  77.00000

51.175      1613 440.00000  1.82000  77.00000
51.675      1616 450.00000  1.82000  77.00000
52.175      1614 460.00000  1.82000  77.00000
52.692      1617 470.00000  1.86000  78.00000
53.208      1619 450.00000  1.86000  78.00000

53.708      1622 460.00000  1.85000  78.00000
54.208      1613 440.00000  1.75000  78.00000
54.708      1613 440.00000  1.68000  78.00000
55.224      1605 440.00000  1.70000  78.00000
55.724      1609 440.00000  1.75000  78.00000

56.224      1612 440.00000  1.73000  78.00000
56.724      1621 460.00000  1.79000  78.00000
57.240      1623 470.00000  1.83000  79.00000
57.757      1628 480.00000  1.84000  79.00000
58.257      1629 470.00000  1.84000  79.00000

58.773      1630 460.00000  1.84000  79.00000
59.273      1634 470.00000  1.83000  79.00000
59.773      1668 530.00000  2.10000  79.00000
60.290      1646 520.00000  2.27000  79.00000
60.806      1640 510.00000  2.22000  79.00000
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Description : Merrion Oil & Gas

Step Rate Test / Flush #1 / June 12, 2002

PAGE :4 Data every 0.50 min. Datafile C:\SMARTS\DATADIR\FLUSH1.DAT

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ELAPSED      Calc      A      SLURRY      Braden
  TIME      BH  Pressure  PUMP      Head
          Press  TREATING  RATE      .
        min.    psi      PSI      BPM      PSI
=====

61.306      1700  570.00000  2.22000  79.00000
61.806      1639  510.00000  2.23000  80.00000
62.307      1682  550.00000  2.19000  80.00000
62.822      1665  540.00000  2.28000  80.00000
63.322      1650  520.00000  2.21000  80.00000

63.822      1684  560.00000  2.29000  80.00000
64.338      1650  520.00000  2.21000  80.00000
64.838      1706  580.00000  2.27000  81.00000
65.338      1650  520.00000  2.21000  81.00000
65.855      1694  570.00000  2.29000  81.00000

66.355      1660  530.00000  2.21000  81.00000
66.871      1684  560.00000  2.29000  81.00000
67.372      1660  530.00000  2.21000  81.00000
67.888      1684  560.00000  2.29000  81.00000
68.403      1692  560.00000  2.19000  81.00000

68.903      1669  540.00000  2.23000  82.00000
69.403      1712  580.00000  2.19000  81.00000
69.903      1660  530.00000  2.22000  81.00000
70.403      1720  590.00000  2.21000  82.00000
70.903      1650  520.00000  2.21000  81.00000

71.403      1729  600.00000  2.23000  82.00000
71.903      1650  520.00000  2.21000  82.00000
72.403      1715  590.00000  2.28000  82.00000
72.903      1671  540.00000  2.20000  82.00000
73.419      1686  560.00000  2.26000  81.00000

73.919      1713  580.00000  2.18000  81.00000
74.436      1676  560.00000  2.38000  82.00000
74.951      1699  610.00000  2.82000  82.00000
75.452      1727  640.00000  2.84000  82.00000
75.952      1719  630.00000  2.81000  81.00000

76.460      1729  640.00000  2.82000  82.00000
76.960      1739  650.00000  2.82000  81.00000
77.468      1739  650.00000  2.81000  82.00000
77.968      1739  650.00000  2.82000  81.00000
78.476      1739  650.00000  2.82000  82.00000

78.992      1739  650.00000  2.81000  82.00000
79.500      1747  660.00000  2.84000  81.00000
80.008      1739  650.00000  2.82000  81.00000
80.509      1748  660.00000  2.83000  81.00000
81.009      1748  660.00000  2.83000  81.00000

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Description : Merrion Oil & Gas

Step Rate Test / Flush #1 / June 12, 2002

PAGE :5 Data every 0.50 min. Datafile C:\SMARTS\DATADIR\FLUSH1.DAT

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ELAPSED      Calc      A      SLURRY      Braden
  TIME      BH  Pressure  PUMP      Head
          Press  TREATING  RATE      .
          min.   psi      PSI      BPM      PSI
=====
81.525      1747 660.00000  2.85000  81.00000
82.026      1737 650.00000  2.84000  82.00000
82.541      1737 650.00000  2.84000  82.00000
83.041      1737 650.00000  2.85000  81.00000
83.541      1757 670.00000  2.84000  82.00000

84.041      1758 670.00000  2.83000  82.00000
84.541      1757 670.00000  2.84000  82.00000
85.057      1751 660.00000  2.78000  82.00000
85.557      1752 660.00000  2.76000  82.00000
86.057      1755 660.00000  2.71000  82.00000

86.557      1773 680.00000  2.75000  82.00000
87.058      1761 660.00000  2.61000  82.00000
87.573      1866 770.00000  2.70000  82.00000
88.073      1778 680.00000  2.67000  82.00000
88.574      1742 650.00000  2.77000  81.00000

89.089      1738 640.00000  2.66000  82.00000
89.589      1738 640.00000  2.67000  81.00000
90.089      2062 1000.00000  3.23000  82.00000
90.589      2006 960.00000  3.47000  81.00000
91.089      1857 780.00000  3.00000  82.00000

91.606      1688 620.00000  3.14000  82.00000
92.122      1782 720.00000  3.24000  81.00000
92.622      1784 730.00000  3.35000  81.00000
93.122      1805 750.00000  3.34000  81.00000
93.639      1793 740.00000  3.36000  81.00000

94.154      1803 750.00000  3.37000  81.00000
94.655      1812 760.00000  3.38000  81.00000
95.172      1812 760.00000  3.38000  81.00000
95.672      1801 750.00000  3.39000  81.00000
96.187      1803 750.00000  3.37000  81.00000

96.687      1832 780.00000  3.38000  81.00000
97.188      1802 750.00000  3.38000  81.00000
97.703      1831 780.00000  3.39000  81.00000
98.203      1802 750.00000  3.38000  81.00000
98.703      1822 770.00000  3.38000  81.00000

99.204      1821 770.00000  3.39000  80.00000
99.710      1832 780.00000  3.38000  80.00000
100.220     1812 760.00000  3.38000  81.00000
100.720     1823 770.00000  3.37000  80.00000
101.220     1813 760.00000  3.37000  80.00000

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Description : Merrion Oil & Gas

Step Rate Test / Flush #1 / June 12, 2002

PAGE :6 Data every 0.50 min. Datafile C:\SMARTS\DATADIR\FLUSH1.DAT

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ELAPSED	Calc	A	SLURRY	Braden
TIME	BH	Pressure	PUMP	Head
min.	Press	TREATING	RATE	.
	psi	PSI	BPM	PSI

=====

101.720	1832	780.00000	3.38000	80.00000
102.236	1823	770.00000	3.37000	80.00000
102.752	1812	760.00000	3.38000	81.00000
103.252	1842	790.00000	3.38000	81.00000
103.769	1813	760.00000	3.37000	81.00000
104.269	1835	800.00000	3.62000	81.00000
104.785	1826	800.00000	3.75000	81.00000
105.285	1842	810.00000	3.67000	81.00000
105.785	1852	820.00000	3.67000	81.00000
106.301	1851	820.00000	3.68000	81.00000
106.801	1851	820.00000	3.68000	81.00000
107.301	1852	820.00000	3.67000	81.00000
107.817	1852	820.00000	3.67000	82.00000
108.317	1852	820.00000	3.66000	82.00000
108.817	1842	810.00000	3.66000	82.00000
109.317	1852	820.00000	3.67000	82.00000
109.817	1852	820.00000	3.66000	82.00000
110.318	1862	830.00000	3.66000	82.00000
110.833	1862	830.00000	3.67000	82.00000
111.333	1852	820.00000	3.66000	82.00000
111.833	1862	830.00000	3.67000	82.00000
112.333	1862	830.00000	3.66000	82.00000
112.849	1851	820.00000	3.68000	82.00000
113.349	1862	830.00000	3.67000	82.00000
113.849	1860	830.00000	3.69000	82.00000
114.366	1861	830.00000	3.68000	82.00000
114.866	1861	830.00000	3.68000	82.00000
115.382	1871	840.00000	3.68000	82.00000
115.883	1872	840.00000	3.67000	82.00000
116.399	1871	840.00000	3.68000	82.00000
116.915	1862	830.00000	3.67000	82.00000
117.415	1852	820.00000	3.67000	82.00000
117.931	1862	830.00000	3.67000	82.00000
118.432	1862	830.00000	3.67000	82.00000
118.932	1872	840.00000	3.67000	82.00000
119.432	1838	830.00000	3.98000	82.00000
119.948	1895	920.00000	4.40000	82.00000
120.464	1900	910.00000	4.22000	82.00000
120.980	1889	900.00000	4.23000	82.00000
121.480	1890	900.00000	4.22000	82.00000

Description : Merrion Oil & Gas

Step Rate Test / Flush #1 / June 12, 2002

PAGE :7 Data every 0.50 min. Datafile C:\SMARTS\DATADIR\FLUSH1.DAT

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ELAPSED	Calc	A	SLURRY	Braden
TIME	BH	Pressure	PUMP	Head
min.	Press	TREATING	RATE	.
	psi	PSI	BPM	PSI

=====

121.980	1910	920.00000	4.22000	82.00000
122.480	1869	880.00000	4.23000	82.00000
122.980	1891	900.00000	4.21000	82.00000
123.480	1913	920.00000	4.18000	82.00000
123.980	1912	920.00000	4.19000	82.00000

124.496	1901	910.00000	4.21000	82.00000
124.996	1911	920.00000	4.21000	82.00000
125.496	1911	920.00000	4.21000	82.00000
125.996	1911	920.00000	4.21000	82.00000
126.512	1910	920.00000	4.22000	82.00000

127.012	1910	920.00000	4.22000	82.00000
127.529	1879	890.00000	4.23000	82.00000
128.029	1900	910.00000	4.22000	82.00000
128.529	1898	910.00000	4.24000	82.00000
129.029	1909	920.00000	4.23000	82.00000

129.544	1898	910.00000	4.24000	82.00000
130.044	1888	900.00000	4.24000	82.00000
130.544	1909	920.00000	4.23000	82.00000
131.044	1889	900.00000	4.23000	82.00000
131.544	1910	920.00000	4.22000	82.00000

132.044	1899	910.00000	4.23000	82.00000
132.552	1910	920.00000	4.22000	82.00000
133.060	1911	920.00000	4.21000	82.00000
133.560	1911	920.00000	4.21000	82.00000
134.085	1890	900.00000	4.22000	82.00000

134.585	1925	980.00000	4.77000	82.00000
135.085	1914	970.00000	4.78000	82.00000
135.585	1935	990.00000	4.76000	82.00000
136.085	1905	960.00000	4.76000	82.00000
136.601	1935	990.00000	4.76000	82.00000

137.118	1925	980.00000	4.77000	82.00000
137.635	1945	1000.00000	4.76000	82.00000
138.151	1925	980.00000	4.76000	82.00000
138.667	1925	980.00000	4.76000	82.00000
139.183	1945	1000.00000	4.76000	82.00000

139.684	1936	990.00000	4.75000	82.00000
140.200	1927	980.00000	4.74000	82.00000
140.700	1916	970.00000	4.75000	82.00000
141.200	1925	980.00000	4.77000	82.00000
141.700	1945	1000.00000	4.77000	82.00000

Description : Merrion Oil & Gas

Step Rate Test / Flush #1 / June 12, 2002

PAGE :8 Data every 0.50 min. Datafile C:\SMARTS\DATADIR\FLUSH1.DAT

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ELAPSED      Calc      A      SLURRY      Braden
TIME         BH      Pressure      PUMP      Head
              Press    TREATING      RATE      .
              psi      PSI      BPM      PSI
=====

142.216      1945 1000.00000      4.77000      82.00000
142.716      1915 970.00000      4.77000      82.00000
143.233      1915 970.00000      4.77000      82.00000
143.748      1946 1000.00000      4.75000      82.00000
144.249      1945 1000.00000      4.76000      82.00000

144.749      1955 1010.00000      4.76000      82.00000
145.249      1927 980.00000      4.74000      82.00000
145.765      1916 970.00000      4.75000      82.00000
146.265      1946 1000.00000      4.75000      82.00000
146.765      1946 1000.00000      4.75000      82.00000

147.281      1955 1010.00000      4.76000      82.00000
147.781      1947 1000.00000      4.74000      81.00000
148.297      1956 1010.00000      4.75000      82.00000
148.798      1956 1010.00000      4.75000      81.00000
149.298      1926 980.00000      4.75000      81.00000

149.814      1963 1040.00000      5.02000      82.00000
150.315      1967 1070.00000      5.31000      81.00000
150.831      1981 1080.00000      5.26000      81.00000
151.346      1970 1070.00000      5.27000      81.00000
151.846      1942 1040.00000      5.25000      81.00000

152.346      1941 1040.00000      5.26000      81.00000
152.847      1950 1050.00000      5.28000      81.00000
153.364      1980 1080.00000      5.28000      81.00000
153.879      1980 1080.00000      5.27000      81.00000
154.379      1968 1070.00000      5.30000      81.00000

154.879      1978 1080.00000      5.30000      81.00000
155.379      1989 1090.00000      5.29000      81.00000
155.879      1997 1100.00000      5.31000      81.00000
156.395      1968 1070.00000      5.30000      80.00000
156.895      1958 1060.00000      5.30000      81.00000

157.412      1989 1090.00000      5.29000      81.00000
157.912      1988 1090.00000      5.30000      80.00000
158.429      1989 1090.00000      5.29000      80.00000
158.929      1959 1060.00000      5.29000      80.00000
159.444      1960 1060.00000      5.28000      80.00000

159.944      1981 1080.00000      5.26000      80.00000
160.444      1983 1080.00000      5.24000      80.00000
160.944      1971 1070.00000      5.26000      80.00000
161.461      1972 1070.00000      5.25000      80.00000
161.967      1972 1070.00000      5.25000      80.00000

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Description : Merrion Oil & Gas

Step Rate Test / Flush #1 / June 12, 2002

PAGE :9 Data every 0.50 min. Datafile C:\SMARTS\DATADIR\FLUSH1.DAT

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ELAPSED      Calc      A      SLURRY      Braden
TIME         BH      Pressure      PUMP      Head
              Press    TREATING      RATE      .
              psi      PSI      BPM      PSI
=====

162.478      1951 1050.00000      5.26000      80.00000
162.993      2001 1100.00000      5.26000      79.00000
163.493      2000 1100.00000      5.28000      80.00000
163.994      1990 1090.00000      5.27000      80.00000
164.494      2020 1120.00000      5.27000      80.00000

165.015      1960 1110.00000      5.81000      80.00000
165.526      1976 1110.00000      5.64000      80.00000
166.026      1995 1130.00000      5.65000      80.00000
166.526      1997 1140.00000      5.73000      80.00000
167.026      1998 1140.00000      5.72000      80.00000

167.543      2007 1150.00000      5.73000      80.00000
168.043      1988 1130.00000      5.72000      80.00000
168.558      1998 1140.00000      5.72000      80.00000
169.058      2008 1150.00000      5.72000      80.00000
169.559      1988 1130.00000      5.72000      80.00000

170.075      2020 1160.00000      5.70000      81.00000
170.575      2006 1150.00000      5.74000      80.00000
171.075      2007 1150.00000      5.73000      81.00000
171.591      1997 1140.00000      5.73000      81.00000
172.091      2017 1160.00000      5.73000      81.00000

172.608      2017 1160.00000      5.73000      81.00000
173.108      1999 1140.00000      5.71000      81.00000
173.623      2000 1140.00000      5.70000      81.00000
174.123      2010 1150.00000      5.70000      81.00000
174.623      2017 1160.00000      5.73000      81.00000

175.123      2016 1160.00000      5.74000      81.00000
175.623      2001 1140.00000      5.69000      81.00000
176.123      2018 1160.00000      5.72000      81.00000
176.623      2017 1160.00000      5.73000      81.00000
177.124      2029 1170.00000      5.71000      81.00000

177.639      2018 1160.00000      5.72000      81.00000
178.139      1997 1140.00000      5.73000      81.00000
178.639      2017 1160.00000      5.73000      81.00000
179.139      2026 1170.00000      5.74000      81.00000
179.655      2026 1200.00000      6.05000      81.00000

180.156      2009 1200.00000      6.22000      81.00000
180.672      2029 1220.00000      6.22000      81.00000
181.172      2047 1240.00000      6.24000      81.00000
181.672      2036 1230.00000      6.25000      81.00000
182.188      2008 1200.00000      6.23000      81.00000
```

Description : Merrion Oil & Gas

Step Rate Test / Flush #1 / June 12, 2002

PAGE :10 Data every 0.50 min. Datafile C:\SMARTS\DATADIR\FLUSH1.DAT

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ELAPSED	Calc	A	SLURRY	Braden
TIME	BH	Pressure	PUMP	Head
min.	Press	TREATING	RATE	.
	psi	PSI	BPM	PSI

=====

182.688	2008	1200.00000	6.23000	81.00000
183.188	2066	1260.00000	6.25000	82.00000
183.704	2036	1230.00000	6.25000	81.00000
184.204	2057	1250.00000	6.24000	82.00000
184.704	2037	1230.00000	6.24000	82.00000
185.221	2066	1260.00000	6.25000	82.00000
185.737	2040	1230.00000	6.21000	82.00000
186.238	2026	1220.00000	6.25000	82.00000
186.753	2058	1250.00000	6.23000	82.00000
187.253	2027	1220.00000	6.24000	82.00000
187.754	2047	1240.00000	6.24000	82.00000
188.261	2037	1230.00000	6.24000	83.00000
188.761	2077	1270.00000	6.24000	82.00000
189.269	2046	1240.00000	6.25000	82.00000
189.778	2037	1230.00000	6.24000	82.00000
190.295	2058	1250.00000	6.23000	82.00000
190.802	2036	1230.00000	6.25000	82.00000
191.311	2035	1230.00000	6.26000	82.00000
191.826	2035	1230.00000	6.26000	82.00000
192.326	2066	1260.00000	6.25000	82.00000
192.826	2045	1240.00000	6.26000	83.00000
193.326	2037	1230.00000	6.24000	83.00000
193.826	2084	1280.00000	6.27000	83.00000
194.326	2074	1290.00000	6.47000	82.00000
194.843	2084	1320.00000	6.66000	82.00000
195.360	2078	1340.00000	6.90000	83.00000
195.860	2039	1280.00000	6.70000	83.00000
196.400	2072	1310.00000	6.68000	83.00000
196.909	2076	1320.00000	6.73000	83.00000
197.409	2054	1300.00000	6.75000	83.00000
197.925	2047	1290.00000	6.72000	83.00000
198.426	2096	1340.00000	6.73000	83.00000
198.942	2075	1320.00000	6.74000	83.00000
199.458	2068	1310.00000	6.71000	83.00000
199.958	2068	1310.00000	6.71000	83.00000
200.458	2057	1300.00000	6.72000	83.00000
200.958	2099	1340.00000	6.70000	83.00000
201.474	2068	1310.00000	6.71000	83.00000
201.974	2071	1310.00000	6.69000	83.00000
202.474	2078	1320.00000	6.71000	83.00000

Description : Merrion Oil & Gas

Step Rate Test / Flush #1 / June 12, 2002

PAGE :11 Data every 0.50 min. Datafile C:\SMARTS\DATADIR\FLUSH1.DAT

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ELAPSED	Calc	A	SLURRY	Braden
TIME	BH	Pressure	PUMP	Head
min.	Press	TREATING	RATE	.
	psi	PSI	BPM	PSI

=====

202.990	2092	1330.00000	6.68000	83.00000
203.490	2079	1320.00000	6.70000	83.00000
203.990	2099	1340.00000	6.70000	83.00000
204.507	2089	1330.00000	6.70000	83.00000
205.007	2098	1340.00000	6.71000	83.00000
205.523	2083	1320.00000	6.67000	83.00000
206.023	2064	1300.00000	6.66000	83.00000
206.523	2092	1330.00000	6.68000	82.00000
207.039	2081	1320.00000	6.69000	83.00000
207.539	2102	1340.00000	6.68000	83.00000
208.055	2082	1320.00000	6.68000	82.00000
208.556	2091	1330.00000	6.69000	83.00000
209.072	2102	1340.00000	6.68000	82.00000
209.573	2119	1380.00000	6.89000	82.00000
210.088	2093	1380.00000	7.13000	83.00000
210.588	2092	1380.00000	7.14000	82.00000
211.088	2116	1420.00000	7.28000	82.00000
211.589	2054	1360.00000	7.30000	82.00000
212.105	2079	1360.00000	7.08000	83.00000
212.605	2111	1410.00000	7.24000	82.00000
213.121	2031	1320.00000	7.15000	82.00000
213.621	2161	1450.00000	7.15000	83.00000
214.121	2114	1420.00000	7.30000	83.00000
214.621	2159	1470.00000	7.35000	83.00000
215.137	2124	1440.00000	7.39000	83.00000
215.637	2107	1420.00000	7.36000	83.00000
216.137	2147	1460.00000	7.36000	83.00000
216.654	2146	1460.00000	7.37000	82.00000
217.169	2119	1430.00000	7.35000	83.00000
217.670	2130	1440.00000	7.34000	83.00000
218.187	2095	1410.00000	7.38000	84.00000
218.703	2117	1430.00000	7.36000	83.00000
219.219	2129	1440.00000	7.35000	83.00000
219.735	2109	1420.00000	7.35000	84.00000
220.236	2106	1420.00000	7.37000	84.00000
220.753	2151	1460.00000	7.33000	84.00000
221.269	2119	1430.00000	7.35000	84.00000
221.785	2087	1400.00000	7.36000	83.00000
222.301	2119	1430.00000	7.35000	84.00000
222.801	2119	1430.00000	7.35000	84.00000

Description : Merrion Oil & Gas

Step Rate Test / Flush #1 / June 12, 2002

PAGE :12 Data every 0.50 min. Datafile C:\SMARTS\DATADIR\FLUSH1.DAT

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+++++
ELAPSED      Calc      A      SLURRY      Braden
  TIME      BH  Pressure  PUMP      Head
           Press TREATING  RATE      .
           psi   PSI      BPM      PSI
=====

223.301      2136 1450.00000  7.37000  84.00000
223.801      2109 1420.00000  7.35000  83.00000
224.301      2119 1430.00000  7.35000  84.00000
224.801      2147 1510.00000  7.80000  84.00000
225.317      2147 1500.00000  7.71000  83.00000

225.818      2137 1490.00000  7.71000  83.00000
226.350      2129 1480.00000  7.70000  84.00000
226.850      2150 1500.00000  7.69000  83.00000
227.367      2171 1520.00000  7.68000  84.00000
227.867      2111 1460.00000  7.68000  84.00000

228.367      2161 1510.00000  7.68000  84.00000
228.883      2113 1460.00000  7.66000  84.00000
229.383      2162 1510.00000  7.67000  84.00000
229.899      2153 1500.00000  7.66000  84.00000
230.400      2153 1500.00000  7.66000  84.00000

230.916      2122 1470.00000  7.67000  84.00000
231.416      2153 1500.00000  7.66000  84.00000
231.916      2162 1510.00000  7.67000  84.00000
232.432      2153 1500.00000  7.66000  83.00000
232.933      2152 1500.00000  7.67000  83.00000

233.448      2163 1510.00000  7.66000  84.00000
233.948      2132 1480.00000  7.67000  83.00000
234.448      2143 1490.00000  7.66000  83.00000
234.964      2123 1470.00000  7.66000  83.00000
235.464      2152 1500.00000  7.67000  83.00000

235.964      2157 1500.00000  7.63000  83.00000
236.464      2164 1510.00000  7.65000  83.00000
236.964      2164 1510.00000  7.65000  82.00000
237.464      2144 1490.00000  7.65000  82.00000
237.964      2156 1500.00000  7.64000  82.00000

238.464      2182 1530.00000  7.67000  83.00000
238.980      2174 1520.00000  7.65000  82.00000
239.481      2175 1550.00000  7.90000  83.00000
239.984      2157 1540.00000  7.97000  83.00000
240.496      2190 1620.00000  8.36000  83.00000

240.997      2152 1560.00000  8.18000  83.00000
241.513      2173 1580.00000  8.17000  83.00000
242.013      2160 1580.00000  8.28000  82.00000
242.529      2181 1600.00000  8.27000  82.00000
243.037      2181 1600.00000  8.27000  82.00000
```

Description : Merrion Oil & Gas

Step Rate Test / Flush #1 / June 12, 2002

PAGE :13 Data every 0.50 min. Datafile C:\SMARTS\DATADIR\FLUSH1.DAT

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+++++
ELAPSED      Calc      A      SLURRY      Braden
TIME         BH      Pressure  PUMP      Head
            Press  TREATING  RATE      .
            min.   psi      PSI      BPM      PSI
=====

243.537      2180 1600.00000  8.28000  82.00000
244.037      2191 1610.00000  8.27000  82.00000
244.537      2182 1600.00000  8.26000  82.00000
245.053      2193 1610.00000  8.25000  82.00000
245.570      2180 1600.00000  8.28000  81.00000

246.071      2183 1600.00000  8.25000  81.00000
246.586      2171 1590.00000  8.27000  81.00000
247.086      2200 1620.00000  8.28000  80.00000
247.586      2170 1590.00000  8.28000  81.00000
248.087      2159 1580.00000  8.29000  81.00000

248.603      2190 1610.00000  8.28000  81.00000
249.118      2181 1600.00000  8.27000  81.00000
249.618      2171 1590.00000  8.27000  80.00000
250.118      2191 1610.00000  8.27000  80.00000
250.619      2180 1600.00000  8.28000  81.00000

251.119      2200 1620.00000  8.28000  80.00000
251.635      2172 1590.00000  8.26000  81.00000
252.135      2180 1600.00000  8.28000  81.00000
252.635      2161 1580.00000  8.27000  80.00000
253.151      2182 1600.00000  8.26000  81.00000

253.667      2201 1620.00000  8.27000  80.00000
254.168      2173 1590.00000  8.25000  80.00000
254.684      2183 1610.00000  8.34000  80.00000
255.184      2198 1650.00000  8.54000  80.00000
255.684      2213 1690.00000  8.74000  80.00000

256.200      2197 1680.00000  8.79000  80.00000
256.700      2178 1660.00000  8.78000  80.00000
257.200      2185 1670.00000  8.80000  80.00000
257.717      2158 1640.00000  8.78000  80.00000
258.233      2207 1690.00000  8.79000  80.00000

258.733      2197 1680.00000  8.79000  80.00000
259.233      2199 1680.00000  8.77000  80.00000
259.733      2179 1660.00000  8.77000  80.00000
260.250      2231 1710.00000  8.76000  80.00000
260.765      2179 1660.00000  8.77000  80.00000

261.266      2199 1680.00000  8.77000  80.00000
261.781      2208 1690.00000  8.78000  80.00000
262.281      2192 1670.00000  8.75000  80.00000
262.782      2199 1680.00000  8.77000  80.00000
263.282      2251 1730.00000  8.76000  80.00000
```

Description : Merrion Oil & Gas

Step Rate Test / Flush #1 / June 12, 2002

PAGE :14 Data every 0.50 min. Datafile C:\SMARTS\DATADIR\FLUSH1.DAT

```
+++++
ELAPSED      Calc      A      SLURRY      Braden
TIME         BH      Pressure      PUMP      Head
              Press    TREATING      RATE      .
              psi      PSI      BPM      PSI
=====

263.798      2222 1700.00000      8.75000      80.00000
264.298      2181 1660.00000      8.76000      80.00000
264.798      2212 1690.00000      8.75000      80.00000
265.298      2208 1690.00000      8.78000      80.00000
265.798      2211 1690.00000      8.76000      80.00000

266.298      2229 1710.00000      8.77000      80.00000
266.813      2208 1690.00000      8.78000      80.00000
267.313      2178 1660.00000      8.78000      80.00000
267.813      2247 1730.00000      8.79000      80.00000
268.313      2215 1700.00000      8.80000      80.00000

268.813      2197 1680.00000      8.79000      80.00000
269.330      2205 1690.00000      8.80000      79.00000
269.830      2211 1760.00000      9.30000      80.00000
270.346      2242 1790.00000      9.29000      80.00000
270.847      2220 1770.00000      9.31000      80.00000

271.362      2251 1800.00000      9.30000      81.00000
271.862      2232 1780.00000      9.29000      80.00000
272.362      2232 1780.00000      9.29000      80.00000
272.862      2252 1800.00000      9.29000      80.00000
273.362      2224 1770.00000      9.28000      80.00000

273.879      2215 1760.00000      9.27000      80.00000
274.395      2255 1800.00000      9.27000      79.00000
274.895      2234 1780.00000      9.28000      80.00000
275.395      2235 1780.00000      9.27000      79.00000
275.912      2215 1760.00000      9.27000      79.00000

276.427      2216 1760.00000      9.26000      79.00000
276.927      2265 1810.00000      9.27000      78.00000
277.428      2225 1770.00000      9.27000      79.00000
277.945      2256 1800.00000      9.26000      78.00000
278.460      2234 1780.00000      9.28000      77.00000

278.960      2224 1770.00000      9.28000      77.00000
279.461      2234 1780.00000      9.28000      77.00000
279.976      2234 1780.00000      9.28000      77.00000
280.476      2231 1780.00000      9.30000      76.00000
280.977      2202 1750.00000      9.29000      76.00000

281.477      2232 1780.00000      9.29000      76.00000
281.993      2204 1750.00000      9.28000      75.00000
282.493      2251 1800.00000      9.30000      75.00000
282.993      2251 1800.00000      9.30000      75.00000
283.509      2232 1780.00000      9.29000      74.00000
```

Description : Merrion Oil & Gas

Step Rate Test / Flush #1 / June 12, 2002

PAGE :15 Data every 0.50 min. Datafile C:\SMARTS\DATADIR\FLUSH1.DAT

+++++
ELAPSED Calc A SLURRY Braden
TIME BH Pressure PUMP Head
 Press TREATING RATE .
 psi PSI BPM PSI
=====

284.009	2231	1780.00000	9.30000	74.00000
284.509	2262	1910.00000	10.04000	74.00000
285.026	2246	1840.00000	9.64000	74.00000
285.541	2260	1890.00000	9.91000	73.00000
286.041	2229	1840.00000	9.77000	73.00000
286.541	2208	1810.00000	9.70000	73.00000
287.041	2252	1850.00000	9.67000	73.00000
287.541	2252	1850.00000	9.67000	72.00000
288.041	2261	1860.00000	9.68000	72.00000
288.541	2259	1860.00000	9.69000	72.00000
289.042	2255	1860.00000	9.72000	72.00000
289.557	2247	1850.00000	9.71000	72.00000
290.057	2271	1870.00000	9.68000	71.00000
290.557	2279	1880.00000	9.69000	72.00000
291.057	2243	1850.00000	9.74000	71.00000
291.557	2279	1880.00000	9.69000	71.00000
292.057	2251	1860.00000	9.75000	71.00000
292.572	2275	1880.00000	9.72000	70.00000
293.072	2277	1880.00000	9.71000	70.00000
293.573	2231	1840.00000	9.75000	70.00000
294.073	2239	1840.00000	9.69000	70.00000
294.573	2253	1850.00000	9.66000	70.00000
295.073	2265	1860.00000	9.65000	69.00000
295.589	2235	1840.00000	9.72000	69.00000
296.089	2245	1850.00000	9.72000	69.00000
296.606	2265	1870.00000	9.72000	69.00000
297.113	2231	1840.00000	9.75000	69.00000
297.613	2271	1880.00000	9.75000	69.00000
298.121	2273	1880.00000	9.74000	69.00000
298.621	2287	1890.00000	9.71000	68.00000
299.130	2288	1890.00000	9.70000	68.00000
299.646	2313	2010.00000	10.39000	68.00000
300.147	2303	1960.00000	10.10000	68.00000
300.654	2296	2000.00000	10.44000	68.00000
301.162	2297	1960.00000	10.15000	67.00000
301.662	2322	1990.00000	10.18000	67.00000
302.162	2320	2040.00000	10.55000	67.00000
302.679	2274	1950.00000	10.24000	67.00000
303.179	2281	1960.00000	10.26000	67.00000
303.696	2281	1960.00000	10.26000	67.00000

Description : Merrion Oil & Gas

Step Rate Test / Flush #1 / June 12, 2002

PAGE :16 Data every 0.50 min. Datafile C:\SMARTS\DATADIR\FLUSH1.DAT

```
+++++
ELAPSED      Calc      A      SLURRY      Braden
TIME         BH      Pressure      PUMP      Head
            Press  TREATING      RATE      .
            min.   psi      PSI      BPM      PSI
=====

304.212      2294 1970.00000  10.24000  67.00000
304.727      2313 1990.00000  10.25000  67.00000
305.227      2303 1980.00000  10.25000  67.00000
305.727      2320 2000.00000  10.27000  67.00000
306.227      2310 1990.00000  10.27000  67.00000

306.727      2318 1990.00000  10.21000  67.00000
307.228      2287 1960.00000  10.22000  67.00000
307.744      2327 2000.00000  10.22000  67.00000
308.244      2254 1930.00000  10.24000  66.00000
308.760      2314 1990.00000  10.24000  66.00000

309.260      2321 2000.00000  10.26000  67.00000
309.760      2271 1950.00000  10.26000  66.00000
310.277      2264 1940.00000  10.24000  66.00000
310.777      2308 1990.00000  10.28000  66.00000
311.293      2301 1980.00000  10.26000  66.00000

311.793      2313 1990.00000  10.25000  66.00000
312.293      2325 2000.00000  10.23000  66.00000
312.809      2308 1980.00000  10.21000  66.00000
313.309      2262 1930.00000  10.18000  66.00000
313.809      2301 1970.00000  10.19000  66.00000

314.326      2231 1760.00000   9.15000  66.00000
314.841      2384 2160.00000  10.94000  66.00000
315.342      2339 2090.00000  10.77000  66.00000
315.842      2310 2050.00000  10.69000  67.00000
316.358      2349 2090.00000  10.70000  67.00000

316.858      2310 2050.00000  10.69000  67.00000
317.359      2313 2050.00000  10.67000  67.00000
317.874      2320 2050.00000  10.62000  67.00000
318.375      2333 2070.00000  10.67000  67.00000
318.891      2348 2080.00000  10.64000  67.00000

319.407      2358 2090.00000  10.64000  67.00000
319.907      2315 2050.00000  10.66000  67.00000
320.407      2326 2060.00000  10.65000  67.00000
320.908      2325 2060.00000  10.66000  67.00000
321.423      2305 2030.00000  10.59000  67.00000

321.923      2340 2070.00000  10.62000  68.00000
322.424      2329 2060.00000  10.63000  67.00000
322.940      2311 2090.00000  10.96000  68.00000
323.455      2315 2030.00000  10.52000  68.00000
323.956      2362 2080.00000  10.54000  68.00000
```

Description : Merrion Oil & Gas

Step Rate Test / Flush #1 / June 12, 2002

PAGE :17 Data every 0.50 min. Datafile C:\SMARTS\DATADIR\FLUSH1.DAT

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+++++
ELAPSED      Calc      A      SLURRY      Braden
TIME         BH      Pressure      PUMP      Head
            Press  TREATING      RATE      .
            min.   psi      PSI      BPM      PSI
=====

324.456      2349  2070.00000  10.56000  69.00000
324.957      2368  2100.00000  10.64000  68.00000
325.472      2342  2100.00000  10.82000  69.00000
325.973      2312  2070.00000  10.82000  69.00000
326.488      2347  2110.00000  10.85000  69.00000

326.988      2327  2090.00000  10.85000  69.00000
327.489      2339  2100.00000  10.84000  69.00000
328.004      2367  2130.00000  10.85000  69.00000
328.504      2367  2130.00000  10.85000  69.00000
329.005      2340  2100.00000  10.83000  69.00000

329.521      2370  2150.00000  10.97000  69.00000
330.021      2407  2240.00000  11.33000  68.00000
330.521      2332  2170.00000  11.36000  69.00000
331.037      2371  2210.00000  11.37000  69.00000
331.537      2377  2210.00000  11.33000  69.00000

332.037      2411  2240.00000  11.30000  69.00000
332.553      2340  2160.00000  11.24000  69.00000
333.053      2340  2160.00000  11.24000  69.00000
333.570      2361  2180.00000  11.23000  69.00000
334.070      2367  2190.00000  11.26000  69.00000

334.587      2396  2220.00000  11.27000  70.00000
335.087      2389  2210.00000  11.25000  70.00000
335.602      2400  2230.00000  11.31000  70.00000
336.102      2358  2190.00000  11.32000  70.00000
336.602      2407  2230.00000  11.26000  70.00000

337.102      2394  2220.00000  11.28000  70.00000
337.619      2400  2230.00000  11.31000  70.00000
338.119      2363  2190.00000  11.29000  71.00000
338.619      2414  2230.00000  11.21000  71.00000
339.119      2380  2200.00000  11.24000  70.00000

339.634      2414  2240.00000  11.28000  70.00000
340.134      2409  2230.00000  11.25000  71.00000
340.635      2344  2170.00000  11.28000  71.00000
341.135      2377  2200.00000  11.26000  71.00000
341.650      2396  2220.00000  11.27000  71.00000

342.150      2387  2210.00000  11.26000  71.00000
342.651      2387  2210.00000  11.26000  71.00000
343.151      2349  2170.00000  11.25000  71.00000
343.667      2411  2230.00000  11.23000  71.00000
344.167      2433  2250.00000  11.22000  71.00000
```

Description : Merrion Oil & Gas

Step Rate Test / Flush #1 / June 12, 2002

PAGE :18 Data every 0.50 min. Datafile C:\SMARTS\DATADIR\FLUSH1.DAT

```
+++++
ELAPSED      Calc      A      SLURRY      Braden
TIME         BH      Pressure      PUMP      Head
            Press  TREATING      RATE      .
            min.   psi      PSI      BPM      PSI
=====
```

344.667	2369	2260.00000	11.71000	71.00000
345.183	2450	2350.00000	11.77000	71.00000
345.683	2407	2310.00000	11.79000	71.00000
346.183	2372	2280.00000	11.82000	71.00000
346.700	2385	2290.00000	11.80000	71.00000
347.216	2427	2330.00000	11.79000	71.00000
347.716	2415	2320.00000	11.80000	71.00000
348.216	2439	2340.00000	11.78000	71.00000
348.732	2420	2320.00000	11.77000	71.00000
349.233	3449	2360.00000	2.82000	71.00000
349.752	3285	2330.00000	4.65000	71.00000
350.264	2359	2280.00000	11.91000	70.00000
350.764	2417	2340.00000	11.92000	70.00000
351.264	2365	2290.00000	11.93000	71.00000
351.765	2409	2330.00000	11.91000	70.00000
352.265	2415	2340.00000	11.93000	71.00000
352.782	2419	2340.00000	11.91000	71.00000
353.289	2364	2290.00000	11.94000	71.00000
353.789	2402	2320.00000	11.89000	71.00000
354.297	2362	2290.00000	11.95000	71.00000
354.797	2402	2330.00000	11.95000	71.00000
355.305	2370	2290.00000	11.90000	71.00000
355.805	2417	2340.00000	11.92000	71.00000
356.322	2435	2360.00000	11.93000	71.00000
356.822	2372	2300.00000	11.95000	71.00000
357.338	2424	2350.00000	11.94000	71.00000
357.838	2411	2340.00000	11.96000	71.00000
358.350	2435	2360.00000	11.93000	71.00000
358.854	2418	2350.00000	11.98000	71.00000
359.354	2491	2420.00000	11.96000	71.00000
359.871	2390	2360.00000	12.22000	71.00000
360.387	2447	2390.00000	12.05000	71.00000
360.887	2426	2410.00000	12.31000	71.00000
361.387	2438	2420.00000	12.30000	71.00000
361.887	2453	2440.00000	12.33000	71.00000
362.403	2431	2420.00000	12.34000	71.00000
362.903	2446	2430.00000	12.31000	71.00000
363.403	2451	2440.00000	12.34000	71.00000
363.920	2451	2440.00000	12.34000	71.00000
364.436	2474	2460.00000	12.32000	71.00000

Description : Merrion Oil & Gas

Step Rate Test / Flush #1 / June 12, 2002

PAGE :19 Data every 0.50 min. Datafile C:\SMARTS\DATADIR\FLUSH1.DAT

```
+++++
ELAPSED      Calc      A      SLURRY      Braden
TIME         BH      Pressure      PUMP      Head
            Press  TREATING      RATE      .
            psi    PSI          BPM      PSI
=====

364.936      2463  2450.00000  12.33000  72.00000
365.436      2441  2430.00000  12.34000  71.00000
365.936      2453  2440.00000  12.33000  71.00000
366.452      2466  2450.00000  12.31000  71.00000
366.953      2441  2420.00000  12.28000  71.00000

367.468      2459  2440.00000  12.29000  71.00000
367.968      2489  2460.00000  12.23000  70.00000
368.469      2494  2470.00000  12.26000  70.00000
368.985      2472  2450.00000  12.27000  70.00000
369.485      2472  2450.00000  12.27000  70.00000

369.985      2499  2480.00000  12.29000  70.00000
370.502      2509  2490.00000  12.29000  70.00000
371.017      2471  2460.00000  12.34000  70.00000
371.517      2494  2480.00000  12.32000  70.00000
372.017      2488  2470.00000  12.30000  69.00000

372.517      2474  2460.00000  12.32000  70.00000
373.034      2509  2490.00000  12.29000  70.00000
373.534      2476  2460.00000  12.31000  69.00000
374.050      2482  2460.00000  12.27000  69.00000
374.550      2504  2480.00000  12.26000  69.00000

375.050      2195  960.00000  0.00000  69.00000
375.566      2115  910.00000  0.00000  69.00000
376.066      2049  850.00000  0.12000  69.00000
376.582      1991  790.00000  0.00000  69.00000
377.082      1949  750.00000  0.00000  69.00000

377.582      1916  720.00000  0.00000  69.00000
378.082      1896  700.00000  0.00000  69.00000
378.582      1876  680.00000  0.00000  69.00000
379.082      1856  660.00000  0.00000  69.00000
379.582      1846  650.00000  0.00000  0.00000

380.082      1826  630.00000  0.00000  0.00000
380.598      1816  620.00000  0.00000  0.00000
381.098      1806  610.00000  0.00000  0.00000
381.598      1796  600.00000  0.00000  0.00000
382.114      1786  590.00000  0.00000  0.00000

382.614      1776  580.00000  0.00000  0.00000
383.130      1766  570.00000  0.00000  0.00000
383.631      1766  570.00000  0.00000  0.00000
384.131      1756  560.00000  0.00000  0.00000
384.647      1746  550.00000  0.00000  0.00000
```

Description : Merrion Oil & Gas

Step Rate Test / Flush #1 / June 12, 2002

PAGE :20 Data every 0.50 min. Datafile C:\SMARTS\DATADIR\FLUSH1.DAT

+++++
ELAPSED Calc A SLURRY Braden
TIME BH Pressure PUMP Head
 Press TREATING RATE .
 min. psi PSI BPM PSI
=====

385.147	1746	550.00000	0.00000	0.00000
385.663	1736	540.00000	0.00000	0.00000
386.163	1736	540.00000	0.00000	0.00000
386.663	1726	530.00000	0.00000	0.00000
387.163	1716	520.00000	0.00000	0.00000
387.679	1716	520.00000	0.00000	0.00000
388.179	1716	520.00000	0.00000	0.00000
388.679	1706	510.00000	0.00000	0.00000
389.179	1706	510.00000	0.00000	0.00000
389.679	1696	500.00000	0.00000	0.00000
390.179	1696	500.00000	0.00000	0.00000

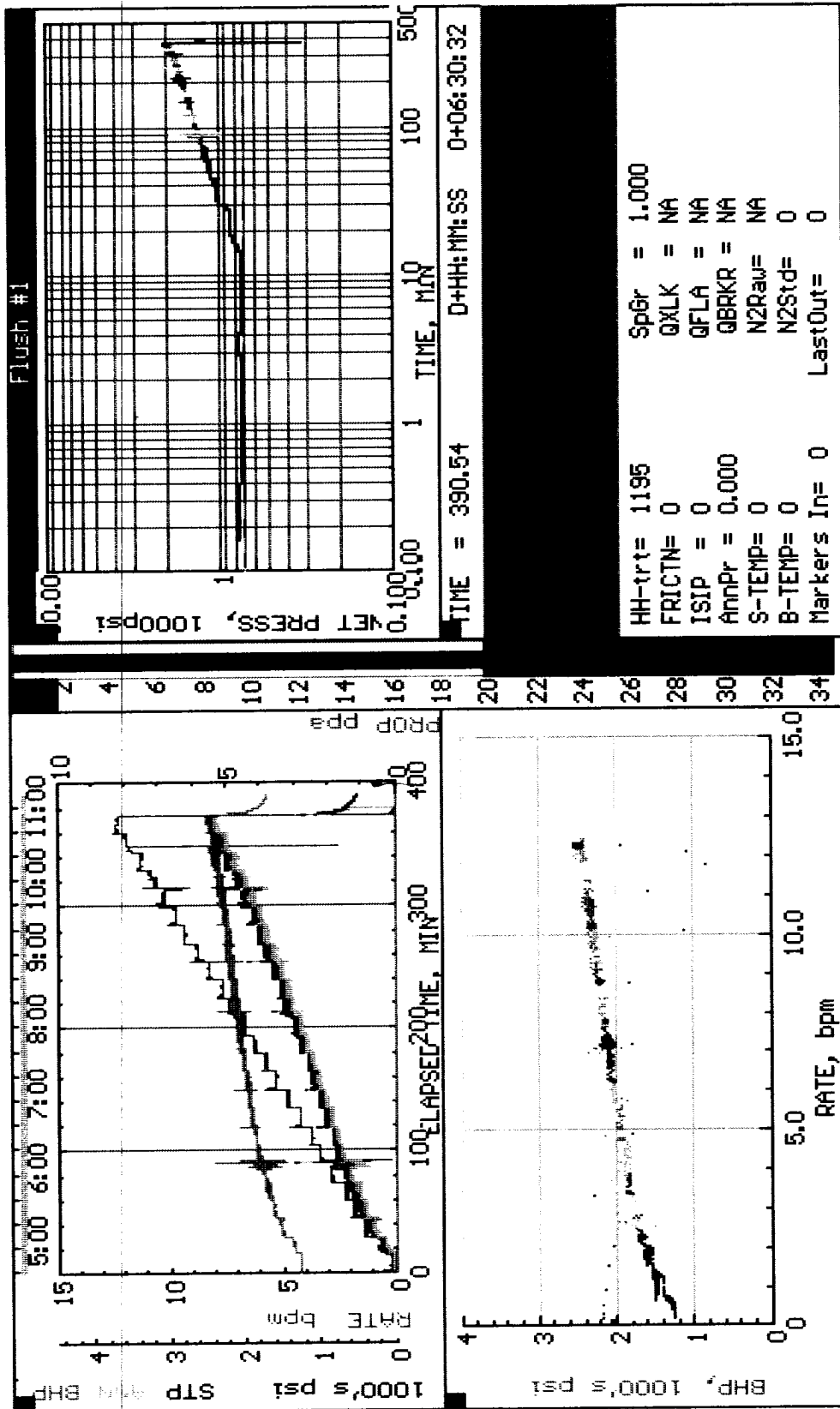
Desc: Flush #1

MESA VERDE

Merrion Oil & Gas

Step Rate Test - June 12, 2002

PAGE : 8-G (6/12/2002 17:08:04) Data stored in C:\SMARTS\DATADIR\FLUSH1



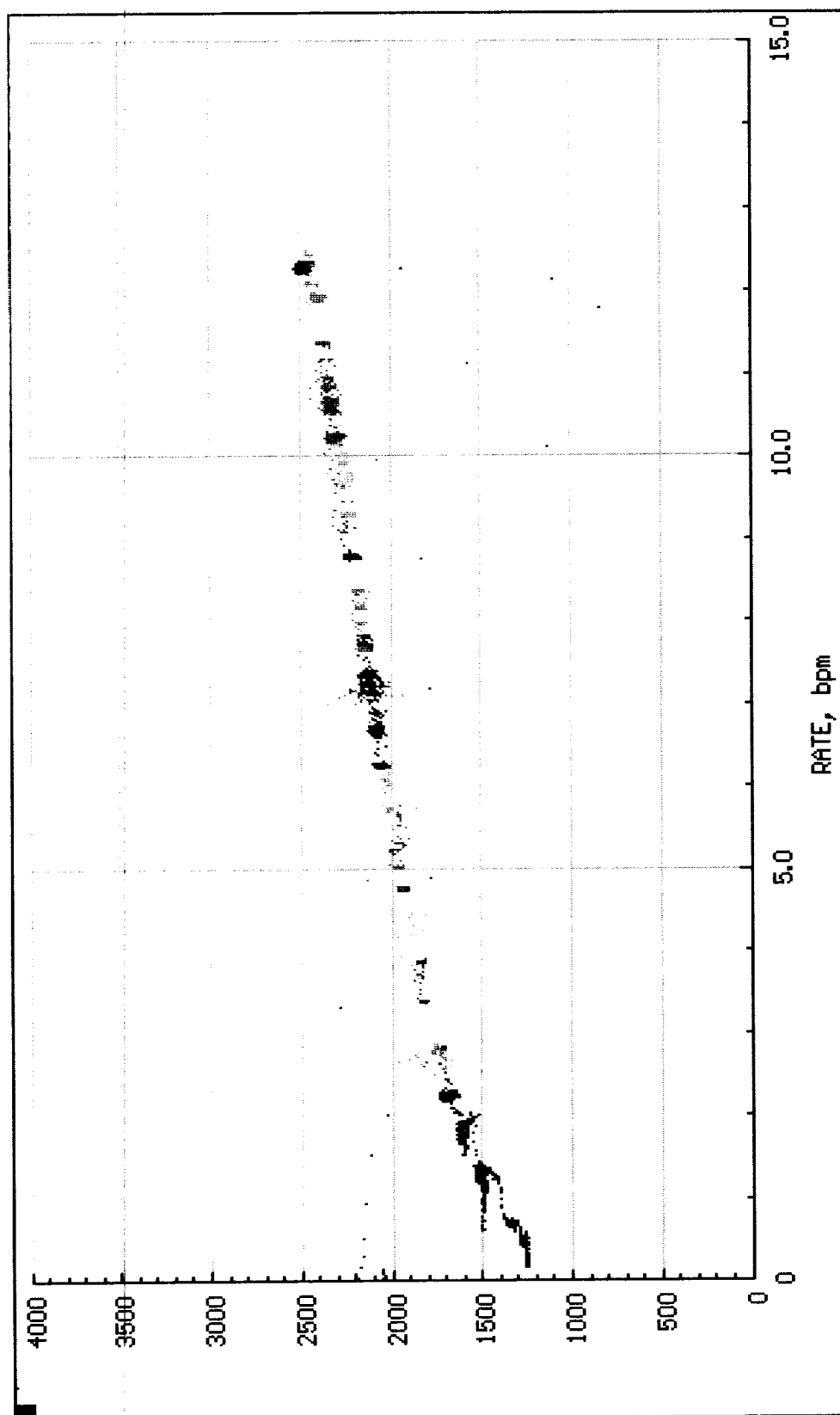
Desc: Flush #1

MESA VERDE

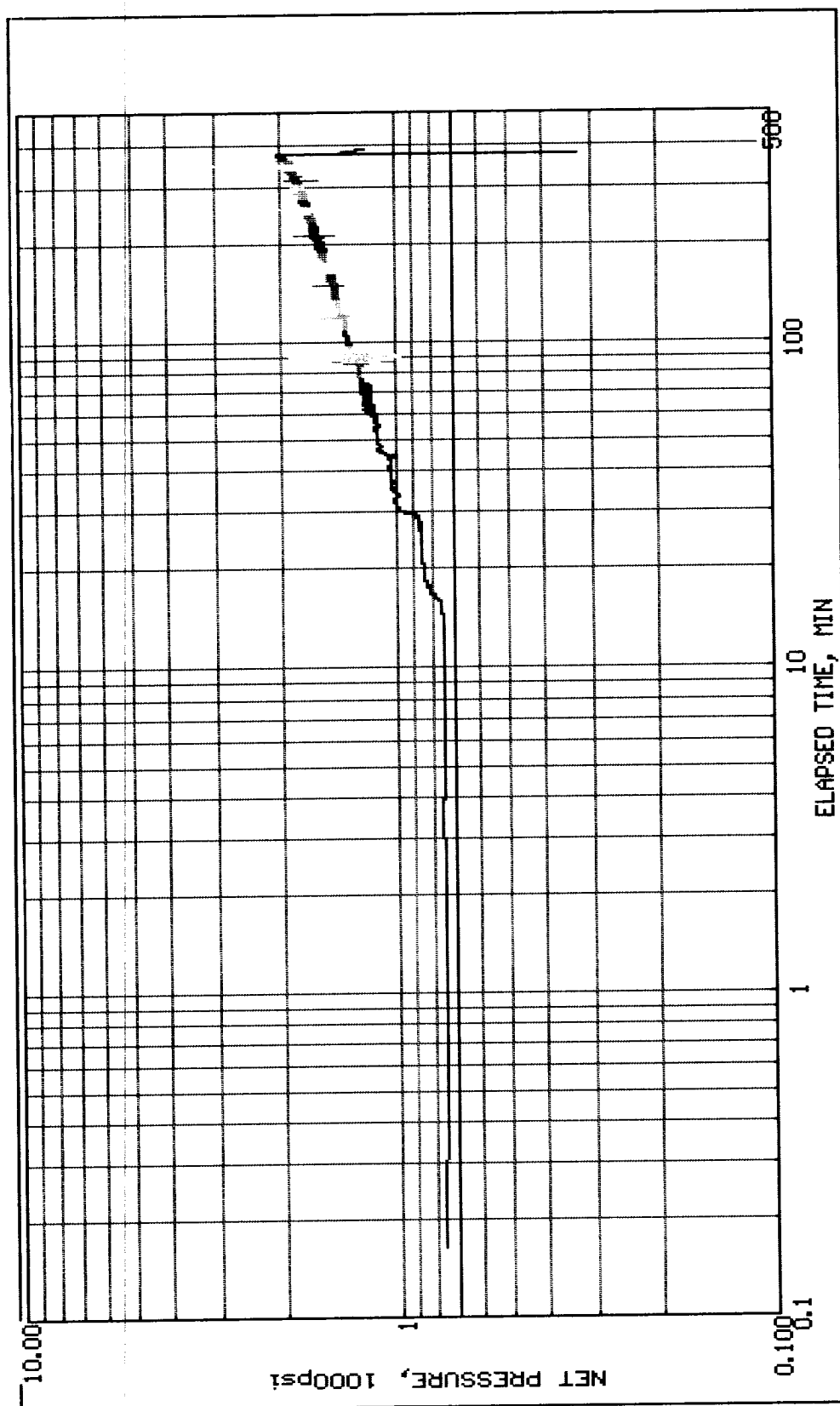
Merrion Oil & Gas

Step Rate Test - June 12, 2002

PAGE : 2-G (6/12/2002 17:08:04) Data stored in C:\SMARTS\DATADIR\FLUSH1



Desc: Flush #1
MESA VERDE
Merrion Oil & Gas
Step Rate Test - June 12, 2002
PAGE : 9-G (6/12/2002 17:08:04) Data stored in C:\SMARTS\DATADIR\FLUSH1



Submit 3 Copies To Appropriate District Office
District I
1625 N. French Dr., Hobbs, NM 88240
District II
811 South First, Artesia, NM 88210
District III
1000 Rio Brazos Rd., Aztec, NM 87410
District IV
2040 South Pacheco, Santa Fe, NM 87505

State of New Mexico
Energy, Minerals and Natural Resources

OIL CONSERVATION DIVISION
2040 South Pacheco
Santa Fe, NM 87505

Form C-103
Revised March 25, 1999

WELL API NO.
30-045-30271

5. Indicate Type of Lease
STATE ☒ FEE ☐

6. State Oil & Gas Lease No.
NA

7. Lease Name or Unit Agreement Name:

FLUSH (26049)

8. Well No. 1

9. Pool name or Wildcat
SWD, Mesaverde

SUNDRY NOTICES AND REPORTS ON WELLS
(DO NOT USE THIS FORM FOR PROPOSALS TO DRILL OR TO DEEPEN OR PLUG BACK TO A DIFFERENT RESERVOIR. USE "APPLICATION FOR PERMIT" (FORM C-101) FOR SUCH PROPOSALS.)

1. Type of Well:
Oil Well ☐ Gas Well ☐ Other ☒ SWD

2. Name of Operator
Merrion Oil & Gas

3. Address of Operator
610 Reilly Ave, Farmington, NM 87401

4. Well Location
Unit Letter F : 1910 feet from the north line and 1765 feet from the west line
Section 2 Township 26N Range 13W NMPM San Juan County

10. Elevation (Show whether DR, RKB, RT, GR, etc.)
6047' GR

11. Check Appropriate Box to Indicate Nature of Notice, Report or Other Data

NOTICE OF INTENTION TO:

PERFORM REMEDIAL WORK ☐ PLUG AND ABANDON ☐

TEMPORARILY ABANDON ☐ CHANGE PLANS ☐

PULL OR ALTER CASING ☐ MULTIPLE COMPLETION ☐

OTHER: Perform Step Rate Test ☒

SUBSEQUENT REPORT OF:

REMEDIAL WORK ☐ ALTERING CASING ☐

COMMENCE DRILLING OPNS. ☐ PLUG AND ABANDONMENT ☐

CASING TEST AND CEMENT JOB ☐

OTHER: ☐

12. Describe proposed or completed operations. (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work). SEE RULE 1103. For Multiple Completions: Attach wellbore diagram of proposed completion or recompilation.

Merrion Oil & Gas proposes to perform a step rate test on the subject well in accordance with the attached procedure.

ISIP-1000
5-640
10-540
15-490

I hereby certify that the information above is true and complete to the best of my knowledge and belief.

SIGNATURE [Signature] TITLE Production Engineer DATE 6/10/02

Type or print name Connie S. Dinning Telephone No. 327-9801

(This space for State use)

APPROVED BY _____ TITLE _____ DATE _____

Conditions of approval, if any:

Merrion Oil & Gas Corporation
Step Rate Test Procedure

June 10, 2002

Well:	Flush No. 1	Field:	Mesaverde
Location:	1910' fnl & 1765' fwl (se nw)	Elevation:	6047' GR
	Sec. 2, T26N, R13W		6053' RKB
	San Juan County, New Mexico	By:	Connie Dinning

Background Information

1. The rig up diagram and mechanical configuration of the wellbore are attached.
2. A step rate test was performed on May 2, 2002. The results are on file with the NMOCD. The pump rate was not sufficient to provide accurate information about the frac pressure of the well.

Procedure

Run Bottom Hole Pressure Monitor

1. Notify NMOCD minimum of 24 hours prior to testing.
2. Shut in well 24 hrs prior to test.
3. Move-in, rig up Cobra Slickline.
4. RIH w/ Electronic pressure gauge and set at $\pm 2065'$ KB.
5. Fill 7 tanks on location w/ produced water.

Perform Step Rate Test

1. Install pressure gauges on bradenhead and casinghead.
2. MIRU pump truck.
3. Install paper chart recorder on pump discharge to record surface pressure and rate.
4. Load hole w/ produced water.
5. Begin step rate test at 0.25 BPM. If possible, pump three steps below current pressure limit of 422 psi. Hold each step for 15 minutes. Increase rate in increments of 0.5 BPM up to an estimated 12.25 BPM. Three steps above breakover point must be established for a valid test. Continue pumping in .5 bbl increments if the required data is not obtained by the 12.25 BPM step. Haul in more city water as necessary.
6. Record casing and bradenhead pressures at each step.
7. Record ISIP at end of test.
8. Rig down pump.
9. Retrieve bottom hole pressure tool, rig down slickline.
10. Put well on to injection.
11. Provide all pressure/rate charts, field notes and bottom hole pressure data to Connie Dinning at the MOG office.



BH = 59
CSG = 14

10:33

Procedure For Step Rate Test:

- | | T | C | BH |
|--|------------|----|----|
| 1. Pump produced water at 0.25 bpm for exactly 15 minutes and record all of the rates and pressure. Use a choke assembly to pinch back the rate and adjust to the desired rate. | 50
110 | 15 | 65 |
| 2. Pump produced water at 0.75 bpm for exactly 15 minutes and record all of the rates and pressure. Use a choke assembly to pinch back the rate and adjust to the desired rate. | 160
180 | 16 | 70 |
| 3. Pump produced water at 1.25 bpm for exactly 15 minutes and record all of the rates and pressure. Use a choke assembly to pinch back the rate and adjust to the desired rate. | 350
130 | 16 | 74 |
| 4. Pump produced water at 1.75 bpm for exactly 15 minutes and record all of the rates and pressure. Use a choke assembly to pinch back the rate and adjust to the desired rate. | 480
60 | 16 | 78 |
| 5. Pump produced water at 2.25 bpm for exactly 15 minutes and record all of the rates and pressure. Use a choke assembly to pinch back the rate and adjust to the desired rate. | 540
130 | 18 | 82 |
| 6. Pump produced water at 2.75 bpm for exactly 15 minutes and record all of the rates and pressure. Use a choke assembly to pinch back the rate and adjust to the desired rate. | 670
100 | 18 | 82 |
| 7. Pump produced water at 3.25 bpm for exactly 15 minutes and record all of the rates and pressure. Use a choke assembly to pinch back the rate and adjust to the desired rate. | 770
60 | 24 | 81 |
| 8. Pump produced water at 3.75 bpm for exactly 15 minutes and record all of the rates and pressure. Use a choke assembly to pinch back the rate and adjust to the desired rate. | 830
90 | 18 | 82 |
| 9. Pump produced water at 4.25 bpm for exactly 15 minutes and record all of the rates and pressure. Use a choke assembly to pinch back the rate and adjust to the desired rate. | 920
70 | 18 | 82 |
| 10. Pump produced water at 4.75 bpm for exactly 15 minutes and record all of the rates and pressure. Use a choke assembly to pinch back the rate and adjust to the desired rate. | 990
100 | 18 | 82 |
| 11. Pump produced water at 5.25 bpm for exactly 15 minutes and record all of the rates and pressure. | 1090
70 | 19 | 80 |
| 12. Pump produced water at 5.75 bpm for exactly 15 minutes and record all of the rates and pressure. | 1160 | 19 | 81 |

- 90
13. Pump produced water at 6.25 bpm for exactly 15 minutes and record all of the rates and pressure. 1250 19 82
- 70
14. Pump produced water at 6.75 bpm for exactly 15 minutes and record all of the rates and pressure. 1320 16 83
- 120
15. Pump produced water at 7.25 bpm for exactly 15 minutes and record all of the rates and pressure. 1440 15 84
- 60
16. Pump produced water at 7.75 bpm for exactly 15 minutes and record all of the rates and pressure. 1500 15 83
- 100
17. Pump produced water at 8.25 bpm for exactly 15 minutes and record all of the rates and pressure. 1600 16 81
- 100
18. Pump produced water at 8.75 bpm for exactly 15 minutes and record all of the rates and pressure. 1700 16 80
- 80
19. Pump produced water at 9.25 bpm for exactly 15 minutes and record all of the rates and pressure. 1780 18 76
- 90
20. Pump produced water at 9.75 bpm for exactly 15 minutes and record all of the rates and pressure. 1870 19 70
- 130
21. Pump produced water at 10.25 bpm for exactly 15 minutes and record all of the rates and pressure. 2000 19 66
- 100
22. Pump produced water at 10.75 bpm for exactly 15 minutes and record all of the rates and pressure. 2100 18 69
23. Pump produced water at 11.25 bpm for exactly 15 minutes and record all of the rates and pressure.
24. Pump produced water at 11.75 bpm for exactly 15 minutes and record all of the rates and pressure.
25. Pump produced water at 12.25 bpm for exactly 15 minutes and record all of the rates and pressure. 2480

BHP required to fracture the formation = 1,707 psi
 (based on ISIP from pump-in) ISDP = 1,087
 Frac Gradient From ISDP = 0.8265 psi/ft

Wellbore Schematic

Flush No. 1, SWD

Current Wellbore Configuration

Location: 1910' Int & 1765' Int (se nw)
Sec 2, T26N, R13W
San Juan Co, New Mexico

January 28, 2002

Elevation: 6,047' GL
6,052' RKB

By: Connie Dinning

Tertiary

Undifferentiated Tertiary - Surface

Kirtland - 76'

Fruitland - 800'

Pictured Cliffs - 1233'

Cretaceous

Mesaverde - 2060'

Top of Cmt @ Surface

Bit Size - 12 1/4"

9 5/8" Surface Csg @ 282' KB w/ 200sx; 236(c) Class H

Bit Size 8 3/4"

2 7/8" EUE Internally Plastic Coated Tubing @ 1914' KB
w/ 7" Lock-Set RCP w/ plastic lined mandrel
OnOff tool, SS Profile nipple, (2.31" ID).
Set packer in compression (4/21/01)

DV tool @ 1946' KB. Cement w/ 200sx (412 cf) Class H w/ 2% SMS
1% CaCl2 and 1/4#/sx Celloflake. Tail in w/ 50sx (59 cf) Class H

Mesaverde Perfs

2065' - 2432' Total 332 holes. Frac w/ filtered produced water &
154,800# 20/40 sand

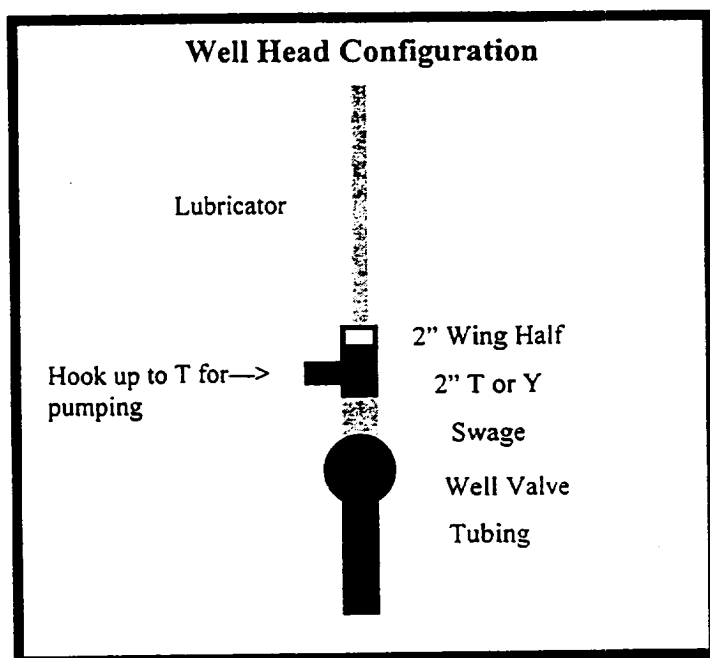
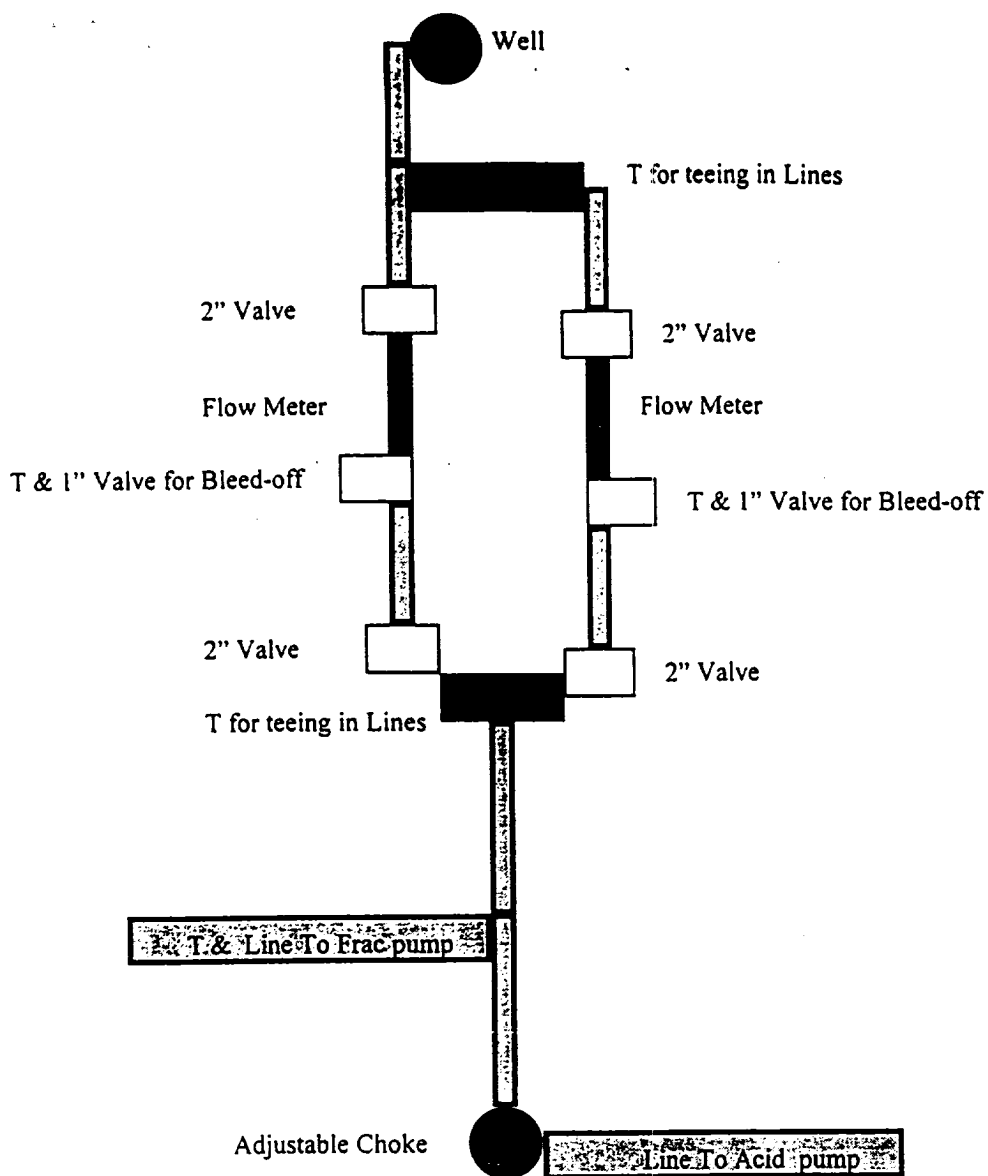
2753' - 3270' Total 170 holes. Frac w/ filtered produced water &
101,000# 20/40 sand

3433' - 3866' Total 186 holes (all zones, holes 0.32"). Frac w/
produced water & 101,000# 20/40 Brady sand (April 11, 2001)

7" Production Csg @ 4103' w/ 400 sx (473cf) Class H w/ 1% CaCl2
and 1/4#/sx Celloflake (Note: 42 jts 23# N-80 LT&C on bottom, 19 jts
23# J-55 ST&C next, DV tool, then 23 jts 23# J-55 ST&C, then 35 jts
26# J-55 on top)

TD @ 4106' KB

PBTD @ 4069' KB



330-1617

Jeff Davis



Die 30 #1
parker test
el GP