

MWD SURVEYS

Customer: Chesapeake Op.
Well: Wagner 11-65 9-1H
Field/Block: DJ Basin
Co./Parish: Weld
State: CO

PGS Job #: MCO4102311
MWD Operator: Lucas Medinger
Directional Driller: Jeremy Yeager
Date of First Survey: May 12, 2011
Date of Last Survey: June 5, 2011

Total Correction: 8.34 East Grid

Vertical Section Plane: 180.83 Nominal Dip Angle: 67.51 Magnetic Field Strength: 534

Measured	Depth	Inc.	Arm.	T.V.D.	Ver. Sect.	Coordinates	Closure	Vib/Shk
						+N/-S	+E/-W	
						Dist.	Angle	DLS
						Temp (°F)	Color	Date
						Time	Flow Rate	
Survey's are tied into: MWD								
Company: Xtreme Engineering								
Date Received: 05/11/11								

0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Xtreme	289	0.25	0.00	289.00	-0.63	0.63	0.00	0.09
Xtreme	793	1.00	0.00	792.97	-6.13	6.13	0.00	0.15
Xtreme	1,024	0.75	0.00	1023.94	-9.65	9.66	0.00	0.11
Xtreme	1,034	0.53	22.96	1033.94	-9.76	9.76	0.02	3.34
Xtreme	1,289	0.18	180.99	1288.93	-10.45	10.45	0.47	0.27
Xtreme	1,508	0.18	82.73	1507.93	-10.16	10.15	0.81	0.12
Xtreme	1,809	0.18	229.86	1808.93	-9.92	9.90	0.91	0.11
Xtreme	2,076	0.09	245.41	2075.93	-9.55	9.55	0.40	0.04
Xtreme	2,338	0.53	228.63	2337.93	-8.65	8.66	-0.69	0.17
Xtreme	2,582	0.70	275.38	2581.92	-8.01	8.05	-3.02	0.21
Xtreme	2,899.8	0.88	313.79	2899.69	-9.83	9.92	-6.72	0.17
Xtreme	3,266	1.58	331.28	3265.80	-16.13	16.30	-11.18	0.21
Xtreme	3,517	1.49	338.40	3516.71	-22.16	22.37	-14.04	0.08
Xtreme	3,817.4	2.02	350.44	3816.97	-30.98	31.22	-16.36	0.21
Xtreme	4,104	2.72	355.19	4103.32	-42.71	42.98	-17.77	0.25
Xtreme	4,417	3.16	0.11	4415.91	-58.73	59.00	-18.37	0.16
Xtreme	4,673	4.04	2.84	4671.40	-74.80	75.07	-17.91	0.35
Xtreme	4,956.6	4.22	11.80	4954.27	-95.03	95.26	-15.28	0.24
Xtreme	5,242.2	3.87	23.58	5239.16	-114.23	114.38	-9.28	0.31
Xtreme	5,564	3.52	30.08	5560.30	-132.87	132.88	0.02	0.17
Xtreme	5,964	3.08	32.19	5959.63	-152.76	152.60	11.90	0.11



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Total Correction: 8.34 East Grid

Vertical Section Plane: 180.83 Nominal Dip Angle: 67.51 Magnetic Field Strength: .534

Measured			Coordinates				Closure			Vib/Shk				
Depth	Inc.	Azm.	T.V.D.	Ver. Sect.	+N/-S	+E/-W	Dist.	Angle	DLS	Temp (°F)	Color	Date	Time	Flow Rate
Xtreme	6,272	2.46	43.79	6267.27	-164.66	164.37	20.88	165.70	7.24	0.27				
1	6,288	2.70	45.00	6283.26	-165.18	164.89	21.38	166.27	7.39	1.54	124 °F	05/12/11	11:03	520 (gpm)
2	6,383	2.70	42.10	6378.15	-168.47	168.13	24.47	169.90	8.28	0.14	124 °F	05/12/11	12:25	520 (gpm)
3	6,478	2.70	33.30	6473.05	-172.04	171.66	27.19	173.80	9.00	0.44	124 °F	05/12/11	13:25	520 (gpm)
4	6,573	2.40	32.50	6567.95	-175.62	175.21	29.49	177.67	9.55	0.32	124 °F	05/12/11	15:24	520 (gpm)
5	6,668	1.70	38.80	6662.89	-178.42	177.99	31.44	180.74	10.02	0.77	131 °F	05/12/11	17:25	520 (gpm)
6	6,764	1.40	52.30	6758.86	-180.28	179.81	33.26	182.86	10.48	0.49	131 °F	05/12/11	18:40	520 (gpm)
7	6,858	1.10	74.50	6852.83	-181.24	180.76	35.04	184.12	10.97	0.60	131 °F	05/12/11	19:51	520 (gpm)
8	6,953	1.20	109.70	6947.82	-181.18	180.66	36.86	184.39	11.53	0.74	131 °F	05/12/11	20:52	520 (gpm)
9	7,049	0.80	120.90	7043.80	-180.52	179.98	38.38	184.03	12.04	0.46	138 °F	05/12/11	21:47	520 (gpm)
10	7,142	0.80	128.90	7136.79	-179.79	179.24	39.44	183.53	12.41	0.12	138 °F	05/12/11	23:01	520 (gpm)
11	7,237	0.90	105.20	7231.78	-179.20	178.63	40.68	183.20	12.83	0.38	138 °F	05/12/11	23:56	520 (gpm)
12	7,332	0.50	110.20	7326.78	-178.88	178.29	41.79	183.12	13.19	0.43	131 °F	05/13/11	1:17	520 (gpm)
13	7,428	0.70	121.80	7422.77	-178.44	177.84	42.68	182.88	13.49	0.24	138 °F	05/13/11	3:34	505 (gpm)
14	7,523	0.50	109.90	7517.76	-178.00	177.39	43.56	182.66	13.80	0.25	138 °F	05/13/11	4:42	505 (gpm)
15	7,619	0.70	108.70	7613.76	-177.68	177.06	44.51	182.57	14.11	0.21	138 °F	05/13/11	6:44	520 (gpm)
16	7,714	0.80	105.70	7708.75	-177.34	176.69	45.70	182.51	14.50	0.11	138 °F	05/13/11	8:26	520 (gpm)
17	7,809	0.60	106.40	7803.74	-177.03	176.37	46.81	182.48	14.86	0.21	145 °F	05/13/11	9:40	520 (gpm)
18	7,875	0.90	126.70	7869.74	-176.64	175.97	47.56	182.28	15.12	0.60	145 °F	05/26/11	23:00	520 (gpm)
19	7,906	2.30	161.10	7900.73	-175.91	175.23	47.96	181.68	15.31	5.28	145 °F	05/27/11	1:11	520 (gpm)
20	7,938	5.40	171.80	7932.65	-173.82	173.13	48.38	179.77	15.61	9.90	153 °F	05/27/11	3:04	510 (gpm)
21	7,970	9.70	174.60	7964.37	-169.65	168.96	48.85	175.88	16.13	13.48	153 °F	05/27/11	4:22	510 (gpm)
22	8,002	12.90	178.70	7995.74	-163.40	162.70	49.18	169.97	16.82	10.30	153 °F	05/27/11	5:45	520 (gpm)
23	8,034	14.60	178.10	8026.82	-155.80	155.10	49.40	162.77	17.67	5.33	153 °F	05/27/11	7:27	520 (gpm)
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6/23/2011

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Vertical Section Plane: 180.83

Nominal Dip Angle: 67.51

Magnetic Field Strength: .534

	Measured		Azim.	Coordinates			Closure			Vib/Shk					
	Depth	Inc.		T.V.D.	Ver. Sect.	+N / -S	+E / -W	Dist.	Angle	DLS	Temp (°F)	Color	Date	Time	Flow Rate
24	8,065	15.90	177.80	8056.73	-147.65	146.95	49.69	155.12	18.68	4.20	153 °F	Orange	05/27/11	8:42	492 (gpm)
25	8,097	18.70	179.80	8087.28	-138.15	137.44	49.88	146.21	19.95	8.94	153 °F	Orange	05/27/11	9:48	487 (gpm)
26	8,129	20.70	181.60	8117.41	-127.36	126.65	49.74	136.07	21.44	6.53	153 °F	Orange	05/27/11	10:52	492 (gpm)
27	8,161	22.90	183.40	8147.12	-115.48	114.78	49.21	124.89	23.21	7.18	153 °F	Orange	05/27/11	11:49	492 (gpm)
28	8,193	24.90	183.60	8176.37	-102.53	101.84	48.42	112.77	25.43	6.26	153 °F	Orange	05/27/11	12:47	492 (gpm)
29	8,224	26.90	181.80	8204.26	-89.00	88.32	47.79	100.42	28.42	6.93	153 °F	Orange	05/27/11	14:44	492 (gpm)
30	8,256	29.00	181.70	8232.52	-74.01	73.33	47.33	87.28	32.84	6.56	153 °F	Orange	05/27/11	15:33	494 (gpm)
31	8,288	31.00	182.90	8260.23	-58.01	57.34	46.68	73.94	39.15	6.52	153 °F	Orange	05/27/11	16:25	494 (gpm)
32	8,320	33.60	182.40	8287.28	-40.92	40.26	45.89	61.05	48.74	8.17	153 °F	Orange	05/27/11	17:57	494 (gpm)
33	8,351	36.00	179.70	8312.74	-23.24	22.58	45.58	50.87	63.65	9.20	153 °F	Orange	05/27/11	19:04	492 (gpm)
34	8,383	39.70	177.30	8338.00	-3.63	2.96	46.11	46.21	86.33	12.44	153 °F	Orange	05/27/11	20:15	494 (gpm)
35	8,415	44.00	176.10	8361.83	17.66	-18.35	47.35	50.78	111.18	13.67	153 °F	Orange	05/27/11	21:10	500 (gpm)
36	8,447	47.80	175.90	8384.10	40.56	-41.27	48.96	64.03	130.13	11.88	153 °F	Orange	05/27/11	22:00	492 (gpm)
37	8,479	49.90	177.40	8405.15	64.59	-65.32	50.36	82.48	142.37	7.45	153 °F	Orange	05/27/11	22:48	491 (gpm)
38	8,510	53.00	179.00	8424.47	88.80	-89.55	51.11	103.11	150.28	10.78	153 °F	Orange	05/27/11	23:40	492 (gpm)
39	8,542	57.10	180.30	8442.80	115.02	-115.77	51.27	126.61	156.12	13.24	153 °F	Orange	05/28/11	0:43	494 (gpm)
40	8,574	61.80	181.20	8459.06	142.57	-143.32	50.90	152.09	160.45	14.89	160 °F	Orange	05/28/11	1:30	494 (gpm)
41	8,606	64.80	184.30	8473.44	171.13	-171.87	49.52	178.86	163.93	12.76	160 °F	Orange	05/28/11	2:20	492 (gpm)
42	8,637	66.70	183.80	8486.17	199.35	-200.06	47.52	205.63	166.64	6.30	160 °F	Orange	05/28/11	3:16	494 (gpm)
43	8,669	68.20	182.60	8498.44	228.88	-229.56	45.88	234.10	168.70	5.83	160 °F	Orange	05/28/11	4:25	494 (gpm)
44	8,701	69.80	181.00	8509.91	258.74	-259.42	44.94	263.29	170.17	6.84	160 °F	Orange	05/28/11	5:33	494 (gpm)
45	8,733	71.30	182.30	8520.57	288.91	-289.58	44.07	292.92	171.35	6.05	160 °F	Orange	05/28/11	6:50	494 (gpm)
46	8,765	72.50	180.50	8530.51	319.33	-319.99	43.33	322.91	172.29	6.53	160 °F	Orange	05/28/11	8:07	494 (gpm)
47	8,796	74.00	180.10	8539.44	349.01	-349.67	43.17	352.33	172.96	4.99	160 °F	Orange	05/28/11	9:40	494 (gpm)
3	6/23/2011														

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Vertical Section Plane: 180.83 Nominal Dip Angle: 67.51 Magnetic Field Strength: .534

Measured Depth	Inc. Azm.		T.V.D.	Ver. Sect.	Coordinates		Closure			Vib/Shk	Date	Time	Flow Rate
	Inc.	Azm.			+N/-S	+E/-W	Dist.	Angle	DLS				
48	8,828	76.90	180.70	8547.48	379.98	-380.64	42.96	383.06	173.56	9.24	160 °F	05/28/11	10:53 494 (gpm)
49	8,860	80.00	181.50	8553.89	411.32	-411.98	42.35	414.15	174.13	9.99	160 °F	05/28/11	12:09 494 (gpm)
50	8,891	83.00	181.40	8558.47	441.98	-442.63	41.58	444.58	174.63	9.68	160 °F	05/28/11	13:15 494 (gpm)
51	8,923	86.40	181.80	8561.42	473.83	-474.47	40.69	476.22	175.10	10.70	153 °F	05/30/11	17:21 445 (gpm)
52	8,954	90.70	182.30	8562.21	504.81	-505.44	39.58	506.98	175.52	13.96	153 °F	05/30/11	18:07 450 (gpm)
53	8,986	92.20	182.50	8561.40	536.79	-537.40	38.24	538.76	175.93	4.73	153 °F	05/30/11	19:30 450 (gpm)
54	9,082	89.10	182.70	8560.31	632.72	-633.28	33.88	634.19	176.94	3.24	160 °F	05/30/11	23:09 484 (gpm)
55	9,177	89.00	182.50	8561.89	727.66	-728.17	29.58	728.77	177.67	0.24	160 °F	05/31/11	1:16 484 (gpm)
56	9,272	90.50	182.80	8562.30	822.61	-823.06	25.18	823.45	178.25	1.61	160 °F	05/31/11	4:15 482 (gpm)
57	9,367	91.00	182.60	8561.06	917.55	-917.95	20.71	918.18	178.71	0.57	160 °F	05/31/11	6:25 487 (gpm)
58	9,462	91.50	182.40	8558.98	1,012.49	-1,012.84	16.57	1,012.97	179.06	0.57	160 °F	05/31/11	8:08 487 (gpm)
59	9,556	91.00	183.50	8556.93	1,106.40	-1,106.69	11.73	1,106.75	179.39	1.29	160 °F	05/31/11	11:35 484 (gpm)
60	9,651	90.20	183.70	8555.94	1,201.29	-1,201.50	5.77	1,201.51	179.73	0.87	167 °F	05/31/11	14:57 458 (gpm)
61	9,746	89.10	183.60	8556.52	1,296.17	-1,296.30	-0.28	1,296.30	180.01	1.16	160 °F	05/31/11	19:13 458 (gpm)
62	9,841	88.90	182.30	8558.18	1,391.09	-1,391.16	-5.17	1,391.17	180.21	1.38	167 °F	05/31/11	21:21 458 (gpm)
63	9,937	89.40	183.80	8559.60	1,487.00	-1,487.01	-10.28	1,487.04	180.40	1.65	167 °F	05/31/11	23:51 458 (gpm)
64	10,032	88.70	183.00	8561.18	1,581.89	-1,581.83	-15.91	1,581.91	180.58	1.12	167 °F	06/01/11	9:10 458 (gpm)
65	10,128	89.00	183.50	8563.10	1,677.78	-1,677.65	-21.35	1,677.79	180.73	0.61	167 °F	06/01/11	10:48 458 (gpm)
66	10,223	89.40	184.10	8564.43	1,772.65	-1,772.43	-27.65	1,772.65	180.89	0.76	176 °F	06/01/11	12:47 458 (gpm)
67	10,318	89.80	184.30	8565.09	1,867.48	-1,867.17	-34.61	1,867.50	181.06	0.47	176 °F	06/01/11	14:36 458 (gpm)
68	10,414	90.60	184.00	8564.76	1,963.32	-1,962.92	-41.55	1,963.36	181.21	0.89	176 °F	06/01/11	18:04 458 (gpm)
69	10,509	91.00	184.30	8563.43	2,058.15	-2,057.66	-48.43	2,058.23	181.35	0.53	176 °F	06/01/11	21:38 458 (gpm)
70	10,605	91.50	184.40	8561.34	2,153.94	-2,153.36	-55.71	2,154.08	181.48	0.53	176 °F	06/02/11	12:59 458 (gpm)
71	10,699	92.50	184.30	8558.06	2,247.71	-2,247.03	-62.83	2,247.91	181.60	1.07	167 °F	06/03/11	0:56 458 (gpm)

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					+N / -S	+E / -W	Dist	Angle							
72	10.793	91.90	181.40	8554.45	2,341.57	-2,340.84	-67.50	2,341.81	181.65	3.15	167 °F		06/03/11	4:46	458 (gpm)
73	10.889	89.10	180.50	8553.61	2,437.56	-2,436.81	-69.09	2,437.79	181.62	3.06	167 °F		06/03/11	8:20	458 (gpm)
74	10.984	88.20	179.20	8555.85	2,532.51	-2,531.78	-68.84	2,532.72	181.56	1.66	176 °F		06/03/11	11:00	458 (gpm)
75	11.080	86.90	178.70	8559.95	2,628.37	-2,627.68	-67.09	2,628.53	181.46	1.45	183 °F		06/03/11	13:22	458 (gpm)
76	11.175	88.30	178.30	8563.93	2,723.21	-2,722.56	-64.60	2,723.32	181.36	1.53	183 °F		06/03/11	15:23	458 (gpm)
77	11.270	89.20	177.80	8566.00	2,818.07	-2,817.48	-61.37	2,818.15	181.25	1.08	183 °F		06/03/11	17:26	458 (gpm)
78	11.365	90.00	177.40	8566.66	2,912.92	-2,912.39	-57.39	2,912.96	181.13	0.94	183 °F		06/03/11	19:36	458 (gpm)
79	11.460	91.00	177.20	8565.84	3,007.73	-3,007.28	-52.92	3,007.75	181.01	1.07	183 °F		06/03/11	21:37	458 (gpm)
80	11.555	92.20	176.90	8563.18	3,102.49	-3,102.12	-48.03	3,102.49	180.89	1.30	183 °F		06/04/11	0:01	458 (gpm)
81	11.651	92.00	176.50	8559.67	3,198.17	-3,197.89	-42.51	3,198.17	180.76	0.47	183 °F		06/04/11	3:45	458 (gpm)
82	11.746	91.80	176.30	8556.52	3,292.84	-3,292.65	-36.55	3,292.86	180.64	0.30	183 °F		06/04/11	7:58	458 (gpm)
83	11.841	89.10	174.40	8555.77	3,387.39	-3,387.32	-28.85	3,387.45	180.49	3.48	190 °F		06/04/11	10:36	458 (gpm)
84	11.937	87.60	175.80	8558.53	3,482.86	-3,482.93	-20.65	3,482.99	180.34	2.14	190 °F		06/04/11	14:01	458 (gpm)
85	12.032	88.60	178.90	8561.68	3,577.62	-3,577.76	-16.26	3,577.80	180.26	3.43	190 °F		06/04/11	18:26	458 (gpm)
86	12.128	89.90	179.60	8562.94	3,673.57	-3,673.74	-15.00	3,673.77	180.23	1.54	190 °F		06/04/11	21:51	458 (gpm)
87	12.223	89.80	180.60	8563.19	3,768.57	-3,768.74	-15.17	3,768.77	180.23	1.06	190 °F		06/05/11	0:45	458 (gpm)
88	12.318	90.70	179.70	8562.78	3,863.56	-3,863.74	-15.42	3,863.77	180.23	1.34	190 °F		06/05/11	2:55	458 (gpm)
89	12.413	91.60	179.60	8560.87	3,958.52	-3,958.72	-14.84	3,958.74	180.21	0.95	198 °F		06/05/11	5:02	458 (gpm)
90	12.456	91.80	179.90	8559.59	4,001.49	-4,001.70	-14.65	4,001.72	180.21	0.84	198 °F		06/05/11	6:13	458 (gpm)
PTB	12.500	91.80	179.90	8558.21	4,045.46	-4,045.67	-14.57	4,045.70	180.21	0.00					

