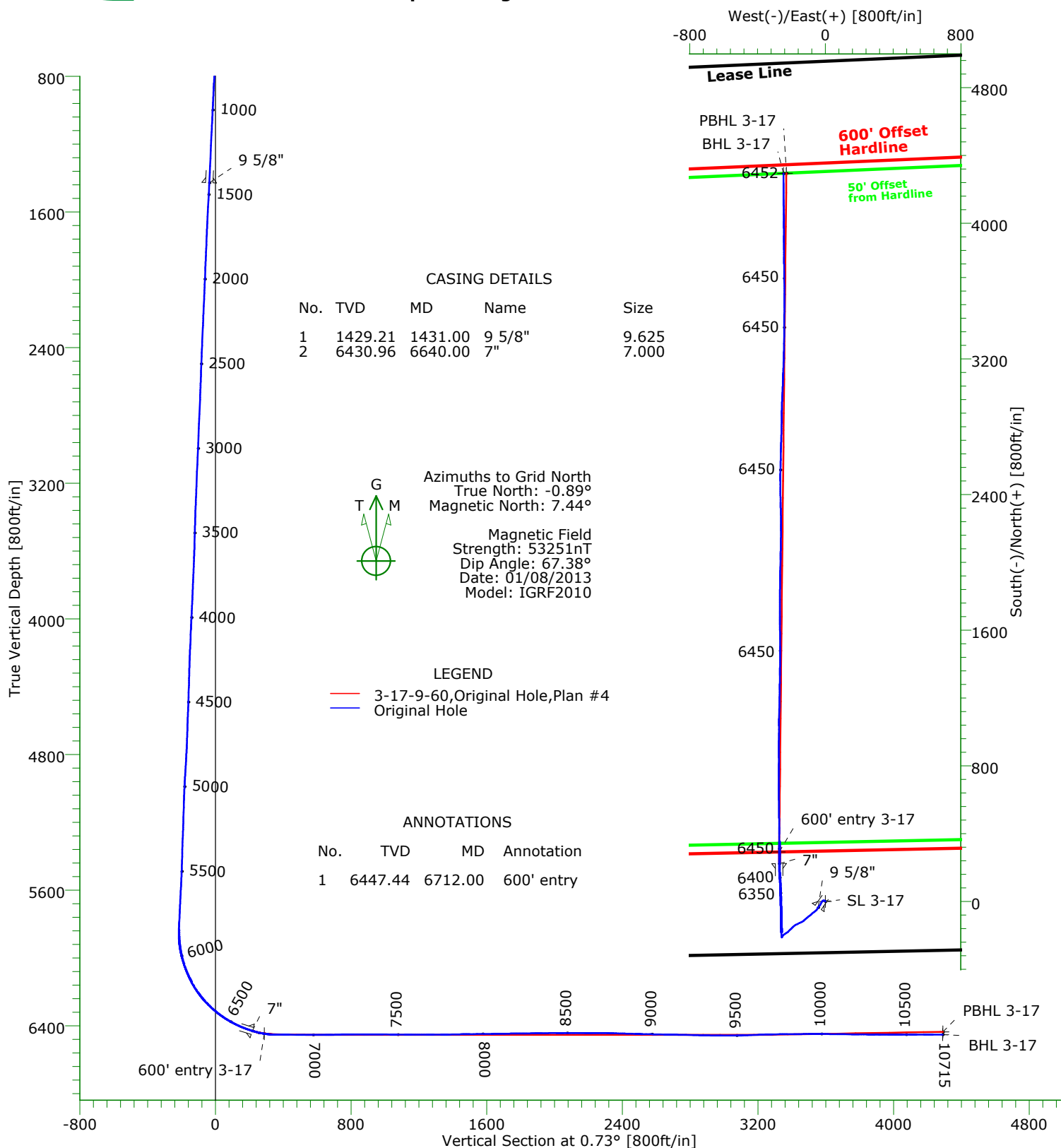




CARRIZO OIL & GAS, INC.

Field: Niobrara CONZ'83
Site: Nelson 2-17-9-60 Pad
Well: 3-17-9-60
Wellpath: Original Hole



Precision Directional Services, Inc.

Survey Report

Company: CARRIZO OIL & GAS, INC. Field: Niobrara CONZ'83 Site: Nelson 2-17-9-60 Pad Well: 3-17-9-60 Wellpath: Original Hole	Date: 04/29/2013 Co-ordinate(NE) Reference: Vertical (TVD) Reference: Section (VS) Reference: Survey Calculation Method:	Time: 11:47:34 Well: 3-17-9-60, Grid North 4991'GL+17'KB 4508.0 Well (0.00N,0.00E,0.73Azi) Minimum Curvature	Page: 1 Db: Adapti
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Field: Niobrara CONZ'83			
Map System: US State Plane Coordinate System 1983		Map Zone: Colorado, Northern Zone	
Geo Datum: GRS 1980		Coordinate System: Well Centre	
Sys Datum: Mean Sea Level		Geomagnetic Model: IGRF2010	

Site: Nelson 2-17-9-60 Pad			
Weld County, CO			
Site Position:	Northing: 1516469.00 ft	Latitude: 40 44 34.562 N	
From: Map	Easting: 3382061.35 ft	Longitude: 104 7 16.287 W	
Position Uncertainty: 0.00 ft		North Reference: Grid	
Ground Level: 4991.00 ft		Grid Convergence: 0.89 deg	

Well: 3-17-9-60 centered on 2-17		Slot Name: 3-17	
Well Position: +N/-S 33.05 ft	Northing: 1516502.05 ft	Latitude: 40 44 34.894 N	
+E/-W -30.54 ft	Easting : 3382030.81 ft	Longitude: 104 7 16.677 W	
Position Uncertainty: 0.00 ft			

Wellpath: Original Hole		Drilled From: Surface	
Current Datum: 4991'GL+17'KB		Tie-on Depth: 0.00 ft	
Magnetic Data: 01/08/2013		Above System Datum: Mean Sea Level	
Field Strength: 53251 nT		Declination: 8.33 deg	
Vertical Section: Depth From (TVD)		Mag Dip Angle: 67.38 deg	
ft	+N/-S ft	+E/-W ft	Direction deg
0.00	0.00	0.00	0.73

Survey Program for Definitive Wellpath				
Date: 04/27/2013		Validated: No		Version: 2
Actual From ft	To ft	Survey	Toolcode	Tool Name
142.00	10658.00	Survey #1 (142.00-10658.00)	MWD	Std MWD
10715.00	10715.00	Survey #2 (10715.00-10715.00)	Project	Projection

Survey										
MD ft	Incl deg	Azim deg	TVD ft	+N/-S ft	+E/-W ft	VS ft	DLS deg/100ft	Build deg/100ft	Turn deg/100ft	Tool/Comment
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	TIE LINE
142.00	1.10	304.20	141.99	0.77	-1.13	0.75	0.77	0.77	0.00	MWD
234.00	1.40	311.40	233.97	2.01	-2.70	1.97	0.37	0.33	7.83	MWD
326.00	1.60	307.10	325.94	3.52	-4.57	3.47	0.25	0.22	-4.67	MWD
418.00	1.60	307.50	417.90	5.08	-6.61	5.00	0.01	0.00	0.43	MWD
509.00	2.30	271.50	508.85	5.90	-9.45	5.78	1.51	0.77	-39.56	MWD
601.00	2.80	253.40	600.76	5.31	-13.44	5.14	1.02	0.54	-19.67	MWD
692.00	4.10	216.60	691.61	2.06	-17.51	1.84	2.75	1.43	-40.44	MWD
783.00	4.90	210.60	782.32	-3.90	-21.43	-4.17	1.02	0.88	-6.59	MWD
875.00	3.30	209.10	874.09	-9.59	-24.72	-9.91	1.74	-1.74	-1.63	MWD
966.00	2.60	200.80	964.97	-13.81	-26.73	-14.15	0.90	-0.77	-9.12	MWD
1058.00	3.50	212.20	1056.84	-18.14	-28.96	-18.51	1.18	0.98	12.39	MWD
1149.00	3.40	220.30	1147.67	-22.55	-32.19	-22.95	0.55	-0.11	8.90	MWD
1241.00	3.30	217.00	1239.51	-26.74	-35.55	-27.19	0.24	-0.11	-3.59	MWD
1332.00	3.20	214.00	1330.37	-30.94	-38.54	-31.43	0.22	-0.11	-3.30	MWD
1370.00	3.20	217.90	1368.31	-32.66	-39.79	-33.16	0.57	0.00	10.26	MWD
1447.00	3.20	214.00	1445.19	-36.13	-42.31	-36.67	0.28	0.00	-5.06	MWD
1489.00	3.20	213.30	1487.12	-38.08	-43.61	-38.64	0.09	0.00	-1.67	MWD
1574.00	3.30	212.00	1571.99	-42.14	-46.21	-42.73	0.15	0.12	-1.53	MWD
1660.00	3.50	213.10	1657.83	-46.44	-48.95	-47.06	0.24	0.23	1.28	MWD
1745.00	3.30	226.50	1742.69	-50.30	-52.15	-50.96	0.96	-0.24	15.76	MWD
1776.00	3.30	227.00	1773.64	-51.52	-53.45	-52.20	0.09	0.00	1.61	MWD

Precision Directional Services, Inc.

Survey Report

Company: CARRIZO OIL & GAS, INC. Field: Niobrara CONZ'83 Site: Nelson 2-17-9-60 Pad Well: 3-17-9-60 Wellpath: Original Hole	Date: 04/29/2013 Time: 11:47:34 Page: 2 Co-ordinate(NE) Reference: Well: 3-17-9-60, Grid North Vertical (TVD) Reference: 4991'GL+17"KB 4508.0 Section (VS) Reference: Well (0.00N,0.00E,0.73Azi) Survey Calculation Method: Minimum Curvature Db: Adapti
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Survey

MD ft	Incl deg	Azim deg	TVD ft	+N/-S ft	+E/-W ft	VS ft	DLS deg/100ft	Build deg/100ft	Turn deg/100ft	Tool/Comment
1862.00	3.60	224.40	1859.48	-55.14	-57.15	-55.86	0.39	0.35	-3.02	MWD
1947.00	4.00	235.40	1944.29	-58.73	-61.45	-59.51	0.98	0.47	12.94	MWD
2032.00	3.80	235.50	2029.10	-62.01	-66.21	-62.85	0.24	-0.24	0.12	MWD
2117.00	4.00	230.30	2113.90	-65.50	-70.82	-66.39	0.48	0.24	-6.12	MWD
2202.00	3.90	232.10	2198.70	-69.17	-75.38	-70.12	0.19	-0.12	2.12	MWD
2287.00	3.50	225.80	2283.52	-72.75	-79.52	-73.76	0.67	-0.47	-7.41	MWD
2371.00	3.50	225.80	2367.36	-76.32	-83.20	-77.38	0.00	0.00	0.00	MWD
2456.00	3.30	220.50	2452.21	-79.99	-86.65	-81.09	0.44	-0.24	-6.24	MWD
2542.00	3.30	239.80	2538.07	-83.12	-90.39	-84.27	1.29	0.00	22.44	MWD
2627.00	4.00	236.70	2622.90	-85.98	-94.98	-87.18	0.86	0.82	-3.65	MWD
2712.00	3.70	229.60	2707.71	-89.38	-99.55	-90.65	0.66	-0.35	-8.35	MWD
2797.00	3.70	229.80	2792.53	-92.93	-103.73	-94.25	0.02	0.00	0.24	MWD
2883.00	3.50	229.30	2878.36	-96.44	-107.84	-97.80	0.24	-0.23	-0.58	MWD
2968.00	3.60	229.10	2963.20	-99.87	-111.83	-101.29	0.12	0.12	-0.24	MWD
3053.00	3.60	230.90	3048.03	-103.30	-115.92	-104.77	0.13	0.00	2.12	MWD
3138.00	3.40	231.00	3132.87	-106.57	-119.95	-108.09	0.24	-0.24	0.12	MWD
3223.00	3.40	228.20	3217.72	-109.84	-123.78	-111.41	0.20	0.00	-3.29	MWD
3308.00	3.30	222.80	3302.58	-113.32	-127.32	-114.93	0.39	-0.12	-6.35	MWD
3394.00	3.20	233.80	3388.44	-116.55	-130.94	-118.21	0.73	-0.12	12.79	MWD
3478.00	3.70	246.00	3472.29	-119.04	-135.31	-120.75	1.05	0.60	14.52	MWD
3563.00	3.60	245.80	3557.12	-121.25	-140.25	-123.02	0.12	-0.12	-0.24	MWD
3648.00	4.80	243.90	3641.89	-123.90	-145.88	-125.75	1.42	1.41	-2.24	MWD
3734.00	5.20	244.40	3727.56	-127.17	-152.63	-129.11	0.47	0.47	0.58	MWD
3819.00	5.70	245.80	3812.18	-130.57	-159.95	-132.59	0.61	0.59	1.65	MWD
3904.00	5.10	240.50	3896.80	-134.16	-167.09	-136.27	0.92	-0.71	-6.24	MWD
3989.00	5.60	241.60	3981.43	-137.99	-174.02	-140.20	0.60	0.59	1.29	MWD
4074.00	4.20	233.10	4066.12	-141.83	-180.16	-144.12	1.85	-1.65	-10.00	MWD
4159.00	4.00	231.00	4150.90	-145.57	-184.95	-147.91	0.29	-0.24	-2.47	MWD
4245.00	3.10	224.40	4236.73	-149.12	-188.91	-151.51	1.15	-1.05	-7.67	MWD
4330.00	2.00	231.00	4321.65	-151.69	-191.67	-154.12	1.34	-1.29	7.76	MWD
4415.00	2.50	223.30	4406.58	-153.97	-194.10	-156.43	0.69	0.59	-9.06	MWD
4500.00	2.70	224.50	4491.50	-156.75	-196.77	-159.24	0.24	0.24	1.41	MWD
4584.00	3.40	227.90	4575.38	-159.83	-200.01	-162.37	0.86	0.83	4.05	MWD
4668.00	2.50	228.00	4659.26	-162.73	-203.22	-165.30	1.07	-1.07	0.12	MWD
4753.00	3.10	220.80	4744.16	-165.71	-206.10	-168.32	0.82	0.71	-8.47	MWD
4838.00	4.60	225.80	4828.97	-169.82	-210.04	-172.49	1.81	1.76	5.88	MWD
4923.00	5.30	226.60	4913.65	-174.90	-215.34	-177.63	0.83	0.82	0.94	MWD
5009.00	4.00	229.30	4999.37	-179.58	-220.50	-182.38	1.53	-1.51	3.14	MWD
5094.00	3.40	239.80	5084.19	-182.78	-224.92	-185.64	1.06	-0.71	12.35	MWD
5180.00	3.20	240.20	5170.05	-185.26	-229.21	-188.17	0.23	-0.23	0.47	MWD
5265.00	3.60	232.40	5254.90	-188.07	-233.38	-191.03	0.72	0.47	-9.18	MWD
5350.00	3.30	236.80	5339.74	-191.04	-237.55	-194.05	0.47	-0.35	5.18	MWD
5435.00	3.00	240.20	5424.62	-193.48	-241.52	-196.54	0.42	-0.35	4.00	MWD
5521.00	3.40	226.50	5510.48	-196.35	-245.33	-199.46	1.00	0.47	-15.93	MWD
5606.00	4.00	217.00	5595.31	-200.46	-248.94	-203.61	1.01	0.71	-11.18	MWD
5690.00	3.30	221.00	5679.13	-204.62	-252.29	-207.82	0.89	-0.83	4.76	MWD
5775.00	3.40	206.80	5763.99	-208.72	-255.03	-211.95	0.98	0.12	-16.71	MWD
5794.00	3.40	207.30	5782.96	-209.72	-255.54	-212.96	0.16	0.00	2.63	MWD
5839.00	2.60	206.40	5827.90	-211.82	-256.61	-215.07	1.78	-1.78	-2.00	MWD
5882.00	1.40	330.70	5870.88	-212.24	-257.30	-215.50	8.33	-2.79	289.07	MWD
5925.00	5.90	351.30	5913.78	-209.59	-257.89	-212.86	10.73	10.47	47.91	MWD
5967.00	10.50	356.00	5955.34	-203.64	-258.48	-206.91	11.06	10.95	11.19	MWD
6007.00	14.40	356.70	5994.40	-195.03	-259.02	-198.32	9.76	9.75	1.75	MWD

Precision Directional Services, Inc.

Survey Report

Company: CARRIZO OIL & GAS, INC. Field: Niobrara CONZ'83 Site: Nelson 2-17-9-60 Pad Well: 3-17-9-60 Wellpath: Original Hole	Date: 04/29/2013 Time: 11:47:34 Co-ordinate(NE) Reference: Well: 3-17-9-60, Grid North Vertical (TVD) Reference: 4991'GL+17"KB 4508.0 Section (VS) Reference: Well (0.00N,0.00E,0.73Azi) Survey Calculation Method: Minimum Curvature Db: Adapti
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Survey

MD ft	Incl deg	Azim deg	TVD ft	+N/-S ft	+E/-W ft	VS ft	DLS deg/100ft	Build deg/100ft	Turn deg/100ft	Tool/Comment
6049.00	17.90	357.40	6034.73	-183.37	-259.62	-186.66	8.35	8.33	1.67	MWD
6092.00	21.50	357.90	6075.21	-168.89	-260.21	-172.19	8.38	8.37	1.16	MWD
6135.00	25.10	357.80	6114.70	-151.89	-260.85	-155.20	8.37	8.37	-0.23	MWD
6177.00	29.30	358.50	6152.04	-132.71	-261.46	-136.03	10.03	10.00	1.67	MWD
6220.00	33.00	358.80	6188.84	-110.48	-261.98	-113.81	8.61	8.60	0.70	MWD
6263.00	37.50	359.70	6223.94	-85.67	-262.29	-89.00	10.53	10.47	2.09	MWD
6305.00	42.60	359.40	6256.08	-58.65	-262.51	-61.99	12.15	12.14	-0.71	MWD
6347.00	46.50	357.90	6286.01	-29.20	-263.22	-32.56	9.62	9.29	-3.57	MWD
6389.00	49.80	359.00	6314.03	2.06	-264.05	-1.30	8.10	7.86	2.62	MWD
6432.00	54.30	358.70	6340.46	35.96	-264.74	32.58	10.48	10.47	-0.70	MWD
6475.00	58.90	358.50	6364.13	71.83	-265.62	68.44	10.70	10.70	-0.47	MWD
6517.00	62.40	356.50	6384.71	108.40	-267.22	104.99	9.31	8.33	-4.76	MWD
6560.00	66.30	355.70	6403.32	147.06	-269.86	143.61	9.22	9.07	-1.86	MWD
6584.00	68.60	357.40	6412.53	169.19	-271.19	165.72	11.60	9.58	7.08	MWD
6647.00	73.50	0.10	6432.98	228.73	-272.47	225.24	8.77	7.78	4.29	MWD
6690.00	78.20	0.60	6443.49	270.42	-272.22	266.93	10.99	10.93	1.16	MWD
6712.00	81.12	0.39	6447.44	292.06	-272.03	288.57	13.29	13.26	-0.94	600' entry
6733.00	83.90	0.20	6450.18	312.87	-271.92	309.38	13.29	13.26	-0.92	MWD
6775.00	89.30	0.10	6452.67	354.78	-271.81	351.29	12.86	12.86	-0.24	MWD
6818.00	90.20	0.10	6452.86	397.78	-271.74	394.29	2.09	2.09	0.00	MWD
6860.00	89.00	359.40	6453.15	439.78	-271.92	436.28	3.31	-2.86	-1.67	MWD
6903.00	89.00	359.00	6453.90	482.77	-272.52	479.26	0.93	0.00	-0.93	MWD
6945.00	89.60	359.50	6454.41	524.76	-273.07	521.24	1.86	1.43	1.19	MWD
6988.00	90.30	359.20	6454.45	567.76	-273.56	564.23	1.77	1.63	-0.70	MWD
7031.00	89.70	358.80	6454.45	610.75	-274.31	607.21	1.68	-1.40	-0.93	MWD
7073.00	90.40	359.40	6454.41	652.75	-274.97	649.19	2.20	1.67	1.43	MWD
7116.00	91.80	0.60	6453.59	695.74	-274.97	692.18	4.29	3.26	2.79	MWD
7158.00	91.90	0.10	6452.23	737.71	-274.71	734.16	1.21	0.24	-1.19	MWD
7201.00	90.60	0.90	6451.29	780.70	-274.34	777.14	3.55	-3.02	1.86	MWD
7244.00	89.70	0.10	6451.18	823.70	-273.96	820.14	2.80	-2.09	-1.86	MWD
7286.00	89.60	359.40	6451.44	865.70	-274.14	862.13	1.68	-0.24	-1.67	MWD
7329.00	90.40	0.10	6451.44	908.70	-274.33	905.13	2.47	1.86	1.63	MWD
7372.00	90.00	0.80	6451.29	951.69	-273.99	948.13	1.87	-0.93	1.63	MWD
7414.00	89.20	0.20	6451.58	993.69	-273.63	990.12	2.38	-1.90	-1.43	MWD
7456.00	89.30	0.10	6452.13	1035.69	-273.52	1032.12	0.34	0.24	-0.24	MWD
7498.00	90.00	1.60	6452.39	1077.68	-272.89	1074.12	3.94	1.67	3.57	MWD
7541.00	90.00	1.50	6452.39	1120.67	-271.73	1117.11	0.23	0.00	-0.23	MWD
7584.00	89.80	0.80	6452.46	1163.66	-270.87	1160.11	1.69	-0.47	-1.63	MWD
7626.00	89.90	1.10	6452.57	1205.65	-270.17	1202.11	0.75	0.24	0.71	MWD
7669.00	90.00	1.30	6452.61	1248.64	-269.27	1245.11	0.52	0.23	0.47	MWD
7712.00	89.80	0.60	6452.69	1291.63	-268.56	1288.11	1.69	-0.47	-1.63	MWD
7754.00	89.70	0.60	6452.87	1333.63	-268.12	1330.11	0.24	-0.24	0.00	MWD
7797.00	91.40	1.10	6452.46	1376.62	-267.48	1373.10	4.12	3.95	1.16	MWD
7839.00	91.60	0.80	6451.36	1418.60	-266.78	1415.09	0.86	0.48	-0.71	MWD
7882.00	91.30	0.40	6450.27	1461.59	-266.33	1458.08	1.16	-0.70	-0.93	MWD
7924.00	90.50	359.50	6449.61	1503.58	-266.37	1500.07	2.87	-1.90	-2.14	MWD
7967.00	90.70	359.50	6449.16	1546.58	-266.75	1543.05	0.47	0.47	0.00	MWD
8009.00	90.70	359.00	6448.64	1588.57	-267.30	1585.04	1.19	0.00	-1.19	MWD
8052.00	90.70	358.70	6448.12	1631.56	-268.16	1628.01	0.70	0.00	-0.70	MWD
8095.00	90.50	0.10	6447.67	1674.55	-268.61	1670.99	3.29	-0.47	3.26	MWD
8137.00	91.10	0.90	6447.08	1716.55	-268.24	1712.99	2.38	1.43	1.90	MWD
8180.00	90.60	0.60	6446.45	1759.54	-267.68	1755.98	1.36	-1.16	-0.70	MWD
8223.00	90.50	359.90	6446.03	1802.53	-267.49	1798.98	1.64	-0.23	-1.63	MWD
8265.00	90.80	0.60	6445.56	1844.53	-267.31	1840.98	1.81	0.71	1.67	MWD

Precision Directional Services, Inc.

Survey Report

Company: CARRIZO OIL & GAS, INC. Field: Niobrara CONZ'83 Site: Nelson 2-17-9-60 Pad Well: 3-17-9-60 Wellpath: Original Hole	Date: 04/29/2013 Co-ordinate(NE) Reference: Well: 3-17-9-60, Grid North Vertical (TVD) Reference: 4991'GL+17"KB 4508.0 Section (VS) Reference: Well (0.00N,0.00E,0.73Azi) Survey Calculation Method: Minimum Curvature	Time: 11:47:34 Page: 4 Db: Adapti
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Survey

MD ft	Incl deg	Azim deg	TVD ft	+N/-S ft	+E/-W ft	VS ft	DLS deg/100ft	Build deg/100ft	Turn deg/100ft	Tool/Comment
8308.00	90.70	0.10	6444.99	1887.53	-267.05	1883.97	1.19	-0.23	-1.16	MWD
8350.00	90.60	1.30	6444.52	1929.52	-266.53	1925.97	2.87	-0.24	2.86	MWD
8393.00	91.10	1.60	6443.88	1972.50	-265.45	1968.96	1.36	1.16	0.70	MWD
8435.00	91.10	1.50	6443.07	2014.48	-264.31	2010.95	0.24	0.00	-0.24	MWD
8478.00	89.30	0.80	6442.92	2057.47	-263.45	2053.94	4.49	-4.19	-1.63	MWD
8520.00	89.90	0.90	6443.22	2099.46	-262.82	2095.94	1.45	1.43	0.24	MWD
8562.00	90.10	1.30	6443.22	2141.45	-262.02	2137.94	1.06	0.48	0.95	MWD
8604.00	90.00	0.80	6443.18	2183.45	-261.25	2179.94	1.21	-0.24	-1.19	MWD
8646.00	89.90	359.50	6443.22	2225.45	-261.14	2221.94	3.10	-0.24	-3.10	MWD
8689.00	89.40	358.70	6443.48	2268.44	-261.81	2264.92	2.19	-1.16	-1.86	MWD
8731.00	89.60	358.10	6443.84	2310.42	-262.99	2306.88	1.51	0.48	-1.43	MWD
8774.00	88.40	359.00	6444.60	2353.40	-264.07	2349.84	3.49	-2.79	2.09	MWD
8816.00	88.30	359.20	6445.80	2395.38	-264.73	2391.81	0.53	-0.24	0.48	MWD
8859.00	88.20	359.50	6447.12	2438.35	-265.22	2434.78	0.74	-0.23	0.70	MWD
8901.00	88.10	359.40	6448.47	2480.33	-265.62	2476.74	0.34	-0.24	-0.24	MWD
8944.00	88.90	1.50	6449.60	2523.31	-265.29	2519.73	5.22	1.86	4.88	MWD
8987.00	89.10	1.50	6450.35	2566.29	-264.16	2562.72	0.47	0.47	0.00	MWD
9030.00	88.60	1.10	6451.21	2609.27	-263.19	2605.70	1.49	-1.16	-0.93	MWD
9072.00	88.80	1.10	6452.17	2651.25	-262.38	2647.69	0.48	0.48	0.00	MWD
9115.00	89.40	2.20	6452.84	2694.23	-261.14	2690.68	2.91	1.40	2.56	MWD
9158.00	88.90	1.60	6453.48	2737.20	-259.72	2733.67	1.82	-1.16	-1.40	MWD
9200.00	88.80	1.30	6454.32	2779.18	-258.65	2775.66	0.75	-0.24	-0.71	MWD
9243.00	88.80	0.90	6455.22	2822.16	-257.83	2818.65	0.93	0.00	-0.93	MWD
9285.00	88.20	0.80	6456.32	2864.14	-257.21	2860.63	1.45	-1.43	-0.24	MWD
9328.00	89.40	1.30	6457.22	2907.12	-256.42	2903.62	3.02	2.79	1.16	MWD
9371.00	89.50	2.00	6457.64	2950.10	-255.18	2946.61	1.64	0.23	1.63	MWD
9413.00	90.40	2.70	6457.67	2992.07	-253.46	2988.59	2.71	2.14	1.67	MWD
9456.00	90.00	2.50	6457.52	3035.02	-251.51	3031.57	1.04	-0.93	-0.47	MWD
9499.00	89.50	2.00	6457.71	3077.99	-249.82	3074.56	1.64	-1.16	-1.16	MWD
9541.00	92.50	2.30	6456.98	3119.95	-248.24	3116.53	7.18	7.14	0.71	MWD
9584.00	92.30	2.00	6455.18	3162.88	-246.63	3159.48	0.84	-0.47	-0.70	MWD
9626.00	92.30	1.30	6453.49	3204.83	-245.42	3201.44	1.67	0.00	-1.67	MWD
9668.00	92.00	0.90	6451.91	3246.79	-244.62	3243.41	1.19	-0.71	-0.95	MWD
9711.00	90.50	0.90	6450.98	3289.77	-243.94	3286.40	3.49	-3.49	0.00	MWD
9753.00	90.70	0.90	6450.54	3331.77	-243.28	3328.40	0.48	0.48	0.00	MWD
9796.00	90.50	0.40	6450.09	3374.76	-242.79	3371.39	1.25	-0.47	-1.16	MWD
9838.00	90.40	0.40	6449.76	3416.76	-242.50	3413.39	0.24	-0.24	0.00	MWD
9881.00	90.60	0.80	6449.38	3459.75	-242.05	3456.39	1.04	0.47	0.93	MWD
9923.00	90.40	0.60	6449.01	3501.75	-241.54	3498.39	0.67	-0.48	-0.48	MWD
9966.00	90.00	0.10	6448.86	3544.75	-241.28	3541.39	1.49	-0.93	-1.16	MWD
10008.00	89.50	359.70	6449.05	3586.75	-241.35	3583.38	1.52	-1.19	-0.95	MWD
10051.00	89.30	359.50	6449.50	3629.74	-241.65	3626.37	0.66	-0.47	-0.47	MWD
10093.00	89.40	359.50	6449.97	3671.74	-242.02	3668.36	0.24	0.24	0.00	MWD
10136.00	89.20	359.00	6450.50	3714.73	-242.58	3711.34	1.25	-0.47	-1.16	MWD
10179.00	89.30	359.00	6451.06	3757.72	-243.33	3754.32	0.23	0.23	0.00	MWD
10221.00	89.50	359.70	6451.50	3799.72	-243.81	3796.30	1.73	0.48	1.67	MWD
10264.00	89.40	359.90	6451.92	3842.71	-243.96	3839.29	0.52	-0.23	0.47	MWD
10307.00	90.30	0.80	6452.03	3885.71	-243.69	3882.29	2.96	2.09	2.09	MWD
10349.00	89.60	358.70	6452.06	3927.71	-243.88	3924.28	5.27	-1.67	-5.00	MWD
10392.00	89.90	359.20	6452.25	3970.70	-244.66	3967.26	1.36	0.70	1.16	MWD
10435.00	90.40	0.90	6452.14	4013.70	-244.63	4010.26	4.12	1.16	3.95	MWD
10477.00	89.70	358.70	6452.10	4055.70	-244.77	4052.25	5.50	-1.67	-5.24	MWD
10520.00	89.40	358.30	6452.44	4098.68	-245.90	4095.22	1.16	-0.70	-0.93	MWD

Precision Directional Services, Inc.

Survey Report

Company: CARRIZO OIL & GAS, INC. Field: Niobrara CONZ'83 Site: Nelson 2-17-9-60 Pad Well: 3-17-9-60 Wellpath: Original Hole	Date: 04/29/2013 Time: 11:47:34 Page: 5 Co-ordinate(NE) Reference: Well: 3-17-9-60, Grid North Vertical (TVD) Reference: 4991'GL+17'KB 4508.0 Section (VS) Reference: Well (0.00N,0.00E,0.73Azi) Survey Calculation Method: Minimum Curvature Db: Adapti
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Survey

MD ft	Incl deg	Azim deg	TVD ft	+N/-S ft	+E/-W ft	VS ft	DLS deg/100ft	Build deg/100ft	Turn deg/100ft	Tool/Comment
10562.00	90.00	0.20	6452.66	4140.67	-246.45	4137.20	4.74	1.43	4.52	MWD
10604.00	90.00	359.20	6452.66	4182.67	-246.67	4179.19	2.38	0.00	-2.38	MWD
10658.00	90.30	0.40	6452.52	4236.67	-246.86	4233.18	2.29	0.56	2.22	MWD
10715.00	90.30	0.40	6452.22	4293.67	-246.46	4290.18	0.00	0.00	0.00	Project

Annotation

MD ft	TVD ft	
6712.00	6447.44	600' entry