

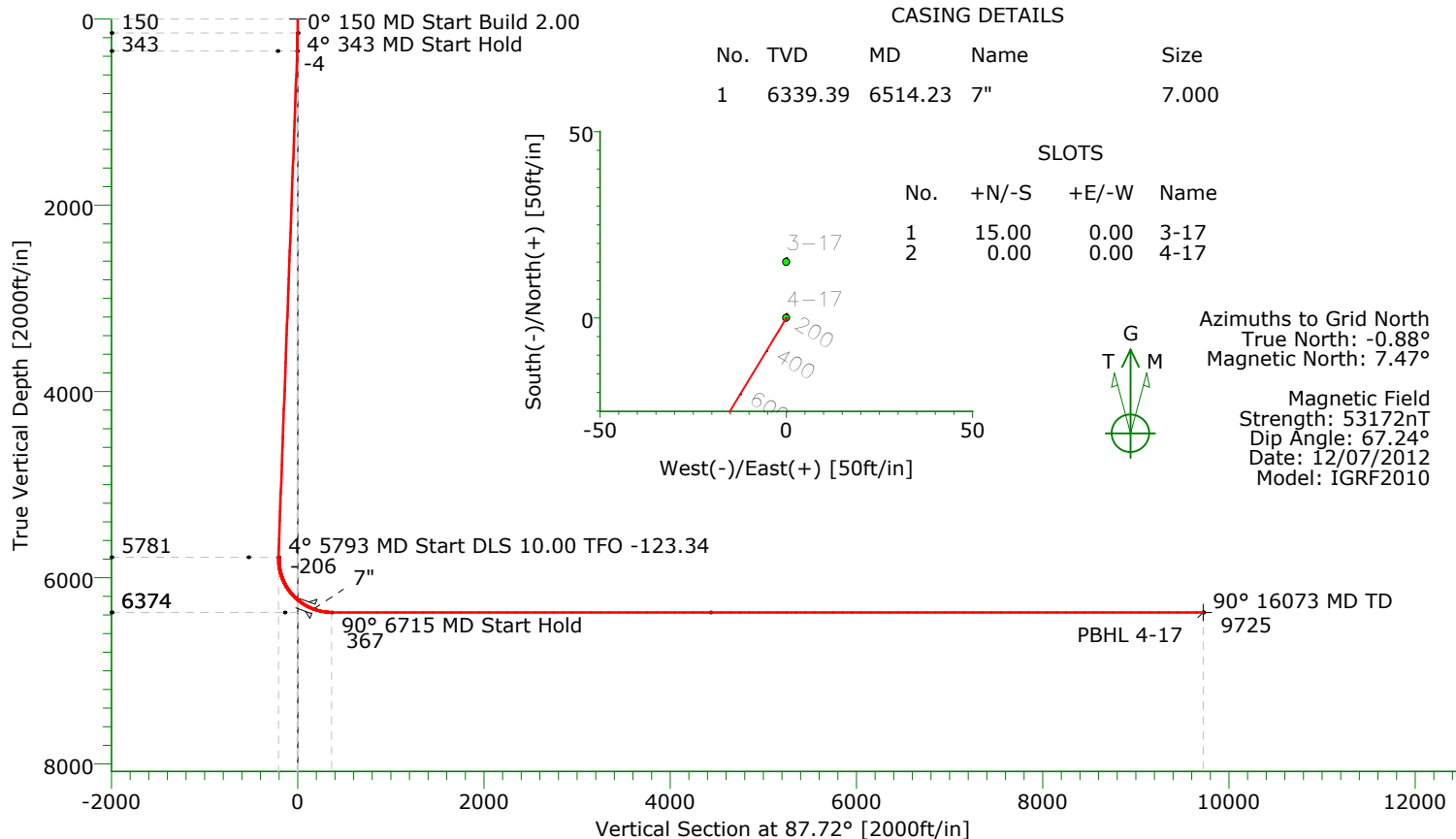
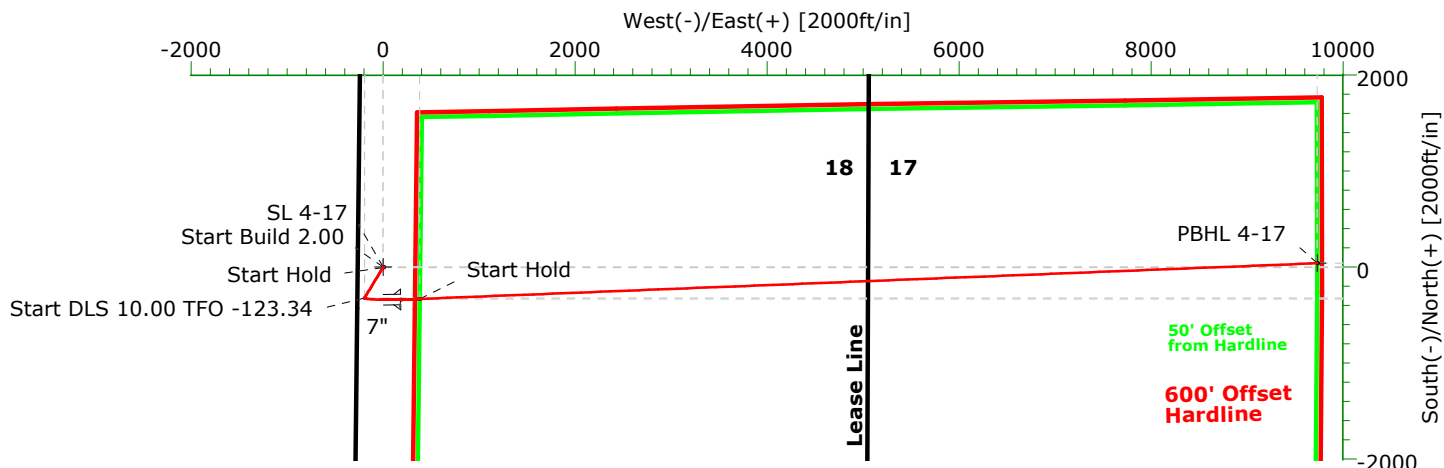


CARRIZO

CARRIZO OIL & GAS, INC.
 Field: Niobrara CONZ'83
 Site: Slick Rock 2-18-7-60 Pad
 Well: 4-17-7-60
 Wellpath: Original Hole
 Plan: Plan #2



Precision
 Directional Services



TARGET DETAILS								
Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Shape
SL 4-17	0.00	0.00	0.00	1455678.84	3376348.49	40°34'34.814N	104°08'42.564W	Point
PBHL 4-17	6374.00	40.57	9730.72	1455719.41	3386079.21	40°34'33.727N	104°06'36.465W	Point

SECTION DETAILS										
Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	DLeg	TFace	VSec	Target
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
2	150.00	0.00	0.00	150.00	0.00	0.00	0.00	0.00	0.00	
3	343.49	3.87	211.12	343.34	-5.59	-3.38	2.00	0.00	-3.60	
4	5793.28	3.87	211.12	5780.70	-320.47	-193.46	0.00	0.00	-206.06	
5	6714.57	90.00	87.72	6374.00	-331.20	379.98	10.00	-123.34	366.50	
6	16072.69	90.00	87.72	6374.00	40.57	9730.72	0.00	0.00	9724.63	PBHL 4-17

Precision Directional Services, Inc.

Planning Report

Company: CARRIZO OIL & GAS, INC. Field: Niobrara CONZ'83 Site: Slick Rock 2-18-7-60 Pad Well: 4-17-7-60 Wellpath: Original Hole	Date: 01/16/2013 Co-ordinate(NE) Reference: Vertical (TVD) Reference: Section (VS) Reference: Plan:	Time: 13:07:15 Well: 4-17-7-60, Grid North 4938'GL+17'KB 4955.0 Well (0.00N,0.00E,87.72Azi) Plan #2	Page: 1
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Field: Niobrara CONZ'83 Map System: US State Plane Coordinate System 1983 Geo Datum: GRS 1980 Sys Datum: Mean Sea Level	Map Zone: Colorado, Northern Zone Coordinate System: Well Centre Geomagnetic Model: IGRF2010
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Site: Slick Rock 2-18-7-60 Pad Weld County, CO Site Position: From: Map Position Uncertainty: 0.00 ft Ground Level: 4938.00 ft	Northing: 1455693.84 ft Easting: 3376348.49 ft Latitude: 40 34 34.962 N Longitude: 104 8 42.561 W North Reference: Grid Grid Convergence: 0.88 deg
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Well: 4-17-7-60 centered on 3-17 Well Position: +N/-S -15.00 ft +E/-W 0.00 ft Position Uncertainty: 0.00 ft	Slot Name: 4-17 Latitude: 40 34 34.814 N Longitude: 104 8 42.564 W
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Wellpath: Original Hole Current Datum: 4938'GL+17'KB Magnetic Data: 12/07/2012 Field Strength: 53172 nT Vertical Section: Depth From (TVD) ft	Drilled From: Surface Tie-on Depth: 0.00 ft Above System Datum: Mean Sea Level Declination: 8.34 deg Mag Dip Angle: 67.24 deg +E/-W ft Direction deg
0.00	0.00

Plan: Plan #2 Principal: No	Date Composed: 01/16/2013 Version: 1 Tied-to: From Surface
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Plan Section Information										
MD ft	Incl deg	Azim deg	TVD ft	+N/-S ft	+E/-W ft	DLS deg/100ft	Build deg/100ft	Turn deg/100ft	TFO deg	Target
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
150.00	0.00	0.00	150.00	0.00	0.00	0.00	0.00	0.00	0.00	
343.49	3.87	211.12	343.34	-5.59	-3.38	2.00	2.00	0.00	0.00	
5793.28	3.87	211.12	5780.70	-320.47	-193.46	0.00	0.00	0.00	0.00	
6714.57	90.00	87.72	6374.00	-331.20	379.98	10.00	9.35	-13.39	-123.34	
16072.69	90.00	87.72	6374.00	40.57	9730.72	0.00	0.00	0.00	0.00	PBHL 4-17

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
150.00	0.00	0.00	150.00	0.00	0.00	0.00	0.00	0.00	0.00	
200.00	1.00	211.12	200.00	-0.37	-0.23	-0.24	2.00	2.00	0.00	
300.00	3.00	211.12	299.93	-3.36	-2.03	-2.16	2.00	2.00	0.00	
343.49	3.87	211.12	343.34	-5.59	-3.38	-3.60	2.00	2.00	0.00	
400.00	3.87	211.12	399.72	-8.86	-5.35	-5.69	0.00	0.00	0.00	
500.00	3.87	211.12	499.50	-14.63	-8.83	-9.41	0.00	0.00	0.00	
600.00	3.87	211.12	599.27	-20.41	-12.32	-13.12	0.00	0.00	0.00	
700.00	3.87	211.12	699.04	-26.19	-15.81	-16.84	0.00	0.00	0.00	
800.00	3.87	211.12	798.81	-31.97	-19.30	-20.56	0.00	0.00	0.00	
900.00	3.87	211.12	898.58	-37.75	-22.79	-24.27	0.00	0.00	0.00	
1000.00	3.87	211.12	998.36	-43.52	-26.27	-27.99	0.00	0.00	0.00	
1100.00	3.87	211.12	1098.13	-49.30	-29.76	-31.70	0.00	0.00	0.00	
1200.00	3.87	211.12	1197.90	-55.08	-33.25	-35.42	0.00	0.00	0.00	
1300.00	3.87	211.12	1297.67	-60.86	-36.74	-39.13	0.00	0.00	0.00	
1400.00	3.87	211.12	1397.44	-66.63	-40.23	-42.85	0.00	0.00	0.00	

Precision Directional Services, Inc.

Planning Report

Company: CARRIZO OIL & GAS, INC.
Field: Niobrara CONZ'83
Site: Slick Rock 2-18-7-60 Pad
Well: 4-17-7-60
Wellpath: Original Hole

Date: 01/16/2013
Co-ordinate(NE) Reference: Well: 4-17-7-60, Grid North
Vertical (TVD) Reference: 4938'GL+17"KB 4955.0
Section (VS) Reference: Well (0.00N,0.00E,87.72Azi)
Plan: Plan #2

Page: 2

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
1500.00	3.87	211.12	1497.22	-72.41	-43.71	-46.56	0.00	0.00	0.00	
1600.00	3.87	211.12	1596.99	-78.19	-47.20	-50.28	0.00	0.00	0.00	
1700.00	3.87	211.12	1696.76	-83.97	-50.69	-53.99	0.00	0.00	0.00	
1800.00	3.87	211.12	1796.53	-89.75	-54.18	-57.71	0.00	0.00	0.00	
1900.00	3.87	211.12	1896.30	-95.52	-57.67	-61.42	0.00	0.00	0.00	
2000.00	3.87	211.12	1996.08	-101.30	-61.15	-65.14	0.00	0.00	0.00	
2100.00	3.87	211.12	2095.85	-107.08	-64.64	-68.85	0.00	0.00	0.00	
2200.00	3.87	211.12	2195.62	-112.86	-68.13	-72.57	0.00	0.00	0.00	
2300.00	3.87	211.12	2295.39	-118.63	-71.62	-76.28	0.00	0.00	0.00	
2400.00	3.87	211.12	2395.16	-124.41	-75.11	-80.00	0.00	0.00	0.00	
2500.00	3.87	211.12	2494.94	-130.19	-78.59	-83.71	0.00	0.00	0.00	
2600.00	3.87	211.12	2594.71	-135.97	-82.08	-87.43	0.00	0.00	0.00	
2700.00	3.87	211.12	2694.48	-141.74	-85.57	-91.14	0.00	0.00	0.00	
2800.00	3.87	211.12	2794.25	-147.52	-89.06	-94.86	0.00	0.00	0.00	
2900.00	3.87	211.12	2894.02	-153.30	-92.55	-98.57	0.00	0.00	0.00	
3000.00	3.87	211.12	2993.80	-159.08	-96.03	-102.29	0.00	0.00	0.00	
3100.00	3.87	211.12	3093.57	-164.86	-99.52	-106.00	0.00	0.00	0.00	
3200.00	3.87	211.12	3193.34	-170.63	-103.01	-109.72	0.00	0.00	0.00	
3300.00	3.87	211.12	3293.11	-176.41	-106.50	-113.43	0.00	0.00	0.00	
3400.00	3.87	211.12	3392.88	-182.19	-109.99	-117.15	0.00	0.00	0.00	
3500.00	3.87	211.12	3492.66	-187.97	-113.47	-120.86	0.00	0.00	0.00	
3600.00	3.87	211.12	3592.43	-193.74	-116.96	-124.58	0.00	0.00	0.00	
3700.00	3.87	211.12	3692.20	-199.52	-120.45	-128.29	0.00	0.00	0.00	
3800.00	3.87	211.12	3791.97	-205.30	-123.94	-132.01	0.00	0.00	0.00	
3900.00	3.87	211.12	3891.74	-211.08	-127.42	-135.72	0.00	0.00	0.00	
4000.00	3.87	211.12	3991.52	-216.86	-130.91	-139.44	0.00	0.00	0.00	
4100.00	3.87	211.12	4091.29	-222.63	-134.40	-143.15	0.00	0.00	0.00	
4200.00	3.87	211.12	4191.06	-228.41	-137.89	-146.87	0.00	0.00	0.00	
4300.00	3.87	211.12	4290.83	-234.19	-141.38	-150.58	0.00	0.00	0.00	
4400.00	3.87	211.12	4390.60	-239.97	-144.86	-154.30	0.00	0.00	0.00	
4500.00	3.87	211.12	4490.38	-245.74	-148.35	-158.01	0.00	0.00	0.00	
4600.00	3.87	211.12	4590.15	-251.52	-151.84	-161.73	0.00	0.00	0.00	
4700.00	3.87	211.12	4689.92	-257.30	-155.33	-165.44	0.00	0.00	0.00	
4800.00	3.87	211.12	4789.69	-263.08	-158.82	-169.16	0.00	0.00	0.00	
4900.00	3.87	211.12	4889.46	-268.86	-162.30	-172.87	0.00	0.00	0.00	
5000.00	3.87	211.12	4989.24	-274.63	-165.79	-176.59	0.00	0.00	0.00	
5100.00	3.87	211.12	5089.01	-280.41	-169.28	-180.30	0.00	0.00	0.00	
5200.00	3.87	211.12	5188.78	-286.19	-172.77	-184.02	0.00	0.00	0.00	
5300.00	3.87	211.12	5288.55	-291.97	-176.26	-187.73	0.00	0.00	0.00	
5400.00	3.87	211.12	5388.32	-297.74	-179.74	-191.45	0.00	0.00	0.00	
5500.00	3.87	211.12	5488.10	-303.52	-183.23	-195.16	0.00	0.00	0.00	
5600.00	3.87	211.12	5587.87	-309.30	-186.72	-198.88	0.00	0.00	0.00	
5700.00	3.87	211.12	5687.64	-315.08	-190.21	-202.59	0.00	0.00	0.00	
5793.28	3.87	211.12	5780.70	-320.47	-193.46	-206.06	0.00	0.00	0.00	
5800.00	3.55	202.00	5787.41	-320.85	-193.66	-206.27	10.00	-4.83	-135.69	
5850.00	4.79	130.04	5837.31	-323.63	-192.64	-205.36	10.00	2.50	-143.91	
5900.00	9.13	108.30	5886.94	-326.22	-187.27	-200.10	10.00	8.67	-43.49	
5950.00	13.92	100.90	5935.92	-328.61	-177.59	-190.52	10.00	9.57	-14.80	
6000.00	18.81	97.27	5983.88	-330.77	-163.68	-176.71	10.00	9.79	-7.27	
6050.00	23.75	95.10	6030.45	-332.68	-145.64	-158.76	10.00	9.88	-4.34	
6100.00	28.71	93.64	6075.29	-334.34	-123.61	-136.81	10.00	9.92	-2.91	
6150.00	33.68	92.58	6118.05	-335.73	-97.76	-111.04	10.00	9.94	-2.11	
6200.00	38.66	91.77	6158.40	-336.84	-68.28	-81.63	10.00	9.95	-1.63	
6250.00	43.64	91.12	6196.04	-337.66	-35.40	-48.81	10.00	9.96	-1.31	

Precision Directional Services, Inc.

Planning Report

Company: CARRIZO OIL & GAS, INC.
Field: Niobrara CONZ'83
Site: Slick Rock 2-18-7-60 Pad
Well: 4-17-7-60
Wellpath: Original Hole

Date: 01/16/2013
Co-ordinate(NE) Reference: Well: 4-17-7-60, Grid North
Vertical (TVD) Reference: 4938'GL+17"KB 4955.0
Section (VS) Reference: Well (0.00N,0.00E,87.72Azi)
Plan: Plan #2

Page: 3

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
6300.00	48.62	90.57	6230.68	-338.18	0.63	-12.82	10.00	9.97	-1.09	
6350.00	53.61	90.11	6262.06	-338.41	39.54	26.04	10.00	9.97	-0.93	
6400.00	58.60	89.70	6289.93	-338.33	81.03	67.50	10.00	9.98	-0.82	
6450.00	63.59	89.33	6314.09	-337.96	124.78	111.24	10.00	9.98	-0.74	
6500.00	68.58	88.99	6334.35	-337.29	170.47	156.92	10.00	9.98	-0.68	
6514.23	70.00	88.90	6339.39	-337.04	183.78	170.23	10.00	9.98	-0.64	7"
6550.00	73.57	88.68	6350.57	-336.33	217.74	204.19	10.00	9.98	-0.63	
6600.00	78.56	88.38	6362.60	-335.08	266.24	252.70	10.00	9.98	-0.60	
6650.00	83.55	88.09	6370.37	-333.55	315.59	302.07	10.00	9.98	-0.58	
6700.00	88.55	87.81	6373.82	-331.77	365.43	351.94	10.00	9.98	-0.57	
6714.57	90.00	87.72	6374.00	-331.20	379.98	366.50	10.00	9.98	-0.56	
6800.00	90.00	87.72	6374.00	-327.81	465.35	451.94	0.00	0.00	0.00	
6900.00	90.00	87.72	6374.00	-323.83	565.27	551.94	0.00	0.00	0.00	
7000.00	90.00	87.72	6374.00	-319.86	665.19	651.94	0.00	0.00	0.00	
7100.00	90.00	87.72	6374.00	-315.89	765.11	751.94	0.00	0.00	0.00	
7200.00	90.00	87.72	6374.00	-311.92	865.03	851.94	0.00	0.00	0.00	
7300.00	90.00	87.72	6374.00	-307.94	964.95	951.94	0.00	0.00	0.00	
7400.00	90.00	87.72	6374.00	-303.97	1064.87	1051.94	0.00	0.00	0.00	
7500.00	90.00	87.72	6374.00	-300.00	1164.79	1151.94	0.00	0.00	0.00	
7600.00	90.00	87.72	6374.00	-296.02	1264.72	1251.94	0.00	0.00	0.00	
7700.00	90.00	87.72	6374.00	-292.05	1364.64	1351.94	0.00	0.00	0.00	
7800.00	90.00	87.72	6374.00	-288.08	1464.56	1451.94	0.00	0.00	0.00	
7900.00	90.00	87.72	6374.00	-284.11	1564.48	1551.94	0.00	0.00	0.00	
8000.00	90.00	87.72	6374.00	-280.13	1664.40	1651.94	0.00	0.00	0.00	
8100.00	90.00	87.72	6374.00	-276.16	1764.32	1751.94	0.00	0.00	0.00	
8200.00	90.00	87.72	6374.00	-272.19	1864.24	1851.94	0.00	0.00	0.00	
8300.00	90.00	87.72	6374.00	-268.22	1964.16	1951.94	0.00	0.00	0.00	
8400.00	90.00	87.72	6374.00	-264.24	2064.08	2051.94	0.00	0.00	0.00	
8500.00	90.00	87.72	6374.00	-260.27	2164.01	2151.94	0.00	0.00	0.00	
8600.00	90.00	87.72	6374.00	-256.30	2263.93	2251.94	0.00	0.00	0.00	
8700.00	90.00	87.72	6374.00	-252.32	2363.85	2351.94	0.00	0.00	0.00	
8800.00	90.00	87.72	6374.00	-248.35	2463.77	2451.94	0.00	0.00	0.00	
8900.00	90.00	87.72	6374.00	-244.38	2563.69	2551.94	0.00	0.00	0.00	
9000.00	90.00	87.72	6374.00	-240.41	2663.61	2651.94	0.00	0.00	0.00	
9100.00	90.00	87.72	6374.00	-236.43	2763.53	2751.94	0.00	0.00	0.00	
9200.00	90.00	87.72	6374.00	-232.46	2863.45	2851.94	0.00	0.00	0.00	
9300.00	90.00	87.72	6374.00	-228.49	2963.37	2951.94	0.00	0.00	0.00	
9400.00	90.00	87.72	6374.00	-224.52	3063.29	3051.94	0.00	0.00	0.00	
9500.00	90.00	87.72	6374.00	-220.54	3163.22	3151.94	0.00	0.00	0.00	
9600.00	90.00	87.72	6374.00	-216.57	3263.14	3251.94	0.00	0.00	0.00	
9700.00	90.00	87.72	6374.00	-212.60	3363.06	3351.94	0.00	0.00	0.00	
9800.00	90.00	87.72	6374.00	-208.63	3462.98	3451.94	0.00	0.00	0.00	
9900.00	90.00	87.72	6374.00	-204.65	3562.90	3551.94	0.00	0.00	0.00	
10000.00	90.00	87.72	6374.00	-200.68	3662.82	3651.94	0.00	0.00	0.00	
10100.00	90.00	87.72	6374.00	-196.71	3762.74	3751.94	0.00	0.00	0.00	
10200.00	90.00	87.72	6374.00	-192.73	3862.66	3851.94	0.00	0.00	0.00	
10300.00	90.00	87.72	6374.00	-188.76	3962.58	3951.94	0.00	0.00	0.00	
10400.00	90.00	87.72	6374.00	-184.79	4062.51	4051.94	0.00	0.00	0.00	
10500.00	90.00	87.72	6374.00	-180.82	4162.43	4151.94	0.00	0.00	0.00	
10600.00	90.00	87.72	6374.00	-176.84	4262.35	4251.94	0.00	0.00	0.00	
10700.00	90.00	87.72	6374.00	-172.87	4362.27	4351.94	0.00	0.00	0.00	
10800.00	90.00	87.72	6374.00	-168.90	4462.19	4451.94	0.00	0.00	0.00	
10900.00	90.00	87.72	6374.00	-164.93	4562.11	4551.94	0.00	0.00	0.00	

Precision Directional Services, Inc.

Planning Report

Company: CARRIZO OIL & GAS, INC.
Field: Niobrara CONZ'83
Site: Slick Rock 2-18-7-60 Pad
Well: 4-17-7-60
Wellpath: Original Hole

Date: 01/16/2013
Co-ordinate(NE) Reference: Well: 4-17-7-60, Grid North
Vertical (TVD) Reference: 4938'GL+17'KB 4955.0
Section (VS) Reference: Well (0.00N,0.00E,87.72Azi)
Plan: Plan #2

Page: 4

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
11000.00	90.00	87.72	6374.00	-160.95	4662.03	4651.94	0.00	0.00	0.00	
11100.00	90.00	87.72	6374.00	-156.98	4761.95	4751.94	0.00	0.00	0.00	
11200.00	90.00	87.72	6374.00	-153.01	4861.87	4851.94	0.00	0.00	0.00	
11300.00	90.00	87.72	6374.00	-149.03	4961.79	4951.94	0.00	0.00	0.00	
11400.00	90.00	87.72	6374.00	-145.06	5061.72	5051.94	0.00	0.00	0.00	
11500.00	90.00	87.72	6374.00	-141.09	5161.64	5151.94	0.00	0.00	0.00	
11600.00	90.00	87.72	6374.00	-137.12	5261.56	5251.94	0.00	0.00	0.00	
11700.00	90.00	87.72	6374.00	-133.14	5361.48	5351.94	0.00	0.00	0.00	
11800.00	90.00	87.72	6374.00	-129.17	5461.40	5451.94	0.00	0.00	0.00	
11900.00	90.00	87.72	6374.00	-125.20	5561.32	5551.94	0.00	0.00	0.00	
12000.00	90.00	87.72	6374.00	-121.23	5661.24	5651.94	0.00	0.00	0.00	
12100.00	90.00	87.72	6374.00	-117.25	5761.16	5751.94	0.00	0.00	0.00	
12200.00	90.00	87.72	6374.00	-113.28	5861.08	5851.94	0.00	0.00	0.00	
12300.00	90.00	87.72	6374.00	-109.31	5961.01	5951.94	0.00	0.00	0.00	
12400.00	90.00	87.72	6374.00	-105.33	6060.93	6051.94	0.00	0.00	0.00	
12500.00	90.00	87.72	6374.00	-101.36	6160.85	6151.94	0.00	0.00	0.00	
12600.00	90.00	87.72	6374.00	-97.39	6260.77	6251.94	0.00	0.00	0.00	
12700.00	90.00	87.72	6374.00	-93.42	6360.69	6351.94	0.00	0.00	0.00	
12800.00	90.00	87.72	6374.00	-89.44	6460.61	6451.94	0.00	0.00	0.00	
12900.00	90.00	87.72	6374.00	-85.47	6560.53	6551.94	0.00	0.00	0.00	
13000.00	90.00	87.72	6374.00	-81.50	6660.45	6651.94	0.00	0.00	0.00	
13100.00	90.00	87.72	6374.00	-77.53	6760.37	6751.94	0.00	0.00	0.00	
13200.00	90.00	87.72	6374.00	-73.55	6860.30	6851.94	0.00	0.00	0.00	
13300.00	90.00	87.72	6374.00	-69.58	6960.22	6951.94	0.00	0.00	0.00	
13400.00	90.00	87.72	6374.00	-65.61	7060.14	7051.94	0.00	0.00	0.00	
13500.00	90.00	87.72	6374.00	-61.64	7160.06	7151.94	0.00	0.00	0.00	
13600.00	90.00	87.72	6374.00	-57.66	7259.98	7251.94	0.00	0.00	0.00	
13700.00	90.00	87.72	6374.00	-53.69	7359.90	7351.94	0.00	0.00	0.00	
13800.00	90.00	87.72	6374.00	-49.72	7459.82	7451.94	0.00	0.00	0.00	
13900.00	90.00	87.72	6374.00	-45.74	7559.74	7551.94	0.00	0.00	0.00	
14000.00	90.00	87.72	6374.00	-41.77	7659.66	7651.94	0.00	0.00	0.00	
14100.00	90.00	87.72	6374.00	-37.80	7759.58	7751.94	0.00	0.00	0.00	
14200.00	90.00	87.72	6374.00	-33.83	7859.51	7851.94	0.00	0.00	0.00	
14300.00	90.00	87.72	6374.00	-29.85	7959.43	7951.94	0.00	0.00	0.00	
14400.00	90.00	87.72	6374.00	-25.88	8059.35	8051.94	0.00	0.00	0.00	
14500.00	90.00	87.72	6374.00	-21.91	8159.27	8151.94	0.00	0.00	0.00	
14600.00	90.00	87.72	6374.00	-17.94	8259.19	8251.94	0.00	0.00	0.00	
14700.00	90.00	87.72	6374.00	-13.96	8359.11	8351.94	0.00	0.00	0.00	
14800.00	90.00	87.72	6374.00	-9.99	8459.03	8451.94	0.00	0.00	0.00	
14900.00	90.00	87.72	6374.00	-6.02	8558.95	8551.94	0.00	0.00	0.00	
15000.00	90.00	87.72	6374.00	-2.04	8658.87	8651.94	0.00	0.00	0.00	
15100.00	90.00	87.72	6374.00	1.93	8758.80	8751.94	0.00	0.00	0.00	
15200.00	90.00	87.72	6374.00	5.90	8858.72	8851.94	0.00	0.00	0.00	
15300.00	90.00	87.72	6374.00	9.87	8958.64	8951.94	0.00	0.00	0.00	
15400.00	90.00	87.72	6374.00	13.85	9058.56	9051.94	0.00	0.00	0.00	
15500.00	90.00	87.72	6374.00	17.82	9158.48	9151.94	0.00	0.00	0.00	
15600.00	90.00	87.72	6374.00	21.79	9258.40	9251.94	0.00	0.00	0.00	
15700.00	90.00	87.72	6374.00	25.76	9358.32	9351.94	0.00	0.00	0.00	
15800.00	90.00	87.72	6374.00	29.74	9458.24	9451.94	0.00	0.00	0.00	
15900.00	90.00	87.72	6374.00	33.71	9558.16	9551.94	0.00	0.00	0.00	
16000.00	90.00	87.72	6374.00	37.68	9658.08	9651.94	0.00	0.00	0.00	
16072.69	90.00	87.72	6374.00	40.57	9730.72	9724.63	0.00	0.00	0.00	PBHL 4-17

Precision Directional Services, Inc.

Planning Report

Company: CARRIZO OIL & GAS, INC. Field: Niobrara CONZ'83 Site: Slick Rock 2-18-7-60 Pad Well: 4-17-7-60 Wellpath: Original Hole	Date: 01/16/2013 Co-ordinate(NE) Reference: Well: 4-17-7-60, Grid North Vertical (TVD) Reference: 4938'GL+17"KB 4955.0 Section (VS) Reference: Well (0.00N,0.00E,87.72Azi) Plan: Plan #2	Time: 13:07:15 Page: 5
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Targets

Name	Description	Dir.	TVD ft	+N/-S ft	+E/-W ft	Map Northing ft	Map Easting ft	<---- Latitude ---->			<--- Longitude --->			
	Dip.							Deg	Min	Sec	Deg	Min	Sec	
SL 4-17			0.00	0.00	0.00	1455678.84	3376348.49	40	34	34.814	N	104	8 42.564	W
PBHL 4-17			6374.00	40.57	9730.72	1455719.41	3386079.21	40	34	33.727	N	104	6 36.465	W

Casing Points

MD ft	TVD ft	Diameter in	Hole Size in	Name
6514.23	6339.39	7.000	8.750	7"