



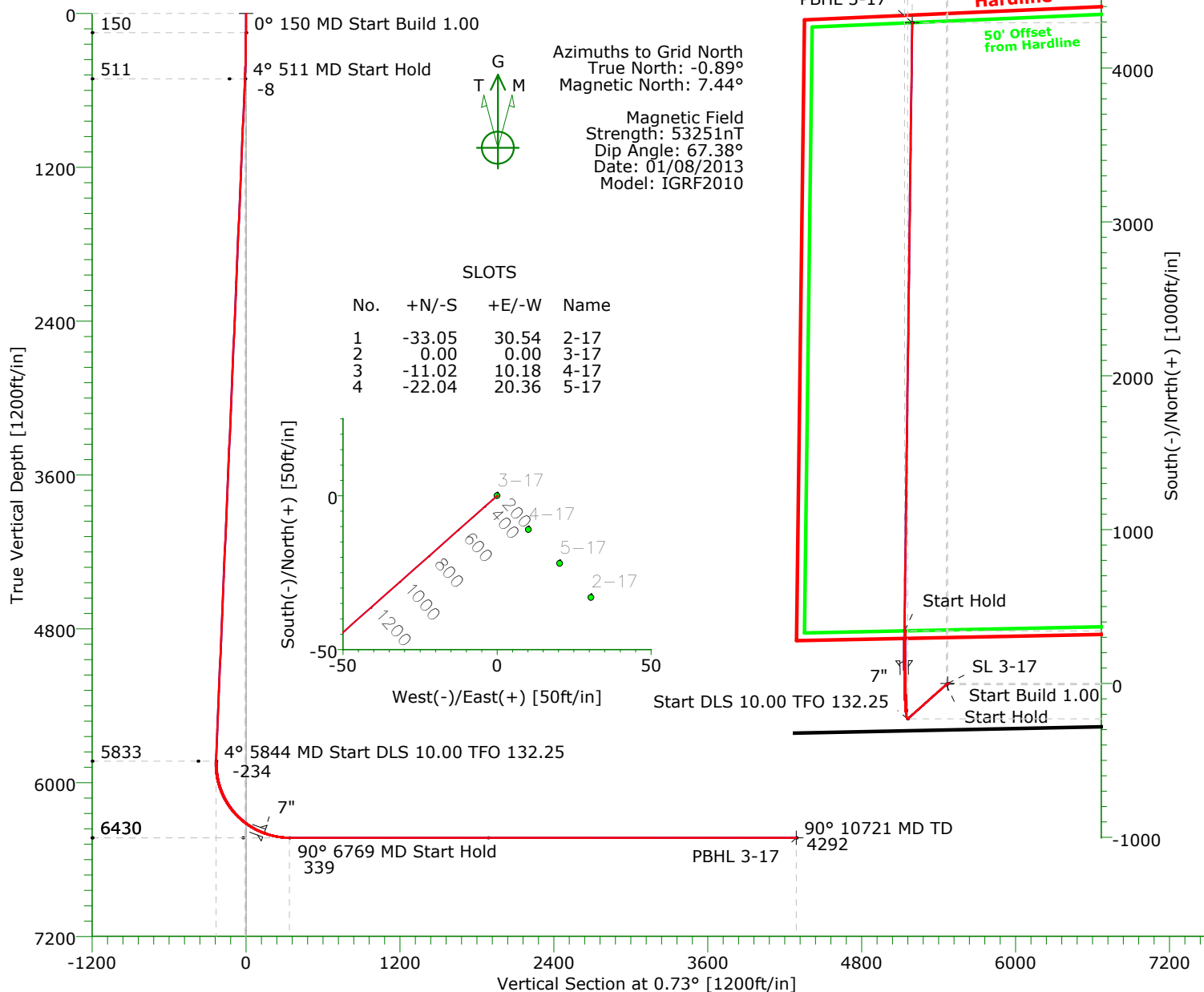
CARRIZO OIL & GAS, INC.

Field: Niobrara CONZ'83
Site: Nelson 2-17-9-60 Pad
Well: 3-17-9-60
Wellpath: Original Hole
Plan: Plan #1



CASING DETAILS

No.	TVD	MD	Name	Size
1	6395.40	6568.30	7"	7.000



SLOTS

No.	+N/-S	+E/-W	Name
1	-33.05	30.54	2-17
2	0.00	0.00	3-17
3	-11.02	10.18	4-17
4	-22.04	20.36	5-17

Azimuths to Grid North
True North: -0.89°
Magnetic North: 7.44°

Magnetic Field
Strength: 53251nT
Dip Angle: 67.38°
Date: 01/08/2013
Model: IGRF2010

TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Shape
SL 3-17	0.00	0.00	0.00	1516502.05	3382030.81	40°44'34.894N	104°07'16.677W	Point
PBHL 3-17	6430.00	4294.87	-229.99	1520796.92	3381800.82	40°45'17.362N	104°07'18.798W	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	511.19	3.61	228.43	510.95	-7.55	-8.51	1.00	0.00	-7.66	
4	5844.23	3.61	228.43	5833.40	-230.49	-259.86	0.00	0.00	-233.78	
5	6768.53	90.00	0.73	6430.00	342.26	-280.41	10.00	132.25	338.66	
6	10721.46	90.00	0.73	6430.00	4294.87	-229.99	0.00	0.00	4291.59	PBHL 3-17

Precision Directional Services, Inc.

Planning 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: 01/08/2013 Co-ordinate(NE) Reference: Vertical (TVD) Reference: Section (VS) Reference: Plan:	Time: 13:59:40 Well: 3-17-9-60, Grid North 4991'GL+17'KB 4508.0 Well (0.00N,0.00E,0.73Azi) Plan #1	Page: 1
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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	Height 4508.00 ft	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)	+N/-S	Mag Dip Angle: 67.38 deg	
ft	ft	+E/-W	Direction
		ft	deg
0.00	0.00	0.00	0.73

Plan: Plan #1	Date Composed: 01/08/2013
Principal: No	Version: 1
	Tied-to: From Surface

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	
511.19	3.61	228.43	510.95	-7.55	-8.51	1.00	1.00	0.00	0.00	
5844.23	3.61	228.43	5833.40	-230.49	-259.86	0.00	0.00	0.00	0.00	
6768.53	90.00	0.73	6430.00	342.26	-280.41	10.00	9.35	14.31	132.25	
10721.46	90.00	0.73	6430.00	4294.87	-229.99	0.00	0.00	0.00	0.00	PBHL 3-17

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	0.50	228.43	200.00	-0.14	-0.16	-0.15	1.00	1.00	0.00	
300.00	1.50	228.43	299.98	-1.30	-1.47	-1.32	1.00	1.00	0.00	
400.00	2.50	228.43	399.92	-3.62	-4.08	-3.67	1.00	1.00	0.00	
500.00	3.50	228.43	499.78	-7.09	-8.00	-7.19	1.00	1.00	0.00	
511.19	3.61	228.43	510.95	-7.55	-8.51	-7.66	1.00	1.00	0.00	
600.00	3.61	228.43	599.58	-11.26	-12.70	-11.43	0.00	0.00	0.00	
700.00	3.61	228.43	699.39	-15.44	-17.41	-15.67	0.00	0.00	0.00	
800.00	3.61	228.43	799.19	-19.63	-22.13	-19.91	0.00	0.00	0.00	
900.00	3.61	228.43	898.99	-23.81	-26.84	-24.15	0.00	0.00	0.00	
1000.00	3.61	228.43	998.79	-27.99	-31.55	-28.39	0.00	0.00	0.00	
1100.00	3.61	228.43	1098.59	-32.17	-36.26	-32.63	0.00	0.00	0.00	
1200.00	3.61	228.43	1198.39	-36.35	-40.98	-36.87	0.00	0.00	0.00	
1300.00	3.61	228.43	1298.19	-40.53	-45.69	-41.11	0.00	0.00	0.00	
1400.00	3.61	228.43	1398.00	-44.71	-50.40	-45.35	0.00	0.00	0.00	

Precision Directional Services, Inc.

Planning 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: 01/08/2013
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)
Plan: Plan #1

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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
1500.00	3.61	228.43	1497.80	-48.89	-55.12	-49.59	0.00	0.00	0.00	
1600.00	3.61	228.43	1597.60	-53.07	-59.83	-53.83	0.00	0.00	0.00	
1700.00	3.61	228.43	1697.40	-57.25	-64.54	-58.07	0.00	0.00	0.00	
1800.00	3.61	228.43	1797.20	-61.43	-69.26	-62.31	0.00	0.00	0.00	
1900.00	3.61	228.43	1897.00	-65.61	-73.97	-66.55	0.00	0.00	0.00	
2000.00	3.61	228.43	1996.80	-69.79	-78.68	-70.79	0.00	0.00	0.00	
2100.00	3.61	228.43	2096.60	-73.97	-83.40	-75.03	0.00	0.00	0.00	
2200.00	3.61	228.43	2196.41	-78.15	-88.11	-79.27	0.00	0.00	0.00	
2300.00	3.61	228.43	2296.21	-82.33	-92.82	-83.51	0.00	0.00	0.00	
2400.00	3.61	228.43	2396.01	-86.51	-97.53	-87.75	0.00	0.00	0.00	
2500.00	3.61	228.43	2495.81	-90.69	-102.25	-91.99	0.00	0.00	0.00	
2600.00	3.61	228.43	2595.61	-94.87	-106.96	-96.23	0.00	0.00	0.00	
2700.00	3.61	228.43	2695.41	-99.05	-111.67	-100.47	0.00	0.00	0.00	
2800.00	3.61	228.43	2795.21	-103.23	-116.39	-104.71	0.00	0.00	0.00	
2900.00	3.61	228.43	2895.02	-107.41	-121.10	-108.95	0.00	0.00	0.00	
3000.00	3.61	228.43	2994.82	-111.59	-125.81	-113.19	0.00	0.00	0.00	
3100.00	3.61	228.43	3094.62	-115.77	-130.53	-117.43	0.00	0.00	0.00	
3200.00	3.61	228.43	3194.42	-119.95	-135.24	-121.67	0.00	0.00	0.00	
3300.00	3.61	228.43	3294.22	-124.13	-139.95	-125.91	0.00	0.00	0.00	
3400.00	3.61	228.43	3394.02	-128.31	-144.66	-130.15	0.00	0.00	0.00	
3500.00	3.61	228.43	3493.82	-132.49	-149.38	-134.39	0.00	0.00	0.00	
3600.00	3.61	228.43	3593.63	-136.67	-154.09	-138.63	0.00	0.00	0.00	
3700.00	3.61	228.43	3693.43	-140.86	-158.80	-142.87	0.00	0.00	0.00	
3800.00	3.61	228.43	3793.23	-145.04	-163.52	-147.11	0.00	0.00	0.00	
3900.00	3.61	228.43	3893.03	-149.22	-168.23	-151.35	0.00	0.00	0.00	
4000.00	3.61	228.43	3992.83	-153.40	-172.94	-155.59	0.00	0.00	0.00	
4100.00	3.61	228.43	4092.63	-157.58	-177.66	-159.83	0.00	0.00	0.00	
4200.00	3.61	228.43	4192.43	-161.76	-182.37	-164.07	0.00	0.00	0.00	
4300.00	3.61	228.43	4292.23	-165.94	-187.08	-168.31	0.00	0.00	0.00	
4400.00	3.61	228.43	4392.04	-170.12	-191.79	-172.55	0.00	0.00	0.00	
4500.00	3.61	228.43	4491.84	-174.30	-196.51	-176.79	0.00	0.00	0.00	
4600.00	3.61	228.43	4591.64	-178.48	-201.22	-181.03	0.00	0.00	0.00	
4700.00	3.61	228.43	4691.44	-182.66	-205.93	-185.27	0.00	0.00	0.00	
4800.00	3.61	228.43	4791.24	-186.84	-210.65	-189.51	0.00	0.00	0.00	
4900.00	3.61	228.43	4891.04	-191.02	-215.36	-193.75	0.00	0.00	0.00	
5000.00	3.61	228.43	4990.84	-195.20	-220.07	-197.99	0.00	0.00	0.00	
5100.00	3.61	228.43	5090.65	-199.38	-224.79	-202.23	0.00	0.00	0.00	
5200.00	3.61	228.43	5190.45	-203.56	-229.50	-206.47	0.00	0.00	0.00	
5300.00	3.61	228.43	5290.25	-207.74	-234.21	-210.71	0.00	0.00	0.00	
5400.00	3.61	228.43	5390.05	-211.92	-238.92	-214.95	0.00	0.00	0.00	
5500.00	3.61	228.43	5489.85	-216.10	-243.64	-219.19	0.00	0.00	0.00	
5600.00	3.61	228.43	5589.65	-220.28	-248.35	-223.43	0.00	0.00	0.00	
5700.00	3.61	228.43	5689.45	-224.46	-253.06	-227.67	0.00	0.00	0.00	
5800.00	3.61	228.43	5789.26	-228.64	-257.78	-231.91	0.00	0.00	0.00	
5844.23	3.61	228.43	5833.40	-230.49	-259.86	-233.78	0.00	0.00	0.00	
5850.00	3.25	235.98	5839.16	-230.70	-260.13	-234.00	10.00	-6.24	130.86	
5900.00	4.13	320.42	5889.08	-230.11	-262.46	-233.43	10.00	1.75	168.89	
5950.00	8.57	342.69	5938.77	-225.16	-264.71	-228.52	10.00	8.89	44.53	
6000.00	13.41	349.44	5987.84	-215.90	-266.89	-219.28	10.00	9.68	13.51	
6050.00	18.34	352.63	6035.92	-202.39	-268.96	-205.80	10.00	9.85	6.39	
6100.00	23.29	354.51	6082.64	-184.74	-270.91	-188.18	10.00	9.91	3.74	
6150.00	28.26	355.75	6127.65	-163.08	-272.74	-166.54	10.00	9.94	2.49	
6200.00	33.24	356.65	6170.61	-137.58	-274.42	-141.06	10.00	9.96	1.79	
6250.00	38.23	357.33	6211.18	-108.43	-275.94	-111.93	10.00	9.97	1.37	

Precision Directional Services, Inc.

Planning 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: 01/08/2013
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)
Plan: Plan #1

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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
6300.00	43.21	357.88	6249.07	-75.85	-277.30	-79.37	10.00	9.97	1.10	
6350.00	48.20	358.34	6283.97	-40.09	-278.47	-43.63	10.00	9.98	0.91	
6400.00	53.19	358.73	6315.63	-1.42	-279.45	-4.98	10.00	9.98	0.78	
6450.00	58.19	359.07	6343.81	39.86	-280.24	36.28	10.00	9.98	0.68	
6500.00	63.18	359.38	6368.28	83.44	-280.83	79.85	10.00	9.99	0.61	
6550.00	68.17	359.66	6388.87	128.98	-281.21	125.39	10.00	9.99	0.56	
6568.30	70.00	359.76	6395.40	146.07	-281.30	142.48	10.00	9.99	0.53	7"
6600.00	73.17	359.92	6405.42	176.15	-281.38	172.55	10.00	9.99	0.52	
6650.00	78.16	0.17	6417.80	224.57	-281.34	220.97	10.00	9.99	0.50	
6700.00	83.15	0.41	6425.91	273.89	-281.09	270.29	10.00	9.99	0.48	
6750.00	88.15	0.64	6429.70	323.73	-280.63	320.13	10.00	9.99	0.47	
6768.53	90.00	0.73	6430.00	342.26	-280.41	338.66	10.00	9.99	0.47	
6800.00	90.00	0.73	6430.00	373.73	-280.01	370.13	0.00	0.00	0.00	
6900.00	90.00	0.73	6430.00	473.72	-278.73	470.13	0.00	0.00	0.00	
7000.00	90.00	0.73	6430.00	573.71	-277.46	570.13	0.00	0.00	0.00	
7100.00	90.00	0.73	6430.00	673.70	-276.18	670.13	0.00	0.00	0.00	
7200.00	90.00	0.73	6430.00	773.69	-274.91	770.13	0.00	0.00	0.00	
7300.00	90.00	0.73	6430.00	873.68	-273.63	870.13	0.00	0.00	0.00	
7400.00	90.00	0.73	6430.00	973.68	-272.36	970.13	0.00	0.00	0.00	
7500.00	90.00	0.73	6430.00	1073.67	-271.08	1070.13	0.00	0.00	0.00	
7600.00	90.00	0.73	6430.00	1173.66	-269.80	1170.13	0.00	0.00	0.00	
7700.00	90.00	0.73	6430.00	1273.65	-268.53	1270.13	0.00	0.00	0.00	
7800.00	90.00	0.73	6430.00	1373.64	-267.25	1370.13	0.00	0.00	0.00	
7900.00	90.00	0.73	6430.00	1473.64	-265.98	1470.13	0.00	0.00	0.00	
8000.00	90.00	0.73	6430.00	1573.63	-264.70	1570.13	0.00	0.00	0.00	
8100.00	90.00	0.73	6430.00	1673.62	-263.43	1670.13	0.00	0.00	0.00	
8200.00	90.00	0.73	6430.00	1773.61	-262.15	1770.13	0.00	0.00	0.00	
8300.00	90.00	0.73	6430.00	1873.60	-260.88	1870.13	0.00	0.00	0.00	
8400.00	90.00	0.73	6430.00	1973.60	-259.60	1970.13	0.00	0.00	0.00	
8500.00	90.00	0.73	6430.00	2073.59	-258.32	2070.13	0.00	0.00	0.00	
8600.00	90.00	0.73	6430.00	2173.58	-257.05	2170.13	0.00	0.00	0.00	
8700.00	90.00	0.73	6430.00	2273.57	-255.77	2270.13	0.00	0.00	0.00	
8800.00	90.00	0.73	6430.00	2373.56	-254.50	2370.13	0.00	0.00	0.00	
8900.00	90.00	0.73	6430.00	2473.55	-253.22	2470.13	0.00	0.00	0.00	
9000.00	90.00	0.73	6430.00	2573.55	-251.95	2570.13	0.00	0.00	0.00	
9100.00	90.00	0.73	6430.00	2673.54	-250.67	2670.13	0.00	0.00	0.00	
9200.00	90.00	0.73	6430.00	2773.53	-249.40	2770.13	0.00	0.00	0.00	
9300.00	90.00	0.73	6430.00	2873.52	-248.12	2870.13	0.00	0.00	0.00	
9400.00	90.00	0.73	6430.00	2973.51	-246.85	2970.13	0.00	0.00	0.00	
9500.00	90.00	0.73	6430.00	3073.51	-245.57	3070.13	0.00	0.00	0.00	
9600.00	90.00	0.73	6430.00	3173.50	-244.29	3170.13	0.00	0.00	0.00	
9700.00	90.00	0.73	6430.00	3273.49	-243.02	3270.13	0.00	0.00	0.00	
9800.00	90.00	0.73	6430.00	3373.48	-241.74	3370.13	0.00	0.00	0.00	
9900.00	90.00	0.73	6430.00	3473.47	-240.47	3470.13	0.00	0.00	0.00	
10000.00	90.00	0.73	6430.00	3573.47	-239.19	3570.13	0.00	0.00	0.00	
10100.00	90.00	0.73	6430.00	3673.46	-237.92	3670.13	0.00	0.00	0.00	
10200.00	90.00	0.73	6430.00	3773.45	-236.64	3770.13	0.00	0.00	0.00	
10300.00	90.00	0.73	6430.00	3873.44	-235.37	3870.13	0.00	0.00	0.00	
10400.00	90.00	0.73	6430.00	3973.43	-234.09	3970.13	0.00	0.00	0.00	
10500.00	90.00	0.73	6430.00	4073.42	-232.81	4070.13	0.00	0.00	0.00	
10600.00	90.00	0.73	6430.00	4173.42	-231.54	4170.13	0.00	0.00	0.00	
10700.00	90.00	0.73	6430.00	4273.41	-230.26	4270.13	0.00	0.00	0.00	
10721.46	90.00	0.73	6430.00	4294.87	-229.99	4291.59	0.00	0.00	0.00	PBHL 3-17

Precision Directional Services, Inc.

Planning 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: 01/08/2013 Co-ordinate(NE) Reference: Vertical (TVD) Reference: Section (VS) Reference: Plan:	Time: 13:59:40 Well: 3-17-9-60, Grid North 4991'GL+17'KB 4508.0 Well (0.00N,0.00E,0.73Azi) Plan #1	Page: 4
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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

Targets

Name	Description Dip.	Dir.	TVD ft	+N/-S ft	+E/-W ft	Map Northing ft	Map Easting ft	<--- Latitude ---> Deg Min Sec			<--- Longitude ---> Deg Min Sec		
SL 3-17			0.00	0.00	0.00	1516502.05	3382030.81	40	44	34.894 N	104	7	16.677 W
PBHL 3-17			6430.00	4294.87	-229.99	1520796.92	3381800.82	40	45	17.362 N	104	7	18.798 W

Casing Points

MD ft	TVD ft	Diameter in	Hole Size in	Name
6568.30	6395.40	7.000	8.750	7"