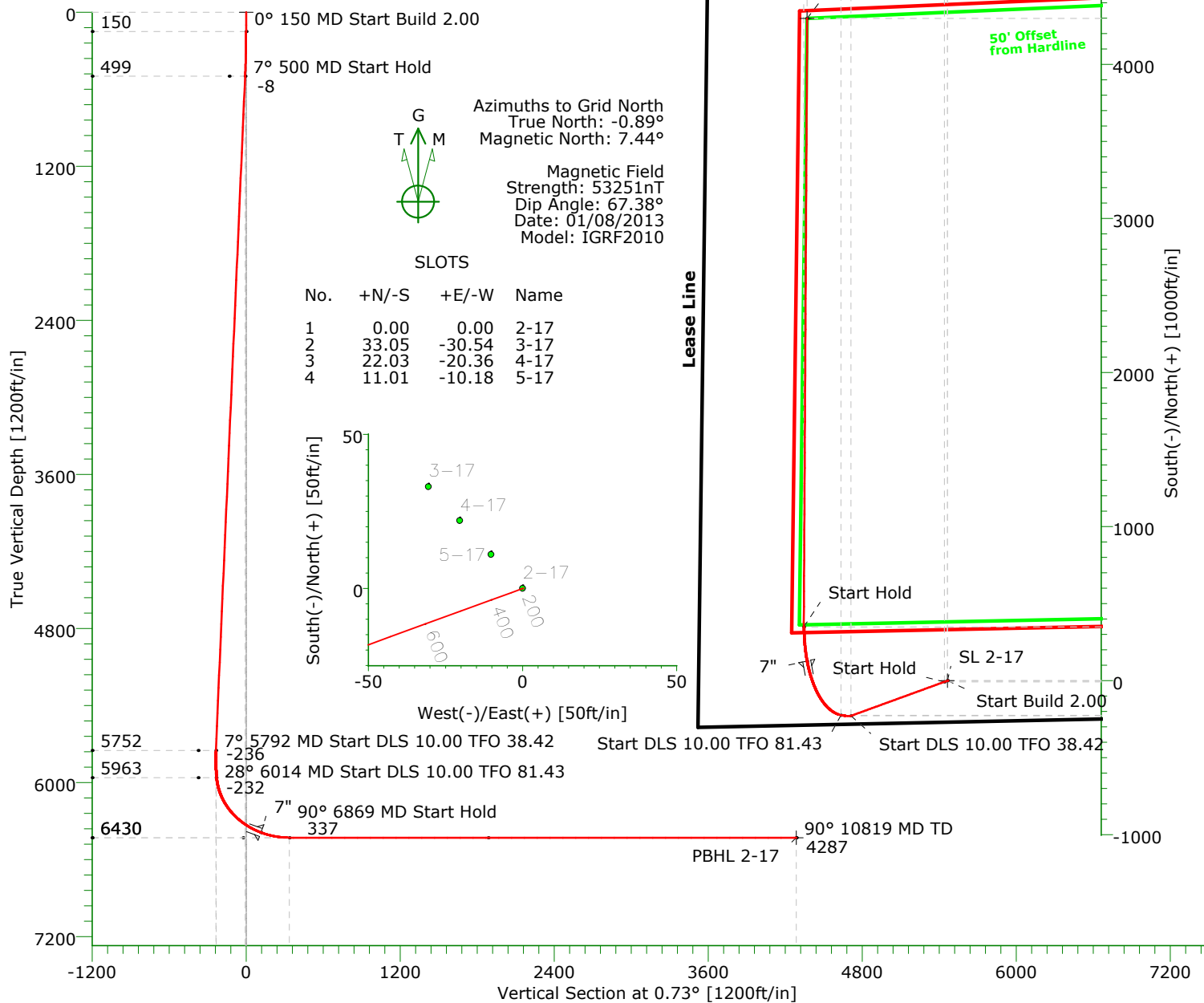




CASING DETAILS

No.	TVD	MD	Name	Size
1	6390.63	6641.61	7"	7.000



TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Shape
SL 2-17	0.00	0.00	0.00	1516469.00	3382061.35	40°44'34.562N	104°07'16.287W	Point
PBHL 2-17	6430.00	4299.29	-910.95	1520768.29	3381150.40	40°45'17.179N	104°07'27.254W	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	500.00	7.00	250.00	499.13	-7.30	-20.07	2.00	250.00	-7.56	
4	5792.16	7.00	250.00	5751.84	-227.89	-626.12	0.00	0.00	-235.85	
5	6014.09	28.00	280.00	5962.60	-223.41	-690.95	10.00	38.42	-232.20	
6	6868.80	90.00	0.32	6430.00	349.10	-932.77	10.00	81.43	337.19	
7	10819.05	90.00	0.32	6430.00	4299.29	-910.95	0.00	0.00	4287.34	PBHL 2-17

Precision Directional Services, Inc.

Planning Report

Company: CARRIZO OIL & GAS, INC. Field: Niobrara CONZ'83 Site: Nelson 2-17-9-60 Pad Well: 2-17-9-60 Wellpath: Original Hole	Date: 01/22/2013 Co-ordinate(NE) Reference: Well: 2-17-9-60, Grid North Vertical (TVD) Reference: 4991'GL+17'KB 4508.0 Section (VS) Reference: Well (0.00N,0.00E,0.73Azi) Plan: Plan #2	Time: 15:29:38 Page: 1
--	--	---

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
--	---

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: 2-17-9-60	Slot Name:
Well Position: +N/-S 0.00 ft	Latitude: 40 44 34.562 N
+E/-W 0.00 ft	Longitude: 104 7 16.287 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
0.00	+E/-W ft
	Direction deg
	0.73

Plan: Plan #2	Date Composed: 01/22/2013
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	
500.00	7.00	250.00	499.13	-7.30	-20.07	2.00	2.00	0.00	250.00	
5792.16	7.00	250.00	5751.84	-227.89	-626.12	0.00	0.00	0.00	0.00	
6014.09	28.00	280.00	5962.60	-223.41	-690.95	10.00	9.46	13.52	38.42	
6868.80	90.00	0.32	6430.00	349.10	-932.77	10.00	7.25	9.40	81.43	
10819.05	90.00	0.32	6430.00	4299.29	-910.95	0.00	0.00	0.00	0.00	PBHL 2-17

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	250.00	200.00	-0.15	-0.41	-0.15	2.00	2.00	0.00	
300.00	3.00	250.00	299.93	-1.34	-3.69	-1.39	2.00	2.00	0.00	
400.00	5.00	250.00	399.68	-3.73	-10.24	-3.86	2.00	2.00	0.00	
500.00	7.00	250.00	499.13	-7.30	-20.07	-7.56	2.00	2.00	0.00	
600.00	7.00	250.00	598.38	-11.47	-31.52	-11.87	0.00	0.00	0.00	
700.00	7.00	250.00	697.64	-15.64	-42.97	-16.19	0.00	0.00	0.00	
800.00	7.00	250.00	796.89	-19.81	-54.42	-20.50	0.00	0.00	0.00	
900.00	7.00	250.00	896.15	-23.98	-65.87	-24.81	0.00	0.00	0.00	
1000.00	7.00	250.00	995.40	-28.14	-77.33	-29.13	0.00	0.00	0.00	
1100.00	7.00	250.00	1094.66	-32.31	-88.78	-33.44	0.00	0.00	0.00	
1200.00	7.00	250.00	1193.91	-36.48	-100.23	-37.75	0.00	0.00	0.00	
1300.00	7.00	250.00	1293.17	-40.65	-111.68	-42.07	0.00	0.00	0.00	
1400.00	7.00	250.00	1392.42	-44.82	-123.13	-46.38	0.00	0.00	0.00	
1500.00	7.00	250.00	1491.68	-48.99	-134.59	-50.70	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: 2-17-9-60 Wellpath: Original Hole	Date: 01/22/2013 Co-ordinate(NE) Reference: Vertical (TVD) Reference: Section (VS) Reference: Plan:	Time: 15:29:38 Well: 2-17-9-60, Grid North 4991'GL+17'KB 4508.0 Well (0.00N,0.00E,0.73Azi) 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
1600.00	7.00	250.00	1590.93	-53.15	-146.04	-55.01	0.00	0.00	0.00	
1700.00	7.00	250.00	1690.19	-57.32	-157.49	-59.32	0.00	0.00	0.00	
1800.00	7.00	250.00	1789.44	-61.49	-168.94	-63.64	0.00	0.00	0.00	
1900.00	7.00	250.00	1888.69	-65.66	-180.39	-67.95	0.00	0.00	0.00	
2000.00	7.00	250.00	1987.95	-69.83	-191.85	-72.26	0.00	0.00	0.00	
2100.00	7.00	250.00	2087.20	-73.99	-203.30	-76.58	0.00	0.00	0.00	
2200.00	7.00	250.00	2186.46	-78.16	-214.75	-80.89	0.00	0.00	0.00	
2300.00	7.00	250.00	2285.71	-82.33	-226.20	-85.21	0.00	0.00	0.00	
2400.00	7.00	250.00	2384.97	-86.50	-237.65	-89.52	0.00	0.00	0.00	
2500.00	7.00	250.00	2484.22	-90.67	-249.11	-93.83	0.00	0.00	0.00	
2600.00	7.00	250.00	2583.48	-94.84	-260.56	-98.15	0.00	0.00	0.00	
2700.00	7.00	250.00	2682.73	-99.00	-272.01	-102.46	0.00	0.00	0.00	
2800.00	7.00	250.00	2781.99	-103.17	-283.46	-106.77	0.00	0.00	0.00	
2900.00	7.00	250.00	2881.24	-107.34	-294.91	-111.09	0.00	0.00	0.00	
3000.00	7.00	250.00	2980.50	-111.51	-306.37	-115.40	0.00	0.00	0.00	
3100.00	7.00	250.00	3079.75	-115.68	-317.82	-119.72	0.00	0.00	0.00	
3200.00	7.00	250.00	3179.00	-119.84	-329.27	-124.03	0.00	0.00	0.00	
3300.00	7.00	250.00	3278.26	-124.01	-340.72	-128.34	0.00	0.00	0.00	
3400.00	7.00	250.00	3377.51	-128.18	-352.17	-132.66	0.00	0.00	0.00	
3500.00	7.00	250.00	3476.77	-132.35	-363.63	-136.97	0.00	0.00	0.00	
3600.00	7.00	250.00	3576.02	-136.52	-375.08	-141.28	0.00	0.00	0.00	
3700.00	7.00	250.00	3675.28	-140.69	-386.53	-145.60	0.00	0.00	0.00	
3800.00	7.00	250.00	3774.53	-144.85	-397.98	-149.91	0.00	0.00	0.00	
3900.00	7.00	250.00	3873.79	-149.02	-409.43	-154.23	0.00	0.00	0.00	
4000.00	7.00	250.00	3973.04	-153.19	-420.88	-158.54	0.00	0.00	0.00	
4100.00	7.00	250.00	4072.30	-157.36	-432.34	-162.85	0.00	0.00	0.00	
4200.00	7.00	250.00	4171.55	-161.53	-443.79	-167.17	0.00	0.00	0.00	
4300.00	7.00	250.00	4270.81	-165.69	-455.24	-171.48	0.00	0.00	0.00	
4400.00	7.00	250.00	4370.06	-169.86	-466.69	-175.79	0.00	0.00	0.00	
4500.00	7.00	250.00	4469.31	-174.03	-478.14	-180.11	0.00	0.00	0.00	
4600.00	7.00	250.00	4568.57	-178.20	-489.60	-184.42	0.00	0.00	0.00	
4700.00	7.00	250.00	4667.82	-182.37	-501.05	-188.74	0.00	0.00	0.00	
4800.00	7.00	250.00	4767.08	-186.54	-512.50	-193.05	0.00	0.00	0.00	
4900.00	7.00	250.00	4866.33	-190.70	-523.95	-197.36	0.00	0.00	0.00	
5000.00	7.00	250.00	4965.59	-194.87	-535.40	-201.68	0.00	0.00	0.00	
5100.00	7.00	250.00	5064.84	-199.04	-546.86	-205.99	0.00	0.00	0.00	
5200.00	7.00	250.00	5164.10	-203.21	-558.31	-210.30	0.00	0.00	0.00	
5300.00	7.00	250.00	5263.35	-207.38	-569.76	-214.62	0.00	0.00	0.00	
5400.00	7.00	250.00	5362.61	-211.54	-581.21	-218.93	0.00	0.00	0.00	
5500.00	7.00	250.00	5461.86	-215.71	-592.66	-223.25	0.00	0.00	0.00	
5600.00	7.00	250.00	5561.12	-219.88	-604.12	-227.56	0.00	0.00	0.00	
5700.00	7.00	250.00	5660.37	-224.05	-615.57	-231.87	0.00	0.00	0.00	
5792.16	7.00	250.00	5751.84	-227.89	-626.12	-235.85	0.00	0.00	0.00	
5800.00	7.63	253.67	5759.62	-228.20	-627.07	-236.17	10.00	8.03	46.83	
5850.00	12.08	267.42	5808.88	-229.37	-635.49	-237.45	10.00	8.89	27.49	
5900.00	16.83	273.67	5857.28	-229.14	-647.94	-237.38	10.00	9.51	12.51	
5950.00	21.70	277.21	5904.47	-227.52	-664.35	-235.96	10.00	9.73	7.07	
6000.00	26.61	279.49	5950.08	-224.51	-684.58	-233.21	10.00	9.83	4.57	
6014.09	28.00	280.00	5962.60	-223.41	-690.95	-232.20	10.00	9.86	3.60	
6050.00	28.74	287.40	5994.21	-219.37	-707.49	-228.36	10.00	2.05	20.61	
6100.00	30.39	296.98	6037.72	-210.03	-730.25	-219.31	10.00	3.31	19.15	
6150.00	32.67	305.50	6080.36	-196.45	-752.52	-206.02	10.00	4.56	17.04	
6200.00	35.45	312.92	6121.79	-178.72	-774.14	-188.57	10.00	5.57	14.85	

Precision Directional Services, Inc.

Planning Report

Company: CARRIZO OIL & GAS, INC. Field: Niobrara CONZ'83 Site: Nelson 2-17-9-60 Pad Well: 2-17-9-60 Wellpath: Original Hole	Date: 01/22/2013 Co-ordinate(NE) Reference: Vertical (TVD) Reference: Section (VS) Reference: Plan:	Time: 15:29:38 Well: 2-17-9-60, Grid North 4991'GL+17'KB 4508.0 Well (0.00N,0.00E,0.73Azi) 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
6250.00	38.63	319.34	6161.71	-156.99	-794.94	-167.11	10.00	6.36	12.83	
6300.00	42.11	324.88	6199.81	-131.43	-814.77	-141.80	10.00	6.96	11.09	
6350.00	45.83	329.71	6235.80	-102.21	-833.47	-112.82	10.00	7.43	9.65	
6400.00	49.72	333.95	6269.40	-69.57	-850.90	-80.41	10.00	7.79	8.48	
6450.00	53.75	337.72	6300.36	-33.76	-866.94	-44.80	10.00	8.06	7.54	
6500.00	57.89	341.11	6328.45	4.96	-881.44	-6.27	10.00	8.27	6.79	
6550.00	62.11	344.21	6353.45	46.28	-894.32	34.88	10.00	8.44	6.20	
6600.00	66.39	347.08	6375.17	89.90	-905.46	78.36	10.00	8.57	5.73	
6641.61	70.00	349.32	6390.63	127.71	-913.35	116.06	10.00	8.66	5.39	7"
6650.00	70.73	349.76	6393.45	135.48	-914.79	123.81	10.00	8.70	5.23	
6700.00	75.10	352.30	6408.14	182.67	-922.23	170.91	10.00	8.74	5.08	
6750.00	79.49	354.74	6419.13	231.12	-927.72	219.28	10.00	8.79	4.88	
6800.00	83.91	357.11	6426.35	280.46	-931.23	268.57	10.00	8.83	4.74	
6850.00	88.34	359.44	6429.73	330.31	-932.73	318.40	10.00	8.85	4.67	
6868.80	90.00	0.32	6430.00	349.10	-932.77	337.19	10.00	8.86	4.64	
6900.00	90.00	0.32	6430.00	380.30	-932.60	368.39	0.00	0.00	0.00	
7000.00	90.00	0.32	6430.00	480.30	-932.04	468.39	0.00	0.00	0.00	
7100.00	90.00	0.32	6430.00	580.30	-931.49	568.38	0.00	0.00	0.00	
7200.00	90.00	0.32	6430.00	680.30	-930.94	668.38	0.00	0.00	0.00	
7300.00	90.00	0.32	6430.00	780.30	-930.39	768.38	0.00	0.00	0.00	
7400.00	90.00	0.32	6430.00	880.30	-929.84	868.38	0.00	0.00	0.00	
7500.00	90.00	0.32	6430.00	980.29	-929.28	968.37	0.00	0.00	0.00	
7600.00	90.00	0.32	6430.00	1080.29	-928.73	1068.37	0.00	0.00	0.00	
7700.00	90.00	0.32	6430.00	1180.29	-928.18	1168.37	0.00	0.00	0.00	
7800.00	90.00	0.32	6430.00	1280.29	-927.63	1268.37	0.00	0.00	0.00	
7900.00	90.00	0.32	6430.00	1380.29	-927.07	1368.36	0.00	0.00	0.00	
8000.00	90.00	0.32	6430.00	1480.29	-926.52	1468.36	0.00	0.00	0.00	
8100.00	90.00	0.32	6430.00	1580.28	-925.97	1568.36	0.00	0.00	0.00	
8200.00	90.00	0.32	6430.00	1680.28	-925.42	1668.36	0.00	0.00	0.00	
8300.00	90.00	0.32	6430.00	1780.28	-924.86	1768.35	0.00	0.00	0.00	
8400.00	90.00	0.32	6430.00	1880.28	-924.31	1868.35	0.00	0.00	0.00	
8500.00	90.00	0.32	6430.00	1980.28	-923.76	1968.35	0.00	0.00	0.00	
8600.00	90.00	0.32	6430.00	2080.28	-923.21	2068.35	0.00	0.00	0.00	
8700.00	90.00	0.32	6430.00	2180.28	-922.65	2168.34	0.00	0.00	0.00	
8800.00	90.00	0.32	6430.00	2280.27	-922.10	2268.34	0.00	0.00	0.00	
8900.00	90.00	0.32	6430.00	2380.27	-921.55	2368.34	0.00	0.00	0.00	
9000.00	90.00	0.32	6430.00	2480.27	-921.00	2468.34	0.00	0.00	0.00	
9100.00	90.00	0.32	6430.00	2580.27	-920.45	2568.33	0.00	0.00	0.00	
9200.00	90.00	0.32	6430.00	2680.27	-919.89	2668.33	0.00	0.00	0.00	
9300.00	90.00	0.32	6430.00	2780.27	-919.34	2768.33	0.00	0.00	0.00	
9400.00	90.00	0.32	6430.00	2880.26	-918.79	2868.33	0.00	0.00	0.00	
9500.00	90.00	0.32	6430.00	2980.26	-918.24	2968.32	0.00	0.00	0.00	
9600.00	90.00	0.32	6430.00	3080.26	-917.68	3068.32	0.00	0.00	0.00	
9700.00	90.00	0.32	6430.00	3180.26	-917.13	3168.32	0.00	0.00	0.00	
9800.00	90.00	0.32	6430.00	3280.26	-916.58	3268.31	0.00	0.00	0.00	
9900.00	90.00	0.32	6430.00	3380.26	-916.03	3368.31	0.00	0.00	0.00	
10000.00	90.00	0.32	6430.00	3480.26	-915.47	3468.31	0.00	0.00	0.00	
10100.00	90.00	0.32	6430.00	3580.25	-914.92	3568.31	0.00	0.00	0.00	
10200.00	90.00	0.32	6430.00	3680.25	-914.37	3668.30	0.00	0.00	0.00	
10300.00	90.00	0.32	6430.00	3780.25	-913.82	3768.30	0.00	0.00	0.00	
10400.00	90.00	0.32	6430.00	3880.25	-913.26	3868.30	0.00	0.00	0.00	
10500.00	90.00	0.32	6430.00	3980.25	-912.71	3968.30	0.00	0.00	0.00	
10600.00	90.00	0.32	6430.00	4080.25	-912.16	4068.29	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: 2-17-9-60 Wellpath: Original Hole	Date: 01/22/2013 Co-ordinate(NE) Reference: Vertical (TVD) Reference: Section (VS) Reference: Plan:	Time: 15:29:38 Well: 2-17-9-60, Grid North 4991'GL+17"KB 4508.0 Well (0.00N,0.00E,0.73Azi) 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
10700.00	90.00	0.32	6430.00	4180.24	-911.61	4168.29	0.00	0.00	0.00	
10800.00	90.00	0.32	6430.00	4280.24	-911.06	4268.29	0.00	0.00	0.00	
10819.05	90.00	0.32	6430.00	4299.29	-910.95	4287.34	0.00	0.00	0.00	PBHL 2-17

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 2-17			0.00	0.00	0.00	1516469.00	3382061.35	40	44	34.562 N	104	7	16.287 W
PBHL 2-17			6430.00	4299.29	-910.95	1520768.29	3381150.40	40	45	17.179 N	104	7	27.254 W

Casing Points

MD ft	TVD ft	Diameter in	Hole Size in	Name
6641.61	6390.63	7.000	8.750	7"