

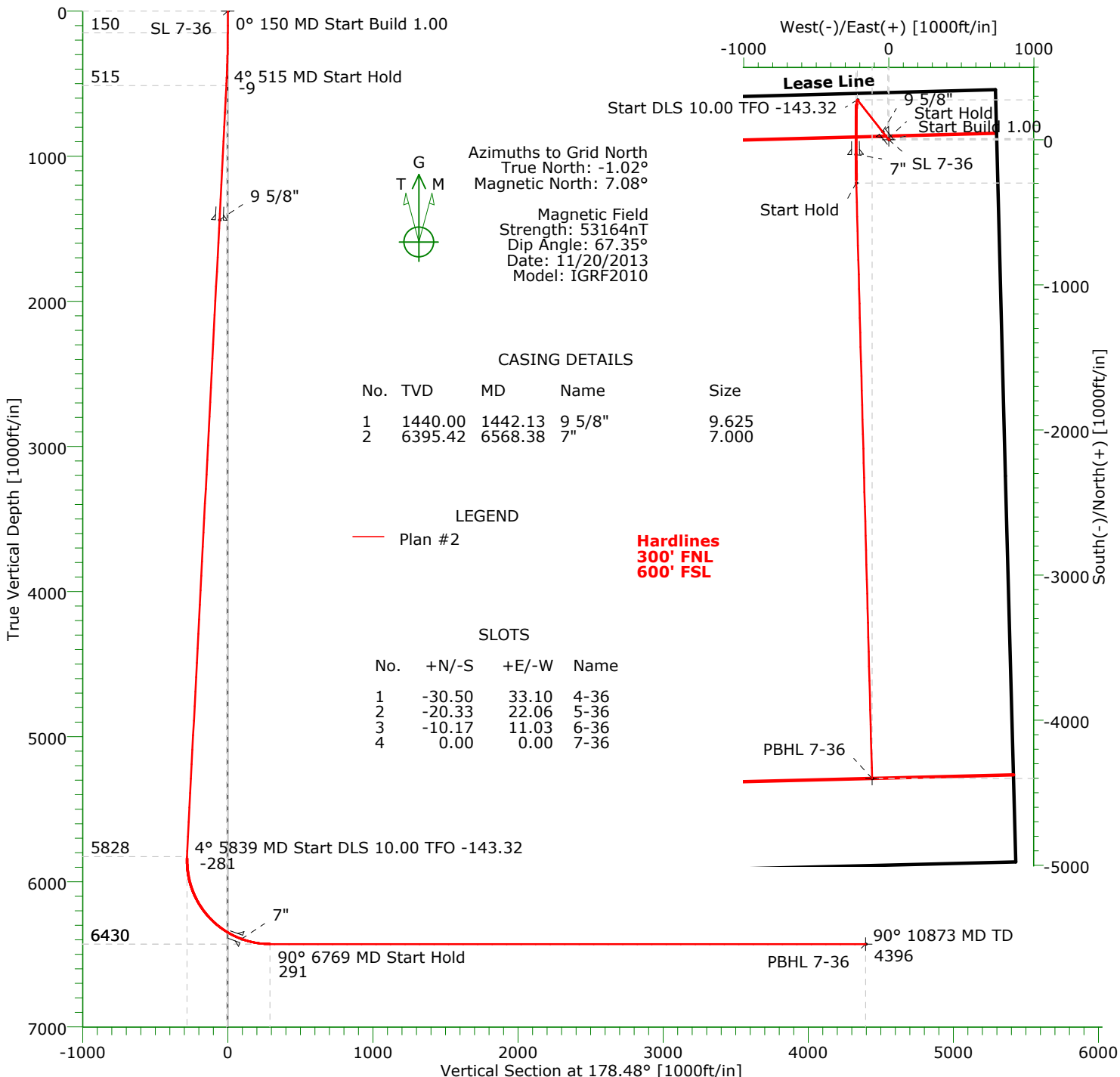


CARRIZO OIL & GAS, INC.

Field: Niobrara CONZ'83
Site: Castor 4-36-9-59 Pad
Well: 7-36-9-59
Wellpath: Original Hole
Plan: Plan #2



Precision
Directional Services



Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Shape
SL 7-36	0.00	0.00	0.00	1506712.92	3438242.99	40°42'48.910N103°55'08.773W		Point
PBHL 7-36	6430.00	-4400.16	-115.34	1502312.76	3438127.65	40°42'05.459N103°55'11.288W		Point

SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	DLeg	TFace	VSec	Target
1	0.00	0.00	321.85	0.00	0.00	0.00	0.00	0.00	0.00	
2	150.00	0.00	321.85	150.00	0.00	0.00	0.00	321.85	0.00	
3	514.88	3.65	321.85	514.63	9.13	-7.17	1.00	0.00	-9.32	
4	5839.25	3.65	321.85	5828.21	275.62	-216.47	0.00	0.00	-281.26	
5	6768.53	90.00	178.48	6430.00	-297.00	-224.18	10.00	-143.32	290.95	
6	10873.13	90.00	178.48	6430.00	-4400.16	-115.34	0.00	0.00	4395.55	PBHL 7-36

Precision Directional Services, Inc.

Planning Report

Company: CARRIZO OIL & GAS, INC.				Date: 10/31/2013		Time: 14:00:14		Page: 1	
Field: Niobrara CONZ'83				Co-ordinate(NE) Reference: Well: 7-36-9-59, Grid North					
Site: Castor 4-36-9-59 Pad				Vertical (TVD) Reference: 4890'PE+17'KB 4907.0					
Well: 7-36-9-59				Section (VS) Reference: Well (0.00N,0.00E,178.48Azi)					
Wellpath: Original Hole				Plan: Plan #2					

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: Castor 4-36-9-59 Pad Weld County, CO renamed 9-9-13									
Site Position:		Northing: 1506682.42 ft		Latitude: 40 42 48.603 N					
From: Map		Easting: 3438276.09 ft		Longitude: 103 55 8.350 W					
Position Uncertainty: 0.00 ft				North Reference: Grid					
Ground Level: 4890.00 ft				Grid Convergence: 1.02 deg					

Well: 7-36-9-59				Slot Name: 7-36					
Well Position: +N/-S 30.50 ft		Northing: 1506712.92 ft		Latitude: 40 42 48.910 N					
+E/-W -33.10 ft		Easting : 3438242.99 ft		Longitude: 103 55 8.773 W					
Position Uncertainty: 0.00 ft									

Wellpath: Original Hole				Drilled From: Surface					
Current Datum: 4890'PE+17'KB		Height 4907.00 ft		Tie-on Depth: 0.00 ft					
Magnetic Data: 11/20/2013				Above System Datum: Mean Sea Level					
Field Strength: 53164 nT				Declination: 8.10 deg					
Vertical Section: Depth From (TVD)		+N/-S		Mag Dip Angle: 67.35 deg					
ft		ft		+E/-W		Direction			
0.00		0.00		ft		deg			
				0.00		178.48			

Plan: Plan #2 updated offsets				Date Composed: 10/31/2013					
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	321.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
150.00	0.00	321.85	150.00	0.00	0.00	0.00	0.00	0.00	321.85	
514.88	3.65	321.85	514.63	9.13	-7.17	1.00	1.00	0.00	0.00	
5839.25	3.65	321.85	5828.21	275.62	-216.47	0.00	0.00	0.00	0.00	
6768.53	90.00	178.48	6430.00	-297.00	-224.18	10.00	9.29	-15.43	-143.32	
10873.13	90.00	178.48	6430.00	-4400.16	-115.34	0.00	0.00	0.00	0.00	PBHL 7-36

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	321.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
100.00	0.00	321.85	100.00	0.00	0.00	0.00	0.00	0.00	0.00	
150.00	0.00	321.85	150.00	0.00	0.00	0.00	0.00	0.00	0.00	
200.00	0.50	321.85	200.00	0.17	-0.13	-0.18	1.00	1.00	0.00	
300.00	1.50	321.85	299.98	1.54	-1.21	-1.58	1.00	1.00	0.00	
400.00	2.50	321.85	399.92	4.29	-3.37	-4.38	1.00	1.00	0.00	
500.00	3.50	321.85	499.78	8.40	-6.60	-8.58	1.00	1.00	0.00	
514.88	3.65	321.85	514.63	9.13	-7.17	-9.32	1.00	1.00	0.00	
600.00	3.65	321.85	599.58	13.39	-10.52	-13.67	0.00	0.00	0.00	
700.00	3.65	321.85	699.38	18.40	-14.45	-18.78	0.00	0.00	0.00	
800.00	3.65	321.85	799.18	23.40	-18.38	-23.88	0.00	0.00	0.00	
900.00	3.65	321.85	898.97	28.41	-22.31	-28.99	0.00	0.00	0.00	
1000.00	3.65	321.85	998.77	33.41	-26.24	-34.10	0.00	0.00	0.00	
1100.00	3.65	321.85	1098.57	38.42	-30.17	-39.21	0.00	0.00	0.00	
1200.00	3.65	321.85	1198.36	43.42	-34.10	-44.31	0.00	0.00	0.00	

Precision Directional Services, Inc.

Planning Report

Company: CARRIZO OIL & GAS, INC.
Field: Niobrara CONZ'83
Site: Castor 4-36-9-59 Pad
Well: 7-36-9-59
Wellpath: Original Hole

Date: 10/31/2013
Co-ordinate(NE) Reference: Well: 7-36-9-59, Grid North
Vertical (TVD) Reference: 4890'PE+17'KB 4907.0
Section (VS) Reference: Well (0.00N,0.00E,178.48Azi)
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
1300.00	3.65	321.85	1298.16	48.43	-38.04	-49.42	0.00	0.00	0.00	9 5/8"
1400.00	3.65	321.85	1397.96	53.43	-41.97	-54.53	0.00	0.00	0.00	
1442.13	3.65	321.85	1440.00	55.54	-43.62	-56.68	0.00	0.00	0.00	
1500.00	3.65	321.85	1497.76	58.44	-45.90	-59.64	0.00	0.00	0.00	
1600.00	3.65	321.85	1597.55	63.44	-49.83	-64.74	0.00	0.00	0.00	
1700.00	3.65	321.85	1697.35	68.45	-53.76	-69.85	0.00	0.00	0.00	
1800.00	3.65	321.85	1797.15	73.45	-57.69	-74.96	0.00	0.00	0.00	
1900.00	3.65	321.85	1896.95	78.46	-61.62	-80.07	0.00	0.00	0.00	
2000.00	3.65	321.85	1996.74	83.46	-65.55	-85.17	0.00	0.00	0.00	
2100.00	3.65	321.85	2096.54	88.47	-69.48	-90.28	0.00	0.00	0.00	
2200.00	3.65	321.85	2196.34	93.47	-73.41	-95.39	0.00	0.00	0.00	
2300.00	3.65	321.85	2296.13	98.48	-77.34	-100.50	0.00	0.00	0.00	
2400.00	3.65	321.85	2395.93	103.48	-81.28	-105.60	0.00	0.00	0.00	
2500.00	3.65	321.85	2495.73	108.49	-85.21	-110.71	0.00	0.00	0.00	
2600.00	3.65	321.85	2595.53	113.49	-89.14	-115.82	0.00	0.00	0.00	
2700.00	3.65	321.85	2695.32	118.50	-93.07	-120.93	0.00	0.00	0.00	
2800.00	3.65	321.85	2795.12	123.50	-97.00	-126.03	0.00	0.00	0.00	
2900.00	3.65	321.85	2894.92	128.51	-100.93	-131.14	0.00	0.00	0.00	
3000.00	3.65	321.85	2994.72	133.51	-104.86	-136.25	0.00	0.00	0.00	
3100.00	3.65	321.85	3094.51	138.52	-108.79	-141.35	0.00	0.00	0.00	
3200.00	3.65	321.85	3194.31	143.52	-112.72	-146.46	0.00	0.00	0.00	
3300.00	3.65	321.85	3294.11	148.53	-116.65	-151.57	0.00	0.00	0.00	
3400.00	3.65	321.85	3393.90	153.53	-120.58	-156.68	0.00	0.00	0.00	
3500.00	3.65	321.85	3493.70	158.54	-124.51	-161.78	0.00	0.00	0.00	
3600.00	3.65	321.85	3593.50	163.54	-128.45	-166.89	0.00	0.00	0.00	
3700.00	3.65	321.85	3693.30	168.55	-132.38	-172.00	0.00	0.00	0.00	
3800.00	3.65	321.85	3793.09	173.55	-136.31	-177.11	0.00	0.00	0.00	
3900.00	3.65	321.85	3892.89	178.56	-140.24	-182.21	0.00	0.00	0.00	
4000.00	3.65	321.85	3992.69	183.56	-144.17	-187.32	0.00	0.00	0.00	
4100.00	3.65	321.85	4092.49	188.57	-148.10	-192.43	0.00	0.00	0.00	
4200.00	3.65	321.85	4192.28	193.57	-152.03	-197.54	0.00	0.00	0.00	
4300.00	3.65	321.85	4292.08	198.58	-155.96	-202.64	0.00	0.00	0.00	
4400.00	3.65	321.85	4391.88	203.58	-159.89	-207.75	0.00	0.00	0.00	
4500.00	3.65	321.85	4491.68	208.59	-163.82	-212.86	0.00	0.00	0.00	
4600.00	3.65	321.85	4591.47	213.59	-167.75	-217.97	0.00	0.00	0.00	
4700.00	3.65	321.85	4691.27	218.60	-171.68	-223.07	0.00	0.00	0.00	
4800.00	3.65	321.85	4791.07	223.60	-175.62	-228.18	0.00	0.00	0.00	
4900.00	3.65	321.85	4890.86	228.61	-179.55	-233.29	0.00	0.00	0.00	
5000.00	3.65	321.85	4990.66	233.61	-183.48	-238.40	0.00	0.00	0.00	
5100.00	3.65	321.85	5090.46	238.62	-187.41	-243.50	0.00	0.00	0.00	
5200.00	3.65	321.85	5190.26	243.62	-191.34	-248.61	0.00	0.00	0.00	
5300.00	3.65	321.85	5290.05	248.63	-195.27	-253.72	0.00	0.00	0.00	
5400.00	3.65	321.85	5389.85	253.63	-199.20	-258.83	0.00	0.00	0.00	
5500.00	3.65	321.85	5489.65	258.64	-203.13	-263.93	0.00	0.00	0.00	
5600.00	3.65	321.85	5589.45	263.64	-207.06	-269.04	0.00	0.00	0.00	
5700.00	3.65	321.85	5689.24	268.65	-210.99	-274.15	0.00	0.00	0.00	
5800.00	3.65	321.85	5789.04	273.65	-214.92	-279.26	0.00	0.00	0.00	
5839.25	3.65	321.85	5828.21	275.62	-216.47	-281.26	0.00	0.00	0.00	
5900.00	3.83	213.14	5888.89	275.44	-218.77	-281.14	10.00	0.29	-178.96	
6000.00	13.32	187.73	5987.68	261.19	-222.15	-266.99	10.00	9.50	-25.42	
6100.00	23.24	183.56	6082.52	230.00	-224.94	-235.89	10.00	9.92	-4.16	
6200.00	33.21	181.81	6170.52	182.81	-227.03	-188.77	10.00	9.97	-1.75	
6300.00	43.19	180.80	6249.00	121.07	-228.38	-127.08	10.00	9.98	-1.01	
6400.00	53.18	180.11	6315.59	46.63	-228.94	-52.69	10.00	9.99	-0.69	

Precision Directional Services, Inc.

Planning Report

Company: CARRIZO OIL & GAS, INC.
Field: Niobrara CONZ'83
Site: Castor 4-36-9-59 Pad
Well: 7-36-9-59
Wellpath: Original Hole

Date: 10/31/2013
Co-ordinate(NE) Reference: Well: 7-36-9-59, Grid North
Vertical (TVD) Reference: 4890'PE+17'KB 4907.0
Section (VS) Reference: Well (0.00N,0.00E,178.48Azi)
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
6500.00	63.17	179.58	6368.26	-38.22	-228.69	32.14	10.00	9.99	-0.53	
6568.38	70.00	179.27	6395.42	-100.93	-228.07	94.84	10.00	9.99	-0.45	7"
6600.00	73.16	179.14	6405.41	-130.92	-227.65	124.84	10.00	9.99	-0.42	
6700.00	83.15	178.74	6425.91	-228.65	-225.84	222.58	10.00	9.99	-0.40	
6768.53	90.00	178.48	6430.00	-297.00	-224.18	290.95	10.00	9.99	-0.38	
6800.00	90.00	178.48	6430.00	-328.46	-223.35	322.42	0.00	0.00	0.00	
6900.00	90.00	178.48	6430.00	-428.42	-220.69	422.42	0.00	0.00	0.00	
7000.00	90.00	178.48	6430.00	-528.39	-218.04	522.42	0.00	0.00	0.00	
7100.00	90.00	178.48	6430.00	-628.35	-215.39	622.42	0.00	0.00	0.00	
7200.00	90.00	178.48	6430.00	-728.32	-212.74	722.42	0.00	0.00	0.00	
7300.00	90.00	178.48	6430.00	-828.28	-210.09	822.42	0.00	0.00	0.00	
7400.00	90.00	178.48	6430.00	-928.25	-207.44	922.42	0.00	0.00	0.00	
7500.00	90.00	178.48	6430.00	-1028.21	-204.78	1022.42	0.00	0.00	0.00	
7600.00	90.00	178.48	6430.00	-1128.18	-202.13	1122.42	0.00	0.00	0.00	
7700.00	90.00	178.48	6430.00	-1228.14	-199.48	1222.42	0.00	0.00	0.00	
7800.00	90.00	178.48	6430.00	-1328.11	-196.83	1322.42	0.00	0.00	0.00	
7900.00	90.00	178.48	6430.00	-1428.07	-194.18	1422.42	0.00	0.00	0.00	
8000.00	90.00	178.48	6430.00	-1528.04	-191.52	1522.42	0.00	0.00	0.00	
8100.00	90.00	178.48	6430.00	-1628.00	-188.87	1622.42	0.00	0.00	0.00	
8200.00	90.00	178.48	6430.00	-1727.97	-186.22	1722.42	0.00	0.00	0.00	
8300.00	90.00	178.48	6430.00	-1827.93	-183.57	1822.42	0.00	0.00	0.00	
8400.00	90.00	178.48	6430.00	-1927.90	-180.92	1922.42	0.00	0.00	0.00	
8500.00	90.00	178.48	6430.00	-2027.86	-178.27	2022.42	0.00	0.00	0.00	
8600.00	90.00	178.48	6430.00	-2127.83	-175.61	2122.42	0.00	0.00	0.00	
8700.00	90.00	178.48	6430.00	-2227.79	-172.96	2222.42	0.00	0.00	0.00	
8800.00	90.00	178.48	6430.00	-2327.76	-170.31	2322.42	0.00	0.00	0.00	
8900.00	90.00	178.48	6430.00	-2427.72	-167.66	2422.42	0.00	0.00	0.00	
9000.00	90.00	178.48	6430.00	-2527.69	-165.01	2522.42	0.00	0.00	0.00	
9100.00	90.00	178.48	6430.00	-2627.65	-162.36	2622.42	0.00	0.00	0.00	
9200.00	90.00	178.48	6430.00	-2727.61	-159.70	2722.42	0.00	0.00	0.00	
9300.00	90.00	178.48	6430.00	-2827.58	-157.05	2822.42	0.00	0.00	0.00	
9400.00	90.00	178.48	6430.00	-2927.54	-154.40	2922.42	0.00	0.00	0.00	
9500.00	90.00	178.48	6430.00	-3027.51	-151.75	3022.42	0.00	0.00	0.00	
9600.00	90.00	178.48	6430.00	-3127.47	-149.10	3122.42	0.00	0.00	0.00	
9700.00	90.00	178.48	6430.00	-3227.44	-146.45	3222.42	0.00	0.00	0.00	
9800.00	90.00	178.48	6430.00	-3327.40	-143.79	3322.42	0.00	0.00	0.00	
9900.00	90.00	178.48	6430.00	-3427.37	-141.14	3422.42	0.00	0.00	0.00	
10000.00	90.00	178.48	6430.00	-3527.33	-138.49	3522.42	0.00	0.00	0.00	
10100.00	90.00	178.48	6430.00	-3627.30	-135.84	3622.42	0.00	0.00	0.00	
10200.00	90.00	178.48	6430.00	-3727.26	-133.19	3722.42	0.00	0.00	0.00	
10300.00	90.00	178.48	6430.00	-3827.23	-130.54	3822.42	0.00	0.00	0.00	
10400.00	90.00	178.48	6430.00	-3927.19	-127.88	3922.42	0.00	0.00	0.00	
10500.00	90.00	178.48	6430.00	-4027.16	-125.23	4022.42	0.00	0.00	0.00	
10600.00	90.00	178.48	6430.00	-4127.12	-122.58	4122.42	0.00	0.00	0.00	
10700.00	90.00	178.48	6430.00	-4227.09	-119.93	4222.42	0.00	0.00	0.00	
10800.00	90.00	178.48	6430.00	-4327.05	-117.28	4322.42	0.00	0.00	0.00	
10873.13	90.00	178.48	6430.00	-4400.16	-115.34	4395.55	0.00	0.00	0.00	PBHL 7-36

Precision Directional Services, Inc.

Planning Report

Company: CARRIZO OIL & GAS, INC.
Field: Niobrara CONZ'83
Site: Castor 4-36-9-59 Pad
Well: 7-36-9-59
Wellpath: Original Hole

Date: 10/31/2013
Co-ordinate(NE) Reference: Well: 7-36-9-59, Grid North
Vertical (TVD) Reference: 4890'PE+17'KB 4907.0
Section (VS) Reference: Well (0.00N,0.00E,178.48Azi)
Plan: Plan #2

Page: 4

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 7-36			0.00	0.00	0.00	1506712.923438242.99		40 42 48.910 N	103 55 8.773 W
PBHL 7-36			6430.00	-4400.16	-115.34	1502312.763438127.65		40 42 5.459 N	103 55 11.288 W

Casing Points

MD ft	TVD ft	Diameter in	Hole Size in	Name
1442.13	1440.00	9.625	12.250	9 5/8"
6568.38	6395.42	7.000	8.500	7"