



Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Shape
SL 2-10	0.00	0.00	0.00	1522093.75	3391371.57	40°45'28.686N	104°05'14.184W	Point
PBHL 2-10	6490.00	4458.47	917.05	1526552.22	3392288.62	40°46'12.590N	104°05'01.343W	Point

SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	DLeg	TFace	VSec	Target
1	0.00	0.00	104.55	0.00	0.00	0.00	0.00	0.00	0.00	
2	150.00	0.00	104.55	150.00	0.00	0.00	0.00	104.55	0.00	
3	500.00	7.00	104.55	499.13	-5.36	20.67	2.00	104.55	-5.77	
4	5946.47	7.00	104.55	5905.00	-172.12	663.14	0.00	0.00	-185.28	
5	6206.06	30.00	55.00	6150.45	-138.29	732.81	10.00	299.63	-152.84	
6	6892.22	90.00	10.00	6490.00	360.28	961.48	10.10	310.89	341.08	
7	7262.97	90.00	358.88	6490.00	729.34	990.12	3.00	-90.00	709.50	
8	10992.82	90.00	358.88	6490.00	4458.47	917.05	0.00	0.00	4439.34	PBHL 2-10

Precision Directional Services, Inc.

Planning Report

Company: CARRIZO OIL & GAS, INC.		Date: 07/03/2014		Time: 13:11:33		Page: 1	
Field: Niobrara CONZ'83		Co-ordinate(NE) Reference: Well: 2-10-9-60, Grid North					
Site: Dietzler 10-14-9-60		Vertical (TVD) Reference: 5090'GL+17'KB 5107.0					
Well: 2-10-9-60		Section (VS) Reference: Well (0.00N,0.00E,358.86Azi)					
Wellpath: Original Hole		Plan: Plan #1					

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: Dietzler 10-14-9-60 S:10,T:9N,R:60W Weld County, CO			
Site Position:	Northing: 1522108.94 ft	Latitude: 40 45 28.836 N	
From: Map	Easting: 3391371.77 ft	Longitude: 104 5 14.178 W	
Position Uncertainty: 0.00 ft		North Reference: Grid	
Ground Level: 5090.00 ft		Grid Convergence: 0.91 deg	

Well: 2-10-9-60		Slot Name:	
Well Position: +N/-S -15.19 ft	Northing: 1522093.75 ft	Latitude: 40 45 28.686 N	
+E/-W -0.20 ft	Easting : 3391371.57 ft	Longitude: 104 5 14.184 W	
Position Uncertainty: 0.00 ft			

Wellpath: Original Hole		Drilled From: Surface	
Current Datum: 5090'GL+17'KB	Height 5107.00 ft	Tie-on Depth: 0.00 ft	
Magnetic Data: 08/04/2014		Above System Datum: Mean Sea Level	
Field Strength: 53095 nT		Declination: 8.10 deg	
Vertical Section: Depth From (TVD)	+N/-S	Mag Dip Angle: 67.34 deg	
ft	ft	+E/-W	Direction
		ft	bearing
0.00	0.00	0.00	358.86

Plan: Plan #1		Date Composed: 07/03/2014	
Principal: No		Version: 1	
		Tied-to: From Surface	

Plan Section Information										
MD ft	Incl deg	Azim bearing	TVD ft	+N/-S ft	+E/-W ft	DLS deg/100ft	Build deg/100ft	Turn deg/100ft	TFO deg	Target
0.00	0.00	104.55	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
150.00	0.00	104.55	150.00	0.00	0.00	0.00	0.00	0.00	104.55	
500.00	7.00	104.55	499.13	-5.36	20.67	2.00	2.00	0.00	104.55	
5946.47	7.00	104.55	5905.00	-172.12	663.14	0.00	0.00	0.00	0.00	
6206.06	30.00	55.00	6150.45	-138.29	732.81	10.00	8.86	-19.09	299.63	
6892.22	90.00	10.00	6490.00	360.28	961.48	10.10	8.74	-6.56	310.89	
7262.97	90.00	358.88	6490.00	729.34	990.12	3.00	0.00	-3.00	-90.00	
10992.82	90.00	358.88	6490.00	4458.47	917.05	0.00	0.00	0.00	0.00	PBHL 2-10

Survey										
MD ft	Incl deg	Azim bearing	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	104.55	150.00	0.00	0.00	0.00	0.00	0.00	0.00	
200.00	1.00	104.55	200.00	-0.11	0.42	-0.12	2.00	2.00	0.00	
300.00	3.00	104.55	299.93	-0.99	3.80	-1.06	2.00	2.00	0.00	
400.00	5.00	104.55	399.68	-2.74	10.55	-2.95	2.00	2.00	0.00	
500.00	7.00	104.55	499.13	-5.36	20.67	-5.77	2.00	2.00	0.00	
600.00	7.00	104.55	598.38	-8.43	32.46	-9.07	0.00	0.00	0.00	
700.00	7.00	104.55	697.64	-11.49	44.26	-12.37	0.00	0.00	0.00	
800.00	7.00	104.55	796.89	-14.55	56.06	-15.66	0.00	0.00	0.00	
900.00	7.00	104.55	896.15	-17.61	67.85	-18.96	0.00	0.00	0.00	
1000.00	7.00	104.55	995.40	-20.67	79.65	-22.25	0.00	0.00	0.00	
1100.00	7.00	104.55	1094.66	-23.73	91.45	-25.55	0.00	0.00	0.00	
1200.00	7.00	104.55	1193.91	-26.80	103.24	-28.84	0.00	0.00	0.00	
1300.00	7.00	104.55	1293.17	-29.86	115.04	-32.14	0.00	0.00	0.00	
1400.00	7.00	104.55	1392.42	-32.92	126.83	-35.44	0.00	0.00	0.00	

Precision Directional Services, Inc.

Planning Report

Company: CARRIZO OIL & GAS, INC.
Field: Niobrara CONZ'83
Site: Dietzler 10-14-9-60
Well: 2-10-9-60
Wellpath: Original Hole

Date: 07/03/2014
Co-ordinate(NE) Reference: Well: 2-10-9-60, Grid North
Vertical (TVD) Reference: 5090'GL+17'KB 5107.0
Section (VS) Reference: Well (0.00N,0.00E,358.86Azi)
Plan: Plan #1

Page: 2

Survey

MD ft	Incl deg	Azim bearing	TVD ft	+N/-S ft	+E/-W ft	VS ft	DLS deg/100ft	Build deg/100ft	Turn deg/100ft	Tool/Comment
1407.64	7.00	104.55	1400.00	-33.15	127.73	-35.69	0.00	0.00	0.00	9 5/8"
1500.00	7.00	104.55	1491.68	-35.98	138.63	-38.73	0.00	0.00	0.00	
1600.00	7.00	104.55	1590.93	-39.04	150.43	-42.03	0.00	0.00	0.00	
1700.00	7.00	104.55	1690.19	-42.10	162.22	-45.32	0.00	0.00	0.00	
1800.00	7.00	104.55	1789.44	-45.17	174.02	-48.62	0.00	0.00	0.00	
1900.00	7.00	104.55	1888.69	-48.23	185.81	-51.92	0.00	0.00	0.00	
2000.00	7.00	104.55	1987.95	-51.29	197.61	-55.21	0.00	0.00	0.00	
2100.00	7.00	104.55	2087.20	-54.35	209.41	-58.51	0.00	0.00	0.00	
2200.00	7.00	104.55	2186.46	-57.41	221.20	-61.80	0.00	0.00	0.00	
2300.00	7.00	104.55	2285.71	-60.47	233.00	-65.10	0.00	0.00	0.00	
2400.00	7.00	104.55	2384.97	-63.54	244.79	-68.39	0.00	0.00	0.00	
2500.00	7.00	104.55	2484.22	-66.60	256.59	-71.69	0.00	0.00	0.00	
2600.00	7.00	104.55	2583.48	-69.66	268.39	-74.99	0.00	0.00	0.00	
2700.00	7.00	104.55	2682.73	-72.72	280.18	-78.28	0.00	0.00	0.00	
2800.00	7.00	104.55	2781.99	-75.78	291.98	-81.58	0.00	0.00	0.00	
2900.00	7.00	104.55	2881.24	-78.84	303.77	-84.87	0.00	0.00	0.00	
3000.00	7.00	104.55	2980.50	-81.91	315.57	-88.17	0.00	0.00	0.00	
3100.00	7.00	104.55	3079.75	-84.97	327.37	-91.46	0.00	0.00	0.00	
3200.00	7.00	104.55	3179.00	-88.03	339.16	-94.76	0.00	0.00	0.00	
3300.00	7.00	104.55	3278.26	-91.09	350.96	-98.06	0.00	0.00	0.00	
3400.00	7.00	104.55	3377.51	-94.15	362.76	-101.35	0.00	0.00	0.00	
3500.00	7.00	104.55	3476.77	-97.21	374.55	-104.65	0.00	0.00	0.00	
3600.00	7.00	104.55	3576.02	-100.28	386.35	-107.94	0.00	0.00	0.00	
3700.00	7.00	104.55	3675.28	-103.34	398.14	-111.24	0.00	0.00	0.00	
3800.00	7.00	104.55	3774.53	-106.40	409.94	-114.53	0.00	0.00	0.00	
3900.00	7.00	104.55	3873.79	-109.46	421.74	-117.83	0.00	0.00	0.00	
4000.00	7.00	104.55	3973.04	-112.52	433.53	-121.13	0.00	0.00	0.00	
4100.00	7.00	104.55	4072.30	-115.58	445.33	-124.42	0.00	0.00	0.00	
4200.00	7.00	104.55	4171.55	-118.65	457.12	-127.72	0.00	0.00	0.00	
4300.00	7.00	104.55	4270.81	-121.71	468.92	-131.01	0.00	0.00	0.00	
4400.00	7.00	104.55	4370.06	-124.77	480.72	-134.31	0.00	0.00	0.00	
4500.00	7.00	104.55	4469.31	-127.83	492.51	-137.60	0.00	0.00	0.00	
4600.00	7.00	104.55	4568.57	-130.89	504.31	-140.90	0.00	0.00	0.00	
4700.00	7.00	104.55	4667.82	-133.95	516.10	-144.20	0.00	0.00	0.00	
4800.00	7.00	104.55	4767.08	-137.02	527.90	-147.49	0.00	0.00	0.00	
4900.00	7.00	104.55	4866.33	-140.08	539.70	-150.79	0.00	0.00	0.00	
5000.00	7.00	104.55	4965.59	-143.14	551.49	-154.08	0.00	0.00	0.00	
5100.00	7.00	104.55	5064.84	-146.20	563.29	-157.38	0.00	0.00	0.00	
5200.00	7.00	104.55	5164.10	-149.26	575.08	-160.67	0.00	0.00	0.00	
5300.00	7.00	104.55	5263.35	-152.32	586.88	-163.97	0.00	0.00	0.00	
5400.00	7.00	104.55	5362.61	-155.39	598.68	-167.27	0.00	0.00	0.00	
5500.00	7.00	104.55	5461.86	-158.45	610.47	-170.56	0.00	0.00	0.00	
5600.00	7.00	104.55	5561.12	-161.51	622.27	-173.86	0.00	0.00	0.00	
5700.00	7.00	104.55	5660.37	-164.57	634.07	-177.15	0.00	0.00	0.00	
5800.00	7.00	104.55	5759.62	-167.63	645.86	-180.45	0.00	0.00	0.00	
5900.00	7.00	104.55	5858.88	-170.69	657.66	-183.74	0.00	0.00	0.00	
5946.47	7.00	104.55	5905.00	-172.12	663.14	-185.28	0.00	0.00	0.00	
5950.00	7.18	102.09	5908.51	-172.22	663.56	-185.39	10.00	5.13	-69.55	
6000.00	10.71	78.67	5957.91	-171.96	671.18	-185.28	10.00	7.05	-46.85	
6050.00	15.08	67.65	6006.64	-168.57	681.75	-182.10	10.00	8.75	-22.02	
6100.00	19.75	61.63	6054.34	-162.08	695.21	-175.88	10.00	9.34	-12.05	
6150.00	24.55	57.86	6100.64	-152.53	711.45	-166.66	10.00	9.59	-7.54	
6200.00	29.41	55.26	6145.19	-140.00	730.34	-154.51	10.00	9.72	-5.19	

Precision Directional Services, Inc.

Planning Report

Company: CARRIZO OIL & GAS, INC.
Field: Niobrara CONZ'83
Site: Dietzler 10-14-9-60
Well: 2-10-9-60
Wellpath: Original Hole

Date: 07/03/2014
Co-ordinate(NE) Reference: Well: 2-10-9-60, Grid North
Vertical (TVD) Reference: 5090'GL+17'KB 5107.0
Section (VS) Reference: Well (0.00N,0.00E,358.86Azi)
Plan: Plan #1

Page: 3

Survey

MD ft	Incl deg	Azim bearing	TVD ft	+N/-S ft	+E/-W ft	VS ft	DLS deg/100ft	Build deg/100ft	Turn deg/100ft	Tool/Comment
6206.06	30.00	55.00	6150.45	-138.29	732.81	-152.84	10.00	9.77	-4.31	
6250.00	33.06	48.85	6187.91	-124.09	750.84	-139.01	10.10	6.96	-14.01	
6300.00	36.85	43.01	6228.89	-104.14	771.35	-119.47	10.10	7.58	-11.67	
6350.00	40.87	38.15	6267.83	-80.30	791.69	-96.03	10.10	8.05	-9.73	
6400.00	45.07	34.03	6304.41	-52.74	811.71	-68.88	10.10	8.40	-8.23	
6450.00	49.40	30.48	6338.36	-21.69	831.26	-38.23	10.10	8.65	-7.10	
6500.00	53.82	27.37	6369.40	12.61	850.18	-4.31	10.10	8.85	-6.22	
6550.00	58.32	24.59	6397.31	49.90	868.32	32.61	10.10	8.99	-5.55	
6600.00	62.87	22.08	6421.85	89.89	885.55	72.25	10.10	9.10	-5.04	
6650.00	67.46	19.76	6442.85	132.26	901.73	114.30	10.10	9.18	-4.64	
6677.51	70.00	18.55	6452.83	156.48	910.13	138.34	10.10	9.23	-4.40	7"
6700.00	72.08	17.59	6460.14	176.70	916.73	158.42	10.10	9.26	-4.27	
6750.00	76.72	15.53	6473.58	222.85	930.44	204.29	10.10	9.29	-4.12	
6800.00	81.38	13.55	6483.08	270.35	942.75	251.54	10.10	9.32	-3.96	
6850.00	86.05	11.61	6488.55	318.84	953.57	299.81	10.10	9.34	-3.87	
6892.22	90.00	10.00	6490.00	360.28	961.48	341.08	10.10	9.35	-3.82	
6900.00	90.00	9.77	6490.00	367.94	962.81	348.72	3.00	0.00	-3.00	
7000.00	90.00	6.77	6490.00	466.89	977.19	447.36	3.00	0.00	-3.00	
7100.00	90.00	3.77	6490.00	566.46	986.37	546.72	3.00	0.00	-3.00	
7200.00	90.00	0.77	6490.00	666.37	990.32	646.54	3.00	0.00	-3.00	
7262.97	90.00	358.88	6490.00	729.34	990.12	709.50	3.00	0.00	-3.00	
7300.00	90.00	358.88	6490.00	766.36	989.40	746.52	0.00	0.00	0.00	
7400.00	90.00	358.88	6490.00	866.34	987.44	846.52	0.00	0.00	0.00	
7500.00	90.00	358.88	6490.00	966.32	985.48	946.52	0.00	0.00	0.00	
7600.00	90.00	358.88	6490.00	1066.30	983.52	1046.52	0.00	0.00	0.00	
7700.00	90.00	358.88	6490.00	1166.28	981.56	1146.52	0.00	0.00	0.00	
7800.00	90.00	358.88	6490.00	1266.26	979.60	1246.52	0.00	0.00	0.00	
7900.00	90.00	358.88	6490.00	1366.24	977.64	1346.52	0.00	0.00	0.00	
8000.00	90.00	358.88	6490.00	1466.23	975.69	1446.52	0.00	0.00	0.00	
8100.00	90.00	358.88	6490.00	1566.21	973.73	1546.52	0.00	0.00	0.00	
8200.00	90.00	358.88	6490.00	1666.19	971.77	1646.52	0.00	0.00	0.00	
8300.00	90.00	358.88	6490.00	1766.17	969.81	1746.52	0.00	0.00	0.00	
8400.00	90.00	358.88	6490.00	1866.15	967.85	1846.52	0.00	0.00	0.00	
8500.00	90.00	358.88	6490.00	1966.13	965.89	1946.52	0.00	0.00	0.00	
8600.00	90.00	358.88	6490.00	2066.11	963.93	2046.52	0.00	0.00	0.00	
8700.00	90.00	358.88	6490.00	2166.09	961.97	2146.52	0.00	0.00	0.00	
8800.00	90.00	358.88	6490.00	2266.07	960.01	2246.52	0.00	0.00	0.00	
8900.00	90.00	358.88	6490.00	2366.05	958.05	2346.52	0.00	0.00	0.00	
9000.00	90.00	358.88	6490.00	2466.03	956.09	2446.52	0.00	0.00	0.00	
9100.00	90.00	358.88	6490.00	2566.01	954.13	2546.52	0.00	0.00	0.00	
9200.00	90.00	358.88	6490.00	2666.00	952.17	2646.52	0.00	0.00	0.00	
9300.00	90.00	358.88	6490.00	2765.98	950.22	2746.52	0.00	0.00	0.00	
9400.00	90.00	358.88	6490.00	2865.96	948.26	2846.52	0.00	0.00	0.00	
9500.00	90.00	358.88	6490.00	2965.94	946.30	2946.52	0.00	0.00	0.00	
9600.00	90.00	358.88	6490.00	3065.92	944.34	3046.52	0.00	0.00	0.00	
9700.00	90.00	358.88	6490.00	3165.90	942.38	3146.52	0.00	0.00	0.00	
9800.00	90.00	358.88	6490.00	3265.88	940.42	3246.52	0.00	0.00	0.00	
9900.00	90.00	358.88	6490.00	3365.86	938.46	3346.52	0.00	0.00	0.00	
10000.00	90.00	358.88	6490.00	3465.84	936.50	3446.52	0.00	0.00	0.00	
10100.00	90.00	358.88	6490.00	3565.82	934.54	3546.52	0.00	0.00	0.00	
10200.00	90.00	358.88	6490.00	3665.80	932.58	3646.52	0.00	0.00	0.00	
10300.00	90.00	358.88	6490.00	3765.78	930.62	3746.52	0.00	0.00	0.00	
10400.00	90.00	358.88	6490.00	3865.76	928.66	3846.52	0.00	0.00	0.00	

Precision Directional Services, Inc.

Planning Report

Company: CARRIZO OIL & GAS, INC.
Field: Niobrara CONZ'83
Site: Dietzler 10-14-9-60
Well: 2-10-9-60
Wellpath: Original Hole

Date: 07/03/2014
Co-ordinate(NE) Reference: Well: 2-10-9-60, Grid North
Vertical (TVD) Reference: 5090'GL+17'KB 5107.0
Section (VS) Reference: Well (0.00N,0.00E,358.86Azi)
Plan: Plan #1

Page: 4

Survey

MD ft	Incl deg	Azim bearing	TVD ft	+N/-S ft	+E/-W ft	VS ft	DLS deg/100ft	Build deg/100ft	Turn deg/100ft	Tool/Comment
10500.00	90.00	358.88	6490.00	3965.75	926.71	3946.52	0.00	0.00	0.00	
10600.00	90.00	358.88	6490.00	4065.73	924.75	4046.52	0.00	0.00	0.00	
10700.00	90.00	358.88	6490.00	4165.71	922.79	4146.52	0.00	0.00	0.00	
10800.00	90.00	358.88	6490.00	4265.69	920.83	4246.52	0.00	0.00	0.00	
10900.00	90.00	358.88	6490.00	4365.67	918.87	4346.52	0.00	0.00	0.00	
10992.82	90.00	358.88	6490.00	4458.47	917.05	4439.34	0.00	0.00	0.00	PBHL 2-10

Targets

Name	Description Dip.	Dir.	TVD ft	+N/-S ft	+E/-W ft	Map Northing ft	Map Easting ft	<---- Latitude ---->			<--- Longitude --->		
SL 2-10			0.00	0.00	0.00	1522093.753391	371.57	40	45	28.686 N	104	5	14.184 W
PBHL 2-10			6490.00	4458.47	917.05	1526552.223392	288.62	40	46	12.590 N	104	5	1.343 W

Casing Points

MD ft	TVD ft	Diameter in	Hole Size in	Name
1407.64	1400.00	9.625	12.250	9 5/8"
6677.51	6452.83	7.000	8.750	7"