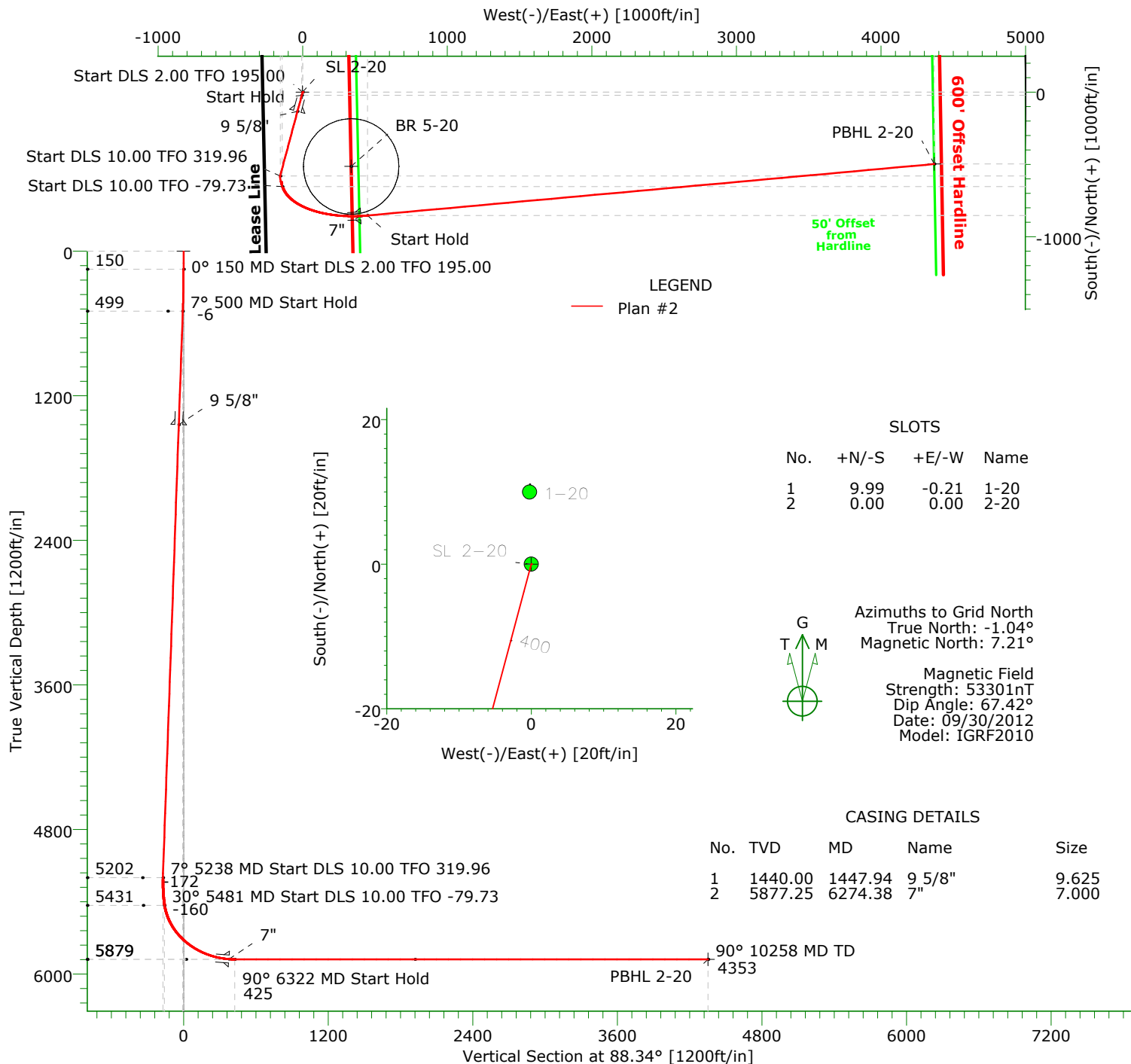




CARRIZO OIL & GAS, INC.

Field: Niobrara CONZ'83
Site: Bringelson 20 Pad
Well: 2-20-11-9-58
Wellpath: Original Hole
Plan: Plan #2



TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Shape
BR 5-20	-100.00	-513.26	335.97	1516050.38	3444615.28	40°44'20.030N103°53'43.842W		Circle (Radius: 330)
SL 2-20	0.00	0.00	0.00	1516563.64	3444279.31	40°44'25.160N103°53'48.085W		Point
PBHL 2-20	5879.00	-496.64	4368.74	1516067.00	3448648.05	40°44'19.469N103°52'51.458W		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	195.00	499.13	-20.63	-5.53	2.00	195.00	-6.12	
4	5237.96	7.00	195.00	5201.77	-578.36	-154.97	0.00	0.00	-171.66	
5	5481.18	30.00	163.00	5431.25	-651.93	-140.82	10.00	319.96	-159.64	
6	6322.43	90.00	84.81	5879.00	-852.41	449.67	10.00	-79.73	424.79	
7	10257.61	90.00	84.81	5879.00	-496.64	4368.74	0.00	0.00	4352.52	PBHL 2-20

Precision Directional Services, Inc.

Planning Report

Company: CARRIZO OIL & GAS, INC. Field: Niobrara CONZ'83 Site: Bringelson 20 Pad Well: 2-20-11-9-58 Wellpath: Original Hole	Date: 08/29/2012 Co-ordinate(NE) Reference: Well: 2-20-11-9-58, Grid North Vertical (TVD) Reference: 4867'GL+17"KB 4884.0 Section (VS) Reference: Well (0.00N,0.00E,88.34Azi) Plan: Plan #2	Time: 08:41:19 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: Bringelson 20 Pad			
Weld County, CO			
Site Position:	Northing: 1516573.63 ft	Latitude: 40 44 25.259 N	
From: Map	Easting: 3444279.10 ft	Longitude: 103 53 48.086 W	
Position Uncertainty: 0.00 ft		North Reference: Grid	
Ground Level: 4867.00 ft		Grid Convergence: 1.04 deg	

Well: 2-20-11-9-58 centered on 1-20 Well Position: +N/-S -9.99 ft +E/-W 0.21 ft Position Uncertainty: 0.00 ft	Slot Name: 2-20 Latitude: 40 44 25.160 N Longitude: 103 53 48.085 W
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Wellpath: Original Hole Current Datum: 4867'GL+17"KB Magnetic Data: 09/30/2012 Field Strength: 53301 nT Vertical Section: Depth From (TVD) ft	Height 4884.00 ft	Drilled From: Surface Tie-on Depth: 0.00 ft Above System Datum: Mean Sea Level Declination: 8.24 deg Mag Dip Angle: 67.42 deg +E/-W ft Direction deg
0.00	0.00	0.00 88.34

Plan: Plan #2 Principal: No	Date Composed: 08/29/2012 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	
500.00	7.00	195.00	499.13	-20.63	-5.53	2.00	2.00	0.00	195.00	
5237.96	7.00	195.00	5201.77	-578.36	-154.97	0.00	0.00	0.00	0.00	
5481.18	30.00	163.00	5431.25	-651.93	-140.82	10.00	9.46	-13.16	319.96	
6322.43	90.00	84.81	5879.00	-852.41	449.67	10.00	7.13	-9.29	-79.73	
10257.61	90.00	84.81	5879.00	-496.64	4368.74	0.00	0.00	0.00	0.00	PBHL 2-20

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	195.00	200.00	-0.42	-0.11	-0.13	2.00	2.00	0.00	
300.00	3.00	195.00	299.93	-3.79	-1.02	-1.13	2.00	2.00	0.00	
400.00	5.00	195.00	399.68	-10.53	-2.82	-3.13	2.00	2.00	0.00	
500.00	7.00	195.00	499.13	-20.63	-5.53	-6.12	2.00	2.00	0.00	
600.00	7.00	195.00	598.38	-32.40	-8.68	-9.62	0.00	0.00	0.00	
700.00	7.00	195.00	697.64	-44.17	-11.84	-13.11	0.00	0.00	0.00	
800.00	7.00	195.00	796.89	-55.94	-14.99	-16.60	0.00	0.00	0.00	
900.00	7.00	195.00	896.15	-67.71	-18.14	-20.10	0.00	0.00	0.00	
1000.00	7.00	195.00	995.40	-79.48	-21.30	-23.59	0.00	0.00	0.00	
1100.00	7.00	195.00	1094.66	-91.26	-24.45	-27.09	0.00	0.00	0.00	
1200.00	7.00	195.00	1193.91	-103.03	-27.61	-30.58	0.00	0.00	0.00	
1300.00	7.00	195.00	1293.17	-114.80	-30.76	-34.07	0.00	0.00	0.00	
1400.00	7.00	195.00	1392.42	-126.57	-33.91	-37.57	0.00	0.00	0.00	
1447.94	7.00	195.00	1440.00	-132.21	-35.43	-39.24	0.00	0.00	0.00	9 5/8"

Precision Directional Services, Inc.

Planning Report

Company: CARRIZO OIL & GAS, INC.
Field: Niobrara CONZ'83
Site: Bringelson 20 Pad
Well: 2-20-11-9-58
Wellpath: Original Hole

Date: 08/29/2012
Co-ordinate(NE) Reference: Well: 2-20-11-9-58, Grid North
Vertical (TVD) Reference: 4867'GL+17"KB 4884.0
Section (VS) Reference: Well (0.00N,0.00E,88.34Azi)
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	7.00	195.00	1491.68	-138.34	-37.07	-41.06	0.00	0.00	0.00	
1600.00	7.00	195.00	1590.93	-150.11	-40.22	-44.55	0.00	0.00	0.00	
1700.00	7.00	195.00	1690.19	-161.89	-43.38	-48.05	0.00	0.00	0.00	
1800.00	7.00	195.00	1789.44	-173.66	-46.53	-51.54	0.00	0.00	0.00	
1900.00	7.00	195.00	1888.69	-185.43	-49.69	-55.04	0.00	0.00	0.00	
2000.00	7.00	195.00	1987.95	-197.20	-52.84	-58.53	0.00	0.00	0.00	
2100.00	7.00	195.00	2087.20	-208.97	-55.99	-62.02	0.00	0.00	0.00	
2200.00	7.00	195.00	2186.46	-220.74	-59.15	-65.52	0.00	0.00	0.00	
2300.00	7.00	195.00	2285.71	-232.52	-62.30	-69.01	0.00	0.00	0.00	
2400.00	7.00	195.00	2384.97	-244.29	-65.46	-72.51	0.00	0.00	0.00	
2500.00	7.00	195.00	2484.22	-256.06	-68.61	-76.00	0.00	0.00	0.00	
2600.00	7.00	195.00	2583.48	-267.83	-71.77	-79.49	0.00	0.00	0.00	
2700.00	7.00	195.00	2682.73	-279.60	-74.92	-82.99	0.00	0.00	0.00	
2800.00	7.00	195.00	2781.99	-291.37	-78.07	-86.48	0.00	0.00	0.00	
2900.00	7.00	195.00	2881.24	-303.15	-81.23	-89.98	0.00	0.00	0.00	
3000.00	7.00	195.00	2980.50	-314.92	-84.38	-93.47	0.00	0.00	0.00	
3100.00	7.00	195.00	3079.75	-326.69	-87.54	-96.96	0.00	0.00	0.00	
3200.00	7.00	195.00	3179.00	-338.46	-90.69	-100.46	0.00	0.00	0.00	
3300.00	7.00	195.00	3278.26	-350.23	-93.84	-103.95	0.00	0.00	0.00	
3400.00	7.00	195.00	3377.51	-362.00	-97.00	-107.44	0.00	0.00	0.00	
3500.00	7.00	195.00	3476.77	-373.78	-100.15	-110.94	0.00	0.00	0.00	
3600.00	7.00	195.00	3576.02	-385.55	-103.31	-114.43	0.00	0.00	0.00	
3700.00	7.00	195.00	3675.28	-397.32	-106.46	-117.93	0.00	0.00	0.00	
3800.00	7.00	195.00	3774.53	-409.09	-109.62	-121.42	0.00	0.00	0.00	
3900.00	7.00	195.00	3873.79	-420.86	-112.77	-124.91	0.00	0.00	0.00	
4000.00	7.00	195.00	3973.04	-432.63	-115.92	-128.41	0.00	0.00	0.00	
4100.00	7.00	195.00	4072.30	-444.41	-119.08	-131.90	0.00	0.00	0.00	
4200.00	7.00	195.00	4171.55	-456.18	-122.23	-135.40	0.00	0.00	0.00	
4300.00	7.00	195.00	4270.81	-467.95	-125.39	-138.89	0.00	0.00	0.00	
4400.00	7.00	195.00	4370.06	-479.72	-128.54	-142.38	0.00	0.00	0.00	
4500.00	7.00	195.00	4469.31	-491.49	-131.70	-145.88	0.00	0.00	0.00	
4600.00	7.00	195.00	4568.57	-503.26	-134.85	-149.37	0.00	0.00	0.00	
4700.00	7.00	195.00	4667.82	-515.04	-138.00	-152.87	0.00	0.00	0.00	
4800.00	7.00	195.00	4767.08	-526.81	-141.16	-156.36	0.00	0.00	0.00	
4900.00	7.00	195.00	4866.33	-538.58	-144.31	-159.85	0.00	0.00	0.00	
5000.00	7.00	195.00	4965.59	-550.35	-147.47	-163.35	0.00	0.00	0.00	
5100.00	7.00	195.00	5064.84	-562.12	-150.62	-166.84	0.00	0.00	0.00	
5200.00	7.00	195.00	5164.10	-573.89	-153.77	-170.33	0.00	0.00	0.00	
5237.96	7.00	195.00	5201.77	-578.36	-154.97	-171.66	0.00	0.00	0.00	
5250.00	7.96	189.40	5213.71	-579.89	-155.30	-172.03	10.00	7.97	-46.53	
5300.00	12.41	176.12	5262.92	-588.67	-155.50	-172.49	10.00	8.89	-26.56	
5350.00	17.16	169.93	5311.25	-601.30	-153.85	-171.20	10.00	9.50	-12.38	
5400.00	22.02	166.39	5358.35	-617.68	-150.35	-168.18	10.00	9.72	-7.09	
5450.00	26.93	164.08	5403.84	-637.69	-145.03	-163.44	10.00	9.82	-4.61	
5481.18	30.00	163.00	5431.25	-651.93	-140.82	-159.64	10.00	9.86	-3.46	
5500.00	30.39	159.34	5447.52	-660.89	-137.76	-156.85	10.00	2.05	-19.46	
5550.00	31.89	150.10	5490.34	-684.19	-126.71	-146.48	10.00	3.00	-18.47	
5600.00	33.99	141.75	5532.32	-706.62	-111.46	-131.89	10.00	4.21	-16.70	
5650.00	36.60	134.36	5573.15	-728.04	-92.14	-113.19	10.00	5.22	-14.78	
5700.00	39.61	127.88	5612.50	-748.26	-68.89	-90.54	10.00	6.02	-12.95	
5750.00	42.93	122.22	5650.09	-767.14	-41.89	-64.09	10.00	6.65	-11.33	
5800.00	46.50	117.24	5685.62	-784.53	-11.34	-34.06	10.00	7.14	-9.96	
5850.00	50.27	112.83	5718.83	-800.30	22.53	-0.66	10.00	7.52	-8.82	

Precision Directional Services, Inc.

Planning Report

Company: CARRIZO OIL & GAS, INC. Field: Niobrara CONZ'83 Site: Bringelson 20 Pad Well: 2-20-11-9-58 Wellpath: Original Hole	Date: 08/29/2012 Co-ordinate(NE) Reference: Vertical (TVD) Reference: Section (VS) Reference: Plan:	Time: 08:41:19 Well: 2-20-11-9-58, Grid North 4867'GL+17"KB 4884.0 Well (0.00N,0.00E,88.34Azi) Plan #2	Page: 3
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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
5900.00	54.18	108.89	5749.46	-814.33	59.45	35.84	10.00	7.82	-7.89	
5950.00	58.21	105.32	5777.29	-826.51	99.15	75.16	10.00	8.06	-7.13	
6000.00	62.32	102.05	5802.09	-836.75	141.32	117.02	10.00	8.24	-6.53	
6050.00	66.51	99.03	5823.67	-844.98	185.65	161.09	10.00	8.38	-6.05	
6100.00	70.76	96.19	5841.89	-851.13	231.79	207.03	10.00	8.49	-5.68	
6150.00	75.05	93.49	5856.59	-855.15	279.39	254.50	10.00	8.57	-5.39	
6200.00	79.36	90.91	5867.66	-857.01	328.10	303.13	10.00	8.63	-5.18	
6250.00	83.70	88.39	5875.02	-856.70	377.53	352.56	10.00	8.67	-5.03	
6274.38	85.82	87.18	5877.25	-855.76	401.79	376.83	10.00	8.69	-4.96	7"
6300.00	88.05	85.92	5878.62	-854.22	427.33	402.40	10.00	8.70	-4.93	
6322.43	90.00	84.81	5879.00	-852.41	449.67	424.79	10.00	8.71	-4.92	
6400.00	90.00	84.81	5879.00	-845.40	526.93	502.22	0.00	0.00	0.00	
6500.00	90.00	84.81	5879.00	-836.35	626.52	602.03	0.00	0.00	0.00	
6600.00	90.00	84.81	5879.00	-827.31	726.11	701.84	0.00	0.00	0.00	
6700.00	90.00	84.81	5879.00	-818.27	825.70	801.65	0.00	0.00	0.00	
6800.00	90.00	84.81	5879.00	-809.23	925.29	901.46	0.00	0.00	0.00	
6900.00	90.00	84.81	5879.00	-800.19	1024.88	1001.27	0.00	0.00	0.00	
7000.00	90.00	84.81	5879.00	-791.15	1124.47	1101.08	0.00	0.00	0.00	
7100.00	90.00	84.81	5879.00	-782.11	1224.06	1200.89	0.00	0.00	0.00	
7200.00	90.00	84.81	5879.00	-773.07	1323.66	1300.70	0.00	0.00	0.00	
7300.00	90.00	84.81	5879.00	-764.03	1423.25	1400.52	0.00	0.00	0.00	
7400.00	90.00	84.81	5879.00	-754.99	1522.84	1500.33	0.00	0.00	0.00	
7500.00	90.00	84.81	5879.00	-745.95	1622.43	1600.14	0.00	0.00	0.00	
7600.00	90.00	84.81	5879.00	-736.91	1722.02	1699.95	0.00	0.00	0.00	
7700.00	90.00	84.81	5879.00	-727.87	1821.61	1799.76	0.00	0.00	0.00	
7800.00	90.00	84.81	5879.00	-718.83	1921.20	1899.57	0.00	0.00	0.00	
7900.00	90.00	84.81	5879.00	-709.78	2020.79	1999.38	0.00	0.00	0.00	
8000.00	90.00	84.81	5879.00	-700.74	2120.38	2099.19	0.00	0.00	0.00	
8100.00	90.00	84.81	5879.00	-691.70	2219.97	2199.00	0.00	0.00	0.00	
8200.00	90.00	84.81	5879.00	-682.66	2319.56	2298.81	0.00	0.00	0.00	
8300.00	90.00	84.81	5879.00	-673.62	2419.15	2398.62	0.00	0.00	0.00	
8400.00	90.00	84.81	5879.00	-664.58	2518.74	2498.43	0.00	0.00	0.00	
8500.00	90.00	84.81	5879.00	-655.54	2618.33	2598.24	0.00	0.00	0.00	
8600.00	90.00	84.81	5879.00	-646.50	2717.92	2698.05	0.00	0.00	0.00	
8700.00	90.00	84.81	5879.00	-637.46	2817.51	2797.86	0.00	0.00	0.00	
8800.00	90.00	84.81	5879.00	-628.42	2917.10	2897.67	0.00	0.00	0.00	
8900.00	90.00	84.81	5879.00	-619.38	3016.69	2997.48	0.00	0.00	0.00	
9000.00	90.00	84.81	5879.00	-610.34	3116.28	3097.30	0.00	0.00	0.00	
9100.00	90.00	84.81	5879.00	-601.30	3215.87	3197.11	0.00	0.00	0.00	
9200.00	90.00	84.81	5879.00	-592.26	3315.46	3296.92	0.00	0.00	0.00	
9300.00	90.00	84.81	5879.00	-583.21	3415.06	3396.73	0.00	0.00	0.00	
9400.00	90.00	84.81	5879.00	-574.17	3514.65	3496.54	0.00	0.00	0.00	
9500.00	90.00	84.81	5879.00	-565.13	3614.24	3596.35	0.00	0.00	0.00	
9600.00	90.00	84.81	5879.00	-556.09	3713.83	3696.16	0.00	0.00	0.00	
9700.00	90.00	84.81	5879.00	-547.05	3813.42	3795.97	0.00	0.00	0.00	
9800.00	90.00	84.81	5879.00	-538.01	3913.01	3895.78	0.00	0.00	0.00	
9900.00	90.00	84.81	5879.00	-528.97	4012.60	3995.59	0.00	0.00	0.00	
10000.00	90.00	84.81	5879.00	-519.93	4112.19	4095.40	0.00	0.00	0.00	
10100.00	90.00	84.81	5879.00	-510.89	4211.78	4195.21	0.00	0.00	0.00	
10200.00	90.00	84.81	5879.00	-501.85	4311.37	4295.02	0.00	0.00	0.00	
10257.61	90.00	84.81	5879.00	-496.64	4368.74	4352.52	0.00	0.00	0.00	PBHL 2-20

Precision Directional Services, Inc.

Planning Report

Company: CARRIZO OIL & GAS, INC. Field: Niobrara CONZ'83 Site: Bringelson 20 Pad Well: 2-20-11-9-58 Wellpath: Original Hole	Date: 08/29/2012 Co-ordinate(NE) Reference: Vertical (TVD) Reference: Section (VS) Reference: Plan:	Time: 08:41:19 Well: 2-20-11-9-58, Grid North 4867'GL+17"KB 4884.0 Well (0.00N,0.00E,88.34Azi) Plan #2	Page: 4
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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	
BR 5-20			-100.00	-513.26	335.97	1516050.38	3444615.28	40	44	20.030	N	103	53	43.842	W
-Circle (Radius: 330)															
SL 2-20			0.00	0.00	0.00	1516563.64	3444279.31	40	44	25.160	N	103	53	48.085	W
PBHL 2-20			5879.00	-496.64	4368.74	1516067.00	3448648.05	40	44	19.469	N	103	52	51.458	W

Casing Points

MD ft	TVD ft	Diameter in	Hole Size in	Name
1447.94	1440.00	9.625	12.250	9 5/8"
6274.38	5877.25	7.000	8.500	7"