



CARRIZO

CARRIZO OIL & GAS, INC.

Field: Niobrara CONZ'83

Site: Nelson Ranches 1-27-10-59 Pad

Well: 1-27-10-59

Wellpath: Original Hole

Plan: Plan #2



Precision

Directional Services

Azimuths to Grid North
True North: -0.99°
Magnetic North: 7.20°



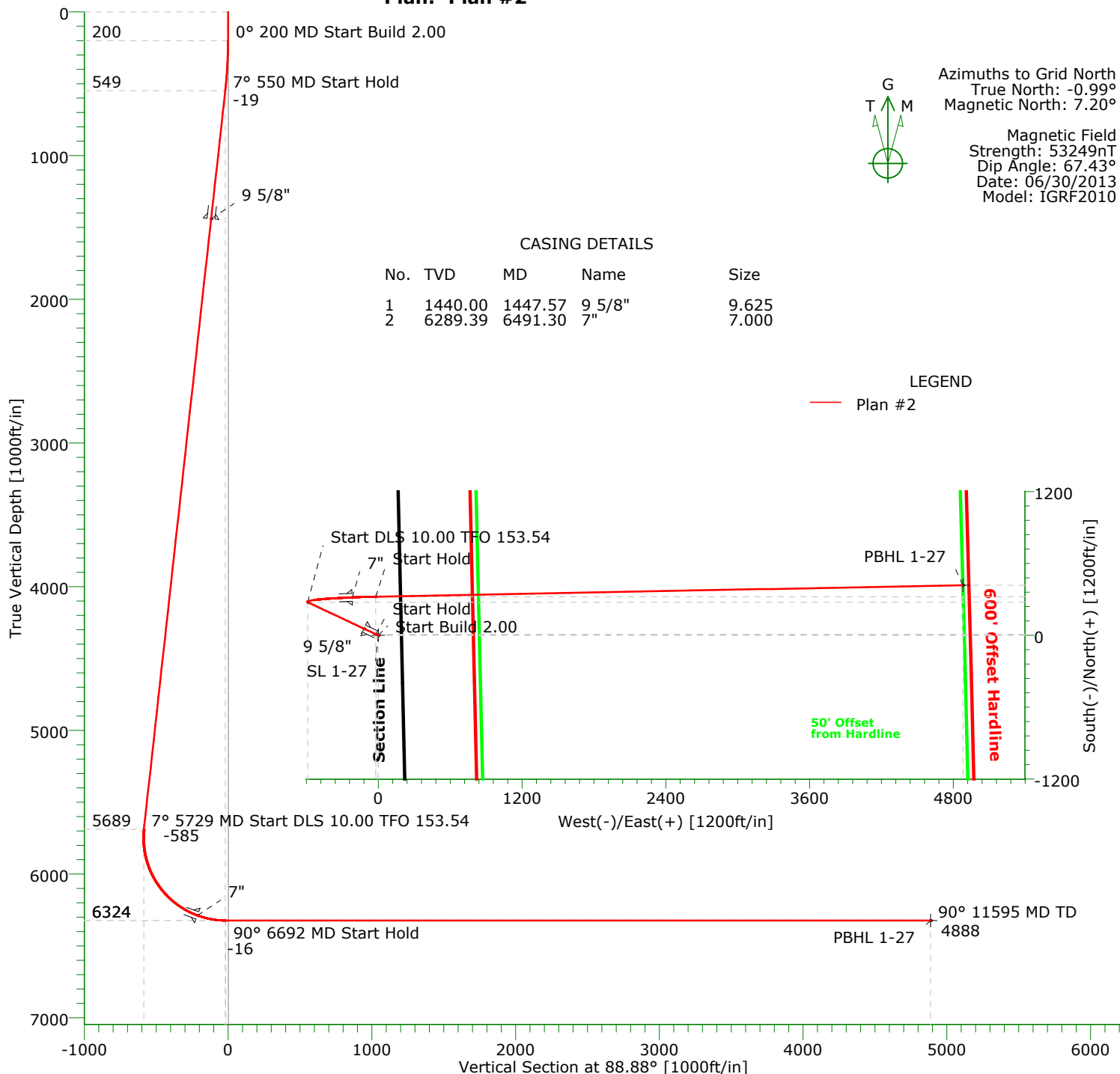
Magnetic Field
Strength: 53249nT
Dip Angle: 67.43°
Date: 06/30/2013
Model: IGRF2010

CASING DETAILS

No.	TVD	MD	Name	Size
1	1440.00	1447.57	9 5/8"	9.625
2	6289.39	6491.30	7"	7.000

LEGEND

— Plan #2



TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Shape
SL 1-27	-18.00	0.00	0.00	1541579.21	3421956.87	40°48'36.191N	103°58'32.449W	Point
PBHL 1-27	6324.00	418.73	4880.74	1541997.94	3426837.61	40°48'39.494N	103°57'28.892W	Point

SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	DLeg	TFace	VSec	Target
1	0.00	0.00	205.00	0.00	0.00	0.00	0.00	0.00	0.00	
2	200.00	0.00	205.00	200.00	0.00	0.00	0.00	205.00	0.00	
3	550.13	7.00	295.17	549.26	9.09	-19.34	2.00	0.00	-19.16	
4	5728.86	7.00	295.17	5689.36	277.63	-590.74	0.00	0.00	-585.20	
5	6691.61	90.00	88.88	6324.00	323.29	-22.00	10.00	153.54	-15.68	
6	11595.28	90.00	88.88	6324.00	419.14	4880.73	0.00	0.00	4887.99	PBHL 1-27

Plan: Plan #2 (1-27-10-59/Original Hole)

Created By: Shane Nelson

Date: 05/17/2013

PRECISION DIRECTIONAL SERVICES, INC.

713.435.6250

Precision Directional Services, Inc.

Planning Report

Company: CARRIZO OIL & GAS, INC. Field: Niobrara CONZ'83 Site: Nelson Ranches 1-27-10-59 Pad Well: 1-27-10-59 Wellpath: Original Hole	Date: 05/17/2013 Co-ordinate(NE) Reference: Well: 1-27-10-59, Grid North Vertical (TVD) Reference: 5167'GL+17'KB 5184.0 Section (VS) Reference: Well (0.00N,0.00E,88.88Azi) Plan: Plan #2	Time: 09:05:55 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: Nelson Ranches 1-27-10-59 Pad			
Weld County, CO			
Site Position:	Northing: 1541002.63 ft	Latitude: 40 48 30.396 N	
From: Map	Easting: 3422535.10 ft	Longitude: 103 58 25.060 W	
Position Uncertainty: 0.00 ft		North Reference: Grid	
Ground Level: 5167.00 ft		Grid Convergence: 0.99 deg	

Well: 1-27-10-59 adjusted from site 5-16 2219'FNL,193'FEL Sec 28	Slot Name:
Well Position: +N/-S 576.58 ft	Latitude: 40 48 36.191 N
+E/-W -578.23 ft	Longitude: 103 58 32.449 W
Position Uncertainty: 0.00 ft	

Wellpath: Original Hole Current Datum: 5167'GL+17'KB Magnetic Data: 06/30/2013 Field Strength: 53249 nT Vertical Section: Depth From (TVD) ft	Height 5184.00 ft	Drilled From: Surface Tie-on Depth: 0.00 ft Above System Datum: Mean Sea Level Declination: 8.19 deg Mag Dip Angle: 67.43 deg +E/-W ft Direction deg
0.00	0.00	0.00 88.88

Plan: Plan #2 updated SL Principal: No	Date Composed: 05/17/2013 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	205.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
200.00	0.00	205.00	200.00	0.00	0.00	0.00	0.00	0.00	205.00	
550.13	7.00	295.17	549.26	9.09	-19.34	2.00	2.00	0.00	0.00	
5728.86	7.00	295.17	5689.36	277.63	-590.74	0.00	0.00	0.00	0.00	
6691.61	90.00	88.88	6324.00	323.29	-22.00	10.00	8.62	15.97	153.54	
11595.28	90.00	88.88	6324.00	419.14	4880.73	0.00	0.00	0.00	0.00	PBHL 1-27

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	205.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
100.00	0.00	205.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	
200.00	0.00	205.00	200.00	0.00	0.00	0.00	0.00	0.00	0.00	
300.00	2.00	295.17	299.98	0.74	-1.58	-1.56	2.00	2.00	0.00	
400.00	4.00	295.17	399.84	2.97	-6.32	-6.26	2.00	2.00	0.00	
500.00	6.00	295.17	499.45	6.68	-14.20	-14.07	2.00	2.00	0.00	
550.13	7.00	295.17	549.26	9.09	-19.34	-19.16	2.00	2.00	0.00	
600.00	7.00	295.17	598.76	11.68	-24.84	-24.61	0.00	0.00	0.00	
700.00	7.00	295.17	698.01	16.86	-35.88	-35.54	0.00	0.00	0.00	
800.00	7.00	295.17	797.27	22.05	-46.91	-46.47	0.00	0.00	0.00	
900.00	7.00	295.17	896.52	27.23	-57.94	-57.40	0.00	0.00	0.00	
1000.00	7.00	295.17	995.77	32.42	-68.98	-68.33	0.00	0.00	0.00	
1100.00	7.00	295.17	1095.03	37.60	-80.01	-79.26	0.00	0.00	0.00	
1200.00	7.00	295.17	1194.28	42.79	-91.04	-90.19	0.00	0.00	0.00	
1300.00	7.00	295.17	1293.54	47.97	-102.08	-101.12	0.00	0.00	0.00	

Precision Directional Services, Inc.

Planning Report

Company: CARRIZO OIL & GAS, INC.
Field: Niobrara CONZ'83
Site: Nelson Ranches 1-27-10-59 Pad
Well: 1-27-10-59
Wellpath: Original Hole

Date: 05/17/2013
Co-ordinate(NE) Reference: Well: 1-27-10-59, Grid North
Vertical (TVD) Reference: 5167'GL+17'KB 5184.0
Section (VS) Reference: Well (0.00N,0.00E,88.88Azi)
Plan: Plan #2

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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
1400.00	7.00	295.17	1392.79	53.16	-113.11	-112.05	0.00	0.00	0.00	9 5/8"
1447.57	7.00	295.17	1440.00	55.63	-118.36	-117.25	0.00	0.00	0.00	
1500.00	7.00	295.17	1492.04	58.35	-124.15	-122.98	0.00	0.00	0.00	
1600.00	7.00	295.17	1591.30	63.53	-135.18	-133.91	0.00	0.00	0.00	
1700.00	7.00	295.17	1690.55	68.72	-146.21	-144.84	0.00	0.00	0.00	
1800.00	7.00	295.17	1789.81	73.90	-157.25	-155.77	0.00	0.00	0.00	
1900.00	7.00	295.17	1889.06	79.09	-168.28	-166.70	0.00	0.00	0.00	
2000.00	7.00	295.17	1988.31	84.27	-179.31	-177.63	0.00	0.00	0.00	
2100.00	7.00	295.17	2087.57	89.46	-190.35	-188.56	0.00	0.00	0.00	
2200.00	7.00	295.17	2186.82	94.64	-201.38	-199.49	0.00	0.00	0.00	
2300.00	7.00	295.17	2286.08	99.83	-212.41	-210.42	0.00	0.00	0.00	
2400.00	7.00	295.17	2385.33	105.02	-223.45	-221.35	0.00	0.00	0.00	
2500.00	7.00	295.17	2484.58	110.20	-234.48	-232.28	0.00	0.00	0.00	
2600.00	7.00	295.17	2583.84	115.39	-245.52	-243.21	0.00	0.00	0.00	
2700.00	7.00	295.17	2683.09	120.57	-256.55	-254.14	0.00	0.00	0.00	
2800.00	7.00	295.17	2782.35	125.76	-267.58	-265.07	0.00	0.00	0.00	
2900.00	7.00	295.17	2881.60	130.94	-278.62	-276.00	0.00	0.00	0.00	
3000.00	7.00	295.17	2980.85	136.13	-289.65	-286.93	0.00	0.00	0.00	
3100.00	7.00	295.17	3080.11	141.31	-300.68	-297.86	0.00	0.00	0.00	
3200.00	7.00	295.17	3179.36	146.50	-311.72	-308.79	0.00	0.00	0.00	
3300.00	7.00	295.17	3278.62	151.69	-322.75	-319.72	0.00	0.00	0.00	
3400.00	7.00	295.17	3377.87	156.87	-333.78	-330.65	0.00	0.00	0.00	
3500.00	7.00	295.17	3477.12	162.06	-344.82	-341.58	0.00	0.00	0.00	
3600.00	7.00	295.17	3576.38	167.24	-355.85	-352.51	0.00	0.00	0.00	
3700.00	7.00	295.17	3675.63	172.43	-366.88	-363.44	0.00	0.00	0.00	
3800.00	7.00	295.17	3774.89	177.61	-377.92	-374.37	0.00	0.00	0.00	
3900.00	7.00	295.17	3874.14	182.80	-388.95	-385.30	0.00	0.00	0.00	
4000.00	7.00	295.17	3973.40	187.98	-399.99	-396.23	0.00	0.00	0.00	
4100.00	7.00	295.17	4072.65	193.17	-411.02	-407.17	0.00	0.00	0.00	
4200.00	7.00	295.17	4171.90	198.36	-422.05	-418.10	0.00	0.00	0.00	
4300.00	7.00	295.17	4271.16	203.54	-433.09	-429.03	0.00	0.00	0.00	
4400.00	7.00	295.17	4370.41	208.73	-444.12	-439.96	0.00	0.00	0.00	
4500.00	7.00	295.17	4469.67	213.91	-455.15	-450.89	0.00	0.00	0.00	
4600.00	7.00	295.17	4568.92	219.10	-466.19	-461.82	0.00	0.00	0.00	
4700.00	7.00	295.17	4668.17	224.28	-477.22	-472.75	0.00	0.00	0.00	
4800.00	7.00	295.17	4767.43	229.47	-488.25	-483.68	0.00	0.00	0.00	
4900.00	7.00	295.17	4866.68	234.65	-499.29	-494.61	0.00	0.00	0.00	
5000.00	7.00	295.17	4965.94	239.84	-510.32	-505.54	0.00	0.00	0.00	
5100.00	7.00	295.17	5065.19	245.02	-521.36	-516.47	0.00	0.00	0.00	
5200.00	7.00	295.17	5164.44	250.21	-532.39	-527.40	0.00	0.00	0.00	
5300.00	7.00	295.17	5263.70	255.40	-543.42	-538.33	0.00	0.00	0.00	
5400.00	7.00	295.17	5362.95	260.58	-554.46	-549.26	0.00	0.00	0.00	
5500.00	7.00	295.17	5462.21	265.77	-565.49	-560.19	0.00	0.00	0.00	
5600.00	7.00	295.17	5561.46	270.95	-576.52	-571.12	0.00	0.00	0.00	
5700.00	7.00	295.17	5660.71	276.14	-587.56	-582.05	0.00	0.00	0.00	
5728.86	7.00	295.17	5689.36	277.63	-590.74	-585.20	0.00	0.00	0.00	
5800.00	3.23	13.97	5760.27	281.43	-594.19	-588.57	10.00	-5.31	110.76	
5900.00	11.27	73.04	5859.48	287.02	-584.13	-578.41	10.00	8.05	59.07	
6000.00	21.06	80.76	5955.42	292.77	-556.98	-551.15	10.00	9.79	7.72	
6100.00	30.98	83.68	6045.17	298.51	-513.56	-507.62	10.00	9.92	2.92	
6200.00	40.94	85.28	6126.01	304.05	-455.18	-449.15	10.00	9.96	1.60	7"
6300.00	50.91	86.35	6195.49	309.23	-383.62	-377.50	10.00	9.97	1.06	
6400.00	60.89	87.14	6251.49	313.89	-301.05	-294.86	10.00	9.98	0.80	
6491.30	70.00	87.75	6289.39	317.57	-218.18	-211.93	10.00	9.98	0.66	

Precision Directional Services, Inc.

Planning Report

Company: CARRIZO OIL & GAS, INC.
Field: Niobrara CONZ'83
Site: Nelson Ranches 1-27-10-59 Pad
Well: 1-27-10-59
Wellpath: Original Hole

Date: 05/17/2013
Co-ordinate(NE) Reference: Well: 1-27-10-59, Grid North
Vertical (TVD) Reference: 5167'GL+17'KB 5184.0
Section (VS) Reference: Well (0.00N,0.00E,88.88Azi)
Plan: Plan #2

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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
6500.00	70.87	87.80	6292.31	317.89	-209.99	-203.73	10.00	9.98	0.61	
6600.00	80.85	88.38	6316.70	321.11	-113.19	-106.89	10.00	9.98	0.58	
6691.61	90.00	88.88	6324.00	323.29	-22.00	-15.68	10.00	9.99	0.55	
6700.00	90.00	88.88	6324.00	323.45	-13.61	-7.28	0.00	0.00	0.00	
6800.00	90.00	88.88	6324.00	325.41	86.37	92.72	0.00	0.00	0.00	
6900.00	90.00	88.88	6324.00	327.36	186.35	192.72	0.00	0.00	0.00	
7000.00	90.00	88.88	6324.00	329.32	286.33	292.72	0.00	0.00	0.00	
7100.00	90.00	88.88	6324.00	331.27	386.31	392.72	0.00	0.00	0.00	
7200.00	90.00	88.88	6324.00	333.23	486.30	492.72	0.00	0.00	0.00	
7300.00	90.00	88.88	6324.00	335.18	586.28	592.72	0.00	0.00	0.00	
7400.00	90.00	88.88	6324.00	337.14	686.26	692.72	0.00	0.00	0.00	
7500.00	90.00	88.88	6324.00	339.09	786.24	792.72	0.00	0.00	0.00	
7600.00	90.00	88.88	6324.00	341.05	886.22	892.72	0.00	0.00	0.00	
7700.00	90.00	88.88	6324.00	343.00	986.20	992.72	0.00	0.00	0.00	
7800.00	90.00	88.88	6324.00	344.96	1086.18	1092.72	0.00	0.00	0.00	
7900.00	90.00	88.88	6324.00	346.91	1186.16	1192.72	0.00	0.00	0.00	
8000.00	90.00	88.88	6324.00	348.86	1286.14	1292.72	0.00	0.00	0.00	
8100.00	90.00	88.88	6324.00	350.82	1386.12	1392.72	0.00	0.00	0.00	
8200.00	90.00	88.88	6324.00	352.77	1486.10	1492.72	0.00	0.00	0.00	
8300.00	90.00	88.88	6324.00	354.73	1586.09	1592.72	0.00	0.00	0.00	
8400.00	90.00	88.88	6324.00	356.68	1686.07	1692.72	0.00	0.00	0.00	
8500.00	90.00	88.88	6324.00	358.64	1786.05	1792.72	0.00	0.00	0.00	
8600.00	90.00	88.88	6324.00	360.59	1886.03	1892.72	0.00	0.00	0.00	
8700.00	90.00	88.88	6324.00	362.55	1986.01	1992.72	0.00	0.00	0.00	
8800.00	90.00	88.88	6324.00	364.50	2085.99	2092.72	0.00	0.00	0.00	
8900.00	90.00	88.88	6324.00	366.46	2185.97	2192.72	0.00	0.00	0.00	
9000.00	90.00	88.88	6324.00	368.41	2285.95	2292.72	0.00	0.00	0.00	
9100.00	90.00	88.88	6324.00	370.37	2385.93	2392.72	0.00	0.00	0.00	
9200.00	90.00	88.88	6324.00	372.32	2485.91	2492.72	0.00	0.00	0.00	
9300.00	90.00	88.88	6324.00	374.27	2585.89	2592.72	0.00	0.00	0.00	
9400.00	90.00	88.88	6324.00	376.23	2685.88	2692.72	0.00	0.00	0.00	
9500.00	90.00	88.88	6324.00	378.18	2785.86	2792.72	0.00	0.00	0.00	
9600.00	90.00	88.88	6324.00	380.14	2885.84	2892.72	0.00	0.00	0.00	
9700.00	90.00	88.88	6324.00	382.09	2985.82	2992.72	0.00	0.00	0.00	
9800.00	90.00	88.88	6324.00	384.05	3085.80	3092.72	0.00	0.00	0.00	
9900.00	90.00	88.88	6324.00	386.00	3185.78	3192.72	0.00	0.00	0.00	
10000.00	90.00	88.88	6324.00	387.96	3285.76	3292.72	0.00	0.00	0.00	
10100.00	90.00	88.88	6324.00	389.91	3385.74	3392.72	0.00	0.00	0.00	
10200.00	90.00	88.88	6324.00	391.87	3485.72	3492.72	0.00	0.00	0.00	
10300.00	90.00	88.88	6324.00	393.82	3585.70	3592.72	0.00	0.00	0.00	
10400.00	90.00	88.88	6324.00	395.78	3685.68	3692.72	0.00	0.00	0.00	
10500.00	90.00	88.88	6324.00	397.73	3785.67	3792.72	0.00	0.00	0.00	
10600.00	90.00	88.88	6324.00	399.69	3885.65	3892.72	0.00	0.00	0.00	
10700.00	90.00	88.88	6324.00	401.64	3985.63	3992.72	0.00	0.00	0.00	
10800.00	90.00	88.88	6324.00	403.59	4085.61	4092.72	0.00	0.00	0.00	
10900.00	90.00	88.88	6324.00	405.55	4185.59	4192.72	0.00	0.00	0.00	
11000.00	90.00	88.88	6324.00	407.50	4285.57	4292.72	0.00	0.00	0.00	
11100.00	90.00	88.88	6324.00	409.46	4385.55	4392.72	0.00	0.00	0.00	
11200.00	90.00	88.88	6324.00	411.41	4485.53	4492.72	0.00	0.00	0.00	
11300.00	90.00	88.88	6324.00	413.37	4585.51	4592.72	0.00	0.00	0.00	
11400.00	90.00	88.88	6324.00	415.32	4685.49	4692.72	0.00	0.00	0.00	
11500.00	90.00	88.88	6324.00	417.28	4785.47	4792.72	0.00	0.00	0.00	
11595.28	90.00	88.88	6324.00	419.14	4880.73	4887.99	0.00	0.00	0.00	PBHL 1-27

Precision Directional Services, Inc.

Planning Report

Company: CARRIZO OIL & GAS, INC. Field: Niobrara CONZ'83 Site: Nelson Ranches 1-27-10-59 Pad Well: 1-27-10-59 Wellpath: Original Hole	Date: 05/17/2013 Time: 09:05:55 Page: 4 Co-ordinate(NE) Reference: Well: 1-27-10-59, Grid North Vertical (TVD) Reference: 5167'GL+17'KB 5184.0 Section (VS) Reference: Well (0.00N,0.00E,88.88Azi) Plan: Plan #2
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Targets

Name	Description	Dir.	TVD ft	+N/-S ft	+E/-W ft	Map Northing ft	Map Easting ft	<---- Latitude ---->			<--- Longitude --->				
								Deg	Min	Sec	Deg	Min	Sec		
SL 1-27			-18.00	0.00	0.00	1541579.21	3421956.87	40	48	36.191	N	103	58	32.449	W
PBHL 1-27			6324.00	418.73	4880.74	1541997.94	3426837.61	40	48	39.494	N	103	57	28.892	W

Casing Points

MD ft	TVD ft	Diameter in	Hole Size in	Name
1447.57	1440.00	9.625	12.250	9 5/8"
6491.30	6289.39	7.000	8.500	7"