



CARRIZO

CARRIZO OIL & GAS, INC.

Field: Niobrara CONZ'83

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

Well: 3-27-10-59

Wellpath: Original Hole

Plan: Plan #1



Precision

Directional Services

CASING DETAILS

No.	TVD	MD	Name	Size
1	1400.00	1405.44	9 5/8"	9.625
2	6329.67	6589.68	7"	7.000



Azimuths to Grid North
True North: -0.99°
Magnetic North: 7.10°

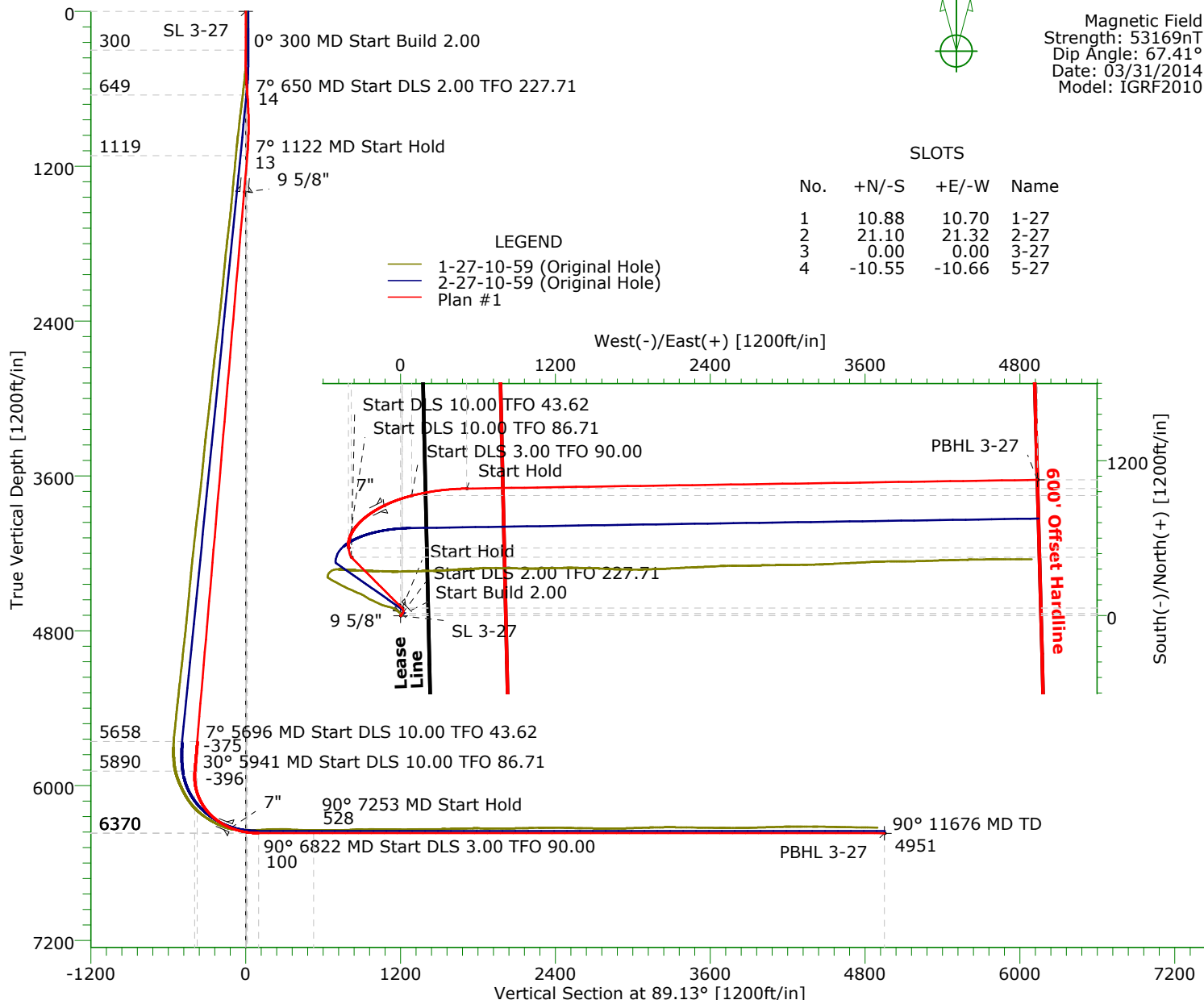
Magnetic Field
Strength: 53169nT
Dip Angle: 67.41°
Date: 03/31/2014
Model: IGRF2010

SLOTS

No.	+N/-S	+E/-W	Name
1	10.88	10.70	1-27
2	21.10	21.32	2-27
3	0.00	0.00	3-27
4	-10.55	-10.66	5-27

LEGEND

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



TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Shape
SL 3-27	0.00	0.00	0.00	1541558.11	3421935.55	40°48'35.986N	103°58'32.731W	Point
PBHL 3-27	6370.00	1052.45	4935.31	1542610.56	3426870.86	40°48'45.540N	103°57'28.322W	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	300.00	0.00	0.00	300.00	0.00	0.00	0.00	0.00	0.00	
3	650.00	7.00	40.00	649.13	16.36	13.73	2.00	40.00	13.97	
4	1122.27	7.00	315.00	1118.95	58.85	11.87	2.00	227.71	12.76	
5	5695.54	7.00	315.00	5658.13	452.95	-382.23	0.00	0.00	-375.31	
6	5941.20	30.00	350.00	5889.98	525.12	-403.81	10.00	43.62	-395.79	
7	6822.21	90.00	76.20	6370.00	930.26	86.34	10.00	86.71	100.46	
8	7253.16	90.00	89.13	6370.00	985.17	512.86	3.00	90.00	527.76	
9	11676.13	90.00	89.13	6370.00	1052.45	4935.31	0.00	0.00	4950.72	PBHL 3-27

Plan: Plan #1 (3-27-10-59/Original Hole)

Created By: Shane Nelson

Date: 02/20/2014

PRECISION DIRECTIONAL SERVICES, INC.

713.435.6250

Precision Directional Services, Inc.

Planning Report

Company: CARRIZO OIL & GAS, INC.		Date: 02/20/2014	Time: 18:57:58	Page: 1
Field: Niobrara CONZ'83		Co-ordinate(NE) Reference: Well: 3-27-10-59, Grid North		
Site: Nelson Ranches 1-27-10-59 Pad		Vertical (TVD) Reference: 5167'GL+17'KB 5184.0		
Well: 3-27-10-59		Section (VS) Reference: Well (0.00N,0.00E,89.13Azi)		
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: Nelson Ranches 1-27-10-59 Pad	
Weld County, CO	
Site Position:	Northing: 1541002.63 ft
From: Map	Easting: 3422535.10 ft
Position Uncertainty: 0.00 ft	Latitude: 40 48 30.396 N
Ground Level: 5167.00 ft	Longitude: 103 58 25.060 W
	North Reference: Grid
	Grid Convergence: 0.99 deg

Well: 3-27-10-59	Slot Name: 3-27
Well Position: +N/-S 555.48 ft	Latitude: 40 48 35.986 N
+E/-W -599.55 ft	Longitude: 103 58 32.731 W
Position Uncertainty: 0.00 ft	

Wellpath: Original Hole	Drilled From: Surface
Current Datum: 5167'GL+17'KB	Tie-on Depth: 0.00 ft
Magnetic Data: 03/31/2014	Above System Datum: Mean Sea Level
Field Strength: 53169 nT	Declination: 8.09 deg
Vertical Section: Depth From (TVD)	Mag Dip Angle: 67.41 deg
ft	+N/-S
	+E/-W
	Direction
	deg
0.00	0.00
0.00	0.00
0.00	89.13

Plan: Plan #1	Date Composed: 02/20/2014
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	
300.00	0.00	0.00	300.00	0.00	0.00	0.00	0.00	0.00	0.00	
650.00	7.00	40.00	649.13	16.36	13.73	2.00	2.00	0.00	40.00	
1122.27	7.00	315.00	1118.95	58.85	11.87	2.00	0.00	-18.00	227.71	
5695.54	7.00	315.00	5658.13	452.95	-382.23	0.00	0.00	0.00	0.00	
5941.20	30.00	350.00	5889.98	525.12	-403.81	10.00	9.36	14.25	43.62	
6822.21	90.00	76.20	6370.00	930.26	86.34	10.00	6.81	9.78	86.71	
7253.16	90.00	89.13	6370.00	985.17	512.86	3.00	0.00	3.00	90.00	
11676.13	90.00	89.13	6370.00	1052.45	4935.31	0.00	0.00	0.00	0.00	PBHL 3-27

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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
100.00	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	
200.00	0.00	0.00	200.00	0.00	0.00	0.00	0.00	0.00	0.00	
300.00	0.00	0.00	300.00	0.00	0.00	0.00	0.00	0.00	0.00	
400.00	2.00	40.00	399.98	1.34	1.12	1.14	2.00	2.00	0.00	
500.00	4.00	40.00	499.84	5.35	4.49	4.57	2.00	2.00	0.00	
600.00	6.00	40.00	599.45	12.02	10.09	10.27	2.00	2.00	0.00	
650.00	7.00	40.00	649.13	16.36	13.73	13.97	2.00	2.00	0.00	
700.00	6.37	33.32	698.79	21.01	17.21	17.52	2.00	-1.26	-13.37	
800.00	5.45	15.95	798.27	30.21	21.56	22.02	2.00	-0.92	-17.37	
900.00	5.18	354.43	897.85	39.27	22.43	23.02	2.00	-0.27	-21.52	
1000.00	5.65	333.70	997.41	48.18	19.81	20.54	2.00	0.47	-20.73	
1100.00	6.71	317.82	1096.83	56.92	13.70	14.57	2.00	1.06	-15.88	

Precision Directional Services, Inc.

Planning Report

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Field: Niobrara CONZ'83
Site: Nelson Ranches 1-27-10-59 Pad
Well: 3-27-10-59
Wellpath: Original Hole

Date: 02/20/2014
Co-ordinate(NE) Reference: Well: 3-27-10-59, Grid North
Vertical (TVD) Reference: 5167'GL+17'KB 5184.0
Section (VS) Reference: Well (0.00N,0.00E,89.13Azi)
Plan: Plan #1

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
1122.27	7.00	315.00	1118.95	58.85	11.87	12.76	2.00	1.31	-12.67	
1200.00	7.00	315.00	1196.09	65.55	5.17	6.17	0.00	0.00	0.00	
1300.00	7.00	315.00	1295.35	74.16	-3.44	-2.32	0.00	0.00	0.00	
1400.00	7.00	315.00	1394.60	82.78	-12.06	-10.80	0.00	0.00	0.00	
1405.44	7.00	315.00	1400.00	83.25	-12.53	-11.27	0.00	0.00	0.00	9 5/8"
1500.00	7.00	315.00	1493.86	91.40	-20.68	-19.29	0.00	0.00	0.00	
1600.00	7.00	315.00	1593.11	100.02	-29.30	-27.78	0.00	0.00	0.00	
1700.00	7.00	315.00	1692.37	108.63	-37.91	-36.26	0.00	0.00	0.00	
1800.00	7.00	315.00	1791.62	117.25	-46.53	-44.75	0.00	0.00	0.00	
1900.00	7.00	315.00	1890.88	125.87	-55.15	-53.23	0.00	0.00	0.00	
2000.00	7.00	315.00	1990.13	134.49	-63.77	-61.72	0.00	0.00	0.00	
2100.00	7.00	315.00	2089.39	143.10	-72.38	-70.20	0.00	0.00	0.00	
2200.00	7.00	315.00	2188.64	151.72	-81.00	-78.69	0.00	0.00	0.00	
2300.00	7.00	315.00	2287.90	160.34	-89.62	-87.17	0.00	0.00	0.00	
2400.00	7.00	315.00	2387.15	168.96	-98.24	-95.66	0.00	0.00	0.00	
2500.00	7.00	315.00	2486.40	177.57	-106.85	-104.15	0.00	0.00	0.00	
2600.00	7.00	315.00	2585.66	186.19	-115.47	-112.63	0.00	0.00	0.00	
2700.00	7.00	315.00	2684.91	194.81	-124.09	-121.12	0.00	0.00	0.00	
2800.00	7.00	315.00	2784.17	203.43	-132.71	-129.60	0.00	0.00	0.00	
2900.00	7.00	315.00	2883.42	212.04	-141.32	-138.09	0.00	0.00	0.00	
3000.00	7.00	315.00	2982.68	220.66	-149.94	-146.57	0.00	0.00	0.00	
3100.00	7.00	315.00	3081.93	229.28	-158.56	-155.06	0.00	0.00	0.00	
3200.00	7.00	315.00	3181.19	237.90	-167.18	-163.55	0.00	0.00	0.00	
3300.00	7.00	315.00	3280.44	246.51	-175.79	-172.03	0.00	0.00	0.00	
3400.00	7.00	315.00	3379.70	255.13	-184.41	-180.52	0.00	0.00	0.00	
3500.00	7.00	315.00	3478.95	263.75	-193.03	-189.00	0.00	0.00	0.00	
3600.00	7.00	315.00	3578.21	272.37	-201.65	-197.49	0.00	0.00	0.00	
3700.00	7.00	315.00	3677.46	280.98	-210.26	-205.97	0.00	0.00	0.00	
3800.00	7.00	315.00	3776.71	289.60	-218.88	-214.46	0.00	0.00	0.00	
3900.00	7.00	315.00	3875.97	298.22	-227.50	-222.94	0.00	0.00	0.00	
4000.00	7.00	315.00	3975.22	306.84	-236.12	-231.43	0.00	0.00	0.00	
4100.00	7.00	315.00	4074.48	315.45	-244.73	-239.92	0.00	0.00	0.00	
4200.00	7.00	315.00	4173.73	324.07	-253.35	-248.40	0.00	0.00	0.00	
4300.00	7.00	315.00	4272.99	332.69	-261.97	-256.89	0.00	0.00	0.00	
4400.00	7.00	315.00	4372.24	341.31	-270.59	-265.37	0.00	0.00	0.00	
4500.00	7.00	315.00	4471.50	349.92	-279.20	-273.86	0.00	0.00	0.00	
4600.00	7.00	315.00	4570.75	358.54	-287.82	-282.34	0.00	0.00	0.00	
4700.00	7.00	315.00	4670.01	367.16	-296.44	-290.83	0.00	0.00	0.00	
4800.00	7.00	315.00	4769.26	375.77	-305.06	-299.32	0.00	0.00	0.00	
4900.00	7.00	315.00	4868.52	384.39	-313.67	-307.80	0.00	0.00	0.00	
5000.00	7.00	315.00	4967.77	393.01	-322.29	-316.29	0.00	0.00	0.00	
5100.00	7.00	315.00	5067.02	401.63	-330.91	-324.77	0.00	0.00	0.00	
5200.00	7.00	315.00	5166.28	410.24	-339.53	-333.26	0.00	0.00	0.00	
5300.00	7.00	315.00	5265.53	418.86	-348.14	-341.74	0.00	0.00	0.00	
5400.00	7.00	315.00	5364.79	427.48	-356.76	-350.23	0.00	0.00	0.00	
5500.00	7.00	315.00	5464.04	436.10	-365.38	-358.71	0.00	0.00	0.00	
5600.00	7.00	315.00	5563.30	444.71	-374.00	-367.20	0.00	0.00	0.00	
5695.54	7.00	315.00	5658.13	452.95	-382.23	-375.31	0.00	0.00	0.00	
5700.00	7.33	317.41	5662.55	453.35	-382.61	-375.69	10.00	7.38	54.09	
5750.00	11.57	334.06	5711.87	460.21	-386.97	-379.94	10.00	8.47	33.29	
5800.00	16.24	341.57	5760.40	471.36	-391.37	-384.17	10.00	9.35	15.02	
5850.00	21.06	345.75	5807.76	486.71	-395.80	-388.36	10.00	9.64	8.36	
5900.00	25.95	348.42	5853.60	506.14	-400.21	-392.48	10.00	9.77	5.34	

Precision Directional Services, Inc.

Planning Report

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Wellpath: Original Hole

Date: 02/20/2014
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Vertical (TVD) Reference: 5167'GL+17'KB 5184.0
Section (VS) Reference: Well (0.00N,0.00E,89.13Azi)
Plan: Plan #1

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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
5941.20	30.00	350.00	5889.98	525.12	-403.81	-395.79	10.00	9.84	3.84	
5950.00	30.06	351.75	5897.60	529.47	-404.51	-396.42	10.00	0.71	19.93	
6000.00	30.85	1.51	5940.72	554.70	-405.97	-397.50	10.00	1.57	19.50	
6050.00	32.32	10.64	5983.34	580.66	-403.16	-394.30	10.00	2.95	18.26	
6100.00	34.40	18.92	6025.12	607.18	-396.11	-386.85	10.00	4.15	16.56	
6150.00	36.97	26.27	6065.75	634.04	-384.87	-375.20	10.00	5.15	14.71	
6200.00	39.95	32.74	6104.91	661.04	-369.53	-359.45	10.00	5.95	12.94	
6250.00	43.24	38.42	6142.31	687.98	-350.19	-339.70	10.00	6.58	11.35	
6300.00	46.77	43.42	6177.67	714.65	-327.01	-316.12	10.00	7.08	10.00	
6350.00	50.51	47.85	6210.71	740.84	-300.17	-288.89	10.00	7.46	8.87	
6400.00	54.39	51.83	6241.19	766.36	-269.87	-258.20	10.00	7.77	7.95	
6450.00	58.39	55.43	6268.87	791.02	-236.34	-224.30	10.00	8.00	7.21	
6500.00	62.48	58.74	6293.54	814.62	-199.83	-187.44	10.00	8.19	6.60	
6550.00	66.65	61.80	6315.01	836.99	-160.62	-147.90	10.00	8.33	6.13	
6589.68	70.00	64.09	6329.67	853.75	-127.79	-114.81	10.00	8.43	5.78	7"
6600.00	70.87	64.67	6333.12	857.95	-119.02	-105.98	10.00	8.48	5.62	
6650.00	75.14	67.40	6347.74	877.35	-75.33	-62.00	10.00	8.53	5.46	
6700.00	79.43	70.03	6358.74	895.04	-29.90	-16.30	10.00	8.59	5.25	
6750.00	83.75	72.58	6366.06	910.88	16.94	30.77	10.00	8.63	5.10	
6800.00	88.08	75.09	6369.62	924.76	64.83	78.86	10.00	8.66	5.02	
6822.21	90.00	76.20	6370.00	930.26	86.34	100.46	10.00	8.66	4.99	
6900.00	90.00	78.53	6370.00	947.28	162.24	176.61	3.00	0.00	3.00	
7000.00	90.00	81.53	6370.00	964.58	260.72	275.34	3.00	0.00	3.00	
7100.00	90.00	84.53	6370.00	976.71	359.97	374.76	3.00	0.00	3.00	
7200.00	90.00	87.53	6370.00	983.62	459.72	474.60	3.00	0.00	3.00	
7253.16	90.00	89.13	6370.00	985.17	512.86	527.76	3.00	0.00	3.00	
7300.00	90.00	89.13	6370.00	985.89	559.69	574.60	0.00	0.00	0.00	
7400.00	90.00	89.13	6370.00	987.41	659.68	674.60	0.00	0.00	0.00	
7500.00	90.00	89.13	6370.00	988.93	759.67	774.60	0.00	0.00	0.00	
7600.00	90.00	89.13	6370.00	990.45	859.66	874.60	0.00	0.00	0.00	
7700.00	90.00	89.13	6370.00	991.97	959.64	974.60	0.00	0.00	0.00	
7800.00	90.00	89.13	6370.00	993.49	1059.63	1074.60	0.00	0.00	0.00	
7900.00	90.00	89.13	6370.00	995.01	1159.62	1174.60	0.00	0.00	0.00	
8000.00	90.00	89.13	6370.00	996.53	1259.61	1274.60	0.00	0.00	0.00	
8100.00	90.00	89.13	6370.00	998.05	1359.60	1374.60	0.00	0.00	0.00	
8200.00	90.00	89.13	6370.00	999.58	1459.59	1474.60	0.00	0.00	0.00	
8300.00	90.00	89.13	6370.00	1001.10	1559.58	1574.60	0.00	0.00	0.00	
8400.00	90.00	89.13	6370.00	1002.62	1659.56	1674.60	0.00	0.00	0.00	
8500.00	90.00	89.13	6370.00	1004.14	1759.55	1774.60	0.00	0.00	0.00	
8600.00	90.00	89.13	6370.00	1005.66	1859.54	1874.60	0.00	0.00	0.00	
8700.00	90.00	89.13	6370.00	1007.18	1959.53	1974.60	0.00	0.00	0.00	
8800.00	90.00	89.13	6370.00	1008.70	2059.52	2074.60	0.00	0.00	0.00	
8900.00	90.00	89.13	6370.00	1010.22	2159.51	2174.60	0.00	0.00	0.00	
9000.00	90.00	89.13	6370.00	1011.74	2259.49	2274.60	0.00	0.00	0.00	
9100.00	90.00	89.13	6370.00	1013.26	2359.48	2374.60	0.00	0.00	0.00	
9200.00	90.00	89.13	6370.00	1014.79	2459.47	2474.60	0.00	0.00	0.00	
9300.00	90.00	89.13	6370.00	1016.31	2559.46	2574.60	0.00	0.00	0.00	
9400.00	90.00	89.13	6370.00	1017.83	2659.45	2674.60	0.00	0.00	0.00	
9500.00	90.00	89.13	6370.00	1019.35	2759.44	2774.60	0.00	0.00	0.00	
9600.00	90.00	89.13	6370.00	1020.87	2859.42	2874.60	0.00	0.00	0.00	
9700.00	90.00	89.13	6370.00	1022.39	2959.41	2974.60	0.00	0.00	0.00	
9800.00	90.00	89.13	6370.00	1023.91	3059.40	3074.60	0.00	0.00	0.00	
9900.00	90.00	89.13	6370.00	1025.43	3159.39	3174.60	0.00	0.00	0.00	
10000.00	90.00	89.13	6370.00	1026.95	3259.38	3274.60	0.00	0.00	0.00	

Precision Directional Services, Inc.

Planning Report

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Field: Niobrara CONZ'83
Site: Nelson Ranches 1-27-10-59 Pad
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Wellpath: Original Hole

Date: 02/20/2014
Co-ordinate(NE) Reference: Well: 3-27-10-59, Grid North
Vertical (TVD) Reference: 5167'GL+17'KB 5184.0
Section (VS) Reference: Well (0.00N,0.00E,89.13Azi)
Plan: Plan #1

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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
10100.00	90.00	89.13	6370.00	1028.48	3359.37	3374.60	0.00	0.00	0.00	
10200.00	90.00	89.13	6370.00	1030.00	3459.36	3474.60	0.00	0.00	0.00	
10300.00	90.00	89.13	6370.00	1031.52	3559.34	3574.60	0.00	0.00	0.00	
10400.00	90.00	89.13	6370.00	1033.04	3659.33	3674.60	0.00	0.00	0.00	
10500.00	90.00	89.13	6370.00	1034.56	3759.32	3774.60	0.00	0.00	0.00	
10600.00	90.00	89.13	6370.00	1036.08	3859.31	3874.60	0.00	0.00	0.00	
10700.00	90.00	89.13	6370.00	1037.60	3959.30	3974.60	0.00	0.00	0.00	
10800.00	90.00	89.13	6370.00	1039.12	4059.29	4074.60	0.00	0.00	0.00	
10900.00	90.00	89.13	6370.00	1040.64	4159.27	4174.60	0.00	0.00	0.00	
11000.00	90.00	89.13	6370.00	1042.17	4259.26	4274.60	0.00	0.00	0.00	
11100.00	90.00	89.13	6370.00	1043.69	4359.25	4374.60	0.00	0.00	0.00	
11200.00	90.00	89.13	6370.00	1045.21	4459.24	4474.60	0.00	0.00	0.00	
11300.00	90.00	89.13	6370.00	1046.73	4559.23	4574.60	0.00	0.00	0.00	
11400.00	90.00	89.13	6370.00	1048.25	4659.22	4674.60	0.00	0.00	0.00	
11500.00	90.00	89.13	6370.00	1049.77	4759.20	4774.60	0.00	0.00	0.00	
11600.00	90.00	89.13	6370.00	1051.29	4859.19	4874.60	0.00	0.00	0.00	
11676.13	90.00	89.13	6370.00	1052.45	4935.31	4950.72	0.00	0.00	0.00	PBHL 3-27

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 3-27			0.00	0.00	0.00	1541558.11	3421935.55	40	48	35.986 N	103	58	32.731 W
PBHL 3-27			6370.00	1052.45	4935.31	1542610.56	3426870.86	40	48	45.540 N	103	57	28.322 W

Casing Points

MD ft	TVD ft	Diameter in	Hole Size in	Name
1405.44	1400.00	9.625	12.250	9 5/8"
6589.68	6329.67	7.000	8.500	7"