



CARRIZO

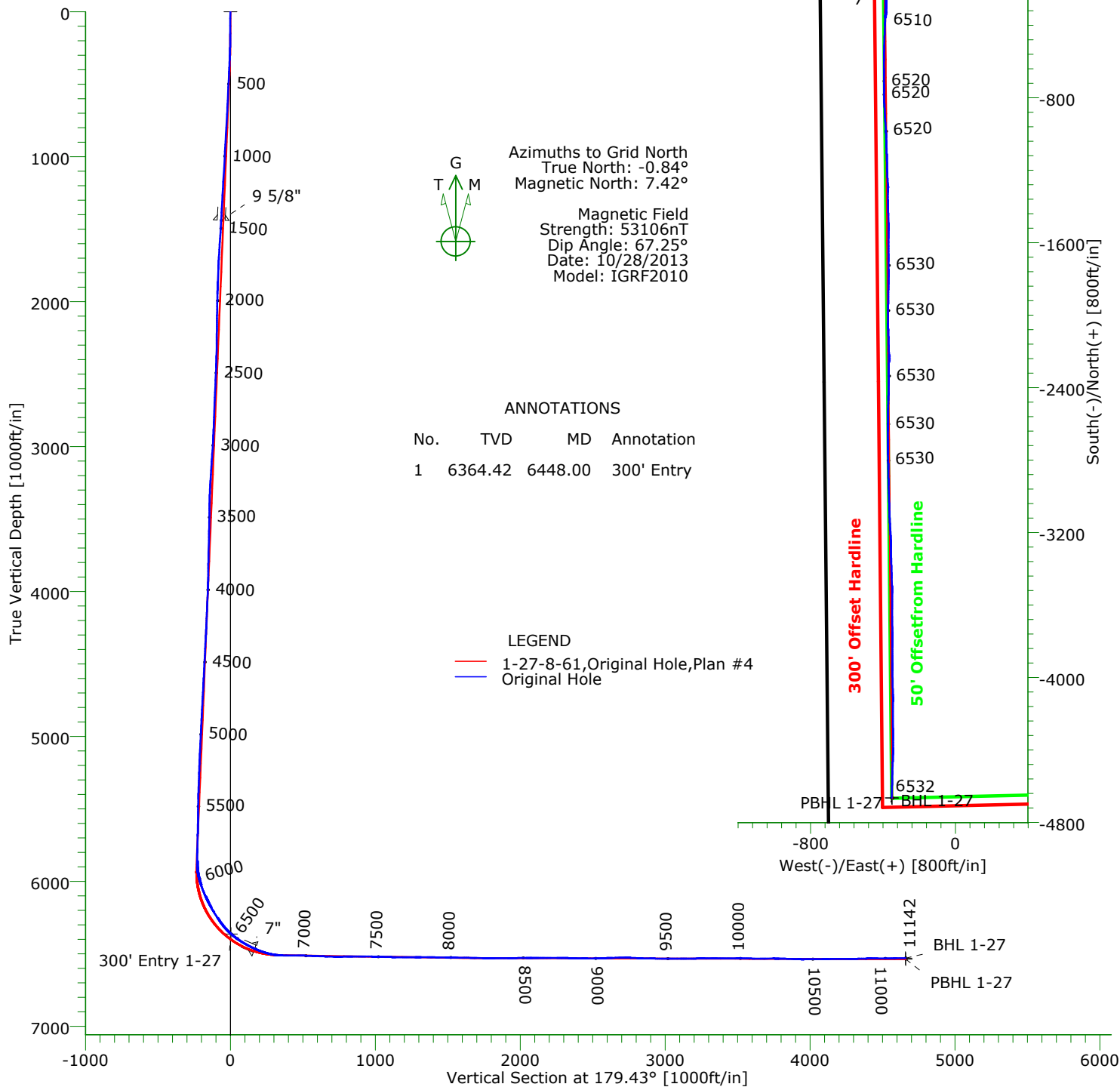
CARRIZO OIL & GAS, INC.
Field: Niobrara CONZ'83
Site: Speaker 27-11-8-61 Pad
Well: 1-27-8-61
Wellpath: Original Hole



Precision
Directional Services

CASING DETAILS

No.	TVD	MD	Name	Size
1	1439.87	1444.00	9 5/8"	9.625
2	6467.22	6645.00	7"	7.000



TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Shape
SL 1-27	0.00	0.00	0.00	1478356.89	3361067.22	40°38'21.144N	104°11'56.270W	Point
300' Entry 1-27	6364.42	-8.20	-375.73	1478348.69	3360691.49	40°38'21.117N	104°12'01.145W	Point
BHL 1-27	6531.56	-4663.46	-352.25	1473693.43	3360714.97	40°37'35.118N	104°12'01.725W	Point
PBHL 1-27	6538.00	-4664.53	-350.00	1473692.36	3360717.22	40°37'35.107N	104°12'01.696W	Point

Wellpath: (1-27-8-61/Original Hole)

Created By: Tony LoRicca Date: 11/04/2013

PRECISION DIRECTIONAL SERVICES, INC.

713.435.6250

Precision Directional Services, Inc.

Survey Report

Company: CARRIZO OIL & GAS, INC.		Date: 11/04/2013	Time: 09:56:01	Page: 1
Field: Niobrara CONZ'83		Co-ordinate(NE) Reference: Well: 1-27-8-61, Grid North		
Site: Speaker 27-11-8-61 Pad		Vertical (TVD) Reference: 4999'GL+17"KB 5016.0		
Well: 1-27-8-61		Section (VS) Reference: Well (0.00N,0.00E,179.43Azi)		
Wellpath: Original Hole		Survey Calculation Method: Minimum Curvature	Db: Adapti	

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: Speaker 27-11-8-61 Pad Centered on #1 Weld County, CO				
Site Position:	Northing: 1478356.89 ft	Latitude: 40 38 21.144 N		
From: Map	Easting: 3361067.22 ft	Longitude: 104 11 56.270 W		
Position Uncertainty: 0.00 ft		North Reference: Grid		
Ground Level: 4999.00 ft		Grid Convergence: 0.84 deg		

Well: 1-27-8-61				
Slot Name:				
Well Position: +N/-S 0.00 ft	Northing: 1478356.89 ft	Latitude: 40 38 21.144 N		
+E/-W 0.00 ft	Easting : 3361067.22 ft	Longitude: 104 11 56.270 W		
Position Uncertainty: 0.00 ft				

Wellpath: Original Hole				
Current Datum: 4999'GL+17"KB	Height 5016.00 ft	Drilled From: Surface		
Magnetic Data: 10/28/2013		Tie-on Depth: 0.00 ft		
Field Strength: 53106 nT		Above System Datum: Mean Sea Level		
Vertical Section: Depth From (TVD)	+N/-S	Declination: 8.26 deg		
ft	ft	Mag Dip Angle: 67.25 deg		
		+E/-W	Direction	
		ft	deg	
0.00	0.00	0.00	179.43	

Survey Program for Definitive Wellpath				
Date: 11/02/2013	Validated: No	Version: 2		
Actual From To	Survey	Toolcode	Tool Name	
ft ft				
145.00 11079.00	Survey #1 (145.00-11079.00)	MWD	Std MWD	
11142.00 11142.00	Survey #2 (11142.00-11142.00)	Project	Projection	

Survey										
MD	Incl	Azim	TVD	+N/-S	+E/-W	VS	DLS	Build	Turn	Tool/Comment
ft	deg	deg	ft	ft	ft	ft	deg/100ft	deg/100ft	deg/100ft	
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	TIE LINE
145.00	0.30	43.50	145.00	0.28	0.26	-0.27	0.21	0.21	0.00	MWD
241.00	1.80	315.90	240.98	1.54	-0.62	-1.55	1.89	1.56	-91.25	MWD
334.00	4.00	308.70	333.86	4.62	-4.16	-4.66	2.39	2.37	-7.74	MWD
428.00	4.60	306.40	427.59	8.90	-9.76	-9.00	0.66	0.64	-2.45	MWD
521.00	4.70	306.20	520.29	13.37	-15.83	-13.52	0.11	0.11	-0.22	MWD
615.00	4.80	304.70	613.96	17.88	-22.17	-18.10	0.17	0.11	-1.60	MWD
709.00	5.10	305.40	707.61	22.54	-28.81	-22.83	0.33	0.32	0.74	MWD
802.00	5.10	307.00	800.25	27.42	-35.48	-27.77	0.15	0.00	1.72	MWD
896.00	5.20	307.70	893.87	32.54	-42.19	-32.96	0.13	0.11	0.74	MWD
989.00	4.90	308.90	986.51	37.61	-48.62	-38.10	0.34	-0.32	1.29	MWD
1083.00	4.90	309.80	1080.16	42.70	-54.82	-43.25	0.08	0.00	0.96	MWD
1177.00	4.80	309.80	1173.83	47.79	-60.93	-48.40	0.11	-0.11	0.00	MWD
1270.00	4.90	310.30	1266.49	52.85	-66.95	-53.51	0.12	0.11	0.54	MWD
1364.00	4.80	310.10	1360.16	57.98	-73.02	-58.70	0.11	-0.11	-0.21	MWD
1414.00	4.90	310.50	1409.98	60.72	-76.24	-61.47	0.21	0.20	0.80	MWD
1528.00	5.10	311.50	1523.54	67.23	-83.74	-68.06	0.19	0.18	0.88	MWD
1613.00	5.30	314.70	1608.19	72.50	-89.36	-73.38	0.41	0.24	3.76	MWD
1698.00	4.90	314.20	1692.86	77.79	-94.75	-78.73	0.47	-0.47	-0.59	MWD
1783.00	5.60	296.60	1777.50	82.18	-101.06	-83.18	2.06	0.82	-20.71	MWD
1868.00	5.60	289.40	1862.10	85.41	-108.68	-86.49	0.83	0.00	-8.47	MWD
1954.00	2.90	296.10	1947.86	87.77	-114.60	-88.90	3.19	-3.14	7.79	MWD

Precision Directional Services, Inc.

Survey Report

Company: CARRIZO OIL & GAS, INC.	Date: 11/04/2013	Time: 09:56:01	Page: 2
Field: Niobrara CONZ'83	Co-ordinate(NE) Reference: Well: 1-27-8-61, Grid North		
Site: Speaker 27-11-8-61 Pad	Vertical (TVD) Reference: 4999'GL+17"KB 5016.0		
Well: 1-27-8-61	Section (VS) Reference: Well (0.00N,0.00E,179.43Azi)		
Wellpath: Original Hole	Survey Calculation Method: Minimum Curvature	Db: Adapti	

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
2039.00	2.80	290.30	2032.75	89.43	-118.48	-90.61	0.36	-0.12	-6.82	MWD
2124.00	3.10	286.60	2117.64	90.81	-122.63	-92.02	0.42	0.35	-4.35	MWD
2209.00	2.60	288.10	2202.53	92.06	-126.66	-93.32	0.59	-0.59	1.76	MWD
2295.00	2.20	288.00	2288.46	93.18	-130.08	-94.47	0.47	-0.47	-0.12	MWD
2380.00	2.10	286.00	2373.40	94.11	-133.13	-95.43	0.15	-0.12	-2.35	MWD
2465.00	4.10	309.60	2458.27	96.48	-136.97	-97.84	2.74	2.35	27.76	MWD
2550.00	4.10	309.90	2543.05	100.37	-141.64	-101.77	0.03	0.00	0.35	MWD
2635.00	4.20	306.80	2627.83	104.18	-146.47	-105.63	0.29	0.12	-3.65	MWD
2721.00	3.80	303.40	2713.62	107.64	-151.37	-109.14	0.54	-0.47	-3.95	MWD
2806.00	3.90	302.90	2798.43	110.76	-156.15	-112.30	0.12	0.12	-0.59	MWD
2891.00	3.50	301.70	2883.25	113.69	-160.78	-115.28	0.48	-0.47	-1.41	MWD
2977.00	6.10	307.30	2968.94	117.84	-166.65	-119.49	3.07	3.02	6.51	MWD
3062.00	6.30	305.50	3053.45	123.28	-174.04	-125.01	0.33	0.24	-2.12	MWD
3147.00	6.00	309.10	3137.96	128.79	-181.28	-130.59	0.57	-0.35	4.24	MWD
3232.00	5.80	308.40	3222.51	134.26	-188.10	-136.13	0.25	-0.24	-0.82	MWD
3317.00	5.20	298.90	3307.12	138.79	-194.84	-140.72	1.28	-0.71	-11.18	MWD
3403.00	3.90	285.00	3392.85	141.43	-201.07	-143.43	1.97	-1.51	-16.16	MWD
3488.00	3.30	287.60	3477.68	142.92	-206.20	-144.97	0.73	-0.71	3.06	MWD
3573.00	3.10	287.80	3562.55	144.36	-210.72	-146.45	0.24	-0.24	0.24	MWD
3658.00	3.40	288.70	3647.41	145.87	-215.29	-148.01	0.36	0.35	1.06	MWD
3743.00	3.40	298.30	3732.26	147.88	-219.90	-150.06	0.67	0.00	11.29	MWD
3829.00	3.30	283.90	3818.12	149.68	-224.55	-151.91	0.98	-0.12	-16.74	MWD
3914.00	3.10	279.20	3902.98	150.64	-229.19	-152.91	0.39	-0.24	-5.53	MWD
3999.00	4.30	305.20	3987.81	152.84	-234.07	-155.16	2.39	1.41	30.59	MWD
4084.00	4.20	302.00	4072.58	156.33	-239.31	-158.70	0.30	-0.12	-3.76	MWD
4170.00	3.80	311.70	4158.37	159.89	-244.11	-162.31	0.91	-0.47	11.28	MWD
4255.00	3.30	312.80	4243.21	163.43	-248.01	-165.89	0.59	-0.59	1.29	MWD
4340.00	4.90	308.70	4327.99	167.36	-252.63	-169.86	1.91	1.88	-4.82	MWD
4426.00	4.40	308.70	4413.70	171.72	-258.08	-174.28	0.58	-0.58	0.00	MWD
4511.00	4.20	314.90	4498.46	175.95	-262.83	-178.56	0.59	-0.24	7.29	MWD
4596.00	3.50	320.50	4583.27	180.15	-266.68	-182.80	0.93	-0.82	6.59	MWD
4682.00	5.20	310.10	4669.02	184.69	-271.33	-187.38	2.17	1.98	-12.09	MWD
4767.00	4.80	306.20	4753.70	189.27	-277.15	-192.02	0.62	-0.47	-4.59	MWD
4852.00	4.50	309.20	4838.42	193.48	-282.60	-196.28	0.45	-0.35	3.53	MWD
4937.00	3.80	314.00	4923.19	197.54	-287.21	-200.39	0.92	-0.82	5.65	MWD
5023.00	5.10	307.00	5008.93	201.82	-292.31	-204.72	1.64	1.51	-8.14	MWD
5108.00	4.90	303.30	5093.61	206.09	-298.37	-209.05	0.45	-0.24	-4.35	MWD
5193.00	4.00	300.60	5178.35	209.59	-303.95	-212.61	1.09	-1.06	-3.18	MWD
5279.00	3.10	308.20	5264.19	212.56	-308.36	-215.62	1.18	-1.05	8.84	MWD
5364.00	2.90	317.80	5349.07	215.57	-311.61	-218.66	0.64	-0.24	11.29	MWD
5449.00	3.30	288.70	5433.95	217.95	-315.37	-221.08	1.89	0.47	-34.24	MWD
5535.00	3.10	280.10	5519.82	219.15	-320.01	-222.32	0.60	-0.23	-10.00	MWD
5620.00	2.20	294.10	5604.73	220.22	-323.76	-223.43	1.30	-1.06	16.47	MWD
5705.00	4.70	290.80	5689.57	222.12	-328.51	-225.38	2.95	2.94	-3.88	MWD
5790.00	4.70	286.90	5774.28	224.37	-335.09	-227.70	0.38	0.00	-4.59	MWD
5832.00	4.00	288.30	5816.16	225.33	-338.13	-228.69	1.69	-1.67	3.33	MWD
5875.00	3.50	288.30	5859.07	226.22	-340.80	-229.59	1.16	-1.16	0.00	MWD
5917.00	5.70	238.00	5900.95	225.51	-343.79	-228.92	10.44	5.24	-119.76	MWD
5960.00	11.40	217.00	5943.46	220.98	-348.16	-224.44	14.90	13.26	-48.84	MWD
6003.00	17.10	208.30	5985.12	212.01	-353.72	-215.52	14.12	13.26	-20.23	MWD
6045.00	21.90	204.50	6024.71	199.44	-359.90	-203.01	11.82	11.43	-9.05	MWD
6088.00	23.20	202.90	6064.42	184.34	-366.52	-187.98	3.34	3.02	-3.72	MWD
6131.00	23.70	196.70	6103.87	168.26	-372.30	-171.95	5.85	1.16	-14.42	MWD

Precision Directional Services, Inc.

Survey Report

Company: CARRIZO OIL & GAS, INC.	Date: 11/04/2013	Time: 09:56:01	Page: 3
Field: Niobrara CONZ'83	Co-ordinate(NE) Reference: Well: 1-27-8-61, Grid North		
Site: Speaker 27-11-8-61 Pad	Vertical (TVD) Reference: 4999'GL+17"KB 5016.0		
Well: 1-27-8-61	Section (VS) Reference: Well (0.00N,0.00E,179.43Azi)		
Wellpath: Original Hole	Survey Calculation Method: Minimum Curvature	Db: Adapti	

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
6173.00	27.50	186.20	6141.76	150.52	-375.78	-154.25	14.06	9.05	-25.00	MWD
6216.00	30.10	180.70	6179.45	129.86	-376.98	-133.60	8.63	6.05	-12.79	MWD
6258.00	31.70	176.90	6215.49	108.31	-376.51	-112.05	6.01	3.81	-9.05	MWD
6301.00	32.30	176.30	6251.95	85.56	-375.16	-89.29	1.58	1.40	-1.40	MWD
6344.00	36.10	179.20	6287.51	61.42	-374.24	-65.14	9.61	8.84	6.74	MWD
6386.00	40.20	181.60	6320.54	35.49	-374.45	-39.21	10.38	9.76	5.71	MWD
6429.00	46.90	181.60	6351.68	5.89	-375.28	-9.62	15.58	15.58	0.00	MWD
6448.00	48.89	182.10	6364.42	-8.20	-375.73	4.46	10.64	10.46	2.66	300' Entry
6472.00	51.40	182.70	6379.80	-26.61	-376.51	22.86	10.64	10.47	2.48	MWD
6514.00	56.50	182.70	6404.51	-60.51	-378.11	56.75	12.14	12.14	0.00	MWD
6557.00	59.50	181.60	6427.30	-96.95	-379.47	93.17	7.31	6.98	-2.56	MWD
6600.00	62.80	181.80	6448.04	-134.59	-380.59	130.80	7.69	7.67	0.47	MWD
6663.00	68.30	182.10	6474.11	-191.89	-382.54	188.07	8.74	8.73	0.48	MWD
6706.00	71.80	181.80	6488.78	-232.28	-383.91	228.44	8.17	8.14	-0.70	MWD
6749.00	75.90	182.30	6500.74	-273.54	-385.39	269.70	9.60	9.53	1.16	MWD
6791.00	82.60	182.10	6508.56	-314.75	-386.97	310.89	15.96	15.95	-0.48	MWD
6834.00	89.30	182.00	6511.60	-357.59	-388.51	353.71	15.58	15.58	-0.23	MWD
6877.00	90.00	182.10	6511.86	-400.56	-390.05	396.66	1.64	1.63	0.23	MWD
6901.00	89.70	182.10	6511.93	-424.55	-390.93	420.64	1.25	-1.25	0.00	MWD
6944.00	89.30	181.80	6512.30	-467.52	-392.39	463.59	1.16	-0.93	-0.70	MWD
6987.00	88.50	181.80	6513.13	-510.49	-393.74	506.55	1.86	-1.86	0.00	MWD
7029.00	87.90	181.30	6514.45	-552.46	-394.87	548.50	1.86	-1.43	-1.19	MWD
7072.00	88.00	180.40	6515.98	-595.42	-395.51	591.46	2.10	0.23	-2.09	MWD
7115.00	87.40	180.40	6517.71	-638.39	-395.81	634.42	1.40	-1.40	0.00	MWD
7157.00	88.40	179.90	6519.25	-680.36	-395.92	676.39	2.66	2.38	-1.19	MWD
7200.00	88.50	179.50	6520.41	-723.34	-395.70	719.37	0.96	0.23	-0.93	MWD
7243.00	91.50	179.00	6520.41	-766.33	-395.13	762.36	7.07	6.98	-1.16	MWD
7285.00	91.40	178.10	6519.35	-808.31	-394.07	804.35	2.16	-0.24	-2.14	MWD
7328.00	89.70	177.40	6518.94	-851.27	-392.38	847.32	4.28	-3.95	-1.63	MWD
7370.00	89.50	177.00	6519.23	-893.22	-390.33	889.29	1.06	-0.48	-0.95	MWD
7413.00	89.60	176.20	6519.57	-936.14	-387.78	932.24	1.87	0.23	-1.86	MWD
7455.00	89.40	176.20	6519.93	-978.05	-385.00	974.17	0.48	-0.48	0.00	MWD
7498.00	89.00	178.50	6520.53	-1020.99	-383.01	1017.13	5.43	-0.93	5.35	MWD
7540.00	88.30	178.10	6521.52	-1062.96	-381.77	1059.11	1.92	-1.67	-0.95	MWD
7583.00	87.90	177.40	6522.95	-1105.91	-380.08	1102.07	1.87	-0.93	-1.63	MWD
7626.00	89.80	179.00	6523.81	-1148.87	-378.73	1145.05	5.78	4.42	3.72	MWD
7668.00	90.00	178.50	6523.89	-1190.86	-377.81	1187.04	1.28	0.48	-1.19	MWD
7711.00	89.40	177.60	6524.11	-1233.84	-376.35	1230.03	2.52	-1.40	-2.09	MWD
7754.00	89.30	177.00	6524.60	-1276.79	-374.32	1273.00	1.41	-0.23	-1.40	MWD
7796.00	90.00	180.20	6524.85	-1318.77	-373.30	1314.99	7.80	1.67	7.62	MWD
7839.00	90.00	179.90	6524.85	-1361.77	-373.33	1357.98	0.70	0.00	-0.70	MWD
7882.00	89.80	178.60	6524.93	-1404.76	-372.77	1400.98	3.06	-0.47	-3.02	MWD
7924.00	89.30	178.10	6525.26	-1446.74	-371.56	1442.97	1.68	-1.19	-1.19	MWD
7967.00	89.30	178.10	6525.79	-1489.72	-370.14	1485.96	0.00	0.00	0.00	MWD
8010.00	89.40	180.90	6526.27	-1532.71	-369.76	1528.95	6.52	0.23	6.51	MWD
8052.00	88.90	180.00	6526.90	-1574.70	-370.09	1570.94	2.45	-1.19	-2.14	MWD
8095.00	88.90	180.20	6527.72	-1617.69	-370.17	1613.93	0.47	0.00	0.47	MWD
8138.00	89.00	180.00	6528.51	-1660.68	-370.24	1656.92	0.52	0.23	-0.47	MWD
8180.00	88.50	179.20	6529.43	-1702.67	-369.95	1698.91	2.25	-1.19	-1.90	MWD
8223.00	88.60	179.20	6530.51	-1745.66	-369.35	1741.89	0.23	0.23	0.00	MWD
8265.00	89.40	180.70	6531.25	-1787.65	-369.31	1783.89	4.05	1.90	3.57	MWD
8308.00	90.70	181.30	6531.21	-1830.64	-370.06	1826.87	3.33	3.02	1.40	MWD
8351.00	90.40	180.90	6530.80	-1873.63	-370.89	1869.85	1.16	-0.70	-0.93	MWD
8393.00	90.70	181.10	6530.39	-1915.62	-371.62	1911.83	0.86	0.71	0.48	MWD

Precision Directional Services, Inc.

Survey Report

Company: CARRIZO OIL & GAS, INC. Field: Niobrara CONZ'83 Site: Speaker 27-11-8-61 Pad Well: 1-27-8-61 Wellpath: Original Hole	Date: 11/04/2013 Co-ordinate(NE) Reference: Well: 1-27-8-61, Grid North Vertical (TVD) Reference: 4999'GL+17"KB 5016.0 Section (VS) Reference: Well (0.00N,0.00E,179.43Azi) Survey Calculation Method: Minimum Curvature Db: Adapti
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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
8436.00	90.10	180.40	6530.09	-1958.62	-372.18	1954.82	2.14	-1.40	-1.63	MWD
8479.00	90.60	180.20	6529.83	-2001.61	-372.41	1997.81	1.25	1.16	-0.47	MWD
8521.00	90.70	179.90	6529.35	-2043.61	-372.45	2039.81	0.75	0.24	-0.71	MWD
8564.00	88.90	177.90	6529.50	-2086.60	-371.62	2082.80	6.26	-4.19	-4.65	MWD
8607.00	90.40	178.80	6529.77	-2129.58	-370.38	2125.79	4.07	3.49	2.09	MWD
8649.00	90.00	177.80	6529.62	-2171.56	-369.14	2167.78	2.56	-0.95	-2.38	MWD
8692.00	90.10	178.30	6529.58	-2214.54	-367.67	2210.77	1.19	0.23	1.16	MWD
8735.00	90.10	182.10	6529.51	-2257.53	-367.82	2253.76	8.84	0.00	8.84	MWD
8777.00	89.80	180.70	6529.54	-2299.51	-368.85	2295.73	3.41	-0.71	-3.33	MWD
8820.00	88.50	179.70	6530.18	-2342.51	-369.00	2338.72	3.81	-3.02	-2.33	MWD
8862.00	88.20	180.90	6531.39	-2384.49	-369.22	2380.70	2.94	-0.71	2.86	MWD
8905.00	88.30	181.80	6532.70	-2427.46	-370.23	2423.65	2.10	0.23	2.09	MWD
8948.00	90.70	181.40	6533.08	-2470.43	-371.43	2466.62	5.66	5.58	-0.93	MWD
8990.00	90.70	181.10	6532.57	-2512.42	-372.35	2508.59	0.71	0.00	-0.71	MWD
9033.00	91.50	180.20	6531.74	-2555.41	-372.84	2551.57	2.80	1.86	-2.09	MWD
9076.00	92.90	180.90	6530.09	-2598.37	-373.25	2594.53	3.64	3.26	1.63	MWD
9118.00	91.20	180.40	6528.59	-2640.34	-373.72	2636.49	4.22	-4.05	-1.19	MWD
9161.00	91.00	180.70	6527.76	-2683.33	-374.14	2679.48	0.84	-0.47	0.70	MWD
9203.00	90.00	180.00	6527.40	-2725.33	-374.39	2721.47	2.91	-2.38	-1.67	MWD
9246.00	87.30	178.10	6528.41	-2768.31	-373.68	2764.45	7.68	-6.28	-4.42	MWD
9289.00	87.20	177.90	6530.47	-2811.23	-372.18	2807.39	0.52	-0.23	-0.47	MWD
9331.00	88.80	179.50	6531.94	-2853.19	-371.23	2849.36	5.39	3.81	3.81	MWD
9374.00	88.90	179.20	6532.80	-2896.18	-370.74	2892.35	0.74	0.23	-0.70	MWD
9416.00	89.60	178.30	6533.35	-2938.17	-369.83	2934.34	2.71	1.67	-2.14	MWD
9459.00	89.40	178.10	6533.73	-2981.14	-368.48	2977.33	0.66	-0.47	-0.47	MWD
9502.00	89.80	178.10	6534.03	-3024.12	-367.05	3020.32	0.93	0.93	0.00	MWD
9544.00	90.40	178.30	6533.95	-3066.10	-365.73	3062.31	1.51	1.43	0.48	MWD
9587.00	90.70	177.90	6533.54	-3109.07	-364.31	3105.29	1.16	0.70	-0.93	MWD
9630.00	89.80	176.90	6533.35	-3152.03	-362.35	3148.26	3.13	-2.09	-2.33	MWD
9672.00	90.00	176.30	6533.43	-3193.95	-359.86	3190.21	1.51	0.48	-1.43	MWD
9715.00	90.70	177.40	6533.16	-3236.88	-357.50	3233.17	3.03	1.63	2.56	MWD
9758.00	90.50	180.00	6532.71	-3279.87	-356.53	3276.16	6.06	-0.47	6.05	MWD
9800.00	90.00	179.30	6532.53	-3321.87	-356.27	3318.16	2.05	-1.19	-1.67	MWD
9843.00	89.50	177.90	6532.72	-3364.85	-355.22	3361.15	3.46	-1.16	-3.26	MWD
9886.00	90.20	178.10	6532.83	-3407.82	-353.72	3404.14	1.69	1.63	0.47	MWD
9928.00	89.70	177.90	6532.87	-3449.80	-352.25	3446.12	1.28	-1.19	-0.48	MWD
9971.00	90.20	177.90	6532.90	-3492.77	-350.68	3489.11	1.16	1.16	0.00	MWD
10013.00	89.90	180.40	6532.87	-3534.76	-350.05	3531.10	6.00	-0.71	5.95	MWD
10056.00	89.40	180.00	6533.13	-3577.76	-350.20	3574.10	1.49	-1.16	-0.93	MWD
10099.00	89.90	179.70	6533.39	-3620.76	-350.09	3617.10	1.36	1.16	-0.70	MWD
10141.00	90.00	179.70	6533.43	-3662.76	-349.87	3659.10	0.24	0.24	0.00	MWD
10184.00	90.10	179.20	6533.39	-3705.76	-349.46	3702.10	1.19	0.23	-1.16	MWD
10227.00	90.10	178.60	6533.32	-3748.75	-348.63	3745.09	1.40	0.00	-1.40	MWD
10269.00	88.50	181.30	6533.83	-3790.74	-348.60	3787.08	7.47	-3.81	6.43	MWD
10312.00	88.40	180.20	6534.99	-3833.72	-349.16	3830.06	2.57	-0.23	-2.56	MWD
10355.00	88.10	180.00	6536.31	-3876.70	-349.23	3873.03	0.84	-0.70	-0.47	MWD
10397.00	87.90	179.30	6537.77	-3918.67	-348.98	3915.01	1.73	-0.48	-1.67	MWD
10440.00	90.60	179.50	6538.34	-3961.66	-348.53	3958.00	6.30	6.28	0.47	MWD
10482.00	90.80	179.00	6537.82	-4003.66	-347.98	4000.00	1.28	0.48	-1.19	MWD
10525.00	90.60	178.50	6537.30	-4046.64	-347.04	4042.99	1.25	-0.47	-1.16	MWD
10568.00	90.40	178.10	6536.92	-4089.62	-345.76	4085.98	1.04	-0.47	-0.93	MWD
10610.00	90.20	180.70	6536.70	-4131.62	-345.32	4127.98	6.21	-0.48	6.19	MWD
10653.00	90.50	180.20	6536.44	-4174.61	-345.66	4170.97	1.36	0.70	-1.16	MWD

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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
10695.00	90.30	179.90	6536.15	-4216.61	-345.70	4212.96	0.86	-0.48	-0.71	MWD
10738.00	90.20	179.50	6535.96	-4259.61	-345.47	4255.96	0.96	-0.23	-0.93	MWD
10781.00	90.80	179.90	6535.58	-4302.61	-345.25	4298.96	1.68	1.40	0.93	MWD
10823.00	91.60	179.70	6534.70	-4344.60	-345.10	4340.95	1.96	1.90	-0.48	MWD
10866.00	91.50	179.90	6533.54	-4387.58	-344.95	4383.93	0.52	-0.23	0.47	MWD
10909.00	89.50	181.60	6533.16	-4430.57	-345.51	4426.92	6.10	-4.65	3.95	MWD
10951.00	90.70	182.30	6533.09	-4472.55	-346.94	4468.88	3.31	2.86	1.67	MWD
10994.00	90.70	182.00	6532.57	-4515.51	-348.56	4511.82	0.70	0.00	-0.70	MWD
11037.00	91.00	181.40	6531.93	-4558.49	-349.83	4554.78	1.56	0.70	-1.40	MWD
11079.00	90.00	181.30	6531.56	-4600.48	-350.82	4596.76	2.39	-2.38	-0.24	MWD
11142.00	90.00	181.30	6531.56	-4663.46	-352.25	4659.73	0.00	0.00	0.00	Project

Annotation

MD ft	TVD ft	
6448.00	6364.42	300' Entry