



Precision Directional Services, Inc.

Survey Report

Company: CARRIZO OIL & GAS, INC. Field: Niobrara CONZ'83 Site: Bringelson 1-32-9-58 Pad Well: 2-32-9-58 Wellpath: Original Hole	Date: 03/20/2013 Co-ordinate(NE) Reference: Well: 2-32-9-58, Grid North Vertical (TVD) Reference: 4782'GL+17"KB 4799.0 Section (VS) Reference: Well (0.00N,0.00E,358.32Azi) Survey Calculation Method: Minimum Curvature	Time: 09:35:36 Page: 1 Db: Adapti
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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 1-32-9-58 Pad			
Weld County, CO			
Site Position: From: Map Position Uncertainty: 0.00 ft Ground Level: 4782.00 ft	Northing: 1502242.15 ft Easting: 3448322.07 ft	Latitude: 40 42 2.945 N Longitude: 103 52 58.966 W North Reference: Grid Grid Convergence: 1.04 deg	

Well: 2-32-9-58 Well Position: +N/-S -15.00 ft +E/-W 0.38 ft Position Uncertainty: 0.00 ft	Slot Name: 2-32 Northing: 1502227.15 ft Easting : 3448322.45 ft Latitude: 40 42 2.797 N Longitude: 103 52 58.965 W
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Wellpath: Original Hole Current Datum: 4782'GL+17"KB Magnetic Data: 03/04/2013 Field Strength: 53237 nT Vertical Section: Depth From (TVD) ft	Height 4799.00 ft	Drilled From: Surface Tie-on Depth: 0.00 ft Above System Datum: Mean Sea Level Declination: 8.17 deg Mag Dip Angle: 67.37 deg +N/-S ft +E/-W ft Direction deg
0.00	0.00	0.00 358.32

Survey Program for Definitive Wellpath				
Date: 03/20/2013 Actual From ft To ft	Validated: No Survey	Version: 0 Toolcode		Tool Name
140.00	10073.00	Survey #1 (140.00-10073.00)	MWD	Std MWD
10135.00	10135.00	Survey #2 (10135.00-10135.00)	Project	Projection

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	TIE LINE
140.00	0.60	218.20	140.00	-0.58	-0.45	-0.56	0.43	0.43	0.00	MWD
232.00	1.10	97.80	231.99	-1.07	0.12	-1.08	1.63	0.54	-130.87	MWD
324.00	5.20	96.10	323.83	-1.64	5.15	-1.79	4.46	4.46	-1.85	MWD
417.00	5.80	92.40	416.40	-2.28	14.03	-2.69	0.75	0.65	-3.98	MWD
507.00	5.40	94.80	505.98	-2.83	22.80	-3.49	0.51	-0.44	2.67	MWD
600.00	5.30	93.40	598.57	-3.45	31.44	-4.37	0.18	-0.11	-1.51	MWD
691.00	5.20	97.70	689.19	-4.25	39.73	-5.41	0.45	-0.11	4.73	MWD
783.00	5.20	98.50	780.81	-5.42	47.98	-6.83	0.08	0.00	0.87	MWD
874.00	4.80	101.00	871.46	-6.76	55.80	-8.39	0.50	-0.44	2.75	MWD
965.00	5.50	103.60	962.10	-8.51	63.77	-10.38	0.81	0.77	2.86	MWD
1057.00	6.40	109.10	1053.60	-11.23	72.90	-13.36	1.16	0.98	5.98	MWD
1148.00	7.70	108.40	1143.91	-14.81	83.48	-17.25	1.43	1.43	-0.77	MWD
1239.00	8.10	110.30	1234.05	-18.96	95.28	-21.74	0.52	0.44	2.09	MWD
1331.00	8.10	110.80	1325.13	-23.51	107.42	-26.65	0.08	0.00	0.54	MWD
1387.00	7.90	109.10	1380.58	-26.17	114.74	-29.52	0.55	-0.36	-3.04	MWD
1475.00	8.40	109.80	1467.69	-30.33	126.50	-34.02	0.58	0.57	0.80	MWD
1505.00	8.40	110.80	1497.37	-31.85	130.61	-35.66	0.49	0.00	3.33	MWD
1597.00	7.00	96.10	1588.55	-34.83	142.47	-38.99	2.61	-1.52	-15.98	MWD
1694.00	6.30	82.90	1684.90	-34.80	153.63	-39.29	1.73	-0.72	-13.61	MWD
1779.00	6.20	85.50	1769.40	-33.86	162.84	-38.62	0.35	-0.12	3.06	MWD
1864.00	5.50	80.30	1853.95	-32.82	171.43	-37.83	1.03	-0.82	-6.12	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
1949.00	5.60	103.10	1938.57	-33.07	179.48	-38.32	2.58	0.12	26.82	MWD
2034.00	5.50	105.00	2023.17	-35.06	187.46	-40.55	0.25	-0.12	2.24	MWD
2120.00	5.70	105.60	2108.76	-37.28	195.55	-43.00	0.24	0.23	0.70	MWD
2206.00	6.00	108.20	2194.31	-39.83	203.93	-45.79	0.47	0.35	3.02	MWD
2291.00	5.80	108.90	2278.86	-42.61	212.22	-48.81	0.25	-0.24	0.82	MWD
2376.00	5.90	107.50	2363.42	-45.32	220.45	-51.76	0.20	0.12	-1.65	MWD
2461.00	5.80	106.30	2447.97	-47.83	228.74	-54.52	0.19	-0.12	-1.41	MWD
2547.00	5.80	105.90	2533.53	-50.24	237.09	-57.17	0.05	0.00	-0.47	MWD
2632.00	7.50	107.70	2617.96	-53.11	246.50	-60.31	2.01	2.00	2.12	MWD
2717.00	7.30	104.50	2702.25	-56.15	257.01	-63.66	0.54	-0.24	-3.76	MWD
2802.00	6.90	106.10	2786.60	-58.91	267.15	-66.72	0.52	-0.47	1.88	MWD
2888.00	6.10	98.90	2872.05	-61.05	276.63	-69.14	1.33	-0.93	-8.37	MWD
2973.00	6.60	98.70	2956.53	-62.49	285.92	-70.85	0.59	0.59	-0.24	MWD
3058.00	6.00	90.10	3041.01	-63.24	295.19	-71.87	1.31	-0.71	-10.12	MWD
3143.00	6.90	100.50	3125.48	-64.18	304.65	-73.08	1.73	1.06	12.24	MWD
3229.00	7.70	102.10	3210.78	-66.33	315.36	-75.54	0.96	0.93	1.86	MWD
3314.00	8.00	100.30	3294.98	-68.58	326.75	-78.13	0.46	0.35	-2.12	MWD
3399.00	7.70	98.90	3379.19	-70.52	338.20	-80.40	0.42	-0.35	-1.65	MWD
3484.00	6.90	95.20	3463.50	-71.86	348.91	-82.06	1.09	-0.94	-4.35	MWD
3570.00	6.50	93.60	3548.91	-72.63	358.91	-83.12	0.51	-0.47	-1.86	MWD
3655.00	6.80	95.20	3633.34	-73.39	368.72	-84.17	0.41	0.35	1.88	MWD
3740.00	5.00	102.60	3717.89	-74.66	377.35	-85.69	2.29	-2.12	8.71	MWD
3825.00	5.00	114.00	3802.56	-76.97	384.35	-88.21	1.17	0.00	13.41	MWD
3910.00	4.60	111.20	3887.27	-79.71	390.91	-91.14	0.55	-0.47	-3.29	MWD
3995.00	6.10	104.20	3971.89	-82.05	398.47	-93.70	1.92	1.76	-8.24	MWD
4080.00	5.50	104.50	4056.46	-84.18	406.79	-96.07	0.71	-0.71	0.35	MWD
4145.00	6.20	101.30	4121.12	-85.65	413.25	-97.72	1.19	1.08	-4.92	MWD
4230.00	7.10	101.20	4205.55	-87.57	422.90	-99.93	1.06	1.06	-0.12	MWD
4315.00	6.80	98.20	4289.92	-89.30	433.04	-101.96	0.55	-0.35	-3.53	MWD
4400.00	7.70	95.90	4374.24	-90.61	443.68	-103.58	1.11	1.06	-2.71	MWD
4485.00	8.00	95.90	4458.45	-91.80	455.23	-105.11	0.35	0.35	0.00	MWD
4570.00	7.60	99.80	4542.66	-93.37	466.65	-107.01	0.78	-0.47	4.59	MWD
4655.00	6.80	97.50	4626.99	-94.98	477.18	-108.93	1.00	-0.94	-2.71	MWD
4740.00	5.70	88.70	4711.49	-95.54	486.39	-109.76	1.71	-1.29	-10.35	MWD
4825.00	6.10	82.20	4796.04	-94.83	495.08	-109.30	0.92	0.47	-7.65	MWD
4911.00	6.50	78.80	4881.52	-93.27	504.39	-108.01	0.64	0.47	-3.95	MWD
4996.00	6.10	69.50	4966.01	-90.75	513.34	-105.76	1.29	-0.47	-10.94	MWD
5081.00	5.30	59.90	5050.59	-87.20	520.96	-102.43	1.46	-0.94	-11.29	MWD
5166.00	4.40	53.40	5135.28	-83.29	526.98	-98.70	1.24	-1.06	-7.65	MWD
5209.00	5.30	55.80	5178.13	-81.19	529.94	-96.69	2.15	2.09	5.58	MWD
5251.00	7.90	53.70	5219.85	-78.39	533.88	-94.00	6.22	6.19	-5.00	MWD
5294.00	10.80	43.20	5262.27	-73.70	539.02	-89.47	7.80	6.74	-24.42	MWD
5336.00	13.70	38.90	5303.31	-66.96	544.84	-82.90	7.23	6.90	-10.24	MWD
5379.00	16.50	38.60	5344.82	-58.22	551.84	-74.37	6.51	6.51	-0.70	MWD
5422.00	19.40	36.70	5385.73	-47.72	559.92	-64.12	6.88	6.74	-4.42	MWD
5464.00	22.20	33.80	5424.99	-35.53	568.51	-52.18	7.10	6.67	-6.90	MWD
5507.00	25.30	30.90	5464.34	-20.89	577.75	-37.82	7.70	7.21	-6.74	MWD
5549.00	28.90	29.80	5501.73	-4.38	587.40	-21.60	8.65	8.57	-2.62	MWD
5592.00	31.70	30.00	5538.85	14.42	598.22	-3.12	6.52	6.51	0.47	MWD
5634.00	35.20	27.70	5573.89	34.71	609.37	16.83	8.86	8.33	-5.48	MWD
5655.00	36.70	26.50	5590.89	45.68	614.98	27.63	7.89	7.14	-5.71	MWD
5677.00	38.50	25.10	5608.32	57.77	620.82	39.54	9.06	8.18	-6.36	MWD
5698.00	41.30	25.80	5624.43	69.93	626.61	51.53	13.50	13.33	3.33	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
5719.00	44.70	26.30	5639.78	82.79	632.90	64.20	16.27	16.19	2.38	MWD
5740.00	48.50	26.50	5654.21	96.46	639.68	77.66	18.11	18.10	0.95	MWD
5762.00	52.20	25.90	5668.24	111.65	647.16	92.63	16.95	16.82	-2.73	MWD
5783.00	55.60	23.70	5680.62	127.05	654.27	107.82	18.27	16.19	-10.48	MWD
5804.00	57.10	20.00	5692.25	143.28	660.77	123.84	16.31	7.14	-17.62	MWD
5825.00	57.40	15.60	5703.62	160.09	666.16	140.49	17.68	1.43	-20.95	MWD
5847.00	58.70	12.20	5715.26	178.20	670.64	158.47	14.38	5.91	-15.45	MWD
5879.00	62.50	7.80	5730.98	205.65	675.46	185.76	16.86	11.87	-13.75	MWD
5912.00	67.40	4.70	5744.95	235.35	678.70	215.35	17.11	14.85	-9.39	MWD
5954.00	70.40	1.20	5760.07	274.47	680.70	254.40	10.56	7.14	-8.33	MWD
5997.00	72.50	359.90	5773.75	315.24	681.09	295.13	5.66	4.88	-3.02	MWD
6039.00	74.80	358.30	5785.57	355.53	680.45	335.43	6.58	5.48	-3.81	MWD
6069.00	77.73	357.74	5792.69	384.65	679.45	364.56	9.93	9.77	-1.87	600' entry
6082.00	79.00	357.50	5795.32	397.37	678.92	377.30	9.93	9.77	-1.84	MWD
6125.00	84.00	355.90	5801.67	439.81	676.47	419.79	12.20	11.63	-3.72	MWD
6167.00	87.30	355.70	5804.85	481.57	673.40	461.62	7.87	7.86	-0.48	MWD
6210.00	90.00	356.10	5805.87	524.45	670.33	504.57	6.35	6.28	0.93	MWD
6253.00	90.40	356.20	5805.72	567.35	667.44	547.54	0.96	0.93	0.23	MWD
6295.00	92.20	356.60	5804.76	609.25	664.80	589.50	4.39	4.29	0.95	MWD
6338.00	92.30	356.40	5803.08	652.14	662.18	632.45	0.52	0.23	-0.47	MWD
6380.00	92.70	356.20	5801.24	694.01	659.47	674.38	1.06	0.95	-0.48	MWD
6423.00	92.90	355.70	5799.14	736.85	656.44	717.29	1.25	0.47	-1.16	MWD
6466.00	91.60	355.40	5797.46	779.69	653.10	760.21	3.10	-3.02	-0.70	MWD
6477.00	91.70	355.40	5797.14	790.65	652.22	771.19	0.91	0.91	0.00	MWD
6519.00	92.10	355.40	5795.75	832.49	648.86	813.11	0.95	0.95	0.00	MWD
6562.00	91.50	356.20	5794.40	875.36	645.71	856.05	2.32	-1.40	1.86	MWD
6605.00	89.60	357.60	5793.98	918.29	643.38	899.03	5.49	-4.42	3.26	MWD
6647.00	89.70	357.50	5794.24	960.25	641.59	941.03	0.34	0.24	-0.24	MWD
6690.00	89.90	357.30	5794.39	1003.20	639.64	984.02	0.66	0.47	-0.47	MWD
6732.00	88.70	357.80	5794.90	1045.16	637.84	1026.01	3.10	-2.86	1.19	MWD
6775.00	88.30	357.30	5796.03	1088.11	636.01	1068.99	1.49	-0.93	-1.16	MWD
6818.00	88.00	357.10	5797.42	1131.03	633.91	1111.96	0.84	-0.70	-0.47	MWD
6860.00	89.30	357.80	5798.41	1172.98	632.04	1153.95	3.52	3.10	1.67	MWD
6903.00	90.90	358.50	5798.33	1215.95	630.65	1196.94	4.06	3.72	1.63	MWD
6945.00	90.90	357.80	5797.67	1257.93	629.29	1238.94	1.67	0.00	-1.67	MWD
6988.00	91.00	357.50	5796.96	1300.89	627.53	1281.93	0.74	0.23	-0.70	MWD
7031.00	91.40	357.30	5796.06	1343.83	625.58	1324.91	1.04	0.93	-0.47	MWD
7073.00	90.60	356.90	5795.32	1385.77	623.46	1366.90	2.13	-1.90	-0.95	MWD
7116.00	90.10	356.90	5795.06	1428.71	621.13	1409.88	1.16	-1.16	0.00	MWD
7159.00	90.20	356.60	5794.95	1471.64	618.69	1452.87	0.74	0.23	-0.70	MWD
7201.00	90.70	358.00	5794.62	1513.59	616.71	1494.86	3.54	1.19	3.33	MWD
7244.00	91.10	357.80	5793.94	1556.55	615.14	1537.85	1.04	0.93	-0.47	MWD
7286.00	91.80	359.00	5792.88	1598.52	613.97	1579.84	3.31	1.67	2.86	MWD
7329.00	90.70	0.30	5791.94	1641.51	613.70	1622.81	3.96	-2.56	3.02	MWD
7372.00	89.50	0.30	5791.87	1684.51	613.93	1665.79	2.79	-2.79	0.00	MWD
7414.00	89.30	359.90	5792.31	1726.51	614.00	1707.76	1.06	-0.48	-0.95	MWD
7457.00	89.90	0.30	5792.61	1769.51	614.08	1750.74	1.68	1.40	0.93	MWD
7500.00	90.30	0.30	5792.53	1812.50	614.30	1793.72	0.93	0.93	0.00	MWD
7542.00	88.40	0.30	5793.01	1854.50	614.52	1835.69	4.52	-4.52	0.00	MWD
7585.00	88.10	0.10	5794.32	1897.48	614.67	1878.64	0.84	-0.70	-0.47	MWD
7627.00	87.90	358.90	5795.79	1939.45	614.31	1920.61	2.89	-0.48	-2.86	MWD
7670.00	89.30	358.00	5796.84	1982.42	613.14	1963.59	3.87	3.26	-2.09	MWD
7712.00	90.40	357.80	5796.95	2024.39	611.60	2005.59	2.66	2.62	-0.48	MWD
7755.00	90.50	357.60	5796.61	2067.36	609.88	2048.59	0.52	0.23	-0.47	MWD

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Site: Bringelson 1-32-9-58 Pad
Well: 2-32-9-58
Wellpath: Original Hole

Date: 03/20/2013 **Time:** 09:35:36 **Page:** 4
Co-ordinate(NE) Reference: Well: 2-32-9-58, Grid North
Vertical (TVD) Reference: 4782'GL+17"KB 4799.0
Section (VS) Reference: Well (0.00N,0.00E,358.32Azi)
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
7797.00	90.70	357.10	5796.17	2109.31	607.94	2090.58	1.28	0.48	-1.19	MWD
7840.00	90.50	356.80	5795.72	2152.25	605.65	2133.56	0.84	-0.47	-0.70	MWD
7883.00	91.00	356.80	5795.16	2195.17	603.25	2176.55	1.16	1.16	0.00	MWD
7925.00	90.40	355.50	5794.65	2237.08	600.43	2218.51	3.41	-1.43	-3.10	MWD
7968.00	88.40	355.50	5795.10	2279.94	597.06	2261.45	4.65	-4.65	0.00	MWD
8010.00	88.30	356.60	5796.31	2321.82	594.16	2303.40	2.63	-0.24	2.62	MWD
8053.00	88.20	356.80	5797.62	2364.73	591.69	2346.37	0.52	-0.23	0.47	MWD
8096.00	89.70	357.60	5798.41	2407.67	589.59	2389.35	3.95	3.49	1.86	MWD
8138.00	90.50	357.60	5798.33	2449.63	587.83	2431.35	1.90	1.90	0.00	MWD
8180.00	90.40	357.10	5798.00	2491.59	585.89	2473.34	1.21	-0.24	-1.19	MWD
8222.00	89.90	356.20	5797.89	2533.51	583.44	2515.32	2.45	-1.19	-2.14	MWD
8265.00	90.00	356.10	5797.93	2576.42	580.55	2558.29	0.33	0.23	-0.23	MWD
8307.00	90.70	357.30	5797.67	2618.34	578.13	2600.27	3.31	1.67	2.86	MWD
8350.00	90.40	357.80	5797.26	2661.30	576.29	2643.26	1.36	-0.70	1.16	MWD
8392.00	89.70	356.90	5797.22	2703.26	574.35	2685.26	2.71	-1.67	-2.14	MWD
8435.00	90.10	359.70	5797.30	2746.23	573.08	2728.25	6.58	0.93	6.51	MWD
8477.00	90.70	0.10	5797.01	2788.23	573.00	2770.24	1.72	1.43	0.95	MWD
8520.00	90.10	359.00	5796.71	2831.23	572.66	2813.22	2.91	-1.40	-2.56	MWD
8563.00	89.70	358.20	5796.78	2874.22	571.61	2856.22	2.08	-0.93	-1.86	MWD
8605.00	90.20	358.50	5796.82	2916.20	570.40	2898.22	1.39	1.19	0.71	MWD
8648.00	91.20	359.20	5796.29	2959.19	569.54	2941.22	2.84	2.33	1.63	MWD
8690.00	91.10	358.70	5795.45	3001.17	568.77	2983.21	1.21	-0.24	-1.19	MWD
8733.00	91.20	358.30	5794.59	3044.15	567.65	3026.20	0.96	0.23	-0.93	MWD
8775.00	89.30	358.20	5794.40	3086.12	566.36	3068.19	4.53	-4.52	-0.24	MWD
8818.00	89.10	357.80	5795.00	3129.09	564.86	3111.19	1.04	-0.47	-0.93	MWD
8861.00	89.20	357.30	5795.64	3172.05	563.03	3154.18	1.19	0.23	-1.16	MWD
8903.00	89.20	356.80	5796.23	3213.99	560.86	3196.17	1.19	0.00	-1.19	MWD
8946.00	88.70	358.50	5797.02	3256.95	559.10	3239.15	4.12	-1.16	3.95	MWD
8988.00	88.70	358.30	5797.97	3298.92	557.93	3281.14	0.48	0.00	-0.48	MWD
9031.00	88.20	358.00	5799.13	3341.88	556.54	3324.13	1.36	-1.16	-0.70	MWD
9073.00	89.30	358.70	5800.05	3383.85	555.33	3366.12	3.10	2.62	1.67	MWD
9116.00	89.90	358.90	5800.35	3426.84	554.43	3409.11	1.47	1.40	0.47	MWD
9159.00	89.50	358.20	5800.57	3469.83	553.34	3452.11	1.87	-0.93	-1.63	MWD
9201.00	89.20	356.20	5801.05	3511.77	551.29	3494.10	4.81	-0.71	-4.76	MWD
9244.00	90.00	356.90	5801.35	3554.69	548.70	3537.08	2.47	1.86	1.63	MWD
9286.00	90.00	356.90	5801.35	3596.63	546.43	3579.06	0.00	0.00	0.00	MWD
9329.00	89.30	356.80	5801.61	3639.56	544.07	3622.05	1.64	-1.63	-0.23	MWD
9371.00	89.20	357.10	5802.16	3681.50	541.84	3664.03	0.75	-0.24	0.71	MWD
9414.00	90.50	359.40	5802.28	3724.48	540.52	3707.03	6.14	3.02	5.35	MWD
9457.00	89.40	357.80	5802.31	3767.46	539.47	3750.03	4.52	-2.56	-3.72	MWD
9499.00	89.00	356.60	5802.90	3809.41	537.42	3792.01	3.01	-0.95	-2.86	MWD
9542.00	89.40	357.80	5803.50	3852.35	535.32	3835.00	2.94	0.93	2.79	MWD
9584.00	90.70	358.20	5803.46	3894.32	533.86	3877.00	3.24	3.10	0.95	MWD
9627.00	91.10	358.20	5802.79	3937.30	532.50	3919.99	0.93	0.93	0.00	MWD
9670.00	91.60	357.80	5801.77	3980.26	531.00	3962.98	1.49	1.16	-0.93	MWD
9712.00	92.10	357.80	5800.42	4022.21	529.39	4004.96	1.19	1.19	0.00	MWD
9755.00	92.10	357.50	5798.84	4065.14	527.63	4047.92	0.70	0.00	-0.70	MWD
9797.00	92.30	357.30	5797.23	4107.07	525.73	4089.89	0.67	0.48	-0.48	MWD
9840.00	92.80	357.30	5795.32	4149.98	523.70	4132.84	1.16	1.16	0.00	MWD
9883.00	93.00	357.30	5793.14	4192.87	521.68	4175.78	0.47	0.47	0.00	MWD
9925.00	91.70	356.80	5791.42	4234.78	519.52	4217.73	3.32	-3.10	-1.19	MWD
10010.00	91.40	356.60	5789.12	4319.61	514.63	4302.66	0.42	-0.35	-0.24	MWD
10073.00	91.50	356.10	5787.53	4382.46	510.62	4365.61	0.81	0.16	-0.79	MWD

Precision Directional Services, Inc.

Survey Report

Company: CARRIZO OIL & GAS, INC. Field: Niobrara CONZ'83 Site: Bringelson 1-32-9-58 Pad Well: 2-32-9-58 Wellpath: Original Hole	Date: 03/20/2013 Time: 09:35:36 Page: 5 Co-ordinate(NE) Reference: Well: 2-32-9-58, Grid North Vertical (TVD) Reference: 4782'GL+17'KB 4799.0 Section (VS) Reference: Well (0.00N,0.00E,358.32Azi) 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
10135.00	91.50	356.10	5785.90	4444.30	506.40	4427.54	0.00	0.00	0.00	PROJECTED to TD

Annotation

MD ft	TVD ft	
6069.00	5792.69	600' entry