



# CARRIZO

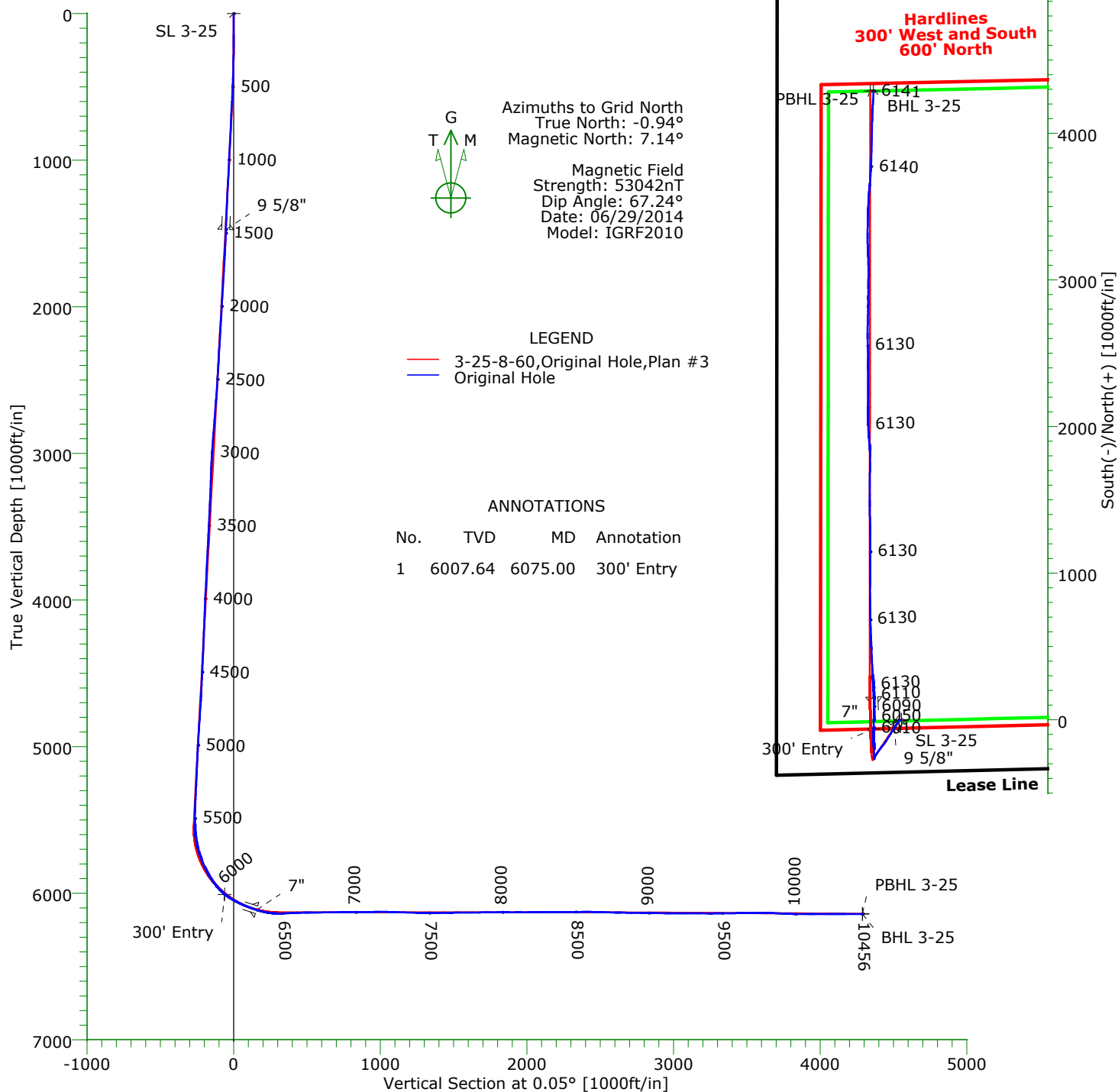
**CARRIZO OIL & GAS, INC.**  
Field: Niobrara CONZ'83  
Site: Hemberger 1-25-8-60 Pad  
Well: 3-25-8-60  
Wellpath: Original Hole



**Precision**  
Directional Services

## CASING DETAILS

No.	TVD	MD	Name	Size
1	1472.89	1475.00	9 5/8"	9.625
2	6113.49	6318.00	7"	7.000



# Precision Directional Services, Inc.

## Survey Report

<b>Company:</b> CARRIZO OIL & GAS, INC. <b>Field:</b> Niobrara CONZ'83 <b>Site:</b> Hemberger 1-25-8-60 Pad <b>Well:</b> 3-25-8-60 <b>Wellpath:</b> Original Hole	<b>Date:</b> 07/07/2014 <b>Co-ordinate(NE) Reference:</b> Well: 3-25-8-60, Grid North <b>Vertical (TVD) Reference:</b> 4908'GL+17"KB 4925.0 <b>Section (VS) Reference:</b> Well (0.00N,0.00E,0.05Azi) <b>Survey Calculation Method:</b> Minimum Curvature	<b>Time:</b> 07:54:51 <b>Page:</b> 1 <b>Db:</b> Adapti
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<b>Field:</b> Niobrara CONZ'83  <b>Map System:</b> US State Plane Coordinate System 1983 <b>Geo Datum:</b> GRS 1980 <b>Sys Datum:</b> Mean Sea Level	<b>Map Zone:</b> Colorado, Northern Zone <b>Coordinate System:</b> Well Centre <b>Geomagnetic Model:</b> IGRF2010
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<b>Site:</b> Hemberger 1-25-8-60 Pad  <b>Site Position:</b> <b>From:</b> Map <b>Position Uncertainty:</b> 0.00 ft <b>Ground Level:</b> 4908.00 ft	<b>Northing:</b> 1474603.96 ft <b>Easting:</b> 3403479.97 ft  <b>Latitude:</b> 40 37 37.555 N <b>Longitude:</b> 104 2 46.978 W <b>North Reference:</b> Grid <b>Grid Convergence:</b> 0.94 deg
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<b>Well:</b> 3-25-8-60  <b>Well Position:</b> +N/-S 15.00 ft <b>Position Uncertainty:</b> 0.00 ft	<b>Slot Name:</b> 3-25  <b>Well Position:</b> +N/-S 15.00 ft <b>Position Uncertainty:</b> 0.00 ft
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<b>Wellpath:</b> Original Hole  <b>Current Datum:</b> 4908'GL+17"KB <b>Magnetic Data:</b> 06/29/2014 <b>Field Strength:</b> 53042 nT <b>Vertical Section:</b> Depth From (TVD) ft	<b>Drilled From:</b> Surface <b>Tie-on Depth:</b> 0.00 ft <b>Above System Datum:</b> Mean Sea Level <b>Declination:</b> 8.08 deg <b>Mag Dip Angle:</b> 67.24 deg <b>+N/-S</b> ft <b>+E/-W</b> ft <b>Direction</b> bearing
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<b>Survey Program for Definitive Wellpath</b> <b>Date:</b> 07/07/2014 <b>Actual From</b> ft <b>To</b> ft	<b>Validated:</b> No <b>Survey</b>	<b>Version:</b> 3 <b>Toolcode</b>	<b>Tool Name</b>
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140.00	10398.00	Survey #1 (140.00-10398.00)	MWD	Std MWD
10456.00	10456.00	Survey #2 (10456.00-10456.00)	Project	Projection

Survey										
MD ft	Incl deg	Azim bearing	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	0.50	297.50	140.00	0.28	-0.54	0.28	0.36	0.36	0.00	MWD
234.00	2.50	253.40	233.96	-0.11	-2.87	-0.12	2.31	2.13	-46.91	MWD
325.00	3.70	253.40	324.83	-1.52	-7.59	-1.53	1.32	1.32	0.00	MWD
417.00	3.70	245.00	416.64	-3.62	-13.12	-3.63	0.59	0.00	-9.13	MWD
508.00	3.50	227.60	507.46	-6.74	-17.83	-6.75	1.22	-0.22	-19.12	MWD
600.00	3.40	205.90	599.30	-11.08	-21.10	-11.10	1.41	-0.11	-23.59	MWD
691.00	3.40	208.80	690.14	-15.88	-23.58	-15.90	0.19	0.00	3.19	MWD
783.00	3.30	209.10	781.98	-20.58	-26.18	-20.60	0.11	-0.11	0.33	MWD
874.00	3.30	211.60	872.83	-25.10	-28.83	-25.13	0.16	0.00	2.75	MWD
966.00	3.30	213.20	964.68	-29.57	-31.66	-29.60	0.10	0.00	1.74	MWD
1057.00	3.30	215.60	1055.53	-33.89	-34.62	-33.92	0.15	0.00	2.64	MWD
1149.00	3.30	211.60	1147.37	-38.30	-37.55	-38.33	0.25	0.00	-4.35	MWD
1240.00	3.30	214.70	1238.22	-42.69	-40.42	-42.72	0.20	0.00	3.41	MWD
1332.00	3.20	214.00	1330.07	-46.99	-43.36	-47.03	0.12	-0.11	-0.76	MWD
1423.00	2.80	214.60	1420.95	-50.93	-46.04	-50.97	0.44	-0.44	0.66	MWD
1506.00	2.70	221.80	1503.85	-54.05	-48.50	-54.09	0.43	-0.12	8.67	MWD
1590.00	3.30	213.20	1587.74	-57.55	-51.14	-57.59	0.89	0.71	-10.24	MWD
1675.00	4.20	217.20	1672.56	-62.08	-54.36	-62.12	1.10	1.06	4.71	MWD
1760.00	4.10	211.70	1757.33	-67.14	-57.84	-67.19	0.48	-0.12	-6.47	MWD
1845.00	3.90	213.00	1842.13	-72.15	-61.01	-72.20	0.26	-0.24	1.53	MWD
1930.00	3.90	210.90	1926.93	-77.06	-64.07	-77.11	0.17	0.00	-2.47	MWD

# Precision Directional Services, Inc.

## Survey Report

<b>Company:</b> CARRIZO OIL & GAS, INC. <b>Field:</b> Niobrara CONZ'83 <b>Site:</b> Hemberger 1-25-8-60 Pad <b>Well:</b> 3-25-8-60 <b>Wellpath:</b> Original Hole	<b>Date:</b> 07/07/2014 <b>Time:</b> 07:54:51 <b>Page:</b> 2 <b>Co-ordinate(NE) Reference:</b> Well: 3-25-8-60, Grid North <b>Vertical (TVD) Reference:</b> 4908'GL+17"KB 4925.0 <b>Section (VS) Reference:</b> Well (0.00N,0.00E,0.05Azi) <b>Survey Calculation Method:</b> Minimum Curvature <b>Db:</b> Adapti
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### Survey

MD ft	Incl deg	Azim bearing	TVD ft	+N/-S ft	+E/-W ft	VS ft	DLS deg/100ft	Build deg/100ft	Turn deg/100ft	Tool/Comment
2015.00	3.80	205.20	2011.74	-82.08	-66.75	-82.14	0.47	-0.12	-6.71	MWD
2100.00	3.40	203.50	2096.57	-86.94	-68.96	-87.00	0.49	-0.47	-2.00	MWD
2185.00	4.00	210.20	2181.39	-91.82	-71.45	-91.88	0.87	0.71	7.88	MWD
2270.00	3.80	211.70	2266.20	-96.78	-74.42	-96.84	0.26	-0.24	1.76	MWD
2355.00	3.70	212.10	2351.01	-101.50	-77.36	-101.56	0.12	-0.12	0.47	MWD
2441.00	4.70	214.40	2436.78	-106.76	-80.83	-106.83	1.18	1.16	2.67	MWD
2525.00	4.60	213.00	2520.51	-112.42	-84.61	-112.49	0.18	-0.12	-1.67	MWD
2610.00	4.70	213.00	2605.23	-118.20	-88.36	-118.28	0.12	0.12	0.00	MWD
2695.00	5.30	211.00	2689.90	-124.48	-92.28	-124.56	0.73	0.71	-2.35	MWD
2780.00	5.10	209.80	2774.55	-131.13	-96.18	-131.21	0.27	-0.24	-1.41	MWD
2865.00	5.30	212.10	2859.20	-137.73	-100.14	-137.82	0.34	0.24	2.71	MWD
2951.00	4.70	215.30	2944.88	-143.97	-104.29	-144.06	0.77	-0.70	3.72	MWD
3035.00	4.00	211.40	3028.63	-149.28	-107.80	-149.38	0.90	-0.83	-4.64	MWD
3121.00	3.10	228.40	3114.47	-153.39	-111.10	-153.48	1.60	-1.05	19.77	MWD
3206.00	2.60	216.10	3199.37	-156.47	-113.96	-156.57	0.93	-0.59	-14.47	MWD
3291.00	2.70	208.20	3284.27	-159.79	-116.04	-159.89	0.45	0.12	-9.29	MWD
3377.00	2.90	213.70	3370.17	-163.39	-118.20	-163.49	0.39	0.23	6.40	MWD
3462.00	3.50	218.80	3455.04	-167.20	-121.02	-167.30	0.78	0.71	6.00	MWD
3547.00	4.00	223.70	3539.86	-171.36	-124.70	-171.47	0.70	0.59	5.76	MWD
3632.00	3.80	220.40	3624.66	-175.65	-128.57	-175.76	0.35	-0.24	-3.88	MWD
3717.00	3.70	211.40	3709.48	-180.14	-131.83	-180.25	0.70	-0.12	-10.59	MWD
3802.00	3.50	214.90	3794.31	-184.61	-134.74	-184.72	0.35	-0.24	4.12	MWD
3887.00	3.30	218.40	3879.16	-188.65	-137.74	-188.77	0.34	-0.24	4.12	MWD
3972.00	3.20	219.70	3964.03	-192.39	-140.78	-192.52	0.15	-0.12	1.53	MWD
4057.00	3.10	217.90	4048.90	-196.03	-143.71	-196.16	0.17	-0.12	-2.12	MWD
4142.00	2.90	222.60	4133.78	-199.43	-146.57	-199.56	0.37	-0.24	5.53	MWD
4227.00	2.70	220.90	4218.68	-202.53	-149.34	-202.66	0.25	-0.24	-2.00	MWD
4313.00	3.30	216.30	4304.56	-206.05	-152.13	-206.18	0.75	0.70	-5.35	MWD
4398.00	3.10	216.70	4389.43	-209.87	-154.95	-210.00	0.24	-0.24	0.47	MWD
4483.00	3.60	212.30	4474.28	-213.96	-157.75	-214.10	0.66	0.59	-5.18	MWD
4568.00	2.80	214.90	4559.15	-217.92	-160.37	-218.06	0.96	-0.94	3.06	MWD
4652.00	3.40	220.20	4643.03	-221.51	-163.15	-221.65	0.79	0.71	6.31	MWD
4737.00	4.50	211.00	4727.82	-226.29	-166.49	-226.44	1.49	1.29	-10.82	MWD
4822.00	4.80	212.80	4812.54	-232.14	-170.14	-232.29	0.39	0.35	2.12	MWD
4907.00	4.00	210.90	4897.29	-237.67	-173.59	-237.82	0.96	-0.94	-2.24	MWD
4992.00	4.00	208.40	4982.09	-242.82	-176.52	-242.98	0.21	0.00	-2.94	MWD
5077.00	2.90	203.10	5066.93	-247.41	-178.77	-247.57	1.35	-1.29	-6.24	MWD
5162.00	2.40	208.80	5151.84	-250.95	-180.47	-251.10	0.66	-0.59	6.71	MWD
5247.00	2.80	203.50	5236.75	-254.41	-182.16	-254.57	0.55	0.47	-6.24	MWD
5331.00	3.10	201.60	5320.64	-258.40	-183.81	-258.56	0.38	0.36	-2.26	MWD
5416.00	2.20	203.30	5405.55	-262.04	-185.30	-262.20	1.06	-1.06	2.00	MWD
5459.00	1.80	198.00	5448.52	-263.44	-185.84	-263.60	1.02	-0.93	-12.33	MWD
5498.00	1.70	192.80	5487.50	-264.59	-186.16	-264.75	0.48	-0.26	-13.33	MWD
5540.00	0.70	241.30	5529.50	-265.32	-186.52	-265.48	3.20	-2.38	115.48	MWD
5583.00	3.60	333.00	5572.47	-264.24	-187.36	-264.40	8.58	6.74	213.26	MWD
5624.00	7.60	352.70	5613.27	-260.40	-188.29	-260.57	10.69	9.76	48.05	MWD
5667.00	11.40	1.90	5655.67	-253.33	-188.51	-253.50	9.49	8.84	21.40	MWD
5709.00	15.60	4.90	5696.50	-243.55	-187.89	-243.72	10.13	10.00	7.14	MWD
5752.00	18.50	2.00	5737.61	-230.97	-187.16	-231.13	7.03	6.74	-6.74	MWD
5795.00	22.10	359.90	5777.93	-216.06	-186.94	-216.22	8.54	8.37	-4.88	MWD
5837.00	24.00	356.60	5816.58	-199.63	-187.46	-199.79	5.47	4.52	-7.86	MWD
5880.00	27.80	356.10	5855.25	-180.89	-188.66	-181.05	8.85	8.84	-1.16	MWD
5922.00	32.40	357.10	5891.58	-159.87	-189.89	-160.03	11.02	10.95	2.38	MWD

# Precision Directional Services, Inc.

## Survey Report

<b>Company:</b> CARRIZO OIL & GAS, INC. <b>Field:</b> Niobrara CONZ'83 <b>Site:</b> Hemberger 1-25-8-60 Pad <b>Well:</b> 3-25-8-60 <b>Wellpath:</b> Original Hole	<b>Date:</b> 07/07/2014 <b>Time:</b> 07:54:51 <b>Page:</b> 3 <b>Co-ordinate(NE) Reference:</b> Well: 3-25-8-60, Grid North <b>Vertical (TVD) Reference:</b> 4908'GL+17"KB 4925.0 <b>Section (VS) Reference:</b> Well (0.00N,0.00E,0.05Azi) <b>Survey Calculation Method:</b> Minimum Curvature <b>Db:</b> Adapti
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### Survey

MD ft	Incl deg	Azim bearing	TVD ft	+N/-S ft	+E/-W ft	VS ft	DLS deg/100ft	Build deg/100ft	Turn deg/100ft	Tool/Comment
5965.00	36.00	358.50	5927.14	-135.72	-190.81	-135.89	8.57	8.37	3.26	MWD
6008.00	40.30	0.80	5960.95	-109.17	-190.94	-109.34	10.53	10.00	5.35	MWD
6050.00	47.10	1.70	5991.29	-80.18	-190.30	-80.34	16.26	16.19	2.14	MWD
6075.00	51.23	1.46	6007.64	-61.27	-189.78	-61.44	16.53	16.51	-0.97	300' Entry
6093.00	54.20	1.30	6018.54	-46.96	-189.43	-47.12	16.53	16.51	-0.88	MWD
6135.00	59.80	1.30	6041.41	-11.76	-188.63	-11.92	13.33	13.33	0.00	MWD
6178.00	63.90	1.70	6061.69	26.13	-187.64	25.97	9.57	9.53	0.93	MWD
6220.00	66.80	0.80	6079.20	64.29	-186.81	64.13	7.17	6.90	-2.14	MWD
6263.00	69.10	359.40	6095.35	104.14	-186.75	103.98	6.14	5.35	-3.26	MWD
6306.00	71.70	357.80	6109.77	144.64	-187.74	144.47	6.99	6.05	-3.72	MWD
6318.00	72.20	357.30	6113.49	156.03	-188.23	155.87	5.75	4.17	-4.17	MWD
6381.00	78.30	357.10	6129.52	216.86	-191.20	216.69	9.69	9.68	-0.32	MWD
6427.00	85.30	356.20	6136.08	262.28	-193.87	262.11	15.34	15.22	-1.96	MWD
6473.00	90.30	356.80	6137.84	308.15	-196.67	307.97	10.95	10.87	1.30	MWD
6519.00	92.40	357.50	6136.76	354.07	-198.96	353.90	4.81	4.57	1.52	MWD
6561.00	92.90	357.30	6134.82	395.98	-200.86	395.81	1.28	1.19	-0.48	MWD
6604.00	91.50	357.80	6133.17	438.91	-202.70	438.74	3.46	-3.26	1.16	MWD
6645.00	92.10	357.80	6131.88	479.86	-204.27	479.68	1.46	1.46	0.00	MWD
6688.00	89.90	357.50	6131.13	522.82	-206.03	522.64	5.16	-5.12	-0.70	MWD
6730.00	90.30	358.00	6131.06	564.78	-207.68	564.60	1.52	0.95	1.19	MWD
6773.00	90.50	358.20	6130.76	607.76	-209.11	607.58	0.66	0.47	0.47	MWD
6816.00	90.50	357.80	6130.38	650.73	-210.61	650.55	0.93	0.00	-0.93	MWD
6858.00	90.90	357.80	6129.87	692.70	-212.22	692.51	0.95	0.95	0.00	MWD
6901.00	91.30	358.70	6129.04	735.67	-213.53	735.48	2.29	0.93	2.09	MWD
6943.00	89.30	359.80	6128.82	777.66	-214.08	777.47	5.43	-4.76	2.62	MWD
6986.00	89.80	0.50	6129.16	820.66	-213.97	820.47	2.00	1.16	1.63	MWD
7028.00	90.30	0.30	6129.12	862.66	-213.68	862.47	1.28	1.19	-0.48	MWD
7071.00	90.90	0.30	6128.67	905.66	-213.45	905.47	1.40	1.40	0.00	MWD
7113.00	91.60	0.50	6127.76	947.64	-213.16	947.46	1.73	1.67	0.48	MWD
7155.00	89.80	0.60	6127.24	989.64	-212.76	989.45	4.29	-4.29	0.24	MWD
7198.00	89.90	0.30	6127.36	1032.64	-212.42	1032.45	0.74	0.23	-0.70	MWD
7240.00	88.50	0.50	6127.94	1074.63	-212.12	1074.44	3.37	-3.33	0.48	MWD
7282.00	88.30	359.90	6129.12	1116.61	-211.98	1116.43	1.51	-0.48	-1.43	MWD
7324.00	88.30	359.90	6130.36	1158.59	-212.05	1158.41	0.00	0.00	0.00	MWD
7367.00	88.40	359.60	6131.60	1201.58	-212.24	1201.39	0.74	0.23	-0.70	MWD
7409.00	88.40	359.80	6132.77	1243.56	-212.46	1243.37	0.48	0.00	0.48	MWD
7452.00	88.10	358.70	6134.09	1286.53	-213.02	1286.35	2.65	-0.70	-2.56	MWD
7494.00	90.10	359.10	6134.75	1328.52	-213.83	1328.33	4.86	4.76	0.95	MWD
7536.00	90.60	358.70	6134.49	1370.51	-214.63	1370.32	1.52	1.19	-0.95	MWD
7579.00	91.00	359.20	6133.89	1413.50	-215.42	1413.31	1.49	0.93	1.16	MWD
7621.00	91.20	358.70	6133.08	1455.48	-216.19	1455.29	1.28	0.48	-1.19	MWD
7663.00	90.30	0.60	6132.53	1497.48	-216.45	1497.29	5.01	-2.14	4.52	MWD
7706.00	90.40	0.10	6132.27	1540.48	-216.18	1540.29	1.19	0.23	-1.16	MWD
7748.00	90.40	0.30	6131.98	1582.47	-216.04	1582.29	0.48	0.00	0.48	MWD
7791.00	90.70	0.60	6131.56	1625.47	-215.70	1625.28	0.99	0.70	0.70	MWD
7833.00	90.70	0.80	6131.05	1667.46	-215.19	1667.28	0.48	0.00	0.48	MWD
7875.00	90.60	0.30	6130.57	1709.46	-214.78	1709.27	1.21	-0.24	-1.19	MWD
7918.00	90.00	0.10	6130.35	1752.46	-214.63	1752.27	1.47	-1.40	-0.47	MWD
7960.00	90.20	0.30	6130.28	1794.46	-214.49	1794.27	0.67	0.48	0.48	MWD
8002.00	89.90	358.40	6130.24	1836.45	-214.96	1836.27	4.58	-0.71	-4.52	MWD
8045.00	90.00	354.80	6130.28	1879.37	-217.51	1879.18	8.38	0.23	-8.37	MWD
8087.00	90.00	354.50	6130.28	1921.19	-221.43	1920.99	0.71	0.00	-0.71	MWD
8129.00	90.10	357.30	6130.24	1963.08	-224.43	1962.88	6.67	0.24	6.67	MWD
8172.00	90.30	357.10	6130.09	2006.02	-226.53	2005.83	0.66	0.47	-0.47	MWD

# Precision Directional Services, Inc.

## Survey Report

<b>Company:</b> CARRIZO OIL & GAS, INC. <b>Field:</b> Niobrara CONZ'83 <b>Site:</b> Hemberger 1-25-8-60 Pad <b>Well:</b> 3-25-8-60 <b>Wellpath:</b> Original Hole	<b>Date:</b> 07/07/2014 <b>Co-ordinate(NE) Reference:</b> Well: 3-25-8-60, Grid North <b>Vertical (TVD) Reference:</b> 4908'GL+17"KB 4925.0 <b>Section (VS) Reference:</b> Well (0.00N,0.00E,0.05Azi) <b>Survey Calculation Method:</b> Minimum Curvature	<b>Time:</b> 07:54:51 <b>Page:</b> 4 <b>Db:</b> Adapti
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### Survey

MD ft	Incl deg	Azim bearing	TVD ft	+N/-S ft	+E/-W ft	VS ft	DLS deg/100ft	Build deg/100ft	Turn deg/100ft	Tool/Comment
8214.00	91.20	358.50	6129.54	2047.99	-228.14	2047.79	3.96	2.14	3.33	MWD
8257.00	92.00	359.90	6128.34	2090.97	-228.75	2090.77	3.75	1.86	3.26	MWD
8299.00	89.60	1.00	6127.75	2132.96	-228.42	2132.76	6.29	-5.71	2.62	MWD
8341.00	89.80	0.30	6127.97	2174.95	-227.94	2174.75	1.73	0.48	-1.67	MWD
8384.00	89.70	359.90	6128.16	2217.95	-227.86	2217.75	0.96	-0.23	-0.93	MWD
8426.00	90.10	0.30	6128.23	2259.95	-227.79	2259.75	1.35	0.95	0.95	MWD
8469.00	90.30	359.80	6128.08	2302.95	-227.75	2302.75	1.25	0.47	-1.16	MWD
8511.00	90.60	0.10	6127.75	2344.95	-227.79	2344.75	1.01	0.71	0.71	MWD
8554.00	90.70	359.60	6127.27	2387.95	-227.90	2387.75	1.19	0.23	-1.16	MWD
8596.00	89.10	0.50	6127.34	2429.95	-227.87	2429.75	4.37	-3.81	2.14	MWD
8639.00	88.80	359.60	6128.13	2472.94	-227.83	2472.74	2.21	-0.70	-2.09	MWD
8681.00	88.60	359.10	6129.08	2514.92	-228.30	2514.72	1.28	-0.48	-1.19	MWD
8723.00	88.50	358.50	6130.14	2556.90	-229.18	2556.70	1.45	-0.24	-1.43	MWD
8765.00	88.50	358.50	6131.24	2598.87	-230.28	2598.67	0.00	0.00	0.00	MWD
8808.00	89.20	0.60	6132.11	2641.86	-230.62	2641.66	5.15	1.63	4.88	MWD
8851.00	89.00	1.00	6132.78	2684.85	-230.02	2684.65	1.04	-0.47	0.93	MWD
8893.00	89.20	1.50	6133.44	2726.84	-229.10	2726.63	1.28	0.48	1.19	MWD
8936.00	89.30	1.30	6134.00	2769.82	-228.05	2769.62	0.52	0.23	-0.47	MWD
8978.00	89.40	1.50	6134.48	2811.80	-227.03	2811.60	0.53	0.24	0.48	MWD
9021.00	89.10	359.60	6135.04	2854.80	-226.61	2854.60	4.47	-0.70	-4.42	MWD
9063.00	89.00	0.30	6135.74	2896.79	-226.65	2896.59	1.68	-0.24	1.67	MWD
9106.00	89.00	0.10	6136.49	2939.78	-226.50	2939.58	0.47	0.00	-0.47	MWD
9148.00	89.90	1.90	6136.89	2981.77	-225.77	2981.57	4.79	2.14	4.29	MWD
9191.00	90.00	1.00	6136.93	3024.76	-224.68	3024.56	2.11	0.23	-2.09	MWD
9234.00	89.80	359.60	6137.01	3067.76	-224.45	3067.56	3.29	-0.47	-3.26	MWD
9276.00	90.10	358.40	6137.04	3109.75	-225.19	3109.55	2.95	0.71	-2.86	MWD
9319.00	89.50	358.20	6137.19	3152.73	-226.46	3152.53	1.47	-1.40	-0.47	MWD
9361.00	89.80	357.10	6137.45	3194.69	-228.19	3194.49	2.71	0.71	-2.62	MWD
9404.00	89.80	358.50	6137.60	3237.66	-229.84	3237.46	3.26	0.00	3.26	MWD
9446.00	90.70	359.10	6137.42	3279.65	-230.72	3279.45	2.58	2.14	1.43	MWD
9489.00	90.60	1.00	6136.93	3322.64	-230.68	3322.44	4.42	-0.23	4.42	MWD
9532.00	90.40	1.20	6136.55	3365.64	-229.85	3365.43	0.66	-0.47	0.47	MWD
9574.00	90.80	0.80	6136.11	3407.63	-229.12	3407.43	1.35	0.95	-0.95	MWD
9617.00	91.20	1.30	6135.36	3450.61	-228.33	3450.41	1.49	0.93	1.16	MWD
9659.00	90.00	3.10	6134.92	3492.58	-226.72	3492.38	5.15	-2.86	4.29	MWD
9702.00	90.60	3.10	6134.70	3535.51	-224.39	3535.32	1.40	1.40	0.00	MWD
9743.00	91.50	3.30	6133.95	3576.44	-222.11	3576.25	2.25	2.20	0.49	MWD
9786.00	89.80	5.40	6133.46	3619.31	-218.84	3619.12	6.28	-3.95	4.88	MWD
9828.00	87.30	4.70	6134.52	3661.13	-215.15	3660.94	6.18	-5.95	-1.67	MWD
9871.00	87.10	4.00	6136.62	3703.96	-211.89	3703.77	1.69	-0.47	-1.63	MWD
9913.00	87.00	3.10	6138.78	3745.82	-209.29	3745.64	2.15	-0.24	-2.14	MWD
9956.00	88.80	2.40	6140.36	3788.74	-207.23	3788.56	4.49	4.19	-1.63	MWD
9999.00	89.10	1.30	6141.15	3831.71	-205.85	3831.53	2.65	0.70	-2.56	MWD
10041.00	89.40	1.30	6141.70	3873.69	-204.89	3873.51	0.71	0.71	0.00	MWD
10084.00	89.20	0.80	6142.22	3916.68	-204.10	3916.50	1.25	-0.47	-1.16	MWD
10126.00	90.20	1.90	6142.44	3958.67	-203.11	3958.49	3.54	2.38	2.62	MWD
10168.00	90.70	1.50	6142.11	4000.65	-201.87	4000.47	1.52	1.19	-0.95	MWD
10211.00	91.10	1.20	6141.44	4043.63	-200.86	4043.46	1.16	0.93	-0.70	MWD
10254.00	89.90	1.30	6141.06	4086.62	-199.92	4086.44	2.80	-2.79	0.23	MWD
10296.00	90.00	2.40	6141.10	4128.60	-198.56	4128.42	2.63	0.24	2.62	MWD
10339.00	90.10	3.60	6141.06	4171.54	-196.31	4171.36	2.80	0.23	2.79	MWD
10398.00	90.10	2.20	6140.96	4230.46	-193.33	4230.29	2.37	0.00	-2.37	MWD
10456.00	90.10	2.20	6140.86	4288.42	-191.10	4288.25	0.00	0.00	0.00	PROJECTED to TD

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## Survey Report

**Company:** CARRIZO OIL & GAS, INC.  
**Field:** Niobrara CONZ'83  
**Site:** Hemberger 1-25-8-60 Pad  
**Well:** 3-25-8-60  
**Wellpath:** Original Hole

**Date:** 07/07/2014  
**Co-ordinate(NE) Reference:** Well: 3-25-8-60, Grid North  
**Vertical (TVD) Reference:** 4908'GL+17'KB 4925.0  
**Section (VS) Reference:** Well (0.00N,0.00E,0.05Azi)  
**Survey Calculation Method:** Minimum Curvature  
**Time:** 07:54:51  
**Page:** 5  
**Db:** Adapti

### Annotation

MD ft	TVD ft	
6075.00	6007.64	300' Entry