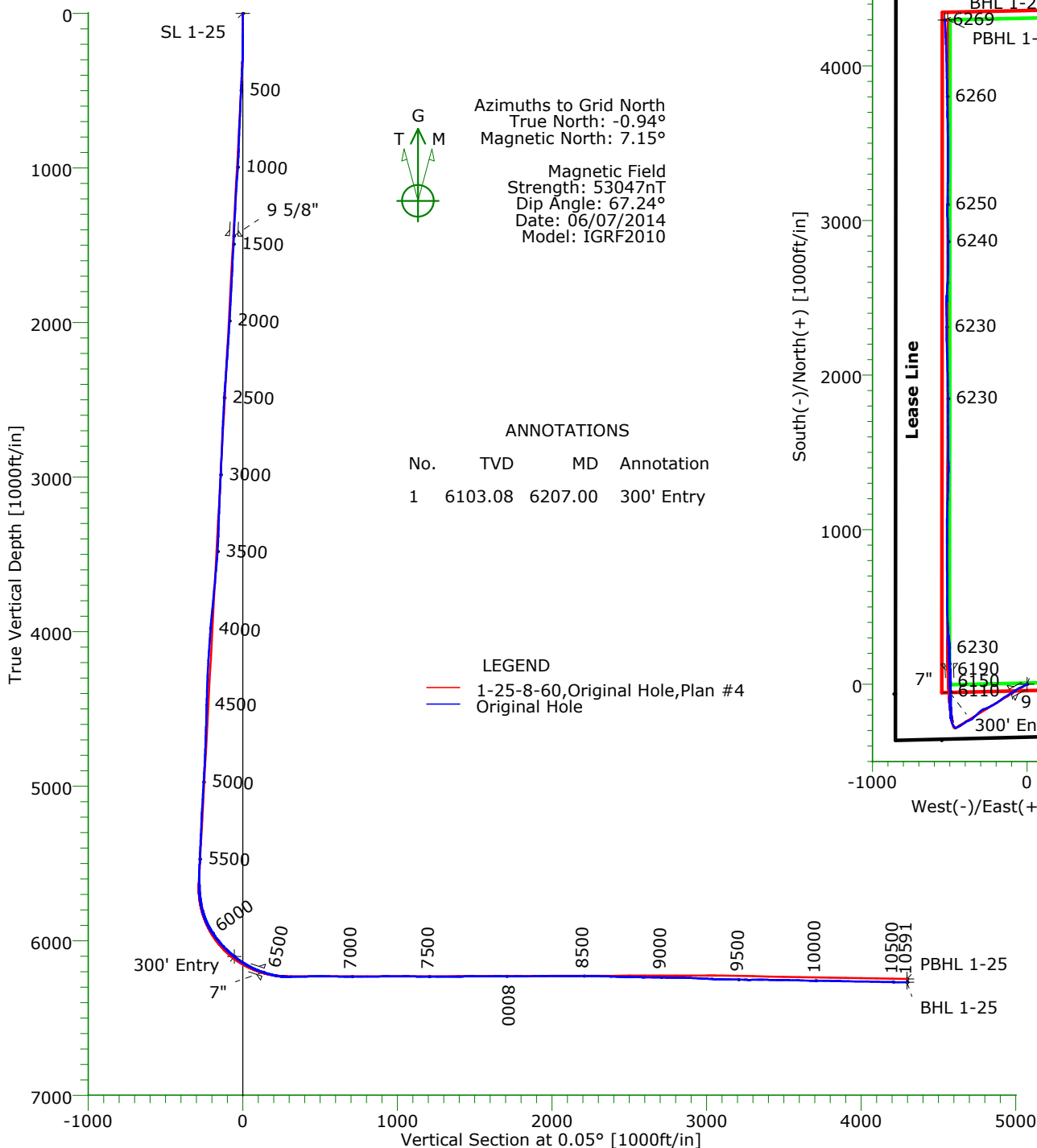




### CASING DETAILS

No.	TVD	MD	Name	Size
1	1441.31	1447.00	9 5/8"	9.625
2	6204.96	6421.00	7"	7.000



Azimuths to Grid North  
 True North: -0.94°  
 Magnetic North: 7.15°

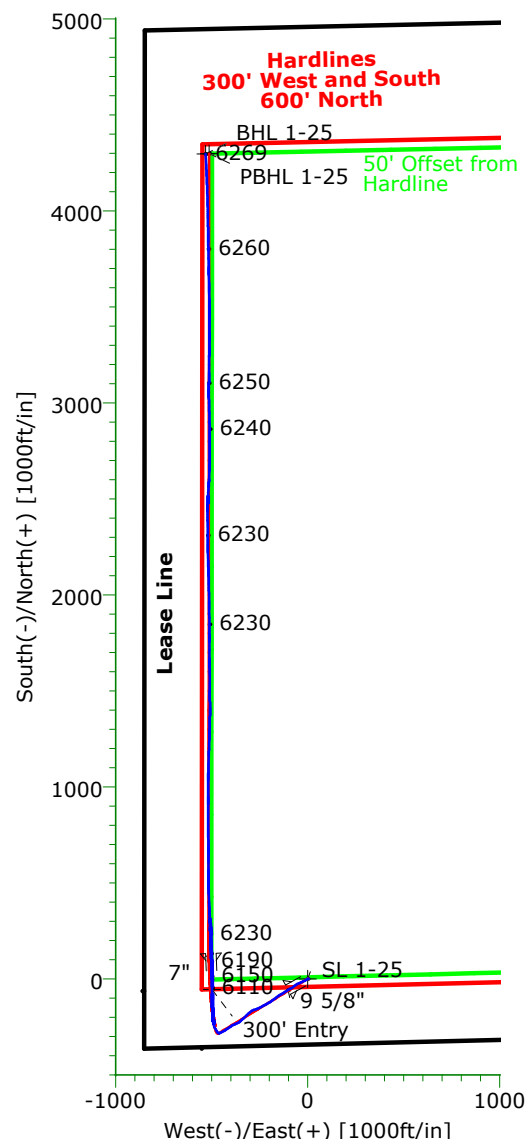
Magnetic Field  
 Strength: 53047nT  
 Dip Angle: 67.24°  
 Date: 06/07/2014  
 Model: IGRF2010

### ANNOTATIONS

No.	TVD	MD	Annotation
1	6103.08	6207.00	300' Entry

### LEGEND

- 1-25-8-60, Original Hole, Plan #4
- Original Hole



### TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Shape
SL 1-25	0.00	0.00	0.00	1474603.96	3403479.97	40°37'37.555N	104°02'46.978W	Point
300' Entry 1-25	6103.08	-54.26	-498.81	1474549.70	3402981.16	40°37'37.099N	104°02'53.458W	Point
PBHL 1-25	6248.00	4297.62	-513.13	1478901.58	3402966.84	40°38'20.099N	104°02'52.719W	Point
BHL 1-25	6269.34	4297.27	-532.03	1478901.23	3402947.94	40°38'20.098N	104°02'52.965W	Point

# Precision Directional Services, Inc.

## Survey Report

<b>Company:</b> CARRIZO OIL & GAS, INC.		<b>Date:</b> 06/16/2014		<b>Time:</b> 08:39:47		<b>Page:</b> 1	
<b>Field:</b> Niobrara CONZ'83		<b>Co-ordinate(NE) Reference:</b> Well: 1-25-8-60, Grid North					
<b>Site:</b> Hemberger 1-25-8-60 Pad		<b>Vertical (TVD) Reference:</b> 4908'GL+17"KB 4925.0					
<b>Well:</b> 1-25-8-60		<b>Section (VS) Reference:</b> Well (0.00N,0.00E,0.05Azi)					
<b>Wellpath:</b> Original Hole		<b>Survey Calculation Method:</b> Minimum Curvature		<b>Db:</b> Adapti			

<b>Field:</b> Niobrara CONZ'83	
<b>Map System:</b> US State Plane Coordinate System 1983	<b>Map Zone:</b> Colorado, Northern Zone
<b>Geo Datum:</b> GRS 1980	<b>Coordinate System:</b> Well Centre
<b>Sys Datum:</b> Mean Sea Level	<b>Geomagnetic Model:</b> IGRF2010

<b>Site:</b> Hemberger 1-25-8-60 Pad	
<b>Site Position:</b>	<b>Northing:</b> 1474603.96 ft
<b>From:</b> Map	<b>Easting:</b> 3403479.97 ft
<b>Position Uncertainty:</b> 0.00 ft	<b>Latitude:</b> 40 37 37.555 N
<b>Ground Level:</b> 4908.00 ft	<b>Longitude:</b> 104 2 46.978 W
	<b>North Reference:</b> Grid
	<b>Grid Convergence:</b> 0.94 deg

<b>Well:</b> 1-25-8-60		<b>Slot Name:</b>	
<b>Well Position:</b> +N/-S 0.00 ft	<b>Northing:</b> 1474603.96 ft	<b>Latitude:</b> 40 37 37.555 N	
+E/-W 0.00 ft	<b>Easting :</b> 3403479.97 ft	<b>Longitude:</b> 104 2 46.978 W	
<b>Position Uncertainty:</b> 0.00 ft			

<b>Wellpath:</b> Original Hole		<b>Drilled From:</b> Surface	
<b>Current Datum:</b> 4908'GL+17"KB	<b>Height</b> 4925.00 ft	<b>Tie-on Depth:</b> 0.00 ft	
<b>Magnetic Data:</b> 06/07/2014		<b>Above System Datum:</b> Mean Sea Level	
<b>Field Strength:</b> 53047 nT		<b>Declination:</b> 8.09 deg	
<b>Vertical Section:</b> Depth From (TVD)	+N/-S	<b>Mag Dip Angle:</b> 67.24 deg	
ft	ft	+E/-W	<b>Direction</b>
		ft	bearing
0.00	0.00	0.00	0.05

<b>Survey Program for Definitive Wellpath</b>			
<b>Date:</b> 06/15/2014	<b>Validated:</b> No	<b>Version:</b> 3	
<b>Actual From</b> ft	<b>To</b> ft	<b>Survey</b>	<b>Toolcode</b> <b>Tool Name</b>
141.00	10533.00	Survey #1 (141.00-10533.00)	MWD Std MWD
10591.00	10591.00	Survey #2 (10591.00-10591.00)	Project Projection

<b>Survey</b>										
MD	Incl	Azim	TVD	+N/-S	+E/-W	VS	DLS	Build	Turn	Tool/Comment
ft	deg	bearing	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
141.00	0.40	67.30	141.00	0.19	0.45	0.19	0.28	0.28	0.00	MWD
236.00	1.90	241.80	235.98	-0.43	-0.63	-0.43	2.42	1.58	183.68	MWD
328.00	5.30	240.90	327.79	-3.21	-5.69	-3.22	3.70	3.70	-0.98	MWD
420.00	6.20	242.00	419.33	-7.61	-13.79	-7.63	0.99	0.98	1.20	MWD
512.00	5.90	243.20	510.81	-12.08	-22.39	-12.10	0.35	-0.33	1.30	MWD
604.00	5.80	245.30	602.33	-16.15	-30.84	-16.18	0.26	-0.11	2.28	MWD
696.00	5.60	243.90	693.88	-20.07	-39.09	-20.10	0.26	-0.22	-1.52	MWD
788.00	5.20	247.60	785.47	-23.63	-46.98	-23.67	0.58	-0.43	4.02	MWD
880.00	4.90	248.50	877.11	-26.66	-54.49	-26.71	0.34	-0.33	0.98	MWD
972.00	5.90	233.70	968.71	-30.90	-61.95	-30.96	1.86	1.09	-16.09	MWD
1064.00	6.10	230.90	1060.20	-36.78	-69.56	-36.84	0.39	0.22	-3.04	MWD
1156.00	5.80	234.40	1151.71	-42.57	-77.13	-42.64	0.51	-0.33	3.80	MWD
1248.00	5.80	238.00	1243.24	-47.74	-84.85	-47.82	0.40	0.00	3.91	MWD
1340.00	5.50	239.40	1334.79	-52.45	-92.59	-52.53	0.36	-0.33	1.52	MWD
1410.00	5.40	240.80	1404.48	-55.76	-98.35	-55.85	0.24	-0.14	2.00	MWD
1506.00	5.50	241.50	1500.04	-60.16	-106.34	-60.26	0.13	0.10	0.73	MWD
1591.00	5.50	236.40	1584.65	-64.36	-113.31	-64.46	0.57	0.00	-6.00	MWD
1676.00	5.30	236.00	1669.27	-68.81	-119.96	-68.92	0.24	-0.24	-0.47	MWD
1761.00	5.70	240.60	1753.88	-73.08	-126.89	-73.19	0.70	0.47	5.41	MWD
1846.00	6.20	239.00	1838.42	-77.51	-134.50	-77.63	0.62	0.59	-1.88	MWD
1931.00	5.60	238.50	1922.97	-82.05	-141.97	-82.17	0.71	-0.71	-0.59	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> 1-25-8-60 <b>Wellpath:</b> Original Hole	<b>Date:</b> 06/16/2014 <b>Time:</b> 08:39:47 <b>Co-ordinate(NE) Reference:</b> Well: 1-25-8-60, 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	<b>Page:</b> 2
---	---	----------------

### 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
2016.00	6.20	235.30	2007.52	-86.83	-149.28	-86.96	0.80	0.71	-3.76	MWD
2101.00	5.60	232.00	2092.07	-91.99	-156.33	-92.13	0.81	-0.71	-3.88	MWD
2186.00	6.50	233.90	2176.60	-97.38	-163.48	-97.52	1.08	1.06	2.24	MWD
2271.00	7.70	236.50	2260.95	-103.36	-172.12	-103.51	1.46	1.41	3.06	MWD
2356.00	7.10	234.40	2345.24	-109.56	-181.14	-109.72	0.77	-0.71	-2.47	MWD
2441.00	6.70	229.30	2429.62	-115.85	-189.17	-116.01	0.86	-0.47	-6.00	MWD
2526.00	6.10	240.40	2514.10	-121.31	-196.85	-121.49	1.61	-0.71	13.06	MWD
2611.00	5.70	242.30	2598.64	-125.51	-204.52	-125.69	0.52	-0.47	2.24	MWD
2696.00	5.40	241.50	2683.25	-129.38	-211.77	-129.56	0.36	-0.35	-0.94	MWD
2781.00	5.30	241.10	2767.88	-133.18	-218.72	-133.37	0.13	-0.12	-0.47	MWD
2866.00	5.30	241.10	2852.51	-136.98	-225.60	-137.17	0.00	0.00	0.00	MWD
2951.00	5.10	240.90	2937.16	-140.71	-232.33	-140.92	0.24	-0.24	-0.24	MWD
3036.00	6.00	242.50	3021.76	-144.60	-239.58	-144.81	1.07	1.06	1.88	MWD
3121.00	5.10	240.10	3106.36	-148.54	-246.79	-148.75	1.09	-1.06	-2.82	MWD
3207.00	5.30	245.20	3192.01	-152.11	-253.71	-152.33	0.59	0.23	5.93	MWD
3292.00	6.10	252.20	3276.59	-155.13	-261.58	-155.36	1.25	0.94	8.24	MWD
3377.00	6.90	255.20	3361.04	-157.82	-270.81	-158.06	1.02	0.94	3.53	MWD
3463.00	8.10	248.00	3446.31	-161.41	-281.42	-161.65	1.77	1.40	-8.37	MWD
3548.00	8.10	234.30	3530.47	-167.15	-291.84	-167.40	2.27	0.00	-16.12	MWD
3633.00	7.60	227.60	3614.67	-174.43	-300.86	-174.69	1.23	-0.59	-7.88	MWD
3718.00	8.00	228.80	3698.89	-182.12	-309.46	-182.39	0.51	0.47	1.41	MWD
3803.00	7.90	226.20	3783.07	-190.06	-318.12	-190.34	0.44	-0.12	-3.06	MWD
3888.00	7.60	223.90	3867.29	-198.15	-326.24	-198.44	0.51	-0.35	-2.71	MWD
3973.00	6.90	226.30	3951.61	-205.73	-333.83	-206.02	0.90	-0.82	2.82	MWD
4058.00	6.20	230.90	4036.06	-212.15	-341.08	-212.45	1.03	-0.82	5.41	MWD
4143.00	5.60	226.90	4120.61	-217.88	-347.67	-218.18	0.86	-0.71	-4.71	MWD
4228.00	5.10	226.70	4205.24	-223.30	-353.45	-223.61	0.59	-0.59	-0.24	MWD
4313.00	5.10	244.10	4289.91	-227.55	-359.60	-227.86	1.81	0.00	20.47	MWD
4399.00	4.60	246.70	4375.60	-230.58	-366.20	-230.90	0.63	-0.58	3.02	MWD
4484.00	4.00	244.30	4460.36	-233.21	-372.00	-233.54	0.74	-0.71	-2.82	MWD
4569.00	3.30	245.00	4545.19	-235.53	-376.89	-235.86	0.83	-0.82	0.82	MWD
4654.00	3.90	247.80	4630.02	-237.66	-381.79	-237.99	0.74	0.71	3.29	MWD
4738.00	5.30	243.80	4713.75	-240.45	-387.91	-240.79	1.71	1.67	-4.76	MWD
4823.00	4.50	240.20	4798.43	-243.84	-394.33	-244.19	1.01	-0.94	-4.24	MWD
4908.00	4.90	235.50	4883.15	-247.56	-400.21	-247.90	0.65	0.47	-5.53	MWD
4993.00	6.10	234.10	4967.76	-252.26	-406.86	-252.62	1.42	1.41	-1.65	MWD
5078.00	5.60	236.20	5052.31	-257.22	-413.97	-257.58	0.64	-0.59	2.47	MWD
5164.00	6.00	235.80	5137.87	-262.08	-421.17	-262.44	0.47	0.47	-0.47	MWD
5249.00	4.50	232.70	5222.51	-266.59	-427.50	-266.97	1.80	-1.76	-3.65	MWD
5333.00	4.60	237.40	5306.25	-270.41	-432.96	-270.78	0.46	0.12	5.60	MWD
5418.00	6.30	248.70	5390.86	-273.94	-440.18	-274.32	2.36	2.00	13.29	MWD
5503.00	7.30	249.20	5475.27	-277.55	-449.57	-277.94	1.18	1.18	0.59	MWD
5587.00	4.70	240.40	5558.80	-281.14	-457.55	-281.54	3.27	-3.10	-10.48	MWD
5625.00	3.50	236.20	5596.70	-282.56	-459.87	-282.96	3.25	-3.16	-11.05	MWD
5667.00	4.00	268.90	5638.62	-283.30	-462.40	-283.70	5.15	1.19	77.86	MWD
5710.00	5.70	306.20	5681.47	-282.07	-465.62	-282.47	8.12	3.95	86.74	MWD
5752.00	9.00	323.70	5723.13	-278.19	-469.25	-278.60	9.41	7.86	41.67	MWD
5795.00	13.50	327.10	5765.29	-271.26	-473.97	-271.67	10.57	10.47	7.91	MWD
5837.00	16.70	327.80	5805.83	-262.03	-479.85	-262.45	7.63	7.62	1.67	MWD
5880.00	20.50	338.50	5846.59	-249.79	-485.91	-250.22	11.84	8.84	24.88	MWD
5923.00	25.70	348.00	5886.14	-233.65	-490.61	-234.08	14.84	12.09	22.09	MWD
5965.00	31.30	353.60	5923.05	-213.88	-493.72	-214.31	14.76	13.33	13.33	MWD
6008.00	35.30	356.60	5958.98	-190.37	-495.71	-190.80	10.06	9.30	6.98	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> 1-25-8-60 <b>Wellpath:</b> Original Hole	<b>Date:</b> 06/16/2014 <b>Co-ordinate(NE) Reference:</b> Well: 1-25-8-60, 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> 08:39:47 <b>Page:</b> 3 <b>Db:</b> Adapti
---	---	--

### 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
6051.00	38.50	357.70	5993.36	-164.58	-496.98	-165.02	7.60	7.44	2.56	MWD
6093.00	41.90	358.20	6025.44	-137.50	-497.95	-137.93	8.13	8.10	1.19	MWD
6136.00	45.40	359.10	6056.55	-107.83	-498.64	-108.26	8.27	8.14	2.09	MWD
6178.00	49.90	0.10	6084.83	-76.80	-498.85	-77.23	10.86	10.71	2.38	MWD
6207.00	52.13	0.10	6103.08	-54.26	-498.81	-54.69	7.67	7.67	0.00	300' Entry
6221.00	53.20	0.10	6111.57	-43.13	-498.79	-43.56	7.67	7.67	0.00	MWD
6263.00	55.70	359.20	6135.99	-8.96	-499.00	-9.40	6.20	5.95	-2.14	MWD
6306.00	60.00	358.20	6158.86	27.43	-499.83	26.99	10.19	10.00	-2.33	MWD
6349.00	64.50	358.00	6178.88	65.45	-501.10	65.01	10.47	10.47	-0.47	MWD
6383.00	69.00	357.70	6192.30	96.66	-502.27	96.22	13.26	13.24	-0.88	MWD
6475.00	76.40	358.40	6219.64	184.39	-505.25	183.94	8.08	8.04	0.76	MWD
6521.00	80.10	357.80	6229.00	229.39	-506.74	228.95	8.14	8.04	-1.30	MWD
6563.00	88.40	357.70	6233.21	271.11	-508.38	270.66	19.76	19.76	-0.24	MWD
6606.00	92.00	357.80	6233.06	314.07	-510.07	313.62	8.38	8.37	0.23	MWD
6647.00	90.80	357.70	6232.06	355.02	-511.68	354.58	2.94	-2.93	-0.24	MWD
6690.00	90.00	357.80	6231.76	397.99	-513.36	397.54	1.87	-1.86	0.23	MWD
6733.00	90.90	357.80	6231.42	440.96	-515.01	440.51	2.09	2.09	0.00	MWD
6775.00	91.30	358.90	6230.61	482.93	-516.22	482.48	2.79	0.95	2.62	MWD
6818.00	89.80	359.80	6230.20	525.92	-516.71	525.47	4.07	-3.49	2.09	MWD
6860.00	88.90	0.10	6230.68	567.92	-516.75	567.47	2.26	-2.14	0.71	MWD
6903.00	88.90	0.10	6231.50	610.91	-516.67	610.46	0.00	0.00	0.00	MWD
6945.00	88.50	359.90	6232.45	652.90	-516.67	652.45	1.06	-0.95	-0.48	MWD
6988.00	89.90	359.20	6233.06	695.89	-517.01	695.44	3.64	3.26	-1.63	MWD
7030.00	90.00	359.40	6233.09	737.89	-517.52	737.44	0.53	0.24	0.48	MWD
7073.00	90.50	359.80	6232.90	780.89	-517.82	780.44	1.49	1.16	0.93	MWD
7115.00	90.60	359.60	6232.50	822.89	-518.04	822.43	0.53	0.24	-0.48	MWD
7157.00	90.70	359.40	6232.02	864.88	-518.41	864.43	0.53	0.24	-0.48	MWD
7200.00	90.90	359.20	6231.42	907.88	-518.94	907.42	0.66	0.47	-0.47	MWD
7242.00	90.40	0.80	6230.95	949.87	-518.94	949.42	3.99	-1.19	3.81	MWD
7284.00	90.70	0.30	6230.54	991.87	-518.53	991.41	1.39	0.71	-1.19	MWD
7326.00	90.40	0.60	6230.14	1033.86	-518.20	1033.41	1.01	-0.71	0.71	MWD
7369.00	88.50	1.70	6230.55	1076.85	-517.34	1076.40	5.11	-4.42	2.56	MWD
7411.00	88.60	1.50	6231.62	1118.82	-516.17	1118.37	0.53	0.24	-0.48	MWD
7454.00	89.90	1.50	6232.18	1161.80	-515.04	1161.35	3.02	3.02	0.00	MWD
7496.00	89.70	2.10	6232.33	1203.78	-513.72	1203.33	1.51	-0.48	1.43	MWD
7539.00	89.60	1.90	6232.59	1246.75	-512.22	1246.31	0.52	-0.23	-0.47	MWD
7581.00	90.60	1.30	6232.52	1288.74	-511.05	1288.29	2.78	2.38	-1.43	MWD
7623.00	89.80	1.70	6232.37	1330.72	-509.95	1330.28	2.13	-1.90	0.95	MWD
7666.00	90.00	0.60	6232.44	1373.71	-509.09	1373.27	2.60	0.47	-2.56	MWD
7708.00	91.40	359.80	6231.93	1415.71	-508.94	1415.26	3.84	3.33	-1.90	MWD
7750.00	91.60	359.10	6230.83	1457.69	-509.34	1457.24	1.73	0.48	-1.67	MWD
7793.00	90.20	359.40	6230.16	1500.68	-509.91	1500.23	3.33	-3.26	0.70	MWD
7835.00	89.90	359.60	6230.12	1542.68	-510.27	1542.23	0.86	-0.71	0.48	MWD
7878.00	89.50	359.60	6230.34	1585.68	-510.57	1585.23	0.93	-0.93	0.00	MWD
7920.00	88.90	359.40	6230.93	1627.67	-510.94	1627.22	1.51	-1.43	-0.48	MWD
7963.00	90.60	359.80	6231.12	1670.67	-511.24	1670.22	4.06	3.95	0.93	MWD
8005.00	90.10	359.80	6230.86	1712.67	-511.39	1712.22	1.19	-1.19	0.00	MWD
8047.00	89.70	359.80	6230.94	1754.67	-511.53	1754.22	0.95	-0.95	0.00	MWD
8090.00	90.90	359.40	6230.71	1797.66	-511.83	1797.22	2.94	2.79	-0.93	MWD
8132.00	90.80	359.60	6230.09	1839.66	-512.20	1839.21	0.53	-0.24	0.48	MWD
8174.00	90.70	359.60	6229.54	1881.65	-512.49	1881.20	0.24	-0.24	0.00	MWD
8217.00	90.70	359.40	6229.01	1924.65	-512.87	1924.20	0.47	0.00	-0.47	MWD
8259.00	89.90	359.10	6228.79	1966.64	-513.42	1966.19	2.03	-1.90	-0.71	MWD
8301.00	89.70	359.10	6228.94	2008.64	-514.08	2008.19	0.48	-0.48	0.00	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> 1-25-8-60 <b>Wellpath:</b> Original Hole	<b>Date:</b> 06/16/2014 <b>Co-ordinate(NE) Reference:</b> Well: 1-25-8-60, 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> 08:39:47 <b>Page:</b> 4 <b>Db:</b> Adapti
---	---	--

### 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
8344.00	89.90	358.90	6229.09	2051.63	-514.83	2051.18	0.66	0.47	-0.47	MWD
8386.00	90.00	358.40	6229.13	2093.62	-515.82	2093.17	1.21	0.24	-1.19	MWD
8429.00	90.30	357.80	6229.01	2136.59	-517.24	2136.14	1.56	0.70	-1.40	MWD
8471.00	89.90	358.50	6228.94	2178.57	-518.60	2178.12	1.92	-0.95	1.67	MWD
8514.00	90.00	358.50	6228.98	2221.56	-519.72	2221.10	0.23	0.23	0.00	MWD
8556.00	89.40	359.40	6229.20	2263.55	-520.49	2263.09	2.58	-1.43	2.14	MWD
8599.00	88.70	359.90	6229.91	2306.54	-520.76	2306.09	2.00	-1.63	1.16	MWD
8641.00	88.40	0.10	6230.97	2348.53	-520.76	2348.07	0.86	-0.71	0.48	MWD
8684.00	87.90	359.60	6232.36	2391.51	-520.87	2391.05	1.64	-1.16	-1.16	MWD
8726.00	87.80	359.80	6233.94	2433.48	-521.09	2433.02	0.53	-0.24	0.48	MWD
8769.00	88.60	1.00	6235.29	2476.45	-520.79	2476.00	3.35	1.86	2.79	MWD
8812.00	89.50	4.20	6236.00	2519.40	-518.84	2518.94	7.73	2.09	7.44	MWD
8854.00	89.30	4.00	6236.44	2561.29	-515.84	2560.84	0.67	-0.48	-0.48	MWD
8896.00	89.60	2.10	6236.84	2603.22	-513.60	2602.77	4.58	0.71	-4.52	MWD
8939.00	89.70	2.10	6237.11	2646.19	-512.03	2645.75	0.23	0.23	0.00	MWD
8982.00	88.70	1.70	6237.71	2689.16	-510.60	2688.72	2.50	-2.33	-0.93	MWD
9024.00	89.60	1.00	6238.33	2731.15	-509.61	2730.70	2.71	2.14	-1.67	MWD
9067.00	90.20	0.10	6238.40	2774.15	-509.20	2773.70	2.52	1.40	-2.09	MWD
9109.00	89.10	359.40	6238.66	2816.14	-509.38	2815.70	3.10	-2.62	-1.67	MWD
9152.00	87.80	358.90	6239.82	2859.12	-510.02	2858.68	3.24	-3.02	-1.16	MWD
9194.00	87.30	358.40	6241.62	2901.07	-511.01	2900.62	1.68	-1.19	-1.19	MWD
9237.00	87.10	358.20	6243.72	2944.00	-512.28	2943.55	0.66	-0.47	-0.47	MWD
9280.00	87.60	358.70	6245.71	2986.94	-513.44	2986.49	1.64	1.16	1.16	MWD
9322.00	87.10	358.50	6247.65	3028.88	-514.47	3028.43	1.28	-1.19	-0.48	MWD
9365.00	88.30	0.80	6249.38	3071.84	-514.73	3071.39	6.03	2.79	5.35	MWD
9407.00	89.80	1.30	6250.07	3113.83	-513.96	3113.38	3.76	3.57	1.19	MWD
9450.00	88.80	0.50	6250.60	3156.82	-513.29	3156.37	2.98	-2.33	-1.86	MWD
9492.00	88.40	0.50	6251.62	3198.80	-512.92	3198.36	0.95	-0.95	0.00	MWD
9535.00	88.30	0.50	6252.86	3241.79	-512.54	3241.34	0.23	-0.23	0.00	MWD
9578.00	90.40	0.60	6253.35	3284.78	-512.13	3284.33	4.89	4.88	0.23	MWD
9620.00	90.70	0.30	6252.95	3326.77	-511.80	3326.33	1.01	0.71	-0.71	MWD
9663.00	89.20	0.10	6252.98	3369.77	-511.65	3369.33	3.52	-3.49	-0.47	MWD
9705.00	89.50	359.80	6253.46	3411.77	-511.69	3411.32	1.01	0.71	-0.71	MWD
9747.00	90.00	359.20	6253.64	3453.77	-512.05	3453.32	1.86	1.19	-1.43	MWD
9789.00	88.80	0.10	6254.08	3495.76	-512.31	3495.32	3.57	-2.86	2.14	MWD
9832.00	88.70	359.40	6255.02	3538.75	-512.50	3538.30	1.64	-0.23	-1.63	MWD
9874.00	88.50	359.40	6256.05	3580.74	-512.94	3580.29	0.48	-0.48	0.00	MWD
9917.00	88.10	358.90	6257.32	3623.71	-513.58	3623.26	1.49	-0.93	-1.16	MWD
9960.00	88.20	358.90	6258.71	3666.68	-514.40	3666.23	0.23	0.23	0.00	MWD
10002.00	89.90	359.10	6259.41	3708.67	-515.13	3708.22	4.08	4.05	0.48	MWD
10045.00	90.00	358.70	6259.45	3751.66	-515.96	3751.21	0.96	0.23	-0.93	MWD
10087.00	88.90	358.70	6259.85	3793.65	-516.91	3793.20	2.62	-2.62	0.00	MWD
10129.00	88.60	358.40	6260.77	3835.62	-517.98	3835.17	1.01	-0.71	-0.71	MWD
10172.00	88.50	359.60	6261.85	3878.60	-518.73	3878.15	2.80	-0.23	2.79	MWD
10215.00	89.00	359.20	6262.79	3921.59	-519.18	3921.14	1.49	1.16	-0.93	MWD
10258.00	89.10	359.20	6263.50	3964.58	-519.78	3964.13	0.23	0.23	0.00	MWD
10343.00	88.90	358.50	6264.99	4049.55	-521.48	4049.09	0.86	-0.24	-0.82	MWD
10427.00	88.60	358.00	6266.82	4133.49	-524.05	4133.03	0.69	-0.36	-0.60	MWD
10512.00	89.30	357.10	6268.38	4218.40	-527.68	4217.94	1.34	0.82	-1.06	MWD
10533.00	89.30	356.80	6268.63	4239.37	-528.80	4238.90	1.43	0.00	-1.43	MWD
10591.00	89.30	356.80	6269.34	4297.27	-532.03	4296.81	0.00	0.00	0.00	Project

# Precision Directional Services, Inc.

## Survey Report

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

**Date:** 06/16/2014 **Time:** 08:39:47 **Page:** 5  
**Co-ordinate(NE) Reference:** Well: 1-25-8-60, 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 **Db:** Adapti

### Annotation

MD ft	TVD ft	
6207.00	6103.08	300' Entry