



### CASING DETAILS

No.	TVD	MD	Name	Size
1	6237.21	6438.07	7"	7.000

### TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Shape
SL 1-35	0.00	0.00	0.00	1505922.29	3400763.64	40°42'47.419N	104°03'15.581W	Point
PBHL 1-35	6272.00	-4436.79	802.74	1501485.50	3401566.38	40°42'03.454N	104°03'06.099W	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	150.00	0.00	0.00	150.00	0.00	0.00	0.00	0.00	0.00	
3	485.57	6.71	71.13	484.80	6.35	18.58	2.00	0.00	-5.79	
4	5719.64	6.71	71.13	5683.00	204.22	597.39	0.00	0.00	-186.19	
5	6639.39	90.00	178.28	6272.00	-366.16	680.74	10.00	107.05	386.43	
6	10711.85	90.00	178.28	6272.00	-4436.79	802.74	0.00	0.00	4458.89	PBHL 1-35

# Precision Directional Services, Inc.

## Planning Report

<b>Company:</b> CARRIZO OIL & GAS, INC.		<b>Date:</b> 03/18/2013	<b>Time:</b> 08:01:10	<b>Page:</b> 1
<b>Field:</b> Niobrara CONZ'83		<b>Co-ordinate(NE) Reference:</b> Well: 1-35-9-60, Grid North		
<b>Site:</b> Shull 1-35-9-60 Pad		<b>Vertical (TVD) Reference:</b> 4923'GL+17'KB 4940.0		
<b>Well:</b> 1-35-9-60		<b>Section (VS) Reference:</b> Well (0.00N,0.00E,178.28Azi)		
<b>Wellpath:</b> Original Hole		<b>Plan:</b> Plan #1		

  

<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> Shull 1-35-9-60 Pad				
<b>Weld County, CO</b>				
<b>Site Position:</b>	<b>From:</b> Map	<b>Northing:</b> 1505922.29 ft	<b>Latitude:</b> 40 42 47.419 N	
<b>Position Uncertainty:</b> 0.00 ft		<b>Easting:</b> 3400763.64 ft	<b>Longitude:</b> 104 3 15.581 W	
<b>Ground Level:</b> 4923.00 ft			<b>North Reference:</b> Grid	
			<b>Grid Convergence:</b> 0.93 deg	

  

<b>Well:</b> 1-35-9-60		<b>Slot Name:</b>		
<b>Well Position:</b>	<b>+N/-S</b> 0.00 ft	<b>Northing:</b> 1505922.29 ft	<b>Latitude:</b> 40 42 47.419 N	
	<b>+E/-W</b> 0.00 ft	<b>Easting :</b> 3400763.64 ft	<b>Longitude:</b> 104 3 15.581 W	
<b>Position Uncertainty:</b> 0.00 ft				

  

<b>Wellpath:</b> Original Hole		<b>Drilled From:</b> Surface		
<b>Current Datum:</b> 4923'GL+17'KB		<b>Tie-on Depth:</b> 0.00 ft		
<b>Magnetic Data:</b> 04/01/2013		<b>Above System Datum:</b> Mean Sea Level		
<b>Field Strength:</b> 53218 nT		<b>Declination:</b> 8.26 deg		
<b>Vertical Section:</b> Depth From (TVD)		<b>Mag Dip Angle:</b> 67.35 deg		
	ft	<b>+N/-S</b> ft	<b>+E/-W</b> ft	<b>Direction</b> deg
0.00		0.00	0.00	178.28

  

<b>Plan:</b> Plan #1		<b>Date Composed:</b> 03/18/2013	
<b>Principal:</b> No		<b>Version:</b> 1	
		<b>Tied-to:</b> 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	
150.00	0.00	0.00	150.00	0.00	0.00	0.00	0.00	0.00	0.00	
485.57	6.71	71.13	484.80	6.35	18.58	2.00	2.00	0.00	0.00	
5719.64	6.71	71.13	5683.00	204.22	597.39	0.00	0.00	0.00	0.00	
6639.39	90.00	178.28	6272.00	-366.16	680.74	10.00	9.06	11.65	107.05	
10711.85	90.00	178.28	6272.00	-4436.79	802.74	0.00	0.00	0.00	0.00	PBHL 1-35

  

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	
150.00	0.00	0.00	150.00	0.00	0.00	0.00	0.00	0.00	0.00	
200.00	1.00	71.13	200.00	0.14	0.41	-0.13	2.00	2.00	0.00	
300.00	3.00	71.13	299.93	1.27	3.72	-1.16	2.00	2.00	0.00	
400.00	5.00	71.13	399.68	3.53	10.32	-3.22	2.00	2.00	0.00	
485.57	6.71	71.13	484.80	6.35	18.58	-5.79	2.00	2.00	0.00	
500.00	6.71	71.13	499.13	6.90	20.17	-6.29	0.00	0.00	0.00	
600.00	6.71	71.13	598.45	10.68	31.23	-9.73	0.00	0.00	0.00	
700.00	6.71	71.13	697.76	14.46	42.29	-13.18	0.00	0.00	0.00	
800.00	6.71	71.13	797.08	18.24	53.35	-16.63	0.00	0.00	0.00	
900.00	6.71	71.13	896.39	22.02	64.41	-20.07	0.00	0.00	0.00	
1000.00	6.71	71.13	995.71	25.80	75.46	-23.52	0.00	0.00	0.00	
1100.00	6.71	71.13	1095.02	29.58	86.52	-26.97	0.00	0.00	0.00	
1200.00	6.71	71.13	1194.34	33.36	97.58	-30.41	0.00	0.00	0.00	

# Precision Directional Services, Inc.

## Planning Report

**Company:** CARRIZO OIL & GAS, INC.  
**Field:** Niobrara CONZ'83  
**Site:** Shull 1-35-9-60 Pad  
**Well:** 1-35-9-60  
**Wellpath:** Original Hole

**Date:** 03/18/2013  
**Co-ordinate(NE) Reference:** Well: 1-35-9-60, Grid North  
**Vertical (TVD) Reference:** 4923'GL+17'KB 4940.0  
**Section (VS) Reference:** Well (0.00N,0.00E,178.28Azi)  
**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
1300.00	6.71	71.13	1293.65	37.14	108.64	-33.86	0.00	0.00	0.00	
1400.00	6.71	71.13	1392.97	40.92	119.70	-37.31	0.00	0.00	0.00	
1500.00	6.71	71.13	1492.28	44.70	130.76	-40.75	0.00	0.00	0.00	
1600.00	6.71	71.13	1591.60	48.48	141.82	-44.20	0.00	0.00	0.00	
1700.00	6.71	71.13	1690.91	52.26	152.87	-47.65	0.00	0.00	0.00	
1800.00	6.71	71.13	1790.23	56.04	163.93	-51.09	0.00	0.00	0.00	
1900.00	6.71	71.13	1889.54	59.82	174.99	-54.54	0.00	0.00	0.00	
2000.00	6.71	71.13	1988.86	63.60	186.05	-57.99	0.00	0.00	0.00	
2100.00	6.71	71.13	2088.17	67.38	197.11	-61.43	0.00	0.00	0.00	
2200.00	6.71	71.13	2187.48	71.16	208.17	-64.88	0.00	0.00	0.00	
2300.00	6.71	71.13	2286.80	74.94	219.23	-68.33	0.00	0.00	0.00	
2400.00	6.71	71.13	2386.11	78.72	230.28	-71.77	0.00	0.00	0.00	
2500.00	6.71	71.13	2485.43	82.50	241.34	-75.22	0.00	0.00	0.00	
2600.00	6.71	71.13	2584.74	86.28	252.40	-78.67	0.00	0.00	0.00	
2700.00	6.71	71.13	2684.06	90.06	263.46	-82.11	0.00	0.00	0.00	
2800.00	6.71	71.13	2783.37	93.84	274.52	-85.56	0.00	0.00	0.00	
2900.00	6.71	71.13	2882.69	97.62	285.58	-89.01	0.00	0.00	0.00	
3000.00	6.71	71.13	2982.00	101.40	296.64	-92.46	0.00	0.00	0.00	
3100.00	6.71	71.13	3081.32	105.18	307.69	-95.90	0.00	0.00	0.00	
3200.00	6.71	71.13	3180.63	108.97	318.75	-99.35	0.00	0.00	0.00	
3300.00	6.71	71.13	3279.95	112.75	329.81	-102.80	0.00	0.00	0.00	
3400.00	6.71	71.13	3379.26	116.53	340.87	-106.24	0.00	0.00	0.00	
3500.00	6.71	71.13	3478.58	120.31	351.93	-109.69	0.00	0.00	0.00	
3600.00	6.71	71.13	3577.89	124.09	362.99	-113.14	0.00	0.00	0.00	
3700.00	6.71	71.13	3677.21	127.87	374.05	-116.58	0.00	0.00	0.00	
3800.00	6.71	71.13	3776.52	131.65	385.10	-120.03	0.00	0.00	0.00	
3900.00	6.71	71.13	3875.84	135.43	396.16	-123.48	0.00	0.00	0.00	
4000.00	6.71	71.13	3975.15	139.21	407.22	-126.92	0.00	0.00	0.00	
4100.00	6.71	71.13	4074.46	142.99	418.28	-130.37	0.00	0.00	0.00	
4200.00	6.71	71.13	4173.78	146.77	429.34	-133.82	0.00	0.00	0.00	
4300.00	6.71	71.13	4273.09	150.55	440.40	-137.26	0.00	0.00	0.00	
4400.00	6.71	71.13	4372.41	154.33	451.46	-140.71	0.00	0.00	0.00	
4500.00	6.71	71.13	4471.72	158.11	462.51	-144.16	0.00	0.00	0.00	
4600.00	6.71	71.13	4571.04	161.89	473.57	-147.60	0.00	0.00	0.00	
4700.00	6.71	71.13	4670.35	165.67	484.63	-151.05	0.00	0.00	0.00	
4800.00	6.71	71.13	4769.67	169.45	495.69	-154.50	0.00	0.00	0.00	
4900.00	6.71	71.13	4868.98	173.23	506.75	-157.94	0.00	0.00	0.00	
5000.00	6.71	71.13	4968.30	177.01	517.81	-161.39	0.00	0.00	0.00	
5100.00	6.71	71.13	5067.61	180.79	528.87	-164.84	0.00	0.00	0.00	
5200.00	6.71	71.13	5166.93	184.57	539.92	-168.28	0.00	0.00	0.00	
5300.00	6.71	71.13	5266.24	188.35	550.98	-171.73	0.00	0.00	0.00	
5400.00	6.71	71.13	5365.56	192.13	562.04	-175.18	0.00	0.00	0.00	
5500.00	6.71	71.13	5464.87	195.91	573.10	-178.62	0.00	0.00	0.00	
5600.00	6.71	71.13	5564.19	199.69	584.16	-182.07	0.00	0.00	0.00	
5700.00	6.71	71.13	5663.50	203.47	595.22	-185.52	0.00	0.00	0.00	
5719.64	6.71	71.13	5683.00	204.22	597.39	-186.19	0.00	0.00	0.00	
5800.00	8.82	131.82	5762.75	201.62	606.44	-183.33	10.00	2.62	75.53	
5900.00	17.26	157.07	5860.15	182.80	617.96	-164.17	10.00	8.45	25.25	
6000.00	26.79	165.41	5952.77	147.24	629.44	-128.28	10.00	9.52	8.34	
6100.00	36.55	169.56	6037.79	96.02	640.54	-76.75	10.00	9.77	4.15	
6200.00	46.41	172.14	6112.62	30.70	650.92	-11.15	10.00	9.85	2.58	
6300.00	56.30	173.98	6175.00	-46.74	660.25	66.54	10.00	9.90	1.85	
6400.00	66.22	175.44	6223.02	-133.94	668.27	153.94	10.00	9.92	1.46	
6438.07	70.00	175.94	6237.21	-169.16	670.92	189.22	10.00	9.93	1.30	7"

# Precision Directional Services, Inc.

## Planning Report

**Company:** CARRIZO OIL & GAS, INC.  
**Field:** Niobrara CONZ'83  
**Site:** Shull 1-35-9-60 Pad  
**Well:** 1-35-9-60  
**Wellpath:** Original Hole

**Date:** 03/18/2013  
**Co-ordinate(NE) Reference:** Well: 1-35-9-60, Grid North  
**Vertical (TVD) Reference:** 4923'GL+17'KB 4940.0  
**Section (VS) Reference:** Well (0.00N,0.00E,178.28Azi)  
**Plan:** Plan #1

**Page:** 3

### 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
6500.00	76.15	176.69	6255.23	-228.26	674.72	248.41	10.00	9.93	1.22	
6600.00	86.09	177.84	6270.65	-326.82	679.41	347.07	10.00	9.94	1.15	
6639.39	90.00	178.28	6272.00	-366.16	680.74	386.43	10.00	9.94	1.12	
6700.00	90.00	178.28	6272.00	-426.74	682.56	447.04	0.00	0.00	0.00	
6800.00	90.00	178.28	6272.00	-526.70	685.55	547.04	0.00	0.00	0.00	
6900.00	90.00	178.28	6272.00	-626.65	688.55	647.04	0.00	0.00	0.00	
7000.00	90.00	178.28	6272.00	-726.61	691.54	747.04	0.00	0.00	0.00	
7100.00	90.00	178.28	6272.00	-826.56	694.54	847.04	0.00	0.00	0.00	
7200.00	90.00	178.28	6272.00	-926.52	697.53	947.04	0.00	0.00	0.00	
7300.00	90.00	178.28	6272.00	-1026.47	700.53	1047.04	0.00	0.00	0.00	
7400.00	90.00	178.28	6272.00	-1126.43	703.53	1147.04	0.00	0.00	0.00	
7500.00	90.00	178.28	6272.00	-1226.38	706.52	1247.04	0.00	0.00	0.00	
7600.00	90.00	178.28	6272.00	-1326.34	709.52	1347.04	0.00	0.00	0.00	
7700.00	90.00	178.28	6272.00	-1426.29	712.51	1447.04	0.00	0.00	0.00	
7800.00	90.00	178.28	6272.00	-1526.25	715.51	1547.04	0.00	0.00	0.00	
7900.00	90.00	178.28	6272.00	-1626.20	718.50	1647.04	0.00	0.00	0.00	
8000.00	90.00	178.28	6272.00	-1726.16	721.50	1747.04	0.00	0.00	0.00	
8100.00	90.00	178.28	6272.00	-1826.11	724.50	1847.04	0.00	0.00	0.00	
8200.00	90.00	178.28	6272.00	-1926.07	727.49	1947.04	0.00	0.00	0.00	
8300.00	90.00	178.28	6272.00	-2026.02	730.49	2047.04	0.00	0.00	0.00	
8400.00	90.00	178.28	6272.00	-2125.98	733.48	2147.04	0.00	0.00	0.00	
8500.00	90.00	178.28	6272.00	-2225.93	736.48	2247.04	0.00	0.00	0.00	
8600.00	90.00	178.28	6272.00	-2325.89	739.47	2347.04	0.00	0.00	0.00	
8700.00	90.00	178.28	6272.00	-2425.84	742.47	2447.04	0.00	0.00	0.00	
8800.00	90.00	178.28	6272.00	-2525.80	745.47	2547.04	0.00	0.00	0.00	
8900.00	90.00	178.28	6272.00	-2625.75	748.46	2647.04	0.00	0.00	0.00	
9000.00	90.00	178.28	6272.00	-2725.71	751.46	2747.04	0.00	0.00	0.00	
9100.00	90.00	178.28	6272.00	-2825.66	754.45	2847.04	0.00	0.00	0.00	
9200.00	90.00	178.28	6272.00	-2925.62	757.45	2947.04	0.00	0.00	0.00	
9300.00	90.00	178.28	6272.00	-3025.57	760.44	3047.04	0.00	0.00	0.00	
9400.00	90.00	178.28	6272.00	-3125.53	763.44	3147.04	0.00	0.00	0.00	
9500.00	90.00	178.28	6272.00	-3225.48	766.44	3247.04	0.00	0.00	0.00	
9600.00	90.00	178.28	6272.00	-3325.44	769.43	3347.04	0.00	0.00	0.00	
9700.00	90.00	178.28	6272.00	-3425.39	772.43	3447.04	0.00	0.00	0.00	
9800.00	90.00	178.28	6272.00	-3525.35	775.42	3547.04	0.00	0.00	0.00	
9900.00	90.00	178.28	6272.00	-3625.30	778.42	3647.04	0.00	0.00	0.00	
10000.00	90.00	178.28	6272.00	-3725.26	781.41	3747.04	0.00	0.00	0.00	
10100.00	90.00	178.28	6272.00	-3825.22	784.41	3847.04	0.00	0.00	0.00	
10200.00	90.00	178.28	6272.00	-3925.17	787.41	3947.04	0.00	0.00	0.00	
10300.00	90.00	178.28	6272.00	-4025.13	790.40	4047.04	0.00	0.00	0.00	
10400.00	90.00	178.28	6272.00	-4125.08	793.40	4147.04	0.00	0.00	0.00	
10500.00	90.00	178.28	6272.00	-4225.04	796.39	4247.04	0.00	0.00	0.00	
10600.00	90.00	178.28	6272.00	-4324.99	799.39	4347.04	0.00	0.00	0.00	
10700.00	90.00	178.28	6272.00	-4424.95	802.39	4447.04	0.00	0.00	0.00	
10711.85	90.00	178.28	6272.00	-4436.79	802.74	4458.89	0.00	0.00	0.00	PBHL 1-35

### Targets

Name	Description Dip.	Dir.	TVD ft	+N/-S ft	+E/-W ft	Map Northing ft	Map Easting ft	<--- Latitude --->			<--- Longitude --->		
SL 1-35			0.00	0.00	0.00	1505922.29	3400763.64	40	42	47.419 N	104	3	15.581 W
PBHL 1-35			6272.00	-4436.79	802.74	1501485.50	3401566.38	40	42	3.454 N	104	3	6.099 W

# Precision Directional Services, Inc.

## Planning Report

**Company:** CARRIZO OIL & GAS, INC.

**Field:** Niobrara CONZ'83

**Site:** Shull 1-35-9-60 Pad

**Well:** 1-35-9-60

**Wellpath:** Original Hole

**Date:** 03/18/2013

**Time:** 08:01:10

**Page:** 4

**Co-ordinate(NE) Reference:** Well: 1-35-9-60, Grid North

**Vertical (TVD) Reference:** 4923'GL+17'KB 4940.0

**Section (VS) Reference:** Well (0.00N,0.00E,178.28Azi)

**Plan:** Plan #1

### Casing Points

MD ft	TVD ft	Diameter in	Hole Size in	Name
6438.07	6237.21	7.000	8.500	7"