



# CARRIZO

## CARRIZO OIL & GAS, INC.

Field: Niobrara CONZ'83

Site: Bringelson Ranch 34-41-9-58 Pad

Well: 2-34-9-58

Wellpath: Original Hole

Plan: Plan #3

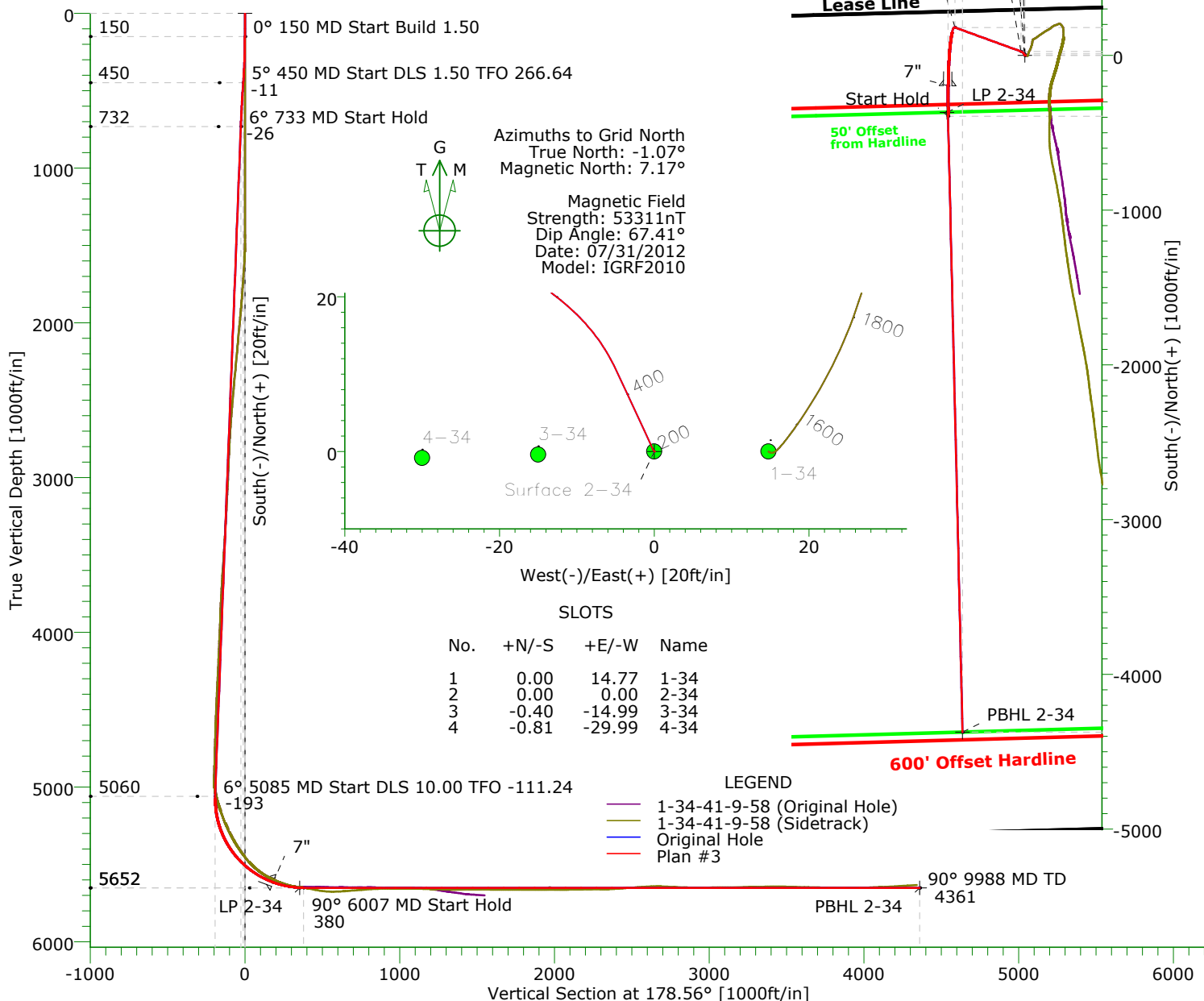


# Precision

Directional Services

### CASING DETAILS

No.	TVD	MD	Name	Size
1	5617.20	5806.04	7"	7.000



### SLOTS

No.	+N/-S	+E/-W	Name
1	0.00	14.77	1-34
2	0.00	0.00	2-34
3	-0.40	-14.99	3-34
4	-0.81	-29.99	4-34

### TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Shape
Surface 2-34	0.00	0.00	0.00	1507293.93	3458797.16	40°42'50.945N103°50'41.763W		Point
PBHL 2-34	5652.00	-4372.12	-401.95	1502921.81	3458395.21	40°42'07.825N103°50'48.040W		Point
LP 2-34	5652.00	-367.00	-502.67	1506926.93	3458294.49	40°42'47.412N103°50'48.378W		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	450.00	4.50	335.00	449.69	10.67	-4.98	1.50	335.00	-10.79	
4	733.07	6.00	290.00	731.68	25.80	-23.58	1.50	266.64	-26.39	
5	5085.23	6.00	290.00	5060.00	181.40	-451.07	0.00	0.00	-192.67	
6	6007.03	90.00	178.65	5651.93	-392.34	-495.54	10.00	-111.24	379.76	
7	9987.91	90.00	178.65	5652.00	-4372.12	-401.95	0.00	0.00	4360.64	PBHL 2-34

Plan: Plan #3 (2-34-9-58/Original Hole)

Created By: Michael Cabrera

Date: 11/01/2012

PRECISION DIRECTIONAL SERVICES, INC.

713.435.6250

# Precision Directional Services, Inc.

## Planning Report

<b>Company:</b> CARRIZO OIL & GAS, INC. <b>Field:</b> Niobrara CONZ'83 <b>Site:</b> Bringelson Ranch 34-41-9-58 Pad <b>Well:</b> 2-34-9-58 <b>Wellpath:</b> Original Hole	<b>Date:</b> 11/01/2012 <b>Co-ordinate(NE) Reference:</b> Well: 2-34-9-58, Grid North <b>Vertical (TVD) Reference:</b> 4736'GL+17"KB 4753.0 <b>Section (VS) Reference:</b> Well (0.00N,0.00E,178.56Azi) <b>Plan:</b> Plan #3	<b>Time:</b> 12:57:22 <b>Page:</b> 1
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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

<b>Site:</b> Bringelson Ranch 34-41-9-58 Pad	
<b>Site Position:</b> <b>From:</b> Map <b>Position Uncertainty:</b> 0.00 ft <b>Ground Level:</b> 4736.00 ft	<b>Northing:</b> 1507293.93 ft <b>Easting:</b> 3458811.93 ft <b>Latitude:</b> 40 42 50.942 N <b>Longitude:</b> 103 50 41.571 W <b>North Reference:</b> Grid <b>Grid Convergence:</b> 1.07 deg

<b>Well:</b> 2-34-9-58 Centered on 1-23-41-9-58 (Surface Revised 11/01)	<b>Slot Name:</b>
<b>Well Position:</b> +N/-S 0.00 ft +E/-W -14.77 ft <b>Position Uncertainty:</b> 0.00 ft	<b>Northing:</b> 1507293.93 ft <b>Easting :</b> 3458797.16 ft <b>Latitude:</b> 40 42 50.945 N <b>Longitude:</b> 103 50 41.763 W

<b>Wellpath:</b> Original Hole	<b>Drilled From:</b> Surface
<b>Current Datum:</b> 4736'GL+17"KB <b>Magnetic Data:</b> 07/31/2012 <b>Field Strength:</b> 53311 nT <b>Vertical Section:</b> Depth From (TVD) ft	<b>Tie-on Depth:</b> 0.00 ft <b>Above System Datum:</b> Mean Sea Level <b>Declination:</b> 8.23 deg <b>Mag Dip Angle:</b> 67.41 deg <b>+E/-W</b> ft <b>Direction</b> deg
0.00	0.00

<b>Plan:</b> Plan #3 <b>Principal:</b> Yes	<b>Date Composed:</b> 09/28/2012 <b>Version:</b> 1 <b>Tied-to:</b> From Surface
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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	
450.00	4.50	335.00	449.69	10.67	-4.98	1.50	1.50	0.00	335.00	
733.07	6.00	290.00	731.68	25.80	-23.58	1.50	0.53	-15.90	266.64	
5085.23	6.00	290.00	5060.00	181.40	-451.07	0.00	0.00	0.00	0.00	
6007.03	90.00	178.65	5651.93	-392.34	-495.54	10.00	9.11	-12.08	-111.24	
9987.91	90.00	178.65	5652.00	-4372.12	-401.95	0.00	0.00	0.00	0.00	PBHL 2-34

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
150.00	0.00	0.00	150.00	0.00	0.00	0.00	0.00	0.00	0.00	
200.00	0.75	335.00	200.00	0.30	-0.14	-0.30	1.50	1.50	0.00	
300.00	2.25	335.00	299.96	2.67	-1.24	-2.70	1.50	1.50	0.00	
400.00	3.75	335.00	399.82	7.41	-3.46	-7.50	1.50	1.50	0.00	
450.00	4.50	335.00	449.69	10.67	-4.98	-10.79	1.50	1.50	0.00	
500.00	4.52	325.45	499.54	14.07	-6.92	-14.24	1.50	0.04	-19.10	
600.00	4.91	307.75	599.20	19.94	-12.54	-20.25	1.50	0.39	-17.70	
700.00	5.68	293.76	698.78	24.55	-20.46	-25.06	1.50	0.77	-14.00	
733.07	6.00	290.00	731.68	25.80	-23.58	-26.39	1.50	0.96	-11.36	
800.00	6.00	290.00	798.24	28.20	-30.15	-28.94	0.00	0.00	0.00	
900.00	6.00	290.00	897.69	31.77	-39.98	-32.77	0.00	0.00	0.00	
1000.00	6.00	290.00	997.15	35.35	-49.80	-36.59	0.00	0.00	0.00	
1100.00	6.00	290.00	1096.60	38.92	-59.62	-40.41	0.00	0.00	0.00	
1200.00	6.00	290.00	1196.05	42.50	-69.44	-44.23	0.00	0.00	0.00	
1300.00	6.00	290.00	1295.50	46.07	-79.27	-48.05	0.00	0.00	0.00	

# Precision Directional Services, Inc.

## Planning Report

**Company:** CARRIZO OIL & GAS, INC.  
**Field:** Niobrara CONZ'83  
**Site:** Bringelson Ranch 34-41-9-58 Pad  
**Well:** 2-34-9-58  
**Wellpath:** Original Hole

**Date:** 11/01/2012  
**Co-ordinate(NE) Reference:** Well: 2-34-9-58, Grid North  
**Vertical (TVD) Reference:** 4736'GL+17'KB 4753.0  
**Section (VS) Reference:** Well (0.00N,0.00E,178.56Azi)  
**Plan:** Plan #3

**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
1400.00	6.00	290.00	1394.96	49.65	-89.09	-51.87	0.00	0.00	0.00	
1500.00	6.00	290.00	1494.41	53.22	-98.91	-55.69	0.00	0.00	0.00	
1600.00	6.00	290.00	1593.86	56.80	-108.73	-59.51	0.00	0.00	0.00	
1700.00	6.00	290.00	1693.31	60.37	-118.56	-63.33	0.00	0.00	0.00	
1800.00	6.00	290.00	1792.76	63.95	-128.38	-67.15	0.00	0.00	0.00	
1900.00	6.00	290.00	1892.22	67.52	-138.20	-70.97	0.00	0.00	0.00	
2000.00	6.00	290.00	1991.67	71.10	-148.02	-74.79	0.00	0.00	0.00	
2100.00	6.00	290.00	2091.12	74.67	-157.85	-78.61	0.00	0.00	0.00	
2200.00	6.00	290.00	2190.57	78.25	-167.67	-82.44	0.00	0.00	0.00	
2300.00	6.00	290.00	2290.03	81.82	-177.49	-86.26	0.00	0.00	0.00	
2400.00	6.00	290.00	2389.48	85.40	-187.31	-90.08	0.00	0.00	0.00	
2500.00	6.00	290.00	2488.93	88.97	-197.14	-93.90	0.00	0.00	0.00	
2600.00	6.00	290.00	2588.38	92.55	-206.96	-97.72	0.00	0.00	0.00	
2700.00	6.00	290.00	2687.83	96.12	-216.78	-101.54	0.00	0.00	0.00	
2800.00	6.00	290.00	2787.29	99.70	-226.60	-105.36	0.00	0.00	0.00	
2900.00	6.00	290.00	2886.74	103.27	-236.43	-109.18	0.00	0.00	0.00	
3000.00	6.00	290.00	2986.19	106.85	-246.25	-113.00	0.00	0.00	0.00	
3100.00	6.00	290.00	3085.64	110.42	-256.07	-116.82	0.00	0.00	0.00	
3200.00	6.00	290.00	3185.09	114.00	-265.89	-120.64	0.00	0.00	0.00	
3300.00	6.00	290.00	3284.55	117.57	-275.72	-124.46	0.00	0.00	0.00	
3400.00	6.00	290.00	3384.00	121.15	-285.54	-128.29	0.00	0.00	0.00	
3500.00	6.00	290.00	3483.45	124.72	-295.36	-132.11	0.00	0.00	0.00	
3600.00	6.00	290.00	3582.90	128.30	-305.18	-135.93	0.00	0.00	0.00	
3700.00	6.00	290.00	3682.36	131.87	-315.01	-139.75	0.00	0.00	0.00	
3800.00	6.00	290.00	3781.81	135.45	-324.83	-143.57	0.00	0.00	0.00	
3900.00	6.00	290.00	3881.26	139.02	-334.65	-147.39	0.00	0.00	0.00	
4000.00	6.00	290.00	3980.71	142.60	-344.47	-151.21	0.00	0.00	0.00	
4100.00	6.00	290.00	4080.16	146.17	-354.30	-155.03	0.00	0.00	0.00	
4200.00	6.00	290.00	4179.62	149.75	-364.12	-158.85	0.00	0.00	0.00	
4300.00	6.00	290.00	4279.07	153.32	-373.94	-162.67	0.00	0.00	0.00	
4400.00	6.00	290.00	4378.52	156.90	-383.76	-166.49	0.00	0.00	0.00	
4500.00	6.00	290.00	4477.97	160.47	-393.59	-170.31	0.00	0.00	0.00	
4600.00	6.00	290.00	4577.43	164.05	-403.41	-174.13	0.00	0.00	0.00	
4700.00	6.00	290.00	4676.88	167.62	-413.23	-177.96	0.00	0.00	0.00	
4800.00	6.00	290.00	4776.33	171.20	-423.05	-181.78	0.00	0.00	0.00	
4900.00	6.00	290.00	4875.78	174.77	-432.88	-185.60	0.00	0.00	0.00	
5000.00	6.00	290.00	4975.23	178.35	-442.70	-189.42	0.00	0.00	0.00	
5085.23	6.00	290.00	5060.00	181.40	-451.07	-192.67	0.00	0.00	0.00	
5100.00	5.64	275.84	5074.69	181.73	-452.52	-193.05	10.00	-2.47	-95.89	
5150.00	7.05	231.02	5124.41	180.05	-457.35	-191.49	10.00	2.82	-89.64	
5200.00	10.84	209.41	5173.81	174.03	-462.04	-185.58	10.00	7.58	-43.21	
5250.00	15.33	199.58	5222.51	163.70	-466.57	-175.37	10.00	8.99	-19.68	
5300.00	20.06	194.20	5270.13	149.15	-470.89	-160.94	10.00	9.46	-10.75	
5350.00	24.89	190.83	5316.32	130.49	-474.97	-142.38	10.00	9.67	-6.74	
5400.00	29.78	188.50	5360.73	107.86	-478.79	-119.86	10.00	9.77	-4.66	
5450.00	34.69	186.78	5403.01	81.43	-482.31	-93.53	10.00	9.83	-3.44	
5500.00	39.63	185.44	5442.84	51.41	-485.50	-63.60	10.00	9.87	-2.68	
5550.00	44.57	184.35	5479.93	18.02	-488.35	-30.29	10.00	9.89	-2.17	
5600.00	49.53	183.44	5513.98	-18.48	-490.82	6.14	10.00	9.91	-1.82	
5650.00	54.49	182.66	5544.75	-57.82	-492.91	45.42	10.00	9.92	-1.57	
5700.00	59.46	181.96	5571.99	-99.69	-494.59	87.23	10.00	9.93	-1.39	
5750.00	64.43	181.34	5595.50	-143.79	-495.86	131.28	10.00	9.94	-1.25	
5800.00	69.40	180.76	5615.10	-189.76	-496.70	177.22	10.00	9.94	-1.15	

# Precision Directional Services, Inc.

## Planning Report

**Company:** CARRIZO OIL & GAS, INC.  
**Field:** Niobrara CONZ'83  
**Site:** Bringelson Ranch 34-41-9-58 Pad  
**Well:** 2-34-9-58  
**Wellpath:** Original Hole

**Date:** 11/01/2012  
**Co-ordinate(NE) Reference:** Well: 2-34-9-58, Grid North  
**Vertical (TVD) Reference:** 4736'GL+17"KB 4753.0  
**Section (VS) Reference:** Well (0.00N,0.00E,178.56Azi)  
**Plan:** Plan #3

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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
5806.04	70.00	180.69	5617.20	-195.42	-496.77	182.88	10.00	9.95	-1.11	7"
5850.00	74.37	180.22	5630.64	-237.26	-497.10	224.70	10.00	9.95	-1.08	
5900.00	79.35	179.71	5642.01	-285.94	-497.07	273.36	10.00	9.95	-1.03	
5950.00	84.32	179.21	5649.11	-335.41	-496.60	322.83	10.00	9.95	-0.99	
6000.00	89.30	178.72	5651.89	-385.31	-495.70	372.73	10.00	9.95	-0.98	
6007.03	90.00	178.65	5651.93	-392.34	-495.54	379.76	10.00	9.95	-0.97	
6100.00	90.00	178.65	5651.93	-485.29	-493.35	472.73	0.00	0.00	0.00	
6200.00	90.00	178.65	5651.93	-585.26	-491.00	572.73	0.00	0.00	0.00	
6300.00	90.00	178.65	5651.93	-685.23	-488.65	672.73	0.00	0.00	0.00	
6400.00	90.00	178.65	5651.94	-785.20	-486.30	772.73	0.00	0.00	0.00	
6500.00	90.00	178.65	5651.94	-885.18	-483.95	872.73	0.00	0.00	0.00	
6600.00	90.00	178.65	5651.94	-985.15	-481.60	972.73	0.00	0.00	0.00	
6700.00	90.00	178.65	5651.94	-1085.12	-479.25	1072.73	0.00	0.00	0.00	
6800.00	90.00	178.65	5651.94	-1185.09	-476.90	1172.73	0.00	0.00	0.00	
6900.00	90.00	178.65	5651.95	-1285.06	-474.55	1272.73	0.00	0.00	0.00	
7000.00	90.00	178.65	5651.95	-1385.04	-472.19	1372.73	0.00	0.00	0.00	
7100.00	90.00	178.65	5651.95	-1485.01	-469.84	1472.73	0.00	0.00	0.00	
7200.00	90.00	178.65	5651.95	-1584.98	-467.49	1572.73	0.00	0.00	0.00	
7300.00	90.00	178.65	5651.95	-1684.95	-465.14	1672.73	0.00	0.00	0.00	
7400.00	90.00	178.65	5651.95	-1784.93	-462.79	1772.73	0.00	0.00	0.00	
7500.00	90.00	178.65	5651.96	-1884.90	-460.44	1872.73	0.00	0.00	0.00	
7600.00	90.00	178.65	5651.96	-1984.87	-458.09	1972.73	0.00	0.00	0.00	
7700.00	90.00	178.65	5651.96	-2084.84	-455.74	2072.73	0.00	0.00	0.00	
7800.00	90.00	178.65	5651.96	-2184.82	-453.39	2172.73	0.00	0.00	0.00	
7900.00	90.00	178.65	5651.96	-2284.79	-451.04	2272.73	0.00	0.00	0.00	
8000.00	90.00	178.65	5651.96	-2384.76	-448.68	2372.73	0.00	0.00	0.00	
8100.00	90.00	178.65	5651.97	-2484.73	-446.33	2472.73	0.00	0.00	0.00	
8200.00	90.00	178.65	5651.97	-2584.71	-443.98	2572.73	0.00	0.00	0.00	
8300.00	90.00	178.65	5651.97	-2684.68	-441.63	2672.73	0.00	0.00	0.00	
8400.00	90.00	178.65	5651.97	-2784.65	-439.28	2772.73	0.00	0.00	0.00	
8500.00	90.00	178.65	5651.97	-2884.62	-436.93	2872.73	0.00	0.00	0.00	
8600.00	90.00	178.65	5651.98	-2984.59	-434.58	2972.73	0.00	0.00	0.00	
8700.00	90.00	178.65	5651.98	-3084.57	-432.23	3072.73	0.00	0.00	0.00	
8800.00	90.00	178.65	5651.98	-3184.54	-429.88	3172.73	0.00	0.00	0.00	
8900.00	90.00	178.65	5651.98	-3284.51	-427.53	3272.73	0.00	0.00	0.00	
9000.00	90.00	178.65	5651.98	-3384.48	-425.18	3372.73	0.00	0.00	0.00	
9100.00	90.00	178.65	5651.98	-3484.46	-422.82	3472.73	0.00	0.00	0.00	
9200.00	90.00	178.65	5651.99	-3584.43	-420.47	3572.73	0.00	0.00	0.00	
9300.00	90.00	178.65	5651.99	-3684.40	-418.12	3672.73	0.00	0.00	0.00	
9400.00	90.00	178.65	5651.99	-3784.37	-415.77	3772.73	0.00	0.00	0.00	
9500.00	90.00	178.65	5651.99	-3884.35	-413.42	3872.73	0.00	0.00	0.00	
9600.00	90.00	178.65	5651.99	-3984.32	-411.07	3972.73	0.00	0.00	0.00	
9700.00	90.00	178.65	5651.99	-4084.29	-408.72	4072.73	0.00	0.00	0.00	
9800.00	90.00	178.65	5652.00	-4184.26	-406.37	4172.73	0.00	0.00	0.00	
9900.00	90.00	178.65	5652.00	-4284.24	-404.02	4272.73	0.00	0.00	0.00	
9987.91	90.00	178.65	5652.00	-4372.12	-401.95	4360.64	0.00	0.00	0.00	PBHL 2-34

### Targets

Name	Description Dip.	Dir.	TVD ft	+N/-S ft	+E/-W ft	Map Northing ft	Map Easting ft	<--- Latitude ---> Deg Min Sec			<--- Longitude ---> Deg Min Sec		
Surface 2-34			0.00	0.00	0.00	1507293.93	3458797.16	40	42	50.945 N	103	50	41.763 W

# Precision Directional Services, Inc.

## Planning Report

**Company:** CARRIZO OIL & GAS, INC.  
**Field:** Niobrara CONZ'83  
**Site:** Bringelson Ranch 34-41-9-58 Pad  
**Well:** 2-34-9-58  
**Wellpath:** Original Hole

**Date:** 11/01/2012  
**Co-ordinate(NE) Reference:** Well: 2-34-9-58, Grid North  
**Vertical (TVD) Reference:** 4736'GL+17"KB 4753.0  
**Section (VS) Reference:** Well (0.00N,0.00E,178.56Azi)  
**Plan:** Plan #3

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### Targets

Name	Description Dip. Dir.	TVD ft	+N/-S ft	+E/-W ft	Map Northing ft	Map Easting ft	<---- Latitude ----> Deg Min Sec			<--- Longitude ---> Deg Min Sec		
PBHL 2-34		5652.00	-4372.12	-401.95	1502921.81	3458395.21	40	42	7.825 N	103	50	48.040 W
LP 2-34		5652.00	-367.00	-502.67	1506926.93	3458294.49	40	42	47.412 N	103	50	48.378 W

### Casing Points

MD ft	TVD ft	Diameter in	Hole Size in	Name
5806.04	5617.20	7.000	8.750	7"