



# CARRIZO OIL & GAS, INC.

Field: Niobrara COCZ'83

Site: WEP 28 PAD

Well: 2-28-11-3-64

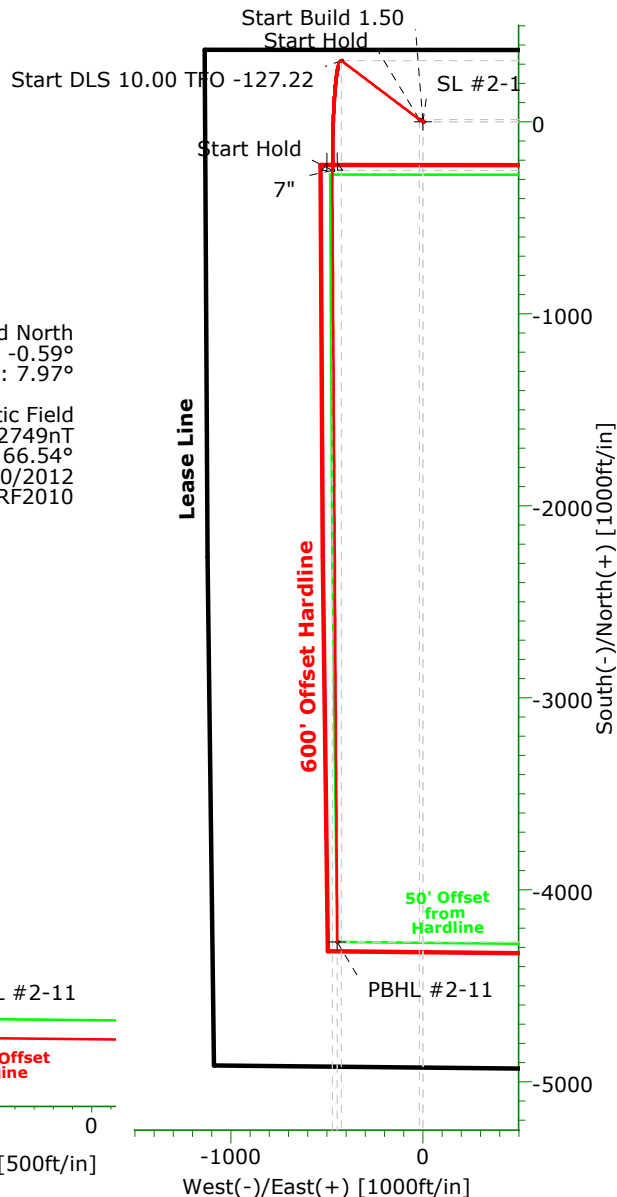
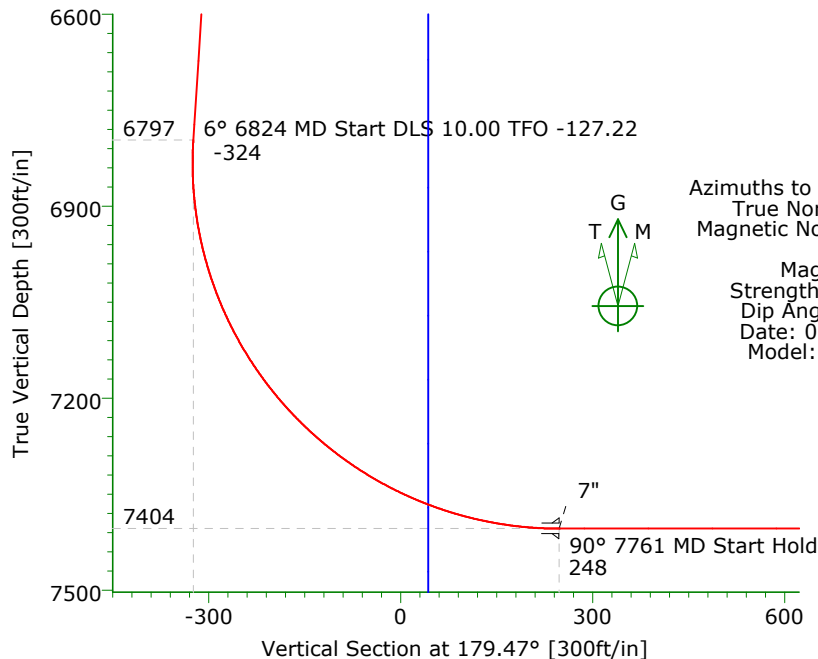
Wellpath: Original Hole

Plan: Plan #1



## CASING DETAILS

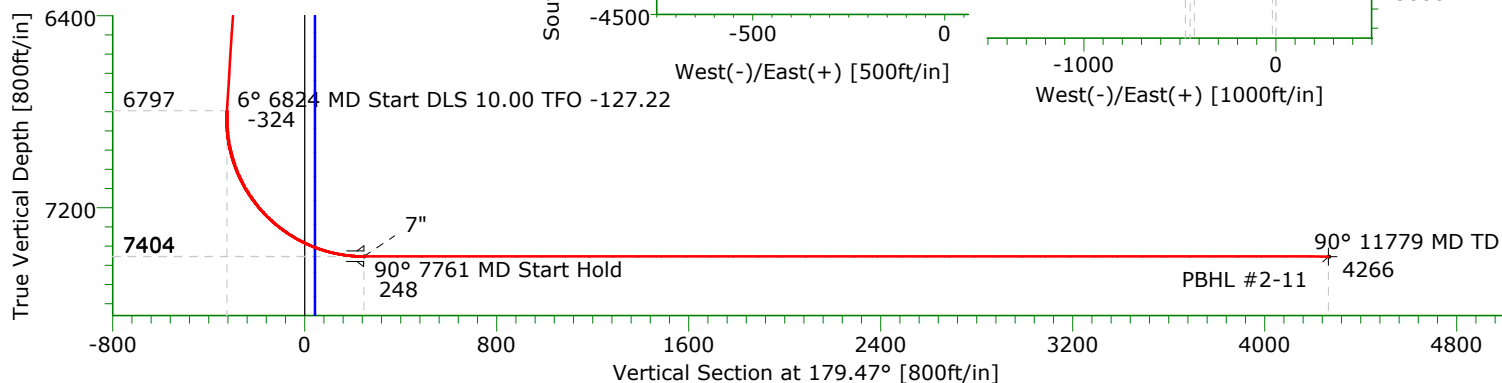
No.	TVD	MD	Name	Size
1	7404.00	7760.66	7"	7.000



Sidetrack off cement plug after drilling Pilot Hole to 8246' TVD

## LEGEND

- 1-27-41-3.64 (Pilot Hole)
- Plan #1



## TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Shape
SL #2-11	0.00	0.00	0.00	1705679.81	3264108.71	39°46'01.701N104°33'37.788W		Point
PBHL #2-11	7404.00	-4270.11	-445.44	1701409.70	3263663.27	39°45'19.548N104°33'44.057W		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	1540.00	0.00	0.00	1540.00	0.00	0.00	0.00	0.00	0.00	
3	1940.00	6.00	307.00	1939.27	12.59	-16.71	1.50	307.00	-12.75	
4	6824.29	6.00	307.00	6796.80	319.85	-424.45	0.00	0.00	-323.76	
5	7760.66	90.00	179.63	7404.00	-252.27	-471.47	10.00	-127.22	247.90	
6	11778.59	90.00	179.63	7404.00	-4270.11	-445.44	0.00	0.00	4265.81	PBHL #2-11

**Company:** CARRIZO OIL & GAS, INC.  
**Field:** Niobrara COCZ'83  
**Site:** WEP 28 PAD  
**Well:** 2-28-11-3-64  
**Wellpath:** Original Hole

**Date:** 05/23/2012  
**Co-ordinate(NE) Reference:** Well: 2-28-11-3-64, Grid North  
**Vertical (TVD) Reference:** 5580'GL+17'KB 5597.0  
**Section (VS) Reference:** Well (0.00N,0.00E,179.47Azi)  
**Plan:** Plan #1

**Page:** 1

**Field:** Niobrara COCZ'83

**Map System:** US State Plane Coordinate System 1983  
**Geo Datum:** GRS 1980  
**Sys Datum:** Mean Sea Level

**Map Zone:** Colorado, Central Zone  
**Coordinate System:** Well Centre  
**Geomagnetic Model:** IGRF2010

**Site:** WEP 28 PAD  
S:28, T:3S, R:64W  
Adams County, CO

**Site Position:**  
**From:** Map  
**Position Uncertainty:** 0.00 ft  
**Ground Level:** 5580.00 ft

**Northing:** 1705679.81 ft  
**Easting:** 3264108.71 ft

**Latitude:** 39 46 1.701 N  
**Longitude:** 104 33 37.788 W  
**North Reference:** Grid  
**Grid Convergence:** 0.59 deg

**Well:** 2-28-11-3-64

**Slot Name:**

**Well Position:** +N/-S 0.00 ft  
+E/-W 0.00 ft  
**Position Uncertainty:** 0.00 ft

**Northing:** 1705679.81 ft  
**Easting :** 3264108.71 ft

**Latitude:** 39 46 1.701 N  
**Longitude:** 104 33 37.788 W

**Wellpath:** Original Hole

**Drilled From:** Surface  
**Tie-on Depth:** 0.00 ft  
**Above System Datum:** Mean Sea Level  
**Declination:** 8.56 deg  
**Mag Dip Angle:** 66.54 deg  
**+E/-W**  
**Direction**  
deg

**Current Datum:** 5580'GL+17'KB  
**Magnetic Data:** 06/30/2012  
**Field Strength:** 52749 nT  
**Vertical Section:** Depth From (TVD)  
ft  
0.00  
+N/-S  
ft  
0.00

0.00  
179.47

**Plan:** Plan #1

**Date Composed:** 05/23/2012  
**Version:** 1  
**Tied-to:** From Surface

**Principal:** No

#### 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	
1540.00	0.00	0.00	1540.00	0.00	0.00	0.00	0.00	0.00	0.00	
1940.00	6.00	307.00	1939.27	12.59	-16.71	1.50	1.50	0.00	307.00	
6824.29	6.00	307.00	6796.80	319.85	-424.45	0.00	0.00	0.00	0.00	
7760.66	90.00	179.63	7404.00	-252.27	-471.47	10.00	8.97	-13.60	-127.22	
11778.59	90.00	179.63	7404.00	-4270.11	-445.44	0.00	0.00	0.00	0.00	PBHL #2-11

#### 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
1540.00	0.00	0.00	1540.00	0.00	0.00	0.00	0.00	0.00	0.00	
1600.00	0.90	307.00	1600.00	0.28	-0.38	-0.29	1.50	1.50	0.00	
1700.00	2.40	307.00	1699.95	2.02	-2.68	-2.04	1.50	1.50	0.00	
1800.00	3.90	307.00	1799.80	5.32	-7.06	-5.39	1.50	1.50	0.00	
1900.00	5.40	307.00	1899.47	10.20	-13.54	-10.33	1.50	1.50	0.00	
1940.00	6.00	307.00	1939.27	12.59	-16.71	-12.75	1.50	1.50	0.00	
2000.00	6.00	307.00	1998.94	16.37	-21.72	-16.57	0.00	0.00	0.00	
2100.00	6.00	307.00	2098.39	22.66	-30.07	-22.94	0.00	0.00	0.00	
2200.00	6.00	307.00	2197.85	28.95	-38.42	-29.30	0.00	0.00	0.00	
2300.00	6.00	307.00	2297.30	35.24	-46.76	-35.67	0.00	0.00	0.00	
2400.00	6.00	307.00	2396.75	41.53	-55.11	-42.04	0.00	0.00	0.00	
2500.00	6.00	307.00	2496.20	47.82	-63.46	-48.41	0.00	0.00	0.00	
2600.00	6.00	307.00	2595.65	54.11	-71.81	-54.77	0.00	0.00	0.00	
2700.00	6.00	307.00	2695.11	60.40	-80.16	-61.14	0.00	0.00	0.00	
2800.00	6.00	307.00	2794.56	66.69	-88.50	-67.51	0.00	0.00	0.00	

**Company:** CARRIZO OIL & GAS, INC.  
**Field:** Niobrara COCZ'83  
**Site:** WEP 28 PAD  
**Well:** 2-28-11-3-64  
**Wellpath:** Original Hole

**Date:** 05/23/2012  
**Co-ordinate(NE) Reference:** Well: 2-28-11-3-64, Grid North  
**Vertical (TVD) Reference:** 5580'GL+17'KB 5597.0  
**Section (VS) Reference:** Well (0.00N,0.00E,179.47Azi)  
**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
2900.00	6.00	307.00	2894.01	72.98	-96.85	-73.88	0.00	0.00	0.00	
3000.00	6.00	307.00	2993.46	79.27	-105.20	-80.24	0.00	0.00	0.00	
3100.00	6.00	307.00	3092.91	85.56	-113.55	-86.61	0.00	0.00	0.00	
3200.00	6.00	307.00	3192.37	91.86	-121.90	-92.98	0.00	0.00	0.00	
3300.00	6.00	307.00	3291.82	98.15	-130.24	-99.35	0.00	0.00	0.00	
3400.00	6.00	307.00	3391.27	104.44	-138.59	-105.71	0.00	0.00	0.00	
3500.00	6.00	307.00	3490.72	110.73	-146.94	-112.08	0.00	0.00	0.00	
3600.00	6.00	307.00	3590.18	117.02	-155.29	-118.45	0.00	0.00	0.00	
3700.00	6.00	307.00	3689.63	123.31	-163.64	-124.82	0.00	0.00	0.00	
3800.00	6.00	307.00	3789.08	129.60	-171.98	-131.18	0.00	0.00	0.00	
3900.00	6.00	307.00	3888.53	135.89	-180.33	-137.55	0.00	0.00	0.00	
4000.00	6.00	307.00	3987.98	142.18	-188.68	-143.92	0.00	0.00	0.00	
4100.00	6.00	307.00	4087.44	148.47	-197.03	-150.29	0.00	0.00	0.00	
4200.00	6.00	307.00	4186.89	154.76	-205.38	-156.66	0.00	0.00	0.00	
4300.00	6.00	307.00	4286.34	161.05	-213.72	-163.02	0.00	0.00	0.00	
4400.00	6.00	307.00	4385.79	167.34	-222.07	-169.39	0.00	0.00	0.00	
4500.00	6.00	307.00	4485.25	173.63	-230.42	-175.76	0.00	0.00	0.00	
4600.00	6.00	307.00	4584.70	179.92	-238.77	-182.13	0.00	0.00	0.00	
4700.00	6.00	307.00	4684.15	186.22	-247.12	-188.49	0.00	0.00	0.00	
4800.00	6.00	307.00	4783.60	192.51	-255.46	-194.86	0.00	0.00	0.00	
4900.00	6.00	307.00	4883.05	198.80	-263.81	-201.23	0.00	0.00	0.00	
5000.00	6.00	307.00	4982.51	205.09	-272.16	-207.60	0.00	0.00	0.00	
5100.00	6.00	307.00	5081.96	211.38	-280.51	-213.96	0.00	0.00	0.00	
5200.00	6.00	307.00	5181.41	217.67	-288.86	-220.33	0.00	0.00	0.00	
5300.00	6.00	307.00	5280.86	223.96	-297.20	-226.70	0.00	0.00	0.00	
5400.00	6.00	307.00	5380.32	230.25	-305.55	-233.07	0.00	0.00	0.00	
5500.00	6.00	307.00	5479.77	236.54	-313.90	-239.43	0.00	0.00	0.00	
5600.00	6.00	307.00	5579.22	242.83	-322.25	-245.80	0.00	0.00	0.00	
5700.00	6.00	307.00	5678.67	249.12	-330.60	-252.17	0.00	0.00	0.00	
5800.00	6.00	307.00	5778.12	255.41	-338.94	-258.54	0.00	0.00	0.00	
5900.00	6.00	307.00	5877.58	261.70	-347.29	-264.91	0.00	0.00	0.00	
6000.00	6.00	307.00	5977.03	267.99	-355.64	-271.27	0.00	0.00	0.00	
6100.00	6.00	307.00	6076.48	274.29	-363.99	-277.64	0.00	0.00	0.00	
6200.00	6.00	307.00	6175.93	280.58	-372.34	-284.01	0.00	0.00	0.00	
6300.00	6.00	307.00	6275.38	286.87	-380.68	-290.38	0.00	0.00	0.00	
6400.00	6.00	307.00	6374.84	293.16	-389.03	-296.74	0.00	0.00	0.00	
6500.00	6.00	307.00	6474.29	299.45	-397.38	-303.11	0.00	0.00	0.00	
6600.00	6.00	307.00	6573.74	305.74	-405.73	-309.48	0.00	0.00	0.00	
6700.00	6.00	307.00	6673.19	312.03	-414.08	-315.85	0.00	0.00	0.00	
6800.00	6.00	307.00	6772.65	318.32	-422.42	-322.21	0.00	0.00	0.00	
6824.29	6.00	307.00	6796.80	319.85	-424.45	-323.76	0.00	0.00	0.00	
6850.00	4.89	282.23	6822.40	320.89	-426.60	-324.82	10.00	-4.31	-96.32	
6900.00	6.18	230.07	6872.19	319.61	-430.75	-323.58	10.00	2.58	-104.33	
6950.00	10.12	207.53	6921.69	313.98	-434.85	-317.99	10.00	7.87	-45.08	
7000.00	14.71	198.18	6970.51	304.05	-438.86	-308.10	10.00	9.19	-18.71	
7050.00	19.50	193.27	7018.29	289.88	-442.76	-293.97	10.00	9.58	-9.81	
7100.00	24.38	190.25	7064.66	271.59	-446.51	-275.71	10.00	9.75	-6.04	
7150.00	29.29	188.19	7109.26	249.32	-450.10	-253.47	10.00	9.83	-4.12	
7200.00	34.23	186.68	7151.76	223.23	-453.48	-227.41	10.00	9.87	-3.02	
7250.00	39.18	185.51	7191.83	193.52	-456.63	-197.74	10.00	9.90	-2.34	
7300.00	44.14	184.57	7229.18	160.43	-459.54	-164.67	10.00	9.92	-1.89	
7350.00	49.11	183.78	7263.51	124.19	-462.17	-128.46	10.00	9.93	-1.58	
7400.00	54.08	183.10	7294.56	85.09	-464.51	-89.39	10.00	9.94	-1.36	
7450.00	59.05	182.50	7322.10	43.43	-466.54	-47.74	10.00	9.95	-1.20	

**Company:** CARRIZO OIL & GAS, INC.  
**Field:** Niobrara COCZ'83  
**Site:** WEP 28 PAD  
**Well:** 2-28-11-3-64  
**Wellpath:** Original Hole

**Date:** 05/23/2012  
**Co-ordinate(NE) Reference:** Well: 2-28-11-3-64, Grid North  
**Vertical (TVD) Reference:** 5580'GL+17'KB 5597.0  
**Section (VS) Reference:** Well (0.00N,0.00E,179.47Azi)  
**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
7500.00	64.03	181.96	7345.92	-0.48	-468.25	-3.85	10.00	9.96	-1.08	
7550.00	69.01	181.47	7365.83	-46.31	-469.61	41.96	10.00	9.96	-0.99	
7600.00	73.99	181.00	7381.69	-93.70	-470.63	89.34	10.00	9.96	-0.93	
7650.00	78.97	180.56	7393.38	-142.29	-471.29	137.93	10.00	9.96	-0.88	
7700.00	83.95	180.14	7400.80	-191.72	-471.59	187.35	10.00	9.96	-0.85	
7750.00	88.94	179.72	7403.90	-241.61	-471.53	237.24	10.00	9.97	-0.84	
7760.66	90.00	179.63	7404.00	-252.27	-471.47	247.90	10.00	9.97	-0.83	7"
7800.00	90.00	179.63	7404.00	-291.61	-471.21	287.24	0.00	0.00	0.00	
7900.00	90.00	179.63	7404.00	-391.61	-470.56	387.24	0.00	0.00	0.00	
8000.00	90.00	179.63	7404.00	-491.60	-469.92	487.24	0.00	0.00	0.00	
8100.00	90.00	179.63	7404.00	-591.60	-469.27	587.24	0.00	0.00	0.00	
8200.00	90.00	179.63	7404.00	-691.60	-468.62	687.23	0.00	0.00	0.00	
8300.00	90.00	179.63	7404.00	-791.60	-467.97	787.23	0.00	0.00	0.00	
8400.00	90.00	179.63	7404.00	-891.60	-467.32	887.23	0.00	0.00	0.00	
8500.00	90.00	179.63	7404.00	-991.59	-466.68	987.23	0.00	0.00	0.00	
8600.00	90.00	179.63	7404.00	-1091.59	-466.03	1087.23	0.00	0.00	0.00	
8700.00	90.00	179.63	7404.00	-1191.59	-465.38	1187.23	0.00	0.00	0.00	
8800.00	90.00	179.63	7404.00	-1291.59	-464.73	1287.23	0.00	0.00	0.00	
8900.00	90.00	179.63	7404.00	-1391.58	-464.09	1387.23	0.00	0.00	0.00	
9000.00	90.00	179.63	7404.00	-1491.58	-463.44	1487.23	0.00	0.00	0.00	
9100.00	90.00	179.63	7404.00	-1591.58	-462.79	1587.23	0.00	0.00	0.00	
9200.00	90.00	179.63	7404.00	-1691.58	-462.14	1687.23	0.00	0.00	0.00	
9300.00	90.00	179.63	7404.00	-1791.58	-461.49	1787.23	0.00	0.00	0.00	
9400.00	90.00	179.63	7404.00	-1891.57	-460.85	1887.23	0.00	0.00	0.00	
9500.00	90.00	179.63	7404.00	-1991.57	-460.20	1987.23	0.00	0.00	0.00	
9600.00	90.00	179.63	7404.00	-2091.57	-459.55	2087.23	0.00	0.00	0.00	
9700.00	90.00	179.63	7404.00	-2191.57	-458.90	2187.23	0.00	0.00	0.00	
9800.00	90.00	179.63	7404.00	-2291.57	-458.26	2287.23	0.00	0.00	0.00	
9900.00	90.00	179.63	7404.00	-2391.56	-457.61	2387.23	0.00	0.00	0.00	
10000.00	90.00	179.63	7404.00	-2491.56	-456.96	2487.23	0.00	0.00	0.00	
10100.00	90.00	179.63	7404.00	-2591.56	-456.31	2587.23	0.00	0.00	0.00	
10200.00	90.00	179.63	7404.00	-2691.56	-455.67	2687.23	0.00	0.00	0.00	
10300.00	90.00	179.63	7404.00	-2791.56	-455.02	2787.23	0.00	0.00	0.00	
10400.00	90.00	179.63	7404.00	-2891.55	-454.37	2887.23	0.00	0.00	0.00	
10500.00	90.00	179.63	7404.00	-2991.55	-453.72	2987.23	0.00	0.00	0.00	
10600.00	90.00	179.63	7404.00	-3091.55	-453.07	3087.23	0.00	0.00	0.00	
10700.00	90.00	179.63	7404.00	-3191.55	-452.43	3187.23	0.00	0.00	0.00	
10800.00	90.00	179.63	7404.00	-3291.54	-451.78	3287.22	0.00	0.00	0.00	
10900.00	90.00	179.63	7404.00	-3391.54	-451.13	3387.22	0.00	0.00	0.00	
11000.00	90.00	179.63	7404.00	-3491.54	-450.48	3487.22	0.00	0.00	0.00	
11100.00	90.00	179.63	7404.00	-3591.54	-449.84	3587.22	0.00	0.00	0.00	
11200.00	90.00	179.63	7404.00	-3691.54	-449.19	3687.22	0.00	0.00	0.00	
11300.00	90.00	179.63	7404.00	-3791.53	-448.54	3787.22	0.00	0.00	0.00	
11400.00	90.00	179.63	7404.00	-3891.53	-447.89	3887.22	0.00	0.00	0.00	
11500.00	90.00	179.63	7404.00	-3991.53	-447.24	3987.22	0.00	0.00	0.00	
11600.00	90.00	179.63	7404.00	-4091.53	-446.60	4087.22	0.00	0.00	0.00	
11700.00	90.00	179.63	7404.00	-4191.53	-445.95	4187.22	0.00	0.00	0.00	
11778.59	90.00	179.63	7404.00	-4270.11	-445.44	4265.81	0.00	0.00	0.00	PBHL #2-11

**Company:** CARRIZO OIL & GAS, INC.  
**Field:** Niobrara COCZ'83  
**Site:** WEP 28 PAD  
**Well:** 2-28-11-3-64  
**Wellpath:** Original Hole

**Date:** 05/23/2012  
**Co-ordinate(NE) Reference:** Well: 2-28-11-3-64, Grid North  
**Vertical (TVD) Reference:** 5580'GL+17'KB 5597.0  
**Section (VS) Reference:** Well (0.00N,0.00E,179.47Azi)  
**Plan:** Plan #1

**Time:** 14:53:21  
**Page:** 4

#### Targets

Name	Description	Dir.	TVD ft	+N/-S ft	+E/-W ft	Map Northing ft	Map Easting ft	<---- Latitude ---->			<--- Longitude --->				
								Deg	Min	Sec	Deg	Min	Sec		
SL #2-11			0.00	0.00	0.00	1705679.81	3264108.71	39	46	1.701	N	104	33	37.788	W
PBHL #2-11			7404.00	-4270.11	-445.44	1701409.70	3263663.27	39	45	19.548	N	104	33	44.057	W

#### Casing Points

MD ft	TVD ft	Diameter in	Hole Size in	Name
7760.66	7404.00	7.000	8.750	7"