



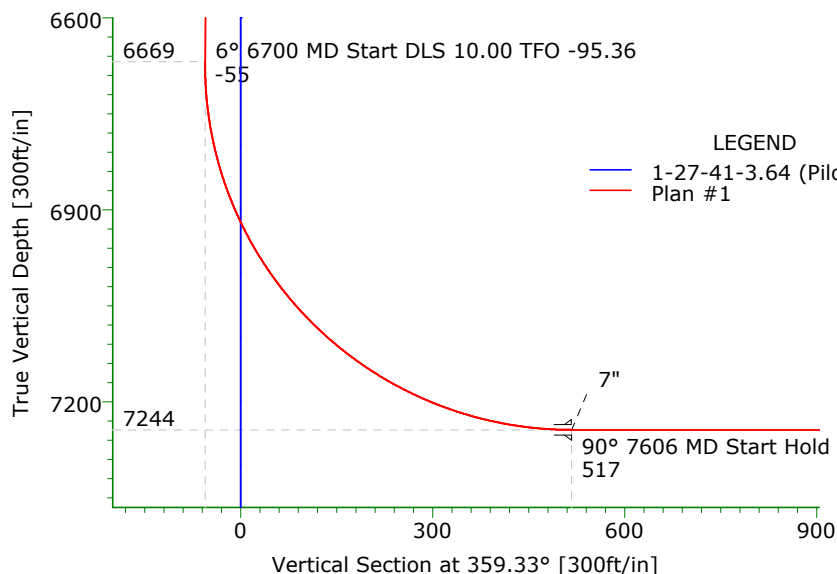
# CARRIZO OIL & GAS, INC.

Field: Niobrara COCZ'83  
Site: WEP PAD  
Well: 1-27-41-3.64  
Wellpath: Original Hole  
Plan: Plan #1

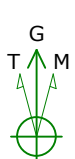


## CASING DETAILS

No.	TVD	MD	Name	Size
1	7244.00	7606.05	7"	7.000

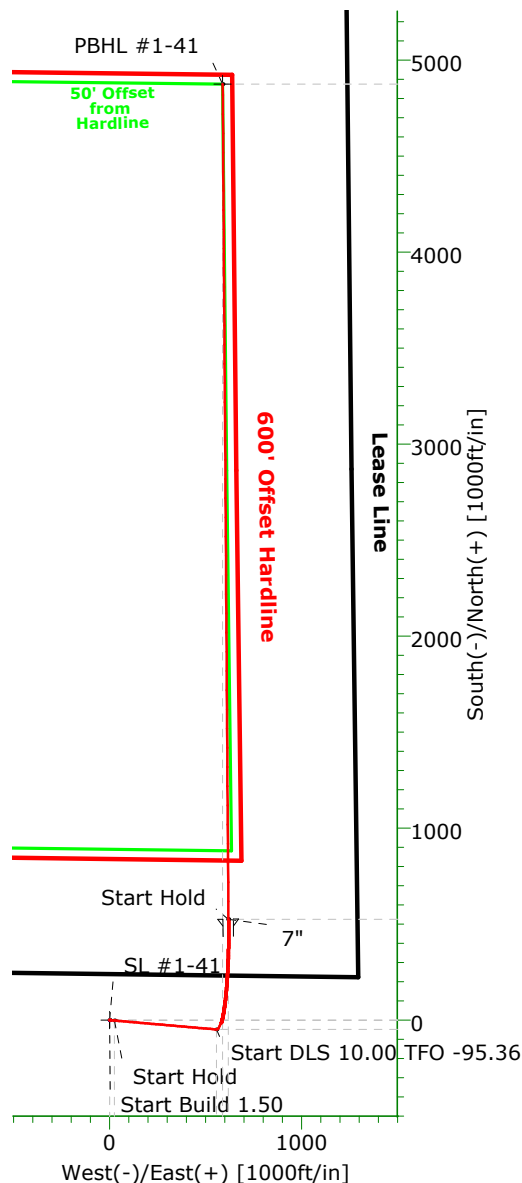
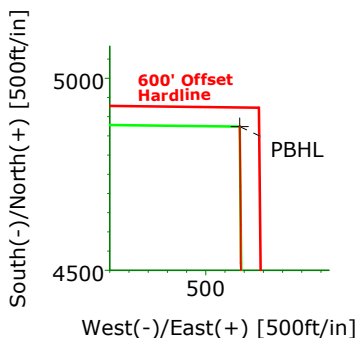
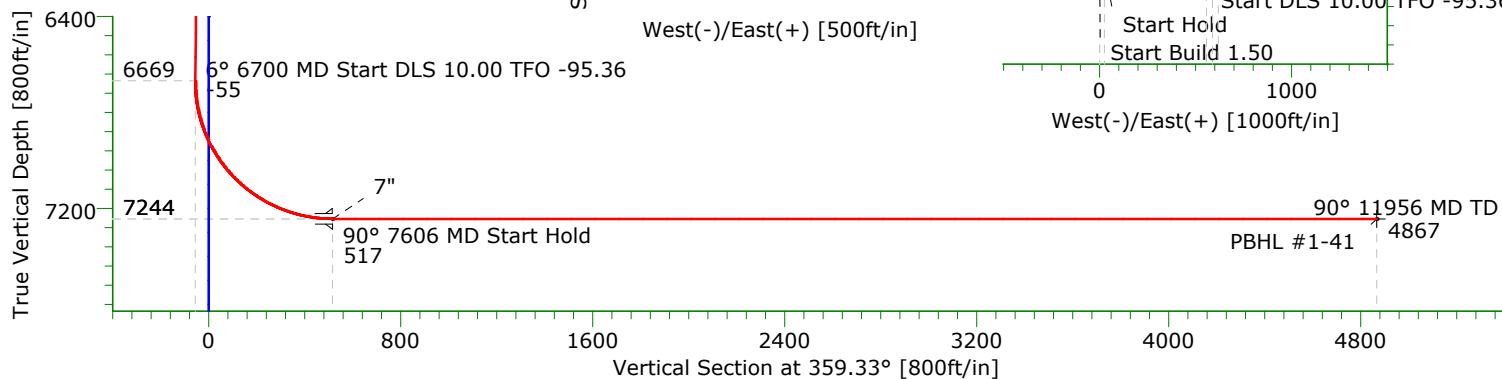


**Sidetrack off cement plug after drilling Pilot Hole to 8086' TVD**



Azimuths to Grid North  
True North: -0.61°  
Magnetic North: 7.94°

Magnetic Field  
Strength: 52752nT  
Dip Angle: 66.54°  
Date: 06/30/2012  
Model: IGRF2010



## TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Shape
SL #1-41	0.00	0.00	0.00	1705711.42	3272211.78	39°46'01.172N	104°31'54.020W	Point
PBHL #1-41	7244.00	4874.62	589.16	1710586.04	3272800.94	39°46'49.282N	104°31'45.809W	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	1973.33	6.50	95.00	1972.40	-2.14	24.46	1.50	95.00	-2.43	
4	6699.95	6.50	95.00	6668.64	-48.77	557.49	0.00	0.00	-55.29	
5	7606.05	90.00	359.61	7244.00	524.58	618.85	10.00	-95.36	517.31	
6	11956.18	90.00	359.61	7244.00	4874.62	589.16	0.00	0.00	4867.40	PBHL #1-41

**Company:** CARRIZO OIL & GAS, INC.  
**Field:** Niobrara COCZ'83  
**Site:** WEP PAD  
**Well:** 1-27-41-3.64  
**Wellpath:** Original Hole

**Date:** 05/23/2012  
**Co-ordinate(NE) Reference:** Well: 1-27-41-3.64, Grid North  
**Vertical (TVD) Reference:** 5509'GL+17'KB 5526.0  
**Section (VS) Reference:** Well (0.00N,0.00E,359.33Azi)  
**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 PAD

**Site Position:**  
**From:** Map  
**Position Uncertainty:** 0.00 ft  
**Ground Level:** 5509.00 ft

**Northing:** 1705711.42 ft  
**Easting:** 3272211.78 ft

**Latitude:** 39 46 1.172 N  
**Longitude:** 104 31 54.020 W  
**North Reference:** Grid  
**Grid Convergence:** 0.61 deg

**Well:** 1-27-41-3.64

**Slot Name:**

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

**Northing:** 1705711.42 ft  
**Easting:** 3272211.78 ft

**Latitude:** 39 46 1.172 N  
**Longitude:** 104 31 54.020 W

**Wellpath:** Original Hole

**Current Datum:** 5509'GL+17'KB  
**Magnetic Data:** 06/30/2012  
**Field Strength:** 52752 nT  
**Vertical Section:** Depth From (TVD)

**Height** 5526.00 ft

**Drilled From:** Surface  
**Tie-on Depth:** 0.00 ft  
**Above System Datum:** Mean Sea Level  
**Declination:** 8.55 deg  
**Mag Dip Angle:** 66.54 deg  
**+E/-W** Direction deg

0.00

0.00

0.00

359.33

**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	
1973.33	6.50	95.00	1972.40	-2.14	24.46	1.50	1.50	0.00	95.00	
6699.95	6.50	95.00	6668.64	-48.77	557.49	0.00	0.00	0.00	0.00	
7606.05	90.00	359.61	7244.00	524.58	618.85	10.00	9.22	-10.53	-95.36	
11956.18	90.00	359.61	7244.00	4874.62	589.16	0.00	0.00	0.00	0.00	PBHL #1-41

#### 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	95.00	1600.00	-0.04	0.47	-0.05	1.50	1.50	0.00	
1700.00	2.40	95.00	1699.95	-0.29	3.34	-0.33	1.50	1.50	0.00	
1800.00	3.90	95.00	1799.80	-0.77	8.81	-0.87	1.50	1.50	0.00	
1900.00	5.40	95.00	1899.47	-1.48	16.89	-1.67	1.50	1.50	0.00	
1973.33	6.50	95.00	1972.40	-2.14	24.46	-2.43	1.50	1.50	0.00	
2000.00	6.50	95.00	1998.90	-2.40	27.47	-2.72	0.00	0.00	0.00	
2100.00	6.50	95.00	2098.26	-3.39	38.74	-3.84	0.00	0.00	0.00	
2200.00	6.50	95.00	2197.61	-4.38	50.02	-4.96	0.00	0.00	0.00	
2300.00	6.50	95.00	2296.97	-5.36	61.30	-6.08	0.00	0.00	0.00	
2400.00	6.50	95.00	2396.33	-6.35	72.58	-7.20	0.00	0.00	0.00	
2500.00	6.50	95.00	2495.69	-7.34	83.85	-8.32	0.00	0.00	0.00	
2600.00	6.50	95.00	2595.04	-8.32	95.13	-9.43	0.00	0.00	0.00	
2700.00	6.50	95.00	2694.40	-9.31	106.41	-10.55	0.00	0.00	0.00	
2800.00	6.50	95.00	2793.76	-10.30	117.69	-11.67	0.00	0.00	0.00	

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**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	6.50	95.00	2893.11	-11.28	128.96	-12.79	0.00	0.00	0.00	
3000.00	6.50	95.00	2992.47	-12.27	140.24	-13.91	0.00	0.00	0.00	
3100.00	6.50	95.00	3091.83	-13.26	151.52	-15.03	0.00	0.00	0.00	
3200.00	6.50	95.00	3191.19	-14.24	162.79	-16.15	0.00	0.00	0.00	
3300.00	6.50	95.00	3290.54	-15.23	174.07	-17.26	0.00	0.00	0.00	
3400.00	6.50	95.00	3389.90	-16.22	185.35	-18.38	0.00	0.00	0.00	
3500.00	6.50	95.00	3489.26	-17.20	196.63	-19.50	0.00	0.00	0.00	
3600.00	6.50	95.00	3588.61	-18.19	207.90	-20.62	0.00	0.00	0.00	
3700.00	6.50	95.00	3687.97	-19.18	219.18	-21.74	0.00	0.00	0.00	
3800.00	6.50	95.00	3787.33	-20.16	230.46	-22.86	0.00	0.00	0.00	
3900.00	6.50	95.00	3886.69	-21.15	241.74	-23.97	0.00	0.00	0.00	
4000.00	6.50	95.00	3986.04	-22.14	253.01	-25.09	0.00	0.00	0.00	
4100.00	6.50	95.00	4085.40	-23.12	264.29	-26.21	0.00	0.00	0.00	
4200.00	6.50	95.00	4184.76	-24.11	275.57	-27.33	0.00	0.00	0.00	
4300.00	6.50	95.00	4284.11	-25.10	286.84	-28.45	0.00	0.00	0.00	
4400.00	6.50	95.00	4383.47	-26.08	298.12	-29.57	0.00	0.00	0.00	
4500.00	6.50	95.00	4482.83	-27.07	309.40	-30.68	0.00	0.00	0.00	
4600.00	6.50	95.00	4582.19	-28.06	320.68	-31.80	0.00	0.00	0.00	
4700.00	6.50	95.00	4681.54	-29.04	331.95	-32.92	0.00	0.00	0.00	
4800.00	6.50	95.00	4780.90	-30.03	343.23	-34.04	0.00	0.00	0.00	
4900.00	6.50	95.00	4880.26	-31.02	354.51	-35.16	0.00	0.00	0.00	
5000.00	6.50	95.00	4979.62	-32.00	365.78	-36.28	0.00	0.00	0.00	
5100.00	6.50	95.00	5078.97	-32.99	377.06	-37.40	0.00	0.00	0.00	
5200.00	6.50	95.00	5178.33	-33.98	388.34	-38.51	0.00	0.00	0.00	
5300.00	6.50	95.00	5277.69	-34.96	399.62	-39.63	0.00	0.00	0.00	
5400.00	6.50	95.00	5377.04	-35.95	410.89	-40.75	0.00	0.00	0.00	
5500.00	6.50	95.00	5476.40	-36.94	422.17	-41.87	0.00	0.00	0.00	
5600.00	6.50	95.00	5575.76	-37.92	433.45	-42.99	0.00	0.00	0.00	
5700.00	6.50	95.00	5675.12	-38.91	444.73	-44.11	0.00	0.00	0.00	
5800.00	6.50	95.00	5774.47	-39.90	456.00	-45.22	0.00	0.00	0.00	
5900.00	6.50	95.00	5873.83	-40.88	467.28	-46.34	0.00	0.00	0.00	
6000.00	6.50	95.00	5973.19	-41.87	478.56	-47.46	0.00	0.00	0.00	
6100.00	6.50	95.00	6072.54	-42.85	489.83	-48.58	0.00	0.00	0.00	
6200.00	6.50	95.00	6171.90	-43.84	501.11	-49.70	0.00	0.00	0.00	
6300.00	6.50	95.00	6271.26	-44.83	512.39	-50.82	0.00	0.00	0.00	
6400.00	6.50	95.00	6370.62	-45.81	523.67	-51.94	0.00	0.00	0.00	
6500.00	6.50	95.00	6469.97	-46.80	534.94	-53.05	0.00	0.00	0.00	
6600.00	6.50	95.00	6569.33	-47.79	546.22	-54.17	0.00	0.00	0.00	
6699.95	6.50	95.00	6668.64	-48.77	557.49	-55.29	0.00	0.00	0.00	
6750.00	7.82	55.32	6718.33	-47.08	563.12	-53.66	10.00	2.63	-79.29	
6800.00	11.39	33.87	6767.63	-41.04	568.67	-47.69	10.00	7.15	-42.89	
6850.00	15.76	23.32	6816.23	-30.70	574.11	-37.42	10.00	8.73	-21.11	
6900.00	20.41	17.36	6863.75	-16.14	579.40	-22.91	10.00	9.30	-11.91	
6950.00	25.19	13.57	6909.84	2.53	584.50	-4.30	10.00	9.56	-7.59	
7000.00	30.04	10.92	6954.13	25.18	589.37	18.29	10.00	9.70	-5.29	
7050.00	34.93	8.96	6996.30	51.62	593.98	44.67	10.00	9.78	-3.93	
7100.00	39.84	7.42	7036.02	81.66	598.28	74.66	10.00	9.83	-3.07	
7150.00	44.77	6.18	7072.99	115.07	602.24	108.02	10.00	9.86	-2.50	
7200.00	49.71	5.13	7106.92	151.58	605.84	144.49	10.00	9.88	-2.10	
7250.00	54.66	4.22	7137.57	190.94	609.05	183.80	10.00	9.90	-1.81	
7300.00	59.61	3.42	7164.70	232.83	611.84	225.66	10.00	9.91	-1.60	
7350.00	64.57	2.70	7188.09	276.94	614.19	269.74	10.00	9.92	-1.44	
7400.00	69.53	2.04	7207.58	322.93	616.09	315.70	10.00	9.92	-1.33	
7450.00	74.50	1.41	7223.02	370.45	617.52	363.20	10.00	9.93	-1.25	

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**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	79.46	0.82	7234.28	419.14	618.46	411.88	10.00	9.93	-1.19	
7550.00	84.43	0.24	7241.28	468.63	618.92	461.36	10.00	9.93	-1.15	
7600.00	89.40	359.68	7243.97	518.54	618.88	511.26	10.00	9.94	-1.13	
7606.05	90.00	359.61	7244.00	524.58	618.85	517.31	10.00	9.94	-1.13	7"
7700.00	90.00	359.61	7244.00	618.53	618.20	611.26	0.00	0.00	0.00	
7800.00	90.00	359.61	7244.00	718.53	617.52	711.26	0.00	0.00	0.00	
7900.00	90.00	359.61	7244.00	818.53	616.84	811.26	0.00	0.00	0.00	
8000.00	90.00	359.61	7244.00	918.53	616.16	911.26	0.00	0.00	0.00	
8100.00	90.00	359.61	7244.00	1018.53	615.47	1011.26	0.00	0.00	0.00	
8200.00	90.00	359.61	7244.00	1118.52	614.79	1111.26	0.00	0.00	0.00	
8300.00	90.00	359.61	7244.00	1218.52	614.11	1211.26	0.00	0.00	0.00	
8400.00	90.00	359.61	7244.00	1318.52	613.43	1311.26	0.00	0.00	0.00	
8500.00	90.00	359.61	7244.00	1418.52	612.75	1411.25	0.00	0.00	0.00	
8600.00	90.00	359.61	7244.00	1518.51	612.06	1511.25	0.00	0.00	0.00	
8700.00	90.00	359.61	7244.00	1618.51	611.38	1611.25	0.00	0.00	0.00	
8800.00	90.00	359.61	7244.00	1718.51	610.70	1711.25	0.00	0.00	0.00	
8900.00	90.00	359.61	7244.00	1818.51	610.02	1811.25	0.00	0.00	0.00	
9000.00	90.00	359.61	7244.00	1918.50	609.33	1911.25	0.00	0.00	0.00	
9100.00	90.00	359.61	7244.00	2018.50	608.65	2011.25	0.00	0.00	0.00	
9200.00	90.00	359.61	7244.00	2118.50	607.97	2111.25	0.00	0.00	0.00	
9300.00	90.00	359.61	7244.00	2218.50	607.29	2211.24	0.00	0.00	0.00	
9400.00	90.00	359.61	7244.00	2318.50	606.60	2311.24	0.00	0.00	0.00	
9500.00	90.00	359.61	7244.00	2418.49	605.92	2411.24	0.00	0.00	0.00	
9600.00	90.00	359.61	7244.00	2518.49	605.24	2511.24	0.00	0.00	0.00	
9700.00	90.00	359.61	7244.00	2618.49	604.56	2611.24	0.00	0.00	0.00	
9800.00	90.00	359.61	7244.00	2718.49	603.87	2711.24	0.00	0.00	0.00	
9900.00	90.00	359.61	7244.00	2818.48	603.19	2811.24	0.00	0.00	0.00	
10000.00	90.00	359.61	7244.00	2918.48	602.51	2911.24	0.00	0.00	0.00	
10100.00	90.00	359.61	7244.00	3018.48	601.83	3011.24	0.00	0.00	0.00	
10200.00	90.00	359.61	7244.00	3118.48	601.14	3111.23	0.00	0.00	0.00	
10300.00	90.00	359.61	7244.00	3218.47	600.46	3211.23	0.00	0.00	0.00	
10400.00	90.00	359.61	7244.00	3318.47	599.78	3311.23	0.00	0.00	0.00	
10500.00	90.00	359.61	7244.00	3418.47	599.10	3411.23	0.00	0.00	0.00	
10600.00	90.00	359.61	7244.00	3518.47	598.41	3511.23	0.00	0.00	0.00	
10700.00	90.00	359.61	7244.00	3618.46	597.73	3611.23	0.00	0.00	0.00	
10800.00	90.00	359.61	7244.00	3718.46	597.05	3711.23	0.00	0.00	0.00	
10900.00	90.00	359.61	7244.00	3818.46	596.37	3811.23	0.00	0.00	0.00	
11000.00	90.00	359.61	7244.00	3918.46	595.69	3911.22	0.00	0.00	0.00	
11100.00	90.00	359.61	7244.00	4018.46	595.00	4011.22	0.00	0.00	0.00	
11200.00	90.00	359.61	7244.00	4118.45	594.32	4111.22	0.00	0.00	0.00	
11300.00	90.00	359.61	7244.00	4218.45	593.64	4211.22	0.00	0.00	0.00	
11400.00	90.00	359.61	7244.00	4318.45	592.96	4311.22	0.00	0.00	0.00	
11500.00	90.00	359.61	7244.00	4418.45	592.27	4411.22	0.00	0.00	0.00	
11600.00	90.00	359.61	7244.00	4518.44	591.59	4511.22	0.00	0.00	0.00	
11700.00	90.00	359.61	7244.00	4618.44	590.91	4611.22	0.00	0.00	0.00	
11800.00	90.00	359.61	7244.00	4718.44	590.23	4711.21	0.00	0.00	0.00	
11900.00	90.00	359.61	7244.00	4818.44	589.54	4811.21	0.00	0.00	0.00	
11956.18	90.00	359.61	7244.00	4874.62	589.16	4867.40	0.00	0.00	0.00	PBHL #1-41

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**Section (VS) Reference:** Well (0.00N,0.00E,359.33Azi)  
**Plan:** Plan #1

**Time:** 13:38:39  
**Page:** 4

#### Targets

Name	Description Dip.	Dir.	TVD ft	+N/-S ft	+E/-W ft	Map Northing ft	Map Easting ft	<---- Latitude ---->			<--- Longitude --->		
								Deg	Min	Sec	Deg	Min	Sec
SL #1-41			0.00	0.00	0.00	1705711.423272211.78		39	46	1.172 N	104	31	54.020 W
PBHL #1-41			7244.00	4874.62	589.16	1710586.043272800.94		39	46	49.282 N	104	31	45.809 W

#### Casing Points

MD ft	TVD ft	Diameter in	Hole Size in	Name
7606.05	7244.00	7.000	8.750	7"