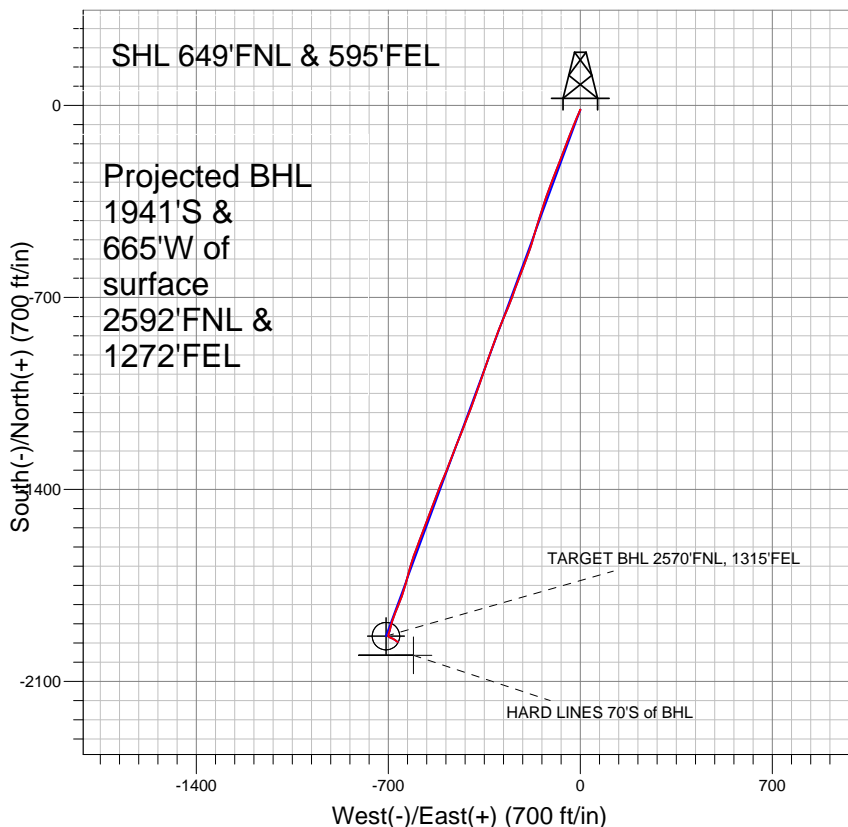


## Anadarko, Weld County CO

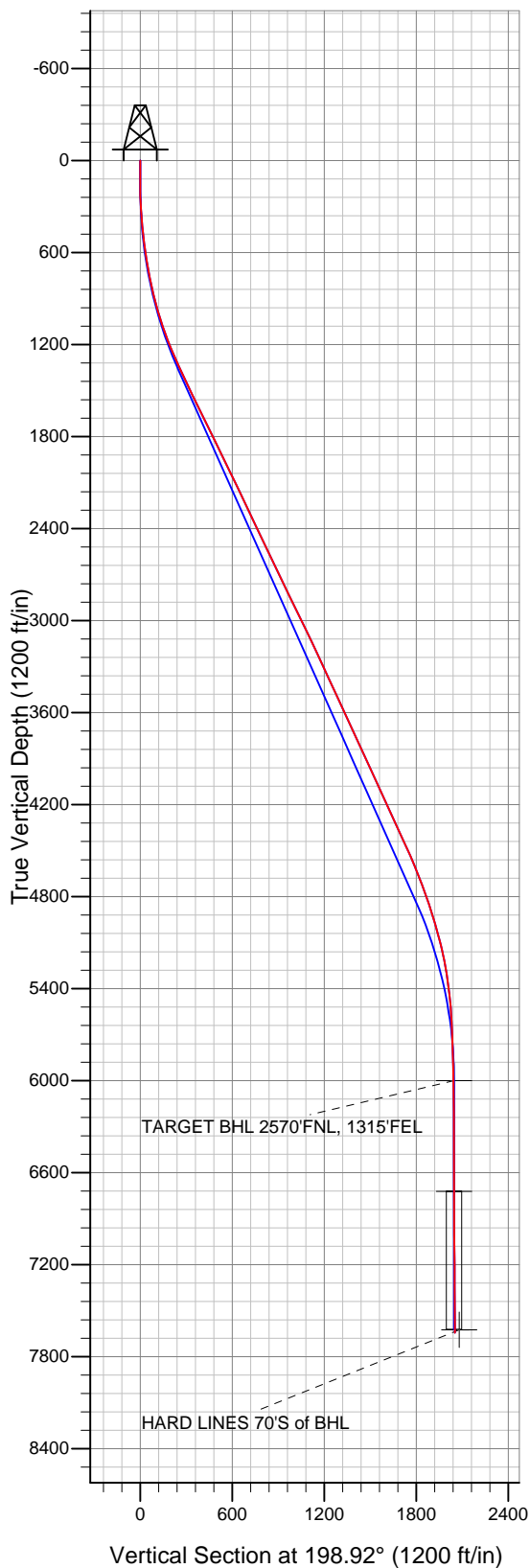


### LEGEND

- ◆ Strohauer 24-14, Wellbore #1, Plan #1 (11-16-10) V0
- Wellbore #1
- Survey #1

## Final Survey Plot

Projected Final Survey -  
8060'MD & 7644'TVD @ 2051' VS  
1.3 deg Inc 126.8 deg AZ



Project: SEC.14-T4N-R65W  
Site: Strohauer 1-14 Pad Sec.14-T4N-R65W  
Well: Strohauer 24-14  
Plan: Wellbore #1



## **Directional**

### **Anadarko, Weld County CO**

**SEC.14-T4N-R65W**

**Strohauer 1-14 Pad Sec.14-T4N-R65W**

**Strohauer 24-14**

**Wellbore #1**

**Survey: Survey #1**

### **Standard Survey Report**

**21 December, 2010**

<b>Company:</b>	Anadarko, Weld County CO	<b>Local Co-ordinate Reference:</b>	Site Strohauer 1-14 Pad Sec.14-T4N-R65W
<b>Project:</b>	SEC.14-T4N-R65W	<b>TVD Reference:</b>	WELL @ 4725.0ft (Original Well Elev)
<b>Site:</b>	Strohauer 1-14 Pad Sec.14-T4N-R65W	<b>MD Reference:</b>	WELL @ 4725.0ft (Original Well Elev)
<b>Well:</b>	Strohauer 24-14	<b>North Reference:</b>	True
<b>Wellbore:</b>	Wellbore #1	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	Wellbore #1	<b>Database:</b>	Landmark

<b>Project</b>	SEC.14-T4N-R65W, Weld County, Colorado		
<b>Map System:</b>	US State Plane 1983	<b>System Datum:</b>	Mean Sea Level
<b>Geo Datum:</b>	North American Datum 1983		Using Well Reference Point
<b>Map Zone:</b>	Colorado Northern Zone		Using geodetic scale factor

<b>Site</b>	Strohauer 1-14 Pad Sec.14-T4N-R65W		
<b>Site Position:</b>		<b>Northing:</b>	1,359,895.76ft
<b>From:</b>	Lat/Long	<b>Easting:</b>	3,244,543.10ft
<b>Position Uncertainty:</b>	0.0 ft	<b>Slot Radius:</b>	"
		<b>Latitude:</b>	40° 19' 4.782 N
		<b>Longitude:</b>	104° 37' 22.825 W
		<b>Grid Convergence:</b>	0.57 °

<b>Well</b>	Strohauer 24-14		
<b>Well Position</b>	<b>+N-S</b>	-16.0 ft	<b>Northing:</b> 1,359,879.72 ft
	<b>+E-W</b>	0.0 ft	<b>Easting:</b> 3,244,543.26 ft
<b>Position Uncertainty</b>		0.0 ft	<b>Wellhead Elevation:</b> ft
			<b>Latitude:</b> 40° 19' 4.623 N
			<b>Longitude:</b> 104° 37' 22.825 W
			<b>Ground Level:</b> 4,711.0ft

<b>Wellbore</b>	Wellbore #1				
<b>Magnetics</b>	<b>Model Name</b>	<b>Sample Date</b>	<b>Declination (°)</b>	<b>Dip Angle (°)</b>	<b>Field Strength (nT)</b>
	IGRF2010	12/6/2010	8.85	67.03	53,160

<b>Design</b>	Wellbore #1				
<b>Audit Notes:</b>					
<b>Version:</b>	1.0	<b>Phase:</b>	ACTUAL	<b>Tie On Depth:</b>	0.0
<b>Vertical Section:</b>	<b>Depth From (TVD) (ft)</b>	<b>+N-S (ft)</b>	<b>+E-W (ft)</b>	<b>Direction (°)</b>	
	0.0	-16.0	0.0	198.92	

<b>Survey Program</b>	<b>Date</b>	12/21/2010			
<b>From (ft)</b>	<b>To (ft)</b>	<b>Survey (Wellbore)</b>	<b>Tool Name</b>	<b>Description</b>	
139.0	8,060.0	Survey #1 (Wellbore #1)	MWD	MWD - Standard	

<b>Survey</b>										
<b>Measured Depth (ft)</b>	<b>Inclination (°)</b>	<b>Azimuth (°)</b>	<b>Vertical Depth (ft)</b>	<b>+N-S (ft)</b>	<b>+E-W (ft)</b>	<b>Vertical Section (ft)</b>	<b>Dogleg Rate (°/100ft)</b>	<b>Build Rate (°/100ft)</b>	<b>Turn Rate (°/100ft)</b>	
0.0	0.00	0.00	0.0	-16.0	0.0	0.0	0.00	0.00	0.00	
139.0	0.40	21.70	139.0	-15.6	0.2	-0.5	0.29	0.29	0.00	
232.0	1.00	201.20	232.0	-16.0	0.0	0.0	1.51	0.65	193.01	
325.0	3.50	206.00	324.9	-19.4	-1.5	3.6	2.69	2.69	5.16	
445.0	5.80	199.90	444.5	-28.3	-5.2	13.3	1.96	1.92	-5.08	
532.0	7.80	202.90	530.9	-37.9	-9.0	23.6	2.33	2.30	3.45	
600.0	8.90	204.80	598.2	-46.9	-13.0	33.5	1.67	1.62	2.79	
682.0	8.80	200.00	679.2	-58.6	-17.8	46.0	0.91	-0.12	-5.85	
772.0	11.40	202.80	767.8	-73.3	-23.6	61.8	2.94	2.89	3.11	
889.0	13.50	203.70	882.0	-96.4	-33.6	86.9	1.80	1.79	0.77	
977.0	16.00	201.80	967.1	-117.1	-42.2	109.3	2.89	2.84	-2.16	
1,064.0	18.00	200.50	1,050.3	-140.8	-51.4	134.7	2.34	2.30	-1.49	
1,152.0	20.60	199.50	1,133.4	-168.2	-61.3	163.8	2.98	2.95	-1.14	

<b>Company:</b>	Anadarko, Weld County CO	<b>Local Co-ordinate Reference:</b>	Site Strothauer 1-14 Pad Sec.14-T4N-R65W
<b>Project:</b>	SEC.14-T4N-R65W	<b>TVD Reference:</b>	WELL @ 4725.0ft (Original Well Elev)
<b>Site:</b>	Strothauer 1-14 Pad Sec.14-T4N-R65W	<b>MD Reference:</b>	WELL @ 4725.0ft (Original Well Elev)
<b>Well:</b>	Strothauer 24-14	<b>North Reference:</b>	True
<b>Wellbore:</b>	Wellbore #1	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	Wellbore #1	<b>Database:</b>	Landmark

Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
1,241.0	22.10	200.50	1,216.3	-198.6	-72.4	196.2	1.73	1.69	1.12
1,330.0	24.40	202.70	1,298.0	-231.3	-85.4	231.3	2.76	2.58	2.47
1,420.0	24.60	200.90	1,379.9	-265.9	-99.2	268.5	0.86	0.22	-2.00
1,507.0	25.30	200.50	1,458.8	-300.2	-112.2	305.2	0.83	0.80	-0.46
1,594.0	26.00	198.40	1,537.2	-335.7	-124.7	342.9	1.32	0.80	-2.41
1,684.0	26.20	198.00	1,618.1	-373.4	-137.1	382.5	0.30	0.22	-0.44
1,773.0	26.30	197.70	1,697.9	-410.8	-149.1	421.8	0.19	0.11	-0.34
1,863.0	26.20	196.70	1,778.6	-448.9	-160.9	461.6	0.50	-0.11	-1.11
1,951.0	25.70	196.20	1,857.7	-485.8	-171.8	500.1	0.62	-0.57	-0.57
2,039.0	26.10	198.90	1,936.9	-522.4	-183.4	538.5	1.42	0.45	3.07
2,127.0	26.00	200.10	2,016.0	-558.8	-196.3	577.1	0.61	-0.11	1.36
2,215.0	26.40	200.20	2,094.9	-595.3	-209.7	616.0	0.46	0.45	0.11
2,301.0	25.50	201.20	2,172.2	-630.5	-223.0	653.6	1.16	-1.05	1.16
2,391.0	25.50	201.00	2,253.5	-666.7	-236.9	692.3	0.10	0.00	-0.22
2,479.0	25.00	200.30	2,333.1	-701.8	-250.2	729.8	0.66	-0.57	-0.80
2,568.0	25.50	202.00	2,413.6	-737.2	-263.9	767.8	0.99	0.56	1.91
2,658.0	25.00	202.70	2,495.0	-772.7	-278.5	806.1	0.65	-0.56	0.78
2,748.0	25.50	201.90	2,576.4	-808.2	-293.0	844.4	0.67	0.56	-0.89
2,837.0	25.90	199.80	2,656.6	-844.3	-306.8	883.0	1.12	0.45	-2.36
2,926.0	25.70	200.70	2,736.7	-880.6	-320.2	921.7	0.49	-0.22	1.01
3,015.0	26.50	199.50	2,816.6	-917.4	-333.6	960.8	1.08	0.90	-1.35
3,105.0	25.50	198.50	2,897.5	-954.7	-346.5	1,000.3	1.21	-1.11	-1.11
3,195.0	26.40	198.50	2,978.4	-992.1	-359.0	1,039.7	1.00	1.00	0.00
3,284.0	26.00	199.40	3,058.3	-1,029.2	-371.7	1,079.0	0.63	-0.45	1.01
3,372.0	25.40	199.50	3,137.6	-1,065.2	-384.4	1,117.1	0.68	-0.68	0.11
3,460.0	24.80	200.50	3,217.3	-1,100.3	-397.2	1,154.4	0.83	-0.68	1.14
3,550.0	24.40	202.20	3,299.1	-1,135.2	-410.8	1,191.9	0.90	-0.44	1.89
3,640.0	25.30	200.90	3,380.8	-1,170.3	-424.7	1,229.7	1.17	1.00	-1.44
3,728.0	24.50	201.40	3,460.6	-1,204.9	-438.1	1,266.7	0.94	-0.91	0.57
3,817.0	24.90	202.30	3,541.5	-1,239.4	-451.9	1,303.8	0.62	0.45	1.01
3,905.0	25.00	201.10	3,621.2	-1,273.9	-465.7	1,340.9	0.59	0.11	-1.36
3,993.0	24.60	199.40	3,701.1	-1,308.5	-478.4	1,377.8	0.93	-0.45	-1.93
4,082.0	25.20	203.00	3,781.9	-1,343.5	-492.0	1,415.2	1.83	0.67	4.04
4,169.0	24.60	203.00	3,860.8	-1,377.2	-506.3	1,451.8	0.69	-0.69	0.00
4,259.0	24.60	200.50	3,942.6	-1,412.0	-520.2	1,489.2	1.16	0.00	-2.78
4,347.0	24.40	201.20	4,022.7	-1,446.1	-533.2	1,525.6	0.40	-0.23	0.80
4,435.0	25.10	201.00	4,102.6	-1,480.4	-546.4	1,562.5	0.80	0.80	-0.23
4,525.0	24.20	199.10	4,184.4	-1,515.7	-559.3	1,600.0	1.33	-1.00	-2.11
4,612.0	24.30	202.40	4,263.7	-1,549.1	-572.0	1,635.7	1.56	0.11	3.79
4,702.0	25.10	200.20	4,345.5	-1,584.1	-585.6	1,673.2	1.35	0.89	-2.44
4,792.0	24.80	199.80	4,427.1	-1,619.8	-598.6	1,711.2	0.38	-0.33	-0.44
4,880.0	24.30	198.90	4,507.1	-1,654.3	-610.7	1,747.8	0.71	-0.57	-1.02
4,967.0	22.20	196.00	4,587.1	-1,687.0	-621.1	1,782.1	2.75	-2.41	-3.33
5,053.0	22.00	195.00	4,666.7	-1,718.2	-629.7	1,814.4	0.50	-0.23	-1.16
5,141.0	20.40	196.20	4,748.8	-1,748.9	-638.2	1,846.1	1.88	-1.82	1.36
5,231.0	18.00	197.80	4,833.8	-1,777.2	-646.9	1,875.7	2.73	-2.67	1.78
5,319.0	17.30	201.80	4,917.6	-1,802.3	-655.9	1,902.4	1.59	-0.80	4.55
5,407.0	16.60	200.70	5,001.8	-1,826.2	-665.2	1,928.0	0.87	-0.80	-1.25
5,496.0	14.90	201.60	5,087.5	-1,848.7	-673.9	1,952.2	1.93	-1.91	1.01
5,584.0	12.10	200.90	5,173.0	-1,867.8	-681.4	1,972.7	3.19	-3.18	-0.80
5,673.0	10.20	196.00	5,260.3	-1,884.1	-686.9	1,989.9	2.38	-2.13	-5.51
5,762.0	7.90	194.80	5,348.2	-1,897.6	-690.6	2,003.9	2.59	-2.58	-1.35
5,849.0	6.70	193.20	5,434.5	-1,908.4	-693.3	2,014.9	1.40	-1.38	-1.84
5,937.0	4.40	194.80	5,522.1	-1,916.6	-695.3	2,023.3	2.62	-2.61	1.82

<b>Company:</b>	Anadarko, Weld County CO	<b>Local Co-ordinate Reference:</b>	Site Strothauer 1-14 Pad Sec.14-T4N-R65W
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<b>Well:</b>	Strothauer 24-14	<b>North Reference:</b>	True
<b>Wellbore:</b>	Wellbore #1	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	Wellbore #1	<b>Database:</b>	Landmark

Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
6,026.0	2.80	197.60	5,610.9	-1,922.0	-696.8	2,028.9	1.81	-1.80	3.15
6,159.0	2.00	197.40	5,743.8	-1,927.3	-698.5	2,034.5	0.60	-0.60	-0.15
6,292.0	1.90	194.30	5,876.7	-1,931.7	-699.8	2,039.0	0.11	-0.08	-2.33
6,415.3	1.23	171.76	6,000.0	-1,934.9	-700.1	2,042.2	0.73	-0.54	-18.27
<b>TARGET BHL 2570'FNL, 1315'FEL</b>									
6,423.0	1.20	169.60	6,007.7	-1,935.1	-700.0	2,042.4	0.73	-0.41	-28.20
6,556.0	0.80	132.00	6,140.7	-1,937.1	-699.1	2,043.9	0.56	-0.30	-28.27
6,688.0	1.00	117.10	6,272.7	-1,938.2	-697.4	2,044.5	0.23	0.15	-11.29
6,822.0	1.00	112.30	6,406.6	-1,939.2	-695.3	2,044.7	0.06	0.00	-3.58
6,956.0	1.10	114.30	6,540.6	-1,940.2	-693.0	2,044.9	0.08	0.07	1.49
7,091.0	1.35	116.30	6,675.6	-1,941.4	-690.4	2,045.2	0.19	0.19	1.48
7,136.8	1.58	116.12	6,721.4	-1,941.9	-689.4	2,045.4	0.49	0.49	-0.38
<b>TARGET CIRCLE 2570'FNL &amp; 1315'FEL</b>									
7,223.0	2.00	115.90	6,807.5	-1,943.1	-686.9	2,045.7	0.49	0.49	-0.26
7,356.0	2.60	118.20	6,940.4	-1,945.6	-682.2	2,046.5	0.46	0.45	1.73
7,489.0	2.00	123.40	7,073.3	-1,948.3	-677.6	2,047.5	0.48	-0.45	3.91
7,620.0	1.50	123.80	7,204.2	-1,950.5	-674.3	2,048.5	0.38	-0.38	0.31
7,753.0	1.50	122.80	7,337.2	-1,952.4	-671.4	2,049.4	0.02	0.00	-0.75
7,885.0	1.50	125.70	7,469.2	-1,954.3	-668.5	2,050.3	0.06	0.00	2.20
8,010.0	1.30	126.80	7,594.1	-1,956.1	-666.0	2,051.2	0.16	-0.16	0.88
8,042.6	1.30	126.80	7,626.7	-1,956.6	-665.4	2,051.5	0.00	0.00	0.00
<b>HARD LINES 70'S of BHL</b>									
8,060.0	1.30	126.80	7,644.1	-1,956.8	-665.1	2,051.6	0.00	0.00	0.00

Checked By: \_\_\_\_\_ Approved By: \_\_\_\_\_ Date: \_\_\_\_\_