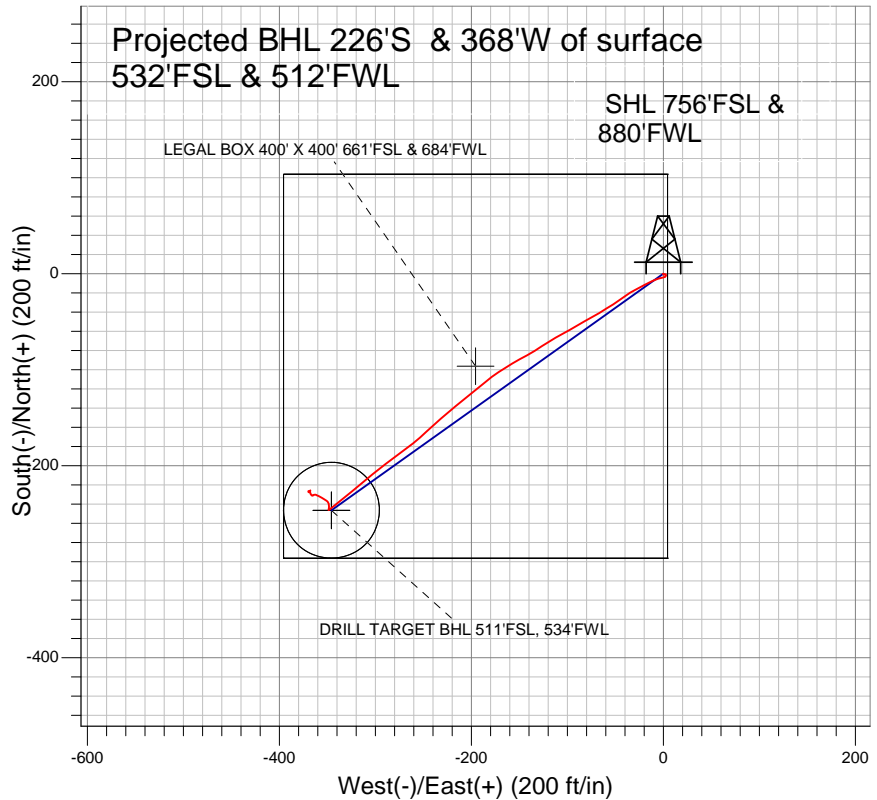
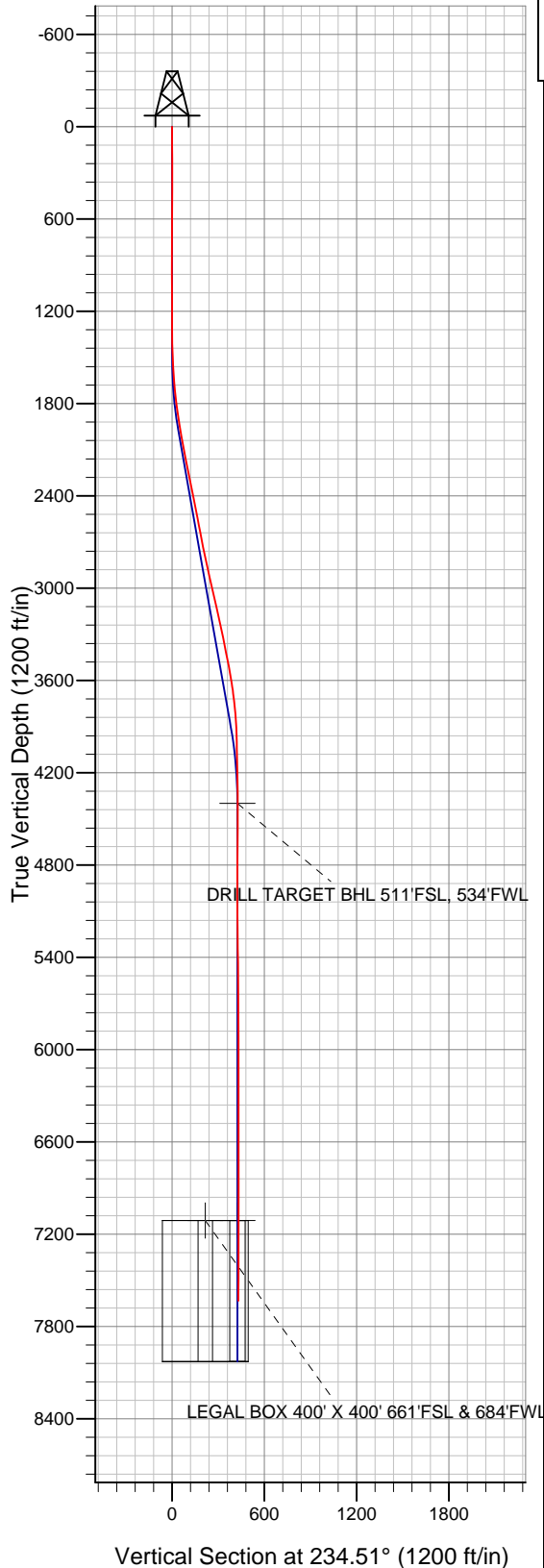


Well Name: **Riverbend 13-18**

Surface Location: Riverbend 13-18 Pad Sec.18-T1N-R66W
North American Datum 1983, US State Plane 1983 Colorado Northern Zone

Ground Elevation: 4919.0
+N/-S +E/-W Northing Easting Latitude Longitude Slot
0.0 0.0 1260291.35 3188540.86 40° 2' 45.323 N 04° 49' 35.576 W
Original Well EleWELL @ 4934.0ft (Original Well Elev)

Anadarko, Weld County CO



LEGEND

- △ Riverbend 13-18, Wellbore #1, Plan #3 (10-26-10) V0
- Wellbore #1

Final Survey Plot

Projected Final Survey -
7673'MD & 7634'TVD @ 431' VS
0.4 deg Inc 5.10 deg AZ

Project: SEC.18-T1N-R66W
Site: Riverbend 13-18 Pad Sec.18-T1N-R66W
Well: Riverbend 13-18
Plan: Wellbore #1



Anadarko, Weld County CO

SEC.18-T1N-R66W

Riverbend 13-18 Pad Sec.18-T1N-R66W

Riverbend 13-18

Wellbore #1

Design: Wellbore #1

Standard Survey Report

05 November, 2010



Survey		Wellbore Data							
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)
0.0	0.00	0.00	0.0	0.0	0.0	0.0	0.00	0.00	0.00
115.0	0.40	248.40	115.0	-0.1	-0.4	0.4	0.35	0.35	0.00
208.0	0.20	122.50	208.0	-0.4	-0.5	0.6	0.58	-0.22	-135.38
301.0	0.40	141.30	301.0	-0.7	-0.2	0.6	0.24	0.22	20.22
410.0	0.30	117.20	410.0	-1.1	0.3	0.4	0.16	-0.09	-22.11
500.0	0.35	72.70	500.0	-1.1	0.8	0.0	0.28	0.06	-49.44
590.0	0.26	65.30	590.0	-1.0	1.2	-0.4	0.11	-0.10	-8.22
678.0	0.30	93.10	678.0	-0.9	1.6	-0.8	0.16	0.05	31.59
767.0	0.20	51.60	767.0	-0.8	2.0	-1.1	0.23	-0.11	-46.63
857.0	0.30	105.20	857.0	-0.8	2.3	-1.4	0.27	0.11	59.56
962.0	0.80	170.10	962.0	-1.6	2.7	-1.3	0.69	0.48	61.81
1,040.0	0.20	220.50	1,040.0	-2.2	2.7	-0.9	0.88	-0.77	64.62
1,127.0	0.30	216.70	1,127.0	-2.5	2.5	-0.6	0.12	0.11	-4.37

Company:	Anadarko, Weld County CO	Local Co-ordinate Reference:	Well Riverbend 13-18
Project:	SEC.18-T1N-R66W	TVD Reference:	WELL @ 4934.0ft (Original Well Elev)
Site:	Riverbend 13-18 Pad Sec.18-T1N-R66W	MD Reference:	WELL @ 4934.0ft (Original Well Elev)
Well:	Riverbend 13-18	North Reference:	True
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Wellbore #1	Database:	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)	
1,218.0	0.40	216.10	1,218.0	-3.0	2.2	0.0	0.11	0.11	-0.66	
1,308.0	0.10	205.30	1,308.0	-3.3	1.9	0.3	0.34	-0.33	-12.00	
1,398.0	0.40	231.40	1,398.0	-3.6	1.7	0.7	0.35	0.33	29.00	
1,487.0	2.60	259.10	1,486.9	-4.1	-0.6	2.9	2.53	2.47	31.12	
1,578.0	3.60	253.80	1,577.8	-5.3	-5.3	7.4	1.14	1.10	-5.82	
1,667.0	4.80	243.50	1,666.6	-7.8	-11.3	13.7	1.59	1.35	-11.57	
1,758.0	6.30	243.10	1,757.1	-11.7	-19.2	22.4	1.65	1.65	-0.44	
1,847.0	8.00	242.20	1,845.4	-16.8	-29.0	33.4	1.91	1.91	-1.01	
1,934.0	8.90	234.80	1,931.5	-23.5	-39.9	46.1	1.62	1.03	-8.51	
2,023.0	10.60	236.30	2,019.2	-32.0	-52.3	61.2	1.93	1.91	1.69	
2,113.0	11.30	240.30	2,107.6	-41.0	-66.9	78.3	1.15	0.78	4.44	
2,204.0	11.20	239.10	2,196.8	-50.0	-82.2	95.9	0.28	-0.11	-1.32	
2,295.0	11.10	241.60	2,286.1	-58.7	-97.5	113.4	0.54	-0.11	2.75	
2,384.0	10.90	240.70	2,373.5	-66.9	-112.4	130.3	0.30	-0.22	-1.01	
2,472.0	11.10	235.60	2,459.9	-75.7	-126.6	147.0	1.13	0.23	-5.80	
2,562.0	12.00	241.90	2,548.0	-85.0	-142.0	165.0	1.72	1.00	7.00	
2,651.0	10.90	238.80	2,635.3	-93.7	-157.4	182.6	1.42	-1.24	-3.48	
2,740.0	11.10	236.90	2,722.6	-102.8	-171.8	199.5	0.47	0.22	-2.13	
2,829.0	12.00	229.90	2,809.8	-113.4	-186.0	217.3	1.87	1.01	-7.87	
2,919.0	12.50	231.80	2,897.8	-125.5	-200.8	236.3	0.71	0.56	2.11	
3,010.0	13.30	230.40	2,986.5	-138.2	-216.6	256.6	0.94	0.88	-1.54	
3,098.0	12.80	229.30	3,072.2	-151.0	-231.8	276.4	0.63	-0.57	-1.25	
3,189.0	12.60	226.10	3,161.0	-164.5	-246.6	296.3	0.80	-0.22	-3.52	
3,277.0	12.00	231.00	3,247.0	-176.9	-260.6	314.9	1.37	-0.68	5.57	
3,367.0	11.50	235.00	3,335.1	-187.9	-275.3	333.2	1.06	-0.56	4.44	
3,455.0	11.40	232.80	3,421.3	-198.2	-289.4	350.7	0.51	-0.11	-2.50	
3,544.0	10.80	230.40	3,508.7	-208.9	-302.8	367.8	0.85	-0.67	-2.70	
3,634.0	10.00	229.70	3,597.2	-219.3	-315.3	384.0	0.90	-0.89	-0.78	
3,725.0	7.00	230.60	3,687.2	-227.9	-325.6	397.4	3.30	-3.30	0.99	
3,815.0	5.80	233.00	3,776.6	-234.1	-333.4	407.4	1.37	-1.33	2.67	
3,906.0	3.90	228.30	3,867.3	-239.0	-339.4	415.1	2.13	-2.09	-5.16	
3,996.0	1.10	228.20	3,957.2	-241.6	-342.4	419.0	3.11	-3.11	-0.11	
4,085.0	1.00	228.80	4,046.2	-242.7	-343.6	420.6	0.11	-0.11	0.67	
4,175.0	1.10	233.70	4,136.2	-243.7	-344.9	422.3	0.15	0.11	5.44	
4,266.0	1.20	231.80	4,227.1	-244.8	-346.3	424.1	0.12	0.11	-2.09	
4,357.0	0.40	232.90	4,318.1	-245.6	-347.3	425.4	0.88	-0.88	1.21	
4,438.8	1.06	240.23	4,400.0	-246.1	-348.2	426.4	0.81	0.80	8.96	
DRILL TARGET BHL 511'FSL, 534'FWL										
4,444.0	1.10	240.40	4,405.1	-246.2	-348.3	426.5	0.81	0.81	3.25	
4,533.0	0.40	16.30	4,494.1	-246.3	-348.9	427.1	1.59	-0.79	152.70	
4,622.0	0.45	17.90	4,583.1	-245.7	-348.7	426.6	0.06	0.06	1.80	
4,711.0	0.80	12.70	4,672.1	-244.7	-348.5	425.8	0.40	0.39	-5.84	
4,844.0	1.45	358.40	4,805.1	-242.1	-348.3	424.2	0.53	0.49	-10.75	
4,937.0	1.48	347.30	4,898.1	-239.8	-348.6	423.1	0.31	0.03	-11.94	
5,071.0	1.80	304.40	5,032.0	-236.9	-350.8	423.1	0.92	0.24	-32.01	
5,162.0	1.89	303.00	5,123.0	-235.3	-353.2	424.2	0.11	0.10	-1.54	
5,249.0	1.85	300.30	5,209.9	-233.8	-355.6	425.3	0.11	-0.05	-3.10	
5,384.0	1.45	296.30	5,344.9	-231.9	-359.0	427.0	0.31	-0.30	-2.96	
5,473.0	0.97	296.20	5,433.8	-231.1	-360.7	427.9	0.54	-0.54	-0.11	
5,562.0	0.75	295.40	5,522.8	-230.5	-361.9	428.5	0.25	-0.25	-0.90	
5,652.0	0.65	255.90	5,612.8	-230.4	-362.9	429.3	0.54	-0.11	-43.89	
5,741.0	0.72	279.00	5,701.8	-230.4	-364.0	430.1	0.32	0.08	25.96	
5,830.0	0.60	197.00	5,790.8	-230.8	-364.7	430.9	0.98	-0.13	-92.14	
5,921.0	0.45	255.00	5,881.8	-231.3	-365.2	431.6	0.58	-0.16	63.74	

Company:	Anadarko, Weld County CO	Local Co-ordinate Reference:	Well Riverbend 13-18
Project:	SEC.18-T1N-R66W	TVD Reference:	WELL @ 4934.0ft (Original Well Elev)
Site:	Riverbend 13-18 Pad Sec.18-T1N-R66W	MD Reference:	WELL @ 4934.0ft (Original Well Elev)
Well:	Riverbend 13-18	North Reference:	True
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Wellbore #1	Database:	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)	
6,010.0	0.40	298.00	5,970.8	-231.3	-365.8	432.1	0.35	-0.06	48.31	
6,100.0	0.30	298.60	6,060.8	-231.0	-366.2	432.3	0.11	-0.11	0.67	
6,188.0	0.40	312.70	6,148.8	-230.7	-366.7	432.5	0.15	0.11	16.02	
6,277.0	0.40	317.60	6,237.8	-230.3	-367.1	432.6	0.04	0.00	5.51	
6,367.0	0.50	339.50	6,327.8	-229.7	-367.5	432.5	0.22	0.11	24.33	
6,456.0	0.06	75.40	6,416.8	-229.3	-367.6	432.4	0.57	-0.49	107.75	
6,544.0	0.16	338.20	6,504.8	-229.2	-367.6	432.3	0.20	0.11	-110.45	
6,633.0	0.40	323.40	6,593.8	-228.8	-367.8	432.3	0.28	0.27	-16.63	
6,723.0	0.90	326.30	6,683.8	-228.0	-368.4	432.3	0.56	0.56	3.22	
6,813.0	0.50	335.00	6,773.8	-227.0	-368.9	432.2	0.46	-0.44	9.67	
6,903.0	0.30	297.50	6,863.8	-226.5	-369.3	432.2	0.35	-0.22	-41.67	
6,992.0	0.20	231.50	6,952.8	-226.5	-369.6	432.5	0.32	-0.11	-74.16	
7,082.0	0.30	205.90	7,042.8	-226.8	-369.9	432.8	0.16	0.11	-28.44	
7,150.7	0.07	205.90	7,111.5	-227.0	-370.0	433.0	0.33	-0.33	0.00	
LEGAL BOX 400' X 400' 661'FSL & 684'FWL										
7,151.2	0.07	205.90	7,112.0	-227.0	-370.0	433.0	0.33	-0.33	0.00	
TARGET CIRCLE 511'FSL, 534'FWL										
7,172.0	0.00	195.50	7,132.8	-227.1	-370.0	433.0	0.33	-0.33	0.00	
7,263.0	0.50	177.50	7,223.8	-227.5	-369.9	433.3	0.55	0.55	0.00	
7,353.0	0.70	101.60	7,313.8	-228.0	-369.4	433.1	0.84	0.22	-84.33	
7,444.0	0.60	44.50	7,404.8	-227.7	-368.5	432.3	0.69	-0.11	-62.75	
7,533.0	0.60	19.60	7,493.8	-227.0	-368.0	431.4	0.29	0.00	-27.98	
7,623.0	0.40	5.10	7,583.8	-226.2	-367.8	430.8	0.26	-0.22	-16.11	
7,673.0	0.40	5.10	7,633.8	-225.9	-367.8	430.6	0.00	0.00	0.00	

Checked By: _____	Approved By: _____	Date: _____
-------------------	--------------------	-------------