

Well Name: **Western 35-10**

Surface Location: Western 19-10 Pad Sec.10-T4N-R66W  
North American Datum 1983 , US State Plane 1983 , Colorado Northern Zone

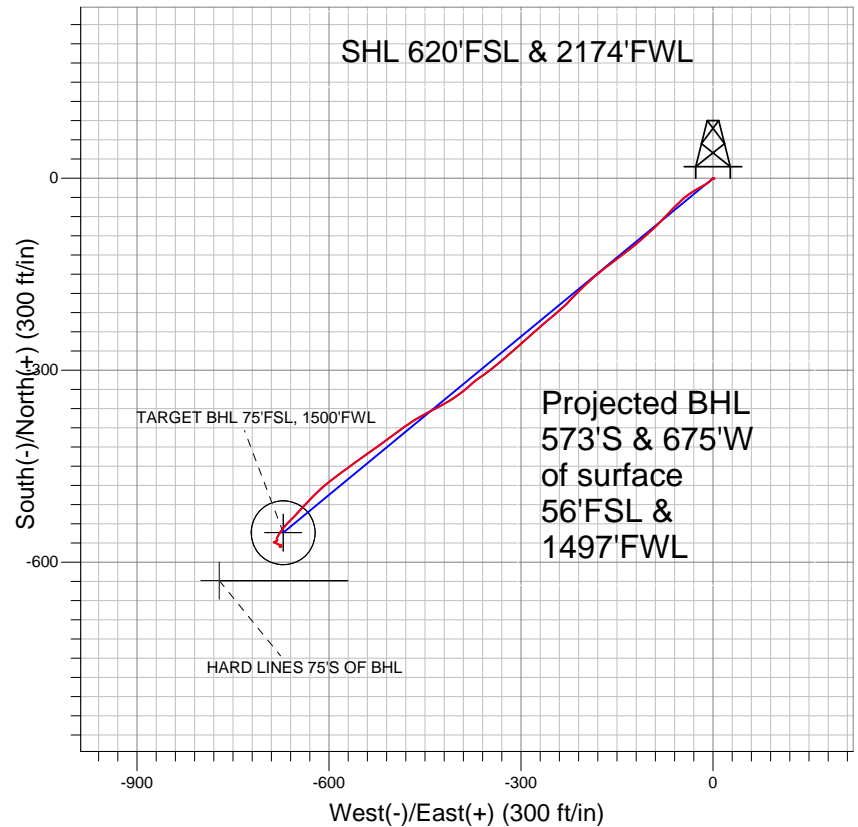
Ground Elevation: 4723.0

+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
0.0	0.0	1360523.06	3204811.70	40° 19' 14.549 N	104° 45' 55.685 W

Original Well Elev WELL @ 4737.0ft (Original Well Elev)

Slot

## Anadarko, Weld County CO

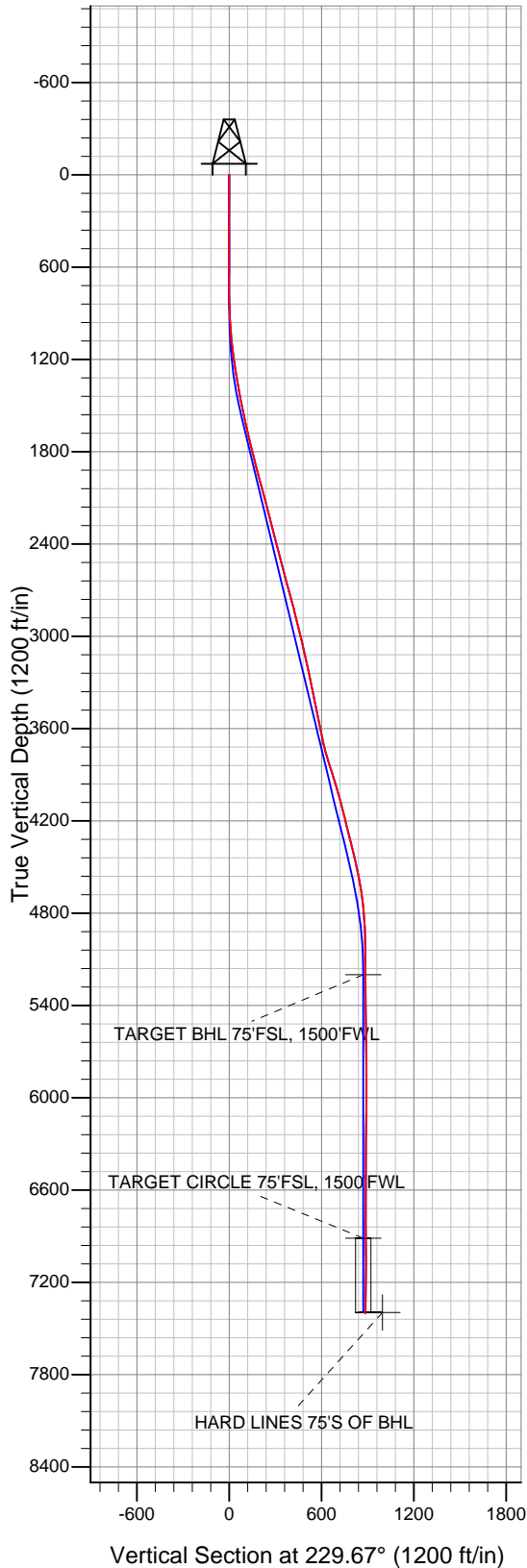


### LEGEND

- Western 35-10, Wellbore #1, Plan #1 (10-1-10) V0
- Wellbore #1
- Survey #1

## Final Survey Plot

Projected Final Survey -  
7505'MD & 7401'TVD @ 885' VS  
0.4 deg Inc 54.7 deg AZ



Project: SEC.10-T4N-R66W  
Site: Western 19-10 Pad Sec.10-T4N-R66W  
Well: Western 35-10  
Plan: Wellbore #1



## **Directional**

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

**SEC.10-T4N-R66W**

**Western 19-10 Pad Sec.10-T4N-R66W**

**Western 35-10**

**Wellbore #1**

**Survey: Survey #1**

### **Standard Survey Report**

**21 October, 2010**

<b>Company:</b>	Anadarko, Weld County CO	<b>Local Co-ordinate Reference:</b>	Well Western 35-10
<b>Project:</b>	SEC.10-T4N-R66W	<b>TVD Reference:</b>	WELL @ 4737.0ft (Original Well Elev)
<b>Site:</b>	Western 19-10 Pad Sec.10-T4N-R66W	<b>MD Reference:</b>	WELL @ 4737.0ft (Original Well Elev)
<b>Well:</b>	Western 35-10	<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.10-T4N-R66W, 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>	Western 19-10 Pad Sec.10-T4N-R66W		
<b>Site Position:</b>		<b>Northing:</b>	1,360,523.58 ft
<b>From:</b>	Lat/Long	<b>Easting:</b>	3,204,827.87 ft
<b>Position Uncertainty:</b>	0.0 ft	<b>Slot Radius:</b>	"
		<b>Latitude:</b>	40° 19' 14.552 N
		<b>Longitude:</b>	104° 45' 55.476 W
		<b>Grid Convergence:</b>	0.47 °

<b>Well</b>	Western 35-10		
<b>Well Position</b>	<b>+N/-S</b>	0.0 ft	<b>Northing:</b> 1,360,523.06 ft
	<b>+E/-W</b>	0.0 ft	<b>Easting:</b> 3,204,811.70 ft
<b>Position Uncertainty</b>	0.0 ft	<b>Wellhead Elevation:</b>	ft
		<b>Latitude:</b>	40° 19' 14.549 N
		<b>Longitude:</b>	104° 45' 55.685 W
		<b>Ground Level:</b>	4,723.0 ft

<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	10/8/2010	8.95	67.01	53,163

<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	0.0	0.0	229.67	

<b>Survey Program</b>	<b>Date</b>	10/21/2010			
<b>From (ft)</b>	<b>To (ft)</b>	<b>Survey (Wellbore)</b>	<b>Tool Name</b>	<b>Description</b>	
127.0	7,505.0	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	0.0	0.0	0.0	0.00	0.00	0.00	
127.0	0.50	123.80	127.0	-0.3	0.5	-0.2	0.39	0.39	0.00	
371.0	0.40	75.20	371.0	-0.7	2.2	-1.2	0.16	-0.04	-19.92	
510.0	0.60	247.10	510.0	-0.8	2.0	-1.0	0.72	0.14	123.67	
614.0	0.40	346.20	614.0	-0.7	1.4	-0.6	0.74	-0.19	95.29	
710.0	0.40	320.90	710.0	-0.1	1.1	-0.8	0.18	0.00	-26.35	
805.0	0.80	227.50	805.0	-0.3	0.4	-0.1	0.96	0.42	-98.32	
900.0	2.20	227.00	899.9	-2.0	-1.4	2.4	1.47	1.47	-0.53	
995.0	4.10	232.40	994.8	-5.3	-5.5	7.6	2.02	2.00	5.68	
1,090.0	6.20	237.40	1,089.4	-10.2	-12.5	16.1	2.26	2.21	5.26	
1,185.0	7.80	242.60	1,183.7	-15.9	-22.5	27.4	1.81	1.68	5.47	
1,281.0	9.40	236.90	1,278.6	-23.2	-34.9	41.6	1.89	1.67	-5.94	
1,376.0	10.50	227.80	1,372.2	-33.2	-47.8	57.9	2.02	1.16	-9.58	

<b>Company:</b>	Anadarko, Weld County CO	<b>Local Co-ordinate Reference:</b>	Well Western 35-10
<b>Project:</b>	SEC.10-T4N-R66W	<b>TVD Reference:</b>	WELL @ 4737.0ft (Original Well Elev)
<b>Site:</b>	Western 19-10 Pad Sec.10-T4N-R66W	<b>MD Reference:</b>	WELL @ 4737.0ft (Original Well Elev)
<b>Well:</b>	Western 35-10	<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)
1,471.0	10.40	224.50	1,465.6	-45.1	-60.2	75.1	0.64	-0.11	-3.47
1,566.0	12.10	223.10	1,558.8	-58.5	-73.0	93.5	1.81	1.79	-1.47
1,661.0	12.80	225.60	1,651.6	-73.2	-87.3	113.9	0.93	0.74	2.63
1,756.0	14.10	228.10	1,744.0	-88.3	-103.5	136.0	1.50	1.37	2.63
1,852.0	14.50	229.70	1,837.0	-103.8	-121.3	159.7	0.59	0.42	1.67
1,915.0	14.00	232.70	1,898.0	-113.6	-133.4	175.2	1.42	-0.79	4.76
2,042.0	15.30	233.00	2,020.9	-133.0	-159.0	207.3	1.03	1.02	0.24
2,137.0	15.50	230.50	2,112.5	-148.6	-178.8	232.5	0.73	0.21	-2.63
2,232.0	14.20	227.60	2,204.3	-164.5	-197.2	256.8	1.58	-1.37	-3.05
2,328.0	14.00	223.00	2,297.4	-180.9	-213.8	280.1	1.19	-0.21	-4.79
2,423.0	14.10	225.70	2,389.6	-197.4	-230.0	303.1	0.70	0.11	2.84
2,518.0	15.00	229.30	2,481.5	-213.5	-247.6	326.9	1.34	0.95	3.79
2,613.0	15.30	229.80	2,573.2	-229.6	-266.5	351.7	0.34	0.32	0.53
2,708.0	15.40	229.60	2,664.9	-245.9	-285.6	376.9	0.12	0.11	-0.21
2,803.0	15.70	228.10	2,756.4	-262.7	-304.8	402.4	0.53	0.32	-1.58
2,898.0	13.20	228.00	2,848.4	-278.5	-322.4	426.0	2.63	-2.63	-0.11
2,994.0	14.10	230.60	2,941.7	-293.3	-339.6	448.7	1.13	0.94	2.71
3,089.0	13.40	236.50	3,033.9	-306.7	-357.7	471.2	1.65	-0.74	6.21
3,184.0	13.00	228.90	3,126.4	-319.8	-375.0	492.8	1.87	-0.42	-8.00
3,279.0	11.50	231.40	3,219.3	-332.7	-390.4	513.0	1.67	-1.58	2.63
3,374.0	12.10	236.60	3,312.3	-344.1	-406.1	532.3	1.28	0.63	5.47
3,469.0	11.70	241.10	3,405.2	-354.2	-422.9	551.6	1.06	-0.42	4.74
3,564.0	12.30	243.20	3,498.1	-363.5	-440.4	570.9	0.78	0.63	2.21
3,659.0	11.90	239.90	3,591.0	-372.9	-457.9	590.4	0.84	-0.42	-3.47
3,755.0	11.60	235.50	3,685.0	-383.4	-474.4	609.7	0.98	-0.31	-4.58
3,850.0	16.60	234.50	3,777.1	-396.7	-493.3	632.8	5.27	5.26	-1.05
3,945.0	18.20	233.60	3,867.8	-413.3	-516.3	661.1	1.71	1.68	-0.95
4,040.0	17.10	234.10	3,958.3	-430.3	-539.6	689.8	1.17	-1.16	0.53
4,135.0	15.10	234.70	4,049.6	-445.7	-561.0	716.1	2.11	-2.11	0.63
4,230.0	13.60	233.30	4,141.6	-459.5	-580.0	739.6	1.62	-1.58	-1.47
4,325.0	14.90	232.60	4,233.7	-473.6	-598.7	762.9	1.38	1.37	-0.74
4,421.0	14.10	226.10	4,326.6	-489.2	-616.9	786.9	1.89	-0.83	-6.77
4,516.0	13.30	223.50	4,418.9	-505.2	-632.8	809.3	1.06	-0.84	-2.74
4,611.0	12.10	222.20	4,511.6	-520.5	-647.0	830.1	1.30	-1.26	-1.37
4,706.0	10.40	224.90	4,604.8	-533.9	-659.7	848.5	1.87	-1.79	2.84
4,801.0	7.70	220.20	4,698.6	-544.8	-669.9	863.3	2.94	-2.84	-4.95
4,897.0	4.90	213.80	4,794.0	-553.2	-676.3	873.6	3.00	-2.92	-6.67
4,991.0	3.60	206.40	4,887.7	-559.1	-679.9	880.2	1.50	-1.38	-7.87
5,086.0	1.40	203.00	4,982.6	-562.9	-681.7	883.9	2.32	-2.32	-3.58
5,181.0	0.50	99.00	5,077.6	-564.0	-681.7	884.7	1.68	-0.95	-109.47
5,277.0	0.50	125.10	5,173.6	-564.3	-680.9	884.3	0.24	0.00	27.19
5,372.0	0.50	200.60	5,268.6	-565.0	-680.8	884.6	0.64	0.00	79.47
5,467.0	0.50	203.90	5,363.6	-565.7	-681.1	885.3	0.03	0.00	3.47
5,562.0	0.80	230.50	5,458.6	-566.5	-681.7	886.4	0.44	0.32	28.00
5,657.0	1.00	238.70	5,553.6	-567.4	-683.0	887.8	0.25	0.21	8.63
5,752.0	1.40	253.40	5,648.6	-568.1	-684.8	889.7	0.53	0.42	15.47
5,847.0	0.60	259.70	5,743.6	-568.6	-686.4	891.2	0.85	-0.84	6.63
5,943.0	0.40	122.40	5,839.6	-568.8	-686.6	891.6	0.97	-0.21	-143.02
6,038.0	0.70	122.80	5,934.6	-569.3	-685.8	891.3	0.32	0.32	0.42
6,133.0	0.80	109.60	6,029.6	-569.9	-684.7	890.8	0.21	0.11	-13.89
6,228.0	1.10	109.40	6,124.5	-570.4	-683.2	890.0	0.32	0.32	-0.21
6,323.0	1.00	124.10	6,219.5	-571.1	-681.7	889.3	0.30	-0.11	15.47
6,418.0	1.30	114.00	6,314.5	-572.1	-680.0	888.6	0.38	0.32	-10.63
6,514.0	1.10	109.20	6,410.5	-572.8	-678.1	887.7	0.23	-0.21	-5.00

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<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)	
6,609.0	1.00	109.70	6,505.5	-573.4	-676.5	886.8	0.11	-0.11	0.53	
6,704.0	0.70	123.10	6,600.5	-574.0	-675.2	886.2	0.38	-0.32	14.11	
6,799.0	0.60	162.90	6,695.5	-574.8	-674.6	886.3	0.48	-0.11	41.89	
6,894.0	0.70	226.00	6,790.5	-575.6	-674.9	887.0	0.72	0.11	66.42	
6,989.0	0.70	242.30	6,885.4	-576.3	-675.8	888.2	0.21	0.00	17.16	
7,085.0	0.50	277.20	6,981.4	-576.5	-676.7	889.0	0.42	-0.21	36.35	
7,180.0	0.70	354.50	7,076.4	-575.9	-677.2	889.0	0.81	0.21	81.37	
7,275.0	0.90	41.80	7,171.4	-574.8	-676.8	887.9	0.70	0.21	49.79	
7,370.0	0.80	41.80	7,266.4	-573.7	-675.8	886.5	0.11	-0.11	0.00	
7,451.0	0.40	54.70	7,347.4	-573.1	-675.2	885.7	0.52	-0.49	15.93	
7,505.0	0.40	54.70	7,401.4	-572.9	-674.9	885.3	0.00	0.00	0.00	

Checked By: _____	Approved By: _____	Date: _____
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