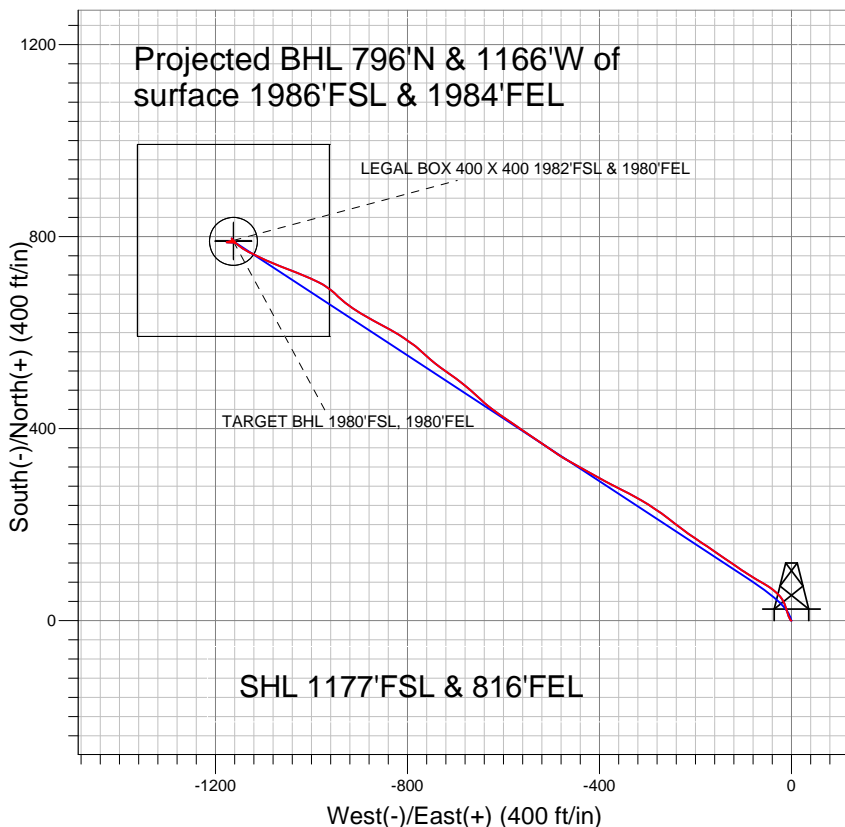


Anadarko, Weld County CO



LEGEND

- Denver 10-18, Wellbore #1, Plan #1 (12-14-10) V0
- Wellbore #1
- Survey #1

Final Survey Plot

Projected Final Survey -
8275'MD & 8068'TVD @ 1412' VS
1.9 deg Inc 320.0 deg AZ

Project: SEC.18-T1N-R66W
Site: Denver 20-18 Pad Sec.18-T1N-R66W
Well: Denver 10-18
Plan: Wellbore #1



Directional

Anadarko, Weld County CO

SEC.18-T1N-R66W

Denver 20-18 Pad Sec.18-T1N-R66W

Denver 10-18

Wellbore #1

Survey: Survey #1

Standard Survey Report

07 February, 2011

Company:	Anadarko, Weld County CO	Local Co-ordinate Reference:	Well Denver 10-18
Project:	SEC.18-T1N-R66W	TVD Reference:	WELL @ 4950.0ft (Original Well Elev)
Site:	Denver 20-18 Pad Sec.18-T1N-R66W	MD Reference:	WELL @ 4950.0ft (Original Well Elev)
Well:	Denver 10-18	North Reference:	True
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Wellbore #1	Database:	Landmark

Project	SEC.18-T1N-R66W, Weld County, Colorado		
Map System:	US State Plane 1983	System Datum:	Mean Sea Level
Geo Datum:	North American Datum 1983		Using Well Reference Point
Map Zone:	Colorado Northern Zone		Using geodetic scale factor

Site	Denver 20-18 Pad Sec.18-T1N-R66W		
Site Position:		Northing:	1,260,775.29 ft
From:	Lat/Long	Easting:	3,192,217.36 ft
Position Uncertainty:	0.0 ft	Slot Radius:	"
		Latitude:	40° 2' 49.826 N
		Longitude:	104° 48' 48.254 W
		Grid Convergence:	0.44 °

Well	Denver 10-18		
Well Position	+N/-S	0.0 ft	Northing: 1,260,775.27 ft
	+E/-W	0.0 ft	Easting: 3,192,217.36 ft
Position Uncertainty	0.0 ft	Wellhead Elevation:	ft
		Latitude:	40° 2' 49.826 N
		Longitude:	104° 48' 48.254 W
		Ground Level:	4,935.0 ft

Wellbore	Wellbore #1				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	1/26/2011	8.91	66.77	52,980

Design	Wellbore #1				
Audit Notes:					
Version:	1.0	Phase:	ACTUAL	Tie On Depth:	0.0
Vertical Section:	Depth From (TVD) (ft)	+N/-S (ft)	+E/-W (ft)	Direction (°)	
	0.0	0.0	0.0	304.32	

Survey Program	Date	2/7/2011			
From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description	
144.0	8,275.0	Survey #1 (Wellbore #1)	MWD	MWD - Standard	

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)	
0.0	0.00	0.00	0.0	0.0	0.0	0.0	0.00	0.00	0.00	
144.0	0.30	259.80	144.0	-0.1	-0.4	0.3	0.21	0.21	0.00	
233.0	1.10	306.60	233.0	0.4	-1.3	1.3	1.03	0.90	52.58	
323.0	2.80	327.10	322.9	2.8	-3.2	4.2	2.01	1.89	22.78	
415.0	5.00	340.90	414.7	8.4	-5.7	9.5	2.58	2.39	15.00	
506.0	7.10	342.90	505.2	17.6	-8.7	17.1	2.32	2.31	2.20	
598.0	9.40	341.90	596.3	30.1	-12.7	27.5	2.50	2.50	-1.09	
690.0	10.20	327.20	686.9	44.1	-19.4	40.9	2.85	0.87	-15.98	
785.0	11.40	313.10	780.3	57.6	-30.8	57.9	3.04	1.26	-14.84	
880.0	12.00	303.90	873.3	69.5	-45.9	77.1	2.06	0.63	-9.68	
950.0	13.20	299.20	941.6	77.5	-58.9	92.3	2.25	1.71	-6.71	
1,020.0	13.70	300.90	1,009.7	85.7	-73.0	108.6	0.91	0.71	2.43	
1,115.0	14.20	302.50	1,101.9	97.7	-92.5	131.5	0.66	0.53	1.68	

Company:	Anadarko, Weld County CO	Local Co-ordinate Reference:	Well Denver 10-18
Project:	SEC.18-T1N-R66W	TVD Reference:	WELL @ 4950.0ft (Original Well Elev)
Site:	Denver 20-18 Pad Sec.18-T1N-R66W	MD Reference:	WELL @ 4950.0ft (Original Well Elev)
Well:	Denver 10-18	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)
1,210.0	17.10	305.60	1,193.4	112.1	-113.7	157.1	3.18	3.05	3.26
1,305.0	18.10	303.20	1,283.9	128.3	-137.4	185.8	1.30	1.05	-2.53
1,401.0	18.20	305.40	1,375.1	145.2	-162.1	215.7	0.72	0.10	2.29
1,496.0	19.60	302.70	1,465.0	162.4	-187.6	246.5	1.74	1.47	-2.84
1,591.0	21.00	305.60	1,554.1	180.9	-214.8	279.4	1.81	1.47	3.05
1,686.0	22.30	308.10	1,642.4	201.9	-242.8	314.4	1.68	1.37	2.63
1,781.0	20.70	306.00	1,730.8	222.9	-270.6	349.2	1.87	-1.68	-2.21
1,876.0	19.90	302.30	1,819.9	241.4	-297.9	382.1	1.59	-0.84	-3.89
1,972.0	18.90	298.40	1,910.4	257.5	-325.4	413.9	1.70	-1.04	-4.06
2,069.0	17.50	297.10	2,002.6	271.7	-352.2	444.0	1.50	-1.44	-1.34
2,164.0	16.80	296.50	2,093.4	284.3	-377.2	471.8	0.76	-0.74	-0.63
2,259.0	17.10	300.00	2,184.2	297.4	-401.5	499.3	1.12	0.32	3.68
2,354.0	17.20	298.00	2,275.0	311.0	-426.0	527.2	0.63	0.11	-2.11
2,450.0	16.90	300.00	2,366.8	324.6	-450.7	555.2	0.69	-0.31	2.08
2,545.0	16.50	300.80	2,457.8	338.4	-474.2	582.5	0.49	-0.42	0.84
2,640.0	16.70	304.90	2,548.8	353.1	-497.0	609.6	1.25	0.21	4.32
2,735.0	15.90	303.30	2,640.0	368.1	-519.1	636.2	0.97	-0.84	-1.68
2,831.0	15.60	305.60	2,732.4	382.8	-540.5	662.3	0.72	-0.31	2.40
2,926.0	15.30	303.40	2,824.0	397.2	-561.4	687.6	0.69	-0.32	-2.32
3,021.0	14.90	305.00	2,915.7	411.1	-581.9	712.3	0.61	-0.42	1.68
3,116.0	15.70	304.20	3,007.3	425.3	-602.5	737.4	0.87	0.84	-0.84
3,211.0	17.70	307.00	3,098.3	441.2	-624.7	764.7	2.27	2.11	2.95
3,306.0	18.20	313.30	3,188.7	460.1	-647.0	793.8	2.11	0.53	6.63
3,402.0	16.80	311.60	3,280.3	479.6	-668.3	822.3	1.55	-1.46	-1.77
3,496.0	15.80	307.30	3,370.5	496.4	-688.6	848.6	1.67	-1.06	-4.57
3,591.0	17.00	306.10	3,461.6	512.4	-710.1	875.4	1.31	1.26	-1.26
3,687.0	15.60	304.80	3,553.8	528.0	-732.1	902.3	1.51	-1.46	-1.35
3,782.0	14.90	311.60	3,645.4	543.4	-751.7	927.2	2.02	-0.74	7.16
3,877.0	15.90	312.30	3,737.0	560.3	-770.5	952.2	1.07	1.05	0.74
3,972.0	19.60	306.00	3,827.5	578.4	-793.0	981.0	4.38	3.89	-6.63
4,067.0	18.40	303.00	3,917.3	595.9	-818.5	1,012.0	1.63	-1.26	-3.16
4,163.0	18.00	296.40	4,008.5	610.8	-844.4	1,041.8	2.19	-0.42	-6.88
4,258.0	18.80	299.50	4,098.7	624.9	-870.9	1,071.6	1.33	0.84	3.26
4,353.0	19.00	299.40	4,188.5	640.0	-897.7	1,102.3	0.21	0.21	-0.11
4,448.0	18.50	308.50	4,278.5	657.0	-923.0	1,132.7	3.12	-0.53	9.58
4,543.0	19.20	313.00	4,368.4	677.0	-946.2	1,163.2	1.70	0.74	4.74
4,638.0	17.90	304.00	4,458.5	695.8	-969.7	1,193.2	3.31	-1.37	-9.47
4,734.0	16.40	293.30	4,550.3	709.4	-994.4	1,221.3	3.63	-1.56	-11.15
4,829.0	17.80	291.40	4,641.1	720.0	-1,020.3	1,248.6	1.59	1.47	-2.00
4,923.0	17.20	292.50	4,730.7	730.6	-1,046.5	1,276.2	0.73	-0.64	1.17
5,018.0	16.00	291.50	4,821.7	740.8	-1,071.6	1,302.7	1.30	-1.26	-1.05
5,113.0	14.70	295.40	4,913.4	750.7	-1,094.7	1,327.4	1.75	-1.37	4.11
5,209.0	12.00	294.90	5,006.8	760.2	-1,114.8	1,349.3	2.82	-2.81	-0.52
5,304.0	9.90	297.20	5,100.0	768.1	-1,131.0	1,367.1	2.26	-2.21	2.42
5,399.0	7.80	303.50	5,193.9	775.4	-1,143.6	1,381.7	2.43	-2.21	6.63
5,494.0	6.20	312.50	5,288.2	782.4	-1,152.8	1,393.2	2.04	-1.68	9.47
5,589.0	4.60	303.20	5,382.8	787.9	-1,159.8	1,402.1	1.91	-1.68	-9.79
5,684.0	1.90	295.70	5,477.6	790.7	-1,164.4	1,407.5	2.87	-2.84	-7.89
5,779.0	0.70	255.60	5,572.6	791.2	-1,166.4	1,409.4	1.51	-1.26	-42.21
5,875.0	1.60	258.00	5,668.5	790.8	-1,168.2	1,410.7	0.94	0.94	2.50
5,970.0	0.90	254.10	5,763.5	790.3	-1,170.3	1,412.1	0.74	-0.74	-4.11
6,066.4	0.93	246.28	5,799.9	790.1	-1,170.8	1,412.5	0.35	0.07	-21.50
TARGET BHL 1980°FSL, 1980°FEL									
6,065.0	1.00	234.90	5,858.5	789.7	-1,171.6	1,412.9	0.35	0.13	-19.41

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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)
6,160.0	0.70	248.40	5,953.5	789.0	-1,172.9	1,413.5	0.38	-0.32	14.21
6,255.0	0.30	246.20	6,048.5	788.7	-1,173.6	1,414.0	0.42	-0.42	-2.32
6,351.0	0.20	133.10	6,144.5	788.4	-1,173.7	1,413.9	0.44	-0.10	-117.81
6,446.0	0.40	294.00	6,239.5	788.5	-1,173.9	1,414.1	0.62	0.21	169.37
6,541.0	0.40	270.80	6,334.5	788.6	-1,174.6	1,414.7	0.17	0.00	-24.42
6,636.0	0.60	260.10	6,429.5	788.5	-1,175.4	1,415.3	0.23	0.21	-11.26
6,731.0	0.50	235.20	6,524.5	788.2	-1,176.2	1,415.8	0.27	-0.11	-26.21
6,826.0	0.20	203.70	6,619.5	787.8	-1,176.6	1,415.9	0.36	-0.32	-33.16
6,921.0	0.30	82.80	6,714.5	787.7	-1,176.4	1,415.7	0.46	0.11	-127.26
7,017.0	0.70	78.80	6,810.5	787.8	-1,175.6	1,415.1	0.42	0.42	-4.17
7,112.0	2.20	91.30	6,905.4	787.9	-1,173.2	1,413.2	1.60	1.58	13.16
7,207.0	2.50	96.90	7,000.4	787.6	-1,169.3	1,409.8	0.40	0.32	5.89
7,302.0	1.70	91.50	7,095.3	787.3	-1,165.9	1,406.8	0.87	-0.84	-5.68
7,321.8	1.55	91.83	7,115.1	787.3	-1,165.3	1,406.3	0.74	-0.74	1.69
LEGAL BOX 400 X 400 1982°FSL & 1980°FEL - TARGET CIRCLE 1980°FSL & 1980°FEL									
7,397.0	1.00	94.00	7,190.3	787.2	-1,163.6	1,404.9	0.74	-0.74	2.88
7,492.0	0.50	87.40	7,285.3	787.2	-1,162.4	1,403.9	0.53	-0.53	-6.95
7,588.0	0.40	103.30	7,381.3	787.1	-1,161.7	1,403.2	0.17	-0.10	16.56
7,683.0	0.50	91.60	7,476.3	787.1	-1,160.9	1,402.6	0.14	0.11	-12.32
7,778.0	0.50	85.20	7,571.3	787.1	-1,160.1	1,401.9	0.06	0.00	-6.74
7,873.0	0.60	79.20	7,666.3	787.2	-1,159.2	1,401.2	0.12	0.11	-6.32
7,969.0	1.90	320.00	7,762.2	788.5	-1,159.7	1,402.4	2.35	1.35	-124.17
8,275.0	1.90	320.00	8,068.1	796.3	-1,166.2	1,412.2	0.00	0.00	0.00

Checked By: _____ Approved By: _____ Date: _____