

Well Name: **Denver 25-18**

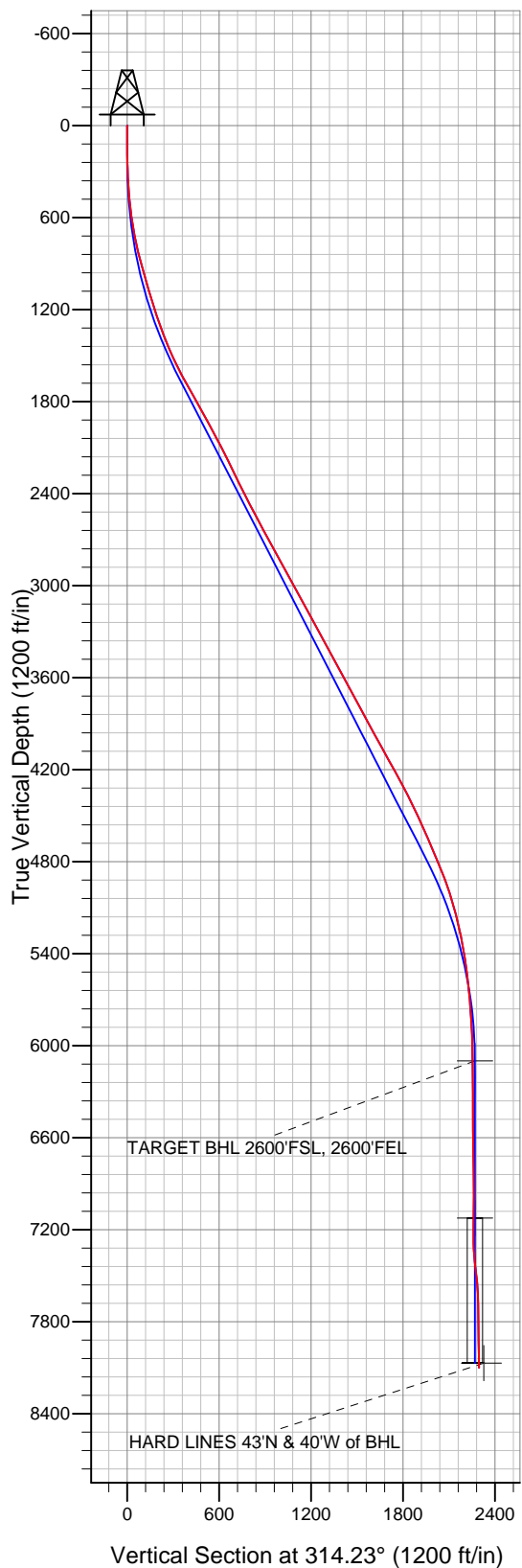
Surface Location: Denver 20-18 Pad Sec.18-T1N-R66W
North American Datum 1983 US State Plane 1983 Colorado Northern Zone

Ground Elevation: 4935.0

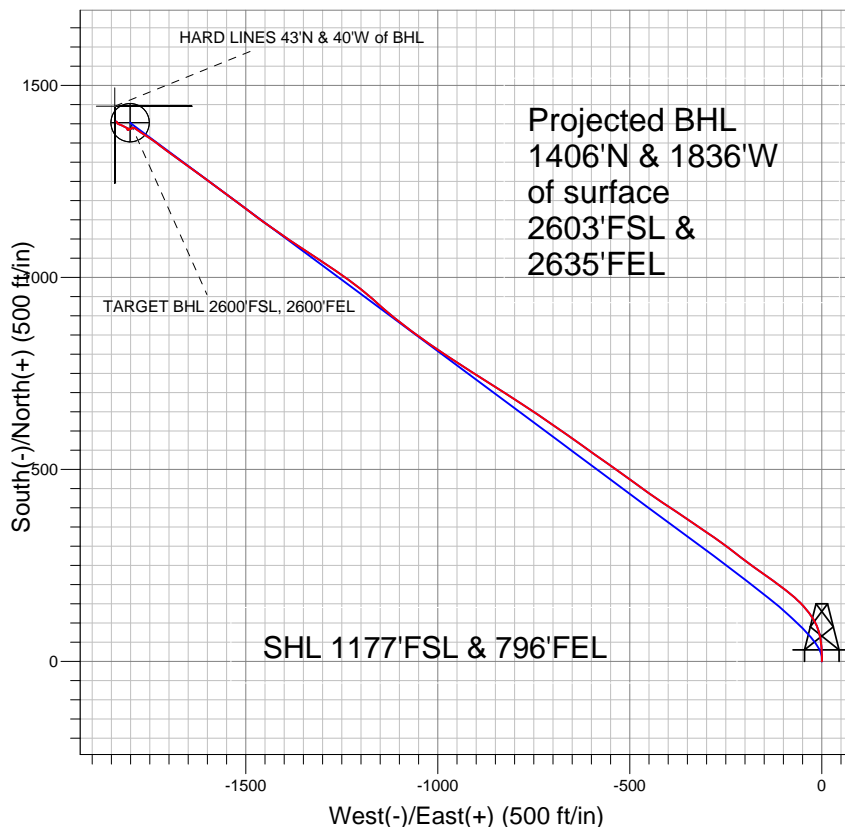
+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
0.0	0.0	1260775.42	3192237.24	40° 2' 49.826 N	104° 48' 47.999 W

Original Well Elev WELL @ 4950.0ft (Original Well Elev)

Slot



Anadarko, Weld County CO



LEGEND

- ◆ Denver 25-18, Wellbore #1, Plan #1 (12-14-10) V0
- Wellbore #1
- Survey #1

Final Survey Plot

Projected Final Survey -
8616'MD & 8100'TVD @ 2313' VS
1.2 deg Inc 314.8 deg AZ

Project: SEC.18-T1N-R66W
Site: Denver 20-18 Pad Sec.18-T1N-R66W
Well: Denver 25-18
Plan: Wellbore #1



Anadarko, Weld County CO

SEC.18-T1N-R66W

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

Denver 25-18

Wellbore #1

Survey: Survey #1

Standard Survey Report

26 January, 2011



Company:	Anadarko, Weld County CO	Local Co-ordinate Reference:	Well Denver 25-18
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 25-18	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 25-18		
Well Position	+N/-S	0.0 ft	Northing: 1,260,775.42 ft
	+E/-W	0.0 ft	Easting: 3,192,237.24 ft
Position Uncertainty	0.0 ft	Wellhead Elevation:	ft
		Latitude:	40° 2' 49.826 N
		Longitude:	104° 48' 47.999 W
		Ground Level:	4,935.0 ft

Wellbore	Wellbore #1				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	1/18/2011	8.91	66.77	52,982

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	314.23	

Survey Program	Date	1/26/2011			
From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description	
144.0	8,616.0	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	0.50	34.50	144.0	0.5	0.4	0.1	0.35	0.35	0.00	
233.0	1.90	2.60	233.0	2.3	0.6	1.2	1.68	1.57	-35.84	
323.0	3.50	0.00	322.9	6.5	0.7	4.1	1.78	1.78	-2.89	
415.0	5.70	358.20	414.6	13.9	0.6	9.3	2.40	2.39	-1.96	
506.0	8.00	357.10	504.9	24.8	0.1	17.2	2.53	2.53	-1.21	
598.0	10.70	355.40	595.7	39.7	-0.9	28.3	2.95	2.93	-1.85	
690.0	12.40	351.20	685.8	58.0	-3.1	42.6	2.06	1.85	-4.57	
785.0	14.40	343.70	778.2	79.4	-8.0	61.1	2.79	2.11	-7.89	
880.0	15.50	332.30	870.0	102.0	-17.2	83.4	3.30	1.16	-12.00	
951.0	16.30	324.60	938.3	118.5	-27.4	102.3	3.17	1.13	-10.85	
1,019.0	16.10	321.60	1,003.6	133.6	-38.8	121.0	1.27	-0.29	-4.41	
1,115.0	16.10	315.00	1,095.9	153.5	-56.4	147.5	1.91	0.00	-6.88	

Company:	Anadarko, Weld County CO	Local Co-ordinate Reference:	Well Denver 25-18
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 25-18	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	17.80	308.80	1,186.8	171.9	-77.1	175.1	2.61	1.79	-6.53
1,305.0	19.30	308.30	1,276.8	190.7	-100.7	205.2	1.59	1.58	-0.53
1,400.0	21.10	305.90	1,366.0	210.5	-126.9	237.8	2.09	1.89	-2.53
1,495.0	23.60	304.60	1,453.8	231.3	-156.4	273.4	2.68	2.63	-1.37
1,591.0	25.90	306.80	1,541.0	254.8	-189.0	313.2	2.58	2.40	2.29
1,686.0	28.40	307.80	1,625.5	281.1	-223.5	356.2	2.67	2.63	1.05
1,781.0	29.80	305.80	1,708.5	308.7	-260.5	402.0	1.79	1.47	-2.11
1,876.0	29.10	304.20	1,791.3	335.5	-298.7	448.1	1.11	-0.74	-1.68
1,971.0	29.80	304.30	1,874.0	361.8	-337.3	494.1	0.74	0.74	0.11
2,068.0	28.60	303.60	1,958.7	388.3	-376.6	540.7	1.29	-1.24	-0.72
2,164.0	27.80	303.90	2,043.3	413.5	-414.3	585.3	0.85	-0.83	0.31
2,259.0	27.50	305.70	2,127.4	438.6	-450.5	628.8	0.93	-0.32	1.89
2,354.0	26.50	306.00	2,212.1	463.9	-485.5	671.4	1.06	-1.05	0.32
2,449.0	26.50	305.70	2,297.1	488.7	-519.8	713.4	0.14	0.00	-0.32
2,545.0	26.70	304.90	2,382.9	513.5	-554.9	755.8	0.43	0.21	-0.83
2,640.0	27.80	305.40	2,467.4	538.6	-590.5	798.8	1.18	1.16	0.53
2,735.0	27.80	305.50	2,551.4	564.3	-626.6	842.6	0.05	0.00	0.11
2,830.0	28.70	305.50	2,635.1	590.4	-663.2	887.0	0.95	0.95	0.00
2,925.0	28.80	304.20	2,718.4	616.5	-700.7	932.1	0.67	0.11	-1.37
3,021.0	29.10	304.40	2,802.4	642.7	-739.1	977.9	0.33	0.31	0.21
3,116.0	29.70	302.40	2,885.2	668.3	-778.0	1,023.7	1.21	0.63	-2.11
3,211.0	28.90	303.00	2,968.0	693.5	-817.1	1,069.2	0.90	-0.84	0.63
3,306.0	29.50	303.10	3,050.9	718.7	-856.0	1,114.7	0.63	0.63	0.11
3,401.0	28.90	302.70	3,133.9	743.9	-894.9	1,160.1	0.66	-0.63	-0.42
3,496.0	29.20	301.30	3,216.9	768.4	-934.0	1,205.2	0.78	0.32	-1.47
3,591.0	29.00	303.00	3,299.9	792.9	-973.1	1,250.4	0.90	-0.21	1.79
3,686.0	29.70	306.50	3,382.7	819.5	-1,011.3	1,296.3	1.95	0.74	3.68
3,782.0	27.60	305.90	3,467.0	846.7	-1,048.5	1,341.9	2.21	-2.19	-0.63
3,877.0	28.00	307.30	3,551.0	873.1	-1,084.0	1,385.8	0.81	0.42	1.47
3,972.0	28.80	308.20	3,634.6	900.7	-1,119.8	1,430.7	0.96	0.84	0.95
4,067.0	29.10	312.30	3,717.7	930.4	-1,154.8	1,476.5	2.11	0.32	4.32
4,162.0	29.00	309.60	3,800.8	960.7	-1,189.7	1,522.6	1.38	-0.11	-2.84
4,257.0	28.00	307.00	3,884.2	988.8	-1,225.2	1,567.6	1.68	-1.05	-2.74
4,352.0	29.00	304.30	3,967.7	1,015.2	-1,262.1	1,612.4	1.72	1.05	-2.84
4,448.0	29.60	302.60	4,051.5	1,041.1	-1,301.3	1,658.6	1.07	0.63	-1.77
4,543.0	29.70	304.20	4,134.0	1,066.9	-1,340.5	1,704.7	0.84	0.11	1.68
4,638.0	29.10	304.10	4,216.8	1,093.1	-1,379.1	1,750.7	0.63	-0.63	-0.11
4,733.0	28.90	304.90	4,299.9	1,119.2	-1,417.0	1,796.1	0.46	-0.21	0.84
4,828.0	26.60	305.40	4,383.9	1,144.7	-1,453.2	1,839.7	2.43	-2.42	0.53
4,923.0	24.80	307.10	4,469.5	1,169.0	-1,486.4	1,880.5	2.05	-1.89	1.79
5,018.0	25.30	306.90	4,555.6	1,193.2	-1,518.6	1,920.4	0.53	0.53	-0.21
5,113.0	22.90	306.60	4,642.3	1,216.4	-1,549.6	1,958.9	2.53	-2.53	-0.32
5,208.0	24.30	306.40	4,729.4	1,239.0	-1,580.2	1,996.6	1.48	1.47	-0.21
5,304.0	22.30	306.30	4,817.5	1,261.5	-1,610.8	2,034.2	2.08	-2.08	-0.10
5,399.0	20.90	305.70	4,905.9	1,282.1	-1,639.1	2,068.8	1.49	-1.47	-0.63
5,494.0	18.60	305.10	4,995.3	1,300.7	-1,665.3	2,100.5	2.43	-2.42	-0.63
5,589.0	16.40	307.40	5,085.9	1,317.6	-1,688.3	2,128.8	2.43	-2.32	2.42
5,684.0	13.50	305.30	5,177.6	1,332.1	-1,708.0	2,153.1	3.10	-3.05	-2.21
5,779.0	12.20	307.00	5,270.3	1,344.6	-1,725.1	2,174.0	1.42	-1.37	1.79
5,874.0	10.50	306.40	5,363.4	1,355.8	-1,740.1	2,192.5	1.79	-1.79	-0.63
5,970.0	8.50	304.70	5,458.1	1,365.0	-1,752.9	2,208.2	2.10	-2.08	-1.77
6,065.0	6.70	303.80	5,552.2	1,372.1	-1,763.3	2,220.6	1.90	-1.89	-0.95
6,160.0	5.80	298.60	5,646.7	1,377.4	-1,772.1	2,230.6	1.12	-0.95	-5.47
6,255.0	4.30	302.70	5,741.3	1,381.7	-1,779.3	2,238.7	1.62	-1.58	4.32

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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)
6,350.0	3.50	305.20	5,836.1	1,385.3	-1,784.7	2,245.1	0.86	-0.84	2.63
6,445.0	2.40	313.90	5,931.0	1,388.3	-1,788.5	2,249.9	1.25	-1.16	9.16
6,541.0	1.00	267.70	6,026.9	1,389.7	-1,790.8	2,252.5	1.93	-1.46	-48.13
6,614.3	1.23	271.53	6,100.2	1,389.7	-1,792.2	2,253.6	0.33	0.31	5.22
TARGET BHL 2600'FSL, 2600'FEL									
6,636.0	1.30	272.40	6,121.9	1,389.7	-1,792.7	2,253.9	0.33	0.32	4.02
6,731.0	1.40	270.30	6,216.9	1,389.7	-1,794.9	2,255.5	0.12	0.11	-2.21
6,826.0	1.10	212.60	6,311.9	1,389.0	-1,796.6	2,256.2	1.30	-0.32	-60.74
6,921.0	1.20	234.20	6,406.8	1,387.6	-1,797.9	2,256.2	0.47	0.11	22.74
7,016.0	1.60	247.80	6,501.8	1,386.5	-1,799.9	2,256.9	0.54	0.42	14.32
7,112.0	0.70	278.50	6,597.8	1,386.1	-1,801.8	2,257.9	1.10	-0.94	31.98
7,207.0	1.10	267.90	6,692.8	1,386.2	-1,803.2	2,259.0	0.45	0.42	-11.16
7,302.0	1.40	266.80	6,787.8	1,386.1	-1,805.3	2,260.4	0.32	0.32	-1.16
7,397.0	1.20	261.50	6,882.7	1,385.9	-1,807.5	2,261.8	0.25	-0.21	-5.58
7,492.0	0.30	164.80	6,977.7	1,385.5	-1,808.4	2,262.2	1.34	-0.95	-101.79
7,587.0	1.20	122.00	7,072.7	1,384.7	-1,807.5	2,261.0	1.05	0.95	-45.05
7,639.4	1.28	88.59	7,125.1	1,384.4	-1,806.4	2,260.1	1.36	0.14	-63.75
TARGET CIRCLE 2600'FSL & 2600'FEL									
7,683.0	1.60	68.50	7,168.7	1,384.7	-1,805.4	2,259.5	1.36	0.75	-46.09
7,778.0	1.20	345.70	7,263.7	1,386.1	-1,804.4	2,259.8	1.97	-0.42	-87.16
7,873.0	4.50	295.80	7,358.5	1,388.7	-1,808.0	2,264.2	4.04	3.47	-52.53
7,969.0	7.10	295.70	7,454.0	1,392.9	-1,816.7	2,273.4	2.71	2.71	-0.10
8,063.0	6.10	293.50	7,547.4	1,397.4	-1,826.5	2,283.5	1.10	-1.06	-2.34
8,159.0	1.50	299.40	7,643.2	1,400.1	-1,832.3	2,289.5	4.80	-4.79	6.15
8,254.0	0.50	341.90	7,738.2	1,401.1	-1,833.5	2,291.1	1.24	-1.05	44.74
8,350.0	0.70	354.80	7,834.2	1,402.1	-1,833.7	2,291.9	0.25	0.21	13.44
8,444.0	1.00	330.60	7,928.2	1,403.4	-1,834.2	2,293.1	0.49	0.32	-25.74
8,540.0	1.10	311.10	8,024.1	1,404.7	-1,835.3	2,294.9	0.38	0.10	-20.31
8,566.0	1.20	314.80	8,050.1	1,405.0	-1,835.6	2,295.4	0.48	0.38	14.23
HARD LINES 43°N & 40°W of BHL									
8,616.0	1.20	314.80	8,100.1	1,405.8	-1,836.4	2,296.4	0.00	0.00	0.00

Checked By: _____	Approved By: _____	Date: _____
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