

Well Name: **Denver 36-18**

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

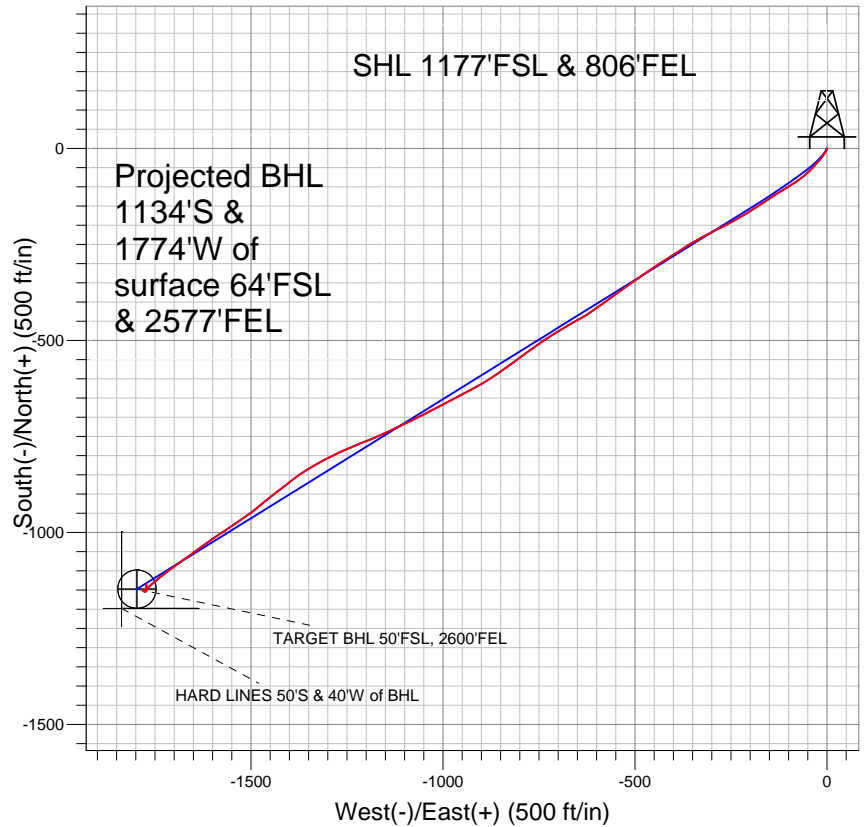
Ground Elevation: 4935.0

+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
0.0	0.0	1260775.35	3192227.44	40° 2' 49.826 N	104° 48' 48.125 W

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

Slot

Anadarko, Weld County CO

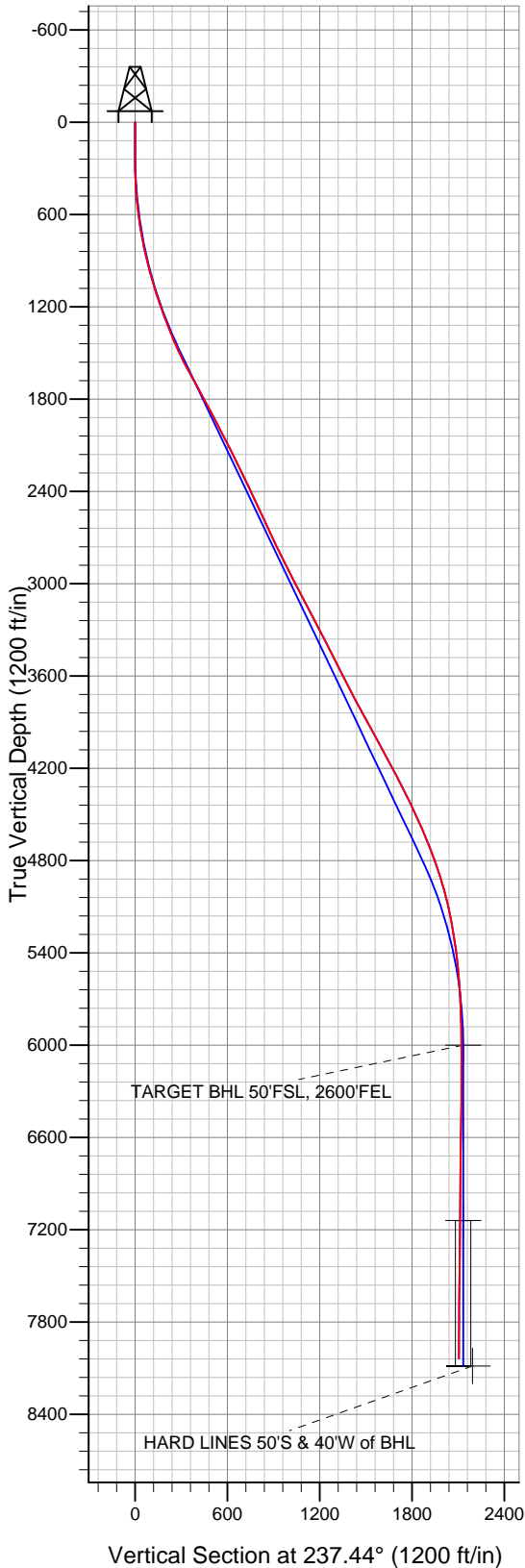


LEGEND

- △ Denver 36-18, Wellbore #1, Plan #1 (12-14-10) V0
- Wellbore #1
- Survey #1

Final Survey Plot

Projected Final Survey -
8497'MD & 8036'TVD @ 2105' VS
1.0 deg Inc 310.4 deg AZ



Project: SEC.18-T1N-R66W
Site: Denver 20-18 Pad Sec.18-T1N-R66W
Well: Denver 36-18
Plan: Wellbore #1



Directional

Anadarko, Weld County CO

SEC.18-T1N-R66W

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

Denver 36-18

Wellbore #1

Survey: Survey #1

Standard Survey Report

03 February, 2011

Company:	Anadarko, Weld County CO	Local Co-ordinate Reference:	Well Denver 36-18
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 36-18	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 36-18		
Well Position	+N/-S	0.0 ft	Northing: 1,260,775.35 ft
	+E/-W	0.0 ft	Easting: 3,192,227.44 ft
Position Uncertainty	0.0 ft	Wellhead Elevation:	ft
		Latitude:	40° 2' 49.826 N
		Longitude:	104° 48' 48.125 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	237.44	

Survey Program	Date	2/3/2011			
From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description	
144.0	8,497.0	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	0.20	116.30	144.0	-0.1	0.2	-0.1	0.14	0.14	0.00	
233.0	0.70	168.30	233.0	-0.7	0.5	0.0	0.67	0.56	58.43	
323.0	1.70	205.00	323.0	-2.5	0.0	1.3	1.35	1.11	40.78	
415.0	3.60	212.00	414.9	-6.1	-2.1	5.1	2.09	2.07	7.61	
506.0	5.40	211.40	505.6	-12.2	-5.8	11.5	1.98	1.98	-0.66	
598.0	7.30	217.90	597.0	-20.5	-11.7	20.9	2.20	2.07	7.07	
690.0	9.70	220.60	688.0	-31.0	-20.3	33.8	2.64	2.61	2.93	
785.0	12.00	222.30	781.3	-44.4	-32.2	51.0	2.44	2.42	1.79	
880.0	13.40	226.30	874.0	-59.3	-46.8	71.4	1.74	1.47	4.21	
955.0	14.70	229.40	946.7	-71.5	-60.3	89.3	2.00	1.73	4.13	
1,020.0	15.60	233.40	1,009.5	-82.1	-73.6	106.2	2.12	1.38	6.15	
1,116.0	17.80	239.60	1,101.4	-97.2	-96.6	133.7	2.95	2.29	6.46	

Company:	Anadarko, Weld County CO	Local Co-ordinate Reference:	Well Denver 36-18
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 36-18	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)
1,211.0	19.70	238.70	1,191.4	-112.9	-122.8	164.3	2.02	2.00	-0.95
1,306.0	20.70	235.10	1,280.5	-130.8	-150.2	197.0	1.68	1.05	-3.79
1,401.0	21.60	237.90	1,369.1	-149.7	-178.8	231.3	1.42	0.95	2.95
1,496.0	24.10	238.30	1,456.7	-169.2	-210.2	268.2	2.64	2.63	0.42
1,591.0	26.40	241.30	1,542.6	-189.5	-245.2	308.7	2.77	2.42	3.16
1,687.0	28.50	243.40	1,627.8	-210.1	-284.4	352.7	2.41	2.19	2.19
1,782.0	28.70	242.00	1,711.2	-230.9	-324.8	398.0	0.74	0.21	-1.47
1,877.0	29.00	237.40	1,794.4	-254.0	-364.3	443.8	2.36	0.32	-4.84
1,972.0	28.70	237.90	1,877.6	-278.6	-403.1	489.6	0.41	-0.32	0.53
2,069.0	27.40	236.60	1,963.2	-303.2	-441.4	535.2	1.48	-1.34	-1.34
2,165.0	27.10	234.70	2,048.6	-328.0	-477.7	579.2	0.96	-0.31	-1.98
2,260.0	26.80	234.80	2,133.3	-352.9	-512.9	622.2	0.32	-0.32	0.11
2,355.0	26.00	234.00	2,218.4	-377.5	-547.2	664.4	0.92	-0.84	-0.84
2,450.0	25.20	234.10	2,304.0	-401.6	-580.5	705.3	0.84	-0.84	0.11
2,546.0	25.60	235.30	2,390.8	-425.3	-614.1	746.5	0.68	0.42	1.25
2,641.0	25.70	242.10	2,476.4	-446.7	-649.2	787.5	3.10	0.11	7.16
2,736.0	25.10	238.20	2,562.2	-466.9	-684.5	828.2	1.87	-0.63	-4.11
2,831.0	24.50	238.10	2,648.5	-488.0	-718.3	868.0	0.63	-0.63	-0.11
2,926.0	26.10	235.20	2,734.4	-510.3	-752.2	908.6	2.13	1.68	-3.05
3,022.0	26.20	234.00	2,820.5	-534.8	-786.7	950.9	0.56	0.10	-1.25
3,117.0	26.50	233.00	2,905.7	-559.9	-820.6	992.9	0.56	0.32	-1.05
3,212.0	27.50	235.30	2,990.3	-585.1	-855.6	1,036.0	1.52	1.05	2.42
3,307.0	27.60	239.00	3,074.5	-608.9	-892.5	1,079.9	1.80	0.11	3.89
3,402.0	27.90	243.20	3,158.6	-630.3	-931.2	1,124.0	2.08	0.32	4.42
3,497.0	27.70	241.70	3,242.7	-650.8	-970.4	1,168.2	0.77	-0.21	-1.58
3,592.0	27.80	241.90	3,326.7	-671.7	-1,009.4	1,212.3	0.14	0.11	0.21
3,687.0	27.40	243.80	3,410.9	-691.8	-1,048.6	1,256.1	1.02	-0.42	2.00
3,783.0	26.30	244.40	3,496.6	-710.7	-1,087.6	1,299.1	1.18	-1.15	0.63
3,878.0	26.90	243.90	3,581.5	-729.3	-1,125.9	1,341.4	0.67	0.63	-0.53
3,973.0	27.50	246.10	3,666.0	-747.6	-1,165.2	1,384.4	1.23	0.63	2.32
4,068.0	28.70	249.10	3,749.8	-764.6	-1,206.6	1,428.5	1.95	1.26	3.16
4,163.0	28.50	245.90	3,833.2	-782.0	-1,248.6	1,473.2	1.63	-0.21	-3.37
4,258.0	28.70	243.50	3,916.6	-801.5	-1,289.7	1,518.3	1.23	0.21	-2.53
4,353.0	28.40	241.40	4,000.1	-822.5	-1,329.9	1,563.5	1.10	-0.32	-2.21
4,449.0	28.60	235.70	4,084.5	-846.3	-1,369.0	1,609.3	2.84	0.21	-5.94
4,544.0	28.60	231.80	4,167.9	-873.2	-1,405.6	1,654.7	1.96	0.00	-4.11
4,639.0	28.80	231.60	4,251.2	-901.5	-1,441.4	1,700.0	0.23	0.21	-0.21
4,734.0	27.00	229.90	4,335.2	-929.6	-1,475.9	1,744.2	2.07	-1.89	-1.79
4,829.0	25.40	235.50	4,420.4	-955.0	-1,509.2	1,785.9	3.10	-1.68	5.89
4,924.0	24.50	235.60	4,506.6	-977.7	-1,542.2	1,826.0	0.95	-0.95	0.11
5,019.0	23.30	236.20	4,593.4	-999.3	-1,574.1	1,864.5	1.29	-1.26	0.63
5,114.0	21.70	234.80	4,681.2	-1,019.9	-1,604.0	1,900.8	1.78	-1.68	-1.47
5,209.0	20.40	234.50	4,769.8	-1,039.6	-1,631.9	1,934.9	1.37	-1.37	-0.32
5,304.0	19.40	234.40	4,859.2	-1,058.4	-1,658.2	1,967.2	1.05	-1.05	-0.11
5,399.0	16.30	233.50	4,949.6	-1,075.5	-1,681.7	1,996.2	3.28	-3.26	-0.95
5,495.0	14.20	233.70	5,042.2	-1,090.5	-1,702.0	2,021.4	2.19	-2.19	0.21
5,590.0	11.60	233.10	5,134.8	-1,103.1	-1,719.1	2,042.6	2.74	-2.74	-0.63
5,685.0	10.30	232.00	5,228.1	-1,114.1	-1,733.4	2,060.6	1.39	-1.37	-1.16
5,780.0	8.80	230.70	5,321.7	-1,123.9	-1,745.7	2,076.2	1.60	-1.58	-1.37
5,875.0	7.00	228.20	5,415.8	-1,132.4	-1,755.7	2,089.2	1.93	-1.89	-2.63
5,971.0	5.60	225.10	5,511.3	-1,139.6	-1,763.3	2,099.5	1.50	-1.46	-3.23
6,066.0	4.40	224.90	5,605.9	-1,145.5	-1,769.2	2,107.6	1.26	-1.26	-0.21
6,161.0	2.90	242.00	5,700.7	-1,149.2	-1,773.9	2,113.6	1.93	-1.58	18.00
6,256.0	1.50	266.00	5,795.6	-1,150.4	-1,777.3	2,117.0	1.73	-1.47	25.26

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Site:	Denver 20-18 Pad Sec.18-T1N-R66W	MD Reference:	WELL @ 4950.0ft (Original Well Elev)
Well:	Denver 36-18	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)	
6,351.0	0.90	259.30	5,890.6	-1,150.6	-1,779.2	2,118.8	0.65	-0.63	-7.05	
6,446.0	0.70	264.80	5,985.6	-1,150.8	-1,780.5	2,120.0	0.23	-0.21	5.79	
6,460.5	0.63	261.94	6,000.1	-1,150.8	-1,780.7	2,120.2	0.55	-0.50	-19.68	
TARGET BHL 50'FSL, 2600'FEL										
6,541.0	0.30	221.80	6,080.6	-1,151.0	-1,781.3	2,120.8	0.55	-0.41	-49.88	
6,637.0	0.30	115.90	6,176.6	-1,151.3	-1,781.2	2,120.9	0.50	0.00	-110.31	
6,732.0	0.60	137.10	6,271.6	-1,151.8	-1,780.7	2,120.7	0.36	0.32	22.32	
6,827.0	0.70	129.50	6,366.6	-1,152.5	-1,779.9	2,120.4	0.14	0.11	-8.00	
6,922.0	1.00	110.50	6,461.6	-1,153.2	-1,778.7	2,119.7	0.43	0.32	-20.00	
7,017.0	1.10	105.60	6,556.6	-1,153.7	-1,777.0	2,118.6	0.14	0.11	-5.16	
7,112.0	1.70	85.00	6,651.5	-1,153.9	-1,774.7	2,116.8	0.81	0.63	-21.68	
7,207.0	0.80	34.90	6,746.5	-1,153.2	-1,772.9	2,114.9	1.41	-0.95	-52.74	
7,303.0	0.70	43.50	6,842.5	-1,152.2	-1,772.1	2,113.7	0.16	-0.10	8.96	
7,398.0	0.40	0.10	6,937.5	-1,151.5	-1,771.7	2,113.0	0.52	-0.32	-45.68	
7,493.0	0.40	331.20	7,032.5	-1,150.8	-1,771.9	2,112.8	0.21	0.00	-30.42	
7,588.0	0.90	20.80	7,127.5	-1,149.9	-1,771.8	2,112.2	0.75	0.53	52.21	
7,600.5	0.92	17.08	7,140.0	-1,149.7	-1,771.7	2,112.0	0.49	0.12	-29.73	
TARGET CIRCLE 50'FSL & 2600'FEL										
7,683.0	1.10	356.60	7,222.5	-1,148.2	-1,771.6	2,111.1	0.49	0.22	-24.83	
7,779.0	1.30	351.80	7,318.4	-1,146.3	-1,771.8	2,110.2	0.23	0.21	-5.00	
7,874.0	1.30	356.60	7,413.4	-1,144.1	-1,772.0	2,109.2	0.11	0.00	5.05	
7,970.0	1.20	353.90	7,509.4	-1,142.0	-1,772.2	2,108.3	0.12	-0.10	-2.81	
8,064.0	1.00	355.60	7,603.4	-1,140.2	-1,772.4	2,107.4	0.22	-0.21	1.81	
8,160.0	1.00	357.90	7,699.4	-1,138.6	-1,772.5	2,106.6	0.04	0.00	2.40	
8,255.0	0.80	345.60	7,794.4	-1,137.1	-1,772.6	2,106.0	0.29	-0.21	-12.95	
8,351.0	0.90	8.60	7,890.3	-1,135.7	-1,772.7	2,105.3	0.37	0.10	23.96	
8,447.0	1.00	310.40	7,986.3	-1,134.4	-1,773.2	2,105.0	0.97	0.10	-60.63	
8,497.0	1.00	310.40	8,036.3	-1,133.8	-1,773.9	2,105.3	0.00	0.00	0.00	
HARD LINES 50'S & 40'W of BHL										

Checked By: _____	Approved By: _____	Date: _____
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