



ANADARKO PETROLEUM CORP.

ANADARKO COLORADO NORTHERN ZONE NAD 83

WELD_Denver

DENVER 15-18

DENVER 15-18

Plan: DENVER 15-18 (wp02)

Standard Planning Report

06 October, 2010





Project: ANADARKO COLORADO NORTHERN ZONE NAD 83
 Site: WELD Denver
 Well: DENVER 15-18
 Wellbore: DENVER 15-18
 Section:
 SHL:
 Design: DENVER 15-18 (wp02)
 Latitude: 40° 2' 49.826 N
 Longitude: 104° 48' 48.384 W
 GL: 4935.0
 KB: WELL @ 4935.0ft (Original Well Elev)



Weatherford®



Azimuths to True North
 Magnetic North: 8.92°

Magnetic Field
 Strength: 52995.7nT
 Dip Angle: 66.79°
 Date: 9/29/2010
 Model: BGGM2010

FORMATION TOP DETAILS

TVDPath	MDPath	Formation
3975.0	4207.6	PK Depth
4641.0	4877.5	SX Depth
7105.0	7341.5	NIO Depth
7465.0	7701.5	CD Depth
7557.0	7793.5	GH Depth
7915.0	8151.5	J Depth

CASING DETAILS

TVD	MD	Name	Size
960.0	962.0	9 5/8"	9-5/8

SECTION DETAILS

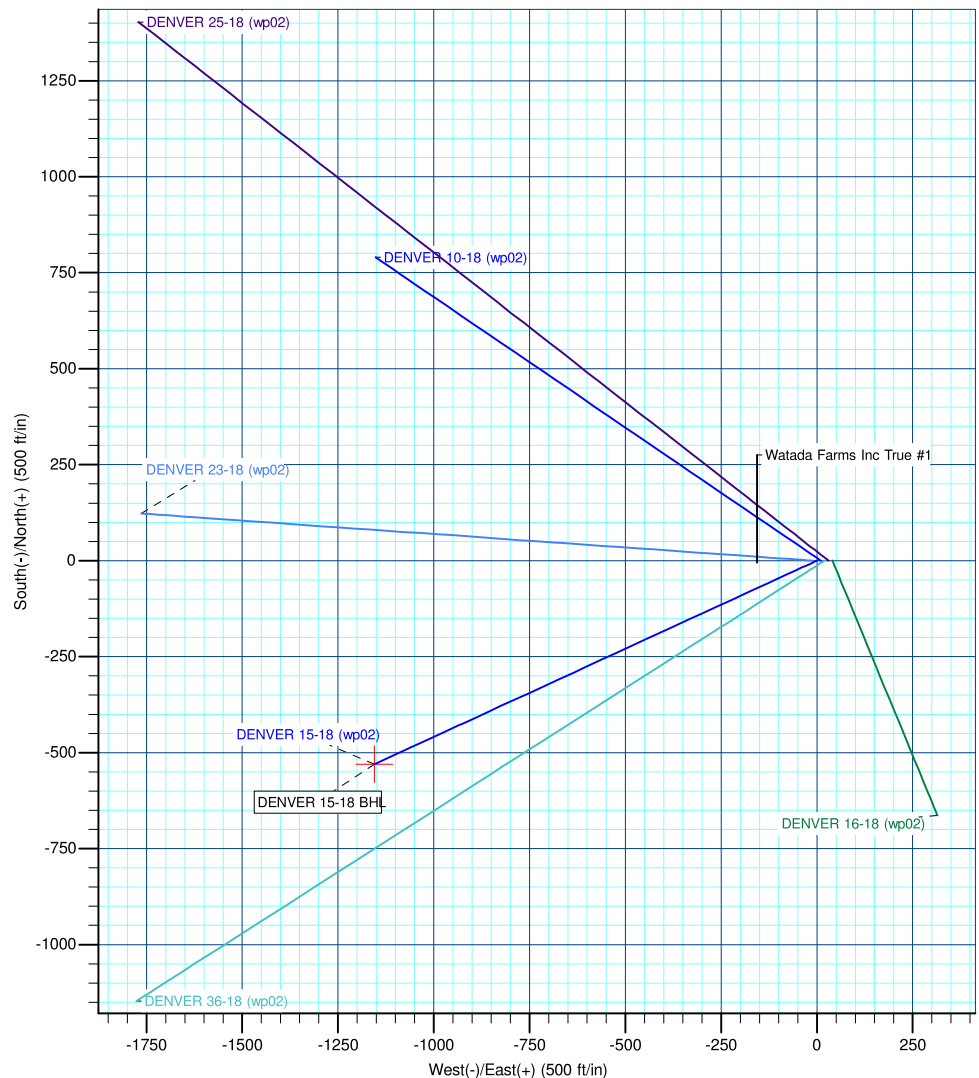
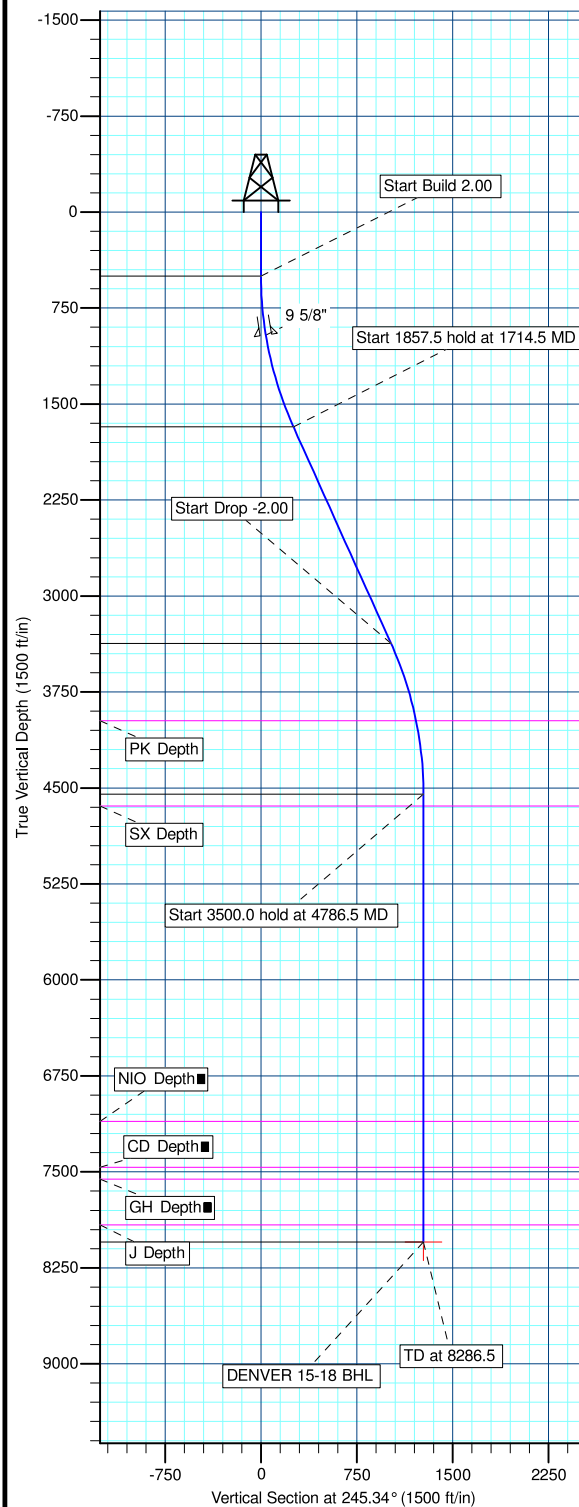
MD	Inc	Azi	TVD	+N/-S	+E/-W	DLeg	TFace	VSec	Annotation
0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.0	
500.0	0.00	0.00	500.0	0.0	0.0	0.00	0.00	0.0	Start Build 2.00
1714.5	24.29	245.34	1678.5	-105.8	-230.5	2.00	245.34	253.6	Start 1857.5 hold at 1714.5 MD
3572.0	24.29	245.34	3371.5	-424.6	-924.9	0.00	0.00	1017.7	Start Drop -2.00
4786.5	0.00	0.00	4550.0	-530.3	-1155.4	2.00	180.00	1271.3	Start 3500.0 hold at 4786.5 MD
8286.5	0.00	0.00	8050.0	-530.3	-1155.4	0.00	0.00	1271.3	TD at 8286.5

WELLBORE TARGET DETAILS (MAP CO-ORDINATES AND LAT/LONG)

Name	TVD	+N/-S	+E/-W	Latitude	Longitude	Shape
DENVER 15-18 BHL	8050.0	-530.3	-1155.4	40° 2' 44.585 N	104° 49' 3.241 W	Point

WELL DETAILS: DENVER 15-18

+N/-S	+E/-W	Northing	Ground Level: Easting	4935.0 Latitude	104° 48' 48.384 W Longitude	Slot
0.0	0.0	1260775.20	3192207.28	40° 2' 49.826 N		



Plan: DENVER 15-18 (wp02) (DENVER 15-18/DENVER 15-18)

Created By: Jason Daguitera

Date: 15:52, October 06 2010

Database:	EDM 2003.21 Single User Db	Local Co-ordinate Reference:	Well DENVER 15-18
Company:	ANADARKO PETROLEUM CORP.	TVD Reference:	WELL @ 4935.0ft (Original Well Elev)
Project:	ANADARKO COLORADO NORTHERN ZONE NAD 83	MD Reference:	WELL @ 4935.0ft (Original Well Elev)
Site:	WELD_Denver	North Reference:	True
Well:	DENVER 15-18	Survey Calculation Method:	Minimum Curvature
Wellbore:	DENVER 15-18		
Design:	DENVER 15-18 (wp02)		

Project	ANADARKO COLORADO NORTHERN ZONE NAD 83, ROCKIES, ROCKIES		
Map System:	US State Plane 1983	System Datum:	Mean Sea Level
Geo Datum:	North American Datum 1983		
Map Zone:	Colorado Northern Zone		

Site	WELD_Denver			
Site Position:		Northing:	1,260,775.65 ft	Latitude: 40° 2' 49.830 N
From:	Lat/Long	Easting:	3,192,216.80 ft	Longitude: 104° 48' 48.262 W
Position Uncertainty:	0.0 ft	Slot Radius:	"	Grid Convergence: 0.44 °

Well	DENVER 15-18			
Well Position	+N/-S	-0.4 ft	Northing:	1,260,775.20 ft
	+E/-W	-9.5 ft	Easting:	3,192,207.28 ft
Position Uncertainty		0.0 ft	Wellhead Elevation:	ft
				Ground Level: 4,935.0 ft

Wellbore	DENVER 15-18				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	BGGM2010	9/29/2010	8.92	66.79	52,996

Design	DENVER 15-18 (wp02)			
Audit Notes:				
Version:	Phase:	PLAN	Tie On Depth:	0.0
Vertical Section:	Depth From (TVD) (ft)	+N/-S (ft)	+E/-W (ft)	Direction (°)
	0.0	0.0	0.0	245.34

Plan Sections										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	TFO (°)	Target
0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.00	0.00	
500.0	0.00	0.00	500.0	0.0	0.0	0.00	0.00	0.00	0.00	
1,714.5	24.29	245.34	1,678.5	-105.8	-230.5	2.00	2.00	0.00	245.34	
3,572.0	24.29	245.34	3,371.5	-424.6	-924.9	0.00	0.00	0.00	0.00	
4,786.5	0.00	0.00	4,550.0	-530.3	-1,155.4	2.00	-2.00	0.00	180.00	
8,286.5	0.00	0.00	8,050.0	-530.3	-1,155.4	0.00	0.00	0.00	0.00	DENVER 15-18 BH

Database:	EDM 2003.21 Single User Db	Local Co-ordinate Reference:	Well DENVER 15-18
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Project:	ANADARKO COLORADO NORTHERN ZONE NAD 83	MD Reference:	WELL @ 4935.0ft (Original Well Elev)
Site:	WELD_Denver	North Reference:	True
Well:	DENVER 15-18	Survey Calculation Method:	Minimum Curvature
Wellbore:	DENVER 15-18		
Design:	DENVER 15-18 (wp02)		

Planned 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
100.0	0.00	0.00	100.0	0.0	0.0	0.0	0.00	0.00	0.00
200.0	0.00	0.00	200.0	0.0	0.0	0.0	0.00	0.00	0.00
300.0	0.00	0.00	300.0	0.0	0.0	0.0	0.00	0.00	0.00
400.0	0.00	0.00	400.0	0.0	0.0	0.0	0.00	0.00	0.00
Start Build 2.00									
500.0	0.00	0.00	500.0	0.0	0.0	0.0	0.00	0.00	0.00
600.0	2.00	245.34	600.0	-0.7	-1.6	1.7	2.00	2.00	0.00
700.0	4.00	245.34	699.8	-2.9	-6.3	7.0	2.00	2.00	0.00
800.0	6.00	245.34	799.5	-6.5	-14.3	15.7	2.00	2.00	0.00
900.0	8.00	245.34	898.7	-11.6	-25.3	27.9	2.00	2.00	0.00
9 5/8"									
962.0	9.24	245.34	960.0	-15.5	-33.8	37.2	2.00	2.00	0.00
1,000.0	10.00	245.34	997.5	-18.2	-39.6	43.5	2.00	2.00	0.00
1,100.0	12.00	245.34	1,095.6	-26.1	-56.9	62.6	2.00	2.00	0.00
1,200.0	14.00	245.34	1,193.1	-35.5	-77.3	85.1	2.00	2.00	0.00
1,300.0	16.00	245.34	1,289.6	-46.3	-100.9	111.0	2.00	2.00	0.00
1,400.0	18.00	245.34	1,385.3	-58.5	-127.4	140.2	2.00	2.00	0.00
1,500.0	20.00	245.34	1,479.8	-72.1	-157.0	172.8	2.00	2.00	0.00
1,600.0	22.00	245.34	1,573.2	-87.0	-189.6	208.6	2.00	2.00	0.00
1,700.0	24.00	245.34	1,665.2	-103.3	-225.1	247.7	2.00	2.00	0.00
Start 1857.5 hold at 1714.5 MD									
1,714.5	24.29	245.34	1,678.5	-105.8	-230.5	253.6	2.00	2.00	0.00
1,800.0	24.29	245.34	1,756.4	-120.5	-262.4	288.8	0.00	0.00	0.00
1,900.0	24.29	245.34	1,847.5	-137.6	-299.8	329.9	0.00	0.00	0.00
2,000.0	24.29	245.34	1,938.7	-154.8	-337.2	371.0	0.00	0.00	0.00
2,100.0	24.29	245.34	2,029.8	-171.9	-374.6	412.2	0.00	0.00	0.00
2,200.0	24.29	245.34	2,121.0	-189.1	-412.0	453.3	0.00	0.00	0.00
2,300.0	24.29	245.34	2,212.1	-206.3	-449.4	494.5	0.00	0.00	0.00
2,400.0	24.29	245.34	2,303.3	-223.4	-486.8	535.6	0.00	0.00	0.00
2,500.0	24.29	245.34	2,394.4	-240.6	-524.1	576.7	0.00	0.00	0.00
2,600.0	24.29	245.34	2,485.6	-257.7	-561.5	617.9	0.00	0.00	0.00
2,700.0	24.29	245.34	2,576.7	-274.9	-598.9	659.0	0.00	0.00	0.00
2,800.0	24.29	245.34	2,667.9	-292.1	-636.3	700.1	0.00	0.00	0.00
2,900.0	24.29	245.34	2,759.0	-309.2	-673.7	741.3	0.00	0.00	0.00
3,000.0	24.29	245.34	2,850.1	-326.4	-711.1	782.4	0.00	0.00	0.00
3,100.0	24.29	245.34	2,941.3	-343.5	-748.5	823.5	0.00	0.00	0.00
3,200.0	24.29	245.34	3,032.4	-360.7	-785.8	864.7	0.00	0.00	0.00
3,300.0	24.29	245.34	3,123.6	-377.9	-823.2	905.8	0.00	0.00	0.00
3,400.0	24.29	245.34	3,214.7	-395.0	-860.6	946.9	0.00	0.00	0.00
3,500.0	24.29	245.34	3,305.9	-412.2	-898.0	988.1	0.00	0.00	0.00
Start Drop -2.00									
3,572.0	24.29	245.34	3,371.5	-424.6	-924.9	1,017.7	0.00	0.00	0.00
3,600.0	23.73	245.34	3,397.1	-429.3	-935.3	1,029.1	2.00	-2.00	0.00
3,700.0	21.73	245.34	3,489.3	-445.4	-970.4	1,067.7	2.00	-2.00	0.00
3,800.0	19.73	245.34	3,582.8	-460.2	-1,002.6	1,103.1	2.00	-2.00	0.00
3,900.0	17.73	245.34	3,677.5	-473.6	-1,031.7	1,135.2	2.00	-2.00	0.00
4,000.0	15.73	245.34	3,773.3	-485.6	-1,057.9	1,164.0	2.00	-2.00	0.00
4,100.0	13.73	245.34	3,870.0	-496.2	-1,081.0	1,189.5	2.00	-2.00	0.00
4,200.0	11.73	245.34	3,967.5	-505.4	-1,101.0	1,211.5	2.00	-2.00	0.00
PK Depth									
4,207.6	11.58	245.34	3,975.0	-506.0	-1,102.4	1,213.0	2.00	-2.00	0.00
4,300.0	9.73	245.34	4,065.8	-513.2	-1,118.0	1,230.1	2.00	-2.00	0.00

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Site:	WELD_Denver	North Reference:	True
Well:	DENVER 15-18	Survey Calculation Method:	Minimum Curvature
Wellbore:	DENVER 15-18		
Design:	DENVER 15-18 (wp02)		

Planned 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)
4,400.0	7.73	245.34	4,164.6	-519.5	-1,131.8	1,245.3	2.00	-2.00	0.00
4,500.0	5.73	245.34	4,263.9	-524.4	-1,142.4	1,257.0	2.00	-2.00	0.00
4,600.0	3.73	245.34	4,363.6	-527.8	-1,149.9	1,265.3	2.00	-2.00	0.00
4,700.0	1.73	245.34	4,463.5	-529.8	-1,154.2	1,270.0	2.00	-2.00	0.00
Start 3500.0 hold at 4786.5 MD									
4,786.5	0.00	0.00	4,550.0	-530.3	-1,155.4	1,271.3	2.00	-2.00	0.00
4,800.0	0.00	0.00	4,563.5	-530.3	-1,155.4	1,271.3	0.00	0.00	0.00
SX Depth									
4,877.5	0.00	0.00	4,641.0	-530.3	-1,155.4	1,271.3	0.00	0.00	0.00
4,900.0	0.00	0.00	4,663.5	-530.3	-1,155.4	1,271.3	0.00	0.00	0.00
5,000.0	0.00	0.00	4,763.5	-530.3	-1,155.4	1,271.3	0.00	0.00	0.00
5,100.0	0.00	0.00	4,863.5	-530.3	-1,155.4	1,271.3	0.00	0.00	0.00
5,200.0	0.00	0.00	4,963.5	-530.3	-1,155.4	1,271.3	0.00	0.00	0.00
5,300.0	0.00	0.00	5,063.5	-530.3	-1,155.4	1,271.3	0.00	0.00	0.00
5,400.0	0.00	0.00	5,163.5	-530.3	-1,155.4	1,271.3	0.00	0.00	0.00
5,500.0	0.00	0.00	5,263.5	-530.3	-1,155.4	1,271.3	0.00	0.00	0.00
5,600.0	0.00	0.00	5,363.5	-530.3	-1,155.4	1,271.3	0.00	0.00	0.00
5,700.0	0.00	0.00	5,463.5	-530.3	-1,155.4	1,271.3	0.00	0.00	0.00
5,800.0	0.00	0.00	5,563.5	-530.3	-1,155.4	1,271.3	0.00	0.00	0.00
5,900.0	0.00	0.00	5,663.5	-530.3	-1,155.4	1,271.3	0.00	0.00	0.00
6,000.0	0.00	0.00	5,763.5	-530.3	-1,155.4	1,271.3	0.00	0.00	0.00
6,100.0	0.00	0.00	5,863.5	-530.3	-1,155.4	1,271.3	0.00	0.00	0.00
6,200.0	0.00	0.00	5,963.5	-530.3	-1,155.4	1,271.3	0.00	0.00	0.00
6,300.0	0.00	0.00	6,063.5	-530.3	-1,155.4	1,271.3	0.00	0.00	0.00
6,400.0	0.00	0.00	6,163.5	-530.3	-1,155.4	1,271.3	0.00	0.00	0.00
6,500.0	0.00	0.00	6,263.5	-530.3	-1,155.4	1,271.3	0.00	0.00	0.00
6,600.0	0.00	0.00	6,363.5	-530.3	-1,155.4	1,271.3	0.00	0.00	0.00
6,700.0	0.00	0.00	6,463.5	-530.3	-1,155.4	1,271.3	0.00	0.00	0.00
6,800.0	0.00	0.00	6,563.5	-530.3	-1,155.4	1,271.3	0.00	0.00	0.00
6,900.0	0.00	0.00	6,663.5	-530.3	-1,155.4	1,271.3	0.00	0.00	0.00
7,000.0	0.00	0.00	6,763.5	-530.3	-1,155.4	1,271.3	0.00	0.00	0.00
7,100.0	0.00	0.00	6,863.5	-530.3	-1,155.4	1,271.3	0.00	0.00	0.00
7,200.0	0.00	0.00	6,963.5	-530.3	-1,155.4	1,271.3	0.00	0.00	0.00
7,300.0	0.00	0.00	7,063.5	-530.3	-1,155.4	1,271.3	0.00	0.00	0.00
NIO Depth									
7,341.5	0.00	0.00	7,105.0	-530.3	-1,155.4	1,271.3	0.00	0.00	0.00
7,400.0	0.00	0.00	7,163.5	-530.3	-1,155.4	1,271.3	0.00	0.00	0.00
7,500.0	0.00	0.00	7,263.5	-530.3	-1,155.4	1,271.3	0.00	0.00	0.00
7,600.0	0.00	0.00	7,363.5	-530.3	-1,155.4	1,271.3	0.00	0.00	0.00
7,700.0	0.00	0.00	7,463.5	-530.3	-1,155.4	1,271.3	0.00	0.00	0.00
CD Depth									
7,701.5	0.00	0.00	7,465.0	-530.3	-1,155.4	1,271.3	0.00	0.00	0.00
GH Depth									
7,793.5	0.00	0.00	7,557.0	-530.3	-1,155.4	1,271.3	0.00	0.00	0.00
7,800.0	0.00	0.00	7,563.5	-530.3	-1,155.4	1,271.3	0.00	0.00	0.00
7,900.0	0.00	0.00	7,663.5	-530.3	-1,155.4	1,271.3	0.00	0.00	0.00
8,000.0	0.00	0.00	7,763.5	-530.3	-1,155.4	1,271.3	0.00	0.00	0.00
8,100.0	0.00	0.00	7,863.5	-530.3	-1,155.4	1,271.3	0.00	0.00	0.00
J Depth									
8,151.5	0.00	0.00	7,915.0	-530.3	-1,155.4	1,271.3	0.00	0.00	0.00
8,200.0	0.00	0.00	7,963.5	-530.3	-1,155.4	1,271.3	0.00	0.00	0.00
TD at 8286.5									

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Company:	ANADARKO PETROLEUM CORP.	TVD Reference:	WELL @ 4935.0ft (Original Well Elev)
Project:	ANADARKO COLORADO NORTHERN ZONE NAD 83	MD Reference:	WELL @ 4935.0ft (Original Well Elev)
Site:	WELD_Denver	North Reference:	True
Well:	DENVER 15-18	Survey Calculation Method:	Minimum Curvature
Wellbore:	DENVER 15-18		
Design:	DENVER 15-18 (wp02)		

Planned 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)
8,286.5	0.00	0.00	8,050.0	-530.3	-1,155.4	1,271.3	0.00	0.00	0.00

Design Targets

Target Name

- hit/miss target	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (ft)	Easting (ft)	Latitude	Longitude
- Shape									
DENVER 15-18 BHL	0.00	0.00	8,050.0	-530.3	-1,155.4	1,260,235.92	3,191,056.00	40° 2' 44.585 N	104° 49' 3.241 W
- plan hits target center									
- Point									

Casing Points

Measured Depth (ft)	Vertical Depth (ft)	Name	Casing Diameter (")	Hole Diameter (")
962.0	960.0	9 5/8"	9-5/8	12-1/4

Formations

Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)
4,877.5	4,641.0	SX Depth			
7,793.5	7,557.0	GH Depth			
4,207.6	3,975.0	PK Depth			
7,341.5	7,105.0	NIO Depth			
7,701.5	7,465.0	CD Depth			
8,151.5	7,915.0	J Depth			

Plan Annotations

Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates		Comment
		+N/-S (ft)	+E/-W (ft)	
500.0	500.0	0.0	0.0	Start Build 2.00
1,714.5	1,678.5	-105.8	-230.5	Start 1857.5 hold at 1714.5 MD
3,572.0	3,371.5	-424.6	-924.9	Start Drop -2.00
4,786.5	4,550.0	-530.3	-1,155.4	Start 3500.0 hold at 4786.5 MD
8,286.5	8,050.0	-530.3	-1,155.4	TD at 8286.5