



ANADARKO PETROLEUM CORP.

ANADARKO COLORADO NORTHERN ZONE NAD 83

WELD_Denver

DENVER 16-18

DENVER 16-18

Plan: DENVER 16-18 (wp02)

Standard Planning Report

06 October, 2010

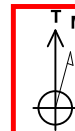




Project: ANADARKO COLORADO NORTHERN ZONE NAD 83
 Site: WELD Denver
 Well: DENVER 16-18
 Wellbore: DENVER 16-18
 Section:
 SHL:
 Design: DENVER 16-18 (wp02)
 Latitude: 40° 2' 49.830 N
 Longitude: 104° 48' 47.869 W
 GL: 4935.0
 KB: WELL @ 4935.0ft (Original Well Elev)



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	4083.9	PK Depth
4631.0	4739.9	SX Depth
7095.0	7203.9	NIO Depth
7455.0	7563.9	CD Depth
7547.0	7655.9	GH Depth
7905.0	8013.9	J Depth

CASING DETAILS

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

SECTION DETAILS

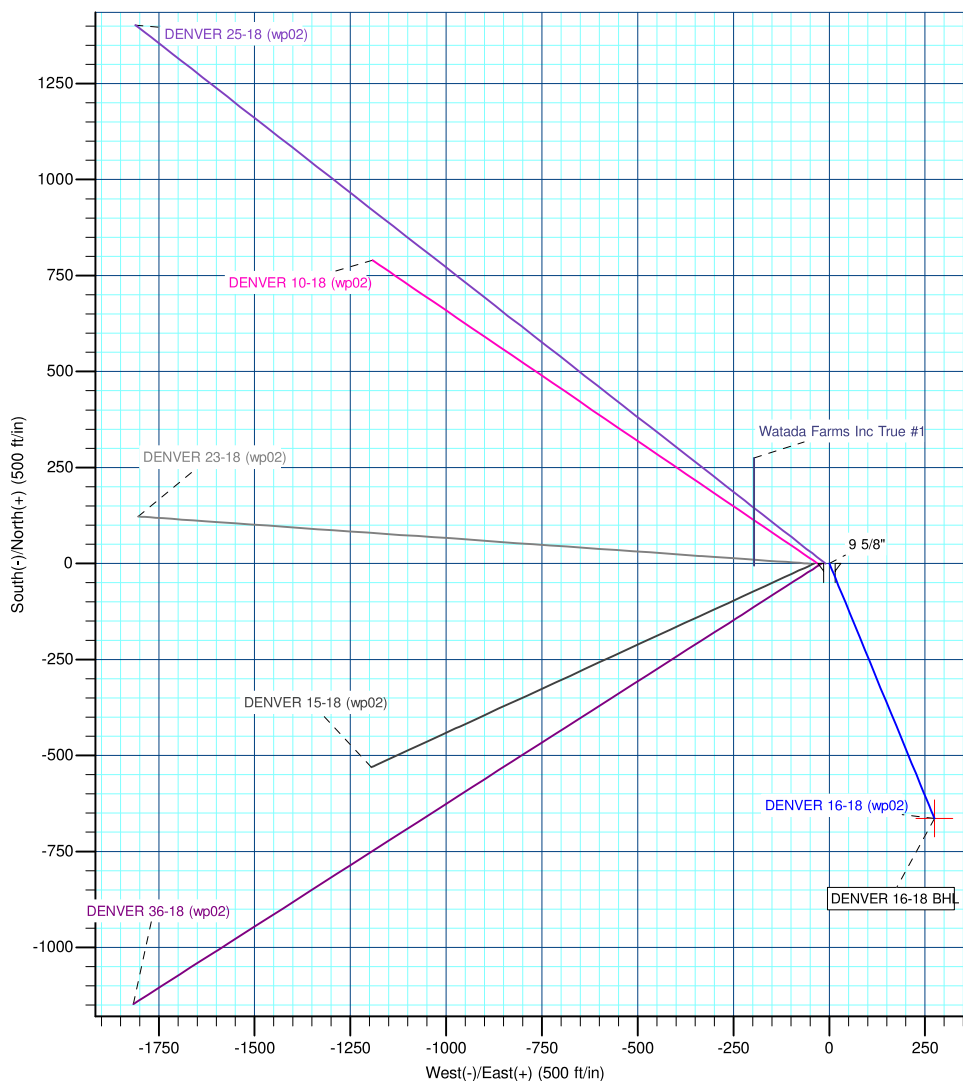
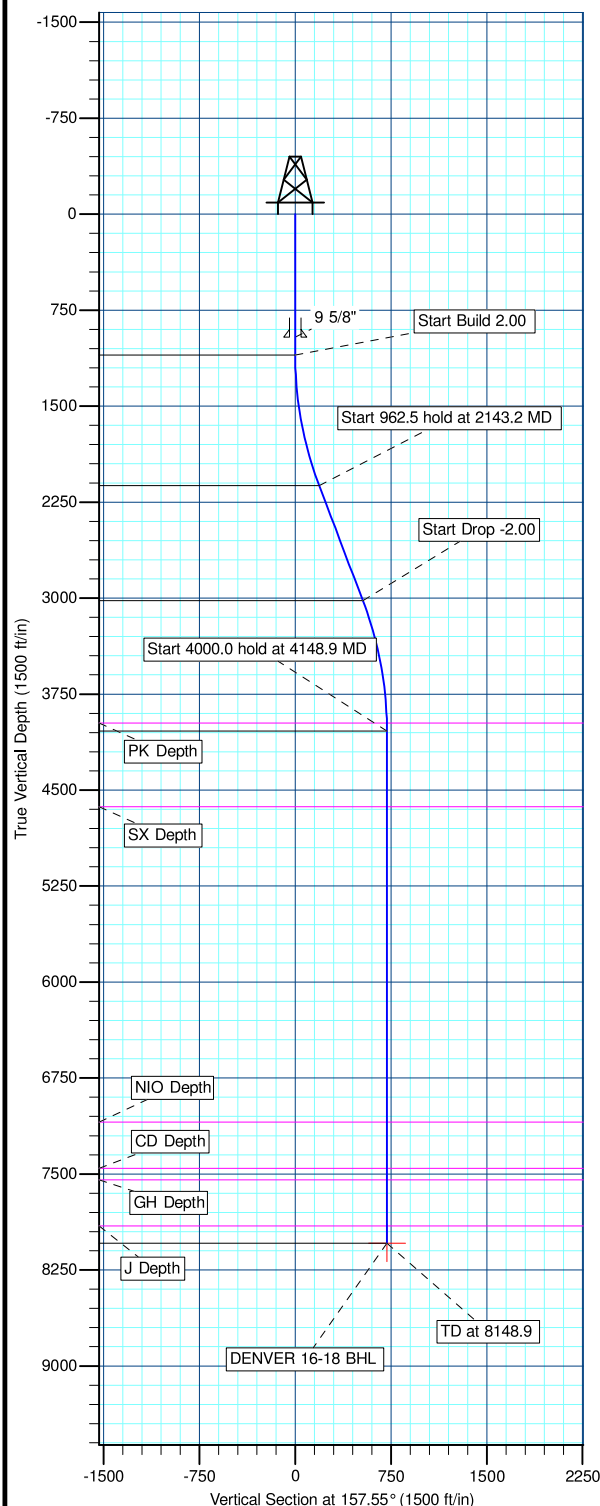
MD	Inc	Azi	TVD	+N/-S	+E/-W	DLeg	TFace	VSec	Annotation
0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.0	
1100.0	0.00	0.00	1100.0	0.0	0.0	0.00	0.00	0.0	Start Build 2.00
2143.2	20.86	157.55	2120.3	-173.6	71.7	2.00	157.55	187.9	Start 962.5 hold at 2143.2 MD
3105.7	20.86	157.55	3019.7	-490.4	202.6	0.00	0.00	530.6	Start Drop -2.00
4148.9	0.00	0.00	4040.0	-664.1	274.4	2.00	180.00	718.5	Start 4000.0 hold at 4148.9 MD
8148.9	0.00	0.00	8040.0	-664.1	274.4	0.00	0.00	718.5	TD at 8148.9

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

Name	TVD	+N/-S	+E/-W	Latitude	Longitude	Shape
DENVER 16-18 BHL	8040.0	-664.1	274.4	40° 2' 43.267 N	104° 48' 44.341 W	Point

WELL DETAILS: DENVER 16-18

+N/-S	+E/-W	Northing	Ground Level: Easting	4935.0 Latitude	104° 48' 47.869 W Longitude	Slot
0.0	0.0	1260775.87	3192247.31	40° 2' 49.830 N		



Plan: DENVER 16-18 (wp02) (DENVER 16-18/DENVER 16-18)

Created By: Jason Daguitera Date: 16:09, October 06 2010

Database:	EDM 2003.21 Single User Db	Local Co-ordinate Reference:	Well DENVER 16-18
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 16-18	Survey Calculation Method:	Minimum Curvature
Wellbore:	DENVER 16-18		
Design:	DENVER 16-18 (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 16-18			
Well Position	+N/-S	0.0 ft	Northing:	1,260,775.87 ft
	+E/-W	30.5 ft	Easting:	3,192,247.31 ft
Position Uncertainty	0.0 ft		Wellhead Elevation:	ft
			Ground Level:	4,935.0 ft

Wellbore	DENVER 16-18				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	BGGM2010	9/29/2010	8.92	66.79	52,996

Design	DENVER 16-18 (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	157.55

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	
1,100.0	0.00	0.00	1,100.0	0.0	0.0	0.00	0.00	0.00	0.00	
2,143.2	20.86	157.55	2,120.3	-173.6	71.7	2.00	2.00	0.00	157.55	
3,105.7	20.86	157.55	3,019.7	-490.4	202.6	0.00	0.00	0.00	0.00	
4,148.9	0.00	0.00	4,040.0	-664.1	274.4	2.00	-2.00	0.00	180.00	
8,148.9	0.00	0.00	8,040.0	-664.1	274.4	0.00	0.00	0.00	0.00	DENVER 16-18 BH

Database:	EDM 2003.21 Single User Db	Local Co-ordinate Reference:	Well DENVER 16-18
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 16-18	Survey Calculation Method:	Minimum Curvature
Wellbore:	DENVER 16-18		
Design:	DENVER 16-18 (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
500.0	0.00	0.00	500.0	0.0	0.0	0.0	0.00	0.00	0.00
600.0	0.00	0.00	600.0	0.0	0.0	0.0	0.00	0.00	0.00
700.0	0.00	0.00	700.0	0.0	0.0	0.0	0.00	0.00	0.00
800.0	0.00	0.00	800.0	0.0	0.0	0.0	0.00	0.00	0.00
900.0	0.00	0.00	900.0	0.0	0.0	0.0	0.00	0.00	0.00
9 5/8"									
960.0	0.00	0.00	960.0	0.0	0.0	0.0	0.00	0.00	0.00
1,000.0	0.00	0.00	1,000.0	0.0	0.0	0.0	0.00	0.00	0.00
Start Build 2.00									
1,100.0	0.00	0.00	1,100.0	0.0	0.0	0.0	0.00	0.00	0.00
1,200.0	2.00	157.55	1,200.0	-1.6	0.7	1.7	2.00	2.00	0.00
1,300.0	4.00	157.55	1,299.8	-6.4	2.7	7.0	2.00	2.00	0.00
1,400.0	6.00	157.55	1,399.5	-14.5	6.0	15.7	2.00	2.00	0.00
1,500.0	8.00	157.55	1,498.7	-25.8	10.6	27.9	2.00	2.00	0.00
1,600.0	10.00	157.55	1,597.5	-40.2	16.6	43.5	2.00	2.00	0.00
1,700.0	12.00	157.55	1,695.6	-57.9	23.9	62.6	2.00	2.00	0.00
1,800.0	14.00	157.55	1,793.1	-78.6	32.5	85.1	2.00	2.00	0.00
1,900.0	16.00	157.55	1,889.6	-102.6	42.4	111.0	2.00	2.00	0.00
2,000.0	18.00	157.55	1,985.3	-129.6	53.5	140.2	2.00	2.00	0.00
2,100.0	20.00	157.55	2,079.8	-159.7	66.0	172.8	2.00	2.00	0.00
Start 962.5 hold at 2143.2 MD									
2,143.2	20.86	157.55	2,120.3	-173.6	71.7	187.9	2.00	2.00	0.00
2,200.0	20.86	157.55	2,173.4	-192.3	79.5	208.1	0.00	0.00	0.00
2,300.0	20.86	157.55	2,266.8	-225.2	93.1	243.7	0.00	0.00	0.00
2,400.0	20.86	157.55	2,360.3	-258.1	106.7	279.3	0.00	0.00	0.00
2,500.0	20.86	157.55	2,453.7	-291.1	120.3	314.9	0.00	0.00	0.00
2,600.0	20.86	157.55	2,547.1	-324.0	133.9	350.5	0.00	0.00	0.00
2,700.0	20.86	157.55	2,640.6	-356.9	147.5	386.2	0.00	0.00	0.00
2,800.0	20.86	157.55	2,734.0	-389.8	161.1	421.8	0.00	0.00	0.00
2,900.0	20.86	157.55	2,827.5	-422.7	174.7	457.4	0.00	0.00	0.00
3,000.0	20.86	157.55	2,920.9	-455.6	188.3	493.0	0.00	0.00	0.00
3,100.0	20.86	157.55	3,014.4	-488.6	201.9	528.6	0.00	0.00	0.00
Start Drop -2.00									
3,105.7	20.86	157.55	3,019.7	-490.4	202.6	530.6	0.00	0.00	0.00
3,200.0	18.98	157.55	3,108.3	-520.1	214.9	562.8	2.00	-2.00	0.00
3,300.0	16.98	157.55	3,203.4	-548.7	226.7	593.6	2.00	-2.00	0.00
3,400.0	14.98	157.55	3,299.6	-574.1	237.2	621.2	2.00	-2.00	0.00
3,500.0	12.98	157.55	3,396.6	-596.4	246.4	645.3	2.00	-2.00	0.00
3,600.0	10.98	157.55	3,494.4	-615.6	254.3	666.1	2.00	-2.00	0.00
3,700.0	8.98	157.55	3,592.9	-631.6	261.0	683.4	2.00	-2.00	0.00
3,800.0	6.98	157.55	3,691.9	-644.4	266.3	697.3	2.00	-2.00	0.00
3,900.0	4.98	157.55	3,791.4	-654.1	270.2	707.7	2.00	-2.00	0.00
4,000.0	2.98	157.55	3,891.1	-660.5	272.9	714.6	2.00	-2.00	0.00
PK Depth									
4,083.9	1.30	157.55	3,975.0	-663.4	274.1	717.8	2.00	-2.00	0.00
4,100.0	0.98	157.55	3,991.1	-663.7	274.2	718.1	2.00	-2.00	0.00
Start 4000.0 hold at 4148.9 MD									

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Site:	WELD_Denver	North Reference:	True
Well:	DENVER 16-18	Survey Calculation Method:	Minimum Curvature
Wellbore:	DENVER 16-18		
Design:	DENVER 16-18 (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)
4,148.9	0.00	0.00	4,040.0	-664.1	274.4	718.5	2.00	-2.00	0.00
4,200.0	0.00	0.00	4,091.1	-664.1	274.4	718.5	0.00	0.00	0.00
4,300.0	0.00	0.00	4,191.1	-664.1	274.4	718.5	0.00	0.00	0.00
4,400.0	0.00	0.00	4,291.1	-664.1	274.4	718.5	0.00	0.00	0.00
4,500.0	0.00	0.00	4,391.1	-664.1	274.4	718.5	0.00	0.00	0.00
4,600.0	0.00	0.00	4,491.1	-664.1	274.4	718.5	0.00	0.00	0.00
4,700.0	0.00	0.00	4,591.1	-664.1	274.4	718.5	0.00	0.00	0.00
SX Depth									
4,739.9	0.00	0.00	4,631.0	-664.1	274.4	718.5	0.00	0.00	0.00
4,800.0	0.00	0.00	4,691.1	-664.1	274.4	718.5	0.00	0.00	0.00
4,900.0	0.00	0.00	4,791.1	-664.1	274.4	718.5	0.00	0.00	0.00
5,000.0	0.00	0.00	4,891.1	-664.1	274.4	718.5	0.00	0.00	0.00
5,100.0	0.00	0.00	4,991.1	-664.1	274.4	718.5	0.00	0.00	0.00
5,200.0	0.00	0.00	5,091.1	-664.1	274.4	718.5	0.00	0.00	0.00
5,300.0	0.00	0.00	5,191.1	-664.1	274.4	718.5	0.00	0.00	0.00
5,400.0	0.00	0.00	5,291.1	-664.1	274.4	718.5	0.00	0.00	0.00
5,500.0	0.00	0.00	5,391.1	-664.1	274.4	718.5	0.00	0.00	0.00
5,600.0	0.00	0.00	5,491.1	-664.1	274.4	718.5	0.00	0.00	0.00
5,700.0	0.00	0.00	5,591.1	-664.1	274.4	718.5	0.00	0.00	0.00
5,800.0	0.00	0.00	5,691.1	-664.1	274.4	718.5	0.00	0.00	0.00
5,900.0	0.00	0.00	5,791.1	-664.1	274.4	718.5	0.00	0.00	0.00
6,000.0	0.00	0.00	5,891.1	-664.1	274.4	718.5	0.00	0.00	0.00
6,100.0	0.00	0.00	5,991.1	-664.1	274.4	718.5	0.00	0.00	0.00
6,200.0	0.00	0.00	6,091.1	-664.1	274.4	718.5	0.00	0.00	0.00
6,300.0	0.00	0.00	6,191.1	-664.1	274.4	718.5	0.00	0.00	0.00
6,400.0	0.00	0.00	6,291.1	-664.1	274.4	718.5	0.00	0.00	0.00
6,500.0	0.00	0.00	6,391.1	-664.1	274.4	718.5	0.00	0.00	0.00
6,600.0	0.00	0.00	6,491.1	-664.1	274.4	718.5	0.00	0.00	0.00
6,700.0	0.00	0.00	6,591.1	-664.1	274.4	718.5	0.00	0.00	0.00
6,800.0	0.00	0.00	6,691.1	-664.1	274.4	718.5	0.00	0.00	0.00
6,900.0	0.00	0.00	6,791.1	-664.1	274.4	718.5	0.00	0.00	0.00
7,000.0	0.00	0.00	6,891.1	-664.1	274.4	718.5	0.00	0.00	0.00
7,100.0	0.00	0.00	6,991.1	-664.1	274.4	718.5	0.00	0.00	0.00
7,200.0	0.00	0.00	7,091.1	-664.1	274.4	718.5	0.00	0.00	0.00
NIO Depth									
7,203.9	0.00	0.00	7,095.0	-664.1	274.4	718.5	0.00	0.00	0.00
7,300.0	0.00	0.00	7,191.1	-664.1	274.4	718.5	0.00	0.00	0.00
7,400.0	0.00	0.00	7,291.1	-664.1	274.4	718.5	0.00	0.00	0.00
7,500.0	0.00	0.00	7,391.1	-664.1	274.4	718.5	0.00	0.00	0.00
CD Depth									
7,563.9	0.00	0.00	7,455.0	-664.1	274.4	718.5	0.00	0.00	0.00
7,600.0	0.00	0.00	7,491.1	-664.1	274.4	718.5	0.00	0.00	0.00
GH Depth									
7,655.9	0.00	0.00	7,547.0	-664.1	274.4	718.5	0.00	0.00	0.00
7,700.0	0.00	0.00	7,591.1	-664.1	274.4	718.5	0.00	0.00	0.00
7,800.0	0.00	0.00	7,691.1	-664.1	274.4	718.5	0.00	0.00	0.00
7,900.0	0.00	0.00	7,791.1	-664.1	274.4	718.5	0.00	0.00	0.00
8,000.0	0.00	0.00	7,891.1	-664.1	274.4	718.5	0.00	0.00	0.00
J Depth									
8,013.9	0.00	0.00	7,905.0	-664.1	274.4	718.5	0.00	0.00	0.00
8,100.0	0.00	0.00	7,991.1	-664.1	274.4	718.5	0.00	0.00	0.00
TD at 8148.9									

Database:	EDM 2003.21 Single User Db	Local Co-ordinate Reference:	Well DENVER 16-18
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 16-18	Survey Calculation Method:	Minimum Curvature
Wellbore:	DENVER 16-18		
Design:	DENVER 16-18 (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)
8,148.9	0.00	0.00	8,040.0	-664.1	274.4	718.5	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 16-18 BHL	0.00	0.00	8,040.0	-664.1	274.4	1,260,113.95	3,192,526.81	40° 2' 43.267 N	104° 48' 44.341 W
- plan hits target center									
- Point									

Casing Points

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

Formations

Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)
7,203.9	7,095.0	NIO Depth			
4,083.9	3,975.0	PK Depth			
4,739.9	4,631.0	SX Depth			
7,655.9	7,547.0	GH Depth			
8,013.9	7,905.0	J Depth			
7,563.9	7,455.0	CD Depth			

Plan Annotations

Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates		Comment
		+N/-S (ft)	+E/-W (ft)	
1,100.0	1,100.0	0.0	0.0	Start Build 2.00
2,143.2	2,120.3	-173.6	71.7	Start 962.5 hold at 2143.2 MD
3,105.7	3,019.7	-490.4	202.6	Start Drop -2.00
4,148.9	4,040.0	-664.1	274.4	Start 4000.0 hold at 4148.9 MD
8,148.9	8,040.0	-664.1	274.4	TD at 8148.9