



ANADARKO PETROLEUM CORP.

ANADARKO COLORADO NORTHERN ZONE NAD 83

WELD_Denver

DENVER 10-18

DENVER 10-18

Plan: DENVER 10-18 (wp02)

Standard Planning Report

06 October, 2010





Project: ANADARKO COLORADO NORTHERN ZONE NAD 83
 Site: WELD Denver
 Well: DENVER 10-18
 Wellbore: DENVER 10-18
 Section:
 SHL:
 Design: DENVER 10-18 (wp02)
 Latitude: 40° 2' 49.826 N
 Longitude: 104° 48' 48.254 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	4241.4	PK Depth
4651.0	4922.1	SX Depth
7115.0	7386.1	NIO Depth
7475.0	7746.1	CD Depth
7567.0	7838.1	GH Depth
7925.0	8196.1	J Depth

CASING DETAILS

TVD	MD	Name	Size
960.0	966.0	9 5/8"	9-5/8

SECTION DETAILS

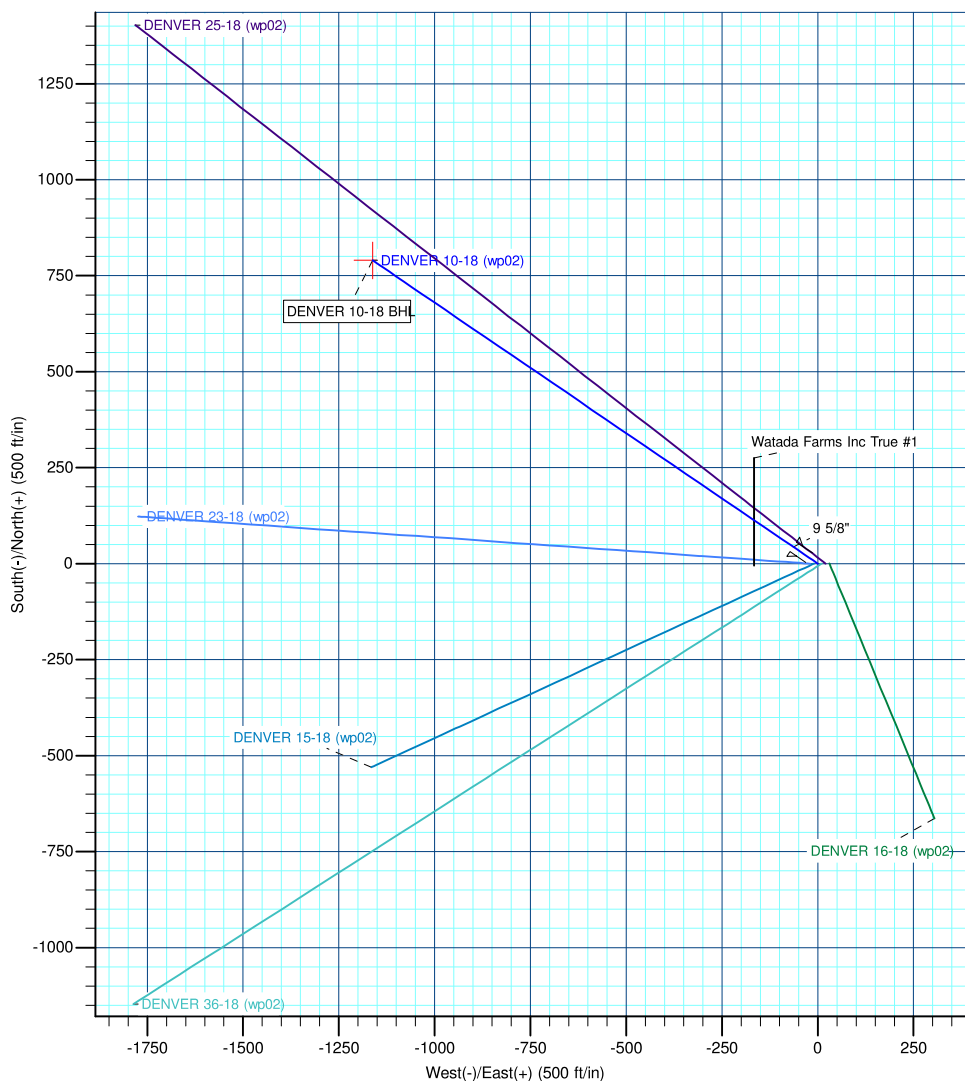
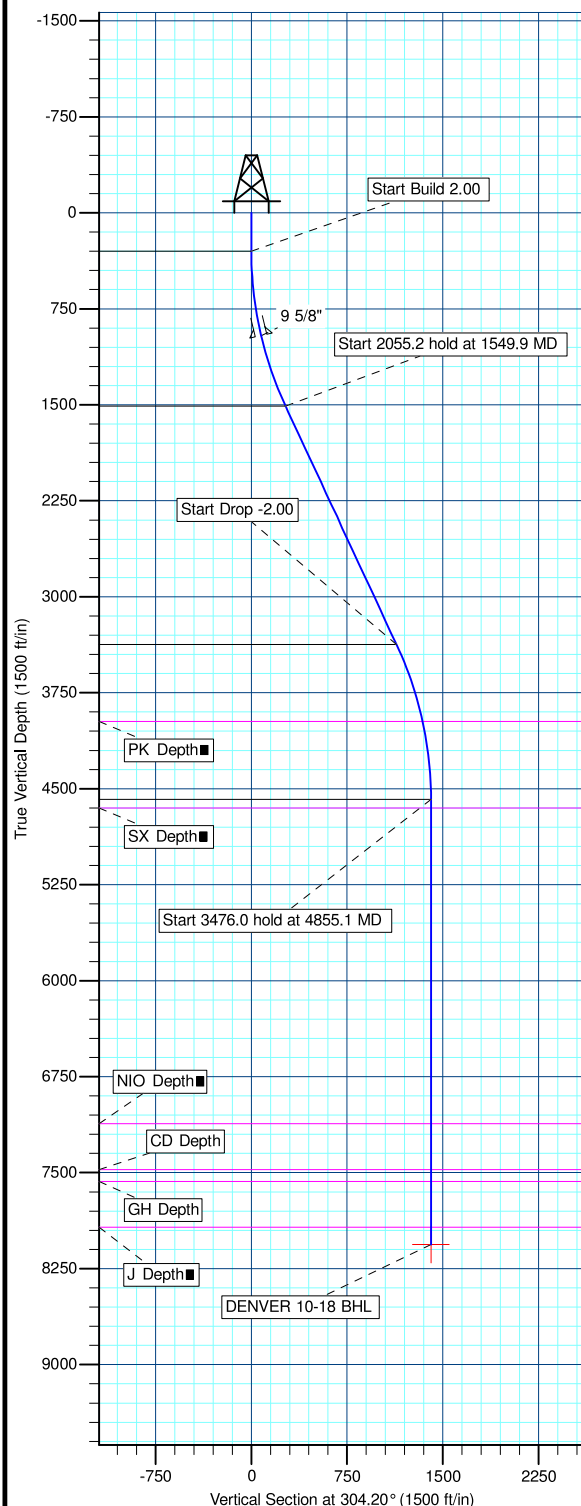
MD	Inc	Azi	TVD	+N/-S	+E/-W	DLeg	TFace	VSec	Annotation
0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.0	
300.0	0.00	0.00	300.0	0.0	0.0	0.00	0.00	0.0	Start Build 2.00
1549.9	25.00	304.20	1510.6	150.8	-222.0	2.00	304.20	268.4	Start 2055.2 hold at 1549.9 MD
3605.2	25.00	304.20	3373.4	639.0	-940.4	0.00	0.00	1136.9	Start Drop -2.00
4855.1	0.00	0.00	4584.0	789.8	-1162.4	2.00	180.00	1405.3	Start 3476.0 hold at 4855.1 MD
8331.1	0.00	0.00	8060.0	789.8	-1162.4	0.00	0.00	1405.3	TD at 8331.1

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

Name	TVD	+N/-S	+E/-W	Latitude	Longitude	Shape
DENVER 10-18 BHL	8060.0	789.8	-1162.4	40° 2' 57.631 N	104° 49' 3.202 W	Point

WELL DETAILS: DENVER 10-18

+N/-S	+E/-W	Northing	Ground Level: Easting	4935.0 Latitude	104° 48' 48.254 W Longitude	Slot
0.0	0.0	1260775.27	3192217.36	40° 2' 49.826 N		



Plan: DENVER 10-18 (wp02) (DENVER 10-18/DENVER 10-18)

Created By: Jason Daguitera Date: 15:48, October 06 2010

Database:	EDM 2003.21 Single User Db	Local Co-ordinate Reference:	Well DENVER 10-18
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 10-18	Survey Calculation Method:	Minimum Curvature
Wellbore:	DENVER 10-18		
Design:	DENVER 10-18 (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 10-18					
Well Position	+N/-S	-0.4 ft	Northing:	1,260,775.27 ft	Latitude:	40° 2' 49.826 N
	+E/-W	0.6 ft	Easting:	3,192,217.36 ft	Longitude:	104° 48' 48.254 W
Position Uncertainty		0.0 ft	Wellhead Elevation:	ft	Ground Level:	4,935.0 ft

Wellbore	DENVER 10-18				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	BGGM2010	9/29/2010	8.92	66.79	52,996

Design	DENVER 10-18 (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	304.20

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	
300.0	0.00	0.00	300.0	0.0	0.0	0.00	0.00	0.00	0.00	
1,549.9	25.00	304.20	1,510.6	150.8	-222.0	2.00	2.00	0.00	304.20	
3,605.2	25.00	304.20	3,373.4	639.0	-940.4	0.00	0.00	0.00	0.00	
4,855.1	0.00	0.00	4,584.0	789.8	-1,162.4	2.00	-2.00	0.00	180.00	
8,331.1	0.00	0.00	8,060.0	789.8	-1,162.4	0.00	0.00	0.00	0.00	DENVER 10-18 BH

Database:	EDM 2003.21 Single User Db	Local Co-ordinate Reference:	Well DENVER 10-18
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 10-18	Survey Calculation Method:	Minimum Curvature
Wellbore:	DENVER 10-18		
Design:	DENVER 10-18 (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
Start Build 2.00									
300.0	0.00	0.00	300.0	0.0	0.0	0.0	0.00	0.00	0.00
400.0	2.00	304.20	400.0	1.0	-1.4	1.7	2.00	2.00	0.00
500.0	4.00	304.20	499.8	3.9	-5.8	7.0	2.00	2.00	0.00
600.0	6.00	304.20	599.5	8.8	-13.0	15.7	2.00	2.00	0.00
700.0	8.00	304.20	698.7	15.7	-23.1	27.9	2.00	2.00	0.00
800.0	10.00	304.20	797.5	24.5	-36.0	43.5	2.00	2.00	0.00
900.0	12.00	304.20	895.6	35.2	-51.8	62.6	2.00	2.00	0.00
9 5/8"									
966.0	13.32	304.20	960.0	43.3	-63.7	77.1	2.00	2.00	0.00
1,000.0	14.00	304.20	993.1	47.8	-70.4	85.1	2.00	2.00	0.00
1,100.0	16.00	304.20	1,089.6	62.4	-91.8	111.0	2.00	2.00	0.00
1,200.0	18.00	304.20	1,185.3	78.8	-116.0	140.2	2.00	2.00	0.00
1,300.0	20.00	304.20	1,279.8	97.1	-142.9	172.8	2.00	2.00	0.00
1,400.0	22.00	304.20	1,373.2	117.2	-172.5	208.6	2.00	2.00	0.00
1,500.0	24.00	304.20	1,465.2	139.2	-204.9	247.7	2.00	2.00	0.00
Start 2055.2 hold at 1549.9 MD									
1,549.9	25.00	304.20	1,510.6	150.8	-222.0	268.4	2.00	2.00	0.00
1,600.0	25.00	304.20	1,556.0	162.7	-239.5	289.5	0.00	0.00	0.00
1,700.0	25.00	304.20	1,646.7	186.5	-274.4	331.8	0.00	0.00	0.00
1,800.0	25.00	304.20	1,737.3	210.2	-309.4	374.1	0.00	0.00	0.00
1,900.0	25.00	304.20	1,827.9	234.0	-344.3	416.3	0.00	0.00	0.00
2,000.0	25.00	304.20	1,918.6	257.7	-379.3	458.6	0.00	0.00	0.00
2,100.0	25.00	304.20	2,009.2	281.5	-414.3	500.8	0.00	0.00	0.00
2,200.0	25.00	304.20	2,099.8	305.2	-449.2	543.1	0.00	0.00	0.00
2,300.0	25.00	304.20	2,190.5	329.0	-484.2	585.4	0.00	0.00	0.00
2,400.0	25.00	304.20	2,281.1	352.7	-519.1	627.6	0.00	0.00	0.00
2,500.0	25.00	304.20	2,371.7	376.5	-554.1	669.9	0.00	0.00	0.00
2,600.0	25.00	304.20	2,462.3	400.2	-589.0	712.1	0.00	0.00	0.00
2,700.0	25.00	304.20	2,553.0	424.0	-624.0	754.4	0.00	0.00	0.00
2,800.0	25.00	304.20	2,643.6	447.7	-658.9	796.7	0.00	0.00	0.00
2,900.0	25.00	304.20	2,734.2	471.5	-693.9	838.9	0.00	0.00	0.00
3,000.0	25.00	304.20	2,824.9	495.2	-728.8	881.2	0.00	0.00	0.00
3,100.0	25.00	304.20	2,915.5	519.0	-763.8	923.4	0.00	0.00	0.00
3,200.0	25.00	304.20	3,006.1	542.7	-798.8	965.7	0.00	0.00	0.00
3,300.0	25.00	304.20	3,096.8	566.5	-833.7	1,008.0	0.00	0.00	0.00
3,400.0	25.00	304.20	3,187.4	590.2	-868.7	1,050.2	0.00	0.00	0.00
3,500.0	25.00	304.20	3,278.0	614.0	-903.6	1,092.5	0.00	0.00	0.00
3,600.0	25.00	304.20	3,368.7	637.7	-938.6	1,134.7	0.00	0.00	0.00
Start Drop -2.00									
3,605.2	25.00	304.20	3,373.4	639.0	-940.4	1,136.9	0.00	0.00	0.00
3,700.0	23.10	304.20	3,459.9	660.7	-972.3	1,175.6	2.00	-2.00	0.00
3,800.0	21.10	304.20	3,552.6	681.8	-1,003.5	1,213.2	2.00	-2.00	0.00
3,900.0	19.10	304.20	3,646.5	701.1	-1,031.9	1,247.6	2.00	-2.00	0.00
4,000.0	17.10	304.20	3,741.5	718.6	-1,057.6	1,278.6	2.00	-2.00	0.00
4,100.0	15.10	304.20	3,837.6	734.2	-1,080.5	1,306.4	2.00	-2.00	0.00
4,200.0	13.10	304.20	3,934.6	747.9	-1,100.7	1,330.7	2.00	-2.00	0.00
PK Depth									
4,241.4	12.27	304.20	3,975.0	753.0	-1,108.2	1,339.8	2.00	-2.00	0.00
4,300.0	11.10	304.20	4,032.4	759.7	-1,118.0	1,351.7	2.00	-2.00	0.00

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Site:	WELD_Denver	North Reference:	True
Well:	DENVER 10-18	Survey Calculation Method:	Minimum Curvature
Wellbore:	DENVER 10-18		
Design:	DENVER 10-18 (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	9.10	304.20	4,130.8	769.5	-1,132.5	1,369.2	2.00	-2.00	0.00
4,500.0	7.10	304.20	4,229.8	777.4	-1,144.2	1,383.3	2.00	-2.00	0.00
4,600.0	5.10	304.20	4,329.2	783.4	-1,153.0	1,393.9	2.00	-2.00	0.00
4,700.0	3.10	304.20	4,429.0	787.4	-1,158.9	1,401.1	2.00	-2.00	0.00
4,800.0	1.10	304.20	4,528.9	789.5	-1,161.9	1,404.8	2.00	-2.00	0.00
Start 3476.0 hold at 4855.1 MD									
4,855.1	0.00	0.00	4,584.0	789.8	-1,162.4	1,405.3	2.00	-2.00	0.00
4,900.0	0.00	0.00	4,628.9	789.8	-1,162.4	1,405.3	0.00	0.00	0.00
SX Depth									
4,922.1	0.00	0.00	4,651.0	789.8	-1,162.4	1,405.3	0.00	0.00	0.00
5,000.0	0.00	0.00	4,728.9	789.8	-1,162.4	1,405.3	0.00	0.00	0.00
5,100.0	0.00	0.00	4,828.9	789.8	-1,162.4	1,405.3	0.00	0.00	0.00
5,200.0	0.00	0.00	4,928.9	789.8	-1,162.4	1,405.3	0.00	0.00	0.00
5,300.0	0.00	0.00	5,028.9	789.8	-1,162.4	1,405.3	0.00	0.00	0.00
5,400.0	0.00	0.00	5,128.9	789.8	-1,162.4	1,405.3	0.00	0.00	0.00
5,500.0	0.00	0.00	5,228.9	789.8	-1,162.4	1,405.3	0.00	0.00	0.00
5,600.0	0.00	0.00	5,328.9	789.8	-1,162.4	1,405.3	0.00	0.00	0.00
5,700.0	0.00	0.00	5,428.9	789.8	-1,162.4	1,405.3	0.00	0.00	0.00
5,800.0	0.00	0.00	5,528.9	789.8	-1,162.4	1,405.3	0.00	0.00	0.00
5,900.0	0.00	0.00	5,628.9	789.8	-1,162.4	1,405.3	0.00	0.00	0.00
6,000.0	0.00	0.00	5,728.9	789.8	-1,162.4	1,405.3	0.00	0.00	0.00
6,100.0	0.00	0.00	5,828.9	789.8	-1,162.4	1,405.3	0.00	0.00	0.00
6,200.0	0.00	0.00	5,928.9	789.8	-1,162.4	1,405.3	0.00	0.00	0.00
6,300.0	0.00	0.00	6,028.9	789.8	-1,162.4	1,405.3	0.00	0.00	0.00
6,400.0	0.00	0.00	6,128.9	789.8	-1,162.4	1,405.3	0.00	0.00	0.00
6,500.0	0.00	0.00	6,228.9	789.8	-1,162.4	1,405.3	0.00	0.00	0.00
6,600.0	0.00	0.00	6,328.9	789.8	-1,162.4	1,405.3	0.00	0.00	0.00
6,700.0	0.00	0.00	6,428.9	789.8	-1,162.4	1,405.3	0.00	0.00	0.00
6,800.0	0.00	0.00	6,528.9	789.8	-1,162.4	1,405.3	0.00	0.00	0.00
6,900.0	0.00	0.00	6,628.9	789.8	-1,162.4	1,405.3	0.00	0.00	0.00
7,000.0	0.00	0.00	6,728.9	789.8	-1,162.4	1,405.3	0.00	0.00	0.00
7,100.0	0.00	0.00	6,828.9	789.8	-1,162.4	1,405.3	0.00	0.00	0.00
7,200.0	0.00	0.00	6,928.9	789.8	-1,162.4	1,405.3	0.00	0.00	0.00
7,300.0	0.00	0.00	7,028.9	789.8	-1,162.4	1,405.3	0.00	0.00	0.00
NIO Depth									
7,386.1	0.00	0.00	7,115.0	789.8	-1,162.4	1,405.3	0.00	0.00	0.00
7,400.0	0.00	0.00	7,128.9	789.8	-1,162.4	1,405.3	0.00	0.00	0.00
7,500.0	0.00	0.00	7,228.9	789.8	-1,162.4	1,405.3	0.00	0.00	0.00
7,600.0	0.00	0.00	7,328.9	789.8	-1,162.4	1,405.3	0.00	0.00	0.00
7,700.0	0.00	0.00	7,428.9	789.8	-1,162.4	1,405.3	0.00	0.00	0.00
CD Depth									
7,746.1	0.00	0.00	7,475.0	789.8	-1,162.4	1,405.3	0.00	0.00	0.00
7,800.0	0.00	0.00	7,528.9	789.8	-1,162.4	1,405.3	0.00	0.00	0.00
GH Depth									
7,838.1	0.00	0.00	7,567.0	789.8	-1,162.4	1,405.3	0.00	0.00	0.00
7,900.0	0.00	0.00	7,628.9	789.8	-1,162.4	1,405.3	0.00	0.00	0.00
8,000.0	0.00	0.00	7,728.9	789.8	-1,162.4	1,405.3	0.00	0.00	0.00
8,100.0	0.00	0.00	7,828.9	789.8	-1,162.4	1,405.3	0.00	0.00	0.00
J Depth									
8,196.1	0.00	0.00	7,925.0	789.8	-1,162.4	1,405.3	0.00	0.00	0.00
8,200.0	0.00	0.00	7,928.9	789.8	-1,162.4	1,405.3	0.00	0.00	0.00
8,300.0	0.00	0.00	8,028.9	789.8	-1,162.4	1,405.3	0.00	0.00	0.00

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Site:	WELD_Denver	North Reference:	True
Well:	DENVER 10-18	Survey Calculation Method:	Minimum Curvature
Wellbore:	DENVER 10-18		
Design:	DENVER 10-18 (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)
TD at 8331.1 8,331.1	0.00	0.00	8,060.0	789.8	-1,162.4	1,405.3	0.00	0.00	0.00

Design Targets

Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (ft)	Easting (ft)	Latitude	Longitude
- hit/miss target - Shape DENVER 10-18 BHL - plan hits target center - Point	0.00	0.00	8,060.0	789.8	-1,162.4	1,261,556.04	3,191,048.92	40° 2' 57.631 N	104° 49' 3.202 W

Casing Points

Measured Depth (ft)	Vertical Depth (ft)	Name	Casing Diameter (")	Hole Diameter (")
966.0	960.0	9 5/8"	9-5/8	12-1/4

Formations

Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)
7,386.1	7,115.0	NIO Depth			
4,241.4	3,975.0	PK Depth			
7,838.1	7,567.0	GH Depth			
8,196.1	7,925.0	J Depth			
4,922.1	4,651.0	SX Depth			
7,746.1	7,475.0	CD Depth			

Plan Annotations

Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates +N/-S (ft)	+E/-W (ft)	Comment
300.0	300.0	0.0	0.0	Start Build 2.00
1,549.9	1,510.6	150.8	-222.0	Start 2055.2 hold at 1549.9 MD
3,605.2	3,373.4	639.0	-940.4	Start Drop -2.00
4,855.1	4,584.0	789.8	-1,162.4	Start 3476.0 hold at 4855.1 MD
8,331.1	8,060.0	789.8	-1,162.4	TD at 8331.1