

ANADARKO PETROLEUM CORP.

ANADARKO COLORADO NORTHERN ZONE NAD 83

WELD_JOHNSTOWN FARMS

Johnstown Farms 35-9

Johnstown Farms 35-9

Plan: Johnstown Farms 35-9 (wp01)

Standard Planning Report

16 February, 2011

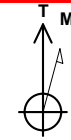


Project: ANADARKO COLORADO NORTHERN ZONE NAD 83
Site: WELD_JOHNSTOWN FARMS
Well: Johnstown Farms 35-9
Wellbore: Johnstown Farms 35-9
Design: Johnstown Farms 35-9 (wp01)
Latitude: 40° 19' 27.393 N
Longitude: 104° 54' 3.470 W
GL: 4780.0
KB: WELL @ 4780.0ft (Original Well Elev)



FORMATION TOP DETAILS

TVDPath	MDPath	Formation
3926.0	4194.6	SX
6811.0	7093.5	NIO
7135.0	7417.5	CD
7218.0	7500.5	GH



Azimuths to True North
Magnetic North: 8.99°

Magnetic Field
Strength: 53137.7snT
Dip Angle: 67.00°
Date: 9/27/2010
Model: BGGM2010

WELL DETAILS: Johnstown Farms 35-9

+N/-S	+E/-W	Northing	Ground Level: Easting	4780.0 Latitude	Longitude	Slot
0.0	0.0	1361538.74	3167022.81	40° 19' 27.393 N	104° 54' 3.470 W	

CASING DETAILS

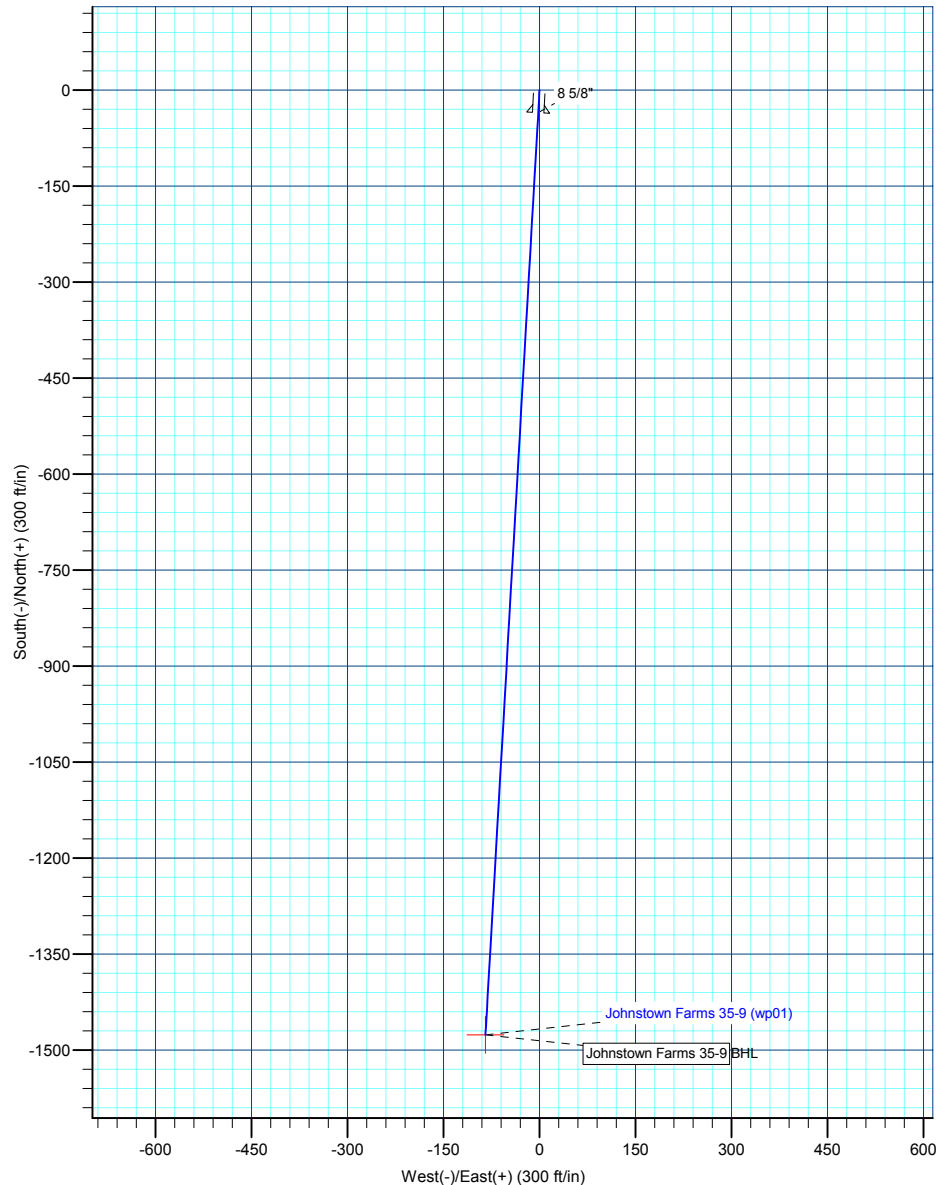
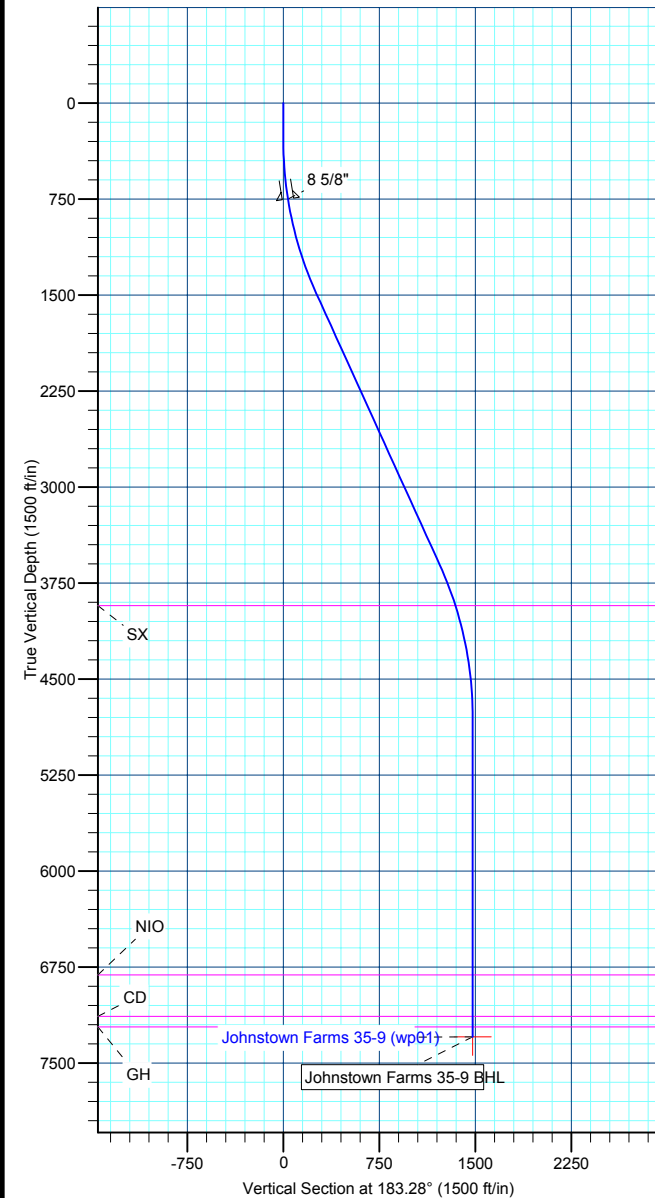
TVD	MD	Name	Size
750.0	751.9	8 5/8"	8-5/8

WELLBORE TARGET DETAILS (LAT/LONG)

Name	TVD	+N/-S	+E/-W	Latitude	Longitude	Shape Point
Johnstown Farms 35-9 BHL	7295.0	-1476.5	-84.5	40° 19' 12.803 N	104° 54' 4.561 W	

SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	DLeg	TFace	VSec	Target
1	0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.0	
2	300.0	0.00	0.00	300.0	0.0	0.0	0.00	0.00	0.0	
3	1522.0	24.44	183.28	1485.3	-256.3	-14.7	2.00	183.28	256.7	
4	3855.5	24.44	183.28	3609.7	-1220.2	-69.8	0.00	0.00	1222.2	
5	5077.5	0.00	0.00	4795.0	-1476.5	-84.5	2.00	180.00	1478.9	
6	7577.5	0.00	0.00	7295.0	-1476.5	-84.5	0.00	0.00	1478.9	Johnstown Farms 35-9 BHL



Database:	EDM 2003.21 Single User Db	Local Co-ordinate Reference:	Well Johnstown Farms 35-9
Company:	ANADARKO PETROLEUM CORP.	TVD Reference:	WELL @ 4780.0ft (Original Well Elev)
Project:	ANADARKO COLORADO NORTHERN ZONE NAD 83	MD Reference:	WELL @ 4780.0ft (Original Well Elev)
Site:	WELD_JOHNSTOWN FARMS	North Reference:	True
Well:	Johnstown Farms 35-9	Survey Calculation Method:	Minimum Curvature
Wellbore:	Johnstown Farms 35-9		
Design:	Johnstown Farms 35-9 (wp01)		

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_JOHNSTOWN FARMS			
Site Position:		Northing:	1,361,567.94 ft	Latitude:	40° 19' 27.682 N
From:	Lat/Long	Easting:	3,167,029.59ft	Longitude:	104° 54' 3.380 W
Position Uncertainty:	0.0 ft	Slot Radius:	"	Grid Convergence:	0.39 °

Well	Johnstown Farms 35-9					
Well Position	+N/-S	-29.2 ft	Northing:	1,361,538.74 ft	Latitude:	40° 19' 27.393 N
	+E/-W	-7.0 ft	Easting:	3,167,022.81 ft	Longitude:	104° 54' 3.470 W
Position Uncertainty		0.0 ft	Wellhead Elevation:	ft	Ground Level:	4,780.0 ft

Wellbore	Johnstown Farms 35-9				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	BGGM2010	9/27/2010	8.99	67.00	53,138

Design	Johnstown Farms 35-9 (wp01)			
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	183.28

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	
1,522.0	24.44	183.28	1,485.3	-256.3	-14.7	2.00	2.00	0.00	183.28	
3,855.5	24.44	183.28	3,609.7	-1,220.2	-69.8	0.00	0.00	0.00	0.00	
5,077.5	0.00	0.00	4,795.0	-1,476.5	-84.5	2.00	-2.00	0.00	180.00	
7,577.5	0.00	0.00	7,295.0	-1,476.5	-84.5	0.00	0.00	0.00	0.00	Johnstown Farms 3

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Project:	ANADARKO COLORADO NORTHERN ZONE NAD 83	MD Reference:	WELL @ 4780.0ft (Original Well Elev)
Site:	WELD_JOHNSTOWN FARMS	North Reference:	True
Well:	Johnstown Farms 35-9	Survey Calculation Method:	Minimum Curvature
Wellbore:	Johnstown Farms 35-9		
Design:	Johnstown Farms 35-9 (wp01)		

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
Start Build 2.00									
400.0	2.00	183.28	400.0	-1.7	-0.1	1.7	2.00	2.00	0.00
500.0	4.00	183.28	499.8	-7.0	-0.4	7.0	2.00	2.00	0.00
600.0	6.00	183.28	599.5	-15.7	-0.9	15.7	2.00	2.00	0.00
700.0	8.00	183.28	698.7	-27.8	-1.6	27.9	2.00	2.00	0.00
751.9	9.04	183.28	750.0	-35.5	-2.0	35.6	2.00	2.00	0.00
8 5/8"									
800.0	10.00	183.28	797.5	-43.5	-2.5	43.5	2.00	2.00	0.00
900.0	12.00	183.28	895.6	-62.5	-3.6	62.6	2.00	2.00	0.00
1,000.0	14.00	183.28	993.1	-85.0	-4.9	85.1	2.00	2.00	0.00
1,100.0	16.00	183.28	1,089.6	-110.8	-6.3	111.0	2.00	2.00	0.00
1,200.0	18.00	183.28	1,185.3	-140.0	-8.0	140.2	2.00	2.00	0.00
1,300.0	20.00	183.28	1,279.8	-172.5	-9.9	172.8	2.00	2.00	0.00
1,400.0	22.00	183.28	1,373.2	-208.3	-11.9	208.6	2.00	2.00	0.00
1,461.3	23.23	183.28	1,429.8	-231.8	-13.3	232.2	2.00	2.00	0.00
Start 2976.66 hold at 1461.35 MD									
1,500.0	24.00	183.28	1,465.2	-247.3	-14.1	247.7	2.00	2.00	0.00
1,522.0	24.44	183.28	1,485.3	-256.3	-14.7	256.7	2.00	2.00	0.00
1,600.0	24.44	183.28	1,556.3	-288.5	-16.5	289.0	0.00	0.00	0.00
1,700.0	24.44	183.28	1,647.3	-329.8	-18.9	330.3	0.00	0.00	0.00
1,800.0	24.44	183.28	1,738.4	-371.1	-21.2	371.7	0.00	0.00	0.00
1,900.0	24.44	183.28	1,829.4	-412.4	-23.6	413.1	0.00	0.00	0.00
2,000.0	24.44	183.28	1,920.4	-453.7	-26.0	454.5	0.00	0.00	0.00
2,100.0	24.44	183.28	2,011.5	-495.0	-28.3	495.8	0.00	0.00	0.00
2,200.0	24.44	183.28	2,102.5	-536.3	-30.7	537.2	0.00	0.00	0.00
2,300.0	24.44	183.28	2,193.6	-577.6	-33.1	578.6	0.00	0.00	0.00
2,400.0	24.44	183.28	2,284.6	-619.0	-35.4	620.0	0.00	0.00	0.00
2,500.0	24.44	183.28	2,375.6	-660.3	-37.8	661.3	0.00	0.00	0.00
2,600.0	24.44	183.28	2,466.7	-701.6	-40.1	702.7	0.00	0.00	0.00
2,700.0	24.44	183.28	2,557.7	-742.9	-42.5	744.1	0.00	0.00	0.00
2,800.0	24.44	183.28	2,648.8	-784.2	-44.9	785.5	0.00	0.00	0.00
2,900.0	24.44	183.28	2,739.8	-825.5	-47.2	826.8	0.00	0.00	0.00
3,000.0	24.44	183.28	2,830.8	-866.8	-49.6	868.2	0.00	0.00	0.00
3,100.0	24.44	183.28	2,921.9	-908.1	-52.0	909.6	0.00	0.00	0.00
3,200.0	24.44	183.28	3,012.9	-949.4	-54.3	951.0	0.00	0.00	0.00
3,300.0	24.44	183.28	3,104.0	-990.7	-56.7	992.3	0.00	0.00	0.00
3,400.0	24.44	183.28	3,195.0	-1,032.0	-59.1	1,033.7	0.00	0.00	0.00
3,500.0	24.44	183.28	3,286.0	-1,073.3	-61.4	1,075.1	0.00	0.00	0.00
3,600.0	24.44	183.28	3,377.1	-1,114.6	-63.8	1,116.5	0.00	0.00	0.00
3,700.0	24.44	183.28	3,468.1	-1,155.9	-66.1	1,157.8	0.00	0.00	0.00
3,800.0	24.44	183.28	3,559.2	-1,197.2	-68.5	1,199.2	0.00	0.00	0.00
3,855.5	24.44	183.28	3,609.7	-1,220.2	-69.8	1,222.2	0.00	0.00	0.00
3,900.0	23.55	183.28	3,650.3	-1,238.2	-70.9	1,240.3	2.00	-2.00	0.00
4,000.0	21.55	183.28	3,742.7	-1,276.5	-73.0	1,278.6	2.00	-2.00	0.00
4,100.0	19.55	183.28	3,836.3	-1,311.6	-75.1	1,313.7	2.00	-2.00	0.00
4,194.6	17.66	183.28	3,926.0	-1,341.7	-76.8	1,343.9	2.00	-2.00	0.00
SX									
4,200.0	17.55	183.28	3,931.1	-1,343.3	-76.9	1,345.5	2.00	-2.00	0.00
4,300.0	15.55	183.28	4,027.0	-1,371.8	-78.5	1,374.0	2.00	-2.00	0.00

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Site:	WELD_JOHNSTOWN FARMS	North Reference:	True
Well:	Johnstown Farms 35-9	Survey Calculation Method:	Minimum Curvature
Wellbore:	Johnstown Farms 35-9		
Design:	Johnstown Farms 35-9 (wp01)		

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	13.55	183.28	4,123.8	-1,396.8	-79.9	1,399.1	2.00	-2.00	0.00
4,438.0	12.79	183.28	4,160.8	-1,405.5	-80.4	1,407.8	2.00	-2.00	0.00
Start Drop -2.00									
4,500.0	11.55	183.28	4,221.4	-1,418.5	-81.2	1,420.9	2.00	-2.00	0.00
4,600.0	9.55	183.28	4,319.7	-1,436.8	-82.2	1,439.2	2.00	-2.00	0.00
4,700.0	7.55	183.28	4,418.5	-1,451.7	-83.1	1,454.0	2.00	-2.00	0.00
4,800.0	5.55	183.28	4,517.9	-1,463.1	-83.7	1,465.4	2.00	-2.00	0.00
4,900.0	3.55	183.28	4,617.6	-1,471.0	-84.2	1,473.4	2.00	-2.00	0.00
5,000.0	1.55	183.28	4,717.5	-1,475.4	-84.4	1,477.8	2.00	-2.00	0.00
5,077.5	0.00	0.00	4,795.0	-1,476.5	-84.5	1,478.9	2.00	-2.00	0.00
5,100.0	0.00	0.00	4,817.5	-1,476.5	-84.5	1,478.9	0.00	0.00	0.00
5,200.0	0.00	0.00	4,917.5	-1,476.5	-84.5	1,478.9	0.00	0.00	0.00
5,300.0	0.00	0.00	5,017.5	-1,476.5	-84.5	1,478.9	0.00	0.00	0.00
5,400.0	0.00	0.00	5,117.5	-1,476.5	-84.5	1,478.9	0.00	0.00	0.00
5,500.0	0.00	0.00	5,217.5	-1,476.5	-84.5	1,478.9	0.00	0.00	0.00
5,599.4	0.00	0.00	5,316.8	-1,476.5	-84.5	1,478.9	0.00	0.00	0.00
Start 2000.00 hold at 5599.35 MD									
5,600.0	0.00	0.00	5,317.5	-1,476.5	-84.5	1,478.9	0.00	0.00	0.00
5,700.0	0.00	0.00	5,417.5	-1,476.5	-84.5	1,478.9	0.00	0.00	0.00
5,800.0	0.00	0.00	5,517.5	-1,476.5	-84.5	1,478.9	0.00	0.00	0.00
5,900.0	0.00	0.00	5,617.5	-1,476.5	-84.5	1,478.9	0.00	0.00	0.00
6,000.0	0.00	0.00	5,717.5	-1,476.5	-84.5	1,478.9	0.00	0.00	0.00
6,100.0	0.00	0.00	5,817.5	-1,476.5	-84.5	1,478.9	0.00	0.00	0.00
6,200.0	0.00	0.00	5,917.5	-1,476.5	-84.5	1,478.9	0.00	0.00	0.00
6,300.0	0.00	0.00	6,017.5	-1,476.5	-84.5	1,478.9	0.00	0.00	0.00
6,400.0	0.00	0.00	6,117.5	-1,476.5	-84.5	1,478.9	0.00	0.00	0.00
6,500.0	0.00	0.00	6,217.5	-1,476.5	-84.5	1,478.9	0.00	0.00	0.00
6,600.0	0.00	0.00	6,317.5	-1,476.5	-84.5	1,478.9	0.00	0.00	0.00
6,700.0	0.00	0.00	6,417.5	-1,476.5	-84.5	1,478.9	0.00	0.00	0.00
6,800.0	0.00	0.00	6,517.5	-1,476.5	-84.5	1,478.9	0.00	0.00	0.00
6,900.0	0.00	0.00	6,617.5	-1,476.5	-84.5	1,478.9	0.00	0.00	0.00
7,000.0	0.00	0.00	6,717.5	-1,476.5	-84.5	1,478.9	0.00	0.00	0.00
7,093.5	0.00	0.00	6,811.0	-1,476.5	-84.5	1,478.9	0.00	0.00	0.00
NIO									
7,100.0	0.00	0.00	6,817.5	-1,476.5	-84.5	1,478.9	0.00	0.00	0.00
7,200.0	0.00	0.00	6,917.5	-1,476.5	-84.5	1,478.9	0.00	0.00	0.00
7,300.0	0.00	0.00	7,017.5	-1,476.5	-84.5	1,478.9	0.00	0.00	0.00
7,400.0	0.00	0.00	7,117.5	-1,476.5	-84.5	1,478.9	0.00	0.00	0.00
7,417.5	0.00	0.00	7,135.0	-1,476.5	-84.5	1,478.9	0.00	0.00	0.00
CD									
7,500.0	0.00	0.00	7,217.5	-1,476.5	-84.5	1,478.9	0.00	0.00	0.00
7,500.5	0.00	0.00	7,218.0	-1,476.5	-84.5	1,478.9	0.00	0.00	0.00
GH									
7,577.5	0.00	0.00	7,295.0	-1,476.5	-84.5	1,478.9	0.00	0.00	0.00
Johnstown Farms 35-9 BHL									

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Wellbore:	Johnstown Farms 35-9		
Design:	Johnstown Farms 35-9 (wp01)		

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									
Johnstown Farms 35- - plan hits target center - Point	0.00	0.00	7,295.0	-1,476.5	-84.5	1,360,061.74	3,166,948.30	40° 19' 12.803 N	104° 54' 4.561 W

Casing Points

Measured Depth (ft)	Vertical Depth (ft)	Name	Casing Diameter (")	Hole Diameter (")
751.9	750.0	8 5/8"	8-5/8	11

Formations

Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)
4,194.6	3,926.0	SX		0.00	
7,093.5	6,811.0	NIO		0.00	
7,500.5	7,218.0	GH		0.00	
7,417.5	7,135.0	CD		0.00	

Plan Annotations

Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates		Comment
		+N/-S (ft)	+E/-W (ft)	
300.0	300.0	0.0	0.0	Start Build 2.00
1,461.3	1,429.8	-231.8	-13.3	Start 2976.66 hold at 1461.35 MD
4,438.0	4,160.8	-1,405.5	-80.4	Start Drop -2.00
5,599.4	5,316.8	-1,476.5	-84.5	Start 2000.00 hold at 5599.35 MD
7,599.4				TD at 7599.35