



ANADARKO PETROLEUM CORP.

ANADARKO COLORADO NORTHERN ZONE NAD 83

WELD_Johnstown Farms

Johnstown Farms 33-9

Johnstown Farms 33-9

Plan: Johnstown Farms 33-9 (wp01)

Standard Planning Report

27 September, 2010



Johnstown Farms 33-9
ANADARKO COLORADO NORTHERN ZONE NAD 83
40° 19' 27.584 N
104° 54' 3.413 W



: Johnstown Farms 33-9 (wp01) (Johnstown Farms 33-9/Johnstown Farms 33-9)

Created By: Jason Daguitera

REFERENCE INFORMATION

Co-ordinate (N/E) Reference: Well Johnstown Farms 33-9, True North
Vertical (TVD) Reference: WELL @ 4780.00ft (Original Well Elev)
Section (VS) Reference: Slot - (0.00N, 0.00E)
Measured Depth Reference: WELL @ 4780.00ft (Original Well Elev)
Calculation Method: Minimum Curvature

WELL DETAILS: Johnstown Farms 33-9

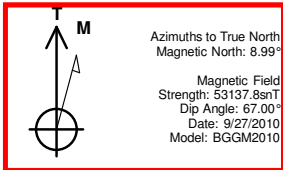
+N/-S	+E/-W	Northing	Ground Level: Easting	4780.00	Latitude	Longitude	Slot
0.00	0.00	1361558.08	3167027.14	40° 19' 27.584 N	104° 54' 3.413 W		

CASING DETAILS

TVD	MD	Name	Size
750.00	751.87	9 5/8"	9.625

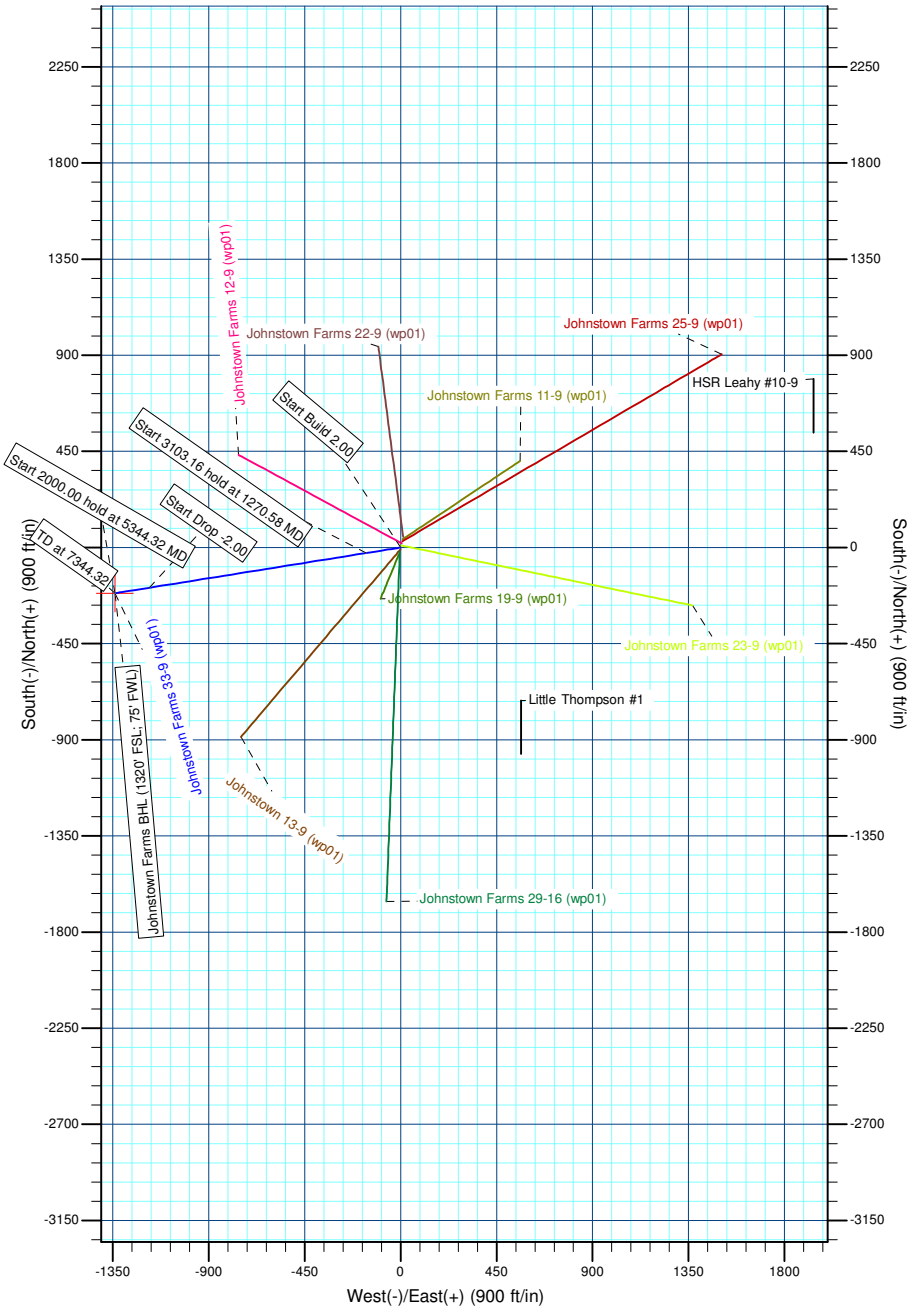
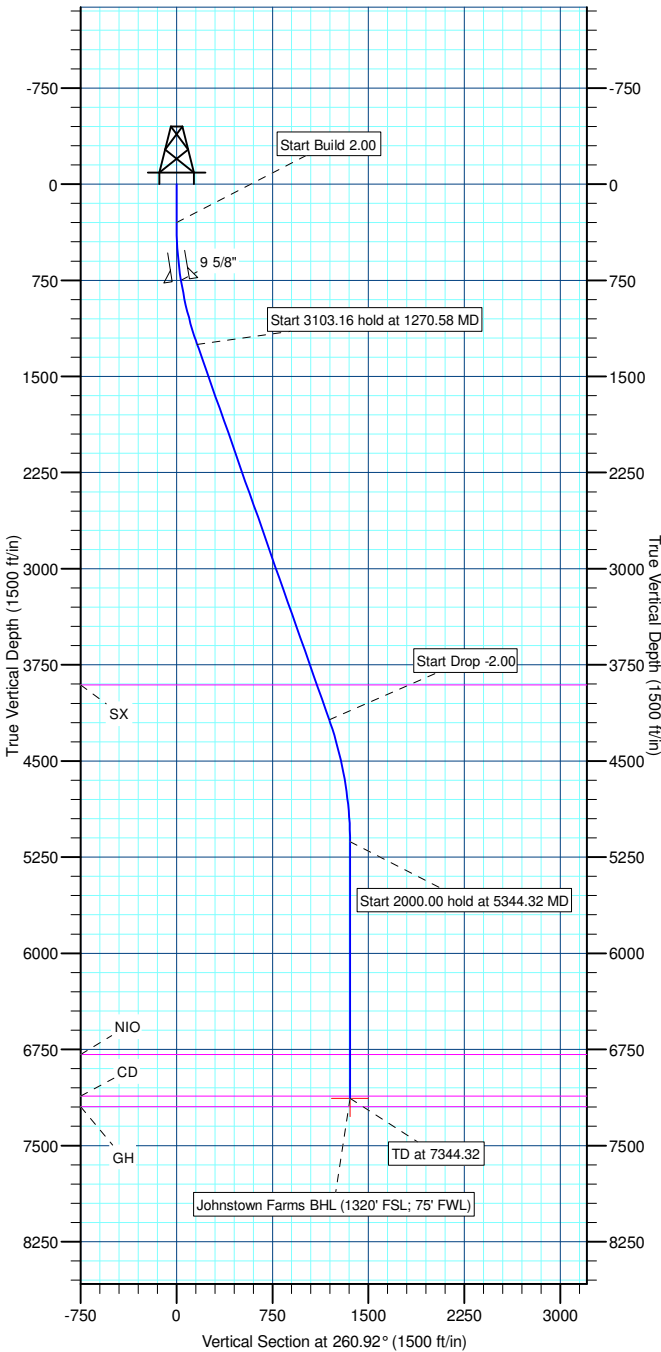
SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	DLeg	TFace	VSec	Target
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
2	300.00	0.00	0.00	300.00	0.00	0.00	0.00	0.00	0.00	
3	1270.58	19.41	260.92	1252.12	-25.70	-160.81	2.00	260.92	162.85	
4	4373.74	19.41	260.92	4178.88	-188.46	-1179.22	0.00	0.00	1194.19	
5	5344.32	0.00	0.00	5131.00	-214.16	-1340.03	2.00	180.00	1357.03	
6	7344.32	0.00	0.00	7131.00	-214.16	-1340.03	0.00	0.00	1357.03	Johnstown Farms BHL (1320' FSL; 75' FWL)



WELLBORE TARGET DETAILS (LAT/LONG)

Name	TVD	+N/-S	+E/-W	Latitude	Longitude	Shape
Johnstown Farms BHL (1320' FSL; 75' FWL)	7131.00	-214.16	-1340.03	40° 19' 25.468 N	104° 54' 20.714 W	Point



Database:	EDM 2003.21 Single User Db	Local Co-ordinate Reference:	Well Johnstown Farms 33-9
Company:	ANADARKO PETROLEUM CORP.	TVD Reference:	WELL @ 4780.00ft (Original Well Elev)
Project:	ANADARKO COLORADO NOTHERN ZONE NAD 83	MD Reference:	WELL @ 4780.00ft (Original Well Elev)
Site:	WELD_Johnstown Farms	North Reference:	True
Well:	Johnstown Farms 33-9	Survey Calculation Method:	Minimum Curvature
Wellbore:	Johnstown Farms 33-9		
Design:	Johnstown Farms 33-9 (wp01)		

Project	ANADARKO COLORADO NOTHERN 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: From: Position Uncertainty:			Lat/Long 0.00 ft			Northing:		1,361,567.94 ft		Latitude:		40° 19' 27.682 N	
						Easting:		3,167,029.59 ft		Longitude:		104° 54' 3.380 W	
						Slot Radius:		in		Grid Convergence:		0.39 °	

Well	Johnstown Farms 33-9					
Well Position	+N/-S	-9.84 ft	Northing:	1,361,558.08 ft	Latitude:	40° 19' 27.584 N
	+E/-W	-2.51ft	Easting:	3,167,027.14 ft	Longitude:	104° 54' 3.413 W
Position Uncertainty		0.00 ft	Wellhead Elevation:	ft	Ground Level:	4,780.00ft

Wellbore	Johnstown Farms 33-9				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	BGGM2010	9/27/2010	8.99	67.00	53,138

Design	Johnstown Farms 33-9 (wp01)			
Audit Notes:				
Version:	Phase:	PLAN	Tie On Depth:	0.00
Vertical Section:	Depth From (TVD) (ft)	+N/-S (ft)	+E/-W (ft)	Direction (°)
	0.00	0.00	0.00	260.92

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
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
300.00	0.00	0.00	300.00	0.00	0.00	0.00	0.00	0.00	0.00	
1,270.58	19.41	260.92	1,252.12	-25.70	-160.81	2.00	2.00	0.00	260.92	
4,373.74	19.41	260.92	4,178.88	-188.46	-1,179.22	0.00	0.00	0.00	0.00	
5,344.32	0.00	0.00	5,131.00	-214.16	-1,340.03	2.00	-2.00	0.00	180.00	
7,344.32	0.00	0.00	7,131.00	-214.16	-1,340.03	0.00	0.00	0.00	0.00	Johnstown Farms E

Database:	EDM 2003.21 Single User Db	Local Co-ordinate Reference:	Well Johnstown Farms 33-9
Company:	ANADARKO PETROLEUM CORP.	TVD Reference:	WELL @ 4780.00ft (Original Well Elev)
Project:	ANADARKO COLORADO NOTHERN ZONE NAD 83	MD Reference:	WELL @ 4780.00ft (Original Well Elev)
Site:	WELD_Johnstown Farms	North Reference:	True
Well:	Johnstown Farms 33-9	Survey Calculation Method:	Minimum Curvature
Wellbore:	Johnstown Farms 33-9		
Design:	Johnstown Farms 33-9 (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)
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
100.00	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00
200.00	0.00	0.00	200.00	0.00	0.00	0.00	0.00	0.00	0.00
Start Build 2.00									
300.00	0.00	0.00	300.00	0.00	0.00	0.00	0.00	0.00	0.00
400.00	2.00	260.92	399.98	-0.28	-1.72	1.75	2.00	2.00	0.00
500.00	4.00	260.92	499.84	-1.10	-6.89	6.98	2.00	2.00	0.00
600.00	6.00	260.92	599.45	-2.48	-15.50	15.69	2.00	2.00	0.00
700.00	8.00	260.92	698.70	-4.40	-27.53	27.88	2.00	2.00	0.00
9 5/8"									
751.87	9.04	260.92	750.00	-5.61	-35.12	35.56	2.00	2.00	0.00
800.00	10.00	260.92	797.47	-6.87	-42.98	43.52	2.00	2.00	0.00
900.00	12.00	260.92	895.62	-9.88	-61.82	62.60	2.00	2.00	0.00
1,000.00	14.00	260.92	993.06	-13.43	-84.03	85.10	2.00	2.00	0.00
1,100.00	16.00	260.92	1,089.64	-17.51	-109.59	110.98	2.00	2.00	0.00
1,200.00	18.00	260.92	1,185.27	-22.13	-138.46	140.21	2.00	2.00	0.00
Start 3103.16 hold at 1270.58 MD									
1,270.58	19.41	260.92	1,252.12	-25.70	-160.81	162.85	2.00	2.00	0.00
1,300.00	19.41	260.92	1,279.87	-27.24	-170.46	172.63	0.00	0.00	0.00
1,400.00	19.41	260.92	1,374.18	-32.49	-203.28	205.86	0.00	0.00	0.00
1,500.00	19.41	260.92	1,468.50	-37.73	-236.10	239.10	0.00	0.00	0.00
1,600.00	19.41	260.92	1,562.81	-42.98	-268.92	272.33	0.00	0.00	0.00
1,700.00	19.41	260.92	1,657.13	-48.22	-301.74	305.57	0.00	0.00	0.00
1,800.00	19.41	260.92	1,751.44	-53.47	-334.56	338.80	0.00	0.00	0.00
1,900.00	19.41	260.92	1,845.76	-58.71	-367.37	372.04	0.00	0.00	0.00
2,000.00	19.41	260.92	1,940.08	-63.96	-400.19	405.27	0.00	0.00	0.00
2,100.00	19.41	260.92	2,034.39	-69.20	-433.01	438.51	0.00	0.00	0.00
2,200.00	19.41	260.92	2,128.71	-74.45	-465.83	471.74	0.00	0.00	0.00
2,300.00	19.41	260.92	2,223.02	-79.69	-498.65	504.98	0.00	0.00	0.00
2,400.00	19.41	260.92	2,317.34	-84.94	-531.47	538.21	0.00	0.00	0.00
2,500.00	19.41	260.92	2,411.65	-90.18	-564.29	571.45	0.00	0.00	0.00
2,600.00	19.41	260.92	2,505.97	-95.43	-597.10	604.68	0.00	0.00	0.00
2,700.00	19.41	260.92	2,600.28	-100.67	-629.92	637.92	0.00	0.00	0.00
2,800.00	19.41	260.92	2,694.60	-105.92	-662.74	671.15	0.00	0.00	0.00
2,900.00	19.41	260.92	2,788.92	-111.16	-695.56	704.39	0.00	0.00	0.00
3,000.00	19.41	260.92	2,883.23	-116.41	-728.38	737.62	0.00	0.00	0.00
3,100.00	19.41	260.92	2,977.55	-121.65	-761.20	770.86	0.00	0.00	0.00
3,200.00	19.41	260.92	3,071.86	-126.90	-794.02	804.09	0.00	0.00	0.00
3,300.00	19.41	260.92	3,166.18	-132.14	-826.84	837.33	0.00	0.00	0.00
3,400.00	19.41	260.92	3,260.49	-137.39	-859.65	870.56	0.00	0.00	0.00
3,500.00	19.41	260.92	3,354.81	-142.63	-892.47	903.80	0.00	0.00	0.00
3,600.00	19.41	260.92	3,449.12	-147.88	-925.29	937.03	0.00	0.00	0.00
3,700.00	19.41	260.92	3,543.44	-153.12	-958.11	970.27	0.00	0.00	0.00
3,800.00	19.41	260.92	3,637.76	-158.37	-990.93	1,003.50	0.00	0.00	0.00
3,900.00	19.41	260.92	3,732.07	-163.61	-1,023.75	1,036.74	0.00	0.00	0.00
4,000.00	19.41	260.92	3,826.39	-168.86	-1,056.57	1,069.97	0.00	0.00	0.00
SX									
4,084.41	19.41	260.92	3,906.00	-173.28	-1,084.27	1,098.03	0.00	0.00	0.00
4,100.00	19.41	260.92	3,920.70	-174.10	-1,089.38	1,103.21	0.00	0.00	0.00
4,200.00	19.41	260.92	4,015.02	-179.35	-1,122.20	1,136.44	0.00	0.00	0.00
4,300.00	19.41	260.92	4,109.33	-184.59	-1,155.02	1,169.68	0.00	0.00	0.00
Start Drop -2.00									
4,373.74	19.41	260.92	4,178.88	-188.46	-1,179.22	1,194.19	0.00	0.00	0.00

Database:	EDM 2003.21 Single User Db	Local Co-ordinate Reference:	Well Johnstown Farms 33-9
Company:	ANADARKO PETROLEUM CORP.	TVD Reference:	WELL @ 4780.00ft (Original Well Elev)
Project:	ANADARKO COLORADO NOTHERN ZONE NAD 83	MD Reference:	WELL @ 4780.00ft (Original Well Elev)
Site:	WELD_Johnstown Farms	North Reference:	True
Well:	Johnstown Farms 33-9	Survey Calculation Method:	Minimum Curvature
Wellbore:	Johnstown Farms 33-9		
Design:	Johnstown Farms 33-9 (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)
4,400.00	18.89	260.92	4,203.69	-189.82	-1,187.73	1,202.80	2.00	-2.00	0.00
4,500.00	16.89	260.92	4,298.85	-194.67	-1,218.05	1,233.51	2.00	-2.00	0.00
4,600.00	14.89	260.92	4,395.03	-198.99	-1,245.08	1,260.88	2.00	-2.00	0.00
4,700.00	12.89	260.92	4,492.10	-202.77	-1,268.78	1,284.88	2.00	-2.00	0.00
4,800.00	10.89	260.92	4,589.95	-206.02	-1,289.12	1,305.48	2.00	-2.00	0.00
4,900.00	8.89	260.92	4,688.46	-208.73	-1,306.07	1,322.65	2.00	-2.00	0.00
5,000.00	6.89	260.92	4,787.51	-210.90	-1,319.62	1,336.37	2.00	-2.00	0.00
5,100.00	4.89	260.92	4,886.98	-212.52	-1,329.75	1,346.62	2.00	-2.00	0.00
5,200.00	2.89	260.92	4,986.74	-213.59	-1,336.44	1,353.40	2.00	-2.00	0.00
5,300.00	0.89	260.92	5,086.68	-214.10	-1,339.69	1,356.69	2.00	-2.00	0.00
Start 2000.00 hold at 5344.32 MD									
5,344.32	0.00	0.00	5,131.00	-214.16	-1,340.03	1,357.03	2.00	-2.00	0.00
5,400.00	0.00	0.00	5,186.68	-214.16	-1,340.03	1,357.03	0.00	0.00	0.00
5,500.00	0.00	0.00	5,286.68	-214.16	-1,340.03	1,357.03	0.00	0.00	0.00
5,600.00	0.00	0.00	5,386.68	-214.16	-1,340.03	1,357.03	0.00	0.00	0.00
5,700.00	0.00	0.00	5,486.68	-214.16	-1,340.03	1,357.03	0.00	0.00	0.00
5,800.00	0.00	0.00	5,586.68	-214.16	-1,340.03	1,357.03	0.00	0.00	0.00
5,900.00	0.00	0.00	5,686.68	-214.16	-1,340.03	1,357.03	0.00	0.00	0.00
6,000.00	0.00	0.00	5,786.68	-214.16	-1,340.03	1,357.03	0.00	0.00	0.00
6,100.00	0.00	0.00	5,886.68	-214.16	-1,340.03	1,357.03	0.00	0.00	0.00
6,200.00	0.00	0.00	5,986.68	-214.16	-1,340.03	1,357.03	0.00	0.00	0.00
6,300.00	0.00	0.00	6,086.68	-214.16	-1,340.03	1,357.03	0.00	0.00	0.00
6,400.00	0.00	0.00	6,186.68	-214.16	-1,340.03	1,357.03	0.00	0.00	0.00
6,500.00	0.00	0.00	6,286.68	-214.16	-1,340.03	1,357.03	0.00	0.00	0.00
6,600.00	0.00	0.00	6,386.68	-214.16	-1,340.03	1,357.03	0.00	0.00	0.00
6,700.00	0.00	0.00	6,486.68	-214.16	-1,340.03	1,357.03	0.00	0.00	0.00
6,800.00	0.00	0.00	6,586.68	-214.16	-1,340.03	1,357.03	0.00	0.00	0.00
6,900.00	0.00	0.00	6,686.68	-214.16	-1,340.03	1,357.03	0.00	0.00	0.00
7,000.00	0.00	0.00	6,786.68	-214.16	-1,340.03	1,357.03	0.00	0.00	0.00
NIO									
7,004.32	0.00	0.00	6,791.00	-214.16	-1,340.03	1,357.03	0.00	0.00	0.00
7,100.00	0.00	0.00	6,886.68	-214.16	-1,340.03	1,357.03	0.00	0.00	0.00
7,200.00	0.00	0.00	6,986.68	-214.16	-1,340.03	1,357.03	0.00	0.00	0.00
7,300.00	0.00	0.00	7,086.68	-214.16	-1,340.03	1,357.03	0.00	0.00	0.00
CD									
7,328.32	0.00	0.00	7,115.00	-214.16	-1,340.03	1,357.03	0.00	0.00	0.00
TD at 7344.32									
7,344.32	0.00	0.00	7,131.00	-214.16	-1,340.03	1,357.03	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
Johnstown Farms BH	0.00	0.00	7,131.00	-214.16	-1,340.03	1,361,334.87	3,165,688.60	40° 19' 25.468 N	104° 54' 20.714 W
- hit/miss target									
- Shape									
- Point									

Database:	EDM 2003.21 Single User Db	Local Co-ordinate Reference:	Well Johnstown Farms 33-9
Company:	ANADARKO PETROLEUM CORP.	TVD Reference:	WELL @ 4780.00ft (Original Well Elev)
Project:	ANADARKO COLORADO NOTHERN ZONE NAD 83	MD Reference:	WELL @ 4780.00ft (Original Well Elev)
Site:	WELD_Johnstown Farms	North Reference:	True
Well:	Johnstown Farms 33-9	Survey Calculation Method:	Minimum Curvature
Wellbore:	Johnstown Farms 33-9		
Design:	Johnstown Farms 33-9 (wp01)		

Casing Points

Measured Depth (ft)	Vertical Depth (ft)	Name	Casing Diameter (in)	Hole Diameter (in)
751.87	750.00	9 5/8"	9.625	12.250

Formations

Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)
7,004.32	6,791.00	NIO		0.00	
7,328.32	7,115.00	CD		0.00	
4,084.41	3,906.00	SX		0.00	
	7,198.00	GH		0.00	

Plan Annotations

Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates		Comment
		+N/-S (ft)	+E/-W (ft)	
300.00	300.00	0.00	0.00	Start Build 2.00
1,270.58	1,252.12	-25.70	-160.81	Start 3103.16 hold at 1270.58 MD
4,373.74	4,178.88	-188.46	-1,179.22	Start Drop -2.00
5,344.32	5,131.00	-214.16	-1,340.03	Start 2000.00 hold at 5344.32 MD
7,344.32	7,131.00	-214.16	-1,340.03	TD at 7344.32



ANADARKO PETROLEUM CORP.

**ANADARKO COLORADO NOTHERN ZONE NAD 83
WELD_Johnstown Farms
Johnstown Farms 33-9**

**Johnstown Farms 33-9
Johnstown Farms 33-9 (wp01)**

Anticollision Summary Report

27 September, 2010



Company:	ANADARKO PETROLEUM CORP.	Local Co-ordinate Reference:	Well Johnstown Farms 33-9
Project:	ANADARKO COLORADO NOTHERN ZONE NAD 83	TVD Reference:	WELL @ 4780.00ft (Original Well Elev)
Reference Site:	WELD_Johnstown Farms	MD Reference:	WELL @ 4780.00ft (Original Well Elev)
Site Error:	0.00ft	North Reference:	True
Reference Well:	Johnstown Farms 33-9	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00ft	Output errors are at	2.00 sigma
Reference Wellbore	Johnstown Farms 33-9	Database:	EDM 2003.21 Single User Db
Reference Design:	Johnstown Farms 33-9 (wp01)	Offset TVD Reference:	Offset Datum

Reference	Johnstown Farms 33-9 (wp01)		
Filter type:	NO GLOBAL FILTER: Using user defined selection & filtering criteria		
Interpolation Method:	MD Interval 100.00ft	Error Model:	ISCWSA
Depth Range:	Unlimited	Scan Method:	Closest Approach 3D
Results Limited by:	Maximum center-center distance of 1,300.79ft	Error Surface:	Elliptical Conic
Warning Levels Evaluated at:	2.00 Sigma		

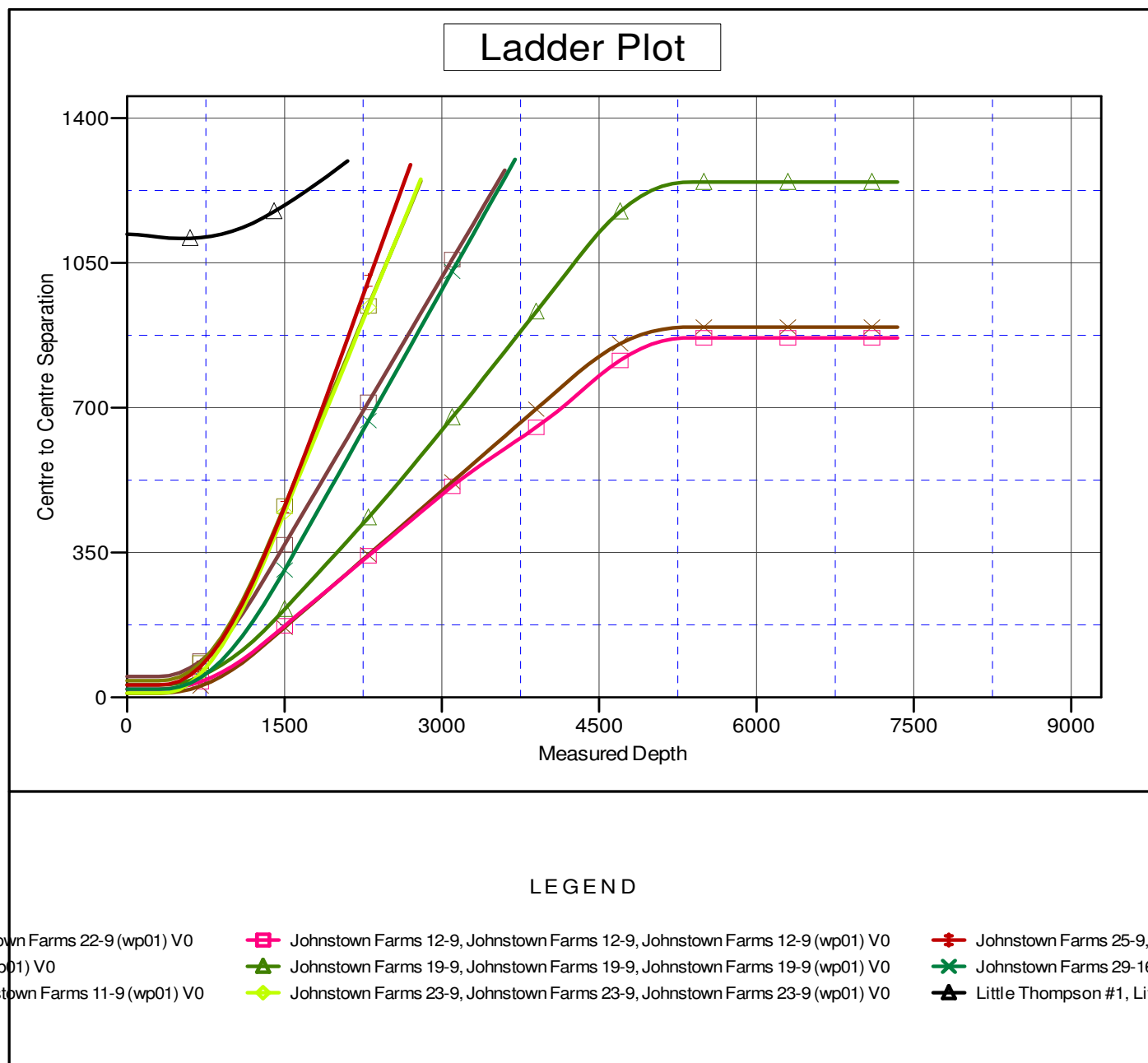
Survey Tool Program	Date 9/27/2010			
From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description
0.00	7,344.32	Johnstown Farms 33-9 (wp01) (Johnstowr	MWD	MWD - Standard

Summary						
Site Name	Reference Measured Depth (ft)	Offset Measured Depth (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Separation Factor	Warning
Offset Well - Wellbore - Design						
WELD_Johnstown Farms						
HSR-Leahy #10-9 - HSR Leahy #10-9 - HSR Leahy #10-9						Out of range
Johnston Farms 22-9 - Johnstown Farms 22-9 - Johnst	300.00	300.00	50.20	49.08	44.669 CC, ES	
Johnstown 13-9 - Johnstown 13-9 - Johnstown 13-9 (wpC	300.00	300.00	10.09	8.96	8.974 CC, ES	
Johnstown Farms 11-9 - Johnstown Farms 11-9 - Johnst	300.00	300.00	40.12	38.99	35.695 CC, ES	
Johnstown Farms 12-9 - Johnstown Farms 12-9 - Johnst	300.00	300.00	20.23	19.11	18.005 CC, ES	
Johnstown Farms 19-9 - Johnstown Farms 19-9 - Johnst	300.00	300.00	29.97	28.84	26.664 CC, ES	
Johnstown Farms 23-9 - Johnstown Farms 23-9 - Johnst	300.00	300.00	10.15	9.03	9.032 CC, ES	
Johnstown Farms 25-9 - Johnstown Farms 25-9 - Johnst	300.00	300.00	29.95	28.83	26.649 CC, ES	
Johnstown Farms 29-16 - Johnstown Farms 29-16 - Johi	300.00	300.00	19.82	18.70	17.636 CC, ES	
Johnstown 13-9 - Johnstown 13-9 - Johnstown 13-9 (wpC	400.00	399.67	11.01	9.47	7.155 SF	
Johnstown Farms 23-9 - Johnstown Farms 23-9 - Johnst	400.00	399.87	11.43	9.88	7.377 SF	
Johnstown Farms 11-9 - Johnstown Farms 11-9 - Johnst	500.00	497.06	49.14	47.13	24.539 SF	
Johnstown Farms 25-9 - Johnstown Farms 25-9 - Johnst	500.00	497.64	39.10	37.10	19.517 SF	
Johnstown Farms 29-16 - Johnstown Farms 29-16 - Johi	500.00	498.27	25.22	23.27	12.955 SF	
Little Thompson #1 - Little Thompson #1 - Little Thompsc	527.80	560.97	1,109.34	1,107.12	501.070 CC, ES	
Johnston Farms 22-9 - Johnstown Farms 22-9 - Johnsto	600.00	593.55	71.14	68.65	28.605 SF	
Johnstown Farms 12-9 - Johnstown Farms 12-9 - Johnst	600.00	599.12	30.30	27.81	12.202 SF	
Johnstown Farms 19-9 - Johnstown Farms 19-9 - Johnst	600.00	596.18	41.05	38.65	17.073 SF	
Little Thompson #1 - Little Thompson #1 - Little Thompsc	2,100.00	2,064.52	1,297.06	1,284.08	99.922 SF	

Company:	ANADARKO PETROLEUM CORP.	Local Co-ordinate Reference:	Well Johnstown Farms 33-9
Project:	ANADARKO COLORADO NOTHERN ZONE NAD 83	TVD Reference:	WELL @ 4780.00ft (Original Well Elev)
Reference Site:	WELD_Johnstown Farms	MD Reference:	WELL @ 4780.00ft (Original Well Elev)
Site Error:	0.00ft	North Reference:	True
Reference Well:	Johnstown Farms 33-9	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00ft	Output errors are at	2.00 sigma
Reference Wellbore	Johnstown Farms 33-9	Database:	EDM 2003.21 Single User Db
Reference Design:	Johnstown Farms 33-9 (wp01)	Offset TVD Reference:	Offset Datum

Reference Depths are relative to WELL @ 4780.00ft (Original Well Ele
Offset Depths are relative to Offset Datum
Central Meridian is 105° 30' 0.000 W °

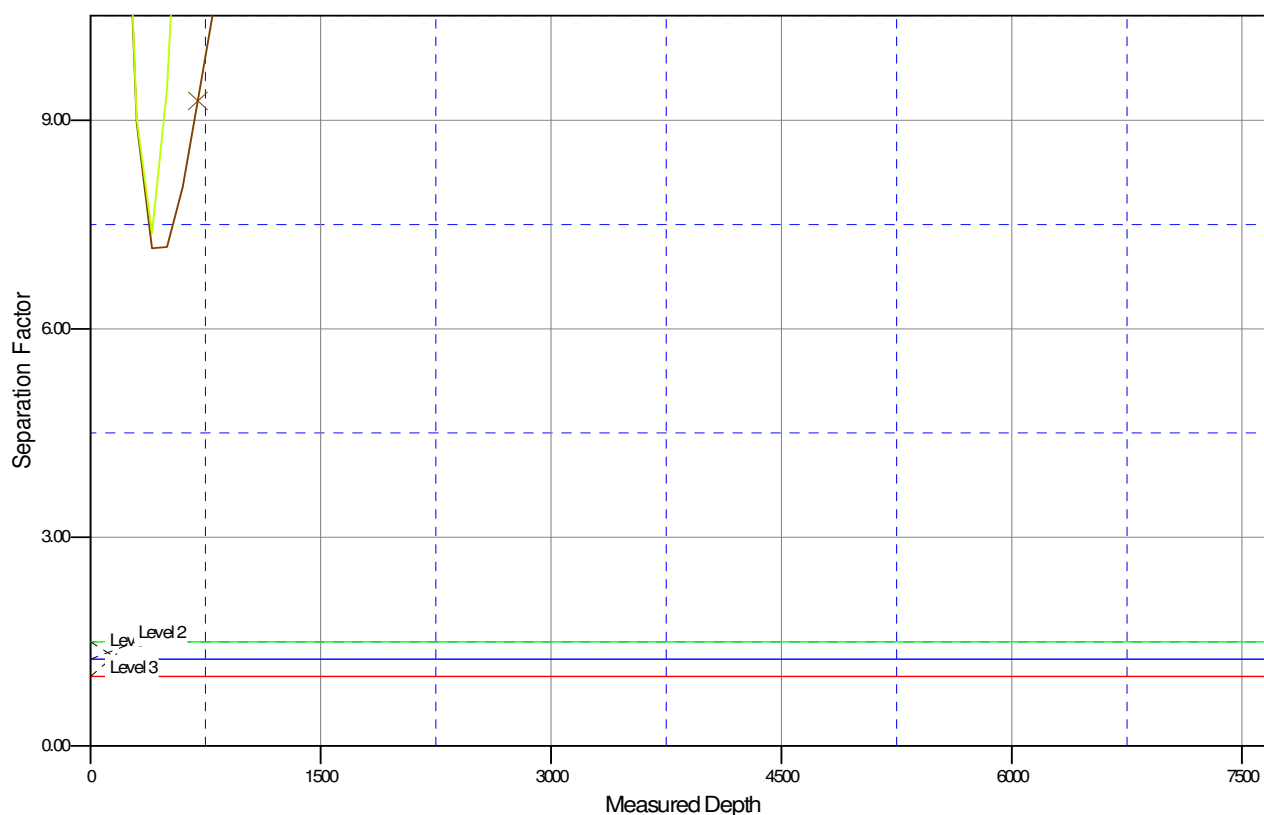
Coordinates are relative to: Johnstown Farms 33-9
Coordinate System is US State Plane 1983, Colorado Northern Zone
Grid Convergence at Surface is: 0.39°



Company:	ANADARKO PETROLEUM CORP.	Local Co-ordinate Reference:	Well Johnstown Farms 33-9
Project:	ANADARKO COLORADO NORTHERN ZONE NAD 83	TVD Reference:	WELL @ 4780.00ft (Original Well Elev)
Reference Site:	WELD_Johnstown Farms	MD Reference:	WELL @ 4780.00ft (Original Well Elev)
Site Error:	0.00ft	North Reference:	True
Reference Well:	Johnstown Farms 33-9	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00ft	Output errors are at	2.00 sigma
Reference Wellbore	Johnstown Farms 33-9	Database:	EDM 2003.21 Single User Db
Reference Design:	Johnstown Farms 33-9 (wp01)	Offset TVD Reference:	Offset Datum

Reference Depths are relative to WELL @ 4780.00ft (Original Well Ele Coordinates are relative to: Johnstown Farms 33-9
Offset Depths are relative to Offset Datum Coordinate System is US State Plane 1983, Colorado Northern Zone
Central Meridian is 105° 30' 0.000 W ° Grid Convergence at Surface is: 0.39°

Separation Factor Plot



LEGEND

Johnstown Farms 22-9 (wp01) V0	Johnstown Farms 12-9, Johnstown Farms 12-9, Johnstown Farms 12-9 (wp01) V0	Johnstown Farms 25-9, Johnstown Farms 25-9, Johnstown Farms 25-9 (wp01) V0
Johnstown Farms 19-9 (wp01) V0	Johnstown Farms 19-9, Johnstown Farms 19-9, Johnstown Farms 19-9 (wp01) V0	Johnstown Farms 29-16, Johnstown Farms 29-16, Johnstown Farms 29-16 (wp01) V0
Johnstown Farms 11-9 (wp01) V0	Johnstown Farms 23-9, Johnstown Farms 23-9, Johnstown Farms 23-9 (wp01) V0	Little Thompson #1, Little Thompson #1, Little Thompson #1 (wp01) V0