



ANADARKO PETROLEUM CORP.

ANADARKO COLORADO NORTHERN ZONE NAD 83

WELD_Johnstown Farms

Johnstown Farms 12-9

Johnstown Farms 12-9

Plan: Johnstown Farms 12-9 (wp01)

Standard Planning Report

27 September, 2010



Johnstown Farms 12-9
ANADARKO COLORADO NORTHERN ZONE NAD 83
40° 19' 27.779 N
104° 54' 3.352 W



Johnstown Farms 12-9 (wp01) (Johnstown Farms 12-9/Johnstown Farms 12-9)

Created By: Jason Daguitera

REFERENCE INFORMATION

Co-ordinate (N/E) Reference: Well Johnstown Farms 12-9, 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 12-9

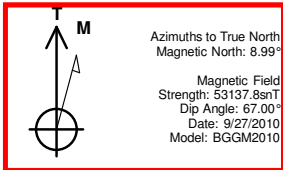
+N/-S	+E/-W	Northing	Ground Level: Easting	4780.00 Latitude	Longitude	Slot
0.00	0.00	1361577.78	3167031.75	40° 19' 27.779 N	104° 54' 3.352 W	

CASING DETAILS

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

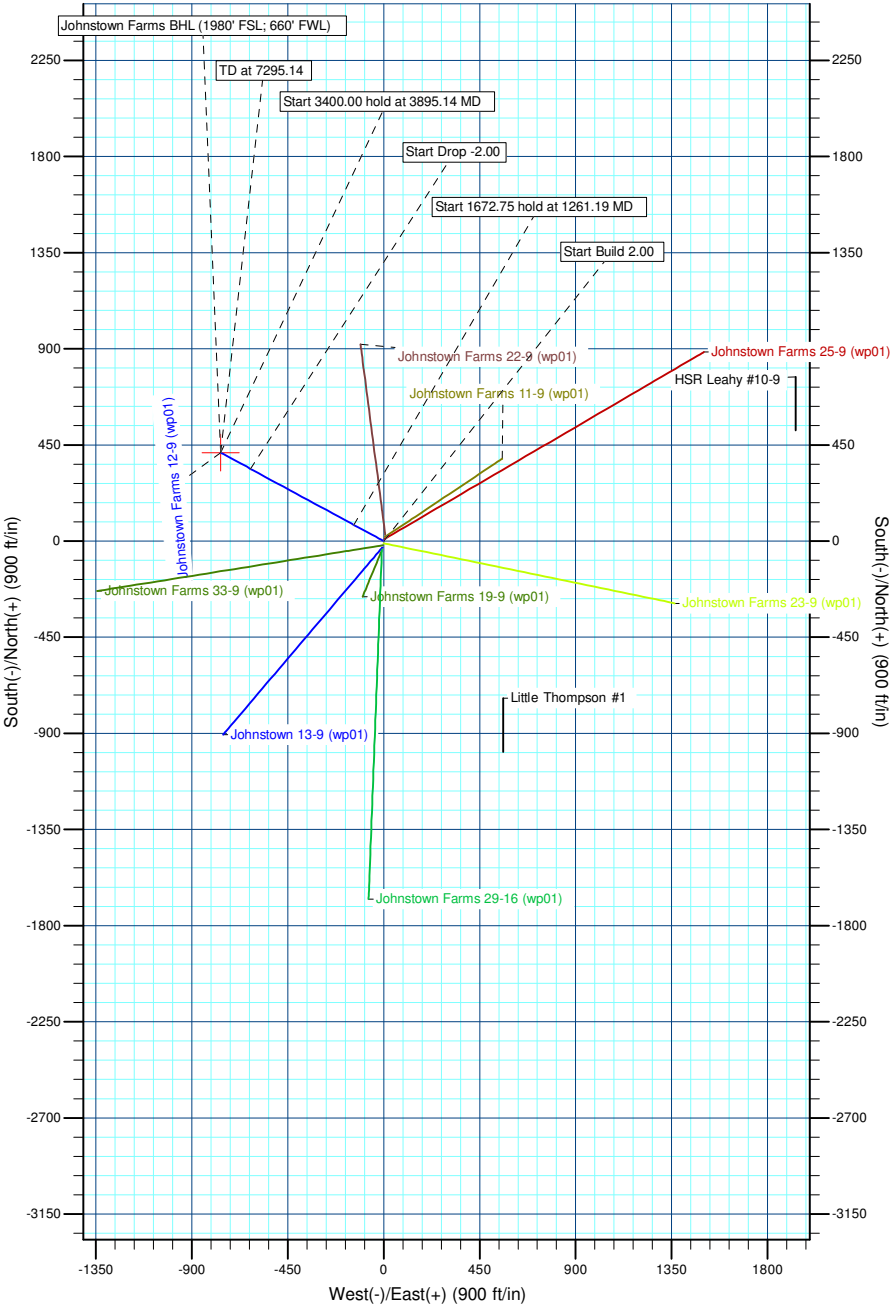
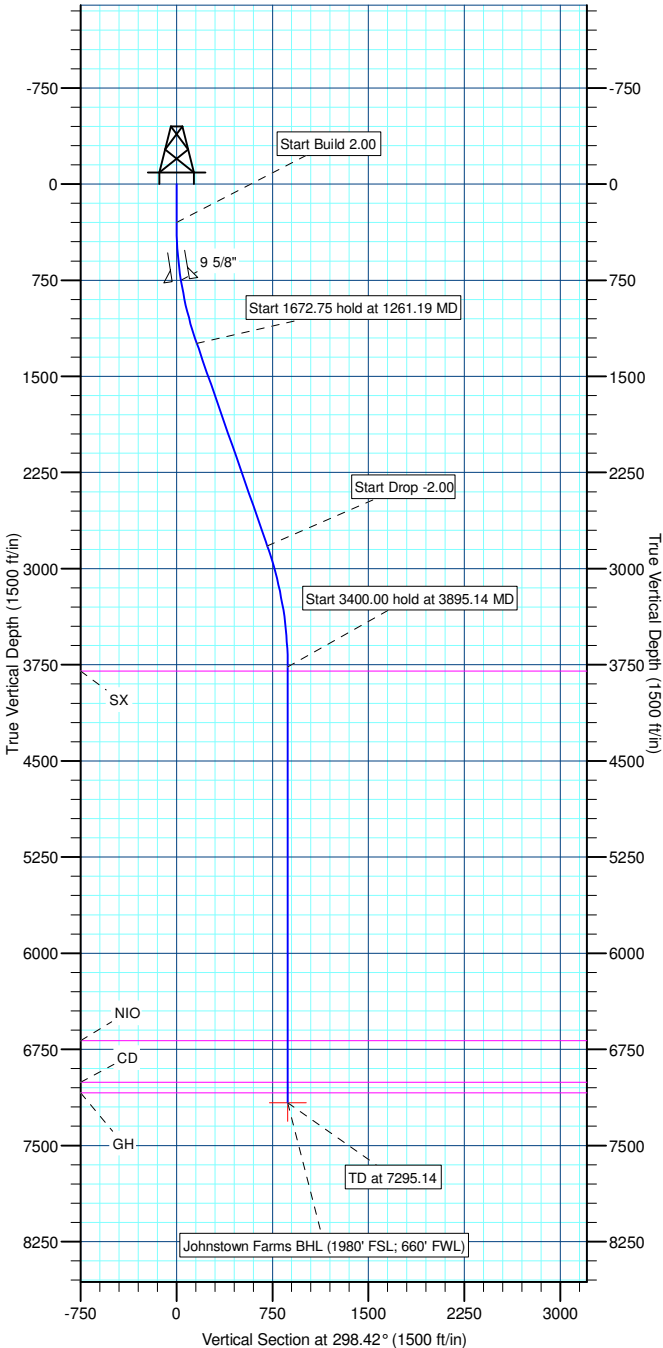
SECTION DETAILS

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	1261.19	19.22	298.42	1243.26	76.03	-140.49	2.00	298.42	159.74	
4	2933.95	19.22	298.42	2822.74	338.19	-624.87	0.00	0.00	710.51	
5	3895.14	0.00	0.00	3766.00	414.22	-765.35	2.00	180.00	870.25	
6	7295.14	0.00	0.00	7166.00	414.22	-765.35	0.00	0.00	870.25	Johnstown Farms BHL (1980' FSL; 660' FWL)



WELLBORE TARGET DETAILS (LAT/LONG)

Name	TVD	+N/-S	+E/-W	Latitude	Longitude	Shape
Johnstown Farms BHL (1980' FSL; 660' FWL)	7166.00	414.22	-765.35	40° 19' 31.872 N	104° 54' 13.234 W	Point



Database:	EDM 2003.21 Single User Db	Local Co-ordinate Reference:	Well Johnstown Farms 12-9
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 12-9	Survey Calculation Method:	Minimum Curvature
Wellbore:	Johnstown Farms 12-9		
Design:	Johnstown Farms 12-9 (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:		Northing:	1,361,567.94 ft
From:	Lat/Long	Easting:	3,167,029.59 ft
Position Uncertainty:	0.00 ft	Slot Radius:	in
		Latitude:	40° 19' 27.682 N
		Longitude:	104° 54' 3.380 W
		Grid Convergence:	0.39 °

Well	Johnstown Farms 12-9		
Well Position	+N/-S	9.83 ft	Northing:
	+E/-W	2.23 ft	Easting:
Position Uncertainty		0.00 ft	Wellhead Elevation:
			Latitude:
			Longitude:
			Ground Level:

Wellbore	Johnstown Farms 12-9				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	BGGM2010	9/27/2010	8.99	67.00	53,138

Design	Johnstown Farms 12-9 (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	298.42

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	
1,261.19	19.22	298.42	1,243.26	76.03	-140.49	2.00	2.00	0.00	298.42	
2,933.95	19.22	298.42	2,822.74	338.19	-624.87	0.00	0.00	0.00	0.00	
3,895.14	0.00	0.00	3,766.00	414.22	-765.35	2.00	-2.00	0.00	180.00	
7,295.14	0.00	0.00	7,166.00	414.22	-765.35	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 12-9
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 12-9	Survey Calculation Method:	Minimum Curvature
Wellbore:	Johnstown Farms 12-9		
Design:	Johnstown Farms 12-9 (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	298.42	399.98	0.83	-1.53	1.75	2.00	2.00	0.00	
500.00	4.00	298.42	499.84	3.32	-6.14	6.98	2.00	2.00	0.00	
600.00	6.00	298.42	599.45	7.47	-13.80	15.69	2.00	2.00	0.00	
700.00	8.00	298.42	698.70	13.27	-24.52	27.88	2.00	2.00	0.00	
9 5/8"										
751.87	9.04	298.42	750.00	16.93	-31.28	35.56	2.00	2.00	0.00	
800.00	10.00	298.42	797.47	20.72	-38.28	43.52	2.00	2.00	0.00	
900.00	12.00	298.42	895.62	29.80	-55.06	62.60	2.00	2.00	0.00	
1,000.00	14.00	298.42	993.06	40.50	-74.84	85.10	2.00	2.00	0.00	
1,100.00	16.00	298.42	1,089.64	52.82	-97.60	110.98	2.00	2.00	0.00	
1,200.00	18.00	298.42	1,185.27	66.74	-123.31	140.21	2.00	2.00	0.00	
Start 1672.75 hold at 1261.19 MD										
1,261.19	19.22	298.42	1,243.26	76.03	-140.49	159.74	2.00	2.00	0.00	
1,300.00	19.22	298.42	1,279.90	82.12	-151.72	172.52	0.00	0.00	0.00	
1,400.00	19.22	298.42	1,374.33	97.79	-180.68	205.45	0.00	0.00	0.00	
1,500.00	19.22	298.42	1,468.75	113.46	-209.64	238.37	0.00	0.00	0.00	
1,600.00	19.22	298.42	1,563.18	129.13	-238.59	271.30	0.00	0.00	0.00	
1,700.00	19.22	298.42	1,657.60	144.80	-267.55	304.22	0.00	0.00	0.00	
1,800.00	19.22	298.42	1,752.02	160.48	-296.51	337.15	0.00	0.00	0.00	
1,900.00	19.22	298.42	1,846.45	176.15	-325.47	370.08	0.00	0.00	0.00	
2,000.00	19.22	298.42	1,940.87	191.82	-354.42	403.00	0.00	0.00	0.00	
2,100.00	19.22	298.42	2,035.29	207.49	-383.38	435.93	0.00	0.00	0.00	
2,200.00	19.22	298.42	2,129.72	223.16	-412.34	468.85	0.00	0.00	0.00	
2,300.00	19.22	298.42	2,224.14	238.83	-441.29	501.78	0.00	0.00	0.00	
2,400.00	19.22	298.42	2,318.57	254.51	-470.25	534.71	0.00	0.00	0.00	
2,500.00	19.22	298.42	2,412.99	270.18	-499.21	567.63	0.00	0.00	0.00	
2,600.00	19.22	298.42	2,507.41	285.85	-528.16	600.56	0.00	0.00	0.00	
2,700.00	19.22	298.42	2,601.84	301.52	-557.12	633.48	0.00	0.00	0.00	
2,800.00	19.22	298.42	2,696.26	317.19	-586.08	666.41	0.00	0.00	0.00	
2,900.00	19.22	298.42	2,790.69	332.87	-615.04	699.33	0.00	0.00	0.00	
Start Drop -2.00										
2,933.95	19.22	298.42	2,822.74	338.19	-624.87	710.51	0.00	0.00	0.00	
3,000.00	17.90	298.42	2,885.36	348.20	-643.36	731.54	2.00	-2.00	0.00	
3,100.00	15.90	298.42	2,981.03	362.03	-668.93	760.61	2.00	-2.00	0.00	
3,200.00	13.90	298.42	3,077.66	374.27	-691.54	786.33	2.00	-2.00	0.00	
3,300.00	11.90	298.42	3,175.13	384.90	-711.18	808.66	2.00	-2.00	0.00	
3,400.00	9.90	298.42	3,273.32	393.90	-727.81	827.57	2.00	-2.00	0.00	
3,500.00	7.90	298.42	3,372.11	401.27	-741.42	843.05	2.00	-2.00	0.00	
3,600.00	5.90	298.42	3,471.38	406.99	-751.99	855.06	2.00	-2.00	0.00	
3,700.00	3.90	298.42	3,571.01	411.06	-759.51	863.61	2.00	-2.00	0.00	
3,800.00	1.90	298.42	3,670.88	413.47	-763.96	868.67	2.00	-2.00	0.00	
Start 3400.00 hold at 3895.14 MD										
3,895.14	0.00	0.00	3,766.00	414.22	-765.35	870.25	2.00	-2.00	0.00	
3,900.00	0.00	0.00	3,770.86	414.22	-765.35	870.25	0.00	0.00	0.00	
SX										
3,926.14	0.00	0.00	3,797.00	414.22	-765.35	870.25	0.00	0.00	0.00	
4,000.00	0.00	0.00	3,870.86	414.22	-765.35	870.25	0.00	0.00	0.00	

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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 12-9	Survey Calculation Method:	Minimum Curvature
Wellbore:	Johnstown Farms 12-9		
Design:	Johnstown Farms 12-9 (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)
4,100.00	0.00	0.00	3,970.86	414.22	-765.35	870.25	0.00	0.00	0.00
4,200.00	0.00	0.00	4,070.86	414.22	-765.35	870.25	0.00	0.00	0.00
4,300.00	0.00	0.00	4,170.86	414.22	-765.35	870.25	0.00	0.00	0.00
4,400.00	0.00	0.00	4,270.86	414.22	-765.35	870.25	0.00	0.00	0.00
4,500.00	0.00	0.00	4,370.86	414.22	-765.35	870.25	0.00	0.00	0.00
4,600.00	0.00	0.00	4,470.86	414.22	-765.35	870.25	0.00	0.00	0.00
4,700.00	0.00	0.00	4,570.86	414.22	-765.35	870.25	0.00	0.00	0.00
4,800.00	0.00	0.00	4,670.86	414.22	-765.35	870.25	0.00	0.00	0.00
4,900.00	0.00	0.00	4,770.86	414.22	-765.35	870.25	0.00	0.00	0.00
5,000.00	0.00	0.00	4,870.86	414.22	-765.35	870.25	0.00	0.00	0.00
5,100.00	0.00	0.00	4,970.86	414.22	-765.35	870.25	0.00	0.00	0.00
5,200.00	0.00	0.00	5,070.86	414.22	-765.35	870.25	0.00	0.00	0.00
5,300.00	0.00	0.00	5,170.86	414.22	-765.35	870.25	0.00	0.00	0.00
5,400.00	0.00	0.00	5,270.86	414.22	-765.35	870.25	0.00	0.00	0.00
5,500.00	0.00	0.00	5,370.86	414.22	-765.35	870.25	0.00	0.00	0.00
5,600.00	0.00	0.00	5,470.86	414.22	-765.35	870.25	0.00	0.00	0.00
5,700.00	0.00	0.00	5,570.86	414.22	-765.35	870.25	0.00	0.00	0.00
5,800.00	0.00	0.00	5,670.86	414.22	-765.35	870.25	0.00	0.00	0.00
5,900.00	0.00	0.00	5,770.86	414.22	-765.35	870.25	0.00	0.00	0.00
6,000.00	0.00	0.00	5,870.86	414.22	-765.35	870.25	0.00	0.00	0.00
6,100.00	0.00	0.00	5,970.86	414.22	-765.35	870.25	0.00	0.00	0.00
6,200.00	0.00	0.00	6,070.86	414.22	-765.35	870.25	0.00	0.00	0.00
6,300.00	0.00	0.00	6,170.86	414.22	-765.35	870.25	0.00	0.00	0.00
6,400.00	0.00	0.00	6,270.86	414.22	-765.35	870.25	0.00	0.00	0.00
6,500.00	0.00	0.00	6,370.86	414.22	-765.35	870.25	0.00	0.00	0.00
6,600.00	0.00	0.00	6,470.86	414.22	-765.35	870.25	0.00	0.00	0.00
6,700.00	0.00	0.00	6,570.86	414.22	-765.35	870.25	0.00	0.00	0.00
6,800.00	0.00	0.00	6,670.86	414.22	-765.35	870.25	0.00	0.00	0.00
NIO									
6,811.14	0.00	0.00	6,682.00	414.22	-765.35	870.25	0.00	0.00	0.00
6,900.00	0.00	0.00	6,770.86	414.22	-765.35	870.25	0.00	0.00	0.00
7,000.00	0.00	0.00	6,870.86	414.22	-765.35	870.25	0.00	0.00	0.00
7,100.00	0.00	0.00	6,970.86	414.22	-765.35	870.25	0.00	0.00	0.00
CD									
7,135.14	0.00	0.00	7,006.00	414.22	-765.35	870.25	0.00	0.00	0.00
7,200.00	0.00	0.00	7,070.86	414.22	-765.35	870.25	0.00	0.00	0.00
GH									
7,218.14	0.00	0.00	7,089.00	414.22	-765.35	870.25	0.00	0.00	0.00
TD at 7295.14									
7,295.14	0.00	0.00	7,166.00	414.22	-765.35	870.25	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	7,166.00	414.22	-765.35	1,361,986.82	3,166,263.62	40° 19' 31.872 N	104° 54' 13.234 W
- hit/miss target									
- Shape									
- plan hits target center									
- Point									

Database:	EDM 2003.21 Single User Db	Local Co-ordinate Reference:	Well Johnstown Farms 12-9
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 12-9	Survey Calculation Method:	Minimum Curvature
Wellbore:	Johnstown Farms 12-9		
Design:	Johnstown Farms 12-9 (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 (°)
3,926.14	3,797.00	SX		0.00	
7,135.14	7,006.00	CD		0.00	
6,811.14	6,682.00	NIO		0.00	
7,218.14	7,089.00	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
1,261.19	1,243.26	76.03	-140.49	Start 1672.75 hold at 1261.19 MD
2,933.95	2,822.74	338.19	-624.87	Start Drop -2.00
3,895.14	3,766.00	414.22	-765.35	Start 3400.00 hold at 3895.14 MD
7,295.14	7,166.00	414.22	-765.35	TD at 7295.14



ANADARKO PETROLEUM CORP.

**ANADARKO COLORADO NOTHERN ZONE NAD 83
WELD_Johnstown Farms
Johnstown Farms 12-9**

**Johnstown Farms 12-9
Johnstown Farms 12-9 (wp01)**

Anticollision Summary Report

27 September, 2010



Company:	ANADARKO PETROLEUM CORP.	Local Co-ordinate Reference:	Well Johnstown Farms 12-9
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 12-9	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00ft	Output errors are at	2.00 sigma
Reference Wellbore	Johnstown Farms 12-9	Database:	EDM 2003.21 Single User Db
Reference Design:	Johnstown Farms 12-9 (wp01)	Offset TVD Reference:	Offset Datum

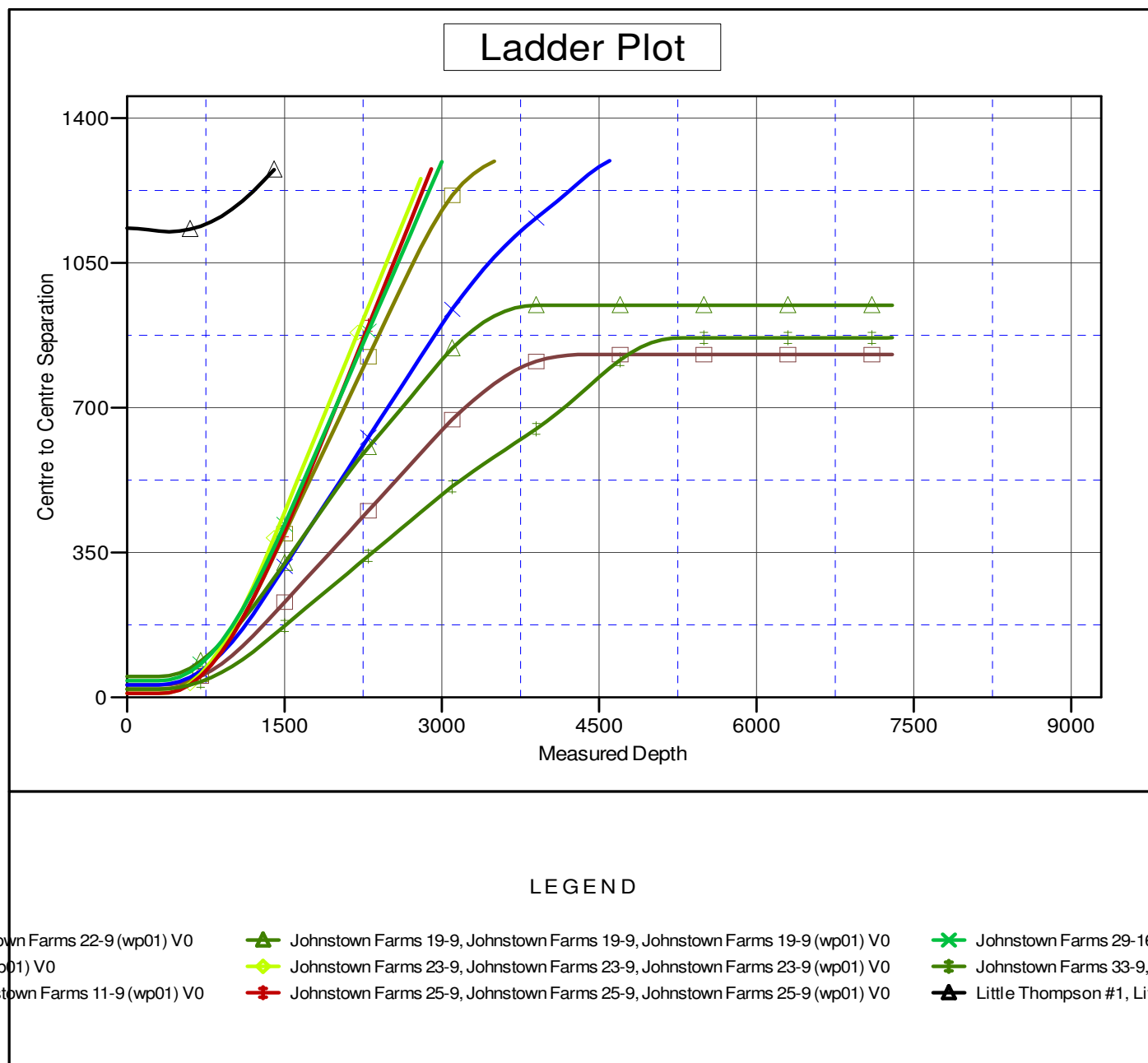
Reference	Johnstown Farms 12-9 (wp01)		
Filter type:	NO GLOBAL FILTER: Using user defined selection & filtering criteria		
Interpolation Method:	MD Interval 100.00ft	Error Model:	ISCWSA
Depth Range:	Unlimited	Scan Method:	Closest Approach 3D
Results Limited by:	Maximum center-center distance of 1,300.79ft	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	7,295.14	Johnstown Farms 12-9 (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	29.97	28.84	26.664 CC, ES	
Johnstown 13-9 - Johnstown 13-9 - Johnstown 13-9 (wpC	300.00	300.00	30.32	29.20	26.979 CC, ES	
Johnstown Farms 11-9 - Johnstown Farms 11-9 - Johnst	300.00	300.00	19.88	18.76	17.690 CC, ES	
Johnstown Farms 19-9 - Johnstown Farms 19-9 - Johnst	300.00	300.00	50.20	49.08	44.669 CC, ES	
Johnstown Farms 23-9 - Johnstown Farms 23-9 - Johnst	300.00	300.00	10.09	8.96	8.974 CC	
Johnstown Farms 25-9 - Johnstown Farms 25-9 - Johnst	300.00	300.00	9.71	8.59	8.644 CC, ES	
Johnstown Farms 29-16 - Johnstown Farms 29-16 - Johi	300.00	300.00	40.05	38.93	35.641 CC, ES	
Johnstown Farms 33-9 - Johnstown Farms 33-9 - Johnst	300.00	300.00	20.23	19.11	18.005 CC, ES	
Johnstown Farms 23-9 - Johnstown Farms 23-9 - Johnst	300.13	300.13	10.09	8.96	8.970 ES	
Johnstown Farms 23-9 - Johnstown Farms 23-9 - Johnst	400.00	399.89	11.06	9.51	7.109 SF	
Johnstown Farms 25-9 - Johnstown Farms 25-9 - Johnst	400.00	399.67	10.86	9.30	6.950 SF	
Little Thompson #1 - Little Thompson #1 - Little Thompsc	401.87	436.10	1,125.90	1,124.24	677.301 CC, ES	
Johnstown 13-9 - Johnstown 13-9 - Johnstown 13-9 (wpC	500.00	497.76	38.45	36.47	19.429 SF	
Johnstown Farms 11-9 - Johnstown Farms 11-9 - Johnst	500.00	498.28	25.88	23.86	12.839 SF	
Johnstown Farms 29-16 - Johnstown Farms 29-16 - Johi	500.00	496.61	49.27	47.30	24.987 SF	
Johnston Farms 22-9 - Johnstown Farms 22-9 - Johnsto	600.00	596.44	41.53	39.02	16.579 SF	
Johnstown Farms 33-9 - Johnstown Farms 33-9 - Johnst	600.00	598.85	30.29	27.80	12.199 SF	
Little Thompson #1 - Little Thompson #1 - Little Thompsc	1,400.00	1,411.37	1,275.72	1,268.93	187.989 SF	
Johnstown Farms 19-9 - Johnstown Farms 19-9 - Johnst	7,295.14	7,181.19	947.63	914.82	28.881 SF	

Company:	ANADARKO PETROLEUM CORP.	Local Co-ordinate Reference:	Well Johnstown Farms 12-9
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 12-9	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00ft	Output errors are at	2.00 sigma
Reference Wellbore	Johnstown Farms 12-9	Database:	EDM 2003.21 Single User Db
Reference Design:	Johnstown Farms 12-9 (wp01)	Offset TVD Reference:	Offset Datum

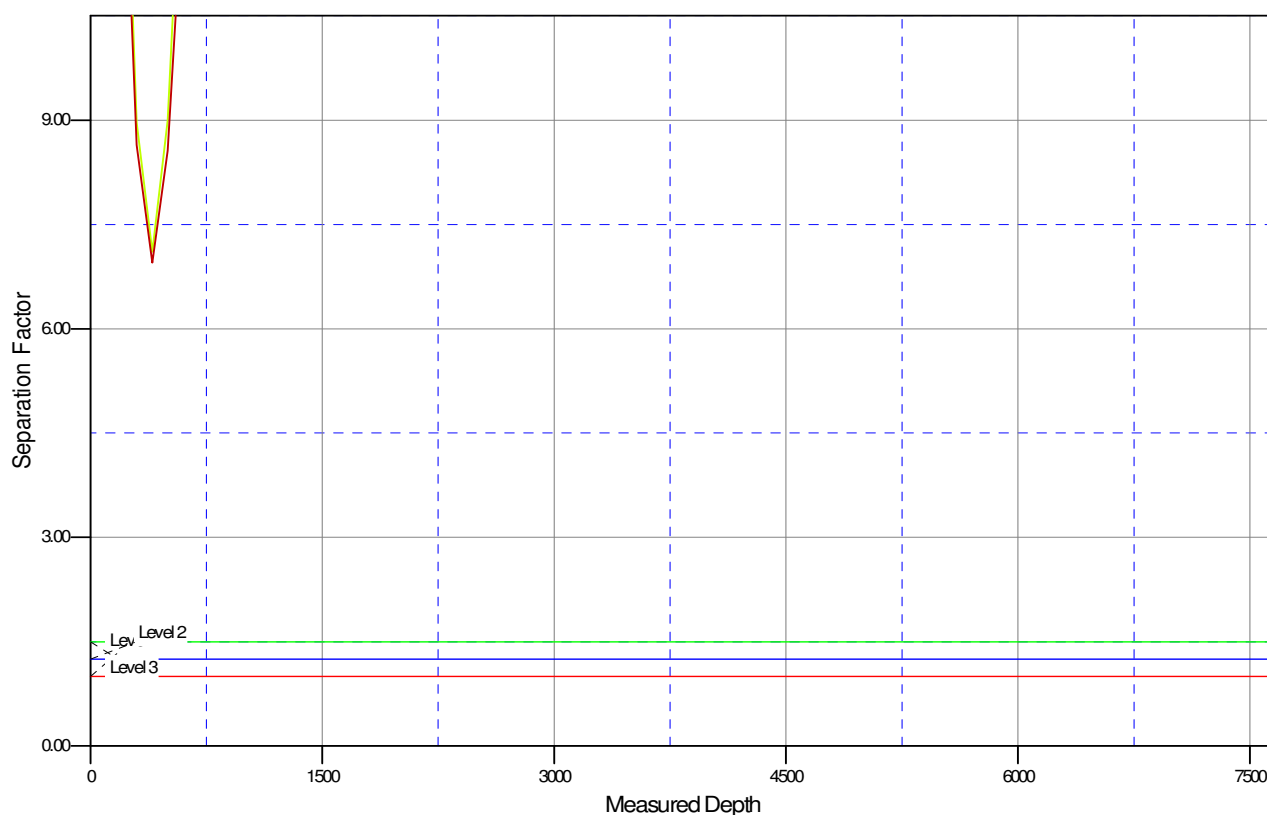
Reference Depths are relative to WELL @ 4780.00ft (Original Well Ele Coordinates are relative to: Johnstown Farms 12-9
Offset Depths are relative to Offset Datum Coordinate System is US State Plane 1983, Colorado Northern Zone
Central Meridian is 105° 30' 0.000 W ° Grid Convergence at Surface is: 0.39°









Company:	ANADARKO PETROLEUM CORP.	Local Co-ordinate Reference:	Well Johnstown Farms 12-9
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 12-9	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00ft	Output errors are at	2.00 sigma
Reference Wellbore	Johnstown Farms 12-9	Database:	EDM 2003.21 Single User Db
Reference Design:	Johnstown Farms 12-9 (wp01)	Offset TVD Reference:	Offset Datum

Reference Depths are relative to WELL @ 4780.00ft (Original Well Ele Coordinates are relative to: Johnstown Farms 12-9
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 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 23-9 (wp01) V0	 Johnstown Farms 23-9, Johnstown Farms 23-9, Johnstown Farms 23-9 (wp01) V0	 Johnstown Farms 33-9, Johnstown Farms 33-9, Johnstown Farms 33-9 (wp01) V0
Johnstown Farms 11-9 (wp01) V0	 Johnstown Farms 25-9, Johnstown Farms 25-9, Johnstown Farms 25-9 (wp01) V0	 Little Thompson #1, Little Thompson #1, Little Thompson #1 (wp01) V0