



ANADARKO PETROLEUM CORP.

ANADARKO COLORADO NORTHERN ZONE NAD 83

WELD_Johnstown Farms

Johnstown Farms 23-9

Johnstown Farms 23-9

Plan: Johnstown Farms 23-9 (wp01)

Standard Planning Report

27 September, 2010



Johnstown Farms 23-9
ANADARKO COLORADO NORTHERN ZONE NAD 83
40° 19' 27.681 N
104° 54' 3.380 W



: Johnstown Farms 23-9 (wp01) (Johnstown Farms 23-9/Johnstown Farms 23-9)

Created By: Jason Daguitera

REFERENCE INFORMATION

Co-ordinate (N/E) Reference: Well Johnstown Farms 23-9, 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 23-9

+N/-S	+E/-W	Northing	Ground Level: Easting	4780.00 Latitude	Longitude	Slot
0.00	0.00	1361567.93	3167029.59	40° 19' 27.681 N	104° 54' 3.380 W	

CASING DETAILS

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

SECTION DETAILS

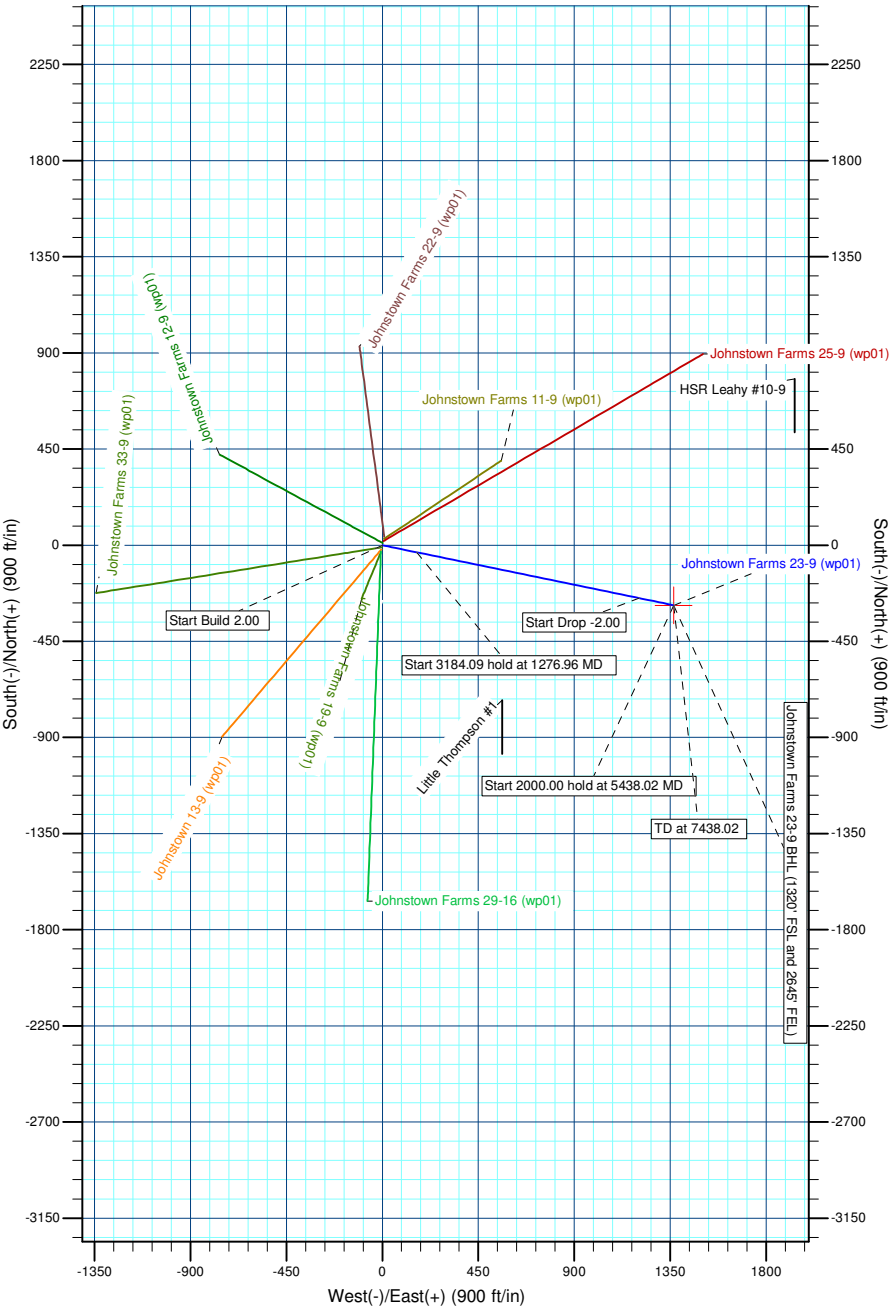
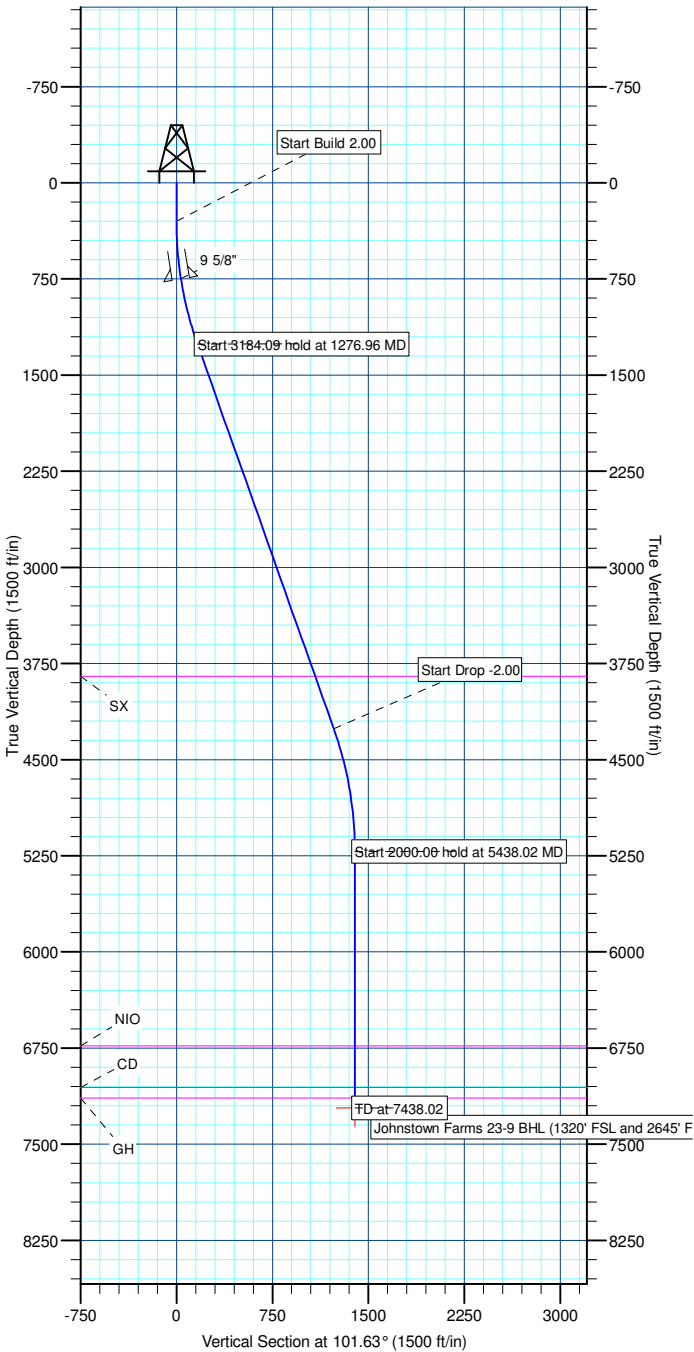
Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	DLeg	TFace	VSec	Target
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
2	300.00	0.00	0.00	300.00	0.00	0.00	0.00	0.00	0.00	
3	1276.96	19.54	101.63	1258.13	-33.26	161.59	2.00	101.63	164.98	
4	4461.06	19.54	101.63	4258.87	-247.93	1204.65	0.00	0.00	1229.90	
5	5438.02	0.00	0.00	5217.00	-281.19	1366.24	2.00	180.00	1394.88	
6	7438.02	0.00	0.00	7217.00	-281.19	1366.24	0.00	0.00	1394.88	Johnstown Farms 23-9 BHL (1320' FSL and 2645' FEL)



Azimuths to True North:
Magnetic North: 8.99°
Magnetic Field
Strength: 53139.0nT
Dip Angle: 67.00°
Date: 9/23/2010
Model: BGGM2010

WELLBORE TARGET DETAILS (LAT/LONG)

Name	TVD	+N/-S	+E/-W	Latitude	Longitude	Shape
Johnstown Farms 23-9 BHL (1320' FSL and 2645' FEL)	7217.00	-281.19	1366.24	40° 19' 24.902 N	104° 53' 45.740 W	Point



Database:	EDM 2003.21 Single User Db	Local Co-ordinate Reference:	Well Johnstown Farms 23-9
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 23-9	Survey Calculation Method:	Minimum Curvature
Wellbore:	Johnstown Farms 23-9		
Design:	Johnstown Farms 23-9 (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:	Lat/Long	Northing:	1,361,567.94 ft	Latitude:	40° 19' 27.682 N
		Easting:	3,167,029.59 ft	Longitude:	104° 54' 3.380 W
	Position Uncertainty:	0.00 ft	Slot Radius:	in	Grid Convergence:

Well	Johnstown Farms 23-9					
Well Position	+N/-S	-0.01 ft	Northing:	1,361,567.93 ft	Latitude:	40° 19' 27.681 N
	+E/-W	0.00 ft	Easting:	3,167,029.59 ft	Longitude:	104° 54' 3.380 W
Position Uncertainty		0.00 ft	Wellhead Elevation:	ft	Ground Level:	4,780.00 ft

Wellbore	Johnstown Farms 23-9				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	BGGM2010	9/23/2010	8.99	67.00	53,139

Design	Johnstown Farms 23-9 (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	101.63

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	
1,276.96	19.54	101.63	1,258.13	-33.26	161.59	2.00	2.00	0.00	101.63	
4,461.06	19.54	101.63	4,258.87	-247.93	1,204.65	0.00	0.00	0.00	0.00	
5,438.02	0.00	0.00	5,217.00	-281.19	1,366.24	2.00	-2.00	0.00	180.00	
7,438.02	0.00	0.00	7,217.00	-281.19	1,366.24	0.00	0.00	0.00	0.00	Johnstown Farms 2

Database:	EDM 2003.21 Single User Db	Local Co-ordinate Reference:	Well Johnstown Farms 23-9
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 23-9	Survey Calculation Method:	Minimum Curvature
Wellbore:	Johnstown Farms 23-9		
Design:	Johnstown Farms 23-9 (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	101.63	399.98	-0.35	1.71	1.75	2.00	2.00	0.00
500.00	4.00	101.63	499.84	-1.41	6.84	6.98	2.00	2.00	0.00
600.00	6.00	101.63	599.45	-3.16	15.37	15.69	2.00	2.00	0.00
700.00	8.00	101.63	698.70	-5.62	27.31	27.88	2.00	2.00	0.00
9 5/8"									
751.87	9.04	101.63	750.00	-7.17	34.83	35.56	2.00	2.00	0.00
800.00	10.00	101.63	797.47	-8.77	42.63	43.52	2.00	2.00	0.00
900.00	12.00	101.63	895.62	-12.62	61.32	62.60	2.00	2.00	0.00
1,000.00	14.00	101.63	993.06	-17.15	83.35	85.10	2.00	2.00	0.00
1,100.00	16.00	101.63	1,089.64	-22.37	108.70	110.98	2.00	2.00	0.00
1,200.00	18.00	101.63	1,185.27	-28.26	137.33	140.21	2.00	2.00	0.00
Start 3184.09 hold at 1276.96 MD									
1,276.96	19.54	101.63	1,258.13	-33.26	161.59	164.98	2.00	2.00	0.00
1,300.00	19.54	101.63	1,279.85	-34.81	169.14	172.68	0.00	0.00	0.00
1,400.00	19.54	101.63	1,374.09	-41.55	201.89	206.13	0.00	0.00	0.00
1,500.00	19.54	101.63	1,468.33	-48.29	234.65	239.57	0.00	0.00	0.00
1,600.00	19.54	101.63	1,562.57	-55.04	267.41	273.02	0.00	0.00	0.00
1,700.00	19.54	101.63	1,656.81	-61.78	300.17	306.46	0.00	0.00	0.00
1,800.00	19.54	101.63	1,751.05	-68.52	332.93	339.91	0.00	0.00	0.00
1,900.00	19.54	101.63	1,845.29	-75.26	365.69	373.35	0.00	0.00	0.00
2,000.00	19.54	101.63	1,939.54	-82.00	398.45	406.80	0.00	0.00	0.00
2,100.00	19.54	101.63	2,033.78	-88.75	431.20	440.24	0.00	0.00	0.00
2,200.00	19.54	101.63	2,128.02	-95.49	463.96	473.69	0.00	0.00	0.00
2,300.00	19.54	101.63	2,222.26	-102.23	496.72	507.13	0.00	0.00	0.00
2,400.00	19.54	101.63	2,316.50	-108.97	529.48	540.58	0.00	0.00	0.00
2,500.00	19.54	101.63	2,410.74	-115.71	562.24	574.02	0.00	0.00	0.00
2,600.00	19.54	101.63	2,504.98	-122.46	595.00	607.47	0.00	0.00	0.00
2,700.00	19.54	101.63	2,599.22	-129.20	627.76	640.91	0.00	0.00	0.00
2,800.00	19.54	101.63	2,693.47	-135.94	660.51	674.36	0.00	0.00	0.00
2,900.00	19.54	101.63	2,787.71	-142.68	693.27	707.80	0.00	0.00	0.00
3,000.00	19.54	101.63	2,881.95	-149.43	726.03	741.25	0.00	0.00	0.00
3,100.00	19.54	101.63	2,976.19	-156.17	758.79	774.69	0.00	0.00	0.00
3,200.00	19.54	101.63	3,070.43	-162.91	791.55	808.14	0.00	0.00	0.00
3,300.00	19.54	101.63	3,164.67	-169.65	824.31	841.58	0.00	0.00	0.00
3,400.00	19.54	101.63	3,258.91	-176.39	857.07	875.03	0.00	0.00	0.00
3,500.00	19.54	101.63	3,353.15	-183.14	889.83	908.48	0.00	0.00	0.00
3,600.00	19.54	101.63	3,447.40	-189.88	922.58	941.92	0.00	0.00	0.00
3,700.00	19.54	101.63	3,541.64	-196.62	955.34	975.37	0.00	0.00	0.00
3,800.00	19.54	101.63	3,635.88	-203.36	988.10	1,008.81	0.00	0.00	0.00
3,900.00	19.54	101.63	3,730.12	-210.10	1,020.86	1,042.26	0.00	0.00	0.00
4,000.00	19.54	101.63	3,824.36	-216.85	1,053.62	1,075.70	0.00	0.00	0.00
SX									
4,025.08	19.54	101.63	3,848.00	-218.54	1,061.83	1,084.09	0.00	0.00	0.00
4,100.00	19.54	101.63	3,918.60	-223.59	1,086.38	1,109.15	0.00	0.00	0.00
4,200.00	19.54	101.63	4,012.84	-230.33	1,119.14	1,142.59	0.00	0.00	0.00
4,300.00	19.54	101.63	4,107.09	-237.07	1,151.89	1,176.04	0.00	0.00	0.00
4,400.00	19.54	101.63	4,201.33	-243.81	1,184.65	1,209.48	0.00	0.00	0.00
Start Drop -2.00									

Database:	EDM 2003.21 Single User Db	Local Co-ordinate Reference:	Well Johnstown Farms 23-9
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 23-9	Survey Calculation Method:	Minimum Curvature
Wellbore:	Johnstown Farms 23-9		
Design:	Johnstown Farms 23-9 (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)
4,461.06	19.54	101.63	4,258.87	-247.93	1,204.65	1,229.90	0.00	0.00	0.00
4,500.00	18.76	101.63	4,295.65	-250.51	1,217.17	1,242.68	2.00	-2.00	0.00
4,600.00	16.76	101.63	4,390.88	-256.65	1,247.04	1,273.18	2.00	-2.00	0.00
4,700.00	14.76	101.63	4,487.12	-262.13	1,273.64	1,300.34	2.00	-2.00	0.00
4,800.00	12.76	101.63	4,584.24	-266.92	1,296.94	1,324.12	2.00	-2.00	0.00
4,900.00	10.76	101.63	4,682.14	-271.03	1,316.90	1,344.51	2.00	-2.00	0.00
5,000.00	8.76	101.63	4,780.69	-274.45	1,333.51	1,361.46	2.00	-2.00	0.00
5,100.00	6.76	101.63	4,879.77	-277.17	1,346.73	1,374.96	2.00	-2.00	0.00
5,200.00	4.76	101.63	4,979.26	-279.20	1,356.56	1,385.00	2.00	-2.00	0.00
5,300.00	2.76	101.63	5,079.04	-280.52	1,362.99	1,391.55	2.00	-2.00	0.00
5,400.00	0.76	101.63	5,178.98	-281.14	1,365.99	1,394.63	2.00	-2.00	0.00
Start 2000.00 hold at 5438.02 MD									
5,438.02	0.00	0.00	5,217.00	-281.19	1,366.24	1,394.88	2.00	-2.00	0.00
5,500.00	0.00	0.00	5,278.98	-281.19	1,366.24	1,394.88	0.00	0.00	0.00
5,600.00	0.00	0.00	5,378.98	-281.19	1,366.24	1,394.88	0.00	0.00	0.00
5,700.00	0.00	0.00	5,478.98	-281.19	1,366.24	1,394.88	0.00	0.00	0.00
5,800.00	0.00	0.00	5,578.98	-281.19	1,366.24	1,394.88	0.00	0.00	0.00
5,900.00	0.00	0.00	5,678.98	-281.19	1,366.24	1,394.88	0.00	0.00	0.00
6,000.00	0.00	0.00	5,778.98	-281.19	1,366.24	1,394.88	0.00	0.00	0.00
6,100.00	0.00	0.00	5,878.98	-281.19	1,366.24	1,394.88	0.00	0.00	0.00
6,200.00	0.00	0.00	5,978.98	-281.19	1,366.24	1,394.88	0.00	0.00	0.00
6,300.00	0.00	0.00	6,078.98	-281.19	1,366.24	1,394.88	0.00	0.00	0.00
6,400.00	0.00	0.00	6,178.98	-281.19	1,366.24	1,394.88	0.00	0.00	0.00
6,500.00	0.00	0.00	6,278.98	-281.19	1,366.24	1,394.88	0.00	0.00	0.00
6,600.00	0.00	0.00	6,378.98	-281.19	1,366.24	1,394.88	0.00	0.00	0.00
6,700.00	0.00	0.00	6,478.98	-281.19	1,366.24	1,394.88	0.00	0.00	0.00
6,800.00	0.00	0.00	6,578.98	-281.19	1,366.24	1,394.88	0.00	0.00	0.00
6,900.00	0.00	0.00	6,678.98	-281.19	1,366.24	1,394.88	0.00	0.00	0.00
NIO									
6,954.02	0.00	0.00	6,733.00	-281.19	1,366.24	1,394.88	0.00	0.00	0.00
7,000.00	0.00	0.00	6,778.98	-281.19	1,366.24	1,394.88	0.00	0.00	0.00
7,100.00	0.00	0.00	6,878.98	-281.19	1,366.24	1,394.88	0.00	0.00	0.00
7,200.00	0.00	0.00	6,978.98	-281.19	1,366.24	1,394.88	0.00	0.00	0.00
CD									
7,278.02	0.00	0.00	7,057.00	-281.19	1,366.24	1,394.88	0.00	0.00	0.00
7,300.00	0.00	0.00	7,078.98	-281.19	1,366.24	1,394.88	0.00	0.00	0.00
GH									
7,361.02	0.00	0.00	7,140.00	-281.19	1,366.24	1,394.88	0.00	0.00	0.00
7,400.00	0.00	0.00	7,178.98	-281.19	1,366.24	1,394.88	0.00	0.00	0.00
TD at 7438.02									
7,438.02	0.00	0.00	7,217.00	-281.19	1,366.24	1,394.88	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									
Johnstown Farms 23- - plan hits target center - Point	0.00	0.00	7,217.00	-281.19	1,366.24	1,361,295.98	3,168,397.69	40° 19' 24.902 N	104° 53' 45.740 W

Database:	EDM 2003.21 Single User Db	Local Co-ordinate Reference:	Well Johnstown Farms 23-9
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 23-9	Survey Calculation Method:	Minimum Curvature
Wellbore:	Johnstown Farms 23-9		
Design:	Johnstown Farms 23-9 (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 (°)
7,278.02	7,057.00	CD		0.00	
6,954.02	6,733.00	NIO		0.00	
4,025.08	3,848.00	SX		0.00	
7,361.02	7,140.00	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
1,276.96	1,258.13	-33.26	161.59	Start 3184.09 hold at 1276.96 MD
4,461.06	4,258.87	-247.93	1,204.65	Start Drop -2.00
5,438.02	5,217.00	-281.19	1,366.24	Start 2000.00 hold at 5438.02 MD
7,438.02	7,217.00	-281.19	1,366.24	TD at 7438.02



ANADARKO PETROLEUM CORP.

**ANADARKO COLORADO NOTHERN ZONE NAD 83
WELD_Johnstown Farms
Johnstown Farms 23-9**

**Johnstown Farms 23-9
Johnstown Farms 23-9 (wp01)**

Anticollision Summary Report

27 September, 2010



Company:	ANADARKO PETROLEUM CORP.	Local Co-ordinate Reference:	Well Johnstown Farms 23-9
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 23-9	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00ft	Output errors are at	2.00 sigma
Reference Wellbore	Johnstown Farms 23-9	Database:	EDM 2003.21 Single User Db
Reference Design:	Johnstown Farms 23-9 (wp01)	Offset TVD Reference:	Offset Datum

Reference	Johnstown Farms 23-9 (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		

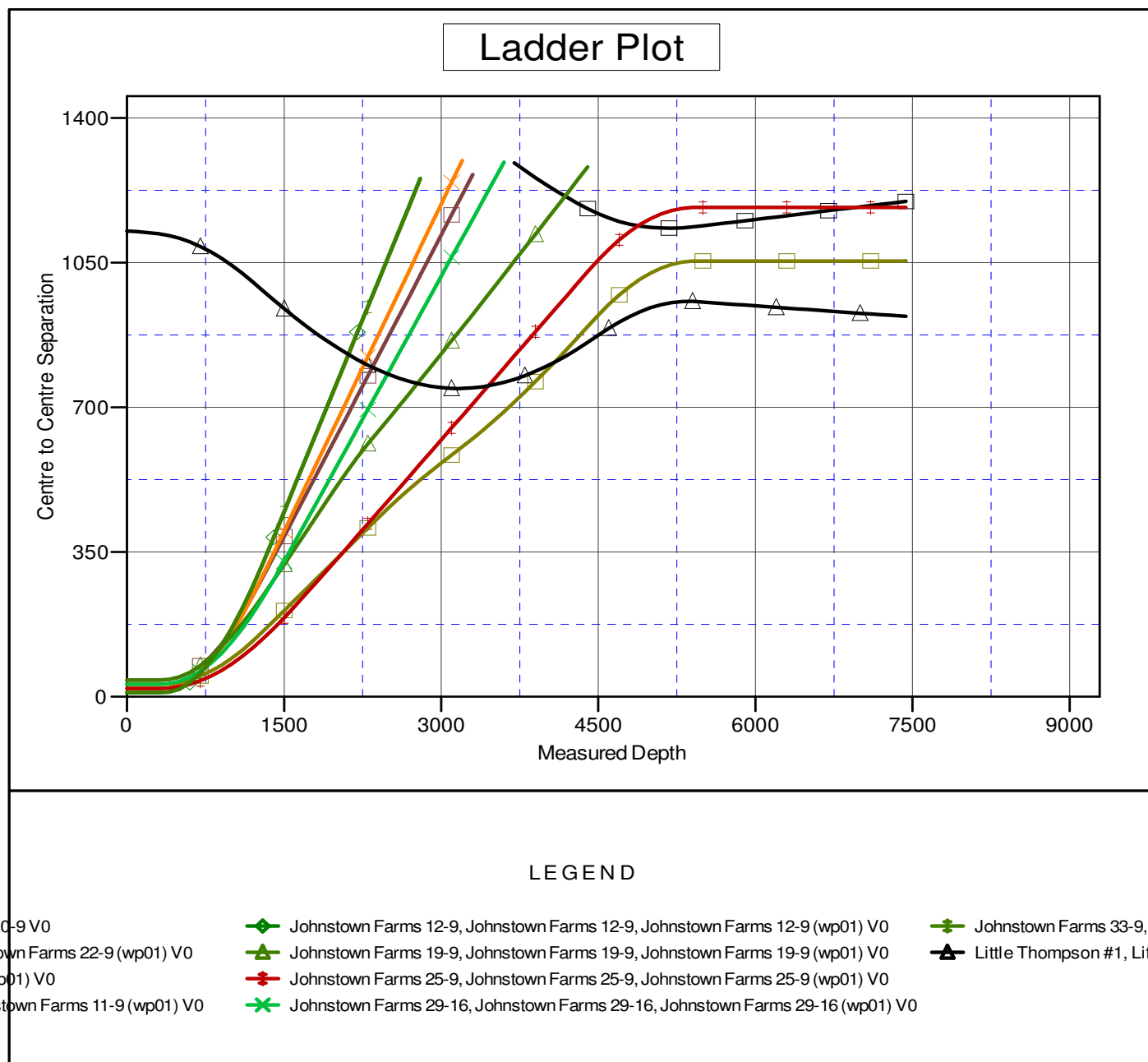
Survey Tool Program	Date	9/27/2010		
From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description
0.00	7,438.02	Johnstown Farms 23-9 (wp01) (Johnstowr	MWD	MWD - Standard

Summary						
Site Name	Reference Measured Depth (ft)	Offset Measured Depth (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Separation Factor	Warning
WELD_Johnstown Farms						
Johnston Farms 22-9 - Johnstown Farms 22-9 - Johnsto	300.00	300.00	40.05	38.93	35.637 CC, ES	
Johnstown 13-9 - Johnstown 13-9 - Johnstown 13-9 (wpC	300.00	300.00	20.23	19.11	18.005 CC, ES	
Johnstown Farms 11-9 - Johnstown Farms 11-9 - Johnst	300.00	300.00	29.97	28.84	26.664 CC, ES	
Johnstown Farms 12-9 - Johnstown Farms 12-9 - Johnst	300.00	300.00	10.09	8.96	8.974 CC	
Johnstown Farms 19-9 - Johnstown Farms 19-9 - Johnst	300.00	300.00	40.12	38.99	35.695 CC, ES	
Johnstown Farms 25-9 - Johnstown Farms 25-9 - Johnst	300.00	300.00	19.80	18.68	17.618 CC, ES	
Johnstown Farms 29-16 - Johnstown Farms 29-16 - Johi	300.00	300.00	29.97	28.85	26.667 CC, ES	
Johnstown Farms 33-9 - Johnstown Farms 33-9 - Johnst	300.00	300.00	10.15	9.03	9.032 CC, ES	
Johnstown Farms 12-9 - Johnstown Farms 12-9 - Johnst	300.11	300.11	10.09	8.96	8.971 ES	
Johnstown 13-9 - Johnstown 13-9 - Johnstown 13-9 (wpC	400.00	399.29	21.98	20.45	14.291 SF	
Johnstown Farms 12-9 - Johnstown Farms 12-9 - Johnst	400.00	399.79	11.06	9.51	7.112 SF	
Johnstown Farms 33-9 - Johnstown Farms 33-9 - Johnst	400.00	399.74	11.42	9.88	7.382 SF	
Johnstown Farms 25-9 - Johnstown Farms 25-9 - Johnst	500.00	498.93	24.47	22.47	12.272 SF	
Johnstown Farms 29-16 - Johnstown Farms 29-16 - Johi	500.00	497.57	37.38	35.43	19.188 SF	
Johnston Farms 22-9 - Johnstown Farms 22-9 - Johnsto	600.00	594.03	57.97	55.49	23.348 SF	
Johnstown Farms 19-9 - Johnstown Farms 19-9 - Johnst	600.00	594.03	58.72	56.31	24.366 SF	
Johnstown Farms 11-9 - Johnstown Farms 11-9 - Johnst	700.00	695.84	50.11	47.09	16.619 SF	
Little Thompson #1 - Little Thompson #1 - Little Thompsc	3,164.32	3,063.48	745.83	721.54	30.714 CC	
Little Thompson #1 - Little Thompson #1 - Little Thompsc	3,200.00	3,097.00	745.93	721.33	30.326 ES	
HSR-Leahy #10-9 - HSR Leahy #10-9 - HSR Leahy #10-	5,175.52	4,923.76	1,133.66	1,094.23	28.754 CC	
HSR-Leahy #10-9 - HSR Leahy #10-9 - HSR Leahy #10-	5,200.00	4,948.12	1,133.70	1,094.15	28.670 ES	
HSR-Leahy #10-9 - HSR Leahy #10-9 - HSR Leahy #10-	7,438.02	7,184.43	1,198.74	1,151.66	25.461 SF	
Little Thompson #1 - Little Thompson #1 - Little Thompsc	7,438.02	7,236.92	920.33	878.94	22.236 SF	

Company:	ANADARKO PETROLEUM CORP.	Local Co-ordinate Reference:	Well Johnstown Farms 23-9
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 23-9	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00ft	Output errors are at	2.00 sigma
Reference Wellbore	Johnstown Farms 23-9	Database:	EDM 2003.21 Single User Db
Reference Design:	Johnstown Farms 23-9 (wp01)	Offset TVD Reference:	Offset Datum

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

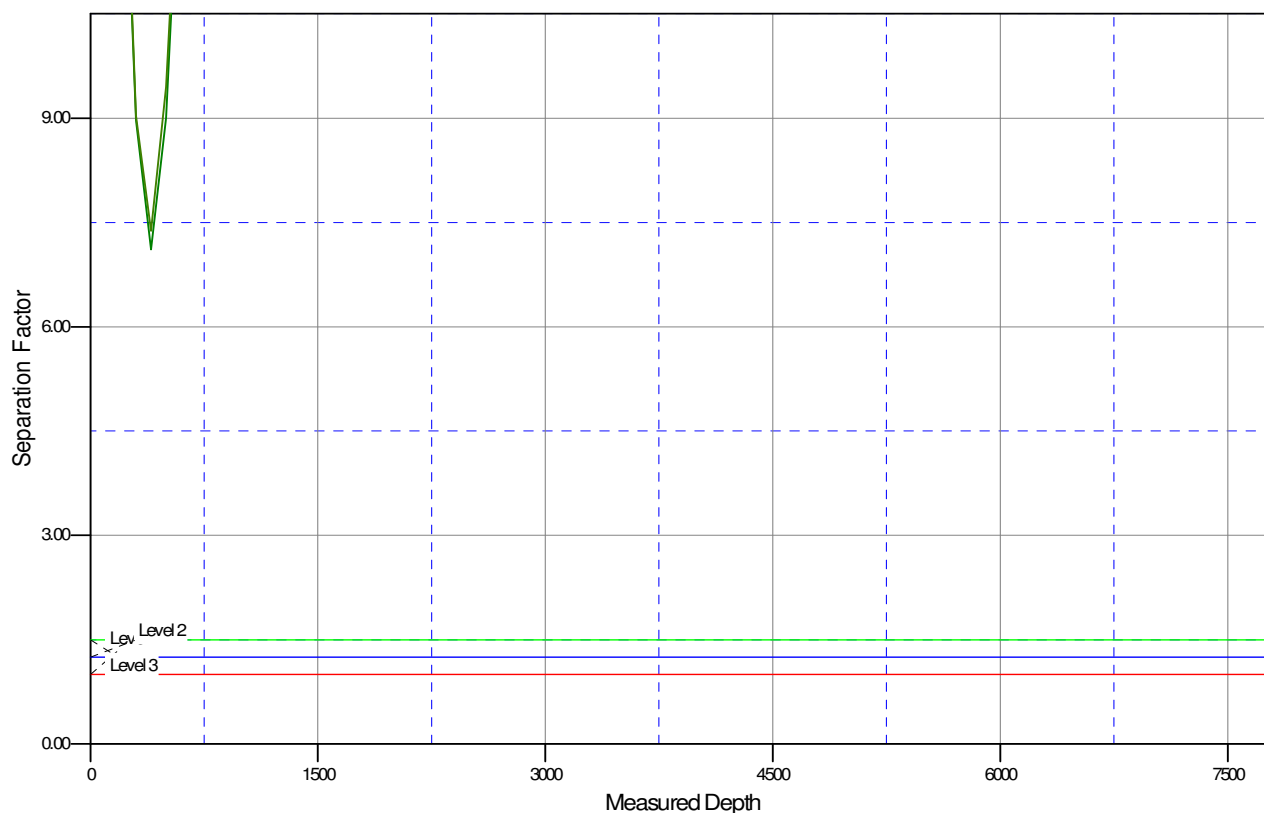
Coordinates are relative to: Johnstown Farms 23-9
Coordinate System is US State Plane 1983, Colorado Northern Zone
Grid Convergence at Surface is: 0.39°



Company:	ANADARKO PETROLEUM CORP.	Local Co-ordinate Reference:	Well Johnstown Farms 23-9
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Reference Design:	Johnstown Farms 23-9 (wp01)	Offset TVD Reference:	Offset Datum

Reference Depths are relative to WELL @ 4780.00ft (Original Well Ele Coordinates are relative to: Johnstown Farms 23-9
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

10-9 V0	Johnstown Farms 12-9, Johnstown Farms 12-9, Johnstown Farms 12-9 (wp01) V0	Johnstown Farms 33-9, Johnstown Farms 33-9, Johnstown Farms 33-9 (wp01) V0
Johnstown Farms 22-9 (wp01) V0	Johnstown Farms 19-9, Johnstown Farms 19-9, Johnstown Farms 19-9 (wp01) V0	Little Thompson #1, Little Thompson #1, Little Thompson #1 (wp01) V0
Johnstown Farms 11-9 (wp01) V0	Johnstown Farms 25-9, Johnstown Farms 25-9, Johnstown Farms 25-9 (wp01) V0	
Johnstown Farms 11-9 (wp01) V0	Johnstown Farms 29-16, Johnstown Farms 29-16, Johnstown Farms 29-16 (wp01) V0	