



# **US ROCKIES REGION PLANNING**

**COLORADO NORTHERN ZONE - 83**

**WELD\_MAPLEWOOD 16-7**

**P\_MAPLEWOOD 35-7**

**P\_MAPLEWOOD 35-7**

**Plan: PLAN #1 1-19-10 RHS**

## **Standard Planning Report**

**19 January, 2010**





Azimuths to True North  
Magnetic North: 9.14°  
  
Magnetic Field  
Strength: 53219.8nT  
Dip Angle: 67.01°  
Date: 1/19/2010  
Model: IGRF2010

#### WELL DETAILS: P\_MAPLEWOOD 35-7

+N/-S	+E/-W	Northing	Ground Level: Easting	4848.00 Latitude	Longitude	Slot
0.00	0.00	1361151.54	3156620.56	40° 19' 24.240 N	104° 56' 17.808 W	

#### SECTION DETAILS

MD	Inc	Azi	TVD	+N/-S	+E/-W	DLeg	TFace	VSec	Target
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
900.00	0.00	0.00	900.00	0.00	0.00	0.00	0.00	0.00	
1518.47	12.37	158.24	1513.67	-61.76	24.65	2.00	158.24	66.50	
5182.16	12.37	158.24	5092.33	-790.68	315.53	0.00	0.00	851.31	
5800.63	0.00	0.00	5706.00	-852.44	340.18	2.00	180.00	917.81	
7709.63	0.00	0.00	7615.00	-852.44	340.18	0.00	0.00	917.81	PBHL_MAPLEWOOD 35-7(50 FSL 1310 FWL)50°TGT RAD

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

Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Shape
PBHL	7615.00	-852.44	340.18	1360301.28	3156966.13	40° 19' 15.816 N	104° 56' 13.416 W	Circle (Radius: 50.00)

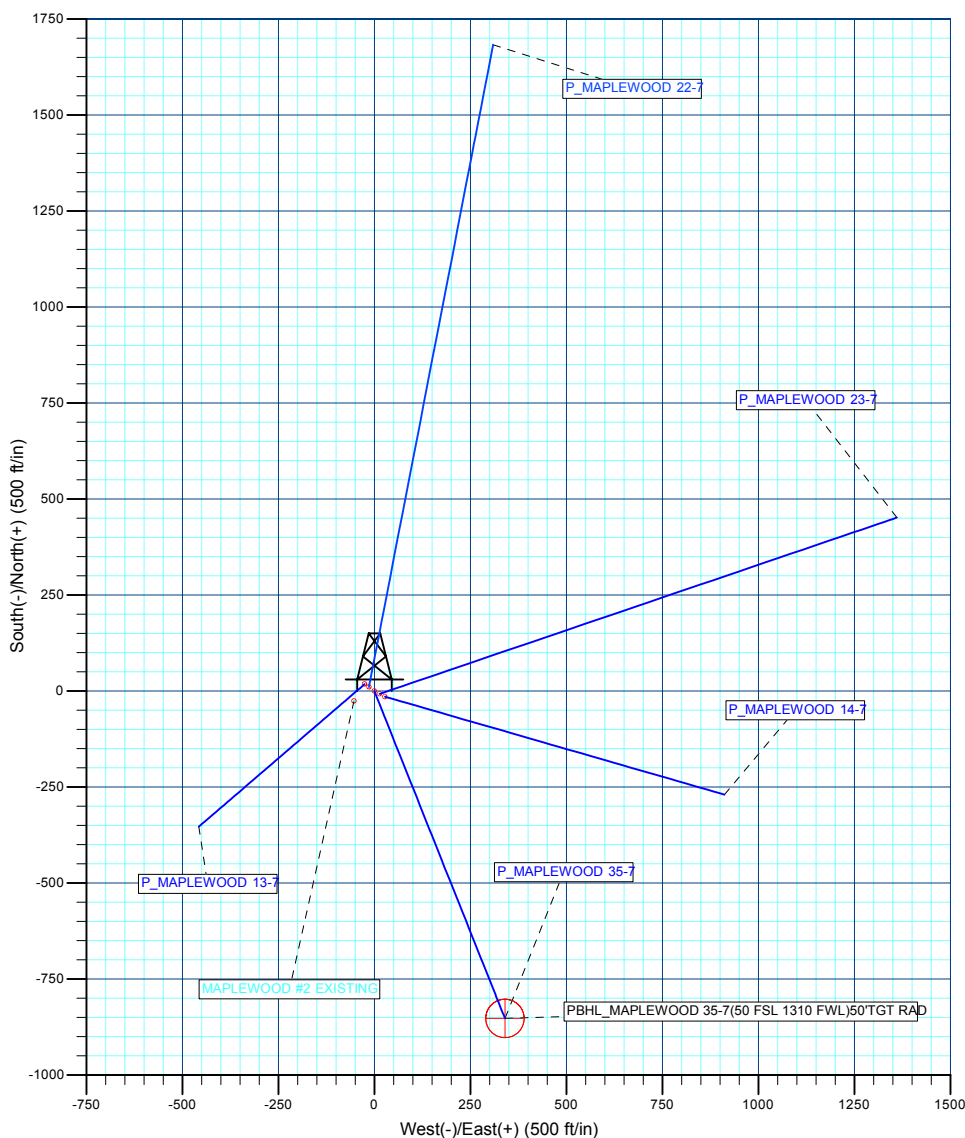
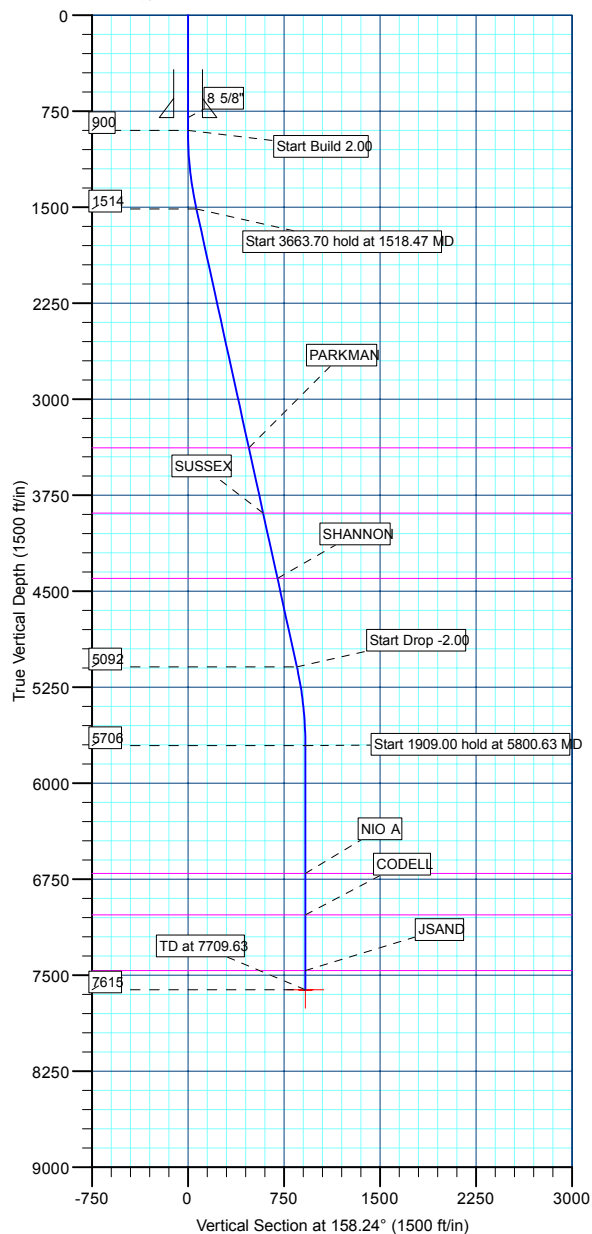
#### CASING DETAILS

TVD	MD	Name	Size
800.00	800.00	8 5/8"	8.62



KB ELEV:WELL @ 4863.00ft (Original Well Elev)

GRD ELEV: 4848.00



Plan: PLAN #1 1-19-10 RHS (P\_MAPLEWOOD 35-7/P\_MAPLEWOOD 35-7)

Created By: Robert H. Scott

<b>Database:</b>	EDM 2003.21 Single User Db	<b>Local Co-ordinate Reference:</b>	Well P_MAPLEWOOD 35-7
<b>Company:</b>	US ROCKIES REGION PLANNING	<b>TVD Reference:</b>	WELL @ 4863.00ft (Original Well Elev)
<b>Project:</b>	COLORADO NORTHERN ZONE - 83	<b>MD Reference:</b>	WELL @ 4863.00ft (Original Well Elev)
<b>Site:</b>	WELD_MAPLEWOOD 16-7	<b>North Reference:</b>	True
<b>Well:</b>	P_MAPLEWOOD 35-7	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	P_MAPLEWOOD 35-7		
<b>Design:</b>	PLAN #1 1-19-10 RHS		

<b>Project</b>	COLORADO NORTHERN ZONE - 83, KERR MCGEE OIL & GAS ONSHORE LP		
<b>Map System:</b>	US State Plane 1983	<b>System Datum:</b>	Mean Sea Level
<b>Geo Datum:</b>	North American Datum 1983		
<b>Map Zone:</b>	Colorado Northern Zone		

Site						WELD_MAPLEWOOD 16-7, SECTION 7 T4N R67W											
Site Position:			Northing:			1,361,151.54 ft			Latitude:			40° 19' 24.240 N					
From:			Lat/Long			Easting:			3,156,620.56 ft			Longitude:			104° 56' 17.808 W		
Position Uncertainty:			0.00 ft			Slot Radius:			in			Grid Convergence:			0.36 °		

Well	P_MAPLEWOOD 35-7					
Well Position	+N/-S	0.00 ft	Northing:	1,361,151.54 ft	Latitude:	40° 19' 24.240 N
	+E/-W	0.00 ft	Easting:	3,156,620.56 ft	Longitude:	104° 56' 17.808 W
Position Uncertainty		0.00 ft	Wellhead Elevation:	ft	Ground Level:	4,848.00 ft

<b>Wellbore</b>	P_MAPLEWOOD 35-7				
<b>Magnetics</b>	<b>Model Name</b>	<b>Sample Date</b>	<b>Declination (°)</b>	<b>Dip Angle (°)</b>	<b>Field Strength (nT)</b>
	IGRF2010	1/19/2010	9.14	67.01	53,220

<b>Design</b>	PLAN #1 1-19-10 RHS			
<b>Audit Notes:</b>				
<b>Version:</b>	<b>Phase:</b>	PLAN	<b>Tie On Depth:</b>	0.00
<b>Vertical Section:</b>	<b>Depth From (TVD) (ft)</b>	<b>+N/-S (ft)</b>	<b>+E/-W (ft)</b>	<b>Direction (°)</b>
	0.00	0.00	0.00	158.24

<b>Plan Sections</b>										
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	
900.00	0.00	0.00	900.00	0.00	0.00	0.00	0.00	0.00	0.00	
1,518.47	12.37	158.24	1,513.67	-61.76	24.65	2.00	2.00	0.00	158.24	
5,182.16	12.37	158.24	5,092.33	-790.68	315.53	0.00	0.00	0.00	0.00	
5,800.63	0.00	0.00	5,706.00	-852.44	340.18	2.00	-2.00	0.00	180.00	
7,709.63	0.00	0.00	7,615.00	-852.44	340.18	0.00	0.00	0.00	0.00	PBHL_MAPLEWOC

<b>Database:</b>	EDM 2003.21 Single User Db	<b>Local Co-ordinate Reference:</b>	Well P_MAPLEWOOD 35-7
<b>Company:</b>	US ROCKIES REGION PLANNING	<b>TVD Reference:</b>	WELL @ 4863.00ft (Original Well Elev)
<b>Project:</b>	COLORADO NORTHERN ZONE - 83	<b>MD Reference:</b>	WELL @ 4863.00ft (Original Well Elev)
<b>Site:</b>	WELD_MAPLEWOOD 16-7	<b>North Reference:</b>	True
<b>Well:</b>	P_MAPLEWOOD 35-7	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	P_MAPLEWOOD 35-7		
<b>Design:</b>	PLAN #1 1-19-10 RHS		

**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)
<b>Start Build 2.00</b>									
900.00	0.00	0.00	900.00	0.00	0.00	0.00	0.00	0.00	0.00
1,000.00	2.00	158.24	999.98	-1.62	0.65	1.75	2.00	2.00	0.00
1,100.00	4.00	158.24	1,099.84	-6.48	2.59	6.98	2.00	2.00	0.00
1,200.00	6.00	158.24	1,199.45	-14.58	5.82	15.69	2.00	2.00	0.00
1,300.00	8.00	158.24	1,298.70	-25.89	10.33	27.88	2.00	2.00	0.00
1,400.00	10.00	158.24	1,397.47	-40.42	16.13	43.52	2.00	2.00	0.00
1,500.00	12.00	158.24	1,495.62	-58.14	23.20	62.60	2.00	2.00	0.00
<b>Start 3663.70 hold at 1518.47 MD</b>									
1,518.47	12.37	158.24	1,513.67	-61.76	24.65	66.50	2.00	2.00	0.00
1,600.00	12.37	158.24	1,593.31	-77.99	31.12	83.97	0.00	0.00	0.00
1,700.00	12.37	158.24	1,690.99	-97.88	39.06	105.39	0.00	0.00	0.00
1,800.00	12.37	158.24	1,788.67	-117.78	47.00	126.81	0.00	0.00	0.00
1,900.00	12.37	158.24	1,886.35	-137.67	54.94	148.23	0.00	0.00	0.00
2,000.00	12.37	158.24	1,984.03	-157.57	62.88	169.65	0.00	0.00	0.00
2,100.00	12.37	158.24	2,081.71	-177.46	70.82	191.07	0.00	0.00	0.00
2,200.00	12.37	158.24	2,179.39	-197.36	78.76	212.49	0.00	0.00	0.00
2,300.00	12.37	158.24	2,277.07	-217.25	86.70	233.91	0.00	0.00	0.00
2,400.00	12.37	158.24	2,374.74	-237.15	94.64	255.34	0.00	0.00	0.00
2,500.00	12.37	158.24	2,472.42	-257.05	102.58	276.76	0.00	0.00	0.00
2,600.00	12.37	158.24	2,570.10	-276.94	110.52	298.18	0.00	0.00	0.00
2,700.00	12.37	158.24	2,667.78	-296.84	118.46	319.60	0.00	0.00	0.00
2,800.00	12.37	158.24	2,765.46	-316.73	126.40	341.02	0.00	0.00	0.00
2,900.00	12.37	158.24	2,863.14	-336.63	134.34	362.44	0.00	0.00	0.00
3,000.00	12.37	158.24	2,960.82	-356.52	142.28	383.86	0.00	0.00	0.00
3,100.00	12.37	158.24	3,058.50	-376.42	150.22	405.28	0.00	0.00	0.00
3,200.00	12.37	158.24	3,156.17	-396.31	158.16	426.71	0.00	0.00	0.00
3,300.00	12.37	158.24	3,253.85	-416.21	166.09	448.13	0.00	0.00	0.00
3,400.00	12.37	158.24	3,351.53	-436.11	174.03	469.55	0.00	0.00	0.00
<b>PARKMAN</b>									
3,429.15	12.37	158.24	3,380.00	-441.90	176.35	475.79	0.00	0.00	0.00
3,500.00	12.37	158.24	3,449.21	-456.00	181.97	490.97	0.00	0.00	0.00
3,600.00	12.37	158.24	3,546.89	-475.90	189.91	512.39	0.00	0.00	0.00
3,700.00	12.37	158.24	3,644.57	-495.79	197.85	533.81	0.00	0.00	0.00
3,800.00	12.37	158.24	3,742.25	-515.69	205.79	555.23	0.00	0.00	0.00
3,900.00	12.37	158.24	3,839.92	-535.58	213.73	576.65	0.00	0.00	0.00
<b>SUSSEX</b>									
3,951.27	12.37	158.24	3,890.00	-545.78	217.80	587.64	0.00	0.00	0.00
4,000.00	12.37	158.24	3,937.60	-555.48	221.67	598.08	0.00	0.00	0.00
4,100.00	12.37	158.24	4,035.28	-575.37	229.61	619.50	0.00	0.00	0.00
4,200.00	12.37	158.24	4,132.96	-595.27	237.55	640.92	0.00	0.00	0.00
4,300.00	12.37	158.24	4,230.64	-615.17	245.49	662.34	0.00	0.00	0.00
4,400.00	12.37	158.24	4,328.32	-635.06	253.43	683.76	0.00	0.00	0.00
<b>SHANNON</b>									
4,473.39	12.37	158.24	4,400.00	-649.66	259.26	699.48	0.00	0.00	0.00
4,500.00	12.37	158.24	4,426.00	-654.96	261.37	705.18	0.00	0.00	0.00
4,600.00	12.37	158.24	4,523.68	-674.85	269.31	726.60	0.00	0.00	0.00
4,700.00	12.37	158.24	4,621.35	-694.75	277.25	748.02	0.00	0.00	0.00
4,800.00	12.37	158.24	4,719.03	-714.64	285.19	769.45	0.00	0.00	0.00
4,900.00	12.37	158.24	4,816.71	-734.54	293.13	790.87	0.00	0.00	0.00
5,000.00	12.37	158.24	4,914.39	-754.43	301.07	812.29	0.00	0.00	0.00
5,100.00	12.37	158.24	5,012.07	-774.33	309.01	833.71	0.00	0.00	0.00
<b>Start Drop -2.00</b>									

<b>Database:</b>	EDM 2003.21 Single User Db	<b>Local Co-ordinate Reference:</b>	Well P_MAPLEWOOD 35-7
<b>Company:</b>	US ROCKIES REGION PLANNING	<b>TVD Reference:</b>	WELL @ 4863.00ft (Original Well Elev)
<b>Project:</b>	COLORADO NORTHERN ZONE - 83	<b>MD Reference:</b>	WELL @ 4863.00ft (Original Well Elev)
<b>Site:</b>	WELD_MAPLEWOOD 16-7	<b>North Reference:</b>	True
<b>Well:</b>	P_MAPLEWOOD 35-7	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	P_MAPLEWOOD 35-7		
<b>Design:</b>	PLAN #1 1-19-10 RHS		

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)
5,182.16	12.37	158.24	5,092.33	-790.68	315.53	851.31	0.00	0.00	0.00
5,200.00	12.01	158.24	5,109.76	-794.17	316.93	855.08	2.00	-2.00	0.00
5,300.00	10.01	158.24	5,207.91	-811.92	324.01	874.18	2.00	-2.00	0.00
5,400.00	8.01	158.24	5,306.67	-826.46	329.81	889.84	2.00	-2.00	0.00
5,500.00	6.01	158.24	5,405.92	-837.80	334.34	902.05	2.00	-2.00	0.00
5,600.00	4.01	158.24	5,505.53	-845.92	337.58	910.79	2.00	-2.00	0.00
5,700.00	2.01	158.24	5,605.39	-850.80	339.52	916.04	2.00	-2.00	0.00
5,800.00	0.01	158.24	5,705.37	-852.44	340.18	917.81	2.00	-2.00	0.00
Start 1909.00 hold at 5800.63 MD									
5,800.63	0.00	0.00	5,706.00	-852.44	340.18	917.81	2.00	-2.00	0.00
5,900.00	0.00	0.00	5,805.37	-852.44	340.18	917.81	0.00	0.00	0.00
6,000.00	0.00	0.00	5,905.37	-852.44	340.18	917.81	0.00	0.00	0.00
6,100.00	0.00	0.00	6,005.37	-852.44	340.18	917.81	0.00	0.00	0.00
6,200.00	0.00	0.00	6,105.37	-852.44	340.18	917.81	0.00	0.00	0.00
6,300.00	0.00	0.00	6,205.37	-852.44	340.18	917.81	0.00	0.00	0.00
6,400.00	0.00	0.00	6,305.37	-852.44	340.18	917.81	0.00	0.00	0.00
6,500.00	0.00	0.00	6,405.37	-852.44	340.18	917.81	0.00	0.00	0.00
6,600.00	0.00	0.00	6,505.37	-852.44	340.18	917.81	0.00	0.00	0.00
6,700.00	0.00	0.00	6,605.37	-852.44	340.18	917.81	0.00	0.00	0.00
6,800.00	0.00	0.00	6,705.37	-852.44	340.18	917.81	0.00	0.00	0.00
NIO A									
6,800.63	0.00	0.00	6,706.00	-852.44	340.18	917.81	0.00	0.00	0.00
6,900.00	0.00	0.00	6,805.37	-852.44	340.18	917.81	0.00	0.00	0.00
7,000.00	0.00	0.00	6,905.37	-852.44	340.18	917.81	0.00	0.00	0.00
7,100.00	0.00	0.00	7,005.37	-852.44	340.18	917.81	0.00	0.00	0.00
CODELL									
7,124.63	0.00	0.00	7,030.00	-852.44	340.18	917.81	0.00	0.00	0.00
7,200.00	0.00	0.00	7,105.37	-852.44	340.18	917.81	0.00	0.00	0.00
7,300.00	0.00	0.00	7,205.37	-852.44	340.18	917.81	0.00	0.00	0.00
7,400.00	0.00	0.00	7,305.37	-852.44	340.18	917.81	0.00	0.00	0.00
7,500.00	0.00	0.00	7,405.37	-852.44	340.18	917.81	0.00	0.00	0.00
JSAND									
7,558.63	0.00	0.00	7,464.00	-852.44	340.18	917.81	0.00	0.00	0.00
7,600.00	0.00	0.00	7,505.37	-852.44	340.18	917.81	0.00	0.00	0.00
7,700.00	0.00	0.00	7,605.37	-852.44	340.18	917.81	0.00	0.00	0.00
PBHL_MAPLEWOOD 35-7(50 FSL 1310 FWL)50'TGT RAD									
7,709.63	0.00	0.00	7,615.00	-852.44	340.18	917.81	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									
PBHL_MAPLEWOOD	0.00	0.00	7,615.00	-852.44	340.18	1,360,301.28	3,156,966.13	40° 19' 15.816 N	104° 56' 13.416 W
- plan hits target center									
- Circle (radius 50.00)									

<b>Database:</b>	EDM 2003.21 Single User Db	<b>Local Co-ordinate Reference:</b>	Well P_MAPLEWOOD 35-7
<b>Company:</b>	US ROCKIES REGION PLANNING	<b>TVD Reference:</b>	WELL @ 4863.00ft (Original Well Elev)
<b>Project:</b>	COLORADO NORTHERN ZONE - 83	<b>MD Reference:</b>	WELL @ 4863.00ft (Original Well Elev)
<b>Site:</b>	WELD_MAPLEWOOD 16-7	<b>North Reference:</b>	True
<b>Well:</b>	P_MAPLEWOOD 35-7	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	P_MAPLEWOOD 35-7		
<b>Design:</b>	PLAN #1 1-19-10 RHS		

Casing Points					
Measured Depth (ft)	Vertical Depth (ft)	Name	Casing Diameter (in)	Hole Diameter (in)	
800.00	800.00	8 5/8"	8.62	11.00	

Formations						
Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)	
3,429.15	3,380.00	PARKMAN				
3,951.27	3,890.00	SUSSEX				
4,473.39	4,400.00	SHANNON				
6,800.63	6,706.00	NIO A				
7,124.63	7,030.00	CODELL				
7,558.63	7,464.00	JSAND		0.00		

Plan Annotations					
Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates			
		+N/-S (ft)	+E/-W (ft)	Comment	
900.00	900.00	0.00	0.00	Start Build 2.00	
1,518.47	1,513.67	-61.76	24.65	Start 3663.70 hold at 1518.47 MD	
5,182.16	5,092.33	-790.68	315.53	Start Drop -2.00	
5,800.63	5,706.00	-852.44	340.18	Start 1909.00 hold at 5800.63 MD	
7,709.63	7,615.00	-852.44	340.18	TD at 7709.63	



# **US ROCKIES REGION PLANNING**

**COLORADO NORTHERN ZONE - 83  
WELD\_MAPLEWOOD 16-7  
P\_MAPLEWOOD 35-7**

**P\_MAPLEWOOD 35-7  
PLAN #1 1-19-10 RHS**

## **Anticollision Report**

**19 January, 2010**



<b>Company:</b>	US ROCKIES REGION PLANNING	<b>Local Co-ordinate Reference:</b>	Well P_MAPLEWOOD 35-7
<b>Project:</b>	COLORADO NORTHERN ZONE - 83	<b>TVD Reference:</b>	WELL @ 4863.00ft (Original Well Elev)
<b>Reference Site:</b>	WELD_MAPLEWOOD 16-7	<b>MD Reference:</b>	WELL @ 4863.00ft (Original Well Elev)
<b>Site Error:</b>	0.00ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	P_MAPLEWOOD 35-7	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.00ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	P_MAPLEWOOD 35-7	<b>Database:</b>	EDM 2003.21 Single User Db
<b>Reference Design:</b>	PLAN #1 1-19-10 RHS	<b>Offset TVD Reference:</b>	Offset Datum

<b>Reference</b>	PLAN #1 1-19-10 RHS		
<b>Filter type:</b>	NO GLOBAL FILTER: Using user defined selection & filtering criteria		
<b>Interpolation Method:</b>	Stations	<b>Error Model:</b>	ISCWSA
<b>Depth Range:</b>	0.00 to 20,000.00ft	<b>Scan Method:</b>	Closest Approach 3D
<b>Results Limited by:</b>	Maximum center-center distance of 10,000.00ft	<b>Error Surface:</b>	Elliptical Conic
<b>Warning Levels Evaluated at:</b>	2.00 Sigma		

<b>Survey Tool Program</b>	<b>Date</b> 1/19/2010				
<b>From (ft)</b>	<b>To (ft)</b>	<b>Survey (Wellbore)</b>	<b>Tool Name</b>	<b>Description</b>	
0.00	7,709.63	PLAN #1 1-19-10 RHS (P_MAPLEWOOD	Good_gyro	Good Gyro	

<b>Summary</b>						
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_MAPLEWOOD 16-7						
MAPLEWOOD #2 EXISTING - MAPLEWOOD #2 EXIST	1,052.68	1,040.61	58.66	55.89	21.165	CC
MAPLEWOOD #2 EXISTING - MAPLEWOOD #2 EXIST	1,100.00	1,087.84	58.73	55.83	20.224	ES
MAPLEWOOD #2 EXISTING - MAPLEWOOD #2 EXIST	1,300.00	1,286.70	63.31	59.82	18.149	SF
P_MAPLEWOOD 13-7 - P_MAPLEWOOD 13-7 - PLAN #	900.00	900.00	31.00	28.64	13.151	CC, ES
P_MAPLEWOOD 13-7 - P_MAPLEWOOD 13-7 - PLAN #	1,000.00	999.71	32.88	30.28	12.602	SF
P_MAPLEWOOD 14-7 - P_MAPLEWOOD 14-7 - PLAN #	900.00	900.00	31.47	29.11	13.351	CC, ES
P_MAPLEWOOD 14-7 - P_MAPLEWOOD 14-7 - PLAN #	1,100.00	1,097.69	33.46	30.60	11.685	SF
P_MAPLEWOOD 22-7 - P_MAPLEWOOD 22-7 - PLAN #	900.00	900.00	17.71	15.35	7.512	CC, ES, SF
P_MAPLEWOOD 23-7 - P_MAPLEWOOD 23-7 - PLAN #	958.84	958.61	15.71	13.20	6.246	CC
P_MAPLEWOOD 23-7 - P_MAPLEWOOD 23-7 - PLAN #	1,000.00	999.57	15.79	13.16	6.013	ES, SF

WELD_MAPLEWOOD 16-7 - MAPLEWOOD #2 EXISTING - MAPLEWOOD #2 EXISTING - MAPLEWOOD												Offset Site Error:	0.00 ft
Survey Program: 0-MWD												Offset Well Error:	0.00 ft
Reference		Offset		Semi Major Axis			Distance						
Measured Depth	Vertical Depth	Measured Depth	Vertical Depth	Reference	Offset	Highside Toolface	Offset Wellbore Centre		Between Centres	Between Ellipses	Minimum Separation	Separation Factor	Warning
(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(°)	+N/-S (ft)	+E/-W (ft)	(ft)	(ft)	(ft)		
0.00	0.00	0.00	0.00	0.00	0.00	-115.72	-25.52	-52.98	60.02				
100.00	100.00	88.00	88.00	0.04	0.10	-115.72	-25.52	-52.98	58.80	58.66	0.14	409.990	
200.00	200.00	188.00	188.00	0.10	0.31	-115.72	-25.52	-52.98	58.80	58.40	0.41	144.466	
300.00	300.00	288.00	288.00	0.15	0.53	-115.72	-25.52	-52.98	58.80	58.12	0.68	85.949	
400.00	400.00	388.00	388.00	0.20	0.76	-115.72	-25.52	-52.98	58.80	57.84	0.96	61.171	
500.00	500.00	488.00	488.00	0.25	0.98	-115.72	-25.52	-52.98	58.80	57.57	1.24	47.483	
600.00	600.00	588.00	588.00	0.31	1.21	-115.72	-25.52	-52.98	58.80	57.29	1.52	38.800	
700.00	700.00	688.00	688.00	0.36	1.43	-115.72	-25.52	-52.98	58.80	57.01	1.79	32.802	
800.00	800.00	788.00	788.00	0.41	1.66	-115.72	-25.52	-52.98	58.80	56.73	2.07	28.410	
900.00	900.00	888.00	888.00	0.46	1.88	-115.72	-25.52	-52.98	58.80	56.46	2.35	25.056	
1,000.00	999.98	987.98	987.98	0.52	2.11	87.73	-25.52	-52.98	58.71	56.08	2.62	22.370	
1,052.68	1,052.61	1,040.61	1,040.61	0.54	2.23	90.00	-25.52	-52.98	58.66	55.89	2.77	21.165	CC
1,100.00	1,099.84	1,087.84	1,087.84	0.57	2.33	92.83	-25.52	-52.98	58.73	55.83	2.90	20.224	ES
1,200.00	1,199.45	1,187.45	1,187.45	0.64	2.56	101.15	-25.52	-52.98	59.80	56.61	3.19	18.737	
1,300.00	1,298.70	1,286.70	1,286.70	0.72	2.78	111.90	-25.52	-52.98	63.31	59.82	3.49	18.149	SF
1,400.00	1,397.47	1,385.47	1,385.47	0.82	3.00	123.52	-25.52	-52.98	70.70	66.91	3.79	18.666	
1,500.00	1,495.62	1,483.62	1,483.62	0.96	3.22	134.30	-25.52	-52.98	82.87	78.79	4.08	20.321	

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



<b>Company:</b>	US ROCKIES REGION PLANNING	<b>Local Co-ordinate Reference:</b>	Well P_MAPLEWOOD 35-7
<b>Project:</b>	COLORADO NORTHERN ZONE - 83	<b>TVD Reference:</b>	WELL @ 4863.00ft (Original Well Elev)
<b>Reference Site:</b>	WELD_MAPLEWOOD 16-7	<b>MD Reference:</b>	WELL @ 4863.00ft (Original Well Elev)
<b>Site Error:</b>	0.00ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	P_MAPLEWOOD 35-7	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.00ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	P_MAPLEWOOD 35-7	<b>Database:</b>	EDM 2003.21 Single User Db
<b>Reference Design:</b>	PLAN #1 1-19-10 RHS	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design												Offset Site Error:	0.00 ft
Survey Program: 0-MWD												Offset Well Error:	0.00 ft
Reference		Offset		Semi Major Axis			Distance						
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning
1,518.47	1,513.67	1,501.67	1,501.67	0.99	3.26	136.11	-25.52	-52.98	85.67	81.54	4.13	20.742	
1,600.00	1,593.31	1,581.31	1,581.31	1.12	3.44	143.07	-25.52	-52.98	99.12	94.75	4.37	22.695	
1,700.00	1,690.99	1,678.99	1,678.99	1.30	3.66	149.34	-25.52	-52.98	117.08	112.42	4.66	25.144	
1,800.00	1,788.67	1,776.67	1,776.67	1.48	3.88	153.93	-25.52	-52.98	136.04	131.09	4.94	27.512	
1,900.00	1,886.35	1,874.35	1,874.35	1.67	4.10	157.38	-25.52	-52.98	155.64	150.41	5.23	29.735	
2,000.00	1,984.03	1,972.03	1,972.03	1.86	4.32	160.06	-25.52	-52.98	175.67	170.14	5.52	31.795	
2,100.00	2,081.71	2,069.71	2,069.71	2.05	4.54	162.20	-25.52	-52.98	195.99	190.17	5.82	33.692	
2,200.00	2,179.39	2,167.39	2,167.39	2.24	4.76	163.93	-25.52	-52.98	216.52	210.41	6.11	35.434	
2,300.00	2,277.07	2,265.07	2,265.07	2.44	4.98	165.36	-25.52	-52.98	237.21	230.81	6.41	37.034	
2,400.00	2,374.74	2,362.74	2,362.74	2.63	5.20	166.56	-25.52	-52.98	258.03	251.32	6.70	38.504	
2,500.00	2,472.42	2,460.42	2,460.42	2.83	5.42	167.58	-25.52	-52.98	278.93	271.93	7.00	39.858	
2,600.00	2,570.10	2,558.10	2,558.10	3.03	5.64	168.46	-25.52	-52.98	299.90	292.61	7.30	41.107	
2,700.00	2,667.78	2,655.78	2,655.78	3.23	5.86	169.22	-25.52	-52.98	320.94	313.34	7.59	42.261	
2,800.00	2,765.46	2,753.46	2,753.46	3.42	6.08	169.89	-25.52	-52.98	342.02	334.13	7.89	43.331	
2,900.00	2,863.14	2,851.14	2,851.14	3.62	6.30	170.49	-25.52	-52.98	363.14	354.95	8.19	44.324	
3,000.00	2,960.82	2,948.82	2,948.82	3.82	6.52	171.01	-25.52	-52.98	384.30	375.81	8.49	45.248	
3,100.00	3,058.50	3,046.50	3,046.50	4.02	6.74	171.49	-25.52	-52.98	405.48	396.69	8.79	46.110	
3,200.00	3,156.17	3,144.17	3,144.17	4.22	6.95	171.91	-25.52	-52.98	426.69	417.60	9.09	46.916	
3,300.00	3,253.85	3,241.85	3,241.85	4.42	7.17	172.30	-25.52	-52.98	447.92	438.52	9.40	47.670	
3,400.00	3,351.53	3,339.53	3,339.53	4.62	7.39	172.65	-25.52	-52.98	469.16	459.46	9.70	48.377	
3,500.00	3,449.21	3,437.21	3,437.21	4.82	7.61	172.97	-25.52	-52.98	490.42	480.42	10.00	49.042	
3,600.00	3,546.89	3,534.89	3,534.89	5.02	7.83	173.26	-25.52	-52.98	511.70	501.39	10.30	49.668	
3,700.00	3,644.57	3,632.57	3,632.57	5.22	8.05	173.53	-25.52	-52.98	532.98	522.38	10.60	50.258	
3,800.00	3,742.25	3,730.25	3,730.25	5.42	8.27	173.78	-25.52	-52.98	554.28	543.37	10.91	50.815	
3,900.00	3,839.92	3,827.92	3,827.92	5.62	8.49	174.01	-25.52	-52.98	575.58	564.37	11.21	51.343	
4,000.00	3,937.60	3,925.60	3,925.60	5.82	8.71	174.23	-25.52	-52.98	596.90	585.38	11.51	51.842	
4,100.00	4,035.28	4,023.28	4,023.28	6.02	8.93	174.43	-25.52	-52.98	618.22	606.40	11.82	52.315	
4,200.00	4,132.96	4,120.96	4,120.96	6.23	9.15	174.61	-25.52	-52.98	639.55	627.43	12.12	52.765	
4,300.00	4,230.64	4,218.64	4,218.64	6.43	9.37	174.79	-25.52	-52.98	660.88	648.46	12.42	53.193	
4,400.00	4,328.32	4,316.32	4,316.32	6.63	9.59	174.95	-25.52	-52.98	682.22	669.49	12.73	53.600	
4,500.00	4,426.00	4,414.00	4,414.00	6.83	9.81	175.10	-25.52	-52.98	703.56	690.53	13.03	53.988	
4,600.00	4,523.68	4,511.68	4,511.68	7.03	10.03	175.25	-25.52	-52.98	724.91	711.58	13.34	54.359	
4,700.00	4,621.35	4,609.35	4,609.35	7.23	10.25	175.38	-25.52	-52.98	746.27	732.63	13.64	54.712	
4,800.00	4,719.03	4,707.03	4,707.03	7.43	10.47	175.51	-25.52	-52.98	767.62	753.68	13.94	55.051	
4,900.00	4,816.71	4,804.71	4,804.71	7.63	10.69	175.64	-25.52	-52.98	788.98	774.74	14.25	55.374	
5,000.00	4,914.39	4,902.39	4,902.39	7.84	10.91	175.75	-25.52	-52.98	810.35	795.79	14.55	55.684	
5,100.00	5,012.07	5,000.07	5,000.07	8.04	11.13	175.86	-25.52	-52.98	831.71	816.86	14.86	55.982	
5,182.16	5,092.33	5,080.33	5,080.33	8.20	11.31	175.95	-25.52	-52.98	849.27	834.16	15.11	56.217	
5,200.00	5,109.76	5,097.76	5,097.76	8.24	11.35	175.97	-25.52	-52.98	853.03	837.85	15.18	56.211	
5,300.00	5,207.91	5,195.91	5,195.91	8.42	11.57	176.08	-25.52	-52.98	872.09	856.54	15.55	56.094	
5,400.00	5,306.67	5,294.67	5,294.67	8.57	11.79	176.17	-25.52	-52.98	887.72	871.82	15.90	55.840	
5,500.00	5,405.92	5,393.92	5,393.92	8.69	12.01	176.24	-25.52	-52.98	899.90	883.67	16.23	55.460	
5,600.00	5,505.53	5,493.53	5,493.53	8.78	12.24	176.29	-25.52	-52.98	908.62	892.08	16.53	54.963	
5,700.00	5,605.39	5,593.39	5,593.39	8.84	12.46	176.32	-25.52	-52.98	913.86	897.05	16.81	54.355	
5,800.63	5,706.00	5,694.00	5,694.00	8.87	12.69	-25.43	-25.52	-52.98	915.62	898.55	17.07	53.637	
5,900.00	5,805.37	5,793.37	5,793.37	8.89	12.91	-25.43	-25.52	-52.98	915.62	898.29	17.33	52.834	
6,000.00	5,905.37	5,893.37	5,893.37	8.91	13.13	-25.43	-25.52	-52.98	915.62	898.03	17.59	52.049	
6,100.00	6,005.37	5,993.37	5,993.37	8.93	13.36	-25.43	-25.52	-52.98	915.62	897.77	17.85	51.286	
6,200.00	6,105.37	6,093.37	6,093.37	8.95	13.58	-25.43	-25.52	-52.98	915.62	897.51	18.12	50.544	
6,300.00	6,205.37	6,193.37	6,193.37	8.97	13.81	-25.43	-25.52	-52.98	915.62	897.25	18.38	49.823	
6,400.00	6,305.37	6,293.37	6,293.37	8.99	14.03	-25.43	-25.52	-52.98	915.62	896.98	18.64	49.121	
6,500.00	6,405.37	6,393.37	6,393.37	9.01	14.26	-25.43	-25.52	-52.98	915.62	896.72	18.90	48.437	

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

<b>Company:</b>	US ROCKIES REGION PLANNING	<b>Local Co-ordinate Reference:</b>	Well P_MAPLEWOOD 35-7
<b>Project:</b>	COLORADO NORTHERN ZONE - 83	<b>TVD Reference:</b>	WELL @ 4863.00ft (Original Well Elev)
<b>Reference Site:</b>	WELD_MAPLEWOOD 16-7	<b>MD Reference:</b>	WELL @ 4863.00ft (Original Well Elev)
<b>Site Error:</b>	0.00ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	P_MAPLEWOOD 35-7	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.00ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	P_MAPLEWOOD 35-7	<b>Database:</b>	EDM 2003.21 Single User Db
<b>Reference Design:</b>	PLAN #1 1-19-10 RHS	<b>Offset TVD Reference:</b>	Offset Datum

<b>Offset Design</b> WELD_MAPLEWOOD 16-7 - MAPLEWOOD #2 EXISTING - MAPLEWOOD #2 EXISTING - MAPLEWOOD #2 EXISTING - MAPLEWOOD #2 EXISTING												<b>Offset Site Error:</b>	0.00 ft
Survey Program: 0-MWD												<b>Offset Well Error:</b>	0.00 ft
Reference	Offset	Semi Major Axis		Distance									
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning
6,600.00	6,505.37	6,493.37	6,493.37	9.03	14.48	-25.43	-25.52	-52.98	915.62	896.46	19.17	47.772	
6,700.00	6,605.37	6,593.37	6,593.37	9.05	14.71	-25.43	-25.52	-52.98	915.62	896.19	19.43	47.125	
6,800.00	6,705.37	6,693.37	6,693.37	9.07	14.93	-25.43	-25.52	-52.98	915.62	895.93	19.69	46.494	
6,900.00	6,805.37	6,793.37	6,793.37	9.09	15.16	-25.43	-25.52	-52.98	915.62	895.67	19.96	45.879	
7,000.00	6,905.37	6,893.37	6,893.37	9.11	15.38	-25.43	-25.52	-52.98	915.62	895.40	20.22	45.279	
7,100.00	7,005.37	6,993.37	6,993.37	9.13	15.61	-25.43	-25.52	-52.98	915.62	895.14	20.49	44.695	
7,200.00	7,105.37	7,093.37	7,093.37	9.15	15.83	-25.43	-25.52	-52.98	915.62	894.87	20.75	44.125	
7,300.00	7,205.37	7,193.37	7,193.37	9.17	16.06	-25.43	-25.52	-52.98	915.62	894.61	21.02	43.568	
7,400.00	7,305.37	7,293.37	7,293.37	9.19	16.28	-25.43	-25.52	-52.98	915.62	894.34	21.28	43.026	
7,500.00	7,405.37	7,393.37	7,393.37	9.22	16.51	-25.43	-25.52	-52.98	915.62	894.08	21.55	42.496	
7,600.00	7,505.37	7,493.37	7,493.37	9.24	16.73	-25.43	-25.52	-52.98	915.62	893.81	21.81	41.978	
7,709.63	7,615.00	7,603.00	7,603.00	9.26	16.98	-25.43	-25.52	-52.98	915.62	893.52	22.10	41.425	

<b>Company:</b>	US ROCKIES REGION PLANNING	<b>Local Co-ordinate Reference:</b>	Well P_MAPLEWOOD 35-7
<b>Project:</b>	COLORADO NORTHERN ZONE - 83	<b>TVD Reference:</b>	WELL @ 4863.00ft (Original Well Elev)
<b>Reference Site:</b>	WELD_MAPLEWOOD 16-7	<b>MD Reference:</b>	WELL @ 4863.00ft (Original Well Elev)
<b>Site Error:</b>	0.00ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	P_MAPLEWOOD 35-7	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.00ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	P_MAPLEWOOD 35-7	<b>Database:</b>	EDM 2003.21 Single User Db
<b>Reference Design:</b>	PLAN #1 1-19-10 RHS	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design												Offset Site Error:	0.00 ft
Survey Program: 0-MWD												Offset Well Error:	0.00 ft
Reference		Offset		Semi Major Axis			Distance						
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning
0.00	0.00	0.00	0.00	0.00	0.00	-54.05	18.20	-25.09	31.00				
100.00	100.00	100.00	100.00	0.04	0.10	-54.05	18.20	-25.09	31.00	30.86	0.14	221.367	
200.00	200.00	200.00	200.00	0.10	0.32	-54.05	18.20	-25.09	31.00	30.58	0.42	74.308	
300.00	300.00	300.00	300.00	0.15	0.55	-54.05	18.20	-25.09	31.00	30.30	0.69	44.648	
400.00	400.00	400.00	400.00	0.20	0.77	-54.05	18.20	-25.09	31.00	30.03	0.97	31.911	
500.00	500.00	500.00	500.00	0.25	0.99	-54.05	18.20	-25.09	31.00	29.75	1.25	24.828	
600.00	600.00	600.00	600.00	0.31	1.22	-54.05	18.20	-25.09	31.00	29.47	1.53	20.318	
700.00	700.00	700.00	700.00	0.36	1.44	-54.05	18.20	-25.09	31.00	29.20	1.80	17.195	
800.00	800.00	800.00	800.00	0.41	1.67	-54.05	18.20	-25.09	31.00	28.92	2.08	14.904	
900.00	900.00	900.00	900.00	0.46	1.89	-54.05	18.20	-25.09	31.00	28.64	2.36	13.151 CC, ES	
1,000.00	999.98	999.71	999.69	0.52	2.10	146.36	17.07	-26.41	32.88	30.28	2.61	12.602 SF	
1,100.00	1,099.84	1,099.17	1,099.01	0.57	2.28	143.12	13.69	-30.34	38.62	35.78	2.85	13.569	
1,200.00	1,199.45	1,198.15	1,197.62	0.64	2.49	139.43	8.09	-36.85	48.35	45.25	3.10	15.594	
1,300.00	1,298.70	1,296.70	1,295.46	0.72	2.71	136.34	0.44	-45.75	62.04	58.66	3.38	18.347	
1,400.00	1,397.47	1,395.31	1,393.27	0.82	2.96	135.56	-7.72	-55.24	78.62	74.93	3.69	21.288	
1,500.00	1,495.62	1,493.46	1,490.63	0.96	3.22	136.40	-15.84	-64.68	97.67	93.64	4.03	24.234	
1,518.47	1,513.67	1,511.53	1,508.55	0.99	3.27	136.66	-17.33	-66.42	101.46	97.36	4.09	24.777	
1,600.00	1,593.31	1,591.24	1,587.62	1.12	3.49	137.88	-23.92	-74.09	118.42	114.02	4.40	26.917	
1,700.00	1,690.99	1,689.01	1,684.60	1.30	3.77	138.97	-32.01	-83.49	139.28	134.50	4.79	29.099	
1,800.00	1,788.67	1,786.78	1,781.58	1.48	4.06	139.78	-40.10	-92.90	160.18	154.99	5.18	30.894	
1,900.00	1,886.35	1,884.55	1,878.56	1.67	4.35	140.40	-48.18	-102.31	181.10	175.50	5.59	32.387	
2,000.00	1,984.03	1,982.33	1,975.54	1.86	4.65	140.89	-56.27	-111.71	202.03	196.02	6.01	33.642	
2,100.00	2,081.71	2,080.10	2,072.52	2.05	4.95	141.29	-64.36	-121.12	222.97	216.55	6.42	34.709	
2,200.00	2,179.39	2,177.87	2,169.50	2.24	5.26	141.62	-72.44	-130.52	243.93	237.08	6.85	35.623	
2,300.00	2,277.07	2,275.64	2,266.49	2.44	5.56	141.90	-80.53	-139.93	264.89	257.61	7.27	36.413	
2,400.00	2,374.74	2,373.41	2,363.47	2.63	5.87	142.14	-88.61	-149.34	285.86	278.15	7.70	37.102	
2,500.00	2,472.42	2,471.18	2,460.45	2.83	6.18	142.34	-96.70	-158.74	306.83	298.69	8.14	37.707	
2,600.00	2,570.10	2,568.95	2,557.43	3.03	6.50	142.52	-104.79	-168.15	327.80	319.23	8.57	38.242	
2,700.00	2,667.78	2,666.72	2,654.41	3.23	6.81	142.68	-112.87	-177.55	348.77	339.77	9.01	38.718	
2,800.00	2,765.46	2,764.49	2,751.39	3.42	7.13	142.82	-120.96	-186.96	369.75	360.31	9.45	39.143	
2,900.00	2,863.14	2,862.27	2,848.37	3.62	7.44	142.94	-129.05	-196.37	390.73	380.85	9.89	39.526	
3,000.00	2,960.82	2,960.04	2,945.35	3.82	7.76	143.06	-137.13	-205.77	411.71	401.39	10.33	39.871	
3,100.00	3,058.50	3,057.81	3,042.33	4.02	8.08	143.16	-145.22	-215.18	432.70	421.93	10.77	40.185	
3,200.00	3,156.17	3,155.58	3,139.32	4.22	8.40	143.25	-153.31	-224.58	453.68	442.47	11.21	40.470	
3,300.00	3,253.85	3,253.35	3,236.30	4.42	8.71	143.33	-161.39	-233.99	474.67	463.01	11.65	40.731	
3,400.00	3,351.53	3,351.12	3,333.28	4.62	9.03	143.41	-169.48	-243.40	495.65	483.55	12.10	40.971	
3,500.00	3,449.21	3,448.89	3,430.26	4.82	9.35	143.48	-177.57	-252.80	516.64	504.10	12.54	41.191	
3,600.00	3,546.89	3,546.66	3,527.24	5.02	9.68	143.54	-185.65	-262.21	537.63	524.64	12.99	41.395	
3,700.00	3,644.57	3,644.43	3,624.22	5.22	10.00	143.60	-193.74	-271.61	558.61	545.18	13.43	41.583	
3,800.00	3,742.25	3,742.21	3,721.20	5.42	10.32	143.66	-201.83	-281.02	579.60	565.72	13.88	41.759	
3,900.00	3,839.92	3,839.98	3,818.18	5.62	10.64	143.71	-209.91	-290.43	600.59	586.26	14.33	41.921	
4,000.00	3,937.60	3,937.75	3,915.16	5.82	10.96	143.76	-218.00	-299.83	621.58	606.81	14.77	42.073	
4,100.00	4,035.28	4,035.52	4,012.14	6.02	11.28	143.80	-226.09	-309.24	642.57	627.35	15.22	42.215	
4,200.00	4,132.96	4,133.29	4,109.13	6.23	11.61	143.85	-234.17	-318.64	663.56	647.89	15.67	42.349	
4,300.00	4,230.64	4,231.06	4,206.11	6.43	11.93	143.89	-242.26	-328.05	684.55	668.43	16.12	42.473	
4,400.00	4,328.32	4,328.83	4,303.09	6.63	12.25	143.92	-250.34	-337.46	705.54	688.98	16.57	42.591	
4,500.00	4,426.00	4,426.60	4,400.07	6.83	12.58	143.96	-258.43	-346.86	726.53	709.52	17.01	42.702	
4,600.00	4,523.68	4,524.37	4,497.05	7.03	12.90	143.99	-266.52	-356.27	747.52	730.06	17.46	42.806	
4,700.00	4,621.35	4,622.15	4,594.03	7.23	13.22	144.02	-274.60	-365.67	768.52	750.60	17.91	42.905	
4,800.00	4,719.03	4,719.92	4,691.01	7.43	13.55	144.05	-282.69	-375.08	789.51	771.15	18.36	42.998	
4,900.00	4,816.71	4,817.69	4,787.99	7.63	13.87	144.08	-290.78	-384.49	810.50	791.69	18.81	43.087	
5,000.00	4,914.39	4,915.46	4,884.97	7.84	14.20	144.11	-298.86	-393.89	831.49	812.23	19.26	43.171	

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

<b>Company:</b>	US ROCKIES REGION PLANNING	<b>Local Co-ordinate Reference:</b>	Well P_MAPLEWOOD 35-7
<b>Project:</b>	COLORADO NORTHERN ZONE - 83	<b>TVD Reference:</b>	WELL @ 4863.00ft (Original Well Elev)
<b>Reference Site:</b>	WELD_MAPLEWOOD 16-7	<b>MD Reference:</b>	WELL @ 4863.00ft (Original Well Elev)
<b>Site Error:</b>	0.00ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	P_MAPLEWOOD 35-7	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.00ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	P_MAPLEWOOD 35-7	<b>Database:</b>	EDM 2003.21 Single User Db
<b>Reference Design:</b>	PLAN #1 1-19-10 RHS	<b>Offset TVD Reference:</b>	Offset Datum

<b>Offset Design</b> WELD_MAPLEWOOD 16-7 - P_MAPLEWOOD 13-7 - P_MAPLEWOOD 13-7 - PLAN #1 1-19-10 RHS												<b>Offset Site Error:</b>	0.00 ft
Survey Program: 0-MWD												<b>Offset Well Error:</b>	0.00 ft
Reference		Offset		Semi Major Axis			Distance						
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning
5,100.00	5,012.07	5,013.23	4,981.96	8.04	14.52	144.13	-306.95	-403.30	852.48	832.77	19.71	43.250	
5,182.16	5,092.33	5,093.56	5,061.64	8.20	14.79	144.15	-313.59	-411.03	869.73	849.65	20.08	43.313	
5,200.00	5,109.76	5,111.01	5,078.95	8.24	14.84	144.20	-315.04	-412.71	873.43	853.26	20.17	43.297	
5,300.00	5,207.91	5,209.16	5,176.30	8.42	15.17	144.36	-323.16	-422.15	892.54	871.86	20.68	43.155	
5,400.00	5,306.67	5,307.76	5,274.11	8.57	15.50	144.36	-331.31	-431.63	908.87	887.70	21.17	42.929	
5,500.00	5,405.92	5,408.23	5,373.76	8.69	15.82	144.20	-339.59	-441.26	922.39	900.76	21.63	42.641	
5,600.00	5,505.53	5,517.91	5,482.87	8.78	16.06	144.00	-346.90	-449.76	932.44	910.45	21.98	42.414	
5,700.00	5,605.39	5,628.27	5,593.00	8.84	16.27	143.87	-351.49	-455.11	938.56	916.29	22.27	42.144	
5,800.63	5,706.00	5,739.70	5,704.38	8.87	16.45	-57.96	-353.33	-457.24	940.74	918.15	22.60	41.632	
5,900.00	5,805.37	5,840.69	5,805.37	8.89	16.60	-57.96	-353.36	-457.28	940.76	917.98	22.77	41.308	
6,000.00	5,905.37	5,940.69	5,905.37	8.91	16.74	-57.96	-353.36	-457.28	940.76	917.81	22.95	40.998	
6,100.00	6,005.37	6,040.69	6,005.37	8.93	16.89	-57.96	-353.36	-457.28	940.76	917.64	23.12	40.689	
6,200.00	6,105.37	6,140.69	6,105.37	8.95	17.04	-57.96	-353.36	-457.28	940.76	917.46	23.30	40.382	
6,300.00	6,205.37	6,240.69	6,205.37	8.97	17.19	-57.96	-353.36	-457.28	940.76	917.28	23.47	40.075	
6,400.00	6,305.37	6,340.69	6,305.37	8.99	17.34	-57.96	-353.36	-457.28	940.76	917.10	23.65	39.770	
6,500.00	6,405.37	6,440.69	6,405.37	9.01	17.49	-57.96	-353.36	-457.28	940.76	916.92	23.84	39.466	
6,600.00	6,505.37	6,540.69	6,505.37	9.03	17.65	-57.96	-353.36	-457.28	940.76	916.74	24.02	39.164	
6,700.00	6,605.37	6,640.69	6,605.37	9.05	17.81	-57.96	-353.36	-457.28	940.76	916.55	24.21	38.864	
6,800.00	6,705.37	6,740.69	6,705.37	9.07	17.97	-57.96	-353.36	-457.28	940.76	916.36	24.39	38.566	
6,900.00	6,805.37	6,840.69	6,805.37	9.09	18.13	-57.96	-353.36	-457.28	940.76	916.17	24.58	38.269	
7,000.00	6,905.37	6,940.69	6,905.37	9.11	18.29	-57.96	-353.36	-457.28	940.76	915.98	24.77	37.974	
7,100.00	7,005.37	7,040.69	7,005.37	9.13	18.45	-57.96	-353.36	-457.28	940.76	915.79	24.97	37.682	
7,200.00	7,105.37	7,140.69	7,105.37	9.15	18.61	-57.96	-353.36	-457.28	940.76	915.60	25.16	37.391	
7,266.54	7,171.91	7,207.23	7,171.91	9.16	18.72	-57.96	-353.36	-457.28	940.76	915.47	25.29	37.200	
7,300.00	7,205.37	7,240.32	7,205.00	9.17	18.78	-57.96	-353.36	-457.28	940.76	915.40	25.35	37.104	
7,400.00	7,305.37	7,240.32	7,205.00	9.19	18.78	-57.96	-353.36	-457.28	946.10	920.71	25.38	37.271	
7,500.00	7,405.37	7,240.32	7,205.00	9.22	18.78	-57.96	-353.36	-457.28	961.86	936.44	25.41	37.847	
7,600.00	7,505.37	7,240.32	7,205.00	9.24	18.78	-57.96	-353.36	-457.28	987.54	962.10	25.44	38.811	
7,709.63	7,615.00	7,240.32	7,205.00	9.26	18.78	-57.96	-353.36	-457.28	1,026.22	1,000.74	25.48	40.278	

<b>Company:</b>	US ROCKIES REGION PLANNING	<b>Local Co-ordinate Reference:</b>	Well P_MAPLEWOOD 35-7
<b>Project:</b>	COLORADO NORTHERN ZONE - 83	<b>TVD Reference:</b>	WELL @ 4863.00ft (Original Well Elev)
<b>Reference Site:</b>	WELD_MAPLEWOOD 16-7	<b>MD Reference:</b>	WELL @ 4863.00ft (Original Well Elev)
<b>Site Error:</b>	0.00ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	P_MAPLEWOOD 35-7	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.00ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	P_MAPLEWOOD 35-7	<b>Database:</b>	EDM 2003.21 Single User Db
<b>Reference Design:</b>	PLAN #1 1-19-10 RHS	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design												Offset Site Error:	0.00 ft
Survey Program: 0-MWD												Offset Well Error:	0.00 ft
Reference		Offset		Semi Major Axis			Distance						
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning
0.00	0.00	0.00	0.00	0.00	0.00	117.62	-14.59	27.88	31.47				
100.00	100.00	100.00	100.00	0.04	0.10	117.62	-14.59	27.88	31.47	31.33	0.14	224.722	
200.00	200.00	200.00	200.00	0.10	0.32	117.62	-14.59	27.88	31.47	31.05	0.42	75.435	
300.00	300.00	300.00	300.00	0.15	0.55	117.62	-14.59	27.88	31.47	30.77	0.69	45.325	
400.00	400.00	400.00	400.00	0.20	0.77	117.62	-14.59	27.88	31.47	30.50	0.97	32.394	
500.00	500.00	500.00	500.00	0.25	0.99	117.62	-14.59	27.88	31.47	30.22	1.25	25.204	
600.00	600.00	600.00	600.00	0.31	1.22	117.62	-14.59	27.88	31.47	29.94	1.53	20.626	
700.00	700.00	700.00	700.00	0.36	1.44	117.62	-14.59	27.88	31.47	29.67	1.80	17.455	
800.00	800.00	800.00	800.00	0.41	1.67	117.62	-14.59	27.88	31.47	29.39	2.08	15.130	
900.00	900.00	900.00	900.00	0.46	1.89	117.62	-14.59	27.88	31.47	29.11	2.36	13.351 CC, ES	
1,000.00	999.98	998.91	998.89	0.52	2.10	-43.26	-15.06	29.52	31.87	29.25	2.62	12.181	
1,100.00	1,099.84	1,097.69	1,097.53	0.57	2.30	-50.67	-16.48	34.43	33.46	30.60	2.86	11.685 SF	
1,200.00	1,199.45	1,196.19	1,195.66	0.64	2.51	-61.24	-18.83	42.58	37.20	34.08	3.12	11.909	
1,300.00	1,298.70	1,294.29	1,293.05	0.72	2.74	-72.40	-22.10	53.91	44.11	40.69	3.41	12.918	
1,400.00	1,397.47	1,391.86	1,389.45	0.82	3.01	-82.05	-26.26	68.35	54.70	50.94	3.75	14.568	
1,500.00	1,495.62	1,488.77	1,484.63	0.96	3.32	-89.50	-31.30	85.81	69.00	64.84	4.16	16.593	
1,518.47	1,513.67	1,506.59	1,502.06	0.99	3.37	-90.64	-32.32	89.36	72.03	67.79	4.24	16.991	
1,600.00	1,593.31	1,586.41	1,580.03	1.12	3.66	-94.90	-37.06	105.80	86.19	81.56	4.63	18.624	
1,700.00	1,690.99	1,684.63	1,675.96	1.30	4.04	-98.51	-42.91	126.07	104.01	98.88	5.14	20.254	
1,800.00	1,788.67	1,782.85	1,771.88	1.48	4.43	-101.07	-48.76	146.35	122.13	116.46	5.67	21.548	
1,900.00	1,886.35	1,881.07	1,867.81	1.67	4.83	-102.96	-54.61	166.62	140.41	134.19	6.22	22.582	
2,000.00	1,984.03	1,979.29	1,963.74	1.86	5.25	-104.41	-60.46	186.89	158.81	152.03	6.78	23.418	
2,100.00	2,081.71	2,077.51	2,059.67	2.05	5.67	-105.57	-66.31	207.17	177.29	169.94	7.36	24.103	
2,200.00	2,179.39	2,175.74	2,155.60	2.24	6.10	-106.50	-72.15	227.44	195.83	187.89	7.94	24.672	
2,300.00	2,277.07	2,273.96	2,251.53	2.44	6.53	-107.28	-78.00	247.71	214.40	205.88	8.53	25.149	
2,400.00	2,374.74	2,372.18	2,347.45	2.63	6.97	-107.93	-83.85	267.99	233.01	223.90	9.12	25.555	
2,500.00	2,472.42	2,470.40	2,443.38	2.83	7.41	-108.48	-89.70	288.26	251.65	241.93	9.72	25.903	
2,600.00	2,570.10	2,568.62	2,539.31	3.03	7.85	-108.96	-95.55	308.53	270.30	259.99	10.32	26.205	
2,700.00	2,667.78	2,666.84	2,635.24	3.23	8.30	-109.38	-101.40	328.81	288.97	278.05	10.92	26.468	
2,800.00	2,765.46	2,765.06	2,731.17	3.42	8.75	-109.74	-107.24	349.08	307.65	296.13	11.52	26.701	
2,900.00	2,863.14	2,863.29	2,827.10	3.62	9.20	-110.06	-113.09	369.35	326.34	314.22	12.13	26.907	
3,000.00	2,960.82	2,961.51	2,923.03	3.82	9.65	-110.35	-118.94	389.63	345.05	332.31	12.74	27.092	
3,100.00	3,058.50	3,059.73	3,018.95	4.02	10.10	-110.61	-124.79	409.90	363.76	350.41	13.35	27.258	
3,200.00	3,156.17	3,157.95	3,114.88	4.22	10.55	-110.85	-130.64	430.17	382.47	368.52	13.95	27.408	
3,300.00	3,253.85	3,256.17	3,210.81	4.42	11.01	-111.06	-136.48	450.45	401.19	386.63	14.57	27.544	
3,400.00	3,351.53	3,354.39	3,306.74	4.62	11.46	-111.25	-142.33	470.72	419.92	404.74	15.18	27.669	
3,500.00	3,449.21	3,452.62	3,402.67	4.82	11.92	-111.43	-148.18	491.00	438.65	422.86	15.79	27.783	
3,600.00	3,546.89	3,550.84	3,498.60	5.02	12.38	-111.59	-154.03	511.27	457.38	440.98	16.40	27.889	
3,700.00	3,644.57	3,649.06	3,594.52	5.22	12.83	-111.74	-159.88	531.54	476.12	459.11	17.01	27.986	
3,800.00	3,742.25	3,747.28	3,690.45	5.42	13.29	-111.88	-165.73	551.82	494.86	477.24	17.63	28.077	
3,900.00	3,839.92	3,845.50	3,786.38	5.62	13.75	-112.00	-171.57	572.09	513.60	495.37	18.24	28.162	
4,000.00	3,937.60	3,943.72	3,882.31	5.82	14.21	-112.12	-177.42	592.36	532.35	513.50	18.85	28.241	
4,100.00	4,035.28	4,041.95	3,978.24	6.02	14.67	-112.23	-183.27	612.64	551.10	531.63	19.46	28.315	
4,200.00	4,132.96	4,140.17	4,074.17	6.23	15.12	-112.34	-189.12	632.91	569.85	549.77	20.08	28.385	
4,300.00	4,230.64	4,238.39	4,170.10	6.43	15.58	-112.43	-194.97	653.18	588.60	567.91	20.69	28.450	
4,400.00	4,328.32	4,336.61	4,266.02	6.63	16.04	-112.53	-200.81	673.46	607.35	586.05	21.30	28.513	
4,500.00	4,426.00	4,434.83	4,361.95	6.83	16.50	-112.61	-206.66	693.73	626.10	604.19	21.91	28.572	
4,600.00	4,523.68	4,533.05	4,457.88	7.03	16.96	-112.69	-212.51	714.00	644.86	622.33	22.53	28.628	
4,700.00	4,621.35	4,631.28	4,553.81	7.23	17.43	-112.77	-218.36	734.28	663.61	640.48	23.14	28.681	
4,800.00	4,719.03	4,729.50	4,649.74	7.43	17.89	-112.84	-224.21	754.55	682.37	658.62	23.75	28.732	
4,900.00	4,816.71	4,827.72	4,745.67	7.63	18.35	-112.91	-230.06	774.82	701.13	676.77	24.36	28.781	
5,000.00	4,914.39	4,925.94	4,841.59	7.84	18.81	-112.97	-235.90	795.10	719.89	694.91	24.97	28.827	

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

<b>Company:</b>	US ROCKIES REGION PLANNING	<b>Local Co-ordinate Reference:</b>	Well P_MAPLEWOOD 35-7
<b>Project:</b>	COLORADO NORTHERN ZONE - 83	<b>TVD Reference:</b>	WELL @ 4863.00ft (Original Well Elev)
<b>Reference Site:</b>	WELD_MAPLEWOOD 16-7	<b>MD Reference:</b>	WELL @ 4863.00ft (Original Well Elev)
<b>Site Error:</b>	0.00ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	P_MAPLEWOOD 35-7	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.00ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	P_MAPLEWOOD 35-7	<b>Database:</b>	EDM 2003.21 Single User Db
<b>Reference Design:</b>	PLAN #1 1-19-10 RHS	<b>Offset TVD Reference:</b>	Offset Datum

<b>Offset Design</b> WELD_MAPLEWOOD 16-7 - P_MAPLEWOOD 14-7 - P_MAPLEWOOD 14-7 - PLAN #1 1-19-10 RHS												<b>Offset Site Error:</b>	0.00 ft
Survey Program: 0-MWD												<b>Offset Well Error:</b>	0.00 ft
Reference		Offset		Semi Major Axis			Distance						
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning
5,100.00	5,012.07	5,024.16	4,937.52	8.04	19.27	-113.03	-241.75	815.37	738.65	713.06	25.58	28.872	
5,182.16	5,092.33	5,104.87	5,016.34	8.20	19.65	-113.08	-246.56	832.03	754.06	727.98	26.09	28.907	
5,200.00	5,109.76	5,122.39	5,033.46	8.24	19.73	-113.15	-247.60	835.64	757.39	731.17	26.21	28.893	
5,300.00	5,207.91	5,226.73	5,135.45	8.42	20.17	-113.39	-253.71	856.82	775.07	748.19	26.89	28.827	
5,400.00	5,306.67	5,340.23	5,247.09	8.57	20.52	-113.54	-259.35	876.38	789.87	762.43	27.44	28.781	
5,500.00	5,405.92	5,454.56	5,360.29	8.69	20.83	-113.65	-263.79	891.77	801.44	773.51	27.93	28.699	
5,600.00	5,505.53	5,569.52	5,474.66	8.78	21.08	-113.74	-266.99	902.86	809.73	781.39	28.33	28.581	
5,700.00	5,605.39	5,684.92	5,589.84	8.84	21.28	-113.79	-268.92	909.54	814.71	786.05	28.66	28.426	
5,800.63	5,706.00	5,801.11	5,706.00	8.87	21.43	44.44	-269.56	911.77	816.37	787.45	28.92	28.226	
5,900.00	5,805.37	5,900.48	5,805.37	8.89	21.55	44.44	-269.56	911.77	816.37	787.31	29.06	28.088	
6,000.00	5,905.37	6,000.48	5,905.37	8.91	21.67	44.44	-269.56	911.77	816.37	787.16	29.21	27.946	
6,100.00	6,005.37	6,100.48	6,005.37	8.93	21.79	44.44	-269.56	911.77	816.37	787.01	29.36	27.804	
6,200.00	6,105.37	6,200.48	6,105.37	8.95	21.92	44.44	-269.56	911.77	816.37	786.86	29.51	27.661	
6,300.00	6,205.37	6,300.48	6,205.37	8.97	22.05	44.44	-269.56	911.77	816.37	786.71	29.67	27.518	
6,400.00	6,305.37	6,400.48	6,305.37	8.99	22.18	44.44	-269.56	911.77	816.37	786.55	29.82	27.375	
6,500.00	6,405.37	6,500.48	6,405.37	9.01	22.31	44.44	-269.56	911.77	816.37	786.39	29.98	27.232	
6,600.00	6,505.37	6,600.48	6,505.37	9.03	22.44	44.44	-269.56	911.77	816.37	786.24	30.14	27.088	
6,700.00	6,605.37	6,700.48	6,605.37	9.05	22.57	44.44	-269.56	911.77	816.37	786.07	30.30	26.945	
6,800.00	6,705.37	6,800.48	6,705.37	9.07	22.71	44.44	-269.56	911.77	816.37	785.91	30.46	26.801	
6,900.00	6,805.37	6,900.48	6,805.37	9.09	22.84	44.44	-269.56	911.77	816.37	785.75	30.62	26.658	
7,000.00	6,905.37	7,000.48	6,905.37	9.11	22.98	44.44	-269.56	911.77	816.37	785.58	30.79	26.514	
7,100.00	7,005.37	7,100.48	7,005.37	9.13	23.12	44.44	-269.56	911.77	816.37	785.42	30.96	26.371	
7,200.00	7,105.37	7,200.48	7,105.37	9.15	23.26	44.44	-269.56	911.77	816.37	785.25	31.13	26.228	
7,300.00	7,205.37	7,300.48	7,205.37	9.17	23.40	44.44	-269.56	911.77	816.37	785.08	31.30	26.085	
7,400.00	7,305.37	7,400.48	7,305.37	9.19	23.54	44.44	-269.56	911.77	816.37	784.90	31.47	25.942	
7,500.00	7,405.37	7,500.48	7,405.37	9.22	23.69	44.44	-269.56	911.77	816.37	784.73	31.64	25.800	
7,600.00	7,505.37	7,600.48	7,505.37	9.24	23.83	44.44	-269.56	911.77	816.37	784.56	31.82	25.658	
7,709.63	7,615.00	7,710.11	7,615.00	9.26	23.99	44.44	-269.56	911.77	816.37	784.36	32.01	25.503	



<b>Company:</b>	US ROCKIES REGION PLANNING	<b>Local Co-ordinate Reference:</b>	Well P_MAPLEWOOD 35-7
<b>Project:</b>	COLORADO NORTHERN ZONE - 83	<b>TVD Reference:</b>	WELL @ 4863.00ft (Original Well Elev)
<b>Reference Site:</b>	WELD_MAPLEWOOD 16-7	<b>MD Reference:</b>	WELL @ 4863.00ft (Original Well Elev)
<b>Site Error:</b>	0.00ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	P_MAPLEWOOD 35-7	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.00ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	P_MAPLEWOOD 35-7	<b>Database:</b>	EDM 2003.21 Single User Db
<b>Reference Design:</b>	PLAN #1 1-19-10 RHS	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design												Offset Site Error:	0.00 ft
Survey Program: 0-MWD												Offset Well Error:	0.00 ft
Reference		Offset		Semi Major Axis			Distance						
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning
0.00	0.00	0.00	0.00	0.00	0.00	-51.94	10.92	-13.94	17.71				
100.00	100.00	100.00	100.00	0.04	0.10	-51.94	10.92	-13.94	17.71	17.57	0.14	126.448	
200.00	200.00	200.00	200.00	0.10	0.32	-51.94	10.92	-13.94	17.71	17.29	0.42	42.446	
300.00	300.00	300.00	300.00	0.15	0.55	-51.94	10.92	-13.94	17.71	17.01	0.69	25.504	
400.00	400.00	400.00	400.00	0.20	0.77	-51.94	10.92	-13.94	17.71	16.74	0.97	18.228	
500.00	500.00	500.00	500.00	0.25	0.99	-51.94	10.92	-13.94	17.71	16.46	1.25	14.182	
600.00	600.00	600.00	600.00	0.31	1.22	-51.94	10.92	-13.94	17.71	16.18	1.53	11.606	
700.00	700.00	700.00	700.00	0.36	1.44	-51.94	10.92	-13.94	17.71	15.90	1.80	9.822	
800.00	800.00	800.00	800.00	0.41	1.67	-51.94	10.92	-13.94	17.71	15.63	2.08	8.513	
900.00	900.00	900.00	900.00	0.46	1.89	-51.94	10.92	-13.94	17.71	15.35	2.36	7.512 CC, ES, SF	
1,000.00	999.98	999.61	999.59	0.52	2.12	156.68	12.62	-13.61	20.15	17.52	2.63	7.659	
1,100.00	1,099.84	1,098.55	1,098.39	0.57	2.34	169.47	17.67	-12.64	28.58	25.68	2.90	9.852	
1,200.00	1,199.45	1,196.18	1,195.66	0.64	2.56	179.16	25.94	-11.04	44.04	40.87	3.17	13.906	
1,300.00	1,298.70	1,291.90	1,290.68	0.72	2.80	-175.03	37.19	-8.86	66.43	63.00	3.43	19.379	
1,400.00	1,397.47	1,385.13	1,382.82	0.82	3.05	-171.57	51.15	-6.16	95.38	91.69	3.69	25.883	
1,500.00	1,495.62	1,475.39	1,471.53	0.96	3.32	-169.39	67.46	-3.01	130.55	126.61	3.94	33.141	
1,518.47	1,513.67	1,491.70	1,487.50	0.99	3.37	-169.08	70.70	-2.38	137.70	133.71	3.99	34.551	
1,600.00	1,593.31	1,562.69	1,556.80	1.12	3.62	-167.98	85.83	0.55	170.60	166.39	4.22	40.468	
1,700.00	1,690.99	1,647.70	1,639.24	1.30	3.95	-166.87	106.17	4.48	213.33	208.83	4.50	47.388	
1,800.00	1,788.67	1,730.37	1,718.80	1.48	4.30	-165.93	128.25	8.75	258.60	253.81	4.79	53.971	
1,900.00	1,886.35	1,810.68	1,795.42	1.67	4.68	-165.11	151.84	13.32	306.29	301.21	5.08	60.255	
2,000.00	1,984.03	1,888.60	1,869.10	1.86	5.08	-164.40	176.73	18.13	356.33	350.95	5.38	66.262	
2,100.00	2,081.71	1,964.13	1,939.83	2.05	5.52	-163.76	202.74	23.16	408.60	402.92	5.67	72.019	
2,200.00	2,179.39	2,037.27	2,007.64	2.24	5.97	-163.19	229.65	28.37	463.01	457.04	5.97	77.571	
2,300.00	2,277.07	2,108.05	2,072.56	2.44	6.44	-162.67	257.31	33.72	519.46	513.20	6.26	82.951	
2,400.00	2,374.74	2,163.96	2,141.56	2.63	6.98	-162.16	288.38	39.73	577.56	570.98	6.58	87.818	
2,500.00	2,472.42	2,265.10	2,215.24	2.83	7.57	-161.70	321.75	46.18	635.87	628.96	6.91	92.004	
2,600.00	2,570.10	2,346.25	2,288.93	3.03	8.17	-161.33	355.12	52.63	694.20	686.95	7.25	95.760	
2,700.00	2,667.78	2,427.40	2,362.61	3.23	8.78	-161.01	388.49	59.09	752.55	744.96	7.59	99.138	
2,800.00	2,765.46	2,508.54	2,436.30	3.42	9.39	-160.74	421.86	65.54	810.91	802.97	7.94	102.187	
2,900.00	2,863.14	2,589.69	2,509.99	3.62	10.01	-160.50	455.23	72.00	869.28	861.00	8.28	104.942	
3,000.00	2,960.82	2,670.84	2,583.67	3.82	10.64	-160.29	488.60	78.45	927.66	919.03	8.63	107.444	
3,100.00	3,058.50	2,751.99	2,657.36	4.02	11.27	-160.11	521.97	84.91	986.05	977.06	8.99	109.726	
3,200.00	3,156.17	2,833.13	2,731.05	4.22	11.90	-159.95	555.35	91.36	1,044.44	1,035.10	9.34	111.814	
3,300.00	3,253.85	2,914.28	2,804.73	4.42	12.53	-159.80	588.72	97.82	1,102.84	1,093.14	9.70	113.730	
3,400.00	3,351.53	2,995.43	2,878.42	4.62	13.17	-159.67	622.09	104.27	1,161.24	1,151.18	10.05	115.492	
3,500.00	3,449.21	3,076.58	2,952.10	4.82	13.81	-159.56	655.46	110.72	1,219.64	1,209.23	10.41	117.114	
3,600.00	3,546.89	3,157.72	3,025.79	5.02	14.45	-159.45	688.83	117.18	1,278.05	1,267.28	10.77	118.615	
3,700.00	3,644.57	3,238.87	3,099.48	5.22	15.09	-159.35	722.20	123.63	1,336.46	1,325.33	11.14	120.007	
3,800.00	3,742.25	3,320.02	3,173.16	5.42	15.74	-159.26	755.57	130.09	1,394.87	1,383.38	11.50	121.301	
3,900.00	3,839.92	3,401.17	3,246.85	5.62	16.38	-159.18	788.94	136.54	1,453.29	1,441.43	11.86	122.507	
4,000.00	3,937.60	3,482.31	3,320.53	5.82	17.03	-159.11	822.31	143.00	1,511.71	1,499.48	12.23	123.630	
4,100.00	4,035.28	3,563.46	3,394.22	6.02	17.67	-159.03	855.68	149.45	1,570.13	1,557.53	12.59	124.681	
4,200.00	4,132.96	3,644.61	3,467.91	6.23	18.32	-158.97	889.05	155.90	1,628.55	1,615.59	12.96	125.665	
4,300.00	4,230.64	3,725.76	3,541.59	6.43	18.97	-158.91	922.42	162.36	1,686.97	1,673.64	13.33	126.590	
4,400.00	4,328.32	3,806.90	3,615.28	6.63	19.62	-158.85	955.79	168.81	1,745.39	1,731.70	13.69	127.459	
4,500.00	4,426.00	3,888.05	3,688.97	6.83	20.27	-158.80	989.16	175.27	1,803.81	1,789.75	14.06	128.277	
4,600.00	4,523.68	3,969.20	3,762.65	7.03	20.92	-158.75	1,022.53	181.72	1,862.24	1,847.81	14.43	129.048	
4,700.00	4,621.35	4,050.34	3,836.34	7.23	21.57	-158.70	1,055.90	188.18	1,920.66	1,905.86	14.80	129.777	
4,800.00	4,719.03	4,131.49	3,910.02	7.43	22.22	-158.66	1,089.27	194.63	1,979.09	1,963.92	15.17	130.466	
4,900.00	4,816.71	4,212.64	3,983.71	7.63	22.87	-158.62	1,122.64	201.09	2,037.52	2,021.98	15.54	131.120	
5,000.00	4,914.39	4,293.79	4,057.40	7.84	23.52	-158.58	1,156.01	207.54	2,095.95	2,080.04	15.91	131.739	

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

<b>Company:</b>	US ROCKIES REGION PLANNING	<b>Local Co-ordinate Reference:</b>	Well P_MAPLEWOOD 35-7
<b>Project:</b>	COLORADO NORTHERN ZONE - 83	<b>TVD Reference:</b>	WELL @ 4863.00ft (Original Well Elev)
<b>Reference Site:</b>	WELD_MAPLEWOOD 16-7	<b>MD Reference:</b>	WELL @ 4863.00ft (Original Well Elev)
<b>Site Error:</b>	0.00ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	P_MAPLEWOOD 35-7	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.00ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	P_MAPLEWOOD 35-7	<b>Database:</b>	EDM 2003.21 Single User Db
<b>Reference Design:</b>	PLAN #1 1-19-10 RHS	<b>Offset TVD Reference:</b>	Offset Datum

<b>Offset Design</b> WELD_MAPLEWOOD 16-7 - P_MAPLEWOOD 22-7 - P_MAPLEWOOD 22-7 - PLAN #1 1-19-10 RHS												<b>Offset Site Error:</b>	0.00 ft
Survey Program: 0-MWD												<b>Offset Well Error:</b>	0.00 ft
Reference		Offset		Semi Major Axis			Distance						
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning
5,100.00	5,012.07	4,374.93	4,131.08	8.04	24.17	-158.54	1,189.38	213.99	2,154.37	2,138.09	16.28	132.327	
5,182.16	5,092.33	4,441.61	4,191.63	8.20	24.71	-158.51	1,216.80	219.30	2,202.38	2,185.80	16.59	132.789	
5,200.00	5,109.76	4,456.11	4,204.80	8.24	24.83	-158.60	1,222.76	220.45	2,212.76	2,196.06	16.70	132.530	
5,300.00	5,207.91	4,538.51	4,279.62	8.42	25.49	-159.04	1,256.65	227.00	2,269.38	2,252.07	17.31	131.098	
5,400.00	5,306.67	4,622.67	4,356.04	8.57	26.17	-159.40	1,291.26	233.70	2,323.29	2,305.38	17.91	129.708	
5,500.00	5,405.92	4,708.48	4,433.97	8.69	26.86	-159.69	1,326.55	240.52	2,374.43	2,355.93	18.50	128.368	
5,600.00	5,505.53	4,795.86	4,513.31	8.78	27.56	-159.92	1,362.48	247.47	2,422.74	2,403.67	19.06	127.084	
5,700.00	5,605.39	4,884.68	4,593.96	8.84	28.28	-160.09	1,399.01	254.54	2,468.16	2,448.55	19.61	125.859	
5,800.63	5,706.00	5,150.08	4,837.83	8.87	30.00	-1.60	1,501.63	274.39	2,509.92	2,489.28	20.64	121.624	
5,900.00	5,805.37	5,850.77	5,516.94	8.89	32.77	-0.78	1,663.96	305.79	2,533.11	2,510.80	22.30	113.573	
6,000.00	5,905.37	6,239.96	5,905.37	8.91	33.34	-0.69	1,683.03	309.47	2,535.66	2,512.73	22.93	110.582	
6,100.00	6,005.37	6,339.96	6,005.37	8.93	33.42	-0.69	1,683.03	309.47	2,535.66	2,512.55	23.11	109.711	
6,200.00	6,105.37	6,439.96	6,105.37	8.95	33.50	-0.69	1,683.03	309.47	2,535.66	2,512.36	23.30	108.845	
6,300.00	6,205.37	6,539.96	6,205.37	8.97	33.58	-0.69	1,683.03	309.47	2,535.66	2,512.18	23.48	107.984	
6,400.00	6,305.37	6,639.96	6,305.37	8.99	33.67	-0.69	1,683.03	309.47	2,535.66	2,511.99	23.67	107.129	
6,500.00	6,405.37	6,739.96	6,405.37	9.01	33.75	-0.69	1,683.03	309.47	2,535.66	2,511.80	23.86	106.279	
6,600.00	6,505.37	6,839.96	6,505.37	9.03	33.84	-0.69	1,683.03	309.47	2,535.66	2,511.61	24.05	105.435	
6,700.00	6,605.37	6,939.96	6,605.37	9.05	33.92	-0.69	1,683.03	309.47	2,535.66	2,511.42	24.24	104.597	
6,800.00	6,705.37	7,039.96	6,705.37	9.07	34.01	-0.69	1,683.03	309.47	2,535.66	2,511.22	24.44	103.766	
6,900.00	6,805.37	7,139.96	6,805.37	9.09	34.10	-0.69	1,683.03	309.47	2,535.66	2,511.03	24.63	102.941	
7,000.00	6,905.37	7,239.96	6,905.37	9.11	34.19	-0.69	1,683.03	309.47	2,535.66	2,510.83	24.83	102.123	
7,100.00	7,005.37	7,339.96	7,005.37	9.13	34.28	-0.69	1,683.03	309.47	2,535.66	2,510.63	25.03	101.311	
7,200.00	7,105.37	7,439.96	7,105.37	9.15	34.38	-0.69	1,683.03	309.47	2,535.66	2,510.43	25.23	100.506	
7,300.00	7,205.37	7,539.96	7,205.37	9.17	34.47	-0.69	1,683.03	309.47	2,535.66	2,510.23	25.43	99.709	
7,400.00	7,305.37	7,639.96	7,305.37	9.19	34.56	-0.69	1,683.03	309.47	2,535.66	2,510.02	25.63	98.918	
7,500.00	7,405.37	7,739.96	7,405.37	9.22	34.66	-0.69	1,683.03	309.47	2,535.66	2,509.82	25.84	98.135	
7,600.00	7,505.37	7,839.96	7,505.37	9.24	34.76	-0.69	1,683.03	309.47	2,535.66	2,509.61	26.04	97.359	
7,667.29	7,572.66	7,907.25	7,572.66	9.25	34.83	-0.69	1,683.03	309.47	2,535.66	2,509.47	26.18	96.841	
7,709.63	7,615.00	7,934.59	7,600.00	9.26	34.85	-0.69	1,683.03	309.47	2,535.70	2,509.46	26.25	96.614	



<b>Company:</b>	US ROCKIES REGION PLANNING	<b>Local Co-ordinate Reference:</b>	Well P_MAPLEWOOD 35-7
<b>Project:</b>	COLORADO NORTHERN ZONE - 83	<b>TVD Reference:</b>	WELL @ 4863.00ft (Original Well Elev)
<b>Reference Site:</b>	WELD_MAPLEWOOD 16-7	<b>MD Reference:</b>	WELL @ 4863.00ft (Original Well Elev)
<b>Site Error:</b>	0.00ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	P_MAPLEWOOD 35-7	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.00ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	P_MAPLEWOOD 35-7	<b>Database:</b>	EDM 2003.21 Single User Db
<b>Reference Design:</b>	PLAN #1 1-19-10 RHS	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design												Offset Site Error:	0.00 ft
Survey Program: 0-MWD												Offset Well Error:	0.00 ft
Reference		Offset		Semi Major Axis			Distance						
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning
0.00	0.00	0.00	0.00	0.00	0.00	117.62	-7.29	13.94	15.73				
100.00	100.00	100.00	100.00	0.04	0.10	117.62	-7.29	13.94	15.73	15.59	0.14	112.361	
200.00	200.00	200.00	200.00	0.10	0.32	117.62	-7.29	13.94	15.73	15.32	0.42	37.717	
300.00	300.00	300.00	300.00	0.15	0.55	117.62	-7.29	13.94	15.73	15.04	0.69	22.662	
400.00	400.00	400.00	400.00	0.20	0.77	117.62	-7.29	13.94	15.73	14.76	0.97	16.197	
500.00	500.00	500.00	500.00	0.25	0.99	117.62	-7.29	13.94	15.73	14.49	1.25	12.602	
600.00	600.00	600.00	600.00	0.31	1.22	117.62	-7.29	13.94	15.73	14.21	1.53	10.313	
700.00	700.00	700.00	700.00	0.36	1.44	117.62	-7.29	13.94	15.73	13.93	1.80	8.728	
800.00	800.00	800.00	800.00	0.41	1.67	117.62	-7.29	13.94	15.73	13.65	2.08	7.565	
900.00	900.00	900.00	900.00	0.46	1.89	117.62	-7.29	13.94	15.73	13.38	2.36	6.675	
958.84	958.84	958.61	958.61	0.49	2.02	-43.64	-7.10	14.51	15.71	13.20	2.52	6.246 CC	
1,000.00	999.98	999.57	999.55	0.52	2.11	-49.31	-6.74	15.58	15.79	13.16	2.63	6.013 ES, SF	
1,100.00	1,099.84	1,098.79	1,098.63	0.57	2.32	-72.54	-5.07	20.47	17.98	15.09	2.89	6.228	
1,200.00	1,199.45	1,197.33	1,196.80	0.64	2.54	-95.94	-2.32	28.53	25.95	22.79	3.16	8.210	
1,300.00	1,298.70	1,294.88	1,293.63	0.72	2.79	-110.13	1.47	39.66	40.43	36.98	3.45	11.707	
1,400.00	1,397.47	1,391.11	1,388.70	0.82	3.05	-117.76	6.25	53.69	60.55	56.78	3.77	16.053	
1,500.00	1,495.62	1,485.74	1,481.67	0.96	3.35	-122.02	11.96	70.42	85.67	81.54	4.12	20.783	
1,518.47	1,513.67	1,503.02	1,498.57	0.99	3.40	-122.58	13.11	73.79	90.82	86.63	4.19	21.679	
1,600.00	1,593.31	1,578.74	1,572.41	1.12	3.68	-124.46	18.53	89.69	114.81	110.30	4.51	25.430	
1,700.00	1,690.99	1,670.37	1,661.12	1.30	4.06	-125.19	25.92	111.39	146.47	141.53	4.94	29.655	
1,800.00	1,788.67	1,760.48	1,747.60	1.48	4.48	-125.04	34.09	135.34	180.43	175.04	5.39	33.482	
1,900.00	1,886.35	1,848.93	1,831.67	1.67	4.94	-124.43	42.95	161.34	216.65	210.79	5.86	36.969	
2,000.00	1,984.03	1,935.61	1,913.20	1.86	5.44	-123.59	52.44	189.19	255.10	248.75	6.36	40.141	
2,100.00	2,081.71	2,027.20	1,998.85	2.05	6.02	-122.75	62.92	219.91	294.75	287.85	6.90	42.748	
2,200.00	2,179.39	2,118.93	2,084.63	2.24	6.61	-122.10	73.40	250.68	334.43	326.99	7.44	44.936	
2,300.00	2,277.07	2,210.66	2,170.40	2.44	7.22	-121.59	83.89	281.44	374.15	366.15	8.00	46.785	
2,400.00	2,374.74	2,302.39	2,256.18	2.63	7.84	-121.17	94.38	312.21	413.89	405.33	8.56	48.363	
2,500.00	2,472.42	2,394.12	2,341.96	2.83	8.47	-120.83	104.86	342.97	453.64	444.51	9.12	49.721	
2,600.00	2,570.10	2,485.85	2,427.74	3.03	9.10	-120.55	115.35	373.73	493.40	483.71	9.69	50.901	
2,700.00	2,667.78	2,577.58	2,513.52	3.23	9.74	-120.31	125.84	404.50	533.17	522.90	10.27	51.936	
2,800.00	2,765.46	2,669.31	2,599.29	3.42	10.38	-120.10	136.32	435.26	572.95	562.11	10.84	52.851	
2,900.00	2,863.14	2,761.03	2,685.07	3.62	11.03	-119.92	146.81	466.03	612.73	601.31	11.42	53.665	
3,000.00	2,960.82	2,852.76	2,770.85	3.82	11.68	-119.76	157.30	496.79	652.52	640.52	12.00	54.394	
3,100.00	3,058.50	2,944.49	2,856.63	4.02	12.33	-119.61	167.78	527.56	692.31	679.73	12.58	55.051	
3,200.00	3,156.17	3,036.22	2,942.41	4.22	12.99	-119.49	178.27	558.32	732.11	718.95	13.16	55.646	
3,300.00	3,253.85	3,127.95	3,028.18	4.42	13.64	-119.37	188.76	589.09	771.90	758.16	13.74	56.188	
3,400.00	3,351.53	3,219.68	3,113.96	4.62	14.30	-119.27	199.24	619.85	811.70	797.38	14.32	56.683	
3,500.00	3,449.21	3,311.41	3,199.74	4.82	14.96	-119.18	209.73	650.62	851.50	836.60	14.90	57.139	
3,600.00	3,546.89	3,403.14	3,285.52	5.02	15.62	-119.10	220.22	681.38	891.31	875.82	15.49	57.559	
3,700.00	3,644.57	3,494.87	3,371.30	5.22	16.28	-119.02	230.70	712.15	931.11	915.04	16.07	57.948	
3,800.00	3,742.25	3,586.60	3,457.07	5.42	16.94	-118.95	241.19	742.91	970.92	954.27	16.65	58.310	
3,900.00	3,839.92	3,678.33	3,542.85	5.62	17.61	-118.88	251.68	773.68	1,010.73	993.49	17.23	58.647	
4,000.00	3,937.60	3,770.06	3,628.63	5.82	18.27	-118.82	262.16	804.44	1,050.53	1,032.72	17.82	58.963	
4,100.00	4,035.28	3,861.79	3,714.41	6.02	18.93	-118.77	272.65	835.20	1,090.34	1,071.94	18.40	59.260	
4,200.00	4,132.96	3,953.52	3,800.19	6.23	19.60	-118.72	283.14	865.97	1,130.15	1,111.17	18.98	59.539	
4,300.00	4,230.64	4,045.25	3,885.96	6.43	20.26	-118.67	293.62	896.73	1,169.97	1,150.40	19.56	59.803	
4,400.00	4,328.32	4,136.98	3,971.74	6.63	20.93	-118.62	304.11	927.50	1,209.78	1,189.63	20.15	60.052	
4,500.00	4,426.00	4,228.71	4,057.52	6.83	21.60	-118.58	314.60	958.26	1,249.59	1,228.86	20.73	60.289	
4,600.00	4,523.68	4,320.44	4,143.30	7.03	22.26	-118.54	325.09	989.03	1,289.40	1,268.09	21.31	60.514	
4,700.00	4,621.35	4,412.17	4,229.08	7.23	22.93	-118.50	335.57	1,019.79	1,329.21	1,307.33	21.89	60.728	
4,800.00	4,719.03	4,503.90	4,314.85	7.43	23.60	-118.47	346.06	1,050.56	1,369.03	1,346.56	22.47	60.920	
4,900.00	4,816.71	4,595.62	4,400.63	7.63	24.27	-118.43	356.55	1,081.32	1,408.84	1,385.78	23.07	61.081	

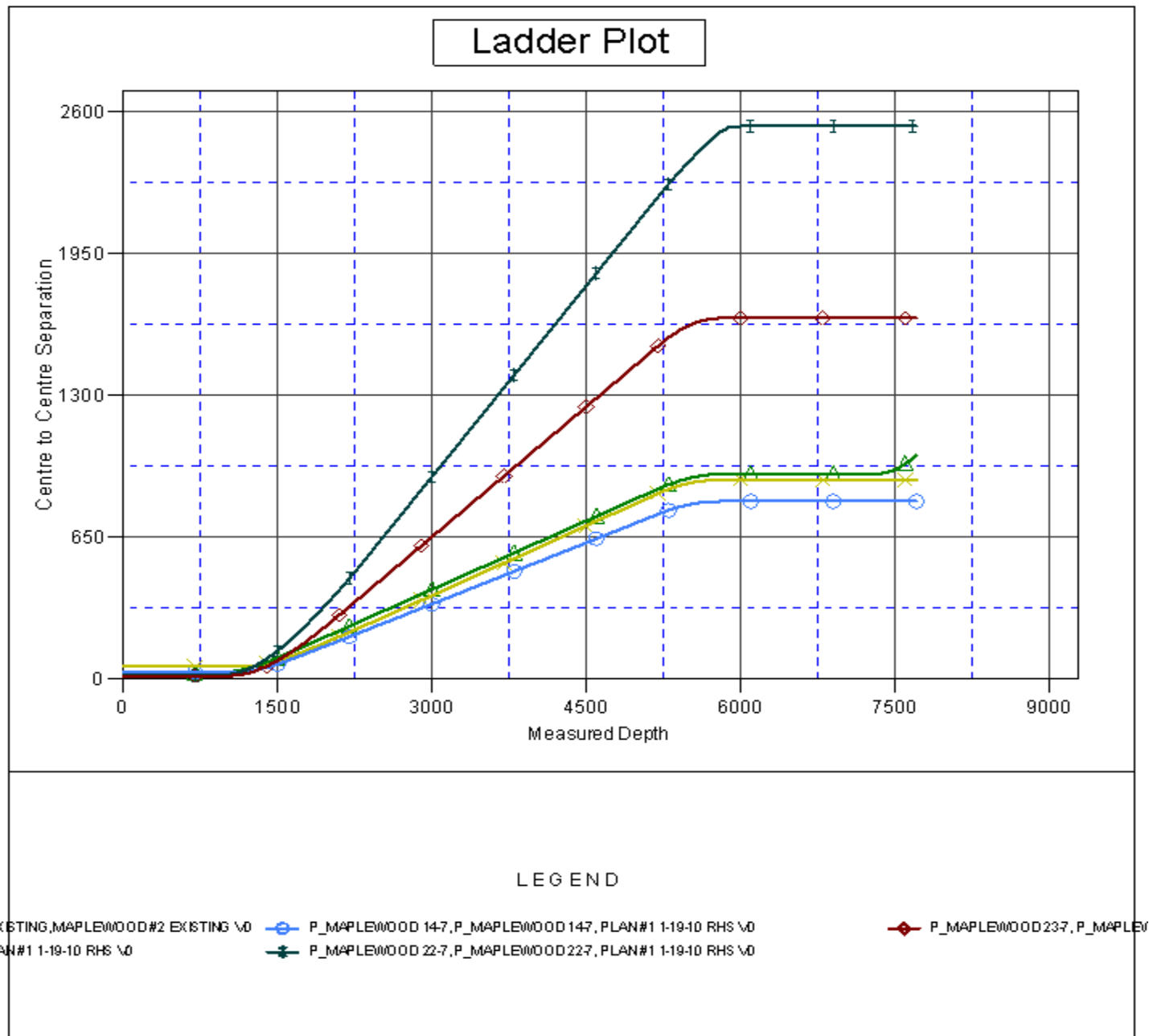
CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

<b>Company:</b>	US ROCKIES REGION PLANNING	<b>Local Co-ordinate Reference:</b>	Well P_MAPLEWOOD 35-7
<b>Project:</b>	COLORADO NORTHERN ZONE - 83	<b>TVD Reference:</b>	WELL @ 4863.00ft (Original Well Elev)
<b>Reference Site:</b>	WELD_MAPLEWOOD 16-7	<b>MD Reference:</b>	WELL @ 4863.00ft (Original Well Elev)
<b>Site Error:</b>	0.00ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	P_MAPLEWOOD 35-7	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.00ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	P_MAPLEWOOD 35-7	<b>Database:</b>	EDM 2003.21 Single User Db
<b>Reference Design:</b>	PLAN #1 1-19-10 RHS	<b>Offset TVD Reference:</b>	Offset Datum

<b>Offset Design</b> WELD_MAPLEWOOD 16-7 - P_MAPLEWOOD 23-7 - P_MAPLEWOOD 23-7 - PLAN #1 1-19-10 RHS												<b>Offset Site Error:</b>	0.00 ft
Survey Program: 0-MWD												<b>Offset Well Error:</b>	0.00 ft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	
5,000.00	4,914.39	4,687.35	4,486.41	7.84	24.93	-118.40	367.03	1,112.09	1,448.66	1,425.00	23.66	61.233	
5,100.00	5,012.07	4,779.08	4,572.19	8.04	25.60	-118.37	377.52	1,142.85	1,488.47	1,464.22	24.25	61.377	
5,182.16	5,092.33	4,854.45	4,642.67	8.20	26.15	-118.35	386.14	1,168.13	1,521.19	1,496.45	24.74	61.490	
5,200.00	5,109.76	4,870.82	4,657.97	8.24	26.27	-118.48	388.01	1,173.62	1,528.26	1,503.38	24.89	61.409	
5,300.00	5,207.91	5,012.58	4,791.24	8.42	27.18	-119.06	403.59	1,219.33	1,566.10	1,540.26	25.84	60.616	
5,400.00	5,306.67	5,188.54	4,959.65	8.57	28.02	-119.49	420.01	1,267.52	1,597.94	1,571.19	26.76	59.721	
5,500.00	5,405.92	5,371.16	5,137.38	8.69	28.74	-119.81	433.50	1,307.08	1,623.13	1,595.56	27.56	58.887	
5,600.00	5,505.53	5,559.07	5,322.67	8.78	29.30	-120.03	443.53	1,336.52	1,641.34	1,613.10	28.24	58.112	
5,700.00	5,605.39	5,750.68	5,513.29	8.84	29.71	-120.16	449.71	1,354.63	1,652.34	1,623.55	28.79	57.393	
5,800.63	5,706.00	5,943.53	5,706.00	8.87	29.94	38.04	451.76	1,360.64	1,655.98	1,626.78	29.20	56.707	
5,900.00	5,805.37	6,042.90	5,805.37	8.89	30.03	38.04	451.76	1,360.64	1,655.98	1,626.64	29.34	56.438	
6,000.00	5,905.37	6,142.90	5,905.37	8.91	30.12	38.04	451.76	1,360.64	1,655.98	1,626.50	29.49	56.157	
6,100.00	6,005.37	6,242.90	6,005.37	8.93	30.22	38.04	451.76	1,360.64	1,655.98	1,626.35	29.64	55.875	
6,200.00	6,105.37	6,342.90	6,105.37	8.95	30.31	38.04	451.76	1,360.64	1,655.98	1,626.20	29.79	55.593	
6,300.00	6,205.37	6,442.90	6,205.37	8.97	30.41	38.04	451.76	1,360.64	1,655.98	1,626.04	29.94	55.310	
6,400.00	6,305.37	6,542.90	6,305.37	8.99	30.51	38.04	451.76	1,360.64	1,655.98	1,625.89	30.09	55.026	
6,500.00	6,405.37	6,642.90	6,405.37	9.01	30.61	38.04	451.76	1,360.64	1,655.98	1,625.73	30.25	54.742	
6,600.00	6,505.37	6,742.90	6,505.37	9.03	30.71	38.04	451.76	1,360.64	1,655.98	1,625.58	30.41	54.458	
6,700.00	6,605.37	6,842.90	6,605.37	9.05	30.81	38.04	451.76	1,360.64	1,655.98	1,625.42	30.57	54.174	
6,800.00	6,705.37	6,942.90	6,705.37	9.07	30.91	38.04	451.76	1,360.64	1,655.98	1,625.26	30.73	53.889	
6,900.00	6,805.37	7,042.90	6,805.37	9.09	31.01	38.04	451.76	1,360.64	1,655.98	1,625.09	30.89	53.605	
7,000.00	6,905.37	7,142.90	6,905.37	9.11	31.12	38.04	451.76	1,360.64	1,655.98	1,624.93	31.06	53.321	
7,100.00	7,005.37	7,242.90	7,005.37	9.13	31.23	38.04	451.76	1,360.64	1,655.98	1,624.76	31.22	53.037	
7,200.00	7,105.37	7,342.90	7,105.37	9.15	31.34	38.04	451.76	1,360.64	1,655.98	1,624.59	31.39	52.754	
7,300.00	7,205.37	7,442.90	7,205.37	9.17	31.45	38.04	451.76	1,360.64	1,655.98	1,624.42	31.56	52.471	
7,400.00	7,305.37	7,542.90	7,305.37	9.19	31.56	38.04	451.76	1,360.64	1,655.98	1,624.25	31.73	52.189	
7,500.00	7,405.37	7,642.90	7,405.37	9.22	31.67	38.04	451.76	1,360.64	1,655.98	1,624.08	31.90	51.907	
7,600.00	7,505.37	7,742.90	7,505.37	9.24	31.78	38.04	451.76	1,360.64	1,655.98	1,623.91	32.08	51.625	
7,709.63	7,615.00	7,852.53	7,615.00	9.26	31.91	38.04	451.76	1,360.64	1,655.98	1,623.72	32.27	51.318	

<b>Company:</b>	US ROCKIES REGION PLANNING	<b>Local Co-ordinate Reference:</b>	Well P_MAPLEWOOD 35-7
<b>Project:</b>	COLORADO NORTHERN ZONE - 83	<b>TVD Reference:</b>	WELL @ 4863.00ft (Original Well Elev)
<b>Reference Site:</b>	WELD_MAPLEWOOD 16-7	<b>MD Reference:</b>	WELL @ 4863.00ft (Original Well Elev)
<b>Site Error:</b>	0.00ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	P_MAPLEWOOD 35-7	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.00ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	P_MAPLEWOOD 35-7	<b>Database:</b>	EDM 2003.21 Single User Db
<b>Reference Design:</b>	PLAN #1 1-19-10 RHS	<b>Offset TVD Reference:</b>	Offset Datum

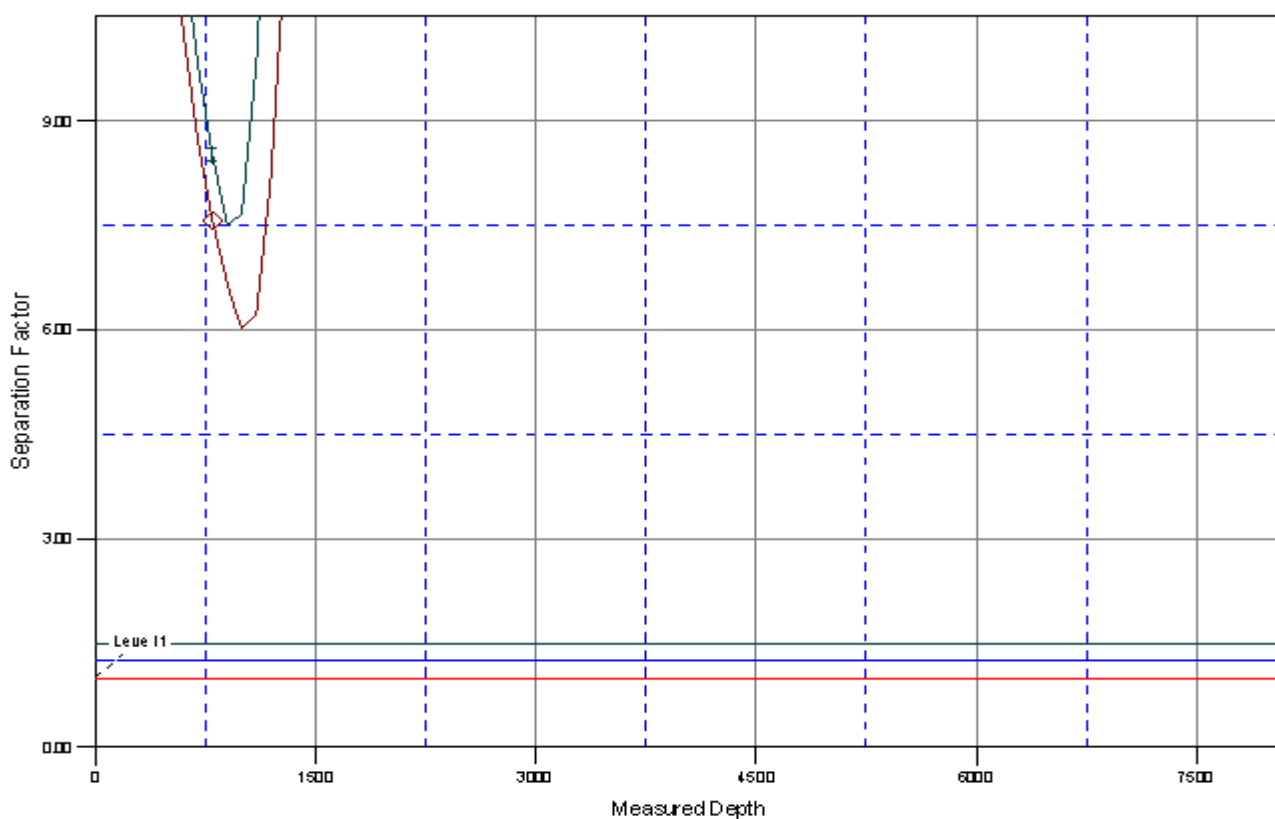
Reference Depths are relative to WELL @ 4863.00ft (Original Well Elev) Coordinates are relative to: P\_MAPLEWOOD 35-7  
Offset Depths are relative to Offset Datum Coordinate System is US State Plane 1983, Colorado Northern Zone  
Central Meridian is 105° 30' 0.000 W ° Grid Convergence at Surface is: 0.36°



<b>Company:</b>	US ROCKIES REGION PLANNING	<b>Local Co-ordinate Reference:</b>	Well P_MAPLEWOOD 35-7
<b>Project:</b>	COLORADO NORTHERN ZONE - 83	<b>TVD Reference:</b>	WELL @ 4863.00ft (Original Well Elev)
<b>Reference Site:</b>	WELD_MAPLEWOOD 16-7	<b>MD Reference:</b>	WELL @ 4863.00ft (Original Well Elev)
<b>Site Error:</b>	0.00ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	P_MAPLEWOOD 35-7	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.00ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	P_MAPLEWOOD 35-7	<b>Database:</b>	EDM 2003.21 Single User Db
<b>Reference Design:</b>	PLAN #1 1-19-10 RHS	<b>Offset TVD Reference:</b>	Offset Datum

Reference Depths are relative to WELL @ 4863.00ft (Original Well Elev) Coordinates are relative to: P\_MAPLEWOOD 35-7  
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: 0.36°

## Separation Factor Plot



### LEGEND

EXISTING,MAPLEWOOD #2 EXISTING \O P\_MAPLEWOOD 147,P\_MAPLEWOOD 147,PLAN#1 1-19-10 RHS \O P\_MAPLEWOOD 237,P\_MAPLEWOOD 237,PLAN#1 1-19-10 RHS \O  
PLAN#1 1-19-10 RHS \O P\_MAPLEWOOD 227,P\_MAPLEWOOD 227,PLAN#1 1-19-10 RHS \O