



# **US ROCKIES REGION PLANNING**

**COLORADO NORTHERN ZONE - 83**

**WELD\_MAPLEWOOD 16-7**

**P\_MAPLEWOOD 14-7**

**P\_MAPLEWOOD 14-7**

**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 14-7

+N/-S	+E/-W	Northing	Ground Level:	4848.00	Latitude	Longitude	Slot
0.00	0.00	1361137.13	Easting	3156648.53	40° 19' 24.096 N	104° 56' 17.448 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	
1520.25	12.41	106.09	1515.42	-18.54	64.26	2.00	106.09	66.88	
5179.86	12.41	106.09	5089.58	-236.43	819.62	0.00	0.00	853.04	
5800.11	0.00	0.00	5705.00	-254.97	883.89	2.00	180.00	919.93	
7715.11	0.00	0.00	7620.00	-254.97	883.89	0.00	0.00	919.93	PBHL_MAPLEWOOD 14-7(660 FSL 1880 FWL)50°TGT RAD

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

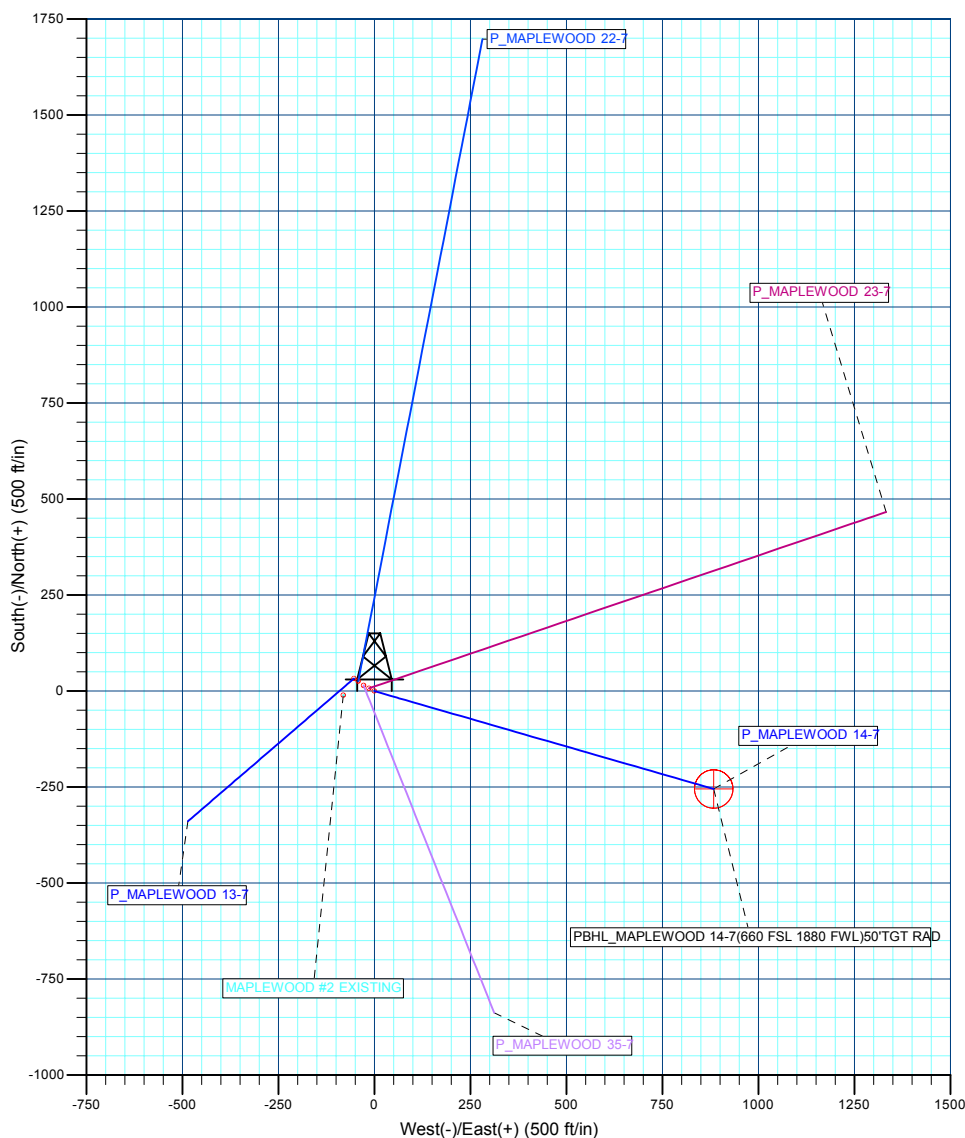
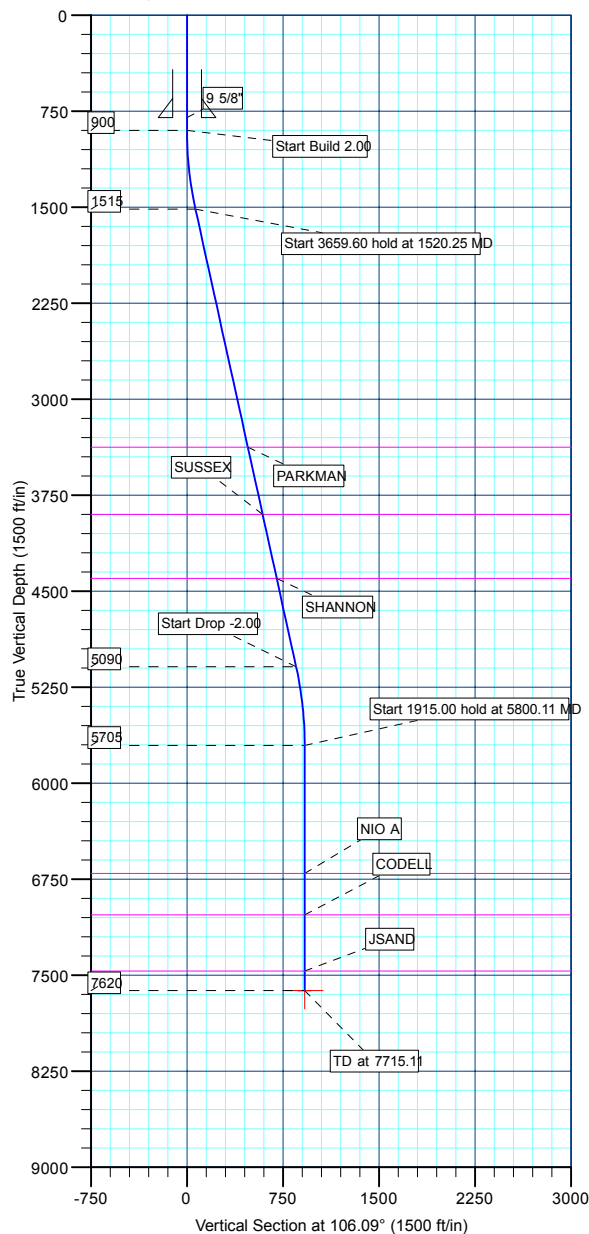
Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Shape
PBHL	7620.00	-254.97	883.89	1360887.76	3157534.01	40° 19' 21.576 N	104° 56' 6.036 W	Circle (Radius: 50.00)

#### CASING DETAILS

TVD	MD	Name	Size
800.00	800.00	9 5/8"	9.62

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

GRD ELEV: 4848.00



Plan: PLAN #1 1-19-10 RHS (P\_MAPLEWOOD 14-7/P\_MAPLEWOOD 14-7)

Created By: Robert H. Scott

<b>Database:</b>	EDM 2003.21 Single User Db	<b>Local Co-ordinate Reference:</b>	Well P_MAPLEWOOD 14-7
<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 14-7	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	P_MAPLEWOOD 14-7		
<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 14-7					
Well Position	+N/-S	-14.59 ft	Northing:	1,361,137.13 ft	Latitude:	40° 19' 24.096 N
	+E/-W	27.88 ft	Easting:	3,156,648.53 ft	Longitude:	104° 56' 17.448 W
Position Uncertainty		0.00 ft	Wellhead Elevation:	ft	Ground Level:	4,848.00 ft

<b>Wellbore</b>	P_MAPLEWOOD 14-7				
<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	106.09

<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	
1,520.25	12.41	106.09	1,515.42	-18.54	64.26	2.00	2.00	0.00	106.09	
5,179.86	12.41	106.09	5,089.58	-236.43	819.62	0.00	0.00	0.00	0.00	
5,800.11	0.00	0.00	5,705.00	-254.97	883.89	2.00	-2.00	0.00	180.00	
7,715.11	0.00	0.00	7,620.00	-254.97	883.89	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 14-7
<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 14-7	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	P_MAPLEWOOD 14-7		
<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	106.09	999.98	-0.48	1.68	1.75	2.00	2.00	0.00
1,100.00	4.00	106.09	1,099.84	-1.93	6.71	6.98	2.00	2.00	0.00
1,200.00	6.00	106.09	1,199.45	-4.35	15.08	15.69	2.00	2.00	0.00
1,300.00	8.00	106.09	1,298.70	-7.73	26.79	27.88	2.00	2.00	0.00
1,400.00	10.00	106.09	1,397.47	-12.06	41.82	43.52	2.00	2.00	0.00
1,500.00	12.00	106.09	1,495.62	-17.35	60.15	62.60	2.00	2.00	0.00
<b>Start 3659.60 hold at 1520.25 MD</b>									
1,520.25	12.41	106.09	1,515.42	-18.54	64.26	66.88	2.00	2.00	0.00
1,600.00	12.41	106.09	1,593.30	-23.29	80.72	84.01	0.00	0.00	0.00
1,700.00	12.41	106.09	1,690.97	-29.24	101.36	105.50	0.00	0.00	0.00
1,800.00	12.41	106.09	1,788.63	-35.19	122.00	126.98	0.00	0.00	0.00
1,900.00	12.41	106.09	1,886.30	-41.15	142.64	148.46	0.00	0.00	0.00
2,000.00	12.41	106.09	1,983.97	-47.10	163.29	169.94	0.00	0.00	0.00
2,100.00	12.41	106.09	2,081.63	-53.06	183.93	191.43	0.00	0.00	0.00
2,200.00	12.41	106.09	2,179.30	-59.01	204.57	212.91	0.00	0.00	0.00
2,300.00	12.41	106.09	2,276.96	-64.96	225.21	234.39	0.00	0.00	0.00
2,400.00	12.41	106.09	2,374.63	-70.92	245.85	255.87	0.00	0.00	0.00
2,500.00	12.41	106.09	2,472.29	-76.87	266.49	277.35	0.00	0.00	0.00
2,600.00	12.41	106.09	2,569.96	-82.83	287.13	298.84	0.00	0.00	0.00
2,700.00	12.41	106.09	2,667.62	-88.78	307.77	320.32	0.00	0.00	0.00
2,800.00	12.41	106.09	2,765.29	-94.74	328.41	341.80	0.00	0.00	0.00
2,900.00	12.41	106.09	2,862.95	-100.69	349.05	363.28	0.00	0.00	0.00
3,000.00	12.41	106.09	2,960.62	-106.64	369.69	384.76	0.00	0.00	0.00
3,100.00	12.41	106.09	3,058.28	-112.60	390.33	406.25	0.00	0.00	0.00
3,200.00	12.41	106.09	3,155.95	-118.55	410.97	427.73	0.00	0.00	0.00
3,300.00	12.41	106.09	3,253.61	-124.51	431.61	449.21	0.00	0.00	0.00
3,400.00	12.41	106.09	3,351.28	-130.46	452.25	470.69	0.00	0.00	0.00
<b>PARKMAN</b>									
3,424.29	12.41	106.09	3,375.00	-131.91	457.27	475.91	0.00	0.00	0.00
3,500.00	12.41	106.09	3,448.95	-136.41	472.89	492.18	0.00	0.00	0.00
3,600.00	12.41	106.09	3,546.61	-142.37	493.53	513.66	0.00	0.00	0.00
3,700.00	12.41	106.09	3,644.28	-148.32	514.17	535.14	0.00	0.00	0.00
3,800.00	12.41	106.09	3,741.94	-154.28	534.81	556.62	0.00	0.00	0.00
3,900.00	12.41	106.09	3,839.61	-160.23	555.46	578.10	0.00	0.00	0.00
<b>SUSSEX</b>									
3,961.84	12.41	106.09	3,900.00	-163.91	568.22	591.39	0.00	0.00	0.00
4,000.00	12.41	106.09	3,937.27	-166.18	576.10	599.59	0.00	0.00	0.00
4,100.00	12.41	106.09	4,034.94	-172.14	596.74	621.07	0.00	0.00	0.00
4,200.00	12.41	106.09	4,132.60	-178.09	617.38	642.55	0.00	0.00	0.00
4,300.00	12.41	106.09	4,230.27	-184.05	638.02	664.03	0.00	0.00	0.00
4,400.00	12.41	106.09	4,327.93	-190.00	658.66	685.51	0.00	0.00	0.00
<b>SHANNON</b>									
4,473.79	12.41	106.09	4,400.00	-194.39	673.89	701.37	0.00	0.00	0.00
4,500.00	12.41	106.09	4,425.60	-195.95	679.30	707.00	0.00	0.00	0.00
4,600.00	12.41	106.09	4,523.26	-201.91	699.94	728.48	0.00	0.00	0.00
4,700.00	12.41	106.09	4,620.93	-207.86	720.58	749.96	0.00	0.00	0.00
4,800.00	12.41	106.09	4,718.59	-213.82	741.22	771.44	0.00	0.00	0.00
4,900.00	12.41	106.09	4,816.26	-219.77	761.86	792.93	0.00	0.00	0.00
5,000.00	12.41	106.09	4,913.93	-225.73	782.50	814.41	0.00	0.00	0.00
5,100.00	12.41	106.09	5,011.59	-231.68	803.14	835.89	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 14-7
<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 14-7	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	P_MAPLEWOOD 14-7		
<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)
5,179.86	12.41	106.09	5,089.58	-236.43	819.62	853.04	0.00	0.00	0.00
5,200.00	12.00	106.09	5,109.27	-237.61	823.72	857.30	2.00	-2.00	0.00
5,300.00	10.00	106.09	5,207.43	-242.90	842.05	876.39	2.00	-2.00	0.00
5,400.00	8.00	106.09	5,306.19	-247.24	857.08	892.03	2.00	-2.00	0.00
5,500.00	6.00	106.09	5,405.44	-250.62	868.80	904.22	2.00	-2.00	0.00
5,600.00	4.00	106.09	5,505.05	-253.04	877.17	912.94	2.00	-2.00	0.00
5,700.00	2.00	106.09	5,604.91	-254.49	882.21	918.18	2.00	-2.00	0.00
5,800.00	0.00	106.09	5,704.89	-254.97	883.89	919.93	2.00	-2.00	0.00
<b>Start 1915.00 hold at 5800.11 MD</b>									
5,800.11	0.00	0.00	5,705.00	-254.97	883.89	919.93	2.00	-2.00	0.00
5,900.00	0.00	0.00	5,804.89	-254.97	883.89	919.93	0.00	0.00	0.00
6,000.00	0.00	0.00	5,904.89	-254.97	883.89	919.93	0.00	0.00	0.00
6,100.00	0.00	0.00	6,004.89	-254.97	883.89	919.93	0.00	0.00	0.00
6,200.00	0.00	0.00	6,104.89	-254.97	883.89	919.93	0.00	0.00	0.00
6,300.00	0.00	0.00	6,204.89	-254.97	883.89	919.93	0.00	0.00	0.00
6,400.00	0.00	0.00	6,304.89	-254.97	883.89	919.93	0.00	0.00	0.00
6,500.00	0.00	0.00	6,404.89	-254.97	883.89	919.93	0.00	0.00	0.00
6,600.00	0.00	0.00	6,504.89	-254.97	883.89	919.93	0.00	0.00	0.00
6,700.00	0.00	0.00	6,604.89	-254.97	883.89	919.93	0.00	0.00	0.00
6,800.00	0.00	0.00	6,704.89	-254.97	883.89	919.93	0.00	0.00	0.00
<b>NIO A</b>									
6,800.11	0.00	0.00	6,705.00	-254.97	883.89	919.93	0.00	0.00	0.00
6,900.00	0.00	0.00	6,804.89	-254.97	883.89	919.93	0.00	0.00	0.00
7,000.00	0.00	0.00	6,904.89	-254.97	883.89	919.93	0.00	0.00	0.00
7,100.00	0.00	0.00	7,004.89	-254.97	883.89	919.93	0.00	0.00	0.00
<b>CODELL</b>									
7,124.11	0.00	0.00	7,029.00	-254.97	883.89	919.93	0.00	0.00	0.00
7,200.00	0.00	0.00	7,104.89	-254.97	883.89	919.93	0.00	0.00	0.00
7,300.00	0.00	0.00	7,204.89	-254.97	883.89	919.93	0.00	0.00	0.00
7,400.00	0.00	0.00	7,304.89	-254.97	883.89	919.93	0.00	0.00	0.00
7,500.00	0.00	0.00	7,404.89	-254.97	883.89	919.93	0.00	0.00	0.00
<b>JSAND</b>									
7,562.11	0.00	0.00	7,467.00	-254.97	883.89	919.93	0.00	0.00	0.00
7,600.00	0.00	0.00	7,504.89	-254.97	883.89	919.93	0.00	0.00	0.00
7,700.00	0.00	0.00	7,604.89	-254.97	883.89	919.93	0.00	0.00	0.00
<b>PBHL_MAPLEWOOD 14-7(660 FSL 1880 FWL)50'TGT RAD</b>									
7,715.11	0.00	0.00	7,620.00	-254.97	883.89	919.93	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	7,620.00	-254.97	883.89	1,360,887.76	3,157,534.01	40° 19' 21.576 N	104° 56' 6.036 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 14-7
<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 14-7	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	P_MAPLEWOOD 14-7		
<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	9 5/8"	9.62	12.25	

Formations						
Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)	
3,424.29	3,375.00	PARKMAN				
3,961.84	3,900.00	SUSSEX				
4,473.79	4,400.00	SHANNON				
6,800.11	6,705.00	NIO A				
7,124.11	7,029.00	CODELL				
7,562.11	7,467.00	JSAND				

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	
1,520.25	1,515.42	-18.54	64.26	Start 3659.60 hold at 1520.25 MD	
5,179.86	5,089.58	-236.43	819.62	Start Drop -2.00	
5,800.11	5,705.00	-254.97	883.89	Start 1915.00 hold at 5800.11 MD	
7,715.11	7,620.00	-254.97	883.89	TD at 7715.11	



# **US ROCKIES REGION PLANNING**

**COLORADO NORTHERN ZONE - 83  
WELD\_MAPLEWOOD 16-7  
P\_MAPLEWOOD 14-7**

**P\_MAPLEWOOD 14-7  
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 14-7
<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 14-7	<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 14-7	<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	7,715.11	PLAN #1 1-19-10 RHS (P_MAPLEWOOD	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_MAPLEWOOD 16-7						
MAPLEWOOD #2 EXISTING - MAPLEWOOD #2 EXIST	900.00	888.00	81.60	77.82	21.602	CC, ES
MAPLEWOOD #2 EXISTING - MAPLEWOOD #2 EXIST	1,100.00	1,087.84	88.03	83.41	19.057	SF
P_MAPLEWOOD 13-7 - P_MAPLEWOOD 13-7 - PLAN #	900.00	900.00	62.30	58.51	16.450	CC, ES
P_MAPLEWOOD 13-7 - P_MAPLEWOOD 13-7 - PLAN #	1,000.00	999.26	64.54	60.35	15.397	SF
P_MAPLEWOOD 22-7 - P_MAPLEWOOD 22-7 - PLAN #	900.00	900.00	48.99	45.20	12.934	CC, ES
P_MAPLEWOOD 22-7 - P_MAPLEWOOD 22-7 - PLAN #	1,000.00	999.34	51.29	47.07	12.170	SF
P_MAPLEWOOD 23-7 - P_MAPLEWOOD 23-7 - PLAN #	900.00	900.00	15.73	11.95	4.154	CC, ES
P_MAPLEWOOD 23-7 - P_MAPLEWOOD 23-7 - PLAN #	1,000.00	1,000.37	16.26	12.05	3.865	SF
P_MAPLEWOOD 35-7 - P_MAPLEWOOD 35-7 - PLAN #	900.00	900.00	31.47	29.11	13.351	CC, ES
P_MAPLEWOOD 35-7 - P_MAPLEWOOD 35-7 - PLAN #	1,100.00	1,101.49	33.51	30.64	11.675	SF

Offset Design		WELD_MAPLEWOOD 16-7 - MAPLEWOOD #2 EXISTING - MAPLEWOOD #									
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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 14-7
<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 14-7	<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 14-7	<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 WELD_MAPLEWOOD 16-7 - MAPLEWOOD #2 EXISTING - MAPLEWOOD #2 EXISTING - MAPLEWOOD #2 EXISTING - MAPLEWOOD #2 EXISTING												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
1,600.00	1,593.30	1,581.30	1,581.30	3.71	3.44	168.01	-10.93	-80.86	162.05	155.35	6.71	24.165	
1,700.00	1,690.97	1,678.97	1,678.97	4.10	3.66	169.40	-10.93	-80.86	183.14	175.98	7.16	25.582	
1,800.00	1,788.63	1,776.63	1,776.63	4.50	3.88	170.51	-10.93	-80.86	204.31	196.69	7.62	26.826	
1,900.00	1,886.30	1,874.30	1,874.30	4.91	4.10	171.41	-10.93	-80.86	225.54	217.46	8.08	27.925	
2,000.00	1,983.97	1,971.97	1,971.97	5.34	4.32	172.15	-10.93	-80.86	246.81	238.27	8.54	28.900	
2,100.00	2,081.63	2,069.63	2,069.63	5.77	4.54	172.78	-10.93	-80.86	268.11	259.11	9.01	29.770	
2,200.00	2,179.30	2,167.30	2,167.30	6.21	4.76	173.32	-10.93	-80.86	289.45	279.97	9.47	30.550	
2,300.00	2,276.96	2,264.96	2,264.96	6.65	4.98	173.78	-10.93	-80.86	310.80	300.85	9.94	31.253	
2,400.00	2,374.63	2,362.63	2,362.63	7.09	5.20	174.18	-10.93	-80.86	332.17	321.75	10.42	31.890	
2,500.00	2,472.29	2,460.29	2,460.29	7.54	5.42	174.53	-10.93	-80.86	353.55	342.66	10.89	32.469	
2,600.00	2,569.96	2,557.96	2,557.96	8.00	5.64	174.84	-10.93	-80.86	374.95	363.58	11.36	32.997	
2,700.00	2,667.62	2,655.62	2,655.62	8.45	5.86	175.12	-10.93	-80.86	396.35	384.51	11.84	33.481	
2,800.00	2,765.29	2,753.29	2,753.29	8.91	6.08	175.37	-10.93	-80.86	417.76	405.45	12.31	33.925	
2,900.00	2,862.95	2,850.95	2,850.95	9.37	6.30	175.60	-10.93	-80.86	439.18	426.39	12.79	34.335	
3,000.00	2,960.62	2,948.62	2,948.62	9.83	6.52	175.80	-10.93	-80.86	460.60	447.34	13.27	34.714	
3,100.00	3,058.28	3,046.28	3,046.28	10.29	6.73	175.99	-10.93	-80.86	482.03	468.29	13.75	35.066	
3,200.00	3,155.95	3,143.95	3,143.95	10.75	6.95	176.16	-10.93	-80.86	503.47	489.24	14.23	35.392	
3,300.00	3,253.61	3,241.61	3,241.61	11.21	7.17	176.32	-10.93	-80.86	524.91	510.20	14.70	35.697	
3,400.00	3,351.28	3,339.28	3,339.28	11.67	7.39	176.46	-10.93	-80.86	546.35	531.16	15.18	35.981	
3,500.00	3,448.95	3,436.95	3,436.95	12.14	7.61	176.60	-10.93	-80.86	567.79	552.13	15.66	36.247	
3,600.00	3,546.61	3,534.61	3,534.61	12.60	7.83	176.72	-10.93	-80.86	589.24	573.09	16.15	36.496	
3,700.00	3,644.28	3,632.28	3,632.28	13.07	8.05	176.84	-10.93	-80.86	610.69	594.06	16.63	36.731	
3,800.00	3,741.94	3,729.94	3,729.94	13.54	8.27	176.94	-10.93	-80.86	632.14	615.03	17.11	36.952	
3,900.00	3,839.61	3,827.61	3,827.61	14.00	8.49	177.04	-10.93	-80.86	653.59	636.01	17.59	37.160	
4,000.00	3,937.27	3,925.27	3,925.27	14.47	8.71	177.14	-10.93	-80.86	675.05	656.98	18.07	37.356	
4,100.00	4,034.94	4,022.94	4,022.94	14.94	8.93	177.23	-10.93	-80.86	696.51	677.96	18.55	37.542	
4,200.00	4,132.60	4,120.60	4,120.60	15.40	9.15	177.31	-10.93	-80.86	717.97	698.93	19.03	37.718	
4,300.00	4,230.27	4,218.27	4,218.27	15.87	9.37	177.39	-10.93	-80.86	739.43	719.91	19.52	37.885	
4,400.00	4,327.93	4,315.93	4,315.93	16.34	9.59	177.46	-10.93	-80.86	760.89	740.89	20.00	38.044	
4,500.00	4,425.60	4,413.60	4,413.60	16.81	9.81	177.53	-10.93	-80.86	782.35	761.87	20.48	38.195	
4,600.00	4,523.26	4,511.26	4,511.26	17.28	10.03	177.60	-10.93	-80.86	803.81	782.85	20.97	38.339	
4,700.00	4,620.93	4,608.93	4,608.93	17.75	10.25	177.66	-10.93	-80.86	825.28	803.83	21.45	38.476	
4,800.00	4,718.59	4,706.59	4,706.59	18.22	10.47	177.72	-10.93	-80.86	846.74	824.81	21.93	38.607	
4,900.00	4,816.26	4,804.26	4,804.26	18.69	10.69	177.78	-10.93	-80.86	868.21	845.79	22.42	38.731	
5,000.00	4,913.93	4,901.93	4,901.93	19.16	10.91	177.83	-10.93	-80.86	889.68	866.78	22.90	38.851	
5,100.00	5,011.59	4,999.59	4,999.59	19.63	11.12	177.88	-10.93	-80.86	911.15	887.76	23.38	38.965	
5,179.86	5,089.58	5,077.58	5,077.58	20.00	11.30	177.92	-10.93	-80.86	928.29	904.52	23.77	39.053	
5,200.00	5,109.27	5,097.27	5,097.27	20.08	11.34	177.93	-10.93	-80.86	932.54	908.66	23.88	39.049	
5,300.00	5,207.43	5,195.43	5,195.43	20.41	11.57	177.99	-10.93	-80.86	951.62	927.22	24.40	39.007	
5,400.00	5,306.19	5,294.19	5,294.19	20.69	11.79	178.03	-10.93	-80.86	967.25	942.38	24.88	38.884	
5,500.00	5,405.44	5,393.44	5,393.44	20.94	12.01	178.06	-10.93	-80.86	979.44	954.12	25.32	38.684	
5,600.00	5,505.05	5,493.05	5,493.05	21.14	12.23	178.09	-10.93	-80.86	988.15	962.43	25.72	38.413	
5,700.00	5,604.91	5,592.91	5,592.91	21.30	12.46	178.10	-10.93	-80.86	993.39	967.29	26.09	38.075	
5,800.11	5,705.00	5,693.00	5,693.00	21.43	12.68	-75.80	-10.93	-80.86	995.13	968.71	26.43	37.659	
5,900.00	5,804.89	5,792.89	5,792.89	21.55	12.91	-75.80	-10.93	-80.86	995.13	968.31	26.83	37.094	
6,000.00	5,904.89	5,892.89	5,892.89	21.67	13.13	-75.80	-10.93	-80.86	995.13	967.90	27.23	36.545	
6,100.00	6,004.89	5,992.89	5,992.89	21.79	13.36	-75.80	-10.93	-80.86	995.13	967.50	27.63	36.011	
6,200.00	6,104.89	6,092.89	6,092.89	21.92	13.58	-75.80	-10.93	-80.86	995.13	967.09	28.04	35.490	
6,300.00	6,204.89	6,192.89	6,192.89	22.05	13.81	-75.80	-10.93	-80.86	995.13	966.69	28.45	34.983	
6,400.00	6,304.89	6,292.89	6,292.89	22.17	14.03	-75.80	-10.93	-80.86	995.13	966.28	28.85	34.488	
6,500.00	6,404.89	6,392.89	6,392.89	22.30	14.26	-75.80	-10.93	-80.86	995.13	965.87	29.26	34.006	
6,600.00	6,504.89	6,492.89	6,492.89	22.44	14.48	-75.80	-10.93	-80.86	995.13	965.46	29.67	33.536	

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 14-7
<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 14-7	<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 14-7	<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
6,700.00	6,604.89	6,592.89	6,592.89	22.57	14.71	-75.80	-10.93	-80.86	995.13	965.05	30.08	33.078	
6,800.00	6,704.89	6,692.89	6,692.89	22.70	14.93	-75.80	-10.93	-80.86	995.13	964.64	30.50	32.631	
6,900.00	6,804.89	6,792.89	6,792.89	22.84	15.16	-75.80	-10.93	-80.86	995.13	964.22	30.91	32.195	
7,000.00	6,904.89	6,892.89	6,892.89	22.98	15.38	-75.80	-10.93	-80.86	995.13	963.81	31.32	31.769	
7,100.00	7,004.89	6,992.89	6,992.89	23.12	15.61	-75.80	-10.93	-80.86	995.13	963.39	31.74	31.354	
7,200.00	7,104.89	7,092.89	7,092.89	23.26	15.83	-75.80	-10.93	-80.86	995.13	962.98	32.15	30.948	
7,300.00	7,204.89	7,192.89	7,192.89	23.40	16.05	-75.80	-10.93	-80.86	995.13	962.56	32.57	30.552	
7,400.00	7,304.89	7,292.89	7,292.89	23.54	16.28	-75.80	-10.93	-80.86	995.13	962.14	32.99	30.166	
7,500.00	7,404.89	7,392.89	7,392.89	23.69	16.50	-75.80	-10.93	-80.86	995.13	961.73	33.41	29.788	
7,600.00	7,504.89	7,492.89	7,492.89	23.83	16.73	-75.80	-10.93	-80.86	995.13	961.31	33.83	29.419	
7,700.00	7,604.89	7,592.89	7,592.89	23.98	16.95	-75.80	-10.93	-80.86	995.13	960.89	34.25	29.058	
7,715.11	7,620.00	7,608.00	7,608.00	24.00	16.99	-75.80	-10.93	-80.86	995.13	960.82	34.31	29.004	

<b>Company:</b>	US ROCKIES REGION PLANNING	<b>Local Co-ordinate Reference:</b>	Well P_MAPLEWOOD 14-7
<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 14-7	<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 14-7	<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	-58.25	32.79	-52.98	62.30				
100.00	100.00	100.00	100.00	0.10	0.10	-58.25	32.79	-52.98	62.30	62.11	0.19	326.099	
200.00	200.00	200.00	200.00	0.32	0.32	-58.25	32.79	-52.98	62.30	61.66	0.64	97.258	
300.00	300.00	300.00	300.00	0.55	0.55	-58.25	32.79	-52.98	62.30	61.21	1.09	57.151	
400.00	400.00	400.00	400.00	0.77	0.77	-58.25	32.79	-52.98	62.30	60.76	1.54	40.465	
500.00	500.00	500.00	500.00	0.99	0.99	-58.25	32.79	-52.98	62.30	60.31	1.99	31.320	
600.00	600.00	600.00	600.00	1.22	1.22	-58.25	32.79	-52.98	62.30	59.86	2.44	25.547	
700.00	700.00	700.00	700.00	1.44	1.44	-58.25	32.79	-52.98	62.30	59.41	2.89	21.571	
800.00	800.00	800.00	800.00	1.67	1.67	-58.25	32.79	-52.98	62.30	58.96	3.34	18.666	
900.00	900.00	900.00	900.00	1.89	1.89	-58.25	32.79	-52.98	62.30	58.51	3.79	16.450 CC, ES	
1,000.00	999.98	999.26	999.24	2.10	2.09	-166.20	31.67	-54.28	64.54	60.35	4.19	15.397 SF	
1,100.00	1,099.84	1,097.96	1,097.80	2.30	2.28	-171.04	28.33	-58.16	71.61	67.05	4.56	15.696	
1,200.00	1,199.45	1,195.56	1,195.04	2.52	2.48	-177.19	22.86	-64.53	84.24	79.30	4.94	17.047	
1,300.00	1,298.70	1,292.14	1,290.93	2.76	2.70	176.87	15.40	-73.20	102.92	97.59	5.33	19.301	
1,400.00	1,397.47	1,389.02	1,387.03	3.03	2.95	172.58	7.39	-82.52	126.28	120.54	5.74	22.019	
1,500.00	1,495.62	1,485.06	1,482.29	3.35	3.20	169.82	-0.55	-91.76	153.41	147.27	6.15	24.964	
1,520.25	1,515.42	1,504.39	1,501.47	3.42	3.25	169.39	-2.15	-93.62	159.34	153.11	6.23	25.580	
1,600.00	1,593.30	1,580.46	1,576.92	3.71	3.46	168.08	-8.44	-100.93	183.00	176.40	6.60	27.730	
1,700.00	1,690.97	1,675.84	1,671.53	4.10	3.74	166.85	-16.33	-110.11	212.76	205.68	7.08	30.070	
1,800.00	1,788.63	1,771.22	1,766.15	4.50	4.02	165.92	-24.22	-119.29	242.58	235.02	7.56	32.073	
1,900.00	1,886.30	1,866.61	1,860.76	4.91	4.30	165.19	-32.11	-128.46	272.46	264.40	8.06	33.798	
2,000.00	1,983.97	1,961.99	1,955.37	5.34	4.59	164.61	-40.00	-137.64	302.36	293.80	8.57	35.293	
2,100.00	2,081.63	2,057.37	2,049.98	5.77	4.88	164.13	-47.89	-146.81	332.29	323.21	9.08	36.595	
2,200.00	2,179.30	2,152.76	2,144.60	6.21	5.18	163.73	-55.78	-155.99	362.24	352.64	9.60	37.738	
2,300.00	2,276.96	2,248.14	2,239.21	6.65	5.48	163.39	-63.67	-165.17	392.20	382.08	10.12	38.746	
2,400.00	2,374.63	2,343.52	2,333.82	7.09	5.78	163.10	-71.55	-174.34	422.17	411.52	10.65	39.641	
2,500.00	2,472.29	2,438.90	2,428.43	7.54	6.08	162.85	-79.44	-183.52	452.15	440.97	11.18	40.438	
2,600.00	2,569.96	2,534.29	2,523.04	8.00	6.39	162.63	-87.33	-192.70	482.13	470.42	11.72	41.153	
2,700.00	2,667.62	2,629.67	2,617.66	8.45	6.69	162.43	-95.22	-201.87	512.13	499.87	12.25	41.797	
2,800.00	2,765.29	2,725.05	2,712.27	8.91	7.00	162.26	-103.11	-211.05	542.12	529.33	12.79	42.379	
2,900.00	2,862.95	2,820.44	2,806.88	9.37	7.31	162.11	-111.00	-220.22	572.12	558.79	13.33	42.908	
3,000.00	2,960.62	2,915.82	2,901.49	9.83	7.62	161.97	-118.89	-229.40	602.13	588.25	13.88	43.390	
3,100.00	3,058.28	3,011.20	2,996.10	10.29	7.93	161.84	-126.78	-238.58	632.13	617.71	14.42	43.831	
3,200.00	3,155.95	3,106.58	3,090.72	10.75	8.24	161.73	-134.67	-247.75	662.14	647.17	14.97	44.236	
3,300.00	3,253.61	3,201.97	3,185.33	11.21	8.55	161.62	-142.56	-256.93	692.15	676.64	15.52	44.609	
3,400.00	3,351.28	3,297.35	3,279.94	11.67	8.86	161.52	-150.44	-266.11	722.17	706.10	16.06	44.953	
3,500.00	3,448.95	3,392.73	3,374.55	12.14	9.17	161.44	-158.33	-275.28	752.18	735.57	16.61	45.272	
3,600.00	3,546.61	3,488.12	3,469.17	12.60	9.48	161.35	-166.22	-284.46	782.20	765.03	17.17	45.567	
3,700.00	3,644.28	3,583.50	3,563.78	13.07	9.80	161.28	-174.11	-293.63	812.22	794.50	17.72	45.842	
3,800.00	3,741.94	3,678.88	3,658.39	13.54	10.11	161.21	-182.00	-302.81	842.24	823.97	18.27	46.099	
3,900.00	3,839.61	3,774.26	3,753.00	14.00	10.42	161.14	-189.89	-311.99	872.26	853.44	18.82	46.339	
4,000.00	3,937.27	3,869.65	3,847.61	14.47	10.74	161.08	-197.78	-321.16	902.28	882.90	19.38	46.564	
4,100.00	4,034.94	3,965.03	3,942.23	14.94	11.05	161.02	-205.67	-330.34	932.30	912.37	19.93	46.775	
4,200.00	4,132.60	4,060.41	4,036.84	15.40	11.37	160.97	-213.56	-339.52	962.33	941.84	20.49	46.973	
4,300.00	4,230.27	4,155.80	4,131.45	15.87	11.68	160.92	-221.45	-348.69	992.35	971.31	21.04	47.160	
4,400.00	4,327.93	4,251.18	4,226.06	16.34	12.00	160.87	-229.33	-357.87	1,022.37	1,000.78	21.60	47.336	
4,500.00	4,425.60	4,346.56	4,320.67	16.81	12.31	160.83	-237.22	-367.04	1,052.40	1,030.25	22.15	47.502	
4,600.00	4,523.26	4,441.95	4,415.29	17.28	12.63	160.79	-245.11	-376.22	1,082.43	1,059.71	22.71	47.660	
4,700.00	4,620.93	4,537.33	4,509.90	17.75	12.94	160.75	-253.00	-385.40	1,112.45	1,089.18	23.27	47.809	
4,800.00	4,718.59	4,632.71	4,604.51	18.22	13.26	160.71	-260.89	-394.57	1,142.48	1,118.65	23.83	47.950	
4,900.00	4,816.26	4,728.09	4,699.12	18.69	13.58	160.67	-268.78	-403.75	1,172.51	1,148.12	24.38	48.085	
5,000.00	4,913.93	4,823.48	4,793.74	19.16	13.89	160.64	-276.67	-412.93	1,202.53	1,177.59	24.94	48.212	

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 14-7
<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 14-7	<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 14-7	<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	5,011.59	4,918.86	4,888.35	19.63	14.21	160.61	-284.56	-422.10	1,232.56	1,207.06	25.50	48.334	
5,179.86	5,089.58	4,995.03	4,963.90	20.00	14.46	160.58	-290.86	-429.43	1,256.54	1,230.59	25.95	48.427	
5,200.00	5,109.27	5,014.26	4,982.98	20.08	14.52	160.62	-292.45	-431.28	1,262.53	1,236.45	26.08	48.417	
5,300.00	5,207.43	5,110.30	5,078.24	20.41	14.84	160.74	-300.39	-440.52	1,290.34	1,263.67	26.67	48.384	
5,400.00	5,306.19	5,207.18	5,174.34	20.69	15.16	160.79	-308.40	-449.84	1,314.98	1,287.75	27.23	48.290	
5,500.00	5,405.44	5,304.78	5,271.15	20.94	15.49	160.77	-316.48	-459.23	1,336.42	1,308.66	27.76	48.143	
5,600.00	5,505.05	5,409.66	5,375.18	21.14	15.82	160.67	-325.11	-469.28	1,354.62	1,326.36	28.26	47.933	
5,700.00	5,604.91	5,569.01	5,533.83	21.30	16.16	160.49	-334.78	-480.52	1,366.94	1,338.19	28.75	47.540	
5,800.11	5,705.00	5,730.45	5,695.13	21.43	16.43	-93.50	-338.69	-485.07	1,371.55	1,342.37	29.18	47.004	
5,900.00	5,804.89	5,840.21	5,804.89	21.55	16.59	-93.50	-338.77	-485.16	1,371.61	1,342.08	29.53	46.449	
6,000.00	5,904.89	5,940.21	5,904.89	21.67	16.74	-93.50	-338.77	-485.16	1,371.61	1,341.75	29.86	45.938	
6,100.00	6,004.89	6,040.21	6,004.89	21.79	16.89	-93.50	-338.77	-485.16	1,371.61	1,341.42	30.19	45.433	
6,200.00	6,104.89	6,140.21	6,104.89	21.92	17.04	-93.50	-338.77	-485.16	1,371.61	1,341.09	30.52	44.935	
6,300.00	6,204.89	6,240.21	6,204.89	22.05	17.19	-93.50	-338.77	-485.16	1,371.61	1,340.75	30.86	44.444	
6,400.00	6,304.89	6,340.21	6,304.89	22.17	17.34	-93.50	-338.77	-485.16	1,371.61	1,340.41	31.20	43.959	
6,500.00	6,404.89	6,440.21	6,404.89	22.30	17.49	-93.50	-338.77	-485.16	1,371.61	1,340.07	31.54	43.481	
6,600.00	6,504.89	6,540.21	6,504.89	22.44	17.65	-93.50	-338.77	-485.16	1,371.61	1,339.72	31.89	43.010	
6,700.00	6,604.89	6,640.21	6,604.89	22.57	17.81	-93.50	-338.77	-485.16	1,371.61	1,339.37	32.24	42.545	
6,800.00	6,704.89	6,740.21	6,704.89	22.70	17.96	-93.50	-338.77	-485.16	1,371.61	1,339.02	32.59	42.087	
6,900.00	6,804.89	6,840.21	6,804.89	22.84	18.12	-93.50	-338.77	-485.16	1,371.61	1,338.67	32.94	41.636	
7,000.00	6,904.89	6,940.21	6,904.89	22.98	18.29	-93.50	-338.77	-485.16	1,371.61	1,338.31	33.30	41.191	
7,100.00	7,004.89	7,040.21	7,004.89	23.12	18.45	-93.50	-338.77	-485.16	1,371.61	1,337.96	33.66	40.754	
7,200.00	7,104.89	7,140.21	7,104.89	23.26	18.61	-93.50	-338.77	-485.16	1,371.61	1,337.60	34.02	40.322	
7,300.00	7,204.89	7,240.21	7,204.89	23.40	18.78	-93.50	-338.77	-485.16	1,371.61	1,337.23	34.38	39.898	
7,400.00	7,304.89	7,240.32	7,205.00	23.54	18.78	-93.50	-338.77	-485.16	1,375.24	1,340.68	34.56	39.792	
7,500.00	7,404.89	7,240.32	7,205.00	23.69	18.78	-93.50	-338.77	-485.16	1,386.10	1,351.36	34.74	39.895	
7,600.00	7,504.89	7,240.32	7,205.00	23.83	18.78	-93.50	-338.77	-485.16	1,404.01	1,369.09	34.93	40.197	
7,700.00	7,604.89	7,240.32	7,205.00	23.98	18.78	-93.50	-338.77	-485.16	1,428.72	1,393.60	35.11	40.689	
7,715.11	7,620.00	7,240.32	7,205.00	24.00	18.78	-93.50	-338.77	-485.16	1,433.02	1,397.88	35.14	40.779	

<b>Company:</b>	US ROCKIES REGION PLANNING	<b>Local Co-ordinate Reference:</b>	Well P_MAPLEWOOD 14-7
<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 14-7	<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 14-7	<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
0.00	0.00	0.00	0.00	0.00	0.00	-58.62	25.50	-41.82	48.99				
100.00	100.00	100.00	100.00	0.10	0.10	-58.62	25.50	-41.82	48.99	48.80	0.19	256.407	
200.00	200.00	200.00	200.00	0.32	0.32	-58.62	25.50	-41.82	48.99	48.35	0.64	76.472	
300.00	300.00	300.00	300.00	0.55	0.55	-58.62	25.50	-41.82	48.99	47.90	1.09	44.937	
400.00	400.00	400.00	400.00	0.77	0.77	-58.62	25.50	-41.82	48.99	47.45	1.54	31.817	
500.00	500.00	500.00	500.00	0.99	0.99	-58.62	25.50	-41.82	48.99	47.00	1.99	24.627	
600.00	600.00	600.00	600.00	1.22	1.22	-58.62	25.50	-41.82	48.99	46.55	2.44	20.087	
700.00	700.00	700.00	700.00	1.44	1.44	-58.62	25.50	-41.82	48.99	46.10	2.89	16.961	
800.00	800.00	800.00	800.00	1.67	1.67	-58.62	25.50	-41.82	48.99	45.65	3.34	14.677	
900.00	900.00	900.00	900.00	1.89	1.89	-58.62	25.50	-41.82	48.99	45.20	3.79	12.934 CC, ES	
1,000.00	999.98	999.34	999.32	2.10	2.12	-163.41	27.20	-41.50	51.29	47.07	4.21	12.170 SF	
1,100.00	1,099.84	1,098.29	1,098.13	2.30	2.34	-160.12	32.24	-40.52	58.32	53.69	4.62	12.613	
1,200.00	1,199.45	1,196.47	1,195.94	2.52	2.56	-156.11	40.55	-38.91	70.31	65.27	5.04	13.950	
1,300.00	1,298.70	1,293.50	1,292.26	2.76	2.80	-152.34	52.00	-36.70	87.40	81.93	5.47	15.977	
1,400.00	1,397.47	1,389.04	1,386.67	3.03	3.06	-149.19	66.39	-33.92	109.57	103.65	5.92	18.503	
1,500.00	1,495.62	1,482.76	1,478.75	3.35	3.35	-146.68	83.50	-30.61	136.72	130.32	6.40	21.355	
1,520.25	1,515.42	1,501.50	1,497.09	3.42	3.41	-146.24	87.27	-29.88	142.81	136.31	6.50	21.965	
1,600.00	1,593.30	1,574.64	1,568.42	3.71	3.66	-144.77	103.14	-26.81	167.82	160.88	6.94	24.178	
1,700.00	1,690.97	1,664.99	1,655.93	4.10	4.02	-142.86	125.19	-22.54	201.07	193.55	7.52	26.731	
1,800.00	1,788.63	1,753.69	1,741.11	4.50	4.41	-140.96	149.46	-17.85	236.47	228.33	8.13	29.068	
1,900.00	1,886.30	1,840.61	1,823.81	4.91	4.83	-139.14	175.76	-12.76	274.05	265.28	8.78	31.229	
2,000.00	1,983.97	1,925.67	1,903.90	5.34	5.30	-137.41	203.86	-7.33	313.85	304.41	9.44	33.249	
2,100.00	2,081.63	2,008.77	1,981.30	5.77	5.79	-135.78	233.55	-1.58	355.84	345.72	10.12	35.158	
2,200.00	2,179.30	2,089.84	2,055.93	6.21	6.32	-134.25	264.63	4.43	400.02	389.20	10.82	36.970	
2,300.00	2,276.96	2,172.57	2,131.22	6.65	6.90	-132.79	298.29	10.94	446.21	434.67	11.55	38.650	
2,400.00	2,374.63	2,260.45	2,211.02	7.09	7.53	-131.48	334.43	17.93	492.97	480.67	12.30	40.068	
2,500.00	2,472.29	2,348.33	2,290.82	7.54	8.18	-130.39	370.57	24.92	539.90	526.83	13.07	41.317	
2,600.00	2,569.96	2,436.21	2,370.62	8.00	8.84	-129.48	406.71	31.91	586.96	573.12	13.84	42.423	
2,700.00	2,667.62	2,524.09	2,450.42	8.45	9.51	-128.70	442.84	38.90	634.11	619.50	14.61	43.406	
2,800.00	2,765.29	2,611.97	2,530.21	8.91	10.18	-128.03	478.98	45.89	681.34	665.96	15.39	44.284	
2,900.00	2,862.95	2,699.85	2,610.01	9.37	10.86	-127.45	515.12	52.88	728.64	712.48	16.17	45.074	
3,000.00	2,960.62	2,787.73	2,689.81	9.83	11.54	-126.93	551.26	59.87	775.99	759.04	16.95	45.785	
3,100.00	3,058.28	2,875.60	2,769.61	10.29	12.23	-126.48	587.40	66.86	823.38	805.65	17.73	46.430	
3,200.00	3,155.95	2,963.48	2,849.41	10.75	12.92	-126.07	623.54	73.85	870.81	852.29	18.52	47.016	
3,300.00	3,253.61	3,051.36	2,929.21	11.21	13.61	-125.71	659.68	80.84	918.27	898.96	19.31	47.552	
3,400.00	3,351.28	3,139.24	3,009.01	11.67	14.30	-125.38	695.81	87.83	965.76	945.65	20.10	48.043	
3,500.00	3,448.95	3,227.12	3,088.80	12.14	15.00	-125.09	731.95	94.82	1,013.26	992.37	20.89	48.494	
3,600.00	3,546.61	3,315.00	3,168.60	12.60	15.70	-124.82	768.09	101.81	1,060.79	1,039.10	21.69	48.910	
3,700.00	3,644.28	3,402.88	3,248.40	13.07	16.39	-124.57	804.23	108.79	1,108.33	1,085.85	22.48	49.295	
3,800.00	3,741.94	3,490.75	3,328.20	13.54	17.09	-124.34	840.37	115.78	1,155.89	1,132.61	23.28	49.652	
3,900.00	3,839.61	3,578.63	3,408.00	14.00	17.79	-124.13	876.51	122.77	1,203.46	1,179.38	24.08	49.983	
4,000.00	3,937.27	3,666.51	3,487.80	14.47	18.49	-123.94	912.64	129.76	1,251.04	1,226.17	24.88	50.292	
4,100.00	4,034.94	3,754.39	3,567.60	14.94	19.20	-123.76	948.78	136.75	1,298.64	1,272.96	25.67	50.581	
4,200.00	4,132.60	3,842.27	3,647.39	15.40	19.90	-123.59	984.92	143.74	1,346.24	1,319.76	26.47	50.851	
4,300.00	4,230.27	3,930.15	3,727.19	15.87	20.60	-123.44	1,021.06	150.73	1,393.85	1,366.57	27.27	51.104	
4,400.00	4,327.93	4,018.03	3,806.99	16.34	21.31	-123.29	1,057.20	157.72	1,441.46	1,413.39	28.08	51.342	
4,500.00	4,425.60	4,105.90	3,886.79	16.81	22.01	-123.16	1,093.34	164.71	1,489.09	1,460.21	28.88	51.565	
4,600.00	4,523.26	4,193.78	3,966.59	17.28	22.72	-123.03	1,129.48	171.70	1,536.72	1,507.04	29.68	51.776	
4,700.00	4,620.93	4,281.66	4,046.39	17.75	23.42	-122.91	1,165.61	178.69	1,584.35	1,553.87	30.48	51.976	
4,800.00	4,718.59	4,369.54	4,126.18	18.22	24.13	-122.80	1,201.75	185.68	1,631.99	1,600.71	31.29	52.164	
4,900.00	4,816.26	4,457.42	4,205.98	18.69	24.84	-122.69	1,237.89	192.67	1,679.64	1,647.55	32.09	52.342	
5,000.00	4,913.93	4,545.30	4,285.78	19.16	25.54	-122.59	1,274.03	199.66	1,727.29	1,694.40	32.89	52.512	

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 14-7
<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 14-7	<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 14-7	<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						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	
5,100.00	5,011.59	4,633.18	4,365.58	19.63	26.25	-122.50	1,310.17	206.65	1,774.94	1,741.24	33.70	52.672	
5,179.86	5,089.58	4,703.35	4,429.30	20.00	26.82	-122.42	1,339.03	212.23	1,813.00	1,778.66	34.34	52.795	
5,200.00	5,109.27	4,721.07	4,445.39	20.08	26.96	-122.59	1,346.31	213.64	1,822.57	1,788.02	34.54	52.764	
5,300.00	5,207.43	4,809.49	4,525.68	20.41	27.67	-123.31	1,382.67	220.68	1,869.06	1,833.59	35.47	52.688	
5,400.00	5,306.19	4,898.58	4,606.58	20.69	28.39	-123.90	1,419.31	227.76	1,913.87	1,877.51	36.36	52.634	
5,500.00	5,405.44	5,050.31	4,745.13	20.94	29.44	-124.14	1,480.02	239.50	1,956.31	1,918.92	37.38	52.329	
5,600.00	5,505.05	5,285.45	4,965.56	21.14	30.70	-124.03	1,560.22	255.02	1,991.49	1,953.00	38.49	51.735	
5,700.00	5,604.91	5,534.98	5,205.95	21.30	31.79	-123.84	1,625.62	267.67	2,017.83	1,978.36	39.46	51.130	
5,800.11	5,705.00	5,795.88	5,462.49	21.43	32.64	-17.49	1,671.77	276.59	2,034.69	1,994.43	40.25	50.545	
5,900.00	5,804.89	6,062.99	5,728.44	21.55	33.17	-17.18	1,695.09	281.10	2,042.53	2,001.74	40.79	50.078	
6,000.00	5,904.89	6,239.48	5,904.89	21.67	33.34	-17.14	1,697.62	281.59	2,043.37	2,002.24	41.13	49.678	
6,100.00	6,004.89	6,339.48	6,004.89	21.79	33.42	-17.14	1,697.62	281.59	2,043.37	2,001.98	41.39	49.366	
6,200.00	6,104.89	6,439.48	6,104.89	21.92	33.50	-17.14	1,697.62	281.59	2,043.37	2,001.72	41.66	49.054	
6,300.00	6,204.89	6,539.48	6,204.89	22.05	33.58	-17.14	1,697.62	281.59	2,043.37	2,001.45	41.92	48.742	
6,400.00	6,304.89	6,639.48	6,304.89	22.17	33.67	-17.14	1,697.62	281.59	2,043.37	2,001.18	42.19	48.431	
6,500.00	6,404.89	6,739.48	6,404.89	22.30	33.75	-17.14	1,697.62	281.59	2,043.37	2,000.91	42.46	48.120	
6,600.00	6,504.89	6,839.48	6,504.89	22.44	33.84	-17.14	1,697.62	281.59	2,043.37	2,000.63	42.74	47.809	
6,700.00	6,604.89	6,939.48	6,604.89	22.57	33.92	-17.14	1,697.62	281.59	2,043.37	2,000.35	43.02	47.500	
6,800.00	6,704.89	7,039.48	6,704.89	22.70	34.01	-17.14	1,697.62	281.59	2,043.37	2,000.07	43.30	47.191	
6,900.00	6,804.89	7,139.48	6,804.89	22.84	34.10	-17.14	1,697.62	281.59	2,043.37	1,999.79	43.58	46.883	
7,000.00	6,904.89	7,239.48	6,904.89	22.98	34.19	-17.14	1,697.62	281.59	2,043.37	1,999.50	43.87	46.577	
7,100.00	7,004.89	7,339.48	7,004.89	23.12	34.28	-17.14	1,697.62	281.59	2,043.37	1,999.21	44.16	46.271	
7,200.00	7,104.89	7,439.48	7,104.89	23.26	34.37	-17.14	1,697.62	281.59	2,043.37	1,998.92	44.45	45.967	
7,300.00	7,204.89	7,539.48	7,204.89	23.40	34.47	-17.14	1,697.62	281.59	2,043.37	1,998.62	44.75	45.664	
7,400.00	7,304.89	7,639.48	7,304.89	23.54	34.56	-17.14	1,697.62	281.59	2,043.37	1,998.33	45.05	45.362	
7,500.00	7,404.89	7,739.48	7,404.89	23.69	34.66	-17.14	1,697.62	281.59	2,043.37	1,998.03	45.35	45.062	
7,600.00	7,504.89	7,839.48	7,504.89	23.83	34.76	-17.14	1,697.62	281.59	2,043.37	1,997.72	45.65	44.764	
7,664.95	7,569.84	7,904.43	7,569.84	23.93	34.82	-17.14	1,697.62	281.59	2,043.37	1,997.53	45.85	44.571	
7,700.00	7,604.89	7,934.59	7,600.00	23.98	34.85	-17.14	1,697.62	281.59	2,043.38	1,997.43	45.95	44.474	
7,715.11	7,620.00	7,934.59	7,600.00	24.00	34.85	-17.14	1,697.62	281.59	2,043.47	1,997.50	45.97	44.453	



<b>Company:</b>	US ROCKIES REGION PLANNING	<b>Local Co-ordinate Reference:</b>	Well P_MAPLEWOOD 14-7
<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 14-7	<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 14-7	<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	-62.38	7.29	-13.94	15.73				
100.00	100.00	100.00	100.00	0.10	0.10	-62.38	7.29	-13.94	15.73	15.54	0.19	82.355	
200.00	200.00	200.00	200.00	0.32	0.32	-62.38	7.29	-13.94	15.73	15.09	0.64	24.562	
300.00	300.00	300.00	300.00	0.55	0.55	-62.38	7.29	-13.94	15.73	14.64	1.09	14.433	
400.00	400.00	400.00	400.00	0.77	0.77	-62.38	7.29	-13.94	15.73	14.19	1.54	10.219	
500.00	500.00	500.00	500.00	0.99	0.99	-62.38	7.29	-13.94	15.73	13.74	1.99	7.910	
600.00	600.00	600.00	600.00	1.22	1.22	-62.38	7.29	-13.94	15.73	13.30	2.44	6.452	
700.00	700.00	700.00	700.00	1.44	1.44	-62.38	7.29	-13.94	15.73	12.85	2.89	5.448	
800.00	800.00	800.00	800.00	1.67	1.67	-62.38	7.29	-13.94	15.73	12.40	3.34	4.714	
900.00	900.00	900.00	900.00	1.89	1.89	-62.38	7.29	-13.94	15.73	11.95	3.79	4.154 CC, ES	
1,000.00	999.98	1,000.37	1,000.35	2.10	2.11	-165.21	7.86	-12.28	16.26	12.05	4.21	3.865 SF	
1,100.00	1,099.84	1,100.67	1,100.51	2.30	2.33	-156.70	9.56	-7.29	18.12	13.52	4.61	3.932	
1,200.00	1,199.45	1,200.84	1,200.29	2.52	2.55	-146.15	12.39	1.00	21.89	16.86	5.03	4.349	
1,300.00	1,298.70	1,300.81	1,299.51	2.76	2.80	-136.58	16.33	12.55	27.96	22.46	5.50	5.085	
1,400.00	1,397.47	1,400.52	1,397.98	3.03	3.08	-129.19	21.37	27.34	36.43	30.40	6.03	6.043	
1,500.00	1,495.62	1,499.91	1,495.54	3.35	3.39	-123.81	27.49	45.30	47.23	40.60	6.64	7.116	
1,520.25	1,515.42	1,520.00	1,515.17	3.42	3.47	-122.93	28.86	49.31	49.70	42.92	6.78	7.334	
1,600.00	1,593.30	1,598.95	1,592.03	3.71	3.76	-119.20	34.67	66.36	59.72	52.37	7.35	8.126	
1,700.00	1,690.97	1,697.53	1,687.27	4.10	4.17	-113.61	42.88	90.46	73.03	64.88	8.15	8.962	
1,800.00	1,788.63	1,795.44	1,780.93	4.50	4.65	-107.63	52.08	117.44	87.73	78.71	9.02	9.730	
1,900.00	1,886.30	1,892.45	1,872.72	4.91	5.18	-101.70	62.21	147.15	104.34	94.42	9.92	10.517	
2,000.00	1,983.97	1,989.40	1,963.50	5.34	5.78	-96.22	73.18	179.35	123.07	112.23	10.84	11.356	
2,100.00	2,081.63	2,086.97	2,054.74	5.77	6.40	-92.05	84.34	212.07	142.80	131.05	11.75	12.153	
2,200.00	2,179.30	2,184.54	2,145.98	6.21	7.05	-88.89	95.49	244.80	163.09	150.43	12.66	12.884	
2,300.00	2,276.96	2,282.11	2,237.22	6.65	7.70	-86.44	106.65	277.52	183.76	170.19	13.56	13.548	
2,400.00	2,374.63	2,379.68	2,328.46	7.09	8.37	-84.48	117.80	310.24	204.68	190.21	14.47	14.149	
2,500.00	2,472.29	2,477.25	2,419.70	7.54	9.04	-82.88	128.95	342.97	225.79	210.42	15.37	14.692	
2,600.00	2,569.96	2,574.82	2,510.94	8.00	9.72	-81.56	140.11	375.69	247.04	230.77	16.27	15.182	
2,700.00	2,667.62	2,672.39	2,602.18	8.45	10.40	-80.44	151.26	408.42	268.39	251.22	17.18	15.626	
2,800.00	2,765.29	2,769.96	2,693.42	8.91	11.09	-79.49	162.42	441.14	289.83	271.74	18.08	16.026	
2,900.00	2,862.95	2,867.53	2,784.66	9.37	11.78	-78.68	173.57	473.86	311.33	292.34	18.99	16.390	
3,000.00	2,960.62	2,965.10	2,875.90	9.83	12.48	-77.96	184.73	506.59	332.89	312.98	19.91	16.723	
3,100.00	3,058.28	3,062.67	2,967.14	10.29	13.17	-77.34	195.88	539.31	354.49	333.67	20.82	17.027	
3,200.00	3,155.95	3,160.24	3,058.38	10.75	13.87	-76.78	207.04	572.03	376.12	354.39	21.73	17.306	
3,300.00	3,253.61	3,257.81	3,149.62	11.21	14.57	-76.29	218.19	604.76	397.79	375.14	22.65	17.563	
3,400.00	3,351.28	3,355.38	3,240.86	11.67	15.28	-75.84	229.35	637.48	419.48	395.91	23.57	17.800	
3,500.00	3,448.95	3,452.95	3,332.10	12.14	15.98	-75.44	240.50	670.21	441.19	416.71	24.48	18.020	
3,600.00	3,546.61	3,550.52	3,423.34	12.60	16.68	-75.08	251.65	702.93	462.92	437.52	25.40	18.224	
3,700.00	3,644.28	3,648.09	3,514.58	13.07	17.39	-74.75	262.81	735.65	484.67	458.35	26.32	18.413	
3,800.00	3,741.94	3,745.67	3,605.82	13.54	18.09	-74.45	273.96	768.38	506.43	479.19	27.24	18.590	
3,900.00	3,839.61	3,843.24	3,697.06	14.00	18.80	-74.18	285.12	801.10	528.20	500.04	28.16	18.755	
4,000.00	3,937.27	3,940.81	3,788.30	14.47	19.51	-73.92	296.27	833.82	549.99	520.90	29.08	18.910	
4,100.00	4,034.94	4,038.38	3,879.54	14.94	20.21	-73.69	307.43	866.55	571.78	541.77	30.01	19.055	
4,200.00	4,132.60	4,135.95	3,970.78	15.40	20.92	-73.47	318.58	899.27	593.58	562.65	30.93	19.191	
4,300.00	4,230.27	4,233.52	4,062.02	15.87	21.63	-73.27	329.74	931.99	615.39	583.54	31.85	19.320	
4,400.00	4,327.93	4,331.09	4,153.26	16.34	22.34	-73.08	340.89	964.72	637.21	604.43	32.78	19.441	
4,500.00	4,425.60	4,428.66	4,244.50	16.81	23.05	-72.90	352.05	997.44	659.03	625.33	33.70	19.555	
4,600.00	4,523.26	4,526.23	4,335.74	17.28	23.76	-72.74	363.20	1,030.17	680.86	646.23	34.63	19.664	
4,700.00	4,620.93	4,623.80	4,426.98	17.75	24.47	-72.58	374.35	1,062.89	702.69	667.14	35.55	19.766	
4,800.00	4,718.59	4,721.37	4,518.22	18.22	25.18	-72.44	385.51	1,095.61	724.53	688.05	36.48	19.863	
4,900.00	4,816.26	4,818.94	4,609.46	18.69	25.89	-72.30	396.66	1,128.34	746.37	708.97	37.40	19.956	
5,000.00	4,913.93	4,919.86	4,703.85	19.16	26.61	-72.17	408.19	1,162.15	768.19	729.85	38.33	20.040	

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 14-7
<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 14-7	<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 14-7	<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						
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	5,011.59	5,044.39	4,821.45	19.63	27.34	-72.17	421.39	1,200.88	787.94	748.63	39.31	20.044	
5,179.86	5,089.58	5,144.93	4,917.62	20.00	27.82	-72.35	430.84	1,228.60	801.31	761.23	40.08	19.992	
5,200.00	5,109.27	5,170.41	4,942.15	20.08	27.94	-72.47	433.06	1,235.12	804.36	764.08	40.27	19.973	
5,300.00	5,207.43	5,297.49	5,065.37	20.41	28.47	-73.01	443.09	1,264.53	818.08	776.97	41.10	19.902	
5,400.00	5,306.19	5,425.45	5,190.71	20.69	28.92	-73.44	451.39	1,288.88	829.38	787.56	41.82	19.832	
5,500.00	5,405.44	5,554.13	5,317.77	20.94	29.29	-73.77	457.91	1,308.01	838.21	795.79	42.43	19.757	
5,600.00	5,505.05	5,683.34	5,446.16	21.14	29.59	-74.01	462.60	1,321.76	844.54	801.62	42.92	19.678	
5,700.00	5,604.91	5,812.93	5,575.44	21.30	29.80	-74.15	465.42	1,330.03	848.34	805.04	43.29	19.595	
5,800.11	5,705.00	5,942.53	5,705.00	21.43	29.94	31.89	466.35	1,332.76	849.58	806.02	43.56	19.504	
5,900.00	5,804.89	6,042.43	5,804.89	21.55	30.03	31.89	466.35	1,332.76	849.58	805.79	43.79	19.401	
6,000.00	5,904.89	6,142.43	5,904.89	21.67	30.12	31.89	466.35	1,332.76	849.58	805.55	44.03	19.294	
6,100.00	6,004.89	6,242.43	6,004.89	21.79	30.22	31.89	466.35	1,332.76	849.58	805.30	44.28	19.187	
6,200.00	6,104.89	6,342.43	6,104.89	21.92	30.31	31.89	466.35	1,332.76	849.58	805.05	44.53	19.079	
6,300.00	6,204.89	6,442.43	6,204.89	22.05	30.41	31.89	466.35	1,332.76	849.58	804.80	44.78	18.972	
6,400.00	6,304.89	6,542.43	6,304.89	22.17	30.51	31.89	466.35	1,332.76	849.58	804.55	45.04	18.864	
6,500.00	6,404.89	6,642.43	6,404.89	22.30	30.60	31.89	466.35	1,332.76	849.58	804.29	45.29	18.757	
6,600.00	6,504.89	6,742.43	6,504.89	22.44	30.71	31.89	466.35	1,332.76	849.58	804.03	45.56	18.649	
6,700.00	6,604.89	6,842.43	6,604.89	22.57	30.81	31.89	466.35	1,332.76	849.58	803.76	45.82	18.542	
6,800.00	6,704.89	6,942.43	6,704.89	22.70	30.91	31.89	466.35	1,332.76	849.58	803.49	46.09	18.434	
6,900.00	6,804.89	7,042.43	6,804.89	22.84	31.01	31.89	466.35	1,332.76	849.58	803.22	46.36	18.327	
7,000.00	6,904.89	7,142.43	6,904.89	22.98	31.12	31.89	466.35	1,332.76	849.58	802.95	46.63	18.220	
7,100.00	7,004.89	7,242.43	7,004.89	23.12	31.23	31.89	466.35	1,332.76	849.58	802.68	46.91	18.113	
7,200.00	7,104.89	7,342.43	7,104.89	23.26	31.34	31.89	466.35	1,332.76	849.58	802.40	47.18	18.006	
7,300.00	7,204.89	7,442.43	7,204.89	23.40	31.44	31.89	466.35	1,332.76	849.58	802.12	47.46	17.899	
7,400.00	7,304.89	7,542.43	7,304.89	23.54	31.56	31.89	466.35	1,332.76	849.58	801.83	47.75	17.793	
7,500.00	7,404.89	7,642.43	7,404.89	23.69	31.67	31.89	466.35	1,332.76	849.58	801.55	48.03	17.687	
7,600.00	7,504.89	7,742.43	7,504.89	23.83	31.78	31.89	466.35	1,332.76	849.58	801.26	48.32	17.582	
7,700.00	7,604.89	7,842.43	7,604.89	23.98	31.89	31.89	466.35	1,332.76	849.58	800.97	48.61	17.477	
7,702.58	7,607.47	7,845.01	7,607.47	23.98	31.90	31.89	466.35	1,332.76	849.58	800.96	48.62	17.474	
7,715.11	7,620.00	7,852.53	7,615.00	24.00	31.91	31.89	466.35	1,332.76	849.60	800.95	48.65	17.464	



<b>Company:</b>	US ROCKIES REGION PLANNING	<b>Local Co-ordinate Reference:</b>	Well P_MAPLEWOOD 14-7
<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 14-7	<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 14-7	<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 WELD_MAPLEWOOD 16-7 - P_MAPLEWOOD 35-7 - P_MAPLEWOOD 35-7 - PLAN #1 1-19-10 RHS											Offset Site Error: 0.00 ft		
Survey Program: 0-Good_gyro											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	-62.38	14.59	-27.88	31.47				
100.00	100.00	100.00	100.00	0.10	0.04	-62.38	14.59	-27.88	31.47	31.33	0.14	224.722	
200.00	200.00	200.00	200.00	0.32	0.10	-62.38	14.59	-27.88	31.47	31.05	0.42	75.435	
300.00	300.00	300.00	300.00	0.55	0.15	-62.38	14.59	-27.88	31.47	30.77	0.69	45.325	
400.00	400.00	400.00	400.00	0.77	0.20	-62.38	14.59	-27.88	31.47	30.50	0.97	32.394	
500.00	500.00	500.00	500.00	0.99	0.25	-62.38	14.59	-27.88	31.47	30.22	1.25	25.204	
600.00	600.00	600.00	600.00	1.22	0.31	-62.38	14.59	-27.88	31.47	29.94	1.53	20.626	
700.00	700.00	700.00	700.00	1.44	0.36	-62.38	14.59	-27.88	31.47	29.67	1.80	17.455	
800.00	800.00	800.00	800.00	1.67	0.41	-62.38	14.59	-27.88	31.47	29.39	2.08	15.130	
900.00	900.00	900.00	900.00	1.89	0.46	-62.38	14.59	-27.88	31.47	29.11	2.36	13.351	CC, ES
1,000.00	999.98	1,000.82	1,000.80	2.10	0.52	-171.18	12.94	-27.23	31.88	29.26	2.62	12.168	
1,100.00	1,099.84	1,101.49	1,101.32	2.30	0.57	-178.81	8.01	-25.26	33.51	30.64	2.87	11.675	SF
1,200.00	1,199.45	1,201.87	1,201.32	2.52	0.64	170.34	-0.17	-21.99	37.35	34.22	3.14	11.915	
1,300.00	1,298.70	1,301.83	1,300.52	2.76	0.72	158.91	-11.54	-17.45	44.44	41.01	3.43	12.944	
1,400.00	1,397.47	1,401.23	1,398.68	3.03	0.83	149.00	-26.03	-11.67	55.30	51.51	3.79	14.596	
1,500.00	1,495.62	1,499.94	1,495.56	3.35	0.96	141.29	-43.54	-4.68	69.93	65.71	4.22	16.584	
1,520.25	1,515.42	1,519.83	1,515.01	3.42	0.99	139.98	-47.45	-3.13	73.33	69.02	4.31	17.001	
1,600.00	1,593.30	1,598.16	1,591.52	3.71	1.12	135.94	-63.03	3.09	87.23	82.52	4.72	18.500	
1,700.00	1,690.97	1,696.38	1,687.46	4.10	1.29	132.41	-82.57	10.89	105.08	99.83	5.25	20.022	
1,800.00	1,788.63	1,794.60	1,783.40	4.50	1.47	129.90	-102.11	18.69	123.21	117.40	5.80	21.225	
1,900.00	1,886.30	1,892.83	1,879.34	4.91	1.65	128.04	-121.66	26.49	141.50	135.12	6.38	22.183	
2,000.00	1,983.97	1,991.05	1,975.28	5.34	1.84	126.61	-141.20	34.29	159.91	152.94	6.97	22.956	
2,100.00	2,081.63	2,089.27	2,071.23	5.77	2.03	125.47	-160.74	42.08	178.39	170.83	7.56	23.588	
2,200.00	2,179.30	2,187.49	2,167.17	6.21	2.22	124.54	-180.28	49.88	196.93	188.76	8.17	24.111	
2,300.00	2,276.96	2,285.71	2,263.11	6.65	2.41	123.78	-199.82	57.68	215.51	206.73	8.78	24.549	
2,400.00	2,374.63	2,383.93	2,359.05	7.09	2.60	123.13	-219.37	65.48	234.12	224.72	9.40	24.919	
2,500.00	2,472.29	2,482.16	2,454.99	7.54	2.79	122.58	-238.91	73.28	252.75	242.74	10.02	25.236	
2,600.00	2,569.96	2,580.38	2,550.93	8.00	2.99	122.11	-258.45	81.08	271.41	260.77	10.64	25.510	
2,700.00	2,667.62	2,678.60	2,646.88	8.45	3.18	121.70	-277.99	88.88	290.08	278.81	11.27	25.748	
2,800.00	2,765.29	2,776.82	2,742.82	8.91	3.38	121.33	-297.53	96.67	308.76	296.87	11.89	25.957	
2,900.00	2,862.95	2,875.04	2,838.76	9.37	3.57	121.01	-317.07	104.47	327.45	314.93	12.53	26.142	
3,000.00	2,960.62	2,973.26	2,934.70	9.83	3.77	120.73	-336.62	112.27	346.16	333.00	13.16	26.306	
3,100.00	3,058.28	3,071.49	3,030.64	10.29	3.96	120.47	-356.16	120.07	364.87	351.07	13.79	26.452	
3,200.00	3,155.95	3,169.71	3,126.58	10.75	4.16	120.24	-375.70	127.87	383.58	369.15	14.43	26.584	
3,300.00	3,253.61	3,267.93	3,222.53	11.21	4.36	120.03	-395.24	135.67	402.30	387.24	15.07	26.703	
3,400.00	3,351.28	3,366.15	3,318.47	11.67	4.55	119.83	-414.78	143.46	421.03	405.33	15.70	26.810	
3,500.00	3,448.95	3,464.37	3,414.41	12.14	4.75	119.66	-434.32	151.26	439.76	423.42	16.34	26.909	
3,600.00	3,546.61	3,562.59	3,510.35	12.60	4.95	119.50	-453.87	159.06	458.49	441.51	16.98	26.998	
3,700.00	3,644.28	3,660.82	3,606.29	13.07	5.14	119.35	-473.41	166.86	477.23	459.61	17.62	27.080	
3,800.00	3,741.94	3,759.04	3,702.23	13.54	5.34	119.21	-492.95	174.66	495.97	477.71	18.26	27.156	
3,900.00	3,839.61	3,857.26	3,798.18	14.00	5.54	119.08	-512.49	182.46	514.72	495.81	18.91	27.226	
4,000.00	3,937.27	3,955.48	3,894.12	14.47	5.73	118.97	-532.03	190.25	533.46	513.91	19.55	27.291	
4,100.00	4,034.94	4,053.70	3,990.06	14.94	5.93	118.86	-551.57	198.05	552.21	532.02	20.19	27.351	
4,200.00	4,132.60	4,151.92	4,086.00	15.40	6.13	118.75	-571.12	205.85	570.96	550.12	20.83	27.406	
4,300.00	4,230.27	4,250.14	4,181.94	15.87	6.33	118.66	-590.66	213.65	589.71	568.23	21.48	27.459	
4,400.00	4,327.93	4,348.37	4,277.88	16.34	6.52	118.56	-610.20	221.45	608.46	586.34	22.12	27.507	
4,500.00	4,425.60	4,446.59	4,373.82	16.81	6.72	118.48	-629.74	229.25	627.21	604.45	22.76	27.553	
4,600.00	4,523.26	4,544.81	4,469.77	17.28	6.92	118.40	-649.28	237.05	645.97	622.56	23.41	27.596	
4,700.00	4,620.93	4,643.03	4,565.71	17.75	7.12	118.32	-668.82	244.84	664.73	640.67	24.05	27.636	
4,800.00	4,718.59	4,741.25	4,661.65	18.22	7.31	118.25	-688.37	252.64	683.48	658.78	24.70	27.674	
4,900.00	4,816.26	4,839.47	4,757.59	18.69	7.51	118.18	-707.91	260.44	702.24	676.90	25.34	27.709	
5,000.00	4,913.93	4,937.70	4,853.53	19.16	7.71	118.12	-727.45	268.24	721.00	695.01	25.99	27.743	

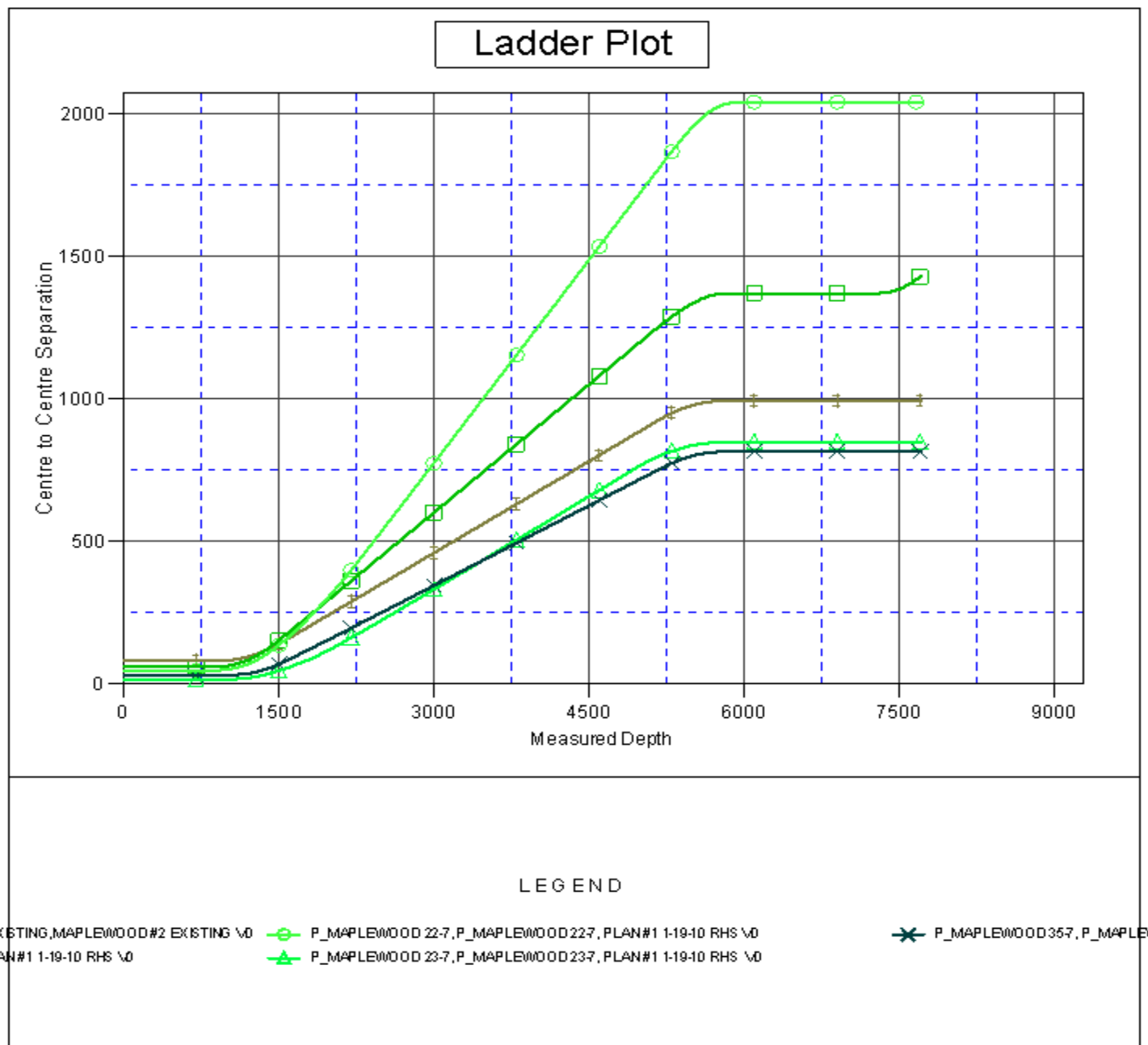
CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

<b>Company:</b>	US ROCKIES REGION PLANNING	<b>Local Co-ordinate Reference:</b>	Well P_MAPLEWOOD 14-7
<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 14-7	<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 14-7	<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 35-7 - P_MAPLEWOOD 35-7 - PLAN #1 1-19-10 RHS												<b>Offset Site Error:</b>	0.00 ft
Survey Program: 0-Good_gyro												<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	5,011.59	5,035.92	4,949.47	19.63	7.91	118.06	-746.99	276.04	739.76	713.13	26.63	27.775	
5,179.86	5,089.58	5,114.35	5,026.09	20.00	8.07	118.01	-762.60	282.26	754.74	727.59	27.15	27.799	
5,200.00	5,109.27	5,134.14	5,045.42	20.08	8.11	118.06	-766.53	283.84	758.49	731.23	27.26	27.828	
5,300.00	5,207.43	5,238.58	5,147.55	20.41	8.31	118.18	-786.81	291.93	775.92	748.21	27.71	27.999	
5,400.00	5,306.19	5,349.55	5,256.78	20.69	8.49	118.24	-804.94	299.16	790.41	762.30	28.11	28.119	
5,500.00	5,405.44	5,461.31	5,367.47	20.94	8.64	118.29	-819.21	304.86	801.73	773.30	28.43	28.202	
5,600.00	5,505.05	5,573.66	5,479.27	21.14	8.76	118.32	-829.51	308.97	809.84	781.17	28.67	28.250	
5,700.00	5,604.91	5,686.42	5,591.82	21.30	8.83	118.34	-835.74	311.45	814.73	785.90	28.83	28.260	
5,800.11	5,705.00	5,799.50	5,704.87	21.43	8.87	-135.56	-837.85	312.30	816.37	787.45	28.92	28.227	
5,900.00	5,804.89	5,899.52	5,804.89	21.55	8.89	-135.56	-837.85	312.30	816.37	787.31	29.06	28.089	
6,000.00	5,904.89	5,999.52	5,904.89	21.67	8.91	-135.56	-837.85	312.30	816.37	787.16	29.21	27.947	
6,100.00	6,004.89	6,099.52	6,004.89	21.79	8.93	-135.56	-837.85	312.30	816.37	787.01	29.36	27.804	
6,200.00	6,104.89	6,199.52	6,104.89	21.92	8.95	-135.56	-837.85	312.30	816.37	786.86	29.51	27.662	
6,300.00	6,204.89	6,299.52	6,204.89	22.05	8.97	-135.56	-837.85	312.30	816.37	786.71	29.67	27.519	
6,400.00	6,304.89	6,399.52	6,304.89	22.17	8.99	-135.56	-837.85	312.30	816.37	786.55	29.82	27.376	
6,500.00	6,404.89	6,499.52	6,404.89	22.30	9.01	-135.56	-837.85	312.30	816.37	786.39	29.98	27.232	
6,600.00	6,504.89	6,599.52	6,504.89	22.44	9.03	-135.56	-837.85	312.30	816.37	786.24	30.14	27.089	
6,700.00	6,604.89	6,699.52	6,604.89	22.57	9.05	-135.56	-837.85	312.30	816.37	786.08	30.30	26.945	
6,800.00	6,704.89	6,799.52	6,704.89	22.70	9.07	-135.56	-837.85	312.30	816.37	785.91	30.46	26.802	
6,900.00	6,804.89	6,899.52	6,804.89	22.84	9.09	-135.56	-837.85	312.30	816.37	785.75	30.62	26.658	
7,000.00	6,904.89	6,999.52	6,904.89	22.98	9.11	-135.56	-837.85	312.30	816.37	785.58	30.79	26.515	
7,100.00	7,004.89	7,099.52	7,004.89	23.12	9.13	-135.56	-837.85	312.30	816.37	785.42	30.96	26.372	
7,200.00	7,104.89	7,199.52	7,104.89	23.26	9.15	-135.56	-837.85	312.30	816.37	785.25	31.13	26.229	
7,300.00	7,204.89	7,299.52	7,204.89	23.40	9.17	-135.56	-837.85	312.30	816.37	785.08	31.30	26.086	
7,400.00	7,304.89	7,399.52	7,304.89	23.54	9.19	-135.56	-837.85	312.30	816.37	784.91	31.47	25.943	
7,500.00	7,404.89	7,499.52	7,404.89	23.69	9.22	-135.56	-837.85	312.30	816.37	784.73	31.64	25.801	
7,600.00	7,504.89	7,599.52	7,504.89	23.83	9.24	-135.56	-837.85	312.30	816.37	784.56	31.82	25.659	
7,700.00	7,604.89	7,699.52	7,604.89	23.98	9.26	-135.56	-837.85	312.30	816.37	784.38	31.99	25.517	
7,702.58	7,607.47	7,702.10	7,607.47	23.98	9.26	-135.56	-837.85	312.30	816.37	784.38	32.00	25.514	
7,715.11	7,620.00	7,709.63	7,615.00	24.00	9.26	-135.56	-837.85	312.30	816.39	784.37	32.02	25.498	

<b>Company:</b>	US ROCKIES REGION PLANNING	<b>Local Co-ordinate Reference:</b>	Well P_MAPLEWOOD 14-7
<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 14-7	<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 14-7	<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 14-7  
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 14-7
<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 14-7	<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 14-7	<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 14-7  
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°

