



US ROCKIES REGION PLANNING

COLORADO NORTHERN ZONE - 83

WELD_MAPLEWOOD 16-7

P_MAPLEWOOD 23-7

P_MAPLEWOOD 23-7

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 23-7

+N/-S	+E/-W	Northing	Ground Level: Easting	4848.00 Latitude	Longitude	Slot
0.00	0.00	1361144.34	3156634.54	40° 19' 24.168 N	104° 56' 17.628 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	
1937.63	20.75	71.18	1915.09	59.97	175.93	2.00	71.18	185.87	
4903.90	20.75	71.18	4688.91	399.08	1170.77	0.00	0.00	1236.92	
5941.53	0.00	0.00	5704.00	459.05	1346.70	2.00	180.00	1422.79	
7852.53	0.00	0.00	7615.00	459.05	1346.70	0.00	0.00	1422.79	PBHL_MAPLEWOOD 23-7(1400 FSL 2330 FWL)50'TGT RAD

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

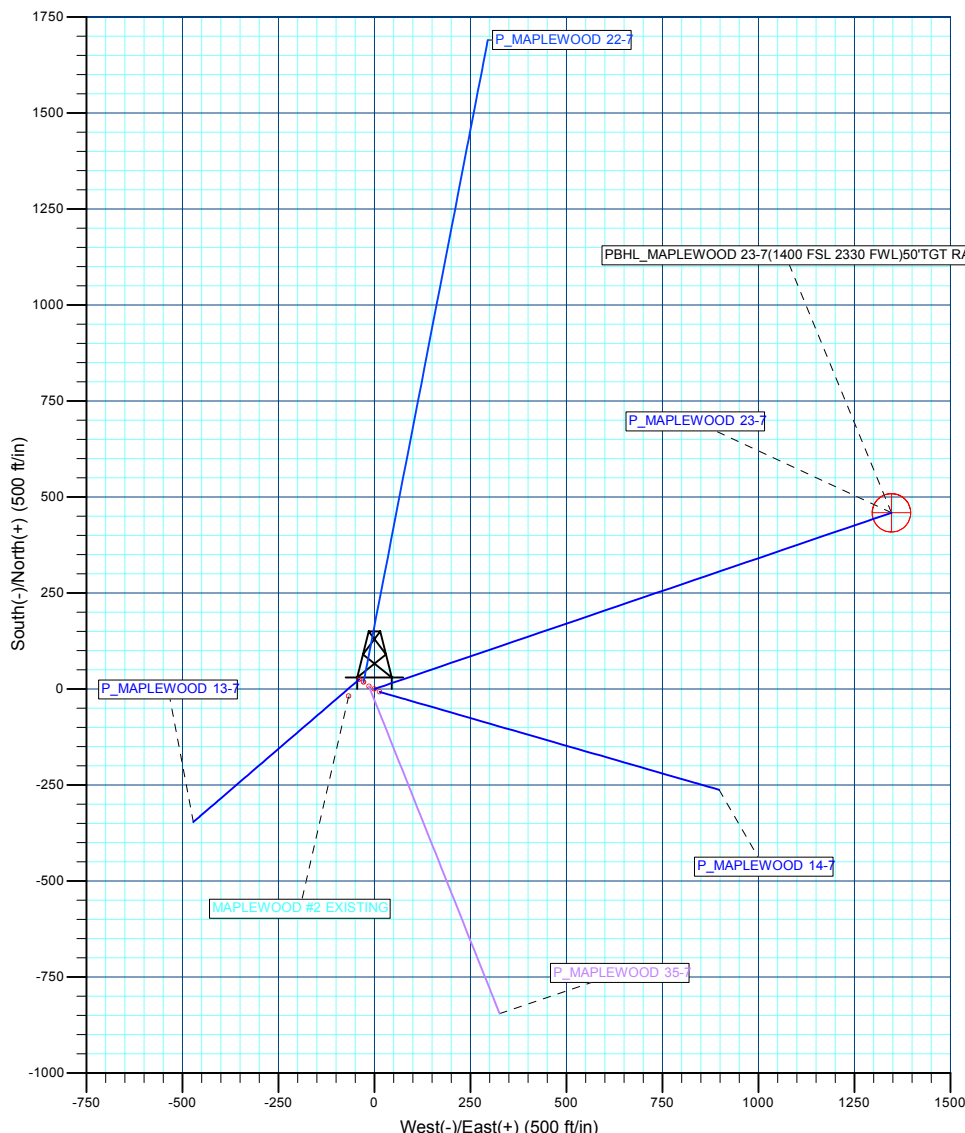
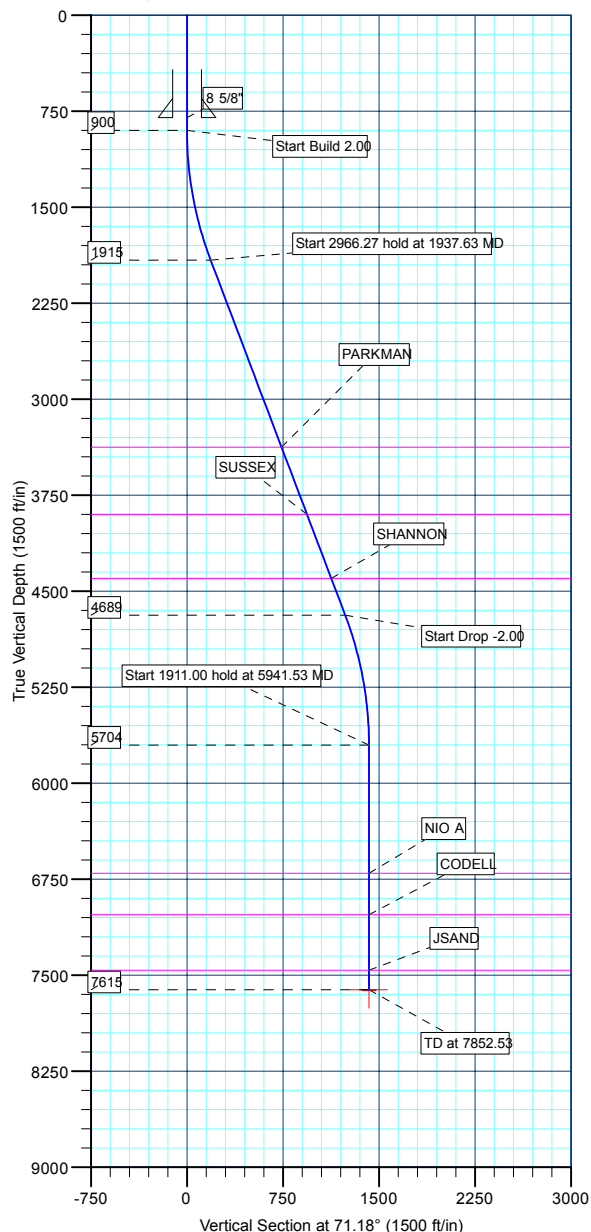
Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Shape
PBHL	7615.00	459.05	1346.70	1361611.91	3157978.31	40° 19' 28.704 N	104° 56' 0.240 W	Circle (Radius: 50.00)

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 23-7/P_MAPLEWOOD 23-7)

Created By: Robert H. Scott

Database:	EDM 2003.21 Single User Db	Local Co-ordinate Reference:	Well P_MAPLEWOOD 23-7
Company:	US ROCKIES REGION PLANNING	TVD Reference:	WELL @ 4863.00ft (Original Well Elev)
Project:	COLORADO NORTHERN ZONE - 83	MD Reference:	WELL @ 4863.00ft (Original Well Elev)
Site:	WELD_MAPLEWOOD 16-7	North Reference:	True
Well:	P_MAPLEWOOD 23-7	Survey Calculation Method:	Minimum Curvature
Wellbore:	P_MAPLEWOOD 23-7		
Design:	PLAN #1 1-19-10 RHS		

Project	COLORADO NORTHERN ZONE - 83, KERR MCGEE OIL & GAS ONSHORE LP		
Map System:	US State Plane 1983	System Datum:	Mean Sea Level
Geo Datum:	North American Datum 1983		
Map Zone:	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 23-7			
Well Position	+N/-S	-7.29 ft	Northing:	1,361,144.34 ft
	+E/-W	13.94 ft	Easting:	3,156,634.54 ft
Position Uncertainty		0.00 ft	Wellhead Elevation:	ft
			Ground Level:	4,848.00 ft

Wellbore	P_MAPLEWOOD 23-7				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	1/19/2010	9.14	67.01	53,220

Design	PLAN #1 1-19-10 RHS			
Audit Notes:				
Version:	Phase:	PLAN	Tie On Depth:	0.00
Vertical Section:	Depth From (TVD) (ft)	+N/-S (ft)	+E/-W (ft)	Direction (°)
	0.00	0.00	0.00	71.18

Plan Sections										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	TFO (°)	Target
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
900.00	0.00	0.00	900.00	0.00	0.00	0.00	0.00	0.00	0.00	
1,937.63	20.75	71.18	1,915.09	59.97	175.93	2.00	2.00	0.00	71.18	
4,903.90	20.75	71.18	4,688.91	399.08	1,170.77	0.00	0.00	0.00	0.00	
5,941.53	0.00	0.00	5,704.00	459.05	1,346.70	2.00	-2.00	0.00	180.00	
7,852.53	0.00	0.00	7,615.00	459.05	1,346.70	0.00	0.00	0.00	0.00	PBHL_MAPLEWOC

Database:	EDM 2003.21 Single User Db	Local Co-ordinate Reference:	Well P_MAPLEWOOD 23-7
Company:	US ROCKIES REGION PLANNING	TVD Reference:	WELL @ 4863.00ft (Original Well Elev)
Project:	COLORADO NORTHERN ZONE - 83	MD Reference:	WELL @ 4863.00ft (Original Well Elev)
Site:	WELD_MAPLEWOOD 16-7	North Reference:	True
Well:	P_MAPLEWOOD 23-7	Survey Calculation Method:	Minimum Curvature
Wellbore:	P_MAPLEWOOD 23-7		
Design:	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)
Start Build 2.00									
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	71.18	999.98	0.56	1.65	1.75	2.00	2.00	0.00
1,100.00	4.00	71.18	1,099.84	2.25	6.61	6.98	2.00	2.00	0.00
1,200.00	6.00	71.18	1,199.45	5.06	14.85	15.69	2.00	2.00	0.00
1,300.00	8.00	71.18	1,298.70	9.00	26.39	27.88	2.00	2.00	0.00
1,400.00	10.00	71.18	1,397.47	14.04	41.20	43.52	2.00	2.00	0.00
1,500.00	12.00	71.18	1,495.62	20.20	59.25	62.60	2.00	2.00	0.00
1,600.00	14.00	71.18	1,593.06	27.46	80.55	85.10	2.00	2.00	0.00
1,700.00	16.00	71.18	1,689.64	35.81	105.04	110.98	2.00	2.00	0.00
1,800.00	18.00	71.18	1,785.27	45.24	132.71	140.21	2.00	2.00	0.00
1,900.00	20.00	71.18	1,879.82	55.74	163.53	172.77	2.00	2.00	0.00
Start 2966.27 hold at 1937.63 MD									
1,937.63	20.75	71.18	1,915.09	59.97	175.93	185.87	2.00	2.00	0.00
2,000.00	20.75	71.18	1,973.41	67.10	196.85	207.97	0.00	0.00	0.00
2,100.00	20.75	71.18	2,066.93	78.53	230.39	243.40	0.00	0.00	0.00
2,200.00	20.75	71.18	2,160.44	89.96	263.92	278.84	0.00	0.00	0.00
2,300.00	20.75	71.18	2,253.95	101.40	297.46	314.27	0.00	0.00	0.00
2,400.00	20.75	71.18	2,347.46	112.83	331.00	349.70	0.00	0.00	0.00
2,500.00	20.75	71.18	2,440.97	124.26	364.54	385.14	0.00	0.00	0.00
2,600.00	20.75	71.18	2,534.49	135.69	398.08	420.57	0.00	0.00	0.00
2,700.00	20.75	71.18	2,628.00	147.13	431.62	456.00	0.00	0.00	0.00
2,800.00	20.75	71.18	2,721.51	158.56	465.16	491.44	0.00	0.00	0.00
2,900.00	20.75	71.18	2,815.02	169.99	498.69	526.87	0.00	0.00	0.00
3,000.00	20.75	71.18	2,908.53	181.42	532.23	562.30	0.00	0.00	0.00
3,100.00	20.75	71.18	3,002.04	192.86	565.77	597.74	0.00	0.00	0.00
3,200.00	20.75	71.18	3,095.56	204.29	599.31	633.17	0.00	0.00	0.00
3,300.00	20.75	71.18	3,189.07	215.72	632.85	668.60	0.00	0.00	0.00
3,400.00	20.75	71.18	3,282.58	227.15	666.39	704.04	0.00	0.00	0.00
PARKMAN									
3,498.83	20.75	71.18	3,375.00	238.45	699.53	739.06	0.00	0.00	0.00
3,500.00	20.75	71.18	3,376.09	238.58	699.93	739.47	0.00	0.00	0.00
3,600.00	20.75	71.18	3,469.60	250.02	733.46	774.90	0.00	0.00	0.00
3,700.00	20.75	71.18	3,563.12	261.45	767.00	810.34	0.00	0.00	0.00
3,800.00	20.75	71.18	3,656.63	272.88	800.54	845.77	0.00	0.00	0.00
3,900.00	20.75	71.18	3,750.14	284.31	834.08	881.20	0.00	0.00	0.00
4,000.00	20.75	71.18	3,843.65	295.75	867.62	916.64	0.00	0.00	0.00
SUSSEX									
4,060.26	20.75	71.18	3,900.00	302.63	887.83	937.99	0.00	0.00	0.00
4,100.00	20.75	71.18	3,937.16	307.18	901.16	952.07	0.00	0.00	0.00
4,200.00	20.75	71.18	4,030.68	318.61	934.69	987.51	0.00	0.00	0.00
4,300.00	20.75	71.18	4,124.19	330.04	968.23	1,022.94	0.00	0.00	0.00
4,400.00	20.75	71.18	4,217.70	341.48	1,001.77	1,058.37	0.00	0.00	0.00
4,500.00	20.75	71.18	4,311.21	352.91	1,035.31	1,093.81	0.00	0.00	0.00
SHANNON									
4,594.95	20.75	71.18	4,400.00	363.76	1,067.15	1,127.45	0.00	0.00	0.00
4,600.00	20.75	71.18	4,404.72	364.34	1,068.85	1,129.24	0.00	0.00	0.00
4,700.00	20.75	71.18	4,498.23	375.77	1,102.39	1,164.67	0.00	0.00	0.00
4,800.00	20.75	71.18	4,591.75	387.20	1,135.93	1,200.11	0.00	0.00	0.00
4,900.00	20.75	71.18	4,685.26	398.64	1,169.46	1,235.54	0.00	0.00	0.00
Start Drop -2.00									
4,903.90	20.75	71.18	4,688.91	399.08	1,170.77	1,236.92	0.00	0.00	0.00
5,000.00	18.83	71.18	4,779.32	409.58	1,201.57	1,269.46	2.00	-2.00	0.00

Database:	EDM 2003.21 Single User Db	Local Co-ordinate Reference:	Well P_MAPLEWOOD 23-7
Company:	US ROCKIES REGION PLANNING	TVD Reference:	WELL @ 4863.00ft (Original Well Elev)
Project:	COLORADO NORTHERN ZONE - 83	MD Reference:	WELL @ 4863.00ft (Original Well Elev)
Site:	WELD_MAPLEWOOD 16-7	North Reference:	True
Well:	P_MAPLEWOOD 23-7	Survey Calculation Method:	Minimum Curvature
Wellbore:	P_MAPLEWOOD 23-7		
Design:	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)
5,100.00	16.83	71.18	4,874.52	419.46	1,230.55	1,300.08	2.00	-2.00	0.00
5,200.00	14.83	71.18	4,970.72	428.26	1,256.37	1,327.36	2.00	-2.00	0.00
5,300.00	12.83	71.18	5,067.81	435.97	1,279.00	1,351.26	2.00	-2.00	0.00
5,400.00	10.83	71.18	5,165.69	442.59	1,298.40	1,371.76	2.00	-2.00	0.00
5,500.00	8.83	71.18	5,264.21	448.10	1,314.56	1,388.83	2.00	-2.00	0.00
5,600.00	6.83	71.18	5,363.27	452.49	1,327.46	1,402.46	2.00	-2.00	0.00
5,700.00	4.83	71.18	5,462.75	455.77	1,337.07	1,412.62	2.00	-2.00	0.00
5,800.00	2.83	71.18	5,562.52	457.92	1,343.39	1,419.30	2.00	-2.00	0.00
5,900.00	0.83	71.18	5,662.47	458.96	1,346.42	1,422.49	2.00	-2.00	0.00
Start 1911.00 hold at 5941.53 MD									
5,941.53	0.00	0.00	5,704.00	459.05	1,346.70	1,422.79	2.00	-2.00	0.00
6,000.00	0.00	0.00	5,762.47	459.05	1,346.70	1,422.79	0.00	0.00	0.00
6,100.00	0.00	0.00	5,862.47	459.05	1,346.70	1,422.79	0.00	0.00	0.00
6,200.00	0.00	0.00	5,962.47	459.05	1,346.70	1,422.79	0.00	0.00	0.00
6,300.00	0.00	0.00	6,062.47	459.05	1,346.70	1,422.79	0.00	0.00	0.00
6,400.00	0.00	0.00	6,162.47	459.05	1,346.70	1,422.79	0.00	0.00	0.00
6,500.00	0.00	0.00	6,262.47	459.05	1,346.70	1,422.79	0.00	0.00	0.00
6,600.00	0.00	0.00	6,362.47	459.05	1,346.70	1,422.79	0.00	0.00	0.00
6,700.00	0.00	0.00	6,462.47	459.05	1,346.70	1,422.79	0.00	0.00	0.00
6,800.00	0.00	0.00	6,562.47	459.05	1,346.70	1,422.79	0.00	0.00	0.00
6,900.00	0.00	0.00	6,662.47	459.05	1,346.70	1,422.79	0.00	0.00	0.00
NIO A									
6,941.53	0.00	0.00	6,704.00	459.05	1,346.70	1,422.79	0.00	0.00	0.00
7,000.00	0.00	0.00	6,762.47	459.05	1,346.70	1,422.79	0.00	0.00	0.00
7,100.00	0.00	0.00	6,862.47	459.05	1,346.70	1,422.79	0.00	0.00	0.00
7,200.00	0.00	0.00	6,962.47	459.05	1,346.70	1,422.79	0.00	0.00	0.00
CODELL									
7,265.53	0.00	0.00	7,028.00	459.05	1,346.70	1,422.79	0.00	0.00	0.00
7,300.00	0.00	0.00	7,062.47	459.05	1,346.70	1,422.79	0.00	0.00	0.00
7,400.00	0.00	0.00	7,162.47	459.05	1,346.70	1,422.79	0.00	0.00	0.00
7,500.00	0.00	0.00	7,262.47	459.05	1,346.70	1,422.79	0.00	0.00	0.00
7,600.00	0.00	0.00	7,362.47	459.05	1,346.70	1,422.79	0.00	0.00	0.00
JSAND									
7,699.53	0.00	0.00	7,462.00	459.05	1,346.70	1,422.79	0.00	0.00	0.00
7,700.00	0.00	0.00	7,462.47	459.05	1,346.70	1,422.79	0.00	0.00	0.00
7,800.00	0.00	0.00	7,562.47	459.05	1,346.70	1,422.79	0.00	0.00	0.00
PBHL_MAPLEWOOD 23-7(1400 FSL 2330 FWL)50'TGT RAD									
7,852.53	0.00	0.00	7,615.00	459.05	1,346.70	1,422.79	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	459.05	1,346.70	1,361,611.91	3,157,978.31	40° 19' 28.704 N	104° 56' 0.240 W
- plan hits target center									
- Circle (radius 50.00)									

Database:	EDM 2003.21 Single User Db	Local Co-ordinate Reference:	Well P_MAPLEWOOD 23-7
Company:	US ROCKIES REGION PLANNING	TVD Reference:	WELL @ 4863.00ft (Original Well Elev)
Project:	COLORADO NORTHERN ZONE - 83	MD Reference:	WELL @ 4863.00ft (Original Well Elev)
Site:	WELD_MAPLEWOOD 16-7	North Reference:	True
Well:	P_MAPLEWOOD 23-7	Survey Calculation Method:	Minimum Curvature
Wellbore:	P_MAPLEWOOD 23-7		
Design:	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 (°)	
3,498.83	3,375.00	PARKMAN				
4,060.26	3,900.00	SUSSEX				
4,594.95	4,400.00	SHANNON				
6,941.53	6,704.00	NIO A				
7,265.53	7,028.00	CODELL				
7,699.53	7,462.00	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	
1,937.63	1,915.09	59.97	175.93	Start 2966.27 hold at 1937.63 MD	
4,903.90	4,688.91	399.08	1,170.77	Start Drop -2.00	
5,941.53	5,704.00	459.05	1,346.70	Start 1911.00 hold at 5941.53 MD	
7,852.53	7,615.00	459.05	1,346.70	TD at 7852.53	



US ROCKIES REGION PLANNING

**COLORADO NORTHERN ZONE - 83
WELD_MAPLEWOOD 16-7
P_MAPLEWOOD 23-7**

**P_MAPLEWOOD 23-7
PLAN #1 1-19-10 RHS**

Anticollision Report

19 January, 2010



Company:	US ROCKIES REGION PLANNING	Local Co-ordinate Reference:	Well P_MAPLEWOOD 23-7
Project:	COLORADO NORTHERN ZONE - 83	TVD Reference:	WELL @ 4863.00ft (Original Well Elev)
Reference Site:	WELD_MAPLEWOOD 16-7	MD Reference:	WELL @ 4863.00ft (Original Well Elev)
Site Error:	0.00ft	North Reference:	True
Reference Well:	P_MAPLEWOOD 23-7	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00ft	Output errors are at	2.00 sigma
Reference Wellbore	P_MAPLEWOOD 23-7	Database:	EDM 2003.21 Single User Db
Reference Design:	PLAN #1 1-19-10 RHS	Offset TVD Reference:	Offset Datum

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

Survey Tool Program	Date	1/19/2010		
From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description
0.00	7,852.53	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
WELD_MAPLEWOOD 16-7						
MAPLEWOOD #2 EXISTING - MAPLEWOOD #2 EXIST	900.00	888.00	69.36	65.58	18.362	CC, ES
MAPLEWOOD #2 EXISTING - MAPLEWOOD #2 EXIST	1,100.00	1,087.84	76.32	71.68	16.449	SF
P_MAPLEWOOD 13-7 - P_MAPLEWOOD 13-7 - PLAN #	900.00	900.00	46.62	42.83	12.310	CC, ES
P_MAPLEWOOD 13-7 - P_MAPLEWOOD 13-7 - PLAN #	1,000.00	999.43	48.28	44.07	11.490	SF
P_MAPLEWOOD 14-7 - P_MAPLEWOOD 14-7 - PLAN #	900.00	900.00	15.73	11.95	4.154	CC, ES
P_MAPLEWOOD 14-7 - P_MAPLEWOOD 14-7 - PLAN #	1,000.00	999.45	16.26	12.05	3.864	SF
P_MAPLEWOOD 22-7 - P_MAPLEWOOD 22-7 - PLAN #	900.00	900.00	33.30	29.52	8.793	CC, ES
P_MAPLEWOOD 22-7 - P_MAPLEWOOD 22-7 - PLAN #	1,000.00	999.53	35.03	30.81	8.293	SF
P_MAPLEWOOD 35-7 - P_MAPLEWOOD 35-7 - PLAN #	958.66	958.89	15.71	13.20	6.246	CC
P_MAPLEWOOD 35-7 - P_MAPLEWOOD 35-7 - PLAN #	1,000.00	1,000.36	15.79	13.16	6.011	ES, 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

Company:	US ROCKIES REGION PLANNING	Local Co-ordinate Reference:	Well P_MAPLEWOOD 23-7
Project:	COLORADO NORTHERN ZONE - 83	TVD Reference:	WELL @ 4863.00ft (Original Well Elev)
Reference Site:	WELD_MAPLEWOOD 16-7	MD Reference:	WELL @ 4863.00ft (Original Well Elev)
Site Error:	0.00ft	North Reference:	True
Reference Well:	P_MAPLEWOOD 23-7	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00ft	Output errors are at	2.00 sigma
Reference Wellbore	P_MAPLEWOOD 23-7	Database:	EDM 2003.21 Single User Db
Reference Design:	PLAN #1 1-19-10 RHS	Offset TVD Reference:	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
1,700.00	1,689.64	1,677.64	1,677.64	4.18	3.66	-178.57	-18.23	-66.92	180.25	173.14	7.11	25.338	
1,800.00	1,785.27	1,773.27	1,773.27	4.67	3.87	-178.75	-18.23	-66.92	209.48	201.96	7.51	27.880	
1,900.00	1,879.82	1,867.82	1,867.82	5.23	4.09	-178.91	-18.23	-66.92	242.03	234.12	7.91	30.596	
1,937.63	1,915.09	1,903.09	1,903.09	5.45	4.17	-178.96	-18.23	-66.92	255.13	247.07	8.06	31.657	
2,000.00	1,973.41	1,961.41	1,961.41	5.84	4.30	-179.04	-18.23	-66.92	277.22	268.87	8.36	33.165	
2,100.00	2,066.93	2,054.93	2,054.93	6.49	4.51	-179.15	-18.23	-66.92	312.65	303.81	8.85	35.345	
2,200.00	2,160.44	2,148.44	2,148.44	7.15	4.72	-179.24	-18.23	-66.92	348.08	338.75	9.34	37.274	
2,300.00	2,253.95	2,241.95	2,241.95	7.82	4.93	-179.31	-18.23	-66.92	383.51	373.68	9.84	38.989	
2,400.00	2,347.46	2,335.46	2,335.46	8.51	5.14	-179.37	-18.23	-66.92	418.95	408.61	10.34	40.522	
2,500.00	2,440.97	2,428.97	2,428.97	9.20	5.35	-179.41	-18.23	-66.92	454.38	443.53	10.84	41.899	
2,600.00	2,534.49	2,522.49	2,522.49	9.90	5.56	-179.46	-18.23	-66.92	489.81	478.46	11.35	43.142	
2,700.00	2,628.00	2,616.00	2,616.00	10.60	5.77	-179.49	-18.23	-66.92	525.24	513.38	11.86	44.268	
2,800.00	2,721.51	2,709.51	2,709.51	11.30	5.98	-179.53	-18.23	-66.92	560.67	548.30	12.38	45.294	
2,900.00	2,815.02	2,803.02	2,803.02	12.01	6.19	-179.55	-18.23	-66.92	596.11	583.21	12.89	46.230	
3,000.00	2,908.53	2,896.53	2,896.53	12.73	6.40	-179.58	-18.23	-66.92	631.54	618.13	13.41	47.089	
3,100.00	3,002.04	2,990.04	2,990.04	13.44	6.61	-179.60	-18.23	-66.92	666.97	653.04	13.93	47.879	
3,200.00	3,095.56	3,083.56	3,083.56	14.16	6.82	-179.62	-18.23	-66.92	702.40	687.95	14.45	48.608	
3,300.00	3,189.07	3,177.07	3,177.07	14.88	7.03	-179.64	-18.23	-66.92	737.84	722.87	14.97	49.282	
3,400.00	3,282.58	3,270.58	3,270.58	15.60	7.24	-179.66	-18.23	-66.92	773.27	757.78	15.49	49.908	
3,500.00	3,376.09	3,364.09	3,364.09	16.32	7.45	-179.67	-18.23	-66.92	808.70	792.69	16.02	50.490	
3,600.00	3,469.60	3,457.60	3,457.60	17.04	7.66	-179.69	-18.23	-66.92	844.14	827.59	16.54	51.033	
3,700.00	3,563.12	3,551.12	3,551.12	17.76	7.87	-179.70	-18.23	-66.92	879.57	862.50	17.07	51.540	
3,800.00	3,656.63	3,644.63	3,644.63	18.49	8.08	-179.71	-18.23	-66.92	915.00	897.41	17.59	52.015	
3,900.00	3,750.14	3,738.14	3,738.14	19.21	8.29	-179.72	-18.23	-66.92	950.44	932.32	18.12	52.460	
4,000.00	3,843.65	3,831.65	3,831.65	19.94	8.50	-179.73	-18.23	-66.92	985.87	967.22	18.64	52.879	
4,100.00	3,937.16	3,925.16	3,925.16	20.66	8.71	-179.74	-18.23	-66.92	1,021.30	1,002.13	19.17	53.274	
4,200.00	4,030.68	4,018.68	4,018.68	21.39	8.92	-179.75	-18.23	-66.92	1,056.73	1,037.04	19.70	53.646	
4,300.00	4,124.19	4,112.19	4,112.19	22.11	9.13	-179.76	-18.23	-66.92	1,092.17	1,071.94	20.23	53.998	
4,400.00	4,217.70	4,205.70	4,205.70	22.84	9.34	-179.76	-18.23	-66.92	1,127.60	1,106.85	20.75	54.331	
4,500.00	4,311.21	4,299.21	4,299.21	23.57	9.55	-179.77	-18.23	-66.92	1,163.03	1,141.75	21.28	54.646	
4,600.00	4,404.72	4,392.72	4,392.72	24.30	9.76	-179.78	-18.23	-66.92	1,198.47	1,176.65	21.81	54.945	
4,700.00	4,498.23	4,486.23	4,486.23	25.03	9.97	-179.78	-18.23	-66.92	1,233.90	1,211.56	22.34	55.230	
4,800.00	4,591.75	4,579.75	4,579.75	25.75	10.18	-179.79	-18.23	-66.92	1,269.33	1,246.46	22.87	55.500	
4,903.90	4,688.91	4,676.91	4,676.91	26.51	10.40	-179.80	-18.23	-66.92	1,306.15	1,282.73	23.42	55.768	
5,000.00	4,779.32	4,767.32	4,767.32	27.11	10.60	-179.80	-18.23	-66.92	1,338.69	1,314.64	24.04	55.680	
5,100.00	4,874.52	4,862.52	4,862.52	27.62	10.82	-179.81	-18.23	-66.92	1,369.31	1,344.67	24.64	55.579	
5,200.00	4,970.72	4,958.72	4,958.72	28.07	11.03	-179.82	-18.23	-66.92	1,396.58	1,371.39	25.19	55.432	
5,300.00	5,067.81	5,055.81	5,055.81	28.48	11.25	-179.82	-18.23	-66.92	1,420.49	1,394.77	25.71	55.242	
5,400.00	5,165.69	5,153.69	5,153.69	28.84	11.47	-179.82	-18.23	-66.92	1,440.99	1,414.80	26.19	55.014	
5,500.00	5,264.21	5,252.21	5,252.21	29.15	11.69	-179.83	-18.23	-66.92	1,458.06	1,431.43	26.63	54.751	
5,600.00	5,363.27	5,351.27	5,351.27	29.41	11.92	-179.83	-18.23	-66.92	1,471.68	1,444.66	27.03	54.456	
5,700.00	5,462.75	5,450.75	5,450.75	29.62	12.14	-179.83	-18.23	-66.92	1,481.84	1,454.47	27.38	54.130	
5,800.00	5,562.52	5,550.52	5,550.52	29.79	12.36	-179.83	-18.23	-66.92	1,488.52	1,460.84	27.68	53.774	
5,900.00	5,662.47	5,650.47	5,650.47	29.91	12.59	-179.83	-18.23	-66.92	1,491.72	1,463.78	27.94	53.390	
5,941.53	5,704.00	5,692.00	5,692.00	29.94	12.68	-108.66	-18.23	-66.92	1,492.02	1,463.98	28.03	53.220	
6,000.00	5,762.47	5,750.47	5,750.47	29.99	12.81	-108.66	-18.23	-66.92	1,492.02	1,463.76	28.26	52.802	
6,100.00	5,862.47	5,850.47	5,850.47	30.08	13.04	-108.66	-18.23	-66.92	1,492.02	1,463.37	28.65	52.085	
6,200.00	5,962.47	5,950.47	5,950.47	30.18	13.26	-108.66	-18.23	-66.92	1,492.02	1,462.98	29.04	51.386	
6,300.00	6,062.47	6,050.47	6,050.47	30.27	13.49	-108.66	-18.23	-66.92	1,492.02	1,462.59	29.43	50.702	
6,400.00	6,162.47	6,150.47	6,150.47	30.37	13.71	-108.66	-18.23	-66.92	1,492.02	1,462.20	29.82	50.034	
6,500.00	6,262.47	6,250.47	6,250.47	30.46	13.94	-108.66	-18.23	-66.92	1,492.02	1,461.80	30.21	49.381	
6,600.00	6,362.47	6,350.47	6,350.47	30.56	14.16	-108.66	-18.23	-66.92	1,492.02	1,461.41	30.61	48.742	

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

Company:	US ROCKIES REGION PLANNING	Local Co-ordinate Reference:	Well P_MAPLEWOOD 23-7
Project:	COLORADO NORTHERN ZONE - 83	TVD Reference:	WELL @ 4863.00ft (Original Well Elev)
Reference Site:	WELD_MAPLEWOOD 16-7	MD Reference:	WELL @ 4863.00ft (Original Well Elev)
Site Error:	0.00ft	North Reference:	True
Reference Well:	P_MAPLEWOOD 23-7	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00ft	Output errors are at	2.00 sigma
Reference Wellbore	P_MAPLEWOOD 23-7	Database:	EDM 2003.21 Single User Db
Reference Design:	PLAN #1 1-19-10 RHS	Offset TVD Reference:	Offset Datum

Offset Design WELD_MAPLEWOOD 16-7 - MAPLEWOOD #2 EXISTING - MAPLEWOOD #2 EX												
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Company:	US ROCKIES REGION PLANNING	Local Co-ordinate Reference:	Well P_MAPLEWOOD 23-7
Project:	COLORADO NORTHERN ZONE - 83	TVD Reference:	WELL @ 4863.00ft (Original Well Elev)
Reference Site:	WELD_MAPLEWOOD 16-7	MD Reference:	WELL @ 4863.00ft (Original Well Elev)
Site Error:	0.00ft	North Reference:	True
Reference Well:	P_MAPLEWOOD 23-7	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00ft	Output errors are at	2.00 sigma
Reference Wellbore	P_MAPLEWOOD 23-7	Database:	EDM 2003.21 Single User Db
Reference Design:	PLAN #1 1-19-10 RHS	Offset TVD Reference:	Offset Datum

Offset Design		WELD_MAPLEWOOD 16-7 - P_MAPLEWOOD 13-7 - P_MAPLEWOOD 13-7 - PLAN #1 1-19-10 RHS										Offset Site Error:		0.00 ft
Survey Program: 0-MWD												Offset Well Error:		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		
0.00	0.00	0.00	0.00	0.00	0.00	-56.85	25.49	-39.04	46.62					
100.00	100.00	100.00	100.00	0.10	0.10	-56.85	25.49	-39.04	46.62	46.43	0.19	244.030		
200.00	200.00	200.00	200.00	0.32	0.32	-56.85	25.49	-39.04	46.62	45.98	0.64	72.781		
300.00	300.00	300.00	300.00	0.55	0.55	-56.85	25.49	-39.04	46.62	45.53	1.09	42.768		
400.00	400.00	400.00	400.00	0.77	0.77	-56.85	25.49	-39.04	46.62	45.08	1.54	30.281		
500.00	500.00	500.00	500.00	0.99	0.99	-56.85	25.49	-39.04	46.62	44.63	1.99	23.438		
600.00	600.00	600.00	600.00	1.22	1.22	-56.85	25.49	-39.04	46.62	44.18	2.44	19.118		
700.00	700.00	700.00	700.00	1.44	1.44	-56.85	25.49	-39.04	46.62	43.73	2.89	16.142		
800.00	800.00	800.00	800.00	1.67	1.67	-56.85	25.49	-39.04	46.62	43.28	3.34	13.968		
900.00	900.00	900.00	900.00	1.89	1.89	-56.85	25.49	-39.04	46.62	42.83	3.79	12.310 CC, ES		
1,000.00	999.98	999.43	999.41	2.11	2.09	-131.60	24.37	-40.34	48.28	44.07	4.20	11.490 SF		
1,100.00	1,099.84	1,098.17	1,098.01	2.32	2.28	-140.75	21.03	-44.23	54.22	49.63	4.59	11.815		
1,200.00	1,199.45	1,195.55	1,195.02	2.55	2.48	-151.74	15.56	-50.59	66.42	61.44	4.98	13.339		
1,300.00	1,298.70	1,291.53	1,290.33	2.80	2.70	-161.32	8.16	-59.20	86.00	80.63	5.37	16.016		
1,400.00	1,397.47	1,387.66	1,385.68	3.08	2.94	-167.97	0.21	-68.44	111.13	105.38	5.76	19.295		
1,500.00	1,495.62	1,482.77	1,480.03	3.39	3.19	-172.34	-7.66	-77.59	140.52	134.38	6.15	22.860		
1,600.00	1,593.06	1,576.77	1,573.26	3.76	3.45	-175.30	-15.43	-86.64	173.73	167.19	6.53	26.595		
1,700.00	1,689.64	1,669.53	1,665.27	4.18	3.72	-177.36	-23.10	-95.56	210.49	203.57	6.92	30.438		
1,800.00	1,785.27	1,760.94	1,755.95	4.67	3.99	-178.83	-30.66	-104.36	250.65	243.35	7.30	34.351		
1,900.00	1,879.82	1,850.89	1,845.17	5.23	4.25	-179.91	-38.10	-113.01	294.08	286.40	7.68	38.311		
1,937.63	1,915.09	1,884.34	1,878.35	5.45	4.35	-179.75	-40.87	-116.23	311.25	303.43	7.82	39.811		
2,000.00	1,973.41	1,939.59	1,933.15	5.84	4.52	-179.28	-45.44	-121.54	340.09	331.97	8.11	41.929		
2,100.00	2,066.93	2,028.17	2,021.02	6.49	4.79	-178.66	-52.77	-130.06	386.36	377.77	8.59	44.988		
2,200.00	2,160.44	2,116.76	2,108.89	7.15	5.07	-178.18	-60.09	-138.59	432.65	423.58	9.07	47.685		
2,300.00	2,253.95	2,205.34	2,196.76	7.82	5.34	-177.79	-67.42	-147.11	478.97	469.41	9.57	50.074		
2,400.00	2,347.46	2,293.92	2,284.62	8.51	5.62	-177.47	-74.75	-155.63	525.30	515.24	10.06	52.200		
2,500.00	2,440.97	2,382.51	2,372.49	9.20	5.90	-177.20	-82.07	-164.15	571.65	561.08	10.57	54.101		
2,600.00	2,534.49	2,471.09	2,460.36	9.90	6.18	-176.97	-89.40	-172.68	618.00	606.92	11.07	55.809		
2,700.00	2,628.00	2,559.68	2,548.23	10.60	6.47	-176.78	-96.73	-181.20	664.36	652.77	11.58	57.351		
2,800.00	2,721.51	2,648.26	2,636.10	11.30	6.75	-176.61	-104.05	-189.72	710.72	698.62	12.10	58.747		
2,900.00	2,815.02	2,736.85	2,723.97	12.01	7.04	-176.46	-111.38	-198.24	757.09	744.47	12.61	60.017		
3,000.00	2,908.53	2,825.43	2,811.83	12.73	7.32	-176.32	-118.71	-206.76	803.46	790.32	13.13	61.177		
3,100.00	3,002.04	2,914.01	2,899.70	13.44	7.61	-176.21	-126.03	-215.29	849.83	836.18	13.65	62.238		
3,200.00	3,095.56	3,002.60	2,987.57	14.16	7.90	-176.10	-133.36	-223.81	896.21	882.03	14.18	63.214		
3,300.00	3,189.07	3,091.18	3,075.44	14.88	8.19	-176.00	-140.69	-232.33	942.59	927.89	14.70	64.113		
3,400.00	3,282.58	3,179.77	3,163.31	15.60	8.47	-175.92	-148.01	-240.85	988.97	973.74	15.23	64.944		
3,500.00	3,376.09	3,268.35	3,251.18	16.32	8.76	-175.84	-155.34	-249.37	1,035.35	1,019.60	15.76	65.714		
3,600.00	3,469.60	3,356.93	3,339.04	17.04	9.05	-175.77	-162.67	-257.90	1,081.73	1,065.45	16.28	66.429		
3,700.00	3,563.12	3,445.52	3,426.91	17.76	9.34	-175.70	-169.99	-266.42	1,128.12	1,111.31	16.81	67.096		
3,800.00	3,656.63	3,534.10	3,514.78	18.49	9.63	-175.64	-177.32	-274.94	1,174.51	1,157.16	17.34	67.717		
3,900.00	3,750.14	3,622.69	3,602.65	19.21	9.93	-175.58	-184.65	-283.46	1,220.89	1,203.02	17.88	68.299		
4,000.00	3,843.65	3,711.27	3,690.52	19.94	10.22	-175.53	-191.97	-291.99	1,267.28	1,248.87	18.41	68.844		
4,100.00	3,937.16	3,799.86	3,778.39	20.66	10.51	-175.48	-199.30	-300.51	1,313.67	1,294.73	18.94	69.356		
4,200.00	4,030.68	3,888.44	3,866.25	21.39	10.80	-175.44	-206.63	-309.03	1,360.06	1,340.58	19.47	69.837		
4,300.00	4,124.19	3,977.02	3,954.12	22.11	11.09	-175.39	-213.95	-317.55	1,406.45	1,386.44	20.01	70.291		
4,400.00	4,217.70	4,065.61	4,041.99	22.84	11.38	-175.35	-221.28	-326.07	1,452.84	1,432.30	20.54	70.719		
4,500.00	4,311.21	4,154.19	4,129.86	23.57	11.68	-175.32	-228.61	-334.60	1,499.23	1,478.15	21.08	71.123		
4,600.00	4,404.72	4,242.78	4,217.73	24.30	11.97	-175.28	-235.93	-343.12	1,545.62	1,524.01	21.62	71.506		
4,700.00	4,498.23	4,331.36	4,305.60	25.03	12.26	-175.25	-243.26	-351.64	1,592.01	1,569.86	22.15	71.869		
4,800.00	4,591.75	4,419.94	4,393.46	25.75	12.55	-175.22	-250.59	-360.16	1,638.41	1,615.72	22.69	72.213		
4,903.90	4,688.91	4,511.98	4,484.76	26.51	12.86	-175.19	-258.20	-369.02	1,686.61	1,663.36	23.25	72.553		
5,000.00	4,779.32	4,597.84	4,569.92	27.11	13.14	-175.24	-265.30	-377.28	1,729.76	1,705.86	23.90	72.374		

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

Company:	US ROCKIES REGION PLANNING	Local Co-ordinate Reference:	Well P_MAPLEWOOD 23-7
Project:	COLORADO NORTHERN ZONE - 83	TVD Reference:	WELL @ 4863.00ft (Original Well Elev)
Reference Site:	WELD_MAPLEWOOD 16-7	MD Reference:	WELL @ 4863.00ft (Original Well Elev)
Site Error:	0.00ft	North Reference:	True
Reference Well:	P_MAPLEWOOD 23-7	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00ft	Output errors are at	2.00 sigma
Reference Wellbore	P_MAPLEWOOD 23-7	Database:	EDM 2003.21 Single User Db
Reference Design:	PLAN #1 1-19-10 RHS	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.00 ft
WELD_MAPLEWOOD 16-7 - P_MAPLEWOOD 13-7 - P_MAPLEWOOD 13-7 - PLAN #1 1-19-10 RHS												Offset Well Error:	0.00 ft
Survey Program: 0-MWD													
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	4,874.52	4,688.66	4,660.01	27.62	13.44	175.27	-272.81	-386.01	1,771.59	1,747.06	24.53	72.222	
5,200.00	4,970.72	4,780.87	4,751.47	28.07	13.75	175.29	-280.44	-394.89	1,810.24	1,785.11	25.13	72.045	
5,300.00	5,067.81	4,874.37	4,844.21	28.48	14.06	175.30	-288.17	-403.88	1,845.66	1,819.97	25.69	71.847	
5,400.00	5,165.69	4,969.03	4,938.12	28.84	14.37	175.29	-296.00	-412.99	1,877.81	1,851.59	26.21	71.632	
5,500.00	5,264.21	5,064.75	5,033.06	29.15	14.69	175.27	-303.92	-422.20	1,906.64	1,879.94	26.70	71.403	
5,600.00	5,363.27	5,161.41	5,128.94	29.41	15.01	175.23	-311.91	-431.50	1,932.13	1,904.98	27.15	71.162	
5,700.00	5,462.75	5,258.89	5,225.63	29.62	15.34	175.18	-319.97	-440.87	1,954.25	1,926.69	27.56	70.911	
5,800.00	5,562.52	5,357.07	5,323.01	29.79	15.66	175.12	-328.09	-450.32	1,972.97	1,945.04	27.93	70.652	
5,900.00	5,662.47	5,582.17	5,546.96	29.91	16.18	174.97	-342.62	-467.21	1,986.23	1,957.77	28.46	69.797	
5,941.53	5,704.00	5,705.67	5,670.35	29.94	16.39	-113.88	-345.77	-470.88	1,988.09	1,959.39	28.70	69.275	
6,000.00	5,762.47	5,797.78	5,762.47	29.99	16.53	-113.89	-346.07	-471.22	1,988.23	1,959.27	28.96	68.655	
6,100.00	5,862.47	5,897.78	5,862.47	30.08	16.68	-113.89	-346.07	-471.22	1,988.23	1,958.93	29.30	67.859	
6,200.00	5,962.47	5,997.78	5,962.47	30.18	16.83	-113.89	-346.07	-471.22	1,988.23	1,958.59	29.64	67.075	
6,300.00	6,062.47	6,097.78	6,062.47	30.27	16.97	-113.89	-346.07	-471.22	1,988.23	1,958.24	29.99	66.303	
6,400.00	6,162.47	6,197.78	6,162.47	30.37	17.12	-113.89	-346.07	-471.22	1,988.23	1,957.90	30.34	65.542	
6,500.00	6,262.47	6,297.78	6,262.47	30.46	17.28	-113.89	-346.07	-471.22	1,988.23	1,957.55	30.69	64.793	
6,600.00	6,362.47	6,397.78	6,362.47	30.56	17.43	-113.89	-346.07	-471.22	1,988.23	1,957.19	31.04	64.056	
6,700.00	6,462.47	6,497.78	6,462.47	30.66	17.58	-113.89	-346.07	-471.22	1,988.23	1,956.84	31.39	63.331	
6,800.00	6,562.47	6,597.78	6,562.47	30.76	17.74	-113.89	-346.07	-471.22	1,988.23	1,956.48	31.75	62.617	
6,900.00	6,662.47	6,697.78	6,662.47	30.87	17.90	-113.89	-346.07	-471.22	1,988.23	1,956.12	32.11	61.914	
7,000.00	6,762.47	6,797.78	6,762.47	30.97	18.06	-113.89	-346.07	-471.22	1,988.23	1,955.76	32.47	61.224	
7,100.00	6,862.47	6,897.78	6,862.47	31.07	18.22	-113.89	-346.07	-471.22	1,988.23	1,955.39	32.84	60.544	
7,200.00	6,962.47	6,997.78	6,962.47	31.18	18.38	-113.89	-346.07	-471.22	1,988.23	1,955.03	33.21	59.875	
7,300.00	7,062.47	7,097.78	7,062.47	31.29	18.54	-113.89	-346.07	-471.22	1,988.23	1,954.66	33.57	59.218	
7,400.00	7,162.47	7,197.78	7,162.47	31.40	18.71	-113.89	-346.07	-471.22	1,988.23	1,954.29	33.95	58.572	
7,421.62	7,184.09	7,219.41	7,184.09	31.42	18.74	-113.89	-346.07	-471.22	1,988.23	1,954.21	34.03	58.433	
7,500.00	7,262.47	7,240.32	7,205.00	31.51	18.78	-113.89	-346.07	-471.22	1,989.06	1,954.85	34.21	58.148	
7,600.00	7,362.47	7,240.32	7,205.00	31.62	18.78	-113.89	-346.07	-471.22	1,994.46	1,960.07	34.39	57.999	
7,700.00	7,462.47	7,240.32	7,205.00	31.73	18.78	-113.89	-346.07	-471.22	2,004.83	1,970.26	34.57	57.994	
7,800.00	7,562.47	7,240.32	7,205.00	31.85	18.78	-113.89	-346.07	-471.22	2,020.11	1,985.36	34.75	58.129	
7,852.53	7,615.00	7,240.32	7,205.00	31.91	18.78	-113.89	-346.07	-471.22	2,030.07	1,995.22	34.85	58.254	

Company:	US ROCKIES REGION PLANNING	Local Co-ordinate Reference:	Well P_MAPLEWOOD 23-7
Project:	COLORADO NORTHERN ZONE - 83	TVD Reference:	WELL @ 4863.00ft (Original Well Elev)
Reference Site:	WELD_MAPLEWOOD 16-7	MD Reference:	WELL @ 4863.00ft (Original Well Elev)
Site Error:	0.00ft	North Reference:	True
Reference Well:	P_MAPLEWOOD 23-7	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00ft	Output errors are at	2.00 sigma
Reference Wellbore	P_MAPLEWOOD 23-7	Database:	EDM 2003.21 Single User Db
Reference Design:	PLAN #1 1-19-10 RHS	Offset TVD Reference:	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	0.10	0.10	117.62	-7.29	13.94	15.73	15.54	0.19	82.355	
200.00	200.00	200.00	200.00	0.32	0.32	117.62	-7.29	13.94	15.73	15.09	0.64	24.562	
300.00	300.00	300.00	300.00	0.55	0.55	117.62	-7.29	13.94	15.73	14.64	1.09	14.433	
400.00	400.00	400.00	400.00	0.77	0.77	117.62	-7.29	13.94	15.73	14.19	1.54	10.219	
500.00	500.00	500.00	500.00	0.99	0.99	117.62	-7.29	13.94	15.73	13.74	1.99	7.910	
600.00	600.00	600.00	600.00	1.22	1.22	117.62	-7.29	13.94	15.73	13.30	2.44	6.452	
700.00	700.00	700.00	700.00	1.44	1.44	117.62	-7.29	13.94	15.73	12.85	2.89	5.448	
800.00	800.00	800.00	800.00	1.67	1.67	117.62	-7.29	13.94	15.73	12.40	3.34	4.714	
900.00	900.00	900.00	900.00	1.89	1.89	117.62	-7.29	13.94	15.73	11.95	3.79	4.154 CC, ES	
1,000.00	999.98	999.45	999.43	2.11	2.10	49.65	-7.77	15.60	16.26	12.05	4.21	3.864 SF	
1,100.00	1,099.84	1,098.84	1,098.68	2.32	2.30	58.04	-9.21	20.57	18.10	13.49	4.61	3.925	
1,200.00	1,199.45	1,198.11	1,197.57	2.55	2.51	68.44	-11.59	28.83	21.82	16.78	5.04	4.330	
1,300.00	1,298.70	1,297.18	1,295.90	2.80	2.75	77.86	-14.91	40.35	27.83	22.32	5.51	5.049	
1,400.00	1,397.47	1,395.99	1,393.52	3.08	3.02	85.08	-19.16	55.09	36.21	30.17	6.04	5.991	
1,500.00	1,495.62	1,494.50	1,490.24	3.39	3.33	90.26	-24.33	73.00	46.91	40.26	6.65	7.049	
1,600.00	1,593.06	1,593.39	1,586.85	3.76	3.69	94.71	-30.19	93.30	59.36	52.01	7.36	8.070	
1,700.00	1,689.64	1,692.28	1,683.43	4.18	4.07	100.16	-36.07	113.71	72.67	64.52	8.14	8.924	
1,800.00	1,785.27	1,790.82	1,779.67	4.67	4.46	106.02	-41.94	134.05	87.37	78.38	8.99	9.715	
1,900.00	1,879.82	1,888.90	1,875.46	5.23	4.87	111.86	-47.78	154.29	104.03	94.15	9.88	10.529	
1,937.63	1,915.09	1,925.66	1,911.36	5.45	5.02	113.99	-49.97	161.88	110.90	100.68	10.22	10.850	
2,000.00	1,973.41	1,986.51	1,970.79	5.84	5.28	117.34	-53.59	174.44	122.78	111.99	10.79	11.379	
2,100.00	2,066.93	2,084.08	2,066.08	6.49	5.70	121.53	-59.40	194.58	142.51	130.81	11.70	12.184	
2,200.00	2,160.44	2,181.65	2,161.38	7.15	6.13	124.70	-65.21	214.72	162.79	150.19	12.60	12.921	
2,300.00	2,253.95	2,279.22	2,256.67	7.82	6.56	127.16	-71.02	234.86	183.45	169.95	13.50	13.588	
2,400.00	2,347.46	2,376.79	2,351.96	8.51	6.99	129.13	-76.83	255.00	204.37	189.97	14.40	14.190	
2,500.00	2,440.97	2,474.36	2,447.25	9.20	7.43	130.73	-82.64	275.14	225.48	210.17	15.31	14.731	
2,600.00	2,534.49	2,571.93	2,542.55	9.90	7.87	132.06	-88.45	295.28	246.73	230.51	16.21	15.219	
2,700.00	2,628.00	2,669.50	2,637.84	10.60	8.31	133.17	-94.26	315.42	268.08	250.96	17.12	15.661	
2,800.00	2,721.51	2,767.08	2,733.13	11.30	8.76	134.12	-100.07	335.55	289.52	271.49	18.03	16.061	
2,900.00	2,815.02	2,864.65	2,828.42	12.01	9.20	134.94	-105.88	355.69	311.02	292.08	18.94	16.425	
3,000.00	2,908.53	2,962.22	2,923.72	12.73	9.65	135.66	-111.69	375.83	332.57	312.73	19.85	16.758	
3,100.00	3,002.04	3,059.79	3,019.01	13.44	10.10	136.29	-117.50	395.97	354.17	333.42	20.76	17.063	
3,200.00	3,095.56	3,157.36	3,114.30	14.16	10.55	136.84	-123.31	416.11	375.81	354.14	21.67	17.343	
3,300.00	3,189.07	3,254.93	3,209.59	14.88	11.00	137.34	-129.12	436.25	397.47	374.89	22.58	17.601	
3,400.00	3,282.58	3,352.50	3,304.89	15.60	11.45	137.78	-134.93	456.39	419.16	395.67	23.50	17.840	
3,500.00	3,376.09	3,450.07	3,400.18	16.32	11.91	138.18	-140.74	476.53	440.87	416.46	24.41	18.062	
3,600.00	3,469.60	3,547.64	3,495.47	17.04	12.36	138.54	-146.54	496.67	462.60	437.28	25.33	18.267	
3,700.00	3,563.12	3,645.21	3,590.76	17.76	12.81	138.87	-152.35	516.81	484.35	458.10	26.25	18.454	
3,800.00	3,656.63	3,742.78	3,686.06	18.49	13.27	139.17	-158.16	536.95	506.11	478.94	27.17	18.628	
3,900.00	3,750.14	3,840.35	3,781.35	19.21	13.72	139.45	-163.97	557.08	527.88	499.79	28.09	18.791	
4,000.00	3,843.65	3,937.92	3,876.64	19.94	14.18	139.71	-169.78	577.22	549.67	520.65	29.02	18.943	
4,100.00	3,937.16	4,035.49	3,971.94	20.66	14.64	139.94	-175.59	597.36	571.46	541.52	29.94	19.086	
4,200.00	4,030.68	4,133.06	4,067.23	21.39	15.09	140.16	-181.40	617.50	593.26	562.39	30.87	19.220	
4,300.00	4,124.19	4,230.63	4,162.52	22.11	15.55	140.36	-187.21	637.64	615.07	583.28	31.79	19.346	
4,400.00	4,217.70	4,328.20	4,257.81	22.84	16.00	140.55	-193.02	657.78	636.89	604.17	32.72	19.465	
4,500.00	4,311.21	4,425.77	4,353.11	23.57	16.46	140.73	-198.83	677.92	658.71	625.06	33.65	19.578	
4,600.00	4,404.72	4,523.34	4,448.40	24.30	16.92	140.89	-204.64	698.06	680.54	645.96	34.57	19.684	
4,700.00	4,498.23	4,620.92	4,543.69	25.03	17.38	141.05	-210.45	718.20	702.37	666.87	35.50	19.785	
4,800.00	4,591.75	4,718.49	4,638.98	25.75	17.83	141.19	-216.26	738.34	724.21	687.78	36.43	19.880	
4,903.90	4,688.91	4,819.86	4,737.99	26.51	18.31	141.33	-222.29	759.26	746.90	709.51	37.39	19.975	
5,000.00	4,779.32	4,913.90	4,829.84	27.11	18.75	141.63	-227.89	778.67	766.66	728.39	38.27	20.031	

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

Company:	US ROCKIES REGION PLANNING	Local Co-ordinate Reference:	Well P_MAPLEWOOD 23-7
Project:	COLORADO NORTHERN ZONE - 83	TVD Reference:	WELL @ 4863.00ft (Original Well Elev)
Reference Site:	WELD_MAPLEWOOD 16-7	MD Reference:	WELL @ 4863.00ft (Original Well Elev)
Site Error:	0.00ft	North Reference:	True
Reference Well:	P_MAPLEWOOD 23-7	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00ft	Output errors are at	2.00 sigma
Reference Wellbore	P_MAPLEWOOD 23-7	Database:	EDM 2003.21 Single User Db
Reference Design:	PLAN #1 1-19-10 RHS	Offset TVD Reference:	Offset Datum

Offset Design WELD_MAPLEWOOD 16-7 - P_MAPLEWOOD 14-7 - P_MAPLEWOOD 14-7 - PLAN #1 1-19-10 RHS												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
5,100.00	4,874.52	5,012.26	4,925.90	27.62	19.21	141.75	-233.75	798.97	784.59	745.44	39.15	20.041	
5,200.00	4,970.72	5,111.03	5,022.36	28.07	19.68	141.68	-239.63	819.36	799.83	759.79	40.03	19.979	
5,300.00	5,067.81	5,207.74	5,116.85	28.48	20.11	141.45	-245.35	839.19	812.43	771.54	40.88	19.871	
5,400.00	5,165.69	5,300.00	5,207.43	28.84	20.41	141.23	-250.20	855.99	823.06	781.50	41.56	19.806	
5,500.00	5,264.21	5,391.35	5,297.63	29.15	20.67	141.06	-254.20	869.86	831.92	789.79	42.13	19.748	
5,600.00	5,363.27	5,483.50	5,389.04	29.41	20.90	140.92	-257.42	881.04	839.01	796.40	42.61	19.691	
5,700.00	5,462.75	5,575.82	5,480.94	29.62	21.09	140.82	-259.83	889.40	844.29	801.30	43.00	19.636	
5,800.00	5,562.52	5,668.25	5,573.19	29.79	21.25	140.75	-261.43	894.91	847.77	804.48	43.29	19.583	
5,900.00	5,662.47	5,760.75	5,665.65	29.91	21.38	140.72	-262.19	897.57	849.43	805.93	43.50	19.529	
5,941.53	5,704.00	5,800.11	5,705.00	29.94	21.43	-148.11	-262.27	897.83	849.58	806.02	43.56	19.504	
5,961.36	5,723.83	5,818.94	5,723.83	29.96	21.45	-148.11	-262.27	897.83	849.58	805.98	43.60	19.485	
6,000.00	5,762.47	5,857.57	5,762.47	29.99	21.50	-148.11	-262.27	897.83	849.58	805.89	43.69	19.446	
6,100.00	5,862.47	5,957.57	5,862.47	30.08	21.62	-148.11	-262.27	897.83	849.58	805.65	43.93	19.339	
6,200.00	5,962.47	6,057.57	5,962.47	30.18	21.74	-148.11	-262.27	897.83	849.58	805.41	44.17	19.232	
6,300.00	6,062.47	6,157.57	6,062.47	30.27	21.87	-148.11	-262.27	897.83	849.58	805.16	44.42	19.125	
6,400.00	6,162.47	6,257.57	6,162.47	30.37	21.99	-148.11	-262.27	897.83	849.58	804.91	44.67	19.018	
6,500.00	6,262.47	6,357.57	6,262.47	30.46	22.12	-148.11	-262.27	897.83	849.58	804.65	44.93	18.910	
6,600.00	6,362.47	6,457.57	6,362.47	30.56	22.25	-148.11	-262.27	897.83	849.58	804.40	45.18	18.802	
6,700.00	6,462.47	6,557.57	6,462.47	30.66	22.38	-148.11	-262.27	897.83	849.58	804.14	45.44	18.695	
6,800.00	6,562.47	6,657.57	6,562.47	30.76	22.51	-148.11	-262.27	897.83	849.58	803.87	45.71	18.587	
6,900.00	6,662.47	6,757.57	6,662.47	30.87	22.65	-148.11	-262.27	897.83	849.58	803.61	45.97	18.480	
7,000.00	6,762.47	6,857.57	6,762.47	30.97	22.78	-148.11	-262.27	897.83	849.58	803.34	46.24	18.372	
7,100.00	6,862.47	6,957.57	6,862.47	31.07	22.92	-148.11	-262.27	897.83	849.58	803.07	46.51	18.265	
7,200.00	6,962.47	7,057.57	6,962.47	31.18	23.06	-148.11	-262.27	897.83	849.58	802.79	46.79	18.158	
7,300.00	7,062.47	7,157.57	7,062.47	31.29	23.20	-148.11	-262.27	897.83	849.58	802.52	47.07	18.051	
7,400.00	7,162.47	7,257.57	7,162.47	31.40	23.34	-148.11	-262.27	897.83	849.58	802.24	47.34	17.945	
7,500.00	7,262.47	7,357.57	7,262.47	31.51	23.48	-148.11	-262.27	897.83	849.58	801.95	47.63	17.838	
7,600.00	7,362.47	7,457.57	7,362.47	31.62	23.63	-148.11	-262.27	897.83	849.58	801.67	47.91	17.732	
7,700.00	7,462.47	7,557.57	7,462.47	31.73	23.77	-148.11	-262.27	897.83	849.58	801.38	48.20	17.627	
7,800.00	7,562.47	7,657.57	7,562.47	31.85	23.92	-148.11	-262.27	897.83	849.58	801.09	48.49	17.521	
7,852.53	7,615.00	7,710.11	7,615.00	31.91	23.99	-148.11	-262.27	897.83	849.58	800.94	48.64	17.466	

Company:	US ROCKIES REGION PLANNING	Local Co-ordinate Reference:	Well P_MAPLEWOOD 23-7
Project:	COLORADO NORTHERN ZONE - 83	TVD Reference:	WELL @ 4863.00ft (Original Well Elev)
Reference Site:	WELD_MAPLEWOOD 16-7	MD Reference:	WELL @ 4863.00ft (Original Well Elev)
Site Error:	0.00ft	North Reference:	True
Reference Well:	P_MAPLEWOOD 23-7	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00ft	Output errors are at	2.00 sigma
Reference Wellbore	P_MAPLEWOOD 23-7	Database:	EDM 2003.21 Single User Db
Reference Design:	PLAN #1 1-19-10 RHS	Offset TVD Reference:	Offset Datum

Offset Design WELD_MAPLEWOOD 16-7 - P_MAPLEWOOD 22-7 - P_MAPLEWOOD 22-7 - PLAN #1 1-19-10 RHS										Offset Site Error: 0.00 ft			
Survey Program: 0-MWD										Offset Well Error: 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
0.00	0.00	0.00	0.00	0.00	0.00	-56.85	18.21	-27.88	33.30				
100.00	100.00	100.00	100.00	0.10	0.10	-56.85	18.21	-27.88	33.30	33.11	0.19	174.312	
200.00	200.00	200.00	200.00	0.32	0.32	-56.85	18.21	-27.88	33.30	32.66	0.64	51.988	
300.00	300.00	300.00	300.00	0.55	0.55	-56.85	18.21	-27.88	33.30	32.21	1.09	30.550	
400.00	400.00	400.00	400.00	0.77	0.77	-56.85	18.21	-27.88	33.30	31.76	1.54	21.630	
500.00	500.00	500.00	500.00	0.99	0.99	-56.85	18.21	-27.88	33.30	31.31	1.99	16.742	
600.00	600.00	600.00	600.00	1.22	1.22	-56.85	18.21	-27.88	33.30	30.86	2.44	13.656	
700.00	700.00	700.00	700.00	1.44	1.44	-56.85	18.21	-27.88	33.30	30.41	2.89	11.530	
800.00	800.00	800.00	800.00	1.67	1.67	-56.85	18.21	-27.88	33.30	29.96	3.34	9.977	
900.00	900.00	900.00	900.00	1.89	1.89	-56.85	18.21	-27.88	33.30	29.52	3.79	8.793 CC, ES	
1,000.00	999.98	999.53	999.51	2.11	2.12	-127.62	19.91	-27.55	35.03	30.81	4.22	8.293 SF	
1,100.00	1,099.84	1,098.88	1,098.72	2.32	2.34	-126.60	24.99	-26.57	40.23	35.58	4.65	8.644	
1,200.00	1,199.45	1,197.87	1,197.34	2.55	2.57	-125.36	33.40	-24.94	48.90	43.81	5.10	9.595	
1,300.00	1,298.70	1,296.33	1,295.07	2.80	2.81	-124.19	45.08	-22.68	61.02	55.46	5.56	10.968	
1,400.00	1,397.47	1,394.08	1,391.63	3.08	3.08	-123.18	59.94	-19.81	76.57	70.50	6.07	12.617	
1,500.00	1,495.62	1,490.97	1,486.78	3.39	3.37	-122.33	77.84	-16.35	95.48	88.86	6.63	14.411	
1,600.00	1,593.06	1,586.84	1,580.28	3.76	3.71	-121.60	98.66	-12.32	117.72	110.47	7.25	16.243	
1,700.00	1,689.64	1,681.55	1,671.90	4.18	4.08	-120.97	122.23	-7.76	143.21	135.27	7.94	18.029	
1,800.00	1,785.27	1,774.99	1,761.45	4.67	4.50	-120.39	148.39	-2.70	171.89	163.16	8.72	19.707	
1,900.00	1,879.82	1,867.02	1,848.76	5.23	4.97	-119.85	176.94	2.82	203.67	194.08	9.59	21.242	
1,937.63	1,915.09	1,900.00	1,879.82	5.45	5.14	-119.65	187.83	4.93	216.42	206.49	9.93	21.803	
2,000.00	1,973.41	1,957.67	1,933.81	5.84	5.48	-119.58	207.73	8.77	238.16	227.60	10.55	22.568	
2,100.00	2,066.93	2,047.23	2,016.81	6.49	6.04	-119.04	240.74	15.16	274.13	262.54	11.59	23.649	
2,200.00	2,160.44	2,135.58	2,097.63	7.15	6.63	-118.15	275.78	21.94	311.50	298.82	12.68	24.567	
2,300.00	2,253.95	2,227.73	2,181.31	7.82	7.30	-117.18	313.68	29.27	349.67	335.83	13.84	25.269	
2,400.00	2,347.46	2,320.01	2,265.10	8.51	7.97	-116.40	351.63	36.61	387.91	372.90	15.02	25.834	
2,500.00	2,440.97	2,412.30	2,348.90	9.20	8.66	-115.76	389.58	43.95	426.20	410.00	16.21	26.294	
2,600.00	2,534.49	2,504.58	2,432.70	9.90	9.36	-115.22	427.53	51.29	464.53	447.12	17.42	26.674	
2,700.00	2,628.00	2,596.86	2,516.50	10.60	10.07	-114.77	465.48	58.63	502.89	484.26	18.63	26.991	
2,800.00	2,721.51	2,689.14	2,600.29	11.30	10.78	-114.38	503.43	65.97	541.28	521.42	19.86	27.259	
2,900.00	2,815.02	2,781.43	2,684.09	12.01	11.49	-114.04	541.38	73.31	579.68	558.59	21.09	27.488	
3,000.00	2,908.53	2,873.71	2,767.89	12.73	12.21	-113.75	579.33	80.65	618.09	595.77	22.33	27.685	
3,100.00	3,002.04	2,965.99	2,851.69	13.44	12.94	-113.49	617.27	87.99	656.52	632.95	23.57	27.857	
3,200.00	3,095.56	3,058.28	2,935.49	14.16	13.66	-113.26	655.22	95.33	694.96	670.14	24.81	28.007	
3,300.00	3,189.07	3,150.56	3,019.28	14.88	14.39	-113.05	693.17	102.67	733.40	707.34	26.06	28.139	
3,400.00	3,282.58	3,242.84	3,103.08	15.60	15.12	-112.86	731.12	110.01	771.86	744.54	27.32	28.257	
3,500.00	3,376.09	3,335.12	3,186.88	16.32	15.86	-112.69	769.07	117.35	810.32	781.75	28.57	28.361	
3,600.00	3,469.60	3,427.41	3,270.68	17.04	16.59	-112.54	807.02	124.69	848.79	818.96	29.83	28.455	
3,700.00	3,563.12	3,519.69	3,354.47	17.76	17.32	-112.40	844.97	132.03	887.26	856.17	31.09	28.540	
3,800.00	3,656.63	3,611.97	3,438.27	18.49	18.06	-112.27	882.92	139.37	925.73	893.38	32.35	28.616	
3,900.00	3,750.14	3,704.25	3,522.07	19.21	18.80	-112.15	920.87	146.71	964.21	930.60	33.61	28.686	
4,000.00	3,843.65	3,796.54	3,605.87	19.94	19.53	-112.04	958.82	154.05	1,002.69	967.81	34.88	28.749	
4,100.00	3,937.16	3,888.82	3,689.67	20.66	20.27	-111.94	996.77	161.39	1,041.18	1,005.03	36.14	28.807	
4,200.00	4,030.68	3,981.10	3,773.46	21.39	21.01	-111.84	1,034.72	168.73	1,079.66	1,042.25	37.41	28.860	
4,300.00	4,124.19	4,073.39	3,857.26	22.11	21.75	-111.76	1,072.67	176.07	1,118.15	1,079.48	38.68	28.909	
4,400.00	4,217.70	4,165.67	3,941.06	22.84	22.49	-111.67	1,110.62	183.41	1,156.65	1,116.70	39.95	28.955	
4,500.00	4,311.21	4,257.95	4,024.86	23.57	23.23	-111.60	1,148.57	190.75	1,195.14	1,153.92	41.22	28.997	
4,600.00	4,404.72	4,350.23	4,108.65	24.30	23.97	-111.53	1,186.52	198.09	1,233.64	1,191.15	42.49	29.036	
4,700.00	4,498.23	4,442.52	4,192.45	25.03	24.72	-111.46	1,224.47	205.43	1,272.13	1,228.38	43.76	29.072	
4,800.00	4,591.75	4,534.80	4,276.25	25.75	25.46	-111.39	1,262.42	212.77	1,310.63	1,265.60	45.03	29.106	
4,903.90	4,688.91	4,630.68	4,363.32	26.51	26.23	-111.33	1,301.85	220.40	1,350.63	1,304.28	46.35	29.139	
5,000.00	4,779.32	4,719.55	4,444.02	27.11	26.95	-111.94	1,338.39	227.46	1,387.09	1,339.46	47.63	29.124	

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

Company:	US ROCKIES REGION PLANNING	Local Co-ordinate Reference:	Well P_MAPLEWOOD 23-7
Project:	COLORADO NORTHERN ZONE - 83	TVD Reference:	WELL @ 4863.00ft (Original Well Elev)
Reference Site:	WELD_MAPLEWOOD 16-7	MD Reference:	WELL @ 4863.00ft (Original Well Elev)
Site Error:	0.00ft	North Reference:	True
Reference Well:	P_MAPLEWOOD 23-7	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00ft	Output errors are at	2.00 sigma
Reference Wellbore	P_MAPLEWOOD 23-7	Database:	EDM 2003.21 Single User Db
Reference Design:	PLAN #1 1-19-10 RHS	Offset TVD Reference:	Offset Datum

Offset Design WELD_MAPLEWOOD 16-7 - P_MAPLEWOOD 22-7 - P_MAPLEWOOD 22-7 - PLAN #1 1-19-10 RHS												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
5,100.00	4,874.52	4,812.36	4,528.29	27.62	27.69	-112.42	1,376.56	234.85	1,423.85	1,375.01	48.84	29.154	
5,200.00	4,970.72	4,905.39	4,612.77	28.07	28.44	-112.74	1,414.82	242.25	1,459.41	1,409.41	50.00	29.188	
5,300.00	5,067.81	5,021.76	4,718.84	28.48	29.28	-112.83	1,461.79	251.33	1,493.38	1,442.20	51.17	29.184	
5,400.00	5,165.69	5,159.54	4,846.69	28.84	30.05	-112.77	1,512.19	261.08	1,523.76	1,471.51	52.25	29.165	
5,500.00	5,264.21	5,301.01	4,980.37	29.15	30.78	-112.68	1,557.60	269.86	1,550.15	1,496.92	53.23	29.124	
5,600.00	5,363.27	5,445.84	5,119.41	29.41	31.43	-112.56	1,597.32	277.55	1,572.39	1,518.30	54.09	29.070	
5,700.00	5,462.75	5,593.60	5,263.20	29.62	32.01	-112.41	1,630.69	284.00	1,590.35	1,535.51	54.84	29.001	
5,800.00	5,562.52	5,743.84	5,410.99	29.79	32.49	-112.22	1,657.10	289.11	1,603.91	1,548.46	55.45	28.927	
5,900.00	5,662.47	5,896.01	5,561.91	29.91	32.88	-112.01	1,676.07	292.78	1,612.96	1,557.04	55.92	28.843	
5,941.53	5,704.00	5,959.64	5,625.28	29.94	33.00	-40.73	1,681.66	293.86	1,615.38	1,559.31	56.07	28.810	
6,000.00	5,762.47	6,049.54	5,715.00	29.99	33.15	-40.58	1,687.20	294.93	1,617.66	1,561.42	56.24	28.762	
6,100.00	5,862.47	6,197.05	5,862.47	30.08	33.31	-40.49	1,690.33	295.53	1,618.95	1,562.45	56.49	28.657	
6,200.00	5,962.47	6,297.05	5,962.47	30.18	33.39	-40.49	1,690.33	295.53	1,618.95	1,562.26	56.68	28.561	
6,300.00	6,062.47	6,397.05	6,062.47	30.27	33.47	-40.49	1,690.33	295.53	1,618.95	1,562.07	56.88	28.464	
6,400.00	6,162.47	6,497.05	6,162.47	30.37	33.55	-40.49	1,690.33	295.53	1,618.95	1,561.87	57.07	28.366	
6,500.00	6,262.47	6,597.05	6,262.47	30.46	33.63	-40.49	1,690.33	295.53	1,618.95	1,561.67	57.27	28.268	
6,600.00	6,362.47	6,697.05	6,362.47	30.56	33.71	-40.49	1,690.33	295.53	1,618.95	1,561.47	57.47	28.168	
6,700.00	6,462.47	6,797.05	6,462.47	30.66	33.80	-40.49	1,690.33	295.53	1,618.95	1,561.27	57.68	28.068	
6,800.00	6,562.47	6,897.05	6,562.47	30.76	33.89	-40.49	1,690.33	295.53	1,618.95	1,561.06	57.89	27.968	
6,900.00	6,662.47	6,997.05	6,662.47	30.87	33.97	-40.49	1,690.33	295.53	1,618.95	1,560.85	58.10	27.867	
7,000.00	6,762.47	7,097.05	6,762.47	30.97	34.06	-40.49	1,690.33	295.53	1,618.95	1,560.64	58.31	27.765	
7,100.00	6,862.47	7,197.05	6,862.47	31.07	34.15	-40.49	1,690.33	295.53	1,618.95	1,560.42	58.52	27.663	
7,200.00	6,962.47	7,297.05	6,962.47	31.18	34.24	-40.49	1,690.33	295.53	1,618.95	1,560.21	58.74	27.560	
7,300.00	7,062.47	7,397.05	7,062.47	31.29	34.34	-40.49	1,690.33	295.53	1,618.95	1,559.98	58.96	27.457	
7,400.00	7,162.47	7,497.05	7,162.47	31.40	34.43	-40.49	1,690.33	295.53	1,618.95	1,559.76	59.19	27.353	
7,500.00	7,262.47	7,597.05	7,262.47	31.51	34.52	-40.49	1,690.33	295.53	1,618.95	1,559.54	59.41	27.249	
7,600.00	7,362.47	7,697.05	7,362.47	31.62	34.62	-40.49	1,690.33	295.53	1,618.95	1,559.31	59.64	27.145	
7,700.00	7,462.47	7,797.05	7,462.47	31.73	34.72	-40.49	1,690.33	295.53	1,618.95	1,559.08	59.87	27.040	
7,800.00	7,562.47	7,897.05	7,562.47	31.85	34.82	-40.49	1,690.33	295.53	1,618.95	1,558.84	60.10	26.935	
7,828.02	7,590.49	7,925.08	7,590.49	31.88	34.84	-40.49	1,690.33	295.53	1,618.95	1,558.78	60.17	26.906	
7,852.53	7,615.00	7,934.59	7,600.00	31.91	34.85	-40.49	1,690.33	295.53	1,619.02	1,558.81	60.21	26.889	

Company:	US ROCKIES REGION PLANNING	Local Co-ordinate Reference:	Well P_MAPLEWOOD 23-7
Project:	COLORADO NORTHERN ZONE - 83	TVD Reference:	WELL @ 4863.00ft (Original Well Elev)
Reference Site:	WELD_MAPLEWOOD 16-7	MD Reference:	WELL @ 4863.00ft (Original Well Elev)
Site Error:	0.00ft	North Reference:	True
Reference Well:	P_MAPLEWOOD 23-7	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00ft	Output errors are at	2.00 sigma
Reference Wellbore	P_MAPLEWOOD 23-7	Database:	EDM 2003.21 Single User Db
Reference Design:	PLAN #1 1-19-10 RHS	Offset TVD Reference:	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 (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	0.04	-62.38	7.29	-13.94	15.73	15.59	0.14	112.361			
200.00	200.00	200.00	200.00	0.32	0.10	-62.38	7.29	-13.94	15.73	15.32	0.42	37.717			
300.00	300.00	300.00	300.00	0.55	0.15	-62.38	7.29	-13.94	15.73	15.04	0.69	22.662			
400.00	400.00	400.00	400.00	0.77	0.20	-62.38	7.29	-13.94	15.73	14.76	0.97	16.197			
500.00	500.00	500.00	500.00	0.99	0.25	-62.38	7.29	-13.94	15.73	14.49	1.25	12.602			
600.00	600.00	600.00	600.00	1.22	0.31	-62.38	7.29	-13.94	15.73	14.21	1.53	10.313			
700.00	700.00	700.00	700.00	1.44	0.36	-62.38	7.29	-13.94	15.73	13.93	1.80	8.728			
800.00	800.00	800.00	800.00	1.67	0.41	-62.38	7.29	-13.94	15.73	13.65	2.08	7.565			
900.00	900.00	900.00	900.00	1.89	0.46	-62.38	7.29	-13.94	15.73	13.38	2.36	6.675			
958.66	958.66	958.89	958.89	2.02	0.49	-136.59	6.73	-13.72	15.71	13.20	2.52	6.246 CC			
1,000.00	999.98	1,000.36	1,000.34	2.11	0.52	-142.35	5.66	-13.29	15.79	13.16	2.63	6.011 ES, SF			
1,100.00	1,099.84	1,100.37	1,100.21	2.32	0.57	-165.82	0.79	-11.35	18.01	15.12	2.89	6.228			
1,200.00	1,199.45	1,199.69	1,199.15	2.55	0.64	170.58	-7.25	-8.14	26.08	22.91	3.17	8.222			
1,300.00	1,298.70	1,297.99	1,296.71	2.80	0.72	156.21	-18.34	-3.71	40.71	37.23	3.48	11.698			
1,400.00	1,397.47	1,394.95	1,392.49	3.08	0.82	148.31	-32.32	1.87	61.00	57.17	3.82	15.953			
1,500.00	1,495.62	1,490.29	1,486.12	3.39	0.95	143.69	-48.99	8.52	86.32	82.11	4.21	20.495			
1,600.00	1,593.06	1,585.25	1,578.91	3.76	1.10	141.03	-67.76	16.01	115.89	111.24	4.65	24.929			
1,700.00	1,689.64	1,679.88	1,671.34	4.18	1.26	140.10	-86.58	23.52	148.19	143.06	5.13	28.896			
1,800.00	1,785.27	1,773.61	1,762.89	4.67	1.43	140.05	-105.23	30.96	183.02	177.37	5.65	32.406			
1,900.00	1,879.82	1,866.32	1,853.45	5.23	1.60	140.45	-123.68	38.32	220.37	214.16	6.21	35.507			
1,937.63	1,915.09	1,900.92	1,887.25	5.45	1.67	140.67	-130.56	41.07	235.08	228.66	6.43	36.582			
2,000.00	1,973.41	1,958.13	1,943.13	5.84	1.78	141.32	-141.94	45.61	259.78	252.98	6.80	38.189			
2,100.00	2,066.93	2,049.86	2,032.73	6.49	1.95	142.14	-160.19	52.90	299.44	292.02	7.42	40.375			
2,200.00	2,160.44	2,141.59	2,122.33	7.15	2.13	142.77	-178.44	60.18	339.13	331.09	8.04	42.174			
2,300.00	2,253.95	2,233.32	2,211.93	7.82	2.31	143.27	-196.69	67.46	378.84	370.17	8.67	43.674			
2,400.00	2,347.46	2,325.04	2,301.53	8.51	2.49	143.67	-214.94	74.75	418.58	409.27	9.31	44.938			
2,500.00	2,440.97	2,416.77	2,391.13	9.20	2.67	144.00	-233.19	82.03	458.33	448.37	9.96	46.016			
2,600.00	2,534.49	2,508.50	2,480.73	9.90	2.85	144.28	-251.44	89.31	498.10	487.49	10.61	46.943			
2,700.00	2,628.00	2,600.23	2,570.33	10.60	3.03	144.52	-269.69	96.59	537.87	526.61	11.26	47.748			
2,800.00	2,721.51	2,691.96	2,659.93	11.30	3.21	144.73	-287.94	103.88	577.65	565.73	11.92	48.452			
2,900.00	2,815.02	2,783.69	2,749.53	12.01	3.39	144.90	-306.19	111.16	617.43	604.85	12.58	49.073			
3,000.00	2,908.53	2,875.42	2,839.13	12.73	3.57	145.06	-324.44	118.44	657.22	643.98	13.24	49.623			
3,100.00	3,002.04	2,967.15	2,928.73	13.44	3.76	145.20	-342.69	125.73	697.01	683.10	13.91	50.115			
3,200.00	3,095.56	3,058.88	3,018.33	14.16	3.94	145.33	-360.94	133.01	736.81	722.23	14.57	50.555			
3,300.00	3,189.07	3,150.61	3,107.93	14.88	4.12	145.44	-379.19	140.29	776.61	761.36	15.24	50.953			
3,400.00	3,282.58	3,242.34	3,197.53	15.60	4.31	145.54	-397.44	147.58	816.41	800.50	15.91	51.313			
3,500.00	3,376.09	3,334.07	3,287.13	16.32	4.49	145.63	-415.69	154.86	856.21	839.63	16.58	51.641			
3,600.00	3,469.60	3,425.80	3,376.73	17.04	4.67	145.71	-433.94	162.14	896.01	878.76	17.25	51.940			
3,700.00	3,563.12	3,517.53	3,466.33	17.76	4.86	145.79	-452.19	169.42	935.82	917.89	17.92	52.215			
3,800.00	3,656.63	3,609.26	3,555.93	18.49	5.04	145.86	-470.44	176.71	975.62	957.03	18.59	52.467			
3,900.00	3,750.14	3,700.99	3,645.53	19.21	5.22	145.92	-488.69	183.99	1,015.43	996.16	19.27	52.700			
4,000.00	3,843.65	3,792.72	3,735.13	19.94	5.41	145.98	-506.94	191.27	1,055.24	1,035.30	19.94	52.916			
4,100.00	3,937.16	3,884.45	3,824.73	20.66	5.59	146.04	-525.19	198.56	1,095.05	1,074.43	20.62	53.116			
4,200.00	4,030.68	3,976.18	3,914.33	21.39	5.78	146.09	-543.44	205.84	1,134.86	1,113.57	21.29	53.302			
4,300.00	4,124.19	4,067.91	4,003.93	22.11	5.96	146.14	-561.69	213.12	1,174.67	1,152.70	21.97	53.476			
4,400.00	4,217.70	4,159.64	4,093.53	22.84	6.14	146.18	-579.94	220.41	1,214.48	1,191.84	22.64	53.638			
4,500.00	4,311.21	4,251.36	4,183.13	23.57	6.33	146.22	-598.19	227.69	1,254.29	1,230.98	23.32	53.790			
4,600.00	4,404.72	4,343.09	4,272.73	24.30	6.51	146.26	-616.44	234.97	1,294.11	1,270.11	24.00	53.932			
4,700.00	4,498.23	4,434.82	4,362.33	25.03	6.70	146.30	-634.69	242.25	1,333.92	1,309.25	24.67	54.066			
4,800.00	4,591.75	4,526.55	4,451.93	25.75	6.88	146.34	-652.95	249.54	1,373.73	1,348.38	25.35	54.193			
4,903.90	4,688.91	4,621.86	4,545.03	26.51	7.07	146.37	-671.91	257.10	1,415.10	1,389.05	26.05	54.316			

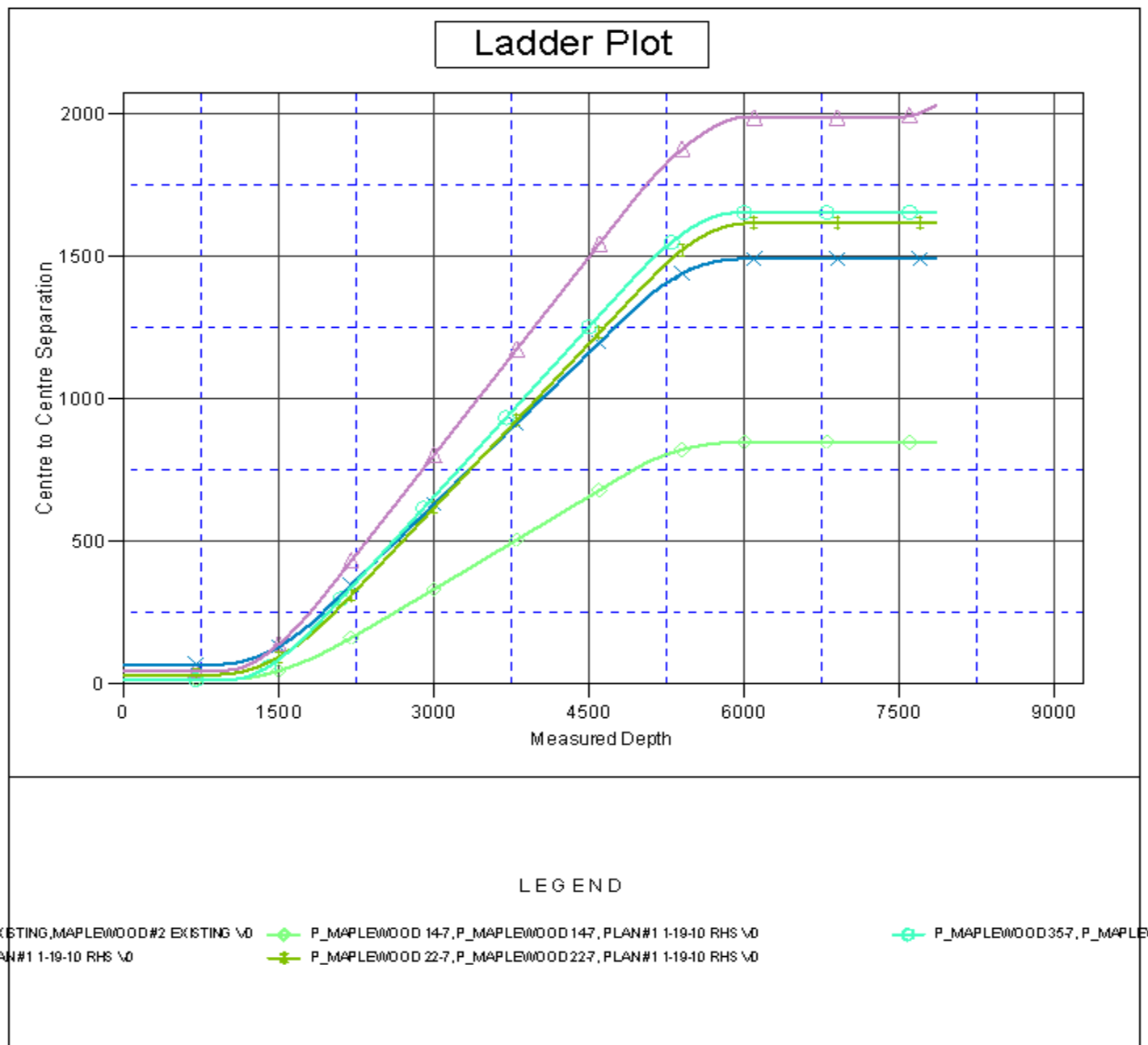
CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Company:	US ROCKIES REGION PLANNING	Local Co-ordinate Reference:	Well P_MAPLEWOOD 23-7
Project:	COLORADO NORTHERN ZONE - 83	TVD Reference:	WELL @ 4863.00ft (Original Well Elev)
Reference Site:	WELD_MAPLEWOOD 16-7	MD Reference:	WELL @ 4863.00ft (Original Well Elev)
Site Error:	0.00ft	North Reference:	True
Reference Well:	P_MAPLEWOOD 23-7	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00ft	Output errors are at	2.00 sigma
Reference Wellbore	P_MAPLEWOOD 23-7	Database:	EDM 2003.21 Single User Db
Reference Design:	PLAN #1 1-19-10 RHS	Offset TVD Reference:	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 (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
5,000.00	4,779.32	4,710.54	4,631.65	27.11	7.25	146.80	-689.55	264.14	1,452.12	1,425.59	26.54	54.723	
5,100.00	4,874.52	4,803.85	4,722.80	27.62	7.44	147.14	-708.12	271.55	1,487.99	1,461.03	26.96	55.182	
5,200.00	4,970.72	4,898.12	4,814.88	28.07	7.63	147.36	-726.87	279.04	1,521.12	1,493.75	27.37	55.576	
5,300.00	5,067.81	4,993.23	4,907.77	28.48	7.82	147.48	-745.79	286.59	1,551.47	1,523.72	27.75	55.908	
5,400.00	5,165.69	5,089.05	5,001.37	28.84	8.01	147.50	-764.86	294.20	1,579.03	1,550.93	28.10	56.184	
5,500.00	5,264.21	5,186.73	5,096.79	29.15	8.21	147.42	-784.29	301.95	1,603.80	1,575.37	28.44	56.402	
5,600.00	5,363.27	5,321.64	5,229.24	29.41	8.45	147.20	-808.04	311.43	1,624.57	1,595.78	28.79	56.427	
5,700.00	5,462.75	5,459.18	5,365.36	29.62	8.64	147.03	-826.27	318.70	1,640.18	1,611.14	29.04	56.478	
5,800.00	5,562.52	5,598.64	5,504.18	29.79	8.78	146.92	-838.54	323.60	1,650.51	1,621.33	29.19	56.551	
5,900.00	5,662.47	5,739.26	5,644.63	29.91	8.85	146.87	-844.54	325.99	1,655.50	1,626.28	29.22	56.665	
5,941.53	5,704.00	5,797.81	5,703.18	29.94	8.87	-141.96	-845.15	326.24	1,655.98	1,626.78	29.20	56.713	
6,000.00	5,762.47	5,857.10	5,762.47	29.99	8.88	-141.96	-845.15	326.24	1,655.98	1,626.71	29.28	56.559	
6,100.00	5,862.47	5,957.10	5,862.47	30.08	8.90	-141.96	-845.15	326.24	1,655.98	1,626.56	29.43	56.278	
6,200.00	5,962.47	6,057.10	5,962.47	30.18	8.92	-141.96	-845.15	326.24	1,655.98	1,626.41	29.57	55.997	
6,300.00	6,062.47	6,157.10	6,062.47	30.27	8.94	-141.96	-845.15	326.24	1,655.98	1,626.26	29.72	55.714	
6,400.00	6,162.47	6,257.10	6,162.47	30.37	8.96	-141.96	-845.15	326.24	1,655.98	1,626.11	29.87	55.431	
6,500.00	6,262.47	6,357.10	6,262.47	30.46	8.98	-141.96	-845.15	326.24	1,655.98	1,625.96	30.03	55.148	
6,600.00	6,362.47	6,457.10	6,362.47	30.56	9.00	-141.96	-845.15	326.24	1,655.98	1,625.80	30.18	54.864	
6,700.00	6,462.47	6,557.10	6,462.47	30.66	9.02	-141.96	-845.15	326.24	1,655.98	1,625.64	30.34	54.580	
6,800.00	6,562.47	6,657.10	6,562.47	30.76	9.04	-141.96	-845.15	326.24	1,655.98	1,625.49	30.50	54.296	
6,900.00	6,662.47	6,757.10	6,662.47	30.87	9.06	-141.96	-845.15	326.24	1,655.98	1,625.32	30.66	54.012	
7,000.00	6,762.47	6,857.10	6,762.47	30.97	9.08	-141.96	-845.15	326.24	1,655.98	1,625.16	30.82	53.727	
7,100.00	6,862.47	6,957.10	6,862.47	31.07	9.10	-141.96	-845.15	326.24	1,655.98	1,625.00	30.99	53.443	
7,200.00	6,962.47	7,057.10	6,962.47	31.18	9.12	-141.96	-845.15	326.24	1,655.98	1,624.83	31.15	53.159	
7,300.00	7,062.47	7,157.10	7,062.47	31.29	9.14	-141.96	-845.15	326.24	1,655.98	1,624.67	31.32	52.876	
7,400.00	7,162.47	7,257.10	7,162.47	31.40	9.16	-141.96	-845.15	326.24	1,655.98	1,624.50	31.49	52.593	
7,500.00	7,262.47	7,357.10	7,262.47	31.51	9.18	-141.96	-845.15	326.24	1,655.98	1,624.33	31.66	52.310	
7,600.00	7,362.47	7,457.10	7,362.47	31.62	9.21	-141.96	-845.15	326.24	1,655.98	1,624.16	31.83	52.028	
7,700.00	7,462.47	7,557.10	7,462.47	31.73	9.23	-141.96	-845.15	326.24	1,655.98	1,623.98	32.00	51.746	
7,800.00	7,562.47	7,657.10	7,562.47	31.85	9.25	-141.96	-845.15	326.24	1,655.98	1,623.81	32.18	51.465	
7,852.53	7,615.00	7,709.63	7,615.00	31.91	9.26	-141.96	-845.15	326.24	1,655.98	1,623.72	32.27	51.318	

Company:	US ROCKIES REGION PLANNING	Local Co-ordinate Reference:	Well P_MAPLEWOOD 23-7
Project:	COLORADO NORTHERN ZONE - 83	TVD Reference:	WELL @ 4863.00ft (Original Well Elev)
Reference Site:	WELD_MAPLEWOOD 16-7	MD Reference:	WELL @ 4863.00ft (Original Well Elev)
Site Error:	0.00ft	North Reference:	True
Reference Well:	P_MAPLEWOOD 23-7	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00ft	Output errors are at	2.00 sigma
Reference Wellbore	P_MAPLEWOOD 23-7	Database:	EDM 2003.21 Single User Db
Reference Design:	PLAN #1 1-19-10 RHS	Offset TVD Reference:	Offset Datum

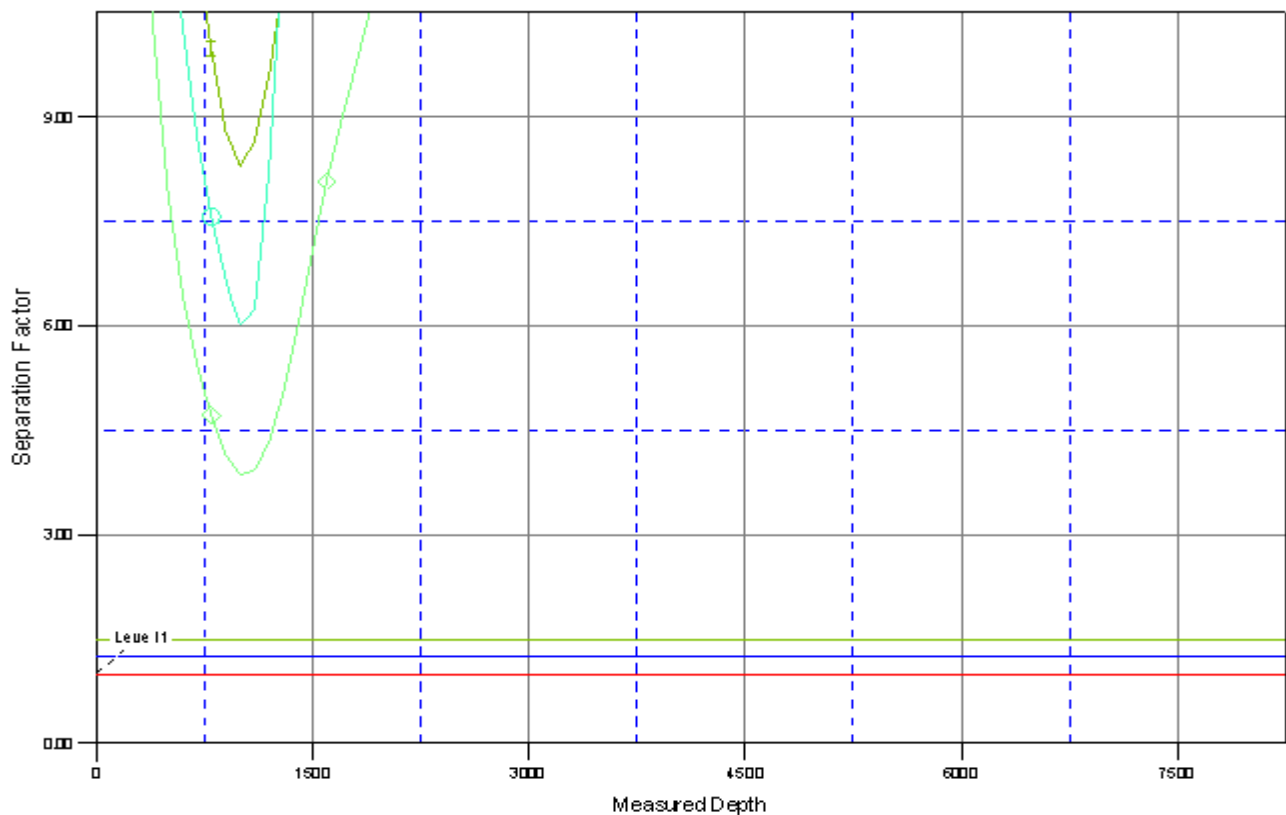
Reference Depths are relative to WELL @ 4863.00ft (Original Well Elev) Coordinates are relative to: P_MAPLEWOOD 23-7
Offset Depths are relative to Offset Datum Coordinate System is US State Plane 1983, Colorado Northern Zone
Central Meridian is 105° 30' 0.000 W ° Grid Convergence at Surface is: 0.36°



Company:	US ROCKIES REGION PLANNING	Local Co-ordinate Reference:	Well P_MAPLEWOOD 23-7
Project:	COLORADO NORTHERN ZONE - 83	TVD Reference:	WELL @ 4863.00ft (Original Well Elev)
Reference Site:	WELD_MAPLEWOOD 16-7	MD Reference:	WELL @ 4863.00ft (Original Well Elev)
Site Error:	0.00ft	North Reference:	True
Reference Well:	P_MAPLEWOOD 23-7	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00ft	Output errors are at	2.00 sigma
Reference Wellbore	P_MAPLEWOOD 23-7	Database:	EDM 2003.21 Single User Db
Reference Design:	PLAN #1 1-19-10 RHS	Offset TVD Reference:	Offset Datum

Reference Depths are relative to WELL @ 4863.00ft (Original Well Elev) Coordinates are relative to: P_MAPLEWOOD 23-7
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 357,P_MAPLEWOOD 357,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