



US ROCKIES REGION PLANNING

COLORADO NORTHERN ZONE - 83

WELD_FRICO PAD

P_FRICO 33-11

P_FRICO 33-11

Plan: PLAN #1 2-10-10 RHS

Standard Planning Report

10 February, 2010





Project: COLORADO NORTHERN ZONE - 83
 Site: WELD_FRICO PAD
 Well: P_FRICO 33-11
 Wellbore: P_FRICO 33-11
 Section: SECTION 6 T3N R65W
 SHL: 2327 FSL 1676 FWL
 Design: PLAN #1 2-10-10 RHS
 Latitude: 40° 14' 20.195 N
 Longitude: 104° 38' 2.188 W
 GL: 4779.00
 KB: WELL @ 4794.00ft (Original Well Elev)



Weatherford®



Azimuths to True North
 Magnetic North: 8.96°
 Magnetic Field
 Strength: 53203.1snT
 Dip Angle: 66.99°
 Date: 2/10/2010
 Model: IGRF2010

FORMATION TOP DETAILS

TVDPath	MDPath	Formation
3780.00	3982.02	PARKMAN
4306.00	4559.33	SUSSEX
6800.00	7188.44	NIO A
7080.00	7468.44	CODELL
7160.00	7548.44	GRNHRN
7530.00	7918.44	JSAND TOP

CASING DETAILS

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

SECTION DETAILS

MD	Inc	Azi	TVD	+N/-S	+E/-W	DLeg	TFace	VSec	Annotation
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	Start Build 2.00
2116.91	24.34	235.85	2080.64	-142.91	-210.70	2.00	235.85	254.60	Start 3554.63 hold at 2116.91 MD
5671.53	24.34	235.85	5319.36	-965.20	-1423.09	0.00	0.00	1719.53	Start Drop -2.00
6888.44	0.00	0.00	6500.00	-1108.10	-1633.79	2.00	180.00	1974.12	Start 1180.00 hold at 6888.44 MD
8068.44	0.00	0.00	7680.00	-1108.10	-1633.79	0.00	0.00	1974.12	TD at 8068.44

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

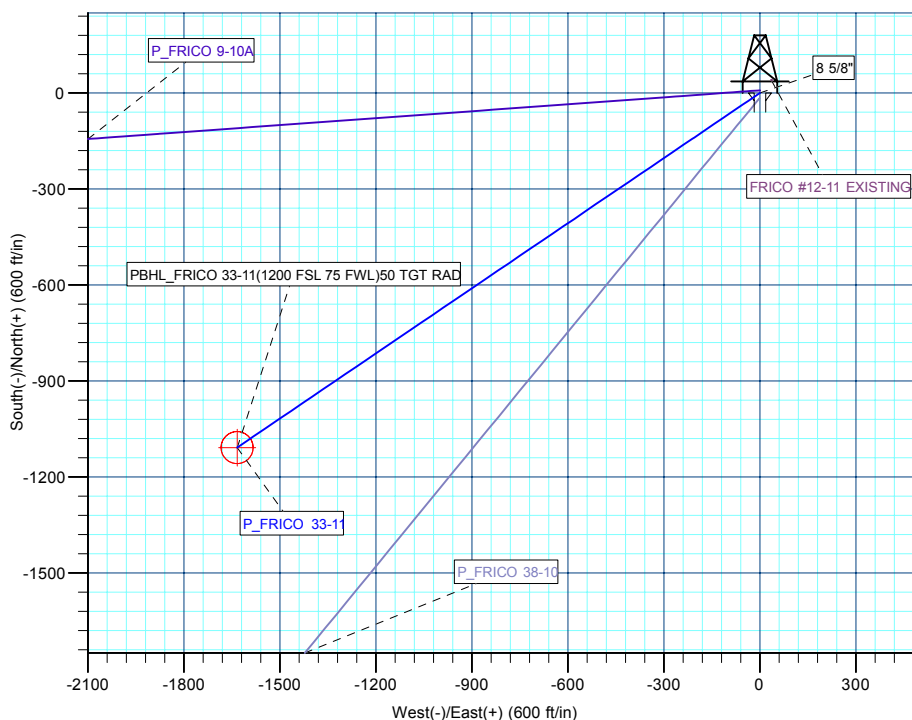
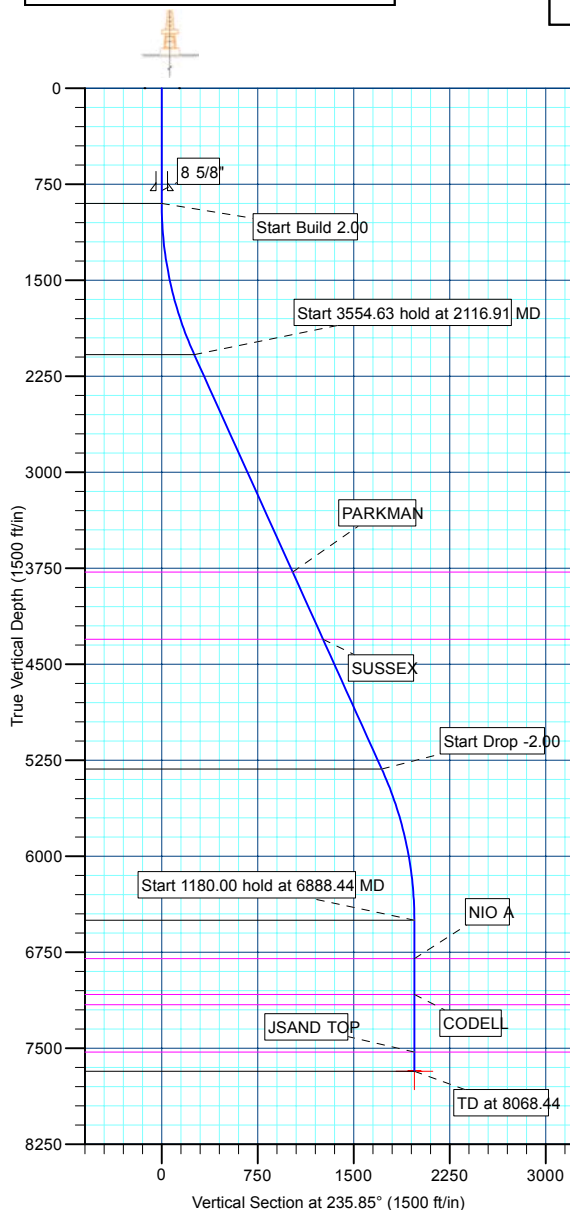
Name	TVD	+N/-S	+E/-W	Latitude	Longitude	Shape
PBHL	7680.00	-1108.10	-1633.79	40° 14' 9.244 N	104° 38' 23.255 W	Circle (Radius: 50.00)

WELL DETAILS: P_FRICO 33-11

+N/-S	+E/-W	Northing	Ground Level: Easting	4779.00 Latitude	Longitude	Slot
0.00	0.00	1331069.47	3241775.58	40° 14' 20.195 N	104° 38' 2.188 W	

LEGEND

- FRICO #12-11 EXISTING, FRICO #12-11 EXISTING, FRICO #12 EXISTING V0
- P_FRICO 38-10, P_FRICO 38-10, PLAN #1 2-10-10 RHS V0
- P_FRICO 9-10A, P_FRICO 9-10A, PLAN #1 2-10-10 RHS V0
- PLAN #1 2-10-10 RHS



Plan: PLAN #1 2-10-10 RHS (P_FRICO 33-11/P_FRICO 33-11)

Created By: Robert H. Scott Date: 11:00, February 10 2010

Database:	EDM 2003.21 Single User Db	Local Co-ordinate Reference:	Well P_FRICO 33-11
Company:	US ROCKIES REGION PLANNING	TVD Reference:	WELL @ 4794.00ft (Original Well Elev)
Project:	COLORADO NORTHERN ZONE - 83	MD Reference:	WELL @ 4794.00ft (Original Well Elev)
Site:	WELD_FRICO PAD	North Reference:	True
Well:	P_FRICO 33-11	Survey Calculation Method:	Minimum Curvature
Wellbore:	P_FRICO 33-11		
Design:	PLAN #1 2-10-10 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_FRICO PAD, SECTION 6 T3N R65W											
Site Position:			Northing:			1,331,069.47 ft			Latitude:			40° 14' 20.195 N					
From:			Lat/Long			Easting:			3,241,775.58 ft			Longitude:			104° 38' 2.188 W		
Position Uncertainty:			0.00 ft			Slot Radius:			in			Grid Convergence:			0.56 °		

Well	P_FRICO 33-11					
Well Position	+N/-S	0.00 ft	Northing:	1,331,069.47 ft	Latitude:	40° 14' 20.195 N
	+E/-W	0.00 ft	Easting:	3,241,775.58 ft	Longitude:	104° 38' 2.188 W
Position Uncertainty		0.00 ft	Wellhead Elevation:	ft	Ground Level:	4,779.00 ft

Wellbore	P_FRICO 33-11				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	2/10/2010	8.96	66.99	53,203

Design	PLAN #1 2-10-10 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	235.85

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	
2,116.91	24.34	235.85	2,080.64	-142.91	-210.70	2.00	2.00	0.00	235.85	
5,671.53	24.34	235.85	5,319.36	-965.20	-1,423.09	0.00	0.00	0.00	0.00	
6,888.44	0.00	0.00	6,500.00	-1,108.10	-1,633.79	2.00	-2.00	0.00	180.00	
8,068.44	0.00	0.00	7,680.00	-1,108.10	-1,633.79	0.00	0.00	0.00	0.00	PBHL_FRICO 33-1

Database:	EDM 2003.21 Single User Db	Local Co-ordinate Reference:	Well P_FRICO 33-11
Company:	US ROCKIES REGION PLANNING	TVD Reference:	WELL @ 4794.00ft (Original Well Elev)
Project:	COLORADO NORTHERN ZONE - 83	MD Reference:	WELL @ 4794.00ft (Original Well Elev)
Site:	WELD_FRICO PAD	North Reference:	True
Well:	P_FRICO 33-11	Survey Calculation Method:	Minimum Curvature
Wellbore:	P_FRICO 33-11		
Design:	PLAN #1 2-10-10 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	235.85	999.98	-0.98	-1.44	1.75	2.00	2.00	0.00
1,100.00	4.00	235.85	1,099.84	-3.92	-5.78	6.98	2.00	2.00	0.00
1,200.00	6.00	235.85	1,199.45	-8.81	-12.99	15.69	2.00	2.00	0.00
1,300.00	8.00	235.85	1,298.70	-15.65	-23.07	27.88	2.00	2.00	0.00
1,400.00	10.00	235.85	1,397.47	-24.43	-36.02	43.52	2.00	2.00	0.00
1,500.00	12.00	235.85	1,495.62	-35.14	-51.81	62.60	2.00	2.00	0.00
1,600.00	14.00	235.85	1,593.06	-47.77	-70.43	85.10	2.00	2.00	0.00
1,700.00	16.00	235.85	1,689.64	-62.29	-91.84	110.98	2.00	2.00	0.00
1,800.00	18.00	235.85	1,785.27	-78.70	-116.04	140.21	2.00	2.00	0.00
1,900.00	20.00	235.85	1,879.82	-96.98	-142.98	172.77	2.00	2.00	0.00
2,000.00	22.00	235.85	1,973.17	-117.09	-172.64	208.60	2.00	2.00	0.00
2,100.00	24.00	235.85	2,065.21	-139.02	-204.98	247.67	2.00	2.00	0.00
Start 3554.63 hold at 2116.91 MD									
2,116.91	24.34	235.85	2,080.64	-142.91	-210.70	254.60	2.00	2.00	0.00
2,200.00	24.34	235.85	2,156.35	-162.13	-239.05	288.84	0.00	0.00	0.00
2,300.00	24.34	235.85	2,247.46	-185.26	-273.15	330.05	0.00	0.00	0.00
2,400.00	24.34	235.85	2,338.57	-208.40	-307.26	371.26	0.00	0.00	0.00
2,500.00	24.34	235.85	2,429.69	-231.53	-341.37	412.48	0.00	0.00	0.00
2,600.00	24.34	235.85	2,520.80	-254.66	-375.47	453.69	0.00	0.00	0.00
2,700.00	24.34	235.85	2,611.91	-277.79	-409.58	494.90	0.00	0.00	0.00
2,800.00	24.34	235.85	2,703.03	-300.93	-443.69	536.11	0.00	0.00	0.00
2,900.00	24.34	235.85	2,794.14	-324.06	-477.80	577.32	0.00	0.00	0.00
3,000.00	24.34	235.85	2,885.25	-347.19	-511.90	618.54	0.00	0.00	0.00
3,100.00	24.34	235.85	2,976.36	-370.33	-546.01	659.75	0.00	0.00	0.00
3,200.00	24.34	235.85	3,067.48	-393.46	-580.12	700.96	0.00	0.00	0.00
3,300.00	24.34	235.85	3,158.59	-416.59	-614.22	742.17	0.00	0.00	0.00
3,400.00	24.34	235.85	3,249.70	-439.73	-648.33	783.39	0.00	0.00	0.00
3,500.00	24.34	235.85	3,340.82	-462.86	-682.44	824.60	0.00	0.00	0.00
3,600.00	24.34	235.85	3,431.93	-485.99	-716.55	865.81	0.00	0.00	0.00
3,700.00	24.34	235.85	3,523.04	-509.12	-750.65	907.02	0.00	0.00	0.00
3,800.00	24.34	235.85	3,614.16	-532.26	-784.76	948.23	0.00	0.00	0.00
3,900.00	24.34	235.85	3,705.27	-555.39	-818.87	989.45	0.00	0.00	0.00
PARKMAN									
3,982.02	24.34	235.85	3,780.00	-574.36	-846.84	1,023.25	0.00	0.00	0.00
4,000.00	24.34	235.85	3,796.38	-578.52	-852.97	1,030.66	0.00	0.00	0.00
4,100.00	24.34	235.85	3,887.49	-601.66	-887.08	1,071.87	0.00	0.00	0.00
4,200.00	24.34	235.85	3,978.61	-624.79	-921.19	1,113.08	0.00	0.00	0.00
4,300.00	24.34	235.85	4,069.72	-647.92	-955.30	1,154.29	0.00	0.00	0.00
4,400.00	24.34	235.85	4,160.83	-671.05	-989.40	1,195.51	0.00	0.00	0.00
4,500.00	24.34	235.85	4,251.95	-694.19	-1,023.51	1,236.72	0.00	0.00	0.00
SUSSEX									
4,559.33	24.34	235.85	4,306.00	-707.91	-1,043.75	1,261.17	0.00	0.00	0.00
4,600.00	24.34	235.85	4,343.06	-717.32	-1,057.62	1,277.93	0.00	0.00	0.00
4,700.00	24.34	235.85	4,434.17	-740.45	-1,091.73	1,319.14	0.00	0.00	0.00
4,800.00	24.34	235.85	4,525.28	-763.59	-1,125.83	1,360.35	0.00	0.00	0.00
4,900.00	24.34	235.85	4,616.40	-786.72	-1,159.94	1,401.57	0.00	0.00	0.00
5,000.00	24.34	235.85	4,707.51	-809.85	-1,194.05	1,442.78	0.00	0.00	0.00
5,100.00	24.34	235.85	4,798.62	-832.98	-1,228.15	1,483.99	0.00	0.00	0.00
5,200.00	24.34	235.85	4,889.74	-856.12	-1,262.26	1,525.20	0.00	0.00	0.00
5,300.00	24.34	235.85	4,980.85	-879.25	-1,296.37	1,566.41	0.00	0.00	0.00
5,400.00	24.34	235.85	5,071.96	-902.38	-1,330.48	1,607.63	0.00	0.00	0.00

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Company:	US ROCKIES REGION PLANNING	TVD Reference:	WELL @ 4794.00ft (Original Well Elev)
Project:	COLORADO NORTHERN ZONE - 83	MD Reference:	WELL @ 4794.00ft (Original Well Elev)
Site:	WELD_FRICO PAD	North Reference:	True
Well:	P_FRICO 33-11	Survey Calculation Method:	Minimum Curvature
Wellbore:	P_FRICO 33-11		
Design:	PLAN #1 2-10-10 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)
5,500.00	24.34	235.85	5,163.08	-925.52	-1,364.58	1,648.84	0.00	0.00	0.00
5,600.00	24.34	235.85	5,254.19	-948.65	-1,398.69	1,690.05	0.00	0.00	0.00
Start Drop -2.00									
5,671.53	24.34	235.85	5,319.36	-965.20	-1,423.09	1,719.53	0.00	0.00	0.00
5,700.00	23.77	235.85	5,345.36	-971.71	-1,432.69	1,731.13	2.00	-2.00	0.00
5,800.00	21.77	235.85	5,437.56	-993.43	-1,464.72	1,769.83	2.00	-2.00	0.00
5,900.00	19.77	235.85	5,531.06	-1,013.34	-1,494.06	1,805.29	2.00	-2.00	0.00
6,000.00	17.77	235.85	5,625.74	-1,031.39	-1,520.69	1,837.46	2.00	-2.00	0.00
6,100.00	15.77	235.85	5,721.48	-1,047.59	-1,544.57	1,866.31	2.00	-2.00	0.00
6,200.00	13.77	235.85	5,818.17	-1,061.90	-1,565.66	1,891.80	2.00	-2.00	0.00
6,300.00	11.77	235.85	5,915.69	-1,074.30	-1,583.95	1,913.90	2.00	-2.00	0.00
6,400.00	9.77	235.85	6,013.93	-1,084.79	-1,599.41	1,932.59	2.00	-2.00	0.00
6,500.00	7.77	235.85	6,112.75	-1,093.35	-1,612.03	1,947.83	2.00	-2.00	0.00
6,600.00	5.77	235.85	6,212.05	-1,099.96	-1,621.78	1,959.62	2.00	-2.00	0.00
6,700.00	3.77	235.85	6,311.70	-1,104.63	-1,628.66	1,967.93	2.00	-2.00	0.00
6,800.00	1.77	235.85	6,411.58	-1,107.34	-1,632.66	1,972.76	2.00	-2.00	0.00
Start 1180.00 hold at 6888.44 MD									
6,888.44	0.00	0.00	6,500.00	-1,108.10	-1,633.79	1,974.12	2.00	-2.00	140.38
6,900.00	0.00	0.00	6,511.56	-1,108.10	-1,633.79	1,974.12	0.00	0.00	0.00
7,000.00	0.00	0.00	6,611.56	-1,108.10	-1,633.79	1,974.12	0.00	0.00	0.00
7,100.00	0.00	0.00	6,711.56	-1,108.10	-1,633.79	1,974.12	0.00	0.00	0.00
NIO A									
7,188.44	0.00	0.00	6,800.00	-1,108.10	-1,633.79	1,974.12	0.00	0.00	0.00
7,200.00	0.00	0.00	6,811.56	-1,108.10	-1,633.79	1,974.12	0.00	0.00	0.00
7,300.00	0.00	0.00	6,911.56	-1,108.10	-1,633.79	1,974.12	0.00	0.00	0.00
7,400.00	0.00	0.00	7,011.56	-1,108.10	-1,633.79	1,974.12	0.00	0.00	0.00
CODELL									
7,468.44	0.00	0.00	7,080.00	-1,108.10	-1,633.79	1,974.12	0.00	0.00	0.00
7,500.00	0.00	0.00	7,111.56	-1,108.10	-1,633.79	1,974.12	0.00	0.00	0.00
GRNHRN									
7,548.44	0.00	0.00	7,160.00	-1,108.10	-1,633.79	1,974.12	0.00	0.00	0.00
7,600.00	0.00	0.00	7,211.56	-1,108.10	-1,633.79	1,974.12	0.00	0.00	0.00
7,700.00	0.00	0.00	7,311.56	-1,108.10	-1,633.79	1,974.12	0.00	0.00	0.00
7,800.00	0.00	0.00	7,411.56	-1,108.10	-1,633.79	1,974.12	0.00	0.00	0.00
7,900.00	0.00	0.00	7,511.56	-1,108.10	-1,633.79	1,974.12	0.00	0.00	0.00
JSAND TOP									
7,918.44	0.00	0.00	7,530.00	-1,108.10	-1,633.79	1,974.12	0.00	0.00	0.00
8,000.00	0.00	0.00	7,611.56	-1,108.10	-1,633.79	1,974.12	0.00	0.00	0.00
PBHL_FRICO 33-11(1200 FSL 75 FWL)50 TGT RAD									
8,068.44	0.00	0.00	7,680.00	-1,108.10	-1,633.79	1,974.12	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_FRICO 33-11(0.00	0.00	7,680.00	-1,108.10	-1,633.79	1,329,945.46	3,240,152.70	40° 14' 9.244 N	104° 38' 23.255 W
- plan hits target center									
- Circle (radius 50.00)									

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Company:	US ROCKIES REGION PLANNING	TVD Reference:	WELL @ 4794.00ft (Original Well Elev)
Project:	COLORADO NORTHERN ZONE - 83	MD Reference:	WELL @ 4794.00ft (Original Well Elev)
Site:	WELD_FRICO PAD	North Reference:	True
Well:	P_FRICO 33-11	Survey Calculation Method:	Minimum Curvature
Wellbore:	P_FRICO 33-11		
Design:	PLAN #1 2-10-10 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 (°)	
3,982.02	3,780.00	PARKMAN				
4,559.33	4,306.00	SUSSEX				
7,188.44	6,800.00	NIO A				
7,468.44	7,080.00	CODELL				
7,548.44	7,160.00	GRNHRN				
7,918.44	7,530.00	JSAND TOP				

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	
2,116.91	2,080.64	-142.91	-210.70	Start 3554.63 hold at 2116.91 MD	
5,671.53	5,319.36	-965.20	-1,423.09	Start Drop -2.00	
6,888.44	6,500.00	-1,108.10	-1,633.79	Start 1180.00 hold at 6888.44 MD	
8,068.44	7,680.00	-1,108.10	-1,633.79	TD at 8068.44	



US ROCKIES REGION PLANNING

**COLORADO NORTHERN ZONE - 83
WELD_FRICO PAD
P_FRICO 33-11**

**P_FRICO 33-11
PLAN #1 2-10-10 RHS**

Anticollision Report

10 February, 2010



Company:	US ROCKIES REGION PLANNING	Local Co-ordinate Reference:	Well P_FRICO 33-11
Project:	COLORADO NORTHERN ZONE - 83	TVD Reference:	WELL @ 4794.00ft (Original Well Elev)
Reference Site:	WELD_FRICO PAD	MD Reference:	WELL @ 4794.00ft (Original Well Elev)
Site Error:	0.00ft	North Reference:	True
Reference Well:	P_FRICO 33-11	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00ft	Output errors are at	2.00 sigma
Reference Wellbore	P_FRICO 33-11	Database:	EDM 2003.21 Single User Db
Reference Design:	PLAN #1 2-10-10 RHS	Offset TVD Reference:	Offset Datum

Reference	PLAN #1 2-10-10 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 2/10/2010				
From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description	
0.00	8,068.44	PLAN #1 2-10-10 RHS (P_FRICO 33-11)	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_FRICO PAD						
FRICO #12-11 EXISTING - FRICO #12-11 EXISTING - F	900.00	886.00	54.23	18.89	1.535	CC
FRICO #12-11 EXISTING - FRICO #12-11 EXISTING - F	1,000.00	985.98	55.91	16.39	1.415	Level 3, ES
FRICO #12-11 EXISTING - FRICO #12-11 EXISTING - F	1,100.00	1,085.84	60.97	17.35	1.398	Level 3, SF
P_FRICO 38-10 - P_FRICO 38-10 - PLAN #1 2-10-10 R	300.00	300.00	16.08	14.99	14.751	CC, ES
P_FRICO 38-10 - P_FRICO 38-10 - PLAN #1 2-10-10 R	500.00	498.77	22.11	20.17	11.374	SF
P_FRICO 9-10A - P_FRICO 9-10A - PLAN #1 2-10-10 R	399.21	399.23	8.27	6.74	5.429	CC
P_FRICO 9-10A - P_FRICO 9-10A - PLAN #1 2-10-10 R	400.00	400.02	8.27	6.74	5.416	ES
P_FRICO 9-10A - P_FRICO 9-10A - PLAN #1 2-10-10 R	500.00	499.80	9.80	7.84	5.004	SF

Offset Design										WELD_FRICO PAD - FRICO #12-11 EXISTING - FRICO #12-11 EXISTING - FRICO #12 EXISTING			Offset Site Error:		0.00 ft
Survey Program: 0-UNKNOWN												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	40.05	41.51	34.90	56.01						
100.00	100.00	86.00	86.00	0.10	1.72	40.05	41.51	34.90	54.23	52.41	1.82	29.869			
200.00	200.00	186.00	186.00	0.32	5.44	40.05	41.51	34.90	54.23	48.47	5.76	9.414			
300.00	300.00	286.00	286.00	0.55	9.44	40.05	41.51	34.90	54.23	44.24	9.99	5.431			
400.00	400.00	386.00	386.00	0.77	13.44	40.05	41.51	34.90	54.23	40.02	14.21	3.816			
500.00	500.00	486.00	486.00	0.99	17.44	40.05	41.51	34.90	54.23	35.79	18.43	2.942			
600.00	600.00	586.00	586.00	1.22	21.44	40.05	41.51	34.90	54.23	31.57	22.66	2.393			
700.00	700.00	686.00	686.00	1.44	25.44	40.05	41.51	34.90	54.23	27.34	26.88	2.017			
800.00	800.00	786.00	786.00	1.67	29.44	40.05	41.51	34.90	54.23	23.12	31.11	1.743			
900.00	900.00	886.00	886.00	1.89	33.44	40.05	41.51	34.90	54.23	18.89	35.33	1.535 CC			
1,000.00	999.98	985.98	985.98	2.10	37.44	164.68	41.51	34.90	55.91	16.39	39.52	1.415 Level 3, ES			
1,100.00	1,099.84	1,085.84	1,085.84	2.29	41.43	165.95	41.51	34.90	60.97	17.35	43.63	1.398 Level 3, SF			
1,200.00	1,199.45	1,185.45	1,185.45	2.50	45.42	167.66	41.51	34.90	69.46	21.80	47.66	1.457 Level 3			
1,300.00	1,298.70	1,284.70	1,284.70	2.73	49.39	169.45	41.51	34.90	81.41	29.80	51.61	1.577			
1,400.00	1,397.47	1,383.47	1,383.47	3.00	53.34	171.10	41.51	34.90	96.83	41.40	55.44	1.747			
1,500.00	1,495.62	1,481.62	1,481.62	3.32	57.26	172.51	41.51	34.90	115.73	56.59	59.14	1.957			
1,600.00	1,593.06	1,579.06	1,579.06	3.68	61.16	173.67	41.51	34.90	138.07	75.38	62.69	2.202			
1,700.00	1,689.64	1,675.64	1,675.64	4.11	65.03	174.62	41.51	34.90	163.82	97.74	66.08	2.479			
1,800.00	1,785.27	1,771.27	1,771.27	4.61	68.85	175.39	41.51	34.90	192.96	123.67	69.29	2.785			
1,900.00	1,879.82	1,865.82	1,865.82	5.17	72.63	176.00	41.51	34.90	225.43	153.12	72.31	3.118			

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_FRICO 33-11
Project:	COLORADO NORTHERN ZONE - 83	TVD Reference:	WELL @ 4794.00ft (Original Well Elev)
Reference Site:	WELD_FRICO PAD	MD Reference:	WELL @ 4794.00ft (Original Well Elev)
Site Error:	0.00ft	North Reference:	True
Reference Well:	P_FRICO 33-11	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00ft	Output errors are at	2.00 sigma
Reference Wellbore	P_FRICO 33-11	Database:	EDM 2003.21 Single User Db
Reference Design:	PLAN #1 2-10-10 RHS	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.00 ft
Survey Program: 0-UNKNOWN												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
2,000.00	1,973.17	1,959.17	1,959.17	5.81	76.37	176.51	41.51	34.90	261.20	186.08	75.12	3.477	
2,100.00	2,065.21	2,051.21	2,051.21	6.52	80.05	176.91	41.51	34.90	300.22	222.50	77.72	3.863	
2,116.91	2,080.64	2,066.64	2,066.64	6.65	80.67	176.98	41.51	34.90	307.13	228.99	78.14	3.931	
2,200.00	2,156.35	2,142.35	2,142.35	7.28	83.69	177.28	41.51	34.90	341.34	260.19	81.15	4.206	
2,300.00	2,247.46	2,233.46	2,233.46	8.07	87.34	177.57	41.51	34.90	382.52	297.74	84.78	4.512	
2,400.00	2,338.57	2,324.57	2,324.57	8.87	90.98	177.81	41.51	34.90	423.70	335.28	88.42	4.792	
2,500.00	2,429.69	2,415.69	2,415.69	9.67	94.63	178.00	41.51	34.90	464.89	372.82	92.07	5.049	
2,600.00	2,520.80	2,506.80	2,506.80	10.49	98.27	178.17	41.51	34.90	506.08	410.36	95.72	5.287	
2,700.00	2,611.91	2,597.91	2,597.91	11.31	101.92	178.30	41.51	34.90	547.28	447.90	99.38	5.507	
2,800.00	2,703.03	2,689.03	2,689.03	12.14	105.56	178.42	41.51	34.90	588.48	485.44	103.04	5.711	
2,900.00	2,794.14	2,780.14	2,780.14	12.97	109.21	178.53	41.51	34.90	629.68	522.98	106.70	5.901	
3,000.00	2,885.25	2,871.25	2,871.25	13.80	112.85	178.62	41.51	34.90	670.88	560.51	110.36	6.079	
3,100.00	2,976.36	2,962.36	2,962.36	14.64	116.49	178.70	41.51	34.90	712.08	598.05	114.03	6.245	
3,200.00	3,067.48	3,053.48	3,053.48	15.48	120.14	178.77	41.51	34.90	753.29	635.58	117.70	6.400	
3,300.00	3,158.59	3,144.59	3,144.59	16.32	123.78	178.83	41.51	34.90	794.49	673.12	121.37	6.546	
3,400.00	3,249.70	3,235.70	3,235.70	17.16	127.43	178.89	41.51	34.90	835.69	710.65	125.05	6.683	
3,500.00	3,340.82	3,326.82	3,326.82	18.01	131.07	178.94	41.51	34.90	876.90	748.18	128.72	6.812	
3,600.00	3,431.93	3,417.93	3,417.93	18.85	134.72	178.99	41.51	34.90	918.11	785.71	132.40	6.935	
3,700.00	3,523.04	3,509.04	3,509.04	19.70	138.36	179.03	41.51	34.90	959.31	823.24	136.07	7.050	
3,800.00	3,614.16	3,600.16	3,600.16	20.54	142.01	179.07	41.51	34.90	1,000.52	860.77	139.75	7.159	
3,900.00	3,705.27	3,691.27	3,691.27	21.39	145.65	179.11	41.51	34.90	1,041.73	898.30	143.43	7.263	
4,000.00	3,796.38	3,782.38	3,782.38	22.24	149.30	179.14	41.51	34.90	1,082.94	935.83	147.11	7.362	
4,100.00	3,887.49	3,873.49	3,873.49	23.09	152.94	179.17	41.51	34.90	1,124.15	973.36	150.79	7.455	
4,200.00	3,978.61	3,964.61	3,964.61	23.94	156.58	179.20	41.51	34.90	1,165.35	1,010.89	154.47	7.544	
4,300.00	4,069.72	4,055.72	4,055.72	24.79	160.23	179.23	41.51	34.90	1,206.56	1,048.41	158.15	7.629	
4,400.00	4,160.83	4,146.83	4,146.83	25.64	163.87	179.26	41.51	34.90	1,247.77	1,085.94	161.83	7.710	
4,500.00	4,251.95	4,237.95	4,237.95	26.49	167.52	179.28	41.51	34.90	1,288.98	1,123.47	165.51	7.788	
4,600.00	4,343.06	4,329.06	4,329.06	27.35	171.16	179.30	41.51	34.90	1,330.19	1,161.00	169.19	7.862	
4,700.00	4,434.17	4,420.17	4,420.17	28.20	174.81	179.32	41.51	34.90	1,371.40	1,198.52	172.88	7.933	
4,800.00	4,525.28	4,511.28	4,511.28	29.05	178.45	179.34	41.51	34.90	1,412.61	1,236.05	176.56	8.001	
4,900.00	4,616.40	4,602.40	4,602.40	29.90	182.10	179.36	41.51	34.90	1,453.82	1,273.58	180.24	8.066	
5,000.00	4,707.51	4,693.51	4,693.51	30.76	185.74	179.38	41.51	34.90	1,495.03	1,311.10	183.93	8.128	
5,100.00	4,798.62	4,784.62	4,784.62	31.61	189.38	179.40	41.51	34.90	1,536.24	1,348.63	187.61	8.188	
5,200.00	4,889.74	4,875.74	4,875.74	32.46	193.03	179.41	41.51	34.90	1,577.45	1,386.16	191.29	8.246	
5,300.00	4,980.85	4,966.85	4,966.85	33.32	196.67	179.43	41.51	34.90	1,618.66	1,423.68	194.98	8.302	
5,400.00	5,071.96	5,057.96	5,057.96	34.17	200.32	179.44	41.51	34.90	1,659.87	1,461.21	198.66	8.355	
5,500.00	5,163.08	5,149.08	5,149.08	35.03	203.96	179.45	41.51	34.90	1,701.08	1,498.73	202.35	8.407	
5,600.00	5,254.19	5,240.19	5,240.19	35.88	207.61	179.47	41.51	34.90	1,742.29	1,536.26	206.03	8.456	
5,671.53	5,319.36	5,305.36	5,305.36	36.49	210.21	179.48	41.51	34.90	1,771.77	1,563.10	208.67	8.491	
5,700.00	5,345.36	5,331.36	5,331.36	36.70	211.25	179.48	41.51	34.90	1,783.37	1,572.83	210.54	8.470	
5,800.00	5,437.56	5,423.56	5,423.56	37.31	214.94	179.50	41.51	34.90	1,822.07	1,604.98	217.10	8.393	
5,900.00	5,531.06	5,517.06	5,517.06	37.88	218.68	179.52	41.51	34.90	1,857.53	1,633.95	223.58	8.308	
6,000.00	5,625.74	5,611.74	5,611.74	38.40	222.47	179.53	41.51	34.90	1,889.70	1,659.79	229.91	8.219	
6,100.00	5,721.48	5,707.48	5,707.48	38.87	226.30	179.54	41.51	34.90	1,918.55	1,682.48	236.07	8.127	
6,200.00	5,818.17	5,804.17	5,804.17	39.29	230.17	179.55	41.51	34.90	1,944.04	1,702.00	242.04	8.032	
6,300.00	5,915.69	5,901.69	5,901.69	39.66	234.07	179.56	41.51	34.90	1,966.14	1,718.35	247.78	7.935	
6,400.00	6,013.93	5,999.93	5,999.93	39.99	238.00	179.57	41.51	34.90	1,984.82	1,731.52	253.30	7.836	
6,500.00	6,112.75	6,098.75	6,098.75	40.26	241.95	179.57	41.51	34.90	2,000.07	1,741.51	258.56	7.735	
6,600.00	6,212.05	6,198.05	6,198.05	40.48	245.92	179.58	41.51	34.90	2,011.85	1,748.31	263.54	7.634	
6,700.00	6,311.70	6,297.70	6,297.70	40.65	249.91	179.58	41.51	34.90	2,020.16	1,751.93	268.23	7.531	
6,800.00	6,411.58	6,397.58	6,397.58	40.78	253.90	179.58	41.51	34.90	2,024.99	1,752.39	272.60	7.428	
6,888.44	6,500.00	6,486.00	6,486.00	40.86	257.44	55.44	41.51	34.90	2,026.36	1,750.16	276.20	7.337	

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_FRICO 33-11
Project:	COLORADO NORTHERN ZONE - 83	TVD Reference:	WELL @ 4794.00ft (Original Well Elev)
Reference Site:	WELD_FRICO PAD	MD Reference:	WELL @ 4794.00ft (Original Well Elev)
Site Error:	0.00ft	North Reference:	True
Reference Well:	P_FRICO 33-11	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00ft	Output errors are at	2.00 sigma
Reference Wellbore	P_FRICO 33-11	Database:	EDM 2003.21 Single User Db
Reference Design:	PLAN #1 2-10-10 RHS	Offset TVD Reference:	Offset Datum

Offset Design WELD_FRICO PAD - FRICO #12-11 EXISTING - FRICO #12-11 EXISTING - FRICO #12 EXISTING												Offset Site Error:	0.00 ft
Survey Program: 0-UNKNOWN												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
6,900.00	6,511.56	6,497.56	6,497.56	40.86	257.90	55.44	41.51	34.90	2,026.36	1,749.68	276.68	7.324	
7,000.00	6,611.56	6,597.56	6,597.56	40.93	261.90	55.44	41.51	34.90	2,026.36	1,745.54	280.82	7.216	
7,100.00	6,711.56	6,697.56	6,697.56	41.00	265.90	55.44	41.51	34.90	2,026.36	1,741.40	284.96	7.111	
7,200.00	6,811.56	6,797.56	6,797.56	41.07	269.90	55.44	41.51	34.90	2,026.36	1,737.26	289.10	7.009	
7,300.00	6,911.56	6,897.56	6,897.56	41.15	273.90	55.44	41.51	34.90	2,026.36	1,733.11	293.25	6.910	
7,400.00	7,011.56	6,997.56	6,997.56	41.22	277.90	55.44	41.51	34.90	2,026.36	1,728.96	297.39	6.814	
7,500.00	7,111.56	7,097.56	7,097.56	41.30	281.90	55.44	41.51	34.90	2,026.36	1,724.82	301.54	6.720	
7,600.00	7,211.56	7,197.56	7,197.56	41.37	285.90	55.44	41.51	34.90	2,026.36	1,720.67	305.69	6.629	
7,700.00	7,311.56	7,297.56	7,297.56	41.45	289.90	55.44	41.51	34.90	2,026.36	1,716.52	309.84	6.540	
7,800.00	7,411.56	7,397.56	7,397.56	41.53	293.90	55.44	41.51	34.90	2,026.36	1,712.36	314.00	6.453	
7,900.00	7,511.56	7,497.56	7,497.56	41.61	297.90	55.44	41.51	34.90	2,026.36	1,708.21	318.15	6.369	
8,000.00	7,611.56	7,597.56	7,597.56	41.69	301.90	55.44	41.51	34.90	2,026.36	1,704.05	322.30	6.287	
8,068.44	7,680.00	7,666.00	7,666.00	41.74	304.64	55.44	41.51	34.90	2,026.36	1,701.21	325.15	6.232	

Company:	US ROCKIES REGION PLANNING	Local Co-ordinate Reference:	Well P_FRICO 33-11
Project:	COLORADO NORTHERN ZONE - 83	TVD Reference:	WELL @ 4794.00ft (Original Well Elev)
Reference Site:	WELD_FRICO PAD	MD Reference:	WELL @ 4794.00ft (Original Well Elev)
Site Error:	0.00ft	North Reference:	True
Reference Well:	P_FRICO 33-11	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00ft	Output errors are at	2.00 sigma
Reference Wellbore	P_FRICO 33-11	Database:	EDM 2003.21 Single User Db
Reference Design:	PLAN #1 2-10-10 RHS	Offset TVD Reference:	Offset Datum

Offset Design WELD_FRICO PAD - P_FRICO 38-10 - P_FRICO 38-10 - PLAN #1 2-10-10 RHS												Offset Site Error:	0.00 ft
Survey Program: 0-MWMD												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	-176.02	-16.04	-1.12	16.08				
100.00	100.00	100.00	100.00	0.10	0.10	-176.02	-16.04	-1.12	16.08	15.89	0.19	84.165	
200.00	200.00	200.00	200.00	0.32	0.32	-176.02	-16.04	-1.12	16.08	15.44	0.64	25.102	
300.00	300.00	300.00	300.00	0.55	0.55	-176.02	-16.04	-1.12	16.08	14.99	1.09	14.751 CC, ES	
400.00	400.00	399.50	399.48	0.77	0.75	-172.75	-17.38	-2.21	17.53	16.01	1.52	11.556	
500.00	500.00	498.77	498.61	0.99	0.95	-165.61	-21.37	-5.49	22.11	20.17	1.94	11.374 SF	
600.00	600.00	597.56	597.02	1.22	1.18	-158.71	-27.98	-10.90	30.18	27.78	2.40	12.568	
700.00	700.00	695.64	694.39	1.44	1.45	-153.64	-37.14	-18.40	41.83	38.94	2.89	14.466	
800.00	800.00	792.80	790.38	1.67	1.76	-150.20	-48.75	-27.91	56.99	53.57	3.42	16.680	
900.00	900.00	888.83	884.69	1.89	2.12	-147.89	-62.68	-39.34	75.57	71.59	3.98	18.990	
1,000.00	999.98	983.90	977.42	2.10	2.53	-22.39	-78.88	-52.61	95.90	91.75	4.14	23.143	
1,100.00	1,099.84	1,078.32	1,068.78	2.29	2.99	-21.94	-97.32	-67.71	116.30	111.72	4.58	25.415	
1,200.00	1,199.45	1,172.08	1,158.68	2.50	3.50	-21.99	-117.92	-84.60	136.73	131.71	5.03	27.205	
1,300.00	1,298.70	1,265.21	1,247.05	2.73	4.06	-22.33	-140.63	-103.20	157.19	151.69	5.50	28.602	
1,400.00	1,397.47	1,357.70	1,333.84	3.00	4.67	-22.86	-165.36	-123.47	177.65	171.66	5.99	29.664	
1,500.00	1,495.62	1,449.57	1,418.97	3.32	5.34	-23.51	-192.07	-145.35	198.12	191.61	6.51	30.433	
1,600.00	1,593.06	1,540.82	1,502.39	3.68	6.05	-24.25	-220.67	-168.78	218.61	211.54	7.07	30.939	
1,700.00	1,689.64	1,631.47	1,584.05	4.11	6.81	-25.05	-251.10	-193.71	239.11	231.45	7.66	31.205	
1,800.00	1,785.27	1,721.51	1,663.89	4.61	7.62	-25.88	-283.29	-220.09	259.64	251.33	8.31	31.249	
1,900.00	1,879.82	1,810.98	1,741.89	5.17	8.47	-26.74	-317.18	-247.86	280.20	271.19	9.01	31.093	
2,000.00	1,973.17	1,900.00	1,818.11	5.81	9.36	-27.62	-352.76	-277.01	300.79	291.01	9.78	30.754	
2,100.00	2,065.21	1,996.55	1,899.80	6.52	10.37	-28.66	-392.56	-309.63	320.31	309.64	10.67	30.019	
2,116.91	2,080.64	2,013.13	1,913.83	6.65	10.55	-28.86	-399.40	-315.23	323.33	312.50	10.83	29.850	
2,200.00	2,156.35	2,094.69	1,982.82	7.28	11.40	-29.93	-433.04	-342.80	338.04	326.35	11.68	28.933	
2,300.00	2,247.46	2,192.84	2,065.85	8.07	12.44	-31.10	-473.52	-375.96	355.87	343.12	12.75	27.905	
2,400.00	2,338.57	2,290.98	2,148.88	8.87	13.48	-32.16	-514.00	-409.13	373.84	359.98	13.86	26.966	
2,500.00	2,429.69	2,389.13	2,231.91	9.67	14.52	-33.12	-554.48	-442.30	391.92	376.91	15.01	26.111	
2,600.00	2,520.80	2,487.28	2,314.94	10.49	15.57	-34.00	-594.96	-475.47	410.10	393.91	16.19	25.337	
2,700.00	2,611.91	2,585.42	2,397.97	11.31	16.61	-34.81	-635.45	-508.64	428.37	410.98	17.39	24.635	
2,800.00	2,703.03	2,683.57	2,481.00	12.14	17.66	-35.55	-675.93	-541.81	446.71	428.09	18.61	24.000	
2,900.00	2,794.14	2,781.72	2,564.03	12.97	18.71	-36.23	-716.41	-574.98	465.11	445.25	19.86	23.423	
3,000.00	2,885.25	2,879.87	2,647.06	13.80	19.76	-36.85	-756.89	-608.14	483.58	462.46	21.12	22.899	
3,100.00	2,976.36	2,978.01	2,730.09	14.64	20.81	-37.44	-797.37	-641.31	502.09	479.70	22.39	22.421	
3,200.00	3,067.48	3,076.16	2,813.12	15.48	21.86	-37.98	-837.85	-674.48	520.66	496.97	23.68	21.985	
3,300.00	3,158.59	3,174.31	2,896.15	16.32	22.91	-38.48	-878.33	-707.65	539.26	514.28	24.98	21.586	
3,400.00	3,249.70	3,272.45	2,979.18	17.16	23.96	-38.95	-918.81	-740.82	557.91	531.61	26.29	21.219	
3,500.00	3,340.82	3,370.60	3,062.21	18.01	25.02	-39.39	-959.29	-773.99	576.58	548.97	27.61	20.882	
3,600.00	3,431.93	3,468.75	3,145.24	18.85	26.07	-39.80	-999.77	-807.16	595.29	566.35	28.94	20.571	
3,700.00	3,523.04	3,566.90	3,228.27	19.70	27.12	-40.19	-1,040.25	-840.33	614.03	583.75	30.27	20.283	
3,800.00	3,614.16	3,665.04	3,311.30	20.54	28.18	-40.56	-1,080.73	-873.49	632.79	601.17	31.61	20.016	
3,900.00	3,705.27	3,763.19	3,394.33	21.39	29.23	-40.90	-1,121.21	-906.66	651.57	618.61	32.96	19.769	
4,000.00	3,796.38	3,861.34	3,477.36	22.24	30.29	-41.22	-1,161.69	-939.83	670.38	636.07	34.31	19.538	
4,100.00	3,887.49	3,959.48	3,560.39	23.09	31.34	-41.53	-1,202.18	-973.00	689.20	653.54	35.67	19.323	
4,200.00	3,978.61	4,057.63	3,643.42	23.94	32.40	-41.82	-1,242.66	-1,006.17	708.05	671.02	37.03	19.122	
4,300.00	4,069.72	4,155.78	3,726.45	24.79	33.45	-42.09	-1,283.14	-1,039.34	726.91	688.51	38.39	18.933	
4,400.00	4,160.83	4,253.92	3,809.48	25.64	34.51	-42.36	-1,323.62	-1,072.51	745.78	706.02	39.76	18.757	
4,500.00	4,251.95	4,352.07	3,892.51	26.49	35.56	-42.60	-1,364.10	-1,105.68	764.67	723.54	41.13	18.591	
4,600.00	4,343.06	4,450.22	3,975.54	27.35	36.62	-42.84	-1,404.58	-1,138.84	783.58	741.07	42.51	18.434	
4,700.00	4,434.17	4,548.37	4,058.57	28.20	37.67	-43.07	-1,445.06	-1,172.01	802.49	758.61	43.88	18.287	
4,800.00	4,525.28	4,646.51	4,141.60	29.05	38.73	-43.28	-1,485.54	-1,205.18	821.42	776.15	45.26	18.148	
4,900.00	4,616.40	4,744.66	4,224.63	29.90	39.79	-43.49	-1,526.02	-1,238.35	840.36	793.71	46.65	18.016	
5,000.00	4,707.51	4,842.81	4,307.66	30.76	40.84	-43.68	-1,566.50	-1,271.52	859.30	811.27	48.03	17.891	

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_FRICO 33-11
Project:	COLORADO NORTHERN ZONE - 83	TVD Reference:	WELL @ 4794.00ft (Original Well Elev)
Reference Site:	WELD_FRICO PAD	MD Reference:	WELL @ 4794.00ft (Original Well Elev)
Site Error:	0.00ft	North Reference:	True
Reference Well:	P_FRICO 33-11	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00ft	Output errors are at	2.00 sigma
Reference Wellbore	P_FRICO 33-11	Database:	EDM 2003.21 Single User Db
Reference Design:	PLAN #1 2-10-10 RHS	Offset TVD Reference:	Offset Datum

Offset Design WELD_FRICO PAD - P_FRICO 38-10 - P_FRICO 38-10 - PLAN #1 2-10-10 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	4,798.62	4,940.95	4,390.69	31.61	41.90	-43.87	-1,606.98	-1,304.69	878.26	828.84	49.42	17.773	
5,200.00	4,889.74	5,039.10	4,473.72	32.46	42.95	-44.05	-1,647.46	-1,337.86	897.22	846.42	50.80	17.661	
5,300.00	4,980.85	5,137.25	4,556.75	33.32	44.01	-44.22	-1,687.94	-1,371.03	916.20	864.00	52.19	17.554	
5,400.00	5,071.96	5,235.39	4,639.78	34.17	45.07	-44.39	-1,728.42	-1,404.19	935.18	881.59	53.58	17.452	
5,500.00	5,163.08	5,333.54	4,722.81	35.03	46.12	-44.55	-1,768.91	-1,437.36	954.17	899.19	54.98	17.356	
5,600.00	5,254.19	5,431.69	4,805.84	35.88	47.18	-44.70	-1,809.39	-1,470.53	973.16	916.79	56.37	17.263	
5,671.53	5,319.36	5,501.89	4,865.23	36.49	47.94	-44.80	-1,838.34	-1,494.26	986.75	929.38	57.37	17.200	
5,700.00	5,345.36	5,529.82	4,888.86	36.70	48.24	-44.92	-1,849.86	-1,503.70	992.26	934.49	57.77	17.176	
5,800.00	5,437.56	5,627.60	4,971.58	37.31	49.29	-45.25	-1,890.19	-1,536.74	1,013.16	954.14	59.02	17.165	
5,900.00	5,531.06	5,768.43	5,092.49	37.88	50.48	-45.50	-1,946.02	-1,582.49	1,034.44	974.14	60.30	17.154	
6,000.00	5,625.74	5,911.54	5,218.84	38.40	51.50	-45.71	-1,997.98	-1,625.06	1,053.92	992.47	61.44	17.152	
6,100.00	5,721.48	6,056.37	5,349.96	38.87	52.45	-45.91	-2,045.52	-1,664.02	1,071.53	1,009.05	62.48	17.151	
6,200.00	5,818.17	6,202.80	5,485.52	39.29	53.32	-46.08	-2,088.32	-1,699.08	1,087.20	1,023.80	63.40	17.148	
6,300.00	5,915.69	6,350.66	5,625.09	39.66	54.09	-46.22	-2,126.04	-1,729.99	1,100.88	1,036.69	64.20	17.148	
6,400.00	6,013.93	6,499.79	5,768.21	39.99	54.76	-46.34	-2,158.40	-1,756.50	1,112.52	1,047.64	64.88	17.148	
6,500.00	6,112.75	6,650.00	5,914.38	40.26	55.32	-46.44	-2,185.12	-1,778.40	1,122.05	1,056.63	65.43	17.150	
6,600.00	6,212.05	6,801.08	6,063.02	40.48	55.78	-46.52	-2,205.98	-1,795.49	1,129.46	1,063.61	65.85	17.152	
6,700.00	6,311.70	6,952.83	6,213.53	40.65	56.11	-46.57	-2,220.81	-1,807.64	1,134.69	1,068.56	66.14	17.157	
6,800.00	6,411.58	7,105.01	6,365.28	40.78	56.33	-46.60	-2,229.46	-1,814.73	1,137.74	1,071.44	66.30	17.161	
6,888.44	6,500.00	7,239.78	6,500.00	40.86	56.44	-170.75	-2,231.91	-1,816.74	1,138.60	1,072.27	66.33	17.165	
6,900.00	6,511.56	7,251.34	6,511.56	40.86	56.44	-170.75	-2,231.91	-1,816.74	1,138.60	1,072.25	66.35	17.160	
7,000.00	6,611.56	7,351.34	6,611.56	40.93	56.49	-170.75	-2,231.91	-1,816.74	1,138.60	1,072.09	66.52	17.117	
7,100.00	6,711.56	7,451.34	6,711.56	41.00	56.54	-170.75	-2,231.91	-1,816.74	1,138.60	1,071.92	66.69	17.074	
7,200.00	6,811.56	7,551.34	6,811.56	41.07	56.59	-170.75	-2,231.91	-1,816.74	1,138.60	1,071.75	66.86	17.031	
7,300.00	6,911.56	7,651.34	6,911.56	41.15	56.64	-170.75	-2,231.91	-1,816.74	1,138.60	1,071.57	67.03	16.987	
7,400.00	7,011.56	7,751.34	7,011.56	41.22	56.68	-170.75	-2,231.91	-1,816.74	1,138.60	1,071.40	67.20	16.942	
7,500.00	7,111.56	7,851.34	7,111.56	41.30	56.73	-170.75	-2,231.91	-1,816.74	1,138.60	1,071.22	67.38	16.898	
7,600.00	7,211.56	7,951.34	7,211.56	41.37	56.79	-170.75	-2,231.91	-1,816.74	1,138.60	1,071.04	67.56	16.852	
7,700.00	7,311.56	8,051.34	7,311.56	41.45	56.84	-170.75	-2,231.91	-1,816.74	1,138.60	1,070.86	67.75	16.807	
7,800.00	7,411.56	8,151.34	7,411.56	41.53	56.89	-170.75	-2,231.91	-1,816.74	1,138.60	1,070.67	67.93	16.761	
7,900.00	7,511.56	8,251.34	7,511.56	41.61	56.94	-170.75	-2,231.91	-1,816.74	1,138.60	1,070.48	68.12	16.715	
8,000.00	7,611.56	8,351.34	7,611.56	41.69	57.00	-170.75	-2,231.91	-1,816.74	1,138.60	1,070.29	68.31	16.668	
8,068.44	7,680.00	8,419.78	7,680.00	41.74	57.03	-170.75	-2,231.91	-1,816.74	1,138.60	1,070.16	68.44	16.636	

Company:	US ROCKIES REGION PLANNING	Local Co-ordinate Reference:	Well P_FRICO 33-11
Project:	COLORADO NORTHERN ZONE - 83	TVD Reference:	WELL @ 4794.00ft (Original Well Elev)
Reference Site:	WELD_FRICO PAD	MD Reference:	WELL @ 4794.00ft (Original Well Elev)
Site Error:	0.00ft	North Reference:	True
Reference Well:	P_FRICO 33-11	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00ft	Output errors are at	2.00 sigma
Reference Wellbore	P_FRICO 33-11	Database:	EDM 2003.21 Single User Db
Reference Design:	PLAN #1 2-10-10 RHS	Offset TVD Reference:	Offset Datum

Offset Design WELD_FRICO PAD - P_FRICO 9-10A - P_FRICO 9-10A - PLAN #1 2-10-10 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
0.00	0.00	0.00	0.00	0.00	0.00	7.60	8.37	1.12	8.44				
100.00	100.00	100.00	100.00	0.10	0.10	7.60	8.37	1.12	8.44	8.25	0.19	44.200	
200.00	200.00	200.00	200.00	0.32	0.32	7.60	8.37	1.12	8.44	7.80	0.64	13.182	
300.00	300.00	300.00	300.00	0.55	0.55	7.60	8.37	1.12	8.44	7.35	1.09	7.746	
399.21	399.21	399.23	399.21	0.77	0.76	-4.14	8.25	-0.60	8.27	6.74	1.52	5.429 CC	
400.00	400.00	400.02	400.00	0.77	0.76	-4.33	8.24	-0.62	8.27	6.74	1.53	5.416 ES	
500.00	500.00	499.80	499.63	0.99	0.97	-36.54	7.87	-5.83	9.80	7.84	1.96	5.004 SF	
600.00	600.00	599.09	598.55	1.22	1.22	-63.36	7.24	-14.44	16.22	13.81	2.41	6.739	
700.00	700.00	697.67	696.39	1.44	1.49	-76.40	6.38	-26.37	27.37	24.48	2.89	9.481	
800.00	800.00	795.31	792.84	1.67	1.81	-82.74	5.29	-41.48	42.43	39.02	3.40	12.470	
900.00	900.00	891.80	887.60	1.89	2.17	-86.19	3.97	-59.63	61.04	57.08	3.96	15.419	
1,000.00	999.98	987.27	980.70	2.10	2.58	36.35	2.45	-80.71	81.65	77.46	4.20	19.457	
1,100.00	1,099.84	1,081.99	1,072.32	2.29	3.05	36.23	0.71	-104.67	102.76	98.13	4.63	22.179	
1,200.00	1,199.45	1,175.93	1,162.34	2.50	3.57	36.84	-1.23	-131.41	124.33	119.24	5.09	24.412	
1,300.00	1,298.70	1,269.06	1,250.69	2.73	4.14	37.82	-3.35	-160.80	146.38	140.79	5.58	26.220	
1,400.00	1,397.47	1,361.39	1,337.27	3.00	4.77	39.00	-5.67	-192.76	168.94	162.83	6.11	27.641	
1,500.00	1,495.62	1,452.88	1,422.01	3.32	5.46	40.29	-8.16	-227.15	192.07	185.38	6.69	28.698	
1,600.00	1,593.06	1,543.63	1,504.94	3.68	6.18	41.64	-10.82	-263.91	215.79	208.46	7.34	29.415	
1,700.00	1,689.64	1,640.70	1,593.02	4.11	7.01	43.24	-13.77	-304.59	238.64	230.55	8.09	29.488	
1,800.00	1,785.27	1,738.11	1,681.42	4.61	7.85	45.08	-16.72	-345.41	259.30	250.34	8.96	28.941	
1,900.00	1,879.82	1,835.75	1,770.02	5.17	8.70	47.15	-19.68	-386.33	277.93	267.98	9.96	27.918	
2,000.00	1,973.17	1,933.50	1,858.73	5.81	9.55	49.46	-22.65	-427.29	294.73	283.63	11.10	26.556	
2,100.00	2,065.21	2,031.25	1,947.42	6.52	10.41	52.00	-25.62	-468.26	309.92	297.52	12.41	24.981	
2,116.91	2,080.64	2,047.76	1,962.41	6.65	10.56	52.45	-26.12	-475.18	312.35	299.71	12.64	24.702	
2,200.00	2,156.35	2,128.92	2,036.06	7.28	11.27	54.79	-28.58	-509.19	324.47	310.60	13.87	23.394	
2,300.00	2,247.46	2,226.60	2,124.69	8.07	12.13	57.39	-31.54	-550.12	339.72	324.32	15.41	22.047	
2,400.00	2,338.57	2,324.27	2,213.33	8.87	12.99	59.77	-34.51	-591.05	355.62	338.61	17.00	20.915	
2,500.00	2,429.69	2,421.95	2,301.97	9.67	13.86	61.94	-37.47	-631.99	372.06	353.42	18.64	19.963	
2,600.00	2,520.80	2,519.62	2,390.60	10.49	14.73	63.94	-40.44	-672.92	389.00	368.69	20.30	19.159	
2,700.00	2,611.91	2,617.30	2,479.24	11.31	15.59	65.76	-43.40	-713.85	406.36	384.36	21.99	18.477	
2,800.00	2,703.03	2,714.98	2,567.87	12.14	16.46	67.44	-46.36	-754.78	424.09	400.39	23.70	17.896	
2,900.00	2,794.14	2,812.65	2,656.51	12.97	17.33	68.98	-49.33	-795.72	442.15	416.73	25.41	17.398	
3,000.00	2,885.25	2,910.33	2,745.14	13.80	18.20	70.40	-52.29	-836.65	460.50	433.36	27.14	16.968	
3,100.00	2,976.36	3,008.00	2,833.78	14.64	19.07	71.72	-55.25	-877.58	479.10	450.23	28.87	16.595	
3,200.00	3,067.48	3,105.68	2,922.41	15.48	19.94	72.93	-58.22	-918.51	497.94	467.33	30.60	16.270	
3,300.00	3,158.59	3,203.35	3,011.05	16.32	20.81	74.06	-61.18	-959.45	516.97	484.64	32.34	15.986	
3,400.00	3,249.70	3,301.03	3,099.68	17.16	21.68	75.11	-64.15	-1,000.38	536.19	502.12	34.08	15.735	
3,500.00	3,340.82	3,398.70	3,188.32	18.01	22.55	76.08	-67.11	-1,041.31	555.57	519.76	35.81	15.513	
3,600.00	3,431.93	3,496.38	3,276.95	18.85	23.42	76.99	-70.07	-1,082.24	575.10	537.55	37.55	15.316	
3,700.00	3,523.04	3,594.05	3,365.59	19.70	24.30	77.85	-73.04	-1,123.18	594.76	555.47	39.28	15.140	
3,800.00	3,614.16	3,691.73	3,454.23	20.54	25.17	78.64	-76.00	-1,164.11	614.53	573.52	41.02	14.983	
3,900.00	3,705.27	3,789.41	3,542.86	21.39	26.04	79.39	-78.97	-1,205.04	634.42	591.67	42.75	14.841	
4,000.00	3,796.38	3,887.08	3,631.50	22.24	26.91	80.09	-81.93	-1,245.97	654.40	609.92	44.48	14.713	
4,100.00	3,887.49	3,984.76	3,720.13	23.09	27.79	80.75	-84.89	-1,286.91	674.47	628.27	46.20	14.598	
4,200.00	3,978.61	4,082.43	3,808.77	23.94	28.66	81.37	-87.86	-1,327.84	694.63	646.70	47.93	14.493	
4,300.00	4,069.72	4,180.11	3,897.40	24.79	29.53	81.96	-90.82	-1,368.77	714.85	665.20	49.65	14.397	
4,400.00	4,160.83	4,277.78	3,986.04	25.64	30.40	82.52	-93.78	-1,409.70	735.15	683.78	51.37	14.310	
4,500.00	4,251.95	4,375.46	4,074.67	26.49	31.28	83.04	-96.75	-1,450.64	755.51	702.42	53.09	14.230	
4,600.00	4,343.06	4,473.13	4,163.31	27.35	32.15	83.54	-99.71	-1,491.57	775.93	721.12	54.81	14.157	
4,700.00	4,434.17	4,570.81	4,251.94	28.20	33.02	84.01	-102.68	-1,532.50	796.40	739.87	56.52	14.090	
4,800.00	4,525.28	4,668.48	4,340.58	29.05	33.90	84.46	-105.64	-1,573.43	816.92	758.68	58.24	14.028	
4,900.00	4,616.40	4,766.16	4,429.22	29.90	34.77	84.89	-108.60	-1,614.37	837.49	777.54	59.95	13.971	

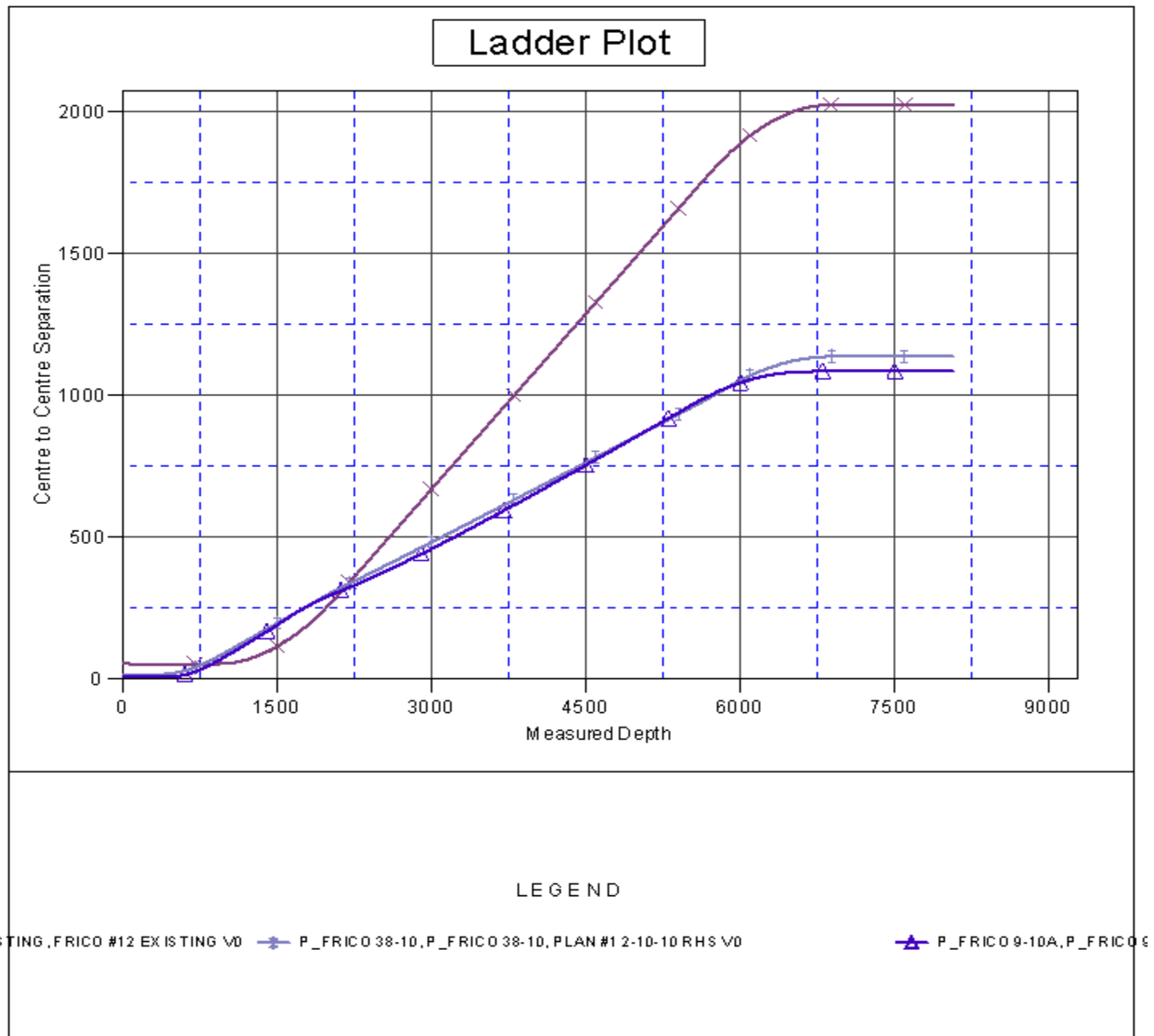
CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Company:	US ROCKIES REGION PLANNING	Local Co-ordinate Reference:	Well P_FRICO 33-11
Project:	COLORADO NORTHERN ZONE - 83	TVD Reference:	WELL @ 4794.00ft (Original Well Elev)
Reference Site:	WELD_FRICO PAD	MD Reference:	WELL @ 4794.00ft (Original Well Elev)
Site Error:	0.00ft	North Reference:	True
Reference Well:	P_FRICO 33-11	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00ft	Output errors are at	2.00 sigma
Reference Wellbore	P_FRICO 33-11	Database:	EDM 2003.21 Single User Db
Reference Design:	PLAN #1 2-10-10 RHS	Offset TVD Reference:	Offset Datum

Offset Design WELD_FRICO PAD - P_FRICO 9-10A - P_FRICO 9-10A - PLAN #1 2-10-10 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
5,000.00	4,707.51	4,863.83	4,517.85	30.76	35.64	85.30	-111.57	-1,655.30	858.09	796.44	61.65	13.918	
5,100.00	4,798.62	4,961.51	4,606.49	31.61	36.52	85.68	-114.53	-1,696.23	878.74	815.38	63.36	13.869	
5,200.00	4,889.74	5,059.19	4,695.12	32.46	37.39	86.05	-117.49	-1,737.16	899.43	834.36	65.07	13.823	
5,300.00	4,980.85	5,156.86	4,783.76	33.32	38.27	86.41	-120.46	-1,778.10	920.15	853.38	66.77	13.781	
5,400.00	5,071.96	5,254.54	4,872.39	34.17	39.14	86.75	-123.42	-1,819.03	940.90	872.43	68.47	13.742	
5,500.00	5,163.08	5,352.21	4,961.03	35.03	40.01	87.07	-126.39	-1,859.96	961.68	891.51	70.17	13.705	
5,600.00	5,254.19	5,461.91	5,060.93	35.88	40.85	87.46	-129.66	-1,905.14	982.13	910.27	71.87	13.666	
5,671.53	5,319.36	5,546.21	5,138.77	36.49	41.40	87.88	-132.00	-1,937.43	995.68	922.61	73.07	13.626	
5,700.00	5,345.36	5,579.80	5,170.04	36.70	41.61	88.18	-132.88	-1,949.66	1,000.81	927.26	73.55	13.607	
5,800.00	5,437.56	5,698.04	5,281.21	37.31	42.30	89.18	-135.79	-1,989.77	1,017.69	942.64	75.04	13.561	
5,900.00	5,531.06	5,816.60	5,394.27	37.88	42.89	90.12	-138.36	-2,025.37	1,032.75	956.35	76.40	13.518	
6,000.00	5,625.74	5,935.40	5,508.93	38.40	43.42	91.01	-140.60	-2,056.33	1,045.97	968.34	77.63	13.474	
6,100.00	5,721.48	6,054.34	5,624.92	38.87	43.87	91.86	-142.50	-2,082.55	1,057.32	978.59	78.73	13.430	
6,200.00	5,818.17	6,173.32	5,741.95	39.29	44.24	92.67	-144.05	-2,103.95	1,066.77	987.07	79.70	13.384	
6,300.00	5,915.69	6,292.24	5,859.70	39.66	44.54	93.44	-145.25	-2,120.48	1,074.31	993.76	80.55	13.337	
6,400.00	6,013.93	6,411.01	5,977.88	39.99	44.76	94.18	-146.09	-2,132.11	1,079.91	998.65	81.26	13.289	
6,500.00	6,112.75	6,529.51	6,096.18	40.26	44.91	94.89	-146.58	-2,138.83	1,083.59	1,001.73	81.85	13.238	
6,600.00	6,212.05	6,645.40	6,212.05	40.48	45.01	95.56	-146.71	-2,140.71	1,085.34	1,003.01	82.33	13.183	
6,700.00	6,311.70	6,745.05	6,311.70	40.65	45.07	96.01	-146.71	-2,140.71	1,086.18	1,003.50	82.68	13.137	
6,800.00	6,411.58	6,844.93	6,411.58	40.78	45.14	96.27	-146.71	-2,140.71	1,086.70	1,003.76	82.94	13.103	
6,888.44	6,500.00	6,933.35	6,500.00	40.86	45.20	-27.80	-146.71	-2,140.71	1,086.85	1,003.75	83.10	13.079	
6,900.00	6,511.56	6,944.91	6,511.56	40.86	45.20	-27.80	-146.71	-2,140.71	1,086.85	1,003.73	83.11	13.077	
7,000.00	6,611.56	7,044.91	6,611.56	40.93	45.27	-27.80	-146.71	-2,140.71	1,086.85	1,003.59	83.25	13.055	
7,100.00	6,711.56	7,144.91	6,711.56	41.00	45.34	-27.80	-146.71	-2,140.71	1,086.85	1,003.45	83.40	13.032	
7,200.00	6,811.56	7,244.91	6,811.56	41.07	45.41	-27.80	-146.71	-2,140.71	1,086.85	1,003.30	83.54	13.009	
7,300.00	6,911.56	7,344.91	6,911.56	41.15	45.48	-27.80	-146.71	-2,140.71	1,086.85	1,003.16	83.69	12.987	
7,400.00	7,011.56	7,444.91	7,011.56	41.22	45.55	-27.80	-146.71	-2,140.71	1,086.85	1,003.01	83.84	12.963	
7,500.00	7,111.56	7,544.91	7,111.56	41.30	45.63	-27.80	-146.71	-2,140.71	1,086.85	1,002.85	83.99	12.940	
7,600.00	7,211.56	7,644.91	7,211.56	41.37	45.70	-27.80	-146.71	-2,140.71	1,086.85	1,002.70	84.15	12.916	
7,700.00	7,311.56	7,744.91	7,311.56	41.45	45.78	-27.80	-146.71	-2,140.71	1,086.85	1,002.54	84.30	12.892	
7,800.00	7,411.56	7,844.91	7,411.56	41.53	45.85	-27.80	-146.71	-2,140.71	1,086.85	1,002.39	84.46	12.868	
7,900.00	7,511.56	7,944.91	7,511.56	41.61	45.93	-27.80	-146.71	-2,140.71	1,086.85	1,002.23	84.62	12.844	
8,000.00	7,611.56	8,044.91	7,611.56	41.69	46.01	-27.80	-146.71	-2,140.71	1,086.85	1,002.06	84.78	12.819	
8,068.44	7,680.00	8,113.35	7,680.00	41.74	46.06	-27.80	-146.71	-2,140.71	1,086.85	1,001.95	84.89	12.802	

Company:	US ROCKIES REGION PLANNING	Local Co-ordinate Reference:	Well P_FRICO 33-11
Project:	COLORADO NORTHERN ZONE - 83	TVD Reference:	WELL @ 4794.00ft (Original Well Elev)
Reference Site:	WELD_FRICO PAD	MD Reference:	WELL @ 4794.00ft (Original Well Elev)
Site Error:	0.00ft	North Reference:	True
Reference Well:	P_FRICO 33-11	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00ft	Output errors are at	2.00 sigma
Reference Wellbore	P_FRICO 33-11	Database:	EDM 2003.21 Single User Db
Reference Design:	PLAN #1 2-10-10 RHS	Offset TVD Reference:	Offset Datum

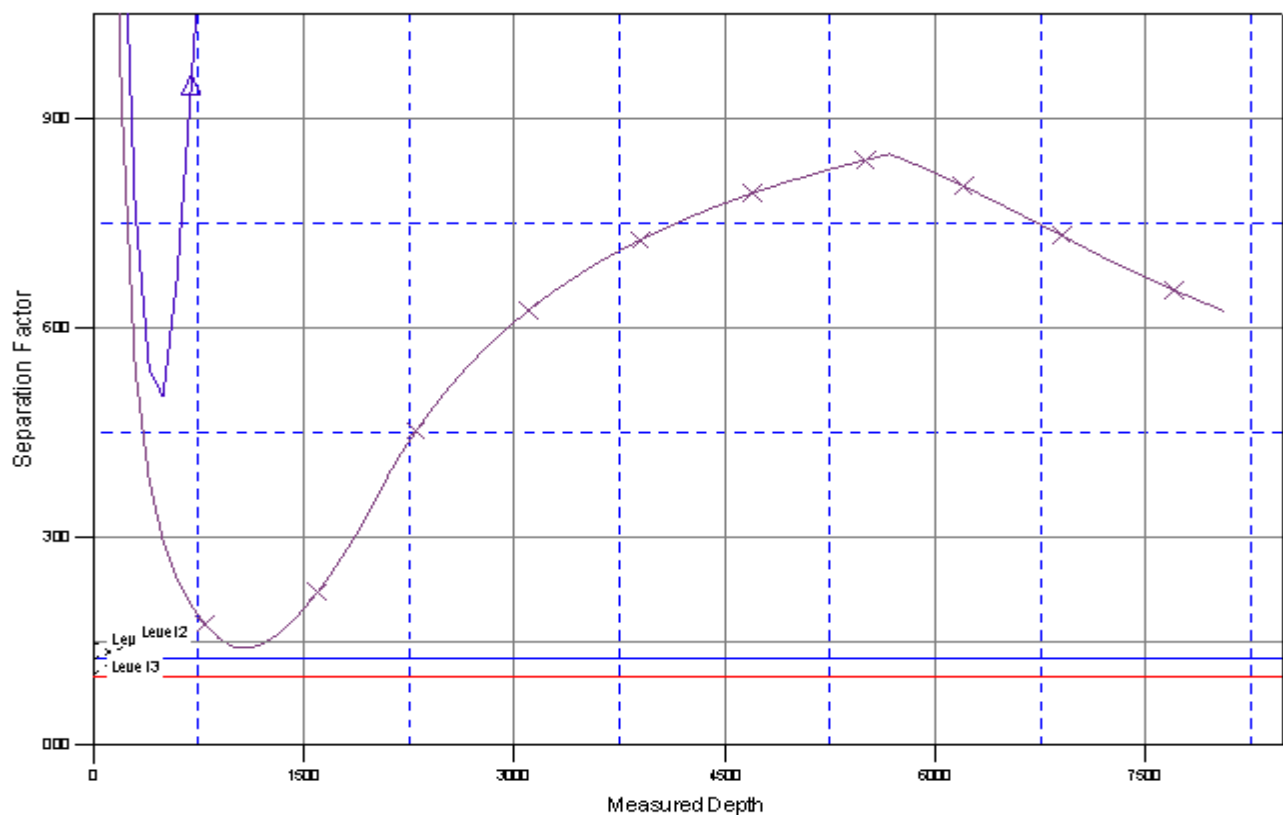
Reference Depths are relative to WELL @ 4794.00ft (Original Well Elev) Coordinates are relative to: P_FRICO 33-11
Offset Depths are relative to Offset Datum Coordinate System is US State Plane 1983, Colorado Northern Zone
Central Meridian is 105° 30' 0.000 W ° Grid Convergence at Surface is: 0.56°



Company:	US ROCKIES REGION PLANNING	Local Co-ordinate Reference:	Well P_FRICO 33-11
Project:	COLORADO NORTHERN ZONE - 83	TVD Reference:	WELL @ 4794.00ft (Original Well Elev)
Reference Site:	WELD_FRICO PAD	MD Reference:	WELL @ 4794.00ft (Original Well Elev)
Site Error:	0.00ft	North Reference:	True
Reference Well:	P_FRICO 33-11	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00ft	Output errors are at	2.00 sigma
Reference Wellbore	P_FRICO 33-11	Database:	EDM 2003.21 Single User Db
Reference Design:	PLAN #1 2-10-10 RHS	Offset TVD Reference:	Offset Datum

Reference Depths are relative to WELL @ 4794.00ft (Original Well Elev) Coordinates are relative to: P_FRICO 33-11
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: 0.56°

Separation Factor Plot



LEGEND

EXISTING FRICO #12 EXISTING V0 — P_FRICO 38-10, P_FRICO 38-10, PLAN #1 2-10-10 RHS V0

— P_FRICO 9-10A, P_FRICO 9-10A, PLAN #1 2-10-10 RHS V0