



US ROCKIES REGION PLANNING

COLORADO NORTHERN ZONE - 83

WELD_JESSER 18-2 PAD

P_BROWN 3-2

P_BROWN 3-2

Plan: PLAN #1 3-16-10 RHS

Standard Planning Report

16 March, 2010

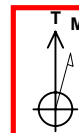




Project: COLORADO NORTHERN ZONE - 83
 Site: WELD_JESSER 18-2 PAD
 Well: P_BROWN 3-2
 Wellbore: P_BROWN 3-2
 Section: SECTION 2 T1N R66W
 SHL: 1178 FNL 1192 FWL
 Design: PLAN #1 3-16-10 RHS
 Latitude: 40° 5' 2.663 N
 Longitude: 104° 44' 57.966 W
 GL: 5143.00
 KB: WELL @ 5158.00ft (Original Well Elev)



Weatherford®



Azimuths to True North
 Magnetic North: 8.99°
 Magnetic Field
 Strength: 53095.8nT
 Dip Angle: 66.84°
 Date: 3/16/2010
 Model: IGRF2010

FORMATION TOP DETAILS

TVDPath	MDPath	Formation
4275.00	4347.95	PARKMAN
4765.00	4852.13	SUSSEX
7245.00	7361.83	NIO A
7565.00	7681.83	CODELL
8025.00	8141.83	JSAND

CASING DETAILS

TVD	MD	Name	Size
1200.00	1200.00	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	
1300.00	0.00	0.00	1300.00	0.00	0.00	0.00	0.00	0.00	Start Build 2.00
1980.98	0.00	49.27	1974.58	52.56	61.05	2.00	49.27	80.56	Start 3699.87 hold at 1980.98 MD
5680.85	13.62	49.27	5570.42	621.00	721.28	0.00	0.00	951.78	Start Drop -2.00
6361.83	0.00	0.00	6245.00	673.56	782.32	2.00	180.00	1032.34	Start 1915.00 hold at 6361.83 MD
8276.83	0.00	0.00	8160.00	673.56	782.32	0.00	0.00	1032.34	TD at 8276.83

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

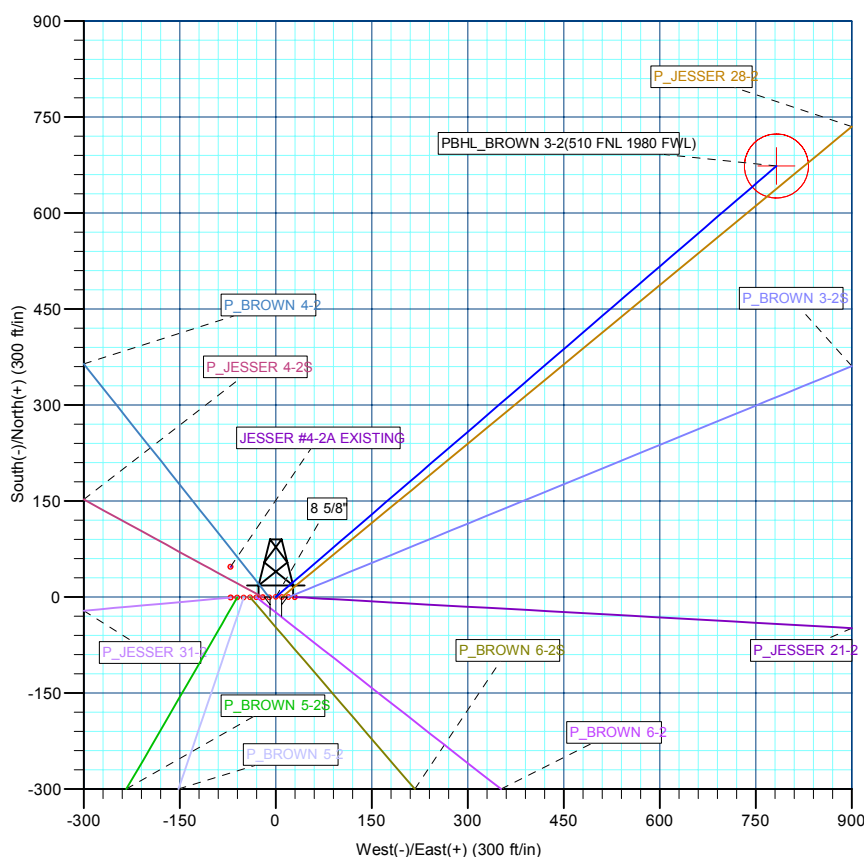
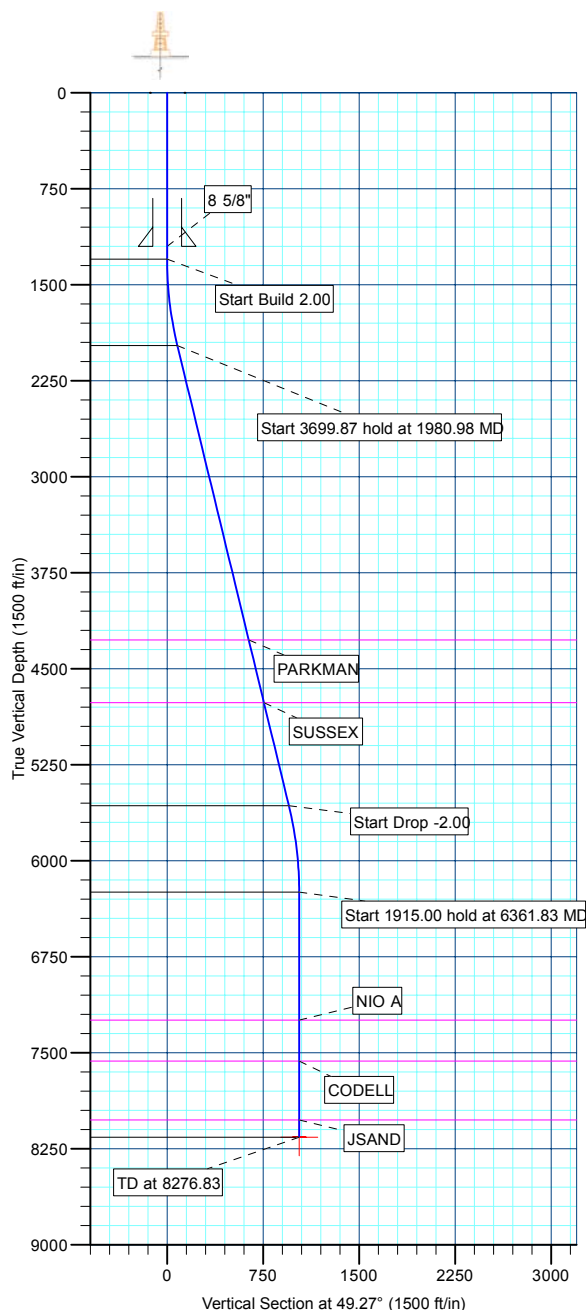
Name	TVD	+N/-S	+E/-W	Latitude	Longitude	Shape
PBHL	8160.00	673.56	782.32	40° 5' 9.319 N	104° 44' 47.900 W	Circle (Radius: 50.00)

WELL DETAILS: P_BROWN 3-2

+N/-S	+E/-W	Northing	Ground Level: Easting	5143.00 Latitude	Longitude	Slot
0.00	0.00	1274361.36	3210011.75	40° 5' 2.663 N	104° 44' 57.966 W	

LEGEND

- JESSER #4-2A EXISTING, JESSER #4-2A EXISTING, JESSER #4-2A EXISTING V0
- P_BROWN 3-2S, P_BROWN 3-2S, PLAN #1 3-16-10 RHS V0
- P_BROWN 4-2, P_BROWN 4-2, PLAN #1 3-16-10 RHS V0
- P_BROWN 5-2, P_BROWN 5-2, PLAN #1 3-16-10 RHS V0
- P_BROWN 5-2S, P_BROWN 5-2S, PLAN #1 3-16-10 RHS V0
- P_BROWN 6-2, P_BROWN 6-2, PLAN #1 3-16-10 RHS V0
- P_BROWN 6-2S, P_BROWN 6-2S, PLAN #1 3-16-10 RHS V0
- P_JESSER 21-2, P_JESSER 21-2, PLAN #1 3-16-10 RHS V0
- P_JESSER 28-2, P_JESSER 28-2, PLAN #1 3-16-10 RHS V0
- P_JESSER 31-2, P_JESSER 31-2, PLAN #1 3-16-10 RHS V0
- P_JESSER 4-2S, P_JESSER 4-2S, PLAN #1 3-16-10 RHS V0
- PLAN #1 3-16-10 RHS



Plan: PLAN #1 3-16-10 RHS (P_BROWN 3-2/P_BROWN 3-2)

Created By: Robert H. Scott Date: 15:06, March 16 2010

Database:	EDM 2003.21 Single User Db	Local Co-ordinate Reference:	Well P_BROWN 3-2
Company:	US ROCKIES REGION PLANNING	TVD Reference:	WELL @ 5158.00ft (Original Well Elev)
Project:	COLORADO NORTHERN ZONE - 83	MD Reference:	WELL @ 5158.00ft (Original Well Elev)
Site:	WELD_JESSER 18-2 PAD	North Reference:	True
Well:	P_BROWN 3-2	Survey Calculation Method:	Minimum Curvature
Wellbore:	P_BROWN 3-2		
Design:	PLAN #1 3-16-10 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_JESSER 18-2 PAD, SECTION 2 T1N R66W											
Site Position:						Northing:			1,274,361.36ft			Latitude:			40° 5' 2.663 N		
From:			Lat/Long			Easting:			3,210,011.75ft			Longitude:			104° 44' 57.966 W		
Position Uncertainty:			0.00 ft			Slot Radius:			in			Grid Convergence:			0.48 °		

Well	P_BROWN 3-2					
Well Position	+N/-S	0.00 ft	Northing:	1,274,361.36 ft	Latitude:	40° 5' 2.663 N
	+E/-W	0.00 ft	Easting:	3,210,011.75 ft	Longitude:	104° 44' 57.966 W
Position Uncertainty		0.00 ft	Wellhead Elevation:	ft	Ground Level:	5,143.00 ft

Wellbore	P_BROWN 3-2				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	3/16/2010	9.00	66.84	53,096

Design	PLAN #1 3-16-10 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	49.27

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	
1,300.00	0.00	0.00	1,300.00	0.00	0.00	0.00	0.00	0.00	0.00	
1,980.98	13.62	49.27	1,974.58	52.56	61.05	2.00	2.00	0.00	49.27	
5,680.85	13.62	49.27	5,570.42	621.00	721.28	0.00	0.00	0.00	0.00	
6,361.83	0.00	0.00	6,245.00	673.56	782.32	2.00	-2.00	0.00	180.00	
8,276.83	0.00	0.00	8,160.00	673.56	782.32	0.00	0.00	0.00	0.00	PBHL_BROWN 3-2

Database:	EDM 2003.21 Single User Db	Local Co-ordinate Reference:	Well P_BROWN 3-2
Company:	US ROCKIES REGION PLANNING	TVD Reference:	WELL @ 5158.00ft (Original Well Elev)
Project:	COLORADO NORTHERN ZONE - 83	MD Reference:	WELL @ 5158.00ft (Original Well Elev)
Site:	WELD_JESSER 18-2 PAD	North Reference:	True
Well:	P_BROWN 3-2	Survey Calculation Method:	Minimum Curvature
Wellbore:	P_BROWN 3-2		
Design:	PLAN #1 3-16-10 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									
1,300.00	0.00	0.00	1,300.00	0.00	0.00	0.00	0.00	0.00	0.00
1,400.00	2.00	49.27	1,399.98	1.14	1.32	1.75	2.00	2.00	0.00
1,500.00	4.00	49.27	1,499.84	4.55	5.29	6.98	2.00	2.00	0.00
1,600.00	6.00	49.27	1,599.45	10.24	11.89	15.69	2.00	2.00	0.00
1,700.00	8.00	49.27	1,698.70	18.19	21.13	27.88	2.00	2.00	0.00
1,800.00	10.00	49.27	1,797.47	28.40	32.98	43.52	2.00	2.00	0.00
1,900.00	12.00	49.27	1,895.62	40.85	47.44	62.60	2.00	2.00	0.00
Start 3699.87 hold at 1980.98 MD									
1,980.98	13.62	49.27	1,974.58	52.56	61.05	80.56	2.00	2.00	0.00
2,000.00	13.62	49.27	1,993.07	55.48	64.44	85.04	0.00	0.00	0.00
2,100.00	13.62	49.27	2,090.26	70.85	82.29	108.58	0.00	0.00	0.00
2,200.00	13.62	49.27	2,187.45	86.21	100.13	132.13	0.00	0.00	0.00
2,300.00	13.62	49.27	2,284.63	101.57	117.98	155.68	0.00	0.00	0.00
2,400.00	13.62	49.27	2,381.82	116.94	135.82	179.22	0.00	0.00	0.00
2,500.00	13.62	49.27	2,479.01	132.30	153.66	202.77	0.00	0.00	0.00
2,600.00	13.62	49.27	2,576.20	147.67	171.51	226.32	0.00	0.00	0.00
2,700.00	13.62	49.27	2,673.39	163.03	189.35	249.87	0.00	0.00	0.00
2,800.00	13.62	49.27	2,770.57	178.39	207.20	273.41	0.00	0.00	0.00
2,900.00	13.62	49.27	2,867.76	193.76	225.04	296.96	0.00	0.00	0.00
3,000.00	13.62	49.27	2,964.95	209.12	242.89	320.51	0.00	0.00	0.00
3,100.00	13.62	49.27	3,062.14	224.48	260.73	344.06	0.00	0.00	0.00
3,200.00	13.62	49.27	3,159.33	239.85	278.58	367.60	0.00	0.00	0.00
3,300.00	13.62	49.27	3,256.52	255.21	296.42	391.15	0.00	0.00	0.00
3,400.00	13.62	49.27	3,353.70	270.58	314.27	414.70	0.00	0.00	0.00
3,500.00	13.62	49.27	3,450.89	285.94	332.11	438.25	0.00	0.00	0.00
3,600.00	13.62	49.27	3,548.08	301.30	349.96	461.79	0.00	0.00	0.00
3,700.00	13.62	49.27	3,645.27	316.67	367.80	485.34	0.00	0.00	0.00
3,800.00	13.62	49.27	3,742.46	332.03	385.65	508.89	0.00	0.00	0.00
3,900.00	13.62	49.27	3,839.64	347.40	403.49	532.44	0.00	0.00	0.00
4,000.00	13.62	49.27	3,936.83	362.76	421.33	555.98	0.00	0.00	0.00
4,100.00	13.62	49.27	4,034.02	378.12	439.18	579.53	0.00	0.00	0.00
4,200.00	13.62	49.27	4,131.21	393.49	457.02	603.08	0.00	0.00	0.00
4,300.00	13.62	49.27	4,228.40	408.85	474.87	626.63	0.00	0.00	0.00
PARKMAN									
4,347.95	13.62	49.27	4,275.00	416.22	483.43	637.92	0.00	0.00	0.00
4,400.00	13.62	49.27	4,325.58	424.21	492.71	650.17	0.00	0.00	0.00
4,500.00	13.62	49.27	4,422.77	439.58	510.56	673.72	0.00	0.00	0.00
4,600.00	13.62	49.27	4,519.96	454.94	528.40	697.27	0.00	0.00	0.00
4,700.00	13.62	49.27	4,617.15	470.31	546.25	720.82	0.00	0.00	0.00
4,800.00	13.62	49.27	4,714.34	485.67	564.09	744.36	0.00	0.00	0.00
SUSSEX									
4,852.13	13.62	49.27	4,765.00	493.68	573.39	756.64	0.00	0.00	0.00
4,900.00	13.62	49.27	4,811.52	501.03	581.94	767.91	0.00	0.00	0.00
5,000.00	13.62	49.27	4,908.71	516.40	599.78	791.46	0.00	0.00	0.00
5,100.00	13.62	49.27	5,005.90	531.76	617.63	815.00	0.00	0.00	0.00
5,200.00	13.62	49.27	5,103.09	547.13	635.47	838.55	0.00	0.00	0.00
5,300.00	13.62	49.27	5,200.28	562.49	653.32	862.10	0.00	0.00	0.00
5,400.00	13.62	49.27	5,297.46	577.85	671.16	885.65	0.00	0.00	0.00
5,500.00	13.62	49.27	5,394.65	593.22	689.01	909.19	0.00	0.00	0.00
5,600.00	13.62	49.27	5,491.84	608.58	706.85	932.74	0.00	0.00	0.00
Start Drop -2.00									
5,680.85	13.62	49.27	5,570.42	621.00	721.28	951.78	0.00	0.00	0.00

Database:	EDM 2003.21 Single User Db	Local Co-ordinate Reference:	Well P_BROWN 3-2
Company:	US ROCKIES REGION PLANNING	TVD Reference:	WELL @ 5158.00ft (Original Well Elev)
Project:	COLORADO NORTHERN ZONE - 83	MD Reference:	WELL @ 5158.00ft (Original Well Elev)
Site:	WELD_JESSER 18-2 PAD	North Reference:	True
Well:	P_BROWN 3-2	Survey Calculation Method:	Minimum Curvature
Wellbore:	P_BROWN 3-2		
Design:	PLAN #1 3-16-10 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)
5,700.00	13.24	49.27	5,589.04	623.90	724.65	956.23	2.00	-2.00	0.00
5,800.00	11.24	49.27	5,686.77	637.73	740.71	977.42	2.00	-2.00	0.00
5,900.00	9.24	49.27	5,785.17	649.33	754.18	995.19	2.00	-2.00	0.00
6,000.00	7.24	49.27	5,884.13	658.67	765.03	1,009.52	2.00	-2.00	0.00
6,100.00	5.24	49.27	5,983.54	665.76	773.26	1,020.38	2.00	-2.00	0.00
6,200.00	3.24	49.27	6,083.26	670.58	778.86	1,027.77	2.00	-2.00	0.00
6,300.00	1.24	49.27	6,183.18	673.13	781.82	1,031.67	2.00	-2.00	0.00
Start 1915.00 hold at 6361.83 MD									
6,361.83	0.00	0.00	6,245.00	673.56	782.32	1,032.34	2.00	-2.00	-79.69
6,400.00	0.00	0.00	6,283.17	673.56	782.32	1,032.34	0.00	0.00	0.00
6,500.00	0.00	0.00	6,383.17	673.56	782.32	1,032.34	0.00	0.00	0.00
6,600.00	0.00	0.00	6,483.17	673.56	782.32	1,032.34	0.00	0.00	0.00
6,700.00	0.00	0.00	6,583.17	673.56	782.32	1,032.34	0.00	0.00	0.00
6,800.00	0.00	0.00	6,683.17	673.56	782.32	1,032.34	0.00	0.00	0.00
6,900.00	0.00	0.00	6,783.17	673.56	782.32	1,032.34	0.00	0.00	0.00
7,000.00	0.00	0.00	6,883.17	673.56	782.32	1,032.34	0.00	0.00	0.00
7,100.00	0.00	0.00	6,983.17	673.56	782.32	1,032.34	0.00	0.00	0.00
7,200.00	0.00	0.00	7,083.17	673.56	782.32	1,032.34	0.00	0.00	0.00
7,300.00	0.00	0.00	7,183.17	673.56	782.32	1,032.34	0.00	0.00	0.00
NIO A									
7,361.83	0.00	0.00	7,245.00	673.56	782.32	1,032.34	0.00	0.00	0.00
7,400.00	0.00	0.00	7,283.17	673.56	782.32	1,032.34	0.00	0.00	0.00
7,500.00	0.00	0.00	7,383.17	673.56	782.32	1,032.34	0.00	0.00	0.00
7,600.00	0.00	0.00	7,483.17	673.56	782.32	1,032.34	0.00	0.00	0.00
CODELL									
7,681.83	0.00	0.00	7,565.00	673.56	782.32	1,032.34	0.00	0.00	0.00
7,700.00	0.00	0.00	7,583.17	673.56	782.32	1,032.34	0.00	0.00	0.00
7,800.00	0.00	0.00	7,683.17	673.56	782.32	1,032.34	0.00	0.00	0.00
7,900.00	0.00	0.00	7,783.17	673.56	782.32	1,032.34	0.00	0.00	0.00
8,000.00	0.00	0.00	7,883.17	673.56	782.32	1,032.34	0.00	0.00	0.00
8,100.00	0.00	0.00	7,983.17	673.56	782.32	1,032.34	0.00	0.00	0.00
JSAND									
8,141.83	0.00	0.00	8,025.00	673.56	782.32	1,032.34	0.00	0.00	0.00
8,200.00	0.00	0.00	8,083.17	673.56	782.32	1,032.34	0.00	0.00	0.00
PBHL_BROWN 3-2(510 FNL 1980 FWL)									
8,276.83	0.00	0.00	8,160.00	673.56	782.32	1,032.34	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_BROWN 3-2(5	0.00	0.00	8,160.00	673.56	782.32	1,275,041.52	3,210,788.34	40° 5' 9.319 N	104° 44' 47.900 W
- plan hits target center									
- Circle (radius 50.00)									

Database:	EDM 2003.21 Single User Db	Local Co-ordinate Reference:	Well P_BROWN 3-2
Company:	US ROCKIES REGION PLANNING	TVD Reference:	WELL @ 5158.00ft (Original Well Elev)
Project:	COLORADO NORTHERN ZONE - 83	MD Reference:	WELL @ 5158.00ft (Original Well Elev)
Site:	WELD_JESSER 18-2 PAD	North Reference:	True
Well:	P_BROWN 3-2	Survey Calculation Method:	Minimum Curvature
Wellbore:	P_BROWN 3-2		
Design:	PLAN #1 3-16-10 RHS		

Casing Points					
Measured Depth (ft)	Vertical Depth (ft)	Name	Casing Diameter (in)	Hole Diameter (in)	
1,200.00	1,200.00	8 5/8"	8.62	11.00	

Formations						
Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)	
4,347.95	4,275.00	PARKMAN				
4,852.13	4,765.00	SUSSEX				
7,361.83	7,245.00	NIO A				
7,681.83	7,565.00	CODELL				
8,141.83	8,025.00	JSAND				

Plan Annotations					
Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates			
		+N/-S (ft)	+E/-W (ft)	Comment	
1,300.00	1,300.00	0.00	0.00	Start Build 2.00	
1,980.98	1,974.58	52.56	61.05	Start 3699.87 hold at 1980.98 MD	
5,680.85	5,570.42	621.00	721.28	Start Drop -2.00	
6,361.83	6,245.00	673.56	782.32	Start 1915.00 hold at 6361.83 MD	
8,276.83	8,160.00	673.56	782.32	TD at 8276.83	



US ROCKIES REGION PLANNING

**COLORADO NORTHERN ZONE - 83
WELD_JESSER 18-2 PAD
P_BROWN 3-2**

**P_BROWN 3-2
PLAN #1 3-16-10 RHS**

Anticollision Report

16 March, 2010



Company:	US ROCKIES REGION PLANNING	Local Co-ordinate Reference:	Well P_BROWN 3-2
Project:	COLORADO NORTHERN ZONE - 83	TVD Reference:	WELL @ 5158.00ft (Original Well Elev)
Reference Site:	WELD_JESSER 18-2 PAD	MD Reference:	WELL @ 5158.00ft (Original Well Elev)
Site Error:	0.00ft	North Reference:	True
Reference Well:	P_BROWN 3-2	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00ft	Output errors are at	2.00 sigma
Reference Wellbore	P_BROWN 3-2	Database:	EDM 2003.21 Single User Db
Reference Design:	PLAN #1 3-16-10 RHS	Offset TVD Reference:	Offset Datum

Reference	PLAN #1 3-16-10 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 3/16/2010				
From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description	
0.00	8,276.83	PLAN #1 3-16-10 RHS (P_BROWN 3-2)	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_JESSER 18-2 PAD						
JESSER #4-2A EXISTING - JESSER #4-2A EXISTING -	1,300.00	1,279.00	84.92	32.97	1.635	CC
JESSER #4-2A EXISTING - JESSER #4-2A EXISTING -	1,600.00	1,578.45	90.37	25.83	1.400	Level 3, ES, SF
P_BROWN 3-2S - P_BROWN 3-2S - PLAN #1 3-16-10 F	1,532.33	1,531.22	19.55	12.97	2.973	CC
P_BROWN 3-2S - P_BROWN 3-2S - PLAN #1 3-16-10 F	1,600.00	1,598.57	19.69	12.82	2.868	ES
P_BROWN 3-2S - P_BROWN 3-2S - PLAN #1 3-16-10 F	1,700.00	1,698.10	20.74	13.41	2.830	SF
P_BROWN 4-2 - P_BROWN 4-2 - PLAN #1 3-16-10 RH	1,300.00	1,300.00	10.08	4.49	1.805	CC, ES, SF
P_BROWN 5-2 - P_BROWN 5-2 - PLAN #1 3-16-10 RH	1,300.00	1,300.00	50.09	44.51	8.968	CC, ES
P_BROWN 5-2 - P_BROWN 5-2 - PLAN #1 3-16-10 RH	1,400.00	1,399.30	52.09	46.09	8.685	SF
P_BROWN 5-2S - P_BROWN 5-2S - PLAN #1 3-16-10 F	1,300.00	1,300.00	60.16	54.58	10.771	CC, ES
P_BROWN 5-2S - P_BROWN 5-2S - PLAN #1 3-16-10 F	1,400.00	1,399.12	62.20	56.21	10.370	SF
P_BROWN 6-2 - P_BROWN 6-2 - PLAN #1 3-16-10 RH	1,345.13	1,345.50	30.22	24.44	5.232	CC
P_BROWN 6-2 - P_BROWN 6-2 - PLAN #1 3-16-10 RH	1,400.00	1,400.78	30.27	24.27	5.041	ES
P_BROWN 6-2 - P_BROWN 6-2 - PLAN #1 3-16-10 RH	1,500.00	1,501.26	31.38	24.99	4.906	SF
P_BROWN 6-2S - P_BROWN 6-2S - PLAN #1 3-16-10 F	1,300.00	1,300.00	40.01	34.43	7.164	CC, ES
P_BROWN 6-2S - P_BROWN 6-2S - PLAN #1 3-16-10 F	1,500.00	1,501.01	42.82	36.43	6.701	SF
P_JESSER 21-2 - P_JESSER 21-2 - PLAN #1 3-16-10 R	1,300.00	1,300.00	29.94	24.35	5.360	CC, ES
P_JESSER 21-2 - P_JESSER 21-2 - PLAN #1 3-16-10 R	1,500.00	1,497.80	31.93	25.51	4.976	SF
P_JESSER 28-2 - P_JESSER 28-2 - PLAN #1 3-16-10 R	1,300.00	1,300.00	9.79	4.21	1.753	CC
P_JESSER 28-2 - P_JESSER 28-2 - PLAN #1 3-16-10 R	2,000.00	1,998.18	10.90	2.06	1.234	Level 2, ES, SF
P_JESSER 31-2 - P_JESSER 31-2 - PLAN #1 3-16-10 R	1,300.00	1,300.00	70.24	64.65	12.575	CC, ES
P_JESSER 31-2 - P_JESSER 31-2 - PLAN #1 3-16-10 R	1,400.00	1,397.51	73.28	67.27	12.200	SF
P_JESSER 4-2S - P_JESSER 4-2S - PLAN #1 3-16-10 F	1,300.00	1,300.00	20.15	14.56	3.608	CC, ES, SF

Offset Design		WELD_JESSER 18-2 PAD - JESSER #4-2A EXISTING - JESSER #4-2A EXISTING - JESSER #4-2A E										Offset Site Error:		0.00 ft
Survey Program:		0-UNKNOWN										Offset Well Error:		0.00 ft
Reference		Offset		Semi Major Axis			Distance						Warning	
Measured Depth	Vertical Depth	Measured Depth	Vertical Depth	Reference	Offset	Highside Toolface	Offset Wellbore Centre		Between Centres	Between Ellipses	Minimum Separation	Separation Factor		
(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(°)	+N/-S (ft)	+E/-W (ft)	(ft)	(ft)	(ft)			
0.00	0.00	0.00	0.00	0.00	0.00	-56.13	47.33	-70.51	87.48					
100.00	100.00	79.00	79.00	0.10	1.58	-56.13	47.33	-70.51	84.92	83.25	1.68	50.682		
200.00	200.00	179.00	179.00	0.32	5.16	-56.13	47.33	-70.51	84.92	79.44	5.48	15.496		
300.00	300.00	279.00	279.00	0.55	9.16	-56.13	47.33	-70.51	84.92	75.22	9.71	8.750		
400.00	400.00	379.00	379.00	0.77	13.16	-56.13	47.33	-70.51	84.92	70.99	13.93	6.096		
500.00	500.00	479.00	479.00	0.99	17.16	-56.13	47.33	-70.51	84.92	66.77	18.15	4.678		

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_BROWN 3-2
Project:	COLORADO NORTHERN ZONE - 83	TVD Reference:	WELL @ 5158.00ft (Original Well Elev)
Reference Site:	WELD_JESSER 18-2 PAD	MD Reference:	WELL @ 5158.00ft (Original Well Elev)
Site Error:	0.00ft	North Reference:	True
Reference Well:	P_BROWN 3-2	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00ft	Output errors are at	2.00 sigma
Reference Wellbore	P_BROWN 3-2	Database:	EDM 2003.21 Single User Db
Reference Design:	PLAN #1 3-16-10 RHS	Offset TVD Reference:	Offset Datum

Offset Design WELD_JESSER 18-2 PAD - JESSER #4-2A EXISTING - JESSER #4-2A EXISTING - JESSER #4-2A E												Offset Site Error:	0.00 ft
Survey Program: 0-UNKNOWN												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	
600.00	600.00	579.00	579.00	1.22	21.16	-56.13	47.33	-70.51	84.92	62.54	22.38	3.795	
700.00	700.00	679.00	679.00	1.44	25.16	-56.13	47.33	-70.51	84.92	58.32	26.60	3.192	
800.00	800.00	779.00	779.00	1.67	29.16	-56.13	47.33	-70.51	84.92	54.09	30.83	2.755	
900.00	900.00	879.00	879.00	1.89	33.16	-56.13	47.33	-70.51	84.92	49.87	35.05	2.423	
1,000.00	1,000.00	979.00	979.00	2.12	37.16	-56.13	47.33	-70.51	84.92	45.64	39.28	2.162	
1,100.00	1,100.00	1,079.00	1,079.00	2.34	41.16	-56.13	47.33	-70.51	84.92	41.42	43.50	1.952	
1,200.00	1,200.00	1,179.00	1,179.00	2.57	45.16	-56.13	47.33	-70.51	84.92	37.19	47.73	1.779	
1,300.00	1,300.00	1,279.00	1,279.00	2.79	49.16	-56.13	47.33	-70.51	84.92	32.97	51.95	1.635 CC	
1,400.00	1,399.98	1,378.98	1,378.98	3.01	53.16	-106.52	47.33	-70.51	85.40	29.23	56.17	1.520	
1,500.00	1,499.84	1,478.84	1,478.84	3.23	57.15	-109.79	47.33	-70.51	87.04	26.67	60.37	1.442 Level 3	
1,600.00	1,599.45	1,578.45	1,578.45	3.46	61.14	-114.92	47.33	-70.51	90.37	25.83	64.53	1.400 Level 3, ES, SF	
1,700.00	1,698.70	1,677.70	1,677.70	3.70	65.11	-121.38	47.33	-70.51	96.16	27.54	68.62	1.401 Level 3	
1,800.00	1,797.47	1,776.47	1,776.47	3.96	69.06	-128.48	47.33	-70.51	105.21	32.64	72.58	1.450 Level 3	
1,900.00	1,895.62	1,874.62	1,874.62	4.25	72.98	-135.49	47.33	-70.51	118.13	41.79	76.34	1.547	
1,980.98	1,974.58	1,953.58	1,953.58	4.52	76.14	-140.75	47.33	-70.51	131.66	52.44	79.22	1.662	
2,000.00	1,993.07	1,972.07	1,972.07	4.59	76.88	-141.94	47.33	-70.51	135.20	55.25	79.95	1.691	
2,100.00	2,090.26	2,069.26	2,069.26	4.96	80.77	-147.28	47.33	-70.51	154.60	70.78	83.81	1.845	
2,200.00	2,187.45	2,166.45	2,166.45	5.34	84.66	-151.43	47.33	-70.51	175.02	87.30	87.72	1.995	
2,300.00	2,284.63	2,263.63	2,263.63	5.75	88.55	-154.70	47.33	-70.51	196.14	104.49	91.65	2.140	
2,400.00	2,381.82	2,360.82	2,360.82	6.17	92.43	-157.34	47.33	-70.51	217.76	122.15	95.61	2.278	
2,500.00	2,479.01	2,458.01	2,458.01	6.59	96.32	-159.50	47.33	-70.51	239.74	140.16	99.58	2.407	
2,600.00	2,576.20	2,555.20	2,555.20	7.03	100.21	-161.30	47.33	-70.51	262.00	158.42	103.57	2.530	
2,700.00	2,673.39	2,652.39	2,652.39	7.48	104.10	-162.82	47.33	-70.51	284.46	176.89	107.57	2.644	
2,800.00	2,770.57	2,749.57	2,749.57	7.93	107.98	-164.11	47.33	-70.51	307.09	195.51	111.58	2.752	
2,900.00	2,867.76	2,846.76	2,846.76	8.38	111.87	-165.23	47.33	-70.51	329.84	214.25	115.59	2.854	
3,000.00	2,964.95	2,943.95	2,943.95	8.84	115.76	-166.20	47.33	-70.51	352.70	233.09	119.61	2.949	
3,100.00	3,062.14	3,041.14	3,041.14	9.31	119.65	-167.06	47.33	-70.51	375.64	252.01	123.63	3.038	
3,200.00	3,159.33	3,138.33	3,138.33	9.78	123.53	-167.82	47.33	-70.51	398.66	271.00	127.66	3.123	
3,300.00	3,256.52	3,235.52	3,235.52	10.25	127.42	-168.49	47.33	-70.51	421.73	290.04	131.69	3.203	
3,400.00	3,353.70	3,332.70	3,332.70	10.72	131.31	-169.10	47.33	-70.51	444.85	309.14	135.72	3.278	
3,500.00	3,450.89	3,429.89	3,429.89	11.19	135.20	-169.64	47.33	-70.51	468.02	328.27	139.75	3.349	
3,600.00	3,548.08	3,527.08	3,527.08	11.67	139.08	-170.13	47.33	-70.51	491.22	347.43	143.79	3.416	
3,700.00	3,645.27	3,624.27	3,624.27	12.15	142.97	-170.58	47.33	-70.51	514.45	366.63	147.83	3.480	
3,800.00	3,742.46	3,721.46	3,721.46	12.63	146.86	-170.99	47.33	-70.51	537.71	385.85	151.87	3.541	
3,900.00	3,839.64	3,818.64	3,818.64	13.11	150.75	-171.37	47.33	-70.51	561.00	405.09	155.91	3.598	
4,000.00	3,936.83	3,915.83	3,915.83	13.59	154.63	-171.72	47.33	-70.51	584.30	424.35	159.95	3.653	
4,100.00	4,034.02	4,013.02	4,013.02	14.07	158.52	-172.04	47.33	-70.51	607.63	443.63	163.99	3.705	
4,200.00	4,131.21	4,110.21	4,110.21	14.56	162.41	-172.33	47.33	-70.51	630.97	462.93	168.04	3.755	
4,300.00	4,228.40	4,207.40	4,207.40	15.04	166.30	-172.61	47.33	-70.51	654.32	482.24	172.08	3.802	
4,400.00	4,325.58	4,304.58	4,304.58	15.53	170.18	-172.86	47.33	-70.51	677.69	501.56	176.13	3.848	
4,500.00	4,422.77	4,401.77	4,401.77	16.01	174.07	-173.10	47.33	-70.51	701.07	520.90	180.18	3.891	
4,600.00	4,519.96	4,498.96	4,498.96	16.50	177.96	-173.33	47.33	-70.51	724.46	540.24	184.22	3.933	
4,700.00	4,617.15	4,596.15	4,596.15	16.99	181.85	-173.53	47.33	-70.51	747.87	559.59	188.27	3.972	
4,800.00	4,714.34	4,693.34	4,693.34	17.47	185.73	-173.73	47.33	-70.51	771.28	578.96	192.32	4.010	
4,900.00	4,811.52	4,790.52	4,790.52	17.96	189.62	-173.92	47.33	-70.51	794.69	598.33	196.37	4.047	
5,000.00	4,908.71	4,887.71	4,887.71	18.45	193.51	-174.09	47.33	-70.51	818.12	617.70	200.42	4.082	
5,100.00	5,005.90	4,984.90	4,984.90	18.94	197.40	-174.26	47.33	-70.51	841.55	637.08	204.47	4.116	
5,200.00	5,103.09	5,082.09	5,082.09	19.43	201.28	-174.41	47.33	-70.51	864.99	656.47	208.52	4.148	
5,300.00	5,200.28	5,179.28	5,179.28	19.92	205.17	-174.56	47.33	-70.51	888.44	675.87	212.57	4.179	
5,400.00	5,297.46	5,276.46	5,276.46	20.41	209.06	-174.70	47.33	-70.51	911.89	695.26	216.62	4.210	
5,500.00	5,394.65	5,373.65	5,373.65	20.90	212.95	-174.83	47.33	-70.51	935.34	714.67	220.67	4.239	
5,600.00	5,491.84	5,470.84	5,470.84	21.39	216.83	-174.96	47.33	-70.51	958.80	734.08	224.72	4.267	

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_BROWN 3-2
Project:	COLORADO NORTHERN ZONE - 83	TVD Reference:	WELL @ 5158.00ft (Original Well Elev)
Reference Site:	WELD_JESSER 18-2 PAD	MD Reference:	WELL @ 5158.00ft (Original Well Elev)
Site Error:	0.00ft	North Reference:	True
Reference Well:	P_BROWN 3-2	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00ft	Output errors are at	2.00 sigma
Reference Wellbore	P_BROWN 3-2	Database:	EDM 2003.21 Single User Db
Reference Design:	PLAN #1 3-16-10 RHS	Offset TVD Reference:	Offset Datum

Offset Design WELD_JESSER 18-2 PAD - JESSER #4-2A EXISTING - JESSER #4-2A EXISTING - JESSER #4-2A E												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
5,680.85	5,570.42	5,549.42	5,549.42	21.79	219.98	-175.06	47.33	-70.51	977.77	749.77	228.00	4.288	
5,700.00	5,589.04	5,568.04	5,568.04	21.87	220.72	-175.09	47.33	-70.51	982.20	753.10	229.10	4.287	
5,800.00	5,686.77	5,665.77	5,665.77	22.23	224.63	-175.23	47.33	-70.51	1,003.32	768.53	234.79	4.273	
5,900.00	5,785.17	5,764.17	5,764.17	22.55	228.57	-175.34	47.33	-70.51	1,021.03	780.77	240.27	4.250	
6,000.00	5,884.13	5,863.13	5,863.13	22.82	232.53	-175.43	47.33	-70.51	1,035.31	789.80	245.51	4.217	
6,100.00	5,983.54	5,962.54	5,962.54	23.06	236.50	-175.49	47.33	-70.51	1,046.14	795.64	250.50	4.176	
6,200.00	6,083.26	6,062.26	6,062.26	23.25	240.49	-175.54	47.33	-70.51	1,053.51	798.30	255.21	4.128	
6,300.00	6,183.18	6,162.18	6,162.18	23.41	244.49	-175.56	47.33	-70.51	1,057.40	797.77	259.63	4.073	
6,361.83	6,245.00	6,224.00	6,224.00	23.48	246.96	-126.29	47.33	-70.51	1,058.06	795.86	262.21	4.035	
6,400.00	6,283.17	6,262.17	6,262.17	23.53	248.49	-126.29	47.33	-70.51	1,058.06	794.26	263.80	4.011	
6,500.00	6,383.17	6,362.17	6,362.17	23.65	252.49	-126.29	47.33	-70.51	1,058.06	790.07	267.99	3.948	
6,600.00	6,483.17	6,462.17	6,462.17	23.78	256.49	-126.29	47.33	-70.51	1,058.06	785.88	272.18	3.887	
6,700.00	6,583.17	6,562.17	6,562.17	23.91	260.49	-126.29	47.33	-70.51	1,058.06	781.69	276.37	3.828	
6,800.00	6,683.17	6,662.17	6,662.17	24.04	264.49	-126.29	47.33	-70.51	1,058.06	777.50	280.57	3.771	
6,900.00	6,783.17	6,762.17	6,762.17	24.17	268.49	-126.29	47.33	-70.51	1,058.06	773.30	284.76	3.716	
7,000.00	6,883.17	6,862.17	6,862.17	24.31	272.49	-126.29	47.33	-70.51	1,058.06	769.11	288.95	3.662	
7,100.00	6,983.17	6,962.17	6,962.17	24.44	276.49	-126.29	47.33	-70.51	1,058.06	764.91	293.15	3.609	
7,200.00	7,083.17	7,062.17	7,062.17	24.58	280.49	-126.29	47.33	-70.51	1,058.06	760.72	297.35	3.558	
7,300.00	7,183.17	7,162.17	7,162.17	24.72	284.49	-126.29	47.33	-70.51	1,058.06	756.52	301.54	3.509	
7,400.00	7,283.17	7,262.17	7,262.17	24.86	288.49	-126.29	47.33	-70.51	1,058.06	752.32	305.74	3.461	
7,500.00	7,383.17	7,362.17	7,362.17	25.00	292.49	-126.29	47.33	-70.51	1,058.06	748.13	309.94	3.414	
7,600.00	7,483.17	7,462.17	7,462.17	25.14	296.49	-126.29	47.33	-70.51	1,058.06	743.93	314.14	3.368	
7,700.00	7,583.17	7,562.17	7,562.17	25.28	300.49	-126.29	47.33	-70.51	1,058.06	739.73	318.34	3.324	
7,800.00	7,683.17	7,662.17	7,662.17	25.43	304.49	-126.29	47.33	-70.51	1,058.06	735.53	322.54	3.280	
7,900.00	7,783.17	7,762.17	7,762.17	25.57	308.49	-126.29	47.33	-70.51	1,058.06	731.33	326.74	3.238	
8,000.00	7,883.17	7,862.17	7,862.17	25.72	312.49	-126.29	47.33	-70.51	1,058.06	727.13	330.94	3.197	
8,100.00	7,983.17	7,962.17	7,962.17	25.87	316.49	-126.29	47.33	-70.51	1,058.06	722.93	335.14	3.157	
8,200.00	8,083.17	8,062.17	8,062.17	26.01	320.49	-126.29	47.33	-70.51	1,058.06	718.72	339.34	3.118	
8,276.83	8,160.00	8,139.00	8,139.00	26.13	323.56	-126.29	47.33	-70.51	1,058.06	715.49	342.57	3.089	

Company:	US ROCKIES REGION PLANNING	Local Co-ordinate Reference:	Well P_BROWN 3-2
Project:	COLORADO NORTHERN ZONE - 83	TVD Reference:	WELL @ 5158.00ft (Original Well Elev)
Reference Site:	WELD_JESSER 18-2 PAD	MD Reference:	WELL @ 5158.00ft (Original Well Elev)
Site Error:	0.00ft	North Reference:	True
Reference Well:	P_BROWN 3-2	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00ft	Output errors are at	2.00 sigma
Reference Wellbore	P_BROWN 3-2	Database:	EDM 2003.21 Single User Db
Reference Design:	PLAN #1 3-16-10 RHS	Offset TVD Reference:	Offset Datum

Offset Design WELD_JESSER 18-2 PAD - P_BROWN 3-2S - P_BROWN 3-2S - PLAN #1 3-16-10 RHS												Offset Site Error:	0.00 ft
Survey Program: 0-MWD												Offset Well Error:	0.00 ft
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Semi Major Axis 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	90.08	-0.03	19.87	19.87				
100.00	100.00	100.00	100.00	0.10	0.10	90.08	-0.03	19.87	19.87	19.68	0.19	103.985	
200.00	200.00	200.00	200.00	0.32	0.32	90.08	-0.03	19.87	19.87	19.23	0.64	31.013	
300.00	300.00	300.00	300.00	0.55	0.55	90.08	-0.03	19.87	19.87	18.78	1.09	18.224	
400.00	400.00	400.00	400.00	0.77	0.77	90.08	-0.03	19.87	19.87	18.33	1.54	12.903	
500.00	500.00	500.00	500.00	0.99	0.99	90.08	-0.03	19.87	19.87	17.88	1.99	9.987	
600.00	600.00	600.00	600.00	1.22	1.22	90.08	-0.03	19.87	19.87	17.43	2.44	8.146	
700.00	700.00	700.00	700.00	1.44	1.44	90.08	-0.03	19.87	19.87	16.98	2.89	6.878	
800.00	800.00	800.00	800.00	1.67	1.67	90.08	-0.03	19.87	19.87	16.53	3.34	5.952	
900.00	900.00	900.00	900.00	1.89	1.89	90.08	-0.03	19.87	19.87	16.08	3.79	5.246	
1,000.00	1,000.00	1,000.00	1,000.00	2.12	2.12	90.08	-0.03	19.87	19.87	15.63	4.24	4.689	
1,100.00	1,100.00	1,100.00	1,100.00	2.34	2.34	90.08	-0.03	19.87	19.87	15.18	4.69	4.239	
1,200.00	1,200.00	1,200.00	1,200.00	2.57	2.57	90.08	-0.03	19.87	19.87	14.73	5.14	3.868	
1,300.00	1,300.00	1,300.00	1,300.00	2.79	2.79	90.08	-0.03	19.87	19.87	14.28	5.59	3.557	
1,400.00	1,399.98	1,399.52	1,399.51	3.01	3.01	42.68	0.46	21.07	19.76	13.74	6.02	3.284	
1,500.00	1,499.84	1,499.04	1,498.95	3.23	3.22	48.35	1.94	24.66	19.57	13.14	6.44	3.041	
1,532.33	1,532.07	1,531.22	1,531.08	3.30	3.29	51.02	2.62	26.34	19.55	12.97	6.58	2.973 CC	
1,600.00	1,599.45	1,598.57	1,598.27	3.46	3.44	57.87	4.39	30.66	19.69	12.82	6.87	2.868 ES	
1,700.00	1,698.70	1,698.10	1,697.38	3.70	3.66	70.46	7.83	39.05	20.74	13.41	7.33	2.830 SF	
1,800.00	1,797.47	1,797.63	1,796.23	3.96	3.90	84.10	12.24	49.82	23.37	15.52	7.84	2.979	
1,900.00	1,895.62	1,897.17	1,894.74	4.25	4.16	96.42	17.63	62.97	27.94	19.54	8.41	3.324	
1,980.98	1,974.58	1,977.79	1,974.24	4.52	4.40	104.56	22.71	75.37	33.11	24.21	8.90	3.722	
2,000.00	1,993.07	1,996.73	1,992.87	4.59	4.45	106.15	24.00	78.50	34.48	25.47	9.01	3.826	
2,100.00	2,090.26	2,096.42	2,090.66	4.96	4.77	110.63	31.34	96.42	41.96	32.29	9.67	4.339	
2,200.00	2,187.45	2,196.20	2,188.00	5.34	5.12	110.73	39.65	116.71	49.43	39.03	10.39	4.755	
2,300.00	2,284.63	2,295.93	2,284.69	5.75	5.51	108.17	48.92	139.33	56.82	45.63	11.19	5.077	
2,400.00	2,381.82	2,395.49	2,380.53	6.17	5.94	103.90	59.12	164.24	64.43	52.38	12.05	5.347	
2,500.00	2,479.01	2,494.87	2,475.56	6.59	6.41	98.73	70.15	191.16	72.66	59.71	12.95	5.612	
2,600.00	2,576.20	2,594.31	2,570.53	7.03	6.92	94.36	81.33	218.43	81.45	67.60	13.85	5.881	
2,700.00	2,673.39	2,693.75	2,665.50	7.48	7.43	90.86	92.50	245.71	90.62	75.87	14.75	6.144	
2,800.00	2,770.57	2,793.19	2,760.47	7.93	7.96	88.01	103.68	272.98	100.06	84.41	15.65	6.394	
2,900.00	2,867.76	2,892.63	2,855.45	8.38	8.51	85.66	114.86	300.26	109.70	93.15	16.55	6.630	
3,000.00	2,964.95	2,992.07	2,950.42	8.84	9.06	83.69	126.03	327.53	119.50	102.05	17.45	6.850	
3,100.00	3,062.14	3,091.52	3,045.39	9.31	9.61	82.02	137.21	354.81	129.41	111.07	18.35	7.054	
3,200.00	3,159.33	3,190.96	3,140.36	9.78	10.18	80.58	148.38	382.08	139.42	120.18	19.25	7.244	
3,300.00	3,256.52	3,290.40	3,235.34	10.25	10.75	79.34	159.56	409.36	149.51	129.36	20.15	7.419	
3,400.00	3,353.70	3,389.84	3,330.31	10.72	11.32	78.26	170.73	436.64	159.66	138.60	21.06	7.582	
3,500.00	3,450.89	3,489.28	3,425.28	11.19	11.90	77.30	181.91	463.91	169.85	147.89	21.96	7.734	
3,600.00	3,548.08	3,588.72	3,520.25	11.67	12.48	76.46	193.09	491.19	180.09	157.22	22.87	7.874	
3,700.00	3,645.27	3,688.17	3,615.23	12.15	13.06	75.70	204.26	518.46	190.36	166.58	23.78	8.005	
3,800.00	3,742.46	3,787.61	3,710.20	12.63	13.65	75.03	215.44	545.74	200.66	175.97	24.69	8.127	
3,900.00	3,839.64	3,887.05	3,805.17	13.11	14.24	74.41	226.61	573.01	210.99	185.38	25.60	8.241	
4,000.00	3,936.83	3,986.49	3,900.14	13.59	14.83	73.86	237.79	600.29	221.33	194.82	26.52	8.347	
4,100.00	4,034.02	4,085.93	3,995.12	14.07	15.42	73.36	248.96	627.56	231.70	204.27	27.43	8.447	
4,200.00	4,131.21	4,185.37	4,090.09	14.56	16.01	72.89	260.14	654.84	242.08	213.74	28.34	8.541	
4,300.00	4,228.40	4,284.81	4,185.06	15.04	16.61	72.47	271.31	682.11	252.48	223.22	29.26	8.629	
4,400.00	4,325.58	4,384.26	4,280.03	15.53	17.20	72.08	282.49	709.39	262.89	232.71	30.18	8.711	
4,500.00	4,422.77	4,483.70	4,375.01	16.01	17.80	71.72	293.67	736.67	273.31	242.21	31.09	8.789	
4,600.00	4,519.96	4,583.14	4,469.98	16.50	18.40	71.39	304.84	763.94	283.74	251.72	32.01	8.863	
4,700.00	4,617.15	4,682.58	4,564.95	16.99	18.99	71.08	316.02	791.22	294.18	261.24	32.93	8.933	
4,800.00	4,714.34	4,782.02	4,659.92	17.47	19.59	70.79	327.19	818.49	304.62	270.77	33.85	8.999	
4,900.00	4,811.52	4,881.46	4,754.89	17.96	20.19	70.52	338.37	845.77	315.08	280.30	34.77	9.061	

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_BROWN 3-2
Project:	COLORADO NORTHERN ZONE - 83	TVD Reference:	WELL @ 5158.00ft (Original Well Elev)
Reference Site:	WELD_JESSER 18-2 PAD	MD Reference:	WELL @ 5158.00ft (Original Well Elev)
Site Error:	0.00ft	North Reference:	True
Reference Well:	P_BROWN 3-2	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00ft	Output errors are at	2.00 sigma
Reference Wellbore	P_BROWN 3-2	Database:	EDM 2003.21 Single User Db
Reference Design:	PLAN #1 3-16-10 RHS	Offset TVD Reference:	Offset Datum

Offset Design WELD_JESSER 18-2 PAD - P_BROWN 3-2S - P_BROWN 3-2S - PLAN #1 3-16-10 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	4,908.71	4,980.90	4,849.87	18.45	20.79	70.27	349.54	873.04	325.54	289.84	35.69	9.120	
5,100.00	5,005.90	5,080.35	4,944.84	18.94	21.40	70.03	360.72	900.32	336.00	299.39	36.62	9.177	
5,200.00	5,103.09	5,179.79	5,039.81	19.43	22.00	69.81	371.90	927.59	346.48	308.94	37.54	9.230	
5,300.00	5,200.28	5,206.16	5,065.00	19.92	22.16	69.75	374.86	934.83	364.35	326.23	38.13	9.557	
5,400.00	5,297.46	5,206.16	5,065.00	20.41	22.16	69.75	374.86	934.83	405.91	367.32	38.59	10.518	
5,500.00	5,394.65	5,206.16	5,065.00	20.90	22.16	69.75	374.86	934.83	465.60	426.54	39.06	11.920	
5,600.00	5,491.84	5,206.16	5,065.00	21.39	22.16	69.75	374.86	934.83	537.39	497.87	39.53	13.595	
5,680.85	5,570.42	5,206.16	5,065.00	21.79	22.16	69.75	374.86	934.83	601.36	561.46	39.91	15.069	
5,700.00	5,589.04	5,206.16	5,065.00	21.87	22.16	70.27	374.86	934.83	617.11	577.01	40.10	15.390	
5,800.00	5,686.77	5,206.16	5,065.00	22.23	22.16	73.39	374.86	934.83	702.41	661.32	41.09	17.094	
5,900.00	5,785.17	5,206.16	5,065.00	22.55	22.16	77.21	374.86	934.83	791.59	749.46	42.12	18.791	
6,000.00	5,884.13	5,206.16	5,065.00	22.82	22.16	81.77	374.86	934.83	883.38	840.23	43.15	20.474	
6,100.00	5,983.54	5,206.16	5,065.00	23.06	22.16	87.06	374.86	934.83	976.95	932.88	44.07	22.168	
6,200.00	6,083.26	5,206.16	5,065.00	23.25	22.16	93.01	374.86	934.83	1,071.74	1,026.95	44.79	23.930	
6,300.00	6,183.18	5,206.16	5,065.00	23.41	22.16	99.50	374.86	934.83	1,167.35	1,122.16	45.18	25.836	
6,361.83	6,245.00	5,206.16	5,065.00	23.48	22.16	152.95	374.86	934.83	1,226.74	1,181.51	45.23	27.125	
6,400.00	6,283.17	5,206.16	5,065.00	23.53	22.16	152.95	374.86	934.83	1,263.50	1,218.23	45.27	27.910	
6,500.00	6,383.17	5,206.16	5,065.00	23.65	22.16	152.95	374.86	934.83	1,360.17	1,314.77	45.40	29.960	
6,600.00	6,483.17	5,206.16	5,065.00	23.78	22.16	152.95	374.86	934.83	1,457.29	1,411.76	45.53	32.006	
6,700.00	6,583.17	5,206.16	5,065.00	23.91	22.16	152.95	374.86	934.83	1,554.78	1,509.11	45.66	34.048	
6,800.00	6,683.17	5,206.16	5,065.00	24.04	22.16	152.95	374.86	934.83	1,652.56	1,606.76	45.80	36.084	
6,900.00	6,783.17	5,206.16	5,065.00	24.17	22.16	152.95	374.86	934.83	1,750.60	1,704.67	45.93	38.112	
7,000.00	6,883.17	5,206.16	5,065.00	24.31	22.16	152.95	374.86	934.83	1,848.85	1,802.78	46.07	40.131	
7,100.00	6,983.17	5,206.16	5,065.00	24.44	22.16	152.95	374.86	934.83	1,947.27	1,901.06	46.21	42.141	
7,200.00	7,083.17	5,206.16	5,065.00	24.58	22.16	152.95	374.86	934.83	2,045.85	1,999.50	46.35	44.141	
7,300.00	7,183.17	5,206.16	5,065.00	24.72	22.16	152.95	374.86	934.83	2,144.56	2,098.07	46.49	46.131	
7,400.00	7,283.17	5,206.16	5,065.00	24.86	22.16	152.95	374.86	934.83	2,243.38	2,196.75	46.63	48.110	
7,500.00	7,383.17	5,206.16	5,065.00	25.00	22.16	152.95	374.86	934.83	2,342.31	2,295.53	46.77	50.078	
7,600.00	7,483.17	5,206.16	5,065.00	25.14	22.16	152.95	374.86	934.83	2,441.32	2,394.40	46.92	52.034	
7,700.00	7,583.17	5,206.16	5,065.00	25.28	22.16	152.95	374.86	934.83	2,540.41	2,493.34	47.06	53.978	
7,800.00	7,683.17	5,206.16	5,065.00	25.43	22.16	152.95	374.86	934.83	2,639.57	2,592.36	47.21	55.911	
7,900.00	7,783.17	5,206.16	5,065.00	25.57	22.16	152.95	374.86	934.83	2,738.78	2,691.43	47.36	57.831	
8,000.00	7,883.17	5,206.16	5,065.00	25.72	22.16	152.95	374.86	934.83	2,838.06	2,790.55	47.51	59.740	
8,100.00	7,983.17	5,206.16	5,065.00	25.87	22.16	152.95	374.86	934.83	2,937.38	2,889.72	47.66	61.636	
8,200.00	8,083.17	5,206.16	5,065.00	26.01	22.16	152.95	374.86	934.83	3,036.75	2,988.94	47.81	63.519	
8,276.83	8,160.00	5,206.16	5,065.00	26.13	22.16	152.95	374.86	934.83	3,113.12	3,065.19	47.93	64.958	

Company:	US ROCKIES REGION PLANNING	Local Co-ordinate Reference:	Well P_BROWN 3-2
Project:	COLORADO NORTHERN ZONE - 83	TVD Reference:	WELL @ 5158.00ft (Original Well Elev)
Reference Site:	WELD_JESSER 18-2 PAD	MD Reference:	WELL @ 5158.00ft (Original Well Elev)
Site Error:	0.00ft	North Reference:	True
Reference Well:	P_BROWN 3-2	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00ft	Output errors are at	2.00 sigma
Reference Wellbore	P_BROWN 3-2	Database:	EDM 2003.21 Single User Db
Reference Design:	PLAN #1 3-16-10 RHS	Offset TVD Reference:	Offset Datum

Offset Design WELD_JESSER 18-2 PAD - P_BROWN 4-2 - P_BROWN 4-2 - PLAN #1 3-16-10 RHS												Offset Site Error:	0.00 ft
Survey Program: 0-MWD												Offset Well Error:	0.00 ft
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Semi Major Axis 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	-92.17	-0.38	-10.07	10.08				
100.00	100.00	100.00	100.00	0.10	0.10	-92.17	-0.38	-10.07	10.08	9.89	0.19	52.762	
200.00	200.00	200.00	200.00	0.32	0.32	-92.17	-0.38	-10.07	10.08	9.44	0.64	15.736	
300.00	300.00	300.00	300.00	0.55	0.55	-92.17	-0.38	-10.07	10.08	8.99	1.09	9.247	
400.00	400.00	400.00	400.00	0.77	0.77	-92.17	-0.38	-10.07	10.08	8.54	1.54	6.547	
500.00	500.00	500.00	500.00	0.99	0.99	-92.17	-0.38	-10.07	10.08	8.09	1.99	5.068	
600.00	600.00	600.00	600.00	1.22	1.22	-92.17	-0.38	-10.07	10.08	7.64	2.44	4.133	
700.00	700.00	700.00	700.00	1.44	1.44	-92.17	-0.38	-10.07	10.08	7.19	2.89	3.490	
800.00	800.00	800.00	800.00	1.67	1.67	-92.17	-0.38	-10.07	10.08	6.74	3.34	3.020	
900.00	900.00	900.00	900.00	1.89	1.89	-92.17	-0.38	-10.07	10.08	6.29	3.79	2.662	
1,000.00	1,000.00	1,000.00	1,000.00	2.12	2.12	-92.17	-0.38	-10.07	10.08	5.84	4.24	2.379	
1,100.00	1,100.00	1,100.00	1,100.00	2.34	2.34	-92.17	-0.38	-10.07	10.08	5.39	4.69	2.151	
1,200.00	1,200.00	1,200.00	1,200.00	2.57	2.57	-92.17	-0.38	-10.07	10.08	4.94	5.14	1.963	
1,300.00	1,300.00	1,300.00	1,300.00	2.79	2.79	-92.17	-0.38	-10.07	10.08	4.49	5.59	1.805 CC, ES, SF	
1,400.00	1,399.98	1,399.73	1,399.71	3.01	3.01	-139.97	0.98	-11.15	12.48	6.46	6.02	2.072	
1,500.00	1,499.84	1,499.12	1,498.96	3.23	3.23	-137.68	5.03	-14.38	19.69	13.24	6.45	3.054	
1,600.00	1,599.45	1,597.82	1,597.28	3.46	3.46	-136.14	11.73	-19.70	31.70	24.83	6.88	4.611	
1,700.00	1,698.70	1,695.49	1,694.24	3.70	3.70	-135.19	20.95	-27.04	48.45	41.14	7.31	6.629	
1,800.00	1,797.47	1,791.84	1,789.42	3.96	3.95	-134.55	32.59	-36.28	69.86	62.10	7.76	9.007	
1,900.00	1,895.62	1,887.52	1,883.48	4.25	4.23	-134.20	46.35	-47.23	95.61	87.38	8.23	11.622	
1,980.98	1,974.58	1,965.20	1,959.76	4.52	4.47	-134.66	57.82	-56.35	118.45	109.82	8.63	13.729	
2,000.00	1,993.07	1,983.38	1,977.62	4.59	4.53	-134.90	60.51	-58.49	124.00	115.27	8.73	14.205	
2,100.00	2,090.26	2,079.00	2,071.52	4.96	4.84	-135.86	74.63	-69.71	153.19	143.91	9.28	16.505	
2,200.00	2,187.45	2,174.62	2,165.42	5.34	5.17	-136.51	88.75	-80.94	182.42	172.56	9.86	18.508	
2,300.00	2,284.63	2,270.23	2,259.32	5.75	5.50	-136.98	102.87	-92.16	211.66	201.21	10.45	20.257	
2,400.00	2,381.82	2,365.85	2,353.22	6.17	5.84	-137.34	116.99	-103.39	240.91	229.86	11.06	21.788	
2,500.00	2,479.01	2,461.47	2,447.12	6.59	6.19	-137.62	131.11	-114.62	270.17	258.49	11.68	23.136	
2,600.00	2,576.20	2,557.08	2,541.02	7.03	6.55	-137.85	145.23	-125.84	299.43	287.13	12.31	24.327	
2,700.00	2,673.39	2,652.70	2,634.92	7.48	6.91	-138.03	159.35	-137.07	328.70	315.75	12.95	25.384	
2,800.00	2,770.57	2,748.32	2,728.82	7.93	7.27	-138.19	173.47	-148.29	357.97	344.37	13.60	26.326	
2,900.00	2,867.76	2,843.93	2,822.72	8.38	7.64	-138.32	187.59	-159.52	387.24	372.99	14.25	27.170	
3,000.00	2,964.95	2,939.55	2,916.61	8.84	8.01	-138.43	201.71	-170.75	416.51	401.60	14.91	27.929	
3,100.00	3,062.14	3,035.17	3,010.51	9.31	8.39	-138.53	215.82	-181.97	445.79	430.21	15.58	28.614	
3,200.00	3,159.33	3,130.78	3,104.41	9.78	8.77	-138.62	229.94	-193.20	475.06	458.81	16.25	29.236	
3,300.00	3,256.52	3,226.40	3,198.31	10.25	9.14	-138.69	244.06	-204.42	504.34	487.41	16.92	29.801	
3,400.00	3,353.70	3,322.02	3,292.21	10.72	9.52	-138.76	258.18	-215.65	533.62	516.01	17.60	30.317	
3,500.00	3,450.89	3,417.63	3,386.11	11.19	9.91	-138.82	272.30	-226.87	562.89	544.61	18.28	30.789	
3,600.00	3,548.08	3,513.25	3,480.01	11.67	10.29	-138.87	286.42	-238.10	592.17	573.20	18.97	31.223	
3,700.00	3,645.27	3,608.87	3,573.91	12.15	10.67	-138.92	300.54	-249.33	621.45	601.80	19.65	31.623	
3,800.00	3,742.46	3,704.48	3,667.81	12.63	11.06	-138.97	314.66	-260.55	650.73	630.39	20.34	31.993	
3,900.00	3,839.64	3,800.10	3,761.71	13.11	11.45	-139.01	328.78	-271.78	680.01	658.98	21.03	32.335	
4,000.00	3,936.83	3,895.72	3,855.61	13.59	11.83	-139.05	342.90	-283.00	709.29	687.56	21.72	32.653	
4,100.00	4,034.02	3,991.33	3,949.51	14.07	12.22	-139.08	357.02	-294.23	738.56	716.15	22.42	32.948	
4,200.00	4,131.21	4,086.95	4,043.41	14.56	12.61	-139.12	371.14	-305.46	767.84	744.73	23.11	33.224	
4,300.00	4,228.40	4,182.57	4,137.31	15.04	13.00	-139.15	385.26	-316.68	797.12	773.32	23.81	33.482	
4,400.00	4,325.58	4,278.18	4,231.21	15.53	13.39	-139.17	399.38	-327.91	826.40	801.90	24.51	33.724	
4,500.00	4,422.77	4,373.80	4,325.11	16.01	13.78	-139.20	413.50	-339.13	855.68	830.48	25.20	33.950	
4,600.00	4,519.96	4,469.42	4,419.01	16.50	14.18	-139.22	427.62	-350.36	884.96	859.06	25.90	34.163	
4,700.00	4,617.15	4,565.03	4,512.91	16.99	14.57	-139.25	441.74	-361.59	914.25	887.64	26.60	34.364	
4,800.00	4,714.34	4,660.65	4,606.81	17.47	14.96	-139.27	455.86	-372.81	943.53	916.22	27.31	34.553	
4,900.00	4,811.52	4,756.27	4,700.71	17.96	15.35	-139.29	469.98	-384.04	972.81	944.80	28.01	34.732	
5,000.00	4,908.71	4,851.88	4,794.61	18.45	15.75	-139.31	484.10	-395.26	1,002.09	973.38	28.71	34.901	

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_BROWN 3-2
Project:	COLORADO NORTHERN ZONE - 83	TVD Reference:	WELL @ 5158.00ft (Original Well Elev)
Reference Site:	WELD_JESSER 18-2 PAD	MD Reference:	WELL @ 5158.00ft (Original Well Elev)
Site Error:	0.00ft	North Reference:	True
Reference Well:	P_BROWN 3-2	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00ft	Output errors are at	2.00 sigma
Reference Wellbore	P_BROWN 3-2	Database:	EDM 2003.21 Single User Db
Reference Design:	PLAN #1 3-16-10 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						Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	
5,100.00	5,005.90	4,947.50	4,888.51	18.94	16.14	-139.32	498.22	-406.49	1,031.37	1,001.95	29.42	35.061	
5,200.00	5,103.09	5,043.12	4,982.41	19.43	16.53	-139.34	512.33	-417.72	1,060.65	1,030.53	30.12	35.213	
5,300.00	5,200.28	5,138.73	5,076.31	19.92	16.93	-139.36	526.45	-428.94	1,089.93	1,059.10	30.83	35.357	
5,400.00	5,297.46	5,234.35	5,170.21	20.41	17.32	-139.37	540.57	-440.17	1,119.21	1,087.68	31.53	35.494	
5,500.00	5,394.65	5,329.97	5,264.11	20.90	17.72	-139.38	554.69	-451.39	1,148.49	1,116.25	32.24	35.625	
5,600.00	5,491.84	5,425.58	5,358.01	21.39	18.11	-139.40	568.81	-462.62	1,177.77	1,144.83	32.95	35.749	
5,680.85	5,570.42	5,502.89	5,433.92	21.79	18.43	-139.41	580.23	-471.70	1,201.45	1,167.93	33.52	35.845	
5,700.00	5,589.04	5,521.21	5,451.92	21.87	18.51	-139.48	582.93	-473.85	1,207.01	1,173.34	33.67	35.851	
5,800.00	5,686.77	5,617.34	5,546.32	22.23	18.91	-139.79	597.13	-485.13	1,234.53	1,200.13	34.40	35.889	
5,900.00	5,785.17	5,714.10	5,641.35	22.55	19.31	-139.96	611.42	-496.49	1,259.48	1,224.38	35.10	35.885	
6,000.00	5,884.13	5,819.15	5,744.54	22.82	19.72	-139.97	626.82	-508.74	1,281.79	1,246.03	35.77	35.835	
6,100.00	5,983.54	5,954.70	5,878.42	23.06	20.10	-139.87	643.33	-521.86	1,299.58	1,263.18	36.40	35.704	
6,200.00	6,083.26	6,092.35	6,015.25	23.25	20.43	-139.80	654.99	-531.14	1,311.86	1,274.92	36.93	35.519	
6,300.00	6,183.18	6,231.35	6,153.99	23.41	20.69	-139.75	661.54	-536.35	1,318.54	1,281.18	37.36	35.293	
6,361.83	6,245.00	6,317.63	6,240.24	23.48	20.81	-90.46	662.95	-537.47	1,319.84	1,282.27	37.57	35.127	
6,400.00	6,283.17	6,360.56	6,283.17	23.53	20.87	-90.46	662.99	-537.50	1,319.87	1,282.18	37.69	35.019	
6,500.00	6,383.17	6,460.56	6,383.17	23.65	21.01	-90.46	662.99	-537.50	1,319.87	1,281.87	37.99	34.738	
6,600.00	6,483.17	6,560.56	6,483.17	23.78	21.15	-90.46	662.99	-537.50	1,319.87	1,281.56	38.31	34.454	
6,700.00	6,583.17	6,660.56	6,583.17	23.91	21.30	-90.46	662.99	-537.50	1,319.87	1,281.24	38.62	34.173	
6,800.00	6,683.17	6,760.56	6,683.17	24.04	21.45	-90.46	662.99	-537.50	1,319.87	1,280.92	38.94	33.894	
6,900.00	6,783.17	6,860.56	6,783.17	24.17	21.60	-90.46	662.99	-537.50	1,319.87	1,280.60	39.26	33.617	
7,000.00	6,883.17	6,960.56	6,883.17	24.31	21.75	-90.46	662.99	-537.50	1,319.87	1,280.28	39.59	33.342	
7,100.00	6,983.17	7,060.56	6,983.17	24.44	21.90	-90.46	662.99	-537.50	1,319.87	1,279.95	39.91	33.070	
7,200.00	7,083.17	7,160.56	7,083.17	24.58	22.06	-90.46	662.99	-537.50	1,319.87	1,279.63	40.24	32.801	
7,300.00	7,183.17	7,260.56	7,183.17	24.72	22.21	-90.46	662.99	-537.50	1,319.87	1,279.30	40.57	32.534	
7,400.00	7,283.17	7,360.56	7,283.17	24.86	22.37	-90.46	662.99	-537.50	1,319.87	1,278.96	40.90	32.269	
7,500.00	7,383.17	7,460.56	7,383.17	25.00	22.53	-90.46	662.99	-537.50	1,319.87	1,278.63	41.24	32.007	
7,600.00	7,483.17	7,560.56	7,483.17	25.14	22.69	-90.46	662.99	-537.50	1,319.87	1,278.29	41.57	31.748	
7,700.00	7,583.17	7,660.56	7,583.17	25.28	22.85	-90.46	662.99	-537.50	1,319.87	1,277.95	41.91	31.491	
7,800.00	7,683.17	7,760.56	7,683.17	25.43	23.01	-90.46	662.99	-537.50	1,319.87	1,277.61	42.25	31.237	
7,900.00	7,783.17	7,860.56	7,783.17	25.57	23.17	-90.46	662.99	-537.50	1,319.87	1,277.27	42.60	30.985	
8,000.00	7,883.17	7,960.56	7,883.17	25.72	23.33	-90.46	662.99	-537.50	1,319.87	1,276.92	42.94	30.736	
8,100.00	7,983.17	8,060.56	7,983.17	25.87	23.50	-90.46	662.99	-537.50	1,319.87	1,276.58	43.29	30.489	
8,200.00	8,083.17	8,160.56	8,083.17	26.01	23.66	-90.46	662.99	-537.50	1,319.87	1,276.23	43.64	30.246	
8,276.83	8,160.00	8,237.39	8,160.00	26.13	23.79	-90.46	662.99	-537.50	1,319.87	1,275.96	43.91	30.060	

Company:	US ROCKIES REGION PLANNING	Local Co-ordinate Reference:	Well P_BROWN 3-2
Project:	COLORADO NORTHERN ZONE - 83	TVD Reference:	WELL @ 5158.00ft (Original Well Elev)
Reference Site:	WELD_JESSER 18-2 PAD	MD Reference:	WELL @ 5158.00ft (Original Well Elev)
Site Error:	0.00ft	North Reference:	True
Reference Well:	P_BROWN 3-2	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00ft	Output errors are at	2.00 sigma
Reference Wellbore	P_BROWN 3-2	Database:	EDM 2003.21 Single User Db
Reference Design:	PLAN #1 3-16-10 RHS	Offset TVD Reference:	Offset Datum

Offset Design WELD_JESSER 18-2 PAD - P_BROWN 5-2 - P_BROWN 5-2 - PLAN #1 3-16-10 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	-90.86	-0.75	-50.09	50.09				
100.00	100.00	100.00	100.00	0.10	0.10	-90.86	-0.75	-50.09	50.09	49.90	0.19	262.188	
200.00	200.00	200.00	200.00	0.32	0.32	-90.86	-0.75	-50.09	50.09	49.45	0.64	78.197	
300.00	300.00	300.00	300.00	0.55	0.55	-90.86	-0.75	-50.09	50.09	49.00	1.09	45.951	
400.00	400.00	400.00	400.00	0.77	0.77	-90.86	-0.75	-50.09	50.09	48.55	1.54	32.534	
500.00	500.00	500.00	500.00	0.99	0.99	-90.86	-0.75	-50.09	50.09	48.10	1.99	25.182	
600.00	600.00	600.00	600.00	1.22	1.22	-90.86	-0.75	-50.09	50.09	47.65	2.44	20.540	
700.00	700.00	700.00	700.00	1.44	1.44	-90.86	-0.75	-50.09	50.09	47.20	2.89	17.343	
800.00	800.00	800.00	800.00	1.67	1.67	-90.86	-0.75	-50.09	50.09	46.75	3.34	15.007	
900.00	900.00	900.00	900.00	1.89	1.89	-90.86	-0.75	-50.09	50.09	46.30	3.79	13.226	
1,000.00	1,000.00	1,000.00	1,000.00	2.12	2.12	-90.86	-0.75	-50.09	50.09	45.85	4.24	11.823	
1,100.00	1,100.00	1,100.00	1,100.00	2.34	2.34	-90.86	-0.75	-50.09	50.09	45.41	4.69	10.689	
1,200.00	1,200.00	1,200.00	1,200.00	2.57	2.57	-90.86	-0.75	-50.09	50.09	44.96	5.14	9.753	
1,300.00	1,300.00	1,300.00	1,300.00	2.79	2.79	-90.86	-0.75	-50.09	50.09	44.51	5.59	8.968 CC, ES	
1,400.00	1,399.98	1,399.30	1,399.28	3.01	2.99	-143.11	-2.38	-50.64	52.09	46.09	6.00	8.685 SF	
1,500.00	1,499.84	1,497.94	1,497.78	3.23	3.16	-150.70	-7.22	-52.29	58.80	52.43	6.37	9.225	
1,600.00	1,599.45	1,595.26	1,594.74	3.46	3.34	-159.82	-15.14	-54.98	71.69	64.94	6.75	10.620	
1,700.00	1,698.70	1,690.65	1,689.44	3.70	3.54	-167.93	-25.93	-58.65	91.63	84.51	7.12	12.867	
1,800.00	1,797.47	1,783.56	1,781.26	3.96	3.75	-174.18	-39.29	-63.20	118.72	111.24	7.49	15.855	
1,900.00	1,895.62	1,873.47	1,869.65	4.25	3.99	-178.75	-54.91	-68.51	152.61	144.76	7.85	19.441	
1,980.98	1,974.58	1,943.80	1,938.40	4.52	4.20	178.49	-68.95	-73.29	184.72	176.58	8.14	22.704	
2,000.00	1,993.07	1,960.03	1,954.21	4.59	4.25	177.93	-72.41	-74.47	192.78	184.56	8.21	23.468	
2,100.00	2,090.26	2,050.03	2,041.83	4.96	4.56	175.50	-91.85	-81.08	235.60	226.94	8.65	27.231	
2,200.00	2,187.45	2,140.02	2,129.45	5.34	4.88	173.81	-111.29	-87.70	278.66	269.56	9.10	30.628	
2,300.00	2,284.63	2,230.02	2,217.07	5.75	5.23	172.57	-130.73	-94.31	321.86	312.31	9.55	33.687	
2,400.00	2,381.82	2,320.01	2,304.69	6.17	5.58	171.62	-150.17	-100.93	365.16	355.14	10.02	36.444	
2,500.00	2,479.01	2,410.01	2,392.32	6.59	5.95	170.88	-169.61	-107.54	408.53	398.03	10.49	38.935	
2,600.00	2,576.20	2,500.00	2,479.94	7.03	6.33	170.27	-189.04	-114.16	451.93	440.96	10.97	41.189	
2,700.00	2,673.39	2,590.00	2,567.56	7.48	6.71	169.78	-208.48	-120.77	495.38	483.92	11.46	43.234	
2,800.00	2,770.57	2,679.99	2,655.18	7.93	7.10	169.36	-227.92	-127.38	538.84	526.90	11.95	45.095	
2,900.00	2,867.76	2,769.99	2,742.80	8.38	7.50	169.00	-247.36	-134.00	582.33	569.89	12.44	46.794	
3,000.00	2,964.95	2,859.98	2,830.42	8.84	7.90	168.70	-266.80	-140.61	625.84	612.89	12.94	48.350	
3,100.00	3,062.14	2,949.97	2,918.04	9.31	8.31	168.43	-286.24	-147.23	669.35	655.91	13.45	49.778	
3,200.00	3,159.33	3,039.97	3,005.66	9.78	8.72	168.20	-305.68	-153.84	712.88	698.93	13.95	51.091	
3,300.00	3,256.52	3,129.96	3,093.28	10.25	9.13	167.99	-325.11	-160.46	756.41	741.95	14.46	52.304	
3,400.00	3,353.70	3,219.96	3,180.90	10.72	9.55	167.81	-344.55	-167.07	799.96	784.98	14.97	53.424	
3,500.00	3,450.89	3,309.95	3,268.52	11.19	9.97	167.64	-363.99	-173.68	843.50	828.02	15.49	54.464	
3,600.00	3,548.08	3,399.95	3,356.14	11.67	10.38	167.49	-383.43	-180.30	887.06	871.05	16.00	55.429	
3,700.00	3,645.27	3,489.94	3,443.77	12.15	10.81	167.36	-402.87	-186.91	930.61	914.09	16.52	56.327	
3,800.00	3,742.46	3,579.94	3,531.39	12.63	11.23	167.23	-422.31	-193.53	974.18	957.13	17.04	57.165	
3,900.00	3,839.64	3,669.93	3,619.01	13.11	11.65	167.12	-441.74	-200.14	1,017.74	1,000.18	17.56	57.949	
4,000.00	3,936.83	3,759.93	3,706.63	13.59	12.08	167.02	-461.18	-206.76	1,061.31	1,043.22	18.09	58.682	
4,100.00	4,034.02	3,849.92	3,794.25	14.07	12.51	166.92	-480.62	-213.37	1,104.88	1,086.27	18.61	59.371	
4,200.00	4,131.21	3,939.92	3,881.87	14.56	12.93	166.84	-500.06	-219.98	1,148.45	1,129.31	19.14	60.018	
4,300.00	4,228.40	4,029.91	3,969.49	15.04	13.36	166.75	-519.50	-226.60	1,192.02	1,172.36	19.66	60.627	
4,400.00	4,325.58	4,119.90	4,057.11	15.53	13.79	166.68	-538.94	-233.21	1,235.60	1,215.41	20.19	61.202	
4,500.00	4,422.77	4,209.90	4,144.73	16.01	14.22	166.61	-558.38	-239.83	1,279.18	1,258.46	20.72	61.744	
4,600.00	4,519.96	4,299.89	4,232.35	16.50	14.65	166.54	-577.81	-246.44	1,322.76	1,301.51	21.25	62.257	
4,700.00	4,617.15	4,389.89	4,319.97	16.99	15.09	166.48	-597.25	-253.06	1,366.34	1,344.56	21.78	62.742	
4,800.00	4,714.34	4,479.88	4,407.60	17.47	15.52	166.42	-616.69	-259.67	1,409.92	1,387.61	22.31	63.202	
4,900.00	4,811.52	4,569.88	4,495.22	17.96	15.95	166.37	-636.13	-266.28	1,453.50	1,430.66	22.84	63.639	
5,000.00	4,908.71	4,659.87	4,582.84	18.45	16.38	166.32	-655.57	-272.90	1,497.09	1,473.72	23.37	64.055	

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_BROWN 3-2
Project:	COLORADO NORTHERN ZONE - 83	TVD Reference:	WELL @ 5158.00ft (Original Well Elev)
Reference Site:	WELD_JESSER 18-2 PAD	MD Reference:	WELL @ 5158.00ft (Original Well Elev)
Site Error:	0.00ft	North Reference:	True
Reference Well:	P_BROWN 3-2	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00ft	Output errors are at	2.00 sigma
Reference Wellbore	P_BROWN 3-2	Database:	EDM 2003.21 Single User Db
Reference Design:	PLAN #1 3-16-10 RHS	Offset TVD Reference:	Offset Datum

Offset Design WELD_JESSER 18-2 PAD - P_BROWN 5-2 - P_BROWN 5-2 - PLAN #1 3-16-10 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	5,005.90	4,749.87	4,670.46	18.94	16.82	166.27	-675.01	-279.51	1,540.67	1,516.77	23.90	64.450	
5,200.00	5,103.09	4,839.86	4,758.08	19.43	17.25	166.22	-694.45	-286.13	1,584.26	1,559.82	24.44	64.826	
5,300.00	5,200.28	4,929.86	4,845.70	19.92	17.69	166.18	-713.88	-292.74	1,627.84	1,602.87	24.97	65.185	
5,400.00	5,297.46	5,019.85	4,933.32	20.41	18.12	166.14	-733.32	-299.36	1,671.43	1,645.92	25.51	65.528	
5,500.00	5,394.65	5,109.84	5,020.94	20.90	18.56	166.10	-752.76	-305.97	1,715.02	1,688.98	26.04	65.855	
5,600.00	5,491.84	5,199.84	5,108.56	21.39	18.99	166.06	-772.20	-312.58	1,758.61	1,732.03	26.58	66.169	
5,680.85	5,570.42	5,272.60	5,179.40	21.79	19.35	166.03	-787.92	-317.93	1,793.85	1,766.84	27.01	66.412	
5,700.00	5,589.04	5,289.86	5,196.21	21.87	19.43	166.07	-791.64	-319.20	1,802.14	1,775.00	27.14	66.392	
5,800.00	5,686.77	5,380.84	5,284.79	22.23	19.87	166.24	-811.29	-325.89	1,843.61	1,815.82	27.79	66.334	
5,900.00	5,785.17	5,473.15	5,374.67	22.55	20.32	166.35	-831.23	-332.67	1,881.97	1,853.56	28.41	66.242	
6,000.00	5,884.13	5,566.69	5,465.74	22.82	20.77	166.43	-851.44	-339.55	1,917.18	1,888.19	28.99	66.123	
6,100.00	5,983.54	5,661.33	5,557.89	23.06	21.23	166.46	-871.88	-346.50	1,949.20	1,919.66	29.54	65.980	
6,200.00	6,083.26	5,761.38	5,658.88	23.25	21.94	166.36	-907.05	-358.47	1,977.23	1,947.00	30.23	65.402	
6,300.00	6,183.18	5,861.69	5,758.27	23.41	22.69	166.17	-945.26	-371.47	1,994.19	1,963.14	31.05	64.221	
6,361.83	6,245.00	5,923.40	5,820.67	23.48	23.00	-144.60	-954.84	-374.73	1,998.06	1,966.58	31.49	63.452	
6,400.00	6,283.17	5,963.91	5,858.17	23.53	23.10	-144.61	-955.50	-374.96	1,998.29	1,966.59	31.69	63.048	
6,500.00	6,383.17	6,063.91	5,958.17	23.65	23.21	-144.61	-955.50	-374.96	1,998.29	1,966.25	32.04	62.366	
6,600.00	6,483.17	6,163.91	6,058.17	23.78	23.32	-144.61	-955.50	-374.96	1,998.29	1,965.90	32.39	61.696	
6,700.00	6,583.17	6,263.91	6,158.17	23.91	23.43	-144.61	-955.50	-374.96	1,998.29	1,965.55	32.74	61.034	
6,800.00	6,683.17	6,363.91	6,258.17	24.04	23.54	-144.61	-955.50	-374.96	1,998.29	1,965.19	33.09	60.383	
6,900.00	6,783.17	6,463.91	6,358.17	24.17	23.66	-144.61	-955.50	-374.96	1,998.29	1,964.84	33.45	59.741	
7,000.00	6,883.17	6,563.91	6,458.17	24.31	23.77	-144.61	-955.50	-374.96	1,998.29	1,964.48	33.81	59.109	
7,100.00	6,983.17	6,663.91	6,558.17	24.44	23.89	-144.61	-955.50	-374.96	1,998.29	1,964.12	34.17	58.487	
7,200.00	7,083.17	6,763.91	6,658.17	24.58	24.01	-144.61	-955.50	-374.96	1,998.29	1,963.76	34.53	57.873	
7,300.00	7,183.17	6,863.91	6,758.17	24.72	24.13	-144.61	-955.50	-374.96	1,998.29	1,963.39	34.89	57.270	
7,400.00	7,283.17	6,963.91	6,858.17	24.86	24.25	-144.61	-955.50	-374.96	1,998.29	1,963.03	35.26	56.675	
7,500.00	7,383.17	7,063.91	6,958.17	25.00	24.37	-144.61	-955.50	-374.96	1,998.29	1,962.66	35.63	56.090	
7,600.00	7,483.17	7,163.91	7,058.17	25.14	24.50	-144.61	-955.50	-374.96	1,998.29	1,962.29	36.00	55.514	
7,700.00	7,583.17	7,263.91	7,158.17	25.28	24.62	-144.61	-955.50	-374.96	1,998.29	1,961.92	36.37	54.947	
7,800.00	7,683.17	7,363.91	7,258.17	25.43	24.75	-144.61	-955.50	-374.96	1,998.29	1,961.55	36.74	54.389	
7,900.00	7,783.17	7,463.91	7,358.17	25.57	24.88	-144.61	-955.50	-374.96	1,998.29	1,961.17	37.12	53.839	
8,000.00	7,883.17	7,563.91	7,458.17	25.72	25.01	-144.61	-955.50	-374.96	1,998.29	1,960.79	37.49	53.298	
8,100.00	7,983.17	7,663.91	7,558.17	25.87	25.14	-144.61	-955.50	-374.96	1,998.29	1,960.42	37.87	52.766	
8,200.00	8,083.17	7,763.91	7,658.17	26.01	25.27	-144.61	-955.50	-374.96	1,998.29	1,960.04	38.25	52.242	
8,276.83	8,160.00	7,840.73	7,736.00	26.13	25.37	-144.61	-955.50	-374.96	1,998.29	1,959.74	38.54	51.845	

Company:	US ROCKIES REGION PLANNING	Local Co-ordinate Reference:	Well P_BROWN 3-2
Project:	COLORADO NORTHERN ZONE - 83	TVD Reference:	WELL @ 5158.00ft (Original Well Elev)
Reference Site:	WELD_JESSER 18-2 PAD	MD Reference:	WELL @ 5158.00ft (Original Well Elev)
Site Error:	0.00ft	North Reference:	True
Reference Well:	P_BROWN 3-2	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00ft	Output errors are at	2.00 sigma
Reference Wellbore	P_BROWN 3-2	Database:	EDM 2003.21 Single User Db
Reference Design:	PLAN #1 3-16-10 RHS	Offset TVD Reference:	Offset Datum

Offset Design WELD_JESSER 18-2 PAD - P_BROWN 5-2S - P_BROWN 5-2S - PLAN #1 3-16-10 RHS												Offset Site Error:	0.00 ft
Survey Program: 0-MWD												Offset Well Error:	0.00 ft
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Semi Major Axis Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)		Distance Between Centres (ft)		Minimum Separation (ft)	Separation Factor	Warning
0.00	0.00	0.00	0.00	0.00	0.00	-90.71	-0.75	-60.16	60.16				
100.00	100.00	100.00	100.00	0.10	0.10	-90.71	-0.75	-60.16	60.16	59.97	0.19	314.908	
200.00	200.00	200.00	200.00	0.32	0.32	-90.71	-0.75	-60.16	60.16	59.52	0.64	93.920	
300.00	300.00	300.00	300.00	0.55	0.55	-90.71	-0.75	-60.16	60.16	59.07	1.09	55.190	
400.00	400.00	400.00	400.00	0.77	0.77	-90.71	-0.75	-60.16	60.16	58.62	1.54	39.076	
500.00	500.00	500.00	500.00	0.99	0.99	-90.71	-0.75	-60.16	60.16	58.17	1.99	30.245	
600.00	600.00	600.00	600.00	1.22	1.22	-90.71	-0.75	-60.16	60.16	57.72	2.44	24.670	
700.00	700.00	700.00	700.00	1.44	1.44	-90.71	-0.75	-60.16	60.16	57.28	2.89	20.830	
800.00	800.00	800.00	800.00	1.67	1.67	-90.71	-0.75	-60.16	60.16	56.83	3.34	18.025	
900.00	900.00	900.00	900.00	1.89	1.89	-90.71	-0.75	-60.16	60.16	56.38	3.79	15.886	
1,000.00	1,000.00	1,000.00	1,000.00	2.12	2.12	-90.71	-0.75	-60.16	60.16	55.93	4.24	14.200	
1,100.00	1,100.00	1,100.00	1,100.00	2.34	2.34	-90.71	-0.75	-60.16	60.16	55.48	4.69	12.838	
1,200.00	1,200.00	1,200.00	1,200.00	2.57	2.57	-90.71	-0.75	-60.16	60.16	55.03	5.14	11.714	
1,300.00	1,300.00	1,300.00	1,300.00	2.79	2.79	-90.71	-0.75	-60.16	60.16	54.58	5.59	10.771 CC, ES	
1,400.00	1,399.98	1,399.12	1,399.11	3.01	2.99	-142.00	-1.86	-60.80	62.20	56.21	6.00	10.370 SF	
1,500.00	1,499.84	1,497.73	1,497.64	3.23	3.16	-147.28	-5.18	-62.72	68.74	62.36	6.38	10.777	
1,600.00	1,599.45	1,595.33	1,595.04	3.46	3.35	-154.02	-10.63	-65.87	80.63	73.88	6.76	11.936	
1,700.00	1,698.70	1,691.46	1,690.77	3.70	3.54	-160.55	-18.10	-70.19	98.58	91.45	7.13	13.829	
1,800.00	1,797.47	1,785.65	1,784.34	3.96	3.74	-166.03	-27.44	-75.59	122.79	115.29	7.49	16.384	
1,900.00	1,895.62	1,877.49	1,875.30	4.25	3.96	-170.30	-38.47	-81.96	153.13	145.28	7.85	19.501	
1,980.98	1,974.58	1,949.89	1,946.76	4.52	4.15	-173.00	-48.50	-87.76	182.01	173.88	8.14	22.370	
2,000.00	1,993.07	1,966.64	1,963.26	4.59	4.19	-173.57	-50.98	-89.19	189.28	181.07	8.21	23.043	
2,100.00	2,090.26	2,053.68	2,048.80	4.96	4.45	-176.09	-64.91	-97.24	228.87	220.24	8.63	26.529	
2,200.00	2,187.45	2,138.98	2,132.25	5.34	4.72	-178.02	-80.20	-106.08	270.67	261.62	9.05	29.922	
2,300.00	2,284.63	2,222.49	2,213.55	5.75	5.02	-179.56	-96.72	-115.63	314.56	305.09	9.47	33.218	
2,400.00	2,381.82	2,304.21	2,292.69	6.17	5.34	-179.18	-114.38	-125.83	360.44	350.54	9.90	36.421	
2,500.00	2,479.01	2,385.98	2,371.43	6.59	5.69	-178.10	-133.46	-136.86	408.18	397.85	10.33	39.504	
2,600.00	2,576.20	2,473.29	2,455.36	7.03	6.09	-177.16	-154.28	-148.90	456.55	445.76	10.79	42.314	
2,700.00	2,673.39	2,560.60	2,539.28	7.48	6.50	-176.40	-175.10	-160.93	504.99	493.74	11.25	44.882	
2,800.00	2,770.57	2,647.90	2,623.21	7.93	6.92	-175.78	-195.92	-172.96	553.49	541.77	11.72	47.231	
2,900.00	2,867.76	2,735.21	2,707.14	8.38	7.35	-175.25	-216.75	-184.99	602.03	589.84	12.19	49.383	
3,000.00	2,964.95	2,822.51	2,791.07	8.84	7.79	-174.81	-237.57	-197.03	650.61	637.94	12.67	51.361	
3,100.00	3,062.14	2,909.82	2,875.00	9.31	8.24	-174.42	-258.39	-209.06	699.21	686.06	13.15	53.181	
3,200.00	3,159.33	2,997.12	2,958.93	9.78	8.70	-174.09	-279.21	-221.09	747.83	734.20	13.63	54.859	
3,300.00	3,256.52	3,084.43	3,042.85	10.25	9.15	-173.79	-300.03	-233.13	796.47	782.35	14.12	56.409	
3,400.00	3,353.70	3,171.73	3,126.78	10.72	9.62	-173.53	-320.85	-245.16	845.12	830.51	14.61	57.846	
3,500.00	3,450.89	3,259.04	3,210.71	11.19	10.09	-173.30	-341.67	-257.19	893.79	878.68	15.10	59.181	
3,600.00	3,548.08	3,346.34	3,294.64	11.67	10.56	-173.09	-362.49	-269.23	942.46	926.86	15.60	60.423	
3,700.00	3,645.27	3,433.65	3,378.57	12.15	11.03	-172.90	-383.31	-281.26	991.15	975.05	16.09	61.582	
3,800.00	3,742.46	3,520.95	3,462.50	12.63	11.51	-172.73	-404.13	-293.29	1,039.84	1,023.24	16.59	62.664	
3,900.00	3,839.64	3,608.26	3,546.42	13.11	11.98	-172.58	-424.95	-305.32	1,088.53	1,071.44	17.09	63.677	
4,000.00	3,936.83	3,695.57	3,630.35	13.59	12.46	-172.44	-445.77	-317.36	1,137.24	1,119.64	17.60	64.626	
4,100.00	4,034.02	3,782.87	3,714.28	14.07	12.94	-172.31	-466.59	-329.39	1,185.95	1,167.84	18.10	65.517	
4,200.00	4,131.21	3,870.18	3,798.21	14.56	13.43	-172.19	-487.41	-341.42	1,234.66	1,216.05	18.61	66.356	
4,300.00	4,228.40	3,957.48	3,882.14	15.04	13.91	-172.08	-508.23	-353.46	1,283.37	1,264.26	19.11	67.145	
4,400.00	4,325.58	4,044.79	3,966.07	15.53	14.40	-171.97	-529.05	-365.49	1,332.09	1,312.47	19.62	67.891	
4,500.00	4,422.77	4,132.09	4,049.99	16.01	14.88	-171.88	-549.87	-377.52	1,380.82	1,360.69	20.13	68.595	
4,600.00	4,519.96	4,219.40	4,133.92	16.50	15.37	-171.79	-570.69	-389.55	1,429.54	1,408.90	20.64	69.261	
4,700.00	4,617.15	4,306.70	4,217.85	16.99	15.86	-171.71	-591.51	-401.59	1,478.27	1,457.12	21.15	69.893	
4,800.00	4,714.34	4,394.01	4,301.78	17.47	16.35	-171.63	-612.33	-413.62	1,527.00	1,505.34	21.66	70.492	
4,900.00	4,811.52	4,481.31	4,385.71	17.96	16.84	-171.55	-633.15	-425.65	1,575.73	1,553.56	22.17	71.060	
5,000.00	4,908.71	4,568.62	4,469.63	18.45	17.33	-171.49	-653.97	-437.69	1,624.47	1,601.78	22.69	71.601	

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_BROWN 3-2
Project:	COLORADO NORTHERN ZONE - 83	TVD Reference:	WELL @ 5158.00ft (Original Well Elev)
Reference Site:	WELD_JESSER 18-2 PAD	MD Reference:	WELL @ 5158.00ft (Original Well Elev)
Site Error:	0.00ft	North Reference:	True
Reference Well:	P_BROWN 3-2	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00ft	Output errors are at	2.00 sigma
Reference Wellbore	P_BROWN 3-2	Database:	EDM 2003.21 Single User Db
Reference Design:	PLAN #1 3-16-10 RHS	Offset TVD Reference:	Offset Datum

Offset Design WELD_JESSER 18-2 PAD - P_BROWN 5-2S - P_BROWN 5-2S - PLAN #1 3-16-10 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	5,005.90	4,655.92	4,553.56	18.94	17.82	171.42	-674.79	-449.72	1,673.20	1,650.00	23.20	72.115	
5,200.00	5,103.09	4,743.23	4,637.49	19.43	18.31	171.36	-695.61	-461.75	1,721.94	1,698.22	23.72	72.606	
5,300.00	5,200.28	4,830.53	4,721.42	19.92	18.81	171.30	-716.43	-473.79	1,770.68	1,746.44	24.23	73.073	
5,400.00	5,297.46	4,917.84	4,805.35	20.41	19.30	171.25	-737.25	-485.82	1,819.42	1,794.67	24.75	73.520	
5,500.00	5,394.65	5,005.15	4,889.28	20.90	19.79	171.20	-758.07	-497.85	1,868.16	1,842.89	25.26	73.947	
5,600.00	5,491.84	5,092.45	4,973.20	21.39	20.29	171.15	-778.89	-509.88	1,916.90	1,891.12	25.78	74.355	
5,680.85	5,570.42	5,163.04	5,041.06	21.79	20.69	171.11	-795.72	-519.61	1,956.31	1,930.11	26.20	74.673	
5,700.00	5,589.04	5,179.79	5,057.16	21.87	20.78	171.13	-799.72	-521.92	1,965.59	1,939.25	26.33	74.647	
5,800.00	5,686.77	5,209.79	5,086.00	22.23	20.95	171.28	-806.87	-526.06	2,013.08	1,986.25	26.83	75.042	
5,900.00	5,785.17	5,209.79	5,086.00	22.55	20.95	171.45	-806.87	-526.06	2,061.15	2,033.95	27.20	75.780	
6,000.00	5,884.13	5,209.79	5,086.00	22.82	20.95	171.61	-806.87	-526.06	2,109.92	2,082.39	27.53	76.642	
6,100.00	5,983.54	5,209.79	5,086.00	23.06	20.95	171.77	-806.87	-526.06	2,159.27	2,131.45	27.82	77.625	
6,200.00	6,083.26	5,209.79	5,086.00	23.25	20.95	171.94	-806.87	-526.06	2,209.12	2,181.06	28.06	78.727	
6,300.00	6,183.18	5,209.79	5,086.00	23.41	20.95	172.10	-806.87	-526.06	2,259.36	2,231.10	28.26	79.949	
6,361.83	6,245.00	5,209.79	5,086.00	23.48	20.95	-138.53	-806.87	-526.06	2,290.59	2,262.23	28.36	80.762	
6,400.00	6,283.17	5,209.79	5,086.00	23.53	20.95	-138.53	-806.87	-526.06	2,310.14	2,281.72	28.43	81.262	
6,500.00	6,383.17	5,209.79	5,086.00	23.65	20.95	-138.53	-806.87	-526.06	2,363.51	2,334.90	28.62	82.589	
6,600.00	6,483.17	5,209.79	5,086.00	23.78	20.95	-138.53	-806.87	-526.06	2,419.84	2,391.03	28.81	83.998	
6,700.00	6,583.17	5,209.79	5,086.00	23.91	20.95	-138.53	-806.87	-526.06	2,478.92	2,449.92	29.00	85.481	
6,800.00	6,683.17	5,209.79	5,086.00	24.04	20.95	-138.53	-806.87	-526.06	2,540.57	2,511.38	29.19	87.030	
6,900.00	6,783.17	5,209.79	5,086.00	24.17	20.95	-138.53	-806.87	-526.06	2,604.60	2,575.21	29.39	88.637	
7,000.00	6,883.17	5,209.79	5,086.00	24.31	20.95	-138.53	-806.87	-526.06	2,670.84	2,641.26	29.58	90.295	
7,100.00	6,983.17	5,209.79	5,086.00	24.44	20.95	-138.53	-806.87	-526.06	2,739.12	2,709.35	29.77	91.998	
7,200.00	7,083.17	5,209.79	5,086.00	24.58	20.95	-138.53	-806.87	-526.06	2,809.31	2,779.34	29.97	93.741	
7,300.00	7,183.17	5,209.79	5,086.00	24.72	20.95	-138.53	-806.87	-526.06	2,881.26	2,851.10	30.17	95.516	
7,400.00	7,283.17	5,209.79	5,086.00	24.86	20.95	-138.53	-806.87	-526.06	2,954.84	2,924.48	30.36	97.321	
7,500.00	7,383.17	5,209.79	5,086.00	25.00	20.95	-138.53	-806.87	-526.06	3,029.94	2,999.38	30.56	99.149	
7,600.00	7,483.17	5,209.79	5,086.00	25.14	20.95	-138.53	-806.87	-526.06	3,106.44	3,075.68	30.76	100.998	
7,700.00	7,583.17	5,209.79	5,086.00	25.28	20.95	-138.53	-806.87	-526.06	3,184.24	3,153.29	30.96	102.863	
7,800.00	7,683.17	5,209.79	5,086.00	25.43	20.95	-138.53	-806.87	-526.06	3,263.26	3,232.10	31.16	104.741	
7,900.00	7,783.17	5,209.79	5,086.00	25.57	20.95	-138.53	-806.87	-526.06	3,343.39	3,312.04	31.36	106.629	
8,000.00	7,883.17	5,209.79	5,086.00	25.72	20.95	-138.53	-806.87	-526.06	3,424.57	3,393.02	31.56	108.524	
8,100.00	7,983.17	5,209.79	5,086.00	25.87	20.95	-138.53	-806.87	-526.06	3,506.73	3,474.97	31.76	110.424	
8,200.00	8,083.17	5,209.79	5,086.00	26.01	20.95	-138.53	-806.87	-526.06	3,589.79	3,557.83	31.96	112.327	
8,276.83	8,160.00	5,209.79	5,086.00	26.13	20.95	-138.53	-806.87	-526.06	3,654.18	3,622.06	32.11	113.789	

Company:	US ROCKIES REGION PLANNING	Local Co-ordinate Reference:	Well P_BROWN 3-2
Project:	COLORADO NORTHERN ZONE - 83	TVD Reference:	WELL @ 5158.00ft (Original Well Elev)
Reference Site:	WELD_JESSER 18-2 PAD	MD Reference:	WELL @ 5158.00ft (Original Well Elev)
Site Error:	0.00ft	North Reference:	True
Reference Well:	P_BROWN 3-2	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00ft	Output errors are at	2.00 sigma
Reference Wellbore	P_BROWN 3-2	Database:	EDM 2003.21 Single User Db
Reference Design:	PLAN #1 3-16-10 RHS	Offset TVD Reference:	Offset Datum

Offset Design WELD_JESSER 18-2 PAD - P_BROWN 6-2 - P_BROWN 6-2 - PLAN #1 3-16-10 RHS												Offset Site Error:	0.00 ft
Survey Program: 0-MWD												Offset Well Error:	0.00 ft
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	-90.72	-0.38	-30.22	30.22				
100.00	100.00	100.00	100.00	0.10	0.10	-90.72	-0.38	-30.22	30.22	30.03	0.19	158.187	
200.00	200.00	200.00	200.00	0.32	0.32	-90.72	-0.38	-30.22	30.22	29.58	0.64	47.178	
300.00	300.00	300.00	300.00	0.55	0.55	-90.72	-0.38	-30.22	30.22	29.13	1.09	27.723	
400.00	400.00	400.00	400.00	0.77	0.77	-90.72	-0.38	-30.22	30.22	28.68	1.54	19.629	
500.00	500.00	500.00	500.00	0.99	0.99	-90.72	-0.38	-30.22	30.22	28.23	1.99	15.193	
600.00	600.00	600.00	600.00	1.22	1.22	-90.72	-0.38	-30.22	30.22	27.78	2.44	12.393	
700.00	700.00	700.00	700.00	1.44	1.44	-90.72	-0.38	-30.22	30.22	27.33	2.89	10.464	
800.00	800.00	800.00	800.00	1.67	1.67	-90.72	-0.38	-30.22	30.22	26.88	3.34	9.054	
900.00	900.00	900.00	900.00	1.89	1.89	-90.72	-0.38	-30.22	30.22	26.43	3.79	7.980	
1,000.00	1,000.00	1,000.00	1,000.00	2.12	2.12	-90.72	-0.38	-30.22	30.22	25.98	4.24	7.133	
1,100.00	1,100.00	1,100.00	1,100.00	2.34	2.34	-90.72	-0.38	-30.22	30.22	25.54	4.69	6.449	
1,200.00	1,200.00	1,200.00	1,200.00	2.57	2.57	-90.72	-0.38	-30.22	30.22	25.09	5.14	5.884	
1,300.00	1,300.00	1,300.00	1,300.00	2.79	2.79	-90.72	-0.38	-30.22	30.22	24.64	5.59	5.411	
1,345.13	1,345.13	1,345.50	1,345.50	2.89	2.88	-140.86	-0.60	-29.94	30.22	24.44	5.78	5.232 CC	
1,400.00	1,399.98	1,400.78	1,400.76	3.01	3.00	-144.24	-1.48	-28.83	30.27	24.27	6.01	5.041 ES	
1,500.00	1,499.84	1,501.26	1,501.09	3.23	3.18	-156.53	-4.74	-24.66	31.38	24.99	6.40	4.906 SF	
1,600.00	1,599.45	1,601.14	1,600.59	3.46	3.39	-173.75	-10.14	-17.78	36.02	29.22	6.79	5.301	
1,700.00	1,698.70	1,700.15	1,698.85	3.70	3.60	170.03	-17.61	-8.27	46.32	39.11	7.21	6.421	
1,800.00	1,797.47	1,798.00	1,795.49	3.96	3.85	158.12	-27.04	3.75	62.70	55.03	7.67	8.177	
1,900.00	1,895.62	1,894.45	1,890.19	4.25	4.12	150.12	-38.32	18.12	84.60	76.43	8.16	10.366	
1,980.98	1,974.58	1,971.35	1,965.23	4.52	4.38	145.61	-48.72	31.38	105.95	97.36	8.59	12.328	
2,000.00	1,993.07	1,989.31	1,982.68	4.59	4.44	144.78	-51.33	34.70	111.36	102.66	8.71	12.790	
2,100.00	2,090.26	2,084.80	2,075.44	4.96	4.79	141.35	-65.32	52.53	140.17	130.83	9.33	15.020	
2,200.00	2,187.45	2,180.29	2,168.21	5.34	5.17	139.10	-79.31	70.36	169.28	159.29	9.98	16.957	
2,300.00	2,284.63	2,275.78	2,260.97	5.75	5.56	137.50	-93.30	88.18	198.56	187.90	10.66	18.632	
2,400.00	2,381.82	2,371.28	2,353.73	6.17	5.97	136.31	-107.29	106.01	227.94	216.59	11.35	20.084	
2,500.00	2,479.01	2,466.77	2,446.50	6.59	6.39	135.40	-121.28	123.84	257.39	245.34	12.06	21.345	
2,600.00	2,576.20	2,562.26	2,539.26	7.03	6.82	134.67	-135.27	141.66	286.90	274.11	12.78	22.446	
2,700.00	2,673.39	2,657.75	2,632.03	7.48	7.26	134.08	-149.26	159.49	316.43	302.92	13.52	23.411	
2,800.00	2,770.57	2,753.25	2,724.79	7.93	7.71	133.59	-163.25	177.32	345.99	331.73	14.26	24.262	
2,900.00	2,867.76	2,848.74	2,817.56	8.38	8.16	133.17	-177.24	195.14	375.57	360.56	15.01	25.016	
3,000.00	2,964.95	2,944.23	2,910.32	8.84	8.61	132.82	-191.23	212.97	405.17	389.40	15.77	25.687	
3,100.00	3,062.14	3,039.72	3,003.09	9.31	9.07	132.51	-205.22	230.80	434.78	418.24	16.54	26.287	
3,200.00	3,159.33	3,135.21	3,095.85	9.78	9.53	132.25	-219.21	248.62	464.40	447.09	17.31	26.826	
3,300.00	3,256.52	3,230.71	3,188.61	10.25	10.00	132.01	-233.20	266.45	494.02	475.94	18.09	27.312	
3,400.00	3,353.70	3,326.20	3,281.38	10.72	10.47	131.80	-247.19	284.28	523.66	504.79	18.87	27.752	
3,500.00	3,450.89	3,421.69	3,374.14	11.19	10.94	131.62	-261.18	302.10	553.30	533.64	19.65	28.153	
3,600.00	3,548.08	3,517.18	3,466.91	11.67	11.41	131.45	-275.17	319.93	582.94	562.50	20.44	28.518	
3,700.00	3,645.27	3,612.68	3,559.67	12.15	11.88	131.30	-289.16	337.76	612.59	591.35	21.23	28.853	
3,800.00	3,742.46	3,708.17	3,652.44	12.63	12.36	131.17	-303.16	355.58	642.24	620.21	22.02	29.160	
3,900.00	3,839.64	3,803.66	3,745.20	13.11	12.83	131.04	-317.15	373.41	671.89	649.07	22.82	29.443	
4,000.00	3,936.83	3,899.15	3,837.97	13.59	13.31	130.93	-331.14	391.24	701.55	677.93	23.62	29.704	
4,100.00	4,034.02	3,994.65	3,930.73	14.07	13.79	130.82	-345.13	409.06	731.21	706.79	24.42	29.946	
4,200.00	4,131.21	4,090.14	4,023.50	14.56	14.27	130.72	-359.12	426.89	760.87	735.65	25.22	30.171	
4,300.00	4,228.40	4,185.63	4,116.26	15.04	14.75	130.64	-373.11	444.72	790.53	764.51	26.02	30.380	
4,400.00	4,325.58	4,281.12	4,209.02	15.53	15.23	130.55	-387.10	462.54	820.20	793.37	26.83	30.575	
4,500.00	4,422.77	4,376.61	4,301.79	16.01	15.72	130.48	-401.09	480.37	849.86	822.23	27.63	30.758	
4,600.00	4,519.96	4,472.11	4,394.55	16.50	16.20	130.40	-415.08	498.20	879.53	851.09	28.44	30.929	
4,700.00	4,617.15	4,567.60	4,487.32	16.99	16.68	130.34	-429.07	516.02	909.20	879.95	29.25	31.089	
4,800.00	4,714.34	4,663.09	4,580.08	17.47	17.17	130.27	-443.06	533.85	938.87	908.81	30.05	31.240	
4,900.00	4,811.52	4,758.58	4,672.85	17.96	17.65	130.21	-457.05	551.68	968.54	937.68	30.86	31.381	

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_BROWN 3-2
Project:	COLORADO NORTHERN ZONE - 83	TVD Reference:	WELL @ 5158.00ft (Original Well Elev)
Reference Site:	WELD_JESSER 18-2 PAD	MD Reference:	WELL @ 5158.00ft (Original Well Elev)
Site Error:	0.00ft	North Reference:	True
Reference Well:	P_BROWN 3-2	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00ft	Output errors are at	2.00 sigma
Reference Wellbore	P_BROWN 3-2	Database:	EDM 2003.21 Single User Db
Reference Design:	PLAN #1 3-16-10 RHS	Offset TVD Reference:	Offset Datum

Offset Design WELD_JESSER 18-2 PAD - P_BROWN 6-2 - P_BROWN 6-2 - PLAN #1 3-16-10 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	4,908.71	4,854.08	4,765.61	18.45	18.13	130.16	-471.04	569.50	998.21	966.54	31.67	31.515	
5,100.00	5,005.90	4,949.57	4,858.38	18.94	18.62	130.11	-485.03	587.33	1,027.88	995.40	32.49	31.642	
5,200.00	5,103.09	5,045.06	4,951.14	19.43	19.11	130.06	-499.02	605.16	1,057.56	1,024.26	33.30	31.761	
5,300.00	5,200.28	5,140.55	5,043.90	19.92	19.59	130.01	-513.01	622.98	1,087.23	1,053.12	34.11	31.875	
5,400.00	5,297.46	5,236.04	5,136.67	20.41	20.08	129.97	-527.00	640.81	1,116.90	1,081.98	34.92	31.982	
5,500.00	5,394.65	5,331.54	5,229.43	20.90	20.56	129.92	-540.99	658.64	1,146.58	1,110.84	35.74	32.084	
5,600.00	5,491.84	5,427.03	5,322.20	21.39	21.05	129.88	-554.98	676.46	1,176.25	1,139.70	36.55	32.181	
5,680.85	5,570.42	5,504.23	5,397.20	21.79	21.45	129.85	-566.29	690.88	1,200.25	1,163.04	37.21	32.256	
5,700.00	5,589.04	5,522.53	5,414.97	21.87	21.54	129.93	-568.97	694.29	1,205.89	1,168.51	37.38	32.261	
5,800.00	5,686.77	5,618.44	5,508.14	22.23	22.03	130.26	-583.02	712.20	1,234.08	1,195.89	38.19	32.311	
5,900.00	5,785.17	5,718.50	5,605.36	22.55	22.53	130.41	-597.66	730.85	1,260.10	1,221.13	38.98	32.331	
6,000.00	5,884.13	5,852.39	5,736.24	22.82	23.04	130.40	-615.01	752.96	1,282.30	1,242.56	39.74	32.265	
6,100.00	5,983.54	5,988.80	5,870.80	23.06	23.45	130.38	-628.79	770.51	1,299.45	1,259.07	40.38	32.179	
6,200.00	6,083.26	6,127.14	6,008.20	23.25	23.77	130.35	-638.70	783.14	1,311.44	1,270.53	40.91	32.055	
6,300.00	6,183.18	6,266.76	6,147.49	23.41	24.02	130.31	-644.54	790.59	1,318.18	1,276.85	41.33	31.891	
6,361.83	6,245.00	6,353.44	6,234.12	23.48	24.14	179.56	-646.06	792.52	1,319.71	1,278.17	41.54	31.768	
6,400.00	6,283.17	6,402.49	6,283.17	23.53	24.20	179.55	-646.22	792.72	1,319.82	1,278.16	41.66	31.682	
6,500.00	6,383.17	6,502.49	6,383.17	23.65	24.32	179.55	-646.22	792.72	1,319.82	1,277.88	41.94	31.472	
6,600.00	6,483.17	6,602.49	6,483.17	23.78	24.43	179.55	-646.22	792.72	1,319.82	1,277.60	42.22	31.263	
6,700.00	6,583.17	6,702.49	6,583.17	23.91	24.55	179.55	-646.22	792.72	1,319.82	1,277.32	42.50	31.054	
6,800.00	6,683.17	6,802.49	6,683.17	24.04	24.66	179.55	-646.22	792.72	1,319.82	1,277.03	42.79	30.846	
6,900.00	6,783.17	6,902.49	6,783.17	24.17	24.78	179.55	-646.22	792.72	1,319.82	1,276.74	43.08	30.639	
7,000.00	6,883.17	7,002.49	6,883.17	24.31	24.90	179.55	-646.22	792.72	1,319.82	1,276.45	43.37	30.433	
7,100.00	6,983.17	7,102.49	6,983.17	24.44	25.02	179.55	-646.22	792.72	1,319.82	1,276.16	43.66	30.228	
7,200.00	7,083.17	7,202.49	7,083.17	24.58	25.15	179.55	-646.22	792.72	1,319.82	1,275.86	43.96	30.023	
7,300.00	7,183.17	7,302.49	7,183.17	24.72	25.27	179.55	-646.22	792.72	1,319.82	1,275.56	44.26	29.820	
7,400.00	7,283.17	7,402.49	7,283.17	24.86	25.40	179.55	-646.22	792.72	1,319.82	1,275.26	44.56	29.618	
7,500.00	7,383.17	7,502.49	7,383.17	25.00	25.53	179.55	-646.22	792.72	1,319.82	1,274.95	44.87	29.416	
7,600.00	7,483.17	7,602.49	7,483.17	25.14	25.65	179.55	-646.22	792.72	1,319.82	1,274.64	45.17	29.216	
7,700.00	7,583.17	7,702.49	7,583.17	25.28	25.78	179.55	-646.22	792.72	1,319.82	1,274.34	45.48	29.017	
7,800.00	7,683.17	7,802.49	7,683.17	25.43	25.92	179.55	-646.22	792.72	1,319.82	1,274.02	45.80	28.820	
7,900.00	7,783.17	7,902.49	7,783.17	25.57	26.05	179.55	-646.22	792.72	1,319.82	1,273.71	46.11	28.624	
8,000.00	7,883.17	8,002.49	7,883.17	25.72	26.18	179.55	-646.22	792.72	1,319.82	1,273.39	46.43	28.429	
8,100.00	7,983.17	8,102.49	7,983.17	25.87	26.32	179.55	-646.22	792.72	1,319.82	1,273.07	46.74	28.235	
8,200.00	8,083.17	8,202.49	8,083.17	26.01	26.45	179.55	-646.22	792.72	1,319.82	1,272.75	47.07	28.042	
8,276.83	8,160.00	8,279.32	8,160.00	26.13	26.56	179.55	-646.22	792.72	1,319.82	1,272.51	47.31	27.896	

Company:	US ROCKIES REGION PLANNING	Local Co-ordinate Reference:	Well P_BROWN 3-2
Project:	COLORADO NORTHERN ZONE - 83	TVD Reference:	WELL @ 5158.00ft (Original Well Elev)
Reference Site:	WELD_JESSER 18-2 PAD	MD Reference:	WELL @ 5158.00ft (Original Well Elev)
Site Error:	0.00ft	North Reference:	True
Reference Well:	P_BROWN 3-2	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00ft	Output errors are at	2.00 sigma
Reference Wellbore	P_BROWN 3-2	Database:	EDM 2003.21 Single User Db
Reference Design:	PLAN #1 3-16-10 RHS	Offset TVD Reference:	Offset Datum

Offset Design WELD_JESSER 18-2 PAD - P_BROWN 6-2S - P_BROWN 6-2S - PLAN #1 3-16-10 RHS												Offset Site Error:	0.00 ft
Survey Program: 0-MWD												Offset Well Error:	0.00 ft
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	-90.55	-0.38	-40.01	40.01				
100.00	100.00	100.00	100.00	0.10	0.10	-90.55	-0.38	-40.01	40.01	39.82	0.19	209.444	
200.00	200.00	200.00	200.00	0.32	0.32	-90.55	-0.38	-40.01	40.01	39.37	0.64	62.466	
300.00	300.00	300.00	300.00	0.55	0.55	-90.55	-0.38	-40.01	40.01	38.92	1.09	36.707	
400.00	400.00	400.00	400.00	0.77	0.77	-90.55	-0.38	-40.01	40.01	38.47	1.54	25.989	
500.00	500.00	500.00	500.00	0.99	0.99	-90.55	-0.38	-40.01	40.01	38.03	1.99	20.116	
600.00	600.00	600.00	600.00	1.22	1.22	-90.55	-0.38	-40.01	40.01	37.58	2.44	16.408	
700.00	700.00	700.00	700.00	1.44	1.44	-90.55	-0.38	-40.01	40.01	37.13	2.89	13.854	
800.00	800.00	800.00	800.00	1.67	1.67	-90.55	-0.38	-40.01	40.01	36.68	3.34	11.988	
900.00	900.00	900.00	900.00	1.89	1.89	-90.55	-0.38	-40.01	40.01	36.23	3.79	10.565	
1,000.00	1,000.00	1,000.00	1,000.00	2.12	2.12	-90.55	-0.38	-40.01	40.01	35.78	4.24	9.444	
1,100.00	1,100.00	1,100.00	1,100.00	2.34	2.34	-90.55	-0.38	-40.01	40.01	35.33	4.69	8.538	
1,200.00	1,200.00	1,200.00	1,200.00	2.57	2.57	-90.55	-0.38	-40.01	40.01	34.88	5.14	7.791	
1,300.00	1,300.00	1,300.00	1,300.00	2.79	2.79	-90.55	-0.38	-40.01	40.01	34.43	5.59	7.164 CC, ES	
1,400.00	1,399.98	1,400.64	1,400.62	3.01	2.99	-142.85	-1.39	-39.15	40.56	34.55	6.00	6.756	
1,500.00	1,499.84	1,501.01	1,500.92	3.23	3.18	-151.33	-4.39	-36.57	42.82	36.43	6.39	6.701 SF	
1,600.00	1,599.45	1,600.86	1,600.55	3.46	3.37	-163.15	-9.37	-32.30	48.36	41.58	6.78	7.135	
1,700.00	1,698.70	1,699.94	1,699.21	3.70	3.57	-175.17	-16.26	-26.39	58.69	51.52	7.17	8.183	
1,800.00	1,797.47	1,797.99	1,796.58	3.96	3.79	174.83	-24.98	-18.90	74.45	66.86	7.58	9.820	
1,900.00	1,895.62	1,894.80	1,892.40	4.25	4.03	167.30	-35.46	-9.92	95.51	87.50	8.01	11.921	
1,980.98	1,974.58	1,972.12	1,968.65	4.52	4.24	162.74	-45.14	-1.61	116.22	107.83	8.38	13.866	
2,000.00	1,993.07	1,990.14	1,986.39	4.59	4.29	161.85	-47.57	0.48	121.47	112.99	8.48	14.324	
2,100.00	2,090.26	2,084.37	2,078.87	4.96	4.58	157.70	-61.29	12.25	149.98	140.95	9.03	16.614	
2,200.00	2,187.45	2,177.64	2,169.94	5.34	4.90	154.19	-76.56	25.36	179.98	170.37	9.61	18.725	
2,300.00	2,284.63	2,269.86	2,259.47	5.75	5.25	151.13	-93.32	39.74	211.52	201.29	10.23	20.674	
2,400.00	2,381.82	2,360.93	2,347.34	6.17	5.64	148.40	-111.48	55.32	244.63	233.75	10.88	22.477	
2,500.00	2,479.01	2,450.78	2,433.45	6.59	6.06	145.94	-130.95	72.02	279.36	267.79	11.57	24.154	
2,600.00	2,576.20	2,540.29	2,518.63	7.03	6.52	143.69	-151.82	89.93	315.69	303.42	12.27	25.719	
2,700.00	2,673.39	2,632.55	2,606.23	7.48	7.02	141.75	-173.80	108.79	352.78	339.76	13.02	27.102	
2,800.00	2,770.57	2,724.82	2,693.83	7.93	7.54	140.18	-195.78	127.64	390.15	376.38	13.77	28.336	
2,900.00	2,867.76	2,817.08	2,781.44	8.38	8.07	138.87	-217.75	146.50	427.74	413.21	14.53	29.438	
3,000.00	2,964.95	2,909.35	2,869.04	8.84	8.61	137.78	-239.73	165.36	465.48	450.19	15.30	30.426	
3,100.00	3,062.14	3,001.61	2,956.64	9.31	9.16	136.85	-261.70	184.22	503.35	487.28	16.07	31.314	
3,200.00	3,159.33	3,093.88	3,044.24	9.78	9.71	136.05	-283.68	203.07	541.32	524.47	16.86	32.114	
3,300.00	3,256.52	3,186.14	3,131.85	10.25	10.28	135.36	-305.66	221.93	579.37	561.72	17.64	32.838	
3,400.00	3,353.70	3,278.41	3,219.45	10.72	10.84	134.75	-327.63	240.79	617.48	599.04	18.43	33.497	
3,500.00	3,450.89	3,370.67	3,307.05	11.19	11.42	134.21	-349.61	259.64	655.64	636.41	19.23	34.097	
3,600.00	3,548.08	3,462.94	3,394.65	11.67	11.99	133.73	-371.59	278.50	693.85	673.82	20.03	34.645	
3,700.00	3,645.27	3,555.20	3,482.26	12.15	12.57	133.30	-393.56	297.36	732.10	711.27	20.83	35.148	
3,800.00	3,742.46	3,647.47	3,569.86	12.63	13.15	132.91	-415.54	316.21	770.37	748.74	21.63	35.611	
3,900.00	3,839.64	3,739.73	3,657.46	13.11	13.73	132.56	-437.52	335.07	808.68	786.24	22.44	36.038	
4,000.00	3,936.83	3,832.00	3,745.07	13.59	14.32	132.24	-459.49	353.93	847.01	823.76	23.25	36.433	
4,100.00	4,034.02	3,924.26	3,832.67	14.07	14.91	131.95	-481.47	372.78	885.35	861.30	24.06	36.799	
4,200.00	4,131.21	4,016.53	3,920.27	14.56	15.50	131.68	-503.45	391.64	923.72	898.85	24.87	37.140	
4,300.00	4,228.40	4,108.79	4,007.87	15.04	16.09	131.44	-525.42	410.50	962.10	936.42	25.69	37.457	
4,400.00	4,325.58	4,201.06	4,095.48	15.53	16.68	131.21	-547.40	429.36	1,000.50	974.00	26.50	37.753	
4,500.00	4,422.77	4,293.32	4,183.08	16.01	17.27	131.00	-569.38	448.21	1,038.91	1,011.59	27.32	38.029	
4,600.00	4,519.96	4,385.59	4,270.68	16.50	17.87	130.80	-591.35	467.07	1,077.33	1,049.19	28.14	38.289	
4,700.00	4,617.15	4,477.85	4,358.28	16.99	18.46	130.62	-613.33	485.93	1,115.76	1,086.80	28.96	38.532	
4,800.00	4,714.34	4,570.11	4,445.89	17.47	19.06	130.45	-635.31	504.78	1,154.20	1,124.42	29.78	38.761	
4,900.00	4,811.52	4,662.38	4,533.49	17.96	19.65	130.29	-657.28	523.64	1,192.64	1,162.05	30.60	38.977	
5,000.00	4,908.71	4,754.64	4,621.09	18.45	20.25	130.14	-679.26	542.50	1,231.10	1,199.68	31.42	39.180	

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_BROWN 3-2
Project:	COLORADO NORTHERN ZONE - 83	TVD Reference:	WELL @ 5158.00ft (Original Well Elev)
Reference Site:	WELD_JESSER 18-2 PAD	MD Reference:	WELL @ 5158.00ft (Original Well Elev)
Site Error:	0.00ft	North Reference:	True
Reference Well:	P_BROWN 3-2	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00ft	Output errors are at	2.00 sigma
Reference Wellbore	P_BROWN 3-2	Database:	EDM 2003.21 Single User Db
Reference Design:	PLAN #1 3-16-10 RHS	Offset TVD Reference:	Offset Datum

Offset Design WELD_JESSER 18-2 PAD - P_BROWN 6-2S - P_BROWN 6-2S - PLAN #1 3-16-10 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	5,005.90	4,846.91	4,708.70	18.94	20.85	130.00	-701.24	561.35	1,269.56	1,237.32	32.24	39.373	
5,200.00	5,103.09	4,939.17	4,796.30	19.43	21.45	129.87	-723.21	580.21	1,308.03	1,274.96	33.07	39.555	
5,300.00	5,200.28	5,031.44	4,883.90	19.92	22.05	129.75	-745.19	599.07	1,346.50	1,312.61	33.89	39.728	
5,400.00	5,297.46	5,123.70	4,971.50	20.41	22.65	129.63	-767.17	617.92	1,384.98	1,350.26	34.72	39.891	
5,500.00	5,394.65	5,215.97	5,059.11	20.90	23.25	129.52	-789.14	636.78	1,423.46	1,387.92	35.54	40.047	
5,600.00	5,491.84	5,250.61	5,092.00	21.39	23.47	129.48	-797.39	643.86	1,463.08	1,426.96	36.12	40.509	
5,680.85	5,570.42	5,250.61	5,092.00	21.79	23.47	129.48	-797.39	643.86	1,498.91	1,462.45	36.46	41.114	
5,700.00	5,589.04	5,250.61	5,092.00	21.87	23.47	129.64	-797.39	643.86	1,507.87	1,471.31	36.56	41.240	
5,800.00	5,686.77	5,250.61	5,092.00	22.23	23.47	130.49	-797.39	643.86	1,556.51	1,519.47	37.04	42.022	
5,900.00	5,785.17	5,250.61	5,092.00	22.55	23.47	131.39	-797.39	643.86	1,608.00	1,570.53	37.47	42.913	
6,000.00	5,884.13	5,250.61	5,092.00	22.82	23.47	132.35	-797.39	643.86	1,662.01	1,624.16	37.85	43.909	
6,100.00	5,983.54	5,250.61	5,092.00	23.06	23.47	133.35	-797.39	643.86	1,718.26	1,680.08	38.18	45.004	
6,200.00	6,083.26	5,250.61	5,092.00	23.25	23.47	134.38	-797.39	643.86	1,776.45	1,737.99	38.45	46.196	
6,300.00	6,183.18	5,250.61	5,092.00	23.41	23.47	135.44	-797.39	643.86	1,836.34	1,797.66	38.67	47.483	
6,361.83	6,245.00	5,250.61	5,092.00	23.48	23.47	-174.62	-797.39	643.86	1,874.11	1,835.33	38.78	48.327	
6,400.00	6,283.17	5,250.61	5,092.00	23.53	23.47	-174.62	-797.39	643.86	1,897.84	1,859.00	38.83	48.873	
6,500.00	6,383.17	5,250.61	5,092.00	23.65	23.47	-174.62	-797.39	643.86	1,962.14	1,923.16	38.98	50.331	
6,600.00	6,483.17	5,250.61	5,092.00	23.78	23.47	-174.62	-797.39	643.86	2,029.35	1,990.21	39.14	51.851	
6,700.00	6,583.17	5,250.61	5,092.00	23.91	23.47	-174.62	-797.39	643.86	2,099.16	2,059.87	39.29	53.423	
6,800.00	6,683.17	5,250.61	5,092.00	24.04	23.47	-174.62	-797.39	643.86	2,171.34	2,131.89	39.45	55.041	
6,900.00	6,783.17	5,250.61	5,092.00	24.17	23.47	-174.62	-797.39	643.86	2,245.65	2,206.04	39.61	56.698	
7,000.00	6,883.17	5,250.61	5,092.00	24.31	23.47	-174.62	-797.39	643.86	2,321.89	2,282.13	39.77	58.389	
7,100.00	6,983.17	5,250.61	5,092.00	24.44	23.47	-174.62	-797.39	643.86	2,399.88	2,359.95	39.93	60.108	
7,200.00	7,083.17	5,250.61	5,092.00	24.58	23.47	-174.62	-797.39	643.86	2,479.45	2,439.36	40.09	61.851	
7,300.00	7,183.17	5,250.61	5,092.00	24.72	23.47	-174.62	-797.39	643.86	2,560.45	2,520.20	40.25	63.614	
7,400.00	7,283.17	5,250.61	5,092.00	24.86	23.47	-174.62	-797.39	643.86	2,642.75	2,602.34	40.41	65.393	
7,500.00	7,383.17	5,250.61	5,092.00	25.00	23.47	-174.62	-797.39	643.86	2,726.23	2,685.66	40.58	67.185	
7,600.00	7,483.17	5,250.61	5,092.00	25.14	23.47	-174.62	-797.39	643.86	2,810.80	2,770.06	40.74	68.987	
7,700.00	7,583.17	5,250.61	5,092.00	25.28	23.47	-174.62	-797.39	643.86	2,896.35	2,855.44	40.91	70.797	
7,800.00	7,683.17	5,250.61	5,092.00	25.43	23.47	-174.62	-797.39	643.86	2,982.79	2,941.72	41.08	72.612	
7,900.00	7,783.17	5,250.61	5,092.00	25.57	23.47	-174.62	-797.39	643.86	3,070.06	3,028.82	41.25	74.431	
8,000.00	7,883.17	5,250.61	5,092.00	25.72	23.47	-174.62	-797.39	643.86	3,158.09	3,116.67	41.42	76.251	
8,100.00	7,983.17	5,250.61	5,092.00	25.87	23.47	-174.62	-797.39	643.86	3,246.81	3,205.22	41.59	78.071	
8,200.00	8,083.17	5,250.61	5,092.00	26.01	23.47	-174.62	-797.39	643.86	3,336.17	3,294.41	41.76	79.890	
8,276.83	8,160.00	5,250.61	5,092.00	26.13	23.47	-174.62	-797.39	643.86	3,405.22	3,363.33	41.89	81.286	

Company:	US ROCKIES REGION PLANNING	Local Co-ordinate Reference:	Well P_BROWN 3-2
Project:	COLORADO NORTHERN ZONE - 83	TVD Reference:	WELL @ 5158.00ft (Original Well Elev)
Reference Site:	WELD_JESSER 18-2 PAD	MD Reference:	WELL @ 5158.00ft (Original Well Elev)
Site Error:	0.00ft	North Reference:	True
Reference Well:	P_BROWN 3-2	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00ft	Output errors are at	2.00 sigma
Reference Wellbore	P_BROWN 3-2	Database:	EDM 2003.21 Single User Db
Reference Design:	PLAN #1 3-16-10 RHS	Offset TVD Reference:	Offset Datum

Offset Design WELD_JESSER 18-2 PAD - P_JESSER 21-2 - P_JESSER 21-2 - PLAN #1 3-16-10 RHS												Offset Site Error:	0.00 ft
Survey Program: 0-MWD												Offset Well Error:	0.00 ft
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Semi Major Axis 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	90.03	-0.02	29.94	29.94				
100.00	100.00	100.00	100.00	0.10	0.10	90.03	-0.02	29.94	29.94	29.75	0.19	156.709	
200.00	200.00	200.00	200.00	0.32	0.32	90.03	-0.02	29.94	29.94	29.30	0.64	46.738	
300.00	300.00	300.00	300.00	0.55	0.55	90.03	-0.02	29.94	29.94	28.85	1.09	27.465	
400.00	400.00	400.00	400.00	0.77	0.77	90.03	-0.02	29.94	29.94	28.40	1.54	19.446	
500.00	500.00	500.00	500.00	0.99	0.99	90.03	-0.02	29.94	29.94	27.95	1.99	15.051	
600.00	600.00	600.00	600.00	1.22	1.22	90.03	-0.02	29.94	29.94	27.50	2.44	12.277	
700.00	700.00	700.00	700.00	1.44	1.44	90.03	-0.02	29.94	29.94	27.05	2.89	10.366	
800.00	800.00	800.00	800.00	1.67	1.67	90.03	-0.02	29.94	29.94	26.60	3.34	8.970	
900.00	900.00	900.00	900.00	1.89	1.89	90.03	-0.02	29.94	29.94	26.15	3.79	7.905	
1,000.00	1,000.00	1,000.00	1,000.00	2.12	2.12	90.03	-0.02	29.94	29.94	25.70	4.24	7.066	
1,100.00	1,100.00	1,100.00	1,100.00	2.34	2.34	90.03	-0.02	29.94	29.94	25.25	4.69	6.389	
1,200.00	1,200.00	1,200.00	1,200.00	2.57	2.57	90.03	-0.02	29.94	29.94	24.80	5.14	5.829	
1,300.00	1,300.00	1,300.00	1,300.00	2.79	2.79	90.03	-0.02	29.94	29.94	24.35	5.59	5.360 CC, ES	
1,400.00	1,399.98	1,398.95	1,398.93	3.01	3.00	43.06	-0.11	31.65	30.37	24.36	6.01	5.052	
1,500.00	1,499.84	1,497.80	1,497.65	3.23	3.20	49.53	-0.40	36.75	31.93	25.51	6.42	4.976 SF	
1,600.00	1,599.45	1,596.46	1,595.93	3.46	3.41	58.78	-0.87	45.24	35.33	28.49	6.84	5.168	
1,700.00	1,698.70	1,694.82	1,693.57	3.70	3.64	68.74	-1.53	57.06	41.31	34.03	7.28	5.673	
1,800.00	1,797.47	1,792.80	1,790.37	3.96	3.90	77.66	-2.38	72.15	50.32	42.54	7.77	6.473	
1,900.00	1,895.62	1,890.30	1,886.13	4.25	4.18	84.79	-3.40	90.45	62.43	54.10	8.32	7.499	
1,980.98	1,974.58	1,968.85	1,962.79	4.52	4.45	89.27	-4.35	107.54	74.43	65.60	8.83	8.432	
2,000.00	1,993.07	1,987.24	1,980.67	4.59	4.51	90.19	-4.59	111.85	77.53	68.58	8.95	8.662	
2,100.00	2,090.26	2,083.66	2,073.93	4.96	4.88	93.11	-5.96	136.29	95.30	85.67	9.64	9.890	
2,200.00	2,187.45	2,179.43	2,165.68	5.34	5.31	93.82	-7.49	163.66	115.28	104.91	10.37	11.116	
2,300.00	2,284.63	2,275.44	2,256.78	5.75	5.79	93.32	-9.18	193.92	137.15	126.00	11.15	12.305	
2,400.00	2,381.82	2,372.92	2,349.08	6.17	6.32	92.78	-10.93	225.22	159.42	147.45	11.96	13.325	
2,500.00	2,479.01	2,470.40	2,441.38	6.59	6.87	92.37	-12.68	256.53	181.70	168.89	12.81	14.186	
2,600.00	2,576.20	2,567.88	2,533.68	7.03	7.44	92.05	-14.42	287.83	203.99	190.31	13.67	14.917	
2,700.00	2,673.39	2,665.35	2,625.98	7.48	8.02	91.79	-16.17	319.13	226.28	211.72	14.56	15.543	
2,800.00	2,770.57	2,762.83	2,718.28	7.93	8.61	91.58	-17.92	350.43	248.58	233.12	15.46	16.081	
2,900.00	2,867.76	2,860.31	2,810.58	8.38	9.22	91.40	-19.67	381.74	270.88	254.51	16.37	16.549	
3,000.00	2,964.95	2,957.79	2,902.88	8.84	9.83	91.25	-21.42	413.04	293.18	275.89	17.29	16.956	
3,100.00	3,062.14	3,055.27	2,995.18	9.31	10.44	91.13	-23.17	444.34	315.48	297.26	18.22	17.314	
3,200.00	3,159.33	3,152.75	3,087.48	9.78	11.06	91.01	-24.92	475.65	337.79	318.63	19.16	17.631	
3,300.00	3,256.52	3,250.23	3,179.77	10.25	11.68	90.92	-26.67	506.95	360.09	339.99	20.10	17.912	
3,400.00	3,353.70	3,347.71	3,272.07	10.72	12.31	90.83	-28.42	538.25	382.40	361.35	21.05	18.163	
3,500.00	3,450.89	3,445.19	3,364.37	11.19	12.94	90.75	-30.16	569.56	404.71	382.70	22.01	18.389	
3,600.00	3,548.08	3,542.66	3,456.67	11.67	13.58	90.69	-31.91	600.86	427.01	404.05	22.97	18.592	
3,700.00	3,645.27	3,640.14	3,548.97	12.15	14.21	90.62	-33.66	632.16	449.32	425.39	23.93	18.776	
3,800.00	3,742.46	3,737.62	3,641.27	12.63	14.85	90.57	-35.41	663.46	471.63	446.73	24.90	18.943	
3,900.00	3,839.64	3,835.10	3,733.57	13.11	15.49	90.52	-37.16	694.77	493.94	468.07	25.87	19.096	
4,000.00	3,936.83	3,932.58	3,825.87	13.59	16.13	90.47	-38.91	726.07	516.25	489.41	26.84	19.236	
4,100.00	4,034.02	4,030.06	3,918.17	14.07	16.77	90.43	-40.66	757.37	538.56	510.75	27.81	19.364	
4,200.00	4,131.21	4,127.54	4,010.47	14.56	17.42	90.39	-42.41	788.68	560.87	532.08	28.79	19.482	
4,300.00	4,228.40	4,225.02	4,102.77	15.04	18.06	90.35	-44.16	819.98	583.18	553.41	29.77	19.592	
4,400.00	4,325.58	4,322.50	4,195.07	15.53	18.71	90.32	-45.90	851.28	605.49	574.74	30.75	19.693	
4,500.00	4,422.77	4,419.97	4,287.37	16.01	19.35	90.29	-47.65	882.58	627.80	596.07	31.73	19.787	
4,600.00	4,519.96	4,517.45	4,379.67	16.50	20.00	90.26	-49.40	913.89	650.11	617.40	32.71	19.875	
4,700.00	4,617.15	4,614.93	4,471.97	16.99	20.65	90.23	-51.15	945.19	672.42	638.73	33.69	19.956	
4,800.00	4,714.34	4,712.41	4,564.27	17.47	21.30	90.21	-52.90	976.49	694.73	660.05	34.68	20.033	
4,900.00	4,811.52	4,809.89	4,656.57	17.96	21.95	90.18	-54.65	1,007.80	717.04	681.38	35.67	20.104	
5,000.00	4,908.71	4,907.37	4,748.87	18.45	22.60	90.16	-56.40	1,039.10	739.35	702.70	36.65	20.171	

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_BROWN 3-2
Project:	COLORADO NORTHERN ZONE - 83	TVD Reference:	WELL @ 5158.00ft (Original Well Elev)
Reference Site:	WELD_JESSER 18-2 PAD	MD Reference:	WELL @ 5158.00ft (Original Well Elev)
Site Error:	0.00ft	North Reference:	True
Reference Well:	P_BROWN 3-2	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00ft	Output errors are at	2.00 sigma
Reference Wellbore	P_BROWN 3-2	Database:	EDM 2003.21 Single User Db
Reference Design:	PLAN #1 3-16-10 RHS	Offset TVD Reference:	Offset Datum

Offset Design WELD_JESSER 18-2 PAD - P_JESSER 21-2 - P_JESSER 21-2 - PLAN #1 3-16-10 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	5,005.90	5,004.85	4,841.17	18.94	23.25	90.14	-58.15	1,070.40	761.67	724.02	37.64	20.234	
5,200.00	5,103.09	5,102.33	4,933.47	19.43	23.90	90.12	-59.90	1,101.71	783.98	745.35	38.63	20.294	
5,300.00	5,200.28	5,199.81	5,025.76	19.92	24.55	90.10	-61.64	1,133.01	806.29	766.67	39.62	20.350	
5,400.00	5,297.46	5,297.28	5,118.06	20.41	25.20	90.08	-63.39	1,164.31	828.60	787.99	40.61	20.403	
5,500.00	5,394.65	5,394.76	5,210.36	20.90	25.85	90.07	-65.14	1,195.61	850.91	809.31	41.60	20.453	
5,600.00	5,491.84	5,492.24	5,302.66	21.39	26.51	90.05	-66.89	1,226.92	873.22	830.63	42.60	20.501	
5,680.85	5,570.42	5,576.00	5,382.01	21.79	27.05	90.04	-68.39	1,253.72	891.21	847.80	43.41	20.529	
5,700.00	5,589.04	5,599.68	5,404.52	21.87	27.19	90.13	-68.80	1,261.05	895.33	851.70	43.62	20.524	
5,800.00	5,686.77	5,724.21	5,523.87	22.23	27.77	90.54	-70.78	1,296.51	915.11	870.56	44.55	20.540	
5,900.00	5,785.17	5,850.13	5,646.00	22.55	28.28	90.87	-72.49	1,327.06	931.97	886.59	45.38	20.537	
6,000.00	5,884.13	5,977.24	5,770.53	22.82	28.73	91.11	-73.90	1,352.43	945.84	899.74	46.10	20.517	
6,100.00	5,983.54	6,105.33	5,897.04	23.06	29.10	91.28	-75.02	1,372.40	956.66	909.95	46.71	20.481	
6,200.00	6,083.26	6,234.19	6,025.09	23.25	29.39	91.37	-75.82	1,386.77	964.40	917.20	47.20	20.433	
6,300.00	6,183.18	6,363.58	6,154.18	23.41	29.61	91.38	-76.30	1,395.40	969.01	921.43	47.58	20.367	
6,361.83	6,245.00	6,443.74	6,234.30	23.48	29.71	140.63	-76.44	1,397.83	970.29	922.54	47.75	20.319	
6,400.00	6,283.17	6,492.62	6,283.17	23.53	29.76	140.61	-76.46	1,398.21	970.49	922.64	47.85	20.281	
6,500.00	6,383.17	6,592.62	6,383.17	23.65	29.86	140.61	-76.46	1,398.21	970.49	922.39	48.10	20.178	
6,600.00	6,483.17	6,692.62	6,483.17	23.78	29.96	140.61	-76.46	1,398.21	970.49	922.14	48.34	20.075	
6,700.00	6,583.17	6,792.62	6,583.17	23.91	30.06	140.61	-76.46	1,398.21	970.49	921.89	48.59	19.971	
6,800.00	6,683.17	6,892.62	6,683.17	24.04	30.17	140.61	-76.46	1,398.21	970.49	921.64	48.85	19.867	
6,900.00	6,783.17	6,992.62	6,783.17	24.17	30.27	140.61	-76.46	1,398.21	970.49	921.38	49.10	19.764	
7,000.00	6,883.17	7,092.62	6,883.17	24.31	30.38	140.61	-76.46	1,398.21	970.49	921.12	49.36	19.660	
7,100.00	6,983.17	7,192.62	6,983.17	24.44	30.49	140.61	-76.46	1,398.21	970.49	920.86	49.63	19.556	
7,200.00	7,083.17	7,292.62	7,083.17	24.58	30.59	140.61	-76.46	1,398.21	970.49	920.60	49.89	19.453	
7,300.00	7,183.17	7,392.62	7,183.17	24.72	30.71	140.61	-76.46	1,398.21	970.49	920.33	50.16	19.349	
7,400.00	7,283.17	7,492.62	7,283.17	24.86	30.82	140.61	-76.46	1,398.21	970.49	920.06	50.43	19.245	
7,500.00	7,383.17	7,592.62	7,383.17	25.00	30.93	140.61	-76.46	1,398.21	970.49	919.79	50.70	19.142	
7,600.00	7,483.17	7,692.62	7,483.17	25.14	31.04	140.61	-76.46	1,398.21	970.49	919.51	50.97	19.039	
7,700.00	7,583.17	7,792.62	7,583.17	25.28	31.16	140.61	-76.46	1,398.21	970.49	919.24	51.25	18.936	
7,800.00	7,683.17	7,892.62	7,683.17	25.43	31.28	140.61	-76.46	1,398.21	970.49	918.96	51.53	18.833	
7,900.00	7,783.17	7,992.62	7,783.17	25.57	31.39	140.61	-76.46	1,398.21	970.49	918.68	51.81	18.730	
8,000.00	7,883.17	8,092.62	7,883.17	25.72	31.51	140.61	-76.46	1,398.21	970.49	918.39	52.10	18.628	
8,100.00	7,983.17	8,192.62	7,983.17	25.87	31.63	140.61	-76.46	1,398.21	970.49	918.10	52.38	18.526	
8,200.00	8,083.17	8,292.62	8,083.17	26.01	31.76	140.61	-76.46	1,398.21	970.49	917.82	52.67	18.425	
8,276.83	8,160.00	8,369.45	8,160.00	26.13	31.85	140.61	-76.46	1,398.21	970.49	917.59	52.90	18.347	

Company:	US ROCKIES REGION PLANNING	Local Co-ordinate Reference:	Well P_BROWN 3-2
Project:	COLORADO NORTHERN ZONE - 83	TVD Reference:	WELL @ 5158.00ft (Original Well Elev)
Reference Site:	WELD_JESSER 18-2 PAD	MD Reference:	WELL @ 5158.00ft (Original Well Elev)
Site Error:	0.00ft	North Reference:	True
Reference Well:	P_BROWN 3-2	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00ft	Output errors are at	2.00 sigma
Reference Wellbore	P_BROWN 3-2	Database:	EDM 2003.21 Single User Db
Reference Design:	PLAN #1 3-16-10 RHS	Offset TVD Reference:	Offset Datum

Offset Design WELD_JESSER 18-2 PAD - P_JESSER 28-2 - P_JESSER 28-2 - PLAN #1 3-16-10 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	90.17	-0.03	9.79	9.79				
100.00	100.00	100.00	100.00	0.10	0.10	90.17	-0.03	9.79	9.79	9.60	0.19	51.260	
200.00	200.00	200.00	200.00	0.32	0.32	90.17	-0.03	9.79	9.79	9.15	0.64	15.288	
300.00	300.00	300.00	300.00	0.55	0.55	90.17	-0.03	9.79	9.79	8.70	1.09	8.984	
400.00	400.00	400.00	400.00	0.77	0.77	90.17	-0.03	9.79	9.79	8.25	1.54	6.361	
500.00	500.00	500.00	500.00	0.99	0.99	90.17	-0.03	9.79	9.79	7.80	1.99	4.923	
600.00	600.00	600.00	600.00	1.22	1.22	90.17	-0.03	9.79	9.79	7.35	2.44	4.016	
700.00	700.00	700.00	700.00	1.44	1.44	90.17	-0.03	9.79	9.79	6.91	2.89	3.391	
800.00	800.00	800.00	800.00	1.67	1.67	90.17	-0.03	9.79	9.79	6.46	3.34	2.934	
900.00	900.00	900.00	900.00	1.89	1.89	90.17	-0.03	9.79	9.79	6.01	3.79	2.586	
1,000.00	1,000.00	1,000.00	1,000.00	2.12	2.12	90.17	-0.03	9.79	9.79	5.56	4.24	2.311	
1,100.00	1,100.00	1,100.00	1,100.00	2.34	2.34	90.17	-0.03	9.79	9.79	5.11	4.69	2.090	
1,200.00	1,200.00	1,200.00	1,200.00	2.57	2.57	90.17	-0.03	9.79	9.79	4.66	5.14	1.907	
1,300.00	1,300.00	1,300.00	1,300.00	2.79	2.79	90.17	-0.03	9.79	9.79	4.21	5.59	1.753 CC	
1,400.00	1,399.98	1,399.74	1,399.72	3.01	3.01	41.08	1.08	11.13	9.81	3.79	6.02	1.630	
1,500.00	1,499.84	1,499.48	1,499.31	3.23	3.23	41.60	4.39	15.15	9.87	3.43	6.44	1.532	
1,600.00	1,599.45	1,599.21	1,598.67	3.46	3.46	42.46	9.91	21.83	9.97	3.10	6.87	1.452 Level 3	
1,700.00	1,698.70	1,698.95	1,697.67	3.70	3.69	43.63	17.63	31.18	10.12	2.81	7.31	1.385 Level 3	
1,800.00	1,797.47	1,798.69	1,796.18	3.96	3.96	45.09	27.54	43.18	10.31	2.54	7.77	1.327 Level 3	
1,900.00	1,895.62	1,898.44	1,894.09	4.25	4.25	46.79	39.62	57.81	10.56	2.29	8.27	1.276 Level 3	
1,980.98	1,974.58	1,979.21	1,972.86	4.52	4.52	48.32	51.00	71.59	10.79	2.07	8.72	1.238 Level 2	
2,000.00	1,993.07	1,998.18	1,991.29	4.59	4.58	48.45	53.87	75.07	10.90	2.06	8.83	1.234 Level 2, ES, SF	
2,100.00	2,090.26	2,097.86	2,087.58	4.96	4.97	42.27	70.26	94.91	12.92	3.57	9.35	1.381 Level 3	
2,200.00	2,187.45	2,197.25	2,182.65	5.34	5.40	31.20	88.71	117.26	17.96	8.19	9.76	1.839	
2,300.00	2,284.63	2,296.13	2,276.18	5.75	5.90	22.11	109.14	141.99	26.56	16.39	10.17	2.612	
2,400.00	2,381.82	2,394.26	2,367.84	6.17	6.45	16.11	131.43	168.99	38.80	28.18	10.62	3.653	
2,500.00	2,479.01	2,491.42	2,457.37	6.59	7.07	12.29	155.46	198.09	54.57	43.46	11.11	4.912	
2,600.00	2,576.20	2,588.72	2,545.90	7.03	7.75	9.82	181.16	229.22	73.28	61.66	11.63	6.303	
2,700.00	2,673.39	2,686.85	2,635.04	7.48	8.46	8.31	207.29	260.86	92.42	80.26	12.17	7.597	
2,800.00	2,770.57	2,784.98	2,724.18	7.93	9.19	7.32	233.41	292.49	111.60	98.88	12.72	8.774	
2,900.00	2,867.76	2,883.10	2,813.32	8.38	9.94	6.62	259.53	324.13	130.80	117.52	13.28	9.847	
3,000.00	2,964.95	2,981.23	2,902.46	8.84	10.70	6.10	285.66	355.77	150.02	136.17	13.85	10.828	
3,100.00	3,062.14	3,079.36	2,991.59	9.31	11.47	5.70	311.78	387.41	169.25	154.81	14.43	11.727	
3,200.00	3,159.33	3,177.49	3,080.73	9.78	12.24	5.38	337.91	419.04	188.48	173.46	15.02	12.553	
3,300.00	3,256.52	3,275.62	3,169.87	10.25	13.03	5.12	364.03	450.68	207.71	192.11	15.60	13.312	
3,400.00	3,353.70	3,373.75	3,259.01	10.72	13.81	4.90	390.16	482.32	226.95	210.76	16.20	14.014	
3,500.00	3,450.89	3,471.87	3,348.15	11.19	14.61	4.72	416.28	513.96	246.20	229.40	16.79	14.662	
3,600.00	3,548.08	3,570.00	3,437.29	11.67	15.40	4.56	442.41	545.59	265.44	248.05	17.39	15.264	
3,700.00	3,645.27	3,668.13	3,526.43	12.15	16.20	4.43	468.53	577.23	284.69	266.69	17.99	15.823	
3,800.00	3,742.46	3,766.26	3,615.57	12.63	17.00	4.31	494.66	608.87	303.93	285.34	18.60	16.343	
3,900.00	3,839.64	3,864.39	3,704.71	13.11	17.81	4.20	520.78	640.51	323.18	303.98	19.20	16.829	
4,000.00	3,936.83	3,962.52	3,793.84	13.59	18.61	4.11	546.91	672.14	342.43	322.62	19.81	17.283	
4,100.00	4,034.02	4,060.64	3,882.98	14.07	19.42	4.03	573.03	703.78	361.68	341.26	20.42	17.709	
4,200.00	4,131.21	4,158.77	3,972.12	14.56	20.23	3.96	599.15	735.42	380.93	359.90	21.04	18.108	
4,300.00	4,228.40	4,256.90	4,061.26	15.04	21.04	3.89	625.28	767.06	400.19	378.53	21.65	18.484	
4,400.00	4,325.58	4,355.03	4,150.40	15.53	21.86	3.83	651.40	798.69	419.44	397.17	22.27	18.837	
4,500.00	4,422.77	4,453.16	4,239.54	16.01	22.67	3.77	677.53	830.33	438.69	415.81	22.88	19.170	
4,600.00	4,519.96	4,551.29	4,328.68	16.50	23.48	3.72	703.65	861.97	457.94	434.44	23.50	19.485	
4,700.00	4,617.15	4,649.42	4,417.82	16.99	24.30	3.67	729.78	893.61	477.20	453.07	24.12	19.783	
4,800.00	4,714.34	4,747.54	4,506.96	17.47	25.12	3.63	755.90	925.24	496.45	471.71	24.74	20.065	
4,900.00	4,811.52	4,845.67	4,596.10	17.96	25.93	3.59	782.03	956.88	515.70	490.34	25.36	20.333	
5,000.00	4,908.71	4,943.80	4,685.23	18.45	26.75	3.55	808.15	988.52	534.96	508.97	25.99	20.587	

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_BROWN 3-2
Project:	COLORADO NORTHERN ZONE - 83	TVD Reference:	WELL @ 5158.00ft (Original Well Elev)
Reference Site:	WELD_JESSER 18-2 PAD	MD Reference:	WELL @ 5158.00ft (Original Well Elev)
Site Error:	0.00ft	North Reference:	True
Reference Well:	P_BROWN 3-2	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00ft	Output errors are at	2.00 sigma
Reference Wellbore	P_BROWN 3-2	Database:	EDM 2003.21 Single User Db
Reference Design:	PLAN #1 3-16-10 RHS	Offset TVD Reference:	Offset Datum

Offset Design WELD_JESSER 18-2 PAD - P_JESSER 28-2 - P_JESSER 28-2 - PLAN #1 3-16-10 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	5,005.90	5,041.93	4,774.37	18.94	27.57	3.52	834.28	1,020.16	554.21	527.60	26.61	20.828	
5,200.00	5,103.09	5,140.06	4,863.51	19.43	28.39	3.49	860.40	1,051.79	573.46	546.23	27.23	21.058	
5,300.00	5,200.28	5,238.19	4,952.65	19.92	29.21	3.46	886.52	1,083.43	592.72	564.86	27.86	21.277	
5,400.00	5,297.46	5,336.31	5,041.79	20.41	30.03	3.43	912.65	1,115.07	611.97	583.49	28.48	21.486	
5,500.00	5,394.65	5,434.44	5,130.93	20.90	30.85	3.40	938.77	1,146.71	631.23	602.12	29.11	21.685	
5,600.00	5,491.84	5,532.57	5,220.07	21.39	31.67	3.38	964.90	1,178.34	650.48	620.75	29.73	21.876	
5,680.85	5,570.42	5,628.21	5,307.30	21.79	32.37	3.36	989.86	1,208.57	665.39	635.11	30.28	21.975	
5,700.00	5,589.04	5,652.81	5,329.93	21.87	32.52	3.36	996.00	1,216.00	668.60	638.20	30.40	21.995	
5,800.00	5,686.77	5,781.99	5,450.09	22.23	33.28	3.36	1,026.18	1,252.55	684.76	653.80	30.95	22.122	
5,900.00	5,785.17	5,912.31	5,573.35	22.55	33.98	3.35	1,053.10	1,285.16	699.89	668.45	31.44	22.260	
6,000.00	5,884.13	6,043.73	5,699.46	22.82	34.59	3.34	1,076.60	1,313.62	713.95	682.09	31.85	22.413	
6,100.00	5,983.54	6,176.17	5,828.14	23.06	35.13	3.33	1,096.54	1,337.77	726.90	694.71	32.20	22.578	
6,200.00	6,083.26	6,309.58	5,959.07	23.25	35.59	3.31	1,112.78	1,357.43	738.71	706.25	32.46	22.758	
6,300.00	6,183.18	6,443.87	6,091.93	23.41	35.95	3.29	1,125.18	1,372.45	749.35	716.70	32.65	22.954	
6,361.83	6,245.00	6,527.30	6,174.88	23.48	36.14	52.55	1,130.88	1,379.36	755.32	722.59	32.72	23.081	
6,400.00	6,283.17	6,578.99	6,226.39	23.53	36.24	52.54	1,133.65	1,382.70	758.52	725.64	32.88	23.068	
6,500.00	6,383.17	6,714.97	6,362.17	23.65	36.43	52.52	1,138.08	1,388.07	763.64	730.35	33.29	22.939	
6,600.00	6,483.17	6,835.98	6,483.17	23.78	36.54	52.51	1,138.77	1,388.91	764.44	730.77	33.66	22.709	
6,700.00	6,583.17	6,935.98	6,583.17	23.91	36.62	52.51	1,138.77	1,388.91	764.44	730.42	34.01	22.474	
6,800.00	6,683.17	7,035.98	6,683.17	24.04	36.71	52.51	1,138.77	1,388.91	764.44	730.07	34.37	22.242	
6,900.00	6,783.17	7,135.98	6,783.17	24.17	36.79	52.51	1,138.77	1,388.91	764.44	729.71	34.73	22.014	
7,000.00	6,883.17	7,235.98	6,883.17	24.31	36.88	52.51	1,138.77	1,388.91	764.44	729.35	35.08	21.789	
7,100.00	6,983.17	7,335.98	6,983.17	24.44	36.97	52.51	1,138.77	1,388.91	764.44	728.99	35.45	21.567	
7,200.00	7,083.17	7,435.98	7,083.17	24.58	37.06	52.51	1,138.77	1,388.91	764.44	728.63	35.81	21.348	
7,300.00	7,183.17	7,535.98	7,183.17	24.72	37.15	52.51	1,138.77	1,388.91	764.44	728.26	36.17	21.133	
7,400.00	7,283.17	7,635.98	7,283.17	24.86	37.24	52.51	1,138.77	1,388.91	764.44	727.90	36.54	20.921	
7,500.00	7,383.17	7,735.98	7,383.17	25.00	37.33	52.51	1,138.77	1,388.91	764.44	727.53	36.91	20.712	
7,600.00	7,483.17	7,835.98	7,483.17	25.14	37.43	52.51	1,138.77	1,388.91	764.44	727.16	37.28	20.507	
7,700.00	7,583.17	7,935.98	7,583.17	25.28	37.52	52.51	1,138.77	1,388.91	764.44	726.79	37.65	20.304	
7,800.00	7,683.17	8,035.98	7,683.17	25.43	37.62	52.51	1,138.77	1,388.91	764.44	726.41	38.02	20.105	
7,900.00	7,783.17	8,135.98	7,783.17	25.57	37.71	52.51	1,138.77	1,388.91	764.44	726.04	38.40	19.909	
8,000.00	7,883.17	8,235.98	7,883.17	25.72	37.81	52.51	1,138.77	1,388.91	764.44	725.66	38.77	19.715	
8,100.00	7,983.17	8,335.98	7,983.17	25.87	37.91	52.51	1,138.77	1,388.91	764.44	725.29	39.15	19.525	
8,200.00	8,083.17	8,435.98	8,083.17	26.01	38.01	52.51	1,138.77	1,388.91	764.44	724.91	39.53	19.338	
8,249.81	8,132.98	8,485.79	8,132.98	26.09	38.06	52.51	1,138.77	1,388.91	764.44	724.72	39.72	19.245	
8,276.83	8,160.00	8,508.80	8,156.00	26.13	38.08	52.51	1,138.77	1,388.91	764.45	724.63	39.82	19.200	

Company:	US ROCKIES REGION PLANNING	Local Co-ordinate Reference:	Well P_BROWN 3-2
Project:	COLORADO NORTHERN ZONE - 83	TVD Reference:	WELL @ 5158.00ft (Original Well Elev)
Reference Site:	WELD_JESSER 18-2 PAD	MD Reference:	WELL @ 5158.00ft (Original Well Elev)
Site Error:	0.00ft	North Reference:	True
Reference Well:	P_BROWN 3-2	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00ft	Output errors are at	2.00 sigma
Reference Wellbore	P_BROWN 3-2	Database:	EDM 2003.21 Single User Db
Reference Design:	PLAN #1 3-16-10 RHS	Offset TVD Reference:	Offset Datum

Offset Design WELD_JESSER 18-2 PAD - P_JESSER 31-2 - P_JESSER 31-2 - PLAN #1 3-16-10 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	-90.61	-0.75	-70.23	70.24				
100.00	100.00	100.00	100.00	0.10	0.10	-90.61	-0.75	-70.23	70.24	70.04	0.19	367.629	
200.00	200.00	200.00	200.00	0.32	0.32	-90.61	-0.75	-70.23	70.24	69.60	0.64	109.644	
300.00	300.00	300.00	300.00	0.55	0.55	-90.61	-0.75	-70.23	70.24	69.15	1.09	64.430	
400.00	400.00	400.00	400.00	0.77	0.77	-90.61	-0.75	-70.23	70.24	68.70	1.54	45.618	
500.00	500.00	500.00	500.00	0.99	0.99	-90.61	-0.75	-70.23	70.24	68.25	1.99	35.309	
600.00	600.00	600.00	600.00	1.22	1.22	-90.61	-0.75	-70.23	70.24	67.80	2.44	28.800	
700.00	700.00	700.00	700.00	1.44	1.44	-90.61	-0.75	-70.23	70.24	67.35	2.89	24.318	
800.00	800.00	800.00	800.00	1.67	1.67	-90.61	-0.75	-70.23	70.24	66.90	3.34	21.043	
900.00	900.00	900.00	900.00	1.89	1.89	-90.61	-0.75	-70.23	70.24	66.45	3.79	18.545	
1,000.00	1,000.00	1,000.00	1,000.00	2.12	2.12	-90.61	-0.75	-70.23	70.24	66.00	4.24	16.577	
1,100.00	1,100.00	1,100.00	1,100.00	2.34	2.34	-90.61	-0.75	-70.23	70.24	65.55	4.69	14.987	
1,200.00	1,200.00	1,200.00	1,200.00	2.57	2.57	-90.61	-0.75	-70.23	70.24	65.10	5.14	13.675	
1,300.00	1,300.00	1,300.00	1,300.00	2.79	2.79	-90.61	-0.75	-70.23	70.24	64.65	5.59	12.575 CC, ES	
1,400.00	1,399.98	1,397.51	1,397.49	3.01	3.00	-140.80	-0.89	-71.88	73.28	67.27	6.01	12.200 SF	
1,500.00	1,499.84	1,494.39	1,494.25	3.23	3.19	-143.14	-1.33	-76.80	82.49	76.08	6.40	12.880	
1,600.00	1,599.45	1,590.05	1,589.55	3.46	3.40	-146.03	-2.06	-84.84	98.02	91.22	6.80	14.419	
1,700.00	1,698.70	1,683.89	1,682.74	3.70	3.62	-148.76	-3.04	-95.81	119.92	112.73	7.19	16.690	
1,800.00	1,797.47	1,775.40	1,773.22	3.96	3.85	-151.02	-4.26	-109.43	148.11	140.54	7.57	19.574	
1,900.00	1,895.62	1,864.10	1,860.46	4.25	4.11	-152.76	-5.69	-125.37	182.39	174.45	7.94	22.963	
1,980.98	1,974.58	1,933.58	1,928.43	4.52	4.33	-153.83	-6.98	-139.73	214.44	206.20	8.24	26.013	
2,000.00	1,993.07	1,949.60	1,944.04	4.59	4.38	-154.12	-7.30	-143.27	222.46	214.14	8.32	26.725	
2,100.00	2,090.26	2,034.79	2,026.79	4.96	4.69	-155.29	-9.11	-163.45	266.09	257.34	8.76	30.392	
2,200.00	2,187.45	2,124.35	2,113.64	5.34	5.04	-156.16	-11.06	-185.24	310.40	301.19	9.21	33.709	
2,300.00	2,284.63	2,213.92	2,200.49	5.75	5.41	-156.81	-13.02	-207.04	354.74	345.07	9.67	36.677	
2,400.00	2,381.82	2,303.48	2,287.34	6.17	5.80	-157.31	-14.98	-228.83	399.12	388.98	10.15	39.340	
2,500.00	2,479.01	2,393.05	2,374.19	6.59	6.19	-157.72	-16.93	-250.63	443.52	432.89	10.63	41.734	
2,600.00	2,576.20	2,482.61	2,461.04	7.03	6.60	-158.05	-18.89	-272.42	487.93	476.81	11.12	43.894	
2,700.00	2,673.39	2,572.18	2,547.89	7.48	7.02	-158.32	-20.84	-294.22	532.35	520.74	11.61	45.848	
2,800.00	2,770.57	2,661.74	2,634.74	7.93	7.44	-158.56	-22.80	-316.01	576.78	564.67	12.11	47.622	
2,900.00	2,867.76	2,751.31	2,721.59	8.38	7.87	-158.76	-24.75	-337.81	621.22	608.60	12.62	49.237	
3,000.00	2,964.95	2,840.87	2,808.44	8.84	8.30	-158.93	-26.71	-359.60	665.66	652.54	13.13	50.713	
3,100.00	3,062.14	2,930.43	2,895.29	9.31	8.74	-159.08	-28.66	-381.40	710.11	696.47	13.64	52.064	
3,200.00	3,159.33	3,020.00	2,982.14	9.78	9.18	-159.21	-30.62	-403.19	754.56	740.40	14.16	53.305	
3,300.00	3,256.52	3,109.56	3,068.99	10.25	9.62	-159.33	-32.58	-424.99	799.01	784.34	14.67	54.448	
3,400.00	3,353.70	3,199.13	3,155.84	10.72	10.07	-159.44	-34.53	-446.78	843.47	828.27	15.20	55.503	
3,500.00	3,450.89	3,288.69	3,242.70	11.19	10.52	-159.53	-36.49	-468.58	887.93	872.20	15.72	56.479	
3,600.00	3,548.08	3,378.26	3,329.55	11.67	10.97	-159.62	-38.44	-490.38	932.38	916.14	16.25	57.384	
3,700.00	3,645.27	3,467.82	3,416.40	12.15	11.42	-159.70	-40.40	-512.17	976.85	960.07	16.78	58.226	
3,800.00	3,742.46	3,557.39	3,503.25	12.63	11.88	-159.77	-42.35	-533.97	1,021.31	1,004.00	17.31	59.011	
3,900.00	3,839.64	3,646.95	3,590.10	13.11	12.33	-159.84	-44.31	-555.76	1,065.77	1,047.93	17.84	59.743	
4,000.00	3,936.83	3,736.52	3,676.95	13.59	12.79	-159.90	-46.26	-577.56	1,110.24	1,091.86	18.37	60.428	
4,100.00	4,034.02	3,826.08	3,763.80	14.07	13.25	-159.95	-48.22	-599.35	1,154.70	1,135.79	18.91	61.071	
4,200.00	4,131.21	3,915.65	3,850.65	14.56	13.70	-160.01	-50.18	-621.15	1,199.17	1,179.72	19.44	61.674	
4,300.00	4,228.40	4,005.21	3,937.50	15.04	14.16	-160.05	-52.13	-642.94	1,243.64	1,223.65	19.98	62.241	
4,400.00	4,325.58	4,094.78	4,024.35	15.53	14.62	-160.10	-54.09	-664.74	1,288.10	1,267.58	20.52	62.775	
4,500.00	4,422.77	4,184.34	4,111.20	16.01	15.09	-160.14	-56.04	-686.53	1,332.57	1,311.51	21.06	63.279	
4,600.00	4,519.96	4,273.91	4,198.05	16.50	15.55	-160.18	-58.00	-708.33	1,377.04	1,355.44	21.60	63.754	
4,700.00	4,617.15	4,363.47	4,284.90	16.99	16.01	-160.22	-59.95	-730.12	1,421.51	1,399.37	22.14	64.205	
4,800.00	4,714.34	4,453.03	4,371.75	17.47	16.47	-160.25	-61.91	-751.92	1,465.98	1,443.30	22.68	64.631	
4,900.00	4,811.52	4,542.60	4,458.60	17.96	16.94	-160.28	-63.86	-773.72	1,510.45	1,487.23	23.22	65.036	
5,000.00	4,908.71	4,632.16	4,545.45	18.45	17.40	-160.31	-65.82	-795.51	1,554.92	1,531.15	23.77	65.421	

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_BROWN 3-2
Project:	COLORADO NORTHERN ZONE - 83	TVD Reference:	WELL @ 5158.00ft (Original Well Elev)
Reference Site:	WELD_JESSER 18-2 PAD	MD Reference:	WELL @ 5158.00ft (Original Well Elev)
Site Error:	0.00ft	North Reference:	True
Reference Well:	P_BROWN 3-2	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00ft	Output errors are at	2.00 sigma
Reference Wellbore	P_BROWN 3-2	Database:	EDM 2003.21 Single User Db
Reference Design:	PLAN #1 3-16-10 RHS	Offset TVD Reference:	Offset Datum

Offset Design WELD_JESSER 18-2 PAD - P_JESSER 31-2 - P_JESSER 31-2 - PLAN #1 3-16-10 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	5,005.90	4,721.73	4,632.30	18.94	17.87	-160.34	-67.78	-817.31	1,599.39	1,575.08	24.31	65.786	
5,200.00	5,103.09	4,811.29	4,719.15	19.43	18.33	-160.37	-69.73	-839.10	1,643.86	1,619.01	24.86	66.134	
5,300.00	5,200.28	4,900.86	4,806.00	19.92	18.80	-160.40	-71.69	-860.90	1,688.33	1,662.93	25.40	66.466	
5,400.00	5,297.46	4,990.42	4,892.85	20.41	19.26	-160.42	-73.64	-882.69	1,732.81	1,706.86	25.95	66.782	
5,500.00	5,394.65	5,079.99	4,979.70	20.90	19.73	-160.44	-75.60	-904.49	1,777.28	1,750.78	26.49	67.084	
5,600.00	5,491.84	5,169.55	5,066.55	21.39	20.19	-160.47	-77.55	-926.28	1,821.75	1,794.71	27.04	67.373	
5,680.85	5,570.42	5,241.97	5,136.77	21.79	20.57	-160.48	-79.13	-943.90	1,857.71	1,830.22	27.48	67.597	
5,700.00	5,589.04	5,259.14	5,153.43	21.87	20.66	-160.55	-79.51	-948.08	1,866.17	1,838.55	27.62	67.571	
5,800.00	5,686.77	5,349.70	5,241.23	22.23	21.13	-160.85	-81.49	-970.12	1,908.59	1,880.30	28.29	67.469	
5,900.00	5,785.17	5,441.59	5,330.34	22.55	21.61	-161.09	-83.49	-992.48	1,948.00	1,919.07	28.93	67.342	
6,000.00	5,884.13	5,534.70	5,420.64	22.82	22.10	-161.26	-85.53	-1,015.14	1,984.36	1,954.83	29.53	67.195	
6,100.00	5,983.54	5,628.94	5,512.01	23.06	22.59	-161.38	-87.58	-1,038.07	2,017.62	1,987.52	30.10	67.033	
6,200.00	6,083.26	5,728.44	5,607.24	23.25	23.30	-161.37	-90.75	-1,073.39	2,047.43	2,016.66	30.77	66.550	
6,300.00	6,183.18	6,092.35	5,966.77	23.41	24.24	-161.18	-95.34	-1,124.52	2,066.76	2,035.08	31.68	65.245	
6,361.83	6,245.00	6,292.29	6,166.11	23.48	24.61	-111.84	-96.67	-1,139.37	2,071.81	2,039.65	32.15	64.432	
6,400.00	6,283.17	6,409.38	6,283.17	23.53	24.75	-111.82	-96.87	-1,141.62	2,072.47	2,040.06	32.41	63.941	
6,500.00	6,383.17	6,509.38	6,383.17	23.65	24.86	-111.82	-96.87	-1,141.62	2,072.47	2,039.72	32.76	63.268	
6,600.00	6,483.17	6,609.38	6,483.17	23.78	24.98	-111.82	-96.87	-1,141.62	2,072.47	2,039.37	33.11	62.595	
6,700.00	6,583.17	6,709.38	6,583.17	23.91	25.11	-111.82	-96.87	-1,141.62	2,072.47	2,039.01	33.46	61.933	
6,800.00	6,683.17	6,809.38	6,683.17	24.04	25.23	-111.82	-96.87	-1,141.62	2,072.47	2,038.65	33.82	61.280	
6,900.00	6,783.17	6,909.38	6,783.17	24.17	25.35	-111.82	-96.87	-1,141.62	2,072.47	2,038.30	34.18	60.636	
7,000.00	6,883.17	7,009.38	6,883.17	24.31	25.48	-111.82	-96.87	-1,141.62	2,072.47	2,037.93	34.54	60.003	
7,100.00	6,983.17	7,109.38	6,983.17	24.44	25.61	-111.82	-96.87	-1,141.62	2,072.47	2,037.57	34.90	59.379	
7,200.00	7,083.17	7,209.38	7,083.17	24.58	25.73	-111.82	-96.87	-1,141.62	2,072.47	2,037.21	35.27	58.764	
7,300.00	7,183.17	7,309.38	7,183.17	24.72	25.86	-111.82	-96.87	-1,141.62	2,072.47	2,036.84	35.63	58.159	
7,400.00	7,283.17	7,409.38	7,283.17	24.86	26.00	-111.82	-96.87	-1,141.62	2,072.47	2,036.47	36.00	57.564	
7,500.00	7,383.17	7,509.38	7,383.17	25.00	26.13	-111.82	-96.87	-1,141.62	2,072.47	2,036.10	36.37	56.977	
7,600.00	7,483.17	7,609.38	7,483.17	25.14	26.26	-111.82	-96.87	-1,141.62	2,072.47	2,035.73	36.75	56.400	
7,700.00	7,583.17	7,709.38	7,583.17	25.28	26.40	-111.82	-96.87	-1,141.62	2,072.47	2,035.35	37.12	55.831	
7,800.00	7,683.17	7,809.38	7,683.17	25.43	26.53	-111.82	-96.87	-1,141.62	2,072.47	2,034.98	37.50	55.272	
7,900.00	7,783.17	7,909.38	7,783.17	25.57	26.67	-111.82	-96.87	-1,141.62	2,072.47	2,034.60	37.87	54.721	
8,000.00	7,883.17	8,009.38	7,883.17	25.72	26.81	-111.82	-96.87	-1,141.62	2,072.47	2,034.22	38.25	54.179	
8,100.00	7,983.17	8,109.38	7,983.17	25.87	26.95	-111.82	-96.87	-1,141.62	2,072.47	2,033.84	38.63	53.646	
8,200.00	8,083.17	8,209.38	8,083.17	26.01	27.09	-111.82	-96.87	-1,141.62	2,072.47	2,033.46	39.01	53.121	
8,276.83	8,160.00	8,286.21	8,160.00	26.13	27.20	-111.82	-96.87	-1,141.62	2,072.47	2,033.17	39.31	52.723	

Company:	US ROCKIES REGION PLANNING	Local Co-ordinate Reference:	Well P_BROWN 3-2
Project:	COLORADO NORTHERN ZONE - 83	TVD Reference:	WELL @ 5158.00ft (Original Well Elev)
Reference Site:	WELD_JESSER 18-2 PAD	MD Reference:	WELL @ 5158.00ft (Original Well Elev)
Site Error:	0.00ft	North Reference:	True
Reference Well:	P_BROWN 3-2	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00ft	Output errors are at	2.00 sigma
Reference Wellbore	P_BROWN 3-2	Database:	EDM 2003.21 Single User Db
Reference Design:	PLAN #1 3-16-10 RHS	Offset TVD Reference:	Offset Datum

Offset Design WELD_JESSER 18-2 PAD - P_JESSER 4-2S - P_JESSER 4-2S - PLAN #1 3-16-10 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	-91.08	-0.38	-20.15	20.15				
100.00	100.00	100.00	100.00	0.10	0.10	-91.08	-0.38	-20.15	20.15	19.96	0.19	105.468	
200.00	200.00	200.00	200.00	0.32	0.32	-91.08	-0.38	-20.15	20.15	19.51	0.64	31.455	
300.00	300.00	300.00	300.00	0.55	0.55	-91.08	-0.38	-20.15	20.15	19.06	1.09	18.484	
400.00	400.00	400.00	400.00	0.77	0.77	-91.08	-0.38	-20.15	20.15	18.61	1.54	13.087	
500.00	500.00	500.00	500.00	0.99	0.99	-91.08	-0.38	-20.15	20.15	18.16	1.99	10.130	
600.00	600.00	600.00	600.00	1.22	1.22	-91.08	-0.38	-20.15	20.15	17.71	2.44	8.262	
700.00	700.00	700.00	700.00	1.44	1.44	-91.08	-0.38	-20.15	20.15	17.26	2.89	6.977	
800.00	800.00	800.00	800.00	1.67	1.67	-91.08	-0.38	-20.15	20.15	16.81	3.34	6.037	
900.00	900.00	900.00	900.00	1.89	1.89	-91.08	-0.38	-20.15	20.15	16.36	3.79	5.320	
1,000.00	1,000.00	1,000.00	1,000.00	2.12	2.12	-91.08	-0.38	-20.15	20.15	15.91	4.24	4.756	
1,100.00	1,100.00	1,100.00	1,100.00	2.34	2.34	-91.08	-0.38	-20.15	20.15	15.46	4.69	4.300	
1,200.00	1,200.00	1,200.00	1,200.00	2.57	2.57	-91.08	-0.38	-20.15	20.15	15.01	5.14	3.923	
1,300.00	1,300.00	1,300.00	1,300.00	2.79	2.79	-91.08	-0.38	-20.15	20.15	14.56	5.59	3.608 CC, ES, SF	
1,400.00	1,399.98	1,399.49	1,399.47	3.01	3.01	-141.51	0.24	-21.28	22.63	16.61	6.02	3.760	
1,500.00	1,499.84	1,498.62	1,498.53	3.23	3.22	-143.80	2.09	-24.68	30.10	23.66	6.44	4.677	
1,600.00	1,599.45	1,597.06	1,596.76	3.46	3.44	-145.80	5.14	-30.28	42.57	35.72	6.85	6.216	
1,700.00	1,698.70	1,694.46	1,693.76	3.70	3.66	-147.15	9.36	-38.01	60.00	52.74	7.26	8.265	
1,800.00	1,797.47	1,790.51	1,789.16	3.96	3.90	-147.99	14.67	-47.76	82.32	74.65	7.67	10.729	
1,900.00	1,895.62	1,884.89	1,882.61	4.25	4.15	-148.48	21.01	-59.39	109.43	101.34	8.09	13.527	
1,980.98	1,974.58	1,959.92	1,956.64	4.52	4.36	-148.70	26.83	-70.08	134.82	126.39	8.43	15.985	
2,000.00	1,993.07	1,977.36	1,973.82	4.59	4.41	-148.80	28.28	-72.74	141.17	132.65	8.52	16.560	
2,100.00	2,090.26	2,068.34	2,063.16	4.96	4.69	-148.88	36.47	-87.77	175.60	166.58	9.01	19.480	
2,200.00	2,187.45	2,158.43	2,151.23	5.34	5.00	-148.55	45.58	-104.48	211.73	202.20	9.52	22.233	
2,300.00	2,284.63	2,251.39	2,241.90	5.75	5.34	-148.17	55.39	-122.48	248.55	238.49	10.06	24.706	
2,400.00	2,381.82	2,344.36	2,332.58	6.17	5.69	-147.88	65.20	-140.48	285.38	274.77	10.61	26.894	
2,500.00	2,479.01	2,437.32	2,423.25	6.59	6.06	-147.66	75.01	-158.48	322.22	311.04	11.17	28.835	
2,600.00	2,576.20	2,530.28	2,513.92	7.03	6.44	-147.49	84.82	-176.47	359.05	347.31	11.75	30.562	
2,700.00	2,673.39	2,623.24	2,604.60	7.48	6.82	-147.34	94.63	-194.47	395.90	383.56	12.33	32.104	
2,800.00	2,770.57	2,716.21	2,695.27	7.93	7.21	-147.23	104.44	-212.47	432.74	419.82	12.92	33.486	
2,900.00	2,867.76	2,809.17	2,785.95	8.38	7.61	-147.13	114.25	-230.47	469.58	456.06	13.52	34.730	
3,000.00	2,964.95	2,902.13	2,876.62	8.84	8.01	-147.04	124.06	-248.47	506.43	492.30	14.13	35.853	
3,100.00	3,062.14	2,995.09	2,967.29	9.31	8.41	-146.97	133.87	-266.47	543.27	528.54	14.73	36.871	
3,200.00	3,159.33	3,088.05	3,057.97	9.78	8.82	-146.90	143.68	-284.47	580.12	564.77	15.35	37.796	
3,300.00	3,256.52	3,181.02	3,148.64	10.25	9.24	-146.85	153.48	-302.47	616.97	601.00	15.97	38.640	
3,400.00	3,353.70	3,273.98	3,239.32	10.72	9.65	-146.80	163.29	-320.46	653.82	637.23	16.59	39.412	
3,500.00	3,450.89	3,366.94	3,329.99	11.19	10.07	-146.75	173.10	-338.46	690.67	673.45	17.21	40.121	
3,600.00	3,548.08	3,459.90	3,420.66	11.67	10.49	-146.71	182.91	-356.46	727.51	709.67	17.84	40.773	
3,700.00	3,645.27	3,552.87	3,511.34	12.15	10.91	-146.68	192.72	-374.46	764.36	745.89	18.47	41.376	
3,800.00	3,742.46	3,645.83	3,602.01	12.63	11.34	-146.64	202.53	-392.46	801.21	782.10	19.11	41.933	
3,900.00	3,839.64	3,738.79	3,692.69	13.11	11.76	-146.61	212.34	-410.46	838.06	818.32	19.74	42.450	
4,000.00	3,936.83	3,831.75	3,783.36	13.59	12.19	-146.59	222.15	-428.46	874.91	854.53	20.38	42.930	
4,100.00	4,034.02	3,924.71	3,874.03	14.07	12.61	-146.56	231.96	-446.45	911.76	890.74	21.02	43.378	
4,200.00	4,131.21	4,017.68	3,964.71	14.56	13.04	-146.54	241.77	-464.45	948.61	926.95	21.66	43.796	
4,300.00	4,228.40	4,110.64	4,055.38	15.04	13.47	-146.52	251.58	-482.45	985.46	963.16	22.30	44.187	
4,400.00	4,325.58	4,203.60	4,146.06	15.53	13.90	-146.50	261.39	-500.45	1,022.31	999.36	22.95	44.554	
4,500.00	4,422.77	4,296.56	4,236.73	16.01	14.33	-146.48	271.20	-518.45	1,059.16	1,035.57	23.59	44.898	
4,600.00	4,519.96	4,389.52	4,327.40	16.50	14.77	-146.46	281.01	-536.45	1,096.01	1,071.77	24.24	45.222	
4,700.00	4,617.15	4,482.49	4,418.08	16.99	15.20	-146.44	290.82	-554.45	1,132.86	1,107.98	24.88	45.527	
4,800.00	4,714.34	4,575.45	4,508.75	17.47	15.63	-146.43	300.63	-572.45	1,169.71	1,144.18	25.53	45.815	
4,900.00	4,811.52	4,668.41	4,599.43	17.96	16.07	-146.41	310.44	-590.44	1,206.56	1,180.38	26.18	46.087	
5,000.00	4,908.71	4,761.37	4,690.10	18.45	16.50	-146.40	320.25	-608.44	1,243.41	1,216.58	26.83	46.344	

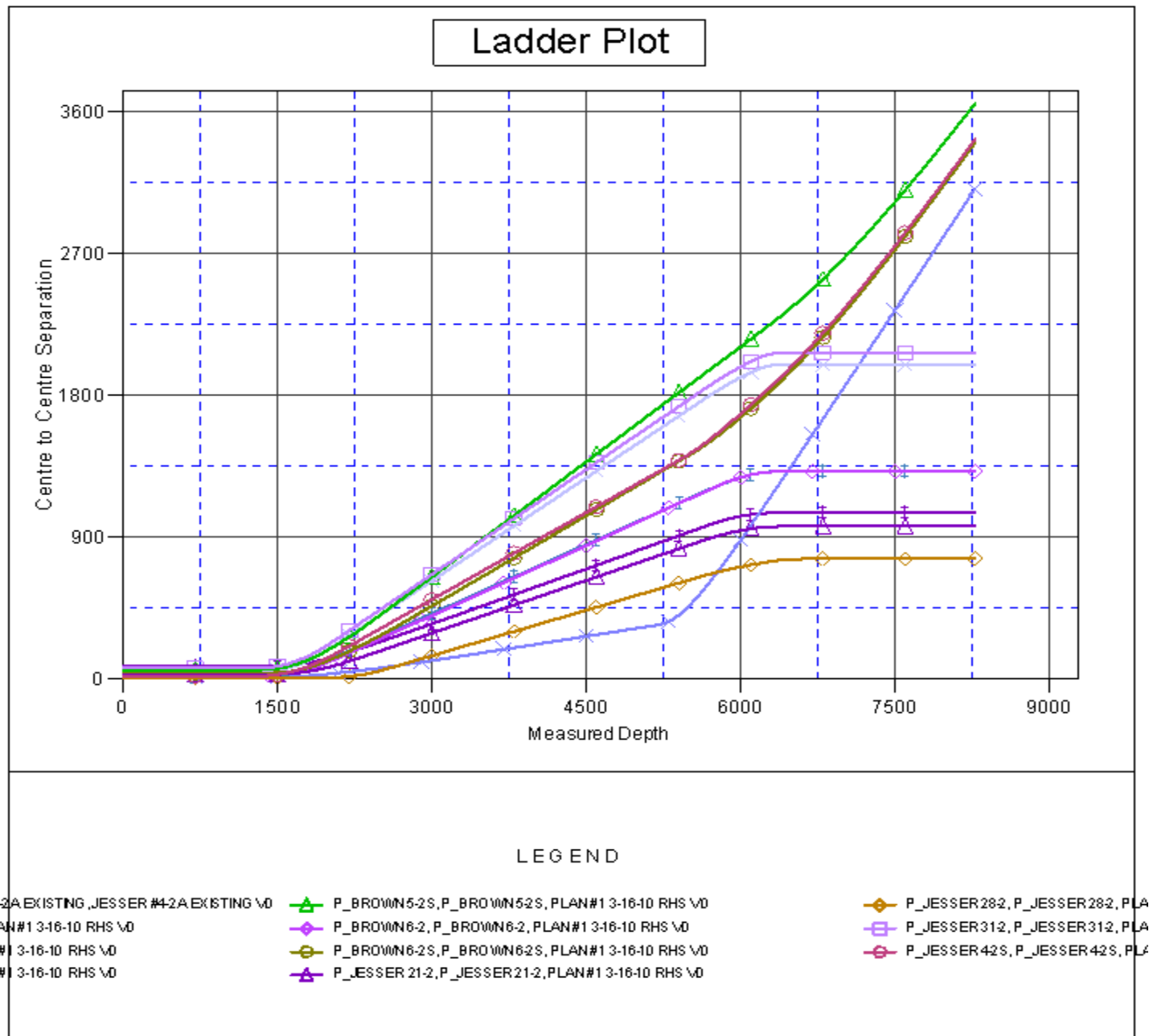
CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Company:	US ROCKIES REGION PLANNING	Local Co-ordinate Reference:	Well P_BROWN 3-2
Project:	COLORADO NORTHERN ZONE - 83	TVD Reference:	WELL @ 5158.00ft (Original Well Elev)
Reference Site:	WELD_JESSER 18-2 PAD	MD Reference:	WELL @ 5158.00ft (Original Well Elev)
Site Error:	0.00ft	North Reference:	True
Reference Well:	P_BROWN 3-2	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00ft	Output errors are at	2.00 sigma
Reference Wellbore	P_BROWN 3-2	Database:	EDM 2003.21 Single User Db
Reference Design:	PLAN #1 3-16-10 RHS	Offset TVD Reference:	Offset Datum

Offset Design WELD_JESSER 18-2 PAD - P_JESSER 4-2S - P_JESSER 4-2S - PLAN #1 3-16-10 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	5,005.90	4,854.34	4,780.78	18.94	16.94	-146.39	330.05	-626.44	1,280.26	1,252.78	27.48	46.588	
5,200.00	5,103.09	4,947.30	4,871.45	19.43	17.37	-146.37	339.86	-644.44	1,317.11	1,288.98	28.13	46.819	
5,300.00	5,200.28	5,040.26	4,962.12	19.92	17.81	-146.36	349.67	-662.44	1,353.96	1,325.18	28.78	47.039	
5,400.00	5,297.46	5,133.22	5,052.80	20.41	18.24	-146.35	359.48	-680.44	1,390.81	1,361.38	29.44	47.248	
5,500.00	5,394.65	5,158.04	5,077.00	20.90	18.36	-146.35	362.10	-685.24	1,429.29	1,399.42	29.87	47.853	
5,600.00	5,491.84	5,158.04	5,077.00	21.39	18.36	-146.35	362.10	-685.24	1,473.35	1,443.13	30.22	48.754	
5,680.85	5,570.42	5,158.04	5,077.00	21.79	18.36	-146.35	362.10	-685.24	1,512.87	1,482.37	30.50	49.595	
5,700.00	5,589.04	5,158.04	5,077.00	21.87	18.36	-146.48	362.10	-685.24	1,522.67	1,492.08	30.59	49.775	
5,800.00	5,686.77	5,158.04	5,077.00	22.23	18.36	-147.15	362.10	-685.24	1,575.16	1,544.17	30.99	50.835	
5,900.00	5,785.17	5,158.04	5,077.00	22.55	18.36	-147.85	362.10	-685.24	1,629.70	1,598.37	31.33	52.012	
6,000.00	5,884.13	5,158.04	5,077.00	22.82	18.36	-148.57	362.10	-685.24	1,686.03	1,654.40	31.63	53.301	
6,100.00	5,983.54	5,158.04	5,077.00	23.06	18.36	-149.30	362.10	-685.24	1,743.92	1,712.04	31.88	54.699	
6,200.00	6,083.26	5,158.04	5,077.00	23.25	18.36	-150.04	362.10	-685.24	1,803.14	1,771.06	32.08	56.204	
6,300.00	6,183.18	5,158.04	5,077.00	23.41	18.36	-150.79	362.10	-685.24	1,863.50	1,831.27	32.23	57.814	
6,361.83	6,245.00	5,158.04	5,077.00	23.48	18.36	-101.98	362.10	-685.24	1,901.31	1,869.01	32.30	58.861	
6,400.00	6,283.17	5,158.04	5,077.00	23.53	18.36	-101.98	362.10	-685.24	1,925.00	1,892.64	32.36	59.486	
6,500.00	6,383.17	5,158.04	5,077.00	23.65	18.36	-101.98	362.10	-685.24	1,989.18	1,956.66	32.53	61.156	
6,600.00	6,483.17	5,158.04	5,077.00	23.78	18.36	-101.98	362.10	-685.24	2,056.23	2,023.54	32.69	62.894	
6,700.00	6,583.17	5,158.04	5,077.00	23.91	18.36	-101.98	362.10	-685.24	2,125.87	2,093.01	32.86	64.691	
6,800.00	6,683.17	5,158.04	5,077.00	24.04	18.36	-101.98	362.10	-685.24	2,197.85	2,164.82	33.03	66.538	
6,900.00	6,783.17	5,158.04	5,077.00	24.17	18.36	-101.98	362.10	-685.24	2,271.96	2,238.75	33.20	68.428	
7,000.00	6,883.17	5,158.04	5,077.00	24.31	18.36	-101.98	362.10	-685.24	2,347.98	2,314.61	33.37	70.353	
7,100.00	6,983.17	5,158.04	5,077.00	24.44	18.36	-101.98	362.10	-685.24	2,425.75	2,392.20	33.55	72.308	
7,200.00	7,083.17	5,158.04	5,077.00	24.58	18.36	-101.98	362.10	-685.24	2,505.09	2,471.37	33.72	74.288	
7,300.00	7,183.17	5,158.04	5,077.00	24.72	18.36	-101.98	362.10	-685.24	2,585.87	2,551.97	33.90	76.287	
7,400.00	7,283.17	5,158.04	5,077.00	24.86	18.36	-101.98	362.10	-685.24	2,667.95	2,633.88	34.07	78.301	
7,500.00	7,383.17	5,158.04	5,077.00	25.00	18.36	-101.98	362.10	-685.24	2,751.22	2,716.97	34.25	80.327	
7,600.00	7,483.17	5,158.04	5,077.00	25.14	18.36	-101.98	362.10	-685.24	2,835.56	2,801.14	34.43	82.361	
7,700.00	7,583.17	5,158.04	5,077.00	25.28	18.36	-101.98	362.10	-685.24	2,920.90	2,886.29	34.61	84.400	
7,800.00	7,683.17	5,158.04	5,077.00	25.43	18.36	-101.98	362.10	-685.24	3,007.14	2,972.35	34.79	86.442	
7,900.00	7,783.17	5,158.04	5,077.00	25.57	18.36	-101.98	362.10	-685.24	3,094.21	3,059.24	34.97	88.484	
8,000.00	7,883.17	5,158.04	5,077.00	25.72	18.36	-101.98	362.10	-685.24	3,182.04	3,146.89	35.15	90.525	
8,100.00	7,983.17	5,158.04	5,077.00	25.87	18.36	-101.98	362.10	-685.24	3,270.56	3,235.23	35.33	92.562	
8,200.00	8,083.17	5,158.04	5,077.00	26.01	18.36	-101.98	362.10	-685.24	3,359.74	3,324.22	35.52	94.594	
8,276.83	8,160.00	5,158.04	5,077.00	26.13	18.36	-101.98	362.10	-685.24	3,428.65	3,392.99	35.66	96.151	

Company:	US ROCKIES REGION PLANNING	Local Co-ordinate Reference:	Well P_BROWN 3-2
Project:	COLORADO NORTHERN ZONE - 83	TVD Reference:	WELL @ 5158.00ft (Original Well Elev)
Reference Site:	WELD_JESSER 18-2 PAD	MD Reference:	WELL @ 5158.00ft (Original Well Elev)
Site Error:	0.00ft	North Reference:	True
Reference Well:	P_BROWN 3-2	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00ft	Output errors are at	2.00 sigma
Reference Wellbore	P_BROWN 3-2	Database:	EDM 2003.21 Single User Db
Reference Design:	PLAN #1 3-16-10 RHS	Offset TVD Reference:	Offset Datum

Reference Depths are relative to WELL @ 5158.00ft (Original Well Elev) Coordinates are relative to: P_BROWN 3-2
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: 0.48°



Company:	US ROCKIES REGION PLANNING	Local Co-ordinate Reference:	Well P_BROWN 3-2
Project:	COLORADO NORTHERN ZONE - 83	TVD Reference:	WELL @ 5158.00ft (Original Well Elev)
Reference Site:	WELD_JESSER 18-2 PAD	MD Reference:	WELL @ 5158.00ft (Original Well Elev)
Site Error:	0.00ft	North Reference:	True
Reference Well:	P_BROWN 3-2	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00ft	Output errors are at	2.00 sigma
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