



US ROCKIES REGION PLANNING

COLORADO NORTHERN ZONE - 83

WELD_HIGHWAY 160 17-2 pad

P_HIGHWAY 160 26-2

P_HIGHWAY 160 26-2

Plan: PLAN #1 3-17-10 RHS

Standard Planning Report

17 March, 2010





Project: COLORADO NORTHERN ZONE - 83
Site: WELD_HIGHWAY 160 17-2 pad
Well: P_HIGHWAY 160 26-2
Wellbore: P_HIGHWAY 160 26-2
Section: SECTION 2 T1N R66W
SHL: 1496 FNL 1589 FEL
Design: PLAN #1 3-17-10 RHS
Latitude: 40° 4' 59.711 N
Longitude: 104° 44' 25.861 W
GL: 5104.00
KB: WELL @ 5119.00ft (Original Well Elev)



Weatherford®



Azimuths to True North
Magnetic North: 8.99°

Magnetic Field
Strength: 53096.4nT
Dip Angle: 66.84°
Date: 3/17/2010
Model: IGRF2010

FORMATION TOP DETAILS

TVDPath	MDPath	Formation
4236.00	4543.57	PARKMAN
4726.00	5081.82	SUSSEX
7206.00	7627.56	NIO A
7526.00	7947.56	CODELL
7986.00	8407.56	JSAND

CASING DETAILS

TVD	MD	Name	Size
1100.00	1110.78	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	
300.00	0.00	0.00	300.00	0.00	0.00	0.00	0.00	0.00	Start Build 2.00
1522.23	24.44	46.55	1485.49	176.60	186.43	2.00	46.55	256.80	Start 3883.09 hold at 1522.23 MD
5405.33	24.44	46.55	5020.51	1281.66	1353.01	0.00	0.00	1863.68	Start Drop -2.00
6627.56	0.00	0.00	6206.00	1458.27	1539.44	2.00	180.00	2120.47	Start 1915.00 hold at 6627.56 MD
8542.56	0.00	0.00	8121.00	1458.27	1539.44	0.00	0.00	2120.47	TD at 8542.56

LEGEND

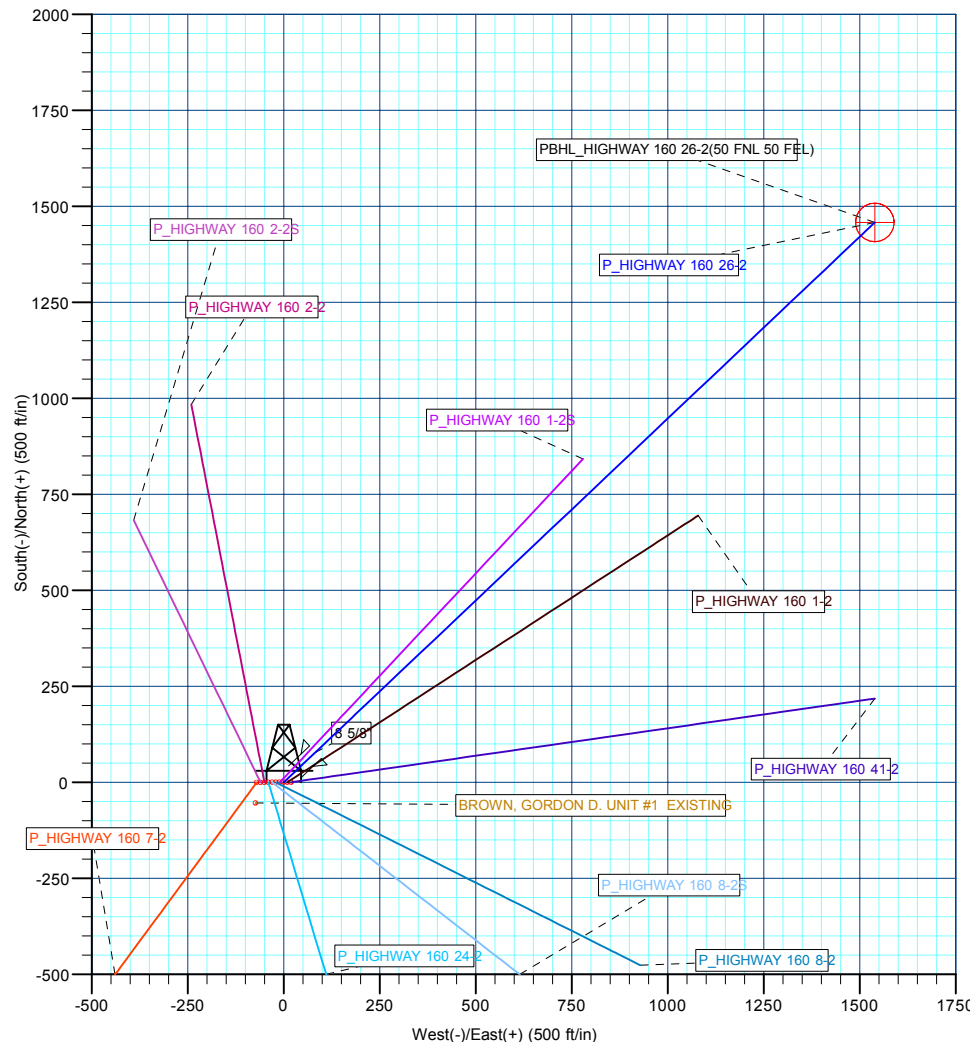
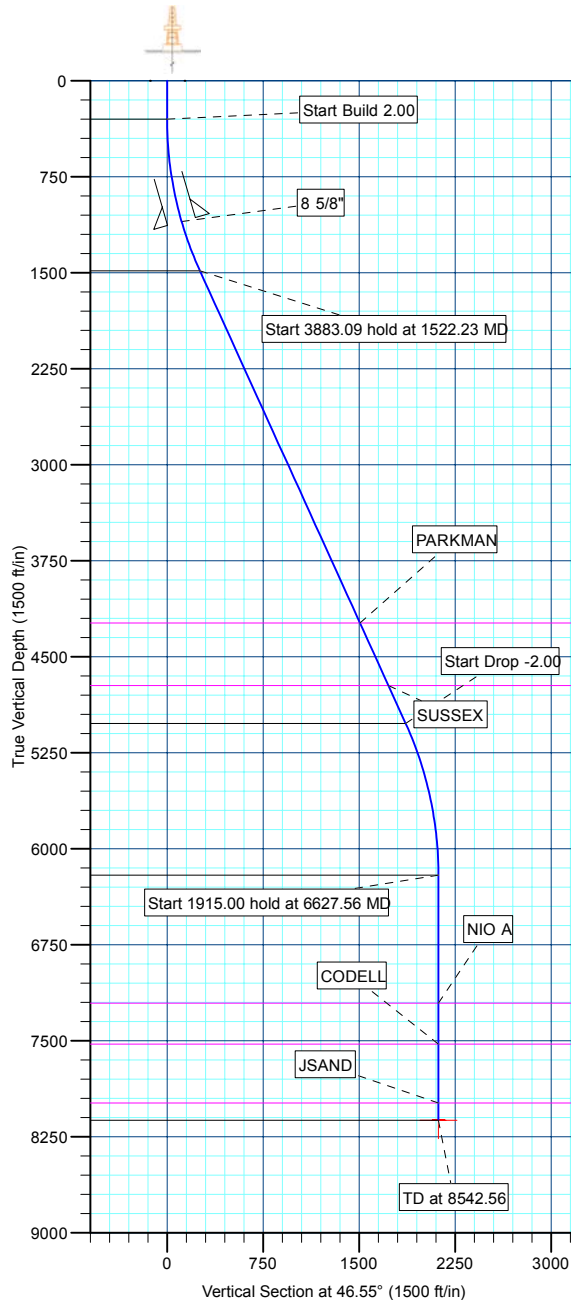
BROWN, GORDON D. UNIT #1 EXISTING, BROWN, GORDON D. UNIT #1 EXISTING, BROWN, GORDON D. UNIT #1 EXISTING V0
P_HIGHWAY 160 1-2, P_HIGHWAY 160 1-2, PLAN #1 3-17-10 RHS V0
P_HIGHWAY 160 1-2S, P_HIGHWAY 160 1-2S, PLAN #1 3-17-10 RHS V0
P_HIGHWAY 160 2-2, P_HIGHWAY 160 2-2, PLAN #1 3-17-10 RHS V0
P_HIGHWAY 160 2-2S, P_HIGHWAY 160 2-2S, PLAN #1 3-17-10 RHS V0
P_HIGHWAY 160 24-2, P_HIGHWAY 160 24-2, PLAN #1 3-17-10 RHS V0
P_HIGHWAY 160 41-2, P_HIGHWAY 160 41-2, PLAN #1 3-17-10 RHS V0
P_HIGHWAY 160 7-2, P_HIGHWAY 160 7-2, PLAN #1 3-17-10 RHS V0
P_HIGHWAY 160 8-2, P_HIGHWAY 160 8-2, PLAN #1 3-17-10 RHS V0
P_HIGHWAY 160 8-2S, P_HIGHWAY 160 8-2S, PLAN #1 3-17-10 RHS V0
PLAN #1 3-17-10 RHS

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

Name	TVD	+N/-S	+E/-W	Latitude	Longitude	Shape
PBHL	8121.00	1458.27	1539.44	40° 5' 14.122 N	104° 44' 6.054 W	Circle (Radius: 50.00)

WELL DETAILS: P_HIGHWAY 160 26-2

+N/-S	+E/-W	Northing	Ground Level: Easting	5104.00 Latitude	104° 44' 25.861 W Longitude	Slot
0.00	0.00	1274083.90	3212509.55	40° 4' 59.711 N		



Plan: PLAN #1 3-17-10 RHS (P_HIGHWAY 160 26-2/P_HIGHWAY 160 26-2)

Created By: Robert H. Scott Date: 14:54, March 17 2010

Database:	EDM 2003.21 Single User Db	Local Co-ordinate Reference:	Well P_HIGHWAY 160 26-2
Company:	US ROCKIES REGION PLANNING	TVD Reference:	WELL @ 5119.00ft (Original Well Elev)
Project:	COLORADO NORTHERN ZONE - 83	MD Reference:	WELL @ 5119.00ft (Original Well Elev)
Site:	WELD_HIGHWAY 160 17-2 pad	North Reference:	True
Well:	P_HIGHWAY 160 26-2	Survey Calculation Method:	Minimum Curvature
Wellbore:	P_HIGHWAY 160 26-2		
Design:	PLAN #1 3-17-10 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_HIGHWAY 160 17-2 pad, SECTION 2 T1N R66W											
Site Position:						Northing:			1,274,084.36 ft			Latitude:			40° 4' 59.714 N		
From:			Lat/Long			Easting:			3,212,519.34 ft			Longitude:			104° 44' 25.735 W		
Position Uncertainty:			0.00 ft			Slot Radius:			in			Grid Convergence:			0.49 °		

Well	P_HIGHWAY 160 26-2					
Well Position	+N/-S	-0.38 ft	Northing:	1,274,083.90 ft	Latitude:	40° 4' 59.711 N
	+E/-W	-9.79 ft	Easting:	3,212,509.55 ft	Longitude:	104° 44' 25.861 W
Position Uncertainty		0.00 ft	Wellhead Elevation:	ft	Ground Level:	5,104.00 ft

Wellbore	P_HIGHWAY 160 26-2				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	3/17/2010	8.99	66.84	53,096

Design	PLAN #1 3-17-10 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	46.55

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	
300.00	0.00	0.00	300.00	0.00	0.00	0.00	0.00	0.00	0.00	
1,522.23	24.44	46.55	1,485.49	176.60	186.43	2.00	2.00	0.00	46.55	
5,405.33	24.44	46.55	5,020.51	1,281.66	1,353.01	0.00	0.00	0.00	0.00	
6,627.56	0.00	0.00	6,206.00	1,458.27	1,539.44	2.00	-2.00	0.00	180.00	
8,542.56	0.00	0.00	8,121.00	1,458.27	1,539.44	0.00	0.00	0.00	0.00	PBHL_HIGHWAY 1

Database:	EDM 2003.21 Single User Db	Local Co-ordinate Reference:	Well P_HIGHWAY 160 26-2
Company:	US ROCKIES REGION PLANNING	TVD Reference:	WELL @ 5119.00ft (Original Well Elev)
Project:	COLORADO NORTHERN ZONE - 83	MD Reference:	WELL @ 5119.00ft (Original Well Elev)
Site:	WELD_HIGHWAY 160 17-2 pad	North Reference:	True
Well:	P_HIGHWAY 160 26-2	Survey Calculation Method:	Minimum Curvature
Wellbore:	P_HIGHWAY 160 26-2		
Design:	PLAN #1 3-17-10 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									
300.00	0.00	0.00	300.00	0.00	0.00	0.00	0.00	0.00	0.00
400.00	2.00	46.55	399.98	1.20	1.27	1.75	2.00	2.00	0.00
500.00	4.00	46.55	499.84	4.80	5.07	6.98	2.00	2.00	0.00
600.00	6.00	46.55	599.45	10.79	11.39	15.69	2.00	2.00	0.00
700.00	8.00	46.55	698.70	19.17	20.24	27.88	2.00	2.00	0.00
800.00	10.00	46.55	797.47	29.93	31.60	43.52	2.00	2.00	0.00
900.00	12.00	46.55	895.62	43.05	45.45	62.60	2.00	2.00	0.00
1,000.00	14.00	46.55	993.06	58.52	61.78	85.10	2.00	2.00	0.00
1,100.00	16.00	46.55	1,089.64	76.32	80.57	110.98	2.00	2.00	0.00
8 5/8"									
1,110.78	16.22	46.55	1,100.00	78.38	82.74	113.97	2.00	2.00	0.00
1,200.00	18.00	46.55	1,185.27	96.43	101.79	140.21	2.00	2.00	0.00
1,300.00	20.00	46.55	1,279.82	118.81	125.43	172.77	2.00	2.00	0.00
1,400.00	22.00	46.55	1,373.17	143.46	151.44	208.60	2.00	2.00	0.00
1,500.00	24.00	46.55	1,465.21	170.33	179.81	247.67	2.00	2.00	0.00
Start 3883.09 hold at 1522.23 MD									
1,522.23	24.44	46.55	1,485.49	176.60	186.43	256.80	2.00	2.00	0.00
1,600.00	24.44	46.55	1,556.29	198.73	209.79	288.98	0.00	0.00	0.00
1,700.00	24.44	46.55	1,647.32	227.19	239.84	330.36	0.00	0.00	0.00
1,800.00	24.44	46.55	1,738.36	255.65	269.88	371.74	0.00	0.00	0.00
1,900.00	24.44	46.55	1,829.39	284.11	299.92	413.12	0.00	0.00	0.00
2,000.00	24.44	46.55	1,920.43	312.56	329.96	454.50	0.00	0.00	0.00
2,100.00	24.44	46.55	2,011.47	341.02	360.01	495.88	0.00	0.00	0.00
2,200.00	24.44	46.55	2,102.50	369.48	390.05	537.27	0.00	0.00	0.00
2,300.00	24.44	46.55	2,193.54	397.94	420.09	578.65	0.00	0.00	0.00
2,400.00	24.44	46.55	2,284.58	426.40	450.13	620.03	0.00	0.00	0.00
2,500.00	24.44	46.55	2,375.61	454.86	480.18	661.41	0.00	0.00	0.00
2,600.00	24.44	46.55	2,466.65	483.32	510.22	702.79	0.00	0.00	0.00
2,700.00	24.44	46.55	2,557.68	511.77	540.26	744.17	0.00	0.00	0.00
2,800.00	24.44	46.55	2,648.72	540.23	570.30	785.55	0.00	0.00	0.00
2,900.00	24.44	46.55	2,739.76	568.69	600.34	826.94	0.00	0.00	0.00
3,000.00	24.44	46.55	2,830.79	597.15	630.39	868.32	0.00	0.00	0.00
3,100.00	24.44	46.55	2,921.83	625.61	660.43	909.70	0.00	0.00	0.00
3,200.00	24.44	46.55	3,012.86	654.07	690.47	951.08	0.00	0.00	0.00
3,300.00	24.44	46.55	3,103.90	682.52	720.51	992.46	0.00	0.00	0.00
3,400.00	24.44	46.55	3,194.94	710.98	750.56	1,033.84	0.00	0.00	0.00
3,500.00	24.44	46.55	3,285.97	739.44	780.60	1,075.22	0.00	0.00	0.00
3,600.00	24.44	46.55	3,377.01	767.90	810.64	1,116.61	0.00	0.00	0.00
3,700.00	24.44	46.55	3,468.05	796.36	840.68	1,157.99	0.00	0.00	0.00
3,800.00	24.44	46.55	3,559.08	824.82	870.73	1,199.37	0.00	0.00	0.00
3,900.00	24.44	46.55	3,650.12	853.27	900.77	1,240.75	0.00	0.00	0.00
4,000.00	24.44	46.55	3,741.15	881.73	930.81	1,282.13	0.00	0.00	0.00
4,100.00	24.44	46.55	3,832.19	910.19	960.85	1,323.51	0.00	0.00	0.00
4,200.00	24.44	46.55	3,923.23	938.65	990.90	1,364.89	0.00	0.00	0.00
4,300.00	24.44	46.55	4,014.26	967.11	1,020.94	1,406.28	0.00	0.00	0.00
4,400.00	24.44	46.55	4,105.30	995.57	1,050.98	1,447.66	0.00	0.00	0.00
4,500.00	24.44	46.55	4,196.33	1,024.02	1,081.02	1,489.04	0.00	0.00	0.00
PARKMAN									
4,543.57	24.44	46.55	4,236.00	1,036.42	1,094.11	1,507.07	0.00	0.00	0.00
4,600.00	24.44	46.55	4,287.37	1,052.48	1,111.07	1,530.42	0.00	0.00	0.00
4,700.00	24.44	46.55	4,378.41	1,080.94	1,141.11	1,571.80	0.00	0.00	0.00
4,800.00	24.44	46.55	4,469.44	1,109.40	1,171.15	1,613.18	0.00	0.00	0.00

Database:	EDM 2003.21 Single User Db	Local Co-ordinate Reference:	Well P_HIGHWAY 160 26-2
Company:	US ROCKIES REGION PLANNING	TVD Reference:	WELL @ 5119.00ft (Original Well Elev)
Project:	COLORADO NORTHERN ZONE - 83	MD Reference:	WELL @ 5119.00ft (Original Well Elev)
Site:	WELD_HIGHWAY 160 17-2 pad	North Reference:	True
Well:	P_HIGHWAY 160 26-2	Survey Calculation Method:	Minimum Curvature
Wellbore:	P_HIGHWAY 160 26-2		
Design:	PLAN #1 3-17-10 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)
4,900.00	24.44	46.55	4,560.48	1,137.86	1,201.19	1,654.56	0.00	0.00	0.00
5,000.00	24.44	46.55	4,651.51	1,166.32	1,231.24	1,695.95	0.00	0.00	0.00
SUSSEX									
5,081.82	24.44	46.55	4,726.00	1,189.60	1,255.82	1,729.80	0.00	0.00	0.00
5,100.00	24.44	46.55	4,742.55	1,194.77	1,261.28	1,737.33	0.00	0.00	0.00
5,200.00	24.44	46.55	4,833.59	1,223.23	1,291.32	1,778.71	0.00	0.00	0.00
5,300.00	24.44	46.55	4,924.62	1,251.69	1,321.36	1,820.09	0.00	0.00	0.00
5,400.00	24.44	46.55	5,015.66	1,280.15	1,351.40	1,861.47	0.00	0.00	0.00
Start Drop -2.00									
5,405.33	24.44	46.55	5,020.51	1,281.66	1,353.01	1,863.68	0.00	0.00	0.00
5,500.00	22.55	46.55	5,107.33	1,307.62	1,380.41	1,901.42	2.00	-2.00	0.00
5,600.00	20.55	46.55	5,200.33	1,332.88	1,407.07	1,938.15	2.00	-2.00	0.00
5,700.00	18.55	46.55	5,294.56	1,355.90	1,431.37	1,971.62	2.00	-2.00	0.00
5,800.00	16.55	46.55	5,389.90	1,376.63	1,453.26	2,001.77	2.00	-2.00	0.00
5,900.00	14.55	46.55	5,486.23	1,395.07	1,472.72	2,028.58	2.00	-2.00	0.00
6,000.00	12.55	46.55	5,583.45	1,411.18	1,489.73	2,052.01	2.00	-2.00	0.00
6,100.00	10.55	46.55	5,681.42	1,424.95	1,504.27	2,072.03	2.00	-2.00	0.00
6,200.00	8.55	46.55	5,780.02	1,436.36	1,516.32	2,088.62	2.00	-2.00	0.00
6,300.00	6.55	46.55	5,879.15	1,445.40	1,525.86	2,101.77	2.00	-2.00	0.00
6,400.00	4.55	46.55	5,978.68	1,452.05	1,532.88	2,111.44	2.00	-2.00	0.00
6,500.00	2.55	46.55	6,078.48	1,456.31	1,537.37	2,117.63	2.00	-2.00	0.00
6,600.00	0.55	46.55	6,178.44	1,458.17	1,539.34	2,120.34	2.00	-2.00	0.00
Start 1915.00 hold at 6627.56 MD									
6,627.56	0.00	0.00	6,206.00	1,458.27	1,539.44	2,120.47	2.00	-2.00	-168.90
6,700.00	0.00	0.00	6,278.44	1,458.27	1,539.44	2,120.47	0.00	0.00	0.00
6,800.00	0.00	0.00	6,378.44	1,458.27	1,539.44	2,120.47	0.00	0.00	0.00
6,900.00	0.00	0.00	6,478.44	1,458.27	1,539.44	2,120.47	0.00	0.00	0.00
7,000.00	0.00	0.00	6,578.44	1,458.27	1,539.44	2,120.47	0.00	0.00	0.00
7,100.00	0.00	0.00	6,678.44	1,458.27	1,539.44	2,120.47	0.00	0.00	0.00
7,200.00	0.00	0.00	6,778.44	1,458.27	1,539.44	2,120.47	0.00	0.00	0.00
7,300.00	0.00	0.00	6,878.44	1,458.27	1,539.44	2,120.47	0.00	0.00	0.00
7,400.00	0.00	0.00	6,978.44	1,458.27	1,539.44	2,120.47	0.00	0.00	0.00
7,500.00	0.00	0.00	7,078.44	1,458.27	1,539.44	2,120.47	0.00	0.00	0.00
7,600.00	0.00	0.00	7,178.44	1,458.27	1,539.44	2,120.47	0.00	0.00	0.00
NIO A									
7,627.56	0.00	0.00	7,206.00	1,458.27	1,539.44	2,120.47	0.00	0.00	0.00
7,700.00	0.00	0.00	7,278.44	1,458.27	1,539.44	2,120.47	0.00	0.00	0.00
7,800.00	0.00	0.00	7,378.44	1,458.27	1,539.44	2,120.47	0.00	0.00	0.00
7,900.00	0.00	0.00	7,478.44	1,458.27	1,539.44	2,120.47	0.00	0.00	0.00
CODELL									
7,947.56	0.00	0.00	7,526.00	1,458.27	1,539.44	2,120.47	0.00	0.00	0.00
8,000.00	0.00	0.00	7,578.44	1,458.27	1,539.44	2,120.47	0.00	0.00	0.00
8,100.00	0.00	0.00	7,678.44	1,458.27	1,539.44	2,120.47	0.00	0.00	0.00
8,200.00	0.00	0.00	7,778.44	1,458.27	1,539.44	2,120.47	0.00	0.00	0.00
8,300.00	0.00	0.00	7,878.44	1,458.27	1,539.44	2,120.47	0.00	0.00	0.00
8,400.00	0.00	0.00	7,978.44	1,458.27	1,539.44	2,120.47	0.00	0.00	0.00
JSAND									
8,407.56	0.00	0.00	7,986.00	1,458.27	1,539.44	2,120.47	0.00	0.00	0.00
8,500.00	0.00	0.00	8,078.44	1,458.27	1,539.44	2,120.47	0.00	0.00	0.00
PBHL_HIGHWAY 160 26-2(50 FNL 50 FEL)									
8,542.56	0.00	0.00	8,121.00	1,458.27	1,539.44	2,120.47	0.00	0.00	0.00

Database:	EDM 2003.21 Single User Db	Local Co-ordinate Reference:	Well P_HIGHWAY 160 26-2
Company:	US ROCKIES REGION PLANNING	TVD Reference:	WELL @ 5119.00ft (Original Well Elev)
Project:	COLORADO NORTHERN ZONE - 83	MD Reference:	WELL @ 5119.00ft (Original Well Elev)
Site:	WELD_HIGHWAY 160 17-2 pad	North Reference:	True
Well:	P_HIGHWAY 160 26-2	Survey Calculation Method:	Minimum Curvature
Wellbore:	P_HIGHWAY 160 26-2		
Design:	PLAN #1 3-17-10 RHS		

Design Targets									
Target Name									
- hit/miss target	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (ft)	Easting (ft)	Latitude	Longitude
- Shape									
PBHL_HIGHWAY 160	0.00	0.00	8,121.00	1,458.27	1,539.44	1,275,555.30	3,214,036.43	40° 5' 14.122 N	104° 44' 6.054 W
- plan hits target center									
- Circle (radius 50.00)									

Casing Points					
Measured Depth (ft)	Vertical Depth (ft)	Name	Casing Diameter (in)	Hole Diameter (in)	
1,110.78	1,100.00	8 5/8"	8.62	11.00	

Formations						
Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)	
4,543.57	4,236.00	PARKMAN				
5,081.82	4,726.00	SUSSEX				
7,627.56	7,206.00	NIO A				
7,947.56	7,526.00	CODELL				
8,407.56	7,986.00	JSAND				

Plan Annotations					
Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates			
		+N/-S (ft)	+E/-W (ft)	Comment	
300.00	300.00	0.00	0.00	Start Build 2.00	
1,522.23	1,485.49	176.60	186.43	Start 3883.09 hold at 1522.23 MD	
5,405.33	5,020.51	1,281.66	1,353.01	Start Drop -2.00	
6,627.56	6,206.00	1,458.27	1,539.44	Start 1915.00 hold at 6627.56 MD	
8,542.56	8,121.00	1,458.27	1,539.44	TD at 8542.56	



US ROCKIES REGION PLANNING

**COLORADO NORTHERN ZONE - 83
WELD_HIGHWAY 160 17-2 pad
P_HIGHWAY 160 26-2**

**P_HIGHWAY 160 26-2
PLAN #1 3-17-10 RHS**

Anticollision Report

17 March, 2010



Company:	US ROCKIES REGION PLANNING	Local Co-ordinate Reference:	Well P_HIGHWAY 160 26-2
Project:	COLORADO NORTHERN ZONE - 83	TVD Reference:	WELL @ 5119.00ft (Original Well Elev)
Reference Site:	WELD_HIGHWAY 160 17-2 pad	MD Reference:	WELL @ 5119.00ft (Original Well Elev)
Site Error:	0.00ft	North Reference:	True
Reference Well:	P_HIGHWAY 160 26-2	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00ft	Output errors are at	2.00 sigma
Reference Wellbore	P_HIGHWAY 160 26-2	Database:	EDM 2003.21 Single User Db
Reference Design:	PLAN #1 3-17-10 RHS	Offset TVD Reference:	Offset Datum

Reference	PLAN #1 3-17-10 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 3/17/2010			
From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description
0.00	8,542.56	PLAN #1 3-17-10 RHS (P_HIGHWAY 160	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_HIGHWAY 160 17-2 pad						
BROWN, GORDON D. UNIT #1 EXISTING - BROWN, C	300.00	285.00	90.56	80.61	9.106	CC
BROWN, GORDON D. UNIT #1 EXISTING - BROWN, C	400.00	384.98	92.29	78.13	6.519	ES
BROWN, GORDON D. UNIT #1 EXISTING - BROWN, C	800.00	782.47	133.85	103.32	4.385	SF
P_HIGHWAY 160 1-2 - P_HIGHWAY 160 1-2 - PLAN #1	505.52	505.34	6.46	4.45	3.205	CC, ES, SF
P_HIGHWAY 160 1-2S - P_HIGHWAY 160 1-2S - PLAN	300.00	300.00	10.07	8.98	9.241	CC, ES
P_HIGHWAY 160 1-2S - P_HIGHWAY 160 1-2S - PLAN	400.00	399.98	11.40	9.87	7.430	SF
P_HIGHWAY 160 2-2 - P_HIGHWAY 160 2-2 - PLAN #1	300.00	300.00	50.09	49.00	45.947	CC, ES
P_HIGHWAY 160 2-2 - P_HIGHWAY 160 2-2 - PLAN #1	700.00	698.70	72.99	70.11	25.377	SF
P_HIGHWAY 160 2-2S - P_HIGHWAY 160 2-2S - PLAN	300.00	300.00	60.16	59.07	55.187	CC, ES
P_HIGHWAY 160 2-2S - P_HIGHWAY 160 2-2S - PLAN	700.00	698.70	82.74	79.86	28.744	SF
P_HIGHWAY 160 24-2 - P_HIGHWAY 160 24-2 - PLAN	300.00	300.00	40.01	38.92	36.705	CC, ES
P_HIGHWAY 160 24-2 - P_HIGHWAY 160 24-2 - PLAN	600.00	599.45	52.53	50.10	21.659	SF
P_HIGHWAY 160 41-2 - P_HIGHWAY 160 41-2 - PLAN	590.08	589.58	13.40	10.99	5.553	CC
P_HIGHWAY 160 41-2 - P_HIGHWAY 160 41-2 - PLAN	600.00	599.45	13.44	10.98	5.462	ES, SF
P_HIGHWAY 160 7-2 - P_HIGHWAY 160 7-2 - PLAN #1	300.00	300.00	70.23	69.14	64.428	CC, ES
P_HIGHWAY 160 7-2 - P_HIGHWAY 160 7-2 - PLAN #1	800.00	797.47	106.24	102.91	31.849	SF
P_HIGHWAY 160 8-2 - P_HIGHWAY 160 8-2 - PLAN #1	300.00	300.00	20.15	19.06	18.481	CC, ES
P_HIGHWAY 160 8-2 - P_HIGHWAY 160 8-2 - PLAN #1	500.00	499.84	25.67	23.69	12.978	SF
P_HIGHWAY 160 8-2S - P_HIGHWAY 160 8-2S - PLAN	300.00	300.00	29.94	28.85	27.465	CC, ES
P_HIGHWAY 160 8-2S - P_HIGHWAY 160 8-2S - PLAN	600.00	599.45	42.72	40.30	17.625	SF

Offset Design		WELD_HIGHWAY 160 17-2 pad - BROWN, GORDON D. UNIT #1 EXISTING - BROWN, GORDON D.										Offset Site Error:		0.00 ft			
Survey Program: 0-UNKNOWN														Offset Well Error:		0.00 ft	
Reference		Offset		Semi Major Axis			Distance										
Measured Depth	Vertical Depth	Measured Depth	Vertical Depth	Reference	Offset	Highside Toolface	Offset Wellbore Centre		Between Centres	Between Ellipses	Minimum Separation	Separation Factor	Warning				
(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(°)	+N/-S (ft)	+E/-W (ft)	(ft)	(ft)	(ft)						
0.00	0.00	0.00	0.00	0.00	0.00	-126.25	-53.55	-73.03	91.79								
100.00	100.00	85.00	85.00	0.10	1.70	-126.25	-53.55	-73.03	90.56	88.76	1.80	50.435					
200.00	200.00	185.00	185.00	0.32	5.40	-126.25	-53.55	-73.03	90.56	84.84	5.72	15.831					
300.00	300.00	285.00	285.00	0.55	9.40	-126.25	-53.55	-73.03	90.56	80.61	9.95	9.106	CC				
400.00	399.98	384.98	384.98	0.77	13.40	-172.93	-53.55	-73.03	92.29	78.13	14.16	6.519	ES				
500.00	499.84	484.84	484.84	0.99	17.39	-173.30	-53.55	-73.03	97.49	79.15	18.34	5.316					
600.00	599.45	584.45	584.45	1.24	21.38	-173.83	-53.55	-73.03	106.15	83.68	22.47	4.724					
700.00	698.70	683.70	683.70	1.51	25.35	-174.44	-53.55	-73.03	118.27	91.73	26.54	4.456					

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_HIGHWAY 160 26-2
Project:	COLORADO NORTHERN ZONE - 83	TVD Reference:	WELL @ 5119.00ft (Original Well Elev)
Reference Site:	WELD_HIGHWAY 160 17-2 pad	MD Reference:	WELL @ 5119.00ft (Original Well Elev)
Site Error:	0.00ft	North Reference:	True
Reference Well:	P_HIGHWAY 160 26-2	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00ft	Output errors are at	2.00 sigma
Reference Wellbore	P_HIGHWAY 160 26-2	Database:	EDM 2003.21 Single User Db
Reference Design:	PLAN #1 3-17-10 RHS	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.00 ft
Survey Program: 0-UNKNOWN												Offset Well Error:	0.00 ft
Reference		Offset		Semi Major Axis			Distance						
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning
800.00	797.47	782.47	782.47	1.83	29.30	-175.06	-53.55	-73.03	133.85	103.32	30.53	4.385 SF	
900.00	895.62	880.62	880.62	2.19	33.22	-175.65	-53.55	-73.03	152.87	118.46	34.41	4.442	
1,000.00	993.06	978.06	978.06	2.61	37.12	-176.18	-53.55	-73.03	175.31	137.13	38.18	4.591	
1,100.00	1,089.64	1,074.64	1,074.64	3.09	40.99	-176.64	-53.55	-73.03	201.14	159.32	41.82	4.809	
1,200.00	1,185.27	1,170.27	1,170.27	3.63	44.81	-177.03	-53.55	-73.03	230.34	185.03	45.31	5.083	
1,300.00	1,279.82	1,264.82	1,264.82	4.24	48.59	-177.37	-53.55	-73.03	262.86	214.22	48.64	5.404	
1,400.00	1,373.17	1,358.17	1,358.17	4.91	52.33	-177.65	-53.55	-73.03	298.66	246.88	51.79	5.767	
1,500.00	1,465.21	1,450.21	1,450.21	5.64	56.01	-177.89	-53.55	-73.03	337.71	282.97	54.74	6.169	
1,522.23	1,485.49	1,470.49	1,470.49	5.82	56.82	-177.94	-53.55	-73.03	346.83	291.45	55.37	6.263	
1,600.00	1,556.29	1,541.29	1,541.29	6.43	59.65	-178.12	-53.55	-73.03	378.99	320.78	58.21	6.510	
1,700.00	1,647.32	1,632.32	1,632.32	7.22	63.29	-178.30	-53.55	-73.03	420.36	358.49	61.87	6.794	
1,800.00	1,738.36	1,723.36	1,723.36	8.03	66.93	-178.45	-53.55	-73.03	461.72	396.20	65.53	7.046	
1,900.00	1,829.39	1,814.39	1,814.39	8.83	70.58	-178.58	-53.55	-73.03	503.09	433.90	69.19	7.271	
2,000.00	1,920.43	1,905.43	1,905.43	9.64	74.22	-178.69	-53.55	-73.03	544.47	471.61	72.86	7.473	
2,100.00	2,011.47	1,996.47	1,996.47	10.46	77.86	-178.78	-53.55	-73.03	585.84	509.31	76.53	7.655	
2,200.00	2,102.50	2,087.50	2,087.50	11.27	81.50	-178.86	-53.55	-73.03	627.21	547.01	80.20	7.821	
2,300.00	2,193.54	2,178.54	2,178.54	12.09	85.14	-178.93	-53.55	-73.03	668.59	584.72	83.87	7.971	
2,400.00	2,284.58	2,269.58	2,269.58	12.91	88.78	-178.99	-53.55	-73.03	709.96	622.42	87.55	8.109	
2,500.00	2,375.61	2,360.61	2,360.61	13.73	92.42	-179.05	-53.55	-73.03	751.34	660.12	91.22	8.236	
2,600.00	2,466.65	2,451.65	2,451.65	14.56	96.07	-179.10	-53.55	-73.03	792.72	697.82	94.90	8.353	
2,700.00	2,557.68	2,542.68	2,542.68	15.38	99.71	-179.14	-53.55	-73.03	834.10	735.52	98.58	8.461	
2,800.00	2,648.72	2,633.72	2,633.72	16.20	103.35	-179.18	-53.55	-73.03	875.47	773.22	102.25	8.562	
2,900.00	2,739.76	2,724.76	2,724.76	17.03	106.99	-179.22	-53.55	-73.03	916.85	810.92	105.93	8.655	
3,000.00	2,830.79	2,815.79	2,815.79	17.85	110.63	-179.25	-53.55	-73.03	958.23	848.62	109.61	8.742	
3,100.00	2,921.83	2,906.83	2,906.83	18.68	114.27	-179.29	-53.55	-73.03	999.61	886.32	113.29	8.823	
3,200.00	3,012.86	2,997.86	2,997.86	19.50	117.91	-179.31	-53.55	-73.03	1,040.99	924.02	116.97	8.900	
3,300.00	3,103.90	3,088.90	3,088.90	20.33	121.56	-179.34	-53.55	-73.03	1,082.37	961.72	120.65	8.971	
3,400.00	3,194.94	3,179.94	3,179.94	21.16	125.20	-179.36	-53.55	-73.03	1,123.75	999.41	124.33	9.038	
3,500.00	3,285.97	3,270.97	3,270.97	21.98	128.84	-179.39	-53.55	-73.03	1,165.12	1,037.11	128.01	9.102	
3,600.00	3,377.01	3,362.01	3,362.01	22.81	132.48	-179.41	-53.55	-73.03	1,206.50	1,074.81	131.69	9.162	
3,700.00	3,468.05	3,453.05	3,453.05	23.64	136.12	-179.43	-53.55	-73.03	1,247.88	1,112.51	135.37	9.218	
3,800.00	3,559.08	3,544.08	3,544.08	24.46	139.76	-179.45	-53.55	-73.03	1,289.26	1,150.21	139.06	9.272	
3,900.00	3,650.12	3,635.12	3,635.12	25.29	143.40	-179.46	-53.55	-73.03	1,330.64	1,187.91	142.74	9.322	
4,000.00	3,741.15	3,726.15	3,726.15	26.12	147.05	-179.48	-53.55	-73.03	1,372.02	1,225.60	146.42	9.371	
4,100.00	3,832.19	3,817.19	3,817.19	26.95	150.69	-179.49	-53.55	-73.03	1,413.40	1,263.30	150.10	9.416	
4,200.00	3,923.23	3,908.23	3,908.23	27.78	154.33	-179.51	-53.55	-73.03	1,454.78	1,301.00	153.78	9.460	
4,300.00	4,014.26	3,999.26	3,999.26	28.60	157.97	-179.52	-53.55	-73.03	1,496.16	1,338.70	157.47	9.502	
4,400.00	4,105.30	4,090.30	4,090.30	29.43	161.61	-179.54	-53.55	-73.03	1,537.54	1,376.40	161.15	9.541	
4,500.00	4,196.33	4,181.33	4,181.33	30.26	165.25	-179.55	-53.55	-73.03	1,578.92	1,414.09	164.83	9.579	
4,600.00	4,287.37	4,272.37	4,272.37	31.09	168.89	-179.56	-53.55	-73.03	1,620.31	1,451.79	168.51	9.615	
4,700.00	4,378.41	4,363.41	4,363.41	31.92	172.54	-179.57	-53.55	-73.03	1,661.69	1,489.49	172.20	9.650	
4,800.00	4,469.44	4,454.44	4,454.44	32.75	176.18	-179.58	-53.55	-73.03	1,703.07	1,527.19	175.88	9.683	
4,900.00	4,560.48	4,545.48	4,545.48	33.57	179.82	-179.59	-53.55	-73.03	1,744.45	1,564.88	179.56	9.715	
5,000.00	4,651.51	4,636.51	4,636.51	34.40	183.46	-179.60	-53.55	-73.03	1,785.83	1,602.58	183.25	9.746	
5,100.00	4,742.55	4,727.55	4,727.55	35.23	187.10	-179.61	-53.55	-73.03	1,827.21	1,640.28	186.93	9.775	
5,200.00	4,833.59	4,818.59	4,818.59	36.06	190.74	-179.62	-53.55	-73.03	1,868.59	1,677.98	190.61	9.803	
5,300.00	4,924.62	4,909.62	4,909.62	36.89	194.38	-179.63	-53.55	-73.03	1,909.97	1,715.67	194.30	9.830	
5,405.33	5,020.51	5,005.51	5,005.51	37.76	198.22	-179.63	-53.55	-73.03	1,953.55	1,755.38	198.18	9.858	
5,500.00	5,107.33	5,092.33	5,092.33	38.44	201.69	-179.65	-53.55	-73.03	1,991.30	1,787.00	204.30	9.747	
5,600.00	5,200.33	5,185.33	5,185.33	39.03	205.41	-179.66	-53.55	-73.03	2,028.03	1,817.36	210.67	9.627	
5,700.00	5,294.56	5,279.56	5,279.56	39.56	209.18	-179.67	-53.55	-73.03	2,061.49	1,844.59	216.91	9.504	
5,800.00	5,389.90	5,374.90	5,374.90	40.05	213.00	-179.68	-53.55	-73.03	2,091.65	1,868.66	222.99	9.380	

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_HIGHWAY 160 26-2
Project:	COLORADO NORTHERN ZONE - 83	TVD Reference:	WELL @ 5119.00ft (Original Well Elev)
Reference Site:	WELD_HIGHWAY 160 17-2 pad	MD Reference:	WELL @ 5119.00ft (Original Well Elev)
Site Error:	0.00ft	North Reference:	True
Reference Well:	P_HIGHWAY 160 26-2	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00ft	Output errors are at	2.00 sigma
Reference Wellbore	P_HIGHWAY 160 26-2	Database:	EDM 2003.21 Single User Db
Reference Design:	PLAN #1 3-17-10 RHS	Offset TVD Reference:	Offset Datum

Offset Design WELD_HIGHWAY 160 17-2 pad - BROWN, GORDON D. UNIT #1 EXISTING - BROWN, GORDON D.												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
5,900.00	5,486.23	5,471.23	5,471.23	40.50	216.85	-179.68	-53.55	-73.03	2,118.46	1,889.55	228.90	9.255	
6,000.00	5,583.45	5,568.45	5,568.45	40.89	220.74	-179.69	-53.55	-73.03	2,141.89	1,907.27	234.62	9.129	
6,100.00	5,681.42	5,666.42	5,666.42	41.24	224.66	-179.69	-53.55	-73.03	2,161.91	1,921.79	240.12	9.004	
6,200.00	5,780.02	5,765.02	5,765.02	41.53	228.60	-179.70	-53.55	-73.03	2,178.50	1,933.12	245.38	8.878	
6,300.00	5,879.15	5,864.15	5,864.15	41.78	232.57	-179.70	-53.55	-73.03	2,191.64	1,941.25	250.39	8.753	
6,400.00	5,978.68	5,963.68	5,963.68	41.97	236.55	-179.70	-53.55	-73.03	2,201.31	1,946.18	255.13	8.628	
6,500.00	6,078.48	6,063.48	6,063.48	42.12	240.54	-179.71	-53.55	-73.03	2,207.51	1,947.94	259.57	8.504	
6,600.00	6,178.44	6,163.44	6,163.44	42.22	244.54	-179.71	-53.55	-73.03	2,210.21	1,946.52	263.70	8.382	
6,627.56	6,206.00	6,191.00	6,191.00	42.24	245.64	-133.15	-53.55	-73.03	2,210.35	1,945.57	264.78	8.348	
6,700.00	6,278.44	6,263.44	6,263.44	42.29	248.54	-133.15	-53.55	-73.03	2,210.35	1,942.58	267.77	8.255	
6,800.00	6,378.44	6,363.44	6,363.44	42.36	252.54	-133.15	-53.55	-73.03	2,210.35	1,938.43	271.91	8.129	
6,900.00	6,478.44	6,463.44	6,463.44	42.42	256.54	-133.15	-53.55	-73.03	2,210.35	1,934.29	276.06	8.007	
7,000.00	6,578.44	6,563.44	6,563.44	42.50	260.54	-133.15	-53.55	-73.03	2,210.35	1,930.14	280.20	7.888	
7,100.00	6,678.44	6,663.44	6,663.44	42.57	264.54	-133.15	-53.55	-73.03	2,210.35	1,926.00	284.35	7.773	
7,200.00	6,778.44	6,763.44	6,763.44	42.64	268.54	-133.15	-53.55	-73.03	2,210.35	1,921.85	288.50	7.662	
7,300.00	6,878.44	6,863.44	6,863.44	42.71	272.54	-133.15	-53.55	-73.03	2,210.35	1,917.70	292.65	7.553	
7,400.00	6,978.44	6,963.44	6,963.44	42.79	276.54	-133.15	-53.55	-73.03	2,210.35	1,913.55	296.80	7.447	
7,500.00	7,078.44	7,063.44	7,063.44	42.87	280.54	-133.15	-53.55	-73.03	2,210.35	1,909.39	300.95	7.345	
7,600.00	7,178.44	7,163.44	7,163.44	42.94	284.54	-133.15	-53.55	-73.03	2,210.35	1,905.24	305.11	7.245	
7,700.00	7,278.44	7,263.44	7,263.44	43.02	288.54	-133.15	-53.55	-73.03	2,210.35	1,901.08	309.26	7.147	
7,800.00	7,378.44	7,363.44	7,363.44	43.10	292.54	-133.15	-53.55	-73.03	2,210.35	1,896.93	313.42	7.052	
7,900.00	7,478.44	7,463.44	7,463.44	43.18	296.54	-133.15	-53.55	-73.03	2,210.35	1,892.77	317.58	6.960	
8,000.00	7,578.44	7,563.44	7,563.44	43.26	300.54	-133.15	-53.55	-73.03	2,210.35	1,888.61	321.73	6.870	
8,100.00	7,678.44	7,663.44	7,663.44	43.34	304.54	-133.15	-53.55	-73.03	2,210.35	1,884.45	325.90	6.782	
8,200.00	7,778.44	7,763.44	7,763.44	43.43	308.54	-133.15	-53.55	-73.03	2,210.35	1,880.29	330.06	6.697	
8,300.00	7,878.44	7,863.44	7,863.44	43.51	312.54	-133.15	-53.55	-73.03	2,210.35	1,876.13	334.22	6.613	
8,400.00	7,978.44	7,963.44	7,963.44	43.60	316.54	-133.15	-53.55	-73.03	2,210.35	1,871.96	338.38	6.532	
8,500.00	8,078.44	8,063.44	8,063.44	43.68	320.54	-133.15	-53.55	-73.03	2,210.35	1,867.80	342.55	6.453	
8,542.56	8,121.00	8,106.00	8,106.00	43.72	322.24	-133.15	-53.55	-73.03	2,210.35	1,866.03	344.32	6.419	

Company:	US ROCKIES REGION PLANNING	Local Co-ordinate Reference:	Well P_HIGHWAY 160 26-2
Project:	COLORADO NORTHERN ZONE - 83	TVD Reference:	WELL @ 5119.00ft (Original Well Elev)
Reference Site:	WELD_HIGHWAY 160 17-2 pad	MD Reference:	WELL @ 5119.00ft (Original Well Elev)
Site Error:	0.00ft	North Reference:	True
Reference Well:	P_HIGHWAY 160 26-2	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00ft	Output errors are at	2.00 sigma
Reference Wellbore	P_HIGHWAY 160 26-2	Database:	EDM 2003.21 Single User Db
Reference Design:	PLAN #1 3-17-10 RHS	Offset TVD Reference:	Offset Datum

Offset Design WELD_HIGHWAY 160 17-2 pad - P_HIGHWAY 160 1-2 - P_HIGHWAY 160 1-2 - PLAN #1 3-17-10 RH:												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	87.80	0.38	9.79	9.80				
100.00	100.00	100.00	100.00	0.10	0.10	87.80	0.38	9.79	9.80	9.61	0.19	51.299	
200.00	200.00	200.00	200.00	0.32	0.32	87.80	0.38	9.79	9.80	9.16	0.64	15.300	
300.00	300.00	300.00	300.00	0.55	0.55	87.80	0.38	9.79	9.80	8.71	1.09	8.990	
400.00	399.98	399.98	399.98	0.77	0.77	48.98	0.38	9.79	8.57	7.03	1.54	5.580	
500.00	499.84	499.84	499.84	0.99	0.99	86.55	0.38	9.79	6.47	4.49	1.99	3.257	
505.52	505.34	505.34	505.34	1.01	1.01	90.00	0.38	9.79	6.46	4.45	2.02	3.205 CC, ES, SF	
600.00	599.45	599.45	599.45	1.24	1.22	142.03	0.38	9.79	10.54	8.10	2.44	4.322	
700.00	698.70	698.70	698.70	1.51	1.44	162.35	0.38	9.79	21.50	18.63	2.87	7.481	
800.00	797.47	797.47	797.47	1.83	1.66	169.71	0.38	9.79	36.73	33.41	3.31	11.079	
900.00	895.62	895.62	895.62	2.19	1.88	173.18	0.38	9.79	55.61	51.85	3.76	14.802	
1,000.00	993.06	993.06	993.06	2.61	2.10	175.10	0.38	9.79	78.00	73.80	4.20	18.568	
1,100.00	1,089.64	1,089.64	1,089.64	3.09	2.32	176.29	0.38	9.79	103.81	99.16	4.65	22.346	
1,200.00	1,185.27	1,185.27	1,185.27	3.63	2.53	177.07	0.38	9.79	133.00	127.91	5.09	26.119	
1,300.00	1,279.82	1,284.56	1,284.56	4.24	2.75	177.54	1.06	10.84	164.38	158.83	5.55	29.636	
1,400.00	1,373.17	1,385.68	1,385.55	4.91	2.97	177.67	3.65	14.84	195.86	189.85	6.01	32.600	
1,500.00	1,465.21	1,487.96	1,487.47	5.64	3.20	177.59	8.25	21.92	227.36	220.88	6.48	35.079	
1,522.23	1,485.49	1,510.86	1,510.25	5.82	3.26	177.55	9.55	23.93	234.36	227.78	6.59	35.570	
1,600.00	1,556.29	1,591.77	1,590.55	6.43	3.45	177.37	14.94	32.23	257.84	250.82	7.03	36.700	
1,700.00	1,647.32	1,697.80	1,695.30	7.22	3.73	177.03	23.87	45.98	285.00	277.39	7.61	37.470	
1,800.00	1,738.36	1,805.84	1,801.33	8.03	4.06	176.56	35.13	63.33	308.64	300.43	8.21	37.596	
1,900.00	1,829.39	1,915.63	1,908.21	8.83	4.44	175.99	48.79	84.38	328.70	319.86	8.84	37.187	
2,000.00	1,920.43	2,026.89	2,015.45	9.64	4.89	175.30	64.90	109.20	345.12	335.62	9.50	36.336	
2,100.00	2,011.47	2,128.87	2,112.99	10.46	5.36	174.61	81.12	134.19	358.95	348.79	10.16	35.334	
2,200.00	2,102.50	2,227.84	2,207.60	11.27	5.84	173.99	96.93	158.54	372.73	361.90	10.83	34.428	
2,300.00	2,193.54	2,326.81	2,302.22	12.09	6.34	173.41	112.73	182.89	386.55	375.04	11.51	33.587	
2,400.00	2,284.58	2,425.78	2,396.83	12.91	6.86	172.87	128.54	207.24	400.40	388.20	12.20	32.808	
2,500.00	2,375.61	2,524.74	2,491.45	13.73	7.39	172.37	144.34	231.58	414.29	401.38	12.91	32.085	
2,600.00	2,466.65	2,623.71	2,586.06	14.56	7.93	171.90	160.14	255.93	428.21	414.58	13.63	31.414	
2,700.00	2,557.68	2,722.68	2,680.68	15.38	8.48	171.46	175.95	280.28	442.15	427.79	14.36	30.791	
2,800.00	2,648.72	2,821.65	2,775.29	16.20	9.03	171.05	191.75	304.63	456.12	441.02	15.10	30.212	
2,900.00	2,739.76	2,920.61	2,869.91	17.03	9.59	170.66	207.56	328.97	470.11	454.26	15.84	29.672	
3,000.00	2,830.79	3,019.58	2,964.52	17.85	10.15	170.29	223.36	353.32	484.12	467.52	16.60	29.169	
3,100.00	2,921.83	3,118.55	3,059.14	18.68	10.72	169.95	239.16	377.67	498.14	480.79	17.36	28.699	
3,200.00	3,012.86	3,217.52	3,153.76	19.50	11.29	169.62	254.97	402.02	512.19	494.06	18.12	28.260	
3,300.00	3,103.90	3,316.49	3,248.37	20.33	11.86	169.31	270.77	426.36	526.25	507.35	18.90	27.848	
3,400.00	3,194.94	3,415.45	3,342.99	21.16	12.44	169.02	286.58	450.71	540.32	520.65	19.68	27.462	
3,500.00	3,285.97	3,514.42	3,437.60	21.98	13.02	168.74	302.38	475.06	554.41	533.95	20.46	27.100	
3,600.00	3,377.01	3,613.39	3,532.22	22.81	13.60	168.48	318.18	499.40	568.51	547.26	21.25	26.759	
3,700.00	3,468.05	3,712.36	3,626.83	23.64	14.18	168.22	333.99	523.75	582.62	560.58	22.04	26.437	
3,800.00	3,559.08	3,811.32	3,721.45	24.46	14.76	167.98	349.79	548.10	596.74	573.91	22.83	26.134	
3,900.00	3,650.12	3,910.29	3,816.06	25.29	15.34	167.76	365.60	572.45	610.87	587.24	23.63	25.848	
4,000.00	3,741.15	4,009.26	3,910.68	26.12	15.93	167.54	381.40	596.79	625.01	600.57	24.44	25.577	
4,100.00	3,832.19	4,108.23	4,005.29	26.95	16.51	167.33	397.20	621.14	639.16	613.92	25.24	25.321	
4,200.00	3,923.23	4,207.20	4,099.91	27.78	17.10	167.13	413.01	645.49	653.32	627.26	26.05	25.078	
4,300.00	4,014.26	4,306.16	4,194.52	28.60	17.68	166.94	428.81	669.84	667.48	640.62	26.86	24.847	
4,400.00	4,105.30	4,405.13	4,289.14	29.43	18.27	166.75	444.61	694.18	681.65	653.97	27.68	24.628	
4,500.00	4,196.33	4,504.10	4,383.75	30.26	18.86	166.58	460.42	718.53	695.83	667.33	28.49	24.419	
4,600.00	4,287.37	4,603.07	4,478.37	31.09	19.45	166.41	476.22	742.88	710.01	680.70	29.31	24.221	
4,700.00	4,378.41	4,702.03	4,572.99	31.92	20.04	166.25	492.03	767.23	724.20	694.07	30.14	24.031	
4,800.00	4,469.44	4,801.00	4,667.60	32.75	20.63	166.09	507.83	791.57	738.40	707.44	30.96	23.851	
4,900.00	4,560.48	4,899.97	4,762.22	33.57	21.22	165.94	523.63	815.92	752.60	720.81	31.78	23.678	

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_HIGHWAY 160 26-2
Project:	COLORADO NORTHERN ZONE - 83	TVD Reference:	WELL @ 5119.00ft (Original Well Elev)
Reference Site:	WELD_HIGHWAY 160 17-2 pad	MD Reference:	WELL @ 5119.00ft (Original Well Elev)
Site Error:	0.00ft	North Reference:	True
Reference Well:	P_HIGHWAY 160 26-2	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00ft	Output errors are at	2.00 sigma
Reference Wellbore	P_HIGHWAY 160 26-2	Database:	EDM 2003.21 Single User Db
Reference Design:	PLAN #1 3-17-10 RHS	Offset TVD Reference:	Offset Datum

Offset Design WELD_HIGHWAY 160 17-2 pad - P_HIGHWAY 160 1-2 - P_HIGHWAY 160 1-2 - PLAN #1 3-17-10 RH:												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	4,651.51	4,998.94	4,856.83	34.40	21.81	165.80	539.44	840.27	766.80	734.19	32.61	23.513	
5,100.00	4,742.55	5,097.91	4,951.45	35.23	22.40	165.66	555.24	864.62	781.01	747.57	33.44	23.355	
5,200.00	4,833.59	5,196.87	5,046.06	36.06	22.99	165.52	571.05	888.96	795.22	760.95	34.27	23.204	
5,300.00	4,924.62	5,295.84	5,140.68	36.89	23.58	165.39	586.85	913.31	809.44	774.34	35.10	23.059	
5,405.33	5,020.51	5,400.08	5,240.33	37.76	24.21	165.26	603.50	938.96	824.42	788.44	35.98	22.913	
5,500.00	5,107.33	5,493.97	5,330.09	38.44	24.77	165.18	618.49	962.05	836.39	799.57	36.83	22.712	
5,600.00	5,200.33	5,582.55	5,414.86	39.03	25.27	165.06	632.48	983.61	846.11	808.51	37.60	22.503	
5,700.00	5,294.56	5,661.04	5,490.51	39.56	25.62	164.96	643.87	1,001.15	854.67	816.44	38.23	22.358	
5,800.00	5,389.90	5,739.45	5,566.63	40.05	25.93	164.87	654.11	1,016.94	862.35	823.57	38.78	22.239	
5,900.00	5,486.23	5,817.80	5,643.17	40.50	26.22	164.79	663.21	1,030.96	869.14	829.88	39.26	22.139	
6,000.00	5,583.45	5,900.00	5,723.94	40.89	26.49	164.72	671.53	1,043.77	875.04	835.36	39.68	22.053	
6,100.00	5,681.42	5,974.34	5,797.33	41.24	26.71	164.67	677.97	1,053.69	880.03	840.03	40.00	22.001	
6,200.00	5,780.02	6,052.55	5,874.85	41.53	26.91	164.62	683.61	1,062.39	884.12	843.86	40.26	21.960	
6,300.00	5,879.15	6,130.73	5,952.59	41.78	27.09	164.58	688.11	1,069.31	887.31	846.87	40.45	21.938	
6,400.00	5,978.68	6,200.00	6,021.63	41.97	27.23	164.56	691.12	1,073.95	889.65	849.11	40.55	21.942	
6,500.00	6,078.48	6,287.03	6,108.54	42.12	27.36	164.53	693.62	1,077.79	890.97	850.37	40.60	21.945	
6,600.00	6,178.44	6,365.17	6,186.65	42.22	27.46	164.52	694.63	1,079.36	891.43	850.87	40.56	21.976	
6,627.56	6,206.00	6,394.52	6,216.00	42.24	27.49	-148.94	694.71	1,079.49	891.44	850.89	40.55	21.982	
6,655.57	6,234.01	6,412.53	6,234.01	42.26	27.51	-148.94	694.71	1,079.49	891.38	850.77	40.61	21.948	
6,700.00	6,278.44	6,456.96	6,278.44	42.29	27.55	-148.94	694.71	1,079.49	891.38	850.65	40.73	21.883	
6,800.00	6,378.44	6,556.96	6,378.44	42.36	27.66	-148.94	694.71	1,079.49	891.38	850.36	41.02	21.731	
6,900.00	6,478.44	6,656.96	6,478.44	42.42	27.77	-148.94	694.71	1,079.49	891.38	850.08	41.31	21.580	
7,000.00	6,578.44	6,756.96	6,578.44	42.50	27.88	-148.94	694.71	1,079.49	891.38	849.79	41.60	21.429	
7,100.00	6,678.44	6,856.96	6,678.44	42.57	28.00	-148.94	694.71	1,079.49	891.38	849.49	41.89	21.279	
7,200.00	6,778.44	6,956.96	6,778.44	42.64	28.11	-148.94	694.71	1,079.49	891.38	849.20	42.19	21.130	
7,300.00	6,878.44	7,056.96	6,878.44	42.71	28.23	-148.94	694.71	1,079.49	891.38	848.90	42.48	20.981	
7,400.00	6,978.44	7,156.96	6,978.44	42.79	28.34	-148.94	694.71	1,079.49	891.38	848.60	42.79	20.834	
7,500.00	7,078.44	7,256.96	7,078.44	42.87	28.46	-148.94	694.71	1,079.49	891.38	848.29	43.09	20.687	
7,600.00	7,178.44	7,356.96	7,178.44	42.94	28.58	-148.94	694.71	1,079.49	891.38	847.99	43.40	20.541	
7,700.00	7,278.44	7,456.96	7,278.44	43.02	28.70	-148.94	694.71	1,079.49	891.38	847.68	43.70	20.396	
7,800.00	7,378.44	7,556.96	7,378.44	43.10	28.82	-148.94	694.71	1,079.49	891.38	847.37	44.02	20.252	
7,900.00	7,478.44	7,656.96	7,478.44	43.18	28.95	-148.94	694.71	1,079.49	891.38	847.06	44.33	20.108	
8,000.00	7,578.44	7,756.96	7,578.44	43.26	29.07	-148.94	694.71	1,079.49	891.38	846.74	44.64	19.966	
8,100.00	7,678.44	7,856.96	7,678.44	43.34	29.20	-148.94	694.71	1,079.49	891.38	846.42	44.96	19.825	
8,200.00	7,778.44	7,956.96	7,778.44	43.43	29.32	-148.94	694.71	1,079.49	891.38	846.10	45.28	19.685	
8,300.00	7,878.44	8,056.96	7,878.44	43.51	29.45	-148.94	694.71	1,079.49	891.38	845.78	45.60	19.546	
8,400.00	7,978.44	8,156.96	7,978.44	43.60	29.58	-148.94	694.71	1,079.49	891.38	845.45	45.93	19.408	
8,500.00	8,078.44	8,256.96	8,078.44	43.68	29.71	-148.94	694.71	1,079.49	891.38	845.13	46.26	19.271	
8,542.56	8,121.00	8,299.52	8,121.00	43.72	29.76	-148.94	694.71	1,079.49	891.38	844.99	46.40	19.213	

Company:	US ROCKIES REGION PLANNING	Local Co-ordinate Reference:	Well P_HIGHWAY 160 26-2
Project:	COLORADO NORTHERN ZONE - 83	TVD Reference:	WELL @ 5119.00ft (Original Well Elev)
Reference Site:	WELD_HIGHWAY 160 17-2 pad	MD Reference:	WELL @ 5119.00ft (Original Well Elev)
Site Error:	0.00ft	North Reference:	True
Reference Well:	P_HIGHWAY 160 26-2	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00ft	Output errors are at	2.00 sigma
Reference Wellbore	P_HIGHWAY 160 26-2	Database:	EDM 2003.21 Single User Db
Reference Design:	PLAN #1 3-17-10 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	
0.00	0.00	0.00	0.00	0.00	0.00	-90.00	0.00	-10.07	10.07				
100.00	100.00	100.00	100.00	0.10	0.10	-90.00	0.00	-10.07	10.07	9.88	0.19	52.725	
200.00	200.00	200.00	200.00	0.32	0.32	-90.00	0.00	-10.07	10.07	9.43	0.64	15.725	
300.00	300.00	300.00	300.00	0.55	0.55	-90.00	0.00	-10.07	10.07	8.98	1.09	9.241 CC, ES	
400.00	399.98	399.98	399.98	0.77	0.77	-142.58	0.00	-10.07	11.40	9.87	1.53	7.430 SF	
500.00	499.84	499.84	499.84	0.99	0.99	-154.08	0.00	-10.07	15.88	13.91	1.98	8.034	
600.00	599.45	599.45	599.45	1.24	1.22	-163.16	0.00	-10.07	24.03	21.61	2.42	9.930	
700.00	698.70	698.70	698.70	1.51	1.44	-168.76	0.00	-10.07	35.87	33.01	2.86	12.532	
800.00	797.47	797.47	797.47	1.83	1.66	-172.12	0.00	-10.07	51.31	48.00	3.31	15.524	
900.00	895.62	895.62	895.62	2.19	1.88	-174.22	0.00	-10.07	70.26	66.51	3.75	18.744	
1,000.00	993.06	993.06	993.06	2.61	2.10	-175.58	0.00	-10.07	92.67	88.48	4.19	22.103	
1,100.00	1,089.64	1,089.64	1,089.64	3.09	2.32	-176.51	0.00	-10.07	118.49	113.85	4.64	25.548	
1,200.00	1,185.27	1,185.27	1,185.27	3.63	2.53	-177.17	0.00	-10.07	147.69	142.60	5.08	29.044	
1,300.00	1,279.82	1,283.73	1,283.73	4.24	2.75	-177.64	0.67	-9.45	179.34	173.80	5.54	32.378	
1,400.00	1,373.17	1,383.36	1,383.29	4.91	2.97	-177.94	3.21	-7.06	211.89	205.89	6.00	35.324	
1,500.00	1,465.21	1,483.59	1,483.33	5.64	3.20	-178.12	7.68	-2.88	245.27	238.80	6.47	37.935	
1,522.23	1,485.49	1,505.96	1,505.64	5.82	3.25	-178.15	8.94	-1.70	252.80	246.23	6.57	38.475	
1,600.00	1,556.29	1,584.84	1,584.19	6.43	3.43	-178.24	14.13	3.17	278.47	271.48	7.00	39.794	
1,700.00	1,647.32	1,687.89	1,686.56	7.22	3.68	-178.30	22.70	11.20	309.24	301.68	7.56	40.908	
1,800.00	1,738.36	1,792.68	1,790.30	8.03	3.95	-178.30	33.48	21.31	337.41	329.27	8.13	41.485	
1,900.00	1,829.39	1,899.09	1,895.19	8.83	4.26	-178.26	46.55	33.55	362.93	354.21	8.72	41.620	
2,000.00	1,920.43	2,006.99	2,001.00	9.64	4.60	-178.18	61.97	48.00	385.73	376.41	9.32	41.386	
2,100.00	2,011.47	2,116.23	2,107.47	10.46	4.99	-178.07	79.80	64.71	405.78	395.84	9.93	40.845	
2,200.00	2,102.50	2,226.67	2,214.35	11.27	5.43	-177.93	100.07	83.71	423.01	412.45	10.56	40.045	
2,300.00	2,193.54	2,338.12	2,321.36	12.09	5.93	-177.76	122.81	105.02	437.39	426.18	11.21	39.028	
2,400.00	2,284.58	2,450.42	2,428.21	12.91	6.50	-177.56	148.01	128.64	448.88	437.01	11.87	37.827	
2,500.00	2,375.61	2,560.31	2,531.76	13.73	7.10	-177.34	174.83	153.78	457.53	445.00	12.53	36.507	
2,600.00	2,466.65	2,660.00	2,625.40	14.56	7.68	-177.13	199.79	177.16	465.31	452.13	13.18	35.298	
2,700.00	2,557.68	2,759.68	2,719.03	15.38	8.28	-176.93	224.74	200.55	473.10	459.26	13.84	34.187	
2,800.00	2,648.72	2,859.36	2,812.66	16.20	8.89	-176.74	249.70	223.94	480.89	466.39	14.50	33.164	
2,900.00	2,739.76	2,959.04	2,906.29	17.03	9.52	-176.55	274.65	247.32	488.69	473.52	15.17	32.217	
3,000.00	2,830.79	3,058.73	2,999.93	17.85	10.15	-176.37	299.60	270.71	496.50	480.65	15.84	31.341	
3,100.00	2,921.83	3,158.41	3,093.56	18.68	10.78	-176.19	324.56	294.09	504.31	487.79	16.52	30.528	
3,200.00	3,012.86	3,258.09	3,187.19	19.50	11.43	-176.02	349.51	317.48	512.12	494.92	17.20	29.771	
3,300.00	3,103.90	3,357.78	3,280.82	20.33	12.07	-175.86	374.47	340.87	519.94	502.05	17.89	29.067	
3,400.00	3,194.94	3,457.46	3,374.46	21.16	12.73	-175.70	399.42	364.25	527.76	509.18	18.58	28.409	
3,500.00	3,285.97	3,557.14	3,468.09	21.98	13.38	-175.54	424.37	387.64	535.59	516.31	19.27	27.793	
3,600.00	3,377.01	3,656.82	3,561.72	22.81	14.04	-175.39	449.33	411.03	543.41	523.45	19.97	27.216	
3,700.00	3,468.05	3,756.51	3,655.35	23.64	14.70	-175.24	474.28	434.41	551.25	530.58	20.67	26.675	
3,800.00	3,559.08	3,856.19	3,748.99	24.46	15.36	-175.10	499.23	457.80	559.09	537.72	21.37	26.165	
3,900.00	3,650.12	3,955.87	3,842.62	25.29	16.03	-174.96	524.19	481.18	566.93	544.85	22.07	25.685	
4,000.00	3,741.15	4,055.56	3,936.25	26.12	16.70	-174.83	549.14	504.57	574.77	551.99	22.78	25.233	
4,100.00	3,832.19	4,155.24	4,029.88	26.95	17.37	-174.69	574.10	527.96	582.62	559.13	23.49	24.805	
4,200.00	3,923.23	4,254.92	4,123.52	27.78	18.04	-174.57	599.05	551.34	590.47	566.27	24.20	24.400	
4,300.00	4,014.26	4,354.60	4,217.15	28.60	18.71	-174.44	624.00	574.73	598.32	573.41	24.91	24.017	
4,400.00	4,105.30	4,454.29	4,310.78	29.43	19.38	-174.32	648.96	598.12	606.17	580.55	25.63	23.653	
4,500.00	4,196.33	4,553.97	4,404.41	30.26	20.05	-174.20	673.91	621.50	614.03	587.69	26.35	23.307	
4,600.00	4,287.37	4,653.65	4,498.05	31.09	20.73	-174.09	698.87	644.89	621.89	594.83	27.06	22.978	
4,700.00	4,378.41	4,753.34	4,591.68	31.92	21.40	-173.97	723.82	668.27	629.76	601.97	27.79	22.665	
4,800.00	4,469.44	4,853.02	4,685.31	32.75	22.08	-173.86	748.77	691.66	637.62	609.11	28.51	22.367	
4,900.00	4,560.48	4,952.70	4,778.95	33.57	22.76	-173.76	773.73	715.05	645.49	616.26	29.23	22.082	
5,000.00	4,651.51	5,052.38	4,872.58	34.40	23.43	-173.65	798.68	738.43	653.36	623.40	29.96	21.810	

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_HIGHWAY 160 26-2
Project:	COLORADO NORTHERN ZONE - 83	TVD Reference:	WELL @ 5119.00ft (Original Well Elev)
Reference Site:	WELD_HIGHWAY 160 17-2 pad	MD Reference:	WELL @ 5119.00ft (Original Well Elev)
Site Error:	0.00ft	North Reference:	True
Reference Well:	P_HIGHWAY 160 26-2	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00ft	Output errors are at	2.00 sigma
Reference Wellbore	P_HIGHWAY 160 26-2	Database:	EDM 2003.21 Single User Db
Reference Design:	PLAN #1 3-17-10 RHS	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.00 ft
WELD_HIGHWAY 160 17-2 pad - P_HIGHWAY 160 1-2S - P_HIGHWAY 160 1-2S - PLAN #1 3-17-10 f												Offset Well Error:	0.00 ft
Survey Program: 0-MWD													
Reference		Offset		Semi Major Axis			Distance						
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning
5,100.00	4,742.55	5,152.07	4,966.21	35.23	24.11	-173.55	823.64	761.82	661.23	630.55	30.68	21.550	
5,200.00	4,833.59	5,226.37	5,036.00	36.06	24.62	-173.48	842.24	779.25	669.59	638.26	31.32	21.377	
5,300.00	4,924.62	5,226.37	5,036.00	36.89	24.62	-173.48	842.24	779.25	688.44	656.74	31.70	21.718	
5,405.33	5,020.51	5,226.37	5,036.00	37.76	24.62	-173.48	842.24	779.25	722.86	690.77	32.09	22.523	
5,500.00	5,107.33	5,226.37	5,036.00	38.44	24.62	-173.58	842.24	779.25	763.59	731.10	32.49	23.504	
5,600.00	5,200.33	5,226.37	5,036.00	39.03	24.62	-173.71	842.24	779.25	813.57	780.75	32.83	24.782	
5,700.00	5,294.56	5,226.37	5,036.00	39.56	24.62	-173.85	842.24	779.25	869.46	836.35	33.11	26.257	
5,800.00	5,389.90	5,226.37	5,036.00	40.05	24.62	-174.01	842.24	779.25	930.12	896.78	33.34	27.898	
5,900.00	5,486.23	5,226.37	5,036.00	40.50	24.62	-174.19	842.24	779.25	994.61	961.10	33.51	29.683	
6,000.00	5,583.45	5,226.37	5,036.00	40.89	24.62	-174.37	842.24	779.25	1,062.16	1,028.54	33.62	31.595	
6,100.00	5,681.42	5,226.37	5,036.00	41.24	24.62	-174.56	842.24	779.25	1,132.15	1,098.48	33.67	33.625	
6,200.00	5,780.02	5,226.37	5,036.00	41.53	24.62	-174.75	842.24	779.25	1,204.09	1,170.42	33.67	35.766	
6,300.00	5,879.15	5,226.37	5,036.00	41.78	24.62	-174.95	842.24	779.25	1,277.55	1,243.95	33.60	38.019	
6,400.00	5,978.68	5,226.37	5,036.00	41.97	24.62	-175.14	842.24	779.25	1,352.21	1,318.73	33.48	40.384	
6,500.00	6,078.48	5,226.37	5,036.00	42.12	24.62	-175.33	842.24	779.25	1,427.80	1,394.49	33.31	42.865	
6,600.00	6,178.44	5,226.37	5,036.00	42.22	24.62	-175.52	842.24	779.25	1,504.09	1,471.01	33.08	45.471	
6,627.56	6,206.00	5,226.37	5,036.00	42.24	24.62	-129.02	842.24	779.25	1,525.21	1,492.21	33.01	46.211	
6,700.00	6,278.44	5,226.37	5,036.00	42.29	24.62	-129.02	842.24	779.25	1,581.46	1,548.36	33.10	47.778	
6,800.00	6,378.44	5,226.37	5,036.00	42.36	24.62	-129.02	842.24	779.25	1,661.18	1,627.94	33.24	49.974	
6,900.00	6,478.44	5,226.37	5,036.00	42.42	24.62	-129.02	842.24	779.25	1,742.99	1,709.60	33.38	52.212	
7,000.00	6,578.44	5,226.37	5,036.00	42.50	24.62	-129.02	842.24	779.25	1,826.61	1,793.08	33.53	54.483	
7,100.00	6,678.44	5,226.37	5,036.00	42.57	24.62	-129.02	842.24	779.25	1,911.80	1,878.13	33.67	56.778	
7,200.00	6,778.44	5,226.37	5,036.00	42.64	24.62	-129.02	842.24	779.25	1,998.37	1,964.55	33.82	59.092	
7,300.00	6,878.44	5,226.37	5,036.00	42.71	24.62	-129.02	842.24	779.25	2,086.13	2,052.17	33.97	61.419	
7,400.00	6,978.44	5,226.37	5,036.00	42.79	24.62	-129.02	842.24	779.25	2,174.96	2,140.84	34.11	63.754	
7,500.00	7,078.44	5,226.37	5,036.00	42.87	24.62	-129.02	842.24	779.25	2,264.71	2,230.45	34.27	66.093	
7,600.00	7,178.44	5,226.37	5,036.00	42.94	24.62	-129.02	842.24	779.25	2,355.30	2,320.88	34.42	68.433	
7,700.00	7,278.44	5,226.37	5,036.00	43.02	24.62	-129.02	842.24	779.25	2,446.61	2,412.04	34.57	70.771	
7,800.00	7,378.44	5,226.37	5,036.00	43.10	24.62	-129.02	842.24	779.25	2,538.58	2,503.86	34.73	73.104	
7,900.00	7,478.44	5,226.37	5,036.00	43.18	24.62	-129.02	842.24	779.25	2,631.14	2,596.26	34.88	75.431	
8,000.00	7,578.44	5,226.37	5,036.00	43.26	24.62	-129.02	842.24	779.25	2,724.22	2,689.18	35.04	77.749	
8,100.00	7,678.44	5,226.37	5,036.00	43.34	24.62	-129.02	842.24	779.25	2,817.78	2,782.58	35.20	80.058	
8,200.00	7,778.44	5,226.37	5,036.00	43.43	24.62	-129.02	842.24	779.25	2,911.76	2,876.40	35.36	82.355	
8,300.00	7,878.44	5,226.37	5,036.00	43.51	24.62	-129.02	842.24	779.25	3,006.13	2,970.62	35.52	84.639	
8,400.00	7,978.44	5,226.37	5,036.00	43.60	24.62	-129.02	842.24	779.25	3,100.86	3,065.18	35.68	86.911	
8,500.00	8,078.44	5,226.37	5,036.00	43.68	24.62	-129.02	842.24	779.25	3,195.91	3,160.06	35.84	89.168	
8,542.56	8,121.00	5,226.37	5,036.00	43.72	24.62	-129.02	842.24	779.25	3,236.45	3,200.54	35.91	90.124	

Company:	US ROCKIES REGION PLANNING	Local Co-ordinate Reference:	Well P_HIGHWAY 160 26-2
Project:	COLORADO NORTHERN ZONE - 83	TVD Reference:	WELL @ 5119.00ft (Original Well Elev)
Reference Site:	WELD_HIGHWAY 160 17-2 pad	MD Reference:	WELL @ 5119.00ft (Original Well Elev)
Site Error:	0.00ft	North Reference:	True
Reference Well:	P_HIGHWAY 160 26-2	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00ft	Output errors are at	2.00 sigma
Reference Wellbore	P_HIGHWAY 160 26-2	Database:	EDM 2003.21 Single User Db
Reference Design:	PLAN #1 3-17-10 RHS	Offset TVD Reference:	Offset Datum

Offset Design													Offset Site Error:	0.00 ft
Survey Program: 0-MWD													Offset Well Error:	0.00 ft
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	-90.42	-0.36	-50.09	50.09					
100.00	100.00	100.00	100.00	0.10	0.10	-90.42	-0.36	-50.09	50.09	49.90	0.19	262.169		
200.00	200.00	200.00	200.00	0.32	0.32	-90.42	-0.36	-50.09	50.09	49.45	0.64	78.191		
300.00	300.00	300.00	300.00	0.55	0.55	-90.42	-0.36	-50.09	50.09	49.00	1.09	45.947 CC, ES		
400.00	399.98	399.98	399.98	0.77	0.77	-138.28	-0.36	-50.09	51.38	49.84	1.53	33.474		
500.00	499.84	499.84	499.84	0.99	0.99	-141.83	-0.36	-50.09	55.39	53.42	1.98	28.000		
600.00	599.45	599.45	599.45	1.24	1.22	-146.69	-0.36	-50.09	62.48	60.06	2.43	25.756		
700.00	698.70	698.70	698.70	1.51	1.44	-151.84	-0.36	-50.09	72.99	70.11	2.88	25.377 SF		
800.00	797.47	797.47	797.47	1.83	1.66	-156.58	-0.36	-50.09	87.12	83.79	3.33	26.188		
900.00	895.62	895.62	895.62	2.19	1.88	-160.60	-0.36	-50.09	104.94	101.16	3.78	27.787		
1,000.00	993.06	993.06	993.06	2.61	2.10	-163.86	-0.36	-50.09	126.42	122.19	4.23	29.920		
1,100.00	1,089.64	1,089.64	1,089.64	3.09	2.32	-166.45	-0.36	-50.09	151.50	146.82	4.67	32.417		
1,200.00	1,185.27	1,185.27	1,185.27	3.63	2.53	-168.51	-0.36	-50.09	180.10	174.98	5.12	35.165		
1,300.00	1,279.82	1,282.19	1,282.18	4.24	2.75	-169.87	0.79	-50.31	211.70	206.13	5.58	37.956		
1,400.00	1,373.17	1,379.39	1,379.27	4.91	2.97	-170.27	5.15	-51.15	245.38	239.33	6.05	40.582		
1,500.00	1,465.21	1,476.34	1,475.92	5.64	3.19	-170.00	12.71	-52.62	281.03	274.50	6.53	43.011		
1,522.23	1,485.49	1,497.85	1,497.32	5.82	3.24	-169.87	14.82	-53.03	289.22	282.58	6.64	43.525		
1,600.00	1,556.29	1,573.30	1,572.25	6.43	3.42	-169.37	23.48	-54.70	317.69	310.59	7.10	44.741		
1,700.00	1,647.32	1,670.96	1,668.84	7.22	3.67	-168.36	37.56	-57.42	353.25	345.53	7.72	45.746		
1,800.00	1,738.36	1,769.11	1,765.38	8.03	3.95	-167.05	54.95	-60.79	387.75	379.36	8.40	46.187		
1,900.00	1,829.39	1,866.73	1,860.74	8.83	4.26	-165.53	75.42	-64.75	421.33	412.20	9.13	46.168		
2,000.00	1,920.43	1,960.44	1,952.04	9.64	4.59	-164.14	96.14	-68.76	454.77	444.88	9.89	45.971		
2,100.00	2,011.47	2,054.14	2,043.34	10.46	4.94	-162.94	116.87	-72.77	488.42	477.74	10.69	45.703		
2,200.00	2,102.50	2,147.85	2,134.63	11.27	5.30	-161.89	137.59	-76.78	522.24	510.74	11.51	45.392		
2,300.00	2,193.54	2,241.55	2,225.93	12.09	5.67	-160.98	158.31	-80.79	556.20	543.85	12.34	45.062		
2,400.00	2,284.58	2,335.26	2,317.22	12.91	6.05	-160.16	179.03	-84.80	590.26	577.07	13.20	44.728		
2,500.00	2,375.61	2,428.96	2,408.52	13.73	6.44	-159.44	199.75	-88.81	624.43	610.36	14.06	44.399		
2,600.00	2,466.65	2,522.67	2,499.82	14.56	6.84	-158.79	220.47	-92.82	658.67	643.73	14.94	44.081		
2,700.00	2,557.68	2,616.37	2,591.11	15.38	7.24	-158.20	241.19	-96.83	692.98	677.15	15.83	43.777		
2,800.00	2,648.72	2,710.07	2,682.41	16.20	7.65	-157.67	261.91	-100.84	727.34	710.62	16.73	43.487		
2,900.00	2,739.76	2,803.78	2,773.71	17.03	8.06	-157.19	282.64	-104.85	761.76	744.13	17.63	43.214		
3,000.00	2,830.79	2,897.48	2,865.00	17.85	8.47	-156.74	303.36	-108.86	796.22	777.69	18.54	42.956		
3,100.00	2,921.83	2,991.19	2,956.30	18.68	8.89	-156.34	324.08	-112.87	830.72	811.27	19.45	42.713		
3,200.00	3,012.86	3,084.89	3,047.60	19.50	9.31	-155.97	344.80	-116.88	865.26	844.89	20.37	42.485		
3,300.00	3,103.90	3,178.60	3,138.89	20.33	9.73	-155.62	365.52	-120.89	899.82	878.53	21.29	42.270		
3,400.00	3,194.94	3,272.30	3,230.19	21.16	10.15	-155.30	386.24	-124.90	934.41	912.20	22.21	42.068		
3,500.00	3,285.97	3,366.00	3,321.49	21.98	10.58	-155.01	406.96	-128.91	969.02	945.89	23.14	41.878		
3,600.00	3,377.01	3,459.71	3,412.78	22.81	11.01	-154.73	427.68	-132.92	1,003.66	979.59	24.07	41.699		
3,700.00	3,468.05	3,553.41	3,504.08	23.64	11.43	-154.47	448.40	-136.93	1,038.31	1,013.31	25.00	41.531		
3,800.00	3,559.08	3,647.12	3,595.38	24.46	11.86	-154.23	469.13	-140.94	1,072.99	1,047.05	25.94	41.372		
3,900.00	3,650.12	3,740.82	3,686.67	25.29	12.29	-154.01	489.85	-144.95	1,107.67	1,080.80	26.87	41.222		
4,000.00	3,741.15	3,834.53	3,777.97	26.12	12.72	-153.79	510.57	-148.96	1,142.38	1,114.57	27.81	41.080		
4,100.00	3,832.19	3,928.23	3,869.27	26.95	13.16	-153.59	531.29	-152.97	1,177.09	1,148.34	28.75	40.945		
4,200.00	3,923.23	4,021.94	3,960.56	27.78	13.59	-153.41	552.01	-156.98	1,211.82	1,182.13	29.69	40.818		
4,300.00	4,014.26	4,115.64	4,051.86	28.60	14.02	-153.23	572.73	-160.99	1,246.55	1,215.92	30.63	40.698		
4,400.00	4,105.30	4,209.34	4,143.16	29.43	14.46	-153.06	593.45	-165.00	1,281.30	1,249.73	31.57	40.583		
4,500.00	4,196.33	4,303.05	4,234.45	30.26	14.89	-152.90	614.17	-169.01	1,316.06	1,283.54	32.52	40.474		
4,600.00	4,287.37	4,396.75	4,325.75	31.09	15.33	-152.75	634.90	-173.02	1,350.82	1,317.36	33.46	40.371		
4,700.00	4,378.41	4,490.46	4,417.05	31.92	15.76	-152.61	655.62	-177.03	1,385.60	1,351.19	34.41	40.272		
4,800.00	4,469.44	4,584.16	4,508.34	32.75	16.20	-152.47	676.34	-181.04	1,420.38	1,385.02	35.35	40.178		
4,900.00	4,560.48	4,677.87	4,599.64	33.57	16.63	-152.34	697.06	-185.05	1,455.16	1,418.86	36.30	40.088		
5,000.00	4,651.51	4,771.57	4,690.94	34.40	17.07	-152.22	717.78	-189.06	1,489.96	1,452.71	37.25	40.002		

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_HIGHWAY 160 26-2
Project:	COLORADO NORTHERN ZONE - 83	TVD Reference:	WELL @ 5119.00ft (Original Well Elev)
Reference Site:	WELD_HIGHWAY 160 17-2 pad	MD Reference:	WELL @ 5119.00ft (Original Well Elev)
Site Error:	0.00ft	North Reference:	True
Reference Well:	P_HIGHWAY 160 26-2	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00ft	Output errors are at	2.00 sigma
Reference Wellbore	P_HIGHWAY 160 26-2	Database:	EDM 2003.21 Single User Db
Reference Design:	PLAN #1 3-17-10 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	4,742.55	4,865.28	4,782.23	35.23	17.51	-152.10	738.50	-193.07	1,524.75	1,486.56	38.19	39.921	
5,200.00	4,833.59	4,958.98	4,873.53	36.06	17.95	-151.99	759.22	-197.08	1,559.56	1,520.42	39.14	39.842	
5,300.00	4,924.62	5,052.68	4,964.83	36.89	18.38	-151.88	779.94	-201.09	1,594.37	1,554.28	40.09	39.767	
5,405.33	5,020.51	5,151.38	5,060.99	37.76	18.85	-151.77	801.77	-205.31	1,631.04	1,589.95	41.09	39.691	
5,500.00	5,107.33	5,240.54	5,147.85	38.44	19.26	-151.96	821.48	-209.13	1,662.71	1,620.67	42.04	39.554	
5,600.00	5,200.33	5,335.59	5,240.47	39.03	19.71	-152.09	842.51	-213.19	1,693.32	1,650.34	42.99	39.392	
5,700.00	5,294.56	5,431.45	5,333.86	39.56	20.16	-152.13	863.70	-217.30	1,721.01	1,677.09	43.92	39.184	
5,800.00	5,389.90	5,527.99	5,427.92	40.05	20.61	-152.09	885.05	-221.43	1,745.76	1,700.92	44.84	38.934	
5,900.00	5,486.23	5,625.09	5,522.53	40.50	21.06	-151.97	906.52	-225.58	1,767.55	1,721.81	45.74	38.647	
6,000.00	5,583.45	5,718.98	5,614.18	40.89	21.45	-151.82	926.49	-229.44	1,786.46	1,739.94	46.52	38.400	
6,100.00	5,681.42	5,812.40	5,705.97	41.24	21.75	-151.70	943.52	-232.74	1,802.66	1,755.50	47.16	38.221	
6,200.00	5,780.02	5,906.56	5,799.01	41.53	22.03	-151.61	957.70	-235.49	1,816.12	1,768.41	47.71	38.067	
6,300.00	5,879.15	6,000.00	5,891.76	41.78	22.26	-151.54	968.80	-237.63	1,826.80	1,778.65	48.15	37.942	
6,400.00	5,978.68	6,096.55	5,987.93	41.97	22.47	-151.49	977.15	-239.25	1,834.68	1,786.19	48.49	37.837	
6,500.00	6,078.48	6,192.09	6,083.33	42.12	22.63	-151.46	982.27	-240.24	1,839.74	1,791.02	48.72	37.761	
6,600.00	6,178.44	6,287.81	6,179.02	42.22	22.76	-151.46	984.26	-240.63	1,841.97	1,793.13	48.85	37.710	
6,627.56	6,206.00	6,314.79	6,206.00	42.24	22.79	-104.91	984.29	-240.63	1,842.09	1,793.22	48.87	37.696	
6,700.00	6,278.44	6,387.23	6,278.44	42.29	22.88	-104.91	984.29	-240.63	1,842.09	1,793.06	49.02	37.575	
6,800.00	6,378.44	6,487.23	6,378.44	42.36	23.01	-104.91	984.29	-240.63	1,842.09	1,792.83	49.26	37.399	
6,900.00	6,478.44	6,587.23	6,478.44	42.42	23.14	-104.91	984.29	-240.63	1,842.09	1,792.60	49.49	37.221	
7,000.00	6,578.44	6,687.23	6,578.44	42.50	23.27	-104.91	984.29	-240.63	1,842.09	1,792.36	49.73	37.043	
7,100.00	6,678.44	6,787.23	6,678.44	42.57	23.40	-104.91	984.29	-240.63	1,842.09	1,792.12	49.97	36.865	
7,200.00	6,778.44	6,887.23	6,778.44	42.64	23.54	-104.91	984.29	-240.63	1,842.09	1,791.88	50.21	36.686	
7,300.00	6,878.44	6,987.23	6,878.44	42.71	23.67	-104.91	984.29	-240.63	1,842.09	1,791.63	50.46	36.507	
7,400.00	6,978.44	7,087.23	6,978.44	42.79	23.81	-104.91	984.29	-240.63	1,842.09	1,791.38	50.71	36.328	
7,500.00	7,078.44	7,187.23	7,078.44	42.87	23.95	-104.91	984.29	-240.63	1,842.09	1,791.13	50.96	36.148	
7,600.00	7,178.44	7,287.23	7,178.44	42.94	24.09	-104.91	984.29	-240.63	1,842.09	1,790.87	51.21	35.969	
7,700.00	7,278.44	7,387.23	7,278.44	43.02	24.23	-104.91	984.29	-240.63	1,842.09	1,790.62	51.47	35.789	
7,800.00	7,378.44	7,487.23	7,378.44	43.10	24.37	-104.91	984.29	-240.63	1,842.09	1,790.36	51.73	35.609	
7,900.00	7,478.44	7,587.23	7,478.44	43.18	24.52	-104.91	984.29	-240.63	1,842.09	1,790.09	51.99	35.429	
8,000.00	7,578.44	7,687.23	7,578.44	43.26	24.66	-104.91	984.29	-240.63	1,842.09	1,789.83	52.26	35.250	
8,100.00	7,678.44	7,787.23	7,678.44	43.34	24.81	-104.91	984.29	-240.63	1,842.09	1,789.56	52.53	35.070	
8,200.00	7,778.44	7,887.23	7,778.44	43.43	24.95	-104.91	984.29	-240.63	1,842.09	1,789.29	52.80	34.891	
8,300.00	7,878.44	7,987.23	7,878.44	43.51	25.10	-104.91	984.29	-240.63	1,842.09	1,789.02	53.07	34.712	
8,400.00	7,978.44	8,087.23	7,978.44	43.60	25.25	-104.91	984.29	-240.63	1,842.09	1,788.75	53.34	34.533	
8,500.00	8,078.44	8,187.23	8,078.44	43.68	25.40	-104.91	984.29	-240.63	1,842.09	1,788.47	53.62	34.355	
8,521.42	8,099.86	8,208.65	8,099.86	43.70	25.44	-104.91	984.29	-240.63	1,842.09	1,788.41	53.68	34.317	
8,542.56	8,121.00	8,215.79	8,107.00	43.72	25.45	-104.91	984.29	-240.63	1,842.14	1,788.42	53.72	34.294	

Company:	US ROCKIES REGION PLANNING	Local Co-ordinate Reference:	Well P_HIGHWAY 160 26-2
Project:	COLORADO NORTHERN ZONE - 83	TVD Reference:	WELL @ 5119.00ft (Original Well Elev)
Reference Site:	WELD_HIGHWAY 160 17-2 pad	MD Reference:	WELL @ 5119.00ft (Original Well Elev)
Site Error:	0.00ft	North Reference:	True
Reference Well:	P_HIGHWAY 160 26-2	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00ft	Output errors are at	2.00 sigma
Reference Wellbore	P_HIGHWAY 160 26-2	Database:	EDM 2003.21 Single User Db
Reference Design:	PLAN #1 3-17-10 RHS	Offset TVD Reference:	Offset Datum

Offset Design WELD_HIGHWAY 160 17-2 pad - P_HIGHWAY 160 2-2S - P_HIGHWAY 160 2-2S - PLAN #1 3-17-10 f													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	-90.35	-0.36	-60.16	60.16					
100.00	100.00	100.00	100.00	0.10	0.10	-90.35	-0.36	-60.16	60.16	59.97	0.19	314.893		
200.00	200.00	200.00	200.00	0.32	0.32	-90.35	-0.36	-60.16	60.16	59.52	0.64	93.916		
300.00	300.00	300.00	300.00	0.55	0.55	-90.35	-0.36	-60.16	60.16	59.07	1.09	55.187 CC, ES		
400.00	399.98	399.98	399.98	0.77	0.77	-137.99	-0.36	-60.16	61.45	59.91	1.53	40.035		
500.00	499.84	499.84	499.84	0.99	0.99	-141.01	-0.36	-60.16	65.43	63.45	1.98	33.071		
600.00	599.45	599.45	599.45	1.24	1.22	-145.27	-0.36	-60.16	72.42	69.99	2.43	29.842		
700.00	698.70	698.70	698.70	1.51	1.44	-149.97	-0.36	-60.16	82.74	79.86	2.88	28.744 SF		
800.00	797.47	797.47	797.47	1.83	1.66	-154.48	-0.36	-60.16	96.63	93.30	3.33	29.004		
900.00	895.62	895.62	895.62	2.19	1.88	-158.47	-0.36	-60.16	114.18	110.40	3.78	30.176		
1,000.00	993.06	993.06	993.06	2.61	2.10	-161.82	-0.36	-60.16	135.41	131.18	4.24	31.973		
1,100.00	1,089.64	1,089.64	1,089.64	3.09	2.32	-164.57	-0.36	-60.16	160.26	155.58	4.69	34.204		
1,200.00	1,185.27	1,185.27	1,185.27	3.63	2.53	-166.79	-0.36	-60.16	188.67	183.54	5.14	36.740		
1,300.00	1,279.82	1,280.36	1,280.36	4.24	2.75	-168.37	0.40	-60.53	220.46	214.87	5.59	39.456		
1,400.00	1,373.17	1,374.76	1,374.76	4.91	2.96	-169.12	3.23	-61.90	255.30	249.26	6.05	42.214		
1,500.00	1,465.21	1,468.23	1,468.01	5.64	3.17	-169.30	8.11	-64.26	293.07	286.55	6.52	44.945		
1,522.23	1,485.49	1,488.88	1,488.60	5.82	3.22	-169.28	9.47	-64.91	301.86	295.23	6.63	45.545		
1,600.00	1,556.29	1,561.06	1,560.52	6.43	3.38	-169.18	14.99	-67.58	332.74	325.68	7.06	47.117		
1,700.00	1,647.32	1,654.04	1,652.97	7.22	3.61	-168.74	23.90	-71.89	372.20	364.56	7.64	48.699		
1,800.00	1,738.36	1,747.11	1,745.24	8.03	3.84	-168.05	34.85	-77.19	411.40	403.15	8.25	49.848		
1,900.00	1,829.39	1,840.14	1,837.15	8.83	4.10	-167.17	47.81	-83.46	450.41	441.51	8.90	50.617		
2,000.00	1,920.43	1,933.04	1,928.55	9.64	4.38	-166.15	62.77	-90.69	489.30	479.71	9.58	51.054		
2,100.00	2,011.47	2,025.69	2,019.27	10.46	4.68	-165.02	79.67	-98.86	528.13	517.82	10.31	51.211		
2,200.00	2,102.50	2,117.42	2,108.79	11.27	5.00	-163.89	97.68	-107.57	567.04	555.96	11.08	51.168		
2,300.00	2,193.54	2,208.99	2,198.15	12.09	5.34	-162.90	115.70	-116.28	606.11	594.24	11.87	51.057		
2,400.00	2,284.58	2,300.57	2,287.52	12.91	5.69	-162.04	133.72	-124.99	645.32	632.64	12.68	50.900		
2,500.00	2,375.61	2,392.15	2,376.88	13.73	6.05	-161.27	151.74	-133.71	684.64	671.14	13.50	50.715		
2,600.00	2,466.65	2,483.72	2,466.24	14.56	6.42	-160.58	169.75	-142.42	724.05	709.72	14.33	50.515		
2,700.00	2,557.68	2,575.30	2,555.60	15.38	6.79	-159.97	187.77	-151.13	763.55	748.37	15.18	50.311		
2,800.00	2,648.72	2,666.87	2,644.97	16.20	7.18	-159.41	205.79	-159.84	803.10	787.08	16.03	50.106		
2,900.00	2,739.76	2,758.45	2,734.33	17.03	7.56	-158.91	223.81	-168.55	842.72	825.84	16.89	49.905		
3,000.00	2,830.79	2,850.03	2,823.69	17.85	7.95	-158.45	241.82	-177.27	882.39	864.64	17.75	49.710		
3,100.00	2,921.83	2,941.60	2,913.06	18.68	8.34	-158.03	259.84	-185.98	922.10	903.48	18.62	49.522		
3,200.00	3,012.86	3,033.18	3,002.42	19.50	8.74	-157.65	277.86	-194.69	961.85	942.35	19.49	49.341		
3,300.00	3,103.90	3,124.76	3,091.78	20.33	9.14	-157.29	295.88	-203.40	1,001.63	981.26	20.37	49.168		
3,400.00	3,194.94	3,216.33	3,181.15	21.16	9.54	-156.97	313.90	-212.12	1,041.44	1,020.19	21.25	49.003		
3,500.00	3,285.97	3,307.91	3,270.51	21.98	9.95	-156.66	331.91	-220.83	1,081.28	1,059.15	22.14	48.846		
3,600.00	3,377.01	3,399.49	3,359.87	22.81	10.35	-156.38	349.93	-229.54	1,121.15	1,098.12	23.02	48.697		
3,700.00	3,468.05	3,491.06	3,449.23	23.64	10.76	-156.12	367.95	-238.25	1,161.03	1,137.12	23.91	48.555		
3,800.00	3,559.08	3,582.64	3,538.60	24.46	11.17	-155.88	385.97	-246.96	1,200.93	1,176.13	24.80	48.420		
3,900.00	3,650.12	3,674.22	3,627.96	25.29	11.58	-155.65	403.98	-255.68	1,240.85	1,215.16	25.70	48.291		
4,000.00	3,741.15	3,765.79	3,717.32	26.12	11.99	-155.43	422.00	-264.39	1,280.79	1,254.20	26.59	48.169		
4,100.00	3,832.19	3,857.37	3,806.69	26.95	12.40	-155.23	440.02	-273.10	1,320.74	1,293.26	27.49	48.053		
4,200.00	3,923.23	3,948.95	3,896.05	27.78	12.82	-155.04	458.04	-281.81	1,360.70	1,332.32	28.38	47.942		
4,300.00	4,014.26	4,040.52	3,985.41	28.60	13.23	-154.86	476.05	-290.52	1,400.68	1,371.40	29.28	47.837		
4,400.00	4,105.30	4,132.10	4,074.78	29.43	13.64	-154.69	494.07	-299.24	1,440.67	1,410.49	30.18	47.736		
4,500.00	4,196.33	4,223.68	4,164.14	30.26	14.06	-154.53	512.09	-307.95	1,480.66	1,449.58	31.08	47.641		
4,600.00	4,287.37	4,315.25	4,253.50	31.09	14.48	-154.38	530.11	-316.66	1,520.67	1,488.69	31.98	47.549		
4,700.00	4,378.41	4,406.83	4,342.86	31.92	14.89	-154.24	548.12	-325.37	1,560.68	1,527.80	32.88	47.462		
4,800.00	4,469.44	4,498.41	4,432.23	32.75	15.31	-154.10	566.14	-334.09	1,600.70	1,566.92	33.79	47.378		
4,900.00	4,560.48	4,589.98	4,521.59	33.57	15.73	-153.97	584.16	-342.80	1,640.73	1,606.04	34.69	47.299		
5,000.00	4,651.51	4,681.56	4,610.95	34.40	16.15	-153.84	602.18	-351.51	1,680.77	1,645.17	35.59	47.222		

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_HIGHWAY 160 26-2
Project:	COLORADO NORTHERN ZONE - 83	TVD Reference:	WELL @ 5119.00ft (Original Well Elev)
Reference Site:	WELD_HIGHWAY 160 17-2 pad	MD Reference:	WELL @ 5119.00ft (Original Well Elev)
Site Error:	0.00ft	North Reference:	True
Reference Well:	P_HIGHWAY 160 26-2	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00ft	Output errors are at	2.00 sigma
Reference Wellbore	P_HIGHWAY 160 26-2	Database:	EDM 2003.21 Single User Db
Reference Design:	PLAN #1 3-17-10 RHS	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.00 ft
WELD_HIGHWAY 160 17-2 pad - P_HIGHWAY 160 2-2S - P_HIGHWAY 160 2-2S - PLAN #1 3-17-10 f												Offset Well Error:	0.00 ft
Survey Program: 0-MWD													
Reference		Offset		Semi Major Axis			Distance						
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning
5,100.00	4,742.55	4,773.14	4,700.32	35.23	16.57	-153.73	620.19	-360.22	1,720.81	1,684.31	36.50	47.149	
5,200.00	4,833.59	4,864.71	4,789.68	36.06	16.98	-153.61	638.21	-368.93	1,760.86	1,723.46	37.40	47.079	
5,300.00	4,924.62	4,956.29	4,879.04	36.89	17.40	-153.51	656.23	-377.65	1,800.91	1,762.60	38.31	47.011	
5,405.33	5,020.51	5,052.75	4,973.17	37.76	17.85	-153.40	675.21	-386.82	1,843.10	1,803.84	39.26	46.943	
5,500.00	5,107.33	5,092.54	5,012.00	38.44	18.03	-153.71	683.04	-390.61	1,880.34	1,840.39	39.96	47.058	
5,600.00	5,200.33	5,092.54	5,012.00	39.03	18.03	-154.10	683.04	-390.61	1,920.79	1,880.38	40.41	47.533	
5,700.00	5,294.56	5,092.54	5,012.00	39.56	18.03	-154.50	683.04	-390.61	1,962.70	1,921.90	40.80	48.106	
5,800.00	5,389.90	5,092.54	5,012.00	40.05	18.03	-154.91	683.04	-390.61	2,005.93	1,964.80	41.13	48.773	
5,900.00	5,486.23	5,092.54	5,012.00	40.50	18.03	-155.33	683.04	-390.61	2,050.34	2,008.95	41.39	49.533	
6,000.00	5,583.45	5,092.54	5,012.00	40.89	18.03	-155.75	683.04	-390.61	2,095.81	2,054.22	41.60	50.384	
6,100.00	5,681.42	5,092.54	5,012.00	41.24	18.03	-156.18	683.04	-390.61	2,142.22	2,100.49	41.74	51.326	
6,200.00	5,780.02	5,092.54	5,012.00	41.53	18.03	-156.61	683.04	-390.61	2,189.46	2,147.64	41.82	52.360	
6,300.00	5,879.15	5,092.54	5,012.00	41.78	18.03	-157.04	683.04	-390.61	2,237.41	2,195.57	41.83	53.486	
6,400.00	5,978.68	5,092.54	5,012.00	41.97	18.03	-157.47	683.04	-390.61	2,285.97	2,244.18	41.79	54.707	
6,500.00	6,078.48	5,092.54	5,012.00	42.12	18.03	-157.89	683.04	-390.61	2,335.05	2,293.37	41.68	56.026	
6,600.00	6,178.44	5,092.54	5,012.00	42.22	18.03	-158.32	683.04	-390.61	2,384.56	2,343.05	41.51	57.445	
6,627.56	6,206.00	5,092.54	5,012.00	42.24	18.03	-111.88	683.04	-390.61	2,398.27	2,356.81	41.45	57.854	
6,700.00	6,278.44	5,092.54	5,012.00	42.29	18.03	-111.88	683.04	-390.61	2,435.14	2,393.61	41.53	58.631	
6,800.00	6,378.44	5,092.54	5,012.00	42.36	18.03	-111.88	683.04	-390.61	2,488.62	2,446.97	41.65	59.755	
6,900.00	6,478.44	5,092.54	5,012.00	42.42	18.03	-111.88	683.04	-390.61	2,544.90	2,503.13	41.76	60.937	
7,000.00	6,578.44	5,092.54	5,012.00	42.50	18.03	-111.88	683.04	-390.61	2,603.80	2,561.92	41.88	62.173	
7,100.00	6,678.44	5,092.54	5,012.00	42.57	18.03	-111.88	683.04	-390.61	2,665.16	2,623.16	42.00	63.458	
7,200.00	6,778.44	5,092.54	5,012.00	42.64	18.03	-111.88	683.04	-390.61	2,728.80	2,686.68	42.12	64.787	
7,300.00	6,878.44	5,092.54	5,012.00	42.71	18.03	-111.88	683.04	-390.61	2,794.57	2,752.33	42.24	66.158	
7,400.00	6,978.44	5,092.54	5,012.00	42.79	18.03	-111.88	683.04	-390.61	2,862.33	2,819.97	42.36	67.565	
7,500.00	7,078.44	5,092.54	5,012.00	42.87	18.03	-111.88	683.04	-390.61	2,931.93	2,889.44	42.49	69.004	
7,600.00	7,178.44	5,092.54	5,012.00	42.94	18.03	-111.88	683.04	-390.61	3,003.25	2,960.63	42.62	70.474	
7,700.00	7,278.44	5,092.54	5,012.00	43.02	18.03	-111.88	683.04	-390.61	3,076.17	3,033.42	42.74	71.969	
7,800.00	7,378.44	5,092.54	5,012.00	43.10	18.03	-111.88	683.04	-390.61	3,150.57	3,107.70	42.87	73.489	
7,900.00	7,478.44	5,092.54	5,012.00	43.18	18.03	-111.88	683.04	-390.61	3,226.36	3,183.35	43.00	75.028	
8,000.00	7,578.44	5,092.54	5,012.00	43.26	18.03	-111.88	683.04	-390.61	3,303.43	3,260.30	43.13	76.586	
8,100.00	7,678.44	5,092.54	5,012.00	43.34	18.03	-111.88	683.04	-390.61	3,381.71	3,338.44	43.27	78.160	
8,200.00	7,778.44	5,092.54	5,012.00	43.43	18.03	-111.88	683.04	-390.61	3,461.10	3,417.70	43.40	79.748	
8,300.00	7,878.44	5,092.54	5,012.00	43.51	18.03	-111.88	683.04	-390.61	3,541.54	3,498.01	43.54	81.348	
8,400.00	7,978.44	5,092.54	5,012.00	43.60	18.03	-111.88	683.04	-390.61	3,622.96	3,579.28	43.67	82.957	
8,500.00	8,078.44	5,092.54	5,012.00	43.68	18.03	-111.88	683.04	-390.61	3,705.28	3,661.47	43.81	84.575	
8,542.56	8,121.00	5,092.54	5,012.00	43.72	18.03	-111.88	683.04	-390.61	3,740.58	3,696.71	43.87	85.266	

Company:	US ROCKIES REGION PLANNING	Local Co-ordinate Reference:	Well P_HIGHWAY 160 26-2
Project:	COLORADO NORTHERN ZONE - 83	TVD Reference:	WELL @ 5119.00ft (Original Well Elev)
Reference Site:	WELD_HIGHWAY 160 17-2 pad	MD Reference:	WELL @ 5119.00ft (Original Well Elev)
Site Error:	0.00ft	North Reference:	True
Reference Well:	P_HIGHWAY 160 26-2	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00ft	Output errors are at	2.00 sigma
Reference Wellbore	P_HIGHWAY 160 26-2	Database:	EDM 2003.21 Single User Db
Reference Design:	PLAN #1 3-17-10 RHS	Offset TVD Reference:	Offset Datum

Offset Design WELD_HIGHWAY 160 17-2 pad - P_HIGHWAY 160 24-2 - P_HIGHWAY 160 24-2 - PLAN #1 3-17-10 F												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	-90.00	0.00	-40.01	40.01				
100.00	100.00	100.00	100.00	0.10	0.10	-90.00	0.00	-40.01	40.01	39.82	0.19	209.437	
200.00	200.00	200.00	200.00	0.32	0.32	-90.00	0.00	-40.01	40.01	39.37	0.64	62.464	
300.00	300.00	300.00	300.00	0.55	0.55	-90.00	0.00	-40.01	40.01	38.92	1.09	36.705 CC, ES	
400.00	399.98	399.98	399.98	0.77	0.77	-138.20	0.00	-40.01	41.30	39.76	1.53	26.907	
500.00	499.84	499.84	499.84	0.99	0.99	-142.56	0.00	-40.01	45.33	43.36	1.98	22.916	
600.00	599.45	599.45	599.45	1.24	1.22	-148.27	0.00	-40.01	52.53	50.10	2.43	21.659 SF	
700.00	698.70	698.70	698.70	1.51	1.44	-153.98	0.00	-40.01	63.23	60.36	2.87	22.003	
800.00	797.47	797.47	797.47	1.83	1.66	-158.94	0.00	-40.01	77.61	74.29	3.32	23.364	
900.00	895.62	895.62	895.62	2.19	1.88	-162.94	0.00	-40.01	95.69	91.92	3.77	25.389	
1,000.00	993.06	993.06	993.06	2.61	2.10	-166.05	0.00	-40.01	117.42	113.20	4.22	27.852	
1,100.00	1,089.64	1,089.64	1,089.64	3.09	2.32	-168.45	0.00	-40.01	142.70	138.04	4.66	30.608	
1,200.00	1,185.27	1,185.27	1,185.27	3.63	2.53	-170.30	0.00	-40.01	171.48	166.37	5.11	33.562	
1,300.00	1,279.82	1,278.00	1,277.99	4.24	2.72	-172.02	-1.02	-39.71	204.04	198.51	5.53	36.890	
1,400.00	1,373.17	1,368.15	1,368.05	4.91	2.88	-174.02	-4.72	-38.59	241.03	235.10	5.93	40.648	
1,500.00	1,465.21	1,455.61	1,455.27	5.64	3.04	-176.09	-10.91	-36.73	282.55	276.22	6.33	44.642	
1,522.23	1,485.49	1,474.66	1,474.24	5.82	3.08	-176.54	-12.60	-36.22	292.40	285.98	6.42	45.552	
1,600.00	1,556.29	1,540.55	1,539.75	6.43	3.21	-178.14	-19.36	-34.18	327.66	320.87	6.80	48.219	
1,700.00	1,647.32	1,623.81	1,622.26	7.22	3.40	179.92	-29.96	-30.99	374.30	367.01	7.30	51.292	
1,800.00	1,738.36	1,705.34	1,702.73	8.03	3.60	178.10	-42.57	-27.20	422.44	414.62	7.82	53.995	
1,900.00	1,829.39	1,785.08	1,781.02	8.83	3.82	176.39	-57.01	-22.85	472.10	463.72	8.38	56.340	
2,000.00	1,920.43	1,862.95	1,857.05	9.64	4.07	174.78	-73.12	-18.00	523.30	514.34	8.96	58.378	
2,100.00	2,011.47	1,943.87	1,935.64	10.46	4.35	173.20	-91.55	-12.45	575.84	566.25	9.59	60.052	
2,200.00	2,102.50	2,027.78	2,017.11	11.27	4.67	171.81	-110.83	-6.64	628.77	618.53	10.25	61.366	
2,300.00	2,193.54	2,111.70	2,098.58	12.09	5.01	170.64	-130.11	-0.84	681.93	671.01	10.92	62.447	
2,400.00	2,284.58	2,195.62	2,180.04	12.91	5.36	169.63	-149.39	4.97	735.27	723.67	11.61	63.344	
2,500.00	2,375.61	2,279.54	2,261.51	13.73	5.72	168.76	-168.67	10.77	788.76	776.45	12.31	64.095	
2,600.00	2,466.65	2,363.46	2,342.98	14.56	6.09	168.00	-187.94	16.58	842.36	829.34	13.01	64.733	
2,700.00	2,557.68	2,447.37	2,424.44	15.38	6.47	167.32	-207.22	22.38	896.05	882.32	13.73	65.281	
2,800.00	2,648.72	2,531.29	2,505.91	16.20	6.86	166.73	-226.50	28.19	949.82	935.38	14.45	65.754	
2,900.00	2,739.76	2,615.21	2,587.38	17.03	7.24	166.19	-245.78	33.99	1,003.66	988.49	15.17	66.166	
3,000.00	2,830.79	2,699.13	2,668.85	17.85	7.64	165.71	-265.06	39.80	1,057.55	1,041.66	15.90	66.528	
3,100.00	2,921.83	2,783.05	2,750.31	18.68	8.04	165.28	-284.33	45.60	1,111.50	1,094.87	16.63	66.845	
3,200.00	3,012.86	2,866.96	2,831.78	19.50	8.44	164.89	-303.61	51.41	1,165.48	1,148.12	17.36	67.127	
3,300.00	3,103.90	2,950.88	2,913.25	20.33	8.84	164.53	-322.89	57.21	1,219.50	1,201.40	18.10	67.380	
3,400.00	3,194.94	3,034.80	2,994.71	21.16	9.25	164.20	-342.17	63.02	1,273.55	1,254.71	18.84	67.606	
3,500.00	3,285.97	3,118.72	3,076.18	21.98	9.66	163.90	-361.45	68.82	1,327.63	1,308.05	19.58	67.810	
3,600.00	3,377.01	3,202.63	3,157.65	22.81	10.07	163.62	-380.72	74.63	1,381.73	1,361.41	20.32	67.995	
3,700.00	3,468.05	3,286.55	3,239.11	23.64	10.48	163.36	-400.00	80.43	1,435.85	1,414.79	21.07	68.163	
3,800.00	3,559.08	3,370.47	3,320.58	24.46	10.90	163.12	-419.28	86.24	1,489.99	1,468.18	21.81	68.316	
3,900.00	3,650.12	3,454.39	3,402.05	25.29	11.31	162.90	-438.56	92.04	1,544.15	1,521.60	22.56	68.456	
4,000.00	3,741.15	3,538.31	3,483.52	26.12	11.73	162.69	-457.84	97.85	1,598.33	1,575.02	23.30	68.585	
4,100.00	3,832.19	3,622.22	3,564.98	26.95	12.15	162.50	-477.11	103.65	1,652.52	1,628.46	24.05	68.703	
4,200.00	3,923.23	3,706.14	3,646.45	27.78	12.57	162.32	-496.39	109.46	1,706.72	1,681.92	24.80	68.813	
4,300.00	4,014.26	3,790.06	3,727.92	28.60	12.99	162.15	-515.67	115.26	1,760.93	1,735.38	25.55	68.915	
4,400.00	4,105.30	3,873.98	3,809.38	29.43	13.41	161.99	-534.95	121.07	1,815.15	1,788.85	26.30	69.009	
4,500.00	4,196.33	3,957.90	3,890.85	30.26	13.83	161.84	-554.23	126.87	1,869.39	1,842.33	27.05	69.096	
4,600.00	4,287.37	4,041.81	3,972.32	31.09	14.25	161.69	-573.50	132.67	1,923.63	1,895.82	27.81	69.178	
4,700.00	4,378.41	4,125.73	4,053.78	31.92	14.67	161.56	-592.78	138.48	1,977.88	1,949.32	28.56	69.255	
4,800.00	4,469.44	4,209.65	4,135.25	32.75	15.09	161.43	-612.06	144.28	2,032.13	2,002.82	29.31	69.327	
4,900.00	4,560.48	4,293.57	4,216.72	33.57	15.52	161.31	-631.34	150.09	2,086.39	2,056.33	30.07	69.394	
5,000.00	4,651.51	4,377.49	4,298.19	34.40	15.94	161.20	-650.62	155.89	2,140.66	2,109.84	30.82	69.457	

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_HIGHWAY 160 26-2
Project:	COLORADO NORTHERN ZONE - 83	TVD Reference:	WELL @ 5119.00ft (Original Well Elev)
Reference Site:	WELD_HIGHWAY 160 17-2 pad	MD Reference:	WELL @ 5119.00ft (Original Well Elev)
Site Error:	0.00ft	North Reference:	True
Reference Well:	P_HIGHWAY 160 26-2	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00ft	Output errors are at	2.00 sigma
Reference Wellbore	P_HIGHWAY 160 26-2	Database:	EDM 2003.21 Single User Db
Reference Design:	PLAN #1 3-17-10 RHS	Offset TVD Reference:	Offset Datum

Offset Design WELD_HIGHWAY 160 17-2 pad - P_HIGHWAY 160 24-2 - P_HIGHWAY 160 24-2 - PLAN #1 3-17-10 F												Offset Site Error:	0.00 ft
Survey Program: 0-MWD												Offset Well Error:	0.00 ft
Reference		Offset		Semi Major Axis			Distance						
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning
5,100.00	4,742.55	4,461.40	4,379.65	35.23	16.37	161.09	-669.89	161.70	2,194.94	2,163.36	31.57	69.517	
5,200.00	4,833.59	4,545.32	4,461.12	36.06	16.79	160.98	-689.17	167.50	2,249.22	2,216.89	32.33	69.573	
5,300.00	4,924.62	4,629.24	4,542.59	36.89	17.22	160.88	-708.45	173.31	2,303.50	2,270.42	33.08	69.626	
5,405.33	5,020.51	4,717.63	4,628.39	37.76	17.66	160.78	-728.76	179.42	2,360.69	2,326.81	33.88	69.679	
5,500.00	5,107.33	4,797.84	4,706.27	38.44	18.07	161.07	-747.18	184.97	2,410.84	2,376.12	34.72	69.430	
5,600.00	5,200.33	4,884.17	4,790.07	39.03	18.51	161.32	-767.02	190.94	2,461.07	2,425.51	35.56	69.215	
5,700.00	5,294.56	4,972.04	4,875.38	39.56	18.96	161.50	-787.20	197.02	2,508.42	2,472.06	36.36	68.983	
5,800.00	5,389.90	5,061.35	4,962.08	40.05	19.41	161.64	-807.72	203.20	2,552.86	2,515.72	37.14	68.741	
5,900.00	5,486.23	5,151.98	5,050.06	40.50	19.87	161.73	-828.54	209.47	2,594.32	2,556.44	37.88	68.493	
6,000.00	5,583.45	5,243.83	5,139.23	40.89	20.34	161.77	-849.64	215.82	2,632.77	2,594.19	38.58	68.243	
6,100.00	5,681.42	5,336.78	5,229.46	41.24	20.81	161.77	-870.99	222.25	2,668.18	2,628.94	39.24	67.995	
6,200.00	5,780.02	5,430.72	5,320.66	41.53	21.29	161.73	-892.57	228.75	2,700.51	2,660.66	39.86	67.751	
6,300.00	5,879.15	5,525.54	5,412.71	41.78	21.77	161.65	-914.35	235.31	2,729.75	2,689.31	40.43	67.513	
6,400.00	5,978.68	5,621.11	5,505.49	41.97	22.26	161.54	-936.31	241.92	2,755.86	2,714.90	40.96	67.283	
6,500.00	6,078.48	5,834.16	5,713.39	42.12	23.08	161.07	-980.68	255.28	2,777.76	2,735.98	41.79	66.475	
6,600.00	6,178.44	6,164.00	6,040.44	42.22	23.88	160.61	-1,020.42	267.25	2,789.39	2,746.77	42.62	65.448	
6,627.56	6,206.00	6,256.46	6,132.76	42.24	24.03	-152.90	-1,025.07	268.65	2,790.56	2,747.78	42.78	65.235	
6,700.00	6,278.44	6,402.16	6,278.44	42.29	24.21	-152.93	-1,026.88	269.19	2,790.97	2,747.89	43.07	64.797	
6,800.00	6,378.44	6,502.16	6,378.44	42.36	24.32	-152.93	-1,026.88	269.19	2,790.97	2,747.64	43.32	64.421	
6,900.00	6,478.44	6,602.16	6,478.44	42.42	24.42	-152.93	-1,026.88	269.19	2,790.97	2,747.39	43.58	64.046	
7,000.00	6,578.44	6,702.16	6,578.44	42.50	24.53	-152.93	-1,026.88	269.19	2,790.97	2,747.13	43.84	63.670	
7,100.00	6,678.44	6,802.16	6,678.44	42.57	24.64	-152.93	-1,026.88	269.19	2,790.97	2,746.87	44.10	63.294	
7,200.00	6,778.44	6,902.16	6,778.44	42.64	24.74	-152.93	-1,026.88	269.19	2,790.97	2,746.61	44.36	62.918	
7,300.00	6,878.44	7,002.16	6,878.44	42.71	24.85	-152.93	-1,026.88	269.19	2,790.97	2,746.34	44.63	62.542	
7,400.00	6,978.44	7,102.16	6,978.44	42.79	24.97	-152.93	-1,026.88	269.19	2,790.97	2,746.07	44.89	62.167	
7,500.00	7,078.44	7,202.16	7,078.44	42.87	25.08	-152.93	-1,026.88	269.19	2,790.97	2,745.80	45.17	61.792	
7,600.00	7,178.44	7,302.16	7,178.44	42.94	25.20	-152.93	-1,026.88	269.19	2,790.97	2,745.52	45.44	61.418	
7,700.00	7,278.44	7,402.16	7,278.44	43.02	25.31	-152.93	-1,026.88	269.19	2,790.97	2,745.25	45.72	61.045	
7,800.00	7,378.44	7,502.16	7,378.44	43.10	25.43	-152.93	-1,026.88	269.19	2,790.97	2,744.97	46.00	60.673	
7,900.00	7,478.44	7,602.16	7,478.44	43.18	25.55	-152.93	-1,026.88	269.19	2,790.97	2,744.68	46.28	60.301	
8,000.00	7,578.44	7,702.16	7,578.44	43.26	25.67	-152.93	-1,026.88	269.19	2,790.97	2,744.40	46.57	59.931	
8,100.00	7,678.44	7,802.16	7,678.44	43.34	25.79	-152.93	-1,026.88	269.19	2,790.97	2,744.11	46.86	59.562	
8,200.00	7,778.44	7,902.16	7,778.44	43.43	25.92	-152.93	-1,026.88	269.19	2,790.97	2,743.82	47.15	59.195	
8,300.00	7,878.44	8,002.16	7,878.44	43.51	26.04	-152.93	-1,026.88	269.19	2,790.97	2,743.52	47.44	58.829	
8,400.00	7,978.44	8,102.16	7,978.44	43.60	26.17	-152.93	-1,026.88	269.19	2,790.97	2,743.23	47.74	58.464	
8,500.00	8,078.44	8,202.16	8,078.44	43.68	26.30	-152.93	-1,026.88	269.19	2,790.97	2,742.93	48.04	58.101	
8,542.56	8,121.00	8,244.72	8,121.00	43.72	26.35	-152.93	-1,026.88	269.19	2,790.97	2,742.80	48.16	57.947	

Company:	US ROCKIES REGION PLANNING	Local Co-ordinate Reference:	Well P_HIGHWAY 160 26-2
Project:	COLORADO NORTHERN ZONE - 83	TVD Reference:	WELL @ 5119.00ft (Original Well Elev)
Reference Site:	WELD_HIGHWAY 160 17-2 pad	MD Reference:	WELL @ 5119.00ft (Original Well Elev)
Site Error:	0.00ft	North Reference:	True
Reference Well:	P_HIGHWAY 160 26-2	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00ft	Output errors are at	2.00 sigma
Reference Wellbore	P_HIGHWAY 160 26-2	Database:	EDM 2003.21 Single User Db
Reference Design:	PLAN #1 3-17-10 RHS	Offset TVD Reference:	Offset Datum

Offset Design WELD_HIGHWAY 160 17-2 pad - P_HIGHWAY 160 41-2 - P_HIGHWAY 160 41-2 - PLAN #1 3-17-10 F												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	88.95	0.36	19.87	19.87				
100.00	100.00	100.00	100.00	0.10	0.10	88.95	0.36	19.87	19.87	19.68	0.19	104.003	
200.00	200.00	200.00	200.00	0.32	0.32	88.95	0.36	19.87	19.87	19.23	0.64	31.019	
300.00	300.00	300.00	300.00	0.55	0.55	88.95	0.36	19.87	19.87	18.78	1.09	18.227	
400.00	399.98	399.98	399.98	0.77	0.77	46.04	0.36	19.87	18.62	17.08	1.54	12.128	
500.00	499.84	499.84	499.84	0.99	0.99	60.19	0.36	19.87	15.45	13.47	1.98	7.789	
590.08	589.58	589.58	589.58	1.21	1.20	90.00	0.36	19.87	13.40	10.99	2.41	5.553 CC	
600.00	599.45	599.45	599.45	1.24	1.22	94.33	0.36	19.87	13.44	10.98	2.46	5.462 ES, SF	
700.00	698.70	698.70	698.70	1.51	1.44	134.31	0.36	19.87	18.81	15.89	2.92	6.441	
800.00	797.47	797.47	797.47	1.83	1.66	154.75	0.36	19.87	31.81	28.46	3.35	9.495	
900.00	895.62	895.62	895.62	2.19	1.88	164.05	0.36	19.87	49.77	45.98	3.78	13.155	
1,000.00	993.06	993.06	993.06	2.61	2.10	168.91	0.36	19.87	71.69	67.46	4.22	16.979	
1,100.00	1,089.64	1,089.64	1,089.64	3.09	2.32	171.76	0.36	19.87	97.23	92.57	4.66	20.847	
1,200.00	1,185.27	1,185.27	1,185.27	3.63	2.53	173.60	0.36	19.87	126.25	121.14	5.11	24.714	
1,300.00	1,279.82	1,283.32	1,283.31	4.24	2.75	174.59	0.54	21.07	157.78	152.22	5.56	28.396	
1,400.00	1,373.17	1,382.53	1,382.40	4.91	2.95	174.65	1.19	25.62	190.15	184.14	6.01	31.634	
1,500.00	1,465.21	1,482.34	1,481.88	5.64	3.17	174.15	2.34	33.63	223.31	216.82	6.49	34.430	
1,522.23	1,485.49	1,504.61	1,504.03	5.82	3.22	173.99	2.66	35.88	230.79	224.19	6.59	34.996	
1,600.00	1,556.29	1,583.06	1,581.92	6.43	3.41	173.34	3.99	45.18	256.28	249.23	7.04	36.386	
1,700.00	1,647.32	1,685.38	1,683.06	7.22	3.68	172.23	6.19	60.47	286.86	279.21	7.66	37.472	
1,800.00	1,738.36	1,789.09	1,784.95	8.03	3.98	170.85	8.93	79.61	315.03	306.71	8.32	37.868	
1,900.00	1,829.39	1,893.94	1,887.18	8.83	4.34	169.23	12.24	102.66	340.83	331.78	9.05	37.667	
2,000.00	1,920.43	1,999.68	1,989.33	9.64	4.76	167.40	16.11	129.63	364.37	354.51	9.86	36.948	
2,100.00	2,011.47	2,106.01	2,090.98	10.46	5.26	165.36	20.53	160.50	385.79	375.01	10.78	35.782	
2,200.00	2,102.50	2,212.65	2,191.69	11.27	5.83	163.11	25.51	195.19	405.27	393.44	11.83	34.265	
2,300.00	2,193.54	2,314.39	2,286.66	12.09	6.45	160.82	30.69	231.33	423.29	410.32	12.97	32.632	
2,400.00	2,284.58	2,411.48	2,377.12	12.91	7.07	158.76	35.69	266.22	441.63	427.47	14.16	31.194	
2,500.00	2,375.61	2,508.57	2,467.59	13.73	7.71	156.87	40.70	301.11	460.49	445.09	15.40	29.908	
2,600.00	2,466.65	2,605.66	2,558.05	14.56	8.36	155.13	45.70	336.00	479.80	463.12	16.68	28.765	
2,700.00	2,557.68	2,702.75	2,648.51	15.38	9.03	153.52	50.71	370.90	499.52	481.52	18.00	27.752	
2,800.00	2,648.72	2,799.83	2,738.98	16.20	9.71	152.03	55.71	405.79	519.59	500.24	19.35	26.856	
2,900.00	2,739.76	2,896.92	2,829.44	17.03	10.40	150.66	60.71	440.68	539.98	519.26	20.72	26.061	
3,000.00	2,830.79	2,994.01	2,919.90	17.85	11.09	149.38	65.72	475.57	560.65	538.54	22.11	25.355	
3,100.00	2,921.83	3,091.10	3,010.36	18.68	11.79	148.19	70.72	510.47	581.57	558.05	23.52	24.727	
3,200.00	3,012.86	3,188.18	3,100.83	19.50	12.49	147.08	75.73	545.36	602.72	577.78	24.94	24.166	
3,300.00	3,103.90	3,285.27	3,191.29	20.33	13.20	146.05	80.73	580.25	624.07	597.70	26.37	23.664	
3,400.00	3,194.94	3,382.36	3,281.75	21.16	13.90	145.08	85.73	615.14	645.61	617.79	27.81	23.213	
3,500.00	3,285.97	3,479.45	3,372.22	21.98	14.62	144.18	90.74	650.03	667.31	638.05	29.26	22.807	
3,600.00	3,377.01	3,576.54	3,462.68	22.81	15.33	143.33	95.74	684.93	689.16	658.44	30.71	22.439	
3,700.00	3,468.05	3,673.62	3,553.14	23.64	16.05	142.54	100.75	719.82	711.14	678.97	32.17	22.105	
3,800.00	3,559.08	3,770.71	3,643.60	24.46	16.76	141.79	105.75	754.71	733.25	699.62	33.63	21.802	
3,900.00	3,650.12	3,867.80	3,734.07	25.29	17.48	141.09	110.75	789.60	755.47	720.37	35.10	21.525	
4,000.00	3,741.15	3,964.89	3,824.53	26.12	18.20	140.42	115.76	824.50	777.80	741.23	36.57	21.271	
4,100.00	3,832.19	4,061.97	3,914.99	26.95	18.92	139.80	120.76	859.39	800.22	762.18	38.04	21.038	
4,200.00	3,923.23	4,159.06	4,005.46	27.78	19.65	139.20	125.77	894.28	822.72	783.21	39.51	20.824	
4,300.00	4,014.26	4,256.15	4,095.92	28.60	20.37	138.64	130.77	929.17	845.31	804.33	40.98	20.627	
4,400.00	4,105.30	4,353.24	4,186.38	29.43	21.09	138.11	135.78	964.07	867.97	825.51	42.46	20.444	
4,500.00	4,196.33	4,450.33	4,276.84	30.26	21.82	137.60	140.78	998.96	890.69	846.76	43.93	20.275	
4,600.00	4,287.37	4,547.41	4,367.31	31.09	22.55	137.12	145.78	1,033.85	913.48	868.08	45.41	20.117	
4,700.00	4,378.41	4,644.50	4,457.77	31.92	23.27	136.67	150.79	1,068.74	936.33	889.45	46.88	19.971	
4,800.00	4,469.44	4,741.59	4,548.23	32.75	24.00	136.23	155.79	1,103.64	959.24	910.87	48.36	19.834	
4,900.00	4,560.48	4,838.68	4,638.70	33.57	24.73	135.82	160.80	1,138.53	982.19	932.35	49.84	19.707	

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_HIGHWAY 160 26-2
Project:	COLORADO NORTHERN ZONE - 83	TVD Reference:	WELL @ 5119.00ft (Original Well Elev)
Reference Site:	WELD_HIGHWAY 160 17-2 pad	MD Reference:	WELL @ 5119.00ft (Original Well Elev)
Site Error:	0.00ft	North Reference:	True
Reference Well:	P_HIGHWAY 160 26-2	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00ft	Output errors are at	2.00 sigma
Reference Wellbore	P_HIGHWAY 160 26-2	Database:	EDM 2003.21 Single User Db
Reference Design:	PLAN #1 3-17-10 RHS	Offset TVD Reference:	Offset Datum

Offset Design WELD_HIGHWAY 160 17-2 pad - P_HIGHWAY 160 41-2 - P_HIGHWAY 160 41-2 - PLAN #1 3-17-10 F												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	4,651.51	4,935.77	4,729.16	34.40	25.45	135.42	165.80	1,173.42	1,005.19	953.87	51.32	19.588	
5,100.00	4,742.55	5,032.85	4,819.62	35.23	26.18	135.04	170.80	1,208.31	1,028.23	975.44	52.80	19.476	
5,200.00	4,833.59	5,129.94	4,910.08	36.06	26.91	134.68	175.81	1,243.21	1,051.32	997.04	54.27	19.371	
5,300.00	4,924.62	5,227.03	5,000.55	36.89	27.64	134.33	180.81	1,278.10	1,074.44	1,018.69	55.75	19.272	
5,405.33	5,020.51	5,329.29	5,095.83	37.76	28.41	133.98	186.08	1,314.85	1,098.83	1,041.52	57.31	19.174	
5,500.00	5,107.33	5,420.96	5,181.25	38.44	29.09	133.93	190.81	1,347.79	1,119.74	1,061.06	58.68	19.083	
5,600.00	5,200.33	5,512.15	5,266.79	39.03	29.67	133.85	195.29	1,379.05	1,139.88	1,080.00	59.88	19.036	
5,700.00	5,294.56	5,603.83	5,353.76	39.56	30.15	133.78	199.40	1,407.74	1,158.25	1,097.31	60.93	19.009	
5,800.00	5,389.90	5,695.96	5,442.05	40.05	30.59	133.72	203.14	1,433.79	1,174.81	1,112.93	61.89	18.983	
5,900.00	5,486.23	5,788.51	5,531.55	40.50	30.99	133.67	206.48	1,457.11	1,189.55	1,126.81	62.75	18.958	
6,000.00	5,583.45	5,881.44	5,622.13	40.89	31.35	133.63	209.43	1,477.63	1,202.44	1,138.93	63.50	18.935	
6,100.00	5,681.42	5,974.70	5,713.67	41.24	31.66	133.59	211.96	1,495.30	1,213.45	1,149.29	64.16	18.912	
6,200.00	5,780.02	6,068.25	5,806.01	41.53	31.93	133.56	214.08	1,510.04	1,222.58	1,157.86	64.72	18.891	
6,300.00	5,879.15	6,162.03	5,899.03	41.78	32.16	133.53	215.76	1,521.82	1,229.80	1,164.63	65.17	18.870	
6,400.00	5,978.68	6,255.99	5,992.57	41.97	32.35	133.50	217.02	1,530.60	1,235.11	1,169.59	65.53	18.849	
6,500.00	6,078.48	6,350.09	6,086.48	42.12	32.50	133.48	217.85	1,536.33	1,238.49	1,172.72	65.78	18.829	
6,600.00	6,178.44	6,444.26	6,180.62	42.22	32.61	133.46	218.23	1,539.02	1,239.95	1,174.02	65.93	18.807	
6,627.56	6,206.00	6,470.23	6,206.58	42.24	32.64	-179.99	218.26	1,539.22	1,240.01	1,174.05	65.95	18.801	
6,655.57	6,234.01	6,497.66	6,234.01	42.26	32.66	-179.99	218.26	1,539.23	1,240.00	1,174.00	66.00	18.788	
6,700.00	6,278.44	6,542.08	6,278.44	42.29	32.70	-179.99	218.26	1,539.23	1,240.00	1,173.93	66.08	18.766	
6,800.00	6,378.44	6,642.08	6,378.44	42.36	32.79	-179.99	218.26	1,539.23	1,240.00	1,173.75	66.26	18.715	
6,900.00	6,478.44	6,742.08	6,478.44	42.42	32.89	-179.99	218.26	1,539.23	1,240.00	1,173.56	66.44	18.664	
7,000.00	6,578.44	6,842.08	6,578.44	42.50	32.98	-179.99	218.26	1,539.23	1,240.00	1,173.38	66.62	18.612	
7,100.00	6,678.44	6,942.08	6,678.44	42.57	33.08	-179.99	218.26	1,539.23	1,240.00	1,173.19	66.81	18.560	
7,200.00	6,778.44	7,042.08	6,778.44	42.64	33.17	-179.99	218.26	1,539.23	1,240.00	1,173.00	67.00	18.507	
7,300.00	6,878.44	7,142.08	6,878.44	42.71	33.27	-179.99	218.26	1,539.23	1,240.00	1,172.81	67.20	18.454	
7,400.00	6,978.44	7,242.08	6,978.44	42.79	33.37	-179.99	218.26	1,539.23	1,240.00	1,172.61	67.39	18.400	
7,500.00	7,078.44	7,342.08	7,078.44	42.87	33.47	-179.99	218.26	1,539.23	1,240.00	1,172.42	67.59	18.346	
7,600.00	7,178.44	7,442.08	7,178.44	42.94	33.57	-179.99	218.26	1,539.23	1,240.00	1,172.21	67.79	18.292	
7,700.00	7,278.44	7,542.08	7,278.44	43.02	33.68	-179.99	218.26	1,539.23	1,240.00	1,172.01	67.99	18.238	
7,800.00	7,378.44	7,642.08	7,378.44	43.10	33.78	-179.99	218.26	1,539.23	1,240.00	1,171.81	68.20	18.183	
7,900.00	7,478.44	7,742.08	7,478.44	43.18	33.89	-179.99	218.26	1,539.23	1,240.00	1,171.60	68.40	18.128	
8,000.00	7,578.44	7,842.08	7,578.44	43.26	33.99	-179.99	218.26	1,539.23	1,240.00	1,171.39	68.61	18.072	
8,100.00	7,678.44	7,942.08	7,678.44	43.34	34.10	-179.99	218.26	1,539.23	1,240.00	1,171.18	68.82	18.017	
8,200.00	7,778.44	8,042.08	7,778.44	43.43	34.21	-179.99	218.26	1,539.23	1,240.00	1,170.96	69.04	17.961	
8,300.00	7,878.44	8,142.08	7,878.44	43.51	34.32	-179.99	218.26	1,539.23	1,240.00	1,170.75	69.26	17.905	
8,400.00	7,978.44	8,242.08	7,978.44	43.60	34.43	-179.99	218.26	1,539.23	1,240.00	1,170.53	69.47	17.848	
8,500.00	8,078.44	8,342.08	8,078.44	43.68	34.54	-179.99	218.26	1,539.23	1,240.00	1,170.31	69.69	17.792	
8,542.56	8,121.00	8,384.65	8,121.00	43.72	34.59	-179.99	218.26	1,539.23	1,240.00	1,170.21	69.79	17.768	

Company:	US ROCKIES REGION PLANNING	Local Co-ordinate Reference:	Well P_HIGHWAY 160 26-2
Project:	COLORADO NORTHERN ZONE - 83	TVD Reference:	WELL @ 5119.00ft (Original Well Elev)
Reference Site:	WELD_HIGHWAY 160 17-2 pad	MD Reference:	WELL @ 5119.00ft (Original Well Elev)
Site Error:	0.00ft	North Reference:	True
Reference Well:	P_HIGHWAY 160 26-2	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00ft	Output errors are at	2.00 sigma
Reference Wellbore	P_HIGHWAY 160 26-2	Database:	EDM 2003.21 Single User Db
Reference Design:	PLAN #1 3-17-10 RHS	Offset TVD Reference:	Offset Datum

Offset Design WELD_HIGHWAY 160 17-2 pad - P_HIGHWAY 160 7-2 - P_HIGHWAY 160 7-2 - PLAN #1 3-17-10 RH: Survey Program: 0-MWD													Offset Site Error: 0.00 ft
Reference Offset Semi Major Axis Distance													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	-90.30	-0.37	-70.23	70.23				
100.00	100.00	100.00	100.00	0.10	0.10	-90.30	-0.37	-70.23	70.23	70.04	0.19	367.617	
200.00	200.00	200.00	200.00	0.32	0.32	-90.30	-0.37	-70.23	70.23	69.59	0.64	109.640	
300.00	300.00	300.00	300.00	0.55	0.55	-90.30	-0.37	-70.23	70.23	69.14	1.09	64.428 CC, ES	
400.00	399.98	399.98	399.98	0.77	0.77	-137.79	-0.37	-70.23	71.52	69.98	1.53	46.596	
500.00	499.84	499.84	499.84	0.99	0.99	-140.41	-0.37	-70.23	75.48	73.50	1.98	38.147	
600.00	599.45	599.45	599.45	1.24	1.22	-144.19	-0.37	-70.23	82.39	79.96	2.43	33.941	
700.00	698.70	698.70	698.70	1.51	1.44	-148.49	-0.37	-70.23	92.56	89.68	2.88	32.133	
800.00	797.47	797.47	797.47	1.83	1.66	-152.77	-0.37	-70.23	106.24	102.91	3.34	31.849 SF	
900.00	895.62	895.62	895.62	2.19	1.88	-156.67	-0.37	-70.23	123.56	119.77	3.79	32.594	
1,000.00	993.06	993.06	993.06	2.61	2.10	-160.04	-0.37	-70.23	144.55	140.31	4.25	34.052	
1,100.00	1,089.64	1,089.64	1,089.64	3.09	2.32	-162.88	-0.37	-70.23	169.18	164.48	4.70	36.013	
1,200.00	1,185.27	1,185.27	1,185.27	3.63	2.53	-165.22	-0.37	-70.23	197.39	192.24	5.15	38.330	
1,300.00	1,279.82	1,274.30	1,274.29	4.24	2.72	-167.13	-1.14	-70.80	230.06	224.49	5.57	41.298	
1,400.00	1,373.17	1,359.24	1,359.16	4.91	2.87	-168.85	-3.93	-72.86	268.76	262.79	5.97	45.025	
1,500.00	1,465.21	1,440.59	1,440.31	5.64	3.03	-170.35	-8.49	-76.23	313.29	306.93	6.36	49.258	
1,522.23	1,485.49	1,458.15	1,457.80	5.82	3.06	-170.65	-9.72	-77.13	323.96	317.51	6.45	50.249	
1,600.00	1,556.29	1,518.52	1,517.86	6.43	3.18	-171.75	-14.60	-80.74	362.48	355.68	6.80	53.295	
1,700.00	1,647.32	1,600.00	1,598.70	7.22	3.36	-173.02	-22.80	-86.79	414.18	406.91	7.27	56.982	
1,800.00	1,738.36	1,667.07	1,665.00	8.03	3.52	-173.93	-30.94	-92.79	468.02	460.29	7.72	60.600	
1,900.00	1,829.39	1,745.21	1,742.00	8.83	3.73	-174.85	-41.65	-100.69	523.69	515.49	8.20	63.867	
2,000.00	1,920.43	1,827.87	1,823.43	9.64	3.96	-175.64	-53.10	-109.15	579.60	570.91	8.69	66.697	
2,100.00	2,011.47	1,910.54	1,904.86	10.46	4.21	-176.30	-64.55	-117.60	635.58	626.39	9.19	69.180	
2,200.00	2,102.50	1,993.20	1,986.29	11.27	4.47	-176.85	-76.01	-126.05	691.61	681.92	9.69	71.366	
2,300.00	2,193.54	2,075.86	2,067.71	12.09	4.73	-177.31	-87.46	-134.50	747.67	737.47	10.20	73.299	
2,400.00	2,284.58	2,158.52	2,149.14	12.91	5.01	-177.72	-98.91	-142.95	803.77	793.05	10.71	75.025	
2,500.00	2,375.61	2,241.19	2,230.57	13.73	5.29	-178.07	-110.36	-151.40	859.88	848.65	11.23	76.572	
2,600.00	2,466.65	2,323.85	2,312.00	14.56	5.58	-178.38	-121.82	-159.85	916.02	904.27	11.75	77.965	
2,700.00	2,557.68	2,406.51	2,393.43	15.38	5.87	-178.65	-133.27	-168.30	972.17	959.90	12.27	79.224	
2,800.00	2,648.72	2,489.17	2,474.85	16.20	6.17	-178.89	-144.72	-176.75	1,028.34	1,015.54	12.80	80.363	
2,900.00	2,739.76	2,571.84	2,556.28	17.03	6.47	-179.11	-156.17	-185.20	1,084.52	1,071.19	13.32	81.401	
3,000.00	2,830.79	2,654.50	2,637.71	17.85	6.77	-179.30	-167.63	-193.65	1,140.70	1,126.85	13.85	82.349	
3,100.00	2,921.83	2,737.16	2,719.14	18.68	7.08	-179.48	-179.08	-202.10	1,196.90	1,182.52	14.38	83.220	
3,200.00	3,012.86	2,819.82	2,800.57	19.50	7.38	-179.64	-190.53	-210.55	1,253.10	1,238.19	14.91	84.021	
3,300.00	3,103.90	2,902.49	2,881.99	20.33	7.69	-179.79	-201.98	-219.01	1,309.31	1,293.86	15.45	84.760	
3,400.00	3,194.94	2,985.15	2,963.42	21.16	8.01	-179.93	-213.44	-227.46	1,365.52	1,349.54	15.98	85.442	
3,500.00	3,285.97	3,067.81	3,044.85	21.98	8.32	-179.95	-224.89	-235.91	1,421.74	1,405.23	16.52	86.074	
3,600.00	3,377.01	3,150.47	3,126.28	22.81	8.63	-179.83	-236.34	-244.36	1,477.97	1,460.91	17.05	86.662	
3,700.00	3,468.05	3,233.14	3,207.71	23.64	8.95	-179.73	-247.79	-252.81	1,534.19	1,516.60	17.59	87.211	
3,800.00	3,559.08	3,315.80	3,289.13	24.46	9.27	-179.63	-259.25	-261.26	1,590.43	1,572.30	18.13	87.723	
3,900.00	3,650.12	3,398.46	3,370.56	25.29	9.59	-179.54	-270.70	-269.71	1,646.66	1,627.99	18.67	88.202	
4,000.00	3,741.15	3,481.12	3,451.99	26.12	9.90	-179.45	-282.15	-278.16	1,702.90	1,683.69	19.21	88.651	
4,100.00	3,832.19	3,563.79	3,533.42	26.95	10.22	-179.37	-293.60	-286.61	1,759.13	1,739.39	19.75	89.072	
4,200.00	3,923.23	3,646.45	3,614.84	27.78	10.55	-179.29	-305.06	-295.06	1,815.38	1,795.09	20.29	89.469	
4,300.00	4,014.26	3,729.11	3,696.27	28.60	10.87	-179.22	-316.51	-303.51	1,871.62	1,850.79	20.83	89.843	
4,400.00	4,105.30	3,811.77	3,777.70	29.43	11.19	-179.15	-327.96	-311.96	1,927.86	1,906.49	21.37	90.196	
4,500.00	4,196.33	3,894.44	3,859.13	30.26	11.51	-179.09	-339.41	-320.42	1,984.11	1,962.19	21.92	90.530	
4,600.00	4,287.37	3,977.10	3,940.56	31.09	11.84	-179.03	-350.87	-328.87	2,040.36	2,017.90	22.46	90.845	
4,700.00	4,378.41	4,059.76	4,021.98	31.92	12.16	-178.97	-362.32	-337.32	2,096.61	2,073.61	23.00	91.144	
4,800.00	4,469.44	4,142.42	4,103.41	32.75	12.48	-178.92	-373.77	-345.77	2,152.86	2,129.31	23.55	91.428	
4,900.00	4,560.48	4,225.09	4,184.84	33.57	12.81	-178.87	-385.22	-354.22	2,209.11	2,185.02	24.09	91.698	
5,000.00	4,651.51	4,307.75	4,266.27	34.40	13.13	-178.82	-396.68	-362.67	2,265.37	2,240.73	24.64	91.955	

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_HIGHWAY 160 26-2
Project:	COLORADO NORTHERN ZONE - 83	TVD Reference:	WELL @ 5119.00ft (Original Well Elev)
Reference Site:	WELD_HIGHWAY 160 17-2 pad	MD Reference:	WELL @ 5119.00ft (Original Well Elev)
Site Error:	0.00ft	North Reference:	True
Reference Well:	P_HIGHWAY 160 26-2	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00ft	Output errors are at	2.00 sigma
Reference Wellbore	P_HIGHWAY 160 26-2	Database:	EDM 2003.21 Single User Db
Reference Design:	PLAN #1 3-17-10 RHS	Offset TVD Reference:	Offset Datum

Offset Design WELD_HIGHWAY 160 17-2 pad - P_HIGHWAY 160 7-2 - P_HIGHWAY 160 7-2 - PLAN #1 3-17-10 RH:												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	4,742.55	4,390.41	4,347.70	35.23	13.46	178.77	-408.13	-371.12	2,321.62	2,296.44	25.18	92.200	
5,200.00	4,833.59	4,473.07	4,429.12	36.06	13.78	178.73	-419.58	-379.57	2,377.88	2,352.15	25.73	92.433	
5,300.00	4,924.62	4,555.74	4,510.55	36.89	14.11	178.69	-431.03	-388.02	2,434.13	2,407.86	26.27	92.655	
5,405.33	5,020.51	4,642.80	4,596.32	37.76	14.45	178.65	-443.10	-396.92	2,493.39	2,466.54	26.85	92.879	
5,500.00	5,107.33	4,721.93	4,674.26	38.44	14.77	178.64	-454.06	-405.01	2,545.35	2,517.82	27.53	92.466	
5,600.00	5,200.33	4,807.31	4,758.37	39.03	15.10	178.63	-465.89	-413.74	2,597.36	2,569.16	28.20	92.121	
5,700.00	5,294.56	4,894.47	4,844.22	39.56	15.45	178.61	-477.96	-422.65	2,646.36	2,617.54	28.82	91.809	
5,800.00	5,389.90	4,983.27	4,931.70	40.05	15.80	178.60	-490.27	-431.73	2,692.29	2,662.88	29.41	91.530	
5,900.00	5,486.23	5,073.62	5,020.70	40.50	16.16	178.58	-502.78	-440.97	2,735.10	2,705.14	29.96	91.283	
6,000.00	5,583.45	5,165.41	5,111.12	40.89	16.52	178.56	-515.50	-450.35	2,774.73	2,744.26	30.47	91.069	
6,100.00	5,681.42	5,258.52	5,202.84	41.24	16.89	178.54	-528.40	-459.87	2,811.13	2,780.20	30.93	90.888	
6,200.00	5,780.02	5,352.85	5,295.76	41.53	17.27	178.51	-541.47	-469.51	2,844.27	2,812.92	31.35	90.741	
6,300.00	5,879.15	5,448.27	5,389.75	41.78	17.65	178.48	-554.69	-479.27	2,874.09	2,842.37	31.71	90.627	
6,400.00	5,978.68	5,544.67	5,484.71	41.97	18.03	178.45	-568.04	-489.12	2,900.56	2,868.53	32.03	90.547	
6,500.00	6,078.48	5,641.93	5,580.52	42.12	18.42	178.42	-581.52	-499.07	2,923.66	2,891.36	32.30	90.502	
6,600.00	6,178.44	5,739.94	5,677.07	42.22	18.81	178.38	-595.10	-509.09	2,943.36	2,910.83	32.53	90.493	
6,627.56	6,206.00	5,767.06	5,703.79	42.24	18.91	-135.08	-598.86	-511.86	2,948.18	2,915.60	32.58	90.496	
6,700.00	6,278.44	6,344.71	6,278.44	42.29	20.19	-135.22	-638.20	-540.89	2,953.46	2,919.62	33.84	87.278	
6,800.00	6,378.44	6,444.71	6,378.44	42.36	20.32	-135.22	-638.20	-540.89	2,953.46	2,919.30	34.16	86.465	
6,900.00	6,478.44	6,544.71	6,478.44	42.42	20.45	-135.22	-638.20	-540.89	2,953.46	2,918.98	34.48	85.660	
7,000.00	6,578.44	6,644.71	6,578.44	42.50	20.57	-135.22	-638.20	-540.89	2,953.46	2,918.65	34.80	84.863	
7,100.00	6,678.44	6,744.71	6,678.44	42.57	20.71	-135.22	-638.20	-540.89	2,953.46	2,918.33	35.13	84.074	
7,200.00	6,778.44	6,844.71	6,778.44	42.64	20.84	-135.22	-638.20	-540.89	2,953.46	2,918.00	35.46	83.294	
7,300.00	6,878.44	6,944.71	6,878.44	42.71	20.97	-135.22	-638.20	-540.89	2,953.46	2,917.67	35.79	82.522	
7,400.00	6,978.44	7,044.71	6,978.44	42.79	21.11	-135.22	-638.20	-540.89	2,953.46	2,917.33	36.12	81.759	
7,500.00	7,078.44	7,144.71	7,078.44	42.87	21.25	-135.22	-638.20	-540.89	2,953.46	2,917.00	36.46	81.004	
7,600.00	7,178.44	7,244.71	7,178.44	42.94	21.39	-135.22	-638.20	-540.89	2,953.46	2,916.66	36.80	80.258	
7,700.00	7,278.44	7,344.71	7,278.44	43.02	21.53	-135.22	-638.20	-540.89	2,953.46	2,916.32	37.14	79.521	
7,800.00	7,378.44	7,444.71	7,378.44	43.10	21.67	-135.22	-638.20	-540.89	2,953.46	2,915.97	37.48	78.792	
7,900.00	7,478.44	7,544.71	7,478.44	43.18	21.81	-135.22	-638.20	-540.89	2,953.46	2,915.63	37.83	78.072	
8,000.00	7,578.44	7,644.71	7,578.44	43.26	21.96	-135.22	-638.20	-540.89	2,953.46	2,915.28	38.18	77.361	
8,100.00	7,678.44	7,744.71	7,678.44	43.34	22.10	-135.22	-638.20	-540.89	2,953.46	2,914.93	38.53	76.659	
8,200.00	7,778.44	7,844.71	7,778.44	43.43	22.25	-135.22	-638.20	-540.89	2,953.46	2,914.58	38.88	75.965	
8,300.00	7,878.44	7,944.71	7,878.44	43.51	22.40	-135.22	-638.20	-540.89	2,953.46	2,914.22	39.23	75.280	
8,400.00	7,978.44	8,044.71	7,978.44	43.60	22.55	-135.22	-638.20	-540.89	2,953.46	2,913.87	39.59	74.604	
8,500.00	8,078.44	8,144.71	8,078.44	43.68	22.70	-135.22	-638.20	-540.89	2,953.46	2,913.51	39.95	73.937	
8,542.56	8,121.00	8,187.27	8,121.00	43.72	22.77	-135.22	-638.20	-540.89	2,953.46	2,913.36	40.10	73.655	

Company:	US ROCKIES REGION PLANNING	Local Co-ordinate Reference:	Well P_HIGHWAY 160 26-2
Project:	COLORADO NORTHERN ZONE - 83	TVD Reference:	WELL @ 5119.00ft (Original Well Elev)
Reference Site:	WELD_HIGHWAY 160 17-2 pad	MD Reference:	WELL @ 5119.00ft (Original Well Elev)
Site Error:	0.00ft	North Reference:	True
Reference Well:	P_HIGHWAY 160 26-2	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00ft	Output errors are at	2.00 sigma
Reference Wellbore	P_HIGHWAY 160 26-2	Database:	EDM 2003.21 Single User Db
Reference Design:	PLAN #1 3-17-10 RHS	Offset TVD Reference:	Offset Datum

Offset Design WELD_HIGHWAY 160 17-2 pad - P_HIGHWAY 160 8-2 - P_HIGHWAY 160 8-2 - PLAN #1 3-17-10 RH: Survey Program: 0-MWD													Offset Site Error:	0.00 ft
Reference Offset Semi Major Axis Distance													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	-90.00	0.00	-20.15	20.15					
100.00	100.00	100.00	100.00	0.10	0.10	-90.00	0.00	-20.15	20.15	19.96	0.19	105.451		
200.00	200.00	200.00	200.00	0.32	0.32	-90.00	0.00	-20.15	20.15	19.51	0.64	31.450		
300.00	300.00	300.00	300.00	0.55	0.55	-90.00	0.00	-20.15	20.15	19.06	1.09	18.481 CC, ES		
400.00	399.98	399.98	399.98	0.77	0.77	-139.74	0.00	-20.15	21.45	19.91	1.53	13.974		
500.00	499.84	499.84	499.84	0.99	0.99	-147.26	0.00	-20.15	25.67	23.69	1.98	12.978 SF		
600.00	599.45	599.45	599.45	1.24	1.22	-155.32	0.00	-20.15	33.34	30.91	2.42	13.763		
700.00	698.70	698.70	698.70	1.51	1.44	-161.78	0.00	-20.15	44.71	41.84	2.87	15.598		
800.00	797.47	797.47	797.47	1.83	1.66	-166.40	0.00	-20.15	59.78	56.47	3.31	18.060		
900.00	895.62	895.62	895.62	2.19	1.88	-169.61	0.00	-20.15	78.46	74.71	3.75	20.903		
1,000.00	993.06	993.06	993.06	2.61	2.10	-171.85	0.00	-20.15	100.68	96.48	4.20	23.983		
1,100.00	1,089.64	1,089.64	1,089.64	3.09	2.32	-173.45	0.00	-20.15	126.36	121.72	4.64	27.214		
1,200.00	1,185.27	1,185.27	1,185.27	3.63	2.53	-174.63	0.00	-20.15	155.46	150.37	5.09	30.542		
1,300.00	1,279.82	1,281.99	1,281.98	4.24	2.74	-175.87	-0.53	-19.10	187.44	181.92	5.53	33.918		
1,400.00	1,373.17	1,378.49	1,378.38	4.91	2.92	-177.62	-2.49	-15.18	221.57	215.61	5.95	37.216		
1,500.00	1,465.21	1,474.20	1,473.78	5.64	3.12	-179.63	-5.88	-8.43	257.98	251.59	6.39	40.346		
1,522.23	1,485.49	1,495.35	1,494.82	5.82	3.16	179.90	-6.82	-6.55	266.41	259.91	6.49	41.020		
1,600.00	1,556.29	1,569.31	1,568.29	6.43	3.33	178.22	-10.66	1.10	295.88	288.96	6.92	42.767		
1,700.00	1,647.32	1,664.55	1,662.52	7.22	3.57	176.02	-16.86	13.44	333.23	325.73	7.50	44.420		
1,800.00	1,738.36	1,759.73	1,756.18	8.03	3.84	173.76	-24.45	28.57	370.14	361.99	8.14	45.459		
1,900.00	1,829.39	1,854.65	1,848.97	8.83	4.14	171.47	-33.40	46.42	406.77	397.92	8.85	45.958		
2,000.00	1,920.43	1,947.45	1,939.15	9.64	4.48	169.27	-43.22	65.99	443.42	433.79	9.62	46.077		
2,100.00	2,011.47	2,039.22	2,028.28	10.46	4.84	167.39	-53.02	85.51	480.52	470.09	10.44	46.044		
2,200.00	2,102.50	2,130.99	2,117.41	11.27	5.22	165.78	-62.82	105.04	518.01	506.73	11.28	45.919		
2,300.00	2,193.54	2,222.77	2,206.55	12.09	5.62	164.39	-72.62	124.56	555.82	543.66	12.15	45.742		
2,400.00	2,284.58	2,314.54	2,295.68	12.91	6.02	163.17	-82.42	144.09	593.87	580.83	13.04	45.538		
2,500.00	2,375.61	2,406.31	2,384.82	13.73	6.44	162.10	-92.22	163.61	632.13	618.18	13.95	45.324		
2,600.00	2,466.65	2,498.08	2,473.95	14.56	6.86	161.14	-102.01	183.14	670.55	655.69	14.87	45.108		
2,700.00	2,557.68	2,589.86	2,563.09	15.38	7.29	160.29	-111.81	202.67	709.13	693.33	15.79	44.897		
2,800.00	2,648.72	2,681.63	2,652.22	16.20	7.73	159.53	-121.61	222.19	747.82	731.08	16.73	44.694		
2,900.00	2,739.76	2,773.40	2,741.35	17.03	8.16	158.84	-131.41	241.72	786.61	768.93	17.68	44.501		
3,000.00	2,830.79	2,865.17	2,830.49	17.85	8.61	158.22	-141.21	261.24	825.49	806.87	18.63	44.319		
3,100.00	2,921.83	2,956.95	2,919.62	18.68	9.05	157.65	-151.01	280.77	864.45	844.87	19.58	44.148		
3,200.00	3,012.86	3,048.72	3,008.76	19.50	9.50	157.13	-160.81	300.29	903.48	882.94	20.54	43.987		
3,300.00	3,103.90	3,140.49	3,097.89	20.33	9.95	156.65	-170.60	319.82	942.56	921.06	21.50	43.836		
3,400.00	3,194.94	3,232.26	3,187.03	21.16	10.40	156.21	-180.40	339.35	981.69	959.23	22.47	43.695		
3,500.00	3,285.97	3,324.04	3,276.16	21.98	10.86	155.81	-190.20	358.87	1,020.87	997.44	23.43	43.563		
3,600.00	3,377.01	3,415.81	3,365.30	22.81	11.32	155.43	-200.00	378.40	1,060.09	1,035.69	24.40	43.439		
3,700.00	3,468.05	3,507.58	3,454.43	23.64	11.77	155.08	-209.80	397.92	1,099.35	1,073.97	25.38	43.322		
3,800.00	3,559.08	3,599.35	3,543.56	24.46	12.23	154.76	-219.60	417.45	1,138.64	1,112.29	26.35	43.212		
3,900.00	3,650.12	3,691.13	3,632.70	25.29	12.69	154.45	-229.39	436.97	1,177.96	1,150.63	27.32	43.109		
4,000.00	3,741.15	3,782.90	3,721.83	26.12	13.15	154.17	-239.19	456.50	1,217.30	1,189.00	28.30	43.012		
4,100.00	3,832.19	3,874.67	3,810.97	26.95	13.62	153.90	-248.99	476.02	1,256.67	1,227.39	29.28	42.921		
4,200.00	3,923.23	3,966.44	3,900.10	27.78	14.08	153.65	-258.79	495.55	1,296.06	1,265.80	30.26	42.835		
4,300.00	4,014.26	4,058.22	3,989.24	28.60	14.54	153.42	-268.59	515.08	1,335.47	1,304.23	31.24	42.753		
4,400.00	4,105.30	4,149.99	4,078.37	29.43	15.01	153.20	-278.39	534.60	1,374.89	1,342.67	32.22	42.676		
4,500.00	4,196.33	4,241.76	4,167.50	30.26	15.47	152.99	-288.19	554.13	1,414.34	1,381.14	33.20	42.603		
4,600.00	4,287.37	4,333.53	4,256.64	31.09	15.94	152.79	-297.98	573.65	1,453.79	1,419.61	34.18	42.534		
4,700.00	4,378.41	4,425.31	4,345.77	31.92	16.40	152.60	-307.78	593.18	1,493.27	1,458.10	35.16	42.468		
4,800.00	4,469.44	4,517.08	4,434.91	32.75	16.87	152.42	-317.58	612.70	1,532.75	1,496.61	36.14	42.406		
4,900.00	4,560.48	4,608.85	4,524.04	33.57	17.34	152.25	-327.38	632.23	1,572.25	1,535.12	37.13	42.347		
5,000.00	4,651.51	4,700.62	4,613.18	34.40	17.80	152.09	-337.18	651.76	1,611.76	1,573.64	38.11	42.290		

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_HIGHWAY 160 26-2
Project:	COLORADO NORTHERN ZONE - 83	TVD Reference:	WELL @ 5119.00ft (Original Well Elev)
Reference Site:	WELD_HIGHWAY 160 17-2 pad	MD Reference:	WELL @ 5119.00ft (Original Well Elev)
Site Error:	0.00ft	North Reference:	True
Reference Well:	P_HIGHWAY 160 26-2	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00ft	Output errors are at	2.00 sigma
Reference Wellbore	P_HIGHWAY 160 26-2	Database:	EDM 2003.21 Single User Db
Reference Design:	PLAN #1 3-17-10 RHS	Offset TVD Reference:	Offset Datum

Offset Design WELD_HIGHWAY 160 17-2 pad - P_HIGHWAY 160 8-2 - P_HIGHWAY 160 8-2 - PLAN #1 3-17-10 RH:												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	4,742.55	4,792.40	4,702.31	35.23	18.27	151.94	-346.98	671.28	1,651.27	1,612.18	39.10	42.236	
5,200.00	4,833.59	4,884.17	4,791.45	36.06	18.74	151.79	-356.78	690.81	1,690.80	1,650.72	40.08	42.185	
5,300.00	4,924.62	4,975.94	4,880.58	36.89	19.21	151.65	-366.57	710.33	1,730.34	1,689.27	41.07	42.136	
5,405.33	5,020.51	5,072.60	4,974.46	37.76	19.70	151.51	-376.89	730.90	1,771.99	1,729.89	42.10	42.086	
5,500.00	5,107.33	5,159.98	5,059.33	38.44	20.15	151.74	-386.22	749.49	1,808.17	1,765.08	43.09	41.960	
5,600.00	5,200.33	5,253.29	5,149.96	39.03	20.62	151.90	-396.19	769.34	1,843.62	1,799.54	44.08	41.827	
5,700.00	5,294.56	5,347.52	5,241.48	39.56	21.10	151.97	-406.25	789.39	1,876.19	1,831.15	45.04	41.653	
5,800.00	5,389.90	5,442.57	5,333.79	40.05	21.59	151.97	-416.39	809.61	1,905.88	1,859.89	45.99	41.443	
5,900.00	5,486.23	5,538.30	5,426.78	40.50	22.08	151.90	-426.62	829.98	1,932.67	1,885.76	46.91	41.201	
6,000.00	5,583.45	5,634.62	5,520.32	40.89	22.57	151.76	-436.90	850.47	1,956.54	1,908.74	47.80	40.933	
6,100.00	5,681.42	5,739.27	5,622.22	41.24	23.01	151.56	-447.58	871.76	1,977.36	1,928.75	48.61	40.679	
6,200.00	5,780.02	5,848.05	5,728.97	41.53	23.37	151.37	-456.96	890.44	1,994.74	1,945.47	49.27	40.482	
6,300.00	5,879.15	5,958.21	5,837.80	41.78	23.68	151.22	-464.59	905.66	2,008.59	1,958.77	49.82	40.314	
6,400.00	5,978.68	6,069.46	5,948.29	41.97	23.95	151.10	-470.39	917.22	2,018.85	1,968.60	50.25	40.173	
6,500.00	6,078.48	6,181.51	6,059.99	42.12	24.16	151.01	-474.29	924.97	2,025.48	1,974.92	50.56	40.059	
6,600.00	6,178.44	6,294.02	6,172.42	42.22	24.33	150.96	-476.22	928.83	2,028.46	1,977.71	50.75	39.972	
6,627.56	6,206.00	6,325.07	6,203.46	42.24	24.36	-162.49	-476.40	929.20	2,028.63	1,977.86	50.78	39.952	
6,700.00	6,278.44	6,400.05	6,278.44	42.29	24.45	-162.50	-476.44	929.27	2,028.64	1,977.71	50.93	39.830	
6,800.00	6,378.44	6,500.05	6,378.44	42.36	24.56	-162.50	-476.44	929.27	2,028.64	1,977.49	51.16	39.656	
6,900.00	6,478.44	6,600.05	6,478.44	42.42	24.68	-162.50	-476.44	929.27	2,028.64	1,977.26	51.38	39.480	
7,000.00	6,578.44	6,700.05	6,578.44	42.50	24.80	-162.50	-476.44	929.27	2,028.64	1,977.03	51.61	39.304	
7,100.00	6,678.44	6,800.05	6,678.44	42.57	24.92	-162.50	-476.44	929.27	2,028.64	1,976.80	51.85	39.127	
7,200.00	6,778.44	6,900.05	6,778.44	42.64	25.04	-162.50	-476.44	929.27	2,028.64	1,976.56	52.08	38.950	
7,300.00	6,878.44	7,000.05	6,878.44	42.71	25.16	-162.50	-476.44	929.27	2,028.64	1,976.32	52.32	38.772	
7,400.00	6,978.44	7,100.05	6,978.44	42.79	25.28	-162.50	-476.44	929.27	2,028.64	1,976.08	52.56	38.594	
7,500.00	7,078.44	7,200.05	7,078.44	42.87	25.41	-162.50	-476.44	929.27	2,028.64	1,975.84	52.81	38.416	
7,600.00	7,178.44	7,300.05	7,178.44	42.94	25.54	-162.50	-476.44	929.27	2,028.64	1,975.59	53.05	38.237	
7,700.00	7,278.44	7,400.05	7,278.44	43.02	25.66	-162.50	-476.44	929.27	2,028.64	1,975.34	53.30	38.058	
7,800.00	7,378.44	7,500.05	7,378.44	43.10	25.79	-162.50	-476.44	929.27	2,028.64	1,975.09	53.56	37.878	
7,900.00	7,478.44	7,600.05	7,478.44	43.18	25.92	-162.50	-476.44	929.27	2,028.64	1,974.83	53.81	37.699	
8,000.00	7,578.44	7,700.05	7,578.44	43.26	26.06	-162.50	-476.44	929.27	2,028.64	1,974.58	54.07	37.520	
8,100.00	7,678.44	7,800.05	7,678.44	43.34	26.19	-162.50	-476.44	929.27	2,028.64	1,974.32	54.33	37.340	
8,200.00	7,778.44	7,900.05	7,778.44	43.43	26.32	-162.50	-476.44	929.27	2,028.64	1,974.05	54.59	37.161	
8,300.00	7,878.44	8,000.05	7,878.44	43.51	26.46	-162.50	-476.44	929.27	2,028.64	1,973.79	54.86	36.981	
8,400.00	7,978.44	8,100.05	7,978.44	43.60	26.60	-162.50	-476.44	929.27	2,028.64	1,973.52	55.12	36.802	
8,500.00	8,078.44	8,200.05	8,078.44	43.68	26.73	-162.50	-476.44	929.27	2,028.64	1,973.25	55.39	36.623	
8,542.56	8,121.00	8,242.61	8,121.00	43.72	26.79	-162.50	-476.44	929.27	2,028.64	1,973.14	55.51	36.547	

Company:	US ROCKIES REGION PLANNING	Local Co-ordinate Reference:	Well P_HIGHWAY 160 26-2
Project:	COLORADO NORTHERN ZONE - 83	TVD Reference:	WELL @ 5119.00ft (Original Well Elev)
Reference Site:	WELD_HIGHWAY 160 17-2 pad	MD Reference:	WELL @ 5119.00ft (Original Well Elev)
Site Error:	0.00ft	North Reference:	True
Reference Well:	P_HIGHWAY 160 26-2	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00ft	Output errors are at	2.00 sigma
Reference Wellbore	P_HIGHWAY 160 26-2	Database:	EDM 2003.21 Single User Db
Reference Design:	PLAN #1 3-17-10 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	
0.00	0.00	0.00	0.00	0.00	0.00	-90.00	0.00	-29.94	29.94				
100.00	100.00	100.00	100.00	0.10	0.10	-90.00	0.00	-29.94	29.94	29.75	0.19	156.711	
200.00	200.00	200.00	200.00	0.32	0.32	-90.00	0.00	-29.94	29.94	29.30	0.64	46.738	
300.00	300.00	300.00	300.00	0.55	0.55	-90.00	0.00	-29.94	29.94	28.85	1.09	27.465 CC, ES	
400.00	399.98	399.98	399.98	0.77	0.77	-138.74	0.00	-29.94	31.23	29.70	1.53	20.348	
500.00	499.84	499.84	499.84	0.99	0.99	-144.29	0.00	-29.94	35.33	33.36	1.98	17.863	
600.00	599.45	599.45	599.45	1.24	1.22	-151.05	0.00	-29.94	42.72	40.30	2.42	17.625 SF	
700.00	698.70	698.70	698.70	1.51	1.44	-157.26	0.00	-29.94	53.72	50.85	2.87	18.716	
800.00	797.47	797.47	797.47	1.83	1.66	-162.24	0.00	-29.94	68.43	65.11	3.32	20.637	
900.00	895.62	895.62	895.62	2.19	1.88	-165.99	0.00	-29.94	86.82	83.05	3.76	23.083	
1,000.00	993.06	993.06	993.06	2.61	2.10	-168.77	0.00	-29.94	108.80	104.59	4.21	25.867	
1,100.00	1,089.64	1,089.64	1,089.64	3.09	2.32	-170.83	0.00	-29.94	134.30	129.65	4.65	28.872	
1,200.00	1,185.27	1,185.27	1,185.27	3.63	2.53	-172.39	0.00	-29.94	163.25	158.15	5.10	32.021	
1,300.00	1,279.82	1,280.86	1,280.86	4.24	2.73	-173.84	-0.52	-29.26	195.38	189.85	5.53	35.331	
1,400.00	1,373.17	1,375.59	1,375.53	4.91	2.91	-175.56	-2.47	-26.75	230.34	224.39	5.95	38.731	
1,500.00	1,465.21	1,469.10	1,468.88	5.64	3.09	-177.39	-5.81	-22.45	268.23	261.86	6.37	42.103	
1,522.23	1,485.49	1,489.70	1,489.42	5.82	3.13	-177.80	-6.73	-21.26	277.06	270.59	6.47	42.847	
1,600.00	1,556.29	1,561.63	1,561.09	6.43	3.28	-179.25	-10.48	-16.42	308.17	301.30	6.87	44.886	
1,700.00	1,647.32	1,654.00	1,652.93	7.22	3.49	178.91	-16.52	-8.64	348.09	340.69	7.40	47.024	
1,800.00	1,738.36	1,746.16	1,744.30	8.03	3.71	177.11	-23.89	0.86	388.00	380.03	7.97	48.675	
1,900.00	1,829.39	1,837.98	1,835.02	8.83	3.96	175.33	-32.58	12.06	428.00	419.42	8.58	49.891	
2,000.00	1,920.43	1,929.38	1,924.96	9.64	4.23	173.56	-42.55	24.92	468.16	458.93	9.23	50.723	
2,100.00	2,011.47	2,020.24	2,013.95	10.46	4.53	171.82	-53.77	39.38	508.59	498.66	9.93	51.218	
2,200.00	2,102.50	2,110.48	2,101.88	11.27	4.86	170.10	-66.19	55.40	549.36	538.68	10.68	51.425	
2,300.00	2,193.54	2,200.00	2,188.62	12.09	5.22	168.40	-79.77	72.91	590.56	579.07	11.49	51.396	
2,400.00	2,284.58	2,288.69	2,274.01	12.91	5.62	166.73	-94.44	91.83	632.27	619.91	12.36	51.161	
2,500.00	2,375.61	2,376.70	2,358.19	13.73	6.05	165.08	-110.19	112.13	674.56	661.28	13.28	50.792	
2,600.00	2,466.65	2,465.44	2,442.85	14.56	6.52	163.55	-126.49	133.15	717.36	703.11	14.25	50.346	
2,700.00	2,557.68	2,554.18	2,527.51	15.38	7.00	162.19	-142.78	154.16	760.54	745.31	15.24	49.919	
2,800.00	2,648.72	2,642.92	2,612.17	16.20	7.49	160.96	-159.08	175.18	804.05	787.81	16.24	49.515	
2,900.00	2,739.76	2,731.66	2,696.83	17.03	7.99	159.86	-175.38	196.19	847.84	830.58	17.25	49.139	
3,000.00	2,830.79	2,820.40	2,781.49	17.85	8.50	158.87	-191.68	217.20	891.85	873.57	18.28	48.791	
3,100.00	2,921.83	2,909.14	2,866.15	18.68	9.01	157.97	-207.98	238.22	936.07	916.76	19.31	48.472	
3,200.00	3,012.86	2,997.88	2,950.81	19.50	9.53	157.14	-224.28	259.23	980.46	960.11	20.35	48.179	
3,300.00	3,103.90	3,086.62	3,035.48	20.33	10.06	156.39	-240.57	280.25	1,025.00	1,003.61	21.39	47.911	
3,400.00	3,194.94	3,175.36	3,120.14	21.16	10.59	155.70	-256.87	301.26	1,069.67	1,047.23	22.44	47.665	
3,500.00	3,285.97	3,264.10	3,204.80	21.98	11.12	155.07	-273.17	322.28	1,114.46	1,090.97	23.49	47.439	
3,600.00	3,377.01	3,352.84	3,289.46	22.81	11.65	154.48	-289.47	343.29	1,159.36	1,134.81	24.55	47.233	
3,700.00	3,468.05	3,441.58	3,374.12	23.64	12.19	153.93	-305.77	364.31	1,204.34	1,178.74	25.60	47.043	
3,800.00	3,559.08	3,530.32	3,458.78	24.46	12.73	153.43	-322.07	385.32	1,249.41	1,222.75	26.66	46.868	
3,900.00	3,650.12	3,619.06	3,543.44	25.29	13.27	152.96	-338.36	406.33	1,294.54	1,266.83	27.72	46.707	
4,000.00	3,741.15	3,707.80	3,628.10	26.12	13.82	152.52	-354.66	427.35	1,339.75	1,310.97	28.78	46.559	
4,100.00	3,832.19	3,796.54	3,712.76	26.95	14.36	152.11	-370.96	448.36	1,385.01	1,355.18	29.84	46.421	
4,200.00	3,923.23	3,885.28	3,797.42	27.78	14.91	151.72	-387.26	469.38	1,430.33	1,399.43	30.90	46.293	
4,300.00	4,014.26	3,974.02	3,882.08	28.60	15.46	151.36	-403.56	490.39	1,475.69	1,443.73	31.96	46.174	
4,400.00	4,105.30	4,062.75	3,966.74	29.43	16.01	151.02	-419.85	511.41	1,521.10	1,488.08	33.02	46.063	
4,500.00	4,196.33	4,151.49	4,051.41	30.26	16.56	150.70	-436.15	532.42	1,566.55	1,532.47	34.08	45.960	
4,600.00	4,287.37	4,240.23	4,136.07	31.09	17.11	150.40	-452.45	553.43	1,612.04	1,576.89	35.15	45.864	
4,700.00	4,378.41	4,328.97	4,220.73	31.92	17.66	150.11	-468.75	574.45	1,657.56	1,621.35	36.21	45.774	
4,800.00	4,469.44	4,417.71	4,305.39	32.75	18.21	149.84	-485.05	595.46	1,703.11	1,665.84	37.28	45.689	
4,900.00	4,560.48	4,506.45	4,390.05	33.57	18.76	149.58	-501.35	616.48	1,748.69	1,710.35	38.34	45.610	
5,000.00	4,651.51	4,595.19	4,474.71	34.40	19.32	149.34	-517.64	637.49	1,794.30	1,754.89	39.40	45.535	

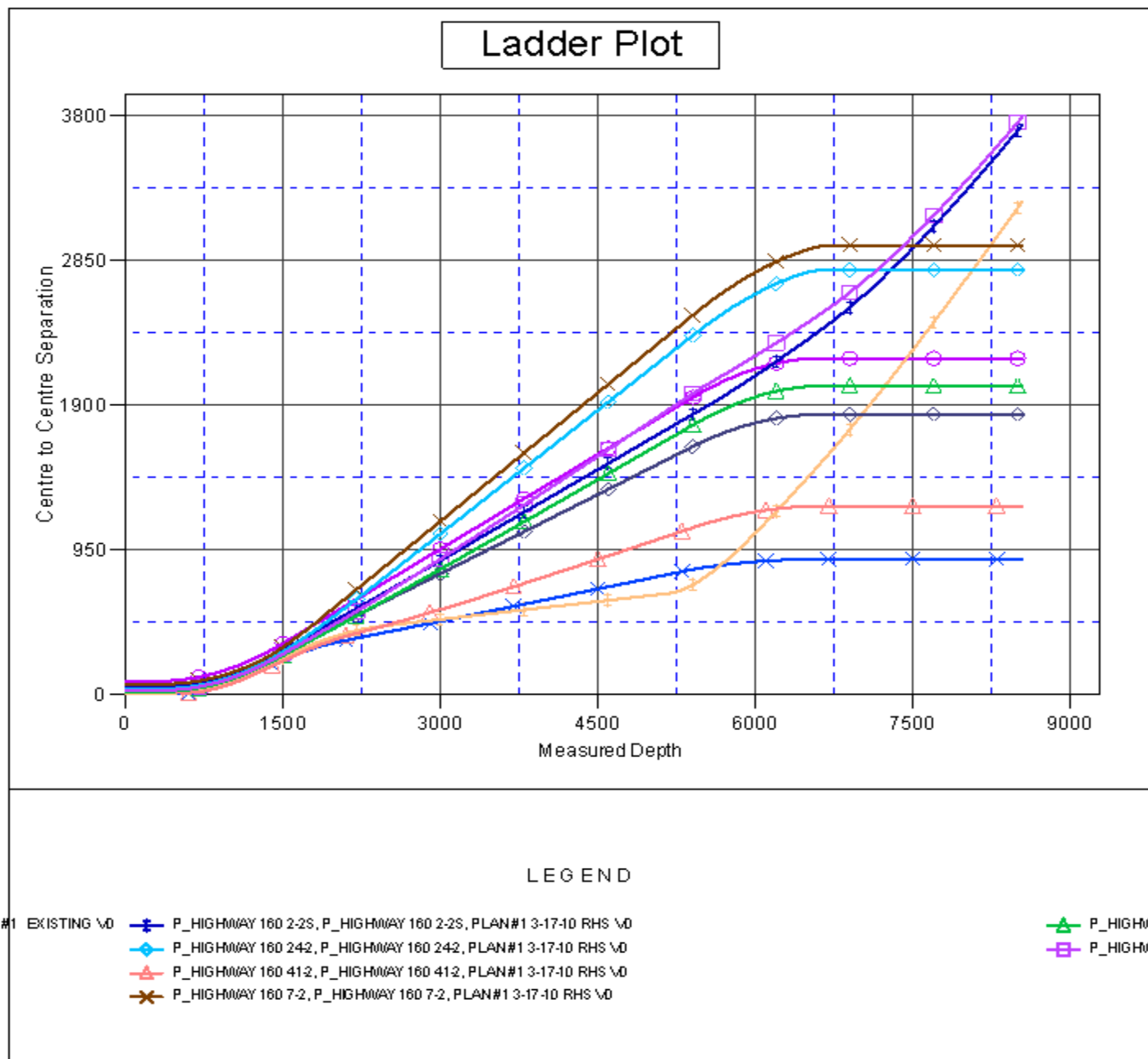
CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Company:	US ROCKIES REGION PLANNING	Local Co-ordinate Reference:	Well P_HIGHWAY 160 26-2
Project:	COLORADO NORTHERN ZONE - 83	TVD Reference:	WELL @ 5119.00ft (Original Well Elev)
Reference Site:	WELD_HIGHWAY 160 17-2 pad	MD Reference:	WELL @ 5119.00ft (Original Well Elev)
Site Error:	0.00ft	North Reference:	True
Reference Well:	P_HIGHWAY 160 26-2	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00ft	Output errors are at	2.00 sigma
Reference Wellbore	P_HIGHWAY 160 26-2	Database:	EDM 2003.21 Single User Db
Reference Design:	PLAN #1 3-17-10 RHS	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.00 ft
WELD_HIGHWAY 160 17-2 pad - P_HIGHWAY 160 8-2S - P_HIGHWAY 160 8-2S - PLAN #1 3-17-10 f												Offset Well Error:	0.00 ft
Survey Program: 0-MWD													
Reference		Offset		Semi Major Axis			Distance						
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning
5,100.00	4,742.55	4,683.93	4,559.37	35.23	19.87	149.11	-533.94	658.51	1,839.93	1,799.46	40.47	45.465	
5,200.00	4,833.59	4,772.67	4,644.03	36.06	20.43	148.89	-550.24	679.52	1,885.59	1,844.05	41.53	45.399	
5,300.00	4,924.62	4,861.41	4,728.69	36.89	20.98	148.68	-566.54	700.54	1,931.26	1,888.66	42.60	45.336	
5,405.33	5,020.51	4,954.88	4,817.86	37.76	21.57	148.47	-583.71	722.67	1,979.39	1,935.67	43.72	45.274	
5,500.00	5,107.33	5,039.43	4,898.53	38.44	22.10	148.75	-599.23	742.69	2,021.48	1,976.68	44.80	45.123	
5,600.00	5,200.33	5,129.83	4,984.78	39.03	22.66	148.96	-615.84	764.10	2,063.35	2,017.47	45.87	44.979	
5,700.00	5,294.56	5,194.00	5,046.00	39.56	23.07	149.19	-627.63	779.30	2,102.70	2,055.95	46.75	44.978	
5,800.00	5,389.90	5,194.00	5,046.00	40.05	23.07	149.63	-627.63	779.30	2,142.32	2,095.17	47.15	45.432	
5,900.00	5,486.23	5,194.00	5,046.00	40.50	23.07	150.08	-627.63	779.30	2,183.10	2,135.61	47.49	45.968	
6,000.00	5,583.45	5,194.00	5,046.00	40.89	23.07	150.54	-627.63	779.30	2,224.93	2,177.17	47.76	46.585	
6,100.00	5,681.42	5,194.00	5,046.00	41.24	23.07	151.00	-627.63	779.30	2,267.69	2,219.73	47.96	47.282	
6,200.00	5,780.02	5,194.00	5,046.00	41.53	23.07	151.47	-627.63	779.30	2,311.28	2,263.19	48.09	48.058	
6,300.00	5,879.15	5,194.00	5,046.00	41.78	23.07	151.93	-627.63	779.30	2,355.62	2,307.46	48.16	48.915	
6,400.00	5,978.68	5,194.00	5,046.00	41.97	23.07	152.40	-627.63	779.30	2,400.59	2,352.44	48.15	49.853	
6,500.00	6,078.48	5,194.00	5,046.00	42.12	23.07	152.87	-627.63	779.30	2,446.12	2,398.04	48.08	50.875	
6,600.00	6,178.44	5,194.00	5,046.00	42.22	23.07	153.34	-627.63	779.30	2,492.12	2,444.17	47.94	51.981	
6,627.56	6,206.00	5,194.00	5,046.00	42.24	23.07	-159.98	-627.63	779.30	2,504.87	2,456.97	47.89	52.302	
6,700.00	6,278.44	5,194.00	5,046.00	42.29	23.07	-159.98	-627.63	779.30	2,539.22	2,491.26	47.97	52.939	
6,800.00	6,378.44	5,194.00	5,046.00	42.36	23.07	-159.98	-627.63	779.30	2,589.24	2,541.16	48.08	53.857	
6,900.00	6,478.44	5,194.00	5,046.00	42.42	23.07	-159.98	-627.63	779.30	2,642.09	2,593.90	48.19	54.827	
7,000.00	6,578.44	5,194.00	5,046.00	42.50	23.07	-159.98	-627.63	779.30	2,697.61	2,649.31	48.30	55.847	
7,100.00	6,678.44	5,194.00	5,046.00	42.57	23.07	-159.98	-627.63	779.30	2,755.65	2,707.23	48.42	56.912	
7,200.00	6,778.44	5,194.00	5,046.00	42.64	23.07	-159.98	-627.63	779.30	2,816.04	2,767.51	48.54	58.018	
7,300.00	6,878.44	5,194.00	5,046.00	42.71	23.07	-159.98	-627.63	779.30	2,878.64	2,829.99	48.66	59.164	
7,400.00	6,978.44	5,194.00	5,046.00	42.79	23.07	-159.98	-627.63	779.30	2,943.31	2,894.53	48.78	60.344	
7,500.00	7,078.44	5,194.00	5,046.00	42.87	23.07	-159.98	-627.63	779.30	3,009.91	2,961.01	48.90	61.556	
7,600.00	7,178.44	5,194.00	5,046.00	42.94	23.07	-159.98	-627.63	779.30	3,078.32	3,029.30	49.02	62.798	
7,700.00	7,278.44	5,194.00	5,046.00	43.02	23.07	-159.98	-627.63	779.30	3,148.42	3,099.27	49.14	64.065	
7,800.00	7,378.44	5,194.00	5,046.00	43.10	23.07	-159.98	-627.63	779.30	3,220.10	3,170.83	49.27	65.357	
7,900.00	7,478.44	5,194.00	5,046.00	43.18	23.07	-159.98	-627.63	779.30	3,293.25	3,243.86	49.40	66.671	
8,000.00	7,578.44	5,194.00	5,046.00	43.26	23.07	-159.98	-627.63	779.30	3,367.79	3,318.26	49.52	68.004	
8,100.00	7,678.44	5,194.00	5,046.00	43.34	23.07	-159.98	-627.63	779.30	3,443.61	3,393.96	49.65	69.354	
8,200.00	7,778.44	5,194.00	5,046.00	43.43	23.07	-159.98	-627.63	779.30	3,520.65	3,470.87	49.78	70.720	
8,300.00	7,878.44	5,194.00	5,046.00	43.51	23.07	-159.98	-627.63	779.30	3,598.81	3,548.90	49.91	72.099	
8,400.00	7,978.44	5,194.00	5,046.00	43.60	23.07	-159.98	-627.63	779.30	3,678.04	3,627.99	50.05	73.491	
8,500.00	8,078.44	5,194.00	5,046.00	43.68	23.07	-159.98	-627.63	779.30	3,758.25	3,708.07	50.18	74.893	
8,542.56	8,121.00	5,194.00	5,046.00	43.72	23.07	-159.98	-627.63	779.30	3,792.67	3,742.44	50.24	75.493	

Company:	US ROCKIES REGION PLANNING	Local Co-ordinate Reference:	Well P_HIGHWAY 160 26-2
Project:	COLORADO NORTHERN ZONE - 83	TVD Reference:	WELL @ 5119.00ft (Original Well Elev)
Reference Site:	WELD_HIGHWAY 160 17-2 pad	MD Reference:	WELL @ 5119.00ft (Original Well Elev)
Site Error:	0.00ft	North Reference:	True
Reference Well:	P_HIGHWAY 160 26-2	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00ft	Output errors are at	2.00 sigma
Reference Wellbore	P_HIGHWAY 160 26-2	Database:	EDM 2003.21 Single User Db
Reference Design:	PLAN #1 3-17-10 RHS	Offset TVD Reference:	Offset Datum

Reference Depths are relative to WELL @ 5119.00ft (Original Well Elev) Coordinates are relative to: P_HIGHWAY 160 26-2
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: 0.49°



Company:	US ROCKIES REGION PLANNING	Local Co-ordinate Reference:	Well P_HIGHWAY 160 26-2
Project:	COLORADO NORTHERN ZONE - 83	TVD Reference:	WELL @ 5119.00ft (Original Well Elev)
Reference Site:	WELD_HIGHWAY 160 17-2 pad	MD Reference:	WELL @ 5119.00ft (Original Well Elev)
Site Error:	0.00ft	North Reference:	True
Reference Well:	P_HIGHWAY 160 26-2	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00ft	Output errors are at	2.00 sigma
Reference Wellbore	P_HIGHWAY 160 26-2	Database:	EDM 2003.21 Single User Db
Reference Design:	PLAN #1 3-17-10 RHS	Offset TVD Reference:	Offset Datum

Reference Depths are relative to WELL @ 5119.00ft (Original Well Elev) Coordinates are relative to: P_HIGHWAY 160 26-2
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: 0.49°

