



US ROCKIES REGION PLANNING

COLORADO NORTHERN ZONE - 83

WESTERN 14-10 PAD

P_WESTERN 35-10

P_WESTERN 35-10

Plan: PLAN #1 1-18-10 RHS

Standard Planning Report

18 January, 2010





P. WESTERN 35-10
COLORADO NORTHERN ZONE - 83
SECTION 10 T4N R66W
620 FSL 2174 FWL
LAT: 40° 19' 14.549 N
LONG: 104° 45' 55.685 W



Azimuths to True North
Magnetic North: 9.05°

Magnetic Field
Strength: 53238.9nT
Dip Angle: 67.03°
Date: 1/18/2010
Model: IGRF2010

WELL DETAILS: P_WESTERN 35-10

+N/-S	+E/-W	Northing	Ground Level: Easting	Latitude	Longitude	Slot
0.00	0.00	1360523.06	3204811.70	40° 19' 14.549 N	104° 45' 55.685 W	

SECTION DETAILS

MD	Inc	Azi	TVD	+N/-S	+E/-W	DLeg	TFace	VSec	Target
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
575.00	0.00	0.00	575.00	0.00	0.00	0.00	0.00	0.00	
1086.47	10.23	230.48	1083.76	-28.98	-35.13	2.00	230.48	45.54	
5476.74	10.23	230.48	5404.24	-525.08	-636.60	0.00	0.00	825.21	
5988.21	0.00	0.00	5913.00	-554.05	-671.73	2.00	180.00	870.75	
7470.21	0.00	0.00	7395.00	-554.05	-671.73	0.00	0.00	870.75	PBHL_WESTERN 35-10(75 FSL 1500 FWL)50'TGT RAD

FORMATION TOP DETAILS

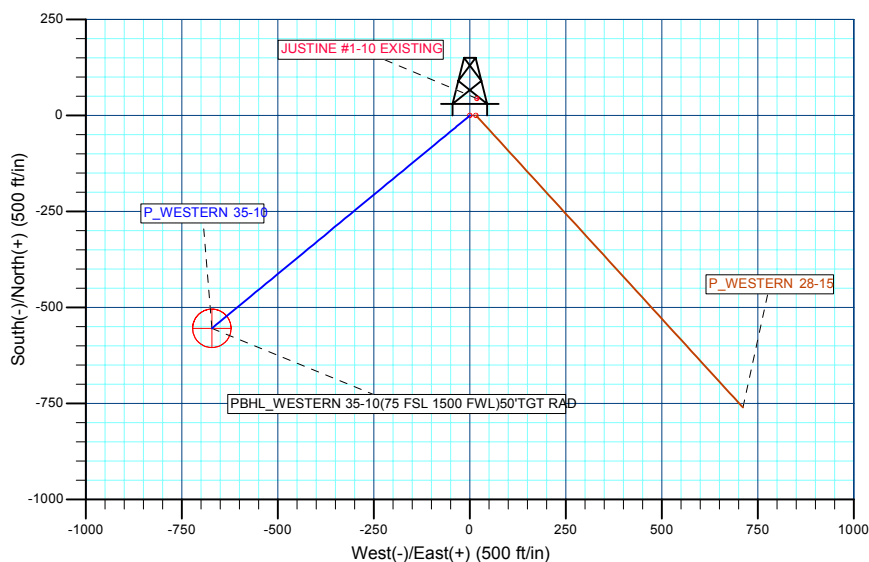
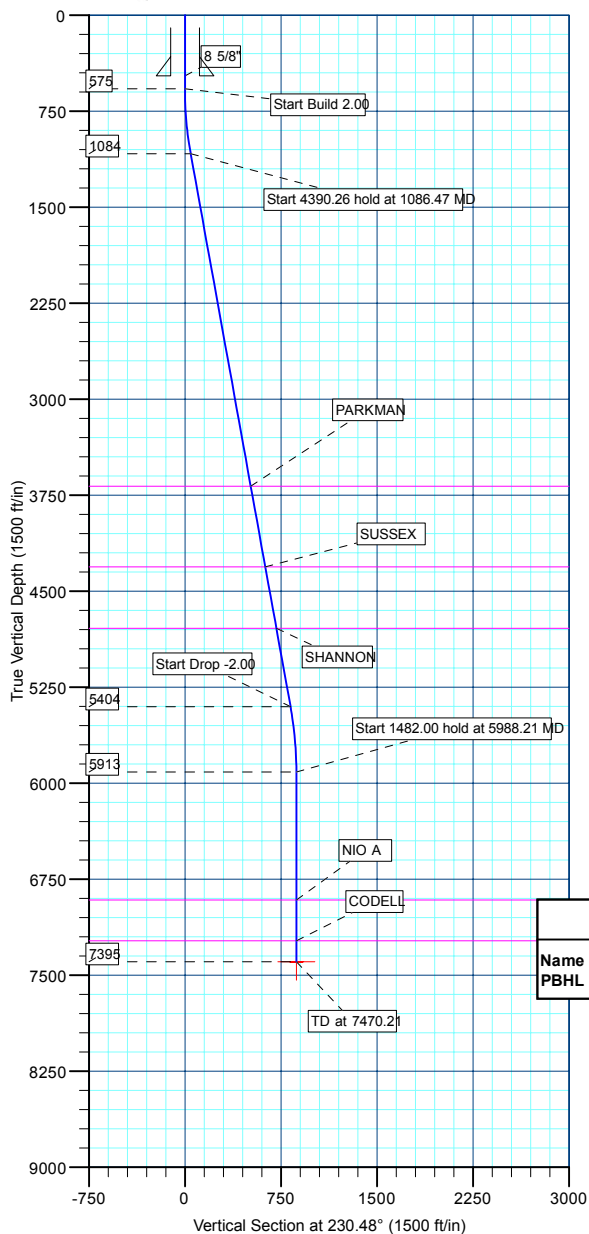
TVDPath	MDPath	Formation
3680.00	3724.65	PARKMAN
4310.00	4364.82	SUSSEX
4790.00	4852.58	SHANNON
6913.00	6988.21	NIO A
7232.00	7307.21	CODELL

CASING DETAILS

TVD	MD	Name	Size
475.00	475.00	8 5/8"	8.62



KB ELEV:WELL @ 4738.00ft (Original Well Elev)
4723.00
GRD ELEV:



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

Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Shape
PBHL	7395.00	-554.05	-671.73	1359963.46	3204144.58	40° 19' 9.073 N	104° 46' 4.357 W	Circle (Radius: 50.00)

Plan: PLAN #1 1-18-10 RHS (P_WESTERN 35-10/P_WESTERN 35-10)

Created By: Robert H. Scott

Database:	EDM 2003.21 Single User Db	Local Co-ordinate Reference:	Well P_WESTERN 35-10
Company:	US ROCKIES REGION PLANNING	TVD Reference:	WELL @ 4738.00ft (Original Well Elev)
Project:	COLORADO NORTHERN ZONE - 83	MD Reference:	WELL @ 4738.00ft (Original Well Elev)
Site:	WESTERN 14-10 PAD	North Reference:	True
Well:	P_WESTERN 35-10	Survey Calculation Method:	Minimum Curvature
Wellbore:	P_WESTERN 35-10		
Design:	PLAN #1 1-18-10 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						WESTERN 14-10 PAD, SECTION 10 T4N R66W					
Site Position:				Northing:		1,360,523.58 ft		Latitude:		40° 19' 14.552 N	
From:		Lat/Long		Easting:		3,204,827.87 ft		Longitude:		104° 45' 55.476 W	
Position Uncertainty:		0.00 ft		Slot Radius:		in		Grid Convergence:		0.47 °	

Well	P_WESTERN 35-10					
Well Position	+N/-S	-0.39 ft	Northing:	1,360,523.06 ft	Latitude:	40° 19' 14.549 N
	+E/-W	-16.17 ft	Easting:	3,204,811.70 ft	Longitude:	104° 45' 55.685 W
Position Uncertainty		0.00 ft	Wellhead Elevation:	ft	Ground Level:	4,723.00 ft

Wellbore	P_WESTERN 35-10				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	1/18/2010	9.05	67.03	53,239

Design	PLAN #1 1-18-10 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	230.48

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	
575.00	0.00	0.00	575.00	0.00	0.00	0.00	0.00	0.00	0.00	
1,086.47	10.23	230.48	1,083.76	-28.98	-35.13	2.00	2.00	0.00	230.48	
5,476.74	10.23	230.48	5,404.24	-525.08	-636.60	0.00	0.00	0.00	0.00	
5,988.21	0.00	0.00	5,913.00	-554.05	-671.73	2.00	-2.00	0.00	180.00	
7,470.21	0.00	0.00	7,395.00	-554.05	-671.73	0.00	0.00	0.00	0.00	PBHL_WESTERN :

Database:	EDM 2003.21 Single User Db	Local Co-ordinate Reference:	Well P_WESTERN 35-10
Company:	US ROCKIES REGION PLANNING	TVD Reference:	WELL @ 4738.00ft (Original Well Elev)
Project:	COLORADO NORTHERN ZONE - 83	MD Reference:	WELL @ 4738.00ft (Original Well Elev)
Site:	WESTERN 14-10 PAD	North Reference:	True
Well:	P_WESTERN 35-10	Survey Calculation Method:	Minimum Curvature
Wellbore:	P_WESTERN 35-10		
Design:	PLAN #1 1-18-10 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									
575.00	0.00	0.00	575.00	0.00	0.00	0.00	0.00	0.00	0.00
600.00	0.50	230.48	600.00	-0.07	-0.08	0.11	2.00	2.00	0.00
700.00	2.50	230.48	699.96	-1.73	-2.10	2.73	2.00	2.00	0.00
800.00	4.50	230.48	799.77	-5.62	-6.81	8.83	2.00	2.00	0.00
900.00	6.50	230.48	899.30	-11.72	-14.21	18.42	2.00	2.00	0.00
1,000.00	8.50	230.48	998.44	-20.02	-24.28	31.47	2.00	2.00	0.00
Start 4390.26 hold at 1086.47 MD									
1,086.47	10.23	230.48	1,083.76	-28.98	-35.13	45.54	2.00	2.00	0.00
1,100.00	10.23	230.48	1,097.07	-30.50	-36.98	47.94	0.00	0.00	0.00
1,200.00	10.23	230.48	1,195.48	-41.80	-50.68	65.70	0.00	0.00	0.00
1,300.00	10.23	230.48	1,293.89	-53.10	-64.38	83.46	0.00	0.00	0.00
1,400.00	10.23	230.48	1,392.30	-64.40	-78.08	101.22	0.00	0.00	0.00
1,500.00	10.23	230.48	1,490.71	-75.70	-91.78	118.98	0.00	0.00	0.00
1,600.00	10.23	230.48	1,589.12	-87.00	-105.48	136.74	0.00	0.00	0.00
1,700.00	10.23	230.48	1,687.53	-98.30	-119.18	154.49	0.00	0.00	0.00
1,800.00	10.23	230.48	1,785.95	-109.60	-132.88	172.25	0.00	0.00	0.00
1,900.00	10.23	230.48	1,884.36	-120.90	-146.58	190.01	0.00	0.00	0.00
2,000.00	10.23	230.48	1,982.77	-132.20	-160.28	207.77	0.00	0.00	0.00
2,100.00	10.23	230.48	2,081.18	-143.50	-173.98	225.53	0.00	0.00	0.00
2,200.00	10.23	230.48	2,179.59	-154.80	-187.68	243.29	0.00	0.00	0.00
2,300.00	10.23	230.48	2,278.00	-166.10	-201.38	261.05	0.00	0.00	0.00
2,400.00	10.23	230.48	2,376.41	-177.40	-215.08	278.81	0.00	0.00	0.00
2,500.00	10.23	230.48	2,474.82	-188.70	-228.79	296.57	0.00	0.00	0.00
2,600.00	10.23	230.48	2,573.23	-200.00	-242.49	314.33	0.00	0.00	0.00
2,700.00	10.23	230.48	2,671.64	-211.30	-256.19	332.09	0.00	0.00	0.00
2,800.00	10.23	230.48	2,770.05	-222.61	-269.89	349.84	0.00	0.00	0.00
2,900.00	10.23	230.48	2,868.46	-233.91	-283.59	367.60	0.00	0.00	0.00
3,000.00	10.23	230.48	2,966.87	-245.21	-297.29	385.36	0.00	0.00	0.00
3,100.00	10.23	230.48	3,065.28	-256.51	-310.99	403.12	0.00	0.00	0.00
3,200.00	10.23	230.48	3,163.69	-267.81	-324.69	420.88	0.00	0.00	0.00
3,300.00	10.23	230.48	3,262.10	-279.11	-338.39	438.64	0.00	0.00	0.00
3,400.00	10.23	230.48	3,360.51	-290.41	-352.09	456.40	0.00	0.00	0.00
3,500.00	10.23	230.48	3,458.92	-301.71	-365.79	474.16	0.00	0.00	0.00
3,600.00	10.23	230.48	3,557.33	-313.01	-379.49	491.92	0.00	0.00	0.00
3,700.00	10.23	230.48	3,655.74	-324.31	-393.19	509.68	0.00	0.00	0.00
PARKMAN									
3,724.65	10.23	230.48	3,680.00	-327.09	-396.56	514.05	0.00	0.00	0.00
3,800.00	10.23	230.48	3,754.15	-335.61	-406.89	527.44	0.00	0.00	0.00
3,900.00	10.23	230.48	3,852.56	-346.91	-420.59	545.19	0.00	0.00	0.00
4,000.00	10.23	230.48	3,950.97	-358.21	-434.29	562.95	0.00	0.00	0.00
4,100.00	10.23	230.48	4,049.39	-369.51	-447.99	580.71	0.00	0.00	0.00
4,200.00	10.23	230.48	4,147.80	-380.81	-461.69	598.47	0.00	0.00	0.00
4,300.00	10.23	230.48	4,246.21	-392.11	-475.39	616.23	0.00	0.00	0.00
SUSSEX									
4,364.82	10.23	230.48	4,310.00	-399.43	-484.27	627.74	0.00	0.00	0.00
4,400.00	10.23	230.48	4,344.62	-403.41	-489.09	633.99	0.00	0.00	0.00
4,500.00	10.23	230.48	4,443.03	-414.71	-502.79	651.75	0.00	0.00	0.00
4,600.00	10.23	230.48	4,541.44	-426.01	-516.49	669.51	0.00	0.00	0.00
4,700.00	10.23	230.48	4,639.85	-437.31	-530.19	687.27	0.00	0.00	0.00
4,800.00	10.23	230.48	4,738.26	-448.61	-543.89	705.03	0.00	0.00	0.00
SHANNON									
4,852.58	10.23	230.48	4,790.00	-454.55	-551.09	714.36	0.00	0.00	0.00

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Company:	US ROCKIES REGION PLANNING	TVD Reference:	WELL @ 4738.00ft (Original Well Elev)
Project:	COLORADO NORTHERN ZONE - 83	MD Reference:	WELL @ 4738.00ft (Original Well Elev)
Site:	WESTERN 14-10 PAD	North Reference:	True
Well:	P_WESTERN 35-10	Survey Calculation Method:	Minimum Curvature
Wellbore:	P_WESTERN 35-10		
Design:	PLAN #1 1-18-10 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	10.23	230.48	4,836.67	-459.91	-557.59	722.79	0.00	0.00	0.00
5,000.00	10.23	230.48	4,935.08	-471.21	-571.29	740.54	0.00	0.00	0.00
5,100.00	10.23	230.48	5,033.49	-482.51	-584.99	758.30	0.00	0.00	0.00
5,200.00	10.23	230.48	5,131.90	-493.81	-598.69	776.06	0.00	0.00	0.00
5,300.00	10.23	230.48	5,230.31	-505.11	-612.39	793.82	0.00	0.00	0.00
5,400.00	10.23	230.48	5,328.72	-516.41	-626.09	811.58	0.00	0.00	0.00
Start Drop -2.00									
5,476.74	10.23	230.48	5,404.24	-525.08	-636.60	825.21	0.00	0.00	0.00
5,500.00	9.76	230.48	5,427.15	-527.65	-639.72	829.25	2.00	-2.00	0.00
5,600.00	7.76	230.48	5,525.98	-537.34	-651.47	844.48	2.00	-2.00	0.00
5,700.00	5.76	230.48	5,625.27	-544.84	-660.56	856.26	2.00	-2.00	0.00
5,800.00	3.76	230.48	5,724.92	-550.12	-666.96	864.57	2.00	-2.00	0.00
5,900.00	1.76	230.48	5,824.80	-553.19	-670.68	869.39	2.00	-2.00	0.00
Start 1482.00 hold at 5988.21 MD									
5,988.21	0.00	0.00	5,913.00	-554.05	-671.73	870.75	2.00	-2.00	0.00
6,000.00	0.00	0.00	5,924.79	-554.05	-671.73	870.75	0.00	0.00	0.00
6,100.00	0.00	0.00	6,024.79	-554.05	-671.73	870.75	0.00	0.00	0.00
6,200.00	0.00	0.00	6,124.79	-554.05	-671.73	870.75	0.00	0.00	0.00
6,300.00	0.00	0.00	6,224.79	-554.05	-671.73	870.75	0.00	0.00	0.00
6,400.00	0.00	0.00	6,324.79	-554.05	-671.73	870.75	0.00	0.00	0.00
6,500.00	0.00	0.00	6,424.79	-554.05	-671.73	870.75	0.00	0.00	0.00
6,600.00	0.00	0.00	6,524.79	-554.05	-671.73	870.75	0.00	0.00	0.00
6,700.00	0.00	0.00	6,624.79	-554.05	-671.73	870.75	0.00	0.00	0.00
6,800.00	0.00	0.00	6,724.79	-554.05	-671.73	870.75	0.00	0.00	0.00
6,900.00	0.00	0.00	6,824.79	-554.05	-671.73	870.75	0.00	0.00	0.00
NIO A									
6,988.21	0.00	0.00	6,913.00	-554.05	-671.73	870.75	0.00	0.00	0.00
7,000.00	0.00	0.00	6,924.79	-554.05	-671.73	870.75	0.00	0.00	0.00
7,100.00	0.00	0.00	7,024.79	-554.05	-671.73	870.75	0.00	0.00	0.00
7,200.00	0.00	0.00	7,124.79	-554.05	-671.73	870.75	0.00	0.00	0.00
7,300.00	0.00	0.00	7,224.79	-554.05	-671.73	870.75	0.00	0.00	0.00
CODELL									
7,307.21	0.00	0.00	7,232.00	-554.05	-671.73	870.75	0.00	0.00	0.00
7,400.00	0.00	0.00	7,324.79	-554.05	-671.73	870.75	0.00	0.00	0.00
PBHL_WESTERN 35-10(75 FSL 1500 FWL)50'TGT RAD									
7,470.21	0.00	0.00	7,395.00	-554.05	-671.73	870.75	0.00	0.00	0.00

Design Targets

Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (ft)	Easting (ft)	Latitude	Longitude
- hit/miss target									
- Shape									
PBHL_WESTERN 35- - plan hits target center - Circle (radius 50.00)	0.00	0.00	7,395.00	-554.05	-671.73	1,359,963.46	3,204,144.58	40° 19' 9.073 N	104° 46' 4.357 W

Database:	EDM 2003.21 Single User Db	Local Co-ordinate Reference:	Well P_WESTERN 35-10
Company:	US ROCKIES REGION PLANNING	TVD Reference:	WELL @ 4738.00ft (Original Well Elev)
Project:	COLORADO NORTHERN ZONE - 83	MD Reference:	WELL @ 4738.00ft (Original Well Elev)
Site:	WESTERN 14-10 PAD	North Reference:	True
Well:	P_WESTERN 35-10	Survey Calculation Method:	Minimum Curvature
Wellbore:	P_WESTERN 35-10		
Design:	PLAN #1 1-18-10 RHS		

Casing Points					
Measured Depth (ft)	Vertical Depth (ft)	Name	Casing Diameter (in)	Hole Diameter (in)	
475.00	475.00	8 5/8"	8.62	11.00	

Formations						
Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)	
3,724.65	3,680.00	PARKMAN				
4,364.82	4,310.00	SUSSEX				
4,852.58	4,790.00	SHANNON				
6,988.21	6,913.00	NIO A				
7,307.21	7,232.00	CODELL				

Plan Annotations					
Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates			
		+N/-S (ft)	+E/-W (ft)	Comment	
575.00	575.00	0.00	0.00	Start Build 2.00	
1,086.47	1,083.76	-28.98	-35.13	Start 4390.26 hold at 1086.47 MD	
5,476.74	5,404.24	-525.08	-636.60	Start Drop -2.00	
5,988.21	5,913.00	-554.05	-671.73	Start 1482.00 hold at 5988.21 MD	
7,470.21	7,395.00	-554.05	-671.73	TD at 7470.21	



US ROCKIES REGION PLANNING

**COLORADO NORTHERN ZONE - 83
WESTERN 14-10 PAD
P_WESTERN 35-10**

**P_WESTERN 35-10
PLAN #1 1-18-10 RHS**

Anticollision Report

18 January, 2010



Company:	US ROCKIES REGION PLANNING	Local Co-ordinate Reference:	Well P_WESTERN 35-10
Project:	COLORADO NORTHERN ZONE - 83	TVD Reference:	WELL @ 4738.00ft (Original Well Elev)
Reference Site:	WESTERN 14-10 PAD	MD Reference:	WELL @ 4738.00ft (Original Well Elev)
Site Error:	0.00ft	North Reference:	True
Reference Well:	P_WESTERN 35-10	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00ft	Output errors are at	2.00 sigma
Reference Wellbore	P_WESTERN 35-10	Database:	EDM 2003.21 Single User Db
Reference Design:	PLAN #1 1-18-10 RHS	Offset TVD Reference:	Offset Datum

Reference	PLAN #1 1-18-10 RHS		
Filter type:	NO GLOBAL FILTER: Using user defined selection & filtering criteria		
Interpolation Method:	Stations	Error Model:	ISCWSA
Depth Range:	0.00 to 20,000.00ft	Scan Method:	Closest Approach 3D
Results Limited by:	Maximum center-center distance of 10,000.00ft	Error Surface:	Elliptical Conic
Warning Levels Evaluated at:	2.00 Sigma		

Survey Tool Program	Date 1/18/2010			
From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description
0.00	7,470.21	PLAN #1 1-18-10 RHS (P_WESTERN 35-	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						
WESTERN 14-10 PAD						
JUSTINE #1-10 EXISTING - JUSTINE #1-10 EXISTING	575.00	575.00	48.33	26.47	2.211	CC
JUSTINE #1-10 EXISTING - JUSTINE #1-10 EXISTING	700.00	699.96	50.77	23.69	1.875	ES
JUSTINE #1-10 EXISTING - JUSTINE #1-10 EXISTING	800.00	799.77	56.32	25.11	1.805	SF
P_WESTERN 28-15 - P_WESTERN 28-15 - PLAN #1 1-	575.00	575.00	16.18	13.83	6.904	CC, ES
P_WESTERN 28-15 - P_WESTERN 28-15 - PLAN #1 1-	600.00	599.91	16.33	13.89	6.686	SF

Offset Design WESTERN 14-10 PAD - JUSTINE #1-10 EXISTING - JUSTINE #1-10 EXISTING - JUSTINE #1-10 EXISTING												
Survey Program: 0-UNKNOWN												
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
0.00	0.00	0.00	0.00	0.00	0.00	23.10	44.46	18.96	48.33			
100.00	100.00	100.00	100.00	0.10	1.70	23.10	44.46	18.96	48.33	46.54	1.80	26.919
200.00	200.00	200.00	200.00	0.32	5.70	23.10	44.46	18.96	48.33	42.31	6.02	8.029
300.00	300.00	300.00	300.00	0.55	9.70	23.10	44.46	18.96	48.33	38.09	10.25	4.718
400.00	400.00	400.00	400.00	0.77	13.70	23.10	44.46	18.96	48.33	33.86	14.47	3.340
500.00	500.00	500.00	500.00	0.99	17.70	23.10	44.46	18.96	48.33	29.64	18.69	2.585
575.00	575.00	575.00	575.00	1.16	20.70	23.10	44.46	18.96	48.33	26.47	21.86	2.211
600.00	600.00	600.00	600.00	1.21	21.70	152.67	44.46	18.96	48.43	25.52	22.91	2.114
700.00	699.96	699.96	699.96	1.40	25.70	154.01	44.46	18.96	50.77	23.69	27.08	1.875
800.00	799.77	799.77	799.77	1.60	29.69	156.68	44.46	18.96	56.32	25.11	31.21	1.805
900.00	899.30	899.30	899.30	1.83	33.67	159.96	44.46	18.96	65.24	29.95	35.29	1.849
1,000.00	998.44	998.44	998.44	2.10	37.64	163.18	44.46	18.96	77.64	38.36	39.28	1.977
1,086.47	1,083.76	1,083.76	1,083.76	2.36	41.05	165.67	44.46	18.96	91.21	48.56	42.65	2.139
1,100.00	1,097.07	1,097.07	1,097.07	2.40	41.58	166.04	44.46	18.96	93.54	50.34	43.20	2.165
1,200.00	1,195.48	1,195.48	1,195.48	2.74	45.52	168.25	44.46	18.96	110.87	63.57	47.29	2.344
1,300.00	1,293.89	1,293.89	1,293.89	3.10	49.46	169.86	44.46	18.96	128.32	76.92	51.40	2.497
1,400.00	1,392.30	1,392.30	1,392.30	3.47	53.39	171.09	44.46	18.96	145.84	90.33	55.50	2.628
1,500.00	1,490.71	1,490.71	1,490.71	3.85	57.33	172.06	44.46	18.96	163.41	103.80	59.62	2.741
1,600.00	1,589.12	1,589.12	1,589.12	4.24	61.26	172.83	44.46	18.96	181.02	117.29	63.73	2.840
1,700.00	1,687.53	1,687.53	1,687.53	4.63	65.20	173.47	44.46	18.96	198.66	130.81	67.85	2.928
1,800.00	1,785.95	1,785.95	1,785.95	5.02	69.14	174.01	44.46	18.96	216.32	144.35	71.97	3.006
1,900.00	1,884.36	1,884.36	1,884.36	5.42	73.07	174.46	44.46	18.96	233.99	157.90	76.09	3.075

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_WESTERN 35-10
Project:	COLORADO NORTHERN ZONE - 83	TVD Reference:	WELL @ 4738.00ft (Original Well Elev)
Reference Site:	WESTERN 14-10 PAD	MD Reference:	WELL @ 4738.00ft (Original Well Elev)
Site Error:	0.00ft	North Reference:	True
Reference Well:	P_WESTERN 35-10	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00ft	Output errors are at	2.00 sigma
Reference Wellbore	P_WESTERN 35-10	Database:	EDM 2003.21 Single User Db
Reference Design:	PLAN #1 1-18-10 RHS	Offset TVD Reference:	Offset Datum

Offset Design WESTERN 14-10 PAD - JUSTINE #1-10 EXISTING - JUSTINE #1-10 EXISTING - JUSTINE #1-10 EXISTING												Offset Site Error:	0.00 ft
Survey Program: 0-UNKNOWN												Offset Well Error:	0.00 ft
Reference	Offset	Semi Major Axis					Distance						Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	
2,000.00	1,982.77	1,982.77	1,982.77	5.81	77.01	174.85	44.46	18.96	251.67	171.46	80.21	3.138	
2,100.00	2,081.18	2,081.18	2,081.18	6.21	80.95	175.19	44.46	18.96	269.37	185.03	84.33	3.194	
2,200.00	2,179.59	2,179.59	2,179.59	6.62	84.88	175.49	44.46	18.96	287.07	198.61	88.46	3.245	
2,300.00	2,278.00	2,278.00	2,278.00	7.02	88.82	175.75	44.46	18.96	304.78	212.20	92.58	3.292	
2,400.00	2,376.41	2,376.41	2,376.41	7.42	92.76	175.98	44.46	18.96	322.49	225.79	96.71	3.335	
2,500.00	2,474.82	2,474.82	2,474.82	7.83	96.69	176.19	44.46	18.96	340.21	239.38	100.83	3.374	
2,600.00	2,573.23	2,573.23	2,573.23	8.23	100.63	176.38	44.46	18.96	357.93	252.98	104.96	3.410	
2,700.00	2,671.64	2,671.64	2,671.64	8.64	104.57	176.55	44.46	18.96	375.66	266.58	109.08	3.444	
2,800.00	2,770.05	2,770.05	2,770.05	9.05	108.50	176.71	44.46	18.96	393.39	280.18	113.21	3.475	
2,900.00	2,868.46	2,868.46	2,868.46	9.46	112.44	176.85	44.46	18.96	411.12	293.78	117.34	3.504	
3,000.00	2,966.87	2,966.87	2,966.87	9.86	116.37	176.98	44.46	18.96	428.86	307.39	121.47	3.531	
3,100.00	3,065.28	3,065.28	3,065.28	10.27	120.31	177.10	44.46	18.96	446.59	321.00	125.60	3.556	
3,200.00	3,163.69	3,163.69	3,163.69	10.68	124.25	177.21	44.46	18.96	464.33	334.61	129.72	3.579	
3,300.00	3,262.10	3,262.10	3,262.10	11.09	128.18	177.31	44.46	18.96	482.07	348.22	133.85	3.602	
3,400.00	3,360.51	3,360.51	3,360.51	11.50	132.12	177.41	44.46	18.96	499.81	361.83	137.98	3.622	
3,500.00	3,458.92	3,458.92	3,458.92	11.91	136.06	177.50	44.46	18.96	517.55	375.44	142.11	3.642	
3,600.00	3,557.33	3,557.33	3,557.33	12.32	139.99	177.58	44.46	18.96	535.30	389.06	146.24	3.660	
3,700.00	3,655.74	3,655.74	3,655.74	12.73	143.93	177.66	44.46	18.96	553.04	402.67	150.37	3.678	
3,800.00	3,754.15	3,754.15	3,754.15	13.14	147.87	177.73	44.46	18.96	570.79	416.29	154.50	3.694	
3,900.00	3,852.56	3,852.56	3,852.56	13.55	151.80	177.80	44.46	18.96	588.53	429.90	158.63	3.710	
4,000.00	3,950.97	3,950.97	3,950.97	13.96	155.74	177.86	44.46	18.96	606.28	443.52	162.76	3.725	
4,100.00	4,049.39	4,049.39	4,049.39	14.37	159.68	177.93	44.46	18.96	624.03	457.14	166.89	3.739	
4,200.00	4,147.80	4,147.80	4,147.80	14.78	163.61	177.98	44.46	18.96	641.77	470.76	171.02	3.753	
4,300.00	4,246.21	4,246.21	4,246.21	15.19	167.55	178.04	44.46	18.96	659.52	484.38	175.15	3.766	
4,400.00	4,344.62	4,344.62	4,344.62	15.60	171.48	178.09	44.46	18.96	677.27	498.00	179.28	3.778	
4,500.00	4,443.03	4,443.03	4,443.03	16.01	175.42	178.14	44.46	18.96	695.02	511.61	183.41	3.790	
4,600.00	4,541.44	4,541.44	4,541.44	16.42	179.36	178.18	44.46	18.96	712.77	525.23	187.54	3.801	
4,700.00	4,639.85	4,639.85	4,639.85	16.83	183.29	178.23	44.46	18.96	730.52	538.86	191.67	3.811	
4,800.00	4,738.26	4,738.26	4,738.26	17.25	187.23	178.27	44.46	18.96	748.27	552.48	195.80	3.822	
4,900.00	4,836.67	4,836.67	4,836.67	17.66	191.17	178.31	44.46	18.96	766.03	566.10	199.93	3.831	
5,000.00	4,935.08	4,935.08	4,935.08	18.07	195.10	178.35	44.46	18.96	783.78	579.72	204.06	3.841	
5,100.00	5,033.49	5,033.49	5,033.49	18.48	199.04	178.38	44.46	18.96	801.53	593.34	208.19	3.850	
5,200.00	5,131.90	5,131.90	5,131.90	18.89	202.98	178.42	44.46	18.96	819.28	606.96	212.32	3.859	
5,300.00	5,230.31	5,230.31	5,230.31	19.30	206.91	178.45	44.46	18.96	837.03	620.58	216.45	3.867	
5,400.00	5,328.72	5,328.72	5,328.72	19.71	210.85	178.49	44.46	18.96	854.79	634.21	220.58	3.875	
5,476.74	5,404.24	5,404.24	5,404.24	20.03	213.87	178.51	44.46	18.96	868.41	644.66	223.75	3.881	
5,500.00	5,427.15	5,427.15	5,427.15	20.11	214.79	178.52	44.46	18.96	872.45	647.44	225.01	3.877	
5,600.00	5,525.98	5,525.98	5,525.98	20.38	218.74	178.55	44.46	18.96	887.68	657.41	230.27	3.855	
5,700.00	5,625.27	5,625.27	5,625.27	20.60	222.71	178.58	44.46	18.96	899.45	664.16	235.30	3.823	
5,800.00	5,724.92	5,724.92	5,724.92	20.80	226.70	178.59	44.46	18.96	907.76	667.68	240.07	3.781	
5,900.00	5,824.80	5,824.80	5,824.80	20.95	230.69	178.60	44.46	18.96	912.58	668.01	244.57	3.731	
5,988.21	5,913.00	5,913.00	5,913.00	21.07	234.22	49.09	44.46	18.96	913.93	665.63	248.31	3.681	
6,000.00	5,924.79	5,924.79	5,924.79	21.09	234.69	49.09	44.46	18.96	913.93	665.13	248.80	3.673	
6,100.00	6,024.79	6,024.79	6,024.79	21.20	238.69	49.09	44.46	18.96	913.93	660.96	252.97	3.613	
6,200.00	6,124.79	6,124.79	6,124.79	21.32	242.69	49.09	44.46	18.96	913.93	656.79	257.14	3.554	
6,300.00	6,224.79	6,224.79	6,224.79	21.44	246.69	49.09	44.46	18.96	913.93	652.62	261.32	3.497	
6,400.00	6,324.79	6,324.79	6,324.79	21.56	250.69	49.09	44.46	18.96	913.93	648.44	265.49	3.442	
6,500.00	6,424.79	6,424.79	6,424.79	21.68	254.69	49.09	44.46	18.96	913.93	644.27	269.67	3.389	
6,600.00	6,524.79	6,524.79	6,524.79	21.81	258.69	49.09	44.46	18.96	913.93	640.09	273.84	3.337	
6,700.00	6,624.79	6,624.79	6,624.79	21.93	262.69	49.09	44.46	18.96	913.93	635.91	278.02	3.287	
6,800.00	6,724.79	6,724.79	6,724.79	22.06	266.69	49.09	44.46	18.96	913.93	631.73	282.20	3.239	
6,900.00	6,824.79	6,824.79	6,824.79	22.19	270.69	49.09	44.46	18.96	913.93	627.55	286.38	3.191	

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_WESTERN 35-10
Project:	COLORADO NORTHERN ZONE - 83	TVD Reference:	WELL @ 4738.00ft (Original Well Elev)
Reference Site:	WESTERN 14-10 PAD	MD Reference:	WELL @ 4738.00ft (Original Well Elev)
Site Error:	0.00ft	North Reference:	True
Reference Well:	P_WESTERN 35-10	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00ft	Output errors are at	2.00 sigma
Reference Wellbore	P_WESTERN 35-10	Database:	EDM 2003.21 Single User Db
Reference Design:	PLAN #1 1-18-10 RHS	Offset TVD Reference:	Offset Datum

Offset Design WESTERN 14-10 PAD - JUSTINE #1-10 EXISTING - JUSTINE #1-10 EXISTING - JUSTINE #1-10 EXISTING													Offset Site Error:	0.00 ft
Survey Program: 0-UNKNOWN													Offset Well Error:	0.00 ft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth	Vertical Depth	Measured Depth	Vertical Depth	Reference	Offset	Highside Toolface	Offset Wellbore Centre		Between Centres	Between Ellipses	Minimum Separation	Separation Factor		
(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(°)	+N/-S (ft)	+E/-W (ft)	(ft)	(ft)	(ft)			
7,000.00	6,924.79	6,924.79	6,924.79	22.32	274.69	49.09	44.46	18.96	913.93	623.37	290.57	3.145		
7,100.00	7,024.79	7,024.79	7,024.79	22.45	278.69	49.09	44.46	18.96	913.93	619.18	294.75	3.101		
7,200.00	7,124.79	7,124.79	7,124.79	22.58	282.69	49.09	44.46	18.96	913.93	615.00	298.93	3.057		
7,300.00	7,224.79	7,224.79	7,224.79	22.72	286.69	49.09	44.46	18.96	913.93	610.82	303.12	3.015		
7,400.00	7,324.79	7,324.79	7,324.79	22.85	290.69	49.09	44.46	18.96	913.93	606.63	307.31	2.974		
7,440.45	7,365.24	7,365.24	7,365.24	22.91	292.31	49.09	44.46	18.96	913.93	604.94	309.00	2.958		
7,470.21	7,395.00	7,380.00	7,380.00	22.95	292.90	49.09	44.46	18.96	914.06	604.41	309.65	2.952		

Company:	US ROCKIES REGION PLANNING	Local Co-ordinate Reference:	Well P_WESTERN 35-10
Project:	COLORADO NORTHERN ZONE - 83	TVD Reference:	WELL @ 4738.00ft (Original Well Elev)
Reference Site:	WESTERN 14-10 PAD	MD Reference:	WELL @ 4738.00ft (Original Well Elev)
Site Error:	0.00ft	North Reference:	True
Reference Well:	P_WESTERN 35-10	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00ft	Output errors are at	2.00 sigma
Reference Wellbore	P_WESTERN 35-10	Database:	EDM 2003.21 Single User Db
Reference Design:	PLAN #1 1-18-10 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	88.62	0.39	16.17	16.18				
100.00	100.00	100.00	100.00	0.10	0.11	88.62	0.39	16.17	16.18	15.97	0.21	77.809	
200.00	200.00	200.00	200.00	0.32	0.34	88.62	0.39	16.17	16.18	15.52	0.66	24.606	
300.00	300.00	300.00	300.00	0.55	0.56	88.62	0.39	16.17	16.18	15.07	1.11	14.614	
400.00	400.00	400.00	400.00	0.77	0.79	88.62	0.39	16.17	16.18	14.62	1.56	10.393	
500.00	500.00	500.00	500.00	0.99	1.01	88.62	0.39	16.17	16.18	14.17	2.01	8.064	
575.00	575.00	575.00	575.00	1.16	1.18	88.62	0.39	16.17	16.18	13.83	2.34	6.904 CC, ES	
600.00	600.00	599.91	599.91	1.21	1.23	-141.81	0.31	16.25	16.33	13.89	2.44	6.686 SF	
700.00	699.96	699.41	699.38	1.40	1.41	-140.78	-1.60	17.99	20.11	17.30	2.81	7.161	
800.00	799.77	798.45	798.22	1.60	1.61	-139.40	-6.04	22.05	28.91	25.71	3.20	9.039	
900.00	899.30	896.64	895.97	1.83	1.83	-138.34	-12.93	28.34	42.69	39.08	3.62	11.802	
1,000.00	998.44	993.64	992.15	2.10	2.09	-137.58	-22.15	36.77	61.41	57.33	4.08	15.069	
1,086.47	1,083.76	1,076.29	1,073.74	2.36	2.34	-137.09	-31.90	45.69	81.49	76.98	4.51	18.071	
1,100.00	1,097.07	1,089.11	1,086.36	2.40	2.38	-137.05	-33.57	47.21	84.93	80.35	4.58	18.541	
1,200.00	1,195.48	1,183.17	1,178.61	2.74	2.71	-136.20	-47.08	59.56	111.65	106.51	5.14	21.711	
1,300.00	1,293.89	1,279.04	1,272.31	3.10	3.08	-135.16	-62.09	73.27	139.63	133.88	5.75	24.291	
1,400.00	1,392.30	1,375.03	1,366.11	3.47	3.47	-134.47	-77.11	87.00	167.63	161.26	6.37	26.302	
1,500.00	1,490.71	1,471.01	1,459.91	3.85	3.88	-133.97	-92.13	100.73	195.65	188.64	7.01	27.897	
1,600.00	1,589.12	1,566.99	1,553.71	4.24	4.30	-133.60	-107.15	114.46	223.68	216.02	7.66	29.184	
1,700.00	1,687.53	1,662.97	1,647.51	4.63	4.72	-133.31	-122.17	128.19	251.72	243.40	8.32	30.240	
1,800.00	1,785.95	1,758.95	1,741.31	5.02	5.15	-133.08	-137.20	141.91	279.76	270.77	8.99	31.120	
1,900.00	1,884.36	1,854.94	1,835.11	5.42	5.58	-132.89	-152.22	155.64	307.81	298.15	9.66	31.862	
2,000.00	1,982.77	1,950.92	1,928.91	5.81	6.01	-132.73	-167.24	169.37	335.86	325.52	10.34	32.496	
2,100.00	2,081.18	2,046.90	2,022.71	6.21	6.45	-132.60	-182.26	183.10	363.91	352.90	11.01	33.043	
2,200.00	2,179.59	2,142.88	2,116.51	6.62	6.89	-132.49	-197.28	196.83	391.96	380.27	11.69	33.521	
2,300.00	2,278.00	2,238.86	2,210.31	7.02	7.33	-132.39	-212.30	210.56	420.02	407.64	12.37	33.941	
2,400.00	2,376.41	2,334.85	2,304.11	7.42	7.77	-132.30	-227.32	224.29	448.07	435.01	13.06	34.313	
2,500.00	2,474.82	2,430.83	2,397.91	7.83	8.22	-132.23	-242.35	238.02	476.13	462.38	13.74	34.645	
2,600.00	2,573.23	2,526.81	2,491.71	8.23	8.66	-132.16	-257.37	251.74	504.18	489.75	14.43	34.944	
2,700.00	2,671.64	2,622.79	2,585.51	8.64	9.10	-132.10	-272.39	265.47	532.24	517.12	15.11	35.214	
2,800.00	2,770.05	2,718.77	2,679.31	9.05	9.55	-132.04	-287.41	279.20	560.29	544.49	15.80	35.460	
2,900.00	2,868.46	2,814.76	2,773.11	9.46	10.00	-132.00	-302.43	292.93	588.35	571.86	16.49	35.685	
3,000.00	2,966.87	2,910.74	2,866.91	9.86	10.44	-131.95	-317.45	306.66	616.41	599.24	17.17	35.891	
3,100.00	3,065.28	3,006.72	2,960.71	10.27	10.89	-131.91	-332.48	320.39	644.47	626.61	17.86	36.081	
3,200.00	3,163.69	3,102.70	3,054.51	10.68	11.34	-131.87	-347.50	334.12	672.53	653.98	18.55	36.256	
3,300.00	3,262.10	3,198.68	3,148.31	11.09	11.79	-131.84	-362.52	347.84	700.59	681.35	19.24	36.420	
3,400.00	3,360.51	3,294.67	3,242.11	11.50	12.24	-131.81	-377.54	361.57	728.64	708.72	19.92	36.572	
3,500.00	3,458.92	3,390.65	3,335.91	11.91	12.68	-131.78	-392.56	375.30	756.70	736.09	20.61	36.715	
3,600.00	3,557.33	3,486.63	3,429.71	12.32	13.13	-131.75	-407.58	389.03	784.76	763.47	21.30	36.848	
3,700.00	3,655.74	3,582.61	3,523.51	12.73	13.58	-131.72	-422.61	402.76	812.82	790.84	21.98	36.974	
3,800.00	3,754.15	3,678.60	3,617.31	13.14	14.03	-131.70	-437.63	416.49	840.88	818.21	22.67	37.093	
3,900.00	3,852.56	3,774.58	3,711.11	13.55	14.48	-131.68	-452.65	430.22	868.94	845.59	23.36	37.205	
4,000.00	3,950.97	3,870.56	3,804.91	13.96	14.93	-131.66	-467.67	443.95	897.00	872.96	24.04	37.312	
4,100.00	4,049.39	3,966.54	3,898.71	14.37	15.38	-131.64	-482.69	457.67	925.06	900.34	24.73	37.413	
4,200.00	4,147.80	4,062.52	3,992.50	14.78	15.83	-131.62	-497.71	471.40	953.12	927.71	25.41	37.509	
4,300.00	4,246.21	4,158.51	4,086.30	15.19	16.28	-131.60	-512.74	485.13	981.18	955.09	26.09	37.601	
4,400.00	4,344.62	4,254.49	4,180.10	15.60	16.73	-131.58	-527.76	498.86	1,009.24	982.46	26.78	37.689	
4,500.00	4,443.03	4,350.47	4,273.90	16.01	17.18	-131.57	-542.78	512.59	1,037.30	1,009.84	27.46	37.773	
4,600.00	4,541.44	4,446.45	4,367.70	16.42	17.63	-131.55	-557.80	526.32	1,065.36	1,037.22	28.14	37.853	
4,700.00	4,639.85	4,542.43	4,461.50	16.83	18.08	-131.54	-572.82	540.05	1,093.42	1,064.60	28.83	37.931	
4,800.00	4,738.26	4,638.42	4,555.30	17.25	18.53	-131.53	-587.84	553.77	1,121.48	1,091.97	29.51	38.005	
4,900.00	4,836.67	4,734.40	4,649.10	17.66	18.99	-131.51	-602.87	567.50	1,149.54	1,119.35	30.19	38.077	

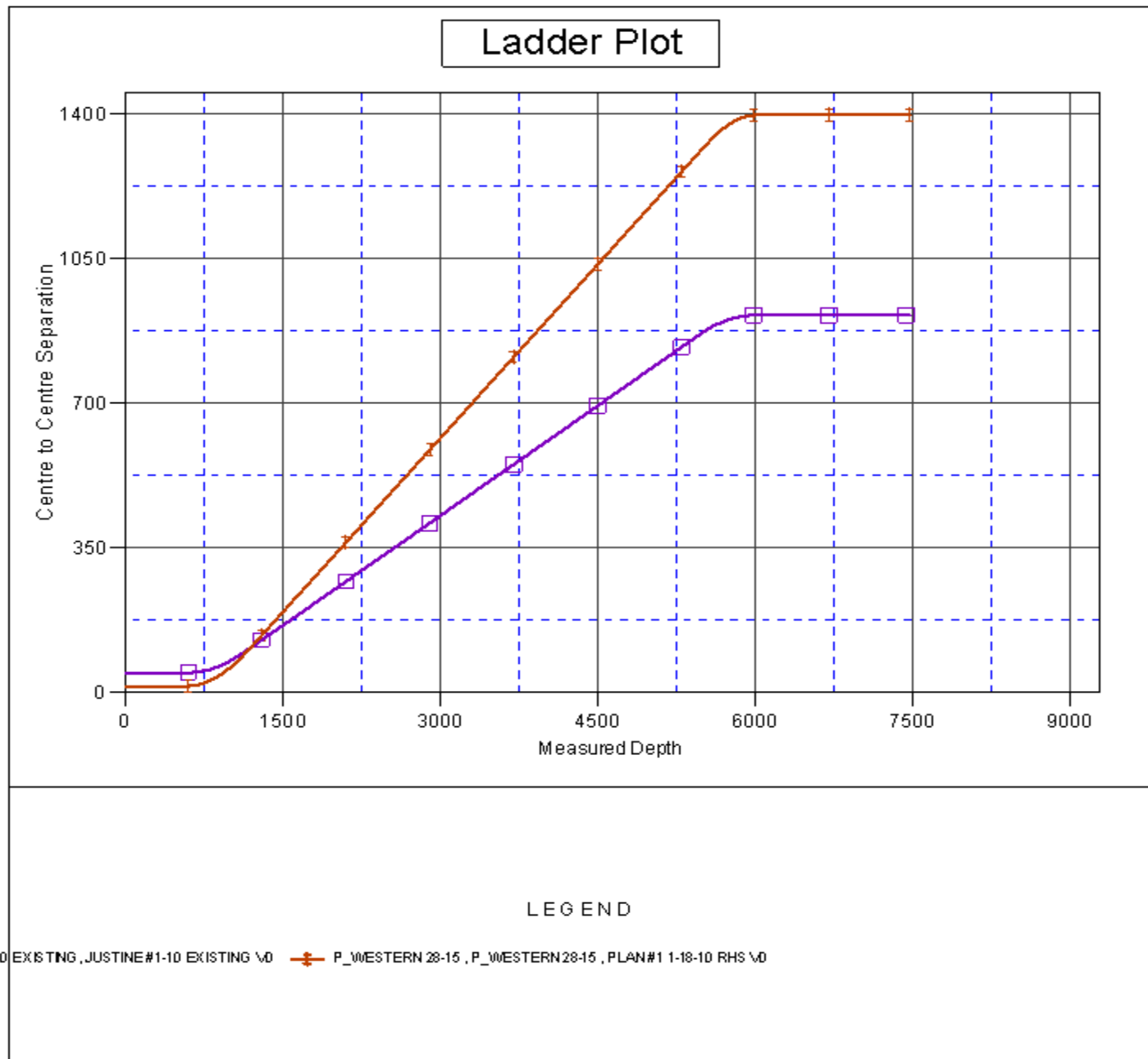
CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Company:	US ROCKIES REGION PLANNING	Local Co-ordinate Reference:	Well P_WESTERN 35-10
Project:	COLORADO NORTHERN ZONE - 83	TVD Reference:	WELL @ 4738.00ft (Original Well Elev)
Reference Site:	WESTERN 14-10 PAD	MD Reference:	WELL @ 4738.00ft (Original Well Elev)
Site Error:	0.00ft	North Reference:	True
Reference Well:	P_WESTERN 35-10	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00ft	Output errors are at	2.00 sigma
Reference Wellbore	P_WESTERN 35-10	Database:	EDM 2003.21 Single User Db
Reference Design:	PLAN #1 1-18-10 RHS	Offset TVD Reference:	Offset Datum

Offset Design WESTERN 14-10 PAD - P_WESTERN 28-15 - P_WESTERN 28-15 - PLAN #1 1-18-10 RHS												Offset Site Error:	0.00 ft
Survey Program: 0-MWD												Offset Well Error:	0.00 ft
Reference	Offset	Semi Major Axis		Distance									
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning
5,000.00	4,935.08	4,830.38	4,742.90	18.07	19.44	-131.50	-617.89	581.23	1,177.60	1,146.73	30.87	38.147	
5,100.00	5,033.49	4,926.36	4,836.70	18.48	19.89	-131.49	-632.91	594.96	1,205.66	1,174.11	31.55	38.213	
5,200.00	5,131.90	5,022.34	4,930.50	18.89	20.34	-131.48	-647.93	608.69	1,233.73	1,201.48	32.25	38.261	
5,300.00	5,230.31	5,118.33	5,024.30	19.30	20.79	-131.47	-662.95	622.42	1,261.79	1,228.85	32.94	38.306	
5,400.00	5,328.72	5,214.31	5,118.10	19.71	21.24	-131.46	-677.97	636.15	1,289.85	1,256.21	33.63	38.350	
5,476.74	5,404.24	5,287.96	5,190.08	20.03	21.59	-131.45	-689.50	646.68	1,311.38	1,277.21	34.17	38.382	
5,500.00	5,427.15	5,310.31	5,211.92	20.11	21.69	-131.55	-693.00	649.88	1,317.85	1,283.50	34.34	38.373	
5,600.00	5,525.98	5,406.72	5,306.15	20.38	22.14	-131.86	-708.09	663.67	1,344.27	1,309.24	35.03	38.375	
5,700.00	5,625.27	5,545.10	5,441.82	20.60	22.66	-131.98	-728.15	682.01	1,367.38	1,331.66	35.73	38.273	
5,800.00	5,724.92	5,701.89	5,596.90	20.80	23.08	-132.03	-745.11	697.50	1,384.26	1,347.94	36.32	38.113	
5,900.00	5,824.80	5,861.23	5,755.54	20.95	23.39	-132.04	-755.90	707.37	1,394.60	1,357.80	36.81	37.891	
5,988.21	5,913.00	6,002.96	5,897.15	21.07	23.60	98.47	-760.02	711.13	1,398.20	1,361.04	37.16	37.625	
6,000.00	5,924.79	6,021.94	5,916.12	21.09	23.62	98.48	-760.17	711.27	1,398.31	1,361.10	37.20	37.585	
6,100.00	6,024.79	6,130.60	6,024.79	21.20	23.74	98.48	-760.24	711.33	1,398.35	1,360.87	37.48	37.312	
6,200.00	6,124.79	6,230.60	6,124.79	21.32	23.84	98.48	-760.24	711.33	1,398.35	1,360.62	37.73	37.059	
6,300.00	6,224.79	6,330.60	6,224.79	21.44	23.95	98.48	-760.24	711.33	1,398.35	1,360.36	37.99	36.806	
6,400.00	6,324.79	6,430.60	6,324.79	21.56	24.05	98.48	-760.24	711.33	1,398.35	1,360.10	38.25	36.554	
6,500.00	6,424.79	6,530.60	6,424.79	21.68	24.16	98.48	-760.24	711.33	1,398.35	1,359.83	38.52	36.301	
6,600.00	6,524.79	6,630.60	6,524.79	21.81	24.27	98.48	-760.24	711.33	1,398.35	1,359.56	38.79	36.049	
6,700.00	6,624.79	6,730.60	6,624.79	21.93	24.39	98.48	-760.24	711.33	1,398.35	1,359.29	39.06	35.797	
6,800.00	6,724.79	6,830.60	6,724.79	22.06	24.50	98.48	-760.24	711.33	1,398.35	1,359.01	39.34	35.546	
6,900.00	6,824.79	6,930.60	6,824.79	22.19	24.62	98.48	-760.24	711.33	1,398.35	1,358.73	39.62	35.295	
7,000.00	6,924.79	7,030.60	6,924.79	22.32	24.73	98.48	-760.24	711.33	1,398.35	1,358.45	39.90	35.045	
7,100.00	7,024.79	7,130.60	7,024.79	22.45	24.85	98.48	-760.24	711.33	1,398.35	1,358.16	40.19	34.797	
7,200.00	7,124.79	7,230.60	7,124.79	22.58	24.97	98.48	-760.24	711.33	1,398.35	1,357.88	40.47	34.549	
7,300.00	7,224.79	7,330.60	7,224.79	22.72	25.09	98.48	-760.24	711.33	1,398.35	1,357.58	40.77	34.302	
7,400.00	7,324.79	7,430.60	7,324.79	22.85	25.22	98.48	-760.24	711.33	1,398.35	1,357.29	41.06	34.056	
7,470.21	7,395.00	7,500.82	7,395.00	22.95	25.30	98.48	-760.24	711.33	1,398.35	1,357.08	41.27	33.884	

Company:	US ROCKIES REGION PLANNING	Local Co-ordinate Reference:	Well P_WESTERN 35-10
Project:	COLORADO NORTHERN ZONE - 83	TVD Reference:	WELL @ 4738.00ft (Original Well Elev)
Reference Site:	WESTERN 14-10 PAD	MD Reference:	WELL @ 4738.00ft (Original Well Elev)
Site Error:	0.00ft	North Reference:	True
Reference Well:	P_WESTERN 35-10	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00ft	Output errors are at	2.00 sigma
Reference Wellbore	P_WESTERN 35-10	Database:	EDM 2003.21 Single User Db
Reference Design:	PLAN #1 1-18-10 RHS	Offset TVD Reference:	Offset Datum

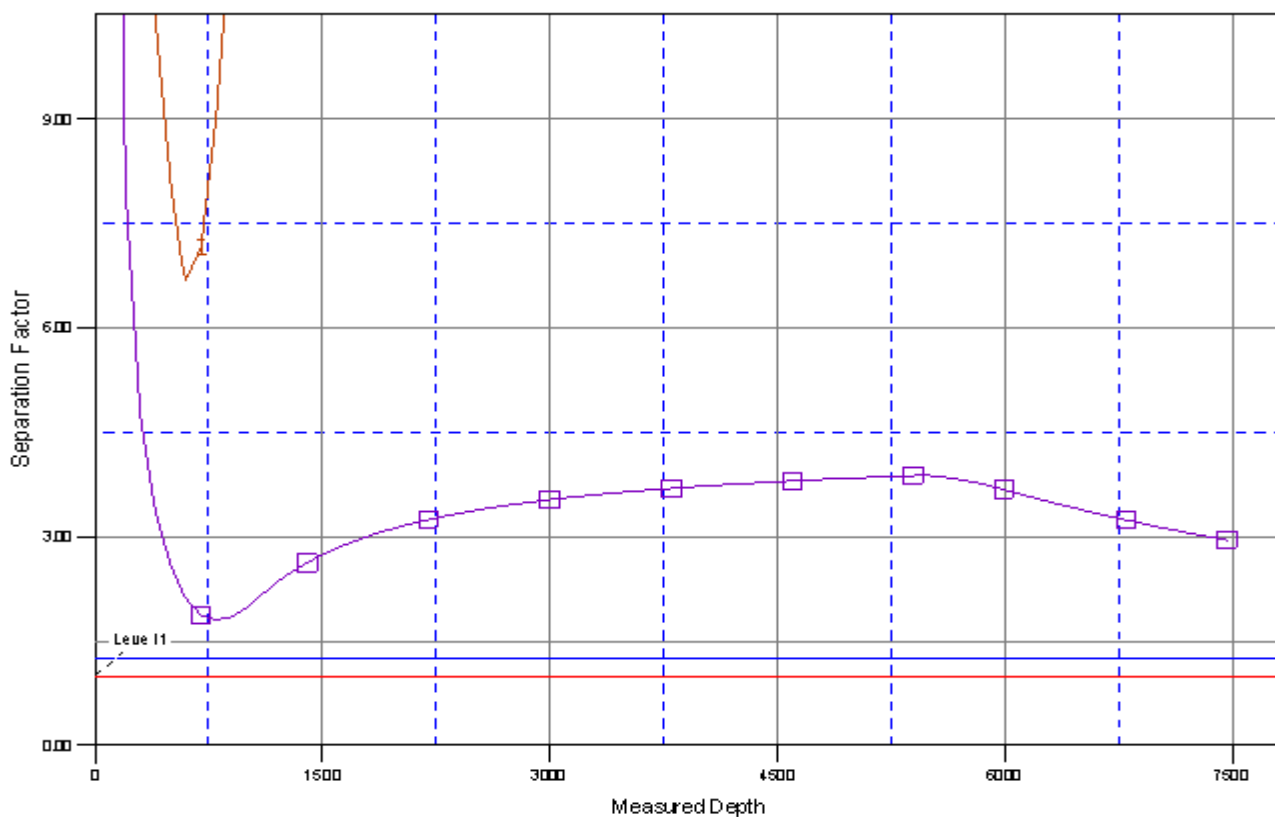
Reference Depths are relative to WELL @ 4738.00ft (Original Well Elev) Coordinates are relative to: P_WESTERN 35-10
Offset Depths are relative to Offset Datum Coordinate System is US State Plane 1983, Colorado Northern Zone
Central Meridian is 105° 30' 0.000 W ° Grid Convergence at Surface is: 0.47°



Company:	US ROCKIES REGION PLANNING	Local Co-ordinate Reference:	Well P_WESTERN 35-10
Project:	COLORADO NORTHERN ZONE - 83	TVD Reference:	WELL @ 4738.00ft (Original Well Elev)
Reference Site:	WESTERN 14-10 PAD	MD Reference:	WELL @ 4738.00ft (Original Well Elev)
Site Error:	0.00ft	North Reference:	True
Reference Well:	P_WESTERN 35-10	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00ft	Output errors are at	2.00 sigma
Reference Wellbore	P_WESTERN 35-10	Database:	EDM 2003.21 Single User Db
Reference Design:	PLAN #1 1-18-10 RHS	Offset TVD Reference:	Offset Datum

Reference Depths are relative to WELL @ 4738.00ft (Original Well Elev) Coordinates are relative to: P_WESTERN 35-10
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: 0.47°

Separation Factor Plot



LEGEND

10 EXISTING, JUSTINE#1-10 EXISTING \0  P_WESTERN 28-15, P_WESTERN 28-15, PLAN#1 1-18-10 RHS \0