



US ROCKIES REGION PLANNING

COLORADO NORTHERN ZONE - 83

WESTERN 14-10 PAD

P_WESTERN 28-15

P_WESTERN 28-15

Plan: PLAN #1 1-18-10 RHS

Standard Planning Report

18 January, 2010





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 28-15

+N/-S	+E/-W	Northing	Easting	Ground Level:	Latitude	Longitude	Slot
0.00	0.00	1360523.58	3204827.87	0.00	40° 19' 14.552 N	104° 45' 55.476 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	
1187.04	12.24	137.57	1182.39	-48.08	43.94	2.00	137.57	65.13	
5432.78	12.24	137.57	5331.61	-712.55	651.22	0.00	0.00	965.31	
6044.82	0.00	0.00	5939.00	-760.63	695.16	2.00	180.00	1030.44	
7925.82	0.00	0.00	7820.00	-760.63	695.16	0.00	0.00	1030.44	PBHL_WESTERN 28-15(150 FNL 2480 FEL)50°TGT RAD

FORMATION TOP DETAILS

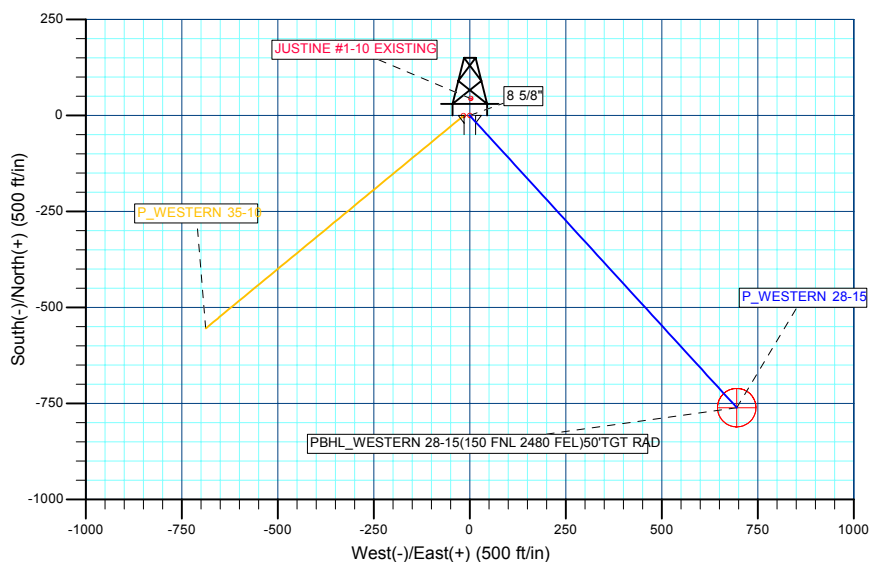
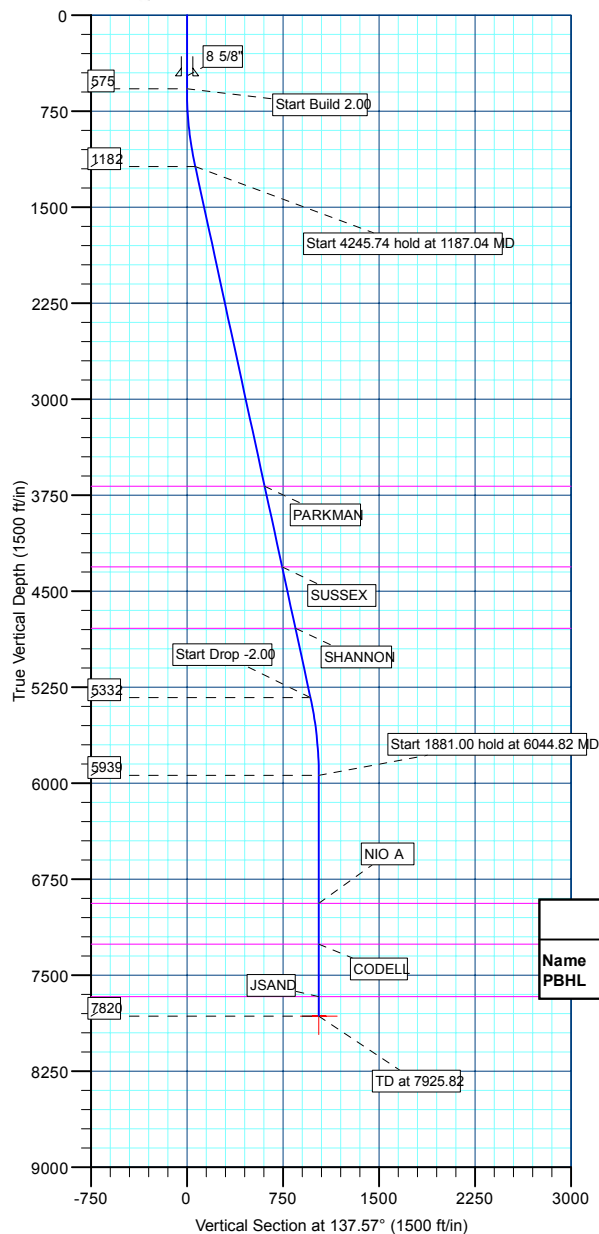
TVDPath	MDPath	Formation
3680.00	3742.75	PARKMAN
4310.00	4387.40	SUSSEX
4790.00	4878.57	SHANNON
6939.00	7044.82	NIO A
7258.00	7363.82	CODELL
7668.00	7773.82	JSAND

CASING DETAILS

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



KB ELEV:WELL @ 4738.00ft (Original Well Elev)
 GRD ELEV: 0.00



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

Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Shape
PBHL	7820.00	-760.63	695.16	1359768.73	3205529.30	40° 19' 7.036 N	104° 45' 46.501 W	Circle (Radius: 50.00)

Plan: PLAN #1 1-18-10 RHS (P_WESTERN 28-15 /P_WESTERN 28-15)

Created By: Robert H. Scott

Database:	EDM 2003.21 Single User Db	Local Co-ordinate Reference:	Well P_WESTERN 28-15
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 28-15	Survey Calculation Method:	Minimum Curvature
Wellbore:	P_WESTERN 28-15		
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 28-15					
Well Position	+N/-S	0.00 ft	Northing:	1,360,523.58 ft	Latitude:	40° 19' 14.552 N
	+E/-W	0.00 ft	Easting:	3,204,827.87 ft	Longitude:	104° 45' 55.476 W
Position Uncertainty		0.00 ft	Wellhead Elevation:	ft	Ground Level:	0.00 ft

Wellbore	P_WESTERN 28-15				
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	137.57

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	
1,187.04	12.24	137.57	1,182.39	-48.08	43.94	2.00	2.00	0.00	137.57	
5,432.78	12.24	137.57	5,331.61	-712.55	651.22	0.00	0.00	0.00	0.00	
6,044.82	0.00	0.00	5,939.00	-760.63	695.16	2.00	-2.00	0.00	180.00	
7,925.82	0.00	0.00	7,820.00	-760.63	695.16	0.00	0.00	0.00	0.00	PBHL_WESTERN :

Database:	EDM 2003.21 Single User Db	Local Co-ordinate Reference:	Well P_WESTERN 28-15
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 28-15	Survey Calculation Method:	Minimum Curvature
Wellbore:	P_WESTERN 28-15		
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	137.57	600.00	-0.08	0.07	0.11	2.00	2.00	0.00
700.00	2.50	137.57	699.96	-2.01	1.84	2.73	2.00	2.00	0.00
800.00	4.50	137.57	799.77	-6.52	5.96	8.83	2.00	2.00	0.00
900.00	6.50	137.57	899.30	-13.59	12.42	18.42	2.00	2.00	0.00
1,000.00	8.50	137.57	998.44	-23.23	21.23	31.47	2.00	2.00	0.00
1,100.00	10.50	137.57	1,097.07	-35.41	32.36	47.97	2.00	2.00	0.00
Start 4245.74 hold at 1187.04 MD									
1,187.04	12.24	137.57	1,182.39	-48.08	43.94	65.13	2.00	2.00	0.00
1,200.00	12.24	137.57	1,195.06	-50.11	45.79	67.88	0.00	0.00	0.00
1,300.00	12.24	137.57	1,292.79	-65.76	60.10	89.08	0.00	0.00	0.00
1,400.00	12.24	137.57	1,390.51	-81.41	74.40	110.28	0.00	0.00	0.00
1,500.00	12.24	137.57	1,488.24	-97.06	88.70	131.48	0.00	0.00	0.00
1,600.00	12.24	137.57	1,585.97	-112.71	103.01	152.69	0.00	0.00	0.00
1,700.00	12.24	137.57	1,683.69	-128.36	117.31	173.89	0.00	0.00	0.00
1,800.00	12.24	137.57	1,781.42	-144.01	131.61	195.09	0.00	0.00	0.00
1,900.00	12.24	137.57	1,879.15	-159.66	145.92	216.29	0.00	0.00	0.00
2,000.00	12.24	137.57	1,976.87	-175.31	160.22	237.49	0.00	0.00	0.00
2,100.00	12.24	137.57	2,074.60	-190.96	174.52	258.70	0.00	0.00	0.00
2,200.00	12.24	137.57	2,172.33	-206.61	188.83	279.90	0.00	0.00	0.00
2,300.00	12.24	137.57	2,270.05	-222.26	203.13	301.10	0.00	0.00	0.00
2,400.00	12.24	137.57	2,367.78	-237.91	217.43	322.30	0.00	0.00	0.00
2,500.00	12.24	137.57	2,465.51	-253.56	231.74	343.50	0.00	0.00	0.00
2,600.00	12.24	137.57	2,563.23	-269.21	246.04	364.71	0.00	0.00	0.00
2,700.00	12.24	137.57	2,660.96	-284.86	260.34	385.91	0.00	0.00	0.00
2,800.00	12.24	137.57	2,758.68	-300.51	274.65	407.11	0.00	0.00	0.00
2,900.00	12.24	137.57	2,856.41	-316.16	288.95	428.31	0.00	0.00	0.00
3,000.00	12.24	137.57	2,954.14	-331.81	303.25	449.51	0.00	0.00	0.00
3,100.00	12.24	137.57	3,051.86	-347.46	317.56	470.72	0.00	0.00	0.00
3,200.00	12.24	137.57	3,149.59	-363.11	331.86	491.92	0.00	0.00	0.00
3,300.00	12.24	137.57	3,247.32	-378.76	346.16	513.12	0.00	0.00	0.00
3,400.00	12.24	137.57	3,345.04	-394.42	360.47	534.32	0.00	0.00	0.00
3,500.00	12.24	137.57	3,442.77	-410.07	374.77	555.52	0.00	0.00	0.00
3,600.00	12.24	137.57	3,540.50	-425.72	389.07	576.73	0.00	0.00	0.00
3,700.00	12.24	137.57	3,638.22	-441.37	403.38	597.93	0.00	0.00	0.00
PARKMAN									
3,742.75	12.24	137.57	3,680.00	-448.06	409.49	606.99	0.00	0.00	0.00
3,800.00	12.24	137.57	3,735.95	-457.02	417.68	619.13	0.00	0.00	0.00
3,900.00	12.24	137.57	3,833.68	-472.67	431.98	640.33	0.00	0.00	0.00
4,000.00	12.24	137.57	3,931.40	-488.32	446.29	661.53	0.00	0.00	0.00
4,100.00	12.24	137.57	4,029.13	-503.97	460.59	682.74	0.00	0.00	0.00
4,200.00	12.24	137.57	4,126.86	-519.62	474.89	703.94	0.00	0.00	0.00
4,300.00	12.24	137.57	4,224.58	-535.27	489.20	725.14	0.00	0.00	0.00
SUSSEX									
4,387.40	12.24	137.57	4,310.00	-548.95	501.70	743.67	0.00	0.00	0.00
4,400.00	12.24	137.57	4,322.31	-550.92	503.50	746.34	0.00	0.00	0.00
4,500.00	12.24	137.57	4,420.04	-566.57	517.80	767.54	0.00	0.00	0.00
4,600.00	12.24	137.57	4,517.76	-582.22	532.11	788.75	0.00	0.00	0.00
4,700.00	12.24	137.57	4,615.49	-597.87	546.41	809.95	0.00	0.00	0.00
4,800.00	12.24	137.57	4,713.22	-613.52	560.71	831.15	0.00	0.00	0.00
SHANNON									
4,878.57	12.24	137.57	4,790.00	-625.82	571.95	847.81	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 28-15	Survey Calculation Method:	Minimum Curvature
Wellbore:	P_WESTERN 28-15		
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	12.24	137.57	4,810.94	-629.17	575.02	852.35	0.00	0.00	0.00
5,000.00	12.24	137.57	4,908.67	-644.82	589.32	873.55	0.00	0.00	0.00
5,100.00	12.24	137.57	5,006.40	-660.47	603.62	894.76	0.00	0.00	0.00
5,200.00	12.24	137.57	5,104.12	-676.12	617.93	915.96	0.00	0.00	0.00
5,300.00	12.24	137.57	5,201.85	-691.77	632.23	937.16	0.00	0.00	0.00
5,400.00	12.24	137.57	5,299.57	-707.42	646.53	958.36	0.00	0.00	0.00
Start Drop -2.00									
5,432.78	12.24	137.57	5,331.61	-712.55	651.22	965.31	0.00	0.00	0.00
5,500.00	10.90	137.57	5,397.46	-722.51	660.32	978.79	2.00	-2.00	0.00
5,600.00	8.90	137.57	5,495.97	-735.19	671.91	995.98	2.00	-2.00	0.00
5,700.00	6.90	137.57	5,595.02	-745.33	681.18	1,009.71	2.00	-2.00	0.00
5,800.00	4.90	137.57	5,694.48	-752.91	688.11	1,019.99	2.00	-2.00	0.00
5,900.00	2.90	137.57	5,794.25	-757.93	692.69	1,026.78	2.00	-2.00	0.00
6,000.00	0.90	137.57	5,894.19	-760.37	694.92	1,030.09	2.00	-2.00	0.00
Start 1881.00 hold at 6044.82 MD									
6,044.82	0.00	0.00	5,939.00	-760.63	695.16	1,030.44	2.00	-2.00	0.00
6,100.00	0.00	0.00	5,994.18	-760.63	695.16	1,030.44	0.00	0.00	0.00
6,200.00	0.00	0.00	6,094.18	-760.63	695.16	1,030.44	0.00	0.00	0.00
6,300.00	0.00	0.00	6,194.18	-760.63	695.16	1,030.44	0.00	0.00	0.00
6,400.00	0.00	0.00	6,294.18	-760.63	695.16	1,030.44	0.00	0.00	0.00
6,500.00	0.00	0.00	6,394.18	-760.63	695.16	1,030.44	0.00	0.00	0.00
6,600.00	0.00	0.00	6,494.18	-760.63	695.16	1,030.44	0.00	0.00	0.00
6,700.00	0.00	0.00	6,594.18	-760.63	695.16	1,030.44	0.00	0.00	0.00
6,800.00	0.00	0.00	6,694.18	-760.63	695.16	1,030.44	0.00	0.00	0.00
6,900.00	0.00	0.00	6,794.18	-760.63	695.16	1,030.44	0.00	0.00	0.00
7,000.00	0.00	0.00	6,894.18	-760.63	695.16	1,030.44	0.00	0.00	0.00
NIO A									
7,044.82	0.00	0.00	6,939.00	-760.63	695.16	1,030.44	0.00	0.00	0.00
7,100.00	0.00	0.00	6,994.18	-760.63	695.16	1,030.44	0.00	0.00	0.00
7,200.00	0.00	0.00	7,094.18	-760.63	695.16	1,030.44	0.00	0.00	0.00
7,300.00	0.00	0.00	7,194.18	-760.63	695.16	1,030.44	0.00	0.00	0.00
CODELL									
7,363.82	0.00	0.00	7,258.00	-760.63	695.16	1,030.44	0.00	0.00	0.00
7,400.00	0.00	0.00	7,294.18	-760.63	695.16	1,030.44	0.00	0.00	0.00
7,500.00	0.00	0.00	7,394.18	-760.63	695.16	1,030.44	0.00	0.00	0.00
7,600.00	0.00	0.00	7,494.18	-760.63	695.16	1,030.44	0.00	0.00	0.00
7,700.00	0.00	0.00	7,594.18	-760.63	695.16	1,030.44	0.00	0.00	0.00
JSAND									
7,773.82	0.00	0.00	7,668.00	-760.63	695.16	1,030.44	0.00	0.00	0.00
7,800.00	0.00	0.00	7,694.18	-760.63	695.16	1,030.44	0.00	0.00	0.00
7,900.00	0.00	0.00	7,794.18	-760.63	695.16	1,030.44	0.00	0.00	0.00
PBHL_ WESTERN 28-15(150 FNL 2480 FEL)50'TGT RAD									
7,925.82	0.00	0.00	7,820.00	-760.63	695.16	1,030.44	0.00	0.00	0.00

Database:	EDM 2003.21 Single User Db	Local Co-ordinate Reference:	Well P_WESTERN 28-15
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 28-15	Survey Calculation Method:	Minimum Curvature
Wellbore:	P_WESTERN 28-15		
Design:	PLAN #1 1-18-10 RHS		

Design Targets									
Target Name									
- hit/miss target	Dip Angle	Dip Dir.	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
- Shape	(°)	(°)	(ft)	(ft)	(ft)	(ft)	(ft)		
PBHL_WESTERN 28- - plan hits target center - Circle (radius 50.00)	0.00	0.00	7,820.00	-760.63	695.16	1,359,768.73	3,205,529.30	40° 19' 7.036 N	104° 45' 46.501 W

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

Formations						
Measured Depth	Vertical Depth		Name	Lithology	Dip	Dip Direction
(ft)	(ft)				(°)	(°)
3,742.75	3,680.00		PARKMAN			
4,387.40	4,310.00		SUSSEX			
4,878.57	4,790.00		SHANNON			
7,044.82	6,939.00		NIO A			
7,363.82	7,258.00		CODELL			
7,773.82	7,668.00		JSAND			

Plan Annotations					
Measured Depth	Vertical Depth	Local Coordinates			
(ft)	(ft)	+N/-S	+E/-W	Comment	
(ft)	(ft)	(ft)	(ft)		
575.00	575.00	0.00	0.00	Start Build 2.00	
1,187.04	1,182.39	-48.08	43.94	Start 4245.74 hold at 1187.04 MD	
5,432.78	5,331.61	-712.55	651.22	Start Drop -2.00	
6,044.82	5,939.00	-760.63	695.16	Start 1881.00 hold at 6044.82 MD	
7,925.82	7,820.00	-760.63	695.16	TD at 7925.82	

US ROCKIES REGION PLANNING

**COLORADO NORTHERN ZONE - 83
WESTERN 14-10 PAD
P_WESTERN 28-15**

**P_WESTERN 28-15
PLAN #1 1-18-10 RHS**

Anticollision Report

18 January, 2010

Company:	US ROCKIES REGION PLANNING	Local Co-ordinate Reference:	Well P_WESTERN 28-15
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 28-15	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00ft	Output errors are at	2.00 sigma
Reference Wellbore	P_WESTERN 28-15	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	7,925.82	PLAN #1 1-18-10 RHS (P_WESTERN 28-	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	44.16	22.28	2.018	CC
JUSTINE #1-10 EXISTING - JUSTINE #1-10 EXISTING	700.00	699.96	46.09	18.99	1.701	ES
JUSTINE #1-10 EXISTING - JUSTINE #1-10 EXISTING	800.00	799.77	50.69	19.44	1.622	SF
P_WESTERN 35-10 - P_WESTERN 35-10 - PLAN #1 1-	575.00	575.00	16.18	13.83	6.904	CC, ES
P_WESTERN 35-10 - P_WESTERN 35-10 - PLAN #1 1-	600.00	599.89	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										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		Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
							+N/-S (ft)	+E/-W (ft)						
0.00	0.00	0.00	0.00	0.00	0.00	3.62	44.07	2.79	44.16	44.16	0.00	N/A		
100.00	100.00	100.00	100.00	0.11	1.70	3.62	44.07	2.79	44.16	42.35	1.81	24.365		
200.00	200.00	200.00	200.00	0.34	5.70	3.62	44.07	2.79	44.16	38.12	6.04	7.315		
300.00	300.00	300.00	300.00	0.56	9.70	3.62	44.07	2.79	44.16	33.90	10.26	4.303		
400.00	400.00	400.00	400.00	0.79	13.70	3.62	44.07	2.79	44.16	29.67	14.49	3.048		
500.00	500.00	500.00	500.00	1.01	17.70	3.62	44.07	2.79	44.16	25.45	18.71	2.360		
575.00	575.00	575.00	575.00	1.18	20.70	3.62	44.07	2.79	44.16	22.28	21.88	2.018 CC		
600.00	600.00	600.00	600.00	1.23	21.70	-134.06	44.07	2.79	44.23	21.31	22.93	1.929		
700.00	699.96	699.96	699.96	1.41	25.70	-136.37	44.07	2.79	46.09	18.99	27.10	1.701 ES		
800.00	799.77	799.77	799.77	1.62	29.69	-141.07	44.07	2.79	50.69	19.44	31.25	1.622 SF		
900.00	899.30	899.30	899.30	1.84	33.67	-146.89	44.07	2.79	58.46	23.12	35.34	1.654		
1,000.00	998.44	998.44	998.44	2.10	37.64	-152.64	44.07	2.79	69.78	30.43	39.35	1.773		
1,100.00	1,097.07	1,097.07	1,097.07	2.41	41.58	-157.65	44.07	2.79	84.81	41.56	43.24	1.961		
1,187.04	1,182.39	1,182.39	1,182.39	2.72	45.00	-161.24	44.07	2.79	100.92	54.39	46.53	2.169		
1,200.00	1,195.06	1,195.06	1,195.06	2.77	45.50	-161.73	44.07	2.79	103.53	56.48	47.05	2.200		
1,300.00	1,292.79	1,292.79	1,292.79	3.16	49.41	-164.80	44.07	2.79	123.88	72.79	51.09	2.425		
1,400.00	1,390.51	1,390.51	1,390.51	3.58	53.32	-167.00	44.07	2.79	144.47	89.34	55.13	2.620		
1,500.00	1,488.24	1,488.24	1,488.24	4.01	57.23	-168.66	44.07	2.79	165.22	106.03	59.19	2.791		
1,600.00	1,585.97	1,585.97	1,585.97	4.44	61.14	-169.94	44.07	2.79	186.07	122.82	63.25	2.942		
1,700.00	1,683.69	1,683.69	1,683.69	4.88	65.05	-170.96	44.07	2.79	206.99	139.68	67.32	3.075		
1,800.00	1,781.42	1,781.42	1,781.42	5.33	68.96	-171.80	44.07	2.79	227.97	156.58	71.39	3.193		
1,900.00	1,879.15	1,879.15	1,879.15	5.78	72.87	-172.50	44.07	2.79	248.98	173.52	75.46	3.299		

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 28-15
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 28-15	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00ft	Output errors are at	2.00 sigma
Reference Wellbore	P_WESTERN 28-15	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-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	1,976.87	1,976.87	1,976.87	6.24	76.77	-173.08	44.07	2.79	270.02	190.48	79.54	3.395	
2,100.00	2,074.60	2,074.60	2,074.60	6.69	80.68	-173.59	44.07	2.79	291.09	207.47	83.62	3.481	
2,200.00	2,172.33	2,172.33	2,172.33	7.15	84.59	-174.02	44.07	2.79	312.17	224.48	87.70	3.560	
2,300.00	2,270.05	2,270.05	2,270.05	7.61	88.50	-174.40	44.07	2.79	333.27	241.49	91.78	3.631	
2,400.00	2,367.78	2,367.78	2,367.78	8.07	92.41	-174.73	44.07	2.79	354.38	258.52	95.86	3.697	
2,500.00	2,465.51	2,465.51	2,465.51	8.54	96.32	-175.03	44.07	2.79	375.50	275.56	99.94	3.757	
2,600.00	2,563.23	2,563.23	2,563.23	9.00	100.23	-175.30	44.07	2.79	396.63	292.61	104.02	3.813	
2,700.00	2,660.96	2,660.96	2,660.96	9.46	104.14	-175.53	44.07	2.79	417.77	309.66	108.11	3.864	
2,800.00	2,758.68	2,758.68	2,758.68	9.93	108.05	-175.75	44.07	2.79	438.91	326.72	112.19	3.912	
2,900.00	2,856.41	2,856.41	2,856.41	10.39	111.96	-175.95	44.07	2.79	460.06	343.79	116.28	3.957	
3,000.00	2,954.14	2,954.14	2,954.14	10.86	115.87	-176.12	44.07	2.79	481.22	360.85	120.36	3.998	
3,100.00	3,051.86	3,051.86	3,051.86	11.33	119.77	-176.29	44.07	2.79	502.37	377.93	124.45	4.037	
3,200.00	3,149.59	3,149.59	3,149.59	11.79	123.68	-176.44	44.07	2.79	523.53	395.00	128.53	4.073	
3,300.00	3,247.32	3,247.32	3,247.32	12.26	127.59	-176.58	44.07	2.79	544.70	412.08	132.62	4.107	
3,400.00	3,345.04	3,345.04	3,345.04	12.73	131.50	-176.70	44.07	2.79	565.87	429.16	136.71	4.139	
3,500.00	3,442.77	3,442.77	3,442.77	13.20	135.41	-176.82	44.07	2.79	587.04	446.24	140.79	4.169	
3,600.00	3,540.50	3,540.50	3,540.50	13.66	139.32	-176.93	44.07	2.79	608.21	463.33	144.88	4.198	
3,700.00	3,638.22	3,638.22	3,638.22	14.13	143.23	-177.04	44.07	2.79	629.38	480.41	148.97	4.225	
3,800.00	3,735.95	3,735.95	3,735.95	14.60	147.14	-177.13	44.07	2.79	650.56	497.50	153.06	4.250	
3,900.00	3,833.68	3,833.68	3,833.68	15.07	151.05	-177.22	44.07	2.79	671.73	514.59	157.14	4.275	
4,000.00	3,931.40	3,931.40	3,931.40	15.54	154.96	-177.31	44.07	2.79	692.91	531.68	161.23	4.298	
4,100.00	4,029.13	4,029.13	4,029.13	16.01	158.87	-177.39	44.07	2.79	714.09	548.77	165.32	4.319	
4,200.00	4,126.86	4,126.86	4,126.86	16.48	162.77	-177.46	44.07	2.79	735.28	565.87	169.41	4.340	
4,300.00	4,224.58	4,224.58	4,224.58	16.95	166.68	-177.54	44.07	2.79	756.46	582.96	173.50	4.360	
4,400.00	4,322.31	4,322.31	4,322.31	17.41	170.59	-177.60	44.07	2.79	777.64	600.06	177.58	4.379	
4,500.00	4,420.04	4,420.04	4,420.04	17.88	174.50	-177.67	44.07	2.79	798.83	617.15	181.67	4.397	
4,600.00	4,517.76	4,517.76	4,517.76	18.35	178.41	-177.73	44.07	2.79	820.01	634.25	185.76	4.414	
4,700.00	4,615.49	4,615.49	4,615.49	18.82	182.32	-177.78	44.07	2.79	841.20	651.35	189.85	4.431	
4,800.00	4,713.22	4,713.22	4,713.22	19.29	186.23	-177.84	44.07	2.79	862.39	668.45	193.94	4.447	
4,900.00	4,810.94	4,810.94	4,810.94	19.76	190.14	-177.89	44.07	2.79	883.57	685.54	198.03	4.462	
5,000.00	4,908.67	4,908.67	4,908.67	20.23	194.05	-177.94	44.07	2.79	904.76	702.64	202.12	4.476	
5,100.00	5,006.40	5,006.40	5,006.40	20.70	197.96	-177.99	44.07	2.79	925.95	719.74	206.21	4.490	
5,200.00	5,104.12	5,104.12	5,104.12	21.17	201.86	-178.03	44.07	2.79	947.14	736.84	210.30	4.504	
5,300.00	5,201.85	5,201.85	5,201.85	21.64	205.77	-178.07	44.07	2.79	968.33	753.95	214.39	4.517	
5,400.00	5,299.57	5,299.57	5,299.57	22.11	209.68	-178.12	44.07	2.79	989.52	771.05	218.48	4.529	
5,432.78	5,331.61	5,331.61	5,331.61	22.27	210.96	-178.13	44.07	2.79	996.47	776.65	219.82	4.533	
5,500.00	5,397.46	5,397.46	5,397.46	22.53	213.60	-178.16	44.07	2.79	1,009.94	786.38	223.56	4.517	
5,600.00	5,495.97	5,495.97	5,495.97	22.82	217.54	-178.20	44.07	2.79	1,027.12	798.18	228.94	4.486	
5,700.00	5,595.02	5,595.02	5,595.02	23.08	221.50	-178.24	44.07	2.79	1,040.85	806.75	234.10	4.446	
5,800.00	5,694.48	5,694.48	5,694.48	23.29	225.48	-178.26	44.07	2.79	1,051.12	812.11	239.00	4.398	
5,900.00	5,794.25	5,794.25	5,794.25	23.46	229.47	-178.28	44.07	2.79	1,057.91	814.26	243.65	4.342	
6,000.00	5,894.19	5,894.19	5,894.19	23.59	233.47	-178.28	44.07	2.79	1,061.22	813.22	248.00	4.279	
6,044.82	5,939.00	5,939.00	5,939.00	23.64	235.26	-40.71	44.07	2.79	1,061.57	811.71	249.86	4.249	
6,100.00	5,994.18	5,994.18	5,994.18	23.71	237.47	-40.71	44.07	2.79	1,061.57	809.40	252.16	4.210	
6,200.00	6,094.18	6,094.18	6,094.18	23.81	241.47	-40.71	44.07	2.79	1,061.57	805.24	256.33	4.141	
6,300.00	6,194.18	6,194.18	6,194.18	23.91	245.47	-40.71	44.07	2.79	1,061.57	801.07	260.49	4.075	
6,400.00	6,294.18	6,294.18	6,294.18	24.02	249.47	-40.71	44.07	2.79	1,061.57	796.91	264.66	4.011	
6,500.00	6,394.18	6,394.18	6,394.18	24.13	253.47	-40.71	44.07	2.79	1,061.57	792.74	268.83	3.949	
6,600.00	6,494.18	6,494.18	6,494.18	24.24	257.47	-40.71	44.07	2.79	1,061.57	788.57	273.00	3.889	
6,700.00	6,594.18	6,594.18	6,594.18	24.35	261.47	-40.71	44.07	2.79	1,061.57	784.40	277.17	3.830	
6,800.00	6,694.18	6,694.18	6,694.18	24.47	265.47	-40.71	44.07	2.79	1,061.57	780.22	281.34	3.773	
6,900.00	6,794.18	6,794.18	6,794.18	24.58	269.47	-40.71	44.07	2.79	1,061.57	776.05	285.52	3.718	

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 28-15
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 28-15	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00ft	Output errors are at	2.00 sigma
Reference Wellbore	P_WESTERN 28-15	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	6,894.18	6,894.18	6,894.18	24.70	273.47	-40.71	44.07	2.79	1,061.57	771.88	289.69	3.664		
7,100.00	6,994.18	6,994.18	6,994.18	24.82	277.47	-40.71	44.07	2.79	1,061.57	767.70	293.87	3.612		
7,200.00	7,094.18	7,094.18	7,094.18	24.93	281.47	-40.71	44.07	2.79	1,061.57	763.52	298.05	3.562		
7,300.00	7,194.18	7,194.18	7,194.18	25.06	285.47	-40.71	44.07	2.79	1,061.57	759.34	302.22	3.513		
7,400.00	7,294.18	7,294.18	7,294.18	25.18	289.47	-40.71	44.07	2.79	1,061.57	755.16	306.40	3.465		
7,461.16	7,355.34	7,355.34	7,355.34	25.25	291.91	-40.71	44.07	2.79	1,061.57	752.61	308.96	3.436		
7,500.00	7,394.18	7,380.00	7,380.00	25.30	292.90	-40.71	44.07	2.79	1,061.66	751.64	310.02	3.425		
7,600.00	7,494.18	7,380.00	7,380.00	25.43	292.90	-40.71	44.07	2.79	1,067.69	757.49	310.20	3.442		
7,700.00	7,594.18	7,380.00	7,380.00	25.55	292.90	-40.71	44.07	2.79	1,082.96	772.58	310.38	3.489		
7,800.00	7,694.18	7,380.00	7,380.00	25.68	292.90	-40.71	44.07	2.79	1,107.09	796.52	310.57	3.565		
7,900.00	7,794.18	7,380.00	7,380.00	25.81	292.90	-40.71	44.07	2.79	1,139.51	828.75	310.75	3.667		
7,925.82	7,820.00	7,380.00	7,380.00	25.84	292.90	-40.71	44.07	2.79	1,149.14	838.34	310.80	3.697		

Company:	US ROCKIES REGION PLANNING	Local Co-ordinate Reference:	Well P_WESTERN 28-15
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 28-15	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00ft	Output errors are at	2.00 sigma
Reference Wellbore	P_WESTERN 28-15	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 35-10 - P_WESTERN 35-10 - PLAN #1 1-18-10 RHS												Offset Site Error:	0.00 ft
Survey Program: 0-MWD												Offset Well Error:	0.00 ft
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning
0.00	0.00	0.00	0.00	0.00	0.00	-91.38	-0.39	-16.17	16.18	16.18	0.00	N/A	
100.00	100.00	100.00	100.00	0.11	0.10	-91.38	-0.39	-16.17	16.18	15.97	0.21	77.809	
200.00	200.00	200.00	200.00	0.34	0.32	-91.38	-0.39	-16.17	16.18	15.52	0.66	24.606	
300.00	300.00	300.00	300.00	0.56	0.55	-91.38	-0.39	-16.17	16.18	15.07	1.11	14.614	
400.00	400.00	400.00	400.00	0.79	0.77	-91.38	-0.39	-16.17	16.18	14.62	1.56	10.393	
500.00	500.00	500.00	500.00	1.01	0.99	-91.38	-0.39	-16.17	16.18	14.17	2.01	8.064	
575.00	575.00	575.00	575.00	1.18	1.16	-91.38	-0.39	-16.17	16.18	13.83	2.34	6.904 CC, ES	
600.00	600.00	599.89	599.89	1.23	1.21	131.10	-0.46	-16.26	16.33	13.89	2.44	6.686 SF	
700.00	699.96	699.32	699.28	1.41	1.40	132.07	-2.11	-18.25	20.10	17.30	2.81	7.160	
800.00	799.77	798.29	798.06	1.62	1.60	133.33	-5.92	-22.88	28.90	25.70	3.20	9.035	
900.00	899.30	896.41	895.74	1.84	1.82	134.20	-11.85	-30.07	42.68	39.06	3.62	11.794	
1,000.00	998.44	993.34	991.85	2.10	2.08	134.68	-19.79	-39.69	61.37	57.30	4.08	15.057	
1,100.00	1,097.07	1,088.79	1,086.04	2.41	2.37	134.90	-29.63	-51.62	84.90	80.32	4.58	18.542	
1,187.04	1,182.39	1,172.60	1,168.52	2.72	2.65	135.45	-39.10	-63.10	108.31	103.25	5.06	21.400	
1,200.00	1,195.06	1,185.05	1,180.77	2.77	2.69	135.62	-40.50	-64.81	111.93	106.79	5.14	21.789	
1,300.00	1,292.79	1,281.03	1,275.22	3.16	3.03	136.66	-51.35	-77.96	139.91	134.17	5.74	24.367	
1,400.00	1,390.51	1,377.01	1,369.68	3.58	3.39	137.35	-62.20	-91.11	167.91	161.55	6.37	26.371	
1,500.00	1,488.24	1,472.99	1,464.13	4.01	3.75	137.84	-73.04	-104.26	195.94	188.93	7.01	27.957	
1,600.00	1,585.97	1,568.97	1,558.59	4.44	4.12	138.21	-83.89	-117.41	223.97	216.31	7.66	29.236	
1,700.00	1,683.69	1,664.96	1,653.05	4.88	4.49	138.50	-94.73	-130.56	252.01	243.68	8.32	30.284	
1,800.00	1,781.42	1,760.94	1,747.50	5.33	4.87	138.73	-105.58	-143.70	280.05	271.06	8.99	31.156	
1,900.00	1,879.15	1,856.92	1,841.96	5.78	5.24	138.92	-116.43	-156.85	308.09	298.43	9.66	31.892	
2,000.00	1,976.87	1,952.90	1,936.42	6.24	5.63	139.08	-127.27	-170.00	336.14	325.81	10.34	32.521	
2,100.00	2,074.60	2,048.88	2,030.87	6.69	6.01	139.21	-138.12	-183.15	364.19	353.18	11.02	33.063	
2,200.00	2,172.33	2,144.87	2,125.33	7.15	6.39	139.32	-148.96	-196.30	392.25	380.55	11.70	33.536	
2,300.00	2,270.05	2,240.85	2,219.79	7.61	6.78	139.42	-159.81	-209.45	420.30	407.92	12.38	33.952	
2,400.00	2,367.78	2,336.83	2,314.24	8.07	7.17	139.51	-170.66	-222.60	448.35	435.29	13.06	34.320	
2,500.00	2,465.51	2,432.81	2,408.70	8.54	7.56	139.58	-181.50	-235.75	476.41	462.66	13.75	34.649	
2,600.00	2,563.23	2,528.79	2,503.15	9.00	7.95	139.65	-192.35	-248.90	504.47	490.03	14.44	34.945	
2,700.00	2,660.96	2,624.78	2,597.61	9.46	8.34	139.71	-203.19	-262.05	532.52	517.40	15.12	35.212	
2,800.00	2,758.68	2,720.76	2,692.07	9.93	8.73	139.77	-214.04	-275.20	560.58	544.77	15.81	35.455	
2,900.00	2,856.41	2,816.74	2,786.52	10.39	9.12	139.82	-224.89	-288.35	588.64	572.14	16.50	35.677	
3,000.00	2,954.14	2,912.72	2,880.98	10.86	9.51	139.86	-235.73	-301.50	616.69	599.51	17.19	35.881	
3,100.00	3,051.86	3,008.70	2,975.44	11.33	9.90	139.90	-246.58	-314.65	644.75	626.88	17.88	36.069	
3,200.00	3,149.59	3,104.69	3,069.89	11.79	10.29	139.94	-257.42	-327.80	672.81	654.25	18.56	36.243	
3,300.00	3,247.32	3,200.67	3,164.35	12.26	10.68	139.97	-268.27	-340.95	700.87	681.62	19.25	36.405	
3,400.00	3,345.04	3,296.65	3,258.81	12.73	11.08	140.00	-279.12	-354.10	728.93	708.99	19.94	36.555	
3,500.00	3,442.77	3,392.63	3,353.26	13.20	11.47	140.03	-289.96	-367.25	756.99	736.36	20.63	36.697	
3,600.00	3,540.50	3,488.61	3,447.72	13.66	11.86	140.06	-300.81	-380.40	785.05	763.73	21.32	36.829	
3,700.00	3,638.22	3,584.60	3,542.17	14.13	12.26	140.09	-311.65	-393.55	813.11	791.10	22.00	36.953	
3,800.00	3,735.95	3,680.58	3,636.63	14.60	12.65	140.11	-322.50	-406.70	841.17	818.48	22.69	37.071	
3,900.00	3,833.68	3,776.56	3,731.09	15.07	13.04	140.13	-333.35	-419.85	869.23	845.85	23.38	37.182	
4,000.00	3,931.40	3,872.54	3,825.54	15.54	13.44	140.15	-344.19	-433.00	897.29	873.22	24.06	37.287	
4,100.00	4,029.13	3,968.52	3,920.00	16.01	13.83	140.17	-355.04	-446.15	925.35	900.60	24.75	37.387	
4,200.00	4,126.86	4,064.51	4,014.46	16.48	14.22	140.19	-365.88	-459.30	953.41	927.97	25.44	37.483	
4,300.00	4,224.58	4,160.49	4,108.91	16.95	14.62	140.21	-376.73	-472.45	981.47	955.34	26.12	37.574	
4,400.00	4,322.31	4,256.47	4,203.37	17.41	15.01	140.23	-387.58	-485.60	1,009.53	982.72	26.81	37.661	
4,500.00	4,420.04	4,352.45	4,297.83	17.88	15.41	140.24	-398.42	-498.75	1,037.59	1,010.10	27.49	37.744	
4,600.00	4,517.76	4,448.43	4,392.28	18.35	15.80	140.26	-409.27	-511.90	1,065.65	1,037.47	28.17	37.824	
4,700.00	4,615.49	4,544.42	4,486.74	18.82	16.19	140.27	-420.11	-525.05	1,093.71	1,064.85	28.86	37.901	
4,800.00	4,713.22	4,640.40	4,581.19	19.29	16.59	140.28	-430.96	-538.20	1,121.77	1,092.23	29.54	37.975	
4,900.00	4,810.94	4,736.38	4,675.65	19.76	16.98	140.30	-441.81	-551.35	1,149.83	1,119.61	30.22	38.046	

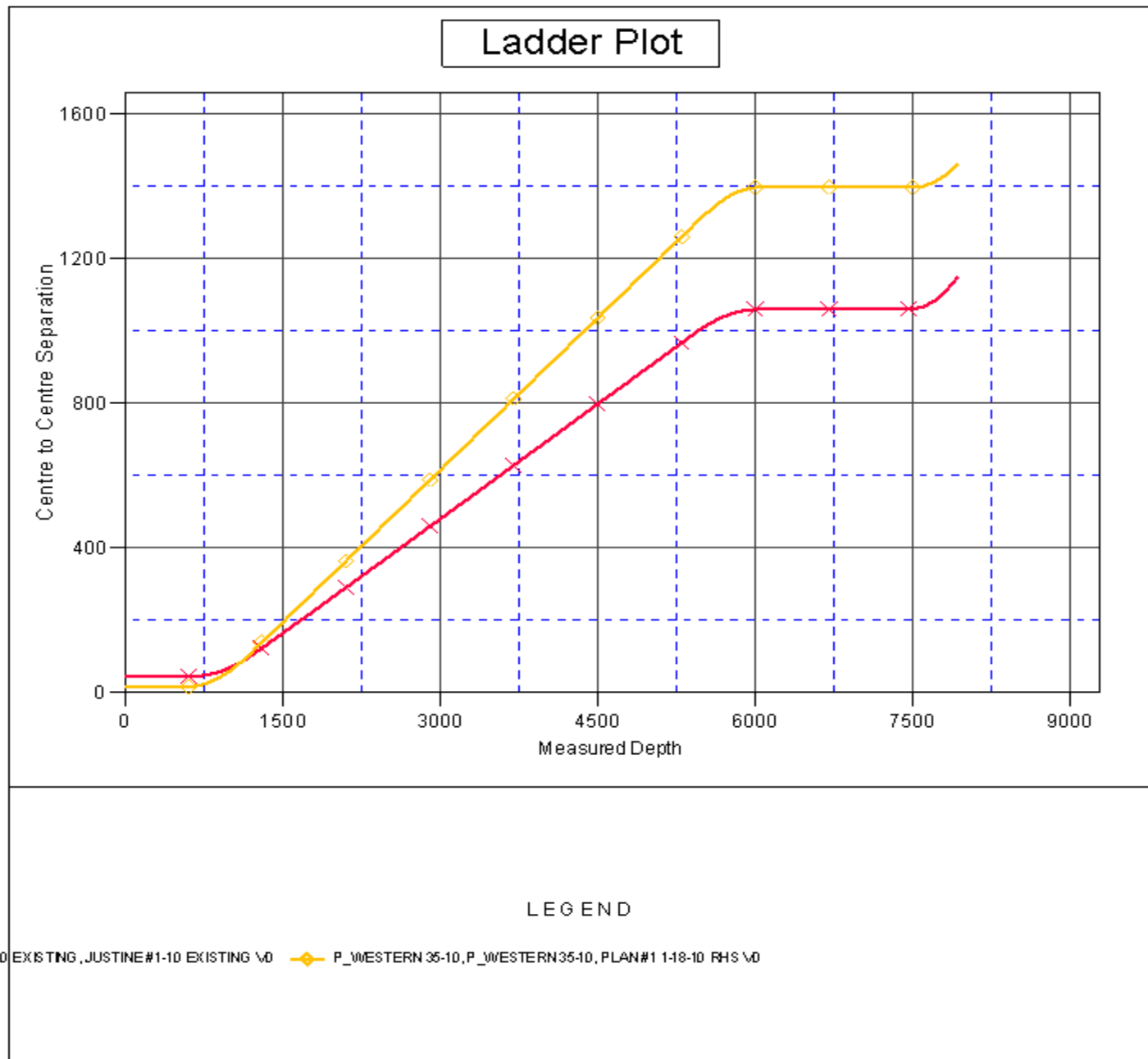
CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Company:	US ROCKIES REGION PLANNING	Local Co-ordinate Reference:	Well P_WESTERN 28-15
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 28-15	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00ft	Output errors are at	2.00 sigma
Reference Wellbore	P_WESTERN 28-15	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						
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning
5,000.00	4,908.67	4,832.36	4,770.11	20.23	17.38	140.31	-452.65	-564.49	1,177.89	1,146.98	30.90	38.115	
5,100.00	5,006.40	4,928.35	4,864.56	20.70	17.77	140.32	-463.50	-577.64	1,205.95	1,174.36	31.58	38.181	
5,200.00	5,104.12	5,024.33	4,959.02	21.17	18.17	140.33	-474.34	-590.79	1,234.01	1,201.74	32.27	38.236	
5,300.00	5,201.85	5,120.31	5,053.48	21.64	18.56	140.34	-485.19	-603.94	1,262.07	1,229.10	32.97	38.281	
5,400.00	5,299.57	5,216.29	5,147.93	22.11	18.96	140.35	-496.04	-617.09	1,290.13	1,256.47	33.66	38.325	
5,432.78	5,331.61	5,247.75	5,178.89	22.27	19.09	140.35	-499.59	-621.40	1,299.33	1,265.44	33.89	38.338	
5,500.00	5,397.46	5,312.44	5,242.55	22.53	19.35	140.58	-506.90	-630.27	1,317.61	1,283.22	34.39	38.313	
5,600.00	5,495.97	5,409.23	5,337.80	22.82	19.75	140.80	-517.84	-643.53	1,342.62	1,307.57	35.06	38.298	
5,700.00	5,595.02	5,520.44	5,447.30	23.08	20.16	140.87	-530.20	-658.51	1,364.87	1,329.17	35.70	38.230	
5,800.00	5,694.48	5,665.16	5,590.63	23.29	20.52	140.86	-542.86	-673.87	1,381.99	1,345.72	36.27	38.102	
5,900.00	5,794.25	5,812.09	5,736.99	23.46	20.82	140.86	-551.00	-683.73	1,393.07	1,356.32	36.74	37.912	
6,000.00	5,894.19	5,960.27	5,885.06	23.59	21.03	140.89	-554.36	-687.80	1,398.02	1,360.90	37.12	37.662	
6,044.82	5,939.00	6,014.21	5,939.00	23.64	21.10	-81.52	-554.44	-687.91	1,398.35	1,361.10	37.25	37.536	
6,100.00	5,994.18	6,069.40	5,994.18	23.71	21.17	-81.52	-554.44	-687.91	1,398.35	1,360.95	37.40	37.389	
6,200.00	6,094.18	6,169.40	6,094.18	23.81	21.28	-81.52	-554.44	-687.91	1,398.35	1,360.70	37.65	37.137	
6,300.00	6,194.18	6,269.40	6,194.18	23.91	21.40	-81.52	-554.44	-687.91	1,398.35	1,360.44	37.91	36.884	
6,400.00	6,294.18	6,369.40	6,294.18	24.02	21.52	-81.52	-554.44	-687.91	1,398.35	1,360.18	38.17	36.631	
6,500.00	6,394.18	6,469.40	6,394.18	24.13	21.64	-81.52	-554.44	-687.91	1,398.35	1,359.91	38.44	36.378	
6,600.00	6,494.18	6,569.40	6,494.18	24.24	21.77	-81.52	-554.44	-687.91	1,398.35	1,359.64	38.71	36.126	
6,700.00	6,594.18	6,669.40	6,594.18	24.35	21.89	-81.52	-554.44	-687.91	1,398.35	1,359.37	38.98	35.874	
6,800.00	6,694.18	6,769.40	6,694.18	24.47	22.02	-81.52	-554.44	-687.91	1,398.35	1,359.10	39.25	35.623	
6,900.00	6,794.18	6,869.40	6,794.18	24.58	22.15	-81.52	-554.44	-687.91	1,398.35	1,358.82	39.53	35.372	
7,000.00	6,894.18	6,969.40	6,894.18	24.70	22.28	-81.52	-554.44	-687.91	1,398.35	1,358.54	39.81	35.122	
7,100.00	6,994.18	7,069.40	6,994.18	24.82	22.41	-81.52	-554.44	-687.91	1,398.35	1,358.25	40.10	34.873	
7,200.00	7,094.18	7,169.40	7,094.18	24.93	22.54	-81.52	-554.44	-687.91	1,398.35	1,357.96	40.39	34.624	
7,300.00	7,194.18	7,269.40	7,194.18	25.06	22.68	-81.52	-554.44	-687.91	1,398.35	1,357.67	40.68	34.377	
7,400.00	7,294.18	7,369.40	7,294.18	25.18	22.81	-81.52	-554.44	-687.91	1,398.35	1,357.38	40.97	34.131	
7,500.00	7,394.18	7,469.40	7,394.18	25.30	22.95	-81.52	-554.44	-687.91	1,398.35	1,357.09	41.27	33.886	
7,600.00	7,494.18	7,470.21	7,395.00	25.43	22.95	-81.52	-554.44	-687.91	1,401.86	1,360.45	41.41	33.850	
7,700.00	7,594.18	7,470.21	7,395.00	25.55	22.95	-81.52	-554.44	-687.91	1,412.47	1,370.90	41.56	33.984	
7,800.00	7,694.18	7,470.21	7,395.00	25.68	22.95	-81.52	-554.44	-687.91	1,430.00	1,388.29	41.71	34.282	
7,900.00	7,794.18	7,470.21	7,395.00	25.81	22.95	-81.52	-554.44	-687.91	1,454.21	1,412.35	41.86	34.737	
7,925.82	7,820.00	7,470.21	7,395.00	25.84	22.95	-81.52	-554.44	-687.91	1,461.51	1,419.61	41.90	34.878	

Company:	US ROCKIES REGION PLANNING	Local Co-ordinate Reference:	Well P_WESTERN 28-15
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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 28-15	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00ft	Output errors are at	2.00 sigma
Reference Wellbore	P_WESTERN 28-15	Database:	EDM 2003.21 Single User Db
Reference Design:	PLAN #1 1-18-10 RHS	Offset TVD Reference:	Offset Datum

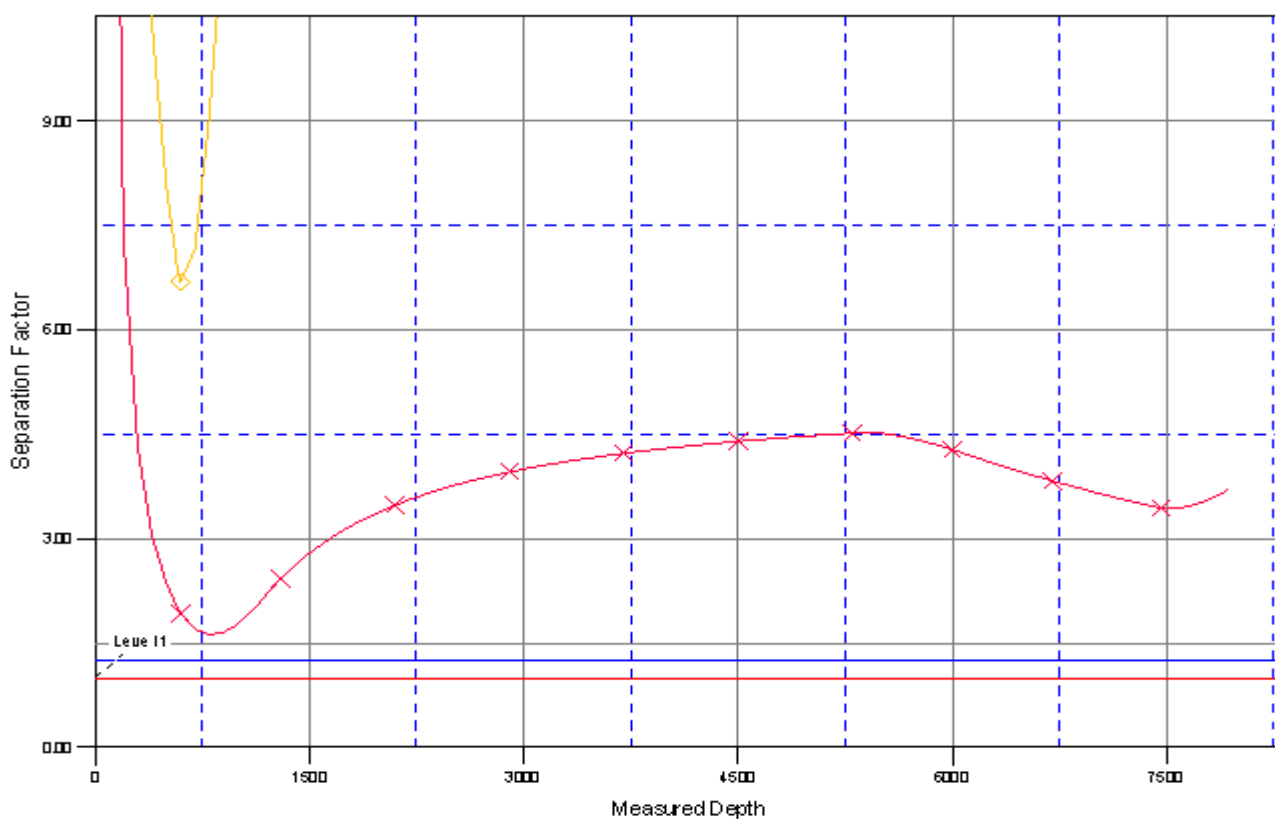
Reference Depths are relative to WELL @ 4738.00ft (Original Well Elev) Coordinates are relative to: P_WESTERN 28-15
Offset Depths are relative to Offset Datum Coordinate System is US State Plane 1983, Colorado Northern Zone
Central Meridian is 105° 30' 0.000 W ° Grid Convergence at Surface is: 0.47°



Company:	US ROCKIES REGION PLANNING	Local Co-ordinate Reference:	Well P_WESTERN 28-15
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 28-15	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00ft	Output errors are at	2.00 sigma
Reference Wellbore	P_WESTERN 28-15	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 28-15
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 35-10, P_WESTERN 35-10, PLAN#1 1-18-10 RHS \0