



# **US ROCKIES REGION PLANNING**

**KERR MCGEE OIL & GAS ONSHORE LP**

**WELD\_RASMUSSEN 9 PAD**

**P\_RASMUSSEN 36-29**

**P\_RASMUSSEN 36-29**

**Plan: PLAN #1 09-02-09 RHS**

## **Standard Planning Report**

**02 September, 2009**





P\_RASMUSSEN 36-29  
KERR MCGEE OIL & GAS ONSHORE LP  
SECTION 29 T2N R68W  
682 FSL 1963 FWL  
LAT: 40° 6' 15.120 N  
LONG: 105° 1' 29.028 W



Azimuths to True North  
Magnetic North: 9.18°  
Magnetic Field  
Strength: 53153.0snT  
Dip Angle: 66.83°  
Date: 9/2/2009  
Model: IGRF200510

WELL DETAILS: P\_RASMUSSEN 36-29

+N/-S	+E/-W	Northing	Easting	Ground Level:	Latitude	Longitude	Slot
0.00	0.00	1281160.64	3132944.52	4934.00	40° 6' 15.120 N	105° 1' 29.028 W	

FORMATION TOP DETAILS

TVDPath	MDPath	Formation
3861.00	3995.79	PARKMAN
4396.00	4533.94	SUSSEX TOP
4809.00	4946.94	SHANNON TOP
7227.00	7364.94	NIO A TOP
7522.00	7659.94	CODELL TOP

SECTION DETAILS

MD	Inc	Azi	TVD	+N/-S	+E/-W	DLeg	TFace	VSoc	Target
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
780.00	0.00	0.00	780.00	0.00	0.00	0.00	0.00	0.00	
1740.95	19.22	227.21	1723.04	-108.45	-117.18	2.00	227.21	159.66	
3572.99	19.22	227.21	3452.96	-518.09	-559.78	0.00	0.00	762.74	
4533.94	0.00	0.00	4396.00	-626.54	-676.95	2.00	180.00	922.40	
7819.94	0.00	0.00	7682.00	-626.54	-676.95	0.00	0.00	922.40	PBHL_RASMUSSEN 36-29(50 FSL 2640 FEL)50' TGT RAD

CASING DETAILS

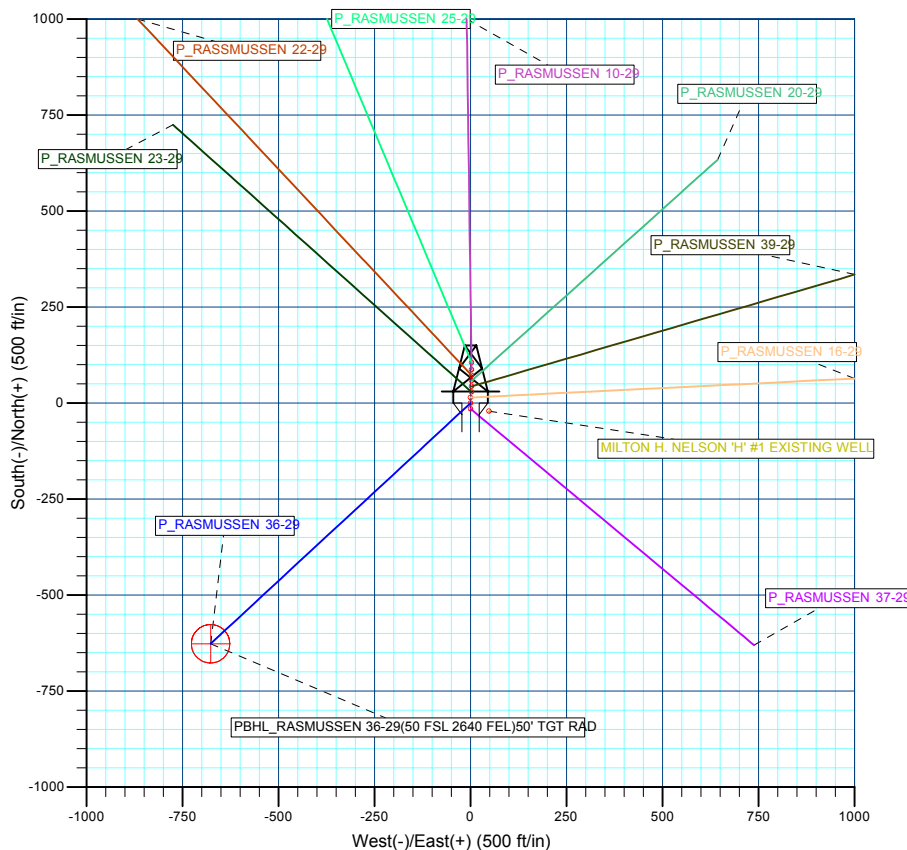
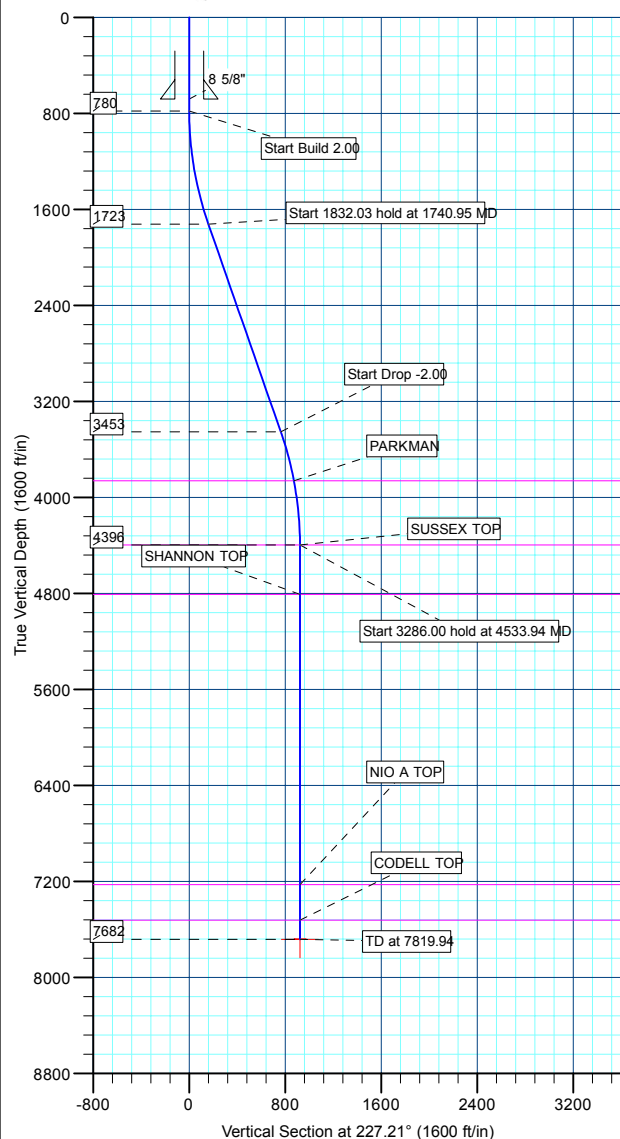
TVD	MD	Name	Size
680.00	680.00	8 5/8"	8.62

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

Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Shape
PBHL	7682.00	-626.54	-676.95	1280530.48	3132270.94	40° 6' 8.928 N	105° 1' 37.740 W	Circle (Radius: 50.00)



KB ELEV: WELL @ 4949.00ft (Original Well Elev)  
GRD ELEV: 4934.00



Plan: PLAN #1 09-02-09 RHS (P\_RASMUSSEN 36-29/P\_RASMUSSEN 36-29)

Created By: Robert H. Scott



<b>Database:</b>	EDM 2003.21 Single User Db	<b>Local Co-ordinate Reference:</b>	Well P_RASMUSSEN 36-29
<b>Company:</b>	US ROCKIES REGION PLANNING	<b>TVD Reference:</b>	WELL @ 4949.00ft (Original Well Elev)
<b>Project:</b>	KERR MCGEE OIL & GAS ONSHORE LP	<b>MD Reference:</b>	WELL @ 4949.00ft (Original Well Elev)
<b>Site:</b>	WELD_RASMUSSEN 9 PAD	<b>North Reference:</b>	True
<b>Well:</b>	P_RASMUSSEN 36-29	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	P_RASMUSSEN 36-29		
<b>Design:</b>	PLAN #1 09-02-09 RHS		

<b>Project</b>	KERR MCGEE OIL & GAS ONSHORE LP, KERR MCGEE OIL & GAS ONSHORE LP		
<b>Map System:</b>	US State Plane 1983	<b>System Datum:</b>	Mean Sea Level
<b>Geo Datum:</b>	North American Datum 1983		
<b>Map Zone:</b>	Colorado Northern Zone		

Site		WELD_RASMUSSEN 9 PAD, SECTION 29 T2N R68W			
Site Position:		Northing:	1,281,248.09 ft	Latitude:	40° 6' 15.984 N
From:	Lat/Long	Easting:	3,132,946.85 ft	Longitude:	105° 1' 28.992 W
Position Uncertainty:	0.00 ft	Slot Radius:	in	Grid Convergence:	0.31 °

Well	P_RASMUSSEN 36-29					
Well Position	+N/-S	-87.44 ft	Northing:	1,281,160.64 ft	Latitude:	40° 6' 15.120 N
	+E/-W	-2.80 ft	Easting:	3,132,944.52 ft	Longitude:	105° 1' 29.028 W
Position Uncertainty		0.00 ft	Wellhead Elevation:	ft	Ground Level:	4,934.00 ft

<b>Wellbore</b>	P_RASMUSSEN 36-29				
<b>Magnetics</b>	<b>Model Name</b>	<b>Sample Date</b>	<b>Declination (°)</b>	<b>Dip Angle (°)</b>	<b>Field Strength (nT)</b>
	IGRF200510	9/2/2009	9.18	66.84	53,153

<b>Design</b>	PLAN #1 09-02-09 RHS			
<b>Audit Notes:</b>				
<b>Version:</b>	<b>Phase:</b>	PLAN	<b>Tie On Depth:</b>	0.00
<b>Vertical Section:</b>	<b>Depth From (TVD) (ft)</b>	<b>+N/-S (ft)</b>	<b>+E/-W (ft)</b>	<b>Direction (°)</b>
	0.00	0.00	0.00	227.21

<b>Plan Sections</b>										
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	
780.00	0.00	0.00	780.00	0.00	0.00	0.00	0.00	0.00	0.00	
1,740.95	19.22	227.21	1,723.04	-108.45	-117.18	2.00	2.00	0.00	227.21	
3,572.99	19.22	227.21	3,452.96	-518.09	-559.78	0.00	0.00	0.00	0.00	
4,533.94	0.00	0.00	4,396.00	-626.54	-676.95	2.00	-2.00	0.00	180.00	
7,819.94	0.00	0.00	7,682.00	-626.54	-676.95	0.00	0.00	0.00	0.00	PBHL_RASMUSSE



<b>Database:</b>	EDM 2003.21 Single User Db	<b>Local Co-ordinate Reference:</b>	Well P_RASMUSSEN 36-29
<b>Company:</b>	US ROCKIES REGION PLANNING	<b>TVD Reference:</b>	WELL @ 4949.00ft (Original Well Elev)
<b>Project:</b>	KERR MCGEE OIL & GAS ONSHORE LP	<b>MD Reference:</b>	WELL @ 4949.00ft (Original Well Elev)
<b>Site:</b>	WELD_RASMUSSEN 9 PAD	<b>North Reference:</b>	True
<b>Well:</b>	P_RASMUSSEN 36-29	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	P_RASMUSSEN 36-29		
<b>Design:</b>	PLAN #1 09-02-09 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)
<b>Start Build 2.00</b>									
780.00	0.00	0.00	780.00	0.00	0.00	0.00	0.00	0.00	0.00
800.00	0.40	227.21	800.00	-0.05	-0.05	0.07	2.00	2.00	0.00
900.00	2.40	227.21	899.96	-1.71	-1.84	2.51	2.00	2.00	0.00
1,000.00	4.40	227.21	999.78	-5.74	-6.20	8.44	2.00	2.00	0.00
1,100.00	6.40	227.21	1,099.33	-12.13	-13.10	17.85	2.00	2.00	0.00
1,200.00	8.40	227.21	1,198.50	-20.88	-22.55	30.73	2.00	2.00	0.00
1,300.00	10.40	227.21	1,297.15	-31.97	-34.54	47.06	2.00	2.00	0.00
1,400.00	12.40	227.21	1,395.17	-45.39	-49.05	66.83	2.00	2.00	0.00
1,500.00	14.40	227.21	1,492.44	-61.13	-66.05	90.00	2.00	2.00	0.00
1,600.00	16.40	227.21	1,588.85	-79.17	-85.54	116.56	2.00	2.00	0.00
1,700.00	18.40	227.21	1,684.27	-99.48	-107.49	146.46	2.00	2.00	0.00
<b>Start 1832.03 hold at 1740.95 MD</b>									
1,740.95	19.22	227.21	1,723.04	-108.45	-117.18	159.66	2.00	2.00	0.00
1,800.00	19.22	227.21	1,778.79	-121.65	-131.44	179.10	0.00	0.00	0.00
1,900.00	19.22	227.21	1,873.22	-144.01	-155.60	212.02	0.00	0.00	0.00
2,000.00	19.22	227.21	1,967.64	-166.37	-179.76	244.94	0.00	0.00	0.00
2,100.00	19.22	227.21	2,062.07	-188.73	-203.92	277.86	0.00	0.00	0.00
2,200.00	19.22	227.21	2,156.50	-211.09	-228.08	310.77	0.00	0.00	0.00
2,300.00	19.22	227.21	2,250.92	-233.45	-252.24	343.69	0.00	0.00	0.00
2,400.00	19.22	227.21	2,345.35	-255.81	-276.40	376.61	0.00	0.00	0.00
2,500.00	19.22	227.21	2,439.78	-278.17	-300.55	409.53	0.00	0.00	0.00
2,600.00	19.22	227.21	2,534.20	-300.53	-324.71	442.45	0.00	0.00	0.00
2,700.00	19.22	227.21	2,628.63	-322.89	-348.87	475.36	0.00	0.00	0.00
2,800.00	19.22	227.21	2,723.06	-345.25	-373.03	508.28	0.00	0.00	0.00
2,900.00	19.22	227.21	2,817.48	-367.61	-397.19	541.20	0.00	0.00	0.00
3,000.00	19.22	227.21	2,911.91	-389.97	-421.35	574.12	0.00	0.00	0.00
3,100.00	19.22	227.21	3,006.34	-412.33	-445.51	607.04	0.00	0.00	0.00
3,200.00	19.22	227.21	3,100.76	-434.69	-469.67	639.95	0.00	0.00	0.00
3,300.00	19.22	227.21	3,195.19	-457.05	-493.82	672.87	0.00	0.00	0.00
3,400.00	19.22	227.21	3,289.62	-479.41	-517.98	705.79	0.00	0.00	0.00
3,500.00	19.22	227.21	3,384.04	-501.77	-542.14	738.71	0.00	0.00	0.00
<b>Start Drop -2.00</b>									
3,572.99	19.22	227.21	3,452.96	-518.09	-559.78	762.74	0.00	0.00	0.00
3,600.00	18.68	227.21	3,478.51	-524.05	-566.21	771.51	2.00	-2.00	0.00
3,700.00	16.68	227.21	3,573.78	-544.67	-588.50	801.87	2.00	-2.00	0.00
3,800.00	14.68	227.21	3,670.06	-563.03	-608.33	828.90	2.00	-2.00	0.00
3,900.00	12.68	227.21	3,767.22	-579.09	-625.69	852.54	2.00	-2.00	0.00
<b>PARKMAN</b>									
3,995.79	10.76	227.21	3,861.00	-592.31	-639.97	872.00	2.00	-2.00	0.00
4,000.00	10.68	227.21	3,865.14	-592.84	-640.54	872.79	2.00	-2.00	0.00
4,100.00	8.68	227.21	3,963.71	-604.26	-652.88	889.60	2.00	-2.00	0.00
4,200.00	6.68	227.21	4,062.81	-613.34	-662.69	902.96	2.00	-2.00	0.00
4,300.00	4.68	227.21	4,162.32	-620.06	-669.95	912.85	2.00	-2.00	0.00
4,400.00	2.68	227.21	4,262.10	-624.42	-674.66	919.27	2.00	-2.00	0.00
4,500.00	0.68	227.21	4,362.06	-626.41	-676.81	922.20	2.00	-2.00	0.00
<b>Start 3286.00 hold at 4533.94 MD - SUSSEX TOP</b>									
4,533.94	0.00	0.00	4,396.00	-626.54	-676.95	922.40	2.00	-2.00	0.00
4,600.00	0.00	0.00	4,462.06	-626.54	-676.95	922.40	0.00	0.00	0.00
4,700.00	0.00	0.00	4,562.06	-626.54	-676.95	922.40	0.00	0.00	0.00
4,800.00	0.00	0.00	4,662.06	-626.54	-676.95	922.40	0.00	0.00	0.00
4,900.00	0.00	0.00	4,762.06	-626.54	-676.95	922.40	0.00	0.00	0.00
<b>SHANNON TOP</b>									



<b>Database:</b>	EDM 2003.21 Single User Db	<b>Local Co-ordinate Reference:</b>	Well P_RASMUSSEN 36-29
<b>Company:</b>	US ROCKIES REGION PLANNING	<b>TVD Reference:</b>	WELL @ 4949.00ft (Original Well Elev)
<b>Project:</b>	KERR MCGEE OIL & GAS ONSHORE LP	<b>MD Reference:</b>	WELL @ 4949.00ft (Original Well Elev)
<b>Site:</b>	WELD_RASMUSSEN 9 PAD	<b>North Reference:</b>	True
<b>Well:</b>	P_RASMUSSEN 36-29	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	P_RASMUSSEN 36-29		
<b>Design:</b>	PLAN #1 09-02-09 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)
4,946.94	0.00	0.00	4,809.00	-626.54	-676.95	922.40	0.00	0.00	0.00
5,000.00	0.00	0.00	4,862.06	-626.54	-676.95	922.40	0.00	0.00	0.00
5,100.00	0.00	0.00	4,962.06	-626.54	-676.95	922.40	0.00	0.00	0.00
5,200.00	0.00	0.00	5,062.06	-626.54	-676.95	922.40	0.00	0.00	0.00
5,300.00	0.00	0.00	5,162.06	-626.54	-676.95	922.40	0.00	0.00	0.00
5,400.00	0.00	0.00	5,262.06	-626.54	-676.95	922.40	0.00	0.00	0.00
5,500.00	0.00	0.00	5,362.06	-626.54	-676.95	922.40	0.00	0.00	0.00
5,600.00	0.00	0.00	5,462.06	-626.54	-676.95	922.40	0.00	0.00	0.00
5,700.00	0.00	0.00	5,562.06	-626.54	-676.95	922.40	0.00	0.00	0.00
5,800.00	0.00	0.00	5,662.06	-626.54	-676.95	922.40	0.00	0.00	0.00
5,900.00	0.00	0.00	5,762.06	-626.54	-676.95	922.40	0.00	0.00	0.00
6,000.00	0.00	0.00	5,862.06	-626.54	-676.95	922.40	0.00	0.00	0.00
6,100.00	0.00	0.00	5,962.06	-626.54	-676.95	922.40	0.00	0.00	0.00
6,200.00	0.00	0.00	6,062.06	-626.54	-676.95	922.40	0.00	0.00	0.00
6,300.00	0.00	0.00	6,162.06	-626.54	-676.95	922.40	0.00	0.00	0.00
6,400.00	0.00	0.00	6,262.06	-626.54	-676.95	922.40	0.00	0.00	0.00
6,500.00	0.00	0.00	6,362.06	-626.54	-676.95	922.40	0.00	0.00	0.00
6,600.00	0.00	0.00	6,462.06	-626.54	-676.95	922.40	0.00	0.00	0.00
6,700.00	0.00	0.00	6,562.06	-626.54	-676.95	922.40	0.00	0.00	0.00
6,800.00	0.00	0.00	6,662.06	-626.54	-676.95	922.40	0.00	0.00	0.00
6,900.00	0.00	0.00	6,762.06	-626.54	-676.95	922.40	0.00	0.00	0.00
7,000.00	0.00	0.00	6,862.06	-626.54	-676.95	922.40	0.00	0.00	0.00
7,100.00	0.00	0.00	6,962.06	-626.54	-676.95	922.40	0.00	0.00	0.00
7,200.00	0.00	0.00	7,062.06	-626.54	-676.95	922.40	0.00	0.00	0.00
7,300.00	0.00	0.00	7,162.06	-626.54	-676.95	922.40	0.00	0.00	0.00
<b>NIO A TOP</b>									
7,364.94	0.00	0.00	7,227.00	-626.54	-676.95	922.40	0.00	0.00	0.00
7,400.00	0.00	0.00	7,262.06	-626.54	-676.95	922.40	0.00	0.00	0.00
7,500.00	0.00	0.00	7,362.06	-626.54	-676.95	922.40	0.00	0.00	0.00
7,600.00	0.00	0.00	7,462.06	-626.54	-676.95	922.40	0.00	0.00	0.00
<b>CODELL TOP</b>									
7,659.94	0.00	0.00	7,522.00	-626.54	-676.95	922.40	0.00	0.00	0.00
7,700.00	0.00	0.00	7,562.06	-626.54	-676.95	922.40	0.00	0.00	0.00
7,800.00	0.00	0.00	7,662.06	-626.54	-676.95	922.40	0.00	0.00	0.00
<b>PBHL_RASMUSSEN 36-29(50 FSL 2640 FEL)50' TGT RAD</b>									
7,819.94	0.00	0.00	7,682.00	-626.54	-676.95	922.40	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_RASMUSSEN	0.00	0.00	7,682.00	-626.54	-676.95	1,280,530.48	3,132,270.94	40° 6' 8.928 N	105° 1' 37.740 W
- plan hits target center									
- Circle (radius 50.00)									



<b>Database:</b>	EDM 2003.21 Single User Db	<b>Local Co-ordinate Reference:</b>	Well P_RASMUSSEN 36-29
<b>Company:</b>	US ROCKIES REGION PLANNING	<b>TVD Reference:</b>	WELL @ 4949.00ft (Original Well Elev)
<b>Project:</b>	KERR MCGEE OIL & GAS ONSHORE LP	<b>MD Reference:</b>	WELL @ 4949.00ft (Original Well Elev)
<b>Site:</b>	WELD_RASMUSSEN 9 PAD	<b>North Reference:</b>	True
<b>Well:</b>	P_RASMUSSEN 36-29	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	P_RASMUSSEN 36-29		
<b>Design:</b>	PLAN #1 09-02-09 RHS		

Casing Points					
Measured Depth (ft)	Vertical Depth (ft)	Name	Casing Diameter (in)	Hole Diameter (in)	
680.00	680.00	8 5/8"	8.62	11.00	

Formations						
Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)	
3,995.79	3,861.00	PARKMAN				
4,533.94	4,396.00	SUSSEX TOP				
4,946.94	4,809.00	SHANNON TOP				
7,364.94	7,227.00	NIO A TOP				
7,659.94	7,522.00	CODELL TOP				

Plan Annotations					
Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates			
		+N/-S (ft)	+E/-W (ft)	Comment	
780.00	780.00	0.00	0.00	Start Build 2.00	
1,740.95	1,723.04	-108.45	-117.18	Start 1832.03 hold at 1740.95 MD	
3,572.99	3,452.96	-518.09	-559.78	Start Drop -2.00	
4,533.94	4,396.00	-626.54	-676.95	Start 3286.00 hold at 4533.94 MD	
7,819.94	7,682.00	-626.54	-676.95	TD at 7819.94	



# **US ROCKIES REGION PLANNING**

**KERR MCGEE OIL & GAS ONSHORE LP  
WELD\_RASMUSSEN 9 PAD  
P\_RASMUSSEN 36-29**

**P\_RASMUSSEN 36-29  
PLAN #1 09-02-09 RHS**

## **Anticollision Report**

**02 September, 2009**





Company:	US ROCKIES REGION PLANNING	Local Co-ordinate Reference:	Well P_RASMUSSEN 36-29
Project:	KERR MCGEE OIL & GAS ONSHORE LP	TVD Reference:	WELL @ 4949.00ft (Original Well Elev)
Reference Site:	WELD_RASMUSSEN 9 PAD	MD Reference:	WELL @ 4949.00ft (Original Well Elev)
Site Error:	0.00ft	North Reference:	True
Reference Well:	P_RASMUSSEN 36-29	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00ft	Output errors are at	2.00 sigma
Reference Wellbore	P_RASMUSSEN 36-29	Database:	EDM 2003.21 Single User Db
Reference Design:	PLAN #1 09-02-09 RHS	Offset TVD Reference:	Offset Datum

Reference	PLAN #1 09-02-09 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 9/2/2009			
From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description
0.00	7,819.94	PLAN #1 09-02-09 RHS (P_RASMUSSEN	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_RASMUSSEN 9 PAD						
MILTON H. NELSON 'H' #1 EXISTING WELL - MILTON	780.00	780.00	52.53	22.01	1.721	CC
MILTON H. NELSON 'H' #1 EXISTING WELL - MILTON	1,000.00	999.78	56.50	16.79	1.423	Level 3, ES
MILTON H. NELSON 'H' #1 EXISTING WELL - MILTON	1,100.00	1,099.33	61.98	18.16	1.414	Level 3, SF
P_RASMUSSEN 10-29 - P_RASMUSSEN 10-29 - PLAN	737.33	737.33	87.48	84.42	28.625	CC
P_RASMUSSEN 10-29 - P_RASMUSSEN 10-29 - PLAN	780.00	779.11	87.63	84.39	26.999	ES
P_RASMUSSEN 10-29 - P_RASMUSSEN 10-29 - PLAN	900.00	895.32	93.06	89.33	24.964	SF
P_RASMUSSEN 16-29 - P_RASMUSSEN 16-29 - PLAN	780.00	780.00	14.57	11.32	4.486	CC
P_RASMUSSEN 16-29 - P_RASMUSSEN 16-29 - PLAN	800.00	800.00	14.62	11.29	4.388	ES, SF
P_RASMUSSEN 20-29 - P_RASMUSSEN 20-29 - PLAN	737.36	737.36	58.33	55.28	19.088	CC
P_RASMUSSEN 20-29 - P_RASMUSSEN 20-29 - PLAN	780.00	779.58	58.44	55.20	18.008	ES
P_RASMUSSEN 20-29 - P_RASMUSSEN 20-29 - PLAN	900.00	897.59	63.01	59.28	16.919	SF
P_RASMUSSEN 23-29 - P_RASMUSSEN 23-29 - PLAN	737.41	737.41	29.28	26.22	9.579	CC
P_RASMUSSEN 23-29 - P_RASMUSSEN 23-29 - PLAN	780.00	779.82	29.37	26.12	9.047	ES
P_RASMUSSEN 23-29 - P_RASMUSSEN 23-29 - PLAN	800.00	799.69	29.59	26.26	8.885	SF
P_RASMUSSEN 25-29 - P_RASMUSSEN 25-29 - PLAN	780.00	780.00	105.67	102.43	32.536	CC
P_RASMUSSEN 25-29 - P_RASMUSSEN 25-29 - PLAN	800.00	800.00	105.72	102.39	31.721	ES
P_RASMUSSEN 25-29 - P_RASMUSSEN 25-29 - PLAN	1,100.00	1,093.50	122.77	118.21	26.921	SF
P_RASMUSSEN 37-29 - P_RASMUSSEN 37-29 - PLAN	855.33	855.10	14.43	10.90	4.085	CC, ES
P_RASMUSSEN 37-29 - P_RASMUSSEN 37-29 - PLAN	900.00	899.54	14.62	10.93	3.958	SF
P_RASMUSSEN 39-29 - P_RASMUSSEN 39-29 - PLAN	780.00	780.00	43.80	40.55	13.485	CC
P_RASMUSSEN 39-29 - P_RASMUSSEN 39-29 - PLAN	800.00	799.90	43.87	40.54	13.173	ES
P_RASMUSSEN 39-29 - P_RASMUSSEN 39-29 - PLAN	900.00	899.18	46.65	42.93	12.548	SF
P_RASMUSSEN 22-29 - P_RASMUSSEN 22-29 - PI	780.00	780.00	72.91	69.66	22.447	CC
P_RASMUSSEN 22-29 - P_RASMUSSEN 22-29 - PI	800.00	800.00	72.95	69.62	21.890	ES
P_RASMUSSEN 22-29 - P_RASMUSSEN 22-29 - PI	1,000.00	998.64	79.57	75.42	19.184	SF

Offset Design	WELD_RASMUSSEN 9 PAD - MILTON H. NELSON 'H' #1 EXISTING WELL - MILTON H. NELSON 'H'											Offset Site Error:	0.00 ft
Survey Program:	0-UNKNOWN											Offset Well Error:	0.00 ft
Reference	Offset	Semi Major Axis		Distance									
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning
0.00	0.00	0.00	0.00	0.00	0.00	113.20	-20.69	48.28	52.53				
100.00	100.00	100.00	100.00	0.10	1.70	113.20	-20.69	48.28	52.53	50.74	1.80	29.257	
200.00	200.00	200.00	200.00	0.32	5.70	113.20	-20.69	48.28	52.53	46.51	6.02	8.726	

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





<b>Company:</b>	US ROCKIES REGION PLANNING	<b>Local Co-ordinate Reference:</b>	Well P_RASMUSSEN 36-29
<b>Project:</b>	KERR MCGEE OIL & GAS ONSHORE LP	<b>TVD Reference:</b>	WELL @ 4949.00ft (Original Well Elev)
<b>Reference Site:</b>	WELD_RASMUSSEN 9 PAD	<b>MD Reference:</b>	WELL @ 4949.00ft (Original Well Elev)
<b>Site Error:</b>	0.00ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	P_RASMUSSEN 36-29	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.00ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	P_RASMUSSEN 36-29	<b>Database:</b>	EDM 2003.21 Single User Db
<b>Reference Design:</b>	PLAN #1 09-02-09 RHS	<b>Offset TVD Reference:</b>	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	
300.00	300.00	300.00	300.00	0.55	9.70	113.20	-20.69	48.28	52.53	42.29	10.25	5.127	
400.00	400.00	400.00	400.00	0.77	13.70	113.20	-20.69	48.28	52.53	38.06	14.47	3.630	
500.00	500.00	500.00	500.00	0.99	17.70	113.20	-20.69	48.28	52.53	33.84	18.69	2.810	
600.00	600.00	600.00	600.00	1.22	21.70	113.20	-20.69	48.28	52.53	29.61	22.92	2.292	
700.00	700.00	700.00	700.00	1.44	25.70	113.20	-20.69	48.28	52.53	25.39	27.14	1.935	
780.00	780.00	780.00	780.00	1.62	28.90	113.20	-20.69	48.28	52.53	22.01	30.52	1.721 CC	
800.00	800.00	800.00	800.00	1.66	29.70	-114.08	-20.69	48.28	52.56	21.20	31.36	1.676	
900.00	899.96	899.96	899.96	1.85	33.70	-116.45	-20.69	48.28	53.60	18.06	35.54	1.508	
1,000.00	999.78	999.78	999.78	2.04	37.69	-121.79	-20.69	48.28	56.50	16.79	39.70	1.423 Level 3, ES	
1,100.00	1,099.33	1,099.33	1,099.33	2.26	41.67	-129.09	-20.69	48.28	61.98	18.16	43.82	1.414 Level 3, SF	
1,200.00	1,198.50	1,198.50	1,198.50	2.51	45.64	-137.05	-20.69	48.28	70.84	22.98	47.86	1.480 Level 3	
1,300.00	1,297.15	1,297.15	1,297.15	2.79	49.59	-144.52	-20.69	48.28	83.59	31.83	51.76	1.615	
1,400.00	1,395.17	1,395.17	1,395.17	3.13	53.51	-150.88	-20.69	48.28	100.41	44.91	55.51	1.809	
1,500.00	1,492.44	1,492.44	1,492.44	3.52	57.40	-156.02	-20.69	48.28	121.28	62.19	59.09	2.052	
1,600.00	1,588.85	1,588.85	1,588.85	3.97	61.25	-160.07	-20.69	48.28	146.04	83.54	62.50	2.337	
1,700.00	1,684.27	1,684.27	1,684.27	4.49	65.07	-163.23	-20.69	48.28	174.56	108.83	65.73	2.656	
1,740.95	1,723.04	1,723.04	1,723.04	4.72	66.62	-164.32	-20.69	48.28	187.29	120.30	67.00	2.795	
1,800.00	1,778.79	1,778.79	1,778.79	5.07	68.85	-165.78	-20.69	48.28	206.14	136.91	69.23	2.978	
1,900.00	1,873.22	1,873.22	1,873.22	5.67	72.63	-167.72	-20.69	48.28	238.28	165.25	73.03	3.263	
2,000.00	1,967.64	1,967.64	1,967.64	6.29	76.41	-169.20	-20.69	48.28	270.60	193.76	76.85	3.521	
2,100.00	2,062.07	2,062.07	2,062.07	6.93	80.18	-170.36	-20.69	48.28	303.06	222.38	80.68	3.756	
2,200.00	2,156.50	2,156.50	2,156.50	7.57	83.96	-171.30	-20.69	48.28	335.60	251.08	84.52	3.971	
2,300.00	2,250.92	2,250.92	2,250.92	8.22	87.74	-172.08	-20.69	48.28	368.21	279.84	88.37	4.167	
2,400.00	2,345.35	2,345.35	2,345.35	8.87	91.51	-172.72	-20.69	48.28	400.87	308.64	92.23	4.347	
2,500.00	2,439.78	2,439.78	2,439.78	9.53	95.29	-173.27	-20.69	48.28	433.57	337.48	96.09	4.512	
2,600.00	2,534.20	2,534.20	2,534.20	10.19	99.07	-173.75	-20.69	48.28	466.30	366.35	99.95	4.665	
2,700.00	2,628.63	2,628.63	2,628.63	10.85	102.85	-174.16	-20.69	48.28	499.06	395.24	103.82	4.807	
2,800.00	2,723.06	2,723.06	2,723.06	11.52	106.62	-174.52	-20.69	48.28	531.83	424.14	107.69	4.939	
2,900.00	2,817.48	2,817.48	2,817.48	12.19	110.40	-174.84	-20.69	48.28	564.62	453.06	111.56	5.061	
3,000.00	2,911.91	2,911.91	2,911.91	12.85	114.18	-175.12	-20.69	48.28	597.43	481.99	115.43	5.176	
3,100.00	3,006.34	3,006.34	3,006.34	13.53	117.95	-175.38	-20.69	48.28	630.25	510.94	119.31	5.282	
3,200.00	3,100.76	3,100.76	3,100.76	14.20	121.73	-175.61	-20.69	48.28	663.07	539.89	123.19	5.383	
3,300.00	3,195.19	3,195.19	3,195.19	14.87	125.51	-175.81	-20.69	48.28	695.91	568.85	127.06	5.477	
3,400.00	3,289.62	3,289.62	3,289.62	15.54	129.28	-176.00	-20.69	48.28	728.75	597.81	130.94	5.565	
3,500.00	3,384.04	3,384.04	3,384.04	16.22	133.06	-176.18	-20.69	48.28	761.60	626.78	134.82	5.649	
3,572.99	3,452.96	3,452.96	3,452.96	16.71	135.82	-176.29	-20.69	48.28	785.58	647.93	137.65	5.707	
3,600.00	3,478.51	3,478.51	3,478.51	16.87	136.84	-176.34	-20.69	48.28	794.34	655.23	139.11	5.710	
3,700.00	3,573.78	3,573.78	3,573.78	17.34	140.65	-176.52	-20.69	48.28	824.65	680.22	144.43	5.710	
3,800.00	3,670.06	3,670.06	3,670.06	17.77	144.50	-176.66	-20.69	48.28	851.63	701.94	149.69	5.689	
3,900.00	3,767.22	3,767.22	3,767.22	18.16	148.39	-176.78	-20.69	48.28	875.24	720.33	154.91	5.650	
4,000.00	3,865.14	3,865.14	3,865.14	18.51	152.31	-176.87	-20.69	48.28	895.45	735.43	160.02	5.596	
4,100.00	3,963.71	3,963.71	3,963.71	18.82	156.25	-176.95	-20.69	48.28	912.24	747.23	165.00	5.529	
4,200.00	4,062.81	4,062.81	4,062.81	19.08	160.21	-177.01	-20.69	48.28	925.58	755.75	169.84	5.450	
4,300.00	4,162.32	4,162.32	4,162.32	19.29	164.19	-177.05	-20.69	48.28	935.46	760.97	174.50	5.361	
4,400.00	4,262.10	4,262.10	4,262.10	19.47	168.18	-177.08	-20.69	48.28	941.87	762.91	178.96	5.263	
4,500.00	4,362.06	4,362.06	4,362.06	19.59	172.18	-177.09	-20.69	48.28	944.80	761.57	183.22	5.157	
4,533.94	4,396.00	4,396.00	4,396.00	19.63	173.54	50.13	-20.69	48.28	945.00	760.38	184.62	5.119	
4,600.00	4,462.06	4,462.06	4,462.06	19.69	176.18	50.13	-20.69	48.28	945.00	757.63	187.37	5.043	
4,700.00	4,562.06	4,562.06	4,562.06	19.79	180.18	50.13	-20.69	48.28	945.00	753.46	191.54	4.934	
4,800.00	4,662.06	4,662.06	4,662.06	19.89	184.18	50.13	-20.69	48.28	945.00	749.29	195.71	4.829	
4,900.00	4,762.06	4,762.06	4,762.06	19.99	188.18	50.13	-20.69	48.28	945.00	745.12	199.88	4.728	
5,000.00	4,862.06	4,862.06	4,862.06	20.09	192.18	50.13	-20.69	48.28	945.00	740.95	204.05	4.631	

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



# Weatherford International Ltd.

## Anticollision Report



<b>Company:</b>	US ROCKIES REGION PLANNING	<b>Local Co-ordinate Reference:</b>	Well P_RASMUSSEN 36-29
<b>Project:</b>	KERR MCGEE OIL & GAS ONSHORE LP	<b>TVD Reference:</b>	WELL @ 4949.00ft (Original Well Elev)
<b>Reference Site:</b>	WELD_RASMUSSEN 9 PAD	<b>MD Reference:</b>	WELL @ 4949.00ft (Original Well Elev)
<b>Site Error:</b>	0.00ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	P_RASMUSSEN 36-29	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.00ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	P_RASMUSSEN 36-29	<b>Database:</b>	EDM 2003.21 Single User Db
<b>Reference Design:</b>	PLAN #1 09-02-09 RHS	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design WELD_RASMUSSEN 9 PAD - MILTON H. NELSON 'H' #1 EXISTING WELL - MILTON H. NELSON 'H'													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		
5,100.00	4,962.06	4,962.06	4,962.06	20.20	196.18	50.13	-20.69	48.28	945.00	736.78	208.22	4.538		
5,200.00	5,062.06	5,062.06	5,062.06	20.30	200.18	50.13	-20.69	48.28	945.00	732.60	212.40	4.449		
5,300.00	5,162.06	5,162.06	5,162.06	20.41	204.18	50.13	-20.69	48.28	945.00	728.43	216.57	4.363		
5,400.00	5,262.06	5,262.06	5,262.06	20.52	208.18	50.13	-20.69	48.28	945.00	724.25	220.75	4.281		
5,500.00	5,362.06	5,362.06	5,362.06	20.64	212.18	50.13	-20.69	48.28	945.00	720.07	224.93	4.201		
5,600.00	5,462.06	5,462.06	5,462.06	20.75	216.18	50.13	-20.69	48.28	945.00	715.89	229.11	4.125		
5,700.00	5,562.06	5,562.06	5,562.06	20.87	220.18	50.13	-20.69	48.28	945.00	711.71	233.29	4.051		
5,800.00	5,662.06	5,662.06	5,662.06	20.98	224.18	50.13	-20.69	48.28	945.00	707.52	237.48	3.979		
5,900.00	5,762.06	5,762.06	5,762.06	21.10	228.18	50.13	-20.69	48.28	945.00	703.34	241.66	3.910		
6,000.00	5,862.06	5,862.06	5,862.06	21.23	232.18	50.13	-20.69	48.28	945.00	699.15	245.85	3.844		
6,100.00	5,962.06	5,962.06	5,962.06	21.35	236.18	50.13	-20.69	48.28	945.00	694.96	250.03	3.779		
6,200.00	6,062.06	6,062.06	6,062.06	21.47	240.18	50.13	-20.69	48.28	945.00	690.78	254.22	3.717		
6,300.00	6,162.06	6,162.06	6,162.06	21.60	244.18	50.13	-20.69	48.28	945.00	686.59	258.41	3.657		
6,400.00	6,262.06	6,262.06	6,262.06	21.73	248.18	50.13	-20.69	48.28	945.00	682.40	262.60	3.599		
6,500.00	6,362.06	6,362.06	6,362.06	21.86	252.18	50.13	-20.69	48.28	945.00	678.21	266.79	3.542		
6,600.00	6,462.06	6,462.06	6,462.06	21.99	256.18	50.13	-20.69	48.28	945.00	674.01	270.98	3.487		
6,700.00	6,562.06	6,562.06	6,562.06	22.12	260.18	50.13	-20.69	48.28	945.00	669.82	275.18	3.434		
6,800.00	6,662.06	6,662.06	6,662.06	22.26	264.18	50.13	-20.69	48.28	945.00	665.63	279.37	3.383		
6,900.00	6,762.06	6,762.06	6,762.06	22.39	268.18	50.13	-20.69	48.28	945.00	661.43	283.57	3.333		
7,000.00	6,862.06	6,862.06	6,862.06	22.53	272.18	50.13	-20.69	48.28	945.00	657.24	287.76	3.284		
7,100.00	6,962.06	6,962.06	6,962.06	22.67	276.18	50.13	-20.69	48.28	945.00	653.04	291.96	3.237		
7,200.00	7,062.06	7,062.06	7,062.06	22.81	280.18	50.13	-20.69	48.28	945.00	648.84	296.16	3.191		
7,300.00	7,162.06	7,162.06	7,162.06	22.95	284.18	50.13	-20.69	48.28	945.00	644.64	300.35	3.146		
7,400.00	7,262.06	7,262.06	7,262.06	23.09	288.18	50.13	-20.69	48.28	945.00	640.45	304.55	3.103		
7,500.00	7,362.06	7,362.06	7,362.06	23.23	292.18	50.13	-20.69	48.28	945.00	636.25	308.75	3.061		
7,600.00	7,462.06	7,462.06	7,462.06	23.38	296.18	50.13	-20.69	48.28	945.00	632.05	312.95	3.020		
7,700.00	7,562.06	7,562.06	7,562.06	23.53	300.18	50.13	-20.69	48.28	945.00	627.85	317.15	2.980		
7,800.00	7,662.06	7,662.06	7,662.06	23.67	304.18	50.13	-20.69	48.28	945.00	623.65	321.35	2.941		
7,819.94	7,682.00	7,682.00	7,682.00	23.70	304.98	50.13	-20.69	48.28	945.00	622.81	322.19	2.933		



<b>Company:</b>	US ROCKIES REGION PLANNING	<b>Local Co-ordinate Reference:</b>	Well P_RASMUSSEN 36-29
<b>Project:</b>	KERR MCGEE OIL & GAS ONSHORE LP	<b>TVD Reference:</b>	WELL @ 4949.00ft (Original Well Elev)
<b>Reference Site:</b>	WELD_RASMUSSEN 9 PAD	<b>MD Reference:</b>	WELL @ 4949.00ft (Original Well Elev)
<b>Site Error:</b>	0.00ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	P_RASMUSSEN 36-29	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.00ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	P_RASMUSSEN 36-29	<b>Database:</b>	EDM 2003.21 Single User Db
<b>Reference Design:</b>	PLAN #1 09-02-09 RHS	<b>Offset TVD Reference:</b>	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	1.83	87.44	2.80	87.48				
100.00	100.00	100.00	100.00	0.10	0.10	1.83	87.44	2.80	87.48	87.29	0.19	457.888	
200.00	200.00	200.00	200.00	0.32	0.32	1.83	87.44	2.80	87.48	86.84	0.64	136.563	
300.00	300.00	300.00	300.00	0.55	0.55	1.83	87.44	2.80	87.48	86.39	1.09	80.248	
400.00	400.00	400.00	400.00	0.77	0.77	1.83	87.44	2.80	87.48	85.94	1.54	56.818	
500.00	500.00	500.00	500.00	0.99	0.99	1.83	87.44	2.80	87.48	85.49	1.99	43.978	
600.00	600.00	600.00	600.00	1.22	1.22	1.83	87.44	2.80	87.48	85.04	2.44	35.871	
700.00	700.00	700.00	700.00	1.44	1.44	1.83	87.44	2.80	87.48	84.59	2.89	30.288	
737.33	737.33	737.33	737.33	1.53	1.53	1.83	87.44	2.80	87.48	84.42	3.06	28.625 CC	
780.00	780.00	779.11	779.11	1.62	1.62	1.83	87.58	2.80	87.63	84.39	3.25	26.999 ES	
800.00	800.00	798.51	798.51	1.66	1.67	134.63	87.85	2.79	87.95	84.62	3.33	26.416	
900.00	899.96	895.32	895.26	1.85	1.88	135.51	91.12	2.75	93.06	89.33	3.73	24.964 SF	
1,000.00	999.78	991.35	991.07	2.04	2.10	137.35	97.60	2.66	104.07	99.94	4.13	25.182	
1,100.00	1,099.33	1,086.08	1,085.31	2.26	2.33	139.59	107.12	2.52	121.09	116.54	4.54	26.647	
1,200.00	1,198.50	1,178.98	1,177.37	2.51	2.57	141.78	119.49	2.35	144.11	139.15	4.96	29.046	
1,300.00	1,297.15	1,269.58	1,266.73	2.79	2.83	143.67	134.42	2.15	173.08	167.69	5.39	32.131	
1,400.00	1,395.17	1,357.46	1,352.92	3.13	3.12	145.19	151.59	1.91	207.81	201.99	5.82	35.701	
1,500.00	1,492.44	1,442.27	1,435.55	3.52	3.43	146.35	170.66	1.64	248.09	241.83	6.27	39.592	
1,600.00	1,588.85	1,523.69	1,514.32	3.97	3.76	147.20	191.27	1.36	293.67	286.95	6.72	43.675	
1,700.00	1,684.27	1,600.00	1,587.58	4.49	4.10	147.76	212.60	1.06	344.28	337.08	7.19	47.864	
1,740.95	1,723.04	1,632.27	1,618.39	4.72	4.27	147.95	222.21	0.93	366.38	358.99	7.40	49.542	
1,800.00	1,778.79	1,675.77	1,659.74	5.07	4.49	148.51	235.71	0.74	399.19	391.48	7.71	51.755	
1,900.00	1,873.22	1,747.62	1,727.58	5.67	4.88	149.20	259.37	0.41	456.37	448.11	8.26	55.235	
2,000.00	1,967.64	1,817.19	1,792.68	6.29	5.29	149.65	283.90	0.07	515.46	506.64	8.82	58.430	
2,100.00	2,062.07	1,884.53	1,855.10	6.93	5.72	149.94	309.14	-0.28	576.36	566.96	9.39	61.373	
2,200.00	2,156.50	1,949.65	1,914.89	7.57	6.16	150.10	334.94	-0.64	638.95	628.98	9.97	64.104	
2,300.00	2,250.92	2,021.50	1,980.33	8.22	6.68	150.21	364.61	-1.05	702.85	692.28	10.57	66.469	
2,400.00	2,345.35	2,098.32	2,050.25	8.87	7.24	150.29	396.43	-1.49	766.87	755.66	11.20	68.447	
2,500.00	2,439.78	2,175.14	2,120.16	9.53	7.81	150.37	428.25	-1.93	830.88	819.04	11.84	70.161	
2,600.00	2,534.20	2,251.96	2,190.08	10.19	8.38	150.43	460.07	-2.37	894.90	882.41	12.49	71.664	
2,700.00	2,628.63	2,328.78	2,260.00	10.85	8.97	150.49	491.89	-2.82	958.91	945.78	13.14	72.988	
2,800.00	2,723.06	2,405.60	2,329.92	11.52	9.55	150.53	523.71	-3.26	1,022.93	1,009.14	13.79	74.161	
2,900.00	2,817.48	2,482.42	2,399.84	12.19	10.14	150.58	555.53	-3.70	1,086.95	1,072.50	14.45	75.202	
3,000.00	2,911.91	2,559.24	2,469.76	12.85	10.74	150.61	587.35	-4.14	1,150.97	1,135.85	15.12	76.134	
3,100.00	3,006.34	2,636.06	2,539.68	13.53	11.33	150.65	619.17	-4.58	1,214.99	1,199.20	15.78	76.971	
3,200.00	3,100.76	2,712.88	2,609.60	14.20	11.93	150.68	651.00	-5.02	1,279.00	1,262.55	16.45	77.728	
3,300.00	3,195.19	2,789.70	2,679.51	14.87	12.53	150.71	682.82	-5.46	1,343.02	1,325.89	17.13	78.412	
3,400.00	3,289.62	2,866.52	2,749.43	15.54	13.13	150.73	714.64	-5.91	1,407.04	1,389.24	17.80	79.034	
3,500.00	3,384.04	2,943.34	2,819.35	16.22	13.73	150.75	746.46	-6.35	1,471.06	1,452.58	18.48	79.602	
3,572.99	3,452.96	2,999.41	2,870.39	16.71	14.18	150.77	769.68	-6.67	1,517.79	1,498.81	18.98	79.987	
3,600.00	3,478.51	3,020.23	2,889.34	16.87	14.34	150.99	778.31	-6.79	1,534.99	1,515.81	19.18	80.015	
3,700.00	3,573.78	3,098.53	2,960.60	17.34	14.96	151.71	810.74	-7.24	1,597.19	1,577.27	19.92	80.182	
3,800.00	3,670.06	3,178.66	3,033.54	17.77	15.59	152.30	843.93	-7.70	1,656.94	1,636.29	20.65	80.233	
3,900.00	3,767.22	3,260.54	3,108.06	18.16	16.24	152.77	877.85	-8.17	1,714.20	1,692.83	21.37	80.201	
4,000.00	3,865.14	3,344.06	3,184.07	18.51	16.90	153.15	912.44	-8.65	1,768.90	1,746.82	22.08	80.110	
4,100.00	3,963.71	3,429.11	3,261.49	18.82	17.57	153.43	947.67	-9.14	1,821.00	1,798.23	22.77	79.979	
4,200.00	4,062.81	3,515.61	3,340.21	19.08	18.26	153.63	983.50	-9.64	1,870.43	1,847.00	23.43	79.824	
4,300.00	4,162.32	3,603.43	3,420.14	19.29	18.95	153.76	1,019.88	-10.14	1,917.17	1,893.11	24.07	79.655	
4,400.00	4,262.10	3,766.91	3,569.88	19.47	20.06	153.52	1,085.44	-11.05	1,960.40	1,935.49	24.91	78.710	
4,500.00	4,362.06	4,032.09	3,819.76	19.59	21.46	152.96	1,173.91	-12.28	1,994.20	1,968.27	25.93	76.913	
4,533.94	4,396.00	4,126.56	3,910.61	19.63	21.89	19.99	1,199.79	-12.64	2,003.10	1,976.85	26.25	76.298	
4,600.00	4,462.06	4,315.33	4,094.46	19.69	22.64	19.55	1,242.47	-13.23	2,017.14	1,990.31	26.83	75.191	

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



# Weatherford International Ltd.

## Anticollision Report



<b>Company:</b>	US ROCKIES REGION PLANNING	<b>Local Co-ordinate Reference:</b>	Well P_RASMUSSEN 36-29
<b>Project:</b>	KERR MCGEE OIL & GAS ONSHORE LP	<b>TVD Reference:</b>	WELL @ 4949.00ft (Original Well Elev)
<b>Reference Site:</b>	WELD_RASMUSSEN 9 PAD	<b>MD Reference:</b>	WELL @ 4949.00ft (Original Well Elev)
<b>Site Error:</b>	0.00ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	P_RASMUSSEN 36-29	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.00ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	P_RASMUSSEN 36-29	<b>Database:</b>	EDM 2003.21 Single User Db
<b>Reference Design:</b>	PLAN #1 09-02-09 RHS	<b>Offset TVD Reference:</b>	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
4,700.00	4,562.06	4,610.18	4,386.14	19.79	23.47	19.14	1,284.67	-13.82	2,030.62	2,003.04	27.58	73.623	
4,800.00	4,662.06	4,886.47	4,662.06	19.89	23.87	19.02	1,296.84	-13.99	2,034.44	2,006.29	28.14	72.287	
4,900.00	4,762.06	4,986.47	4,762.06	19.99	23.96	19.02	1,296.84	-13.99	2,034.44	2,006.00	28.43	71.549	
5,000.00	4,862.06	5,086.47	4,862.06	20.09	24.04	19.02	1,296.84	-13.99	2,034.44	2,005.71	28.73	70.813	
5,100.00	4,962.06	5,186.47	4,962.06	20.20	24.13	19.02	1,296.84	-13.99	2,034.44	2,005.41	29.03	70.082	
5,200.00	5,062.06	5,286.47	5,062.06	20.30	24.23	19.02	1,296.84	-13.99	2,034.44	2,005.10	29.33	69.358	
5,300.00	5,162.06	5,386.47	5,162.06	20.41	24.32	19.02	1,296.84	-13.99	2,034.44	2,004.80	29.64	68.639	
5,400.00	5,262.06	5,486.47	5,262.06	20.52	24.42	19.02	1,296.84	-13.99	2,034.44	2,004.49	29.95	67.927	
5,500.00	5,362.06	5,586.47	5,362.06	20.64	24.52	19.02	1,296.84	-13.99	2,034.44	2,004.17	30.26	67.222	
5,600.00	5,462.06	5,686.47	5,462.06	20.75	24.61	19.02	1,296.84	-13.99	2,034.44	2,003.85	30.58	66.524	
5,700.00	5,562.06	5,786.47	5,562.06	20.87	24.72	19.02	1,296.84	-13.99	2,034.44	2,003.53	30.90	65.834	
5,800.00	5,662.06	5,886.47	5,662.06	20.98	24.82	19.02	1,296.84	-13.99	2,034.44	2,003.21	31.23	65.151	
5,900.00	5,762.06	5,986.47	5,762.06	21.10	24.92	19.02	1,296.84	-13.99	2,034.44	2,002.88	31.55	64.475	
6,000.00	5,862.06	6,086.47	5,862.06	21.23	25.03	19.02	1,296.84	-13.99	2,034.44	2,002.55	31.88	63.808	
6,100.00	5,962.06	6,186.47	5,962.06	21.35	25.14	19.02	1,296.84	-13.99	2,034.44	2,002.22	32.22	63.148	
6,200.00	6,062.06	6,286.47	6,062.06	21.47	25.24	19.02	1,296.84	-13.99	2,034.44	2,001.88	32.55	62.497	
6,300.00	6,162.06	6,386.47	6,162.06	21.60	25.35	19.02	1,296.84	-13.99	2,034.44	2,001.55	32.89	61.854	
6,400.00	6,262.06	6,486.47	6,262.06	21.73	25.47	19.02	1,296.84	-13.99	2,034.44	2,001.20	33.23	61.219	
6,500.00	6,362.06	6,586.47	6,362.06	21.86	25.58	19.02	1,296.84	-13.99	2,034.44	2,000.86	33.58	60.593	
6,600.00	6,462.06	6,686.47	6,462.06	21.99	25.69	19.02	1,296.84	-13.99	2,034.44	2,000.51	33.92	59.974	
6,700.00	6,562.06	6,786.47	6,562.06	22.12	25.81	19.02	1,296.84	-13.99	2,034.44	2,000.17	34.27	59.364	
6,800.00	6,662.06	6,886.47	6,662.06	22.26	25.93	19.02	1,296.84	-13.99	2,034.44	1,999.82	34.62	58.763	
6,900.00	6,762.06	6,986.47	6,762.06	22.39	26.05	19.02	1,296.84	-13.99	2,034.44	1,999.46	34.97	58.169	
7,000.00	6,862.06	7,086.47	6,862.06	22.53	26.17	19.02	1,296.84	-13.99	2,034.44	1,999.11	35.33	57.584	
7,100.00	6,962.06	7,186.47	6,962.06	22.67	26.29	19.02	1,296.84	-13.99	2,034.44	1,998.75	35.69	57.008	
7,200.00	7,062.06	7,286.47	7,062.06	22.81	26.41	19.02	1,296.84	-13.99	2,034.44	1,998.39	36.05	56.439	
7,300.00	7,162.06	7,386.47	7,162.06	22.95	26.54	19.02	1,296.84	-13.99	2,034.44	1,998.03	36.41	55.879	
7,400.00	7,262.06	7,486.47	7,262.06	23.09	26.66	19.02	1,296.84	-13.99	2,034.44	1,997.67	36.77	55.326	
7,500.00	7,362.06	7,586.47	7,362.06	23.23	26.79	19.02	1,296.84	-13.99	2,034.44	1,997.30	37.14	54.782	
7,600.00	7,462.06	7,686.47	7,462.06	23.38	26.92	19.02	1,296.84	-13.99	2,034.44	1,996.93	37.50	54.246	
7,700.00	7,562.06	7,786.47	7,562.06	23.53	27.05	19.02	1,296.84	-13.99	2,034.44	1,996.56	37.87	53.718	
7,800.00	7,662.06	7,886.47	7,662.06	23.67	27.18	19.02	1,296.84	-13.99	2,034.44	1,996.19	38.24	53.197	
7,819.94	7,682.00	7,906.41	7,682.00	23.70	27.21	19.02	1,296.84	-13.99	2,034.44	1,996.12	38.32	53.094	



# Weatherford International Ltd.

## Anticollision Report



<b>Company:</b>	US ROCKIES REGION PLANNING	<b>Local Co-ordinate Reference:</b>	Well P_RASMUSSEN 36-29
<b>Project:</b>	KERR MCGEE OIL & GAS ONSHORE LP	<b>TVD Reference:</b>	WELL @ 4949.00ft (Original Well Elev)
<b>Reference Site:</b>	WELD_RASMUSSEN 9 PAD	<b>MD Reference:</b>	WELL @ 4949.00ft (Original Well Elev)
<b>Site Error:</b>	0.00ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	P_RASMUSSEN 36-29	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.00ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	P_RASMUSSEN 36-29	<b>Database:</b>	EDM 2003.21 Single User Db
<b>Reference Design:</b>	PLAN #1 09-02-09 RHS	<b>Offset TVD Reference:</b>	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	0.00	14.57	0.00	14.57				
100.00	100.00	100.00	100.00	0.10	0.10	0.00	14.57	0.00	14.57	14.38	0.19	76.268	
200.00	200.00	200.00	200.00	0.32	0.32	0.00	14.57	0.00	14.57	13.93	0.64	22.747	
300.00	300.00	300.00	300.00	0.55	0.55	0.00	14.57	0.00	14.57	13.48	1.09	13.367	
400.00	400.00	400.00	400.00	0.77	0.77	0.00	14.57	0.00	14.57	13.03	1.54	9.464	
500.00	500.00	500.00	500.00	0.99	0.99	0.00	14.57	0.00	14.57	12.58	1.99	7.325	
600.00	600.00	600.00	600.00	1.22	1.22	0.00	14.57	0.00	14.57	12.13	2.44	5.975	
700.00	700.00	700.00	700.00	1.44	1.44	0.00	14.57	0.00	14.57	11.68	2.89	5.045	
780.00	780.00	780.00	780.00	1.62	1.62	0.00	14.57	0.00	14.57	11.32	3.25	4.486 CC	
800.00	800.00	800.00	800.00	1.66	1.67	133.05	14.57	0.02	14.62	11.29	3.33	4.388 ES, SF	
900.00	899.96	899.81	899.78	1.85	1.87	146.29	14.68	2.10	16.85	13.14	3.71	4.539	
1,000.00	999.78	998.89	998.70	2.04	2.08	166.41	14.95	7.60	24.89	20.78	4.10	6.065	
1,100.00	1,099.33	1,096.61	1,096.03	2.26	2.30	179.76	15.38	16.37	40.45	35.96	4.50	8.996	
1,200.00	1,198.50	1,192.40	1,191.07	2.51	2.54	-173.00	15.96	28.18	63.14	58.24	4.89	12.901	
1,300.00	1,297.15	1,285.71	1,283.24	2.79	2.81	-168.93	16.68	42.73	92.36	87.07	5.30	17.440	
1,400.00	1,395.17	1,376.08	1,372.00	3.13	3.10	-166.44	17.52	59.67	127.73	122.02	5.70	22.390	
1,500.00	1,492.44	1,463.09	1,456.92	3.52	3.42	-164.77	18.46	78.61	168.90	162.78	6.12	27.598	
1,600.00	1,588.85	1,546.42	1,537.66	3.97	3.77	-163.56	19.47	99.16	215.56	209.02	6.54	32.954	
1,700.00	1,684.27	1,625.79	1,613.98	4.49	4.14	-162.62	20.55	120.91	267.42	260.45	6.97	38.359	
1,740.95	1,723.04	1,657.10	1,643.92	4.72	4.30	-162.29	21.00	130.07	290.08	282.93	7.15	40.557	
1,800.00	1,778.79	1,700.00	1,684.77	5.07	4.52	-162.06	21.65	143.14	323.69	316.24	7.45	43.439	
1,900.00	1,873.22	1,774.18	1,754.94	5.67	4.95	-161.65	22.84	167.19	382.14	374.15	7.98	47.860	
2,000.00	1,967.64	1,844.58	1,820.92	6.29	5.39	-161.23	24.05	191.69	442.45	433.93	8.52	51.901	
2,100.00	2,062.07	1,912.55	1,884.04	6.93	5.85	-160.83	25.29	216.87	504.54	495.47	9.07	55.606	
2,200.00	2,156.50	1,978.13	1,944.37	7.57	6.33	-160.44	26.57	242.57	568.33	558.69	9.63	59.004	
2,300.00	2,250.92	2,048.55	2,008.59	8.22	6.86	-160.03	27.99	271.42	633.48	623.27	10.22	62.009	
2,400.00	2,345.35	2,124.20	2,077.51	8.87	7.46	-159.67	29.53	302.55	698.81	687.99	10.82	64.556	
2,500.00	2,439.78	2,199.84	2,146.44	9.53	8.06	-159.36	31.07	333.68	764.15	752.71	11.44	66.798	
2,600.00	2,534.20	2,275.48	2,215.36	10.19	8.68	-159.11	32.61	364.81	829.51	817.45	12.06	68.775	
2,700.00	2,628.63	2,351.13	2,284.29	10.85	9.30	-158.89	34.15	395.93	894.87	882.18	12.69	70.537	
2,800.00	2,723.06	2,426.77	2,353.21	11.52	9.92	-158.71	35.69	427.06	960.24	946.92	13.32	72.115	
2,900.00	2,817.48	2,502.41	2,422.13	12.19	10.55	-158.54	37.23	458.19	1,025.61	1,011.66	13.95	73.535	
3,000.00	2,911.91	2,578.06	2,491.06	12.85	11.18	-158.40	38.77	489.32	1,090.98	1,076.40	14.58	74.818	
3,100.00	3,006.34	2,653.70	2,559.98	13.53	11.81	-158.27	40.31	520.45	1,156.36	1,141.14	15.22	75.983	
3,200.00	3,100.76	2,729.34	2,628.91	14.20	12.45	-158.16	41.85	551.57	1,221.75	1,205.89	15.86	77.047	
3,300.00	3,195.19	2,804.99	2,697.83	14.87	13.09	-158.05	43.38	582.70	1,287.13	1,270.63	16.50	78.021	
3,400.00	3,289.62	2,880.63	2,766.76	15.54	13.73	-157.96	44.92	613.83	1,352.52	1,335.38	17.14	78.917	
3,500.00	3,384.04	2,956.27	2,835.68	16.22	14.37	-157.88	46.46	644.96	1,417.91	1,400.13	17.78	79.743	
3,572.99	3,452.96	3,011.48	2,885.99	16.71	14.84	-157.82	47.59	667.68	1,465.64	1,447.39	18.25	80.308	
3,600.00	3,478.51	3,031.99	2,904.67	16.87	15.02	-157.97	48.00	676.12	1,483.21	1,464.75	18.46	80.360	
3,700.00	3,573.78	3,109.21	2,975.03	17.34	15.67	-158.46	49.58	707.89	1,546.69	1,527.51	19.18	80.628	
3,800.00	3,670.06	3,188.40	3,047.19	17.77	16.35	-158.86	51.19	740.48	1,607.64	1,587.74	19.90	80.792	
3,900.00	3,767.22	3,269.46	3,121.05	18.16	17.04	-159.16	52.84	773.84	1,665.99	1,645.39	20.60	80.881	
4,000.00	3,865.14	3,352.29	3,196.53	18.51	17.75	-159.39	54.52	807.92	1,721.68	1,700.40	21.28	80.912	
4,100.00	3,963.71	3,436.80	3,273.53	18.82	18.47	-159.55	56.24	842.70	1,774.65	1,752.69	21.96	80.811	
4,200.00	4,062.81	3,522.88	3,351.96	19.08	19.21	-159.65	57.99	878.12	1,824.85	1,802.23	22.62	80.675	
4,300.00	4,162.32	3,610.42	3,431.72	19.29	19.96	-159.69	59.77	914.14	1,872.24	1,848.99	23.25	80.520	
4,400.00	4,262.10	3,699.32	3,512.73	19.47	20.73	-159.68	61.58	950.73	1,916.78	1,892.92	23.85	80.357	
4,500.00	4,362.06	3,789.46	3,594.87	19.59	21.50	-159.62	63.42	987.82	1,958.42	1,934.00	24.42	80.191	
4,533.94	4,396.00	3,827.24	3,629.29	19.63	21.81	67.65	64.19	1,003.35	1,971.89	1,947.26	24.63	80.052	
4,600.00	4,462.06	4,006.61	3,795.19	19.69	23.02	68.35	67.55	1,071.39	1,995.79	1,970.47	25.32	78.810	
4,700.00	4,562.06	4,294.59	4,069.50	19.79	24.52	69.17	71.86	1,158.58	2,024.74	1,998.47	26.28	77.057	

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



# Weatherford International Ltd.

## Anticollision Report



<b>Company:</b>	US ROCKIES REGION PLANNING	<b>Local Co-ordinate Reference:</b>	Well P_RASMUSSEN 36-29
<b>Project:</b>	KERR MCGEE OIL & GAS ONSHORE LP	<b>TVD Reference:</b>	WELL @ 4949.00ft (Original Well Elev)
<b>Reference Site:</b>	WELD_RASMUSSEN 9 PAD	<b>MD Reference:</b>	WELL @ 4949.00ft (Original Well Elev)
<b>Site Error:</b>	0.00ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	P_RASMUSSEN 36-29	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.00ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	P_RASMUSSEN 36-29	<b>Database:</b>	EDM 2003.21 Single User Db
<b>Reference Design:</b>	PLAN #1 09-02-09 RHS	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design WELD_RASMUSSEN 9 PAD - P_RASMUSSEN 16-29 - P_RASMUSSEN 16-29 - PLAN #1 09-02-09 RI												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	
4,800.00	4,662.06	4,598.64	4,367.06	19.89	25.63	69.71	74.91	1,220.31	2,044.18	2,017.06	27.12	75.370	
4,900.00	4,762.06	4,912.85	4,679.63	19.99	26.28	69.96	76.41	1,250.64	2,053.43	2,025.61	27.82	73.812	
5,000.00	4,862.06	5,095.31	4,862.06	20.09	26.45	69.98	76.54	1,253.17	2,054.19	2,025.97	28.22	72.792	
5,100.00	4,962.06	5,195.31	4,962.06	20.20	26.54	69.98	76.54	1,253.17	2,054.19	2,025.68	28.51	72.042	
5,200.00	5,062.06	5,295.31	5,062.06	20.30	26.63	69.98	76.54	1,253.17	2,054.19	2,025.38	28.81	71.298	
5,300.00	5,162.06	5,395.31	5,162.06	20.41	26.72	69.98	76.54	1,253.17	2,054.19	2,025.08	29.11	70.559	
5,400.00	5,262.06	5,495.31	5,262.06	20.52	26.81	69.98	76.54	1,253.17	2,054.19	2,024.77	29.42	69.826	
5,500.00	5,362.06	5,595.31	5,362.06	20.64	26.90	69.98	76.54	1,253.17	2,054.19	2,024.46	29.73	69.100	
5,600.00	5,462.06	5,695.31	5,462.06	20.75	27.00	69.98	76.54	1,253.17	2,054.19	2,024.15	30.04	68.381	
5,700.00	5,562.06	5,795.31	5,562.06	20.87	27.09	69.98	76.54	1,253.17	2,054.19	2,023.83	30.36	67.669	
5,800.00	5,662.06	5,895.31	5,662.06	20.98	27.19	69.98	76.54	1,253.17	2,054.19	2,023.51	30.68	66.964	
5,900.00	5,762.06	5,995.31	5,762.06	21.10	27.29	69.98	76.54	1,253.17	2,054.19	2,023.19	31.00	66.267	
6,000.00	5,862.06	6,095.31	5,862.06	21.23	27.39	69.98	76.54	1,253.17	2,054.19	2,022.87	31.32	65.578	
6,100.00	5,962.06	6,195.31	5,962.06	21.35	27.49	69.98	76.54	1,253.17	2,054.19	2,022.54	31.65	64.897	
6,200.00	6,062.06	6,295.31	6,062.06	21.47	27.60	69.98	76.54	1,253.17	2,054.19	2,022.21	31.98	64.224	
6,300.00	6,162.06	6,395.31	6,162.06	21.60	27.70	69.98	76.54	1,253.17	2,054.19	2,021.87	32.32	63.559	
6,400.00	6,262.06	6,495.31	6,262.06	21.73	27.81	69.98	76.54	1,253.17	2,054.19	2,021.53	32.66	62.903	
6,500.00	6,362.06	6,595.31	6,362.06	21.86	27.92	69.98	76.54	1,253.17	2,054.19	2,021.19	33.00	62.255	
6,600.00	6,462.06	6,695.31	6,462.06	21.99	28.02	69.98	76.54	1,253.17	2,054.19	2,020.85	33.34	61.615	
6,700.00	6,562.06	6,795.31	6,562.06	22.12	28.13	69.98	76.54	1,253.17	2,054.19	2,020.51	33.68	60.984	
6,800.00	6,662.06	6,895.31	6,662.06	22.26	28.25	69.98	76.54	1,253.17	2,054.19	2,020.16	34.03	60.361	
6,900.00	6,762.06	6,995.31	6,762.06	22.39	28.36	69.98	76.54	1,253.17	2,054.19	2,019.81	34.38	59.747	
7,000.00	6,862.06	7,095.31	6,862.06	22.53	28.47	69.98	76.54	1,253.17	2,054.19	2,019.46	34.73	59.141	
7,100.00	6,962.06	7,195.31	6,962.06	22.67	28.59	69.98	76.54	1,253.17	2,054.19	2,019.10	35.09	58.544	
7,200.00	7,062.06	7,295.31	7,062.06	22.81	28.71	69.98	76.54	1,253.17	2,054.19	2,018.75	35.44	57.955	
7,300.00	7,162.06	7,395.31	7,162.06	22.95	28.83	69.98	76.54	1,253.17	2,054.19	2,018.39	35.80	57.374	
7,400.00	7,262.06	7,495.31	7,262.06	23.09	28.94	69.98	76.54	1,253.17	2,054.19	2,018.03	36.16	56.802	
7,500.00	7,362.06	7,595.31	7,362.06	23.23	29.07	69.98	76.54	1,253.17	2,054.19	2,017.66	36.53	56.238	
7,600.00	7,462.06	7,695.31	7,462.06	23.38	29.19	69.98	76.54	1,253.17	2,054.19	2,017.30	36.89	55.682	
7,700.00	7,562.06	7,795.31	7,562.06	23.53	29.31	69.98	76.54	1,253.17	2,054.19	2,016.93	37.26	55.135	
7,800.00	7,662.06	7,895.31	7,662.06	23.67	29.44	69.98	76.54	1,253.17	2,054.19	2,016.56	37.63	54.595	
7,819.94	7,682.00	7,915.25	7,682.00	23.70	29.46	69.98	76.54	1,253.17	2,054.19	2,016.49	37.70	54.489	





<b>Company:</b>	US ROCKIES REGION PLANNING	<b>Local Co-ordinate Reference:</b>	Well P_RASMUSSEN 36-29
<b>Project:</b>	KERR MCGEE OIL & GAS ONSHORE LP	<b>TVD Reference:</b>	WELL @ 4949.00ft (Original Well Elev)
<b>Reference Site:</b>	WELD_RASMUSSEN 9 PAD	<b>MD Reference:</b>	WELL @ 4949.00ft (Original Well Elev)
<b>Site Error:</b>	0.00ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	P_RASMUSSEN 36-29	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.00ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	P_RASMUSSEN 36-29	<b>Database:</b>	EDM 2003.21 Single User Db
<b>Reference Design:</b>	PLAN #1 09-02-09 RHS	<b>Offset TVD Reference:</b>	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	2.75	58.27	2.80	58.33				
100.00	100.00	100.00	100.00	0.10	0.10	2.75	58.27	2.80	58.33	58.14	0.19	305.337	
200.00	200.00	200.00	200.00	0.32	0.32	2.75	58.27	2.80	58.33	57.69	0.64	91.065	
300.00	300.00	300.00	300.00	0.55	0.55	2.75	58.27	2.80	58.33	57.24	1.09	53.513	
400.00	400.00	400.00	400.00	0.77	0.77	2.75	58.27	2.80	58.33	56.80	1.54	37.889	
500.00	500.00	500.00	500.00	0.99	0.99	2.75	58.27	2.80	58.33	56.35	1.99	29.326	
600.00	600.00	600.00	600.00	1.22	1.22	2.75	58.27	2.80	58.33	55.90	2.44	23.920	
700.00	700.00	700.00	700.00	1.44	1.44	2.75	58.27	2.80	58.33	55.45	2.89	20.197	
737.36	737.36	737.36	737.36	1.53	1.53	2.75	58.27	2.80	58.33	55.28	3.06	19.088 CC	
780.00	780.00	779.58	779.57	1.62	1.62	2.85	58.37	2.91	58.44	55.20	3.25	18.008 ES	
800.00	800.00	799.29	799.29	1.66	1.66	135.87	58.55	3.11	58.69	55.36	3.33	17.629	
900.00	899.96	897.59	897.52	1.85	1.88	139.51	60.81	5.62	63.01	59.28	3.72	16.919 SF	
1,000.00	999.78	994.95	994.65	2.04	2.10	145.83	65.26	10.58	73.13	69.01	4.13	17.719	
1,100.00	1,099.33	1,090.68	1,089.88	2.26	2.33	152.57	71.79	17.85	89.94	85.41	4.53	19.843	
1,200.00	1,198.50	1,184.18	1,182.52	2.51	2.58	158.35	80.22	27.22	113.81	108.88	4.93	23.067	
1,300.00	1,297.15	1,274.87	1,271.94	2.79	2.84	162.81	90.32	38.46	144.63	139.30	5.33	27.149	
1,400.00	1,395.17	1,362.27	1,357.62	3.13	3.14	166.12	101.83	51.28	182.07	176.36	5.71	31.876	
1,500.00	1,492.44	1,445.95	1,439.13	3.52	3.45	168.55	114.49	65.37	225.74	219.65	6.09	37.083	
1,600.00	1,588.85	1,525.59	1,516.15	3.97	3.79	170.35	128.01	80.41	275.23	268.78	6.45	42.649	
1,700.00	1,684.27	1,604.88	1,592.24	4.49	4.15	171.77	142.89	96.97	330.18	323.36	6.82	48.438	
1,740.95	1,723.04	1,633.67	1,619.76	4.72	4.30	172.19	148.55	103.27	353.99	347.03	6.96	50.857	
1,800.00	1,778.79	1,681.24	1,665.24	5.07	4.54	172.93	157.90	113.67	388.75	381.52	7.22	53.824	
1,900.00	1,873.22	1,761.82	1,742.25	5.67	4.96	173.92	173.73	131.29	447.68	440.01	7.68	58.324	
2,000.00	1,967.64	1,842.40	1,819.27	6.29	5.39	174.67	189.56	148.91	506.69	498.55	8.14	62.269	
2,100.00	2,062.07	1,922.97	1,896.28	6.93	5.82	175.27	205.40	166.53	565.74	557.13	8.61	65.741	
2,200.00	2,156.50	2,003.55	1,973.30	7.57	6.27	175.76	221.23	184.15	624.82	615.74	9.08	68.812	
2,300.00	2,250.92	2,084.13	2,050.32	8.22	6.72	176.16	237.06	201.77	683.93	674.37	9.56	71.532	
2,400.00	2,345.35	2,164.70	2,127.33	8.87	7.18	176.50	252.90	219.39	743.05	733.01	10.05	73.962	
2,500.00	2,439.78	2,245.28	2,204.35	9.53	7.63	176.79	268.73	237.01	802.19	791.66	10.54	76.144	
2,600.00	2,534.20	2,325.86	2,281.36	10.19	8.10	177.04	284.57	254.63	861.34	850.32	11.03	78.110	
2,700.00	2,628.63	2,406.43	2,358.38	10.85	8.56	177.26	300.40	272.26	920.50	908.98	11.52	79.890	
2,800.00	2,723.06	2,487.01	2,435.39	11.52	9.03	177.45	316.23	289.88	979.67	967.65	12.02	81.504	
2,900.00	2,817.48	2,567.59	2,512.41	12.19	9.49	177.62	332.07	307.50	1,038.85	1,026.33	12.52	82.975	
3,000.00	2,911.91	2,648.16	2,589.43	12.85	9.96	177.77	347.90	325.12	1,098.03	1,085.00	13.02	84.321	
3,100.00	3,006.34	2,728.74	2,666.44	13.53	10.43	177.90	363.73	342.74	1,157.21	1,143.68	13.53	85.557	
3,200.00	3,100.76	2,809.32	2,743.46	14.20	10.91	178.02	379.57	360.36	1,216.40	1,202.37	14.03	86.695	
3,300.00	3,195.19	2,889.89	2,820.47	14.87	11.38	178.14	395.40	377.98	1,275.59	1,261.05	14.54	87.745	
3,400.00	3,289.62	2,970.47	2,897.49	15.54	11.85	178.24	411.23	395.60	1,334.78	1,319.74	15.05	88.717	
3,500.00	3,384.04	3,051.05	2,974.50	16.22	12.33	178.33	427.07	413.22	1,393.98	1,378.43	15.55	89.619	
3,572.99	3,452.96	3,109.86	3,030.72	16.71	12.67	178.39	438.62	426.08	1,437.19	1,421.26	15.93	90.238	
3,600.00	3,478.51	3,131.70	3,051.59	16.87	12.80	178.43	442.92	430.86	1,453.08	1,436.97	16.10	90.236	
3,700.00	3,573.78	3,213.83	3,130.10	17.34	13.29	178.54	459.06	448.82	1,510.09	1,493.36	16.73	90.257	
3,800.00	3,670.06	3,297.91	3,210.46	17.77	13.79	178.64	475.58	467.20	1,564.20	1,546.86	17.34	90.195	
3,900.00	3,767.22	3,383.82	3,292.57	18.16	14.29	178.72	492.46	485.99	1,615.34	1,597.41	17.94	90.063	
4,000.00	3,865.14	3,471.47	3,376.35	18.51	14.81	178.80	509.68	505.16	1,663.46	1,644.95	18.51	89.875	
4,100.00	3,963.71	3,560.74	3,461.67	18.82	15.34	178.86	527.23	524.68	1,708.49	1,689.43	19.06	89.639	
4,200.00	4,062.81	3,651.53	3,548.45	19.08	15.88	178.92	545.07	544.54	1,750.38	1,730.80	19.59	89.363	
4,300.00	4,162.32	3,741.32	3,645.66	19.29	16.43	179.01	562.30	561.97	1,786.75	1,766.41	20.33	88.872	
4,400.00	4,262.10	3,831.59	3,741.59	19.47	17.00	179.08	579.46	579.28	1,811.63	1,790.53	21.11	88.330	
4,500.00	4,362.06	3,922.99	3,837.39	19.59	17.63	179.11	596.46	596.33	1,823.98	1,802.18	21.80	87.882	
4,533.94	4,396.00	4,014.35	3,929.70	19.63	18.22	46.33	613.66	613.13	1,825.22	1,803.22	22.01	87.944	
4,600.00	4,462.06	4,105.71	4,012.06	19.69	18.82	46.33	630.86	630.35	1,825.33	1,803.06	22.27	87.969	

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



# Weatherford International Ltd.

## Anticollision Report



<b>Company:</b>	US ROCKIES REGION PLANNING	<b>Local Co-ordinate Reference:</b>	Well P_RASMUSSEN 36-29
<b>Project:</b>	KERR MCGEE OIL & GAS ONSHORE LP	<b>TVD Reference:</b>	WELL @ 4949.00ft (Original Well Elev)
<b>Reference Site:</b>	WELD_RASMUSSEN 9 PAD	<b>MD Reference:</b>	WELL @ 4949.00ft (Original Well Elev)
<b>Site Error:</b>	0.00ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	P_RASMUSSEN 36-29	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.00ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	P_RASMUSSEN 36-29	<b>Database:</b>	EDM 2003.21 Single User Db
<b>Reference Design:</b>	PLAN #1 09-02-09 RHS	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design WELD_RASMUSSEN 9 PAD - P_RASMUSSEN 20-29 - P_RASMUSSEN 20-29 - PLAN #1 09-02-09 RI												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	
4,700.00	4,562.06	4,678.71	4,562.06	19.79	18.64	46.33	633.86	643.35	1,825.33	1,802.72	22.61	80.713	
4,800.00	4,662.06	4,778.71	4,662.06	19.89	18.75	46.33	633.86	643.35	1,825.33	1,802.36	22.97	79.475	
4,900.00	4,762.06	4,878.71	4,762.06	19.99	18.87	46.33	633.86	643.35	1,825.33	1,802.01	23.32	78.263	
5,000.00	4,862.06	4,978.71	4,862.06	20.09	18.98	46.33	633.86	643.35	1,825.33	1,801.65	23.68	77.077	
5,100.00	4,962.06	5,078.71	4,962.06	20.20	19.10	46.33	633.86	643.35	1,825.33	1,801.29	24.04	75.917	
5,200.00	5,062.06	5,178.71	5,062.06	20.30	19.23	46.33	633.86	643.35	1,825.33	1,800.92	24.41	74.782	
5,300.00	5,162.06	5,278.71	5,162.06	20.41	19.35	46.33	633.86	643.35	1,825.33	1,800.55	24.78	73.672	
5,400.00	5,262.06	5,378.71	5,262.06	20.52	19.48	46.33	633.86	643.35	1,825.33	1,800.18	25.15	72.588	
5,500.00	5,362.06	5,478.71	5,362.06	20.64	19.60	46.33	633.86	643.35	1,825.33	1,799.81	25.52	71.527	
5,600.00	5,462.06	5,578.71	5,462.06	20.75	19.73	46.33	633.86	643.35	1,825.33	1,799.44	25.89	70.491	
5,700.00	5,562.06	5,678.71	5,562.06	20.87	19.86	46.33	633.86	643.35	1,825.33	1,799.06	26.27	69.477	
5,800.00	5,662.06	5,778.71	5,662.06	20.98	20.00	46.33	633.86	643.35	1,825.33	1,798.68	26.65	68.487	
5,900.00	5,762.06	5,878.71	5,762.06	21.10	20.13	46.33	633.86	643.35	1,825.33	1,798.30	27.03	67.520	
6,000.00	5,862.06	5,978.71	5,862.06	21.23	20.27	46.33	633.86	643.35	1,825.33	1,797.91	27.42	66.574	
6,100.00	5,962.06	6,078.71	5,962.06	21.35	20.40	46.33	633.86	643.35	1,825.33	1,797.53	27.80	65.650	
6,200.00	6,062.06	6,178.71	6,062.06	21.47	20.54	46.33	633.86	643.35	1,825.33	1,797.14	28.19	64.747	
6,300.00	6,162.06	6,278.71	6,162.06	21.60	20.68	46.33	633.86	643.35	1,825.33	1,796.75	28.58	63.864	
6,400.00	6,262.06	6,378.71	6,262.06	21.73	20.82	46.33	633.86	643.35	1,825.33	1,796.36	28.97	63.002	
6,500.00	6,362.06	6,478.71	6,362.06	21.86	20.97	46.33	633.86	643.35	1,825.33	1,795.96	29.37	62.158	
6,600.00	6,462.06	6,578.71	6,462.06	21.99	21.11	46.33	633.86	643.35	1,825.33	1,795.57	29.76	61.334	
6,700.00	6,562.06	6,678.71	6,562.06	22.12	21.26	46.33	633.86	643.35	1,825.33	1,795.17	30.16	60.528	
6,800.00	6,662.06	6,778.71	6,662.06	22.26	21.41	46.33	633.86	643.35	1,825.33	1,794.78	30.55	59.741	
6,900.00	6,762.06	6,878.71	6,762.06	22.39	21.55	46.33	633.86	643.35	1,825.33	1,794.38	30.95	58.970	
7,000.00	6,862.06	6,978.71	6,862.06	22.53	21.70	46.33	633.86	643.35	1,825.33	1,793.98	31.35	58.217	
7,100.00	6,962.06	7,078.71	6,962.06	22.67	21.86	46.33	633.86	643.35	1,825.33	1,793.57	31.76	57.481	
7,200.00	7,062.06	7,178.71	7,062.06	22.81	22.01	46.33	633.86	643.35	1,825.33	1,793.17	32.16	56.760	
7,300.00	7,162.06	7,278.71	7,162.06	22.95	22.16	46.33	633.86	643.35	1,825.33	1,792.77	32.56	56.056	
7,400.00	7,262.06	7,378.71	7,262.06	23.09	22.32	46.33	633.86	643.35	1,825.33	1,792.36	32.97	55.366	
7,500.00	7,362.06	7,478.71	7,362.06	23.23	22.47	46.33	633.86	643.35	1,825.33	1,791.96	33.37	54.692	
7,600.00	7,462.06	7,578.71	7,462.06	23.38	22.63	46.33	633.86	643.35	1,825.33	1,791.55	33.78	54.032	
7,700.00	7,562.06	7,678.71	7,562.06	23.53	22.79	46.33	633.86	643.35	1,825.33	1,791.14	34.19	53.386	
7,800.00	7,662.06	7,778.71	7,662.06	23.67	22.95	46.33	633.86	643.35	1,825.33	1,790.73	34.60	52.754	
7,819.94	7,682.00	7,798.65	7,682.00	23.70	22.98	46.33	633.86	643.35	1,825.33	1,790.65	34.68	52.630	





# Weatherford International Ltd.

## Anticollision Report



<b>Company:</b>	US ROCKIES REGION PLANNING	<b>Local Co-ordinate Reference:</b>	Well P_RASMUSSEN 36-29
<b>Project:</b>	KERR MCGEE OIL & GAS ONSHORE LP	<b>TVD Reference:</b>	WELL @ 4949.00ft (Original Well Elev)
<b>Reference Site:</b>	WELD_RASMUSSEN 9 PAD	<b>MD Reference:</b>	WELL @ 4949.00ft (Original Well Elev)
<b>Site Error:</b>	0.00ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	P_RASMUSSEN 36-29	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.00ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	P_RASMUSSEN 36-29	<b>Database:</b>	EDM 2003.21 Single User Db
<b>Reference Design:</b>	PLAN #1 09-02-09 RHS	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design WELD_RASMUSSEN 9 PAD - P_RASMUSSEN 23-29 - P_RASMUSSEN 23-29 - PLAN #1 09-02-09 R													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	5.48	29.14	2.80	29.28				
100.00	100.00	100.00	100.00	0.10	0.10	5.48	29.14	2.80	29.28	29.09	0.19	153.238	
200.00	200.00	200.00	200.00	0.32	0.32	5.48	29.14	2.80	29.28	28.64	0.64	45.702	
300.00	300.00	300.00	300.00	0.55	0.55	5.48	29.14	2.80	29.28	28.19	1.09	26.856	
400.00	400.00	400.00	400.00	0.77	0.77	5.48	29.14	2.80	29.28	27.74	1.54	19.015	
500.00	500.00	500.00	500.00	0.99	0.99	5.48	29.14	2.80	29.28	27.29	1.99	14.718	
600.00	600.00	600.00	600.00	1.22	1.22	5.48	29.14	2.80	29.28	26.84	2.44	12.005	
700.00	700.00	700.00	700.00	1.44	1.44	5.48	29.14	2.80	29.28	26.39	2.89	10.136	
737.41	737.41	737.41	737.41	1.53	1.53	5.48	29.14	2.80	29.28	26.22	3.06	9.579 CC	
780.00	780.00	779.82	779.82	1.62	1.62	5.24	29.25	2.68	29.37	26.12	3.25	9.047 ES	
800.00	800.00	799.69	799.69	1.66	1.67	137.68	29.43	2.48	29.59	26.26	3.33	8.885 SF	
900.00	899.96	898.94	898.87	1.85	1.88	135.71	31.72	-0.09	33.49	29.77	3.73	8.985	
1,000.00	999.78	997.73	997.42	2.04	2.11	133.91	36.28	-5.18	42.09	37.95	4.14	10.166	
1,100.00	1,099.33	1,095.75	1,094.91	2.26	2.35	132.61	43.04	-12.73	55.34	50.77	4.57	12.099	
1,200.00	1,198.50	1,192.69	1,190.93	2.51	2.61	131.76	51.90	-22.64	73.17	68.14	5.04	14.527	
1,300.00	1,297.15	1,288.27	1,285.11	2.79	2.89	131.17	62.76	-34.78	95.49	89.96	5.54	17.245	
1,400.00	1,395.17	1,382.22	1,377.10	3.13	3.22	130.73	75.47	-48.98	122.21	116.12	6.08	20.085	
1,500.00	1,492.44	1,474.31	1,466.62	3.52	3.58	130.36	89.87	-65.08	153.20	146.52	6.69	22.917	
1,600.00	1,588.85	1,564.32	1,553.39	3.97	3.99	130.00	105.80	-82.87	188.35	181.01	7.34	25.647	
1,700.00	1,684.27	1,652.06	1,637.22	4.49	4.43	129.64	123.06	-102.17	227.53	219.46	8.06	28.217	
1,740.95	1,723.04	1,687.30	1,670.67	4.72	4.62	129.48	130.48	-110.45	244.69	236.32	8.37	29.224	
1,800.00	1,778.79	1,737.54	1,718.09	5.07	4.91	129.58	141.52	-122.80	270.22	261.36	8.86	30.494	
1,900.00	1,873.22	1,821.33	1,796.53	5.67	5.43	129.41	161.17	-144.75	314.86	305.14	9.72	32.401	
2,000.00	1,967.64	1,904.76	1,873.76	6.29	5.99	128.97	182.21	-168.27	361.19	350.57	10.62	34.019	
2,100.00	2,062.07	1,993.03	1,955.17	6.93	6.62	128.51	204.97	-193.71	408.09	396.52	11.57	35.264	
2,200.00	2,156.50	2,081.31	2,036.58	7.57	7.26	128.14	227.74	-219.15	455.01	442.46	12.55	36.268	
2,300.00	2,250.92	2,169.59	2,117.98	8.22	7.92	127.85	250.50	-244.59	501.94	488.41	13.53	37.090	
2,400.00	2,345.35	2,257.86	2,199.39	8.87	8.58	127.60	273.27	-270.03	548.88	534.35	14.53	37.773	
2,500.00	2,439.78	2,346.14	2,280.80	9.53	9.24	127.39	296.03	-295.48	595.83	580.29	15.54	38.346	
2,600.00	2,534.20	2,434.41	2,362.21	10.19	9.91	127.22	318.79	-320.92	642.78	626.22	16.55	38.832	
2,700.00	2,628.63	2,522.69	2,443.62	10.85	10.59	127.06	341.56	-346.36	689.73	672.16	17.57	39.249	
2,800.00	2,723.06	2,610.97	2,525.02	11.52	11.27	126.93	364.32	-371.80	736.69	718.09	18.60	39.609	
2,900.00	2,817.48	2,699.24	2,606.43	12.19	11.95	126.81	387.09	-397.24	783.65	764.02	19.63	39.922	
3,000.00	2,911.91	2,787.52	2,687.84	12.85	12.63	126.71	409.85	-422.68	830.62	809.95	20.66	40.197	
3,100.00	3,006.34	2,875.80	2,769.25	13.53	13.32	126.61	432.61	-448.12	877.58	855.88	21.70	40.440	
3,200.00	3,100.76	2,964.07	2,850.66	14.20	14.01	126.53	455.38	-473.56	924.55	901.81	22.74	40.655	
3,300.00	3,195.19	3,052.35	2,932.06	14.87	14.70	126.45	478.14	-499.00	971.52	947.73	23.78	40.848	
3,400.00	3,289.62	3,140.63	3,013.47	15.54	15.39	126.39	500.91	-524.44	1,018.49	993.66	24.83	41.022	
3,500.00	3,384.04	3,228.90	3,094.88	16.22	16.08	126.32	523.67	-549.89	1,065.46	1,039.59	25.87	41.178	
3,572.99	3,452.96	3,293.33	3,154.30	16.71	16.58	126.28	540.29	-568.46	1,099.74	1,073.10	26.64	41.283	
3,600.00	3,478.51	3,317.21	3,176.32	16.87	16.77	126.49	546.44	-575.34	1,112.36	1,085.43	26.94	41.292	
3,700.00	3,573.78	3,406.18	3,258.36	17.34	17.47	127.14	569.39	-600.98	1,157.92	1,129.95	27.97	41.397	
3,800.00	3,670.06	3,522.48	3,366.14	17.77	18.27	127.54	598.51	-633.53	1,200.91	1,171.86	29.05	41.345	
3,900.00	3,767.22	3,654.64	3,490.60	18.16	19.00	127.85	628.13	-666.63	1,239.18	1,209.14	30.04	41.247	
4,000.00	3,865.14	3,791.58	3,621.59	18.51	19.68	128.09	654.75	-696.38	1,272.37	1,241.40	30.97	41.081	
4,100.00	3,963.71	3,932.82	3,758.51	18.82	20.28	128.28	677.80	-722.14	1,300.22	1,268.41	31.81	40.878	
4,200.00	4,062.81	4,077.72	3,900.59	19.08	20.80	128.43	696.74	-743.30	1,322.54	1,290.00	32.54	40.640	
4,300.00	4,162.32	4,225.57	4,046.84	19.29	21.22	128.53	711.10	-759.36	1,339.15	1,305.98	33.16	40.381	
4,400.00	4,262.10	4,375.53	4,196.12	19.47	21.54	128.60	720.51	-769.87	1,349.91	1,316.25	33.66	40.103	
4,500.00	4,362.06	4,526.71	4,347.15	19.59	21.75	128.64	724.71	-774.57	1,354.73	1,320.70	34.03	39.806	
4,533.94	4,396.00	4,575.56	4,396.00	19.63	21.80	-4.14	724.94	-774.82	1,355.02	1,320.89	34.13	39.701	
4,600.00	4,462.06	4,641.62	4,462.06	19.69	21.86	-4.14	724.94	-774.82	1,355.02	1,320.74	34.28	39.527	

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



# Weatherford International Ltd.

## Anticollision Report



<b>Company:</b>	US ROCKIES REGION PLANNING	<b>Local Co-ordinate Reference:</b>	Well P_RASMUSSEN 36-29
<b>Project:</b>	KERR MCGEE OIL & GAS ONSHORE LP	<b>TVD Reference:</b>	WELL @ 4949.00ft (Original Well Elev)
<b>Reference Site:</b>	WELD_RASMUSSEN 9 PAD	<b>MD Reference:</b>	WELL @ 4949.00ft (Original Well Elev)
<b>Site Error:</b>	0.00ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	P_RASMUSSEN 36-29	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.00ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	P_RASMUSSEN 36-29	<b>Database:</b>	EDM 2003.21 Single User Db
<b>Reference Design:</b>	PLAN #1 09-02-09 RHS	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design WELD_RASMUSSEN 9 PAD - P_RASMUSSEN 23-29 - P_RASMUSSEN 23-29 - PLAN #1 09-02-09 R												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	
4,700.00	4,562.06	4,741.62	4,562.06	19.79	21.95	-4.14	724.94	-774.82	1,355.02	1,320.50	34.52	39.259	
4,800.00	4,662.06	4,841.62	4,662.06	19.89	22.05	-4.14	724.94	-774.82	1,355.02	1,320.26	34.75	38.989	
4,900.00	4,762.06	4,941.62	4,762.06	19.99	22.15	-4.14	724.94	-774.82	1,355.02	1,320.02	35.00	38.719	
5,000.00	4,862.06	5,041.62	4,862.06	20.09	22.25	-4.14	724.94	-774.82	1,355.02	1,319.77	35.24	38.448	
5,100.00	4,962.06	5,141.62	4,962.06	20.20	22.35	-4.14	724.94	-774.82	1,355.02	1,319.52	35.49	38.177	
5,200.00	5,062.06	5,241.62	5,062.06	20.30	22.46	-4.14	724.94	-774.82	1,355.02	1,319.27	35.75	37.905	
5,300.00	5,162.06	5,341.62	5,162.06	20.41	22.56	-4.14	724.94	-774.82	1,355.02	1,319.01	36.01	37.633	
5,400.00	5,262.06	5,441.62	5,262.06	20.52	22.67	-4.14	724.94	-774.82	1,355.02	1,318.75	36.27	37.361	
5,500.00	5,362.06	5,541.62	5,362.06	20.64	22.78	-4.14	724.94	-774.82	1,355.02	1,318.48	36.53	37.089	
5,600.00	5,462.06	5,641.62	5,462.06	20.75	22.89	-4.14	724.94	-774.82	1,355.02	1,318.21	36.80	36.818	
5,700.00	5,562.06	5,741.62	5,562.06	20.87	23.01	-4.14	724.94	-774.82	1,355.02	1,317.94	37.08	36.547	
5,800.00	5,662.06	5,841.62	5,662.06	20.98	23.12	-4.14	724.94	-774.82	1,355.02	1,317.66	37.35	36.277	
5,900.00	5,762.06	5,941.62	5,762.06	21.10	23.24	-4.14	724.94	-774.82	1,355.02	1,317.38	37.63	36.007	
6,000.00	5,862.06	6,041.62	5,862.06	21.23	23.36	-4.14	724.94	-774.82	1,355.02	1,317.10	37.91	35.739	
6,100.00	5,962.06	6,141.62	5,962.06	21.35	23.48	-4.14	724.94	-774.82	1,355.02	1,316.82	38.20	35.471	
6,200.00	6,062.06	6,241.62	6,062.06	21.47	23.60	-4.14	724.94	-774.82	1,355.02	1,316.53	38.49	35.205	
6,300.00	6,162.06	6,341.62	6,162.06	21.60	23.72	-4.14	724.94	-774.82	1,355.02	1,316.23	38.78	34.939	
6,400.00	6,262.06	6,441.62	6,262.06	21.73	23.84	-4.14	724.94	-774.82	1,355.02	1,315.94	39.08	34.675	
6,500.00	6,362.06	6,541.62	6,362.06	21.86	23.97	-4.14	724.94	-774.82	1,355.02	1,315.64	39.38	34.413	
6,600.00	6,462.06	6,641.62	6,462.06	21.99	24.10	-4.14	724.94	-774.82	1,355.02	1,315.34	39.68	34.152	
6,700.00	6,562.06	6,741.62	6,562.06	22.12	24.23	-4.14	724.94	-774.82	1,355.02	1,315.04	39.98	33.892	
6,800.00	6,662.06	6,841.62	6,662.06	22.26	24.36	-4.14	724.94	-774.82	1,355.02	1,314.73	40.29	33.635	
6,900.00	6,762.06	6,941.62	6,762.06	22.39	24.49	-4.14	724.94	-774.82	1,355.02	1,314.42	40.60	33.378	
7,000.00	6,862.06	7,041.62	6,862.06	22.53	24.62	-4.14	724.94	-774.82	1,355.02	1,314.11	40.91	33.124	
7,100.00	6,962.06	7,141.62	6,962.06	22.67	24.75	-4.14	724.94	-774.82	1,355.02	1,313.79	41.22	32.871	
7,200.00	7,062.06	7,241.62	7,062.06	22.81	24.89	-4.14	724.94	-774.82	1,355.02	1,313.48	41.54	32.621	
7,300.00	7,162.06	7,341.62	7,162.06	22.95	25.03	-4.14	724.94	-774.82	1,355.02	1,313.16	41.86	32.372	
7,400.00	7,262.06	7,441.62	7,262.06	23.09	25.16	-4.14	724.94	-774.82	1,355.02	1,312.84	42.18	32.125	
7,500.00	7,362.06	7,541.62	7,362.06	23.23	25.30	-4.14	724.94	-774.82	1,355.02	1,312.51	42.50	31.880	
7,600.00	7,462.06	7,641.62	7,462.06	23.38	25.44	-4.14	724.94	-774.82	1,355.02	1,312.19	42.83	31.638	
7,700.00	7,562.06	7,741.62	7,562.06	23.53	25.58	-4.14	724.94	-774.82	1,355.02	1,311.86	43.16	31.397	
7,800.00	7,662.06	7,841.62	7,662.06	23.67	25.73	-4.14	724.94	-774.82	1,355.02	1,311.53	43.49	31.158	
7,806.07	7,668.13	7,847.69	7,668.13	23.68	25.74	-4.14	724.94	-774.82	1,355.02	1,311.51	43.51	31.144	
7,819.94	7,682.00	7,856.56	7,677.00	23.70	25.75	-4.14	724.94	-774.82	1,355.03	1,311.48	43.55	31.117	



<b>Company:</b>	US ROCKIES REGION PLANNING	<b>Local Co-ordinate Reference:</b>	Well P_RASMUSSEN 36-29
<b>Project:</b>	KERR MCGEE OIL & GAS ONSHORE LP	<b>TVD Reference:</b>	WELL @ 4949.00ft (Original Well Elev)
<b>Reference Site:</b>	WELD_RASMUSSEN 9 PAD	<b>MD Reference:</b>	WELL @ 4949.00ft (Original Well Elev)
<b>Site Error:</b>	0.00ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	P_RASMUSSEN 36-29	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.00ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	P_RASMUSSEN 36-29	<b>Database:</b>	EDM 2003.21 Single User Db
<b>Reference Design:</b>	PLAN #1 09-02-09 RHS	<b>Offset TVD Reference:</b>	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	1.52	105.64	2.80	105.67				
100.00	100.00	100.00	100.00	0.10	0.10	1.52	105.64	2.80	105.67	105.48	0.19	553.117	
200.00	200.00	200.00	200.00	0.32	0.32	1.52	105.64	2.80	105.67	105.03	0.64	164.965	
300.00	300.00	300.00	300.00	0.55	0.55	1.52	105.64	2.80	105.67	104.58	1.09	96.938	
400.00	400.00	400.00	400.00	0.77	0.77	1.52	105.64	2.80	105.67	104.13	1.54	68.635	
500.00	500.00	500.00	500.00	0.99	0.99	1.52	105.64	2.80	105.67	103.68	1.99	53.124	
600.00	600.00	600.00	600.00	1.22	1.22	1.52	105.64	2.80	105.67	103.24	2.44	43.332	
700.00	700.00	700.00	700.00	1.44	1.44	1.52	105.64	2.80	105.67	102.79	2.89	36.588	
780.00	780.00	780.00	780.00	1.62	1.62	1.52	105.64	2.80	105.67	102.43	3.25	32.536 CC	
800.00	800.00	800.00	800.00	1.66	1.67	134.33	105.64	2.80	105.72	102.39	3.33	31.721 ES	
900.00	899.96	899.96	899.96	1.85	1.89	135.24	105.64	2.80	107.44	103.71	3.74	28.740	
1,000.00	999.78	997.61	997.60	2.04	2.11	137.10	106.27	2.53	112.36	108.22	4.15	27.092	
1,100.00	1,099.33	1,093.50	1,093.42	2.26	2.33	139.06	109.68	1.10	122.77	118.21	4.56	26.921 SF	
1,200.00	1,198.50	1,188.37	1,188.04	2.51	2.54	140.81	115.96	-1.54	138.83	133.85	4.98	27.860	
1,300.00	1,297.15	1,281.78	1,280.93	2.79	2.77	142.22	124.96	-5.33	160.45	155.03	5.42	29.610	
1,400.00	1,395.17	1,373.35	1,371.64	3.13	3.00	143.26	136.49	-10.18	187.47	181.60	5.87	31.931	
1,500.00	1,492.44	1,462.72	1,459.74	3.52	3.26	143.96	150.31	-15.99	219.74	213.40	6.35	34.631	
1,600.00	1,588.85	1,549.59	1,544.88	3.97	3.54	144.38	166.17	-22.66	257.06	250.21	6.85	37.552	
1,700.00	1,684.27	1,633.67	1,626.76	4.49	3.84	144.58	183.78	-30.07	299.23	291.85	7.37	40.574	
1,740.95	1,723.04	1,667.25	1,659.30	4.72	3.97	144.60	191.43	-33.29	317.85	310.25	7.60	41.817	
1,800.00	1,778.79	1,714.97	1,705.36	5.07	4.16	144.90	202.91	-38.11	345.60	337.64	7.96	43.422	
1,900.00	1,873.22	1,794.30	1,781.47	5.67	4.52	145.12	223.54	-46.79	394.15	385.56	8.59	45.896	
2,000.00	1,967.64	1,871.73	1,855.13	6.29	4.91	145.10	245.55	-56.05	444.57	435.33	9.24	48.091	
2,100.00	2,062.07	1,947.22	1,926.29	6.93	5.32	144.91	268.77	-65.82	496.80	486.88	9.92	50.070	
2,200.00	2,156.50	2,020.72	1,994.92	7.57	5.76	144.62	293.02	-76.02	550.78	540.17	10.62	51.873	
2,300.00	2,250.92	2,092.24	2,061.02	8.22	6.22	144.25	318.17	-86.60	606.46	595.13	11.33	53.526	
2,400.00	2,345.35	2,166.51	2,128.93	8.87	6.73	143.81	345.90	-98.26	663.80	651.72	12.08	54.965	
2,500.00	2,439.78	2,242.02	2,197.57	9.53	7.28	143.36	374.91	-110.46	722.02	709.17	12.85	56.200	
2,600.00	2,534.20	2,323.17	2,271.33	10.19	7.88	142.96	406.08	-123.57	780.29	766.65	13.65	57.167	
2,700.00	2,628.63	2,404.32	2,345.10	10.85	8.50	142.61	437.25	-136.68	838.59	824.13	14.46	57.997	
2,800.00	2,723.06	2,485.46	2,418.86	11.52	9.12	142.30	468.43	-149.79	896.91	881.63	15.28	58.709	
2,900.00	2,817.48	2,566.61	2,492.63	12.19	9.75	142.03	499.60	-162.91	955.24	939.14	16.10	59.330	
3,000.00	2,911.91	2,647.76	2,566.40	12.85	10.38	141.80	530.78	-176.02	1,013.58	996.65	16.93	59.874	
3,100.00	3,006.34	2,728.91	2,640.16	13.53	11.02	141.58	561.95	-189.13	1,071.93	1,054.17	17.76	60.354	
3,200.00	3,100.76	2,810.06	2,713.93	14.20	11.67	141.39	593.13	-202.24	1,130.29	1,111.70	18.60	60.779	
3,300.00	3,195.19	2,891.21	2,787.69	14.87	12.31	141.22	624.30	-215.35	1,188.66	1,169.23	19.44	61.158	
3,400.00	3,289.62	2,972.36	2,861.46	15.54	12.96	141.07	655.48	-228.47	1,247.04	1,226.76	20.28	61.497	
3,500.00	3,384.04	3,053.51	2,935.23	16.22	13.61	140.93	686.65	-241.58	1,305.42	1,284.30	21.12	61.802	
3,572.99	3,452.96	3,112.74	2,989.07	16.71	14.09	140.83	709.40	-251.15	1,348.03	1,326.29	21.74	62.006	
3,600.00	3,478.51	3,134.71	3,009.04	16.87	14.26	141.04	717.85	-254.70	1,363.72	1,341.74	21.99	62.022	
3,700.00	3,573.78	3,216.99	3,083.84	17.34	14.93	141.69	749.46	-268.00	1,420.40	1,397.55	22.85	62.155	
3,800.00	3,670.06	3,300.66	3,159.89	17.77	15.60	142.21	781.60	-281.51	1,474.82	1,451.11	23.71	62.205	
3,900.00	3,767.22	3,385.61	3,237.12	18.16	16.29	142.59	814.23	-295.24	1,526.94	1,502.39	24.55	62.196	
4,000.00	3,865.14	3,471.75	3,315.41	18.51	16.99	142.86	847.32	-309.16	1,576.73	1,551.36	25.37	62.147	
4,100.00	3,963.71	3,558.96	3,394.69	18.82	17.70	143.03	880.83	-323.25	1,624.17	1,598.00	26.16	62.075	
4,200.00	4,062.81	3,647.14	3,474.84	19.08	18.42	143.10	914.70	-337.50	1,669.24	1,642.31	26.93	61.992	
4,300.00	4,162.32	3,736.18	3,555.78	19.29	19.15	143.09	948.91	-351.89	1,711.93	1,684.27	27.65	61.907	
4,400.00	4,262.10	3,825.98	3,637.41	19.47	19.88	142.99	983.40	-366.39	1,752.24	1,723.90	28.34	61.830	
4,500.00	4,362.06	3,916.42	3,719.62	19.59	20.62	142.82	1,018.15	-381.01	1,790.19	1,761.21	28.98	61.768	
4,533.94	4,396.00	3,947.24	3,747.65	19.63	20.87	9.96	1,029.99	-385.99	1,802.53	1,773.34	29.19	61.750	
4,600.00	4,462.06	4,007.29	3,802.23	19.69	21.36	9.51	1,053.06	-395.69	1,826.35	1,796.77	29.57	61.761	
4,700.00	4,562.06	4,098.19	3,884.86	19.79	22.11	8.84	1,087.98	-410.38	1,862.59	1,832.45	30.14	61.795	

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



# Weatherford International Ltd.

## Anticollision Report



<b>Company:</b>	US ROCKIES REGION PLANNING	<b>Local Co-ordinate Reference:</b>	Well P_RASMUSSEN 36-29
<b>Project:</b>	KERR MCGEE OIL & GAS ONSHORE LP	<b>TVD Reference:</b>	WELL @ 4949.00ft (Original Well Elev)
<b>Reference Site:</b>	WELD_RASMUSSEN 9 PAD	<b>MD Reference:</b>	WELL @ 4949.00ft (Original Well Elev)
<b>Site Error:</b>	0.00ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	P_RASMUSSEN 36-29	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.00ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	P_RASMUSSEN 36-29	<b>Database:</b>	EDM 2003.21 Single User Db
<b>Reference Design:</b>	PLAN #1 09-02-09 RHS	<b>Offset TVD Reference:</b>	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	
4,800.00	4,662.06	4,189.09	3,967.49	19.89	22.85	8.19	1,122.90	-425.07	1,899.06	1,868.35	30.70	61.851	
4,900.00	4,762.06	4,279.99	4,050.12	19.99	23.60	7.57	1,157.82	-439.76	1,935.73	1,904.47	31.26	61.925	
5,000.00	4,862.06	4,370.90	4,132.75	20.09	24.34	6.97	1,192.74	-454.44	1,972.61	1,940.80	31.81	62.016	
5,100.00	4,962.06	4,461.80	4,215.38	20.20	25.09	6.40	1,227.66	-469.13	2,009.67	1,977.32	32.35	62.121	
5,200.00	5,062.06	4,552.70	4,298.01	20.30	25.84	5.84	1,262.58	-483.82	2,046.91	2,014.03	32.89	62.239	
5,300.00	5,162.06	4,643.60	4,380.64	20.41	26.58	5.30	1,297.51	-498.51	2,084.32	2,050.90	33.42	62.368	
5,400.00	5,262.06	4,734.50	4,463.28	20.52	27.33	4.78	1,332.43	-513.19	2,121.89	2,087.94	33.95	62.507	
5,500.00	5,362.06	4,825.40	4,545.91	20.64	28.08	4.28	1,367.35	-527.88	2,159.61	2,125.14	34.47	62.654	
5,600.00	5,462.06	4,916.31	4,628.54	20.75	28.83	3.79	1,402.27	-542.57	2,197.47	2,162.49	34.99	62.809	
5,700.00	5,562.06	5,007.21	4,711.17	20.87	29.58	3.32	1,437.19	-557.26	2,235.47	2,199.97	35.50	62.969	
5,800.00	5,662.06	5,098.11	4,793.80	20.98	30.32	2.86	1,472.11	-571.95	2,273.60	2,237.58	36.01	63.135	
5,900.00	5,762.06	5,189.01	4,876.43	21.10	31.07	2.42	1,507.03	-586.63	2,311.84	2,275.33	36.52	63.305	
6,000.00	5,862.06	5,279.91	4,959.06	21.23	31.82	2.00	1,541.95	-601.32	2,350.21	2,313.19	37.02	63.479	
6,100.00	5,962.06	5,370.81	5,041.69	21.35	32.57	1.58	1,576.87	-616.01	2,388.69	2,351.16	37.52	63.656	
6,200.00	6,062.06	5,461.72	5,124.32	21.47	33.32	1.18	1,611.79	-630.70	2,427.27	2,389.24	38.02	63.835	
6,300.00	6,162.06	5,552.62	5,206.96	21.60	34.07	0.80	1,646.72	-645.39	2,465.95	2,427.43	38.52	64.017	
6,400.00	6,262.06	5,643.52	5,289.59	21.73	34.82	0.42	1,681.64	-660.07	2,504.73	2,465.71	39.02	64.199	
6,500.00	6,362.06	5,734.42	5,372.22	21.86	35.57	0.05	1,716.56	-674.76	2,543.60	2,504.09	39.51	64.383	
6,600.00	6,462.06	5,825.32	5,454.85	21.99	36.32	-0.30	1,751.48	-689.45	2,582.56	2,542.56	40.00	64.567	
6,700.00	6,562.06	5,916.22	5,537.48	22.12	37.07	-0.65	1,786.40	-704.14	2,621.60	2,581.11	40.49	64.751	
6,800.00	6,662.06	6,007.12	5,620.11	22.26	37.82	-0.98	1,821.32	-718.83	2,660.72	2,619.75	40.98	64.935	
6,900.00	6,762.06	6,285.26	5,876.01	22.39	39.66	-1.89	1,921.59	-761.00	2,699.09	2,657.13	41.97	64.318	
7,000.00	6,862.06	7,183.61	6,752.95	22.53	42.75	-3.22	2,084.95	-829.71	2,717.98	2,674.08	43.90	61.908	
7,100.00	6,962.06	7,392.75	6,962.06	22.67	42.93	-3.24	2,087.35	-830.72	2,718.24	2,673.93	44.31	61.349	
7,200.00	7,062.06	7,492.75	7,062.06	22.81	43.00	-3.24	2,087.35	-830.72	2,718.24	2,673.64	44.60	60.951	
7,300.00	7,162.06	7,592.75	7,162.06	22.95	43.08	-3.24	2,087.35	-830.72	2,718.24	2,673.35	44.89	60.552	
7,400.00	7,262.06	7,692.75	7,262.06	23.09	43.15	-3.24	2,087.35	-830.72	2,718.24	2,673.05	45.19	60.156	
7,500.00	7,362.06	7,792.75	7,362.06	23.23	43.23	-3.24	2,087.35	-830.72	2,718.24	2,672.75	45.48	59.761	
7,600.00	7,462.06	7,892.75	7,462.06	23.38	43.31	-3.24	2,087.35	-830.72	2,718.24	2,672.45	45.79	59.369	
7,700.00	7,562.06	7,992.75	7,562.06	23.53	43.39	-3.24	2,087.35	-830.72	2,718.24	2,672.15	46.09	58.978	
7,800.00	7,662.06	8,092.75	7,662.06	23.67	43.47	-3.24	2,087.35	-830.72	2,718.24	2,671.85	46.39	58.590	
7,819.94	7,682.00	8,112.70	7,682.00	23.70	43.48	-3.24	2,087.35	-830.72	2,718.24	2,671.78	46.46	58.513	



Company:	US ROCKIES REGION PLANNING	Local Co-ordinate Reference:	Well P_RASMUSSEN 36-29
Project:	KERR MCGEE OIL & GAS ONSHORE LP	TVD Reference:	WELL @ 4949.00ft (Original Well Elev)
Reference Site:	WELD_RASMUSSEN 9 PAD	MD Reference:	WELL @ 4949.00ft (Original Well Elev)
Site Error:	0.00ft	North Reference:	True
Reference Well:	P_RASMUSSEN 36-29	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00ft	Output errors are at	2.00 sigma
Reference Wellbore	P_RASMUSSEN 36-29	Database:	EDM 2003.21 Single User Db
Reference Design:	PLAN #1 09-02-09 RHS	Offset TVD Reference:	Offset Datum

Offset Design WELD_RASMUSSEN 9 PAD - P_RASMUSSEN 37-29 - P_RASMUSSEN 37-29 - PLAN #1 09-02-09 RI												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	180.00	-14.57	0.00	14.57				
100.00	100.00	100.00	100.00	0.10	0.10	180.00	-14.57	0.00	14.57	14.38	0.19	76.246	
200.00	200.00	200.00	200.00	0.32	0.32	180.00	-14.57	0.00	14.57	13.93	0.64	22.740	
300.00	300.00	300.00	300.00	0.55	0.55	180.00	-14.57	0.00	14.57	13.48	1.09	13.363	
400.00	400.00	400.00	400.00	0.77	0.77	180.00	-14.57	0.00	14.57	13.03	1.54	9.461	
500.00	500.00	500.00	500.00	0.99	0.99	180.00	-14.57	0.00	14.57	12.58	1.99	7.323	
600.00	600.00	600.00	600.00	1.22	1.22	180.00	-14.57	0.00	14.57	12.13	2.44	5.973	
700.00	700.00	700.00	700.00	1.44	1.44	180.00	-14.57	0.00	14.57	11.68	2.89	5.044	
780.00	780.00	780.00	780.00	1.62	1.62	180.00	-14.57	0.00	14.57	11.32	3.25	4.485	
800.00	800.00	799.97	799.97	1.66	1.67	-47.47	-14.58	0.01	14.53	11.20	3.33	4.363	
855.33	855.32	855.10	855.09	1.76	1.77	-52.35	-15.04	0.57	14.43	10.90	3.53	4.085 CC, ES	
900.00	899.96	899.54	899.52	1.85	1.85	-60.84	-15.91	1.61	14.62	10.93	3.69	3.958 SF	
1,000.00	999.78	998.65	998.47	2.04	2.04	-88.20	-19.43	5.83	18.28	14.20	4.08	4.480	
1,100.00	1,099.33	1,096.91	1,096.32	2.26	2.26	-109.73	-25.08	12.62	28.95	24.47	4.48	6.461	
1,200.00	1,198.50	1,193.91	1,192.58	2.51	2.49	-121.01	-32.77	21.84	46.34	41.43	4.91	9.439	
1,300.00	1,297.15	1,289.32	1,286.80	2.79	2.76	-126.79	-42.36	33.34	69.45	64.07	5.37	12.925	
1,400.00	1,395.17	1,382.80	1,378.58	3.13	3.06	-129.96	-53.70	46.94	97.77	91.89	5.88	16.624	
1,500.00	1,492.44	1,474.05	1,467.57	3.52	3.40	-131.77	-66.61	62.43	130.99	124.55	6.44	20.342	
1,600.00	1,588.85	1,562.81	1,553.47	3.97	3.79	-132.83	-80.91	79.58	168.88	161.83	7.05	23.949	
1,700.00	1,684.27	1,648.86	1,636.05	4.49	4.21	-133.41	-96.39	98.15	211.24	203.52	7.72	27.361	
1,740.95	1,723.04	1,683.28	1,668.87	4.72	4.38	-133.55	-103.02	106.11	229.83	221.82	8.01	28.697	
1,800.00	1,778.79	1,732.22	1,715.33	5.07	4.66	-134.03	-112.89	117.95	257.49	249.02	8.46	30.421	
1,900.00	1,873.22	1,813.68	1,792.04	5.67	5.15	-134.39	-130.44	139.00	305.88	296.62	9.26	33.029	
2,000.00	1,967.64	1,900.67	1,873.54	6.29	5.71	-134.52	-149.91	162.35	355.20	345.08	10.12	35.103	
2,100.00	2,062.07	1,987.66	1,955.04	6.93	6.28	-134.63	-169.38	185.71	404.53	393.53	11.00	36.780	
2,200.00	2,156.50	2,074.65	2,036.54	7.57	6.87	-134.70	-188.85	209.07	453.85	441.96	11.89	38.157	
2,300.00	2,250.92	2,161.63	2,118.04	8.22	7.47	-134.77	-208.32	232.42	503.17	490.37	12.80	39.303	
2,400.00	2,345.35	2,248.62	2,199.54	8.87	8.07	-134.82	-227.79	255.78	552.50	538.78	13.72	40.269	
2,500.00	2,439.78	2,335.61	2,281.04	9.53	8.67	-134.86	-247.26	279.13	601.82	587.18	14.65	41.090	
2,600.00	2,534.20	2,422.60	2,362.54	10.19	9.29	-134.90	-266.73	302.49	651.15	635.57	15.58	41.797	
2,700.00	2,628.63	2,509.59	2,444.04	10.85	9.90	-134.93	-286.20	325.84	700.47	683.96	16.52	42.410	
2,800.00	2,723.06	2,596.58	2,525.54	11.52	10.52	-134.96	-305.66	349.20	749.80	732.34	17.46	42.947	
2,900.00	2,817.48	2,683.56	2,607.04	12.19	11.14	-134.98	-325.13	372.56	799.12	780.72	18.40	43.420	
3,000.00	2,911.91	2,770.55	2,688.54	12.85	11.76	-135.01	-344.60	395.91	848.45	829.10	19.35	43.841	
3,100.00	3,006.34	2,857.54	2,770.04	13.53	12.39	-135.02	-364.07	419.27	897.77	877.47	20.30	44.217	
3,200.00	3,100.76	2,944.53	2,851.55	14.20	13.01	-135.04	-383.54	442.62	947.10	925.84	21.26	44.556	
3,300.00	3,195.19	3,031.52	2,933.05	14.87	13.64	-135.06	-403.01	465.98	996.42	974.21	22.21	44.863	
3,400.00	3,289.62	3,118.50	3,014.55	15.54	14.27	-135.07	-422.48	489.33	1,045.75	1,022.58	23.17	45.142	
3,500.00	3,384.04	3,205.49	3,096.05	16.22	14.90	-135.08	-441.95	512.69	1,095.08	1,070.95	24.12	45.397	
3,572.99	3,452.96	3,268.98	3,155.53	16.71	15.36	-135.09	-456.16	529.74	1,131.08	1,106.26	24.82	45.570	
3,600.00	3,478.51	3,292.52	3,177.59	16.87	15.53	-135.30	-461.43	536.06	1,144.32	1,119.23	25.10	45.595	
3,700.00	3,573.78	3,380.42	3,259.94	17.34	16.17	-135.97	-481.11	559.66	1,191.97	1,165.93	26.05	45.764	
3,800.00	3,670.06	3,469.40	3,343.31	17.77	16.81	-136.46	-501.02	583.55	1,237.41	1,210.44	26.97	45.876	
3,900.00	3,767.22	3,574.70	3,442.08	18.16	17.53	-136.75	-524.37	611.56	1,280.43	1,252.51	27.92	45.866	
4,000.00	3,865.14	3,715.50	3,575.87	18.51	18.26	-136.87	-552.45	645.25	1,318.54	1,289.70	28.84	45.718	
4,100.00	3,963.71	3,862.16	3,717.34	18.82	18.91	-136.95	-577.19	674.92	1,350.73	1,321.07	29.67	45.528	
4,200.00	4,062.81	4,013.93	3,865.61	19.08	19.48	-137.01	-597.87	699.73	1,376.70	1,346.29	30.40	45.283	
4,300.00	4,162.32	4,169.86	4,019.51	19.29	19.95	-137.05	-613.85	718.90	1,396.18	1,365.16	31.03	45.002	
4,400.00	4,262.10	4,328.85	4,177.59	19.47	20.30	-137.07	-624.60	731.79	1,408.99	1,377.45	31.53	44.681	
4,500.00	4,362.06	4,489.65	4,338.17	19.59	20.55	-137.07	-629.75	737.97	1,414.98	1,383.05	31.93	44.319	
4,533.94	4,396.00	4,544.42	4,392.93	19.63	20.61	90.15	-630.18	738.49	1,415.45	1,383.41	32.04	44.177	
4,600.00	4,462.06	4,613.54	4,462.06	19.69	20.67	90.15	-630.19	738.50	1,415.45	1,383.25	32.20	43.956	

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



# Weatherford International Ltd.

## Anticollision Report



<b>Company:</b>	US ROCKIES REGION PLANNING	<b>Local Co-ordinate Reference:</b>	Well P_RASMUSSEN 36-29
<b>Project:</b>	KERR MCGEE OIL & GAS ONSHORE LP	<b>TVD Reference:</b>	WELL @ 4949.00ft (Original Well Elev)
<b>Reference Site:</b>	WELD_RASMUSSEN 9 PAD	<b>MD Reference:</b>	WELL @ 4949.00ft (Original Well Elev)
<b>Site Error:</b>	0.00ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	P_RASMUSSEN 36-29	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.00ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	P_RASMUSSEN 36-29	<b>Database:</b>	EDM 2003.21 Single User Db
<b>Reference Design:</b>	PLAN #1 09-02-09 RHS	<b>Offset TVD Reference:</b>	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	
4,700.00	4,562.06	4,713.54	4,562.06	19.79	20.77	90.15	-630.19	738.50	1,415.45	1,383.02	32.44	43.639	
4,800.00	4,662.06	4,813.54	4,662.06	19.89	20.86	90.15	-630.19	738.50	1,415.45	1,382.78	32.67	43.320	
4,900.00	4,762.06	4,913.54	4,762.06	19.99	20.96	90.15	-630.19	738.50	1,415.45	1,382.54	32.92	43.001	
5,000.00	4,862.06	5,013.54	4,862.06	20.09	21.06	90.15	-630.19	738.50	1,415.45	1,382.29	33.16	42.680	
5,100.00	4,962.06	5,113.54	4,962.06	20.20	21.17	90.15	-630.19	738.50	1,415.45	1,382.04	33.42	42.359	
5,200.00	5,062.06	5,213.54	5,062.06	20.30	21.27	90.15	-630.19	738.50	1,415.45	1,381.78	33.67	42.037	
5,300.00	5,162.06	5,313.54	5,162.06	20.41	21.38	90.15	-630.19	738.50	1,415.45	1,381.52	33.93	41.715	
5,400.00	5,262.06	5,413.54	5,262.06	20.52	21.48	90.15	-630.19	738.50	1,415.45	1,381.26	34.20	41.393	
5,500.00	5,362.06	5,513.54	5,362.06	20.64	21.59	90.15	-630.19	738.50	1,415.45	1,380.99	34.46	41.071	
5,600.00	5,462.06	5,613.54	5,462.06	20.75	21.71	90.15	-630.19	738.50	1,415.45	1,380.72	34.74	40.750	
5,700.00	5,562.06	5,713.54	5,562.06	20.87	21.82	90.15	-630.19	738.50	1,415.45	1,380.44	35.01	40.429	
5,800.00	5,662.06	5,813.54	5,662.06	20.98	21.93	90.15	-630.19	738.50	1,415.45	1,380.16	35.29	40.110	
5,900.00	5,762.06	5,913.54	5,762.06	21.10	22.05	90.15	-630.19	738.50	1,415.45	1,379.88	35.57	39.791	
6,000.00	5,862.06	6,013.54	5,862.06	21.23	22.17	90.15	-630.19	738.50	1,415.45	1,379.60	35.86	39.474	
6,100.00	5,962.06	6,113.54	5,962.06	21.35	22.29	90.15	-630.19	738.50	1,415.45	1,379.31	36.15	39.157	
6,200.00	6,062.06	6,213.54	6,062.06	21.47	22.41	90.15	-630.19	738.50	1,415.45	1,379.01	36.44	38.843	
6,300.00	6,162.06	6,313.54	6,162.06	21.60	22.53	90.15	-630.19	738.50	1,415.45	1,378.72	36.74	38.530	
6,400.00	6,262.06	6,413.54	6,262.06	21.73	22.66	90.15	-630.19	738.50	1,415.45	1,378.42	37.04	38.219	
6,500.00	6,362.06	6,513.54	6,362.06	21.86	22.79	90.15	-630.19	738.50	1,415.45	1,378.12	37.34	37.909	
6,600.00	6,462.06	6,613.54	6,462.06	21.99	22.91	90.15	-630.19	738.50	1,415.45	1,377.81	37.64	37.602	
6,700.00	6,562.06	6,713.54	6,562.06	22.12	23.04	90.15	-630.19	738.50	1,415.45	1,377.50	37.95	37.297	
6,800.00	6,662.06	6,813.54	6,662.06	22.26	23.17	90.15	-630.19	738.50	1,415.45	1,377.19	38.26	36.994	
6,900.00	6,762.06	6,913.54	6,762.06	22.39	23.31	90.15	-630.19	738.50	1,415.45	1,376.88	38.58	36.693	
7,000.00	6,862.06	7,013.54	6,862.06	22.53	23.44	90.15	-630.19	738.50	1,415.45	1,376.56	38.89	36.394	
7,100.00	6,962.06	7,113.54	6,962.06	22.67	23.57	90.15	-630.19	738.50	1,415.45	1,376.24	39.21	36.098	
7,200.00	7,062.06	7,213.54	7,062.06	22.81	23.71	90.15	-630.19	738.50	1,415.45	1,375.92	39.53	35.805	
7,300.00	7,162.06	7,313.54	7,162.06	22.95	23.85	90.15	-630.19	738.50	1,415.45	1,375.60	39.86	35.513	
7,400.00	7,262.06	7,413.54	7,262.06	23.09	23.99	90.15	-630.19	738.50	1,415.45	1,375.27	40.18	35.225	
7,500.00	7,362.06	7,513.54	7,362.06	23.23	24.13	90.15	-630.19	738.50	1,415.45	1,374.94	40.51	34.939	
7,600.00	7,462.06	7,613.54	7,462.06	23.38	24.27	90.15	-630.19	738.50	1,415.45	1,374.61	40.84	34.655	
7,700.00	7,562.06	7,713.54	7,562.06	23.53	24.41	90.15	-630.19	738.50	1,415.45	1,374.28	41.18	34.374	
7,800.00	7,662.06	7,813.54	7,662.06	23.67	24.56	90.15	-630.19	738.50	1,415.45	1,373.94	41.51	34.096	
7,819.94	7,682.00	7,833.49	7,682.00	23.70	24.59	90.15	-630.19	738.50	1,415.45	1,373.87	41.58	34.041	





Weatherford International Ltd.  
Anticollision Report



Company:	US ROCKIES REGION PLANNING	Local Co-ordinate Reference:	Well P_RASMUSSEN 36-29
Project:	KERR MCGEE OIL & GAS ONSHORE LP	TVD Reference:	WELL @ 4949.00ft (Original Well Elev)
Reference Site:	WELD_RASMUSSEN 9 PAD	MD Reference:	WELL @ 4949.00ft (Original Well Elev)
Site Error:	0.00ft	North Reference:	True
Reference Well:	P_RASMUSSEN 36-29	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00ft	Output errors are at	2.00 sigma
Reference Wellbore	P_RASMUSSEN 36-29	Database:	EDM 2003.21 Single User Db
Reference Design:	PLAN #1 09-02-09 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	3.66	43.71	2.80	43.80				
100.00	100.00	100.00	100.00	0.10	0.10	3.66	43.71	2.80	43.80	43.61	0.19	229.251	
200.00	200.00	200.00	200.00	0.32	0.32	3.66	43.71	2.80	43.80	43.16	0.64	68.373	
300.00	300.00	300.00	300.00	0.55	0.55	3.66	43.71	2.80	43.80	42.71	1.09	40.178	
400.00	400.00	400.00	400.00	0.77	0.77	3.66	43.71	2.80	43.80	42.26	1.54	28.447	
500.00	500.00	500.00	500.00	0.99	0.99	3.66	43.71	2.80	43.80	41.81	1.99	22.018	
600.00	600.00	600.00	600.00	1.22	1.22	3.66	43.71	2.80	43.80	41.36	2.44	17.960	
700.00	700.00	700.00	700.00	1.44	1.44	3.66	43.71	2.80	43.80	40.91	2.89	15.164	
780.00	780.00	780.00	780.00	1.62	1.62	3.66	43.71	2.80	43.80	40.55	3.25	13.485 CC	
800.00	800.00	799.90	799.90	1.66	1.67	136.59	43.73	2.86	43.87	40.54	3.33	13.173 ES	
900.00	899.96	899.18	899.15	1.85	1.87	141.39	44.40	5.18	46.65	42.93	3.72	12.548 SF	
1,000.00	999.78	997.65	997.44	2.04	2.09	150.73	46.02	10.73	54.51	50.39	4.12	13.242	
1,100.00	1,099.33	1,094.66	1,094.02	2.26	2.31	160.67	48.54	19.37	69.02	64.50	4.52	15.273	
1,200.00	1,198.50	1,189.58	1,188.18	2.51	2.56	168.76	51.90	30.86	90.86	85.94	4.92	18.471	
1,300.00	1,297.15	1,281.86	1,279.29	2.79	2.82	174.63	55.99	44.89	119.85	114.54	5.31	22.551	
1,400.00	1,395.17	1,371.00	1,366.82	3.13	3.11	178.78	60.72	61.11	155.56	149.86	5.71	27.259	
1,500.00	1,492.44	1,456.60	1,450.33	3.52	3.43	-178.27	65.99	79.14	197.52	191.43	6.10	32.405	
1,600.00	1,588.85	1,538.31	1,529.49	3.97	3.77	-176.11	71.66	98.58	245.30	238.82	6.48	37.853	
1,700.00	1,684.27	1,615.87	1,604.06	4.49	4.13	-174.47	77.62	119.03	298.51	291.65	6.86	43.507	
1,740.95	1,723.04	1,646.39	1,633.24	4.72	4.28	-173.91	80.13	127.61	321.78	314.76	7.02	45.850	
1,800.00	1,778.79	1,689.40	1,674.21	5.07	4.51	-173.26	83.80	140.20	356.29	349.00	7.29	48.888	
1,900.00	1,873.22	1,760.20	1,741.19	5.67	4.91	-172.34	90.22	162.21	416.30	408.54	7.76	53.675	
2,000.00	1,967.64	1,828.46	1,805.21	6.29	5.33	-171.57	96.85	184.93	478.19	469.97	8.23	58.111	
2,100.00	2,062.07	1,900.00	1,871.69	6.93	5.80	-170.86	104.25	210.30	541.91	533.19	8.72	62.140	
2,200.00	2,156.50	1,957.63	1,924.74	7.57	6.21	-170.34	110.56	231.90	607.25	598.06	9.19	66.075	
2,300.00	2,250.92	2,022.43	1,983.88	8.22	6.70	-169.81	117.98	257.34	674.15	664.47	9.68	69.614	
2,400.00	2,345.35	2,096.21	2,051.05	8.87	7.27	-169.29	126.53	286.64	741.49	731.28	10.21	72.615	
2,500.00	2,439.78	2,169.99	2,118.21	9.53	7.85	-168.86	135.08	315.94	808.86	798.11	10.75	75.265	
2,600.00	2,534.20	2,243.77	2,185.38	10.19	8.44	-168.50	143.63	345.25	876.24	864.95	11.29	77.634	
2,700.00	2,628.63	2,317.55	2,252.55	10.85	9.04	-168.18	152.18	374.55	943.64	931.81	11.83	79.760	
2,800.00	2,723.06	2,391.32	2,319.72	11.52	9.64	-167.91	160.73	403.85	1,011.06	998.68	12.38	81.669	
2,900.00	2,817.48	2,465.10	2,386.89	12.19	10.25	-167.68	169.28	433.16	1,078.49	1,065.56	12.93	83.389	
3,000.00	2,911.91	2,538.88	2,454.05	12.85	10.86	-167.47	177.83	462.46	1,145.92	1,132.44	13.49	84.952	
3,100.00	3,006.34	2,612.66	2,521.22	13.53	11.47	-167.28	186.38	491.76	1,213.37	1,199.32	14.05	86.376	
3,200.00	3,100.76	2,686.44	2,588.39	14.20	12.08	-167.11	194.93	521.07	1,280.82	1,266.21	14.61	87.674	
3,300.00	3,195.19	2,760.22	2,655.56	14.87	12.70	-166.96	203.48	550.37	1,348.27	1,333.10	15.17	88.862	
3,400.00	3,289.62	2,834.00	2,722.73	15.54	13.32	-166.83	212.03	579.67	1,415.73	1,400.00	15.74	89.955	
3,500.00	3,384.04	2,907.78	2,789.89	16.22	13.94	-166.70	220.58	608.98	1,483.20	1,466.89	16.31	90.964	
3,572.99	3,452.96	2,961.63	2,838.92	16.71	14.39	-166.62	226.82	630.37	1,532.44	1,515.72	16.72	91.649	
3,600.00	3,478.51	2,981.64	2,857.14	16.87	14.56	-166.70	229.14	638.31	1,550.57	1,533.66	16.92	91.668	
3,700.00	3,573.78	3,057.13	2,925.87	17.34	15.20	-166.97	237.89	668.30	1,616.09	1,598.48	17.61	91.793	
3,800.00	3,670.06	3,134.78	2,996.55	17.77	15.85	-167.17	246.88	699.14	1,679.00	1,660.71	18.29	91.819	
3,900.00	3,767.22	3,214.48	3,069.11	18.16	16.53	-167.33	256.12	730.79	1,739.24	1,720.29	18.95	91.766	
4,000.00	3,865.14	3,296.13	3,143.45	18.51	17.22	-167.44	265.58	763.22	1,796.74	1,777.14	19.60	91.654	
4,100.00	3,963.71	3,379.65	3,219.48	18.82	17.93	-167.51	275.26	796.39	1,851.44	1,831.20	20.24	91.495	
4,200.00	4,062.81	3,464.92	3,297.11	19.08	18.66	-167.54	285.14	830.26	1,903.27	1,882.43	20.85	91.301	
4,300.00	4,162.32	3,551.84	3,376.25	19.29	19.39	-167.54	295.22	864.79	1,952.19	1,930.75	21.43	91.081	
4,400.00	4,262.10	3,640.32	3,456.79	19.47	20.15	-167.51	305.47	899.92	1,998.13	1,976.13	22.00	90.843	
4,500.00	4,362.06	3,730.23	3,538.65	19.59	20.91	-167.45	315.89	935.64	2,041.05	2,018.52	22.53	90.593	
4,533.94	4,396.00	3,761.06	3,566.71	19.63	21.18	59.79	319.46	947.88	2,054.93	2,032.22	22.71	90.498	
4,600.00	4,462.06	3,821.19	3,621.46	19.69	21.69	59.97	326.43	971.76	2,081.59	2,058.56	23.03	90.379	
4,700.00	4,562.06	3,912.23	3,704.34	19.79	22.47	60.24	336.98	1,007.92	2,121.99	2,098.47	23.52	90.222	

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



# Weatherford International Ltd.

## Anticollision Report



<b>Company:</b>	US ROCKIES REGION PLANNING	<b>Local Co-ordinate Reference:</b>	Well P_RASMUSSEN 36-29
<b>Project:</b>	KERR MCGEE OIL & GAS ONSHORE LP	<b>TVD Reference:</b>	WELL @ 4949.00ft (Original Well Elev)
<b>Reference Site:</b>	WELD_RASMUSSEN 9 PAD	<b>MD Reference:</b>	WELL @ 4949.00ft (Original Well Elev)
<b>Site Error:</b>	0.00ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	P_RASMUSSEN 36-29	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.00ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	P_RASMUSSEN 36-29	<b>Database:</b>	EDM 2003.21 Single User Db
<b>Reference Design:</b>	PLAN #1 09-02-09 RHS	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design												Offset Site Error:	0.00 ft
WELD_RASMUSSEN 9 PAD - P_RASMUSSEN 39-29 - P_RASMUSSEN 39-29 - PLAN #1 09-02-09 RI												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
4,800.00	4,662.06	4,003.27	3,787.23	19.89	23.24	60.49	347.53	1,044.08	2,162.43	2,138.42	24.01	90.072	
4,900.00	4,762.06	4,094.31	3,870.11	19.99	24.02	60.74	358.08	1,080.24	2,202.90	2,178.41	24.50	89.928	
5,000.00	4,862.06	4,185.35	3,952.99	20.09	24.80	60.97	368.63	1,116.40	2,243.41	2,218.43	24.99	89.789	
5,100.00	4,962.06	4,276.39	4,035.87	20.20	25.58	61.20	379.18	1,152.56	2,283.95	2,258.47	25.47	89.656	
5,200.00	5,062.06	4,367.43	4,118.75	20.30	26.36	61.42	389.73	1,188.72	2,324.51	2,298.55	25.96	89.528	
5,300.00	5,162.06	4,458.47	4,201.64	20.41	27.14	61.63	400.28	1,224.88	2,365.11	2,338.65	26.45	89.404	
5,400.00	5,262.06	4,549.51	4,284.52	20.52	27.92	61.84	410.83	1,261.04	2,405.73	2,378.78	26.94	89.284	
5,500.00	5,362.06	4,640.55	4,367.40	20.64	28.70	62.04	421.38	1,297.19	2,446.38	2,418.94	27.44	89.168	
5,600.00	5,462.06	4,731.59	4,450.28	20.75	29.48	62.23	431.93	1,333.35	2,487.05	2,459.12	27.93	89.056	
5,700.00	5,562.06	4,822.63	4,533.16	20.87	30.26	62.42	442.48	1,369.51	2,527.74	2,499.32	28.42	88.947	
5,800.00	5,662.06	4,913.67	4,616.05	20.98	31.04	62.60	453.03	1,405.67	2,568.45	2,539.54	28.91	88.841	
5,900.00	5,762.06	5,004.71	4,698.93	21.10	31.82	62.77	463.58	1,441.83	2,609.19	2,579.79	29.40	88.738	
6,000.00	5,862.06	5,095.75	4,781.81	21.23	32.60	62.94	474.13	1,477.99	2,649.94	2,620.05	29.90	88.638	
6,100.00	5,962.06	5,186.79	4,864.69	21.35	33.38	63.11	484.69	1,514.15	2,690.72	2,660.33	30.39	88.540	
6,200.00	6,062.06	5,277.82	4,947.57	21.47	34.16	63.27	495.24	1,550.31	2,731.51	2,700.63	30.88	88.444	
6,300.00	6,162.06	5,368.86	5,030.46	21.60	34.94	63.42	505.79	1,586.47	2,772.32	2,740.94	31.38	88.351	
6,400.00	6,262.06	5,459.90	5,113.34	21.73	35.72	63.57	516.34	1,622.63	2,813.15	2,781.27	31.87	88.260	
6,500.00	6,362.06	5,550.94	5,196.22	21.86	36.50	63.72	526.89	1,658.78	2,853.99	2,821.62	32.37	88.171	
6,600.00	6,462.06	5,642.06	5,279.10	21.99	37.28	63.87	537.44	1,694.94	2,894.82	2,862.45	32.87	88.082	
6,700.00	6,562.06	5,733.19	5,361.99	22.12	38.06	64.02	547.99	1,731.09	2,935.65	2,905.28	33.37	87.993	
6,800.00	6,662.06	5,824.31	5,444.87	22.26	38.84	64.17	558.54	1,767.24	2,976.48	2,946.11	33.87	87.904	
6,900.00	6,762.06	5,915.44	5,527.76	22.39	39.62	64.32	569.09	1,803.39	3,017.31	2,986.94	34.37	87.815	
7,000.00	6,862.06	6,006.57	5,610.65	22.53	40.40	64.47	579.64	1,839.54	3,058.14	3,027.77	34.87	87.726	
7,100.00	6,962.06	6,097.69	5,693.54	22.67	41.18	64.62	590.19	1,875.69	3,098.97	3,068.60	35.37	87.637	
7,200.00	7,062.06	6,188.82	5,776.42	22.81	41.96	64.77	600.74	1,911.84	3,139.80	3,109.43	35.87	87.548	
7,300.00	7,162.06	6,279.94	5,859.31	22.95	42.74	64.92	611.29	1,947.99	3,180.63	3,150.26	36.37	87.459	
7,400.00	7,262.06	6,371.07	5,942.20	23.09	43.52	65.07	621.84	1,984.14	3,221.46	3,191.09	36.87	87.370	
7,500.00	7,362.06	6,462.19	6,025.09	23.23	44.30	65.22	632.39	2,020.29	3,262.29	3,231.92	37.37	87.281	
7,600.00	7,462.06	6,553.32	6,107.98	23.38	45.08	65.37	642.94	2,056.44	3,303.12	3,272.75	37.87	87.192	
7,700.00	7,562.06	6,644.44	6,190.87	23.53	45.86	65.52	653.49	2,092.59	3,343.95	3,313.58	38.37	87.103	
7,800.00	7,662.06	6,735.57	6,273.76	23.67	46.64	65.67	664.04	2,128.74	3,384.78	3,354.41	38.87	87.014	
7,819.94	7,682.00	8,075.27	7,682.00	23.70	42.26	64.64	601.14	1,913.28	2,866.45	2,826.96	39.49	72.585	





<b>Company:</b>	US ROCKIES REGION PLANNING	<b>Local Co-ordinate Reference:</b>	Well P_RASMUSSEN 36-29
<b>Project:</b>	KERR MCGEE OIL & GAS ONSHORE LP	<b>TVD Reference:</b>	WELL @ 4949.00ft (Original Well Elev)
<b>Reference Site:</b>	WELD_RASMUSSEN 9 PAD	<b>MD Reference:</b>	WELL @ 4949.00ft (Original Well Elev)
<b>Site Error:</b>	0.00ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	P_RASMUSSEN 36-29	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.00ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	P_RASMUSSEN 36-29	<b>Database:</b>	EDM 2003.21 Single User Db
<b>Reference Design:</b>	PLAN #1 09-02-09 RHS	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design WELD_RASMUSSEN 9 PAD - P_RASSMUSSEN 22-29 - P_RASSMUSSEN 22-29 - PLAN #1 09-02-01													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	2.20	72.85	2.80	72.91					
100.00	100.00	100.00	100.00	0.10	0.10	2.20	72.85	2.80	72.91	72.71	0.19	381.600		
200.00	200.00	200.00	200.00	0.32	0.32	2.20	72.85	2.80	72.91	72.26	0.64	113.811		
300.00	300.00	300.00	300.00	0.55	0.55	2.20	72.85	2.80	72.91	71.82	1.09	66.878		
400.00	400.00	400.00	400.00	0.77	0.77	2.20	72.85	2.80	72.91	71.37	1.54	47.352		
500.00	500.00	500.00	500.00	0.99	0.99	2.20	72.85	2.80	72.91	70.92	1.99	36.651		
600.00	600.00	600.00	600.00	1.22	1.22	2.20	72.85	2.80	72.91	70.47	2.44	29.895		
700.00	700.00	700.00	700.00	1.44	1.44	2.20	72.85	2.80	72.91	70.02	2.89	25.242		
780.00	780.00	780.00	780.00	1.62	1.62	2.20	72.85	2.80	72.91	69.66	3.25	22.447 CC		
800.00	800.00	800.00	800.00	1.66	1.67	135.02	72.85	2.80	72.95	69.62	3.33	21.890 ES		
900.00	899.96	899.96	899.96	1.85	1.89	136.32	72.85	2.80	74.70	70.96	3.74	19.982		
1,000.00	999.78	998.64	998.63	2.04	2.11	138.80	73.37	2.31	79.57	75.42	4.15	19.184 SF		
1,100.00	1,099.33	1,096.28	1,096.20	2.26	2.33	140.71	76.16	-0.31	89.27	84.71	4.56	19.574		
1,200.00	1,198.50	1,193.18	1,192.83	2.51	2.55	141.86	81.33	-5.15	103.83	98.85	4.99	20.817		
1,300.00	1,297.15	1,289.01	1,288.11	2.79	2.78	142.37	88.79	-12.14	123.15	117.71	5.44	22.652		
1,400.00	1,395.17	1,383.45	1,381.62	3.13	3.03	142.41	98.41	-21.16	147.10	141.19	5.91	24.870		
1,500.00	1,492.44	1,476.23	1,473.01	3.52	3.30	142.15	110.04	-32.06	175.59	169.16	6.43	27.301		
1,600.00	1,588.85	1,567.06	1,561.95	3.97	3.60	141.70	123.51	-44.70	208.50	201.51	6.99	29.812		
1,700.00	1,684.27	1,655.74	1,648.16	4.49	3.94	141.14	138.65	-58.88	245.71	238.10	7.61	32.300		
1,740.95	1,723.04	1,691.38	1,682.62	4.72	4.08	140.89	145.28	-65.10	262.15	254.28	7.87	33.308		
1,800.00	1,778.79	1,742.22	1,731.58	5.07	4.30	140.77	155.27	-74.47	286.64	278.35	8.30	34.555		
1,900.00	1,873.22	1,827.15	1,812.80	5.67	4.71	140.31	173.38	-91.45	329.40	320.36	9.05	36.414		
2,000.00	1,967.64	1,910.51	1,891.76	6.29	5.15	139.61	192.85	-109.70	373.78	363.94	9.84	37.989		
2,100.00	2,062.07	1,992.18	1,968.35	6.93	5.63	138.78	213.55	-129.11	419.78	409.11	10.67	39.332		
2,200.00	2,156.50	2,072.11	2,042.49	7.57	6.15	137.87	235.34	-149.53	467.41	455.87	11.54	40.489		
2,300.00	2,250.92	2,150.23	2,114.11	8.22	6.70	136.92	258.09	-170.85	516.68	504.23	12.44	41.525		
2,400.00	2,345.35	2,226.47	2,183.17	8.87	7.28	135.95	281.66	-192.95	567.57	554.21	13.36	42.474		
2,500.00	2,439.78	2,300.00	2,248.93	9.53	7.87	135.00	305.64	-215.44	620.09	605.79	14.29	43.379		
2,600.00	2,534.20	2,373.23	2,313.57	10.19	8.51	134.04	330.75	-238.97	674.20	658.94	15.26	44.177		
2,700.00	2,628.63	2,443.70	2,374.92	10.85	9.16	133.11	356.04	-262.68	729.90	713.67	16.23	44.977		
2,800.00	2,723.06	2,520.47	2,441.00	11.52	9.90	132.14	384.55	-289.41	786.87	769.62	17.25	45.603		
2,900.00	2,817.48	2,601.78	2,510.92	12.19	10.70	131.23	414.83	-317.79	844.10	825.78	18.32	46.086		
3,000.00	2,911.91	2,683.09	2,580.84	12.85	11.51	130.44	445.11	-346.18	901.45	882.07	19.38	46.512		
3,100.00	3,006.34	2,764.40	2,650.76	13.53	12.32	129.73	475.38	-374.56	958.90	938.46	20.45	46.895		
3,200.00	3,100.76	2,845.71	2,720.69	14.20	13.15	129.11	505.66	-402.94	1,016.45	994.93	21.52	47.242		
3,300.00	3,195.19	2,927.02	2,790.61	14.87	13.97	128.56	535.93	-431.32	1,074.06	1,051.48	22.58	47.558		
3,400.00	3,289.62	3,008.33	2,860.53	15.54	14.80	128.06	566.21	-459.70	1,131.74	1,108.08	23.65	47.845		
3,500.00	3,384.04	3,089.63	2,930.45	16.22	15.64	127.61	596.48	-488.09	1,189.46	1,164.74	24.73	48.107		
3,572.99	3,452.96	3,148.98	2,981.49	16.71	16.25	127.30	618.58	-508.80	1,231.63	1,206.12	25.51	48.284		
3,600.00	3,478.51	3,170.98	3,000.40	16.87	16.47	127.49	626.77	-516.48	1,247.18	1,221.36	25.82	48.306		
3,700.00	3,573.78	3,253.01	3,070.94	17.34	17.32	128.09	657.32	-545.11	1,303.65	1,276.76	26.90	48.471		
3,800.00	3,670.06	3,335.89	3,142.22	17.77	18.18	128.53	688.18	-574.04	1,358.42	1,330.46	27.96	48.590		
3,900.00	3,767.22	3,419.52	3,214.13	18.16	19.05	128.85	719.31	-603.23	1,411.48	1,382.48	28.99	48.683		
4,000.00	3,865.14	3,503.79	3,286.60	18.51	19.92	129.04	750.69	-632.65	1,462.82	1,432.83	30.00	48.763		
4,100.00	3,963.71	3,588.61	3,359.55	18.82	20.81	129.13	782.28	-662.26	1,512.48	1,481.51	30.97	48.843		
4,200.00	4,062.81	3,673.88	3,432.87	19.08	21.70	129.13	814.03	-692.02	1,560.46	1,528.57	31.89	48.932		
4,300.00	4,162.32	3,759.48	3,506.48	19.29	22.59	129.04	845.90	-721.90	1,606.81	1,574.05	32.77	49.040		
4,400.00	4,262.10	3,845.31	3,580.29	19.47	23.49	128.87	877.86	-751.86	1,651.56	1,617.97	33.59	49.172		
4,500.00	4,362.06	3,931.27	3,654.22	19.59	24.39	128.63	909.87	-781.87	1,694.76	1,660.41	34.35	49.336		
4,533.94	4,396.00	3,960.46	3,679.32	19.63	24.70	-4.25	920.74	-792.06	1,709.08	1,674.48	34.60	49.398		
4,600.00	4,462.06	4,017.27	3,728.17	19.69	25.29	-4.92	941.89	-811.89	1,736.89	1,701.88	35.00	49.620		
4,700.00	4,562.06	4,103.26	3,802.12	19.79	26.19	-5.88	973.91	-841.91	1,779.37	1,743.76	35.60	49.977		

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



# Weatherford International Ltd.

## Anticollision Report



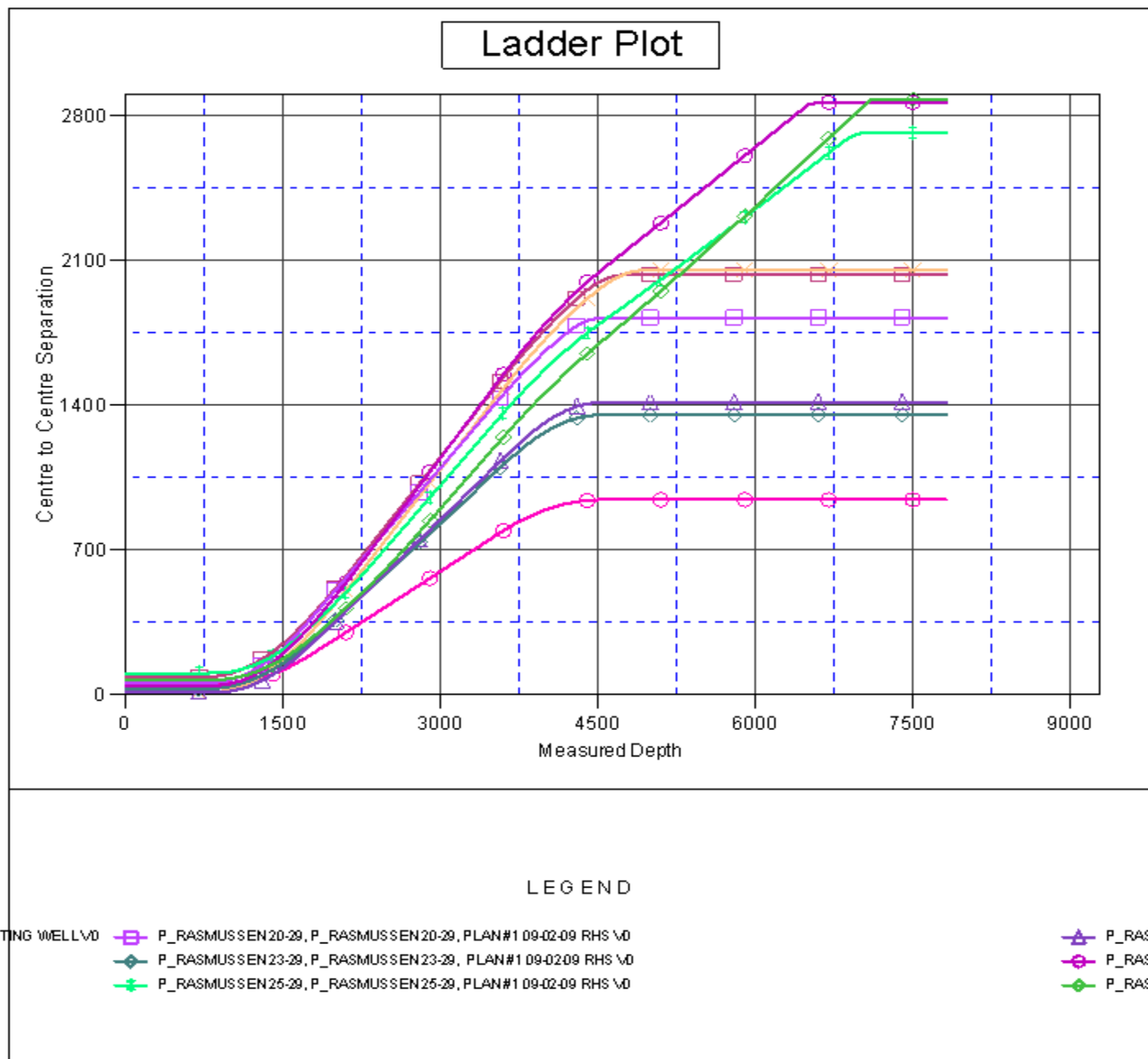
<b>Company:</b>	US ROCKIES REGION PLANNING	<b>Local Co-ordinate Reference:</b>	Well P_RASMUSSEN 36-29
<b>Project:</b>	KERR MCGEE OIL & GAS ONSHORE LP	<b>TVD Reference:</b>	WELL @ 4949.00ft (Original Well Elev)
<b>Reference Site:</b>	WELD_RASMUSSEN 9 PAD	<b>MD Reference:</b>	WELL @ 4949.00ft (Original Well Elev)
<b>Site Error:</b>	0.00ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	P_RASMUSSEN 36-29	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.00ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	P_RASMUSSEN 36-29	<b>Database:</b>	EDM 2003.21 Single User Db
<b>Reference Design:</b>	PLAN #1 09-02-09 RHS	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design WELD_RASMUSSEN 9 PAD - P_RASSMUSSEN 22-29 - P_RASSMUSSEN 22-29 - PLAN #1 09-02-09												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	
4,800.00	4,662.06	4,189.26	3,876.07	19.89	27.10	-6.81	1,005.93	-871.92	1,822.29	1,786.10	36.19	50.357	
4,900.00	4,762.06	4,275.25	3,950.02	19.99	28.00	-7.70	1,037.95	-901.94	1,865.62	1,828.86	36.76	50.755	
5,000.00	4,862.06	4,361.25	4,023.97	20.09	28.90	-8.55	1,069.97	-931.96	1,909.33	1,872.02	37.31	51.170	
5,100.00	4,962.06	4,447.24	4,097.92	20.20	29.81	-9.36	1,101.99	-961.98	1,953.40	1,915.54	37.86	51.598	
5,200.00	5,062.06	4,533.24	4,171.87	20.30	30.71	-10.15	1,134.01	-991.99	1,997.80	1,959.41	38.39	52.038	
5,300.00	5,162.06	4,619.23	4,245.83	20.41	31.62	-10.90	1,166.03	-1,022.01	2,042.51	2,003.60	38.91	52.488	
5,400.00	5,262.06	4,705.23	4,319.78	20.52	32.53	-11.62	1,198.05	-1,052.03	2,087.51	2,048.08	39.43	52.946	
5,500.00	5,362.06	4,791.22	4,393.73	20.64	33.43	-12.31	1,230.07	-1,082.05	2,132.78	2,092.85	39.93	53.409	
5,600.00	5,462.06	4,877.22	4,467.68	20.75	34.34	-12.97	1,262.09	-1,112.06	2,178.31	2,137.88	40.43	53.877	
5,700.00	5,562.06	4,963.21	4,541.63	20.87	35.25	-13.61	1,294.11	-1,142.08	2,224.08	2,183.15	40.92	54.349	
5,800.00	5,662.06	5,049.21	4,615.58	20.98	36.15	-14.23	1,326.13	-1,172.10	2,270.07	2,228.66	41.41	54.824	
5,900.00	5,762.06	5,135.20	4,689.53	21.10	37.06	-14.82	1,358.15	-1,202.12	2,316.27	2,274.38	41.89	55.299	
6,000.00	5,862.06	5,221.20	4,763.48	21.23	37.97	-15.39	1,390.17	-1,232.13	2,362.67	2,320.31	42.36	55.776	
6,100.00	5,962.06	5,307.19	4,837.43	21.35	38.88	-15.94	1,422.19	-1,262.15	2,409.26	2,366.43	42.83	56.252	
6,200.00	6,062.06	5,393.18	4,911.38	21.47	39.78	-16.47	1,454.21	-1,292.17	2,456.03	2,412.73	43.30	56.726	
6,300.00	6,162.06	5,479.18	4,985.34	21.60	40.69	-16.98	1,486.23	-1,322.19	2,502.96	2,459.20	43.76	57.200	
6,400.00	6,262.06	5,565.17	5,059.29	21.73	41.60	-17.48	1,518.25	-1,352.20	2,550.05	2,505.83	44.22	57.671	
6,500.00	6,362.06	5,651.17	5,133.24	21.86	42.51	-17.95	1,550.27	-1,382.22	2,597.29	2,552.62	44.67	58.139	
6,600.00	6,462.06	5,737.16	5,207.19	21.99	43.42	-18.41	1,582.29	-1,412.24	2,644.67	2,599.54	45.13	58.605	
6,700.00	6,562.06	5,823.16	5,281.14	22.12	44.33	-18.86	1,614.31	-1,442.26	2,692.18	2,646.61	45.58	59.066	
6,800.00	6,662.06	5,909.15	5,355.09	22.26	45.24	-19.29	1,646.33	-1,472.27	2,739.83	2,693.80	46.03	59.524	
6,900.00	6,762.06	5,995.15	5,429.04	22.39	46.15	-19.70	1,678.35	-1,502.29	2,787.59	2,741.11	46.48	59.978	
7,000.00	6,862.06	6,081.14	5,502.99	22.53	47.05	-20.10	1,710.37	-1,532.31	2,835.46	2,788.54	46.92	60.428	
7,100.00	6,962.06	6,959.61	6,310.30	22.67	52.90	-22.81	1,956.71	-1,763.24	2,877.15	2,828.00	49.15	58.539	
7,200.00	7,062.06	7,718.21	7,062.06	22.81	54.53	-23.39	2,018.18	-1,820.87	2,881.51	2,831.19	50.32	57.264	
7,300.00	7,162.06	7,818.21	7,162.06	22.95	54.59	-23.39	2,018.18	-1,820.87	2,881.51	2,830.93	50.58	56.972	
7,400.00	7,262.06	7,918.21	7,262.06	23.09	54.65	-23.39	2,018.18	-1,820.87	2,881.51	2,830.67	50.84	56.680	
7,500.00	7,362.06	8,018.21	7,362.06	23.23	54.71	-23.39	2,018.18	-1,820.87	2,881.51	2,830.41	51.10	56.388	
7,600.00	7,462.06	8,118.21	7,462.06	23.38	54.78	-23.39	2,018.18	-1,820.87	2,881.51	2,830.14	51.37	56.096	
7,700.00	7,562.06	8,218.21	7,562.06	23.53	54.84	-23.39	2,018.18	-1,820.87	2,881.51	2,829.87	51.64	55.804	
7,800.00	7,662.06	8,318.21	7,662.06	23.67	54.91	-23.39	2,018.18	-1,820.87	2,881.51	2,829.60	51.91	55.513	
7,812.95	7,675.00	8,331.16	7,675.00	23.69	54.92	-23.39	2,018.18	-1,820.87	2,881.51	2,829.57	51.94	55.476	
7,819.94	7,682.00	8,337.16	7,681.00	23.70	54.92	-23.39	2,018.18	-1,820.87	2,881.51	2,829.55	51.96	55.457	



<b>Company:</b>	US ROCKIES REGION PLANNING	<b>Local Co-ordinate Reference:</b>	Well P_RASMUSSEN 36-29
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<b>Reference Site:</b>	WELD_RASMUSSEN 9 PAD	<b>MD Reference:</b>	WELL @ 4949.00ft (Original Well Elev)
<b>Site Error:</b>	0.00ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	P_RASMUSSEN 36-29	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.00ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	P_RASMUSSEN 36-29	<b>Database:</b>	EDM 2003.21 Single User Db
<b>Reference Design:</b>	PLAN #1 09-02-09 RHS	<b>Offset TVD Reference:</b>	Offset Datum

Reference Depths are relative to WELL @ 4949.00ft (Original Well Elev) Coordinates are relative to: P\_RASMUSSEN 36-29  
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: 0.31°

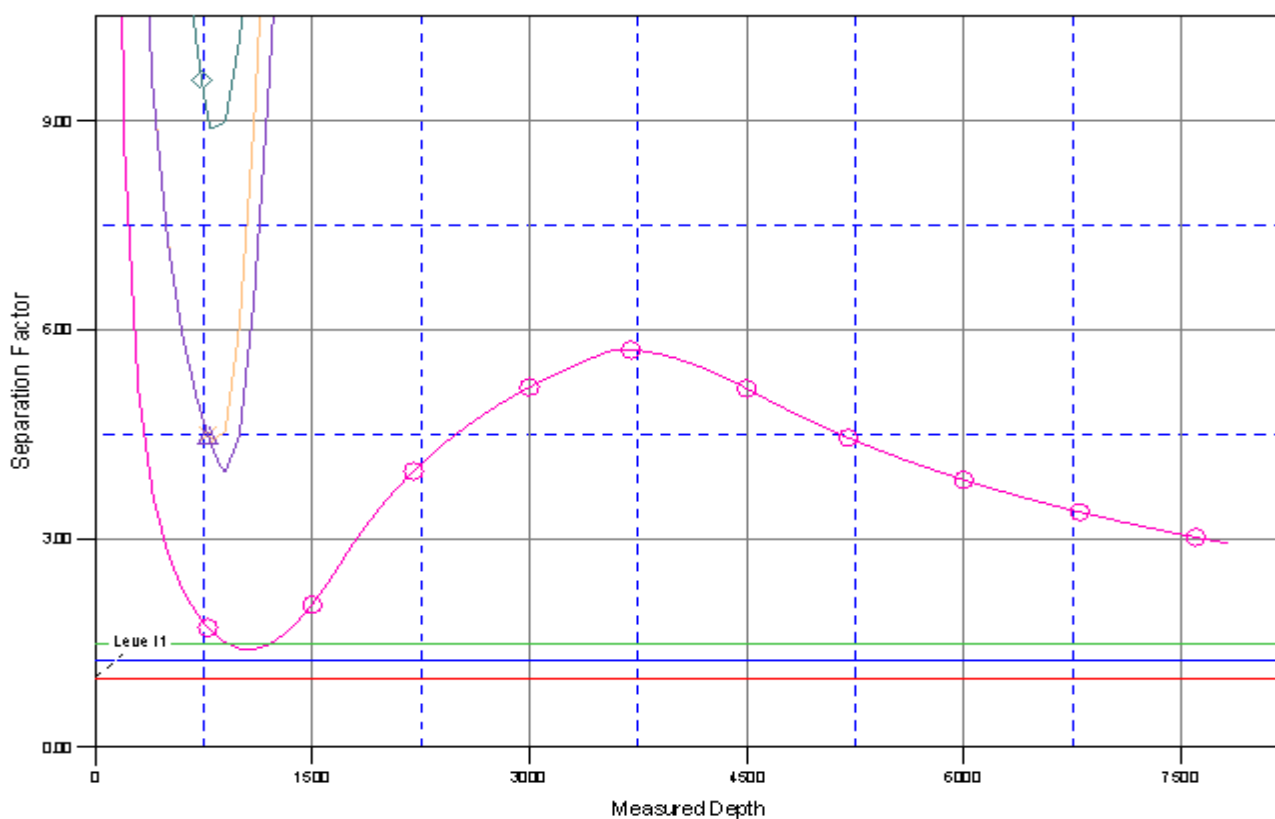




<b>Company:</b>	US ROCKIES REGION PLANNING	<b>Local Co-ordinate Reference:</b>	Well P_RASMUSSEN 36-29
<b>Project:</b>	KERR MCGEE OIL & GAS ONSHORE LP	<b>TVD Reference:</b>	WELL @ 4949.00ft (Original Well Elev)
<b>Reference Site:</b>	WELD_RASMUSSEN 9 PAD	<b>MD Reference:</b>	WELL @ 4949.00ft (Original Well Elev)
<b>Site Error:</b>	0.00ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	P_RASMUSSEN 36-29	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.00ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	P_RASMUSSEN 36-29	<b>Database:</b>	EDM 2003.21 Single User Db
<b>Reference Design:</b>	PLAN #1 09-02-09 RHS	<b>Offset TVD Reference:</b>	Offset Datum

Reference Depths are relative to WELL @ 4949.00ft (Original Well Elev) Coordinates are relative to: P\_RASMUSSEN 36-29  
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: 0.31°

## Separation Factor Plot



### LEGEND

STING WELL VD	P_RASMUSSEN 20-29, P_RASMUSSEN 20-29, PLAN #1 09-02-09 RHS VD	P_RASML
	P_RASMUSSEN 23-29, P_RASMUSSEN 23-29, PLAN #1 09-02-09 RHS VD	P_RASML
	P_RASMUSSEN 25-29, P_RASMUSSEN 25-29, PLAN #1 09-02-09 RHS VD	P_RASML