



US ROCKIES REGION PLANNING

KERR MCGEE OIL & GAS ONSHORE LP

WELD_WITTEMYER 3 PAD

P_WITTEMYER 40-2

P_WITTEMYER 40-2

Plan: PLAN #1 09-02-09 RHS

Standard Planning Report

02 September, 2009





P. WITTEMYER 40-2
KERR MCGEE OIL & GAS ONSHORE LP
SECTION 2 T2N R67W
1476 FNL 1229 FEL
LAT: 40° 10' 12.900 N
LONG: 104° 51' 9.720 W



Azimuths to True North
Magnetic North: 9.09°
Magnetic Field
Strength: 53207.6snT
Dip Angle: 66.92°
Date: 9/2/2009
Model: IGRF200510

WELL DETAILS: P_WITTEMYER 40-2

+N/-S	+E/-W	Northing	Ground Level: Easting	Latitude	Longitude	Slot
0.00	0.00	1305525.27	3180889.10	40° 10' 12.900 N	104° 51' 9.720 W	

FORMATION TOP DETAILS

TVDPath	MDPath	Formation
3882.00	4093.76	PARKMAN
4418.00	4683.48	SUSSEX TOP
4845.00	5148.27	SHANNON TOP
7098.00	7419.91	NIO A TOP
7358.00	7679.91	CODELL TOP
7786.00	8107.91	JSAND TOP

SECTION DETAILS

MD	Inc	Azi	TVD	+N/-S	+E/-W	DLeg	TFace	VSec	Target
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
950.00	0.00	0.00	950.00	0.00	0.00	0.00	0.00	0.00	
2182.23	24.64	135.10	2144.58	-184.83	184.21	2.00	135.10	260.95	
4889.68	24.64	135.10	4605.42	-984.47	981.17	0.00	0.00	1389.92	
6121.91	0.00	0.00	5800.00	-1169.30	1165.38	2.00	180.00	1650.87	
8257.91	0.00	0.00	7936.00	-1169.30	1165.38	0.00	0.00	1650.87	PBHL_WITTEMYER 40-2(2620 FNL 50 FEL)50' TGT RAD

CASING DETAILS

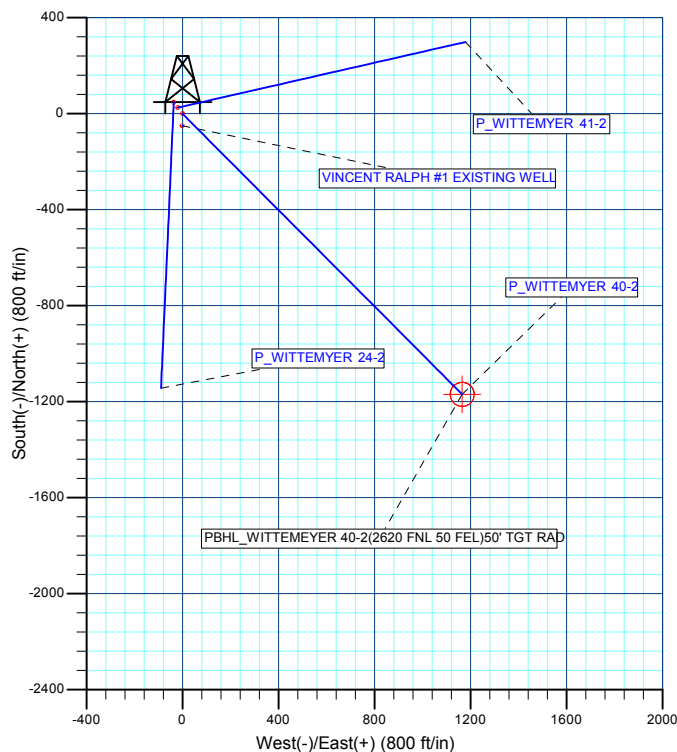
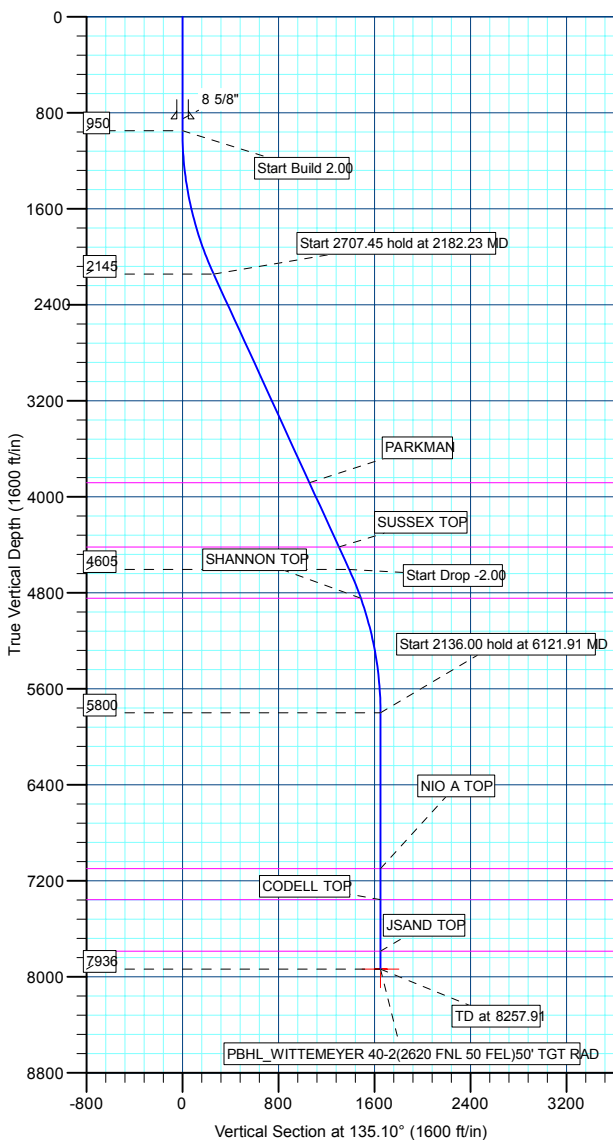
TVD	MD	Name	Size
850.00	850.00	8 5/8"	8.62

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

Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Shape
PBHL	7936.00	-1169.30	1165.38	1304364.50	3182062.98	40° 10' 1.344 N	104° 50' 54.708 W	Circle (Radius: 50.00)



KB ELEV: WELL @ 4856.00ft (Original Well Elev)
GRD ELEV: 4841.00



Plan: PLAN #1 09-02-09 RHS (P_WITTEMYER 40-2/P_WITTEMYER 40-2)

Created By: Robert H. Scott



Database:	EDM 2003.21 Single User Db	Local Co-ordinate Reference:	Well P_WITTEMYER 40-2
Company:	US ROCKIES REGION PLANNING	TVD Reference:	WELL @ 4856.00ft (Original Well Elev)
Project:	KERR MCGEE OIL & GAS ONSHORE LP	MD Reference:	WELL @ 4856.00ft (Original Well Elev)
Site:	WELD_WITTEMYER 3 PAD	North Reference:	True
Well:	P_WITTEMYER 40-2	Survey Calculation Method:	Minimum Curvature
Wellbore:	P_WITTEMYER 40-2		
Design:	PLAN #1 09-02-09 RHS		

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

Site		WELD_WITTEMYER 3 PAD, SECTION 2 T2N R67W			
Site Position:		Northing:	1,305,572.37 ft	Latitude:	40° 10' 13.368 N
From:	Lat/Long	Easting:	3,180,852.42ft	Longitude:	104° 51' 10.188 W
Position Uncertainty:	0.00 ft	Slot Radius:	in	Grid Convergence:	0.42 °

Well		P_WITTEMYER 40-2				
Well Position	+N/-S	-47.37 ft	Northing:	1,305,525.27 ft	Latitude:	40° 10' 12.900 N
	+E/-W	36.33 ft	Easting:	3,180,889.10 ft	Longitude:	104° 51' 9.720 W
Position Uncertainty		0.00 ft	Wellhead Elevation:	ft	Ground Level:	4,841.00 ft

Wellbore	P_WITTEMYER 40-2				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF200510	9/2/2009	9.09	66.92	53,208

Design	PLAN #1 09-02-09 RHS			
Audit Notes:				
Version:	Phase:	PLAN	Tie On Depth:	0.00
Vertical Section:	Depth From (TVD) (ft)	+N/-S (ft)	+E/-W (ft)	Direction (°)
	0.00	0.00	0.00	135.10

Plan Sections										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	TFO (°)	Target
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
950.00	0.00	0.00	950.00	0.00	0.00	0.00	0.00	0.00	0.00	
2,182.23	24.64	135.10	2,144.58	-184.83	184.21	2.00	2.00	0.00	135.10	
4,889.68	24.64	135.10	4,605.42	-984.47	981.17	0.00	0.00	0.00	0.00	
6,121.91	0.00	0.00	5,800.00	-1,169.30	1,165.38	2.00	-2.00	0.00	180.00	
8,257.91	0.00	0.00	7,936.00	-1,169.30	1,165.38	0.00	0.00	0.00	0.00	PBHL_WITTEMEYI



Database:	EDM 2003.21 Single User Db	Local Co-ordinate Reference:	Well P_WITTEMYER 40-2
Company:	US ROCKIES REGION PLANNING	TVD Reference:	WELL @ 4856.00ft (Original Well Elev)
Project:	KERR MCGEE OIL & GAS ONSHORE LP	MD Reference:	WELL @ 4856.00ft (Original Well Elev)
Site:	WELD_WITTEMYER 3 PAD	North Reference:	True
Well:	P_WITTEMYER 40-2	Survey Calculation Method:	Minimum Curvature
Wellbore:	P_WITTEMYER 40-2		
Design:	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)
Start Build 2.00									
950.00	0.00	0.00	950.00	0.00	0.00	0.00	0.00	0.00	0.00
1,000.00	1.00	135.10	1,000.00	-0.31	0.31	0.44	2.00	2.00	0.00
1,100.00	3.00	135.10	1,099.93	-2.78	2.77	3.93	2.00	2.00	0.00
1,200.00	5.00	135.10	1,199.68	-7.72	7.70	10.90	2.00	2.00	0.00
1,300.00	7.00	135.10	1,299.13	-15.12	15.07	21.35	2.00	2.00	0.00
1,400.00	9.00	135.10	1,398.15	-24.98	24.90	35.27	2.00	2.00	0.00
1,500.00	11.00	135.10	1,496.63	-37.28	37.16	52.63	2.00	2.00	0.00
1,600.00	13.00	135.10	1,594.44	-52.01	51.83	73.42	2.00	2.00	0.00
1,700.00	15.00	135.10	1,691.46	-69.14	68.91	97.62	2.00	2.00	0.00
1,800.00	17.00	135.10	1,787.58	-88.66	88.37	125.18	2.00	2.00	0.00
1,900.00	19.00	135.10	1,882.68	-110.55	110.18	156.08	2.00	2.00	0.00
2,000.00	21.00	135.10	1,976.65	-134.77	134.32	190.28	2.00	2.00	0.00
2,100.00	23.00	135.10	2,069.36	-161.30	160.76	227.74	2.00	2.00	0.00
Start 2707.45 hold at 2182.23 MD									
2,182.23	24.64	135.10	2,144.58	-184.83	184.21	260.95	2.00	2.00	0.00
2,200.00	24.64	135.10	2,160.74	-190.08	189.44	268.36	0.00	0.00	0.00
2,300.00	24.64	135.10	2,251.63	-219.61	218.88	310.06	0.00	0.00	0.00
2,400.00	24.64	135.10	2,342.52	-249.15	248.31	351.76	0.00	0.00	0.00
2,500.00	24.64	135.10	2,433.41	-278.68	277.75	393.45	0.00	0.00	0.00
2,600.00	24.64	135.10	2,524.30	-308.22	307.18	435.15	0.00	0.00	0.00
2,700.00	24.64	135.10	2,615.19	-337.75	336.62	476.85	0.00	0.00	0.00
2,800.00	24.64	135.10	2,706.08	-367.29	366.06	518.55	0.00	0.00	0.00
2,900.00	24.64	135.10	2,796.97	-396.82	395.49	560.25	0.00	0.00	0.00
3,000.00	24.64	135.10	2,887.86	-426.36	424.93	601.95	0.00	0.00	0.00
3,100.00	24.64	135.10	2,978.76	-455.89	454.36	643.65	0.00	0.00	0.00
3,200.00	24.64	135.10	3,069.65	-485.43	483.80	685.35	0.00	0.00	0.00
3,300.00	24.64	135.10	3,160.54	-514.96	513.24	727.05	0.00	0.00	0.00
3,400.00	24.64	135.10	3,251.43	-544.50	542.67	768.74	0.00	0.00	0.00
3,500.00	24.64	135.10	3,342.32	-574.03	572.11	810.44	0.00	0.00	0.00
3,600.00	24.64	135.10	3,433.21	-603.57	601.54	852.14	0.00	0.00	0.00
3,700.00	24.64	135.10	3,524.10	-633.10	630.98	893.84	0.00	0.00	0.00
3,800.00	24.64	135.10	3,614.99	-662.64	660.42	935.54	0.00	0.00	0.00
3,900.00	24.64	135.10	3,705.89	-692.17	689.85	977.24	0.00	0.00	0.00
4,000.00	24.64	135.10	3,796.78	-721.71	719.29	1,018.94	0.00	0.00	0.00
PARKMAN									
4,093.76	24.64	135.10	3,882.00	-749.40	746.89	1,058.04	0.00	0.00	0.00
4,100.00	24.64	135.10	3,887.67	-751.24	748.72	1,060.64	0.00	0.00	0.00
4,200.00	24.64	135.10	3,978.56	-780.78	778.16	1,102.34	0.00	0.00	0.00
4,300.00	24.64	135.10	4,069.45	-810.31	807.60	1,144.03	0.00	0.00	0.00
4,400.00	24.64	135.10	4,160.34	-839.85	837.03	1,185.73	0.00	0.00	0.00
4,500.00	24.64	135.10	4,251.23	-869.38	866.47	1,227.43	0.00	0.00	0.00
4,600.00	24.64	135.10	4,342.12	-898.92	895.90	1,269.13	0.00	0.00	0.00
SUSSEX TOP									
4,683.48	24.64	135.10	4,418.00	-923.57	920.48	1,303.94	0.00	0.00	0.00
4,700.00	24.64	135.10	4,433.01	-928.45	925.34	1,310.83	0.00	0.00	0.00
4,800.00	24.64	135.10	4,523.91	-957.99	954.78	1,352.53	0.00	0.00	0.00
Start Drop -2.00									
4,889.68	24.64	135.10	4,605.42	-984.47	981.17	1,389.92	0.00	0.00	0.00
4,900.00	24.44	135.10	4,614.80	-987.51	984.20	1,394.21	2.00	-2.00	0.00
5,000.00	22.44	135.10	4,706.55	-1,015.68	1,012.28	1,433.98	2.00	-2.00	0.00
5,100.00	20.44	135.10	4,799.63	-1,041.57	1,038.08	1,470.53	2.00	-2.00	0.00
SHANNON TOP									



Database:	EDM 2003.21 Single User Db	Local Co-ordinate Reference:	Well P_WITTEMYER 40-2
Company:	US ROCKIES REGION PLANNING	TVD Reference:	WELL @ 4856.00ft (Original Well Elev)
Project:	KERR MCGEE OIL & GAS ONSHORE LP	MD Reference:	WELL @ 4856.00ft (Original Well Elev)
Site:	WELD_WITTEMYER 3 PAD	North Reference:	True
Well:	P_WITTEMYER 40-2	Survey Calculation Method:	Minimum Curvature
Wellbore:	P_WITTEMYER 40-2		
Design:	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)
5,148.27	19.47	135.10	4,845.00	-1,053.24	1,049.71	1,487.01	2.00	-2.00	0.00
5,200.00	18.44	135.10	4,893.92	-1,065.14	1,061.57	1,503.81	2.00	-2.00	0.00
5,300.00	16.44	135.10	4,989.32	-1,086.36	1,082.72	1,533.78	2.00	-2.00	0.00
5,400.00	14.44	135.10	5,085.71	-1,105.22	1,101.51	1,560.39	2.00	-2.00	0.00
5,500.00	12.44	135.10	5,182.96	-1,121.68	1,117.92	1,583.63	2.00	-2.00	0.00
5,600.00	10.44	135.10	5,280.97	-1,135.72	1,131.91	1,603.46	2.00	-2.00	0.00
5,700.00	8.44	135.10	5,379.61	-1,147.34	1,143.49	1,619.86	2.00	-2.00	0.00
5,800.00	6.44	135.10	5,478.77	-1,156.50	1,152.63	1,632.81	2.00	-2.00	0.00
5,900.00	4.44	135.10	5,578.31	-1,163.22	1,159.32	1,642.28	2.00	-2.00	0.00
6,000.00	2.44	135.10	5,678.13	-1,167.46	1,163.55	1,648.28	2.00	-2.00	0.00
6,100.00	0.44	135.10	5,778.09	-1,169.24	1,165.32	1,650.79	2.00	-2.00	0.00
Start 2136.00 hold at 6121.91 MD									
6,121.91	0.00	0.00	5,800.00	-1,169.30	1,165.38	1,650.87	2.00	-2.00	-616.62
6,200.00	0.00	0.00	5,878.09	-1,169.30	1,165.38	1,650.87	0.00	0.00	0.00
6,300.00	0.00	0.00	5,978.09	-1,169.30	1,165.38	1,650.87	0.00	0.00	0.00
6,400.00	0.00	0.00	6,078.09	-1,169.30	1,165.38	1,650.87	0.00	0.00	0.00
6,500.00	0.00	0.00	6,178.09	-1,169.30	1,165.38	1,650.87	0.00	0.00	0.00
6,600.00	0.00	0.00	6,278.09	-1,169.30	1,165.38	1,650.87	0.00	0.00	0.00
6,700.00	0.00	0.00	6,378.09	-1,169.30	1,165.38	1,650.87	0.00	0.00	0.00
6,800.00	0.00	0.00	6,478.09	-1,169.30	1,165.38	1,650.87	0.00	0.00	0.00
6,900.00	0.00	0.00	6,578.09	-1,169.30	1,165.38	1,650.87	0.00	0.00	0.00
7,000.00	0.00	0.00	6,678.09	-1,169.30	1,165.38	1,650.87	0.00	0.00	0.00
7,100.00	0.00	0.00	6,778.09	-1,169.30	1,165.38	1,650.87	0.00	0.00	0.00
7,200.00	0.00	0.00	6,878.09	-1,169.30	1,165.38	1,650.87	0.00	0.00	0.00
7,300.00	0.00	0.00	6,978.09	-1,169.30	1,165.38	1,650.87	0.00	0.00	0.00
7,400.00	0.00	0.00	7,078.09	-1,169.30	1,165.38	1,650.87	0.00	0.00	0.00
NIO A TOP									
7,419.91	0.00	0.00	7,098.00	-1,169.30	1,165.38	1,650.87	0.00	0.00	0.00
7,500.00	0.00	0.00	7,178.09	-1,169.30	1,165.38	1,650.87	0.00	0.00	0.00
7,600.00	0.00	0.00	7,278.09	-1,169.30	1,165.38	1,650.87	0.00	0.00	0.00
CODELL TOP									
7,679.91	0.00	0.00	7,358.00	-1,169.30	1,165.38	1,650.87	0.00	0.00	0.00
7,700.00	0.00	0.00	7,378.09	-1,169.30	1,165.38	1,650.87	0.00	0.00	0.00
7,800.00	0.00	0.00	7,478.09	-1,169.30	1,165.38	1,650.87	0.00	0.00	0.00
7,900.00	0.00	0.00	7,578.09	-1,169.30	1,165.38	1,650.87	0.00	0.00	0.00
8,000.00	0.00	0.00	7,678.09	-1,169.30	1,165.38	1,650.87	0.00	0.00	0.00
8,100.00	0.00	0.00	7,778.09	-1,169.30	1,165.38	1,650.87	0.00	0.00	0.00
JSAND TOP									
8,107.91	0.00	0.00	7,786.00	-1,169.30	1,165.38	1,650.87	0.00	0.00	0.00
8,200.00	0.00	0.00	7,878.09	-1,169.30	1,165.38	1,650.87	0.00	0.00	0.00
PBHL_WITTEMEYER 40-2(2620 FNL 50 FEL)50' TGT RAD									
8,257.91	0.00	0.00	7,936.00	-1,169.30	1,165.38	1,650.87	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_WITTEMEYER	0.00	0.00	7,936.00	-1,169.30	1,165.38	1,304,364.50	3,182,062.98	40° 10' 1.344 N	104° 50' 54.708 W
- plan hits target center									
- Circle (radius 50.00)									



Database:	EDM 2003.21 Single User Db	Local Co-ordinate Reference:	Well P_WITTEMYER 40-2
Company:	US ROCKIES REGION PLANNING	TVD Reference:	WELL @ 4856.00ft (Original Well Elev)
Project:	KERR MCGEE OIL & GAS ONSHORE LP	MD Reference:	WELL @ 4856.00ft (Original Well Elev)
Site:	WELD_WITTEMYER 3 PAD	North Reference:	True
Well:	P_WITTEMYER 40-2	Survey Calculation Method:	Minimum Curvature
Wellbore:	P_WITTEMYER 40-2		
Design:	PLAN #1 09-02-09 RHS		

Casing Points					
Measured Depth (ft)	Vertical Depth (ft)	Name		Casing Diameter (in)	Hole Diameter (in)
850.00	850.00	8 5/8"		8.62	11.00

Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)
4,093.76	3,882.00	PARKMAN			
4,683.48	4,418.00	SUSSEX TOP			
5,148.27	4,845.00	SHANNON TOP			
7,419.91	7,098.00	NIO A TOP			
7,679.91	7,358.00	CODELL TOP			
8,107.91	7,786.00	JSAND TOP			

Plan Annotations					
Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates		Comment	
		+N/-S (ft)	+E/-W (ft)		
950.00	950.00	0.00	0.00	Start Build 2.00	
2,182.23	2,144.58	-184.83	184.21	Start 2707.45 hold at 2182.23 MD	
4,889.68	4,605.42	-984.47	981.17	Start Drop -2.00	
6,121.91	5,800.00	-1,169.30	1,165.38	Start 2136.00 hold at 6121.91 MD	
8,257.91	7,936.00	-1,169.30	1,165.38	TD at 8257.91	



US ROCKIES REGION PLANNING

**KERR MCGEE OIL & GAS ONSHORE LP
WELD_WITTEMYER 3 PAD
P_WITTEMYER 40-2**

**P_WITTEMYER 40-2
PLAN #1 09-02-09 RHS**

Anticollision Report

02 September, 2009





Company:	US ROCKIES REGION PLANNING	Local Co-ordinate Reference:	Well P_WITTEMYER 40-2
Project:	KERR MCGEE OIL & GAS ONSHORE LP	TVD Reference:	WELL @ 4856.00ft (Original Well Elev)
Reference Site:	WELD_WITTEMYER 3 PAD	MD Reference:	WELL @ 4856.00ft (Original Well Elev)
Site Error:	0.00ft	North Reference:	True
Reference Well:	P_WITTEMYER 40-2	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00ft	Output errors are at	2.00 sigma
Reference Wellbore	P_WITTEMYER 40-2	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	8,257.91	PLAN #1 09-02-09 RHS (P_WITTEMYER	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_WITTEMYER 3 PAD						
P_WITTEMYER 24-2 - P_WITTEMYER 24-2 - PLAN #1	950.00	950.00	59.70	55.69	14.880	CC
P_WITTEMYER 24-2 - P_WITTEMYER 24-2 - PLAN #1	1,000.00	1,000.81	59.79	55.58	14.200	ES
P_WITTEMYER 24-2 - P_WITTEMYER 24-2 - PLAN #1	1,300.00	1,304.79	66.43	61.12	12.505	SF
P_WITTEMYER 41-2 - P_WITTEMYER 41-2 - PLAN #1	950.00	950.00	32.14	28.13	8.011	CC, ES
P_WITTEMYER 41-2 - P_WITTEMYER 41-2 - PLAN #1	1,100.00	1,100.61	34.53	29.93	7.501	SF
VINCENT RALPH #1 EXISTING WELL - VINCENT RALPH	1,395.56	1,393.77	36.38	-20.03	0.645	Level 1, CC
VINCENT RALPH #1 EXISTING WELL - VINCENT RALPH	1,400.00	1,398.15	36.39	-20.21	0.643	Level 1, ES, SF

Offset Design WELD_WITTEMYER 3 PAD - P_WITTEMYER 24-2 - P_WITTEMYER 24-2 - PLAN #1 09-02-09 RHS													Offset Site Error:	0.00 ft
Survey Program: 0-MWD													Offset Well Error:	0.00 ft
Reference	Offset	Semi Major Axis			Distance									Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
0.00	0.00	0.00	0.00	0.00	0.00	-37.48	47.37	-36.33	59.70					
100.00	100.00	100.00	100.00	0.10	0.10	-37.48	47.37	-36.33	59.70	59.51	0.19	312.479		
200.00	200.00	200.00	200.00	0.32	0.32	-37.48	47.37	-36.33	59.70	59.06	0.64	93.196		
300.00	300.00	300.00	300.00	0.55	0.55	-37.48	47.37	-36.33	59.70	58.61	1.09	54.764		
400.00	400.00	400.00	400.00	0.77	0.77	-37.48	47.37	-36.33	59.70	58.16	1.54	38.775		
500.00	500.00	500.00	500.00	0.99	0.99	-37.48	47.37	-36.33	59.70	57.71	1.99	30.012		
600.00	600.00	600.00	600.00	1.22	1.22	-37.48	47.37	-36.33	59.70	57.26	2.44	24.480		
700.00	700.00	700.00	700.00	1.44	1.44	-37.48	47.37	-36.33	59.70	56.81	2.89	20.670		
800.00	800.00	800.00	800.00	1.67	1.67	-37.48	47.37	-36.33	59.70	56.36	3.34	17.886		
900.00	900.00	900.00	900.00	1.89	1.89	-37.48	47.37	-36.33	59.70	55.91	3.79	15.763		
950.00	950.00	950.00	950.00	2.01	2.01	-37.48	47.37	-36.33	59.70	55.69	4.01	14.880	CC	
1,000.00	1,000.00	1,000.81	1,000.81	2.11	2.11	-172.91	46.92	-36.35	59.79	55.58	4.21	14.200	ES	
1,100.00	1,099.93	1,102.36	1,102.29	2.29	2.28	-175.53	43.33	-36.51	60.62	56.05	4.56	13.286		
1,200.00	1,199.68	1,203.73	1,203.40	2.49	2.47	179.48	36.16	-36.83	62.62	57.69	4.93	12.708		
1,300.00	1,299.13	1,304.79	1,303.89	2.70	2.68	172.68	25.45	-37.31	66.43	61.12	5.31	12.505	SF	
1,400.00	1,398.15	1,405.43	1,403.51	2.95	2.92	164.89	11.28	-37.94	72.75	67.02	5.73	12.691		
1,500.00	1,496.63	1,505.52	1,502.05	3.24	3.20	157.04	-6.27	-38.72	82.15	75.93	6.21	13.219		
1,600.00	1,594.44	1,604.97	1,599.28	3.57	3.52	149.82	-27.10	-39.65	94.93	88.15	6.79	13.990		
1,700.00	1,691.46	1,703.67	1,695.00	3.96	3.90	143.59	-51.10	-40.72	111.16	103.69	7.47	14.879		
1,800.00	1,787.58	1,801.51	1,789.03	4.42	4.33	138.39	-78.12	-41.92	130.72	122.45	8.28	15.795		
1,900.00	1,882.68	1,898.43	1,881.20	4.95	4.82	134.10	-108.04	-43.26	153.46	144.25	9.21	16.667		

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



Weatherford International Ltd.
Anticollision Report



Company:	US ROCKIES REGION PLANNING	Local Co-ordinate Reference:	Well P_WITTEMYER 40-2
Project:	KERR MCGEE OIL & GAS ONSHORE LP	TVD Reference:	WELL @ 4856.00ft (Original Well Elev)
Reference Site:	WELD_WITTEMYER 3 PAD	MD Reference:	WELL @ 4856.00ft (Original Well Elev)
Site Error:	0.00ft	North Reference:	True
Reference Well:	P_WITTEMYER 40-2	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00ft	Output errors are at	2.00 sigma
Reference Wellbore	P_WITTEMYER 40-2	Database:	EDM 2003.21 Single User Db
Reference Design:	PLAN #1 09-02-09 RHS	Offset TVD Reference:	Offset Datum

Offset Design WELD_WITTEMYER 3 PAD - P_WITTEMYER 24-2 - P_WITTEMYER 24-2 - PLAN #1 09-02-09 RHS												Offset Site Error:	0.00 ft
Survey Program: 0-MWDD												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
2,000.00	1,976.65	1,994.33	1,971.35	5.54	5.37	130.58	-140.69	-44.71	179.21	168.94	10.26	17.459	
2,100.00	2,069.36	2,089.14	2,059.36	6.21	5.97	127.65	-175.92	-46.28	207.80	196.36	11.44	18.157	
2,182.23	2,144.58	2,166.25	2,130.04	6.82	6.50	125.60	-206.70	-47.65	233.35	220.84	12.50	18.661	
2,200.00	2,160.74	2,182.81	2,145.12	6.96	6.62	125.28	-213.56	-47.96	239.07	226.32	12.75	18.757	
2,300.00	2,251.63	2,277.18	2,230.88	7.74	7.31	123.65	-252.88	-49.71	271.44	257.28	14.16	19.174	
2,400.00	2,342.52	2,371.55	2,316.64	8.55	8.02	122.36	-292.21	-51.47	303.96	288.36	15.59	19.492	
2,500.00	2,433.41	2,465.92	2,402.41	9.36	8.74	121.33	-331.53	-53.22	336.59	319.54	17.05	19.737	
2,600.00	2,524.30	2,560.28	2,488.17	10.19	9.47	120.48	-370.86	-54.97	369.30	350.77	18.53	19.930	
2,700.00	2,615.19	2,654.65	2,573.94	11.02	10.21	119.76	-410.18	-56.73	402.08	382.06	20.02	20.085	
2,800.00	2,706.08	2,749.02	2,659.70	11.86	10.95	119.15	-449.51	-58.48	434.90	413.39	21.52	20.212	
2,900.00	2,796.97	2,843.38	2,745.47	12.70	11.70	118.63	-488.84	-60.23	467.76	444.74	23.02	20.317	
3,000.00	2,887.86	2,937.75	2,831.23	13.55	12.45	118.18	-528.16	-61.98	500.65	476.12	24.54	20.405	
3,100.00	2,978.76	3,032.12	2,917.00	14.40	13.20	117.78	-567.49	-63.74	533.57	507.51	26.05	20.480	
3,200.00	3,069.65	3,126.48	3,002.76	15.26	13.95	117.43	-606.81	-65.49	566.50	538.93	27.57	20.544	
3,300.00	3,160.54	3,220.85	3,088.53	16.11	14.71	117.12	-646.14	-67.24	599.46	570.36	29.10	20.600	
3,400.00	3,251.43	3,315.22	3,174.29	16.97	15.47	116.84	-685.46	-69.00	632.42	601.79	30.63	20.649	
3,500.00	3,342.32	3,409.59	3,260.06	17.83	16.23	116.58	-724.79	-70.75	665.40	633.24	32.16	20.692	
3,600.00	3,433.21	3,503.95	3,345.82	18.69	17.00	116.36	-764.11	-72.50	698.39	664.70	33.69	20.730	
3,700.00	3,524.10	3,598.32	3,431.59	19.55	17.76	116.15	-803.44	-74.25	731.39	696.16	35.22	20.765	
3,800.00	3,614.99	3,692.69	3,517.35	20.42	18.53	115.96	-842.76	-76.01	764.39	727.64	36.76	20.796	
3,900.00	3,705.89	3,787.05	3,603.12	21.28	19.29	115.78	-882.09	-77.76	797.41	759.11	38.29	20.824	
4,000.00	3,796.78	3,890.54	3,697.90	22.14	19.90	115.73	-923.57	-79.61	829.92	790.24	39.68	20.916	
4,100.00	3,887.67	3,994.93	3,794.97	23.01	20.46	115.94	-961.93	-81.32	861.37	820.35	41.01	21.002	
4,200.00	3,978.56	4,099.77	3,893.79	23.88	20.99	116.37	-996.87	-82.88	891.78	849.47	42.30	21.080	
4,300.00	4,069.45	4,204.76	3,993.98	24.74	21.49	117.01	-1,028.22	-84.27	921.20	877.66	43.54	21.159	
4,400.00	4,160.34	4,309.64	4,095.14	25.61	21.94	117.84	-1,055.85	-85.51	949.73	905.02	44.71	21.243	
4,500.00	4,251.23	4,414.11	4,196.85	26.48	22.34	118.84	-1,079.68	-86.57	977.48	931.67	45.80	21.342	
4,600.00	4,342.12	4,517.91	4,298.70	27.35	22.69	119.98	-1,099.67	-87.46	1,004.58	957.77	46.81	21.460	
4,700.00	4,433.01	4,620.78	4,400.28	28.22	23.00	121.26	-1,115.83	-88.18	1,031.21	983.48	47.73	21.605	
4,800.00	4,523.91	4,722.47	4,501.20	29.09	23.25	122.64	-1,128.22	-88.73	1,057.55	1,008.99	48.55	21.782	
4,889.68	4,605.42	4,812.46	4,590.83	29.87	23.43	123.97	-1,136.19	-89.09	1,081.06	1,031.86	49.20	21.972	
4,900.00	4,614.80	4,822.74	4,601.09	29.94	23.45	124.17	-1,136.92	-89.12	1,083.76	1,034.49	49.27	21.998	
5,000.00	4,706.55	4,922.25	4,700.45	30.59	23.60	126.08	-1,142.10	-89.35	1,108.87	1,059.13	49.75	22.290	
5,100.00	4,799.63	5,021.42	4,799.60	31.19	23.71	127.90	-1,143.83	-89.43	1,132.13	1,082.02	50.11	22.594	
5,200.00	4,893.92	5,115.73	4,893.92	31.74	23.79	129.50	-1,143.83	-89.43	1,153.68	1,103.28	50.40	22.891	
5,300.00	4,989.32	5,211.13	4,989.32	32.24	23.87	130.91	-1,143.83	-89.43	1,173.56	1,122.91	50.65	23.171	
5,400.00	5,085.71	5,307.52	5,085.71	32.69	23.96	132.13	-1,143.83	-89.43	1,191.56	1,140.70	50.87	23.426	
5,500.00	5,182.96	5,404.78	5,182.96	33.09	24.04	133.17	-1,143.83	-89.43	1,207.55	1,156.49	51.06	23.651	
5,600.00	5,280.97	5,502.79	5,280.97	33.43	24.13	134.05	-1,143.83	-89.43	1,221.37	1,170.14	51.23	23.842	
5,700.00	5,379.61	5,601.43	5,379.61	33.73	24.22	134.75	-1,143.83	-89.43	1,232.92	1,181.54	51.38	23.994	
5,800.00	5,478.77	5,700.58	5,478.77	33.98	24.31	135.31	-1,143.83	-89.43	1,242.12	1,190.59	51.53	24.106	
5,900.00	5,578.31	5,800.13	5,578.31	34.18	24.41	135.71	-1,143.83	-89.43	1,248.90	1,197.24	51.66	24.175	
6,000.00	5,678.13	5,899.94	5,678.13	34.32	24.50	135.96	-1,143.83	-89.43	1,253.20	1,201.41	51.79	24.199	
6,100.00	5,778.09	5,999.90	5,778.09	34.42	24.60	136.06	-1,143.83	-89.43	1,255.01	1,203.10	51.91	24.176	
6,121.91	5,800.00	6,021.81	5,800.00	34.44	24.62	-88.84	-1,143.83	-89.43	1,255.07	1,203.13	51.94	24.164	
6,200.00	5,878.09	6,099.90	5,878.09	34.50	24.70	-88.84	-1,143.83	-89.43	1,255.07	1,202.98	52.09	24.095	
6,300.00	5,978.09	6,199.90	5,978.09	34.57	24.80	-88.84	-1,143.83	-89.43	1,255.07	1,202.79	52.28	24.007	
6,400.00	6,078.09	6,299.90	6,078.09	34.65	24.90	-88.84	-1,143.83	-89.43	1,255.07	1,202.60	52.47	23.919	
6,500.00	6,178.09	6,399.90	6,178.09	34.72	25.01	-88.84	-1,143.83	-89.43	1,255.07	1,202.40	52.67	23.829	
6,600.00	6,278.09	6,499.90	6,278.09	34.80	25.11	-88.84	-1,143.83	-89.43	1,255.07	1,202.20	52.87	23.740	
6,700.00	6,378.09	6,599.90	6,378.09	34.88	25.22	-88.84	-1,143.83	-89.43	1,255.07	1,202.00	53.07	23.649	
6,800.00	6,478.09	6,699.90	6,478.09	34.96	25.33	-88.84	-1,143.83	-89.43	1,255.07	1,201.79	53.28	23.558	

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



Weatherford International Ltd.

Anticollision Report



Company:	US ROCKIES REGION PLANNING	Local Co-ordinate Reference:	Well P_WITTEMYER 40-2
Project:	KERR MCGEE OIL & GAS ONSHORE LP	TVD Reference:	WELL @ 4856.00ft (Original Well Elev)
Reference Site:	WELD_WITTEMYER 3 PAD	MD Reference:	WELL @ 4856.00ft (Original Well Elev)
Site Error:	0.00ft	North Reference:	True
Reference Well:	P_WITTEMYER 40-2	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00ft	Output errors are at	2.00 sigma
Reference Wellbore	P_WITTEMYER 40-2	Database:	EDM 2003.21 Single User Db
Reference Design:	PLAN #1 09-02-09 RHS	Offset TVD Reference:	Offset Datum

Offset Design WELD_WITTEMYER 3 PAD - P_WITTEMYER 24-2 - P_WITTEMYER 24-2 - PLAN #1 09-02-09 RHS													Offset Site Error: 0.00 ft
Survey Program: 0-MWD													Offset Well Error: 0.00 ft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	
6,900.00	6,578.09	6,799.90	6,578.09	35.04	25.44	-88.84	-1,143.83	-89.43	1,255.07	1,201.58	53.49	23.466	
7,000.00	6,678.09	6,899.90	6,678.09	35.12	25.55	-88.84	-1,143.83	-89.43	1,255.07	1,201.37	53.70	23.373	
7,100.00	6,778.09	6,999.90	6,778.09	35.21	25.67	-88.84	-1,143.83	-89.43	1,255.07	1,201.16	53.91	23.280	
7,200.00	6,878.09	7,099.90	6,878.09	35.29	25.78	-88.84	-1,143.83	-89.43	1,255.07	1,200.94	54.13	23.187	
7,300.00	6,978.09	7,199.90	6,978.09	35.38	25.90	-88.84	-1,143.83	-89.43	1,255.07	1,200.72	54.35	23.092	
7,400.00	7,078.09	7,299.90	7,078.09	35.46	26.02	-88.84	-1,143.83	-89.43	1,255.07	1,200.49	54.57	22.998	
7,500.00	7,178.09	7,399.90	7,178.09	35.55	26.13	-88.84	-1,143.83	-89.43	1,255.07	1,200.27	54.80	22.903	
7,600.00	7,278.09	7,499.90	7,278.09	35.64	26.26	-88.84	-1,143.83	-89.43	1,255.07	1,200.04	55.03	22.808	
7,700.00	7,378.09	7,599.90	7,378.09	35.73	26.38	-88.84	-1,143.83	-89.43	1,255.07	1,199.81	55.26	22.712	
7,800.00	7,478.09	7,699.90	7,478.09	35.83	26.50	-88.84	-1,143.83	-89.43	1,255.07	1,199.57	55.49	22.616	
7,804.47	7,482.57	7,704.38	7,482.57	35.83	26.51	-88.84	-1,143.83	-89.43	1,255.07	1,199.56	55.50	22.612	
7,900.00	7,578.09	7,734.81	7,513.00	35.92	26.54	-88.84	-1,143.83	-89.43	1,256.75	1,201.11	55.65	22.583	
8,000.00	7,678.09	7,734.81	7,513.00	36.01	26.54	-88.84	-1,143.83	-89.43	1,265.88	1,210.12	55.76	22.701	
8,100.00	7,778.09	7,734.81	7,513.00	36.11	26.54	-88.84	-1,143.83	-89.43	1,282.76	1,226.88	55.88	22.956	
8,200.00	7,878.09	7,734.81	7,513.00	36.21	26.54	-88.84	-1,143.83	-89.43	1,307.09	1,251.10	55.99	23.343	
8,257.91	7,936.00	7,734.81	7,513.00	36.26	26.54	-88.84	-1,143.83	-89.43	1,324.43	1,268.37	56.06	23.624	



Weatherford International Ltd.

Anticollision Report



Company:	US ROCKIES REGION PLANNING	Local Co-ordinate Reference:	Well P_WITTEMYER 40-2
Project:	KERR MCGEE OIL & GAS ONSHORE LP	TVD Reference:	WELL @ 4856.00ft (Original Well Elev)
Reference Site:	WELD_WITTEMYER 3 PAD	MD Reference:	WELL @ 4856.00ft (Original Well Elev)
Site Error:	0.00ft	North Reference:	True
Reference Well:	P_WITTEMYER 40-2	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00ft	Output errors are at	2.00 sigma
Reference Wellbore	P_WITTEMYER 40-2	Database:	EDM 2003.21 Single User Db
Reference Design:	PLAN #1 09-02-09 RHS	Offset TVD Reference:	Offset Datum

Offset Design WELD_WITTEMYER 3 PAD - P_WITTEMYER 41-2 - P_WITTEMYER 41-2 - PLAN #1 09-02-09 RHS													Offset Site Error:	0.00 ft
Survey Program: 0-MWD													Offset Well Error:	0.00 ft
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning	
0.00	0.00	0.00	0.00	0.00	0.00	-37.49	25.50	-19.56	32.14					
100.00	100.00	100.00	100.00	0.10	0.10	-37.49	25.50	-19.56	32.14	31.95	0.19	168.238		
200.00	200.00	200.00	200.00	0.32	0.32	-37.49	25.50	-19.56	32.14	31.50	0.64	50.176		
300.00	300.00	300.00	300.00	0.55	0.55	-37.49	25.50	-19.56	32.14	31.05	1.09	29.485		
400.00	400.00	400.00	400.00	0.77	0.77	-37.49	25.50	-19.56	32.14	30.60	1.54	20.876		
500.00	500.00	500.00	500.00	0.99	0.99	-37.49	25.50	-19.56	32.14	30.15	1.99	16.158		
600.00	600.00	600.00	600.00	1.22	1.22	-37.49	25.50	-19.56	32.14	29.70	2.44	13.180		
700.00	700.00	700.00	700.00	1.44	1.44	-37.49	25.50	-19.56	32.14	29.25	2.89	11.129		
800.00	800.00	800.00	800.00	1.67	1.67	-37.49	25.50	-19.56	32.14	28.80	3.34	9.630		
900.00	900.00	900.00	900.00	1.89	1.89	-37.49	25.50	-19.56	32.14	28.35	3.79	8.487		
950.00	950.00	950.00	950.00	2.01	2.01	-37.49	25.50	-19.56	32.14	28.13	4.01	8.011 CC, ES		
1,000.00	1,000.00	1,000.23	1,000.23	2.11	2.11	-171.98	25.60	-19.13	32.39	28.17	4.22	7.678		
1,100.00	1,099.93	1,100.61	1,100.54	2.29	2.32	-167.44	26.38	-15.70	34.53	29.93	4.60	7.501 SF		
1,200.00	1,199.68	1,200.72	1,200.40	2.49	2.54	-159.97	27.94	-8.87	39.33	34.33	5.00	7.863		
1,300.00	1,299.13	1,300.41	1,299.54	2.70	2.77	-151.82	30.26	1.31	47.43	42.00	5.43	8.740		
1,400.00	1,398.15	1,399.51	1,397.67	2.95	3.03	-144.59	33.33	14.75	59.18	53.29	5.89	10.042		
1,500.00	1,496.63	1,497.85	1,494.52	3.24	3.32	-138.82	37.11	31.36	74.65	68.23	6.42	11.630		
1,600.00	1,594.44	1,595.30	1,589.86	3.57	3.65	-134.41	41.59	51.00	93.71	86.69	7.01	13.361		
1,700.00	1,691.46	1,691.71	1,683.45	3.96	4.03	-131.04	46.72	73.53	116.23	108.54	7.69	15.113		
1,800.00	1,787.58	1,786.95	1,775.09	4.42	4.45	-128.43	52.48	98.79	142.08	133.62	8.46	16.797		
1,900.00	1,882.68	1,880.90	1,864.61	4.95	4.93	-126.36	58.82	126.61	171.12	161.80	9.32	18.356		
2,000.00	1,976.65	1,973.47	1,951.84	5.54	5.46	-124.66	65.70	156.80	203.25	192.97	10.28	19.762		
2,100.00	2,069.36	2,064.56	2,036.65	6.21	6.04	-123.23	73.08	189.18	238.36	227.01	11.35	21.005		
2,182.23	2,144.58	2,138.30	2,104.51	6.82	6.56	-122.19	79.49	217.30	269.38	257.09	12.29	21.912		
2,200.00	2,160.74	2,154.10	2,118.96	6.96	6.67	-122.10	80.92	223.55	276.31	263.79	12.51	22.082		
2,300.00	2,251.63	2,244.73	2,201.35	7.74	7.36	-121.44	89.31	260.36	315.72	301.93	13.79	22.890		
2,400.00	2,342.52	2,336.55	2,284.74	8.55	8.08	-120.89	97.85	297.83	355.24	340.12	15.12	23.497		
2,500.00	2,433.41	2,428.36	2,368.13	9.36	8.82	-120.45	106.38	335.29	394.78	378.31	16.47	23.971		
2,600.00	2,524.30	2,520.17	2,451.51	10.19	9.57	-120.09	114.92	372.75	434.33	416.49	17.84	24.347		
2,700.00	2,615.19	2,611.99	2,534.90	11.02	10.32	-119.79	123.46	410.21	473.90	454.68	19.22	24.651		
2,800.00	2,706.08	2,703.80	2,618.28	11.86	11.09	-119.53	132.00	447.68	513.48	492.86	20.62	24.899		
2,900.00	2,796.97	2,795.61	2,701.67	12.70	11.85	-119.32	140.54	485.14	553.06	531.03	22.03	25.105		
3,000.00	2,887.86	2,887.42	2,785.05	13.55	12.63	-119.13	149.08	522.60	592.65	569.21	23.45	25.278		
3,100.00	2,978.76	2,979.24	2,868.44	14.40	13.40	-118.96	157.62	560.07	632.25	607.38	24.87	25.424		
3,200.00	3,069.65	3,071.05	2,951.83	15.26	14.18	-118.82	166.16	597.53	671.85	645.55	26.30	25.549		
3,300.00	3,160.54	3,162.86	3,035.21	16.11	14.97	-118.69	174.70	634.99	711.45	683.72	27.73	25.657		
3,400.00	3,251.43	3,254.68	3,118.60	16.97	15.75	-118.57	183.24	672.46	751.05	721.89	29.17	25.751		
3,500.00	3,342.32	3,346.49	3,201.98	17.83	16.54	-118.47	191.77	709.92	790.66	760.05	30.61	25.833		
3,600.00	3,433.21	3,438.30	3,285.37	18.69	17.33	-118.37	200.31	747.38	830.27	798.22	32.05	25.906		
3,700.00	3,524.10	3,530.12	3,368.76	19.55	18.12	-118.29	208.85	784.85	869.88	836.39	33.50	25.970		
3,800.00	3,614.99	3,621.93	3,452.14	20.42	18.91	-118.21	217.39	822.31	909.49	874.55	34.94	26.027		
3,900.00	3,705.89	3,713.74	3,535.53	21.28	19.70	-118.14	225.93	859.77	949.11	912.71	36.39	26.078		
4,000.00	3,796.78	3,805.55	3,618.91	22.14	20.49	-118.07	234.47	897.23	988.72	950.88	37.85	26.124		
4,100.00	3,887.67	3,902.65	3,707.18	23.01	21.29	-118.02	243.46	936.67	1,028.26	988.96	39.31	26.159		
4,200.00	3,978.56	4,012.20	3,808.04	23.88	22.01	-118.13	252.96	978.34	1,066.65	1,025.97	40.69	26.217		
4,300.00	4,069.45	4,122.96	3,911.61	24.74	22.67	-118.45	261.68	1,016.61	1,103.52	1,061.51	42.01	26.265		
4,400.00	4,160.34	4,234.63	4,017.48	25.61	23.28	-118.95	269.57	1,051.22	1,138.90	1,095.61	43.29	26.310		
4,500.00	4,251.23	4,346.87	4,125.21	26.48	23.82	-119.63	276.56	1,081.92	1,172.82	1,128.32	44.50	26.356		
4,600.00	4,342.12	4,459.34	4,234.30	27.35	24.30	-120.47	282.63	1,108.54	1,205.36	1,159.72	45.64	26.412		
4,700.00	4,433.01	4,571.69	4,344.27	28.22	24.72	-121.45	287.74	1,130.93	1,236.63	1,189.94	46.70	26.483		
4,800.00	4,523.91	4,683.58	4,454.60	29.09	25.07	-122.55	291.86	1,149.05	1,266.76	1,219.09	47.67	26.574		
4,889.68	4,605.42	4,783.25	4,553.43	29.87	25.33	-123.65	294.73	1,161.63	1,292.92	1,244.46	48.46	26.680		

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



Weatherford International Ltd.

Anticollision Report



Company:	US ROCKIES REGION PLANNING	Local Co-ordinate Reference:	Well P_WITTEMYER 40-2
Project:	KERR MCGEE OIL & GAS ONSHORE LP	TVD Reference:	WELL @ 4856.00ft (Original Well Elev)
Reference Site:	WELD_WITTEMYER 3 PAD	MD Reference:	WELL @ 4856.00ft (Original Well Elev)
Site Error:	0.00ft	North Reference:	True
Reference Well:	P_WITTEMYER 40-2	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00ft	Output errors are at	2.00 sigma
Reference Wellbore	P_WITTEMYER 40-2	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						
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
4,900.00	4,614.80	4,794.67	4,564.78	29.94	25.36	-123.83	295.01	1,162.86	1,295.87	1,247.32	48.55	26.690	
5,000.00	4,706.55	4,905.57	4,675.24	30.59	25.58	-125.54	297.21	1,172.49	1,323.00	1,273.71	49.29	26.840	
5,100.00	4,799.63	5,016.64	4,786.15	31.19	25.74	-127.16	298.45	1,177.94	1,347.37	1,297.45	49.91	26.995	
5,200.00	4,893.92	5,124.42	4,893.92	31.74	25.85	-128.68	298.76	1,179.28	1,368.97	1,318.55	50.42	27.152	
5,300.00	4,989.32	5,219.82	4,989.32	32.24	25.93	-129.93	298.76	1,179.28	1,388.48	1,337.61	50.87	27.296	
5,400.00	5,085.71	5,316.21	5,085.71	32.69	26.01	-131.01	298.76	1,179.28	1,406.13	1,354.85	51.28	27.421	
5,500.00	5,182.96	5,413.46	5,182.96	33.09	26.10	-131.94	298.76	1,179.28	1,421.76	1,370.11	51.65	27.527	
5,600.00	5,280.97	5,511.47	5,280.97	33.43	26.19	-132.73	298.76	1,179.28	1,435.26	1,383.28	51.98	27.611	
5,700.00	5,379.61	5,610.11	5,379.61	33.73	26.29	-133.37	298.76	1,179.28	1,446.54	1,394.26	52.28	27.671	
5,800.00	5,478.77	5,709.27	5,478.77	33.98	26.38	-133.87	298.76	1,179.28	1,455.51	1,402.97	52.54	27.704	
5,900.00	5,578.31	5,808.81	5,578.31	34.18	26.48	-134.23	298.76	1,179.28	1,462.11	1,409.34	52.77	27.708	
6,000.00	5,678.13	5,908.63	5,678.13	34.32	26.58	-134.46	298.76	1,179.28	1,466.31	1,413.34	52.97	27.683	
6,100.00	5,778.09	6,008.59	5,778.09	34.42	26.68	-134.55	298.76	1,179.28	1,468.07	1,414.93	53.14	27.627	
6,121.91	5,800.00	6,030.50	5,800.00	34.44	26.71	0.54	298.76	1,179.28	1,468.12	1,414.95	53.17	27.610	
6,200.00	5,878.09	6,108.59	5,878.09	34.50	26.79	0.54	298.76	1,179.28	1,468.12	1,414.80	53.33	27.531	
6,300.00	5,978.09	6,208.59	5,978.09	34.57	26.89	0.54	298.76	1,179.28	1,468.12	1,414.60	53.53	27.427	
6,400.00	6,078.09	6,308.59	6,078.09	34.65	27.00	0.54	298.76	1,179.28	1,468.12	1,414.39	53.73	27.323	
6,500.00	6,178.09	6,408.59	6,178.09	34.72	27.10	0.54	298.76	1,179.28	1,468.12	1,414.19	53.94	27.218	
6,600.00	6,278.09	6,508.59	6,278.09	34.80	27.21	0.54	298.76	1,179.28	1,468.12	1,413.98	54.15	27.113	
6,700.00	6,378.09	6,608.59	6,378.09	34.88	27.32	0.54	298.76	1,179.28	1,468.12	1,413.76	54.36	27.006	
6,800.00	6,478.09	6,708.59	6,478.09	34.96	27.43	0.54	298.76	1,179.28	1,468.12	1,413.55	54.58	26.900	
6,900.00	6,578.09	6,808.59	6,578.09	35.04	27.55	0.54	298.76	1,179.28	1,468.12	1,413.33	54.80	26.792	
7,000.00	6,678.09	6,908.59	6,678.09	35.12	27.66	0.54	298.76	1,179.28	1,468.12	1,413.11	55.02	26.685	
7,100.00	6,778.09	7,008.59	6,778.09	35.21	27.78	0.54	298.76	1,179.28	1,468.12	1,412.88	55.24	26.576	
7,200.00	6,878.09	7,108.59	6,878.09	35.29	27.89	0.54	298.76	1,179.28	1,468.12	1,412.66	55.47	26.468	
7,300.00	6,978.09	7,208.59	6,978.09	35.38	28.01	0.54	298.76	1,179.28	1,468.12	1,412.43	55.70	26.359	
7,400.00	7,078.09	7,308.59	7,078.09	35.46	28.13	0.54	298.76	1,179.28	1,468.12	1,412.19	55.93	26.249	
7,500.00	7,178.09	7,408.59	7,178.09	35.55	28.25	0.54	298.76	1,179.28	1,468.12	1,411.96	56.17	26.139	
7,600.00	7,278.09	7,508.59	7,278.09	35.64	28.38	0.54	298.76	1,179.28	1,468.12	1,411.72	56.40	26.029	
7,700.00	7,378.09	7,608.59	7,378.09	35.73	28.50	0.54	298.76	1,179.28	1,468.12	1,411.48	56.64	25.919	
7,800.00	7,478.09	7,708.59	7,478.09	35.83	28.62	0.54	298.76	1,179.28	1,468.12	1,411.24	56.89	25.809	
7,900.00	7,578.09	7,728.50	7,498.00	35.92	28.65	0.54	298.76	1,179.28	1,470.31	1,413.28	57.03	25.782	
8,000.00	7,678.09	7,728.50	7,498.00	36.01	28.65	0.54	298.76	1,179.28	1,479.13	1,421.98	57.15	25.883	
8,100.00	7,778.09	7,728.50	7,498.00	36.11	28.65	0.54	298.76	1,179.28	1,494.60	1,437.34	57.27	26.099	
8,200.00	7,878.09	7,728.50	7,498.00	36.21	28.65	0.54	298.76	1,179.28	1,516.53	1,459.14	57.39	26.426	
8,257.91	7,936.00	7,728.50	7,498.00	36.26	28.65	0.54	298.76	1,179.28	1,532.07	1,474.61	57.46	26.664	



Weatherford International Ltd.

Anticollision Report



Company:	US ROCKIES REGION PLANNING	Local Co-ordinate Reference:	Well P_WITTEMYER 40-2
Project:	KERR MCGEE OIL & GAS ONSHORE LP	TVD Reference:	WELL @ 4856.00ft (Original Well Elev)
Reference Site:	WELD_WITTEMYER 3 PAD	MD Reference:	WELL @ 4856.00ft (Original Well Elev)
Site Error:	0.00ft	North Reference:	True
Reference Well:	P_WITTEMYER 40-2	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00ft	Output errors are at	2.00 sigma
Reference Wellbore	P_WITTEMYER 40-2	Database:	EDM 2003.21 Single User Db
Reference Design:	PLAN #1 09-02-09 RHS	Offset TVD Reference:	Offset Datum

Offset Design WELD_WITTEMYER 3 PAD - VINCENT RALPH #1 EXISTING WELL - VINCENT RALPH #1 EXISTING												Offset Site Error:	0.00 ft
Survey Program: 0-UNKNOWN												Offset Well Error:	0.00 ft
Reference	Offset	Semi Major Axis		Distance								Warning	
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	
0.00	0.00	0.00	0.00	0.00	0.00	-178.45	-50.17	-1.36	50.19				
100.00	100.00	100.00	100.00	0.10	1.70	-178.45	-50.17	-1.36	50.19	48.40	1.80	27.954	
200.00	200.00	200.00	200.00	0.32	5.70	-178.45	-50.17	-1.36	50.19	44.17	6.02	8.337	
300.00	300.00	300.00	300.00	0.55	9.70	-178.45	-50.17	-1.36	50.19	39.95	10.25	4.899	
400.00	400.00	400.00	400.00	0.77	13.70	-178.45	-50.17	-1.36	50.19	35.72	14.47	3.469	
500.00	500.00	500.00	500.00	0.99	17.70	-178.45	-50.17	-1.36	50.19	31.50	18.69	2.685	
600.00	600.00	600.00	600.00	1.22	21.70	-178.45	-50.17	-1.36	50.19	27.27	22.92	2.190	
700.00	700.00	700.00	700.00	1.44	25.70	-178.45	-50.17	-1.36	50.19	23.05	27.14	1.849	
800.00	800.00	800.00	800.00	1.67	29.70	-178.45	-50.17	-1.36	50.19	18.82	31.37	1.600	
900.00	900.00	900.00	900.00	1.89	33.70	-178.45	-50.17	-1.36	50.19	14.60	35.59	1.410 Level 3	
950.00	950.00	950.00	950.00	2.01	35.70	-178.45	-50.17	-1.36	50.19	12.49	37.71	1.331 Level 3	
1,000.00	1,000.00	1,000.00	1,000.00	2.11	37.70	46.82	-50.17	-1.36	49.89	10.09	39.80	1.253 Level 3	
1,100.00	1,099.93	1,099.93	1,099.93	2.29	41.70	49.92	-50.17	-1.36	47.57	3.61	43.96	1.082 Level 2	
1,200.00	1,199.68	1,199.68	1,199.68	2.49	45.69	57.04	-50.17	-1.36	43.41	-4.71	48.12	0.902 Level 1	
1,300.00	1,299.13	1,299.13	1,299.13	2.70	49.67	70.16	-50.17	-1.36	38.71	-13.61	52.32	0.740 Level 1	
1,395.56	1,393.77	1,393.77	1,393.77	2.94	53.45	90.00	-50.17	-1.36	36.38	-20.03	56.41	0.645 Level 1, CC	
1,400.00	1,398.15	1,398.15	1,398.15	2.95	53.63	91.07	-50.17	-1.36	36.39	-20.21	56.59	0.643 Level 1, ES, SF	
1,500.00	1,496.63	1,496.63	1,496.63	3.24	57.57	115.97	-50.17	-1.36	40.61	-19.99	60.61	0.670 Level 1	
1,600.00	1,594.44	1,594.44	1,594.44	3.57	61.48	136.13	-50.17	-1.36	53.22	-10.92	64.14	0.830 Level 1	
1,700.00	1,691.46	1,691.46	1,691.46	3.96	65.36	149.14	-50.17	-1.36	72.78	5.37	67.42	1.080 Level 2	
1,800.00	1,787.58	1,787.58	1,787.58	4.42	69.20	157.22	-50.17	-1.36	97.63	27.08	70.55	1.384 Level 3	
1,900.00	1,882.68	1,882.68	1,882.68	4.95	73.01	162.43	-50.17	-1.36	126.83	53.28	73.55	1.724	
2,000.00	1,976.65	1,976.65	1,976.65	5.54	76.77	165.95	-50.17	-1.36	159.89	83.52	76.38	2.093	
2,100.00	2,069.36	2,069.36	2,069.36	6.21	80.47	168.44	-50.17	-1.36	196.55	117.54	79.01	2.488	
2,182.23	2,144.58	2,144.58	2,144.58	6.82	83.48	169.97	-50.17	-1.36	229.27	148.26	81.01	2.830	
2,200.00	2,160.74	2,160.74	2,160.74	6.96	84.13	170.28	-50.17	-1.36	236.59	154.95	81.64	2.898	
2,300.00	2,251.63	2,251.63	2,251.63	7.74	87.77	171.73	-50.17	-1.36	277.87	192.67	85.20	3.261	
2,400.00	2,342.52	2,342.52	2,342.52	8.55	91.40	172.81	-50.17	-1.36	319.26	230.47	88.79	3.596	
2,500.00	2,433.41	2,433.41	2,433.41	9.36	95.04	173.64	-50.17	-1.36	360.71	268.33	92.39	3.904	
2,600.00	2,524.30	2,524.30	2,524.30	10.19	98.67	174.29	-50.17	-1.36	402.22	306.22	96.01	4.190	
2,700.00	2,615.19	2,615.19	2,615.19	11.02	102.31	174.83	-50.17	-1.36	443.77	344.14	99.63	4.454	
2,800.00	2,706.08	2,706.08	2,706.08	11.86	105.94	175.27	-50.17	-1.36	485.34	382.08	103.26	4.700	
2,900.00	2,796.97	2,796.97	2,796.97	12.70	109.58	175.65	-50.17	-1.36	526.93	420.03	106.90	4.929	
3,000.00	2,887.86	2,887.86	2,887.86	13.55	113.21	175.96	-50.17	-1.36	568.54	457.99	110.54	5.143	
3,100.00	2,978.76	2,978.76	2,978.76	14.40	116.85	176.24	-50.17	-1.36	610.15	495.97	114.19	5.343	
3,200.00	3,069.65	3,069.65	3,069.65	15.26	120.49	176.48	-50.17	-1.36	651.78	533.95	117.84	5.531	
3,300.00	3,160.54	3,160.54	3,160.54	16.11	124.12	176.69	-50.17	-1.36	693.42	571.93	121.49	5.708	
3,400.00	3,251.43	3,251.43	3,251.43	16.97	127.76	176.88	-50.17	-1.36	735.07	609.92	125.14	5.874	
3,500.00	3,342.32	3,342.32	3,342.32	17.83	131.39	177.05	-50.17	-1.36	776.72	647.92	128.80	6.030	
3,600.00	3,433.21	3,433.21	3,433.21	18.69	135.03	177.20	-50.17	-1.36	818.37	685.91	132.46	6.178	
3,700.00	3,524.10	3,524.10	3,524.10	19.55	138.66	177.33	-50.17	-1.36	860.03	723.91	136.12	6.318	
3,800.00	3,614.99	3,614.99	3,614.99	20.42	142.30	177.46	-50.17	-1.36	901.70	761.92	139.78	6.451	
3,900.00	3,705.89	3,705.89	3,705.89	21.28	145.94	177.57	-50.17	-1.36	943.36	799.92	143.44	6.577	
4,000.00	3,796.78	3,796.78	3,796.78	22.14	149.57	177.67	-50.17	-1.36	985.03	837.93	147.10	6.696	
4,100.00	3,887.67	3,887.67	3,887.67	23.01	153.21	177.77	-50.17	-1.36	1,026.70	875.94	150.77	6.810	
4,200.00	3,978.56	3,978.56	3,978.56	23.88	156.84	177.85	-50.17	-1.36	1,068.38	913.94	154.43	6.918	
4,300.00	4,069.45	4,069.45	4,069.45	24.74	160.48	177.93	-50.17	-1.36	1,110.05	951.95	158.10	7.021	
4,400.00	4,160.34	4,160.34	4,160.34	25.61	164.11	178.01	-50.17	-1.36	1,151.73	989.97	161.76	7.120	
4,500.00	4,251.23	4,251.23	4,251.23	26.48	167.75	178.08	-50.17	-1.36	1,193.41	1,027.98	165.43	7.214	
4,600.00	4,342.12	4,342.12	4,342.12	27.35	171.38	178.14	-50.17	-1.36	1,235.09	1,065.99	169.10	7.304	
4,700.00	4,433.01	4,433.01	4,433.01	28.22	175.02	178.20	-50.17	-1.36	1,276.77	1,104.00	172.76	7.390	
4,800.00	4,523.91	4,523.91	4,523.91	29.09	178.66	178.26	-50.17	-1.36	1,318.45	1,142.02	176.43	7.473	

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



Weatherford International Ltd.

Anticollision Report



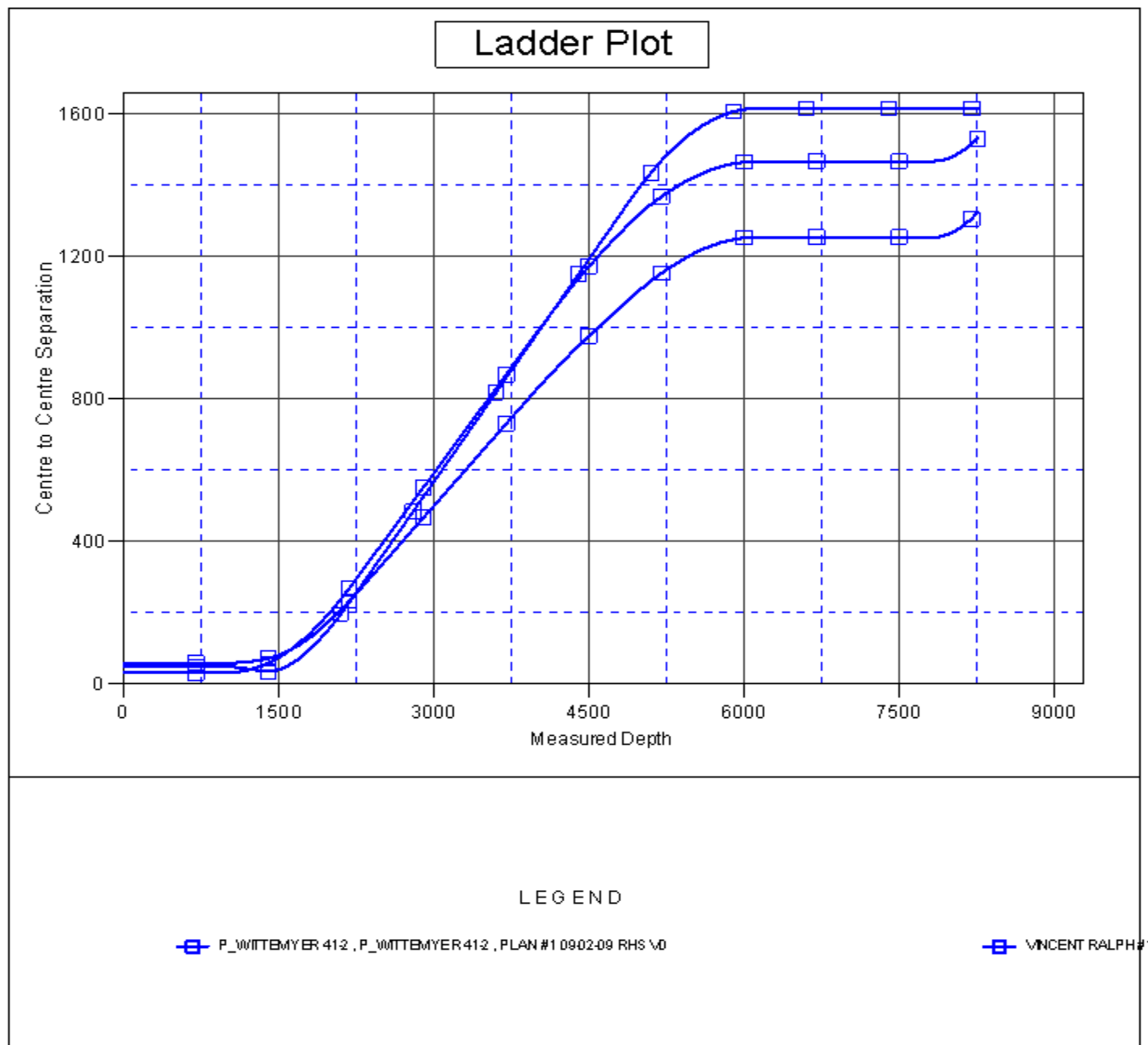
Company:	US ROCKIES REGION PLANNING	Local Co-ordinate Reference:	Well P_WITTEMYER 40-2
Project:	KERR MCGEE OIL & GAS ONSHORE LP	TVD Reference:	WELL @ 4856.00ft (Original Well Elev)
Reference Site:	WELD_WITTEMYER 3 PAD	MD Reference:	WELL @ 4856.00ft (Original Well Elev)
Site Error:	0.00ft	North Reference:	True
Reference Well:	P_WITTEMYER 40-2	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00ft	Output errors are at	2.00 sigma
Reference Wellbore	P_WITTEMYER 40-2	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-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
4,889.68	4,605.42	4,605.42	4,605.42	29.87	181.92	178.31	-50.17	-1.36	1,355.83	1,176.11	179.72	7.544	
4,900.00	4,614.80	4,614.80	4,614.80	29.94	182.29	178.32	-50.17	-1.36	1,360.12	1,179.75	180.37	7.541	
5,000.00	4,706.55	4,706.55	4,706.55	30.59	185.96	178.39	-50.17	-1.36	1,399.88	1,213.35	186.53	7.505	
5,100.00	4,799.63	4,799.63	4,799.63	31.19	189.69	178.45	-50.17	-1.36	1,436.41	1,243.80	192.61	7.458	
5,200.00	4,893.92	4,893.92	4,893.92	31.74	193.46	178.50	-50.17	-1.36	1,469.68	1,271.00	198.68	7.397	
5,300.00	4,989.32	4,989.32	4,989.32	32.24	197.27	178.55	-50.17	-1.36	1,499.64	1,295.02	204.62	7.329	
5,400.00	5,085.71	5,085.71	5,085.71	32.69	201.13	178.59	-50.17	-1.36	1,526.25	1,315.84	210.41	7.254	
5,500.00	5,182.96	5,182.96	5,182.96	33.09	205.02	178.62	-50.17	-1.36	1,549.48	1,333.46	216.02	7.173	
5,600.00	5,280.97	5,280.97	5,280.97	33.43	208.94	178.65	-50.17	-1.36	1,569.31	1,347.85	221.45	7.086	
5,700.00	5,379.61	5,379.61	5,379.61	33.73	212.88	178.67	-50.17	-1.36	1,585.70	1,359.03	226.67	6.996	
5,800.00	5,478.77	5,478.77	5,478.77	33.98	216.85	178.69	-50.17	-1.36	1,598.64	1,366.99	231.65	6.901	
5,900.00	5,578.31	5,578.31	5,578.31	34.18	220.83	178.70	-50.17	-1.36	1,608.11	1,371.73	236.39	6.803	
6,000.00	5,678.13	5,678.13	5,678.13	34.32	224.83	178.71	-50.17	-1.36	1,614.11	1,373.26	240.85	6.702	
6,100.00	5,778.09	5,778.09	5,778.09	34.42	228.82	178.71	-50.17	-1.36	1,616.62	1,371.60	245.02	6.598	
6,121.91	5,800.00	5,800.00	5,800.00	34.44	229.70	-46.19	-50.17	-1.36	1,616.70	1,370.81	245.90	6.575	
6,200.00	5,878.09	5,878.09	5,878.09	34.50	232.82	-46.19	-50.17	-1.36	1,616.70	1,367.57	249.14	6.489	
6,300.00	5,978.09	5,978.09	5,978.09	34.57	236.82	-46.19	-50.17	-1.36	1,616.70	1,363.42	253.28	6.383	
6,400.00	6,078.09	6,078.09	6,078.09	34.65	240.82	-46.19	-50.17	-1.36	1,616.70	1,359.27	257.43	6.280	
6,500.00	6,178.09	6,178.09	6,178.09	34.72	244.82	-46.19	-50.17	-1.36	1,616.70	1,355.12	261.58	6.181	
6,600.00	6,278.09	6,278.09	6,278.09	34.80	248.82	-46.19	-50.17	-1.36	1,616.70	1,350.97	265.73	6.084	
6,700.00	6,378.09	6,378.09	6,378.09	34.88	252.82	-46.19	-50.17	-1.36	1,616.70	1,346.82	269.89	5.990	
6,800.00	6,478.09	6,478.09	6,478.09	34.96	256.82	-46.19	-50.17	-1.36	1,616.70	1,342.66	274.04	5.900	
6,900.00	6,578.09	6,578.09	6,578.09	35.04	260.82	-46.19	-50.17	-1.36	1,616.70	1,338.51	278.20	5.811	
7,000.00	6,678.09	6,678.09	6,678.09	35.12	264.82	-46.19	-50.17	-1.36	1,616.70	1,334.35	282.35	5.726	
7,100.00	6,778.09	6,778.09	6,778.09	35.21	268.82	-46.19	-50.17	-1.36	1,616.70	1,330.19	286.51	5.643	
7,200.00	6,878.09	6,878.09	6,878.09	35.29	272.82	-46.19	-50.17	-1.36	1,616.70	1,326.03	290.67	5.562	
7,300.00	6,978.09	6,978.09	6,978.09	35.38	276.82	-46.19	-50.17	-1.36	1,616.70	1,321.87	294.84	5.483	
7,400.00	7,078.09	7,078.09	7,078.09	35.46	280.82	-46.19	-50.17	-1.36	1,616.70	1,317.70	299.00	5.407	
7,500.00	7,178.09	7,178.09	7,178.09	35.55	284.82	-46.19	-50.17	-1.36	1,616.70	1,313.54	303.16	5.333	
7,600.00	7,278.09	7,278.09	7,278.09	35.64	288.82	-46.19	-50.17	-1.36	1,616.70	1,309.37	307.33	5.260	
7,700.00	7,378.09	7,378.09	7,378.09	35.73	292.82	-46.19	-50.17	-1.36	1,616.70	1,305.21	311.50	5.190	
7,800.00	7,478.09	7,478.09	7,478.09	35.83	296.82	-46.19	-50.17	-1.36	1,616.70	1,301.04	315.67	5.122	
7,900.00	7,578.09	7,578.09	7,578.09	35.92	300.82	-46.19	-50.17	-1.36	1,616.70	1,296.87	319.84	5.055	
8,000.00	7,678.09	7,678.09	7,678.09	36.01	304.82	-46.19	-50.17	-1.36	1,616.70	1,292.70	324.01	4.990	
8,100.00	7,778.09	7,778.09	7,778.09	36.11	308.82	-46.19	-50.17	-1.36	1,616.70	1,288.52	328.18	4.926	
8,200.00	7,878.09	7,878.09	7,878.09	36.21	312.82	-46.19	-50.17	-1.36	1,616.70	1,284.35	332.35	4.864	
8,257.91	7,936.00	7,936.00	7,936.00	36.26	315.14	-46.19	-50.17	-1.36	1,616.70	1,281.94	334.77	4.829	



Company:	US ROCKIES REGION PLANNING	Local Co-ordinate Reference:	Well P_WITTEMYER 40-2
Project:	KERR MCGEE OIL & GAS ONSHORE LP	TVD Reference:	WELL @ 4856.00ft (Original Well Elev)
Reference Site:	WELD_WITTEMYER 3 PAD	MD Reference:	WELL @ 4856.00ft (Original Well Elev)
Site Error:	0.00ft	North Reference:	True
Reference Well:	P_WITTEMYER 40-2	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00ft	Output errors are at	2.00 sigma
Reference Wellbore	P_WITTEMYER 40-2	Database:	EDM 2003.21 Single User Db
Reference Design:	PLAN #1 09-02-09 RHS	Offset TVD Reference:	Offset Datum

Reference Depths are relative to WELL @ 4856.00ft (Original Well Elev) Coordinates are relative to: P_WITTEMYER 40-2
Offset Depths are relative to Offset Datum Coordinate System is US State Plane 1983, Colorado Northern Zone
Central Meridian is 105° 30' 0.000 W ° Grid Convergence at Surface is: 0.42°

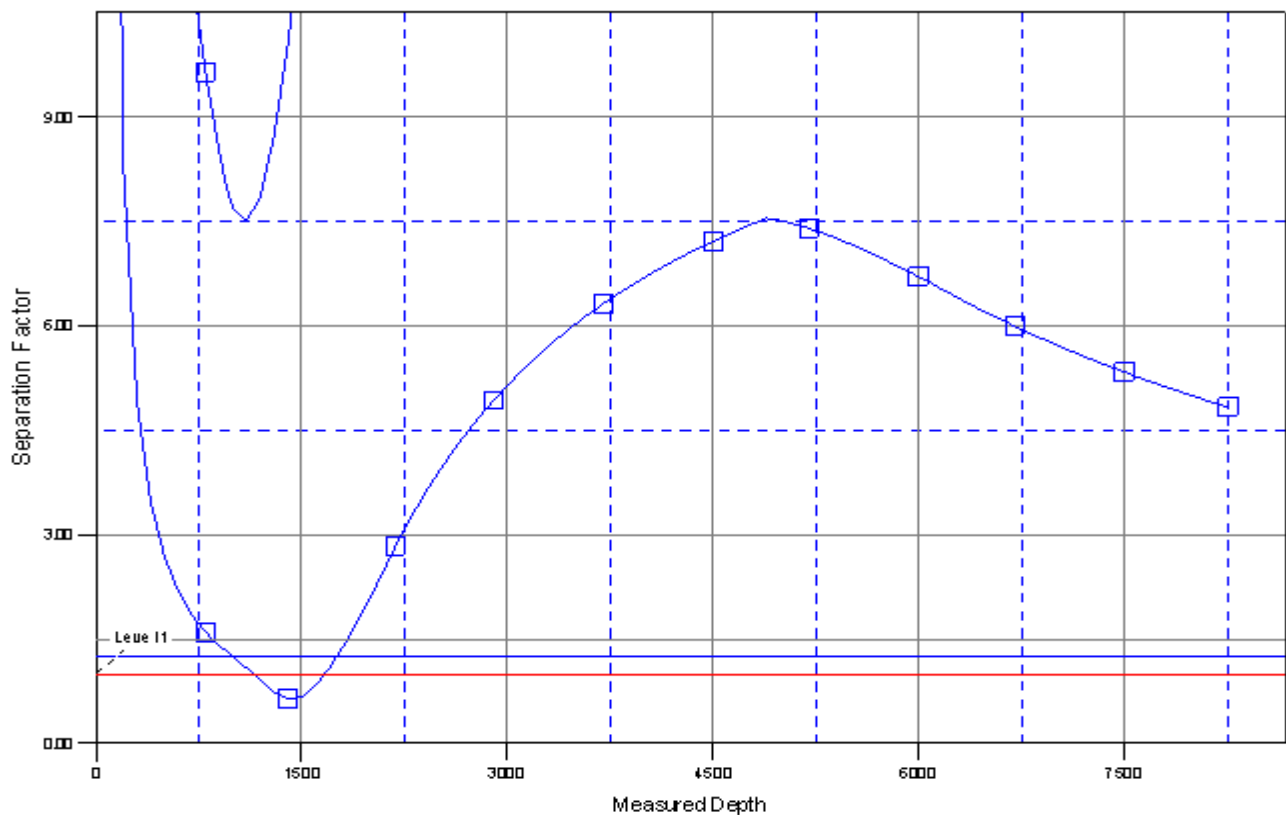




Company:	US ROCKIES REGION PLANNING	Local Co-ordinate Reference:	Well P_WITTEMYER 40-2
Project:	KERR MCGEE OIL & GAS ONSHORE LP	TVD Reference:	WELL @ 4856.00ft (Original Well Elev)
Reference Site:	WELD_WITTEMYER 3 PAD	MD Reference:	WELL @ 4856.00ft (Original Well Elev)
Site Error:	0.00ft	North Reference:	True
Reference Well:	P_WITTEMYER 40-2	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00ft	Output errors are at	2.00 sigma
Reference Wellbore	P_WITTEMYER 40-2	Database:	EDM 2003.21 Single User Db
Reference Design:	PLAN #1 09-02-09 RHS	Offset TVD Reference:	Offset Datum

Reference Depths are relative to WELL @ 4856.00ft (Original Well Elev) Coordinates are relative to: P_WITTEMYER 40-2
Offset Depths are relative to Offset Datum Coordinate System is US State Plane 1983, Colorado Northern Zone
Central Meridian is 105° 30' 0.000 W ° Grid Convergence at Surface is: 0.42°

Separation Factor Plot



LEGEND

P_WITTEMYER 412 , P_WITTEMYER 412 , PLAN #1 09-02-09 RHS \0

VINCENT RALPH #1