



# **US ROCKIES REGION PLANNING**

**KERR MCGEE OIL & GAS ONSHORE LP**

**WELD\_STATE 5 PAD**

**P\_STATE 7-16**

**P\_STATE 7-16**

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

## **Standard Planning Report**

**10 September, 2009**





P\_STATE 7-16  
KERR MCGEE OIL & GAS ONSHORE LP  
SECTION 16 T1N R68W  
396 FNL 2503 FWL  
LAT: 40° 3' 26.280 N  
LONG: 105° 0' 33.264 W



Azimuths to True North  
Magnetic North: 9.16°  
Magnetic Field  
Strength: 53126.3nT  
Dip Angle: 66.80°  
Date: 9/9/2009  
Model: IGRF200510

WELL DETAILS: P\_STATE 7-16

+N/-S	+E/-W	Northing	Easting	Ground Level:	Latitude	Longitude	Slot
0.00	0.00	1264099.91	3137371.96	5135.00	40° 3' 26.280 N	105° 0' 33.264 W	

SECTION DETAILS

MD	Inc	Azi	TVD	+N/-S	+E/-W	DLeg	TFace	VSec	Target
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
1120.00	0.00	0.00	1120.00	0.00	0.00	0.00	0.00	0.00	
2264.05	22.88	152.26	2233.88	-199.51	104.92	2.00	152.26	225.42	
5698.53	22.88	152.26	5398.12	-1381.42	726.49	0.00	0.00	1560.81	
6842.58	0.00	0.00	6512.00	-1580.93	831.41	2.00	180.00	1786.22	
8797.58	0.00	0.00	8467.00	-1580.93	831.41	0.00	0.00	1786.22	PBHL_STATE 7-16(396 FNL 2503 FWL)50' TGT RAD

FORMATION TOP DETAILS

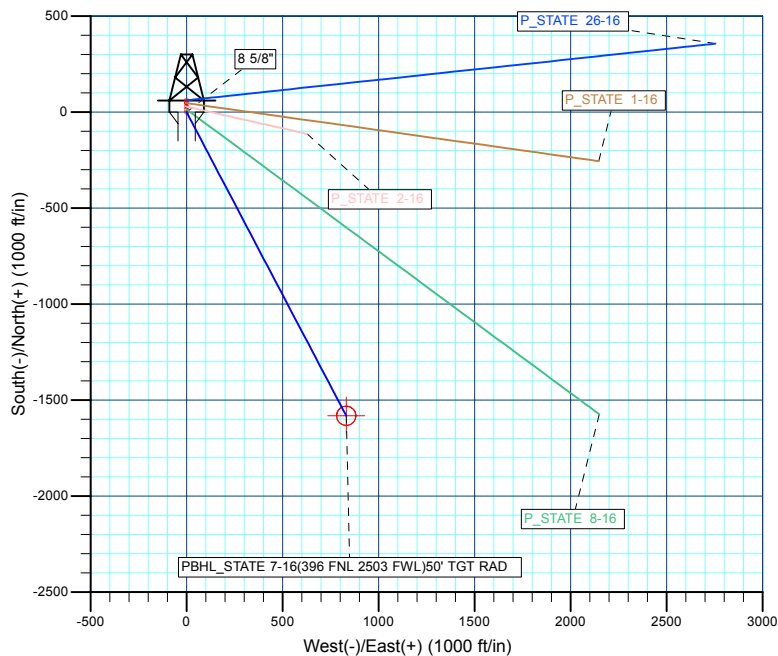
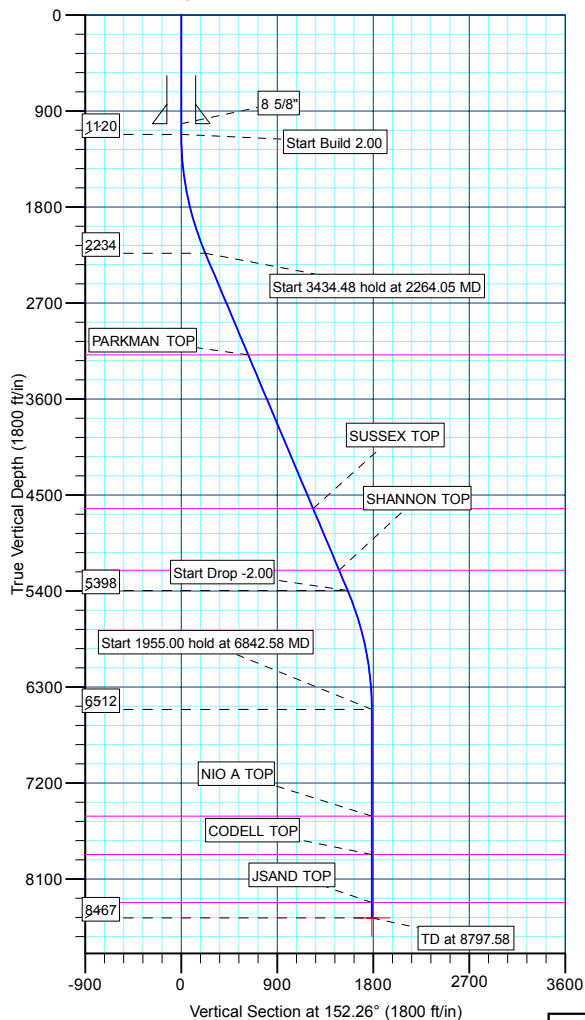
TVDPath	MDPath	Formation
3186.00	3297.48	PARKMAN TOP
4628.00	4862.64	SUSSEX TOP
5207.00	5491.09	SHANNON TOP
7512.00	7842.58	NIO A TOP
7872.00	8202.58	CODELL TOP
8322.00	8652.58	JSAND TOP

CASING DETAILS

TVD	MD	Name	Size
1020.00	1020.00	8 5/8"	8.62



KB ELEV: WELL @ 5150.00ft (Original Well Elev)  
GRD ELEV: 5135.00



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

Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Shape
PBHL	8467.00	-1580.93	831.41	1262523.60	3138212.10	40° 3' 10.656 N	105° 0' 22.572 W	Circle (Radius: 50.00)

Plan: PLAN #1 09-09-09 RHS (P\_STATE 7-16/P\_STATE 7-16)

Created By: Robert H. Scott



<b>Database:</b>	EDM 2003.21 Single User Db	<b>Local Co-ordinate Reference:</b>	Well P_STATE 7-16
<b>Company:</b>	US ROCKIES REGION PLANNING	<b>TVD Reference:</b>	WELL @ 5150.00ft (Original Well Elev)
<b>Project:</b>	KERR MCGEE OIL & GAS ONSHORE LP	<b>MD Reference:</b>	WELL @ 5150.00ft (Original Well Elev)
<b>Site:</b>	WELD_STATE 5 PAD	<b>North Reference:</b>	True
<b>Well:</b>	P_STATE 7-16	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	P_STATE 7-16		
<b>Design:</b>	PLAN #1 09-09-09 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_STATE 5 PAD, SECTION 16 T1N R68W			
Site Position:		Northing:	1,264,147.28ft	Latitude:	40° 3' 26.748 N
From:	Lat/Long	Easting:	3,137,371.69ft	Longitude:	105° 0' 33.264 W
Position Uncertainty:	0.00 ft	Slot Radius:	in	Grid Convergence:	0.32 °

Well	P_STATE 7-16					
Well Position	+N/-S	-47.37 ft	Northing:	1,264,099.91 ft	Latitude:	40° 3' 26.280 N
	+E/-W	0.00 ft	Easting:	3,137,371.96 ft	Longitude:	105° 0' 33.264 W
Position Uncertainty		0.00 ft	Wellhead Elevation:	ft	Ground Level:	5,135.00 ft

<b>Wellbore</b>	P_STATE 7-16				
<b>Magnetics</b>	<b>Model Name</b>	<b>Sample Date</b>	<b>Declination (°)</b>	<b>Dip Angle (°)</b>	<b>Field Strength (nT)</b>
	IGRF200510	9/9/2009	9.16	66.80	53,126

<b>Design</b>	PLAN #1 09-09-09 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	152.26	

<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	
1,120.00	0.00	0.00	1,120.00	0.00	0.00	0.00	0.00	0.00	0.00	
2,264.05	22.88	152.26	2,233.88	-199.51	104.92	2.00	2.00	0.00	152.26	
5,698.53	22.88	152.26	5,398.12	-1,381.42	726.49	0.00	0.00	0.00	0.00	
6,842.58	0.00	0.00	6,512.00	-1,580.93	831.41	2.00	-2.00	0.00	180.00	
8,797.58	0.00	0.00	8,467.00	-1,580.93	831.41	0.00	0.00	0.00	0.00	PBHL_STATE 7-16



<b>Database:</b>	EDM 2003.21 Single User Db	<b>Local Co-ordinate Reference:</b>	Well P_STATE 7-16
<b>Company:</b>	US ROCKIES REGION PLANNING	<b>TVD Reference:</b>	WELL @ 5150.00ft (Original Well Elev)
<b>Project:</b>	KERR MCGEE OIL & GAS ONSHORE LP	<b>MD Reference:</b>	WELL @ 5150.00ft (Original Well Elev)
<b>Site:</b>	WELD_STATE 5 PAD	<b>North Reference:</b>	True
<b>Well:</b>	P_STATE 7-16	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	P_STATE 7-16		
<b>Design:</b>	PLAN #1 09-09-09 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>									
1,120.00	0.00	0.00	1,120.00	0.00	0.00	0.00	0.00	0.00	0.00
1,200.00	1.60	152.26	1,199.99	-0.99	0.52	1.12	2.00	2.00	0.00
1,300.00	3.60	152.26	1,299.88	-5.00	2.63	5.65	2.00	2.00	0.00
1,400.00	5.60	152.26	1,399.55	-12.10	6.36	13.67	2.00	2.00	0.00
1,500.00	7.60	152.26	1,498.89	-22.27	11.71	25.17	2.00	2.00	0.00
1,600.00	9.60	152.26	1,597.76	-35.51	18.67	40.12	2.00	2.00	0.00
1,700.00	11.60	152.26	1,696.05	-51.79	27.24	58.51	2.00	2.00	0.00
1,800.00	13.60	152.26	1,793.63	-71.09	37.39	80.33	2.00	2.00	0.00
1,900.00	15.60	152.26	1,890.40	-93.40	49.12	105.53	2.00	2.00	0.00
2,000.00	17.60	152.26	1,986.23	-118.69	62.42	134.10	2.00	2.00	0.00
2,100.00	19.60	152.26	2,081.00	-146.92	77.26	165.99	2.00	2.00	0.00
2,200.00	21.60	152.26	2,174.60	-178.05	93.64	201.18	2.00	2.00	0.00
<b>Start 3434.48 hold at 2264.05 MD</b>									
2,264.05	22.88	152.26	2,233.88	-199.51	104.92	225.42	2.00	2.00	0.00
2,300.00	22.88	152.26	2,267.00	-211.88	111.43	239.40	0.00	0.00	0.00
2,400.00	22.88	152.26	2,359.14	-246.30	129.53	278.28	0.00	0.00	0.00
2,500.00	22.88	152.26	2,451.27	-280.71	147.62	317.16	0.00	0.00	0.00
2,600.00	22.88	152.26	2,543.40	-315.12	165.72	356.04	0.00	0.00	0.00
2,700.00	22.88	152.26	2,635.53	-349.53	183.82	394.92	0.00	0.00	0.00
2,800.00	22.88	152.26	2,727.66	-383.95	201.92	433.81	0.00	0.00	0.00
2,900.00	22.88	152.26	2,819.79	-418.36	220.02	472.69	0.00	0.00	0.00
3,000.00	22.88	152.26	2,911.92	-452.77	238.11	511.57	0.00	0.00	0.00
3,100.00	22.88	152.26	3,004.06	-487.19	256.21	550.45	0.00	0.00	0.00
3,200.00	22.88	152.26	3,096.19	-521.60	274.31	589.33	0.00	0.00	0.00
<b>PARKMAN TOP</b>									
3,297.48	22.88	152.26	3,186.00	-555.15	291.95	627.24	0.00	0.00	0.00
3,300.00	22.88	152.26	3,188.32	-556.01	292.41	628.21	0.00	0.00	0.00
3,400.00	22.88	152.26	3,280.45	-590.43	310.50	667.10	0.00	0.00	0.00
3,500.00	22.88	152.26	3,372.58	-624.84	328.60	705.98	0.00	0.00	0.00
3,600.00	22.88	152.26	3,464.71	-659.25	346.70	744.86	0.00	0.00	0.00
3,700.00	22.88	152.26	3,556.84	-693.67	364.80	783.74	0.00	0.00	0.00
3,800.00	22.88	152.26	3,648.98	-728.08	382.90	822.62	0.00	0.00	0.00
3,900.00	22.88	152.26	3,741.11	-762.49	400.99	861.51	0.00	0.00	0.00
4,000.00	22.88	152.26	3,833.24	-796.91	419.09	900.39	0.00	0.00	0.00
4,100.00	22.88	152.26	3,925.37	-831.32	437.19	939.27	0.00	0.00	0.00
4,200.00	22.88	152.26	4,017.50	-865.73	455.29	978.15	0.00	0.00	0.00
4,300.00	22.88	152.26	4,109.63	-900.15	473.39	1,017.03	0.00	0.00	0.00
4,400.00	22.88	152.26	4,201.76	-934.56	491.48	1,055.91	0.00	0.00	0.00
4,500.00	22.88	152.26	4,293.90	-968.97	509.58	1,094.80	0.00	0.00	0.00
4,600.00	22.88	152.26	4,386.03	-1,003.39	527.68	1,133.68	0.00	0.00	0.00
4,700.00	22.88	152.26	4,478.16	-1,037.80	545.78	1,172.56	0.00	0.00	0.00
4,800.00	22.88	152.26	4,570.29	-1,072.21	563.87	1,211.44	0.00	0.00	0.00
<b>SUSSEX TOP</b>									
4,862.64	22.88	152.26	4,628.00	-1,093.77	575.21	1,235.80	0.00	0.00	0.00
4,900.00	22.88	152.26	4,662.42	-1,106.62	581.97	1,250.32	0.00	0.00	0.00
5,000.00	22.88	152.26	4,754.55	-1,141.04	600.07	1,289.21	0.00	0.00	0.00
5,100.00	22.88	152.26	4,846.68	-1,175.45	618.17	1,328.09	0.00	0.00	0.00
5,200.00	22.88	152.26	4,938.82	-1,209.86	636.27	1,366.97	0.00	0.00	0.00
5,300.00	22.88	152.26	5,030.95	-1,244.28	654.36	1,405.85	0.00	0.00	0.00
5,400.00	22.88	152.26	5,123.08	-1,278.69	672.46	1,444.73	0.00	0.00	0.00
<b>SHANNON TOP</b>									
5,491.09	22.88	152.26	5,207.00	-1,310.04	688.95	1,480.15	0.00	0.00	0.00



<b>Database:</b>	EDM 2003.21 Single User Db	<b>Local Co-ordinate Reference:</b>	Well P_STATE 7-16
<b>Company:</b>	US ROCKIES REGION PLANNING	<b>TVD Reference:</b>	WELL @ 5150.00ft (Original Well Elev)
<b>Project:</b>	KERR MCGEE OIL & GAS ONSHORE LP	<b>MD Reference:</b>	WELL @ 5150.00ft (Original Well Elev)
<b>Site:</b>	WELD_STATE 5 PAD	<b>North Reference:</b>	True
<b>Well:</b>	P_STATE 7-16	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	P_STATE 7-16		
<b>Design:</b>	PLAN #1 09-09-09 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)
5,500.00	22.88	152.26	5,215.21	-1,313.10	690.56	1,483.62	0.00	0.00	0.00
5,600.00	22.88	152.26	5,307.34	-1,347.52	708.66	1,522.50	0.00	0.00	0.00
<b>Start Drop -2.00</b>									
5,698.53	22.88	152.26	5,398.12	-1,381.42	726.49	1,560.81	0.00	0.00	0.00
5,700.00	22.85	152.26	5,399.47	-1,381.93	726.76	1,561.38	2.00	-2.00	0.00
5,800.00	20.85	152.26	5,492.28	-1,414.87	744.08	1,598.60	2.00	-2.00	0.00
5,900.00	18.85	152.26	5,586.34	-1,444.93	759.88	1,632.55	2.00	-2.00	0.00
6,000.00	16.85	152.26	5,681.52	-1,472.06	774.15	1,663.21	2.00	-2.00	0.00
6,100.00	14.85	152.26	5,777.71	-1,496.23	786.87	1,690.52	2.00	-2.00	0.00
6,200.00	12.85	152.26	5,874.80	-1,517.42	798.01	1,714.46	2.00	-2.00	0.00
6,300.00	10.85	152.26	5,972.66	-1,535.59	807.57	1,735.00	2.00	-2.00	0.00
6,400.00	8.85	152.26	6,071.18	-1,550.74	815.53	1,752.11	2.00	-2.00	0.00
6,500.00	6.85	152.26	6,170.24	-1,562.83	821.89	1,765.77	2.00	-2.00	0.00
6,600.00	4.85	152.26	6,269.71	-1,571.85	826.63	1,775.96	2.00	-2.00	0.00
6,700.00	2.85	152.26	6,369.48	-1,577.79	829.76	1,782.68	2.00	-2.00	0.00
6,800.00	0.85	152.26	6,469.42	-1,580.65	831.26	1,785.91	2.00	-2.00	0.00
<b>Start 1955.00 hold at 6842.58 MD</b>									
6,842.58	0.00	0.00	6,512.00	-1,580.93	831.41	1,786.22	2.00	-2.00	0.00
6,900.00	0.00	0.00	6,569.42	-1,580.93	831.41	1,786.22	0.00	0.00	0.00
7,000.00	0.00	0.00	6,669.42	-1,580.93	831.41	1,786.22	0.00	0.00	0.00
7,100.00	0.00	0.00	6,769.42	-1,580.93	831.41	1,786.22	0.00	0.00	0.00
7,200.00	0.00	0.00	6,869.42	-1,580.93	831.41	1,786.22	0.00	0.00	0.00
7,300.00	0.00	0.00	6,969.42	-1,580.93	831.41	1,786.22	0.00	0.00	0.00
7,400.00	0.00	0.00	7,069.42	-1,580.93	831.41	1,786.22	0.00	0.00	0.00
7,500.00	0.00	0.00	7,169.42	-1,580.93	831.41	1,786.22	0.00	0.00	0.00
7,600.00	0.00	0.00	7,269.42	-1,580.93	831.41	1,786.22	0.00	0.00	0.00
7,700.00	0.00	0.00	7,369.42	-1,580.93	831.41	1,786.22	0.00	0.00	0.00
7,800.00	0.00	0.00	7,469.42	-1,580.93	831.41	1,786.22	0.00	0.00	0.00
<b>NIO A TOP</b>									
7,842.58	0.00	0.00	7,512.00	-1,580.93	831.41	1,786.22	0.00	0.00	0.00
7,900.00	0.00	0.00	7,569.42	-1,580.93	831.41	1,786.22	0.00	0.00	0.00
8,000.00	0.00	0.00	7,669.42	-1,580.93	831.41	1,786.22	0.00	0.00	0.00
8,100.00	0.00	0.00	7,769.42	-1,580.93	831.41	1,786.22	0.00	0.00	0.00
8,200.00	0.00	0.00	7,869.42	-1,580.93	831.41	1,786.22	0.00	0.00	0.00
<b>CODELL TOP</b>									
8,202.58	0.00	0.00	7,872.00	-1,580.93	831.41	1,786.22	0.00	0.00	0.00
8,300.00	0.00	0.00	7,969.42	-1,580.93	831.41	1,786.22	0.00	0.00	0.00
8,400.00	0.00	0.00	8,069.42	-1,580.93	831.41	1,786.22	0.00	0.00	0.00
8,500.00	0.00	0.00	8,169.42	-1,580.93	831.41	1,786.22	0.00	0.00	0.00
8,600.00	0.00	0.00	8,269.42	-1,580.93	831.41	1,786.22	0.00	0.00	0.00
<b>JSAND TOP</b>									
8,652.58	0.00	0.00	8,322.00	-1,580.93	831.41	1,786.22	0.00	0.00	0.00
8,700.00	0.00	0.00	8,369.42	-1,580.93	831.41	1,786.22	0.00	0.00	0.00
<b>PBHL_STATE 7-16(396 FNL 2503 FWL)50' TGT RAD</b>									
8,797.58	0.00	0.00	8,467.00	-1,580.93	831.41	1,786.22	0.00	0.00	0.00



<b>Database:</b>	EDM 2003.21 Single User Db	<b>Local Co-ordinate Reference:</b>	Well P_STATE 7-16
<b>Company:</b>	US ROCKIES REGION PLANNING	<b>TVD Reference:</b>	WELL @ 5150.00ft (Original Well Elev)
<b>Project:</b>	KERR MCGEE OIL & GAS ONSHORE LP	<b>MD Reference:</b>	WELL @ 5150.00ft (Original Well Elev)
<b>Site:</b>	WELD_STATE 5 PAD	<b>North Reference:</b>	True
<b>Well:</b>	P_STATE 7-16	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	P_STATE 7-16		
<b>Design:</b>	PLAN #1 09-09-09 RHS		

Design Targets									
Target Name									
- hit/miss target	Dip Angle	Dip Dir.	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
- Shape	(°)	(°)	(ft)	(ft)	(ft)	(ft)	(ft)		
PBHL_STATE 7-16(3'	0.00	0.00	8,467.00	-1,580.93	831.41	1,262,523.60	3,138,212.10	40° 3' 10.656 N	105° 0' 22.572 W
- plan hits target center									
- Circle (radius 50.00)									

Casing Points					
	Measured Depth	Vertical Depth			
	(ft)	(ft)	Name	Casing Diameter	Hole Diameter
				(in)	(in)
	1,020.00	1,020.00	8 5/8"	8.62	11.00

Formations						
	Measured Depth	Vertical Depth				
	(ft)	(ft)	Name	Lithology	Dip	Dip Direction
					(°)	(°)
	3,297.48	3,186.00	PARKMAN TOP			
	4,862.64	4,628.00	SUSSEX TOP			
	5,491.09	5,207.00	SHANNON TOP			
	7,842.58	7,512.00	NIO A TOP			
	8,202.58	7,872.00	CODELL TOP			
	8,652.58	8,322.00	JSAND TOP			

Plan Annotations					
	Measured Depth	Vertical Depth	Local Coordinates		
	(ft)	(ft)	+N/-S	+E/-W	Comment
			(ft)	(ft)	
	1,120.00	1,120.00	0.00	0.00	Start Build 2.00
	2,264.05	2,233.88	-199.51	104.92	Start 3434.48 hold at 2264.05 MD
	5,698.53	5,398.12	-1,381.42	726.49	Start Drop -2.00
	6,842.58	6,512.00	-1,580.93	831.41	Start 1955.00 hold at 6842.58 MD
	8,797.58	8,467.00	-1,580.93	831.41	TD at 8797.58



# **US ROCKIES REGION PLANNING**

**KERR MCGEE OIL & GAS ONSHORE LP  
WELD\_STATE 5 PAD  
P\_STATE 7-16**

**P\_STATE 7-16  
PLAN #1 09-09-09 RHS**

## **Anticollision Report**

**10 September, 2009**





<b>Company:</b>	US ROCKIES REGION PLANNING	<b>Local Co-ordinate Reference:</b>	Well P_STATE 7-16
<b>Project:</b>	KERR MCGEE OIL & GAS ONSHORE LP	<b>TVD Reference:</b>	WELL @ 5150.00ft (Original Well Elev)
<b>Reference Site:</b>	WELD_STATE 5 PAD	<b>MD Reference:</b>	WELL @ 5150.00ft (Original Well Elev)
<b>Site Error:</b>	0.00ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	P_STATE 7-16	<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_STATE 7-16	<b>Database:</b>	EDM 2003.21 Single User Db
<b>Reference Design:</b>	PLAN #1 09-09-09 RHS	<b>Offset TVD Reference:</b>	Offset Datum

<b>Reference</b>	PLAN #1 09-09-09 RHS		
<b>Filter type:</b>	NO GLOBAL FILTER: Using user defined selection & filtering criteria		
<b>Interpolation Method:</b>	Stations	<b>Error Model:</b>	ISCWSA
<b>Depth Range:</b>	0.00 to 20,000.00ft	<b>Scan Method:</b>	Closest Approach 3D
<b>Results Limited by:</b>	Maximum center-center distance of 10,000.00ft	<b>Error Surface:</b>	Elliptical Conic
<b>Warning Levels Evaluated at:</b>	2.00 Sigma		

<b>Survey Tool Program</b>	<b>Date</b> 9/10/2009			
<b>From (ft)</b>	<b>To (ft)</b>	<b>Survey (Wellbore)</b>	<b>Tool Name</b>	<b>Description</b>
0.00	8,797.58	PLAN #1 09-09-09 RHS (P_STATE 7-16)	MWD	MWD - Standard

<b>Summary</b>						
<b>Site Name</b>	<b>Reference Measured Depth (ft)</b>	<b>Offset Measured Depth (ft)</b>	<b>Distance Between Centres (ft)</b>	<b>Distance Between Ellipses (ft)</b>	<b>Separation Factor</b>	<b>Warning</b>
<b>Offset Well - Wellbore - Design</b>						
WELD_STATE 5 PAD						
P_STATE 1-16 - P_STATE 1-16 - PLAN #1 09-09-09 RH	358.68	358.86	46.91	45.56	34.823	CC
P_STATE 1-16 - P_STATE 1-16 - PLAN #1 09-09-09 RH	400.00	400.00	47.07	45.53	30.694	ES
P_STATE 1-16 - P_STATE 1-16 - PLAN #1 09-09-09 RH	8,400.00	8,647.92	1,868.01	1,788.78	23.575	SF
P_STATE 2-16 - P_STATE 2-16 - PLAN #1 09-09-09 RH	1,120.00	1,120.00	29.14	24.37	6.101	CC, ES
P_STATE 2-16 - P_STATE 2-16 - PLAN #1 09-09-09 RH	1,200.00	1,200.17	29.89	24.79	5.860	SF
P_STATE 26-16 - P_STATE 26-16 - PLAN #1 09-10-09 RH	1,120.00	1,120.00	61.93	57.15	12.966	CC, ES
P_STATE 26-16 - P_STATE 26-16 - PLAN #1 09-10-09 RH	1,300.00	1,299.36	67.60	62.12	12.336	SF
P_STATE 8-16 - P_STATE 8-16 - PLAN #1 09-10-09 RH	1,120.00	1,120.00	14.58	9.80	3.052	CC, ES
P_STATE 8-16 - P_STATE 8-16 - PLAN #1 09-10-09 RH	1,200.00	1,200.24	14.90	9.81	2.925	SF

<b>Offset Design</b> WELD_STATE 5 PAD - P_STATE 1-16 - P_STATE 1-16 - PLAN #1 09-09-09 RHS													<b>Offset Site Error:</b> 0.00 ft
Survey Program: 0-MWD													<b>Offset Well Error:</b> 0.00 ft
<b>Reference</b>	<b>Offset</b>	<b>Semi Major Axis</b>		<b>Distance</b>									
<b>Measured Depth (ft)</b>	<b>Vertical Depth (ft)</b>	<b>Measured Depth (ft)</b>	<b>Vertical Depth (ft)</b>	<b>Reference (ft)</b>	<b>Offset (ft)</b>	<b>Highside Toolface (°)</b>	<b>Offset Wellbore Centre +N/-S (ft)</b>	<b>Offset Wellbore Centre +E/-W (ft)</b>	<b>Between Centres (ft)</b>	<b>Between Ellipses (ft)</b>	<b>Minimum Separation (ft)</b>	<b>Separation Factor</b>	<b>Warning</b>
0.00	0.00	0.00	0.00	0.00	0.00	0.00	47.37	0.00	47.37				
100.00	100.00	100.00	100.00	0.10	0.10	0.00	47.37	0.00	47.37	47.18	0.19	247.936	
200.00	200.00	200.00	200.00	0.32	0.32	0.00	47.37	0.00	47.37	46.73	0.64	73.946	
300.00	300.00	300.25	300.21	0.55	0.53	3.17	47.00	2.61	47.07	45.99	1.08	43.576	
358.68	358.68	358.86	358.68	0.68	0.67	8.01	46.45	6.54	46.91	45.56	1.35	34.823	CC
400.00	400.00	400.00	399.63	0.77	0.77	12.72	45.91	10.36	47.07	45.53	1.53	30.694	ES
500.00	500.00	498.58	497.37	0.99	1.06	27.60	44.12	23.07	49.86	47.85	2.01	24.852	
600.00	600.00	595.63	592.81	1.22	1.41	44.13	41.68	40.43	58.51	56.05	2.46	23.746	
700.00	700.00	690.65	685.27	1.44	1.83	58.10	38.63	62.07	74.58	71.68	2.90	25.712	
800.00	800.00	783.25	774.22	1.67	2.33	68.17	35.05	87.51	97.72	94.37	3.35	29.130	
900.00	900.00	873.10	859.25	1.89	2.90	75.07	31.00	116.24	127.02	123.17	3.85	32.973	
1,000.00	1,000.00	959.95	940.66	2.12	3.53	79.81	26.57	147.76	161.65	157.26	4.39	36.801	
1,100.00	1,100.00	1,043.61	1,016.44	2.34	4.21	83.15	21.81	181.52	201.01	196.04	4.97	40.433	
1,120.00	1,120.00	1,059.94	1,031.18	2.39	4.35	83.69	20.83	188.49	209.41	204.32	5.09	41.131	
1,200.00	1,199.99	1,124.20	1,088.55	2.55	4.94	-66.21	16.80	217.14	244.26	238.83	5.43	44.999	
1,300.00	1,299.88	1,200.00	1,154.93	2.72	5.68	-64.24	11.70	253.37	290.11	284.27	5.84	49.678	
1,400.00	1,399.55	1,277.69	1,221.40	2.92	6.53	-62.90	6.09	293.18	338.13	331.84	6.29	53.722	
1,500.00	1,498.89	1,354.90	1,285.79	3.13	7.43	-62.00	0.15	335.37	388.16	381.38	6.78	57.255	

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_STATE 7-16
<b>Project:</b>	KERR MCGEE OIL & GAS ONSHORE LP	<b>TVD Reference:</b>	WELL @ 5150.00ft (Original Well Elev)
<b>Reference Site:</b>	WELD_STATE 5 PAD	<b>MD Reference:</b>	WELL @ 5150.00ft (Original Well Elev)
<b>Site Error:</b>	0.00ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	P_STATE 7-16	<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_STATE 7-16	<b>Database:</b>	EDM 2003.21 Single User Db
<b>Reference Design:</b>	PLAN #1 09-09-09 RHS	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design WELD_STATE 5 PAD - P_STATE 1-16 - P_STATE 1-16 - PLAN #1 09-09-09 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)	Semi Major Axis Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning
1,600.00	1,597.76	1,436.08	1,352.58	3.37	8.42	-61.48	-6.28	381.07	438.52	431.19	7.33	59.859	
1,700.00	1,696.05	1,523.05	1,424.12	3.65	9.48	-61.32	-13.17	430.03	487.52	479.57	7.95	61.326	
1,800.00	1,793.63	1,610.58	1,496.13	3.98	10.56	-61.42	-20.11	479.31	535.16	526.52	8.64	61.924	
1,900.00	1,890.40	1,698.56	1,568.51	4.37	11.66	-61.71	-27.08	528.84	581.50	572.09	9.41	61.786	
2,000.00	1,986.23	1,786.88	1,641.17	4.82	12.75	-62.17	-34.08	578.56	626.60	616.33	10.26	61.043	
2,100.00	2,081.00	1,875.44	1,714.03	5.34	13.86	-62.75	-41.10	628.42	670.55	659.34	11.21	59.814	
2,200.00	2,174.60	1,964.13	1,786.99	5.93	14.96	-63.45	-48.13	678.35	713.45	701.19	12.26	58.209	
2,264.05	2,233.88	2,020.96	1,833.74	6.34	15.68	-63.94	-52.63	710.34	740.42	727.43	12.98	57.033	
2,300.00	2,267.00	2,052.85	1,859.97	6.58	16.07	-64.52	-55.16	728.29	755.48	742.06	13.42	56.284	
2,400.00	2,359.14	2,141.56	1,932.95	7.28	17.18	-66.00	-62.19	778.23	797.71	783.01	14.70	54.260	
2,500.00	2,451.27	2,230.27	2,005.93	7.99	18.30	-67.34	-69.22	828.17	840.36	824.32	16.03	52.422	
2,600.00	2,543.40	2,318.98	2,078.91	8.72	19.41	-68.56	-76.25	878.11	883.35	865.95	17.40	50.777	
2,700.00	2,635.53	2,407.69	2,151.89	9.45	20.52	-69.66	-83.28	928.05	926.65	907.86	18.79	49.309	
2,800.00	2,727.66	2,496.40	2,224.87	10.20	21.63	-70.67	-90.31	977.99	970.22	950.00	20.21	48.001	
2,900.00	2,819.79	2,585.11	2,297.84	10.95	22.75	-71.60	-97.35	1,027.94	1,014.01	992.36	21.65	46.833	
3,000.00	2,911.92	2,673.82	2,370.82	11.71	23.86	-72.45	-104.38	1,077.88	1,058.00	1,034.90	23.11	45.787	
3,100.00	3,004.06	2,762.53	2,443.80	12.48	24.98	-73.23	-111.41	1,127.82	1,102.18	1,077.60	24.57	44.850	
3,200.00	3,096.19	2,851.24	2,516.78	13.25	26.09	-73.95	-118.44	1,177.76	1,146.50	1,120.45	26.05	44.005	
3,300.00	3,188.32	2,939.95	2,589.76	14.02	27.21	-74.62	-125.47	1,227.70	1,190.97	1,163.43	27.54	43.243	
3,400.00	3,280.45	3,028.66	2,662.74	14.79	28.32	-75.25	-132.50	1,277.64	1,235.56	1,206.53	29.04	42.552	
3,500.00	3,372.58	3,117.36	2,735.72	15.57	29.44	-75.83	-139.53	1,327.58	1,280.26	1,249.73	30.54	41.924	
3,600.00	3,464.71	3,206.07	2,808.70	16.35	30.55	-76.37	-146.56	1,377.52	1,325.07	1,293.02	32.04	41.352	
3,700.00	3,556.84	3,294.78	2,881.67	17.13	31.67	-76.88	-153.59	1,427.46	1,369.96	1,336.40	33.55	40.828	
3,800.00	3,648.98	3,383.49	2,954.65	17.91	32.79	-77.35	-160.62	1,477.40	1,414.93	1,379.86	35.07	40.348	
3,900.00	3,741.11	3,472.20	3,027.63	18.69	33.90	-77.80	-167.65	1,527.34	1,459.98	1,423.40	36.58	39.907	
4,000.00	3,833.24	3,560.91	3,100.61	19.48	35.02	-78.22	-174.68	1,577.28	1,505.09	1,466.99	38.10	39.499	
4,100.00	3,925.37	3,649.62	3,173.59	20.26	36.14	-78.62	-181.71	1,627.22	1,550.27	1,510.65	39.63	39.123	
4,200.00	4,017.50	3,738.33	3,246.57	21.05	37.25	-78.99	-188.74	1,677.16	1,595.50	1,554.36	41.15	38.774	
4,300.00	4,109.63	3,827.04	3,319.55	21.84	38.37	-79.34	-195.78	1,727.11	1,640.79	1,598.11	42.67	38.450	
4,400.00	4,201.76	4,010.12	3,472.94	22.62	40.34	-80.12	-209.70	1,826.00	1,684.50	1,639.57	44.93	37.488	
4,500.00	4,293.90	4,256.00	3,690.39	23.41	42.44	-81.47	-225.66	1,939.40	1,720.78	1,673.12	47.66	36.106	
4,600.00	4,386.03	4,512.38	3,928.82	24.20	44.12	-83.26	-238.75	2,032.37	1,748.65	1,698.21	50.44	34.666	
4,700.00	4,478.16	4,773.27	4,180.65	24.99	45.29	-85.47	-248.17	2,099.31	1,767.91	1,714.71	53.20	33.232	
4,800.00	4,570.29	5,032.03	4,436.41	25.78	45.96	-88.09	-253.52	2,137.31	1,778.72	1,722.86	55.86	31.841	
4,900.00	4,662.42	5,258.34	4,662.42	26.57	46.19	-90.75	-254.89	2,147.00	1,781.79	1,723.56	58.22	30.603	
5,000.00	4,754.55	5,350.48	4,754.55	27.36	46.23	-91.90	-254.89	2,147.00	1,782.76	1,723.16	59.60	29.911	
5,100.00	4,846.68	5,442.61	4,846.68	28.15	46.28	-93.05	-254.89	2,147.00	1,784.59	1,723.62	60.96	29.273	
5,200.00	4,938.82	5,534.74	4,938.82	28.95	46.32	-94.20	-254.89	2,147.00	1,787.26	1,724.95	62.31	28.684	
5,300.00	5,030.95	5,626.87	5,030.95	29.74	46.37	-95.34	-254.89	2,147.00	1,790.77	1,727.14	63.63	28.142	
5,400.00	5,123.08	5,719.00	5,123.08	30.53	46.42	-96.48	-254.89	2,147.00	1,795.11	1,730.18	64.94	27.645	
5,500.00	5,215.21	5,811.13	5,215.21	31.32	46.47	-97.62	-254.89	2,147.00	1,800.29	1,734.07	66.21	27.189	
5,600.00	5,307.34	5,903.26	5,307.34	32.11	46.52	-98.75	-254.89	2,147.00	1,806.28	1,738.81	67.47	26.772	
5,698.53	5,398.12	5,994.04	5,398.12	32.90	46.57	-99.85	-254.89	2,147.00	1,812.99	1,744.31	68.68	26.397	
5,700.00	5,399.47	5,995.40	5,399.47	32.91	46.57	-99.87	-254.89	2,147.00	1,813.10	1,744.39	68.70	26.391	
5,800.00	5,492.28	6,088.21	5,492.28	33.48	46.62	-101.09	-254.89	2,147.00	1,820.37	1,750.53	69.84	26.064	
5,900.00	5,586.34	6,182.26	5,586.34	34.00	46.67	-102.22	-254.89	2,147.00	1,827.64	1,756.73	70.91	25.774	
6,000.00	5,681.52	6,277.44	5,681.52	34.49	46.73	-103.25	-254.89	2,147.00	1,834.72	1,762.82	71.90	25.518	
6,100.00	5,777.71	6,373.63	5,777.71	34.93	46.78	-104.18	-254.89	2,147.00	1,841.44	1,768.64	72.80	25.295	
6,200.00	5,874.80	6,470.72	5,874.80	35.33	46.84	-105.00	-254.89	2,147.00	1,847.64	1,774.02	73.61	25.099	
6,300.00	5,972.66	6,568.58	5,972.66	35.67	46.90	-105.70	-254.89	2,147.00	1,853.18	1,778.85	74.34	24.930	
6,400.00	6,071.18	6,667.10	6,071.18	35.98	46.96	-106.30	-254.89	2,147.00	1,857.96	1,783.00	74.97	24.784	
6,500.00	6,170.24	6,766.16	6,170.24	36.23	47.02	-106.77	-254.89	2,147.00	1,861.89	1,786.38	75.50	24.660	

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_STATE 7-16
<b>Project:</b>	KERR MCGEE OIL & GAS ONSHORE LP	<b>TVD Reference:</b>	WELL @ 5150.00ft (Original Well Elev)
<b>Reference Site:</b>	WELD_STATE 5 PAD	<b>MD Reference:</b>	WELL @ 5150.00ft (Original Well Elev)
<b>Site Error:</b>	0.00ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	P_STATE 7-16	<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_STATE 7-16	<b>Database:</b>	EDM 2003.21 Single User Db
<b>Reference Design:</b>	PLAN #1 09-09-09 RHS	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design WELD_STATE 5 PAD - P_STATE 1-16 - P_STATE 1-16 - PLAN #1 09-09-09 RHS												Offset Site Error:	0.00 ft
Survey Program: 0-MWD												Offset Well Error:	0.00 ft
Reference	Offset	Semi Major Axis		Distance									
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning
6,600.00	6,269.71	6,865.63	6,269.71	36.44	47.08	-107.13	-254.89	2,147.00	1,864.87	1,788.93	75.94	24.556	
6,700.00	6,369.48	6,965.40	6,369.48	36.59	47.15	-107.36	-254.89	2,147.00	1,866.87	1,790.58	76.29	24.470	
6,800.00	6,469.42	7,065.35	6,469.42	36.71	47.21	-107.48	-254.89	2,147.00	1,867.84	1,791.29	76.55	24.401	
6,842.58	6,512.00	7,107.92	6,512.00	36.74	47.24	44.77	-254.89	2,147.00	1,867.93	1,791.30	76.63	24.376	
6,900.00	6,569.42	7,165.34	6,569.42	36.79	47.28	44.77	-254.89	2,147.00	1,867.93	1,791.21	76.72	24.347	
7,000.00	6,669.42	7,265.34	6,669.42	36.86	47.34	44.77	-254.89	2,147.00	1,867.93	1,791.06	76.87	24.299	
7,100.00	6,769.42	7,365.34	6,769.42	36.93	47.41	44.77	-254.89	2,147.00	1,867.93	1,790.90	77.03	24.250	
7,200.00	6,869.42	7,465.34	6,869.42	37.01	47.48	44.77	-254.89	2,147.00	1,867.93	1,790.75	77.19	24.201	
7,300.00	6,969.42	7,565.34	6,969.42	37.08	47.55	44.77	-254.89	2,147.00	1,867.93	1,790.59	77.34	24.151	
7,400.00	7,069.42	7,665.34	7,069.42	37.16	47.62	44.77	-254.89	2,147.00	1,867.93	1,790.42	77.51	24.100	
7,500.00	7,169.42	7,765.34	7,169.42	37.24	47.69	44.77	-254.89	2,147.00	1,867.93	1,790.26	77.67	24.049	
7,600.00	7,269.42	7,865.34	7,269.42	37.32	47.77	44.77	-254.89	2,147.00	1,867.93	1,790.09	77.84	23.998	
7,700.00	7,369.42	7,965.34	7,369.42	37.40	47.84	44.77	-254.89	2,147.00	1,867.93	1,789.92	78.01	23.946	
7,800.00	7,469.42	8,065.34	7,469.42	37.48	47.92	44.77	-254.89	2,147.00	1,867.93	1,789.75	78.18	23.893	
7,900.00	7,569.42	8,165.34	7,569.42	37.57	47.99	44.77	-254.89	2,147.00	1,867.93	1,789.58	78.35	23.840	
8,000.00	7,669.42	8,265.34	7,669.42	37.65	48.07	44.77	-254.89	2,147.00	1,867.93	1,789.40	78.53	23.787	
8,100.00	7,769.42	8,365.34	7,769.42	37.74	48.15	44.77	-254.89	2,147.00	1,867.93	1,789.23	78.71	23.733	
8,200.00	7,869.42	8,465.34	7,869.42	37.82	48.22	44.77	-254.89	2,147.00	1,867.93	1,789.05	78.89	23.679	
8,300.00	7,969.42	8,565.34	7,969.42	37.91	48.30	44.77	-254.89	2,147.00	1,867.93	1,788.86	79.07	23.624	
8,359.63	8,029.06	8,624.98	8,029.06	37.96	48.35	44.77	-254.89	2,147.00	1,867.93	1,788.75	79.18	23.591	
8,400.00	8,069.42	8,647.92	8,052.00	38.00	48.37	44.77	-254.89	2,147.00	1,868.01	1,788.78	79.24	23.575 SF	
8,500.00	8,169.42	8,647.92	8,052.00	38.09	48.37	44.77	-254.89	2,147.00	1,871.62	1,792.29	79.33	23.592	
8,600.00	8,269.42	8,647.92	8,052.00	38.18	48.37	44.77	-254.89	2,147.00	1,880.54	1,801.11	79.43	23.676	
8,700.00	8,369.42	8,647.92	8,052.00	38.27	48.37	44.77	-254.89	2,147.00	1,894.71	1,815.19	79.52	23.825	
8,797.58	8,467.00	8,647.92	8,052.00	38.37	48.37	44.77	-254.89	2,147.00	1,913.48	1,833.86	79.62	24.033	



# Weatherford International Ltd.

## Anticollision Report



<b>Company:</b>	US ROCKIES REGION PLANNING	<b>Local Co-ordinate Reference:</b>	Well P_STATE 7-16
<b>Project:</b>	KERR MCGEE OIL & GAS ONSHORE LP	<b>TVD Reference:</b>	WELL @ 5150.00ft (Original Well Elev)
<b>Reference Site:</b>	WELD_STATE 5 PAD	<b>MD Reference:</b>	WELL @ 5150.00ft (Original Well Elev)
<b>Site Error:</b>	0.00ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	P_STATE 7-16	<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_STATE 7-16	<b>Database:</b>	EDM 2003.21 Single User Db
<b>Reference Design:</b>	PLAN #1 09-09-09 RHS	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design WELD_STATE 5 PAD - P_STATE 2-16 - P_STATE 2-16 - PLAN #1 09-09-09 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	0.00	29.14	0.00	29.14					
100.00	100.00	100.00	100.00	0.10	0.10	0.00	29.14	0.00	29.14	28.95	0.19	152.536		
200.00	200.00	200.00	200.00	0.32	0.32	0.00	29.14	0.00	29.14	28.50	0.64	45.493		
300.00	300.00	300.00	300.00	0.55	0.55	0.00	29.14	0.00	29.14	28.05	1.09	26.733		
400.00	400.00	400.00	400.00	0.77	0.77	0.00	29.14	0.00	29.14	27.60	1.54	18.928		
500.00	500.00	500.00	500.00	0.99	0.99	0.00	29.14	0.00	29.14	27.15	1.99	14.650		
600.00	600.00	600.00	600.00	1.22	1.22	0.00	29.14	0.00	29.14	26.70	2.44	11.950		
700.00	700.00	700.00	700.00	1.44	1.44	0.00	29.14	0.00	29.14	26.25	2.89	10.090		
800.00	800.00	800.00	800.00	1.67	1.67	0.00	29.14	0.00	29.14	25.80	3.34	8.731		
900.00	900.00	900.00	900.00	1.89	1.89	0.00	29.14	0.00	29.14	25.35	3.79	7.695		
1,000.00	1,000.00	1,000.00	1,000.00	2.12	2.12	0.00	29.14	0.00	29.14	24.91	4.24	6.878		
1,100.00	1,100.00	1,100.00	1,100.00	2.34	2.34	0.00	29.14	0.00	29.14	24.46	4.69	6.218		
1,120.00	1,120.00	1,120.00	1,120.00	2.39	2.39	0.00	29.14	0.00	29.14	24.37	4.78	6.101 CC, ES		
1,200.00	1,199.99	1,200.17	1,200.16	2.55	2.56	-151.15	28.89	1.09	29.89	24.79	5.10	5.860 SF		
1,300.00	1,299.88	1,300.28	1,300.16	2.72	2.75	-147.19	27.89	5.53	33.02	27.55	5.47	6.036		
1,400.00	1,399.55	1,400.16	1,399.71	2.92	2.96	-141.78	26.12	13.35	38.85	32.99	5.86	6.630		
1,500.00	1,498.89	1,499.69	1,498.57	3.13	3.19	-136.39	23.59	24.50	47.62	41.33	6.28	7.578		
1,600.00	1,597.76	1,598.73	1,596.51	3.37	3.45	-131.77	20.32	38.92	59.40	52.65	6.75	8.796		
1,700.00	1,696.05	1,697.18	1,693.29	3.65	3.74	-128.09	16.34	56.52	74.20	66.92	7.29	10.182		
1,800.00	1,793.63	1,795.31	1,789.17	3.98	4.07	-125.48	11.74	76.82	91.85	83.95	7.89	11.635		
1,900.00	1,890.40	1,893.33	1,884.88	4.37	4.43	-124.91	7.06	97.47	111.63	103.07	8.55	13.049		
2,000.00	1,986.23	1,990.90	1,980.15	4.82	4.80	-125.63	2.41	118.02	133.39	124.12	9.26	14.398		
2,100.00	2,081.00	2,087.91	2,074.87	5.34	5.19	-127.06	-2.22	138.45	157.22	147.20	10.01	15.698		
2,200.00	2,174.60	2,184.24	2,168.93	5.93	5.58	-128.86	-6.82	158.73	183.28	172.48	10.80	16.978		
2,264.05	2,233.88	2,245.52	2,228.77	6.34	5.83	-130.11	-9.74	171.64	201.22	189.91	11.31	17.796		
2,300.00	2,267.00	2,279.82	2,262.26	6.58	5.98	-130.94	-11.38	178.86	211.59	199.98	11.61	18.225		
2,400.00	2,359.14	2,375.23	2,355.42	7.28	6.38	-132.88	-15.93	198.96	240.63	228.17	12.46	19.306		
2,500.00	2,451.27	2,470.64	2,448.58	7.99	6.80	-134.40	-20.48	219.05	269.86	256.53	13.33	20.241		
2,600.00	2,543.40	2,566.05	2,541.74	8.72	7.21	-135.62	-25.03	239.15	299.24	285.03	14.21	21.056		
2,700.00	2,635.53	2,661.46	2,634.90	9.45	7.63	-136.63	-29.59	259.24	328.72	313.62	15.10	21.771		
2,800.00	2,727.66	2,756.88	2,728.06	10.20	8.06	-137.47	-34.14	279.33	358.27	342.28	15.99	22.400		
2,900.00	2,819.79	2,852.29	2,821.22	10.95	8.48	-138.18	-38.69	299.43	387.89	370.99	16.90	22.958		
3,000.00	2,911.92	2,947.70	2,914.38	11.71	8.91	-138.79	-43.24	319.52	417.55	399.75	17.80	23.455		
3,100.00	3,004.06	3,043.11	3,007.54	12.48	9.34	-139.32	-47.80	339.62	447.25	428.54	18.71	23.900		
3,200.00	3,096.19	3,138.52	3,100.70	13.25	9.78	-139.79	-52.35	359.71	476.98	457.35	19.63	24.300		
3,300.00	3,188.32	3,233.93	3,193.86	14.02	10.21	-140.20	-56.90	379.81	506.74	486.19	20.55	24.663		
3,400.00	3,280.45	3,329.34	3,287.02	14.79	10.65	-140.56	-61.45	399.90	536.52	515.05	21.47	24.992		
3,500.00	3,372.58	3,424.75	3,380.18	15.57	11.08	-140.89	-66.00	419.99	566.31	543.92	22.39	25.291		
3,600.00	3,464.71	3,520.16	3,473.34	16.35	11.52	-141.18	-70.56	440.09	596.12	572.80	23.32	25.566		
3,700.00	3,556.84	3,615.58	3,566.50	17.13	11.96	-141.45	-75.11	460.18	625.94	601.70	24.24	25.817		
3,800.00	3,648.98	3,710.99	3,659.66	17.91	12.40	-141.69	-79.66	480.28	655.78	630.60	25.17	26.049		
3,900.00	3,741.11	3,806.40	3,752.82	18.69	12.84	-141.91	-84.21	500.37	685.62	659.52	26.11	26.264		
4,000.00	3,833.24	3,901.81	3,845.98	19.48	13.29	-142.11	-88.77	520.46	715.47	688.44	27.04	26.462		
4,100.00	3,925.37	3,997.22	3,939.14	20.26	13.73	-142.30	-93.32	540.56	745.33	717.36	27.97	26.646		
4,200.00	4,017.50	4,092.63	4,032.30	21.05	14.17	-142.47	-97.87	560.65	775.20	746.29	28.91	26.818		
4,300.00	4,109.63	4,185.69	4,123.45	21.84	14.49	-142.73	-102.00	578.87	805.21	775.50	29.70	27.109		
4,400.00	4,201.76	4,278.20	4,214.63	22.62	14.77	-143.19	-105.45	594.12	835.54	805.12	30.42	27.467		
4,500.00	4,293.90	4,370.03	4,305.59	23.41	15.01	-143.82	-108.23	606.40	866.25	835.19	31.06	27.889		
4,600.00	4,386.03	4,461.01	4,396.06	24.20	15.23	-144.59	-110.35	615.76	897.42	865.80	31.62	28.377		
4,700.00	4,478.16	4,550.96	4,485.76	24.99	15.41	-145.49	-111.83	622.26	929.16	897.04	32.11	28.932		
4,800.00	4,570.29	4,639.73	4,574.44	25.78	15.55	-146.49	-112.67	625.97	961.56	929.03	32.53	29.556		
4,900.00	4,662.42	4,727.72	4,662.42	26.57	15.68	-147.58	-112.91	627.02	994.74	961.85	32.89	30.245		

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_STATE 7-16
<b>Project:</b>	KERR MCGEE OIL & GAS ONSHORE LP	<b>TVD Reference:</b>	WELL @ 5150.00ft (Original Well Elev)
<b>Reference Site:</b>	WELD_STATE 5 PAD	<b>MD Reference:</b>	WELL @ 5150.00ft (Original Well Elev)
<b>Site Error:</b>	0.00ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	P_STATE 7-16	<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_STATE 7-16	<b>Database:</b>	EDM 2003.21 Single User Db
<b>Reference Design:</b>	PLAN #1 09-09-09 RHS	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design WELD_STATE 5 PAD - P_STATE 2-16 - P_STATE 2-16 - PLAN #1 09-09-09 RHS												Offset Site Error:	0.00 ft
Survey Program: 0-MWD												Offset Well Error:	0.00 ft
Reference		Offset		Semi Major Axis			Distance						
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning
5,000.00	4,754.55	4,819.85	4,754.55	27.36	15.80	-148.72	-112.91	627.02	1,028.49	995.27	33.21	30.966	
5,100.00	4,846.68	4,911.98	4,846.68	28.15	15.92	-149.78	-112.91	627.02	1,062.58	1,029.04	33.55	31.676	
5,200.00	4,938.82	5,004.11	4,938.82	28.95	16.05	-150.79	-112.91	627.02	1,097.00	1,063.12	33.88	32.379	
5,300.00	5,030.95	5,096.24	5,030.95	29.74	16.18	-151.73	-112.91	627.02	1,131.70	1,097.48	34.22	33.072	
5,400.00	5,123.08	5,188.38	5,123.08	30.53	16.32	-152.62	-112.91	627.02	1,166.67	1,132.11	34.56	33.754	
5,500.00	5,215.21	5,280.51	5,215.21	31.32	16.45	-153.46	-112.91	627.02	1,201.88	1,166.97	34.91	34.426	
5,600.00	5,307.34	5,372.64	5,307.34	32.11	16.59	-154.25	-112.91	627.02	1,237.31	1,202.04	35.27	35.085	
5,698.53	5,398.12	5,463.41	5,398.12	32.90	16.72	-154.99	-112.91	627.02	1,272.41	1,236.79	35.62	35.722	
5,700.00	5,399.47	5,464.77	5,399.47	32.91	16.72	-155.01	-112.91	627.02	1,272.94	1,237.31	35.63	35.731	
5,800.00	5,492.28	5,557.58	5,492.28	33.48	16.86	-155.99	-112.91	627.02	1,307.22	1,271.21	36.00	36.309	
5,900.00	5,586.34	5,651.63	5,586.34	34.00	17.01	-156.84	-112.91	627.02	1,338.63	1,302.25	36.38	36.799	
6,000.00	5,681.52	5,746.81	5,681.52	34.49	17.15	-157.57	-112.91	627.02	1,367.09	1,330.35	36.74	37.207	
6,100.00	5,777.71	5,843.01	5,777.71	34.93	17.30	-158.19	-112.91	627.02	1,392.53	1,355.44	37.09	37.541	
6,200.00	5,874.80	5,940.09	5,874.80	35.33	17.45	-158.71	-112.91	627.02	1,414.88	1,377.46	37.43	37.805	
6,300.00	5,972.66	6,037.96	5,972.66	35.67	17.61	-159.15	-112.91	627.02	1,434.10	1,396.36	37.74	38.004	
6,400.00	6,071.18	6,136.48	6,071.18	35.98	17.76	-159.51	-112.91	627.02	1,450.14	1,412.12	38.02	38.142	
6,500.00	6,170.24	6,235.53	6,170.24	36.23	17.92	-159.78	-112.91	627.02	1,462.96	1,424.68	38.28	38.222	
6,600.00	6,269.71	6,335.01	6,269.71	36.44	18.08	-159.98	-112.91	627.02	1,472.54	1,434.04	38.50	38.246	
6,700.00	6,369.48	6,434.78	6,369.48	36.59	18.25	-160.12	-112.91	627.02	1,478.85	1,440.16	38.70	38.217	
6,800.00	6,469.42	6,534.72	6,469.42	36.71	18.41	-160.18	-112.91	627.02	1,481.89	1,443.03	38.86	38.136	
6,842.58	6,512.00	6,577.30	6,512.00	36.74	18.48	-7.93	-112.91	627.02	1,482.19	1,443.27	38.92	38.084	
6,900.00	6,569.42	6,634.72	6,569.42	36.79	18.58	-7.93	-112.91	627.02	1,482.19	1,443.10	39.09	37.916	
7,000.00	6,669.42	6,734.72	6,669.42	36.86	18.74	-7.93	-112.91	627.02	1,482.19	1,442.80	39.39	37.627	
7,100.00	6,769.42	6,834.72	6,769.42	36.93	18.91	-7.93	-112.91	627.02	1,482.19	1,442.49	39.69	37.340	
7,200.00	6,869.42	6,934.72	6,869.42	37.01	19.08	-7.93	-112.91	627.02	1,482.19	1,442.19	40.00	37.055	
7,300.00	6,969.42	7,034.72	6,969.42	37.08	19.25	-7.93	-112.91	627.02	1,482.19	1,441.88	40.31	36.772	
7,400.00	7,069.42	7,134.72	7,069.42	37.16	19.42	-7.93	-112.91	627.02	1,482.19	1,441.57	40.62	36.491	
7,500.00	7,169.42	7,234.72	7,169.42	37.24	19.60	-7.93	-112.91	627.02	1,482.19	1,441.26	40.93	36.212	
7,600.00	7,269.42	7,334.72	7,269.42	37.32	19.77	-7.93	-112.91	627.02	1,482.19	1,440.94	41.25	35.935	
7,700.00	7,369.42	7,434.72	7,369.42	37.40	19.94	-7.93	-112.91	627.02	1,482.19	1,440.62	41.56	35.660	
7,800.00	7,469.42	7,534.72	7,469.42	37.48	20.12	-7.93	-112.91	627.02	1,482.19	1,440.30	41.89	35.387	
7,900.00	7,569.42	7,634.72	7,569.42	37.57	20.30	-7.93	-112.91	627.02	1,482.19	1,439.98	42.21	35.117	
8,000.00	7,669.42	7,734.72	7,669.42	37.65	20.47	-7.93	-112.91	627.02	1,482.19	1,439.66	42.53	34.848	
8,100.00	7,769.42	7,834.72	7,769.42	37.74	20.65	-7.93	-112.91	627.02	1,482.19	1,439.33	42.86	34.583	
8,200.00	7,869.42	7,934.72	7,869.42	37.82	20.83	-7.93	-112.91	627.02	1,482.19	1,439.00	43.19	34.319	
8,300.00	7,969.42	8,034.72	7,969.42	37.91	21.01	-7.93	-112.91	627.02	1,482.19	1,438.67	43.52	34.058	
8,361.94	8,031.36	8,096.66	8,031.36	37.97	21.13	-7.93	-112.91	627.02	1,482.19	1,438.46	43.73	33.897	
8,400.00	8,069.42	8,122.30	8,069.42	38.00	21.17	-7.93	-112.91	627.02	1,482.24	1,438.41	43.83	33.818	
8,500.00	8,169.42	8,122.30	8,057.00	38.09	21.17	-7.93	-112.91	627.02	1,486.45	1,442.47	43.98	33.798	
8,600.00	8,269.42	8,122.30	8,057.00	38.18	21.17	-7.93	-112.91	627.02	1,497.33	1,453.20	44.13	33.929	
8,700.00	8,369.42	8,122.30	8,057.00	38.27	21.17	-7.93	-112.91	627.02	1,514.76	1,470.48	44.28	34.206	
8,797.58	8,467.00	8,122.30	8,057.00	38.37	21.17	-7.93	-112.91	627.02	1,537.85	1,493.42	44.43	34.611	



# Weatherford International Ltd.

## Anticollision Report



<b>Company:</b>	US ROCKIES REGION PLANNING	<b>Local Co-ordinate Reference:</b>	Well P_STATE 7-16
<b>Project:</b>	KERR MCGEE OIL & GAS ONSHORE LP	<b>TVD Reference:</b>	WELL @ 5150.00ft (Original Well Elev)
<b>Reference Site:</b>	WELD_STATE 5 PAD	<b>MD Reference:</b>	WELL @ 5150.00ft (Original Well Elev)
<b>Site Error:</b>	0.00ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	P_STATE 7-16	<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_STATE 7-16	<b>Database:</b>	EDM 2003.21 Single User Db
<b>Reference Design:</b>	PLAN #1 09-09-09 RHS	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design WELD_STATE 5 PAD - P_STATE 26-16 - P_STATE 26-16 - PLAN #1 09-10-09 RHS												Offset Site Error:	0.00 ft
Survey Program: 0-MWD												Offset Well Error:	0.00 ft
Reference	Offset	Semi Major Axis		Distance									
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning
0.00	0.00	0.00	0.00	0.00	0.00	0.00	61.93	0.00	61.93				
100.00	100.00	100.00	100.00	0.10	0.10	0.00	61.93	0.00	61.93	61.74	0.19	324.160	
200.00	200.00	200.00	200.00	0.32	0.32	0.00	61.93	0.00	61.93	61.29	0.64	96.679	
300.00	300.00	300.00	300.00	0.55	0.55	0.00	61.93	0.00	61.93	60.84	1.09	56.812	
400.00	400.00	400.00	400.00	0.77	0.77	0.00	61.93	0.00	61.93	60.39	1.54	40.224	
500.00	500.00	500.00	500.00	0.99	0.99	0.00	61.93	0.00	61.93	59.94	1.99	31.134	
600.00	600.00	600.00	600.00	1.22	1.22	0.00	61.93	0.00	61.93	59.49	2.44	25.395	
700.00	700.00	700.00	700.00	1.44	1.44	0.00	61.93	0.00	61.93	59.04	2.89	21.443	
800.00	800.00	800.00	800.00	1.67	1.67	0.00	61.93	0.00	61.93	58.59	3.34	18.555	
900.00	900.00	900.00	900.00	1.89	1.89	0.00	61.93	0.00	61.93	58.14	3.79	16.352	
1,000.00	1,000.00	1,000.00	1,000.00	2.12	2.12	0.00	61.93	0.00	61.93	57.69	4.24	14.617	
1,100.00	1,100.00	1,100.00	1,100.00	2.34	2.34	0.00	61.93	0.00	61.93	57.24	4.69	13.215	
1,120.00	1,120.00	1,120.00	1,120.00	2.39	2.39	0.00	61.93	0.00	61.93	57.15	4.78	12.966 CC, ES	
1,200.00	1,199.99	1,199.80	1,199.79	2.55	2.56	-151.72	62.05	1.10	63.04	57.94	5.10	12.353	
1,300.00	1,299.88	1,299.36	1,299.25	2.72	2.76	-149.69	62.53	5.58	67.60	62.12	5.48	12.336 SF	
1,400.00	1,399.55	1,398.52	1,398.08	2.92	2.98	-146.71	63.37	13.45	75.82	69.95	5.87	12.912	
1,500.00	1,498.89	1,497.05	1,495.96	3.13	3.21	-143.40	64.57	24.64	87.85	81.56	6.29	13.970	
1,600.00	1,597.76	1,594.73	1,592.56	3.37	3.47	-140.23	66.11	39.02	103.77	97.03	6.74	15.395	
1,700.00	1,696.05	1,691.37	1,687.59	3.65	3.75	-137.42	67.98	56.47	123.58	116.34	7.24	17.068	
1,800.00	1,793.63	1,786.78	1,780.77	3.98	4.07	-135.01	70.16	76.81	147.22	139.42	7.80	18.877	
1,900.00	1,890.40	1,880.78	1,871.87	4.37	4.44	-132.97	72.63	99.85	174.60	166.17	8.43	20.722	
2,000.00	1,986.23	1,973.21	1,960.65	4.82	4.85	-131.24	75.37	125.40	205.62	196.49	9.13	22.525	
2,100.00	2,081.00	2,063.94	2,046.96	5.34	5.31	-129.74	78.36	153.23	240.16	230.25	9.91	24.228	
2,200.00	2,174.60	2,152.85	2,130.62	5.93	5.81	-128.43	81.56	183.13	278.11	267.33	10.78	25.800	
2,264.05	2,233.88	2,208.79	2,182.77	6.34	6.15	-127.66	83.72	203.26	304.14	292.77	11.37	26.741	
2,300.00	2,267.00	2,239.88	2,211.57	6.58	6.36	-127.48	84.96	214.88	319.21	307.46	11.74	27.181	
2,400.00	2,359.14	2,325.49	2,290.23	7.28	6.95	-126.78	88.57	248.49	361.98	349.18	12.80	28.273	
2,500.00	2,451.27	2,409.73	2,366.60	7.99	7.59	-125.89	92.35	283.82	406.07	392.15	13.92	29.173	
2,600.00	2,543.40	2,492.48	2,440.58	8.72	8.27	-124.87	96.30	320.69	451.51	436.42	15.09	29.926	
2,700.00	2,635.53	2,573.66	2,512.08	9.45	9.00	-123.79	100.40	358.91	498.34	482.03	16.30	30.571	
2,800.00	2,727.66	2,653.18	2,581.03	10.20	9.76	-122.66	104.62	398.28	546.59	529.04	17.55	31.151	
2,900.00	2,819.79	2,730.96	2,647.39	10.95	10.55	-121.52	108.95	438.63	596.29	577.48	18.82	31.691	
3,000.00	2,911.92	2,806.97	2,711.15	11.71	11.37	-120.39	113.35	479.76	647.46	627.36	20.10	32.209	
3,100.00	3,004.06	2,884.01	2,774.69	12.48	12.25	-119.24	118.00	523.08	700.06	678.63	21.43	32.667	
3,200.00	3,096.19	2,967.84	2,843.51	13.25	13.22	-118.11	123.10	570.66	753.20	730.37	22.83	32.996	
3,300.00	3,188.32	3,051.66	2,912.33	14.02	14.21	-117.13	128.20	618.25	806.53	782.30	24.23	33.285	
3,400.00	3,280.45	3,135.48	2,981.15	14.79	15.21	-116.26	133.30	665.83	860.01	834.37	25.64	33.541	
3,500.00	3,372.58	3,219.30	3,049.96	15.57	16.21	-115.50	138.40	713.41	913.61	886.56	27.05	33.774	
3,600.00	3,464.71	3,303.12	3,118.78	16.35	17.22	-114.82	143.50	760.99	967.32	938.86	28.46	33.989	
3,700.00	3,556.84	3,386.94	3,187.60	17.13	18.23	-114.21	148.60	808.57	1,021.12	991.25	29.87	34.186	
3,800.00	3,648.98	3,470.76	3,256.42	17.91	19.25	-113.67	153.70	856.15	1,074.99	1,043.71	31.28	34.369	
3,900.00	3,741.11	3,554.58	3,325.24	18.69	20.27	-113.17	158.80	903.73	1,128.92	1,096.24	32.69	34.538	
4,000.00	3,833.24	3,638.40	3,394.06	19.48	21.29	-112.72	163.90	951.31	1,182.91	1,148.82	34.09	34.696	
4,100.00	3,925.37	3,722.22	3,462.87	20.26	22.32	-112.31	169.00	998.90	1,236.95	1,201.45	35.50	34.843	
4,200.00	4,017.50	3,806.04	3,531.69	21.05	23.35	-111.93	174.10	1,046.48	1,291.03	1,254.12	36.91	34.981	
4,300.00	4,109.63	3,889.87	3,600.51	21.84	24.38	-111.58	179.20	1,094.06	1,345.15	1,306.84	38.31	35.110	
4,400.00	4,201.76	3,973.69	3,669.33	22.62	25.41	-111.26	184.30	1,141.64	1,399.30	1,359.58	39.72	35.232	
4,500.00	4,293.90	4,057.51	3,738.15	23.41	26.44	-110.96	189.40	1,189.22	1,453.47	1,412.35	41.12	35.346	
4,600.00	4,386.03	4,141.33	3,806.97	24.20	27.48	-110.69	194.50	1,236.80	1,507.68	1,465.15	42.52	35.454	
4,700.00	4,478.16	4,225.15	3,875.78	24.99	28.51	-110.43	199.60	1,284.38	1,561.90	1,517.98	43.93	35.556	
4,800.00	4,570.29	4,308.97	3,944.60	25.78	29.55	-110.19	204.70	1,331.96	1,616.15	1,570.81	45.34	35.647	
4,900.00	4,662.42	4,392.79	4,013.42	26.57	30.59	-109.97	209.80	1,379.55	1,670.42	1,623.67	46.75	35.732	

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_STATE 7-16
<b>Project:</b>	KERR MCGEE OIL & GAS ONSHORE LP	<b>TVD Reference:</b>	WELL @ 5150.00ft (Original Well Elev)
<b>Reference Site:</b>	WELD_STATE 5 PAD	<b>MD Reference:</b>	WELL @ 5150.00ft (Original Well Elev)
<b>Site Error:</b>	0.00ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	P_STATE 7-16	<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_STATE 7-16	<b>Database:</b>	EDM 2003.21 Single User Db
<b>Reference Design:</b>	PLAN #1 09-09-09 RHS	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design WELD_STATE 5 PAD - P_STATE 26-16 - P_STATE 26-16 - PLAN #1 09-10-09 RHS												Offset Site Error:	0.00 ft
Survey Program: 0-MWD												Offset Well Error:	0.00 ft
Reference	Offset	Semi Major Axis		Distance									
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning
5,000.00	4,754.55	4,476.61	4,082.24	27.36	31.63	-109.76	214.90	1,427.13	1,724.70	1,676.54	48.16	35.811	
5,100.00	4,846.68	4,560.43	4,151.06	28.15	32.67	-109.56	220.00	1,474.71	1,779.00	1,729.42	49.57	35.886	
5,200.00	4,938.82	4,644.25	4,219.87	28.95	33.71	-109.37	225.10	1,522.29	1,833.31	1,782.32	50.99	35.957	
5,300.00	5,030.95	4,728.07	4,288.69	29.74	34.75	-109.20	230.20	1,569.87	1,887.64	1,835.24	52.40	36.025	
5,400.00	5,123.08	4,811.89	4,357.51	30.53	35.79	-109.03	235.30	1,617.45	1,941.97	1,888.16	53.81	36.089	
5,500.00	5,215.21	4,895.72	4,426.33	31.32	36.83	-108.88	240.40	1,665.03	1,996.32	1,941.10	55.22	36.149	
5,600.00	5,307.34	4,979.54	4,495.15	32.11	37.87	-108.73	245.50	1,712.61	2,050.68	1,994.04	56.64	36.207	
5,698.53	5,398.12	5,062.12	4,562.95	32.90	38.90	-108.59	250.52	1,759.49	2,104.24	2,046.21	58.03	36.261	
5,700.00	5,399.47	5,063.36	4,563.97	32.91	38.92	-108.61	250.60	1,760.19	2,105.04	2,046.99	58.06	36.259	
5,800.00	5,492.28	5,147.39	4,632.96	33.48	39.96	-109.63	255.71	1,807.89	2,158.93	2,099.24	59.69	36.169	
5,900.00	5,586.34	5,231.75	4,702.22	34.00	41.01	-110.52	260.84	1,855.78	2,211.85	2,150.55	61.30	36.080	
6,000.00	5,681.52	5,316.34	4,771.67	34.49	42.07	-111.30	265.99	1,903.80	2,263.79	2,200.86	62.92	35.977	
6,100.00	5,777.71	5,401.06	4,841.23	34.93	43.12	-111.97	271.14	1,951.89	2,314.71	2,250.23	64.49	35.895	
6,200.00	5,874.80	5,485.81	4,910.81	35.33	44.18	-112.54	276.30	2,000.00	2,364.63	2,298.65	65.99	35.835	
6,300.00	5,972.66	5,570.48	4,980.32	35.67	45.24	-113.01	281.45	2,048.06	2,413.55	2,346.13	67.42	35.800	
6,400.00	6,071.18	5,654.96	5,049.68	35.98	46.29	-113.40	286.59	2,096.02	2,461.48	2,392.70	68.78	35.789	
6,500.00	6,170.24	5,739.16	5,118.81	36.23	47.34	-113.72	291.72	2,143.82	2,508.45	2,438.39	70.06	35.805	
6,600.00	6,269.71	5,822.98	5,187.63	36.44	48.38	-113.96	296.82	2,191.40	2,554.48	2,483.23	71.26	35.848	
6,700.00	6,369.48	5,906.30	5,256.04	36.59	49.42	-114.15	301.89	2,238.70	2,599.62	2,527.25	72.37	35.920	
6,800.00	6,469.42	6,157.82	5,468.10	36.71	52.01	-112.83	316.28	2,373.02	2,641.60	2,567.56	74.04	35.679	
6,842.58	6,512.00	6,283.66	5,578.44	36.74	53.11	40.08	322.73	2,433.16	2,657.27	2,582.61	74.66	35.593	
6,900.00	6,569.42	6,462.60	5,739.68	36.79	54.50	41.29	330.99	2,510.26	2,676.28	2,601.09	75.19	35.593	
7,000.00	6,669.42	6,798.73	6,054.27	36.86	56.58	43.02	343.55	2,627.41	2,703.27	2,627.35	75.91	35.610	
7,100.00	6,769.42	7,160.99	6,406.22	36.93	58.05	44.20	352.59	2,711.73	2,721.40	2,645.00	76.40	35.619	
7,200.00	6,869.42	7,539.92	6,782.71	37.01	58.81	44.74	356.90	2,751.97	2,729.70	2,652.94	76.76	35.560	
7,300.00	6,969.42	7,726.67	6,969.42	37.08	58.94	44.78	357.16	2,754.36	2,730.19	2,653.22	76.97	35.471	
7,400.00	7,069.42	7,826.67	7,069.42	37.16	58.99	44.78	357.16	2,754.36	2,730.19	2,653.06	77.13	35.399	
7,500.00	7,169.42	7,926.67	7,169.42	37.24	59.05	44.78	357.16	2,754.36	2,730.19	2,652.90	77.29	35.326	
7,600.00	7,269.42	8,026.67	7,269.42	37.32	59.11	44.78	357.16	2,754.36	2,730.19	2,652.74	77.45	35.252	
7,700.00	7,369.42	8,126.67	7,369.42	37.40	59.17	44.78	357.16	2,754.36	2,730.19	2,652.58	77.61	35.178	
7,800.00	7,469.42	8,226.67	7,469.42	37.48	59.23	44.78	357.16	2,754.36	2,730.19	2,652.41	77.78	35.103	
7,900.00	7,569.42	8,326.67	7,569.42	37.57	59.29	44.78	357.16	2,754.36	2,730.19	2,652.24	77.95	35.027	
8,000.00	7,669.42	8,426.67	7,669.42	37.65	59.35	44.78	357.16	2,754.36	2,730.19	2,652.07	78.12	34.950	
8,100.00	7,769.42	8,526.67	7,769.42	37.74	59.42	44.78	357.16	2,754.36	2,730.19	2,651.90	78.29	34.873	
8,200.00	7,869.42	8,626.67	7,869.42	37.82	59.48	44.78	357.16	2,754.36	2,730.19	2,651.73	78.46	34.796	
8,300.00	7,969.42	8,726.67	7,969.42	37.91	59.54	44.78	357.16	2,754.36	2,730.19	2,651.55	78.64	34.717	
8,400.00	8,069.42	8,826.67	8,069.42	38.00	59.61	44.78	357.16	2,754.36	2,730.19	2,651.37	78.82	34.638	
8,500.00	8,169.42	8,926.67	8,169.42	38.09	59.67	44.78	357.16	2,754.36	2,730.19	2,651.19	79.00	34.559	
8,600.00	8,269.42	9,026.67	8,269.42	38.18	59.74	44.78	357.16	2,754.36	2,730.19	2,651.00	79.18	34.479	
8,700.00	8,369.42	9,126.67	8,369.42	38.27	59.81	44.78	357.16	2,754.36	2,730.19	2,650.82	79.37	34.398	
8,797.58	8,467.00	9,224.25	8,467.00	38.37	59.87	44.78	357.16	2,754.36	2,730.19	2,650.64	79.55	34.319	





<b>Company:</b>	US ROCKIES REGION PLANNING	<b>Local Co-ordinate Reference:</b>	Well P_STATE 7-16
<b>Project:</b>	KERR MCGEE OIL & GAS ONSHORE LP	<b>TVD Reference:</b>	WELL @ 5150.00ft (Original Well Elev)
<b>Reference Site:</b>	WELD_STATE 5 PAD	<b>MD Reference:</b>	WELL @ 5150.00ft (Original Well Elev)
<b>Site Error:</b>	0.00ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	P_STATE 7-16	<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_STATE 7-16	<b>Database:</b>	EDM 2003.21 Single User Db
<b>Reference Design:</b>	PLAN #1 09-09-09 RHS	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design WELD_STATE 5 PAD - P_STATE 8-16 - P_STATE 8-16 - PLAN #1 09-10-09 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)	Semi Major Axis 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	0.00	14.58	0.00	14.58				
100.00	100.00	100.00	100.00	0.10	0.10	0.00	14.58	0.00	14.58	14.38	0.19	76.290	
200.00	200.00	200.00	200.00	0.32	0.32	0.00	14.58	0.00	14.58	13.93	0.64	22.753	
300.00	300.00	300.00	300.00	0.55	0.55	0.00	14.58	0.00	14.58	13.49	1.09	13.370	
400.00	400.00	400.00	400.00	0.77	0.77	0.00	14.58	0.00	14.58	13.04	1.54	9.467	
500.00	500.00	500.00	500.00	0.99	0.99	0.00	14.58	0.00	14.58	12.59	1.99	7.327	
600.00	600.00	600.00	600.00	1.22	1.22	0.00	14.58	0.00	14.58	12.14	2.44	5.977	
700.00	700.00	700.00	700.00	1.44	1.44	0.00	14.58	0.00	14.58	11.69	2.89	5.046	
800.00	800.00	800.00	800.00	1.67	1.67	0.00	14.58	0.00	14.58	11.24	3.34	4.367	
900.00	900.00	900.00	900.00	1.89	1.89	0.00	14.58	0.00	14.58	10.79	3.79	3.848	
1,000.00	1,000.00	1,000.00	1,000.00	2.12	2.12	0.00	14.58	0.00	14.58	10.34	4.24	3.440	
1,100.00	1,100.00	1,100.00	1,100.00	2.34	2.34	0.00	14.58	0.00	14.58	9.89	4.69	3.110	
1,120.00	1,120.00	1,120.00	1,120.00	2.39	2.39	0.00	14.58	0.00	14.58	9.80	4.78	3.052 CC, ES	
1,200.00	1,199.99	1,200.24	1,200.23	2.55	2.55	-150.79	13.91	0.90	14.90	9.81	5.10	2.925 SF	
1,300.00	1,299.88	1,300.51	1,300.39	2.72	2.74	-145.44	11.20	4.57	16.32	10.87	5.46	2.992	
1,400.00	1,399.55	1,400.71	1,400.26	2.92	2.94	-138.05	6.41	11.05	19.11	13.27	5.84	3.272	
1,500.00	1,498.89	1,500.82	1,499.69	3.13	3.16	-130.67	-0.44	20.33	23.48	17.22	6.26	3.750	
1,600.00	1,597.76	1,600.78	1,598.52	3.37	3.41	-124.46	-9.34	32.37	29.55	22.81	6.74	4.382	
1,700.00	1,696.05	1,700.57	1,696.60	3.65	3.70	-119.62	-20.26	47.16	37.30	30.00	7.30	5.109	
1,800.00	1,793.63	1,800.15	1,793.78	3.98	4.04	-115.95	-33.17	64.64	46.70	38.74	7.96	5.870	
1,900.00	1,890.40	1,899.50	1,889.92	4.37	4.43	-113.18	-48.05	84.77	57.69	48.97	8.72	6.616	
2,000.00	1,986.23	1,998.58	1,984.87	4.82	4.89	-111.05	-64.85	107.52	70.25	60.64	9.61	7.312	
2,100.00	2,081.00	2,097.36	2,078.51	5.34	5.41	-109.38	-83.53	132.80	84.32	73.69	10.62	7.937	
2,200.00	2,174.60	2,195.82	2,170.71	5.93	6.00	-108.03	-104.04	160.58	99.87	88.09	11.78	8.480	
2,264.05	2,233.88	2,258.70	2,228.95	6.34	6.43	-107.30	-118.13	179.64	110.59	98.00	12.59	8.781	
2,300.00	2,267.00	2,293.94	2,261.36	6.58	6.67	-106.94	-126.35	190.77	116.80	103.73	13.07	8.937	
2,400.00	2,359.14	2,391.71	2,350.35	7.28	7.40	-105.15	-150.40	223.33	134.43	119.94	14.49	9.276	
2,500.00	2,451.27	2,488.94	2,437.43	7.99	8.20	-102.53	-176.09	258.11	152.79	136.78	16.01	9.544	
2,600.00	2,543.40	2,585.42	2,522.34	8.72	9.07	-99.41	-203.31	294.95	172.18	154.59	17.59	9.789	
2,700.00	2,635.53	2,680.94	2,604.84	9.45	10.01	-96.01	-231.91	333.67	192.96	173.76	19.20	10.050	
2,800.00	2,727.66	2,775.30	2,684.72	10.20	11.00	-92.50	-261.75	374.07	215.44	194.63	20.81	10.353	
2,900.00	2,819.79	2,869.37	2,762.76	10.95	12.05	-88.99	-292.96	416.32	239.82	217.43	22.39	10.709	
3,000.00	2,911.92	2,965.18	2,841.84	11.71	13.15	-85.92	-325.10	459.83	265.27	241.31	23.97	11.069	
3,100.00	3,004.06	3,060.99	2,920.92	12.48	14.26	-83.39	-357.24	503.33	291.32	265.81	25.51	11.421	
3,200.00	3,096.19	3,156.80	3,000.00	13.25	15.38	-81.28	-389.37	546.84	317.82	290.79	27.03	11.759	
3,300.00	3,188.32	3,252.60	3,079.08	14.02	16.51	-79.49	-421.51	590.34	344.66	316.12	28.53	12.078	
3,400.00	3,280.45	3,348.41	3,158.16	14.79	17.64	-77.95	-453.65	633.84	371.77	341.74	30.03	12.379	
3,500.00	3,372.58	3,444.22	3,237.24	15.57	18.78	-76.62	-485.78	677.35	399.10	367.57	31.52	12.661	
3,600.00	3,464.71	3,540.02	3,316.32	16.35	19.93	-75.47	-517.92	720.85	426.60	393.59	33.01	12.925	
3,700.00	3,556.84	3,635.83	3,395.40	17.13	21.07	-74.45	-550.06	764.35	454.24	419.75	34.49	13.171	
3,800.00	3,648.98	3,731.64	3,474.48	17.91	22.22	-73.55	-582.19	807.86	482.00	446.04	35.96	13.402	
3,900.00	3,741.11	3,827.45	3,553.56	18.69	23.38	-72.74	-614.33	851.36	509.86	472.42	37.44	13.618	
4,000.00	3,833.24	3,923.25	3,632.64	19.48	24.53	-72.02	-646.46	894.87	537.81	498.89	38.92	13.820	
4,100.00	3,925.37	4,019.06	3,711.72	20.26	25.69	-71.37	-678.60	938.37	565.82	525.43	40.39	14.009	
4,200.00	4,017.50	4,114.87	3,790.80	21.05	26.85	-70.79	-710.74	981.87	593.89	552.03	41.86	14.187	
4,300.00	4,109.63	4,210.67	3,869.88	21.84	28.01	-70.25	-742.87	1,025.38	622.02	578.69	43.33	14.355	
4,400.00	4,201.76	4,306.48	3,948.96	22.62	29.17	-69.76	-775.01	1,068.88	650.20	605.39	44.80	14.512	
4,500.00	4,293.90	4,402.29	4,028.04	23.41	30.33	-69.31	-807.15	1,112.39	678.41	632.14	46.27	14.661	
4,600.00	4,386.03	4,498.10	4,107.12	24.20	31.49	-68.90	-839.28	1,155.89	706.66	658.92	47.74	14.801	
4,700.00	4,478.16	4,593.90	4,186.20	24.99	32.66	-68.52	-871.42	1,199.39	734.94	685.73	49.21	14.934	
4,800.00	4,570.29	4,689.71	4,265.28	25.78	33.82	-68.17	-903.56	1,242.90	763.25	712.57	50.68	15.059	
4,900.00	4,662.42	4,785.52	4,344.36	26.57	34.99	-67.84	-935.69	1,286.40	791.58	739.43	52.15	15.179	

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_STATE 7-16
<b>Project:</b>	KERR MCGEE OIL & GAS ONSHORE LP	<b>TVD Reference:</b>	WELL @ 5150.00ft (Original Well Elev)
<b>Reference Site:</b>	WELD_STATE 5 PAD	<b>MD Reference:</b>	WELL @ 5150.00ft (Original Well Elev)
<b>Site Error:</b>	0.00ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	P_STATE 7-16	<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_STATE 7-16	<b>Database:</b>	EDM 2003.21 Single User Db
<b>Reference Design:</b>	PLAN #1 09-09-09 RHS	<b>Offset TVD Reference:</b>	Offset Datum

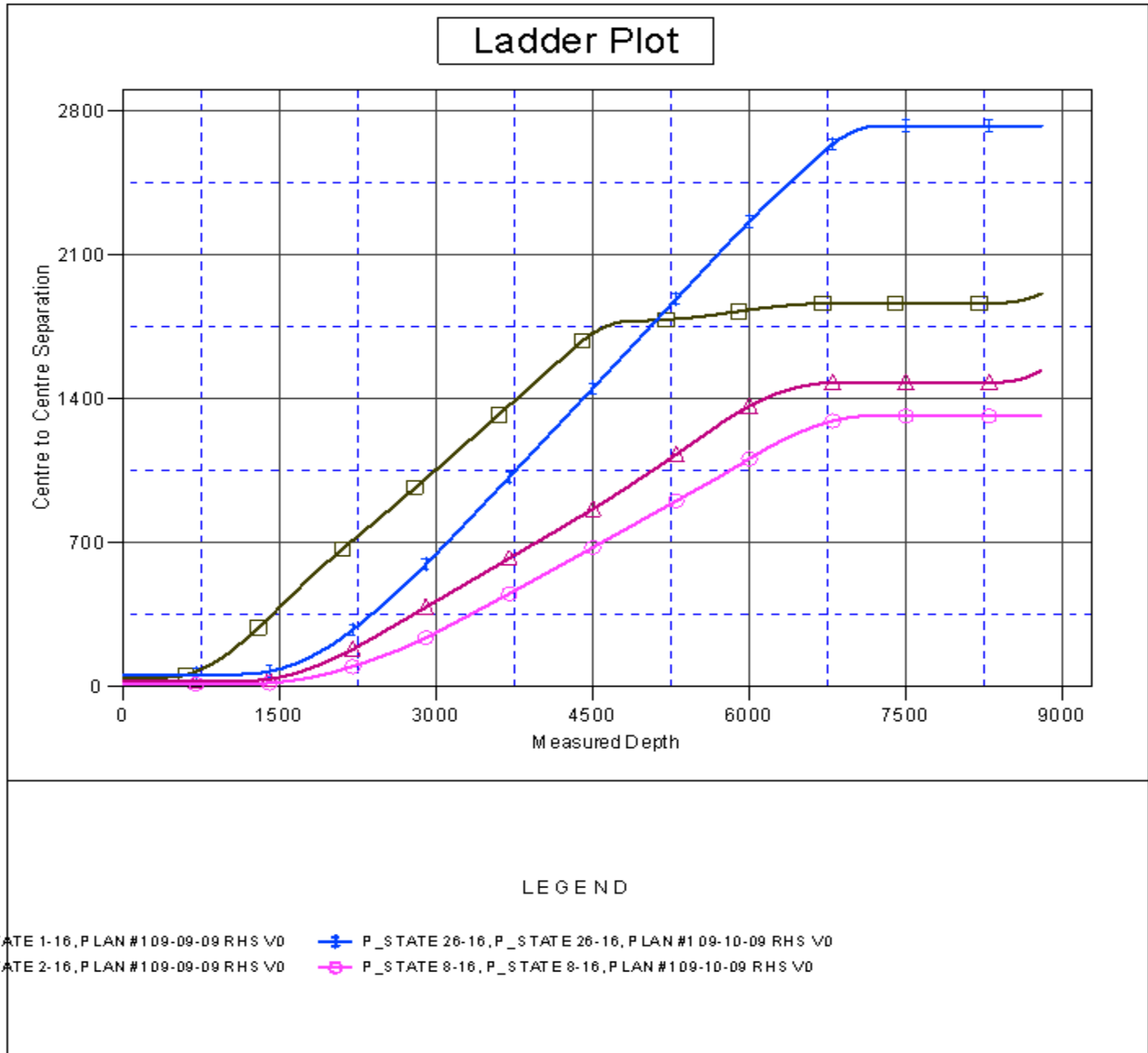
Offset Design WELD_STATE 5 PAD - P_STATE 8-16 - P_STATE 8-16 - PLAN #1 09-10-09 RHS												Offset Site Error:	0.00 ft
Survey Program: 0-MWD												Offset Well Error:	0.00 ft
Reference	Offset	Semi Major Axis		Distance								Warning	
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	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	
5,000.00	4,754.55	4,881.33	4,423.44	27.36	36.16	-67.53	-967.83	1,329.91	819.94	766.32	53.62	15.292	
5,100.00	4,846.68	4,977.13	4,502.52	28.15	37.32	-67.25	-999.97	1,373.41	848.31	793.22	55.09	15.399	
5,200.00	4,938.82	5,072.94	4,581.60	28.95	38.49	-66.98	-1,032.10	1,416.91	876.71	820.15	56.56	15.502	
5,300.00	5,030.95	5,168.75	4,660.68	29.74	39.66	-66.73	-1,064.24	1,460.42	905.12	847.09	58.02	15.599	
5,400.00	5,123.08	5,264.55	4,739.76	30.53	40.83	-66.50	-1,096.38	1,503.92	933.54	874.05	59.49	15.692	
5,500.00	5,215.21	5,360.36	4,818.84	31.32	42.00	-66.28	-1,128.51	1,547.43	961.98	901.02	60.96	15.781	
5,600.00	5,307.34	5,456.17	4,897.92	32.11	43.17	-66.07	-1,160.65	1,590.93	990.43	928.00	62.42	15.866	
5,698.53	5,398.12	5,550.56	4,975.84	32.90	44.32	-65.87	-1,192.31	1,633.79	1,018.47	954.60	63.87	15.946	
5,700.00	5,399.47	5,551.98	4,977.00	32.91	44.34	-65.88	-1,192.78	1,634.43	1,018.89	955.00	63.89	15.947	
5,800.00	5,492.28	5,647.50	5,055.85	33.48	45.50	-66.16	-1,224.83	1,677.81	1,048.07	982.72	65.35	16.038	
5,900.00	5,586.34	5,742.39	5,134.17	34.00	46.66	-66.31	-1,256.65	1,720.90	1,078.63	1,011.94	66.69	16.175	
6,000.00	5,681.52	5,850.98	5,224.04	34.49	47.92	-66.25	-1,292.87	1,769.92	1,110.38	1,042.45	67.93	16.346	
6,100.00	5,777.71	5,985.26	5,337.87	34.93	49.24	-66.02	-1,335.18	1,827.20	1,140.91	1,071.86	69.06	16.521	
6,200.00	5,874.80	6,122.43	5,457.46	35.33	50.43	-65.76	-1,375.08	1,881.21	1,169.52	1,099.50	70.02	16.703	
6,300.00	5,972.66	6,262.43	5,582.69	35.67	51.53	-65.48	-1,412.26	1,931.54	1,196.08	1,125.23	70.85	16.883	
6,400.00	6,071.18	6,405.21	5,713.40	35.98	52.54	-65.18	-1,446.38	1,977.73	1,220.49	1,148.96	71.54	17.061	
6,500.00	6,170.24	6,550.68	5,849.33	36.23	53.43	-64.85	-1,477.11	2,019.34	1,242.66	1,170.60	72.07	17.243	
6,600.00	6,269.71	6,698.70	5,990.17	36.44	54.23	-64.50	-1,504.14	2,055.93	1,262.49	1,190.04	72.45	17.425	
6,700.00	6,369.48	6,849.11	6,135.50	36.59	54.89	-64.12	-1,527.15	2,087.07	1,279.90	1,207.22	72.67	17.611	
6,800.00	6,469.42	7,001.74	6,284.84	36.71	55.44	-63.71	-1,545.82	2,112.35	1,294.78	1,222.04	72.74	17.799	
6,842.58	6,512.00	7,067.34	6,349.50	36.74	55.63	-63.73	-1,552.39	2,121.24	1,300.34	1,227.62	72.72	17.880	
6,900.00	6,569.42	7,156.45	6,437.71	36.79	55.86	-63.71	-1,559.90	2,131.41	1,306.82	1,234.18	72.64	17.990	
7,000.00	6,669.42	7,313.24	6,593.71	36.86	56.16	-63.71	-1,569.15	2,143.93	1,314.75	1,242.16	72.59	18.112	
7,100.00	6,769.42	7,471.29	6,751.57	36.93	56.33	-63.71	-1,573.33	2,149.58	1,318.31	1,245.65	72.66	18.142	
7,200.00	6,869.42	7,589.14	6,869.42	37.01	56.40	-63.71	-1,573.57	2,149.91	1,318.52	1,245.70	72.83	18.105	
7,300.00	6,969.42	7,689.14	6,969.42	37.08	56.45	-63.71	-1,573.57	2,149.91	1,318.52	1,245.54	72.98	18.067	
7,400.00	7,069.42	7,789.14	7,069.42	37.16	56.51	-63.71	-1,573.57	2,149.91	1,318.52	1,245.39	73.13	18.029	
7,500.00	7,169.42	7,889.14	7,169.42	37.24	56.57	-63.71	-1,573.57	2,149.91	1,318.52	1,245.23	73.29	17.990	
7,600.00	7,269.42	7,989.14	7,269.42	37.32	56.62	-63.71	-1,573.57	2,149.91	1,318.52	1,245.07	73.45	17.951	
7,700.00	7,369.42	8,089.14	7,369.42	37.40	56.68	-63.71	-1,573.57	2,149.91	1,318.52	1,244.91	73.61	17.912	
7,800.00	7,469.42	8,189.14	7,469.42	37.48	56.74	-63.71	-1,573.57	2,149.91	1,318.52	1,244.74	73.78	17.872	
7,900.00	7,569.42	8,289.14	7,569.42	37.57	56.80	-63.71	-1,573.57	2,149.91	1,318.52	1,244.58	73.94	17.831	
8,000.00	7,669.42	8,389.14	7,669.42	37.65	56.86	-63.71	-1,573.57	2,149.91	1,318.52	1,244.41	74.11	17.790	
8,100.00	7,769.42	8,489.14	7,769.42	37.74	56.92	-63.71	-1,573.57	2,149.91	1,318.52	1,244.23	74.29	17.749	
8,200.00	7,869.42	8,589.14	7,869.42	37.82	56.98	-63.71	-1,573.57	2,149.91	1,318.52	1,244.06	74.46	17.708	
8,300.00	7,969.42	8,689.14	7,969.42	37.91	57.04	-63.71	-1,573.57	2,149.91	1,318.52	1,243.88	74.64	17.666	
8,400.00	8,069.42	8,789.14	8,069.42	38.00	57.11	-63.71	-1,573.57	2,149.91	1,318.52	1,243.71	74.82	17.624	
8,500.00	8,169.42	8,889.14	8,169.42	38.09	57.17	-63.71	-1,573.57	2,149.91	1,318.52	1,243.52	75.00	17.581	
8,600.00	8,269.42	8,989.14	8,269.42	38.18	57.24	-63.71	-1,573.57	2,149.91	1,318.52	1,243.34	75.18	17.538	
8,700.00	8,369.42	9,089.14	8,369.42	38.27	57.30	-63.71	-1,573.57	2,149.91	1,318.52	1,243.15	75.37	17.495	
8,750.61	8,420.03	9,139.75	8,420.03	38.32	57.34	-63.71	-1,573.57	2,149.91	1,318.52	1,243.06	75.46	17.473	
8,797.58	8,467.00	9,156.72	8,437.00	38.37	57.35	-63.71	-1,573.57	2,149.91	1,318.86	1,243.34	75.52	17.463	





Company:	US ROCKIES REGION PLANNING	Local Co-ordinate Reference:	Well P_STATE 7-16
Project:	KERR MCGEE OIL & GAS ONSHORE LP	TVD Reference:	WELL @ 5150.00ft (Original Well Elev)
Reference Site:	WELD_STATE 5 PAD	MD Reference:	WELL @ 5150.00ft (Original Well Elev)
Site Error:	0.00ft	North Reference:	True
Reference Well:	P_STATE 7-16	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00ft	Output errors are at	2.00 sigma
Reference Wellbore	P_STATE 7-16	Database:	EDM 2003.21 Single User Db
Reference Design:	PLAN #1 09-09-09 RHS	Offset TVD Reference:	Offset Datum

Reference Depths are relative to WELL @ 5150.00ft (Original Well Elev)Coordinates are relative to: P\_STATE 7-16  
Offset Depths are relative to Offset Datum  
Central Meridian is 105° 30' 0.000 W °  
Coordinate System is US State Plane 1983, Colorado Northern Zone  
Grid Convergence at Surface is: 0.32°





<b>Company:</b>	US ROCKIES REGION PLANNING	<b>Local Co-ordinate Reference:</b>	Well P_STATE 7-16
<b>Project:</b>	KERR MCGEE OIL & GAS ONSHORE LP	<b>TVD Reference:</b>	WELL @ 5150.00ft (Original Well Elev)
<b>Reference Site:</b>	WELD_STATE 5 PAD	<b>MD Reference:</b>	WELL @ 5150.00ft (Original Well Elev)
<b>Site Error:</b>	0.00ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	P_STATE 7-16	<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_STATE 7-16	<b>Database:</b>	EDM 2003.21 Single User Db
<b>Reference Design:</b>	PLAN #1 09-09-09 RHS	<b>Offset TVD Reference:</b>	Offset Datum

Reference Depths are relative to WELL @ 5150.00ft (Original Well Elev) Coordinates are relative to: P\_STATE 7-16  
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: 0.32°

