



US ROCKIES REGION PLANNING

KERR MCGEE OIL & GAS ONSHORE LP

WELD_WEBBER 3 PAD

P_WEBBER 31-4

P_WEBBER 31-4

Plan: PLAN #1 09-01-09 RHS

Standard Planning Report

01 September, 2009





P_WEBBER 31-4
KERR MCGEE OIL & GAS ONSHORE LP
SECTION 4 T3N R66W
621' FNL 437 FWL
LAT: 40° 15' 33.120 N
LONG: 104° 47' 25.116 W



Azimuths to True North
Magnetic North: 9.07°
Magnetic Field
Strength: 53262.0snT
Dip Angle: 67.00°
Date: 9/1/2009
Model: IGRF200510

WELL DETAILS: P_WEBBER 31-4

+N/-S	+E/-W	Northing	Easting	Ground Level:	Latitude	Longitude	Slot
0.00	0.00	1338060.70	3198064.41	4788.00	40° 15' 33.120 N	104° 47' 25.116 W	

FORMATION TOP DETAILS

TVDPath	MDPath	Formation
3800.00	3911.47	PARKMAN TOP
4200.00	4312.79	SUSSEX TOP
7003.00	7115.79	NIO A TOP
7296.00	7408.79	CODELL TOP
7734.00	7846.79	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	
700.00	0.00	0.00	700.00	0.00	0.00	0.00	0.00	0.00	
1572.38	17.45	206.13	1558.96	-118.33	-58.06	2.00	206.13	131.80	
3440.41	17.45	206.13	3341.04	-621.16	-304.77	0.00	0.00	691.90	
4312.79	0.00	0.00	4200.00	-739.49	-362.83	2.00	180.00	823.70	
7997.79	0.00	0.00	7885.00	-739.49	-362.83	0.00	0.00	823.70	PBHL_WEBBER 31-4(1360 FNL 75 FWL)50' TGT RAD

CASING DETAILS

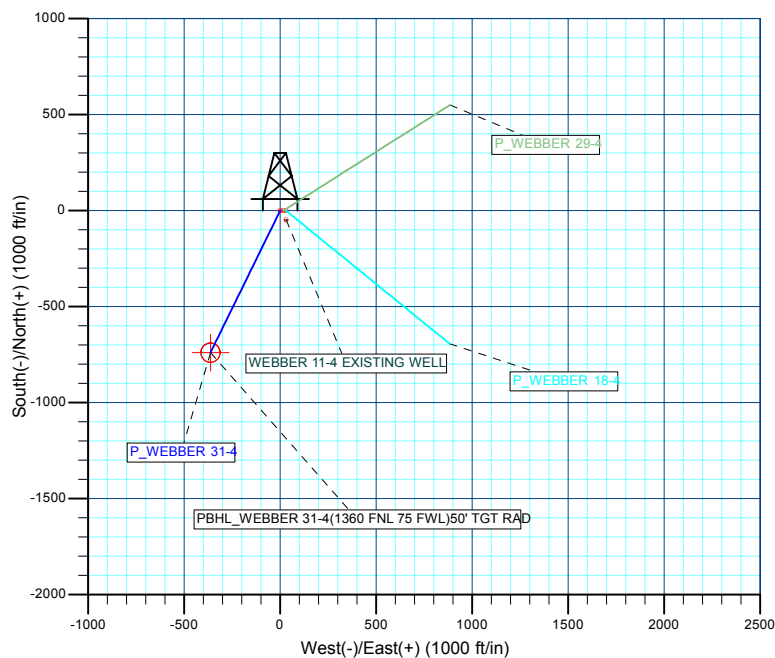
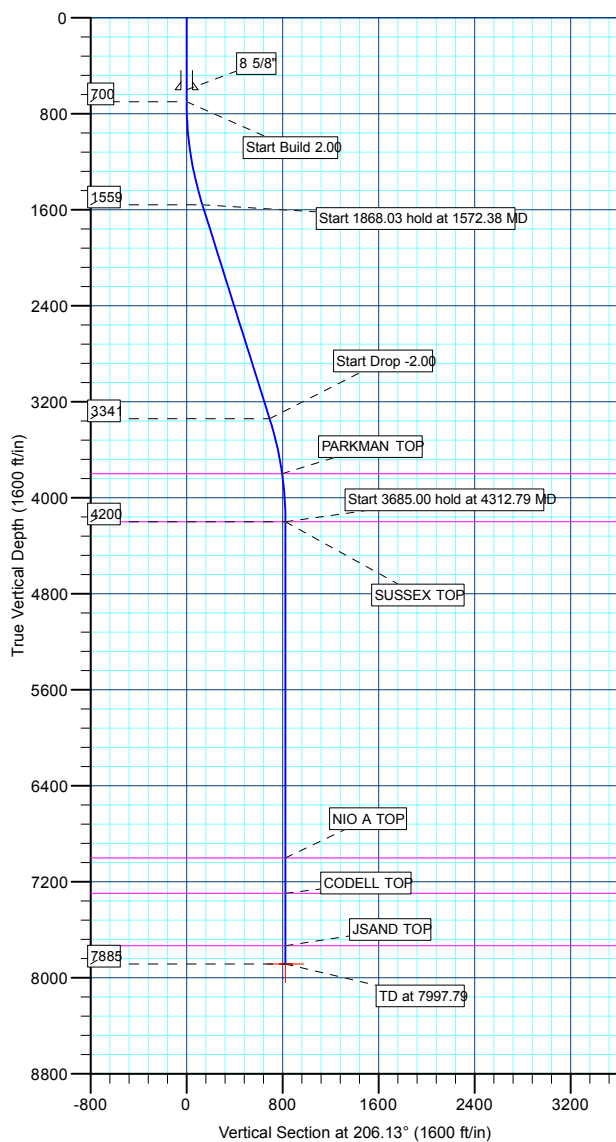
TVD	MD	Name	Size
600.00	600.00	8 5/8"	8.62

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

Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Shape
PBHL	7885.00	-739.49	-362.83	1337318.34	3197707.51	40° 15' 25.812 N	104° 47' 29.796 W	Circle (Radius: 50.00)



KB ELEV: WELL @ 4803.00ft (Original Well Elev)
GRD ELEV: 4788.00



Plan: PLAN #1 09-01-09 RHS (P_WEBBER 31-4/P_WEBBER 31-4)

Created By: Robert H. Scott



Database:	EDM 2003.21 Single User Db	Local Co-ordinate Reference:	Well P_WEBBER 31-4
Company:	US ROCKIES REGION PLANNING	TVD Reference:	WELL @ 4803.00ft (Original Well Elev)
Project:	KERR MCGEE OIL & GAS ONSHORE LP	MD Reference:	WELL @ 4803.00ft (Original Well Elev)
Site:	WELD_WEBBER 3 PAD	North Reference:	True
Well:	P_WEBBER 31-4	Survey Calculation Method:	Minimum Curvature
Wellbore:	P_WEBBER 31-4		
Design:	PLAN #1 09-01-09 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_WEBBER 3 PAD, SECTION 4 T3N R66W			
Site Position:		Northing:		1,338,060.96 ft	
From:		Easting:		3,198,095.11 ft	
Position Uncertainty:		Slot Radius:		Grid Convergence:	
Lat/Long				40° 15' 33.120 N	
0.00 ft		in		104° 47' 24.720 W	
				0.46 °	

Well	P_WEBBER 31-4					
Well Position	+N/-S	-0.01 ft	Northing:	1,338,060.70 ft	Latitude:	40° 15' 33.120 N
	+E/-W	-30.70 ft	Easting:	3,198,064.41 ft	Longitude:	104° 47' 25.116 W
Position Uncertainty		0.00 ft	Wellhead Elevation:	ft	Ground Level:	4,788.00 ft

Wellbore	P_WEBBER 31-4				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF200510	9/1/2009	9.07	67.00	53,262

Design	PLAN #1 09-01-09 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	206.13	

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	
700.00	0.00	0.00	700.00	0.00	0.00	0.00	0.00	0.00	0.00	
1,572.38	17.45	206.13	1,558.96	-118.33	-58.06	2.00	2.00	0.00	206.13	
3,440.41	17.45	206.13	3,341.04	-621.16	-304.77	0.00	0.00	0.00	0.00	
4,312.79	0.00	0.00	4,200.00	-739.49	-362.83	2.00	-2.00	0.00	180.00	
7,997.79	0.00	0.00	7,885.00	-739.49	-362.83	0.00	0.00	0.00	0.00	PBHL_WEBBER 3'



Database:	EDM 2003.21 Single User Db	Local Co-ordinate Reference:	Well P_WEBBER 31-4
Company:	US ROCKIES REGION PLANNING	TVD Reference:	WELL @ 4803.00ft (Original Well Elev)
Project:	KERR MCGEE OIL & GAS ONSHORE LP	MD Reference:	WELL @ 4803.00ft (Original Well Elev)
Site:	WELD_WEBBER 3 PAD	North Reference:	True
Well:	P_WEBBER 31-4	Survey Calculation Method:	Minimum Curvature
Wellbore:	P_WEBBER 31-4		
Design:	PLAN #1 09-01-09 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									
700.00	0.00	0.00	700.00	0.00	0.00	0.00	0.00	0.00	0.00
800.00	2.00	206.13	799.98	-1.57	-0.77	1.75	2.00	2.00	0.00
900.00	4.00	206.13	899.84	-6.27	-3.07	6.98	2.00	2.00	0.00
1,000.00	6.00	206.13	999.45	-14.09	-6.91	15.69	2.00	2.00	0.00
1,100.00	8.00	206.13	1,098.70	-25.03	-12.28	27.88	2.00	2.00	0.00
1,200.00	10.00	206.13	1,197.47	-39.07	-19.17	43.52	2.00	2.00	0.00
1,300.00	12.00	206.13	1,295.62	-56.20	-27.58	62.60	2.00	2.00	0.00
1,400.00	14.00	206.13	1,393.06	-76.40	-37.48	85.10	2.00	2.00	0.00
1,500.00	16.00	206.13	1,489.64	-99.63	-48.88	110.98	2.00	2.00	0.00
Start 1868.03 hold at 1572.38 MD									
1,572.38	17.45	206.13	1,558.96	-118.33	-58.06	131.80	2.00	2.00	0.00
1,600.00	17.45	206.13	1,585.31	-125.76	-61.71	140.09	0.00	0.00	0.00
1,700.00	17.45	206.13	1,680.71	-152.68	-74.91	170.07	0.00	0.00	0.00
1,800.00	17.45	206.13	1,776.11	-179.60	-88.12	200.05	0.00	0.00	0.00
1,900.00	17.45	206.13	1,871.51	-206.52	-101.33	230.04	0.00	0.00	0.00
2,000.00	17.45	206.13	1,966.91	-233.43	-114.53	260.02	0.00	0.00	0.00
2,100.00	17.45	206.13	2,062.30	-260.35	-127.74	290.00	0.00	0.00	0.00
2,200.00	17.45	206.13	2,157.70	-287.27	-140.95	319.99	0.00	0.00	0.00
2,300.00	17.45	206.13	2,253.10	-314.19	-154.16	349.97	0.00	0.00	0.00
2,400.00	17.45	206.13	2,348.50	-341.11	-167.36	379.95	0.00	0.00	0.00
2,500.00	17.45	206.13	2,443.90	-368.02	-180.57	409.93	0.00	0.00	0.00
2,600.00	17.45	206.13	2,539.30	-394.94	-193.78	439.92	0.00	0.00	0.00
2,700.00	17.45	206.13	2,634.70	-421.86	-206.98	469.90	0.00	0.00	0.00
2,800.00	17.45	206.13	2,730.10	-448.78	-220.19	499.88	0.00	0.00	0.00
2,900.00	17.45	206.13	2,825.50	-475.69	-233.40	529.87	0.00	0.00	0.00
3,000.00	17.45	206.13	2,920.90	-502.61	-246.60	559.85	0.00	0.00	0.00
3,100.00	17.45	206.13	3,016.30	-529.53	-259.81	589.83	0.00	0.00	0.00
3,200.00	17.45	206.13	3,111.70	-556.45	-273.02	619.82	0.00	0.00	0.00
3,300.00	17.45	206.13	3,207.10	-583.37	-286.23	649.80	0.00	0.00	0.00
3,400.00	17.45	206.13	3,302.49	-610.28	-299.43	679.78	0.00	0.00	0.00
Start Drop -2.00									
3,440.41	17.45	206.13	3,341.04	-621.16	-304.77	691.90	0.00	0.00	0.00
3,500.00	16.26	206.13	3,398.08	-636.67	-312.38	709.17	2.00	-2.00	0.00
3,600.00	14.26	206.13	3,494.55	-660.29	-323.97	735.49	2.00	-2.00	0.00
3,700.00	12.26	206.13	3,591.88	-680.87	-334.07	758.41	2.00	-2.00	0.00
3,800.00	10.26	206.13	3,689.95	-698.40	-342.67	777.93	2.00	-2.00	0.00
3,900.00	8.26	206.13	3,788.64	-712.84	-349.75	794.02	2.00	-2.00	0.00
PARKMAN TOP									
3,911.47	8.03	206.13	3,800.00	-714.29	-350.47	795.64	2.00	-2.00	0.00
4,000.00	6.26	206.13	3,887.84	-724.17	-355.31	806.64	2.00	-2.00	0.00
4,100.00	4.26	206.13	3,987.41	-732.40	-359.35	815.80	2.00	-2.00	0.00
4,200.00	2.26	206.13	4,087.24	-737.50	-361.85	821.48	2.00	-2.00	0.00
4,300.00	0.26	206.13	4,187.21	-739.46	-362.81	823.67	2.00	-2.00	0.00
Start 3685.00 hold at 4312.79 MD - SUSSEX TOP									
4,312.79	0.00	0.00	4,200.00	-739.49	-362.83	823.70	2.00	-2.00	0.00
4,400.00	0.00	0.00	4,287.21	-739.49	-362.83	823.70	0.00	0.00	0.00
4,500.00	0.00	0.00	4,387.21	-739.49	-362.83	823.70	0.00	0.00	0.00
4,600.00	0.00	0.00	4,487.21	-739.49	-362.83	823.70	0.00	0.00	0.00
4,700.00	0.00	0.00	4,587.21	-739.49	-362.83	823.70	0.00	0.00	0.00
4,800.00	0.00	0.00	4,687.21	-739.49	-362.83	823.70	0.00	0.00	0.00
4,900.00	0.00	0.00	4,787.21	-739.49	-362.83	823.70	0.00	0.00	0.00
5,000.00	0.00	0.00	4,887.21	-739.49	-362.83	823.70	0.00	0.00	0.00



Database:	EDM 2003.21 Single User Db	Local Co-ordinate Reference:	Well P_WEBBER 31-4
Company:	US ROCKIES REGION PLANNING	TVD Reference:	WELL @ 4803.00ft (Original Well Elev)
Project:	KERR MCGEE OIL & GAS ONSHORE LP	MD Reference:	WELL @ 4803.00ft (Original Well Elev)
Site:	WELD_WEBBER 3 PAD	North Reference:	True
Well:	P_WEBBER 31-4	Survey Calculation Method:	Minimum Curvature
Wellbore:	P_WEBBER 31-4		
Design:	PLAN #1 09-01-09 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)
5,100.00	0.00	0.00	4,987.21	-739.49	-362.83	823.70	0.00	0.00	0.00
5,200.00	0.00	0.00	5,087.21	-739.49	-362.83	823.70	0.00	0.00	0.00
5,300.00	0.00	0.00	5,187.21	-739.49	-362.83	823.70	0.00	0.00	0.00
5,400.00	0.00	0.00	5,287.21	-739.49	-362.83	823.70	0.00	0.00	0.00
5,500.00	0.00	0.00	5,387.21	-739.49	-362.83	823.70	0.00	0.00	0.00
5,600.00	0.00	0.00	5,487.21	-739.49	-362.83	823.70	0.00	0.00	0.00
5,700.00	0.00	0.00	5,587.21	-739.49	-362.83	823.70	0.00	0.00	0.00
5,800.00	0.00	0.00	5,687.21	-739.49	-362.83	823.70	0.00	0.00	0.00
5,900.00	0.00	0.00	5,787.21	-739.49	-362.83	823.70	0.00	0.00	0.00
6,000.00	0.00	0.00	5,887.21	-739.49	-362.83	823.70	0.00	0.00	0.00
6,100.00	0.00	0.00	5,987.21	-739.49	-362.83	823.70	0.00	0.00	0.00
6,200.00	0.00	0.00	6,087.21	-739.49	-362.83	823.70	0.00	0.00	0.00
6,300.00	0.00	0.00	6,187.21	-739.49	-362.83	823.70	0.00	0.00	0.00
6,400.00	0.00	0.00	6,287.21	-739.49	-362.83	823.70	0.00	0.00	0.00
6,500.00	0.00	0.00	6,387.21	-739.49	-362.83	823.70	0.00	0.00	0.00
6,600.00	0.00	0.00	6,487.21	-739.49	-362.83	823.70	0.00	0.00	0.00
6,700.00	0.00	0.00	6,587.21	-739.49	-362.83	823.70	0.00	0.00	0.00
6,800.00	0.00	0.00	6,687.21	-739.49	-362.83	823.70	0.00	0.00	0.00
6,900.00	0.00	0.00	6,787.21	-739.49	-362.83	823.70	0.00	0.00	0.00
7,000.00	0.00	0.00	6,887.21	-739.49	-362.83	823.70	0.00	0.00	0.00
7,100.00	0.00	0.00	6,987.21	-739.49	-362.83	823.70	0.00	0.00	0.00
NIO A TOP									
7,115.79	0.00	0.00	7,003.00	-739.49	-362.83	823.70	0.00	0.00	0.00
7,200.00	0.00	0.00	7,087.21	-739.49	-362.83	823.70	0.00	0.00	0.00
7,300.00	0.00	0.00	7,187.21	-739.49	-362.83	823.70	0.00	0.00	0.00
7,400.00	0.00	0.00	7,287.21	-739.49	-362.83	823.70	0.00	0.00	0.00
CODELL TOP									
7,408.79	0.00	0.00	7,296.00	-739.49	-362.83	823.70	0.00	0.00	0.00
7,500.00	0.00	0.00	7,387.21	-739.49	-362.83	823.70	0.00	0.00	0.00
7,600.00	0.00	0.00	7,487.21	-739.49	-362.83	823.70	0.00	0.00	0.00
7,700.00	0.00	0.00	7,587.21	-739.49	-362.83	823.70	0.00	0.00	0.00
7,800.00	0.00	0.00	7,687.21	-739.49	-362.83	823.70	0.00	0.00	0.00
JSAND TOP									
7,846.79	0.00	0.00	7,734.00	-739.49	-362.83	823.70	0.00	0.00	0.00
7,900.00	0.00	0.00	7,787.21	-739.49	-362.83	823.70	0.00	0.00	0.00
PBHL_WEBBER 31-4(1360 FNL 75 FWL)50' TGT RAD									
7,997.79	0.00	0.00	7,885.00	-739.49	-362.83	823.70	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_WEBBER 31-4	0.00	0.00	7,885.00	-739.49	-362.83	1,337,318.34	3,197,707.51	40° 15' 25.812 N	104° 47' 29.796 W
- plan hits target center									
- Circle (radius 50.00)									



Database:	EDM 2003.21 Single User Db	Local Co-ordinate Reference:	Well P_WEBBER 31-4
Company:	US ROCKIES REGION PLANNING	TVD Reference:	WELL @ 4803.00ft (Original Well Elev)
Project:	KERR MCGEE OIL & GAS ONSHORE LP	MD Reference:	WELL @ 4803.00ft (Original Well Elev)
Site:	WELD_WEBBER 3 PAD	North Reference:	True
Well:	P_WEBBER 31-4	Survey Calculation Method:	Minimum Curvature
Wellbore:	P_WEBBER 31-4		
Design:	PLAN #1 09-01-09 RHS		

Casing Points					
Measured Depth (ft)	Vertical Depth (ft)	Name		Casing Diameter (in)	Hole Diameter (in)
600.00	600.00	8 5/8"		8.62	11.00

Formations					
Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)
3,911.47	3,800.00	PARKMAN TOP			
4,312.79	4,200.00	SUSSEX TOP			
7,115.79	7,003.00	NIO A TOP			
7,408.79	7,296.00	CODELL TOP			
7,846.79	7,734.00	JSAND TOP			

Plan Annotations					
Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates		Comment	
		+N/-S (ft)	+E/-W (ft)		
700.00	700.00	0.00	0.00	Start Build 2.00	
1,572.38	1,558.96	-118.33	-58.06	Start 1868.03 hold at 1572.38 MD	
3,440.41	3,341.04	-621.16	-304.77	Start Drop -2.00	
4,312.79	4,200.00	-739.49	-362.83	Start 3685.00 hold at 4312.79 MD	
7,997.79	7,885.00	-739.49	-362.83	TD at 7997.79	



US ROCKIES REGION PLANNING

**KERR MCGEE OIL & GAS ONSHORE LP
WELD_WEBBER 3 PAD
P_WEBBER 31-4**

**P_WEBBER 31-4
PLAN #1 09-01-09 RHS**

Anticollision Report

01 September, 2009





Company:	US ROCKIES REGION PLANNING	Local Co-ordinate Reference:	Well P_WEBBER 31-4
Project:	KERR MCGEE OIL & GAS ONSHORE LP	TVD Reference:	WELL @ 4803.00ft (Original Well Elev)
Reference Site:	WELD_WEBBER 3 PAD	MD Reference:	WELL @ 4803.00ft (Original Well Elev)
Site Error:	0.00ft	North Reference:	True
Reference Well:	P_WEBBER 31-4	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00ft	Output errors are at	2.00 sigma
Reference Wellbore	P_WEBBER 31-4	Database:	EDM 2003.21 Single User Db
Reference Design:	PLAN #1 09-01-09 RHS	Offset TVD Reference:	Offset Datum

Reference	PLAN #1 09-01-09 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 9/1/2009			
From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description
0.00	7,997.79	PLAN #1 09-01-09 RHS (P_WEBBER 31-4	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_WEBBER 3 PAD						
P_WEBBER 18-4 - P_WEBBER 18-4 - PLAN #1 09-01-0	700.00	700.00	30.70	27.81	10.629	CC, ES
P_WEBBER 18-4 - P_WEBBER 18-4 - PLAN #1 09-01-0	800.00	799.13	32.81	29.53	9.987	SF
P_WEBBER 29-4 - P_WEBBER 29-4 - PLAN #1 09-01-0	700.00	700.00	16.75	13.86	5.798	CC, ES
P_WEBBER 29-4 - P_WEBBER 29-4 - PLAN #1 09-01-0	800.00	799.40	19.14	15.84	5.797	SF
WEBBER 11-4 EXISTING WELL - WEBBER 11-4 EXIST	1,117.18	1,115.71	49.41	4.76	1.107	Level 2, CC
WEBBER 11-4 EXISTING WELL - WEBBER 11-4 EXIST	1,200.00	1,197.47	51.15	3.05	1.063	Level 2, ES, SF

Offset Design WELD_WEBBER 3 PAD - P_WEBBER 18-4 - P_WEBBER 18-4 - PLAN #1 09-01-09 RHS													Offset Site Error:	0.00 ft
Survey Program: 0-MWD													Offset Well Error:	0.00 ft
Reference	Offset	Semi Major Axis		Distance		Minimum Separation		Separation Factor		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	89.98	0.01	30.70	30.70					
100.00	100.00	100.00	100.00	0.10	0.10	89.98	0.01	30.70	30.70	30.51	0.19	160.689		
200.00	200.00	200.00	200.00	0.32	0.32	89.98	0.01	30.70	30.70	30.06	0.64	47.925		
300.00	300.00	300.00	300.00	0.55	0.55	89.98	0.01	30.70	30.70	29.61	1.09	28.162		
400.00	400.00	400.00	400.00	0.77	0.77	89.98	0.01	30.70	30.70	29.16	1.54	19.940		
500.00	500.00	500.00	500.00	0.99	0.99	89.98	0.01	30.70	30.70	28.71	1.99	15.433		
600.00	600.00	600.00	600.00	1.22	1.22	89.98	0.01	30.70	30.70	28.26	2.44	12.589		
700.00	700.00	700.00	700.00	1.44	1.44	89.98	0.01	30.70	30.70	27.81	2.89	10.629	CC, ES	
800.00	799.98	799.13	799.11	1.64	1.65	-116.94	-1.07	32.03	32.81	29.53	3.29	9.987	SF	
900.00	899.84	897.98	897.82	1.83	1.84	-118.77	-4.30	36.01	39.18	35.53	3.65	10.728		
1,000.00	999.45	996.29	995.76	2.03	2.05	-120.74	-9.64	42.58	49.83	45.78	4.05	12.305		
1,100.00	1,098.70	1,093.78	1,092.54	2.27	2.28	-122.36	-17.03	51.66	64.74	60.25	4.49	14.429		
1,200.00	1,197.47	1,190.20	1,187.81	2.54	2.55	-123.52	-26.38	63.16	83.86	78.89	4.98	16.855		
1,300.00	1,295.62	1,285.32	1,281.26	2.86	2.86	-124.29	-37.58	76.93	107.12	101.60	5.53	19.383		
1,400.00	1,393.06	1,378.92	1,372.58	3.24	3.22	-124.77	-50.50	92.83	134.43	128.28	6.15	21.864		
1,500.00	1,489.64	1,470.80	1,461.53	3.69	3.62	-125.02	-65.01	110.67	165.67	158.82	6.85	24.201		
1,572.38	1,558.96	1,536.12	1,524.30	4.04	3.94	-125.09	-76.42	124.70	190.68	183.28	7.40	25.770		
1,600.00	1,585.31	1,560.80	1,547.91	4.19	4.07	-125.24	-80.96	130.29	200.67	193.04	7.63	26.310		
1,700.00	1,680.71	1,649.31	1,632.03	4.73	4.56	-125.33	-98.31	151.63	238.00	229.51	8.49	28.037		
1,800.00	1,776.11	1,736.39	1,713.93	5.28	5.10	-124.92	-116.97	174.57	277.12	267.72	9.40	29.475		
1,900.00	1,871.51	1,821.90	1,793.45	5.85	5.69	-124.22	-136.81	198.98	318.02	307.66	10.36	30.703		

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_WEBBER 31-4
Project:	KERR MCGEE OIL & GAS ONSHORE LP	TVD Reference:	WELL @ 4803.00ft (Original Well Elev)
Reference Site:	WELD_WEBBER 3 PAD	MD Reference:	WELL @ 4803.00ft (Original Well Elev)
Site Error:	0.00ft	North Reference:	True
Reference Well:	P_WEBBER 31-4	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00ft	Output errors are at	2.00 sigma
Reference Wellbore	P_WEBBER 31-4	Database:	EDM 2003.21 Single User Db
Reference Design:	PLAN #1 09-01-09 RHS	Offset TVD Reference:	Offset Datum

Offset Design WELD_WEBBER 3 PAD - P_WEBBER 18-4 - P_WEBBER 18-4 - PLAN #1 09-01-09 RHS												Offset Site Error:	0.00 ft
Survey Program: 0-MWMD												Offset Well Error:	0.00 ft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	
2,000.00	1,966.91	1,905.76	1,870.47	6.43	6.31	-123.35	-157.72	224.69	360.70	349.35	11.35	31.785	
2,100.00	2,062.30	1,993.66	1,950.47	7.01	7.01	-122.41	-180.69	252.95	404.69	392.29	12.40	32.637	
2,200.00	2,157.70	2,083.25	2,031.98	7.60	7.74	-121.62	-204.15	281.80	448.81	435.34	13.47	33.310	
2,300.00	2,253.10	2,172.83	2,113.49	8.19	8.48	-120.98	-227.61	310.65	492.98	478.43	14.56	33.868	
2,400.00	2,348.50	2,262.42	2,194.99	8.79	9.23	-120.44	-251.07	339.50	537.20	521.56	15.64	34.338	
2,500.00	2,443.90	2,352.01	2,276.50	9.39	9.98	-119.98	-274.53	368.36	581.45	564.71	16.74	34.739	
2,600.00	2,539.30	2,441.60	2,358.00	9.99	10.74	-119.59	-297.99	397.21	625.72	607.89	17.84	35.083	
2,700.00	2,634.70	2,531.19	2,439.51	10.60	11.50	-119.25	-321.45	426.06	670.02	651.08	18.94	35.384	
2,800.00	2,730.10	2,620.78	2,521.02	11.20	12.26	-118.95	-344.91	454.91	714.33	694.29	20.04	35.647	
2,900.00	2,825.50	2,710.36	2,602.52	11.81	13.03	-118.69	-368.37	483.77	758.66	737.51	21.14	35.880	
3,000.00	2,920.90	2,799.95	2,684.03	12.41	13.80	-118.45	-391.83	512.62	802.99	780.74	22.25	36.088	
3,100.00	3,016.30	2,889.54	2,765.53	13.02	14.57	-118.24	-415.28	541.47	847.34	823.98	23.36	36.275	
3,200.00	3,111.70	2,979.13	2,847.04	13.63	15.34	-118.05	-438.74	570.32	891.70	867.23	24.47	36.443	
3,300.00	3,207.10	3,068.72	2,928.55	14.24	16.11	-117.88	-462.20	599.17	936.06	910.48	25.58	36.597	
3,400.00	3,302.49	3,158.30	3,010.05	14.85	16.89	-117.73	-485.66	628.03	980.43	953.74	26.69	36.737	
3,440.41	3,341.04	3,194.51	3,042.99	15.10	17.20	-117.67	-495.14	639.69	998.36	971.22	27.14	36.790	
3,500.00	3,398.08	3,248.00	3,091.66	15.40	17.67	-118.07	-509.15	656.91	1,024.54	996.70	27.84	36.802	
3,600.00	3,494.55	3,343.44	3,178.51	15.80	18.47	-118.55	-534.10	687.60	1,067.28	1,038.35	28.93	36.892	
3,700.00	3,591.88	3,470.00	3,295.11	16.17	19.33	-118.78	-565.13	725.77	1,106.67	1,076.65	30.02	36.867	
3,800.00	3,689.95	3,601.07	3,418.03	16.50	20.09	-118.94	-593.81	761.04	1,141.51	1,110.51	31.00	36.825	
3,900.00	3,788.64	3,736.31	3,546.91	16.79	20.78	-119.01	-619.65	792.82	1,171.57	1,139.70	31.88	36.752	
4,000.00	3,887.84	3,875.30	3,681.22	17.04	21.41	-119.02	-642.18	820.53	1,196.67	1,164.01	32.66	36.645	
4,100.00	3,987.41	4,017.52	3,820.27	17.24	21.95	-118.95	-660.95	843.62	1,216.62	1,183.30	33.32	36.516	
4,200.00	4,087.24	4,162.35	3,963.22	17.41	22.38	-118.81	-675.57	861.59	1,231.27	1,197.42	33.85	36.371	
4,300.00	4,187.21	4,309.11	4,109.08	17.53	22.72	-118.61	-685.72	874.07	1,240.52	1,206.25	34.27	36.202	
4,312.79	4,200.00	4,327.97	4,127.89	17.54	22.76	87.56	-686.68	875.26	1,241.30	1,207.00	34.31	36.180	
4,400.00	4,287.21	4,457.09	4,256.80	17.63	22.95	87.77	-691.16	880.77	1,244.91	1,210.34	34.57	36.014	
4,500.00	4,387.21	4,587.52	4,387.21	17.73	23.08	87.82	-692.12	881.95	1,245.67	1,210.86	34.82	35.779	
4,600.00	4,487.21	4,687.52	4,487.21	17.83	23.17	87.82	-692.12	881.95	1,245.67	1,210.65	35.03	35.562	
4,700.00	4,587.21	4,787.52	4,587.21	17.94	23.25	87.82	-692.12	881.95	1,245.67	1,210.43	35.25	35.343	
4,800.00	4,687.21	4,887.52	4,687.21	18.04	23.34	87.82	-692.12	881.95	1,245.67	1,210.21	35.47	35.122	
4,900.00	4,787.21	4,987.52	4,787.21	18.15	23.43	87.82	-692.12	881.95	1,245.67	1,209.98	35.69	34.900	
5,000.00	4,887.21	5,087.52	4,887.21	18.26	23.52	87.82	-692.12	881.95	1,245.67	1,209.75	35.92	34.677	
5,100.00	4,987.21	5,187.52	4,987.21	18.37	23.61	87.82	-692.12	881.95	1,245.67	1,209.52	36.16	34.452	
5,200.00	5,087.21	5,287.52	5,087.21	18.49	23.71	87.82	-692.12	881.95	1,245.67	1,209.28	36.39	34.227	
5,300.00	5,187.21	5,387.52	5,187.21	18.60	23.80	87.82	-692.12	881.95	1,245.67	1,209.04	36.64	34.000	
5,400.00	5,287.21	5,487.52	5,287.21	18.72	23.90	87.82	-692.12	881.95	1,245.67	1,208.79	36.88	33.773	
5,500.00	5,387.21	5,587.52	5,387.21	18.84	24.00	87.82	-692.12	881.95	1,245.67	1,208.54	37.13	33.546	
5,600.00	5,487.21	5,687.52	5,487.21	18.97	24.10	87.82	-692.12	881.95	1,245.67	1,208.29	37.39	33.318	
5,700.00	5,587.21	5,787.52	5,587.21	19.09	24.21	87.82	-692.12	881.95	1,245.67	1,208.03	37.65	33.090	
5,800.00	5,687.21	5,887.52	5,687.21	19.22	24.31	87.82	-692.12	881.95	1,245.67	1,207.77	37.91	32.862	
5,900.00	5,787.21	5,987.52	5,787.21	19.34	24.42	87.82	-692.12	881.95	1,245.67	1,207.50	38.17	32.633	
6,000.00	5,887.21	6,087.52	5,887.21	19.47	24.53	87.82	-692.12	881.95	1,245.67	1,207.23	38.44	32.405	
6,100.00	5,987.21	6,187.52	5,987.21	19.60	24.64	87.82	-692.12	881.95	1,245.67	1,206.96	38.71	32.178	
6,200.00	6,087.21	6,287.52	6,087.21	19.74	24.75	87.82	-692.12	881.95	1,245.67	1,206.69	38.99	31.951	
6,300.00	6,187.21	6,387.52	6,187.21	19.87	24.86	87.82	-692.12	881.95	1,245.67	1,206.41	39.27	31.724	
6,400.00	6,287.21	6,487.52	6,287.21	20.01	24.98	87.82	-692.12	881.95	1,245.67	1,206.13	39.55	31.498	
6,500.00	6,387.21	6,587.52	6,387.21	20.14	25.09	87.82	-692.12	881.95	1,245.67	1,205.84	39.83	31.273	
6,600.00	6,487.21	6,687.52	6,487.21	20.28	25.21	87.82	-692.12	881.95	1,245.67	1,205.55	40.12	31.048	
6,700.00	6,587.21	6,787.52	6,587.21	20.42	25.33	87.82	-692.12	881.95	1,245.67	1,205.26	40.41	30.825	
6,800.00	6,687.21	6,887.52	6,687.21	20.57	25.45	87.82	-692.12	881.95	1,245.67	1,204.97	40.71	30.602	
6,900.00	6,787.21	6,987.52	6,787.21	20.71	25.57	87.82	-692.12	881.95	1,245.67	1,204.67	41.00	30.380	

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_WEBBER 31-4
Project:	KERR MCGEE OIL & GAS ONSHORE LP	TVD Reference:	WELL @ 4803.00ft (Original Well Elev)
Reference Site:	WELD_WEBBER 3 PAD	MD Reference:	WELL @ 4803.00ft (Original Well Elev)
Site Error:	0.00ft	North Reference:	True
Reference Well:	P_WEBBER 31-4	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00ft	Output errors are at	2.00 sigma
Reference Wellbore	P_WEBBER 31-4	Database:	EDM 2003.21 Single User Db
Reference Design:	PLAN #1 09-01-09 RHS	Offset TVD Reference:	Offset Datum

Offset Design WELD_WEBBER 3 PAD - P_WEBBER 18-4 - P_WEBBER 18-4 - PLAN #1 09-01-09 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
7,000.00	6,887.21	7,087.52	6,887.21	20.85	25.69	87.82	-692.12	881.95	1,245.67	1,204.37	41.30	30.160	
7,100.00	6,987.21	7,187.52	6,987.21	21.00	25.82	87.82	-692.12	881.95	1,245.67	1,204.07	41.60	29.941	
7,200.00	7,087.21	7,287.52	7,087.21	21.15	25.94	87.82	-692.12	881.95	1,245.67	1,203.76	41.91	29.723	
7,300.00	7,187.21	7,387.52	7,187.21	21.30	26.07	87.82	-692.12	881.95	1,245.67	1,203.46	42.22	29.506	
7,400.00	7,287.21	7,487.52	7,287.21	21.45	26.20	87.82	-692.12	881.95	1,245.67	1,203.15	42.53	29.291	
7,500.00	7,387.21	7,587.52	7,387.21	21.60	26.33	87.82	-692.12	881.95	1,245.67	1,202.83	42.84	29.077	
7,600.00	7,487.21	7,687.52	7,487.21	21.75	26.46	87.82	-692.12	881.95	1,245.67	1,202.52	43.16	28.865	
7,700.00	7,587.21	7,787.52	7,587.21	21.91	26.59	87.82	-692.12	881.95	1,245.67	1,202.20	43.47	28.654	
7,800.00	7,687.21	7,887.52	7,687.21	22.06	26.72	87.82	-692.12	881.95	1,245.67	1,201.88	43.79	28.444	
7,900.00	7,787.21	7,987.52	7,787.21	22.22	26.86	87.82	-692.12	881.95	1,245.67	1,201.56	44.12	28.237	
7,963.43	7,850.65	8,050.96	7,850.65	22.32	26.95	87.82	-692.12	881.95	1,245.67	1,201.35	44.32	28.105	
7,997.79	7,885.00	8,080.31	7,880.00	22.38	26.98	87.82	-692.12	881.95	1,245.68	1,201.26	44.42	28.040	



Company:	US ROCKIES REGION PLANNING	Local Co-ordinate Reference:	Well P_WEBBER 31-4
Project:	KERR MCGEE OIL & GAS ONSHORE LP	TVD Reference:	WELL @ 4803.00ft (Original Well Elev)
Reference Site:	WELD_WEBBER 3 PAD	MD Reference:	WELL @ 4803.00ft (Original Well Elev)
Site Error:	0.00ft	North Reference:	True
Reference Well:	P_WEBBER 31-4	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00ft	Output errors are at	2.00 sigma
Reference Wellbore	P_WEBBER 31-4	Database:	EDM 2003.21 Single User Db
Reference Design:	PLAN #1 09-01-09 RHS	Offset TVD Reference:	Offset Datum

Offset Design WELD_WEBBER 3 PAD - P_WEBBER 29-4 - P_WEBBER 29-4 - PLAN #1 09-01-09 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	90.00	0.00	16.75	16.75				
100.00	100.00	100.00	100.00	0.10	0.10	90.00	0.00	16.75	16.75	16.55	0.19	87.648	
200.00	200.00	200.00	200.00	0.32	0.32	90.00	0.00	16.75	16.75	16.10	0.64	26.141	
300.00	300.00	300.00	300.00	0.55	0.55	90.00	0.00	16.75	16.75	15.66	1.09	15.361	
400.00	400.00	400.00	400.00	0.77	0.77	90.00	0.00	16.75	16.75	15.21	1.54	10.876	
500.00	500.00	500.00	500.00	0.99	0.99	90.00	0.00	16.75	16.75	14.76	1.99	8.418	
600.00	600.00	600.00	600.00	1.22	1.22	90.00	0.00	16.75	16.75	14.31	2.44	6.866	
700.00	700.00	700.00	700.00	1.44	1.44	90.00	0.00	16.75	16.75	13.86	2.89	5.798 CC, ES	
800.00	799.98	799.40	799.38	1.64	1.66	-123.54	0.92	18.20	19.14	15.84	3.30	5.797 SF	
900.00	899.84	898.13	897.97	1.83	1.88	-137.08	3.67	22.53	27.53	23.84	3.69	7.460	
1,000.00	999.45	995.55	995.03	2.03	2.10	-146.99	8.15	29.61	42.99	38.91	4.08	10.525	
1,100.00	1,098.70	1,091.05	1,089.83	2.27	2.35	-152.73	14.27	39.25	65.41	60.93	4.48	14.588	
1,200.00	1,197.47	1,184.06	1,181.76	2.54	2.61	-156.00	21.84	51.21	94.39	89.51	4.89	19.317	
1,300.00	1,295.62	1,274.10	1,270.26	2.86	2.90	-157.94	30.69	65.17	129.60	124.30	5.29	24.486	
1,400.00	1,393.06	1,360.73	1,354.88	3.24	3.22	-159.11	40.61	80.82	170.71	165.01	5.70	29.938	
1,500.00	1,489.64	1,443.60	1,435.27	3.69	3.56	-159.83	51.37	97.80	217.43	211.31	6.11	35.559	
1,572.38	1,558.96	1,500.00	1,489.64	4.04	3.80	-160.15	59.41	110.48	254.56	248.15	6.41	39.713	
1,600.00	1,585.31	1,522.50	1,511.24	4.19	3.92	-160.36	62.77	115.79	269.33	262.78	6.54	41.152	
1,700.00	1,680.71	1,600.00	1,585.27	4.73	4.31	-160.88	75.06	135.18	324.21	317.18	7.02	46.155	
1,800.00	1,776.11	1,671.84	1,653.31	5.28	4.71	-161.15	87.40	154.65	381.19	373.68	7.51	50.761	
1,900.00	1,871.51	1,742.76	1,719.89	5.85	5.15	-161.28	100.48	175.28	440.16	432.16	8.00	55.002	
2,000.00	1,966.91	1,811.23	1,783.58	6.43	5.59	-161.31	113.94	196.51	501.02	492.53	8.50	58.957	
2,100.00	2,062.30	1,877.31	1,844.45	7.01	6.06	-161.29	127.69	218.21	563.67	554.67	9.00	62.635	
2,200.00	2,157.70	1,944.67	1,905.91	7.60	6.56	-161.23	142.45	241.50	627.95	618.44	9.51	66.027	
2,300.00	2,253.10	2,020.90	1,975.29	8.19	7.14	-161.15	159.36	268.18	692.67	682.61	10.05	68.894	
2,400.00	2,348.50	2,097.13	2,044.67	8.79	7.74	-161.10	176.27	294.86	757.39	746.78	10.60	71.434	
2,500.00	2,443.90	2,173.37	2,114.05	9.39	8.34	-161.05	193.17	321.54	822.10	810.94	11.16	73.674	
2,600.00	2,539.30	2,249.60	2,183.43	9.99	8.95	-161.00	210.08	348.21	886.82	875.10	11.72	75.679	
2,700.00	2,634.70	2,325.83	2,252.81	10.60	9.57	-160.97	226.99	374.89	951.54	939.26	12.28	77.479	
2,800.00	2,730.10	2,402.06	2,322.19	11.20	10.19	-160.93	243.90	401.57	1,016.26	1,003.41	12.85	79.102	
2,900.00	2,825.50	2,478.29	2,391.57	11.81	10.81	-160.90	260.81	428.25	1,080.98	1,067.56	13.42	80.562	
3,000.00	2,920.90	2,554.52	2,460.95	12.41	11.43	-160.88	277.72	454.93	1,145.70	1,131.71	13.99	81.889	
3,100.00	3,016.30	2,630.76	2,530.33	13.02	12.06	-160.86	294.63	481.61	1,210.42	1,195.85	14.57	83.100	
3,200.00	3,111.70	2,706.99	2,599.71	13.63	12.69	-160.84	311.54	508.29	1,275.14	1,259.99	15.14	84.209	
3,300.00	3,207.10	2,783.22	2,669.09	14.24	13.31	-160.82	328.45	534.97	1,339.85	1,324.13	15.72	85.223	
3,400.00	3,302.49	2,859.45	2,738.47	14.85	13.95	-160.80	345.36	561.65	1,404.57	1,388.27	16.30	86.156	
3,440.41	3,341.04	2,890.26	2,766.51	15.10	14.20	-160.80	352.19	572.43	1,430.73	1,414.19	16.54	86.514	
3,500.00	3,398.08	2,936.06	2,808.19	15.40	14.58	-161.10	362.35	588.46	1,468.84	1,451.89	16.96	86.624	
3,600.00	3,494.55	3,014.56	2,879.64	15.80	15.23	-161.53	379.76	615.93	1,530.76	1,513.13	17.63	86.839	
3,700.00	3,591.88	3,095.05	2,952.89	16.17	15.90	-161.88	397.61	644.10	1,590.05	1,571.76	18.29	86.932	
3,800.00	3,689.95	3,198.00	3,046.69	16.50	16.73	-162.10	420.33	679.95	1,646.54	1,627.53	19.00	86.654	
3,900.00	3,788.64	3,397.73	3,232.17	16.79	17.94	-162.12	459.93	742.43	1,696.44	1,676.52	19.91	85.198	
4,000.00	3,887.84	3,616.25	3,440.46	17.04	19.06	-162.12	495.22	798.10	1,737.07	1,716.26	20.81	83.464	
4,100.00	3,987.41	3,851.08	3,669.18	17.24	20.01	-162.10	523.55	842.79	1,767.43	1,745.77	21.66	81.590	
4,200.00	4,087.24	4,098.20	3,913.70	17.41	20.72	-162.09	542.42	872.58	1,786.65	1,764.23	22.42	79.687	
4,300.00	4,187.21	4,352.30	4,167.32	17.53	21.12	-162.08	550.00	884.54	1,794.16	1,771.11	23.05	77.850	
4,312.79	4,200.00	4,384.98	4,200.00	17.54	21.15	44.05	550.10	884.69	1,794.26	1,771.14	23.12	77.612	
4,400.00	4,287.21	4,472.20	4,287.21	17.63	21.23	44.05	550.10	884.69	1,794.26	1,770.86	23.39	76.704	
4,500.00	4,387.21	4,572.20	4,387.21	17.73	21.33	44.05	550.10	884.69	1,794.26	1,770.55	23.70	75.697	
4,600.00	4,487.21	4,672.20	4,487.21	17.83	21.42	44.05	550.10	884.69	1,794.26	1,770.24	24.02	74.702	
4,700.00	4,587.21	4,772.20	4,587.21	17.94	21.52	44.05	550.10	884.69	1,794.26	1,769.92	24.34	73.719	
4,800.00	4,687.21	4,872.20	4,687.21	18.04	21.62	44.05	550.10	884.69	1,794.26	1,769.59	24.66	72.751	

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_WEBBER 31-4
Project:	KERR MCGEE OIL & GAS ONSHORE LP	TVD Reference:	WELL @ 4803.00ft (Original Well Elev)
Reference Site:	WELD_WEBBER 3 PAD	MD Reference:	WELL @ 4803.00ft (Original Well Elev)
Site Error:	0.00ft	North Reference:	True
Reference Well:	P_WEBBER 31-4	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00ft	Output errors are at	2.00 sigma
Reference Wellbore	P_WEBBER 31-4	Database:	EDM 2003.21 Single User Db
Reference Design:	PLAN #1 09-01-09 RHS	Offset TVD Reference:	Offset Datum

Offset Design WELD_WEBBER 3 PAD - P_WEBBER 29-4 - P_WEBBER 29-4 - PLAN #1 09-01-09 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
4,900.00	4,787.21	4,972.20	4,787.21	18.15	21.72	44.05	550.10	884.69	1,794.26	1,769.26	24.99	71.796	
5,000.00	4,887.21	5,072.20	4,887.21	18.26	21.82	44.05	550.10	884.69	1,794.26	1,768.93	25.32	70.856	
5,100.00	4,987.21	5,172.20	4,987.21	18.37	21.93	44.05	550.10	884.69	1,794.26	1,768.60	25.66	69.930	
5,200.00	5,087.21	5,272.20	5,087.21	18.49	22.03	44.05	550.10	884.69	1,794.26	1,768.26	26.00	69.019	
5,300.00	5,187.21	5,372.20	5,187.21	18.60	22.14	44.05	550.10	884.69	1,794.26	1,767.92	26.34	68.122	
5,400.00	5,287.21	5,472.20	5,287.21	18.72	22.25	44.05	550.10	884.69	1,794.26	1,767.57	26.68	67.241	
5,500.00	5,387.21	5,572.20	5,387.21	18.84	22.36	44.05	550.10	884.69	1,794.26	1,767.22	27.03	66.375	
5,600.00	5,487.21	5,672.20	5,487.21	18.97	22.48	44.05	550.10	884.69	1,794.26	1,766.87	27.38	65.523	
5,700.00	5,587.21	5,772.20	5,587.21	19.09	22.59	44.05	550.10	884.69	1,794.26	1,766.52	27.74	64.687	
5,800.00	5,687.21	5,872.20	5,687.21	19.22	22.71	44.05	550.10	884.69	1,794.26	1,766.16	28.09	63.865	
5,900.00	5,787.21	5,972.20	5,787.21	19.34	22.83	44.05	550.10	884.69	1,794.26	1,765.80	28.45	63.058	
6,000.00	5,887.21	6,072.20	5,887.21	19.47	22.95	44.05	550.10	884.69	1,794.26	1,765.44	28.82	62.266	
6,100.00	5,987.21	6,172.20	5,987.21	19.60	23.07	44.05	550.10	884.69	1,794.26	1,765.07	29.18	61.489	
6,200.00	6,087.21	6,272.20	6,087.21	19.74	23.19	44.05	550.10	884.69	1,794.26	1,764.71	29.55	60.725	
6,300.00	6,187.21	6,372.20	6,187.21	19.87	23.32	44.05	550.10	884.69	1,794.26	1,764.34	29.92	59.976	
6,400.00	6,287.21	6,472.20	6,287.21	20.01	23.44	44.05	550.10	884.69	1,794.26	1,763.97	30.29	59.241	
6,500.00	6,387.21	6,572.20	6,387.21	20.14	23.57	44.05	550.10	884.69	1,794.26	1,763.59	30.66	58.520	
6,600.00	6,487.21	6,672.20	6,487.21	20.28	23.70	44.05	550.10	884.69	1,794.26	1,763.22	31.04	57.812	
6,700.00	6,587.21	6,772.20	6,587.21	20.42	23.83	44.05	550.10	884.69	1,794.26	1,762.84	31.41	57.118	
6,800.00	6,687.21	6,872.20	6,687.21	20.57	23.96	44.05	550.10	884.69	1,794.26	1,762.46	31.79	56.437	
6,900.00	6,787.21	6,972.20	6,787.21	20.71	24.09	44.05	550.10	884.69	1,794.26	1,762.08	32.17	55.768	
7,000.00	6,887.21	7,072.20	6,887.21	20.85	24.23	44.05	550.10	884.69	1,794.26	1,761.70	32.56	55.113	
7,100.00	6,987.21	7,172.20	6,987.21	21.00	24.37	44.05	550.10	884.69	1,794.26	1,761.31	32.94	54.469	
7,200.00	7,087.21	7,272.20	7,087.21	21.15	24.50	44.05	550.10	884.69	1,794.26	1,760.93	33.33	53.838	
7,300.00	7,187.21	7,372.20	7,187.21	21.30	24.64	44.05	550.10	884.69	1,794.26	1,760.54	33.71	53.219	
7,400.00	7,287.21	7,472.20	7,287.21	21.45	24.78	44.05	550.10	884.69	1,794.26	1,760.15	34.10	52.612	
7,500.00	7,387.21	7,572.20	7,387.21	21.60	24.92	44.05	550.10	884.69	1,794.26	1,759.76	34.49	52.016	
7,600.00	7,487.21	7,672.20	7,487.21	21.75	25.06	44.05	550.10	884.69	1,794.26	1,759.37	34.89	51.432	
7,700.00	7,587.21	7,772.20	7,587.21	21.91	25.21	44.05	550.10	884.69	1,794.26	1,758.98	35.28	50.858	
7,800.00	7,687.21	7,872.20	7,687.21	22.06	25.35	44.05	550.10	884.69	1,794.26	1,758.58	35.67	50.296	
7,900.00	7,787.21	7,972.20	7,787.21	22.22	25.50	44.05	550.10	884.69	1,794.26	1,758.18	36.07	49.743	
7,963.43	7,850.65	8,035.63	7,850.65	22.32	25.59	44.05	550.10	884.69	1,794.26	1,757.93	36.32	49.398	
7,997.79	7,885.00	8,064.98	7,880.00	22.38	25.63	44.05	550.10	884.69	1,794.26	1,757.81	36.45	49.227	



Weatherford International Ltd.

Anticollision Report



Company:	US ROCKIES REGION PLANNING	Local Co-ordinate Reference:	Well P_WEBBER 31-4
Project:	KERR MCGEE OIL & GAS ONSHORE LP	TVD Reference:	WELL @ 4803.00ft (Original Well Elev)
Reference Site:	WELD_WEBBER 3 PAD	MD Reference:	WELL @ 4803.00ft (Original Well Elev)
Site Error:	0.00ft	North Reference:	True
Reference Well:	P_WEBBER 31-4	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00ft	Output errors are at	2.00 sigma
Reference Wellbore	P_WEBBER 31-4	Database:	EDM 2003.21 Single User Db
Reference Design:	PLAN #1 09-01-09 RHS	Offset TVD Reference:	Offset Datum

Offset Design WELD_WEBBER 3 PAD - WEBBER 11-4 EXISTING WELL - WEBBER 11-4 EXISTING WELL - WEBBER 11-4 EXISTING WELL - WEBBER 11-4 EXISTING WELL												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	147.67	-48.99	31.00	57.97				
100.00	100.00	100.00	100.00	0.10	1.70	147.67	-48.99	31.00	57.97	56.18	1.80	32.288	
200.00	200.00	200.00	200.00	0.32	5.70	147.67	-48.99	31.00	57.97	51.95	6.02	9.630	
300.00	300.00	300.00	300.00	0.55	9.70	147.67	-48.99	31.00	57.97	47.73	10.25	5.659	
400.00	400.00	400.00	400.00	0.77	13.70	147.67	-48.99	31.00	57.97	43.50	14.47	4.007	
500.00	500.00	500.00	500.00	0.99	17.70	147.67	-48.99	31.00	57.97	39.28	18.69	3.101	
600.00	600.00	600.00	600.00	1.22	21.70	147.67	-48.99	31.00	57.97	35.06	22.92	2.530	
700.00	700.00	700.00	700.00	1.44	25.70	147.67	-48.99	31.00	57.97	30.83	27.14	2.136	
800.00	799.98	799.98	799.98	1.64	29.70	-59.97	-48.99	31.00	57.08	25.74	31.34	1.822	
900.00	899.84	899.84	899.84	1.83	33.69	-64.77	-48.99	31.00	54.65	19.15	35.50	1.539	
1,000.00	999.45	999.45	999.45	2.03	37.68	-73.59	-48.99	31.00	51.53	11.84	39.69	1.298 Level 3	
1,100.00	1,098.70	1,098.70	1,098.70	2.27	41.65	-87.20	-48.99	31.00	49.47	5.56	43.92	1.127 Level 2	
1,117.18	1,115.71	1,115.71	1,115.71	2.31	42.33	-90.00	-48.99	31.00	49.41	4.76	44.65	1.107 Level 2, CC	
1,200.00	1,197.47	1,197.47	1,197.47	2.54	45.60	-104.74	-48.99	31.00	51.15	3.05	48.10	1.063 Level 2, ES, SF	
1,300.00	1,295.62	1,295.62	1,295.62	2.86	49.52	-122.58	-48.99	31.00	59.02	6.99	52.03	1.134 Level 2	
1,400.00	1,393.06	1,393.06	1,393.06	3.24	53.42	-137.09	-48.99	31.00	73.77	18.13	55.64	1.326 Level 3	
1,500.00	1,489.64	1,489.64	1,489.64	3.69	57.29	-147.49	-48.99	31.00	94.59	35.57	59.02	1.603	
1,572.38	1,558.96	1,558.96	1,558.96	4.04	60.06	-152.96	-48.99	31.00	112.87	51.52	61.35	1.840	
1,600.00	1,585.31	1,585.31	1,585.31	4.19	61.11	-154.74	-48.99	31.00	120.37	58.01	62.37	1.930	
1,700.00	1,680.71	1,680.71	1,680.71	4.73	64.93	-159.66	-48.99	31.00	148.23	82.12	66.10	2.242	
1,800.00	1,776.11	1,776.11	1,776.11	5.28	68.74	-163.03	-48.99	31.00	176.78	106.87	69.91	2.529	
1,900.00	1,871.51	1,871.51	1,871.51	5.85	72.56	-165.46	-48.99	31.00	205.74	131.98	73.76	2.789	
2,000.00	1,966.91	1,966.91	1,966.91	6.43	76.38	-167.29	-48.99	31.00	234.95	157.32	77.63	3.027	
2,100.00	2,062.30	2,062.30	2,062.30	7.01	80.19	-168.72	-48.99	31.00	264.34	182.82	81.52	3.243	
2,200.00	2,157.70	2,157.70	2,157.70	7.60	84.01	-169.86	-48.99	31.00	293.85	208.43	85.42	3.440	
2,300.00	2,253.10	2,253.10	2,253.10	8.19	87.82	-170.80	-48.99	31.00	323.44	234.11	89.33	3.621	
2,400.00	2,348.50	2,348.50	2,348.50	8.79	91.64	-171.57	-48.99	31.00	353.10	259.86	93.25	3.787	
2,500.00	2,443.90	2,443.90	2,443.90	9.39	95.46	-172.23	-48.99	31.00	382.81	285.65	97.17	3.940	
2,600.00	2,539.30	2,539.30	2,539.30	9.99	99.27	-172.79	-48.99	31.00	412.57	311.48	101.09	4.081	
2,700.00	2,634.70	2,634.70	2,634.70	10.60	103.09	-173.28	-48.99	31.00	442.35	337.33	105.02	4.212	
2,800.00	2,730.10	2,730.10	2,730.10	11.20	106.90	-173.71	-48.99	31.00	472.15	363.21	108.95	4.334	
2,900.00	2,825.50	2,825.50	2,825.50	11.81	110.72	-174.08	-48.99	31.00	501.98	389.10	112.88	4.447	
3,000.00	2,920.90	2,920.90	2,920.90	12.41	114.54	-174.41	-48.99	31.00	531.83	415.02	116.81	4.553	
3,100.00	3,016.30	3,016.30	3,016.30	13.02	118.35	-174.71	-48.99	31.00	561.69	440.94	120.75	4.652	
3,200.00	3,111.70	3,111.70	3,111.70	13.63	122.17	-174.98	-48.99	31.00	591.56	466.88	124.69	4.744	
3,300.00	3,207.10	3,207.10	3,207.10	14.24	125.98	-175.22	-48.99	31.00	621.45	492.82	128.62	4.832	
3,400.00	3,302.49	3,302.49	3,302.49	14.85	129.80	-175.44	-48.99	31.00	651.34	518.78	132.56	4.913	
3,440.41	3,341.04	3,341.04	3,341.04	15.10	131.34	-175.52	-48.99	31.00	663.42	529.27	134.15	4.945	
3,500.00	3,398.08	3,398.08	3,398.08	15.40	133.62	-175.66	-48.99	31.00	680.65	543.37	137.27	4.958	
3,600.00	3,494.55	3,494.55	3,494.55	15.80	137.48	-175.86	-48.99	31.00	706.89	564.44	142.45	4.962	
3,700.00	3,591.88	3,591.88	3,591.88	16.17	141.38	-176.03	-48.99	31.00	729.77	582.18	147.59	4.945	
3,800.00	3,689.95	3,689.95	3,689.95	16.50	145.30	-176.16	-48.99	31.00	749.24	596.61	152.63	4.909	
3,900.00	3,788.64	3,788.64	3,788.64	16.79	149.25	-176.26	-48.99	31.00	765.29	607.74	157.54	4.858	
4,000.00	3,887.84	3,887.84	3,887.84	17.04	153.21	-176.34	-48.99	31.00	777.89	615.58	162.32	4.792	
4,100.00	3,987.41	3,987.41	3,987.41	17.24	157.20	-176.39	-48.99	31.00	787.03	620.11	166.93	4.715	
4,200.00	4,087.24	4,087.24	4,087.24	17.41	161.19	-176.42	-48.99	31.00	792.70	621.35	171.35	4.626	
4,300.00	4,187.21	4,187.21	4,187.21	17.53	165.19	-176.44	-48.99	31.00	794.89	619.32	175.57	4.527	
4,312.79	4,200.00	4,200.00	4,200.00	17.54	165.70	-176.44	-48.99	31.00	794.92	618.82	176.10	4.514	
4,400.00	4,287.21	4,287.21	4,287.21	17.63	169.19	-176.44	-48.99	31.00	794.92	615.18	179.73	4.423	
4,500.00	4,387.21	4,387.21	4,387.21	17.73	173.19	-176.44	-48.99	31.00	794.92	611.02	183.90	4.323	
4,600.00	4,487.21	4,487.21	4,487.21	17.83	177.19	-176.44	-48.99	31.00	794.92	606.85	188.07	4.227	
4,700.00	4,587.21	4,587.21	4,587.21	17.94	181.19	-176.44	-48.99	31.00	794.92	602.68	192.24	4.135	

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



Weatherford International Ltd.

Anticollision Report



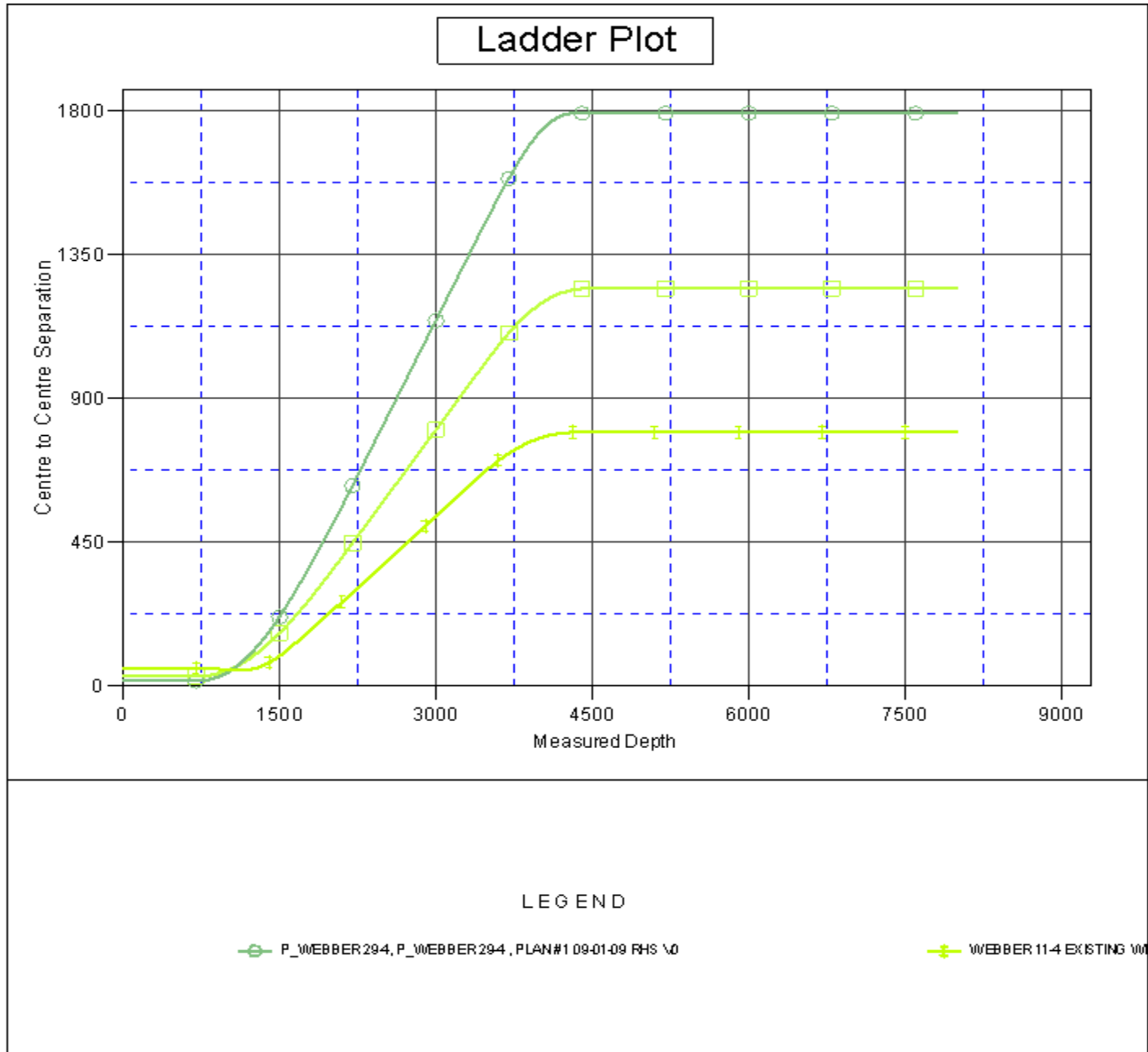
Company:	US ROCKIES REGION PLANNING	Local Co-ordinate Reference:	Well P_WEBBER 31-4
Project:	KERR MCGEE OIL & GAS ONSHORE LP	TVD Reference:	WELL @ 4803.00ft (Original Well Elev)
Reference Site:	WELD_WEBBER 3 PAD	MD Reference:	WELL @ 4803.00ft (Original Well Elev)
Site Error:	0.00ft	North Reference:	True
Reference Well:	P_WEBBER 31-4	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00ft	Output errors are at	2.00 sigma
Reference Wellbore	P_WEBBER 31-4	Database:	EDM 2003.21 Single User Db
Reference Design:	PLAN #1 09-01-09 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
4,800.00	4,687.21	4,687.21	4,687.21	18.04	185.19	29.70	-48.99	31.00	794.92	598.50	196.41	4.047	
4,900.00	4,787.21	4,787.21	4,787.21	18.15	189.19	29.70	-48.99	31.00	794.92	594.33	200.59	3.963	
5,000.00	4,887.21	4,887.21	4,887.21	18.26	193.19	29.70	-48.99	31.00	794.92	590.15	204.76	3.882	
5,100.00	4,987.21	4,987.21	4,987.21	18.37	197.19	29.70	-48.99	31.00	794.92	585.98	208.94	3.804	
5,200.00	5,087.21	5,087.21	5,087.21	18.49	201.19	29.70	-48.99	31.00	794.92	581.80	213.12	3.730	
5,300.00	5,187.21	5,187.21	5,187.21	18.60	205.19	29.70	-48.99	31.00	794.92	577.61	217.30	3.658	
5,400.00	5,287.21	5,287.21	5,287.21	18.72	209.19	29.70	-48.99	31.00	794.92	573.43	221.49	3.589	
5,500.00	5,387.21	5,387.21	5,387.21	18.84	213.19	29.70	-48.99	31.00	794.92	569.25	225.67	3.522	
5,600.00	5,487.21	5,487.21	5,487.21	18.97	217.19	29.70	-48.99	31.00	794.92	565.06	229.85	3.458	
5,700.00	5,587.21	5,587.21	5,587.21	19.09	221.19	29.70	-48.99	31.00	794.92	560.88	234.04	3.396	
5,800.00	5,687.21	5,687.21	5,687.21	19.22	225.19	29.70	-48.99	31.00	794.92	556.69	238.23	3.337	
5,900.00	5,787.21	5,787.21	5,787.21	19.34	229.19	29.70	-48.99	31.00	794.92	552.50	242.42	3.279	
6,000.00	5,887.21	5,887.21	5,887.21	19.47	233.19	29.70	-48.99	31.00	794.92	548.31	246.61	3.223	
6,100.00	5,987.21	5,987.21	5,987.21	19.60	237.19	29.70	-48.99	31.00	794.92	544.12	250.80	3.170	
6,200.00	6,087.21	6,087.21	6,087.21	19.74	241.19	29.70	-48.99	31.00	794.92	539.93	254.99	3.117	
6,300.00	6,187.21	6,187.21	6,187.21	19.87	245.19	29.70	-48.99	31.00	794.92	535.73	259.18	3.067	
6,400.00	6,287.21	6,287.21	6,287.21	20.01	249.19	29.70	-48.99	31.00	794.92	531.54	263.38	3.018	
6,500.00	6,387.21	6,387.21	6,387.21	20.14	253.19	29.70	-48.99	31.00	794.92	527.35	267.57	2.971	
6,600.00	6,487.21	6,487.21	6,487.21	20.28	257.19	29.70	-48.99	31.00	794.92	523.15	271.77	2.925	
6,700.00	6,587.21	6,587.21	6,587.21	20.42	261.19	29.70	-48.99	31.00	794.92	518.95	275.96	2.881	
6,800.00	6,687.21	6,687.21	6,687.21	20.57	265.19	29.70	-48.99	31.00	794.92	514.76	280.16	2.837	
6,900.00	6,787.21	6,787.21	6,787.21	20.71	269.19	29.70	-48.99	31.00	794.92	510.56	284.36	2.795	
7,000.00	6,887.21	6,887.21	6,887.21	20.85	273.19	29.70	-48.99	31.00	794.92	506.36	288.56	2.755	
7,100.00	6,987.21	6,987.21	6,987.21	21.00	277.19	29.70	-48.99	31.00	794.92	502.16	292.76	2.715	
7,200.00	7,087.21	7,087.21	7,087.21	21.15	281.19	29.70	-48.99	31.00	794.92	497.96	296.96	2.677	
7,300.00	7,187.21	7,187.21	7,187.21	21.30	285.19	29.70	-48.99	31.00	794.92	493.76	301.16	2.640	
7,400.00	7,287.21	7,287.21	7,287.21	21.45	289.19	29.70	-48.99	31.00	794.92	489.56	305.36	2.603	
7,500.00	7,387.21	7,387.21	7,387.21	21.60	293.19	29.70	-48.99	31.00	794.92	485.36	309.56	2.568	
7,600.00	7,487.21	7,487.21	7,487.21	21.75	297.19	29.70	-48.99	31.00	794.92	481.15	313.76	2.533	
7,700.00	7,587.21	7,587.21	7,587.21	21.91	301.19	29.70	-48.99	31.00	794.92	476.95	317.97	2.500	
7,800.00	7,687.21	7,687.21	7,687.21	22.06	305.19	29.70	-48.99	31.00	794.92	472.75	322.17	2.467	
7,900.00	7,787.21	7,787.21	7,787.21	22.22	309.19	29.70	-48.99	31.00	794.92	468.54	326.38	2.436	
7,997.79	7,885.00	7,885.00	7,885.00	22.38	313.10	29.70	-48.99	31.00	794.92	464.43	330.49	2.405	



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Reference Site:	WELD_WEBBER 3 PAD	MD Reference:	WELL @ 4803.00ft (Original Well Elev)
Site Error:	0.00ft	North Reference:	True
Reference Well:	P_WEBBER 31-4	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00ft	Output errors are at	2.00 sigma
Reference Wellbore	P_WEBBER 31-4	Database:	EDM 2003.21 Single User Db
Reference Design:	PLAN #1 09-01-09 RHS	Offset TVD Reference:	Offset Datum

Reference Depths are relative to WELL @ 4803.00ft (Original Well Elev) Coordinates are relative to: P_WEBBER 31-4
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: 0.46°

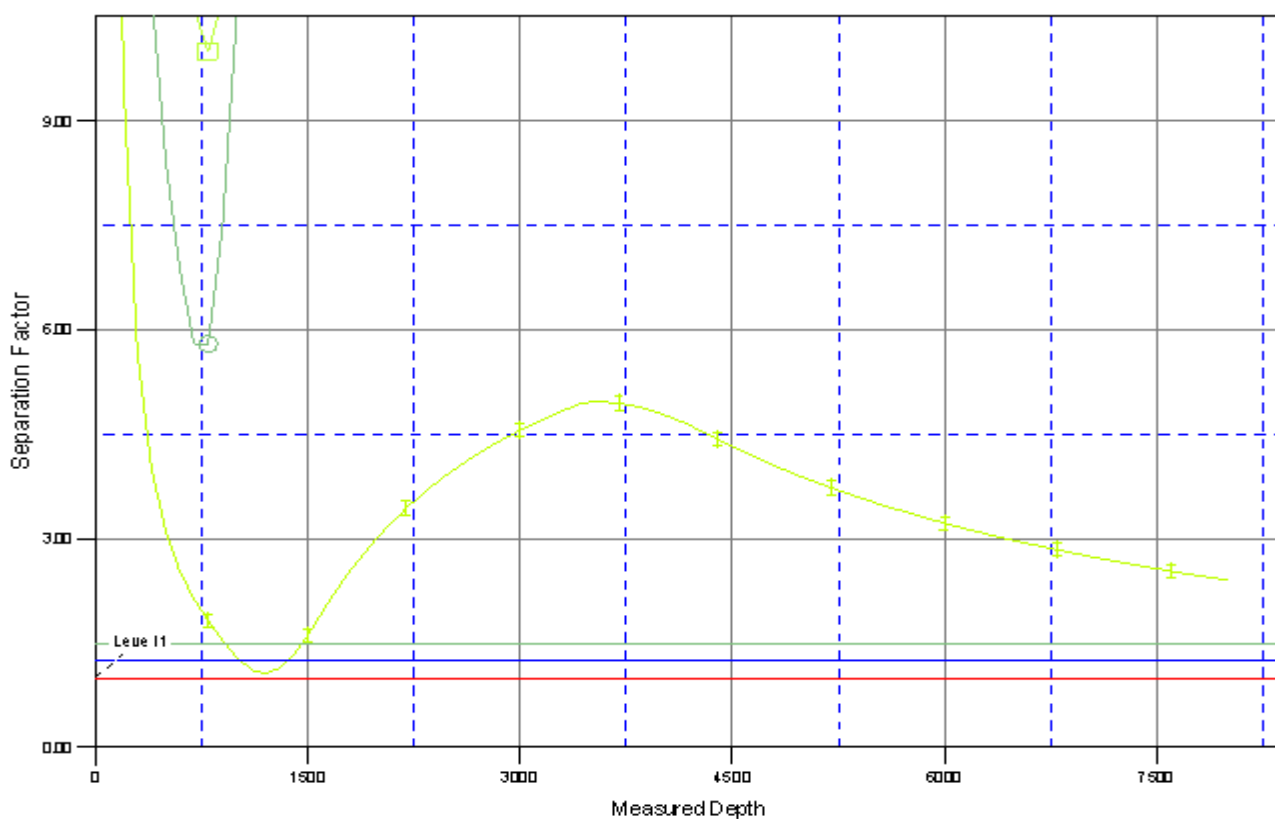




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Central Meridian is 105° 30' 0.000 W ° Grid Convergence at Surface is: 0.46°

Separation Factor Plot



LEGEND

P_WEBBER 294, P_WEBBER 294, PLAN #1 09-01-09 RHS V0

WEBBER 11-4 EXISTING WEL