



# **US ROCKIES REGION PLANNING**

**COLORADO NORTHERN ZONE - 83**

**WELD\_KERR MCGEE 19-3 PAD**

**P\_KERR-MCGEE 33-3**

**P\_KERR-MCGEE 33-3**

**Plan: PLAN #1 1-15-10 RHS**

## **Standard Planning Report**

**15 January, 2010**





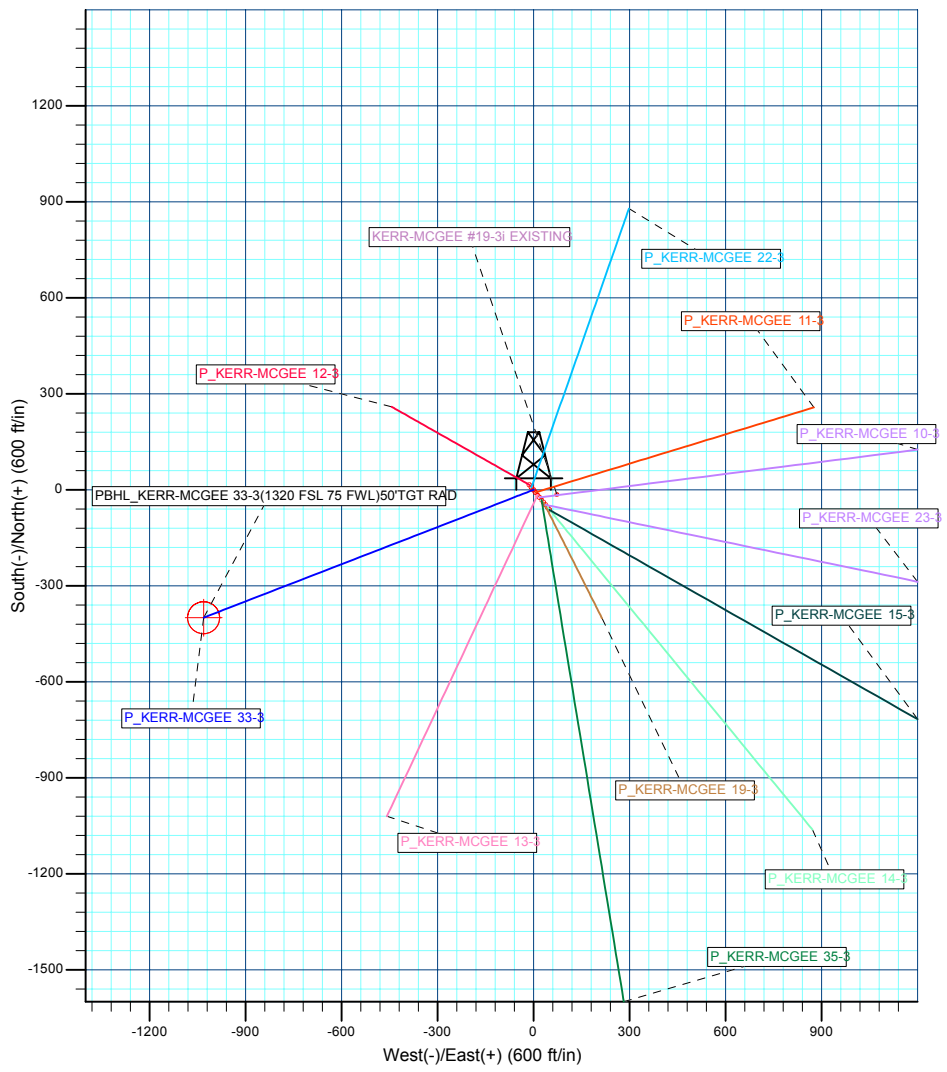
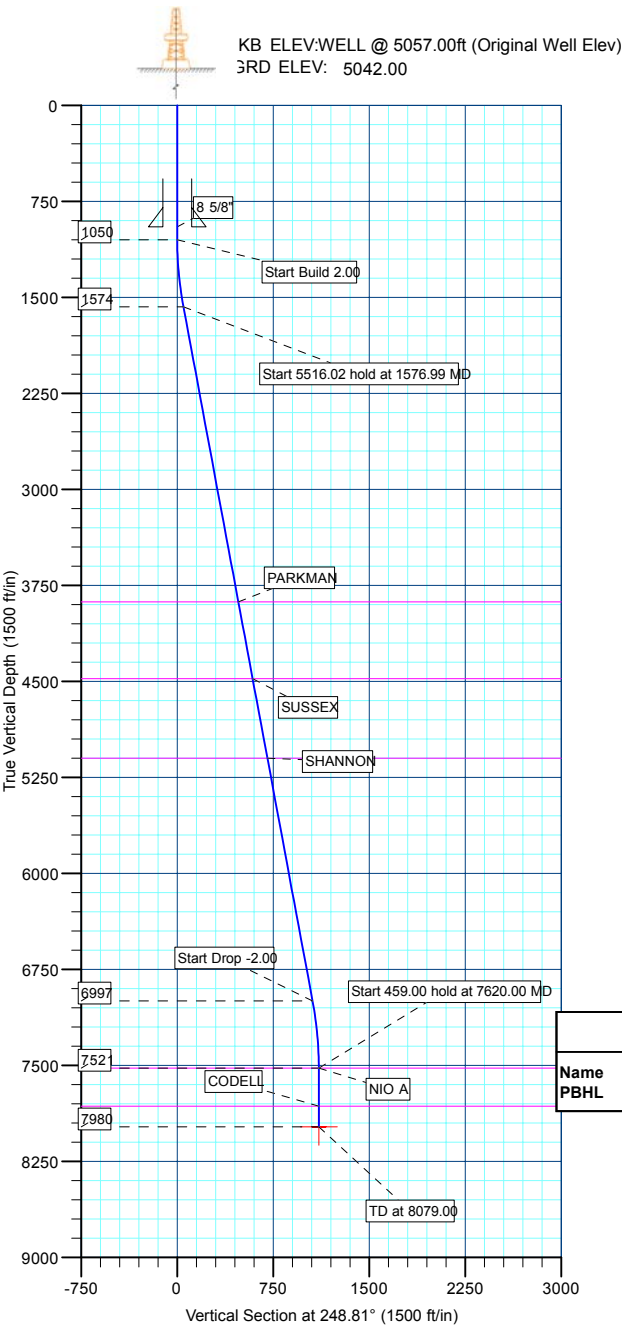
P\_KERR-MCGEE 33-3  
 COLORADO NORTHERN ZONE - 83  
 SECTION 3 T1N R68W  
 1721 FSL 1105 FWL  
 LAT: 40° 4' 39.907 N  
 LONG: 104° 59' 41.968 W



WELL DETAILS: P_KERR-MCGEE 33-3						
+N/-S	+E/-W	Northing	Ground Level: Easting	5042.00 Latitude	Longitude	Slot
0.00	0.00	1271572.36	3141318.02	40° 4' 39.907 N	104° 59' 41.968 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	
1050.00	0.00	0.00	1050.00	0.00	0.00	0.00	0.00	0.00	
1576.99	10.54	248.81	1574.02	-17.47	-45.07	2.00	248.81	48.33	
7093.01	10.54	248.81	6996.98	-382.11	-985.86	0.00	0.00	1057.32	
7620.00	0.00	0.00	7521.00	-399.57	-1030.93	2.00	180.00	1105.65	
8079.00	0.00	0.00	7980.00	-399.57	-1030.93	0.00	0.00	1105.65	PBHL_KERR-MCGEE 33-3(1320 FSL 75 FWL)50'TGT RAD

FORMATION TOP DETAILS		
TVDPath	MDPath	Formation
3880.00	3922.54	PARKMAN
4480.00	4532.84	SUSSEX
5100.00	5163.48	SHANNON
7521.00	7620.00	NIO A
7820.00	7919.00	CODELL



WELLBORE TARGET DETAILS (MAP CO-ORDINATES AND LAT/LONG)									
Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Shape	
PBHL	7980.00	-399.57	-1030.93	1271166.92	3140289.39	40° 4' 35.958 N	104° 59' 55.230 W	Circle (Radius: 50.00)	

CASING DETAILS			
TVD	MD	Name	Size
950.00	950.00	8 5/8"	8.62

<b>Database:</b>	EDM 2003.21 Single User Db	<b>Local Co-ordinate Reference:</b>	Well P_KERR-MCGEE 33-3
<b>Company:</b>	US ROCKIES REGION PLANNING	<b>TVD Reference:</b>	WELL @ 5057.00ft (Original Well Elev)
<b>Project:</b>	COLORADO NORTHERN ZONE - 83	<b>MD Reference:</b>	WELL @ 5057.00ft (Original Well Elev)
<b>Site:</b>	WELD_KERR MCGEE 19-3 PAD	<b>North Reference:</b>	True
<b>Well:</b>	P_KERR-MCGEE 33-3	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	P_KERR-MCGEE 33-3		
<b>Design:</b>	PLAN #1 1-15-10 RHS		

<b>Project</b>	COLORADO NORTHERN ZONE - 83, 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		

<b>Site</b>	WELD_KERR MCGEE 19-3 PAD, SECTION 3 T1N R68W				
<b>Site Position:</b>		<b>Northing:</b>	1,271,548.81 ft	<b>Latitude:</b>	40° 4' 39.673 N
<b>From:</b>	Lat/Long	<b>Easting:</b>	3,141,336.90 ft	<b>Longitude:</b>	104° 59' 41.726 W
<b>Position Uncertainty:</b>	0.00 ft	<b>Slot Radius:</b>	in	<b>Grid Convergence:</b>	0.33 °

<b>Well</b>	P_KERR-MCGEE 33-3					
<b>Well Position</b>	<b>+N/-S</b>	23.66 ft	<b>Northing:</b>	1,271,572.36 ft	<b>Latitude:</b>	40° 4' 39.907 N
	<b>+E/-W</b>	-18.75 ft	<b>Easting:</b>	3,141,318.02 ft	<b>Longitude:</b>	104° 59' 41.968 W
<b>Position Uncertainty</b>		0.00 ft	<b>Wellhead Elevation:</b>	ft	<b>Ground Level:</b>	5,042.00 ft

<b>Wellbore</b>	P_KERR-MCGEE 33-3				
<b>Magnetics</b>	<b>Model Name</b>	<b>Sample Date</b>	<b>Declination (°)</b>	<b>Dip Angle (°)</b>	<b>Field Strength (nT)</b>
	IGRF2010	1/15/2010	9.15	66.80	53,083

<b>Design</b>	PLAN #1 1-15-10 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	248.81

<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	
1,050.00	0.00	0.00	1,050.00	0.00	0.00	0.00	0.00	0.00	0.00	
1,576.99	10.54	248.81	1,574.02	-17.47	-45.07	2.00	2.00	0.00	248.81	
7,093.01	10.54	248.81	6,996.98	-382.11	-985.86	0.00	0.00	0.00	0.00	
7,620.00	0.00	0.00	7,521.00	-399.57	-1,030.93	2.00	-2.00	0.00	180.00	
8,079.00	0.00	0.00	7,980.00	-399.57	-1,030.93	0.00	0.00	0.00	0.00	PBHL_KERR-MCG

<b>Database:</b>	EDM 2003.21 Single User Db	<b>Local Co-ordinate Reference:</b>	Well P_KERR-MCGEE 33-3
<b>Company:</b>	US ROCKIES REGION PLANNING	<b>TVD Reference:</b>	WELL @ 5057.00ft (Original Well Elev)
<b>Project:</b>	COLORADO NORTHERN ZONE - 83	<b>MD Reference:</b>	WELL @ 5057.00ft (Original Well Elev)
<b>Site:</b>	WELD_KERR MCGEE 19-3 PAD	<b>North Reference:</b>	True
<b>Well:</b>	P_KERR-MCGEE 33-3	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	P_KERR-MCGEE 33-3		
<b>Design:</b>	PLAN #1 1-15-10 RHS		

**Planned Survey**

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
<b>Start Build 2.00</b>									
1,050.00	0.00	0.00	1,050.00	0.00	0.00	0.00	0.00	0.00	0.00
1,100.00	1.00	248.81	1,100.00	-0.16	-0.41	0.44	2.00	2.00	0.00
1,200.00	3.00	248.81	1,199.93	-1.42	-3.66	3.93	2.00	2.00	0.00
1,300.00	5.00	248.81	1,299.68	-3.94	-10.16	10.90	2.00	2.00	0.00
1,400.00	7.00	248.81	1,399.13	-7.72	-19.91	21.35	2.00	2.00	0.00
1,500.00	9.00	248.81	1,498.15	-12.75	-32.89	35.27	2.00	2.00	0.00
<b>Start 5516.02 hold at 1576.99 MD</b>									
1,576.99	10.54	248.81	1,574.02	-17.47	-45.07	48.33	2.00	2.00	0.00
1,600.00	10.54	248.81	1,596.64	-18.99	-48.99	52.54	0.00	0.00	0.00
1,700.00	10.54	248.81	1,694.96	-25.60	-66.05	70.84	0.00	0.00	0.00
1,800.00	10.54	248.81	1,793.27	-32.21	-83.10	89.13	0.00	0.00	0.00
1,900.00	10.54	248.81	1,891.58	-38.82	-100.16	107.42	0.00	0.00	0.00
2,000.00	10.54	248.81	1,989.90	-45.43	-117.21	125.71	0.00	0.00	0.00
2,100.00	10.54	248.81	2,088.21	-52.04	-134.27	144.00	0.00	0.00	0.00
2,200.00	10.54	248.81	2,186.52	-58.65	-151.33	162.29	0.00	0.00	0.00
2,300.00	10.54	248.81	2,284.83	-65.26	-168.38	180.59	0.00	0.00	0.00
2,400.00	10.54	248.81	2,383.15	-71.87	-185.44	198.88	0.00	0.00	0.00
2,500.00	10.54	248.81	2,481.46	-78.48	-202.49	217.17	0.00	0.00	0.00
2,600.00	10.54	248.81	2,579.77	-85.09	-219.55	235.46	0.00	0.00	0.00
2,700.00	10.54	248.81	2,678.09	-91.70	-236.60	253.75	0.00	0.00	0.00
2,800.00	10.54	248.81	2,776.40	-98.32	-253.66	272.05	0.00	0.00	0.00
2,900.00	10.54	248.81	2,874.71	-104.93	-270.72	290.34	0.00	0.00	0.00
3,000.00	10.54	248.81	2,973.02	-111.54	-287.77	308.63	0.00	0.00	0.00
3,100.00	10.54	248.81	3,071.34	-118.15	-304.83	326.92	0.00	0.00	0.00
3,200.00	10.54	248.81	3,169.65	-124.76	-321.88	345.21	0.00	0.00	0.00
3,300.00	10.54	248.81	3,267.96	-131.37	-338.94	363.51	0.00	0.00	0.00
3,400.00	10.54	248.81	3,366.27	-137.98	-355.99	381.80	0.00	0.00	0.00
3,500.00	10.54	248.81	3,464.59	-144.59	-373.05	400.09	0.00	0.00	0.00
3,600.00	10.54	248.81	3,562.90	-151.20	-390.10	418.38	0.00	0.00	0.00
3,700.00	10.54	248.81	3,661.21	-157.81	-407.16	436.67	0.00	0.00	0.00
3,800.00	10.54	248.81	3,759.53	-164.42	-424.22	454.97	0.00	0.00	0.00
3,900.00	10.54	248.81	3,857.84	-171.03	-441.27	473.26	0.00	0.00	0.00
<b>PARKMAN</b>									
3,922.54	10.54	248.81	3,880.00	-172.52	-445.12	477.38	0.00	0.00	0.00
4,000.00	10.54	248.81	3,956.15	-177.64	-458.33	491.55	0.00	0.00	0.00
4,100.00	10.54	248.81	4,054.46	-184.25	-475.38	509.84	0.00	0.00	0.00
4,200.00	10.54	248.81	4,152.78	-190.86	-492.44	528.13	0.00	0.00	0.00
4,300.00	10.54	248.81	4,251.09	-197.47	-509.49	546.43	0.00	0.00	0.00
4,400.00	10.54	248.81	4,349.40	-204.08	-526.55	564.72	0.00	0.00	0.00
4,500.00	10.54	248.81	4,447.72	-210.69	-543.61	583.01	0.00	0.00	0.00
<b>SUSSEX</b>									
4,532.84	10.54	248.81	4,480.00	-212.87	-549.21	589.02	0.00	0.00	0.00
4,600.00	10.54	248.81	4,546.03	-217.31	-560.66	601.30	0.00	0.00	0.00
4,700.00	10.54	248.81	4,644.34	-223.92	-577.72	619.59	0.00	0.00	0.00
4,800.00	10.54	248.81	4,742.65	-230.53	-594.77	637.88	0.00	0.00	0.00
4,900.00	10.54	248.81	4,840.97	-237.14	-611.83	656.18	0.00	0.00	0.00
5,000.00	10.54	248.81	4,939.28	-243.75	-628.88	674.47	0.00	0.00	0.00
5,100.00	10.54	248.81	5,037.59	-250.36	-645.94	692.76	0.00	0.00	0.00
<b>SHANNON</b>									
5,163.48	10.54	248.81	5,100.00	-254.55	-656.77	704.37	0.00	0.00	0.00
5,200.00	10.54	248.81	5,135.91	-256.97	-663.00	711.05	0.00	0.00	0.00
5,300.00	10.54	248.81	5,234.22	-263.58	-680.05	729.34	0.00	0.00	0.00

<b>Database:</b>	EDM 2003.21 Single User Db	<b>Local Co-ordinate Reference:</b>	Well P_KERR-MCGEE 33-3
<b>Company:</b>	US ROCKIES REGION PLANNING	<b>TVD Reference:</b>	WELL @ 5057.00ft (Original Well Elev)
<b>Project:</b>	COLORADO NORTHERN ZONE - 83	<b>MD Reference:</b>	WELL @ 5057.00ft (Original Well Elev)
<b>Site:</b>	WELD_KERR MCGEE 19-3 PAD	<b>North Reference:</b>	True
<b>Well:</b>	P_KERR-MCGEE 33-3	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	P_KERR-MCGEE 33-3		
<b>Design:</b>	PLAN #1 1-15-10 RHS		

Planned Survey										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	
5,400.00	10.54	248.81	5,332.53	-270.19	-697.11	747.64	0.00	0.00	0.00	
5,500.00	10.54	248.81	5,430.84	-276.80	-714.16	765.93	0.00	0.00	0.00	
5,600.00	10.54	248.81	5,529.16	-283.41	-731.22	784.22	0.00	0.00	0.00	
5,700.00	10.54	248.81	5,627.47	-290.02	-748.27	802.51	0.00	0.00	0.00	
5,800.00	10.54	248.81	5,725.78	-296.63	-765.33	820.80	0.00	0.00	0.00	
5,900.00	10.54	248.81	5,824.09	-303.24	-782.38	839.10	0.00	0.00	0.00	
6,000.00	10.54	248.81	5,922.41	-309.85	-799.44	857.39	0.00	0.00	0.00	
6,100.00	10.54	248.81	6,020.72	-316.46	-816.50	875.68	0.00	0.00	0.00	
6,200.00	10.54	248.81	6,119.03	-323.07	-833.55	893.97	0.00	0.00	0.00	
6,300.00	10.54	248.81	6,217.35	-329.68	-850.61	912.26	0.00	0.00	0.00	
6,400.00	10.54	248.81	6,315.66	-336.29	-867.66	930.56	0.00	0.00	0.00	
6,500.00	10.54	248.81	6,413.97	-342.91	-884.72	948.85	0.00	0.00	0.00	
6,600.00	10.54	248.81	6,512.28	-349.52	-901.77	967.14	0.00	0.00	0.00	
6,700.00	10.54	248.81	6,610.60	-356.13	-918.83	985.43	0.00	0.00	0.00	
6,800.00	10.54	248.81	6,708.91	-362.74	-935.89	1,003.72	0.00	0.00	0.00	
6,900.00	10.54	248.81	6,807.22	-369.35	-952.94	1,022.01	0.00	0.00	0.00	
7,000.00	10.54	248.81	6,905.54	-375.96	-970.00	1,040.31	0.00	0.00	0.00	
<b>Start Drop -2.00</b>										
7,093.01	10.54	248.81	6,996.98	-382.11	-985.86	1,057.32	0.00	0.00	0.00	
7,100.00	10.40	248.81	7,003.85	-382.57	-987.04	1,058.59	2.00	-2.00	0.00	
7,200.00	8.40	248.81	7,102.50	-388.47	-1,002.27	1,074.92	2.00	-2.00	0.00	
7,300.00	6.40	248.81	7,201.66	-393.12	-1,014.28	1,087.80	2.00	-2.00	0.00	
7,400.00	4.40	248.81	7,301.22	-396.52	-1,023.06	1,097.21	2.00	-2.00	0.00	
7,500.00	2.40	248.81	7,401.03	-398.67	-1,028.58	1,103.14	2.00	-2.00	0.00	
7,600.00	0.40	248.81	7,501.00	-399.55	-1,030.86	1,105.58	2.00	-2.00	0.00	
<b>Start 459.00 hold at 7620.00 MD - NIO A</b>										
7,620.00	0.00	0.00	7,521.00	-399.57	-1,030.93	1,105.65	2.00	-2.00	0.00	
7,700.00	0.00	0.00	7,601.00	-399.57	-1,030.93	1,105.65	0.00	0.00	0.00	
7,800.00	0.00	0.00	7,701.00	-399.57	-1,030.93	1,105.65	0.00	0.00	0.00	
7,900.00	0.00	0.00	7,801.00	-399.57	-1,030.93	1,105.65	0.00	0.00	0.00	
<b>CODELL</b>										
7,919.00	0.00	0.00	7,820.00	-399.57	-1,030.93	1,105.65	0.00	0.00	0.00	
8,000.00	0.00	0.00	7,901.00	-399.57	-1,030.93	1,105.65	0.00	0.00	0.00	
<b>PBHL_KERR-MCGEE 33-3(1320 FSL 75 FWL)50°TGT RAD</b>										
8,079.00	0.00	0.00	7,980.00	-399.57	-1,030.93	1,105.65	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	
PBHL_KERR-MCGEE - hit/miss target - Shape - Circle (radius 50.00)	0.00	0.00	7,980.00	-399.57	-1,030.93	1,271,166.92	3,140,289.39	40° 4' 35.958 N	104° 59' 55.230 W	

Casing Points					
Measured Depth (ft)	Vertical Depth (ft)	Name	Casing Diameter (in)	Hole Diameter (in)	
950.00	950.00	8 5/8"	8.62	11.00	

<b>Database:</b>	EDM 2003.21 Single User Db	<b>Local Co-ordinate Reference:</b>	Well P_KERR-MCGEE 33-3
<b>Company:</b>	US ROCKIES REGION PLANNING	<b>TVD Reference:</b>	WELL @ 5057.00ft (Original Well Elev)
<b>Project:</b>	COLORADO NORTHERN ZONE - 83	<b>MD Reference:</b>	WELL @ 5057.00ft (Original Well Elev)
<b>Site:</b>	WELD_KERR MCGEE 19-3 PAD	<b>North Reference:</b>	True
<b>Well:</b>	P_KERR-MCGEE 33-3	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	P_KERR-MCGEE 33-3		
<b>Design:</b>	PLAN #1 1-15-10 RHS		

**Formations**

Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)
3,922.54	3,880.00	PARKMAN			
4,532.84	4,480.00	SUSSEX			
5,163.48	5,100.00	SHANNON			
7,620.00	7,521.00	NIO A			
7,919.00	7,820.00	CODELL			

**Plan Annotations**

Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates		Comment
		+N/-S (ft)	+E/-W (ft)	
1,050.00	1,050.00	0.00	0.00	Start Build 2.00
1,576.99	1,574.02	-17.47	-45.07	Start 5516.02 hold at 1576.99 MD
7,093.01	6,996.98	-382.11	-985.86	Start Drop -2.00
7,620.00	7,521.00	-399.57	-1,030.93	Start 459.00 hold at 7620.00 MD
8,079.00	7,980.00	-399.57	-1,030.93	TD at 8079.00



# **US ROCKIES REGION PLANNING**

**COLORADO NORTHERN ZONE - 83  
WELD\_KERR MCGEE 19-3 PAD  
P\_KERR-MCGEE 33-3**

**P\_KERR-MCGEE 33-3  
PLAN #1 1-15-10 RHS**

## **Anticollision Report**

**15 January, 2010**



<b>Company:</b>	US ROCKIES REGION PLANNING	<b>Local Co-ordinate Reference:</b>	Well P_KERR-MCGEE 33-3
<b>Project:</b>	COLORADO NORTHERN ZONE - 83	<b>TVD Reference:</b>	WELL @ 5057.00ft (Original Well Elev)
<b>Reference Site:</b>	WELD_KERR MCGEE 19-3 PAD	<b>MD Reference:</b>	WELL @ 5057.00ft (Original Well Elev)
<b>Site Error:</b>	0.00ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	P_KERR-MCGEE 33-3	<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_KERR-MCGEE 33-3	<b>Database:</b>	EDM 2003.21 Single User Db
<b>Reference Design:</b>	PLAN #1 1-15-10 RHS	<b>Offset TVD Reference:</b>	Offset Datum

<b>Reference</b>	PLAN #1 1-15-10 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>	1/15/2010		
<b>From (ft)</b>	<b>To (ft)</b>	<b>Survey (Wellbore)</b>	<b>Tool Name</b>	<b>Description</b>
0.00	8,079.00	PLAN #1 1-15-10 RHS (P_KERR-MCGEE	MWD	MWD - Standard

Site Name Offset Well - Wellbore - Design	Reference	Offset	Distance		Separation Factor	Warning
	Measured Depth (ft)	Measured Depth (ft)	Between Centres (ft)	Between Ellipses (ft)		
WELD_KERR MCGEE 19-3 PAD						
KERR-MCGEE #19-3i EXISTING - KERR-MCGEE #19-3	1,050.00	1,044.00	74.62	32.63	1.777	CC
KERR-MCGEE #19-3i EXISTING - KERR-MCGEE #19-3	1,200.00	1,193.93	77.94	29.70	1.616	ES
KERR-MCGEE #19-3i EXISTING - KERR-MCGEE #19-3	1,300.00	1,293.68	83.97	31.64	1.605	SF
P_KERR-MCGEE 10-3 - P_KERR-MCGEE 10-3 - PLAN	1,050.00	1,050.00	30.19	-11.74	0.720	Level 1, CC
P_KERR-MCGEE 10-3 - P_KERR-MCGEE 10-3 - PLAN	1,100.00	1,099.71	30.55	-12.61	0.708	Level 1, ES, SF
P_KERR-MCGEE 11-3 - P_KERR-MCGEE 11-3 - PLAN	1,050.00	1,050.00	10.11	5.64	2.265	CC, ES
P_KERR-MCGEE 11-3 - P_KERR-MCGEE 11-3 - PLAN	1,100.00	1,099.92	10.41	5.74	2.229	SF
P_KERR-MCGEE 12-3 - P_KERR-MCGEE 12-3 - PLAN	1,050.00	1,050.00	20.27	15.81	4.544	CC, ES
P_KERR-MCGEE 12-3 - P_KERR-MCGEE 12-3 - PLAN	1,100.00	1,099.67	20.54	15.87	4.397	SF
P_KERR-MCGEE 13-3 - P_KERR-MCGEE 13-3 - PLAN	1,050.00	1,050.00	20.39	15.92	4.569	CC, ES
P_KERR-MCGEE 13-3 - P_KERR-MCGEE 13-3 - PLAN	1,100.00	1,099.84	20.71	16.05	4.442	SF
P_KERR-MCGEE 14-3 - P_KERR-MCGEE 14-3 - PLAN	1,050.00	1,050.00	70.11	65.65	15.714	CC, ES
P_KERR-MCGEE 14-3 - P_KERR-MCGEE 14-3 - PLAN	1,200.00	1,196.16	75.22	70.19	14.968	SF
P_KERR-MCGEE 15-3 - P_KERR-MCGEE 15-3 - PLAN	1,050.00	1,050.00	80.21	75.75	17.977	CC, ES
P_KERR-MCGEE 15-3 - P_KERR-MCGEE 15-3 - PLAN	1,200.00	1,195.88	85.09	80.05	16.900	SF
P_KERR-MCGEE 19-3 - P_KERR-MCGEE 19-3 - PLAN	1,050.00	1,050.00	50.01	45.55	11.209	CC, ES
P_KERR-MCGEE 19-3 - P_KERR-MCGEE 19-3 - PLAN	1,100.00	1,099.15	50.56	45.90	10.848	SF
P_KERR-MCGEE 22-3 - P_KERR-MCGEE 22-3 - PLAN	1,050.00	1,050.00	10.00	5.54	2.241	CC
P_KERR-MCGEE 22-3 - P_KERR-MCGEE 22-3 - PLAN	1,100.00	1,099.90	10.11	5.43	2.162	ES, SF
P_KERR-MCGEE 23-3 - P_KERR-MCGEE 23-3 - PLAN	1,050.00	1,050.00	60.12	55.65	13.474	CC, ES
P_KERR-MCGEE 23-3 - P_KERR-MCGEE 23-3 - PLAN	1,200.00	1,197.25	64.55	59.51	12.790	SF
P_KERR-MCGEE 35-3 - P_KERR-MCGEE 35-3 - PLAN	1,050.00	1,050.00	40.20	35.74	9.011	CC, ES
P_KERR-MCGEE 35-3 - P_KERR-MCGEE 35-3 - PLAN	1,100.00	1,099.39	40.71	36.05	8.735	SF

<b>Offset Design</b>	WELD_KERR MCGEE 19-3 PAD - KERR-MCGEE #19-3i EXISTING - KERR-MCGEE #19-3i EXISTING										<b>Offset Site Error:</b>	0.00 ft
<b>Survey Program:</b>	0-UNKNOWN										<b>Offset Well Error:</b>	0.00 ft
Measured Depth (ft)	Vertical Depth (ft)	Offset		Semi Major Axis			Distance				Warning	
		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)
0.00	0.00	0.00	0.00	0.00	0.00	101.83	-15.30	73.04	74.86			
100.00	100.00	94.00	94.00	0.10	1.88	101.83	-15.30	73.04	74.62	72.65	1.98	37.773
200.00	200.00	194.00	194.00	0.32	5.76	101.83	-15.30	73.04	74.62	68.54	6.08	12.273
300.00	300.00	294.00	294.00	0.55	9.76	101.83	-15.30	73.04	74.62	64.32	10.31	7.241
400.00	400.00	394.00	394.00	0.77	13.76	101.83	-15.30	73.04	74.62	60.09	14.53	5.136

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

<b>Company:</b>	US ROCKIES REGION PLANNING	<b>Local Co-ordinate Reference:</b>	Well P_KERR-MCGEE 33-3
<b>Project:</b>	COLORADO NORTHERN ZONE - 83	<b>TVD Reference:</b>	WELL @ 5057.00ft (Original Well Elev)
<b>Reference Site:</b>	WELD_KERR MCGEE 19-3 PAD	<b>MD Reference:</b>	WELL @ 5057.00ft (Original Well Elev)
<b>Site Error:</b>	0.00ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	P_KERR-MCGEE 33-3	<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_KERR-MCGEE 33-3	<b>Database:</b>	EDM 2003.21 Single User Db
<b>Reference Design:</b>	PLAN #1 1-15-10 RHS	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design													WELD_KERR MCGEE 19-3 PAD - KERR-MCGEE #19-3i EXISTING - KERR-MCGEE #19-3i EXISTING	Offset Site Error:	0.00 ft
Survey Program: 0-UNKNOWN														Offset Well Error:	0.00 ft
Reference		Offset		Semi Major Axis			Distance						Warning		
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Tooface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor			
500.00	500.00	494.00	494.00	0.99	17.76	101.83	-15.30	73.04	74.62	55.87	18.75	3.979			
600.00	600.00	594.00	594.00	1.22	21.76	101.83	-15.30	73.04	74.62	51.64	22.98	3.247			
700.00	700.00	694.00	694.00	1.44	25.76	101.83	-15.30	73.04	74.62	47.42	27.20	2.743			
800.00	800.00	794.00	794.00	1.67	29.76	101.83	-15.30	73.04	74.62	43.19	31.43	2.374			
900.00	900.00	894.00	894.00	1.89	33.76	101.83	-15.30	73.04	74.62	38.97	35.65	2.093			
1,000.00	1,000.00	994.00	994.00	2.12	37.76	101.83	-15.30	73.04	74.62	34.74	39.88	1.871			
1,050.00	1,050.00	1,044.00	1,044.00	2.23	39.76	101.83	-15.30	73.04	74.62	32.63	41.99	1.777	CC		
1,100.00	1,100.00	1,094.00	1,094.00	2.33	41.76	-147.16	-15.30	73.04	74.99	30.90	44.09	1.701			
1,200.00	1,199.93	1,193.93	1,193.93	2.53	45.76	-148.52	-15.30	73.04	77.94	29.70	48.24	1.616	ES		
1,300.00	1,299.68	1,293.68	1,293.68	2.73	49.75	-150.95	-15.30	73.04	83.97	31.64	52.33	1.605	SF		
1,400.00	1,399.13	1,393.13	1,393.13	2.95	53.73	-153.98	-15.30	73.04	93.26	36.92	56.34	1.655			
1,500.00	1,498.15	1,492.15	1,492.15	3.20	57.69	-157.18	-15.30	73.04	105.95	45.72	60.23	1.759			
1,576.99	1,574.02	1,568.02	1,568.02	3.42	60.72	-159.55	-15.30	73.04	118.12	54.98	63.14	1.871			
1,600.00	1,596.64	1,590.64	1,590.64	3.49	61.63	-160.24	-15.30	73.04	122.08	58.01	64.08	1.905			
1,700.00	1,694.96	1,688.96	1,688.96	3.80	65.56	-162.78	-15.30	73.04	139.47	71.32	68.15	2.046			
1,800.00	1,793.27	1,787.27	1,787.27	4.14	69.49	-164.75	-15.30	73.04	157.05	84.82	72.23	2.174			
1,900.00	1,891.58	1,885.58	1,885.58	4.48	73.42	-166.33	-15.30	73.04	174.79	98.46	76.32	2.290			
2,000.00	1,989.90	1,983.90	1,983.90	4.84	77.36	-167.61	-15.30	73.04	192.62	112.21	80.42	2.395			
2,100.00	2,088.21	2,082.21	2,082.21	5.21	81.29	-168.68	-15.30	73.04	210.54	126.02	84.51	2.491			
2,200.00	2,186.52	2,180.52	2,180.52	5.59	85.22	-169.58	-15.30	73.04	228.51	139.90	88.62	2.579			
2,300.00	2,284.83	2,278.83	2,278.83	5.97	89.15	-170.35	-15.30	73.04	246.53	153.81	92.72	2.659			
2,400.00	2,383.15	2,377.15	2,377.15	6.36	93.09	-171.01	-15.30	73.04	264.59	167.77	96.83	2.733			
2,500.00	2,481.46	2,475.46	2,475.46	6.75	97.02	-171.59	-15.30	73.04	282.68	181.75	100.94	2.801			
2,600.00	2,579.77	2,573.77	2,573.77	7.14	100.95	-172.10	-15.30	73.04	300.79	195.75	105.05	2.863			
2,700.00	2,678.09	2,672.09	2,672.09	7.54	104.88	-172.55	-15.30	73.04	318.93	209.77	109.16	2.922			
2,800.00	2,776.40	2,770.40	2,770.40	7.94	108.82	-172.95	-15.30	73.04	337.08	223.81	113.27	2.976			
2,900.00	2,874.71	2,868.71	2,868.71	8.34	112.75	-173.32	-15.30	73.04	355.24	237.86	117.38	3.026			
3,000.00	2,973.02	2,967.02	2,967.02	8.74	116.68	-173.64	-15.30	73.04	373.42	251.92	121.50	3.073			
3,100.00	3,071.34	3,065.34	3,065.34	9.15	120.61	-173.94	-15.30	73.04	391.61	266.00	125.61	3.118			
3,200.00	3,169.65	3,163.65	3,163.65	9.56	124.55	-174.21	-15.30	73.04	409.81	280.08	129.73	3.159			
3,300.00	3,267.96	3,261.96	3,261.96	9.96	128.48	-174.46	-15.30	73.04	428.01	294.17	133.85	3.198			
3,400.00	3,366.27	3,360.27	3,360.27	10.37	132.41	-174.68	-15.30	73.04	446.23	308.26	137.96	3.234			
3,500.00	3,464.59	3,458.59	3,458.59	10.78	136.34	-174.89	-15.30	73.04	464.44	322.36	142.08	3.269			
3,600.00	3,562.90	3,556.90	3,556.90	11.19	140.28	-175.09	-15.30	73.04	482.67	336.47	146.20	3.301			
3,700.00	3,661.21	3,655.21	3,655.21	11.60	144.21	-175.26	-15.30	73.04	500.90	350.58	150.32	3.332			
3,800.00	3,759.53	3,753.53	3,753.53	12.01	148.14	-175.43	-15.30	73.04	519.13	364.69	154.44	3.361			
3,900.00	3,857.84	3,851.84	3,851.84	12.43	152.07	-175.59	-15.30	73.04	537.37	378.81	158.56	3.389			
4,000.00	3,956.15	3,950.15	3,950.15	12.84	156.01	-175.73	-15.30	73.04	555.61	392.93	162.68	3.415			
4,100.00	4,054.46	4,048.46	4,048.46	13.25	159.94	-175.87	-15.30	73.04	573.86	407.05	166.80	3.440			
4,200.00	4,152.78	4,146.78	4,146.78	13.66	163.87	-175.99	-15.30	73.04	592.10	421.18	170.92	3.464			
4,300.00	4,251.09	4,245.09	4,245.09	14.08	167.80	-176.11	-15.30	73.04	610.35	435.31	175.04	3.487			
4,400.00	4,349.40	4,343.40	4,343.40	14.49	171.74	-176.23	-15.30	73.04	628.60	449.44	179.16	3.509			
4,500.00	4,447.72	4,441.72	4,441.72	14.91	175.67	-176.33	-15.30	73.04	646.86	463.57	183.28	3.529			
4,600.00	4,546.03	4,540.03	4,540.03	15.32	179.60	-176.44	-15.30	73.04	665.12	477.71	187.41	3.549			
4,700.00	4,644.34	4,638.34	4,638.34	15.74	183.53	-176.53	-15.30	73.04	683.37	491.85	191.53	3.568			
4,800.00	4,742.65	4,736.65	4,736.65	16.15	187.47	-176.62	-15.30	73.04	701.64	505.98	195.65	3.586			
4,900.00	4,840.97	4,834.97	4,834.97	16.57	191.40	-176.71	-15.30	73.04	719.90	520.12	199.77	3.604			
5,000.00	4,939.28	4,933.28	4,933.28	16.99	195.33	-176.79	-15.30	73.04	738.16	534.27	203.90	3.620			
5,100.00	5,037.59	5,031.59	5,031.59	17.40	199.26	-176.87	-15.30	73.04	756.43	548.41	208.02	3.636			
5,200.00	5,135.91	5,129.91	5,129.91	17.82	203.20	-176.94	-15.30	73.04	774.69	562.55	212.14	3.652			
5,300.00	5,234.22	5,228.22	5,228.22	18.24	207.13	-177.01	-15.30	73.04	792.96	576.70	216.26	3.667			
5,400.00	5,332.53	5,326.53	5,326.53	18.65	211.06	-177.08	-15.30	73.04	811.23	590.84	220.39	3.681			

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

<b>Company:</b>	US ROCKIES REGION PLANNING	<b>Local Co-ordinate Reference:</b>	Well P_KERR-MCGEE 33-3
<b>Project:</b>	COLORADO NORTHERN ZONE - 83	<b>TVD Reference:</b>	WELL @ 5057.00ft (Original Well Elev)
<b>Reference Site:</b>	WELD_KERR MCGEE 19-3 PAD	<b>MD Reference:</b>	WELL @ 5057.00ft (Original Well Elev)
<b>Site Error:</b>	0.00ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	P_KERR-MCGEE 33-3	<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_KERR-MCGEE 33-3	<b>Database:</b>	EDM 2003.21 Single User Db
<b>Reference Design:</b>	PLAN #1 1-15-10 RHS	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design													WELD_KERR MCGEE 19-3 PAD - KERR-MCGEE #19-3i EXISTING - KERR-MCGEE #19-3i EXISTING	Offset Site Error:	0.00 ft
Survey Program: 0-UNKNOWN														Offset Well Error:	0.00 ft
Reference		Offset		Semi Major Axis			Distance						Warning		
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor			
5,500.00	5,430.84	5,424.84	5,424.84	19.07	214.99	-177.14	-15.30	73.04	829.50	604.99	224.51	3.695			
5,600.00	5,529.16	5,523.16	5,523.16	19.49	218.93	-177.20	-15.30	73.04	847.77	619.13	228.63	3.708			
5,700.00	5,627.47	5,621.47	5,621.47	19.90	222.86	-177.26	-15.30	73.04	866.04	633.28	232.76	3.721			
5,800.00	5,725.78	5,719.78	5,719.78	20.32	226.79	-177.32	-15.30	73.04	884.31	647.43	236.88	3.733			
5,900.00	5,824.09	5,818.09	5,818.09	20.74	230.72	-177.37	-15.30	73.04	902.58	661.58	241.00	3.745			
6,000.00	5,922.41	5,916.41	5,916.41	21.16	234.66	-177.43	-15.30	73.04	920.86	675.73	245.13	3.757			
6,100.00	6,020.72	6,014.72	6,014.72	21.57	238.59	-177.48	-15.30	73.04	939.13	689.88	249.25	3.768			
6,200.00	6,119.03	6,113.03	6,113.03	21.99	242.52	-177.52	-15.30	73.04	957.41	704.03	253.37	3.779			
6,300.00	6,217.35	6,211.35	6,211.35	22.41	246.45	-177.57	-15.30	73.04	975.68	718.18	257.50	3.789			
6,400.00	6,315.66	6,309.66	6,309.66	22.83	250.39	-177.62	-15.30	73.04	993.96	732.34	261.62	3.799			
6,500.00	6,413.97	6,407.97	6,407.97	23.25	254.32	-177.66	-15.30	73.04	1,012.24	746.49	265.75	3.809			
6,600.00	6,512.28	6,506.28	6,506.28	23.66	258.25	-177.70	-15.30	73.04	1,030.51	760.64	269.87	3.819			
6,700.00	6,610.60	6,604.60	6,604.60	24.08	262.18	-177.74	-15.30	73.04	1,048.79	774.80	273.99	3.828			
6,800.00	6,708.91	6,702.91	6,702.91	24.50	266.12	-177.78	-15.30	73.04	1,067.07	788.95	278.12	3.837			
6,900.00	6,807.22	6,801.22	6,801.22	24.92	270.05	-177.82	-15.30	73.04	1,085.35	803.11	282.24	3.845			
7,000.00	6,905.54	6,899.54	6,899.54	25.34	273.98	-177.85	-15.30	73.04	1,103.63	817.26	286.37	3.854			
7,093.01	6,996.98	6,990.98	6,990.98	25.73	277.64	-177.88	-15.30	73.04	1,120.63	830.43	290.20	3.862			
7,100.00	7,003.85	6,997.85	6,997.85	25.75	277.91	-177.89	-15.30	73.04	1,121.90	831.30	290.60	3.861			
7,200.00	7,102.50	7,096.50	7,096.50	26.04	281.86	-177.93	-15.30	73.04	1,138.22	841.99	296.23	3.842			
7,300.00	7,201.66	7,195.66	7,195.66	26.28	285.83	-177.96	-15.30	73.04	1,151.09	849.47	301.62	3.816			
7,400.00	7,301.22	7,295.22	7,295.22	26.49	289.81	-177.99	-15.30	73.04	1,160.50	853.82	306.68	3.784			
7,500.00	7,401.03	7,395.03	7,395.03	26.66	293.80	-178.00	-15.30	73.04	1,166.42	855.04	311.39	3.746			
7,600.00	7,501.00	7,495.00	7,495.00	26.79	297.80	-178.01	-15.30	73.04	1,168.86	853.14	315.72	3.702			
7,620.00	7,521.00	7,515.00	7,515.00	26.82	298.60	70.81	-15.30	73.04	1,168.93	852.39	316.55	3.693			
7,700.00	7,601.00	7,595.00	7,595.00	26.91	301.80	70.81	-15.30	73.04	1,168.93	849.04	319.89	3.654			
7,800.00	7,701.00	7,695.00	7,695.00	27.04	305.80	70.81	-15.30	73.04	1,168.93	844.86	324.07	3.607			
7,900.00	7,801.00	7,795.00	7,795.00	27.17	309.80	70.81	-15.30	73.04	1,168.93	840.69	328.25	3.561			
8,000.00	7,901.00	7,895.00	7,895.00	27.29	313.80	70.81	-15.30	73.04	1,168.93	836.51	332.43	3.516			
8,079.00	7,980.00	7,974.00	7,974.00	27.39	316.96	70.81	-15.30	73.04	1,168.93	833.20	335.73	3.482			

<b>Company:</b>	US ROCKIES REGION PLANNING	<b>Local Co-ordinate Reference:</b>	Well P_KERR-MCGEE 33-3
<b>Project:</b>	COLORADO NORTHERN ZONE - 83	<b>TVD Reference:</b>	WELL @ 5057.00ft (Original Well Elev)
<b>Reference Site:</b>	WELD_KERR MCGEE 19-3 PAD	<b>MD Reference:</b>	WELL @ 5057.00ft (Original Well Elev)
<b>Site Error:</b>	0.00ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	P_KERR-MCGEE 33-3	<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_KERR-MCGEE 33-3	<b>Database:</b>	EDM 2003.21 Single User Db
<b>Reference Design:</b>	PLAN #1 1-15-10 RHS	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design													WELD_KERR MCGEE 19-3 PAD - P_KERR-MCGEE 10-3 - P_KERR-MCGEE 10-3 - PLAN #1 1-15-10	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 Tooface (°)	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	141.61	-23.66	18.75	30.19						
100.00	100.00	100.00	100.00	0.10	1.70	141.61	-23.66	18.75	30.19	28.39	1.80	16.813			
200.00	200.00	200.00	200.00	0.32	5.70	141.61	-23.66	18.75	30.19	24.17	6.02	5.015			
300.00	300.00	300.00	300.00	0.55	9.70	141.61	-23.66	18.75	30.19	19.94	10.25	2.947			
400.00	400.00	400.00	400.00	0.77	13.70	141.61	-23.66	18.75	30.19	15.72	14.47	2.086			
500.00	500.00	500.00	500.00	0.99	17.70	141.61	-23.66	18.75	30.19	11.49	18.69	1.615			
600.00	600.00	600.00	600.00	1.22	21.70	141.61	-23.66	18.75	30.19	7.27	22.92	1.317	Level 3		
700.00	700.00	700.00	700.00	1.44	25.70	141.61	-23.66	18.75	30.19	3.04	27.14	1.112	Level 2		
800.00	800.00	800.00	800.00	1.67	29.70	141.61	-23.66	18.75	30.19	-1.18	31.37	0.962	Level 1		
900.00	900.00	900.00	900.00	1.89	33.70	141.61	-23.66	18.75	30.19	-5.40	35.59	0.848	Level 1		
1,000.00	1,000.00	1,000.00	1,000.00	2.12	37.70	141.61	-23.66	18.75	30.19	-9.63	39.82	0.758	Level 1		
1,050.00	1,050.00	1,050.00	1,050.00	2.23	39.70	141.61	-23.66	18.75	30.19	-11.74	41.93	0.720	Level 1, CC		
1,100.00	1,100.00	1,099.71	1,099.71	2.33	40.83	-108.67	-23.61	19.18	30.55	-12.61	43.16	0.708	Level 1, ES, SF		
1,200.00	1,199.93	1,198.79	1,198.72	2.53	41.62	-119.02	-23.18	22.58	34.11	-10.02	44.13	0.773	Level 1		
1,300.00	1,299.68	1,296.81	1,296.50	2.73	42.75	-133.45	-22.33	29.29	43.65	-1.75	45.40	0.961	Level 1		
1,400.00	1,399.13	1,393.10	1,392.28	2.95	44.20	-145.40	-21.09	39.11	60.90	14.04	46.87	1.300	Level 3		
1,500.00	1,498.15	1,487.06	1,485.37	3.20	45.94	-153.37	-19.50	51.76	85.87	37.43	48.44	1.773			
1,576.99	1,574.02	1,557.45	1,554.80	3.42	47.46	-157.45	-18.05	63.22	109.98	60.28	49.70	2.213			
1,600.00	1,596.64	1,578.15	1,575.17	3.49	47.92	-158.46	-17.58	66.91	117.89	67.76	50.13	2.351			
1,700.00	1,694.96	1,666.80	1,662.04	3.80	50.11	-161.69	-15.38	84.37	154.32	102.19	52.12	2.961			
1,800.00	1,793.27	1,753.21	1,746.17	4.14	52.49	-163.71	-12.91	103.95	193.85	139.65	54.20	3.576			
1,900.00	1,891.58	1,837.34	1,827.47	4.48	55.04	-165.04	-10.20	125.42	236.25	179.92	56.33	4.194			
2,000.00	1,989.90	1,919.13	1,905.86	4.84	57.73	-165.96	-7.28	148.55	281.33	222.85	58.48	4.811			
2,100.00	2,088.21	2,000.00	1,982.68	5.21	60.60	-166.62	-4.12	173.60	328.96	268.29	60.67	5.422			
2,200.00	2,186.52	2,075.57	2,053.81	5.59	63.52	-167.09	-0.92	198.94	378.99	316.21	62.78	6.036			
2,300.00	2,284.83	2,150.22	2,123.37	5.97	66.56	-167.44	2.46	225.79	431.31	366.42	64.90	6.646			
2,400.00	2,383.15	2,222.48	2,190.02	6.36	69.65	-167.70	5.96	253.49	485.81	418.85	66.96	7.255			
2,500.00	2,481.46	2,296.43	2,257.52	6.75	72.98	-167.91	9.74	283.45	542.28	473.20	69.09	7.849			
2,600.00	2,579.77	2,378.60	2,332.34	7.14	76.85	-168.10	13.99	317.16	599.24	527.78	71.47	8.385			
2,700.00	2,678.09	2,460.78	2,407.17	7.54	80.81	-168.25	18.25	350.87	656.21	582.33	73.88	8.882			
2,800.00	2,776.40	2,542.96	2,481.99	7.94	84.86	-168.39	22.50	384.58	713.18	636.84	76.34	9.343			
2,900.00	2,874.71	2,625.14	2,556.82	8.34	88.99	-168.50	26.76	418.29	770.14	691.32	78.82	9.770			
3,000.00	2,973.02	2,707.31	2,631.64	8.74	93.18	-168.59	31.01	452.00	827.11	745.77	81.34	10.168			
3,100.00	3,071.34	2,789.49	2,706.46	9.15	97.44	-168.68	35.26	485.71	884.09	800.19	83.90	10.538			
3,200.00	3,169.65	2,871.67	2,781.29	9.56	101.75	-168.75	39.52	519.42	941.06	854.58	86.48	10.882			
3,300.00	3,267.96	2,953.85	2,856.11	9.96	106.11	-168.82	43.77	553.13	998.03	908.95	89.08	11.204			
3,400.00	3,366.27	3,036.02	2,930.94	10.37	110.51	-168.87	48.02	586.84	1,055.01	963.30	91.71	11.504			
3,500.00	3,464.59	3,118.20	3,005.76	10.78	114.94	-168.93	52.28	620.55	1,111.98	1,017.63	94.35	11.785			
3,600.00	3,562.90	3,200.38	3,080.59	11.19	119.40	-168.97	56.53	654.26	1,168.96	1,071.94	97.02	12.049			
3,700.00	3,661.21	3,282.56	3,155.41	11.60	123.90	-169.02	60.79	687.97	1,225.94	1,126.23	99.71	12.296			
3,800.00	3,759.53	3,364.73	3,230.24	12.01	128.42	-169.06	65.04	721.68	1,282.91	1,180.51	102.41	12.528			
3,900.00	3,857.84	3,446.91	3,305.06	12.43	132.96	-169.09	69.29	755.39	1,339.89	1,234.77	105.12	12.746			
4,000.00	3,956.15	3,529.09	3,379.88	12.84	137.52	-169.12	73.55	789.10	1,396.87	1,289.02	107.85	12.952			
4,100.00	4,054.46	3,611.26	3,454.71	13.25	142.10	-169.15	77.80	822.81	1,453.85	1,343.25	110.59	13.146			
4,200.00	4,152.78	3,693.44	3,529.53	13.66	146.70	-169.18	82.05	856.51	1,510.83	1,397.48	113.35	13.329			
4,300.00	4,251.09	3,775.62	3,604.36	14.08	151.31	-169.21	86.31	890.22	1,567.80	1,451.69	116.12	13.502			
4,400.00	4,349.40	3,857.80	3,679.18	14.49	155.94	-169.23	90.56	923.93	1,624.78	1,505.89	118.89	13.666			
4,500.00	4,447.72	3,939.97	3,754.01	14.91	160.58	-169.25	94.82	957.64	1,681.76	1,560.08	121.68	13.821			
4,600.00	4,546.03	4,022.15	3,828.83	15.32	165.23	-169.28	99.07	991.35	1,738.74	1,614.27	124.47	13.969			
4,700.00	4,644.34	4,104.33	3,903.65	15.74	169.89	-169.30	103.32	1,025.06	1,795.72	1,668.44	127.28	14.109			
4,800.00	4,742.65	4,186.51	3,978.48	16.15	174.57	-169.31	107.58	1,058.77	1,852.70	1,722.61	130.09	14.242			
4,900.00	4,840.97	4,268.68	4,053.30	16.57	179.25	-169.33	111.83	1,092.48	1,909.68	1,776.77	132.91	14.369			

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

<b>Company:</b>	US ROCKIES REGION PLANNING	<b>Local Co-ordinate Reference:</b>	Well P_KERR-MCGEE 33-3
<b>Project:</b>	COLORADO NORTHERN ZONE - 83	<b>TVD Reference:</b>	WELL @ 5057.00ft (Original Well Elev)
<b>Reference Site:</b>	WELD_KERR MCGEE 19-3 PAD	<b>MD Reference:</b>	WELL @ 5057.00ft (Original Well Elev)
<b>Site Error:</b>	0.00ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	P_KERR-MCGEE 33-3	<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_KERR-MCGEE 33-3	<b>Database:</b>	EDM 2003.21 Single User Db
<b>Reference Design:</b>	PLAN #1 1-15-10 RHS	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design													WELD_KERR MCGEE 19-3 PAD - P_KERR-MCGEE 10-3 - P_KERR-MCGEE 10-3 - PLAN #1 1-15-10	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 Tooface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor			
5,000.00	4,939.28	4,350.86	4,128.13	16.99	183.94	-169.35	116.08	1,126.19	1,966.66	1,830.93	135.73	14.489			
5,100.00	5,037.59	4,433.04	4,202.95	17.40	188.64	-169.36	120.34	1,159.90	2,023.64	1,885.07	138.56	14.604			
5,200.00	5,135.91	4,515.22	4,277.78	17.82	193.34	-169.38	124.59	1,193.61	2,080.62	1,939.22	141.40	14.714			
5,300.00	5,234.22	4,597.39	4,352.60	18.24	198.05	-169.39	128.85	1,227.32	2,137.60	1,993.35	144.25	14.819			
5,400.00	5,332.53	4,679.57	4,427.42	18.65	202.77	-169.40	133.10	1,261.03	2,194.58	2,047.48	147.10	14.919			
5,500.00	5,430.84	4,761.75	4,502.25	19.07	207.49	-169.42	137.35	1,294.74	2,251.56	2,101.61	149.95	15.015			
5,600.00	5,529.16	4,843.93	4,577.07	19.49	212.22	-169.43	141.61	1,328.45	2,308.54	2,155.73	152.81	15.107			
5,700.00	5,627.47	4,926.10	4,651.90	19.90	216.96	-169.44	145.86	1,362.16	2,365.52	2,209.84	155.67	15.195			
5,800.00	5,725.78	5,008.28	4,726.72	20.32	221.70	-169.45	150.11	1,395.87	2,422.50	2,263.96	158.54	15.280			
5,900.00	5,824.09	5,090.46	4,801.55	20.74	226.44	-169.46	154.37	1,429.58	2,479.48	2,318.06	161.41	15.361			
6,000.00	5,922.41	5,172.64	4,876.37	21.16	231.19	-169.47	158.62	1,463.29	2,536.46	2,372.17	164.29	15.439			
6,100.00	6,020.72	5,254.81	4,951.20	21.57	235.94	-169.48	162.88	1,497.00	2,593.44	2,426.27	167.17	15.514			
6,200.00	6,119.03	5,336.99	5,026.02	21.99	240.69	-169.49	167.13	1,530.71	2,650.42	2,480.36	170.05	15.586			
6,300.00	6,217.35	5,419.17	5,100.84	22.41	245.45	-169.50	171.38	1,564.42	2,707.40	2,534.46	172.94	15.655			
6,400.00	6,315.66	5,501.35	5,175.67	22.83	250.21	-169.51	175.64	1,598.13	2,764.38	2,588.55	175.83	15.722			
6,500.00	6,413.97	5,583.52	5,250.49	23.25	254.98	-169.51	179.89	1,631.84	2,821.36	2,642.64	178.72	15.786			
6,600.00	6,512.28	5,665.70	5,325.32	23.66	259.75	-169.52	184.14	1,665.55	2,878.34	2,696.72	181.62	15.848			
6,700.00	6,610.60	5,747.88	5,400.14	24.08	264.52	-169.53	188.40	1,699.26	2,935.32	2,750.80	184.52	15.908			
6,800.00	6,708.91	5,830.06	5,474.97	24.50	269.29	-169.53	192.65	1,732.97	2,992.30	2,804.88	187.42	15.966			
6,900.00	6,807.22	5,912.23	5,549.79	24.92	274.07	-169.54	196.91	1,766.68	3,049.28	2,858.96	190.32	16.022			
7,000.00	6,905.54	5,994.41	5,624.61	25.34	278.84	-169.55	201.16	1,800.39	3,106.26	2,913.03	193.23	16.076			
7,093.01	6,996.98	6,070.84	5,694.21	25.73	283.29	-169.55	205.12	1,831.74	3,159.26	2,963.32	195.93	16.124			
7,100.00	7,003.85	6,076.59	5,699.44	25.75	283.63	-169.57	205.41	1,834.10	3,163.24	2,966.86	196.37	16.108			
7,200.00	7,102.50	6,159.87	5,775.27	26.04	288.47	-169.81	209.72	1,868.26	3,218.59	3,015.92	202.67	15.881			
7,300.00	7,201.66	6,244.99	5,852.77	26.28	293.43	-170.01	214.13	1,903.18	3,271.06	3,061.94	209.12	15.642			
7,400.00	7,301.22	7,746.07	7,301.22	26.49	358.04	-170.12	255.47	2,230.82	3,318.55	3,053.59	264.97	12.524			
7,500.00	7,401.03	7,845.89	7,401.03	26.66	358.94	-170.15	255.47	2,230.82	3,324.40	3,054.54	269.86	12.319			
7,600.00	7,501.00	7,945.85	7,501.00	26.79	359.88	-170.17	255.47	2,230.82	3,326.80	3,052.34	274.46	12.121			
7,620.00	7,521.00	7,965.85	7,521.00	26.82	360.07	78.64	255.47	2,230.82	3,326.87	3,051.52	275.35	12.082			
7,700.00	7,601.00	8,045.85	7,601.00	26.91	360.87	78.64	255.47	2,230.82	3,326.87	3,050.32	276.55	12.030			
7,800.00	7,701.00	8,145.85	7,701.00	27.04	361.89	78.64	255.47	2,230.82	3,326.87	3,048.77	278.10	11.963			
7,900.00	7,801.00	8,245.85	7,801.00	27.17	362.96	78.64	255.47	2,230.82	3,326.87	3,047.17	279.70	11.894			
8,000.00	7,901.00	8,345.85	7,901.00	27.29	364.07	78.64	255.47	2,230.82	3,326.87	3,045.51	281.36	11.824			
8,079.00	7,980.00	8,424.85	7,980.00	27.39	364.97	78.64	255.47	2,230.82	3,326.87	3,044.17	282.71	11.768			

<b>Company:</b>	US ROCKIES REGION PLANNING	<b>Local Co-ordinate Reference:</b>	Well P_KERR-MCGEE 33-3
<b>Project:</b>	COLORADO NORTHERN ZONE - 83	<b>TVD Reference:</b>	WELL @ 5057.00ft (Original Well Elev)
<b>Reference Site:</b>	WELD_KERR MCGEE 19-3 PAD	<b>MD Reference:</b>	WELL @ 5057.00ft (Original Well Elev)
<b>Site Error:</b>	0.00ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	P_KERR-MCGEE 33-3	<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_KERR-MCGEE 33-3	<b>Database:</b>	EDM 2003.21 Single User Db
<b>Reference Design:</b>	PLAN #1 1-15-10 RHS	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design												WELD_KERR MCGEE 19-3 PAD - P_KERR-MCGEE 11-3 - P_KERR-MCGEE 11-3 - PLAN #1 1-15-10	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 Tooface (°)	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	142.47	-8.01	6.16	10.11					
100.00	100.00	100.00	100.00	0.10	0.10	142.47	-8.01	6.16	10.11	9.91	0.19	52.896		
200.00	200.00	200.00	200.00	0.32	0.32	142.47	-8.01	6.16	10.11	9.47	0.64	15.776		
300.00	300.00	300.00	300.00	0.55	0.55	142.47	-8.01	6.16	10.11	9.02	1.09	9.270		
400.00	400.00	400.00	400.00	0.77	0.77	142.47	-8.01	6.16	10.11	8.57	1.54	6.564		
500.00	500.00	500.00	500.00	0.99	0.99	142.47	-8.01	6.16	10.11	8.12	1.99	5.080		
600.00	600.00	600.00	600.00	1.22	1.22	142.47	-8.01	6.16	10.11	7.67	2.44	4.144		
700.00	700.00	700.00	700.00	1.44	1.44	142.47	-8.01	6.16	10.11	7.22	2.89	3.499		
800.00	800.00	800.00	800.00	1.67	1.67	142.47	-8.01	6.16	10.11	6.77	3.34	3.028		
900.00	900.00	900.00	900.00	1.89	1.89	142.47	-8.01	6.16	10.11	6.32	3.79	2.668		
1,000.00	1,000.00	1,000.00	1,000.00	2.12	2.12	142.47	-8.01	6.16	10.11	5.87	4.24	2.385		
1,050.00	1,050.00	1,050.00	1,050.00	2.23	2.23	142.47	-8.01	6.16	10.11	5.64	4.46	2.265 CC, ES		
1,100.00	1,100.00	1,099.92	1,099.92	2.33	2.34	-110.88	-7.89	6.57	10.41	5.74	4.67	2.229 SF		
1,200.00	1,199.93	1,199.41	1,199.34	2.53	2.55	-136.74	-6.88	9.88	14.61	9.55	5.06	2.886		
1,300.00	1,299.68	1,297.81	1,297.50	2.73	2.76	-156.53	-4.89	16.40	26.67	21.22	5.45	4.894		
1,400.00	1,399.13	1,394.46	1,393.63	2.95	2.99	-165.64	-1.98	25.94	46.53	40.70	5.83	7.979		
1,500.00	1,498.15	1,488.71	1,487.00	3.20	3.23	-170.00	1.77	38.22	73.43	67.22	6.21	11.826		
1,576.99	1,574.02	1,559.29	1,556.61	3.42	3.42	-171.90	5.17	49.34	98.63	92.14	6.49	15.189		
1,600.00	1,596.64	1,580.32	1,577.30	3.49	3.48	-172.35	6.27	52.96	106.80	100.21	6.59	16.212		
1,700.00	1,694.96	1,673.69	1,669.12	3.80	3.77	-173.73	11.22	69.16	142.49	135.49	7.01	20.335		
1,800.00	1,793.27	1,767.06	1,760.94	4.14	4.08	-174.56	16.16	85.36	178.23	170.79	7.43	23.972		
1,900.00	1,891.58	1,860.43	1,852.76	4.48	4.39	-175.11	21.11	101.56	213.99	206.12	7.87	27.191		
2,000.00	1,989.90	1,953.81	1,944.59	4.84	4.72	-175.51	26.06	117.76	249.76	241.44	8.31	30.053		
2,100.00	2,088.21	2,047.18	2,036.41	5.21	5.05	-175.80	31.00	133.96	285.53	276.78	8.76	32.610		
2,200.00	2,186.52	2,140.55	2,128.23	5.59	5.39	-176.03	35.95	150.16	321.31	312.11	9.21	34.902		
2,300.00	2,284.83	2,233.92	2,220.06	5.97	5.74	-176.22	40.89	166.37	357.10	347.44	9.66	36.968		
2,400.00	2,383.15	2,327.29	2,311.88	6.36	6.09	-176.37	45.84	182.57	392.89	382.77	10.12	38.836		
2,500.00	2,481.46	2,420.67	2,403.70	6.75	6.44	-176.49	50.78	198.77	428.68	418.10	10.58	40.533		
2,600.00	2,579.77	2,514.04	2,495.52	7.14	6.80	-176.60	55.73	214.97	464.47	453.43	11.04	42.079		
2,700.00	2,678.09	2,607.41	2,587.35	7.54	7.16	-176.69	60.68	231.17	500.26	488.76	11.50	43.493		
2,800.00	2,776.40	2,700.78	2,679.17	7.94	7.52	-176.77	65.62	247.37	536.06	524.09	11.97	44.790		
2,900.00	2,874.71	2,794.15	2,770.99	8.34	7.89	-176.84	70.57	263.57	571.85	559.42	12.44	45.984		
3,000.00	2,973.02	2,887.53	2,862.81	8.74	8.25	-176.90	75.51	279.77	607.65	594.74	12.91	47.086		
3,100.00	3,071.34	2,980.90	2,954.64	9.15	8.62	-176.95	80.46	295.97	643.45	630.07	13.38	48.105		
3,200.00	3,169.65	3,074.27	3,046.46	9.56	8.99	-177.00	85.40	312.17	679.24	665.39	13.85	49.052		
3,300.00	3,267.96	3,167.64	3,138.28	9.96	9.35	-177.04	90.35	328.37	715.04	700.72	14.32	49.932		
3,400.00	3,366.27	3,261.01	3,230.10	10.37	9.72	-177.08	95.30	344.57	750.84	736.04	14.79	50.753		
3,500.00	3,464.59	3,354.39	3,321.93	10.78	10.10	-177.12	100.24	360.78	786.63	771.37	15.27	51.520		
3,600.00	3,562.90	3,447.76	3,413.75	11.19	10.47	-177.15	105.19	376.98	822.43	806.69	15.74	52.238		
3,700.00	3,661.21	3,541.13	3,505.57	11.60	10.84	-177.18	110.13	393.18	858.23	842.01	16.22	52.912		
3,800.00	3,759.53	3,634.50	3,597.40	12.01	11.21	-177.21	115.08	409.38	894.03	877.33	16.70	53.545		
3,900.00	3,857.84	3,727.87	3,689.22	12.43	11.59	-177.23	120.02	425.58	929.83	912.65	17.17	54.141		
4,000.00	3,956.15	3,821.25	3,781.04	12.84	11.96	-177.26	124.97	441.78	965.62	947.97	17.65	54.703		
4,100.00	4,054.46	3,914.62	3,872.86	13.25	12.34	-177.28	129.92	457.98	1,001.42	983.29	18.13	55.234		
4,200.00	4,152.78	4,007.99	3,964.69	13.66	12.71	-177.30	134.86	474.18	1,037.22	1,018.61	18.61	55.736		
4,300.00	4,251.09	4,101.36	4,056.51	14.08	13.09	-177.32	139.81	490.38	1,073.02	1,053.93	19.09	56.212		
4,400.00	4,349.40	4,194.73	4,148.33	14.49	13.46	-177.34	144.75	506.58	1,108.82	1,089.25	19.57	56.663		
4,500.00	4,447.72	4,288.11	4,240.15	14.91	13.84	-177.35	149.70	522.78	1,144.62	1,124.57	20.05	57.092		
4,600.00	4,546.03	4,381.48	4,331.98	15.32	14.22	-177.37	154.64	538.98	1,180.42	1,159.89	20.53	57.499		
4,700.00	4,644.34	4,474.85	4,423.80	15.74	14.59	-177.38	159.59	555.19	1,216.22	1,195.21	21.01	57.887		
4,800.00	4,742.65	4,568.22	4,515.62	16.15	14.97	-177.40	164.54	571.39	1,252.02	1,230.52	21.49	58.257		
4,900.00	4,840.97	4,661.60	4,607.45	16.57	15.35	-177.41	169.48	587.59	1,287.82	1,265.84	21.97	58.610		

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

<b>Company:</b>	US ROCKIES REGION PLANNING	<b>Local Co-ordinate Reference:</b>	Well P_KERR-MCGEE 33-3
<b>Project:</b>	COLORADO NORTHERN ZONE - 83	<b>TVD Reference:</b>	WELL @ 5057.00ft (Original Well Elev)
<b>Reference Site:</b>	WELD_KERR MCGEE 19-3 PAD	<b>MD Reference:</b>	WELL @ 5057.00ft (Original Well Elev)
<b>Site Error:</b>	0.00ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	P_KERR-MCGEE 33-3	<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_KERR-MCGEE 33-3	<b>Database:</b>	EDM 2003.21 Single User Db
<b>Reference Design:</b>	PLAN #1 1-15-10 RHS	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design												WELD_KERR MCGEE 19-3 PAD - P_KERR-MCGEE 11-3 - P_KERR-MCGEE 11-3 - PLAN #1 1-15-10	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 Tooface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)		Separation Factor	
5,000.00	4,939.28	4,754.97	4,699.27	16.99	15.73	-177.42	174.43	603.79	1,323.61	1,301.16	22.45	58.947		
5,100.00	5,037.59	4,848.34	4,791.09	17.40	16.10	-177.43	179.37	619.99	1,359.41	1,336.48	22.94	59.269		
5,200.00	5,135.91	4,941.71	4,882.91	17.82	16.48	-177.45	184.32	636.19	1,395.21	1,371.80	23.42	59.578		
5,300.00	5,234.22	5,035.08	4,974.74	18.24	16.86	-177.46	189.26	652.39	1,431.01	1,407.11	23.90	59.873		
5,400.00	5,332.53	5,128.46	5,066.56	18.65	17.24	-177.47	194.21	668.59	1,466.81	1,442.43	24.38	60.156		
5,500.00	5,430.84	5,221.83	5,158.38	19.07	17.62	-177.48	199.15	684.79	1,502.61	1,477.75	24.87	60.428		
5,600.00	5,529.16	5,315.20	5,250.20	19.49	18.00	-177.49	204.10	700.99	1,538.41	1,513.06	25.35	60.689		
5,700.00	5,627.47	5,408.57	5,342.03	19.90	18.38	-177.49	209.05	717.19	1,574.21	1,548.38	25.83	60.940		
5,800.00	5,725.78	5,501.94	5,433.85	20.32	18.76	-177.50	213.99	733.40	1,610.01	1,583.70	26.32	61.181		
5,900.00	5,824.09	5,595.32	5,525.67	20.74	19.13	-177.51	218.94	749.60	1,645.81	1,619.01	26.80	61.413		
6,000.00	5,922.41	5,688.69	5,617.50	21.16	19.51	-177.52	223.88	765.80	1,681.61	1,654.33	27.28	61.637		
6,100.00	6,020.72	5,782.06	5,709.32	21.57	19.89	-177.53	228.83	782.00	1,717.41	1,689.64	27.77	61.852		
6,200.00	6,119.03	5,875.43	5,801.14	21.99	20.27	-177.53	233.77	798.20	1,753.21	1,724.96	28.25	62.060		
6,300.00	6,217.35	5,968.80	5,892.96	22.41	20.65	-177.54	238.72	814.40	1,789.01	1,760.28	28.73	62.260		
6,400.00	6,315.66	6,062.18	5,984.79	22.83	21.03	-177.55	243.67	830.60	1,824.81	1,795.59	29.22	62.454		
6,500.00	6,413.97	6,326.60	6,246.66	23.25	21.74	-177.57	254.16	864.99	1,856.33	1,826.35	29.98	61.912		
6,600.00	6,512.28	6,592.58	6,512.28	23.66	22.18	-177.63	257.57	876.15	1,878.72	1,848.02	30.70	61.200		
6,700.00	6,610.60	6,690.89	6,610.60	24.08	22.32	-177.65	257.57	876.15	1,897.00	1,865.85	31.14	60.915		
6,800.00	6,708.91	6,789.20	6,708.91	24.50	22.46	-177.67	257.57	876.15	1,915.27	1,883.69	31.59	60.636		
6,900.00	6,807.22	6,887.51	6,807.22	24.92	22.60	-177.69	257.57	876.15	1,933.55	1,901.52	32.03	60.362		
7,000.00	6,905.54	6,985.83	6,905.54	25.34	22.74	-177.72	257.57	876.15	1,951.83	1,919.35	32.48	60.095		
7,093.01	6,996.98	7,077.27	6,996.98	25.73	22.87	-177.74	257.57	876.15	1,968.83	1,935.93	32.90	59.851		
7,100.00	7,003.85	7,084.14	7,003.85	25.75	22.88	-177.74	257.57	876.15	1,970.10	1,937.16	32.94	59.812		
7,200.00	7,102.50	7,182.79	7,102.50	26.04	23.02	-177.77	257.57	876.15	1,986.42	1,952.91	33.51	59.285		
7,300.00	7,201.66	7,281.96	7,201.66	26.28	23.17	-177.79	257.57	876.15	1,999.29	1,965.26	34.03	58.754		
7,400.00	7,301.22	7,381.51	7,301.22	26.49	23.32	-177.81	257.57	876.15	2,008.69	1,974.19	34.50	58.217		
7,500.00	7,401.03	7,481.33	7,401.03	26.66	23.47	-177.82	257.57	876.15	2,014.62	1,979.69	34.93	57.675		
7,600.00	7,501.00	7,581.29	7,501.00	26.79	23.62	-177.83	257.57	876.15	2,017.06	1,981.75	35.31	57.127		
7,620.00	7,521.00	7,601.29	7,521.00	26.82	23.65	70.99	257.57	876.15	2,017.13	1,981.75	35.38	57.014		
7,700.00	7,601.00	7,681.29	7,601.00	26.91	23.77	70.99	257.57	876.15	2,017.13	1,981.44	35.68	56.529		
7,800.00	7,701.00	7,781.29	7,701.00	27.04	23.92	70.99	257.57	876.15	2,017.13	1,981.07	36.06	55.939		
7,900.00	7,801.00	7,881.29	7,801.00	27.17	24.08	70.99	257.57	876.15	2,017.13	1,980.69	36.44	55.358		
8,000.00	7,901.00	7,981.29	7,901.00	27.29	24.23	70.99	257.57	876.15	2,017.13	1,980.31	36.82	54.787		
8,079.00	7,980.00	8,060.29	7,980.00	27.39	24.35	70.99	257.57	876.15	2,017.13	1,980.01	37.12	54.342		

<b>Company:</b>	US ROCKIES REGION PLANNING	<b>Local Co-ordinate Reference:</b>	Well P_KERR-MCGEE 33-3
<b>Project:</b>	COLORADO NORTHERN ZONE - 83	<b>TVD Reference:</b>	WELL @ 5057.00ft (Original Well Elev)
<b>Reference Site:</b>	WELD_KERR MCGEE 19-3 PAD	<b>MD Reference:</b>	WELL @ 5057.00ft (Original Well Elev)
<b>Site Error:</b>	0.00ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	P_KERR-MCGEE 33-3	<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_KERR-MCGEE 33-3	<b>Database:</b>	EDM 2003.21 Single User Db
<b>Reference Design:</b>	PLAN #1 1-15-10 RHS	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design													WELD_KERR MCGEE 19-3 PAD - P_KERR-MCGEE 12-3 - P_KERR-MCGEE 12-3 - PLAN #1 1-15-10	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 Tooface (°)	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	-39.41	15.66	-12.87	20.27						
100.00	100.00	100.00	100.00	0.10	0.10	-39.41	15.66	-12.87	20.27	20.08	0.19	106.121			
200.00	200.00	200.00	200.00	0.32	0.32	-39.41	15.66	-12.87	20.27	19.63	0.64	31.650			
300.00	300.00	300.00	300.00	0.55	0.55	-39.41	15.66	-12.87	20.27	19.18	1.09	18.599			
400.00	400.00	400.00	400.00	0.77	0.77	-39.41	15.66	-12.87	20.27	18.73	1.54	13.168			
500.00	500.00	500.00	500.00	0.99	0.99	-39.41	15.66	-12.87	20.27	18.29	1.99	10.192			
600.00	600.00	600.00	600.00	1.22	1.22	-39.41	15.66	-12.87	20.27	17.84	2.44	8.314			
700.00	700.00	700.00	700.00	1.44	1.44	-39.41	15.66	-12.87	20.27	17.39	2.89	7.020			
800.00	800.00	800.00	800.00	1.67	1.67	-39.41	15.66	-12.87	20.27	16.94	3.34	6.074			
900.00	900.00	900.00	900.00	1.89	1.89	-39.41	15.66	-12.87	20.27	16.49	3.79	5.353			
1,000.00	1,000.00	1,000.00	1,000.00	2.12	2.12	-39.41	15.66	-12.87	20.27	16.04	4.24	4.785			
1,050.00	1,050.00	1,050.00	1,050.00	2.23	2.23	-39.41	15.66	-12.87	20.27	15.81	4.46	4.544 CC, ES			
1,100.00	1,100.00	1,099.67	1,099.67	2.33	2.34	72.48	15.88	-13.25	20.54	15.87	4.67	4.397 SF			
1,200.00	1,199.93	1,198.94	1,198.87	2.53	2.55	77.54	17.57	-16.24	22.80	17.73	5.07	4.494			
1,300.00	1,299.68	1,298.02	1,297.71	2.73	2.77	85.03	20.95	-22.21	27.72	22.23	5.50	5.045			
1,400.00	1,399.13	1,397.45	1,396.70	2.95	3.00	93.29	25.55	-30.33	34.94	29.00	5.95	5.878			
1,500.00	1,498.15	1,496.86	1,495.67	3.20	3.24	103.03	30.20	-38.53	43.38	36.96	6.43	6.750			
1,576.99	1,574.02	1,573.18	1,571.64	3.42	3.43	110.66	33.77	-44.83	51.29	44.47	6.81	7.527			
1,600.00	1,596.64	1,595.95	1,594.31	3.49	3.49	112.84	34.83	-46.71	53.92	46.99	6.93	7.778			
1,700.00	1,694.96	1,694.92	1,692.83	3.80	3.74	120.21	39.46	-54.88	66.04	58.59	7.45	8.862			
1,800.00	1,793.27	1,793.89	1,791.35	4.14	4.00	125.24	44.08	-63.05	78.91	70.93	7.98	9.889			
1,900.00	1,891.58	1,892.85	1,889.87	4.48	4.26	128.85	48.71	-71.22	92.21	83.69	8.51	10.830			
2,000.00	1,989.90	1,991.82	1,988.39	4.84	4.52	131.55	53.34	-79.38	105.77	96.72	9.05	11.683			
2,100.00	2,088.21	2,090.79	2,086.92	5.21	4.78	133.63	57.96	-87.55	119.52	109.92	9.60	12.452			
2,200.00	2,186.52	2,189.76	2,185.44	5.59	5.05	135.28	62.59	-95.72	133.39	123.24	10.15	13.145			
2,300.00	2,284.83	2,288.73	2,283.96	5.97	5.32	136.61	67.22	-103.89	147.34	136.64	10.70	13.770			
2,400.00	2,383.15	2,387.70	2,382.48	6.36	5.59	137.72	71.84	-112.06	161.37	150.11	11.26	14.336			
2,500.00	2,481.46	2,486.66	2,481.00	6.75	5.86	138.65	76.47	-120.23	175.44	163.62	11.81	14.850			
2,600.00	2,579.77	2,585.63	2,579.53	7.14	6.13	139.44	81.10	-128.40	189.55	177.17	12.38	15.317			
2,700.00	2,678.09	2,684.60	2,678.05	7.54	6.40	140.12	85.72	-136.56	203.69	190.75	12.94	15.744			
2,800.00	2,776.40	2,783.57	2,776.57	7.94	6.67	140.71	90.35	-144.73	217.85	204.35	13.50	16.134			
2,900.00	2,874.71	2,882.54	2,875.09	8.34	6.95	141.23	94.98	-152.90	232.04	217.97	14.07	16.494			
3,000.00	2,973.02	2,981.50	2,973.61	8.74	7.22	141.70	99.60	-161.07	246.24	231.60	14.64	16.824			
3,100.00	3,071.34	3,080.47	3,072.14	9.15	7.50	142.11	104.23	-169.24	260.45	245.25	15.20	17.130			
3,200.00	3,169.65	3,179.44	3,170.66	9.56	7.77	142.47	108.86	-177.41	274.68	258.91	15.77	17.413			
3,300.00	3,267.96	3,278.41	3,269.18	9.96	8.05	142.81	113.48	-185.58	288.92	272.57	16.35	17.676			
3,400.00	3,366.27	3,377.38	3,367.70	10.37	8.33	143.11	118.11	-193.74	303.16	286.25	16.92	17.921			
3,500.00	3,464.59	3,476.35	3,466.22	10.78	8.60	143.38	122.74	-201.91	317.42	299.93	17.49	18.149			
3,600.00	3,562.90	3,575.31	3,564.75	11.19	8.88	143.63	127.36	-210.08	331.68	313.61	18.06	18.362			
3,700.00	3,661.21	3,674.28	3,663.27	11.60	9.16	143.86	131.99	-218.25	345.94	327.30	18.64	18.562			
3,800.00	3,759.53	3,773.25	3,761.79	12.01	9.44	144.07	136.62	-226.42	360.21	341.00	19.21	18.750			
3,900.00	3,857.84	3,872.22	3,860.31	12.43	9.72	144.26	141.24	-234.59	374.49	354.70	19.79	18.926			
4,000.00	3,956.15	3,971.19	3,958.83	12.84	9.99	144.45	145.87	-242.76	388.76	368.40	20.36	19.092			
4,100.00	4,054.46	4,070.15	4,057.35	13.25	10.27	144.61	150.49	-250.92	403.05	382.11	20.94	19.249			
4,200.00	4,152.78	4,169.12	4,155.88	13.66	10.55	144.77	155.12	-259.09	417.33	395.82	21.51	19.397			
4,300.00	4,251.09	4,268.09	4,254.40	14.08	10.83	144.92	159.75	-267.26	431.62	409.53	22.09	19.538			
4,400.00	4,349.40	4,367.06	4,352.92	14.49	11.11	145.05	164.37	-275.43	445.91	423.24	22.67	19.670			
4,500.00	4,447.72	4,466.03	4,451.44	14.91	11.39	145.18	169.00	-283.60	460.20	436.96	23.25	19.796			
4,600.00	4,546.03	4,565.00	4,549.96	15.32	11.67	145.30	173.63	-291.77	474.50	450.67	23.82	19.916			
4,700.00	4,644.34	4,663.96	4,648.49	15.74	11.95	145.42	178.25	-299.94	488.80	464.39	24.40	20.030			
4,800.00	4,742.65	4,762.93	4,747.01	16.15	12.23	145.52	182.88	-308.10	503.09	478.11	24.98	20.139			
4,900.00	4,840.97	4,861.90	4,845.53	16.57	12.51	145.62	187.51	-316.27	517.39	491.83	25.56	20.242			

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

<b>Company:</b>	US ROCKIES REGION PLANNING	<b>Local Co-ordinate Reference:</b>	Well P_KERR-MCGEE 33-3
<b>Project:</b>	COLORADO NORTHERN ZONE - 83	<b>TVD Reference:</b>	WELL @ 5057.00ft (Original Well Elev)
<b>Reference Site:</b>	WELD_KERR MCGEE 19-3 PAD	<b>MD Reference:</b>	WELL @ 5057.00ft (Original Well Elev)
<b>Site Error:</b>	0.00ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	P_KERR-MCGEE 33-3	<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_KERR-MCGEE 33-3	<b>Database:</b>	EDM 2003.21 Single User Db
<b>Reference Design:</b>	PLAN #1 1-15-10 RHS	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design													WELD_KERR MCGEE 19-3 PAD - P_KERR-MCGEE 12-3 - P_KERR-MCGEE 12-3 - PLAN #1 1-15-10	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	4,939.28	4,960.87	4,944.05	16.99	12.79	145.72	192.13	-324.44	531.70	505.56	26.14	20.341			
5,100.00	5,037.59	5,059.84	5,042.57	17.40	13.07	145.81	196.76	-332.61	546.00	519.28	26.72	20.435			
5,200.00	5,135.91	5,158.80	5,141.10	17.82	13.35	145.90	201.39	-340.78	560.30	533.01	27.30	20.525			
5,300.00	5,234.22	5,257.77	5,239.62	18.24	13.63	145.98	206.01	-348.95	574.61	546.73	27.88	20.612			
5,400.00	5,332.53	5,356.74	5,338.14	18.65	13.91	146.06	210.64	-357.12	588.92	560.46	28.46	20.695			
5,500.00	5,430.84	5,455.71	5,436.66	19.07	14.19	146.13	215.27	-365.28	603.23	574.19	29.04	20.774			
5,600.00	5,529.16	5,554.68	5,535.18	19.49	14.47	146.20	219.89	-373.45	617.53	587.92	29.62	20.850			
5,700.00	5,627.47	5,653.65	5,633.71	19.90	14.75	146.27	224.52	-381.62	631.84	601.65	30.20	20.923			
5,800.00	5,725.78	5,752.61	5,732.23	20.32	15.04	146.33	229.15	-389.79	646.15	615.38	30.78	20.994			
5,900.00	5,824.09	5,851.58	5,830.75	20.74	15.32	146.39	233.77	-397.96	660.47	629.11	31.36	21.061			
6,000.00	5,922.41	5,950.55	5,929.27	21.16	15.60	146.45	238.40	-406.13	674.78	642.84	31.94	21.126			
6,100.00	6,020.72	6,049.52	6,027.79	21.57	15.88	146.51	243.03	-414.29	689.09	656.57	32.52	21.189			
6,200.00	6,119.03	6,148.49	6,126.32	21.99	16.16	146.56	247.65	-422.46	703.40	670.30	33.10	21.250			
6,300.00	6,217.35	6,247.46	6,224.84	22.41	16.44	146.62	252.28	-430.63	717.72	684.03	33.68	21.308			
6,400.00	6,315.66	6,344.33	6,321.35	22.83	16.67	146.74	256.35	-437.81	732.14	697.94	34.20	21.408			
6,500.00	6,413.97	6,440.26	6,417.15	23.25	16.84	147.10	258.84	-442.21	746.94	712.30	34.64	21.565			
6,600.00	6,512.28	6,535.67	6,512.54	23.66	17.00	147.68	259.74	-443.80	762.19	727.17	35.02	21.765			
6,700.00	6,610.60	6,633.73	6,610.60	24.08	17.17	148.39	259.75	-443.81	777.78	742.39	35.39	21.978			
6,800.00	6,708.91	6,732.04	6,708.91	24.50	17.35	149.08	259.75	-443.81	793.49	757.71	35.77	22.182			
6,900.00	6,807.22	6,830.36	6,807.22	24.92	17.53	149.75	259.75	-443.81	809.30	773.15	36.16	22.384			
7,000.00	6,905.54	6,928.67	6,905.54	25.34	17.72	150.38	259.75	-443.81	825.22	788.68	36.54	22.583			
7,093.01	6,996.98	7,020.11	6,996.98	25.73	17.89	150.95	259.75	-443.81	840.11	803.21	36.90	22.766			
7,100.00	7,003.85	7,026.98	7,003.85	25.75	17.90	151.01	259.75	-443.81	841.23	804.30	36.93	22.778			
7,200.00	7,102.50	7,125.64	7,102.50	26.04	18.08	151.67	259.75	-443.81	855.60	818.28	37.32	22.926			
7,300.00	7,201.66	7,224.80	7,201.66	26.28	18.27	152.18	259.75	-443.81	866.99	829.30	37.69	23.005			
7,400.00	7,301.22	7,324.35	7,301.22	26.49	18.46	152.55	259.75	-443.81	875.33	837.31	38.03	23.017			
7,500.00	7,401.03	7,424.17	7,401.03	26.66	18.65	152.78	259.75	-443.81	880.60	842.26	38.35	22.965			
7,600.00	7,501.00	7,524.13	7,501.00	26.79	18.84	152.87	259.75	-443.81	882.78	844.14	38.63	22.849			
7,620.00	7,521.00	7,544.13	7,521.00	26.82	18.88	41.68	259.75	-443.81	882.84	844.15	38.69	22.818			
7,700.00	7,601.00	7,624.13	7,601.00	26.91	19.03	41.68	259.75	-443.81	882.84	843.87	38.97	22.652			
7,800.00	7,701.00	7,724.13	7,701.00	27.04	19.22	41.68	259.75	-443.81	882.84	843.51	39.33	22.446			
7,900.00	7,801.00	7,824.13	7,801.00	27.17	19.42	41.68	259.75	-443.81	882.84	843.15	39.69	22.243			
8,000.00	7,901.00	7,924.13	7,901.00	27.29	19.61	41.68	259.75	-443.81	882.84	842.79	40.05	22.043			
8,079.00	7,980.00	8,003.13	7,980.00	27.39	19.77	41.68	259.75	-443.81	882.84	842.50	40.34	21.886			

<b>Company:</b>	US ROCKIES REGION PLANNING	<b>Local Co-ordinate Reference:</b>	Well P_KERR-MCGEE 33-3
<b>Project:</b>	COLORADO NORTHERN ZONE - 83	<b>TVD Reference:</b>	WELL @ 5057.00ft (Original Well Elev)
<b>Reference Site:</b>	WELD_KERR MCGEE 19-3 PAD	<b>MD Reference:</b>	WELL @ 5057.00ft (Original Well Elev)
<b>Site Error:</b>	0.00ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	P_KERR-MCGEE 33-3	<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_KERR-MCGEE 33-3	<b>Database:</b>	EDM 2003.21 Single User Db
<b>Reference Design:</b>	PLAN #1 1-15-10 RHS	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design													Offset Site Error:	0.00 ft	
Survey Program: 0-MWD													Offset Well Error:		0.00 ft
Reference				Offset			Semi Major Axis			Distance					
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Tooface (°)	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	141.85	-16.03	12.59	20.39						
100.00	100.00	100.00	100.00	0.10	0.10	141.85	-16.03	12.59	20.39	20.20	0.19	106.707			
200.00	200.00	200.00	200.00	0.32	0.32	141.85	-16.03	12.59	20.39	19.75	0.64	31.825			
300.00	300.00	300.00	300.00	0.55	0.55	141.85	-16.03	12.59	20.39	19.30	1.09	18.701			
400.00	400.00	400.00	400.00	0.77	0.77	141.85	-16.03	12.59	20.39	18.85	1.54	13.241			
500.00	500.00	500.00	500.00	0.99	0.99	141.85	-16.03	12.59	20.39	18.40	1.99	10.249			
600.00	600.00	600.00	600.00	1.22	1.22	141.85	-16.03	12.59	20.39	17.95	2.44	8.360			
700.00	700.00	700.00	700.00	1.44	1.44	141.85	-16.03	12.59	20.39	17.50	2.89	7.058			
800.00	800.00	800.00	800.00	1.67	1.67	141.85	-16.03	12.59	20.39	17.05	3.34	6.108			
900.00	900.00	900.00	900.00	1.89	1.89	141.85	-16.03	12.59	20.39	16.60	3.79	5.383			
1,000.00	1,000.00	1,000.00	1,000.00	2.12	2.12	141.85	-16.03	12.59	20.39	16.15	4.24	4.812			
1,050.00	1,050.00	1,050.00	1,050.00	2.23	2.23	141.85	-16.03	12.59	20.39	15.92	4.46	4.569 CC, ES			
1,100.00	1,100.00	1,099.84	1,099.84	2.33	2.33	-107.04	-16.42	12.41	20.71	16.05	4.66	4.442 SF			
1,200.00	1,199.93	1,199.46	1,199.40	2.53	2.50	-107.55	-19.56	10.94	23.29	18.27	5.03	4.633			
1,300.00	1,299.68	1,298.94	1,298.63	2.73	2.69	-108.28	-25.82	8.01	28.46	23.05	5.41	5.256			
1,400.00	1,399.13	1,398.17	1,397.31	2.95	2.89	-108.96	-35.17	3.62	36.20	30.37	5.83	6.205			
1,500.00	1,498.15	1,497.06	1,495.24	3.20	3.12	-109.47	-47.55	-2.18	46.51	40.20	6.30	7.378			
1,576.99	1,574.02	1,572.90	1,570.00	3.42	3.33	-109.75	-59.12	-7.60	56.17	49.46	6.71	8.371			
1,600.00	1,596.64	1,595.51	1,592.22	3.49	3.39	-109.79	-62.92	-9.38	59.32	52.48	6.84	8.675			
1,700.00	1,694.96	1,693.52	1,688.12	3.80	3.70	-108.44	-81.20	-17.95	73.84	66.40	7.44	9.925			
1,800.00	1,793.27	1,792.24	1,784.32	4.14	4.05	-106.44	-101.26	-27.35	89.20	81.10	8.09	11.022			
1,900.00	1,891.58	1,891.01	1,880.58	4.48	4.43	-105.02	-121.33	-36.76	104.63	95.86	8.78	11.921			
2,000.00	1,989.90	1,989.78	1,976.83	4.84	4.82	-103.97	-141.39	-46.16	120.12	110.63	9.49	12.663			
2,100.00	2,088.21	2,088.56	2,073.09	5.21	5.23	-103.16	-161.46	-55.57	135.63	125.42	10.21	13.281			
2,200.00	2,186.52	2,187.33	2,169.34	5.59	5.65	-102.51	-181.53	-64.97	151.17	140.21	10.96	13.799			
2,300.00	2,284.83	2,286.10	2,265.59	5.97	6.08	-101.99	-201.60	-74.38	166.72	155.01	11.71	14.238			
2,400.00	2,383.15	2,384.88	2,361.85	6.36	6.51	-101.55	-221.67	-83.79	182.28	169.80	12.47	14.613			
2,500.00	2,481.46	2,483.65	2,458.10	6.75	6.95	-101.19	-241.74	-93.19	197.85	184.60	13.25	14.936			
2,600.00	2,579.77	2,582.42	2,554.36	7.14	7.40	-100.87	-261.80	-102.60	213.42	199.40	14.02	15.218			
2,700.00	2,678.09	2,681.20	2,650.61	7.54	7.85	-100.60	-281.87	-112.00	229.01	214.20	14.81	15.464			
2,800.00	2,776.40	2,779.97	2,746.87	7.94	8.30	-100.37	-301.94	-121.41	244.59	229.00	15.60	15.681			
2,900.00	2,874.71	2,878.74	2,843.12	8.34	8.76	-100.16	-322.01	-130.82	260.18	243.79	16.39	15.874			
3,000.00	2,973.02	2,977.51	2,939.38	8.74	9.22	-99.98	-342.08	-140.22	275.78	258.59	17.19	16.046			
3,100.00	3,071.34	3,076.29	3,035.63	9.15	9.68	-99.81	-362.15	-149.63	291.37	273.39	17.99	16.200			
3,200.00	3,169.65	3,175.06	3,131.88	9.56	10.14	-99.66	-382.22	-159.03	306.97	288.18	18.79	16.339			
3,300.00	3,267.96	3,273.83	3,228.14	9.96	10.60	-99.53	-402.28	-168.44	322.57	302.98	19.59	16.465			
3,400.00	3,366.27	3,372.61	3,324.39	10.37	11.07	-99.41	-422.35	-177.85	338.17	317.78	20.40	16.580			
3,500.00	3,464.59	3,471.38	3,420.65	10.78	11.54	-99.30	-442.42	-187.25	353.77	332.57	21.20	16.685			
3,600.00	3,562.90	3,570.15	3,516.90	11.19	12.00	-99.20	-462.49	-196.66	369.38	347.37	22.01	16.782			
3,700.00	3,661.21	3,668.93	3,613.16	11.60	12.47	-99.10	-482.56	-206.06	384.98	362.16	22.82	16.868			
3,800.00	3,759.53	3,767.70	3,709.41	12.01	12.94	-99.02	-502.63	-215.47	400.59	376.95	23.64	16.947			
3,900.00	3,857.84	3,866.47	3,805.67	12.43	13.41	-98.94	-522.70	-224.88	416.19	391.74	24.45	17.020			
4,000.00	3,956.15	3,965.25	3,901.92	12.84	13.88	-98.87	-542.76	-234.28	431.80	406.53	25.27	17.087			
4,100.00	4,054.46	4,064.02	3,998.17	13.25	14.35	-98.80	-562.83	-243.69	447.41	421.32	26.09	17.149			
4,200.00	4,152.78	4,162.79	4,094.43	13.66	14.83	-98.73	-582.90	-253.09	463.02	436.11	26.91	17.207			
4,300.00	4,251.09	4,261.56	4,190.68	14.08	15.30	-98.67	-602.97	-262.50	478.63	450.90	27.73	17.262			
4,400.00	4,349.40	4,360.34	4,286.94	14.49	15.77	-98.62	-623.04	-271.90	494.24	465.69	28.55	17.312			
4,500.00	4,447.72	4,459.11	4,383.19	14.91	16.24	-98.57	-643.11	-281.31	509.85	480.48	29.37	17.359			
4,600.00	4,546.03	4,557.88	4,479.45	15.32	16.72	-98.52	-663.18	-290.72	525.46	495.26	30.19	17.404			
4,700.00	4,644.34	4,656.66	4,575.70	15.74	17.19	-98.47	-683.24	-300.12	541.07	510.05	31.01	17.446			
4,800.00	4,742.65	4,755.43	4,671.95	16.15	17.67	-98.43	-703.31	-309.53	556.68	524.84	31.84	17.485			
4,900.00	4,840.97	4,854.20	4,768.21	16.57	18.14	-98.38	-723.38	-318.93	572.29	539.63	32.66	17.522			

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

<b>Company:</b>	US ROCKIES REGION PLANNING	<b>Local Co-ordinate Reference:</b>	Well P_KERR-MCGEE 33-3
<b>Project:</b>	COLORADO NORTHERN ZONE - 83	<b>TVD Reference:</b>	WELL @ 5057.00ft (Original Well Elev)
<b>Reference Site:</b>	WELD_KERR MCGEE 19-3 PAD	<b>MD Reference:</b>	WELL @ 5057.00ft (Original Well Elev)
<b>Site Error:</b>	0.00ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	P_KERR-MCGEE 33-3	<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_KERR-MCGEE 33-3	<b>Database:</b>	EDM 2003.21 Single User Db
<b>Reference Design:</b>	PLAN #1 1-15-10 RHS	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design													WELD_KERR MCGEE 19-3 PAD - P_KERR-MCGEE 13-3 - P_KERR-MCGEE 13-3 - PLAN #1 1-15-10	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	4,939.28	4,952.98	4,864.46	16.99	18.61	-98.34	-743.45	-328.34	587.90	554.41	33.49	17.557			
5,100.00	5,037.59	5,051.75	4,960.72	17.40	19.09	-98.31	-763.52	-337.75	603.51	569.20	34.31	17.590			
5,200.00	5,135.91	5,150.52	5,056.97	17.82	19.56	-98.27	-783.59	-347.15	619.12	583.99	35.13	17.622			
5,300.00	5,234.22	5,249.30	5,153.23	18.24	20.04	-98.24	-803.65	-356.56	634.74	598.78	35.96	17.651			
5,400.00	5,332.53	5,348.07	5,249.48	18.65	20.52	-98.21	-823.72	-365.96	650.35	613.56	36.79	17.680			
5,500.00	5,430.84	5,446.84	5,345.74	19.07	20.99	-98.18	-843.79	-375.37	665.96	628.35	37.61	17.707			
5,600.00	5,529.16	5,545.62	5,441.99	19.49	21.47	-98.15	-863.86	-384.78	681.57	643.14	38.44	17.732			
5,700.00	5,627.47	5,644.39	5,538.24	19.90	21.94	-98.12	-883.93	-394.18	697.19	657.92	39.26	17.756			
5,800.00	5,725.78	5,743.16	5,634.50	20.32	22.42	-98.09	-904.00	-403.59	712.80	672.71	40.09	17.780			
5,900.00	5,824.09	5,841.93	5,730.75	20.74	22.90	-98.07	-924.07	-412.99	728.41	687.49	40.92	17.802			
6,000.00	5,922.41	5,940.71	5,827.01	21.16	23.37	-98.04	-944.13	-422.40	744.03	702.28	41.74	17.823			
6,100.00	6,020.72	6,048.29	5,931.98	21.57	23.81	-98.05	-965.47	-432.40	759.35	716.81	42.55	17.848			
6,200.00	6,119.03	6,165.17	6,046.84	21.99	24.16	-98.32	-985.00	-441.55	772.67	729.36	43.32	17.838			
6,300.00	6,217.35	6,282.34	6,162.78	22.41	24.47	-98.86	-1,000.31	-448.73	783.72	739.65	44.08	17.781			
6,400.00	6,315.66	6,399.43	6,279.23	22.83	24.72	-99.66	-1,011.30	-453.88	792.57	747.76	44.82	17.684			
6,500.00	6,413.97	6,516.04	6,395.59	23.25	24.91	-100.75	-1,017.96	-457.00	799.36	753.83	45.53	17.556			
6,600.00	6,512.28	6,631.79	6,511.31	23.66	25.06	-102.08	-1,020.32	-458.11	804.25	758.03	46.22	17.400			
6,700.00	6,610.60	6,731.08	6,610.60	24.08	25.17	-103.34	-1,020.32	-458.11	808.35	761.50	46.85	17.254			
6,800.00	6,708.91	6,829.39	6,708.91	24.50	25.28	-104.58	-1,020.32	-458.11	812.83	765.37	47.46	17.128			
6,900.00	6,807.22	6,927.70	6,807.22	24.92	25.38	-105.80	-1,020.32	-458.11	817.70	769.65	48.05	17.018			
7,000.00	6,905.54	7,026.02	6,905.54	25.34	25.48	-107.00	-1,020.32	-458.11	822.94	774.32	48.63	16.924			
7,093.01	6,996.98	7,117.46	6,996.98	25.73	25.58	-108.11	-1,020.32	-458.11	828.16	779.00	49.15	16.849			
7,100.00	7,003.85	7,124.33	7,003.85	25.75	25.59	-108.20	-1,020.32	-458.11	828.56	779.37	49.19	16.844			
7,200.00	7,102.50	7,222.98	7,102.50	26.04	25.70	-109.36	-1,020.32	-458.11	833.88	784.24	49.64	16.798			
7,300.00	7,201.66	7,322.15	7,201.66	26.28	25.81	-110.26	-1,020.32	-458.11	838.28	788.24	50.04	16.752			
7,400.00	7,301.22	7,421.70	7,301.22	26.49	25.92	-110.92	-1,020.32	-458.11	841.60	791.21	50.39	16.701			
7,500.00	7,401.03	7,521.52	7,401.03	26.66	26.03	-111.34	-1,020.32	-458.11	843.74	793.05	50.70	16.643			
7,600.00	7,501.00	7,621.48	7,501.00	26.79	26.15	-111.51	-1,020.32	-458.11	844.64	793.68	50.96	16.576			
7,620.00	7,521.00	7,641.48	7,521.00	26.82	26.17	137.30	-1,020.32	-458.11	844.66	793.66	51.00	16.561			
7,700.00	7,601.00	7,721.48	7,601.00	26.91	26.26	137.30	-1,020.32	-458.11	844.66	793.46	51.20	16.496			
7,800.00	7,701.00	7,821.48	7,701.00	27.04	26.38	137.30	-1,020.32	-458.11	844.66	793.21	51.46	16.415			
7,900.00	7,801.00	7,921.48	7,801.00	27.17	26.50	137.30	-1,020.32	-458.11	844.66	792.95	51.71	16.335			
8,000.00	7,901.00	8,021.48	7,901.00	27.29	26.62	137.30	-1,020.32	-458.11	844.66	792.69	51.97	16.254			
8,079.00	7,980.00	8,100.48	7,980.00	27.39	26.72	137.30	-1,020.32	-458.11	844.66	792.49	52.17	16.190			

<b>Company:</b>	US ROCKIES REGION PLANNING	<b>Local Co-ordinate Reference:</b>	Well P_KERR-MCGEE 33-3
<b>Project:</b>	COLORADO NORTHERN ZONE - 83	<b>TVD Reference:</b>	WELL @ 5057.00ft (Original Well Elev)
<b>Reference Site:</b>	WELD_KERR MCGEE 19-3 PAD	<b>MD Reference:</b>	WELL @ 5057.00ft (Original Well Elev)
<b>Site Error:</b>	0.00ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	P_KERR-MCGEE 33-3	<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_KERR-MCGEE 33-3	<b>Database:</b>	EDM 2003.21 Single User Db
<b>Reference Design:</b>	PLAN #1 1-15-10 RHS	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design												WELD_KERR MCGEE 19-3 PAD - P_KERR-MCGEE 14-3 - P_KERR-MCGEE 14-3 - PLAN #1 1-15-10	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	141.20	-54.64	43.93	70.11					
100.00	100.00	100.00	100.00	0.10	0.10	141.20	-54.64	43.93	70.11	69.92	0.19	366.971		
200.00	200.00	200.00	200.00	0.32	0.32	141.20	-54.64	43.93	70.11	69.47	0.64	109.448		
300.00	300.00	300.00	300.00	0.55	0.55	141.20	-54.64	43.93	70.11	69.02	1.09	64.315		
400.00	400.00	400.00	400.00	0.77	0.77	141.20	-54.64	43.93	70.11	68.57	1.54	45.537		
500.00	500.00	500.00	500.00	0.99	0.99	141.20	-54.64	43.93	70.11	68.12	1.99	35.246		
600.00	600.00	600.00	600.00	1.22	1.22	141.20	-54.64	43.93	70.11	67.67	2.44	28.749		
700.00	700.00	700.00	700.00	1.44	1.44	141.20	-54.64	43.93	70.11	67.22	2.89	24.274		
800.00	800.00	800.00	800.00	1.67	1.67	141.20	-54.64	43.93	70.11	66.77	3.34	21.005		
900.00	900.00	900.00	900.00	1.89	1.89	141.20	-54.64	43.93	70.11	66.32	3.79	18.512		
1,000.00	1,000.00	1,000.00	1,000.00	2.12	2.12	141.20	-54.64	43.93	70.11	65.87	4.24	16.548		
1,050.00	1,050.00	1,050.00	1,050.00	2.23	2.23	141.20	-54.64	43.93	70.11	65.65	4.46	15.714	CC, ES	
1,100.00	1,100.00	1,098.80	1,098.79	2.33	2.33	-107.94	-54.96	44.20	70.67	66.01	4.66	15.161		
1,200.00	1,199.93	1,196.16	1,196.10	2.53	2.50	-110.33	-57.52	46.30	75.22	70.19	5.03	14.968	SF	
1,300.00	1,299.68	1,292.85	1,292.56	2.73	2.69	-114.30	-62.59	50.47	84.65	79.25	5.40	15.668		
1,400.00	1,399.13	1,388.43	1,387.65	2.95	2.89	-118.75	-70.06	56.61	99.37	93.58	5.79	17.148		
1,500.00	1,498.15	1,482.49	1,480.85	3.20	3.11	-122.86	-79.81	64.62	119.60	113.40	6.21	19.272		
1,576.99	1,574.02	1,553.63	1,551.04	3.42	3.30	-125.56	-88.75	71.97	138.95	132.41	6.54	21.245		
1,600.00	1,596.64	1,574.67	1,571.74	3.49	3.36	-126.36	-91.65	74.35	145.31	138.66	6.65	21.866		
1,700.00	1,694.96	1,665.20	1,660.48	3.80	3.64	-128.92	-105.47	85.71	174.93	167.81	7.12	24.570		
1,800.00	1,793.27	1,754.16	1,747.09	4.14	3.96	-130.41	-121.16	98.60	207.52	199.90	7.62	27.243		
1,900.00	1,891.58	1,842.28	1,832.23	4.48	4.32	-131.22	-138.72	113.04	242.81	234.67	8.14	29.843		
2,000.00	1,989.90	1,935.43	1,921.94	4.84	4.74	-131.76	-158.08	128.95	279.11	270.41	8.69	32.106		
2,100.00	2,088.21	2,028.58	2,011.66	5.21	5.18	-132.18	-177.43	144.85	315.42	306.16	9.27	34.042		
2,200.00	2,186.52	2,121.73	2,101.38	5.59	5.63	-132.51	-196.79	160.76	351.75	341.90	9.85	35.703		
2,300.00	2,284.83	2,214.88	2,191.10	5.97	6.10	-132.78	-216.15	176.67	388.09	377.64	10.45	37.136		
2,400.00	2,383.15	2,308.03	2,280.81	6.36	6.58	-133.00	-235.50	192.58	424.43	413.37	11.06	38.380		
2,500.00	2,481.46	2,401.18	2,370.53	6.75	7.07	-133.19	-254.86	208.49	460.78	449.11	11.67	39.468		
2,600.00	2,579.77	2,494.33	2,460.25	7.14	7.56	-133.35	-274.22	224.40	497.13	484.83	12.30	40.423		
2,700.00	2,678.09	2,587.48	2,549.97	7.54	8.06	-133.49	-293.57	240.30	533.49	520.56	12.93	41.269		
2,800.00	2,776.40	2,680.63	2,639.68	7.94	8.56	-133.61	-312.93	256.21	569.84	556.28	13.56	42.022		
2,900.00	2,874.71	2,773.79	2,729.40	8.34	9.07	-133.71	-332.29	272.12	606.20	592.00	14.20	42.696		
3,000.00	2,973.02	2,866.94	2,819.12	8.74	9.57	-133.81	-351.65	288.03	642.56	627.72	14.84	43.303		
3,100.00	3,071.34	2,960.09	2,908.84	9.15	10.09	-133.89	-371.00	303.94	678.92	663.44	15.48	43.851		
3,200.00	3,169.65	3,053.24	2,998.55	9.56	10.60	-133.97	-390.36	319.85	715.29	699.16	16.13	44.349		
3,300.00	3,267.96	3,146.39	3,088.27	9.96	11.12	-134.04	-409.72	335.76	751.65	734.87	16.78	44.803		
3,400.00	3,366.27	3,239.54	3,177.99	10.37	11.63	-134.10	-429.07	351.66	788.01	770.59	17.43	45.219		
3,500.00	3,464.59	3,332.69	3,267.71	10.78	12.15	-134.16	-448.43	367.57	824.38	806.30	18.08	45.602		
3,600.00	3,562.90	3,425.84	3,357.43	11.19	12.67	-134.21	-467.79	383.48	860.75	842.02	18.73	45.955		
3,700.00	3,661.21	3,518.99	3,447.14	11.60	13.19	-134.25	-487.14	399.39	897.11	877.73	19.38	46.282		
3,800.00	3,759.53	3,612.14	3,536.86	12.01	13.72	-134.30	-506.50	415.30	933.48	913.44	20.04	46.586		
3,900.00	3,857.84	3,705.29	3,626.58	12.43	14.24	-134.34	-525.86	431.21	969.85	949.15	20.69	46.869		
4,000.00	3,956.15	3,798.44	3,716.30	12.84	14.76	-134.38	-545.22	447.11	1,006.21	984.87	21.35	47.134		
4,100.00	4,054.46	3,891.59	3,806.01	13.25	15.29	-134.41	-564.57	463.02	1,042.58	1,020.58	22.00	47.382		
4,200.00	4,152.78	3,984.74	3,895.73	13.66	15.81	-134.44	-583.93	478.93	1,078.95	1,056.29	22.66	47.610		
4,300.00	4,251.09	4,077.89	3,985.45	14.08	16.34	-134.48	-603.29	494.84	1,115.32	1,091.99	23.33	47.807		
4,400.00	4,349.40	4,171.04	4,075.17	14.49	16.87	-134.50	-622.64	510.75	1,151.69	1,127.69	24.00	47.991		
4,500.00	4,447.72	4,264.19	4,164.88	14.91	17.39	-134.53	-642.00	526.66	1,188.06	1,163.39	24.67	48.164		
4,600.00	4,546.03	4,357.34	4,254.60	15.32	17.92	-134.56	-661.36	542.57	1,224.43	1,199.09	25.34	48.326		
4,700.00	4,644.34	4,450.49	4,344.32	15.74	18.45	-134.58	-680.71	558.47	1,260.80	1,234.79	26.01	48.479		
4,800.00	4,742.65	4,543.65	4,434.04	16.15	18.97	-134.60	-700.07	574.38	1,297.17	1,270.49	26.68	48.623		
4,900.00	4,840.97	4,636.80	4,523.75	16.57	19.50	-134.62	-719.43	590.29	1,333.54	1,306.19	27.35	48.758		

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

<b>Company:</b>	US ROCKIES REGION PLANNING	<b>Local Co-ordinate Reference:</b>	Well P_KERR-MCGEE 33-3
<b>Project:</b>	COLORADO NORTHERN ZONE - 83	<b>TVD Reference:</b>	WELL @ 5057.00ft (Original Well Elev)
<b>Reference Site:</b>	WELD_KERR MCGEE 19-3 PAD	<b>MD Reference:</b>	WELL @ 5057.00ft (Original Well Elev)
<b>Site Error:</b>	0.00ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	P_KERR-MCGEE 33-3	<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_KERR-MCGEE 33-3	<b>Database:</b>	EDM 2003.21 Single User Db
<b>Reference Design:</b>	PLAN #1 1-15-10 RHS	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design													WELD_KERR MCGEE 19-3 PAD - P_KERR-MCGEE 14-3 - P_KERR-MCGEE 14-3 - PLAN #1 1-15-10	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	4,939.28	4,729.95	4,613.47	16.99	20.03	-134.64	-738.78	606.20	1,369.91	1,341.88	28.02	48.886			
5,100.00	5,037.59	4,823.10	4,703.19	17.40	20.56	-134.66	-758.14	622.11	1,406.28	1,377.58	28.70	49.007			
5,200.00	5,135.91	4,916.25	4,792.91	17.82	21.09	-134.68	-777.50	638.02	1,442.65	1,413.28	29.37	49.122			
5,300.00	5,234.22	5,009.40	4,882.62	18.24	21.62	-134.70	-796.86	653.93	1,479.02	1,448.98	30.04	49.231			
5,400.00	5,332.53	5,102.55	4,972.34	18.65	22.15	-134.71	-816.21	669.83	1,515.39	1,484.67	30.72	49.334			
5,500.00	5,430.84	5,195.70	5,062.06	19.07	22.68	-134.73	-835.57	685.74	1,551.76	1,520.37	31.39	49.433			
5,600.00	5,529.16	5,288.85	5,151.78	19.49	23.21	-134.74	-854.93	701.65	1,588.13	1,556.06	32.07	49.526			
5,700.00	5,627.47	5,382.00	5,241.50	19.90	23.74	-134.76	-874.28	717.56	1,624.50	1,591.76	32.74	49.616			
5,800.00	5,725.78	5,475.15	5,331.21	20.32	24.27	-134.77	-893.64	733.47	1,660.87	1,627.45	33.42	49.701			
5,900.00	5,824.09	5,568.30	5,420.93	20.74	24.80	-134.79	-913.00	749.38	1,697.24	1,663.15	34.09	49.782			
6,000.00	5,922.41	5,661.45	5,510.65	21.16	25.33	-134.80	-932.35	765.28	1,733.61	1,698.84	34.77	49.860			
6,100.00	6,020.72	5,754.60	5,600.37	21.57	25.86	-134.81	-951.71	781.19	1,769.98	1,734.54	35.45	49.934			
6,200.00	6,119.03	5,847.75	5,690.08	21.99	26.39	-134.82	-971.07	797.10	1,806.36	1,770.23	36.12	50.005			
6,300.00	6,217.35	6,002.73	5,839.88	22.41	27.09	-134.87	-1,001.73	822.30	1,841.94	1,805.00	36.93	49.874			
6,400.00	6,315.66	6,225.43	6,058.29	22.83	27.82	-135.15	-1,035.13	849.75	1,871.93	1,834.10	37.83	49.482			
6,500.00	6,413.97	6,455.93	6,287.17	23.25	28.35	-135.68	-1,055.80	866.73	1,895.23	1,856.56	38.66	49.019			
6,600.00	6,512.28	6,681.26	6,512.28	23.66	28.66	-136.44	-1,062.20	872.00	1,911.60	1,872.19	39.40	48.513			
6,700.00	6,610.60	6,779.57	6,610.60	24.08	28.76	-136.81	-1,062.20	872.00	1,925.00	1,885.10	39.90	48.244			
6,800.00	6,708.91	6,877.88	6,708.91	24.50	28.85	-137.18	-1,062.20	872.00	1,938.48	1,898.08	40.40	47.987			
6,900.00	6,807.22	6,976.20	6,807.22	24.92	28.95	-137.54	-1,062.20	872.00	1,952.04	1,911.15	40.89	47.740			
7,000.00	6,905.54	7,074.51	6,905.54	25.34	29.04	-137.90	-1,062.20	872.00	1,965.68	1,924.30	41.38	47.503			
7,093.01	6,996.98	7,165.95	6,996.98	25.73	29.13	-138.22	-1,062.20	872.00	1,978.43	1,936.59	41.84	47.289			
7,100.00	7,003.85	7,172.82	7,003.85	25.75	29.14	-138.26	-1,062.20	872.00	1,979.38	1,937.50	41.88	47.262			
7,200.00	7,102.50	7,271.48	7,102.50	26.04	29.24	-138.74	-1,062.20	872.00	1,991.69	1,949.25	42.44	46.933			
7,300.00	7,201.66	7,370.64	7,201.66	26.28	29.34	-139.11	-1,062.20	872.00	2,001.43	1,958.49	42.94	46.613			
7,400.00	7,301.22	7,470.19	7,301.22	26.49	29.45	-139.38	-1,062.20	872.00	2,008.57	1,965.19	43.38	46.300			
7,500.00	7,401.03	7,570.01	7,401.03	26.66	29.55	-139.54	-1,062.20	872.00	2,013.08	1,969.32	43.77	45.995			
7,600.00	7,501.00	7,669.97	7,501.00	26.79	29.66	-139.61	-1,062.20	872.00	2,014.94	1,970.85	44.10	45.694			
7,620.00	7,521.00	7,689.97	7,521.00	26.82	29.68	109.20	-1,062.20	872.00	2,015.00	1,970.84	44.16	45.632			
7,700.00	7,601.00	7,769.97	7,601.00	26.91	29.77	109.20	-1,062.20	872.00	2,015.00	1,970.61	44.39	45.396			
7,800.00	7,701.00	7,869.97	7,701.00	27.04	29.88	109.20	-1,062.20	872.00	2,015.00	1,970.32	44.67	45.105			
7,900.00	7,801.00	7,969.97	7,801.00	27.17	29.99	109.20	-1,062.20	872.00	2,015.00	1,970.04	44.96	44.816			
8,000.00	7,901.00	8,069.97	7,901.00	27.29	30.10	109.20	-1,062.20	872.00	2,015.00	1,969.74	45.25	44.527			
8,079.00	7,980.00	8,148.97	7,980.00	27.39	30.19	109.20	-1,062.20	872.00	2,015.00	1,969.51	45.49	44.300			

<b>Company:</b>	US ROCKIES REGION PLANNING	<b>Local Co-ordinate Reference:</b>	Well P_KERR-MCGEE 33-3
<b>Project:</b>	COLORADO NORTHERN ZONE - 83	<b>TVD Reference:</b>	WELL @ 5057.00ft (Original Well Elev)
<b>Reference Site:</b>	WELD_KERR MCGEE 19-3 PAD	<b>MD Reference:</b>	WELL @ 5057.00ft (Original Well Elev)
<b>Site Error:</b>	0.00ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	P_KERR-MCGEE 33-3	<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_KERR-MCGEE 33-3	<b>Database:</b>	EDM 2003.21 Single User Db
<b>Reference Design:</b>	PLAN #1 1-15-10 RHS	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design													WELD_KERR MCGEE 19-3 PAD - P_KERR-MCGEE 15-3 - P_KERR-MCGEE 15-3 - PLAN #1 1-15-10	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	141.35	-62.64	50.09	80.21						
100.00	100.00	100.00	100.00	0.10	0.10	141.35	-62.64	50.09	80.21	80.02	0.19	419.821			
200.00	200.00	200.00	200.00	0.32	0.32	141.35	-62.64	50.09	80.21	79.57	0.64	125.210			
300.00	300.00	300.00	300.00	0.55	0.55	141.35	-62.64	50.09	80.21	79.12	1.09	73.577			
400.00	400.00	400.00	400.00	0.77	0.77	141.35	-62.64	50.09	80.21	78.67	1.54	52.095			
500.00	500.00	500.00	500.00	0.99	0.99	141.35	-62.64	50.09	80.21	78.22	1.99	40.322			
600.00	600.00	600.00	600.00	1.22	1.22	141.35	-62.64	50.09	80.21	77.77	2.44	32.889			
700.00	700.00	700.00	700.00	1.44	1.44	141.35	-62.64	50.09	80.21	77.32	2.89	27.770			
800.00	800.00	800.00	800.00	1.67	1.67	141.35	-62.64	50.09	80.21	76.87	3.34	24.030			
900.00	900.00	900.00	900.00	1.89	1.89	141.35	-62.64	50.09	80.21	76.42	3.79	21.178			
1,000.00	1,000.00	1,000.00	1,000.00	2.12	2.12	141.35	-62.64	50.09	80.21	75.97	4.24	18.931			
1,050.00	1,050.00	1,050.00	1,050.00	2.23	2.23	141.35	-62.64	50.09	80.21	75.75	4.46	17.977	CC, ES		
1,100.00	1,100.00	1,098.72	1,098.72	2.33	2.33	-107.85	-62.85	50.45	80.74	76.07	4.66	17.313			
1,200.00	1,199.93	1,195.88	1,195.82	2.53	2.51	-110.75	-64.48	53.32	85.09	80.05	5.03	16.900	SF		
1,300.00	1,299.68	1,292.21	1,291.92	2.73	2.71	-115.68	-67.70	58.99	94.38	88.96	5.42	17.419			
1,400.00	1,399.13	1,387.16	1,386.38	2.95	2.91	-121.34	-72.44	67.32	109.36	103.55	5.81	18.818			
1,500.00	1,498.15	1,480.24	1,478.62	3.20	3.14	-126.71	-78.58	78.12	130.53	124.32	6.21	21.005			
1,576.99	1,574.02	1,550.34	1,547.80	3.42	3.33	-130.28	-84.19	87.97	151.13	144.60	6.53	23.141			
1,600.00	1,596.64	1,571.02	1,568.15	3.49	3.39	-131.32	-86.00	91.16	157.94	151.31	6.63	23.825			
1,700.00	1,694.96	1,659.80	1,655.21	3.80	3.67	-134.90	-94.61	106.29	189.85	182.78	7.07	26.860			
1,800.00	1,793.27	1,746.74	1,739.89	4.14	3.98	-137.33	-104.32	123.38	225.13	217.61	7.52	29.940			
1,900.00	1,891.58	1,831.74	1,822.07	4.48	4.33	-138.98	-115.04	142.23	263.43	255.45	7.98	33.002			
2,000.00	1,989.90	1,914.71	1,901.64	4.84	4.71	-140.10	-126.67	162.67	304.51	296.05	8.46	36.014			
2,100.00	2,088.21	2,000.00	1,982.68	5.21	5.15	-140.89	-139.80	185.76	348.22	339.27	8.95	38.913			
2,200.00	2,186.52	2,074.36	2,052.67	5.59	5.59	-141.35	-152.22	207.60	394.33	384.90	9.43	41.797			
2,300.00	2,284.83	2,150.95	2,124.05	5.97	6.08	-141.67	-165.94	231.73	442.81	432.87	9.94	44.564			
2,400.00	2,383.15	2,225.36	2,192.67	6.36	6.60	-141.85	-180.17	256.76	493.51	483.06	10.44	47.256			
2,500.00	2,481.46	2,300.00	2,260.71	6.75	7.15	-141.95	-195.33	283.41	546.34	535.38	10.96	49.847			
2,600.00	2,579.77	2,374.39	2,327.84	7.14	7.75	-141.98	-211.18	311.28	600.95	589.46	11.49	52.304			
2,700.00	2,678.09	2,457.98	2,403.16	7.54	8.44	-142.00	-229.09	342.77	655.85	643.79	12.05	54.415			
2,800.00	2,776.40	2,541.56	2,478.49	7.94	9.15	-142.02	-247.00	374.27	710.74	698.12	12.62	56.311			
2,900.00	2,874.71	2,625.15	2,553.81	8.34	9.86	-142.04	-264.91	405.76	765.63	752.44	13.20	58.018			
3,000.00	2,973.02	2,708.73	2,629.14	8.74	10.58	-142.06	-282.82	437.26	820.53	806.75	13.78	59.561			
3,100.00	3,071.34	2,792.32	2,704.46	9.15	11.31	-142.07	-300.73	468.75	875.42	861.06	14.36	60.958			
3,200.00	3,169.65	2,875.91	2,779.79	9.56	12.04	-142.08	-318.64	500.25	930.32	915.36	14.95	62.228			
3,300.00	3,267.96	2,959.49	2,855.11	9.96	12.78	-142.09	-336.56	531.75	985.21	969.66	15.55	63.368			
3,400.00	3,366.27	3,043.08	2,930.44	10.37	13.52	-142.10	-354.47	563.24	1,040.10	1,023.96	16.15	64.411			
3,500.00	3,464.59	3,126.66	3,005.76	10.78	14.27	-142.11	-372.38	594.74	1,095.00	1,078.25	16.75	65.367			
3,600.00	3,562.90	3,210.25	3,081.09	11.19	15.02	-142.11	-390.29	626.23	1,149.89	1,132.53	17.36	66.245			
3,700.00	3,661.21	3,293.84	3,156.41	11.60	15.77	-142.12	-408.20	657.73	1,204.78	1,186.82	17.97	67.053			
3,800.00	3,759.53	3,377.42	3,231.74	12.01	16.52	-142.13	-426.11	689.22	1,259.68	1,241.10	18.58	67.798			
3,900.00	3,857.84	3,461.01	3,307.06	12.43	17.27	-142.13	-444.02	720.72	1,314.57	1,295.38	19.19	68.489			
4,000.00	3,956.15	3,544.60	3,382.39	12.84	18.03	-142.14	-461.93	752.21	1,369.47	1,349.66	19.81	69.131			
4,100.00	4,054.46	3,628.18	3,457.71	13.25	18.78	-142.14	-479.85	783.71	1,424.36	1,403.93	20.43	69.728			
4,200.00	4,152.78	3,711.77	3,533.04	13.66	19.54	-142.15	-497.76	815.21	1,479.25	1,458.21	21.05	70.284			
4,300.00	4,251.09	3,795.35	3,608.36	14.08	20.30	-142.15	-515.67	846.70	1,534.15	1,512.48	21.67	70.804			
4,400.00	4,349.40	3,878.94	3,683.69	14.49	21.06	-142.16	-533.58	878.20	1,589.04	1,566.75	22.29	71.290			
4,500.00	4,447.72	3,962.53	3,759.01	14.91	21.82	-142.16	-551.49	909.69	1,643.94	1,621.02	22.91	71.746			
4,600.00	4,546.03	4,046.11	3,834.34	15.32	22.58	-142.16	-569.40	941.19	1,698.83	1,675.29	23.54	72.175			
4,700.00	4,644.34	4,129.70	3,909.66	15.74	23.34	-142.17	-587.31	972.68	1,753.72	1,729.56	24.16	72.578			
4,800.00	4,742.65	4,213.28	3,984.99	16.15	24.10	-142.17	-605.22	1,004.18	1,808.62	1,783.83	24.79	72.959			
4,900.00	4,840.97	4,296.87	4,060.31	16.57	24.86	-142.17	-623.13	1,035.67	1,863.51	1,838.10	25.42	73.318			

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

<b>Company:</b>	US ROCKIES REGION PLANNING	<b>Local Co-ordinate Reference:</b>	Well P_KERR-MCGEE 33-3
<b>Project:</b>	COLORADO NORTHERN ZONE - 83	<b>TVD Reference:</b>	WELL @ 5057.00ft (Original Well Elev)
<b>Reference Site:</b>	WELD_KERR MCGEE 19-3 PAD	<b>MD Reference:</b>	WELL @ 5057.00ft (Original Well Elev)
<b>Site Error:</b>	0.00ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	P_KERR-MCGEE 33-3	<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_KERR-MCGEE 33-3	<b>Database:</b>	EDM 2003.21 Single User Db
<b>Reference Design:</b>	PLAN #1 1-15-10 RHS	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design												WELD_KERR MCGEE 19-3 PAD - P_KERR-MCGEE 15-3 - P_KERR-MCGEE 15-3 - PLAN #1 1-15-10	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 Tooface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
5,000.00	4,939.28	4,380.46	4,135.64	16.99	25.63	-142.17	-641.05	1,067.17	1,918.41	1,892.36	26.05	73.657		
5,100.00	5,037.59	4,464.04	4,210.96	17.40	26.39	-142.18	-658.96	1,098.67	1,973.30	1,946.63	26.67	73.978		
5,200.00	5,135.91	4,547.63	4,286.29	17.82	27.15	-142.18	-676.87	1,130.16	2,028.20	2,000.89	27.30	74.282		
5,300.00	5,234.22	4,631.21	4,361.61	18.24	27.92	-142.18	-694.78	1,161.66	2,083.09	2,055.15	27.93	74.571		
5,400.00	5,332.53	4,714.80	4,436.94	18.65	28.68	-142.18	-712.69	1,193.15	2,137.98	2,109.42	28.57	74.846		
5,500.00	5,430.84	4,798.39	4,512.26	19.07	29.45	-142.19	-730.60	1,224.65	2,192.88	2,163.68	29.20	75.107		
5,600.00	5,529.16	4,881.97	4,587.59	19.49	30.21	-142.19	-748.51	1,256.14	2,247.77	2,217.94	29.83	75.356		
5,700.00	5,627.47	4,965.56	4,662.91	19.90	30.98	-142.19	-766.42	1,287.64	2,302.67	2,272.20	30.46	75.593		
5,800.00	5,725.78	5,049.15	4,738.24	20.32	31.75	-142.19	-784.34	1,319.13	2,357.56	2,326.46	31.09	75.819		
5,900.00	5,824.09	5,132.73	4,813.56	20.74	32.51	-142.19	-802.25	1,350.63	2,412.45	2,380.73	31.73	76.036		
6,000.00	5,922.41	5,216.32	4,888.89	21.16	33.28	-142.19	-820.16	1,382.13	2,467.35	2,434.99	32.36	76.242		
6,100.00	6,020.72	5,299.90	4,964.21	21.57	34.04	-142.20	-838.07	1,413.62	2,522.24	2,489.25	33.00	76.440		
6,200.00	6,119.03	5,383.49	5,039.54	21.99	34.81	-142.20	-855.98	1,445.12	2,577.14	2,543.50	33.63	76.630		
6,300.00	6,217.35	5,467.08	5,114.86	22.41	35.58	-142.20	-873.89	1,476.61	2,632.03	2,597.76	34.27	76.812		
6,400.00	6,315.66	5,550.66	5,190.19	22.83	36.35	-142.20	-891.80	1,508.11	2,686.92	2,652.02	34.90	76.986		
6,500.00	6,413.97	5,634.25	5,265.51	23.25	37.11	-142.20	-909.71	1,539.60	2,741.82	2,706.28	35.54	77.154		
6,600.00	6,512.28	5,717.83	5,340.84	23.66	37.88	-142.20	-927.63	1,571.10	2,796.71	2,760.54	36.17	77.315		
6,700.00	6,610.60	5,801.42	5,416.16	24.08	38.65	-142.20	-945.54	1,602.59	2,851.61	2,814.80	36.81	77.470		
6,800.00	6,708.91	5,885.01	5,491.49	24.50	39.42	-142.20	-963.45	1,634.09	2,906.50	2,869.05	37.45	77.619		
6,900.00	6,807.22	5,968.59	5,566.81	24.92	40.18	-142.21	-981.36	1,665.59	2,961.39	2,923.31	38.08	77.763		
7,000.00	6,905.54	6,052.18	5,642.14	25.34	40.95	-142.21	-999.27	1,697.08	3,016.29	2,977.57	38.72	77.901		
7,093.01	6,996.98	6,129.92	5,712.20	25.73	41.67	-142.21	-1,015.93	1,726.38	3,067.34	3,028.03	39.31	78.025		
7,100.00	7,003.85	6,135.77	5,717.47	25.75	41.72	-142.26	-1,017.18	1,728.58	3,071.18	3,031.79	39.38	77.984		
7,200.00	7,102.50	6,220.20	5,793.55	26.04	42.50	-143.01	-1,035.27	1,760.39	3,124.74	3,084.42	40.32	77.496		
7,300.00	7,201.66	6,306.03	5,870.90	26.28	43.28	-143.65	-1,053.67	1,792.73	3,175.94	3,134.71	41.22	77.042		
7,400.00	7,301.22	7,788.52	7,301.22	26.49	49.27	-143.95	-1,214.39	2,075.35	3,204.53	3,159.29	45.24	70.826		
7,500.00	7,401.03	7,888.34	7,401.03	26.66	49.33	-144.07	-1,214.39	2,075.35	3,209.34	3,163.57	45.77	70.121		
7,600.00	7,501.00	7,988.30	7,501.00	26.79	49.40	-144.11	-1,214.39	2,075.35	3,211.32	3,165.10	46.22	69.484		
7,620.00	7,521.00	8,008.30	7,521.00	26.82	49.41	104.70	-1,214.39	2,075.35	3,211.37	3,165.07	46.30	69.360		
7,700.00	7,601.00	8,088.30	7,601.00	26.91	49.47	104.70	-1,214.39	2,075.35	3,211.37	3,164.85	46.52	69.034		
7,800.00	7,701.00	8,188.30	7,701.00	27.04	49.54	104.70	-1,214.39	2,075.35	3,211.37	3,164.58	46.79	68.633		
7,900.00	7,801.00	8,288.30	7,801.00	27.17	49.61	104.70	-1,214.39	2,075.35	3,211.37	3,164.31	47.06	68.233		
8,000.00	7,901.00	8,388.30	7,901.00	27.29	49.68	104.70	-1,214.39	2,075.35	3,211.37	3,164.03	47.34	67.833		
8,079.00	7,980.00	8,467.30	7,980.00	27.39	49.74	104.70	-1,214.39	2,075.35	3,211.37	3,163.81	47.56	67.518		

<b>Company:</b>	US ROCKIES REGION PLANNING	<b>Local Co-ordinate Reference:</b>	Well P_KERR-MCGEE 33-3
<b>Project:</b>	COLORADO NORTHERN ZONE - 83	<b>TVD Reference:</b>	WELL @ 5057.00ft (Original Well Elev)
<b>Reference Site:</b>	WELD_KERR MCGEE 19-3 PAD	<b>MD Reference:</b>	WELL @ 5057.00ft (Original Well Elev)
<b>Site Error:</b>	0.00ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	P_KERR-MCGEE 33-3	<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_KERR-MCGEE 33-3	<b>Database:</b>	EDM 2003.21 Single User Db
<b>Reference Design:</b>	PLAN #1 1-15-10 RHS	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design												WELD_KERR MCGEE 19-3 PAD - P_KERR-MCGEE 19-3 - P_KERR-MCGEE 19-3 - PLAN #1 1-15-10	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 Tooface (°)	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	141.19	-38.97	31.34	50.01					
100.00	100.00	100.00	100.00	0.10	0.10	141.19	-38.97	31.34	50.01	49.82	0.19	261.774		
200.00	200.00	200.00	200.00	0.32	0.32	141.19	-38.97	31.34	50.01	49.37	0.64	78.073		
300.00	300.00	300.00	300.00	0.55	0.55	141.19	-38.97	31.34	50.01	48.92	1.09	45.878		
400.00	400.00	400.00	400.00	0.77	0.77	141.19	-38.97	31.34	50.01	48.47	1.54	32.483		
500.00	500.00	500.00	500.00	0.99	0.99	141.19	-38.97	31.34	50.01	48.02	1.99	25.142		
600.00	600.00	600.00	600.00	1.22	1.22	141.19	-38.97	31.34	50.01	47.57	2.44	20.508		
700.00	700.00	700.00	700.00	1.44	1.44	141.19	-38.97	31.34	50.01	47.12	2.89	17.316		
800.00	800.00	800.00	800.00	1.67	1.67	141.19	-38.97	31.34	50.01	46.67	3.34	14.984		
900.00	900.00	900.00	900.00	1.89	1.89	141.19	-38.97	31.34	50.01	46.22	3.79	13.205		
1,000.00	1,000.00	1,000.00	1,000.00	2.12	2.12	141.19	-38.97	31.34	50.01	45.78	4.24	11.804		
1,050.00	1,050.00	1,050.00	1,050.00	2.23	2.23	141.19	-38.97	31.34	50.01	45.55	4.46	11.209 CC, ES		
1,100.00	1,100.00	1,099.15	1,099.15	2.33	2.33	-107.97	-39.35	31.53	50.56	45.90	4.66	10.848 SF		
1,200.00	1,199.93	1,197.27	1,197.20	2.53	2.50	-110.53	-42.35	33.05	55.05	50.03	5.02	10.959		
1,300.00	1,299.68	1,295.30	1,295.01	2.73	2.68	-114.58	-48.26	36.02	64.18	58.78	5.40	11.885		
1,400.00	1,399.13	1,394.38	1,393.79	2.95	2.88	-119.62	-55.08	39.46	76.14	70.34	5.80	13.133		
1,500.00	1,498.15	1,493.00	1,492.12	3.20	3.09	-125.03	-61.87	42.89	90.51	84.29	6.22	14.562		
1,576.99	1,574.02	1,568.55	1,567.44	3.42	3.26	-129.10	-67.08	45.51	103.49	96.94	6.55	15.800		
1,600.00	1,596.64	1,591.07	1,589.90	3.49	3.31	-130.31	-68.63	46.29	107.65	101.00	6.65	16.179		
1,700.00	1,694.96	1,688.95	1,687.49	3.80	3.53	-134.61	-75.37	49.69	126.21	119.09	7.12	17.732		
1,800.00	1,793.27	1,786.83	1,785.08	4.14	3.76	-137.80	-82.12	53.09	145.28	137.69	7.59	19.135		
1,900.00	1,891.58	1,884.72	1,882.67	4.48	3.99	-140.26	-88.86	56.49	164.69	156.62	8.08	20.394		
2,000.00	1,989.90	1,982.60	1,980.26	4.84	4.23	-142.19	-95.60	59.89	184.33	175.76	8.57	21.519		
2,100.00	2,088.21	2,080.48	2,077.85	5.21	4.47	-143.75	-102.35	63.29	204.13	195.07	9.06	22.527		
2,200.00	2,186.52	2,178.37	2,175.44	5.59	4.71	-145.03	-109.09	66.69	224.05	214.49	9.56	23.433		
2,300.00	2,284.83	2,276.25	2,273.03	5.97	4.95	-146.11	-115.83	70.09	244.06	234.00	10.07	24.248		
2,400.00	2,383.15	2,374.13	2,370.62	6.36	5.20	-147.02	-122.57	73.49	264.14	253.57	10.57	24.984		
2,500.00	2,481.46	2,472.01	2,468.22	6.75	5.45	-147.80	-129.32	76.89	284.28	273.19	11.08	25.646		
2,600.00	2,579.77	2,569.90	2,565.81	7.14	5.70	-148.48	-136.06	80.29	304.46	292.86	11.60	26.243		
2,700.00	2,678.09	2,667.78	2,663.40	7.54	5.95	-149.08	-142.80	83.69	324.68	312.56	12.12	26.787		
2,800.00	2,776.40	2,765.66	2,760.99	7.94	6.21	-149.60	-149.55	87.09	344.92	332.28	12.64	27.283		
2,900.00	2,874.71	2,863.54	2,858.58	8.34	6.46	-150.07	-156.29	90.49	365.19	352.03	13.17	27.738		
3,000.00	2,973.02	2,961.43	2,956.17	8.74	6.71	-150.49	-163.03	93.89	385.49	371.80	13.69	28.157		
3,100.00	3,071.34	3,059.31	3,053.76	9.15	6.97	-150.86	-169.77	97.29	405.80	391.58	14.22	28.542		
3,200.00	3,169.65	3,157.19	3,151.35	9.56	7.23	-151.20	-176.52	100.69	426.12	411.38	14.75	28.899		
3,300.00	3,267.96	3,255.08	3,248.94	9.96	7.48	-151.51	-183.26	104.09	446.46	431.19	15.27	29.230		
3,400.00	3,366.27	3,352.96	3,346.53	10.37	7.74	-151.80	-190.00	107.49	466.81	451.00	15.80	29.537		
3,500.00	3,464.59	3,450.84	3,444.13	10.78	8.00	-152.05	-196.75	110.89	487.17	470.83	16.34	29.823		
3,600.00	3,562.90	3,548.72	3,541.72	11.19	8.26	-152.29	-203.49	114.29	507.54	490.67	16.87	30.089		
3,700.00	3,661.21	3,646.61	3,639.31	11.60	8.52	-152.51	-210.23	117.69	527.91	510.51	17.40	30.339		
3,800.00	3,759.53	3,744.49	3,736.90	12.01	8.78	-152.71	-216.98	121.09	548.30	530.36	17.93	30.573		
3,900.00	3,857.84	3,842.37	3,834.49	12.43	9.04	-152.90	-223.72	124.49	568.68	550.22	18.47	30.793		
4,000.00	3,956.15	3,940.26	3,932.08	12.84	9.30	-153.08	-230.46	127.88	589.08	570.08	19.00	30.999		
4,100.00	4,054.46	4,038.14	4,029.67	13.25	9.56	-153.24	-237.20	131.28	609.48	589.94	19.54	31.194		
4,200.00	4,152.78	4,136.02	4,127.26	13.66	9.82	-153.40	-243.95	134.68	629.88	609.81	20.07	31.378		
4,300.00	4,251.09	4,233.90	4,224.85	14.08	10.08	-153.54	-250.69	138.08	650.29	629.68	20.61	31.551		
4,400.00	4,349.40	4,331.79	4,322.45	14.49	10.34	-153.68	-257.43	141.48	670.70	649.55	21.15	31.716		
4,500.00	4,447.72	4,429.67	4,420.04	14.91	10.60	-153.80	-264.18	144.88	691.12	669.43	21.68	31.871		
4,600.00	4,546.03	4,527.55	4,517.63	15.32	10.86	-153.92	-270.92	148.28	711.54	689.31	22.22	32.019		
4,700.00	4,644.34	4,625.44	4,615.22	15.74	11.13	-154.04	-277.66	151.68	731.96	709.20	22.76	32.160		
4,800.00	4,742.65	4,723.32	4,712.81	16.15	11.39	-154.14	-284.40	155.08	752.38	729.08	23.30	32.293		
4,900.00	4,840.97	4,821.20	4,810.40	16.57	11.65	-154.24	-291.15	158.48	772.81	748.97	23.84	32.420		

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



<b>Company:</b>	US ROCKIES REGION PLANNING	<b>Local Co-ordinate Reference:</b>	Well P_KERR-MCGEE 33-3
<b>Project:</b>	COLORADO NORTHERN ZONE - 83	<b>TVD Reference:</b>	WELL @ 5057.00ft (Original Well Elev)
<b>Reference Site:</b>	WELD_KERR MCGEE 19-3 PAD	<b>MD Reference:</b>	WELL @ 5057.00ft (Original Well Elev)
<b>Site Error:</b>	0.00ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	P_KERR-MCGEE 33-3	<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_KERR-MCGEE 33-3	<b>Database:</b>	EDM 2003.21 Single User Db
<b>Reference Design:</b>	PLAN #1 1-15-10 RHS	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design													WELD_KERR MCGEE 19-3 PAD - P_KERR-MCGEE 19-3 - P_KERR-MCGEE 19-3 - PLAN #1 1-15-10	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 Tooface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor			
5,000.00	4,939.28	4,919.08	4,907.99	16.99	11.91	-154.34	-297.89	161.88	793.23	768.86	24.38	32.542			
5,100.00	5,037.59	5,016.97	5,005.58	17.40	12.18	-154.43	-304.63	165.28	813.66	788.75	24.91	32.658			
5,200.00	5,135.91	5,114.85	5,103.17	17.82	12.44	-154.52	-311.38	168.68	834.10	808.64	25.45	32.768			
5,300.00	5,234.22	5,212.73	5,200.77	18.24	12.70	-154.60	-318.12	172.08	854.53	828.54	25.99	32.874			
5,400.00	5,332.53	5,310.62	5,298.36	18.65	12.97	-154.68	-324.86	175.48	874.96	848.43	26.53	32.976			
5,500.00	5,430.84	5,408.50	5,395.95	19.07	13.23	-154.75	-331.61	178.88	895.40	868.33	27.07	33.073			
5,600.00	5,529.16	5,506.38	5,493.54	19.49	13.49	-154.83	-338.35	182.28	915.84	888.23	27.61	33.166			
5,700.00	5,627.47	5,604.26	5,591.13	19.90	13.75	-154.89	-345.09	185.68	936.28	908.13	28.15	33.255			
5,800.00	5,725.78	5,702.15	5,688.72	20.32	14.02	-154.96	-351.83	189.08	956.72	928.03	28.69	33.341			
5,900.00	5,824.09	5,800.03	5,786.31	20.74	14.28	-155.02	-358.58	192.48	977.16	947.93	29.24	33.424			
6,000.00	5,922.41	5,897.91	5,883.90	21.16	14.55	-155.08	-365.32	195.88	997.61	967.83	29.78	33.503			
6,100.00	6,020.72	5,995.79	5,981.49	21.57	14.81	-155.14	-372.06	199.28	1,018.05	987.73	30.32	33.579			
6,200.00	6,119.03	6,093.68	6,079.09	21.99	15.07	-155.20	-378.81	202.68	1,038.49	1,007.64	30.86	33.653			
6,300.00	6,217.35	6,191.56	6,176.68	22.41	15.34	-155.25	-385.55	206.08	1,058.94	1,027.54	31.40	33.724			
6,400.00	6,315.66	6,289.44	6,274.27	22.83	15.60	-155.30	-392.29	209.48	1,079.39	1,047.45	31.94	33.793			
6,500.00	6,413.97	6,405.21	6,389.79	23.25	15.87	-155.43	-398.89	212.80	1,099.22	1,066.73	32.48	33.840			
6,600.00	6,512.28	6,526.63	6,511.17	23.66	16.08	-155.78	-401.41	214.07	1,117.05	1,084.10	32.95	33.898			
6,700.00	6,610.60	6,626.06	6,610.60	24.08	16.25	-156.17	-401.42	214.08	1,133.81	1,100.43	33.38	33.963			
6,800.00	6,708.91	6,724.37	6,708.91	24.50	16.41	-156.53	-401.42	214.08	1,150.61	1,116.81	33.80	34.042			
6,900.00	6,807.22	6,822.68	6,807.22	24.92	16.57	-156.89	-401.42	214.08	1,167.46	1,133.24	34.22	34.119			
7,000.00	6,905.54	6,921.00	6,905.54	25.34	16.73	-157.24	-401.42	214.08	1,184.35	1,149.71	34.64	34.195			
7,093.01	6,996.98	7,012.44	6,996.98	25.73	16.88	-157.55	-401.42	214.08	1,200.09	1,165.07	35.02	34.264			
7,100.00	7,003.85	7,019.31	7,003.85	25.75	16.89	-157.58	-401.42	214.08	1,201.27	1,166.21	35.06	34.264			
7,200.00	7,102.50	7,117.96	7,102.50	26.04	17.06	-157.99	-401.42	214.08	1,216.42	1,180.93	35.49	34.273			
7,300.00	7,201.66	7,217.12	7,201.66	26.28	17.23	-158.30	-401.42	214.08	1,228.39	1,192.49	35.89	34.225			
7,400.00	7,301.22	7,316.68	7,301.22	26.49	17.39	-158.53	-401.42	214.08	1,237.14	1,200.89	36.25	34.125			
7,500.00	7,401.03	7,416.50	7,401.03	26.66	17.57	-158.67	-401.42	214.08	1,242.66	1,206.09	36.58	33.973			
7,600.00	7,501.00	7,516.46	7,501.00	26.79	17.74	-158.73	-401.42	214.08	1,244.94	1,208.08	36.86	33.772			
7,620.00	7,521.00	7,536.46	7,521.00	26.82	17.77	90.08	-401.42	214.08	1,245.01	1,208.09	36.92	33.724			
7,700.00	7,601.00	7,616.46	7,601.00	26.91	17.91	90.08	-401.42	214.08	1,245.01	1,207.81	37.19	33.476			
7,800.00	7,701.00	7,716.46	7,701.00	27.04	18.08	90.08	-401.42	214.08	1,245.01	1,207.48	37.53	33.173			
7,900.00	7,801.00	7,816.46	7,801.00	27.17	18.26	90.08	-401.42	214.08	1,245.01	1,207.13	37.87	32.874			
8,000.00	7,901.00	7,916.46	7,901.00	27.29	18.44	90.08	-401.42	214.08	1,245.01	1,206.79	38.22	32.578			
8,079.00	7,980.00	7,995.46	7,980.00	27.39	18.58	90.08	-401.42	214.08	1,245.01	1,206.52	38.49	32.347			

<b>Company:</b>	US ROCKIES REGION PLANNING	<b>Local Co-ordinate Reference:</b>	Well P_KERR-MCGEE 33-3
<b>Project:</b>	COLORADO NORTHERN ZONE - 83	<b>TVD Reference:</b>	WELL @ 5057.00ft (Original Well Elev)
<b>Reference Site:</b>	WELD_KERR MCGEE 19-3 PAD	<b>MD Reference:</b>	WELL @ 5057.00ft (Original Well Elev)
<b>Site Error:</b>	0.00ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	P_KERR-MCGEE 33-3	<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_KERR-MCGEE 33-3	<b>Database:</b>	EDM 2003.21 Single User Db
<b>Reference Design:</b>	PLAN #1 1-15-10 RHS	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design												WELD_KERR MCGEE 19-3 PAD - P_KERR-MCGEE 22-3 - P_KERR-MCGEE 22-3 - PLAN #1 1-15-10	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 Tooface (°)	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	-40.08	7.65	-6.44	10.00					
100.00	100.00	100.00	100.00	0.10	0.10	-40.08	7.65	-6.44	10.00	9.81	0.19	52.327		
200.00	200.00	200.00	200.00	0.32	0.32	-40.08	7.65	-6.44	10.00	9.36	0.64	15.606		
300.00	300.00	300.00	300.00	0.55	0.55	-40.08	7.65	-6.44	10.00	8.91	1.09	9.171		
400.00	400.00	400.00	400.00	0.77	0.77	-40.08	7.65	-6.44	10.00	8.46	1.54	6.493		
500.00	500.00	500.00	500.00	0.99	0.99	-40.08	7.65	-6.44	10.00	8.01	1.99	5.026		
600.00	600.00	600.00	600.00	1.22	1.22	-40.08	7.65	-6.44	10.00	7.56	2.44	4.099		
700.00	700.00	700.00	700.00	1.44	1.44	-40.08	7.65	-6.44	10.00	7.11	2.89	3.461		
800.00	800.00	800.00	800.00	1.67	1.67	-40.08	7.65	-6.44	10.00	6.66	3.34	2.995		
900.00	900.00	900.00	900.00	1.89	1.89	-40.08	7.65	-6.44	10.00	6.21	3.79	2.640		
1,000.00	1,000.00	1,000.00	1,000.00	2.12	2.12	-40.08	7.65	-6.44	10.00	5.76	4.24	2.360		
1,050.00	1,050.00	1,050.00	1,050.00	2.23	2.23	-40.08	7.65	-6.44	10.00	5.54	4.46	2.241 CC		
1,100.00	1,100.00	1,099.90	1,099.90	2.33	2.34	75.57	8.06	-6.29	10.11	5.43	4.68	2.162 ES, SF		
1,200.00	1,199.93	1,199.40	1,199.33	2.53	2.56	104.37	11.33	-5.15	12.85	7.76	5.09	2.524		
1,300.00	1,299.68	1,298.01	1,297.70	2.73	2.79	129.25	17.78	-2.89	22.99	17.48	5.50	4.177		
1,400.00	1,399.13	1,395.16	1,394.32	2.95	3.01	140.62	27.25	0.42	40.74	34.83	5.91	6.893		
1,500.00	1,498.15	1,490.32	1,488.58	3.20	3.26	145.84	39.53	4.72	65.10	58.78	6.32	10.306		
1,576.99	1,574.02	1,561.92	1,559.20	3.42	3.45	148.02	50.71	8.63	88.04	81.41	6.63	13.277		
1,600.00	1,596.64	1,583.13	1,580.06	3.49	3.51	148.55	54.34	9.90	95.50	88.77	6.73	14.186		
1,700.00	1,694.96	1,677.59	1,672.91	3.80	3.80	150.15	70.73	15.63	128.21	121.02	7.19	17.835		
1,800.00	1,793.27	1,772.04	1,765.75	4.14	4.10	151.09	87.12	21.37	160.97	153.31	7.66	21.021		
1,900.00	1,891.58	1,866.50	1,858.60	4.48	4.42	151.72	103.51	27.10	193.76	185.62	8.14	23.811		
2,000.00	1,989.90	1,960.95	1,951.44	4.84	4.74	152.17	119.90	32.84	226.56	217.93	8.63	26.265		
2,100.00	2,088.21	2,055.41	2,044.29	5.21	5.07	152.50	136.29	38.57	259.37	250.25	9.12	28.435		
2,200.00	2,186.52	2,149.86	2,137.13	5.59	5.41	152.76	152.68	44.30	292.19	282.56	9.62	30.362		
2,300.00	2,284.83	2,244.32	2,229.97	5.97	5.76	152.96	169.07	50.04	325.01	314.88	10.13	32.082		
2,400.00	2,383.15	2,338.77	2,322.82	6.36	6.11	153.13	185.46	55.77	357.83	347.19	10.64	33.624		
2,500.00	2,481.46	2,433.22	2,415.66	6.75	6.46	153.27	201.85	61.51	390.66	379.50	11.16	35.012		
2,600.00	2,579.77	2,527.68	2,508.51	7.14	6.81	153.39	218.24	67.24	423.49	411.81	11.68	36.268		
2,700.00	2,678.09	2,622.13	2,601.35	7.54	7.17	153.49	234.64	72.98	456.32	444.12	12.20	37.408		
2,800.00	2,776.40	2,716.59	2,694.20	7.94	7.53	153.58	251.03	78.71	489.15	476.43	12.72	38.447		
2,900.00	2,874.71	2,811.04	2,787.04	8.34	7.90	153.65	267.42	84.45	521.98	508.73	13.25	39.398		
3,000.00	2,973.02	2,905.50	2,879.89	8.74	8.26	153.72	283.81	90.18	554.81	541.04	13.78	40.269		
3,100.00	3,071.34	2,999.95	2,972.73	9.15	8.63	153.78	300.20	95.91	587.65	573.34	14.31	41.072		
3,200.00	3,169.65	3,094.41	3,065.58	9.56	9.00	153.83	316.59	101.65	620.48	605.64	14.84	41.812		
3,300.00	3,267.96	3,188.86	3,158.42	9.96	9.37	153.88	332.98	107.38	653.31	637.94	15.37	42.498		
3,400.00	3,366.27	3,283.32	3,251.27	10.37	9.74	153.92	349.37	113.12	686.15	670.24	15.91	43.134		
3,500.00	3,464.59	3,377.77	3,344.11	10.78	10.11	153.96	365.76	118.85	718.98	702.54	16.44	43.725		
3,600.00	3,562.90	3,472.22	3,436.95	11.19	10.48	154.00	382.15	124.59	751.82	734.84	16.98	44.277		
3,700.00	3,661.21	3,566.68	3,529.80	11.60	10.85	154.03	398.54	130.32	784.65	767.14	17.52	44.793		
3,800.00	3,759.53	3,661.13	3,622.64	12.01	11.22	154.06	414.93	136.06	817.49	799.43	18.06	45.275		
3,900.00	3,857.84	3,755.59	3,715.49	12.43	11.60	154.09	431.32	141.79	850.33	831.73	18.60	45.728		
4,000.00	3,956.15	3,850.04	3,808.33	12.84	11.97	154.12	447.71	147.52	883.16	864.03	19.14	46.154		
4,100.00	4,054.46	3,944.50	3,901.18	13.25	12.35	154.14	464.10	153.26	916.00	896.32	19.68	46.555		
4,200.00	4,152.78	4,038.95	3,994.02	13.66	12.72	154.16	480.50	158.99	948.83	928.62	20.22	46.932		
4,300.00	4,251.09	4,133.41	4,086.87	14.08	13.10	154.19	496.89	164.73	981.67	960.91	20.76	47.289		
4,400.00	4,349.40	4,227.86	4,179.71	14.49	13.48	154.21	513.28	170.46	1,014.51	993.21	21.30	47.627		
4,500.00	4,447.72	4,322.32	4,272.56	14.91	13.85	154.22	529.67	176.20	1,047.34	1,025.50	21.84	47.947		
4,600.00	4,546.03	4,416.77	4,365.40	15.32	14.23	154.24	546.06	181.93	1,080.18	1,057.79	22.39	48.250		
4,700.00	4,644.34	4,511.22	4,458.24	15.74	14.61	154.26	562.45	187.66	1,113.02	1,090.09	22.93	48.538		
4,800.00	4,742.65	4,605.68	4,551.09	16.15	14.98	154.27	578.84	193.40	1,145.86	1,122.38	23.47	48.812		
4,900.00	4,840.97	4,700.13	4,643.93	16.57	15.36	154.29	595.23	199.13	1,178.69	1,154.67	24.02	49.073		

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

<b>Company:</b>	US ROCKIES REGION PLANNING	<b>Local Co-ordinate Reference:</b>	Well P_KERR-MCGEE 33-3
<b>Project:</b>	COLORADO NORTHERN ZONE - 83	<b>TVD Reference:</b>	WELL @ 5057.00ft (Original Well Elev)
<b>Reference Site:</b>	WELD_KERR MCGEE 19-3 PAD	<b>MD Reference:</b>	WELL @ 5057.00ft (Original Well Elev)
<b>Site Error:</b>	0.00ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	P_KERR-MCGEE 33-3	<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_KERR-MCGEE 33-3	<b>Database:</b>	EDM 2003.21 Single User Db
<b>Reference Design:</b>	PLAN #1 1-15-10 RHS	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design													WELD_KERR MCGEE 19-3 PAD - P_KERR-MCGEE 22-3 - P_KERR-MCGEE 22-3 - PLAN #1 1-15-10	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 Tooface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor			
5,000.00	4,939.28	4,794.59	4,736.78	16.99	15.74	154.30	611.62	204.87	1,211.53	1,186.97	24.56	49.322			
5,100.00	5,037.59	4,889.04	4,829.62	17.40	16.12	154.31	628.01	210.60	1,244.37	1,219.26	25.11	49.559			
5,200.00	5,135.91	4,983.50	4,922.47	17.82	16.50	154.33	644.40	216.34	1,277.20	1,251.55	25.65	49.786			
5,300.00	5,234.22	5,077.95	5,015.31	18.24	16.87	154.34	660.79	222.07	1,310.04	1,283.84	26.20	50.002			
5,400.00	5,332.53	5,172.41	5,108.16	18.65	17.25	154.35	677.18	227.81	1,342.88	1,316.13	26.75	50.210			
5,500.00	5,430.84	5,266.86	5,201.00	19.07	17.63	154.36	693.57	233.54	1,375.72	1,348.42	27.29	50.408			
5,600.00	5,529.16	5,361.31	5,293.85	19.49	18.01	154.37	709.96	239.27	1,408.55	1,380.71	27.84	50.599			
5,700.00	5,627.47	5,455.77	5,386.69	19.90	18.39	154.38	726.35	245.01	1,441.39	1,413.01	28.38	50.782			
5,800.00	5,725.78	5,550.22	5,479.54	20.32	18.77	154.39	742.75	250.74	1,474.23	1,445.30	28.93	50.957			
5,900.00	5,824.09	5,644.68	5,572.38	20.74	19.15	154.40	759.14	256.48	1,507.06	1,477.59	29.48	51.126			
6,000.00	5,922.41	5,739.13	5,665.22	21.16	19.53	154.41	775.53	262.21	1,539.90	1,509.88	30.02	51.288			
6,100.00	6,020.72	5,833.59	5,758.07	21.57	19.91	154.41	791.92	267.95	1,572.74	1,542.17	30.57	51.444			
6,200.00	6,119.03	5,928.04	5,850.91	21.99	20.29	154.42	808.31	273.68	1,605.58	1,574.46	31.12	51.594			
6,300.00	6,217.35	6,022.50	5,943.76	22.41	20.67	154.43	824.70	279.42	1,638.41	1,606.75	31.67	51.739			
6,400.00	6,315.66	6,117.25	6,091.29	22.83	21.17	154.47	848.92	287.89	1,670.44	1,638.13	32.31	51.701			
6,500.00	6,413.97	6,378.87	6,296.56	23.25	21.67	154.70	870.78	295.54	1,697.01	1,664.02	32.99	51.436			
6,600.00	6,512.28	6,591.58	6,509.06	23.66	22.02	155.14	878.65	298.29	1,717.14	1,683.52	33.62	51.077			
6,700.00	6,610.60	6,693.12	6,610.60	24.08	22.16	155.41	878.66	298.29	1,733.80	1,699.72	34.08	50.869			
6,800.00	6,708.91	6,791.43	6,708.91	24.50	22.30	155.65	878.66	298.29	1,750.50	1,715.96	34.55	50.673			
6,900.00	6,807.22	6,889.75	6,807.22	24.92	22.44	155.90	878.66	298.29	1,767.23	1,732.22	35.01	50.483			
7,000.00	6,905.54	6,988.06	6,905.54	25.34	22.58	156.14	878.66	298.29	1,783.99	1,748.52	35.47	50.300			
7,093.01	6,996.98	7,079.50	6,996.98	25.73	22.71	156.36	878.66	298.29	1,799.60	1,763.71	35.90	50.134			
7,100.00	7,003.85	7,086.37	7,003.85	25.75	22.72	156.38	878.66	298.29	1,800.77	1,764.83	35.94	50.108			
7,200.00	7,102.50	7,185.03	7,102.50	26.04	22.87	156.71	878.66	298.29	1,815.78	1,779.29	36.49	49.755			
7,300.00	7,201.66	7,284.19	7,201.66	26.28	23.01	156.96	878.66	298.29	1,827.64	1,790.64	37.00	49.389			
7,400.00	7,301.22	7,383.74	7,301.22	26.49	23.16	157.14	878.66	298.29	1,836.31	1,798.85	37.47	49.011			
7,500.00	7,401.03	7,483.56	7,401.03	26.66	23.31	157.26	878.66	298.29	1,841.78	1,803.90	37.88	48.620			
7,600.00	7,501.00	7,583.52	7,501.00	26.79	23.46	157.30	878.66	298.29	1,844.03	1,805.79	38.25	48.216			
7,620.00	7,521.00	7,603.52	7,521.00	26.82	23.49	46.12	878.66	298.29	1,844.10	1,805.79	38.31	48.132			
7,700.00	7,601.00	7,683.52	7,601.00	26.91	23.62	46.12	878.66	298.29	1,844.10	1,805.50	38.60	47.774			
7,800.00	7,701.00	7,783.52	7,701.00	27.04	23.77	46.12	878.66	298.29	1,844.10	1,805.14	38.96	47.334			
7,900.00	7,801.00	7,883.52	7,801.00	27.17	23.92	46.12	878.66	298.29	1,844.10	1,804.78	39.32	46.898			
8,000.00	7,901.00	7,983.52	7,901.00	27.29	24.08	46.12	878.66	298.29	1,844.10	1,804.42	39.68	46.469			
8,050.89	7,951.89	8,034.41	7,951.89	27.36	24.16	46.12	878.66	298.29	1,844.10	1,804.23	39.87	46.253			
8,079.00	7,980.00	8,057.52	7,975.00	27.39	24.20	46.12	878.66	298.29	1,844.11	1,804.14	39.96	46.146			

<b>Company:</b>	US ROCKIES REGION PLANNING	<b>Local Co-ordinate Reference:</b>	Well P_KERR-MCGEE 33-3
<b>Project:</b>	COLORADO NORTHERN ZONE - 83	<b>TVD Reference:</b>	WELL @ 5057.00ft (Original Well Elev)
<b>Reference Site:</b>	WELD_KERR MCGEE 19-3 PAD	<b>MD Reference:</b>	WELL @ 5057.00ft (Original Well Elev)
<b>Site Error:</b>	0.00ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	P_KERR-MCGEE 33-3	<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_KERR-MCGEE 33-3	<b>Database:</b>	EDM 2003.21 Single User Db
<b>Reference Design:</b>	PLAN #1 1-15-10 RHS	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design													WELD_KERR MCGEE 19-3 PAD - P_KERR-MCGEE 23-3 - P_KERR-MCGEE 23-3 - PLAN #1 1-15-10	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 Tooface (°)	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	141.41	-46.99	37.50	60.12						
100.00	100.00	100.00	100.00	0.10	0.10	141.41	-46.99	37.50	60.12	59.92	0.19	314.659			
200.00	200.00	200.00	200.00	0.32	0.32	141.41	-46.99	37.50	60.12	59.48	0.64	93.846			
300.00	300.00	300.00	300.00	0.55	0.55	141.41	-46.99	37.50	60.12	59.03	1.09	55.146			
400.00	400.00	400.00	400.00	0.77	0.77	141.41	-46.99	37.50	60.12	58.58	1.54	39.045			
500.00	500.00	500.00	500.00	0.99	0.99	141.41	-46.99	37.50	60.12	58.13	1.99	30.221			
600.00	600.00	600.00	600.00	1.22	1.22	141.41	-46.99	37.50	60.12	57.68	2.44	24.651			
700.00	700.00	700.00	700.00	1.44	1.44	141.41	-46.99	37.50	60.12	57.23	2.89	20.814			
800.00	800.00	800.00	800.00	1.67	1.67	141.41	-46.99	37.50	60.12	56.78	3.34	18.011			
900.00	900.00	900.00	900.00	1.89	1.89	141.41	-46.99	37.50	60.12	56.33	3.79	15.873			
1,000.00	1,000.00	1,000.00	1,000.00	2.12	2.12	141.41	-46.99	37.50	60.12	55.88	4.24	14.189			
1,050.00	1,050.00	1,050.00	1,050.00	2.23	2.23	141.41	-46.99	37.50	60.12	55.65	4.46	13.474	CC, ES		
1,100.00	1,100.00	1,099.19	1,099.19	2.33	2.33	-108.04	-47.07	37.91	60.58	55.91	4.67	12.982			
1,200.00	1,199.93	1,197.25	1,197.19	2.53	2.53	-112.75	-47.75	41.20	64.55	59.51	5.05	12.790	SF		
1,300.00	1,299.68	1,294.35	1,294.06	2.73	2.73	-120.42	-49.09	47.70	73.61	68.17	5.44	13.538			
1,400.00	1,399.13	1,389.88	1,389.08	2.95	2.94	-128.65	-51.06	57.22	89.04	83.21	5.83	15.270			
1,500.00	1,498.15	1,483.26	1,481.61	3.20	3.18	-135.77	-53.60	69.52	111.49	105.27	6.22	17.911			
1,576.99	1,574.02	1,553.36	1,550.78	3.42	3.37	-140.15	-55.90	80.70	133.55	127.02	6.53	20.462			
1,600.00	1,596.64	1,574.01	1,571.09	3.49	3.43	-141.35	-56.65	84.30	140.85	134.23	6.62	21.272			
1,700.00	1,694.96	1,662.49	1,657.84	3.80	3.71	-145.39	-60.17	101.38	174.94	167.90	7.04	24.848			
1,800.00	1,793.27	1,748.92	1,742.01	4.14	4.03	-148.09	-64.14	120.58	212.45	204.98	7.47	28.451			
1,900.00	1,891.58	1,833.20	1,823.48	4.48	4.37	-149.92	-68.49	141.70	253.01	245.11	7.90	32.022			
2,000.00	1,989.90	1,915.28	1,902.18	4.84	4.75	-151.20	-73.20	164.50	296.36	288.02	8.34	35.534			
2,100.00	2,088.21	2,000.00	1,982.68	5.21	5.19	-152.16	-78.54	190.35	342.37	333.58	8.80	38.927			
2,200.00	2,186.52	2,075.62	2,053.89	5.59	5.62	-152.78	-83.68	215.29	390.67	381.43	9.24	42.277			
2,300.00	2,284.83	2,162.74	2,135.74	5.97	6.15	-153.34	-89.71	244.49	439.65	429.92	9.72	45.221			
2,400.00	2,383.15	2,249.85	2,217.60	6.36	6.70	-153.78	-95.74	273.69	488.65	478.43	10.21	47.855			
2,500.00	2,481.46	2,336.97	2,299.45	6.75	7.26	-154.15	-101.76	302.89	537.66	526.96	10.71	50.215			
2,600.00	2,579.77	2,424.08	2,381.30	7.14	7.83	-154.45	-107.79	332.09	586.70	575.49	11.21	52.337			
2,700.00	2,678.09	2,511.20	2,463.16	7.54	8.41	-154.71	-113.82	361.29	635.74	624.02	11.72	54.251			
2,800.00	2,776.40	2,598.31	2,545.01	7.94	8.99	-154.93	-119.84	390.49	684.79	672.56	12.23	55.985			
2,900.00	2,874.71	2,685.43	2,626.87	8.34	9.58	-155.12	-125.87	419.70	733.85	721.10	12.75	57.557			
3,000.00	2,973.02	2,772.54	2,708.72	8.74	10.18	-155.29	-131.90	448.90	782.91	769.64	13.27	58.991			
3,100.00	3,071.34	2,859.66	2,790.57	9.15	10.77	-155.43	-137.93	478.10	831.98	818.18	13.80	60.301			
3,200.00	3,169.65	2,946.77	2,872.43	9.56	11.38	-155.56	-143.95	507.30	881.05	866.73	14.33	61.503			
3,300.00	3,267.96	3,033.89	2,954.28	9.96	11.98	-155.68	-149.98	536.50	930.13	915.27	14.86	62.609			
3,400.00	3,366.27	3,121.00	3,036.13	10.37	12.59	-155.79	-156.01	565.70	979.20	963.81	15.39	63.628			
3,500.00	3,464.59	3,208.12	3,117.99	10.78	13.20	-155.88	-162.03	594.90	1,028.28	1,012.36	15.93	64.570			
3,600.00	3,562.90	3,295.23	3,199.84	11.19	13.81	-155.97	-168.06	624.10	1,077.37	1,060.90	16.46	65.443			
3,700.00	3,661.21	3,382.35	3,281.69	11.60	14.42	-156.05	-174.09	653.31	1,126.45	1,109.45	17.00	66.253			
3,800.00	3,759.53	3,469.46	3,363.55	12.01	15.03	-156.12	-180.11	682.51	1,175.53	1,157.99	17.54	67.008			
3,900.00	3,857.84	3,556.58	3,445.40	12.43	15.65	-156.19	-186.14	711.71	1,224.62	1,206.53	18.09	67.712			
4,000.00	3,956.15	3,643.70	3,527.26	12.84	16.26	-156.25	-192.17	740.91	1,273.71	1,255.08	18.63	68.370			
4,100.00	4,054.46	3,730.81	3,609.11	13.25	16.88	-156.31	-198.20	770.11	1,322.80	1,303.62	19.17	68.987			
4,200.00	4,152.78	3,817.93	3,690.96	13.66	17.50	-156.36	-204.22	799.31	1,371.89	1,352.16	19.72	69.565			
4,300.00	4,251.09	3,905.04	3,772.82	14.08	18.11	-156.41	-210.25	828.51	1,420.98	1,400.71	20.27	70.109			
4,400.00	4,349.40	3,992.16	3,854.67	14.49	18.73	-156.45	-216.28	857.71	1,470.07	1,449.25	20.82	70.621			
4,500.00	4,447.72	4,079.27	3,936.52	14.91	19.35	-156.50	-222.30	886.92	1,519.16	1,497.79	21.37	71.103			
4,600.00	4,546.03	4,166.39	4,018.38	15.32	19.97	-156.54	-228.33	916.12	1,568.25	1,546.33	21.92	71.559			
4,700.00	4,644.34	4,253.50	4,100.23	15.74	20.59	-156.58	-234.36	945.32	1,617.34	1,594.88	22.47	71.990			
4,800.00	4,742.65	4,340.62	4,182.09	16.15	21.21	-156.61	-240.38	974.52	1,666.44	1,643.42	23.02	72.398			
4,900.00	4,840.97	4,427.73	4,263.94	16.57	21.84	-156.64	-246.41	1,003.72	1,715.53	1,691.96	23.57	72.785			

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



<b>Company:</b>	US ROCKIES REGION PLANNING	<b>Local Co-ordinate Reference:</b>	Well P_KERR-MCGEE 33-3
<b>Project:</b>	COLORADO NORTHERN ZONE - 83	<b>TVD Reference:</b>	WELL @ 5057.00ft (Original Well Elev)
<b>Reference Site:</b>	WELD_KERR MCGEE 19-3 PAD	<b>MD Reference:</b>	WELL @ 5057.00ft (Original Well Elev)
<b>Site Error:</b>	0.00ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	P_KERR-MCGEE 33-3	<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_KERR-MCGEE 33-3	<b>Database:</b>	EDM 2003.21 Single User Db
<b>Reference Design:</b>	PLAN #1 1-15-10 RHS	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design													WELD_KERR MCGEE 19-3 PAD - P_KERR-MCGEE 23-3 - P_KERR-MCGEE 23-3 - PLAN #1 1-15-10	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 Tooface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor			
5,000.00	4,939.28	4,514.85	4,345.79	16.99	22.46	-156.68	-252.44	1,032.92	1,764.62	1,740.50	24.12	73.153			
5,100.00	5,037.59	4,601.96	4,427.65	17.40	23.08	-156.71	-258.47	1,062.12	1,813.72	1,789.04	24.68	73.503			
5,200.00	5,135.91	4,689.08	4,509.50	17.82	23.70	-156.73	-264.49	1,091.32	1,862.81	1,837.58	25.23	73.835			
5,300.00	5,234.22	4,776.19	4,591.35	18.24	24.32	-156.76	-270.52	1,120.52	1,911.91	1,886.13	25.78	74.152			
5,400.00	5,332.53	4,863.31	4,673.21	18.65	24.95	-156.79	-276.55	1,149.73	1,961.00	1,934.67	26.34	74.454			
5,500.00	5,430.84	4,950.42	4,755.06	19.07	25.57	-156.81	-282.57	1,178.93	2,010.10	1,983.21	26.89	74.743			
5,600.00	5,529.16	5,037.54	4,836.92	19.49	26.19	-156.83	-288.60	1,208.13	2,059.20	2,031.75	27.45	75.019			
5,700.00	5,627.47	5,124.65	4,918.77	19.90	26.82	-156.86	-294.63	1,237.33	2,108.29	2,080.29	28.00	75.283			
5,800.00	5,725.78	5,211.77	5,000.62	20.32	27.44	-156.88	-300.65	1,266.53	2,157.39	2,128.83	28.56	75.535			
5,900.00	5,824.09	5,298.88	5,082.48	20.74	28.07	-156.90	-306.68	1,295.73	2,206.49	2,177.37	29.12	75.778			
6,000.00	5,922.41	5,386.00	5,164.33	21.16	28.69	-156.92	-312.71	1,324.93	2,255.58	2,225.91	29.67	76.010			
6,100.00	6,020.72	5,473.12	5,246.18	21.57	29.31	-156.94	-318.74	1,354.13	2,304.68	2,274.45	30.23	76.233			
6,200.00	6,119.03	5,560.23	5,328.04	21.99	29.94	-156.95	-324.76	1,383.34	2,353.78	2,322.99	30.79	76.447			
6,300.00	6,217.35	5,647.35	5,409.89	22.41	30.56	-156.97	-330.79	1,412.54	2,402.87	2,371.53	31.35	76.653			
6,400.00	6,315.66	5,734.46	5,491.74	22.83	31.19	-156.99	-336.82	1,441.74	2,451.97	2,420.07	31.91	76.851			
6,500.00	6,413.97	5,821.57	5,573.59	23.25	31.81	-157.01	-342.85	1,470.94	2,501.07	2,468.57	32.47	77.045			
6,600.00	6,512.28	5,908.68	5,655.72	23.66	32.43	-157.02	-348.88	1,500.14	2,550.17	2,517.07	33.03	77.233			
6,700.00	6,610.60	6,000.00	5,740.00	24.08	33.05	-157.03	-354.91	1,529.34	2,600.00	2,566.00	33.59	77.417			
6,800.00	6,708.91	6,091.31	5,824.31	24.50	33.67	-157.04	-360.94	1,558.54	2,650.00	2,615.00	34.15	77.597			
6,900.00	6,807.22	6,182.62	5,908.62	24.92	34.29	-157.05	-366.97	1,587.74	2,700.00	2,665.00	34.71	77.773			
7,000.00	6,905.54	6,273.93	5,992.93	25.34	34.91	-157.06	-373.00	1,616.94	2,750.00	2,715.00	35.27	77.945			
7,093.01	6,996.98	6,365.24	6,077.24	25.73	35.53	-157.07	-379.03	1,646.14	2,800.00	2,765.00	35.83	78.113			
7,100.00	7,003.85	6,456.55	6,161.55	25.75	35.55	-157.07	-379.03	1,646.14	2,800.00	2,765.00	35.83	78.113			
7,200.00	7,102.50	6,547.86	6,245.86	26.04	35.06	-158.94	-373.32	1,618.59	2,620.90	2,583.35	37.55	69.795			
7,300.00	7,201.66	6,639.17	6,330.17	26.28	35.15	-159.13	-373.32	1,618.59	2,632.94	2,594.81	38.13	69.045			
7,400.00	7,301.22	6,730.48	6,414.48	26.49	35.25	-159.26	-373.32	1,618.59	2,641.75	2,603.08	38.66	68.329			
7,500.00	7,401.03	6,821.79	6,498.79	26.66	35.35	-159.35	-373.32	1,618.59	2,647.29	2,608.16	39.13	67.646			
7,600.00	7,501.00	6,913.10	6,583.10	26.79	35.45	-159.38	-373.32	1,618.59	2,649.58	2,610.03	39.55	66.993			
7,620.00	7,521.00	6,933.10	6,603.10	26.82	35.47	89.43	-373.32	1,618.59	2,649.65	2,610.02	39.63	66.861			
7,700.00	7,601.00	7,013.10	6,683.10	26.91	35.55	89.43	-373.32	1,618.59	2,649.65	2,609.75	39.89	66.421			
7,800.00	7,701.00	7,093.10	6,763.10	27.04	35.65	89.43	-373.32	1,618.59	2,649.65	2,609.43	40.22	65.883			
7,900.00	7,801.00	7,173.10	6,843.10	27.17	35.75	89.43	-373.32	1,618.59	2,649.65	2,609.10	40.55	65.350			
8,000.00	7,901.00	7,253.10	6,923.10	27.29	35.85	89.43	-373.32	1,618.59	2,649.65	2,608.77	40.88	64.821			
8,079.00	7,980.00	7,333.10	7,003.10	27.39	35.94	89.43	-373.32	1,618.59	2,649.65	2,608.51	41.14	64.408			

<b>Company:</b>	US ROCKIES REGION PLANNING	<b>Local Co-ordinate Reference:</b>	Well P_KERR-MCGEE 33-3
<b>Project:</b>	COLORADO NORTHERN ZONE - 83	<b>TVD Reference:</b>	WELL @ 5057.00ft (Original Well Elev)
<b>Reference Site:</b>	WELD_KERR MCGEE 19-3 PAD	<b>MD Reference:</b>	WELL @ 5057.00ft (Original Well Elev)
<b>Site Error:</b>	0.00ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	P_KERR-MCGEE 33-3	<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_KERR-MCGEE 33-3	<b>Database:</b>	EDM 2003.21 Single User Db
<b>Reference Design:</b>	PLAN #1 1-15-10 RHS	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design													WELD_KERR MCGEE 19-3 PAD - P_KERR-MCGEE 35-3 - P_KERR-MCGEE 35-3 - PLAN #1 1-15-10	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 Tooface (°)	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	141.21	-31.34	25.19	40.20						
100.00	100.00	100.00	100.00	0.10	0.10	141.21	-31.34	25.19	40.20	40.01	0.19	210.429			
200.00	200.00	200.00	200.00	0.32	0.32	141.21	-31.34	25.19	40.20	39.56	0.64	62.759			
300.00	300.00	300.00	300.00	0.55	0.55	141.21	-31.34	25.19	40.20	39.11	1.09	36.879			
400.00	400.00	400.00	400.00	0.77	0.77	141.21	-31.34	25.19	40.20	38.66	1.54	26.112			
500.00	500.00	500.00	500.00	0.99	0.99	141.21	-31.34	25.19	40.20	38.21	1.99	20.211			
600.00	600.00	600.00	600.00	1.22	1.22	141.21	-31.34	25.19	40.20	37.76	2.44	16.485			
700.00	700.00	700.00	700.00	1.44	1.44	141.21	-31.34	25.19	40.20	37.31	2.89	13.919			
800.00	800.00	800.00	800.00	1.67	1.67	141.21	-31.34	25.19	40.20	36.86	3.34	12.045			
900.00	900.00	900.00	900.00	1.89	1.89	141.21	-31.34	25.19	40.20	36.42	3.79	10.615			
1,000.00	1,000.00	1,000.00	1,000.00	2.12	2.12	141.21	-31.34	25.19	40.20	35.97	4.24	9.489			
1,050.00	1,050.00	1,050.00	1,050.00	2.23	2.23	141.21	-31.34	25.19	40.20	35.74	4.46	9.011	CC, ES		
1,100.00	1,100.00	1,099.39	1,099.39	2.33	2.33	-107.88	-31.76	25.25	40.71	36.05	4.66	8.735	SF		
1,200.00	1,199.93	1,198.03	1,197.97	2.53	2.50	-109.84	-35.11	25.80	44.80	39.78	5.02	8.922			
1,300.00	1,299.68	1,296.25	1,295.95	2.73	2.68	-112.82	-41.77	26.90	53.09	47.69	5.40	9.835			
1,400.00	1,399.13	1,393.78	1,392.96	2.95	2.88	-115.82	-51.67	28.52	65.69	59.89	5.80	11.327			
1,500.00	1,498.15	1,490.35	1,488.62	3.20	3.10	-118.34	-64.67	30.65	82.60	76.37	6.23	13.249			
1,576.99	1,574.02	1,563.90	1,561.15	3.42	3.29	-119.85	-76.70	32.62	98.54	91.94	6.60	14.926			
1,600.00	1,596.64	1,585.74	1,582.62	3.49	3.35	-120.29	-80.63	33.26	103.74	97.02	6.72	15.444			
1,700.00	1,694.96	1,680.04	1,674.97	3.80	3.64	-121.15	-99.43	36.35	127.81	120.56	7.25	17.622			
1,800.00	1,793.27	1,773.21	1,765.55	4.14	3.98	-120.91	-120.94	39.87	154.16	146.33	7.83	19.688			
1,900.00	1,891.58	1,865.08	1,854.13	4.48	4.36	-120.06	-144.99	43.81	182.77	174.32	8.44	21.642			
2,000.00	1,989.90	1,955.50	1,940.50	4.84	4.78	-118.89	-171.39	48.14	213.65	204.56	9.09	23.499			
2,100.00	2,088.21	2,044.32	2,024.48	5.21	5.25	-117.57	-199.92	52.82	246.84	237.08	9.76	25.286			
2,200.00	2,186.52	2,136.57	2,111.04	5.59	5.78	-116.24	-231.40	57.98	281.69	271.22	10.47	26.897			
2,300.00	2,284.83	2,230.10	2,198.77	5.97	6.35	-115.17	-263.39	63.22	316.70	305.50	11.20	28.275			
2,400.00	2,383.15	2,323.63	2,286.50	6.36	6.93	-114.32	-295.37	68.46	351.79	339.85	11.94	29.463			
2,500.00	2,481.46	2,417.15	2,374.23	6.75	7.52	-113.62	-327.35	73.70	386.94	374.25	12.69	30.496			
2,600.00	2,579.77	2,510.68	2,461.96	7.14	8.12	-113.04	-359.34	78.95	422.12	408.68	13.44	31.399			
2,700.00	2,678.09	2,604.20	2,549.69	7.54	8.73	-112.55	-391.32	84.19	457.34	443.14	14.21	32.195			
2,800.00	2,776.40	2,697.73	2,637.42	7.94	9.35	-112.13	-423.30	89.43	492.59	477.62	14.97	32.901			
2,900.00	2,874.71	2,791.25	2,725.15	8.34	9.97	-111.76	-455.28	94.67	527.85	512.11	15.74	33.530			
3,000.00	2,973.02	2,884.78	2,812.88	8.74	10.59	-111.44	-487.27	99.92	563.13	546.62	16.52	34.094			
3,100.00	3,071.34	2,978.31	2,900.61	9.15	11.22	-111.16	-519.25	105.16	598.43	581.14	17.29	34.603			
3,200.00	3,169.65	3,071.83	2,988.34	9.56	11.86	-110.91	-551.23	110.40	633.74	615.66	18.07	35.063			
3,300.00	3,267.96	3,165.36	3,076.07	9.96	12.49	-110.68	-583.22	115.64	669.05	650.20	18.86	35.483			
3,400.00	3,366.27	3,258.88	3,163.81	10.37	13.13	-110.48	-615.20	120.89	704.38	684.74	19.64	35.866			
3,500.00	3,464.59	3,352.41	3,251.54	10.78	13.76	-110.30	-647.18	126.13	739.71	719.28	20.42	36.218			
3,600.00	3,562.90	3,445.93	3,339.27	11.19	14.40	-110.13	-679.16	131.37	775.05	753.84	21.21	36.542			
3,700.00	3,661.21	3,539.46	3,427.00	11.60	15.04	-109.98	-711.15	136.61	810.39	788.39	22.00	36.842			
3,800.00	3,759.53	3,632.99	3,514.73	12.01	15.69	-109.84	-743.13	141.85	845.73	822.95	22.78	37.120			
3,900.00	3,857.84	3,726.51	3,602.46	12.43	16.33	-109.71	-775.11	147.10	881.09	857.51	23.57	37.378			
4,000.00	3,956.15	3,820.04	3,690.19	12.84	16.97	-109.60	-807.10	152.34	916.44	892.08	24.36	37.619			
4,100.00	4,054.46	3,913.56	3,777.92	13.25	17.62	-109.49	-839.08	157.58	951.80	926.65	25.15	37.845			
4,200.00	4,152.78	4,007.09	3,865.65	13.66	18.27	-109.38	-871.06	162.82	987.16	961.22	25.94	38.056			
4,300.00	4,251.09	4,100.61	3,953.38	14.08	18.91	-109.29	-903.05	168.07	1,022.52	995.79	26.73	38.255			
4,400.00	4,349.40	4,194.14	4,041.11	14.49	19.56	-109.20	-935.03	173.31	1,057.89	1,030.37	27.52	38.443			
4,500.00	4,447.72	4,287.67	4,128.84	14.91	20.21	-109.12	-967.01	178.55	1,093.25	1,064.95	28.31	38.620			
4,600.00	4,546.03	4,381.19	4,216.57	15.32	20.85	-109.04	-998.99	183.79	1,128.62	1,099.52	29.10	38.787			
4,700.00	4,644.34	4,474.72	4,304.30	15.74	21.50	-108.97	-1,030.98	189.03	1,163.99	1,134.11	29.89	38.946			
4,800.00	4,742.65	4,568.24	4,392.04	16.15	22.15	-108.90	-1,062.96	194.28	1,199.37	1,168.69	30.68	39.097			
4,900.00	4,840.97	4,661.77	4,479.77	16.57	22.80	-108.84	-1,094.94	199.52	1,234.74	1,203.27	31.47	39.238			

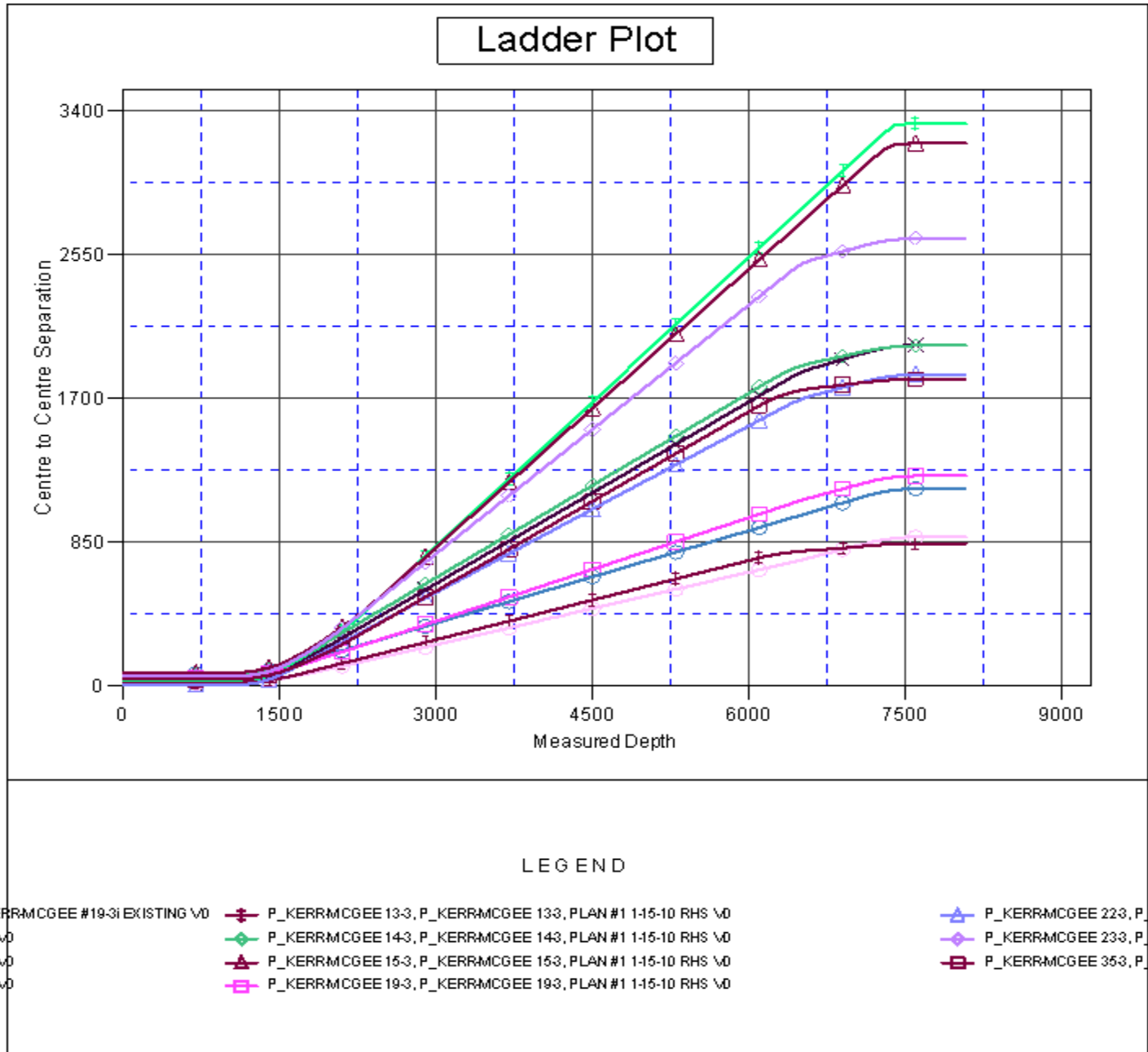
CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

<b>Company:</b>	US ROCKIES REGION PLANNING	<b>Local Co-ordinate Reference:</b>	Well P_KERR-MCGEE 33-3
<b>Project:</b>	COLORADO NORTHERN ZONE - 83	<b>TVD Reference:</b>	WELL @ 5057.00ft (Original Well Elev)
<b>Reference Site:</b>	WELD_KERR MCGEE 19-3 PAD	<b>MD Reference:</b>	WELL @ 5057.00ft (Original Well Elev)
<b>Site Error:</b>	0.00ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	P_KERR-MCGEE 33-3	<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_KERR-MCGEE 33-3	<b>Database:</b>	EDM 2003.21 Single User Db
<b>Reference Design:</b>	PLAN #1 1-15-10 RHS	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design													WELD_KERR MCGEE 19-3 PAD - P_KERR-MCGEE 35-3 - P_KERR-MCGEE 35-3 - PLAN #1 1-15-10	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	4,939.28	4,755.29	4,567.50	16.99	23.45	-108.78	-1,126.93	204.76	1,270.11	1,237.84	32.27	39.358			
5,100.00	5,037.59	4,848.82	4,655.23	17.40	24.10	-108.72	-1,158.91	210.00	1,305.49	1,272.42	33.07	39.472			
5,200.00	5,135.91	4,942.35	4,742.96	17.82	24.75	-108.67	-1,190.89	215.25	1,340.87	1,306.99	33.88	39.580			
5,300.00	5,234.22	5,035.87	4,830.69	18.24	25.40	-108.61	-1,222.87	220.49	1,376.25	1,341.56	34.68	39.682			
5,400.00	5,332.53	5,129.40	4,918.42	18.65	26.05	-108.56	-1,254.86	225.73	1,411.63	1,376.14	35.49	39.779			
5,500.00	5,430.84	5,222.92	5,006.15	19.07	26.71	-108.52	-1,286.84	230.97	1,447.01	1,410.71	36.29	39.872			
5,600.00	5,529.16	5,316.45	5,093.88	19.49	27.36	-108.47	-1,318.82	236.21	1,482.39	1,445.29	37.10	39.960			
5,700.00	5,627.47	5,409.98	5,181.61	19.90	28.01	-108.43	-1,350.81	241.46	1,517.77	1,479.87	37.90	40.044			
5,800.00	5,725.78	5,503.50	5,269.34	20.32	28.66	-108.39	-1,382.79	246.70	1,553.15	1,514.44	38.71	40.125			
5,900.00	5,824.09	5,597.03	5,357.07	20.74	29.31	-108.35	-1,414.77	251.94	1,588.53	1,549.02	39.51	40.202			
6,000.00	5,922.41	5,690.55	5,444.80	21.16	29.96	-108.32	-1,446.75	257.18	1,623.92	1,583.60	40.32	40.275			
6,100.00	6,020.72	5,804.99	5,552.26	21.57	30.71	-108.28	-1,485.60	263.55	1,659.16	1,617.97	41.19	40.277			
6,200.00	6,119.03	5,993.36	5,731.84	21.99	31.56	-108.38	-1,541.61	272.73	1,690.74	1,648.53	42.22	40.049			
6,300.00	6,217.35	6,187.85	5,920.75	22.41	32.28	-108.71	-1,587.10	280.19	1,716.90	1,673.68	43.23	39.717			
6,400.00	6,315.66	6,386.89	6,116.85	22.83	32.86	-109.28	-1,620.45	285.65	1,737.44	1,693.23	44.21	39.301			
6,500.00	6,413.97	6,588.67	6,317.57	23.25	33.27	-110.08	-1,640.46	288.93	1,752.26	1,707.11	45.14	38.818			
6,600.00	6,512.28	6,783.52	6,512.28	23.66	33.51	-111.06	-1,646.52	289.93	1,761.35	1,715.35	46.00	38.290			
6,700.00	6,610.60	6,881.83	6,610.60	24.08	33.58	-111.61	-1,646.52	289.93	1,768.11	1,721.49	46.61	37.932			
6,800.00	6,708.91	6,980.14	6,708.91	24.50	33.66	-112.15	-1,646.52	289.93	1,775.02	1,727.80	47.22	37.590			
6,900.00	6,807.22	7,078.45	6,807.22	24.92	33.73	-112.69	-1,646.52	289.93	1,782.10	1,734.27	47.82	37.263			
7,000.00	6,905.54	7,176.77	6,905.54	25.34	33.81	-113.22	-1,646.52	289.93	1,789.34	1,740.91	48.43	36.950			
7,093.01	6,996.98	7,268.21	6,996.98	25.73	33.89	-113.71	-1,646.52	289.93	1,796.21	1,747.22	48.98	36.670			
7,100.00	7,003.85	7,275.08	7,003.85	25.75	33.89	-113.76	-1,646.52	289.93	1,796.73	1,747.70	49.03	36.646			
7,200.00	7,102.50	7,373.73	7,102.50	26.04	33.97	-114.35	-1,646.52	289.93	1,803.46	1,753.85	49.60	36.357			
7,300.00	7,201.66	7,472.89	7,201.66	26.28	34.05	-114.82	-1,646.52	289.93	1,808.85	1,758.74	50.11	36.095			
7,400.00	7,301.22	7,572.45	7,301.22	26.49	34.14	-115.16	-1,646.52	289.93	1,812.84	1,762.29	50.55	35.860			
7,500.00	7,401.03	7,672.27	7,401.03	26.66	34.22	-115.37	-1,646.52	289.93	1,815.38	1,764.45	50.93	35.647			
7,600.00	7,501.00	7,772.23	7,501.00	26.79	34.31	-115.46	-1,646.52	289.93	1,816.43	1,765.20	51.23	35.456			
7,620.00	7,521.00	7,792.23	7,521.00	26.82	34.32	133.35	-1,646.52	289.93	1,816.46	1,765.17	51.29	35.419			
7,700.00	7,601.00	7,872.23	7,601.00	26.91	34.40	133.35	-1,646.52	289.93	1,816.46	1,764.98	51.48	35.284			
7,800.00	7,701.00	7,972.23	7,701.00	27.04	34.48	133.35	-1,646.52	289.93	1,816.46	1,764.73	51.73	35.116			
7,900.00	7,801.00	8,072.23	7,801.00	27.17	34.57	133.35	-1,646.52	289.93	1,816.46	1,764.48	51.98	34.947			
8,000.00	7,901.00	8,172.23	7,901.00	27.29	34.67	133.35	-1,646.52	289.93	1,816.46	1,764.23	52.23	34.779			
8,046.50	7,947.49	8,218.73	7,947.49	27.35	34.71	133.35	-1,646.52	289.93	1,816.46	1,764.11	52.35	34.700			
8,079.00	7,980.00	8,236.23	7,965.00	27.39	34.72	133.35	-1,646.52	289.93	1,816.52	1,764.11	52.41	34.659			

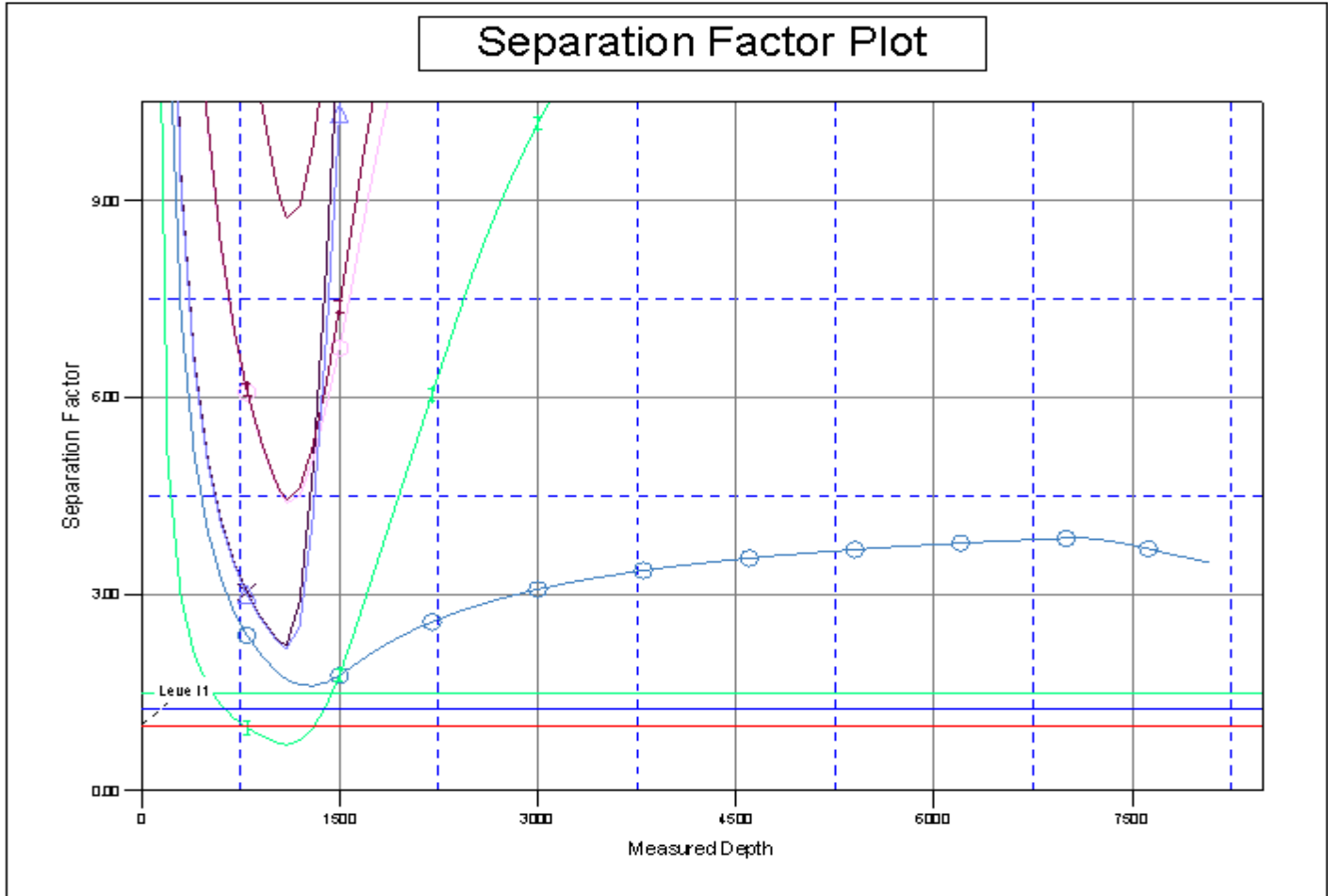
<b>Company:</b>	US ROCKIES REGION PLANNING	<b>Local Co-ordinate Reference:</b>	Well P_KERR-MCGEE 33-3
<b>Project:</b>	COLORADO NORTHERN ZONE - 83	<b>TVD Reference:</b>	WELL @ 5057.00ft (Original Well Elev)
<b>Reference Site:</b>	WELD_KERR MCGEE 19-3 PAD	<b>MD Reference:</b>	WELL @ 5057.00ft (Original Well Elev)
<b>Site Error:</b>	0.00ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	P_KERR-MCGEE 33-3	<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_KERR-MCGEE 33-3	<b>Database:</b>	EDM 2003.21 Single User Db
<b>Reference Design:</b>	PLAN #1 1-15-10 RHS	<b>Offset TVD Reference:</b>	Offset Datum

Reference Depths are relative to WELL @ 5057.00ft (Original Well Elev) Coordinates are relative to: P\_KERR-MCGEE 33-3  
 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: 0.33°



<b>Company:</b>	US ROCKIES REGION PLANNING	<b>Local Co-ordinate Reference:</b>	Well P_KERR-MCGEE 33-3
<b>Project:</b>	COLORADO NORTHERN ZONE - 83	<b>TVD Reference:</b>	WELL @ 5057.00ft (Original Well Elev)
<b>Reference Site:</b>	WELD_KERR MCGEE 19-3 PAD	<b>MD Reference:</b>	WELL @ 5057.00ft (Original Well Elev)
<b>Site Error:</b>	0.00ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	P_KERR-MCGEE 33-3	<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_KERR-MCGEE 33-3	<b>Database:</b>	EDM 2003.21 Single User Db
<b>Reference Design:</b>	PLAN #1 1-15-10 RHS	<b>Offset TVD Reference:</b>	Offset Datum

Reference Depths are relative to WELL @ 5057.00ft (Original Well Elev) Coordinates are relative to: P\_KERR-MCGEE 33-3  
 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: 0.33°



LEGEND

P_KERRMCGEE #19-3i EXISTING \0	P_KERRMCGEE 13-3, P_KERRMCGEE 133, PLAN #1 1-15-10 RHS \0	P_KERRMCGEE 223, P_K
3 \0	P_KERRMCGEE 14-3, P_KERRMCGEE 143, PLAN #1 1-15-10 RHS \0	P_KERRMCGEE 233, P_K
3 \0	P_KERRMCGEE 15-3, P_KERRMCGEE 153, PLAN #1 1-15-10 RHS \0	P_KERRMCGEE 353, P_K
3 \0	P_KERRMCGEE 19-3, P_KERRMCGEE 193, PLAN #1 1-15-10 RHS \0	