



US ROCKIES REGION PLANNING

COLORADO NORTHERN ZONE - 83

WELD_KERR MCGEE 19-3 PAD

P_KERR-MCGEE 10-3

P_KERR-MCGEE 10-3

Plan: PLAN #1 1-15-10 RHS

Standard Planning Report

15 January, 2010



P KERR-MCGEE 10-3
COLORADO NORTHERN ZONE - 83
SECTION 3 T1N R68W
1697 FSL 1123 FWL
LAT: 40° 4' 39.673 N
LONG: 104° 59' 41.726 W



Azimuths to True North
Magnetic North: 9.15°
Magnetic Field
Strength: 53083.2nT
Dip Angle: 66.80°
Date: 1/15/2010
Model: IGRF2010

FORMATION TOP DETAILS

TVDPath	MDPath	Formation
3880.00	4078.35	PARKMAN
4480.00	4737.31	SUSSEX
5100.00	5418.24	SHANNON
7495.00	7939.85	NIO A
7794.00	8238.85	CODELL
8199.00	8643.85	JSAND

WELL DETAILS: P_KERR-MCGEE 10-3

+N/-S	+E/-W	Northing	Ground Level: Easting	Latitude	Longitude	Slot
0.00	0.00	1271548.81	3141336.90	40° 4' 39.673 N	104° 59' 41.726 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	
2271.12	24.42	82.81	2234.48	32.09	254.32	2.00	82.81	256.34	
6423.73	24.42	82.81	6015.52	247.04	1957.75	0.00	0.00	1973.28	
7644.85	0.00	0.00	7200.00	279.14	2212.07	2.00	180.00	2229.61	
8794.85	0.00	0.00	8350.00	279.14	2212.07	0.00	0.00	2229.61	PBHL_KERR-MCGEE 10-3(1980 FSL 1980 FEL)50'TGT RAD

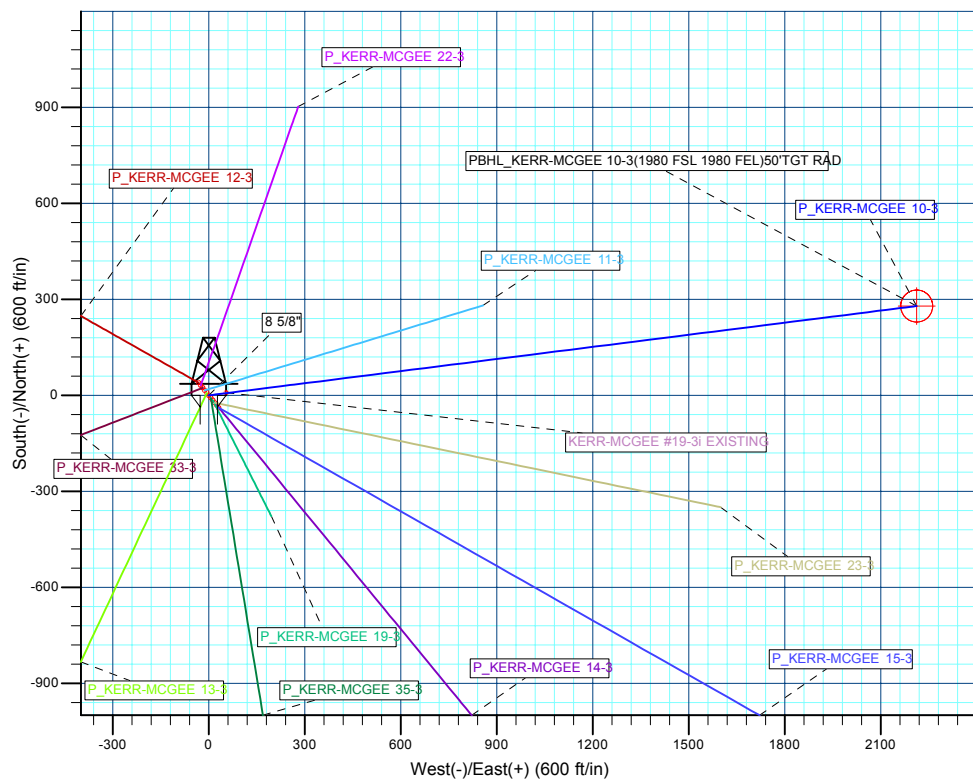
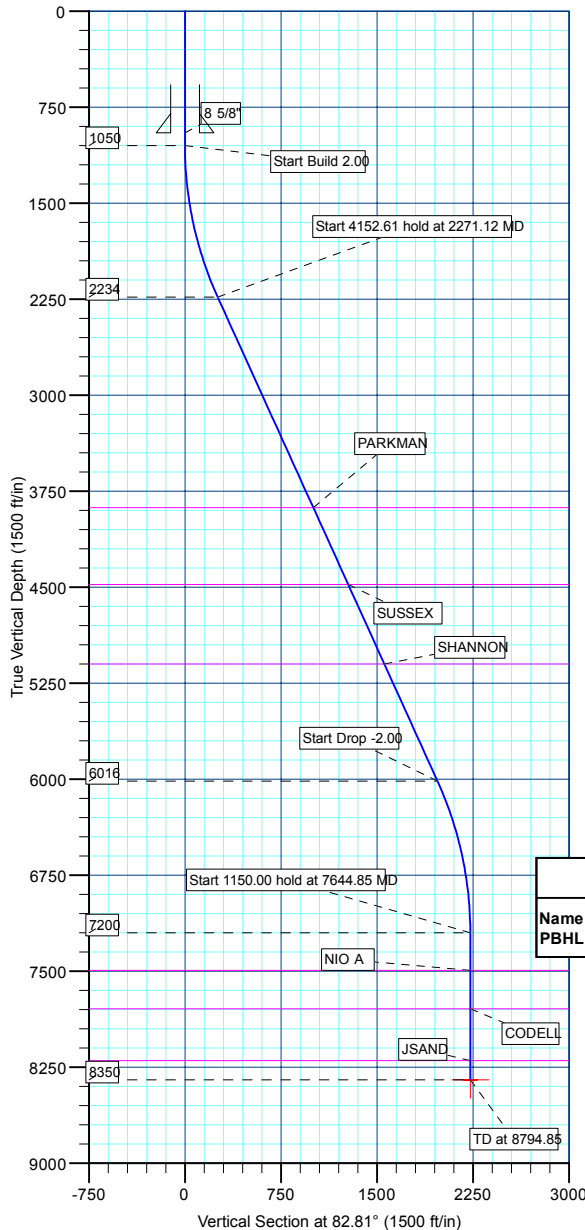
CASING DETAILS

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



KB ELEV:WELL @ 5057.00ft (Original Well Elev)

GRD ELEV: 5042.00



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

Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Shape
PBHL	8350.00	279.14	2212.07	1271840.54	3143547.34	40° 4' 42.431 N	104° 59' 13.268 W	Circle (Radius: 50.00)

Plan: PLAN #1 1-15-10 RHS (P_KERR-MCGEE 10-3/P_KERR-MCGEE 10-3)

Created By: Robert H. Scott

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

Project	COLORADO NORTHERN ZONE - 83, KERR MCGEE OIL & GAS ONSHORE LP		
Map System:	US State Plane 1983	System Datum:	Mean Sea Level
Geo Datum:	North American Datum 1983		
Map Zone:	Colorado Northern Zone		

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

Well	P_KERR-MCGEE 10-3					
Well Position	+N/-S	0.00 ft	Northing:	1,271,548.81 ft	Latitude:	40° 4' 39.673 N
	+E/-W	0.00 ft	Easting:	3,141,336.90 ft	Longitude:	104° 59' 41.726 W
Position Uncertainty		0.00 ft	Wellhead Elevation:	ft	Ground Level:	5,042.00 ft

Wellbore	P_KERR-MCGEE 10-3				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	1/15/2010	9.15	66.80	53,083

Design	PLAN #1 1-15-10 RHS			
Audit Notes:				
Version:	Phase:	PLAN	Tie On Depth:	0.00
Vertical Section:	Depth From (TVD) (ft)	+N/-S (ft)	+E/-W (ft)	Direction (°)
	0.00	0.00	0.00	82.81

Plan Sections										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	TFO (°)	Target
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
1,050.00	0.00	0.00	1,050.00	0.00	0.00	0.00	0.00	0.00	0.00	
2,271.12	24.42	82.81	2,234.48	32.09	254.32	2.00	2.00	0.00	82.81	
6,423.73	24.42	82.81	6,015.52	247.04	1,957.75	0.00	0.00	0.00	0.00	
7,644.85	0.00	0.00	7,200.00	279.14	2,212.07	2.00	-2.00	0.00	180.00	
8,794.85	0.00	0.00	8,350.00	279.14	2,212.07	0.00	0.00	0.00	0.00	PBHL_KERR-MCG

Database:	EDM 2003.21 Single User Db	Local Co-ordinate Reference:	Well P_KERR-MCGEE 10-3
Company:	US ROCKIES REGION PLANNING	TVD Reference:	WELL @ 5057.00ft (Original Well Elev)
Project:	COLORADO NORTHERN ZONE - 83	MD Reference:	WELL @ 5057.00ft (Original Well Elev)
Site:	WELD_KERR MCGEE 19-3 PAD	North Reference:	True
Well:	P_KERR-MCGEE 10-3	Survey Calculation Method:	Minimum Curvature
Wellbore:	P_KERR-MCGEE 10-3		
Design:	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)
Start Build 2.00									
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	82.81	1,100.00	0.05	0.43	0.44	2.00	2.00	0.00
1,200.00	3.00	82.81	1,199.93	0.49	3.90	3.93	2.00	2.00	0.00
1,300.00	5.00	82.81	1,299.68	1.36	10.82	10.90	2.00	2.00	0.00
1,400.00	7.00	82.81	1,399.13	2.67	21.19	21.35	2.00	2.00	0.00
1,500.00	9.00	82.81	1,498.15	4.42	34.99	35.27	2.00	2.00	0.00
1,600.00	11.00	82.81	1,596.63	6.59	52.22	52.63	2.00	2.00	0.00
1,700.00	13.00	82.81	1,694.44	9.19	72.85	73.42	2.00	2.00	0.00
1,800.00	15.00	82.81	1,791.46	12.22	96.85	97.62	2.00	2.00	0.00
1,900.00	17.00	82.81	1,887.58	15.67	124.19	125.18	2.00	2.00	0.00
2,000.00	19.00	82.81	1,982.68	19.54	154.85	156.08	2.00	2.00	0.00
2,100.00	21.00	82.81	2,076.65	23.82	188.78	190.28	2.00	2.00	0.00
2,200.00	23.00	82.81	2,169.36	28.51	225.95	227.74	2.00	2.00	0.00
Start 4152.61 hold at 2271.12 MD									
2,271.12	24.42	82.81	2,234.48	32.09	254.32	256.34	2.00	2.00	0.00
2,300.00	24.42	82.81	2,260.77	33.59	266.17	268.28	0.00	0.00	0.00
2,400.00	24.42	82.81	2,351.82	38.76	307.19	309.62	0.00	0.00	0.00
2,500.00	24.42	82.81	2,442.88	43.94	348.21	350.97	0.00	0.00	0.00
2,600.00	24.42	82.81	2,533.93	49.12	389.23	392.31	0.00	0.00	0.00
2,700.00	24.42	82.81	2,624.98	54.29	430.25	433.66	0.00	0.00	0.00
2,800.00	24.42	82.81	2,716.03	59.47	471.27	475.01	0.00	0.00	0.00
2,900.00	24.42	82.81	2,807.09	64.64	512.29	516.35	0.00	0.00	0.00
3,000.00	24.42	82.81	2,898.14	69.82	553.31	557.70	0.00	0.00	0.00
3,100.00	24.42	82.81	2,989.19	75.00	594.33	599.04	0.00	0.00	0.00
3,200.00	24.42	82.81	3,080.24	80.17	635.35	640.39	0.00	0.00	0.00
3,300.00	24.42	82.81	3,171.29	85.35	676.37	681.74	0.00	0.00	0.00
3,400.00	24.42	82.81	3,262.35	90.53	717.39	723.08	0.00	0.00	0.00
3,500.00	24.42	82.81	3,353.40	95.70	758.41	764.43	0.00	0.00	0.00
3,600.00	24.42	82.81	3,444.45	100.88	799.44	805.77	0.00	0.00	0.00
3,700.00	24.42	82.81	3,535.50	106.05	840.46	847.12	0.00	0.00	0.00
3,800.00	24.42	82.81	3,626.56	111.23	881.48	888.47	0.00	0.00	0.00
3,900.00	24.42	82.81	3,717.61	116.41	922.50	929.81	0.00	0.00	0.00
4,000.00	24.42	82.81	3,808.66	121.58	963.52	971.16	0.00	0.00	0.00
PARKMAN									
4,078.35	24.42	82.81	3,880.00	125.64	995.66	1,003.55	0.00	0.00	0.00
4,100.00	24.42	82.81	3,899.71	126.76	1,004.54	1,012.51	0.00	0.00	0.00
4,200.00	24.42	82.81	3,990.76	131.94	1,045.56	1,053.85	0.00	0.00	0.00
4,300.00	24.42	82.81	4,081.82	137.11	1,086.58	1,095.20	0.00	0.00	0.00
4,400.00	24.42	82.81	4,172.87	142.29	1,127.60	1,136.54	0.00	0.00	0.00
4,500.00	24.42	82.81	4,263.92	147.47	1,168.62	1,177.89	0.00	0.00	0.00
4,600.00	24.42	82.81	4,354.97	152.64	1,209.64	1,219.24	0.00	0.00	0.00
4,700.00	24.42	82.81	4,446.03	157.82	1,250.66	1,260.58	0.00	0.00	0.00
SUSSEX									
4,737.31	24.42	82.81	4,480.00	159.75	1,265.97	1,276.01	0.00	0.00	0.00
4,800.00	24.42	82.81	4,537.08	162.99	1,291.68	1,301.93	0.00	0.00	0.00
4,900.00	24.42	82.81	4,628.13	168.17	1,332.71	1,343.27	0.00	0.00	0.00
5,000.00	24.42	82.81	4,719.18	173.35	1,373.73	1,384.62	0.00	0.00	0.00
5,100.00	24.42	82.81	4,810.23	178.52	1,414.75	1,425.97	0.00	0.00	0.00
5,200.00	24.42	82.81	4,901.29	183.70	1,455.77	1,467.31	0.00	0.00	0.00
5,300.00	24.42	82.81	4,992.34	188.88	1,496.79	1,508.66	0.00	0.00	0.00
5,400.00	24.42	82.81	5,083.39	194.05	1,537.81	1,550.00	0.00	0.00	0.00
SHANNON									

Database:	EDM 2003.21 Single User Db	Local Co-ordinate Reference:	Well P_KERR-MCGEE 10-3
Company:	US ROCKIES REGION PLANNING	TVD Reference:	WELL @ 5057.00ft (Original Well Elev)
Project:	COLORADO NORTHERN ZONE - 83	MD Reference:	WELL @ 5057.00ft (Original Well Elev)
Site:	WELD_KERR MCGEE 19-3 PAD	North Reference:	True
Well:	P_KERR-MCGEE 10-3	Survey Calculation Method:	Minimum Curvature
Wellbore:	P_KERR-MCGEE 10-3		
Design:	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)
5,418.24	24.42	82.81	5,100.00	195.00	1,545.29	1,557.55	0.00	0.00	0.00
5,500.00	24.42	82.81	5,174.44	199.23	1,578.83	1,591.35	0.00	0.00	0.00
5,600.00	24.42	82.81	5,265.50	204.40	1,619.85	1,632.70	0.00	0.00	0.00
5,700.00	24.42	82.81	5,356.55	209.58	1,660.87	1,674.04	0.00	0.00	0.00
5,800.00	24.42	82.81	5,447.60	214.76	1,701.89	1,715.39	0.00	0.00	0.00
5,900.00	24.42	82.81	5,538.65	219.93	1,742.91	1,756.73	0.00	0.00	0.00
6,000.00	24.42	82.81	5,629.70	225.11	1,783.93	1,798.08	0.00	0.00	0.00
6,100.00	24.42	82.81	5,720.76	230.29	1,824.95	1,839.43	0.00	0.00	0.00
6,200.00	24.42	82.81	5,811.81	235.46	1,865.98	1,880.77	0.00	0.00	0.00
6,300.00	24.42	82.81	5,902.86	240.64	1,907.00	1,922.12	0.00	0.00	0.00
6,400.00	24.42	82.81	5,993.91	245.82	1,948.02	1,963.46	0.00	0.00	0.00
Start Drop -2.00									
6,423.73	24.42	82.81	6,015.52	247.04	1,957.75	1,973.28	0.00	0.00	0.00
6,500.00	22.90	82.81	6,085.38	250.88	1,988.12	2,003.88	2.00	-2.00	0.00
6,600.00	20.90	82.81	6,178.16	255.54	2,025.12	2,041.17	2.00	-2.00	0.00
6,700.00	18.90	82.81	6,272.18	259.80	2,058.88	2,075.21	2.00	-2.00	0.00
6,800.00	16.90	82.81	6,367.34	263.65	2,089.37	2,105.94	2.00	-2.00	0.00
6,900.00	14.90	82.81	6,463.51	267.08	2,116.54	2,133.33	2.00	-2.00	0.00
7,000.00	12.90	82.81	6,560.58	270.09	2,140.37	2,157.34	2.00	-2.00	0.00
7,100.00	10.90	82.81	6,658.43	272.67	2,160.82	2,177.96	2.00	-2.00	0.00
7,200.00	8.90	82.81	6,756.93	274.82	2,177.87	2,195.14	2.00	-2.00	0.00
7,300.00	6.90	82.81	6,855.98	276.54	2,191.50	2,208.88	2.00	-2.00	0.00
7,400.00	4.90	82.81	6,955.44	277.83	2,201.70	2,219.16	2.00	-2.00	0.00
7,500.00	2.90	82.81	7,055.21	278.68	2,208.44	2,225.95	2.00	-2.00	0.00
7,600.00	0.90	82.81	7,155.15	279.09	2,211.72	2,229.26	2.00	-2.00	0.00
Start 1150.00 hold at 7644.85 MD									
7,644.85	0.00	0.00	7,200.00	279.14	2,212.07	2,229.61	2.00	-2.00	0.00
7,700.00	0.00	0.00	7,255.15	279.14	2,212.07	2,229.61	0.00	0.00	0.00
7,800.00	0.00	0.00	7,355.15	279.14	2,212.07	2,229.61	0.00	0.00	0.00
7,900.00	0.00	0.00	7,455.15	279.14	2,212.07	2,229.61	0.00	0.00	0.00
NIO A									
7,939.85	0.00	0.00	7,495.00	279.14	2,212.07	2,229.61	0.00	0.00	0.00
8,000.00	0.00	0.00	7,555.15	279.14	2,212.07	2,229.61	0.00	0.00	0.00
8,100.00	0.00	0.00	7,655.15	279.14	2,212.07	2,229.61	0.00	0.00	0.00
8,200.00	0.00	0.00	7,755.15	279.14	2,212.07	2,229.61	0.00	0.00	0.00
CODELL									
8,238.85	0.00	0.00	7,794.00	279.14	2,212.07	2,229.61	0.00	0.00	0.00
8,300.00	0.00	0.00	7,855.15	279.14	2,212.07	2,229.61	0.00	0.00	0.00
8,400.00	0.00	0.00	7,955.15	279.14	2,212.07	2,229.61	0.00	0.00	0.00
8,500.00	0.00	0.00	8,055.15	279.14	2,212.07	2,229.61	0.00	0.00	0.00
8,600.00	0.00	0.00	8,155.15	279.14	2,212.07	2,229.61	0.00	0.00	0.00
JSAND									
8,643.85	0.00	0.00	8,199.00	279.14	2,212.07	2,229.61	0.00	0.00	0.00
8,700.00	0.00	0.00	8,255.15	279.14	2,212.07	2,229.61	0.00	0.00	0.00
PBHL_KERR-MCGEE 10-3(1980 FSL 1980 FEL)50°TGT RAD									
8,794.85	0.00	0.00	8,350.00	279.14	2,212.07	2,229.61	0.00	0.00	0.00

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

Design Targets									
Target Name									
- hit/miss target	Dip Angle	Dip Dir.	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
- Shape	(°)	(°)	(ft)	(ft)	(ft)	(ft)	(ft)		
PBHL_KERR-MCGEE	0.00	0.00	8,350.00	279.14	2,212.07	1,271,840.54	3,143,547.34	40° 4' 42.431 N	104° 59' 13.268 W
- plan hits target center									
- Circle (radius 50.00)									

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

Formations						
	Measured Depth	Vertical Depth			Dip	Dip Direction
	(ft)	(ft)	Name	Lithology	(°)	(°)
	4,078.35	3,880.00	PARKMAN			
	4,737.31	4,480.00	SUSSEX			
	5,418.24	5,100.00	SHANNON			
	7,939.85	7,495.00	NIO A			
	8,238.85	7,794.00	CODELL			
	8,643.85	8,199.00	JSAND			

Plan Annotations					
	Measured Depth	Vertical Depth	Local Coordinates		
	(ft)	(ft)	+N/-S	+E/-W	Comment
	(ft)	(ft)	(ft)	(ft)	
	1,050.00	1,050.00	0.00	0.00	Start Build 2.00
	2,271.12	2,234.48	32.09	254.32	Start 4152.61 hold at 2271.12 MD
	6,423.73	6,015.52	247.04	1,957.75	Start Drop -2.00
	7,644.85	7,200.00	279.14	2,212.07	Start 1150.00 hold at 7644.85 MD
	8,794.85	8,350.00	279.14	2,212.07	TD at 8794.85



US ROCKIES REGION PLANNING

**COLORADO NORTHERN ZONE - 83
WELD_KERR MCGEE 19-3 PAD
P_KERR-MCGEE 10-3**

**P_KERR-MCGEE 10-3
PLAN #1 1-15-10 RHS**

Anticollision Report

15 January, 2010



Company:	US ROCKIES REGION PLANNING	Local Co-ordinate Reference:	Well P_KERR-MCGEE 10-3
Project:	COLORADO NORTHERN ZONE - 83	TVD Reference:	WELL @ 5057.00ft (Original Well Elev)
Reference Site:	WELD_KERR MCGEE 19-3 PAD	MD Reference:	WELL @ 5057.00ft (Original Well Elev)
Site Error:	0.00ft	North Reference:	True
Reference Well:	P_KERR-MCGEE 10-3	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00ft	Output errors are at	2.00 sigma
Reference Wellbore	P_KERR-MCGEE 10-3	Database:	EDM 2003.21 Single User Db
Reference Design:	PLAN #1 1-15-10 RHS	Offset TVD Reference:	Offset Datum

Reference	PLAN #1 1-15-10 RHS		
Filter type:	NO GLOBAL FILTER: Using user defined selection & filtering criteria		
Interpolation Method:	Stations	Error Model:	ISCWSA
Depth Range:	0.00 to 20,000.00ft	Scan Method:	Closest Approach 3D
Results Limited by:	Maximum center-center distance of 10,000.00ft	Error Surface:	Elliptical Conic
Warning Levels Evaluated at:	2.00 Sigma		

Survey Tool Program	Date	1/15/2010		
From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description
0.00	8,794.85	PLAN #1 1-15-10 RHS (P_KERR-MCGEE	UNKNOWN	Unknown survey

Summary						
Site Name	Reference Measured Depth (ft)	Offset Measured Depth (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Separation Factor	Warning
Offset Well - Wellbore - Design						
WELD_KERR MCGEE 19-3 PAD						
KERR-MCGEE #19-3i EXISTING - KERR-MCGEE #19-3	1,611.79	1,602.20	1.50	-109.28	0.014	Level 1, CC, ES, SF
P_KERR-MCGEE 11-3 - P_KERR-MCGEE 11-3 - PLAN	1,050.00	1,050.00	20.08	-21.85	0.479	Level 1, CC
P_KERR-MCGEE 11-3 - P_KERR-MCGEE 11-3 - PLAN	1,100.00	1,100.13	20.15	-23.02	0.467	Level 1, SF
P_KERR-MCGEE 11-3 - P_KERR-MCGEE 11-3 - PLAN	1,400.00	1,400.88	23.38	-23.82	0.495	Level 1, ES
P_KERR-MCGEE 12-3 - P_KERR-MCGEE 12-3 - PLAN	1,050.00	1,050.00	50.46	8.53	1.203	Level 2, CC
P_KERR-MCGEE 12-3 - P_KERR-MCGEE 12-3 - PLAN	1,100.00	1,099.18	51.09	7.92	1.183	Level 2, ES, SF
P_KERR-MCGEE 13-3 - P_KERR-MCGEE 13-3 - PLAN	1,050.00	1,050.00	9.80	-32.13	0.234	Level 1, CC
P_KERR-MCGEE 13-3 - P_KERR-MCGEE 13-3 - PLAN	1,100.00	1,100.06	9.87	-33.29	0.229	Level 1, ES, SF
P_KERR-MCGEE 14-3 - P_KERR-MCGEE 14-3 - PLAN	1,050.00	1,050.00	39.92	-2.01	0.952	Level 1, CC
P_KERR-MCGEE 14-3 - P_KERR-MCGEE 14-3 - PLAN	1,100.00	1,099.31	40.12	-3.04	0.930	Level 1, ES, SF
P_KERR-MCGEE 15-3 - P_KERR-MCGEE 15-3 - PLAN	1,050.00	1,050.00	50.03	8.10	1.193	Level 2, CC
P_KERR-MCGEE 15-3 - P_KERR-MCGEE 15-3 - PLAN	1,100.00	1,099.20	50.20	7.03	1.163	Level 2, ES, SF
P_KERR-MCGEE 19-3 - P_KERR-MCGEE 19-3 - PLAN	1,050.00	1,050.00	19.83	-22.11	0.473	Level 1, CC
P_KERR-MCGEE 19-3 - P_KERR-MCGEE 19-3 - PLAN	1,100.00	1,099.66	20.02	-23.14	0.464	Level 1, ES, SF
P_KERR-MCGEE 22-3 - P_KERR-MCGEE 22-3 - PLAN	1,050.00	1,050.00	40.18	-1.75	0.958	Level 1, CC
P_KERR-MCGEE 22-3 - P_KERR-MCGEE 22-3 - PLAN	1,100.00	1,099.63	40.64	-2.54	0.941	Level 1, ES, SF
P_KERR-MCGEE 23-3 - P_KERR-MCGEE 23-3 - PLAN	1,050.00	1,050.00	29.93	-12.00	0.714	Level 1, CC
P_KERR-MCGEE 23-3 - P_KERR-MCGEE 23-3 - PLAN	1,100.00	1,099.60	30.03	-13.14	0.696	Level 1, SF
P_KERR-MCGEE 23-3 - P_KERR-MCGEE 23-3 - PLAN	1,200.00	1,198.79	30.89	-13.25	0.700	Level 1, ES
P_KERR-MCGEE 33-3 - P_KERR-MCGEE 33-3 - PLAN	1,050.00	1,050.00	30.19	-11.74	0.720	Level 1, CC
P_KERR-MCGEE 33-3 - P_KERR-MCGEE 33-3 - PLAN	1,100.00	1,099.83	30.55	-12.61	0.708	Level 1, ES, SF
P_KERR-MCGEE 35-3 - P_KERR-MCGEE 35-3 - PLAN	1,050.00	1,050.00	10.02	-31.91	0.239	Level 1, CC
P_KERR-MCGEE 35-3 - P_KERR-MCGEE 35-3 - PLAN	1,100.00	1,099.84	10.17	-32.99	0.236	Level 1, ES, SF

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						
Measured Depth	Vertical Depth	Measured Depth	Vertical Depth	Reference	Offset	Highside Toolface	Offset Wellbore Centre		Between Centres	Between Ellipses	Minimum Separation	Separation Factor	Warning
(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(°)	+N/-S (ft)	+E/-W (ft)	(ft)	(ft)	(ft)		
0.00	0.00	0.00	0.00	0.00	0.00	81.24	8.36	54.29	55.25				
100.00	100.00	94.00	94.00	1.70	1.88	81.24	8.36	54.29	54.93	51.35	3.58	15.343	
200.00	200.00	194.00	194.00	5.70	5.76	81.24	8.36	54.29	54.93	43.47	11.46	4.793	
300.00	300.00	294.00	294.00	9.70	9.76	81.24	8.36	54.29	54.93	35.47	19.46	2.823	
400.00	400.00	394.00	394.00	13.70	13.76	81.24	8.36	54.29	54.93	27.47	27.46	2.000	

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

Company:	US ROCKIES REGION PLANNING	Local Co-ordinate Reference:	Well P_KERR-MCGEE 10-3
Project:	COLORADO NORTHERN ZONE - 83	TVD Reference:	WELL @ 5057.00ft (Original Well Elev)
Reference Site:	WELD_KERR MCGEE 19-3 PAD	MD Reference:	WELL @ 5057.00ft (Original Well Elev)
Site Error:	0.00ft	North Reference:	True
Reference Well:	P_KERR-MCGEE 10-3	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00ft	Output errors are at	2.00 sigma
Reference Wellbore	P_KERR-MCGEE 10-3	Database:	EDM 2003.21 Single User Db
Reference Design:	PLAN #1 1-15-10 RHS	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.00 ft
Survey Program: 0-UNKNOWN												Offset Well Error:	0.00 ft
Reference		Offset		Semi Major Axis			Distance						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	
500.00	500.00	494.00	494.00	17.70	17.76	81.24	8.36	54.29	54.93	19.47	35.46	1.549	
600.00	600.00	594.00	594.00	21.70	21.76	81.24	8.36	54.29	54.93	11.47	43.46	1.264 Level 3	
700.00	700.00	694.00	694.00	25.70	25.76	81.24	8.36	54.29	54.93	3.47	51.46	1.067 Level 2	
800.00	800.00	794.00	794.00	29.70	29.76	81.24	8.36	54.29	54.93	-4.53	59.46	0.924 Level 1	
900.00	900.00	894.00	894.00	33.70	33.76	81.24	8.36	54.29	54.93	-12.53	67.46	0.814 Level 1	
1,000.00	1,000.00	994.00	994.00	37.70	37.76	81.24	8.36	54.29	54.93	-20.53	75.46	0.728 Level 1	
1,050.00	1,050.00	1,044.00	1,044.00	39.70	39.76	81.24	8.36	54.29	54.93	-24.53	79.46	0.691 Level 1	
1,100.00	1,100.00	1,094.00	1,094.00	40.84	41.76	-1.58	8.36	54.29	54.49	-28.09	82.58	0.660 Level 1	
1,200.00	1,199.93	1,193.93	1,193.93	41.63	45.76	-1.69	8.36	54.29	51.00	-36.26	87.26	0.584 Level 1	
1,300.00	1,299.68	1,293.68	1,293.68	42.79	49.75	-1.96	8.36	54.29	44.03	-48.14	92.17	0.478 Level 1	
1,400.00	1,399.13	1,393.13	1,393.13	44.31	53.73	-2.58	8.36	54.29	33.59	-63.69	97.28	0.345 Level 1	
1,500.00	1,498.15	1,492.15	1,492.15	46.18	57.69	-4.42	8.36	54.29	19.69	-82.83	102.53	0.192 Level 1	
1,600.00	1,596.63	1,590.63	1,590.63	48.40	61.63	-33.89	8.36	54.29	2.72	-105.90	108.62	0.025 Level 1	
1,611.79	1,608.20	1,602.20	1,602.20	48.70	62.09	-90.00	8.36	54.29	1.50	-109.28	110.78	0.014 Level 1, CC, ES, SF	
1,700.00	1,694.44	1,688.44	1,688.44	50.96	65.54	-175.25	8.36	54.29	18.58	-94.61	113.19	0.164 Level 1	
1,800.00	1,791.46	1,785.46	1,785.46	53.84	69.42	-177.92	8.36	54.29	42.73	-75.79	118.53	0.361 Level 1	
1,900.00	1,887.58	1,881.58	1,881.58	57.06	73.26	-178.72	8.36	54.29	70.29	-53.53	123.82	0.568 Level 1	
2,000.00	1,982.68	1,976.68	1,976.68	60.60	77.07	-179.10	8.36	54.29	101.18	-27.83	129.01	0.784 Level 1	
2,100.00	2,076.65	2,070.65	2,070.65	64.46	80.83	-179.32	8.36	54.29	135.38	1.32	134.06	1.010 Level 2	
2,200.00	2,169.36	2,163.36	2,163.36	68.65	84.53	-179.46	8.36	54.29	172.84	33.90	138.94	1.244 Level 2	
2,271.12	2,234.48	2,228.48	2,228.48	71.82	87.14	-179.53	8.36	54.29	201.43	59.15	142.28	1.416 Level 3	
2,300.00	2,260.77	2,254.77	2,254.77	73.14	88.19	-179.56	8.36	54.29	213.37	69.19	144.18	1.480 Level 3	
2,400.00	2,351.82	2,345.82	2,345.82	77.86	91.83	-179.63	8.36	54.29	254.72	103.91	150.81	1.689	
2,500.00	2,442.88	2,436.88	2,436.88	82.72	95.48	-179.68	8.36	54.29	296.06	138.55	157.51	1.880	
2,600.00	2,533.93	2,527.93	2,527.93	87.71	99.12	-179.72	8.36	54.29	337.41	173.14	164.27	2.054	
2,700.00	2,624.98	2,618.98	2,618.98	92.80	102.76	-179.75	8.36	54.29	378.76	207.67	171.09	2.214	
2,800.00	2,716.03	2,710.03	2,710.03	97.98	106.40	-179.78	8.36	54.29	420.10	242.15	177.95	2.361	
2,900.00	2,807.09	2,801.09	2,801.09	103.24	110.04	-179.80	8.36	54.29	461.45	276.60	184.85	2.496	
3,000.00	2,898.14	2,892.14	2,892.14	108.57	113.69	-179.81	8.36	54.29	502.79	311.01	191.78	2.622	
3,100.00	2,989.19	2,983.19	2,983.19	113.95	117.33	-179.83	8.36	54.29	544.14	345.39	198.75	2.738	
3,200.00	3,080.24	3,074.24	3,074.24	119.38	120.97	-179.84	8.36	54.29	585.48	379.74	205.75	2.846	
3,300.00	3,171.29	3,165.29	3,165.29	124.85	124.61	-179.85	8.36	54.29	626.83	414.06	212.77	2.946	
3,400.00	3,262.35	3,256.35	3,256.35	130.36	128.25	-179.86	8.36	54.29	668.18	448.36	219.81	3.040	
3,500.00	3,353.40	3,347.40	3,347.40	135.90	131.90	-179.87	8.36	54.29	709.52	482.65	226.88	3.127	
3,600.00	3,444.45	3,438.45	3,438.45	141.47	135.54	-179.87	8.36	54.29	750.87	516.91	233.96	3.209	
3,700.00	3,535.50	3,529.50	3,529.50	147.07	139.18	-179.88	8.36	54.29	792.21	551.16	241.05	3.286	
3,800.00	3,626.56	3,620.56	3,620.56	152.68	142.82	-179.89	8.36	54.29	833.56	585.40	248.16	3.359	
3,900.00	3,717.61	3,711.61	3,711.61	158.32	146.46	-179.89	8.36	54.29	874.91	619.62	255.29	3.427	
4,000.00	3,808.66	3,802.66	3,802.66	163.98	150.11	-179.90	8.36	54.29	916.25	653.83	262.42	3.492	
4,100.00	3,899.71	3,893.71	3,893.71	169.65	153.75	-179.90	8.36	54.29	957.60	688.03	269.57	3.552	
4,200.00	3,990.76	3,984.76	3,984.76	175.33	157.39	-179.91	8.36	54.29	998.94	722.22	276.73	3.610	
4,300.00	4,081.82	4,075.82	4,075.82	181.03	161.03	-179.91	8.36	54.29	1,040.29	756.40	283.89	3.664	
4,400.00	4,172.87	4,166.87	4,166.87	186.75	164.67	-179.91	8.36	54.29	1,081.64	790.57	291.07	3.716	
4,500.00	4,263.92	4,257.92	4,257.92	192.47	168.32	-179.92	8.36	54.29	1,122.98	824.73	298.25	3.765	
4,600.00	4,354.97	4,348.97	4,348.97	198.20	171.96	-179.92	8.36	54.29	1,164.33	858.89	305.44	3.812	
4,700.00	4,446.03	4,440.03	4,440.03	203.94	175.60	-179.92	8.36	54.29	1,205.67	893.04	312.63	3.857	
4,800.00	4,537.08	4,531.08	4,531.08	209.69	179.24	-179.92	8.36	54.29	1,247.02	927.19	319.84	3.899	
4,900.00	4,628.13	4,622.13	4,622.13	215.45	182.89	-179.93	8.36	54.29	1,288.37	961.32	327.04	3.939	
5,000.00	4,719.18	4,713.18	4,713.18	221.22	186.53	-179.93	8.36	54.29	1,329.71	995.46	334.26	3.978	
5,100.00	4,810.23	4,804.23	4,804.23	226.99	190.17	-179.93	8.36	54.29	1,371.06	1,029.59	341.47	4.015	
5,200.00	4,901.29	4,895.29	4,895.29	232.77	193.81	-179.93	8.36	54.29	1,412.41	1,063.71	348.69	4.051	
5,300.00	4,992.34	4,986.34	4,986.34	238.55	197.45	-179.94	8.36	54.29	1,453.75	1,097.83	355.92	4.084	

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

Company:	US ROCKIES REGION PLANNING	Local Co-ordinate Reference:	Well P_KERR-MCGEE 10-3
Project:	COLORADO NORTHERN ZONE - 83	TVD Reference:	WELL @ 5057.00ft (Original Well Elev)
Reference Site:	WELD_KERR MCGEE 19-3 PAD	MD Reference:	WELL @ 5057.00ft (Original Well Elev)
Site Error:	0.00ft	North Reference:	True
Reference Well:	P_KERR-MCGEE 10-3	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00ft	Output errors are at	2.00 sigma
Reference Wellbore	P_KERR-MCGEE 10-3	Database:	EDM 2003.21 Single User Db
Reference Design:	PLAN #1 1-15-10 RHS	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.00 ft
Survey Program: 0-UNKNOWN												Offset Well Error:	0.00 ft
Reference		Offset		Semi Major Axis			Distance						
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning
5,400.00	5,083.39	5,077.39	5,077.39	244.34	201.10	-179.94	8.36	54.29	1,495.10	1,131.95	363.15	4.117	
5,500.00	5,174.44	5,168.44	5,168.44	250.14	204.74	-179.94	8.36	54.29	1,536.44	1,166.06	370.38	4.148	
5,600.00	5,265.50	5,259.50	5,259.50	255.93	208.38	-179.94	8.36	54.29	1,577.79	1,200.17	377.62	4.178	
5,700.00	5,356.55	5,350.55	5,350.55	261.74	212.02	-179.94	8.36	54.29	1,619.14	1,234.27	384.86	4.207	
5,800.00	5,447.60	5,441.60	5,441.60	267.54	215.66	-179.94	8.36	54.29	1,660.48	1,268.37	392.11	4.235	
5,900.00	5,538.65	5,532.65	5,532.65	273.36	219.31	-179.94	8.36	54.29	1,701.83	1,302.47	399.35	4.261	
6,000.00	5,629.70	5,623.70	5,623.70	279.17	222.95	-179.95	8.36	54.29	1,743.17	1,336.57	406.60	4.287	
6,100.00	5,720.76	5,714.76	5,714.76	284.99	226.59	-179.95	8.36	54.29	1,784.52	1,370.67	413.85	4.312	
6,200.00	5,811.81	5,805.81	5,805.81	290.81	230.23	-179.95	8.36	54.29	1,825.87	1,404.76	421.11	4.336	
6,300.00	5,902.86	5,896.86	5,896.86	296.63	233.87	-179.95	8.36	54.29	1,867.21	1,438.85	428.36	4.359	
6,400.00	5,993.91	5,987.91	5,987.91	302.46	237.52	-179.95	8.36	54.29	1,908.56	1,472.93	435.62	4.381	
6,423.73	6,015.52	6,009.52	6,009.52	303.84	238.38	-179.95	8.36	54.29	1,918.37	1,481.02	437.35	4.386	
6,500.00	6,085.38	6,079.38	6,079.38	308.22	241.18	-179.95	8.36	54.29	1,948.98	1,503.19	445.78	4.372	
6,600.00	6,178.16	6,172.16	6,172.16	313.76	244.89	-179.95	8.36	54.29	1,986.27	1,529.77	456.50	4.351	
6,700.00	6,272.18	6,266.18	6,266.18	319.07	248.65	-179.96	8.36	54.29	2,020.30	1,553.50	466.80	4.328	
6,800.00	6,367.34	6,361.34	6,361.34	324.15	252.45	-179.96	8.36	54.29	2,051.03	1,574.37	476.66	4.303	
6,900.00	6,463.51	6,457.51	6,457.51	328.99	256.30	-179.96	8.36	54.29	2,078.42	1,592.37	486.05	4.276	
7,000.00	6,560.58	6,554.58	6,554.58	333.59	260.18	-179.96	8.36	54.29	2,102.43	1,607.48	494.96	4.248	
7,100.00	6,658.43	6,652.43	6,652.43	337.96	264.10	-179.96	8.36	54.29	2,123.05	1,619.70	503.35	4.218	
7,200.00	6,756.93	6,750.93	6,750.93	342.09	268.04	-179.96	8.36	54.29	2,140.24	1,629.02	511.21	4.187	
7,300.00	6,855.98	6,849.98	6,849.98	345.99	272.00	-179.96	8.36	54.29	2,153.97	1,635.46	518.51	4.154	
7,400.00	6,955.44	6,949.44	6,949.44	349.65	275.98	-179.96	8.36	54.29	2,164.25	1,639.02	525.23	4.121	
7,500.00	7,055.21	7,049.21	7,049.21	353.08	279.97	-179.96	8.36	54.29	2,171.04	1,639.70	531.35	4.086	
7,600.00	7,155.15	7,149.15	7,149.15	356.29	283.97	-179.96	8.36	54.29	2,174.35	1,637.52	536.83	4.050	
7,644.85	7,200.00	7,194.00	7,194.00	357.17	285.76	-97.15	8.36	54.29	2,174.71	1,636.25	538.46	4.039	
7,700.00	7,255.15	7,249.15	7,249.15	357.64	287.97	-97.15	8.36	54.29	2,174.71	1,633.40	541.30	4.018	
7,800.00	7,355.15	7,349.15	7,349.15	358.52	291.97	-97.15	8.36	54.29	2,174.71	1,628.20	546.50	3.979	
7,900.00	7,455.15	7,449.15	7,449.15	359.44	295.97	-97.15	8.36	54.29	2,174.71	1,622.94	551.76	3.941	
8,000.00	7,555.15	7,549.15	7,549.15	360.40	299.97	-97.15	8.36	54.29	2,174.71	1,617.63	557.08	3.904	
8,100.00	7,655.15	7,649.15	7,649.15	361.41	303.97	-97.15	8.36	54.29	2,174.71	1,612.25	562.45	3.866	
8,200.00	7,755.15	7,749.15	7,749.15	362.46	307.97	-97.15	8.36	54.29	2,174.71	1,606.83	567.88	3.830	
8,300.00	7,855.15	7,849.15	7,849.15	363.55	311.97	-97.15	8.36	54.29	2,174.71	1,601.35	573.36	3.793	
8,400.00	7,955.15	7,949.15	7,949.15	364.68	315.97	-97.15	8.36	54.29	2,174.71	1,595.82	578.89	3.757	
8,500.00	8,055.15	8,049.15	8,049.15	365.85	319.97	-97.15	8.36	54.29	2,174.71	1,590.24	584.47	3.721	
8,600.00	8,155.15	8,149.15	8,149.15	367.06	323.97	-97.15	8.36	54.29	2,174.71	1,584.60	590.10	3.685	
8,700.00	8,255.15	8,249.15	8,249.15	368.31	327.97	-97.15	8.36	54.29	2,174.71	1,578.92	595.79	3.650	
8,794.85	8,350.00	8,344.00	8,344.00	369.54	331.76	-97.15	8.36	54.29	2,174.71	1,573.48	601.22	3.617	

Company:	US ROCKIES REGION PLANNING	Local Co-ordinate Reference:	Well P_KERR-MCGEE 10-3
Project:	COLORADO NORTHERN ZONE - 83	TVD Reference:	WELL @ 5057.00ft (Original Well Elev)
Reference Site:	WELD_KERR MCGEE 19-3 PAD	MD Reference:	WELL @ 5057.00ft (Original Well Elev)
Site Error:	0.00ft	North Reference:	True
Reference Well:	P_KERR-MCGEE 10-3	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00ft	Output errors are at	2.00 sigma
Reference Wellbore	P_KERR-MCGEE 10-3	Database:	EDM 2003.21 Single User Db
Reference Design:	PLAN #1 1-15-10 RHS	Offset TVD Reference:	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						
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning
0.00	0.00	0.00	0.00	0.00	0.00	-38.83	15.65	-12.59	20.08				
100.00	100.00	100.00	100.00	1.70	0.10	-38.83	15.65	-12.59	20.08	18.29	1.80	11.186	
200.00	200.00	200.00	200.00	5.70	0.32	-38.83	15.65	-12.59	20.08	14.06	6.02	3.336	
300.00	300.00	300.00	300.00	9.70	0.55	-38.83	15.65	-12.59	20.08	9.84	10.25	1.960	
400.00	400.00	400.00	400.00	13.70	0.77	-38.83	15.65	-12.59	20.08	5.62	14.47	1.388 Level 3	
500.00	500.00	500.00	500.00	17.70	0.99	-38.83	15.65	-12.59	20.08	1.39	18.69	1.074 Level 2	
600.00	600.00	600.00	600.00	21.70	1.22	-38.83	15.65	-12.59	20.08	-2.83	22.92	0.876 Level 1	
700.00	700.00	700.00	700.00	25.70	1.44	-38.83	15.65	-12.59	20.08	-7.06	27.14	0.740 Level 1	
800.00	800.00	800.00	800.00	29.70	1.67	-38.83	15.65	-12.59	20.08	-11.28	31.37	0.640 Level 1	
900.00	900.00	900.00	900.00	33.70	1.89	-38.83	15.65	-12.59	20.08	-15.51	35.59	0.564 Level 1	
1,000.00	1,000.00	1,000.00	1,000.00	37.70	2.12	-38.83	15.65	-12.59	20.08	-19.73	39.82	0.504 Level 1	
1,050.00	1,050.00	1,050.00	1,050.00	39.70	2.23	-38.83	15.65	-12.59	20.08	-21.85	41.93	0.479 Level 1, CC	
1,100.00	1,100.00	1,100.13	1,100.13	40.84	2.34	-121.53	15.78	-12.17	20.15	-23.02	43.17	0.467 Level 1, SF	
1,200.00	1,199.93	1,200.39	1,200.32	41.63	2.55	-120.76	16.80	-8.82	20.68	-23.47	44.15	0.468 Level 1	
1,300.00	1,299.68	1,300.64	1,300.32	42.79	2.77	-119.33	18.85	-2.11	21.75	-23.74	45.50	0.478 Level 1	
1,400.00	1,399.13	1,400.88	1,400.00	44.31	3.00	-117.42	21.91	7.93	23.38	-23.82	47.19	0.495 Level 1, ES	
1,500.00	1,498.15	1,501.09	1,499.23	46.18	3.26	-115.27	25.99	21.30	25.58	-23.68	49.26	0.519 Level 1	
1,600.00	1,596.63	1,601.22	1,597.85	48.40	3.55	-113.32	31.04	37.84	28.40	-23.29	51.69	0.549 Level 1	
1,700.00	1,694.44	1,701.12	1,696.09	50.96	3.86	-115.90	36.33	55.17	32.43	-21.91	54.34	0.597 Level 1	
1,800.00	1,791.46	1,800.86	1,794.18	53.84	4.19	-122.48	41.62	72.48	38.28	-18.77	57.05	0.671 Level 1	
1,900.00	1,887.58	1,900.31	1,891.98	57.06	4.53	-130.60	46.88	89.73	46.70	-12.97	59.67	0.783 Level 1	
2,000.00	1,982.68	1,999.36	1,989.39	60.60	4.88	-138.47	52.13	106.92	58.35	-3.87	62.22	0.938 Level 1	
2,100.00	2,076.65	2,097.88	2,086.27	64.46	5.24	-145.20	57.35	124.01	73.56	8.84	64.73	1.137 Level 2	
2,200.00	2,169.36	2,195.75	2,182.52	68.65	5.60	-150.61	62.53	140.99	92.45	25.20	67.25	1.375 Level 3	
2,271.12	2,234.48	2,264.90	2,250.52	71.82	5.86	-153.74	66.20	152.99	108.11	39.04	69.07	1.565	
2,300.00	2,260.77	2,292.89	2,278.05	73.14	5.96	-154.89	67.68	157.85	114.86	44.85	70.01	1.641	
2,400.00	2,351.82	2,389.83	2,373.37	77.86	6.33	-158.01	72.81	174.67	138.51	65.12	73.39	1.887	
2,500.00	2,442.88	2,486.76	2,468.70	82.72	6.70	-160.22	77.95	191.49	162.43	85.52	76.91	2.112	
2,600.00	2,533.93	2,583.69	2,564.02	87.71	7.07	-161.86	83.08	208.30	186.53	105.98	80.55	2.316	
2,700.00	2,624.98	2,680.63	2,659.35	92.80	7.44	-163.13	88.22	225.12	210.73	126.47	84.26	2.501	
2,800.00	2,716.03	2,777.56	2,754.67	97.98	7.82	-164.13	93.35	241.94	235.01	146.98	88.04	2.669	
2,900.00	2,807.09	2,874.49	2,850.00	103.24	8.20	-164.95	98.48	258.76	259.35	167.48	91.87	2.823	
3,000.00	2,898.14	2,971.42	2,945.32	108.57	8.58	-165.63	103.62	275.58	283.73	187.99	95.74	2.963	
3,100.00	2,989.19	3,068.36	3,040.64	113.95	8.96	-166.20	108.75	292.40	308.14	208.48	99.66	3.092	
3,200.00	3,080.24	3,165.29	3,135.97	119.38	9.35	-166.68	113.89	309.22	332.58	228.97	103.60	3.210	
3,300.00	3,171.29	3,262.22	3,231.29	124.85	9.73	-167.10	119.02	326.04	357.03	249.45	107.58	3.319	
3,400.00	3,262.35	3,359.16	3,326.62	130.36	10.11	-167.47	124.16	342.85	381.50	269.92	111.58	3.419	
3,500.00	3,353.40	3,456.09	3,421.94	135.90	10.50	-167.79	129.29	359.67	405.98	290.38	115.60	3.512	
3,600.00	3,444.45	3,553.02	3,517.27	141.47	10.89	-168.08	134.42	376.49	430.48	310.83	119.64	3.598	
3,700.00	3,535.50	3,649.96	3,612.59	147.07	11.28	-168.33	139.56	393.31	454.98	331.27	123.70	3.678	
3,800.00	3,626.56	3,746.89	3,707.92	152.68	11.66	-168.56	144.69	410.13	479.49	351.71	127.78	3.752	
3,900.00	3,717.61	3,843.82	3,803.24	158.32	12.05	-168.77	149.83	426.95	504.00	372.13	131.87	3.822	
4,000.00	3,808.66	3,940.75	3,898.57	163.98	12.44	-168.95	154.96	443.77	528.53	392.55	135.97	3.887	
4,100.00	3,899.71	4,037.69	3,993.89	169.65	12.83	-169.12	160.10	460.59	553.05	412.97	140.09	3.948	
4,200.00	3,990.76	4,134.62	4,089.21	175.33	13.22	-169.28	165.23	477.40	577.58	433.37	144.21	4.005	
4,300.00	4,081.82	4,231.55	4,184.54	181.03	13.61	-169.42	170.36	494.22	602.12	453.77	148.35	4.059	
4,400.00	4,172.87	4,328.49	4,279.86	186.75	14.00	-169.55	175.50	511.04	626.66	474.17	152.49	4.109	
4,500.00	4,263.92	4,425.42	4,375.19	192.47	14.39	-169.68	180.63	527.86	651.20	494.55	156.64	4.157	
4,600.00	4,354.97	4,522.35	4,470.51	198.20	14.79	-169.79	185.77	544.68	675.74	514.94	160.80	4.202	
4,700.00	4,446.03	4,619.29	4,565.84	203.94	15.18	-169.90	190.90	561.50	700.29	535.32	164.97	4.245	
4,800.00	4,537.08	4,716.22	4,661.16	209.69	15.57	-169.99	196.04	578.32	724.83	555.69	169.14	4.285	
4,900.00	4,628.13	4,813.15	4,756.49	215.45	15.96	-170.09	201.17	595.13	749.38	576.06	173.32	4.324	

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

Company:	US ROCKIES REGION PLANNING	Local Co-ordinate Reference:	Well P_KERR-MCGEE 10-3
Project:	COLORADO NORTHERN ZONE - 83	TVD Reference:	WELL @ 5057.00ft (Original Well Elev)
Reference Site:	WELD_KERR MCGEE 19-3 PAD	MD Reference:	WELL @ 5057.00ft (Original Well Elev)
Site Error:	0.00ft	North Reference:	True
Reference Well:	P_KERR-MCGEE 10-3	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00ft	Output errors are at	2.00 sigma
Reference Wellbore	P_KERR-MCGEE 10-3	Database:	EDM 2003.21 Single User Db
Reference Design:	PLAN #1 1-15-10 RHS	Offset TVD Reference:	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									
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning		
5,000.00	4,719.18	4,910.08	4,851.81	221.22	16.35	-170.17	206.30	611.95	773.93	596.43	177.50	4.360			
5,100.00	4,810.23	5,007.02	4,947.14	226.99	16.75	-170.25	211.44	628.77	798.49	616.79	181.69	4.395			
5,200.00	4,901.29	5,103.95	5,042.46	232.77	17.14	-170.33	216.57	645.59	823.04	637.15	185.89	4.428			
5,300.00	4,992.34	5,200.88	5,137.79	238.55	17.53	-170.40	221.71	662.41	847.60	657.51	190.09	4.459			
5,400.00	5,083.39	5,297.82	5,233.11	244.34	17.93	-170.47	226.84	679.23	872.15	677.86	194.29	4.489			
5,500.00	5,174.44	5,394.75	5,328.43	250.14	18.32	-170.53	231.98	696.05	896.71	698.21	198.50	4.518			
5,600.00	5,265.50	5,491.68	5,423.76	255.93	18.71	-170.59	237.11	712.87	921.27	718.56	202.71	4.545			
5,700.00	5,356.55	5,588.62	5,519.08	261.74	19.11	-170.65	242.24	729.68	945.83	738.91	206.92	4.571			
5,800.00	5,447.60	5,685.55	5,614.41	267.54	19.50	-170.70	247.38	746.50	970.39	759.25	211.14	4.596			
5,900.00	5,538.65	5,782.48	5,709.73	273.36	19.90	-170.75	252.51	763.32	994.95	779.59	215.36	4.620			
6,000.00	5,629.70	5,879.41	5,805.06	279.17	20.29	-170.80	257.65	780.14	1,019.51	799.93	219.58	4.643			
6,100.00	5,720.76	5,976.35	5,900.38	284.99	20.68	-170.85	262.78	796.96	1,044.08	820.27	223.81	4.665			
6,200.00	5,811.81	6,070.51	5,992.99	290.81	21.06	-170.89	267.77	813.29	1,068.65	840.63	228.03	4.687			
6,300.00	5,902.86	6,141.61	6,063.09	296.63	21.28	-170.94	271.22	824.61	1,094.61	862.45	232.15	4.715			
6,400.00	5,993.91	6,200.00	6,120.87	302.46	21.45	-171.01	273.68	832.66	1,122.90	886.66	236.24	4.753			
6,423.73	6,015.52	6,228.26	6,148.90	303.84	21.51	-171.04	274.75	836.15	1,129.84	892.62	237.22	4.763			
6,500.00	6,085.38	6,281.13	6,201.41	308.22	21.64	-171.19	276.52	841.98	1,152.28	911.53	240.75	4.786			
6,600.00	6,178.16	6,350.21	6,270.18	313.76	21.79	-171.37	278.42	848.18	1,180.74	935.62	245.12	4.817			
6,700.00	6,272.18	6,419.05	6,338.86	319.07	21.92	-171.56	279.83	852.79	1,208.09	958.91	249.19	4.848			
6,800.00	6,367.34	6,500.00	6,419.72	324.15	22.06	-171.76	280.86	856.19	1,234.41	981.45	252.96	4.880			
6,900.00	6,463.51	6,556.05	6,475.76	328.99	22.13	-171.92	281.19	857.26	1,259.42	1,003.01	256.40	4.912			
7,000.00	6,560.58	6,640.87	6,560.58	333.59	22.25	-172.11	281.23	857.40	1,283.01	1,023.44	259.57	4.943			
7,100.00	6,658.43	6,738.72	6,658.43	337.96	22.38	-172.29	281.23	857.40	1,303.44	1,040.98	262.46	4.966			
7,200.00	6,756.93	6,837.22	6,756.93	342.09	22.52	-172.44	281.23	857.40	1,320.48	1,055.24	265.24	4.978			
7,300.00	6,855.98	6,936.27	6,855.98	345.99	22.67	-172.55	281.23	857.40	1,334.11	1,066.37	267.73	4.983			
7,400.00	6,955.44	7,035.74	6,955.44	349.65	22.81	-172.64	281.23	857.40	1,344.30	1,074.35	269.94	4.980			
7,500.00	7,055.21	7,135.50	7,055.21	353.08	22.95	-172.69	281.23	857.40	1,351.04	1,079.18	271.86	4.970			
7,600.00	7,155.15	7,235.44	7,155.15	356.29	23.10	-172.72	281.23	857.40	1,354.32	1,080.84	273.48	4.952			
7,644.85	7,200.00	7,280.29	7,200.00	357.17	23.17	-89.91	281.23	857.40	1,354.67	1,081.18	273.49	4.953			
7,700.00	7,255.15	7,335.44	7,255.15	357.64	23.25	-89.91	281.23	857.40	1,354.67	1,080.42	274.25	4.940			
7,800.00	7,355.15	7,435.44	7,355.15	358.52	23.40	-89.91	281.23	857.40	1,354.67	1,079.00	275.67	4.914			
7,900.00	7,455.15	7,535.44	7,455.15	359.44	23.55	-89.91	281.23	857.40	1,354.67	1,077.53	277.14	4.888			
8,000.00	7,555.15	7,635.44	7,555.15	360.40	23.70	-89.91	281.23	857.40	1,354.67	1,076.00	278.67	4.861			
8,100.00	7,655.15	7,735.44	7,655.15	361.41	23.85	-89.91	281.23	857.40	1,354.67	1,074.41	280.26	4.834			
8,200.00	7,755.15	7,835.44	7,755.15	362.46	24.00	-89.91	281.23	857.40	1,354.67	1,072.77	281.90	4.806			
8,300.00	7,855.15	7,935.44	7,855.15	363.55	24.16	-89.91	281.23	857.40	1,354.67	1,071.08	283.59	4.777			
8,400.00	7,955.15	8,035.44	7,955.15	364.68	24.32	-89.91	281.23	857.40	1,354.67	1,069.33	285.34	4.748			
8,500.00	8,055.15	8,135.44	8,055.15	365.85	24.47	-89.91	281.23	857.40	1,354.67	1,067.53	287.13	4.718			
8,600.00	8,155.15	8,235.44	8,155.15	367.06	24.63	-89.91	281.23	857.40	1,354.67	1,065.69	288.98	4.688			
8,700.00	8,255.15	8,335.44	8,255.15	368.31	24.79	-89.91	281.23	857.40	1,354.67	1,063.79	290.88	4.657			
8,761.48	8,316.62	8,396.91	8,316.62	369.11	24.89	-89.91	281.23	857.40	1,354.67	1,062.59	292.07	4.638			
8,794.85	8,350.00	8,425.29	8,345.00	369.54	24.93	-89.91	281.23	857.40	1,354.68	1,061.96	292.71	4.628			

Company:	US ROCKIES REGION PLANNING	Local Co-ordinate Reference:	Well P_KERR-MCGEE 10-3
Project:	COLORADO NORTHERN ZONE - 83	TVD Reference:	WELL @ 5057.00ft (Original Well Elev)
Reference Site:	WELD_KERR MCGEE 19-3 PAD	MD Reference:	WELL @ 5057.00ft (Original Well Elev)
Site Error:	0.00ft	North Reference:	True
Reference Well:	P_KERR-MCGEE 10-3	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00ft	Output errors are at	2.00 sigma
Reference Wellbore	P_KERR-MCGEE 10-3	Database:	EDM 2003.21 Single User Db
Reference Design:	PLAN #1 1-15-10 RHS	Offset TVD Reference:	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	
0.00	0.00	0.00	0.00	0.00	0.00	-38.80	39.33	-31.62	50.46				
100.00	100.00	100.00	100.00	1.70	0.10	-38.80	39.33	-31.62	50.46	48.67	1.80	28.104	
200.00	200.00	200.00	200.00	5.70	0.32	-38.80	39.33	-31.62	50.46	44.44	6.02	8.382	
300.00	300.00	300.00	300.00	9.70	0.55	-38.80	39.33	-31.62	50.46	40.22	10.25	4.925	
400.00	400.00	400.00	400.00	13.70	0.77	-38.80	39.33	-31.62	50.46	35.99	14.47	3.487	
500.00	500.00	500.00	500.00	17.70	0.99	-38.80	39.33	-31.62	50.46	31.77	18.69	2.699	
600.00	600.00	600.00	600.00	21.70	1.22	-38.80	39.33	-31.62	50.46	27.54	22.92	2.202	
700.00	700.00	700.00	700.00	25.70	1.44	-38.80	39.33	-31.62	50.46	23.32	27.14	1.859	
800.00	800.00	800.00	800.00	29.70	1.67	-38.80	39.33	-31.62	50.46	19.09	31.37	1.609	
900.00	900.00	900.00	900.00	33.70	1.89	-38.80	39.33	-31.62	50.46	14.87	35.59	1.418 Level 3	
1,000.00	1,000.00	1,000.00	1,000.00	37.70	2.12	-38.80	39.33	-31.62	50.46	10.64	39.82	1.267 Level 3	
1,050.00	1,050.00	1,050.00	1,050.00	39.70	2.23	-38.80	39.33	-31.62	50.46	8.53	41.93	1.203 Level 2, CC	
1,100.00	1,100.00	1,099.18	1,099.18	40.84	2.34	-122.18	39.53	-31.99	51.09	7.92	43.17	1.183 Level 2, ES, SF	
1,200.00	1,199.93	1,197.23	1,197.16	41.63	2.55	-126.29	41.19	-34.91	56.30	12.16	44.15	1.275 Level 3	
1,300.00	1,299.68	1,294.33	1,294.04	42.79	2.76	-132.47	44.46	-40.68	67.39	21.94	45.44	1.483 Level 3	
1,400.00	1,399.13	1,391.89	1,391.17	44.31	2.99	-138.61	48.95	-48.62	84.13	37.11	47.02	1.789	
1,500.00	1,498.15	1,489.41	1,488.25	46.18	3.23	-143.79	53.51	-56.67	104.45	55.61	48.84	2.139	
1,600.00	1,596.63	1,586.12	1,584.52	48.40	3.47	-148.02	58.03	-64.65	128.26	77.39	50.87	2.521	
1,700.00	1,694.44	1,681.91	1,679.88	50.96	3.71	-151.47	62.51	-72.55	155.55	102.48	53.07	2.931	
1,800.00	1,791.46	1,776.66	1,774.20	53.84	3.95	-154.28	66.94	-80.37	186.28	130.86	55.42	3.361	
1,900.00	1,887.58	1,870.25	1,867.37	57.06	4.20	-156.58	71.31	-88.10	220.39	162.51	57.88	3.808	
2,000.00	1,982.68	1,962.57	1,959.28	60.60	4.44	-158.49	75.63	-95.72	257.84	197.40	60.43	4.266	
2,100.00	2,076.65	2,053.51	2,049.81	64.46	4.68	-160.08	79.88	-103.23	298.55	235.49	63.06	4.735	
2,200.00	2,169.36	2,142.96	2,138.85	68.65	4.92	-161.40	84.06	-110.61	342.47	276.74	65.73	5.211	
2,271.12	2,234.48	2,205.61	2,201.21	71.82	5.09	-162.22	86.99	-115.78	375.62	307.98	67.64	5.553	
2,300.00	2,260.77	2,230.88	2,226.37	73.14	5.16	-162.61	88.17	-117.86	389.41	320.77	68.64	5.673	
2,400.00	2,351.82	2,318.37	2,313.47	77.86	5.40	-163.78	92.26	-125.09	437.26	365.12	72.14	6.061	
2,500.00	2,442.88	2,405.87	2,400.58	82.72	5.63	-164.72	96.35	-132.31	485.21	409.49	75.72	6.408	
2,600.00	2,533.93	2,493.37	2,487.68	87.71	5.87	-165.49	100.44	-139.53	533.25	453.89	79.37	6.719	
2,700.00	2,624.98	2,580.87	2,574.78	92.80	6.11	-166.14	104.53	-146.75	581.35	498.28	83.07	6.998	
2,800.00	2,716.03	2,668.37	2,661.89	97.98	6.36	-166.69	108.62	-153.97	629.51	542.68	86.83	7.250	
2,900.00	2,807.09	2,755.86	2,748.99	103.24	6.60	-167.15	112.72	-161.20	677.69	587.06	90.63	7.478	
3,000.00	2,898.14	2,843.36	2,836.09	108.57	6.84	-167.56	116.81	-168.42	725.91	631.45	94.47	7.684	
3,100.00	2,989.19	2,930.86	2,923.20	113.95	7.08	-167.92	120.90	-175.64	774.16	675.82	98.33	7.873	
3,200.00	3,080.24	3,018.36	3,010.30	119.38	7.32	-168.23	124.99	-182.86	822.42	720.19	102.23	8.045	
3,300.00	3,171.29	3,105.85	3,097.40	124.85	7.57	-168.51	129.08	-190.08	870.70	764.54	106.16	8.202	
3,400.00	3,262.35	3,193.35	3,184.51	130.36	7.81	-168.76	133.17	-197.30	918.99	808.89	110.10	8.347	
3,500.00	3,353.40	3,280.85	3,271.61	135.90	8.06	-168.99	137.26	-204.53	967.30	853.23	114.07	8.480	
3,600.00	3,444.45	3,368.35	3,358.71	141.47	8.30	-169.19	141.35	-211.75	1,015.62	897.57	118.05	8.603	
3,700.00	3,535.50	3,455.85	3,445.82	147.07	8.55	-169.38	145.44	-218.97	1,063.94	941.89	122.05	8.717	
3,800.00	3,626.56	3,543.34	3,532.92	152.68	8.79	-169.55	149.53	-226.19	1,112.28	986.21	126.07	8.823	
3,900.00	3,717.61	3,630.84	3,620.02	158.32	9.04	-169.70	153.62	-233.41	1,160.62	1,030.52	130.10	8.921	
4,000.00	3,808.66	3,718.34	3,707.13	163.98	9.28	-169.84	157.71	-240.64	1,208.97	1,074.83	134.14	9.013	
4,100.00	3,899.71	3,805.84	3,794.23	169.65	9.53	-169.98	161.80	-247.86	1,257.32	1,119.13	138.19	9.098	
4,200.00	3,990.76	3,893.34	3,881.33	175.33	9.78	-170.10	165.89	-255.08	1,305.68	1,163.42	142.25	9.179	
4,300.00	4,081.82	3,980.83	3,968.44	181.03	10.02	-170.21	169.98	-262.30	1,354.04	1,207.71	146.32	9.254	
4,400.00	4,172.87	4,068.33	4,055.54	186.75	10.27	-170.32	174.07	-269.52	1,402.40	1,252.00	150.40	9.324	
4,500.00	4,263.92	4,155.83	4,142.64	192.47	10.51	-170.42	178.16	-276.74	1,450.77	1,296.28	154.49	9.391	
4,600.00	4,354.97	4,243.33	4,229.75	198.20	10.76	-170.51	182.25	-283.97	1,499.14	1,340.56	158.58	9.453	
4,700.00	4,446.03	4,330.83	4,316.85	203.94	11.01	-170.59	186.34	-291.19	1,547.52	1,384.83	162.68	9.512	
4,800.00	4,537.08	4,418.32	4,403.95	209.69	11.26	-170.68	190.43	-298.41	1,595.89	1,429.10	166.79	9.568	
4,900.00	4,628.13	4,505.82	4,491.06	215.45	11.50	-170.75	194.52	-305.63	1,644.27	1,473.37	170.90	9.621	

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

Company:	US ROCKIES REGION PLANNING	Local Co-ordinate Reference:	Well P_KERR-MCGEE 10-3
Project:	COLORADO NORTHERN ZONE - 83	TVD Reference:	WELL @ 5057.00ft (Original Well Elev)
Reference Site:	WELD_KERR MCGEE 19-3 PAD	MD Reference:	WELL @ 5057.00ft (Original Well Elev)
Site Error:	0.00ft	North Reference:	True
Reference Well:	P_KERR-MCGEE 10-3	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00ft	Output errors are at	2.00 sigma
Reference Wellbore	P_KERR-MCGEE 10-3	Database:	EDM 2003.21 Single User Db
Reference Design:	PLAN #1 1-15-10 RHS	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.00 ft
Survey Program: 0-MWD												Offset Well Error:	0.00 ft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	
5,000.00	4,719.18	4,593.32	4,578.16	221.22	11.75	-170.82	198.61	-312.85	1,692.65	1,517.63	175.02	9.671	
5,100.00	4,810.23	4,680.82	4,665.26	226.99	12.00	-170.89	202.70	-320.08	1,741.04	1,561.89	179.14	9.719	
5,200.00	4,901.29	4,768.31	4,752.37	232.77	12.25	-170.96	206.79	-327.30	1,789.42	1,606.15	183.27	9.764	
5,300.00	4,992.34	4,855.81	4,839.47	238.55	12.49	-171.02	210.88	-334.52	1,837.81	1,650.41	187.40	9.807	
5,400.00	5,083.39	4,943.31	4,926.57	244.34	12.74	-171.08	214.97	-341.74	1,886.20	1,694.66	191.54	9.848	
5,500.00	5,174.44	5,030.81	5,013.68	250.14	12.99	-171.13	219.07	-348.96	1,934.59	1,738.91	195.68	9.887	
5,600.00	5,265.50	5,118.31	5,100.78	255.93	13.24	-171.18	223.16	-356.18	1,982.98	1,783.16	199.82	9.924	
5,700.00	5,356.55	5,205.80	5,187.88	261.74	13.48	-171.23	227.25	-363.41	2,031.37	1,827.40	203.97	9.959	
5,800.00	5,447.60	5,293.30	5,274.99	267.54	13.73	-171.28	231.34	-370.63	2,079.76	1,871.65	208.12	9.993	
5,900.00	5,538.65	5,380.80	5,362.09	273.36	13.98	-171.33	235.43	-377.85	2,128.16	1,915.89	212.27	10.026	
6,000.00	5,629.70	5,468.30	5,449.19	279.17	14.23	-171.37	239.52	-385.07	2,176.55	1,960.13	216.42	10.057	
6,100.00	5,720.76	5,555.80	5,536.30	284.99	14.48	-171.41	243.61	-392.29	2,224.95	2,004.37	220.58	10.087	
6,200.00	5,811.81	5,643.29	5,623.40	290.81	14.73	-171.45	247.70	-399.52	2,273.34	2,048.61	224.74	10.116	
6,300.00	5,902.86	5,730.79	5,710.50	296.63	14.97	-171.49	251.79	-406.74	2,321.74	2,092.84	228.90	10.143	
6,400.00	5,993.91	5,818.29	5,797.61	302.46	15.22	-171.52	255.88	-413.96	2,370.14	2,137.08	233.06	10.169	
6,423.73	6,015.52	5,839.06	5,818.28	303.84	15.28	-171.53	256.85	-415.67	2,381.63	2,147.57	234.05	10.176	
6,500.00	6,085.38	5,906.27	5,885.19	308.22	15.47	-171.67	259.99	-421.22	2,417.66	2,179.96	237.69	10.171	
6,600.00	6,178.16	5,995.79	5,974.31	313.76	15.73	-171.83	264.18	-428.61	2,462.19	2,219.96	242.24	10.164	
6,700.00	6,272.18	6,086.81	6,064.92	319.07	15.98	-171.97	268.43	-436.12	2,503.61	2,257.11	246.50	10.156	
6,800.00	6,367.34	6,179.20	6,156.89	324.15	16.25	-172.07	272.75	-443.75	2,541.86	2,291.36	250.50	10.147	
6,900.00	6,463.51	6,279.71	6,256.95	328.99	16.53	-172.15	277.44	-452.03	2,576.89	2,322.67	254.22	10.137	
7,000.00	6,560.58	6,583.71	6,560.58	333.59	17.08	-172.32	283.41	-462.56	2,602.96	2,345.06	257.90	10.093	
7,100.00	6,658.43	6,681.56	6,658.43	337.96	17.26	-172.44	283.41	-462.56	2,623.40	2,362.45	260.96	10.053	
7,200.00	6,756.93	6,780.06	6,756.93	342.09	17.44	-172.53	283.41	-462.56	2,640.45	2,376.74	263.71	10.013	
7,300.00	6,855.98	6,879.11	6,855.98	345.99	17.62	-172.61	283.41	-462.56	2,654.07	2,387.91	266.16	9.972	
7,400.00	6,955.44	6,978.58	6,955.44	349.65	17.81	-172.66	283.41	-462.56	2,664.26	2,395.96	268.30	9.930	
7,500.00	7,055.21	7,078.34	7,055.21	353.08	18.00	-172.70	283.41	-462.56	2,671.00	2,400.87	270.13	9.888	
7,600.00	7,155.15	7,178.28	7,155.15	356.29	18.18	-172.71	283.41	-462.56	2,674.29	2,402.64	271.65	9.845	
7,644.85	7,200.00	7,223.13	7,200.00	357.17	18.27	-89.91	283.41	-462.56	2,674.64	2,403.03	271.61	9.847	
7,700.00	7,255.15	7,278.28	7,255.15	357.64	18.37	-89.91	283.41	-462.56	2,674.64	2,402.26	272.37	9.820	
7,800.00	7,355.15	7,378.28	7,355.15	358.52	18.56	-89.91	283.41	-462.56	2,674.64	2,400.83	273.80	9.768	
7,900.00	7,455.15	7,478.28	7,455.15	359.44	18.75	-89.91	283.41	-462.56	2,674.64	2,399.34	275.29	9.716	
8,000.00	7,555.15	7,578.28	7,555.15	360.40	18.94	-89.91	283.41	-462.56	2,674.64	2,397.80	276.84	9.661	
8,100.00	7,655.15	7,678.28	7,655.15	361.41	19.14	-89.91	283.41	-462.56	2,674.64	2,396.20	278.44	9.606	
8,200.00	7,755.15	7,778.28	7,755.15	362.46	19.33	-89.91	283.41	-462.56	2,674.64	2,394.55	280.09	9.549	
8,300.00	7,855.15	7,878.28	7,855.15	363.55	19.52	-89.91	283.41	-462.56	2,674.64	2,392.84	281.80	9.491	
8,400.00	7,955.15	7,978.28	7,955.15	364.68	19.72	-89.91	283.41	-462.56	2,674.64	2,391.08	283.55	9.433	
8,500.00	8,055.15	8,078.28	8,055.15	365.85	19.91	-89.91	283.41	-462.56	2,674.64	2,389.27	285.36	9.373	
8,600.00	8,155.15	8,178.28	8,155.15	367.06	20.11	-89.91	283.41	-462.56	2,674.64	2,387.41	287.23	9.312	
8,700.00	8,255.15	8,278.28	8,255.15	368.31	20.30	-89.91	283.41	-462.56	2,674.64	2,385.50	289.13	9.250	
8,794.85	8,350.00	8,373.13	8,350.00	369.54	20.49	-89.91	283.41	-462.56	2,674.64	2,383.65	290.99	9.191	

Company:	US ROCKIES REGION PLANNING	Local Co-ordinate Reference:	Well P_KERR-MCGEE 10-3
Project:	COLORADO NORTHERN ZONE - 83	TVD Reference:	WELL @ 5057.00ft (Original Well Elev)
Reference Site:	WELD_KERR MCGEE 19-3 PAD	MD Reference:	WELL @ 5057.00ft (Original Well Elev)
Site Error:	0.00ft	North Reference:	True
Reference Well:	P_KERR-MCGEE 10-3	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00ft	Output errors are at	2.00 sigma
Reference Wellbore	P_KERR-MCGEE 10-3	Database:	EDM 2003.21 Single User Db
Reference Design:	PLAN #1 1-15-10 RHS	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.00 ft
Survey Program: 0-MWD												Offset Well Error:	0.00 ft
Reference		Offset		Semi Major Axis			Distance						
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning
0.00	0.00	0.00	0.00	0.00	0.00	-38.90	7.63	-6.16	9.80				
100.00	100.00	100.00	100.00	1.70	0.10	-38.90	7.63	-6.16	9.80	8.01	1.80	5.460	
200.00	200.00	200.00	200.00	5.70	0.32	-38.90	7.63	-6.16	9.80	3.78	6.02	1.628	
300.00	300.00	300.00	300.00	9.70	0.55	-38.90	7.63	-6.16	9.80	-0.44	10.25	0.957 Level 1	
400.00	400.00	400.00	400.00	13.70	0.77	-38.90	7.63	-6.16	9.80	-4.67	14.47	0.677 Level 1	
500.00	500.00	500.00	500.00	17.70	0.99	-38.90	7.63	-6.16	9.80	-8.89	18.69	0.524 Level 1	
600.00	600.00	600.00	600.00	21.70	1.22	-38.90	7.63	-6.16	9.80	-13.12	22.92	0.428 Level 1	
700.00	700.00	700.00	700.00	25.70	1.44	-38.90	7.63	-6.16	9.80	-17.34	27.14	0.361 Level 1	
800.00	800.00	800.00	800.00	29.70	1.67	-38.90	7.63	-6.16	9.80	-21.57	31.37	0.313 Level 1	
900.00	900.00	900.00	900.00	33.70	1.89	-38.90	7.63	-6.16	9.80	-25.79	35.59	0.275 Level 1	
1,000.00	1,000.00	1,000.00	1,000.00	37.70	2.12	-38.90	7.63	-6.16	9.80	-30.02	39.82	0.246 Level 1	
1,050.00	1,050.00	1,050.00	1,050.00	39.70	2.23	-38.90	7.63	-6.16	9.80	-32.13	41.93	0.234 Level 1, CC	
1,100.00	1,100.00	1,100.06	1,100.06	40.84	2.33	-126.15	7.23	-6.34	9.87	-33.29	43.16	0.229 Level 1, ES, SF	
1,200.00	1,199.93	1,199.91	1,199.84	41.63	2.50	-155.75	4.08	-7.82	12.25	-31.82	44.08	0.278 Level 1	
1,300.00	1,299.68	1,298.92	1,298.61	42.79	2.69	-177.90	-2.16	-10.74	21.87	-23.42	45.29	0.483 Level 1	
1,400.00	1,399.13	1,396.56	1,395.72	44.31	2.89	165.81	-11.33	-15.04	38.99	-7.85	46.84	0.832 Level 1	
1,500.00	1,498.15	1,492.34	1,490.58	46.18	3.11	160.16	-23.23	-20.62	62.57	13.88	48.68	1.285 Level 3	
1,600.00	1,596.63	1,585.78	1,582.66	48.40	3.36	157.11	-37.61	-27.36	92.09	41.29	50.80	1.813	
1,700.00	1,694.44	1,676.49	1,671.51	50.96	3.64	155.24	-54.15	-35.11	127.25	74.10	53.16	2.394	
1,800.00	1,791.46	1,767.33	1,760.05	53.84	3.96	154.08	-72.54	-43.73	167.13	111.40	55.73	2.999	
1,900.00	1,887.58	1,857.70	1,848.11	57.06	4.30	153.63	-90.90	-52.33	209.94	151.46	58.49	3.590	
2,000.00	1,982.68	1,946.67	1,934.82	60.60	4.65	153.54	-108.97	-60.81	255.57	194.18	61.39	4.163	
2,100.00	2,076.65	2,034.14	2,020.05	64.46	5.00	153.63	-126.74	-69.14	303.96	239.54	64.42	4.718	
2,200.00	2,169.36	2,119.99	2,103.72	68.65	5.36	153.81	-144.19	-77.31	355.10	287.54	67.56	5.256	
2,271.12	2,234.48	2,180.02	2,162.22	71.82	5.62	153.97	-156.38	-83.03	393.13	323.28	69.85	5.628	
2,300.00	2,260.77	2,204.21	2,185.79	73.14	5.72	154.19	-161.30	-85.33	408.84	337.93	70.92	5.765	
2,400.00	2,351.82	2,287.98	2,267.43	77.86	6.08	154.83	-178.32	-93.31	463.30	388.62	74.68	6.204	
2,500.00	2,442.88	2,371.76	2,349.06	82.72	6.45	155.34	-195.34	-101.29	517.78	439.26	78.53	6.594	
2,600.00	2,533.93	2,455.53	2,430.70	87.71	6.83	155.75	-212.36	-109.26	572.29	489.85	82.45	6.941	
2,700.00	2,624.98	2,539.30	2,512.34	92.80	7.20	156.10	-229.38	-117.24	626.82	540.39	86.43	7.252	
2,800.00	2,716.03	2,623.07	2,593.97	97.98	7.58	156.38	-246.40	-125.22	681.36	590.89	90.47	7.531	
2,900.00	2,807.09	2,706.85	2,675.61	103.24	7.97	156.63	-263.42	-133.20	735.91	641.36	94.56	7.783	
3,000.00	2,898.14	2,790.62	2,757.25	108.57	8.35	156.84	-280.44	-141.17	790.47	691.79	98.68	8.010	
3,100.00	2,989.19	2,874.39	2,838.88	113.95	8.74	157.02	-297.47	-149.15	845.04	742.19	102.84	8.217	
3,200.00	3,080.24	2,958.16	2,920.52	119.38	9.13	157.18	-314.49	-157.13	899.61	792.57	107.04	8.405	
3,300.00	3,171.29	3,041.94	3,002.15	124.85	9.52	157.32	-331.51	-165.11	954.18	842.92	111.26	8.576	
3,400.00	3,262.35	3,125.71	3,083.79	130.36	9.91	157.45	-348.53	-173.08	1,008.76	893.26	115.50	8.734	
3,500.00	3,353.40	3,209.48	3,165.43	135.90	10.30	157.57	-365.55	-181.06	1,063.34	943.57	119.77	8.878	
3,600.00	3,444.45	3,293.25	3,247.06	141.47	10.70	157.67	-382.57	-189.04	1,117.93	993.87	124.06	9.011	
3,700.00	3,535.50	3,377.03	3,328.70	147.07	11.09	157.76	-399.59	-197.02	1,172.51	1,044.15	128.36	9.134	
3,800.00	3,626.56	3,460.80	3,410.33	152.68	11.49	157.85	-416.61	-204.99	1,227.10	1,094.42	132.68	9.248	
3,900.00	3,717.61	3,544.57	3,491.97	158.32	11.88	157.93	-433.63	-212.97	1,281.69	1,144.68	137.02	9.354	
4,000.00	3,808.66	3,628.34	3,573.61	163.98	12.28	158.00	-450.65	-220.95	1,336.29	1,194.92	141.36	9.453	
4,100.00	3,899.71	3,712.11	3,655.24	169.65	12.68	158.06	-467.67	-228.93	1,390.88	1,245.16	145.72	9.545	
4,200.00	3,990.76	3,795.89	3,736.88	175.33	13.08	158.12	-484.69	-236.90	1,445.48	1,295.38	150.09	9.631	
4,300.00	4,081.82	3,879.66	3,818.52	181.03	13.47	158.18	-501.71	-244.88	1,500.07	1,345.60	154.47	9.711	
4,400.00	4,172.87	3,963.43	3,900.15	186.75	13.87	158.23	-518.73	-252.86	1,554.67	1,395.81	158.86	9.786	
4,500.00	4,263.92	4,047.20	3,981.79	192.47	14.27	158.28	-535.75	-260.83	1,609.27	1,446.01	163.26	9.857	
4,600.00	4,354.97	4,130.98	4,063.42	198.20	14.67	158.33	-552.78	-268.81	1,663.86	1,496.20	167.66	9.924	
4,700.00	4,446.03	4,214.75	4,145.06	203.94	15.07	158.37	-569.80	-276.79	1,718.46	1,546.39	172.07	9.987	
4,800.00	4,537.08	4,298.52	4,226.70	209.69	15.47	158.41	-586.82	-284.77	1,773.06	1,596.57	176.49	10.046	
4,900.00	4,628.13	4,382.29	4,308.33	215.45	15.88	158.45	-603.84	-292.74	1,827.66	1,646.75	180.92	10.102	

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

Company:	US ROCKIES REGION PLANNING	Local Co-ordinate Reference:	Well P_KERR-MCGEE 10-3
Project:	COLORADO NORTHERN ZONE - 83	TVD Reference:	WELL @ 5057.00ft (Original Well Elev)
Reference Site:	WELD_KERR MCGEE 19-3 PAD	MD Reference:	WELL @ 5057.00ft (Original Well Elev)
Site Error:	0.00ft	North Reference:	True
Reference Well:	P_KERR-MCGEE 10-3	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00ft	Output errors are at	2.00 sigma
Reference Wellbore	P_KERR-MCGEE 10-3	Database:	EDM 2003.21 Single User Db
Reference Design:	PLAN #1 1-15-10 RHS	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.00 ft
Survey Program: 0-MWD												Offset Well Error:	0.00 ft
Reference		Offset		Semi Major Axis			Distance						
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning
5,000.00	4,719.18	4,466.07	4,389.97	221.22	16.28	158.49	-620.86	-300.72	1,882.26	1,696.92	185.35	10.155	
5,100.00	4,810.23	4,549.84	4,471.61	226.99	16.68	158.52	-637.88	-308.70	1,936.87	1,747.08	189.78	10.206	
5,200.00	4,901.29	4,633.61	4,553.24	232.77	17.08	158.55	-654.90	-316.68	1,991.47	1,797.25	194.22	10.254	
5,300.00	4,992.34	4,717.38	4,634.88	238.55	17.48	158.58	-671.92	-324.65	2,046.07	1,847.40	198.67	10.299	
5,400.00	5,083.39	4,801.16	4,716.51	244.34	17.88	158.61	-688.94	-332.63	2,100.67	1,897.56	203.11	10.342	
5,500.00	5,174.44	4,884.93	4,798.15	250.14	18.29	158.64	-705.96	-340.61	2,155.28	1,947.71	207.57	10.384	
5,600.00	5,265.50	4,968.70	4,879.79	255.93	18.69	158.66	-722.98	-348.59	2,209.88	1,997.86	212.02	10.423	
5,700.00	5,356.55	5,052.47	4,961.42	261.74	19.09	158.69	-740.00	-356.56	2,264.48	2,048.00	216.48	10.460	
5,800.00	5,447.60	5,136.24	5,043.06	267.54	19.50	158.71	-757.02	-364.54	2,319.09	2,098.14	220.94	10.496	
5,900.00	5,538.65	5,220.02	5,124.69	273.36	19.90	158.73	-774.04	-372.52	2,373.69	2,148.28	225.41	10.531	
6,000.00	5,629.70	5,303.79	5,206.33	279.17	20.30	158.75	-791.07	-380.50	2,428.29	2,198.41	229.88	10.563	
6,100.00	5,720.76	5,387.56	5,287.97	284.99	20.71	158.77	-808.09	-388.47	2,482.90	2,248.55	234.35	10.595	
6,200.00	5,811.81	5,471.33	5,369.60	290.81	21.11	158.79	-825.11	-396.45	2,537.50	2,298.68	238.83	10.625	
6,300.00	5,902.86	5,555.11	5,451.24	296.63	21.51	158.81	-842.13	-404.43	2,592.11	2,348.81	243.30	10.654	
6,400.00	5,993.91	5,638.88	5,532.88	302.46	21.92	158.83	-859.15	-412.41	2,646.71	2,398.93	247.78	10.682	
6,423.73	6,015.52	5,658.76	5,552.25	303.84	22.01	158.83	-863.19	-414.30	2,659.67	2,410.83	248.84	10.688	
6,500.00	6,085.38	5,723.16	5,615.01	308.22	22.32	159.18	-876.27	-420.43	2,700.52	2,448.25	252.27	10.705	
6,600.00	6,178.16	5,809.11	5,698.76	313.76	22.74	159.58	-893.73	-428.62	2,751.63	2,495.04	256.59	10.724	
6,700.00	6,272.18	5,896.65	5,784.08	319.07	23.16	159.91	-911.52	-436.95	2,799.90	2,539.20	260.70	10.740	
6,800.00	6,367.34	5,985.70	5,870.85	324.15	23.59	160.19	-929.61	-445.43	2,845.27	2,580.69	264.59	10.754	
6,900.00	6,463.51	6,387.30	6,267.14	328.99	24.69	160.40	-986.70	-472.19	2,883.06	2,614.23	268.83	10.724	
7,000.00	6,560.58	6,681.06	6,560.58	333.59	25.12	160.92	-996.66	-476.86	2,907.67	2,635.63	272.04	10.688	
7,100.00	6,658.43	6,778.91	6,658.43	337.96	25.22	161.18	-996.66	-476.86	2,927.21	2,652.35	274.86	10.650	
7,200.00	6,756.93	6,877.41	6,756.93	342.09	25.33	161.39	-996.66	-476.86	2,943.51	2,666.09	277.42	10.610	
7,300.00	6,855.98	6,976.46	6,855.98	345.99	25.43	161.56	-996.66	-476.86	2,956.55	2,676.85	279.70	10.570	
7,400.00	6,955.44	7,075.93	6,955.44	349.65	25.54	161.68	-996.66	-476.86	2,966.31	2,684.59	281.72	10.529	
7,500.00	7,055.21	7,175.69	7,055.21	353.08	25.64	161.77	-996.66	-476.86	2,972.76	2,689.30	283.46	10.488	
7,600.00	7,155.15	7,275.63	7,155.15	356.29	25.75	161.81	-996.66	-476.86	2,975.91	2,690.98	284.92	10.445	
7,644.85	7,200.00	7,320.48	7,200.00	357.17	25.80	-115.38	-996.66	-476.86	2,976.24	2,691.38	284.86	10.448	
7,700.00	7,255.15	7,375.63	7,255.15	357.64	25.87	-115.38	-996.66	-476.86	2,976.24	2,690.73	285.51	10.424	
7,800.00	7,355.15	7,475.63	7,355.15	358.52	25.98	-115.38	-996.66	-476.86	2,976.24	2,689.52	286.72	10.380	
7,900.00	7,455.15	7,575.63	7,455.15	359.44	26.09	-115.38	-996.66	-476.86	2,976.24	2,688.24	287.99	10.334	
8,000.00	7,555.15	7,675.63	7,555.15	360.40	26.21	-115.38	-996.66	-476.86	2,976.24	2,686.92	289.32	10.287	
8,100.00	7,655.15	7,775.63	7,655.15	361.41	26.33	-115.38	-996.66	-476.86	2,976.24	2,685.53	290.71	10.238	
8,200.00	7,755.15	7,875.63	7,755.15	362.46	26.45	-115.38	-996.66	-476.86	2,976.24	2,684.09	292.15	10.187	
8,300.00	7,855.15	7,975.63	7,855.15	363.55	26.57	-115.38	-996.66	-476.86	2,976.24	2,682.60	293.64	10.136	
8,400.00	7,955.15	8,075.63	7,955.15	364.68	26.69	-115.38	-996.66	-476.86	2,976.24	2,681.05	295.19	10.083	
8,500.00	8,055.15	8,175.63	8,055.15	365.85	26.81	-115.38	-996.66	-476.86	2,976.24	2,679.45	296.79	10.028	
8,600.00	8,155.15	8,275.63	8,155.15	367.06	26.93	-115.38	-996.66	-476.86	2,976.24	2,677.80	298.44	9.973	
8,700.00	8,255.15	8,375.63	8,255.15	368.31	27.06	-115.38	-996.66	-476.86	2,976.24	2,676.10	300.14	9.916	
8,761.48	8,316.62	8,437.10	8,316.62	369.11	27.14	-115.38	-996.66	-476.86	2,976.24	2,675.03	301.21	9.881	
8,794.85	8,350.00	8,465.48	8,345.00	369.54	27.17	-115.38	-996.66	-476.86	2,976.24	2,674.45	301.79	9.862	

Company:	US ROCKIES REGION PLANNING	Local Co-ordinate Reference:	Well P_KERR-MCGEE 10-3
Project:	COLORADO NORTHERN ZONE - 83	TVD Reference:	WELL @ 5057.00ft (Original Well Elev)
Reference Site:	WELD_KERR MCGEE 19-3 PAD	MD Reference:	WELL @ 5057.00ft (Original Well Elev)
Site Error:	0.00ft	North Reference:	True
Reference Well:	P_KERR-MCGEE 10-3	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00ft	Output errors are at	2.00 sigma
Reference Wellbore	P_KERR-MCGEE 10-3	Database:	EDM 2003.21 Single User Db
Reference Design:	PLAN #1 1-15-10 RHS	Offset TVD Reference:	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	140.89	-30.98	25.19	39.92				
100.00	100.00	100.00	100.00	1.70	0.10	140.89	-30.98	25.19	39.92	38.13	1.80	22.234	
200.00	200.00	200.00	200.00	5.70	0.32	140.89	-30.98	25.19	39.92	33.90	6.02	6.631	
300.00	300.00	300.00	300.00	9.70	0.55	140.89	-30.98	25.19	39.92	29.68	10.25	3.897	
400.00	400.00	400.00	400.00	13.70	0.77	140.89	-30.98	25.19	39.92	25.45	14.47	2.759	
500.00	500.00	500.00	500.00	17.70	0.99	140.89	-30.98	25.19	39.92	21.23	18.69	2.136	
600.00	600.00	600.00	600.00	21.70	1.22	140.89	-30.98	25.19	39.92	17.00	22.92	1.742	
700.00	700.00	700.00	700.00	25.70	1.44	140.89	-30.98	25.19	39.92	12.78	27.14	1.471 Level 3	
800.00	800.00	800.00	800.00	29.70	1.67	140.89	-30.98	25.19	39.92	8.55	31.37	1.273 Level 3	
900.00	900.00	900.00	900.00	33.70	1.89	140.89	-30.98	25.19	39.92	4.33	35.59	1.122 Level 2	
1,000.00	1,000.00	1,000.00	1,000.00	37.70	2.12	140.89	-30.98	25.19	39.92	0.10	39.82	1.003 Level 2	
1,050.00	1,050.00	1,050.00	1,050.00	39.70	2.23	140.89	-30.98	25.19	39.92	-2.01	41.93	0.952 Level 1, CC	
1,100.00	1,100.00	1,099.31	1,099.31	40.84	2.33	58.59	-31.30	25.45	40.12	-3.04	43.17	0.930 Level 1, ES, SF	
1,200.00	1,199.93	1,197.85	1,197.78	41.63	2.51	62.52	-33.92	27.61	41.85	-2.27	44.12	0.949 Level 1	
1,300.00	1,299.68	1,296.14	1,295.83	42.79	2.70	69.38	-39.14	31.89	45.82	0.38	45.45	1.008 Level 2	
1,400.00	1,399.13	1,394.02	1,393.20	44.31	2.90	77.48	-46.92	38.28	52.79	5.63	47.16	1.119 Level 2	
1,500.00	1,498.15	1,491.35	1,489.60	46.18	3.13	85.23	-57.19	46.73	63.29	14.04	49.25	1.285 Level 3	
1,600.00	1,596.63	1,587.96	1,584.80	48.40	3.40	91.74	-69.88	57.16	77.54	25.83	51.71	1.499 Level 3	
1,700.00	1,694.44	1,683.72	1,678.56	50.96	3.70	96.83	-84.91	69.51	95.49	40.96	54.53	1.751	
1,800.00	1,791.46	1,778.49	1,770.67	53.84	4.06	100.67	-102.15	83.68	116.99	59.29	57.70	2.028	
1,900.00	1,887.58	1,873.54	1,862.33	57.06	4.46	103.67	-121.55	99.63	141.68	80.48	61.20	2.315	
2,000.00	1,982.68	1,969.57	1,954.82	60.60	4.90	106.68	-141.51	116.03	167.99	102.97	65.01	2.584	
2,100.00	2,076.65	2,064.97	2,046.71	64.46	5.35	109.69	-161.33	132.32	195.87	126.78	69.10	2.835	
2,200.00	2,169.36	2,159.64	2,137.89	68.65	5.82	112.62	-181.01	148.49	225.58	152.18	73.40	3.073	
2,271.12	2,234.48	2,226.46	2,202.25	71.82	6.16	114.63	-194.89	159.90	247.94	171.37	76.57	3.238	
2,300.00	2,260.77	2,253.50	2,228.29	73.14	6.30	115.58	-200.51	164.52	257.27	179.39	77.89	3.303	
2,400.00	2,351.82	2,347.12	2,318.47	77.86	6.78	118.39	-219.97	180.51	290.00	207.51	82.49	3.515	
2,500.00	2,442.88	2,440.75	2,408.64	82.72	7.28	120.63	-239.42	196.50	323.24	236.04	87.19	3.707	
2,600.00	2,533.93	2,534.38	2,498.82	87.71	7.77	122.45	-258.88	212.49	356.83	264.86	91.97	3.880	
2,700.00	2,624.98	2,628.00	2,588.99	92.80	8.28	123.97	-278.33	228.48	390.70	293.89	96.81	4.036	
2,800.00	2,716.03	2,721.63	2,679.17	97.98	8.78	125.24	-297.79	244.47	424.77	323.06	101.71	4.176	
2,900.00	2,807.09	2,815.26	2,769.35	103.24	9.29	126.33	-317.25	260.46	459.00	352.35	106.66	4.304	
3,000.00	2,898.14	2,908.88	2,859.52	108.57	9.80	127.26	-336.70	276.45	493.36	381.72	111.65	4.419	
3,100.00	2,989.19	3,002.51	2,949.70	113.95	10.32	128.08	-356.16	292.43	527.82	411.15	116.67	4.524	
3,200.00	3,080.24	3,096.14	3,039.87	119.38	10.84	128.79	-375.61	308.42	562.36	440.64	121.73	4.620	
3,300.00	3,171.29	3,189.76	3,130.05	124.85	11.36	129.43	-395.07	324.41	596.97	470.17	126.81	4.708	
3,400.00	3,262.35	3,283.39	3,220.23	130.36	11.88	129.99	-414.52	340.40	631.64	499.73	131.92	4.788	
3,500.00	3,353.40	3,377.02	3,310.40	135.90	12.40	130.49	-433.98	356.39	666.36	529.31	137.05	4.862	
3,600.00	3,444.45	3,470.64	3,400.58	141.47	12.92	130.95	-453.44	372.38	701.12	558.92	142.19	4.931	
3,700.00	3,535.50	3,564.27	3,490.76	147.07	13.45	131.36	-472.89	388.37	735.91	588.55	147.36	4.994	
3,800.00	3,626.56	3,657.90	3,580.93	152.68	13.97	131.74	-492.35	404.36	770.73	618.19	152.54	5.053	
3,900.00	3,717.61	3,751.52	3,671.11	158.32	14.50	132.08	-511.80	420.35	805.58	647.85	157.74	5.107	
4,000.00	3,808.66	3,845.15	3,761.28	163.98	15.03	132.39	-531.26	436.34	840.45	677.51	162.94	5.158	
4,100.00	3,899.71	3,938.78	3,851.46	169.65	15.55	132.68	-550.72	452.33	875.35	707.19	168.16	5.205	
4,200.00	3,990.76	4,032.40	3,941.64	175.33	16.08	132.95	-570.17	468.32	910.26	736.87	173.39	5.250	
4,300.00	4,081.82	4,126.03	4,031.81	181.03	16.61	133.20	-589.63	484.31	945.19	766.56	178.63	5.291	
4,400.00	4,172.87	4,219.66	4,121.99	186.75	17.14	133.43	-609.08	500.30	980.13	796.25	183.88	5.330	
4,500.00	4,263.92	4,313.28	4,212.16	192.47	17.67	133.64	-628.54	516.29	1,015.08	825.95	189.13	5.367	
4,600.00	4,354.97	4,406.91	4,302.34	198.20	18.20	133.84	-648.00	532.28	1,050.05	855.66	194.39	5.402	
4,700.00	4,446.03	4,500.54	4,392.52	203.94	18.73	134.03	-667.45	548.27	1,085.03	885.36	199.66	5.434	
4,800.00	4,537.08	4,594.16	4,482.69	209.69	19.26	134.20	-686.91	564.26	1,120.02	915.08	204.94	5.465	
4,900.00	4,628.13	4,687.79	4,572.87	215.45	19.79	134.37	-706.36	580.25	1,155.01	944.79	210.22	5.494	

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

Company:	US ROCKIES REGION PLANNING	Local Co-ordinate Reference:	Well P_KERR-MCGEE 10-3
Project:	COLORADO NORTHERN ZONE - 83	TVD Reference:	WELL @ 5057.00ft (Original Well Elev)
Reference Site:	WELD_KERR MCGEE 19-3 PAD	MD Reference:	WELL @ 5057.00ft (Original Well Elev)
Site Error:	0.00ft	North Reference:	True
Reference Well:	P_KERR-MCGEE 10-3	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00ft	Output errors are at	2.00 sigma
Reference Wellbore	P_KERR-MCGEE 10-3	Database:	EDM 2003.21 Single User Db
Reference Design:	PLAN #1 1-15-10 RHS	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.00 ft
WELD_KERR MCGEE 19-3 PAD - P_KERR-MCGEE 14-3 - P_KERR-MCGEE 14-3 - PLAN #1 1-15-10												Offset Well Error:	0.00 ft
Survey Program: 0-MWD													
Reference		Offset		Semi Major Axis			Distance						
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning
5,000.00	4,719.18	4,781.42	4,663.04	221.22	20.32	134.52	-725.82	596.24	1,190.01	974.51	215.51	5.522	
5,100.00	4,810.23	4,875.04	4,753.22	226.99	20.86	134.67	-745.27	612.23	1,225.02	1,004.23	220.80	5.548	
5,200.00	4,901.29	4,968.67	4,843.40	232.77	21.39	134.81	-764.73	628.22	1,260.04	1,033.95	226.09	5.573	
5,300.00	4,992.34	5,062.30	4,933.57	238.55	21.92	134.94	-784.19	644.21	1,295.06	1,063.67	231.39	5.597	
5,400.00	5,083.39	5,155.92	5,023.75	244.34	22.45	135.06	-803.64	660.20	1,330.09	1,093.40	236.69	5.619	
5,500.00	5,174.44	5,249.55	5,113.93	250.14	22.99	135.18	-823.10	676.19	1,365.13	1,123.13	242.00	5.641	
5,600.00	5,265.50	5,343.18	5,204.10	255.93	23.52	135.29	-842.55	692.18	1,400.17	1,152.85	247.31	5.662	
5,700.00	5,356.55	5,436.80	5,294.28	261.74	24.05	135.40	-862.01	708.17	1,435.21	1,182.58	252.63	5.681	
5,800.00	5,447.60	5,530.43	5,384.45	267.54	24.58	135.50	-881.47	724.16	1,470.26	1,212.31	257.94	5.700	
5,900.00	5,538.65	5,624.06	5,474.63	273.36	25.12	135.59	-900.92	740.15	1,505.31	1,242.05	263.26	5.718	
6,000.00	5,629.70	5,717.68	5,564.81	279.17	25.65	135.69	-920.38	756.14	1,540.36	1,271.78	268.58	5.735	
6,100.00	5,720.76	5,811.31	5,654.98	284.99	26.18	135.77	-939.83	772.13	1,575.42	1,301.51	273.91	5.752	
6,200.00	5,811.81	5,905.99	5,746.18	290.81	26.71	135.86	-959.49	788.28	1,610.48	1,331.25	279.23	5.768	
6,300.00	5,902.86	6,008.56	5,845.56	296.63	27.11	136.03	-979.11	804.41	1,645.23	1,360.91	284.32	5.787	
6,400.00	5,993.91	6,111.10	5,945.74	302.46	27.47	136.33	-995.96	818.25	1,679.49	1,390.30	289.18	5.808	
6,423.73	6,015.52	6,135.40	5,969.59	303.84	27.55	136.41	-999.54	821.20	1,687.55	1,397.25	290.30	5.813	
6,500.00	6,085.38	6,213.69	6,046.69	308.22	27.79	137.07	-1,010.04	829.82	1,712.61	1,419.14	293.47	5.836	
6,600.00	6,178.16	6,316.96	6,148.91	313.76	28.06	137.91	-1,021.38	839.15	1,742.96	1,445.60	297.36	5.861	
6,700.00	6,272.18	6,420.77	6,252.12	319.07	28.29	138.72	-1,029.90	846.15	1,770.44	1,469.51	300.93	5.883	
6,800.00	6,367.34	6,524.93	6,356.02	324.15	28.47	139.51	-1,035.55	850.79	1,795.03	1,490.85	304.17	5.901	
6,900.00	6,463.51	6,629.26	6,460.29	328.99	28.61	140.28	-1,038.27	853.03	1,816.70	1,509.62	307.09	5.916	
7,000.00	6,560.58	6,729.55	6,560.58	333.59	28.71	141.00	-1,038.54	853.25	1,835.53	1,525.81	309.72	5.926	
7,100.00	6,658.43	6,827.40	6,658.43	337.96	28.80	141.61	-1,038.54	853.25	1,851.76	1,539.54	312.22	5.931	
7,200.00	6,756.93	6,925.91	6,756.93	342.09	28.90	142.10	-1,038.54	853.25	1,865.35	1,550.79	314.57	5.930	
7,300.00	6,855.98	7,024.95	6,855.98	345.99	28.99	142.49	-1,038.54	853.25	1,876.26	1,559.49	316.77	5.923	
7,400.00	6,955.44	7,124.42	6,955.44	349.65	29.09	142.78	-1,038.54	853.25	1,884.44	1,565.60	318.84	5.910	
7,500.00	7,055.21	7,224.18	7,055.21	353.08	29.19	142.97	-1,038.54	853.25	1,889.87	1,569.09	320.78	5.892	
7,600.00	7,155.15	7,324.12	7,155.15	356.29	29.30	143.06	-1,038.54	853.25	1,892.51	1,569.93	322.58	5.867	
7,644.85	7,200.00	7,368.97	7,200.00	357.17	29.34	-134.12	-1,038.54	853.25	1,892.79	1,570.02	322.77	5.864	
7,700.00	7,255.15	7,424.12	7,255.15	357.64	29.40	-134.12	-1,038.54	853.25	1,892.79	1,569.47	323.32	5.854	
7,800.00	7,355.15	7,524.12	7,355.15	358.52	29.50	-134.12	-1,038.54	853.25	1,892.79	1,568.43	324.36	5.835	
7,900.00	7,455.15	7,624.12	7,455.15	359.44	29.61	-134.12	-1,038.54	853.25	1,892.79	1,567.34	325.45	5.816	
8,000.00	7,555.15	7,724.12	7,555.15	360.40	29.72	-134.12	-1,038.54	853.25	1,892.79	1,566.20	326.59	5.796	
8,100.00	7,655.15	7,824.12	7,655.15	361.41	29.83	-134.12	-1,038.54	853.25	1,892.79	1,565.00	327.79	5.774	
8,200.00	7,755.15	7,924.12	7,755.15	362.46	29.94	-134.12	-1,038.54	853.25	1,892.79	1,563.76	329.03	5.753	
8,300.00	7,855.15	8,024.12	7,855.15	363.55	30.05	-134.12	-1,038.54	853.25	1,892.79	1,562.46	330.33	5.730	
8,400.00	7,955.15	8,124.12	7,955.15	364.68	30.16	-134.12	-1,038.54	853.25	1,892.79	1,561.12	331.67	5.707	
8,500.00	8,055.15	8,224.12	8,055.15	365.85	30.27	-134.12	-1,038.54	853.25	1,892.79	1,559.72	333.07	5.683	
8,600.00	8,155.15	8,324.12	8,155.15	367.06	30.39	-134.12	-1,038.54	853.25	1,892.79	1,558.28	334.51	5.658	
8,700.00	8,255.15	8,424.12	8,255.15	368.31	30.50	-134.12	-1,038.54	853.25	1,892.79	1,556.79	336.00	5.633	
8,794.85	8,350.00	8,518.97	8,350.00	369.54	30.62	-134.12	-1,038.54	853.25	1,892.79	1,555.33	337.46	5.609	

Company:	US ROCKIES REGION PLANNING	Local Co-ordinate Reference:	Well P_KERR-MCGEE 10-3
Project:	COLORADO NORTHERN ZONE - 83	TVD Reference:	WELL @ 5057.00ft (Original Well Elev)
Reference Site:	WELD_KERR MCGEE 19-3 PAD	MD Reference:	WELL @ 5057.00ft (Original Well Elev)
Site Error:	0.00ft	North Reference:	True
Reference Well:	P_KERR-MCGEE 10-3	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00ft	Output errors are at	2.00 sigma
Reference Wellbore	P_KERR-MCGEE 10-3	Database:	EDM 2003.21 Single User Db
Reference Design:	PLAN #1 1-15-10 RHS	Offset TVD Reference:	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
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning
0.00	0.00	0.00	0.00	0.00	0.00	141.21	-38.99	31.34	50.03				
100.00	100.00	100.00	100.00	1.70	0.10	141.21	-38.99	31.34	50.03	48.23	1.80	27.863	
200.00	200.00	200.00	200.00	5.70	0.32	141.21	-38.99	31.34	50.03	44.01	6.02	8.310	
300.00	300.00	300.00	300.00	9.70	0.55	141.21	-38.99	31.34	50.03	39.78	10.25	4.883	
400.00	400.00	400.00	400.00	13.70	0.77	141.21	-38.99	31.34	50.03	35.56	14.47	3.457	
500.00	500.00	500.00	500.00	17.70	0.99	141.21	-38.99	31.34	50.03	31.33	18.69	2.676	
600.00	600.00	600.00	600.00	21.70	1.22	141.21	-38.99	31.34	50.03	27.11	22.92	2.183	
700.00	700.00	700.00	700.00	25.70	1.44	141.21	-38.99	31.34	50.03	22.88	27.14	1.843	
800.00	800.00	800.00	800.00	29.70	1.67	141.21	-38.99	31.34	50.03	18.66	31.37	1.595	
900.00	900.00	900.00	900.00	33.70	1.89	141.21	-38.99	31.34	50.03	14.43	35.59	1.406 Level 3	
1,000.00	1,000.00	1,000.00	1,000.00	37.70	2.12	141.21	-38.99	31.34	50.03	10.21	39.82	1.256 Level 3	
1,050.00	1,050.00	1,050.00	1,050.00	39.70	2.23	141.21	-38.99	31.34	50.03	8.10	41.93	1.193 Level 2, CC	
1,100.00	1,100.00	1,099.20	1,099.20	40.84	2.33	58.64	-39.20	31.71	50.20	7.03	43.17	1.163 Level 2, ES, SF	
1,200.00	1,199.93	1,197.56	1,197.50	41.63	2.52	60.48	-40.87	34.64	51.60	7.47	44.13	1.169 Level 2	
1,300.00	1,299.68	1,295.83	1,295.53	42.79	2.71	63.85	-44.21	40.50	54.55	9.10	45.45	1.200 Level 2	
1,400.00	1,399.13	1,393.92	1,393.09	44.31	2.93	68.24	-49.19	49.26	59.28	12.14	47.14	1.258 Level 3	
1,500.00	1,498.15	1,491.77	1,490.03	46.18	3.17	73.04	-55.80	60.89	66.05	16.84	49.21	1.342 Level 3	
1,600.00	1,596.63	1,589.33	1,586.15	48.40	3.44	77.75	-64.02	75.34	75.03	23.37	51.66	1.452 Level 3	
1,700.00	1,694.44	1,686.52	1,681.30	50.96	3.76	82.02	-73.81	92.56	86.31	31.81	54.51	1.584	
1,800.00	1,791.46	1,783.29	1,775.31	53.84	4.12	85.71	-85.14	112.48	99.92	42.18	57.74	1.731	
1,900.00	1,887.58	1,879.59	1,868.04	57.06	4.55	88.80	-97.96	135.03	115.81	54.45	61.35	1.888	
2,000.00	1,982.68	1,975.35	1,959.34	60.60	5.03	91.33	-112.23	160.13	133.93	68.58	65.35	2.049	
2,100.00	2,076.65	2,070.54	2,049.09	64.46	5.57	93.37	-127.91	187.69	154.22	84.50	69.72	2.212	
2,200.00	2,169.36	2,165.11	2,137.16	68.65	6.18	95.01	-144.93	217.62	176.60	102.15	74.46	2.372	
2,271.12	2,234.48	2,231.96	2,198.71	71.82	6.65	95.97	-157.83	240.30	193.77	115.72	78.05	2.483	
2,300.00	2,260.77	2,259.03	2,223.45	73.14	6.85	96.42	-163.25	249.84	201.01	121.46	79.55	2.527	
2,400.00	2,351.82	2,353.04	2,308.60	77.86	7.58	97.32	-182.95	284.48	227.03	142.14	84.89	2.674	
2,500.00	2,442.88	2,449.44	2,395.47	82.72	8.37	97.85	-203.61	320.81	253.53	163.10	90.43	2.804	
2,600.00	2,533.93	2,545.84	2,482.34	87.71	9.18	98.27	-224.27	357.13	280.05	183.95	96.11	2.914	
2,700.00	2,624.98	2,642.24	2,569.22	92.80	10.01	98.62	-244.92	393.46	306.58	204.69	101.90	3.009	
2,800.00	2,716.03	2,738.64	2,656.09	97.98	10.84	98.91	-265.58	429.78	333.13	225.34	107.79	3.091	
2,900.00	2,807.09	2,835.04	2,742.96	103.24	11.68	99.16	-286.24	466.10	359.67	245.91	113.76	3.162	
3,000.00	2,898.14	2,931.44	2,829.84	108.57	12.53	99.38	-306.90	502.43	386.23	266.43	119.80	3.224	
3,100.00	2,989.19	3,027.84	2,916.71	113.95	13.39	99.57	-327.55	538.75	412.78	286.89	125.89	3.279	
3,200.00	3,080.24	3,124.24	3,003.58	119.38	14.25	99.73	-348.21	575.08	439.34	307.30	132.04	3.327	
3,300.00	3,171.29	3,220.64	3,090.46	124.85	15.11	99.88	-368.87	611.40	465.91	327.67	138.24	3.370	
3,400.00	3,262.35	3,317.05	3,177.33	130.36	15.97	100.01	-389.53	647.72	492.47	348.01	144.47	3.409	
3,500.00	3,353.40	3,413.45	3,264.20	135.90	16.84	100.13	-410.18	684.05	519.04	368.31	150.73	3.443	
3,600.00	3,444.45	3,509.85	3,351.07	141.47	17.71	100.23	-430.84	720.37	545.61	388.58	157.03	3.475	
3,700.00	3,535.50	3,606.25	3,437.95	147.07	18.58	100.33	-451.50	756.70	572.19	408.84	163.35	3.503	
3,800.00	3,626.56	3,702.65	3,524.82	152.68	19.46	100.41	-472.15	793.02	598.76	429.07	169.69	3.528	
3,900.00	3,717.61	3,799.05	3,611.69	158.32	20.33	100.49	-492.81	829.35	625.33	449.27	176.06	3.552	
4,000.00	3,808.66	3,895.45	3,698.57	163.98	21.21	100.57	-513.47	865.67	651.91	469.47	182.44	3.573	
4,100.00	3,899.71	3,991.85	3,785.44	169.65	22.08	100.64	-534.13	901.99	678.49	489.64	188.84	3.593	
4,200.00	3,990.76	4,088.25	3,872.31	175.33	22.96	100.70	-554.78	938.32	705.06	509.80	195.26	3.611	
4,300.00	4,081.82	4,184.65	3,959.19	181.03	23.84	100.76	-575.44	974.64	731.64	529.95	201.69	3.628	
4,400.00	4,172.87	4,281.05	4,046.06	186.75	24.72	100.81	-596.10	1,010.97	758.22	550.09	208.13	3.643	
4,500.00	4,263.92	4,377.45	4,132.93	192.47	25.60	100.86	-616.75	1,047.29	784.80	570.22	214.58	3.657	
4,600.00	4,354.97	4,473.85	4,219.81	198.20	26.48	100.91	-637.41	1,083.61	811.38	590.33	221.05	3.671	
4,700.00	4,446.03	4,570.26	4,306.68	203.94	27.36	100.95	-658.07	1,119.94	837.96	610.44	227.52	3.683	
4,800.00	4,537.08	4,666.66	4,393.55	209.69	28.24	100.99	-678.73	1,156.26	864.54	630.54	234.00	3.695	
4,900.00	4,628.13	4,763.06	4,480.43	215.45	29.13	101.03	-699.38	1,192.59	891.12	650.63	240.49	3.705	

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

Company:	US ROCKIES REGION PLANNING	Local Co-ordinate Reference:	Well P_KERR-MCGEE 10-3
Project:	COLORADO NORTHERN ZONE - 83	TVD Reference:	WELL @ 5057.00ft (Original Well Elev)
Reference Site:	WELD_KERR MCGEE 19-3 PAD	MD Reference:	WELL @ 5057.00ft (Original Well Elev)
Site Error:	0.00ft	North Reference:	True
Reference Well:	P_KERR-MCGEE 10-3	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00ft	Output errors are at	2.00 sigma
Reference Wellbore	P_KERR-MCGEE 10-3	Database:	EDM 2003.21 Single User Db
Reference Design:	PLAN #1 1-15-10 RHS	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.00 ft
Survey Program: 0-MWD												Offset Well Error:	0.00 ft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	
5,000.00	4,719.18	4,859.46	4,567.30	221.22	30.01	101.07	-720.04	1,228.91	917.70	670.72	246.98	3.716	
5,100.00	4,810.23	4,955.86	4,654.17	226.99	30.89	101.10	-740.70	1,265.24	944.29	690.80	253.49	3.725	
5,200.00	4,901.29	5,052.26	4,741.05	232.77	31.77	101.14	-761.35	1,301.56	970.87	710.87	260.00	3.734	
5,300.00	4,992.34	5,148.66	4,827.92	238.55	32.66	101.17	-782.01	1,337.88	997.45	730.94	266.51	3.743	
5,400.00	5,083.39	5,245.06	4,914.79	244.34	33.54	101.20	-802.67	1,374.21	1,024.03	751.00	273.03	3.751	
5,500.00	5,174.44	5,341.46	5,001.66	250.14	34.43	101.23	-823.33	1,410.53	1,050.62	771.06	279.56	3.758	
5,600.00	5,265.50	5,437.86	5,088.54	255.93	35.31	101.25	-843.98	1,446.86	1,077.20	791.11	286.09	3.765	
5,700.00	5,356.55	5,534.26	5,175.41	261.74	36.20	101.28	-864.64	1,483.18	1,103.78	811.16	292.62	3.772	
5,800.00	5,447.60	5,630.66	5,262.28	267.54	37.08	101.30	-885.30	1,519.50	1,130.37	831.20	299.16	3.778	
5,900.00	5,538.65	5,727.06	5,349.16	273.36	37.97	101.32	-905.95	1,555.83	1,156.95	851.24	305.71	3.785	
6,000.00	5,629.70	5,823.47	5,436.03	279.17	38.85	101.35	-926.61	1,592.15	1,183.53	871.28	312.25	3.790	
6,100.00	5,720.76	5,919.87	5,522.90	284.99	39.74	101.37	-947.27	1,628.48	1,210.12	891.32	318.80	3.796	
6,200.00	5,811.81	6,016.27	5,609.78	290.81	40.62	101.39	-967.93	1,664.80	1,236.70	911.35	325.35	3.801	
6,300.00	5,902.86	6,112.67	5,696.65	296.63	41.51	101.41	-988.58	1,701.13	1,263.29	931.38	331.91	3.806	
6,400.00	5,993.91	6,209.07	5,783.52	302.46	42.39	101.42	-1,009.24	1,737.45	1,289.87	951.40	338.47	3.811	
6,423.73	6,015.52	6,231.95	5,804.14	303.84	42.60	101.43	-1,014.14	1,746.07	1,296.18	956.16	340.03	3.812	
6,500.00	6,085.38	6,305.52	5,870.44	308.22	43.28	101.80	-1,029.91	1,773.79	1,316.26	971.37	344.89	3.817	
6,600.00	6,178.16	6,402.07	5,957.45	313.76	44.17	102.15	-1,050.60	1,810.17	1,341.98	990.90	351.08	3.822	
6,700.00	6,272.18	6,502.04	6,064.77	319.07	45.08	102.36	-1,074.80	1,852.74	1,366.27	1,009.16	357.11	3.826	
6,800.00	6,367.34	6,639.57	6,175.47	324.15	45.83	102.54	-1,097.08	1,891.91	1,388.31	1,025.55	362.76	3.827	
6,900.00	6,463.51	6,760.37	6,289.16	328.99	46.52	102.69	-1,117.25	1,927.38	1,408.03	1,039.93	368.11	3.825	
7,000.00	6,560.58	6,882.34	6,405.59	333.59	47.13	102.83	-1,135.20	1,958.94	1,425.40	1,052.25	373.15	3.820	
7,100.00	6,658.43	7,005.35	6,524.47	337.96	47.67	102.95	-1,150.81	1,986.38	1,440.36	1,062.48	377.88	3.812	
7,200.00	6,756.93	7,129.26	6,645.48	342.09	48.12	103.04	-1,163.96	2,009.51	1,452.88	1,070.58	382.30	3.800	
7,300.00	6,855.98	7,253.92	6,768.27	345.99	48.50	103.12	-1,174.57	2,028.16	1,462.90	1,076.49	386.41	3.786	
7,400.00	6,955.44	7,379.17	6,892.46	349.65	48.79	103.17	-1,182.56	2,042.21	1,470.41	1,080.20	390.21	3.768	
7,500.00	7,055.21	7,504.85	7,017.67	353.08	49.02	103.21	-1,187.87	2,051.56	1,475.39	1,081.68	393.71	3.747	
7,600.00	7,155.15	7,630.78	7,143.48	356.29	49.15	103.23	-1,190.47	2,056.12	1,477.82	1,080.91	396.91	3.723	
7,644.85	7,200.00	7,687.30	7,200.00	357.17	49.20	-173.96	-1,190.74	2,056.60	1,478.07	1,080.32	397.75	3.716	
7,700.00	7,255.15	7,742.45	7,255.15	357.64	49.24	-173.96	-1,190.74	2,056.60	1,478.07	1,079.84	398.24	3.712	
7,800.00	7,355.15	7,842.45	7,355.15	358.52	49.30	-173.96	-1,190.74	2,056.60	1,478.07	1,078.92	399.15	3.703	
7,900.00	7,455.15	7,942.45	7,455.15	359.44	49.37	-173.96	-1,190.74	2,056.60	1,478.07	1,077.96	400.12	3.694	
8,000.00	7,555.15	8,042.45	7,555.15	360.40	49.44	-173.96	-1,190.74	2,056.60	1,478.07	1,076.95	401.12	3.685	
8,100.00	7,655.15	8,142.45	7,655.15	361.41	49.51	-173.96	-1,190.74	2,056.60	1,478.07	1,075.90	402.17	3.675	
8,200.00	7,755.15	8,242.45	7,755.15	362.46	49.58	-173.96	-1,190.74	2,056.60	1,478.07	1,074.81	403.26	3.665	
8,300.00	7,855.15	8,342.45	7,855.15	363.55	49.65	-173.96	-1,190.74	2,056.60	1,478.07	1,073.68	404.40	3.655	
8,400.00	7,955.15	8,442.45	7,955.15	364.68	49.72	-173.96	-1,190.74	2,056.60	1,478.07	1,072.50	405.57	3.644	
8,500.00	8,055.15	8,542.45	8,055.15	365.85	49.79	-173.96	-1,190.74	2,056.60	1,478.07	1,071.28	406.79	3.633	
8,600.00	8,155.15	8,642.45	8,155.15	367.06	49.87	-173.96	-1,190.74	2,056.60	1,478.07	1,070.02	408.05	3.622	
8,700.00	8,255.15	8,742.45	8,255.15	368.31	49.94	-173.96	-1,190.74	2,056.60	1,478.07	1,068.72	409.35	3.611	
8,794.85	8,350.00	8,837.30	8,350.00	369.54	50.02	-173.96	-1,190.74	2,056.60	1,478.07	1,067.45	410.63	3.600	

Company:	US ROCKIES REGION PLANNING	Local Co-ordinate Reference:	Well P_KERR-MCGEE 10-3
Project:	COLORADO NORTHERN ZONE - 83	TVD Reference:	WELL @ 5057.00ft (Original Well Elev)
Reference Site:	WELD_KERR MCGEE 19-3 PAD	MD Reference:	WELL @ 5057.00ft (Original Well Elev)
Site Error:	0.00ft	North Reference:	True
Reference Well:	P_KERR-MCGEE 10-3	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00ft	Output errors are at	2.00 sigma
Reference Wellbore	P_KERR-MCGEE 10-3	Database:	EDM 2003.21 Single User Db
Reference Design:	PLAN #1 1-15-10 RHS	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.00 ft
Survey Program: 0-MWD												Offset Well Error:	0.00 ft
Reference		Offset		Semi Major Axis		Distance							
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning
0.00	0.00	0.00	0.00	0.00	0.00	140.57	-15.31	12.59	19.83				
100.00	100.00	100.00	100.00	1.70	0.10	140.57	-15.31	12.59	19.83	18.03	1.80	11.041	
200.00	200.00	200.00	200.00	5.70	0.32	140.57	-15.31	12.59	19.83	13.80	6.02	3.293	
300.00	300.00	300.00	300.00	9.70	0.55	140.57	-15.31	12.59	19.83	9.58	10.25	1.935	
400.00	400.00	400.00	400.00	13.70	0.77	140.57	-15.31	12.59	19.83	5.36	14.47	1.370 Level 3	
500.00	500.00	500.00	500.00	17.70	0.99	140.57	-15.31	12.59	19.83	1.13	18.69	1.060 Level 2	
600.00	600.00	600.00	600.00	21.70	1.22	140.57	-15.31	12.59	19.83	-3.09	22.92	0.865 Level 1	
700.00	700.00	700.00	700.00	25.70	1.44	140.57	-15.31	12.59	19.83	-7.32	27.14	0.730 Level 1	
800.00	800.00	800.00	800.00	29.70	1.67	140.57	-15.31	12.59	19.83	-11.54	31.37	0.632 Level 1	
900.00	900.00	900.00	900.00	33.70	1.89	140.57	-15.31	12.59	19.83	-15.77	35.59	0.557 Level 1	
1,000.00	1,000.00	1,000.00	1,000.00	37.70	2.12	140.57	-15.31	12.59	19.83	-19.99	39.82	0.498 Level 1	
1,050.00	1,050.00	1,050.00	1,050.00	39.70	2.23	140.57	-15.31	12.59	19.83	-22.11	41.93	0.473 Level 1, CC	
1,100.00	1,100.00	1,099.66	1,099.66	40.84	2.33	59.07	-15.70	12.79	20.02	-23.14	43.17	0.464 Level 1, ES, SF	
1,200.00	1,199.93	1,198.86	1,198.79	41.63	2.50	68.61	-18.76	14.33	21.93	-22.19	44.12	0.497 Level 1	
1,300.00	1,299.68	1,297.95	1,297.65	42.79	2.69	82.78	-24.78	17.36	27.03	-18.44	45.46	0.594 Level 1	
1,400.00	1,399.13	1,397.37	1,396.77	44.31	2.89	97.27	-31.63	20.82	34.38	-12.80	47.19	0.729 Level 1	
1,500.00	1,498.15	1,496.45	1,495.56	46.18	3.10	110.52	-38.45	24.26	44.27	-4.95	49.22	0.899 Level 1	
1,600.00	1,596.63	1,595.09	1,593.90	48.40	3.32	121.60	-45.25	27.68	57.41	5.93	51.49	1.115 Level 2	
1,700.00	1,694.44	1,693.14	1,691.66	50.96	3.54	130.39	-52.00	31.09	74.13	20.20	53.93	1.375 Level 3	
1,800.00	1,791.46	1,790.50	1,788.73	53.84	3.77	137.24	-58.71	34.47	94.49	37.97	56.52	1.672	
1,900.00	1,887.58	1,887.05	1,884.99	57.06	4.00	142.56	-65.36	37.82	118.46	59.23	59.22	2.000	
2,000.00	1,982.68	1,982.66	1,980.32	60.60	4.23	146.75	-71.95	41.15	145.96	83.94	62.02	2.353	
2,100.00	2,076.65	2,077.23	2,074.61	64.46	4.46	150.08	-78.46	44.43	176.93	112.04	64.89	2.727	
2,200.00	2,169.36	2,170.64	2,167.74	68.65	4.69	152.77	-84.89	47.67	211.29	143.48	67.81	3.116	
2,271.12	2,234.48	2,236.30	2,233.20	71.82	4.85	154.37	-89.42	49.95	237.76	167.85	69.92	3.401	
2,300.00	2,260.77	2,262.82	2,259.65	73.14	4.92	155.05	-91.24	50.88	248.86	177.96	70.91	3.510	
2,400.00	2,351.82	2,354.67	2,351.22	77.86	5.15	157.00	-97.57	54.07	287.50	213.08	74.42	3.863	
2,500.00	2,442.88	2,446.52	2,442.80	82.72	5.39	158.48	-103.90	57.26	326.36	248.33	78.03	4.182	
2,600.00	2,533.93	2,538.37	2,534.37	87.71	5.62	159.66	-110.23	60.45	365.36	283.64	81.72	4.471	
2,700.00	2,624.98	2,630.22	2,625.95	92.80	5.86	160.60	-116.55	63.64	404.47	318.99	85.48	4.732	
2,800.00	2,716.03	2,722.07	2,717.52	97.98	6.09	161.38	-122.88	66.83	443.65	354.37	89.29	4.969	
2,900.00	2,807.09	2,813.92	2,809.10	103.24	6.33	162.04	-129.21	70.02	482.90	389.75	93.15	5.184	
3,000.00	2,898.14	2,905.77	2,900.67	108.57	6.57	162.59	-135.54	73.21	522.19	425.14	97.05	5.381	
3,100.00	2,989.19	2,997.61	2,992.25	113.95	6.81	163.07	-141.86	76.40	561.51	460.53	100.98	5.561	
3,200.00	3,080.24	3,089.46	3,083.82	119.38	7.05	163.49	-148.19	79.59	600.86	495.92	104.95	5.725	
3,300.00	3,171.29	3,181.31	3,175.40	124.85	7.29	163.85	-154.52	82.78	640.24	531.30	108.94	5.877	
3,400.00	3,262.35	3,273.16	3,266.97	130.36	7.53	164.17	-160.84	85.97	679.64	566.68	112.96	6.017	
3,500.00	3,353.40	3,365.01	3,358.55	135.90	7.77	164.46	-167.17	89.16	719.05	602.05	117.00	6.146	
3,600.00	3,444.45	3,456.86	3,450.13	141.47	8.02	164.72	-173.50	92.35	758.48	637.42	121.06	6.265	
3,700.00	3,535.50	3,548.71	3,541.70	147.07	8.26	164.95	-179.83	95.54	797.92	672.78	125.13	6.377	
3,800.00	3,626.56	3,640.56	3,633.28	152.68	8.50	165.16	-186.15	98.73	837.37	708.14	129.22	6.480	
3,900.00	3,717.61	3,732.41	3,724.85	158.32	8.75	165.35	-192.48	101.92	876.82	743.49	133.33	6.576	
4,000.00	3,808.66	3,824.25	3,816.43	163.98	8.99	165.53	-198.81	105.11	916.29	778.84	137.45	6.666	
4,100.00	3,899.71	3,916.10	3,908.00	169.65	9.23	165.69	-205.14	108.30	955.76	814.18	141.58	6.751	
4,200.00	3,990.76	4,007.95	3,999.58	175.33	9.48	165.84	-211.46	111.49	995.23	849.52	145.72	6.830	
4,300.00	4,081.82	4,099.80	4,091.15	181.03	9.72	165.97	-217.79	114.68	1,034.72	884.85	149.87	6.904	
4,400.00	4,172.87	4,191.65	4,182.73	186.75	9.97	166.10	-224.12	117.87	1,074.20	920.18	154.03	6.974	
4,500.00	4,263.92	4,283.50	4,274.30	192.47	10.21	166.22	-230.45	121.06	1,113.69	955.50	158.19	7.040	
4,600.00	4,354.97	4,375.35	4,365.88	198.20	10.46	166.33	-236.77	124.25	1,153.19	990.82	162.37	7.102	
4,700.00	4,446.03	4,467.20	4,457.45	203.94	10.70	166.43	-243.10	127.44	1,192.69	1,026.14	166.55	7.161	
4,800.00	4,537.08	4,559.05	4,549.03	209.69	10.95	166.52	-249.43	130.63	1,232.19	1,061.45	170.74	7.217	
4,900.00	4,628.13	4,650.90	4,640.60	215.45	11.20	166.61	-255.75	133.82	1,271.69	1,096.76	174.93	7.270	

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

Company:	US ROCKIES REGION PLANNING	Local Co-ordinate Reference:	Well P_KERR-MCGEE 10-3
Project:	COLORADO NORTHERN ZONE - 83	TVD Reference:	WELL @ 5057.00ft (Original Well Elev)
Reference Site:	WELD_KERR MCGEE 19-3 PAD	MD Reference:	WELL @ 5057.00ft (Original Well Elev)
Site Error:	0.00ft	North Reference:	True
Reference Well:	P_KERR-MCGEE 10-3	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00ft	Output errors are at	2.00 sigma
Reference Wellbore	P_KERR-MCGEE 10-3	Database:	EDM 2003.21 Single User Db
Reference Design:	PLAN #1 1-15-10 RHS	Offset TVD Reference:	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 Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	
5,000.00	4,719.18	4,742.74	4,732.18	221.22	11.44	166.70	-262.08	137.01	1,311.20	1,132.07	179.13	7.320	
5,100.00	4,810.23	4,834.59	4,823.75	226.99	11.69	166.78	-268.41	140.20	1,350.71	1,167.37	183.33	7.368	
5,200.00	4,901.29	4,926.44	4,915.33	232.77	11.93	166.85	-274.74	143.39	1,390.22	1,202.67	187.54	7.413	
5,300.00	4,992.34	5,018.29	5,006.90	238.55	12.18	166.92	-281.06	146.58	1,429.73	1,237.97	191.75	7.456	
5,400.00	5,083.39	5,110.14	5,098.48	244.34	12.43	166.99	-287.39	149.77	1,469.24	1,273.27	195.97	7.497	
5,500.00	5,174.44	5,201.99	5,190.05	250.14	12.67	167.05	-293.72	152.96	1,508.76	1,308.56	200.19	7.537	
5,600.00	5,265.50	5,293.84	5,281.63	255.93	12.92	167.11	-300.05	156.15	1,548.27	1,343.86	204.42	7.574	
5,700.00	5,356.55	5,385.69	5,373.20	261.74	13.17	167.17	-306.37	159.34	1,587.79	1,379.15	208.65	7.610	
5,800.00	5,447.60	5,477.54	5,464.78	267.54	13.41	167.22	-312.70	162.53	1,627.31	1,414.43	212.88	7.644	
5,900.00	5,538.65	5,569.39	5,556.36	273.36	13.66	167.28	-319.03	165.72	1,666.83	1,449.72	217.11	7.677	
6,000.00	5,629.70	5,661.23	5,647.93	279.17	13.91	167.32	-325.35	168.91	1,706.36	1,485.00	221.35	7.709	
6,100.00	5,720.76	5,753.08	5,739.51	284.99	14.16	167.37	-331.68	172.10	1,745.88	1,520.29	225.59	7.739	
6,200.00	5,811.81	5,844.93	5,831.08	290.81	14.40	167.42	-338.01	175.29	1,785.40	1,555.57	229.83	7.768	
6,300.00	5,902.86	5,936.78	5,922.66	296.63	14.65	167.46	-344.34	178.48	1,824.93	1,590.85	234.08	7.796	
6,400.00	5,993.91	6,028.63	6,014.23	302.46	14.90	167.50	-350.66	181.67	1,864.45	1,626.13	238.33	7.823	
6,423.73	6,015.52	6,050.43	6,035.97	303.84	14.96	167.51	-352.17	182.43	1,873.83	1,634.50	239.34	7.829	
6,500.00	6,085.38	6,120.87	6,106.19	308.22	15.15	167.67	-357.02	184.87	1,903.07	1,660.24	242.83	7.837	
6,600.00	6,178.16	6,214.33	6,199.38	313.76	15.40	167.84	-363.46	188.12	1,938.60	1,691.41	247.19	7.843	
6,700.00	6,272.18	6,308.96	6,293.72	319.07	15.65	167.97	-369.97	191.40	1,970.92	1,719.62	251.31	7.843	
6,800.00	6,367.34	6,400.00	6,384.59	324.15	15.86	168.10	-375.02	193.95	2,000.20	1,745.12	255.08	7.841	
6,900.00	6,463.51	6,483.88	6,468.42	328.99	16.01	168.27	-377.39	195.14	2,026.61	1,768.14	258.47	7.841	
7,000.00	6,560.58	6,576.04	6,560.58	333.59	16.17	168.49	-377.76	195.33	2,050.09	1,788.55	261.54	7.838	
7,100.00	6,658.43	6,673.89	6,658.43	337.96	16.33	168.68	-377.76	195.33	2,070.32	1,805.99	264.33	7.832	
7,200.00	6,756.93	6,772.39	6,756.93	342.09	16.49	168.84	-377.76	195.33	2,087.18	1,820.36	266.82	7.822	
7,300.00	6,855.98	6,871.44	6,855.98	345.99	16.65	168.97	-377.76	195.33	2,100.67	1,831.64	269.03	7.808	
7,400.00	6,955.44	6,970.90	6,955.44	349.65	16.81	169.06	-377.76	195.33	2,110.76	1,839.80	270.96	7.790	
7,500.00	7,055.21	7,070.67	7,055.21	353.08	16.98	169.12	-377.76	195.33	2,117.43	1,844.85	272.59	7.768	
7,600.00	7,155.15	7,170.61	7,155.15	356.29	17.15	169.15	-377.76	195.33	2,120.68	1,846.76	273.92	7.742	
7,644.85	7,200.00	7,215.46	7,200.00	357.17	17.22	-108.04	-377.76	195.33	2,121.03	1,847.24	273.79	7.747	
7,700.00	7,255.15	7,270.61	7,255.15	357.64	17.32	-108.04	-377.76	195.33	2,121.03	1,846.55	274.48	7.727	
7,800.00	7,355.15	7,370.61	7,355.15	358.52	17.49	-108.04	-377.76	195.33	2,121.03	1,845.24	275.79	7.691	
7,900.00	7,455.15	7,470.61	7,455.15	359.44	17.66	-108.04	-377.76	195.33	2,121.03	1,843.88	277.15	7.653	
8,000.00	7,555.15	7,570.61	7,555.15	360.40	17.83	-108.04	-377.76	195.33	2,121.03	1,842.46	278.57	7.614	
8,100.00	7,655.15	7,670.61	7,655.15	361.41	18.00	-108.04	-377.76	195.33	2,121.03	1,840.98	280.05	7.574	
8,200.00	7,755.15	7,770.61	7,755.15	362.46	18.18	-108.04	-377.76	195.33	2,121.03	1,839.45	281.58	7.533	
8,300.00	7,855.15	7,870.61	7,855.15	363.55	18.36	-108.04	-377.76	195.33	2,121.03	1,837.86	283.17	7.490	
8,400.00	7,955.15	7,970.61	7,955.15	364.68	18.53	-108.04	-377.76	195.33	2,121.03	1,836.22	284.81	7.447	
8,500.00	8,055.15	8,070.61	8,055.15	365.85	18.71	-108.04	-377.76	195.33	2,121.03	1,834.53	286.50	7.403	
8,600.00	8,155.15	8,170.61	8,155.15	367.06	18.89	-108.04	-377.76	195.33	2,121.03	1,832.78	288.25	7.358	
8,700.00	8,255.15	8,270.61	8,255.15	368.31	19.07	-108.04	-377.76	195.33	2,121.03	1,830.98	290.04	7.313	
8,794.85	8,350.00	8,365.46	8,350.00	369.54	19.24	-108.04	-377.76	195.33	2,121.03	1,829.23	291.79	7.269	

Company:	US ROCKIES REGION PLANNING	Local Co-ordinate Reference:	Well P_KERR-MCGEE 10-3
Project:	COLORADO NORTHERN ZONE - 83	TVD Reference:	WELL @ 5057.00ft (Original Well Elev)
Reference Site:	WELD_KERR MCGEE 19-3 PAD	MD Reference:	WELL @ 5057.00ft (Original Well Elev)
Site Error:	0.00ft	North Reference:	True
Reference Well:	P_KERR-MCGEE 10-3	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00ft	Output errors are at	2.00 sigma
Reference Wellbore	P_KERR-MCGEE 10-3	Database:	EDM 2003.21 Single User Db
Reference Design:	PLAN #1 1-15-10 RHS	Offset TVD Reference:	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
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	-38.81	31.31	-25.19	40.18				
100.00	100.00	100.00	100.00	1.70	0.10	-38.81	31.31	-25.19	40.18	38.39	1.80	22.380	
200.00	200.00	200.00	200.00	5.70	0.32	-38.81	31.31	-25.19	40.18	34.16	6.02	6.675	
300.00	300.00	300.00	300.00	9.70	0.55	-38.81	31.31	-25.19	40.18	29.94	10.25	3.922	
400.00	400.00	400.00	400.00	13.70	0.77	-38.81	31.31	-25.19	40.18	25.71	14.47	2.777	
500.00	500.00	500.00	500.00	17.70	0.99	-38.81	31.31	-25.19	40.18	21.49	18.69	2.149	
600.00	600.00	600.00	600.00	21.70	1.22	-38.81	31.31	-25.19	40.18	17.26	22.92	1.753	
700.00	700.00	700.00	700.00	25.70	1.44	-38.81	31.31	-25.19	40.18	13.04	27.14	1.480 Level 3	
800.00	800.00	800.00	800.00	29.70	1.67	-38.81	31.31	-25.19	40.18	8.81	31.37	1.281 Level 3	
900.00	900.00	900.00	900.00	33.70	1.89	-38.81	31.31	-25.19	40.18	4.59	35.59	1.129 Level 2	
1,000.00	1,000.00	1,000.00	1,000.00	37.70	2.12	-38.81	31.31	-25.19	40.18	0.36	39.82	1.009 Level 2	
1,050.00	1,050.00	1,050.00	1,050.00	39.70	2.23	-38.81	31.31	-25.19	40.18	-1.75	41.93	0.958 Level 1, CC	
1,100.00	1,100.00	1,099.63	1,099.63	40.84	2.34	-121.62	31.72	-25.04	40.64	-2.54	43.18	0.941 Level 1, ES, SF	
1,200.00	1,199.93	1,198.78	1,198.72	41.63	2.56	-121.60	34.96	-23.91	44.30	0.13	44.17	1.003 Level 2	
1,300.00	1,299.68	1,297.64	1,297.34	42.79	2.79	-121.55	41.41	-21.65	51.61	6.10	45.51	1.134 Level 2	
1,400.00	1,399.13	1,396.02	1,395.17	44.31	3.02	-121.48	51.01	-18.29	62.54	15.35	47.19	1.325 Level 3	
1,500.00	1,498.15	1,493.71	1,491.94	46.18	3.26	-121.37	63.68	-13.86	77.06	27.87	49.19	1.566	
1,600.00	1,596.63	1,590.73	1,587.53	48.40	3.53	-121.23	79.32	-8.39	95.11	43.60	51.50	1.847	
1,700.00	1,694.44	1,688.58	1,683.71	50.96	3.83	-121.94	96.30	-2.45	115.64	61.53	54.10	2.137	
1,800.00	1,791.46	1,785.93	1,779.40	53.84	4.15	-123.54	113.19	3.46	138.06	81.14	56.92	2.425	
1,900.00	1,887.58	1,882.67	1,874.50	57.06	4.47	-125.59	129.98	9.33	162.57	102.63	59.94	2.712	
2,000.00	1,982.68	1,978.69	1,968.87	60.60	4.80	-127.83	146.64	15.16	189.36	126.26	63.10	3.001	
2,100.00	2,076.65	2,073.85	2,062.42	64.46	5.14	-130.09	163.15	20.94	218.60	152.22	66.39	3.293	
2,200.00	2,169.36	2,168.06	2,155.02	68.65	5.48	-132.30	179.50	26.66	250.44	180.68	69.76	3.590	
2,271.12	2,234.48	2,234.41	2,220.23	71.82	5.72	-133.79	191.01	30.69	274.72	202.52	72.20	3.805	
2,300.00	2,260.77	2,261.23	2,246.60	73.14	5.82	-134.52	195.67	32.32	284.88	211.58	73.30	3.886	
2,400.00	2,351.82	2,354.12	2,337.91	77.86	6.16	-136.67	211.79	37.96	320.34	243.11	77.23	4.148	
2,500.00	2,442.88	2,447.01	2,429.21	82.72	6.51	-138.40	227.91	43.60	356.12	274.86	81.26	4.382	
2,600.00	2,533.93	2,539.90	2,520.52	87.71	6.86	-139.82	244.03	49.24	392.13	306.74	85.39	4.592	
2,700.00	2,624.98	2,632.79	2,611.82	92.80	7.21	-141.00	260.15	54.87	428.32	338.73	89.59	4.781	
2,800.00	2,716.03	2,725.68	2,703.13	97.98	7.57	-141.99	276.26	60.51	464.64	370.79	93.85	4.951	
2,900.00	2,807.09	2,818.57	2,794.44	103.24	7.93	-142.84	292.38	66.15	501.06	402.90	98.16	5.104	
3,000.00	2,898.14	2,911.45	2,885.74	108.57	8.29	-143.58	308.50	71.79	537.57	435.05	102.53	5.243	
3,100.00	2,989.19	3,004.34	2,977.05	113.95	8.65	-144.22	324.62	77.43	574.15	467.22	106.93	5.370	
3,200.00	3,080.24	3,097.23	3,068.35	119.38	9.01	-144.79	340.74	83.07	610.78	499.42	111.36	5.485	
3,300.00	3,171.29	3,190.12	3,159.66	124.85	9.37	-145.29	356.86	88.71	647.46	531.63	115.83	5.590	
3,400.00	3,262.35	3,283.01	3,250.96	130.36	9.74	-145.74	372.98	94.35	684.17	563.85	120.32	5.686	
3,500.00	3,353.40	3,375.90	3,342.27	135.90	10.10	-146.14	389.10	99.99	720.92	596.09	124.83	5.775	
3,600.00	3,444.45	3,468.79	3,433.58	141.47	10.47	-146.51	405.22	105.63	757.70	628.33	129.37	5.857	
3,700.00	3,535.50	3,561.68	3,524.88	147.07	10.83	-146.84	421.33	111.27	794.50	660.58	133.92	5.933	
3,800.00	3,626.56	3,654.57	3,616.19	152.68	11.20	-147.14	437.45	116.91	831.32	692.83	138.49	6.003	
3,900.00	3,717.61	3,747.45	3,707.49	158.32	11.57	-147.41	453.57	122.55	868.16	725.09	143.08	6.068	
4,000.00	3,808.66	3,840.34	3,798.80	163.98	11.93	-147.67	469.69	128.19	905.02	757.34	147.67	6.128	
4,100.00	3,899.71	3,933.23	3,890.10	169.65	12.30	-147.90	485.81	133.83	941.89	789.60	152.28	6.185	
4,200.00	3,990.76	4,026.12	3,981.41	175.33	12.67	-148.12	501.93	139.46	978.77	821.86	156.91	6.238	
4,300.00	4,081.82	4,119.01	4,072.72	181.03	13.04	-148.32	518.05	145.10	1,015.66	854.13	161.54	6.288	
4,400.00	4,172.87	4,211.90	4,164.02	186.75	13.41	-148.50	534.17	150.74	1,052.57	886.39	166.18	6.334	
4,500.00	4,263.92	4,304.79	4,255.33	192.47	13.78	-148.68	550.29	156.38	1,089.48	918.65	170.83	6.378	
4,600.00	4,354.97	4,397.68	4,346.63	198.20	14.15	-148.84	566.41	162.02	1,126.40	950.92	175.48	6.419	
4,700.00	4,446.03	4,490.57	4,437.94	203.94	14.52	-148.99	582.52	167.66	1,163.33	983.18	180.15	6.458	
4,800.00	4,537.08	4,583.45	4,529.24	209.69	14.89	-149.13	598.64	173.30	1,200.26	1,015.45	184.82	6.494	
4,900.00	4,628.13	4,676.34	4,620.55	215.45	15.27	-149.27	614.76	178.94	1,237.20	1,047.71	189.49	6.529	

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

Company:	US ROCKIES REGION PLANNING	Local Co-ordinate Reference:	Well P_KERR-MCGEE 10-3
Project:	COLORADO NORTHERN ZONE - 83	TVD Reference:	WELL @ 5057.00ft (Original Well Elev)
Reference Site:	WELD_KERR MCGEE 19-3 PAD	MD Reference:	WELL @ 5057.00ft (Original Well Elev)
Site Error:	0.00ft	North Reference:	True
Reference Well:	P_KERR-MCGEE 10-3	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00ft	Output errors are at	2.00 sigma
Reference Wellbore	P_KERR-MCGEE 10-3	Database:	EDM 2003.21 Single User Db
Reference Design:	PLAN #1 1-15-10 RHS	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.00 ft
Survey Program: 0-MWD												Offset Well Error:	0.00 ft
Reference		Offset		Semi Major Axis			Distance						
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning
5,000.00	4,719.18	4,769.23	4,711.86	221.22	15.64	-149.39	630.88	184.58	1,274.15	1,079.98	194.17	6.562	
5,100.00	4,810.23	4,862.12	4,803.16	226.99	16.01	-149.51	647.00	190.22	1,311.10	1,112.24	198.86	6.593	
5,200.00	4,901.29	4,955.01	4,894.47	232.77	16.38	-149.63	663.12	195.86	1,348.06	1,144.51	203.55	6.623	
5,300.00	4,992.34	5,047.90	4,985.77	238.55	16.75	-149.73	679.24	201.50	1,385.02	1,176.77	208.25	6.651	
5,400.00	5,083.39	5,140.79	5,077.08	244.34	17.13	-149.83	695.36	207.14	1,421.98	1,209.03	212.95	6.678	
5,500.00	5,174.44	5,233.68	5,168.38	250.14	17.50	-149.93	711.48	212.78	1,458.95	1,241.30	217.65	6.703	
5,600.00	5,265.50	5,326.57	5,259.69	255.93	17.87	-150.02	727.60	218.42	1,495.92	1,273.56	222.36	6.727	
5,700.00	5,356.55	5,419.45	5,351.00	261.74	18.24	-150.11	743.71	224.06	1,532.90	1,305.82	227.07	6.751	
5,800.00	5,447.60	5,512.34	5,442.30	267.54	18.62	-150.19	759.83	229.69	1,569.87	1,338.09	231.79	6.773	
5,900.00	5,538.65	5,605.23	5,533.61	273.36	18.99	-150.27	775.95	235.33	1,606.85	1,370.35	236.50	6.794	
6,000.00	5,629.70	5,698.12	5,624.91	279.17	19.36	-150.34	792.07	240.97	1,643.84	1,402.61	241.22	6.815	
6,100.00	5,720.76	5,791.01	5,716.22	284.99	19.74	-150.42	808.19	246.61	1,680.82	1,434.87	245.95	6.834	
6,200.00	5,811.81	5,883.90	5,807.52	290.81	20.11	-150.49	824.31	252.25	1,717.81	1,467.13	250.67	6.853	
6,300.00	5,902.86	5,976.79	5,898.83	296.63	20.48	-150.55	840.43	257.89	1,754.80	1,499.39	255.40	6.871	
6,400.00	5,993.91	6,069.69	5,990.15	302.46	20.86	-150.62	856.55	263.53	1,791.79	1,531.66	260.13	6.888	
6,423.73	6,015.52	6,091.89	6,011.99	303.84	20.94	-150.63	860.31	264.85	1,800.57	1,539.33	261.24	6.892	
6,500.00	6,085.38	6,163.52	6,082.65	308.22	21.15	-151.00	871.35	268.71	1,827.94	1,563.07	264.87	6.901	
6,600.00	6,178.16	6,258.23	6,176.49	313.76	21.40	-151.48	883.37	272.92	1,861.28	1,591.94	269.35	6.910	
6,700.00	6,272.18	6,353.69	6,271.46	319.07	21.62	-151.97	892.53	276.12	1,891.71	1,618.22	273.50	6.917	
6,800.00	6,367.34	6,449.73	6,367.27	324.15	21.81	-152.46	898.72	278.29	1,919.20	1,641.90	277.30	6.921	
6,900.00	6,463.51	6,546.17	6,463.64	328.99	21.96	-152.96	901.88	279.39	1,943.73	1,662.97	280.76	6.923	
7,000.00	6,560.58	6,643.10	6,560.58	333.59	22.09	-153.46	902.32	279.54	1,965.29	1,681.41	283.88	6.923	
7,100.00	6,658.43	6,740.95	6,658.43	337.96	22.23	-153.89	902.32	279.54	1,983.85	1,697.06	286.79	6.918	
7,200.00	6,756.93	6,839.46	6,756.93	342.09	22.37	-154.25	902.32	279.54	1,999.35	1,709.86	289.49	6.906	
7,300.00	6,855.98	6,938.50	6,855.98	345.99	22.51	-154.52	902.32	279.54	2,011.76	1,719.78	291.98	6.890	
7,400.00	6,955.44	7,037.97	6,955.44	349.65	22.65	-154.73	902.32	279.54	2,021.05	1,726.79	294.27	6.868	
7,500.00	7,055.21	7,137.73	7,055.21	353.08	22.80	-154.86	902.32	279.54	2,027.21	1,730.86	296.34	6.841	
7,600.00	7,155.15	7,237.67	7,155.15	356.29	22.95	-154.93	902.32	279.54	2,030.20	1,731.90	298.30	6.806	
7,644.85	7,200.00	7,282.52	7,200.00	357.17	23.01	-72.13	902.32	279.54	2,030.52	1,731.91	298.61	6.800	
7,700.00	7,255.15	7,337.67	7,255.15	357.64	23.09	-72.13	902.32	279.54	2,030.52	1,731.19	299.33	6.783	
7,800.00	7,355.15	7,437.67	7,355.15	358.52	23.24	-72.13	902.32	279.54	2,030.52	1,729.83	300.69	6.753	
7,900.00	7,455.15	7,537.67	7,455.15	359.44	23.39	-72.13	902.32	279.54	2,030.52	1,728.42	302.10	6.721	
8,000.00	7,555.15	7,637.67	7,555.15	360.40	23.55	-72.13	902.32	279.54	2,030.52	1,726.96	303.56	6.689	
8,100.00	7,655.15	7,737.67	7,655.15	361.41	23.70	-72.13	902.32	279.54	2,030.52	1,725.44	305.08	6.656	
8,200.00	7,755.15	7,837.67	7,755.15	362.46	23.85	-72.13	902.32	279.54	2,030.52	1,723.87	306.65	6.622	
8,300.00	7,855.15	7,937.67	7,855.15	363.55	24.01	-72.13	902.32	279.54	2,030.52	1,722.26	308.26	6.587	
8,400.00	7,955.15	8,037.67	7,955.15	364.68	24.17	-72.13	902.32	279.54	2,030.52	1,720.59	309.93	6.552	
8,500.00	8,055.15	8,057.52	7,975.00	365.85	24.20	-72.13	902.32	279.54	2,032.10	1,720.58	311.52	6.523	
8,600.00	8,155.15	8,057.52	7,975.00	367.06	24.20	-72.13	902.32	279.54	2,038.50	1,725.37	313.12	6.510	
8,700.00	8,255.15	8,057.52	7,975.00	368.31	24.20	-72.13	902.32	279.54	2,049.76	1,734.98	314.78	6.512	
8,794.85	8,350.00	8,057.52	7,975.00	369.54	24.20	-72.13	902.32	279.54	2,064.86	1,748.47	316.38	6.526	

Company:	US ROCKIES REGION PLANNING	Local Co-ordinate Reference:	Well P_KERR-MCGEE 10-3
Project:	COLORADO NORTHERN ZONE - 83	TVD Reference:	WELL @ 5057.00ft (Original Well Elev)
Reference Site:	WELD_KERR MCGEE 19-3 PAD	MD Reference:	WELL @ 5057.00ft (Original Well Elev)
Site Error:	0.00ft	North Reference:	True
Reference Well:	P_KERR-MCGEE 10-3	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00ft	Output errors are at	2.00 sigma
Reference Wellbore	P_KERR-MCGEE 10-3	Database:	EDM 2003.21 Single User Db
Reference Design:	PLAN #1 1-15-10 RHS	Offset TVD Reference:	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						
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning
0.00	0.00	0.00	0.00	0.00	0.00	141.21	-23.33	18.75	29.93				
100.00	100.00	100.00	100.00	1.70	0.10	141.21	-23.33	18.75	29.93	28.13	1.80	16.668	
200.00	200.00	200.00	200.00	5.70	0.32	141.21	-23.33	18.75	29.93	23.91	6.02	4.971	
300.00	300.00	300.00	300.00	9.70	0.55	141.21	-23.33	18.75	29.93	19.68	10.25	2.921	
400.00	400.00	400.00	400.00	13.70	0.77	141.21	-23.33	18.75	29.93	15.46	14.47	2.068	
500.00	500.00	500.00	500.00	17.70	0.99	141.21	-23.33	18.75	29.93	11.23	18.69	1.601	
600.00	600.00	600.00	600.00	21.70	1.22	141.21	-23.33	18.75	29.93	7.01	22.92	1.306	Level 3
700.00	700.00	700.00	700.00	25.70	1.44	141.21	-23.33	18.75	29.93	2.78	27.14	1.103	Level 2
800.00	800.00	800.00	800.00	29.70	1.67	141.21	-23.33	18.75	29.93	-1.44	31.37	0.954	Level 1
900.00	900.00	900.00	900.00	33.70	1.89	141.21	-23.33	18.75	29.93	-5.67	35.59	0.841	Level 1
1,000.00	1,000.00	1,000.00	1,000.00	37.70	2.12	141.21	-23.33	18.75	29.93	-9.89	39.82	0.752	Level 1
1,050.00	1,050.00	1,050.00	1,050.00	39.70	2.23	141.21	-23.33	18.75	29.93	-12.00	41.93	0.714	Level 1, CC
1,100.00	1,100.00	1,099.60	1,099.60	40.84	2.33	58.58	-23.41	19.17	30.03	-13.14	43.17	0.696	Level 1, SF
1,200.00	1,199.93	1,198.79	1,198.72	41.63	2.53	59.98	-24.11	22.53	30.89	-13.25	44.14	0.700	Level 1, ES
1,300.00	1,299.68	1,297.95	1,297.65	42.79	2.74	62.54	-25.49	29.25	32.64	-12.83	45.47	0.718	Level 1
1,400.00	1,399.13	1,397.07	1,396.22	44.31	2.96	65.89	-27.57	39.31	35.38	-11.78	47.16	0.750	Level 1
1,500.00	1,498.15	1,496.13	1,494.33	46.18	3.21	69.59	-30.33	52.70	39.19	-10.04	49.23	0.796	Level 1
1,600.00	1,596.63	1,595.10	1,591.82	48.40	3.49	73.28	-33.78	69.39	44.13	-7.55	51.68	0.854	Level 1
1,700.00	1,694.44	1,693.98	1,688.57	50.96	3.82	76.72	-37.90	89.34	50.24	-4.29	54.52	0.921	Level 1
1,800.00	1,791.46	1,792.74	1,784.45	53.84	4.20	79.76	-42.68	112.52	57.52	-0.24	57.76	0.996	Level 1
1,900.00	1,887.58	1,891.38	1,879.33	57.06	4.63	82.38	-48.12	138.89	65.98	4.58	61.40	1.075	Level 2
2,000.00	1,982.68	1,989.87	1,973.10	60.60	5.14	84.59	-54.21	168.39	75.59	10.15	65.44	1.155	Level 2
2,100.00	2,076.65	2,088.60	2,066.09	64.46	5.70	86.59	-60.92	200.89	86.25	16.37	69.88	1.234	Level 2
2,200.00	2,169.36	2,187.85	2,159.34	68.65	6.31	89.81	-67.79	234.16	97.17	22.40	74.76	1.300	Level 3
2,271.12	2,234.48	2,258.30	2,225.53	71.82	6.75	92.81	-72.66	257.77	105.19	26.73	78.46	1.341	Level 3
2,300.00	2,260.77	2,286.87	2,252.38	73.14	6.94	94.15	-74.64	267.35	108.55	28.56	79.99	1.357	Level 3
2,400.00	2,351.82	2,385.82	2,345.35	77.86	7.58	98.19	-81.48	300.52	120.60	35.26	85.34	1.413	Level 3
2,500.00	2,442.88	2,484.76	2,438.32	82.72	8.23	101.49	-88.33	333.68	133.14	42.40	90.74	1.467	Level 3
2,600.00	2,533.93	2,583.71	2,531.29	87.71	8.89	104.22	-95.17	366.85	146.04	49.87	96.17	1.519	
2,700.00	2,624.98	2,682.65	2,624.26	92.80	9.56	106.50	-102.02	400.02	159.21	57.56	101.64	1.566	
2,800.00	2,716.03	2,781.60	2,717.23	97.98	10.24	108.44	-108.86	433.18	172.59	65.44	107.15	1.611	
2,900.00	2,807.09	2,880.54	2,810.20	103.24	10.92	110.09	-115.71	466.35	186.14	73.46	112.68	1.652	
3,000.00	2,898.14	2,979.49	2,903.16	108.57	11.60	111.52	-122.55	499.52	199.82	81.58	118.24	1.690	
3,100.00	2,989.19	3,078.43	2,996.13	113.95	12.29	112.77	-129.40	532.68	213.60	89.79	123.82	1.725	
3,200.00	3,080.24	3,177.38	3,089.10	119.38	12.98	113.86	-136.25	565.85	227.48	98.06	129.42	1.758	
3,300.00	3,171.29	3,276.32	3,182.07	124.85	13.67	114.83	-143.09	599.02	241.42	106.38	135.04	1.788	
3,400.00	3,262.35	3,375.27	3,275.04	130.36	14.37	115.69	-149.94	632.18	255.43	114.75	140.68	1.816	
3,500.00	3,353.40	3,474.21	3,368.01	135.90	15.07	116.46	-156.78	665.35	269.49	123.16	146.33	1.842	
3,600.00	3,444.45	3,573.16	3,460.98	141.47	15.76	117.16	-163.63	698.52	283.59	131.59	152.00	1.866	
3,700.00	3,535.50	3,672.10	3,553.95	147.07	16.46	117.79	-170.47	731.68	297.72	140.05	157.67	1.888	
3,800.00	3,626.56	3,771.05	3,646.92	152.68	17.16	118.36	-177.32	764.85	311.89	148.53	163.36	1.909	
3,900.00	3,717.61	3,869.99	3,739.89	158.32	17.87	118.89	-184.16	798.02	326.09	157.03	169.07	1.929	
4,000.00	3,808.66	3,968.94	3,832.85	163.98	18.57	119.37	-191.01	831.18	340.31	165.54	174.78	1.947	
4,100.00	3,899.71	4,067.88	3,925.82	169.65	19.27	119.81	-197.85	864.35	354.56	174.06	180.49	1.964	
4,200.00	3,990.76	4,166.83	4,018.79	175.33	19.98	120.21	-204.70	897.52	368.82	182.60	186.22	1.981	
4,300.00	4,081.82	4,265.77	4,111.76	181.03	20.68	120.59	-211.55	930.68	383.10	191.14	191.96	1.996	
4,400.00	4,172.87	4,364.72	4,204.73	186.75	21.39	120.94	-218.39	963.85	397.39	199.70	197.70	2.010	
4,500.00	4,263.92	4,463.66	4,297.70	192.47	22.09	121.27	-225.24	997.01	411.70	208.26	203.44	2.024	
4,600.00	4,354.97	4,562.61	4,390.67	198.20	22.80	121.57	-232.08	1,030.18	426.02	216.82	209.20	2.036	
4,700.00	4,446.03	4,661.55	4,483.64	203.94	23.50	121.85	-238.93	1,063.35	440.35	225.40	214.95	2.049	
4,800.00	4,537.08	4,760.50	4,576.61	209.69	24.21	122.12	-245.77	1,096.51	454.69	233.97	220.72	2.060	
4,900.00	4,628.13	4,859.44	4,669.58	215.45	24.92	122.37	-252.62	1,129.68	469.04	242.56	226.48	2.071	

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

Company:	US ROCKIES REGION PLANNING	Local Co-ordinate Reference:	Well P_KERR-MCGEE 10-3
Project:	COLORADO NORTHERN ZONE - 83	TVD Reference:	WELL @ 5057.00ft (Original Well Elev)
Reference Site:	WELD_KERR MCGEE 19-3 PAD	MD Reference:	WELL @ 5057.00ft (Original Well Elev)
Site Error:	0.00ft	North Reference:	True
Reference Well:	P_KERR-MCGEE 10-3	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00ft	Output errors are at	2.00 sigma
Reference Wellbore	P_KERR-MCGEE 10-3	Database:	EDM 2003.21 Single User Db
Reference Design:	PLAN #1 1-15-10 RHS	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.00 ft
Survey Program: 0-MWD												Offset Well Error:	0.00 ft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	
5,000.00	4,719.18	4,958.39	4,762.54	221.22	25.63	122.60	-259.46	1,162.85	483.40	251.14	232.26	2.081	
5,100.00	4,810.23	5,057.33	4,855.51	226.99	26.34	122.82	-266.31	1,196.01	497.76	259.73	238.03	2.091	
5,200.00	4,901.29	5,156.28	4,948.48	232.77	27.04	123.03	-273.15	1,229.18	512.14	268.33	243.81	2.101	
5,300.00	4,992.34	5,255.22	5,041.45	238.55	27.75	123.23	-280.00	1,262.35	526.52	276.92	249.59	2.109	
5,400.00	5,083.39	5,354.17	5,134.42	244.34	28.46	123.42	-286.84	1,295.51	540.90	285.52	255.38	2.118	
5,500.00	5,174.44	5,453.11	5,227.39	250.14	29.17	123.60	-293.69	1,328.68	555.29	294.12	261.17	2.126	
5,600.00	5,265.50	5,552.06	5,320.36	255.93	29.88	123.76	-300.54	1,361.85	569.68	302.72	266.96	2.134	
5,700.00	5,356.55	5,651.00	5,413.33	261.74	30.59	123.92	-307.38	1,395.01	584.08	311.33	272.75	2.141	
5,800.00	5,447.60	5,749.95	5,506.30	267.54	31.30	124.08	-314.23	1,428.18	598.49	319.94	278.55	2.149	
5,900.00	5,538.65	5,843.49	5,594.63	273.36	31.84	124.33	-320.45	1,458.32	613.30	329.25	284.05	2.159	
6,000.00	5,629.70	5,936.13	5,683.05	279.17	32.30	124.84	-326.03	1,485.37	629.08	339.94	289.14	2.176	
6,100.00	5,720.76	6,028.07	5,771.64	284.99	32.71	125.57	-331.00	1,509.44	645.89	352.04	293.86	2.198	
6,200.00	5,811.81	6,119.11	5,860.09	290.81	33.08	126.51	-335.35	1,530.51	663.85	365.64	298.20	2.226	
6,300.00	5,902.86	6,209.09	5,948.15	296.63	33.40	127.61	-339.09	1,548.63	683.05	380.87	302.18	2.260	
6,400.00	5,993.91	6,300.00	6,037.66	302.46	33.68	128.89	-342.29	1,564.17	703.65	397.88	305.77	2.301	
6,423.73	6,015.52	6,318.73	6,056.16	303.84	33.73	129.17	-342.88	1,567.03	708.75	402.13	306.62	2.312	
6,500.00	6,085.38	6,385.54	6,122.30	308.22	33.91	130.43	-344.79	1,576.25	725.13	416.36	308.77	2.348	
6,600.00	6,178.16	6,472.69	6,208.88	313.76	34.10	131.99	-346.80	1,586.01	746.04	434.70	311.35	2.396	
6,700.00	6,272.18	6,559.36	6,295.24	319.07	34.26	133.47	-348.27	1,593.15	766.29	452.65	313.64	2.443	
6,800.00	6,367.34	6,645.55	6,381.29	324.15	34.39	134.88	-349.22	1,597.71	785.83	470.18	315.65	2.490	
6,900.00	6,463.51	6,731.25	6,466.98	328.99	34.48	136.22	-349.63	1,599.72	804.64	487.26	317.38	2.535	
7,000.00	6,560.58	6,824.86	6,560.58	333.59	34.56	137.56	-349.66	1,599.84	822.35	503.59	318.75	2.580	
7,100.00	6,658.43	6,922.70	6,658.43	337.96	34.65	138.71	-349.66	1,599.84	837.85	517.74	320.10	2.617	
7,200.00	6,756.93	7,021.21	6,756.93	342.09	34.74	139.64	-349.66	1,599.84	850.94	529.42	321.52	2.647	
7,300.00	6,855.98	7,120.26	6,855.98	345.99	34.83	140.36	-349.66	1,599.84	861.50	538.52	322.99	2.667	
7,400.00	6,955.44	7,219.72	6,955.44	349.65	34.92	140.90	-349.66	1,599.84	869.46	544.96	324.51	2.679	
7,500.00	7,055.21	7,319.49	7,055.21	353.08	35.01	141.24	-349.66	1,599.84	874.75	548.67	326.08	2.683	
7,600.00	7,155.15	7,419.43	7,155.15	356.29	35.11	141.41	-349.66	1,599.84	877.34	549.62	327.72	2.677	
7,644.85	7,200.00	7,464.28	7,200.00	357.17	35.15	-135.76	-349.66	1,599.84	877.61	549.72	327.90	2.677	
7,700.00	7,255.15	7,519.42	7,255.15	357.64	35.20	-135.76	-349.66	1,599.84	877.61	549.17	328.44	2.672	
7,800.00	7,355.15	7,619.42	7,355.15	358.52	35.30	-135.76	-349.66	1,599.84	877.61	548.15	329.47	2.664	
7,900.00	7,455.15	7,719.42	7,455.15	359.44	35.40	-135.76	-349.66	1,599.84	877.61	547.07	330.55	2.655	
8,000.00	7,555.15	7,819.42	7,555.15	360.40	35.50	-135.76	-349.66	1,599.84	877.61	545.93	331.68	2.646	
8,100.00	7,655.15	7,919.42	7,655.15	361.41	35.60	-135.76	-349.66	1,599.84	877.61	544.75	332.86	2.637	
8,200.00	7,755.15	8,019.42	7,755.15	362.46	35.70	-135.76	-349.66	1,599.84	877.61	543.52	334.10	2.627	
8,300.00	7,855.15	8,119.42	7,855.15	363.55	35.80	-135.76	-349.66	1,599.84	877.61	542.24	335.38	2.617	
8,400.00	7,955.15	8,219.42	7,955.15	364.68	35.91	-135.76	-349.66	1,599.84	877.61	540.90	336.71	2.606	
8,500.00	8,055.15	8,319.42	8,055.15	365.85	36.01	-135.76	-349.66	1,599.84	877.61	539.52	338.09	2.596	
8,600.00	8,155.15	8,419.42	8,155.15	367.06	36.12	-135.76	-349.66	1,599.84	877.61	538.10	339.52	2.585	
8,700.00	8,255.15	8,519.42	8,255.15	368.31	36.23	-135.76	-349.66	1,599.84	877.61	536.62	340.99	2.574	
8,794.85	8,350.00	8,614.28	8,350.00	369.54	36.33	-135.76	-349.66	1,599.84	877.61	535.18	342.44	2.563	

Company:	US ROCKIES REGION PLANNING	Local Co-ordinate Reference:	Well P_KERR-MCGEE 10-3
Project:	COLORADO NORTHERN ZONE - 83	TVD Reference:	WELL @ 5057.00ft (Original Well Elev)
Reference Site:	WELD_KERR MCGEE 19-3 PAD	MD Reference:	WELL @ 5057.00ft (Original Well Elev)
Site Error:	0.00ft	North Reference:	True
Reference Well:	P_KERR-MCGEE 10-3	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00ft	Output errors are at	2.00 sigma
Reference Wellbore	P_KERR-MCGEE 10-3	Database:	EDM 2003.21 Single User Db
Reference Design:	PLAN #1 1-15-10 RHS	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.00 ft
Survey Program: 0-MWD												Offset Well Error:	0.00 ft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	
0.00	0.00	0.00	0.00	0.00	0.00	-38.39	23.66	-18.75	30.19				
100.00	100.00	100.00	100.00	1.70	0.10	-38.39	23.66	-18.75	30.19	28.39	1.80	16.813	
200.00	200.00	200.00	200.00	5.70	0.32	-38.39	23.66	-18.75	30.19	24.17	6.02	5.015	
300.00	300.00	300.00	300.00	9.70	0.55	-38.39	23.66	-18.75	30.19	19.94	10.25	2.947	
400.00	400.00	400.00	400.00	13.70	0.77	-38.39	23.66	-18.75	30.19	15.72	14.47	2.086	
500.00	500.00	500.00	500.00	17.70	0.99	-38.39	23.66	-18.75	30.19	11.49	18.69	1.615	
600.00	600.00	600.00	600.00	21.70	1.22	-38.39	23.66	-18.75	30.19	7.27	22.92	1.317 Level 3	
700.00	700.00	700.00	700.00	25.70	1.44	-38.39	23.66	-18.75	30.19	3.04	27.14	1.112 Level 2	
800.00	800.00	800.00	800.00	29.70	1.67	-38.39	23.66	-18.75	30.19	-1.18	31.37	0.962 Level 1	
900.00	900.00	900.00	900.00	33.70	1.89	-38.39	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	37.70	2.12	-38.39	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	39.70	2.23	-38.39	23.66	-18.75	30.19	-11.74	41.93	0.720 Level 1, CC	
1,100.00	1,100.00	1,099.83	1,099.83	40.84	2.33	-122.67	23.50	-19.15	30.55	-12.61	43.17	0.708 Level 1, ES, SF	
1,200.00	1,199.93	1,199.13	1,199.07	41.63	2.52	-133.06	22.26	-22.37	34.12	-9.99	44.12	0.773 Level 1	
1,300.00	1,299.68	1,297.38	1,297.07	42.79	2.72	-147.53	19.80	-28.70	43.69	-1.68	45.36	0.963 Level 1	
1,400.00	1,399.13	1,393.89	1,393.07	44.31	2.94	-159.53	16.21	-37.97	60.99	14.13	46.86	1.301 Level 3	
1,500.00	1,498.15	1,488.05	1,486.35	46.18	3.17	-167.57	11.58	-49.92	86.02	37.42	48.60	1.770	
1,600.00	1,596.63	1,579.40	1,576.39	48.40	3.43	-172.71	6.03	-64.23	118.19	67.63	50.56	2.338	
1,700.00	1,694.44	1,671.87	1,667.30	50.96	3.71	-176.02	-0.08	-80.00	155.51	102.80	52.71	2.950	
1,800.00	1,791.46	1,762.96	1,756.85	53.84	4.01	-178.09	-6.10	-95.53	196.33	141.30	55.02	3.568	
1,900.00	1,887.58	1,852.57	1,844.95	57.06	4.32	-179.48	-12.02	-110.82	240.45	182.99	57.46	4.185	
2,000.00	1,982.68	1,940.58	1,931.48	60.60	4.63	179.56	-17.84	-125.83	287.75	227.76	59.99	4.797	
2,100.00	2,076.65	2,026.89	2,016.33	64.46	4.94	178.86	-23.55	-140.55	338.14	275.55	62.59	5.402	
2,200.00	2,169.36	2,111.39	2,099.41	68.65	5.26	178.34	-29.13	-154.96	391.54	326.30	65.25	6.001	
2,271.12	2,234.48	2,170.33	2,157.35	71.82	5.48	178.04	-33.03	-165.01	431.31	364.16	67.16	6.423	
2,300.00	2,260.77	2,194.06	2,180.68	73.14	5.57	177.95	-34.60	-169.06	447.76	379.61	68.15	6.570	
2,400.00	2,351.82	2,276.24	2,261.47	77.86	5.88	177.68	-40.03	-183.08	504.71	433.06	71.65	7.044	
2,500.00	2,442.88	2,358.42	2,342.27	82.72	6.20	177.46	-45.46	-197.09	561.67	486.45	75.22	7.467	
2,600.00	2,533.93	2,440.59	2,423.06	87.71	6.52	177.29	-50.90	-211.11	618.63	539.78	78.85	7.846	
2,700.00	2,624.98	2,522.77	2,503.85	92.80	6.84	177.14	-56.33	-225.13	675.59	593.06	82.54	8.186	
2,800.00	2,716.03	2,604.95	2,584.64	97.98	7.16	177.02	-61.76	-239.14	732.56	646.29	86.27	8.492	
2,900.00	2,807.09	2,687.13	2,665.43	103.24	7.49	176.91	-67.19	-253.16	789.53	699.49	90.04	8.769	
3,000.00	2,898.14	2,769.30	2,746.22	108.57	7.82	176.82	-72.62	-267.17	846.50	752.65	93.85	9.020	
3,100.00	2,989.19	2,851.48	2,827.01	113.95	8.15	176.74	-78.06	-281.19	903.47	805.78	97.69	9.248	
3,200.00	3,080.24	2,933.66	2,907.80	119.38	8.48	176.67	-83.49	-295.21	960.45	858.88	101.56	9.457	
3,300.00	3,171.29	3,015.84	2,988.59	124.85	8.81	176.61	-88.92	-309.22	1,017.42	911.96	105.46	9.648	
3,400.00	3,262.35	3,098.01	3,069.38	130.36	9.14	176.55	-94.35	-323.24	1,074.40	965.02	109.37	9.823	
3,500.00	3,353.40	3,180.19	3,150.17	135.90	9.47	176.50	-99.79	-337.25	1,131.37	1,018.06	113.31	9.985	
3,600.00	3,444.45	3,262.37	3,230.97	141.47	9.81	176.45	-105.22	-351.27	1,188.35	1,071.08	117.27	10.134	
3,700.00	3,535.50	3,344.55	3,311.76	147.07	10.14	176.41	-110.65	-365.28	1,245.33	1,124.09	121.24	10.272	
3,800.00	3,626.56	3,426.72	3,392.55	152.68	10.48	176.37	-116.08	-379.30	1,302.30	1,177.08	125.22	10.400	
3,900.00	3,717.61	3,508.90	3,473.34	158.32	10.82	176.34	-121.52	-393.32	1,359.28	1,230.06	129.22	10.519	
4,000.00	3,808.66	3,591.08	3,554.13	163.98	11.15	176.31	-126.95	-407.33	1,416.26	1,283.02	133.24	10.630	
4,100.00	3,899.71	3,673.26	3,634.92	169.65	11.49	176.28	-132.38	-421.35	1,473.24	1,335.98	137.26	10.733	
4,200.00	3,990.76	3,755.43	3,715.71	175.33	11.83	176.25	-137.81	-435.36	1,530.21	1,388.92	141.29	10.830	
4,300.00	4,081.82	3,837.61	3,796.50	181.03	12.17	176.23	-143.25	-449.38	1,587.19	1,441.86	145.33	10.921	
4,400.00	4,172.87	3,919.79	3,877.29	186.75	12.51	176.20	-148.68	-463.40	1,644.17	1,494.79	149.39	11.006	
4,500.00	4,263.92	4,001.97	3,958.08	192.47	12.85	176.18	-154.11	-477.41	1,701.15	1,547.71	153.44	11.086	
4,600.00	4,354.97	4,084.14	4,038.87	198.20	13.19	176.16	-159.54	-491.43	1,758.13	1,600.62	157.51	11.162	
4,700.00	4,446.03	4,166.32	4,119.67	203.94	13.53	176.14	-164.98	-505.44	1,815.11	1,653.53	161.58	11.233	
4,800.00	4,537.08	4,248.50	4,200.46	209.69	13.87	176.12	-170.41	-519.46	1,872.09	1,706.43	165.66	11.301	
4,900.00	4,628.13	4,330.67	4,281.25	215.45	14.21	176.11	-175.84	-533.48	1,929.07	1,759.32	169.75	11.364	

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

Company:	US ROCKIES REGION PLANNING	Local Co-ordinate Reference:	Well P_KERR-MCGEE 10-3
Project:	COLORADO NORTHERN ZONE - 83	TVD Reference:	WELL @ 5057.00ft (Original Well Elev)
Reference Site:	WELD_KERR MCGEE 19-3 PAD	MD Reference:	WELL @ 5057.00ft (Original Well Elev)
Site Error:	0.00ft	North Reference:	True
Reference Well:	P_KERR-MCGEE 10-3	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00ft	Output errors are at	2.00 sigma
Reference Wellbore	P_KERR-MCGEE 10-3	Database:	EDM 2003.21 Single User Db
Reference Design:	PLAN #1 1-15-10 RHS	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.00 ft
Survey Program: 0-MWD												Offset Well Error:	0.00 ft
Reference		Offset		Semi Major Axis			Distance						
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning
5,000.00	4,719.18	4,412.85	4,362.04	221.22	14.55	176.09	-181.27	-547.49	1,986.05	1,812.21	173.84	11.425	
5,100.00	4,810.23	4,495.03	4,442.83	226.99	14.89	176.07	-186.70	-561.51	2,043.03	1,865.09	177.93	11.482	
5,200.00	4,901.29	4,577.21	4,523.62	232.77	15.23	176.06	-192.14	-575.52	2,100.01	1,917.98	182.03	11.537	
5,300.00	4,992.34	4,659.38	4,604.41	238.55	15.57	176.05	-197.57	-589.54	2,156.99	1,970.85	186.13	11.588	
5,400.00	5,083.39	4,741.56	4,685.20	244.34	15.91	176.03	-203.00	-603.55	2,213.97	2,023.72	190.24	11.638	
5,500.00	5,174.44	4,823.74	4,765.99	250.14	16.25	176.02	-208.43	-617.57	2,270.95	2,076.59	194.35	11.685	
5,600.00	5,265.50	4,905.92	4,846.78	255.93	16.59	176.01	-213.87	-631.59	2,327.93	2,129.46	198.47	11.729	
5,700.00	5,356.55	4,988.09	4,927.57	261.74	16.94	176.00	-219.30	-645.60	2,384.91	2,182.32	202.59	11.772	
5,800.00	5,447.60	5,070.27	5,008.37	267.54	17.28	175.99	-224.73	-659.62	2,441.89	2,235.18	206.71	11.813	
5,900.00	5,538.65	5,152.45	5,089.16	273.36	17.62	175.98	-230.16	-673.63	2,498.87	2,288.03	210.83	11.852	
6,000.00	5,629.70	5,234.63	5,169.95	279.17	17.96	175.97	-235.60	-687.65	2,555.85	2,340.88	214.96	11.890	
6,100.00	5,720.76	5,316.80	5,250.74	284.99	18.31	175.96	-241.03	-701.67	2,612.83	2,393.73	219.09	11.926	
6,200.00	5,811.81	5,398.98	5,331.53	290.81	18.65	175.95	-246.46	-715.68	2,669.81	2,446.58	223.22	11.960	
6,300.00	5,902.86	5,481.16	5,412.32	296.63	18.99	175.94	-251.89	-729.70	2,726.79	2,499.43	227.36	11.993	
6,400.00	5,993.91	5,563.34	5,493.11	302.46	19.33	175.93	-257.33	-743.71	2,783.77	2,552.27	231.50	12.025	
6,423.73	6,015.52	5,582.84	5,512.29	303.84	19.42	175.93	-258.61	-747.04	2,797.29	2,564.81	232.48	12.032	
6,500.00	6,085.38	5,646.08	5,574.46	308.22	19.68	176.00	-262.80	-757.83	2,839.91	2,603.83	236.08	12.029	
6,600.00	6,178.16	5,730.68	5,657.63	313.76	20.03	176.07	-268.39	-772.25	2,893.22	2,652.65	240.57	12.026	
6,700.00	6,272.18	5,817.08	5,742.57	319.07	20.39	176.13	-274.10	-786.99	2,943.55	2,698.77	244.79	12.025	
6,800.00	6,367.34	5,905.18	5,829.18	324.15	20.76	176.18	-279.92	-802.02	2,990.85	2,742.13	248.72	12.025	
6,900.00	6,463.51	5,994.86	5,917.36	328.99	21.14	176.21	-285.85	-817.31	3,035.05	2,782.68	252.37	12.026	
7,000.00	6,560.58	6,086.03	6,006.99	333.59	21.52	176.24	-291.88	-832.86	3,076.10	2,820.38	255.72	12.029	
7,100.00	6,658.43	6,178.57	6,097.96	337.96	21.90	176.26	-298.00	-848.64	3,113.95	2,855.17	258.78	12.033	
7,200.00	6,756.93	6,272.36	6,190.17	342.09	22.29	176.27	-304.20	-864.64	3,148.55	2,887.02	261.53	12.039	
7,300.00	6,855.98	6,367.30	6,283.51	345.99	22.69	176.27	-310.47	-880.83	3,179.87	2,915.89	263.98	12.046	
7,400.00	6,955.44	6,463.26	6,377.85	349.65	23.09	176.26	-316.82	-897.20	3,207.86	2,941.75	266.11	12.055	
7,500.00	7,055.21	6,560.14	6,473.09	353.08	23.50	176.24	-323.22	-913.72	3,232.50	2,964.56	267.93	12.064	
7,600.00	7,155.15	6,657.80	6,569.11	356.29	23.91	176.22	-329.68	-930.38	3,253.74	2,984.30	269.44	12.076	
7,644.85	7,200.00	6,701.84	6,612.40	357.17	24.09	-100.99	-332.59	-937.89	3,262.17	2,992.79	269.38	12.110	
7,700.00	7,255.15	6,756.05	6,665.70	357.64	24.32	-101.02	-336.17	-947.14	3,272.10	3,001.95	270.15	12.112	
7,800.00	7,355.15	6,854.36	6,762.36	358.52	24.73	-101.08	-342.67	-963.91	3,290.12	3,018.52	271.60	12.114	
7,900.00	7,455.15	6,952.68	6,859.01	359.44	25.14	-101.13	-349.17	-980.67	3,308.14	3,035.03	273.11	12.113	
8,000.00	7,555.15	7,050.99	6,955.67	360.40	25.55	-101.19	-355.67	-997.44	3,326.16	3,051.49	274.67	12.110	
8,100.00	7,655.15	7,154.15	7,055.15	361.41	26.98	-101.36	-375.91	-1,049.68	3,326.87	3,049.50	277.38	11.994	
8,200.00	7,755.15	7,254.15	7,155.15	362.46	27.11	-101.36	-375.91	-1,049.68	3,326.87	3,047.92	278.96	11.926	
8,300.00	7,855.15	7,354.15	7,255.15	363.55	27.23	-101.36	-375.91	-1,049.68	3,326.87	3,046.28	280.59	11.857	
8,400.00	7,955.15	8,054.15	7,955.15	364.68	27.36	-101.36	-375.91	-1,049.68	3,326.87	3,044.60	282.27	11.786	
8,500.00	8,055.15	8,079.00	7,980.00	365.85	27.39	-101.36	-375.91	-1,049.68	3,327.72	3,043.84	283.88	11.722	
8,600.00	8,155.15	8,079.00	7,980.00	367.06	27.39	-101.36	-375.91	-1,049.68	3,331.48	3,045.99	285.49	11.669	
8,700.00	8,255.15	8,079.00	7,980.00	368.31	27.39	-101.36	-375.91	-1,049.68	3,338.23	3,051.08	287.16	11.625	
8,794.85	8,350.00	8,079.00	7,980.00	369.54	27.39	-101.36	-375.91	-1,049.68	3,347.38	3,058.61	288.78	11.591	

Company:	US ROCKIES REGION PLANNING	Local Co-ordinate Reference:	Well P_KERR-MCGEE 10-3
Project:	COLORADO NORTHERN ZONE - 83	TVD Reference:	WELL @ 5057.00ft (Original Well Elev)
Reference Site:	WELD_KERR MCGEE 19-3 PAD	MD Reference:	WELL @ 5057.00ft (Original Well Elev)
Site Error:	0.00ft	North Reference:	True
Reference Well:	P_KERR-MCGEE 10-3	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00ft	Output errors are at	2.00 sigma
Reference Wellbore	P_KERR-MCGEE 10-3	Database:	EDM 2003.21 Single User Db
Reference Design:	PLAN #1 1-15-10 RHS	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.00 ft
Survey Program: 0-MWD												Offset Well Error:	0.00 ft
Reference		Offset		Semi Major Axis		Distance							
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning
0.00	0.00	0.00	0.00	0.00	0.00	140.02	-7.67	6.44	10.02				
100.00	100.00	100.00	100.00	1.70	0.10	140.02	-7.67	6.44	10.02	8.22	1.80	5.579	
200.00	200.00	200.00	200.00	5.70	0.32	140.02	-7.67	6.44	10.02	4.00	6.02	1.664	
300.00	300.00	300.00	300.00	9.70	0.55	140.02	-7.67	6.44	10.02	-0.23	10.25	0.978 Level 1	
400.00	400.00	400.00	400.00	13.70	0.77	140.02	-7.67	6.44	10.02	-4.45	14.47	0.692 Level 1	
500.00	500.00	500.00	500.00	17.70	0.99	140.02	-7.67	6.44	10.02	-8.68	18.69	0.536 Level 1	
600.00	600.00	600.00	600.00	21.70	1.22	140.02	-7.67	6.44	10.02	-12.90	22.92	0.437 Level 1	
700.00	700.00	700.00	700.00	25.70	1.44	140.02	-7.67	6.44	10.02	-17.13	27.14	0.369 Level 1	
800.00	800.00	800.00	800.00	29.70	1.67	140.02	-7.67	6.44	10.02	-21.35	31.37	0.319 Level 1	
900.00	900.00	900.00	900.00	33.70	1.89	140.02	-7.67	6.44	10.02	-25.58	35.59	0.281 Level 1	
1,000.00	1,000.00	1,000.00	1,000.00	37.70	2.12	140.02	-7.67	6.44	10.02	-29.80	39.82	0.252 Level 1	
1,050.00	1,050.00	1,050.00	1,050.00	39.70	2.23	140.02	-7.67	6.44	10.02	-31.91	41.93	0.239 Level 1, CC	
1,100.00	1,100.00	1,099.84	1,099.84	40.84	2.33	60.51	-8.10	6.51	10.17	-32.99	43.17	0.236 Level 1, ES, SF	
1,200.00	1,199.93	1,199.35	1,199.29	41.63	2.50	82.26	-11.52	7.07	12.44	-31.69	44.12	0.282 Level 1	
1,300.00	1,299.68	1,298.35	1,298.03	42.79	2.68	104.38	-18.29	8.18	19.90	-25.56	45.46	0.438 Level 1	
1,400.00	1,399.13	1,396.48	1,395.64	44.31	2.88	116.49	-28.33	9.82	33.20	-13.92	47.12	0.705 Level 1	
1,500.00	1,498.15	1,493.43	1,491.67	46.18	3.11	122.54	-41.47	11.98	51.75	2.64	49.11	1.054 Level 2	
1,600.00	1,596.63	1,588.91	1,585.74	48.40	3.36	125.76	-57.55	14.61	75.14	23.74	51.41	1.462 Level 3	
1,700.00	1,694.44	1,682.62	1,677.50	50.96	3.65	127.56	-76.33	17.69	103.16	49.16	54.01	1.910	
1,800.00	1,791.46	1,774.33	1,766.63	53.84	3.98	128.60	-97.56	21.17	135.63	78.73	56.90	2.384	
1,900.00	1,887.58	1,863.80	1,852.90	57.06	4.35	129.17	-120.98	25.01	172.38	112.30	60.07	2.869	
2,000.00	1,982.68	1,950.84	1,936.07	60.60	4.76	129.43	-146.30	29.16	213.25	149.73	63.52	3.357	
2,100.00	2,076.65	2,035.30	2,015.99	64.46	5.20	129.48	-173.24	33.57	258.07	190.85	67.22	3.839	
2,200.00	2,169.36	2,120.96	2,096.39	68.65	5.69	129.49	-202.40	38.35	306.33	235.14	71.19	4.303	
2,271.12	2,234.48	2,182.41	2,154.03	71.82	6.06	129.62	-223.42	41.80	341.94	267.80	74.14	4.612	
2,300.00	2,260.77	2,207.23	2,177.31	73.14	6.21	129.94	-231.90	43.19	356.61	281.22	75.39	4.730	
2,400.00	2,351.82	2,293.16	2,257.92	77.86	6.74	130.87	-261.29	48.01	407.46	327.66	79.80	5.106	
2,500.00	2,442.88	2,379.10	2,338.54	82.72	7.28	131.59	-290.68	52.82	458.38	374.03	84.34	5.435	
2,600.00	2,533.93	2,465.04	2,419.15	87.71	7.83	132.17	-320.07	57.64	509.33	420.35	88.98	5.724	
2,700.00	2,624.98	2,550.98	2,499.77	92.80	8.38	132.64	-349.46	62.46	560.32	466.61	93.71	5.979	
2,800.00	2,716.03	2,636.92	2,580.38	97.98	8.95	133.04	-378.85	67.27	611.34	512.83	98.51	6.206	
2,900.00	2,807.09	2,722.86	2,661.00	103.24	9.51	133.37	-408.24	72.09	662.37	559.00	103.37	6.408	
3,000.00	2,898.14	2,808.80	2,741.61	108.57	10.09	133.66	-437.62	76.91	713.41	605.13	108.28	6.588	
3,100.00	2,989.19	2,894.74	2,822.23	113.95	10.66	133.91	-467.01	81.73	764.47	651.23	113.24	6.751	
3,200.00	3,080.24	2,980.68	2,902.84	119.38	11.24	134.12	-496.40	86.54	815.54	697.30	118.24	6.897	
3,300.00	3,171.29	3,066.62	2,983.46	124.85	11.82	134.31	-525.79	91.36	866.61	743.34	123.27	7.030	
3,400.00	3,262.35	3,152.56	3,064.07	130.36	12.40	134.48	-555.18	96.18	917.69	789.36	128.34	7.151	
3,500.00	3,353.40	3,238.50	3,144.69	135.90	12.99	134.64	-584.57	100.99	968.78	835.35	133.43	7.261	
3,600.00	3,444.45	3,324.44	3,225.30	141.47	13.57	134.77	-613.96	105.81	1,019.87	881.33	138.54	7.361	
3,700.00	3,535.50	3,410.38	3,305.91	147.07	14.16	134.90	-643.34	110.63	1,070.96	927.29	143.68	7.454	
3,800.00	3,626.56	3,496.32	3,386.53	152.68	14.75	135.01	-672.73	115.44	1,122.06	973.23	148.83	7.539	
3,900.00	3,717.61	3,582.26	3,467.14	158.32	15.34	135.11	-702.12	120.26	1,173.16	1,019.16	154.00	7.618	
4,000.00	3,808.66	3,668.20	3,547.76	163.98	15.93	135.21	-731.51	125.08	1,224.26	1,065.07	159.19	7.691	
4,100.00	3,899.71	3,754.14	3,628.37	169.65	16.52	135.29	-760.90	129.90	1,275.37	1,110.98	164.39	7.758	
4,200.00	3,990.76	3,840.08	3,708.99	175.33	17.11	135.37	-790.29	134.71	1,326.48	1,156.87	169.61	7.821	
4,300.00	4,081.82	3,926.02	3,789.60	181.03	17.71	135.45	-819.68	139.53	1,377.59	1,202.75	174.83	7.879	
4,400.00	4,172.87	4,011.96	3,870.22	186.75	18.30	135.52	-849.07	144.35	1,428.70	1,248.63	180.07	7.934	
4,500.00	4,263.92	4,097.90	3,950.83	192.47	18.89	135.58	-878.45	149.16	1,479.81	1,294.49	185.31	7.985	
4,600.00	4,354.97	4,183.84	4,031.45	198.20	19.49	135.64	-907.84	153.98	1,530.92	1,340.35	190.57	8.033	
4,700.00	4,446.03	4,269.77	4,112.06	203.94	20.08	135.70	-937.23	158.80	1,582.04	1,386.20	195.83	8.079	
4,800.00	4,537.08	4,355.71	4,192.67	209.69	20.68	135.75	-966.62	163.62	1,633.15	1,432.05	201.10	8.121	
4,900.00	4,628.13	4,441.65	4,273.29	215.45	21.27	135.80	-996.01	168.43	1,684.27	1,477.89	206.38	8.161	

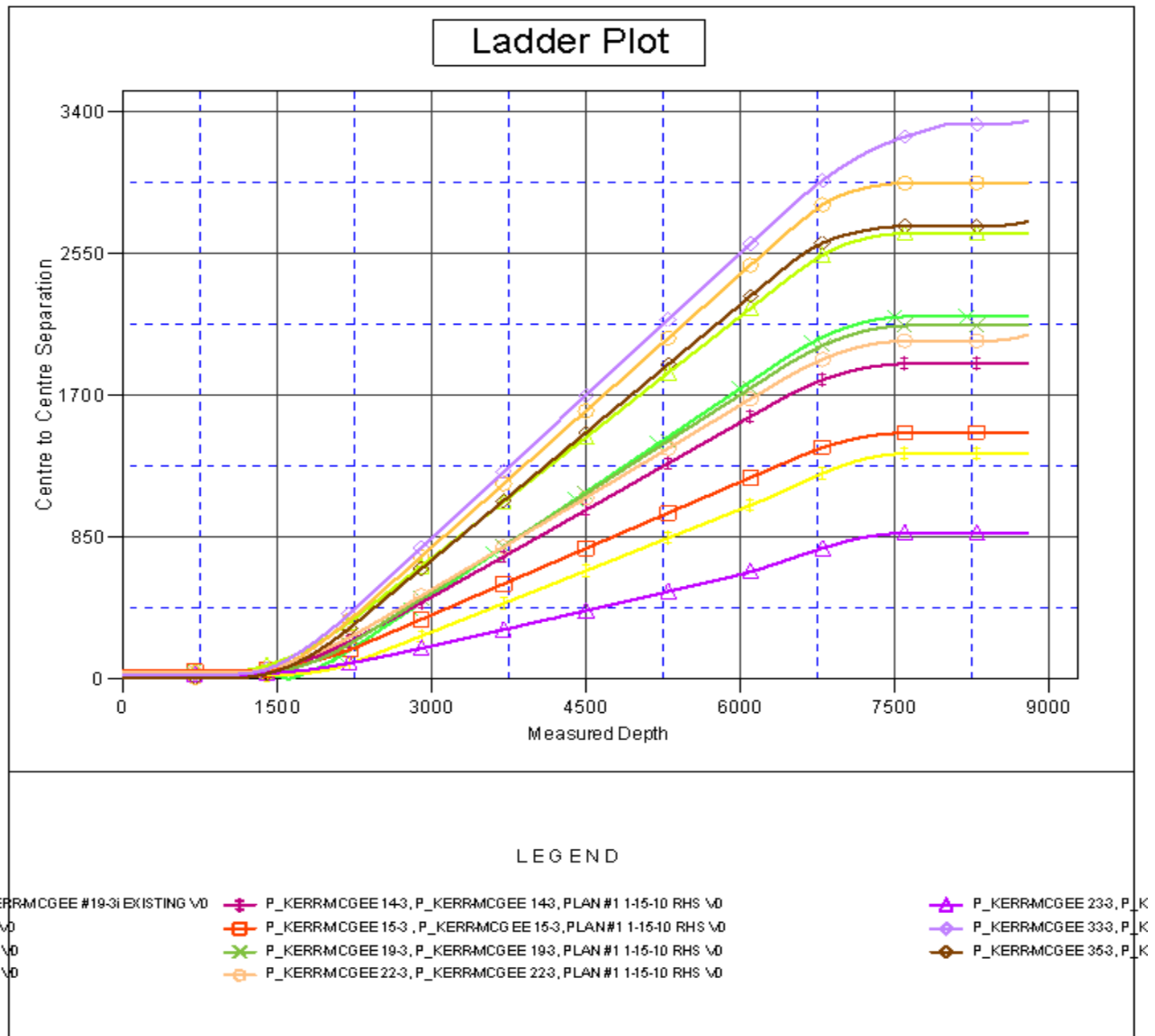
CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Company:	US ROCKIES REGION PLANNING	Local Co-ordinate Reference:	Well P_KERR-MCGEE 10-3
Project:	COLORADO NORTHERN ZONE - 83	TVD Reference:	WELL @ 5057.00ft (Original Well Elev)
Reference Site:	WELD_KERR MCGEE 19-3 PAD	MD Reference:	WELL @ 5057.00ft (Original Well Elev)
Site Error:	0.00ft	North Reference:	True
Reference Well:	P_KERR-MCGEE 10-3	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00ft	Output errors are at	2.00 sigma
Reference Wellbore	P_KERR-MCGEE 10-3	Database:	EDM 2003.21 Single User Db
Reference Design:	PLAN #1 1-15-10 RHS	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.00 ft
Survey Program: 0-MWD												Offset Well Error:	0.00 ft
Reference		Offset		Semi Major Axis			Distance						
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning
5,000.00	4,719.18	4,527.59	4,353.90	221.22	21.87	135.84	-1,025.40	173.25	1,735.38	1,523.72	211.66	8.199	
5,100.00	4,810.23	4,613.53	4,434.52	226.99	22.47	135.89	-1,054.79	178.07	1,786.50	1,569.55	216.95	8.235	
5,200.00	4,901.29	4,699.47	4,515.13	232.77	23.06	135.93	-1,084.17	182.88	1,837.62	1,615.38	222.24	8.268	
5,300.00	4,992.34	4,785.41	4,595.75	238.55	23.66	135.97	-1,113.56	187.70	1,888.74	1,661.20	227.54	8.301	
5,400.00	5,083.39	4,871.35	4,676.36	244.34	24.26	136.00	-1,142.95	192.52	1,939.86	1,707.01	232.85	8.331	
5,500.00	5,174.44	4,957.29	4,756.98	250.14	24.86	136.04	-1,172.34	197.33	1,990.98	1,752.83	238.16	8.360	
5,600.00	5,265.50	5,043.23	4,837.59	255.93	25.45	136.07	-1,201.73	202.15	2,042.10	1,798.63	243.47	8.388	
5,700.00	5,356.55	5,129.17	4,918.21	261.74	26.05	136.10	-1,231.12	206.97	2,093.22	1,844.44	248.79	8.414	
5,800.00	5,447.60	5,215.11	4,998.82	267.54	26.65	136.13	-1,260.51	211.79	2,144.35	1,890.24	254.11	8.439	
5,900.00	5,538.65	5,301.05	5,079.44	273.36	27.25	136.16	-1,289.90	216.60	2,195.47	1,936.04	259.43	8.463	
6,000.00	5,629.70	5,386.99	5,160.05	279.17	27.85	136.19	-1,319.28	221.42	2,246.59	1,981.84	264.76	8.485	
6,100.00	5,720.76	5,472.93	5,240.66	284.99	28.45	136.22	-1,348.67	226.24	2,297.72	2,027.63	270.09	8.507	
6,200.00	5,811.81	5,558.87	5,321.28	290.81	29.05	136.24	-1,378.06	231.05	2,348.84	2,073.42	275.42	8.528	
6,300.00	5,902.86	5,644.81	5,401.89	296.63	29.64	136.27	-1,407.45	235.87	2,399.96	2,119.21	280.75	8.548	
6,400.00	5,993.91	5,730.75	5,482.51	302.46	30.24	136.29	-1,436.84	240.69	2,451.09	2,165.00	286.09	8.567	
6,423.73	6,015.52	5,751.14	5,501.64	303.84	30.39	136.29	-1,443.81	241.83	2,463.22	2,175.86	287.36	8.572	
6,500.00	6,085.38	5,877.52	5,620.96	308.22	31.05	136.93	-1,484.88	248.56	2,500.92	2,209.91	291.01	8.594	
6,600.00	6,178.16	6,067.89	5,803.86	313.76	31.85	137.76	-1,536.88	257.08	2,545.35	2,249.82	295.53	8.613	
6,700.00	6,272.18	6,267.06	5,998.50	319.07	32.53	138.61	-1,578.32	263.88	2,583.72	2,284.07	299.65	8.622	
6,800.00	6,367.34	6,473.35	6,202.69	324.15	33.06	139.48	-1,607.07	268.59	2,615.71	2,312.39	303.32	8.624	
6,900.00	6,463.51	6,684.71	6,413.49	328.99	33.40	140.39	-1,621.41	270.94	2,641.05	2,334.58	306.47	8.618	
7,000.00	6,560.58	6,831.81	6,560.58	333.59	33.55	141.12	-1,622.86	271.18	2,660.28	2,350.90	309.38	8.599	
7,100.00	6,658.43	6,929.66	6,658.43	337.96	33.62	141.60	-1,622.86	271.18	2,676.52	2,364.29	312.23	8.572	
7,200.00	6,756.93	7,028.16	6,756.93	342.09	33.70	141.99	-1,622.86	271.18	2,690.10	2,375.21	314.89	8.543	
7,300.00	6,855.98	7,127.21	6,855.98	345.99	33.77	142.30	-1,622.86	271.18	2,700.99	2,383.63	317.36	8.511	
7,400.00	6,955.44	7,226.67	6,955.44	349.65	33.85	142.54	-1,622.86	271.18	2,709.15	2,389.52	319.63	8.476	
7,500.00	7,055.21	7,326.44	7,055.21	353.08	33.93	142.69	-1,622.86	271.18	2,714.55	2,392.84	321.72	8.438	
7,600.00	7,155.15	7,426.38	7,155.15	356.29	34.01	142.76	-1,622.86	271.18	2,717.19	2,393.56	323.63	8.396	
7,644.85	7,200.00	7,471.23	7,200.00	357.17	34.05	-134.42	-1,622.86	271.18	2,717.47	2,393.63	323.84	8.391	
7,700.00	7,255.15	7,526.38	7,255.15	357.64	34.10	-134.42	-1,622.86	271.18	2,717.47	2,393.08	324.39	8.377	
7,800.00	7,355.15	7,626.38	7,355.15	358.52	34.18	-134.42	-1,622.86	271.18	2,717.47	2,392.05	325.42	8.351	
7,900.00	7,455.15	7,726.38	7,455.15	359.44	34.27	-134.42	-1,622.86	271.18	2,717.47	2,390.97	326.50	8.323	
8,000.00	7,555.15	7,826.38	7,555.15	360.40	34.35	-134.42	-1,622.86	271.18	2,717.47	2,389.83	327.63	8.294	
8,100.00	7,655.15	7,926.38	7,655.15	361.41	34.44	-134.42	-1,622.86	271.18	2,717.47	2,388.65	328.82	8.264	
8,200.00	7,755.15	8,026.38	7,755.15	362.46	34.53	-134.42	-1,622.86	271.18	2,717.47	2,387.41	330.06	8.233	
8,300.00	7,855.15	8,126.38	7,855.15	363.55	34.62	-134.42	-1,622.86	271.18	2,717.47	2,386.13	331.34	8.201	
8,400.00	7,955.15	8,226.38	7,955.15	364.68	34.72	-134.42	-1,622.86	271.18	2,717.47	2,384.79	332.68	8.168	
8,500.00	8,055.15	8,326.23	7,965.00	365.85	34.72	-134.42	-1,622.86	271.18	2,718.96	2,385.00	333.97	8.141	
8,600.00	8,155.15	8,426.23	7,965.00	367.06	34.72	-134.42	-1,622.86	271.18	2,724.11	2,388.82	335.29	8.125	
8,700.00	8,255.15	8,526.23	7,965.00	368.31	34.72	-134.42	-1,622.86	271.18	2,732.91	2,396.25	336.66	8.118	
8,794.85	8,350.00	8,626.23	7,965.00	369.54	34.72	-134.42	-1,622.86	271.18	2,744.61	2,406.60	338.00	8.120	

Company:	US ROCKIES REGION PLANNING	Local Co-ordinate Reference:	Well P_KERR-MCGEE 10-3
Project:	COLORADO NORTHERN ZONE - 83	TVD Reference:	WELL @ 5057.00ft (Original Well Elev)
Reference Site:	WELD_KERR MCGEE 19-3 PAD	MD Reference:	WELL @ 5057.00ft (Original Well Elev)
Site Error:	0.00ft	North Reference:	True
Reference Well:	P_KERR-MCGEE 10-3	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00ft	Output errors are at	2.00 sigma
Reference Wellbore	P_KERR-MCGEE 10-3	Database:	EDM 2003.21 Single User Db
Reference Design:	PLAN #1 1-15-10 RHS	Offset TVD Reference:	Offset Datum

Reference Depths are relative to WELL @ 5057.00ft (Original Well Elev) Coordinates are relative to: P_KERR-MCGEE 10-3
Offset Depths are relative to Offset Datum
Central Meridian is 105° 30' 0.000 W °
Coordinate System is US State Plane 1983, Colorado Northern Zone
Grid Convergence at Surface is: 0.33°



Company:	US ROCKIES REGION PLANNING	Local Co-ordinate Reference:	Well P_KERR-MCGEE 10-3
Project:	COLORADO NORTHERN ZONE - 83	TVD Reference:	WELL @ 5057.00ft (Original Well Elev)
Reference Site:	WELD_KERR MCGEE 19-3 PAD	MD Reference:	WELL @ 5057.00ft (Original Well Elev)
Site Error:	0.00ft	North Reference:	True
Reference Well:	P_KERR-MCGEE 10-3	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00ft	Output errors are at	2.00 sigma
Reference Wellbore	P_KERR-MCGEE 10-3	Database:	EDM 2003.21 Single User Db
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Reference Depths are relative to WELL @ 5057.00ft (Original Well Elev) Coordinates are relative to: P_KERR-MCGEE 10-3
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°

