



US ROCKIES REGION PLANNING

KERR MCGEE OIL & GAS ONSHORE LP

WELD_DRY CREEK PAD 7

P_DRY CREEK 6-27

P_DRY CREEK 6-27

Plan: PLAN #1 10-26-09 RHS

Standard Planning Report

26 October, 2009





P_DRY CREEK 6-27
KERR MCGEE OIL & GAS ONSHORE LP
SECTION 27 T1N R67W
1169 FNL 1245 FWL
LAT: 40° 1' 34.068 N
LONG: 104° 52' 53.976 W



Azimuths to Grid North
True North: -0.40°
Magnetic North: 8.68°

Magnetic Field
Strength: 53111.6nT
Dip Angle: 66.79°
Date: 10/26/2009
Model: IGRF200510

WELL DETAILS: P_DRY CREEK 6-27

+N/-S	+E/-W	Northing	Ground Level: Easting	5008.00 Latitude	Longitude	Slot
0.00	0.00	1252969.05	3173162.40	40° 1' 34.068 N	104° 52' 53.976 W	

FORMATION TOP DETAILS

TVDPath	MDPath	Formation
3141.00	3267.23	PARKMAN TOP
4743.00	4957.79	SUSSEX TOP
7325.00	7539.79	NIO A TOP
7725.00	7939.79	CODELL TOP

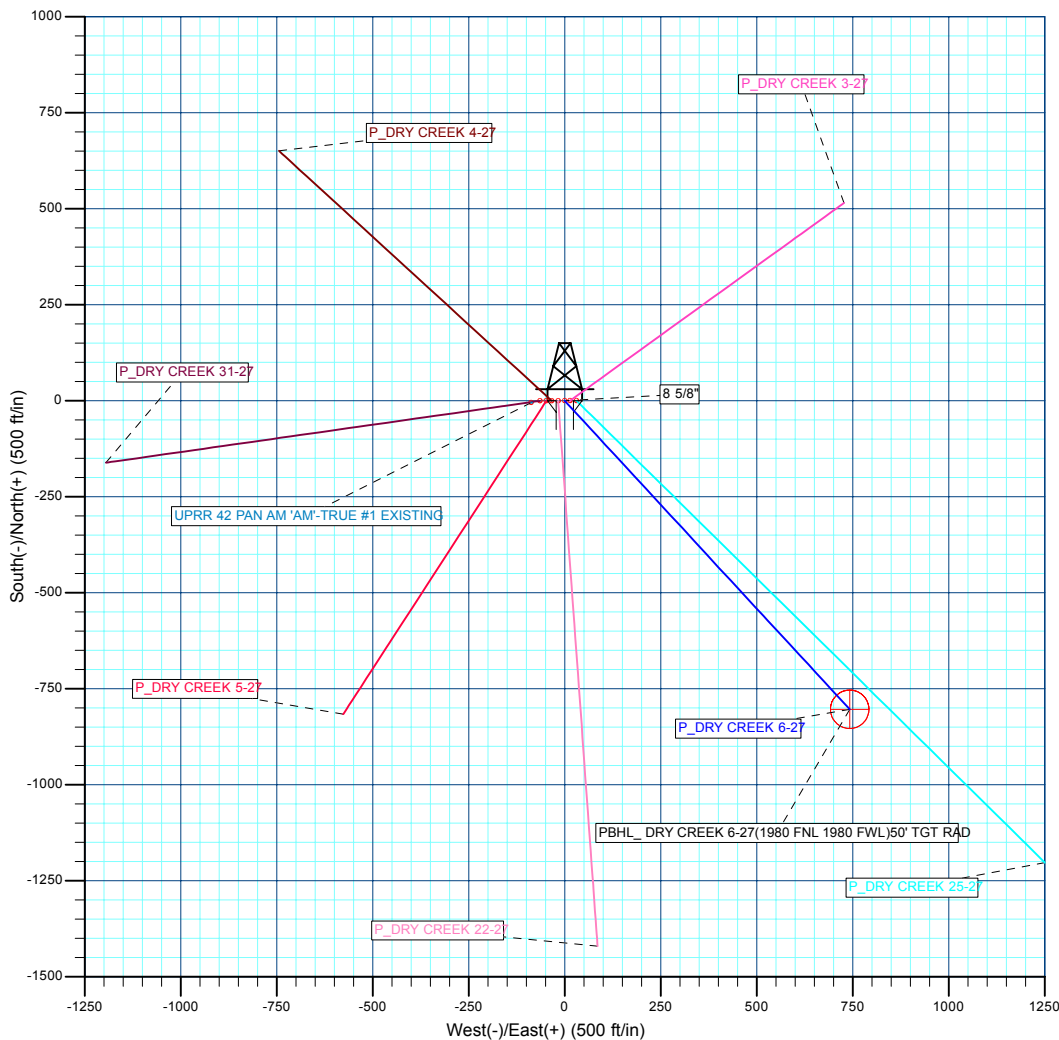
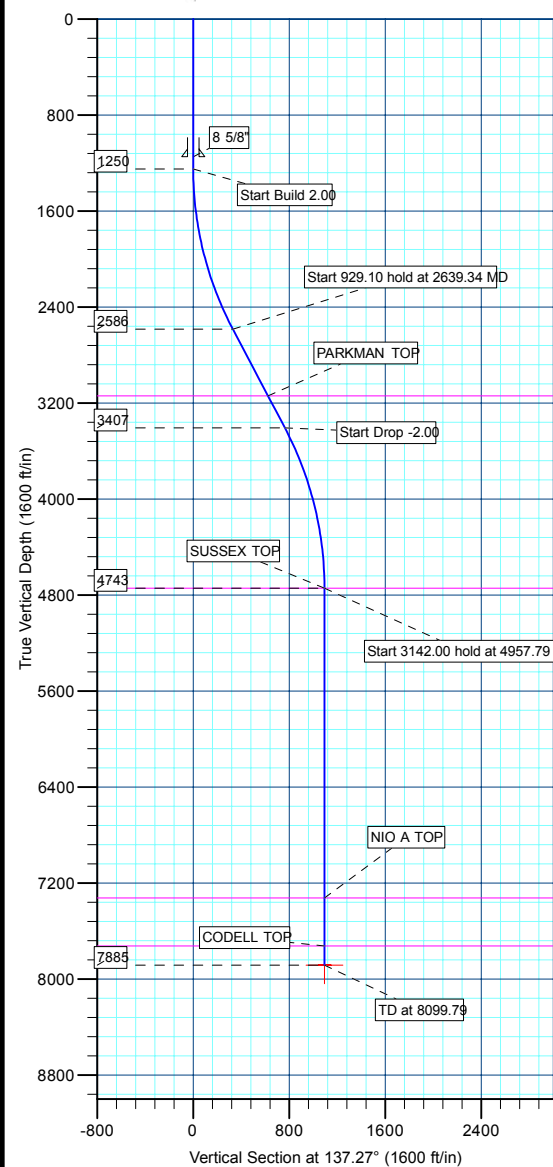
SECTION DETAILS

MD	Inc	Azi	TVD	+N/-S	+E/-W	DLeg	TFace	VSec	Target
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
1250.00	0.00	0.00	1250.00	0.00	0.00	0.00	0.00	0.00	
2639.34	27.79	137.27	2585.52	-242.67	224.14	2.00	137.27	330.35	
3568.44	27.79	137.27	3407.48	-560.84	518.03	0.00	0.00	763.48	
4957.79	0.00	0.00	4743.00	-803.51	742.17	2.00	180.00	1093.82	
8099.79	0.00	0.00	7885.00	-803.51	742.17	0.00	0.00	1093.82	PBHL_ DRY CREEK 6-27(1980 FNL 1980 FWL)50' TGT RAD

CASING DETAILS

TVD	MD	Name	Size
1150.00	1150.00	8 5/8"	8.62

KB ELEV: WELL @ 5023.00ft (Original Well Elev)
GRD ELEV: 5008.00



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

Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Shape
PBHL	7885.00	-803.51	742.17	1252165.54	3173904.56	40° 1' 26.076 N	104° 52' 44.508 W	Circle (Radius: 50.00)

Plan: PLAN #1 10-26-09 RHS (P_DRY CREEK 6-27/P_DRY CREEK 6-27)

Created By: Robert H. Scott

Database:	EDM 2003.21 Single User Db	Local Co-ordinate Reference:	Well P_DRY CREEK 6-27
Company:	US ROCKIES REGION PLANNING	TVD Reference:	WELL @ 5023.00ft (Original Well Elev)
Project:	KERR MCGEE OIL & GAS ONSHORE LP	MD Reference:	WELL @ 5023.00ft (Original Well Elev)
Site:	WELD_DRY CREEK PAD 7	North Reference:	Grid
Well:	P_DRY CREEK 6-27	Survey Calculation Method:	Minimum Curvature
Wellbore:	P_DRY CREEK 6-27		
Design:	PLAN #1 10-26-09 RHS		

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

Site						WELD_DRY CREEK PAD 7, SECTION 27 T1N R67W											
Site Position:						Northing:			1,252,969.16 ft			Latitude:			40° 1' 34.068 N		
From:			Lat/Long			Easting:			3,173,176.40 ft			Longitude:			104° 52' 53.796 W		
Position Uncertainty:			0.00 ft			Slot Radius:			in			Grid Convergence:			0.40 °		

Well	P_DRY CREEK 6-27					
Well Position	+N/-S	-0.11 ft	Northing:	1,252,969.05 ft	Latitude:	40° 1' 34.068 N
	+E/-W	-14.00 ft	Easting:	3,173,162.40 ft	Longitude:	104° 52' 53.976 W
Position Uncertainty		0.00 ft	Wellhead Elevation:	ft	Ground Level:	5,008.00 ft

Wellbore	P_DRY CREEK 6-27				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF200510	10/26/2009	9.08	66.79	53,112

Design	PLAN #1 10-26-09 RHS				
Audit Notes:					
Version:	Phase:	PLAN	Tie On Depth:	0.00	
Vertical Section:	Depth From (TVD) (ft)	+N/-S (ft)	+E/-W (ft)	Direction (°)	
	0.00	0.00	0.00	137.27	

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	
1,250.00	0.00	0.00	1,250.00	0.00	0.00	0.00	0.00	0.00	0.00	
2,639.34	27.79	137.27	2,585.52	-242.67	224.14	2.00	2.00	0.00	137.27	
3,568.44	27.79	137.27	3,407.48	-560.84	518.03	0.00	0.00	0.00	0.00	
4,957.79	0.00	0.00	4,743.00	-803.51	742.17	2.00	-2.00	0.00	180.00	
8,099.79	0.00	0.00	7,885.00	-803.51	742.17	0.00	0.00	0.00	0.00	PBHL_ DRY CREE

Database:	EDM 2003.21 Single User Db	Local Co-ordinate Reference:	Well P_DRY CREEK 6-27
Company:	US ROCKIES REGION PLANNING	TVD Reference:	WELL @ 5023.00ft (Original Well Elev)
Project:	KERR MCGEE OIL & GAS ONSHORE LP	MD Reference:	WELL @ 5023.00ft (Original Well Elev)
Site:	WELD_DRY CREEK PAD 7	North Reference:	Grid
Well:	P_DRY CREEK 6-27	Survey Calculation Method:	Minimum Curvature
Wellbore:	P_DRY CREEK 6-27		
Design:	PLAN #1 10-26-09 RHS		

Planned Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
Start Build 2.00									
1,250.00	0.00	0.00	1,250.00	0.00	0.00	0.00	0.00	0.00	0.00
1,300.00	1.00	137.27	1,300.00	-0.32	0.30	0.44	2.00	2.00	0.00
1,400.00	3.00	137.27	1,399.93	-2.88	2.66	3.93	2.00	2.00	0.00
1,500.00	5.00	137.27	1,499.68	-8.01	7.40	10.90	2.00	2.00	0.00
1,600.00	7.00	137.27	1,599.13	-15.69	14.49	21.35	2.00	2.00	0.00
1,700.00	9.00	137.27	1,698.15	-25.91	23.93	35.27	2.00	2.00	0.00
1,800.00	11.00	137.27	1,796.63	-38.66	35.71	52.63	2.00	2.00	0.00
1,900.00	13.00	137.27	1,894.44	-53.94	49.82	73.42	2.00	2.00	0.00
2,000.00	15.00	137.27	1,991.46	-71.71	66.23	97.62	2.00	2.00	0.00
2,100.00	17.00	137.27	2,087.58	-91.95	84.93	125.18	2.00	2.00	0.00
2,200.00	19.00	137.27	2,182.68	-114.65	105.90	156.08	2.00	2.00	0.00
2,300.00	21.00	137.27	2,276.65	-139.78	129.11	190.28	2.00	2.00	0.00
2,400.00	23.00	137.27	2,369.36	-167.29	154.52	227.74	2.00	2.00	0.00
2,500.00	25.00	137.27	2,460.71	-197.17	182.12	268.41	2.00	2.00	0.00
2,600.00	27.00	137.27	2,550.59	-229.37	211.86	312.24	2.00	2.00	0.00
Start 929.10 hold at 2639.34 MD									
2,639.34	27.79	137.27	2,585.52	-242.67	224.14	330.35	2.00	2.00	0.00
2,700.00	27.79	137.27	2,639.18	-263.44	243.33	358.62	0.00	0.00	0.00
2,800.00	27.79	137.27	2,727.65	-297.69	274.96	405.24	0.00	0.00	0.00
2,900.00	27.79	137.27	2,816.12	-331.93	306.59	451.86	0.00	0.00	0.00
3,000.00	27.79	137.27	2,904.59	-366.18	338.22	498.48	0.00	0.00	0.00
3,100.00	27.79	137.27	2,993.06	-400.42	369.85	545.10	0.00	0.00	0.00
3,200.00	27.79	137.27	3,081.52	-434.67	401.48	591.71	0.00	0.00	0.00
PARKMAN TOP									
3,267.23	27.79	137.27	3,141.00	-457.69	422.75	623.05	0.00	0.00	0.00
3,300.00	27.79	137.27	3,169.99	-468.91	433.11	638.33	0.00	0.00	0.00
3,400.00	27.79	137.27	3,258.46	-503.16	464.75	684.95	0.00	0.00	0.00
3,500.00	27.79	137.27	3,346.93	-537.41	496.38	731.57	0.00	0.00	0.00
Start Drop -2.00									
3,568.44	27.79	137.27	3,407.48	-560.84	518.03	763.48	0.00	0.00	0.00
3,600.00	27.16	137.27	3,435.48	-571.54	527.90	778.03	2.00	-2.00	0.00
3,700.00	25.16	137.27	3,525.24	-603.92	557.81	822.11	2.00	-2.00	0.00
3,800.00	23.16	137.27	3,616.47	-633.98	585.58	863.03	2.00	-2.00	0.00
3,900.00	21.16	137.27	3,709.09	-661.68	611.16	900.74	2.00	-2.00	0.00
4,000.00	19.16	137.27	3,802.96	-686.99	634.54	935.20	2.00	-2.00	0.00
4,100.00	17.16	137.27	3,897.97	-709.88	655.68	966.36	2.00	-2.00	0.00
4,200.00	15.16	137.27	3,994.02	-730.32	674.56	994.18	2.00	-2.00	0.00
4,300.00	13.16	137.27	4,090.98	-748.28	691.15	1,018.64	2.00	-2.00	0.00
4,400.00	11.16	137.27	4,188.73	-763.75	705.44	1,039.69	2.00	-2.00	0.00
4,500.00	9.16	137.27	4,287.16	-776.70	717.40	1,057.32	2.00	-2.00	0.00
4,600.00	7.16	137.27	4,386.14	-787.12	727.03	1,071.51	2.00	-2.00	0.00
4,700.00	5.16	137.27	4,485.56	-795.00	734.30	1,082.23	2.00	-2.00	0.00
4,800.00	3.16	137.27	4,585.29	-800.32	739.22	1,089.48	2.00	-2.00	0.00
4,900.00	1.16	137.27	4,685.22	-803.08	741.77	1,093.24	2.00	-2.00	0.00
Start 3142.00 hold at 4957.79 MD - SUSSEX TOP									
4,957.79	0.00	0.00	4,743.00	-803.51	742.17	1,093.82	2.00	-2.00	-237.55
5,000.00	0.00	0.00	4,785.21	-803.51	742.17	1,093.82	0.00	0.00	0.00
5,100.00	0.00	0.00	4,885.21	-803.51	742.17	1,093.82	0.00	0.00	0.00
5,200.00	0.00	0.00	4,985.21	-803.51	742.17	1,093.82	0.00	0.00	0.00
5,300.00	0.00	0.00	5,085.21	-803.51	742.17	1,093.82	0.00	0.00	0.00
5,400.00	0.00	0.00	5,185.21	-803.51	742.17	1,093.82	0.00	0.00	0.00
5,500.00	0.00	0.00	5,285.21	-803.51	742.17	1,093.82	0.00	0.00	0.00

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Company:	US ROCKIES REGION PLANNING	TVD Reference:	WELL @ 5023.00ft (Original Well Elev)
Project:	KERR MCGEE OIL & GAS ONSHORE LP	MD Reference:	WELL @ 5023.00ft (Original Well Elev)
Site:	WELD_DRY CREEK PAD 7	North Reference:	Grid
Well:	P_DRY CREEK 6-27	Survey Calculation Method:	Minimum Curvature
Wellbore:	P_DRY CREEK 6-27		
Design:	PLAN #1 10-26-09 RHS		

Planned Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
5,600.00	0.00	0.00	5,385.21	-803.51	742.17	1,093.82	0.00	0.00	0.00
5,700.00	0.00	0.00	5,485.21	-803.51	742.17	1,093.82	0.00	0.00	0.00
5,800.00	0.00	0.00	5,585.21	-803.51	742.17	1,093.82	0.00	0.00	0.00
5,900.00	0.00	0.00	5,685.21	-803.51	742.17	1,093.82	0.00	0.00	0.00
6,000.00	0.00	0.00	5,785.21	-803.51	742.17	1,093.82	0.00	0.00	0.00
6,100.00	0.00	0.00	5,885.21	-803.51	742.17	1,093.82	0.00	0.00	0.00
6,200.00	0.00	0.00	5,985.21	-803.51	742.17	1,093.82	0.00	0.00	0.00
6,300.00	0.00	0.00	6,085.21	-803.51	742.17	1,093.82	0.00	0.00	0.00
6,400.00	0.00	0.00	6,185.21	-803.51	742.17	1,093.82	0.00	0.00	0.00
6,500.00	0.00	0.00	6,285.21	-803.51	742.17	1,093.82	0.00	0.00	0.00
6,600.00	0.00	0.00	6,385.21	-803.51	742.17	1,093.82	0.00	0.00	0.00
6,700.00	0.00	0.00	6,485.21	-803.51	742.17	1,093.82	0.00	0.00	0.00
6,800.00	0.00	0.00	6,585.21	-803.51	742.17	1,093.82	0.00	0.00	0.00
6,900.00	0.00	0.00	6,685.21	-803.51	742.17	1,093.82	0.00	0.00	0.00
7,000.00	0.00	0.00	6,785.21	-803.51	742.17	1,093.82	0.00	0.00	0.00
7,100.00	0.00	0.00	6,885.21	-803.51	742.17	1,093.82	0.00	0.00	0.00
7,200.00	0.00	0.00	6,985.21	-803.51	742.17	1,093.82	0.00	0.00	0.00
7,300.00	0.00	0.00	7,085.21	-803.51	742.17	1,093.82	0.00	0.00	0.00
7,400.00	0.00	0.00	7,185.21	-803.51	742.17	1,093.82	0.00	0.00	0.00
7,500.00	0.00	0.00	7,285.21	-803.51	742.17	1,093.82	0.00	0.00	0.00
NIO A TOP									
7,539.79	0.00	0.00	7,325.00	-803.51	742.17	1,093.82	0.00	0.00	0.00
7,600.00	0.00	0.00	7,385.21	-803.51	742.17	1,093.82	0.00	0.00	0.00
7,700.00	0.00	0.00	7,485.21	-803.51	742.17	1,093.82	0.00	0.00	0.00
7,800.00	0.00	0.00	7,585.21	-803.51	742.17	1,093.82	0.00	0.00	0.00
7,900.00	0.00	0.00	7,685.21	-803.51	742.17	1,093.82	0.00	0.00	0.00
CODELL TOP									
7,939.79	0.00	0.00	7,725.00	-803.51	742.17	1,093.82	0.00	0.00	0.00
8,000.00	0.00	0.00	7,785.21	-803.51	742.17	1,093.82	0.00	0.00	0.00
PBHL_ DRY CREEK 6-27(1980 FNL 1980 FWL)50' TGT RAD									
8,099.79	0.00	0.00	7,885.00	-803.51	742.17	1,093.82	0.00	0.00	0.00

Design Targets									
Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (ft)	Easting (ft)	Latitude	Longitude
- hit/miss target									
- Shape									
PBHL_ DRY CREEK (0.00	0.00	7,885.00	-803.51	742.17	1,252,165.54	3,173,904.56	40° 1' 26.076 N	104° 52' 44.508 W
- plan hits target center									
- Circle (radius 50.00)									

Casing Points					
Measured Depth (ft)	Vertical Depth (ft)	Name	Casing Diameter (in)	Hole Diameter (in)	
1,150.00	1,150.00	8 5/8"	8.62	11.00	

Database:	EDM 2003.21 Single User Db	Local Co-ordinate Reference:	Well P_DRY CREEK 6-27
Company:	US ROCKIES REGION PLANNING	TVD Reference:	WELL @ 5023.00ft (Original Well Elev)
Project:	KERR MCGEE OIL & GAS ONSHORE LP	MD Reference:	WELL @ 5023.00ft (Original Well Elev)
Site:	WELD_DRY CREEK PAD 7	North Reference:	Grid
Well:	P_DRY CREEK 6-27	Survey Calculation Method:	Minimum Curvature
Wellbore:	P_DRY CREEK 6-27		
Design:	PLAN #1 10-26-09 RHS		

Formations					
Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)
3,267.23	3,141.00	PARKMAN TOP			
4,957.79	4,743.00	SUSSEX TOP			
7,539.79	7,325.00	NIO A TOP			
7,939.79	7,725.00	CODELL TOP			

Plan Annotations				
Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates		Comment
		+N/-S (ft)	+E/-W (ft)	
1,250.00	1,250.00	0.00	0.00	Start Build 2.00
2,639.34	2,585.52	-242.67	224.14	Start 929.10 hold at 2639.34 MD
3,568.44	3,407.48	-560.84	518.03	Start Drop -2.00
4,957.79	4,743.00	-803.51	742.17	Start 3142.00 hold at 4957.79 MD
8,099.79	7,885.00	-803.51	742.17	TD at 8099.79



US ROCKIES REGION PLANNING

**KERR MCGEE OIL & GAS ONSHORE LP
WELD_DRY CREEK PAD 7
P_DRY CREEK 6-27**

**P_DRY CREEK 6-27
PLAN #1 10-26-09 RHS**

Anticollision Report

26 October, 2009



Company:	US ROCKIES REGION PLANNING	Local Co-ordinate Reference:	Well P_DRY CREEK 6-27
Project:	KERR MCGEE OIL & GAS ONSHORE LP	TVD Reference:	WELL @ 5023.00ft (Original Well Elev)
Reference Site:	WELD_DRY CREEK PAD 7	MD Reference:	WELL @ 5023.00ft (Original Well Elev)
Site Error:	0.00ft	North Reference:	Grid
Reference Well:	P_DRY CREEK 6-27	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00ft	Output errors are at	2.00 sigma
Reference Wellbore	P_DRY CREEK 6-27	Database:	EDM 2003.21 Single User Db
Reference Design:	PLAN #1 10-26-09 RHS	Offset TVD Reference:	Offset Datum

Reference	PLAN #1 10-26-09 RHS		
Filter type:	NO GLOBAL FILTER: Using user defined selection & filtering criteria		
Interpolation Method:	Stations	Error Model:	ISCWSA
Depth Range:	0.00 to 20,000.00ft	Scan Method:	Closest Approach 3D
Results Limited by:	Maximum center-center distance of 10,000.00ft	Error Surface:	Elliptical Conic
Warning Levels Evaluated at:	2.00 Sigma		

Survey Tool Program	Date	10/26/2009		
From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description
0.00	8,099.79	PLAN #1 10-26-09 RHS (P_DRY CREEK	MWD	MWD - Standard

Summary						
Site Name	Reference Measured Depth (ft)	Offset Measured Depth (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Separation Factor	Warning
Offset Well - Wellbore - Design						
WELD_DRY CREEK PAD 7						
P_DRY CREEK 22-27 - P_DRY CREEK 22-27 - PLAN #	1,250.00	1,250.00	16.80	11.44	3.134	CC, ES
P_DRY CREEK 22-27 - P_DRY CREEK 22-27 - PLAN #	1,300.00	1,300.02	17.07	11.51	3.071	SF
P_DRY CREEK 25-27 - P_DRY CREEK 25-27 - PLAN #	1,250.00	1,250.00	30.81	25.44	5.747	CC
P_DRY CREEK 25-27 - P_DRY CREEK 25-27 - PLAN #	1,700.00	1,696.61	31.84	24.75	4.491	ES
P_DRY CREEK 25-27 - P_DRY CREEK 25-27 - PLAN #	3,568.44	3,557.08	71.69	41.77	2.396	SF
P_DRY CREEK 31-27 - P_DRY CREEK 31-27 - PLAN #	1,250.00	1,250.00	64.41	61.08	19.360	CC, ES
P_DRY CREEK 31-27 - P_DRY CREEK 31-27 - PLAN #	1,300.00	1,298.90	65.13	61.67	18.852	SF
P_DRY CREEK 3-27 - P_DRY CREEK 3-27 - PLAN #1 1	1,250.00	1,250.00	14.00	8.64	2.612	CC
P_DRY CREEK 3-27 - P_DRY CREEK 3-27 - PLAN #1 1	1,300.00	1,299.79	14.07	8.51	2.527	ES, SF
P_DRY CREEK 4-27 - P_DRY CREEK 4-27 - PLAN #1 1	1,250.00	1,250.00	33.61	28.24	6.269	CC, ES
P_DRY CREEK 4-27 - P_DRY CREEK 4-27 - PLAN #1 1	1,300.00	1,299.56	34.22	28.65	6.145	SF
P_DRY CREEK 5-27 - P_DRY CREEK 5-27 - PLAN #1 1	1,250.00	1,250.00	47.61	42.25	8.881	CC, ES
P_DRY CREEK 5-27 - P_DRY CREEK 5-27 - PLAN #1 1	1,300.00	1,299.54	48.14	42.58	8.662	SF
UPRR 42 PAN AM 'AM-TRUE #1 EXISTING - UPRR 42	1,250.00	1,250.00	87.48	37.10	1.736	CC
UPRR 42 PAN AM 'AM-TRUE #1 EXISTING - UPRR 42	1,400.00	1,399.93	90.03	33.40	1.590	ES
UPRR 42 PAN AM 'AM-TRUE #1 EXISTING - UPRR 42	1,500.00	1,499.68	94.79	34.05	1.561	SF

Offset Design		WELD_DRY CREEK PAD 7 - P_DRY CREEK 22-27 - P_DRY CREEK 22-27 - PLAN #1 10-26-09 RHS										Offset Site Error:		0.00 ft
Survey Program:		0-MWD										Offset Well Error:		0.00 ft
Reference		Offset		Semi Major Axis			Distance							
Measured Depth	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	-90.41	-0.12	-16.80	16.80					
100.00	100.00	100.00	100.00	0.10	0.10	-90.41	-0.12	-16.80	16.80	16.61	0.19	87.949		
200.00	200.00	200.00	200.00	0.32	0.32	-90.41	-0.12	-16.80	16.80	16.16	0.64	26.230		
300.00	300.00	300.00	300.00	0.55	0.55	-90.41	-0.12	-16.80	16.80	15.71	1.09	15.414		
400.00	400.00	400.00	400.00	0.77	0.77	-90.41	-0.12	-16.80	16.80	15.26	1.54	10.913		
500.00	500.00	500.00	500.00	0.99	0.99	-90.41	-0.12	-16.80	16.80	14.81	1.99	8.447		
600.00	600.00	600.00	600.00	1.22	1.22	-90.41	-0.12	-16.80	16.80	14.36	2.44	6.890		
700.00	700.00	700.00	700.00	1.44	1.44	-90.41	-0.12	-16.80	16.80	13.91	2.89	5.818		
800.00	800.00	800.00	800.00	1.67	1.67	-90.41	-0.12	-16.80	16.80	13.47	3.34	5.034		
900.00	900.00	900.00	900.00	1.89	1.89	-90.41	-0.12	-16.80	16.80	13.02	3.79	4.437		
1,000.00	1,000.00	1,000.00	1,000.00	2.12	2.12	-90.41	-0.12	-16.80	16.80	12.57	4.24	3.966		
1,100.00	1,100.00	1,100.00	1,100.00	2.34	2.34	-90.41	-0.12	-16.80	16.80	12.12	4.69	3.585		

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_DRY CREEK 6-27
Project:	KERR MCGEE OIL & GAS ONSHORE LP	TVD Reference:	WELL @ 5023.00ft (Original Well Elev)
Reference Site:	WELD_DRY CREEK PAD 7	MD Reference:	WELL @ 5023.00ft (Original Well Elev)
Site Error:	0.00ft	North Reference:	Grid
Reference Well:	P_DRY CREEK 6-27	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00ft	Output errors are at	2.00 sigma
Reference Wellbore	P_DRY CREEK 6-27	Database:	EDM 2003.21 Single User Db
Reference Design:	PLAN #1 10-26-09 RHS	Offset TVD Reference:	Offset Datum

Offset Design WELD_DRY CREEK PAD 7 - P_DRY CREEK 22-27 - P_DRY CREEK 22-27 - PLAN #1 10-26-09 RHS												Offset Site Error:	0.00 ft
Survey Program: 0-MWD												Offset Well Error:	0.00 ft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	
1,200.00	1,200.00	1,200.00	1,200.00	2.57	2.57	-90.41	-0.12	-16.80	16.80	11.67	5.14	3.272	
1,250.00	1,250.00	1,250.00	1,250.00	2.68	2.68	-90.41	-0.12	-16.80	16.80	11.44	5.36	3.134 CC, ES	
1,300.00	1,300.00	1,300.02	1,300.01	2.78	2.78	131.93	-0.56	-16.77	17.07	11.51	5.56	3.071 SF	
1,400.00	1,399.93	1,400.01	1,399.94	2.96	2.95	129.25	-4.04	-16.52	19.22	13.32	5.90	3.255	
1,500.00	1,499.68	1,499.89	1,499.57	3.15	3.13	125.36	-10.98	-16.02	23.60	17.34	6.27	3.766	
1,600.00	1,599.13	1,599.56	1,598.70	3.36	3.33	121.64	-21.37	-15.27	30.30	23.64	6.66	4.549	
1,700.00	1,698.15	1,698.97	1,697.13	3.59	3.55	118.64	-35.14	-14.28	39.32	32.22	7.10	5.538	
1,800.00	1,796.63	1,798.02	1,794.68	3.86	3.80	116.36	-52.24	-13.05	50.65	43.05	7.61	6.660	
1,900.00	1,894.44	1,896.65	1,891.17	4.17	4.09	114.64	-72.61	-11.58	64.26	56.07	8.19	7.846	
2,000.00	1,991.46	1,994.80	1,986.43	4.54	4.44	113.31	-96.15	-9.88	80.10	71.23	8.87	9.032	
2,100.00	2,087.58	2,092.39	2,080.30	4.96	4.83	112.27	-122.76	-7.96	98.15	88.49	9.66	10.165	
2,200.00	2,182.68	2,189.36	2,172.62	5.45	5.29	111.41	-152.36	-5.83	118.35	107.79	10.56	11.207	
2,300.00	2,276.65	2,286.68	2,264.55	6.02	5.79	111.10	-184.19	-3.54	140.40	128.83	11.57	12.131	
2,400.00	2,369.36	2,383.86	2,356.34	6.65	6.32	111.88	-216.04	-1.24	163.73	151.06	12.68	12.917	
2,500.00	2,460.71	2,480.58	2,447.69	7.36	6.87	113.33	-247.75	1.04	188.46	174.61	13.85	13.610	
2,600.00	2,550.59	2,576.72	2,538.49	8.15	7.43	115.18	-279.26	3.31	214.77	199.70	15.08	14.247	
2,639.34	2,585.52	2,614.36	2,574.04	8.48	7.65	115.97	-291.60	4.20	225.61	210.04	15.57	14.490	
2,700.00	2,639.18	2,672.31	2,628.76	9.01	8.00	117.42	-310.59	5.57	242.61	226.26	16.35	14.838	
2,800.00	2,727.65	2,767.83	2,718.99	9.89	8.58	119.42	-341.90	7.83	270.91	253.26	17.65	15.351	
2,900.00	2,816.12	2,863.36	2,809.21	10.79	9.16	121.04	-373.21	10.08	299.45	280.49	18.95	15.799	
3,000.00	2,904.59	2,958.89	2,899.43	11.70	9.75	122.38	-404.52	12.34	328.17	307.90	20.27	16.191	
3,100.00	2,993.06	3,054.41	2,989.65	12.62	10.35	123.50	-435.83	14.59	357.03	335.44	21.59	16.537	
3,200.00	3,081.52	3,149.94	3,079.87	13.55	10.95	124.46	-467.14	16.85	386.00	363.09	22.92	16.843	
3,300.00	3,169.99	3,245.47	3,170.10	14.48	11.56	125.28	-498.45	19.11	415.06	390.81	24.25	17.117	
3,400.00	3,258.46	3,341.00	3,260.32	15.42	12.17	126.00	-529.76	21.36	444.18	418.60	25.58	17.362	
3,500.00	3,346.93	3,436.52	3,350.54	16.37	12.78	126.62	-561.07	23.62	473.36	446.44	26.92	17.583	
3,568.44	3,407.48	3,501.90	3,412.29	17.01	13.20	127.01	-582.50	25.16	493.36	465.52	27.84	17.722	
3,600.00	3,435.48	3,532.09	3,440.80	17.28	13.39	127.31	-592.40	25.88	502.49	474.25	28.24	17.792	
3,700.00	3,525.24	3,628.18	3,531.55	17.99	14.01	128.01	-623.89	28.15	530.08	500.63	29.45	17.998	
3,800.00	3,616.47	3,724.86	3,622.86	18.67	14.64	128.35	-655.58	30.43	555.60	524.92	30.68	18.110	
3,900.00	3,709.09	3,822.01	3,714.62	19.31	15.27	128.38	-687.42	32.72	579.04	547.12	31.92	18.143	
4,000.00	3,802.96	3,919.52	3,806.71	19.90	15.90	128.14	-719.38	35.03	600.40	567.24	33.16	18.108	
4,100.00	3,897.97	4,017.26	3,899.02	20.45	16.53	127.64	-751.42	37.34	619.74	585.35	34.39	18.019	
4,200.00	3,994.02	4,115.11	3,991.44	20.95	17.17	126.91	-783.49	39.65	637.14	601.52	35.62	17.885	
4,300.00	4,090.98	4,212.97	4,083.86	21.39	17.81	125.97	-815.57	41.96	652.71	615.87	36.84	17.719	
4,400.00	4,188.73	4,310.70	4,176.17	21.79	18.45	124.81	-847.60	44.27	666.59	628.56	38.03	17.530	
4,500.00	4,287.16	4,408.19	4,268.24	22.13	19.09	123.46	-879.55	46.57	678.94	639.75	39.18	17.327	
4,600.00	4,386.14	4,505.32	4,359.98	22.42	19.72	121.91	-911.39	48.86	689.95	649.65	40.30	17.121	
4,700.00	4,485.56	4,601.97	4,451.26	22.66	20.36	120.18	-943.07	51.15	699.86	658.50	41.36	16.921	
4,800.00	4,585.29	4,698.02	4,541.98	22.85	20.99	118.27	-974.55	53.41	708.92	666.56	42.36	16.736	
4,900.00	4,685.22	4,793.36	4,632.02	22.99	21.61	116.19	-1,005.80	55.67	717.40	674.12	43.28	16.576	
4,957.79	4,743.00	4,848.09	4,683.71	23.05	21.97	-107.82	-1,023.74	56.96	722.17	678.40	43.77	16.499	
5,000.00	4,785.21	4,887.95	4,721.36	23.09	22.24	-108.83	-1,036.80	57.90	725.76	681.63	44.12	16.449	
5,100.00	4,885.21	4,982.40	4,810.56	23.18	22.86	-111.18	-1,067.76	60.13	735.24	690.33	44.91	16.373	
5,200.00	4,985.21	5,076.85	4,899.77	23.27	23.48	-113.47	-1,098.72	62.36	746.04	700.42	45.62	16.352	
5,300.00	5,085.21	5,171.29	4,988.97	23.37	24.10	-115.70	-1,129.67	64.59	758.12	711.85	46.28	16.382	
5,400.00	5,185.21	5,265.74	5,078.17	23.47	24.72	-117.87	-1,160.63	66.82	771.41	724.54	46.87	16.457	
5,500.00	5,285.21	5,360.19	5,167.37	23.57	25.35	-119.96	-1,191.59	69.05	785.86	738.44	47.41	16.575	
5,600.00	5,385.21	5,454.63	5,256.57	23.67	25.97	-121.99	-1,222.54	71.29	801.39	753.49	47.90	16.731	
5,700.00	5,485.21	5,549.08	5,345.77	23.77	26.59	-123.94	-1,253.50	73.52	817.94	769.60	48.34	16.922	
5,800.00	5,585.21	5,656.85	5,447.95	23.87	27.16	-126.01	-1,287.67	75.98	834.90	786.24	48.66	17.158	
5,900.00	5,685.21	5,771.65	5,558.09	23.98	27.64	-127.88	-1,319.93	78.30	850.62	801.72	48.90	17.394	

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_DRY CREEK 6-27
Project:	KERR MCGEE OIL & GAS ONSHORE LP	TVD Reference:	WELL @ 5023.00ft (Original Well Elev)
Reference Site:	WELD_DRY CREEK PAD 7	MD Reference:	WELL @ 5023.00ft (Original Well Elev)
Site Error:	0.00ft	North Reference:	Grid
Reference Well:	P_DRY CREEK 6-27	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00ft	Output errors are at	2.00 sigma
Reference Wellbore	P_DRY CREEK 6-27	Database:	EDM 2003.21 Single User Db
Reference Design:	PLAN #1 10-26-09 RHS	Offset TVD Reference:	Offset Datum

Offset Design WELD_DRY CREEK PAD 7 - P_DRY CREEK 22-27 - P_DRY CREEK 22-27 - PLAN #1 10-26-09 RHS													Offset Site Error: 0.00 ft
Survey Program: 0-MWD													Offset Well Error: 0.00 ft
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Semi Major Axis Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning
6,000.00	5,785.21	5,889.01	5,671.93	24.09	28.09	-129.46	-1,348.33	80.35	864.67	815.55	49.13	17.601	
6,100.00	5,885.21	6,008.60	5,789.04	24.20	28.49	-130.76	-1,372.46	82.09	876.73	827.39	49.34	17.769	
6,200.00	5,985.21	6,130.07	5,908.92	24.31	28.83	-131.78	-1,391.96	83.49	886.54	836.99	49.55	17.892	
6,300.00	6,085.21	6,253.01	6,030.98	24.42	29.12	-132.52	-1,406.52	84.54	893.88	844.12	49.77	17.962	
6,400.00	6,185.21	6,376.99	6,154.60	24.54	29.34	-132.99	-1,415.90	85.22	898.63	848.64	49.99	17.975	
6,500.00	6,285.21	6,501.56	6,279.09	24.65	29.50	-133.19	-1,419.94	85.51	900.68	850.45	50.23	17.931	
6,600.00	6,385.21	6,607.69	6,385.21	24.77	29.60	-133.20	-1,420.10	85.52	900.76	850.30	50.46	17.851	
6,700.00	6,485.21	6,707.69	6,485.21	24.89	29.68	-133.20	-1,420.10	85.52	900.76	850.08	50.68	17.773	
6,800.00	6,585.21	6,807.69	6,585.21	25.01	29.77	-133.20	-1,420.10	85.52	900.76	849.86	50.90	17.695	
6,900.00	6,685.21	6,907.69	6,685.21	25.13	29.86	-133.20	-1,420.10	85.52	900.76	849.63	51.13	17.617	
7,000.00	6,785.21	7,007.69	6,785.21	25.25	29.95	-133.20	-1,420.10	85.52	900.76	849.40	51.36	17.539	
7,100.00	6,885.21	7,107.69	6,885.21	25.38	30.04	-133.20	-1,420.10	85.52	900.76	849.17	51.59	17.460	
7,200.00	6,985.21	7,207.69	6,985.21	25.50	30.13	-133.20	-1,420.10	85.52	900.76	848.93	51.83	17.380	
7,300.00	7,085.21	7,307.69	7,085.21	25.63	30.22	-133.20	-1,420.10	85.52	900.76	848.70	52.06	17.301	
7,400.00	7,185.21	7,407.69	7,185.21	25.76	30.31	-133.20	-1,420.10	85.52	900.76	848.46	52.30	17.221	
7,500.00	7,285.21	7,507.69	7,285.21	25.89	30.41	-133.20	-1,420.10	85.52	900.76	848.21	52.55	17.142	
7,600.00	7,385.21	7,607.69	7,385.21	26.02	30.51	-133.20	-1,420.10	85.52	900.76	847.97	52.79	17.062	
7,700.00	7,485.21	7,707.69	7,485.21	26.15	30.61	-133.20	-1,420.10	85.52	900.76	847.72	53.04	16.982	
7,800.00	7,585.21	7,807.69	7,585.21	26.28	30.71	-133.20	-1,420.10	85.52	900.76	847.47	53.29	16.901	
7,900.00	7,685.21	7,907.69	7,685.21	26.42	30.81	-133.20	-1,420.10	85.52	900.76	847.21	53.55	16.821	
8,000.00	7,785.21	8,007.69	7,785.21	26.55	30.91	-133.20	-1,420.10	85.52	900.76	846.96	53.81	16.741	
8,099.79	7,885.00	8,107.47	7,885.00	26.69	31.01	-133.20	-1,420.10	85.52	900.76	846.70	54.06	16.661	

Company:	US ROCKIES REGION PLANNING	Local Co-ordinate Reference:	Well P_DRY CREEK 6-27
Project:	KERR MCGEE OIL & GAS ONSHORE LP	TVD Reference:	WELL @ 5023.00ft (Original Well Elev)
Reference Site:	WELD_DRY CREEK PAD 7	MD Reference:	WELL @ 5023.00ft (Original Well Elev)
Site Error:	0.00ft	North Reference:	Grid
Reference Well:	P_DRY CREEK 6-27	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00ft	Output errors are at	2.00 sigma
Reference Wellbore	P_DRY CREEK 6-27	Database:	EDM 2003.21 Single User Db
Reference Design:	PLAN #1 10-26-09 RHS	Offset TVD Reference:	Offset Datum

Offset Design WELD_DRY CREEK PAD 7 - P_DRY CREEK 25-27 - P_DRY CREEK 25-27 - PLAN #1 10-26-09 RHS													Offset Site Error: 0.00 ft
Survey Program: 0-MWMD													Offset Well Error: 0.00 ft
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Semi Major Axis Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning
0.00	0.00	0.00	0.00	0.00	0.00	89.60	0.21	30.80	30.81				
100.00	100.00	100.00	100.00	0.10	0.10	89.60	0.21	30.80	30.81	30.61	0.19	161.240	
200.00	200.00	200.00	200.00	0.32	0.32	89.60	0.21	30.80	30.81	30.16	0.64	48.089	
300.00	300.00	300.00	300.00	0.55	0.55	89.60	0.21	30.80	30.81	29.72	1.09	28.259	
400.00	400.00	400.00	400.00	0.77	0.77	89.60	0.21	30.80	30.81	29.27	1.54	20.008	
500.00	500.00	500.00	500.00	0.99	0.99	89.60	0.21	30.80	30.81	28.82	1.99	15.486	
600.00	600.00	600.00	600.00	1.22	1.22	89.60	0.21	30.80	30.81	28.37	2.44	12.632	
700.00	700.00	700.00	700.00	1.44	1.44	89.60	0.21	30.80	30.81	27.92	2.89	10.666	
800.00	800.00	800.00	800.00	1.67	1.67	89.60	0.21	30.80	30.81	27.47	3.34	9.229	
900.00	900.00	900.00	900.00	1.89	1.89	89.60	0.21	30.80	30.81	27.02	3.79	8.134	
1,000.00	1,000.00	1,000.00	1,000.00	2.12	2.12	89.60	0.21	30.80	30.81	26.57	4.24	7.271	
1,100.00	1,100.00	1,100.00	1,100.00	2.34	2.34	89.60	0.21	30.80	30.81	26.12	4.69	6.573	
1,200.00	1,200.00	1,200.00	1,200.00	2.57	2.57	89.60	0.21	30.80	30.81	25.67	5.14	5.998	
1,250.00	1,250.00	1,250.00	1,250.00	2.68	2.68	89.60	0.21	30.80	30.81	25.44	5.36	5.747 CC	
1,300.00	1,300.00	1,299.62	1,299.62	2.78	2.78	-47.70	-0.09	31.11	30.82	25.26	5.56	5.544	
1,400.00	1,399.93	1,398.87	1,398.80	2.96	2.96	-47.94	-2.50	33.56	30.92	25.00	5.91	5.229	
1,500.00	1,499.68	1,498.11	1,497.80	3.15	3.15	-48.42	-7.32	38.45	31.12	24.84	6.28	4.956	
1,600.00	1,599.13	1,597.36	1,596.51	3.36	3.36	-49.12	-14.55	45.78	31.42	24.76	6.67	4.713	
1,700.00	1,698.15	1,696.61	1,694.80	3.59	3.59	-50.03	-24.18	55.54	31.84	24.75	7.09	4.491 ES	
1,800.00	1,796.63	1,795.86	1,792.57	3.86	3.85	-51.13	-36.19	67.72	32.36	24.80	7.56	4.282	
1,900.00	1,894.44	1,895.12	1,889.68	4.17	4.16	-52.40	-50.57	82.31	33.01	24.91	8.09	4.078	
2,000.00	1,991.46	1,994.38	1,986.03	4.54	4.52	-53.82	-67.30	99.28	33.78	25.06	8.72	3.875	
2,100.00	2,087.58	2,093.64	2,081.50	4.96	4.94	-55.35	-86.37	118.62	34.68	25.23	9.45	3.671	
2,200.00	2,182.68	2,192.90	2,175.97	5.45	5.43	-56.98	-107.75	140.30	35.72	25.42	10.31	3.466	
2,300.00	2,276.65	2,292.18	2,269.34	6.02	5.98	-58.68	-131.42	164.30	36.91	25.60	11.31	3.264	
2,400.00	2,369.36	2,391.45	2,361.49	6.65	6.61	-60.41	-157.35	190.60	38.24	25.78	12.46	3.068	
2,500.00	2,460.71	2,490.73	2,452.31	7.36	7.31	-62.15	-185.50	219.15	39.72	25.94	13.79	2.881	
2,600.00	2,550.59	2,590.02	2,541.69	8.15	8.09	-63.89	-215.85	249.93	41.36	26.08	15.28	2.706	
2,639.34	2,585.52	2,629.09	2,576.44	8.48	8.42	-64.57	-228.38	262.64	42.05	26.13	15.92	2.641	
2,700.00	2,639.18	2,689.32	2,629.52	9.01	8.94	-64.86	-248.35	282.89	43.43	26.53	16.89	2.571	
2,800.00	2,727.65	2,789.09	2,716.60	9.89	9.86	-63.32	-282.55	317.57	46.55	28.16	18.38	2.532	
2,900.00	2,816.12	2,889.03	2,803.77	10.79	10.80	-61.87	-316.86	352.37	49.75	29.87	19.88	2.502	
3,000.00	2,904.59	2,988.97	2,890.95	11.70	11.76	-60.60	-351.18	387.17	52.98	31.60	21.38	2.478	
3,100.00	2,993.06	3,088.91	2,978.13	12.62	12.73	-59.48	-385.50	421.97	56.23	33.34	22.89	2.457	
3,200.00	3,081.52	3,188.85	3,065.30	13.55	13.71	-58.47	-419.81	456.77	59.51	35.11	24.39	2.440	
3,300.00	3,169.99	3,288.79	3,152.48	14.48	14.69	-57.58	-454.13	491.57	62.79	36.90	25.89	2.425	
3,400.00	3,258.46	3,388.73	3,239.65	15.42	15.68	-56.77	-488.44	526.38	66.10	38.70	27.39	2.413	
3,500.00	3,346.93	3,488.67	3,326.83	16.37	16.68	-56.04	-522.76	561.18	69.41	40.52	28.89	2.402	
3,568.44	3,407.48	3,557.08	3,386.49	17.01	17.36	-55.58	-546.25	585.00	71.69	41.77	29.92	2.396 SF	
3,600.00	3,435.48	3,588.61	3,414.00	17.28	17.68	-55.28	-557.07	595.98	72.83	42.49	30.34	2.401	
3,700.00	3,525.24	3,688.43	3,501.07	17.99	18.68	-53.05	-591.35	630.74	77.85	46.63	31.22	2.494	
3,800.00	3,616.47	3,788.01	3,587.92	18.67	19.69	-49.32	-625.54	665.41	85.21	53.67	31.53	2.702	
3,900.00	3,709.09	3,887.21	3,674.46	19.31	20.69	-44.73	-659.60	699.96	95.33	63.97	31.36	3.040	
4,000.00	3,802.96	3,985.92	3,760.56	19.90	21.69	-39.90	-693.50	734.33	108.62	77.77	30.85	3.521	
4,100.00	3,897.97	4,084.02	3,846.13	20.45	22.68	-35.27	-727.18	768.49	125.35	95.17	30.18	4.153	
4,200.00	3,994.02	4,181.39	3,931.06	20.95	23.67	-31.09	-760.61	802.40	145.68	116.18	29.50	4.938	
4,300.00	4,090.98	4,277.91	4,015.25	21.39	24.65	-27.45	-793.76	836.01	169.66	140.76	28.90	5.871	
4,400.00	4,188.73	4,373.46	4,098.60	21.79	25.62	-24.35	-826.56	869.28	197.27	168.86	28.41	6.944	
4,500.00	4,287.16	4,467.93	4,181.00	22.13	26.59	-21.74	-859.00	902.18	228.44	200.39	28.05	8.144	
4,600.00	4,386.14	4,561.20	4,262.35	22.42	27.54	-19.55	-891.03	934.65	263.11	235.33	27.79	9.469	
4,700.00	4,485.56	4,653.16	4,342.56	22.66	28.48	-17.72	-922.60	966.68	301.21	273.61	27.60	10.915	
4,800.00	4,585.29	4,743.69	4,421.53	22.85	29.40	-16.18	-953.69	998.20	342.65	315.20	27.45	12.482	

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_DRY CREEK 6-27
Project:	KERR MCGEE OIL & GAS ONSHORE LP	TVD Reference:	WELL @ 5023.00ft (Original Well Elev)
Reference Site:	WELD_DRY CREEK PAD 7	MD Reference:	WELL @ 5023.00ft (Original Well Elev)
Site Error:	0.00ft	North Reference:	Grid
Reference Well:	P_DRY CREEK 6-27	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00ft	Output errors are at	2.00 sigma
Reference Wellbore	P_DRY CREEK 6-27	Database:	EDM 2003.21 Single User Db
Reference Design:	PLAN #1 10-26-09 RHS	Offset TVD Reference:	Offset Datum

Offset Design WELD_DRY CREEK PAD 7 - P_DRY CREEK 25-27 - P_DRY CREEK 25-27 - PLAN #1 10-26-09 RHS												Offset Site Error:	0.00 ft
Survey Program: 0-MWD												Offset Well Error:	0.00 ft
Reference	Offset	Semi Major Axis		Distance									
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning
4,900.00	4,685.22	4,832.69	4,499.16	22.99	30.31	-14.89	-984.25	1,029.19	387.36	360.02	27.33	14.172	
4,957.79	4,743.00	4,883.38	4,543.37	23.05	30.83	123.04	-1,001.65	1,046.84	414.65	387.38	27.27	15.207	
5,000.00	4,785.21	4,920.20	4,575.49	23.09	31.21	123.58	-1,014.29	1,059.66	434.99	407.68	27.31	15.929	
5,100.00	4,885.21	5,007.42	4,651.58	23.18	32.10	124.68	-1,044.24	1,090.04	483.27	455.80	27.47	17.591	
5,200.00	4,985.21	5,094.65	4,727.66	23.27	32.99	125.59	-1,074.19	1,120.41	531.67	503.96	27.71	19.187	
5,300.00	5,085.21	5,181.88	4,803.75	23.37	33.89	126.34	-1,104.14	1,150.79	580.15	552.15	28.00	20.720	
5,400.00	5,185.21	5,269.10	4,879.83	23.47	34.78	126.98	-1,134.09	1,181.16	628.69	600.37	28.33	22.193	
5,500.00	5,285.21	5,368.97	4,967.18	23.57	35.73	127.60	-1,168.07	1,215.62	676.91	648.20	28.71	23.579	
5,600.00	5,385.21	5,486.63	5,071.99	23.67	36.66	128.17	-1,205.61	1,253.69	722.11	692.97	29.14	24.778	
5,700.00	5,485.21	5,609.16	5,183.37	23.77	37.51	128.64	-1,241.45	1,290.03	763.58	733.97	29.61	25.791	
5,800.00	5,585.21	5,736.40	5,301.23	23.87	38.31	129.02	-1,275.10	1,324.16	801.09	771.00	30.09	26.620	
5,900.00	5,685.21	5,868.10	5,425.34	23.98	39.06	129.33	-1,306.01	1,355.51	834.40	803.81	30.59	27.274	
6,000.00	5,785.21	6,003.90	5,555.29	24.09	39.74	129.58	-1,333.67	1,383.55	863.31	832.21	31.10	27.762	
6,100.00	5,885.21	6,143.36	5,690.53	24.20	40.32	129.77	-1,357.53	1,407.76	887.61	856.02	31.59	28.095	
6,200.00	5,985.21	6,285.96	5,830.35	24.31	40.81	129.92	-1,377.13	1,427.63	907.12	875.04	32.08	28.278	
6,300.00	6,085.21	6,431.06	5,973.88	24.42	41.20	130.03	-1,392.03	1,442.74	921.71	889.16	32.54	28.323	
6,400.00	6,185.21	6,577.98	6,120.11	24.54	41.49	130.10	-1,401.89	1,452.75	931.25	898.26	32.98	28.233	
6,500.00	6,285.21	6,725.97	6,267.93	24.65	41.67	130.13	-1,406.50	1,457.42	935.67	902.27	33.40	28.017	
6,600.00	6,385.21	6,843.25	6,385.21	24.77	41.76	130.13	-1,406.85	1,457.77	936.00	902.25	33.75	27.735	
6,700.00	6,485.21	6,943.25	6,485.21	24.89	41.83	130.13	-1,406.85	1,457.77	936.00	901.93	34.07	27.469	
6,800.00	6,585.21	7,043.25	6,585.21	25.01	41.89	130.13	-1,406.85	1,457.77	936.00	901.60	34.40	27.207	
6,900.00	6,685.21	7,143.25	6,685.21	25.13	41.96	130.13	-1,406.85	1,457.77	936.00	901.27	34.73	26.947	
7,000.00	6,785.21	7,243.25	6,785.21	25.25	42.03	130.13	-1,406.85	1,457.77	936.00	900.93	35.07	26.691	
7,100.00	6,885.21	7,343.25	6,885.21	25.38	42.10	130.13	-1,406.85	1,457.77	936.00	900.60	35.40	26.437	
7,200.00	6,985.21	7,443.25	6,985.21	25.50	42.18	130.13	-1,406.85	1,457.77	936.00	900.26	35.74	26.187	
7,300.00	7,085.21	7,543.25	7,085.21	25.63	42.25	130.13	-1,406.85	1,457.77	936.00	899.92	36.08	25.939	
7,400.00	7,185.21	7,643.25	7,185.21	25.76	42.32	130.13	-1,406.85	1,457.77	936.00	899.57	36.43	25.695	
7,500.00	7,285.21	7,743.25	7,285.21	25.89	42.40	130.13	-1,406.85	1,457.77	936.00	899.23	36.77	25.454	
7,600.00	7,385.21	7,843.25	7,385.21	26.02	42.47	130.13	-1,406.85	1,457.77	936.00	898.88	37.12	25.215	
7,700.00	7,485.21	7,943.25	7,485.21	26.15	42.55	130.13	-1,406.85	1,457.77	936.00	898.53	37.47	24.980	
7,800.00	7,585.21	8,043.25	7,585.21	26.28	42.63	130.13	-1,406.85	1,457.77	936.00	898.18	37.82	24.748	
7,900.00	7,685.21	8,143.25	7,685.21	26.42	42.71	130.13	-1,406.85	1,457.77	936.00	897.83	38.18	24.518	
8,000.00	7,785.21	8,243.25	7,785.21	26.55	42.79	130.13	-1,406.85	1,457.77	936.00	897.47	38.53	24.292	
8,099.79	7,885.00	8,343.04	7,885.00	26.69	42.87	130.13	-1,406.85	1,457.77	936.00	897.11	38.89	24.069	

Company:	US ROCKIES REGION PLANNING	Local Co-ordinate Reference:	Well P_DRY CREEK 6-27
Project:	KERR MCGEE OIL & GAS ONSHORE LP	TVD Reference:	WELL @ 5023.00ft (Original Well Elev)
Reference Site:	WELD_DRY CREEK PAD 7	MD Reference:	WELL @ 5023.00ft (Original Well Elev)
Site Error:	0.00ft	North Reference:	Grid
Reference Well:	P_DRY CREEK 6-27	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00ft	Output errors are at	2.00 sigma
Reference Wellbore	P_DRY CREEK 6-27	Database:	EDM 2003.21 Single User Db
Reference Design:	PLAN #1 10-26-09 RHS	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.00 ft
Survey Program: 0-Good_gyro												Offset Well Error:	0.00 ft
Reference	Offset	Semi Major Axis					Distance						Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	
0.00	0.00	0.00	0.00	0.00	0.00	-90.40	-0.45	-64.41	64.41				
100.00	100.00	100.00	100.00	0.10	0.04	-90.40	-0.45	-64.41	64.41	64.27	0.14	459.973	
200.00	200.00	200.00	200.00	0.32	0.10	-90.40	-0.45	-64.41	64.41	63.99	0.42	154.404	
300.00	300.00	300.00	300.00	0.55	0.15	-90.40	-0.45	-64.41	64.41	63.72	0.69	92.773	
400.00	400.00	400.00	400.00	0.77	0.20	-90.40	-0.45	-64.41	64.41	63.44	0.97	66.307	
500.00	500.00	500.00	500.00	0.99	0.25	-90.40	-0.45	-64.41	64.41	63.16	1.25	51.589	
600.00	600.00	600.00	600.00	1.22	0.31	-90.40	-0.45	-64.41	64.41	62.89	1.53	42.218	
700.00	700.00	700.00	700.00	1.44	0.36	-90.40	-0.45	-64.41	64.41	62.61	1.80	35.728	
800.00	800.00	800.00	800.00	1.67	0.41	-90.40	-0.45	-64.41	64.41	62.33	2.08	30.968	
900.00	900.00	900.00	900.00	1.89	0.46	-90.40	-0.45	-64.41	64.41	62.05	2.36	27.327	
1,000.00	1,000.00	1,000.00	1,000.00	2.12	0.52	-90.40	-0.45	-64.41	64.41	61.78	2.63	24.452	
1,100.00	1,100.00	1,100.00	1,100.00	2.34	0.57	-90.40	-0.45	-64.41	64.41	61.50	2.91	22.124	
1,200.00	1,200.00	1,200.00	1,200.00	2.57	0.62	-90.40	-0.45	-64.41	64.41	61.22	3.19	20.201	
1,250.00	1,250.00	1,250.00	1,250.00	2.68	0.65	-90.40	-0.45	-64.41	64.41	61.08	3.33	19.360 CC, ES	
1,300.00	1,300.00	1,298.90	1,298.90	2.78	0.67	132.55	-0.51	-64.82	65.13	61.67	3.45	18.852 SF	
1,400.00	1,399.93	1,396.42	1,396.36	2.96	0.72	134.12	-0.98	-68.11	70.89	67.20	3.69	19.218	
1,500.00	1,499.68	1,493.14	1,492.85	3.15	0.78	136.59	-1.90	-74.62	82.53	78.59	3.93	20.989	
1,600.00	1,599.13	1,588.53	1,587.74	3.36	0.84	139.17	-3.26	-84.19	100.11	95.92	4.19	23.911	
1,700.00	1,698.15	1,682.10	1,680.46	3.59	0.92	141.40	-5.03	-96.61	123.61	119.15	4.46	27.730	
1,800.00	1,796.63	1,773.41	1,770.50	3.86	1.02	143.14	-7.17	-111.61	152.91	148.16	4.75	32.198	
1,900.00	1,894.44	1,862.05	1,857.41	4.17	1.13	144.43	-9.62	-128.89	187.81	182.74	5.07	37.075	
2,000.00	1,991.46	1,947.69	1,940.81	4.54	1.27	145.34	-12.36	-148.10	228.10	222.69	5.41	42.150	
2,100.00	2,087.58	2,033.92	2,024.28	4.96	1.43	146.03	-15.41	-169.54	273.17	267.38	5.79	47.154	
2,200.00	2,182.68	2,121.45	2,108.94	5.45	1.61	146.72	-18.54	-191.54	321.17	314.96	6.21	51.715	
2,300.00	2,276.65	2,207.40	2,192.08	6.02	1.79	147.38	-21.61	-213.15	371.82	365.16	6.66	55.821	
2,400.00	2,369.36	2,291.67	2,273.59	6.65	1.97	147.97	-24.63	-234.33	425.12	417.98	7.15	59.490	
2,500.00	2,460.71	2,374.16	2,353.38	7.36	2.15	148.51	-27.58	-255.06	481.05	473.38	7.67	62.749	
2,600.00	2,550.59	2,454.77	2,431.34	8.15	2.33	148.97	-30.46	-275.32	539.57	531.34	8.22	65.623	
2,639.34	2,585.52	2,485.95	2,461.50	8.48	2.40	149.14	-31.58	-283.16	563.29	554.84	8.45	66.654	
2,700.00	2,639.18	2,533.77	2,507.75	9.01	2.50	149.81	-33.29	-295.18	600.20	591.39	8.81	68.162	
2,800.00	2,727.65	2,612.61	2,584.01	9.89	2.68	150.76	-36.11	-315.00	661.14	651.74	9.40	70.360	
2,900.00	2,816.12	2,691.46	2,660.27	10.79	2.86	151.55	-38.93	-334.81	722.18	712.18	9.99	72.255	
3,000.00	2,904.59	2,770.30	2,736.54	11.70	3.04	152.22	-41.75	-354.63	783.29	772.69	10.60	73.901	
3,100.00	2,993.06	2,849.15	2,812.80	12.62	3.23	152.80	-44.57	-374.45	844.46	833.25	11.21	75.342	
3,200.00	3,081.52	2,927.99	2,889.06	13.55	3.41	153.29	-47.39	-394.27	905.68	893.85	11.82	76.612	
3,300.00	3,169.99	3,006.84	2,965.32	14.48	3.59	153.73	-50.21	-414.08	966.93	954.49	12.44	77.737	
3,400.00	3,258.46	3,085.68	3,041.58	15.42	3.78	154.11	-53.03	-433.90	1,028.21	1,015.16	13.06	78.739	
3,500.00	3,346.93	3,164.52	3,117.84	16.37	3.96	154.45	-55.85	-453.72	1,089.52	1,075.84	13.68	79.638	
3,568.44	3,407.48	3,218.49	3,170.04	17.01	4.09	154.66	-57.78	-467.28	1,131.50	1,117.39	14.11	80.200	
3,600.00	3,435.48	3,243.47	3,194.20	17.28	4.14	154.96	-58.67	-473.56	1,150.73	1,136.46	14.27	80.619	
3,700.00	3,525.24	3,323.92	3,272.02	17.99	4.33	155.77	-61.55	-493.79	1,210.02	1,195.26	14.75	82.023	
3,800.00	3,616.47	3,406.27	3,351.67	18.67	4.53	156.43	-64.49	-514.48	1,266.71	1,251.50	15.22	83.235	
3,900.00	3,709.09	3,490.41	3,433.05	19.31	4.72	156.96	-67.50	-535.63	1,320.75	1,305.08	15.67	84.290	
4,000.00	3,802.96	3,576.23	3,518.06	19.90	4.93	157.38	-70.57	-557.20	1,372.05	1,355.95	16.10	85.218	
4,100.00	3,897.97	3,663.64	3,600.60	20.45	5.13	157.70	-73.70	-579.17	1,420.57	1,404.06	16.51	86.041	
4,200.00	3,994.02	3,752.52	3,686.57	20.95	5.34	157.93	-76.88	-601.51	1,466.24	1,449.35	16.90	86.778	
4,300.00	4,090.98	3,842.78	3,773.87	21.39	5.56	158.08	-80.11	-624.20	1,509.03	1,491.77	17.26	87.445	
4,400.00	4,188.73	3,934.29	3,862.38	21.79	5.77	158.16	-83.38	-647.20	1,548.88	1,531.29	17.59	88.054	
4,500.00	4,287.16	4,026.95	3,952.01	22.13	5.99	158.18	-86.69	-670.49	1,585.78	1,567.88	17.90	88.615	
4,600.00	4,386.14	4,120.64	4,042.63	22.42	6.21	158.12	-90.04	-694.04	1,619.68	1,601.51	18.17	89.137	
4,700.00	4,485.56	4,215.26	4,134.15	22.66	6.44	158.01	-93.43	-717.82	1,650.56	1,632.15	18.42	89.626	
4,800.00	4,585.29	4,310.68	4,226.44	22.85	6.67	157.84	-96.84	-741.81	1,678.42	1,659.79	18.63	90.087	

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_DRY CREEK 6-27
Project:	KERR MCGEE OIL & GAS ONSHORE LP	TVD Reference:	WELL @ 5023.00ft (Original Well Elev)
Reference Site:	WELD_DRY CREEK PAD 7	MD Reference:	WELL @ 5023.00ft (Original Well Elev)
Site Error:	0.00ft	North Reference:	Grid
Reference Well:	P_DRY CREEK 6-27	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00ft	Output errors are at	2.00 sigma
Reference Wellbore	P_DRY CREEK 6-27	Database:	EDM 2003.21 Single User Db
Reference Design:	PLAN #1 10-26-09 RHS	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.00 ft
WELD_DRY CREEK PAD 7 - P_DRY CREEK 31-27 - P_DRY CREEK 31-27 - PLAN #1 10-26-09 RHS												Offset Well Error:	0.00 ft
Survey Program: 0-Good_gyro													
Reference		Offset		Semi Major Axis			Distance						
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning
4,900.00	4,685.22	4,406.78	4,319.40	22.99	6.89	157.62	-100.28	-765.96	1,703.24	1,684.39	18.85	90.355	
4,957.79	4,743.00	4,462.59	4,373.37	23.05	7.03	-65.27	-102.27	-779.99	1,716.19	1,697.20	18.99	90.362	
5,000.00	4,785.21	4,503.42	4,412.87	23.09	7.12	-65.46	-103.74	-790.25	1,725.30	1,706.16	19.13	90.171	
5,100.00	4,885.21	4,600.14	4,506.42	23.18	7.35	-65.90	-107.19	-814.56	1,746.93	1,727.46	19.47	89.736	
5,200.00	4,985.21	4,696.87	4,599.98	23.27	7.58	-66.34	-110.65	-838.88	1,768.66	1,748.86	19.80	89.328	
5,300.00	5,085.21	4,793.59	4,693.53	23.37	7.81	-66.76	-114.11	-863.19	1,790.49	1,770.36	20.13	88.945	
5,400.00	5,185.21	4,890.31	4,787.08	23.47	8.04	-67.17	-117.57	-887.50	1,812.41	1,791.95	20.46	88.586	
5,500.00	5,285.21	4,987.04	4,880.64	23.57	8.27	-67.58	-121.03	-911.81	1,834.42	1,813.64	20.79	88.249	
5,600.00	5,385.21	5,083.76	4,974.19	23.67	8.50	-67.97	-124.49	-936.12	1,856.52	1,835.40	21.12	87.886	
5,700.00	5,485.21	5,180.48	5,067.75	23.77	8.73	-68.36	-127.95	-960.43	1,878.70	1,857.24	21.46	87.535	
5,800.00	5,585.21	5,277.21	5,161.30	23.87	8.96	-68.73	-131.41	-984.75	1,900.96	1,879.16	21.80	87.205	
5,900.00	5,685.21	5,373.93	5,254.86	23.98	9.19	-69.10	-134.87	-1,009.06	1,923.30	1,901.16	22.13	86.895	
6,000.00	5,785.21	5,470.65	5,348.41	24.09	9.42	-69.46	-138.33	-1,033.37	1,945.71	1,923.24	22.47	86.603	
6,100.00	5,885.21	5,567.38	5,441.96	24.20	9.65	-69.81	-141.79	-1,057.68	1,968.20	1,945.40	22.80	86.329	
6,200.00	5,985.21	5,664.10	5,535.52	24.31	9.88	-70.16	-145.25	-1,081.99	1,990.75	1,967.62	23.13	86.072	
6,300.00	6,085.21	5,761.07	5,628.43	24.42	10.18	-70.59	-149.73	-1,113.52	2,013.24	1,989.73	23.51	85.638	
6,400.00	6,185.21	6,056.72	5,919.03	24.54	10.66	-71.26	-156.93	-1,164.07	2,030.44	2,006.40	24.03	84.494	
6,500.00	6,285.21	6,329.86	6,190.71	24.65	10.94	-71.61	-160.75	-1,190.91	2,039.33	2,014.92	24.41	83.535	
6,600.00	6,385.21	6,524.43	6,385.21	24.77	11.01	-71.66	-161.29	-1,194.71	2,040.58	2,015.93	24.65	82.797	
6,700.00	6,485.21	6,624.43	6,485.21	24.89	11.02	-71.66	-161.29	-1,194.71	2,040.58	2,015.74	24.83	82.175	
6,800.00	6,585.21	6,724.43	6,585.21	25.01	11.04	-71.66	-161.29	-1,194.71	2,040.58	2,015.56	25.02	81.557	
6,900.00	6,685.21	6,824.43	6,685.21	25.13	11.06	-71.66	-161.29	-1,194.71	2,040.58	2,015.37	25.21	80.943	
7,000.00	6,785.21	6,924.43	6,785.21	25.25	11.07	-71.66	-161.29	-1,194.71	2,040.58	2,015.18	25.40	80.333	
7,100.00	6,885.21	7,024.43	6,885.21	25.38	11.09	-71.66	-161.29	-1,194.71	2,040.58	2,014.98	25.59	79.727	
7,200.00	6,985.21	7,124.43	6,985.21	25.50	11.11	-71.66	-161.29	-1,194.71	2,040.58	2,014.79	25.79	79.126	
7,300.00	7,085.21	7,224.43	7,085.21	25.63	11.12	-71.66	-161.29	-1,194.71	2,040.58	2,014.59	25.98	78.529	
7,400.00	7,185.21	7,324.43	7,185.21	25.76	11.14	-71.66	-161.29	-1,194.71	2,040.58	2,014.39	26.18	77.937	
7,500.00	7,285.21	7,424.43	7,285.21	25.89	11.16	-71.66	-161.29	-1,194.71	2,040.58	2,014.20	26.38	77.350	
7,600.00	7,385.21	7,524.43	7,385.21	26.02	11.18	-71.66	-161.29	-1,194.71	2,040.58	2,014.00	26.58	76.767	
7,700.00	7,485.21	7,624.43	7,485.21	26.15	11.20	-71.66	-161.29	-1,194.71	2,040.58	2,013.79	26.78	76.189	
7,800.00	7,585.21	7,724.43	7,585.21	26.28	11.22	-71.66	-161.29	-1,194.71	2,040.58	2,013.59	26.99	75.616	
7,900.00	7,685.21	7,824.43	7,685.21	26.42	11.23	-71.66	-161.29	-1,194.71	2,040.58	2,013.39	27.19	75.048	
8,000.00	7,785.21	7,924.43	7,785.21	26.55	11.25	-71.66	-161.29	-1,194.71	2,040.58	2,013.18	27.40	74.485	
8,099.79	7,885.00	8,024.21	7,885.00	26.69	11.27	-71.66	-161.29	-1,194.71	2,040.58	2,012.97	27.60	73.929	

Company:	US ROCKIES REGION PLANNING	Local Co-ordinate Reference:	Well P_DRY CREEK 6-27
Project:	KERR MCGEE OIL & GAS ONSHORE LP	TVD Reference:	WELL @ 5023.00ft (Original Well Elev)
Reference Site:	WELD_DRY CREEK PAD 7	MD Reference:	WELL @ 5023.00ft (Original Well Elev)
Site Error:	0.00ft	North Reference:	Grid
Reference Well:	P_DRY CREEK 6-27	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00ft	Output errors are at	2.00 sigma
Reference Wellbore	P_DRY CREEK 6-27	Database:	EDM 2003.21 Single User Db
Reference Design:	PLAN #1 10-26-09 RHS	Offset TVD Reference:	Offset Datum

Offset Design WELD_DRY CREEK PAD 7 - P_DRY CREEK 3-27 - P_DRY CREEK 3-27 - PLAN #1 10-26-09 RHS												Offset Site Error:	0.00 ft
Survey Program: 0-MWD												Offset Well Error:	0.00 ft
Reference	Offset	Semi Major Axis		Distance		Warning							
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	
0.00	0.00	0.00	0.00	0.00	0.00	89.55	0.11	14.00	14.00				
100.00	100.00	100.00	100.00	0.10	0.10	89.55	0.11	14.00	14.00	13.81	0.19	73.291	
200.00	200.00	200.00	200.00	0.32	0.32	89.55	0.11	14.00	14.00	13.36	0.64	21.859	
300.00	300.00	300.00	300.00	0.55	0.55	89.55	0.11	14.00	14.00	12.91	1.09	12.845	
400.00	400.00	400.00	400.00	0.77	0.77	89.55	0.11	14.00	14.00	12.46	1.54	9.095	
500.00	500.00	500.00	500.00	0.99	0.99	89.55	0.11	14.00	14.00	12.01	1.99	7.039	
600.00	600.00	600.00	600.00	1.22	1.22	89.55	0.11	14.00	14.00	11.56	2.44	5.742	
700.00	700.00	700.00	700.00	1.44	1.44	89.55	0.11	14.00	14.00	11.11	2.89	4.848	
800.00	800.00	800.00	800.00	1.67	1.67	89.55	0.11	14.00	14.00	10.66	3.34	4.195	
900.00	900.00	900.00	900.00	1.89	1.89	89.55	0.11	14.00	14.00	10.22	3.79	3.697	
1,000.00	1,000.00	1,000.00	1,000.00	2.12	2.12	89.55	0.11	14.00	14.00	9.77	4.24	3.305	
1,100.00	1,100.00	1,100.00	1,100.00	2.34	2.34	89.55	0.11	14.00	14.00	9.32	4.69	2.988	
1,200.00	1,200.00	1,200.00	1,200.00	2.57	2.57	89.55	0.11	14.00	14.00	8.87	5.14	2.726	
1,250.00	1,250.00	1,250.00	1,250.00	2.68	2.68	89.55	0.11	14.00	14.00	8.64	5.36	2.612 CC	
1,300.00	1,300.00	1,299.79	1,299.79	2.78	2.79	-50.05	0.36	14.35	14.07	8.51	5.57	2.527 ES, SF	
1,400.00	1,399.93	1,399.23	1,399.16	2.96	3.00	-67.15	2.38	17.15	15.44	9.48	5.96	2.590	
1,500.00	1,499.68	1,498.18	1,497.87	3.15	3.22	-90.09	6.40	22.71	21.10	14.74	6.37	3.315	
1,600.00	1,599.13	1,596.36	1,595.51	3.36	3.45	-105.98	12.35	30.96	32.72	25.93	6.79	4.819	
1,700.00	1,698.15	1,693.46	1,691.69	3.59	3.69	-114.75	20.16	41.77	49.83	42.59	7.23	6.889	
1,800.00	1,796.63	1,789.20	1,786.02	3.86	3.96	-119.61	29.72	55.02	71.85	64.15	7.70	9.327	
1,900.00	1,894.44	1,883.33	1,878.18	4.17	4.25	-122.42	40.92	70.53	98.44	90.23	8.21	11.987	
2,000.00	1,991.46	1,975.62	1,967.88	4.54	4.58	-124.11	53.61	88.11	129.38	120.61	8.77	14.756	
2,100.00	2,087.58	2,065.85	2,054.86	4.96	4.94	-125.13	67.65	107.56	164.49	155.11	9.38	17.542	
2,200.00	2,182.68	2,153.84	2,138.92	5.45	5.34	-125.71	82.88	128.65	203.60	193.55	10.04	20.270	
2,300.00	2,276.65	2,241.57	2,221.98	6.02	5.78	-126.07	99.42	151.56	246.39	235.61	10.78	22.865	
2,400.00	2,369.36	2,330.67	2,306.19	6.65	6.26	-126.61	116.45	175.15	291.42	279.85	11.57	25.184	
2,500.00	2,460.71	2,418.61	2,389.30	7.36	6.75	-127.28	133.26	198.44	338.45	326.04	12.41	27.262	
2,600.00	2,550.59	2,505.27	2,471.21	8.15	7.24	-127.99	149.83	221.39	387.54	374.24	13.30	29.137	
2,639.34	2,585.52	2,539.00	2,503.09	8.48	7.44	-128.27	156.28	230.32	407.42	393.76	13.66	29.822	
2,700.00	2,639.18	2,590.83	2,552.08	9.01	7.74	-129.20	166.19	244.04	438.37	424.12	14.25	30.753	
2,800.00	2,727.65	2,676.27	2,632.84	9.89	8.25	-130.48	182.52	266.67	489.55	474.30	15.25	32.098	
2,900.00	2,816.12	2,761.72	2,713.60	10.79	8.77	-131.51	198.86	289.30	540.88	524.61	16.27	33.250	
3,000.00	2,904.59	2,847.16	2,794.36	11.70	9.29	-132.37	215.20	311.93	592.31	575.02	17.30	34.245	
3,100.00	2,993.06	2,932.61	2,875.12	12.62	9.82	-133.09	231.53	334.56	643.83	625.50	18.34	35.109	
3,200.00	3,081.52	3,018.06	2,955.87	13.55	10.35	-133.71	247.87	357.18	695.42	676.03	19.39	35.865	
3,300.00	3,169.99	3,103.50	3,036.63	14.48	10.89	-134.24	264.20	379.81	747.05	726.60	20.45	36.531	
3,400.00	3,258.46	3,188.95	3,117.39	15.42	11.42	-134.70	280.54	402.44	798.73	777.21	21.52	37.121	
3,500.00	3,346.93	3,274.39	3,198.15	16.37	11.97	-135.11	296.88	425.07	850.44	827.85	22.59	37.646	
3,568.44	3,407.48	3,332.88	3,253.43	17.01	12.34	-135.36	308.06	440.55	885.84	862.52	23.33	37.973	
3,600.00	3,435.48	3,359.91	3,278.98	17.28	12.51	-135.72	313.22	447.71	902.07	878.39	23.67	38.104	
3,700.00	3,525.24	3,446.47	3,360.80	17.99	13.06	-136.71	329.77	470.64	952.06	927.35	24.71	38.525	
3,800.00	3,616.47	3,534.31	3,443.82	18.67	13.63	-137.46	346.57	493.90	999.84	974.08	25.76	38.819	
3,900.00	3,709.09	3,623.33	3,527.95	19.31	14.20	-138.01	363.59	517.47	1,045.35	1,018.55	26.80	39.010	
4,000.00	3,802.96	3,713.40	3,613.08	19.90	14.78	-138.38	380.81	541.32	1,088.54	1,060.72	27.83	39.118	
4,100.00	3,897.97	3,804.43	3,699.12	20.45	15.37	-138.60	398.21	565.43	1,129.40	1,100.56	28.84	39.158	
4,200.00	3,994.02	3,896.30	3,785.95	20.95	15.97	-138.68	415.77	589.76	1,167.91	1,138.07	29.84	39.145	
4,300.00	4,090.98	4,005.28	3,889.23	21.39	16.61	-138.57	436.13	617.95	1,203.70	1,172.85	30.84	39.028	
4,400.00	4,188.73	4,129.06	4,007.96	21.79	17.17	-138.41	456.60	646.31	1,235.08	1,203.34	31.74	38.911	
4,500.00	4,287.16	4,256.26	4,131.42	22.13	17.69	-138.27	474.49	671.09	1,261.70	1,229.14	32.56	38.753	
4,600.00	4,386.14	4,386.41	4,259.02	22.42	18.15	-138.15	489.46	691.83	1,283.38	1,250.10	33.28	38.564	
4,700.00	4,485.56	4,518.98	4,390.05	22.66	18.54	-138.06	501.20	708.09	1,299.98	1,266.09	33.89	38.355	
4,800.00	4,585.29	4,653.37	4,523.68	22.85	18.86	-137.99	509.47	719.55	1,311.39	1,277.00	34.39	38.129	

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_DRY CREEK 6-27
Project:	KERR MCGEE OIL & GAS ONSHORE LP	TVD Reference:	WELL @ 5023.00ft (Original Well Elev)
Reference Site:	WELD_DRY CREEK PAD 7	MD Reference:	WELL @ 5023.00ft (Original Well Elev)
Site Error:	0.00ft	North Reference:	Grid
Reference Well:	P_DRY CREEK 6-27	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00ft	Output errors are at	2.00 sigma
Reference Wellbore	P_DRY CREEK 6-27	Database:	EDM 2003.21 Single User Db
Reference Design:	PLAN #1 10-26-09 RHS	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.00 ft
Survey Program: 0-MWD												Offset Well Error:	0.00 ft
Reference		Offset		Semi Major Axis			Distance						
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning
4,900.00	4,685.22	4,788.93	4,659.00	22.99	19.10	-137.94	514.09	725.95	1,317.53	1,282.75	34.78	37.880	
4,957.79	4,743.00	4,867.53	4,737.59	23.05	19.20	-0.65	515.05	727.27	1,318.66	1,283.71	34.95	37.733	
5,000.00	4,785.21	4,915.16	4,785.21	23.09	19.25	-0.64	515.09	727.33	1,318.69	1,283.63	35.06	37.618	
5,100.00	4,885.21	5,015.16	4,885.21	23.18	19.37	-0.64	515.09	727.33	1,318.69	1,283.38	35.31	37.351	
5,200.00	4,985.21	5,115.16	4,985.21	23.27	19.49	-0.64	515.09	727.33	1,318.69	1,283.13	35.56	37.084	
5,300.00	5,085.21	5,215.16	5,085.21	23.37	19.61	-0.64	515.09	727.33	1,318.69	1,282.87	35.82	36.817	
5,400.00	5,185.21	5,315.16	5,185.21	23.47	19.73	-0.64	515.09	727.33	1,318.69	1,282.61	36.08	36.549	
5,500.00	5,285.21	5,415.16	5,285.21	23.57	19.86	-0.64	515.09	727.33	1,318.69	1,282.34	36.35	36.282	
5,600.00	5,385.21	5,515.16	5,385.21	23.67	19.98	-0.64	515.09	727.33	1,318.69	1,282.08	36.61	36.016	
5,700.00	5,485.21	5,615.16	5,485.21	23.77	20.11	-0.64	515.09	727.33	1,318.69	1,281.80	36.89	35.750	
5,800.00	5,585.21	5,715.16	5,585.21	23.87	20.24	-0.64	515.09	727.33	1,318.69	1,281.53	37.16	35.484	
5,900.00	5,685.21	5,815.16	5,685.21	23.98	20.37	-0.64	515.09	727.33	1,318.69	1,281.25	37.44	35.219	
6,000.00	5,785.21	5,915.16	5,785.21	24.09	20.50	-0.64	515.09	727.33	1,318.69	1,280.96	37.72	34.955	
6,100.00	5,885.21	6,015.16	5,885.21	24.20	20.64	-0.64	515.09	727.33	1,318.69	1,280.68	38.01	34.692	
6,200.00	5,985.21	6,115.16	5,985.21	24.31	20.77	-0.64	515.09	727.33	1,318.69	1,280.39	38.30	34.431	
6,300.00	6,085.21	6,215.16	6,085.21	24.42	20.91	-0.64	515.09	727.33	1,318.69	1,280.10	38.59	34.170	
6,400.00	6,185.21	6,315.16	6,185.21	24.54	21.05	-0.64	515.09	727.33	1,318.69	1,279.80	38.89	33.911	
6,500.00	6,285.21	6,415.16	6,285.21	24.65	21.19	-0.64	515.09	727.33	1,318.69	1,279.50	39.19	33.653	
6,600.00	6,385.21	6,515.16	6,385.21	24.77	21.33	-0.64	515.09	727.33	1,318.69	1,279.20	39.49	33.396	
6,700.00	6,485.21	6,615.16	6,485.21	24.89	21.48	-0.64	515.09	727.33	1,318.69	1,278.90	39.79	33.142	
6,800.00	6,585.21	6,715.16	6,585.21	25.01	21.62	-0.64	515.09	727.33	1,318.69	1,278.59	40.10	32.888	
6,900.00	6,685.21	6,815.16	6,685.21	25.13	21.77	-0.64	515.09	727.33	1,318.69	1,278.28	40.41	32.637	
7,000.00	6,785.21	6,915.16	6,785.21	25.25	21.91	-0.64	515.09	727.33	1,318.69	1,277.97	40.72	32.387	
7,100.00	6,885.21	7,015.16	6,885.21	25.38	22.06	-0.64	515.09	727.33	1,318.69	1,277.66	41.03	32.139	
7,200.00	6,985.21	7,115.16	6,985.21	25.50	22.21	-0.64	515.09	727.33	1,318.69	1,277.34	41.35	31.893	
7,300.00	7,085.21	7,215.16	7,085.21	25.63	22.36	-0.64	515.09	727.33	1,318.69	1,277.02	41.67	31.648	
7,400.00	7,185.21	7,315.16	7,185.21	25.76	22.52	-0.64	515.09	727.33	1,318.69	1,276.70	41.99	31.406	
7,500.00	7,285.21	7,415.16	7,285.21	25.89	22.67	-0.64	515.09	727.33	1,318.69	1,276.38	42.31	31.165	
7,600.00	7,385.21	7,515.16	7,385.21	26.02	22.82	-0.64	515.09	727.33	1,318.69	1,276.05	42.64	30.927	
7,700.00	7,485.21	7,615.16	7,485.21	26.15	22.98	-0.64	515.09	727.33	1,318.69	1,275.72	42.97	30.691	
7,800.00	7,585.21	7,715.16	7,585.21	26.28	23.14	-0.64	515.09	727.33	1,318.69	1,275.39	43.30	30.456	
7,900.00	7,685.21	7,815.16	7,685.21	26.42	23.30	-0.64	515.09	727.33	1,318.69	1,275.06	43.63	30.224	
8,000.00	7,785.21	7,915.16	7,785.21	26.55	23.46	-0.64	515.09	727.33	1,318.69	1,274.72	43.97	29.994	
8,099.79	7,885.00	8,014.95	7,885.00	26.69	23.62	-0.64	515.09	727.33	1,318.69	1,274.39	44.30	29.766	

Company:	US ROCKIES REGION PLANNING	Local Co-ordinate Reference:	Well P_DRY CREEK 6-27
Project:	KERR MCGEE OIL & GAS ONSHORE LP	TVD Reference:	WELL @ 5023.00ft (Original Well Elev)
Reference Site:	WELD_DRY CREEK PAD 7	MD Reference:	WELL @ 5023.00ft (Original Well Elev)
Site Error:	0.00ft	North Reference:	Grid
Reference Well:	P_DRY CREEK 6-27	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00ft	Output errors are at	2.00 sigma
Reference Wellbore	P_DRY CREEK 6-27	Database:	EDM 2003.21 Single User Db
Reference Design:	PLAN #1 10-26-09 RHS	Offset TVD Reference:	Offset Datum

Offset Design WELD_DRY CREEK PAD 7 - P_DRY CREEK 4-27 - P_DRY CREEK 4-27 - PLAN #1 10-26-09 RHS													Offset Site Error: 0.00 ft
Survey Program: 0-MWD													Offset Well Error: 0.00 ft
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning
0.00	0.00	0.00	0.00	0.00	0.00	-90.40	-0.23	-33.60	33.61				
100.00	100.00	100.00	100.00	0.10	0.10	-90.40	-0.23	-33.60	33.61	33.41	0.19	175.898	
200.00	200.00	200.00	200.00	0.32	0.32	-90.40	-0.23	-33.60	33.61	32.97	0.64	52.461	
300.00	300.00	300.00	300.00	0.55	0.55	-90.40	-0.23	-33.60	33.61	32.52	1.09	30.828	
400.00	400.00	400.00	400.00	0.77	0.77	-90.40	-0.23	-33.60	33.61	32.07	1.54	21.827	
500.00	500.00	500.00	500.00	0.99	0.99	-90.40	-0.23	-33.60	33.61	31.62	1.99	16.894	
600.00	600.00	600.00	600.00	1.22	1.22	-90.40	-0.23	-33.60	33.61	31.17	2.44	13.780	
700.00	700.00	700.00	700.00	1.44	1.44	-90.40	-0.23	-33.60	33.61	30.72	2.89	11.635	
800.00	800.00	800.00	800.00	1.67	1.67	-90.40	-0.23	-33.60	33.61	30.27	3.34	10.068	
900.00	900.00	900.00	900.00	1.89	1.89	-90.40	-0.23	-33.60	33.61	29.82	3.79	8.873	
1,000.00	1,000.00	1,000.00	1,000.00	2.12	2.12	-90.40	-0.23	-33.60	33.61	29.37	4.24	7.932	
1,100.00	1,100.00	1,100.00	1,100.00	2.34	2.34	-90.40	-0.23	-33.60	33.61	28.92	4.69	7.171	
1,200.00	1,200.00	1,200.00	1,200.00	2.57	2.57	-90.40	-0.23	-33.60	33.61	28.47	5.14	6.543	
1,250.00	1,250.00	1,250.00	1,250.00	2.68	2.68	-90.40	-0.23	-33.60	33.61	28.24	5.36	6.269 CC, ES	
1,300.00	1,300.00	1,299.56	1,299.56	2.78	2.79	133.34	0.06	-33.92	34.22	28.65	5.57	6.145 SF	
1,400.00	1,399.93	1,398.32	1,398.25	2.96	3.00	140.24	2.36	-36.44	39.48	33.53	5.96	6.630	
1,500.00	1,499.68	1,496.02	1,495.72	3.15	3.22	149.42	6.90	-41.39	51.17	44.83	6.34	8.072	
1,600.00	1,599.13	1,591.99	1,591.18	3.36	3.45	157.11	13.54	-48.64	70.02	63.30	6.72	10.426	
1,700.00	1,698.15	1,685.60	1,683.93	3.59	3.68	162.49	22.10	-57.98	96.00	88.91	7.08	13.553	
1,800.00	1,796.63	1,776.30	1,773.35	3.86	3.94	166.10	32.33	-69.15	128.76	121.32	7.44	17.303	
1,900.00	1,894.44	1,863.61	1,858.93	4.17	4.21	168.52	43.99	-81.87	167.91	160.12	7.79	21.558	
2,000.00	1,991.46	1,947.11	1,940.25	4.54	4.49	170.18	56.78	-95.83	213.07	204.94	8.12	26.225	
2,100.00	2,087.58	2,026.49	2,017.01	4.96	4.80	171.34	70.42	-110.72	263.87	255.42	8.45	31.232	
2,200.00	2,182.68	2,100.00	2,087.58	5.45	5.11	172.16	84.33	-125.90	319.95	311.20	8.76	36.537	
2,300.00	2,276.65	2,172.00	2,156.17	6.02	5.46	172.77	99.14	-142.06	380.95	371.89	9.06	42.029	
2,400.00	2,369.36	2,237.89	2,218.43	6.65	5.80	173.20	113.70	-157.95	446.52	437.16	9.36	47.723	
2,500.00	2,460.71	2,300.00	2,276.65	7.36	6.14	173.51	128.31	-173.90	516.30	506.66	9.64	53.570	
2,600.00	2,550.59	2,363.97	2,336.26	8.15	6.53	173.77	143.99	-191.01	589.61	579.69	9.93	59.396	
2,639.34	2,585.52	2,389.95	2,360.47	8.48	6.68	173.87	150.37	-197.98	619.13	609.09	10.04	61.665	
2,700.00	2,639.18	2,429.70	2,397.49	9.01	6.93	174.13	160.14	-208.63	664.90	654.59	10.31	64.478	
2,800.00	2,727.65	2,495.23	2,458.54	9.89	7.35	174.49	176.23	-226.19	740.38	729.62	10.77	68.773	
2,900.00	2,816.12	2,560.76	2,519.59	10.79	7.77	174.79	192.32	-243.76	815.88	804.64	11.23	72.639	
3,000.00	2,904.59	2,626.29	2,580.63	11.70	8.20	175.04	208.41	-261.32	891.37	879.67	11.70	76.158	
3,100.00	2,993.06	2,691.82	2,641.68	12.62	8.64	175.25	224.50	-278.88	966.88	954.70	12.18	79.360	
3,200.00	3,081.52	2,757.35	2,702.72	13.55	9.08	175.42	240.60	-296.44	1,042.39	1,029.72	12.67	82.269	
3,300.00	3,169.99	2,822.88	2,763.77	14.48	9.53	175.58	256.69	-314.01	1,117.90	1,104.74	13.16	84.937	
3,400.00	3,258.46	2,888.40	2,824.82	15.42	9.98	175.71	272.78	-331.57	1,193.42	1,179.76	13.66	87.382	
3,500.00	3,346.93	2,953.93	2,885.86	16.37	10.44	175.83	288.87	-349.13	1,268.94	1,254.78	14.16	89.623	
3,568.44	3,407.48	2,998.78	2,927.64	17.01	10.75	175.90	299.89	-361.15	1,320.63	1,306.13	14.50	91.062	
3,600.00	3,435.48	3,019.59	2,947.03	17.28	10.89	175.99	305.00	-366.73	1,344.35	1,329.63	14.72	91.329	
3,700.00	3,525.24	3,087.24	3,010.05	17.99	11.37	176.22	321.61	-384.86	1,417.97	1,402.58	15.39	92.130	
3,800.00	3,616.47	3,157.41	3,075.42	18.67	11.87	176.41	338.84	-403.67	1,489.20	1,473.15	16.05	92.767	
3,900.00	3,709.09	3,230.03	3,143.07	19.31	12.38	176.57	356.68	-423.13	1,557.94	1,541.24	16.70	93.272	
4,000.00	3,802.96	3,305.00	3,212.91	19.90	12.92	176.70	375.09	-443.22	1,624.11	1,606.77	17.34	93.666	
4,100.00	3,897.97	3,382.23	3,284.86	20.45	13.47	176.82	394.05	-463.92	1,687.63	1,669.67	17.96	93.962	
4,200.00	3,994.02	3,461.62	3,358.82	20.95	14.04	176.91	413.55	-485.20	1,748.42	1,729.85	18.57	94.177	
4,300.00	4,090.98	3,543.09	3,434.71	21.39	14.63	176.99	433.56	-507.04	1,806.40	1,787.25	19.15	94.325	
4,400.00	4,188.73	3,626.53	3,512.44	21.79	15.23	177.05	454.05	-529.40	1,861.51	1,841.79	19.72	94.412	
4,500.00	4,287.16	3,711.84	3,591.91	22.13	15.85	177.10	475.00	-552.26	1,913.68	1,893.42	20.26	94.449	
4,600.00	4,386.14	3,798.91	3,673.03	22.42	16.48	177.14	496.38	-575.60	1,962.84	1,942.06	20.78	94.440	
4,700.00	4,485.56	3,887.85	3,755.89	22.66	17.12	177.17	518.22	-599.44	2,008.94	1,987.66	21.28	94.389	
4,800.00	4,585.29	4,204.32	4,056.46	22.85	18.75	177.14	584.77	-672.07	2,046.92	2,024.64	22.28	91.864	

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_DRY CREEK 6-27
Project:	KERR MCGEE OIL & GAS ONSHORE LP	TVD Reference:	WELL @ 5023.00ft (Original Well Elev)
Reference Site:	WELD_DRY CREEK PAD 7	MD Reference:	WELL @ 5023.00ft (Original Well Elev)
Site Error:	0.00ft	North Reference:	Grid
Reference Well:	P_DRY CREEK 6-27	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00ft	Output errors are at	2.00 sigma
Reference Wellbore	P_DRY CREEK 6-27	Database:	EDM 2003.21 Single User Db
Reference Design:	PLAN #1 10-26-09 RHS	Offset TVD Reference:	Offset Datum

Offset Design WELD_DRY CREEK PAD 7 - P_DRY CREEK 4-27 - P_DRY CREEK 4-27 - PLAN #1 10-26-09 RHS												Offset Site Error:	0.00 ft
Survey Program: 0-MWD												Offset Well Error:	0.00 ft
Reference	Offset	Semi Major Axis		Distance									
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning
4,900.00	4,685.22	4,549.37	4,394.34	22.99	20.00	177.12	631.34	-722.89	2,070.61	2,047.37	23.23	89.118	
4,957.79	4,743.00	4,757.06	4,600.85	23.05	20.48	-45.62	646.01	-738.90	2,077.23	2,053.50	23.72	87.557	
5,000.00	4,785.21	4,910.45	4,754.09	23.09	20.71	-45.62	650.33	-743.62	2,078.99	2,054.93	24.06	86.418	
5,100.00	4,885.21	5,041.57	4,885.21	23.18	20.85	-45.62	650.55	-743.86	2,079.08	2,054.63	24.45	85.042	
5,200.00	4,985.21	5,141.57	4,985.21	23.27	20.96	-45.62	650.55	-743.86	2,079.08	2,054.28	24.80	83.836	
5,300.00	5,085.21	5,241.57	5,085.21	23.37	21.07	-45.62	650.55	-743.86	2,079.08	2,053.92	25.15	82.654	
5,400.00	5,185.21	5,341.57	5,185.21	23.47	21.19	-45.62	650.55	-743.86	2,079.08	2,053.57	25.51	81.495	
5,500.00	5,285.21	5,441.57	5,285.21	23.57	21.30	-45.62	650.55	-743.86	2,079.08	2,053.21	25.87	80.359	
5,600.00	5,385.21	5,541.57	5,385.21	23.67	21.42	-45.62	650.55	-743.86	2,079.08	2,052.84	26.24	79.246	
5,700.00	5,485.21	5,641.57	5,485.21	23.77	21.54	-45.62	650.55	-743.86	2,079.08	2,052.48	26.60	78.156	
5,800.00	5,585.21	5,741.57	5,585.21	23.87	21.66	-45.62	650.55	-743.86	2,079.08	2,052.11	26.97	77.088	
5,900.00	5,685.21	5,841.57	5,685.21	23.98	21.78	-45.62	650.55	-743.86	2,079.08	2,051.74	27.34	76.043	
6,000.00	5,785.21	5,941.57	5,785.21	24.09	21.91	-45.62	650.55	-743.86	2,079.08	2,051.36	27.71	75.019	
6,100.00	5,885.21	6,041.57	5,885.21	24.20	22.03	-45.62	650.55	-743.86	2,079.08	2,050.99	28.09	74.016	
6,200.00	5,985.21	6,141.57	5,985.21	24.31	22.16	-45.62	650.55	-743.86	2,079.08	2,050.61	28.47	73.035	
6,300.00	6,085.21	6,241.57	6,085.21	24.42	22.29	-45.62	650.55	-743.86	2,079.08	2,050.23	28.85	72.073	
6,400.00	6,185.21	6,341.57	6,185.21	24.54	22.42	-45.62	650.55	-743.86	2,079.08	2,049.85	29.23	71.132	
6,500.00	6,285.21	6,441.57	6,285.21	24.65	22.55	-45.62	650.55	-743.86	2,079.08	2,049.47	29.61	70.211	
6,600.00	6,385.21	6,541.57	6,385.21	24.77	22.69	-45.62	650.55	-743.86	2,079.08	2,049.08	30.00	69.309	
6,700.00	6,485.21	6,641.57	6,485.21	24.89	22.82	-45.62	650.55	-743.86	2,079.08	2,048.69	30.38	68.426	
6,800.00	6,585.21	6,741.57	6,585.21	25.01	22.96	-45.62	650.55	-743.86	2,079.08	2,048.31	30.77	67.562	
6,900.00	6,685.21	6,841.57	6,685.21	25.13	23.09	-45.62	650.55	-743.86	2,079.08	2,047.92	31.16	66.715	
7,000.00	6,785.21	6,941.57	6,785.21	25.25	23.23	-45.62	650.55	-743.86	2,079.08	2,047.52	31.56	65.887	
7,100.00	6,885.21	7,041.57	6,885.21	25.38	23.37	-45.62	650.55	-743.86	2,079.08	2,047.13	31.95	65.075	
7,200.00	6,985.21	7,141.57	6,985.21	25.50	23.52	-45.62	650.55	-743.86	2,079.08	2,046.73	32.34	64.280	
7,300.00	7,085.21	7,241.57	7,085.21	25.63	23.66	-45.62	650.55	-743.86	2,079.08	2,046.34	32.74	63.502	
7,400.00	7,185.21	7,341.57	7,185.21	25.76	23.80	-45.62	650.55	-743.86	2,079.08	2,045.94	33.14	62.740	
7,500.00	7,285.21	7,441.57	7,285.21	25.89	23.95	-45.62	650.55	-743.86	2,079.08	2,045.54	33.54	61.993	
7,600.00	7,385.21	7,541.57	7,385.21	26.02	24.09	-45.62	650.55	-743.86	2,079.08	2,045.14	33.94	61.262	
7,700.00	7,485.21	7,641.57	7,485.21	26.15	24.24	-45.62	650.55	-743.86	2,079.08	2,044.74	34.34	60.546	
7,800.00	7,585.21	7,741.57	7,585.21	26.28	24.39	-45.62	650.55	-743.86	2,079.08	2,044.34	34.74	59.844	
7,900.00	7,685.21	7,841.57	7,685.21	26.42	24.54	-45.62	650.55	-743.86	2,079.08	2,043.93	35.15	59.157	
8,000.00	7,785.21	7,941.57	7,785.21	26.55	24.69	-45.62	650.55	-743.86	2,079.08	2,043.53	35.55	58.483	
8,099.79	7,885.00	8,041.36	7,885.00	26.69	24.84	-45.62	650.55	-743.86	2,079.08	2,043.12	35.96	57.824	

Company:	US ROCKIES REGION PLANNING	Local Co-ordinate Reference:	Well P_DRY CREEK 6-27
Project:	KERR MCGEE OIL & GAS ONSHORE LP	TVD Reference:	WELL @ 5023.00ft (Original Well Elev)
Reference Site:	WELD_DRY CREEK PAD 7	MD Reference:	WELL @ 5023.00ft (Original Well Elev)
Site Error:	0.00ft	North Reference:	Grid
Reference Well:	P_DRY CREEK 6-27	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00ft	Output errors are at	2.00 sigma
Reference Wellbore	P_DRY CREEK 6-27	Database:	EDM 2003.21 Single User Db
Reference Design:	PLAN #1 10-26-09 RHS	Offset TVD Reference:	Offset Datum

Offset Design WELD_DRY CREEK PAD 7 - P_DRY CREEK 5-27 - P_DRY CREEK 5-27 - PLAN #1 10-26-09 RHS												Offset Site Error:	0.00 ft
Survey Program: 0-MWD												Offset Well Error:	0.00 ft
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning
0.00	0.00	0.00	0.00	0.00	0.00	-90.41	-0.34	-47.61	47.61				
100.00	100.00	100.00	100.00	0.10	0.10	-90.41	-0.34	-47.61	47.61	47.42	0.19	249.189	
200.00	200.00	200.00	200.00	0.32	0.32	-90.41	-0.34	-47.61	47.61	46.97	0.64	74.320	
300.00	300.00	300.00	300.00	0.55	0.55	-90.41	-0.34	-47.61	47.61	46.52	1.09	43.672	
400.00	400.00	400.00	400.00	0.77	0.77	-90.41	-0.34	-47.61	47.61	46.07	1.54	30.921	
500.00	500.00	500.00	500.00	0.99	0.99	-90.41	-0.34	-47.61	47.61	45.62	1.99	23.933	
600.00	600.00	600.00	600.00	1.22	1.22	-90.41	-0.34	-47.61	47.61	45.17	2.44	19.522	
700.00	700.00	700.00	700.00	1.44	1.44	-90.41	-0.34	-47.61	47.61	44.72	2.89	16.483	
800.00	800.00	800.00	800.00	1.67	1.67	-90.41	-0.34	-47.61	47.61	44.27	3.34	14.263	
900.00	900.00	900.00	900.00	1.89	1.89	-90.41	-0.34	-47.61	47.61	43.82	3.79	12.570	
1,000.00	1,000.00	1,000.00	1,000.00	2.12	2.12	-90.41	-0.34	-47.61	47.61	43.37	4.24	11.237	
1,100.00	1,100.00	1,100.00	1,100.00	2.34	2.34	-90.41	-0.34	-47.61	47.61	42.92	4.69	10.159	
1,200.00	1,200.00	1,200.00	1,200.00	2.57	2.57	-90.41	-0.34	-47.61	47.61	42.47	5.14	9.270	
1,250.00	1,250.00	1,250.00	1,250.00	2.68	2.68	-90.41	-0.34	-47.61	47.61	42.25	5.36	8.881 CC, ES	
1,300.00	1,300.00	1,299.54	1,299.54	2.78	2.78	132.26	-0.70	-47.84	48.14	42.58	5.56	8.662 SF	
1,400.00	1,399.93	1,398.49	1,398.42	2.96	2.95	131.88	-3.57	-49.70	52.39	46.48	5.91	8.871	
1,500.00	1,499.68	1,497.04	1,496.73	3.15	3.14	131.25	-9.27	-53.40	60.88	54.61	6.27	9.715	
1,600.00	1,599.13	1,594.92	1,594.09	3.36	3.33	130.55	-17.74	-58.89	73.58	66.94	6.65	11.070	
1,700.00	1,698.15	1,691.90	1,690.15	3.59	3.55	129.87	-28.88	-66.11	90.45	83.39	7.06	12.814	
1,800.00	1,796.63	1,787.72	1,784.57	3.86	3.80	129.26	-42.56	-74.99	111.42	103.91	7.51	14.829	
1,900.00	1,894.44	1,882.17	1,877.05	4.17	4.08	128.70	-58.62	-85.41	136.42	128.40	8.02	17.003	
2,000.00	1,991.46	1,975.04	1,967.32	4.54	4.41	128.18	-76.91	-97.26	165.35	156.75	8.60	19.234	
2,100.00	2,087.58	2,066.15	2,055.16	4.96	4.77	127.68	-97.22	-110.44	198.12	188.87	9.24	21.435	
2,200.00	2,182.68	2,155.34	2,140.34	5.45	5.17	127.18	-119.37	-124.80	234.60	224.63	9.97	23.537	
2,300.00	2,276.65	2,242.46	2,222.73	6.02	5.62	126.66	-143.14	-140.22	274.69	263.91	10.77	25.494	
2,400.00	2,369.36	2,327.40	2,302.18	6.65	6.10	126.13	-168.32	-156.55	318.25	306.58	11.66	27.283	
2,500.00	2,460.71	2,412.56	2,381.01	7.36	6.63	125.61	-195.37	-174.09	365.02	352.37	12.65	28.855	
2,600.00	2,550.59	2,499.73	2,461.54	8.15	7.20	125.37	-223.37	-192.25	413.85	400.13	13.72	30.164	
2,639.34	2,585.52	2,533.72	2,492.93	8.48	7.43	125.33	-234.29	-199.33	433.56	419.40	14.16	30.618	
2,700.00	2,639.18	2,585.97	2,541.20	9.01	7.78	125.84	-251.07	-210.22	464.17	449.30	14.87	31.207	
2,800.00	2,727.65	2,672.10	2,620.77	9.89	8.38	126.55	-278.74	-228.16	514.70	498.62	16.08	32.017	
2,900.00	2,816.12	2,758.24	2,700.35	10.79	8.98	127.14	-306.41	-246.11	565.27	547.97	17.30	32.676	
3,000.00	2,904.59	2,844.38	2,779.92	11.70	9.59	127.63	-334.08	-264.05	615.88	597.34	18.54	33.217	
3,100.00	2,993.06	2,930.52	2,859.49	12.62	10.21	128.04	-361.75	-282.00	666.52	646.72	19.80	33.668	
3,200.00	3,081.52	3,016.66	2,939.07	13.55	10.83	128.40	-389.42	-299.95	717.18	696.11	21.06	34.046	
3,300.00	3,169.99	3,102.80	3,018.64	14.48	11.46	128.71	-417.10	-317.89	767.86	745.51	22.34	34.368	
3,400.00	3,258.46	3,188.93	3,098.22	15.42	12.09	128.98	-444.77	-335.84	818.55	794.92	23.63	34.644	
3,500.00	3,346.93	3,275.07	3,177.79	16.37	12.73	129.22	-472.44	-353.78	869.25	844.33	24.92	34.883	
3,568.44	3,407.48	3,334.03	3,232.25	17.01	13.16	129.37	-491.38	-366.07	903.96	878.16	25.81	35.029	
3,600.00	3,435.48	3,361.27	3,257.42	17.28	13.37	129.71	-500.13	-371.74	919.87	893.66	26.21	35.094	
3,700.00	3,525.24	3,448.36	3,337.87	17.99	14.02	130.61	-528.10	-389.89	969.01	941.60	27.41	35.347	
3,800.00	3,616.47	3,536.51	3,419.31	18.67	14.67	131.29	-556.42	-408.25	1,016.16	987.55	28.61	35.517	
3,900.00	3,709.09	3,625.64	3,501.64	19.31	15.34	131.76	-585.05	-426.82	1,061.28	1,031.49	29.79	35.621	
4,000.00	3,802.96	3,715.61	3,584.76	19.90	16.02	132.07	-613.96	-445.57	1,104.34	1,073.39	30.96	35.674	
4,100.00	3,897.97	3,814.48	3,676.20	20.45	16.70	132.18	-645.51	-466.03	1,145.24	1,113.14	32.10	35.675	
4,200.00	3,994.02	3,931.95	3,786.17	20.95	17.32	132.17	-680.12	-488.48	1,182.53	1,149.37	33.16	35.664	
4,300.00	4,090.98	4,052.92	3,901.11	21.39	17.91	132.16	-711.77	-509.01	1,215.63	1,181.49	34.14	35.607	
4,400.00	4,188.73	4,177.11	4,020.64	21.79	18.47	132.15	-740.01	-527.32	1,244.39	1,209.35	35.04	35.515	
4,500.00	4,287.16	4,304.15	4,144.31	22.13	18.97	132.15	-764.36	-543.11	1,268.64	1,232.80	35.84	35.396	
4,600.00	4,386.14	4,433.63	4,271.55	22.42	19.40	132.15	-784.43	-556.13	1,288.26	1,251.73	36.54	35.261	
4,700.00	4,485.56	4,565.07	4,401.69	22.66	19.77	132.15	-799.84	-566.12	1,303.14	1,266.02	37.12	35.105	
4,800.00	4,585.29	4,697.96	4,533.97	22.85	20.07	132.16	-810.32	-572.92	1,313.18	1,275.58	37.60	34.928	

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_DRY CREEK 6-27
Project:	KERR MCGEE OIL & GAS ONSHORE LP	TVD Reference:	WELL @ 5023.00ft (Original Well Elev)
Reference Site:	WELD_DRY CREEK PAD 7	MD Reference:	WELL @ 5023.00ft (Original Well Elev)
Site Error:	0.00ft	North Reference:	Grid
Reference Well:	P_DRY CREEK 6-27	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00ft	Output errors are at	2.00 sigma
Reference Wellbore	P_DRY CREEK 6-27	Database:	EDM 2003.21 Single User Db
Reference Design:	PLAN #1 10-26-09 RHS	Offset TVD Reference:	Offset Datum

Offset Design WELD_DRY CREEK PAD 7 - P_DRY CREEK 5-27 - P_DRY CREEK 5-27 - PLAN #1 10-26-09 RHS												Offset Site Error:	0.00 ft
Survey Program: 0-MWD												Offset Well Error:	0.00 ft
Reference	Offset	Semi Major Axis		Distance									
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning
4,900.00	4,685.22	4,831.73	4,667.57	22.99	20.28	132.16	-815.66	-576.38	1,318.33	1,280.38	37.95	34.739	
4,957.79	4,743.00	4,907.16	4,743.00	23.05	20.37	-90.56	-816.37	-576.84	1,319.07	1,280.96	38.11	34.613	
5,000.00	4,785.21	4,949.37	4,785.21	23.09	20.41	-90.56	-816.37	-576.84	1,319.07	1,280.87	38.20	34.529	
5,100.00	4,885.21	5,049.37	4,885.21	23.18	20.51	-90.56	-816.37	-576.84	1,319.07	1,280.65	38.42	34.331	
5,200.00	4,985.21	5,149.37	4,985.21	23.27	20.62	-90.56	-816.37	-576.84	1,319.07	1,280.42	38.64	34.133	
5,300.00	5,085.21	5,249.37	5,085.21	23.37	20.72	-90.56	-816.37	-576.84	1,319.07	1,280.20	38.87	33.934	
5,400.00	5,185.21	5,349.37	5,185.21	23.47	20.83	-90.56	-816.37	-576.84	1,319.07	1,279.97	39.10	33.734	
5,500.00	5,285.21	5,449.37	5,285.21	23.57	20.93	-90.56	-816.37	-576.84	1,319.07	1,279.73	39.34	33.533	
5,600.00	5,385.21	5,549.37	5,385.21	23.67	21.04	-90.56	-816.37	-576.84	1,319.07	1,279.49	39.58	33.331	
5,700.00	5,485.21	5,649.37	5,485.21	23.77	21.16	-90.56	-816.37	-576.84	1,319.07	1,279.25	39.82	33.128	
5,800.00	5,585.21	5,749.37	5,585.21	23.87	21.27	-90.56	-816.37	-576.84	1,319.07	1,279.01	40.06	32.925	
5,900.00	5,685.21	5,849.37	5,685.21	23.98	21.38	-90.56	-816.37	-576.84	1,319.07	1,278.76	40.31	32.721	
6,000.00	5,785.21	5,949.37	5,785.21	24.09	21.50	-90.56	-816.37	-576.84	1,319.07	1,278.50	40.57	32.517	
6,100.00	5,885.21	6,049.37	5,885.21	24.20	21.62	-90.56	-816.37	-576.84	1,319.07	1,278.25	40.82	32.312	
6,200.00	5,985.21	6,149.37	5,985.21	24.31	21.74	-90.56	-816.37	-576.84	1,319.07	1,277.99	41.08	32.108	
6,300.00	6,085.21	6,249.37	6,085.21	24.42	21.86	-90.56	-816.37	-576.84	1,319.07	1,277.72	41.35	31.904	
6,400.00	6,185.21	6,349.37	6,185.21	24.54	21.99	-90.56	-816.37	-576.84	1,319.07	1,277.46	41.61	31.699	
6,500.00	6,285.21	6,449.37	6,285.21	24.65	22.11	-90.56	-816.37	-576.84	1,319.07	1,277.19	41.88	31.495	
6,600.00	6,385.21	6,549.37	6,385.21	24.77	22.24	-90.56	-816.37	-576.84	1,319.07	1,276.91	42.15	31.291	
6,700.00	6,485.21	6,649.37	6,485.21	24.89	22.37	-90.56	-816.37	-576.84	1,319.07	1,276.64	42.43	31.088	
6,800.00	6,585.21	6,749.37	6,585.21	25.01	22.49	-90.56	-816.37	-576.84	1,319.07	1,276.36	42.71	30.885	
6,900.00	6,685.21	6,849.37	6,685.21	25.13	22.63	-90.56	-816.37	-576.84	1,319.07	1,276.08	42.99	30.682	
7,000.00	6,785.21	6,949.37	6,785.21	25.25	22.76	-90.56	-816.37	-576.84	1,319.07	1,275.79	43.28	30.481	
7,100.00	6,885.21	7,049.37	6,885.21	25.38	22.89	-90.56	-816.37	-576.84	1,319.07	1,275.51	43.56	30.279	
7,200.00	6,985.21	7,149.37	6,985.21	25.50	23.03	-90.56	-816.37	-576.84	1,319.07	1,275.21	43.85	30.079	
7,300.00	7,085.21	7,249.37	7,085.21	25.63	23.17	-90.56	-816.37	-576.84	1,319.07	1,274.92	44.15	29.879	
7,400.00	7,185.21	7,349.37	7,185.21	25.76	23.30	-90.56	-816.37	-576.84	1,319.07	1,274.63	44.44	29.680	
7,500.00	7,285.21	7,449.37	7,285.21	25.89	23.44	-90.56	-816.37	-576.84	1,319.07	1,274.33	44.74	29.482	
7,600.00	7,385.21	7,549.37	7,385.21	26.02	23.58	-90.56	-816.37	-576.84	1,319.07	1,274.03	45.04	29.285	
7,700.00	7,485.21	7,649.37	7,485.21	26.15	23.73	-90.56	-816.37	-576.84	1,319.07	1,273.72	45.35	29.089	
7,800.00	7,585.21	7,749.37	7,585.21	26.28	23.87	-90.56	-816.37	-576.84	1,319.07	1,273.42	45.65	28.894	
7,900.00	7,685.21	7,849.37	7,685.21	26.42	24.01	-90.56	-816.37	-576.84	1,319.07	1,273.11	45.96	28.700	
8,000.00	7,785.21	7,949.37	7,785.21	26.55	24.16	-90.56	-816.37	-576.84	1,319.07	1,272.80	46.27	28.508	
8,064.40	7,849.61	8,013.77	7,849.61	26.64	24.26	-90.56	-816.37	-576.84	1,319.07	1,272.60	46.47	28.384	
8,099.79	7,885.00	8,043.16	7,879.00	26.69	24.30	-90.56	-816.37	-576.84	1,319.08	1,272.51	46.57	28.323	

Company:	US ROCKIES REGION PLANNING	Local Co-ordinate Reference:	Well P_DRY CREEK 6-27
Project:	KERR MCGEE OIL & GAS ONSHORE LP	TVD Reference:	WELL @ 5023.00ft (Original Well Elev)
Reference Site:	WELD_DRY CREEK PAD 7	MD Reference:	WELL @ 5023.00ft (Original Well Elev)
Site Error:	0.00ft	North Reference:	Grid
Reference Well:	P_DRY CREEK 6-27	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00ft	Output errors are at	2.00 sigma
Reference Wellbore	P_DRY CREEK 6-27	Database:	EDM 2003.21 Single User Db
Reference Design:	PLAN #1 10-26-09 RHS	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.00 ft
Survey Program: 0-UNKNOWN												Offset Well Error:	0.00 ft
Reference	Offset	Semi Major Axis					Distance						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	-93.26	-4.98	-87.34	87.48				
100.00	100.00	100.00	100.00	0.10	1.70	-93.26	-4.98	-87.34	87.48	85.69	1.80	48.723	
200.00	200.00	200.00	200.00	0.32	5.70	-93.26	-4.98	-87.34	87.48	81.46	6.02	14.531	
300.00	300.00	300.00	300.00	0.55	9.70	-93.26	-4.98	-87.34	87.48	77.24	10.25	8.539	
400.00	400.00	400.00	400.00	0.77	13.70	-93.26	-4.98	-87.34	87.48	73.01	14.47	6.046	
500.00	500.00	500.00	500.00	0.99	17.70	-93.26	-4.98	-87.34	87.48	68.79	18.69	4.680	
600.00	600.00	600.00	600.00	1.22	21.70	-93.26	-4.98	-87.34	87.48	64.56	22.92	3.817	
700.00	700.00	700.00	700.00	1.44	25.70	-93.26	-4.98	-87.34	87.48	60.34	27.14	3.223	
800.00	800.00	800.00	800.00	1.67	29.70	-93.26	-4.98	-87.34	87.48	56.12	31.37	2.789	
900.00	900.00	900.00	900.00	1.89	33.70	-93.26	-4.98	-87.34	87.48	51.89	35.59	2.458	
1,000.00	1,000.00	1,000.00	1,000.00	2.12	37.70	-93.26	-4.98	-87.34	87.48	47.67	39.82	2.197	
1,100.00	1,100.00	1,100.00	1,100.00	2.34	41.70	-93.26	-4.98	-87.34	87.48	43.44	44.04	1.986	
1,200.00	1,200.00	1,200.00	1,200.00	2.57	45.70	-93.26	-4.98	-87.34	87.48	39.22	48.27	1.812	
1,250.00	1,250.00	1,250.00	1,250.00	2.68	47.70	-93.26	-4.98	-87.34	87.48	37.10	50.38	1.736 CC	
1,300.00	1,300.00	1,300.00	1,300.00	2.78	49.70	-93.26	-4.98	-87.34	87.76	35.28	52.48	1.672	
1,400.00	1,399.93	1,399.93	1,399.93	2.96	53.70	-93.26	-4.98	-87.34	90.03	33.40	56.63	1.590 ES	
1,500.00	1,499.68	1,499.68	1,499.68	3.15	57.69	-93.26	-4.98	-87.34	94.79	34.05	60.74	1.561 SF	
1,600.00	1,599.13	1,599.13	1,599.13	3.36	61.67	-93.26	-4.98	-87.34	102.39	37.62	64.77	1.581	
1,700.00	1,698.15	1,698.15	1,698.15	3.59	65.63	-93.26	-4.98	-87.34	113.22	44.54	68.68	1.648	
1,800.00	1,796.63	1,796.63	1,796.63	3.86	69.57	-93.26	-4.98	-87.34	127.58	55.13	72.45	1.761	
1,900.00	1,894.44	1,894.44	1,894.44	4.17	73.48	-93.26	-4.98	-87.34	145.64	69.59	76.05	1.915	
2,000.00	1,991.46	1,991.46	1,991.46	4.54	77.36	-93.26	-4.98	-87.34	167.44	88.00	79.45	2.108	
2,100.00	2,087.58	2,087.58	2,087.58	4.96	81.20	-93.26	-4.98	-87.34	192.99	110.34	82.65	2.335	
2,200.00	2,182.68	2,182.68	2,182.68	5.45	85.01	-93.26	-4.98	-87.34	222.20	136.57	85.63	2.595	
2,300.00	2,276.65	2,276.65	2,276.65	6.02	88.77	-93.26	-4.98	-87.34	254.99	166.61	88.38	2.885	
2,400.00	2,369.36	2,369.36	2,369.36	6.65	92.47	-93.26	-4.98	-87.34	291.28	200.38	90.90	3.204	
2,500.00	2,460.71	2,460.71	2,460.71	7.36	96.13	-93.26	-4.98	-87.34	330.98	237.80	93.18	3.552	
2,600.00	2,550.59	2,550.59	2,550.59	8.15	99.72	-93.26	-4.98	-87.34	374.00	278.79	95.20	3.928	
2,639.34	2,585.52	2,585.52	2,585.52	8.48	101.12	-93.26	-4.98	-87.34	391.81	295.89	95.93	4.085	
2,700.00	2,639.18	2,639.18	2,639.18	9.01	103.27	-93.26	-4.98	-87.34	419.70	321.72	97.98	4.284	
2,800.00	2,727.65	2,727.65	2,727.65	9.89	106.81	-93.26	-4.98	-87.34	465.77	364.39	101.38	4.594	
2,900.00	2,816.12	2,816.12	2,816.12	10.79	110.34	-93.26	-4.98	-87.34	511.94	407.14	104.80	4.885	
3,000.00	2,904.59	2,904.59	2,904.59	11.70	113.88	-93.26	-4.98	-87.34	558.18	449.94	108.24	5.157	
3,100.00	2,993.06	2,993.06	2,993.06	12.62	117.42	-93.26	-4.98	-87.34	604.48	492.79	111.69	5.412	
3,200.00	3,081.52	3,081.52	3,081.52	13.55	120.96	-93.26	-4.98	-87.34	650.83	535.68	115.15	5.652	
3,300.00	3,169.99	3,169.99	3,169.99	14.48	124.50	-93.26	-4.98	-87.34	697.22	578.59	118.62	5.878	
3,400.00	3,258.46	3,258.46	3,258.46	15.42	128.04	-93.26	-4.98	-87.34	743.63	621.53	122.10	6.090	
3,500.00	3,346.93	3,346.93	3,346.93	16.37	131.58	-93.26	-4.98	-87.34	790.07	664.48	125.58	6.291	
3,568.44	3,407.48	3,407.48	3,407.48	17.01	134.00	-93.26	-4.98	-87.34	821.86	693.89	127.97	6.422	
3,600.00	3,435.48	3,435.48	3,435.48	17.28	135.12	-93.26	-4.98	-87.34	836.37	706.62	129.75	6.446	
3,700.00	3,525.24	3,525.24	3,525.24	17.99	138.71	-93.26	-4.98	-87.34	880.31	744.95	135.37	6.503	
3,800.00	3,616.47	3,616.47	3,616.47	18.67	142.36	-93.26	-4.98	-87.34	921.12	780.14	140.98	6.534	
3,900.00	3,709.09	3,709.09	3,709.09	19.31	146.06	-93.26	-4.98	-87.34	958.73	812.17	146.56	6.542	
4,000.00	3,802.96	3,802.96	3,802.96	19.90	149.82	-93.26	-4.98	-87.34	993.10	841.01	152.10	6.529	
4,100.00	3,897.97	3,897.97	3,897.97	20.45	153.62	-93.26	-4.98	-87.34	1,024.19	866.63	157.56	6.500	
4,200.00	3,994.02	3,994.02	3,994.02	20.95	157.46	-93.26	-4.98	-87.34	1,051.96	888.96	163.00	6.454	
4,300.00	4,090.98	4,090.98	4,090.98	21.39	161.34	-93.26	-4.98	-87.34	1,076.36	908.01	168.35	6.394	
4,400.00	4,188.73	4,188.73	4,188.73	21.79	165.25	-93.26	-4.98	-87.34	1,097.38	923.80	173.58	6.322	
4,500.00	4,287.16	4,287.16	4,287.16	22.13	169.19	-93.26	-4.98	-87.34	1,114.97	936.31	178.66	6.241	
4,600.00	4,386.14	4,386.14	4,386.14	22.42	173.15	-93.26	-4.98	-87.34	1,129.13	945.55	183.58	6.151	
4,700.00	4,485.56	4,485.56	4,485.56	22.66	177.12	-93.26	-4.98	-87.34	1,139.84	951.52	188.32	6.053	
4,800.00	4,585.29	4,585.29	4,585.29	22.85	181.11	-93.26	-4.98	-87.34	1,147.07	954.22	192.85	5.948	

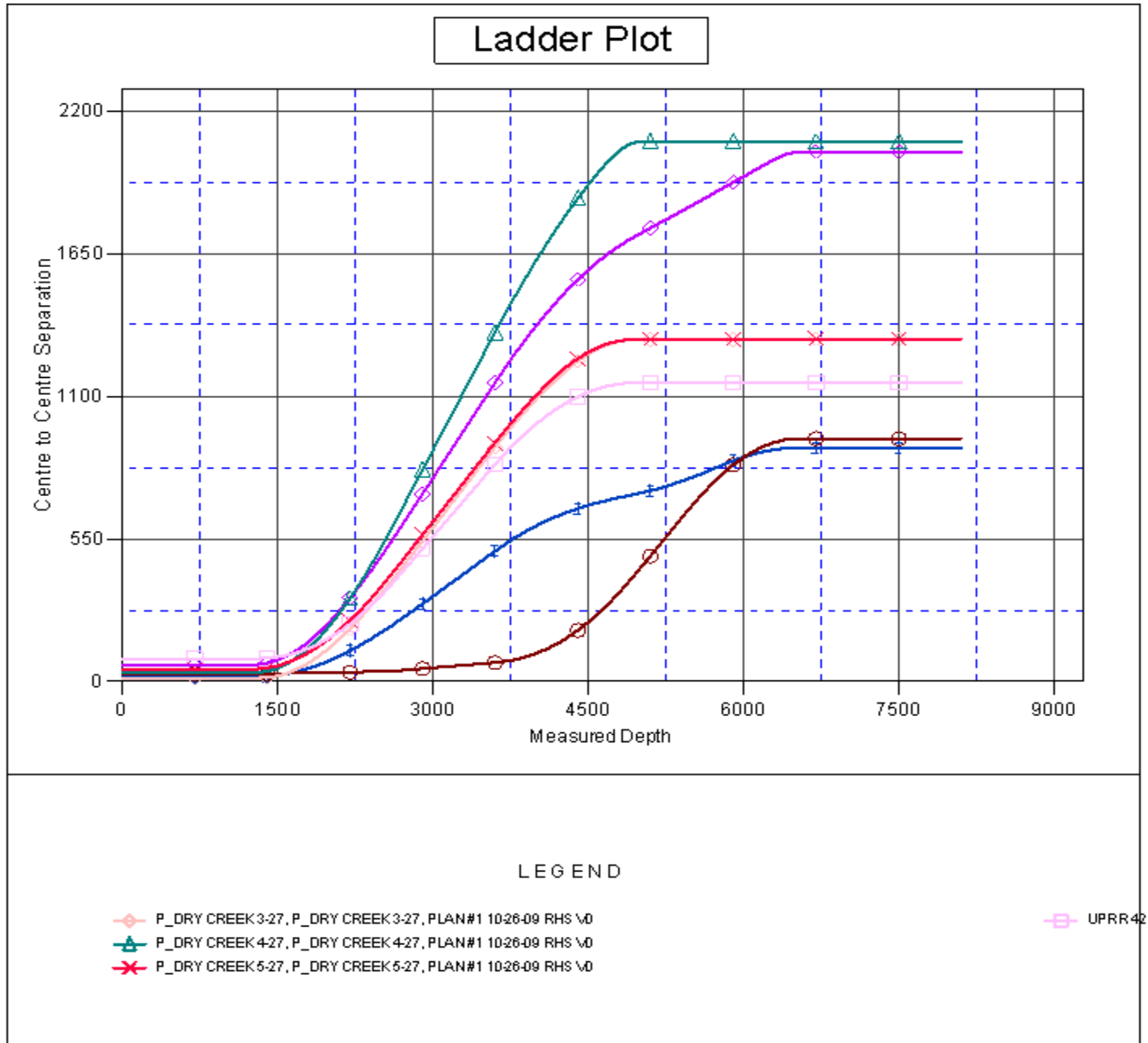
CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Company:	US ROCKIES REGION PLANNING	Local Co-ordinate Reference:	Well P_DRY CREEK 6-27
Project:	KERR MCGEE OIL & GAS ONSHORE LP	TVD Reference:	WELL @ 5023.00ft (Original Well Elev)
Reference Site:	WELD_DRY CREEK PAD 7	MD Reference:	WELL @ 5023.00ft (Original Well Elev)
Site Error:	0.00ft	North Reference:	Grid
Reference Well:	P_DRY CREEK 6-27	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00ft	Output errors are at	2.00 sigma
Reference Wellbore	P_DRY CREEK 6-27	Database:	EDM 2003.21 Single User Db
Reference Design:	PLAN #1 10-26-09 RHS	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.00 ft
Survey Program: 0-UNKNOWN												Offset Well Error:	0.00 ft
Reference		Offset		Semi Major Axis			Distance						
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning
4,900.00	4,685.22	4,685.22	4,685.22	22.99	185.11	176.63	-4.98	-87.34	1,150.83	953.67	197.16	5.837	
4,957.79	4,743.00	4,743.00	4,743.00	23.05	187.42	-46.09	-4.98	-87.34	1,151.41	951.87	199.53	5.771	
5,000.00	4,785.21	4,785.21	4,785.21	23.09	189.11	-46.09	-4.98	-87.34	1,151.41	950.12	201.29	5.720	
5,100.00	4,885.21	4,885.21	4,885.21	23.18	193.11	-46.09	-4.98	-87.34	1,151.41	945.95	205.46	5.604	
5,200.00	4,985.21	4,985.21	4,985.21	23.27	197.11	-46.09	-4.98	-87.34	1,151.41	941.78	209.63	5.493	
5,300.00	5,085.21	5,085.21	5,085.21	23.37	201.11	-46.09	-4.98	-87.34	1,151.41	937.61	213.80	5.385	
5,400.00	5,185.21	5,185.21	5,185.21	23.47	205.11	-46.09	-4.98	-87.34	1,151.41	933.44	217.97	5.282	
5,500.00	5,285.21	5,285.21	5,285.21	23.57	209.11	-46.09	-4.98	-87.34	1,151.41	929.26	222.14	5.183	
5,600.00	5,385.21	5,385.21	5,385.21	23.67	213.11	-46.09	-4.98	-87.34	1,151.41	925.09	226.32	5.088	
5,700.00	5,485.21	5,485.21	5,485.21	23.77	217.11	-46.09	-4.98	-87.34	1,151.41	920.91	230.50	4.995	
5,800.00	5,585.21	5,585.21	5,585.21	23.87	221.11	-46.09	-4.98	-87.34	1,151.41	916.73	234.68	4.906	
5,900.00	5,685.21	5,685.21	5,685.21	23.98	225.11	-46.09	-4.98	-87.34	1,151.41	912.55	238.86	4.821	
6,000.00	5,785.21	5,785.21	5,785.21	24.09	229.11	-46.09	-4.98	-87.34	1,151.41	908.37	243.04	4.738	
6,100.00	5,885.21	5,885.21	5,885.21	24.20	233.11	-46.09	-4.98	-87.34	1,151.41	904.19	247.22	4.657	
6,200.00	5,985.21	5,985.21	5,985.21	24.31	237.11	-46.09	-4.98	-87.34	1,151.41	900.01	251.40	4.580	
6,300.00	6,085.21	6,085.21	6,085.21	24.42	241.11	-46.09	-4.98	-87.34	1,151.41	895.82	255.59	4.505	
6,400.00	6,185.21	6,185.21	6,185.21	24.54	245.11	-46.09	-4.98	-87.34	1,151.41	891.63	259.77	4.432	
6,500.00	6,285.21	6,285.21	6,285.21	24.65	249.11	-46.09	-4.98	-87.34	1,151.41	887.45	263.96	4.362	
6,600.00	6,385.21	6,385.21	6,385.21	24.77	253.11	-46.09	-4.98	-87.34	1,151.41	883.26	268.15	4.294	
6,700.00	6,485.21	6,485.21	6,485.21	24.89	257.11	-46.09	-4.98	-87.34	1,151.41	879.07	272.34	4.228	
6,800.00	6,585.21	6,585.21	6,585.21	25.01	261.11	-46.09	-4.98	-87.34	1,151.41	874.88	276.53	4.164	
6,900.00	6,685.21	6,685.21	6,685.21	25.13	265.11	-46.09	-4.98	-87.34	1,151.41	870.69	280.72	4.102	
7,000.00	6,785.21	6,785.21	6,785.21	25.25	269.11	-46.09	-4.98	-87.34	1,151.41	866.50	284.91	4.041	
7,100.00	6,885.21	6,885.21	6,885.21	25.38	273.11	-46.09	-4.98	-87.34	1,151.41	862.31	289.10	3.983	
7,200.00	6,985.21	6,985.21	6,985.21	25.50	277.11	-46.09	-4.98	-87.34	1,151.41	858.11	293.30	3.926	
7,300.00	7,085.21	7,085.21	7,085.21	25.63	281.11	-46.09	-4.98	-87.34	1,151.41	853.92	297.49	3.870	
7,400.00	7,185.21	7,185.21	7,185.21	25.76	285.11	-46.09	-4.98	-87.34	1,151.41	849.72	301.68	3.817	
7,500.00	7,285.21	7,285.21	7,285.21	25.89	289.11	-46.09	-4.98	-87.34	1,151.41	845.53	305.88	3.764	
7,600.00	7,385.21	7,385.21	7,385.21	26.02	293.11	-46.09	-4.98	-87.34	1,151.41	841.33	310.08	3.713	
7,700.00	7,485.21	7,485.21	7,485.21	26.15	297.11	-46.09	-4.98	-87.34	1,151.41	837.13	314.27	3.664	
7,800.00	7,585.21	7,585.21	7,585.21	26.28	301.11	-46.09	-4.98	-87.34	1,151.41	832.94	318.47	3.615	
7,900.00	7,685.21	7,685.21	7,685.21	26.42	305.11	-46.09	-4.98	-87.34	1,151.41	828.74	322.67	3.568	
8,000.00	7,785.21	7,785.21	7,785.21	26.55	309.11	-46.09	-4.98	-87.34	1,151.41	824.54	326.87	3.523	
8,099.79	7,885.00	7,885.00	7,885.00	26.69	313.10	-46.09	-4.98	-87.34	1,151.41	820.35	331.06	3.478	

Company:	US ROCKIES REGION PLANNING	Local Co-ordinate Reference:	Well P_DRY CREEK 6-27
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Reference Site:	WELD_DRY CREEK PAD 7	MD Reference:	WELL @ 5023.00ft (Original Well Elev)
Site Error:	0.00ft	North Reference:	Grid
Reference Well:	P_DRY CREEK 6-27	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00ft	Output errors are at	2.00 sigma
Reference Wellbore	P_DRY CREEK 6-27	Database:	EDM 2003.21 Single User Db
Reference Design:	PLAN #1 10-26-09 RHS	Offset TVD Reference:	Offset Datum

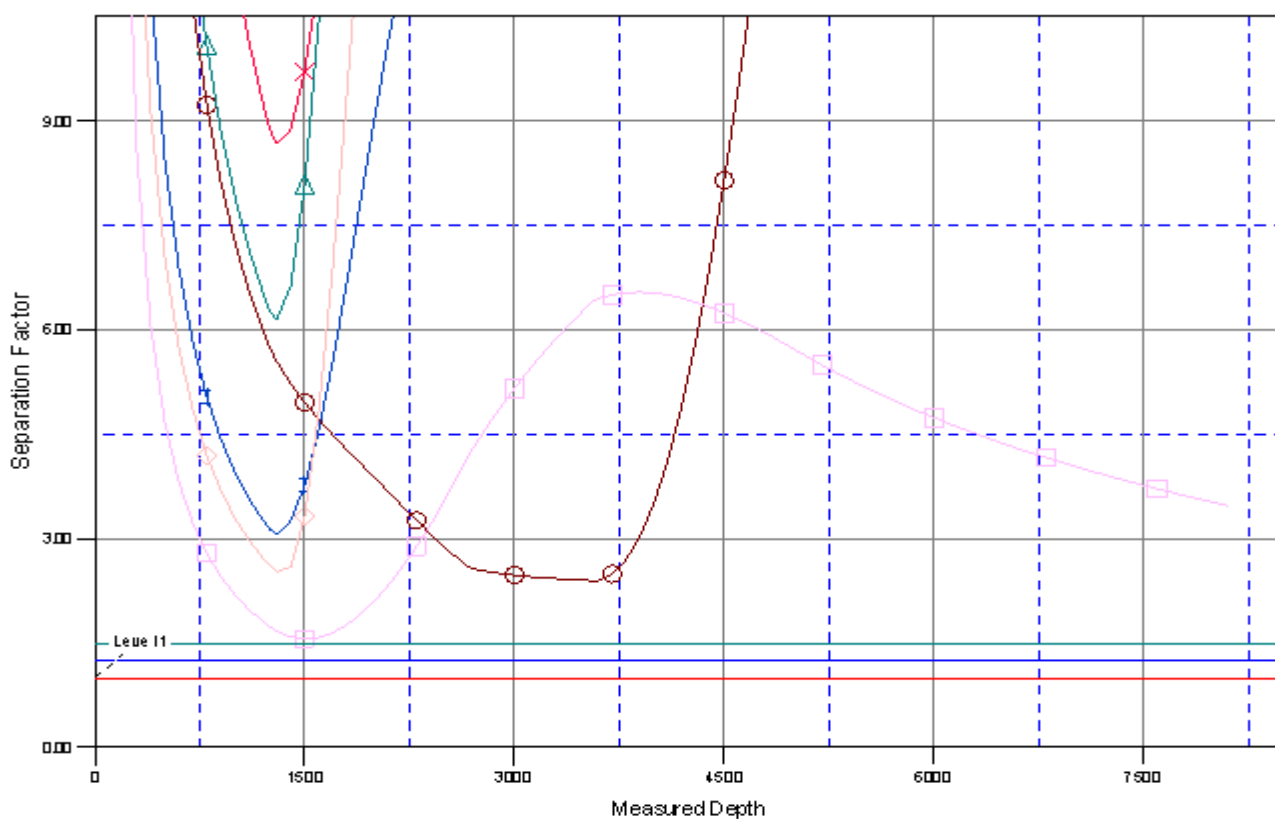
Reference Depths are relative to WELL @ 5023.00ft (Original Well Elev) Coordinates are relative to: P_DRY CREEK 6-27
Offset Depths are relative to Offset Datum Coordinate System is US State Plane 1983, Colorado Northern Zone
Central Meridian is 105° 30' 0.000 W ° Grid Convergence at Surface is: 0.40°



Company:	US ROCKIES REGION PLANNING	Local Co-ordinate Reference:	Well P_DRY CREEK 6-27
Project:	KERR MCGEE OIL & GAS ONSHORE LP	TVD Reference:	WELL @ 5023.00ft (Original Well Elev)
Reference Site:	WELD_DRY CREEK PAD 7	MD Reference:	WELL @ 5023.00ft (Original Well Elev)
Site Error:	0.00ft	North Reference:	Grid
Reference Well:	P_DRY CREEK 6-27	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00ft	Output errors are at	2.00 sigma
Reference Wellbore	P_DRY CREEK 6-27	Database:	EDM 2003.21 Single User Db
Reference Design:	PLAN #1 10-26-09 RHS	Offset TVD Reference:	Offset Datum

Reference Depths are relative to WELL @ 5023.00ft (Original Well Elev) Coordinates are relative to: P_DRY CREEK 6-27
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: 0.40°

Separation Factor Plot



LEGEND

- P_DRY CREEK 3-27, P_DRY CREEK 3-27, PLAN#1 10-26-09 RHS \0
- △ P_DRY CREEK 4-27, P_DRY CREEK 4-27, PLAN#1 10-26-09 RHS \0
- ✕ P_DRY CREEK 5-27, P_DRY CREEK 5-27, PLAN#1 10-26-09 RHS \0
- UPRR42