



# **US ROCKIES REGION PLANNING**

**COLORADO NORTHERN ZONE - 83**

**LARIMER\_ENCORE 3-12 PAD**

**P\_ENCORE 21-12**

**P\_ENCORE 21-12**

**Plan: PLAN #1 3-22-10 RHS**

## **Standard Planning Report**

**22 March, 2010**

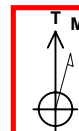




Project: COLORADO NORTHERN ZONE - 83  
 Site: LARIMER\_ENCORE 3-12 PAD  
 Well: P\_ENCORE 21-12  
 Wellbore: P\_ENCORE 21-12  
 Section: SECTION 12 T5N R68W  
 SHL: 520 FNL 2410 FWL  
 Design: PLAN #1 3-22-10 RHS  
 Latitude: 40° 25' 12.417 N  
 Longitude: 104° 57' 19.588 W  
 GL: 4979.00  
 KB: WELL @ 4994.00ft (Original Well Elev)



**Weatherford®**



Azimuths to True North  
 Magnetic North: 9.13°  
 Magnetic Field  
 Strength: 53249.8nT  
 Dip Angle: 67.08°  
 Date: 3/22/2010  
 Model: IGRF2010

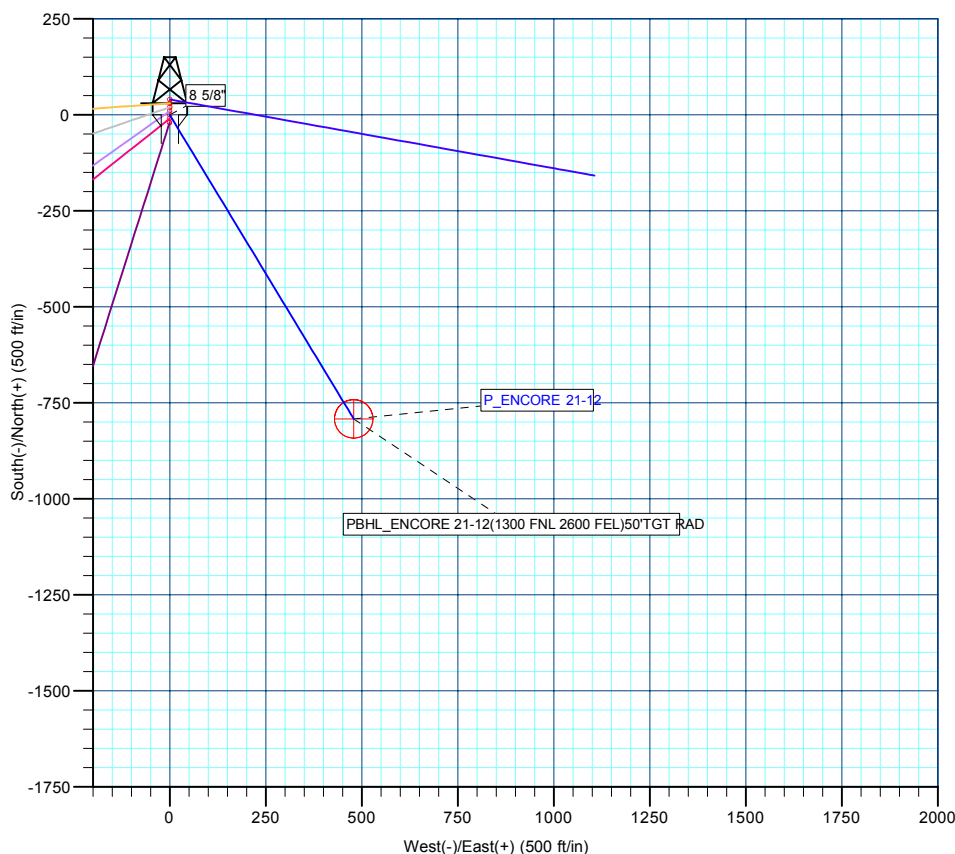
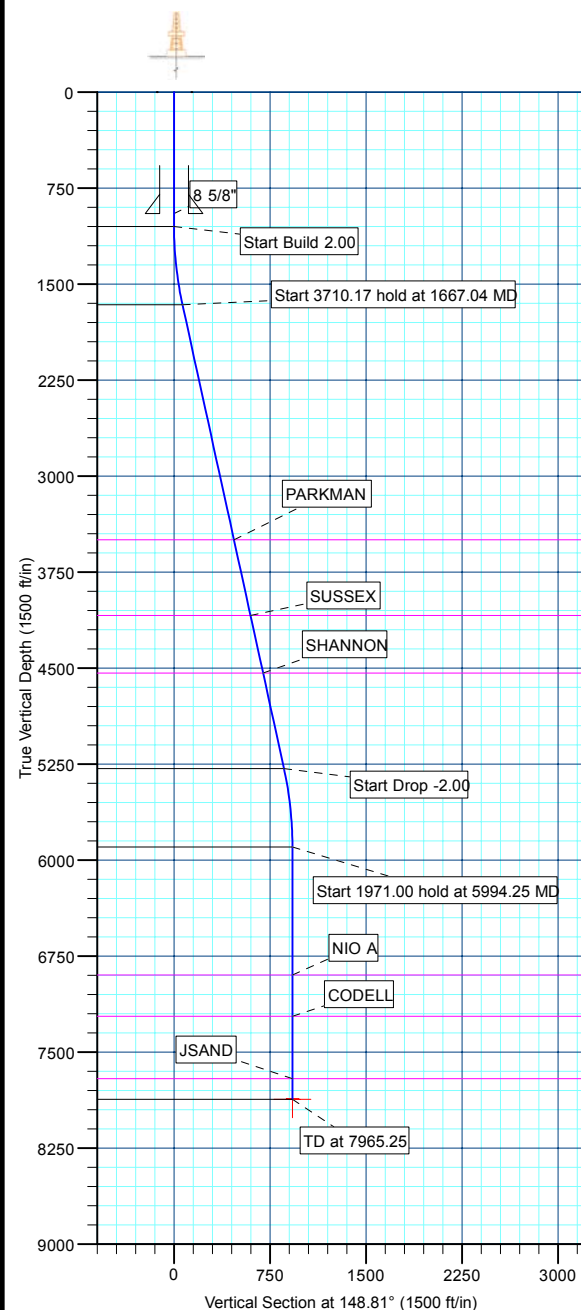
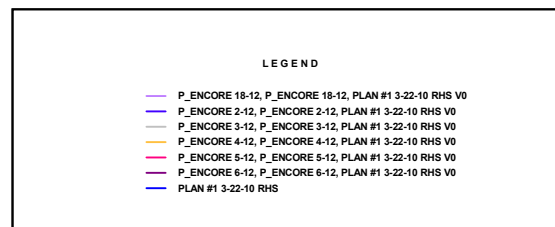
FORMATION TOP DETAILS		
TVDPath	MDPath	Formation
3499.00	3547.20	PARKMAN
4089.00	4151.16	SUSSEX
4539.00	4611.80	SHANNON
6899.00	6994.25	NIO A
7221.00	7316.25	CODELL
7709.00	7804.25	JSAND

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

SECTION DETAILS									
MD	Inc	Azi	TVD	+N/-S	+E/-W	DLeg	TFace	VSec	Annotation
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
1050.00	0.00	0.00	1050.00	0.00	0.00	0.00	0.00	0.00	Start Build 2.00
1667.04	12.34	148.81	1662.28	-56.63	34.28	2.00	148.81	66.19	Start 3710.17 hold at 1667.04 MD
5377.21	12.34	148.81	5286.72	-734.98	444.91	0.00	0.00	859.15	Start Drop -2.00
5994.25	0.00	0.00	5899.00	-791.61	479.19	2.00	180.00	925.34	Start 1971.00 hold at 5994.25 MD
7965.25	0.00	0.00	7870.00	-791.61	479.19	0.00	0.00	925.34	TD at 7965.25

WELLBORE TARGET DETAILS (MAP CO-ORDINATES AND LAT/LONG)						
Name	TVD	+N/-S	+E/-W	Latitude	Longitude	Shape
PBHL	7870.00	-791.61	479.19	40° 25' 4.595 N	104° 57' 13.392 W	Circle (Radius: 50.00)

WELL DETAILS: P_ENCORE 21-12						
+N/-S	+E/-W	Northing	Ground Level: Easting	4979.00 Latitude	Longitude	Slot
0.00	0.00	1396354.15	3151619.37	40° 25' 12.417 N	104° 57' 19.588 W	



Plan: PLAN #1 3-22-10 RHS (P_ENCORE 21-12/P_ENCORE 21-12)	
Created By: Robert H. Scott	Date: 14:37, March 22 2010

<b>Database:</b>	EDM 2003.21 Single User Db	<b>Local Co-ordinate Reference:</b>	Well P_ENCORE 21-12
<b>Company:</b>	US ROCKIES REGION PLANNING	<b>TVD Reference:</b>	WELL @ 4994.00ft (Original Well Elev)
<b>Project:</b>	COLORADO NORTHERN ZONE - 83	<b>MD Reference:</b>	WELL @ 4994.00ft (Original Well Elev)
<b>Site:</b>	LARIMER_ENCORE 3-12 PAD	<b>North Reference:</b>	True
<b>Well:</b>	P_ENCORE 21-12	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	P_ENCORE 21-12		
<b>Design:</b>	PLAN #1 3-22-10 RHS		

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

<b>Site</b>	LARIMER_ENCORE 3-12 PAD, SECTION 12 T5N R68W			
<b>Site Position:</b>		<b>Northing:</b>	1,396,364.36 ft	<b>Latitude:</b> 40° 25' 12.518 N
<b>From:</b>	Lat/Long	<b>Easting:</b>	3,151,619.58 ft	<b>Longitude:</b> 104° 57' 19.584 W
<b>Position Uncertainty:</b>	0.00 ft	<b>Slot Radius:</b>	in	<b>Grid Convergence:</b> 0.35 °

<b>Well</b>	P_ENCORE 21-12			
<b>Well Position</b>	<b>+N/-S</b>	-10.21 ft	<b>Northing:</b>	1,396,354.15 ft
	<b>+E/-W</b>	-0.28 ft	<b>Easting:</b>	3,151,619.37 ft
<b>Position Uncertainty</b>		0.00 ft	<b>Wellhead Elevation:</b>	ft
			<b>Ground Level:</b>	4,979.00 ft

<b>Wellbore</b>	P_ENCORE 21-12				
<b>Magnetics</b>	<b>Model Name</b>	<b>Sample Date</b>	<b>Declination (°)</b>	<b>Dip Angle (°)</b>	<b>Field Strength (nT)</b>
	IGRF2010	3/22/2010	9.13	67.08	53,250

<b>Design</b>	PLAN #1 3-22-10 RHS			
<b>Audit Notes:</b>				
<b>Version:</b>	<b>Phase:</b>	PLAN	<b>Tie On Depth:</b>	0.00
<b>Vertical Section:</b>	<b>Depth From (TVD) (ft)</b>	<b>+N/-S (ft)</b>	<b>+E/-W (ft)</b>	<b>Direction (°)</b>
	0.00	0.00	0.00	148.81

<b>Plan Sections</b>										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	TFO (°)	Target
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
1,050.00	0.00	0.00	1,050.00	0.00	0.00	0.00	0.00	0.00	0.00	
1,667.04	12.34	148.81	1,662.28	-56.63	34.28	2.00	2.00	0.00	148.81	
5,377.21	12.34	148.81	5,286.72	-734.98	444.91	0.00	0.00	0.00	0.00	
5,994.25	0.00	0.00	5,899.00	-791.61	479.19	2.00	-2.00	0.00	180.00	
7,965.25	0.00	0.00	7,870.00	-791.61	479.19	0.00	0.00	0.00	0.00	PBHL_ENCORE 21

<b>Database:</b>	EDM 2003.21 Single User Db	<b>Local Co-ordinate Reference:</b>	Well P_ENCORE 21-12
<b>Company:</b>	US ROCKIES REGION PLANNING	<b>TVD Reference:</b>	WELL @ 4994.00ft (Original Well Elev)
<b>Project:</b>	COLORADO NORTHERN ZONE - 83	<b>MD Reference:</b>	WELL @ 4994.00ft (Original Well Elev)
<b>Site:</b>	LARIMER_ENCORE 3-12 PAD	<b>North Reference:</b>	True
<b>Well:</b>	P_ENCORE 21-12	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	P_ENCORE 21-12		
<b>Design:</b>	PLAN #1 3-22-10 RHS		

**Planned Survey**

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
<b>Start Build 2.00</b>									
1,050.00	0.00	0.00	1,050.00	0.00	0.00	0.00	0.00	0.00	0.00
1,100.00	1.00	148.81	1,100.00	-0.37	0.23	0.44	2.00	2.00	0.00
1,200.00	3.00	148.81	1,199.93	-3.36	2.03	3.93	2.00	2.00	0.00
1,300.00	5.00	148.81	1,299.68	-9.33	5.65	10.90	2.00	2.00	0.00
1,400.00	7.00	148.81	1,399.13	-18.27	11.06	21.35	2.00	2.00	0.00
1,500.00	9.00	148.81	1,498.15	-30.17	18.26	35.27	2.00	2.00	0.00
1,600.00	11.00	148.81	1,596.63	-45.03	27.26	52.63	2.00	2.00	0.00
<b>Start 3710.17 hold at 1667.04 MD</b>									
1,667.04	12.34	148.81	1,662.28	-56.63	34.28	66.19	2.00	2.00	0.00
1,700.00	12.34	148.81	1,694.48	-62.65	37.93	73.24	0.00	0.00	0.00
1,800.00	12.34	148.81	1,792.17	-80.94	48.99	94.61	0.00	0.00	0.00
1,900.00	12.34	148.81	1,889.86	-99.22	60.06	115.98	0.00	0.00	0.00
2,000.00	12.34	148.81	1,987.55	-117.50	71.13	137.36	0.00	0.00	0.00
2,100.00	12.34	148.81	2,085.24	-135.79	82.20	158.73	0.00	0.00	0.00
2,200.00	12.34	148.81	2,182.93	-154.07	93.27	180.10	0.00	0.00	0.00
2,300.00	12.34	148.81	2,280.61	-172.36	104.33	201.47	0.00	0.00	0.00
2,400.00	12.34	148.81	2,378.30	-190.64	115.40	222.85	0.00	0.00	0.00
2,500.00	12.34	148.81	2,475.99	-208.92	126.47	244.22	0.00	0.00	0.00
2,600.00	12.34	148.81	2,573.68	-227.21	137.54	265.59	0.00	0.00	0.00
2,700.00	12.34	148.81	2,671.37	-245.49	148.60	286.96	0.00	0.00	0.00
2,800.00	12.34	148.81	2,769.06	-263.77	159.67	308.34	0.00	0.00	0.00
2,900.00	12.34	148.81	2,866.75	-282.06	170.74	329.71	0.00	0.00	0.00
3,000.00	12.34	148.81	2,964.44	-300.34	181.81	351.08	0.00	0.00	0.00
3,100.00	12.34	148.81	3,062.13	-318.62	192.88	372.45	0.00	0.00	0.00
3,200.00	12.34	148.81	3,159.82	-336.91	203.94	393.83	0.00	0.00	0.00
3,300.00	12.34	148.81	3,257.51	-355.19	215.01	415.20	0.00	0.00	0.00
3,400.00	12.34	148.81	3,355.20	-373.47	226.08	436.57	0.00	0.00	0.00
3,500.00	12.34	148.81	3,452.89	-391.76	237.15	457.94	0.00	0.00	0.00
<b>PARKMAN</b>									
3,547.20	12.34	148.81	3,499.00	-400.39	242.37	468.03	0.00	0.00	0.00
3,600.00	12.34	148.81	3,550.58	-410.04	248.21	479.32	0.00	0.00	0.00
3,700.00	12.34	148.81	3,648.27	-428.32	259.28	500.69	0.00	0.00	0.00
3,800.00	12.34	148.81	3,745.96	-446.61	270.35	522.06	0.00	0.00	0.00
3,900.00	12.34	148.81	3,843.65	-464.89	281.42	543.43	0.00	0.00	0.00
4,000.00	12.34	148.81	3,941.33	-483.18	292.49	564.81	0.00	0.00	0.00
4,100.00	12.34	148.81	4,039.02	-501.46	303.55	586.18	0.00	0.00	0.00
<b>SUSSEX</b>									
4,151.16	12.34	148.81	4,089.00	-510.81	309.22	597.11	0.00	0.00	0.00
4,200.00	12.34	148.81	4,136.71	-519.74	314.62	607.55	0.00	0.00	0.00
4,300.00	12.34	148.81	4,234.40	-538.03	325.69	628.92	0.00	0.00	0.00
4,400.00	12.34	148.81	4,332.09	-556.31	336.76	650.30	0.00	0.00	0.00
4,500.00	12.34	148.81	4,429.78	-574.59	347.82	671.67	0.00	0.00	0.00
4,600.00	12.34	148.81	4,527.47	-592.88	358.89	693.04	0.00	0.00	0.00
<b>SHANNON</b>									
4,611.80	12.34	148.81	4,539.00	-595.03	360.20	695.56	0.00	0.00	0.00
4,700.00	12.34	148.81	4,625.16	-611.16	369.96	714.41	0.00	0.00	0.00
4,800.00	12.34	148.81	4,722.85	-629.44	381.03	735.79	0.00	0.00	0.00
4,900.00	12.34	148.81	4,820.54	-647.73	392.10	757.16	0.00	0.00	0.00
5,000.00	12.34	148.81	4,918.23	-666.01	403.16	778.53	0.00	0.00	0.00
5,100.00	12.34	148.81	5,015.92	-684.29	414.23	799.90	0.00	0.00	0.00
5,200.00	12.34	148.81	5,113.61	-702.58	425.30	821.28	0.00	0.00	0.00
5,300.00	12.34	148.81	5,211.30	-720.86	436.37	842.65	0.00	0.00	0.00

<b>Database:</b>	EDM 2003.21 Single User Db	<b>Local Co-ordinate Reference:</b>	Well P_ENCORE 21-12
<b>Company:</b>	US ROCKIES REGION PLANNING	<b>TVD Reference:</b>	WELL @ 4994.00ft (Original Well Elev)
<b>Project:</b>	COLORADO NORTHERN ZONE - 83	<b>MD Reference:</b>	WELL @ 4994.00ft (Original Well Elev)
<b>Site:</b>	LARIMER_ENCORE 3-12 PAD	<b>North Reference:</b>	True
<b>Well:</b>	P_ENCORE 21-12	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	P_ENCORE 21-12		
<b>Design:</b>	PLAN #1 3-22-10 RHS		

#### Planned Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
<b>Start Drop -2.00</b>									
5,377.21	12.34	148.81	5,286.72	-734.98	444.91	859.15	0.00	0.00	0.00
5,400.00	11.88	148.81	5,309.01	-739.07	447.39	863.93	2.00	-2.00	0.00
5,500.00	9.88	148.81	5,407.20	-755.22	457.17	882.82	2.00	-2.00	0.00
5,600.00	7.88	148.81	5,506.00	-768.43	465.16	898.26	2.00	-2.00	0.00
5,700.00	5.88	148.81	5,605.27	-778.69	471.37	910.25	2.00	-2.00	0.00
5,800.00	3.88	148.81	5,704.90	-785.97	475.78	918.76	2.00	-2.00	0.00
5,900.00	1.88	148.81	5,804.77	-790.28	478.39	923.79	2.00	-2.00	0.00
<b>Start 1971.00 hold at 5994.25 MD</b>									
5,994.25	0.00	0.00	5,899.00	-791.61	479.19	925.34	2.00	-2.00	-157.90
6,000.00	0.00	0.00	5,904.75	-791.61	479.19	925.34	0.00	0.00	0.00
6,100.00	0.00	0.00	6,004.75	-791.61	479.19	925.34	0.00	0.00	0.00
6,200.00	0.00	0.00	6,104.75	-791.61	479.19	925.34	0.00	0.00	0.00
6,300.00	0.00	0.00	6,204.75	-791.61	479.19	925.34	0.00	0.00	0.00
6,400.00	0.00	0.00	6,304.75	-791.61	479.19	925.34	0.00	0.00	0.00
6,500.00	0.00	0.00	6,404.75	-791.61	479.19	925.34	0.00	0.00	0.00
6,600.00	0.00	0.00	6,504.75	-791.61	479.19	925.34	0.00	0.00	0.00
6,700.00	0.00	0.00	6,604.75	-791.61	479.19	925.34	0.00	0.00	0.00
6,800.00	0.00	0.00	6,704.75	-791.61	479.19	925.34	0.00	0.00	0.00
6,900.00	0.00	0.00	6,804.75	-791.61	479.19	925.34	0.00	0.00	0.00
<b>NIO A</b>									
6,994.25	0.00	0.00	6,899.00	-791.61	479.19	925.34	0.00	0.00	0.00
7,000.00	0.00	0.00	6,904.75	-791.61	479.19	925.34	0.00	0.00	0.00
7,100.00	0.00	0.00	7,004.75	-791.61	479.19	925.34	0.00	0.00	0.00
7,200.00	0.00	0.00	7,104.75	-791.61	479.19	925.34	0.00	0.00	0.00
7,300.00	0.00	0.00	7,204.75	-791.61	479.19	925.34	0.00	0.00	0.00
<b>CODELL</b>									
7,316.25	0.00	0.00	7,221.00	-791.61	479.19	925.34	0.00	0.00	0.00
7,400.00	0.00	0.00	7,304.75	-791.61	479.19	925.34	0.00	0.00	0.00
7,500.00	0.00	0.00	7,404.75	-791.61	479.19	925.34	0.00	0.00	0.00
7,600.00	0.00	0.00	7,504.75	-791.61	479.19	925.34	0.00	0.00	0.00
7,700.00	0.00	0.00	7,604.75	-791.61	479.19	925.34	0.00	0.00	0.00
7,800.00	0.00	0.00	7,704.75	-791.61	479.19	925.34	0.00	0.00	0.00
<b>JSAND</b>									
7,804.25	0.00	0.00	7,709.00	-791.61	479.19	925.34	0.00	0.00	0.00
7,900.00	0.00	0.00	7,804.75	-791.61	479.19	925.34	0.00	0.00	0.00
<b>PBHL_ENCORE 21-12(1300 FNL 2600 FEL)50'TGT RAD</b>									
7,965.25	0.00	0.00	7,870.00	-791.61	479.19	925.34	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_ENCORE 21-1	0.00	0.00	7,870.00	-791.61	479.19	1,395,565.50	3,152,103.41	40° 25' 4.595 N	104° 57' 13.392 W
- plan hits target center									
- Circle (radius 50.00)									

<b>Database:</b>	EDM 2003.21 Single User Db	<b>Local Co-ordinate Reference:</b>	Well P_ENCORE 21-12
<b>Company:</b>	US ROCKIES REGION PLANNING	<b>TVD Reference:</b>	WELL @ 4994.00ft (Original Well Elev)
<b>Project:</b>	COLORADO NORTHERN ZONE - 83	<b>MD Reference:</b>	WELL @ 4994.00ft (Original Well Elev)
<b>Site:</b>	LARIMER_ENCORE 3-12 PAD	<b>North Reference:</b>	True
<b>Well:</b>	P_ENCORE 21-12	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	P_ENCORE 21-12		
<b>Design:</b>	PLAN #1 3-22-10 RHS		

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

Formations						
Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)	
3,547.20	3,499.00	PARKMAN				
4,151.16	4,089.00	SUSSEX				
4,611.80	4,539.00	SHANNON				
6,994.25	6,899.00	NIO A				
7,316.25	7,221.00	CODELL				
7,804.25	7,709.00	JSAND				

Plan Annotations					
Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates			
		+N/-S (ft)	+E/-W (ft)	Comment	
1,050.00	1,050.00	0.00	0.00	Start Build 2.00	
1,667.04	1,662.28	-56.63	34.28	Start 3710.17 hold at 1667.04 MD	
5,377.21	5,286.72	-734.98	444.91	Start Drop -2.00	
5,994.25	5,899.00	-791.61	479.19	Start 1971.00 hold at 5994.25 MD	
7,965.25	7,870.00	-791.61	479.19	TD at 7965.25	



# **US ROCKIES REGION PLANNING**

**COLORADO NORTHERN ZONE - 83  
LARIMER\_ENCORE 3-12 PAD  
P\_ENCORE 21-12**

**P\_ENCORE 21-12  
PLAN #1 3-22-10 RHS**

## **Anticollision Report**

**22 March, 2010**



<b>Company:</b>	US ROCKIES REGION PLANNING	<b>Local Co-ordinate Reference:</b>	Well P_ENCORE 21-12
<b>Project:</b>	COLORADO NORTHERN ZONE - 83	<b>TVD Reference:</b>	WELL @ 4994.00ft (Original Well Elev)
<b>Reference Site:</b>	LARIMER_ENCORE 3-12 PAD	<b>MD Reference:</b>	WELL @ 4994.00ft (Original Well Elev)
<b>Site Error:</b>	0.00ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	P_ENCORE 21-12	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.00ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	P_ENCORE 21-12	<b>Database:</b>	EDM 2003.21 Single User Db
<b>Reference Design:</b>	PLAN #1 3-22-10 RHS	<b>Offset TVD Reference:</b>	Offset Datum

<b>Reference</b>	PLAN #1 3-22-10 RHS		
<b>Filter type:</b>	NO GLOBAL FILTER: Using user defined selection & filtering criteria		
<b>Interpolation Method:</b>	Stations	<b>Error Model:</b>	ISCWSA
<b>Depth Range:</b>	0.00 to 20,000.00ft	<b>Scan Method:</b>	Closest Approach 3D
<b>Results Limited by:</b>	Maximum center-center distance of 10,000.00ft	<b>Error Surface:</b>	Elliptical Conic
<b>Warning Levels Evaluated at:</b>	2.00 Sigma		

<b>Survey Tool Program</b>	<b>Date</b>	3/22/2010		
<b>From (ft)</b>	<b>To (ft)</b>	<b>Survey (Wellbore)</b>	<b>Tool Name</b>	<b>Description</b>
0.00	7,965.25	PLAN #1 3-22-10 RHS (P_ENCORE 21-12)	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						
LARIMER_ENCORE 3-12 PAD						
P_ENCORE 18-12 - P_ENCORE 18-12 - PLAN #1 3-22-	1,050.00	1,050.00	10.21	5.75	2.288	CC
P_ENCORE 18-12 - P_ENCORE 18-12 - PLAN #1 3-22-	1,100.00	1,100.10	10.33	5.67	2.216	ES, SF
P_ENCORE 2-12 - P_ENCORE 2-12 - PLAN #1 3-22-10	1,050.00	1,050.00	40.08	35.62	8.983	CC, ES
P_ENCORE 2-12 - P_ENCORE 2-12 - PLAN #1 3-22-10	1,200.00	1,200.26	42.82	37.78	8.503	SF
P_ENCORE 3-12 - P_ENCORE 3-12 - PLAN #1 3-22-10	1,050.00	1,050.00	20.04	15.58	4.493	CC, ES
P_ENCORE 3-12 - P_ENCORE 3-12 - PLAN #1 3-22-10	1,100.00	1,100.11	20.27	15.60	4.346	SF
P_ENCORE 4-12 - P_ENCORE 4-12 - PLAN #1 3-22-10	1,050.00	1,050.00	30.24	25.78	6.779	CC, ES
P_ENCORE 4-12 - P_ENCORE 4-12 - PLAN #1 3-22-10	1,100.00	1,100.04	30.58	25.91	6.554	SF
P_ENCORE 5-12 - P_ENCORE 5-12 - PLAN #1 3-22-10	300.00	300.00	9.84	8.75	9.023	CC, ES
P_ENCORE 5-12 - P_ENCORE 5-12 - PLAN #1 3-22-10	400.00	399.74	11.04	9.52	7.266	SF
P_ENCORE 6-12 - P_ENCORE 6-12 - PLAN #1 3-22-10	1,050.00	1,050.00	20.04	15.58	4.492	CC
P_ENCORE 6-12 - P_ENCORE 6-12 - PLAN #1 3-22-10	1,100.00	1,099.66	20.09	15.43	4.313	ES
P_ENCORE 6-12 - P_ENCORE 6-12 - PLAN #1 3-22-10	1,200.00	1,198.93	20.69	15.69	4.135	SF

Offset Design LARIMER_ENCORE 3-12 PAD - P_ENCORE 18-12 - P_ENCORE 18-12 - PLAN #1 3-22-10 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		Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	
							+N/-S (ft)	+E/-W (ft)					
0.00	0.00	0.00	0.00	0.00	0.00	1.56	10.20	0.28	10.21				
100.00	100.00	100.00	100.00	0.10	0.10	1.56	10.20	0.28	10.21	10.02	0.19	53.432	
200.00	200.00	200.00	200.00	0.32	0.32	1.56	10.20	0.28	10.21	9.57	0.64	15.936	
300.00	300.00	300.00	300.00	0.55	0.55	1.56	10.20	0.28	10.21	9.12	1.09	9.364	
400.00	400.00	400.00	400.00	0.77	0.77	1.56	10.20	0.28	10.21	8.67	1.54	6.630	
500.00	500.00	500.00	500.00	0.99	0.99	1.56	10.20	0.28	10.21	8.22	1.99	5.132	
600.00	600.00	600.00	600.00	1.22	1.22	1.56	10.20	0.28	10.21	7.77	2.44	4.186	
700.00	700.00	700.00	700.00	1.44	1.44	1.56	10.20	0.28	10.21	7.32	2.89	3.534	
800.00	800.00	800.00	800.00	1.67	1.67	1.56	10.20	0.28	10.21	6.87	3.34	3.058	
900.00	900.00	900.00	900.00	1.89	1.89	1.56	10.20	0.28	10.21	6.42	3.79	2.695	
1,000.00	1,000.00	1,000.00	1,000.00	2.12	2.12	1.56	10.20	0.28	10.21	5.97	4.24	2.409	
1,050.00	1,050.00	1,050.00	1,050.00	2.23	2.23	1.56	10.20	0.28	10.21	5.75	4.46	2.288	CC
1,100.00	1,100.00	1,100.10	1,100.10	2.33	2.33	-150.50	9.95	-0.08	10.33	5.67	4.66	2.216	ES, SF
1,200.00	1,199.93	1,200.13	1,200.06	2.51	2.52	-172.54	7.93	-2.93	12.33	7.32	5.02	2.458	
1,300.00	1,299.68	1,299.65	1,299.34	2.70	2.71	164.04	3.92	-8.59	19.45	14.06	5.38	3.612	

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

<b>Company:</b>	US ROCKIES REGION PLANNING	<b>Local Co-ordinate Reference:</b>	Well P_ENCORE 21-12
<b>Project:</b>	COLORADO NORTHERN ZONE - 83	<b>TVD Reference:</b>	WELL @ 4994.00ft (Original Well Elev)
<b>Reference Site:</b>	LARIMER_ENCORE 3-12 PAD	<b>MD Reference:</b>	WELL @ 4994.00ft (Original Well Elev)
<b>Site Error:</b>	0.00ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	P_ENCORE 21-12	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.00ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	P_ENCORE 21-12	<b>Database:</b>	EDM 2003.21 Single User Db
<b>Reference Design:</b>	PLAN #1 3-22-10 RHS	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design												Offset Site Error:	0.00 ft
Survey Program: 0-MWMD												Offset Well Error:	0.00 ft
LARIMER_ENCORE 3-12 PAD - P_ENCORE 18-12 - P_ENCORE 18-12 - PLAN #1 3-22-10 RHS													
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
1,400.00	1,399.13	1,398.34	1,397.48	2.91	2.93	150.92	-2.02	-16.98	32.45	26.67	5.77	5.621	
1,500.00	1,498.15	1,495.88	1,494.08	3.14	3.17	144.19	-9.82	-27.98	50.69	44.49	6.19	8.184	
1,600.00	1,596.63	1,591.97	1,588.74	3.42	3.44	140.41	-19.35	-41.43	73.75	67.09	6.66	11.079	
1,667.04	1,662.28	1,655.44	1,650.94	3.63	3.64	138.73	-26.65	-51.73	91.78	84.79	7.00	13.116	
1,700.00	1,694.48	1,686.38	1,681.16	3.74	3.74	138.12	-30.49	-57.16	101.26	94.08	7.18	14.103	
1,800.00	1,792.17	1,779.36	1,771.50	4.10	4.09	136.08	-43.18	-75.07	131.32	123.54	7.77	16.895	
1,900.00	1,889.86	1,870.89	1,859.71	4.47	4.49	133.96	-57.33	-95.03	163.46	155.04	8.41	19.431	
2,000.00	1,987.55	1,960.84	1,945.57	4.87	4.93	131.89	-72.81	-116.87	197.75	188.66	9.09	21.745	
2,100.00	2,085.24	2,051.32	2,031.15	5.27	5.42	129.92	-89.78	-140.82	234.05	224.24	9.81	23.855	
2,200.00	2,182.93	2,144.08	2,118.76	5.69	5.96	128.37	-107.41	-165.71	270.85	260.29	10.56	25.640	
2,300.00	2,280.61	2,236.85	2,206.37	6.12	6.52	127.19	-125.04	-190.59	307.78	296.45	11.33	27.165	
2,400.00	2,378.30	2,329.62	2,293.98	6.55	7.09	126.27	-142.67	-215.47	344.80	332.69	12.11	28.475	
2,500.00	2,475.99	2,422.38	2,381.59	6.99	7.67	125.52	-160.30	-240.35	381.88	368.98	12.90	29.608	
2,600.00	2,573.68	2,515.15	2,469.20	7.43	8.25	124.90	-177.93	-265.24	419.01	405.32	13.69	30.596	
2,700.00	2,671.37	2,607.91	2,556.82	7.88	8.85	124.39	-195.56	-290.12	456.17	441.67	14.50	31.463	
2,800.00	2,769.06	2,700.68	2,644.43	8.32	9.45	123.95	-213.20	-315.00	493.36	478.06	15.31	32.229	
2,900.00	2,866.75	2,793.45	2,732.04	8.78	10.06	123.57	-230.83	-339.88	530.58	514.45	16.12	32.909	
3,000.00	2,964.44	2,886.21	2,819.65	9.23	10.67	123.25	-248.46	-364.77	567.80	550.86	16.94	33.517	
3,100.00	3,062.13	2,978.98	2,907.26	9.68	11.28	122.96	-266.09	-389.65	605.05	587.28	17.76	34.063	
3,200.00	3,159.82	3,071.74	2,994.87	10.14	11.90	122.71	-283.72	-414.53	642.30	623.71	18.59	34.557	
3,300.00	3,257.51	3,164.51	3,082.48	10.60	12.52	122.48	-301.35	-439.42	679.57	660.15	19.41	35.005	
3,400.00	3,355.20	3,257.28	3,170.09	11.06	13.14	122.28	-318.98	-464.30	716.84	696.60	20.24	35.414	
3,500.00	3,452.89	3,350.04	3,257.70	11.52	13.76	122.10	-336.61	-489.18	754.12	733.04	21.07	35.788	
3,600.00	3,550.58	3,442.81	3,345.31	11.98	14.38	121.93	-354.25	-514.06	791.40	769.50	21.90	36.132	
3,700.00	3,648.27	3,535.57	3,432.92	12.45	15.01	121.78	-371.88	-538.95	828.69	805.96	22.74	36.449	
3,800.00	3,745.96	3,628.34	3,520.53	12.91	15.63	121.64	-389.51	-563.83	865.99	842.42	23.57	36.742	
3,900.00	3,843.65	3,721.11	3,608.14	13.37	16.26	121.52	-407.14	-588.71	903.29	878.88	24.40	37.015	
4,000.00	3,941.33	3,813.87	3,695.75	13.84	16.88	121.40	-424.77	-613.59	940.59	915.35	25.24	37.269	
4,100.00	4,039.02	3,906.64	3,783.36	14.30	17.51	121.29	-442.40	-638.48	977.89	951.82	26.07	37.506	
4,200.00	4,136.71	3,999.40	3,870.97	14.77	18.14	121.19	-460.03	-663.36	1,015.20	988.29	26.91	37.728	
4,300.00	4,234.40	4,092.17	3,958.58	15.24	18.77	121.10	-477.66	-688.24	1,052.51	1,024.77	27.74	37.936	
4,400.00	4,332.09	4,184.94	4,046.19	15.70	19.40	121.02	-495.30	-713.13	1,089.82	1,061.24	28.58	38.132	
4,500.00	4,429.78	4,277.70	4,133.80	16.17	20.03	120.94	-512.93	-738.01	1,127.14	1,097.72	29.42	38.317	
4,600.00	4,527.47	4,370.47	4,221.41	16.64	20.66	120.86	-530.56	-762.89	1,164.45	1,134.20	30.25	38.492	
4,700.00	4,625.16	4,463.24	4,309.02	17.11	21.30	120.79	-548.19	-787.77	1,201.77	1,170.69	31.09	38.658	
4,800.00	4,722.85	4,556.00	4,396.63	17.57	21.93	120.72	-565.82	-812.66	1,239.09	1,207.17	31.92	38.815	
4,900.00	4,820.54	4,648.77	4,484.24	18.04	22.56	120.66	-583.45	-837.54	1,276.41	1,243.65	32.76	38.964	
5,000.00	4,918.23	4,741.53	4,571.85	18.51	23.19	120.60	-601.08	-862.42	1,313.73	1,280.14	33.59	39.107	
5,100.00	5,015.92	4,834.30	4,659.46	18.98	23.83	120.55	-618.71	-887.30	1,351.06	1,316.63	34.43	39.242	
5,200.00	5,113.61	4,927.07	4,747.07	19.45	24.46	120.49	-636.35	-912.19	1,388.38	1,353.12	35.26	39.372	
5,300.00	5,211.30	5,019.83	4,834.68	19.92	25.09	120.44	-653.98	-937.07	1,425.71	1,389.61	36.10	39.496	
5,377.21	5,286.72	5,091.46	4,902.32	20.28	25.58	120.41	-667.59	-956.28	1,454.53	1,417.79	36.74	39.588	
5,400.00	5,309.01	5,112.61	4,922.30	20.37	25.73	120.55	-671.61	-961.96	1,462.99	1,426.03	36.96	39.582	
5,500.00	5,407.20	5,249.01	5,051.70	20.69	26.50	121.04	-696.53	-997.12	1,498.26	1,460.34	37.92	39.508	
5,600.00	5,506.00	5,415.28	5,211.91	20.97	27.21	121.39	-722.18	-1,033.32	1,527.77	1,488.96	38.81	39.366	
5,700.00	5,605.27	5,586.93	5,379.73	21.21	27.82	121.65	-742.97	-1,062.67	1,550.94	1,511.36	39.58	39.182	
5,800.00	5,704.90	5,762.83	5,553.61	21.41	28.30	121.83	-758.22	-1,084.19	1,567.53	1,527.30	40.23	38.962	
5,900.00	5,804.77	5,941.62	5,731.67	21.57	28.64	121.93	-767.36	-1,097.09	1,577.34	1,536.59	40.75	38.705	
5,994.25	5,899.00	6,109.03	5,899.00	21.69	28.84	-89.22	-770.09	-1,100.94	1,580.28	1,539.13	41.15	38.407	
6,000.00	5,904.75	6,114.79	5,904.75	21.70	28.85	-89.22	-770.09	-1,100.94	1,580.28	1,539.12	41.16	38.394	
6,100.00	6,004.75	6,214.79	6,004.75	21.81	28.94	-89.22	-770.09	-1,100.94	1,580.28	1,538.88	41.40	38.175	
6,200.00	6,104.75	6,314.79	6,104.75	21.92	29.03	-89.22	-770.09	-1,100.94	1,580.28	1,538.65	41.63	37.959	

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

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<b>Reference Site:</b>	LARIMER_ENCORE 3-12 PAD	<b>MD Reference:</b>	WELL @ 4994.00ft (Original Well Elev)
<b>Site Error:</b>	0.00ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	P_ENCORE 21-12	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.00ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	P_ENCORE 21-12	<b>Database:</b>	EDM 2003.21 Single User Db
<b>Reference Design:</b>	PLAN #1 3-22-10 RHS	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design												Offset Site Error:	0.00 ft
Survey Program: 0-MWD												Offset Well Error:	0.00 ft
Reference		Offset		Semi Major Axis			Distance						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	
6,300.00	6,204.75	6,414.79	6,204.75	22.04	29.12	-89.22	-770.09	-1,100.94	1,580.28	1,538.41	41.87	37.743	
6,400.00	6,304.75	6,514.79	6,304.75	22.15	29.21	-89.22	-770.09	-1,100.94	1,580.28	1,538.17	42.11	37.526	
6,500.00	6,404.75	6,614.79	6,404.75	22.27	29.31	-89.22	-770.09	-1,100.94	1,580.28	1,537.92	42.36	37.309	
6,600.00	6,504.75	6,714.79	6,504.75	22.39	29.40	-89.22	-770.09	-1,100.94	1,580.28	1,537.67	42.61	37.091	
6,700.00	6,604.75	6,814.79	6,604.75	22.51	29.50	-89.22	-770.09	-1,100.94	1,580.28	1,537.42	42.86	36.873	
6,800.00	6,704.75	6,914.79	6,704.75	22.63	29.60	-89.22	-770.09	-1,100.94	1,580.28	1,537.16	43.11	36.654	
6,900.00	6,804.75	7,014.79	6,804.75	22.76	29.70	-89.22	-770.09	-1,100.94	1,580.28	1,536.91	43.37	36.436	
7,000.00	6,904.75	7,114.79	6,904.75	22.88	29.80	-89.22	-770.09	-1,100.94	1,580.28	1,536.64	43.63	36.218	
7,100.00	7,004.75	7,214.79	7,004.75	23.01	29.90	-89.22	-770.09	-1,100.94	1,580.28	1,536.38	43.90	35.999	
7,200.00	7,104.75	7,314.79	7,104.75	23.14	30.01	-89.22	-770.09	-1,100.94	1,580.28	1,536.11	44.17	35.781	
7,300.00	7,204.75	7,414.79	7,204.75	23.27	30.11	-89.22	-770.09	-1,100.94	1,580.28	1,535.84	44.44	35.563	
7,400.00	7,304.75	7,514.79	7,304.75	23.40	30.22	-89.22	-770.09	-1,100.94	1,580.28	1,535.57	44.71	35.346	
7,500.00	7,404.75	7,614.79	7,404.75	23.53	30.32	-89.22	-770.09	-1,100.94	1,580.28	1,535.29	44.99	35.129	
7,600.00	7,504.75	7,714.79	7,504.75	23.66	30.43	-89.22	-770.09	-1,100.94	1,580.28	1,535.01	45.26	34.912	
7,700.00	7,604.75	7,814.79	7,604.75	23.80	30.54	-89.22	-770.09	-1,100.94	1,580.28	1,534.73	45.55	34.696	
7,800.00	7,704.75	7,914.79	7,704.75	23.94	30.66	-89.22	-770.09	-1,100.94	1,580.28	1,534.45	45.83	34.481	
7,900.00	7,804.75	8,014.79	7,804.75	24.07	30.77	-89.22	-770.09	-1,100.94	1,580.28	1,534.16	46.12	34.266	
7,965.25	7,870.00	8,080.03	7,870.00	24.16	30.84	-89.22	-770.09	-1,100.94	1,580.28	1,533.97	46.31	34.127	

<b>Company:</b>	US ROCKIES REGION PLANNING	<b>Local Co-ordinate Reference:</b>	Well P_ENCORE 21-12
<b>Project:</b>	COLORADO NORTHERN ZONE - 83	<b>TVD Reference:</b>	WELL @ 4994.00ft (Original Well Elev)
<b>Reference Site:</b>	LARIMER_ENCORE 3-12 PAD	<b>MD Reference:</b>	WELL @ 4994.00ft (Original Well Elev)
<b>Site Error:</b>	0.00ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	P_ENCORE 21-12	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.00ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	P_ENCORE 21-12	<b>Database:</b>	EDM 2003.21 Single User Db
<b>Reference Design:</b>	PLAN #1 3-22-10 RHS	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design												Offset Site Error:	0.00 ft
Survey Program: 0-MWD												Offset Well Error:	0.00 ft
Reference		Offset		Semi Major Axis			Distance						
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside 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	1.19	40.07	0.84	40.08				
100.00	100.00	100.00	100.00	0.10	0.10	1.19	40.07	0.84	40.08	39.89	0.19	209.774	
200.00	200.00	200.00	200.00	0.32	0.32	1.19	40.07	0.84	40.08	39.44	0.64	62.564	
300.00	300.00	300.00	300.00	0.55	0.55	1.19	40.07	0.84	40.08	38.99	1.09	36.764	
400.00	400.00	400.00	400.00	0.77	0.77	1.19	40.07	0.84	40.08	38.54	1.54	26.030	
500.00	500.00	500.00	500.00	0.99	0.99	1.19	40.07	0.84	40.08	38.09	1.99	20.148	
600.00	600.00	600.00	600.00	1.22	1.22	1.19	40.07	0.84	40.08	37.64	2.44	16.434	
700.00	700.00	700.00	700.00	1.44	1.44	1.19	40.07	0.84	40.08	37.19	2.89	13.876	
800.00	800.00	800.00	800.00	1.67	1.67	1.19	40.07	0.84	40.08	36.74	3.34	12.007	
900.00	900.00	900.00	900.00	1.89	1.89	1.19	40.07	0.84	40.08	36.29	3.79	10.582	
1,000.00	1,000.00	1,000.00	1,000.00	2.12	2.12	1.19	40.07	0.84	40.08	35.84	4.24	9.459	
1,050.00	1,050.00	1,050.00	1,050.00	2.23	2.23	1.19	40.07	0.84	40.08	35.62	4.46	8.983 CC, ES	
1,100.00	1,100.00	1,100.11	1,100.10	2.33	2.34	-147.33	39.99	1.27	40.38	35.71	4.66	8.656	
1,200.00	1,199.93	1,200.26	1,200.19	2.51	2.53	-145.20	39.37	4.71	42.82	37.78	5.04	8.503 SF	
1,300.00	1,299.68	1,300.22	1,299.90	2.70	2.74	-141.59	38.14	11.58	47.84	42.41	5.43	8.818	
1,400.00	1,399.13	1,399.88	1,399.01	2.91	2.97	-137.41	36.30	21.84	55.63	49.78	5.84	9.520	
1,500.00	1,498.15	1,499.11	1,497.27	3.14	3.22	-133.38	33.87	35.42	66.31	60.00	6.31	10.515	
1,600.00	1,596.63	1,597.79	1,594.46	3.42	3.50	-129.84	30.86	52.23	79.92	73.09	6.83	11.702	
1,667.04	1,662.28	1,663.59	1,658.91	3.63	3.72	-127.80	28.52	65.27	90.68	83.45	7.23	12.546	
1,700.00	1,694.48	1,695.84	1,690.38	3.74	3.83	-126.89	27.28	72.19	96.33	88.89	7.43	12.957	
1,800.00	1,792.17	1,793.28	1,784.97	4.10	4.20	-123.59	23.16	95.21	114.12	105.99	8.13	14.031	
1,900.00	1,889.86	1,890.95	1,879.16	4.47	4.63	-120.15	18.60	120.62	132.91	124.01	8.90	14.931	
2,000.00	1,987.55	1,988.88	1,973.58	4.87	5.08	-117.52	14.01	146.22	152.09	142.38	9.70	15.672	
2,100.00	2,085.24	2,086.81	2,068.00	5.27	5.55	-115.47	9.43	171.82	171.51	160.98	10.53	16.288	
2,200.00	2,182.93	2,184.74	2,162.41	5.69	6.03	-113.84	4.84	197.41	191.10	179.73	11.37	16.802	
2,300.00	2,280.61	2,282.67	2,256.83	6.12	6.53	-112.51	0.25	223.01	210.82	198.59	12.23	17.236	
2,400.00	2,378.30	2,380.61	2,351.24	6.55	7.03	-111.41	-4.33	248.60	230.62	217.52	13.10	17.605	
2,500.00	2,475.99	2,478.54	2,445.66	6.99	7.55	-110.49	-8.92	274.20	250.49	236.51	13.98	17.922	
2,600.00	2,573.68	2,576.47	2,540.08	7.43	8.06	-109.70	-13.51	299.80	270.42	255.55	14.86	18.196	
2,700.00	2,671.37	2,674.40	2,634.49	7.88	8.59	-109.02	-18.09	325.39	290.38	274.63	15.75	18.435	
2,800.00	2,769.06	2,772.33	2,728.91	8.32	9.11	-108.43	-22.68	350.99	310.39	293.74	16.65	18.646	
2,900.00	2,866.75	2,870.26	2,823.33	8.78	9.64	-107.90	-27.27	376.58	330.42	312.87	17.54	18.833	
3,000.00	2,964.44	2,968.20	2,917.74	9.23	10.17	-107.44	-31.85	402.18	350.47	332.02	18.45	18.999	
3,100.00	3,062.13	3,066.13	3,012.16	9.68	10.71	-107.03	-36.44	427.78	370.54	351.19	19.35	19.148	
3,200.00	3,159.82	3,164.06	3,106.57	10.14	11.24	-106.66	-41.03	453.37	390.63	370.37	20.26	19.282	
3,300.00	3,257.51	3,261.99	3,200.99	10.60	11.78	-106.33	-45.62	478.97	410.74	389.57	21.17	19.404	
3,400.00	3,355.20	3,359.92	3,295.41	11.06	12.32	-106.02	-50.20	504.56	430.85	408.77	22.08	19.515	
3,500.00	3,452.89	3,457.86	3,389.82	11.52	12.86	-105.75	-54.79	530.16	450.98	427.99	22.99	19.616	
3,600.00	3,550.58	3,555.79	3,484.24	11.98	13.40	-105.50	-59.38	555.76	471.11	447.21	23.90	19.709	
3,700.00	3,648.27	3,653.72	3,578.66	12.45	13.95	-105.27	-63.96	581.35	491.26	466.44	24.82	19.795	
3,800.00	3,745.96	3,751.65	3,673.07	12.91	14.49	-105.05	-68.55	606.95	511.41	485.68	25.73	19.874	
3,900.00	3,843.65	3,849.58	3,767.49	13.37	15.04	-104.86	-73.14	632.54	531.57	504.92	26.65	19.948	
4,000.00	3,941.33	3,947.51	3,861.90	13.84	15.58	-104.67	-77.72	658.14	551.73	524.16	27.56	20.016	
4,100.00	4,039.02	4,045.45	3,956.32	14.30	16.13	-104.50	-82.31	683.74	571.90	543.41	28.48	20.080	
4,200.00	4,136.71	4,143.38	4,050.74	14.77	16.67	-104.35	-86.90	709.33	592.07	562.67	29.40	20.140	
4,300.00	4,234.40	4,241.31	4,145.15	15.24	17.22	-104.20	-91.48	734.93	612.24	581.93	30.31	20.197	
4,400.00	4,332.09	4,339.24	4,239.57	15.70	17.77	-104.06	-96.07	760.52	632.42	601.19	31.24	20.247	
4,500.00	4,429.78	4,437.17	4,333.99	16.17	18.32	-103.93	-100.66	786.12	652.61	620.44	32.16	20.292	
4,600.00	4,527.47	4,535.10	4,428.40	16.64	18.87	-103.81	-105.25	811.72	672.79	639.70	33.09	20.333	
4,700.00	4,625.16	4,633.04	4,522.82	17.11	19.41	-103.69	-109.83	837.31	692.98	658.97	34.01	20.373	
4,800.00	4,722.85	4,730.97	4,617.23	17.57	19.96	-103.58	-114.42	862.91	713.17	678.23	34.94	20.410	
4,900.00	4,820.54	4,828.90	4,711.65	18.04	20.51	-103.48	-119.01	888.50	733.36	697.49	35.87	20.445	

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

<b>Company:</b>	US ROCKIES REGION PLANNING	<b>Local Co-ordinate Reference:</b>	Well P_ENCORE 21-12
<b>Project:</b>	COLORADO NORTHERN ZONE - 83	<b>TVD Reference:</b>	WELL @ 4994.00ft (Original Well Elev)
<b>Reference Site:</b>	LARIMER_ENCORE 3-12 PAD	<b>MD Reference:</b>	WELL @ 4994.00ft (Original Well Elev)
<b>Site Error:</b>	0.00ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	P_ENCORE 21-12	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.00ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	P_ENCORE 21-12	<b>Database:</b>	EDM 2003.21 Single User Db
<b>Reference Design:</b>	PLAN #1 3-22-10 RHS	<b>Offset TVD Reference:</b>	Offset Datum

<b>Offset Design</b> LARIMER_ENCORE 3-12 PAD - P_ENCORE 2-12 - P_ENCORE 2-12 - PLAN #1 3-22-10 RHS												<b>Offset Site Error:</b>	0.00 ft
Survey Program: 0-MWD												<b>Offset Well Error:</b>	0.00 ft
Reference		Offset		Semi Major Axis			Distance						
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning
5,000.00	4,918.23	4,926.83	4,806.07	18.51	21.06	-103.39	-123.59	914.10	753.56	716.76	36.80	20.478	
5,100.00	5,015.92	5,024.76	4,900.48	18.98	21.61	-103.29	-128.18	939.70	773.76	736.03	37.73	20.509	
5,200.00	5,113.61	5,122.69	4,994.90	19.45	22.16	-103.21	-132.77	965.29	793.96	755.30	38.66	20.539	
5,300.00	5,211.30	5,220.63	5,089.32	19.92	22.71	-103.12	-137.35	990.89	814.16	774.57	39.59	20.567	
5,377.21	5,286.72	5,300.28	5,166.14	20.28	23.14	-103.07	-141.07	1,011.61	829.71	789.40	40.31	20.584	
5,400.00	5,309.01	5,327.02	5,192.01	20.37	23.25	-103.15	-142.26	1,018.26	834.12	793.62	40.50	20.594	
5,500.00	5,407.20	5,445.13	5,307.00	20.69	23.70	-103.45	-147.01	1,044.78	851.62	810.36	41.26	20.640	
5,600.00	5,506.00	5,564.30	5,424.05	20.97	24.09	-103.70	-150.96	1,066.79	866.00	824.07	41.93	20.654	
5,700.00	5,605.27	5,684.36	5,542.79	21.21	24.42	-103.88	-154.06	1,084.10	877.21	834.71	42.51	20.638	
5,800.00	5,704.90	5,805.08	5,662.84	21.41	24.69	-104.01	-156.29	1,096.55	885.23	842.24	42.99	20.594	
5,900.00	5,804.77	5,926.25	5,783.76	21.57	24.89	-104.08	-157.63	1,104.04	890.01	846.65	43.36	20.524	
5,994.25	5,899.00	6,040.66	5,898.14	21.69	25.03	44.72	-158.07	1,106.48	891.55	847.90	43.65	20.427	
6,000.00	5,904.75	6,047.27	5,904.75	21.70	25.04	44.72	-158.07	1,106.48	891.55	847.89	43.66	20.420	
6,100.00	6,004.75	6,147.27	6,004.75	21.81	25.14	44.72	-158.07	1,106.48	891.55	847.66	43.89	20.313	
6,200.00	6,104.75	6,247.27	6,104.75	21.92	25.26	44.72	-158.07	1,106.48	891.55	847.42	44.13	20.204	
6,300.00	6,204.75	6,347.27	6,204.75	22.04	25.37	44.72	-158.07	1,106.48	891.55	847.18	44.37	20.094	
6,400.00	6,304.75	6,447.27	6,304.75	22.15	25.48	44.72	-158.07	1,106.48	891.55	846.94	44.61	19.985	
6,500.00	6,404.75	6,547.27	6,404.75	22.27	25.60	44.72	-158.07	1,106.48	891.55	846.69	44.86	19.875	
6,600.00	6,504.75	6,647.27	6,504.75	22.39	25.72	44.72	-158.07	1,106.48	891.55	846.44	45.11	19.765	
6,700.00	6,604.75	6,747.27	6,604.75	22.51	25.83	44.72	-158.07	1,106.48	891.55	846.19	45.36	19.655	
6,800.00	6,704.75	6,847.27	6,704.75	22.63	25.95	44.72	-158.07	1,106.48	891.55	845.94	45.61	19.545	
6,900.00	6,804.75	6,947.27	6,804.75	22.76	26.08	44.72	-158.07	1,106.48	891.55	845.68	45.87	19.435	
7,000.00	6,904.75	7,047.27	6,904.75	22.88	26.20	44.72	-158.07	1,106.48	891.55	845.42	46.13	19.325	
7,100.00	7,004.75	7,147.27	7,004.75	23.01	26.32	44.72	-158.07	1,106.48	891.55	845.15	46.40	19.215	
7,200.00	7,104.75	7,247.27	7,104.75	23.14	26.45	44.72	-158.07	1,106.48	891.55	844.88	46.67	19.105	
7,300.00	7,204.75	7,347.27	7,204.75	23.27	26.57	44.72	-158.07	1,106.48	891.55	844.61	46.94	18.995	
7,400.00	7,304.75	7,447.27	7,304.75	23.40	26.70	44.72	-158.07	1,106.48	891.55	844.34	47.21	18.886	
7,500.00	7,404.75	7,547.27	7,404.75	23.53	26.83	44.72	-158.07	1,106.48	891.55	844.07	47.48	18.776	
7,600.00	7,504.75	7,647.27	7,504.75	23.66	26.96	44.72	-158.07	1,106.48	891.55	843.79	47.76	18.667	
7,700.00	7,604.75	7,747.27	7,604.75	23.80	27.09	44.72	-158.07	1,106.48	891.55	843.51	48.04	18.558	
7,800.00	7,704.75	7,847.27	7,704.75	23.94	27.23	44.72	-158.07	1,106.48	891.55	843.23	48.32	18.449	
7,900.00	7,804.75	7,947.27	7,804.75	24.07	27.36	44.72	-158.07	1,106.48	891.55	842.94	48.61	18.341	
7,965.25	7,870.00	8,012.52	7,870.00	24.16	27.45	44.72	-158.07	1,106.48	891.55	842.75	48.80	18.270	

<b>Company:</b>	US ROCKIES REGION PLANNING	<b>Local Co-ordinate Reference:</b>	Well P_ENCORE 21-12
<b>Project:</b>	COLORADO NORTHERN ZONE - 83	<b>TVD Reference:</b>	WELL @ 4994.00ft (Original Well Elev)
<b>Reference Site:</b>	LARIMER_ENCORE 3-12 PAD	<b>MD Reference:</b>	WELL @ 4994.00ft (Original Well Elev)
<b>Site Error:</b>	0.00ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	P_ENCORE 21-12	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.00ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	P_ENCORE 21-12	<b>Database:</b>	EDM 2003.21 Single User Db
<b>Reference Design:</b>	PLAN #1 3-22-10 RHS	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design												Offset Site Error:	0.00 ft
Survey Program: 0-MWD												Offset Well Error:	0.00 ft
Reference		Offset		Semi Major Axis			Distance						
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside 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	1.59	20.04	0.56	20.04				
100.00	100.00	100.00	100.00	0.10	0.10	1.59	20.04	0.56	20.04	19.85	0.19	104.915	
200.00	200.00	200.00	200.00	0.32	0.32	1.59	20.04	0.56	20.04	19.40	0.64	31.291	
300.00	300.00	300.00	300.00	0.55	0.55	1.59	20.04	0.56	20.04	18.95	1.09	18.387	
400.00	400.00	400.00	400.00	0.77	0.77	1.59	20.04	0.56	20.04	18.50	1.54	13.019	
500.00	500.00	500.00	500.00	0.99	0.99	1.59	20.04	0.56	20.04	18.06	1.99	10.077	
600.00	600.00	600.00	600.00	1.22	1.22	1.59	20.04	0.56	20.04	17.61	2.44	8.219	
700.00	700.00	700.00	700.00	1.44	1.44	1.59	20.04	0.56	20.04	17.16	2.89	6.940	
800.00	800.00	800.00	800.00	1.67	1.67	1.59	20.04	0.56	20.04	16.71	3.34	6.005	
900.00	900.00	900.00	900.00	1.89	1.89	1.59	20.04	0.56	20.04	16.26	3.79	5.292	
1,000.00	1,000.00	1,000.00	1,000.00	2.12	2.12	1.59	20.04	0.56	20.04	15.81	4.24	4.731	
1,050.00	1,050.00	1,050.00	1,050.00	2.23	2.23	1.59	20.04	0.56	20.04	15.58	4.46	4.493 CC, ES	
1,100.00	1,100.00	1,100.11	1,100.11	2.33	2.33	-149.05	19.89	0.14	20.27	15.60	4.66	4.346 SF	
1,200.00	1,199.93	1,200.12	1,200.05	2.51	2.53	-162.01	18.76	-3.16	22.72	17.69	5.03	4.519	
1,300.00	1,299.68	1,299.46	1,299.15	2.70	2.73	-179.53	16.51	-9.71	30.06	24.66	5.40	5.567	
1,400.00	1,399.13	1,398.12	1,397.34	2.91	2.95	167.74	13.40	-18.78	43.55	37.77	5.78	7.530	
1,500.00	1,498.15	1,496.36	1,495.08	3.14	3.18	161.96	10.23	-28.03	61.52	55.34	6.18	9.956	
1,600.00	1,596.63	1,593.98	1,592.22	3.42	3.42	159.59	7.08	-37.21	83.01	76.42	6.59	12.603	
1,667.04	1,662.28	1,659.01	1,656.94	3.63	3.58	158.95	4.98	-43.33	99.23	92.37	6.87	14.453	
1,700.00	1,694.48	1,690.91	1,688.67	3.74	3.66	158.83	3.95	-46.33	107.56	100.54	7.02	15.326	
1,800.00	1,792.17	1,787.66	1,784.94	4.10	3.91	158.55	0.83	-55.44	132.83	125.34	7.49	17.730	
1,900.00	1,889.86	1,884.41	1,881.22	4.47	4.16	158.36	-2.30	-64.54	158.10	150.12	7.98	19.815	
2,000.00	1,987.55	1,981.17	1,977.49	4.87	4.42	158.23	-5.42	-73.65	183.37	174.89	8.48	21.631	
2,100.00	2,085.24	2,077.92	2,073.77	5.27	4.68	158.12	-8.55	-82.75	208.64	199.66	8.98	23.221	
2,200.00	2,182.93	2,174.67	2,170.04	5.69	4.95	158.04	-11.67	-91.86	233.91	224.41	9.50	24.621	
2,300.00	2,280.61	2,271.43	2,266.31	6.12	5.21	157.98	-14.79	-100.96	259.18	249.16	10.02	25.859	
2,400.00	2,378.30	2,368.18	2,362.59	6.55	5.48	157.92	-17.92	-110.07	284.46	273.91	10.55	26.960	
2,500.00	2,475.99	2,464.93	2,458.86	6.99	5.75	157.88	-21.04	-119.17	309.73	298.65	11.08	27.944	
2,600.00	2,573.68	2,561.69	2,555.13	7.43	6.02	157.84	-24.16	-128.28	335.00	323.38	11.62	28.828	
2,700.00	2,671.37	2,658.44	2,651.41	7.88	6.29	157.81	-27.29	-137.38	360.27	348.11	12.16	29.625	
2,800.00	2,769.06	2,755.20	2,747.68	8.32	6.57	157.78	-30.41	-146.48	385.55	372.84	12.71	30.346	
2,900.00	2,866.75	2,851.95	2,843.95	8.78	6.84	157.76	-33.53	-155.59	410.82	397.57	13.25	31.002	
3,000.00	2,964.44	2,948.70	2,940.23	9.23	7.12	157.73	-36.66	-164.69	436.09	422.29	13.80	31.600	
3,100.00	3,062.13	3,045.46	3,036.50	9.68	7.40	157.71	-39.78	-173.80	461.37	447.02	14.35	32.148	
3,200.00	3,159.82	3,142.21	3,132.77	10.14	7.68	157.70	-42.91	-182.90	486.64	471.74	14.90	32.651	
3,300.00	3,257.51	3,238.96	3,229.05	10.60	7.95	157.68	-46.03	-192.01	511.91	496.45	15.46	33.115	
3,400.00	3,355.20	3,335.72	3,325.32	11.06	8.23	157.67	-49.15	-201.11	537.19	521.17	16.01	33.543	
3,500.00	3,452.89	3,432.47	3,421.59	11.52	8.51	157.65	-52.28	-210.22	562.46	545.89	16.57	33.940	
3,600.00	3,550.58	3,529.22	3,517.87	11.98	8.79	157.64	-55.40	-219.32	587.73	570.60	17.13	34.308	
3,700.00	3,648.27	3,625.98	3,614.14	12.45	9.07	157.63	-58.52	-228.43	613.01	595.32	17.69	34.651	
3,800.00	3,745.96	3,722.73	3,710.42	12.91	9.35	157.62	-61.65	-237.53	638.28	620.03	18.25	34.971	
3,900.00	3,843.65	3,819.48	3,806.69	13.37	9.63	157.61	-64.77	-246.64	663.55	644.74	18.81	35.270	
4,000.00	3,941.33	3,916.24	3,902.96	13.84	9.92	157.60	-67.89	-255.74	688.83	669.45	19.38	35.551	
4,100.00	4,039.02	4,012.99	3,999.24	14.30	10.20	157.59	-71.02	-264.85	714.10	694.16	19.94	35.814	
4,200.00	4,136.71	4,109.74	4,095.51	14.77	10.48	157.59	-74.14	-273.95	739.37	718.87	20.50	36.061	
4,300.00	4,234.40	4,206.50	4,191.78	15.24	10.76	157.58	-77.27	-283.06	764.65	743.58	21.07	36.295	
4,400.00	4,332.09	4,303.25	4,288.06	15.70	11.04	157.57	-80.39	-292.16	789.92	768.29	21.63	36.515	
4,500.00	4,429.78	4,400.01	4,384.33	16.17	11.33	157.57	-83.51	-301.26	815.19	793.00	22.20	36.722	
4,600.00	4,527.47	4,496.76	4,480.60	16.64	11.61	157.56	-86.64	-310.37	840.47	817.70	22.77	36.919	
4,700.00	4,625.16	4,593.51	4,576.88	17.11	11.89	157.56	-89.76	-319.47	865.74	842.41	23.33	37.106	
4,800.00	4,722.85	4,690.27	4,673.15	17.57	12.18	157.55	-92.88	-328.58	891.01	867.12	23.90	37.283	
4,900.00	4,820.54	4,787.02	4,769.42	18.04	12.46	157.55	-96.01	-337.68	916.29	891.82	24.47	37.451	

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

<b>Company:</b>	US ROCKIES REGION PLANNING	<b>Local Co-ordinate Reference:</b>	Well P_ENCORE 21-12
<b>Project:</b>	COLORADO NORTHERN ZONE - 83	<b>TVD Reference:</b>	WELL @ 4994.00ft (Original Well Elev)
<b>Reference Site:</b>	LARIMER_ENCORE 3-12 PAD	<b>MD Reference:</b>	WELL @ 4994.00ft (Original Well Elev)
<b>Site Error:</b>	0.00ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	P_ENCORE 21-12	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.00ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	P_ENCORE 21-12	<b>Database:</b>	EDM 2003.21 Single User Db
<b>Reference Design:</b>	PLAN #1 3-22-10 RHS	<b>Offset TVD Reference:</b>	Offset Datum

<b>Offset Design</b> LARIMER_ENCORE 3-12 PAD - P_ENCORE 3-12 - P_ENCORE 3-12 - PLAN #1 3-22-10 RHS												<b>Offset Site Error:</b>	0.00 ft
Survey Program: 0-MWD												<b>Offset Well Error:</b>	0.00 ft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	
5,000.00	4,918.23	4,883.77	4,865.70	18.51	12.74	157.54	-99.13	-346.79	941.56	916.53	25.03	37.611	
5,100.00	5,015.92	4,980.53	4,961.97	18.98	13.03	157.54	-102.26	-355.89	966.84	941.23	25.60	37.763	
5,200.00	5,113.61	5,077.28	5,058.24	19.45	13.31	157.53	-105.38	-365.00	992.11	965.94	26.17	37.908	
5,300.00	5,211.30	5,174.03	5,154.52	19.92	13.59	157.53	-108.50	-374.10	1,017.38	990.64	26.74	38.047	
5,377.21	5,286.72	5,248.74	5,228.85	20.28	13.81	157.53	-110.91	-381.13	1,036.90	1,009.72	27.18	38.149	
5,400.00	5,309.01	5,270.81	5,250.81	20.37	13.88	157.57	-111.63	-383.21	1,042.57	1,015.25	27.32	38.155	
5,500.00	5,407.20	5,368.12	5,347.64	20.69	14.16	157.69	-114.77	-392.37	1,065.57	1,037.66	27.91	38.175	
5,600.00	5,506.00	5,466.10	5,445.13	20.97	14.45	157.72	-117.93	-401.59	1,085.41	1,056.94	28.47	38.122	
5,700.00	5,605.27	5,564.63	5,543.17	21.21	14.74	157.66	-121.11	-410.86	1,102.09	1,073.09	29.00	38.003	
5,800.00	5,704.90	5,669.79	5,647.83	21.41	15.04	157.49	-124.46	-420.63	1,115.53	1,086.02	29.50	37.813	
5,900.00	5,804.77	5,797.99	5,775.73	21.57	15.30	157.32	-127.27	-428.81	1,124.02	1,094.09	29.93	37.552	
5,994.25	5,899.00	5,919.56	5,897.25	21.69	15.50	-53.93	-128.21	-431.56	1,126.74	1,096.48	30.27	37.225	
6,000.00	5,904.75	5,926.99	5,904.68	21.70	15.51	-53.93	-128.22	-431.57	1,126.75	1,096.46	30.29	37.199	
6,100.00	6,004.75	6,027.06	6,004.75	21.81	15.68	-53.93	-128.22	-431.57	1,126.75	1,096.13	30.62	36.803	
6,200.00	6,104.75	6,127.06	6,104.75	21.92	15.85	-53.93	-128.22	-431.57	1,126.75	1,095.81	30.94	36.414	
6,300.00	6,204.75	6,227.06	6,204.75	22.04	16.02	-53.93	-128.22	-431.57	1,126.75	1,095.48	31.27	36.030	
6,400.00	6,304.75	6,327.06	6,304.75	22.15	16.19	-53.93	-128.22	-431.57	1,126.75	1,095.14	31.61	35.650	
6,500.00	6,404.75	6,427.06	6,404.75	22.27	16.36	-53.93	-128.22	-431.57	1,126.75	1,094.81	31.94	35.275	
6,600.00	6,504.75	6,527.06	6,504.75	22.39	16.53	-53.93	-128.22	-431.57	1,126.75	1,094.47	32.28	34.905	
6,700.00	6,604.75	6,627.06	6,604.75	22.51	16.71	-53.93	-128.22	-431.57	1,126.75	1,094.13	32.62	34.540	
6,800.00	6,704.75	6,727.06	6,704.75	22.63	16.88	-53.93	-128.22	-431.57	1,126.75	1,093.78	32.97	34.179	
6,900.00	6,804.75	6,827.06	6,804.75	22.76	17.06	-53.93	-128.22	-431.57	1,126.75	1,093.44	33.31	33.824	
7,000.00	6,904.75	6,927.06	6,904.75	22.88	17.24	-53.93	-128.22	-431.57	1,126.75	1,093.09	33.66	33.473	
7,100.00	7,004.75	7,027.06	7,004.75	23.01	17.42	-53.93	-128.22	-431.57	1,126.75	1,092.74	34.01	33.127	
7,200.00	7,104.75	7,127.06	7,104.75	23.14	17.60	-53.93	-128.22	-431.57	1,126.75	1,092.38	34.37	32.787	
7,300.00	7,204.75	7,227.06	7,204.75	23.27	17.78	-53.93	-128.22	-431.57	1,126.75	1,092.03	34.72	32.451	
7,400.00	7,304.75	7,327.06	7,304.75	23.40	17.96	-53.93	-128.22	-431.57	1,126.75	1,091.67	35.08	32.120	
7,500.00	7,404.75	7,427.06	7,404.75	23.53	18.15	-53.93	-128.22	-431.57	1,126.75	1,091.31	35.44	31.793	
7,600.00	7,504.75	7,527.06	7,504.75	23.66	18.33	-53.93	-128.22	-431.57	1,126.75	1,090.95	35.80	31.472	
7,700.00	7,604.75	7,627.06	7,604.75	23.80	18.52	-53.93	-128.22	-431.57	1,126.75	1,090.58	36.17	31.155	
7,800.00	7,704.75	7,727.06	7,704.75	23.94	18.70	-53.93	-128.22	-431.57	1,126.75	1,090.22	36.53	30.843	
7,900.00	7,804.75	7,827.06	7,804.75	24.07	18.89	-53.93	-128.22	-431.57	1,126.75	1,089.85	36.90	30.536	
7,965.25	7,870.00	7,892.31	7,870.00	24.16	19.01	-53.93	-128.22	-431.57	1,126.75	1,089.61	37.14	30.338	

<b>Company:</b>	US ROCKIES REGION PLANNING	<b>Local Co-ordinate Reference:</b>	Well P_ENCORE 21-12
<b>Project:</b>	COLORADO NORTHERN ZONE - 83	<b>TVD Reference:</b>	WELL @ 4994.00ft (Original Well Elev)
<b>Reference Site:</b>	LARIMER_ENCORE 3-12 PAD	<b>MD Reference:</b>	WELL @ 4994.00ft (Original Well Elev)
<b>Site Error:</b>	0.00ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	P_ENCORE 21-12	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.00ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	P_ENCORE 21-12	<b>Database:</b>	EDM 2003.21 Single User Db
<b>Reference Design:</b>	PLAN #1 3-22-10 RHS	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design												Offset Site Error:	0.00 ft
Survey Program: 0-MWD												Offset Well Error:	0.00 ft
Reference		Offset		Semi Major Axis			Distance						
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside 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	1.58	30.23	0.84	30.24				
100.00	100.00	100.00	100.00	0.10	0.10	1.58	30.23	0.84	30.24	30.05	0.19	158.305	
200.00	200.00	200.00	200.00	0.32	0.32	1.58	30.23	0.84	30.24	29.60	0.64	47.214	
300.00	300.00	300.00	300.00	0.55	0.55	1.58	30.23	0.84	30.24	29.15	1.09	27.744	
400.00	400.00	400.00	400.00	0.77	0.77	1.58	30.23	0.84	30.24	28.70	1.54	19.644	
500.00	500.00	500.00	500.00	0.99	0.99	1.58	30.23	0.84	30.24	28.26	1.99	15.204	
600.00	600.00	600.00	600.00	1.22	1.22	1.58	30.23	0.84	30.24	27.81	2.44	12.402	
700.00	700.00	700.00	700.00	1.44	1.44	1.58	30.23	0.84	30.24	27.36	2.89	10.472	
800.00	800.00	800.00	800.00	1.67	1.67	1.58	30.23	0.84	30.24	26.91	3.34	9.061	
900.00	900.00	900.00	900.00	1.89	1.89	1.58	30.23	0.84	30.24	26.46	3.79	7.986	
1,000.00	1,000.00	1,000.00	1,000.00	2.12	2.12	1.58	30.23	0.84	30.24	26.01	4.24	7.138	
1,050.00	1,050.00	1,050.00	1,050.00	2.23	2.23	1.58	30.23	0.84	30.24	25.78	4.46	6.779 CC, ES	
1,100.00	1,100.00	1,100.04	1,100.04	2.33	2.34	-148.48	30.20	0.40	30.58	25.91	4.67	6.554 SF	
1,200.00	1,199.93	1,199.85	1,199.79	2.51	2.54	-157.49	29.96	-3.07	33.71	28.67	5.04	6.692	
1,300.00	1,299.68	1,298.88	1,298.56	2.70	2.74	-170.64	29.48	-9.94	41.83	36.42	5.42	7.725	
1,400.00	1,399.13	1,396.60	1,395.75	2.91	2.97	177.67	28.77	-20.06	56.50	50.70	5.80	9.741	
1,500.00	1,498.15	1,492.55	1,490.79	3.14	3.21	169.34	27.86	-33.20	77.91	71.72	6.19	12.580	
1,600.00	1,596.63	1,586.27	1,583.15	3.42	3.48	163.74	26.75	-49.09	105.65	99.05	6.60	16.004	
1,667.04	1,662.28	1,647.67	1,643.34	3.63	3.68	161.04	25.91	-61.13	127.57	120.68	6.89	18.519	
1,700.00	1,694.48	1,677.45	1,672.45	3.74	3.78	159.99	25.47	-67.44	139.11	132.07	7.05	19.743	
1,800.00	1,792.17	1,766.55	1,759.10	4.10	4.12	157.24	24.02	-88.09	175.80	168.25	7.55	23.293	
1,900.00	1,889.86	1,853.66	1,843.16	4.47	4.49	154.96	22.43	-110.88	214.95	206.87	8.07	26.619	
2,000.00	1,987.55	1,938.71	1,924.53	4.87	4.90	153.00	20.71	-135.58	256.52	247.90	8.63	29.738	
2,100.00	2,085.24	2,021.63	2,003.11	5.27	5.35	151.30	18.87	-161.96	300.46	291.27	9.20	32.670	
2,200.00	2,182.93	2,100.00	2,076.65	5.69	5.81	149.83	16.98	-188.98	346.72	336.95	9.78	35.470	
2,300.00	2,280.61	2,180.84	2,151.70	6.12	6.35	148.45	14.89	-218.94	395.20	384.81	10.39	38.035	
2,400.00	2,378.30	2,257.08	2,221.68	6.55	6.90	147.24	12.78	-249.12	445.85	434.85	11.01	40.508	
2,500.00	2,475.99	2,337.26	2,294.55	6.99	7.52	146.09	10.45	-282.50	498.30	486.65	11.65	42.762	
2,600.00	2,573.68	2,421.85	2,371.33	7.43	8.19	145.09	7.98	-317.89	551.07	538.74	12.33	44.710	
2,700.00	2,671.37	2,506.43	2,448.11	7.88	8.88	144.26	5.51	-353.28	603.93	590.93	13.00	46.443	
2,800.00	2,769.06	2,591.01	2,524.89	8.32	9.57	143.56	3.04	-388.67	656.88	643.19	13.69	47.992	
2,900.00	2,866.75	2,675.60	2,601.68	8.78	10.28	142.97	0.57	-424.07	709.88	695.51	14.37	49.383	
3,000.00	2,964.44	2,760.18	2,678.46	9.23	11.00	142.46	-1.90	-459.46	762.94	747.87	15.07	50.640	
3,100.00	3,062.13	2,844.76	2,755.24	9.68	11.71	142.01	-4.37	-494.85	816.03	800.27	15.76	51.779	
3,200.00	3,159.82	2,929.35	2,832.03	10.14	12.44	141.62	-6.84	-530.24	869.15	852.69	16.46	52.816	
3,300.00	3,257.51	3,013.93	2,908.81	10.60	13.16	141.27	-9.32	-565.63	922.30	905.14	17.15	53.764	
3,400.00	3,355.20	3,098.51	2,985.59	11.06	13.89	140.97	-11.79	-601.03	975.46	957.61	17.85	54.634	
3,500.00	3,452.89	3,183.10	3,062.38	11.52	14.63	140.69	-14.26	-636.42	1,028.65	1,010.10	18.56	55.434	
3,600.00	3,550.58	3,267.68	3,139.16	11.98	15.36	140.44	-16.73	-671.81	1,081.85	1,062.59	19.26	56.173	
3,700.00	3,648.27	3,352.26	3,215.94	12.45	16.10	140.21	-19.20	-707.20	1,135.07	1,115.11	19.96	56.858	
3,800.00	3,745.96	3,436.85	3,292.73	12.91	16.84	140.01	-21.67	-742.60	1,188.30	1,167.63	20.67	57.494	
3,900.00	3,843.65	3,521.43	3,369.51	13.37	17.58	139.82	-24.14	-777.99	1,241.53	1,220.16	21.37	58.087	
4,000.00	3,941.33	3,606.01	3,446.29	13.84	18.32	139.65	-26.61	-813.38	1,294.78	1,272.70	22.08	58.642	
4,100.00	4,039.02	3,690.60	3,523.07	14.30	19.06	139.49	-29.08	-848.77	1,348.04	1,325.25	22.79	59.161	
4,200.00	4,136.71	3,775.18	3,599.86	14.77	19.81	139.34	-31.55	-884.17	1,401.30	1,377.80	23.49	59.649	
4,300.00	4,234.40	3,859.76	3,676.64	15.24	20.55	139.21	-34.02	-919.56	1,454.56	1,430.36	24.20	60.108	
4,400.00	4,332.09	3,944.35	3,753.42	15.70	21.30	139.08	-36.49	-954.95	1,507.84	1,482.93	24.91	60.541	
4,500.00	4,429.78	4,028.93	3,830.21	16.17	22.05	138.96	-38.97	-990.34	1,561.11	1,535.50	25.61	60.951	
4,600.00	4,527.47	4,113.51	3,906.99	16.64	22.79	138.85	-41.44	-1,025.73	1,614.40	1,588.08	26.32	61.338	
4,700.00	4,625.16	4,198.10	3,983.77	17.11	23.54	138.75	-43.91	-1,061.13	1,667.68	1,640.65	27.03	61.706	
4,800.00	4,722.85	4,282.68	4,060.56	17.57	24.29	138.65	-46.38	-1,096.52	1,720.97	1,693.24	27.73	62.056	
4,900.00	4,820.54	4,367.26	4,137.34	18.04	25.04	138.56	-48.85	-1,131.91	1,774.26	1,745.82	28.44	62.389	

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

<b>Company:</b>	US ROCKIES REGION PLANNING	<b>Local Co-ordinate Reference:</b>	Well P_ENCORE 21-12
<b>Project:</b>	COLORADO NORTHERN ZONE - 83	<b>TVD Reference:</b>	WELL @ 4994.00ft (Original Well Elev)
<b>Reference Site:</b>	LARIMER_ENCORE 3-12 PAD	<b>MD Reference:</b>	WELL @ 4994.00ft (Original Well Elev)
<b>Site Error:</b>	0.00ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	P_ENCORE 21-12	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.00ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	P_ENCORE 21-12	<b>Database:</b>	EDM 2003.21 Single User Db
<b>Reference Design:</b>	PLAN #1 3-22-10 RHS	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design												Offset Site Error:	0.00 ft
Survey Program: 0-MWD												Offset Well Error:	0.00 ft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	
5,000.00	4,918.23	4,451.85	4,214.12	18.51	25.79	138.47	-51.32	-1,167.30	1,827.56	1,798.42	29.14	62.707	
5,100.00	5,015.92	4,536.43	4,290.90	18.98	26.54	138.39	-53.79	-1,202.70	1,880.86	1,851.01	29.85	63.011	
5,200.00	5,113.61	4,621.01	4,367.69	19.45	27.29	138.32	-56.26	-1,238.09	1,934.16	1,903.60	30.55	63.301	
5,300.00	5,211.30	4,705.60	4,444.47	19.92	28.04	138.24	-58.73	-1,273.48	1,987.46	1,956.20	31.26	63.579	
5,377.21	5,286.72	4,770.91	4,503.76	20.28	28.62	138.19	-60.64	-1,300.81	2,028.62	1,996.82	31.80	63.787	
5,400.00	5,309.01	4,790.22	4,521.29	20.37	28.79	138.36	-61.20	-1,308.89	2,040.71	2,008.69	32.02	63.724	
5,500.00	5,407.20	4,875.74	4,598.92	20.69	29.55	139.04	-63.70	-1,344.67	2,092.40	2,059.48	32.92	63.556	
5,600.00	5,506.00	4,962.46	4,677.64	20.97	30.32	139.60	-66.24	-1,380.96	2,141.83	2,108.05	33.78	63.412	
5,700.00	5,605.27	5,050.28	4,757.37	21.21	31.10	140.05	-68.80	-1,417.71	2,188.95	2,154.37	34.58	63.298	
5,800.00	5,704.90	5,139.09	4,837.99	21.41	31.89	140.39	-71.40	-1,454.87	2,233.73	2,198.39	35.34	63.208	
5,900.00	5,804.77	5,259.75	4,947.64	21.57	32.92	140.52	-74.90	-1,505.07	2,276.08	2,239.91	36.17	62.926	
5,994.25	5,899.00	5,601.89	5,267.85	21.69	34.98	-71.39	-83.26	-1,624.74	2,307.95	2,270.50	37.46	61.618	
6,000.00	5,904.75	5,623.81	5,288.82	21.70	35.09	-71.46	-83.70	-1,631.10	2,309.51	2,271.99	37.52	61.559	
6,100.00	6,004.75	6,019.03	5,674.03	21.81	36.60	-72.28	-89.76	-1,717.88	2,330.04	2,291.54	38.50	60.516	
6,200.00	6,104.75	6,431.72	6,085.00	21.92	37.32	-72.59	-92.09	-1,751.20	2,337.60	2,298.35	39.25	59.561	
6,300.00	6,204.75	6,551.47	6,204.75	22.04	37.41	-72.59	-92.09	-1,751.32	2,337.63	2,298.10	39.53	59.139	
6,400.00	6,304.75	6,651.47	6,304.75	22.15	37.49	-72.59	-92.09	-1,751.32	2,337.63	2,297.84	39.79	58.752	
6,500.00	6,404.75	6,751.47	6,404.75	22.27	37.57	-72.59	-92.09	-1,751.32	2,337.63	2,297.57	40.05	58.364	
6,600.00	6,504.75	6,851.47	6,504.75	22.39	37.65	-72.59	-92.09	-1,751.32	2,337.63	2,297.31	40.32	57.977	
6,700.00	6,604.75	6,951.47	6,604.75	22.51	37.74	-72.59	-92.09	-1,751.32	2,337.63	2,297.04	40.59	57.590	
6,800.00	6,704.75	7,051.47	6,704.75	22.63	37.82	-72.59	-92.09	-1,751.32	2,337.63	2,296.76	40.86	57.204	
6,900.00	6,804.75	7,151.47	6,804.75	22.76	37.90	-72.59	-92.09	-1,751.32	2,337.63	2,296.48	41.14	56.819	
7,000.00	6,904.75	7,251.47	6,904.75	22.88	37.99	-72.59	-92.09	-1,751.32	2,337.63	2,296.20	41.42	56.435	
7,100.00	7,004.75	7,351.47	7,004.75	23.01	38.08	-72.59	-92.09	-1,751.32	2,337.63	2,295.92	41.70	56.052	
7,200.00	7,104.75	7,451.47	7,104.75	23.14	38.16	-72.59	-92.09	-1,751.32	2,337.63	2,295.64	41.99	55.670	
7,300.00	7,204.75	7,551.47	7,204.75	23.27	38.25	-72.59	-92.09	-1,751.32	2,337.63	2,295.35	42.28	55.290	
7,400.00	7,304.75	7,651.47	7,304.75	23.40	38.34	-72.59	-92.09	-1,751.32	2,337.63	2,295.05	42.57	54.911	
7,500.00	7,404.75	7,751.47	7,404.75	23.53	38.44	-72.59	-92.09	-1,751.32	2,337.63	2,294.76	42.87	54.534	
7,600.00	7,504.75	7,851.47	7,504.75	23.66	38.53	-72.59	-92.09	-1,751.32	2,337.63	2,294.46	43.16	54.159	
7,700.00	7,604.75	7,951.47	7,604.75	23.80	38.62	-72.59	-92.09	-1,751.32	2,337.63	2,294.16	43.46	53.786	
7,800.00	7,704.75	8,051.47	7,704.75	23.94	38.72	-72.59	-92.09	-1,751.32	2,337.63	2,293.86	43.76	53.414	
7,900.00	7,804.75	8,151.47	7,804.75	24.07	38.81	-72.59	-92.09	-1,751.32	2,337.63	2,293.56	44.07	53.045	
7,965.25	7,870.00	8,216.71	7,870.00	24.16	38.87	-72.59	-92.09	-1,751.32	2,337.63	2,293.36	44.27	52.806	

<b>Company:</b>	US ROCKIES REGION PLANNING	<b>Local Co-ordinate Reference:</b>	Well P_ENCORE 21-12
<b>Project:</b>	COLORADO NORTHERN ZONE - 83	<b>TVD Reference:</b>	WELL @ 4994.00ft (Original Well Elev)
<b>Reference Site:</b>	LARIMER_ENCORE 3-12 PAD	<b>MD Reference:</b>	WELL @ 4994.00ft (Original Well Elev)
<b>Site Error:</b>	0.00ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	P_ENCORE 21-12	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.00ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	P_ENCORE 21-12	<b>Database:</b>	EDM 2003.21 Single User Db
<b>Reference Design:</b>	PLAN #1 3-22-10 RHS	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design												Offset Site Error:	0.00 ft
Survey Program: 0-MWD												Offset Well Error:	0.00 ft
Reference		Offset		Semi Major Axis			Distance						
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside 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	-178.38	-9.83	-0.28	9.84				
100.00	100.00	100.00	100.00	0.10	0.10	-178.38	-9.83	-0.28	9.84	9.64	0.19	51.483	
200.00	200.00	200.00	200.00	0.32	0.32	-178.38	-9.83	-0.28	9.84	9.20	0.64	15.355	
300.00	300.00	300.00	300.00	0.55	0.55	-178.38	-9.83	-0.28	9.84	8.75	1.09	9.023 CC, ES	
400.00	400.00	399.74	399.72	0.77	0.75	-171.45	-10.91	-1.64	11.04	9.52	1.52	7.266 SF	
500.00	500.00	499.24	499.08	0.99	0.95	-158.01	-14.13	-5.71	15.27	13.33	1.94	7.869	
600.00	600.00	598.26	597.72	1.22	1.19	-147.42	-19.46	-12.44	23.21	20.84	2.37	9.776	
700.00	700.00	696.57	695.30	1.44	1.46	-140.98	-26.85	-21.76	34.88	32.05	2.82	12.358	
800.00	800.00	793.95	791.50	1.67	1.78	-137.16	-36.21	-33.58	50.10	46.82	3.29	15.242	
900.00	900.00	890.18	886.02	1.89	2.14	-134.81	-47.45	-47.76	68.76	64.99	3.77	18.227	
1,000.00	1,000.00	985.09	978.58	2.12	2.55	-133.29	-60.45	-64.19	90.74	86.46	4.28	21.209	
1,050.00	1,050.00	1,031.99	1,024.05	2.23	2.77	-132.72	-67.58	-73.19	102.94	98.40	4.54	22.674	
1,100.00	1,100.00	1,078.50	1,068.96	2.33	3.01	78.89	-75.11	-82.69	115.86	111.24	4.62	25.079	
1,200.00	1,199.93	1,170.30	1,156.98	2.51	3.51	80.37	-91.29	-103.11	143.64	138.60	5.04	28.507	
1,300.00	1,299.68	1,260.29	1,242.41	2.70	4.06	82.25	-108.84	-125.26	174.13	168.65	5.47	31.809	
1,400.00	1,399.13	1,348.29	1,325.06	2.91	4.65	84.21	-127.60	-148.95	207.47	201.54	5.93	34.959	
1,500.00	1,498.15	1,434.14	1,404.74	3.14	5.27	86.10	-147.42	-173.97	243.77	237.34	6.43	37.905	
1,600.00	1,596.63	1,517.70	1,481.36	3.42	5.92	87.83	-168.12	-200.10	283.07	276.10	6.97	40.601	
1,667.04	1,662.28	1,577.46	1,535.74	3.63	6.40	89.05	-183.50	-219.52	310.68	303.29	7.39	42.068	
1,700.00	1,694.48	1,607.13	1,562.74	3.74	6.65	89.92	-191.14	-229.16	324.34	316.74	7.60	42.665	
1,800.00	1,792.17	1,697.13	1,644.65	4.10	7.39	92.16	-214.31	-258.41	366.13	357.81	8.31	44.046	
1,900.00	1,889.86	1,787.14	1,726.56	4.47	8.14	93.95	-237.48	-287.67	408.29	399.22	9.07	45.038	
2,000.00	1,987.55	1,877.15	1,808.47	4.87	8.89	95.40	-260.65	-316.92	450.71	440.87	9.85	45.772	
2,100.00	2,085.24	1,967.16	1,890.37	5.27	9.65	96.61	-283.82	-346.17	493.34	482.69	10.65	46.322	
2,200.00	2,182.93	2,057.16	1,972.28	5.69	10.41	97.63	-306.99	-375.42	536.12	524.65	11.47	46.740	
2,300.00	2,280.61	2,147.17	2,054.19	6.12	11.17	98.49	-330.16	-404.67	579.02	566.72	12.30	47.061	
2,400.00	2,378.30	2,237.18	2,136.09	6.55	11.93	99.24	-353.34	-433.93	622.01	608.86	13.15	47.312	
2,500.00	2,475.99	2,327.19	2,218.00	6.99	12.69	99.89	-376.51	-463.18	665.08	651.08	14.00	47.511	
2,600.00	2,573.68	2,417.19	2,299.91	7.43	13.46	100.47	-399.68	-492.43	708.21	693.35	14.86	47.670	
2,700.00	2,671.37	2,507.20	2,381.81	7.88	14.22	100.97	-422.85	-521.68	751.39	735.67	15.72	47.798	
2,800.00	2,769.06	2,597.21	2,463.72	8.32	14.99	101.42	-446.02	-550.93	794.61	778.02	16.59	47.904	
2,900.00	2,866.75	2,687.22	2,545.63	8.78	15.76	101.83	-469.19	-580.19	837.87	820.41	17.46	47.992	
3,000.00	2,964.44	2,777.22	2,627.54	9.23	16.52	102.20	-492.36	-609.44	881.16	862.83	18.33	48.066	
3,100.00	3,062.13	2,867.23	2,709.44	9.68	17.29	102.53	-515.53	-638.69	924.48	905.27	19.21	48.129	
3,200.00	3,159.82	2,957.24	2,791.35	10.14	18.06	102.83	-538.70	-667.94	967.82	947.73	20.09	48.183	
3,300.00	3,257.51	3,047.25	2,873.26	10.60	18.83	103.11	-561.88	-697.19	1,011.18	990.22	20.97	48.230	
3,400.00	3,355.20	3,137.25	2,955.16	11.06	19.60	103.36	-585.05	-726.45	1,054.56	1,032.71	21.85	48.271	
3,500.00	3,452.89	3,227.26	3,037.07	11.52	20.37	103.59	-608.22	-755.70	1,097.95	1,075.22	22.73	48.308	
3,600.00	3,550.58	3,317.27	3,118.98	11.98	21.14	103.81	-631.39	-784.95	1,141.36	1,117.75	23.61	48.341	
3,700.00	3,648.27	3,407.28	3,200.88	12.45	21.90	104.01	-654.56	-814.20	1,184.78	1,160.29	24.49	48.372	
3,800.00	3,745.96	3,497.28	3,282.79	12.91	22.67	104.20	-677.73	-843.45	1,228.21	1,202.83	25.38	48.400	
3,900.00	3,843.65	3,587.29	3,364.70	13.37	23.44	104.37	-700.90	-872.71	1,271.65	1,245.39	26.26	48.426	
4,000.00	3,941.33	3,677.30	3,446.61	13.84	24.21	104.53	-724.07	-901.96	1,315.10	1,287.95	27.14	48.450	
4,100.00	4,039.02	3,767.31	3,528.51	14.30	24.98	104.68	-747.25	-931.21	1,358.56	1,330.53	28.03	48.473	
4,200.00	4,136.71	3,857.31	3,610.42	14.77	25.75	104.83	-770.42	-960.46	1,402.02	1,373.11	28.91	48.495	
4,300.00	4,234.40	3,947.32	3,692.33	15.24	26.53	104.96	-793.59	-989.71	1,445.49	1,415.70	29.79	48.516	
4,400.00	4,332.09	4,037.33	3,774.23	15.70	27.30	105.08	-816.76	-1,018.97	1,488.97	1,458.29	30.68	48.536	
4,500.00	4,429.78	4,127.34	3,856.14	16.17	28.07	105.20	-839.93	-1,048.22	1,532.45	1,500.89	31.56	48.556	
4,600.00	4,527.47	4,217.34	3,938.05	16.64	28.84	105.32	-863.10	-1,077.47	1,575.94	1,543.49	32.44	48.575	
4,700.00	4,625.16	4,307.35	4,019.96	17.11	29.61	105.42	-886.27	-1,106.72	1,619.43	1,586.10	33.33	48.594	
4,800.00	4,722.85	4,397.36	4,101.86	17.57	30.38	105.52	-909.44	-1,135.97	1,662.92	1,628.72	34.21	48.612	
4,900.00	4,820.54	4,487.37	4,183.77	18.04	31.15	105.62	-932.62	-1,165.23	1,706.42	1,671.34	35.09	48.631	

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

<b>Company:</b>	US ROCKIES REGION PLANNING	<b>Local Co-ordinate Reference:</b>	Well P_ENCORE 21-12
<b>Project:</b>	COLORADO NORTHERN ZONE - 83	<b>TVD Reference:</b>	WELL @ 4994.00ft (Original Well Elev)
<b>Reference Site:</b>	LARIMER_ENCORE 3-12 PAD	<b>MD Reference:</b>	WELL @ 4994.00ft (Original Well Elev)
<b>Site Error:</b>	0.00ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	P_ENCORE 21-12	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.00ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	P_ENCORE 21-12	<b>Database:</b>	EDM 2003.21 Single User Db
<b>Reference Design:</b>	PLAN #1 3-22-10 RHS	<b>Offset TVD Reference:</b>	Offset Datum

<b>Offset Design</b> LARIMER_ENCORE 3-12 PAD - P_ENCORE 5-12 - P_ENCORE 5-12 - PLAN #1 3-22-10 RHS												<b>Offset Site Error:</b>	0.00 ft
Survey Program: 0-MWD												<b>Offset Well Error:</b>	0.00 ft
Reference	Offset	Semi Major Axis		Distance									
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning
5,000.00	4,918.23	4,577.37	4,265.68	18.51	31.92	105.71	-955.79	-1,194.48	1,749.93	1,713.96	35.97	48.649	
5,100.00	5,015.92	4,667.38	4,347.58	18.98	32.69	105.79	-978.96	-1,223.73	1,793.44	1,756.58	36.85	48.667	
5,200.00	5,113.61	4,757.39	4,429.49	19.45	33.46	105.88	-1,002.13	-1,252.98	1,836.95	1,799.22	37.73	48.685	
5,300.00	5,211.30	4,847.40	4,511.40	19.92	34.23	105.96	-1,025.30	-1,282.23	1,880.46	1,841.85	38.61	48.703	
5,377.21	5,286.72	4,916.89	4,574.64	20.28	34.83	106.01	-1,043.19	-1,304.82	1,914.06	1,874.77	39.29	48.717	
5,400.00	5,309.01	4,937.42	4,593.32	20.37	35.01	106.24	-1,048.47	-1,311.49	1,923.95	1,884.40	39.55	48.641	
5,500.00	5,407.20	5,027.76	4,675.52	20.69	35.78	107.14	-1,071.73	-1,340.85	1,966.82	1,926.21	40.61	48.427	
5,600.00	5,506.00	5,118.46	4,758.07	20.97	36.56	107.91	-1,095.08	-1,370.33	2,008.76	1,967.15	41.61	48.274	
5,700.00	5,605.27	5,209.42	4,840.84	21.21	37.34	108.55	-1,118.50	-1,399.89	2,049.74	2,007.20	42.54	48.184	
5,800.00	5,704.90	5,300.53	4,923.75	21.41	38.12	109.08	-1,141.95	-1,429.50	2,089.74	2,046.34	43.40	48.155	
5,900.00	5,804.77	5,391.67	5,006.69	21.57	38.90	109.50	-1,165.42	-1,459.12	2,128.76	2,084.58	44.18	48.186	
5,994.25	5,899.00	5,477.50	5,084.80	21.69	39.63	-101.38	-1,187.51	-1,487.02	2,164.63	2,119.78	44.85	48.259	
6,000.00	5,904.75	5,482.74	5,089.56	21.70	39.68	-101.41	-1,188.86	-1,488.72	2,166.80	2,121.92	44.88	48.284	
6,100.00	6,004.75	5,573.74	5,172.37	21.81	40.46	-101.89	-1,212.29	-1,518.29	2,204.49	2,159.25	45.24	48.726	
6,200.00	6,104.75	5,664.74	5,255.18	21.92	41.24	-102.36	-1,235.71	-1,547.87	2,242.31	2,196.71	45.61	49.167	
6,300.00	6,204.75	5,832.07	5,408.23	22.04	42.50	-103.15	-1,277.71	-1,600.88	2,279.79	2,233.69	46.10	49.454	
6,400.00	6,304.75	6,189.77	5,746.57	22.15	44.32	-104.41	-1,349.33	-1,691.29	2,309.46	2,262.70	46.76	49.389	
6,500.00	6,404.75	6,573.43	6,122.37	22.27	45.58	-105.18	-1,396.43	-1,750.75	2,327.70	2,280.27	47.43	49.075	
6,600.00	6,504.75	6,956.92	6,504.75	22.39	46.12	-105.42	-1,411.95	-1,770.35	2,333.51	2,285.51	48.00	48.620	
6,700.00	6,604.75	7,056.92	6,604.75	22.51	46.18	-105.42	-1,411.95	-1,770.35	2,333.51	2,285.29	48.22	48.398	
6,800.00	6,704.75	7,156.92	6,704.75	22.63	46.24	-105.42	-1,411.95	-1,770.35	2,333.51	2,285.07	48.43	48.179	
6,900.00	6,804.75	7,256.92	6,804.75	22.76	46.30	-105.42	-1,411.95	-1,770.35	2,333.51	2,284.85	48.66	47.958	
7,000.00	6,904.75	7,356.92	6,904.75	22.88	46.37	-105.42	-1,411.95	-1,770.35	2,333.51	2,284.62	48.88	47.737	
7,100.00	7,004.75	7,456.92	7,004.75	23.01	46.43	-105.42	-1,411.95	-1,770.35	2,333.51	2,284.39	49.11	47.515	
7,200.00	7,104.75	7,556.92	7,104.75	23.14	46.49	-105.42	-1,411.95	-1,770.35	2,333.51	2,284.16	49.34	47.292	
7,300.00	7,204.75	7,656.92	7,204.75	23.27	46.56	-105.42	-1,411.95	-1,770.35	2,333.51	2,283.93	49.58	47.068	
7,400.00	7,304.75	7,756.92	7,304.75	23.40	46.62	-105.42	-1,411.95	-1,770.35	2,333.51	2,283.69	49.81	46.844	
7,500.00	7,404.75	7,856.92	7,404.75	23.53	46.69	-105.42	-1,411.95	-1,770.35	2,333.51	2,283.45	50.06	46.619	
7,600.00	7,504.75	7,956.92	7,504.75	23.66	46.76	-105.42	-1,411.95	-1,770.35	2,333.51	2,283.21	50.30	46.393	
7,700.00	7,604.75	8,056.92	7,604.75	23.80	46.83	-105.42	-1,411.95	-1,770.35	2,333.51	2,282.96	50.54	46.167	
7,800.00	7,704.75	8,156.92	7,704.75	23.94	46.90	-105.42	-1,411.95	-1,770.35	2,333.51	2,282.71	50.79	45.941	
7,900.00	7,804.75	8,256.92	7,804.75	24.07	46.97	-105.42	-1,411.95	-1,770.35	2,333.51	2,282.46	51.04	45.715	
7,965.25	7,870.00	8,322.17	7,870.00	24.16	47.01	-105.42	-1,411.95	-1,770.35	2,333.51	2,282.30	51.21	45.567	

<b>Company:</b>	US ROCKIES REGION PLANNING	<b>Local Co-ordinate Reference:</b>	Well P_ENCORE 21-12
<b>Project:</b>	COLORADO NORTHERN ZONE - 83	<b>TVD Reference:</b>	WELL @ 4994.00ft (Original Well Elev)
<b>Reference Site:</b>	LARIMER_ENCORE 3-12 PAD	<b>MD Reference:</b>	WELL @ 4994.00ft (Original Well Elev)
<b>Site Error:</b>	0.00ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	P_ENCORE 21-12	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.00ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	P_ENCORE 21-12	<b>Database:</b>	EDM 2003.21 Single User Db
<b>Reference Design:</b>	PLAN #1 3-22-10 RHS	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design												Offset Site Error:	0.00 ft
Survey Program: 0-MWD												Offset Well Error:	0.00 ft
Reference		Offset		Semi Major Axis			Distance						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	-179.20	-20.04	-0.28	20.04				
100.00	100.00	100.00	100.00	0.10	0.10	-179.20	-20.04	-0.28	20.04	19.85	0.19	104.906	
200.00	200.00	200.00	200.00	0.32	0.32	-179.20	-20.04	-0.28	20.04	19.40	0.64	31.288	
300.00	300.00	300.00	300.00	0.55	0.55	-179.20	-20.04	-0.28	20.04	18.95	1.09	18.386	
400.00	400.00	400.00	400.00	0.77	0.77	-179.20	-20.04	-0.28	20.04	18.50	1.54	13.018	
500.00	500.00	500.00	500.00	0.99	0.99	-179.20	-20.04	-0.28	20.04	18.05	1.99	10.076	
600.00	600.00	600.00	600.00	1.22	1.22	-179.20	-20.04	-0.28	20.04	17.60	2.44	8.218	
700.00	700.00	700.00	700.00	1.44	1.44	-179.20	-20.04	-0.28	20.04	17.15	2.89	6.939	
800.00	800.00	800.00	800.00	1.67	1.67	-179.20	-20.04	-0.28	20.04	16.70	3.34	6.005	
900.00	900.00	900.00	900.00	1.89	1.89	-179.20	-20.04	-0.28	20.04	16.26	3.79	5.292	
1,000.00	1,000.00	1,000.00	1,000.00	2.12	2.12	-179.20	-20.04	-0.28	20.04	15.81	4.24	4.731	
1,050.00	1,050.00	1,050.00	1,050.00	2.23	2.23	-179.20	-20.04	-0.28	20.04	15.58	4.46	4.492 CC	
1,100.00	1,100.00	1,099.66	1,099.66	2.33	2.33	32.99	-20.45	-0.41	20.09	15.43	4.66	4.313 ES	
1,200.00	1,199.93	1,198.93	1,198.87	2.51	2.50	40.81	-23.73	-1.44	20.69	15.69	5.00	4.135 SF	
1,300.00	1,299.68	1,298.02	1,297.71	2.70	2.68	54.54	-30.27	-3.50	22.94	17.57	5.37	4.271	
1,400.00	1,399.13	1,396.81	1,395.96	2.91	2.88	69.60	-40.04	-6.58	28.20	22.43	5.77	4.885	
1,500.00	1,498.15	1,495.17	1,493.38	3.14	3.11	81.89	-52.96	-10.66	37.13	30.91	6.22	5.968	
1,600.00	1,596.63	1,593.01	1,589.77	3.42	3.37	90.49	-68.98	-15.71	49.66	42.93	6.74	7.371	
1,667.04	1,662.28	1,658.25	1,653.69	3.63	3.58	94.59	-81.39	-19.62	59.94	52.80	7.13	8.405	
1,700.00	1,694.48	1,690.23	1,684.91	3.74	3.68	96.19	-87.99	-21.70	65.49	58.15	7.33	8.930	
1,800.00	1,792.17	1,786.86	1,778.76	4.10	4.03	98.51	-109.92	-28.62	83.93	75.93	8.00	10.497	
1,900.00	1,889.86	1,882.74	1,871.07	4.47	4.44	98.55	-134.66	-36.42	104.49	95.78	8.71	11.995	
2,000.00	1,987.55	1,977.69	1,961.56	4.87	4.90	97.44	-162.05	-45.05	127.11	117.64	9.47	13.422	
2,100.00	2,085.24	2,071.50	2,050.00	5.27	5.41	95.76	-191.90	-54.46	151.88	141.62	10.26	14.800	
2,200.00	2,182.93	2,164.88	2,136.98	5.69	5.97	93.81	-224.27	-64.67	178.84	167.76	11.07	16.148	
2,300.00	2,280.61	2,260.80	2,225.99	6.12	6.59	92.13	-258.35	-75.41	206.61	194.69	11.92	17.333	
2,400.00	2,378.30	2,356.71	2,315.00	6.55	7.22	90.86	-292.43	-86.16	234.51	221.73	12.78	18.354	
2,500.00	2,475.99	2,452.62	2,404.01	6.99	7.87	89.85	-326.51	-96.90	262.49	248.85	13.64	19.239	
2,600.00	2,573.68	2,548.54	2,493.02	7.43	8.52	89.04	-360.58	-107.65	290.54	276.02	14.52	20.010	
2,700.00	2,671.37	2,644.45	2,582.03	7.88	9.19	88.37	-394.66	-118.39	318.63	303.22	15.40	20.687	
2,800.00	2,769.06	2,740.37	2,671.04	8.32	9.86	87.81	-428.74	-129.14	346.75	330.46	16.29	21.284	
2,900.00	2,866.75	2,836.28	2,760.05	8.78	10.54	87.33	-462.82	-139.88	374.90	357.71	17.19	21.814	
3,000.00	2,964.44	2,932.19	2,849.06	9.23	11.23	86.92	-496.90	-150.63	403.06	384.98	18.08	22.288	
3,100.00	3,062.13	3,028.11	2,938.07	9.68	11.91	86.57	-530.97	-161.37	431.25	412.26	18.99	22.714	
3,200.00	3,159.82	3,124.02	3,027.08	10.14	12.60	86.26	-565.05	-172.12	459.45	439.56	19.89	23.098	
3,300.00	3,257.51	3,219.93	3,116.09	10.60	13.29	85.98	-599.13	-182.86	487.66	466.86	20.80	23.446	
3,400.00	3,355.20	3,315.85	3,205.09	11.06	13.99	85.73	-633.21	-193.60	515.88	494.17	21.71	23.764	
3,500.00	3,452.89	3,411.76	3,294.10	11.52	14.68	85.51	-667.29	-204.35	544.10	521.48	22.62	24.054	
3,600.00	3,550.58	3,507.67	3,383.11	11.98	15.38	85.31	-701.37	-215.09	572.34	548.80	23.53	24.320	
3,700.00	3,648.27	3,603.59	3,472.12	12.45	16.08	85.13	-735.44	-225.84	600.57	576.13	24.45	24.566	
3,800.00	3,745.96	3,699.50	3,561.13	12.91	16.78	84.97	-769.52	-236.58	628.82	603.46	25.36	24.792	
3,900.00	3,843.65	3,795.41	3,650.14	13.37	17.48	84.82	-803.60	-247.33	657.07	630.79	26.28	25.003	
4,000.00	3,941.33	3,891.33	3,739.15	13.84	18.19	84.68	-837.68	-258.07	685.32	658.12	27.20	25.198	
4,100.00	4,039.02	3,987.24	3,828.16	14.30	18.89	84.55	-871.76	-268.82	713.58	685.46	28.11	25.381	
4,200.00	4,136.71	4,083.15	3,917.17	14.77	19.60	84.44	-905.83	-279.56	741.83	712.80	29.03	25.551	
4,300.00	4,234.40	4,179.07	4,006.18	15.24	20.30	84.33	-939.91	-290.31	770.10	740.14	29.95	25.711	
4,400.00	4,332.09	4,274.98	4,095.19	15.70	21.01	84.23	-973.99	-301.05	798.36	767.49	30.87	25.862	
4,500.00	4,429.78	4,370.90	4,184.20	16.17	21.71	84.13	-1,008.07	-311.79	826.63	794.84	31.79	26.003	
4,600.00	4,527.47	4,466.81	4,273.21	16.64	22.42	84.05	-1,042.15	-322.54	854.89	822.18	32.71	26.136	
4,700.00	4,625.16	4,562.72	4,362.21	17.11	23.13	83.96	-1,076.23	-333.28	883.16	849.53	33.63	26.262	
4,800.00	4,722.85	4,658.64	4,451.22	17.57	23.83	83.89	-1,110.30	-344.03	911.43	876.89	34.55	26.382	
4,900.00	4,820.54	4,754.55	4,540.23	18.04	24.54	83.81	-1,144.38	-354.77	939.71	904.24	35.47	26.495	

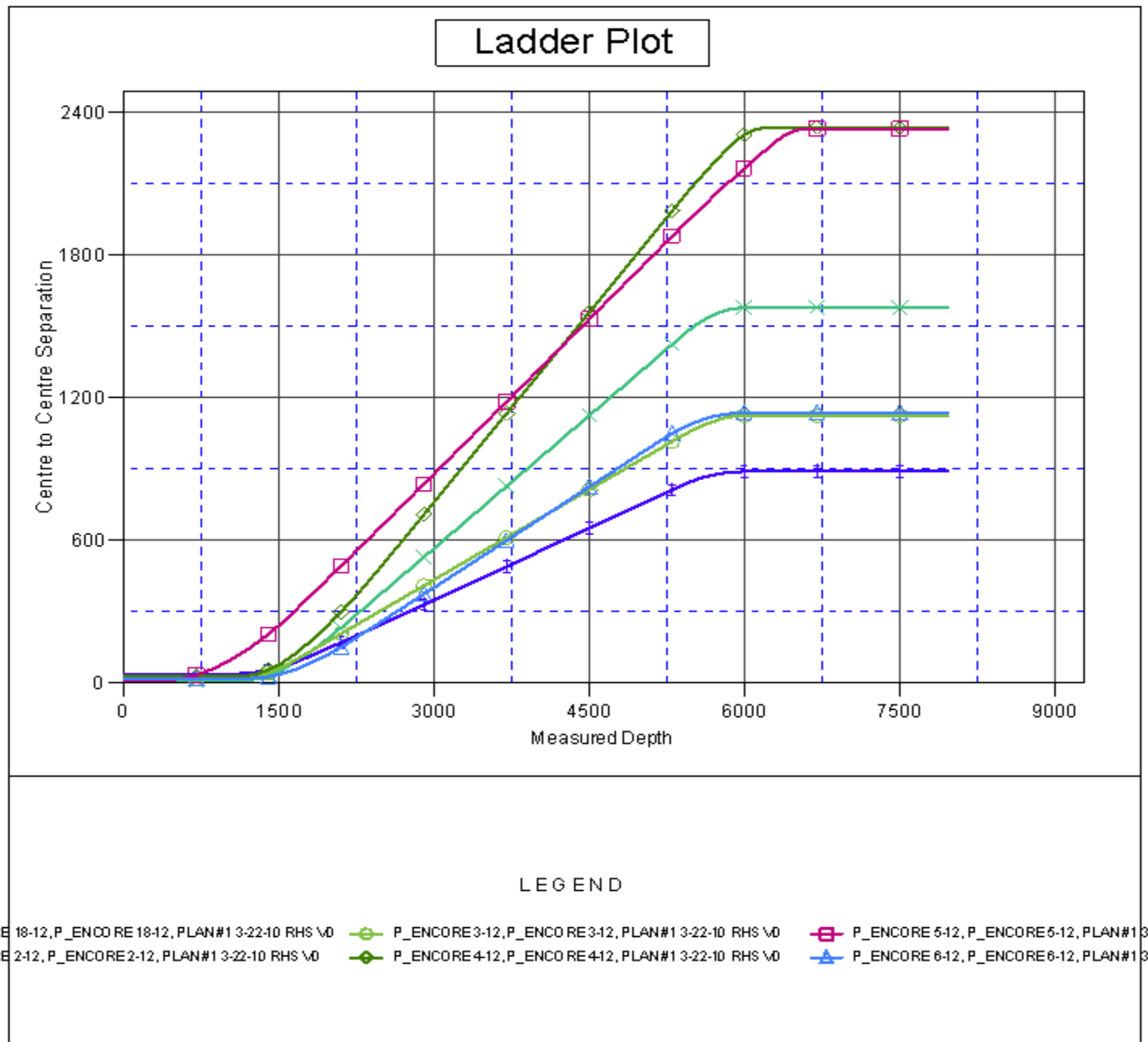
CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

<b>Company:</b>	US ROCKIES REGION PLANNING	<b>Local Co-ordinate Reference:</b>	Well P_ENCORE 21-12
<b>Project:</b>	COLORADO NORTHERN ZONE - 83	<b>TVD Reference:</b>	WELL @ 4994.00ft (Original Well Elev)
<b>Reference Site:</b>	LARIMER_ENCORE 3-12 PAD	<b>MD Reference:</b>	WELL @ 4994.00ft (Original Well Elev)
<b>Site Error:</b>	0.00ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	P_ENCORE 21-12	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.00ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	P_ENCORE 21-12	<b>Database:</b>	EDM 2003.21 Single User Db
<b>Reference Design:</b>	PLAN #1 3-22-10 RHS	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design												Offset Site Error:	0.00 ft
Survey Program: 0-MWD												Offset Well Error:	0.00 ft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	
5,000.00	4,918.23	4,850.46	4,629.24	18.51	25.25	83.75	-1,178.46	-365.52	967.98	931.59	36.39	26.603	
5,100.00	5,015.92	4,946.38	4,718.25	18.98	25.96	83.68	-1,212.54	-376.26	996.26	958.95	37.31	26.705	
5,200.00	5,113.61	5,042.29	4,807.26	19.45	26.67	83.62	-1,246.62	-387.01	1,024.53	986.31	38.22	26.803	
5,300.00	5,211.30	5,172.67	4,929.12	19.92	27.40	83.62	-1,290.82	-400.94	1,051.46	1,012.26	39.20	26.824	
5,377.21	5,286.72	5,279.35	5,030.29	20.28	27.90	83.77	-1,323.04	-411.10	1,069.74	1,029.78	39.96	26.772	
5,400.00	5,309.01	5,311.10	5,060.64	20.37	28.04	83.93	-1,331.94	-413.91	1,074.71	1,034.52	40.19	26.739	
5,500.00	5,407.20	5,451.70	5,196.21	20.69	28.61	84.56	-1,367.45	-425.10	1,094.42	1,053.32	41.10	26.630	
5,600.00	5,506.00	5,594.16	5,335.26	20.97	29.12	85.06	-1,396.92	-434.40	1,110.57	1,068.67	41.90	26.506	
5,700.00	5,605.27	5,738.14	5,477.19	21.21	29.54	85.45	-1,419.97	-441.66	1,123.07	1,080.49	42.58	26.377	
5,800.00	5,704.90	5,883.27	5,621.28	21.41	29.87	85.73	-1,436.29	-446.81	1,131.85	1,088.71	43.14	26.237	
5,900.00	5,804.77	6,029.13	5,766.80	21.57	30.11	85.90	-1,445.67	-449.76	1,136.86	1,093.28	43.57	26.091	
5,994.25	5,899.00	6,161.37	5,899.00	21.69	30.25	-125.23	-1,448.07	-450.52	1,138.12	1,094.24	43.88	25.939	
6,000.00	5,904.75	6,167.12	5,904.75	21.70	30.25	-125.23	-1,448.07	-450.52	1,138.12	1,094.23	43.89	25.931	
6,100.00	6,004.75	6,267.12	6,004.75	21.81	30.33	-125.23	-1,448.07	-450.52	1,138.12	1,094.01	44.11	25.803	
6,200.00	6,104.75	6,367.12	6,104.75	21.92	30.41	-125.23	-1,448.07	-450.52	1,138.12	1,093.79	44.33	25.676	
6,300.00	6,204.75	6,467.12	6,204.75	22.04	30.49	-125.23	-1,448.07	-450.52	1,138.12	1,093.57	44.55	25.547	
6,400.00	6,304.75	6,567.12	6,304.75	22.15	30.57	-125.23	-1,448.07	-450.52	1,138.12	1,093.34	44.78	25.418	
6,500.00	6,404.75	6,667.12	6,404.75	22.27	30.66	-125.23	-1,448.07	-450.52	1,138.12	1,093.12	45.00	25.289	
6,600.00	6,504.75	6,767.12	6,504.75	22.39	30.74	-125.23	-1,448.07	-450.52	1,138.12	1,092.88	45.24	25.159	
6,700.00	6,604.75	6,867.12	6,604.75	22.51	30.83	-125.23	-1,448.07	-450.52	1,138.12	1,092.65	45.47	25.029	
6,800.00	6,704.75	6,967.12	6,704.75	22.63	30.91	-125.23	-1,448.07	-450.52	1,138.12	1,092.41	45.71	24.898	
6,900.00	6,804.75	7,067.12	6,804.75	22.76	31.00	-125.23	-1,448.07	-450.52	1,138.12	1,092.17	45.95	24.767	
7,000.00	6,904.75	7,167.12	6,904.75	22.88	31.09	-125.23	-1,448.07	-450.52	1,138.12	1,091.92	46.20	24.635	
7,100.00	7,004.75	7,267.12	7,004.75	23.01	31.18	-125.23	-1,448.07	-450.52	1,138.12	1,091.67	46.45	24.503	
7,200.00	7,104.75	7,367.12	7,104.75	23.14	31.27	-125.23	-1,448.07	-450.52	1,138.12	1,091.42	46.70	24.372	
7,300.00	7,204.75	7,467.12	7,204.75	23.27	31.37	-125.23	-1,448.07	-450.52	1,138.12	1,091.17	46.95	24.240	
7,400.00	7,304.75	7,567.12	7,304.75	23.40	31.46	-125.23	-1,448.07	-450.52	1,138.12	1,090.91	47.21	24.108	
7,500.00	7,404.75	7,667.12	7,404.75	23.53	31.56	-125.23	-1,448.07	-450.52	1,138.12	1,090.65	47.47	23.976	
7,600.00	7,504.75	7,767.12	7,504.75	23.66	31.65	-125.23	-1,448.07	-450.52	1,138.12	1,090.39	47.73	23.844	
7,700.00	7,604.75	7,867.12	7,604.75	23.80	31.75	-125.23	-1,448.07	-450.52	1,138.12	1,090.12	48.00	23.712	
7,800.00	7,704.75	7,967.12	7,704.75	23.94	31.85	-125.23	-1,448.07	-450.52	1,138.12	1,089.85	48.27	23.580	
7,900.00	7,804.75	8,067.12	7,804.75	24.07	31.95	-125.23	-1,448.07	-450.52	1,138.12	1,089.58	48.54	23.448	
7,965.25	7,870.00	8,132.37	7,870.00	24.16	32.02	-125.23	-1,448.07	-450.52	1,138.12	1,089.40	48.72	23.362	

<b>Company:</b>	US ROCKIES REGION PLANNING	<b>Local Co-ordinate Reference:</b>	Well P_ENCORE 21-12
<b>Project:</b>	COLORADO NORTHERN ZONE - 83	<b>TVD Reference:</b>	WELL @ 4994.00ft (Original Well Elev)
<b>Reference Site:</b>	LARIMER_ENCORE 3-12 PAD	<b>MD Reference:</b>	WELL @ 4994.00ft (Original Well Elev)
<b>Site Error:</b>	0.00ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	P_ENCORE 21-12	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.00ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	P_ENCORE 21-12	<b>Database:</b>	EDM 2003.21 Single User Db
<b>Reference Design:</b>	PLAN #1 3-22-10 RHS	<b>Offset TVD Reference:</b>	Offset Datum

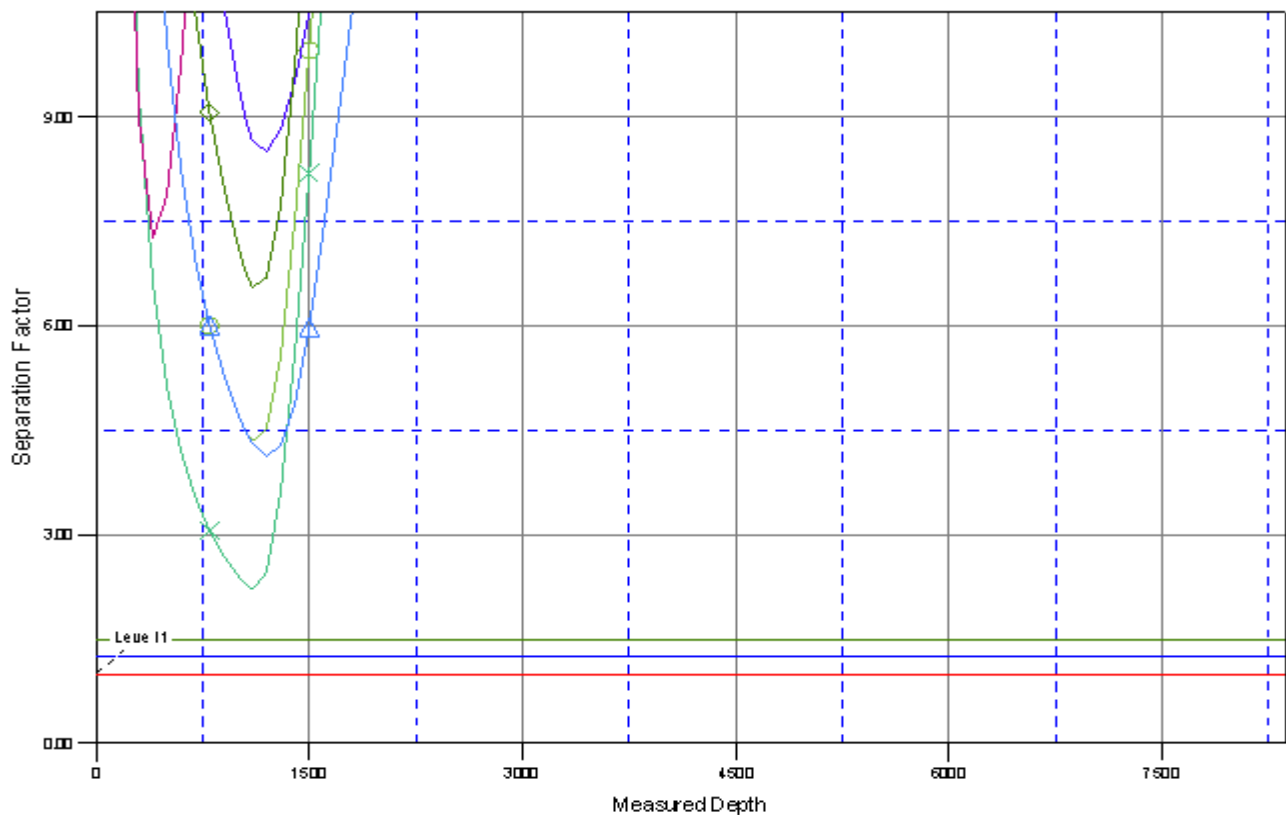
Reference Depths are relative to WELL @ 4994.00ft (Original Well Elev) Coordinates are relative to: P\_ENCORE 21-12  
Offset Depths are relative to Offset Datum Coordinate System is US State Plane 1983, Colorado Northern Zone  
Central Meridian is 105° 30' 0.000 W ° Grid Convergence at Surface is: 0.35°



<b>Company:</b>	US ROCKIES REGION PLANNING	<b>Local Co-ordinate Reference:</b>	Well P_ENCORE 21-12
<b>Project:</b>	COLORADO NORTHERN ZONE - 83	<b>TVD Reference:</b>	WELL @ 4994.00ft (Original Well Elev)
<b>Reference Site:</b>	LARIMER_ENCORE 3-12 PAD	<b>MD Reference:</b>	WELL @ 4994.00ft (Original Well Elev)
<b>Site Error:</b>	0.00ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	P_ENCORE 21-12	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.00ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	P_ENCORE 21-12	<b>Database:</b>	EDM 2003.21 Single User Db
<b>Reference Design:</b>	PLAN #1 3-22-10 RHS	<b>Offset TVD Reference:</b>	Offset Datum

Reference Depths are relative to WELL @ 4994.00ft (Original Well Elev) Coordinates are relative to: P\_ENCORE 21-12  
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: 0.35°

## Separation Factor Plot



## LEGEND

RE 18-12, P\_ENCORE 18-12, PLAN#1 3-22-10 RHS \0 P\_ENCORE 3-12, P\_ENCORE 3-12, PLAN#1 3-22-10 RHS \0 P\_ENCORE 5-12, P\_ENCORE 5-12, PLAN#1 3-22-10 RHS \0  
RE 2-12, P\_ENCORE 2-12, PLAN#1 3-22-10 RHS \0 P\_ENCORE 4-12, P\_ENCORE 4-12, PLAN#1 3-22-10 RHS \0 P\_ENCORE 6-12, P\_ENCORE 6-12, PLAN#1 3-22-10 RHS \0