



# **US ROCKIES REGION PLANNING**

**COLORADO NORTHERN ZONE - 83**

**LARIMER\_ENCORE 3-12 PAD**

**P\_ENCORE 2-12**

**P\_ENCORE 2-12**

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

## **Standard Planning Report**

**22 March, 2010**

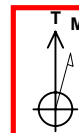




Project: COLORADO NORTHERN ZONE - 83  
 Site: LARIMER\_ENCORE 3-12 PAD  
 Well: P\_ENCORE 2-12  
 Wellbore: P\_ENCORE 2-12  
 Section: SECTION 12 T5N R68W  
 SHL: 480 FNL 2410 FWL  
 Design: PLAN #1 3-22-10 RHS  
 Latitude: 40° 25' 12.813 N  
 Longitude: 104° 57' 19.577 W  
 GL: 4979.00  
 KB: WELL @ 4994.00ft (Original Well Elev)



**Weatherford®**



Azimuths to True North  
 Magnetic North: 9.13°  
 Magnetic Field  
 Strength: 53249.9nT  
 Dip Angle: 67.08°  
 Date: 3/22/2010  
 Model: IGRF2010

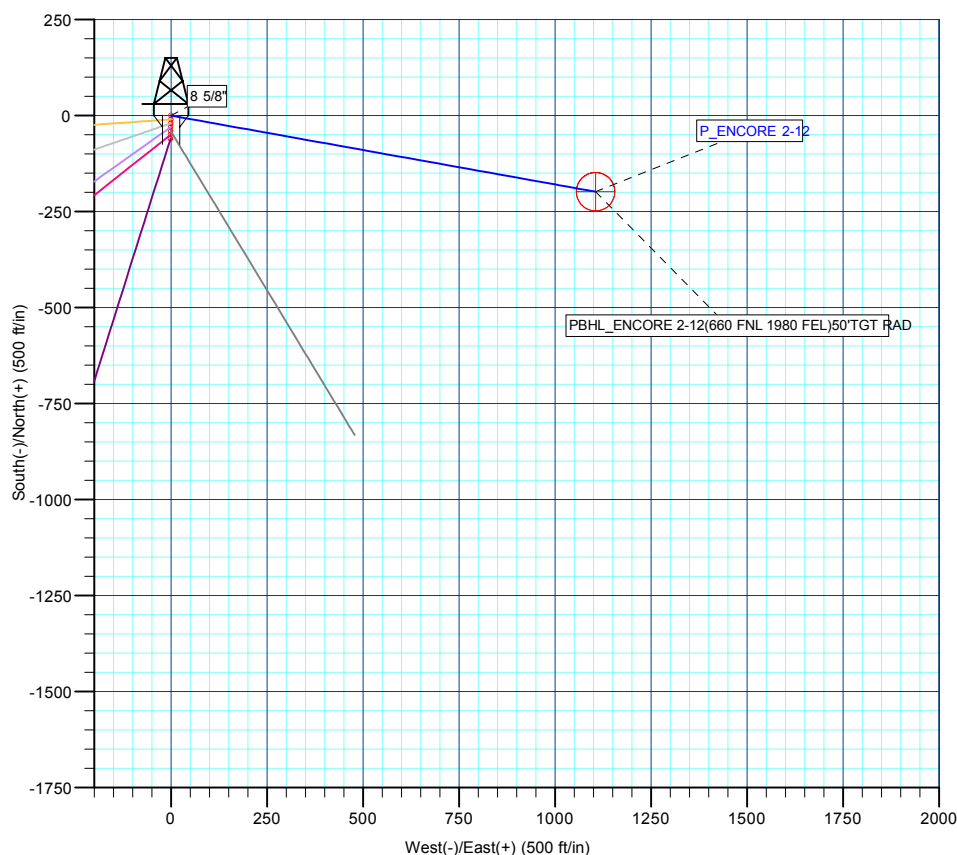
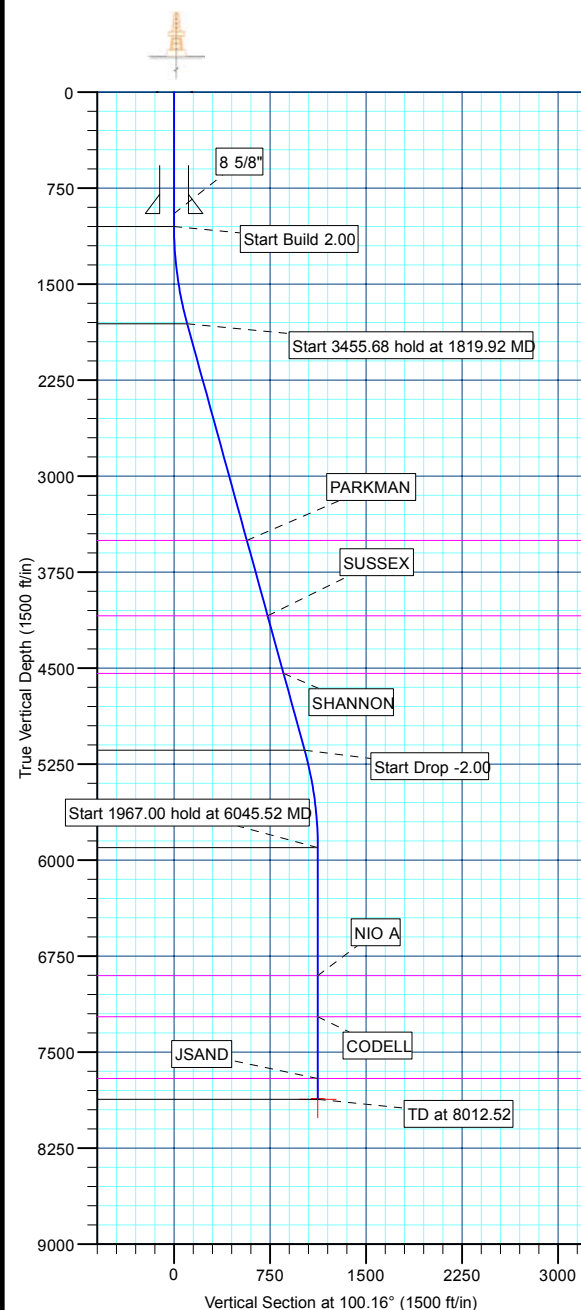
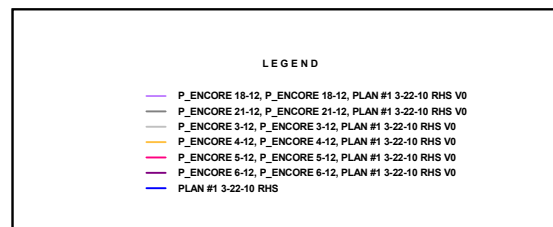
FORMATION TOP DETAILS		
TVDPath	MDPath	Formation
3503.00	3575.25	PARKMAN
4093.00	4187.21	SUSSEX
4543.00	4653.97	SHANNON
6903.00	7045.52	NIO A
7225.00	7367.52	CODELL
7707.00	7849.52	JSAND

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
1819.92	15.40	100.16	1810.68	-18.14	101.23	2.00	100.16	102.84	Start 3455.68 hold at 1819.92 MD
5275.60	15.40	100.16	5142.32	-180.00	1004.42	0.00	0.00	1020.42	Start Drop -2.00
6045.52	0.00	0.00	5903.00	-198.14	1105.65	2.00	180.00	1123.26	Start 1967.00 hold at 6045.52 MD
8012.52	0.00	0.00	7870.00	-198.14	1105.65	0.00	0.00	1123.26	TD at 8012.52

WELLBORE TARGET DETAILS (MAP CO-ORDINATES AND LAT/LONG)							
Name	TVD	+N/-S	+E/-W	Latitude	Longitude	Shape	
PBHL	7870.00	-198.14	+1105.65	40° 25' 10.855 N	104° 57' 5.281 W	Circle (Radius: 50.00)	

WELL DETAILS: P_ENCORE 2-12						
+N/-S	+E/-W	Northing	Ground Level: Easting	4979.00 Latitude	Longitude	Slot
0.00	0.00	1396394.22	3151619.95	40° 25' 12.813 N	104° 57' 19.577 W	



Plan: PLAN #1 3-22-10 RHS (P_ENCORE 2-12/P_ENCORE 2-12)	
Created By: Robert H. Scott	Date: 14:33, March 22 2010

<b>Database:</b>	EDM 2003.21 Single User Db	<b>Local Co-ordinate Reference:</b>	Well P_ENCORE 2-12
<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 2-12	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	P_ENCORE 2-12		
<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		

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

Well	P_ENCORE 2-12					
Well Position	+N/-S	29.86 ft	Northing:	1,396,394.22 ft	Latitude:	40° 25' 12.813 N
	+E/-W	0.56 ft	Easting:	3,151,619.95 ft	Longitude:	104° 57' 19.577 W
Position Uncertainty		0.00 ft	Wellhead Elevation:	ft	Ground Level:	4,979.00 ft

<b>Wellbore</b>	P_ENCORE 2-12				
<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	100.16

<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	
1,819.92	15.40	100.16	1,810.68	-18.14	101.23	2.00	2.00	0.00	100.16	
5,275.60	15.40	100.16	5,142.32	-180.00	1,004.42	0.00	0.00	0.00	0.00	
6,045.52	0.00	0.00	5,903.00	-198.14	1,105.65	2.00	-2.00	0.00	180.00	
8,012.52	0.00	0.00	7,870.00	-198.14	1,105.65	0.00	0.00	0.00	0.00	PBHL_ENCORE 2-

<b>Database:</b>	EDM 2003.21 Single User Db	<b>Local Co-ordinate Reference:</b>	Well P_ENCORE 2-12
<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 2-12	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	P_ENCORE 2-12		
<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	100.16	1,100.00	-0.08	0.43	0.44	2.00	2.00	0.00
1,200.00	3.00	100.16	1,199.93	-0.69	3.86	3.93	2.00	2.00	0.00
1,300.00	5.00	100.16	1,299.68	-1.92	10.73	10.90	2.00	2.00	0.00
1,400.00	7.00	100.16	1,399.13	-3.77	21.02	21.35	2.00	2.00	0.00
1,500.00	9.00	100.16	1,498.15	-6.22	34.72	35.27	2.00	2.00	0.00
1,600.00	11.00	100.16	1,596.63	-9.28	51.81	52.63	2.00	2.00	0.00
1,700.00	13.00	100.16	1,694.44	-12.95	72.27	73.42	2.00	2.00	0.00
1,800.00	15.00	100.16	1,791.46	-17.22	96.08	97.62	2.00	2.00	0.00
<b>Start 3455.68 hold at 1819.92 MD</b>									
1,819.92	15.40	100.16	1,810.68	-18.14	101.23	102.84	2.00	2.00	0.00
1,900.00	15.40	100.16	1,887.89	-21.89	122.16	124.10	0.00	0.00	0.00
2,000.00	15.40	100.16	1,984.30	-26.57	148.29	150.65	0.00	0.00	0.00
2,100.00	15.40	100.16	2,080.71	-31.26	174.43	177.21	0.00	0.00	0.00
2,200.00	15.40	100.16	2,177.12	-35.94	200.57	203.76	0.00	0.00	0.00
2,300.00	15.40	100.16	2,273.53	-40.63	226.70	230.31	0.00	0.00	0.00
2,400.00	15.40	100.16	2,369.94	-45.31	252.84	256.87	0.00	0.00	0.00
2,500.00	15.40	100.16	2,466.35	-49.99	278.97	283.42	0.00	0.00	0.00
2,600.00	15.40	100.16	2,562.76	-54.68	305.11	309.97	0.00	0.00	0.00
2,700.00	15.40	100.16	2,659.17	-59.36	331.25	336.52	0.00	0.00	0.00
2,800.00	15.40	100.16	2,755.58	-64.05	357.38	363.08	0.00	0.00	0.00
2,900.00	15.40	100.16	2,851.99	-68.73	383.52	389.63	0.00	0.00	0.00
3,000.00	15.40	100.16	2,948.40	-73.41	409.66	416.18	0.00	0.00	0.00
3,100.00	15.40	100.16	3,044.81	-78.10	435.79	442.74	0.00	0.00	0.00
3,200.00	15.40	100.16	3,141.22	-82.78	461.93	469.29	0.00	0.00	0.00
3,300.00	15.40	100.16	3,237.63	-87.46	488.07	495.84	0.00	0.00	0.00
3,400.00	15.40	100.16	3,334.04	-92.15	514.20	522.40	0.00	0.00	0.00
3,500.00	15.40	100.16	3,430.46	-96.83	540.34	548.95	0.00	0.00	0.00
<b>PARKMAN</b>									
3,575.25	15.40	100.16	3,503.00	-100.36	560.01	568.93	0.00	0.00	0.00
3,600.00	15.40	100.16	3,526.87	-101.52	566.48	575.50	0.00	0.00	0.00
3,700.00	15.40	100.16	3,623.28	-106.20	592.61	602.05	0.00	0.00	0.00
3,800.00	15.40	100.16	3,719.69	-110.88	618.75	628.61	0.00	0.00	0.00
3,900.00	15.40	100.16	3,816.10	-115.57	644.89	655.16	0.00	0.00	0.00
4,000.00	15.40	100.16	3,912.51	-120.25	671.02	681.71	0.00	0.00	0.00
4,100.00	15.40	100.16	4,008.92	-124.93	697.16	708.27	0.00	0.00	0.00
<b>SUSSEX</b>									
4,187.21	15.40	100.16	4,093.00	-129.02	719.95	731.42	0.00	0.00	0.00
4,200.00	15.40	100.16	4,105.33	-129.62	723.30	734.82	0.00	0.00	0.00
4,300.00	15.40	100.16	4,201.74	-134.30	749.43	761.37	0.00	0.00	0.00
4,400.00	15.40	100.16	4,298.15	-138.99	775.57	787.92	0.00	0.00	0.00
4,500.00	15.40	100.16	4,394.56	-143.67	801.71	814.48	0.00	0.00	0.00
4,600.00	15.40	100.16	4,490.97	-148.35	827.84	841.03	0.00	0.00	0.00
<b>SHANNON</b>									
4,653.97	15.40	100.16	4,543.00	-150.88	841.95	855.36	0.00	0.00	0.00
4,700.00	15.40	100.16	4,587.38	-153.04	853.98	867.58	0.00	0.00	0.00
4,800.00	15.40	100.16	4,683.79	-157.72	880.12	894.14	0.00	0.00	0.00
4,900.00	15.40	100.16	4,780.20	-162.41	906.25	920.69	0.00	0.00	0.00
5,000.00	15.40	100.16	4,876.61	-167.09	932.39	947.24	0.00	0.00	0.00
5,100.00	15.40	100.16	4,973.02	-171.77	958.52	973.79	0.00	0.00	0.00
5,200.00	15.40	100.16	5,069.43	-176.46	984.66	1,000.35	0.00	0.00	0.00
<b>Start Drop -2.00</b>									

<b>Database:</b>	EDM 2003.21 Single User Db	<b>Local Co-ordinate Reference:</b>	Well P_ENCORE 2-12
<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 2-12	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	P_ENCORE 2-12		
<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)
5,275.60	15.40	100.16	5,142.32	-180.00	1,004.42	1,020.42	0.00	0.00	0.00
5,300.00	14.91	100.16	5,165.87	-181.12	1,010.70	1,026.80	2.00	-2.00	0.00
5,400.00	12.91	100.16	5,262.93	-185.36	1,034.36	1,050.84	2.00	-2.00	0.00
5,500.00	10.91	100.16	5,360.77	-189.00	1,054.68	1,071.48	2.00	-2.00	0.00
5,600.00	8.91	100.16	5,459.27	-192.04	1,071.62	1,088.69	2.00	-2.00	0.00
5,700.00	6.91	100.16	5,558.32	-194.47	1,085.16	1,102.45	2.00	-2.00	0.00
5,800.00	4.91	100.16	5,657.78	-196.28	1,095.30	1,112.74	2.00	-2.00	0.00
5,900.00	2.91	100.16	5,757.54	-197.49	1,102.01	1,119.56	2.00	-2.00	0.00
6,000.00	0.91	100.16	5,857.48	-198.07	1,105.29	1,122.90	2.00	-2.00	0.00
<b>Start 1967.00 hold at 6045.52 MD</b>									
6,045.52	0.00	0.00	5,903.00	-198.14	1,105.65	1,123.26	2.00	-2.00	0.00
6,100.00	0.00	0.00	5,957.48	-198.14	1,105.65	1,123.26	0.00	0.00	0.00
6,200.00	0.00	0.00	6,057.48	-198.14	1,105.65	1,123.26	0.00	0.00	0.00
6,300.00	0.00	0.00	6,157.48	-198.14	1,105.65	1,123.26	0.00	0.00	0.00
6,400.00	0.00	0.00	6,257.48	-198.14	1,105.65	1,123.26	0.00	0.00	0.00
6,500.00	0.00	0.00	6,357.48	-198.14	1,105.65	1,123.26	0.00	0.00	0.00
6,600.00	0.00	0.00	6,457.48	-198.14	1,105.65	1,123.26	0.00	0.00	0.00
6,700.00	0.00	0.00	6,557.48	-198.14	1,105.65	1,123.26	0.00	0.00	0.00
6,800.00	0.00	0.00	6,657.48	-198.14	1,105.65	1,123.26	0.00	0.00	0.00
6,900.00	0.00	0.00	6,757.48	-198.14	1,105.65	1,123.26	0.00	0.00	0.00
7,000.00	0.00	0.00	6,857.48	-198.14	1,105.65	1,123.26	0.00	0.00	0.00
<b>NIO A</b>									
7,045.52	0.00	0.00	6,903.00	-198.14	1,105.65	1,123.26	0.00	0.00	0.00
7,100.00	0.00	0.00	6,957.48	-198.14	1,105.65	1,123.26	0.00	0.00	0.00
7,200.00	0.00	0.00	7,057.48	-198.14	1,105.65	1,123.26	0.00	0.00	0.00
7,300.00	0.00	0.00	7,157.48	-198.14	1,105.65	1,123.26	0.00	0.00	0.00
<b>CODELL</b>									
7,367.52	0.00	0.00	7,225.00	-198.14	1,105.65	1,123.26	0.00	0.00	0.00
7,400.00	0.00	0.00	7,257.48	-198.14	1,105.65	1,123.26	0.00	0.00	0.00
7,500.00	0.00	0.00	7,357.48	-198.14	1,105.65	1,123.26	0.00	0.00	0.00
7,600.00	0.00	0.00	7,457.48	-198.14	1,105.65	1,123.26	0.00	0.00	0.00
7,700.00	0.00	0.00	7,557.48	-198.14	1,105.65	1,123.26	0.00	0.00	0.00
7,800.00	0.00	0.00	7,657.48	-198.14	1,105.65	1,123.26	0.00	0.00	0.00
<b>JSAND</b>									
7,849.52	0.00	0.00	7,707.00	-198.14	1,105.65	1,123.26	0.00	0.00	0.00
7,900.00	0.00	0.00	7,757.48	-198.14	1,105.65	1,123.26	0.00	0.00	0.00
8,000.00	0.00	0.00	7,857.48	-198.14	1,105.65	1,123.26	0.00	0.00	0.00
<b>PBHL_ENCORE 2-12(660 FNL 1980 FEL)50'TGT RAD</b>									
8,012.52	0.00	0.00	7,870.00	-198.14	1,105.65	1,123.26	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 2-12	0.00	0.00	7,870.00	-198.14	1,105.65	1,396,202.88	3,152,726.79	40° 25' 10.855 N	104° 57' 5.281 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 2-12
<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 2-12	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	P_ENCORE 2-12		
<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 (°)	
3,575.25	3,503.00	PARKMAN				
4,187.21	4,093.00	SUSSEX				
4,653.97	4,543.00	SHANNON				
7,045.52	6,903.00	NIO A				
7,367.52	7,225.00	CODELL				
7,849.52	7,707.00	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	
1,819.92	1,810.68	-18.14	101.23	Start 3455.68 hold at 1819.92 MD	
5,275.60	5,142.32	-180.00	1,004.42	Start Drop -2.00	
6,045.52	5,903.00	-198.14	1,105.65	Start 1967.00 hold at 6045.52 MD	
8,012.52	7,870.00	-198.14	1,105.65	TD at 8012.52	



# **US ROCKIES REGION PLANNING**

**COLORADO NORTHERN ZONE - 83  
LARIMER\_ENCORE 3-12 PAD  
P\_ENCORE 2-12**

**P\_ENCORE 2-12  
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 2-12
<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 2-12	<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 2-12	<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	8,012.52	PLAN #1 3-22-10 RHS (P_ENCORE 2-12)	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	29.87	25.41	6.695	CC
P_ENCORE 18-12 - P_ENCORE 18-12 - PLAN #1 3-22-	1,100.00	1,099.68	30.07	25.40	6.444	ES
P_ENCORE 18-12 - P_ENCORE 18-12 - PLAN #1 3-22-	1,200.00	1,198.73	32.33	27.28	6.405	SF
P_ENCORE 21-12 - P_ENCORE 21-12 - PLAN #1 3-22-	1,050.00	1,050.00	40.08	35.62	8.983	CC, ES
P_ENCORE 21-12 - P_ENCORE 21-12 - PLAN #1 3-22-	1,200.00	1,198.18	42.78	37.74	8.494	SF
P_ENCORE 3-12 - P_ENCORE 3-12 - PLAN #1 3-22-10	1,050.00	1,050.00	20.03	15.57	4.490	CC
P_ENCORE 3-12 - P_ENCORE 3-12 - PLAN #1 3-22-10	1,100.00	1,099.87	20.13	15.46	4.311	ES, SF
P_ENCORE 4-12 - P_ENCORE 4-12 - PLAN #1 3-22-10	1,089.05	1,089.03	9.82	5.20	2.124	CC
P_ENCORE 4-12 - P_ENCORE 4-12 - PLAN #1 3-22-10	1,100.00	1,099.97	9.83	5.16	2.104	ES, SF
P_ENCORE 5-12 - P_ENCORE 5-12 - PLAN #1 3-22-10	300.00	300.00	49.91	48.82	45.787	CC, ES
P_ENCORE 5-12 - P_ENCORE 5-12 - PLAN #1 3-22-10	700.00	693.11	70.70	67.85	24.779	SF
P_ENCORE 6-12 - P_ENCORE 6-12 - PLAN #1 3-22-10	1,050.00	1,050.00	60.12	55.66	13.475	CC, ES
P_ENCORE 6-12 - P_ENCORE 6-12 - PLAN #1 3-22-10	1,200.00	1,196.82	63.38	58.35	12.602	SF

<b>Offset Design</b> LARIMER_ENCORE 3-12 PAD - P_ENCORE 18-12 - P_ENCORE 18-12 - PLAN #1 3-22-10 RHS											
Survey Program: 0-MWD											
Reference											
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)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Minimum Separation (ft)
0.00	0.00	0.00	0.00	0.00	0.00	-178.93	-29.86	-0.56	29.87		
100.00	100.00	100.00	100.00	0.10	0.10	-178.93	-29.86	-0.56	29.87	29.68	0.19
200.00	200.00	200.00	200.00	0.32	0.32	-178.93	-29.86	-0.56	29.87	29.23	0.64
300.00	300.00	300.00	300.00	0.55	0.55	-178.93	-29.86	-0.56	29.87	28.78	1.09
400.00	400.00	400.00	400.00	0.77	0.77	-178.93	-29.86	-0.56	29.87	28.33	1.54
500.00	500.00	500.00	500.00	0.99	0.99	-178.93	-29.86	-0.56	29.87	27.88	1.99
600.00	600.00	600.00	600.00	1.22	1.22	-178.93	-29.86	-0.56	29.87	27.43	2.44
700.00	700.00	700.00	700.00	1.44	1.44	-178.93	-29.86	-0.56	29.87	26.98	2.89
800.00	800.00	800.00	800.00	1.67	1.67	-178.93	-29.86	-0.56	29.87	26.53	3.34
900.00	900.00	900.00	900.00	1.89	1.89	-178.93	-29.86	-0.56	29.87	26.08	3.79
1,000.00	1,000.00	1,000.00	1,000.00	2.12	2.12	-178.93	-29.86	-0.56	29.87	25.63	4.24
1,050.00	1,050.00	1,050.00	1,050.00	2.23	2.23	-178.93	-29.86	-0.56	29.87	25.41	4.46
1,100.00	1,100.00	1,099.68	1,099.68	2.33	2.33	82.38	-30.11	-0.91	30.07	25.40	4.67
1,200.00	1,199.93	1,198.73	1,198.67	2.53	2.52	93.27	-32.10	-3.71	32.33	27.28	5.05
1,300.00	1,299.68	1,296.88	1,296.57	2.74	2.71	109.75	-36.01	-9.23	39.62	34.18	5.44

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 2-12
<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 2-12	<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 2-12	<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 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
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
1,400.00	1,399.13	1,393.53	1,392.71	2.97	2.92	124.23	-41.76	-17.34	54.37	48.54	5.83	9.319	
1,500.00	1,498.15	1,488.16	1,486.45	3.22	3.15	134.00	-49.20	-27.84	76.80	70.57	6.23	12.333	
1,600.00	1,596.63	1,580.26	1,577.24	3.51	3.40	140.10	-58.16	-40.48	106.22	99.60	6.62	16.037	
1,700.00	1,694.44	1,669.40	1,664.59	3.84	3.69	143.93	-68.43	-54.98	141.99	134.97	7.03	20.207	
1,800.00	1,791.46	1,755.21	1,748.11	4.23	4.00	146.39	-79.79	-71.02	183.63	176.18	7.44	24.666	
1,819.92	1,810.68	1,771.88	1,764.27	4.31	4.06	146.76	-82.17	-74.38	192.59	185.06	7.53	25.578	
1,900.00	1,887.89	1,837.86	1,827.96	4.67	4.34	148.29	-92.10	-88.40	229.90	221.99	7.91	29.057	
2,000.00	1,984.30	1,918.14	1,904.92	5.13	4.71	149.47	-105.33	-107.07	278.77	270.37	8.40	33.173	
2,100.00	2,080.71	1,996.08	1,978.98	5.61	5.12	150.17	-119.36	-126.87	329.99	321.08	8.91	37.036	
2,200.00	2,177.12	2,079.53	2,057.80	6.11	5.58	150.64	-135.21	-149.23	382.68	373.24	9.45	40.514	
2,300.00	2,273.53	2,164.46	2,138.01	6.62	6.08	151.00	-151.35	-172.01	435.42	425.43	10.00	43.548	
2,400.00	2,369.94	2,249.39	2,218.22	7.13	6.59	151.29	-167.49	-194.79	488.18	477.61	10.56	46.218	
2,500.00	2,466.35	2,334.32	2,298.43	7.66	7.11	151.52	-183.63	-217.57	540.94	529.80	11.14	48.579	
2,600.00	2,562.76	2,419.25	2,378.64	8.19	7.65	151.71	-199.78	-240.35	593.70	581.99	11.72	50.675	
2,700.00	2,659.17	2,504.19	2,458.85	8.72	8.18	151.86	-215.92	-263.13	646.47	634.17	12.30	52.546	
2,800.00	2,755.58	2,589.12	2,539.06	9.26	8.73	152.00	-232.06	-285.91	699.24	686.35	12.90	54.220	
2,900.00	2,851.99	2,674.05	2,619.27	9.80	9.28	152.11	-248.20	-308.69	752.02	738.52	13.49	55.727	
3,000.00	2,948.40	2,758.98	2,699.49	10.35	9.83	152.21	-264.34	-331.47	804.79	790.70	14.10	57.091	
3,100.00	3,044.81	2,843.91	2,779.70	10.89	10.39	152.30	-280.49	-354.26	857.57	842.87	14.70	58.330	
3,200.00	3,141.22	2,928.84	2,859.91	11.44	10.95	152.38	-296.63	-377.04	910.35	895.04	15.31	59.461	
3,300.00	3,237.63	3,013.77	2,940.12	11.99	11.51	152.45	-312.77	-399.82	963.13	947.21	15.92	60.496	
3,400.00	3,334.04	3,098.71	3,020.33	12.54	12.08	152.51	-328.91	-422.60	1,015.91	999.38	16.53	61.446	
3,500.00	3,430.46	3,183.64	3,100.54	13.09	12.64	152.57	-345.06	-445.38	1,068.69	1,051.55	17.15	62.322	
3,600.00	3,526.87	3,268.57	3,180.75	13.65	13.21	152.62	-361.20	-468.16	1,121.48	1,103.71	17.76	63.132	
3,700.00	3,623.28	3,353.50	3,260.96	14.20	13.78	152.66	-377.34	-490.94	1,174.26	1,155.88	18.38	63.881	
3,800.00	3,719.69	3,438.43	3,341.17	14.76	14.35	152.70	-393.48	-513.72	1,227.04	1,208.03	19.01	64.548	
3,900.00	3,816.10	3,523.36	3,421.38	15.32	14.92	152.74	-409.62	-536.51	1,279.83	1,260.19	19.64	65.167	
4,000.00	3,912.51	3,608.29	3,501.59	15.87	15.50	152.78	-425.77	-559.29	1,332.61	1,312.34	20.27	65.742	
4,100.00	4,008.92	3,693.23	3,581.80	16.43	16.07	152.81	-441.91	-582.07	1,385.40	1,364.49	20.90	66.278	
4,200.00	4,105.33	3,778.16	3,662.02	16.99	16.64	152.84	-458.05	-604.85	1,438.18	1,416.64	21.54	66.778	
4,300.00	4,201.74	3,863.09	3,742.23	17.55	17.22	152.87	-474.19	-627.63	1,490.97	1,468.79	22.17	67.245	
4,400.00	4,298.15	3,948.02	3,822.44	18.11	17.79	152.90	-490.34	-650.41	1,543.75	1,520.94	22.81	67.684	
4,500.00	4,394.56	4,032.95	3,902.65	18.67	18.37	152.92	-506.48	-673.19	1,596.54	1,573.09	23.45	68.095	
4,600.00	4,490.97	4,117.88	3,982.86	19.23	18.95	152.94	-522.62	-695.97	1,649.32	1,625.24	24.08	68.483	
4,700.00	4,587.38	4,202.81	4,063.07	19.79	19.52	152.96	-538.76	-718.76	1,702.11	1,677.39	24.72	68.848	
4,800.00	4,683.79	4,287.74	4,143.28	20.35	20.10	152.99	-554.90	-741.54	1,754.90	1,729.53	25.36	69.192	
4,900.00	4,780.20	4,372.68	4,223.49	20.91	20.68	153.00	-571.05	-764.32	1,807.68	1,781.68	26.00	69.517	
5,000.00	4,876.61	4,457.61	4,303.70	21.47	21.26	153.02	-587.19	-787.10	1,860.47	1,833.82	26.64	69.825	
5,100.00	4,973.02	4,542.54	4,383.91	22.04	21.84	153.04	-603.33	-809.88	1,913.26	1,885.97	27.29	70.117	
5,200.00	5,069.43	4,627.47	4,464.12	22.60	22.42	153.06	-619.47	-832.66	1,966.04	1,938.11	27.93	70.393	
5,275.60	5,142.32	4,691.68	4,524.76	23.02	22.85	153.07	-631.68	-849.88	2,005.95	1,977.53	28.42	70.593	
5,300.00	5,165.87	4,712.45	4,544.38	23.14	22.99	153.21	-635.62	-855.46	2,018.75	1,990.14	28.61	70.550	
5,400.00	5,262.93	4,798.58	4,625.72	23.54	23.58	153.71	-651.99	-878.56	2,069.55	2,040.17	29.38	70.448	
5,500.00	5,360.77	4,886.22	4,708.50	23.89	24.18	154.12	-668.65	-902.07	2,117.63	2,087.52	30.11	70.321	
5,600.00	5,459.27	4,975.29	4,792.61	24.20	24.79	154.45	-685.58	-925.96	2,162.94	2,132.12	30.82	70.179	
5,700.00	5,558.32	5,065.65	4,877.95	24.46	25.41	154.70	-702.75	-950.20	2,205.43	2,173.94	31.49	70.030	
5,800.00	5,657.78	5,187.36	4,992.99	24.68	26.20	154.82	-725.73	-982.61	2,244.99	2,212.77	32.22	69.676	
5,900.00	5,757.54	5,556.14	5,349.48	24.86	27.71	154.50	-779.74	-1,058.85	2,274.83	2,241.38	33.45	68.011	
6,000.00	5,857.48	5,950.80	5,740.84	24.99	28.65	154.35	-807.73	-1,098.34	2,289.39	2,254.95	34.44	66.484	
6,045.52	5,903.00	6,113.03	5,903.00	25.04	28.85	-105.50	-810.16	-1,101.78	2,290.69	2,255.93	34.76	65.893	
6,100.00	5,957.48	6,167.52	5,957.48	25.09	28.90	-105.50	-810.16	-1,101.78	2,290.69	2,255.77	34.92	65.596	
6,200.00	6,057.48	6,267.52	6,057.48	25.20	28.99	-105.50	-810.16	-1,101.78	2,290.69	2,255.48	35.21	65.057	

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 2-12
<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 2-12	<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 2-12	<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 18-12 - P_ENCORE 18-12 - 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
6,300.00	6,157.48	6,367.52	6,157.48	25.32	29.08	-105.50	-810.16	-1,101.78	2,290.69	2,255.19	35.50	64.524	
6,400.00	6,257.48	6,467.52	6,257.48	25.43	29.17	-105.50	-810.16	-1,101.78	2,290.69	2,254.90	35.80	63.994	
6,500.00	6,357.48	6,567.52	6,357.48	25.54	29.26	-105.50	-810.16	-1,101.78	2,290.69	2,254.60	36.09	63.467	
6,600.00	6,457.48	6,667.52	6,457.48	25.66	29.36	-105.50	-810.16	-1,101.78	2,290.69	2,254.30	36.39	62.943	
6,700.00	6,557.48	6,767.52	6,557.48	25.78	29.45	-105.50	-810.16	-1,101.78	2,290.69	2,254.00	36.70	62.422	
6,800.00	6,657.48	6,867.52	6,657.48	25.90	29.55	-105.50	-810.16	-1,101.78	2,290.69	2,253.69	37.00	61.905	
6,900.00	6,757.48	6,967.52	6,757.48	26.02	29.65	-105.50	-810.16	-1,101.78	2,290.69	2,253.38	37.31	61.392	
7,000.00	6,857.48	7,067.52	6,857.48	26.14	29.75	-105.50	-810.16	-1,101.78	2,290.69	2,253.07	37.62	60.882	
7,100.00	6,957.48	7,167.52	6,957.48	26.26	29.85	-105.50	-810.16	-1,101.78	2,290.69	2,252.75	37.94	60.377	
7,200.00	7,057.48	7,267.52	7,057.48	26.39	29.96	-105.50	-810.16	-1,101.78	2,290.69	2,252.44	38.26	59.876	
7,300.00	7,157.48	7,367.52	7,157.48	26.51	30.06	-105.50	-810.16	-1,101.78	2,290.69	2,252.12	38.58	59.378	
7,400.00	7,257.48	7,467.52	7,257.48	26.64	30.17	-105.50	-810.16	-1,101.78	2,290.69	2,251.79	38.90	58.886	
7,500.00	7,357.48	7,567.52	7,357.48	26.77	30.27	-105.50	-810.16	-1,101.78	2,290.69	2,251.47	39.23	58.397	
7,600.00	7,457.48	7,667.52	7,457.48	26.90	30.38	-105.50	-810.16	-1,101.78	2,290.69	2,251.14	39.55	57.913	
7,700.00	7,557.48	7,767.52	7,557.48	27.03	30.49	-105.50	-810.16	-1,101.78	2,290.69	2,250.81	39.88	57.434	
7,800.00	7,657.48	7,867.52	7,657.48	27.16	30.60	-105.50	-810.16	-1,101.78	2,290.69	2,250.48	40.22	56.959	
7,900.00	7,757.48	7,967.52	7,757.48	27.30	30.72	-105.50	-810.16	-1,101.78	2,290.69	2,250.14	40.55	56.489	
8,000.00	7,857.48	8,067.52	7,857.48	27.43	30.83	-105.50	-810.16	-1,101.78	2,290.69	2,249.81	40.89	56.024	
8,012.52	7,870.00	8,080.03	7,870.00	27.45	30.84	-105.50	-810.16	-1,101.78	2,290.69	2,249.76	40.93	55.966	

<b>Company:</b>	US ROCKIES REGION PLANNING	<b>Local Co-ordinate Reference:</b>	Well P_ENCORE 2-12
<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 2-12	<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 2-12	<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	-178.81	-40.07	-0.84	40.08				
100.00	100.00	100.00	100.00	0.10	0.10	-178.81	-40.07	-0.84	40.08	39.89	0.19	209.774	
200.00	200.00	200.00	200.00	0.32	0.32	-178.81	-40.07	-0.84	40.08	39.44	0.64	62.564	
300.00	300.00	300.00	300.00	0.55	0.55	-178.81	-40.07	-0.84	40.08	38.99	1.09	36.764	
400.00	400.00	400.00	400.00	0.77	0.77	-178.81	-40.07	-0.84	40.08	38.54	1.54	26.030	
500.00	500.00	500.00	500.00	0.99	0.99	-178.81	-40.07	-0.84	40.08	38.09	1.99	20.148	
600.00	600.00	600.00	600.00	1.22	1.22	-178.81	-40.07	-0.84	40.08	37.64	2.44	16.434	
700.00	700.00	700.00	700.00	1.44	1.44	-178.81	-40.07	-0.84	40.08	37.19	2.89	13.876	
800.00	800.00	800.00	800.00	1.67	1.67	-178.81	-40.07	-0.84	40.08	36.74	3.34	12.007	
900.00	900.00	900.00	900.00	1.89	1.89	-178.81	-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	-178.81	-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	-178.81	-40.07	-0.84	40.08	35.62	4.46	8.983 CC, ES	
1,100.00	1,100.00	1,099.41	1,099.41	2.33	2.33	81.31	-40.43	-0.61	40.37	35.71	4.66	8.657	
1,200.00	1,199.93	1,198.18	1,198.12	2.53	2.50	83.37	-43.35	1.15	42.78	37.74	5.04	8.494 SF	
1,300.00	1,299.68	1,296.77	1,296.46	2.74	2.69	86.83	-49.16	4.67	47.73	42.30	5.43	8.790	
1,400.00	1,399.13	1,395.06	1,394.23	2.97	2.90	90.82	-57.83	9.91	55.40	49.55	5.85	9.464	
1,500.00	1,498.15	1,492.94	1,491.18	3.22	3.13	94.62	-69.30	16.86	65.93	59.61	6.32	10.426	
1,600.00	1,596.63	1,590.31	1,587.11	3.51	3.39	97.89	-83.53	25.47	79.35	72.50	6.85	11.578	
1,700.00	1,694.44	1,687.44	1,682.21	3.84	3.70	100.58	-100.43	35.70	95.60	88.14	7.46	12.818	
1,800.00	1,791.46	1,785.64	1,778.14	4.23	4.05	103.69	-118.38	46.57	113.41	105.26	8.15	13.916	
1,819.92	1,810.68	1,805.15	1,797.20	4.31	4.12	104.39	-121.95	48.73	117.11	108.81	8.30	14.115	
1,900.00	1,887.89	1,883.58	1,873.82	4.67	4.41	107.14	-136.29	57.41	132.20	123.29	8.91	14.836	
2,000.00	1,984.30	1,981.51	1,969.48	5.13	4.79	109.81	-154.19	68.25	151.37	141.66	9.71	15.593	
2,100.00	2,080.71	2,079.44	2,065.15	5.61	5.19	111.87	-172.10	79.09	170.79	160.26	10.53	16.220	
2,200.00	2,177.12	2,177.37	2,160.82	6.11	5.60	113.51	-190.00	89.93	190.37	179.00	11.37	16.742	
2,300.00	2,273.53	2,275.31	2,256.49	6.62	6.01	114.85	-207.91	100.77	210.08	197.85	12.23	17.181	
2,400.00	2,369.94	2,373.24	2,352.16	7.13	6.43	115.95	-225.81	111.60	229.88	216.78	13.10	17.554	
2,500.00	2,466.35	2,471.17	2,447.83	7.66	6.86	116.89	-243.72	122.44	249.75	235.78	13.97	17.873	
2,600.00	2,562.76	2,569.10	2,543.50	8.19	7.29	117.68	-261.63	133.28	269.67	254.82	14.86	18.149	
2,700.00	2,659.17	2,667.03	2,639.17	8.72	7.73	118.36	-279.53	144.12	289.64	273.89	15.75	18.390	
2,800.00	2,755.58	2,764.96	2,734.84	9.26	8.17	118.96	-297.44	154.96	309.64	292.99	16.65	18.601	
2,900.00	2,851.99	2,862.90	2,830.50	9.80	8.61	119.48	-315.34	165.80	329.67	312.12	17.55	18.788	
3,000.00	2,948.40	2,960.83	2,926.17	10.35	9.05	119.95	-333.25	176.64	349.72	331.27	18.45	18.955	
3,100.00	3,044.81	3,058.76	3,021.84	10.89	9.50	120.36	-351.15	187.48	369.80	350.44	19.36	19.104	
3,200.00	3,141.22	3,156.69	3,117.51	11.44	9.94	120.73	-369.06	198.31	389.88	369.62	20.27	19.238	
3,300.00	3,237.63	3,254.62	3,213.18	11.99	10.39	121.07	-386.96	209.15	409.99	388.81	21.18	19.360	
3,400.00	3,334.04	3,352.55	3,308.85	12.54	10.84	121.37	-404.87	219.99	430.10	408.01	22.09	19.470	
3,500.00	3,430.46	3,450.49	3,404.52	13.09	11.29	121.65	-422.77	230.83	450.23	427.23	23.00	19.572	
3,600.00	3,526.87	3,548.42	3,500.19	13.65	11.74	121.90	-440.68	241.67	470.36	446.44	23.92	19.664	
3,700.00	3,623.28	3,646.35	3,595.86	14.20	12.20	122.13	-458.58	252.51	490.51	465.67	24.84	19.750	
3,800.00	3,719.69	3,744.28	3,691.52	14.76	12.65	122.35	-476.49	263.35	510.66	484.90	25.75	19.829	
3,900.00	3,816.10	3,842.21	3,787.19	15.32	13.11	122.54	-494.40	274.19	530.81	504.14	26.67	19.902	
4,000.00	3,912.51	3,940.14	3,882.86	15.87	13.56	122.73	-512.30	285.03	550.98	523.39	27.59	19.970	
4,100.00	4,008.92	4,038.08	3,978.53	16.43	14.02	122.90	-530.21	295.86	571.14	542.64	28.51	20.034	
4,200.00	4,105.33	4,136.01	4,074.20	16.99	14.47	123.06	-548.11	306.70	591.32	561.89	29.43	20.093	
4,300.00	4,201.74	4,233.94	4,169.87	17.55	14.93	123.20	-566.02	317.54	611.49	581.14	30.35	20.149	
4,400.00	4,298.15	4,331.87	4,265.54	18.11	15.39	123.34	-583.92	328.38	631.67	600.40	31.27	20.202	
4,500.00	4,394.56	4,429.80	4,361.21	18.67	15.84	123.47	-601.83	339.22	651.85	619.67	32.19	20.251	
4,600.00	4,490.97	4,527.73	4,456.88	19.23	16.30	123.59	-619.73	350.06	672.04	638.93	33.11	20.298	
4,700.00	4,587.38	4,625.67	4,552.54	19.79	16.76	123.71	-637.64	360.90	692.23	658.20	34.03	20.343	
4,800.00	4,683.79	4,723.60	4,648.21	20.35	17.22	123.82	-655.54	371.74	712.42	677.47	34.95	20.385	
4,900.00	4,780.20	4,821.53	4,743.88	20.91	17.68	123.92	-673.45	382.58	732.61	696.74	35.87	20.425	

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 2-12
<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 2-12	<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 2-12	<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 21-12 - P_ENCORE 21-12 - 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	4,876.61	4,919.46	4,839.55	21.47	18.13	124.02	-691.35	393.41	752.81	716.02	36.79	20.463	
5,100.00	4,973.02	5,017.39	4,935.22	22.04	18.59	124.11	-709.26	404.25	773.01	735.29	37.71	20.498	
5,200.00	5,069.43	5,115.33	5,030.89	22.60	19.05	124.20	-727.16	415.09	793.21	754.56	38.64	20.527	
5,275.60	5,142.32	5,189.36	5,103.21	23.02	19.40	124.26	-740.70	423.29	808.48	769.13	39.34	20.549	
5,300.00	5,165.87	5,213.27	5,126.57	23.14	19.51	124.36	-745.07	425.93	813.35	773.78	39.57	20.556	
5,400.00	5,262.93	5,311.48	5,222.51	23.54	19.97	124.60	-763.03	436.80	832.11	791.71	40.41	20.594	
5,500.00	5,360.77	5,412.39	5,321.14	23.89	20.41	124.62	-781.30	447.86	848.89	807.69	41.20	20.604	
5,600.00	5,459.27	5,518.74	5,425.67	24.20	20.74	124.59	-797.99	457.97	863.06	821.21	41.85	20.624	
5,700.00	5,558.32	5,625.75	5,531.52	24.46	21.03	124.57	-811.43	466.10	874.41	832.01	42.41	20.620	
5,800.00	5,657.78	5,733.28	5,638.40	24.68	21.27	124.55	-821.51	472.20	882.91	840.03	42.88	20.592	
5,900.00	5,757.54	5,841.19	5,746.02	24.86	21.47	124.55	-828.18	476.24	888.53	845.28	43.26	20.542	
6,000.00	5,857.48	5,949.33	5,854.08	24.99	21.63	124.55	-831.37	478.17	891.27	847.72	43.55	20.467	
6,045.52	5,903.00	5,998.25	5,903.00	25.04	21.70	-135.28	-831.67	478.36	891.55	847.89	43.66	20.422	
6,100.00	5,957.48	6,052.73	5,957.48	25.09	21.76	-135.28	-831.67	478.36	891.55	847.77	43.78	20.364	
6,200.00	6,057.48	6,152.73	6,057.48	25.20	21.87	-135.28	-831.67	478.36	891.55	847.53	44.02	20.255	
6,300.00	6,157.48	6,252.73	6,157.48	25.32	21.98	-135.28	-831.67	478.36	891.55	847.30	44.25	20.146	
6,400.00	6,257.48	6,352.73	6,257.48	25.43	22.10	-135.28	-831.67	478.36	891.55	847.05	44.50	20.037	
6,500.00	6,357.48	6,452.73	6,357.48	25.54	22.21	-135.28	-831.67	478.36	891.55	846.81	44.74	19.927	
6,600.00	6,457.48	6,552.73	6,457.48	25.66	22.33	-135.28	-831.67	478.36	891.55	846.56	44.99	19.817	
6,700.00	6,557.48	6,652.73	6,557.48	25.78	22.45	-135.28	-831.67	478.36	891.55	846.31	45.24	19.707	
6,800.00	6,657.48	6,752.73	6,657.48	25.90	22.57	-135.28	-831.67	478.36	891.55	846.06	45.49	19.597	
6,900.00	6,757.48	6,852.73	6,757.48	26.02	22.70	-135.28	-831.67	478.36	891.55	845.80	45.75	19.487	
7,000.00	6,857.48	6,952.73	6,857.48	26.14	22.82	-135.28	-831.67	478.36	891.55	845.54	46.01	19.377	
7,100.00	6,957.48	7,052.73	6,957.48	26.26	22.95	-135.28	-831.67	478.36	891.55	845.28	46.27	19.267	
7,200.00	7,057.48	7,152.73	7,057.48	26.39	23.08	-135.28	-831.67	478.36	891.55	845.01	46.54	19.157	
7,300.00	7,157.48	7,252.73	7,157.48	26.51	23.20	-135.28	-831.67	478.36	891.55	844.74	46.81	19.047	
7,400.00	7,257.48	7,352.73	7,257.48	26.64	23.33	-135.28	-831.67	478.36	891.55	844.47	47.08	18.937	
7,500.00	7,357.48	7,452.73	7,357.48	26.77	23.47	-135.28	-831.67	478.36	891.55	844.20	47.35	18.828	
7,600.00	7,457.48	7,552.73	7,457.48	26.90	23.60	-135.28	-831.67	478.36	891.55	843.92	47.63	18.718	
7,700.00	7,557.48	7,652.73	7,557.48	27.03	23.74	-135.28	-831.67	478.36	891.55	843.64	47.91	18.609	
7,800.00	7,657.48	7,752.73	7,657.48	27.16	23.87	-135.28	-831.67	478.36	891.55	843.36	48.19	18.500	
7,900.00	7,757.48	7,852.73	7,757.48	27.30	24.01	-135.28	-831.67	478.36	891.55	843.07	48.48	18.392	
8,000.00	7,857.48	7,952.73	7,857.48	27.43	24.15	-135.28	-831.67	478.36	891.55	842.79	48.76	18.284	
8,012.52	7,870.00	7,965.25	7,870.00	27.45	24.16	-135.28	-831.67	478.36	891.55	842.75	48.80	18.270	

<b>Company:</b>	US ROCKIES REGION PLANNING	<b>Local Co-ordinate Reference:</b>	Well P_ENCORE 2-12
<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 2-12	<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 2-12	<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 LARIMER_ENCORE 3-12 PAD - P_ENCORE 3-12 - P_ENCORE 3-12 - PLAN #1 3-22-10 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
0.00	0.00	0.00	0.00	0.00	0.00	-179.20	-20.03	-0.28	20.03				
100.00	100.00	100.00	100.00	0.10	0.10	-179.20	-20.03	-0.28	20.03	19.84	0.19	104.864	
200.00	200.00	200.00	200.00	0.32	0.32	-179.20	-20.03	-0.28	20.03	19.39	0.64	31.275	
300.00	300.00	300.00	300.00	0.55	0.55	-179.20	-20.03	-0.28	20.03	18.94	1.09	18.378	
400.00	400.00	400.00	400.00	0.77	0.77	-179.20	-20.03	-0.28	20.03	18.49	1.54	13.012	
500.00	500.00	500.00	500.00	0.99	0.99	-179.20	-20.03	-0.28	20.03	18.05	1.99	10.072	
600.00	600.00	600.00	600.00	1.22	1.22	-179.20	-20.03	-0.28	20.03	17.60	2.44	8.215	
700.00	700.00	700.00	700.00	1.44	1.44	-179.20	-20.03	-0.28	20.03	17.15	2.89	6.937	
800.00	800.00	800.00	800.00	1.67	1.67	-179.20	-20.03	-0.28	20.03	16.70	3.34	6.002	
900.00	900.00	900.00	900.00	1.89	1.89	-179.20	-20.03	-0.28	20.03	16.25	3.79	5.290	
1,000.00	1,000.00	1,000.00	1,000.00	2.12	2.12	-179.20	-20.03	-0.28	20.03	15.80	4.24	4.729	
1,050.00	1,050.00	1,050.00	1,050.00	2.23	2.23	-179.20	-20.03	-0.28	20.03	15.57	4.46	4.490 CC	
1,100.00	1,100.00	1,099.87	1,099.87	2.33	2.33	83.02	-20.17	-0.69	20.13	15.46	4.67	4.311 ES, SF	
1,200.00	1,199.93	1,199.26	1,199.20	2.53	2.53	100.51	-21.29	-3.96	22.05	16.99	5.06	4.360	
1,300.00	1,299.68	1,297.65	1,297.34	2.74	2.73	123.81	-23.50	-10.40	30.29	24.84	5.45	5.558	
1,400.00	1,399.13	1,395.34	1,394.57	2.97	2.94	139.72	-26.58	-19.35	46.60	40.76	5.84	7.984	
1,500.00	1,498.15	1,492.66	1,491.41	3.22	3.17	148.67	-29.72	-28.51	67.79	61.57	6.22	10.896	
1,600.00	1,596.63	1,589.14	1,587.41	3.51	3.40	154.19	-32.83	-37.59	92.91	86.30	6.61	14.059	
1,700.00	1,694.44	1,684.66	1,682.45	3.84	3.64	157.91	-35.92	-46.58	121.64	114.65	7.00	17.389	
1,800.00	1,791.46	1,779.10	1,776.42	4.23	3.89	160.57	-38.97	-55.47	153.84	146.46	7.38	20.838	
1,819.92	1,810.68	1,797.77	1,795.00	4.31	3.93	161.02	-39.57	-57.22	160.66	153.20	7.46	21.537	
1,900.00	1,887.89	1,872.74	1,869.61	4.67	4.13	162.66	-41.99	-64.28	188.40	180.59	7.82	24.100	
2,000.00	1,984.30	1,966.37	1,962.77	5.13	4.38	164.13	-45.01	-73.09	223.19	214.92	8.27	26.978	
2,100.00	2,080.71	2,059.99	2,055.93	5.61	4.63	165.21	-48.04	-81.90	258.07	249.33	8.74	29.539	
2,200.00	2,177.12	2,153.62	2,149.08	6.11	4.89	166.03	-51.06	-90.71	293.01	283.80	9.21	31.826	
2,300.00	2,273.53	2,247.24	2,242.24	6.62	5.14	166.68	-54.08	-99.52	327.99	318.31	9.68	33.876	
2,400.00	2,369.94	2,340.86	2,335.40	7.13	5.40	167.20	-57.10	-108.33	363.01	352.85	10.16	35.721	
2,500.00	2,466.35	2,434.49	2,428.56	7.66	5.66	167.63	-60.13	-117.14	398.04	387.40	10.65	37.388	
2,600.00	2,562.76	2,528.11	2,521.72	8.19	5.93	167.99	-63.15	-125.95	433.09	421.96	11.13	38.899	
2,700.00	2,659.17	2,621.73	2,614.88	8.72	6.19	168.30	-66.17	-134.76	468.16	456.53	11.62	40.275	
2,800.00	2,755.58	2,715.36	2,708.04	9.26	6.46	168.56	-69.19	-143.57	503.23	491.12	12.12	41.531	
2,900.00	2,851.99	2,808.98	2,801.20	9.80	6.72	168.79	-72.22	-152.38	538.32	525.70	12.61	42.682	
3,000.00	2,948.40	2,902.61	2,894.36	10.35	6.99	169.00	-75.24	-161.19	573.40	560.30	13.11	43.740	
3,100.00	3,044.81	2,996.23	2,987.52	10.89	7.26	169.17	-78.26	-170.00	608.50	594.89	13.61	44.715	
3,200.00	3,141.22	3,089.85	3,080.68	11.44	7.52	169.33	-81.28	-178.81	643.60	629.49	14.11	45.616	
3,300.00	3,237.63	3,183.48	3,173.84	11.99	7.79	169.48	-84.31	-187.62	678.70	664.09	14.61	46.452	
3,400.00	3,334.04	3,277.10	3,267.00	12.54	8.06	169.60	-87.33	-196.43	713.81	698.69	15.11	47.228	
3,500.00	3,430.46	3,370.72	3,360.15	13.09	8.33	169.72	-90.35	-205.24	748.92	733.30	15.62	47.951	
3,600.00	3,526.87	3,464.35	3,453.31	13.65	8.60	169.83	-93.37	-214.05	784.03	767.91	16.12	48.626	
3,700.00	3,623.28	3,557.97	3,546.47	14.20	8.88	169.92	-96.40	-222.86	819.14	802.51	16.63	49.257	
3,800.00	3,719.69	3,651.59	3,639.63	14.76	9.15	170.01	-99.42	-231.67	854.26	837.12	17.14	49.849	
3,900.00	3,816.10	3,745.22	3,732.79	15.32	9.42	170.09	-102.44	-240.48	889.38	871.73	17.64	50.404	
4,000.00	3,912.51	3,838.84	3,825.95	15.87	9.69	170.17	-105.47	-249.29	924.50	906.34	18.15	50.926	
4,100.00	4,008.92	3,932.47	3,919.11	16.43	9.96	170.24	-108.49	-258.10	959.62	940.95	18.66	51.419	
4,200.00	4,105.33	4,026.09	4,012.27	16.99	10.24	170.31	-111.51	-266.91	994.74	975.57	19.17	51.883	
4,300.00	4,201.74	4,119.71	4,105.43	17.55	10.51	170.37	-114.53	-275.72	1,029.86	1,010.18	19.68	52.322	
4,400.00	4,298.15	4,213.34	4,198.59	18.11	10.78	170.42	-117.56	-284.53	1,064.98	1,044.79	20.19	52.738	
4,500.00	4,394.56	4,306.96	4,291.75	18.67	11.06	170.48	-120.58	-293.34	1,100.11	1,079.40	20.71	53.132	
4,600.00	4,490.97	4,400.58	4,384.91	19.23	11.33	170.53	-123.60	-302.15	1,135.23	1,114.02	21.22	53.506	
4,700.00	4,587.38	4,494.21	4,478.07	19.79	11.60	170.57	-126.62	-310.96	1,170.36	1,148.63	21.73	53.861	
4,800.00	4,683.79	4,587.83	4,571.22	20.35	11.88	170.62	-129.65	-319.77	1,205.49	1,183.24	22.24	54.199	
4,900.00	4,780.20	4,681.46	4,664.38	20.91	12.15	170.66	-132.67	-328.58	1,240.61	1,217.86	22.75	54.521	

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 2-12
<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 2-12	<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 2-12	<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	4,876.61	4,775.08	4,757.54	21.47	12.42	170.70	-135.69	-337.40	1,275.74	1,252.47	23.27	54.829	
5,100.00	4,973.02	4,868.70	4,850.70	22.04	12.70	170.73	-138.71	-346.21	1,310.87	1,287.09	23.78	55.122	
5,200.00	5,069.43	4,962.33	4,943.86	22.60	12.97	170.77	-141.74	-355.02	1,346.00	1,321.70	24.30	55.402	
5,275.60	5,142.32	5,033.11	5,014.29	23.02	13.18	170.80	-144.02	-361.68	1,372.55	1,347.87	24.68	55.606	
5,300.00	5,165.87	5,055.99	5,037.06	23.14	13.25	170.83	-144.76	-363.83	1,381.03	1,356.19	24.84	55.604	
5,400.00	5,262.93	5,150.48	5,131.08	23.54	13.53	170.96	-147.81	-372.72	1,413.75	1,388.32	25.42	55.612	
5,500.00	5,360.77	5,246.04	5,226.17	23.89	13.81	171.04	-150.90	-381.71	1,443.18	1,417.21	25.98	55.560	
5,600.00	5,459.27	5,342.56	5,322.21	24.20	14.09	171.10	-154.01	-390.80	1,469.31	1,442.82	26.49	55.457	
5,700.00	5,558.32	5,439.91	5,419.08	24.46	14.38	171.12	-157.16	-399.96	1,492.10	1,465.12	26.98	55.307	
5,800.00	5,657.78	5,537.99	5,516.67	24.68	14.66	171.11	-160.32	-409.19	1,511.51	1,484.09	27.43	55.114	
5,900.00	5,757.54	5,636.66	5,614.85	24.86	14.95	171.07	-163.51	-418.47	1,527.54	1,499.71	27.83	54.882	
6,000.00	5,857.48	5,831.48	5,809.19	24.99	15.36	170.96	-167.77	-430.89	1,537.23	1,508.90	28.34	54.252	
6,045.52	5,903.00	5,923.27	5,900.96	25.04	15.51	-88.89	-168.29	-432.40	1,538.34	1,509.79	28.54	53.896	
6,100.00	5,957.48	5,979.79	5,957.48	25.09	15.60	-88.89	-168.29	-432.40	1,538.34	1,509.60	28.74	53.525	
6,200.00	6,057.48	6,079.79	6,057.48	25.20	15.77	-88.89	-168.29	-432.40	1,538.34	1,509.24	29.10	52.867	
6,300.00	6,157.48	6,179.79	6,157.48	25.32	15.94	-88.89	-168.29	-432.40	1,538.34	1,508.88	29.46	52.222	
6,400.00	6,257.48	6,279.79	6,257.48	25.43	16.11	-88.89	-168.29	-432.40	1,538.34	1,508.52	29.82	51.589	
6,500.00	6,357.48	6,379.79	6,357.48	25.54	16.28	-88.89	-168.29	-432.40	1,538.34	1,508.15	30.18	50.966	
6,600.00	6,457.48	6,479.79	6,457.48	25.66	16.45	-88.89	-168.29	-432.40	1,538.34	1,507.79	30.55	50.355	
6,700.00	6,557.48	6,579.79	6,557.48	25.78	16.63	-88.89	-168.29	-432.40	1,538.34	1,507.42	30.92	49.754	
6,800.00	6,657.48	6,679.79	6,657.48	25.90	16.80	-88.89	-168.29	-432.40	1,538.34	1,507.05	31.29	49.165	
6,900.00	6,757.48	6,779.79	6,757.48	26.02	16.98	-88.89	-168.29	-432.40	1,538.34	1,506.67	31.66	48.586	
7,000.00	6,857.48	6,879.79	6,857.48	26.14	17.16	-88.89	-168.29	-432.40	1,538.34	1,506.30	32.04	48.018	
7,100.00	6,957.48	6,979.79	6,957.48	26.26	17.33	-88.89	-168.29	-432.40	1,538.34	1,505.92	32.41	47.460	
7,200.00	7,057.48	7,079.79	7,057.48	26.39	17.51	-88.89	-168.29	-432.40	1,538.34	1,505.55	32.79	46.912	
7,300.00	7,157.48	7,179.79	7,157.48	26.51	17.70	-88.89	-168.29	-432.40	1,538.34	1,505.16	33.17	46.375	
7,400.00	7,257.48	7,279.79	7,257.48	26.64	17.88	-88.89	-168.29	-432.40	1,538.34	1,504.78	33.55	45.847	
7,500.00	7,357.48	7,379.79	7,357.48	26.77	18.06	-88.89	-168.29	-432.40	1,538.34	1,504.40	33.94	45.329	
7,600.00	7,457.48	7,479.79	7,457.48	26.90	18.24	-88.89	-168.29	-432.40	1,538.34	1,504.01	34.32	44.820	
7,700.00	7,557.48	7,579.79	7,557.48	27.03	18.43	-88.89	-168.29	-432.40	1,538.34	1,503.63	34.71	44.321	
7,800.00	7,657.48	7,679.79	7,657.48	27.16	18.61	-88.89	-168.29	-432.40	1,538.34	1,503.24	35.10	43.831	
7,900.00	7,757.48	7,779.79	7,757.48	27.30	18.80	-88.89	-168.29	-432.40	1,538.34	1,502.85	35.49	43.350	
8,000.00	7,857.48	7,879.79	7,857.48	27.43	18.99	-88.89	-168.29	-432.40	1,538.34	1,502.46	35.88	42.878	
8,012.52	7,870.00	7,892.31	7,870.00	27.45	19.01	-88.89	-168.29	-432.40	1,538.34	1,502.41	35.93	42.819	



<b>Company:</b>	US ROCKIES REGION PLANNING	<b>Local Co-ordinate Reference:</b>	Well P_ENCORE 2-12
<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 2-12	<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 2-12	<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	180.00	-9.84	0.00	9.84				
100.00	100.00	100.00	100.00	0.10	0.10	180.00	-9.84	0.00	9.84	9.65	0.19	51.484	
200.00	200.00	200.00	200.00	0.32	0.32	180.00	-9.84	0.00	9.84	9.20	0.64	15.355	
300.00	300.00	300.00	300.00	0.55	0.55	180.00	-9.84	0.00	9.84	8.75	1.09	9.023	
400.00	400.00	400.00	400.00	0.77	0.77	180.00	-9.84	0.00	9.84	8.30	1.54	6.389	
500.00	500.00	500.00	500.00	0.99	0.99	180.00	-9.84	0.00	9.84	7.85	1.99	4.945	
600.00	600.00	600.00	600.00	1.22	1.22	180.00	-9.84	0.00	9.84	7.40	2.44	4.033	
700.00	700.00	700.00	700.00	1.44	1.44	180.00	-9.84	0.00	9.84	6.95	2.89	3.406	
800.00	800.00	800.00	800.00	1.67	1.67	180.00	-9.84	0.00	9.84	6.50	3.34	2.947	
900.00	900.00	900.00	900.00	1.89	1.89	180.00	-9.84	0.00	9.84	6.05	3.79	2.597	
1,000.00	1,000.00	1,000.00	1,000.00	2.12	2.12	180.00	-9.84	0.00	9.84	5.60	4.24	2.322	
1,050.00	1,050.00	1,050.00	1,050.00	2.23	2.23	180.00	-9.84	0.00	9.84	5.37	4.46	2.205	
1,089.05	1,089.05	1,089.03	1,089.03	2.31	2.31	82.92	-9.85	-0.27	9.82	5.20	4.62	2.124 CC	
1,100.00	1,100.00	1,099.97	1,099.97	2.33	2.34	84.88	-9.87	-0.43	9.83	5.16	4.67	2.104 ES, SF	
1,200.00	1,199.93	1,199.56	1,199.49	2.53	2.53	119.20	-10.11	-3.89	12.21	7.14	5.06	2.411	
1,300.00	1,299.68	1,298.08	1,297.77	2.74	2.74	147.52	-10.58	-10.71	23.20	17.75	5.45	4.258	
1,400.00	1,399.13	1,394.87	1,394.03	2.97	2.96	159.19	-11.28	-20.68	42.68	36.85	5.83	7.321	
1,500.00	1,498.15	1,489.28	1,487.57	3.22	3.20	164.29	-12.18	-33.53	69.32	63.12	6.21	11.171	
1,600.00	1,596.63	1,580.78	1,577.74	3.51	3.47	166.89	-13.25	-48.91	102.55	95.97	6.58	15.593	
1,700.00	1,694.44	1,668.85	1,664.05	3.84	3.75	168.35	-14.47	-66.42	141.99	135.05	6.94	20.457	
1,800.00	1,791.46	1,753.11	1,746.08	4.23	4.07	169.23	-15.82	-85.64	187.31	180.02	7.30	25.665	
1,819.92	1,810.68	1,769.41	1,761.88	4.31	4.13	169.36	-16.09	-89.64	197.02	189.65	7.37	26.737	
1,900.00	1,887.89	1,833.77	1,824.03	4.67	4.40	169.90	-17.26	-106.29	237.25	229.55	7.70	30.801	
2,000.00	1,984.30	1,911.80	1,898.86	5.13	4.76	170.32	-18.80	-128.34	289.63	281.51	8.12	35.651	
2,100.00	2,080.71	1,987.23	1,970.60	5.61	5.15	170.57	-20.42	-151.58	344.27	335.72	8.55	40.268	
2,200.00	2,177.12	2,060.11	2,039.31	6.11	5.57	170.72	-22.11	-175.82	401.05	392.08	8.98	44.671	
2,300.00	2,273.53	2,130.47	2,105.04	6.62	6.01	170.80	-23.86	-200.86	459.87	450.46	9.41	48.882	
2,400.00	2,369.94	2,200.00	2,169.36	7.13	6.48	170.84	-25.70	-227.18	520.61	510.77	9.84	52.900	
2,500.00	2,466.35	2,263.83	2,227.84	7.66	6.95	170.86	-27.48	-252.71	583.17	572.90	10.27	56.789	
2,600.00	2,562.76	2,335.25	2,292.72	8.19	7.50	170.85	-29.56	-282.49	647.17	636.45	10.72	60.373	
2,700.00	2,659.17	2,411.97	2,362.37	8.72	8.11	170.85	-31.80	-314.59	711.31	700.12	11.19	63.581	
2,800.00	2,755.58	2,488.69	2,432.01	9.26	8.73	170.84	-34.04	-346.70	775.45	763.79	11.66	66.498	
2,900.00	2,851.99	2,565.41	2,501.66	9.80	9.36	170.84	-36.28	-378.80	839.59	827.45	12.14	69.157	
3,000.00	2,948.40	2,642.13	2,571.30	10.35	10.00	170.84	-38.52	-410.90	903.74	891.11	12.62	71.592	
3,100.00	3,044.81	2,718.85	2,640.95	10.89	10.65	170.84	-40.76	-443.00	967.88	954.77	13.11	73.827	
3,200.00	3,141.22	2,795.57	2,710.59	11.44	11.29	170.83	-43.01	-475.10	1,032.02	1,018.42	13.60	75.883	
3,300.00	3,237.63	2,872.29	2,780.23	11.99	11.95	170.83	-45.25	-507.20	1,096.16	1,082.06	14.09	77.776	
3,400.00	3,334.04	2,949.01	2,849.88	12.54	12.61	170.83	-47.49	-539.31	1,160.30	1,145.71	14.59	79.527	
3,500.00	3,430.46	3,025.73	2,919.52	13.09	13.27	170.83	-49.73	-571.41	1,224.44	1,209.35	15.09	81.150	
3,600.00	3,526.87	3,102.45	2,989.17	13.65	13.93	170.83	-51.97	-603.51	1,288.58	1,272.99	15.59	82.658	
3,700.00	3,623.28	3,179.17	3,058.81	14.20	14.59	170.82	-54.21	-635.61	1,352.72	1,336.63	16.09	84.059	
3,800.00	3,719.69	3,255.89	3,128.46	14.76	15.26	170.82	-56.45	-667.71	1,416.86	1,400.27	16.60	85.366	
3,900.00	3,816.10	3,332.61	3,198.10	15.32	15.93	170.82	-58.69	-699.82	1,481.01	1,463.90	17.10	86.587	
4,000.00	3,912.51	3,409.33	3,267.75	15.87	16.60	170.82	-60.93	-731.92	1,545.15	1,527.53	17.61	87.731	
4,100.00	4,008.92	3,486.05	3,337.39	16.43	17.27	170.82	-63.18	-764.02	1,609.29	1,591.17	18.12	88.803	
4,200.00	4,105.33	3,562.77	3,407.04	16.99	17.94	170.82	-65.42	-796.12	1,673.43	1,654.80	18.63	89.810	
4,300.00	4,201.74	3,639.49	3,476.68	17.55	18.62	170.82	-67.66	-828.22	1,737.57	1,718.42	19.15	90.757	
4,400.00	4,298.15	3,716.21	3,546.32	18.11	19.29	170.82	-69.90	-860.33	1,801.71	1,782.05	19.66	91.650	
4,500.00	4,394.56	3,792.93	3,615.97	18.67	19.97	170.82	-72.14	-892.43	1,865.85	1,845.68	20.17	92.493	
4,600.00	4,490.97	3,869.65	3,685.61	19.23	20.64	170.82	-74.38	-924.53	1,929.99	1,909.30	20.69	93.288	
4,700.00	4,587.38	3,946.37	3,755.26	19.79	21.32	170.82	-76.62	-956.63	1,994.13	1,972.93	21.20	94.042	
4,800.00	4,683.79	4,023.09	3,824.90	20.35	22.00	170.82	-78.86	-988.73	2,058.27	2,036.55	21.72	94.756	

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 2-12
<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 2-12	<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 2-12	<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
4,900.00	4,780.20	4,099.81	3,894.55	20.91	22.67	170.82	-81.11	-1,020.83	2,122.42	2,100.18	22.24	95.434	
5,000.00	4,876.61	4,176.53	3,964.19	21.47	23.35	170.81	-83.35	-1,052.94	2,186.56	2,163.80	22.76	96.077	
5,100.00	4,973.02	4,253.25	4,033.84	22.04	24.03	170.81	-85.59	-1,085.04	2,250.70	2,227.42	23.28	96.689	
5,200.00	5,069.43	4,329.97	4,103.48	22.60	24.71	170.81	-87.83	-1,117.14	2,314.84	2,291.04	23.80	97.272	
5,275.60	5,142.32	4,387.97	4,156.13	23.02	25.22	170.81	-89.52	-1,141.41	2,363.33	2,339.14	24.19	97.694	
5,300.00	5,165.87	4,406.75	4,173.19	23.14	25.39	170.88	-90.07	-1,149.27	2,378.90	2,354.53	24.37	97.603	
5,400.00	5,262.93	4,485.09	4,244.30	23.54	26.08	171.11	-92.36	-1,182.05	2,441.05	2,415.97	25.09	97.311	
5,500.00	5,360.77	4,565.51	4,317.30	23.89	26.80	171.31	-94.71	-1,215.70	2,500.46	2,474.69	25.78	97.004	
5,600.00	5,459.27	4,647.93	4,392.12	24.20	27.53	171.48	-97.12	-1,250.19	2,557.07	2,530.62	26.45	96.690	
5,700.00	5,558.32	4,732.24	4,468.66	24.46	28.28	171.61	-99.58	-1,285.46	2,610.79	2,583.70	27.09	96.372	
5,800.00	5,657.78	4,818.35	4,546.82	24.68	29.04	171.72	-102.10	-1,321.49	2,661.57	2,633.86	27.71	96.056	
5,900.00	5,757.54	4,906.14	4,626.52	24.86	29.82	171.80	-104.66	-1,358.23	2,709.35	2,681.06	28.30	95.746	
6,000.00	5,857.48	4,995.50	4,707.64	24.99	30.62	171.86	-107.27	-1,395.62	2,754.08	2,725.22	28.86	95.442	
6,045.52	5,903.00	5,036.68	4,745.02	25.04	30.98	-87.96	-108.47	-1,412.85	2,773.40	2,744.30	29.10	95.297	
6,100.00	5,957.48	5,086.13	4,789.91	25.09	31.42	-88.01	-109.92	-1,433.54	2,796.15	2,766.79	29.36	95.230	
6,200.00	6,057.48	5,176.91	4,872.32	25.20	32.23	-88.10	-112.57	-1,471.53	2,837.91	2,808.07	29.84	95.101	
6,300.00	6,157.48	6,504.19	6,157.48	25.32	37.38	-88.68	-132.16	-1,752.16	2,858.56	2,825.49	33.07	86.441	
6,400.00	6,257.48	6,604.19	6,257.48	25.43	37.46	-88.68	-132.16	-1,752.16	2,858.56	2,825.17	33.39	85.613	
6,500.00	6,357.48	6,704.19	6,357.48	25.54	37.53	-88.68	-132.16	-1,752.16	2,858.56	2,824.85	33.71	84.792	
6,600.00	6,457.48	6,804.19	6,457.48	25.66	37.62	-88.68	-132.16	-1,752.16	2,858.56	2,824.52	34.04	83.981	
6,700.00	6,557.48	6,904.19	6,557.48	25.78	37.70	-88.68	-132.16	-1,752.16	2,858.56	2,824.20	34.37	83.178	
6,800.00	6,657.48	7,004.19	6,657.48	25.90	37.78	-88.68	-132.16	-1,752.16	2,858.56	2,823.86	34.70	82.384	
6,900.00	6,757.48	7,104.19	6,757.48	26.02	37.86	-88.68	-132.16	-1,752.16	2,858.56	2,823.53	35.03	81.599	
7,000.00	6,857.48	7,204.19	6,857.48	26.14	37.95	-88.68	-132.16	-1,752.16	2,858.56	2,823.19	35.37	80.822	
7,100.00	6,957.48	7,304.19	6,957.48	26.26	38.04	-88.68	-132.16	-1,752.16	2,858.56	2,822.86	35.71	80.055	
7,200.00	7,057.48	7,404.19	7,057.48	26.39	38.12	-88.68	-132.16	-1,752.16	2,858.56	2,822.51	36.05	79.298	
7,300.00	7,157.48	7,504.19	7,157.48	26.51	38.21	-88.68	-132.16	-1,752.16	2,858.56	2,822.17	36.39	78.549	
7,400.00	7,257.48	7,604.19	7,257.48	26.64	38.30	-88.68	-132.16	-1,752.16	2,858.56	2,821.82	36.74	77.810	
7,500.00	7,357.48	7,704.19	7,357.48	26.77	38.39	-88.68	-132.16	-1,752.16	2,858.56	2,821.48	37.09	77.079	
7,600.00	7,457.48	7,804.19	7,457.48	26.90	38.48	-88.68	-132.16	-1,752.16	2,858.56	2,821.13	37.44	76.358	
7,700.00	7,557.48	7,904.19	7,557.48	27.03	38.58	-88.68	-132.16	-1,752.16	2,858.56	2,820.77	37.79	75.647	
7,800.00	7,657.48	8,004.19	7,657.48	27.16	38.67	-88.68	-132.16	-1,752.16	2,858.56	2,820.42	38.14	74.944	
7,900.00	7,757.48	8,104.19	7,757.48	27.30	38.77	-88.68	-132.16	-1,752.16	2,858.56	2,820.06	38.50	74.250	
8,000.00	7,857.48	8,204.19	7,857.48	27.43	38.86	-88.68	-132.16	-1,752.16	2,858.56	2,819.71	38.86	73.566	
8,012.52	7,870.00	8,216.71	7,870.00	27.45	38.87	-88.68	-132.16	-1,752.16	2,858.56	2,819.66	38.90	73.481	



<b>Company:</b>	US ROCKIES REGION PLANNING	<b>Local Co-ordinate Reference:</b>	Well P_ENCORE 2-12
<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 2-12	<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 2-12	<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	-178.72	-49.90	-1.11	49.91				
100.00	100.00	100.00	100.00	0.10	0.10	-178.72	-49.90	-1.11	49.91	49.72	0.19	261.256	
200.00	200.00	200.00	200.00	0.32	0.32	-178.72	-49.90	-1.11	49.91	49.27	0.64	77.918	
300.00	300.00	300.00	300.00	0.55	0.55	-178.72	-49.90	-1.11	49.91	48.82	1.09	45.787 CC, ES	
400.00	400.00	398.86	398.84	0.77	0.75	-177.25	-50.96	-2.45	51.03	49.52	1.52	33.654	
500.00	500.00	497.49	497.33	0.99	0.95	-173.21	-54.13	-6.45	54.57	52.64	1.94	28.156	
600.00	600.00	595.65	595.12	1.22	1.18	-167.59	-59.36	-13.06	60.98	58.60	2.38	25.611	
700.00	700.00	693.11	691.88	1.44	1.45	-161.55	-66.62	-22.22	70.70	67.85	2.85	24.779 SF	
800.00	800.00	789.68	787.29	1.67	1.76	-155.95	-75.82	-33.84	84.00	80.63	3.37	24.956	
900.00	900.00	885.13	881.07	1.89	2.12	-151.18	-86.88	-47.79	100.94	97.02	3.93	25.709	
1,000.00	1,000.00	979.28	972.93	2.12	2.52	-147.32	-99.67	-63.95	121.48	116.94	4.54	26.768	
1,050.00	1,050.00	1,025.81	1,018.07	2.23	2.74	-145.69	-106.69	-72.80	133.05	128.18	4.86	27.359	
1,100.00	1,100.00	1,071.88	1,062.58	2.33	2.97	115.51	-114.08	-82.13	145.65	140.99	4.66	31.259	
1,200.00	1,199.93	1,162.22	1,149.26	2.53	3.47	118.36	-129.86	-102.06	174.56	169.48	5.08	34.344	
1,300.00	1,299.68	1,249.83	1,232.52	2.74	3.99	121.09	-146.78	-123.41	208.54	203.03	5.50	37.883	
1,400.00	1,399.13	1,334.34	1,312.02	2.97	4.55	123.51	-164.59	-145.90	247.62	241.69	5.93	41.762	
1,500.00	1,498.15	1,415.48	1,387.51	3.22	5.13	125.56	-183.05	-169.21	291.71	285.35	6.36	45.864	
1,600.00	1,596.63	1,493.01	1,458.83	3.51	5.72	127.23	-201.93	-193.04	340.66	333.86	6.80	50.072	
1,700.00	1,694.44	1,572.54	1,531.27	3.84	6.36	128.73	-222.30	-218.76	393.89	386.61	7.28	54.132	
1,800.00	1,791.46	1,654.20	1,605.58	4.23	7.04	130.08	-243.32	-245.30	449.68	441.90	7.78	57.792	
1,819.92	1,810.68	1,670.26	1,620.19	4.31	7.17	130.32	-247.46	-250.51	461.08	453.20	7.88	58.482	
1,900.00	1,887.89	1,734.68	1,678.82	4.67	7.70	131.97	-264.04	-271.45	507.22	498.89	8.33	60.901	
2,000.00	1,984.30	1,815.12	1,752.02	5.13	8.37	133.66	-284.75	-297.60	565.18	556.27	8.90	63.468	
2,100.00	2,080.71	1,895.57	1,825.23	5.61	9.05	135.04	-305.46	-323.74	623.40	613.89	9.51	65.545	
2,200.00	2,177.12	1,976.01	1,898.43	6.11	9.72	136.19	-326.17	-349.88	681.83	671.69	10.14	67.262	
2,300.00	2,273.53	2,056.46	1,971.64	6.62	10.40	137.16	-346.88	-376.03	740.42	729.64	10.77	68.731	
2,400.00	2,369.94	2,136.90	2,044.84	7.13	11.08	137.99	-367.59	-402.17	799.12	787.70	11.42	70.000	
2,500.00	2,466.35	2,217.35	2,118.05	7.66	11.76	138.71	-388.30	-428.32	857.92	845.85	12.07	71.105	
2,600.00	2,562.76	2,297.79	2,191.25	8.19	12.45	139.33	-409.01	-454.46	916.80	904.08	12.72	72.074	
2,700.00	2,659.17	2,378.24	2,264.46	8.72	13.13	139.88	-429.72	-480.61	975.74	962.36	13.38	72.931	
2,800.00	2,755.58	2,458.68	2,337.66	9.26	13.81	140.37	-450.43	-506.75	1,034.73	1,020.69	14.04	73.694	
2,900.00	2,851.99	2,539.13	2,410.87	9.80	14.50	140.81	-471.14	-532.89	1,093.77	1,079.07	14.71	74.379	
3,000.00	2,948.40	2,619.57	2,484.07	10.35	15.18	141.20	-491.85	-559.04	1,152.85	1,137.48	15.37	74.997	
3,100.00	3,044.81	2,700.02	2,557.28	10.89	15.87	141.56	-512.56	-585.18	1,211.96	1,195.92	16.04	75.557	
3,200.00	3,141.22	2,780.46	2,630.48	11.44	16.55	141.88	-533.27	-611.33	1,271.09	1,254.38	16.71	76.068	
3,300.00	3,237.63	2,860.91	2,703.69	11.99	17.24	142.17	-553.97	-637.47	1,330.25	1,312.87	17.38	76.537	
3,400.00	3,334.04	2,941.35	2,776.89	12.54	17.92	142.44	-574.68	-663.62	1,389.43	1,371.38	18.05	76.969	
3,500.00	3,430.46	3,021.80	2,850.10	13.09	18.61	142.68	-595.39	-689.76	1,448.63	1,429.90	18.72	77.368	
3,600.00	3,526.87	3,102.24	2,923.31	13.65	19.30	142.91	-616.10	-715.90	1,507.84	1,488.44	19.40	77.738	
3,700.00	3,623.28	3,182.69	2,996.51	14.20	19.99	143.12	-636.81	-742.05	1,567.07	1,547.00	20.07	78.083	
3,800.00	3,719.69	3,263.14	3,069.72	14.76	20.67	143.31	-657.52	-768.19	1,626.31	1,605.57	20.74	78.406	
3,900.00	3,816.10	3,343.58	3,142.92	15.32	21.36	143.50	-678.23	-794.34	1,685.56	1,664.15	21.42	78.709	
4,000.00	3,912.51	3,424.03	3,216.13	15.87	22.05	143.66	-698.94	-820.48	1,744.82	1,722.74	22.09	78.994	
4,100.00	4,008.92	3,504.47	3,289.33	16.43	22.74	143.82	-719.65	-846.63	1,804.10	1,781.33	22.76	79.263	
4,200.00	4,105.33	3,584.92	3,362.54	16.99	23.42	143.97	-740.36	-872.77	1,863.38	1,839.94	23.43	79.518	
4,300.00	4,201.74	3,665.36	3,435.74	17.55	24.11	144.11	-761.07	-898.91	1,922.66	1,898.56	24.11	79.760	
4,400.00	4,298.15	3,745.81	3,508.95	18.11	24.80	144.24	-781.78	-925.06	1,981.96	1,957.18	24.78	79.990	
4,500.00	4,394.56	3,826.25	3,582.15	18.67	25.49	144.36	-802.49	-951.20	2,041.26	2,015.81	25.45	80.210	
4,600.00	4,490.97	3,906.70	3,655.36	19.23	26.18	144.48	-823.20	-977.35	2,100.56	2,074.44	26.12	80.419	
4,700.00	4,587.38	3,987.14	3,728.56	19.79	26.87	144.59	-843.91	-1,003.49	2,159.87	2,133.08	26.79	80.620	
4,800.00	4,683.79	4,067.59	3,801.77	20.35	27.55	144.69	-864.62	-1,029.63	2,219.19	2,191.73	27.46	80.812	
4,900.00	4,780.20	4,148.03	3,874.97	20.91	28.24	144.79	-885.33	-1,055.78	2,278.51	2,250.38	28.13	80.998	

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 2-12
<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 2-12	<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 2-12	<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	4,876.61	4,228.48	3,948.18	21.47	28.93	144.88	-906.04	-1,081.92	2,337.84	2,309.04	28.80	81.176	
5,100.00	4,973.02	4,308.92	4,021.38	22.04	29.62	144.97	-926.75	-1,108.07	2,397.16	2,367.70	29.47	81.348	
5,200.00	5,069.43	4,389.37	4,094.59	22.60	30.31	145.05	-947.46	-1,134.21	2,456.50	2,426.35	30.14	81.494	
5,275.60	5,142.32	4,450.18	4,149.93	23.02	30.83	145.11	-963.11	-1,153.98	2,501.35	2,470.69	30.66	81.584	
5,300.00	5,165.87	4,469.86	4,167.84	23.14	31.00	145.34	-968.18	-1,160.37	2,515.76	2,484.87	30.89	81.443	
5,400.00	5,262.93	4,551.59	4,242.22	23.54	31.70	146.17	-989.22	-1,186.93	2,573.36	2,541.59	31.78	80.986	
5,500.00	5,360.77	4,634.97	4,318.09	23.89	32.41	146.88	-1,010.68	-1,214.03	2,628.57	2,595.93	32.64	80.535	
5,600.00	5,459.27	4,719.88	4,395.36	24.20	33.14	147.49	-1,032.54	-1,241.63	2,681.32	2,647.84	33.47	80.105	
5,700.00	5,558.32	4,806.23	4,473.94	24.46	33.88	148.00	-1,054.77	-1,269.69	2,731.54	2,697.27	34.27	79.708	
5,800.00	5,657.78	4,893.92	4,553.73	24.68	34.63	148.42	-1,077.35	-1,298.19	2,779.20	2,744.18	35.03	79.349	
5,900.00	5,757.54	4,982.83	4,634.64	24.86	35.39	148.77	-1,100.23	-1,327.08	2,824.24	2,788.51	35.74	79.033	
6,000.00	5,857.48	5,072.86	4,716.57	24.99	36.17	149.03	-1,123.41	-1,356.34	2,866.63	2,830.24	36.40	78.763	
6,045.52	5,903.00	5,114.18	4,754.17	25.04	36.52	-110.71	-1,134.05	-1,369.77	2,885.04	2,848.35	36.68	78.650	
6,100.00	5,957.48	5,163.76	4,799.29	25.09	36.95	-110.84	-1,146.81	-1,385.89	2,906.74	2,869.79	36.95	78.675	
6,200.00	6,057.48	5,254.76	4,882.10	25.20	37.73	-111.09	-1,170.24	-1,415.46	2,946.60	2,909.17	37.43	78.716	
6,300.00	6,157.48	5,345.76	4,964.91	25.32	38.51	-111.32	-1,193.67	-1,445.03	2,986.52	2,948.60	37.92	78.759	
6,400.00	6,257.48	5,436.76	5,047.72	25.43	39.29	-111.55	-1,217.09	-1,474.61	3,026.47	2,988.06	38.41	78.803	
6,500.00	6,357.48	5,527.76	5,130.53	25.54	40.07	-111.77	-1,240.52	-1,504.18	3,066.46	3,027.57	38.89	78.848	
6,600.00	6,457.48	5,618.76	5,213.34	25.66	40.85	-111.99	-1,263.95	-1,533.76	3,106.49	3,067.12	39.38	78.894	
6,700.00	6,557.48	7,009.65	6,557.48	25.78	46.16	-113.55	-1,452.02	-1,771.18	3,138.21	3,095.61	42.59	73.676	
6,800.00	6,657.48	7,109.65	6,657.48	25.90	46.21	-113.55	-1,452.02	-1,771.18	3,138.21	3,095.36	42.85	73.233	
6,900.00	6,757.48	7,209.65	6,757.48	26.02	46.28	-113.55	-1,452.02	-1,771.18	3,138.21	3,095.10	43.11	72.790	
7,000.00	6,857.48	7,309.65	6,857.48	26.14	46.34	-113.55	-1,452.02	-1,771.18	3,138.21	3,094.83	43.38	72.348	
7,100.00	6,957.48	7,409.65	6,957.48	26.26	46.40	-113.55	-1,452.02	-1,771.18	3,138.21	3,094.57	43.64	71.905	
7,200.00	7,057.48	7,509.65	7,057.48	26.39	46.46	-113.55	-1,452.02	-1,771.18	3,138.21	3,094.30	43.91	71.464	
7,300.00	7,157.48	7,609.65	7,157.48	26.51	46.53	-113.55	-1,452.02	-1,771.18	3,138.21	3,094.02	44.19	71.023	
7,400.00	7,257.48	7,709.65	7,257.48	26.64	46.59	-113.55	-1,452.02	-1,771.18	3,138.21	3,093.75	44.46	70.583	
7,500.00	7,357.48	7,809.65	7,357.48	26.77	46.66	-113.55	-1,452.02	-1,771.18	3,138.21	3,093.47	44.74	70.144	
7,600.00	7,457.48	7,909.65	7,457.48	26.90	46.73	-113.55	-1,452.02	-1,771.18	3,138.21	3,093.19	45.02	69.706	
7,700.00	7,557.48	8,009.65	7,557.48	27.03	46.79	-113.55	-1,452.02	-1,771.18	3,138.21	3,092.91	45.30	69.270	
7,800.00	7,657.48	8,109.65	7,657.48	27.16	46.86	-113.55	-1,452.02	-1,771.18	3,138.21	3,092.62	45.59	68.835	
7,900.00	7,757.48	8,209.65	7,757.48	27.30	46.93	-113.55	-1,452.02	-1,771.18	3,138.21	3,092.33	45.88	68.402	
8,000.00	7,857.48	8,309.65	7,857.48	27.43	47.00	-113.55	-1,452.02	-1,771.18	3,138.21	3,092.04	46.17	67.970	
8,012.52	7,870.00	8,322.17	7,870.00	27.45	47.01	-113.55	-1,452.02	-1,771.18	3,138.21	3,092.00	46.21	67.916	

<b>Company:</b>	US ROCKIES REGION PLANNING	<b>Local Co-ordinate Reference:</b>	Well P_ENCORE 2-12
<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 2-12	<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 2-12	<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	-178.94	-60.11	-1.11	60.12				
100.00	100.00	100.00	100.00	0.10	0.10	-178.94	-60.11	-1.11	60.12	59.93	0.19	314.678	
200.00	200.00	200.00	200.00	0.32	0.32	-178.94	-60.11	-1.11	60.12	59.48	0.64	93.851	
300.00	300.00	300.00	300.00	0.55	0.55	-178.94	-60.11	-1.11	60.12	59.03	1.09	55.150	
400.00	400.00	400.00	400.00	0.77	0.77	-178.94	-60.11	-1.11	60.12	58.58	1.54	39.048	
500.00	500.00	500.00	500.00	0.99	0.99	-178.94	-60.11	-1.11	60.12	58.13	1.99	30.223	
600.00	600.00	600.00	600.00	1.22	1.22	-178.94	-60.11	-1.11	60.12	57.68	2.44	24.652	
700.00	700.00	700.00	700.00	1.44	1.44	-178.94	-60.11	-1.11	60.12	57.23	2.89	20.815	
800.00	800.00	800.00	800.00	1.67	1.67	-178.94	-60.11	-1.11	60.12	56.78	3.34	18.012	
900.00	900.00	900.00	900.00	1.89	1.89	-178.94	-60.11	-1.11	60.12	56.33	3.79	15.874	
1,000.00	1,000.00	1,000.00	1,000.00	2.12	2.12	-178.94	-60.11	-1.11	60.12	55.88	4.24	14.190	
1,050.00	1,050.00	1,050.00	1,050.00	2.23	2.23	-178.94	-60.11	-1.11	60.12	55.66	4.46	13.475 CC, ES	
1,100.00	1,100.00	1,099.01	1,099.00	2.33	2.33	81.41	-60.51	-1.24	60.46	55.80	4.66	12.969	
1,200.00	1,199.93	1,196.82	1,196.76	2.53	2.50	85.23	-63.70	-2.24	63.38	58.35	5.03	12.602 SF	
1,300.00	1,299.68	1,294.05	1,293.75	2.74	2.68	91.80	-70.02	-4.24	69.97	64.56	5.41	12.922	
1,400.00	1,399.13	1,390.31	1,389.51	2.97	2.87	99.40	-79.36	-7.18	81.26	75.44	5.82	13.957	
1,500.00	1,498.15	1,485.25	1,483.58	3.22	3.09	106.53	-91.58	-11.04	97.94	91.69	6.25	15.661	
1,600.00	1,596.63	1,578.53	1,575.54	3.51	3.34	112.43	-106.48	-15.73	120.22	113.50	6.72	17.902	
1,700.00	1,694.44	1,669.84	1,665.02	3.84	3.61	116.99	-123.81	-21.20	147.96	140.75	7.21	20.508	
1,800.00	1,791.46	1,758.91	1,751.70	4.23	3.93	120.39	-143.34	-27.35	180.90	173.14	7.76	23.314	
1,819.92	1,810.68	1,776.36	1,768.61	4.31	3.99	120.95	-147.46	-28.66	188.05	180.18	7.87	23.887	
1,900.00	1,887.89	1,845.80	1,835.61	4.67	4.28	123.20	-164.85	-34.14	218.17	209.81	8.36	26.100	
2,000.00	1,984.30	1,931.01	1,917.19	5.13	4.67	124.98	-188.29	-41.53	258.24	249.25	8.99	28.710	
2,100.00	2,080.71	2,014.44	1,996.33	5.61	5.09	126.01	-213.48	-49.47	300.76	291.10	9.66	31.133	
2,200.00	2,177.12	2,100.00	2,076.65	6.11	5.57	126.57	-241.58	-58.33	345.56	335.19	10.36	33.342	
2,300.00	2,273.53	2,179.38	2,150.44	6.62	6.06	126.79	-269.49	-67.13	392.26	381.18	11.08	35.400	
2,400.00	2,369.94	2,267.59	2,232.30	7.13	6.63	126.96	-300.83	-77.01	439.36	427.52	11.85	37.090	
2,500.00	2,466.35	2,355.80	2,314.15	7.66	7.21	127.09	-332.17	-86.89	486.46	473.84	12.63	38.531	
2,600.00	2,562.76	2,444.00	2,396.01	8.19	7.81	127.20	-363.51	-96.77	533.57	520.15	13.42	39.766	
2,700.00	2,659.17	2,532.21	2,477.87	8.72	8.41	127.30	-394.85	-106.65	580.67	566.45	14.22	40.832	
2,800.00	2,755.58	2,620.41	2,559.72	9.26	9.02	127.37	-426.19	-116.54	627.78	612.75	15.03	41.760	
2,900.00	2,851.99	2,708.62	2,641.58	9.80	9.64	127.44	-457.53	-126.42	674.89	659.04	15.85	42.572	
3,000.00	2,948.40	2,796.83	2,723.44	10.35	10.26	127.50	-488.87	-136.30	722.00	705.32	16.68	43.288	
3,100.00	3,044.81	2,885.03	2,805.29	10.89	10.89	127.55	-520.21	-146.18	769.11	751.60	17.51	43.922	
3,200.00	3,141.22	2,973.24	2,887.15	11.44	11.52	127.60	-551.55	-156.06	816.22	797.87	18.35	44.489	
3,300.00	3,237.63	3,061.45	2,969.01	11.99	12.15	127.64	-582.89	-165.94	863.33	844.14	19.19	44.998	
3,400.00	3,334.04	3,149.65	3,050.87	12.54	12.79	127.68	-614.23	-175.82	910.44	890.41	20.03	45.458	
3,500.00	3,430.46	3,237.86	3,132.72	13.09	13.42	127.71	-645.57	-185.70	957.55	936.67	20.87	45.874	
3,600.00	3,526.87	3,326.07	3,214.58	13.65	14.06	127.74	-676.91	-195.58	1,004.66	982.94	21.72	46.254	
3,700.00	3,623.28	3,414.27	3,296.44	14.20	14.70	127.77	-708.25	-205.47	1,051.77	1,029.20	22.57	46.601	
3,800.00	3,719.69	3,502.48	3,378.29	14.76	15.35	127.79	-739.59	-215.35	1,098.88	1,075.46	23.42	46.920	
3,900.00	3,816.10	3,590.69	3,460.15	15.32	15.99	127.81	-770.93	-225.23	1,145.99	1,121.72	24.27	47.214	
4,000.00	3,912.51	3,678.89	3,542.01	15.87	16.63	127.84	-802.27	-235.11	1,193.10	1,167.98	25.13	47.487	
4,100.00	4,008.92	3,767.10	3,623.86	16.43	17.28	127.86	-833.61	-244.99	1,240.21	1,214.23	25.98	47.739	
4,200.00	4,105.33	3,855.31	3,705.72	16.99	17.92	127.87	-864.95	-254.87	1,287.33	1,260.49	26.83	47.975	
4,300.00	4,201.74	3,943.51	3,787.58	17.55	18.57	127.89	-896.29	-264.75	1,334.44	1,306.75	27.69	48.195	
4,400.00	4,298.15	4,031.72	3,869.44	18.11	19.22	127.91	-927.63	-274.63	1,381.55	1,353.00	28.54	48.401	
4,500.00	4,394.56	4,119.93	3,951.29	18.67	19.87	127.92	-958.97	-284.52	1,428.66	1,399.26	29.40	48.595	
4,600.00	4,490.97	4,208.13	4,033.15	19.23	20.51	127.93	-990.31	-294.40	1,475.77	1,445.52	30.26	48.777	
4,700.00	4,587.38	4,296.34	4,115.01	19.79	21.16	127.95	-1,021.65	-304.28	1,522.88	1,491.77	31.11	48.950	
4,800.00	4,683.79	4,384.54	4,196.86	20.35	21.81	127.96	-1,052.99	-314.16	1,570.00	1,538.03	31.97	49.113	
4,900.00	4,780.20	4,472.75	4,278.72	20.91	22.46	127.97	-1,084.33	-324.04	1,617.11	1,584.28	32.82	49.267	

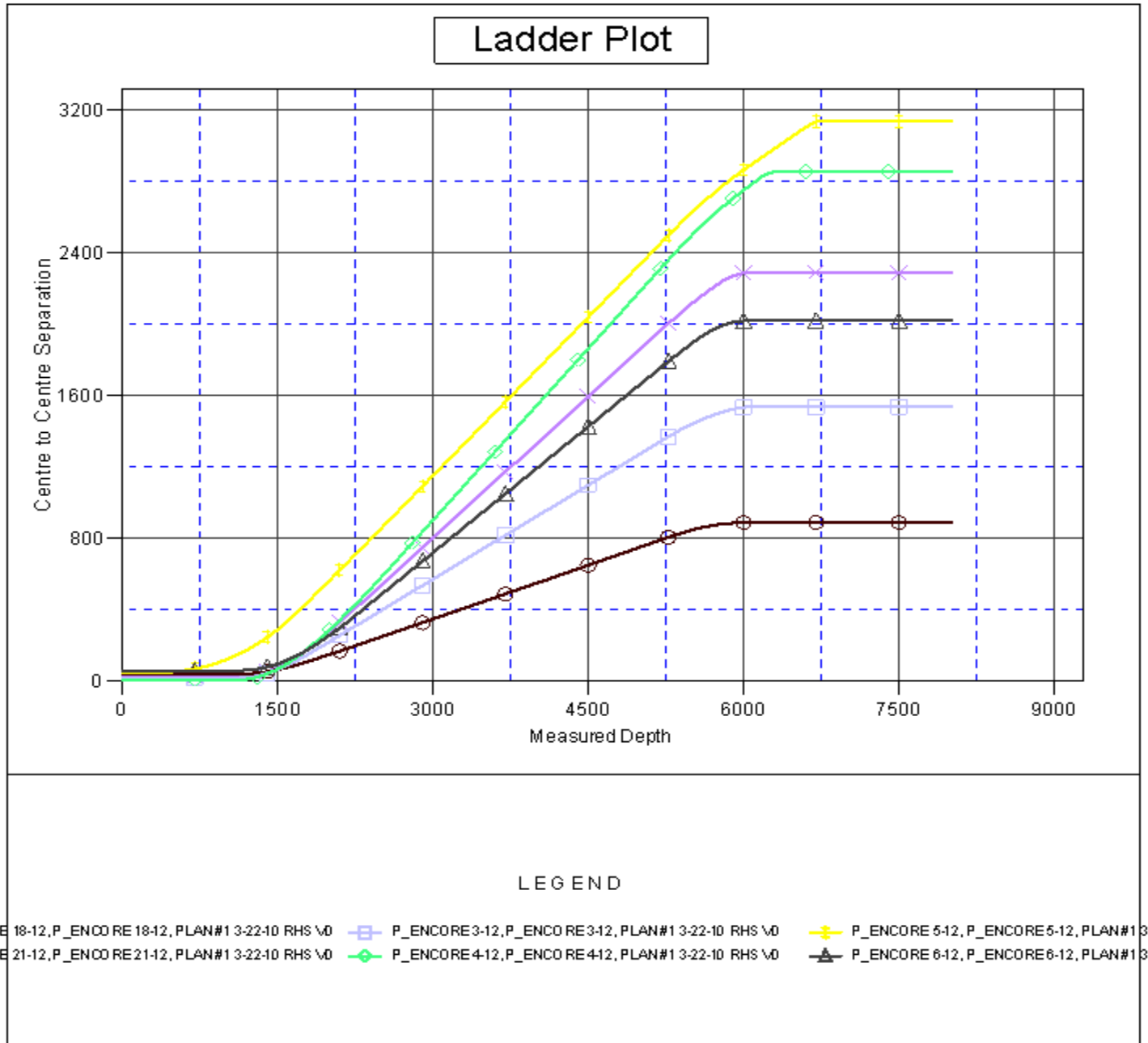
CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

<b>Company:</b>	US ROCKIES REGION PLANNING	<b>Local Co-ordinate Reference:</b>	Well P_ENCORE 2-12
<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 2-12	<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 2-12	<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 6-12 - P_ENCORE 6-12 - 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	4,876.61	4,560.96	4,360.58	21.47	23.11	127.98	-1,115.67	-333.92	1,664.22	1,630.54	33.68	49.414	
5,100.00	4,973.02	4,649.16	4,442.43	22.04	23.76	127.99	-1,147.01	-343.80	1,711.33	1,676.80	34.53	49.554	
5,200.00	5,069.43	4,737.37	4,524.29	22.60	24.42	128.00	-1,178.35	-353.68	1,758.44	1,723.05	35.39	49.688	
5,275.60	5,142.32	4,804.05	4,586.17	23.02	24.91	128.01	-1,202.04	-361.15	1,794.06	1,758.02	36.04	49.785	
5,300.00	5,165.87	4,825.61	4,606.18	23.14	25.07	128.21	-1,209.70	-363.57	1,805.50	1,769.23	36.27	49.774	
5,400.00	5,262.93	4,914.54	4,688.71	23.54	25.72	128.95	-1,241.29	-373.53	1,851.18	1,814.02	37.16	49.812	
5,500.00	5,360.77	5,004.36	4,772.06	23.89	26.39	129.55	-1,273.21	-383.59	1,894.91	1,856.90	38.01	49.856	
5,600.00	5,459.27	5,145.87	4,903.90	24.20	27.27	129.90	-1,322.23	-399.05	1,936.13	1,897.13	39.00	49.646	
5,700.00	5,558.32	5,364.13	5,111.56	24.46	28.26	130.02	-1,386.15	-419.20	1,970.48	1,930.41	40.08	49.170	
5,800.00	5,657.78	5,594.05	5,335.15	24.68	29.12	130.09	-1,436.97	-435.22	1,996.47	1,955.44	41.03	48.657	
5,900.00	5,757.54	5,832.81	5,571.08	24.86	29.76	130.14	-1,471.48	-446.10	2,013.57	1,971.75	41.82	48.150	
6,000.00	5,857.48	6,076.88	5,814.52	24.99	30.16	130.19	-1,487.27	-451.08	2,021.43	1,979.01	42.41	47.663	
6,045.52	5,903.00	6,165.37	5,903.00	25.04	30.25	-129.64	-1,488.14	-451.36	2,021.97	1,979.38	42.60	47.470	
6,100.00	5,957.48	6,219.85	5,957.48	25.09	30.30	-129.64	-1,488.14	-451.36	2,021.97	1,979.25	42.72	47.328	
6,200.00	6,057.48	6,319.85	6,057.48	25.20	30.38	-129.64	-1,488.14	-451.36	2,021.97	1,979.01	42.96	47.069	
6,300.00	6,157.48	6,419.85	6,157.48	25.32	30.45	-129.64	-1,488.14	-451.36	2,021.97	1,978.78	43.20	46.809	
6,400.00	6,257.48	6,519.85	6,257.48	25.43	30.53	-129.64	-1,488.14	-451.36	2,021.97	1,978.53	43.44	46.549	
6,500.00	6,357.48	6,619.85	6,357.48	25.54	30.62	-129.64	-1,488.14	-451.36	2,021.97	1,978.29	43.68	46.288	
6,600.00	6,457.48	6,719.85	6,457.48	25.66	30.70	-129.64	-1,488.14	-451.36	2,021.97	1,978.04	43.93	46.026	
6,700.00	6,557.48	6,819.85	6,557.48	25.78	30.78	-129.64	-1,488.14	-451.36	2,021.97	1,977.79	44.18	45.764	
6,800.00	6,657.48	6,919.85	6,657.48	25.90	30.87	-129.64	-1,488.14	-451.36	2,021.97	1,977.54	44.44	45.502	
6,900.00	6,757.48	7,019.85	6,757.48	26.02	30.96	-129.64	-1,488.14	-451.36	2,021.97	1,977.28	44.69	45.240	
7,000.00	6,857.48	7,119.85	6,857.48	26.14	31.05	-129.64	-1,488.14	-451.36	2,021.97	1,977.02	44.96	44.977	
7,100.00	6,957.48	7,219.85	6,957.48	26.26	31.14	-129.64	-1,488.14	-451.36	2,021.97	1,976.75	45.22	44.715	
7,200.00	7,057.48	7,319.85	7,057.48	26.39	31.23	-129.64	-1,488.14	-451.36	2,021.97	1,976.49	45.49	44.453	
7,300.00	7,157.48	7,419.85	7,157.48	26.51	31.32	-129.64	-1,488.14	-451.36	2,021.97	1,976.22	45.75	44.191	
7,400.00	7,257.48	7,519.85	7,257.48	26.64	31.42	-129.64	-1,488.14	-451.36	2,021.97	1,975.95	46.03	43.930	
7,500.00	7,357.48	7,619.85	7,357.48	26.77	31.51	-129.64	-1,488.14	-451.36	2,021.97	1,975.67	46.30	43.669	
7,600.00	7,457.48	7,719.85	7,457.48	26.90	31.61	-129.64	-1,488.14	-451.36	2,021.97	1,975.39	46.58	43.409	
7,700.00	7,557.48	7,819.85	7,557.48	27.03	31.71	-129.64	-1,488.14	-451.36	2,021.97	1,975.11	46.86	43.149	
7,800.00	7,657.48	7,919.85	7,657.48	27.16	31.81	-129.64	-1,488.14	-451.36	2,021.97	1,974.83	47.14	42.890	
7,900.00	7,757.48	8,019.85	7,757.48	27.30	31.91	-129.64	-1,488.14	-451.36	2,021.97	1,974.54	47.43	42.632	
8,000.00	7,857.48	8,119.85	7,857.48	27.43	32.01	-129.64	-1,488.14	-451.36	2,021.97	1,974.26	47.72	42.375	
8,012.52	7,870.00	8,132.37	7,870.00	27.45	32.02	-129.64	-1,488.14	-451.36	2,021.97	1,974.22	47.75	42.343	

<b>Company:</b>	US ROCKIES REGION PLANNING	<b>Local Co-ordinate Reference:</b>	Well P_ENCODE 2-12
<b>Project:</b>	COLORADO NORTHERN ZONE - 83	<b>TVD Reference:</b>	WELL @ 4994.00ft (Original Well Elev)
<b>Reference Site:</b>	LARIMER_ENCODE 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_ENCODE 2-12	<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_ENCODE 2-12	<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

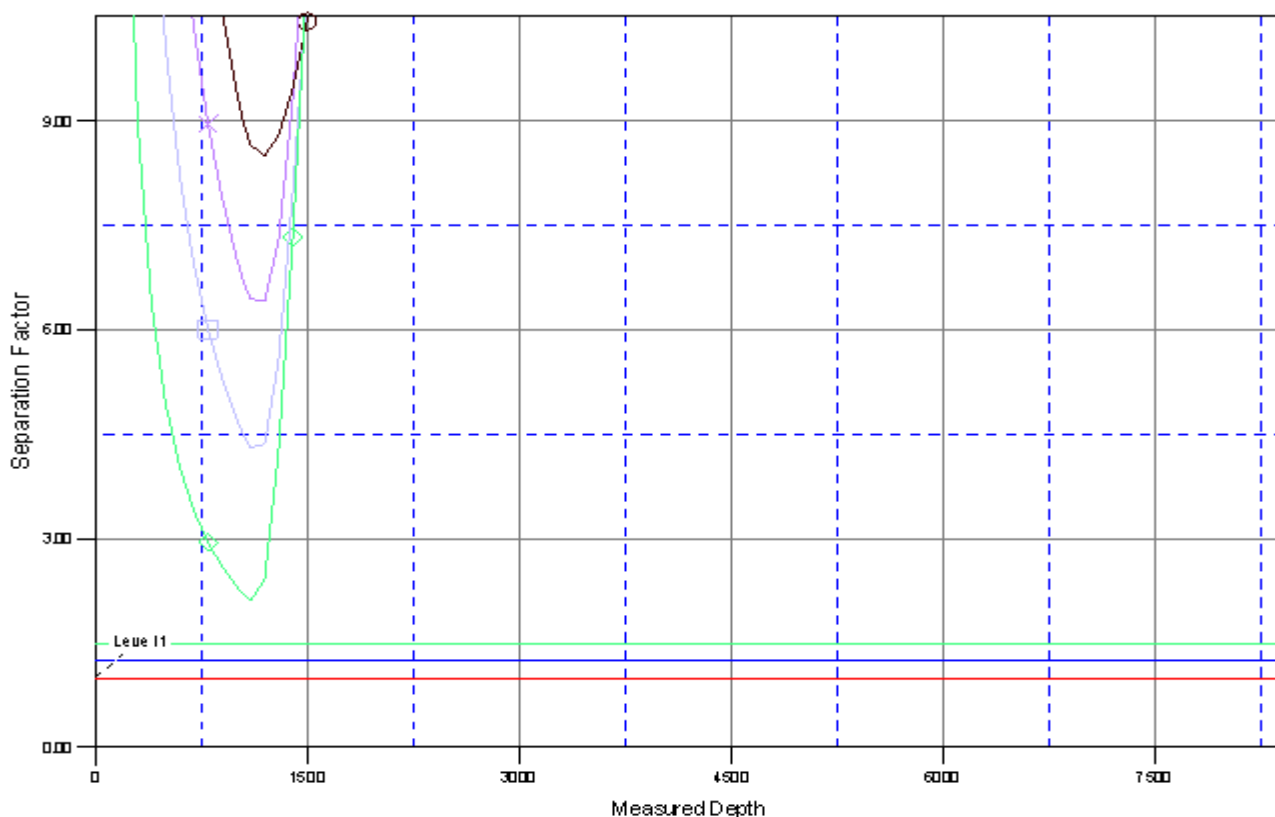
Reference Depths are relative to WELL @ 4994.00ft (Original Well Elev) Coordinates are relative to: P\_ENCODE 2-12  
Offset Depths are relative to Offset Datum Coordinate System is US State Plane 1983, Colorado Northern Zone  
Central Meridian is 105° 30' 0.000 W ° Grid Convergence at Surface is: 0.35°



<b>Company:</b>	US ROCKIES REGION PLANNING	<b>Local Co-ordinate Reference:</b>	Well P_ENCORE 2-12
<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 2-12	<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 2-12	<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 2-12  
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 21-12, P\_ENCORE 21-12, 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