



# **US ROCKIES REGION PLANNING**

**COLORADO NORTHERN ZONE - 83**

**LARIMER\_ENCORE 3-12 PAD**

**P\_ENCORE 6-12**

**P\_ENCORE 6-12**

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

## **Standard Planning Report**

**22 March, 2010**

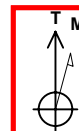




Project: COLORADO NORTHERN ZONE - 83  
 Site: LARIMER\_ENCORE 3-12 PAD  
 Well: P\_ENCORE 6-12  
 Wellbore: P\_ENCORE 6-12  
 Section: SECTION 12 T5N R68W  
 SHL: 540 FNL 2410 FWL  
 Design: PLAN #1 3-22-10 RHS  
 Latitude: 40° 25' 12.219 N  
 Longitude: 104° 57' 19.591 W  
 GL: 4979.00  
 KB: WELL @ 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
3487.00	3619.62	PARKMAN
4077.00	4255.38	SUSSEX
4527.00	4740.29	SHANNON
6887.00	7149.37	NIO A
7209.00	7471.37	CODELL
7705.00	7967.37	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
2143.62	21.87	197.50	2117.26	-196.68	-62.01	2.00	197.50	206.22	Start 2912.12 hold at 2143.62 MD
5055.74	21.87	197.50	4819.74	-1231.35	-388.23	0.00	0.00	1291.11	Start Drop -2.00
6149.37	0.00	0.00	5887.00	-1428.03	-450.24	2.00	180.00	1497.33	Start 1983.00 hold at 6149.37 MD
8132.37	0.00	0.00	7870.00	-1428.03	-450.24	0.00	0.00	1497.33	TD at 8132.37

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

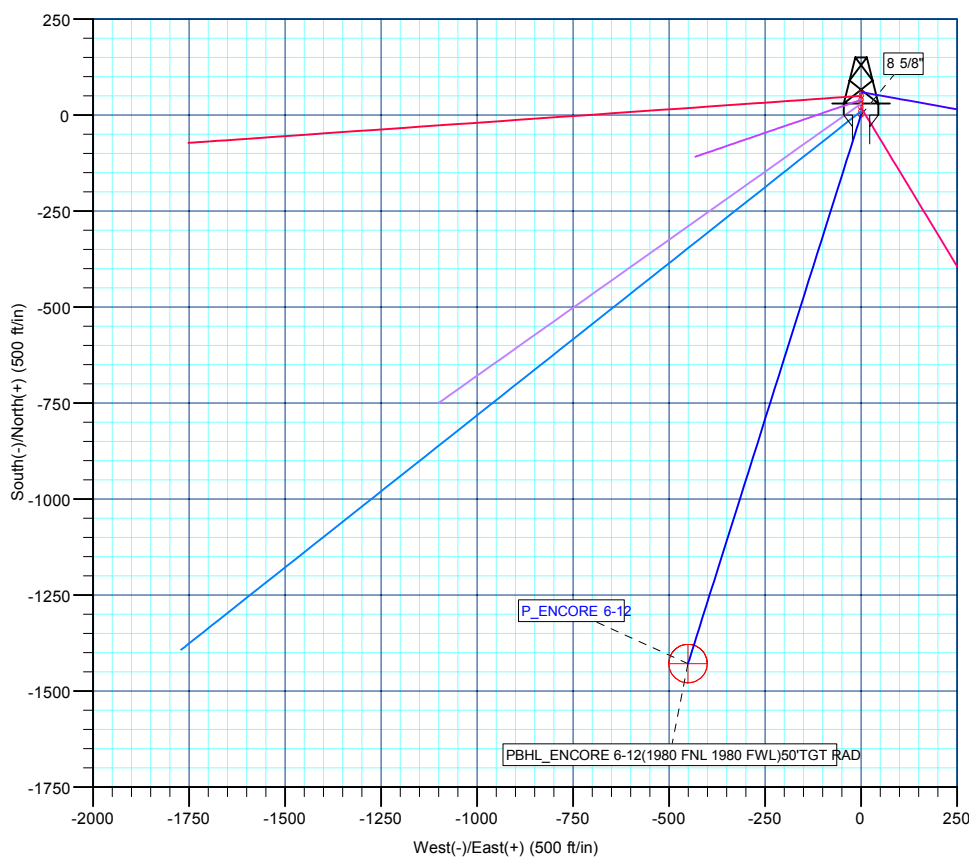
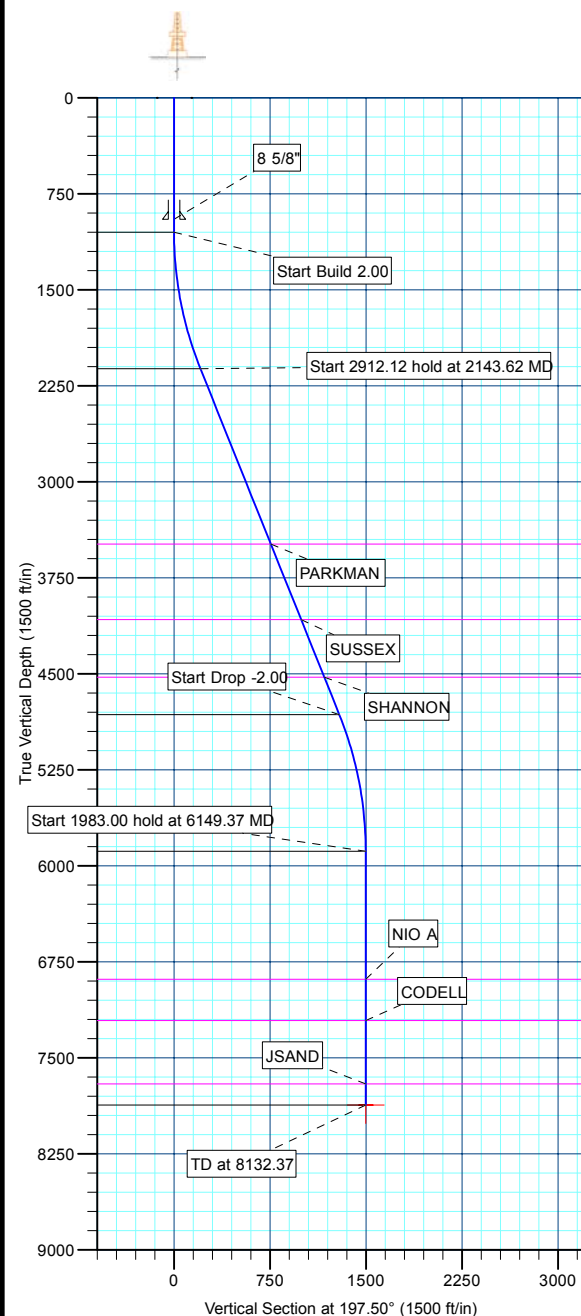
Name	TVD	+N/-S	+E/-W	Latitude	Longitude	Shape
PBHL	7870.00	-1428.03	-450.24	40° 24' 58.108 N	104° 57' 25.412 W	Circle (Radius: 50.00)

#### WELL DETAILS: P\_ENCORE 6-12

+N/-S	+E/-W	Northing	Ground Level:	4979.00	Latitude	Longitude	Slot
0.00	0.00	1396334.10	Easting	3151619.21	40° 25' 12.219 N	104° 57' 19.591 W	

#### LEGEND

- P\_ENCORE 18-12, P\_ENCORE 18-12, PLAN #1 3-22-10 RHS V0
- P\_ENCORE 21-12, P\_ENCORE 21-12, PLAN #1 3-22-10 RHS V0
- P\_ENCORE 2-12, P\_ENCORE 2-12, PLAN #1 3-22-10 RHS V0
- P\_ENCORE 3-12, P\_ENCORE 3-12, PLAN #1 3-22-10 RHS V0
- P\_ENCORE 4-12, P\_ENCORE 4-12, PLAN #1 3-22-10 RHS V0
- P\_ENCORE 5-12, P\_ENCORE 5-12, PLAN #1 3-22-10 RHS V0
- PLAN #1 3-22-10 RHS



Plan: PLAN #1 3-22-10 RHS (P\_ENCORE 6-12/P\_ENCORE 6-12)

Created By: Robert H. Scott Date: 14:55, March 22 2010

<b>Database:</b>	EDM 2003.21 Single User Db	<b>Local Co-ordinate Reference:</b>	Well P_ENCORE 6-12
<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 6-12	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	P_ENCORE 6-12		
<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 6-12					
Well Position	+N/-S	-30.25 ft	Northing:	1,396,334.10 ft	Latitude:	40° 25' 12.219 N
	+E/-W	-0.56 ft	Easting:	3,151,619.21 ft	Longitude:	104° 57' 19.591 W
Position Uncertainty		0.00 ft	Wellhead Elevation:	ft	Ground Level:	4,979.00 ft

<b>Wellbore</b>	P_ENCORE 6-12				
<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	197.50

<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	
2,143.62	21.87	197.50	2,117.26	-196.68	-62.01	2.00	2.00	0.00	197.50	
5,055.74	21.87	197.50	4,819.74	-1,231.35	-388.23	0.00	0.00	0.00	0.00	
6,149.37	0.00	0.00	5,887.00	-1,428.03	-450.24	2.00	-2.00	0.00	180.00	
8,132.37	0.00	0.00	7,870.00	-1,428.03	-450.24	0.00	0.00	0.00	0.00	PBHL_ENCORE 6-

<b>Database:</b>	EDM 2003.21 Single User Db	<b>Local Co-ordinate Reference:</b>	Well P_ENCORE 6-12
<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 6-12	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	P_ENCORE 6-12		
<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	197.50	1,100.00	-0.42	-0.13	0.44	2.00	2.00	0.00
1,200.00	3.00	197.50	1,199.93	-3.74	-1.18	3.93	2.00	2.00	0.00
1,300.00	5.00	197.50	1,299.68	-10.40	-3.28	10.90	2.00	2.00	0.00
1,400.00	7.00	197.50	1,399.13	-20.37	-6.42	21.35	2.00	2.00	0.00
1,500.00	9.00	197.50	1,498.15	-33.64	-10.61	35.27	2.00	2.00	0.00
1,600.00	11.00	197.50	1,596.63	-50.20	-15.83	52.63	2.00	2.00	0.00
1,700.00	13.00	197.50	1,694.44	-70.03	-22.08	73.42	2.00	2.00	0.00
1,800.00	15.00	197.50	1,791.46	-93.10	-29.35	97.62	2.00	2.00	0.00
1,900.00	17.00	197.50	1,887.58	-119.38	-37.64	125.18	2.00	2.00	0.00
2,000.00	19.00	197.50	1,982.68	-148.85	-46.93	156.08	2.00	2.00	0.00
2,100.00	21.00	197.50	2,076.65	-181.47	-57.22	190.28	2.00	2.00	0.00
<b>Start 2912.12 hold at 2143.62 MD</b>									
2,143.62	21.87	197.50	2,117.26	-196.68	-62.01	206.22	2.00	2.00	0.00
2,200.00	21.87	197.50	2,169.57	-216.71	-68.33	227.22	0.00	0.00	0.00
2,300.00	21.87	197.50	2,262.37	-252.24	-79.53	264.48	0.00	0.00	0.00
2,400.00	21.87	197.50	2,355.18	-287.77	-90.73	301.73	0.00	0.00	0.00
2,500.00	21.87	197.50	2,447.98	-323.30	-101.93	338.99	0.00	0.00	0.00
2,600.00	21.87	197.50	2,540.78	-358.83	-113.13	376.24	0.00	0.00	0.00
2,700.00	21.87	197.50	2,633.58	-394.36	-124.34	413.49	0.00	0.00	0.00
2,800.00	21.87	197.50	2,726.38	-429.89	-135.54	450.75	0.00	0.00	0.00
2,900.00	21.87	197.50	2,819.18	-465.42	-146.74	488.00	0.00	0.00	0.00
3,000.00	21.87	197.50	2,911.98	-500.95	-157.94	525.26	0.00	0.00	0.00
3,100.00	21.87	197.50	3,004.79	-536.48	-169.15	562.51	0.00	0.00	0.00
3,200.00	21.87	197.50	3,097.59	-572.01	-180.35	599.77	0.00	0.00	0.00
3,300.00	21.87	197.50	3,190.39	-607.54	-191.55	637.02	0.00	0.00	0.00
3,400.00	21.87	197.50	3,283.19	-643.07	-202.75	674.27	0.00	0.00	0.00
3,500.00	21.87	197.50	3,375.99	-678.60	-213.96	711.53	0.00	0.00	0.00
3,600.00	21.87	197.50	3,468.79	-714.13	-225.16	748.78	0.00	0.00	0.00
<b>PARKMAN</b>									
3,619.62	21.87	197.50	3,487.00	-721.10	-227.36	756.09	0.00	0.00	0.00
3,700.00	21.87	197.50	3,561.60	-749.66	-236.36	786.04	0.00	0.00	0.00
3,800.00	21.87	197.50	3,654.40	-785.19	-247.56	823.29	0.00	0.00	0.00
3,900.00	21.87	197.50	3,747.20	-820.72	-258.76	860.55	0.00	0.00	0.00
4,000.00	21.87	197.50	3,840.00	-856.25	-269.97	897.80	0.00	0.00	0.00
4,100.00	21.87	197.50	3,932.80	-891.78	-281.17	935.05	0.00	0.00	0.00
4,200.00	21.87	197.50	4,025.60	-927.31	-292.37	972.31	0.00	0.00	0.00
<b>SUSSEX</b>									
4,255.38	21.87	197.50	4,077.00	-946.99	-298.58	992.94	0.00	0.00	0.00
4,300.00	21.87	197.50	4,118.40	-962.84	-303.57	1,009.56	0.00	0.00	0.00
4,400.00	21.87	197.50	4,211.21	-998.37	-314.78	1,046.82	0.00	0.00	0.00
4,500.00	21.87	197.50	4,304.01	-1,033.90	-325.98	1,084.07	0.00	0.00	0.00
4,600.00	21.87	197.50	4,396.81	-1,069.43	-337.18	1,121.32	0.00	0.00	0.00
4,700.00	21.87	197.50	4,489.61	-1,104.96	-348.38	1,158.58	0.00	0.00	0.00
<b>SHANNON</b>									
4,740.29	21.87	197.50	4,527.00	-1,119.27	-352.90	1,173.59	0.00	0.00	0.00
4,800.00	21.87	197.50	4,582.41	-1,140.49	-359.59	1,195.83	0.00	0.00	0.00
4,900.00	21.87	197.50	4,675.21	-1,176.02	-370.79	1,233.09	0.00	0.00	0.00
5,000.00	21.87	197.50	4,768.01	-1,211.55	-381.99	1,270.34	0.00	0.00	0.00
<b>Start Drop -2.00</b>									
5,055.74	21.87	197.50	4,819.74	-1,231.35	-388.23	1,291.11	0.00	0.00	0.00
5,100.00	20.99	197.50	4,860.94	-1,246.78	-393.10	1,307.28	2.00	-2.00	0.00

<b>Database:</b>	EDM 2003.21 Single User Db	<b>Local Co-ordinate Reference:</b>	Well P_ENCORE 6-12
<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 6-12	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	P_ENCORE 6-12		
<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)
5,200.00	18.99	197.50	4,954.91	-1,279.37	-403.37	1,341.46	2.00	-2.00	0.00
5,300.00	16.99	197.50	5,050.02	-1,308.82	-412.66	1,372.34	2.00	-2.00	0.00
5,400.00	14.99	197.50	5,146.15	-1,335.09	-420.94	1,399.88	2.00	-2.00	0.00
5,500.00	12.99	197.50	5,243.18	-1,358.14	-428.21	1,424.05	2.00	-2.00	0.00
5,600.00	10.99	197.50	5,340.99	-1,377.95	-434.45	1,444.82	2.00	-2.00	0.00
5,700.00	8.99	197.50	5,439.47	-1,394.49	-439.67	1,462.16	2.00	-2.00	0.00
5,800.00	6.99	197.50	5,538.50	-1,407.74	-443.85	1,476.05	2.00	-2.00	0.00
5,900.00	4.99	197.50	5,637.95	-1,417.69	-446.98	1,486.48	2.00	-2.00	0.00
6,000.00	2.99	197.50	5,737.70	-1,424.32	-449.07	1,493.44	2.00	-2.00	0.00
6,100.00	0.99	197.50	5,837.64	-1,427.63	-450.12	1,496.90	2.00	-2.00	0.00
<b>Start 1983.00 hold at 6149.37 MD</b>									
6,149.37	0.00	0.00	5,887.00	-1,428.03	-450.24	1,497.33	2.00	-2.00	0.00
6,200.00	0.00	0.00	5,937.63	-1,428.03	-450.24	1,497.33	0.00	0.00	0.00
6,300.00	0.00	0.00	6,037.63	-1,428.03	-450.24	1,497.33	0.00	0.00	0.00
6,400.00	0.00	0.00	6,137.63	-1,428.03	-450.24	1,497.33	0.00	0.00	0.00
6,500.00	0.00	0.00	6,237.63	-1,428.03	-450.24	1,497.33	0.00	0.00	0.00
6,600.00	0.00	0.00	6,337.63	-1,428.03	-450.24	1,497.33	0.00	0.00	0.00
6,700.00	0.00	0.00	6,437.63	-1,428.03	-450.24	1,497.33	0.00	0.00	0.00
6,800.00	0.00	0.00	6,537.63	-1,428.03	-450.24	1,497.33	0.00	0.00	0.00
6,900.00	0.00	0.00	6,637.63	-1,428.03	-450.24	1,497.33	0.00	0.00	0.00
7,000.00	0.00	0.00	6,737.63	-1,428.03	-450.24	1,497.33	0.00	0.00	0.00
7,100.00	0.00	0.00	6,837.63	-1,428.03	-450.24	1,497.33	0.00	0.00	0.00
<b>NIO A</b>									
7,149.37	0.00	0.00	6,887.00	-1,428.03	-450.24	1,497.33	0.00	0.00	0.00
7,200.00	0.00	0.00	6,937.63	-1,428.03	-450.24	1,497.33	0.00	0.00	0.00
7,300.00	0.00	0.00	7,037.63	-1,428.03	-450.24	1,497.33	0.00	0.00	0.00
7,400.00	0.00	0.00	7,137.63	-1,428.03	-450.24	1,497.33	0.00	0.00	0.00
<b>CODELL</b>									
7,471.37	0.00	0.00	7,209.00	-1,428.03	-450.24	1,497.33	0.00	0.00	0.00
7,500.00	0.00	0.00	7,237.63	-1,428.03	-450.24	1,497.33	0.00	0.00	0.00
7,600.00	0.00	0.00	7,337.63	-1,428.03	-450.24	1,497.33	0.00	0.00	0.00
7,700.00	0.00	0.00	7,437.63	-1,428.03	-450.24	1,497.33	0.00	0.00	0.00
7,800.00	0.00	0.00	7,537.63	-1,428.03	-450.24	1,497.33	0.00	0.00	0.00
7,900.00	0.00	0.00	7,637.63	-1,428.03	-450.24	1,497.33	0.00	0.00	0.00
<b>JSAND</b>									
7,967.37	0.00	0.00	7,705.00	-1,428.03	-450.24	1,497.33	0.00	0.00	0.00
8,000.00	0.00	0.00	7,737.63	-1,428.03	-450.24	1,497.33	0.00	0.00	0.00
8,100.00	0.00	0.00	7,837.63	-1,428.03	-450.24	1,497.33	0.00	0.00	0.00
<b>PBHL_ENCORE 6-12(1980 FNL 1980 FWL)50'TGT RAD</b>									
8,132.37	0.00	0.00	7,870.00	-1,428.03	-450.24	1,497.33	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 6-12	0.00	0.00	7,870.00	-1,428.03	-450.24	1,394,903.34	3,151,177.74	40° 24' 58.108 N	104° 57' 25.412 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 6-12
<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 6-12	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	P_ENCORE 6-12		
<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 (°)	
3,619.62	3,487.00	PARKMAN				
4,255.38	4,077.00	SUSSEX				
4,740.29	4,527.00	SHANNON				
7,149.37	6,887.00	NIO A				
7,471.37	7,209.00	CODELL				
7,967.37	7,705.00	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	
2,143.62	2,117.26	-196.68	-62.01	Start 2912.12 hold at 2143.62 MD	
5,055.74	4,819.74	-1,231.35	-388.23	Start Drop -2.00	
6,149.37	5,887.00	-1,428.03	-450.24	Start 1983.00 hold at 6149.37 MD	
8,132.37	7,870.00	-1,428.03	-450.24	TD at 8132.37	



# **US ROCKIES REGION PLANNING**

**COLORADO NORTHERN ZONE - 83  
LARIMER\_ENCORE 3-12 PAD  
P\_ENCORE 6-12**

**P\_ENCORE 6-12  
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 6-12
<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 6-12	<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 6-12	<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	8,132.37	PLAN #1 3-22-10 RHS (P_ENCORE 6-12)	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	30.25	25.79	6.780	CC
P_ENCORE 18-12 - P_ENCORE 18-12 - PLAN #1 3-22-	1,100.00	1,100.31	30.41	25.75	6.524	ES
P_ENCORE 18-12 - P_ENCORE 18-12 - PLAN #1 3-22-	1,200.00	1,200.90	31.74	26.72	6.327	SF
P_ENCORE 21-12 - P_ENCORE 21-12 - PLAN #1 3-22-	1,050.00	1,050.00	20.04	15.58	4.492	CC
P_ENCORE 21-12 - P_ENCORE 21-12 - PLAN #1 3-22-	1,100.00	1,100.30	20.09	15.43	4.313	ES
P_ENCORE 21-12 - P_ENCORE 21-12 - PLAN #1 3-22-	1,200.00	1,200.82	20.71	15.70	4.136	SF
P_ENCORE 2-12 - P_ENCORE 2-12 - PLAN #1 3-22-10	1,050.00	1,050.00	60.12	55.66	13.475	CC, ES
P_ENCORE 2-12 - P_ENCORE 2-12 - PLAN #1 3-22-10	1,200.00	1,200.27	63.46	58.43	12.617	SF
P_ENCORE 3-12 - P_ENCORE 3-12 - PLAN #1 3-22-10	1,050.00	1,050.00	40.09	35.62	8.985	CC, ES
P_ENCORE 3-12 - P_ENCORE 3-12 - PLAN #1 3-22-10	1,200.00	1,200.64	42.58	37.55	8.472	SF
P_ENCORE 4-12 - P_ENCORE 4-12 - PLAN #1 3-22-10	1,050.00	1,050.00	50.29	45.82	11.271	CC, ES
P_ENCORE 4-12 - P_ENCORE 4-12 - PLAN #1 3-22-10	1,200.00	1,200.11	53.77	48.74	10.682	SF
P_ENCORE 5-12 - P_ENCORE 5-12 - PLAN #1 3-22-10	490.47	490.61	8.00	6.09	4.193	CC
P_ENCORE 5-12 - P_ENCORE 5-12 - PLAN #1 3-22-10	500.00	500.12	8.03	6.08	4.119	ES, SF

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						
Measured Depth	Vertical Depth	Measured Depth	Vertical Depth	Reference	Offset	Highside Toolface	Offset Wellbore Centre		Between Centres	Between Ellipses	Minimum Separation	Separation Factor	Warning
(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(°)	+N/-S (ft)	+E/-W (ft)	(ft)	(ft)	(ft)		
0.00	0.00	0.00	0.00	0.00	0.00	1.05	30.24	0.56	30.25				
100.00	100.00	100.00	100.00	0.10	0.10	1.05	30.24	0.56	30.25	30.06	0.19	158.335	
200.00	200.00	200.00	200.00	0.32	0.32	1.05	30.24	0.56	30.25	29.61	0.64	47.223	
300.00	300.00	300.00	300.00	0.55	0.55	1.05	30.24	0.56	30.25	29.16	1.09	27.749	
400.00	400.00	400.00	400.00	0.77	0.77	1.05	30.24	0.56	30.25	28.71	1.54	19.647	
500.00	500.00	500.00	500.00	0.99	0.99	1.05	30.24	0.56	30.25	28.26	1.99	15.207	
600.00	600.00	600.00	600.00	1.22	1.22	1.05	30.24	0.56	30.25	27.81	2.44	12.404	
700.00	700.00	700.00	700.00	1.44	1.44	1.05	30.24	0.56	30.25	27.36	2.89	10.474	
800.00	800.00	800.00	800.00	1.67	1.67	1.05	30.24	0.56	30.25	26.91	3.34	9.063	
900.00	900.00	900.00	900.00	1.89	1.89	1.05	30.24	0.56	30.25	26.46	3.79	7.987	
1,000.00	1,000.00	1,000.00	1,000.00	2.12	2.12	1.05	30.24	0.56	30.25	26.01	4.24	7.140	
1,050.00	1,050.00	1,050.00	1,050.00	2.23	2.23	1.05	30.24	0.56	30.25	25.79	4.46	6.780	CC
1,100.00	1,100.00	1,100.31	1,100.31	2.33	2.33	163.12	29.99	0.20	30.41	25.75	4.66	6.524	ES
1,200.00	1,199.93	1,200.90	1,200.83	2.50	2.52	159.79	27.95	-2.69	31.74	26.72	5.02	6.327	SF

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 6-12
<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 6-12	<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 6-12	<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
1,300.00	1,299.68	1,301.38	1,301.06	2.69	2.72	153.94	23.87	-8.44	34.68	29.29	5.39	6.434	
1,400.00	1,399.13	1,401.67	1,400.78	2.89	2.94	146.92	17.78	-17.03	39.63	33.84	5.79	6.841	
1,500.00	1,498.15	1,501.69	1,499.82	3.12	3.18	139.99	9.70	-28.44	46.89	40.65	6.25	7.508	
1,600.00	1,596.63	1,601.39	1,597.99	3.39	3.46	133.92	-0.34	-42.61	56.61	49.84	6.77	8.364	
1,700.00	1,694.44	1,700.68	1,695.10	3.71	3.79	128.93	-12.29	-59.48	68.79	61.41	7.38	9.319	
1,800.00	1,791.46	1,799.51	1,790.99	4.08	4.17	124.95	-26.12	-78.99	83.37	75.27	8.10	10.293	
1,900.00	1,887.58	1,897.81	1,885.49	4.51	4.61	121.79	-41.76	-101.06	100.26	91.33	8.93	11.225	
2,000.00	1,982.68	1,995.53	1,978.46	5.01	5.11	119.26	-59.15	-125.61	119.39	109.50	9.89	12.074	
2,100.00	2,076.65	2,093.17	2,070.68	5.57	5.66	117.70	-77.69	-151.77	140.52	129.58	10.94	12.844	
2,143.62	2,117.26	2,135.69	2,110.84	5.83	5.91	117.48	-85.77	-163.18	150.25	138.83	11.42	13.155	
2,200.00	2,169.57	2,190.60	2,162.70	6.19	6.24	117.58	-96.21	-177.91	163.02	150.95	12.07	13.510	
2,300.00	2,262.37	2,288.01	2,254.69	6.84	6.83	117.72	-114.72	-204.03	185.66	172.42	13.24	14.024	
2,400.00	2,355.18	2,385.41	2,346.68	7.51	7.43	117.82	-133.23	-230.16	208.31	193.87	14.44	14.424	
2,500.00	2,447.98	2,482.81	2,438.66	8.19	8.05	117.91	-151.75	-256.28	230.96	215.29	15.67	14.742	
2,600.00	2,540.78	2,580.21	2,530.65	8.88	8.67	117.98	-170.26	-282.41	253.60	236.70	16.91	14.999	
2,700.00	2,633.58	2,677.61	2,622.64	9.58	9.30	118.04	-188.77	-308.54	276.25	258.09	18.16	15.209	
2,800.00	2,726.38	2,775.01	2,714.63	10.28	9.94	118.09	-207.28	-334.66	298.90	279.47	19.43	15.384	
2,900.00	2,819.18	2,872.41	2,806.61	11.00	10.58	118.13	-225.79	-360.79	321.55	300.84	20.70	15.530	
3,000.00	2,911.98	2,969.81	2,898.60	11.71	11.22	118.17	-244.31	-386.91	344.20	322.21	21.99	15.655	
3,100.00	3,004.79	3,067.22	2,990.59	12.43	11.87	118.20	-262.82	-413.04	366.84	343.57	23.28	15.761	
3,200.00	3,097.59	3,164.62	3,082.58	13.15	12.52	118.23	-281.33	-439.17	389.49	364.92	24.57	15.854	
3,300.00	3,190.39	3,262.02	3,174.56	13.87	13.17	118.26	-299.84	-465.29	412.14	386.28	25.87	15.934	
3,400.00	3,283.19	3,359.42	3,266.55	14.60	13.82	118.28	-318.36	-491.42	434.79	407.62	27.17	16.005	
3,500.00	3,375.99	3,456.82	3,358.54	15.33	14.47	118.30	-336.87	-517.54	457.44	428.97	28.47	16.068	
3,600.00	3,468.79	3,554.22	3,450.53	16.06	15.13	118.32	-355.38	-543.67	480.09	450.31	29.77	16.124	
3,700.00	3,561.60	3,651.62	3,542.52	16.79	15.79	118.34	-373.89	-569.80	502.74	471.65	31.08	16.174	
3,800.00	3,654.40	3,749.03	3,634.50	17.52	16.45	118.35	-392.41	-595.92	525.38	492.99	32.39	16.220	
3,900.00	3,747.20	3,846.43	3,726.49	18.25	17.11	118.37	-410.92	-622.05	548.03	514.33	33.70	16.261	
4,000.00	3,840.00	3,943.83	3,818.48	18.99	17.77	118.38	-429.43	-648.17	570.68	535.67	35.01	16.298	
4,100.00	3,932.80	4,041.23	3,910.47	19.72	18.43	118.39	-447.94	-674.30	593.33	557.00	36.33	16.333	
4,200.00	4,025.60	4,138.63	4,002.45	20.45	19.09	118.40	-466.45	-700.43	615.98	578.34	37.64	16.364	
4,300.00	4,118.40	4,236.03	4,094.44	21.19	19.75	118.41	-484.97	-726.55	638.63	599.67	38.96	16.393	
4,400.00	4,211.21	4,333.43	4,186.43	21.93	20.41	118.42	-503.48	-752.68	661.28	621.01	40.27	16.420	
4,500.00	4,304.01	4,430.83	4,278.42	22.66	21.08	118.43	-521.99	-778.80	683.93	642.34	41.59	16.445	
4,600.00	4,396.81	4,528.24	4,370.41	23.40	21.74	118.44	-540.50	-804.93	706.58	663.67	42.90	16.469	
4,700.00	4,489.61	4,625.64	4,462.39	24.14	22.40	118.45	-559.02	-831.06	729.22	685.00	44.22	16.490	
4,800.00	4,582.41	4,723.04	4,554.38	24.88	23.07	118.46	-577.53	-857.18	751.87	706.34	45.54	16.511	
4,900.00	4,675.21	4,820.44	4,646.37	25.62	23.73	118.46	-596.04	-883.31	774.52	727.67	46.85	16.530	
5,000.00	4,768.01	4,917.84	4,738.36	26.36	24.40	118.47	-614.55	-909.43	797.17	749.00	48.17	16.548	
5,055.74	4,819.74	4,972.13	4,789.63	26.77	24.77	118.47	-624.87	-924.00	809.80	760.89	48.91	16.558	
5,100.00	4,860.94	5,015.28	4,830.38	27.04	25.06	118.63	-633.07	-935.57	819.66	770.19	49.47	16.569	
5,200.00	4,954.91	5,112.98	4,922.65	27.54	25.73	118.82	-651.64	-961.78	840.78	790.12	50.65	16.599	
5,300.00	5,050.02	5,213.36	5,017.70	27.99	26.33	118.81	-670.29	-988.10	860.17	808.41	51.76	16.619	
5,400.00	5,146.15	5,315.61	5,115.57	28.42	26.80	118.80	-687.41	-1,012.25	877.54	824.85	52.69	16.655	
5,500.00	5,243.18	5,418.49	5,215.04	28.80	27.22	118.78	-702.58	-1,033.67	892.82	839.29	53.53	16.678	
5,600.00	5,340.99	5,521.93	5,315.93	29.14	27.60	118.77	-715.74	-1,052.24	905.98	851.70	54.28	16.691	
5,700.00	5,439.47	5,625.84	5,418.05	29.44	27.93	118.76	-726.84	-1,067.90	917.00	862.07	54.93	16.694	
5,800.00	5,538.50	5,730.16	5,521.20	29.70	28.22	118.75	-735.82	-1,080.57	925.85	870.37	55.48	16.687	
5,900.00	5,637.95	5,834.80	5,625.17	29.91	28.45	118.73	-742.63	-1,090.19	932.51	876.57	55.94	16.670	
6,000.00	5,737.70	5,939.68	5,729.74	30.07	28.64	118.72	-747.26	-1,096.72	936.97	880.68	56.29	16.645	
6,100.00	5,837.64	6,044.70	5,834.67	30.19	28.78	118.70	-749.67	-1,100.13	939.22	882.67	56.55	16.608	
6,149.37	5,887.00	6,096.58	5,886.54	30.24	28.83	-43.81	-750.04	-1,100.65	939.52	882.87	56.65	16.584	

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 6-12
<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 6-12	<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 6-12	<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
6,200.00	5,937.63	6,147.67	5,937.63	30.28	28.88	-43.81	-750.05	-1,100.66	939.52	882.77	56.75	16.556	
6,300.00	6,037.63	6,247.67	6,037.63	30.36	28.97	-43.81	-750.05	-1,100.66	939.52	882.60	56.92	16.505	
6,400.00	6,137.63	6,347.67	6,137.63	30.44	29.06	-43.81	-750.05	-1,100.66	939.52	882.42	57.10	16.454	
6,500.00	6,237.63	6,447.67	6,237.63	30.52	29.15	-43.81	-750.05	-1,100.66	939.52	882.24	57.28	16.402	
6,600.00	6,337.63	6,547.67	6,337.63	30.60	29.24	-43.81	-750.05	-1,100.66	939.52	882.06	57.47	16.349	
6,700.00	6,437.63	6,647.67	6,437.63	30.68	29.34	-43.81	-750.05	-1,100.66	939.52	881.87	57.65	16.296	
6,800.00	6,537.63	6,747.67	6,537.63	30.77	29.43	-43.81	-750.05	-1,100.66	939.52	881.68	57.84	16.243	
6,900.00	6,637.63	6,847.67	6,637.63	30.85	29.53	-43.81	-750.05	-1,100.66	939.52	881.49	58.03	16.189	
7,000.00	6,737.63	6,947.67	6,737.63	30.94	29.63	-43.81	-750.05	-1,100.66	939.52	881.29	58.23	16.135	
7,100.00	6,837.63	7,047.67	6,837.63	31.03	29.73	-43.81	-750.05	-1,100.66	939.52	881.09	58.43	16.080	
7,200.00	6,937.63	7,147.67	6,937.63	31.12	29.83	-43.81	-750.05	-1,100.66	939.52	880.89	58.63	16.025	
7,300.00	7,037.63	7,247.67	7,037.63	31.21	29.94	-43.81	-750.05	-1,100.66	939.52	880.69	58.83	15.969	
7,400.00	7,137.63	7,347.67	7,137.63	31.30	30.04	-43.81	-750.05	-1,100.66	939.52	880.48	59.04	15.913	
7,500.00	7,237.63	7,447.67	7,237.63	31.40	30.15	-43.81	-750.05	-1,100.66	939.52	880.27	59.25	15.857	
7,600.00	7,337.63	7,547.67	7,337.63	31.49	30.25	-43.81	-750.05	-1,100.66	939.52	880.06	59.46	15.801	
7,700.00	7,437.63	7,647.67	7,437.63	31.59	30.36	-43.81	-750.05	-1,100.66	939.52	879.84	59.68	15.744	
7,800.00	7,537.63	7,747.67	7,537.63	31.69	30.47	-43.81	-750.05	-1,100.66	939.52	879.63	59.89	15.687	
7,900.00	7,637.63	7,847.67	7,637.63	31.79	30.58	-43.81	-750.05	-1,100.66	939.52	879.41	60.11	15.629	
8,000.00	7,737.63	7,947.67	7,737.63	31.89	30.69	-43.81	-750.05	-1,100.66	939.52	879.19	60.34	15.572	
8,100.00	7,837.63	8,047.67	7,837.63	31.99	30.81	-43.81	-750.05	-1,100.66	939.52	878.96	60.56	15.514	
8,132.37	7,870.00	8,080.03	7,870.00	32.02	30.84	-43.81	-750.05	-1,100.66	939.52	878.89	60.63	15.495	

<b>Company:</b>	US ROCKIES REGION PLANNING	<b>Local Co-ordinate Reference:</b>	Well P_ENCORE 6-12
<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 6-12	<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 6-12	<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
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	0.80	20.04	0.28	20.04				
100.00	100.00	100.00	100.00	0.10	0.10	0.80	20.04	0.28	20.04	19.85	0.19	104.906	
200.00	200.00	200.00	200.00	0.32	0.32	0.80	20.04	0.28	20.04	19.40	0.64	31.288	
300.00	300.00	300.00	300.00	0.55	0.55	0.80	20.04	0.28	20.04	18.95	1.09	18.386	
400.00	400.00	400.00	400.00	0.77	0.77	0.80	20.04	0.28	20.04	18.50	1.54	13.018	
500.00	500.00	500.00	500.00	0.99	0.99	0.80	20.04	0.28	20.04	18.05	1.99	10.076	
600.00	600.00	600.00	600.00	1.22	1.22	0.80	20.04	0.28	20.04	17.60	2.44	8.218	
700.00	700.00	700.00	700.00	1.44	1.44	0.80	20.04	0.28	20.04	17.15	2.89	6.939	
800.00	800.00	800.00	800.00	1.67	1.67	0.80	20.04	0.28	20.04	16.70	3.34	6.005	
900.00	900.00	900.00	900.00	1.89	1.89	0.80	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	0.80	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	0.80	20.04	0.28	20.04	15.58	4.46	4.492 CC	
1,100.00	1,100.00	1,100.30	1,100.29	2.33	2.33	164.32	19.66	0.51	20.09	15.43	4.66	4.313 ES	
1,200.00	1,199.93	1,200.82	1,200.75	2.50	2.51	172.29	16.64	2.33	20.71	15.70	5.01	4.136 SF	
1,300.00	1,299.68	1,301.16	1,300.84	2.69	2.70	-173.75	10.63	5.98	23.00	17.63	5.37	4.286	
1,400.00	1,399.13	1,401.19	1,400.31	2.89	2.91	-158.45	1.65	11.41	28.36	22.60	5.75	4.928	
1,500.00	1,498.15	1,500.79	1,498.93	3.12	3.15	-145.97	-10.24	18.61	37.44	31.24	6.19	6.045	
1,600.00	1,596.63	1,599.83	1,596.46	3.39	3.42	-137.16	-24.96	27.52	50.16	43.46	6.70	7.484	
1,700.00	1,694.44	1,698.30	1,692.82	3.71	3.74	-131.29	-42.30	38.02	66.20	58.91	7.30	9.075	
1,800.00	1,791.46	1,796.50	1,788.74	4.08	4.08	-128.92	-60.26	48.89	84.89	76.95	7.95	10.679	
1,900.00	1,887.58	1,894.28	1,884.27	4.51	4.45	-128.79	-78.14	59.71	105.78	97.13	8.65	12.226	
2,000.00	1,982.68	1,991.55	1,979.29	5.01	4.83	-129.79	-95.92	70.47	128.83	119.44	9.39	13.718	
2,100.00	2,076.65	2,088.17	2,073.68	5.57	5.23	-131.36	-113.58	81.17	154.17	144.01	10.16	15.174	
2,143.62	2,117.26	2,130.08	2,114.63	5.83	5.40	-132.14	-121.25	85.81	165.97	155.47	10.50	15.805	
2,200.00	2,169.57	2,184.16	2,167.45	6.19	5.63	-133.29	-131.13	91.79	181.56	170.59	10.97	16.554	
2,300.00	2,262.37	2,280.07	2,261.14	6.84	6.03	-134.92	-148.67	102.41	209.35	197.54	11.81	17.727	
2,400.00	2,355.18	2,375.98	2,354.84	7.51	6.45	-136.17	-166.21	113.02	237.26	224.59	12.67	18.731	
2,500.00	2,447.98	2,471.90	2,448.54	8.19	6.86	-137.15	-183.74	123.64	265.25	251.71	13.54	19.596	
2,600.00	2,540.78	2,567.81	2,542.24	8.88	7.29	-137.95	-201.28	134.25	293.30	278.88	14.41	20.348	
2,700.00	2,633.58	2,663.72	2,635.93	9.58	7.71	-138.60	-218.82	144.87	321.39	306.09	15.30	21.006	
2,800.00	2,726.38	2,759.64	2,729.63	10.28	8.14	-139.15	-236.35	155.48	349.52	333.32	16.19	21.585	
2,900.00	2,819.18	2,855.55	2,823.33	11.00	8.57	-139.62	-253.89	166.10	377.67	360.58	17.09	22.098	
3,000.00	2,911.98	2,951.46	2,917.03	11.71	9.01	-140.03	-271.43	176.71	405.84	387.84	17.99	22.556	
3,100.00	3,004.79	3,047.38	3,010.72	12.43	9.44	-140.38	-288.96	187.33	434.02	415.12	18.90	22.967	
3,200.00	3,097.59	3,143.29	3,104.42	13.15	9.88	-140.69	-306.50	197.95	462.22	442.42	19.81	23.338	
3,300.00	3,190.39	3,239.21	3,198.12	13.87	10.32	-140.96	-324.03	208.56	490.43	469.72	20.72	23.673	
3,400.00	3,283.19	3,335.12	3,291.82	14.60	10.76	-141.21	-341.57	219.18	518.65	497.02	21.63	23.979	
3,500.00	3,375.99	3,431.03	3,385.51	15.33	11.20	-141.42	-359.11	229.79	546.88	524.34	22.54	24.258	
3,600.00	3,468.79	3,526.95	3,479.21	16.06	11.65	-141.62	-376.64	240.41	575.11	551.65	23.46	24.515	
3,700.00	3,561.60	3,622.86	3,572.91	16.79	12.09	-141.80	-394.18	251.02	603.35	578.98	24.38	24.751	
3,800.00	3,654.40	3,718.77	3,666.61	17.52	12.53	-141.96	-411.72	261.64	631.60	606.30	25.30	24.969	
3,900.00	3,747.20	3,814.69	3,760.30	18.25	12.98	-142.11	-429.25	272.25	659.85	633.63	26.21	25.171	
4,000.00	3,840.00	3,910.60	3,854.00	18.99	13.42	-142.25	-446.79	282.87	688.10	660.97	27.13	25.359	
4,100.00	3,932.80	4,006.51	3,947.70	19.72	13.87	-142.37	-464.33	293.48	716.36	688.30	28.05	25.534	
4,200.00	4,025.60	4,102.43	4,041.39	20.45	14.32	-142.49	-481.86	304.10	744.61	715.64	28.98	25.698	
4,300.00	4,118.40	4,198.34	4,135.09	21.19	14.76	-142.60	-499.40	314.72	772.88	742.98	29.90	25.852	
4,400.00	4,211.21	4,294.25	4,228.79	21.93	15.21	-142.70	-516.93	325.33	801.14	770.32	30.82	25.997	
4,500.00	4,304.01	4,390.17	4,322.49	22.66	15.66	-142.79	-534.47	335.95	829.41	797.67	31.74	26.133	
4,600.00	4,396.81	4,486.08	4,416.18	23.40	16.11	-142.88	-552.01	346.56	857.67	825.01	32.66	26.261	
4,700.00	4,489.61	4,581.99	4,509.88	24.14	16.55	-142.96	-569.54	357.18	885.94	852.36	33.58	26.382	
4,800.00	4,582.41	4,677.91	4,603.58	24.88	17.00	-143.04	-587.08	367.79	914.21	879.71	34.50	26.497	
4,900.00	4,675.21	4,773.82	4,697.28	25.62	17.45	-143.11	-604.62	378.41	942.49	907.06	35.42	26.606	

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 6-12
<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 6-12	<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 6-12	<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	4,768.01	4,869.74	4,790.97	26.36	17.90	-143.18	-622.15	389.02	970.76	934.41	36.35	26.708	
5,055.74	4,819.74	4,923.20	4,843.20	26.77	18.15	-143.21	-631.93	394.94	986.52	949.65	36.87	26.758	
5,100.00	4,860.94	4,965.73	4,884.75	27.04	18.35	-143.38	-639.70	399.65	998.77	961.49	37.29	26.787	
5,200.00	4,954.91	5,062.35	4,979.14	27.54	18.80	-143.64	-657.37	410.34	1,024.51	986.33	38.17	26.838	
5,300.00	5,050.02	5,159.62	5,074.16	27.99	19.26	-143.76	-675.15	421.11	1,047.52	1,008.45	39.06	26.815	
5,400.00	5,146.15	5,257.41	5,169.69	28.42	19.72	-143.73	-693.03	431.93	1,067.79	1,027.84	39.95	26.727	
5,500.00	5,243.18	5,355.61	5,265.62	28.80	20.18	-143.56	-710.99	442.80	1,085.34	1,044.51	40.83	26.579	
5,600.00	5,340.99	5,451.55	5,359.54	29.14	20.54	-143.34	-727.72	452.93	1,100.27	1,058.68	41.59	26.458	
5,700.00	5,439.47	5,547.33	5,453.90	29.44	20.82	-143.15	-741.80	461.45	1,112.76	1,070.55	42.21	26.364	
5,800.00	5,538.50	5,643.64	5,549.26	29.70	21.07	-142.99	-753.23	468.37	1,122.78	1,080.04	42.74	26.271	
5,900.00	5,637.95	5,740.35	5,645.43	29.91	21.29	-142.88	-761.95	473.65	1,130.32	1,087.14	43.17	26.181	
6,000.00	5,737.70	5,837.36	5,742.19	30.07	21.47	-142.79	-767.89	477.24	1,135.34	1,091.83	43.51	26.094	
6,100.00	5,837.64	5,934.56	5,839.31	30.19	21.61	-142.74	-771.03	479.15	1,137.83	1,094.07	43.75	26.005	
6,149.37	5,887.00	5,982.57	5,887.33	30.24	21.68	54.77	-771.54	479.46	1,138.12	1,094.27	43.85	25.957	
6,171.49	5,909.12	6,004.37	5,909.12	30.26	21.71	54.77	-771.56	479.47	1,138.12	1,094.22	43.90	25.926	
6,200.00	5,937.63	6,032.88	5,937.63	30.28	21.74	54.77	-771.56	479.47	1,138.12	1,094.16	43.96	25.888	
6,300.00	6,037.63	6,132.88	6,037.63	30.36	21.85	54.77	-771.56	479.47	1,138.12	1,093.94	44.18	25.761	
6,400.00	6,137.63	6,232.88	6,137.63	30.44	21.96	54.77	-771.56	479.47	1,138.12	1,093.72	44.40	25.633	
6,500.00	6,237.63	6,332.88	6,237.63	30.52	22.08	54.77	-771.56	479.47	1,138.12	1,093.50	44.62	25.505	
6,600.00	6,337.63	6,432.88	6,337.63	30.60	22.19	54.77	-771.56	479.47	1,138.12	1,093.27	44.85	25.376	
6,700.00	6,437.63	6,532.88	6,437.63	30.68	22.31	54.77	-771.56	479.47	1,138.12	1,093.04	45.08	25.246	
6,800.00	6,537.63	6,632.88	6,537.63	30.77	22.43	54.77	-771.56	479.47	1,138.12	1,092.81	45.31	25.116	
6,900.00	6,637.63	6,732.88	6,637.63	30.85	22.55	54.77	-771.56	479.47	1,138.12	1,092.57	45.55	24.986	
7,000.00	6,737.63	6,832.88	6,737.63	30.94	22.67	54.77	-771.56	479.47	1,138.12	1,092.33	45.79	24.855	
7,100.00	6,837.63	6,932.88	6,837.63	31.03	22.80	54.77	-771.56	479.47	1,138.12	1,092.09	46.03	24.723	
7,200.00	6,937.63	7,032.88	6,937.63	31.12	22.92	54.77	-771.56	479.47	1,138.12	1,091.84	46.28	24.592	
7,300.00	7,037.63	7,132.88	7,037.63	31.21	23.05	54.77	-771.56	479.47	1,138.12	1,091.59	46.53	24.460	
7,400.00	7,137.63	7,232.88	7,137.63	31.30	23.18	54.77	-771.56	479.47	1,138.12	1,091.34	46.78	24.328	
7,500.00	7,237.63	7,332.88	7,237.63	31.40	23.31	54.77	-771.56	479.47	1,138.12	1,091.08	47.04	24.196	
7,600.00	7,337.63	7,432.88	7,337.63	31.49	23.44	54.77	-771.56	479.47	1,138.12	1,090.82	47.30	24.064	
7,700.00	7,437.63	7,532.88	7,437.63	31.59	23.57	54.77	-771.56	479.47	1,138.12	1,090.56	47.56	23.932	
7,800.00	7,537.63	7,632.88	7,537.63	31.69	23.71	54.77	-771.56	479.47	1,138.12	1,090.30	47.82	23.800	
7,900.00	7,637.63	7,732.88	7,637.63	31.79	23.84	54.77	-771.56	479.47	1,138.12	1,090.03	48.09	23.668	
8,000.00	7,737.63	7,832.88	7,737.63	31.89	23.98	54.77	-771.56	479.47	1,138.12	1,089.76	48.36	23.537	
8,100.00	7,837.63	7,932.88	7,837.63	31.99	24.12	54.77	-771.56	479.47	1,138.12	1,089.49	48.63	23.405	
8,132.37	7,870.00	7,965.25	7,870.00	32.02	24.16	54.77	-771.56	479.47	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 6-12
<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 6-12	<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 6-12	<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	1.06	60.11	1.11	60.12				
100.00	100.00	100.00	100.00	0.10	0.10	1.06	60.11	1.11	60.12	59.93	0.19	314.678	
200.00	200.00	200.00	200.00	0.32	0.32	1.06	60.11	1.11	60.12	59.48	0.64	93.851	
300.00	300.00	300.00	300.00	0.55	0.55	1.06	60.11	1.11	60.12	59.03	1.09	55.150	
400.00	400.00	400.00	400.00	0.77	0.77	1.06	60.11	1.11	60.12	58.58	1.54	39.048	
500.00	500.00	500.00	500.00	0.99	0.99	1.06	60.11	1.11	60.12	58.13	1.99	30.223	
600.00	600.00	600.00	600.00	1.22	1.22	1.06	60.11	1.11	60.12	57.68	2.44	24.652	
700.00	700.00	700.00	700.00	1.44	1.44	1.06	60.11	1.11	60.12	57.23	2.89	20.815	
800.00	800.00	800.00	800.00	1.67	1.67	1.06	60.11	1.11	60.12	56.78	3.34	18.012	
900.00	900.00	900.00	900.00	1.89	1.89	1.06	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	1.06	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	1.06	60.11	1.11	60.12	55.66	4.46	13.475 CC, ES	
1,100.00	1,100.00	1,100.16	1,100.16	2.33	2.34	164.09	60.03	1.55	60.47	55.81	4.66	12.966	
1,200.00	1,199.93	1,200.27	1,200.20	2.50	2.53	168.07	59.41	4.99	63.46	58.43	5.03	12.617 SF	
1,300.00	1,299.68	1,299.76	1,299.44	2.69	2.74	174.90	58.19	11.82	70.23	64.82	5.41	12.989	
1,400.00	1,399.13	1,398.23	1,397.38	2.89	2.96	-177.20	56.38	21.92	81.83	76.03	5.80	14.111	
1,500.00	1,498.15	1,495.31	1,493.52	3.12	3.21	-169.76	54.02	35.11	98.97	92.76	6.21	15.935	
1,600.00	1,596.63	1,590.65	1,587.44	3.39	3.48	-163.50	51.14	51.18	121.83	115.18	6.65	18.323	
1,700.00	1,694.44	1,683.91	1,678.75	3.71	3.79	-158.53	47.79	69.87	150.27	143.15	7.12	21.102	
1,800.00	1,791.46	1,774.82	1,767.11	4.08	4.13	-154.64	44.02	90.89	183.99	176.36	7.63	24.106	
1,900.00	1,887.58	1,865.03	1,854.18	4.51	4.51	-151.60	39.86	114.13	222.50	214.32	8.19	27.174	
2,000.00	1,982.68	1,955.67	1,941.56	5.01	4.93	-149.56	35.61	137.82	264.29	255.51	8.78	30.087	
2,100.00	2,076.65	2,045.10	2,027.78	5.57	5.35	-148.27	31.42	161.19	308.89	299.48	9.41	32.832	
2,143.62	2,117.26	2,083.71	2,065.00	5.83	5.53	-147.87	29.61	171.28	329.19	319.50	9.69	33.978	
2,200.00	2,169.57	2,133.43	2,112.94	6.19	5.78	-147.73	27.28	184.28	355.74	345.63	10.10	35.212	
2,300.00	2,262.37	2,221.64	2,197.99	6.84	6.22	-147.53	23.15	207.33	402.84	391.98	10.86	37.108	
2,400.00	2,355.18	2,309.85	2,283.03	7.51	6.67	-147.37	19.02	230.39	449.94	438.31	11.63	38.695	
2,500.00	2,447.98	2,398.05	2,368.07	8.19	7.12	-147.24	14.89	253.44	497.04	484.63	12.42	40.035	
2,600.00	2,540.78	2,486.26	2,453.11	8.88	7.59	-147.14	10.76	276.50	544.15	530.93	13.22	41.176	
2,700.00	2,633.58	2,574.47	2,538.15	9.58	8.05	-147.05	6.63	299.55	591.25	577.23	14.03	42.156	
2,800.00	2,726.38	2,662.67	2,623.19	10.28	8.52	-146.97	2.50	322.61	638.36	623.52	14.84	43.006	
2,900.00	2,819.18	2,750.88	2,708.23	11.00	9.00	-146.90	-1.64	345.66	685.47	669.80	15.67	43.749	
3,000.00	2,911.98	2,839.09	2,793.27	11.71	9.47	-146.85	-5.77	368.71	732.58	716.08	16.50	44.402	
3,100.00	3,004.79	2,927.29	2,878.31	12.43	9.95	-146.80	-9.90	391.77	779.68	762.35	17.33	44.981	
3,200.00	3,097.59	3,015.50	2,963.35	13.15	10.43	-146.75	-14.03	414.82	826.79	808.62	18.17	45.497	
3,300.00	3,190.39	3,103.71	3,048.39	13.87	10.91	-146.71	-18.16	437.88	873.90	854.89	19.01	45.959	
3,400.00	3,283.19	3,191.91	3,133.43	14.60	11.40	-146.68	-22.29	460.93	921.01	901.16	19.86	46.376	
3,500.00	3,375.99	3,280.12	3,218.47	15.33	11.88	-146.64	-26.42	483.98	968.13	947.42	20.71	46.754	
3,600.00	3,468.79	3,368.32	3,303.51	16.06	12.37	-146.62	-30.56	507.04	1,015.24	993.68	21.56	47.099	
3,700.00	3,561.60	3,456.53	3,388.55	16.79	12.85	-146.59	-34.69	530.09	1,062.35	1,039.94	22.41	47.414	
3,800.00	3,654.40	3,544.74	3,473.59	17.52	13.34	-146.56	-38.82	553.15	1,109.46	1,086.20	23.26	47.703	
3,900.00	3,747.20	3,632.94	3,558.63	18.25	13.83	-146.54	-42.95	576.20	1,156.57	1,132.46	24.11	47.970	
4,000.00	3,840.00	3,721.15	3,643.67	18.99	14.32	-146.52	-47.08	599.26	1,203.68	1,178.72	24.96	48.218	
4,100.00	3,932.80	3,809.36	3,728.71	19.72	14.81	-146.50	-51.21	622.31	1,250.79	1,224.97	25.82	48.447	
4,200.00	4,025.60	3,897.56	3,813.75	20.45	15.30	-146.48	-55.34	645.36	1,297.90	1,271.23	26.67	48.661	
4,300.00	4,118.40	3,985.77	3,898.79	21.19	15.79	-146.47	-59.48	668.42	1,345.01	1,317.49	27.53	48.862	
4,400.00	4,211.21	4,073.98	3,983.83	21.93	16.29	-146.45	-63.61	691.47	1,392.13	1,363.74	28.38	49.050	
4,500.00	4,304.01	4,162.18	4,068.87	22.66	16.78	-146.44	-67.74	714.53	1,439.24	1,410.00	29.24	49.221	
4,600.00	4,396.81	4,250.39	4,153.91	23.40	17.27	-146.43	-71.87	737.58	1,486.35	1,456.24	30.11	49.364	
4,700.00	4,489.61	4,338.60	4,238.95	24.14	17.77	-146.41	-76.00	760.63	1,533.46	1,502.48	30.98	49.498	
4,800.00	4,582.41	4,426.80	4,323.99	24.88	18.26	-146.40	-80.13	783.69	1,580.57	1,548.72	31.85	49.623	
4,900.00	4,675.21	4,515.01	4,409.03	25.62	18.75	-146.39	-84.26	806.74	1,627.69	1,594.96	32.72	49.741	

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 6-12
<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 6-12	<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 6-12	<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	4,768.01	4,603.22	4,494.07	26.36	19.25	-146.38	-88.40	829.80	1,674.80	1,641.20	33.60	49.851	
5,055.74	4,819.74	4,652.38	4,541.47	26.77	19.52	-146.37	-90.70	842.65	1,701.06	1,666.98	34.08	49.910	
5,100.00	4,860.94	4,691.55	4,579.24	27.04	19.74	-146.62	-92.53	852.89	1,721.66	1,687.14	34.52	49.873	
5,200.00	4,954.91	4,780.99	4,665.46	27.54	20.24	-147.09	-96.72	876.26	1,766.33	1,730.88	35.45	49.830	
5,300.00	5,050.02	4,871.64	4,752.86	27.99	20.75	-147.45	-100.97	899.95	1,808.36	1,772.01	36.35	49.742	
5,400.00	5,146.15	4,963.38	4,841.31	28.42	21.27	-147.72	-105.26	923.93	1,847.72	1,810.49	37.24	49.619	
5,500.00	5,243.18	5,056.11	4,930.70	28.80	21.79	-147.89	-109.61	948.17	1,884.38	1,846.29	38.09	49.467	
5,600.00	5,340.99	5,149.71	5,020.94	29.14	22.31	-147.97	-113.99	972.63	1,918.31	1,879.39	38.92	49.294	
5,700.00	5,439.47	5,244.06	5,111.91	29.44	22.85	-147.98	-118.41	997.29	1,949.49	1,909.79	39.70	49.106	
5,800.00	5,538.50	5,388.95	5,252.16	29.70	23.49	-147.74	-124.81	1,033.02	1,977.13	1,936.58	40.55	48.756	
5,900.00	5,637.95	5,563.72	5,423.47	29.91	24.09	-147.47	-130.90	1,066.97	1,998.47	1,957.16	41.32	48.371	
6,000.00	5,737.70	5,743.14	5,601.18	30.07	24.56	-147.28	-135.22	1,091.07	2,013.07	1,971.14	41.93	48.013	
6,100.00	5,837.64	5,925.54	5,783.05	30.19	24.89	-147.17	-137.59	1,104.29	2,020.73	1,978.36	42.38	47.685	
6,149.37	5,887.00	6,016.13	5,873.61	30.24	25.01	50.35	-138.00	1,106.61	2,021.92	1,979.38	42.54	47.528	
6,200.00	5,937.63	6,080.15	5,937.63	30.28	25.07	50.36	-138.03	1,106.76	2,021.97	1,979.30	42.68	47.378	
6,300.00	6,037.63	6,180.15	6,037.63	30.36	25.18	50.36	-138.03	1,106.76	2,021.97	1,979.06	42.91	47.121	
6,400.00	6,137.63	6,280.15	6,137.63	30.44	25.29	50.36	-138.03	1,106.76	2,021.97	1,978.82	43.15	46.861	
6,500.00	6,237.63	6,380.15	6,237.63	30.52	25.41	50.36	-138.03	1,106.76	2,021.97	1,978.58	43.39	46.601	
6,600.00	6,337.63	6,480.15	6,337.63	30.60	25.52	50.36	-138.03	1,106.76	2,021.97	1,978.34	43.63	46.340	
6,700.00	6,437.63	6,580.15	6,437.63	30.68	25.64	50.36	-138.03	1,106.76	2,021.97	1,978.09	43.88	46.078	
6,800.00	6,537.63	6,680.15	6,537.63	30.77	25.75	50.36	-138.03	1,106.76	2,021.97	1,977.84	44.13	45.816	
6,900.00	6,637.63	6,780.15	6,637.63	30.85	25.87	50.36	-138.03	1,106.76	2,021.97	1,977.59	44.39	45.554	
7,000.00	6,737.63	6,880.15	6,737.63	30.94	25.99	50.36	-138.03	1,106.76	2,021.97	1,977.33	44.64	45.292	
7,100.00	6,837.63	6,980.15	6,837.63	31.03	26.12	50.36	-138.03	1,106.76	2,021.97	1,977.07	44.90	45.029	
7,200.00	6,937.63	7,080.15	6,937.63	31.12	26.24	50.36	-138.03	1,106.76	2,021.97	1,976.81	45.17	44.767	
7,300.00	7,037.63	7,180.15	7,037.63	31.21	26.36	50.36	-138.03	1,106.76	2,021.97	1,976.54	45.43	44.505	
7,400.00	7,137.63	7,280.15	7,137.63	31.30	26.49	50.36	-138.03	1,106.76	2,021.97	1,976.27	45.70	44.243	
7,500.00	7,237.63	7,380.15	7,237.63	31.40	26.62	50.36	-138.03	1,106.76	2,021.97	1,976.00	45.97	43.982	
7,600.00	7,337.63	7,480.15	7,337.63	31.49	26.74	50.36	-138.03	1,106.76	2,021.97	1,975.73	46.25	43.721	
7,700.00	7,437.63	7,580.15	7,437.63	31.59	26.87	50.36	-138.03	1,106.76	2,021.97	1,975.45	46.52	43.461	
7,800.00	7,537.63	7,680.15	7,537.63	31.69	27.00	50.36	-138.03	1,106.76	2,021.97	1,975.17	46.80	43.201	
7,900.00	7,637.63	7,780.15	7,637.63	31.79	27.14	50.36	-138.03	1,106.76	2,021.97	1,974.89	47.09	42.942	
8,000.00	7,737.63	7,880.15	7,737.63	31.89	27.27	50.36	-138.03	1,106.76	2,021.97	1,974.60	47.37	42.683	
8,100.00	7,837.63	7,980.15	7,837.63	31.99	27.40	50.36	-138.03	1,106.76	2,021.97	1,974.31	47.66	42.426	
8,132.37	7,870.00	8,012.52	7,870.00	32.02	27.45	50.36	-138.03	1,106.76	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_ENCORE 6-12
<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 6-12	<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 6-12	<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	40.08	0.84	40.09				
100.00	100.00	100.00	100.00	0.10	0.10	1.19	40.08	0.84	40.09	39.89	0.19	209.816	
200.00	200.00	200.00	200.00	0.32	0.32	1.19	40.08	0.84	40.09	39.45	0.64	62.577	
300.00	300.00	300.00	300.00	0.55	0.55	1.19	40.08	0.84	40.09	39.00	1.09	36.772	
400.00	400.00	400.00	400.00	0.77	0.77	1.19	40.08	0.84	40.09	38.55	1.54	26.036	
500.00	500.00	500.00	500.00	0.99	0.99	1.19	40.08	0.84	40.09	38.10	1.99	20.152	
600.00	600.00	600.00	600.00	1.22	1.22	1.19	40.08	0.84	40.09	37.65	2.44	16.437	
700.00	700.00	700.00	700.00	1.44	1.44	1.19	40.08	0.84	40.09	37.20	2.89	13.879	
800.00	800.00	800.00	800.00	1.67	1.67	1.19	40.08	0.84	40.09	36.75	3.34	12.010	
900.00	900.00	900.00	900.00	1.89	1.89	1.19	40.08	0.84	40.09	36.30	3.79	10.584	
1,000.00	1,000.00	1,000.00	1,000.00	2.12	2.12	1.19	40.08	0.84	40.09	35.85	4.24	9.461	
1,050.00	1,050.00	1,050.00	1,050.00	2.23	2.23	1.19	40.08	0.84	40.09	35.62	4.46	8.985 CC, ES	
1,100.00	1,100.00	1,100.24	1,100.24	2.33	2.33	163.28	39.93	0.42	40.35	35.69	4.66	8.655	
1,200.00	1,199.93	1,200.64	1,200.57	2.50	2.53	160.16	38.79	-2.91	42.58	37.55	5.03	8.472 SF	
1,300.00	1,299.68	1,300.82	1,300.50	2.69	2.73	154.85	36.52	-9.54	47.34	41.93	5.41	8.757	
1,400.00	1,399.13	1,400.50	1,399.71	2.89	2.95	149.45	33.37	-18.73	55.13	49.32	5.81	9.490	
1,500.00	1,498.15	1,499.86	1,498.57	3.12	3.19	146.89	30.16	-28.08	66.15	59.91	6.23	10.613	
1,600.00	1,596.63	1,598.87	1,597.09	3.39	3.43	146.43	26.96	-37.39	80.12	73.44	6.67	12.005	
1,700.00	1,694.44	1,697.42	1,695.16	3.71	3.68	147.19	23.78	-46.67	96.98	89.85	7.13	13.598	
1,800.00	1,791.46	1,795.40	1,792.64	4.08	3.93	148.57	20.62	-55.89	116.77	109.17	7.60	15.363	
1,900.00	1,887.58	1,892.67	1,889.43	4.51	4.18	150.20	17.48	-65.04	139.59	131.51	8.08	17.281	
2,000.00	1,982.68	1,989.12	1,985.41	5.01	4.44	151.88	14.36	-74.12	165.49	156.93	8.56	19.336	
2,100.00	2,076.65	2,084.64	2,080.45	5.57	4.70	153.49	11.28	-83.11	194.52	185.48	9.04	21.513	
2,143.62	2,117.26	2,125.99	2,121.60	5.83	4.81	154.16	9.94	-87.00	208.17	198.92	9.25	22.497	
2,200.00	2,169.57	2,179.29	2,174.63	6.19	4.96	155.10	8.22	-92.01	226.23	216.66	9.57	23.647	
2,300.00	2,262.37	2,273.83	2,268.70	6.84	5.22	156.44	5.17	-100.91	258.37	248.24	10.13	25.499	
2,400.00	2,355.18	2,368.37	2,362.78	7.51	5.48	157.48	2.12	-109.81	290.61	279.90	10.71	27.142	
2,500.00	2,447.98	2,462.92	2,456.85	8.19	5.74	158.31	-0.93	-118.70	322.92	311.63	11.29	28.604	
2,600.00	2,540.78	2,557.46	2,550.92	8.88	6.01	158.99	-3.99	-127.60	355.28	343.40	11.88	29.911	
2,700.00	2,633.58	2,652.00	2,645.00	9.58	6.28	159.56	-7.04	-136.50	387.68	375.21	12.47	31.085	
2,800.00	2,726.38	2,746.54	2,739.07	10.28	6.54	160.04	-10.09	-145.39	420.10	407.03	13.07	32.143	
2,900.00	2,819.18	2,841.09	2,833.14	11.00	6.81	160.46	-13.14	-154.29	452.55	438.88	13.67	33.100	
3,000.00	2,911.98	2,935.63	2,927.22	11.71	7.08	160.81	-16.20	-163.19	485.02	470.74	14.28	33.970	
3,100.00	3,004.79	3,030.17	3,021.29	12.43	7.35	161.13	-19.25	-172.08	517.50	502.62	14.89	34.764	
3,200.00	3,097.59	3,124.71	3,115.36	13.15	7.63	161.40	-22.30	-180.98	550.00	534.50	15.50	35.490	
3,300.00	3,190.39	3,219.25	3,209.44	13.87	7.90	161.65	-25.35	-189.88	582.50	566.39	16.11	36.157	
3,400.00	3,283.19	3,313.80	3,303.51	14.60	8.17	161.86	-28.40	-198.77	615.01	598.29	16.73	36.771	
3,500.00	3,375.99	3,408.34	3,397.58	15.33	8.44	162.06	-31.46	-207.67	647.53	630.19	17.34	37.338	
3,600.00	3,468.79	3,502.88	3,491.66	16.06	8.72	162.24	-34.51	-216.57	680.06	662.10	17.96	37.863	
3,700.00	3,561.60	3,597.42	3,585.73	16.79	8.99	162.40	-37.56	-225.46	712.59	694.01	18.58	38.351	
3,800.00	3,654.40	3,691.97	3,679.80	17.52	9.26	162.55	-40.61	-234.36	745.13	725.92	19.20	38.804	
3,900.00	3,747.20	3,786.51	3,773.88	18.25	9.54	162.68	-43.67	-243.25	777.67	757.84	19.82	39.228	
4,000.00	3,840.00	3,881.05	3,867.95	18.99	9.81	162.81	-46.72	-252.15	810.21	789.76	20.45	39.623	
4,100.00	3,932.80	3,975.59	3,962.02	19.72	10.09	162.92	-49.77	-261.05	842.76	821.68	21.07	39.994	
4,200.00	4,025.60	4,070.14	4,056.10	20.45	10.36	163.03	-52.82	-269.94	875.30	853.61	21.70	40.342	
4,300.00	4,118.40	4,164.68	4,150.17	21.19	10.64	163.13	-55.88	-278.84	907.86	885.53	22.32	40.669	
4,400.00	4,211.21	4,259.22	4,244.24	21.93	10.92	163.22	-58.93	-287.74	940.41	917.46	22.95	40.977	
4,500.00	4,304.01	4,353.76	4,338.32	22.66	11.19	163.31	-61.98	-296.63	972.97	949.39	23.58	41.268	
4,600.00	4,396.81	4,448.31	4,432.39	23.40	11.47	163.39	-65.03	-305.53	1,005.53	981.32	24.20	41.543	
4,700.00	4,489.61	4,542.85	4,526.46	24.14	11.74	163.46	-68.08	-314.43	1,038.09	1,013.25	24.83	41.803	
4,800.00	4,582.41	4,637.39	4,620.54	24.88	12.02	163.53	-71.14	-323.32	1,070.65	1,045.18	25.46	42.049	
4,900.00	4,675.21	4,731.93	4,714.61	25.62	12.30	163.60	-74.19	-332.22	1,103.21	1,077.12	26.09	42.283	

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 6-12
<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 6-12	<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 6-12	<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	4,768.01	4,826.47	4,808.68	26.36	12.58	163.66	-77.24	-341.12	1,135.77	1,109.05	26.72	42.505	
5,055.74	4,819.74	4,879.18	4,861.12	26.77	12.73	163.69	-78.94	-346.08	1,153.93	1,126.85	27.07	42.624	
5,100.00	4,860.94	4,921.12	4,902.86	27.04	12.85	163.80	-80.30	-350.02	1,168.03	1,140.63	27.39	42.639	
5,200.00	4,954.91	5,016.65	4,997.91	27.54	13.13	163.98	-83.38	-359.01	1,197.59	1,169.51	28.08	42.652	
5,300.00	5,050.02	5,113.11	5,093.90	27.99	13.42	164.09	-86.50	-368.09	1,223.93	1,195.19	28.74	42.587	
5,400.00	5,146.15	5,210.39	5,190.69	28.42	13.70	164.14	-89.64	-377.24	1,247.02	1,217.64	29.37	42.453	
5,500.00	5,243.18	5,308.36	5,288.18	28.80	13.99	164.13	-92.80	-386.46	1,266.83	1,236.85	29.98	42.256	
5,600.00	5,340.99	5,406.92	5,386.25	29.14	14.28	164.06	-95.98	-395.74	1,283.35	1,252.80	30.55	42.002	
5,700.00	5,439.47	5,505.94	5,484.77	29.44	14.57	163.93	-99.18	-405.06	1,296.56	1,265.47	31.10	41.694	
5,800.00	5,538.50	5,605.29	5,583.64	29.70	14.86	163.75	-102.38	-414.41	1,306.47	1,274.86	31.61	41.337	
5,900.00	5,637.95	5,700.00	5,677.93	29.91	15.11	163.54	-105.25	-422.76	1,313.27	1,281.23	32.03	40.997	
6,000.00	5,737.70	5,782.58	5,760.33	30.07	15.27	163.42	-106.99	-427.83	1,317.69	1,285.39	32.31	40.784	
6,100.00	5,837.64	5,869.03	5,846.72	30.19	15.42	163.34	-107.98	-430.73	1,319.82	1,287.30	32.52	40.590	
6,149.37	5,887.00	5,911.73	5,889.43	30.24	15.49	0.82	-108.16	-431.25	1,320.01	1,287.41	32.60	40.496	
6,175.55	5,913.19	5,935.50	5,913.19	30.26	15.53	0.82	-108.18	-431.29	1,319.99	1,287.32	32.67	40.401	
6,200.00	5,937.63	5,959.94	5,937.63	30.28	15.57	0.82	-108.18	-431.29	1,319.99	1,287.24	32.75	40.308	
6,300.00	6,037.63	6,059.94	6,037.63	30.36	15.73	0.82	-108.18	-431.29	1,319.99	1,286.93	33.06	39.931	
6,400.00	6,137.63	6,159.94	6,137.63	30.44	15.90	0.82	-108.18	-431.29	1,319.99	1,286.62	33.37	39.558	
6,500.00	6,237.63	6,259.94	6,237.63	30.52	16.07	0.82	-108.18	-431.29	1,319.99	1,286.31	33.68	39.187	
6,600.00	6,337.63	6,359.94	6,337.63	30.60	16.24	0.82	-108.18	-431.29	1,319.99	1,285.99	34.00	38.820	
6,700.00	6,437.63	6,459.94	6,437.63	30.68	16.42	0.82	-108.18	-431.29	1,319.99	1,285.67	34.32	38.457	
6,800.00	6,537.63	6,559.94	6,537.63	30.77	16.59	0.82	-108.18	-431.29	1,319.99	1,285.34	34.65	38.098	
6,900.00	6,637.63	6,659.94	6,637.63	30.85	16.77	0.82	-108.18	-431.29	1,319.99	1,285.02	34.97	37.742	
7,000.00	6,737.63	6,759.94	6,737.63	30.94	16.94	0.82	-108.18	-431.29	1,319.99	1,284.69	35.30	37.390	
7,100.00	6,837.63	6,859.94	6,837.63	31.03	17.12	0.82	-108.18	-431.29	1,319.99	1,284.36	35.64	37.041	
7,200.00	6,937.63	6,959.94	6,937.63	31.12	17.30	0.82	-108.18	-431.29	1,319.99	1,284.02	35.97	36.697	
7,300.00	7,037.63	7,059.94	7,037.63	31.21	17.48	0.82	-108.18	-431.29	1,319.99	1,283.68	36.31	36.356	
7,400.00	7,137.63	7,159.94	7,137.63	31.30	17.66	0.82	-108.18	-431.29	1,319.99	1,283.35	36.65	36.020	
7,500.00	7,237.63	7,259.94	7,237.63	31.40	17.84	0.82	-108.18	-431.29	1,319.99	1,283.00	36.99	35.687	
7,600.00	7,337.63	7,359.94	7,337.63	31.49	18.02	0.82	-108.18	-431.29	1,319.99	1,282.66	37.33	35.358	
7,700.00	7,437.63	7,459.94	7,437.63	31.59	18.21	0.82	-108.18	-431.29	1,319.99	1,282.31	37.68	35.034	
7,800.00	7,537.63	7,559.94	7,537.63	31.69	18.39	0.82	-108.18	-431.29	1,319.99	1,281.97	38.03	34.713	
7,900.00	7,637.63	7,659.94	7,637.63	31.79	18.58	0.82	-108.18	-431.29	1,319.99	1,281.62	38.38	34.396	
8,000.00	7,737.63	7,759.94	7,737.63	31.89	18.76	0.82	-108.18	-431.29	1,319.99	1,281.26	38.73	34.083	
8,100.00	7,837.63	7,859.94	7,837.63	31.99	18.95	0.82	-108.18	-431.29	1,319.99	1,280.91	39.08	33.775	
8,132.37	7,870.00	7,892.31	7,870.00	32.02	19.01	0.82	-108.18	-431.29	1,319.99	1,280.79	39.20	33.676	



<b>Company:</b>	US ROCKIES REGION PLANNING	<b>Local Co-ordinate Reference:</b>	Well P_ENCORE 6-12
<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 6-12	<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 6-12	<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 4-12 - P_ENCORE 4-12 - 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
0.00	0.00	0.00	0.00	0.00	0.00	1.27	50.27	1.11	50.29				
100.00	100.00	100.00	100.00	0.10	0.10	1.27	50.27	1.11	50.29	50.09	0.19	263.205	
200.00	200.00	200.00	200.00	0.32	0.32	1.27	50.27	1.11	50.29	49.65	0.64	78.500	
300.00	300.00	300.00	300.00	0.55	0.55	1.27	50.27	1.11	50.29	49.20	1.09	46.129	
400.00	400.00	400.00	400.00	0.77	0.77	1.27	50.27	1.11	50.29	48.75	1.54	32.660	
500.00	500.00	500.00	500.00	0.99	0.99	1.27	50.27	1.11	50.29	48.30	1.99	25.280	
600.00	600.00	600.00	600.00	1.22	1.22	1.27	50.27	1.11	50.29	47.85	2.44	20.620	
700.00	700.00	700.00	700.00	1.44	1.44	1.27	50.27	1.11	50.29	47.40	2.89	17.410	
800.00	800.00	800.00	800.00	1.67	1.67	1.27	50.27	1.11	50.29	46.95	3.34	15.066	
900.00	900.00	900.00	900.00	1.89	1.89	1.27	50.27	1.11	50.29	46.50	3.79	13.277	
1,000.00	1,000.00	1,000.00	1,000.00	2.12	2.12	1.27	50.27	1.11	50.29	46.05	4.24	11.869	
1,050.00	1,050.00	1,050.00	1,050.00	2.23	2.23	1.27	50.27	1.11	50.29	45.82	4.46	11.271 CC, ES	
1,100.00	1,100.00	1,100.08	1,100.07	2.33	2.34	163.41	50.24	0.68	50.67	46.00	4.66	10.862	
1,200.00	1,199.93	1,200.11	1,200.04	2.50	2.54	160.74	50.00	-2.81	53.77	48.74	5.03	10.682 SF	
1,300.00	1,299.68	1,299.80	1,299.48	2.69	2.75	156.25	49.52	-9.74	60.26	54.84	5.42	11.124	
1,400.00	1,399.13	1,398.92	1,398.05	2.89	2.97	151.11	48.80	-20.06	70.50	64.68	5.82	12.103	
1,500.00	1,498.15	1,497.24	1,495.43	3.12	3.22	146.23	47.85	-33.64	84.72	78.45	6.27	13.516	
1,600.00	1,596.63	1,594.57	1,591.30	3.39	3.51	142.01	46.68	-50.36	102.99	96.23	6.76	15.232	
1,700.00	1,694.44	1,690.70	1,685.38	3.71	3.83	138.55	45.30	-70.06	125.24	117.93	7.32	17.121	
1,800.00	1,791.46	1,785.47	1,777.41	4.08	4.19	135.74	43.73	-92.55	151.37	143.43	7.94	19.063	
1,900.00	1,887.58	1,878.69	1,867.18	4.51	4.60	133.45	41.98	-117.62	181.25	172.61	8.64	20.967	
2,000.00	1,982.68	1,970.23	1,954.49	5.01	5.06	131.55	40.07	-145.06	214.75	205.32	9.43	22.770	
2,100.00	2,076.65	2,059.96	2,039.17	5.57	5.57	129.94	38.00	-174.65	251.72	241.42	10.30	24.435	
2,143.62	2,117.26	2,100.00	2,076.65	5.83	5.81	129.29	37.02	-188.70	268.91	258.21	10.71	25.113	
2,200.00	2,169.57	2,147.89	2,121.21	6.19	6.13	128.84	35.80	-206.20	291.73	280.45	11.28	25.862	
2,300.00	2,262.37	2,234.46	2,201.00	6.84	6.73	127.83	33.46	-239.69	333.23	320.88	12.35	26.989	
2,400.00	2,355.18	2,321.47	2,280.21	7.51	7.39	126.66	30.95	-275.61	376.01	362.53	13.48	27.890	
2,500.00	2,447.98	2,411.44	2,361.88	8.19	8.11	125.62	28.33	-313.26	419.18	404.50	14.67	28.566	
2,600.00	2,540.78	2,501.41	2,443.56	8.88	8.83	124.78	25.70	-350.90	462.43	446.55	15.89	29.110	
2,700.00	2,633.58	2,591.38	2,525.23	9.58	9.58	124.08	23.07	-388.55	505.76	488.65	17.11	29.554	
2,800.00	2,726.38	2,681.35	2,606.90	10.28	10.33	123.49	20.44	-426.19	549.14	530.79	18.35	29.922	
2,900.00	2,819.18	2,771.32	2,688.57	11.00	11.09	122.98	17.81	-463.84	592.56	572.96	19.60	30.231	
3,000.00	2,911.98	2,861.29	2,770.24	11.71	11.85	122.55	15.18	-501.49	636.01	615.15	20.86	30.494	
3,100.00	3,004.79	2,951.25	2,851.91	12.43	12.63	122.17	12.56	-539.13	679.48	657.36	22.12	30.720	
3,200.00	3,097.59	3,041.22	2,933.59	13.15	13.40	121.83	9.93	-576.78	722.98	699.60	23.39	30.915	
3,300.00	3,190.39	3,131.19	3,015.26	13.87	14.18	121.53	7.30	-614.42	766.50	741.84	24.66	31.086	
3,400.00	3,283.19	3,221.16	3,096.93	14.60	14.96	121.27	4.67	-652.07	810.03	784.10	25.93	31.237	
3,500.00	3,375.99	3,311.13	3,178.60	15.33	15.74	121.03	2.04	-689.71	853.57	826.36	27.21	31.370	
3,600.00	3,468.79	3,401.10	3,260.27	16.06	16.53	120.82	-0.58	-727.36	897.12	868.63	28.49	31.490	
3,700.00	3,561.60	3,491.07	3,341.94	16.79	17.31	120.62	-3.21	-765.00	940.69	910.92	29.77	31.597	
3,800.00	3,654.40	3,581.03	3,423.62	17.52	18.10	120.45	-5.84	-802.65	984.26	953.20	31.05	31.694	
3,900.00	3,747.20	3,671.00	3,505.29	18.25	18.89	120.28	-8.47	-840.30	1,027.84	995.50	32.34	31.783	
4,000.00	3,840.00	3,760.97	3,586.96	18.99	19.68	120.13	-11.10	-877.94	1,071.42	1,037.80	33.63	31.864	
4,100.00	3,932.80	3,850.94	3,668.63	19.72	20.48	120.00	-13.73	-915.59	1,115.01	1,080.10	34.91	31.938	
4,200.00	4,025.60	3,940.91	3,750.30	20.45	21.27	119.87	-16.35	-953.23	1,158.61	1,122.41	36.20	32.006	
4,300.00	4,118.40	4,030.88	3,831.97	21.19	22.06	119.75	-18.98	-990.88	1,202.20	1,164.72	37.49	32.070	
4,400.00	4,211.21	4,120.85	3,913.64	21.93	22.86	119.64	-21.61	-1,028.52	1,245.81	1,207.03	38.77	32.129	
4,500.00	4,304.01	4,210.81	3,995.32	22.66	23.66	119.54	-24.24	-1,066.17	1,289.41	1,249.35	40.06	32.184	
4,600.00	4,396.81	4,300.78	4,076.99	23.40	24.45	119.44	-26.87	-1,103.81	1,333.02	1,291.67	41.35	32.236	
4,700.00	4,489.61	4,390.75	4,158.66	24.14	25.25	119.35	-29.50	-1,141.46	1,376.63	1,333.99	42.64	32.285	
4,800.00	4,582.41	4,480.72	4,240.33	24.88	26.05	119.27	-32.12	-1,179.11	1,420.25	1,376.32	43.93	32.331	
4,900.00	4,675.21	4,570.69	4,322.00	25.62	26.84	119.19	-34.75	-1,216.75	1,463.87	1,418.65	45.22	32.374	

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 6-12
<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 6-12	<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 6-12	<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	4,768.01	4,660.66	4,403.67	26.36	27.64	119.12	-37.38	-1,254.40	1,507.49	1,460.98	46.51	32.415	
5,055.74	4,819.74	4,710.81	4,449.20	26.77	28.09	119.08	-38.84	-1,275.38	1,531.80	1,484.58	47.22	32.437	
5,100.00	4,860.94	4,750.69	4,485.41	27.04	28.44	119.40	-40.01	-1,292.07	1,550.96	1,503.10	47.86	32.409	
5,200.00	4,954.91	4,841.25	4,567.61	27.54	29.25	120.03	-42.66	-1,329.96	1,593.12	1,543.95	49.17	32.399	
5,300.00	5,050.02	4,932.33	4,650.30	27.99	30.06	120.51	-45.32	-1,368.07	1,633.72	1,583.27	50.45	32.381	
5,400.00	5,146.15	5,023.83	4,733.35	28.42	30.87	120.86	-47.99	-1,406.36	1,672.75	1,621.05	51.70	32.358	
5,500.00	5,243.18	5,115.62	4,816.68	28.80	31.69	121.08	-50.67	-1,444.77	1,710.20	1,657.31	52.89	32.335	
5,600.00	5,340.99	5,207.61	4,900.19	29.14	32.50	121.19	-53.36	-1,483.26	1,746.09	1,692.06	54.03	32.316	
5,700.00	5,439.47	5,349.64	5,030.35	29.44	33.55	120.91	-57.31	-1,539.92	1,779.32	1,724.04	55.27	32.191	
5,800.00	5,538.50	5,502.98	5,173.85	29.70	34.46	120.58	-61.08	-1,593.80	1,808.00	1,751.66	56.34	32.091	
5,900.00	5,637.95	5,661.32	5,324.83	29.91	35.27	120.23	-64.39	-1,641.33	1,831.91	1,774.67	57.24	32.003	
6,000.00	5,737.70	5,824.08	5,482.52	30.07	35.96	119.86	-67.19	-1,681.42	1,850.84	1,792.85	57.98	31.920	
6,100.00	5,837.64	5,990.54	5,645.89	30.19	36.52	119.49	-69.41	-1,713.13	1,864.60	1,806.04	58.55	31.845	
6,149.37	5,887.00	6,073.82	5,728.26	30.24	36.74	-43.20	-70.26	-1,725.42	1,869.44	1,810.67	58.77	31.810	
6,200.00	5,937.63	6,159.88	5,813.71	30.28	36.94	-43.45	-70.98	-1,735.61	1,873.27	1,814.32	58.95	31.780	
6,300.00	6,037.63	6,331.30	5,984.63	30.36	37.22	-43.74	-71.86	-1,748.26	1,877.99	1,818.76	59.24	31.704	
6,400.00	6,137.63	6,484.35	6,137.63	30.44	37.36	-43.81	-72.05	-1,751.04	1,879.03	1,819.57	59.46	31.601	
6,500.00	6,237.63	6,584.35	6,237.63	30.52	37.44	-43.81	-72.05	-1,751.04	1,879.03	1,819.39	59.64	31.507	
6,600.00	6,337.63	6,684.35	6,337.63	30.60	37.52	-43.81	-72.05	-1,751.04	1,879.03	1,819.21	59.82	31.411	
6,700.00	6,437.63	6,784.35	6,437.63	30.68	37.60	-43.81	-72.05	-1,751.04	1,879.03	1,819.03	60.00	31.315	
6,800.00	6,537.63	6,884.35	6,537.63	30.77	37.68	-43.81	-72.05	-1,751.04	1,879.03	1,818.84	60.19	31.218	
6,900.00	6,637.63	6,984.35	6,637.63	30.85	37.76	-43.81	-72.05	-1,751.04	1,879.03	1,818.65	60.38	31.120	
7,000.00	6,737.63	7,084.35	6,737.63	30.94	37.85	-43.81	-72.05	-1,751.04	1,879.03	1,818.46	60.57	31.021	
7,100.00	6,837.63	7,184.35	6,837.63	31.03	37.93	-43.81	-72.05	-1,751.04	1,879.03	1,818.26	60.77	30.921	
7,200.00	6,937.63	7,284.35	6,937.63	31.12	38.02	-43.81	-72.05	-1,751.04	1,879.03	1,818.06	60.97	30.820	
7,300.00	7,037.63	7,384.35	7,037.63	31.21	38.11	-43.81	-72.05	-1,751.04	1,879.03	1,817.86	61.17	30.719	
7,400.00	7,137.63	7,484.35	7,137.63	31.30	38.19	-43.81	-72.05	-1,751.04	1,879.03	1,817.66	61.37	30.618	
7,500.00	7,237.63	7,584.35	7,237.63	31.40	38.28	-43.81	-72.05	-1,751.04	1,879.03	1,817.45	61.58	30.515	
7,600.00	7,337.63	7,684.35	7,337.63	31.49	38.37	-43.81	-72.05	-1,751.04	1,879.03	1,817.24	61.79	30.412	
7,700.00	7,437.63	7,784.35	7,437.63	31.59	38.47	-43.81	-72.05	-1,751.04	1,879.03	1,817.03	62.00	30.308	
7,800.00	7,537.63	7,884.35	7,537.63	31.69	38.56	-43.81	-72.05	-1,751.04	1,879.03	1,816.82	62.21	30.204	
7,900.00	7,637.63	7,984.35	7,637.63	31.79	38.65	-43.81	-72.05	-1,751.04	1,879.03	1,816.60	62.43	30.100	
8,000.00	7,737.63	8,084.35	7,737.63	31.89	38.75	-43.81	-72.05	-1,751.04	1,879.03	1,816.38	62.65	29.994	
8,100.00	7,837.63	8,184.35	7,837.63	31.99	38.84	-43.81	-72.05	-1,751.04	1,879.03	1,816.16	62.87	29.889	
8,132.37	7,870.00	8,216.71	7,870.00	32.02	38.87	-43.81	-72.05	-1,751.04	1,879.03	1,816.09	62.94	29.855	

<b>Company:</b>	US ROCKIES REGION PLANNING	<b>Local Co-ordinate Reference:</b>	Well P_ENCORE 6-12
<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 6-12	<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 6-12	<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 5-12 - P_ENCORE 5-12 - 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 +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	0.00	10.21	0.00	10.21				
100.00	100.00	100.00	100.00	0.10	0.10	0.00	10.21	0.00	10.21	10.02	0.19	53.433	
200.00	200.00	200.00	200.00	0.32	0.32	0.00	10.21	0.00	10.21	9.57	0.64	15.936	
300.00	300.00	300.00	300.00	0.55	0.55	0.00	10.21	0.00	10.21	9.12	1.09	9.365	
400.00	400.00	400.18	400.16	0.77	0.75	-8.56	9.12	-1.37	9.23	7.70	1.52	6.068	
490.47	490.47	490.61	490.47	0.97	0.94	-38.38	6.27	-4.97	8.00	6.09	1.91	4.193 CC	
500.00	500.00	500.12	499.95	0.99	0.96	-43.01	5.87	-5.48	8.03	6.08	1.95	4.119 ES, SF	
600.00	600.00	599.57	599.02	1.22	1.19	-87.70	0.49	-12.27	12.32	9.94	2.38	5.175	
700.00	700.00	698.30	697.02	1.44	1.47	-107.80	-6.96	-21.67	22.95	20.13	2.82	8.140	
800.00	800.00	796.09	793.61	1.67	1.78	-116.02	-16.40	-33.59	37.92	34.64	3.27	11.581	
900.00	900.00	892.73	888.51	1.89	2.15	-120.07	-27.73	-47.89	56.52	52.78	3.74	15.108	
1,000.00	1,000.00	988.01	981.42	2.12	2.56	-122.36	-40.84	-64.45	78.53	74.31	4.22	18.602	
1,050.00	1,050.00	1,035.09	1,027.05	2.23	2.79	-123.16	-48.03	-73.52	90.77	86.30	4.47	20.313	
1,100.00	1,100.00	1,081.86	1,072.19	2.33	3.02	38.69	-55.63	-83.12	103.48	98.85	4.63	22.333	
1,200.00	1,199.93	1,174.72	1,161.19	2.50	3.54	38.32	-72.07	-103.87	129.28	124.22	5.06	25.553	
1,300.00	1,299.68	1,266.64	1,248.40	2.69	4.10	38.65	-90.10	-126.63	155.55	150.05	5.50	28.259	
1,400.00	1,399.13	1,357.60	1,333.74	2.89	4.71	39.36	-109.64	-151.30	182.30	176.33	5.97	30.517	
1,500.00	1,498.15	1,447.60	1,417.15	3.12	5.37	40.29	-130.62	-177.78	209.56	203.08	6.47	32.368	
1,600.00	1,596.63	1,537.59	1,499.47	3.39	6.08	41.35	-153.20	-206.29	237.32	230.31	7.02	33.826	
1,700.00	1,694.44	1,633.74	1,586.96	3.71	6.87	42.69	-177.95	-237.53	263.85	256.21	7.64	34.543	
1,800.00	1,791.46	1,730.33	1,674.86	4.08	7.67	44.23	-202.81	-268.93	288.15	279.82	8.33	34.588	
1,900.00	1,887.58	1,827.27	1,763.07	4.51	8.48	45.96	-227.77	-300.43	310.33	301.22	9.11	34.060	
2,000.00	1,982.68	1,924.41	1,851.48	5.01	9.29	47.89	-252.78	-332.00	330.57	320.57	10.01	33.032	
2,100.00	2,076.65	2,021.66	1,939.97	5.57	10.11	50.01	-277.81	-363.61	349.05	338.01	11.04	31.616	
2,143.62	2,117.26	2,064.09	1,978.58	5.83	10.47	51.00	-288.73	-377.39	356.61	345.08	11.54	30.913	
2,200.00	2,169.57	2,118.90	2,028.46	6.19	10.93	52.41	-302.85	-395.21	366.31	354.10	12.22	29.989	
2,300.00	2,262.37	2,216.14	2,116.95	6.84	11.75	54.75	-327.88	-426.81	384.03	370.55	13.47	28.500	
2,400.00	2,355.18	2,313.38	2,205.43	7.51	12.58	56.87	-352.91	-458.41	402.31	387.52	14.79	27.198	
2,500.00	2,447.98	2,410.61	2,293.92	8.19	13.40	58.82	-377.94	-490.01	421.10	404.95	16.16	26.066	
2,600.00	2,540.78	2,507.85	2,382.41	8.88	14.23	60.60	-402.98	-521.62	440.33	422.77	17.55	25.083	
2,700.00	2,633.58	2,605.09	2,470.89	9.58	15.06	62.23	-428.01	-553.22	459.93	440.95	18.98	24.228	
2,800.00	2,726.38	2,702.33	2,559.38	10.28	15.89	63.73	-453.04	-584.82	479.87	459.44	20.43	23.483	
2,900.00	2,819.18	2,799.56	2,647.86	11.00	16.71	65.11	-478.07	-616.42	500.11	478.20	21.90	22.832	
3,000.00	2,911.98	2,896.80	2,736.35	11.71	17.54	66.38	-503.10	-648.02	520.60	497.22	23.39	22.261	
3,100.00	3,004.79	2,994.04	2,824.84	12.43	18.37	67.56	-528.14	-679.62	541.33	516.45	24.88	21.757	
3,200.00	3,097.59	3,091.27	2,913.32	13.15	19.20	68.65	-553.17	-711.22	562.26	535.88	26.38	21.311	
3,300.00	3,190.39	3,188.51	3,001.81	13.87	20.03	69.66	-578.20	-742.83	583.38	555.48	27.89	20.915	
3,400.00	3,283.19	3,285.75	3,090.29	14.60	20.87	70.61	-603.23	-774.43	604.65	575.25	29.41	20.561	
3,500.00	3,375.99	3,382.98	3,178.78	15.33	21.70	71.49	-628.27	-806.03	626.08	595.15	30.93	20.244	
3,600.00	3,468.79	3,480.22	3,267.27	16.06	22.53	72.31	-653.30	-837.63	647.64	615.19	32.45	19.959	
3,700.00	3,561.60	3,577.46	3,355.75	16.79	23.36	73.08	-678.33	-869.23	669.32	635.35	33.97	19.702	
3,800.00	3,654.40	3,674.70	3,444.24	17.52	24.19	73.80	-703.36	-900.83	691.10	655.61	35.50	19.469	
3,900.00	3,747.20	3,771.93	3,532.72	18.25	25.02	74.48	-728.40	-932.44	712.99	675.97	37.02	19.257	
4,000.00	3,840.00	3,869.17	3,621.21	18.99	25.86	75.11	-753.43	-964.04	734.97	696.41	38.55	19.064	
4,100.00	3,932.80	3,966.41	3,709.70	19.72	26.69	75.71	-778.46	-995.64	757.02	716.94	40.08	18.888	
4,200.00	4,025.60	4,063.64	3,798.18	20.45	27.52	76.28	-803.49	-1,027.24	779.15	737.55	41.61	18.726	
4,300.00	4,118.40	4,160.88	3,886.67	21.19	28.35	76.81	-828.53	-1,058.84	801.36	758.22	43.14	18.578	
4,400.00	4,211.21	4,258.12	3,975.15	21.93	29.19	77.32	-853.56	-1,090.44	823.62	778.96	44.66	18.441	
4,500.00	4,304.01	4,355.36	4,063.64	22.66	30.02	77.80	-878.59	-1,122.04	845.94	799.75	46.19	18.314	
4,600.00	4,396.81	4,452.59	4,152.13	23.40	30.85	78.26	-903.62	-1,153.65	868.32	820.60	47.72	18.197	
4,700.00	4,489.61	4,549.83	4,240.61	24.14	31.68	78.69	-928.66	-1,185.25	890.74	841.50	49.24	18.088	
4,800.00	4,582.41	4,647.07	4,329.10	24.88	32.52	79.10	-953.69	-1,216.85	913.22	862.45	50.77	17.987	

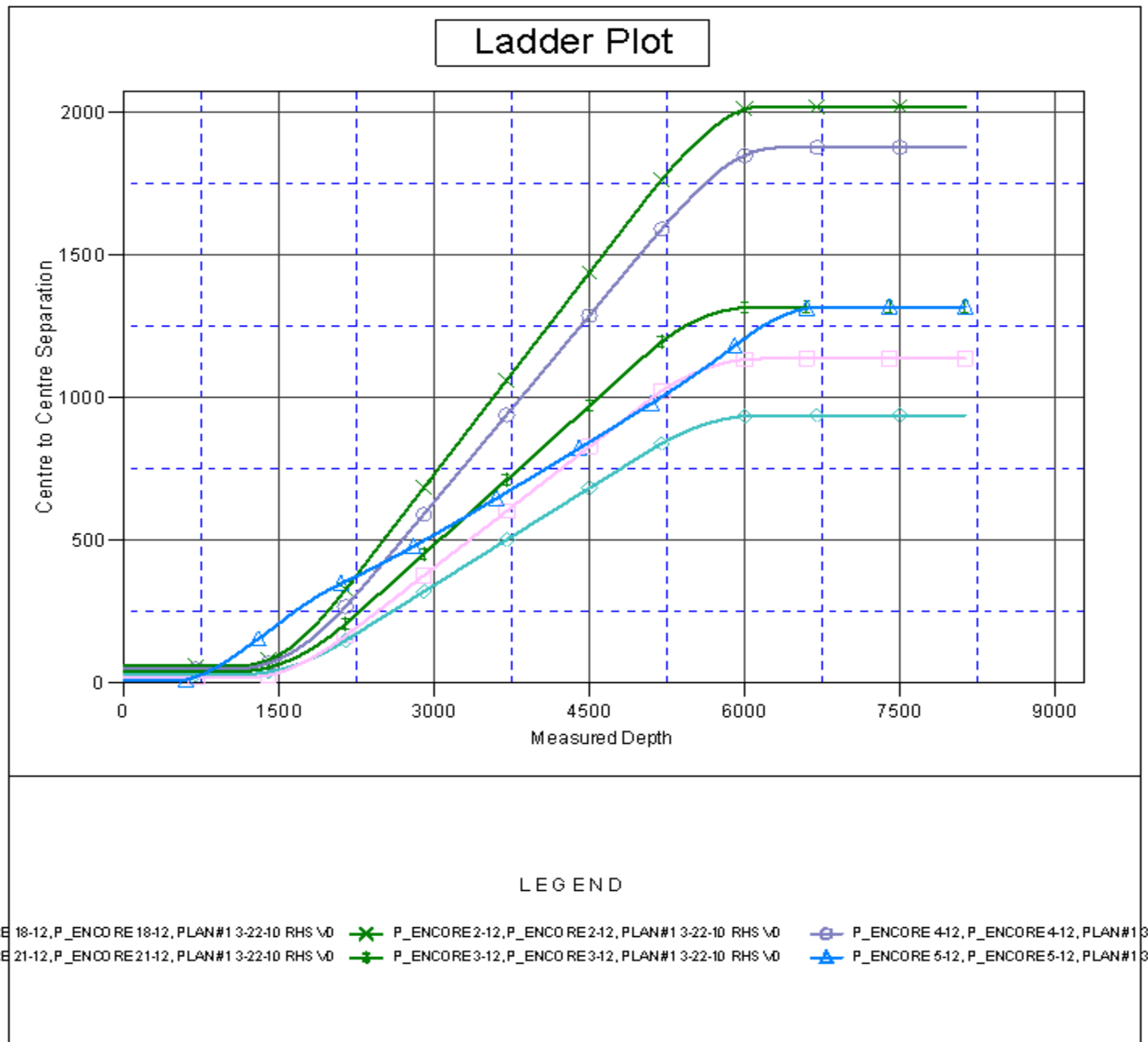
CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

<b>Company:</b>	US ROCKIES REGION PLANNING	<b>Local Co-ordinate Reference:</b>	Well P_ENCORE 6-12
<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 6-12	<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 6-12	<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
4,900.00	4,675.21	4,744.30	4,417.58	25.62	33.35	79.49	-978.72	-1,248.45	935.73	883.44	52.29	17.893	
5,000.00	4,768.01	4,841.54	4,506.07	26.36	34.18	79.86	-1,003.75	-1,280.05	958.29	904.47	53.82	17.806	
5,055.74	4,819.74	4,895.74	4,555.39	26.77	34.65	80.07	-1,017.71	-1,297.67	970.87	916.21	54.67	17.759	
5,100.00	4,860.94	4,938.78	4,594.56	27.04	35.02	80.40	-1,028.79	-1,311.66	980.93	925.59	55.34	17.725	
5,200.00	4,954.91	5,036.03	4,683.05	27.54	35.85	81.02	-1,053.82	-1,343.26	1,004.08	947.39	56.69	17.712	
5,300.00	5,050.02	5,133.18	4,771.46	27.99	36.68	81.45	-1,078.83	-1,374.83	1,027.75	969.81	57.94	17.738	
5,400.00	5,146.15	5,230.11	4,859.67	28.42	37.51	81.70	-1,103.78	-1,406.33	1,051.94	992.84	59.10	17.801	
5,500.00	5,243.18	5,326.70	4,947.57	28.80	38.34	81.79	-1,128.65	-1,437.73	1,076.65	1,016.50	60.15	17.900	
5,600.00	5,340.99	5,422.84	5,035.05	29.14	39.17	81.72	-1,153.40	-1,468.97	1,101.93	1,040.83	61.10	18.036	
5,700.00	5,439.47	5,518.41	5,122.02	29.44	39.99	81.51	-1,178.00	-1,500.03	1,127.83	1,065.89	61.94	18.208	
5,800.00	5,538.50	5,613.29	5,208.37	29.70	40.80	81.19	-1,202.43	-1,530.87	1,154.45	1,091.77	62.68	18.419	
5,900.00	5,637.95	5,707.37	5,293.98	29.91	41.61	80.76	-1,226.65	-1,561.44	1,181.88	1,118.57	63.31	18.668	
6,000.00	5,737.70	5,832.14	5,408.29	30.07	42.50	79.91	-1,257.68	-1,600.62	1,209.27	1,145.52	63.75	18.968	
6,100.00	5,837.64	5,968.34	5,535.39	30.19	43.26	78.95	-1,288.04	-1,638.94	1,234.56	1,170.59	63.97	19.299	
6,149.37	5,887.00	6,036.76	5,600.09	30.24	43.61	-84.03	-1,301.86	-1,656.40	1,246.21	1,182.18	64.03	19.463	
6,200.00	5,937.63	6,107.89	5,667.89	30.28	43.96	-84.73	-1,315.22	-1,673.25	1,257.47	1,193.50	63.97	19.657	
6,300.00	6,037.63	6,251.51	5,806.31	30.36	44.57	-85.93	-1,338.97	-1,703.24	1,277.28	1,213.42	63.86	20.002	
6,400.00	6,137.63	6,398.82	5,950.08	30.44	45.10	-86.90	-1,358.83	-1,728.31	1,293.60	1,229.80	63.80	20.276	
6,500.00	6,237.63	6,549.14	6,098.30	30.52	45.52	-87.63	-1,374.33	-1,747.88	1,306.20	1,242.41	63.79	20.477	
6,600.00	6,337.63	6,701.73	6,249.89	30.60	45.84	-88.13	-1,385.11	-1,761.49	1,314.88	1,251.04	63.84	20.596	
6,700.00	6,437.63	6,855.76	6,403.61	30.68	46.04	-88.39	-1,390.90	-1,768.80	1,319.51	1,255.56	63.95	20.632	
6,800.00	6,537.63	6,989.80	6,537.63	30.77	46.14	-88.43	-1,391.91	-1,770.07	1,320.32	1,256.19	64.13	20.587	
6,900.00	6,637.63	7,089.80	6,637.63	30.85	46.20	-88.43	-1,391.91	-1,770.07	1,320.32	1,256.02	64.30	20.535	
7,000.00	6,737.63	7,189.80	6,737.63	30.94	46.26	-88.43	-1,391.91	-1,770.07	1,320.32	1,255.86	64.46	20.483	
7,100.00	6,837.63	7,289.80	6,837.63	31.03	46.32	-88.43	-1,391.91	-1,770.07	1,320.32	1,255.69	64.63	20.430	
7,200.00	6,937.63	7,389.80	6,937.63	31.12	46.39	-88.43	-1,391.91	-1,770.07	1,320.32	1,255.52	64.80	20.376	
7,300.00	7,037.63	7,489.80	7,037.63	31.21	46.45	-88.43	-1,391.91	-1,770.07	1,320.32	1,255.35	64.97	20.322	
7,400.00	7,137.63	7,589.80	7,137.63	31.30	46.51	-88.43	-1,391.91	-1,770.07	1,320.32	1,255.17	65.14	20.268	
7,500.00	7,237.63	7,689.80	7,237.63	31.40	46.58	-88.43	-1,391.91	-1,770.07	1,320.32	1,255.00	65.32	20.212	
7,600.00	7,337.63	7,789.80	7,337.63	31.49	46.64	-88.43	-1,391.91	-1,770.07	1,320.32	1,254.82	65.50	20.157	
7,700.00	7,437.63	7,889.80	7,437.63	31.59	46.71	-88.43	-1,391.91	-1,770.07	1,320.32	1,254.63	65.69	20.101	
7,800.00	7,537.63	7,989.80	7,537.63	31.69	46.78	-88.43	-1,391.91	-1,770.07	1,320.32	1,254.45	65.87	20.044	
7,900.00	7,637.63	8,089.80	7,637.63	31.79	46.85	-88.43	-1,391.91	-1,770.07	1,320.32	1,254.26	66.06	19.987	
8,000.00	7,737.63	8,189.80	7,737.63	31.89	46.92	-88.43	-1,391.91	-1,770.07	1,320.32	1,254.07	66.25	19.929	
8,100.00	7,837.63	8,289.80	7,837.63	31.99	46.99	-88.43	-1,391.91	-1,770.07	1,320.32	1,253.88	66.44	19.871	
8,132.37	7,870.00	8,322.17	7,870.00	32.02	47.01	-88.43	-1,391.91	-1,770.07	1,320.32	1,253.81	66.51	19.853	

<b>Company:</b>	US ROCKIES REGION PLANNING	<b>Local Co-ordinate Reference:</b>	Well P_ENCORE 6-12
<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 6-12	<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 6-12	<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

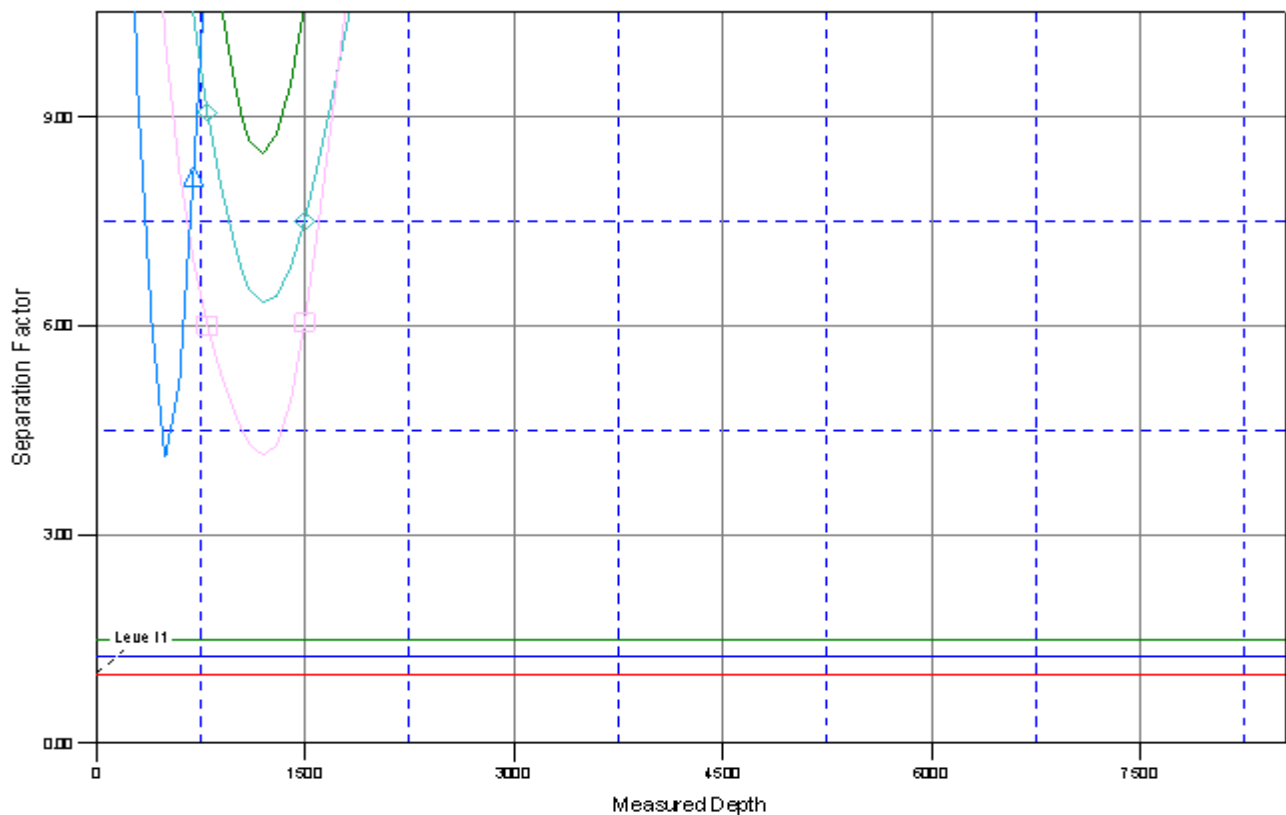
Reference Depths are relative to WELL @ 4994.00ft (Original Well Elev) Coordinates are relative to: P\_ENCORE 6-12  
Offset Depths are relative to Offset Datum Coordinate System is US State Plane 1983, Colorado Northern Zone  
Central Meridian is 105° 30' 0.000 W ° Grid Convergence at Surface is: 0.35°



<b>Company:</b>	US ROCKIES REGION PLANNING	<b>Local Co-ordinate Reference:</b>	Well P_ENCORE 6-12
<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 6-12	<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 6-12	<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 6-12  
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 2-12,P\_ENCORE 2-12,PLAN#1 3-22-10 RHS \0 P\_ENCORE 4-12,P\_ENCORE 4-12,PLAN#1 3-  
RE 21-12,P\_ENCORE 21-12,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-