



Ursa Operating Company, LLC

Rockies Region

Frei A

Frei A23

Wellbore #1

Plan: Design #1

Standard Planning Report

06 August, 2013



Database:	EDM 2003.21 Single User Db	Local Co-ordinate Reference:	Well Frei A23
Company:	Ursa Operating Company, LLC	TVD Reference:	Frei A23 @ 5611.9ft (PAD EST KB)
Project:	Rockies Region	MD Reference:	Frei A23 @ 5611.9ft (PAD EST KB)
Site:	Frei A	North Reference:	True
Well:	Frei A23	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Design #1		

Project	Rockies Region		
Map System:	US State Plane 1983	System Datum:	Mean Sea Level
Geo Datum:	North American Datum 1983		
Map Zone:	Colorado Central Zone		

Site		Frei A			
Site Position: From:	Lat/Long	Northing:	1,626,942.75 ft	Latitude:	39° 32' 9.196 N
		Easting:	2,406,826.15 ft	Longitude:	107° 36' 12.020 W
		Position Uncertainty:	0.0 ft	Slot Radius:	"

Well	Frei A23, SHL LAT: 39.535955700 LONG: -107.603325800					
Well Position	+N/-S	24.7 ft	Northing:	1,626,967.38 ft	Latitude:	39° 32' 9.440 N
	+E/-W	3.7 ft	Easting:	2,406,830.42 ft	Longitude:	107° 36' 11.973 W
Position Uncertainty		0.0 ft	Wellhead Elevation:	5,611.9 ft	Ground Level:	5,596.5 ft

Wellbore	Wellbore #1				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF200510	8/6/2013	9.87	65.80	52,148

Design	Design #1			
Audit Notes:				
Version:	Phase:	PROTOTYPE	Tie On Depth:	0.0
Vertical Section:	Depth From (TVD)	+N/-S (ft)	+E/-W (ft)	Direction (°)
	0.0	0.0	0.0	285.04

Plan Sections										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	TFO (°)	Target
0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.00	0.00	
300.0	0.00	0.00	300.0	0.0	0.0	0.00	0.00	0.00	0.00	
1,329.4	30.88	285.04	1,280.3	70.3	-261.5	3.00	3.00	0.00	285.04	
3,433.1	30.88	285.04	3,085.7	350.5	-1,304.3	0.00	0.00	0.00	0.00	
4,462.5	0.00	0.00	4,066.0	420.8	-1,565.8	3.00	-3.00	0.00	180.00	Frei A23 TGT
7,286.5	0.00	0.00	6,890.0	420.8	-1,565.8	0.00	0.00	0.00	0.00	

Database:	EDM 2003.21 Single User Db	Local Co-ordinate Reference:	Well Frei A23
Company:	Ursa Operating Company, LLC	TVD Reference:	Frei A23 @ 5611.9ft (PAD EST KB)
Project:	Rockies Region	MD Reference:	Frei A23 @ 5611.9ft (PAD EST KB)
Site:	Frei A	North Reference:	True
Well:	Frei A23	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Design #1		

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)
0.0	0.00	0.00	0.0	0.0	0.0	0.0	0.00	0.00	0.00
100.0	0.00	0.00	100.0	0.0	0.0	0.0	0.00	0.00	0.00
200.0	0.00	0.00	200.0	0.0	0.0	0.0	0.00	0.00	0.00
300.0	0.00	0.00	300.0	0.0	0.0	0.0	0.00	0.00	0.00
Start Build 3.00									
400.0	3.00	285.04	400.0	0.7	-2.5	2.6	3.00	3.00	0.00
500.0	6.00	285.04	499.6	2.7	-10.1	10.5	3.00	3.00	0.00
600.0	9.00	285.04	598.8	6.1	-22.7	23.5	3.00	3.00	0.00
700.0	12.00	285.04	697.1	10.8	-40.3	41.7	3.00	3.00	0.00
800.0	15.00	285.04	794.3	16.9	-62.8	65.1	3.00	3.00	0.00
900.0	18.00	285.04	890.2	24.3	-90.3	93.5	3.00	3.00	0.00
1,000.0	21.00	285.04	984.4	32.9	-122.5	126.9	3.00	3.00	0.00
1,100.0	24.00	285.04	1,076.8	42.9	-159.5	165.1	3.00	3.00	0.00
1,200.0	27.00	285.04	1,167.1	54.0	-201.0	208.2	3.00	3.00	0.00
1,300.0	30.00	285.04	1,254.9	66.4	-247.1	255.9	3.00	3.00	0.00
1,329.4	30.88	285.04	1,280.3	70.3	-261.5	270.8	3.00	3.00	0.00
Start 2103.7 hold at 1329.4 MD									
1,400.0	30.88	285.04	1,340.9	79.7	-296.5	307.0	0.00	0.00	0.00
1,500.0	30.88	285.04	1,426.7	93.0	-346.1	358.3	0.00	0.00	0.00
1,600.0	30.88	285.04	1,512.5	106.3	-395.6	409.7	0.00	0.00	0.00
1,700.0	30.88	285.04	1,598.3	119.7	-445.2	461.0	0.00	0.00	0.00
1,800.0	30.88	285.04	1,684.2	133.0	-494.8	512.3	0.00	0.00	0.00
1,900.0	30.88	285.04	1,770.0	146.3	-544.3	563.6	0.00	0.00	0.00
2,000.0	30.88	285.04	1,855.8	159.6	-593.9	615.0	0.00	0.00	0.00
2,100.0	30.88	285.04	1,941.6	172.9	-643.5	666.3	0.00	0.00	0.00
2,200.0	30.88	285.04	2,027.4	186.3	-693.0	717.6	0.00	0.00	0.00
2,300.0	30.88	285.04	2,113.3	199.6	-742.6	769.0	0.00	0.00	0.00
2,400.0	30.88	285.04	2,199.1	212.9	-792.2	820.3	0.00	0.00	0.00
2,500.0	30.88	285.04	2,284.9	226.2	-841.7	871.6	0.00	0.00	0.00
2,600.0	30.88	285.04	2,370.7	239.6	-891.3	922.9	0.00	0.00	0.00
2,700.0	30.88	285.04	2,456.6	252.9	-940.9	974.3	0.00	0.00	0.00
2,800.0	30.88	285.04	2,542.4	266.2	-990.4	1,025.6	0.00	0.00	0.00
2,900.0	30.88	285.04	2,628.2	279.5	-1,040.0	1,076.9	0.00	0.00	0.00
3,000.0	30.88	285.04	2,714.0	292.9	-1,089.6	1,128.2	0.00	0.00	0.00
3,100.0	30.88	285.04	2,799.8	306.2	-1,139.1	1,179.6	0.00	0.00	0.00
3,200.0	30.88	285.04	2,885.7	319.5	-1,188.7	1,230.9	0.00	0.00	0.00
3,224.7	30.88	285.04	2,906.9	322.8	-1,201.0	1,243.6	0.00	0.00	0.00
WF									
3,300.0	30.88	285.04	2,971.5	332.8	-1,238.3	1,282.2	0.00	0.00	0.00
3,400.0	30.88	285.04	3,057.3	346.1	-1,287.9	1,333.6	0.00	0.00	0.00
3,433.1	30.88	285.04	3,085.7	350.5	-1,304.3	1,350.5	0.00	0.00	0.00
Start Drop -3.00									
3,500.0	28.88	285.04	3,143.7	359.2	-1,336.4	1,383.9	3.00	-3.00	0.00
3,600.0	25.88	285.04	3,232.5	371.1	-1,380.8	1,429.9	3.00	-3.00	0.00
3,700.0	22.88	285.04	3,323.6	381.8	-1,420.7	1,471.1	3.00	-3.00	0.00
3,800.0	19.88	285.04	3,416.7	391.3	-1,455.9	1,507.6	3.00	-3.00	0.00
3,900.0	16.88	285.04	3,511.6	399.5	-1,486.3	1,539.1	3.00	-3.00	0.00
4,000.0	13.88	285.04	3,608.0	406.4	-1,511.9	1,565.6	3.00	-3.00	0.00
4,100.0	10.88	285.04	3,705.7	411.9	-1,532.6	1,587.0	3.00	-3.00	0.00
4,200.0	7.88	285.04	3,804.3	416.2	-1,548.4	1,603.3	3.00	-3.00	0.00
4,300.0	4.88	285.04	3,903.7	419.0	-1,559.1	1,614.4	3.00	-3.00	0.00
4,400.0	1.88	285.04	4,003.5	420.6	-1,564.8	1,620.3	3.00	-3.00	0.00
4,462.4	0.00	285.04	4,065.9	420.8	-1,565.8	1,621.3	3.00	-3.00	0.00

Database:	EDM 2003.21 Single User Db	Local Co-ordinate Reference:	Well Frei A23
Company:	Ursa Operating Company, LLC	TVD Reference:	Frei A23 @ 5611.9ft (PAD EST KB)
Project:	Rockies Region	MD Reference:	Frei A23 @ 5611.9ft (PAD EST KB)
Site:	Frei A	North Reference:	True
Well:	Frei A23	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Design #1		

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)
Top of Gas									
4,462.5	0.00	0.00	4,066.0	420.8	-1,565.8	1,621.3	3.00	-3.00	0.00
Start 2824.0 hold at 4462.5 MD									
4,500.0	0.00	0.00	4,103.5	420.8	-1,565.8	1,621.3	0.00	0.00	0.00
4,600.0	0.00	0.00	4,203.5	420.8	-1,565.8	1,621.3	0.00	0.00	0.00
4,700.0	0.00	0.00	4,303.5	420.8	-1,565.8	1,621.3	0.00	0.00	0.00
4,800.0	0.00	0.00	4,403.5	420.8	-1,565.8	1,621.3	0.00	0.00	0.00
4,900.0	0.00	0.00	4,503.5	420.8	-1,565.8	1,621.3	0.00	0.00	0.00
5,000.0	0.00	0.00	4,603.5	420.8	-1,565.8	1,621.3	0.00	0.00	0.00
5,100.0	0.00	0.00	4,703.5	420.8	-1,565.8	1,621.3	0.00	0.00	0.00
5,200.0	0.00	0.00	4,803.5	420.8	-1,565.8	1,621.3	0.00	0.00	0.00
5,300.0	0.00	0.00	4,903.5	420.8	-1,565.8	1,621.3	0.00	0.00	0.00
5,400.0	0.00	0.00	5,003.5	420.8	-1,565.8	1,621.3	0.00	0.00	0.00
5,500.0	0.00	0.00	5,103.5	420.8	-1,565.8	1,621.3	0.00	0.00	0.00
5,600.0	0.00	0.00	5,203.5	420.8	-1,565.8	1,621.3	0.00	0.00	0.00
5,700.0	0.00	0.00	5,303.5	420.8	-1,565.8	1,621.3	0.00	0.00	0.00
5,800.0	0.00	0.00	5,403.5	420.8	-1,565.8	1,621.3	0.00	0.00	0.00
5,811.4	0.00	0.00	5,414.9	420.8	-1,565.8	1,621.3	0.00	0.00	0.00
Cameo									
5,900.0	0.00	0.00	5,503.5	420.8	-1,565.8	1,621.3	0.00	0.00	0.00
6,000.0	0.00	0.00	5,603.5	420.8	-1,565.8	1,621.3	0.00	0.00	0.00
6,100.0	0.00	0.00	5,703.5	420.8	-1,565.8	1,621.3	0.00	0.00	0.00
6,200.0	0.00	0.00	5,803.5	420.8	-1,565.8	1,621.3	0.00	0.00	0.00
6,300.0	0.00	0.00	5,903.5	420.8	-1,565.8	1,621.3	0.00	0.00	0.00
6,400.0	0.00	0.00	6,003.5	420.8	-1,565.8	1,621.3	0.00	0.00	0.00
6,500.0	0.00	0.00	6,103.5	420.8	-1,565.8	1,621.3	0.00	0.00	0.00
6,600.0	0.00	0.00	6,203.5	420.8	-1,565.8	1,621.3	0.00	0.00	0.00
6,700.0	0.00	0.00	6,303.5	420.8	-1,565.8	1,621.3	0.00	0.00	0.00
6,800.0	0.00	0.00	6,403.5	420.8	-1,565.8	1,621.3	0.00	0.00	0.00
6,900.0	0.00	0.00	6,503.5	420.8	-1,565.8	1,621.3	0.00	0.00	0.00
6,986.4	0.00	0.00	6,589.9	420.8	-1,565.8	1,621.3	0.00	0.00	0.00
Rollins									
7,000.0	0.00	0.00	6,603.5	420.8	-1,565.8	1,621.3	0.00	0.00	0.00
7,100.0	0.00	0.00	6,703.5	420.8	-1,565.8	1,621.3	0.00	0.00	0.00
7,200.0	0.00	0.00	6,803.5	420.8	-1,565.8	1,621.3	0.00	0.00	0.00
7,286.5	0.00	0.00	6,890.0	420.8	-1,565.8	1,621.3	0.00	0.00	0.00
TD at 7286.5									

Formations					
Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)
3,224.7	2,906.9	WF		0.00	
4,462.4	4,065.9	Top of Gas		0.00	
5,811.4	5,414.9	Cameo		0.00	
6,986.4	6,589.9	Rollins		0.00	

Database:	EDM 2003.21 Single User Db	Local Co-ordinate Reference:	Well Frei A23
Company:	Ursa Operating Company, LLC	TVD Reference:	Frei A23 @ 5611.9ft (PAD EST KB)
Project:	Rockies Region	MD Reference:	Frei A23 @ 5611.9ft (PAD EST KB)
Site:	Frei A	North Reference:	True
Well:	Frei A23	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Design #1		

Plan Annotations				
Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates		Comment
		+N/-S (ft)	+E/-W (ft)	
300.0	300.0	0.0	0.0	Start Build 3.00
1,329.4	1,280.3	70.3	-261.5	Start 2103.7 hold at 1329.4 MD
3,433.1	3,085.7	350.5	-1,304.3	Start Drop -3.00
4,462.5	4,066.0	420.8	-1,565.8	Start 2824.0 hold at 4462.5 MD
7,286.5	6,890.0	420.8	-1,565.8	TD at 7286.5



Well Name: Frei A23
Surface Location: Frei A
North American Datum 1983 , US State Plane 1983, Colorado Central Zone
Ground Elevation: 5596.5
+N/-S +E/-W Northing Easting Latitude Longitude Slot
0.0 0.0 1626967.38 2406830.42 39° 32' 9.440 N 107° 36' 11.973 W
PAD EST KB Frei A23 @ 5611.9ft (PAD EST KB)



Azimuths to True North
Magnetic North: 9.87°
Magnetic Field
Strength: 52148.3snT
Dip Angle: 65.80°
Date: 8/6/2013
Model: IGRF200510

Frei A
Frei A23
Design #1
20:16, August 06 2013

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

Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Shape
Frei A23 TGT	4066.0	420.8	-1565.8	1627424.35	2405274.83	39° 32' 13.599 N	107° 36' 31.959 W	Point

SECTION DETAILS

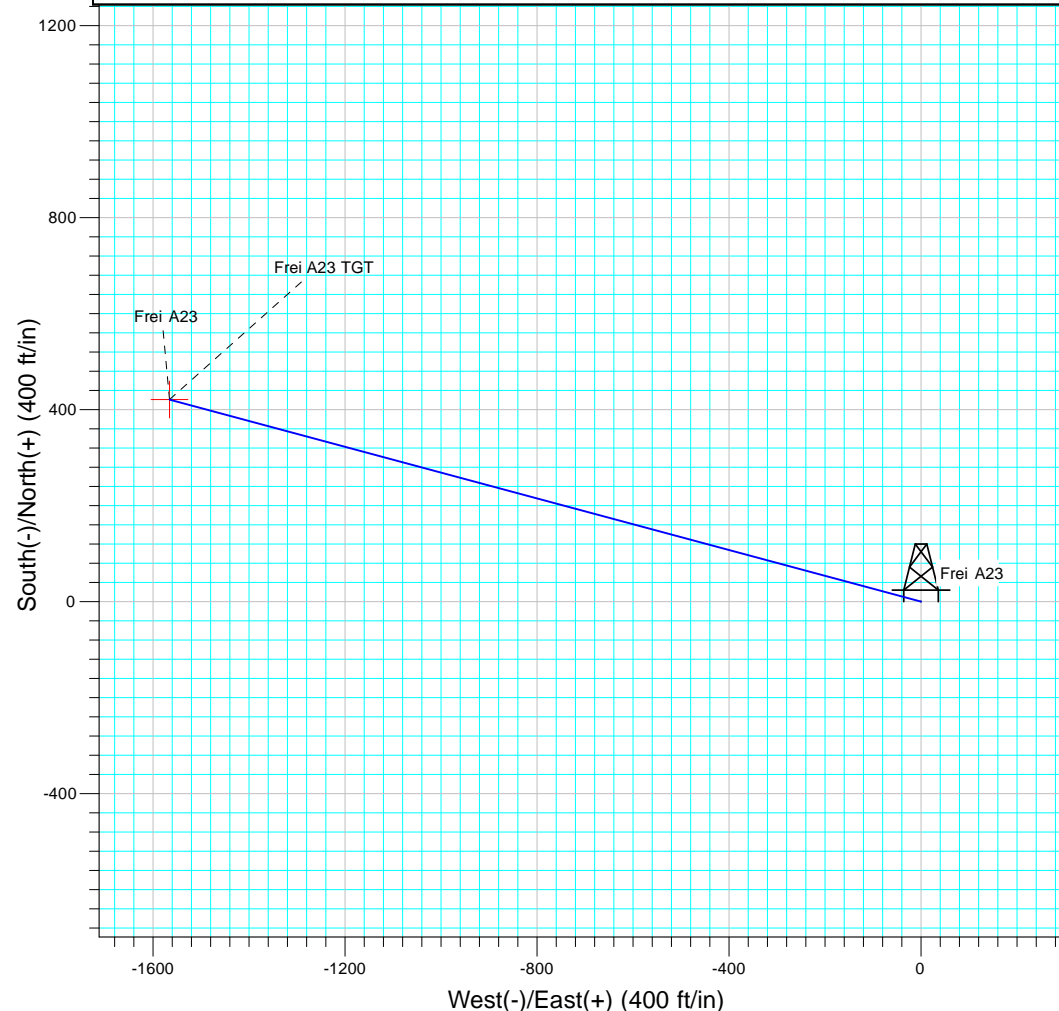
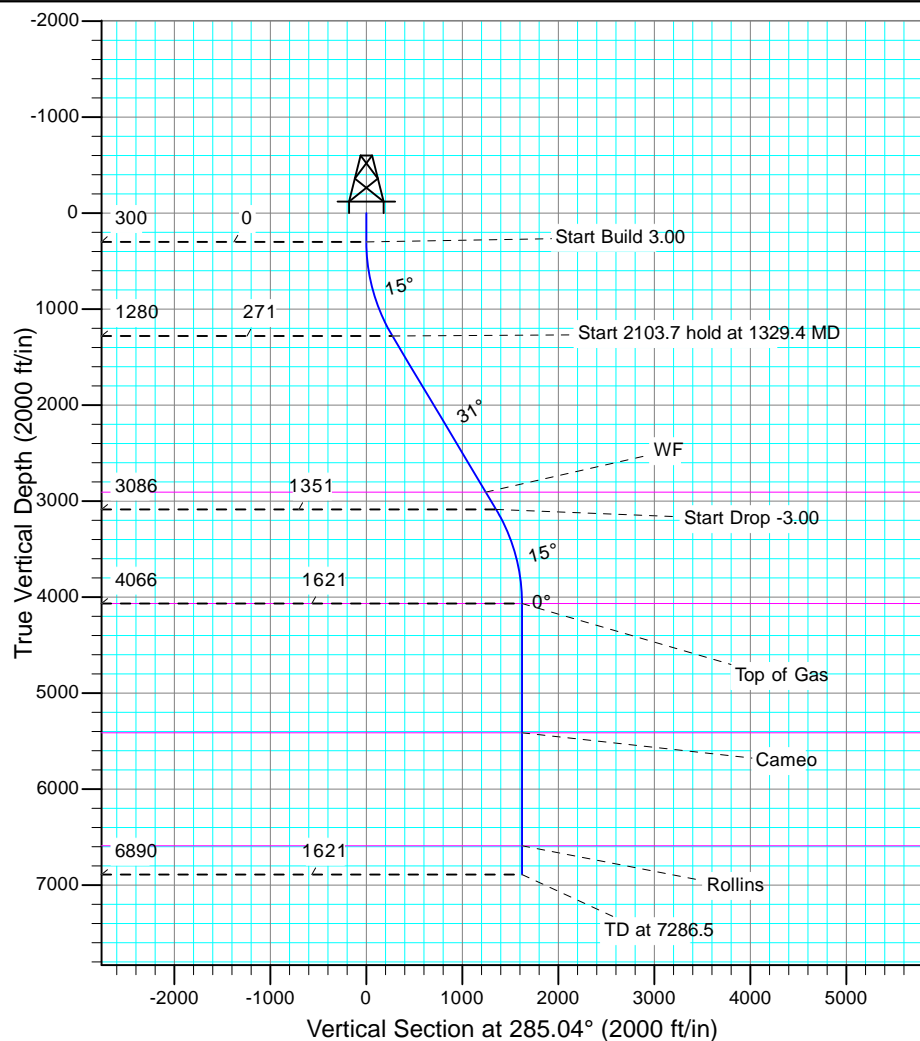
Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	DLeg	TFace	VSec	Target
1	0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.0	
2	300.0	0.00	0.00	300.0	0.0	0.0	0.00	0.00	0.0	
3	1329.4	30.88	285.04	1280.3	70.3	-261.5	3.00	285.04	270.8	
4	3433.1	30.88	285.04	3085.7	350.5	-1304.3	0.00	0.00	1350.5	
5	4462.5	0.00	0.00	4066.0	420.8	-1565.8	3.00	180.00	1621.3	Frei A23 TGT
6	7286.5	0.00	0.00	6890.0	420.8	-1565.8	0.00	0.00	1621.3	

ANNOTATIONS

TVD	MD	Annotation
300.0	300.0	Start Build 3.00
1280.3	1329.4	Start 2103.7 hold at 1329.4 MD
3085.7	3433.1	Start Drop -3.00
4066.0	4462.5	Start 2824.0 hold at 4462.5 MD
6890.0	7286.5	TD at 7286.5

FORMATION TOP DETAILS

TVDP	PathMD	Path	Formation
2906.9	3224.7	WF	WF
4065.9	4462.4	Top of Gas	Top of Gas
5414.9	5811.4	Cameo	Cameo
6589.9	6986.4	Rollins	Rollins





Ursa Operating Company, LLC

Rockies Region

Frei A

Frei A23

Wellbore #1

Design #1

Anticollision Report

06 August, 2013



Company:	Ursa Operating Company, LLC	Local Co-ordinate Reference:	Well Frei A23
Project:	Rockies Region	TVD Reference:	Frei A23 @ 5611.9ft (PAD EST KB)
Reference Site:	Frei A	MD Reference:	Frei A23 @ 5611.9ft (PAD EST KB)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Frei A23	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	EDM 2003.21 Single User Db
Reference Design:	Design #1	Offset TVD Reference:	Offset Datum

Reference	Design #1		
Filter type:	NO GLOBAL FILTER: Using user defined selection & filtering criteria		
Interpolation Method:	Stations	Error Model:	ISCWSA
Depth Range:	Unlimited	Scan Method:	Closest Approach 3D
Results Limited by:	Maximum center-center distance of 10,000.0ft	Error Surface:	Elliptical Conic
Warning Levels Evaluated at:	2.00 Sigma		

Survey Tool Program		Date	8/6/2013		
From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description	
0.0	7,286.5	Design #1 (Wellbore #1)	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						
Frei A						
Frei A1 - Wellbore #1 - Design #1	300.0	300.0	25.0	23.9	22.958	CC, ES
Frei A1 - Wellbore #1 - Design #1	400.0	399.2	26.8	25.3	17.655	SF
Frei A10 - Wellbore #1 - Design #1	300.0	300.0	62.5	61.4	57.344	CC, ES
Frei A10 - Wellbore #1 - Design #1	600.0	586.9	86.6	84.1	34.303	SF
Frei A11 - Wellbore #1 - Actual	0.0	0.0	54.8			
Frei A11 - Wellbore #1 - Actual	2,800.0	1,906.1	1,659.3	1,641.1	91.126	SF
Frei A12 - Wellbore #1 - Design #1	300.0	300.0	75.0	73.9	68.842	CC, ES
Frei A12 - Wellbore #1 - Design #1	700.0	676.3	120.0	116.9	38.632	SF
Frei A14 - Wellbore #1 - Design #1	300.0	300.0	12.5	11.4	11.461	CC, ES
Frei A14 - Wellbore #1 - Design #1	7,249.6	7,314.0	329.9	257.4	4.550	SF
Frei A16 - Wellbore #1 - Actual	0.0	0.0	78.3			
Frei A16 - Wellbore #1 - Actual	3,433.1	2,280.3	2,156.5	2,130.9	84.030	SF
Frei A18 - Wellbore #1 - Design #1	300.0	300.0	50.0	48.9	45.884	CC, ES
Frei A18 - Wellbore #1 - Design #1	1,800.0	1,715.6	347.4	326.3	16.478	SF
Frei A19 - Wellbore #1 - Design #1	300.0	300.0	25.0	23.9	22.925	CC, ES
Frei A19 - Wellbore #1 - Design #1	1,600.0	1,576.7	167.2	149.3	9.370	SF
Frei A2 - Wellbore #1 - Design #1	300.0	300.0	37.5	36.4	34.423	CC, ES
Frei A2 - Wellbore #1 - Design #1	500.0	495.8	48.4	46.4	24.484	SF
Frei A20 - Wellbore #1 - Design #1	300.0	300.0	37.5	36.4	34.419	CC, ES
Frei A20 - Wellbore #1 - Design #1	1,700.0	1,649.5	258.5	239.0	13.245	SF
Frei A21 - Wellbore #1 - Actual	0.0	0.0	25.7			
Frei A21 - Wellbore #1 - Actual	500.0	499.6	35.9	34.9	36.502	SF
Frei A24 - Wellbore #1 - Design #1	300.0	300.0	12.5	11.4	11.502	CC, ES
Frei A24 - Wellbore #1 - Design #1	7,286.5	7,255.1	329.9	258.1	4.593	SF
Frei A3 - Wellbore #1 - Design #1	300.0	300.0	50.0	48.9	45.884	CC, ES
Frei A3 - Wellbore #1 - Design #1	500.0	494.4	61.1	59.1	31.044	SF
Frei A4 - Wellbore #1 - Design #1	300.0	300.0	62.5	61.4	57.381	CC, ES
Frei A4 - Wellbore #1 - Design #1	600.0	586.7	90.7	88.3	36.562	SF
Frei A9 - Wellbore #1 - Actual	0.0	0.0	33.6			
Frei A9 - Wellbore #1 - Actual	400.0	396.1	47.2	46.4	61.802	SF

Company:	Ursa Operating Company, LLC	Local Co-ordinate Reference:	Well Frei A23
Project:	Rockies Region	TVD Reference:	Frei A23 @ 5611.9ft (PAD EST KB)
Reference Site:	Frei A	MD Reference:	Frei A23 @ 5611.9ft (PAD EST KB)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Frei A23	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	EDM 2003.21 Single User Db
Reference Design:	Design #1	Offset TVD Reference:	Offset Datum

Offset Design													Frei A - Frei A1 - Wellbore #1 - Design #1		Offset Site Error: 0.0 ft	
Survey Program: 0-MWD													Offset Well Error: 0.0 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				
0.0	0.0	0.0	0.0	0.0	0.0	-171.50	-24.7	-3.7	25.0							
100.0	100.0	100.0	100.0	0.1	0.1	-171.50	-24.7	-3.7	25.0	24.8	0.19	131.509				
200.0	200.0	200.0	200.0	0.3	0.3	-171.50	-24.7	-3.7	25.0	24.4	0.64	39.092				
300.0	300.0	300.0	300.0	0.5	0.5	-171.50	-24.7	-3.7	25.0	23.9	1.09	22.958 CC, ES				
400.0	400.0	399.2	399.2	0.8	0.8	-107.15	-26.1	-1.5	26.8	25.3	1.52	17.655 SF				
500.0	499.6	496.9	496.5	1.0	1.0	-129.19	-30.0	5.0	36.2	34.2	1.99	18.165				
600.0	598.8	591.5	590.4	1.3	1.2	-145.78	-36.3	15.2	57.5	55.0	2.52	22.866				
700.0	697.1	681.8	679.3	1.6	1.5	-154.78	-44.6	28.7	90.3	87.3	3.04	29.721				
800.0	794.3	766.8	762.2	2.1	1.9	-159.59	-54.4	44.7	133.0	129.4	3.55	37.423				
900.0	890.2	845.6	838.2	2.6	2.3	-162.27	-65.1	62.3	184.3	180.3	4.06	45.410				
1,000.0	984.4	917.9	907.1	3.2	2.7	-163.81	-76.5	80.8	243.5	238.9	4.56	53.413				
1,100.0	1,076.8	983.2	968.8	4.0	3.1	-164.68	-87.9	99.4	309.5	304.4	5.05	61.247				
1,200.0	1,167.1	1,042.2	1,023.6	4.8	3.5	-165.09	-99.1	117.8	381.6	376.1	5.56	68.587				
1,300.0	1,254.9	1,106.3	1,083.0	5.8	4.0	-165.41	-111.7	138.4	458.1	452.1	6.06	75.652				
1,329.4	1,280.3	1,124.4	1,099.7	6.1	4.1	-165.46	-115.3	144.2	481.3	475.1	6.20	77.645				
1,400.0	1,340.9	1,167.3	1,139.5	6.9	4.5	-166.17	-123.7	158.1	537.1	530.6	6.56	81.892				
1,500.0	1,426.7	1,228.2	1,195.9	8.0	4.9	-166.95	-135.7	177.7	616.3	609.2	7.08	87.095				
1,600.0	1,512.5	1,289.1	1,252.3	9.1	5.4	-167.55	-147.7	197.3	695.5	687.9	7.62	91.282				
1,700.0	1,598.3	1,350.0	1,308.7	10.3	5.9	-168.03	-159.7	216.9	774.8	766.6	8.16	94.988				
1,800.0	1,684.2	1,410.9	1,365.1	11.4	6.4	-168.43	-171.7	236.5	854.0	845.3	8.69	98.234				
1,900.0	1,770.0	1,471.8	1,421.4	12.5	6.8	-168.75	-183.7	256.1	933.3	924.1	9.24	100.971				
2,000.0	1,855.8	1,532.7	1,477.8	13.7	7.3	-169.03	-195.7	275.7	1,012.6	1,002.8	9.80	103.375				
2,100.0	1,941.6	1,593.5	1,534.2	14.8	7.8	-169.26	-207.7	295.3	1,091.9	1,081.5	10.35	105.490				
2,200.0	2,027.4	1,654.4	1,590.6	15.9	8.3	-169.46	-219.7	314.9	1,171.1	1,160.2	10.91	107.332				
2,300.0	2,113.3	1,715.3	1,647.0	17.1	8.8	-169.64	-231.7	334.5	1,250.4	1,239.0	11.47	108.984				
2,400.0	2,199.1	1,776.2	1,703.4	18.2	9.3	-169.80	-243.7	354.1	1,329.7	1,317.7	12.04	110.447				
2,500.0	2,284.9	1,837.1	1,759.7	19.4	9.7	-169.94	-255.7	373.7	1,409.0	1,396.4	12.61	111.758				
2,600.0	2,370.7	1,898.0	1,816.1	20.5	10.2	-170.06	-267.7	393.3	1,488.3	1,475.2	13.18	112.945				
2,700.0	2,456.6	1,958.9	1,872.5	21.6	10.7	-170.17	-279.7	412.9	1,567.6	1,553.9	13.75	114.005				
2,800.0	2,542.4	2,019.8	1,928.9	22.8	11.2	-170.27	-291.7	432.5	1,647.0	1,632.6	14.32	114.973				
2,900.0	2,628.2	2,080.6	1,985.3	23.9	11.7	-170.36	-303.7	452.1	1,726.3	1,711.4	14.90	115.852				
3,000.0	2,714.0	2,141.5	2,041.6	25.1	12.2	-170.45	-315.7	471.7	1,805.6	1,790.1	15.48	116.653				
3,100.0	2,799.8	2,202.4	2,098.0	26.2	12.7	-170.52	-327.7	491.3	1,884.9	1,868.8	16.06	117.391				
3,200.0	2,885.7	2,263.3	2,154.4	27.4	13.2	-170.59	-339.7	510.9	1,964.2	1,947.6	16.64	118.062				
3,300.0	2,971.5	2,324.2	2,210.8	28.5	13.6	-170.66	-351.7	530.5	2,043.5	2,026.3	17.22	118.684				
3,400.0	3,057.3	2,385.1	2,267.2	29.7	14.1	-170.72	-363.7	550.1	2,122.8	2,105.0	17.80	119.257				
3,433.1	3,085.7	2,405.2	2,285.8	30.0	14.3	-170.74	-367.7	556.6	2,149.1	2,131.1	17.99	119.438				
3,500.0	3,143.7	2,446.9	2,324.4	30.7	14.6	-171.16	-375.9	570.0	2,201.4	2,182.9	18.49	119.082				
3,600.0	3,232.5	2,512.4	2,385.1	31.6	15.2	-171.69	-388.8	591.1	2,276.9	2,257.7	19.19	118.639				
3,700.0	3,323.6	2,581.8	2,449.4	32.3	15.7	-172.12	-402.5	613.5	2,348.9	2,329.0	19.87	118.185				
3,800.0	3,416.7	2,654.9	2,517.0	33.0	16.3	-172.46	-416.9	637.0	2,417.2	2,396.7	20.53	117.764				
3,900.0	3,511.6	2,731.3	2,587.8	33.5	16.9	-172.73	-432.0	661.6	2,481.6	2,460.5	21.14	117.401				
4,000.0	3,608.0	2,811.0	2,661.6	34.0	17.6	-172.94	-447.7	687.3	2,542.0	2,520.3	21.70	117.114				
4,100.0	3,705.7	2,893.7	2,738.2	34.4	18.2	-173.10	-464.0	713.9	2,598.1	2,575.9	22.22	116.913				
4,200.0	3,804.3	2,979.1	2,817.3	34.7	18.9	-173.22	-480.8	741.4	2,649.9	2,627.2	22.69	116.807				
4,300.0	3,903.7	3,067.1	2,898.8	34.9	19.6	-173.29	-498.2	769.7	2,697.1	2,674.0	23.09	116.803				
4,400.0	4,003.5	3,157.4	2,982.4	35.0	20.3	-173.34	-516.0	798.8	2,739.7	2,716.3	23.44	116.904				
4,462.5	4,066.0	3,214.9	3,035.6	35.0	20.8	111.70	-527.3	817.3	2,764.0	2,740.4	23.62	117.015				
4,500.0	4,103.5	3,249.7	3,067.8	35.1	21.1	111.75	-534.1	828.5	2,778.0	2,754.2	23.79	116.781				
4,600.0	4,203.5	4,420.0	4,203.5	35.1	25.5	112.52	-651.4	1,020.0	2,799.3	2,772.7	26.60	105.232				
4,700.0	4,303.5	4,520.0	4,303.5	35.2	25.6	112.52	-651.4	1,020.0	2,799.3	2,772.4	26.86	104.220				
4,800.0	4,403.5	4,620.0	4,403.5	35.2	25.7	112.52	-651.4	1,020.0	2,799.3	2,772.1	27.12	103.208				

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

Company:	Ursa Operating Company, LLC	Local Co-ordinate Reference:	Well Frei A23
Project:	Rockies Region	TVD Reference:	Frei A23 @ 5611.9ft (PAD EST KB)
Reference Site:	Frei A	MD Reference:	Frei A23 @ 5611.9ft (PAD EST KB)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Frei A23	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	EDM 2003.21 Single User Db
Reference Design:	Design #1	Offset TVD Reference:	Offset Datum

Offset Design													Offset Site Error:	0.0 ft
Survey Program: 0-MWD													Offset Well Error:	0.0 ft
Frei A - Frei A1 - Wellbore #1 - Design #1														
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		
4,900.0	4,503.5	4,720.0	4,503.5	35.3	25.8	112.52	-651.4	1,020.0	2,799.3	2,771.9	27.39	102.197		
5,000.0	4,603.5	4,820.0	4,603.5	35.3	25.8	112.52	-651.4	1,020.0	2,799.3	2,771.6	27.66	101.189		
5,100.0	4,703.5	4,920.0	4,703.5	35.4	25.9	112.52	-651.4	1,020.0	2,799.3	2,771.3	27.94	100.184		
5,200.0	4,803.5	5,020.0	4,803.5	35.5	26.0	112.52	-651.4	1,020.0	2,799.3	2,771.0	28.22	99.183		
5,300.0	4,903.5	5,120.0	4,903.5	35.5	26.1	112.52	-651.4	1,020.0	2,799.3	2,770.8	28.51	98.187		
5,400.0	5,003.5	5,220.0	5,003.5	35.6	26.2	112.52	-651.4	1,020.0	2,799.3	2,770.5	28.80	97.197		
5,500.0	5,103.5	5,320.0	5,103.5	35.7	26.3	112.52	-651.4	1,020.0	2,799.3	2,770.2	29.09	96.214		
5,600.0	5,203.5	5,420.0	5,203.5	35.7	26.3	112.52	-651.4	1,020.0	2,799.3	2,769.9	29.39	95.237		
5,700.0	5,303.5	5,520.0	5,303.5	35.8	26.4	112.52	-651.4	1,020.0	2,799.3	2,769.6	29.69	94.268		
5,800.0	5,403.5	5,620.0	5,403.5	35.9	26.5	112.52	-651.4	1,020.0	2,799.3	2,769.3	30.00	93.307		
5,900.0	5,503.5	5,720.0	5,503.5	36.0	26.6	112.52	-651.4	1,020.0	2,799.3	2,769.0	30.31	92.354		
6,000.0	5,603.5	5,820.0	5,603.5	36.0	26.7	112.52	-651.4	1,020.0	2,799.3	2,768.6	30.62	91.411		
6,100.0	5,703.5	5,920.0	5,703.5	36.1	26.8	112.52	-651.4	1,020.0	2,799.3	2,768.3	30.94	90.476		
6,200.0	5,803.5	6,020.0	5,803.5	36.2	26.9	112.52	-651.4	1,020.0	2,799.3	2,768.0	31.26	89.552		
6,300.0	5,903.5	6,120.0	5,903.5	36.3	27.0	112.52	-651.4	1,020.0	2,799.3	2,767.7	31.58	88.637		
6,400.0	6,003.5	6,220.0	6,003.5	36.3	27.1	112.52	-651.4	1,020.0	2,799.3	2,767.4	31.91	87.732		
6,500.0	6,103.5	6,320.0	6,103.5	36.4	27.2	112.52	-651.4	1,020.0	2,799.3	2,767.0	32.24	86.837		
6,600.0	6,203.5	6,420.0	6,203.5	36.5	27.3	112.52	-651.4	1,020.0	2,799.3	2,766.7	32.57	85.953		
6,700.0	6,303.5	6,520.0	6,303.5	36.6	27.4	112.52	-651.4	1,020.0	2,799.3	2,766.4	32.90	85.080		
6,800.0	6,403.5	6,620.0	6,403.5	36.7	27.5	112.52	-651.4	1,020.0	2,799.3	2,766.0	33.24	84.217		
6,900.0	6,503.5	6,720.0	6,503.5	36.8	27.6	112.52	-651.4	1,020.0	2,799.3	2,765.7	33.58	83.365		
7,000.0	6,603.5	6,820.0	6,603.5	36.9	27.7	112.52	-651.4	1,020.0	2,799.3	2,765.3	33.92	82.524		
7,100.0	6,703.5	6,920.0	6,703.5	36.9	27.8	112.52	-651.4	1,020.0	2,799.3	2,765.0	34.27	81.694		
7,200.0	6,803.5	7,020.0	6,803.5	37.0	28.0	112.52	-651.4	1,020.0	2,799.3	2,764.7	34.61	80.875		
7,286.5	6,890.0	7,033.5	6,817.0	37.1	28.0	112.52	-651.4	1,020.0	2,800.2	2,765.4	34.78	80.505		

Company:	Ursa Operating Company, LLC	Local Co-ordinate Reference:	Well Frei A23
Project:	Rockies Region	TVD Reference:	Frei A23 @ 5611.9ft (PAD EST KB)
Reference Site:	Frei A	MD Reference:	Frei A23 @ 5611.9ft (PAD EST KB)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Frei A23	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	EDM 2003.21 Single User Db
Reference Design:	Design #1	Offset TVD Reference:	Offset Datum

Offset Design												Frei A - Frei A10 - Wellbore #1 - Design #1		Offset Site Error: 0.0 ft	
Survey Program: 0-MWD														Offset Well Error: 0.0 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			
0.0	0.0	0.0	0.0	0.0	0.0	8.49	61.8	9.2	62.5						
100.0	100.0	100.0	100.0	0.1	0.1	8.49	61.8	9.2	62.5	62.3	0.19	328.477			
200.0	200.0	200.0	200.0	0.3	0.3	8.49	61.8	9.2	62.5	61.8	0.64	97.643			
300.0	300.0	300.0	300.0	0.5	0.5	8.49	61.8	9.2	62.5	61.4	1.09	57.344	CC, ES		
400.0	400.0	397.0	397.0	0.8	0.8	86.62	63.8	10.7	64.5	63.0	1.53	42.259			
500.0	499.6	493.0	492.6	1.0	1.0	94.81	69.7	14.9	71.8	69.8	2.00	35.985			
600.0	598.8	586.9	585.8	1.3	1.2	104.74	79.3	21.7	86.6	84.1	2.52	34.303	SF		
700.0	697.1	678.0	675.5	1.6	1.5	113.51	92.1	30.9	110.2	107.1	3.11	35.463			
800.0	794.3	765.4	760.8	2.1	1.9	120.04	107.6	42.1	142.7	139.0	3.74	38.182			
900.0	890.2	848.5	841.0	2.6	2.3	124.52	125.4	54.8	183.5	179.1	4.42	41.549			
1,000.0	984.4	926.8	915.6	3.2	2.7	127.43	144.7	68.6	231.8	226.6	5.15	45.027			
1,100.0	1,076.8	1,000.0	984.4	4.0	3.1	129.20	164.9	83.1	286.8	280.9	5.94	48.317			
1,200.0	1,167.1	1,068.0	1,047.5	4.8	3.6	130.12	185.7	97.9	347.8	341.0	6.79	51.200			
1,300.0	1,254.9	1,130.7	1,104.7	5.8	4.1	130.38	206.4	112.7	414.3	406.6	7.72	53.652			
1,329.4	1,280.3	1,148.1	1,120.5	6.1	4.2	130.35	212.4	117.1	434.8	426.8	8.01	54.272			
1,400.0	1,340.9	1,188.6	1,156.9	6.9	4.5	131.63	226.8	127.4	485.0	476.3	8.68	55.882			
1,500.0	1,426.7	1,243.8	1,205.8	8.0	5.0	132.95	247.6	142.2	557.8	548.1	9.63	57.934			
1,600.0	1,512.5	1,300.0	1,254.9	9.1	5.5	133.91	269.8	158.2	632.3	621.7	10.60	59.629			
1,700.0	1,598.3	1,346.5	1,294.9	10.3	6.0	134.48	289.1	172.0	708.3	696.7	11.57	61.198			
1,800.0	1,684.2	1,400.0	1,340.2	11.4	6.5	134.95	312.3	188.6	785.8	773.2	12.56	62.561			
1,900.0	1,770.0	1,439.8	1,373.4	12.5	6.9	135.18	330.2	201.4	864.5	850.9	13.53	63.885			
2,000.0	1,855.8	1,490.4	1,414.9	13.7	7.4	135.38	353.7	218.2	944.2	929.7	14.54	64.930			
2,100.0	1,941.6	1,550.5	1,464.1	14.8	8.1	135.58	381.6	238.3	1,024.2	1,008.6	15.58	65.726			
2,200.0	2,027.4	1,610.5	1,513.3	15.9	8.8	135.75	409.6	258.3	1,104.2	1,087.5	16.62	66.428			
2,300.0	2,113.3	1,670.5	1,562.5	17.1	9.4	135.89	437.6	278.3	1,184.1	1,166.5	17.67	67.006			
2,400.0	2,199.1	1,730.5	1,611.7	18.2	10.1	136.02	465.5	298.3	1,264.1	1,245.4	18.73	67.504			
2,500.0	2,284.9	1,790.5	1,660.8	19.4	10.8	136.13	493.5	318.3	1,344.1	1,324.3	19.79	67.935			
2,600.0	2,370.7	1,850.5	1,710.0	20.5	11.4	136.23	521.4	338.3	1,424.1	1,403.2	20.85	68.301			
2,700.0	2,456.6	1,910.5	1,759.2	21.6	12.1	136.31	549.4	358.4	1,504.1	1,482.1	21.92	68.626			
2,800.0	2,542.4	1,970.5	1,808.4	22.8	12.8	136.39	577.3	378.4	1,584.0	1,561.1	22.99	68.906			
2,900.0	2,628.2	2,030.5	1,857.6	23.9	13.4	136.46	605.3	398.4	1,664.0	1,640.0	24.06	69.154			
3,000.0	2,714.0	2,090.5	1,906.7	25.1	14.1	136.53	633.2	418.4	1,744.0	1,718.9	25.14	69.376			
3,100.0	2,799.8	2,150.5	1,955.9	26.2	14.8	136.59	661.2	438.4	1,824.0	1,797.8	26.22	69.570			
3,200.0	2,885.7	2,210.5	2,005.1	27.4	15.5	136.64	689.2	458.4	1,904.0	1,876.7	27.30	69.747			
3,300.0	2,971.5	2,270.6	2,054.3	28.5	16.1	136.69	717.1	478.5	1,984.0	1,955.6	28.38	69.903			
3,400.0	3,057.3	2,330.6	2,103.5	29.7	16.8	136.74	745.1	498.5	2,064.0	2,034.5	29.47	70.045			
3,433.1	3,085.7	2,350.4	2,119.7	30.0	17.0	136.75	754.3	505.1	2,090.4	2,060.6	29.83	70.089			
3,500.0	3,143.7	2,391.3	2,153.2	30.7	17.5	136.80	773.4	518.7	2,143.4	2,113.0	30.45	70.396			
3,600.0	3,232.5	2,454.8	2,205.3	31.6	18.2	140.73	802.9	539.9	2,220.6	2,189.2	31.37	70.794			
3,700.0	3,323.6	2,521.1	2,259.6	32.3	19.0	142.57	833.8	562.0	2,295.1	2,262.8	32.31	71.037			
3,800.0	3,416.7	2,590.1	2,316.2	33.0	19.7	144.07	866.0	585.1	2,366.8	2,333.6	33.26	71.170			
3,900.0	3,511.6	2,661.5	2,374.7	33.5	20.5	145.29	899.3	608.9	2,435.6	2,401.4	34.19	71.232			
4,000.0	3,608.0	2,735.2	2,435.1	34.0	21.4	146.28	933.6	633.5	2,501.3	2,466.2	35.11	71.251			
4,100.0	3,705.7	2,810.9	2,497.2	34.4	22.2	147.06	968.9	658.7	2,563.7	2,527.7	35.98	71.250			
4,200.0	3,804.3	2,888.5	2,560.7	34.7	23.1	147.67	1,005.0	684.6	2,622.8	2,586.0	36.81	71.250			
4,300.0	3,903.7	2,967.7	2,625.7	34.9	24.0	148.12	1,041.9	711.0	2,678.6	2,641.0	37.59	71.264			
4,400.0	4,003.5	4,438.6	4,003.5	35.0	31.2	144.10	1,378.9	952.3	2,693.4	2,650.2	43.19	62.357			
4,462.5	4,066.0	4,501.0	4,066.0	35.0	31.3	69.17	1,378.9	952.3	2,694.2	2,650.9	43.32	62.188			
4,500.0	4,103.5	4,538.5	4,103.5	35.1	31.3	69.17	1,378.9	952.3	2,694.2	2,650.8	43.38	62.104			
4,600.0	4,203.5	4,638.5	4,203.5	35.1	31.4	69.17	1,378.9	952.3	2,694.2	2,650.7	43.54	61.874			
4,700.0	4,303.5	4,738.5	4,303.5	35.2	31.4	69.17	1,378.9	952.3	2,694.2	2,650.5	43.71	61.641			
4,800.0	4,403.5	4,838.5	4,403.5	35.2	31.5	69.17	1,378.9	952.3	2,694.2	2,650.3	43.88	61.403			

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

Company:	Ursa Operating Company, LLC	Local Co-ordinate Reference:	Well Frei A23
Project:	Rockies Region	TVD Reference:	Frei A23 @ 5611.9ft (PAD EST KB)
Reference Site:	Frei A	MD Reference:	Frei A23 @ 5611.9ft (PAD EST KB)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Frei A23	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	EDM 2003.21 Single User Db
Reference Design:	Design #1	Offset TVD Reference:	Offset Datum

Offset Design												Frei A - Frei A10 - Wellbore #1 - Design #1		Offset Site Error:		0.0 ft	
Survey Program: 0-MWD														Offset Well Error:		0.0 ft	
Reference		Offset		Semi Major Axis			Distance							Warning			
Measured Depth	Vertical Depth	Measured Depth	Vertical Depth	Reference	Offset	Highside Toolface	Offset Wellbore Centre		Between Centres	Between Ellipses	Minimum Separation	Separation Factor					
(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(°)	+N/-S (ft)	+E/-W (ft)	(ft)	(ft)	(ft)						
4,900.0	4,503.5	4,938.5	4,503.5	35.3	31.5	69.17	1,378.9	952.3	2,694.2	2,650.2	44.05	61.162					
5,000.0	4,603.5	5,038.5	4,603.5	35.3	31.6	69.17	1,378.9	952.3	2,694.2	2,650.0	44.23	60.918					
5,100.0	4,703.5	5,138.5	4,703.5	35.4	31.7	69.17	1,378.9	952.3	2,694.2	2,649.8	44.41	60.670					
5,200.0	4,803.5	5,238.5	4,803.5	35.5	31.7	69.17	1,378.9	952.3	2,694.2	2,649.6	44.59	60.419					
5,300.0	4,903.5	5,338.5	4,903.5	35.5	31.8	69.17	1,378.9	952.3	2,694.2	2,649.4	44.78	60.164					
5,400.0	5,003.5	5,438.5	5,003.5	35.6	31.9	69.17	1,378.9	952.3	2,694.2	2,649.2	44.97	59.908					
5,500.0	5,103.5	5,538.5	5,103.5	35.7	31.9	69.17	1,378.9	952.3	2,694.2	2,649.0	45.17	59.648					
5,600.0	5,203.5	5,638.5	5,203.5	35.7	32.0	69.17	1,378.9	952.3	2,694.2	2,648.8	45.37	59.386					
5,700.0	5,303.5	5,738.5	5,303.5	35.8	32.1	69.17	1,378.9	952.3	2,694.2	2,648.6	45.57	59.122					
5,800.0	5,403.5	5,838.5	5,403.5	35.9	32.2	69.17	1,378.9	952.3	2,694.2	2,648.4	45.78	58.855					
5,900.0	5,503.5	5,938.5	5,503.5	36.0	32.2	69.17	1,378.9	952.3	2,694.2	2,648.2	45.99	58.586					
6,000.0	5,603.5	6,038.5	5,603.5	36.0	32.3	69.17	1,378.9	952.3	2,694.2	2,648.0	46.20	58.316					
6,100.0	5,703.5	6,138.5	5,703.5	36.1	32.4	69.17	1,378.9	952.3	2,694.2	2,647.8	46.42	58.044					
6,200.0	5,803.5	6,238.5	5,803.5	36.2	32.5	69.17	1,378.9	952.3	2,694.2	2,647.6	46.64	57.770					
6,300.0	5,903.5	6,338.5	5,903.5	36.3	32.6	69.17	1,378.9	952.3	2,694.2	2,647.4	46.86	57.495					
6,400.0	6,003.5	6,438.5	6,003.5	36.3	32.7	69.17	1,378.9	952.3	2,694.2	2,647.1	47.09	57.218					
6,500.0	6,103.5	6,538.5	6,103.5	36.4	32.7	69.17	1,378.9	952.3	2,694.2	2,646.9	47.32	56.940					
6,600.0	6,203.5	6,638.5	6,203.5	36.5	32.8	69.17	1,378.9	952.3	2,694.2	2,646.7	47.55	56.662					
6,700.0	6,303.5	6,738.5	6,303.5	36.6	32.9	69.17	1,378.9	952.3	2,694.2	2,646.4	47.79	56.382					
6,800.0	6,403.5	6,838.5	6,403.5	36.7	33.0	69.17	1,378.9	952.3	2,694.2	2,646.2	48.02	56.101					
6,900.0	6,503.5	6,938.5	6,503.5	36.8	33.1	69.17	1,378.9	952.3	2,694.2	2,645.9	48.27	55.820					
7,000.0	6,603.5	7,038.5	6,603.5	36.9	33.2	69.17	1,378.9	952.3	2,694.2	2,645.7	48.51	55.538					
7,017.7	6,621.2	7,056.2	6,621.2	36.9	33.2	69.17	1,378.9	952.3	2,694.2	2,645.7	48.55	55.488					
7,100.0	6,703.5	7,079.0	6,644.0	36.9	33.2	69.17	1,378.9	952.3	2,694.9	2,646.2	48.68	55.357					
7,200.0	6,803.5	7,079.0	6,644.0	37.0	33.2	69.17	1,378.9	952.3	2,698.9	2,650.1	48.80	55.303					
7,286.5	6,890.0	7,079.0	6,644.0	37.1	33.2	69.17	1,378.9	952.3	2,705.4	2,656.5	48.91	55.317					

Company:	Ursa Operating Company, LLC	Local Co-ordinate Reference:	Well Frei A23
Project:	Rockies Region	TVD Reference:	Frei A23 @ 5611.9ft (PAD EST KB)
Reference Site:	Frei A	MD Reference:	Frei A23 @ 5611.9ft (PAD EST KB)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Frei A23	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	EDM 2003.21 Single User Db
Reference Design:	Design #1	Offset TVD Reference:	Offset Datum

Offset Design													Frei A - Frei A11 - Wellbore #1 - Actual		Offset Site Error: 0.0 ft	
Survey Program: 131-													Offset Well Error: 0.0 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				
0.0	0.0	0.0	0.0	0.0	0.0	32.71	46.1	29.6	54.8							
100.0	100.0	99.5	99.5	0.1	0.0	32.41	46.6	29.6	55.2	55.1	0.10	580.088				
200.0	200.0	197.9	197.9	0.3	0.0	31.58	48.6	29.9	57.1	56.8	0.32	178.374				
300.0	300.0	294.2	294.0	0.5	0.0	30.85	54.3	32.4	63.5	63.0	0.54	116.639				
400.0	400.0	388.8	387.7	0.8	0.0	106.94	64.8	38.3	77.0	76.2	0.76	100.936				
500.0	499.6	481.8	479.1	1.0	0.0	109.90	80.0	46.6	98.0	97.0	0.99	98.741				
600.0	598.8	572.7	567.5	1.3	0.0	113.46	98.4	57.2	126.0	124.8	1.26	100.050				
700.0	697.1	662.1	653.6	1.6	0.0	116.76	118.9	69.2	159.9	158.3	1.58	101.357				
800.0	794.3	743.7	731.5	2.1	0.0	119.24	140.3	81.8	200.3	198.3	1.96	102.308				
900.0	890.2	821.3	803.9	2.6	0.0	120.90	164.0	95.7	248.1	245.7	2.41	102.909				
1,000.0	984.4	897.3	874.0	3.2	0.0	122.00	189.7	110.4	301.7	298.8	2.95	102.377				
1,100.0	1,076.8	969.0	939.4	4.0	0.0	122.88	214.6	125.9	360.3	356.7	3.57	100.920				
1,200.0	1,167.1	1,037.4	1,001.3	4.8	0.0	123.55	238.7	142.2	423.5	419.3	4.28	98.855				
1,300.0	1,254.9	1,104.8	1,061.9	5.8	0.0	123.95	263.0	158.7	490.5	485.4	5.10	96.197				
1,329.4	1,280.3	1,121.0	1,076.4	6.1	0.0	123.87	269.0	162.8	511.0	505.6	5.37	95.236				
1,400.0	1,340.9	1,161.4	1,112.4	6.9	0.0	125.29	284.5	173.1	560.9	555.0	5.95	94.330				
1,500.0	1,426.7	1,216.0	1,160.1	8.0	0.0	126.79	306.5	187.5	633.5	626.7	6.78	93.466				
1,600.0	1,512.5	1,269.3	1,206.1	9.1	0.0	127.85	329.6	201.6	707.4	699.8	7.62	92.859				
1,700.0	1,598.3	1,315.3	1,245.0	10.3	0.0	128.55	350.4	214.5	783.1	774.6	8.47	92.433				
1,800.0	1,684.2	1,359.9	1,282.1	11.4	0.0	129.08	371.4	227.6	860.4	851.1	9.33	92.198				
1,900.0	1,770.0	1,409.3	1,322.3	12.5	0.0	129.47	396.0	242.4	939.0	928.8	10.20	92.057				
2,000.0	1,855.8	1,463.2	1,365.4	13.7	0.0	129.70	424.1	258.3	1,018.1	1,007.1	11.08	91.895				
2,100.0	1,941.6	1,522.5	1,412.4	14.8	0.0	129.83	455.9	275.4	1,097.5	1,085.5	11.97	91.697				
2,200.0	2,027.4	1,575.7	1,454.4	15.9	0.0	129.93	484.7	291.0	1,177.1	1,164.3	12.86	91.516				
2,300.0	2,113.3	1,633.3	1,499.8	17.1	0.0	130.01	516.0	308.0	1,257.1	1,243.3	13.76	91.377				
2,400.0	2,199.1	1,688.0	1,542.9	18.2	0.0	130.11	545.3	324.3	1,337.0	1,322.4	14.65	91.275				
2,500.0	2,284.9	1,742.1	1,585.5	19.4	0.0	130.21	574.2	340.8	1,417.3	1,401.7	15.54	91.211				
2,600.0	2,370.7	1,792.9	1,625.4	20.5	0.0	130.30	601.5	356.6	1,497.9	1,481.5	16.43	91.175				
2,700.0	2,456.6	1,856.2	1,675.0	21.6	0.0	130.39	635.5	376.2	1,578.6	1,561.3	17.32	91.159				
2,800.0	2,542.4	1,906.1	1,714.2	22.8	0.0	130.46	662.3	391.7	1,659.3	1,641.1	18.21	91.126 SF				
2,900.0	2,628.2	1,948.4	1,747.3	23.9	0.0	130.54	684.8	405.4	1,740.5	1,721.4	19.10	91.136				
3,000.0	2,714.0	1,999.5	1,787.2	25.1	0.0	130.65	711.7	422.4	1,822.2	1,802.2	19.98	91.209				
3,100.0	2,799.8	2,063.7	1,837.6	26.2	0.0	130.77	745.5	443.8	1,903.8	1,883.0	20.85	91.299				
3,200.0	2,885.7	2,130.2	1,889.7	27.4	0.0	130.88	780.6	465.5	1,985.2	1,963.5	21.73	91.361				
3,300.0	2,971.5	2,198.6	1,943.3	28.5	0.0	130.97	816.8	487.6	2,066.4	2,043.8	22.61	91.399				
3,400.0	3,057.3	2,268.2	1,998.5	29.7	0.0	131.10	852.7	510.1	2,147.2	2,123.7	23.47	91.470				
3,433.1	3,085.7	2,290.5	2,016.3	30.0	0.0	131.14	864.1	517.4	2,173.9	2,150.1	23.76	91.493				
3,500.0	3,143.7	2,336.7	2,053.0	30.7	0.0	133.15	887.8	532.2	2,227.3	2,203.6	23.73	93.852				
3,600.0	3,232.5	2,401.2	2,104.3	31.6	0.0	135.71	921.2	552.6	2,305.2	2,281.5	23.63	97.542				
3,700.0	3,323.6	2,460.1	2,151.0	32.3	0.0	137.87	952.0	571.1	2,380.6	2,357.1	23.52	101.206				
3,800.0	3,416.7	2,508.2	2,189.1	33.0	0.0	139.76	976.8	586.7	2,454.0	2,430.6	23.37	104.987				
3,900.0	3,511.6	2,586.4	2,251.2	33.5	0.0	141.24	1,016.5	612.8	2,525.0	2,501.7	23.26	108.553				
4,000.0	3,608.0	2,688.9	2,332.9	34.0	0.0	142.25	1,069.1	645.5	2,592.2	2,569.0	23.21	111.670				
4,100.0	3,705.7	2,763.1	2,392.2	34.4	0.0	143.22	1,107.2	668.7	2,656.0	2,632.9	23.09	115.005				
4,200.0	3,804.3	2,822.0	2,439.1	34.7	0.0	144.13	1,137.5	687.3	2,717.0	2,694.1	22.92	118.552				
4,300.0	3,903.7	2,886.9	2,490.7	34.9	0.0	144.85	1,170.9	708.1	2,775.2	2,752.5	22.74	122.055				
4,400.0	4,003.5	2,947.7	2,538.9	35.0	0.0	145.47	1,202.3	727.9	2,830.7	2,808.1	22.52	125.679				
4,462.5	4,066.0	4,606.3	4,059.6	35.0	0.0	64.00	1,668.4	991.7	2,845.6	2,820.6	24.93	114.130				
4,500.0	4,103.5	4,644.9	4,098.2	35.1	0.0	63.99	1,668.5	991.7	2,845.6	2,820.7	24.96	114.014				
4,600.0	4,203.5	4,739.3	4,192.6	35.1	0.0	63.99	1,668.8	991.9	2,845.9	2,820.9	25.03	113.693				
4,700.0	4,303.5	4,829.0	4,282.2	35.2	0.0	63.98	1,669.3	992.2	2,846.4	2,821.3	25.11	113.367				
4,800.0	4,403.5	4,918.1	4,371.3	35.2	0.0	63.97	1,670.5	992.7	2,847.5	2,822.3	25.19	113.042				

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

Company:	Ursa Operating Company, LLC	Local Co-ordinate Reference:	Well Frei A23
Project:	Rockies Region	TVD Reference:	Frei A23 @ 5611.9ft (PAD EST KB)
Reference Site:	Frei A	MD Reference:	Frei A23 @ 5611.9ft (PAD EST KB)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Frei A23	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	EDM 2003.21 Single User Db
Reference Design:	Design #1	Offset TVD Reference:	Offset Datum

Offset Design													Offset Site Error:	0.0 ft
Survey Program: 131-													Offset Well Error:	0.0 ft
Frei A - Frei A11 - Wellbore #1 - Actual														
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	
4,900.0	4,503.5	5,048.6	4,501.8	35.3	0.0	63.95	1,671.4	993.0	2,848.0	2,822.7	25.27	112.693		
5,000.0	4,603.5	5,168.5	4,621.8	35.3	0.0	63.97	1,670.5	993.0	2,847.7	2,822.3	25.34	112.357		
5,100.0	4,703.5	5,255.0	4,708.2	35.4	0.0	63.97	1,670.2	992.7	2,847.2	2,821.8	25.43	111.984		
5,200.0	4,803.5	5,368.9	4,822.1	35.5	0.0	63.97	1,670.1	992.4	2,847.0	2,821.5	25.51	111.610		
5,300.0	4,903.5	5,467.0	4,920.2	35.5	0.0	63.98	1,669.5	991.8	2,846.2	2,820.6	25.59	111.220		
5,393.2	4,996.7	5,543.5	4,996.7	35.6	0.0	63.98	1,669.4	991.5	2,845.8	2,820.1	25.67	110.857		
5,400.0	5,003.5	5,548.6	5,001.8	35.6	0.0	63.98	1,669.4	991.5	2,845.8	2,820.1	25.68	110.831		
5,500.0	5,103.5	5,628.7	5,081.9	35.7	0.0	63.97	1,669.9	991.7	2,846.2	2,820.5	25.77	110.460		
5,600.0	5,203.5	5,750.0	5,203.2	35.7	0.0	63.96	1,670.5	992.1	2,846.8	2,821.0	25.86	110.093		
5,700.0	5,303.5	5,832.5	5,285.7	35.8	0.0	63.96	1,670.5	992.4	2,847.1	2,821.2	25.95	109.721		
5,800.0	5,403.5	5,942.3	5,395.5	35.9	0.0	63.97	1,670.7	993.0	2,847.7	2,821.6	26.04	109.354		
5,900.0	5,503.5	6,045.0	5,498.2	36.0	0.0	63.96	1,671.0	993.1	2,847.9	2,821.7	26.14	108.962		
6,000.0	5,603.5	6,136.4	5,589.6	36.0	0.0	63.96	1,671.2	993.3	2,848.2	2,822.0	26.23	108.574		
6,100.0	5,703.5	6,223.0	5,676.2	36.1	0.0	63.96	1,671.4	993.9	2,848.9	2,822.6	26.33	108.202		
6,200.0	5,803.5	6,317.0	5,770.2	36.2	0.0	63.97	1,671.6	994.8	2,849.9	2,823.5	26.43	107.839		
6,300.0	5,903.5	6,412.0	5,865.2	36.3	0.0	63.96	1,672.3	995.8	2,851.2	2,824.6	26.53	107.472		
6,400.0	6,003.5	6,501.3	5,954.5	36.3	0.0	63.95	1,673.6	996.7	2,852.7	2,826.1	26.64	107.102		
6,500.0	6,103.5	6,587.5	6,040.7	36.4	0.0	63.93	1,674.9	998.0	2,854.7	2,827.9	26.74	106.743		
6,600.0	6,203.5	6,740.7	6,193.9	36.5	0.0	63.96	1,674.3	999.8	2,855.4	2,828.5	26.84	106.387		
6,700.0	6,303.5	6,823.4	6,276.5	36.6	0.0	63.95	1,675.1	1,000.0	2,856.1	2,829.1	26.95	105.975		
6,800.0	6,403.5	6,910.7	6,363.9	36.7	0.0	63.93	1,676.2	1,000.6	2,857.2	2,830.1	27.06	105.575		
6,900.0	6,503.5	6,978.0	6,431.1	36.8	0.0	63.92	1,677.2	1,001.2	2,858.8	2,831.6	27.18	105.193		
7,000.0	6,603.5	6,978.0	6,431.1	36.9	0.0	63.92	1,677.2	1,001.2	2,863.1	2,835.8	27.29	104.923		
7,100.0	6,703.5	6,978.0	6,431.1	36.9	0.0	63.92	1,677.2	1,001.2	2,870.8	2,843.4	27.40	104.777		
7,200.0	6,803.5	6,978.0	6,431.1	37.0	0.0	63.92	1,677.2	1,001.2	2,882.0	2,854.5	27.51	104.753		
7,286.5	6,890.0	6,978.0	6,431.1	37.1	0.0	63.92	1,677.2	1,001.2	2,894.5	2,866.9	27.61	104.827		

Company:	Ursa Operating Company, LLC	Local Co-ordinate Reference:	Well Frei A23
Project:	Rockies Region	TVD Reference:	Frei A23 @ 5611.9ft (PAD EST KB)
Reference Site:	Frei A	MD Reference:	Frei A23 @ 5611.9ft (PAD EST KB)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Frei A23	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	EDM 2003.21 Single User Db
Reference Design:	Design #1	Offset TVD Reference:	Offset Datum

Offset Design													Offset Site Error:	0.0 ft
Survey Program: 0-MWD													Offset Well Error:	0.0 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		
0.0	0.0	0.0	0.0	0.0	0.0	8.50	74.2	11.1	75.0					
100.0	100.0	100.0	100.0	0.1	0.1	8.50	74.2	11.1	75.0	74.8	0.19	394.337		
200.0	200.0	200.0	200.0	0.3	0.3	8.50	74.2	11.1	75.0	74.3	0.64	117.220		
300.0	300.0	300.0	300.0	0.5	0.5	8.50	74.2	11.1	75.0	73.9	1.09	68.842 CC, ES		
400.0	400.0	396.2	396.2	0.8	0.8	85.76	76.4	12.1	77.2	75.6	1.53	50.557		
500.0	499.6	491.6	491.3	1.0	1.0	91.83	82.9	15.1	84.4	82.4	1.99	42.361		
600.0	598.8	585.2	584.1	1.3	1.2	99.60	93.4	20.1	98.3	95.8	2.52	39.060		
700.0	697.1	676.3	673.9	1.6	1.5	107.01	107.6	26.7	120.0	116.9	3.11	38.632 SF		
800.0	794.3	764.3	759.7	2.1	1.9	112.99	125.0	34.9	149.8	146.0	3.76	39.831		
900.0	890.2	848.6	841.0	2.6	2.3	117.39	145.0	44.2	187.3	182.8	4.48	41.800		
1,000.0	984.4	928.6	917.3	3.2	2.7	120.42	167.0	54.5	232.0	226.7	5.27	44.019		
1,100.0	1,076.8	1,000.0	984.4	4.0	3.1	122.20	189.1	64.8	283.2	277.1	6.12	46.283		
1,200.0	1,167.1	1,075.1	1,054.0	4.8	3.6	123.52	214.7	76.7	340.2	333.2	7.07	48.117		
1,300.0	1,254.9	1,141.2	1,114.2	5.8	4.1	123.99	239.3	88.2	402.7	394.6	8.09	49.761		
1,329.4	1,280.3	1,159.7	1,130.9	6.1	4.3	124.02	246.5	91.6	422.0	413.5	8.41	50.179		
1,400.0	1,340.9	1,200.0	1,167.1	6.9	4.6	125.31	262.8	99.2	469.3	460.2	9.15	51.302		
1,500.0	1,426.7	1,262.2	1,222.0	8.0	5.1	126.79	289.1	111.5	538.3	528.0	10.23	52.617		
1,600.0	1,512.5	1,318.9	1,271.3	9.1	5.6	127.74	314.6	123.4	609.1	597.8	11.31	53.838		
1,700.0	1,598.3	1,373.3	1,317.7	10.3	6.1	128.37	340.3	135.4	681.6	669.2	12.41	54.933		
1,800.0	1,684.2	1,425.4	1,361.4	11.4	6.7	128.78	366.0	147.4	755.5	742.0	13.51	55.938		
1,900.0	1,770.0	1,475.2	1,402.4	12.5	7.2	129.02	391.5	159.3	830.9	816.3	14.62	56.853		
2,000.0	1,855.8	1,522.8	1,440.9	13.7	7.7	129.15	416.9	171.2	907.5	891.8	15.73	57.702		
2,100.0	1,941.6	1,568.3	1,477.1	14.8	8.2	129.18	441.9	182.9	985.4	968.5	16.85	58.492		
2,200.0	2,027.4	1,600.0	1,501.9	15.9	8.6	129.17	459.8	191.2	1,064.4	1,046.5	17.90	59.447		
2,300.0	2,113.3	1,653.5	1,543.0	17.1	9.2	129.09	490.8	205.7	1,144.3	1,125.2	19.09	59.950		
2,400.0	2,199.1	1,700.0	1,577.9	18.2	9.8	128.96	518.6	218.7	1,225.2	1,205.0	20.24	60.537		
2,500.0	2,284.9	1,731.3	1,601.1	19.4	10.2	128.85	537.8	227.7	1,307.0	1,285.7	21.33	61.282		
2,600.0	2,370.7	1,767.7	1,627.5	20.5	10.7	128.70	560.5	238.3	1,389.7	1,367.3	22.45	61.909		
2,700.0	2,456.6	1,800.0	1,650.5	21.6	11.1	128.55	581.0	247.9	1,473.3	1,449.7	23.55	62.561		
2,800.0	2,542.4	1,835.8	1,675.6	22.8	11.6	128.37	604.1	258.7	1,557.5	1,532.8	24.68	63.101		
2,900.0	2,628.2	1,867.7	1,697.5	23.9	12.0	128.20	625.1	268.5	1,642.5	1,616.7	25.80	63.670		
3,000.0	2,714.0	1,900.0	1,719.3	25.1	12.5	128.01	646.7	278.6	1,728.1	1,701.2	26.92	64.205		
3,100.0	2,799.8	1,927.5	1,737.6	26.2	12.8	127.84	665.3	287.3	1,814.4	1,786.4	28.02	64.761		
3,200.0	2,885.7	1,955.5	1,755.9	27.4	13.3	127.66	684.6	296.3	1,901.3	1,872.2	29.12	65.282		
3,300.0	2,971.5	2,000.0	1,784.2	28.5	13.9	127.36	715.6	310.7	1,988.8	1,958.5	30.33	65.565		
3,400.0	3,057.3	2,000.0	1,784.2	29.7	13.9	127.36	715.6	310.7	2,076.7	2,045.4	31.27	66.403		
3,433.1	3,085.7	2,000.0	1,784.2	30.0	13.9	127.36	715.6	310.7	2,106.0	2,074.4	31.58	66.677		
3,500.0	3,143.7	2,033.2	1,804.9	30.7	14.4	130.02	739.1	321.7	2,164.8	2,132.7	32.07	67.503		
3,600.0	3,232.5	2,058.3	1,820.2	31.6	14.8	133.69	757.1	330.2	2,251.9	2,219.3	32.56	69.164		
3,700.0	3,323.6	2,100.0	1,845.1	32.3	15.4	136.60	787.4	344.3	2,337.9	2,304.7	33.20	70.426		
3,800.0	3,416.7	2,100.0	1,845.1	33.0	15.4	139.75	787.4	344.3	2,422.3	2,389.0	33.35	72.637		
3,900.0	3,511.6	2,133.3	1,864.4	33.5	15.9	142.00	812.0	355.8	2,505.3	2,471.5	33.85	74.021		
4,000.0	3,608.0	2,157.9	1,878.4	34.0	16.3	144.08	830.3	364.3	2,586.8	2,552.6	34.19	75.653		
4,100.0	3,705.7	2,200.0	1,901.7	34.4	17.0	145.57	862.1	379.2	2,666.8	2,632.1	34.75	76.747		
4,200.0	3,804.3	2,200.0	1,901.7	34.7	17.0	147.63	862.1	379.2	2,744.8	2,710.2	34.63	79.267		
4,300.0	3,903.7	2,229.5	1,917.6	34.9	17.4	148.93	884.6	389.7	2,821.2	2,786.3	34.90	80.842		
4,400.0	4,003.5	2,252.4	1,929.7	35.0	17.8	150.20	902.3	398.0	2,895.7	2,860.7	35.00	82.729		
4,462.5	4,066.0	2,282.4	1,945.1	35.0	18.3	75.66	925.6	408.8	2,941.4	2,906.1	35.29	83.344		
4,500.0	4,103.5	2,282.4	1,945.1	35.1	18.3	75.66	925.6	408.8	2,968.6	2,933.2	35.32	84.042		
4,600.0	4,203.5	5,045.4	4,203.5	35.1	40.0	56.99	2,042.4	930.6	2,976.8	2,925.1	51.65	57.633		
4,700.0	4,303.5	5,145.4	4,303.5	35.2	40.0	56.99	2,042.4	930.6	2,976.8	2,925.0	51.79	57.479		
4,800.0	4,403.5	5,245.4	4,403.5	35.2	40.0	56.99	2,042.4	930.6	2,976.8	2,924.9	51.93	57.322		

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

Company:	Ursa Operating Company, LLC	Local Co-ordinate Reference:	Well Frei A23
Project:	Rockies Region	TVD Reference:	Frei A23 @ 5611.9ft (PAD EST KB)
Reference Site:	Frei A	MD Reference:	Frei A23 @ 5611.9ft (PAD EST KB)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Frei A23	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	EDM 2003.21 Single User Db
Reference Design:	Design #1	Offset TVD Reference:	Offset Datum

Offset Design												Frei A - Frei A12 - Wellbore #1 - Design #1		Offset Site Error:		0.0 ft	
Survey Program: 0-MWD														Offset Well Error:		0.0 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					
4,900.0	4,503.5	5,345.4	4,503.5	35.3	40.1	56.99	2,042.4	930.6	2,976.8	2,924.7	52.08	57.162					
5,000.0	4,603.5	5,445.4	4,603.5	35.3	40.1	56.99	2,042.4	930.6	2,976.8	2,924.6	52.23	56.999					
5,100.0	4,703.5	5,545.4	4,703.5	35.4	40.2	56.99	2,042.4	930.6	2,976.8	2,924.4	52.38	56.833					
5,200.0	4,803.5	5,645.4	4,803.5	35.5	40.2	56.99	2,042.4	930.6	2,976.8	2,924.2	52.53	56.664					
5,300.0	4,903.5	5,745.4	4,903.5	35.5	40.3	56.99	2,042.4	930.6	2,976.8	2,924.1	52.69	56.493					
5,400.0	5,003.5	5,845.4	5,003.5	35.6	40.4	56.99	2,042.4	930.6	2,976.8	2,923.9	52.86	56.319					
5,500.0	5,103.5	5,945.4	5,103.5	35.7	40.4	56.99	2,042.4	930.6	2,976.8	2,923.8	53.02	56.143					
5,600.0	5,203.5	6,045.4	5,203.5	35.7	40.5	56.99	2,042.4	930.6	2,976.8	2,923.6	53.19	55.965					
5,700.0	5,303.5	6,145.4	5,303.5	35.8	40.5	56.99	2,042.4	930.6	2,976.8	2,923.4	53.36	55.784					
5,800.0	5,403.5	6,245.4	5,403.5	35.9	40.6	56.99	2,042.4	930.6	2,976.8	2,923.2	53.54	55.601					
5,900.0	5,503.5	6,345.4	5,503.5	36.0	40.6	56.99	2,042.4	930.6	2,976.8	2,923.1	53.72	55.416					
6,000.0	5,603.5	6,445.4	5,603.5	36.0	40.7	56.99	2,042.4	930.6	2,976.8	2,922.9	53.90	55.228					
6,100.0	5,703.5	6,545.4	5,703.5	36.1	40.8	56.99	2,042.4	930.6	2,976.8	2,922.7	54.08	55.039					
6,200.0	5,803.5	6,645.4	5,803.5	36.2	40.8	56.99	2,042.4	930.6	2,976.8	2,922.5	54.27	54.849					
6,300.0	5,903.5	6,745.4	5,903.5	36.3	40.9	56.99	2,042.4	930.6	2,976.8	2,922.3	54.46	54.656					
6,400.0	6,003.5	6,845.4	6,003.5	36.3	41.0	56.99	2,042.4	930.6	2,976.8	2,922.1	54.66	54.462					
6,500.0	6,103.5	6,945.4	6,103.5	36.4	41.0	56.99	2,042.4	930.6	2,976.8	2,921.9	54.86	54.266					
6,600.0	6,203.5	7,045.4	6,203.5	36.5	41.1	56.99	2,042.4	930.6	2,976.8	2,921.7	55.06	54.068					
6,700.0	6,303.5	7,145.4	6,303.5	36.6	41.2	56.99	2,042.4	930.6	2,976.8	2,921.5	55.26	53.869					
6,800.0	6,403.5	7,245.4	6,403.5	36.7	41.2	56.99	2,042.4	930.6	2,976.8	2,921.3	55.47	53.669					
6,900.0	6,503.5	7,345.4	6,503.5	36.8	41.3	56.99	2,042.4	930.6	2,976.8	2,921.1	55.67	53.467					
6,960.1	6,563.6	7,405.5	6,563.6	36.8	41.4	56.99	2,042.4	930.6	2,976.8	2,921.0	55.80	53.346					
7,000.0	6,603.5	7,428.9	6,587.0	36.9	41.4	56.99	2,042.4	930.6	2,976.8	2,921.0	55.87	53.283					
7,100.0	6,703.5	7,428.9	6,587.0	36.9	41.4	56.99	2,042.4	930.6	2,979.1	2,923.1	55.97	53.223					
7,200.0	6,803.5	7,428.9	6,587.0	37.0	41.4	56.99	2,042.4	930.6	2,984.6	2,928.6	56.08	53.222					
7,286.5	6,890.0	7,428.9	6,587.0	37.1	41.4	56.99	2,042.4	930.6	2,992.2	2,936.0	56.17	53.268					

Company:	Ursa Operating Company, LLC	Local Co-ordinate Reference:	Well Frei A23
Project:	Rockies Region	TVD Reference:	Frei A23 @ 5611.9ft (PAD EST KB)
Reference Site:	Frei A	MD Reference:	Frei A23 @ 5611.9ft (PAD EST KB)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Frei A23	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	EDM 2003.21 Single User Db
Reference Design:	Design #1	Offset TVD Reference:	Offset Datum

Offset Design														Offset Site Error:	0.0 ft
Survey Program: 0-MWD														Offset Well Error:	0.0 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			
0.0	0.0	0.0	0.0	0.0	0.0	8.44	12.3	1.8	12.5						
100.0	100.0	100.0	100.0	0.1	0.1	8.44	12.3	1.8	12.5	12.3	0.19	65.649			
200.0	200.0	200.0	200.0	0.3	0.3	8.44	12.3	1.8	12.5	11.8	0.64	19.515			
300.0	300.0	300.0	300.0	0.5	0.5	8.44	12.3	1.8	12.5	11.4	1.09	11.461 CC, ES			
400.0	400.0	399.8	399.8	0.8	0.8	83.82	13.5	-0.5	12.9	11.4	1.53	8.469			
500.0	499.6	499.6	499.2	1.0	1.0	84.92	16.8	-7.6	14.3	12.3	1.99	7.167			
600.0	598.8	599.4	598.2	1.3	1.3	86.34	22.3	-19.4	16.6	14.0	2.55	6.494			
700.0	697.1	699.1	696.2	1.6	1.6	87.76	30.0	-35.8	19.7	16.5	3.24	6.094			
800.0	794.3	798.8	793.2	2.1	2.0	89.01	39.9	-56.8	23.8	19.7	4.10	5.815			
900.0	890.2	898.4	888.7	2.6	2.6	90.03	51.9	-82.3	28.8	23.6	5.15	5.594			
1,000.0	984.4	998.0	982.6	3.2	3.2	90.82	66.0	-112.3	34.6	28.2	6.41	5.407			
1,100.0	1,076.8	1,097.5	1,074.5	4.0	3.9	91.42	82.1	-146.7	41.4	33.5	7.89	5.242			
1,200.0	1,167.1	1,196.9	1,164.3	4.8	4.8	91.87	100.3	-185.3	48.9	39.3	9.61	5.094			
1,300.0	1,254.9	1,296.2	1,251.7	5.8	5.8	92.19	120.4	-228.0	57.3	45.8	11.55	4.961			
1,329.4	1,280.3	1,325.4	1,276.9	6.1	6.1	92.26	126.6	-241.4	59.9	47.8	12.18	4.920			
1,400.0	1,340.9	1,395.4	1,336.3	6.9	6.8	91.48	142.3	-274.8	66.5	52.7	13.71	4.846			
1,500.0	1,426.7	1,494.7	1,418.9	8.0	8.0	88.13	165.8	-324.7	76.2	60.3	15.95	4.780			
1,600.0	1,512.5	1,594.1	1,501.4	9.1	9.2	85.33	189.4	-374.9	86.3	68.1	18.17	4.749			
1,700.0	1,598.3	1,693.5	1,583.9	10.3	10.5	83.12	213.0	-425.1	96.5	76.1	20.38	4.736			
1,800.0	1,684.2	1,792.9	1,666.4	11.4	11.7	81.33	236.5	-475.3	106.9	84.3	22.58	4.734			
1,900.0	1,770.0	1,892.3	1,748.9	12.5	12.9	79.86	260.1	-525.5	117.3	92.5	24.76	4.737			
2,000.0	1,855.8	1,991.8	1,831.4	13.7	14.2	78.63	283.7	-575.7	127.8	100.8	26.94	4.743			
2,100.0	1,941.6	2,091.2	1,913.9	14.8	15.4	77.59	307.3	-625.9	138.3	109.2	29.11	4.752			
2,200.0	2,027.4	2,190.6	1,996.4	15.9	16.6	76.69	330.9	-676.1	148.9	117.6	31.27	4.761			
2,300.0	2,113.3	2,290.0	2,078.9	17.1	17.9	75.92	354.5	-726.3	159.5	126.1	33.44	4.770			
2,400.0	2,199.1	2,389.4	2,161.4	18.2	19.1	75.24	378.1	-776.5	170.1	134.5	35.59	4.780			
2,500.0	2,284.9	2,488.8	2,243.9	19.4	20.4	74.64	401.7	-826.7	180.8	143.0	37.75	4.789			
2,600.0	2,370.7	2,588.2	2,326.4	20.5	21.6	74.10	425.3	-876.9	191.5	151.6	39.90	4.798			
2,700.0	2,456.6	2,687.7	2,408.9	21.6	22.9	73.63	448.9	-927.1	202.2	160.1	42.05	4.807			
2,800.0	2,542.4	2,787.1	2,491.4	22.8	24.1	73.20	472.4	-977.3	212.8	168.6	44.20	4.815			
2,900.0	2,628.2	2,886.5	2,573.9	23.9	25.3	72.81	496.0	-1,027.5	223.6	177.2	46.35	4.823			
3,000.0	2,714.0	2,985.9	2,656.4	25.1	26.6	72.46	519.6	-1,077.7	234.3	185.8	48.50	4.831			
3,100.0	2,799.8	3,085.3	2,738.9	26.2	27.8	72.14	543.2	-1,127.9	245.0	194.4	50.64	4.838			
3,200.0	2,885.7	3,184.7	2,821.4	27.4	29.1	71.84	566.8	-1,178.1	255.7	202.9	52.79	4.844			
3,300.0	2,971.5	3,284.1	2,903.9	28.5	30.3	71.57	590.4	-1,228.3	266.5	211.5	54.93	4.851			
3,400.0	3,057.3	3,384.0	2,986.8	29.7	31.6	71.33	614.1	-1,278.7	277.2	220.1	57.08	4.857			
3,433.1	3,085.7	3,419.3	3,016.3	30.0	32.0	71.32	622.3	-1,296.1	280.6	222.8	57.78	4.856			
3,500.0	3,143.7	3,490.7	3,077.2	30.7	32.7	71.61	638.2	-1,330.0	286.9	227.7	59.16	4.850			
3,600.0	3,232.5	3,597.8	3,170.9	31.6	33.7	72.02	660.2	-1,376.9	295.6	234.6	60.96	4.849			
3,700.0	3,323.6	3,705.1	3,267.6	32.3	34.5	72.39	680.0	-1,419.0	303.4	240.8	62.56	4.850			
3,800.0	3,416.7	3,812.7	3,367.0	33.0	35.3	72.73	697.5	-1,456.2	310.2	246.3	63.95	4.851			
3,900.0	3,511.6	3,920.4	3,468.7	33.5	35.9	73.04	712.6	-1,488.3	316.0	250.9	65.14	4.852			
4,000.0	3,608.0	4,028.4	3,572.4	34.0	36.4	73.33	725.3	-1,515.2	320.9	254.8	66.12	4.853			
4,100.0	3,705.7	4,136.4	3,677.8	34.4	36.8	73.58	735.4	-1,536.9	324.7	257.8	66.92	4.852			
4,200.0	3,804.3	4,244.6	3,784.4	34.7	37.2	73.82	743.0	-1,553.0	327.5	260.0	67.54	4.849			
4,300.0	3,903.7	4,352.7	3,891.9	34.9	37.4	74.03	748.0	-1,563.7	329.3	261.3	67.99	4.843			
4,400.0	4,003.5	4,460.9	4,000.0	35.0	37.5	74.22	750.5	-1,568.9	330.0	261.7	68.27	4.833			
4,462.5	4,066.0	4,526.9	4,066.0	35.0	37.5	-0.64	750.7	-1,569.5	329.9	261.5	68.38	4.825			
4,500.0	4,103.5	4,564.4	4,103.5	35.1	37.6	-0.64	750.7	-1,569.5	329.9	261.5	68.41	4.822			
4,600.0	4,203.5	4,664.4	4,203.5	35.1	37.6	-0.64	750.7	-1,569.5	329.9	261.4	68.53	4.814			
4,700.0	4,303.5	4,764.4	4,303.5	35.2	37.7	-0.64	750.7	-1,569.5	329.9	261.3	68.64	4.806			
4,800.0	4,403.5	4,864.4	4,403.5	35.2	37.7	-0.64	750.7	-1,569.5	329.9	261.2	68.76	4.798			

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

Company:	Ursa Operating Company, LLC	Local Co-ordinate Reference:	Well Frei A23
Project:	Rockies Region	TVD Reference:	Frei A23 @ 5611.9ft (PAD EST KB)
Reference Site:	Frei A	MD Reference:	Frei A23 @ 5611.9ft (PAD EST KB)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Frei A23	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	EDM 2003.21 Single User Db
Reference Design:	Design #1	Offset TVD Reference:	Offset Datum

Offset Design													Offset Site Error:	0.0 ft
Survey Program: 0-MWD													Offset Well Error:	0.0 ft
Frei A - Frei A14 - Wellbore #1 - Design #1														
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		
4,900.0	4,503.5	4,964.4	4,503.5	35.3	37.8	-0.64	750.7	-1,569.5	329.9	261.0	68.89	4.789		
5,000.0	4,603.5	5,064.4	4,603.5	35.3	37.8	-0.64	750.7	-1,569.5	329.9	260.9	69.01	4.781		
5,100.0	4,703.5	5,164.4	4,703.5	35.4	37.9	-0.64	750.7	-1,569.5	329.9	260.8	69.14	4.772		
5,200.0	4,803.5	5,264.4	4,803.5	35.5	38.0	-0.64	750.7	-1,569.5	329.9	260.6	69.27	4.763		
5,300.0	4,903.5	5,364.4	4,903.5	35.5	38.0	-0.64	750.7	-1,569.5	329.9	260.5	69.40	4.754		
5,400.0	5,003.5	5,464.4	5,003.5	35.6	38.1	-0.64	750.7	-1,569.5	329.9	260.4	69.54	4.744		
5,500.0	5,103.5	5,564.4	5,103.5	35.7	38.1	-0.64	750.7	-1,569.5	329.9	260.2	69.68	4.735		
5,600.0	5,203.5	5,664.4	5,203.5	35.7	38.2	-0.64	750.7	-1,569.5	329.9	260.1	69.82	4.725		
5,700.0	5,303.5	5,764.4	5,303.5	35.8	38.3	-0.64	750.7	-1,569.5	329.9	260.0	69.96	4.716		
5,800.0	5,403.5	5,864.4	5,403.5	35.9	38.3	-0.64	750.7	-1,569.5	329.9	259.8	70.11	4.706		
5,900.0	5,503.5	5,964.4	5,503.5	36.0	38.4	-0.64	750.7	-1,569.5	329.9	259.7	70.26	4.696		
6,000.0	5,603.5	6,064.4	5,603.5	36.0	38.5	-0.64	750.7	-1,569.5	329.9	259.5	70.41	4.686		
6,100.0	5,703.5	6,164.4	5,703.5	36.1	38.5	-0.64	750.7	-1,569.5	329.9	259.4	70.56	4.676		
6,200.0	5,803.5	6,264.4	5,803.5	36.2	38.6	-0.64	750.7	-1,569.5	329.9	259.2	70.72	4.665		
6,300.0	5,903.5	6,364.4	5,903.5	36.3	38.7	-0.64	750.7	-1,569.5	329.9	259.0	70.88	4.655		
6,400.0	6,003.5	6,464.4	6,003.5	36.3	38.8	-0.64	750.7	-1,569.5	329.9	258.9	71.04	4.644		
6,500.0	6,103.5	6,564.4	6,103.5	36.4	38.8	-0.64	750.7	-1,569.5	329.9	258.7	71.20	4.634		
6,600.0	6,203.5	6,664.4	6,203.5	36.5	38.9	-0.64	750.7	-1,569.5	329.9	258.6	71.37	4.623		
6,700.0	6,303.5	6,764.4	6,303.5	36.6	39.0	-0.64	750.7	-1,569.5	329.9	258.4	71.54	4.612		
6,800.0	6,403.5	6,864.4	6,403.5	36.7	39.1	-0.64	750.7	-1,569.5	329.9	258.2	71.71	4.601		
6,900.0	6,503.5	6,964.4	6,503.5	36.8	39.2	-0.64	750.7	-1,569.5	329.9	258.0	71.88	4.590		
7,000.0	6,603.5	7,064.4	6,603.5	36.9	39.2	-0.64	750.7	-1,569.5	329.9	257.9	72.06	4.579		
7,100.0	6,703.5	7,164.4	6,703.5	36.9	39.3	-0.64	750.7	-1,569.5	329.9	257.7	72.24	4.567		
7,200.0	6,803.5	7,264.4	6,803.5	37.0	39.4	-0.64	750.7	-1,569.5	329.9	257.5	72.42	4.556		
7,249.6	6,853.0	7,314.0	6,853.0	37.1	39.4	-0.64	750.7	-1,569.5	329.9	257.4	72.51	4.550 SF		
7,286.5	6,890.0	7,331.9	6,871.0	37.1	39.5	-0.64	750.7	-1,569.5	330.5	257.9	72.56	4.555		

Company:	Ursa Operating Company, LLC	Local Co-ordinate Reference:	Well Frei A23
Project:	Rockies Region	TVD Reference:	Frei A23 @ 5611.9ft (PAD EST KB)
Reference Site:	Frei A	MD Reference:	Frei A23 @ 5611.9ft (PAD EST KB)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Frei A23	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	EDM 2003.21 Single User Db
Reference Design:	Design #1	Offset TVD Reference:	Offset Datum

Offset Design													Frei A - Frei A16 - Wellbore #1 - Actual		Offset Site Error: 0.0 ft	
Survey Program: 131-													Offset Well Error: 0.0 ft			
Reference		Offset		Semi Major Axis			Distance							Warning		
Measured Depth	Vertical Depth	Measured Depth	Vertical Depth	Reference	Offset	Highside Toolface	Offset Wellbore Centre		Between Centres	Between Ellipses	Minimum Separation	Separation Factor				
(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(°)	+N/-S (ft)	+E/-W (ft)	(ft)	(ft)	(ft)					
0.0	0.0	0.0	0.0	0.0	0.0	25.19	70.8	33.3	78.3							
100.0	100.0	99.2	99.2	0.1	0.0	25.02	71.4	33.3	78.8	78.7	0.10	827.308				
200.0	200.0	197.3	197.3	0.3	0.0	24.50	73.4	33.4	80.7	80.4	0.32	252.127				
300.0	300.0	293.1	292.9	0.5	0.0	23.94	78.7	34.9	86.4	85.9	0.54	158.590				
400.0	400.0	386.7	385.9	0.8	0.0	99.61	88.6	38.7	98.1	97.3	0.76	128.599				
500.0	499.6	478.5	476.3	1.0	0.0	101.59	103.9	43.5	116.8	115.9	0.99	117.557				
600.0	598.8	568.0	563.4	1.3	0.0	105.29	122.3	52.1	142.7	141.4	1.27	112.633				
700.0	697.1	654.5	646.7	1.6	0.0	108.05	144.3	60.1	174.4	172.9	1.60	109.163				
800.0	794.3	736.8	724.9	2.1	0.0	111.61	166.4	72.9	213.5	211.5	2.00	106.978				
900.0	890.2	813.0	796.4	2.6	0.0	114.49	188.7	87.1	259.4	256.9	2.47	105.070				
1,000.0	984.4	884.3	861.9	3.2	0.0	116.40	212.4	101.9	312.3	309.3	3.03	103.193				
1,100.0	1,076.8	952.6	923.6	4.0	0.0	117.65	237.3	117.6	371.6	367.9	3.68	101.027				
1,200.0	1,167.1	1,025.3	988.0	4.8	0.0	118.03	267.8	132.1	434.4	430.0	4.44	97.853				
1,300.0	1,254.9	1,092.4	1,046.9	5.8	0.0	118.01	296.9	145.6	500.6	495.3	5.32	94.177				
1,329.4	1,280.3	1,109.3	1,061.7	6.1	0.0	117.90	304.3	149.2	520.8	515.2	5.60	93.024				
1,400.0	1,340.9	1,150.8	1,097.7	6.9	0.0	119.29	322.8	158.2	570.1	563.9	6.23	91.548				
1,500.0	1,426.7	1,207.4	1,146.0	8.0	0.0	120.71	349.6	170.5	641.4	634.3	7.13	89.982				
1,600.0	1,512.5	1,268.1	1,196.9	9.1	0.0	121.80	380.0	183.6	714.2	706.1	8.03	88.893				
1,700.0	1,598.3	1,323.1	1,242.1	10.3	0.0	122.42	409.2	194.8	787.7	778.7	8.96	87.910				
1,800.0	1,684.2	1,371.4	1,280.9	11.4	0.0	122.76	436.2	204.9	862.6	852.7	9.90	87.113				
1,900.0	1,770.0	1,415.2	1,315.2	12.5	0.0	122.94	461.7	214.2	939.0	928.1	10.86	86.492				
2,000.0	1,855.8	1,467.2	1,355.1	13.7	0.0	123.06	493.0	225.7	1,016.6	1,004.8	11.82	86.037				
2,100.0	1,941.6	1,526.6	1,400.5	14.8	0.0	123.15	529.0	238.8	1,094.6	1,081.8	12.78	85.656				
2,200.0	2,027.4	1,585.3	1,445.1	15.9	0.0	123.21	564.8	251.9	1,172.7	1,159.0	13.74	85.320				
2,300.0	2,113.3	1,638.1	1,485.1	17.1	0.0	123.25	597.3	263.7	1,251.2	1,236.5	14.72	85.025				
2,400.0	2,199.1	1,692.0	1,525.4	18.2	0.0	123.25	630.9	275.9	1,330.2	1,314.5	15.69	84.776				
2,500.0	2,284.9	1,743.4	1,563.7	19.4	0.0	123.24	663.0	287.8	1,409.5	1,392.9	16.67	84.570				
2,600.0	2,370.7	1,798.5	1,604.7	20.5	0.0	123.25	697.5	300.8	1,489.2	1,471.5	17.64	84.408				
2,700.0	2,456.6	1,855.4	1,647.1	21.6	0.0	123.29	732.7	314.6	1,569.0	1,550.4	18.61	84.290				
2,800.0	2,542.4	1,911.7	1,689.3	22.8	0.0	123.35	767.3	328.7	1,648.9	1,629.3	19.58	84.212				
2,900.0	2,628.2	1,967.6	1,731.3	23.9	0.0	123.42	801.4	342.9	1,729.0	1,708.4	20.54	84.158				
3,000.0	2,714.0	2,029.4	1,777.6	25.1	0.0	123.51	839.1	358.8	1,809.1	1,787.6	21.51	84.124				
3,100.0	2,799.8	2,088.9	1,822.4	26.2	0.0	123.58	875.2	374.0	1,889.2	1,866.7	22.47	84.089				
3,200.0	2,885.7	2,141.9	1,862.2	27.4	0.0	123.65	907.3	387.8	1,969.4	1,945.9	23.43	84.063				
3,300.0	2,971.5	2,200.9	1,906.5	28.5	0.0	123.73	943.1	403.3	2,049.7	2,025.3	24.39	84.055				
3,400.0	3,057.3	2,259.0	1,950.1	29.7	0.0	123.79	978.4	418.4	2,130.0	2,104.6	25.35	84.035				
3,433.1	3,085.7	2,280.3	1,966.1	30.0	0.0	123.81	991.3	423.9	2,156.5	2,130.9	25.66	84.030 SF				
3,500.0	3,143.7	2,314.3	1,991.6	30.7	0.0	126.00	1,011.9	432.9	2,209.9	2,184.2	25.70	85.976				
3,600.0	3,232.5	2,374.4	2,036.9	31.6	0.0	128.89	1,047.9	449.2	2,288.4	2,262.7	25.65	89.225				
3,700.0	3,323.6	2,457.5	2,099.8	32.3	0.0	131.25	1,097.4	471.5	2,364.4	2,338.8	25.58	92.423				
3,800.0	3,416.7	2,517.0	2,145.0	33.0	0.0	133.34	1,132.7	487.5	2,438.0	2,412.5	25.46	95.746				
3,900.0	3,511.6	2,585.9	2,197.3	33.5	0.0	135.06	1,173.5	506.2	2,509.3	2,484.0	25.34	99.034				
4,000.0	3,608.0	2,667.0	2,258.4	34.0	0.0	136.38	1,222.5	527.3	2,578.0	2,552.8	25.24	102.136				
4,100.0	3,705.7	2,757.0	2,326.2	34.4	0.0	137.35	1,277.3	549.8	2,643.6	2,618.4	25.17	105.039				
4,200.0	3,804.3	2,842.8	2,391.0	34.7	0.0	138.15	1,329.3	570.9	2,706.0	2,681.0	25.07	107.945				
4,300.0	3,903.7	2,939.9	2,464.8	34.9	0.0	138.67	1,387.9	594.4	2,765.2	2,740.2	25.00	110.625				
4,400.0	4,003.5	3,027.0	2,531.3	35.0	0.0	139.12	1,440.1	615.0	2,821.0	2,796.2	24.88	113.406				
4,462.5	4,066.0	3,067.7	2,562.5	35.0	0.0	64.52	1,464.5	624.7	2,854.5	2,829.7	24.74	115.379				
4,500.0	4,103.5	3,092.2	2,581.3	35.1	0.0	64.27	1,479.1	630.6	2,874.3	2,849.4	24.86	115.634				
4,600.0	4,203.5	3,264.0	2,714.5	35.1	0.0	62.59	1,580.1	669.8	2,925.5	2,900.0	25.54	114.562				
4,700.0	4,303.5	3,329.7	2,765.9	35.2	0.0	61.97	1,618.5	684.2	2,976.7	2,950.9	25.83	115.249				
4,800.0	4,403.5	3,392.0	2,814.4	35.2	0.0	61.40	1,655.0	698.2	3,028.8	3,002.7	26.10	116.033				

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

Company:	Ursa Operating Company, LLC	Local Co-ordinate Reference:	Well Frei A23
Project:	Rockies Region	TVD Reference:	Frei A23 @ 5611.9ft (PAD EST KB)
Reference Site:	Frei A	MD Reference:	Frei A23 @ 5611.9ft (PAD EST KB)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Frei A23	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	EDM 2003.21 Single User Db
Reference Design:	Design #1	Offset TVD Reference:	Offset Datum

Offset Design													Offset Site Error:	0.0 ft
Survey Program: 131-													Offset Well Error:	0.0 ft
Frei A - Frei A16 - Wellbore #1 - Actual														
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		
4,900.0	4,503.5	3,457.8	2,865.5	35.3	0.0	60.82	1,693.5	713.4	3,081.7	3,055.3	26.38	116.810		
5,000.0	4,603.5	3,539.3	2,929.0	35.3	0.0	60.13	1,740.9	732.5	3,135.1	3,108.4	26.70	117.424		
5,100.0	4,703.5	3,622.6	2,994.2	35.4	0.0	59.45	1,788.8	752.4	3,188.5	3,161.5	27.01	118.066		
5,200.0	4,803.5	3,542.3	2,865.5	35.5	0.0	53.13	2,343.7	997.6	3,204.8	3,175.7	29.14	109.973		
5,300.0	4,903.5	3,647.6	3,064.4	35.5	0.0	53.15	2,343.8	999.6	3,206.4	3,177.2	29.21	109.766		
5,400.0	5,003.5	3,781.1	3,192.9	35.6	0.0	53.15	2,344.1	1,000.5	3,207.0	3,177.7	29.29	109.504		
5,500.0	5,103.5	3,860.7	3,272.6	35.7	0.0	53.15	2,344.6	1,000.8	3,207.7	3,178.3	29.37	109.228		
5,600.0	5,203.5	3,998.8	3,350.7	35.7	0.0	53.12	2,346.4	1,000.5	3,208.4	3,178.9	29.46	108.921		
5,700.0	5,303.5	4,092.6	3,430.4	35.8	0.0	53.10	2,347.1	999.5	3,207.9	3,178.4	29.54	108.582		
5,702.9	5,306.4	4,094.6	3,430.4	35.8	0.0	53.10	2,347.1	999.5	3,207.9	3,178.4	29.55	108.572		
5,800.0	5,403.5	4,172.6	3,510.4	35.9	0.0	53.08	2,348.2	999.0	3,208.3	3,178.7	29.63	108.266		
5,900.0	5,503.5	4,281.8	3,593.6	36.0	0.0	53.05	2,349.7	998.6	3,208.9	3,179.1	29.73	107.949		
6,000.0	5,603.5	4,384.0	3,675.8	36.0	0.0	53.04	2,350.1	998.6	3,209.0	3,179.2	29.81	107.636		
6,100.0	5,703.5	4,505.4	3,757.2	36.1	0.0	53.06	2,349.4	999.2	3,209.1	3,179.2	29.90	107.340		
6,179.3	5,782.8	4,571.0	3,828.8	36.2	0.0	53.08	2,348.5	999.6	3,208.9	3,178.9	29.96	107.101		
6,200.0	5,803.5	4,587.7	3,849.5	36.2	0.0	53.08	2,348.3	999.8	3,208.9	3,178.9	29.98	107.040		
6,300.0	5,903.5	4,662.4	3,930.1	36.3	0.0	53.10	2,347.7	1,000.7	3,209.4	3,179.4	30.06	106.753		
6,400.0	6,003.5	4,738.9	4,010.7	36.3	0.0	53.11	2,347.8	1,001.9	3,210.7	3,180.6	30.15	106.484		
6,500.0	6,103.5	4,814.8	4,092.6	36.4	0.0	53.11	2,348.8	1,003.0	3,212.7	3,182.5	30.25	106.218		
6,600.0	6,203.5	4,887.0	4,173.7	36.5	0.0	53.10	2,350.5	1,004.4	3,215.6	3,185.3	30.34	105.974		
6,700.0	6,303.5	4,955.5	4,254.2	36.6	0.0	53.09	2,351.9	1,005.4	3,216.2	3,185.8	30.44	105.652		
6,800.0	6,403.5	5,024.0	4,335.7	36.7	0.0	53.10	2,351.0	1,004.9	3,214.6	3,184.1	30.54	105.271		
6,812.2	6,415.7	5,040.0	4,351.7	36.7	0.0	53.10	2,351.0	1,004.9	3,214.6	3,184.1	30.55	105.229		
6,900.0	6,503.5	5,104.0	4,431.7	36.8	0.0	53.10	2,351.0	1,004.9	3,215.8	3,185.2	30.64	104.970		
7,000.0	6,603.5	5,174.0	4,511.7	36.9	0.0	53.10	2,351.0	1,004.9	3,220.1	3,189.4	30.74	104.768		
7,100.0	6,703.5	5,244.0	4,591.7	36.9	0.0	53.10	2,351.0	1,004.9	3,227.5	3,196.6	30.84	104.663		
7,200.0	6,803.5	5,314.0	4,671.7	37.0	0.0	53.10	2,351.0	1,004.9	3,237.9	3,207.0	30.94	104.654		
7,286.5	6,890.0	5,384.0	4,751.7	37.1	0.0	53.10	2,351.0	1,004.9	3,249.4	3,218.4	31.03	104.722		

Company:	Ursa Operating Company, LLC	Local Co-ordinate Reference:	Well Frei A23
Project:	Rockies Region	TVD Reference:	Frei A23 @ 5611.9ft (PAD EST KB)
Reference Site:	Frei A	MD Reference:	Frei A23 @ 5611.9ft (PAD EST KB)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Frei A23	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	EDM 2003.21 Single User Db
Reference Design:	Design #1	Offset TVD Reference:	Offset Datum

Offset Design														Offset Site Error:	0.0 ft
Survey Program: 0-MWD														Offset Well Error:	0.0 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			
0.0	0.0	0.0	0.0	0.0	0.0	8.50	49.4	7.4	50.0						
100.0	100.0	100.0	100.0	0.1	0.1	8.50	49.4	7.4	50.0	49.8	0.19	262.828			
200.0	200.0	200.0	200.0	0.3	0.3	8.50	49.4	7.4	50.0	49.3	0.64	78.128			
300.0	300.0	300.0	300.0	0.5	0.5	8.50	49.4	7.4	50.0	48.9	1.09	45.884 CC, ES			
400.0	400.0	398.3	398.3	0.8	0.8	84.10	51.3	5.7	51.3	49.8	1.53	33.582			
500.0	499.6	496.6	496.2	1.0	1.0	85.81	56.9	0.6	55.4	53.4	2.00	27.753			
600.0	598.8	594.5	593.4	1.3	1.3	88.14	66.3	-7.8	62.3	59.7	2.54	24.514			
700.0	697.1	692.1	689.4	1.6	1.6	90.61	79.3	-19.4	72.0	68.8	3.20	22.492			
800.0	794.3	789.3	783.9	2.1	2.0	92.88	95.8	-34.2	84.6	80.6	4.01	21.091			
900.0	890.2	885.8	876.7	2.6	2.5	94.79	115.8	-52.2	100.0	95.0	4.99	20.040			
1,000.0	984.4	981.7	967.3	3.2	3.1	96.32	139.0	-73.0	118.3	112.1	6.16	19.212			
1,100.0	1,076.8	1,076.8	1,055.6	4.0	3.7	97.48	165.4	-96.7	139.3	131.8	7.51	18.538			
1,200.0	1,167.1	1,171.1	1,141.3	4.8	4.5	98.32	194.7	-123.1	162.9	153.8	9.06	17.978			
1,300.0	1,254.9	1,264.6	1,224.1	5.8	5.3	98.90	226.9	-151.9	189.1	178.3	10.81	17.500			
1,329.4	1,280.3	1,291.9	1,247.9	6.1	5.6	99.02	236.8	-160.8	197.3	185.9	11.35	17.386			
1,400.0	1,340.9	1,357.2	1,304.0	6.9	6.3	99.54	261.6	-183.1	217.5	204.8	12.72	17.096			
1,500.0	1,426.7	1,448.9	1,380.9	8.0	7.3	99.26	298.9	-216.6	247.5	232.8	14.74	16.794			
1,600.0	1,512.5	1,539.5	1,454.3	9.1	8.4	98.16	338.4	-252.0	279.0	262.2	16.82	16.590			
1,700.0	1,598.3	1,628.5	1,523.9	10.3	9.6	96.52	379.6	-289.1	312.2	293.3	18.94	16.484			
1,800.0	1,684.2	1,715.6	1,589.5	11.4	10.8	94.56	422.3	-327.3	347.4	326.3	21.08	16.478 SF			
1,900.0	1,770.0	1,800.0	1,650.5	12.5	12.0	92.43	465.7	-366.3	384.7	361.5	23.20	16.579			
2,000.0	1,855.8	1,883.0	1,707.9	13.7	13.4	90.21	510.3	-406.4	424.3	399.0	25.32	16.759			
2,100.0	1,941.6	1,962.8	1,760.6	14.8	14.7	88.00	554.9	-446.4	466.4	439.0	27.37	17.037			
2,200.0	2,027.4	2,039.9	1,809.0	15.9	16.0	85.84	599.5	-486.5	511.0	481.6	29.36	17.403			
2,300.0	2,113.3	2,117.7	1,855.6	17.1	17.5	83.68	645.9	-528.1	558.2	526.9	31.32	17.824			
2,400.0	2,199.1	2,203.1	1,906.1	18.2	19.0	81.58	697.1	-574.1	606.5	573.2	33.31	18.208			
2,500.0	2,284.9	2,288.6	1,956.6	19.4	20.6	79.79	748.4	-620.2	655.4	620.1	35.28	18.580			
2,600.0	2,370.7	2,374.0	2,007.0	20.5	22.2	78.23	799.7	-666.2	704.8	667.5	37.22	18.937			
2,700.0	2,456.6	2,459.4	2,057.5	21.6	23.8	76.87	851.0	-712.3	754.5	715.3	39.14	19.277			
2,800.0	2,542.4	2,544.9	2,108.0	22.8	25.4	75.68	902.3	-758.3	804.4	763.4	41.04	19.599			
2,900.0	2,628.2	2,630.3	2,158.5	23.9	27.0	74.62	953.5	-804.3	854.7	811.7	42.94	19.904			
3,000.0	2,714.0	2,715.7	2,209.0	25.1	28.6	73.67	1,004.8	-850.4	905.1	860.3	44.83	20.191			
3,100.0	2,799.8	2,801.1	2,259.5	26.2	30.2	72.83	1,056.1	-896.4	955.7	909.0	46.70	20.462			
3,200.0	2,885.7	2,886.6	2,309.9	27.4	31.8	72.07	1,107.4	-942.5	1,006.4	957.8	48.58	20.718			
3,300.0	2,971.5	2,972.0	2,360.4	28.5	33.4	71.38	1,158.7	-988.5	1,057.3	1,006.8	50.45	20.958			
3,400.0	3,057.3	3,057.4	2,410.9	29.7	35.0	70.75	1,209.9	-1,034.5	1,108.2	1,055.9	52.31	21.186			
3,433.1	3,085.7	3,085.7	2,427.6	30.0	35.5	70.56	1,226.9	-1,049.8	1,125.1	1,072.2	52.93	21.258			
3,500.0	3,143.7	3,173.3	2,480.4	30.7	37.1	71.05	1,278.9	-1,096.5	1,159.1	1,104.3	54.74	21.174			
3,600.0	3,232.5	3,332.8	2,584.4	31.6	39.6	71.56	1,368.9	-1,177.3	1,207.1	1,149.7	57.35	21.049			
3,700.0	3,323.6	3,503.0	2,706.0	32.3	42.0	72.00	1,457.4	-1,256.7	1,251.0	1,191.2	59.80	20.920			
3,800.0	3,416.7	3,684.0	2,846.5	33.0	44.3	72.38	1,542.3	-1,332.9	1,290.3	1,228.3	62.06	20.793			
3,900.0	3,511.6	3,875.9	3,006.5	33.5	46.3	72.72	1,621.0	-1,403.6	1,324.4	1,260.3	64.08	20.667			
4,000.0	3,608.0	4,078.0	3,185.5	34.0	48.1	73.04	1,690.6	-1,466.1	1,352.7	1,286.9	65.84	20.547			
4,100.0	3,705.7	4,288.8	3,381.8	34.4	49.5	73.34	1,747.8	-1,517.4	1,374.7	1,307.4	67.28	20.432			
4,200.0	3,804.3	4,506.4	3,591.9	34.7	50.4	73.65	1,789.6	-1,554.9	1,389.8	1,321.4	68.39	20.321			
4,300.0	3,903.7	4,728.1	3,811.1	34.9	51.0	73.98	1,813.6	-1,576.5	1,397.7	1,328.5	69.16	20.209			
4,400.0	4,003.5	4,920.8	4,003.5	35.0	51.2	74.28	1,819.1	-1,581.4	1,398.6	1,329.0	69.58	20.100			
4,462.5	4,066.0	4,983.3	4,066.0	35.0	51.2	-0.64	1,819.1	-1,581.4	1,398.3	1,328.7	69.64	20.080			
4,500.0	4,103.5	5,020.8	4,103.5	35.1	51.2	-0.64	1,819.1	-1,581.4	1,398.3	1,328.6	69.67	20.070			
4,600.0	4,203.5	5,120.8	4,203.5	35.1	51.2	-0.64	1,819.1	-1,581.4	1,398.3	1,328.5	69.78	20.039			
4,700.0	4,303.5	5,220.8	4,303.5	35.2	51.3	-0.64	1,819.1	-1,581.4	1,398.3	1,328.4	69.89	20.008			
4,800.0	4,403.5	5,320.8	4,403.5	35.2	51.3	-0.64	1,819.1	-1,581.4	1,398.3	1,328.3	70.00	19.976			

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

Company:	Ursa Operating Company, LLC	Local Co-ordinate Reference:	Well Frei A23
Project:	Rockies Region	TVD Reference:	Frei A23 @ 5611.9ft (PAD EST KB)
Reference Site:	Frei A	MD Reference:	Frei A23 @ 5611.9ft (PAD EST KB)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Frei A23	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	EDM 2003.21 Single User Db
Reference Design:	Design #1	Offset TVD Reference:	Offset Datum

Offset Design													Offset Site Error:	0.0 ft
Survey Program: 0-MWD													Offset Well Error:	0.0 ft
Frei A - Frei A18 - Wellbore #1 - Design #1														
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		
4,900.0	4,503.5	5,420.8	4,503.5	35.3	51.4	-0.64	1,819.1	-1,581.4	1,398.3	1,328.2	70.11	19.943		
5,000.0	4,603.5	5,520.8	4,603.5	35.3	51.4	-0.64	1,819.1	-1,581.4	1,398.3	1,328.1	70.23	19.910		
5,100.0	4,703.5	5,620.8	4,703.5	35.4	51.4	-0.64	1,819.1	-1,581.4	1,398.3	1,328.0	70.35	19.876		
5,200.0	4,803.5	5,720.8	4,803.5	35.5	51.5	-0.64	1,819.1	-1,581.4	1,398.3	1,327.8	70.47	19.842		
5,300.0	4,903.5	5,820.8	4,903.5	35.5	51.5	-0.64	1,819.1	-1,581.4	1,398.3	1,327.7	70.60	19.806		
5,400.0	5,003.5	5,920.8	5,003.5	35.6	51.6	-0.64	1,819.1	-1,581.4	1,398.3	1,327.6	70.73	19.771		
5,500.0	5,103.5	6,020.8	5,103.5	35.7	51.6	-0.64	1,819.1	-1,581.4	1,398.3	1,327.5	70.86	19.734		
5,600.0	5,203.5	6,120.8	5,203.5	35.7	51.7	-0.64	1,819.1	-1,581.4	1,398.3	1,327.3	70.99	19.697		
5,700.0	5,303.5	6,220.8	5,303.5	35.8	51.7	-0.64	1,819.1	-1,581.4	1,398.3	1,327.2	71.13	19.660		
5,800.0	5,403.5	6,320.8	5,403.5	35.9	51.8	-0.64	1,819.1	-1,581.4	1,398.3	1,327.1	71.26	19.622		
5,900.0	5,503.5	6,420.8	5,503.5	36.0	51.8	-0.64	1,819.1	-1,581.4	1,398.3	1,326.9	71.40	19.583		
6,000.0	5,603.5	6,520.8	5,603.5	36.0	51.9	-0.64	1,819.1	-1,581.4	1,398.3	1,326.8	71.55	19.544		
6,100.0	5,703.5	6,620.8	5,703.5	36.1	51.9	-0.64	1,819.1	-1,581.4	1,398.3	1,326.6	71.69	19.504		
6,200.0	5,803.5	6,720.8	5,803.5	36.2	52.0	-0.64	1,819.1	-1,581.4	1,398.3	1,326.5	71.84	19.464		
6,300.0	5,903.5	6,820.8	5,903.5	36.3	52.0	-0.64	1,819.1	-1,581.4	1,398.3	1,326.3	71.99	19.423		
6,400.0	6,003.5	6,920.8	6,003.5	36.3	52.1	-0.64	1,819.1	-1,581.4	1,398.3	1,326.2	72.15	19.382		
6,500.0	6,103.5	7,020.8	6,103.5	36.4	52.1	-0.64	1,819.1	-1,581.4	1,398.3	1,326.0	72.30	19.340		
6,600.0	6,203.5	7,120.8	6,203.5	36.5	52.2	-0.64	1,819.1	-1,581.4	1,398.3	1,325.9	72.46	19.298		
6,700.0	6,303.5	7,220.8	6,303.5	36.6	52.2	-0.64	1,819.1	-1,581.4	1,398.3	1,325.7	72.62	19.255		
6,800.0	6,403.5	7,320.8	6,403.5	36.7	52.3	-0.64	1,819.1	-1,581.4	1,398.3	1,325.5	72.78	19.212		
6,900.0	6,503.5	7,420.8	6,503.5	36.8	52.3	-0.64	1,819.1	-1,581.4	1,398.3	1,325.4	72.95	19.168		
7,000.0	6,603.5	7,520.8	6,603.5	36.9	52.4	-0.64	1,819.1	-1,581.4	1,398.3	1,325.2	73.12	19.124		
7,100.0	6,703.5	7,620.8	6,703.5	36.9	52.5	-0.64	1,819.1	-1,581.4	1,398.3	1,325.0	73.29	19.080		
7,166.5	6,770.0	7,687.3	6,770.0	37.0	52.5	-0.64	1,819.1	-1,581.4	1,398.3	1,324.9	73.40	19.050		
7,200.0	6,803.5	7,720.3	6,803.0	37.0	52.5	-0.64	1,819.1	-1,581.4	1,398.3	1,324.9	73.46	19.035		
7,286.5	6,890.0	7,720.3	6,803.0	37.1	52.5	-0.64	1,819.1	-1,581.4	1,401.0	1,327.5	73.54	19.051		

Company:	Ursa Operating Company, LLC	Local Co-ordinate Reference:	Well Frei A23
Project:	Rockies Region	TVD Reference:	Frei A23 @ 5611.9ft (PAD EST KB)
Reference Site:	Frei A	MD Reference:	Frei A23 @ 5611.9ft (PAD EST KB)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Frei A23	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	EDM 2003.21 Single User Db
Reference Design:	Design #1	Offset TVD Reference:	Offset Datum

Offset Design													Frei A - Frei A19 - Wellbore #1 - Design #1		Offset Site Error: 0.0 ft	
Survey Program: 0-MWD															Offset Well Error: 0.0 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				
0.0	0.0	0.0	0.0	0.0	0.0	8.51	24.7	3.7	25.0							
100.0	100.0	100.0	100.0	0.1	0.1	8.51	24.7	3.7	25.0	24.8	0.19	131.319				
200.0	200.0	200.0	200.0	0.3	0.3	8.51	24.7	3.7	25.0	24.3	0.64	39.036				
300.0	300.0	300.0	300.0	0.5	0.5	8.51	24.7	3.7	25.0	23.9	1.09	22.925	CC, ES			
400.0	400.0	399.4	399.4	0.8	0.8	84.03	26.2	1.6	25.8	24.3	1.53	16.898				
500.0	499.6	498.8	498.4	1.0	1.0	85.51	30.6	-4.8	28.4	26.4	2.00	14.227				
600.0	598.8	598.1	596.9	1.3	1.3	87.43	37.9	-15.4	32.7	30.2	2.55	12.837				
700.0	697.1	697.2	694.4	1.6	1.6	89.37	48.2	-30.1	38.8	35.6	3.23	12.014				
800.0	794.3	796.2	790.6	2.1	2.0	91.09	61.2	-49.0	46.6	42.5	4.07	11.449				
900.0	890.2	894.9	885.4	2.6	2.5	92.48	77.1	-71.8	56.2	51.1	5.10	11.012				
1,000.0	984.4	993.4	978.3	3.2	3.2	93.55	95.7	-98.6	67.4	61.1	6.33	10.648				
1,100.0	1,076.8	1,091.7	1,069.2	4.0	3.9	94.36	116.9	-129.2	80.4	72.6	7.78	10.334				
1,200.0	1,167.1	1,189.6	1,157.7	4.8	4.7	94.93	140.7	-163.5	94.9	85.5	9.44	10.057				
1,300.0	1,254.9	1,287.1	1,243.8	5.8	5.6	95.33	166.9	-201.3	111.0	99.7	11.32	9.808				
1,329.4	1,280.3	1,315.8	1,268.6	6.1	5.9	95.41	175.1	-213.0	116.1	104.1	11.92	9.740				
1,400.0	1,340.9	1,384.4	1,327.0	6.9	6.7	95.37	195.5	-242.5	128.6	115.2	13.40	9.591				
1,500.0	1,426.7	1,481.0	1,407.2	8.0	7.8	93.71	226.3	-286.9	147.2	131.6	15.59	9.436				
1,600.0	1,512.5	1,576.7	1,483.7	9.1	9.1	90.79	259.0	-334.0	167.2	149.3	17.84	9.370	SF			
1,700.0	1,598.3	1,673.3	1,558.9	10.3	10.4	87.46	293.6	-383.8	188.6	168.5	20.09	9.390				
1,800.0	1,684.2	1,770.4	1,634.4	11.4	11.7	84.77	328.4	-434.0	210.6	188.3	22.31	9.441				
1,900.0	1,770.0	1,867.5	1,709.9	12.5	13.1	82.58	363.2	-484.2	233.0	208.5	24.51	9.508				
2,000.0	1,855.8	1,964.6	1,785.4	13.7	14.5	80.78	398.1	-534.4	255.6	229.0	26.68	9.582				
2,100.0	1,941.6	2,061.7	1,860.9	14.8	15.8	79.26	432.9	-584.5	278.5	249.6	28.84	9.657				
2,200.0	2,027.4	2,158.8	1,936.4	15.9	17.2	77.98	467.7	-634.7	301.5	270.5	30.98	9.731				
2,300.0	2,113.3	2,256.0	2,011.9	17.1	18.6	76.88	502.5	-684.9	324.6	291.5	33.12	9.801				
2,400.0	2,199.1	2,353.1	2,087.4	18.2	20.0	75.93	537.3	-735.1	347.8	312.6	35.25	9.868				
2,500.0	2,284.9	2,450.2	2,162.9	19.4	21.4	75.09	572.2	-785.2	371.1	333.7	37.37	9.931				
2,600.0	2,370.7	2,547.3	2,238.5	20.5	22.8	74.36	607.0	-835.4	394.5	355.0	39.49	9.990				
2,700.0	2,456.6	2,644.4	2,314.0	21.6	24.1	73.70	641.8	-885.6	417.9	376.3	41.60	10.046				
2,800.0	2,542.4	2,741.5	2,389.5	22.8	25.5	73.12	676.6	-935.8	441.4	397.7	43.71	10.098				
2,900.0	2,628.2	2,838.6	2,465.0	23.9	26.9	72.59	711.4	-985.9	464.9	419.0	45.82	10.146				
3,000.0	2,714.0	2,935.8	2,540.5	25.1	28.3	72.12	746.2	-1,036.1	488.4	440.5	47.92	10.192				
3,100.0	2,799.8	3,032.9	2,616.0	26.2	29.7	71.69	781.1	-1,086.3	512.0	461.9	50.03	10.234				
3,200.0	2,885.7	3,130.0	2,691.5	27.4	31.1	71.29	815.9	-1,136.5	535.6	483.4	52.13	10.274				
3,300.0	2,971.5	3,227.1	2,767.0	28.5	32.5	70.93	850.7	-1,186.6	559.2	504.9	54.23	10.312				
3,400.0	3,057.3	3,329.4	2,846.7	29.7	33.9	70.60	887.3	-1,239.4	582.7	526.3	56.35	10.340				
3,433.1	3,085.7	3,368.8	2,877.9	30.0	34.4	70.56	900.9	-1,259.0	590.0	532.9	57.11	10.331				
3,500.0	3,143.7	3,448.9	2,943.0	30.7	35.4	70.94	927.6	-1,297.5	604.1	545.4	58.64	10.302				
3,600.0	3,232.5	3,569.8	3,044.7	31.6	36.6	71.47	964.8	-1,351.1	623.4	562.8	60.63	10.282				
3,700.0	3,323.6	3,692.0	3,151.5	32.3	37.8	71.95	998.7	-1,399.9	640.7	578.3	62.42	10.265				
3,800.0	3,416.7	3,815.5	3,263.1	33.0	38.7	72.39	1,028.8	-1,443.3	655.9	591.9	63.98	10.252				
3,900.0	3,511.6	3,940.0	3,378.8	33.5	39.5	72.79	1,055.0	-1,481.0	668.8	603.5	65.31	10.240				
4,000.0	3,608.0	4,065.4	3,498.1	34.0	40.2	73.15	1,076.9	-1,512.7	679.5	613.1	66.44	10.228				
4,100.0	3,705.7	4,191.5	3,620.4	34.4	40.8	73.48	1,094.5	-1,538.0	687.9	620.5	67.35	10.214				
4,200.0	3,804.3	4,318.1	3,744.9	34.7	41.2	73.76	1,107.4	-1,556.6	693.9	625.8	68.04	10.198				
4,300.0	3,903.7	4,445.0	3,870.9	34.9	41.4	74.02	1,115.7	-1,568.5	697.4	628.9	68.54	10.176				
4,400.0	4,003.5	4,571.9	3,997.7	35.0	41.5	74.24	1,119.1	-1,573.4	698.6	629.8	68.85	10.147				
4,462.5	4,066.0	4,640.2	4,066.0	35.0	41.6	-0.64	1,119.2	-1,573.6	698.4	629.5	68.94	10.130				
4,500.0	4,103.5	4,677.7	4,103.5	35.1	41.6	-0.64	1,119.2	-1,573.6	698.4	629.4	68.98	10.125				
4,600.0	4,203.5	4,777.7	4,203.5	35.1	41.6	-0.64	1,119.2	-1,573.6	698.4	629.3	69.09	10.109				
4,700.0	4,303.5	4,877.7	4,303.5	35.2	41.7	-0.64	1,119.2	-1,573.6	698.4	629.2	69.21	10.092				
4,800.0	4,403.5	4,977.7	4,403.5	35.2	41.7	-0.64	1,119.2	-1,573.6	698.4	629.1	69.32	10.075				

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

Company:	Ursa Operating Company, LLC	Local Co-ordinate Reference:	Well Frei A23
Project:	Rockies Region	TVD Reference:	Frei A23 @ 5611.9ft (PAD EST KB)
Reference Site:	Frei A	MD Reference:	Frei A23 @ 5611.9ft (PAD EST KB)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Frei A23	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	EDM 2003.21 Single User Db
Reference Design:	Design #1	Offset TVD Reference:	Offset Datum

Offset Design													Frei A - Frei A19 - Wellbore #1 - Design #1		Offset Site Error:		0.0 ft
Survey Program: 0-MWD															Offset Well Error:		0.0 ft
Reference		Offset		Semi Major Axis			Distance							Warning			
Measured Depth	Vertical Depth	Measured Depth	Vertical Depth	Reference	Offset	Highside Toolface	Offset Wellbore Centre		Between Centres	Between Ellipses	Minimum Separation	Separation Factor					
(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(°)	+N/-S (ft)	+E/-W (ft)	(ft)	(ft)	(ft)						
4,900.0	4,503.5	5,077.7	4,503.5	35.3	41.8	-0.64	1,119.2	-1,573.6	698.4	629.0	69.44	10.057					
5,000.0	4,603.5	5,177.7	4,603.5	35.3	41.8	-0.64	1,119.2	-1,573.6	698.4	628.8	69.57	10.040					
5,100.0	4,703.5	5,277.7	4,703.5	35.4	41.9	-0.64	1,119.2	-1,573.6	698.4	628.7	69.69	10.022					
5,200.0	4,803.5	5,377.7	4,803.5	35.5	41.9	-0.64	1,119.2	-1,573.6	698.4	628.6	69.82	10.003					
5,300.0	4,903.5	5,477.7	4,903.5	35.5	42.0	-0.64	1,119.2	-1,573.6	698.4	628.5	69.95	9.985					
5,400.0	5,003.5	5,577.7	5,003.5	35.6	42.1	-0.64	1,119.2	-1,573.6	698.4	628.3	70.08	9.966					
5,500.0	5,103.5	5,677.7	5,103.5	35.7	42.1	-0.64	1,119.2	-1,573.6	698.4	628.2	70.22	9.946					
5,600.0	5,203.5	5,777.7	5,203.5	35.7	42.2	-0.64	1,119.2	-1,573.6	698.4	628.1	70.36	9.927					
5,700.0	5,303.5	5,877.7	5,303.5	35.8	42.2	-0.64	1,119.2	-1,573.6	698.4	627.9	70.50	9.907					
5,800.0	5,403.5	5,977.7	5,403.5	35.9	42.3	-0.64	1,119.2	-1,573.6	698.4	627.8	70.64	9.887					
5,900.0	5,503.5	6,077.7	5,503.5	36.0	42.3	-0.64	1,119.2	-1,573.6	698.4	627.6	70.79	9.866					
6,000.0	5,603.5	6,177.7	5,603.5	36.0	42.4	-0.64	1,119.2	-1,573.6	698.4	627.5	70.94	9.846					
6,100.0	5,703.5	6,277.7	5,703.5	36.1	42.5	-0.64	1,119.2	-1,573.6	698.4	627.3	71.09	9.825					
6,200.0	5,803.5	6,377.7	5,803.5	36.2	42.5	-0.64	1,119.2	-1,573.6	698.4	627.2	71.24	9.804					
6,300.0	5,903.5	6,477.7	5,903.5	36.3	42.6	-0.64	1,119.2	-1,573.6	698.4	627.0	71.40	9.782					
6,400.0	6,003.5	6,577.7	6,003.5	36.3	42.7	-0.64	1,119.2	-1,573.6	698.4	626.9	71.56	9.760					
6,500.0	6,103.5	6,677.7	6,103.5	36.4	42.7	-0.64	1,119.2	-1,573.6	698.4	626.7	71.72	9.738					
6,600.0	6,203.5	6,777.7	6,203.5	36.5	42.8	-0.64	1,119.2	-1,573.6	698.4	626.5	71.88	9.716					
6,700.0	6,303.5	6,877.7	6,303.5	36.6	42.9	-0.64	1,119.2	-1,573.6	698.4	626.4	72.05	9.694					
6,800.0	6,403.5	6,977.7	6,403.5	36.7	42.9	-0.64	1,119.2	-1,573.6	698.4	626.2	72.22	9.671					
6,900.0	6,503.5	7,077.7	6,503.5	36.8	43.0	-0.64	1,119.2	-1,573.6	698.4	626.0	72.39	9.648					
7,000.0	6,603.5	7,177.7	6,603.5	36.9	43.1	-0.64	1,119.2	-1,573.6	698.4	625.9	72.56	9.625					
7,100.0	6,703.5	7,277.7	6,703.5	36.9	43.2	-0.64	1,119.2	-1,573.6	698.4	625.7	72.74	9.602					
7,200.0	6,803.5	7,377.7	6,803.5	37.0	43.2	-0.64	1,119.2	-1,573.6	698.4	625.5	72.91	9.579					
7,231.7	6,835.2	7,409.4	6,835.2	37.1	43.3	-0.64	1,119.2	-1,573.6	698.4	625.4	72.97	9.571					
7,286.5	6,890.0	7,423.2	6,849.0	37.1	43.3	-0.64	1,119.2	-1,573.6	699.6	626.6	73.03	9.579					

Company:	Ursa Operating Company, LLC	Local Co-ordinate Reference:	Well Frei A23
Project:	Rockies Region	TVD Reference:	Frei A23 @ 5611.9ft (PAD EST KB)
Reference Site:	Frei A	MD Reference:	Frei A23 @ 5611.9ft (PAD EST KB)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Frei A23	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	EDM 2003.21 Single User Db
Reference Design:	Design #1	Offset TVD Reference:	Offset Datum

Offset Design													Frei A - Frei A2 - Wellbore #1 - Design #1		Offset Site Error: 0.0 ft	
Survey Program: 0-MWD													Offset Well Error: 0.0 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				
0.0	0.0	0.0	0.0	0.0	0.0	-171.48	-37.1	-5.6	37.5							
100.0	100.0	100.0	100.0	0.1	0.1	-171.48	-37.1	-5.6	37.5	37.3	0.19	197.179				
200.0	200.0	200.0	200.0	0.3	0.3	-171.48	-37.1	-5.6	37.5	36.9	0.64	58.613				
300.0	300.0	300.0	300.0	0.5	0.5	-171.48	-37.1	-5.6	37.5	36.4	1.09	34.423 CC, ES				
400.0	400.0	398.6	398.6	0.8	0.7	-103.19	-38.9	-3.7	39.6	38.1	1.51	26.146				
500.0	499.6	495.8	495.4	1.0	1.0	-118.55	-44.1	1.6	48.4	46.4	1.98	24.484 SF				
600.0	598.8	590.0	588.9	1.3	1.2	-133.12	-52.4	10.2	67.8	65.3	2.50	27.087				
700.0	697.1	680.2	677.7	1.6	1.5	-142.81	-63.3	21.5	98.5	95.4	3.05	32.331				
800.0	794.3	765.3	760.7	2.1	1.9	-148.61	-76.3	35.0	139.2	135.6	3.59	38.793				
900.0	890.2	844.6	837.2	2.6	2.3	-152.04	-90.7	49.8	188.8	184.7	4.13	45.694				
1,000.0	984.4	917.5	906.8	3.2	2.7	-154.06	-105.9	65.5	246.3	241.6	4.68	52.626				
1,100.0	1,076.8	983.8	969.3	4.0	3.1	-155.19	-121.4	81.4	310.7	305.5	5.24	59.310				
1,200.0	1,167.1	1,043.5	1,024.8	4.8	3.5	-155.69	-136.5	97.1	381.3	375.5	5.82	65.570				
1,300.0	1,254.9	1,100.0	1,076.8	5.8	3.9	-155.80	-152.0	113.0	457.3	450.9	6.42	71.196				
1,329.4	1,280.3	1,110.9	1,086.8	6.1	4.0	-155.63	-155.1	116.2	480.5	473.9	6.61	72.707				
1,400.0	1,340.9	1,144.8	1,117.5	6.9	4.3	-156.46	-165.0	126.5	537.2	530.2	7.04	76.268				
1,500.0	1,426.7	1,203.3	1,170.4	8.0	4.8	-157.60	-182.3	144.4	618.1	610.4	7.64	80.915				
1,600.0	1,512.5	1,261.8	1,223.4	9.1	5.3	-158.48	-199.7	162.3	698.9	690.7	8.24	84.823				
1,700.0	1,598.3	1,320.3	1,276.3	10.3	5.8	-159.17	-217.0	180.2	779.9	771.0	8.85	88.153				
1,800.0	1,684.2	1,378.8	1,329.2	11.4	6.3	-159.74	-234.4	198.1	860.8	851.4	9.46	91.031				
1,900.0	1,770.0	1,437.3	1,382.2	12.5	6.9	-160.21	-251.7	216.0	941.8	931.7	10.07	93.529				
2,000.0	1,855.8	1,495.9	1,435.1	13.7	7.4	-160.61	-269.1	233.9	1,022.8	1,012.1	10.69	95.707				
2,100.0	1,941.6	1,554.4	1,488.0	14.8	7.9	-160.94	-286.4	251.9	1,103.8	1,092.5	11.31	97.567				
2,200.0	2,027.4	1,612.9	1,540.9	15.9	8.4	-161.24	-303.8	269.8	1,184.8	1,172.9	11.94	99.230				
2,300.0	2,113.3	1,671.4	1,593.9	17.1	8.9	-161.49	-321.1	287.7	1,265.9	1,253.3	12.57	100.680				
2,400.0	2,199.1	1,729.9	1,646.8	18.2	9.5	-161.71	-338.5	305.6	1,346.9	1,333.7	13.21	101.976				
2,500.0	2,284.9	1,788.4	1,699.7	19.4	10.0	-161.91	-355.8	323.5	1,428.0	1,414.1	13.85	103.134				
2,600.0	2,370.7	1,846.9	1,752.7	20.5	10.5	-162.09	-373.2	341.4	1,509.0	1,494.5	14.49	104.163				
2,700.0	2,456.6	1,905.4	1,805.6	21.6	11.0	-162.25	-390.5	359.3	1,590.1	1,574.9	15.13	105.100				
2,800.0	2,542.4	1,963.9	1,858.5	22.8	11.6	-162.39	-407.9	377.2	1,671.1	1,655.4	15.77	105.936				
2,900.0	2,628.2	2,022.4	1,911.4	23.9	12.1	-162.52	-425.3	395.2	1,752.2	1,735.8	16.42	106.701				
3,000.0	2,714.0	2,080.9	1,964.4	25.1	12.6	-162.64	-442.6	413.1	1,833.3	1,816.2	17.07	107.394				
3,100.0	2,799.8	2,139.5	2,017.3	26.2	13.1	-162.75	-460.0	431.0	1,914.3	1,896.6	17.72	108.027				
3,200.0	2,885.7	2,198.0	2,070.2	27.4	13.7	-162.85	-477.3	448.9	1,995.4	1,977.0	18.37	108.610				
3,300.0	2,971.5	2,256.5	2,123.1	28.5	14.2	-162.94	-494.7	466.8	2,076.5	2,057.4	19.03	109.139				
3,400.0	3,057.3	2,315.0	2,176.1	29.7	14.7	-163.03	-512.0	484.7	2,157.5	2,137.9	19.68	109.631				
3,433.1	3,085.7	2,334.3	2,193.6	30.0	14.9	-163.06	-517.8	490.6	2,184.4	2,164.5	19.90	109.783				
3,500.0	3,143.7	2,374.4	2,229.8	30.7	15.3	-163.86	-529.6	502.9	2,238.0	2,217.6	20.36	109.913				
3,600.0	3,232.5	2,437.6	2,287.0	31.6	15.8	-164.85	-548.4	522.3	2,315.4	2,294.4	21.05	110.013				
3,700.0	3,323.6	2,504.6	2,347.6	32.3	16.4	-165.65	-568.2	542.8	2,389.6	2,367.9	21.74	109.921				
3,800.0	3,416.7	2,575.2	2,411.5	33.0	17.1	-166.29	-589.2	564.4	2,460.4	2,437.9	22.42	109.729				
3,900.0	3,511.6	2,649.3	2,478.5	33.5	17.7	-166.80	-611.2	587.1	2,527.4	2,504.3	23.08	109.503				
4,000.0	3,608.0	2,726.7	2,548.5	34.0	18.4	-167.20	-634.1	610.8	2,590.6	2,566.8	23.70	109.285				
4,100.0	3,705.7	2,807.0	2,621.2	34.4	19.2	-167.51	-657.9	635.4	2,649.7	2,625.4	24.29	109.102				
4,200.0	3,804.3	2,890.2	2,696.4	34.7	19.9	-167.74	-682.6	660.8	2,704.7	2,679.8	24.82	108.974				
4,300.0	3,903.7	2,976.0	2,774.0	34.9	20.7	-167.90	-708.0	687.1	2,755.3	2,730.0	25.30	108.916				
4,400.0	4,003.5	3,064.1	2,853.7	35.0	21.5	-167.99	-734.2	714.1	2,801.5	2,775.8	25.72	108.938				
4,462.5	4,066.0	3,120.2	2,904.5	35.0	22.0	117.03	-750.8	731.2	2,828.1	2,802.1	25.95	108.990				
4,500.0	4,103.5	3,154.1	2,935.2	35.1	22.3	117.12	-760.9	741.6	2,843.5	2,817.3	26.14	108.785				
4,600.0	4,203.5	3,244.6	3,017.0	35.1	23.1	117.36	-787.7	769.3	2,884.6	2,857.9	26.65	108.243				
4,700.0	4,303.5	4,577.6	4,303.5	35.2	28.4	118.90	-975.4	963.1	2,888.7	2,858.7	30.03	96.204				
4,800.0	4,403.5	4,677.6	4,403.5	35.2	28.4	118.90	-975.4	963.1	2,888.7	2,858.4	30.26	95.463				

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

Company:	Ursa Operating Company, LLC	Local Co-ordinate Reference:	Well Frei A23
Project:	Rockies Region	TVD Reference:	Frei A23 @ 5611.9ft (PAD EST KB)
Reference Site:	Frei A	MD Reference:	Frei A23 @ 5611.9ft (PAD EST KB)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Frei A23	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	EDM 2003.21 Single User Db
Reference Design:	Design #1	Offset TVD Reference:	Offset Datum

Offset Design													Offset Site Error:	0.0 ft
Survey Program: 0-MWD													Offset Well Error:	0.0 ft
Frei A - Frei A2 - Wellbore #1 - Design #1														
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		
4,900.0	4,503.5	4,777.6	4,503.5	35.3	28.5	118.90	-975.4	963.1	2,888.7	2,858.2	30.50	94.717		
5,000.0	4,603.5	4,877.6	4,603.5	35.3	28.6	118.90	-975.4	963.1	2,888.7	2,858.0	30.74	93.969		
5,100.0	4,703.5	4,977.6	4,703.5	35.4	28.6	118.90	-975.4	963.1	2,888.7	2,857.7	30.99	93.219		
5,200.0	4,803.5	5,077.6	4,803.5	35.5	28.7	118.90	-975.4	963.1	2,888.7	2,857.5	31.24	92.467		
5,300.0	4,903.5	5,177.6	4,903.5	35.5	28.8	118.90	-975.4	963.1	2,888.7	2,857.2	31.50	91.715		
5,400.0	5,003.5	5,277.6	5,003.5	35.6	28.8	118.90	-975.4	963.1	2,888.7	2,856.9	31.76	90.962		
5,500.0	5,103.5	5,377.6	5,103.5	35.7	28.9	118.90	-975.4	963.1	2,888.7	2,856.7	32.02	90.210		
5,600.0	5,203.5	5,477.6	5,203.5	35.7	29.0	118.90	-975.4	963.1	2,888.7	2,856.4	32.29	89.458		
5,700.0	5,303.5	5,577.6	5,303.5	35.8	29.1	118.90	-975.4	963.1	2,888.7	2,856.1	32.56	88.709		
5,800.0	5,403.5	5,677.6	5,403.5	35.9	29.2	118.90	-975.4	963.1	2,888.7	2,855.9	32.84	87.961		
5,900.0	5,503.5	5,777.6	5,503.5	36.0	29.2	118.90	-975.4	963.1	2,888.7	2,855.6	33.12	87.216		
6,000.0	5,603.5	5,877.6	5,603.5	36.0	29.3	118.90	-975.4	963.1	2,888.7	2,855.3	33.41	86.474		
6,100.0	5,703.5	5,977.6	5,703.5	36.1	29.4	118.90	-975.4	963.1	2,888.7	2,855.0	33.69	85.735		
6,200.0	5,803.5	6,077.6	5,803.5	36.2	29.5	118.90	-975.4	963.1	2,888.7	2,854.7	33.98	85.000		
6,300.0	5,903.5	6,177.6	5,903.5	36.3	29.6	118.90	-975.4	963.1	2,888.7	2,854.4	34.28	84.269		
6,400.0	6,003.5	6,277.6	6,003.5	36.3	29.7	118.90	-975.4	963.1	2,888.7	2,854.1	34.58	83.542		
6,500.0	6,103.5	6,377.6	6,103.5	36.4	29.8	118.90	-975.4	963.1	2,888.7	2,853.8	34.88	82.820		
6,600.0	6,203.5	6,477.6	6,203.5	36.5	29.9	118.90	-975.4	963.1	2,888.7	2,853.5	35.18	82.103		
6,700.0	6,303.5	6,577.6	6,303.5	36.6	30.0	118.90	-975.4	963.1	2,888.7	2,853.2	35.49	81.391		
6,800.0	6,403.5	6,677.6	6,403.5	36.7	30.0	118.90	-975.4	963.1	2,888.7	2,852.9	35.80	80.685		
6,900.0	6,503.5	6,777.6	6,503.5	36.8	30.1	118.90	-975.4	963.1	2,888.7	2,852.6	36.12	79.985		
7,000.0	6,603.5	6,877.6	6,603.5	36.9	30.2	118.90	-975.4	963.1	2,888.7	2,852.3	36.43	79.290		
7,100.0	6,703.5	6,977.6	6,703.5	36.9	30.3	118.90	-975.4	963.1	2,888.7	2,851.9	36.75	78.601		
7,200.0	6,803.5	7,077.6	6,803.5	37.0	30.4	118.90	-975.4	963.1	2,888.7	2,851.6	37.07	77.919		
7,220.0	6,823.5	7,097.6	6,823.5	37.0	30.5	118.90	-975.4	963.1	2,888.7	2,851.6	37.14	77.783		
7,286.5	6,890.0	7,115.1	6,841.0	37.1	30.5	118.90	-975.4	963.1	2,889.1	2,851.8	37.27	77.513		

Company:	Ursa Operating Company, LLC	Local Co-ordinate Reference:	Well Frei A23
Project:	Rockies Region	TVD Reference:	Frei A23 @ 5611.9ft (PAD EST KB)
Reference Site:	Frei A	MD Reference:	Frei A23 @ 5611.9ft (PAD EST KB)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Frei A23	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	EDM 2003.21 Single User Db
Reference Design:	Design #1	Offset TVD Reference:	Offset Datum

Offset Design													Offset Site Error:	0.0 ft
Survey Program: 0-MWD													Offset Well Error:	0.0 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	
0.0	0.0	0.0	0.0	0.0	0.0	8.48	37.1	5.5	37.5					
100.0	100.0	100.0	100.0	0.1	0.1	8.48	37.1	5.5	37.5	37.3	0.19	197.157		
200.0	200.0	200.0	200.0	0.3	0.3	8.48	37.1	5.5	37.5	36.9	0.64	58.607		
300.0	300.0	300.0	300.0	0.5	0.5	8.48	37.1	5.5	37.5	36.4	1.09	34.419 CC, ES		
400.0	400.0	398.9	398.9	0.8	0.8	84.06	38.8	3.6	38.6	37.1	1.53	25.275		
500.0	499.6	497.7	497.4	1.0	1.0	85.73	44.0	-2.0	42.1	40.1	2.00	21.082		
600.0	598.8	596.4	595.2	1.3	1.3	87.94	52.5	-11.4	47.9	45.4	2.54	18.828		
700.0	697.1	694.8	692.0	1.6	1.6	90.23	64.5	-24.5	56.1	52.9	3.21	17.459		
800.0	794.3	792.8	787.4	2.1	2.0	92.28	79.7	-41.2	66.7	62.7	4.04	16.517		
900.0	890.2	890.5	881.1	2.6	2.5	93.98	98.0	-61.4	79.7	74.7	5.05	15.803		
1,000.0	984.4	987.7	972.9	3.2	3.1	95.31	119.5	-85.0	95.1	88.8	6.24	15.228		
1,100.0	1,076.8	1,084.3	1,062.5	4.0	3.8	96.30	144.0	-111.9	112.7	105.0	7.64	14.747		
1,200.0	1,167.1	1,180.4	1,149.6	4.8	4.6	97.02	171.3	-141.9	132.5	123.3	9.24	14.336		
1,300.0	1,254.9	1,275.9	1,234.0	5.8	5.5	97.50	201.3	-174.8	154.5	143.4	11.05	13.975		
1,329.4	1,280.3	1,303.8	1,258.2	6.1	5.8	97.61	210.6	-185.1	161.3	149.7	11.62	13.889		
1,400.0	1,340.9	1,370.7	1,315.5	6.9	6.5	97.90	233.9	-210.6	178.3	165.3	13.05	13.665		
1,500.0	1,426.7	1,464.9	1,394.0	8.0	7.5	97.12	268.9	-249.1	203.5	188.4	15.15	13.434		
1,600.0	1,512.5	1,558.0	1,468.9	9.1	8.7	95.39	306.1	-289.9	230.2	212.8	17.32	13.290		
1,700.0	1,598.3	1,649.5	1,540.0	10.3	9.9	93.06	344.9	-332.6	258.5	239.0	19.52	13.245 SF		
1,800.0	1,684.2	1,739.1	1,606.7	11.4	11.3	90.39	385.2	-376.8	289.0	267.3	21.72	13.308		
1,900.0	1,770.0	1,826.9	1,669.3	12.5	12.6	87.56	426.6	-422.2	321.8	298.0	23.87	13.484		
2,000.0	1,855.8	1,919.5	1,734.1	13.7	14.1	84.82	471.2	-471.2	356.3	330.2	26.04	13.679		
2,100.0	1,941.6	2,012.1	1,798.9	14.8	15.6	82.56	515.7	-520.2	391.3	363.1	28.18	13.885		
2,200.0	2,027.4	2,104.7	1,863.6	15.9	17.1	80.66	560.3	-569.1	426.7	396.5	30.29	14.091		
2,300.0	2,113.3	2,197.3	1,928.4	17.1	18.6	79.05	604.9	-618.1	462.6	430.2	32.37	14.290		
2,400.0	2,199.1	2,290.0	1,993.1	18.2	20.1	77.67	649.5	-667.0	498.7	464.2	34.44	14.481		
2,500.0	2,284.9	2,382.6	2,057.9	19.4	21.6	76.47	694.1	-716.0	535.0	498.5	36.49	14.661		
2,600.0	2,370.7	2,475.2	2,122.6	20.5	23.2	75.43	738.7	-765.0	571.5	533.0	38.53	14.831		
2,700.0	2,456.6	2,567.8	2,187.4	21.6	24.7	74.51	783.2	-813.9	608.1	567.6	40.57	14.990		
2,800.0	2,542.4	2,660.4	2,252.1	22.8	26.2	73.69	827.8	-862.9	644.9	602.3	42.60	15.140		
2,900.0	2,628.2	2,753.1	2,316.9	23.9	27.7	72.96	872.4	-911.9	681.8	637.2	44.62	15.279		
3,000.0	2,714.0	2,845.7	2,381.7	25.1	29.3	72.31	917.0	-960.8	718.7	672.1	46.64	15.410		
3,100.0	2,799.8	2,938.3	2,446.4	26.2	30.8	71.72	961.6	-1,009.8	755.8	707.1	48.66	15.533		
3,200.0	2,885.7	3,030.9	2,511.2	27.4	32.3	71.18	1,006.2	-1,058.8	792.9	742.2	50.67	15.648		
3,300.0	2,971.5	3,123.6	2,575.9	28.5	33.8	70.69	1,050.7	-1,107.7	830.0	777.3	52.68	15.755		
3,400.0	3,057.3	3,219.4	2,643.0	29.7	35.4	70.23	1,096.9	-1,158.4	867.2	812.5	54.71	15.850		
3,433.1	3,085.7	3,263.9	2,674.6	30.0	36.1	70.07	1,117.9	-1,181.5	879.2	823.7	55.49	15.844		
3,500.0	3,143.7	3,355.5	2,742.0	30.7	37.4	70.51	1,159.7	-1,227.3	902.2	845.0	57.20	15.774		
3,600.0	3,232.5	3,495.8	2,850.9	31.6	39.1	71.11	1,219.3	-1,292.8	934.2	874.7	59.49	15.704		
3,700.0	3,323.6	3,640.3	2,969.4	32.3	40.7	71.65	1,274.9	-1,353.9	963.0	901.5	61.56	15.643		
3,800.0	3,416.7	3,788.8	3,097.3	33.0	42.2	72.14	1,325.5	-1,409.5	988.4	925.0	63.43	15.584		
3,900.0	3,511.6	3,940.7	3,233.9	33.5	43.4	72.59	1,370.3	-1,458.7	1,010.1	945.1	65.03	15.533		
4,000.0	3,608.0	4,095.8	3,378.3	34.0	44.4	73.00	1,408.3	-1,500.4	1,028.0	961.6	66.40	15.482		
4,100.0	3,705.7	4,253.4	3,529.2	34.4	45.2	73.36	1,438.7	-1,533.8	1,041.9	974.4	67.50	15.436		
4,200.0	3,804.3	4,412.8	3,685.2	34.7	45.8	73.70	1,460.9	-1,558.2	1,051.6	983.2	68.35	15.385		
4,300.0	3,903.7	4,573.4	3,844.4	34.9	46.1	74.00	1,474.3	-1,572.9	1,057.0	988.0	68.94	15.331		
4,400.0	4,003.5	4,732.6	4,003.5	35.0	46.3	74.27	1,478.6	-1,577.6	1,058.1	988.8	69.31	15.266		
4,462.5	4,066.0	4,795.1	4,066.0	35.0	46.3	-0.64	1,478.6	-1,577.6	1,057.8	988.5	69.38	15.247		
4,500.0	4,103.5	4,832.6	4,103.5	35.1	46.3	-0.64	1,478.6	-1,577.6	1,057.8	988.4	69.42	15.239		
4,600.0	4,203.5	4,932.6	4,203.5	35.1	46.4	-0.64	1,478.6	-1,577.6	1,057.8	988.3	69.52	15.215		
4,700.0	4,303.5	5,032.6	4,303.5	35.2	46.4	-0.64	1,478.6	-1,577.6	1,057.8	988.2	69.64	15.191		
4,800.0	4,403.5	5,132.6	4,403.5	35.2	46.4	-0.64	1,478.6	-1,577.6	1,057.8	988.1	69.75	15.166		

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

Company:	Ursa Operating Company, LLC	Local Co-ordinate Reference:	Well Frei A23
Project:	Rockies Region	TVD Reference:	Frei A23 @ 5611.9ft (PAD EST KB)
Reference Site:	Frei A	MD Reference:	Frei A23 @ 5611.9ft (PAD EST KB)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Frei A23	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	EDM 2003.21 Single User Db
Reference Design:	Design #1	Offset TVD Reference:	Offset Datum

Offset Design													Frei A - Frei A20 - Wellbore #1 - Design #1		Offset Site Error:		0.0 ft
Survey Program: 0-MWD															Offset Well Error:		0.0 ft
Reference		Offset		Semi Major Axis			Distance							Warning			
Measured Depth	Vertical Depth	Measured Depth	Vertical Depth	Reference	Offset	Highside Toolface	Offset Wellbore Centre		Between Centres	Between Ellipses	Minimum Separation	Separation Factor					
(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(°)	+N/-S (ft)	+E/-W (ft)	(ft)	(ft)	(ft)						
4,900.0	4,503.5	5,232.6	4,503.5	35.3	46.5	-0.64	1,478.6	-1,577.6	1,057.8	988.0	69.87	15.141					
5,000.0	4,603.5	5,332.6	4,603.5	35.3	46.5	-0.64	1,478.6	-1,577.6	1,057.8	987.8	69.99	15.115					
5,100.0	4,703.5	5,432.6	4,703.5	35.4	46.6	-0.64	1,478.6	-1,577.6	1,057.8	987.7	70.11	15.088					
5,200.0	4,803.5	5,532.6	4,803.5	35.5	46.6	-0.64	1,478.6	-1,577.6	1,057.8	987.6	70.23	15.061					
5,300.0	4,903.5	5,632.6	4,903.5	35.5	46.7	-0.64	1,478.6	-1,577.6	1,057.8	987.5	70.36	15.034					
5,400.0	5,003.5	5,732.6	5,003.5	35.6	46.7	-0.64	1,478.6	-1,577.6	1,057.8	987.3	70.49	15.006					
5,500.0	5,103.5	5,832.6	5,103.5	35.7	46.8	-0.64	1,478.6	-1,577.6	1,057.8	987.2	70.63	14.978					
5,600.0	5,203.5	5,932.6	5,203.5	35.7	46.8	-0.64	1,478.6	-1,577.6	1,057.8	987.1	70.76	14.949					
5,700.0	5,303.5	6,032.6	5,303.5	35.8	46.9	-0.64	1,478.6	-1,577.6	1,057.8	986.9	70.90	14.920					
5,800.0	5,403.5	6,132.6	5,403.5	35.9	46.9	-0.64	1,478.6	-1,577.6	1,057.8	986.8	71.04	14.891					
5,900.0	5,503.5	6,232.6	5,503.5	36.0	47.0	-0.64	1,478.6	-1,577.6	1,057.8	986.7	71.18	14.861					
6,000.0	5,603.5	6,332.6	5,603.5	36.0	47.0	-0.64	1,478.6	-1,577.6	1,057.8	986.5	71.33	14.830					
6,100.0	5,703.5	6,432.6	5,703.5	36.1	47.1	-0.64	1,478.6	-1,577.6	1,057.8	986.4	71.48	14.799					
6,200.0	5,803.5	6,532.6	5,803.5	36.2	47.1	-0.64	1,478.6	-1,577.6	1,057.8	986.2	71.63	14.768					
6,300.0	5,903.5	6,632.6	5,903.5	36.3	47.2	-0.64	1,478.6	-1,577.6	1,057.8	986.1	71.78	14.737					
6,400.0	6,003.5	6,732.6	6,003.5	36.3	47.3	-0.64	1,478.6	-1,577.6	1,057.8	985.9	71.94	14.705					
6,500.0	6,103.5	6,832.6	6,103.5	36.4	47.3	-0.64	1,478.6	-1,577.6	1,057.8	985.7	72.10	14.673					
6,600.0	6,203.5	6,932.6	6,203.5	36.5	47.4	-0.64	1,478.6	-1,577.6	1,057.8	985.6	72.26	14.640					
6,700.0	6,303.5	7,032.6	6,303.5	36.6	47.4	-0.64	1,478.6	-1,577.6	1,057.8	985.4	72.42	14.607					
6,800.0	6,403.5	7,132.6	6,403.5	36.7	47.5	-0.64	1,478.6	-1,577.6	1,057.8	985.2	72.59	14.574					
6,900.0	6,503.5	7,232.6	6,503.5	36.8	47.6	-0.64	1,478.6	-1,577.6	1,057.8	985.1	72.75	14.540					
7,000.0	6,603.5	7,332.6	6,603.5	36.9	47.6	-0.64	1,478.6	-1,577.6	1,057.8	984.9	72.92	14.506					
7,100.0	6,703.5	7,432.6	6,703.5	36.9	47.7	-0.64	1,478.6	-1,577.6	1,057.8	984.7	73.10	14.472					
7,200.0	6,803.5	7,532.6	6,803.5	37.0	47.8	-0.64	1,478.6	-1,577.6	1,057.8	984.6	73.27	14.437					
7,286.5	6,890.0	7,554.1	6,825.0	37.1	47.8	-0.64	1,478.6	-1,577.6	1,059.8	986.5	73.37	14.445					

Company:	Ursa Operating Company, LLC	Local Co-ordinate Reference:	Well Frei A23
Project:	Rockies Region	TVD Reference:	Frei A23 @ 5611.9ft (PAD EST KB)
Reference Site:	Frei A	MD Reference:	Frei A23 @ 5611.9ft (PAD EST KB)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Frei A23	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	EDM 2003.21 Single User Db
Reference Design:	Design #1	Offset TVD Reference:	Offset Datum

Offset Design													Offset Site Error:	0.0 ft
Survey Program: 163-													Offset Well Error:	0.0 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	
0.0	0.0	0.0	0.0	0.0	0.0	69.44	9.0	24.1	25.7					
100.0	100.0	99.9	99.9	0.1	0.0	69.13	9.2	24.2	25.9	25.8	0.10	272.188		
200.0	200.0	199.9	199.9	0.3	0.0	68.17	9.8	24.5	26.4	26.1	0.32	82.525		
300.0	300.0	299.9	299.9	0.5	0.0	66.31	10.7	24.4	26.6	26.1	0.54	48.892		
400.0	400.0	399.8	399.8	0.8	0.0	142.40	11.9	24.4	29.2	28.4	0.76	38.240		
500.0	499.6	499.6	499.6	1.0	0.0	148.32	12.9	24.3	35.9	34.9	0.98	36.502 SF		
600.0	598.8	598.7	598.7	1.3	0.0	155.22	13.9	24.3	47.7	46.4	1.21	39.267		
700.0	697.1	696.7	696.7	1.6	0.0	160.71	15.2	24.5	64.9	63.5	1.45	44.742		
800.0	794.3	794.4	794.3	2.1	0.0	164.71	16.5	24.9	87.7	86.0	1.70	51.644		
900.0	890.2	891.7	891.7	2.6	0.0	167.23	18.6	24.3	114.7	112.8	1.96	58.563		
1,000.0	984.4	987.7	987.5	3.2	0.0	168.99	21.1	22.8	145.8	143.6	2.24	65.200		
1,100.0	1,076.8	1,082.3	1,082.1	4.0	0.0	170.20	24.1	20.7	181.2	178.7	2.53	71.597		
1,200.0	1,167.1	1,179.5	1,179.2	4.8	0.0	170.67	29.2	17.5	220.3	217.4	2.85	77.233		
1,300.0	1,254.9	1,277.7	1,276.7	5.8	0.0	170.35	38.0	11.5	261.1	257.9	3.21	81.417		
1,329.4	1,280.3	1,306.2	1,305.0	6.1	0.0	170.25	40.9	9.4	273.6	270.2	3.32	82.476		
1,400.0	1,340.9	1,371.9	1,370.1	6.9	0.0	170.14	47.8	3.9	303.5	299.9	3.61	84.006		
1,500.0	1,426.7	1,464.8	1,462.1	8.0	0.0	169.88	58.3	-4.2	345.4	341.3	4.05	85.367		
1,600.0	1,512.5	1,557.4	1,553.6	9.1	0.0	169.52	69.8	-12.8	386.8	382.3	4.49	86.066		
1,700.0	1,598.3	1,650.7	1,645.5	10.3	0.0	169.00	83.0	-21.6	427.8	422.8	4.96	86.231		
1,800.0	1,684.2	1,751.7	1,744.6	11.4	0.0	168.25	99.5	-32.0	467.9	462.4	5.45	85.778		
1,900.0	1,770.0	1,851.4	1,841.8	12.5	0.0	167.37	118.1	-44.4	505.9	499.9	5.98	84.662		
2,000.0	1,855.8	1,942.3	1,930.1	13.7	0.0	166.59	135.9	-56.1	543.5	537.0	6.51	83.498		
2,100.0	1,941.6	2,036.9	2,022.2	14.8	0.0	165.90	154.2	-68.0	581.4	574.3	7.05	82.451		
2,200.0	2,027.4	2,134.3	2,116.8	15.9	0.0	165.24	173.5	-81.0	618.6	611.0	7.61	81.313		
2,300.0	2,113.3	2,233.5	2,212.9	17.1	0.0	164.63	193.2	-95.1	655.2	647.0	8.17	80.155		
2,400.0	2,199.1	2,323.2	2,299.9	18.2	0.0	164.15	211.0	-108.2	691.3	682.6	8.74	79.125		
2,500.0	2,284.9	2,407.1	2,381.4	19.4	0.0	163.79	227.1	-119.7	728.4	719.1	9.29	78.376		
2,600.0	2,370.7	2,495.5	2,467.4	20.5	0.0	163.45	244.1	-130.8	766.6	756.8	9.86	77.775		
2,700.0	2,456.6	2,589.2	2,558.7	21.6	0.0	163.13	262.0	-142.6	804.8	794.4	10.43	77.196		
2,800.0	2,542.4	2,683.3	2,650.3	22.8	0.0	162.84	279.8	-154.6	842.9	831.9	10.99	76.668		
2,900.0	2,628.2	2,778.3	2,742.7	23.9	0.0	162.56	298.1	-167.0	880.7	869.1	11.57	76.121		
3,000.0	2,714.0	2,868.5	2,830.5	25.1	0.0	162.34	315.0	-178.9	918.4	906.3	12.14	75.660		
3,100.0	2,799.8	2,956.1	2,915.7	26.2	0.0	162.14	331.5	-189.9	956.7	944.0	12.71	75.284		
3,200.0	2,885.7	3,047.2	3,004.5	27.4	0.0	161.93	349.0	-201.1	995.2	981.9	13.29	74.908		
3,300.0	2,971.5	3,137.1	3,092.0	28.5	0.0	161.74	366.1	-212.1	1,033.8	1,019.9	13.86	74.581		
3,400.0	3,057.3	3,221.7	3,174.7	29.7	0.0	161.65	381.2	-222.0	1,072.9	1,058.4	14.42	74.408		
3,433.1	3,085.7	3,249.4	3,201.8	30.0	0.0	161.63	385.8	-225.1	1,085.9	1,071.3	14.60	74.386		
3,500.0	3,143.7	3,306.3	3,257.6	30.7	0.0	161.87	394.9	-231.3	1,111.6	1,096.7	14.88	74.691		
3,600.0	3,232.5	3,390.0	3,340.0	31.6	0.0	162.18	407.3	-240.1	1,146.4	1,131.1	15.25	75.187		
3,700.0	3,323.6	3,461.9	3,410.9	32.3	0.0	162.45	416.8	-246.6	1,177.9	1,162.3	15.55	75.732		
3,800.0	3,416.7	3,537.0	3,485.5	33.0	0.0	162.72	424.9	-251.6	1,206.7	1,190.9	15.79	76.408		
3,900.0	3,511.6	3,619.8	3,567.9	33.5	0.0	162.98	431.8	-256.0	1,232.1	1,216.1	15.97	77.163		
4,000.0	3,608.0	3,705.9	3,653.7	34.0	0.0	163.21	437.5	-259.7	1,253.5	1,237.4	16.08	77.945		
4,100.0	3,705.7	3,789.8	3,737.4	34.4	0.0	163.39	442.0	-262.4	1,271.0	1,254.8	16.15	78.717		
4,200.0	3,804.3	3,869.1	3,816.6	34.7	0.0	163.55	444.8	-263.8	1,285.0	1,268.8	16.15	79.558		
4,300.0	3,903.7	3,981.0	3,928.5	34.9	0.0	163.67	447.3	-265.4	1,294.2	1,278.1	16.10	80.375		
4,400.0	4,003.5	4,084.5	4,031.9	35.0	0.0	163.72	448.5	-267.9	1,297.4	1,281.4	16.01	81.016		
4,462.5	4,066.0	4,133.4	4,080.8	35.0	0.0	88.77	448.6	-268.7	1,297.4	1,281.4	15.94	81.401		
4,500.0	4,103.5	4,167.1	4,114.5	35.1	0.0	88.78	448.5	-269.1	1,297.0	1,281.1	15.98	81.190		
4,600.0	4,203.5	4,263.5	4,210.9	35.1	0.0	88.78	448.5	-269.8	1,296.3	1,280.2	16.08	80.605		
4,678.9	4,282.4	4,335.0	4,282.4	35.2	0.0	88.77	448.7	-270.0	1,296.1	1,279.9	16.17	80.153		
4,700.0	4,303.5	4,355.2	4,302.6	35.2	0.0	88.77	448.7	-270.0	1,296.1	1,279.9	16.19	80.036		

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

Company:	Ursa Operating Company, LLC	Local Co-ordinate Reference:	Well Frei A23
Project:	Rockies Region	TVD Reference:	Frei A23 @ 5611.9ft (PAD EST KB)
Reference Site:	Frei A	MD Reference:	Frei A23 @ 5611.9ft (PAD EST KB)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Frei A23	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	EDM 2003.21 Single User Db
Reference Design:	Design #1	Offset TVD Reference:	Offset Datum

Offset Design													Frei A - Frei A21 - Wellbore #1 - Actual		Offset Site Error:		0.0 ft	
Survey Program: 163-															Offset Well Error:		0.0 ft	
Reference		Offset		Semi Major Axis			Distance							Warning				
Measured Depth	Vertical Depth	Measured Depth	Vertical Depth	Reference	Offset	Highside Toolface	Offset Wellbore Centre		Between Centres	Between Ellipses	Minimum Separation	Separation Factor						
(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(°)	+N/-S (ft)	+E/-W (ft)	(ft)	(ft)	(ft)							
4,800.0	4,403.5	4,460.2	4,407.6	35.2	0.0	88.75	449.1	-269.9	1,296.1	1,279.8	16.31	79.473						
4,900.0	4,503.5	4,571.5	4,518.9	35.3	0.0	88.79	448.2	-271.0	1,295.1	1,278.7	16.41	78.916						
5,000.0	4,603.5	4,664.7	4,612.1	35.3	0.0	88.82	447.4	-271.9	1,294.1	1,277.6	16.52	78.349						
5,100.0	4,703.5	4,766.2	4,713.6	35.4	0.0	88.85	446.8	-272.4	1,293.6	1,277.0	16.63	77.802						
5,200.0	4,803.5	4,863.7	4,811.1	35.5	0.0	88.91	445.3	-273.3	1,292.7	1,276.0	16.73	77.270						
5,300.0	4,903.5	4,968.6	4,916.0	35.5	0.0	88.98	443.9	-273.8	1,292.2	1,275.4	16.83	76.758						
5,400.0	5,003.5	5,062.6	5,009.9	35.6	0.0	89.02	442.9	-274.7	1,291.3	1,274.3	16.95	76.194						
5,500.0	5,103.5	5,173.9	5,121.2	35.7	0.0	89.05	442.2	-275.4	1,290.6	1,273.6	17.07	75.629						
5,600.0	5,203.5	5,271.0	5,218.3	35.7	0.0	89.06	441.9	-276.7	1,289.3	1,272.1	17.19	74.997						
5,700.0	5,303.5	5,359.6	5,306.9	35.8	0.0	89.08	441.6	-277.4	1,288.6	1,271.2	17.32	74.404						
5,775.1	5,378.6	5,431.7	5,379.0	35.9	0.0	89.08	441.5	-277.4	1,288.5	1,271.1	17.42	73.975						
5,800.0	5,403.5	5,456.0	5,403.4	35.9	0.0	89.08	441.5	-277.4	1,288.5	1,271.0	17.45	73.834						
5,900.0	5,503.5	5,575.5	5,522.9	36.0	0.0	89.11	440.7	-278.4	1,287.7	1,270.1	17.58	73.263						
6,000.0	5,603.5	5,667.2	5,614.6	36.0	0.0	89.16	439.7	-279.5	1,286.5	1,268.8	17.70	72.682						
6,095.8	5,699.3	5,752.0	5,699.3	36.1	0.0	89.19	439.1	-279.8	1,286.1	1,268.2	17.83	72.146						
6,100.0	5,703.5	5,755.7	5,703.1	36.1	0.0	89.19	439.0	-279.8	1,286.1	1,268.2	17.83	72.123						
6,200.0	5,803.5	5,850.4	5,797.7	36.2	0.0	89.20	438.9	-279.6	1,286.3	1,268.4	17.97	71.583						
6,300.0	5,903.5	5,956.1	5,903.4	36.3	0.0	89.22	438.3	-279.2	1,286.7	1,268.6	18.11	71.065						
6,400.0	6,003.5	6,076.0	6,023.3	36.3	0.0	89.18	439.2	-280.5	1,285.5	1,267.3	18.26	70.401						
6,500.0	6,103.5	6,174.6	6,121.9	36.4	0.0	89.11	440.8	-281.9	1,284.1	1,265.7	18.42	69.697						
6,600.0	6,203.5	6,275.4	6,222.7	36.5	0.0	89.03	442.5	-283.5	1,282.6	1,264.0	18.59	68.990						
6,700.0	6,303.5	6,367.5	6,314.7	36.6	0.0	88.95	444.3	-284.7	1,281.3	1,262.5	18.76	68.300						
6,800.0	6,403.5	6,456.7	6,403.9	36.7	0.0	88.87	446.1	-285.1	1,280.9	1,262.0	18.93	67.666						
6,805.3	6,408.8	6,461.6	6,408.8	36.7	0.0	88.86	446.2	-285.1	1,280.9	1,262.0	18.94	67.633						
6,900.0	6,503.5	6,550.9	6,498.1	36.8	0.0	88.77	448.2	-284.9	1,281.1	1,262.0	19.11	67.057						
7,000.0	6,603.5	6,645.3	6,592.4	36.9	0.0	88.67	450.6	-284.4	1,281.7	1,262.4	19.28	66.465						
7,100.0	6,703.5	6,737.8	6,685.0	36.9	0.0	88.55	453.3	-283.4	1,282.9	1,263.4	19.47	65.901						
7,200.0	6,803.5	6,800.0	6,747.1	37.0	0.0	88.47	455.1	-282.5	1,284.9	1,265.3	19.64	65.416						
7,286.5	6,890.0	6,800.0	6,747.1	37.1	0.0	88.47	455.1	-282.5	1,291.6	1,271.9	19.78	65.309						

Company:	Ursa Operating Company, LLC	Local Co-ordinate Reference:	Well Frei A23
Project:	Rockies Region	TVD Reference:	Frei A23 @ 5611.9ft (PAD EST KB)
Reference Site:	Frei A	MD Reference:	Frei A23 @ 5611.9ft (PAD EST KB)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Frei A23	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	EDM 2003.21 Single User Db
Reference Design:	Design #1	Offset TVD Reference:	Offset Datum

Offset Design														Offset Site Error:	0.0 ft
Survey Program: 0-MWD														Offset Well Error:	0.0 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		
0.0	0.0	0.0	0.0	0.0	0.0	-171.45	-12.4	-1.9	12.5						
100.0	100.0	100.0	100.0	0.1	0.1	-171.45	-12.4	-1.9	12.5	12.3	0.19	65.883			
200.0	200.0	200.0	200.0	0.3	0.3	-171.45	-12.4	-1.9	12.5	11.9	0.64	19.584			
300.0	300.0	300.0	300.0	0.5	0.5	-171.45	-12.4	-1.9	12.5	11.4	1.09	11.502 CC, ES			
400.0	400.0	399.9	399.9	0.8	0.8	-96.46	-12.2	-4.5	13.0	11.5	1.52	8.560			
500.0	499.6	499.9	499.5	1.0	1.0	-96.34	-11.7	-12.3	14.6	12.6	1.99	7.341			
600.0	598.8	599.8	598.5	1.3	1.3	-96.19	-10.8	-25.3	17.1	14.6	2.54	6.742			
700.0	697.1	699.6	696.7	1.6	1.6	-96.02	-9.6	-43.4	20.7	17.5	3.23	6.404			
800.0	794.3	799.4	793.7	2.1	2.0	-95.85	-8.1	-66.6	25.3	21.2	4.10	6.172			
900.0	890.2	899.1	889.3	2.6	2.6	-95.69	-6.2	-94.9	30.8	25.7	5.15	5.984			
1,000.0	984.4	998.8	983.3	3.2	3.2	-95.53	-4.0	-128.0	37.4	31.0	6.42	5.819			
1,100.0	1,076.8	1,098.3	1,075.2	4.0	4.0	-95.37	-1.5	-165.9	44.9	37.0	7.92	5.669			
1,200.0	1,167.1	1,197.7	1,165.0	4.8	4.8	-95.20	1.3	-208.5	53.3	43.7	9.64	5.530			
1,300.0	1,254.9	1,297.1	1,252.5	5.8	5.8	-95.12	4.4	-255.6	62.6	51.0	11.60	5.401			
1,329.4	1,280.3	1,326.4	1,278.0	6.1	6.1	-95.53	5.4	-269.9	65.5	53.3	12.21	5.365			
1,400.0	1,340.9	1,396.6	1,339.2	6.9	6.8	-96.99	7.6	-304.2	72.5	58.8	13.70	5.291			
1,500.0	1,426.7	1,496.0	1,425.9	8.0	7.9	-98.63	10.9	-352.8	82.4	66.6	15.83	5.209			
1,600.0	1,512.5	1,595.5	1,512.7	9.1	9.0	-99.92	14.1	-401.4	92.4	74.5	17.96	5.147			
1,700.0	1,598.3	1,695.0	1,599.4	10.3	10.0	-100.95	17.3	-450.0	102.5	82.4	20.10	5.098			
1,800.0	1,684.2	1,794.5	1,686.2	11.4	11.1	-101.80	20.5	-498.6	112.6	90.3	22.25	5.059			
1,900.0	1,770.0	1,894.0	1,772.9	12.5	12.1	-102.52	23.7	-547.2	122.6	98.2	24.39	5.028			
2,000.0	1,855.8	1,993.4	1,859.7	13.7	13.2	-103.12	26.9	-595.8	132.7	106.2	26.54	5.001			
2,100.0	1,941.6	2,092.9	1,946.4	14.8	14.3	-103.63	30.2	-644.4	142.9	114.2	28.69	4.979			
2,200.0	2,027.4	2,192.4	2,033.2	15.9	15.4	-104.08	33.4	-693.0	153.0	122.2	30.84	4.961			
2,300.0	2,113.3	2,291.9	2,119.9	17.1	16.4	-104.48	36.6	-741.6	163.1	130.1	32.99	4.945			
2,400.0	2,199.1	2,391.4	2,206.6	18.2	17.5	-104.82	39.8	-790.2	173.3	138.1	35.14	4.931			
2,500.0	2,284.9	2,490.8	2,293.4	19.4	18.6	-105.13	43.0	-838.7	183.4	146.1	37.29	4.918			
2,600.0	2,370.7	2,590.3	2,380.1	20.5	19.7	-105.41	46.3	-887.3	193.6	154.1	39.45	4.907			
2,700.0	2,456.6	2,689.8	2,466.9	21.6	20.7	-105.66	49.5	-935.9	203.7	162.1	41.60	4.898			
2,800.0	2,542.4	2,789.3	2,553.6	22.8	21.8	-105.88	52.7	-984.5	213.9	170.1	43.75	4.889			
2,900.0	2,628.2	2,888.8	2,640.4	23.9	22.9	-106.09	55.9	-1,033.1	224.1	178.2	45.90	4.881			
3,000.0	2,714.0	2,988.2	2,727.1	25.1	24.0	-106.27	59.1	-1,081.7	234.2	186.2	48.05	4.874			
3,100.0	2,799.8	3,087.7	2,813.8	26.2	25.0	-106.45	62.3	-1,130.3	244.4	194.2	50.20	4.868			
3,200.0	2,885.7	3,187.2	2,900.6	27.4	26.1	-106.60	65.6	-1,178.9	254.6	202.2	52.36	4.862			
3,300.0	2,971.5	3,286.7	2,987.3	28.5	27.2	-106.75	68.8	-1,227.5	264.7	210.2	54.51	4.857			
3,400.0	3,057.3	3,386.2	3,074.1	29.7	28.3	-106.88	72.0	-1,276.1	274.9	218.2	56.66	4.852			
3,433.1	3,085.7	3,419.1	3,102.8	30.0	28.6	-106.93	73.1	-1,292.2	278.3	220.9	57.37	4.850			
3,500.0	3,143.7	3,485.4	3,160.7	30.7	29.3	-106.98	75.2	-1,324.5	284.7	226.0	58.75	4.847			
3,600.0	3,232.5	3,583.2	3,247.5	31.6	30.2	-106.85	78.2	-1,369.5	293.5	233.1	60.47	4.855			
3,700.0	3,323.6	3,681.2	3,336.6	32.3	30.9	-106.72	80.9	-1,410.1	301.4	239.5	61.98	4.863			
3,800.0	3,416.7	3,779.2	3,427.8	33.0	31.6	-106.60	83.3	-1,446.0	308.4	245.1	63.31	4.872			
3,900.0	3,511.6	3,877.4	3,520.8	33.5	32.1	-106.48	85.3	-1,477.3	314.4	250.0	64.44	4.879			
4,000.0	3,608.0	3,975.7	3,615.4	34.0	32.6	-106.35	87.1	-1,503.8	319.5	254.1	65.39	4.886			
4,100.0	3,705.7	4,074.1	3,711.4	34.4	33.0	-106.23	88.5	-1,525.4	323.5	257.4	66.15	4.891			
4,200.0	3,804.3	4,172.6	3,808.4	34.7	33.3	-106.09	89.6	-1,542.1	326.6	259.9	66.75	4.894			
4,300.0	3,903.7	4,271.1	3,906.2	34.9	33.5	-105.95	90.4	-1,553.8	328.7	261.5	67.18	4.893			
4,400.0	4,003.5	4,369.7	4,004.6	35.0	33.6	-105.80	90.8	-1,560.4	329.8	262.3	67.46	4.889			
4,462.5	4,066.0	4,431.4	4,066.2	35.0	33.7	179.34	90.9	-1,562.0	329.9	262.4	67.56	4.883			
4,486.5	4,090.0	4,455.1	4,090.0	35.0	33.7	179.36	90.9	-1,562.0	329.9	262.3	67.59	4.881			
4,500.0	4,103.5	4,468.6	4,103.5	35.1	33.7	179.36	90.9	-1,562.0	329.9	262.3	67.61	4.880			
4,600.0	4,203.5	4,568.6	4,203.5	35.1	33.7	179.36	90.9	-1,562.0	329.9	262.2	67.72	4.872			
4,700.0	4,303.5	4,668.6	4,303.5	35.2	33.8	179.36	90.9	-1,562.0	329.9	262.1	67.84	4.863			

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

Company:	Ursa Operating Company, LLC	Local Co-ordinate Reference:	Well Frei A23
Project:	Rockies Region	TVD Reference:	Frei A23 @ 5611.9ft (PAD EST KB)
Reference Site:	Frei A	MD Reference:	Frei A23 @ 5611.9ft (PAD EST KB)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Frei A23	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	EDM 2003.21 Single User Db
Reference Design:	Design #1	Offset TVD Reference:	Offset Datum

Offset Design													Offset Site Error:	0.0 ft
Survey Program: 0-MWD													Offset Well Error:	0.0 ft
Frei A - Frei A24 - Wellbore #1 - Design #1														
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		
4,800.0	4,403.5	4,768.6	4,403.5	35.2	33.9	179.36	90.9	-1,562.0	329.9	262.0	67.96	4.854		
4,900.0	4,503.5	4,868.6	4,503.5	35.3	33.9	179.36	90.9	-1,562.0	329.9	261.8	68.09	4.846		
5,000.0	4,603.5	4,968.6	4,603.5	35.3	34.0	179.36	90.9	-1,562.0	329.9	261.7	68.21	4.836		
5,100.0	4,703.5	5,068.6	4,703.5	35.4	34.1	179.36	90.9	-1,562.0	329.9	261.6	68.34	4.827		
5,200.0	4,803.5	5,168.6	4,803.5	35.5	34.1	179.36	90.9	-1,562.0	329.9	261.4	68.48	4.818		
5,300.0	4,903.5	5,268.6	4,903.5	35.5	34.2	179.36	90.9	-1,562.0	329.9	261.3	68.61	4.808		
5,400.0	5,003.5	5,368.6	5,003.5	35.6	34.3	179.36	90.9	-1,562.0	329.9	261.2	68.75	4.799		
5,500.0	5,103.5	5,468.6	5,103.5	35.7	34.3	179.36	90.9	-1,562.0	329.9	261.0	68.89	4.789		
5,600.0	5,203.5	5,568.6	5,203.5	35.7	34.4	179.36	90.9	-1,562.0	329.9	260.9	69.03	4.779		
5,700.0	5,303.5	5,668.6	5,303.5	35.8	34.5	179.36	90.9	-1,562.0	329.9	260.7	69.18	4.769		
5,800.0	5,403.5	5,768.6	5,403.5	35.9	34.5	179.36	90.9	-1,562.0	329.9	260.6	69.33	4.759		
5,900.0	5,503.5	5,868.6	5,503.5	36.0	34.6	179.36	90.9	-1,562.0	329.9	260.4	69.48	4.748		
6,000.0	5,603.5	5,968.6	5,603.5	36.0	34.7	179.36	90.9	-1,562.0	329.9	260.3	69.63	4.738		
6,100.0	5,703.5	6,068.6	5,703.5	36.1	34.8	179.36	90.9	-1,562.0	329.9	260.1	69.79	4.727		
6,200.0	5,803.5	6,168.6	5,803.5	36.2	34.9	179.36	90.9	-1,562.0	329.9	260.0	69.95	4.717		
6,300.0	5,903.5	6,268.6	5,903.5	36.3	34.9	179.36	90.9	-1,562.0	329.9	259.8	70.11	4.706		
6,400.0	6,003.5	6,368.6	6,003.5	36.3	35.0	179.36	90.9	-1,562.0	329.9	259.6	70.27	4.695		
6,500.0	6,103.5	6,468.6	6,103.5	36.4	35.1	179.36	90.9	-1,562.0	329.9	259.5	70.44	4.684		
6,600.0	6,203.5	6,568.6	6,203.5	36.5	35.2	179.36	90.9	-1,562.0	329.9	259.3	70.61	4.673		
6,700.0	6,303.5	6,668.6	6,303.5	36.6	35.3	179.36	90.9	-1,562.0	329.9	259.1	70.78	4.661		
6,800.0	6,403.5	6,768.6	6,403.5	36.7	35.4	179.36	90.9	-1,562.0	329.9	259.0	70.95	4.650		
6,900.0	6,503.5	6,868.6	6,503.5	36.8	35.4	179.36	90.9	-1,562.0	329.9	258.8	71.13	4.638		
7,000.0	6,603.5	6,968.6	6,603.5	36.9	35.5	179.36	90.9	-1,562.0	329.9	258.6	71.31	4.627		
7,100.0	6,703.5	7,068.6	6,703.5	36.9	35.6	179.36	90.9	-1,562.0	329.9	258.4	71.49	4.615		
7,200.0	6,803.5	7,168.6	6,803.5	37.0	35.7	179.36	90.9	-1,562.0	329.9	258.2	71.67	4.603		
7,286.5	6,890.0	7,255.1	6,890.0	37.1	35.8	179.36	90.9	-1,562.0	329.9	258.1	71.83	4.593 SF		

Company:	Ursa Operating Company, LLC	Local Co-ordinate Reference:	Well Frei A23
Project:	Rockies Region	TVD Reference:	Frei A23 @ 5611.9ft (PAD EST KB)
Reference Site:	Frei A	MD Reference:	Frei A23 @ 5611.9ft (PAD EST KB)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Frei A23	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	EDM 2003.21 Single User Db
Reference Design:	Design #1	Offset TVD Reference:	Offset Datum

Offset Design														Offset Site Error:	0.0 ft
Frei A - Frei A3 - Wellbore #1 - Design #1														Offset Well Error:	0.0 ft
Survey Program: 0-MWD															
Reference		Offset		Semi Major Axis		Distance									
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning		
0.0	0.0	0.0	0.0	0.0	0.0	-171.50	-49.4	-7.4	50.0						
100.0	100.0	100.0	100.0	0.1	0.1	-171.50	-49.4	-7.4	50.0	49.8	0.19	262.828			
200.0	200.0	200.0	200.0	0.3	0.3	-171.50	-49.4	-7.4	50.0	49.3	0.64	78.128			
300.0	300.0	300.0	300.0	0.5	0.5	-171.50	-49.4	-7.4	50.0	48.9	1.09	45.884 CC, ES			
400.0	400.0	397.9	397.9	0.8	0.7	-101.17	-51.5	-5.9	52.3	50.8	1.51	34.630			
500.0	499.6	494.4	494.1	1.0	1.0	-112.39	-57.5	-1.7	61.1	59.1	1.97	31.044 SF			
600.0	598.8	588.3	587.2	1.3	1.2	-124.42	-67.2	5.1	79.2	76.7	2.49	31.807			
700.0	697.1	678.4	675.9	1.6	1.5	-133.63	-79.9	14.2	108.0	104.9	3.05	35.426			
800.0	794.3	763.6	759.1	2.1	1.8	-139.73	-95.2	24.9	146.6	143.0	3.62	40.523			
900.0	890.2	843.4	836.1	2.6	2.2	-143.57	-112.2	36.9	194.2	190.0	4.20	46.211			
1,000.0	984.4	917.2	906.5	3.2	2.6	-145.92	-130.2	49.6	249.6	244.8	4.80	51.982			
1,100.0	1,076.8	984.8	970.2	4.0	3.1	-147.27	-148.6	62.7	312.1	306.6	5.43	57.502			
1,200.0	1,167.1	1,045.9	1,027.1	4.8	3.5	-147.88	-166.9	75.6	380.7	374.6	6.08	62.566			
1,300.0	1,254.9	1,100.0	1,076.8	5.8	3.9	-147.90	-184.3	87.9	454.7	447.9	6.79	67.003			
1,329.4	1,280.3	1,115.6	1,091.0	6.1	4.0	-147.84	-189.5	91.5	477.5	470.4	7.00	68.165			
1,400.0	1,340.9	1,150.0	1,122.3	6.9	4.3	-148.86	-201.4	99.9	532.9	525.4	7.49	71.143			
1,500.0	1,426.7	1,200.0	1,167.1	8.0	4.8	-150.01	-219.5	112.7	612.8	604.6	8.19	74.844			
1,600.0	1,512.5	1,243.9	1,206.0	9.1	5.2	-150.78	-236.1	124.4	694.0	685.1	8.88	78.118			
1,700.0	1,598.3	1,301.3	1,256.7	10.3	5.7	-151.60	-258.0	139.9	775.7	766.1	9.59	80.921			
1,800.0	1,684.2	1,358.7	1,307.5	11.4	6.2	-152.27	-279.9	155.4	857.3	847.1	10.29	83.318			
1,900.0	1,770.0	1,416.2	1,358.2	12.5	6.8	-152.82	-301.9	170.9	939.1	928.1	10.98	85.506			
2,000.0	1,855.8	1,473.6	1,409.0	13.7	7.3	-153.28	-323.8	186.3	1,020.8	1,009.1	11.69	87.322			
2,100.0	1,941.6	1,531.0	1,459.8	14.8	7.9	-153.67	-345.7	201.8	1,102.6	1,090.2	12.40	88.910			
2,200.0	2,027.4	1,588.4	1,510.5	15.9	8.4	-154.01	-367.6	217.3	1,184.4	1,171.2	13.12	90.298			
2,300.0	2,113.3	1,645.8	1,561.3	17.1	9.0	-154.31	-389.6	232.8	1,266.2	1,252.3	13.84	91.500			
2,400.0	2,199.1	1,703.2	1,612.0	18.2	9.5	-154.57	-411.5	248.3	1,348.0	1,333.4	14.56	92.579			
2,500.0	2,284.9	1,760.6	1,662.8	19.4	10.1	-154.80	-433.4	263.7	1,429.8	1,414.5	15.29	93.515			
2,600.0	2,370.7	1,818.1	1,713.5	20.5	10.6	-155.00	-455.3	279.2	1,511.6	1,495.6	16.02	94.361			
2,700.0	2,456.6	1,875.5	1,764.3	21.6	11.2	-155.19	-477.3	294.7	1,593.4	1,576.7	16.75	95.114			
2,800.0	2,542.4	1,932.9	1,815.0	22.8	11.8	-155.35	-499.2	310.2	1,675.3	1,657.8	17.49	95.791			
2,900.0	2,628.2	1,990.3	1,865.8	23.9	12.3	-155.50	-521.1	325.7	1,757.1	1,738.9	18.23	96.404			
3,000.0	2,714.0	2,047.7	1,916.5	25.1	12.9	-155.64	-543.0	341.1	1,838.9	1,820.0	18.97	96.955			
3,100.0	2,799.8	2,105.1	1,967.3	26.2	13.4	-155.77	-565.0	356.6	1,920.8	1,901.1	19.71	97.461			
3,200.0	2,885.7	2,162.5	2,018.1	27.4	14.0	-155.88	-586.9	372.1	2,002.6	1,982.2	20.45	97.916			
3,300.0	2,971.5	2,220.0	2,068.8	28.5	14.6	-155.99	-608.8	387.6	2,084.5	2,063.3	21.20	98.337			
3,400.0	3,057.3	2,277.4	2,119.6	29.7	15.1	-156.09	-630.7	403.1	2,166.3	2,144.4	21.94	98.721			
3,433.1	3,085.7	2,296.4	2,136.4	30.0	15.3	-156.12	-638.0	408.2	2,193.4	2,171.2	22.19	98.843			
3,500.0	3,143.7	2,335.7	2,171.1	30.7	15.7	-157.25	-653.0	418.8	2,247.5	2,224.9	22.64	99.261			
3,600.0	3,232.5	2,397.6	2,225.9	31.6	16.3	-158.67	-676.6	435.5	2,326.0	2,302.7	23.33	99.718			
3,700.0	3,323.6	2,463.3	2,283.9	32.3	16.9	-159.80	-701.7	453.2	2,401.4	2,377.3	24.04	99.893			
3,800.0	3,416.7	2,532.5	2,345.1	33.0	17.6	-160.72	-728.2	471.9	2,473.4	2,448.6	24.76	99.899			
3,900.0	3,511.6	2,605.1	2,409.3	33.5	18.3	-161.45	-755.9	491.4	2,542.0	2,516.5	25.47	99.813			
4,000.0	3,608.0	2,680.8	2,476.2	34.0	19.0	-162.02	-784.8	511.8	2,606.8	2,580.7	26.15	99.683			
4,100.0	3,705.7	2,759.4	2,545.7	34.4	19.8	-162.47	-814.8	533.0	2,667.9	2,641.1	26.80	99.550			
4,200.0	3,804.3	2,840.8	2,617.6	34.7	20.6	-162.80	-845.9	555.0	2,724.9	2,697.5	27.40	99.439			
4,300.0	3,903.7	2,924.6	2,691.7	34.9	21.4	-163.04	-877.9	577.6	2,777.8	2,749.9	27.95	99.371			
4,400.0	4,003.5	3,010.7	2,767.9	35.0	22.3	-163.19	-910.8	600.8	2,826.5	2,798.0	28.45	99.358			
4,462.5	4,066.0	3,065.6	2,816.4	35.0	22.8	121.80	-931.7	615.6	2,854.7	2,826.0	28.73	99.378			
4,500.0	4,103.5	3,098.8	2,845.7	35.1	23.1	121.94	-944.4	624.5	2,871.1	2,842.2	28.94	99.204			
4,600.0	4,203.5	3,187.2	2,923.8	35.1	24.0	122.29	-978.1	648.4	2,915.0	2,885.5	29.52	98.750			
4,700.0	4,303.5	4,632.2	4,303.5	35.2	30.4	124.82	-1,255.2	844.0	2,935.3	2,901.6	33.70	87.106			
4,800.0	4,403.5	4,732.2	4,403.5	35.2	30.5	124.82	-1,255.2	844.0	2,935.3	2,901.4	33.90	86.575			

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

Company:	Ursa Operating Company, LLC	Local Co-ordinate Reference:	Well Frei A23
Project:	Rockies Region	TVD Reference:	Frei A23 @ 5611.9ft (PAD EST KB)
Reference Site:	Frei A	MD Reference:	Frei A23 @ 5611.9ft (PAD EST KB)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Frei A23	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	EDM 2003.21 Single User Db
Reference Design:	Design #1	Offset TVD Reference:	Offset Datum

Offset Design												Frei A - Frei A3 - Wellbore #1 - Design #1		Offset Site Error:		0.0 ft	
Survey Program: 0-MWD														Offset Well Error:		0.0 ft	
Reference		Offset		Semi Major Axis			Distance							Warning			
Measured Depth	Vertical Depth	Measured Depth	Vertical Depth	Reference	Offset	Highside Toolface	Offset Wellbore Centre		Between Centres	Between Ellipses	Minimum Separation	Separation Factor					
(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(°)	+N/-S (ft)	+E/-W (ft)	(ft)	(ft)	(ft)						
4,900.0	4,503.5	4,832.2	4,503.5	35.3	30.5	124.82	-1,255.2	844.0	2,935.3	2,901.2	34.12	86.039					
5,000.0	4,603.5	4,932.2	4,603.5	35.3	30.6	124.82	-1,255.2	844.0	2,935.3	2,900.9	34.33	85.498					
5,100.0	4,703.5	5,032.2	4,703.5	35.4	30.7	124.82	-1,255.2	844.0	2,935.3	2,900.7	34.55	84.953					
5,200.0	4,803.5	5,132.2	4,803.5	35.5	30.7	124.82	-1,255.2	844.0	2,935.3	2,900.5	34.78	84.403					
5,300.0	4,903.5	5,232.2	4,903.5	35.5	30.8	124.82	-1,255.2	844.0	2,935.3	2,900.3	35.01	83.851					
5,400.0	5,003.5	5,332.2	5,003.5	35.6	30.9	124.82	-1,255.2	844.0	2,935.3	2,900.0	35.24	83.295					
5,500.0	5,103.5	5,432.2	5,103.5	35.7	30.9	124.82	-1,255.2	844.0	2,935.3	2,899.8	35.48	82.738					
5,600.0	5,203.5	5,532.2	5,203.5	35.7	31.0	124.82	-1,255.2	844.0	2,935.3	2,899.6	35.72	82.178					
5,700.0	5,303.5	5,632.2	5,303.5	35.8	31.1	124.82	-1,255.2	844.0	2,935.3	2,899.3	35.96	81.616					
5,800.0	5,403.5	5,732.2	5,403.5	35.9	31.1	124.82	-1,255.2	844.0	2,935.3	2,899.1	36.21	81.054					
5,900.0	5,503.5	5,832.2	5,503.5	36.0	31.2	124.82	-1,255.2	844.0	2,935.3	2,898.8	36.47	80.491					
6,000.0	5,603.5	5,932.2	5,603.5	36.0	31.3	124.82	-1,255.2	844.0	2,935.3	2,898.5	36.72	79.927					
6,100.0	5,703.5	6,032.2	5,703.5	36.1	31.4	124.82	-1,255.2	844.0	2,935.3	2,898.3	36.99	79.363					
6,200.0	5,803.5	6,132.2	5,803.5	36.2	31.5	124.82	-1,255.2	844.0	2,935.3	2,898.0	37.25	78.800					
6,300.0	5,903.5	6,232.2	5,903.5	36.3	31.5	124.82	-1,255.2	844.0	2,935.3	2,897.8	37.52	78.237					
6,400.0	6,003.5	6,332.2	6,003.5	36.3	31.6	124.82	-1,255.2	844.0	2,935.3	2,897.5	37.79	77.675					
6,500.0	6,103.5	6,432.2	6,103.5	36.4	31.7	124.82	-1,255.2	844.0	2,935.3	2,897.2	38.06	77.114					
6,600.0	6,203.5	6,532.2	6,203.5	36.5	31.8	124.82	-1,255.2	844.0	2,935.3	2,896.9	38.34	76.555					
6,700.0	6,303.5	6,632.2	6,303.5	36.6	31.9	124.82	-1,255.2	844.0	2,935.3	2,896.7	38.62	75.997					
6,800.0	6,403.5	6,732.2	6,403.5	36.7	32.0	124.82	-1,255.2	844.0	2,935.3	2,896.4	38.91	75.441					
6,900.0	6,503.5	6,832.2	6,503.5	36.8	32.0	124.82	-1,255.2	844.0	2,935.3	2,896.1	39.20	74.887					
7,000.0	6,603.5	6,932.2	6,603.5	36.9	32.1	124.82	-1,255.2	844.0	2,935.3	2,895.8	39.49	74.336					
7,100.0	6,703.5	7,032.2	6,703.5	36.9	32.2	124.82	-1,255.2	844.0	2,935.3	2,895.5	39.78	73.788					
7,200.0	6,803.5	7,132.2	6,803.5	37.0	32.3	124.82	-1,255.2	844.0	2,935.3	2,895.2	40.08	73.242					
7,244.6	6,848.1	7,176.8	6,848.1	37.1	32.4	124.82	-1,255.2	844.0	2,935.3	2,895.1	40.21	72.999					
7,286.5	6,890.0	7,191.7	6,863.0	37.1	32.4	124.82	-1,255.2	844.0	2,935.4	2,895.1	40.29	72.849					

Company:	Ursa Operating Company, LLC	Local Co-ordinate Reference:	Well Frei A23
Project:	Rockies Region	TVD Reference:	Frei A23 @ 5611.9ft (PAD EST KB)
Reference Site:	Frei A	MD Reference:	Frei A23 @ 5611.9ft (PAD EST KB)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Frei A23	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	EDM 2003.21 Single User Db
Reference Design:	Design #1	Offset TVD Reference:	Offset Datum

Offset Design													Frei A - Frei A4 - Wellbore #1 - Design #1		Offset Site Error:		0.0 ft
Survey Program: 0-MWD															Offset Well Error:		0.0 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)						
0.0	0.0	0.0	0.0	0.0	0.0	-171.49	-61.8	-9.3	62.5								
100.0	100.0	100.0	100.0	0.1	0.1	-171.49	-61.8	-9.3	62.5	62.3	0.19	328.688					
200.0	200.0	200.0	200.0	0.3	0.3	-171.49	-61.8	-9.3	62.5	61.9	0.64	97.706					
300.0	300.0	300.0	300.0	0.5	0.5	-171.49	-61.8	-9.3	62.5	61.4	1.09	57.381	CC, ES				
400.0	400.0	397.3	397.3	0.8	0.7	-100.08	-63.9	-8.0	64.9	63.4	1.51	43.026					
500.0	499.6	493.3	493.0	1.0	1.0	-108.99	-70.2	-4.3	73.5	71.5	1.96	37.479					
600.0	598.8	586.7	585.6	1.3	1.2	-119.35	-80.3	1.7	90.7	88.3	2.48	36.562	SF				
700.0	697.1	676.5	674.0	1.6	1.5	-128.05	-93.7	9.6	118.0	115.0	3.05	38.755					
800.0	794.3	761.7	757.2	2.1	1.8	-134.29	-109.6	19.0	155.2	151.5	3.63	42.701					
900.0	890.2	841.6	834.3	2.6	2.2	-138.45	-127.5	29.6	201.2	197.0	4.24	47.445					
1,000.0	984.4	915.7	905.1	3.2	2.6	-141.11	-146.5	40.8	255.3	250.4	4.87	52.396					
1,100.0	1,076.8	983.7	969.2	4.0	3.1	-142.70	-166.0	52.4	316.4	310.8	5.53	57.169					
1,200.0	1,167.1	1,045.5	1,026.7	4.8	3.5	-143.49	-185.5	63.9	383.7	377.5	6.24	61.535					
1,300.0	1,254.9	1,100.0	1,076.8	5.8	3.9	-143.61	-204.0	74.8	456.5	449.5	6.99	65.316					
1,329.4	1,280.3	1,116.4	1,091.7	6.1	4.0	-143.59	-209.7	78.2	478.9	471.7	7.22	66.290					
1,400.0	1,340.9	1,151.5	1,123.6	6.9	4.3	-144.75	-222.5	85.7	533.5	525.8	7.74	68.902					
1,500.0	1,426.7	1,200.0	1,167.1	8.0	4.7	-146.02	-241.0	96.7	612.4	603.9	8.48	72.179					
1,600.0	1,512.5	1,243.6	1,205.7	9.1	5.1	-146.90	-258.4	107.0	692.7	683.5	9.21	75.206					
1,700.0	1,598.3	1,285.8	1,242.6	10.3	5.5	-147.58	-276.0	117.4	774.3	764.3	9.97	77.689					
1,800.0	1,684.2	1,325.7	1,277.1	11.4	5.9	-148.10	-293.3	127.6	857.1	846.4	10.71	80.007					
1,900.0	1,770.0	1,363.5	1,309.3	12.5	6.3	-148.49	-310.2	137.6	941.0	929.6	11.46	82.129					
2,000.0	1,855.8	1,400.0	1,340.2	13.7	6.7	-148.80	-327.1	147.5	1,025.9	1,013.7	12.19	84.128					
2,100.0	1,941.6	1,433.0	1,367.7	14.8	7.1	-149.02	-342.7	156.8	1,111.6	1,098.7	12.94	85.894					
2,200.0	2,027.4	1,465.1	1,394.2	15.9	7.5	-149.20	-358.4	166.0	1,198.2	1,184.5	13.69	87.545					
2,300.0	2,113.3	1,500.0	1,422.6	17.1	7.9	-149.35	-375.8	176.4	1,285.5	1,271.1	14.44	89.056					
2,400.0	2,199.1	1,527.5	1,444.7	18.2	8.2	-149.45	-389.8	184.7	1,373.5	1,358.3	15.19	90.432					
2,500.0	2,284.9	1,569.1	1,478.0	19.4	8.7	-149.57	-411.3	197.4	1,461.9	1,446.0	15.95	91.642					
2,600.0	2,370.7	1,615.8	1,515.4	20.5	9.3	-149.69	-435.4	211.6	1,550.3	1,533.6	16.72	92.697					
2,700.0	2,456.6	1,662.5	1,552.8	21.6	9.9	-149.80	-459.5	225.8	1,638.8	1,621.3	17.50	93.640					
2,800.0	2,542.4	1,709.3	1,590.2	22.8	10.4	-149.90	-483.6	240.1	1,727.2	1,708.9	18.28	94.510					
2,900.0	2,628.2	1,756.0	1,627.6	23.9	11.0	-149.99	-507.7	254.3	1,815.6	1,796.5	19.06	95.272					
3,000.0	2,714.0	1,802.7	1,665.0	25.1	11.6	-150.07	-531.8	268.6	1,904.0	1,884.2	19.84	95.983					
3,100.0	2,799.8	1,849.4	1,702.4	26.2	12.2	-150.14	-555.9	282.8	1,992.4	1,971.8	20.62	96.609					
3,200.0	2,885.7	1,896.1	1,739.8	27.4	12.8	-150.21	-580.0	297.1	2,080.8	2,059.4	21.41	97.196					
3,300.0	2,971.5	1,942.8	1,777.2	28.5	13.3	-150.27	-604.1	311.3	2,169.2	2,147.0	22.20	97.718					
3,400.0	3,057.3	1,989.5	1,814.5	29.7	13.9	-150.32	-628.2	325.6	2,257.7	2,234.7	22.99	98.207					
3,433.1	3,085.7	2,005.0	1,826.9	30.0	14.1	-150.34	-636.2	330.3	2,286.9	2,263.7	23.25	98.360					
3,500.0	3,143.7	2,037.1	1,852.7	30.7	14.5	-152.11	-652.8	340.1	2,345.6	2,322.1	23.52	99.717					
3,600.0	3,232.5	2,088.5	1,893.8	31.6	15.2	-154.28	-679.3	355.8	2,431.3	2,407.3	24.00	101.288					
3,700.0	3,323.6	2,143.7	1,938.0	32.3	15.9	-155.99	-707.8	372.6	2,514.6	2,490.0	24.58	102.287					
3,800.0	3,416.7	2,202.6	1,985.1	33.0	16.6	-157.36	-738.2	390.6	2,595.1	2,569.9	25.22	102.914					
3,900.0	3,511.6	2,265.1	2,035.1	33.5	17.4	-158.44	-770.4	409.6	2,672.7	2,646.8	25.88	103.291					
4,000.0	3,608.0	2,330.9	2,087.8	34.0	18.2	-159.30	-804.4	429.7	2,747.1	2,720.6	26.54	103.517					
4,100.0	3,705.7	2,399.9	2,143.1	34.4	19.1	-159.98	-840.0	450.7	2,818.3	2,791.1	27.19	103.657					
4,200.0	3,804.3	2,471.9	2,200.7	34.7	20.0	-160.51	-877.1	472.7	2,886.0	2,858.2	27.81	103.756					
4,300.0	3,903.7	2,546.7	2,260.5	34.9	20.9	-160.90	-915.7	495.5	2,950.0	2,921.6	28.41	103.855					
4,400.0	4,003.5	2,624.1	2,322.5	35.0	21.9	-161.19	-955.6	519.1	3,010.4	2,981.4	28.95	103.980					
4,462.5	4,066.0	2,673.6	2,362.2	35.0	22.5	123.73	-981.2	534.2	3,046.1	3,016.8	29.27	104.074					
4,500.0	4,103.5	2,703.7	2,386.2	35.1	22.9	123.91	-996.7	543.4	3,067.1	3,037.6	29.51	103.927					
4,600.0	4,203.5	2,783.7	2,450.3	35.1	23.9	124.36	-1,038.0	567.8	3,123.1	3,093.0	30.16	103.554					
4,700.0	4,303.5	2,863.7	2,514.4	35.2	24.9	124.81	-1,079.3	592.2	3,179.3	3,148.5	30.80	103.232					
4,800.0	4,403.5	2,943.8	2,578.4	35.2	25.9	125.23	-1,120.6	616.6	3,235.7	3,204.3	31.43	102.954					

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

Company:	Ursa Operating Company, LLC	Local Co-ordinate Reference:	Well Frei A23
Project:	Rockies Region	TVD Reference:	Frei A23 @ 5611.9ft (PAD EST KB)
Reference Site:	Frei A	MD Reference:	Frei A23 @ 5611.9ft (PAD EST KB)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Frei A23	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	EDM 2003.21 Single User Db
Reference Design:	Design #1	Offset TVD Reference:	Offset Datum

Offset Design													Offset Site Error:	0.0 ft
Survey Program: 0-MWD													Offset Well Error:	0.0 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 Tooface (")	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
4,900.0	4,503.5	5,035.1	4,503.5	35.3	38.0	129.79	-1,664.5	938.1	3,258.5	3,220.3	38.25	85.195		
5,000.0	4,603.5	5,135.1	4,603.5	35.3	38.0	129.79	-1,664.5	938.1	3,258.5	3,220.1	38.44	84.770		
5,100.0	4,703.5	5,235.1	4,703.5	35.4	38.1	129.79	-1,664.5	938.1	3,258.5	3,219.9	38.64	84.339		
5,200.0	4,803.5	5,335.1	4,803.5	35.5	38.1	129.79	-1,664.5	938.1	3,258.5	3,219.7	38.84	83.904		
5,300.0	4,903.5	5,435.1	4,903.5	35.5	38.2	129.79	-1,664.5	938.1	3,258.5	3,219.5	39.04	83.464		
5,400.0	5,003.5	5,535.1	5,003.5	35.6	38.2	129.79	-1,664.5	938.1	3,258.5	3,219.3	39.25	83.020		
5,500.0	5,103.5	5,635.1	5,103.5	35.7	38.3	129.79	-1,664.5	938.1	3,258.5	3,219.0	39.46	82.573		
5,600.0	5,203.5	5,735.1	5,203.5	35.7	38.4	129.79	-1,664.5	938.1	3,258.5	3,218.8	39.68	82.122		
5,700.0	5,303.5	5,835.1	5,303.5	35.8	38.4	129.79	-1,664.5	938.1	3,258.5	3,218.6	39.90	81.668		
5,800.0	5,403.5	5,935.1	5,403.5	35.9	38.5	129.79	-1,664.5	938.1	3,258.5	3,218.4	40.12	81.212		
5,900.0	5,503.5	6,035.1	5,503.5	36.0	38.5	129.79	-1,664.5	938.1	3,258.5	3,218.2	40.35	80.752		
6,000.0	5,603.5	6,135.1	5,603.5	36.0	38.6	129.79	-1,664.5	938.1	3,258.5	3,217.9	40.58	80.291		
6,100.0	5,703.5	6,235.1	5,703.5	36.1	38.7	129.79	-1,664.5	938.1	3,258.5	3,217.7	40.82	79.828		
6,200.0	5,803.5	6,335.1	5,803.5	36.2	38.7	129.79	-1,664.5	938.1	3,258.5	3,217.5	41.06	79.363		
6,300.0	5,903.5	6,435.1	5,903.5	36.3	38.8	129.79	-1,664.5	938.1	3,258.5	3,217.2	41.30	78.897		
6,400.0	6,003.5	6,535.1	6,003.5	36.3	38.8	129.79	-1,664.5	938.1	3,258.5	3,217.0	41.55	78.430		
6,500.0	6,103.5	6,635.1	6,103.5	36.4	38.9	129.79	-1,664.5	938.1	3,258.5	3,216.7	41.80	77.962		
6,600.0	6,203.5	6,735.1	6,203.5	36.5	39.0	129.79	-1,664.5	938.1	3,258.5	3,216.5	42.05	77.494		
6,700.0	6,303.5	6,835.1	6,303.5	36.6	39.1	129.79	-1,664.5	938.1	3,258.5	3,216.2	42.30	77.025		
6,800.0	6,403.5	6,935.1	6,403.5	36.7	39.1	129.79	-1,664.5	938.1	3,258.5	3,215.9	42.56	76.556		
6,900.0	6,503.5	7,035.1	6,503.5	36.8	39.2	129.79	-1,664.5	938.1	3,258.5	3,215.7	42.83	76.087		
7,000.0	6,603.5	7,135.1	6,603.5	36.9	39.3	129.79	-1,664.5	938.1	3,258.5	3,215.4	43.09	75.618		
7,100.0	6,703.5	7,235.1	6,703.5	36.9	39.3	129.79	-1,664.5	938.1	3,258.5	3,215.1	43.36	75.150		
7,200.0	6,803.5	7,335.1	6,803.5	37.0	39.4	129.79	-1,664.5	938.1	3,258.5	3,214.9	43.63	74.682		
7,254.7	6,858.2	7,389.8	6,858.2	37.1	39.5	129.79	-1,664.5	938.1	3,258.5	3,214.7	43.78	74.427		
7,286.5	6,890.0	7,413.6	6,882.0	37.1	39.5	129.79	-1,664.5	938.1	3,258.5	3,214.7	43.86	74.297		

Company:	Ursa Operating Company, LLC	Local Co-ordinate Reference:	Well Frei A23
Project:	Rockies Region	TVD Reference:	Frei A23 @ 5611.9ft (PAD EST KB)
Reference Site:	Frei A	MD Reference:	Frei A23 @ 5611.9ft (PAD EST KB)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Frei A23	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	EDM 2003.21 Single User Db
Reference Design:	Design #1	Offset TVD Reference:	Offset Datum

Offset Design													Offset Site Error:	0.0 ft
Survey Program: 129-													Offset Well Error:	0.0 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	
0.0	0.0	0.0	0.0	0.0	0.0	50.48	21.4	25.9	33.6					
100.0	100.0	99.8	99.8	0.1	0.0	50.73	21.5	26.3	33.9	33.8	0.10	356.247		
200.0	200.0	199.2	199.2	0.3	0.0	51.10	22.1	27.4	35.3	35.0	0.32	110.205		
300.0	300.0	298.2	298.1	0.5	0.0	50.95	24.3	29.9	38.6	38.0	0.54	70.778		
400.0	400.0	396.1	395.8	0.8	0.0	127.73	28.9	35.0	47.2	46.4	0.76	61.802 SF		
500.0	499.6	492.4	491.5	1.0	0.0	131.41	36.5	42.3	62.9	61.9	0.99	63.648		
600.0	598.8	586.3	584.3	1.3	0.0	135.12	46.7	52.4	86.6	85.4	1.23	70.142		
700.0	697.1	676.4	672.6	1.6	0.0	137.84	59.4	65.0	118.5	117.0	1.51	78.378		
800.0	794.3	761.6	755.2	2.1	0.0	139.75	73.8	79.9	158.5	156.7	1.83	86.706		
900.0	890.2	842.2	832.4	2.6	0.0	140.86	89.9	96.4	206.1	203.9	2.19	93.982		
1,000.0	984.4	913.6	899.7	3.2	0.0	141.05	107.0	113.2	261.2	258.6	2.62	99.538		
1,100.0	1,076.8	984.1	965.0	4.0	0.0	140.91	125.9	131.9	323.0	319.8	3.13	103.247		
1,200.0	1,167.1	1,048.9	1,024.2	4.8	0.0	140.38	145.0	150.2	389.9	386.2	3.72	104.800		
1,300.0	1,254.9	1,110.2	1,079.7	5.8	0.0	139.78	163.3	168.7	461.5	457.1	4.40	104.769		
1,329.4	1,280.3	1,123.0	1,091.2	6.1	0.0	139.47	167.1	172.7	483.3	478.7	4.63	104.383		
1,400.0	1,340.9	1,162.4	1,126.5	6.9	0.0	140.39	179.1	185.4	536.7	531.6	5.11	105.092		
1,500.0	1,426.7	1,217.0	1,174.7	8.0	0.0	141.34	196.6	204.2	614.0	608.2	5.79	105.992		
1,600.0	1,512.5	1,268.2	1,219.3	9.1	0.0	141.95	213.9	222.3	692.3	685.8	6.49	106.630		
1,700.0	1,598.3	1,328.8	1,271.9	10.3	0.0	142.42	235.3	243.6	770.9	763.7	7.20	107.100		
1,800.0	1,684.2	1,391.2	1,325.9	11.4	0.0	142.78	257.7	265.4	849.5	841.6	7.91	107.412		
1,900.0	1,770.0	1,451.6	1,378.1	12.5	0.0	143.05	279.6	286.4	928.2	919.5	8.63	107.603		
2,000.0	1,855.8	1,511.2	1,429.4	13.7	0.0	143.22	301.6	307.2	1,006.9	997.6	9.35	107.684		
2,100.0	1,941.6	1,570.6	1,480.6	14.8	0.0	143.38	323.6	328.0	1,085.8	1,075.7	10.08	107.759		
2,200.0	2,027.4	1,632.2	1,533.6	15.9	0.0	143.54	346.1	349.7	1,164.8	1,154.0	10.80	107.862		
2,300.0	2,113.3	1,695.4	1,588.1	17.1	0.0	143.66	369.5	371.8	1,243.6	1,232.1	11.53	107.902		
2,400.0	2,199.1	1,754.3	1,638.8	18.2	0.0	143.76	391.2	392.5	1,322.5	1,310.3	12.25	107.936		
2,500.0	2,284.9	1,817.2	1,693.0	19.4	0.0	143.90	413.9	414.7	1,401.5	1,388.5	12.97	108.029		
2,600.0	2,370.7	1,884.5	1,751.2	20.5	0.0	144.04	438.0	438.4	1,480.3	1,466.6	13.69	108.134		
2,700.0	2,456.6	1,947.6	1,805.8	21.6	0.0	144.15	460.8	460.4	1,558.9	1,544.5	14.41	108.180		
2,800.0	2,542.4	2,009.3	1,859.1	22.8	0.0	144.22	483.3	481.8	1,637.5	1,622.4	15.14	108.183		
2,900.0	2,628.2	2,069.8	1,911.5	23.9	0.0	144.32	504.8	503.0	1,716.1	1,700.3	15.86	108.240		
3,000.0	2,714.0	2,129.3	1,963.1	25.1	0.0	144.42	525.8	523.9	1,794.8	1,778.3	16.57	108.312		
3,100.0	2,799.8	2,191.6	2,017.0	26.2	0.0	144.51	548.0	545.8	1,873.6	1,856.3	17.29	108.363		
3,200.0	2,885.7	2,257.6	2,074.0	27.4	0.0	144.55	572.3	568.7	1,952.2	1,934.2	18.02	108.350		
3,300.0	2,971.5	2,322.9	2,130.4	28.5	0.0	144.60	596.2	591.3	2,030.8	2,012.0	18.75	108.331		
3,400.0	3,057.3	2,385.0	2,184.3	29.7	0.0	144.66	618.4	612.8	2,109.2	2,089.8	19.47	108.354		
3,433.1	3,085.7	2,404.7	2,201.4	30.0	0.0	144.68	625.4	619.7	2,135.2	2,115.5	19.70	108.360		
3,500.0	3,143.7	2,446.0	2,237.1	30.7	0.0	146.09	640.2	634.0	2,187.1	2,167.4	19.71	110.964		
3,600.0	3,232.5	2,556.0	2,333.0	31.6	0.0	147.80	679.3	671.3	2,261.7	2,242.0	19.72	114.696		
3,700.0	3,323.6	2,653.9	2,418.7	32.3	0.0	149.12	714.2	703.0	2,332.3	2,312.5	19.76	118.018		
3,800.0	3,416.7	2,767.4	2,519.4	33.0	0.0	150.13	752.8	738.7	2,398.3	2,378.5	19.82	121.020		
3,900.0	3,511.6	2,857.7	2,600.2	33.5	0.0	151.03	781.4	766.8	2,460.3	2,440.4	19.83	124.067		
4,000.0	3,608.0	2,949.9	2,683.0	34.0	0.0	151.73	810.5	795.1	2,518.2	2,498.4	19.84	126.952		
4,100.0	3,705.7	3,088.6	2,808.2	34.4	0.0	152.08	853.5	836.6	2,571.7	2,551.8	19.89	129.300		
4,200.0	3,804.3	3,747.2	3,433.5	34.7	0.0	151.14	1,000.0	971.7	2,613.3	2,592.9	20.34	128.456		
4,300.0	3,903.7	4,270.7	3,955.0	34.9	0.0	151.51	1,027.0	992.6	2,623.7	2,603.4	20.26	129.516		
4,400.0	4,003.5	4,381.3	4,065.5	35.0	0.0	151.60	1,027.5	990.4	2,626.9	2,606.7	20.21	129.962		
4,462.5	4,066.0	4,468.5	4,152.7	35.0	0.0	76.64	1,027.3	987.8	2,626.0	2,605.8	20.18	130.135		
4,500.0	4,103.5	4,514.1	4,198.2	35.1	0.0	76.64	1,026.9	986.3	2,624.7	2,604.5	20.21	129.873		
4,600.0	4,203.5	4,607.2	4,291.3	35.1	0.0	76.65	1,025.6	983.2	2,621.2	2,600.9	20.29	129.178		
4,700.0	4,303.5	4,687.9	4,372.0	35.2	0.0	76.67	1,024.2	981.0	2,618.2	2,597.8	20.37	128.514		
4,800.0	4,403.5	4,776.0	4,460.0	35.2	0.0	76.69	1,023.0	979.2	2,615.8	2,595.4	20.46	127.874		

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

Company:	Ursa Operating Company, LLC	Local Co-ordinate Reference:	Well Frei A23
Project:	Rockies Region	TVD Reference:	Frei A23 @ 5611.9ft (PAD EST KB)
Reference Site:	Frei A	MD Reference:	Frei A23 @ 5611.9ft (PAD EST KB)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Frei A23	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	EDM 2003.21 Single User Db
Reference Design:	Design #1	Offset TVD Reference:	Offset Datum

Offset Design											Frei A - Frei A9 - Wellbore #1 - Actual		Offset Site Error:		0.0 ft	
Survey Program: 129-													Offset Well Error:		0.0 ft	
Reference		Offset		Semi Major Axis			Distance							Warning		
Measured Depth	Vertical Depth	Measured Depth	Vertical Depth	Reference	Offset	Highside Toolface	Offset Wellbore Centre		Between Centres	Between Ellipses	Minimum Separation	Separation Factor				
(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(°)	+N/-S (ft)	+E/-W (ft)	(ft)	(ft)	(ft)					
4,900.0	4,503.5	4,858.3	4,542.3	35.3	0.0	76.71	1,021.5	978.0	2,614.0	2,593.4	20.54	127.264				
5,000.0	4,603.5	4,943.0	4,627.0	35.3	0.0	76.73	1,020.6	977.2	2,612.8	2,592.2	20.63	126.663				
5,100.0	4,703.5	5,034.4	4,718.4	35.4	0.0	76.75	1,019.6	976.7	2,612.1	2,591.4	20.72	126.081				
5,199.7	4,803.2	5,119.2	4,803.2	35.5	0.0	76.76	1,019.1	976.6	2,611.8	2,591.0	20.81	125.491				
5,200.0	4,803.5	5,119.4	4,803.4	35.5	0.0	76.76	1,019.1	976.6	2,611.8	2,591.0	20.81	125.489				
5,300.0	4,903.5	5,205.5	4,889.5	35.5	0.0	76.75	1,019.3	976.9	2,612.1	2,591.2	20.91	124.895				
5,400.0	5,003.5	5,319.5	5,003.5	35.6	0.0	76.75	1,019.8	977.0	2,612.4	2,591.3	21.02	124.280				
5,480.4	5,083.9	5,399.9	5,083.9	35.7	0.0	76.74	1,020.0	976.9	2,612.3	2,591.2	21.11	123.771				
5,500.0	5,103.5	5,416.6	5,100.6	35.7	0.0	76.74	1,020.1	976.9	2,612.3	2,591.2	21.13	123.647				
5,600.0	5,203.5	5,511.8	5,195.8	35.7	0.0	76.71	1,021.4	976.9	2,612.6	2,591.4	21.24	122.985				
5,700.0	5,303.5	5,611.3	5,295.3	35.8	0.0	76.67	1,023.2	976.7	2,612.8	2,591.5	21.37	122.292				
5,800.0	5,403.5	5,708.0	5,392.0	35.9	0.0	76.65	1,024.3	976.9	2,613.3	2,591.9	21.48	121.646				
5,900.0	5,503.5	5,798.9	5,482.8	36.0	0.0	76.63	1,025.2	977.6	2,614.3	2,592.7	21.60	121.032				
6,000.0	5,603.5	5,912.3	5,596.2	36.0	0.0	76.62	1,026.0	978.0	2,614.7	2,593.0	21.72	120.392				
6,100.0	5,703.5	6,000.9	5,684.8	36.1	0.0	76.61	1,026.3	978.2	2,615.1	2,593.3	21.84	119.767				
6,200.0	5,803.5	6,096.9	5,780.8	36.2	0.0	76.58	1,028.1	978.7	2,616.0	2,594.1	21.96	119.103				
6,300.0	5,903.5	6,197.5	5,881.4	36.3	0.0	76.54	1,029.8	979.2	2,616.8	2,594.7	22.09	118.439				
6,400.0	6,003.5	6,298.1	5,982.0	36.3	0.0	76.54	1,030.1	979.9	2,617.7	2,595.5	22.22	117.832				
6,500.0	6,103.5	6,385.5	6,069.4	36.4	0.0	76.56	1,029.4	981.0	2,618.7	2,596.4	22.33	117.275				
6,600.0	6,203.5	6,464.7	6,148.6	36.5	0.0	76.57	1,029.2	982.4	2,620.4	2,597.9	22.45	116.729				
6,700.0	6,303.5	6,594.8	6,278.7	36.6	0.0	76.57	1,029.8	984.9	2,622.5	2,599.9	22.57	116.177				
6,800.0	6,403.5	6,721.9	6,405.7	36.7	0.0	76.56	1,030.4	985.0	2,622.6	2,599.9	22.70	115.518				
6,813.2	6,416.7	6,732.9	6,416.7	36.7	0.0	76.56	1,030.4	985.0	2,622.6	2,599.9	22.72	115.430				
6,900.0	6,503.5	6,807.8	6,491.7	36.8	0.0	76.55	1,031.1	985.1	2,622.8	2,600.0	22.84	114.855				
7,000.0	6,603.5	6,870.0	6,553.8	36.9	0.0	76.53	1,031.9	985.2	2,623.6	2,600.6	22.97	114.215				
7,100.0	6,703.5	6,870.0	6,553.8	36.9	0.0	76.53	1,031.9	985.2	2,627.4	2,604.3	23.10	113.734				
7,200.0	6,803.5	6,870.0	6,553.8	37.0	0.0	76.53	1,031.9	985.2	2,634.9	2,611.7	23.23	113.414				
7,286.5	6,890.0	6,870.0	6,553.8	37.1	0.0	76.53	1,031.9	985.2	2,644.5	2,621.2	23.35	113.265				

Company:	Ursa Operating Company, LLC	Local Co-ordinate Reference:	Well Frei A23
Project:	Rockies Region	TVD Reference:	Frei A23 @ 5611.9ft (PAD EST KB)
Reference Site:	Frei A	MD Reference:	Frei A23 @ 5611.9ft (PAD EST KB)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Frei A23	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	EDM 2003.21 Single User Db
Reference Design:	Design #1	Offset TVD Reference:	Offset Datum

Reference Depths are relative to Frei A23 @ 5611.9ft (PAD EST KB)

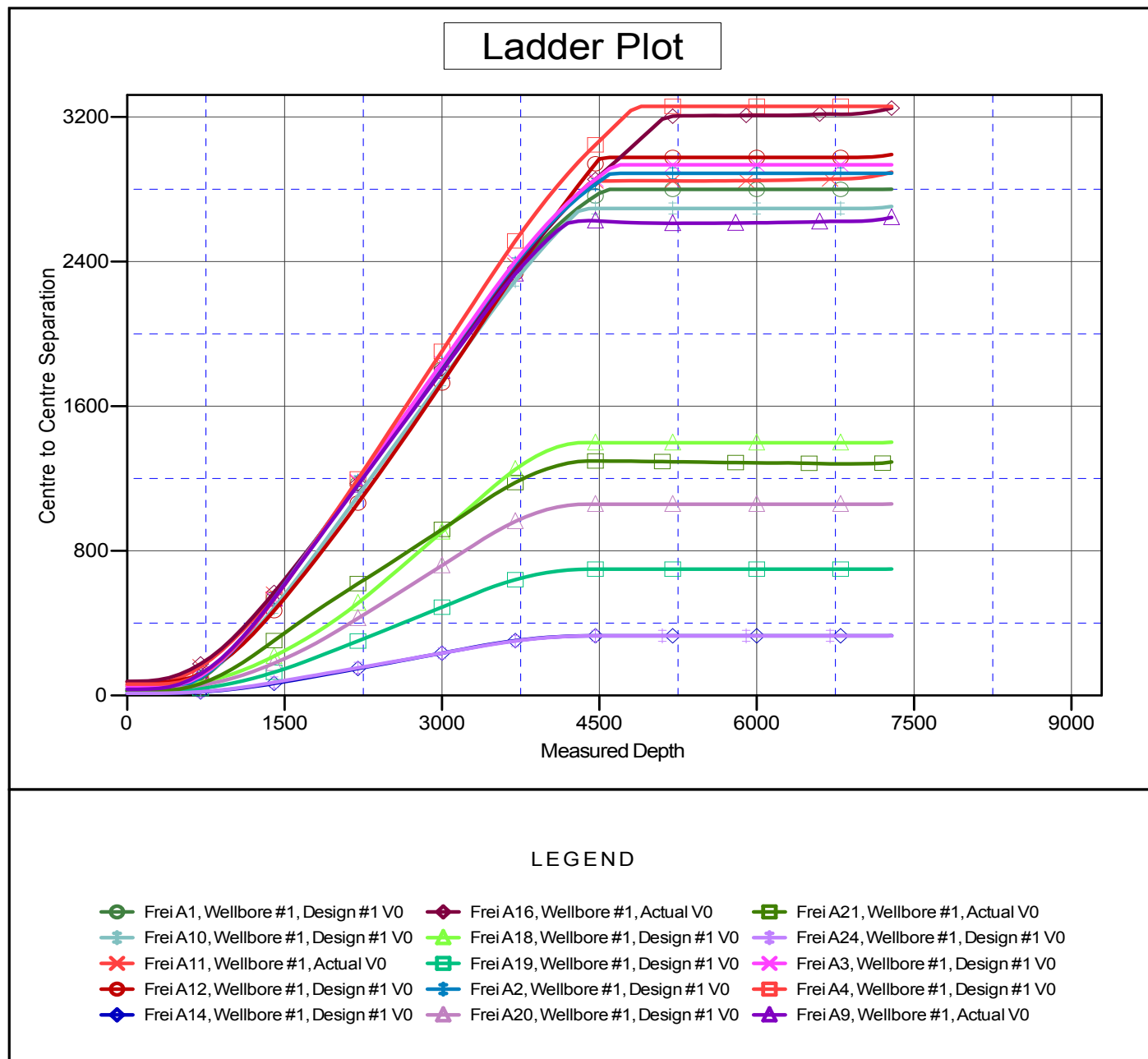
Offset Depths are relative to Offset Datum

Central Meridian is 105° 30' 0.000 W °

Coordinates are relative to: Frei A23

Coordinate System is US State Plane 1983, Colorado Central Zone

Grid Convergence at Surface is: -1.33°



Company:	Ursa Operating Company, LLC	Local Co-ordinate Reference:	Well Frei A23
Project:	Rockies Region	TVD Reference:	Frei A23 @ 5611.9ft (PAD EST KB)
Reference Site:	Frei A	MD Reference:	Frei A23 @ 5611.9ft (PAD EST KB)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Frei A23	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	EDM 2003.21 Single User Db
Reference Design:	Design #1	Offset TVD Reference:	Offset Datum

Reference Depths are relative to Frei A23 @ 5611.9ft (PAD EST KB)

Offset Depths are relative to Offset Datum

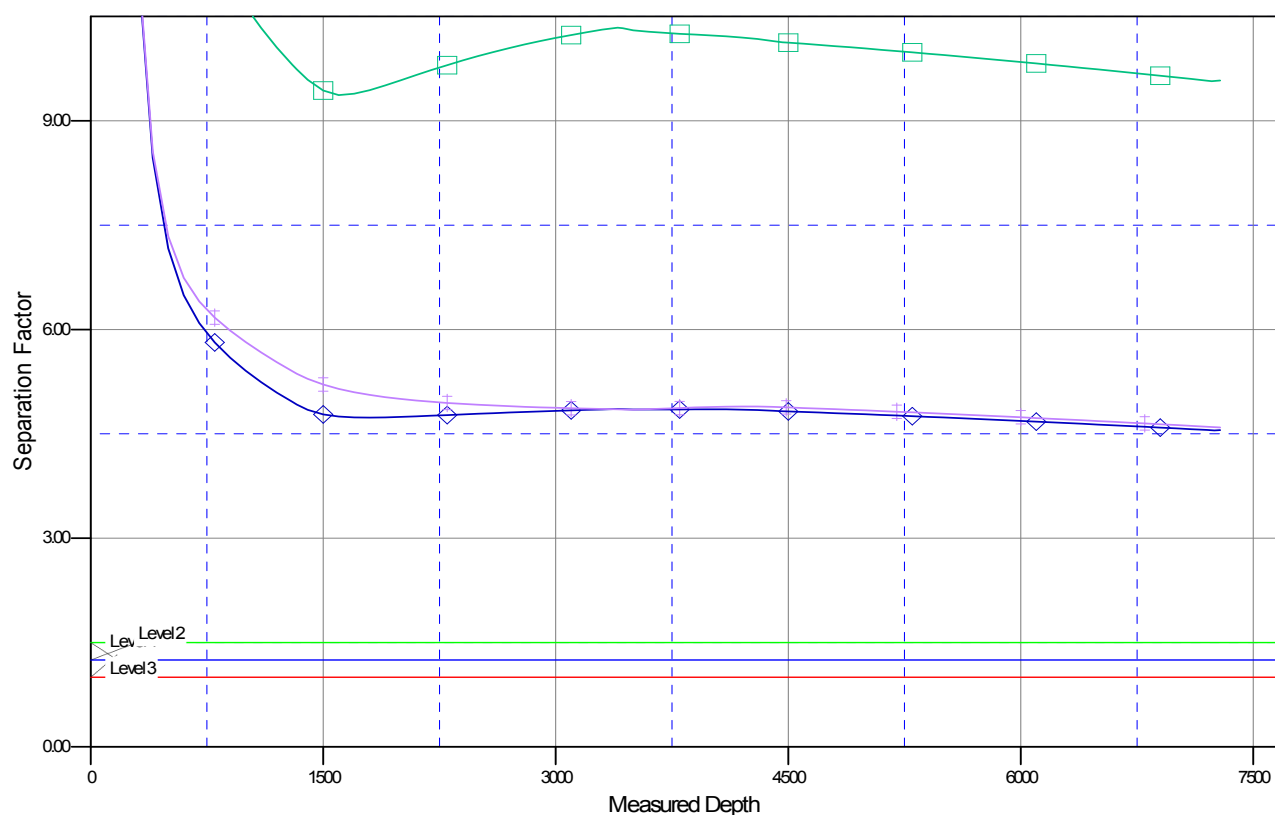
Central Meridian is 105° 30' 0.000 W °

Coordinates are relative to: Frei A23

Coordinate System is US State Plane 1983, Colorado Central Zone

Grid Convergence at Surface is: -1.33°

Separation Factor Plot



LEGEND

Frei A1, Wellbore #1, Design #1 V0	Frei A16, Wellbore #1, Actual V0	Frei A21, Wellbore #1, Actual V0
Frei A10, Wellbore #1, Design #1 V0	Frei A18, Wellbore #1, Design #1 V0	Frei A24, Wellbore #1, Design #1 V0
Frei A11, Wellbore #1, Actual V0	Frei A19, Wellbore #1, Design #1 V0	Frei A3, Wellbore #1, Design #1 V0
Frei A12, Wellbore #1, Design #1 V0	Frei A2, Wellbore #1, Design #1 V0	Frei A4, Wellbore #1, Design #1 V0
Frei A14, Wellbore #1, Design #1 V0	Frei A20, Wellbore #1, Design #1 V0	Frei A9, Wellbore #1, Actual V0