



# **Ursa Operating Company, LLC**

**Rockies Region  
Valley Farms O  
23A-10-06-92**

**Wellbore #1**

**Plan: Design #2**

## **Standard Planning Report**

**11 June, 2014**



<b>Database:</b>	MasterDB	<b>Local Co-ordinate Reference:</b>	Well 23A-10-06-92
<b>Company:</b>	Ursa Operating Company, LLC	<b>TVD Reference:</b>	23A-10-06-92 @ 5447.4usft (PAD Est KB)
<b>Project:</b>	Rockies Region	<b>MD Reference:</b>	23A-10-06-92 @ 5447.4usft (PAD Est KB)
<b>Site:</b>	Valley Farms O	<b>North Reference:</b>	True
<b>Well:</b>	23A-10-06-92	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	Design #2		

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

Site		Valley Farms O			
Site Position:		Northing:	1,627,349.92 usft	Latitude:	39° 32' 9.673 N
From:	Lat/Long	Easting:	2,391,526.29 usft	Longitude:	107° 39' 27.378 W
Position Uncertainty:	0.0 usft	Slot Radius:	13-3/16 "	Grid Convergence:	-1.36 °

Well	23A-10-06-92, SHL LAT: 39.536260481 LONG: -107.657612592					
Well Position	+N/-S	87.4 usft	Northing:	1,627,437.39 usft	Latitude:	39° 32' 10.538 N
	+E/-W	-2.2 usft	Easting:	2,391,526.21 usft	Longitude:	107° 39' 27.405 W
Position Uncertainty		0.0 usft	Wellhead Elevation:	5,447.4 usft	Ground Level:	5,432.0 usft

<b>Wellbore</b>	Wellbore #1				
<b>Magnetics</b>	<b>Model Name</b>	<b>Sample Date</b>	<b>Declination (°)</b>	<b>Dip Angle (°)</b>	<b>Field Strength (nT)</b>
	IGRF200510	10/8/2013	9.87	65.79	52,126

<b>Design</b>	Design #2			
<b>Audit Notes:</b>				
<b>Version:</b>	<b>Phase:</b>	PROTOTYPE	<b>Tie On Depth:</b>	0.0
<b>Vertical Section:</b>	<b>Depth From (TVD) (usft)</b>	<b>+N/-S (usft)</b>	<b>+E/-W (usft)</b>	<b>Direction (°)</b>
	0.0	0.0	0.0	21.46

<b>Plan Sections</b>										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	TFO (°)	Target
0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.00	0.00	
800.0	0.00	0.00	800.0	0.0	0.0	0.00	0.00	0.00	0.00	
1,665.3	25.96	21.46	1,636.0	179.3	70.5	3.00	3.00	0.00	21.46	
4,839.6	25.96	21.46	4,490.0	1,472.4	578.7	0.00	0.00	0.00	0.00	
5,704.8	0.00	0.00	5,326.0	1,651.8	649.2	3.00	-3.00	0.00	180.00	23A-10-06-92 TGT
7,974.8	0.00	0.00	7,596.0	1,651.8	649.2	0.00	0.00	0.00	0.00	

<b>Database:</b>	MasterDB	<b>Local Co-ordinate Reference:</b>	Well 23A-10-06-92
<b>Company:</b>	Ursa Operating Company, LLC	<b>TVD Reference:</b>	23A-10-06-92 @ 5447.4usft (PAD Est KB)
<b>Project:</b>	Rockies Region	<b>MD Reference:</b>	23A-10-06-92 @ 5447.4usft (PAD Est KB)
<b>Site:</b>	Valley Farms O	<b>North Reference:</b>	True
<b>Well:</b>	23A-10-06-92	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	Design #2		

Planned Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
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
400.0	0.00	0.00	400.0	0.0	0.0	0.0	0.00	0.00	0.00
500.0	0.00	0.00	500.0	0.0	0.0	0.0	0.00	0.00	0.00
600.0	0.00	0.00	600.0	0.0	0.0	0.0	0.00	0.00	0.00
700.0	0.00	0.00	700.0	0.0	0.0	0.0	0.00	0.00	0.00
800.0	0.00	0.00	800.0	0.0	0.0	0.0	0.00	0.00	0.00
<b>Start Build 3.00</b>									
900.0	3.00	21.46	900.0	2.4	1.0	2.6	3.00	3.00	0.00
1,000.0	6.00	21.46	999.6	9.7	3.8	10.5	3.00	3.00	0.00
<b>Surface Casing</b>									
1,100.0	9.00	21.46	1,098.8	21.9	8.6	23.5	3.00	3.00	0.00
1,200.0	12.00	21.46	1,197.1	38.8	15.3	41.7	3.00	3.00	0.00
1,300.0	15.00	21.46	1,294.3	60.6	23.8	65.1	3.00	3.00	0.00
1,400.0	18.00	21.46	1,390.2	87.0	34.2	93.5	3.00	3.00	0.00
1,500.0	21.00	21.46	1,484.4	118.1	46.4	126.9	3.00	3.00	0.00
1,600.0	24.00	21.46	1,576.8	153.7	60.4	165.1	3.00	3.00	0.00
1,665.3	25.96	21.46	1,636.0	179.3	70.5	192.7	3.00	3.00	0.00
<b>Start 3174.3 hold at 1665.3 MD</b>									
1,700.0	25.96	21.46	1,667.2	193.5	76.0	207.9	0.00	0.00	0.00
1,800.0	25.96	21.46	1,757.1	234.2	92.1	251.6	0.00	0.00	0.00
1,900.0	25.96	21.46	1,847.0	274.9	108.1	295.4	0.00	0.00	0.00
2,000.0	25.96	21.46	1,936.9	315.7	124.1	339.2	0.00	0.00	0.00
2,100.0	25.96	21.46	2,026.8	356.4	140.1	383.0	0.00	0.00	0.00
2,200.0	25.96	21.46	2,116.8	397.2	156.1	426.7	0.00	0.00	0.00
2,300.0	25.96	21.46	2,206.7	437.9	172.1	470.5	0.00	0.00	0.00
2,400.0	25.96	21.46	2,296.6	478.6	188.1	514.3	0.00	0.00	0.00
2,500.0	25.96	21.46	2,386.5	519.4	204.1	558.0	0.00	0.00	0.00
2,600.0	25.96	21.46	2,476.4	560.1	220.1	601.8	0.00	0.00	0.00
2,700.0	25.96	21.46	2,566.3	600.8	236.2	645.6	0.00	0.00	0.00
2,800.0	25.96	21.46	2,656.2	641.6	252.2	689.4	0.00	0.00	0.00
2,900.0	25.96	21.46	2,746.1	682.3	268.2	733.1	0.00	0.00	0.00
3,000.0	25.96	21.46	2,836.0	723.1	284.2	776.9	0.00	0.00	0.00
3,100.0	25.96	21.46	2,926.0	763.8	300.2	820.7	0.00	0.00	0.00
3,200.0	25.96	21.46	3,015.9	804.5	316.2	864.4	0.00	0.00	0.00
3,300.0	25.96	21.46	3,105.8	845.3	332.2	908.2	0.00	0.00	0.00
3,400.0	25.96	21.46	3,195.7	886.0	348.2	952.0	0.00	0.00	0.00
3,500.0	25.96	21.46	3,285.6	926.7	364.3	995.8	0.00	0.00	0.00
3,600.0	25.96	21.46	3,375.5	967.5	380.3	1,039.5	0.00	0.00	0.00
3,700.0	25.96	21.46	3,465.4	1,008.2	396.3	1,083.3	0.00	0.00	0.00
3,800.0	25.96	21.46	3,555.3	1,049.0	412.3	1,127.1	0.00	0.00	0.00
3,900.0	25.96	21.46	3,645.3	1,089.7	428.3	1,170.8	0.00	0.00	0.00
3,995.8	25.96	21.46	3,731.4	1,128.7	443.6	1,212.8	0.00	0.00	0.00
<b>Williams Fork</b>									
4,000.0	25.96	21.46	3,735.2	1,130.4	444.3	1,214.6	0.00	0.00	0.00
4,100.0	25.96	21.46	3,825.1	1,171.2	460.3	1,258.4	0.00	0.00	0.00
4,200.0	25.96	21.46	3,915.0	1,211.9	476.3	1,302.2	0.00	0.00	0.00
4,300.0	25.96	21.46	4,004.9	1,252.6	492.3	1,345.9	0.00	0.00	0.00
4,400.0	25.96	21.46	4,094.8	1,293.4	508.4	1,389.7	0.00	0.00	0.00
4,500.0	25.96	21.46	4,184.7	1,334.1	524.4	1,433.5	0.00	0.00	0.00
4,600.0	25.96	21.46	4,274.6	1,374.8	540.4	1,477.2	0.00	0.00	0.00
4,700.0	25.96	21.46	4,364.5	1,415.6	556.4	1,521.0	0.00	0.00	0.00

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<b>Project:</b>	Rockies Region	<b>MD Reference:</b>	23A-10-06-92 @ 5447.4usft (PAD Est KB)
<b>Site:</b>	Valley Farms O	<b>North Reference:</b>	True
<b>Well:</b>	23A-10-06-92	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	Design #2		

Planned Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
4,800.0	25.96	21.46	4,454.5	1,456.3	572.4	1,564.8	0.00	0.00	0.00
4,839.6	25.96	21.46	4,490.0	1,472.4	578.7	1,582.1	0.00	0.00	0.00
<b>Start Drop -3.00</b>									
4,900.0	24.14	21.46	4,544.8	1,496.3	588.1	1,607.7	3.00	-3.00	0.00
5,000.0	21.14	21.46	4,637.1	1,532.1	602.2	1,646.2	3.00	-3.00	0.00
5,100.0	18.14	21.46	4,731.2	1,563.4	614.5	1,679.8	3.00	-3.00	0.00
5,200.0	15.14	21.46	4,827.0	1,590.0	625.0	1,708.4	3.00	-3.00	0.00
5,300.0	12.14	21.46	4,924.2	1,612.0	633.6	1,732.0	3.00	-3.00	0.00
5,400.0	9.14	21.46	5,022.5	1,629.2	640.3	1,750.5	3.00	-3.00	0.00
5,500.0	6.14	21.46	5,121.6	1,641.5	645.2	1,763.8	3.00	-3.00	0.00
5,600.0	3.14	21.46	5,221.2	1,649.1	648.2	1,771.9	3.00	-3.00	0.00
5,704.8	0.00	21.46	5,326.0	1,651.8	649.2	1,774.8	3.00	-3.00	0.00
<b>Start 2270.0 hold at 5704.8 MD - Back to Vertical - 23A-10-06-92 TGT</b>									
5,705.2	0.00	0.00	5,326.4	1,651.8	649.2	1,774.8	0.08	-0.08	0.00
<b>Top of Gas</b>									
5,800.0	0.00	0.00	5,421.2	1,651.8	649.2	1,774.8	0.00	0.00	0.00
5,900.0	0.00	0.00	5,521.2	1,651.8	649.2	1,774.8	0.00	0.00	0.00
6,000.0	0.00	0.00	5,621.2	1,651.8	649.2	1,774.8	0.00	0.00	0.00
6,100.0	0.00	0.00	5,721.2	1,651.8	649.2	1,774.8	0.00	0.00	0.00
6,200.0	0.00	0.00	5,821.2	1,651.8	649.2	1,774.8	0.00	0.00	0.00
6,300.0	0.00	0.00	5,921.2	1,651.8	649.2	1,774.8	0.00	0.00	0.00
6,400.0	0.00	0.00	6,021.2	1,651.8	649.2	1,774.8	0.00	0.00	0.00
6,500.0	0.00	0.00	6,121.2	1,651.8	649.2	1,774.8	0.00	0.00	0.00
6,600.0	0.00	0.00	6,221.2	1,651.8	649.2	1,774.8	0.00	0.00	0.00
6,677.2	0.00	0.00	6,298.4	1,651.8	649.2	1,774.8	0.00	0.00	0.00
<b>Cameo</b>									
6,700.0	0.00	0.00	6,321.2	1,651.8	649.2	1,774.8	0.00	0.00	0.00
6,800.0	0.00	0.00	6,421.2	1,651.8	649.2	1,774.8	0.00	0.00	0.00
6,900.0	0.00	0.00	6,521.2	1,651.8	649.2	1,774.8	0.00	0.00	0.00
7,000.0	0.00	0.00	6,621.2	1,651.8	649.2	1,774.8	0.00	0.00	0.00
7,100.0	0.00	0.00	6,721.2	1,651.8	649.2	1,774.8	0.00	0.00	0.00
7,200.0	0.00	0.00	6,821.2	1,651.8	649.2	1,774.8	0.00	0.00	0.00
7,300.0	0.00	0.00	6,921.2	1,651.8	649.2	1,774.8	0.00	0.00	0.00
7,400.0	0.00	0.00	7,021.2	1,651.8	649.2	1,774.8	0.00	0.00	0.00
7,500.0	0.00	0.00	7,121.2	1,651.8	649.2	1,774.8	0.00	0.00	0.00
7,600.0	0.00	0.00	7,221.2	1,651.8	649.2	1,774.8	0.00	0.00	0.00
7,675.2	0.00	0.00	7,296.4	1,651.8	649.2	1,774.8	0.00	0.00	0.00
<b>Rollins</b>									
7,700.0	0.00	0.00	7,321.2	1,651.8	649.2	1,774.8	0.00	0.00	0.00
7,800.0	0.00	0.00	7,421.2	1,651.8	649.2	1,774.8	0.00	0.00	0.00
7,900.0	0.00	0.00	7,521.2	1,651.8	649.2	1,774.8	0.00	0.00	0.00
7,974.8	0.00	0.00	7,596.0	1,651.8	649.2	1,774.8	0.00	0.00	0.00
<b>TD at 7974.8</b>									

<b>Database:</b>	MasterDB	<b>Local Co-ordinate Reference:</b>	Well 23A-10-06-92
<b>Company:</b>	Ursa Operating Company, LLC	<b>TVD Reference:</b>	23A-10-06-92 @ 5447.4usft (PAD Est KB)
<b>Project:</b>	Rockies Region	<b>MD Reference:</b>	23A-10-06-92 @ 5447.4usft (PAD Est KB)
<b>Site:</b>	Valley Farms O	<b>North Reference:</b>	True
<b>Well:</b>	23A-10-06-92	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	Design #2		

Design Targets									
Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude
23A-10-06-92 TGT	0.00	0.00	5,326.0	1,651.8	649.2	1,629,073.26	2,392,214.47	39° 32' 26.863 N	107° 39' 19.118 W
- hit/miss target									
- Shape									
- plan hits target center									
- Rectangle (sides W100.0 H40.0 D2,270.0)									

Formations						
Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (°)	
3,995.8	3,731.4	Williams Fork		0.00		
5,705.2	5,326.4	Top of Gas		0.00		
6,677.2	6,298.4	Cameo		0.00		
7,675.2	7,296.4	Rollins		0.00		

Plan Annotations				
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
800.0	800.0	0.0	0.0	Start Build 3.00
1,000.0	999.6	9.7	3.8	Surface Casing
1,665.3	1,636.0	179.3	70.5	Start 3174.3 hold at 1665.3 MD
4,839.6	4,490.0	1,472.4	578.7	Start Drop -3.00
5,704.8	5,326.0	1,651.8	649.2	Start 2270.0 hold at 5704.8 MD
5,704.8	5,326.0	1,651.8	649.2	Back to Vertical
7,974.8	7,596.0	1,651.8	649.2	TD at 7974.8



Well Name: 23A-10-06-92  
Surface Location: Valley Farms O  
North American Datum 1983, US State Plane 1983, Colorado Central Zone  
Ground Elevation: 5432.0  
+N/-S +E/-W Northing Easting Latitude Longitude Slot  
0.0 0.0 1627437.39 2391526.20 39° 32' 10.538 N 107° 39' 27.405 W  
PAD Est KB 23A-10-06-92 @ 5447.4usft (PAD Est KB)



Azimuths to True North  
Magnetic North: 9.87°  
Magnetic Field  
Strength: 52126.2snT  
Dip Angle: 65.79°  
Date: 10/8/2013  
Model: IGRF200510

Valley Farms O  
23A-10-06-92  
Design #2  
17:13, June 11 2014

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

Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Shape
23A-10-06-92 TGT	5326.0	1651.8	649.2	1629073.27	2392214.47	39° 32' 26.863 N	107° 39' 19.118 W	Rectangle (Sides: L40.0 W100.0)

#### SECTION DETAILS

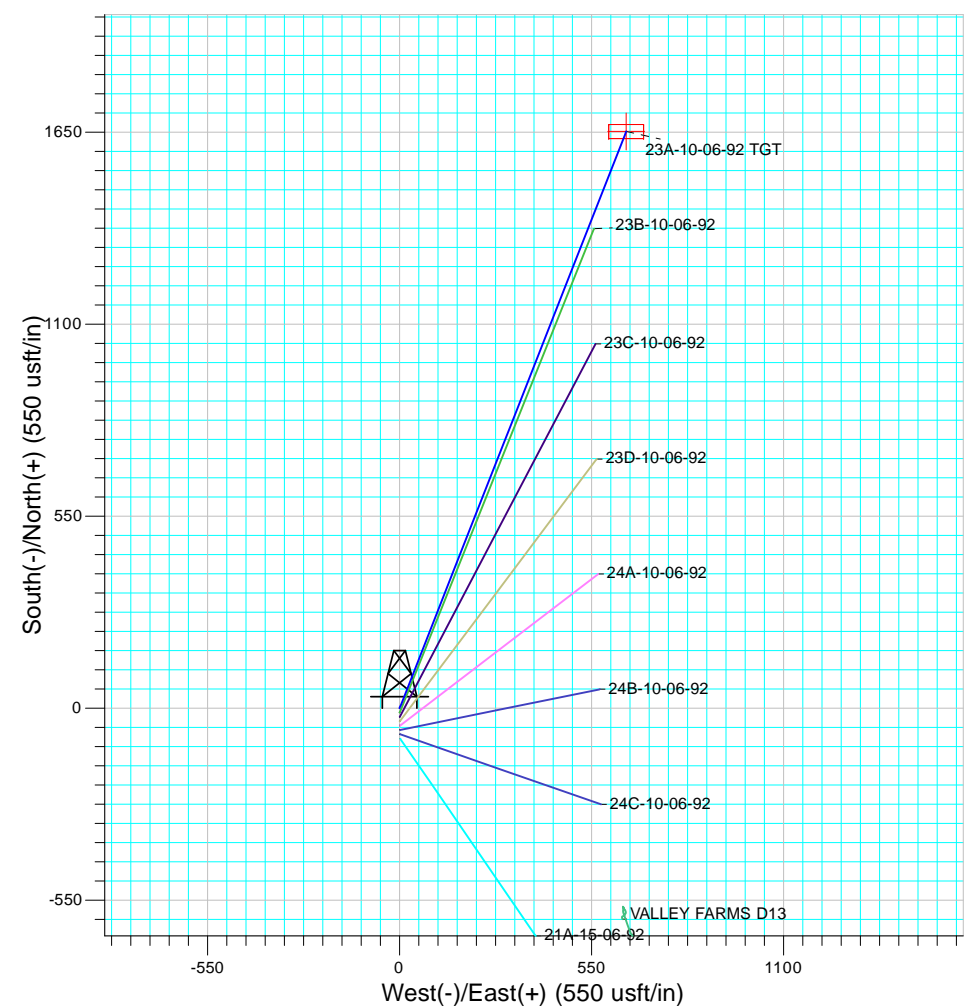
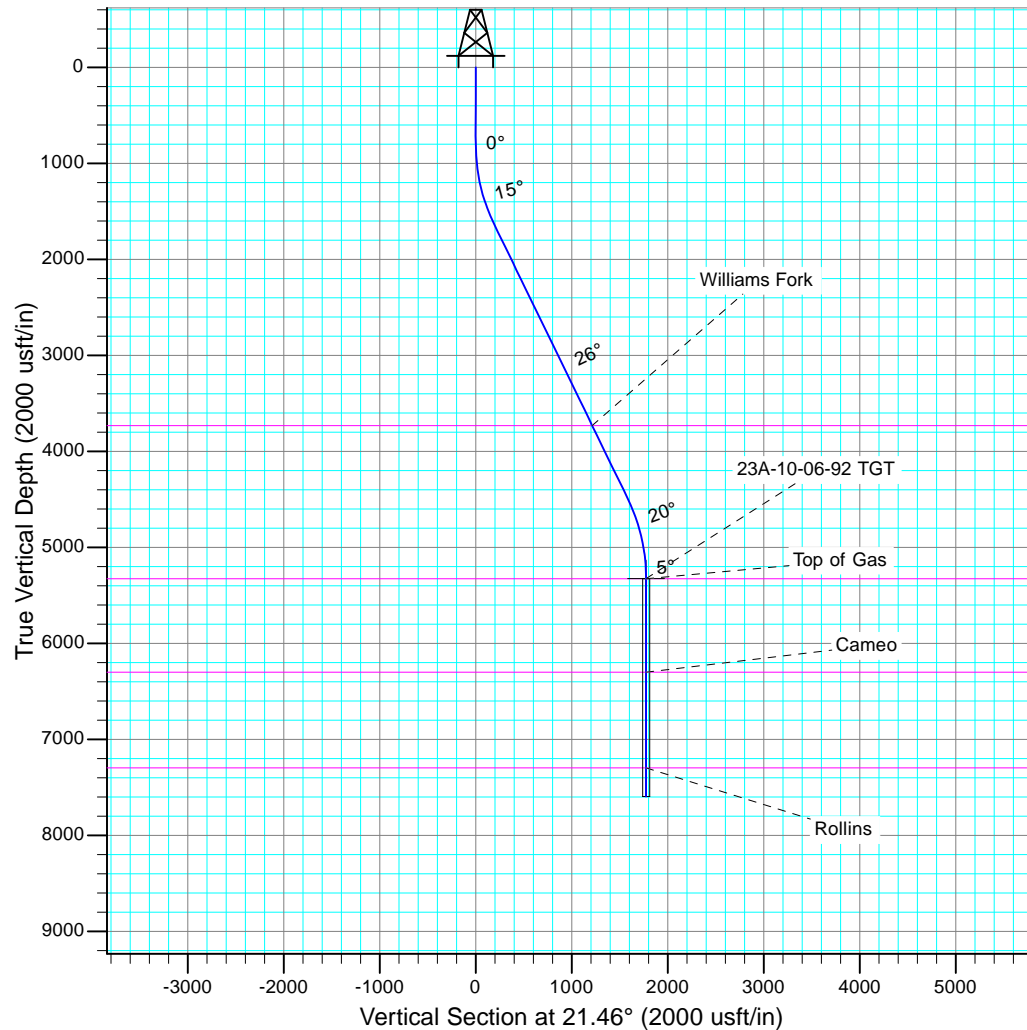
Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSec	Target
1	0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.0	
2	800.0	0.00	0.00	800.0	0.0	0.0	0.00	0.00	0.0	
3	1665.3	25.96	21.46	1636.0	179.3	70.5	3.00	21.46	192.7	
4	4839.6	25.96	21.46	4490.0	1472.4	578.7	0.00	0.00	1582.1	
5	5704.8	0.00	0.00	5326.0	1651.8	649.2	3.00	180.00	1774.8	23A-10-06-92 TGT
6	7974.8	0.00	0.00	7596.0	1651.8	649.2	0.00	0.00	1774.8	

#### ANNOTATIONS

TVD	MD	Annotation
800.0	800.0	Start Build 3.00
999.6	1000.0	Surface Casing
1636.0	1665.3	Start 3174.3 hold at 1665.3 MD
4490.0	4839.6	Start Drop -3.00
5326.0	5704.8	Start 2270.0 hold at 5704.8 MD
5326.0	5704.8	Back to Vertical
7596.0	7974.8	TD at 7974.8

#### FORMATION TOP DETAILS

TVDPath	MDPath	Formation	DipAngle	DipDir
3731.4	3995.8	Williams Fork	0.00	
5326.4	5705.2	Top of Gas	0.00	
6298.4	6677.2	Cameo	0.00	
7296.4	7675.2	Rollins	0.00	





# **Ursa Operating Company, LLC**

**Rockies Region**

**Valley Farms O**

**23A-10-06-92**

**Wellbore #1**

**Design #2**

## **Anticollision Report**

**11 June, 2014**



<b>Company:</b>	Ursa Operating Company, LLC	<b>Local Co-ordinate Reference:</b>	Well 23A-10-06-92
<b>Project:</b>	Rockies Region	<b>TVD Reference:</b>	23A-10-06-92 @ 5447.4usft (PAD Est KB)
<b>Reference Site:</b>	Valley Farms O	<b>MD Reference:</b>	23A-10-06-92 @ 5447.4usft (PAD Est KB)
<b>Site Error:</b>	0.0 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	23A-10-06-92	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Wellbore #1	<b>Database:</b>	MasterDB
<b>Reference Design:</b>	Design #2	<b>Offset TVD Reference:</b>	Offset Datum

Reference	Design #2		
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 10,000.0 usft	Error Surface:	Elliptical Conic
Warning Levels Evaluated at:	2.00 Sigma	Casing Method:	Not applied

Survey Tool Program		Date	6/11/2014		
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description	
0.0	8,008.1	Design #2 (Wellbore #1)	MWD	MWD - Standard	

Summary						
Site Name	Reference Measured Depth (usft)	Offset Measured Depth (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Separation Factor	Warning
Offset Well - Wellbore - Design						
Valley Farms O						
21A-15-06-92 - Wellbore #1 - Design #1	800.0	800.0	87.5	84.1	26.215	CC, ES
21A-15-06-92 - Wellbore #1 - Design #1	1,000.0	999.6	97.2	93.0	22.963	SF
23B-10-06-92 - Wellbore #1 - Design #1	800.0	800.0	12.5	9.2	3.745	CC, ES, SF
23C-10-06-92 - Wellbore #1 - Design #1	800.0	800.0	25.0	21.7	7.490	CC, ES
23C-10-06-92 - Wellbore #1 - Design #1	900.0	900.0	27.4	23.6	7.243	SF
23D-10-06-92 - Wellbore #1 - Design #1	800.0	800.0	37.5	34.2	11.235	CC, ES
23D-10-06-92 - Wellbore #1 - Design #1	900.0	900.0	39.9	36.1	10.542	SF
24A-10-06-92 - Wellbore #1 - Design #1	800.0	800.0	50.0	46.6	14.980	CC, ES
24A-10-06-92 - Wellbore #1 - Design #1	900.0	900.0	52.4	48.6	13.841	SF
24B-10-06-92 - Wellbore #1 - Design #1	800.0	800.0	62.5	59.1	18.725	CC, ES
24B-10-06-92 - Wellbore #1 - Design #1	1,000.0	999.6	72.2	68.0	17.066	SF
24C-10-06-92 - Wellbore #1 - Design #1	800.0	800.0	75.0	71.6	22.470	CC, ES
24C-10-06-92 - Wellbore #1 - Design #1	1,000.0	999.6	84.7	80.5	20.014	SF
VALLEY FARMS D13 - Wellbore #1 - Actual	3,003.1	3,690.9	1,796.1	1,772.4	76.056	CC, ES
VALLEY FARMS D13 - Wellbore #1 - Actual	7,974.8	7,829.3	2,244.5	2,198.8	49.042	SF
VALLEY FARMS D3 - Wellbore #1 - Actual	1,366.1	1,767.7	2,189.6	2,182.1	290.692	CC, ES
VALLEY FARMS D3 - Wellbore #1 - Actual	7,974.8	7,705.8	3,100.2	3,056.5	71.010	SF

<b>Offset Design</b> Valley Farms O - 21A-15-06-92 - Wellbore #1 - Design #1												<b>Offset Site Error:</b>	0.0 usft
<b>Survey Program:</b> 0-MWD												<b>Offset Well Error:</b>	0.0 usft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Distance		Minimum Separation (usft)	Separation Factor	Warning		
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		Between Centres (usft)	Between Ellipses (usft)					
0.0	0.0	0.0	0.0	0.0	0.0	178.59	-87.4	2.2	87.5				
100.0	100.0	100.0	100.0	0.1	0.1	178.59	-87.4	2.2	87.5	87.3	0.19	460.029	
200.0	200.0	200.0	200.0	0.3	0.3	178.59	-87.4	2.2	87.5	86.8	0.64	136.748	
300.0	300.0	300.0	300.0	0.5	0.5	178.59	-87.4	2.2	87.5	86.4	1.09	80.311	
400.0	400.0	400.0	400.0	0.8	0.8	178.59	-87.4	2.2	87.5	85.9	1.54	56.849	
500.0	500.0	500.0	500.0	1.0	1.0	178.59	-87.4	2.2	87.5	85.5	1.99	43.996	
600.0	600.0	600.0	600.0	1.2	1.2	178.59	-87.4	2.2	87.5	85.0	2.44	35.883	
700.0	700.0	700.0	700.0	1.4	1.4	178.59	-87.4	2.2	87.5	84.6	2.89	30.296	
800.0	800.0	800.0	800.0	1.7	1.7	178.59	-87.4	2.2	87.5	84.1	3.34	26.215	CC, ES
900.0	900.0	900.0	900.0	1.9	1.9	157.75	-87.4	2.2	89.9	86.1	3.79	23.742	
1,000.0	999.6	999.6	999.6	2.1	2.1	159.42	-87.4	2.2	97.2	93.0	4.23	22.963	SF

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



<b>Company:</b>	Ursa Operating Company, LLC	<b>Local Co-ordinate Reference:</b>	Well 23A-10-06-92
<b>Project:</b>	Rockies Region	<b>TVD Reference:</b>	23A-10-06-92 @ 5447.4usft (PAD Est KB)
<b>Reference Site:</b>	Valley Farms O	<b>MD Reference:</b>	23A-10-06-92 @ 5447.4usft (PAD Est KB)
<b>Site Error:</b>	0.0 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	23A-10-06-92	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Wellbore #1	<b>Database:</b>	MasterDB
<b>Reference Design:</b>	Design #2	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design Valley Farms O - 21A-15-06-92 - Wellbore #1 - Design #1													Offset Site Error:	0.0 usft
Survey Program: 0-MWD													Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis		Distance								Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor		
1,100.0	1,098.8	1,098.8	1,098.8	2.4	2.3	161.71	-87.4	2.2	109.5	104.8	4.67	23.431		
1,200.0	1,197.1	1,192.3	1,192.3	2.7	2.5	163.35	-89.3	3.4	128.8	123.7	5.08	25.326		
1,300.0	1,294.3	1,283.2	1,282.9	3.0	2.7	163.85	-94.7	7.1	156.6	151.1	5.49	28.530		
1,400.0	1,390.2	1,370.4	1,369.5	3.4	2.9	163.60	-103.2	13.0	192.5	186.6	5.90	32.617		
1,500.0	1,484.4	1,453.3	1,451.3	3.9	3.1	162.95	-114.3	20.6	236.1	229.8	6.33	37.294		
1,600.0	1,576.8	1,531.2	1,527.6	4.5	3.3	162.08	-127.4	29.6	287.0	280.2	6.78	42.329		
1,665.3	1,636.0	1,579.2	1,574.2	5.0	3.4	161.44	-136.8	36.0	323.9	316.8	7.09	45.714		
1,700.0	1,667.2	1,603.9	1,598.1	5.2	3.5	161.32	-141.9	39.6	344.4	337.1	7.27	47.340		
1,800.0	1,757.1	1,682.3	1,673.6	6.0	3.8	160.89	-159.2	51.4	404.2	396.3	7.85	51.492		
1,900.0	1,847.0	1,762.4	1,750.8	6.7	4.2	160.56	-176.8	63.5	464.0	455.6	8.44	54.989		
2,000.0	1,936.9	1,842.5	1,828.0	7.5	4.5	160.30	-194.4	75.6	523.9	514.8	9.05	57.906		
2,100.0	2,026.8	1,922.6	1,905.2	8.3	4.9	160.10	-212.1	87.7	583.7	574.0	9.67	60.343		
2,200.0	2,116.8	2,002.7	1,982.4	9.1	5.3	159.93	-229.7	99.8	643.6	633.2	10.32	62.386		
2,300.0	2,206.7	2,082.8	2,059.6	9.9	5.7	159.79	-247.3	111.9	703.4	692.4	10.97	64.121		
2,400.0	2,296.6	2,162.9	2,136.8	10.8	6.1	159.68	-265.0	124.0	763.3	751.6	11.63	65.610		
2,500.0	2,386.5	2,243.0	2,213.9	11.6	6.5	159.58	-282.6	136.1	823.1	810.8	12.31	66.894		
2,600.0	2,476.4	2,323.1	2,291.1	12.4	6.9	159.49	-300.2	148.2	883.0	870.0	12.98	68.009		
2,700.0	2,566.3	2,403.2	2,368.3	13.2	7.3	159.42	-317.9	160.3	942.9	929.2	13.67	68.981		
2,800.0	2,656.2	2,483.3	2,445.5	14.1	7.7	159.35	-335.5	172.4	1,002.7	988.4	14.36	69.831		
2,900.0	2,746.1	2,563.4	2,522.7	14.9	8.2	159.30	-353.1	184.5	1,062.6	1,047.5	15.05	70.581		
3,000.0	2,836.0	2,643.5	2,599.9	15.7	8.6	159.24	-370.8	196.6	1,122.4	1,106.7	15.75	71.247		
3,100.0	2,926.0	2,723.6	2,677.1	16.6	9.0	159.20	-388.4	208.7	1,182.3	1,165.9	16.46	71.841		
3,200.0	3,015.9	2,803.7	2,754.3	17.4	9.5	159.15	-406.0	220.8	1,242.2	1,225.0	17.16	72.373		
3,300.0	3,105.8	2,883.8	2,831.5	18.2	9.9	159.12	-423.7	232.9	1,302.0	1,284.2	17.87	72.850		
3,400.0	3,195.7	2,963.9	2,908.7	19.1	10.3	159.08	-441.3	245.0	1,361.9	1,343.3	18.58	73.280		
3,500.0	3,285.6	3,044.0	2,985.8	19.9	10.8	159.05	-458.9	257.2	1,421.8	1,402.5	19.30	73.671		
3,600.0	3,375.5	3,124.0	3,063.0	20.7	11.2	159.02	-476.6	269.3	1,481.6	1,461.6	20.02	74.025		
3,700.0	3,465.4	3,204.1	3,140.2	21.6	11.7	158.99	-494.2	281.4	1,541.5	1,520.8	20.73	74.349		
3,800.0	3,555.3	3,284.2	3,217.4	22.4	12.1	158.97	-511.8	293.5	1,601.4	1,579.9	21.45	74.644		
3,900.0	3,645.3	3,364.3	3,294.6	23.2	12.6	158.94	-529.5	305.6	1,661.2	1,639.1	22.17	74.915		
4,000.0	3,735.2	3,444.4	3,371.8	24.1	13.0	158.92	-547.1	317.7	1,721.1	1,698.2	22.90	75.164		
4,100.0	3,825.1	3,524.5	3,449.0	24.9	13.4	158.90	-564.7	329.8	1,781.0	1,757.3	23.62	75.394		
4,200.0	3,915.0	3,604.6	3,526.2	25.7	13.9	158.88	-582.4	341.9	1,840.8	1,816.5	24.35	75.607		
4,300.0	4,004.9	3,684.7	3,603.4	26.6	14.3	158.87	-600.0	354.0	1,900.7	1,875.6	25.07	75.803		
4,400.0	4,094.8	3,764.8	3,680.6	27.4	14.8	158.85	-617.6	366.1	1,960.6	1,934.8	25.80	75.985		
4,500.0	4,184.7	3,844.9	3,757.7	28.3	15.2	158.83	-635.3	378.2	2,020.4	1,993.9	26.53	76.155		
4,600.0	4,274.6	3,925.0	3,834.9	29.1	15.7	158.82	-652.9	390.3	2,080.3	2,053.0	27.26	76.312		
4,700.0	4,364.5	4,005.1	3,912.1	29.9	16.1	158.80	-670.5	402.4	2,140.2	2,112.2	27.99	76.460		
4,800.0	4,454.5	4,085.2	3,989.3	30.8	16.6	158.79	-688.2	414.5	2,200.0	2,171.3	28.72	76.597		
4,839.6	4,490.0	4,116.9	4,019.8	31.1	16.8	158.79	-695.2	419.3	2,223.7	2,194.7	29.01	76.649		
4,900.0	4,544.8	4,165.8	4,067.0	31.6	17.0	159.24	-705.9	426.7	2,259.2	2,229.6	29.58	76.382		
5,000.0	4,637.1	4,249.0	4,147.2	32.1	17.5	159.86	-724.2	439.3	2,314.6	2,284.2	30.45	76.014		
5,100.0	4,731.2	4,334.7	4,229.8	32.7	18.0	160.35	-743.1	452.2	2,365.9	2,334.7	31.28	75.644		
5,200.0	4,827.0	4,422.8	4,314.6	33.1	18.5	160.72	-762.5	465.5	2,413.0	2,380.9	32.05	75.291		
5,300.0	4,924.2	4,512.9	4,401.4	33.5	19.0	160.98	-782.3	479.1	2,455.6	2,422.8	32.75	74.969		
5,400.0	5,022.5	4,604.8	4,490.0	33.8	19.5	161.14	-802.6	493.0	2,493.7	2,460.3	33.39	74.688		
5,500.0	5,121.6	4,698.3	4,580.2	34.1	20.0	161.21	-823.2	507.2	2,527.2	2,493.3	33.94	74.454		
5,600.0	5,221.2	4,793.2	4,671.5	34.3	20.6	161.20	-844.0	521.5	2,556.1	2,521.7	34.42	74.273		
5,704.8	5,326.0	4,893.7	4,768.4	34.4	21.1	-177.44	-866.2	536.7	2,581.4	2,546.6	34.82	74.143		
5,800.0	5,421.2	5,554.7	5,421.2	34.4	22.9	-178.56	-935.6	584.3	2,588.2	2,551.6	36.57	70.778		
5,900.0	5,521.2	5,654.7	5,521.2	34.5	23.0	-178.56	-935.6	584.3	2,588.2	2,551.3	36.83	70.278		
6,000.0	5,621.2	5,754.7	5,621.2	34.6	23.1	-178.56	-935.6	584.3	2,588.2	2,551.1	37.09	69.778		

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

<b>Company:</b>	Ursa Operating Company, LLC	<b>Local Co-ordinate Reference:</b>	Well 23A-10-06-92
<b>Project:</b>	Rockies Region	<b>TVD Reference:</b>	23A-10-06-92 @ 5447.4usft (PAD Est KB)
<b>Reference Site:</b>	Valley Farms O	<b>MD Reference:</b>	23A-10-06-92 @ 5447.4usft (PAD Est KB)
<b>Site Error:</b>	0.0 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	23A-10-06-92	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Wellbore #1	<b>Database:</b>	MasterDB
<b>Reference Design:</b>	Design #2	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design Valley Farms O - 21A-15-06-92 - Wellbore #1 - Design #1													Offset Site Error:	0.0 usft
Survey Program: 0-MWD													Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor		
6,100.0	5,721.2	5,854.7	5,721.2	34.7	23.2	-178.56	-935.6	584.3	2,588.2	2,550.8	37.36	69.279		
6,200.0	5,821.2	5,954.7	5,821.2	34.7	23.3	-178.56	-935.6	584.3	2,588.2	2,550.5	37.63	68.781		
6,300.0	5,921.2	6,054.7	5,921.2	34.8	23.4	-178.56	-935.6	584.3	2,588.2	2,550.2	37.90	68.283		
6,400.0	6,021.2	6,154.7	6,021.2	34.9	23.5	-178.56	-935.6	584.3	2,588.2	2,550.0	38.18	67.787		
6,500.0	6,121.2	6,254.7	6,121.2	35.0	23.6	-178.56	-935.6	584.3	2,588.2	2,549.7	38.46	67.292		
6,600.0	6,221.2	6,354.7	6,221.2	35.0	23.7	-178.56	-935.6	584.3	2,588.2	2,549.4	38.75	66.799		
6,700.0	6,321.2	6,454.7	6,321.2	35.1	23.8	-178.56	-935.6	584.3	2,588.2	2,549.1	39.03	66.308		
6,800.0	6,421.2	6,554.7	6,421.2	35.2	23.9	-178.56	-935.6	584.3	2,588.2	2,548.8	39.32	65.819		
6,900.0	6,521.2	6,654.7	6,521.2	35.3	24.0	-178.56	-935.6	584.3	2,588.2	2,548.5	39.62	65.332		
7,000.0	6,621.2	6,754.7	6,621.2	35.4	24.2	-178.56	-935.6	584.3	2,588.2	2,548.2	39.91	64.848		
7,100.0	6,721.2	6,854.7	6,721.2	35.5	24.3	-178.56	-935.6	584.3	2,588.2	2,547.9	40.21	64.366		
7,200.0	6,821.2	6,954.7	6,821.2	35.5	24.4	-178.56	-935.6	584.3	2,588.2	2,547.6	40.51	63.887		
7,300.0	6,921.2	7,054.7	6,921.2	35.6	24.5	-178.56	-935.6	584.3	2,588.2	2,547.3	40.82	63.410		
7,400.0	7,021.2	7,154.7	7,021.2	35.7	24.6	-178.56	-935.6	584.3	2,588.2	2,547.0	41.12	62.937		
7,500.0	7,121.2	7,254.7	7,121.2	35.8	24.8	-178.56	-935.6	584.3	2,588.2	2,546.7	41.43	62.467		
7,600.0	7,221.2	7,354.7	7,221.2	35.9	24.9	-178.56	-935.6	584.3	2,588.2	2,546.4	41.74	62.000		
7,700.0	7,321.2	7,454.7	7,321.2	36.0	25.0	-178.56	-935.6	584.3	2,588.2	2,546.1	42.06	61.536		
7,800.0	7,421.2	7,554.7	7,421.2	36.1	25.1	-178.56	-935.6	584.3	2,588.2	2,545.8	42.38	61.076		
7,900.0	7,521.2	7,654.7	7,521.2	36.2	25.3	-178.56	-935.6	584.3	2,588.2	2,545.5	42.70	60.619		
7,974.8	7,596.0	7,729.5	7,596.0	36.3	25.4	-178.56	-935.6	584.3	2,588.2	2,545.2	42.94	60.279		

<b>Company:</b>	Ursa Operating Company, LLC	<b>Local Co-ordinate Reference:</b>	Well 23A-10-06-92
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<b>Reference Site:</b>	Valley Farms O	<b>MD Reference:</b>	23A-10-06-92 @ 5447.4usft (PAD Est KB)
<b>Site Error:</b>	0.0 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	23A-10-06-92	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Wellbore #1	<b>Database:</b>	MasterDB
<b>Reference Design:</b>	Design #2	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design Valley Farms O - 23B-10-06-92 - Wellbore #1 - Design #1													Offset Site Error: 0.0 usft
Survey Program: 0-MWD													Offset Well Error: 0.0 usft
Reference		Offset		Semi Major Axis		Distance						Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
0.0	0.0	0.0	0.0	0.0	0.0	178.59	-12.5	0.3	12.5				
100.0	100.0	100.0	100.0	0.1	0.1	178.59	-12.5	0.3	12.5	12.3	0.19	65.719	
200.0	200.0	200.0	200.0	0.3	0.3	178.59	-12.5	0.3	12.5	11.9	0.64	19.536	
300.0	300.0	300.0	300.0	0.5	0.5	178.59	-12.5	0.3	12.5	11.4	1.09	11.473	
400.0	400.0	400.0	400.0	0.8	0.8	178.59	-12.5	0.3	12.5	11.0	1.54	8.121	
500.0	500.0	500.0	500.0	1.0	1.0	178.59	-12.5	0.3	12.5	10.5	1.99	6.285	
600.0	600.0	600.0	600.0	1.2	1.2	178.59	-12.5	0.3	12.5	10.1	2.44	5.126	
700.0	700.0	700.0	700.0	1.4	1.4	178.59	-12.5	0.3	12.5	9.6	2.89	4.328	
800.0	800.0	800.0	800.0	1.7	1.7	178.59	-12.5	0.3	12.5	9.2	3.34	3.745 CC, ES, SF	
900.0	900.0	900.0	900.0	1.9	1.9	161.01	-12.5	0.3	14.9	11.2	3.79	3.947	
1,000.0	999.6	999.6	999.6	2.1	2.1	167.47	-12.5	0.3	22.5	18.3	4.23	5.318	
1,100.0	1,098.8	1,098.8	1,098.8	2.4	2.3	172.01	-12.5	0.3	35.4	30.7	4.67	7.572	
1,200.0	1,197.1	1,199.8	1,199.7	2.7	2.6	174.44	-10.1	1.3	50.9	45.9	5.10	9.998	
1,300.0	1,294.3	1,301.7	1,301.3	3.0	2.8	175.69	-2.6	4.3	66.5	61.0	5.51	12.074	
1,400.0	1,390.2	1,404.4	1,403.2	3.4	3.0	176.43	10.0	9.3	82.0	76.0	5.92	13.841	
1,500.0	1,484.4	1,508.1	1,505.0	3.9	3.3	176.91	27.8	16.5	97.3	90.9	6.34	15.339	
1,600.0	1,576.8	1,612.7	1,606.6	4.5	3.7	177.23	51.0	25.8	112.4	105.6	6.77	16.592	
1,665.3	1,636.0	1,681.5	1,672.5	5.0	3.9	177.38	69.0	33.0	122.1	115.0	7.06	17.285	
1,700.0	1,667.2	1,718.3	1,707.5	5.2	4.1	177.45	79.6	37.3	126.9	119.6	7.26	17.477	
1,800.0	1,757.1	1,825.1	1,807.8	6.0	4.6	177.54	113.7	51.0	137.0	129.2	7.86	17.441	
1,900.0	1,847.0	1,929.3	1,903.7	6.7	5.2	177.51	151.5	66.2	142.1	133.7	8.48	16.767	
2,000.0	1,936.9	2,029.2	1,995.3	7.5	5.9	177.46	188.5	81.0	146.4	137.3	9.11	16.069	
2,100.0	2,026.8	2,129.1	2,086.9	8.3	6.5	177.42	225.5	95.9	150.6	140.9	9.76	15.430	
2,200.0	2,116.8	2,229.0	2,178.5	9.1	7.2	177.38	262.5	110.8	154.9	144.5	10.43	14.854	
2,300.0	2,206.7	2,328.9	2,270.1	9.9	7.9	177.35	299.5	125.6	159.2	148.1	11.10	14.334	
2,400.0	2,296.6	2,428.8	2,361.7	10.8	8.6	177.31	336.5	140.5	163.4	151.6	11.79	13.862	
2,500.0	2,386.5	2,528.7	2,453.3	11.6	9.4	177.28	373.5	155.4	167.7	155.2	12.48	13.435	
2,600.0	2,476.4	2,628.6	2,544.9	12.4	10.1	177.25	410.5	170.2	171.9	158.8	13.18	13.046	
2,700.0	2,566.3	2,728.5	2,636.5	13.2	10.8	177.21	447.5	185.1	176.2	162.3	13.88	12.691	
2,800.0	2,656.2	2,828.5	2,728.1	14.1	11.6	177.19	484.5	200.0	180.5	165.9	14.59	12.366	
2,900.0	2,746.1	2,928.4	2,819.7	14.9	12.3	177.16	521.5	214.8	184.7	169.4	15.31	12.069	
3,000.0	2,836.0	3,028.3	2,911.3	15.7	13.1	177.13	558.5	229.7	189.0	173.0	16.02	11.795	
3,100.0	2,926.0	3,128.2	3,003.0	16.6	13.8	177.11	595.5	244.5	193.2	176.5	16.74	11.543	
3,200.0	3,015.9	3,228.1	3,094.6	17.4	14.6	177.08	632.5	259.4	197.5	180.0	17.46	11.309	
3,300.0	3,105.8	3,328.0	3,186.2	18.2	15.3	177.06	669.5	274.3	201.8	183.6	18.19	11.093	
3,400.0	3,195.7	3,427.9	3,277.8	19.1	16.1	177.04	706.5	289.1	206.0	187.1	18.91	10.892	
3,500.0	3,285.6	3,527.8	3,369.4	19.9	16.8	177.02	743.5	304.0	210.3	190.6	19.64	10.705	
3,600.0	3,375.5	3,627.7	3,461.0	20.7	17.6	177.00	780.5	318.9	214.5	194.2	20.37	10.531	
3,700.0	3,465.4	3,727.6	3,552.6	21.6	18.3	176.98	817.5	333.7	218.8	197.7	21.10	10.368	
3,800.0	3,555.3	3,827.5	3,644.2	22.4	19.1	176.96	854.5	348.6	223.0	201.2	21.84	10.215	
3,900.0	3,645.3	3,927.5	3,735.8	23.2	19.9	176.94	891.5	363.4	227.3	204.7	22.57	10.071	
4,000.0	3,735.2	4,027.4	3,827.4	24.1	20.6	176.92	928.5	378.3	231.6	208.3	23.30	9.936	
4,100.0	3,825.1	4,127.3	3,919.0	24.9	21.4	176.91	965.5	393.2	235.8	211.8	24.04	9.809	
4,200.0	3,915.0	4,227.2	4,010.6	25.7	22.2	176.89	1,002.5	408.0	240.1	215.3	24.78	9.689	
4,300.0	4,004.9	4,327.1	4,102.2	26.6	22.9	176.87	1,039.6	422.9	244.3	218.8	25.52	9.576	
4,400.0	4,094.8	4,427.0	4,193.8	27.4	23.7	176.86	1,076.6	437.8	248.6	222.3	26.25	9.469	
4,500.0	4,184.7	4,526.9	4,285.5	28.3	24.5	176.84	1,113.6	452.6	252.9	225.9	26.99	9.367	
4,600.0	4,274.6	4,626.8	4,377.1	29.1	25.2	176.83	1,150.6	467.5	257.1	229.4	27.73	9.271	
4,700.0	4,364.5	4,726.7	4,468.7	29.9	26.0	176.82	1,187.6	482.3	261.4	232.9	28.48	9.179	
4,800.0	4,454.5	4,826.6	4,560.3	30.8	26.8	176.80	1,224.6	497.2	265.6	236.4	29.22	9.092	
4,839.6	4,490.0	4,861.9	4,592.7	31.1	27.0	176.80	1,237.4	502.4	267.6	238.1	29.49	9.075	
4,900.0	4,544.8	4,914.8	4,641.8	31.6	27.3	176.81	1,255.7	509.7	271.0	241.1	29.93	9.055	

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

<b>Company:</b>	Ursa Operating Company, LLC	<b>Local Co-ordinate Reference:</b>	Well 23A-10-06-92
<b>Project:</b>	Rockies Region	<b>TVD Reference:</b>	23A-10-06-92 @ 5447.4usft (PAD Est KB)
<b>Reference Site:</b>	Valley Farms O	<b>MD Reference:</b>	23A-10-06-92 @ 5447.4usft (PAD Est KB)
<b>Site Error:</b>	0.0 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	23A-10-06-92	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Wellbore #1	<b>Database:</b>	MasterDB
<b>Reference Design:</b>	Design #2	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design Valley Farms O - 23B-10-06-92 - Wellbore #1 - Design #1													Offset Site Error: 0.0 usft
Survey Program: 0-MWD													Offset Well Error: 0.0 usft
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
5,000.0	4,637.1	5,000.0	4,722.0	32.1	27.8	176.83	1,282.4	520.4	276.1	245.6	30.54	9.043	
5,100.0	4,731.2	5,089.4	4,807.4	32.7	28.2	176.84	1,306.8	530.2	280.6	249.6	31.04	9.041	
5,200.0	4,827.0	5,176.5	4,891.7	33.1	28.5	176.85	1,327.0	538.4	284.4	253.0	31.41	9.054	
5,300.0	4,924.2	5,263.4	4,976.8	33.5	28.9	176.86	1,343.6	545.0	287.5	255.8	31.65	9.082	
5,400.0	5,022.5	5,350.3	5,062.5	33.8	29.1	176.86	1,356.6	550.2	289.9	258.1	31.78	9.122	
5,500.0	5,121.6	5,437.1	5,148.7	34.1	29.3	176.87	1,365.9	554.0	291.6	259.8	31.78	9.176	
5,600.0	5,221.2	5,523.8	5,235.3	34.3	29.5	176.87	1,371.6	556.3	292.7	261.0	31.66	9.244	
5,704.8	5,326.0	5,615.6	5,327.0	34.4	29.6	-161.67	1,373.6	557.1	293.0	261.6	31.40	9.330	
5,736.9	5,358.1	5,646.7	5,358.1	34.4	29.6	-161.67	1,373.6	557.1	293.0	261.5	31.49	9.304	
5,800.0	5,421.2	5,709.8	5,421.2	34.4	29.6	-161.67	1,373.6	557.1	293.0	261.3	31.67	9.252	
5,900.0	5,521.2	5,809.8	5,521.2	34.5	29.7	-161.67	1,373.6	557.1	293.0	261.0	31.98	9.162	
6,000.0	5,621.2	5,909.8	5,621.2	34.6	29.8	-161.67	1,373.6	557.1	293.0	260.7	32.29	9.073	
6,100.0	5,721.2	6,009.8	5,721.2	34.7	29.9	-161.67	1,373.6	557.1	293.0	260.4	32.61	8.985	
6,200.0	5,821.2	6,109.8	5,821.2	34.7	30.0	-161.67	1,373.6	557.1	293.0	260.1	32.93	8.897	
6,300.0	5,921.2	6,209.8	5,921.2	34.8	30.1	-161.67	1,373.6	557.1	293.0	259.7	33.25	8.811	
6,400.0	6,021.2	6,309.8	6,021.2	34.9	30.2	-161.67	1,373.6	557.1	293.0	259.4	33.58	8.725	
6,500.0	6,121.2	6,409.8	6,121.2	35.0	30.2	-161.67	1,373.6	557.1	293.0	259.1	33.91	8.641	
6,600.0	6,221.2	6,509.8	6,221.2	35.0	30.3	-161.67	1,373.6	557.1	293.0	258.7	34.24	8.557	
6,700.0	6,321.2	6,609.8	6,321.2	35.1	30.4	-161.67	1,373.6	557.1	293.0	258.4	34.57	8.474	
6,800.0	6,421.2	6,709.8	6,421.2	35.2	30.5	-161.67	1,373.6	557.1	293.0	258.1	34.91	8.392	
6,900.0	6,521.2	6,809.8	6,521.2	35.3	30.6	-161.67	1,373.6	557.1	293.0	257.7	35.25	8.312	
7,000.0	6,621.2	6,909.8	6,621.2	35.4	30.7	-161.67	1,373.6	557.1	293.0	257.4	35.59	8.232	
7,100.0	6,721.2	7,009.8	6,721.2	35.5	30.8	-161.67	1,373.6	557.1	293.0	257.0	35.94	8.153	
7,200.0	6,821.2	7,109.8	6,821.2	35.5	30.9	-161.67	1,373.6	557.1	293.0	256.7	36.28	8.075	
7,300.0	6,921.2	7,209.8	6,921.2	35.6	31.0	-161.67	1,373.6	557.1	293.0	256.4	36.63	7.998	
7,400.0	7,021.2	7,309.8	7,021.2	35.7	31.1	-161.67	1,373.6	557.1	293.0	256.0	36.98	7.922	
7,500.0	7,121.2	7,409.8	7,121.2	35.8	31.2	-161.67	1,373.6	557.1	293.0	255.6	37.34	7.847	
7,600.0	7,221.2	7,509.8	7,221.2	35.9	31.3	-161.67	1,373.6	557.1	293.0	255.3	37.69	7.773	
7,700.0	7,321.2	7,609.8	7,321.2	36.0	31.5	-161.67	1,373.6	557.1	293.0	254.9	38.05	7.700	
7,800.0	7,421.2	7,709.8	7,421.2	36.1	31.6	-161.67	1,373.6	557.1	293.0	254.6	38.41	7.628	
7,900.0	7,521.2	7,809.8	7,521.2	36.2	31.7	-161.67	1,373.6	557.1	293.0	254.2	38.77	7.557	
7,974.8	7,596.0	7,884.6	7,596.0	36.3	31.8	-161.67	1,373.6	557.1	293.0	253.9	39.04	7.505	

<b>Company:</b>	Ursa Operating Company, LLC	<b>Local Co-ordinate Reference:</b>	Well 23A-10-06-92
<b>Project:</b>	Rockies Region	<b>TVD Reference:</b>	23A-10-06-92 @ 5447.4usft (PAD Est KB)
<b>Reference Site:</b>	Valley Farms O	<b>MD Reference:</b>	23A-10-06-92 @ 5447.4usft (PAD Est KB)
<b>Site Error:</b>	0.0 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	23A-10-06-92	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Wellbore #1	<b>Database:</b>	MasterDB
<b>Reference Design:</b>	Design #2	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design Valley Farms O - 23C-10-06-92 - Wellbore #1 - Design #1													Offset Site Error:	0.0 usft
Survey Program: 0-MWD													Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis		Distance								Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor		
0.0	0.0	0.0	0.0	0.0	0.0	178.59	-25.0	0.6	25.0					
100.0	100.0	100.0	100.0	0.1	0.1	178.59	-25.0	0.6	25.0	24.8	0.19	131.436		
200.0	200.0	200.0	200.0	0.3	0.3	178.59	-25.0	0.6	25.0	24.4	0.64	39.071		
300.0	300.0	300.0	300.0	0.5	0.5	178.59	-25.0	0.6	25.0	23.9	1.09	22.946		
400.0	400.0	400.0	400.0	0.8	0.8	178.59	-25.0	0.6	25.0	23.5	1.54	16.242		
500.0	500.0	500.0	500.0	1.0	1.0	178.59	-25.0	0.6	25.0	23.0	1.99	12.570		
600.0	600.0	600.0	600.0	1.2	1.2	178.59	-25.0	0.6	25.0	22.6	2.44	10.252		
700.0	700.0	700.0	700.0	1.4	1.4	178.59	-25.0	0.6	25.0	22.1	2.89	8.656		
800.0	800.0	800.0	800.0	1.7	1.7	178.59	-25.0	0.6	25.0	21.7	3.34	7.490 CC, ES		
900.0	900.0	900.0	900.0	1.9	1.9	159.23	-25.0	0.6	27.4	23.6	3.79	7.243 SF		
1,000.0	999.6	999.6	999.6	2.1	2.1	163.74	-25.0	0.6	34.9	30.6	4.23	8.239		
1,100.0	1,098.8	1,098.8	1,098.8	2.4	2.3	168.07	-25.0	0.6	47.5	42.9	4.67	10.178		
1,200.0	1,197.1	1,200.3	1,200.3	2.7	2.6	170.76	-22.7	1.8	63.0	57.9	5.10	12.360		
1,300.0	1,294.3	1,302.8	1,302.4	3.0	2.8	171.95	-15.5	5.6	78.6	73.1	5.52	14.249		
1,400.0	1,390.2	1,406.1	1,404.8	3.4	3.0	172.36	-3.3	12.0	94.1	88.2	5.94	15.859		
1,500.0	1,484.4	1,510.3	1,507.1	3.9	3.3	172.32	13.9	21.0	109.6	103.2	6.37	17.213		
1,600.0	1,576.8	1,615.4	1,609.1	4.5	3.7	171.99	36.2	32.7	124.9	118.1	6.82	18.320		
1,665.3	1,636.0	1,684.4	1,675.3	5.0	4.0	171.67	53.6	41.8	134.8	127.7	7.13	18.914		
1,700.0	1,667.2	1,721.0	1,710.1	5.2	4.1	171.47	63.6	47.1	139.8	132.4	7.33	19.063		
1,800.0	1,757.1	1,820.0	1,804.0	6.0	4.6	170.93	91.4	61.6	153.4	145.4	7.96	19.271		
1,900.0	1,847.0	1,919.1	1,898.0	6.7	5.1	170.49	119.2	76.2	167.0	158.4	8.59	19.440		
2,000.0	1,936.9	2,018.1	1,992.0	7.5	5.6	170.11	147.0	90.8	180.6	171.3	9.25	19.514		
2,100.0	2,026.8	2,117.2	2,085.9	8.3	6.1	169.78	174.7	105.3	194.2	184.3	9.93	19.548		
2,200.0	2,116.8	2,216.3	2,179.9	9.1	6.7	169.50	202.5	119.9	207.8	197.2	10.63	19.552		
2,300.0	2,206.7	2,315.3	2,273.9	9.9	7.3	169.25	230.3	134.5	221.4	210.1	11.33	19.537		
2,400.0	2,296.6	2,414.4	2,367.8	10.8	7.8	169.03	258.1	149.0	235.1	223.0	12.05	19.507		
2,500.0	2,386.5	2,513.5	2,461.8	11.6	8.4	168.83	285.8	163.6	248.7	235.9	12.77	19.468		
2,600.0	2,476.4	2,612.5	2,555.8	12.4	9.0	168.66	313.6	178.2	262.3	248.8	13.51	19.424		
2,700.0	2,566.3	2,711.6	2,649.7	13.2	9.6	168.50	341.4	192.7	276.0	261.7	14.24	19.376		
2,800.0	2,656.2	2,810.6	2,743.7	14.1	10.2	168.36	369.2	207.3	289.6	274.6	14.99	19.326		
2,900.0	2,746.1	2,909.7	2,837.7	14.9	10.8	168.23	397.0	221.9	303.2	287.5	15.73	19.275		
3,000.0	2,836.0	3,008.8	2,931.6	15.7	11.4	168.11	424.7	236.4	316.9	300.4	16.48	19.225		
3,100.0	2,926.0	3,107.8	3,025.6	16.6	12.0	168.00	452.5	251.0	330.5	313.3	17.24	19.174		
3,200.0	3,015.9	3,206.9	3,119.6	17.4	12.6	167.90	480.3	265.6	344.2	326.2	18.00	19.125		
3,300.0	3,105.8	3,306.0	3,213.5	18.2	13.2	167.80	508.1	280.1	357.8	339.1	18.76	19.077		
3,400.0	3,195.7	3,405.0	3,307.5	19.1	13.8	167.72	535.8	294.7	371.5	351.9	19.52	19.031		
3,500.0	3,285.6	3,504.1	3,401.5	19.9	14.4	167.64	563.6	309.3	385.1	364.8	20.28	18.986		
3,600.0	3,375.5	3,603.2	3,495.4	20.7	15.0	167.56	591.4	323.8	398.7	377.7	21.05	18.942		
3,700.0	3,465.4	3,702.2	3,589.4	21.6	15.6	167.49	619.2	338.4	412.4	390.6	21.82	18.901		
3,800.0	3,555.3	3,801.3	3,683.4	22.4	16.3	167.43	647.0	353.0	426.0	403.5	22.59	18.860		
3,900.0	3,645.3	3,900.3	3,777.3	23.2	16.9	167.37	674.7	367.5	439.7	416.3	23.36	18.821		
4,000.0	3,735.2	3,999.4	3,871.3	24.1	17.5	167.31	702.5	382.1	453.3	429.2	24.13	18.784		
4,100.0	3,825.1	4,098.5	3,965.3	24.9	18.1	167.26	730.3	396.7	467.0	442.1	24.91	18.748		
4,200.0	3,915.0	4,197.5	4,059.2	25.7	18.7	167.21	758.1	411.2	480.6	455.0	25.68	18.714		
4,300.0	4,004.9	4,296.6	4,153.2	26.6	19.3	167.16	785.8	425.8	494.3	467.8	26.46	18.680		
4,400.0	4,094.8	4,395.7	4,247.2	27.4	19.9	167.11	813.6	440.4	507.9	480.7	27.24	18.649		
4,500.0	4,184.7	4,494.7	4,341.1	28.3	20.6	167.07	841.4	454.9	521.6	493.6	28.02	18.618		
4,600.0	4,274.6	4,593.8	4,435.1	29.1	21.2	167.03	869.2	469.5	535.2	506.4	28.79	18.588		
4,700.0	4,364.5	4,692.8	4,529.1	29.9	21.8	166.99	896.9	484.1	548.9	519.3	29.57	18.560		
4,800.0	4,454.5	4,791.9	4,623.0	30.8	22.4	166.95	924.7	498.6	562.5	532.2	30.35	18.533		
4,839.6	4,490.0	4,831.1	4,660.2	31.1	22.6	166.94	935.7	504.4	567.9	537.3	30.66	18.522		
4,900.0	4,544.8	4,891.1	4,717.1	31.6	23.0	166.94	952.5	513.2	575.3	544.1	31.19	18.442		

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

<b>Company:</b>	Ursa Operating Company, LLC	<b>Local Co-ordinate Reference:</b>	Well 23A-10-06-92
<b>Project:</b>	Rockies Region	<b>TVD Reference:</b>	23A-10-06-92 @ 5447.4usft (PAD Est KB)
<b>Reference Site:</b>	Valley Farms O	<b>MD Reference:</b>	23A-10-06-92 @ 5447.4usft (PAD Est KB)
<b>Site Error:</b>	0.0 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	23A-10-06-92	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Wellbore #1	<b>Database:</b>	MasterDB
<b>Reference Design:</b>	Design #2	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design													Offset Site Error:	0.0 usft
Survey Program: 0-MWD													Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis		Highside Tooface (")	Distance		Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)						
5,000.0	4,637.1	4,971.7	4,794.0	32.1	23.5	166.92	974.2	524.6	584.7	552.8	31.89	18.333		
5,100.0	4,731.2	5,048.9	4,868.4	32.7	23.8	166.89	992.3	534.1	592.8	560.4	32.46	18.266		
5,200.0	4,827.0	5,125.9	4,943.4	33.1	24.1	166.87	1,007.6	542.1	599.7	566.8	32.90	18.228		
5,300.0	4,924.2	5,200.0	5,016.2	33.5	24.3	166.85	1,019.9	548.5	605.2	572.0	33.22	18.219		
5,400.0	5,022.5	5,279.7	5,095.0	33.8	24.6	166.84	1,030.2	554.0	609.5	576.0	33.44	18.228		
5,500.0	5,121.6	5,356.5	5,171.4	34.1	24.7	166.82	1,037.5	557.8	612.4	578.9	33.53	18.265		
5,600.0	5,221.2	5,433.2	5,247.9	34.3	24.9	166.81	1,041.9	560.1	614.1	580.6	33.51	18.325		
5,704.8	5,326.0	5,513.6	5,328.3	34.4	25.0	-171.75	1,043.7	561.1	614.4	581.0	33.37	18.411		
5,740.3	5,361.4	5,546.8	5,361.4	34.4	25.0	-171.75	1,043.7	561.1	614.4	580.9	33.46	18.361		
5,800.0	5,421.2	5,606.5	5,421.2	34.4	25.1	-171.75	1,043.7	561.1	614.4	580.7	33.62	18.273		
5,900.0	5,521.2	5,706.5	5,521.2	34.5	25.2	-171.75	1,043.7	561.1	614.4	580.4	33.92	18.112		
6,000.0	5,621.2	5,806.5	5,621.2	34.6	25.3	-171.75	1,043.7	561.1	614.4	580.1	34.22	17.952		
6,100.0	5,721.2	5,906.5	5,721.2	34.7	25.4	-171.75	1,043.7	561.1	614.4	579.8	34.53	17.793		
6,200.0	5,821.2	6,006.5	5,821.2	34.7	25.5	-171.75	1,043.7	561.1	614.4	579.5	34.84	17.635		
6,300.0	5,921.2	6,106.5	5,921.2	34.8	25.6	-171.75	1,043.7	561.1	614.4	579.2	35.15	17.478		
6,400.0	6,021.2	6,206.5	6,021.2	34.9	25.7	-171.75	1,043.7	561.1	614.4	578.9	35.47	17.323		
6,500.0	6,121.2	6,306.5	6,121.2	35.0	25.8	-171.75	1,043.7	561.1	614.4	578.6	35.78	17.169		
6,600.0	6,221.2	6,406.5	6,221.2	35.0	25.9	-171.75	1,043.7	561.1	614.4	578.3	36.10	17.017		
6,700.0	6,321.2	6,506.5	6,321.2	35.1	26.0	-171.75	1,043.7	561.1	614.4	577.9	36.43	16.866		
6,800.0	6,421.2	6,606.5	6,421.2	35.2	26.1	-171.75	1,043.7	561.1	614.4	577.6	36.75	16.716		
6,900.0	6,521.2	6,706.5	6,521.2	35.3	26.2	-171.75	1,043.7	561.1	614.4	577.3	37.08	16.568		
7,000.0	6,621.2	6,806.5	6,621.2	35.4	26.4	-171.75	1,043.7	561.1	614.4	577.0	37.41	16.422		
7,100.0	6,721.2	6,906.5	6,721.2	35.5	26.5	-171.75	1,043.7	561.1	614.4	576.6	37.75	16.276		
7,200.0	6,821.2	7,006.5	6,821.2	35.5	26.6	-171.75	1,043.7	561.1	614.4	576.3	38.08	16.133		
7,300.0	6,921.2	7,106.5	6,921.2	35.6	26.7	-171.75	1,043.7	561.1	614.4	575.9	38.42	15.991		
7,400.0	7,021.2	7,206.5	7,021.2	35.7	26.8	-171.75	1,043.7	561.1	614.4	575.6	38.76	15.851		
7,500.0	7,121.2	7,306.5	7,121.2	35.8	27.0	-171.75	1,043.7	561.1	614.4	575.3	39.10	15.712		
7,600.0	7,221.2	7,406.5	7,221.2	35.9	27.1	-171.75	1,043.7	561.1	614.4	574.9	39.45	15.575		
7,700.0	7,321.2	7,506.5	7,321.2	36.0	27.2	-171.75	1,043.7	561.1	614.4	574.6	39.79	15.439		
7,800.0	7,421.2	7,606.5	7,421.2	36.1	27.3	-171.75	1,043.7	561.1	614.4	574.2	40.14	15.305		
7,900.0	7,521.2	7,706.5	7,521.2	36.2	27.5	-171.75	1,043.7	561.1	614.4	573.9	40.49	15.172		
7,974.8	7,596.0	7,781.3	7,596.0	36.3	27.6	-171.75	1,043.7	561.1	614.4	573.6	40.76	15.074		

<b>Company:</b>	Ursa Operating Company, LLC	<b>Local Co-ordinate Reference:</b>	Well 23A-10-06-92
<b>Project:</b>	Rockies Region	<b>TVD Reference:</b>	23A-10-06-92 @ 5447.4usft (PAD Est KB)
<b>Reference Site:</b>	Valley Farms O	<b>MD Reference:</b>	23A-10-06-92 @ 5447.4usft (PAD Est KB)
<b>Site Error:</b>	0.0 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	23A-10-06-92	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Wellbore #1	<b>Database:</b>	MasterDB
<b>Reference Design:</b>	Design #2	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design Valley Farms O - 23D-10-06-92 - Wellbore #1 - Design #1													Offset Site Error:	0.0 usft
Survey Program: 0-MWD													Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis		Distance								Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor		
0.0	0.0	0.0	0.0	0.0	0.0	178.59	-37.5	0.9	37.5					
100.0	100.0	100.0	100.0	0.1	0.1	178.59	-37.5	0.9	37.5	37.3	0.19	197.155		
200.0	200.0	200.0	200.0	0.3	0.3	178.59	-37.5	0.9	37.5	36.8	0.64	58.606		
300.0	300.0	300.0	300.0	0.5	0.5	178.59	-37.5	0.9	37.5	36.4	1.09	34.419		
400.0	400.0	400.0	400.0	0.8	0.8	178.59	-37.5	0.9	37.5	36.0	1.54	24.364		
500.0	500.0	500.0	500.0	1.0	1.0	178.59	-37.5	0.9	37.5	35.5	1.99	18.855		
600.0	600.0	600.0	600.0	1.2	1.2	178.59	-37.5	0.9	37.5	35.1	2.44	15.378		
700.0	700.0	700.0	700.0	1.4	1.4	178.59	-37.5	0.9	37.5	34.6	2.89	12.984		
800.0	800.0	800.0	800.0	1.7	1.7	178.59	-37.5	0.9	37.5	34.2	3.34	11.235 CC, ES		
900.0	900.0	900.0	900.0	1.9	1.9	158.56	-37.5	0.9	39.9	36.1	3.79	10.542 SF		
1,000.0	999.6	999.6	999.6	2.1	2.1	161.97	-37.5	0.9	47.3	43.1	4.23	11.176		
1,100.0	1,098.8	1,098.8	1,098.8	2.4	2.3	165.74	-37.5	0.9	59.9	55.2	4.67	12.811		
1,200.0	1,197.1	1,200.7	1,200.6	2.7	2.6	168.16	-35.4	2.5	75.4	70.3	5.10	14.773		
1,300.0	1,294.3	1,303.4	1,303.0	3.0	2.8	168.83	-28.8	7.4	91.3	85.8	5.52	16.531		
1,400.0	1,390.2	1,406.9	1,405.6	3.4	3.0	168.51	-17.8	15.7	107.5	101.6	5.95	18.059		
1,500.0	1,484.4	1,511.1	1,508.0	3.9	3.3	167.58	-2.2	27.4	124.0	117.6	6.41	19.351		
1,600.0	1,576.8	1,613.0	1,606.9	4.5	3.7	166.38	16.9	41.7	141.3	134.4	6.90	20.489		
1,665.3	1,636.0	1,676.8	1,668.9	5.0	3.9	165.90	29.2	51.0	154.9	147.6	7.23	21.411		
1,700.0	1,667.2	1,710.6	1,701.7	5.2	4.0	165.77	35.8	55.9	162.7	155.2	7.45	21.837		
1,800.0	1,757.1	1,808.1	1,796.3	6.0	4.4	165.47	54.7	70.1	185.1	177.0	8.09	22.876		
1,900.0	1,847.0	1,905.5	1,890.8	6.7	4.8	165.23	73.6	84.3	207.5	198.7	8.75	23.711		
2,000.0	1,936.9	2,003.0	1,985.4	7.5	5.2	165.04	92.5	98.5	229.9	220.4	9.43	24.375		
2,100.0	2,026.8	2,100.5	2,079.9	8.3	5.7	164.88	111.3	112.7	252.3	242.1	10.12	24.916		
2,200.0	2,116.8	2,197.9	2,174.5	9.1	6.1	164.75	130.2	126.8	274.7	263.8	10.83	25.359		
2,300.0	2,206.7	2,295.4	2,269.0	9.9	6.5	164.64	149.1	141.0	297.1	285.5	11.55	25.727		
2,400.0	2,296.6	2,392.8	2,363.6	10.8	7.0	164.54	168.0	155.2	319.5	307.2	12.27	26.035		
2,500.0	2,386.5	2,490.3	2,458.1	11.6	7.5	164.46	186.9	169.4	341.9	328.9	13.00	26.295		
2,600.0	2,476.4	2,587.7	2,552.7	12.4	7.9	164.38	205.8	183.6	364.3	350.5	13.74	26.517		
2,700.0	2,566.3	2,685.2	2,647.2	13.2	8.4	164.32	224.7	197.7	386.7	372.2	14.48	26.707		
2,800.0	2,656.2	2,782.7	2,741.8	14.1	8.8	164.26	243.6	211.9	409.1	393.9	15.22	26.872		
2,900.0	2,746.1	2,880.1	2,836.3	14.9	9.3	164.21	262.4	226.1	431.5	415.5	15.97	27.015		
3,000.0	2,836.0	2,977.6	2,930.9	15.7	9.8	164.16	281.3	240.3	453.9	437.2	16.72	27.141		
3,100.0	2,926.0	3,075.0	3,025.4	16.6	10.3	164.12	300.2	254.5	476.3	458.8	17.48	27.251		
3,200.0	3,015.9	3,172.5	3,120.0	17.4	10.7	164.08	319.1	268.7	498.7	480.5	18.24	27.349		
3,300.0	3,105.8	3,269.9	3,214.5	18.2	11.2	164.05	338.0	282.8	521.1	502.1	18.99	27.436		
3,400.0	3,195.7	3,367.4	3,309.1	19.1	11.7	164.02	356.9	297.0	543.5	523.8	19.76	27.514		
3,500.0	3,285.6	3,464.8	3,403.6	19.9	12.2	163.99	375.8	311.2	566.0	545.4	20.52	27.584		
3,600.0	3,375.5	3,562.3	3,498.2	20.7	12.6	163.96	394.7	325.4	588.4	567.1	21.28	27.647		
3,700.0	3,465.4	3,659.8	3,592.7	21.6	13.1	163.93	413.5	339.6	610.8	588.7	22.05	27.704		
3,800.0	3,555.3	3,757.2	3,687.3	22.4	13.6	163.91	432.4	353.7	633.2	610.4	22.81	27.756		
3,900.0	3,645.3	3,854.7	3,781.8	23.2	14.1	163.89	451.3	367.9	655.6	632.0	23.58	27.803		
4,000.0	3,735.2	3,952.1	3,876.4	24.1	14.6	163.87	470.2	382.1	678.0	653.7	24.35	27.846		
4,100.0	3,825.1	4,049.6	3,970.9	24.9	15.0	163.85	489.1	396.3	700.4	675.3	25.12	27.885		
4,200.0	3,915.0	4,147.0	4,065.5	25.7	15.5	163.83	508.0	410.5	722.8	696.9	25.89	27.921		
4,300.0	4,004.9	4,244.5	4,160.0	26.6	16.0	163.81	526.9	424.6	745.2	718.6	26.66	27.955		
4,400.0	4,094.8	4,342.0	4,254.6	27.4	16.5	163.80	545.8	438.8	767.6	740.2	27.43	27.985		
4,500.0	4,184.7	4,439.4	4,349.1	28.3	17.0	163.78	564.7	453.0	790.1	761.9	28.20	28.014		
4,600.0	4,274.6	4,536.9	4,443.7	29.1	17.5	163.77	583.5	467.2	812.5	783.5	28.98	28.040		
4,700.0	4,364.5	4,634.3	4,538.2	29.9	17.9	163.75	602.4	481.4	834.9	805.1	29.75	28.064		
4,800.0	4,454.5	4,731.8	4,632.8	30.8	18.4	163.74	621.3	495.6	857.3	826.8	30.52	28.087		
4,839.6	4,490.0	4,770.3	4,670.2	31.1	18.6	163.74	628.8	501.2	866.2	835.3	30.83	28.095		
4,900.0	4,544.8	4,829.4	4,727.5	31.6	18.9	163.82	640.2	509.8	878.8	847.4	31.36	28.026		

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

<b>Company:</b>	Ursa Operating Company, LLC	<b>Local Co-ordinate Reference:</b>	Well 23A-10-06-92
<b>Project:</b>	Rockies Region	<b>TVD Reference:</b>	23A-10-06-92 @ 5447.4usft (PAD Est KB)
<b>Reference Site:</b>	Valley Farms O	<b>MD Reference:</b>	23A-10-06-92 @ 5447.4usft (PAD Est KB)
<b>Site Error:</b>	0.0 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	23A-10-06-92	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Wellbore #1	<b>Database:</b>	MasterDB
<b>Reference Design:</b>	Design #2	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design Valley Farms O - 23D-10-06-92 - Wellbore #1 - Design #1													Offset Site Error: 0.0 usft
Survey Program: 0-MWD													Offset Well Error: 0.0 usft
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
5,000.0	4,637.1	4,928.0	4,823.1	32.1	19.4	163.85	659.3	524.1	895.8	863.6	32.17	27.841	
5,100.0	4,731.2	5,000.0	4,893.0	32.7	19.7	163.82	673.2	534.5	908.3	875.5	32.82	27.675	
5,200.0	4,827.0	5,082.5	4,973.7	33.1	20.0	163.76	686.9	544.8	918.5	885.1	33.35	27.537	
5,300.0	4,924.2	5,153.0	5,043.2	33.5	20.3	163.73	696.4	551.9	926.9	893.1	33.74	27.474	
5,400.0	5,022.5	5,223.5	5,113.1	33.8	20.4	163.71	703.9	557.5	933.4	899.4	34.01	27.447	
5,500.0	5,121.6	5,300.0	5,189.2	34.1	20.6	163.69	709.6	561.9	938.1	903.9	34.18	27.446	
5,600.0	5,221.2	5,364.5	5,253.6	34.3	20.7	163.68	712.6	564.1	940.8	906.6	34.20	27.505	
5,704.8	5,326.0	5,441.9	5,331.0	34.4	20.8	-174.87	713.9	565.0	941.7	907.5	34.14	27.587	
5,738.3	5,359.5	5,470.4	5,359.5	34.4	20.8	-174.87	713.9	565.0	941.7	907.5	34.22	27.521	
5,800.0	5,421.2	5,532.0	5,421.2	34.4	20.9	-174.87	713.9	565.0	941.7	907.3	34.39	27.386	
5,900.0	5,521.2	5,632.0	5,521.2	34.5	21.0	-174.87	713.9	565.0	941.7	907.0	34.68	27.152	
6,000.0	5,621.2	5,732.0	5,621.2	34.6	21.2	-174.87	713.9	565.0	941.7	906.7	34.98	26.919	
6,100.0	5,721.2	5,832.0	5,721.2	34.7	21.3	-174.87	713.9	565.0	941.7	906.4	35.28	26.688	
6,200.0	5,821.2	5,932.0	5,821.2	34.7	21.4	-174.87	713.9	565.0	941.7	906.1	35.59	26.458	
6,300.0	5,921.2	6,032.0	5,921.2	34.8	21.6	-174.87	713.9	565.0	941.7	905.8	35.90	26.230	
6,400.0	6,021.2	6,132.0	6,021.2	34.9	21.7	-174.87	713.9	565.0	941.7	905.5	36.21	26.004	
6,500.0	6,121.2	6,232.0	6,121.2	35.0	21.8	-174.87	713.9	565.0	941.7	905.1	36.53	25.780	
6,600.0	6,221.2	6,332.0	6,221.2	35.0	21.9	-174.87	713.9	565.0	941.7	904.8	36.84	25.558	
6,700.0	6,321.2	6,432.0	6,321.2	35.1	22.1	-174.87	713.9	565.0	941.7	904.5	37.16	25.338	
6,800.0	6,421.2	6,532.0	6,421.2	35.2	22.2	-174.87	713.9	565.0	941.7	904.2	37.49	25.119	
6,900.0	6,521.2	6,632.0	6,521.2	35.3	22.4	-174.87	713.9	565.0	941.7	903.9	37.81	24.903	
7,000.0	6,621.2	6,732.0	6,621.2	35.4	22.5	-174.87	713.9	565.0	941.7	903.5	38.14	24.689	
7,100.0	6,721.2	6,832.0	6,721.2	35.5	22.6	-174.87	713.9	565.0	941.7	903.2	38.47	24.477	
7,200.0	6,821.2	6,932.0	6,821.2	35.5	22.8	-174.87	713.9	565.0	941.7	902.9	38.80	24.267	
7,300.0	6,921.2	7,032.0	6,921.2	35.6	22.9	-174.87	713.9	565.0	941.7	902.5	39.14	24.059	
7,400.0	7,021.2	7,132.0	7,021.2	35.7	23.1	-174.87	713.9	565.0	941.7	902.2	39.48	23.854	
7,500.0	7,121.2	7,232.0	7,121.2	35.8	23.2	-174.87	713.9	565.0	941.7	901.9	39.82	23.651	
7,600.0	7,221.2	7,332.0	7,221.2	35.9	23.4	-174.87	713.9	565.0	941.7	901.5	40.16	23.449	
7,700.0	7,321.2	7,432.0	7,321.2	36.0	23.5	-174.87	713.9	565.0	941.7	901.2	40.50	23.250	
7,800.0	7,421.2	7,532.0	7,421.2	36.1	23.7	-174.87	713.9	565.0	941.7	900.8	40.85	23.054	
7,900.0	7,521.2	7,632.0	7,521.2	36.2	23.8	-174.87	713.9	565.0	941.7	900.5	41.19	22.859	
7,974.8	7,596.0	7,706.9	7,596.0	36.3	23.9	-174.87	713.9	565.0	941.7	900.2	41.46	22.715	



<b>Company:</b>	Ursa Operating Company, LLC	<b>Local Co-ordinate Reference:</b>	Well 23A-10-06-92
<b>Project:</b>	Rockies Region	<b>TVD Reference:</b>	23A-10-06-92 @ 5447.4usft (PAD Est KB)
<b>Reference Site:</b>	Valley Farms O	<b>MD Reference:</b>	23A-10-06-92 @ 5447.4usft (PAD Est KB)
<b>Site Error:</b>	0.0 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	23A-10-06-92	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Wellbore #1	<b>Database:</b>	MasterDB
<b>Reference Design:</b>	Design #2	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design Valley Farms O - 24A-10-06-92 - Wellbore #1 - Design #1													Offset Site Error:	0.0 usft
Survey Program: 0-MWD													Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis		Distance								Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor		
0.0	0.0	0.0	0.0	0.0	0.0	178.59	-50.0	1.2	50.0					
100.0	100.0	100.0	100.0	0.1	0.1	178.59	-50.0	1.2	50.0	49.8	0.19	262.874		
200.0	200.0	200.0	200.0	0.3	0.3	178.59	-50.0	1.2	50.0	49.3	0.64	78.142		
300.0	300.0	300.0	300.0	0.5	0.5	178.59	-50.0	1.2	50.0	48.9	1.09	45.892		
400.0	400.0	400.0	400.0	0.8	0.8	178.59	-50.0	1.2	50.0	48.4	1.54	32.485		
500.0	500.0	500.0	500.0	1.0	1.0	178.59	-50.0	1.2	50.0	48.0	1.99	25.140		
600.0	600.0	600.0	600.0	1.2	1.2	178.59	-50.0	1.2	50.0	47.5	2.44	20.505		
700.0	700.0	700.0	700.0	1.4	1.4	178.59	-50.0	1.2	50.0	47.1	2.89	17.312		
800.0	800.0	800.0	800.0	1.7	1.7	178.59	-50.0	1.2	50.0	46.6	3.34	14.980 CC, ES		
900.0	900.0	900.0	900.0	1.9	1.9	158.21	-50.0	1.2	52.4	48.6	3.79	13.841 SF		
1,000.0	999.6	999.6	999.6	2.1	2.1	160.93	-50.0	1.2	59.8	55.5	4.23	14.120		
1,100.0	1,098.8	1,098.8	1,098.8	2.4	2.3	164.21	-50.0	1.2	72.2	67.6	4.67	15.457		
1,200.0	1,197.1	1,200.4	1,200.4	2.7	2.6	166.15	-48.4	3.3	88.1	83.0	5.10	17.261		
1,300.0	1,294.3	1,302.6	1,302.2	3.0	2.8	166.04	-43.5	9.8	105.3	99.7	5.53	19.042		
1,400.0	1,390.2	1,405.2	1,403.9	3.4	3.0	164.71	-35.2	20.6	123.7	117.7	5.97	20.707		
1,500.0	1,484.4	1,505.0	1,502.1	3.9	3.3	162.97	-24.5	34.6	144.1	137.7	6.46	22.324		
1,600.0	1,576.8	1,601.8	1,597.3	4.5	3.6	162.02	-13.8	48.5	169.2	162.2	6.97	24.263		
1,665.3	1,636.0	1,664.2	1,658.7	5.0	3.8	161.76	-7.0	57.5	188.1	180.8	7.32	25.693		
1,700.0	1,667.2	1,697.3	1,691.3	5.2	3.9	161.78	-3.3	62.3	198.7	191.2	7.54	26.367		
1,800.0	1,757.1	1,792.5	1,784.9	6.0	4.2	161.82	7.2	76.0	229.3	221.1	8.18	28.033		
1,900.0	1,847.0	1,887.7	1,878.5	6.7	4.5	161.86	17.7	89.7	259.9	251.0	8.84	29.399		
2,000.0	1,936.9	1,983.0	1,972.2	7.5	4.9	161.89	28.1	103.4	290.4	280.9	9.52	30.511		
2,100.0	2,026.8	2,078.2	2,065.8	8.3	5.2	161.91	38.6	117.2	321.0	310.8	10.21	31.441		
2,200.0	2,116.8	2,173.4	2,159.4	9.1	5.6	161.93	49.1	130.9	351.5	340.6	10.91	32.224		
2,300.0	2,206.7	2,268.6	2,253.1	9.9	5.9	161.94	59.6	144.6	382.1	370.5	11.62	32.888		
2,400.0	2,296.6	2,363.8	2,346.7	10.8	6.3	161.96	70.1	158.3	412.7	400.3	12.33	33.457		
2,500.0	2,386.5	2,459.0	2,440.3	11.6	6.6	161.97	80.6	172.0	443.2	430.2	13.06	33.949		
2,600.0	2,476.4	2,554.2	2,534.0	12.4	7.0	161.98	91.1	185.8	473.8	460.0	13.78	34.377		
2,700.0	2,566.3	2,649.5	2,627.6	13.2	7.4	161.99	101.6	199.5	504.4	489.9	14.51	34.753		
2,800.0	2,656.2	2,744.7	2,721.2	14.1	7.7	161.99	112.0	213.2	534.9	519.7	15.25	35.084		
2,900.0	2,746.1	2,839.9	2,814.9	14.9	8.1	162.00	122.5	226.9	565.5	549.5	15.98	35.378		
3,000.0	2,836.0	2,935.1	2,908.5	15.7	8.5	162.01	133.0	240.6	596.1	579.3	16.72	35.640		
3,100.0	2,926.0	3,030.3	3,002.1	16.6	8.8	162.01	143.5	254.4	626.6	609.2	17.47	35.876		
3,200.0	3,015.9	3,125.5	3,095.8	17.4	9.2	162.02	154.0	268.1	657.2	639.0	18.21	36.088		
3,300.0	3,105.8	3,220.7	3,189.4	18.2	9.6	162.02	164.5	281.8	687.8	668.8	18.96	36.280		
3,400.0	3,195.7	3,316.0	3,283.1	19.1	10.0	162.03	175.0	295.5	718.3	698.6	19.71	36.454		
3,500.0	3,285.6	3,411.2	3,376.7	19.9	10.3	162.03	185.4	309.3	748.9	728.4	20.45	36.613		
3,600.0	3,375.5	3,506.4	3,470.3	20.7	10.7	162.03	195.9	323.0	779.5	758.3	21.20	36.759		
3,700.0	3,465.4	3,601.6	3,564.0	21.6	11.1	162.04	206.4	336.7	810.0	788.1	21.96	36.892		
3,800.0	3,555.3	3,696.8	3,657.6	22.4	11.5	162.04	216.9	350.4	840.6	817.9	22.71	37.015		
3,900.0	3,645.3	3,792.0	3,751.2	23.2	11.9	162.04	227.4	364.1	871.2	847.7	23.46	37.129		
4,000.0	3,735.2	3,887.2	3,844.9	24.1	12.2	162.05	237.9	377.9	901.7	877.5	24.22	37.234		
4,100.0	3,825.1	3,982.5	3,938.5	24.9	12.6	162.05	248.4	391.6	932.3	907.3	24.97	37.331		
4,200.0	3,915.0	4,077.7	4,032.1	25.7	13.0	162.05	258.9	405.3	962.8	937.1	25.73	37.422		
4,300.0	4,004.9	4,172.9	4,125.8	26.6	13.4	162.05	269.3	419.0	993.4	966.9	26.49	37.507		
4,400.0	4,094.8	4,268.1	4,219.4	27.4	13.7	162.06	279.8	432.7	1,024.0	996.7	27.24	37.586		
4,500.0	4,184.7	4,363.3	4,313.0	28.3	14.1	162.06	290.3	446.5	1,054.5	1,026.5	28.00	37.660		
4,600.0	4,274.6	4,458.5	4,406.7	29.1	14.5	162.06	300.8	460.2	1,085.1	1,056.3	28.76	37.729		
4,700.0	4,364.5	4,553.7	4,500.3	29.9	14.9	162.06	311.3	473.9	1,115.7	1,086.2	29.52	37.794		
4,800.0	4,454.5	4,649.0	4,593.9	30.8	15.3	162.06	321.8	487.6	1,146.2	1,116.0	30.28	37.855		
4,839.6	4,490.0	4,686.6	4,631.0	31.1	15.4	162.06	325.9	493.0	1,158.3	1,127.7	30.58	37.878		
4,900.0	4,544.8	4,744.4	4,687.8	31.6	15.7	162.22	332.3	501.4	1,175.9	1,144.8	31.10	37.808		

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

<b>Company:</b>	Ursa Operating Company, LLC	<b>Local Co-ordinate Reference:</b>	Well 23A-10-06-92
<b>Project:</b>	Rockies Region	<b>TVD Reference:</b>	23A-10-06-92 @ 5447.4usft (PAD Est KB)
<b>Reference Site:</b>	Valley Farms O	<b>MD Reference:</b>	23A-10-06-92 @ 5447.4usft (PAD Est KB)
<b>Site Error:</b>	0.0 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	23A-10-06-92	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Wellbore #1	<b>Database:</b>	MasterDB
<b>Reference Design:</b>	Design #2	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design Valley Farms O - 24A-10-06-92 - Wellbore #1 - Design #1													Offset Site Error:	0.0 usft
Survey Program: 0-MWD													Offset Well Error:	0.0 usft
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning	
5,000.0	4,637.1	4,841.2	4,783.0	32.1	16.0	162.37	342.9	515.3	1,201.2	1,169.3	31.91	37.647		
5,100.0	4,731.2	4,939.0	4,879.2	32.7	16.4	162.40	353.7	529.4	1,221.6	1,189.0	32.67	37.395		
5,200.0	4,827.0	5,037.6	4,976.2	33.1	16.8	162.32	364.6	543.6	1,237.2	1,203.8	33.38	37.062		
5,300.0	4,924.2	5,100.0	5,037.7	33.5	17.0	162.27	370.9	551.9	1,249.0	1,215.1	33.83	36.915		
5,400.0	5,022.5	5,176.7	5,113.8	33.8	17.2	162.21	376.9	559.8	1,258.1	1,224.0	34.18	36.805		
5,500.0	5,121.6	5,246.3	5,183.0	34.1	17.4	162.18	380.8	564.9	1,264.8	1,230.4	34.40	36.772		
5,600.0	5,221.2	5,315.8	5,252.4	34.3	17.5	162.17	383.2	567.9	1,268.8	1,234.4	34.49	36.787		
5,704.8	5,326.0	5,389.4	5,326.0	34.4	17.6	-176.38	384.0	569.0	1,270.3	1,235.9	34.46	36.859		
5,800.0	5,421.2	5,484.6	5,421.2	34.4	17.8	-176.38	384.0	569.0	1,270.3	1,235.6	34.73	36.577		
5,900.0	5,521.2	5,584.6	5,521.2	34.5	17.9	-176.38	384.0	569.0	1,270.3	1,235.3	35.03	36.269		
6,000.0	5,621.2	5,684.6	5,621.2	34.6	18.1	-176.38	384.0	569.0	1,270.3	1,235.0	35.32	35.962		
6,100.0	5,721.2	5,784.6	5,721.2	34.7	18.2	-176.38	384.0	569.0	1,270.3	1,234.7	35.63	35.657		
6,200.0	5,821.2	5,884.6	5,821.2	34.7	18.4	-176.38	384.0	569.0	1,270.3	1,234.4	35.93	35.355		
6,300.0	5,921.2	5,984.6	5,921.2	34.8	18.5	-176.38	384.0	569.0	1,270.3	1,234.1	36.24	35.055		
6,400.0	6,021.2	6,084.6	6,021.2	34.9	18.7	-176.38	384.0	569.0	1,270.3	1,233.8	36.55	34.757		
6,500.0	6,121.2	6,184.6	6,121.2	35.0	18.8	-176.38	384.0	569.0	1,270.3	1,233.5	36.86	34.461		
6,600.0	6,221.2	6,284.6	6,221.2	35.0	19.0	-176.38	384.0	569.0	1,270.3	1,233.1	37.18	34.168		
6,700.0	6,321.2	6,384.6	6,321.2	35.1	19.1	-176.38	384.0	569.0	1,270.3	1,232.8	37.50	33.878		
6,800.0	6,421.2	6,484.6	6,421.2	35.2	19.3	-176.38	384.0	569.0	1,270.3	1,232.5	37.82	33.590		
6,900.0	6,521.2	6,584.6	6,521.2	35.3	19.4	-176.38	384.0	569.0	1,270.3	1,232.2	38.14	33.304		
7,000.0	6,621.2	6,684.6	6,621.2	35.4	19.6	-176.38	384.0	569.0	1,270.3	1,231.9	38.47	33.022		
7,100.0	6,721.2	6,784.6	6,721.2	35.5	19.8	-176.38	384.0	569.0	1,270.3	1,231.5	38.80	32.742		
7,200.0	6,821.2	6,884.6	6,821.2	35.5	19.9	-176.38	384.0	569.0	1,270.3	1,231.2	39.13	32.464		
7,300.0	6,921.2	6,984.6	6,921.2	35.6	20.1	-176.38	384.0	569.0	1,270.3	1,230.9	39.46	32.190		
7,400.0	7,021.2	7,084.6	7,021.2	35.7	20.3	-176.38	384.0	569.0	1,270.3	1,230.5	39.80	31.918		
7,500.0	7,121.2	7,184.6	7,121.2	35.8	20.4	-176.38	384.0	569.0	1,270.3	1,230.2	40.14	31.650		
7,600.0	7,221.2	7,284.6	7,221.2	35.9	20.6	-176.38	384.0	569.0	1,270.3	1,229.8	40.48	31.384		
7,700.0	7,321.2	7,384.6	7,321.2	36.0	20.8	-176.38	384.0	569.0	1,270.3	1,229.5	40.82	31.121		
7,800.0	7,421.2	7,484.6	7,421.2	36.1	20.9	-176.38	384.0	569.0	1,270.3	1,229.2	41.16	30.860		
7,900.0	7,521.2	7,584.6	7,521.2	36.2	21.1	-176.38	384.0	569.0	1,270.3	1,228.8	41.51	30.603		
7,949.2	7,570.4	7,633.8	7,570.4	36.2	21.2	-176.38	384.0	569.0	1,270.3	1,228.6	41.68	30.477		
7,974.8	7,596.0	7,657.4	7,594.0	36.3	21.2	-176.38	384.0	569.0	1,270.3	1,228.6	41.77	30.415		

<b>Company:</b>	Ursa Operating Company, LLC	<b>Local Co-ordinate Reference:</b>	Well 23A-10-06-92
<b>Project:</b>	Rockies Region	<b>TVD Reference:</b>	23A-10-06-92 @ 5447.4usft (PAD Est KB)
<b>Reference Site:</b>	Valley Farms O	<b>MD Reference:</b>	23A-10-06-92 @ 5447.4usft (PAD Est KB)
<b>Site Error:</b>	0.0 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	23A-10-06-92	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Wellbore #1	<b>Database:</b>	MasterDB
<b>Reference Design:</b>	Design #2	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design Valley Farms O - 24B-10-06-92 - Wellbore #1 - Design #1													Offset Site Error: 0.0 usft
Survey Program: 0-MWD													Offset Well Error: 0.0 usft
Reference		Offset		Semi Major Axis		Distance						Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
0.0	0.0	0.0	0.0	0.0	0.0	178.59	-62.5	1.5	62.5				
100.0	100.0	100.0	100.0	0.1	0.1	178.59	-62.5	1.5	62.5	62.3	0.19	328.593	
200.0	200.0	200.0	200.0	0.3	0.3	178.59	-62.5	1.5	62.5	61.8	0.64	97.678	
300.0	300.0	300.0	300.0	0.5	0.5	178.59	-62.5	1.5	62.5	61.4	1.09	57.365	
400.0	400.0	400.0	400.0	0.8	0.8	178.59	-62.5	1.5	62.5	60.9	1.54	40.606	
500.0	500.0	500.0	500.0	1.0	1.0	178.59	-62.5	1.5	62.5	60.5	1.99	31.426	
600.0	600.0	600.0	600.0	1.2	1.2	178.59	-62.5	1.5	62.5	60.0	2.44	25.631	
700.0	700.0	700.0	700.0	1.4	1.4	178.59	-62.5	1.5	62.5	59.6	2.89	21.640	
800.0	800.0	800.0	800.0	1.7	1.7	178.59	-62.5	1.5	62.5	59.1	3.34	18.725 CC, ES	
900.0	900.0	900.0	900.0	1.9	1.9	158.00	-62.5	1.5	64.9	61.1	3.79	17.141	
1,000.0	999.6	999.6	999.6	2.1	2.1	160.26	-62.5	1.5	72.2	68.0	4.23	17.066 SF	
1,100.0	1,098.8	1,098.8	1,098.8	2.4	2.3	163.13	-62.5	1.5	84.6	80.0	4.67	18.111	
1,200.0	1,197.1	1,198.7	1,198.7	2.7	2.6	164.63	-62.0	4.0	101.4	96.3	5.10	19.888	
1,300.0	1,294.3	1,298.4	1,298.1	3.0	2.8	163.90	-60.4	11.6	121.6	116.1	5.52	22.021	
1,400.0	1,390.2	1,397.1	1,395.9	3.4	3.0	161.93	-57.9	24.1	145.3	139.4	5.98	24.314	
1,500.0	1,484.4	1,493.0	1,490.8	3.9	3.3	160.42	-55.1	37.8	173.4	167.0	6.47	26.811	
1,600.0	1,576.8	1,587.5	1,584.2	4.5	3.5	159.71	-52.3	51.4	206.3	199.3	6.98	29.536	
1,665.3	1,636.0	1,648.2	1,644.3	5.0	3.7	159.53	-50.5	60.1	230.2	222.9	7.33	31.400	
1,700.0	1,667.2	1,680.3	1,676.0	5.2	3.8	159.62	-49.6	64.7	243.5	235.9	7.54	32.273	
1,800.0	1,757.1	1,772.7	1,767.5	6.0	4.1	159.84	-46.9	78.0	281.6	273.4	8.17	34.455	
1,900.0	1,847.0	1,865.1	1,858.9	6.7	4.3	160.00	-44.2	91.3	319.8	310.9	8.82	36.237	
2,000.0	1,936.9	1,957.6	1,950.3	7.5	4.6	160.13	-41.5	104.5	357.9	348.4	9.49	37.715	
2,100.0	2,026.8	2,050.0	2,041.8	8.3	4.9	160.23	-38.8	117.8	396.1	385.9	10.17	38.952	
2,200.0	2,116.8	2,142.4	2,133.2	9.1	5.2	160.32	-36.0	131.1	434.2	423.4	10.86	39.997	
2,300.0	2,206.7	2,234.9	2,224.6	9.9	5.5	160.39	-33.3	144.3	472.4	460.8	11.55	40.889	
2,400.0	2,296.6	2,327.3	2,316.1	10.8	5.8	160.45	-30.6	157.6	510.6	498.3	12.26	41.656	
2,500.0	2,386.5	2,419.7	2,407.5	11.6	6.1	160.51	-27.9	170.9	548.7	535.7	12.97	42.321	
2,600.0	2,476.4	2,512.2	2,499.0	12.4	6.4	160.55	-25.2	184.1	586.9	573.2	13.68	42.902	
2,700.0	2,566.3	2,604.6	2,590.4	13.2	6.7	160.59	-22.5	197.4	625.0	610.6	14.40	43.412	
2,800.0	2,656.2	2,697.0	2,681.8	14.1	7.1	160.63	-19.8	210.7	663.2	648.1	15.12	43.864	
2,900.0	2,746.1	2,789.5	2,773.3	14.9	7.4	160.66	-17.1	224.0	701.3	685.5	15.84	44.266	
3,000.0	2,836.0	2,881.9	2,864.7	15.7	7.7	160.69	-14.4	237.2	739.5	722.9	16.57	44.626	
3,100.0	2,926.0	2,974.3	2,956.1	16.6	8.0	160.71	-11.7	250.5	777.7	760.4	17.30	44.949	
3,200.0	3,015.9	3,066.8	3,047.6	17.4	8.3	160.74	-9.0	263.8	815.8	797.8	18.03	45.241	
3,300.0	3,105.8	3,159.2	3,139.0	18.2	8.6	160.76	-6.3	277.0	854.0	835.2	18.77	45.506	
3,400.0	3,195.7	3,251.6	3,230.4	19.1	8.9	160.78	-3.6	290.3	892.1	872.6	19.50	45.747	
3,500.0	3,285.6	3,344.1	3,321.9	19.9	9.3	160.80	-0.9	303.6	930.3	910.1	20.24	45.967	
3,600.0	3,375.5	3,436.5	3,413.3	20.7	9.6	160.81	1.8	316.8	968.5	947.5	20.98	46.169	
3,700.0	3,465.4	3,528.9	3,504.7	21.6	9.9	160.83	4.5	330.1	1,006.6	984.9	21.72	46.354	
3,800.0	3,555.3	3,621.4	3,596.2	22.4	10.2	160.84	7.3	343.4	1,044.8	1,022.3	22.46	46.525	
3,900.0	3,645.3	3,713.8	3,687.6	23.2	10.5	160.86	10.0	356.6	1,082.9	1,059.7	23.20	46.683	
4,000.0	3,735.2	3,806.2	3,779.0	24.1	10.9	160.87	12.7	369.9	1,121.1	1,097.2	23.94	46.830	
4,100.0	3,825.1	3,898.7	3,870.5	24.9	11.2	160.88	15.4	383.2	1,159.3	1,134.6	24.68	46.966	
4,200.0	3,915.0	3,991.1	3,961.9	25.7	11.5	160.89	18.1	396.4	1,197.4	1,172.0	25.43	47.092	
4,300.0	4,004.9	4,083.5	4,053.4	26.6	11.8	160.90	20.8	409.7	1,235.6	1,209.4	26.17	47.210	
4,400.0	4,094.8	4,176.0	4,144.8	27.4	12.2	160.91	23.5	423.0	1,273.7	1,246.8	26.92	47.321	
4,500.0	4,184.7	4,268.4	4,236.2	28.3	12.5	160.92	26.2	436.3	1,311.9	1,284.2	27.66	47.424	
4,600.0	4,274.6	4,360.8	4,327.7	29.1	12.8	160.93	28.9	449.5	1,350.0	1,321.6	28.41	47.521	
4,700.0	4,364.5	4,453.3	4,419.1	29.9	13.1	160.93	31.6	462.8	1,388.2	1,359.1	29.16	47.612	
4,800.0	4,454.5	4,545.7	4,510.5	30.8	13.4	160.94	34.3	476.1	1,426.4	1,396.5	29.90	47.697	
4,839.6	4,490.0	4,582.3	4,546.7	31.1	13.6	160.94	35.4	481.3	1,441.5	1,411.3	30.20	47.730	
4,900.0	4,544.8	4,638.5	4,602.3	31.6	13.8	161.17	37.0	489.4	1,463.7	1,433.0	30.72	47.640	

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

<b>Company:</b>	Ursa Operating Company, LLC	<b>Local Co-ordinate Reference:</b>	Well 23A-10-06-92
<b>Project:</b>	Rockies Region	<b>TVD Reference:</b>	23A-10-06-92 @ 5447.4usft (PAD Est KB)
<b>Reference Site:</b>	Valley Farms O	<b>MD Reference:</b>	23A-10-06-92 @ 5447.4usft (PAD Est KB)
<b>Site Error:</b>	0.0 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	23A-10-06-92	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Wellbore #1	<b>Database:</b>	MasterDB
<b>Reference Design:</b>	Design #2	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design													Offset Site Error:	0.0 usft
Survey Program: 0-MWD													Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor		
5,000.0	4,637.1	4,732.8	4,695.6	32.1	14.1	161.44	39.8	502.9	1,496.7	1,465.2	31.52	47.478		
5,100.0	4,731.2	4,828.6	4,790.4	32.7	14.4	161.58	42.6	516.7	1,525.1	1,492.8	32.28	47.246		
5,200.0	4,827.0	4,925.7	4,886.4	33.1	14.8	161.62	45.4	530.6	1,548.6	1,515.6	32.98	46.955		
5,300.0	4,924.2	5,023.7	4,983.4	33.5	15.1	161.56	48.3	544.7	1,567.3	1,533.7	33.62	46.614		
5,400.0	5,022.5	5,115.1	5,073.8	33.8	15.4	161.42	50.9	557.5	1,581.2	1,547.1	34.14	46.312		
5,500.0	5,121.6	5,200.0	5,158.2	34.1	15.6	161.33	52.7	566.3	1,591.2	1,556.7	34.46	46.169		
5,600.0	5,221.2	5,279.9	5,238.0	34.3	15.8	161.29	53.7	571.3	1,597.3	1,562.7	34.63	46.128		
5,704.8	5,326.0	5,367.9	5,326.0	34.4	15.9	-177.27	54.1	573.0	1,599.5	1,564.8	34.67	46.139		
5,800.0	5,421.2	5,463.1	5,421.2	34.4	16.0	-177.27	54.1	573.0	1,599.5	1,564.6	34.93	45.798		
5,900.0	5,521.2	5,563.1	5,521.2	34.5	16.2	-177.27	54.1	573.0	1,599.5	1,564.3	35.22	45.420		
6,000.0	5,621.2	5,663.1	5,621.2	34.6	16.4	-177.27	54.1	573.0	1,599.5	1,564.0	35.51	45.045		
6,100.0	5,721.2	5,763.1	5,721.2	34.7	16.5	-177.27	54.1	573.0	1,599.5	1,563.7	35.81	44.671		
6,200.0	5,821.2	5,863.1	5,821.2	34.7	16.7	-177.27	54.1	573.0	1,599.5	1,563.4	36.11	44.300		
6,300.0	5,921.2	5,963.1	5,921.2	34.8	16.9	-177.27	54.1	573.0	1,599.5	1,563.1	36.41	43.932		
6,400.0	6,021.2	6,063.1	6,021.2	34.9	17.0	-177.27	54.1	573.0	1,599.5	1,562.8	36.71	43.565		
6,500.0	6,121.2	6,163.1	6,121.2	35.0	17.2	-177.27	54.1	573.0	1,599.5	1,562.5	37.02	43.202		
6,600.0	6,221.2	6,263.1	6,221.2	35.0	17.4	-177.27	54.1	573.0	1,599.5	1,562.2	37.34	42.842		
6,700.0	6,321.2	6,363.1	6,321.2	35.1	17.5	-177.27	54.1	573.0	1,599.5	1,561.8	37.65	42.484		
6,800.0	6,421.2	6,463.1	6,421.2	35.2	17.7	-177.27	54.1	573.0	1,599.5	1,561.5	37.97	42.129		
6,900.0	6,521.2	6,563.1	6,521.2	35.3	17.9	-177.27	54.1	573.0	1,599.5	1,561.2	38.29	41.777		
7,000.0	6,621.2	6,663.1	6,621.2	35.4	18.0	-177.27	54.1	573.0	1,599.5	1,560.9	38.61	41.429		
7,100.0	6,721.2	6,763.1	6,721.2	35.5	18.2	-177.27	54.1	573.0	1,599.5	1,560.6	38.93	41.083		
7,200.0	6,821.2	6,863.1	6,821.2	35.5	18.4	-177.27	54.1	573.0	1,599.5	1,560.2	39.26	40.741		
7,300.0	6,921.2	6,963.1	6,921.2	35.6	18.6	-177.27	54.1	573.0	1,599.5	1,559.9	39.59	40.402		
7,400.0	7,021.2	7,063.1	7,021.2	35.7	18.8	-177.27	54.1	573.0	1,599.5	1,559.6	39.92	40.066		
7,500.0	7,121.2	7,163.1	7,121.2	35.8	18.9	-177.27	54.1	573.0	1,599.5	1,559.2	40.26	39.734		
7,600.0	7,221.2	7,263.1	7,221.2	35.9	19.1	-177.27	54.1	573.0	1,599.5	1,558.9	40.59	39.405		
7,700.0	7,321.2	7,363.1	7,321.2	36.0	19.3	-177.27	54.1	573.0	1,599.5	1,558.6	40.93	39.079		
7,800.0	7,421.2	7,463.1	7,421.2	36.1	19.5	-177.27	54.1	573.0	1,599.5	1,558.2	41.27	38.757		
7,900.0	7,521.2	7,563.1	7,521.2	36.2	19.7	-177.27	54.1	573.0	1,599.5	1,557.9	41.61	38.438		
7,947.3	7,568.5	7,610.4	7,568.5	36.2	19.7	-177.27	54.1	573.0	1,599.5	1,557.7	41.78	38.288		
7,974.8	7,596.0	7,630.9	7,589.0	36.3	19.8	-177.27	54.1	573.0	1,599.5	1,557.7	41.86	38.214		

<b>Company:</b>	Ursa Operating Company, LLC	<b>Local Co-ordinate Reference:</b>	Well 23A-10-06-92
<b>Project:</b>	Rockies Region	<b>TVD Reference:</b>	23A-10-06-92 @ 5447.4usft (PAD Est KB)
<b>Reference Site:</b>	Valley Farms O	<b>MD Reference:</b>	23A-10-06-92 @ 5447.4usft (PAD Est KB)
<b>Site Error:</b>	0.0 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	23A-10-06-92	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Wellbore #1	<b>Database:</b>	MasterDB
<b>Reference Design:</b>	Design #2	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design Valley Farms O - 24C-10-06-92 - Wellbore #1 - Design #1													Offset Site Error:	0.0 usft
Survey Program: 0-MWD													Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis		Distance								Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor		
0.0	0.0	0.0	0.0	0.0	0.0	178.59	-75.0	1.8	75.0					
100.0	100.0	100.0	100.0	0.1	0.1	178.59	-75.0	1.8	75.0	74.8	0.19	394.310		
200.0	200.0	200.0	200.0	0.3	0.3	178.59	-75.0	1.8	75.0	74.3	0.64	117.213		
300.0	300.0	300.0	300.0	0.5	0.5	178.59	-75.0	1.8	75.0	73.9	1.09	68.838		
400.0	400.0	400.0	400.0	0.8	0.8	178.59	-75.0	1.8	75.0	73.4	1.54	48.727		
500.0	500.0	500.0	500.0	1.0	1.0	178.59	-75.0	1.8	75.0	73.0	1.99	37.711		
600.0	600.0	600.0	600.0	1.2	1.2	178.59	-75.0	1.8	75.0	72.5	2.44	30.757		
700.0	700.0	700.0	700.0	1.4	1.4	178.59	-75.0	1.8	75.0	72.1	2.89	25.968		
800.0	800.0	800.0	800.0	1.7	1.7	178.59	-75.0	1.8	75.0	71.6	3.34	22.470 CC, ES		
900.0	900.0	900.0	900.0	1.9	1.9	157.86	-75.0	1.8	77.4	73.6	3.79	20.441		
1,000.0	999.6	999.6	999.6	2.1	2.1	159.78	-75.0	1.8	84.7	80.5	4.23	20.014 SF		
1,100.0	1,098.8	1,098.8	1,098.8	2.4	2.3	162.33	-75.0	1.8	97.1	92.4	4.67	20.770		
1,200.0	1,197.1	1,195.8	1,195.7	2.7	2.5	163.72	-75.7	4.1	115.1	110.0	5.09	22.607		
1,300.0	1,294.3	1,291.3	1,290.9	3.0	2.7	163.22	-78.1	10.9	139.3	133.8	5.51	25.289		
1,400.0	1,390.2	1,384.6	1,383.6	3.4	2.9	161.67	-81.9	21.8	169.5	163.6	5.95	28.480		
1,500.0	1,484.4	1,477.7	1,475.6	3.9	3.2	160.12	-86.6	35.3	205.2	198.8	6.43	31.904		
1,600.0	1,576.8	1,569.2	1,566.0	4.5	3.4	159.29	-91.3	48.5	245.5	238.5	6.93	35.420		
1,665.3	1,636.0	1,627.9	1,623.9	5.0	3.6	159.00	-94.2	57.0	274.1	266.9	7.27	37.731		
1,700.0	1,667.2	1,658.8	1,654.5	5.2	3.7	159.07	-95.8	61.5	289.9	282.4	7.47	38.796		
1,800.0	1,757.1	1,747.9	1,742.6	6.0	3.9	159.23	-100.3	74.4	335.3	327.2	8.08	41.471		
1,900.0	1,847.0	1,837.0	1,830.6	6.7	4.2	159.35	-104.8	87.3	380.7	372.0	8.72	43.664		
2,000.0	1,936.9	1,926.1	1,918.7	7.5	4.5	159.45	-109.3	100.2	426.1	416.7	9.37	45.478		
2,100.0	2,026.8	2,015.2	2,006.7	8.3	4.8	159.53	-113.8	113.1	471.4	461.4	10.03	46.993		
2,200.0	2,116.8	2,104.3	2,094.8	9.1	5.1	159.59	-118.3	126.0	516.8	506.1	10.71	48.269		
2,300.0	2,206.7	2,193.5	2,182.8	9.9	5.4	159.65	-122.8	138.9	562.2	550.8	11.39	49.355		
2,400.0	2,296.6	2,282.6	2,270.9	10.8	5.7	159.69	-127.3	151.8	607.6	595.5	12.08	50.286		
2,500.0	2,386.5	2,371.7	2,358.9	11.6	6.0	159.73	-131.8	164.7	653.0	640.2	12.78	51.091		
2,600.0	2,476.4	2,460.8	2,447.0	12.4	6.3	159.77	-136.4	177.7	698.4	684.9	13.48	51.792		
2,700.0	2,566.3	2,549.9	2,535.0	13.2	6.6	159.80	-140.9	190.6	743.8	729.6	14.19	52.407		
2,800.0	2,656.2	2,639.0	2,623.1	14.1	6.9	159.82	-145.4	203.5	789.1	774.2	14.90	52.949		
2,900.0	2,746.1	2,728.1	2,711.1	14.9	7.2	159.85	-149.9	216.4	834.5	818.9	15.62	53.430		
3,000.0	2,836.0	2,817.2	2,799.2	15.7	7.5	159.87	-154.4	229.3	879.9	863.6	16.34	53.860		
3,100.0	2,926.0	2,906.3	2,887.2	16.6	7.9	159.89	-158.9	242.2	925.3	908.3	17.06	54.244		
3,200.0	3,015.9	2,995.4	2,975.3	17.4	8.2	159.91	-163.4	255.1	970.7	952.9	17.78	54.590		
3,300.0	3,105.8	3,084.5	3,063.3	18.2	8.5	159.92	-167.9	268.0	1,016.1	997.6	18.51	54.903		
3,400.0	3,195.7	3,173.6	3,151.4	19.1	8.8	159.94	-172.4	280.9	1,061.5	1,042.2	19.23	55.186		
3,500.0	3,285.6	3,262.7	3,239.4	19.9	9.1	159.95	-176.9	293.8	1,106.9	1,086.9	19.96	55.445		
3,600.0	3,375.5	3,351.8	3,327.5	20.7	9.4	159.96	-181.4	306.7	1,152.3	1,131.6	20.69	55.681		
3,700.0	3,465.4	3,440.9	3,415.6	21.6	9.8	159.97	-185.9	319.6	1,197.6	1,176.2	21.43	55.898		
3,800.0	3,555.3	3,530.0	3,503.6	22.4	10.1	159.98	-190.4	332.5	1,243.0	1,220.9	22.16	56.097		
3,900.0	3,645.3	3,619.1	3,591.7	23.2	10.4	159.99	-194.9	345.4	1,288.4	1,265.5	22.89	56.280		
4,000.0	3,735.2	3,708.3	3,679.7	24.1	10.7	160.00	-199.4	358.3	1,333.8	1,310.2	23.63	56.450		
4,100.0	3,825.1	3,797.4	3,767.8	24.9	11.0	160.01	-204.0	371.2	1,379.2	1,354.8	24.36	56.607		
4,200.0	3,915.0	3,886.5	3,855.8	25.7	11.4	160.02	-208.5	384.1	1,424.6	1,399.5	25.10	56.753		
4,300.0	4,004.9	3,975.6	3,943.9	26.6	11.7	160.03	-213.0	397.0	1,470.0	1,444.1	25.84	56.888		
4,400.0	4,094.8	4,064.7	4,031.9	27.4	12.0	160.03	-217.5	409.9	1,515.4	1,488.8	26.58	57.015		
4,500.0	4,184.7	4,153.8	4,120.0	28.3	12.3	160.04	-222.0	422.8	1,560.7	1,533.4	27.32	57.133		
4,600.0	4,274.6	4,242.9	4,208.0	29.1	12.7	160.05	-226.5	435.7	1,606.1	1,578.1	28.06	57.243		
4,700.0	4,364.5	4,332.0	4,296.1	29.9	13.0	160.05	-231.0	448.6	1,651.5	1,622.7	28.80	57.347		
4,800.0	4,454.5	4,421.1	4,384.1	30.8	13.3	160.06	-235.5	461.5	1,696.9	1,667.4	29.54	57.444		
4,839.6	4,490.0	4,456.4	4,419.0	31.1	13.4	160.06	-237.3	466.6	1,714.9	1,685.0	29.83	57.481		
4,900.0	4,544.8	4,510.6	4,472.6	31.6	13.6	160.35	-240.0	474.5	1,741.5	1,711.1	30.37	57.349		

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

<b>Company:</b>	Ursa Operating Company, LLC	<b>Local Co-ordinate Reference:</b>	Well 23A-10-06-92
<b>Project:</b>	Rockies Region	<b>TVD Reference:</b>	23A-10-06-92 @ 5447.4usft (PAD Est KB)
<b>Reference Site:</b>	Valley Farms O	<b>MD Reference:</b>	23A-10-06-92 @ 5447.4usft (PAD Est KB)
<b>Site Error:</b>	0.0 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	23A-10-06-92	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Wellbore #1	<b>Database:</b>	MasterDB
<b>Reference Design:</b>	Design #2	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design Valley Farms O - 24C-10-06-92 - Wellbore #1 - Design #1													Offset Site Error: 0.0 usft
Survey Program: 0-MWD													Offset Well Error: 0.0 usft
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
5,000.0	4,637.1	4,602.0	4,562.9	32.1	14.0	160.73	-244.6	487.7	1,782.0	1,750.8	31.18	57.149	
5,100.0	4,731.2	4,695.3	4,655.0	32.7	14.3	160.99	-249.4	501.2	1,817.9	1,785.9	31.95	56.903	
5,200.0	4,827.0	4,790.1	4,748.8	33.1	14.6	161.14	-254.2	515.0	1,849.1	1,816.5	32.66	56.625	
5,300.0	4,924.2	4,886.3	4,843.8	33.5	15.0	161.19	-259.0	528.9	1,875.7	1,842.3	33.30	56.323	
5,400.0	5,022.5	4,983.5	4,939.8	33.8	15.4	161.14	-263.9	543.0	1,897.4	1,863.5	33.88	56.004	
5,500.0	5,121.6	5,085.9	5,041.0	34.1	15.7	160.98	-269.1	557.7	1,914.3	1,879.9	34.40	55.652	
5,600.0	5,221.2	5,226.0	5,180.3	34.3	16.0	160.76	-274.1	572.2	1,925.2	1,890.4	34.81	55.309	
5,704.8	5,326.0	5,371.8	5,326.0	34.4	16.3	-177.85	-275.8	576.9	1,928.9	1,893.9	35.00	55.115	
5,800.0	5,421.2	5,467.0	5,421.2	34.4	16.4	-177.85	-275.8	576.9	1,928.9	1,893.7	35.25	54.722	
5,900.0	5,521.2	5,567.0	5,521.2	34.5	16.6	-177.85	-275.8	576.9	1,928.9	1,893.4	35.53	54.291	
6,000.0	5,621.2	5,667.0	5,621.2	34.6	16.7	-177.85	-275.8	576.9	1,928.9	1,893.1	35.81	53.861	
6,100.0	5,721.2	5,767.0	5,721.2	34.7	16.9	-177.85	-275.8	576.9	1,928.9	1,892.8	36.10	53.433	
6,200.0	5,821.2	5,867.0	5,821.2	34.7	17.0	-177.85	-275.8	576.9	1,928.9	1,892.5	36.39	53.007	
6,300.0	5,921.2	5,967.0	5,921.2	34.8	17.2	-177.85	-275.8	576.9	1,928.9	1,892.2	36.68	52.583	
6,400.0	6,021.2	6,067.0	6,021.2	34.9	17.3	-177.85	-275.8	576.9	1,928.9	1,891.9	36.98	52.162	
6,500.0	6,121.2	6,167.0	6,121.2	35.0	17.5	-177.85	-275.8	576.9	1,928.9	1,891.6	37.28	51.742	
6,600.0	6,221.2	6,267.0	6,221.2	35.0	17.7	-177.85	-275.8	576.9	1,928.9	1,891.3	37.58	51.326	
6,700.0	6,321.2	6,367.0	6,321.2	35.1	17.8	-177.85	-275.8	576.9	1,928.9	1,891.0	37.89	50.912	
6,800.0	6,421.2	6,467.0	6,421.2	35.2	18.0	-177.85	-275.8	576.9	1,928.9	1,890.7	38.20	50.502	
6,900.0	6,521.2	6,567.0	6,521.2	35.3	18.1	-177.85	-275.8	576.9	1,928.9	1,890.4	38.51	50.094	
7,000.0	6,621.2	6,667.0	6,621.2	35.4	18.3	-177.85	-275.8	576.9	1,928.9	1,890.1	38.82	49.689	
7,100.0	6,721.2	6,767.0	6,721.2	35.5	18.5	-177.85	-275.8	576.9	1,928.9	1,889.8	39.14	49.288	
7,200.0	6,821.2	6,867.0	6,821.2	35.5	18.6	-177.85	-275.8	576.9	1,928.9	1,889.5	39.45	48.889	
7,300.0	6,921.2	6,967.0	6,921.2	35.6	18.8	-177.85	-275.8	576.9	1,928.9	1,889.1	39.78	48.494	
7,400.0	7,021.2	7,067.0	7,021.2	35.7	19.0	-177.85	-275.8	576.9	1,928.9	1,888.8	40.10	48.103	
7,500.0	7,121.2	7,167.0	7,121.2	35.8	19.2	-177.85	-275.8	576.9	1,928.9	1,888.5	40.43	47.715	
7,600.0	7,221.2	7,267.0	7,221.2	35.9	19.3	-177.85	-275.8	576.9	1,928.9	1,888.2	40.75	47.330	
7,700.0	7,321.2	7,367.0	7,321.2	36.0	19.5	-177.85	-275.8	576.9	1,928.9	1,887.8	41.09	46.949	
7,800.0	7,421.2	7,467.0	7,421.2	36.1	19.7	-177.85	-275.8	576.9	1,928.9	1,887.5	41.42	46.572	
7,900.0	7,521.2	7,567.0	7,521.2	36.2	19.8	-177.85	-275.8	576.9	1,928.9	1,887.2	41.75	46.198	
7,947.3	7,568.5	7,614.3	7,568.5	36.2	19.9	-177.85	-275.8	576.9	1,928.9	1,887.0	41.91	46.023	
7,974.8	7,596.0	7,634.8	7,589.0	36.3	20.0	-177.85	-275.8	576.9	1,928.9	1,886.9	41.99	45.935	

<b>Company:</b>	Ursa Operating Company, LLC	<b>Local Co-ordinate Reference:</b>	Well 23A-10-06-92
<b>Project:</b>	Rockies Region	<b>TVD Reference:</b>	23A-10-06-92 @ 5447.4usft (PAD Est KB)
<b>Reference Site:</b>	Valley Farms O	<b>MD Reference:</b>	23A-10-06-92 @ 5447.4usft (PAD Est KB)
<b>Site Error:</b>	0.0 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	23A-10-06-92	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Wellbore #1	<b>Database:</b>	MasterDB
<b>Reference Design:</b>	Design #2	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design Valley Farms O - VALLEY FARMS D13 - Wellbore #1 - Actual													Offset Site Error: 0.0 usft
Survey Program: 149-MWD													Offset Well Error: 0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
0.0	0.0	0.0	0.0	0.0	0.0	142.45	-1,861.6	1,431.0	2,348.1				
100.0	100.0	123.0	123.0	0.1	0.1	142.45	-1,861.3	1,430.5	2,347.6	2,347.4	0.22	N/A	
200.0	200.0	494.0	492.9	0.3	1.0	142.35	-1,839.0	1,419.0	2,341.2	2,339.9	1.30	1,794.942	
300.0	300.0	824.4	818.0	0.5	2.2	142.24	-1,790.6	1,387.1	2,323.5	2,321.0	2.45	950.145	
400.0	400.0	1,217.0	1,194.0	0.8	4.4	141.75	-1,692.3	1,334.1	2,296.5	2,292.5	4.09	561.230	
500.0	500.0	1,474.4	1,431.4	1.0	6.3	141.49	-1,608.6	1,280.1	2,257.0	2,251.6	5.43	415.946	
600.0	600.0	1,562.4	1,511.5	1.2	7.0	141.39	-1,578.2	1,260.2	2,215.8	2,209.7	6.03	367.458	
700.0	700.0	1,652.2	1,593.3	1.4	7.6	141.29	-1,547.3	1,239.9	2,174.7	2,168.1	6.63	328.075	
800.0	800.0	1,752.9	1,685.0	1.7	8.4	141.19	-1,512.7	1,216.5	2,133.4	2,126.1	7.29	292.517	
900.0	900.0	1,841.2	1,765.3	1.9	9.1	120.85	-1,482.3	1,196.0	2,093.2	2,086.4	6.77	309.148	
1,000.0	999.6	1,933.6	1,849.4	2.1	9.8	122.00	-1,450.6	1,174.4	2,055.5	2,048.2	7.29	282.051	
1,100.0	1,098.8	2,017.9	1,926.2	2.4	10.4	123.19	-1,422.4	1,154.2	2,020.6	2,012.8	7.80	259.010	
1,200.0	1,197.1	2,105.6	2,006.3	2.7	11.1	124.44	-1,393.6	1,132.9	1,988.9	1,980.5	8.36	237.889	
1,300.0	1,294.3	2,201.6	2,093.9	3.0	11.8	125.75	-1,362.0	1,109.9	1,960.3	1,951.3	9.00	217.833	
1,400.0	1,390.2	2,296.4	2,180.5	3.4	12.6	127.03	-1,329.5	1,088.7	1,934.7	1,925.0	9.69	199.606	
1,500.0	1,484.4	2,387.4	2,263.5	3.9	13.2	128.28	-1,297.7	1,069.3	1,912.5	1,902.1	10.43	183.402	
1,600.0	1,576.8	2,484.4	2,351.9	4.5	14.0	129.61	-1,263.9	1,048.7	1,893.9	1,882.7	11.25	168.415	
1,665.3	1,636.0	2,539.8	2,402.5	5.0	14.4	130.41	-1,244.6	1,036.8	1,883.8	1,872.1	11.78	159.887	
1,700.0	1,667.2	2,569.0	2,429.2	5.2	14.7	130.73	-1,234.5	1,030.5	1,879.0	1,867.0	12.08	155.522	
1,800.0	1,757.1	2,657.8	2,510.4	6.0	15.3	131.69	-1,204.0	1,011.6	1,865.8	1,852.9	12.97	143.882	
1,900.0	1,847.0	2,732.2	2,578.6	6.7	15.9	132.49	-1,178.5	996.3	1,853.8	1,840.0	13.82	134.181	
2,000.0	1,936.9	2,808.7	2,649.0	7.5	16.4	133.32	-1,152.9	981.0	1,843.4	1,828.7	14.67	125.615	
2,100.0	2,026.8	2,889.1	2,723.3	8.3	17.0	134.21	-1,126.5	965.0	1,834.3	1,818.7	15.55	117.980	
2,200.0	2,116.8	2,966.1	2,794.6	9.1	17.6	135.04	-1,101.5	950.5	1,826.6	1,810.2	16.41	111.321	
2,300.0	2,206.7	3,037.7	2,861.3	9.9	18.1	135.82	-1,078.8	937.4	1,820.6	1,803.3	17.25	105.553	
2,400.0	2,296.6	3,120.7	2,938.9	10.8	18.6	136.73	-1,053.2	922.5	1,816.1	1,798.0	18.12	100.238	
2,500.0	2,386.5	3,226.6	3,037.8	11.6	19.3	137.91	-1,020.7	903.1	1,812.4	1,793.3	19.06	95.079	
2,600.0	2,476.4	3,358.3	3,159.9	12.4	20.3	139.42	-978.8	877.0	1,807.4	1,787.3	20.11	89.889	
2,700.0	2,566.3	3,439.9	3,235.4	13.2	20.9	140.36	-952.6	860.6	1,803.0	1,782.0	20.98	85.923	
2,800.0	2,656.2	3,534.4	3,323.0	14.1	21.6	141.43	-922.1	842.3	1,799.5	1,777.6	21.90	82.178	
2,900.0	2,746.1	3,611.0	3,394.0	14.9	22.1	142.30	-897.6	827.8	1,797.0	1,774.2	22.74	79.008	
3,000.0	2,836.0	3,688.6	3,466.3	15.7	22.6	143.19	-873.5	813.1	1,796.1	1,772.5	23.59	76.140	
3,003.1	2,838.8	3,690.9	3,468.4	15.7	22.7	143.21	-872.8	812.6	1,796.1	1,772.4	23.61	76.056 CC, ES	
3,100.0	2,926.0	3,758.8	3,531.9	16.6	23.1	143.98	-852.3	800.2	1,796.9	1,772.5	24.40	73.647	
3,200.0	3,015.9	3,827.1	3,596.2	17.4	23.6	144.75	-832.5	788.1	1,799.8	1,774.6	25.20	71.432	
3,300.0	3,105.8	3,893.0	3,658.5	18.2	24.0	145.49	-814.2	776.7	1,804.7	1,778.7	25.98	69.473	
3,400.0	3,195.7	3,965.7	3,727.5	19.1	24.4	146.30	-794.9	764.4	1,811.5	1,784.8	26.77	67.673	
3,500.0	3,285.6	4,033.5	3,792.2	19.9	24.8	147.03	-777.6	753.6	1,820.2	1,792.7	27.53	66.111	
3,600.0	3,375.5	4,100.5	3,856.4	20.7	25.2	147.73	-761.3	743.8	1,830.9	1,802.6	28.28	64.737	
3,700.0	3,465.4	4,175.0	3,928.2	21.6	25.6	148.49	-744.1	733.6	1,843.5	1,814.5	29.04	63.482	
3,800.0	3,555.3	4,227.2	3,978.7	22.4	25.8	149.02	-732.8	726.8	1,858.2	1,828.5	29.72	62.515	
3,900.0	3,645.3	4,269.0	4,019.2	23.2	26.0	149.44	-724.5	721.3	1,875.3	1,845.0	30.37	61.740	
4,000.0	3,735.2	4,336.6	4,085.2	24.1	26.3	150.11	-712.3	712.6	1,894.8	1,863.7	31.08	60.960	
4,100.0	3,825.1	4,396.3	4,143.7	24.9	26.6	150.69	-702.9	705.3	1,916.6	1,884.9	31.76	60.349	
4,200.0	3,915.0	4,463.8	4,209.9	25.7	26.8	151.33	-693.1	697.3	1,940.3	1,907.9	32.45	59.804	
4,300.0	4,004.9	4,549.0	4,293.8	26.6	27.1	152.11	-681.4	687.9	1,965.2	1,932.1	33.16	59.270	
4,400.0	4,094.8	4,619.8	4,363.6	27.4	27.4	152.73	-672.0	680.6	1,991.2	1,957.3	33.82	58.870	
4,500.0	4,184.7	4,699.3	4,442.1	28.3	27.6	153.40	-662.3	672.9	2,018.4	1,983.9	34.50	58.511	
4,600.0	4,274.6	4,802.8	4,544.5	29.1	28.0	154.20	-649.6	664.7	2,046.2	2,011.0	35.20	58.135	
4,700.0	4,364.5	4,886.4	4,627.3	29.9	28.2	154.78	-638.9	659.8	2,073.8	2,038.0	35.84	57.864	
4,800.0	4,454.5	4,956.7	4,697.0	30.8	28.4	155.24	-630.5	656.6	2,102.6	2,066.1	36.45	57.688	
4,839.6	4,490.0	4,983.7	4,723.8	31.1	28.5	155.41	-627.5	655.4	2,114.3	2,077.6	36.68	57.637	

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



<b>Company:</b>	Ursa Operating Company, LLC	<b>Local Co-ordinate Reference:</b>	Well 23A-10-06-92
<b>Project:</b>	Rockies Region	<b>TVD Reference:</b>	23A-10-06-92 @ 5447.4usft (PAD Est KB)
<b>Reference Site:</b>	Valley Farms O	<b>MD Reference:</b>	23A-10-06-92 @ 5447.4usft (PAD Est KB)
<b>Site Error:</b>	0.0 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	23A-10-06-92	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Wellbore #1	<b>Database:</b>	MasterDB
<b>Reference Design:</b>	Design #2	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design													Offset Site Error:	0.0 usft
Survey Program: 149-MWD													Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor		
4,900.0	4,544.8	5,019.0	4,758.9	31.6	28.6	155.84	-623.8	654.1	2,131.8	2,094.7	37.17	57.349		
5,000.0	4,637.1	5,101.0	4,840.5	32.1	28.8	156.60	-615.7	651.2	2,158.0	2,120.0	37.91	56.927		
5,100.0	4,731.2	5,183.1	4,922.2	32.7	28.9	157.23	-608.3	648.6	2,180.3	2,141.8	38.55	56.564		
5,200.0	4,827.0	5,265.3	5,004.0	33.1	29.1	157.75	-601.4	646.1	2,198.7	2,159.6	39.08	56.260		
5,300.0	4,924.2	5,351.4	5,089.9	33.5	29.3	158.17	-594.8	643.7	2,213.0	2,173.5	39.51	56.008		
5,400.0	5,022.5	5,432.2	5,170.4	33.8	29.4	158.49	-589.0	641.5	2,223.1	2,183.3	39.81	55.840		
5,500.0	5,121.6	5,520.0	5,258.1	34.1	29.6	158.69	-583.8	640.6	2,229.5	2,189.5	40.00	55.744		
5,600.0	5,221.2	5,591.2	5,329.2	34.3	29.7	158.76	-580.2	640.6	2,231.9	2,191.9	40.02	55.771		
5,704.8	5,326.0	5,677.1	5,415.0	34.4	29.8	-179.78	-576.4	640.8	2,229.9	2,190.0	39.93	55.849		
5,800.0	5,421.2	5,756.2	5,494.1	34.4	29.9	-179.79	-573.5	641.1	2,226.5	2,186.3	40.13	55.480		
5,900.0	5,521.2	5,833.9	5,571.7	34.5	30.0	-179.80	-571.3	641.4	2,223.6	2,183.3	40.35	55.106		
6,000.0	5,621.2	5,896.0	5,633.8	34.6	30.1	-179.80	-570.2	641.4	2,222.1	2,181.5	40.55	54.791		
6,100.0	5,721.2	5,991.0	5,728.8	34.7	30.2	-179.79	-569.7	640.9	2,221.5	2,180.7	40.80	54.444		
6,200.0	5,821.2	6,089.8	5,827.6	34.7	30.3	-179.77	-569.6	640.4	2,221.4	2,180.3	41.06	54.105		
6,300.0	5,921.2	6,188.5	5,926.3	34.8	30.3	-179.76	-569.3	640.0	2,221.1	2,179.8	41.31	53.768		
6,400.0	6,021.2	6,284.7	6,022.5	34.9	30.4	-179.76	-569.2	639.9	2,220.9	2,179.4	41.56	53.436		
6,426.5	6,047.7	6,309.9	6,047.7	34.9	30.4	-179.76	-569.2	639.8	2,220.9	2,179.3	41.63	53.349		
6,500.0	6,121.2	6,378.9	6,116.7	35.0	30.5	-179.76	-569.2	639.7	2,221.0	2,179.2	41.82	53.113		
6,600.0	6,221.2	6,468.7	6,206.5	35.0	30.6	-179.76	-569.6	639.8	2,221.4	2,179.4	42.06	52.810		
6,700.0	6,321.2	6,569.4	6,307.2	35.1	30.7	-179.78	-570.2	640.5	2,222.1	2,179.7	42.32	52.506		
6,800.0	6,421.2	6,661.7	6,399.5	35.2	30.7	-179.79	-571.0	641.2	2,222.9	2,180.3	42.57	52.222		
6,900.0	6,521.2	6,756.6	6,494.4	35.3	30.8	-179.81	-572.1	641.7	2,224.0	2,181.2	42.82	51.937		
7,000.0	6,621.2	6,866.8	6,604.6	35.4	30.9	-179.82	-573.0	642.1	2,224.9	2,181.8	43.09	51.627		
7,100.0	6,721.2	6,958.3	6,696.1	35.5	31.0	-179.83	-573.9	642.6	2,225.8	2,182.4	43.35	51.346		
7,200.0	6,821.2	7,050.5	6,788.3	35.5	31.0	-179.85	-575.1	643.4	2,227.1	2,183.5	43.60	51.075		
7,300.0	6,921.2	7,143.8	6,881.5	35.6	31.1	-179.88	-576.6	644.7	2,228.7	2,184.9	43.86	50.815		
7,400.0	7,021.2	7,235.2	6,972.9	35.7	31.1	-179.92	-578.4	646.2	2,230.7	2,186.6	44.11	50.570		
7,500.0	7,121.2	7,334.1	7,071.8	35.8	31.2	-179.95	-580.6	647.2	2,232.9	2,188.5	44.38	50.317		
7,600.0	7,221.2	7,428.0	7,165.6	35.9	31.3	-179.96	-582.8	647.7	2,235.2	2,190.6	44.64	50.069		
7,700.0	7,321.2	7,517.7	7,255.3	36.0	31.3	-179.97	-585.2	648.0	2,238.0	2,193.1	44.91	49.832		
7,800.0	7,421.2	7,621.1	7,358.7	36.1	31.4	-179.95	-588.2	647.1	2,240.8	2,195.6	45.20	49.570		
7,900.0	7,521.2	7,738.2	7,475.7	36.2	31.5	-179.90	-591.2	645.5	2,243.5	2,197.9	45.52	49.282		
7,974.8	7,596.0	7,829.3	7,566.8	36.3	31.6	-179.88	-592.6	644.7	2,244.5	2,198.8	45.77	49.042 SF		



<b>Company:</b>	Ursa Operating Company, LLC	<b>Local Co-ordinate Reference:</b>	Well 23A-10-06-92
<b>Project:</b>	Rockies Region	<b>TVD Reference:</b>	23A-10-06-92 @ 5447.4usft (PAD Est KB)
<b>Reference Site:</b>	Valley Farms O	<b>MD Reference:</b>	23A-10-06-92 @ 5447.4usft (PAD Est KB)
<b>Site Error:</b>	0.0 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	23A-10-06-92	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Wellbore #1	<b>Database:</b>	MasterDB
<b>Reference Design:</b>	Design #2	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design Valley Farms O - VALLEY FARMS D3 - Wellbore #1 - Actual													Offset Site Error:	0.0 usft
Survey Program: 241-MWD													Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Distance		Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)						
0.0	0.0	0.0	0.0	0.0	0.0	142.87	-1,864.2	1,411.3	2,338.1					
100.0	100.0	140.2	140.2	0.1	0.2	142.88	-1,863.3	1,410.4	2,337.3	2,337.0	0.25	9,427.351		
200.0	200.0	305.1	305.0	0.3	0.4	142.89	-1,859.9	1,407.0	2,334.5	2,333.8	0.73	3,203.700		
300.0	300.0	585.7	584.2	0.5	1.2	143.06	-1,843.5	1,385.9	2,323.8	2,322.2	1.63	1,426.080		
400.0	400.0	810.0	805.4	0.8	2.0	143.47	-1,826.6	1,353.0	2,309.0	2,306.6	2.40	962.726		
500.0	500.0	895.1	889.0	1.0	2.3	143.64	-1,818.8	1,339.0	2,291.8	2,289.0	2.82	813.221		
600.0	600.0	993.7	985.8	1.2	2.7	143.86	-1,810.4	1,322.2	2,274.8	2,271.5	3.27	695.875		
700.0	700.0	1,082.0	1,072.4	1.4	3.0	144.07	-1,803.3	1,306.9	2,258.0	2,254.3	3.70	610.763		
800.0	800.0	1,171.0	1,159.9	1.7	3.3	144.29	-1,796.6	1,291.6	2,241.8	2,237.7	4.13	543.406		
900.0	900.0	1,301.3	1,287.7	1.9	3.9	123.63	-1,786.3	1,268.5	2,226.3	2,221.4	4.92	452.902		
1,000.0	999.6	1,414.7	1,398.9	2.1	4.3	124.40	-1,775.4	1,249.3	2,213.0	2,207.5	5.47	404.848		
1,100.0	1,098.8	1,511.4	1,493.7	2.4	4.7	125.15	-1,765.5	1,232.8	2,202.1	2,196.1	5.99	367.644		
1,200.0	1,197.1	1,612.1	1,592.4	2.7	5.1	125.96	-1,755.7	1,215.3	2,194.7	2,188.2	6.55	334.976		
1,300.0	1,294.3	1,707.1	1,685.5	3.0	5.5	126.73	-1,745.7	1,199.5	2,190.4	2,183.3	7.13	307.386		
1,366.1	1,357.9	1,767.7	1,744.9	3.3	5.7	127.24	-1,739.5	1,189.3	2,189.6	2,182.1	7.53	290.692 CC, ES		
1,400.0	1,390.2	1,799.3	1,775.9	3.4	5.9	127.50	-1,736.3	1,184.0	2,189.8	2,182.1	7.74	282.772		
1,500.0	1,484.4	1,898.8	1,873.4	3.9	6.3	128.35	-1,726.3	1,167.0	2,192.9	2,184.4	8.44	259.838		
1,600.0	1,576.8	1,986.8	1,959.7	4.5	6.6	129.10	-1,717.3	1,151.9	2,199.6	2,190.5	9.15	240.290		
1,665.3	1,636.0	2,045.7	2,017.4	5.0	6.9	129.60	-1,711.5	1,141.6	2,206.4	2,196.7	9.65	228.562		
1,700.0	1,667.2	2,080.2	2,051.2	5.2	7.0	129.99	-1,708.1	1,135.6	2,210.4	2,200.5	9.96	221.973		
1,800.0	1,757.1	2,165.8	2,135.1	6.0	7.4	130.95	-1,699.2	1,121.1	2,222.6	2,211.8	10.80	205.726		
1,900.0	1,847.0	2,248.8	2,216.4	6.7	7.7	131.88	-1,691.1	1,106.8	2,235.9	2,224.2	11.65	191.893		
2,000.0	1,936.9	2,340.5	2,306.3	7.5	8.1	132.90	-1,682.1	1,091.2	2,250.1	2,237.6	12.53	179.622		
2,100.0	2,026.8	2,432.8	2,396.8	8.3	8.4	133.90	-1,672.8	1,075.6	2,264.9	2,251.5	13.40	169.027		
2,200.0	2,116.8	2,512.6	2,475.1	9.1	8.7	134.76	-1,664.8	1,062.3	2,280.6	2,266.4	14.23	160.221		
2,300.0	2,206.7	2,576.0	2,537.3	9.9	9.0	135.43	-1,658.8	1,052.0	2,297.7	2,282.7	15.02	152.958		
2,400.0	2,296.6	2,644.4	2,604.6	10.8	9.3	136.15	-1,653.0	1,040.9	2,316.5	2,300.6	15.82	146.390		
2,500.0	2,386.5	2,711.1	2,670.2	11.6	9.5	136.86	-1,648.2	1,030.2	2,336.9	2,320.3	16.62	140.635		
2,600.0	2,476.4	2,793.3	2,751.2	12.4	9.8	137.71	-1,642.9	1,017.1	2,358.8	2,341.3	17.44	135.217		
2,700.0	2,566.3	2,933.0	2,888.6	13.2	10.4	139.17	-1,633.0	993.5	2,380.6	2,362.2	18.41	129.299		
2,800.0	2,656.2	3,058.6	3,011.6	14.1	10.9	140.45	-1,621.5	971.3	2,401.1	2,381.7	19.34	124.176		
2,900.0	2,746.1	3,154.3	3,105.4	14.9	11.3	141.41	-1,612.2	954.0	2,421.6	2,401.4	20.18	119.990		
3,000.0	2,836.0	3,258.9	3,207.5	15.7	11.7	142.45	-1,601.6	934.8	2,442.4	2,421.4	21.04	116.063		
3,100.0	2,926.0	3,358.4	3,304.9	16.6	12.2	143.41	-1,590.7	917.0	2,463.3	2,441.4	21.87	112.622		
3,200.0	3,015.9	3,437.6	3,382.4	17.4	12.5	144.15	-1,581.9	903.4	2,484.8	2,462.2	22.63	109.784		
3,300.0	3,105.8	3,514.0	3,457.3	18.2	12.8	144.84	-1,573.9	890.7	2,507.6	2,484.2	23.38	107.260		
3,400.0	3,195.7	3,577.3	3,519.5	19.1	13.0	145.41	-1,567.8	880.4	2,531.6	2,507.5	24.08	105.113		
3,500.0	3,285.6	3,658.4	3,599.2	19.9	13.4	146.12	-1,560.2	867.7	2,556.7	2,531.9	24.82	103.009		
3,600.0	3,375.5	3,740.4	3,679.8	20.7	13.7	146.83	-1,552.7	855.0	2,582.5	2,557.0	25.55	101.086		
3,700.0	3,465.4	3,823.3	3,761.5	21.6	14.0	147.52	-1,545.4	842.4	2,609.2	2,582.9	26.27	99.332		
3,800.0	3,555.3	3,921.1	3,857.8	22.4	14.3	148.31	-1,536.6	828.2	2,636.2	2,609.2	27.00	97.626		
3,900.0	3,645.3	4,017.2	3,952.5	23.2	14.7	149.07	-1,527.6	814.6	2,663.4	2,635.7	27.72	96.067		
4,000.0	3,735.2	4,107.4	4,041.5	24.1	15.0	149.76	-1,518.9	802.1	2,690.9	2,662.5	28.43	94.662		
4,100.0	3,825.1	4,203.9	4,136.6	24.9	15.4	150.47	-1,509.7	789.0	2,718.9	2,689.7	29.13	93.334		
4,200.0	3,915.0	4,322.3	4,253.4	25.7	15.8	151.32	-1,497.3	773.7	2,746.4	2,716.6	29.86	91.973		
4,300.0	4,004.9	4,397.6	4,327.7	26.6	16.0	151.83	-1,489.1	764.6	2,774.1	2,743.6	30.51	90.931		
4,400.0	4,094.8	4,448.0	4,377.5	27.4	16.2	152.16	-1,484.1	758.8	2,803.0	2,771.9	31.11	90.110		
4,500.0	4,184.7	4,513.1	4,442.0	28.3	16.4	152.58	-1,478.3	751.7	2,833.3	2,801.6	31.72	89.328		
4,600.0	4,274.6	4,572.6	4,501.0	29.1	16.6	152.95	-1,473.7	746.0	2,864.9	2,832.6	32.31	88.661		
4,700.0	4,364.5	4,640.0	4,568.0	29.9	16.8	153.34	-1,469.2	740.1	2,897.8	2,864.8	32.91	88.048		
4,800.0	4,454.5	4,704.0	4,631.7	30.8	17.0	153.70	-1,465.4	735.1	2,931.6	2,898.1	33.49	87.532		
4,839.6	4,490.0	4,734.0	4,661.5	31.1	17.0	153.86	-1,463.7	733.0	2,945.2	2,911.5	33.73	87.326		

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

<b>Company:</b>	Ursa Operating Company, LLC	<b>Local Co-ordinate Reference:</b>	Well 23A-10-06-92
<b>Project:</b>	Rockies Region	<b>TVD Reference:</b>	23A-10-06-92 @ 5447.4usft (PAD Est KB)
<b>Reference Site:</b>	Valley Farms O	<b>MD Reference:</b>	23A-10-06-92 @ 5447.4usft (PAD Est KB)
<b>Site Error:</b>	0.0 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	23A-10-06-92	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Wellbore #1	<b>Database:</b>	MasterDB
<b>Reference Design:</b>	Design #2	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design Valley Farms O - VALLEY FARMS D3 - Wellbore #1 - Actual													Offset Site Error:	0.0 usft
Survey Program: 241-MWD													Offset Well Error:	0.0 usft
Reference	Offset	Semi Major Axis		Distance										Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor		
4,900.0	4,544.8	4,764.4	4,691.8	31.6	17.1	154.30	-1,462.2	731.0	2,965.6	2,931.4	34.14	86.859		
5,000.0	4,637.1	4,826.0	4,753.2	32.1	17.2	155.00	-1,459.8	727.0	2,996.8	2,962.0	34.75	86.242		
5,100.0	4,731.2	4,885.5	4,812.6	32.7	17.4	155.60	-1,458.1	723.2	3,024.6	2,989.3	35.28	85.735		
5,200.0	4,827.0	4,986.3	4,913.1	33.1	17.6	156.25	-1,455.8	716.6	3,048.5	3,012.7	35.79	85.169		
5,300.0	4,924.2	5,142.2	5,068.6	33.5	17.9	156.93	-1,450.0	706.9	3,066.3	3,029.9	36.32	84.429		
5,400.0	5,022.5	5,236.0	5,162.2	33.8	18.1	157.29	-1,445.8	702.0	3,078.7	3,042.1	36.66	83.974		
5,500.0	5,121.6	5,325.6	5,251.6	34.1	18.3	157.55	-1,441.9	697.7	3,086.6	3,049.7	36.91	83.616		
5,600.0	5,221.2	5,406.1	5,331.9	34.3	18.5	157.71	-1,438.8	693.9	3,090.2	3,053.2	37.06	83.386		
5,704.8	5,326.0	5,499.1	5,424.8	34.4	18.7	179.24	-1,435.7	689.9	3,089.3	3,052.2	37.13	83.211		
5,800.0	5,421.2	5,581.0	5,506.7	34.4	18.8	179.30	-1,433.3	687.1	3,086.5	3,049.1	37.37	82.583		
5,900.0	5,521.2	5,675.0	5,600.6	34.5	19.0	179.35	-1,430.8	684.3	3,083.8	3,046.1	37.66	81.891		
6,000.0	5,621.2	5,766.2	5,691.7	34.6	19.2	179.40	-1,428.6	681.5	3,081.4	3,043.4	37.94	81.225		
6,100.0	5,721.2	5,862.0	5,787.4	34.7	19.4	179.45	-1,426.5	678.5	3,079.1	3,040.9	38.22	80.553		
6,200.0	5,821.2	5,925.8	5,851.3	34.7	19.5	179.49	-1,425.5	676.7	3,077.5	3,039.0	38.46	80.018		
6,300.0	5,921.2	5,999.2	5,924.6	34.8	19.6	179.52	-1,425.2	675.0	3,077.0	3,038.3	38.71	79.488		
6,321.8	5,942.9	6,017.5	5,942.9	34.8	19.6	179.53	-1,425.2	674.6	3,077.0	3,038.3	38.77	79.368		
6,400.0	6,021.2	6,088.5	6,013.8	34.9	19.7	179.55	-1,425.3	673.3	3,077.2	3,038.2	38.99	78.929		
6,500.0	6,121.2	6,181.0	6,106.3	35.0	19.9	179.59	-1,425.6	671.5	3,077.5	3,038.2	39.27	78.376		
6,600.0	6,221.2	6,265.9	6,191.3	35.0	20.0	179.61	-1,426.2	670.4	3,078.2	3,038.6	39.53	77.862		
6,700.0	6,321.2	6,348.0	6,273.4	35.1	20.1	179.63	-1,427.3	669.4	3,079.4	3,039.7	39.80	77.377		
6,800.0	6,421.2	6,427.0	6,352.3	35.2	20.2	179.64	-1,428.7	668.5	3,081.3	3,041.2	40.06	76.919		
6,900.0	6,521.2	6,521.0	6,446.3	35.3	20.3	179.66	-1,430.9	667.7	3,083.6	3,043.3	40.34	76.435		
7,000.0	6,621.2	6,607.2	6,532.5	35.4	20.4	179.67	-1,433.3	667.1	3,086.4	3,045.8	40.62	75.988		
7,100.0	6,721.2	6,705.1	6,630.3	35.5	20.6	179.68	-1,436.2	666.6	3,089.3	3,048.4	40.91	75.517		
7,200.0	6,821.2	6,809.5	6,734.7	35.5	20.7	179.68	-1,439.2	666.4	3,092.2	3,051.0	41.21	75.039		
7,300.0	6,921.2	6,902.0	6,827.1	35.6	20.8	179.68	-1,441.8	666.4	3,095.1	3,053.6	41.49	74.599		
7,400.0	7,021.2	6,968.4	6,893.5	35.7	20.9	179.69	-1,444.2	666.1	3,098.6	3,056.9	41.74	74.241		
7,500.0	7,121.2	7,074.5	6,999.5	35.8	21.0	179.70	-1,448.7	665.2	3,102.9	3,060.9	42.05	73.797		
7,600.0	7,221.2	7,214.1	7,138.9	35.9	21.2	179.68	-1,453.5	666.4	3,106.4	3,064.0	42.39	73.279		
7,700.0	7,321.2	7,474.4	7,399.1	36.0	21.5	179.54	-1,452.5	674.2	3,105.3	3,062.4	42.88	72.418		
7,800.0	7,421.2	7,561.0	7,485.7	36.1	21.6	179.52	-1,450.5	675.3	3,103.0	3,059.9	43.16	71.898		
7,900.0	7,521.2	7,645.6	7,570.3	36.2	21.8	179.51	-1,448.9	675.6	3,101.2	3,057.8	43.45	71.382		
7,974.8	7,596.0	7,705.8	7,630.5	36.3	21.8	179.51	-1,448.1	675.6	3,100.2	3,056.5	43.66	71.010 SF		

<b>Company:</b>	Ursa Operating Company, LLC	<b>Local Co-ordinate Reference:</b>	Well 23A-10-06-92
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<b>Reference Site:</b>	Valley Farms O	<b>MD Reference:</b>	23A-10-06-92 @ 5447.4usft (PAD Est KB)
<b>Site Error:</b>	0.0 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	23A-10-06-92	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Wellbore #1	<b>Database:</b>	MasterDB
<b>Reference Design:</b>	Design #2	<b>Offset TVD Reference:</b>	Offset Datum

Reference Depths are relative to 23A-10-06-92 @ 5447.4usft (PAD Est)

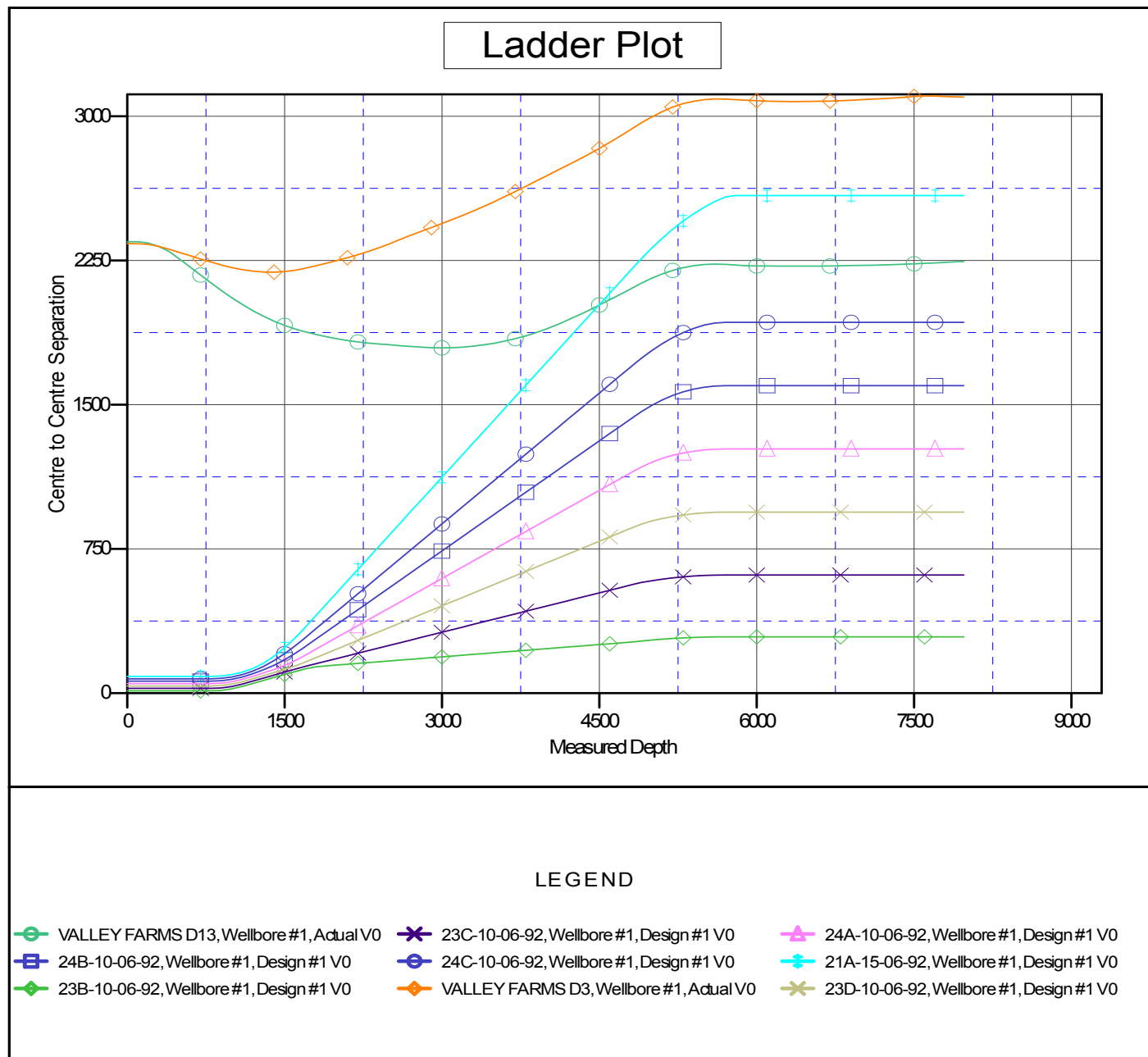
Offset Depths are relative to Offset Datum

Central Meridian is 105° 30' 0.000 W

Coordinates are relative to: 23A-10-06-92

Coordinate System is US State Plane 1983, Colorado Central Zone

Grid Convergence at Surface is: -1.36°



<b>Company:</b>	Ursa Operating Company, LLC	<b>Local Co-ordinate Reference:</b>	Well 23A-10-06-92
<b>Project:</b>	Rockies Region	<b>TVD Reference:</b>	23A-10-06-92 @ 5447.4usft (PAD Est KB)
<b>Reference Site:</b>	Valley Farms O	<b>MD Reference:</b>	23A-10-06-92 @ 5447.4usft (PAD Est KB)
<b>Site Error:</b>	0.0 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	23A-10-06-92	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Wellbore #1	<b>Database:</b>	MasterDB
<b>Reference Design:</b>	Design #2	<b>Offset TVD Reference:</b>	Offset Datum

Reference Depths are relative to 23A-10-06-92 @ 5447.4usft (PAD Est)

Offset Depths are relative to Offset Datum

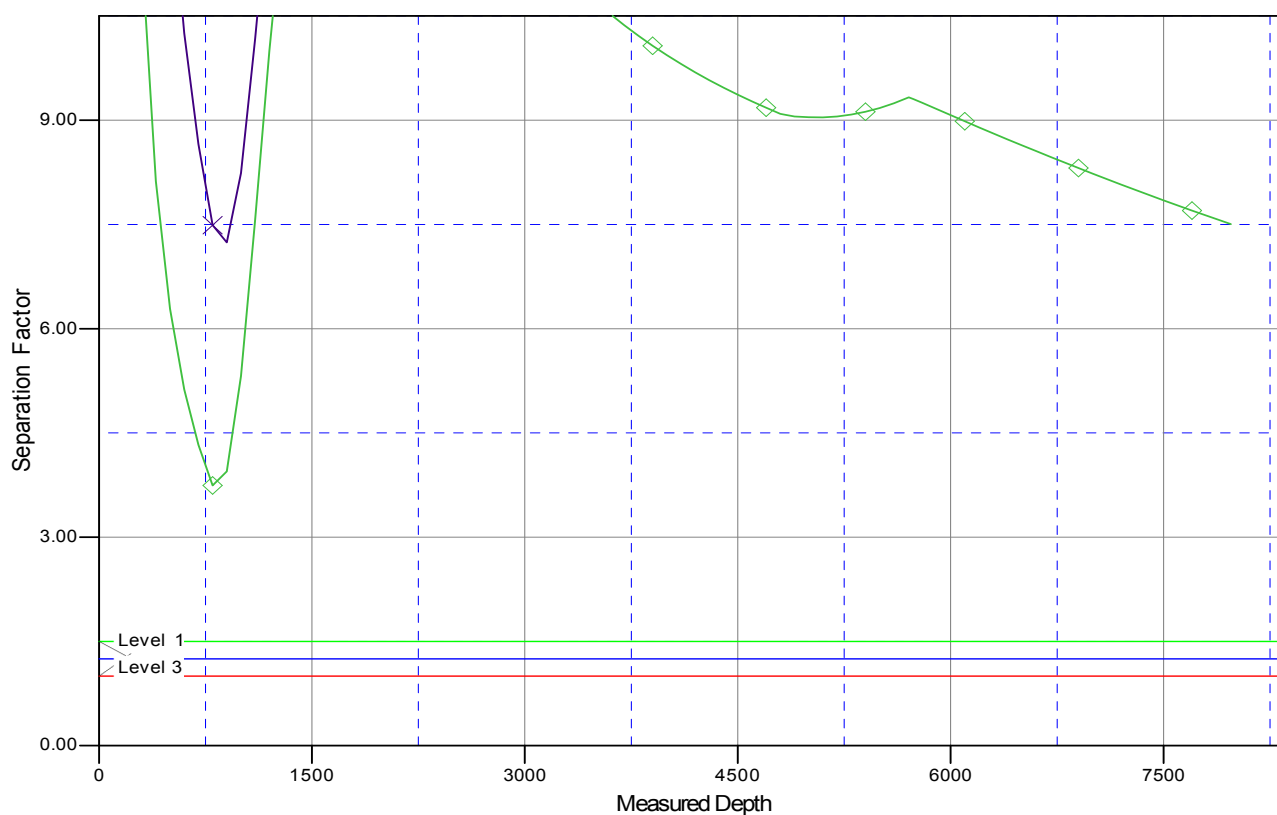
Central Meridian is 105° 30' 0.000 W

Coordinates are relative to: 23A-10-06-92

Coordinate System is US State Plane 1983, Colorado Central Zone

Grid Convergence at Surface is: -1.36°

### Separation Factor Plot



### LEGEND

VALLEY FARMS D13, Wellbore #1, Actual V0	23C-10-06-92, Wellbore #1, Design #1 V0	24A-10-06-92, Wellbore #1, Design #1 V0
24B-10-06-92, Wellbore #1, Design #1 V0	24C-10-06-92, Wellbore #1, Design #1 V0	21A-15-06-92, Wellbore #1, Design #1 V0
23B-10-06-92, Wellbore #1, Design #1 V0	VALLEY FARMS D3, Wellbore #1, Actual V0	23D-10-06-92, Wellbore #1, Design #1 V0