



Ursa Operating Company, LLC

Rockies Region

Valley Farms J

Valley Farms J15

Wellbore #1

Plan: Design #1

Standard Planning Report

08 September, 2013



Database:	EDM 2003.21 Single User Db	Local Co-ordinate Reference:	Well Valley Farms J15
Company:	Ursa Operating Company, LLC	TVD Reference:	Valley Farms J15 @ 5552.4ft (Original Well Elev)
Project:	Rockies Region	MD Reference:	Valley Farms J15 @ 5552.4ft (Original Well Elev)
Site:	Valley Farms J	North Reference:	True
Well:	Valley Farms J15	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Design #1		

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

Site		Valley Farms J			
Site Position:		Northing:	1,626,334.55 ft	Latitude:	39° 32' 2.073 N
From:	Lat/Long	Easting:	2,401,977.73 ft	Longitude:	107° 37' 13.708 W
Position Uncertainty:	0.0 ft	Slot Radius:	"	Grid Convergence:	-1.34 °

Well	Valley Farms J15, SHL LAT: 39.533654500 LONG: -107.620550100					
Well Position	+N/-S	-92.7 ft	Northing:	1,626,242.33 ft	Latitude:	39° 32' 1.156 N
	+E/-W	-21.4 ft	Easting:	2,401,954.22 ft	Longitude:	107° 37' 13.980 W
Position Uncertainty		0.0 ft	Wellhead Elevation:	5,552.4 ft	Ground Level:	5,537.0 ft

Wellbore	Wellbore #1				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF200510	9/8/2013	9.86	65.79	52,137

Design	Design #1			
Audit Notes:				
Version:	Phase:	PROTOTYPE	Tie On Depth:	0.0
Vertical Section:	Depth From (TVD) (ft)	+N/-S (ft)	+E/-W (ft)	Direction (°)
	0.0	0.0	0.0	129.49

Plan Sections										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	TFO (°)	Target
0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.00	0.00	
1,100.0	0.00	0.00	1,100.0	0.0	0.0	0.00	0.00	0.00	0.00	
2,519.1	42.57	129.49	2,392.1	-320.1	388.5	3.00	3.00	0.00	129.49	
3,386.6	42.57	129.49	3,030.9	-693.4	841.4	0.00	0.00	0.00	0.00	
4,805.7	0.00	0.00	4,323.0	-1,013.5	1,229.9	3.00	-3.00	0.00	180.00	J15 TGT
7,589.7	0.00	0.00	7,107.0	-1,013.5	1,229.9	0.00	0.00	0.00	0.00	

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Site:	Valley Farms J	North Reference:	True
Well:	Valley Farms J15	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Design #1		

Planned Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
0.0	0.00	0.00	0.0	0.0	0.0	0.0	0.00	0.00	0.00
100.0	0.00	0.00	100.0	0.0	0.0	0.0	0.00	0.00	0.00
200.0	0.00	0.00	200.0	0.0	0.0	0.0	0.00	0.00	0.00
300.0	0.00	0.00	300.0	0.0	0.0	0.0	0.00	0.00	0.00
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
900.0	0.00	0.00	900.0	0.0	0.0	0.0	0.00	0.00	0.00
1,000.0	0.00	0.00	1,000.0	0.0	0.0	0.0	0.00	0.00	0.00
1,100.0	0.00	0.00	1,100.0	0.0	0.0	0.0	0.00	0.00	0.00
Start Build 3.00									
1,200.0	3.00	129.49	1,200.0	-1.7	2.0	2.6	3.00	3.00	0.00
1,300.0	6.00	129.49	1,299.6	-6.7	8.1	10.5	3.00	3.00	0.00
1,400.0	9.00	129.49	1,398.8	-15.0	18.1	23.5	3.00	3.00	0.00
1,500.0	12.00	129.49	1,497.1	-26.5	32.2	41.7	3.00	3.00	0.00
1,600.0	15.00	129.49	1,594.3	-41.4	50.2	65.1	3.00	3.00	0.00
1,700.0	18.00	129.49	1,690.2	-59.4	72.1	93.5	3.00	3.00	0.00
1,800.0	21.00	129.49	1,784.4	-80.7	97.9	126.9	3.00	3.00	0.00
1,900.0	24.00	129.49	1,876.8	-105.0	127.4	165.1	3.00	3.00	0.00
2,000.0	27.00	129.49	1,967.1	-132.4	160.6	208.2	3.00	3.00	0.00
2,100.0	30.00	129.49	2,054.9	-162.7	197.5	255.9	3.00	3.00	0.00
2,200.0	33.00	129.49	2,140.2	-196.0	237.8	308.1	3.00	3.00	0.00
2,300.0	36.00	129.49	2,222.6	-232.0	281.5	364.7	3.00	3.00	0.00
2,400.0	39.00	129.49	2,301.9	-270.7	328.5	425.6	3.00	3.00	0.00
2,500.0	42.00	129.49	2,377.9	-312.0	378.6	490.6	3.00	3.00	0.00
2,519.1	42.57	129.49	2,392.1	-320.1	388.5	503.4	3.00	3.00	0.00
Start 867.6 hold at 2519.1 MD									
2,600.0	42.57	129.49	2,451.7	-355.0	430.7	558.1	0.00	0.00	0.00
2,700.0	42.57	129.49	2,525.3	-398.0	482.9	625.8	0.00	0.00	0.00
2,800.0	42.57	129.49	2,598.9	-441.0	535.1	693.4	0.00	0.00	0.00
2,900.0	42.57	129.49	2,672.6	-484.0	587.3	761.1	0.00	0.00	0.00
3,000.0	42.57	129.49	2,746.2	-527.1	639.6	828.7	0.00	0.00	0.00
3,100.0	42.57	129.49	2,819.9	-570.1	691.8	896.4	0.00	0.00	0.00
3,200.0	42.57	129.49	2,893.5	-613.1	744.0	964.0	0.00	0.00	0.00
3,300.0	42.57	129.49	2,967.2	-656.1	796.2	1,031.7	0.00	0.00	0.00
3,386.6	42.57	129.49	3,030.9	-693.4	841.4	1,090.3	0.00	0.00	0.00
Start Drop -3.00									
3,400.0	42.17	129.49	3,040.8	-699.1	848.4	1,099.3	3.00	-3.00	0.00
3,500.0	39.17	129.49	3,116.7	-740.6	898.6	1,164.5	3.00	-3.00	0.00
3,595.8	36.30	129.49	3,192.4	-777.9	943.9	1,223.1	3.00	-3.00	0.00
WF									
3,600.0	36.17	129.49	3,195.8	-779.4	945.8	1,225.6	3.00	-3.00	0.00
3,700.0	33.17	129.49	3,278.0	-815.6	989.7	1,282.5	3.00	-3.00	0.00
3,800.0	30.17	129.49	3,363.1	-849.0	1,030.2	1,335.0	3.00	-3.00	0.00
3,900.0	27.17	129.49	3,450.9	-879.5	1,067.2	1,382.9	3.00	-3.00	0.00
4,000.0	24.17	129.49	3,541.0	-907.1	1,100.7	1,426.3	3.00	-3.00	0.00
4,100.0	21.17	129.49	3,633.3	-931.6	1,130.4	1,464.8	3.00	-3.00	0.00
4,200.0	18.17	129.49	3,727.4	-953.0	1,156.4	1,498.4	3.00	-3.00	0.00
4,300.0	15.17	129.49	3,823.2	-971.2	1,178.5	1,527.1	3.00	-3.00	0.00
4,400.0	12.17	129.49	3,920.3	-986.2	1,196.7	1,550.8	3.00	-3.00	0.00

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Well:	Valley Farms J15	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Design #1		

Planned Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
4,500.0	9.17	129.49	4,018.6	-998.0	1,211.0	1,569.3	3.00	-3.00	0.00
4,600.0	6.17	129.49	4,117.7	-1,006.5	1,221.3	1,582.6	3.00	-3.00	0.00
4,700.0	3.17	129.49	4,217.4	-1,011.7	1,227.6	1,590.8	3.00	-3.00	0.00
4,805.7	0.00	0.00	4,323.0	-1,013.5	1,229.9	1,593.7	3.00	-3.00	0.00
Start 2784.0 hold at 4805.7 MD									
4,806.1	0.00	0.00	4,323.4	-1,013.5	1,229.9	1,593.7	0.00	0.00	0.00
Top of Gas									
4,900.0	0.00	0.00	4,417.3	-1,013.5	1,229.9	1,593.7	0.00	0.00	0.00
5,000.0	0.00	0.00	4,517.3	-1,013.5	1,229.9	1,593.7	0.00	0.00	0.00
5,100.0	0.00	0.00	4,617.3	-1,013.5	1,229.9	1,593.7	0.00	0.00	0.00
5,200.0	0.00	0.00	4,717.3	-1,013.5	1,229.9	1,593.7	0.00	0.00	0.00
5,300.0	0.00	0.00	4,817.3	-1,013.5	1,229.9	1,593.7	0.00	0.00	0.00
5,400.0	0.00	0.00	4,917.3	-1,013.5	1,229.9	1,593.7	0.00	0.00	0.00
5,500.0	0.00	0.00	5,017.3	-1,013.5	1,229.9	1,593.7	0.00	0.00	0.00
5,600.0	0.00	0.00	5,117.3	-1,013.5	1,229.9	1,593.7	0.00	0.00	0.00
5,700.0	0.00	0.00	5,217.3	-1,013.5	1,229.9	1,593.7	0.00	0.00	0.00
5,800.0	0.00	0.00	5,317.3	-1,013.5	1,229.9	1,593.7	0.00	0.00	0.00
5,900.0	0.00	0.00	5,417.3	-1,013.5	1,229.9	1,593.7	0.00	0.00	0.00
6,000.0	0.00	0.00	5,517.3	-1,013.5	1,229.9	1,593.7	0.00	0.00	0.00
6,100.0	0.00	0.00	5,617.3	-1,013.5	1,229.9	1,593.7	0.00	0.00	0.00
6,104.1	0.00	0.00	5,621.4	-1,013.5	1,229.9	1,593.7	0.00	0.00	0.00
Cameo									
6,200.0	0.00	0.00	5,717.3	-1,013.5	1,229.9	1,593.7	0.00	0.00	0.00
6,300.0	0.00	0.00	5,817.3	-1,013.5	1,229.9	1,593.7	0.00	0.00	0.00
6,400.0	0.00	0.00	5,917.3	-1,013.5	1,229.9	1,593.7	0.00	0.00	0.00
6,500.0	0.00	0.00	6,017.3	-1,013.5	1,229.9	1,593.7	0.00	0.00	0.00
6,600.0	0.00	0.00	6,117.3	-1,013.5	1,229.9	1,593.7	0.00	0.00	0.00
6,700.0	0.00	0.00	6,217.3	-1,013.5	1,229.9	1,593.7	0.00	0.00	0.00
6,800.0	0.00	0.00	6,317.3	-1,013.5	1,229.9	1,593.7	0.00	0.00	0.00
6,900.0	0.00	0.00	6,417.3	-1,013.5	1,229.9	1,593.7	0.00	0.00	0.00
7,000.0	0.00	0.00	6,517.3	-1,013.5	1,229.9	1,593.7	0.00	0.00	0.00
7,100.0	0.00	0.00	6,617.3	-1,013.5	1,229.9	1,593.7	0.00	0.00	0.00
7,200.0	0.00	0.00	6,717.3	-1,013.5	1,229.9	1,593.7	0.00	0.00	0.00
7,290.1	0.00	0.00	6,807.4	-1,013.5	1,229.9	1,593.7	0.00	0.00	0.00
Rollins									
7,300.0	0.00	0.00	6,817.3	-1,013.5	1,229.9	1,593.7	0.00	0.00	0.00
7,400.0	0.00	0.00	6,917.3	-1,013.5	1,229.9	1,593.7	0.00	0.00	0.00
7,500.0	0.00	0.00	7,017.3	-1,013.5	1,229.9	1,593.7	0.00	0.00	0.00
7,589.7	0.00	0.00	7,107.0	-1,013.5	1,229.9	1,593.7	0.00	0.00	0.00
TD at 7589.7									

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Site:	Valley Farms J	North Reference:	True
Well:	Valley Farms J15	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Design #1		

Formations					
Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)
3,595.8	3,192.4	WF		0.00	
4,806.1	4,323.4	Top of Gas		0.00	
6,104.1	5,621.4	Cameo		0.00	
7,290.1	6,807.4	Rollins		0.00	

Plan Annotations					
Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates			
		+N/-S (ft)	+E/-W (ft)	Comment	
1,100.0	1,100.0	0.0	0.0	Start Build 3.00	
2,519.1	2,392.1	-320.1	388.5	Start 867.6 hold at 2519.1 MD	
3,386.6	3,030.9	-693.4	841.4	Start Drop -3.00	
4,805.7	4,323.0	-1,013.5	1,229.9	Start 2784.0 hold at 4805.7 MD	
7,589.7	7,107.0	-1,013.5	1,229.9	TD at 7589.7	



Well Name: Valley Farms J15
Surface Location: Valley Farms J
North American Datum 1983, US State Plane 1983, Colorado Central Zone
Ground Elevation: 5537.0
+N/-S +E/-W Northing Easting Latitude Longitude Slot
0.0 0.0 1626242.33 2401954.22 39° 32' 1.156 N 107° 37' 13.980 W
Original Well Elev Valley Farms J15 @ 5552.4ft (Original Well Elev)



Azimuths to True North
Magnetic North: 9.86°
Magnetic Field
Strength: 52136.5nT
Dip Angle: 65.79°
Date: 9/8/2013
Model: IGRF200510

Valley Farms J
Valley Farms J15
Design #1
23:45, September 08 2013

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

Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Shape
J15 TGT	4323.0	-1013.5	1229.9	1625200.36	2403160.10	39° 31' 51.138 N	107° 36' 58.283 W	Rectangle (Sides: L40.0 W100.0)

SECTION DETAILS

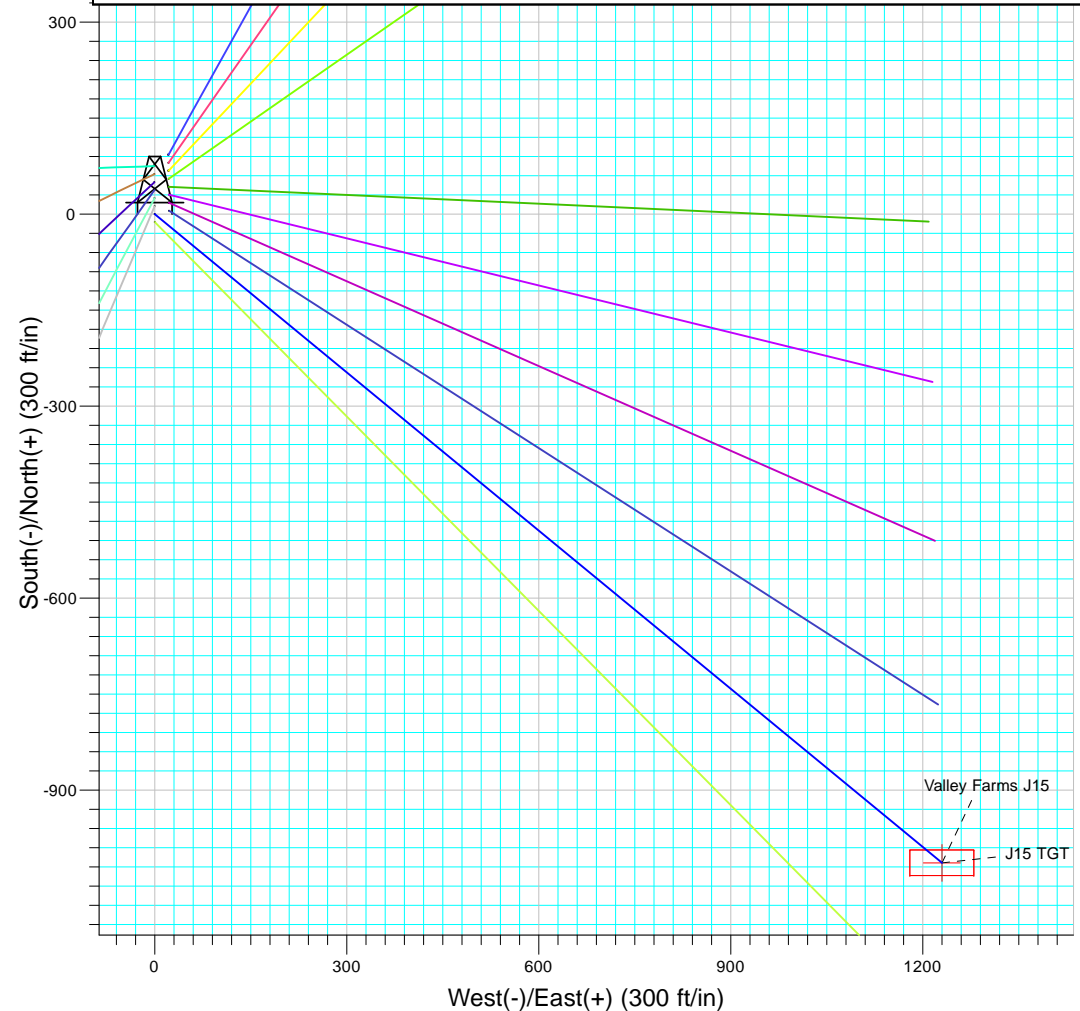
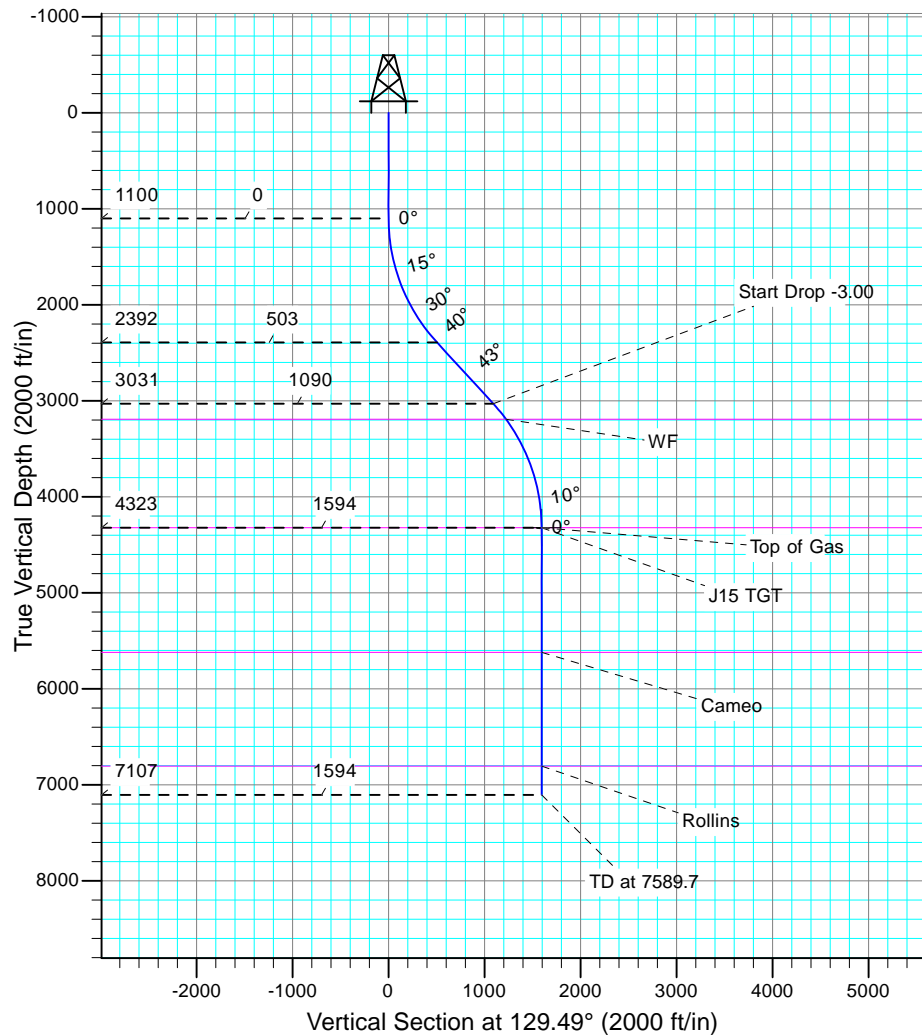
Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	DLeg	TFace	VSec	Target
1	0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.0	
2	1100.0	0.00	0.00	1100.0	0.0	0.0	0.00	0.00	0.0	
3	2519.1	42.57	129.49	2392.1	-320.1	388.5	3.00	129.49	503.4	
4	3386.6	42.57	129.49	3030.9	-693.4	841.4	0.00	0.00	1090.3	
5	4805.7	0.00	0.00	4323.0	-1013.5	1229.9	3.00	180.00	1593.7	J15 TGT
6	7589.7	0.00	0.00	7107.0	-1013.5	1229.9	0.00	0.00	1593.7	

ANNOTATIONS

TVD	MD	Annotation
1100.0	1100.0	Start Build 3.00
2392.1	2519.1	Start 867.6 hold at 2519.1 MD
3030.9	3386.6	Start Drop -3.00
4323.0	4805.7	Start 2784.0 hold at 4805.7 MD
7107.0	7589.7	TD at 7589.7

FORMATION TOP DETAILS

TVDP	MDP	Path	Formation
3192.4	3595.8	WF	WF
4323.4	4806.1	Top of Gas	Top of Gas
5621.4	6104.1	Cameo	Cameo
6807.4	7290.1	Rollins	Rollins





Ursa Operating Company, LLC

Rockies Region

Valley Farms J

Valley Farms J15

Wellbore #1

Design #1

Anticollision Report

08 September, 2013



Company:	Ursa Operating Company, LLC	Local Co-ordinate Reference:	Well Valley Farms J15
Project:	Rockies Region	TVD Reference:	Valley Farms J15 @ 5552.4ft (Original Well Elev)
Reference Site:	Valley Farms J	MD Reference:	Valley Farms J15 @ 5552.4ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Valley Farms J15	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	EDM 2003.21 Single User Db
Reference Design:	Design #1	Offset TVD Reference:	Offset Datum

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

Survey Tool Program	Date	9/8/2013
From (ft)	To (ft)	Survey (Wellbore)
0.0	7,589.7	Design #1 (Wellbore #1)
		Tool Name
		MWD
		Description
		MWD - Standard

Summary						
Site Name	Reference Measured Depth (ft)	Offset Measured Depth (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Separation Factor	Warning
Offset Well - Wellbore - Design						
Valley Farms I						
Valley Farms I2 - Wellbore #1 - Actual	3,389.0	3,384.9	1,610.6	1,585.7	64.672	CC
Valley Farms I2 - Wellbore #1 - Actual	3,400.0	3,388.8	1,610.6	1,585.6	64.268	ES
Valley Farms I2 - Wellbore #1 - Actual	4,000.0	3,677.2	1,697.4	1,666.6	55.057	SF
Valley Farms I7 - Wellbore #1 - Actual	3,305.8	3,563.8	1,469.7	1,446.2	62.525	CC, ES
Valley Farms I7 - Wellbore #1 - Actual	3,800.0	3,704.0	1,538.2	1,509.2	53.055	SF
Valley Farms J						
Valley Farms J1 - Wellbore #1 - Design #1	1,100.0	1,100.0	95.2	90.5	20.312	CC, ES
Valley Farms J1 - Wellbore #1 - Design #1	1,200.0	1,195.3	98.8	93.6	19.353	SF
Valley Farms J10 - Wellbore #1 - Design #1	1,195.7	1,196.2	12.2	7.1	2.399	CC
Valley Farms J10 - Wellbore #1 - Design #1	1,200.0	1,200.5	12.2	7.1	2.392	ES, SF
Valley Farms J11 - Wellbore #1 - Design #1	1,100.0	1,100.0	48.1	43.4	10.261	CC, ES
Valley Farms J11 - Wellbore #1 - Design #1	1,200.0	1,198.9	49.7	44.6	9.751	SF
Valley Farms J12 - Wellbore #1 - Design #1	1,100.0	1,100.0	37.5	32.8	8.004	CC, ES
Valley Farms J12 - Wellbore #1 - Design #1	1,200.0	1,199.2	38.6	33.5	7.584	SF
Valley Farms J13 - Wellbore #1 - Design #1	1,100.0	1,100.0	28.5	23.8	6.083	CC, ES
Valley Farms J13 - Wellbore #1 - Design #1	1,300.0	1,298.6	31.2	25.7	5.690	SF
Valley Farms J14 - Wellbore #1 - Design #1	1,100.0	1,100.0	23.1	18.4	4.922	CC
Valley Farms J14 - Wellbore #1 - Design #1	1,200.0	1,199.2	23.3	18.2	4.578	ES
Valley Farms J14 - Wellbore #1 - Design #1	2,519.1	2,507.1	76.1	53.0	3.293	SF
Valley Farms J16 - Wellbore #1 - Design #1	1,100.0	1,100.0	12.5	7.8	2.667	CC
Valley Farms J16 - Wellbore #1 - Design #1	1,200.0	1,199.5	12.7	7.6	2.493	ES
Valley Farms J16 - Wellbore #1 - Design #1	1,300.0	1,299.1	13.3	7.8	2.429	SF
Valley Farms J2 - Wellbore #1 - Design #1	1,100.0	1,100.0	83.1	78.4	17.731	CC, ES
Valley Farms J2 - Wellbore #1 - Design #1	1,200.0	1,195.9	86.5	81.4	16.957	SF
Valley Farms J3 - Wellbore #1 - Design #1	1,100.0	1,100.0	71.1	66.4	15.181	CC, ES
Valley Farms J3 - Wellbore #1 - Design #1	1,200.0	1,196.6	74.4	69.3	14.576	SF
Valley Farms J4 - Wellbore #1 - Design #1	1,100.0	1,100.0	59.4	54.7	12.680	CC, ES
Valley Farms J4 - Wellbore #1 - Design #1	1,200.0	1,197.4	62.4	57.2	12.218	SF
Valley Farms J5 - Wellbore #1 - Design #1	1,100.0	1,100.0	75.0	70.3	16.008	CC, ES
Valley Farms J5 - Wellbore #1 - Design #1	1,200.0	1,199.8	76.8	71.7	15.058	SF
Valley Farms J6 - Wellbore #1 - Design #1	1,100.0	1,100.0	62.5	57.8	13.341	CC, ES
Valley Farms J6 - Wellbore #1 - Design #1	1,300.0	1,301.2	67.1	61.7	12.268	SF
Valley Farms J7 - Wellbore #1 - Design #1	1,157.3	1,158.3	50.0	45.0	10.156	CC
Valley Farms J7 - Wellbore #1 - Design #1	1,200.0	1,201.6	50.0	44.9	9.827	ES

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

Company:	Ursa Operating Company, LLC	Local Co-ordinate Reference:	Well Valley Farms J15
Project:	Rockies Region	TVD Reference:	Valley Farms J15 @ 5552.4ft (Original Well Elev)
Reference Site:	Valley Farms J	MD Reference:	Valley Farms J15 @ 5552.4ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Valley Farms J15	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	EDM 2003.21 Single User Db
Reference Design:	Design #1	Offset TVD Reference:	Offset Datum

Summary						
Site Name	Reference Measured Depth (ft)	Offset Measured Depth (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Separation Factor	Warning
Offset Well - Wellbore - Design						
Valley Farms J						
Valley Farms J7 - Wellbore #1 - Design #1	1,300.0	1,302.3	52.1	46.6	9.538	SF
Valley Farms J8 - Wellbore #1 - Design #1	1,214.3	1,216.0	37.2	32.0	7.232	CC, ES
Valley Farms J8 - Wellbore #1 - Design #1	1,300.0	1,302.2	38.4	33.0	7.054	SF
Valley Farms J9 - Wellbore #1 - Design #1	1,219.1	1,220.3	24.5	19.4	4.758	CC, ES, SF

Offset Design		Valley Farms I - Valley Farms I2 - Wellbore #1 - Actual											Offset Site Error:		0.0 ft			
Survey Program:		923-													Offset Well Error:		0.0 ft	
Reference		Offset		Semi Major Axis			Distance											
Measured Depth	Vertical Depth	Measured Depth	Vertical Depth	Reference	Offset	Highside Toolface	Offset Wellbore Centre		Between Centres	Between Ellipses	Minimum Separation	Separation Factor	Warning					
(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(°)	+N/-S (ft)	+E/-W (ft)	(ft)	(ft)	(ft)							
0.0	0.0	125.4	125.4	0.0	0.0	168.40	-2,539.3	521.1	2,592.2									
100.0	100.0	232.6	232.6	0.1	0.0	168.42	-2,538.9	520.3	2,591.8	2,591.7	0.10	N/A						
200.0	200.0	339.8	339.8	0.3	0.0	168.44	-2,538.4	519.0	2,591.0	2,590.7	0.32	8,099.068						
300.0	300.0	447.0	447.0	0.5	0.0	168.48	-2,537.6	517.2	2,590.0	2,589.5	0.54	4,754.868						
400.0	400.0	554.2	554.1	0.8	0.0	168.52	-2,536.7	515.0	2,588.7	2,587.9	0.77	3,364.164						
500.0	500.0	661.3	661.2	1.0	0.0	168.58	-2,535.5	512.2	2,587.1	2,586.1	0.99	2,602.008						
600.0	600.0	768.4	768.2	1.2	0.0	168.64	-2,534.2	509.0	2,585.3	2,584.1	1.22	2,120.701						
700.0	700.0	875.5	875.2	1.4	0.0	168.72	-2,532.6	505.3	2,583.2	2,581.7	1.44	1,789.071						
800.0	800.0	996.9	996.6	1.7	0.0	168.81	-2,530.4	500.5	2,580.6	2,579.0	1.67	1,546.546						
900.0	900.0	1,560.4	1,553.3	1.9	0.0	169.91	-2,480.3	441.3	2,575.7	2,573.8	1.89	1,360.362						
1,000.0	1,000.0	2,160.2	2,107.6	2.1	0.0	173.28	-2,330.2	274.5	2,546.9	2,544.7	2.12	1,202.384						
1,100.0	1,100.0	2,247.4	2,183.2	2.3	0.0	174.00	-2,301.6	241.8	2,507.9	2,505.5	2.34	1,070.396						
1,200.0	1,200.0	2,328.5	2,253.5	2.5	0.0	46.18	-2,275.6	211.0	2,468.1	2,465.5	2.54	969.848						
1,300.0	1,299.6	2,415.3	2,328.7	2.7	0.0	48.15	-2,247.4	177.9	2,425.2	2,422.5	2.73	887.893						
1,400.0	1,398.8	2,487.1	2,391.1	3.0	0.0	50.16	-2,224.3	150.8	2,380.1	2,377.2	2.94	810.873						
1,500.0	1,497.1	2,580.4	2,471.7	3.2	0.0	52.74	-2,194.0	115.0	2,332.5	2,329.3	3.17	735.481						
1,600.0	1,594.3	2,651.0	2,532.6	3.5	0.0	55.25	-2,171.0	87.7	2,282.8	2,279.4	3.46	659.861						
1,700.0	1,690.2	2,724.5	2,596.0	4.0	0.0	58.05	-2,147.0	59.4	2,231.7	2,227.8	3.82	583.452						
1,800.0	1,784.4	2,793.9	2,655.9	4.5	0.0	61.03	-2,124.1	32.6	2,179.3	2,175.0	4.29	507.722						
1,900.0	1,876.8	2,855.0	2,708.5	5.1	0.0	64.05	-2,103.9	9.2	2,126.1	2,121.2	4.88	435.551						
2,000.0	1,967.1	2,909.2	2,755.2	5.8	0.0	67.08	-2,085.9	-11.7	2,072.8	2,067.2	5.61	369.697						
2,100.0	2,054.9	2,958.8	2,797.9	6.7	0.0	70.12	-2,069.6	-30.7	2,020.0	2,013.5	6.48	311.901						
2,200.0	2,140.2	3,011.6	2,843.5	7.7	0.0	73.34	-2,052.2	-51.1	1,967.9	1,960.4	7.50	262.507						
2,300.0	2,222.6	3,060.6	2,885.6	8.8	0.0	76.51	-2,035.8	-70.1	1,917.2	1,908.5	8.66	221.398						
2,400.0	2,301.9	3,107.4	2,925.8	10.1	0.0	79.62	-2,020.0	-88.1	1,868.3	1,858.4	9.96	187.628						
2,500.0	2,377.9	3,145.5	2,958.5	11.5	0.0	82.41	-2,007.0	-102.6	1,822.0	1,810.6	11.38	160.164						
2,519.1	2,392.1	3,150.6	2,962.9	11.7	0.0	82.87	-2,005.2	-104.6	1,813.5	1,801.8	11.66	155.553						
2,600.0	2,451.7	3,172.2	2,981.4	12.9	0.0	83.59	-1,997.9	-112.8	1,779.0	1,766.2	12.85	138.431						
2,700.0	2,525.3	3,198.8	3,004.3	14.4	0.0	84.48	-1,988.8	-123.0	1,740.3	1,726.0	14.35	121.304						
2,800.0	2,598.9	3,225.5	3,027.2	15.9	0.0	85.38	-1,979.7	-133.2	1,706.2	1,690.3	15.86	107.583						
2,900.0	2,672.6	3,249.8	3,048.1	17.4	0.0	86.21	-1,971.4	-142.5	1,676.9	1,659.5	17.38	96.470						
3,000.0	2,746.2	3,273.5	3,068.5	18.9	0.0	87.01	-1,963.5	-151.6	1,652.7	1,633.8	18.91	87.381						
3,100.0	2,819.9	3,297.5	3,089.2	20.5	0.0	87.82	-1,955.5	-160.8	1,633.8	1,613.4	20.45	79.891						
3,200.0	2,893.5	3,328.0	3,115.4	22.0	0.0	88.86	-1,945.5	-172.5	1,620.5	1,598.5	21.99	73.682						
3,300.0	2,967.2	3,353.8	3,137.8	23.5	0.0	89.73	-1,937.0	-182.4	1,612.8	1,589.3	23.54	68.526						
3,386.6	3,030.9	3,384.1	3,163.9	24.9	0.0	90.76	-1,927.1	-193.9	1,610.6	1,585.7	24.87	64.760						

Company:	Ursa Operating Company, LLC	Local Co-ordinate Reference:	Well Valley Farms J15
Project:	Rockies Region	TVD Reference:	Valley Farms J15 @ 5552.4ft (Original Well Elev)
Reference Site:	Valley Farms J	MD Reference:	Valley Farms J15 @ 5552.4ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Valley Farms J15	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	EDM 2003.21 Single User Db
Reference Design:	Design #1	Offset TVD Reference:	Offset Datum

Offset Design														Offset Site Error:	0.0 ft
Valley Farms I - Valley Farms I2 - Wellbore #1 - Actual														Offset Well Error:	0.0 ft
Survey Program:	923-														
Reference		Offset		Semi Major Axis			Distance								
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning		
3,389.0	3,032.7	3,384.9	3,164.7	24.9	0.0	90.79	-1,926.8	-194.2	1,610.6	1,585.7	24.90	64.672 CC			
3,400.0	3,040.8	3,388.8	3,168.1	25.1	0.0	90.92	-1,925.5	-195.7	1,610.6	1,585.6	25.06	64.268 ES			
3,500.0	3,116.7	3,422.0	3,196.8	26.3	0.0	92.13	-1,914.7	-208.1	1,613.9	1,587.6	26.34	61.281			
3,600.0	3,195.8	3,461.5	3,231.1	27.5	0.0	93.68	-1,901.8	-222.8	1,622.3	1,594.8	27.51	58.975			
3,700.0	3,278.0	3,501.2	3,265.8	28.7	0.0	95.35	-1,889.0	-237.5	1,635.5	1,607.0	28.57	57.253			
3,800.0	3,363.1	3,552.2	3,310.3	29.7	0.0	97.44	-1,872.8	-256.4	1,653.0	1,623.5	29.48	56.066			
3,900.0	3,450.9	3,612.1	3,362.7	30.6	0.0	99.84	-1,853.9	-278.3	1,673.9	1,643.6	30.24	55.353			
4,000.0	3,541.0	3,677.2	3,420.1	31.4	0.0	102.36	-1,833.8	-301.4	1,697.4	1,666.6	30.83	55.057 SF			
4,100.0	3,633.3	3,760.8	3,495.0	32.1	0.0	105.25	-1,809.6	-329.7	1,722.8	1,691.6	31.22	55.188			
4,200.0	3,727.4	3,875.9	3,600.1	32.8	0.0	108.61	-1,778.9	-365.0	1,748.3	1,716.9	31.36	55.757			
4,300.0	3,823.2	3,981.1	3,697.6	33.3	0.0	111.42	-1,752.1	-394.2	1,772.6	1,741.2	31.39	56.471			
4,400.0	3,920.3	4,084.0	3,794.0	33.7	0.0	113.85	-1,727.7	-420.6	1,795.7	1,764.4	31.33	57.317			
4,500.0	4,018.6	4,272.6	3,974.9	34.0	0.0	116.92	-1,692.2	-459.9	1,816.6	1,785.6	30.99	58.626			
4,600.0	4,117.7	4,403.8	4,103.9	34.3	0.0	118.46	-1,676.5	-477.6	1,830.9	1,800.1	30.84	59.360			
4,700.0	4,217.4	4,598.8	4,298.0	34.5	0.0	119.61	-1,665.0	-492.0	1,839.9	1,809.2	30.70	59.938			
4,805.7	4,323.0	4,737.3	4,436.4	34.6	0.0	-110.65	-1,663.0	-493.8	1,842.0	1,811.3	30.70	60.009			
4,900.0	4,417.3	4,835.1	4,534.2	34.6	0.0	-110.63	-1,662.5	-494.1	1,842.1	1,811.3	30.75	59.909			
5,000.0	4,517.3	4,946.2	4,645.3	34.7	0.0	-110.62	-1,662.2	-493.9	1,841.8	1,811.0	30.81	59.781			
5,100.0	4,617.3	5,050.8	4,749.9	34.7	0.0	-110.64	-1,662.4	-492.9	1,841.0	1,810.1	30.88	59.623			
5,200.0	4,717.3	5,145.6	4,844.7	34.8	0.0	-110.67	-1,663.1	-492.0	1,840.3	1,809.4	30.95	59.462			
5,300.0	4,817.3	5,247.6	4,946.7	34.9	0.0	-110.71	-1,664.0	-491.0	1,839.7	1,808.7	31.03	59.297			
5,400.0	4,917.3	5,357.9	5,056.9	34.9	0.0	-110.74	-1,664.7	-489.7	1,838.8	1,807.7	31.10	59.123			
5,500.0	5,017.3	5,468.2	5,167.3	35.0	0.0	-110.78	-1,665.2	-487.6	1,837.2	1,806.1	31.18	58.922			
5,600.0	5,117.3	5,561.8	5,260.8	35.0	0.0	-110.81	-1,665.5	-485.8	1,835.5	1,804.3	31.26	58.719			
5,700.0	5,217.3	5,664.0	5,363.0	35.1	0.0	-110.80	-1,664.9	-484.5	1,834.2	1,802.8	31.33	58.541			
5,800.0	5,317.3	5,766.1	5,465.1	35.2	0.0	-110.79	-1,663.8	-483.1	1,832.5	1,801.1	31.40	58.357			
5,900.0	5,417.3	5,867.2	5,566.2	35.3	0.0	-110.77	-1,662.8	-481.6	1,830.8	1,799.3	31.47	58.168			
6,000.0	5,517.3	5,960.9	5,659.9	35.3	0.0	-110.77	-1,662.3	-480.2	1,829.2	1,797.6	31.55	57.976			
6,100.0	5,617.3	6,048.9	5,747.9	35.4	0.0	-110.79	-1,662.3	-479.2	1,828.1	1,796.5	31.63	57.792			
6,200.0	5,717.3	6,151.4	5,850.4	35.5	0.0	-110.82	-1,663.0	-478.1	1,827.4	1,795.7	31.72	57.610			
6,300.0	5,817.3	6,252.4	5,951.4	35.5	0.0	-110.87	-1,664.1	-476.7	1,826.5	1,794.6	31.81	57.414			
6,400.0	5,917.3	6,356.8	6,055.8	35.6	0.0	-110.91	-1,665.1	-475.1	1,825.4	1,793.5	31.91	57.211			
6,500.0	6,017.3	6,462.4	6,161.4	35.7	0.0	-110.97	-1,666.2	-473.2	1,824.1	1,792.1	32.00	56.997			
6,600.0	6,117.3	6,562.0	6,260.9	35.8	0.0	-111.00	-1,666.5	-471.4	1,822.5	1,790.4	32.10	56.785			
6,700.0	6,217.3	6,650.4	6,349.3	35.9	0.0	-110.96	-1,665.0	-470.9	1,821.4	1,789.2	32.17	56.614			
6,800.0	6,317.3	6,740.0	6,438.9	35.9	0.0	-110.88	-1,662.5	-471.4	1,820.9	1,788.6	32.24	56.477			
6,900.0	6,417.3	6,838.5	6,537.3	36.0	0.0	-110.79	-1,659.9	-472.2	1,820.7	1,788.4	32.31	56.352			
7,000.0	6,517.3	6,948.1	6,646.9	36.1	0.0	-110.71	-1,657.2	-472.7	1,820.2	1,787.9	32.38	56.216			
7,100.0	6,617.3	7,050.6	6,749.4	36.2	0.0	-110.62	-1,654.4	-472.9	1,819.4	1,787.0	32.45	56.068			
7,200.0	6,717.3	7,139.8	6,838.5	36.3	0.0	-110.54	-1,651.8	-473.2	1,818.8	1,786.2	32.52	55.919			
7,217.9	6,735.2	7,153.5	6,852.2	36.3	0.0	-110.53	-1,651.5	-473.3	1,818.7	1,786.2	32.54	55.894			
7,300.0	6,817.3	7,220.4	6,919.1	36.4	0.0	-110.50	-1,650.6	-474.0	1,819.1	1,786.5	32.61	55.787			
7,400.0	6,917.3	7,334.2	7,032.8	36.4	0.0	-110.45	-1,649.4	-475.4	1,820.0	1,787.3	32.69	55.670			
7,500.0	7,017.3	7,467.0	7,165.6	36.5	0.0	-110.48	-1,649.7	-473.8	1,818.8	1,786.0	32.80	55.459			
7,589.7	7,107.0	7,573.6	7,272.2	36.6	0.0	-110.53	-1,650.4	-470.9	1,816.8	1,783.9	32.90	55.227			

Company:	Ursa Operating Company, LLC	Local Co-ordinate Reference:	Well Valley Farms J15
Project:	Rockies Region	TVD Reference:	Valley Farms J15 @ 5552.4ft (Original Well Elev)
Reference Site:	Valley Farms J	MD Reference:	Valley Farms J15 @ 5552.4ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Valley Farms J15	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	EDM 2003.21 Single User Db
Reference Design:	Design #1	Offset TVD Reference:	Offset Datum

Offset Design													Valley Farms I - Valley Farms I7 - Wellbore #1 - Actual		Offset Site Error: 0.0 ft	
Survey Program: 983-															Offset Well Error: 0.0 ft	
Reference		Offset		Semi Major Axis			Distance							Warning		
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor				
0.0	0.0	108.9	108.9	0.0	0.0	168.06	-2,537.0	536.3	2,593.1							
100.0	100.0	201.9	201.9	0.1	0.0	168.06	-2,537.4	536.4	2,593.6	2,593.5	0.10	N/A				
200.0	200.0	295.0	295.0	0.3	0.0	168.06	-2,538.1	536.7	2,594.3	2,594.0	0.32	8,109.610				
300.0	300.0	388.0	388.0	0.5	0.0	168.06	-2,538.9	537.0	2,595.3	2,594.7	0.54	4,764.690				
400.0	400.0	481.0	481.0	0.8	0.0	168.05	-2,540.0	537.4	2,596.5	2,595.7	0.77	3,374.414				
500.0	500.0	574.1	574.0	1.0	0.0	168.05	-2,541.4	537.9	2,598.0	2,597.0	0.99	2,613.043				
600.0	600.0	667.1	667.0	1.2	0.0	168.04	-2,543.0	538.5	2,599.8	2,598.6	1.22	2,132.678				
700.0	700.0	760.1	760.0	1.4	0.0	168.04	-2,544.8	539.2	2,601.9	2,600.4	1.44	1,802.072				
800.0	800.0	853.1	853.0	1.7	0.0	168.03	-2,546.8	539.9	2,604.2	2,602.5	1.67	1,560.700				
900.0	900.0	946.1	946.0	1.9	0.0	168.02	-2,549.1	540.8	2,606.8	2,604.9	1.89	1,376.782				
1,000.0	1,000.0	2,732.4	2,570.1	2.1	0.0	176.42	-2,105.9	131.7	2,561.9	2,559.8	2.12	1,209.509				
1,100.0	1,100.0	2,807.0	2,626.3	2.3	0.0	177.26	-2,069.2	99.2	2,505.5	2,503.1	2.34	1,069.367				
1,200.0	1,200.0	2,880.5	2,681.6	2.5	0.0	50.27	-2,033.0	66.9	2,448.0	2,445.5	2.55	961.903				
1,300.0	1,299.6	2,948.0	2,732.3	2.7	0.0	52.99	-1,999.9	37.2	2,388.5	2,385.8	2.73	873.998				
1,400.0	1,398.8	3,002.0	2,772.9	3.0	0.0	55.78	-1,973.5	13.3	2,327.4	2,324.4	2.94	791.498				
1,500.0	1,497.1	3,051.3	2,810.1	3.2	0.0	58.74	-1,949.8	-8.7	2,265.2	2,262.0	3.18	711.315				
1,600.0	1,594.3	3,101.5	2,848.1	3.5	0.0	61.94	-1,925.8	-31.0	2,202.3	2,198.8	3.49	631.426				
1,700.0	1,690.2	3,156.2	2,889.8	4.0	0.0	65.46	-1,899.7	-55.0	2,138.9	2,135.0	3.88	551.757				
1,800.0	1,784.4	3,226.3	2,943.1	4.5	0.0	69.64	-1,865.9	-85.4	2,075.0	2,070.6	4.38	473.886				
1,900.0	1,876.8	3,269.1	2,975.6	5.1	0.0	73.25	-1,845.0	-104.0	2,011.2	2,006.2	5.00	402.029				
2,000.0	1,967.1	3,305.6	3,003.2	5.8	0.0	76.74	-1,827.3	-120.0	1,948.5	1,942.7	5.76	338.272				
2,100.0	2,054.9	3,337.8	3,027.6	6.7	0.0	80.10	-1,811.8	-134.2	1,887.2	1,880.6	6.65	283.704				
2,200.0	2,140.2	3,367.0	3,049.8	7.7	0.0	83.31	-1,797.7	-146.9	1,828.1	1,820.4	7.68	238.183				
2,300.0	2,222.6	3,392.9	3,069.6	8.8	0.0	86.29	-1,785.3	-158.0	1,771.7	1,762.9	8.82	200.818				
2,400.0	2,301.9	3,415.1	3,086.7	10.1	0.0	89.00	-1,774.6	-167.4	1,718.6	1,708.5	10.09	170.396				
2,500.0	2,377.9	3,430.4	3,098.5	11.5	0.0	91.27	-1,767.3	-173.8	1,669.5	1,658.1	11.46	145.684				
2,519.1	2,392.1	3,432.7	3,100.3	11.7	0.0	91.66	-1,766.2	-174.7	1,660.7	1,648.9	11.73	141.523				
2,600.0	2,451.7	3,442.7	3,108.0	12.9	0.0	92.04	-1,761.4	-178.8	1,625.0	1,612.1	12.92	125.785				
2,700.0	2,525.3	3,455.8	3,118.2	14.4	0.0	92.55	-1,755.2	-184.2	1,585.4	1,571.0	14.40	110.100				
2,800.0	2,598.9	3,469.9	3,129.3	15.9	0.0	93.09	-1,748.5	-189.9	1,551.2	1,535.3	15.89	97.594				
2,900.0	2,672.6	3,485.2	3,141.3	17.4	0.0	93.67	-1,741.4	-196.0	1,522.6	1,505.2	17.40	87.520				
3,000.0	2,746.2	3,501.6	3,154.3	18.9	0.0	94.30	-1,733.7	-202.5	1,499.9	1,481.0	18.90	79.343				
3,100.0	2,819.9	3,519.7	3,168.6	20.5	0.0	94.99	-1,725.3	-209.6	1,483.5	1,463.0	20.41	72.674				
3,200.0	2,893.5	3,539.9	3,184.9	22.0	0.0	95.77	-1,716.0	-217.3	1,473.4	1,451.5	21.92	67.220				
3,300.0	2,967.2	3,562.4	3,203.0	23.5	0.0	96.63	-1,705.7	-225.8	1,469.8	1,446.3	23.42	62.759				
3,305.8	2,971.4	3,563.8	3,204.1	23.6	0.0	96.68	-1,705.1	-226.3	1,469.7	1,446.2	23.51	62.525 CC, ES				
3,386.6	3,030.9	3,583.9	3,220.4	24.9	0.0	97.45	-1,696.0	-233.7	1,471.9	1,447.1	24.71	59.562				
3,400.0	3,040.8	3,587.5	3,223.3	25.1	0.0	97.60	-1,694.4	-235.0	1,472.6	1,447.7	24.89	59.154				
3,500.0	3,116.7	3,609.0	3,241.0	26.3	0.0	98.68	-1,684.8	-242.8	1,481.3	1,455.2	26.11	56.728				
3,600.0	3,195.8	3,637.0	3,264.1	27.5	0.0	100.13	-1,672.5	-252.7	1,495.4	1,468.2	27.21	54.959				
3,700.0	3,278.0	3,664.3	3,286.9	28.7	0.0	101.68	-1,660.9	-262.4	1,514.6	1,486.4	28.19	53.732				
3,800.0	3,363.1	3,704.0	3,320.3	29.7	0.0	103.76	-1,644.8	-276.4	1,538.2	1,509.2	28.99	53.055 SF				
3,900.0	3,450.9	3,811.4	3,413.7	30.6	0.0	107.96	-1,604.2	-310.4	1,564.2	1,534.8	29.38	53.232				
4,000.0	3,541.0	3,860.3	3,457.1	31.4	0.0	110.21	-1,586.8	-324.6	1,591.8	1,561.9	29.84	53.348				
4,100.0	3,633.3	3,911.7	3,503.0	32.1	0.0	112.48	-1,569.0	-339.8	1,621.4	1,591.3	30.14	53.803				
4,200.0	3,727.4	3,965.1	3,550.8	32.8	0.0	114.72	-1,551.6	-355.7	1,652.5	1,622.2	30.29	54.555				
4,300.0	3,823.2	4,109.1	3,682.4	33.3	0.0	118.69	-1,509.0	-395.7	1,683.4	1,653.5	29.91	56.275				
4,400.0	3,920.3	4,261.0	3,826.0	33.7	0.0	121.99	-1,471.8	-428.2	1,709.1	1,679.6	29.48	57.969				
4,500.0	4,018.6	4,439.4	4,000.0	34.0	0.0	124.60	-1,443.2	-454.3	1,729.2	1,700.1	29.06	59.500				
4,600.0	4,117.7	4,641.9	4,200.9	34.3	0.0	126.38	-1,423.8	-469.2	1,741.6	1,712.9	28.74	60.591				

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

Company:	Ursa Operating Company, LLC	Local Co-ordinate Reference:	Well Valley Farms J15
Project:	Rockies Region	TVD Reference:	Valley Farms J15 @ 5552.4ft (Original Well Elev)
Reference Site:	Valley Farms J	MD Reference:	Valley Farms J15 @ 5552.4ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Valley Farms J15	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	EDM 2003.21 Single User Db
Reference Design:	Design #1	Offset TVD Reference:	Offset Datum

Offset Design													Valley Farms I - Valley Farms I7 - Wellbore #1 - Actual		Offset Site Error:		0.0 ft
Survey Program: 983-													Offset Well Error:		0.0 ft		
Reference		Offset		Semi Major Axis			Distance							Warning			
Measured Depth	Vertical Depth	Measured Depth	Vertical Depth	Reference	Offset	Highside Toolface	Offset Wellbore Centre		Between Centres	Between Ellipses	Minimum Separation	Separation Factor					
Depth (ft)	Depth (ft)	Depth (ft)	Depth (ft)	(ft)	(ft)	(°)	+N/-S (ft)	+E/-W (ft)	(ft)	(ft)	(ft)						
4,700.0	4,217.4	4,798.8	4,357.6	34.5	0.0	127.07	-1,417.1	-470.9	1,746.4	1,717.8	28.65	60.954					
4,805.7	4,323.0	4,899.7	4,458.5	34.6	0.0	-103.28	-1,414.7	-470.0	1,746.6	1,718.0	28.65	60.971					
4,900.0	4,417.3	4,998.0	4,556.8	34.6	0.0	-103.27	-1,414.4	-469.1	1,745.8	1,717.0	28.71	60.814					
5,000.0	4,517.3	5,107.8	4,666.6	34.7	0.0	-103.28	-1,414.2	-467.3	1,744.1	1,715.4	28.77	60.613					
5,100.0	4,617.3	5,186.4	4,745.2	34.7	0.0	-103.28	-1,414.0	-466.3	1,742.8	1,714.0	28.84	60.424					
5,200.0	4,717.3	5,280.9	4,839.7	34.8	0.0	-103.27	-1,413.6	-466.1	1,742.5	1,713.6	28.91	60.279					
5,300.0	4,817.3	5,391.4	4,950.2	34.9	0.0	-103.25	-1,412.8	-465.7	1,742.0	1,713.0	28.97	60.126					
5,400.0	4,917.3	5,498.0	5,056.8	34.9	0.0	-103.23	-1,411.8	-464.6	1,740.8	1,711.8	29.04	59.950					
5,499.5	5,016.8	5,575.0	5,133.8	35.0	0.0	-103.23	-1,411.6	-464.1	1,740.1	1,711.0	29.11	59.776					
5,500.0	5,017.3	5,575.4	5,134.2	35.0	0.0	-103.23	-1,411.6	-464.1	1,740.1	1,711.0	29.11	59.775					
5,600.0	5,117.3	5,653.9	5,212.7	35.0	0.0	-103.24	-1,412.3	-464.5	1,740.7	1,711.5	29.19	59.633					
5,700.0	5,217.3	5,744.5	5,303.2	35.1	0.0	-103.26	-1,413.3	-465.8	1,742.4	1,713.1	29.27	59.518					
5,800.0	5,317.3	5,848.1	5,406.8	35.2	0.0	-103.29	-1,414.5	-467.3	1,744.1	1,714.8	29.36	59.402					
5,900.0	5,417.3	5,960.3	5,519.1	35.3	0.0	-103.34	-1,416.2	-468.4	1,745.4	1,715.9	29.45	59.256					
6,000.0	5,517.3	6,058.5	5,617.2	35.3	0.0	-103.35	-1,416.7	-469.1	1,746.3	1,716.7	29.54	59.118					
6,100.0	5,617.3	6,169.6	5,728.3	35.4	0.0	-103.32	-1,415.9	-470.1	1,747.0	1,717.3	29.61	58.994					
6,200.0	5,717.3	6,277.9	5,836.6	35.5	0.0	-103.28	-1,414.8	-470.4	1,747.0	1,717.3	29.69	58.851					
6,300.0	5,817.3	6,380.9	5,939.5	35.5	0.0	-103.26	-1,414.3	-470.3	1,746.8	1,717.0	29.77	58.683					
6,400.0	5,917.3	6,482.2	6,040.9	35.6	0.0	-103.26	-1,414.1	-470.0	1,746.4	1,716.6	29.85	58.502					
6,500.0	6,017.3	6,577.1	6,135.8	35.7	0.0	-103.25	-1,413.7	-469.8	1,746.1	1,716.2	29.94	58.325					
6,513.6	6,030.9	6,589.2	6,147.9	35.7	0.0	-103.25	-1,413.7	-469.8	1,746.1	1,716.2	29.95	58.302					
6,600.0	6,117.3	6,668.8	6,227.5	35.8	0.0	-103.26	-1,414.0	-469.9	1,746.3	1,716.3	30.03	58.152					
6,700.0	6,217.3	6,768.4	6,327.1	35.9	0.0	-103.28	-1,414.7	-470.2	1,746.8	1,716.7	30.13	57.980					
6,800.0	6,317.3	6,873.6	6,432.3	35.9	0.0	-103.29	-1,415.2	-470.4	1,747.1	1,716.8	30.23	57.801					
6,900.0	6,417.3	6,975.4	6,534.1	36.0	0.0	-103.31	-1,415.8	-470.3	1,747.1	1,716.8	30.33	57.612					
7,000.0	6,517.3	7,079.9	6,638.6	36.1	0.0	-103.33	-1,416.5	-470.0	1,747.0	1,716.6	30.43	57.416					
7,100.0	6,617.3	7,199.0	6,757.7	36.2	0.0	-103.35	-1,416.6	-469.1	1,746.3	1,715.8	30.53	57.203					
7,200.0	6,717.3	7,279.0	6,837.7	36.3	0.0	-103.31	-1,415.5	-468.7	1,745.5	1,714.9	30.62	57.012					
7,218.4	6,735.7	7,294.0	6,852.7	36.3	0.0	-103.30	-1,415.1	-468.8	1,745.5	1,714.9	30.63	56.985					
7,300.0	6,817.3	7,358.0	6,916.7	36.4	0.0	-103.25	-1,413.6	-469.5	1,745.9	1,715.2	30.70	56.876					
7,400.0	6,917.3	7,453.5	7,012.1	36.4	0.0	-103.20	-1,412.4	-471.1	1,747.2	1,716.5	30.78	56.759					
7,500.0	7,017.3	7,558.2	7,116.8	36.5	0.0	-103.17	-1,411.9	-472.4	1,748.4	1,717.5	30.88	56.619					
7,589.7	7,107.0	7,665.7	7,224.3	36.6	0.0	-103.15	-1,411.5	-473.1	1,748.9	1,717.9	30.97	56.476					

Company:	Ursa Operating Company, LLC	Local Co-ordinate Reference:	Well Valley Farms J15
Project:	Rockies Region	TVD Reference:	Valley Farms J15 @ 5552.4ft (Original Well Elev)
Reference Site:	Valley Farms J	MD Reference:	Valley Farms J15 @ 5552.4ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Valley Farms J15	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	EDM 2003.21 Single User Db
Reference Design:	Design #1	Offset TVD Reference:	Offset Datum

Offset Design														Offset Site Error:	0.0 ft
Valley Farms J - Valley Farms J1 - Wellbore #1 - Design #1														Offset Well Error:	0.0 ft
Survey Program: 0-MWD															
Reference		Offset		Semi Major Axis			Distance								
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning		
0.0	0.0	0.0	0.0	0.0	0.0	12.96	92.7	21.4	95.2						
100.0	100.0	100.0	100.0	0.1	0.1	12.96	92.7	21.4	95.2	95.0	0.19	500.501			
200.0	200.0	200.0	200.0	0.3	0.3	12.96	92.7	21.4	95.2	94.5	0.64	148.779			
300.0	300.0	300.0	300.0	0.5	0.5	12.96	92.7	21.4	95.2	94.1	1.09	87.376			
400.0	400.0	400.0	400.0	0.8	0.8	12.96	92.7	21.4	95.2	93.6	1.54	61.850			
500.0	500.0	500.0	500.0	1.0	1.0	12.96	92.7	21.4	95.2	93.2	1.99	47.866			
600.0	600.0	600.0	600.0	1.2	1.2	12.96	92.7	21.4	95.2	92.7	2.44	39.040			
700.0	700.0	700.0	700.0	1.4	1.4	12.96	92.7	21.4	95.2	92.3	2.89	32.962			
800.0	800.0	800.0	800.0	1.7	1.7	12.96	92.7	21.4	95.2	91.8	3.34	28.521			
900.0	900.0	900.0	900.0	1.9	1.9	12.96	92.7	21.4	95.2	91.4	3.79	25.135			
1,000.0	1,000.0	1,000.0	1,000.0	2.1	2.1	12.96	92.7	21.4	95.2	90.9	4.24	22.468			
1,100.0	1,100.0	1,100.0	1,100.0	2.3	2.3	12.96	92.7	21.4	95.2	90.5	4.69	20.312 CC, ES			
1,200.0	1,200.0	1,195.3	1,195.2	2.5	2.6	-117.35	94.8	22.5	98.8	93.6	5.10	19.353 SF			
1,300.0	1,299.6	1,289.7	1,289.4	2.7	2.8	-119.45	101.0	25.9	109.6	104.1	5.51	19.881			
1,400.0	1,398.8	1,382.4	1,381.4	3.0	3.0	-122.08	111.0	31.5	127.8	121.9	5.94	21.510			
1,500.0	1,497.1	1,472.7	1,470.3	3.2	3.2	-124.59	124.4	38.9	153.5	147.1	6.40	23.984			
1,600.0	1,594.3	1,559.8	1,555.4	3.5	3.5	-126.61	140.9	48.1	186.4	179.5	6.89	27.043			
1,700.0	1,690.2	1,643.3	1,636.0	4.0	3.8	-128.08	159.9	58.6	226.3	218.9	7.43	30.440			
1,800.0	1,784.4	1,722.7	1,711.7	4.5	4.1	-129.01	180.7	70.2	272.7	264.7	8.03	33.955			
1,900.0	1,876.8	1,800.0	1,784.4	5.1	4.5	-129.52	203.7	82.9	325.3	316.6	8.70	37.374			
2,000.0	1,967.1	1,867.8	1,847.3	5.8	4.9	-129.50	225.9	95.2	383.4	374.0	9.44	40.606			
2,100.0	2,054.9	1,933.3	1,907.1	6.7	5.3	-129.16	249.2	108.1	446.7	436.4	10.28	43.452			
2,200.0	2,140.2	2,000.0	1,967.1	7.7	5.7	-128.62	274.8	122.3	514.7	503.5	11.21	45.896			
2,300.0	2,222.6	2,050.0	2,011.3	8.8	6.1	-127.43	295.1	133.6	586.8	574.6	12.25	47.908			
2,400.0	2,301.9	2,100.0	2,054.9	10.1	6.5	-125.98	316.5	145.5	662.8	649.4	13.41	49.417			
2,500.0	2,377.9	2,147.9	2,096.1	11.5	6.9	-124.23	337.9	157.3	742.1	727.4	14.74	50.360			
2,519.1	2,392.1	2,156.3	2,103.3	11.7	7.0	-123.84	341.8	159.5	757.6	742.6	15.01	50.485			
2,600.0	2,451.7	2,200.0	2,140.2	12.9	7.4	-125.11	362.2	170.8	823.9	807.9	15.99	51.515			
2,700.0	2,525.3	2,232.5	2,167.3	14.4	7.7	-125.89	377.9	179.5	906.7	889.5	17.24	52.607			
2,800.0	2,598.9	2,281.7	2,207.9	15.9	8.2	-126.87	402.1	193.0	990.4	971.9	18.49	53.565			
2,900.0	2,672.6	2,335.5	2,252.3	17.4	8.7	-127.79	428.7	207.7	1,074.2	1,054.4	19.75	54.387			
3,000.0	2,746.2	2,389.4	2,296.8	18.9	9.2	-128.57	455.3	222.5	1,158.0	1,137.0	21.02	55.104			
3,100.0	2,819.9	2,443.2	2,341.2	20.5	9.8	-129.26	481.9	237.2	1,241.9	1,219.6	22.29	55.711			
3,200.0	2,893.5	2,497.0	2,385.6	22.0	10.3	-129.85	508.5	251.9	1,325.9	1,302.3	23.57	56.246			
3,300.0	2,967.2	2,550.8	2,430.0	23.5	10.9	-130.38	535.1	266.7	1,409.9	1,385.0	24.87	56.701			
3,386.6	3,030.9	2,597.5	2,468.5	24.9	11.4	-130.79	558.1	279.5	1,482.7	1,456.7	25.99	57.057			
3,400.0	3,040.8	2,604.7	2,474.5	25.1	11.4	-131.31	561.7	281.4	1,493.9	1,467.8	26.09	57.267			
3,500.0	3,116.7	2,660.6	2,520.6	26.3	12.0	-134.81	589.3	296.8	1,576.7	1,549.9	26.82	58.781			
3,600.0	3,195.8	2,719.6	2,569.3	27.5	12.6	-137.66	618.4	312.9	1,657.4	1,629.8	27.65	59.941			
3,700.0	3,278.0	2,781.7	2,620.5	28.7	13.3	-139.97	649.1	329.9	1,735.8	1,707.2	28.55	60.791			
3,800.0	3,363.1	2,846.5	2,674.0	29.7	14.0	-141.84	681.1	347.7	1,811.6	1,782.1	29.51	61.383			
3,900.0	3,450.9	2,914.0	2,729.7	30.6	14.7	-143.35	714.4	366.2	1,884.7	1,854.2	30.51	61.773			
4,000.0	3,541.0	2,983.9	2,787.4	31.4	15.4	-144.55	748.9	385.3	1,955.0	1,923.4	31.53	62.001			
4,100.0	3,633.3	3,056.1	2,847.0	32.1	16.2	-145.50	784.6	405.1	2,022.2	1,989.7	32.56	62.109			
4,200.0	3,727.4	3,130.3	2,908.2	32.8	17.0	-146.23	821.2	425.4	2,086.4	2,052.8	33.58	62.129			
4,300.0	3,823.2	3,206.4	2,971.0	33.3	17.8	-146.78	858.8	446.3	2,147.4	2,112.8	34.59	62.088			
4,400.0	3,920.3	3,284.2	3,035.2	33.7	18.6	-147.17	897.2	467.6	2,205.1	2,169.6	35.56	62.009			
4,500.0	4,018.6	3,363.3	3,100.5	34.0	19.5	-147.43	936.3	489.3	2,259.5	2,223.0	36.50	61.911			
4,600.0	4,117.7	3,493.7	3,208.6	34.3	20.8	-147.05	1,000.1	524.6	2,310.5	2,272.7	37.82	61.085			
4,700.0	4,217.4	4,355.7	4,012.9	34.5	25.6	-143.24	1,252.8	664.8	2,342.3	2,300.0	42.29	55.386			

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

Company:	Ursa Operating Company, LLC	Local Co-ordinate Reference:	Well Valley Farms J15
Project:	Rockies Region	TVD Reference:	Valley Farms J15 @ 5552.4ft (Original Well Elev)
Reference Site:	Valley Farms J	MD Reference:	Valley Farms J15 @ 5552.4ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Valley Farms J15	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	EDM 2003.21 Single User Db
Reference Design:	Design #1	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:		0.0 ft	
Survey Program: 0-MWD												Offset Well Error:		0.0 ft	
Reference		Offset		Semi Major Axis			Distance							Warning	
Measured Depth	Vertical Depth	Measured Depth	Vertical Depth	Reference	Offset	Highside Toolface	Offset Wellbore Centre		Between Centres	Between Ellipses	Minimum Separation	Separation Factor			
(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(°)	+N/-S (ft)	+E/-W (ft)	(ft)	(ft)	(ft)				
4,805.7	4,323.0	4,666.3	4,323.0	34.6	26.0	-13.77	1,264.6	671.4	2,345.6	2,302.8	42.82	54.781			
4,900.0	4,417.3	4,760.6	4,417.3	34.6	26.1	-13.77	1,264.6	671.4	2,345.6	2,302.6	42.98	54.570			
5,000.0	4,517.3	4,860.6	4,517.3	34.7	26.1	-13.77	1,264.6	671.4	2,345.6	2,302.4	43.17	54.338			
5,100.0	4,617.3	4,960.6	4,617.3	34.7	26.2	-13.77	1,264.6	671.4	2,345.6	2,302.3	43.35	54.104			
5,200.0	4,717.3	5,060.6	4,717.3	34.8	26.3	-13.77	1,264.6	671.4	2,345.6	2,302.1	43.55	53.866			
5,300.0	4,817.3	5,160.6	4,817.3	34.9	26.4	-13.77	1,264.6	671.4	2,345.6	2,301.9	43.74	53.626			
5,400.0	4,917.3	5,260.6	4,917.3	34.9	26.5	-13.77	1,264.6	671.4	2,345.6	2,301.7	43.94	53.384			
5,500.0	5,017.3	5,360.6	5,017.3	35.0	26.5	-13.77	1,264.6	671.4	2,345.6	2,301.5	44.14	53.139			
5,600.0	5,117.3	5,460.6	5,117.3	35.0	26.6	-13.77	1,264.6	671.4	2,345.6	2,301.3	44.35	52.893			
5,700.0	5,217.3	5,560.6	5,217.3	35.1	26.7	-13.77	1,264.6	671.4	2,345.6	2,301.1	44.56	52.644			
5,800.0	5,317.3	5,660.6	5,317.3	35.2	26.8	-13.77	1,264.6	671.4	2,345.6	2,300.8	44.77	52.393			
5,900.0	5,417.3	5,760.6	5,417.3	35.3	26.9	-13.77	1,264.6	671.4	2,345.6	2,300.6	44.99	52.141			
6,000.0	5,517.3	5,860.6	5,517.3	35.3	27.0	-13.77	1,264.6	671.4	2,345.6	2,300.4	45.21	51.888			
6,100.0	5,617.3	5,960.6	5,617.3	35.4	27.1	-13.77	1,264.6	671.4	2,345.6	2,300.2	45.43	51.633			
6,200.0	5,717.3	6,060.6	5,717.3	35.5	27.2	-13.77	1,264.6	671.4	2,345.6	2,300.0	45.66	51.376			
6,300.0	5,817.3	6,160.6	5,817.3	35.5	27.3	-13.77	1,264.6	671.4	2,345.6	2,299.7	45.89	51.119			
6,400.0	5,917.3	6,260.6	5,917.3	35.6	27.4	-13.77	1,264.6	671.4	2,345.6	2,299.5	46.12	50.860			
6,500.0	6,017.3	6,360.6	6,017.3	35.7	27.5	-13.77	1,264.6	671.4	2,345.6	2,299.3	46.35	50.601			
6,600.0	6,117.3	6,460.6	6,117.3	35.8	27.6	-13.77	1,264.6	671.4	2,345.6	2,299.0	46.59	50.341			
6,700.0	6,217.3	6,560.6	6,217.3	35.9	27.7	-13.77	1,264.6	671.4	2,345.6	2,298.8	46.84	50.080			
6,800.0	6,317.3	6,660.6	6,317.3	35.9	27.8	-13.77	1,264.6	671.4	2,345.6	2,298.5	47.08	49.819			
6,900.0	6,417.3	6,760.6	6,417.3	36.0	27.9	-13.77	1,264.6	671.4	2,345.6	2,298.3	47.33	49.558			
7,000.0	6,517.3	6,860.6	6,517.3	36.1	28.0	-13.77	1,264.6	671.4	2,345.6	2,298.0	47.58	49.296			
7,100.0	6,617.3	6,960.6	6,617.3	36.2	28.1	-13.77	1,264.6	671.4	2,345.6	2,297.8	47.84	49.034			
7,200.0	6,717.3	7,060.6	6,717.3	36.3	28.2	-13.77	1,264.6	671.4	2,345.6	2,297.5	48.09	48.771			
7,300.0	6,817.3	7,160.6	6,817.3	36.4	28.3	-13.77	1,264.6	671.4	2,345.6	2,297.3	48.35	48.509			
7,400.0	6,917.3	7,260.6	6,917.3	36.4	28.4	-13.77	1,264.6	671.4	2,345.6	2,297.0	48.62	48.247			
7,500.0	7,017.3	7,360.6	7,017.3	36.5	28.6	-13.77	1,264.6	671.4	2,345.6	2,296.7	48.88	47.985			
7,589.7	7,107.0	7,367.3	7,024.0	36.6	28.6	-13.77	1,264.6	671.4	2,347.1	2,298.1	49.00	47.896			

Company:	Ursa Operating Company, LLC	Local Co-ordinate Reference:	Well Valley Farms J15
Project:	Rockies Region	TVD Reference:	Valley Farms J15 @ 5552.4ft (Original Well Elev)
Reference Site:	Valley Farms J	MD Reference:	Valley Farms J15 @ 5552.4ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Valley Farms J15	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	EDM 2003.21 Single User Db
Reference Design:	Design #1	Offset TVD Reference:	Offset Datum

Offset Design													Offset Site Error:	0.0 ft
Valley Farms J - Valley Farms J10 - Wellbore #1 - Design #1													Offset Well Error:	0.0 ft
Survey Program: 0-MWD														
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
0.0	0.0	0.0	0.0	0.0	0.0	-0.65	12.5	-0.1	12.5					
100.0	100.0	100.0	100.0	0.1	0.1	-0.65	12.5	-0.1	12.5	12.3	0.19	65.707		
200.0	200.0	200.0	200.0	0.3	0.3	-0.65	12.5	-0.1	12.5	11.9	0.64	19.532		
300.0	300.0	300.0	300.0	0.5	0.5	-0.65	12.5	-0.1	12.5	11.4	1.09	11.471		
400.0	400.0	400.0	400.0	0.8	0.8	-0.65	12.5	-0.1	12.5	11.0	1.54	8.120		
500.0	500.0	500.0	500.0	1.0	1.0	-0.65	12.5	-0.1	12.5	10.5	1.99	6.284		
600.0	600.0	600.0	600.0	1.2	1.2	-0.65	12.5	-0.1	12.5	10.1	2.44	5.125		
700.0	700.0	700.0	700.0	1.4	1.4	-0.65	12.5	-0.1	12.5	9.6	2.89	4.327		
800.0	800.0	800.0	800.0	1.7	1.7	-0.65	12.5	-0.1	12.5	9.2	3.34	3.744		
900.0	900.0	900.0	900.0	1.9	1.9	-0.65	12.5	-0.1	12.5	8.7	3.79	3.300		
1,000.0	1,000.0	1,000.0	1,000.0	2.1	2.1	-0.65	12.5	-0.1	12.5	8.3	4.24	2.950		
1,100.0	1,100.0	1,100.0	1,100.0	2.3	2.3	-0.65	12.5	-0.1	12.5	7.8	4.69	2.667		
1,195.7	1,195.7	1,196.2	1,196.2	2.5	2.5	-143.51	10.3	-1.1	12.2	7.1	5.07	2.399 CC		
1,200.0	1,200.0	1,200.5	1,200.5	2.5	2.5	-144.75	10.1	-1.2	12.2	7.1	5.08	2.392 ES, SF		
1,300.0	1,299.6	1,300.4	1,300.0	2.7	2.7	178.08	2.8	-4.2	15.5	10.1	5.43	2.860		
1,400.0	1,398.8	1,399.2	1,397.9	3.0	2.9	152.27	-9.0	-9.3	28.0	22.2	5.82	4.818		
1,500.0	1,497.1	1,496.2	1,493.4	3.2	3.2	140.88	-25.2	-16.1	48.5	42.2	6.27	7.728		
1,600.0	1,594.3	1,591.1	1,585.7	3.5	3.5	135.28	-45.3	-24.6	75.4	68.6	6.80	11.093		
1,700.0	1,690.2	1,683.3	1,674.3	4.0	3.8	132.00	-68.9	-34.6	108.3	100.9	7.42	14.596		
1,800.0	1,784.4	1,772.7	1,758.8	4.5	4.2	129.77	-95.5	-45.8	146.7	138.6	8.15	18.006		
1,900.0	1,876.8	1,858.7	1,838.9	5.1	4.7	128.04	-124.5	-58.1	190.4	181.4	8.99	21.168		
2,000.0	1,967.1	1,941.4	1,914.4	5.8	5.2	126.54	-155.5	-71.2	238.9	228.9	9.95	23.997		
2,100.0	2,054.9	2,020.5	1,985.3	6.7	5.8	125.14	-187.9	-84.9	291.9	280.9	11.04	26.454		
2,200.0	2,140.2	2,099.0	2,054.2	7.7	6.4	123.82	-222.4	-99.5	349.1	336.9	12.25	28.499		
2,300.0	2,222.6	2,178.9	2,124.2	8.8	7.0	122.92	-258.0	-114.6	408.9	395.4	13.57	30.131		
2,400.0	2,301.9	2,256.8	2,192.4	10.1	7.7	122.30	-292.6	-129.2	471.1	456.2	14.98	31.457		
2,500.0	2,377.9	2,332.3	2,258.5	11.5	8.4	121.81	-326.2	-143.5	535.7	519.2	16.46	32.540		
2,519.1	2,392.1	2,346.4	2,270.9	11.7	8.5	121.72	-332.5	-146.1	548.3	531.5	16.76	32.722		
2,600.0	2,451.7	2,406.1	2,323.1	12.9	9.0	123.05	-359.0	-157.4	602.0	584.0	18.00	33.440		
2,700.0	2,525.3	2,479.9	2,387.8	14.4	9.7	124.40	-391.9	-171.2	668.5	648.9	19.56	34.178		
2,800.0	2,598.9	2,553.7	2,452.4	15.9	10.3	125.50	-424.7	-185.1	735.2	714.1	21.13	34.792		
2,900.0	2,672.6	2,627.5	2,517.0	17.4	11.0	126.43	-457.5	-199.0	802.1	779.3	22.71	35.312		
3,000.0	2,746.2	2,701.3	2,581.6	18.9	11.6	127.22	-490.4	-212.9	869.0	844.7	24.30	35.755		
3,100.0	2,819.9	2,775.1	2,646.2	20.5	12.3	127.89	-523.2	-226.8	936.0	910.1	25.90	36.136		
3,200.0	2,893.5	2,848.9	2,710.8	22.0	13.0	128.48	-556.0	-240.7	1,003.1	975.6	27.51	36.467		
3,300.0	2,967.2	2,922.7	2,775.4	23.5	13.7	128.99	-588.8	-254.6	1,070.2	1,041.1	29.12	36.759		
3,386.6	3,030.9	2,986.6	2,831.4	24.9	14.2	129.39	-617.3	-266.6	1,128.4	1,097.9	30.51	36.983		
3,400.0	3,040.8	2,996.5	2,840.1	25.1	14.3	129.72	-621.7	-268.5	1,137.4	1,106.7	30.71	37.040		
3,500.0	3,116.7	3,071.9	2,906.1	26.3	15.0	131.94	-655.2	-282.7	1,203.0	1,170.9	32.11	37.467		
3,600.0	3,195.8	3,149.6	2,974.1	27.5	15.7	133.71	-689.8	-297.3	1,265.9	1,232.4	33.53	37.751		
3,700.0	3,278.0	3,229.4	3,044.0	28.7	16.5	135.10	-725.3	-312.3	1,326.0	1,291.0	34.97	37.914		
3,800.0	3,363.1	3,311.1	3,115.6	29.7	17.2	136.18	-761.7	-327.7	1,383.1	1,346.6	36.42	37.976		
3,900.0	3,450.9	3,394.6	3,188.6	30.6	18.0	136.97	-798.8	-343.4	1,437.1	1,399.2	37.86	37.958		
4,000.0	3,541.0	3,479.4	3,262.9	31.4	18.8	137.53	-836.5	-359.4	1,488.0	1,448.7	39.28	37.878		
4,100.0	3,633.3	3,565.5	3,338.3	32.1	19.6	137.88	-874.8	-375.6	1,535.7	1,495.0	40.68	37.750		
4,200.0	3,727.4	3,652.6	3,414.5	32.8	20.4	138.05	-913.6	-392.0	1,580.1	1,538.1	42.04	37.588		
4,300.0	3,823.2	3,740.4	3,491.4	33.3	21.2	138.04	-952.6	-408.5	1,621.4	1,578.1	43.35	37.403		
4,400.0	3,920.3	3,851.5	3,569.1	33.7	22.1	137.66	-1,001.3	-429.1	1,659.3	1,614.6	44.71	37.112		
4,500.0	4,018.6	4,001.4	3,725.1	34.0	23.0	136.93	-1,059.3	-453.7	1,691.5	1,645.4	46.10	36.693		
4,600.0	4,117.7	4,160.7	3,874.6	34.3	23.9	136.24	-1,109.9	-475.1	1,716.9	1,669.6	47.29	36.304		

Company:	Ursa Operating Company, LLC	Local Co-ordinate Reference:	Well Valley Farms J15
Project:	Rockies Region	TVD Reference:	Valley Farms J15 @ 5552.4ft (Original Well Elev)
Reference Site:	Valley Farms J	MD Reference:	Valley Farms J15 @ 5552.4ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Valley Farms J15	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	EDM 2003.21 Single User Db
Reference Design:	Design #1	Offset TVD Reference:	Offset Datum

Offset Design														Offset Site Error:	0.0 ft
Valley Farms J - Valley Farms J10 - Wellbore #1 - Design #1														Offset Well Error:	0.0 ft
Survey Program: 0-MWD															
Reference		Offset		Semi Major Axis			Offset Wellbore Centre		Distance				Warning		
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	+N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor			
4,700.0	4,217.4	4,328.2	4,036.1	34.5	24.6	135.61	-1,150.6	-492.3	1,735.0	1,686.8	48.26	35.949			
4,805.7	4,323.0	4,512.1	4,217.1	34.6	25.2	-95.49	-1,180.1	-504.8	1,745.9	1,696.9	49.00	35.633			
4,900.0	4,417.3	4,679.9	4,384.3	34.6	25.5	-95.89	-1,193.0	-510.2	1,749.6	1,700.2	49.43	35.394			
5,000.0	4,517.3	4,812.9	4,517.3	34.7	25.6	-95.93	-1,194.3	-510.8	1,750.0	1,700.4	49.64	35.252			
5,100.0	4,617.3	4,912.9	4,617.3	34.7	25.7	-95.93	-1,194.3	-510.8	1,750.0	1,700.2	49.79	35.145			
5,200.0	4,717.3	5,012.9	4,717.3	34.8	25.8	-95.93	-1,194.3	-510.8	1,750.0	1,700.1	49.95	35.037			
5,300.0	4,817.3	5,112.9	4,817.3	34.9	25.8	-95.93	-1,194.3	-510.8	1,750.0	1,699.9	50.11	34.926			
5,400.0	4,917.3	5,212.9	4,917.3	34.9	25.9	-95.93	-1,194.3	-510.8	1,750.0	1,699.8	50.27	34.813			
5,500.0	5,017.3	5,312.9	5,017.3	35.0	26.0	-95.93	-1,194.3	-510.8	1,750.0	1,699.6	50.43	34.699			
5,600.0	5,117.3	5,412.9	5,117.3	35.0	26.1	-95.93	-1,194.3	-510.8	1,750.0	1,699.4	50.60	34.584			
5,700.0	5,217.3	5,512.9	5,217.3	35.1	26.2	-95.93	-1,194.3	-510.8	1,750.0	1,699.2	50.77	34.466			
5,800.0	5,317.3	5,612.9	5,317.3	35.2	26.2	-95.93	-1,194.3	-510.8	1,750.0	1,699.1	50.95	34.348			
5,900.0	5,417.3	5,712.9	5,417.3	35.3	26.3	-95.93	-1,194.3	-510.8	1,750.0	1,698.9	51.13	34.227			
6,000.0	5,517.3	5,812.9	5,517.3	35.3	26.4	-95.93	-1,194.3	-510.8	1,750.0	1,698.7	51.31	34.106			
6,100.0	5,617.3	5,912.9	5,617.3	35.4	26.5	-95.93	-1,194.3	-510.8	1,750.0	1,698.5	51.50	33.983			
6,200.0	5,717.3	6,012.9	5,717.3	35.5	26.6	-95.93	-1,194.3	-510.8	1,750.0	1,698.3	51.69	33.859			
6,300.0	5,817.3	6,112.9	5,817.3	35.5	26.7	-95.93	-1,194.3	-510.8	1,750.0	1,698.1	51.88	33.734			
6,400.0	5,917.3	6,212.9	5,917.3	35.6	26.8	-95.93	-1,194.3	-510.8	1,750.0	1,697.9	52.07	33.607			
6,500.0	6,017.3	6,312.9	6,017.3	35.7	26.9	-95.93	-1,194.3	-510.8	1,750.0	1,697.7	52.27	33.480			
6,600.0	6,117.3	6,412.9	6,117.3	35.8	27.0	-95.93	-1,194.3	-510.8	1,750.0	1,697.5	52.47	33.351			
6,700.0	6,217.3	6,512.9	6,217.3	35.9	27.1	-95.93	-1,194.3	-510.8	1,750.0	1,697.3	52.68	33.222			
6,800.0	6,317.3	6,612.9	6,317.3	35.9	27.2	-95.93	-1,194.3	-510.8	1,750.0	1,697.1	52.88	33.091			
6,900.0	6,417.3	6,712.9	6,417.3	36.0	27.3	-95.93	-1,194.3	-510.8	1,750.0	1,696.9	53.10	32.960			
7,000.0	6,517.3	6,812.9	6,517.3	36.1	27.4	-95.93	-1,194.3	-510.8	1,750.0	1,696.7	53.31	32.828			
7,100.0	6,617.3	6,912.9	6,617.3	36.2	27.5	-95.93	-1,194.3	-510.8	1,750.0	1,696.5	53.53	32.695			
7,200.0	6,717.3	7,012.9	6,717.3	36.3	27.6	-95.93	-1,194.3	-510.8	1,750.0	1,696.3	53.74	32.562			
7,300.0	6,817.3	7,112.9	6,817.3	36.4	27.7	-95.93	-1,194.3	-510.8	1,750.0	1,696.1	53.97	32.428			
7,400.0	6,917.3	7,212.9	6,917.3	36.4	27.8	-95.93	-1,194.3	-510.8	1,750.0	1,695.8	54.19	32.293			
7,500.0	7,017.3	7,312.9	7,017.3	36.5	27.9	-95.93	-1,194.3	-510.8	1,750.0	1,695.6	54.42	32.158			
7,589.7	7,107.0	7,402.6	7,107.0	36.6	28.0	-95.93	-1,194.3	-510.8	1,750.0	1,695.4	54.63	32.036			

Company:	Ursa Operating Company, LLC	Local Co-ordinate Reference:	Well Valley Farms J15
Project:	Rockies Region	TVD Reference:	Valley Farms J15 @ 5552.4ft (Original Well Elev)
Reference Site:	Valley Farms J	MD Reference:	Valley Farms J15 @ 5552.4ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Valley Farms J15	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	EDM 2003.21 Single User Db
Reference Design:	Design #1	Offset TVD Reference:	Offset Datum

Offset Design														Offset Site Error:	0.0 ft
Valley Farms J - Valley Farms J11 - Wellbore #1 - Design #1														Offset Well Error:	0.0 ft
Survey Program: 0-MWD															
Reference		Offset		Semi Major Axis			Offset Wellbore Centre		Distance				Warning		
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	+N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor			
0.0	0.0	0.0	0.0	0.0	0.0	27.19	42.8	22.0	48.1						
100.0	100.0	100.0	100.0	0.1	0.1	27.19	42.8	22.0	48.1	47.9	0.19	252.833			
200.0	200.0	200.0	200.0	0.3	0.3	27.19	42.8	22.0	48.1	47.4	0.64	75.157			
300.0	300.0	300.0	300.0	0.5	0.5	27.19	42.8	22.0	48.1	47.0	1.09	44.139			
400.0	400.0	400.0	400.0	0.8	0.8	27.19	42.8	22.0	48.1	46.5	1.54	31.244			
500.0	500.0	500.0	500.0	1.0	1.0	27.19	42.8	22.0	48.1	46.1	1.99	24.180			
600.0	600.0	600.0	600.0	1.2	1.2	27.19	42.8	22.0	48.1	45.6	2.44	19.721			
700.0	700.0	700.0	700.0	1.4	1.4	27.19	42.8	22.0	48.1	45.2	2.89	16.651			
800.0	800.0	800.0	800.0	1.7	1.7	27.19	42.8	22.0	48.1	44.7	3.34	14.408			
900.0	900.0	900.0	900.0	1.9	1.9	27.19	42.8	22.0	48.1	44.3	3.79	12.697			
1,000.0	1,000.0	1,000.0	1,000.0	2.1	2.1	27.19	42.8	22.0	48.1	43.8	4.24	11.350			
1,100.0	1,100.0	1,100.0	1,100.0	2.3	2.3	27.19	42.8	22.0	48.1	43.4	4.69	10.261 CC, ES			
1,200.0	1,200.0	1,198.9	1,198.9	2.5	2.6	-102.48	42.6	24.5	49.7	44.6	5.10	9.751 SF			
1,300.0	1,299.6	1,297.7	1,297.4	2.7	2.8	-102.95	42.3	32.2	54.6	49.1	5.50	9.936			
1,400.0	1,398.8	1,396.2	1,395.0	3.0	3.0	-103.55	41.7	44.9	62.8	56.8	5.94	10.566			
1,500.0	1,497.1	1,494.2	1,491.4	3.2	3.3	-104.12	40.9	62.5	74.1	67.7	6.46	11.479			
1,600.0	1,594.3	1,591.6	1,586.2	3.5	3.6	-104.57	39.9	84.8	88.7	81.6	7.09	12.518			
1,700.0	1,690.2	1,688.3	1,679.0	4.0	4.0	-104.88	38.7	111.8	106.4	98.5	7.86	13.544			
1,800.0	1,784.4	1,784.1	1,769.6	4.5	4.5	-105.02	37.2	143.1	127.1	118.3	8.79	14.458			
1,900.0	1,876.8	1,879.0	1,857.5	5.1	5.0	-105.04	35.6	178.5	150.8	140.9	9.92	15.206			
2,000.0	1,967.1	1,972.8	1,942.7	5.8	5.7	-104.92	33.8	217.8	177.4	166.2	11.25	15.774			
2,100.0	2,054.9	2,066.2	2,025.5	6.7	6.5	-104.74	31.8	260.8	206.7	194.0	12.77	16.186			
2,200.0	2,140.2	2,161.1	2,109.0	7.7	7.4	-105.27	29.8	305.9	237.8	223.3	14.48	16.423			
2,300.0	2,222.6	2,255.1	2,191.8	8.8	8.2	-106.51	27.7	350.5	270.5	254.2	16.31	16.588			
2,400.0	2,301.9	2,348.0	2,273.6	10.1	9.1	-108.19	25.7	394.6	305.0	286.8	18.22	16.741			
2,500.0	2,377.9	2,439.6	2,354.1	11.5	10.0	-110.09	23.7	438.1	341.8	321.6	20.19	16.926			
2,519.1	2,392.1	2,456.9	2,369.4	11.7	10.2	-110.47	23.4	446.3	349.1	328.5	20.57	16.967			
2,600.0	2,451.7	2,530.1	2,433.8	12.9	10.9	-112.82	21.8	481.0	380.5	358.3	22.20	17.142			
2,700.0	2,525.3	2,620.7	2,513.5	14.4	11.8	-115.24	19.8	524.0	420.0	395.8	24.19	17.361			
2,800.0	2,598.9	2,711.2	2,593.1	15.9	12.7	-117.26	17.8	566.9	460.0	433.8	26.17	17.575			
2,900.0	2,672.6	2,801.7	2,672.8	17.4	13.6	-118.96	15.9	609.9	500.4	472.3	28.15	17.779			
3,000.0	2,746.2	2,892.2	2,752.4	18.9	14.5	-120.41	13.9	652.8	541.2	511.1	30.11	17.971			
3,100.0	2,819.9	2,982.7	2,832.0	20.5	15.5	-121.66	11.9	695.8	582.2	550.1	32.08	18.150			
3,200.0	2,893.5	3,073.2	2,911.7	22.0	16.4	-122.74	10.0	738.8	623.4	589.3	34.03	18.317			
3,300.0	2,967.2	3,163.7	2,991.3	23.5	17.3	-123.70	8.0	781.7	664.7	628.8	35.99	18.472			
3,386.6	3,030.9	3,242.1	3,060.3	24.9	18.1	-124.43	6.3	818.9	700.7	663.0	37.68	18.598			
3,400.0	3,040.8	3,254.3	3,071.0	25.1	18.2	-124.69	6.0	824.7	706.2	668.3	37.92	18.624			
3,500.0	3,116.7	3,345.8	3,151.5	26.3	19.2	-126.27	4.1	868.1	746.1	706.4	39.70	18.794			
3,600.0	3,195.8	3,438.6	3,233.2	27.5	20.1	-127.37	2.0	912.2	783.1	741.6	41.52	18.860			
3,700.0	3,278.0	3,532.6	3,315.9	28.7	21.1	-128.05	0.0	956.8	817.2	773.8	43.38	18.836			
3,800.0	3,363.1	3,625.7	3,398.1	29.7	22.0	-128.40	-2.0	1,000.5	848.2	803.1	45.17	18.777			
3,900.0	3,450.9	3,717.8	3,481.1	30.6	22.7	-128.70	-3.8	1,040.4	876.6	829.9	46.74	18.756			
4,000.0	3,541.0	3,810.8	3,566.7	31.4	23.4	-128.98	-5.5	1,076.5	902.3	854.1	48.14	18.742			
4,100.0	3,633.3	3,904.7	3,654.9	32.1	23.9	-129.25	-6.9	1,108.8	925.1	875.7	49.38	18.734			
4,200.0	3,727.4	4,000.0	3,745.9	32.8	24.5	-129.50	-8.2	1,137.0	945.1	894.7	50.45	18.733			
4,300.0	3,823.2	4,094.6	3,837.5	33.3	24.9	-129.74	-9.3	1,160.5	962.2	910.8	51.34	18.742			
4,400.0	3,920.3	4,190.4	3,931.3	33.7	25.2	-129.96	-10.2	1,179.7	976.3	924.2	52.05	18.755			
4,500.0	4,018.6	4,286.6	4,026.5	34.0	25.5	-130.16	-10.9	1,194.2	987.3	934.7	52.60	18.772			
4,600.0	4,117.7	4,383.1	4,122.5	34.3	25.7	-130.35	-11.3	1,203.9	995.4	942.4	52.97	18.790			
4,700.0	4,217.4	4,479.8	4,219.0	34.5	25.8	-130.53	-11.5	1,208.8	1,000.3	947.2	53.19	18.808			

Company:	Ursa Operating Company, LLC	Local Co-ordinate Reference:	Well Valley Farms J15
Project:	Rockies Region	TVD Reference:	Valley Farms J15 @ 5552.4ft (Original Well Elev)
Reference Site:	Valley Farms J	MD Reference:	Valley Farms J15 @ 5552.4ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Valley Farms J15	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	EDM 2003.21 Single User Db
Reference Design:	Design #1	Offset TVD Reference:	Offset Datum

Offset Design													Offset Site Error:	0.0 ft
Survey Program: 0-MWD													Offset Well Error:	0.0 ft
Valley Farms J - Valley Farms J11 - Wellbore #1 - Design #1														
Reference		Offset		Semi Major Axis			Distance							
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning	
4,805.7	4,323.0	4,583.8	4,323.0	34.6	25.9	-1.17	-11.5	1,209.4	1,002.2	948.9	53.28	18.810		
4,900.0	4,417.3	4,678.1	4,417.3	34.6	26.0	-1.17	-11.5	1,209.4	1,002.2	948.8	53.42	18.762		
5,000.0	4,517.3	4,778.1	4,517.3	34.7	26.1	-1.17	-11.5	1,209.4	1,002.2	948.6	53.57	18.709		
5,100.0	4,617.3	4,878.1	4,617.3	34.7	26.1	-1.17	-11.5	1,209.4	1,002.2	948.5	53.72	18.655		
5,200.0	4,717.3	4,978.1	4,717.3	34.8	26.2	-1.17	-11.5	1,209.4	1,002.2	948.3	53.88	18.600		
5,300.0	4,817.3	5,078.1	4,817.3	34.9	26.3	-1.17	-11.5	1,209.4	1,002.2	948.2	54.05	18.544		
5,400.0	4,917.3	5,178.1	4,917.3	34.9	26.4	-1.17	-11.5	1,209.4	1,002.2	948.0	54.21	18.487		
5,500.0	5,017.3	5,278.1	5,017.3	35.0	26.5	-1.17	-11.5	1,209.4	1,002.2	947.8	54.38	18.430		
5,600.0	5,117.3	5,378.1	5,117.3	35.0	26.6	-1.17	-11.5	1,209.4	1,002.2	947.7	54.55	18.372		
5,700.0	5,217.3	5,478.1	5,217.3	35.1	26.7	-1.17	-11.5	1,209.4	1,002.2	947.5	54.73	18.313		
5,800.0	5,317.3	5,578.1	5,317.3	35.2	26.8	-1.17	-11.5	1,209.4	1,002.2	947.3	54.90	18.254		
5,900.0	5,417.3	5,678.1	5,417.3	35.3	26.9	-1.17	-11.5	1,209.4	1,002.2	947.1	55.09	18.194		
6,000.0	5,517.3	5,778.1	5,517.3	35.3	27.0	-1.17	-11.5	1,209.4	1,002.2	946.9	55.27	18.133		
6,100.0	5,617.3	5,878.1	5,617.3	35.4	27.0	-1.17	-11.5	1,209.4	1,002.2	946.8	55.46	18.072		
6,200.0	5,717.3	5,978.1	5,717.3	35.5	27.1	-1.17	-11.5	1,209.4	1,002.2	946.6	55.65	18.010		
6,300.0	5,817.3	6,078.1	5,817.3	35.5	27.3	-1.17	-11.5	1,209.4	1,002.2	946.4	55.84	17.948		
6,400.0	5,917.3	6,178.1	5,917.3	35.6	27.4	-1.17	-11.5	1,209.4	1,002.2	946.2	56.04	17.885		
6,500.0	6,017.3	6,278.1	6,017.3	35.7	27.5	-1.17	-11.5	1,209.4	1,002.2	946.0	56.24	17.822		
6,600.0	6,117.3	6,378.1	6,117.3	35.8	27.6	-1.17	-11.5	1,209.4	1,002.2	945.8	56.44	17.758		
6,700.0	6,217.3	6,478.1	6,217.3	35.9	27.7	-1.17	-11.5	1,209.4	1,002.2	945.6	56.64	17.694		
6,800.0	6,317.3	6,578.1	6,317.3	35.9	27.8	-1.17	-11.5	1,209.4	1,002.2	945.4	56.85	17.629		
6,900.0	6,417.3	6,678.1	6,417.3	36.0	27.9	-1.17	-11.5	1,209.4	1,002.2	945.1	57.06	17.564		
7,000.0	6,517.3	6,778.1	6,517.3	36.1	28.0	-1.17	-11.5	1,209.4	1,002.2	944.9	57.27	17.499		
7,100.0	6,617.3	6,878.1	6,617.3	36.2	28.1	-1.17	-11.5	1,209.4	1,002.2	944.7	57.49	17.433		
7,200.0	6,717.3	6,978.1	6,717.3	36.3	28.2	-1.17	-11.5	1,209.4	1,002.2	944.5	57.71	17.367		
7,300.0	6,817.3	7,078.1	6,817.3	36.4	28.3	-1.17	-11.5	1,209.4	1,002.2	944.3	57.93	17.301		
7,400.0	6,917.3	7,178.1	6,917.3	36.4	28.5	-1.17	-11.5	1,209.4	1,002.2	944.1	58.15	17.234		
7,500.0	7,017.3	7,278.1	7,017.3	36.5	28.6	-1.17	-11.5	1,209.4	1,002.2	943.8	58.38	17.167		
7,510.1	7,027.4	7,288.2	7,027.4	36.5	28.6	-1.17	-11.5	1,209.4	1,002.2	943.8	58.40	17.160		
7,589.7	7,107.0	7,311.8	7,051.0	36.6	28.6	-1.17	-11.5	1,209.4	1,003.8	945.3	58.52	17.153		

Company:	Ursa Operating Company, LLC	Local Co-ordinate Reference:	Well Valley Farms J15
Project:	Rockies Region	TVD Reference:	Valley Farms J15 @ 5552.4ft (Original Well Elev)
Reference Site:	Valley Farms J	MD Reference:	Valley Farms J15 @ 5552.4ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Valley Farms J15	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	EDM 2003.21 Single User Db
Reference Design:	Design #1	Offset TVD Reference:	Offset Datum

Offset Design														Offset Site Error:	0.0 ft
Valley Farms J - Valley Farms J12 - Wellbore #1 - Design #1														Offset Well Error:	0.0 ft
Survey Program: 0-MWD															
Reference		Offset		Semi Major Axis			Distance								
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning		
0.0	0.0	0.0	0.0	0.0	0.0	36.18	30.3	22.1	37.5						
100.0	100.0	100.0	100.0	0.1	0.1	36.18	30.3	22.1	37.5	37.3	0.19	197.222			
200.0	200.0	200.0	200.0	0.3	0.3	36.18	30.3	22.1	37.5	36.9	0.64	58.626			
300.0	300.0	300.0	300.0	0.5	0.5	36.18	30.3	22.1	37.5	36.4	1.09	34.430			
400.0	400.0	400.0	400.0	0.8	0.8	36.18	30.3	22.1	37.5	36.0	1.54	24.372			
500.0	500.0	500.0	500.0	1.0	1.0	36.18	30.3	22.1	37.5	35.5	1.99	18.862			
600.0	600.0	600.0	600.0	1.2	1.2	36.18	30.3	22.1	37.5	35.1	2.44	15.384			
700.0	700.0	700.0	700.0	1.4	1.4	36.18	30.3	22.1	37.5	34.6	2.89	12.988			
800.0	800.0	800.0	800.0	1.7	1.7	36.18	30.3	22.1	37.5	34.2	3.34	11.239			
900.0	900.0	900.0	900.0	1.9	1.9	36.18	30.3	22.1	37.5	33.7	3.79	9.904			
1,000.0	1,000.0	1,000.0	1,000.0	2.1	2.1	36.18	30.3	22.1	37.5	33.3	4.24	8.853			
1,100.0	1,100.0	1,100.0	1,100.0	2.3	2.3	36.18	30.3	22.1	37.5	32.8	4.69	8.004 CC, ES			
1,200.0	1,200.0	1,199.2	1,199.2	2.5	2.6	-93.58	29.7	24.6	38.6	33.5	5.10	7.584 SF			
1,300.0	1,299.6	1,298.4	1,298.1	2.7	2.8	-94.32	27.8	32.1	42.1	36.6	5.49	7.665			
1,400.0	1,398.8	1,397.4	1,396.2	3.0	3.0	-95.29	24.8	44.6	47.8	41.9	5.93	8.057			
1,500.0	1,497.1	1,496.2	1,493.4	3.2	3.2	-96.29	20.5	61.9	55.8	49.3	6.45	8.641			
1,600.0	1,594.3	1,594.7	1,589.2	3.5	3.6	-97.16	15.1	84.0	66.0	58.9	7.10	9.304			
1,700.0	1,690.2	1,692.8	1,683.3	4.0	4.0	-97.87	8.5	110.8	78.5	70.6	7.89	9.946			
1,800.0	1,784.4	1,790.5	1,775.6	4.5	4.5	-98.38	0.9	142.1	93.2	84.3	8.88	10.497			
1,900.0	1,876.8	1,887.7	1,865.6	5.1	5.1	-98.74	-7.9	177.7	110.0	99.9	10.07	10.925			
2,000.0	1,967.1	1,984.4	1,953.1	5.8	5.8	-98.94	-17.6	217.5	128.8	117.4	11.48	11.224			
2,100.0	2,054.9	2,080.6	2,038.1	6.7	6.6	-99.02	-28.4	261.3	149.7	136.6	13.11	11.418			
2,200.0	2,140.2	2,178.0	2,123.0	7.7	7.5	-99.90	-39.7	307.6	172.0	157.0	14.96	11.499			
2,300.0	2,222.6	2,274.8	2,207.5	8.8	8.5	-101.93	-51.0	353.6	195.4	178.5	16.93	11.544			
2,400.0	2,301.9	2,370.8	2,291.2	10.1	9.5	-104.65	-62.2	399.2	220.5	201.5	18.98	11.616			
2,500.0	2,377.9	2,465.8	2,374.0	11.5	10.4	-107.77	-73.2	444.4	247.7	226.6	21.06	11.762			
2,519.1	2,392.1	2,483.7	2,389.6	11.7	10.6	-108.38	-75.3	452.9	253.2	231.7	21.45	11.801			
2,600.0	2,451.7	2,559.8	2,456.0	12.9	11.4	-111.43	-84.2	489.1	277.0	253.9	23.12	11.983			
2,700.0	2,525.3	2,653.9	2,538.0	14.4	12.4	-114.56	-95.1	533.8	307.3	282.2	25.14	12.227			
2,800.0	2,598.9	2,747.9	2,620.1	15.9	13.4	-117.12	-106.1	578.5	338.4	311.2	27.12	12.475			
2,900.0	2,672.6	2,842.0	2,702.1	17.4	14.3	-119.27	-117.1	623.2	369.9	340.8	29.09	12.716			
3,000.0	2,746.2	2,936.0	2,784.1	18.9	15.3	-121.07	-128.0	667.9	401.8	370.8	31.04	12.947			
3,100.0	2,819.9	3,030.1	2,866.1	20.5	16.3	-122.62	-139.0	712.6	434.1	401.1	32.98	13.164			
3,200.0	2,893.5	3,124.1	2,948.1	22.0	17.3	-123.95	-149.9	757.3	466.6	431.7	34.91	13.367			
3,300.0	2,967.2	3,218.2	3,030.2	23.5	18.3	-125.11	-160.9	802.0	499.3	462.5	36.83	13.557			
3,386.6	3,030.9	3,299.6	3,101.2	24.9	19.2	-126.00	-170.4	840.7	527.7	489.2	38.49	13.711			
3,400.0	3,040.8	3,312.2	3,112.2	25.1	19.3	-126.24	-171.8	846.7	532.1	493.4	38.73	13.740			
3,500.0	3,116.7	3,407.1	3,194.9	26.3	20.4	-127.64	-182.9	891.8	563.2	522.7	40.49	13.908			
3,600.0	3,195.8	3,503.1	3,278.6	27.5	21.4	-128.47	-194.1	937.4	591.3	548.9	42.35	13.960			
3,700.0	3,278.0	3,598.9	3,362.2	28.7	22.4	-128.81	-205.2	982.9	616.2	571.9	44.28	13.915			
3,800.0	3,363.1	3,688.1	3,441.2	29.7	23.2	-129.00	-215.1	1,023.1	638.7	592.8	45.93	13.906			
3,900.0	3,450.9	3,777.6	3,522.3	30.6	23.8	-129.19	-224.1	1,059.8	659.4	611.9	47.43	13.902			
4,000.0	3,541.0	3,867.4	3,605.4	31.4	24.5	-129.38	-232.2	1,092.9	678.0	629.2	48.76	13.905			
4,100.0	3,633.3	3,957.4	3,690.2	32.1	25.0	-129.56	-239.4	1,122.2	694.6	644.7	49.93	13.912			
4,200.0	3,727.4	4,047.7	3,776.6	32.8	25.5	-129.74	-245.6	1,147.6	709.1	658.2	50.92	13.925			
4,300.0	3,823.2	4,138.1	3,864.3	33.3	25.9	-129.90	-250.9	1,169.2	721.6	669.8	51.76	13.941			
4,400.0	3,920.3	4,228.8	3,953.1	33.7	26.2	-130.06	-255.2	1,186.7	731.9	679.4	52.43	13.960			
4,500.0	4,018.6	4,319.5	4,042.8	34.0	26.4	-130.21	-258.5	1,200.0	740.0	687.1	52.93	13.981			
4,600.0	4,117.7	4,410.4	4,133.1	34.3	26.6	-130.35	-260.7	1,209.3	746.0	692.8	53.29	14.001			
4,700.0	4,217.4	4,500.0	4,222.6	34.5	26.8	-130.48	-262.0	1,214.3	749.9	696.4	53.49	14.019			

Company:	Ursa Operating Company, LLC	Local Co-ordinate Reference:	Well Valley Farms J15
Project:	Rockies Region	TVD Reference:	Valley Farms J15 @ 5552.4ft (Original Well Elev)
Reference Site:	Valley Farms J	MD Reference:	Valley Farms J15 @ 5552.4ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Valley Farms J15	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	EDM 2003.21 Single User Db
Reference Design:	Design #1	Offset TVD Reference:	Offset Datum

Offset Design													Offset Site Error:	0.0 ft
Valley Farms J - Valley Farms J12 - Wellbore #1 - Design #1													Offset Well Error:	0.0 ft
Survey Program: 0-MWD														
Reference		Offset		Semi Major Axis			Distance							
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning	
4,805.7	4,323.0	4,600.4	4,323.0	34.6	26.9	-1.10	-262.2	1,215.4	751.5	697.9	53.56	14.030		
4,900.0	4,417.3	4,694.7	4,417.3	34.6	26.9	-1.10	-262.2	1,215.4	751.5	697.8	53.70	13.995		
5,000.0	4,517.3	4,794.7	4,517.3	34.7	27.0	-1.10	-262.2	1,215.4	751.5	697.6	53.85	13.956		
5,100.0	4,617.3	4,894.7	4,617.3	34.7	27.1	-1.10	-262.2	1,215.4	751.5	697.5	54.00	13.916		
5,200.0	4,717.3	4,994.7	4,717.3	34.8	27.2	-1.10	-262.2	1,215.4	751.5	697.3	54.16	13.876		
5,300.0	4,817.3	5,094.7	4,817.3	34.9	27.2	-1.10	-262.2	1,215.4	751.5	697.1	54.32	13.835		
5,400.0	4,917.3	5,194.7	4,917.3	34.9	27.3	-1.10	-262.2	1,215.4	751.5	697.0	54.48	13.793		
5,500.0	5,017.3	5,294.7	5,017.3	35.0	27.4	-1.10	-262.2	1,215.4	751.5	696.8	54.65	13.751		
5,600.0	5,117.3	5,394.7	5,117.3	35.0	27.5	-1.10	-262.2	1,215.4	751.5	696.6	54.82	13.708		
5,700.0	5,217.3	5,494.7	5,217.3	35.1	27.6	-1.10	-262.2	1,215.4	751.5	696.5	54.99	13.665		
5,800.0	5,317.3	5,594.7	5,317.3	35.2	27.7	-1.10	-262.2	1,215.4	751.5	696.3	55.17	13.621		
5,900.0	5,417.3	5,694.7	5,417.3	35.3	27.8	-1.10	-262.2	1,215.4	751.5	696.1	55.35	13.577		
6,000.0	5,517.3	5,794.7	5,517.3	35.3	27.9	-1.10	-262.2	1,215.4	751.5	695.9	55.53	13.533		
6,100.0	5,617.3	5,894.7	5,617.3	35.4	28.0	-1.10	-262.2	1,215.4	751.5	695.7	55.71	13.488		
6,200.0	5,717.3	5,994.7	5,717.3	35.5	28.1	-1.10	-262.2	1,215.4	751.5	695.6	55.90	13.442		
6,300.0	5,817.3	6,094.7	5,817.3	35.5	28.2	-1.10	-262.2	1,215.4	751.5	695.4	56.09	13.396		
6,400.0	5,917.3	6,194.7	5,917.3	35.6	28.3	-1.10	-262.2	1,215.4	751.5	695.2	56.29	13.350		
6,500.0	6,017.3	6,294.7	6,017.3	35.7	28.4	-1.10	-262.2	1,215.4	751.5	695.0	56.49	13.303		
6,600.0	6,117.3	6,394.7	6,117.3	35.8	28.5	-1.10	-262.2	1,215.4	751.5	694.8	56.69	13.256		
6,700.0	6,217.3	6,494.7	6,217.3	35.9	28.6	-1.10	-262.2	1,215.4	751.5	694.6	56.89	13.209		
6,800.0	6,317.3	6,594.7	6,317.3	35.9	28.7	-1.10	-262.2	1,215.4	751.5	694.4	57.10	13.162		
6,900.0	6,417.3	6,694.7	6,417.3	36.0	28.8	-1.10	-262.2	1,215.4	751.5	694.2	57.30	13.114		
7,000.0	6,517.3	6,794.7	6,517.3	36.1	28.9	-1.10	-262.2	1,215.4	751.5	693.9	57.52	13.065		
7,100.0	6,617.3	6,894.7	6,617.3	36.2	29.0	-1.10	-262.2	1,215.4	751.5	693.7	57.73	13.017		
7,200.0	6,717.3	6,994.7	6,717.3	36.3	29.1	-1.10	-262.2	1,215.4	751.5	693.5	57.95	12.968		
7,300.0	6,817.3	7,094.7	6,817.3	36.4	29.2	-1.10	-262.2	1,215.4	751.5	693.3	58.17	12.919		
7,400.0	6,917.3	7,194.7	6,917.3	36.4	29.3	-1.10	-262.2	1,215.4	751.5	693.1	58.39	12.870		
7,500.0	7,017.3	7,294.7	7,017.3	36.5	29.4	-1.10	-262.2	1,215.4	751.5	692.9	58.61	12.821		
7,540.7	7,058.0	7,335.4	7,058.0	36.6	29.5	-1.10	-262.2	1,215.4	751.5	692.8	58.70	12.801		
7,589.7	7,107.0	7,349.4	7,072.0	36.6	29.5	-1.10	-262.2	1,215.4	752.3	693.5	58.77	12.799		

Company:	Ursa Operating Company, LLC	Local Co-ordinate Reference:	Well Valley Farms J15
Project:	Rockies Region	TVD Reference:	Valley Farms J15 @ 5552.4ft (Original Well Elev)
Reference Site:	Valley Farms J	MD Reference:	Valley Farms J15 @ 5552.4ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Valley Farms J15	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	EDM 2003.21 Single User Db
Reference Design:	Design #1	Offset TVD Reference:	Offset Datum

Offset Design		Valley Farms J - Valley Farms J13 - Wellbore #1 - Design #1											Offset Site Error:		0.0 ft
Survey Program: 0-MWD													Offset Well Error:		0.0 ft
Reference		Offset		Semi Major Axis			Distance							Warning	
Measured Depth	Vertical Depth	Measured Depth	Vertical Depth	Reference	Offset	Highside Toolface	Offset Wellbore Centre		Between Centres	Between Ellipses	Minimum Separation	Separation Factor			
(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(°)	+N/-S (ft)	+E/-W (ft)	(ft)	(ft)	(ft)				
0.0	0.0	0.0	0.0	0.0	0.0	51.42	17.8	22.3	28.5						
100.0	100.0	100.0	100.0	0.1	0.1	51.42	17.8	22.3	28.5	28.3	0.19	149.897			
200.0	200.0	200.0	200.0	0.3	0.3	51.42	17.8	22.3	28.5	27.9	0.64	44.558			
300.0	300.0	300.0	300.0	0.5	0.5	51.42	17.8	22.3	28.5	27.4	1.09	26.169			
400.0	400.0	400.0	400.0	0.8	0.8	51.42	17.8	22.3	28.5	27.0	1.54	18.524			
500.0	500.0	500.0	500.0	1.0	1.0	51.42	17.8	22.3	28.5	26.5	1.99	14.336			
600.0	600.0	600.0	600.0	1.2	1.2	51.42	17.8	22.3	28.5	26.1	2.44	11.692			
700.0	700.0	700.0	700.0	1.4	1.4	51.42	17.8	22.3	28.5	25.6	2.89	9.872			
800.0	800.0	800.0	800.0	1.7	1.7	51.42	17.8	22.3	28.5	25.2	3.34	8.542			
900.0	900.0	900.0	900.0	1.9	1.9	51.42	17.8	22.3	28.5	24.7	3.79	7.528			
1,000.0	1,000.0	1,000.0	1,000.0	2.1	2.1	51.42	17.8	22.3	28.5	24.3	4.24	6.729			
1,100.0	1,100.0	1,100.0	1,100.0	2.3	2.3	51.42	17.8	22.3	28.5	23.8	4.69	6.083 CC, ES			
1,200.0	1,200.0	1,199.3	1,199.3	2.5	2.5	-78.56	16.7	24.6	29.2	24.1	5.09	5.728			
1,300.0	1,299.6	1,298.6	1,298.2	2.7	2.7	-79.88	13.6	31.7	31.2	25.7	5.48	5.690 SF			
1,400.0	1,398.8	1,397.8	1,396.6	3.0	3.0	-81.72	8.4	43.5	34.5	28.6	5.91	5.841			
1,500.0	1,497.1	1,497.0	1,494.1	3.2	3.2	-83.75	1.2	59.9	39.3	32.9	6.43	6.107			
1,600.0	1,594.3	1,596.0	1,590.4	3.5	3.6	-85.70	-8.1	80.9	45.4	38.3	7.08	6.418			
1,700.0	1,690.2	1,694.9	1,685.3	4.0	4.0	-87.44	-19.3	106.4	52.9	45.1	7.89	6.714			
1,800.0	1,784.4	1,793.6	1,778.5	4.5	4.5	-88.90	-32.5	136.3	61.8	52.9	8.89	6.954			
1,900.0	1,876.8	1,892.2	1,869.7	5.1	5.1	-90.08	-47.6	170.4	72.1	61.9	10.12	7.121			
2,000.0	1,967.1	1,990.6	1,958.7	5.8	5.8	-91.02	-64.6	208.8	83.6	72.0	11.58	7.217			
2,100.0	2,054.9	2,088.8	2,045.2	6.7	6.7	-91.75	-83.3	251.2	96.4	83.1	13.29	7.253			
2,200.0	2,140.2	2,187.0	2,129.4	7.7	7.7	-92.43	-103.7	297.5	110.4	95.2	15.24	7.243			
2,300.0	2,222.6	2,285.8	2,213.4	8.8	8.7	-94.69	-124.7	345.1	125.0	107.6	17.40	7.187			
2,400.0	2,301.9	2,384.1	2,297.0	10.1	9.8	-98.48	-145.6	392.3	140.5	120.9	19.65	7.153			
2,500.0	2,377.9	2,481.6	2,380.0	11.5	10.9	-103.20	-166.3	439.3	157.8	135.9	21.90	7.207			
2,519.1	2,392.1	2,500.1	2,395.7	11.7	11.1	-104.17	-170.2	448.2	161.4	139.1	22.32	7.232			
2,600.0	2,451.7	2,578.5	2,462.4	12.9	11.9	-108.35	-186.9	485.9	177.2	153.2	24.04	7.371			
2,700.0	2,525.3	2,675.4	2,544.8	14.4	13.0	-112.60	-207.4	532.5	197.8	171.8	26.09	7.583			
2,800.0	2,598.9	2,772.3	2,627.3	15.9	14.1	-116.03	-228.0	579.1	219.3	191.2	28.06	7.815			
2,900.0	2,672.6	2,869.2	2,709.7	17.4	15.2	-118.86	-248.6	625.7	241.4	211.4	29.99	8.049			
3,000.0	2,746.2	2,966.1	2,792.1	18.9	16.4	-121.21	-269.2	672.3	264.0	232.1	31.89	8.278			
3,100.0	2,819.9	3,063.0	2,874.5	20.5	17.5	-123.20	-289.7	718.9	286.9	253.1	33.77	8.496			
3,200.0	2,893.5	3,159.9	2,956.9	22.0	18.6	-124.89	-310.3	765.5	310.1	274.5	35.63	8.704			
3,300.0	2,967.2	3,256.8	3,039.3	23.5	19.7	-126.34	-330.9	812.1	333.5	296.1	37.48	8.898			
3,386.6	3,030.9	3,340.7	3,110.7	24.9	20.7	-127.45	-348.7	852.5	354.0	314.9	39.08	9.057			
3,400.0	3,040.8	3,353.7	3,121.8	25.1	20.8	-127.68	-351.5	858.7	357.1	317.8	39.31	9.084			
3,500.0	3,116.7	3,451.2	3,204.7	26.3	22.0	-128.91	-372.2	905.6	378.8	337.8	41.08	9.222			
3,600.0	3,195.8	3,549.4	3,288.3	27.5	23.1	-129.39	-393.0	952.9	397.4	354.3	43.04	9.234			
3,700.0	3,278.0	3,640.6	3,366.7	28.7	24.0	-129.49	-411.8	995.4	413.5	368.6	44.86	9.217			
3,800.0	3,363.1	3,730.8	3,446.4	29.7	24.8	-129.59	-428.9	1,034.1	428.3	381.8	46.48	9.215			
3,900.0	3,450.9	3,821.0	3,527.9	30.6	25.5	-129.71	-444.4	1,069.3	441.8	393.9	47.94	9.217			
4,000.0	3,541.0	3,911.2	3,611.2	31.4	26.2	-129.82	-458.4	1,101.0	454.1	404.9	49.23	9.223			
4,100.0	3,633.3	4,000.0	3,694.7	32.1	26.7	-129.94	-470.6	1,128.6	465.0	414.7	50.36	9.235			
4,200.0	3,727.4	4,091.4	3,782.1	32.8	27.2	-130.05	-481.5	1,153.3	474.6	423.3	51.32	9.249			
4,300.0	3,823.2	4,181.6	3,869.3	33.3	27.6	-130.17	-490.6	1,173.8	482.9	430.8	52.11	9.266			
4,400.0	3,920.3	4,271.7	3,957.5	33.7	27.9	-130.28	-498.0	1,190.6	489.7	437.0	52.74	9.285			
4,500.0	4,018.6	4,361.7	4,046.5	34.0	28.2	-130.39	-503.7	1,203.6	495.2	441.9	53.22	9.304			
4,600.0	4,117.7	4,451.8	4,136.0	34.3	28.4	-130.50	-507.7	1,212.7	499.2	445.7	53.55	9.323			
4,700.0	4,217.4	4,541.8	4,225.8	34.5	28.5	-130.60	-510.0	1,217.9	501.8	448.1	53.73	9.339			

Company:	Ursa Operating Company, LLC	Local Co-ordinate Reference:	Well Valley Farms J15
Project:	Rockies Region	TVD Reference:	Valley Farms J15 @ 5552.4ft (Original Well Elev)
Reference Site:	Valley Farms J	MD Reference:	Valley Farms J15 @ 5552.4ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Valley Farms J15	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	EDM 2003.21 Single User Db
Reference Design:	Design #1	Offset TVD Reference:	Offset Datum

Offset Design													Offset Site Error:	0.0 ft
Valley Farms J - Valley Farms J13 - Wellbore #1 - Design #1													Offset Well Error:	0.0 ft
Survey Program: 0-MWD														
Reference		Offset		Semi Major Axis			Offset Wellbore Centre		Distance				Warning	
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	+N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
4,805.7	4,323.0	4,639.0	4,323.0	34.6	28.6	-1.21	-510.6	1,219.3	503.0	449.2	53.80	9.350		
4,900.0	4,417.3	4,733.3	4,417.3	34.6	28.7	-1.21	-510.6	1,219.3	503.0	449.1	53.93	9.328		
5,000.0	4,517.3	4,833.3	4,517.3	34.7	28.7	-1.21	-510.6	1,219.3	503.0	448.9	54.08	9.302		
5,100.0	4,617.3	4,933.3	4,617.3	34.7	28.8	-1.21	-510.6	1,219.3	503.0	448.8	54.23	9.276		
5,200.0	4,717.3	5,033.3	4,717.3	34.8	28.9	-1.21	-510.6	1,219.3	503.0	448.6	54.38	9.250		
5,300.0	4,817.3	5,133.3	4,817.3	34.9	29.0	-1.21	-510.6	1,219.3	503.0	448.5	54.54	9.223		
5,400.0	4,917.3	5,233.3	4,917.3	34.9	29.0	-1.21	-510.6	1,219.3	503.0	448.3	54.70	9.196		
5,500.0	5,017.3	5,333.3	5,017.3	35.0	29.1	-1.21	-510.6	1,219.3	503.0	448.2	54.87	9.168		
5,600.0	5,117.3	5,433.3	5,117.3	35.0	29.2	-1.21	-510.6	1,219.3	503.0	448.0	55.04	9.140		
5,700.0	5,217.3	5,533.3	5,217.3	35.1	29.3	-1.21	-510.6	1,219.3	503.0	447.8	55.21	9.112		
5,800.0	5,317.3	5,633.3	5,317.3	35.2	29.4	-1.21	-510.6	1,219.3	503.0	447.6	55.38	9.083		
5,900.0	5,417.3	5,733.3	5,417.3	35.3	29.5	-1.21	-510.6	1,219.3	503.0	447.5	55.56	9.054		
6,000.0	5,517.3	5,833.3	5,517.3	35.3	29.5	-1.21	-510.6	1,219.3	503.0	447.3	55.74	9.025		
6,100.0	5,617.3	5,933.3	5,617.3	35.4	29.6	-1.21	-510.6	1,219.3	503.0	447.1	55.92	8.995		
6,200.0	5,717.3	6,033.3	5,717.3	35.5	29.7	-1.21	-510.6	1,219.3	503.0	446.9	56.11	8.965		
6,300.0	5,817.3	6,133.3	5,817.3	35.5	29.8	-1.21	-510.6	1,219.3	503.0	446.7	56.30	8.935		
6,400.0	5,917.3	6,233.3	5,917.3	35.6	29.9	-1.21	-510.6	1,219.3	503.0	446.5	56.49	8.905		
6,500.0	6,017.3	6,333.3	6,017.3	35.7	30.0	-1.21	-510.6	1,219.3	503.0	446.3	56.69	8.874		
6,600.0	6,117.3	6,433.3	6,117.3	35.8	30.1	-1.21	-510.6	1,219.3	503.0	446.1	56.88	8.843		
6,700.0	6,217.3	6,533.3	6,217.3	35.9	30.2	-1.21	-510.6	1,219.3	503.0	445.9	57.08	8.812		
6,800.0	6,317.3	6,633.3	6,317.3	35.9	30.3	-1.21	-510.6	1,219.3	503.0	445.7	57.29	8.780		
6,900.0	6,417.3	6,733.3	6,417.3	36.0	30.4	-1.21	-510.6	1,219.3	503.0	445.5	57.50	8.749		
7,000.0	6,517.3	6,833.3	6,517.3	36.1	30.5	-1.21	-510.6	1,219.3	503.0	445.3	57.70	8.717		
7,100.0	6,617.3	6,933.3	6,617.3	36.2	30.6	-1.21	-510.6	1,219.3	503.0	445.1	57.92	8.685		
7,200.0	6,717.3	7,033.3	6,717.3	36.3	30.7	-1.21	-510.6	1,219.3	503.0	444.9	58.13	8.653		
7,300.0	6,817.3	7,133.3	6,817.3	36.4	30.8	-1.21	-510.6	1,219.3	503.0	444.7	58.35	8.621		
7,400.0	6,917.3	7,233.3	6,917.3	36.4	30.9	-1.21	-510.6	1,219.3	503.0	444.5	58.57	8.588		
7,500.0	7,017.3	7,333.3	7,017.3	36.5	31.0	-1.21	-510.6	1,219.3	503.0	444.2	58.79	8.556		
7,550.7	7,068.0	7,384.0	7,068.0	36.6	31.1	-1.21	-510.6	1,219.3	503.0	444.1	58.91	8.539		
7,589.7	7,107.0	7,402.0	7,086.0	36.6	31.1	-1.21	-510.6	1,219.3	503.5	444.5	58.97	8.538		

Company:	Ursa Operating Company, LLC	Local Co-ordinate Reference:	Well Valley Farms J15
Project:	Rockies Region	TVD Reference:	Valley Farms J15 @ 5552.4ft (Original Well Elev)
Reference Site:	Valley Farms J	MD Reference:	Valley Farms J15 @ 5552.4ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Valley Farms J15	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	EDM 2003.21 Single User Db
Reference Design:	Design #1	Offset TVD Reference:	Offset Datum

Offset Design													Offset Site Error:	0.0 ft
Valley Farms J - Valley Farms J14 - Wellbore #1 - Design #1													Offset Well Error:	0.0 ft
Survey Program: 0-MWD														
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
0.0	0.0	0.0	0.0	0.0	0.0	76.76	5.3	22.5	23.1					
100.0	100.0	100.0	100.0	0.1	0.1	76.76	5.3	22.5	23.1	22.9	0.19	121.293		
200.0	200.0	200.0	200.0	0.3	0.3	76.76	5.3	22.5	23.1	22.4	0.64	36.055		
300.0	300.0	300.0	300.0	0.5	0.5	76.76	5.3	22.5	23.1	22.0	1.09	21.175		
400.0	400.0	400.0	400.0	0.8	0.8	76.76	5.3	22.5	23.1	21.5	1.54	14.989		
500.0	500.0	500.0	500.0	1.0	1.0	76.76	5.3	22.5	23.1	21.1	1.99	11.600		
600.0	600.0	600.0	600.0	1.2	1.2	76.76	5.3	22.5	23.1	20.6	2.44	9.461		
700.0	700.0	700.0	700.0	1.4	1.4	76.76	5.3	22.5	23.1	20.2	2.89	7.988		
800.0	800.0	800.0	800.0	1.7	1.7	76.76	5.3	22.5	23.1	19.7	3.34	6.912		
900.0	900.0	900.0	900.0	1.9	1.9	76.76	5.3	22.5	23.1	19.3	3.79	6.091		
1,000.0	1,000.0	1,000.0	1,000.0	2.1	2.1	76.76	5.3	22.5	23.1	18.8	4.24	5.445		
1,100.0	1,100.0	1,100.0	1,100.0	2.3	2.3	76.76	5.3	22.5	23.1	18.4	4.69	4.922 CC		
1,200.0	1,200.0	1,199.2	1,199.1	2.5	2.5	-53.26	3.9	24.6	23.3	18.2	5.09	4.578 ES		
1,300.0	1,299.6	1,298.3	1,298.0	2.7	2.7	-54.77	-0.3	31.1	24.0	18.5	5.46	4.390		
1,400.0	1,398.8	1,397.5	1,396.3	3.0	3.0	-57.11	-7.2	41.9	25.1	19.3	5.87	4.282		
1,500.0	1,497.1	1,496.6	1,493.8	3.2	3.2	-60.03	-16.9	57.0	26.8	20.4	6.35	4.223		
1,600.0	1,594.3	1,595.8	1,590.2	3.5	3.5	-63.26	-29.3	76.3	29.0	22.1	6.94	4.181		
1,700.0	1,690.2	1,694.9	1,685.3	4.0	3.9	-66.55	-44.4	99.8	31.9	24.2	7.71	4.134		
1,800.0	1,784.4	1,794.0	1,778.8	4.5	4.5	-69.72	-62.1	127.4	35.3	26.6	8.69	4.066		
1,900.0	1,876.8	1,893.1	1,870.5	5.1	5.1	-72.65	-82.4	159.0	39.4	29.5	9.90	3.976		
2,000.0	1,967.1	1,992.1	1,960.0	5.8	5.8	-75.28	-105.3	194.6	44.1	32.7	11.38	3.872		
2,100.0	2,054.9	2,091.2	2,047.3	6.7	6.7	-77.58	-130.6	234.1	49.3	36.2	13.11	3.761		
2,200.0	2,140.2	2,190.2	2,131.9	7.7	7.7	-79.58	-158.3	277.2	55.2	40.1	15.11	3.651		
2,300.0	2,222.6	2,289.2	2,213.8	8.8	8.8	-81.30	-188.3	324.0	61.6	44.2	17.37	3.546		
2,400.0	2,301.9	2,388.8	2,294.7	10.1	10.0	-84.79	-219.8	373.1	68.0	48.1	19.91	3.417		
2,500.0	2,377.9	2,488.2	2,375.3	11.5	11.2	-91.62	-251.2	421.9	74.7	52.1	22.62	3.303		
2,519.1	2,392.1	2,507.1	2,390.7	11.7	11.4	-93.22	-257.1	431.2	76.1	53.0	23.13	3.293 SF		
2,600.0	2,451.7	2,587.2	2,455.7	12.9	12.4	-99.77	-282.4	470.6	82.9	57.7	25.13	3.298		
2,700.0	2,525.3	2,686.2	2,536.0	14.4	13.7	-106.46	-313.7	519.3	92.4	65.1	27.33	3.382		
2,800.0	2,598.9	2,785.3	2,616.4	15.9	15.0	-111.85	-345.0	568.0	103.0	73.7	29.31	3.514		
2,900.0	2,672.6	2,884.3	2,696.7	17.4	16.2	-116.21	-376.2	616.7	114.3	83.2	31.16	3.669		
3,000.0	2,746.2	2,983.3	2,777.1	18.9	17.5	-119.77	-407.5	665.4	126.2	93.2	32.92	3.832		
3,100.0	2,819.9	3,082.3	2,857.4	20.5	18.8	-122.72	-438.7	714.1	138.4	103.8	34.63	3.997		
3,200.0	2,893.5	3,181.3	2,937.8	22.0	20.1	-125.18	-470.0	762.8	151.0	114.7	36.31	4.157		
3,300.0	2,967.2	3,280.3	3,018.1	23.5	21.4	-127.26	-501.3	811.5	163.8	125.8	37.98	4.312		
3,386.6	3,030.9	3,366.1	3,087.7	24.9	22.5	-128.82	-528.3	853.7	175.0	135.6	39.42	4.439		
3,400.0	3,040.8	3,379.4	3,098.5	25.1	22.7	-129.07	-532.5	860.2	176.7	137.1	39.63	4.459		
3,500.0	3,116.7	3,478.7	3,179.1	26.3	24.0	-130.09	-563.9	909.0	187.7	146.3	41.42	4.531		
3,600.0	3,195.8	3,574.3	3,257.4	27.5	25.1	-130.14	-593.5	955.1	196.1	152.7	43.42	4.517		
3,700.0	3,278.0	3,668.4	3,337.0	28.7	26.1	-130.17	-620.6	997.3	203.9	158.7	45.21	4.510		
3,800.0	3,363.1	3,762.4	3,418.9	29.7	27.0	-130.21	-645.5	1,036.1	211.1	164.3	46.81	4.509		
3,900.0	3,450.9	3,856.2	3,502.8	30.6	27.7	-130.26	-668.2	1,071.5	217.7	169.4	48.26	4.510		
4,000.0	3,541.0	3,950.0	3,588.6	31.4	28.4	-130.31	-688.6	1,103.2	223.6	174.1	49.54	4.514		
4,100.0	3,633.3	4,043.6	3,676.1	32.1	29.0	-130.37	-706.7	1,131.4	228.9	178.3	50.65	4.520		
4,200.0	3,727.4	4,137.2	3,765.0	32.8	29.6	-130.43	-722.4	1,155.9	233.6	182.0	51.60	4.528		
4,300.0	3,823.2	4,230.7	3,855.1	33.3	30.0	-130.50	-735.8	1,176.7	237.6	185.2	52.38	4.536		
4,400.0	3,920.3	4,324.1	3,946.3	33.7	30.4	-130.56	-746.7	1,193.8	241.0	188.0	53.00	4.546		
4,500.0	4,018.6	4,417.4	4,038.3	34.0	30.7	-130.63	-755.2	1,207.1	243.6	190.1	53.47	4.556		
4,600.0	4,117.7	4,510.7	4,130.9	34.3	30.9	-130.70	-761.3	1,216.5	245.6	191.8	53.80	4.565		
4,700.0	4,217.4	4,604.0	4,223.9	34.5	31.0	-130.77	-764.9	1,222.2	246.9	192.9	53.98	4.574		

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

Company:	Ursa Operating Company, LLC	Local Co-ordinate Reference:	Well Valley Farms J15
Project:	Rockies Region	TVD Reference:	Valley Farms J15 @ 5552.4ft (Original Well Elev)
Reference Site:	Valley Farms J	MD Reference:	Valley Farms J15 @ 5552.4ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Valley Farms J15	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	EDM 2003.21 Single User Db
Reference Design:	Design #1	Offset TVD Reference:	Offset Datum

Offset Design												Valley Farms J - Valley Farms J14 - Wellbore #1 - Design #1		Offset Site Error:		0.0 ft	
Survey Program: 0-MWD														Offset Well Error:		0.0 ft	
Reference		Offset		Semi Major Axis			Distance										
Measured Depth	Vertical Depth	Measured Depth	Vertical Depth	Reference	Offset	Highside Toolface	Offset Wellbore Centre		Between Centres	Between Ellipses	Minimum Separation	Separation Factor	Warning				
Depth (ft)	Depth (ft)	Depth (ft)	Depth (ft)	(ft)	(ft)	(°)	+N/-S (ft)	+E/-W (ft)	(ft)	(ft)	(ft)						
4,805.7	4,323.0	4,703.1	4,323.0	34.6	31.1	-1.35	-766.1	1,224.0	247.5	193.5	54.03	4.581					
4,900.0	4,417.3	4,797.4	4,417.3	34.6	31.2	-1.35	-766.1	1,224.0	247.5	193.3	54.16	4.570					
5,000.0	4,517.3	4,897.4	4,517.3	34.7	31.3	-1.35	-766.1	1,224.0	247.5	193.2	54.30	4.558					
5,100.0	4,617.3	4,997.4	4,617.3	34.7	31.3	-1.35	-766.1	1,224.0	247.5	193.0	54.45	4.545					
5,200.0	4,717.3	5,097.4	4,717.3	34.8	31.4	-1.35	-766.1	1,224.0	247.5	192.9	54.61	4.532					
5,300.0	4,817.3	5,197.4	4,817.3	34.9	31.5	-1.35	-766.1	1,224.0	247.5	192.7	54.76	4.519					
5,400.0	4,917.3	5,297.4	4,917.3	34.9	31.5	-1.35	-766.1	1,224.0	247.5	192.6	54.92	4.506					
5,500.0	5,017.3	5,397.4	5,017.3	35.0	31.6	-1.35	-766.1	1,224.0	247.5	192.4	55.09	4.493					
5,600.0	5,117.3	5,497.4	5,117.3	35.0	31.7	-1.35	-766.1	1,224.0	247.5	192.2	55.25	4.480					
5,700.0	5,217.3	5,597.4	5,217.3	35.1	31.7	-1.35	-766.1	1,224.0	247.5	192.1	55.42	4.466					
5,800.0	5,317.3	5,697.4	5,317.3	35.2	31.8	-1.35	-766.1	1,224.0	247.5	191.9	55.59	4.452					
5,900.0	5,417.3	5,797.4	5,417.3	35.3	31.9	-1.35	-766.1	1,224.0	247.5	191.7	55.77	4.438					
6,000.0	5,517.3	5,897.4	5,517.3	35.3	32.0	-1.35	-766.1	1,224.0	247.5	191.6	55.95	4.424					
6,100.0	5,617.3	5,997.4	5,617.3	35.4	32.1	-1.35	-766.1	1,224.0	247.5	191.4	56.13	4.410					
6,200.0	5,717.3	6,097.4	5,717.3	35.5	32.1	-1.35	-766.1	1,224.0	247.5	191.2	56.31	4.395					
6,300.0	5,817.3	6,197.4	5,817.3	35.5	32.2	-1.35	-766.1	1,224.0	247.5	191.0	56.50	4.381					
6,400.0	5,917.3	6,297.4	5,917.3	35.6	32.3	-1.35	-766.1	1,224.0	247.5	190.8	56.69	4.366					
6,500.0	6,017.3	6,397.4	6,017.3	35.7	32.4	-1.35	-766.1	1,224.0	247.5	190.6	56.88	4.351					
6,600.0	6,117.3	6,497.4	6,117.3	35.8	32.5	-1.35	-766.1	1,224.0	247.5	190.4	57.08	4.336					
6,700.0	6,217.3	6,597.4	6,217.3	35.9	32.6	-1.35	-766.1	1,224.0	247.5	190.2	57.28	4.321					
6,800.0	6,317.3	6,697.4	6,317.3	35.9	32.7	-1.35	-766.1	1,224.0	247.5	190.0	57.48	4.306					
6,900.0	6,417.3	6,797.4	6,417.3	36.0	32.8	-1.35	-766.1	1,224.0	247.5	189.8	57.68	4.291					
7,000.0	6,517.3	6,897.4	6,517.3	36.1	32.8	-1.35	-766.1	1,224.0	247.5	189.6	57.89	4.275					
7,100.0	6,617.3	6,997.4	6,617.3	36.2	32.9	-1.35	-766.1	1,224.0	247.5	189.4	58.10	4.260					
7,200.0	6,717.3	7,097.4	6,717.3	36.3	33.0	-1.35	-766.1	1,224.0	247.5	189.2	58.31	4.244					
7,300.0	6,817.3	7,197.4	6,817.3	36.4	33.1	-1.35	-766.1	1,224.0	247.5	189.0	58.53	4.229					
7,400.0	6,917.3	7,297.4	6,917.3	36.4	33.2	-1.35	-766.1	1,224.0	247.5	188.8	58.75	4.213					
7,500.0	7,017.3	7,397.4	7,017.3	36.5	33.3	-1.35	-766.1	1,224.0	247.5	188.5	58.97	4.197					
7,556.9	7,074.2	7,454.3	7,074.2	36.6	33.4	-1.35	-766.1	1,224.0	247.5	188.4	59.09	4.188					
7,589.7	7,107.0	7,479.1	7,099.0	36.6	33.4	-1.35	-766.1	1,224.0	247.6	188.5	59.16	4.186					

Company:	Ursa Operating Company, LLC	Local Co-ordinate Reference:	Well Valley Farms J15
Project:	Rockies Region	TVD Reference:	Valley Farms J15 @ 5552.4ft (Original Well Elev)
Reference Site:	Valley Farms J	MD Reference:	Valley Farms J15 @ 5552.4ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Valley Farms J15	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	EDM 2003.21 Single User Db
Reference Design:	Design #1	Offset TVD Reference:	Offset Datum

Offset Design													Offset Site Error:	0.0 ft
Valley Farms J - Valley Farms J16 - Wellbore #1 - Design #1													Offset Well Error:	0.0 ft
Survey Program: 0-MWD														
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
0.0	0.0	0.0	0.0	0.0	0.0	179.22	-12.5	0.2	12.5					
100.0	100.0	100.0	100.0	0.1	0.1	179.22	-12.5	0.2	12.5	12.3	0.19	65.709		
200.0	200.0	200.0	200.0	0.3	0.3	179.22	-12.5	0.2	12.5	11.9	0.64	19.533		
300.0	300.0	300.0	300.0	0.5	0.5	179.22	-12.5	0.2	12.5	11.4	1.09	11.471		
400.0	400.0	400.0	400.0	0.8	0.8	179.22	-12.5	0.2	12.5	11.0	1.54	8.120		
500.0	500.0	500.0	500.0	1.0	1.0	179.22	-12.5	0.2	12.5	10.5	1.99	6.284		
600.0	600.0	600.0	600.0	1.2	1.2	179.22	-12.5	0.2	12.5	10.1	2.44	5.125		
700.0	700.0	700.0	700.0	1.4	1.4	179.22	-12.5	0.2	12.5	9.6	2.89	4.327		
800.0	800.0	800.0	800.0	1.7	1.7	179.22	-12.5	0.2	12.5	9.2	3.34	3.744		
900.0	900.0	900.0	900.0	1.9	1.9	179.22	-12.5	0.2	12.5	8.7	3.79	3.300		
1,000.0	1,000.0	1,000.0	1,000.0	2.1	2.1	179.22	-12.5	0.2	12.5	8.3	4.24	2.950		
1,100.0	1,100.0	1,100.0	1,100.0	2.3	2.3	179.22	-12.5	0.2	12.5	7.8	4.69	2.667 CC		
1,200.0	1,200.0	1,199.5	1,199.5	2.5	2.5	50.59	-14.3	2.0	12.7	7.6	5.09	2.493 ES		
1,300.0	1,299.6	1,299.1	1,298.7	2.7	2.7	53.01	-19.9	7.5	13.3	7.8	5.46	2.429 SF		
1,400.0	1,398.8	1,398.6	1,397.4	3.0	2.9	56.60	-29.1	16.5	14.3	8.4	5.87	2.431		
1,500.0	1,497.1	1,498.1	1,495.2	3.2	3.2	60.80	-41.9	29.2	15.8	9.4	6.36	2.479		
1,600.0	1,594.3	1,597.6	1,592.0	3.5	3.5	65.12	-58.4	45.5	17.8	10.8	6.97	2.551		
1,700.0	1,690.2	1,697.1	1,687.4	4.0	3.9	69.18	-78.4	65.2	20.3	12.6	7.75	2.624		
1,800.0	1,784.4	1,796.6	1,781.2	4.5	4.4	72.79	-101.9	88.4	23.4	14.7	8.74	2.681		
1,900.0	1,876.8	1,896.0	1,873.2	5.1	5.0	75.88	-128.8	115.1	27.1	17.1	9.97	2.717		
2,000.0	1,967.1	1,995.4	1,963.0	5.8	5.8	78.47	-159.1	145.0	31.3	19.8	11.44	2.731		
2,100.0	2,054.9	2,094.9	2,050.5	6.7	6.6	80.62	-192.7	178.2	35.9	22.8	13.17	2.729		
2,200.0	2,140.2	2,194.2	2,135.4	7.7	7.6	82.38	-229.5	214.5	41.1	26.0	15.15	2.713		
2,300.0	2,222.6	2,293.6	2,217.4	8.8	8.7	83.83	-269.3	253.8	46.8	29.4	17.38	2.690		
2,400.0	2,301.9	2,393.0	2,296.4	10.1	9.9	85.02	-312.2	296.1	52.9	33.0	19.86	2.662		
2,500.0	2,377.9	2,492.3	2,372.2	11.5	11.2	86.01	-357.9	341.3	59.4	36.8	22.57	2.632		
2,519.1	2,392.1	2,511.2	2,386.3	11.7	11.5	86.17	-366.9	350.2	60.7	37.6	23.12	2.626		
2,600.0	2,451.7	2,591.6	2,444.5	12.9	12.7	85.51	-406.3	389.1	66.5	41.0	25.44	2.613		
2,700.0	2,525.3	2,690.4	2,512.9	14.4	14.2	81.31	-457.0	439.2	74.5	46.3	28.18	2.644		
2,800.0	2,598.9	2,788.3	2,576.9	15.9	15.9	74.66	-509.8	491.3	84.5	54.0	30.51	2.769		
2,900.0	2,672.6	2,885.9	2,637.2	17.4	17.6	67.07	-564.3	545.1	97.3	65.1	32.20	3.023		
3,000.0	2,746.2	2,984.2	2,697.4	18.9	19.3	60.93	-619.6	599.7	111.9	78.3	33.59	3.332		
3,100.0	2,819.9	3,082.5	2,757.6	20.5	21.1	56.24	-674.9	654.3	127.5	92.6	34.90	3.654		
3,200.0	2,893.5	3,180.8	2,817.8	22.0	22.9	52.58	-730.2	709.0	143.7	107.6	36.19	3.972		
3,300.0	2,967.2	3,284.4	2,883.0	23.5	24.6	50.09	-787.5	765.6	159.0	121.4	37.62	4.226		
3,386.6	3,030.9	3,375.9	2,944.0	24.9	25.9	49.37	-835.9	813.4	169.3	129.9	39.37	4.299		
3,400.0	3,040.8	3,390.1	2,953.8	25.1	26.2	49.38	-843.3	820.7	170.6	130.9	39.68	4.300		
3,500.0	3,116.7	3,496.5	3,029.4	26.3	27.7	49.44	-896.5	873.3	180.5	138.7	41.85	4.313		
3,600.0	3,195.8	3,603.4	3,109.4	27.5	29.1	49.48	-947.0	923.1	189.8	146.0	43.88	4.326		
3,700.0	3,278.0	3,710.8	3,193.7	28.7	30.5	49.52	-994.3	969.8	198.6	152.9	45.75	4.341		
3,800.0	3,363.1	3,818.6	3,281.9	29.7	31.7	49.55	-1,038.4	1,013.4	206.8	159.3	47.45	4.357		
3,900.0	3,450.9	3,926.8	3,373.8	30.6	32.8	49.57	-1,079.0	1,053.5	214.3	165.3	48.99	4.375		
4,000.0	3,541.0	4,035.5	3,469.2	31.4	33.8	49.57	-1,116.0	1,090.0	221.2	170.8	50.34	4.394		
4,100.0	3,633.3	4,144.4	3,567.7	32.1	34.7	49.56	-1,149.1	1,122.8	227.4	175.9	51.52	4.413		
4,200.0	3,727.4	4,253.7	3,669.0	32.8	35.5	49.55	-1,178.3	1,151.6	232.9	180.3	52.51	4.434		
4,300.0	3,823.2	4,363.4	3,772.8	33.3	36.2	49.51	-1,203.4	1,176.4	237.6	184.3	53.33	4.455		
4,400.0	3,920.3	4,473.2	3,878.6	33.7	36.7	49.47	-1,224.3	1,197.0	241.7	187.7	53.98	4.477		
4,500.0	4,018.6	4,583.3	3,986.2	34.0	37.2	49.41	-1,240.8	1,213.3	244.9	190.5	54.45	4.498		
4,600.0	4,117.7	4,693.6	4,095.2	34.3	37.5	49.34	-1,252.9	1,225.2	247.4	192.7	54.76	4.518		
4,700.0	4,217.4	4,804.0	4,205.0	34.5	37.7	49.26	-1,260.5	1,232.7	249.2	194.2	54.91	4.537		

Company:	Ursa Operating Company, LLC	Local Co-ordinate Reference:	Well Valley Farms J15
Project:	Rockies Region	TVD Reference:	Valley Farms J15 @ 5552.4ft (Original Well Elev)
Reference Site:	Valley Farms J	MD Reference:	Valley Farms J15 @ 5552.4ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Valley Farms J15	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	EDM 2003.21 Single User Db
Reference Design:	Design #1	Offset TVD Reference:	Offset Datum

Offset Design													Offset Site Error:	0.0 ft
Survey Program: 0-MWD													Offset Well Error:	0.0 ft
Reference														
Offset				Semi Major Axis			Distance							
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning	
4,805.7	4,323.0	4,920.8	4,321.7	34.6	37.8	178.64	-1,263.6	1,235.8	250.1	195.2	54.91	4.555		
4,900.0	4,417.3	5,016.4	4,417.3	34.6	37.9	178.63	-1,263.6	1,235.8	250.2	195.1	55.03	4.546		
5,000.0	4,517.3	5,116.4	4,517.3	34.7	37.9	178.63	-1,263.6	1,235.8	250.2	195.0	55.17	4.534		
5,100.0	4,617.3	5,216.4	4,617.3	34.7	38.0	178.63	-1,263.6	1,235.8	250.2	194.8	55.32	4.522		
5,200.0	4,717.3	5,316.4	4,717.3	34.8	38.0	178.63	-1,263.6	1,235.8	250.2	194.7	55.46	4.510		
5,300.0	4,817.3	5,416.4	4,817.3	34.9	38.1	178.63	-1,263.6	1,235.8	250.2	194.5	55.61	4.498		
5,400.0	4,917.3	5,516.4	4,917.3	34.9	38.1	178.63	-1,263.6	1,235.8	250.2	194.4	55.77	4.486		
5,500.0	5,017.3	5,616.4	5,017.3	35.0	38.2	178.63	-1,263.6	1,235.8	250.2	194.2	55.92	4.473		
5,600.0	5,117.3	5,716.4	5,117.3	35.0	38.3	178.63	-1,263.6	1,235.8	250.2	194.1	56.08	4.461		
5,700.0	5,217.3	5,816.4	5,217.3	35.1	38.3	178.63	-1,263.6	1,235.8	250.2	193.9	56.25	4.448		
5,800.0	5,317.3	5,916.4	5,317.3	35.2	38.4	178.63	-1,263.6	1,235.8	250.2	193.7	56.41	4.434		
5,900.0	5,417.3	6,016.4	5,417.3	35.3	38.5	178.63	-1,263.6	1,235.8	250.2	193.6	56.58	4.421		
6,000.0	5,517.3	6,116.4	5,517.3	35.3	38.5	178.63	-1,263.6	1,235.8	250.2	193.4	56.76	4.408		
6,100.0	5,617.3	6,216.4	5,617.3	35.4	38.6	178.63	-1,263.6	1,235.8	250.2	193.2	56.93	4.394		
6,200.0	5,717.3	6,316.4	5,717.3	35.5	38.7	178.63	-1,263.6	1,235.8	250.2	193.1	57.11	4.380		
6,300.0	5,817.3	6,416.4	5,817.3	35.5	38.7	178.63	-1,263.6	1,235.8	250.2	192.9	57.29	4.367		
6,400.0	5,917.3	6,516.4	5,917.3	35.6	38.8	178.63	-1,263.6	1,235.8	250.2	192.7	57.47	4.353		
6,500.0	6,017.3	6,616.4	6,017.3	35.7	38.9	178.63	-1,263.6	1,235.8	250.2	192.5	57.66	4.338		
6,600.0	6,117.3	6,716.4	6,117.3	35.8	38.9	178.63	-1,263.6	1,235.8	250.2	192.3	57.85	4.324		
6,700.0	6,217.3	6,816.4	6,217.3	35.9	39.0	178.63	-1,263.6	1,235.8	250.2	192.1	58.05	4.310		
6,800.0	6,317.3	6,916.4	6,317.3	35.9	39.1	178.63	-1,263.6	1,235.8	250.2	191.9	58.24	4.295		
6,900.0	6,417.3	7,016.4	6,417.3	36.0	39.2	178.63	-1,263.6	1,235.8	250.2	191.7	58.44	4.281		
7,000.0	6,517.3	7,116.4	6,517.3	36.1	39.2	178.63	-1,263.6	1,235.8	250.2	191.5	58.64	4.266		
7,100.0	6,617.3	7,216.4	6,617.3	36.2	39.3	178.63	-1,263.6	1,235.8	250.2	191.3	58.85	4.251		
7,200.0	6,717.3	7,316.4	6,717.3	36.3	39.4	178.63	-1,263.6	1,235.8	250.2	191.1	59.05	4.236		
7,300.0	6,817.3	7,416.4	6,817.3	36.4	39.5	178.63	-1,263.6	1,235.8	250.2	190.9	59.26	4.221		
7,400.0	6,917.3	7,516.4	6,917.3	36.4	39.6	178.63	-1,263.6	1,235.8	250.2	190.7	59.47	4.206		
7,500.0	7,017.3	7,616.4	7,017.3	36.5	39.6	178.63	-1,263.6	1,235.8	250.2	190.5	59.69	4.191		
7,589.7	7,107.0	7,706.1	7,107.0	36.6	39.7	178.63	-1,263.6	1,235.8	250.2	190.3	59.88	4.177		

Company:	Ursa Operating Company, LLC	Local Co-ordinate Reference:	Well Valley Farms J15
Project:	Rockies Region	TVD Reference:	Valley Farms J15 @ 5552.4ft (Original Well Elev)
Reference Site:	Valley Farms J	MD Reference:	Valley Farms J15 @ 5552.4ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Valley Farms J15	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	EDM 2003.21 Single User Db
Reference Design:	Design #1	Offset TVD Reference:	Offset Datum

Offset Design													Offset Site Error:	0.0 ft
Survey Program: 0-MWD													Offset Well Error:	0.0 ft
Reference													Warning	
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Semi Major Axis (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Distance Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	
0.0	0.0	0.0	0.0	0.0	0.0	15.01	80.2	21.5	83.1					
100.0	100.0	100.0	100.0	0.1	0.1	15.01	80.2	21.5	83.1	82.9	0.19	436.906		
200.0	200.0	200.0	200.0	0.3	0.3	15.01	80.2	21.5	83.1	82.4	0.64	129.875		
300.0	300.0	300.0	300.0	0.5	0.5	15.01	80.2	21.5	83.1	82.0	1.09	76.274		
400.0	400.0	400.0	400.0	0.8	0.8	15.01	80.2	21.5	83.1	81.5	1.54	53.991		
500.0	500.0	500.0	500.0	1.0	1.0	15.01	80.2	21.5	83.1	81.1	1.99	41.784		
600.0	600.0	600.0	600.0	1.2	1.2	15.01	80.2	21.5	83.1	80.6	2.44	34.079		
700.0	700.0	700.0	700.0	1.4	1.4	15.01	80.2	21.5	83.1	80.2	2.89	28.773		
800.0	800.0	800.0	800.0	1.7	1.7	15.01	80.2	21.5	83.1	79.7	3.34	24.897		
900.0	900.0	900.0	900.0	1.9	1.9	15.01	80.2	21.5	83.1	79.3	3.79	21.941		
1,000.0	1,000.0	1,000.0	1,000.0	2.1	2.1	15.01	80.2	21.5	83.1	78.8	4.24	19.613		
1,100.0	1,100.0	1,100.0	1,100.0	2.3	2.3	15.01	80.2	21.5	83.1	78.4	4.69	17.731 CC, ES		
1,200.0	1,200.0	1,195.9	1,195.9	2.5	2.6	-115.36	82.2	22.9	86.5	81.4	5.10	16.957 SF		
1,300.0	1,299.6	1,291.1	1,290.8	2.7	2.8	-117.58	88.1	27.0	97.0	91.5	5.51	17.594		
1,400.0	1,398.8	1,384.6	1,383.6	3.0	3.0	-120.29	97.6	33.7	114.6	108.7	5.95	19.276		
1,500.0	1,497.1	1,475.9	1,473.5	3.2	3.2	-122.81	110.5	42.6	139.4	133.0	6.41	21.747		
1,600.0	1,594.3	1,564.3	1,559.7	3.5	3.5	-124.80	126.3	53.7	171.2	164.3	6.92	24.752		
1,700.0	1,690.2	1,649.2	1,641.7	4.0	3.8	-126.20	144.5	66.5	209.7	202.3	7.48	28.046		
1,800.0	1,784.4	1,730.3	1,718.9	4.5	4.2	-127.06	164.7	80.6	254.6	246.5	8.10	31.414		
1,900.0	1,876.8	1,807.2	1,791.2	5.1	4.5	-127.46	186.3	95.7	305.3	296.5	8.80	34.682		
2,000.0	1,967.1	1,879.7	1,858.3	5.8	5.0	-127.46	208.9	111.5	361.6	352.0	9.59	37.698		
2,100.0	2,054.9	1,947.7	1,920.2	6.7	5.4	-127.10	231.9	127.6	422.8	412.4	10.48	40.346		
2,200.0	2,140.2	2,013.0	1,978.6	7.7	5.8	-126.45	255.7	144.2	488.7	477.3	11.45	42.668		
2,300.0	2,222.6	2,084.3	2,042.2	8.8	6.4	-125.91	282.3	162.7	557.8	545.2	12.55	44.434		
2,400.0	2,301.9	2,152.8	2,103.1	10.1	6.9	-125.30	307.8	180.6	629.3	615.5	13.74	45.794		
2,500.0	2,377.9	2,218.2	2,161.4	11.5	7.4	-124.58	332.2	197.6	703.2	688.2	15.03	46.795		
2,519.1	2,392.1	2,230.3	2,172.2	11.7	7.5	-124.42	336.7	200.8	717.6	702.3	15.29	46.942		
2,600.0	2,451.7	2,281.4	2,217.7	12.9	7.9	-125.94	355.7	214.1	778.9	762.6	16.29	47.803		
2,700.0	2,525.3	2,344.5	2,273.9	14.4	8.5	-127.53	379.2	230.5	855.0	837.4	17.55	48.714		
2,800.0	2,598.9	2,407.7	2,330.2	15.9	9.0	-128.87	402.8	247.0	931.3	912.4	18.81	49.501		
2,900.0	2,672.6	2,470.9	2,386.4	17.4	9.5	-130.01	426.3	263.4	1,007.7	987.6	20.08	50.174		
3,000.0	2,746.2	2,534.0	2,442.7	18.9	10.0	-131.00	449.8	279.9	1,084.4	1,063.0	21.36	50.762		
3,100.0	2,819.9	2,597.2	2,498.9	20.5	10.6	-131.87	473.4	296.3	1,161.1	1,138.5	22.64	51.281		
3,200.0	2,893.5	2,660.3	2,555.2	22.0	11.1	-132.63	496.9	312.8	1,238.0	1,214.0	23.93	51.734		
3,300.0	2,967.2	2,723.5	2,611.4	23.5	11.6	-133.30	520.5	329.3	1,314.9	1,289.7	25.22	52.140		
3,386.6	3,030.9	2,778.2	2,660.2	24.9	12.1	-133.82	540.8	343.5	1,381.6	1,355.2	26.34	52.456		
3,400.0	3,040.8	2,786.7	2,667.7	25.1	12.2	-134.24	544.0	345.7	1,391.9	1,365.4	26.47	52.585		
3,500.0	3,116.7	2,851.9	2,725.8	26.3	12.7	-137.06	568.3	362.7	1,467.4	1,440.0	27.42	53.518		
3,600.0	3,195.8	2,920.2	2,786.6	27.5	13.3	-139.36	593.7	380.5	1,540.3	1,511.9	28.42	54.191		
3,700.0	3,278.0	2,991.4	2,850.0	28.7	13.9	-141.22	620.3	399.0	1,610.5	1,581.1	29.47	54.642		
3,800.0	3,363.1	3,065.3	2,915.9	29.7	14.6	-142.73	647.8	418.3	1,677.8	1,647.2	30.55	54.911		
3,900.0	3,450.9	3,141.7	2,983.9	30.6	15.3	-143.93	676.3	438.2	1,741.9	1,710.3	31.65	55.036		
4,000.0	3,541.0	3,220.4	3,054.0	31.4	15.9	-144.86	705.6	458.7	1,802.8	1,770.0	32.75	55.047		
4,100.0	3,633.3	3,301.2	3,126.0	32.1	16.6	-145.58	735.7	479.7	1,860.3	1,826.4	33.84	54.971		
4,200.0	3,727.4	3,383.8	3,199.6	32.8	17.4	-146.10	766.5	501.3	1,914.3	1,879.4	34.91	54.830		
4,300.0	3,823.2	3,468.1	3,274.6	33.3	18.1	-146.45	797.9	523.2	1,964.7	1,928.8	35.95	54.645		
4,400.0	3,920.3	3,553.8	3,351.0	33.7	18.9	-146.65	829.9	545.5	2,011.6	1,974.6	36.96	54.431		
4,500.0	4,018.6	3,746.8	3,525.6	34.0	20.2	-145.96	897.0	592.5	2,053.5	2,015.0	38.54	53.287		
4,600.0	4,117.7	4,047.3	3,811.4	34.3	21.7	-145.04	972.5	645.2	2,083.8	2,043.5	40.24	51.785		
4,700.0	4,217.4	4,375.2	4,135.3	34.5	22.6	-144.71	1,011.8	672.7	2,099.8	2,058.5	41.29	50.857		

Company:	Ursa Operating Company, LLC	Local Co-ordinate Reference:	Well Valley Farms J15
Project:	Rockies Region	TVD Reference:	Valley Farms J15 @ 5552.4ft (Original Well Elev)
Reference Site:	Valley Farms J	MD Reference:	Valley Farms J15 @ 5552.4ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Valley Farms J15	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	EDM 2003.21 Single User Db
Reference Design:	Design #1	Offset TVD Reference:	Offset Datum

Offset Design		Valley Farms J - Valley Farms J2 - Wellbore #1 - Design #1											Offset Site Error:		0.0 ft
Survey Program: 0-MWD													Offset Well Error:		0.0 ft
Reference		Offset		Semi Major Axis			Distance							Warning	
Measured Depth	Vertical Depth	Measured Depth	Vertical Depth	Reference	Offset	Highside Toolface	Offset Wellbore Centre		Between Centres	Between Ellipses	Minimum Separation	Separation Factor			
(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(°)	+N/-S (ft)	+E/-W (ft)	(ft)	(ft)	(ft)				
4,805.7	4,323.0	4,562.9	4,323.0	34.6	22.9	-15.31	1,014.7	674.8	2,102.8	2,061.3	41.56	50.592			
4,900.0	4,417.3	4,657.2	4,417.3	34.6	22.9	-15.31	1,014.7	674.8	2,102.8	2,061.1	41.74	50.381			
5,000.0	4,517.3	4,757.2	4,517.3	34.7	23.0	-15.31	1,014.7	674.8	2,102.8	2,060.9	41.93	50.151			
5,100.0	4,617.3	4,857.2	4,617.3	34.7	23.1	-15.31	1,014.7	674.8	2,102.8	2,060.7	42.13	49.918			
5,200.0	4,717.3	4,957.2	4,717.3	34.8	23.2	-15.31	1,014.7	674.8	2,102.8	2,060.5	42.32	49.683			
5,300.0	4,817.3	5,057.2	4,817.3	34.9	23.3	-15.31	1,014.7	674.8	2,102.8	2,060.3	42.53	49.446			
5,400.0	4,917.3	5,157.2	4,917.3	34.9	23.4	-15.31	1,014.7	674.8	2,102.8	2,060.1	42.74	49.206			
5,500.0	5,017.3	5,257.2	5,017.3	35.0	23.5	-15.31	1,014.7	674.8	2,102.8	2,059.9	42.95	48.965			
5,600.0	5,117.3	5,357.2	5,117.3	35.0	23.6	-15.31	1,014.7	674.8	2,102.8	2,059.7	43.16	48.722			
5,700.0	5,217.3	5,457.2	5,217.3	35.1	23.7	-15.31	1,014.7	674.8	2,102.8	2,059.5	43.38	48.477			
5,800.0	5,317.3	5,557.2	5,317.3	35.2	23.8	-15.31	1,014.7	674.8	2,102.8	2,059.2	43.60	48.230			
5,900.0	5,417.3	5,657.2	5,417.3	35.3	23.9	-15.31	1,014.7	674.8	2,102.8	2,059.0	43.82	47.983			
6,000.0	5,517.3	5,757.2	5,517.3	35.3	24.0	-15.31	1,014.7	674.8	2,102.8	2,058.8	44.05	47.734			
6,100.0	5,617.3	5,857.2	5,617.3	35.4	24.1	-15.31	1,014.7	674.8	2,102.8	2,058.5	44.28	47.484			
6,200.0	5,717.3	5,957.2	5,717.3	35.5	24.2	-15.31	1,014.7	674.8	2,102.8	2,058.3	44.52	47.234			
6,300.0	5,817.3	6,057.2	5,817.3	35.5	24.3	-15.31	1,014.7	674.8	2,102.8	2,058.1	44.76	46.982			
6,400.0	5,917.3	6,157.2	5,917.3	35.6	24.5	-15.31	1,014.7	674.8	2,102.8	2,057.8	45.00	46.730			
6,500.0	6,017.3	6,257.2	6,017.3	35.7	24.6	-15.31	1,014.7	674.8	2,102.8	2,057.6	45.24	46.477			
6,600.0	6,117.3	6,357.2	6,117.3	35.8	24.7	-15.31	1,014.7	674.8	2,102.8	2,057.3	45.49	46.224			
6,700.0	6,217.3	6,457.2	6,217.3	35.9	24.8	-15.31	1,014.7	674.8	2,102.8	2,057.1	45.74	45.970			
6,800.0	6,317.3	6,557.2	6,317.3	35.9	24.9	-15.31	1,014.7	674.8	2,102.8	2,056.8	46.00	45.717			
6,900.0	6,417.3	6,657.2	6,417.3	36.0	25.0	-15.31	1,014.7	674.8	2,102.8	2,056.6	46.25	45.463			
7,000.0	6,517.3	6,757.2	6,517.3	36.1	25.2	-15.31	1,014.7	674.8	2,102.8	2,056.3	46.51	45.209			
7,100.0	6,617.3	6,857.2	6,617.3	36.2	25.3	-15.31	1,014.7	674.8	2,102.8	2,056.1	46.78	44.955			
7,200.0	6,717.3	6,957.2	6,717.3	36.3	25.4	-15.31	1,014.7	674.8	2,102.8	2,055.8	47.04	44.701			
7,300.0	6,817.3	7,057.2	6,817.3	36.4	25.5	-15.31	1,014.7	674.8	2,102.8	2,055.5	47.31	44.448			
7,400.0	6,917.3	7,157.2	6,917.3	36.4	25.7	-15.31	1,014.7	674.8	2,102.8	2,055.3	47.58	44.195			
7,500.0	7,017.3	7,257.2	7,017.3	36.5	25.8	-15.31	1,014.7	674.8	2,102.8	2,055.0	47.85	43.942			
7,589.7	7,107.0	7,275.9	7,036.0	36.6	25.8	-15.31	1,014.7	674.8	2,104.0	2,056.0	48.00	43.837			

Company:	Ursa Operating Company, LLC	Local Co-ordinate Reference:	Well Valley Farms J15
Project:	Rockies Region	TVD Reference:	Valley Farms J15 @ 5552.4ft (Original Well Elev)
Reference Site:	Valley Farms J	MD Reference:	Valley Farms J15 @ 5552.4ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Valley Farms J15	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	EDM 2003.21 Single User Db
Reference Design:	Design #1	Offset TVD Reference:	Offset Datum

Offset Design														Offset Site Error:	0.0 ft
Valley Farms J - Valley Farms J3 - Wellbore #1 - Design #1														Offset Well Error:	0.0 ft
Survey Program: 0-MWD															
Reference		Offset		Semi Major Axis			Distance							Warning	
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor			
0.0	0.0	0.0	0.0	0.0	0.0	17.73	67.7	21.7	71.1						
100.0	100.0	100.0	100.0	0.1	0.1	17.73	67.7	21.7	71.1	70.9	0.19	374.059			
200.0	200.0	200.0	200.0	0.3	0.3	17.73	67.7	21.7	71.1	70.5	0.64	111.193			
300.0	300.0	300.0	300.0	0.5	0.5	17.73	67.7	21.7	71.1	70.0	1.09	65.302			
400.0	400.0	400.0	400.0	0.8	0.8	17.73	67.7	21.7	71.1	69.6	1.54	46.225			
500.0	500.0	500.0	500.0	1.0	1.0	17.73	67.7	21.7	71.1	69.1	1.99	35.774			
600.0	600.0	600.0	600.0	1.2	1.2	17.73	67.7	21.7	71.1	68.7	2.44	29.177			
700.0	700.0	700.0	700.0	1.4	1.4	17.73	67.7	21.7	71.1	68.2	2.89	24.634			
800.0	800.0	800.0	800.0	1.7	1.7	17.73	67.7	21.7	71.1	67.8	3.34	21.316			
900.0	900.0	900.0	900.0	1.9	1.9	17.73	67.7	21.7	71.1	67.3	3.79	18.785			
1,000.0	1,000.0	1,000.0	1,000.0	2.1	2.1	17.73	67.7	21.7	71.1	66.9	4.24	16.792			
1,100.0	1,100.0	1,100.0	1,100.0	2.3	2.3	17.73	67.7	21.7	71.1	66.4	4.69	15.181 CC, ES			
1,200.0	1,200.0	1,196.6	1,196.6	2.5	2.6	-112.67	69.5	23.3	74.4	69.3	5.10	14.576 SF			
1,300.0	1,299.6	1,292.6	1,292.2	2.7	2.8	-114.94	74.8	28.3	84.3	78.8	5.51	15.282			
1,400.0	1,398.8	1,387.1	1,386.0	3.0	3.0	-117.65	83.4	36.4	100.9	94.9	5.95	16.953			
1,500.0	1,497.1	1,479.6	1,477.1	3.2	3.2	-120.10	95.1	47.4	124.2	117.8	6.42	19.338			
1,600.0	1,594.3	1,569.6	1,564.9	3.5	3.5	-121.98	109.6	61.0	154.2	147.2	6.95	22.185			
1,700.0	1,690.2	1,656.5	1,648.6	4.0	3.9	-123.28	126.4	76.9	190.4	182.9	7.54	25.256			
1,800.0	1,784.4	1,739.9	1,728.0	4.5	4.2	-124.05	145.1	94.5	232.7	224.5	8.21	28.347			
1,900.0	1,876.8	1,820.5	1,803.5	5.1	4.6	-124.41	165.5	113.7	280.6	271.6	8.97	31.275			
2,000.0	1,967.1	1,905.6	1,882.8	5.8	5.1	-124.88	188.0	135.0	332.3	322.5	9.83	33.815			
2,100.0	2,054.9	1,988.6	1,960.1	6.7	5.6	-125.44	210.0	155.7	386.9	376.1	10.77	35.940			
2,200.0	2,140.2	2,069.2	2,035.2	7.7	6.1	-125.99	231.4	175.8	444.4	432.6	11.78	37.736			
2,300.0	2,222.6	2,147.3	2,108.0	8.8	6.6	-126.46	252.1	195.3	504.9	492.0	12.86	39.249			
2,400.0	2,301.9	2,222.7	2,178.1	10.1	7.1	-126.80	272.1	214.1	568.3	554.3	14.02	40.529			
2,500.0	2,377.9	2,295.1	2,245.6	11.5	7.6	-126.98	291.3	232.2	634.7	619.4	15.26	41.603			
2,519.1	2,392.1	2,308.5	2,258.1	11.7	7.7	-127.00	294.8	235.5	647.7	632.2	15.50	41.785			
2,600.0	2,451.7	2,365.4	2,311.0	12.9	8.0	-128.73	309.9	249.7	703.2	686.7	16.50	42.615			
2,700.0	2,525.3	2,435.6	2,376.4	14.4	8.5	-130.54	328.5	267.2	772.3	754.6	17.74	43.531			
2,800.0	2,598.9	2,505.8	2,441.8	15.9	9.0	-132.06	347.1	284.8	841.7	822.7	18.98	44.343			
2,900.0	2,672.6	2,576.0	2,507.2	17.4	9.5	-133.36	365.7	302.3	911.4	891.2	20.23	45.062			
3,000.0	2,746.2	2,646.2	2,572.6	18.9	10.0	-134.49	384.3	319.8	981.3	959.8	21.47	45.707			
3,100.0	2,819.9	2,716.5	2,638.0	20.5	10.5	-135.47	402.9	337.3	1,051.4	1,028.7	22.71	46.287			
3,200.0	2,893.5	2,786.7	2,703.4	22.0	11.0	-136.33	421.5	354.9	1,121.6	1,097.6	23.96	46.811			
3,300.0	2,967.2	2,856.9	2,768.8	23.5	11.4	-137.09	440.1	372.4	1,191.9	1,166.7	25.21	47.285			
3,386.6	3,030.9	2,917.7	2,825.5	24.9	11.9	-137.68	456.2	387.6	1,252.9	1,226.6	26.29	47.662			
3,400.0	3,040.8	2,927.1	2,834.3	25.1	11.9	-138.03	458.7	389.9	1,262.3	1,235.9	26.43	47.766			
3,500.0	3,116.7	2,999.3	2,901.5	26.3	12.4	-140.37	477.9	407.9	1,331.0	1,303.6	27.44	48.512			
3,600.0	3,195.8	3,074.5	2,971.5	27.5	13.0	-142.25	497.8	426.7	1,396.8	1,368.3	28.49	49.027			
3,700.0	3,278.0	3,152.5	3,044.2	28.7	13.5	-143.77	518.4	446.2	1,459.4	1,429.8	29.57	49.347			
3,800.0	3,363.1	3,233.0	3,119.2	29.7	14.1	-144.97	539.8	466.2	1,518.6	1,488.0	30.68	49.506			
3,900.0	3,450.9	3,315.9	3,196.3	30.6	14.7	-145.90	561.7	486.9	1,574.4	1,542.6	31.78	49.533			
4,000.0	3,541.0	3,400.9	3,275.5	31.4	15.3	-146.60	584.3	508.1	1,626.5	1,593.6	32.89	49.454			
4,100.0	3,633.3	3,487.7	3,356.4	32.1	15.9	-147.09	607.3	529.8	1,674.9	1,640.9	33.98	49.290			
4,200.0	3,727.4	3,576.2	3,438.8	32.8	16.6	-147.41	630.7	551.9	1,719.5	1,684.5	35.05	49.061			
4,300.0	3,823.2	3,666.1	3,522.6	33.3	17.2	-147.56	654.5	574.3	1,760.3	1,724.2	36.08	48.783			
4,400.0	3,920.3	3,785.8	3,634.4	33.7	18.0	-147.38	685.5	603.5	1,796.8	1,759.6	37.25	48.239			
4,500.0	4,018.6	3,959.7	3,800.8	34.0	18.8	-146.98	722.2	638.0	1,826.2	1,787.7	38.41	47.540			
4,600.0	4,117.7	4,143.1	3,980.4	34.3	19.5	-146.73	748.7	663.0	1,847.0	1,807.7	39.29	47.003			
4,700.0	4,217.4	4,332.7	4,168.9	34.5	19.9	-146.66	762.8	676.3	1,858.8	1,819.0	39.85	46.648			

Company:	Ursa Operating Company, LLC	Local Co-ordinate Reference:	Well Valley Farms J15
Project:	Rockies Region	TVD Reference:	Valley Farms J15 @ 5552.4ft (Original Well Elev)
Reference Site:	Valley Farms J	MD Reference:	Valley Farms J15 @ 5552.4ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Valley Farms J15	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	EDM 2003.21 Single User Db
Reference Design:	Design #1	Offset TVD Reference:	Offset Datum

Offset Design													Valley Farms J - Valley Farms J3 - Wellbore #1 - Design #1		Offset Site Error:		0.0 ft
Survey Program: 0-MWD															Offset Well Error:		0.0 ft
Reference		Offset		Semi Major Axis			Distance							Warning			
Measured Depth	Vertical Depth	Measured Depth	Vertical Depth	Reference	Offset	Highside Toolface	Offset Wellbore Centre		Between Centres	Between Ellipses	Minimum Separation	Separation Factor					
(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(°)	+N/-S (ft)	+E/-W (ft)	(ft)	(ft)	(ft)						
4,805.7	4,323.0	4,486.8	4,323.0	34.6	20.1	-17.24	764.8	678.2	1,861.9	1,821.9	40.05	46.488					
4,900.0	4,417.3	4,581.1	4,417.3	34.6	20.2	-17.24	764.8	678.2	1,861.9	1,821.7	40.23	46.278					
5,000.0	4,517.3	4,681.1	4,517.3	34.7	20.3	-17.24	764.8	678.2	1,861.9	1,821.5	40.43	46.048					
5,100.0	4,617.3	4,781.1	4,617.3	34.7	20.4	-17.24	764.8	678.2	1,861.9	1,821.3	40.64	45.816					
5,200.0	4,717.3	4,881.1	4,717.3	34.8	20.5	-17.24	764.8	678.2	1,861.9	1,821.1	40.85	45.582					
5,300.0	4,817.3	4,981.1	4,817.3	34.9	20.6	-17.24	764.8	678.2	1,861.9	1,820.9	41.06	45.345					
5,400.0	4,917.3	5,081.1	4,917.3	34.9	20.7	-17.24	764.8	678.2	1,861.9	1,820.7	41.28	45.107					
5,500.0	5,017.3	5,181.1	5,017.3	35.0	20.8	-17.24	764.8	678.2	1,861.9	1,820.4	41.50	44.868					
5,600.0	5,117.3	5,281.1	5,117.3	35.0	20.9	-17.24	764.8	678.2	1,861.9	1,820.2	41.72	44.627					
5,700.0	5,217.3	5,381.1	5,217.3	35.1	21.0	-17.24	764.8	678.2	1,861.9	1,820.0	41.95	44.385					
5,800.0	5,317.3	5,481.1	5,317.3	35.2	21.2	-17.24	764.8	678.2	1,861.9	1,819.8	42.18	44.142					
5,900.0	5,417.3	5,581.1	5,417.3	35.3	21.3	-17.24	764.8	678.2	1,861.9	1,819.5	42.42	43.898					
6,000.0	5,517.3	5,681.1	5,517.3	35.3	21.4	-17.24	764.8	678.2	1,861.9	1,819.3	42.65	43.653					
6,100.0	5,617.3	5,781.1	5,617.3	35.4	21.5	-17.24	764.8	678.2	1,861.9	1,819.0	42.89	43.407					
6,200.0	5,717.3	5,881.1	5,717.3	35.5	21.6	-17.24	764.8	678.2	1,861.9	1,818.8	43.14	43.161					
6,300.0	5,817.3	5,981.1	5,817.3	35.5	21.8	-17.24	764.8	678.2	1,861.9	1,818.6	43.39	42.914					
6,400.0	5,917.3	6,081.1	5,917.3	35.6	21.9	-17.24	764.8	678.2	1,861.9	1,818.3	43.64	42.667					
6,500.0	6,017.3	6,181.1	6,017.3	35.7	22.0	-17.24	764.8	678.2	1,861.9	1,818.1	43.89	42.420					
6,600.0	6,117.3	6,281.1	6,117.3	35.8	22.2	-17.24	764.8	678.2	1,861.9	1,817.8	44.15	42.173					
6,700.0	6,217.3	6,381.1	6,217.3	35.9	22.3	-17.24	764.8	678.2	1,861.9	1,817.5	44.41	41.926					
6,800.0	6,317.3	6,481.1	6,317.3	35.9	22.4	-17.24	764.8	678.2	1,861.9	1,817.3	44.67	41.678					
6,900.0	6,417.3	6,581.1	6,417.3	36.0	22.6	-17.24	764.8	678.2	1,861.9	1,817.0	44.94	41.431					
7,000.0	6,517.3	6,681.1	6,517.3	36.1	22.7	-17.24	764.8	678.2	1,861.9	1,816.7	45.21	41.185					
7,100.0	6,617.3	6,781.1	6,617.3	36.2	22.8	-17.24	764.8	678.2	1,861.9	1,816.5	45.48	40.938					
7,200.0	6,717.3	6,881.1	6,717.3	36.3	23.0	-17.24	764.8	678.2	1,861.9	1,816.2	45.76	40.692					
7,300.0	6,817.3	6,981.1	6,817.3	36.4	23.1	-17.24	764.8	678.2	1,861.9	1,815.9	46.03	40.447					
7,400.0	6,917.3	7,081.1	6,917.3	36.4	23.3	-17.24	764.8	678.2	1,861.9	1,815.6	46.31	40.202					
7,500.0	7,017.3	7,181.1	7,017.3	36.5	23.4	-17.24	764.8	678.2	1,861.9	1,815.3	46.60	39.958					
7,516.6	7,033.9	7,197.7	7,033.9	36.6	23.4	-17.24	764.8	678.2	1,861.9	1,815.3	46.64	39.918					
7,589.7	7,107.0	7,217.8	7,054.0	36.6	23.4	-17.24	764.8	678.2	1,862.7	1,815.9	46.77	39.826					

Company:	Ursa Operating Company, LLC	Local Co-ordinate Reference:	Well Valley Farms J15
Project:	Rockies Region	TVD Reference:	Valley Farms J15 @ 5552.4ft (Original Well Elev)
Reference Site:	Valley Farms J	MD Reference:	Valley Farms J15 @ 5552.4ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Valley Farms J15	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	EDM 2003.21 Single User Db
Reference Design:	Design #1	Offset TVD Reference:	Offset Datum

Offset Design													Offset Site Error:	0.0 ft
Valley Farms J - Valley Farms J4 - Wellbore #1 - Design #1													Offset Well Error:	0.0 ft
Survey Program: 0-MWD														
Reference		Offset		Semi Major Axis			Distance							
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning	
0.0	0.0	0.0	0.0	0.0	0.0	21.56	55.3	21.8	59.4					
100.0	100.0	100.0	100.0	0.1	0.1	21.56	55.3	21.8	59.4	59.2	0.19	312.445		
200.0	200.0	200.0	200.0	0.3	0.3	21.56	55.3	21.8	59.4	58.8	0.64	92.877		
300.0	300.0	300.0	300.0	0.5	0.5	21.56	55.3	21.8	59.4	58.3	1.09	54.546		
400.0	400.0	400.0	400.0	0.8	0.8	21.56	55.3	21.8	59.4	57.9	1.54	38.611		
500.0	500.0	500.0	500.0	1.0	1.0	21.56	55.3	21.8	59.4	57.4	1.99	29.881		
600.0	600.0	600.0	600.0	1.2	1.2	21.56	55.3	21.8	59.4	57.0	2.44	24.371		
700.0	700.0	700.0	700.0	1.4	1.4	21.56	55.3	21.8	59.4	56.5	2.89	20.577		
800.0	800.0	800.0	800.0	1.7	1.7	21.56	55.3	21.8	59.4	56.1	3.34	17.805		
900.0	900.0	900.0	900.0	1.9	1.9	21.56	55.3	21.8	59.4	55.6	3.79	15.691		
1,000.0	1,000.0	1,000.0	1,000.0	2.1	2.1	21.56	55.3	21.8	59.4	55.2	4.24	14.026		
1,100.0	1,100.0	1,100.0	1,100.0	2.3	2.3	21.56	55.3	21.8	59.4	54.7	4.69	12.680 CC, ES		
1,200.0	1,200.0	1,197.4	1,197.3	2.5	2.6	-108.82	56.7	23.9	62.4	57.2	5.10	12.218 SF		
1,300.0	1,299.6	1,294.2	1,293.9	2.7	2.8	-111.00	60.9	29.9	71.2	65.7	5.51	12.921		
1,400.0	1,398.8	1,389.9	1,388.8	3.0	3.0	-113.57	67.8	39.9	86.1	80.2	5.95	14.470		
1,500.0	1,497.1	1,484.0	1,481.4	3.2	3.3	-115.84	77.3	53.4	107.1	100.6	6.44	16.627		
1,600.0	1,594.3	1,576.1	1,571.1	3.5	3.5	-117.56	89.0	70.3	133.9	126.9	6.99	19.152		
1,700.0	1,690.2	1,665.6	1,657.4	4.0	3.9	-118.72	102.8	90.1	166.5	158.9	7.63	21.828		
1,800.0	1,784.4	1,758.1	1,745.7	4.5	4.3	-119.97	118.3	112.4	203.2	194.9	8.36	24.306		
1,900.0	1,876.8	1,849.4	1,833.0	5.1	4.7	-121.57	133.7	134.4	242.8	233.6	9.17	26.468		
2,000.0	1,967.1	1,939.1	1,918.7	5.8	5.2	-123.28	148.8	156.1	285.3	275.3	10.06	28.352		
2,100.0	2,054.9	2,026.8	2,002.6	6.7	5.6	-124.96	163.5	177.3	331.1	320.0	11.02	30.045		
2,200.0	2,140.2	2,112.5	2,084.4	7.7	6.1	-126.51	177.9	197.9	380.1	368.1	12.03	31.589		
2,300.0	2,222.6	2,195.7	2,164.0	8.8	6.5	-127.90	192.0	218.0	432.6	419.5	13.10	33.020		
2,400.0	2,301.9	2,276.3	2,241.1	10.1	7.0	-129.10	205.5	237.5	488.6	474.4	14.22	34.361		
2,500.0	2,377.9	2,354.2	2,315.4	11.5	7.4	-130.07	218.6	256.3	548.1	532.7	15.39	35.622		
2,519.1	2,392.1	2,368.7	2,329.3	11.7	7.5	-130.23	221.0	259.8	559.8	544.2	15.61	35.854		
2,600.0	2,451.7	2,430.0	2,387.9	12.9	7.8	-132.19	231.4	274.6	610.1	593.5	16.56	36.833		
2,700.0	2,525.3	2,505.7	2,460.3	14.4	8.3	-134.23	244.1	292.9	672.8	655.0	17.73	37.935		
2,800.0	2,598.9	2,581.5	2,532.7	15.9	8.7	-135.94	256.8	311.2	735.9	717.0	18.90	38.929		
2,900.0	2,672.6	2,657.2	2,605.1	17.4	9.1	-137.38	269.6	329.5	799.4	779.3	20.07	39.829		
3,000.0	2,746.2	2,733.0	2,677.5	18.9	9.6	-138.62	282.3	347.8	863.1	841.9	21.23	40.646		
3,100.0	2,819.9	2,808.7	2,749.9	20.5	10.0	-139.70	295.1	366.1	927.1	904.7	22.40	41.390		
3,200.0	2,893.5	2,884.5	2,822.3	22.0	10.4	-140.63	307.8	384.4	991.2	967.7	23.56	42.068		
3,300.0	2,967.2	2,960.2	2,894.7	23.5	10.9	-141.46	320.6	402.6	1,055.5	1,030.8	24.73	42.689		
3,386.6	3,030.9	3,025.8	2,957.4	24.9	11.3	-142.10	331.6	418.5	1,111.3	1,085.5	25.73	43.185		
3,400.0	3,040.8	3,036.0	2,967.1	25.1	11.3	-142.40	333.3	420.9	1,119.8	1,094.0	25.87	43.289		
3,500.0	3,116.7	3,113.6	3,041.3	26.3	11.8	-144.36	346.4	439.7	1,182.3	1,155.4	26.86	44.018		
3,600.0	3,195.8	3,194.1	3,118.2	27.5	12.3	-145.93	359.9	459.1	1,241.4	1,213.5	27.89	44.511		
3,700.0	3,278.0	3,277.2	3,197.6	28.7	12.8	-147.15	373.9	479.2	1,296.9	1,268.0	28.95	44.803		
3,800.0	3,363.1	3,362.7	3,279.4	29.7	13.3	-148.10	388.3	499.8	1,348.8	1,318.7	30.02	44.928		
3,900.0	3,450.9	3,450.4	3,363.1	30.6	13.8	-148.80	403.0	521.0	1,396.8	1,365.7	31.10	44.913		
4,000.0	3,541.0	3,540.0	3,448.7	31.4	14.3	-149.29	418.1	542.6	1,440.8	1,408.6	32.17	44.783		
4,100.0	3,633.3	3,631.2	3,535.9	32.1	14.8	-149.58	433.4	564.7	1,480.8	1,447.6	33.23	44.558		
4,200.0	3,727.4	3,723.8	3,624.5	32.8	15.4	-149.71	449.0	587.0	1,516.7	1,482.4	34.27	44.255		
4,300.0	3,823.2	3,817.7	3,714.1	33.3	16.0	-149.68	464.8	609.7	1,548.4	1,513.1	35.28	43.886		
4,400.0	3,920.3	3,934.2	3,826.3	33.7	16.5	-149.47	482.8	635.5	1,575.4	1,539.1	36.27	43.437		
4,500.0	4,018.6	4,056.9	3,946.3	34.0	17.0	-149.30	497.5	656.6	1,596.6	1,559.6	37.04	43.109		
4,600.0	4,117.7	4,182.6	4,070.6	34.3	17.3	-149.21	507.9	671.6	1,611.8	1,574.2	37.61	42.861		
4,700.0	4,217.4	4,310.2	4,197.8	34.5	17.6	-149.19	513.7	679.9	1,620.9	1,582.9	37.96	42.699		

Company:	Ursa Operating Company, LLC	Local Co-ordinate Reference:	Well Valley Farms J15
Project:	Rockies Region	TVD Reference:	Valley Farms J15 @ 5552.4ft (Original Well Elev)
Reference Site:	Valley Farms J	MD Reference:	Valley Farms J15 @ 5552.4ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Valley Farms J15	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	EDM 2003.21 Single User Db
Reference Design:	Design #1	Offset TVD Reference:	Offset Datum

Offset Design											Valley Farms J - Valley Farms J4 - Wellbore #1 - Design #1		Offset Site Error:		0.0 ft
Survey Program: 0-MWD													Offset Well Error:		0.0 ft
Reference		Offset		Semi Major Axis			Distance								
Measured Depth	Vertical Depth	Measured Depth	Vertical Depth	Reference	Offset	Highside Toolface	Offset Wellbore Centre		Between Centres	Between Ellipses	Minimum Separation	Separation Factor	Warning		
(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(°)	+N/-S (ft)	+E/-W (ft)	(ft)	(ft)	(ft)				
4,805.7	4,323.0	4,435.4	4,323.0	34.6	17.7	-19.74	514.9	681.6	1,623.8	1,585.7	38.11	42.612			
4,900.0	4,417.3	4,529.7	4,417.3	34.6	17.8	-19.74	514.9	681.6	1,623.8	1,585.5	38.30	42.398			
5,000.0	4,517.3	4,629.7	4,517.3	34.7	18.0	-19.74	514.9	681.6	1,623.8	1,585.3	38.51	42.164			
5,100.0	4,617.3	4,729.7	4,617.3	34.7	18.1	-19.74	514.9	681.6	1,623.8	1,585.1	38.73	41.928			
5,200.0	4,717.3	4,829.7	4,717.3	34.8	18.2	-19.74	514.9	681.6	1,623.8	1,584.8	38.95	41.691			
5,300.0	4,817.3	4,929.7	4,817.3	34.9	18.3	-19.74	514.9	681.6	1,623.8	1,584.6	39.17	41.452			
5,400.0	4,917.3	5,029.7	4,917.3	34.9	18.4	-19.74	514.9	681.6	1,623.8	1,584.4	39.40	41.212			
5,500.0	5,017.3	5,129.7	5,017.3	35.0	18.6	-19.74	514.9	681.6	1,623.8	1,584.2	39.63	40.971			
5,600.0	5,117.3	5,229.7	5,117.3	35.0	18.7	-19.74	514.9	681.6	1,623.8	1,583.9	39.87	40.729			
5,700.0	5,217.3	5,329.7	5,217.3	35.1	18.8	-19.74	514.9	681.6	1,623.8	1,583.7	40.11	40.486			
5,800.0	5,317.3	5,429.7	5,317.3	35.2	19.0	-19.74	514.9	681.6	1,623.8	1,583.4	40.35	40.243			
5,900.0	5,417.3	5,529.7	5,417.3	35.3	19.1	-19.74	514.9	681.6	1,623.8	1,583.2	40.60	39.999			
6,000.0	5,517.3	5,629.7	5,517.3	35.3	19.2	-19.74	514.9	681.6	1,623.8	1,583.0	40.85	39.754			
6,100.0	5,617.3	5,729.7	5,617.3	35.4	19.4	-19.74	514.9	681.6	1,623.8	1,582.7	41.10	39.509			
6,200.0	5,717.3	5,829.7	5,717.3	35.5	19.5	-19.74	514.9	681.6	1,623.8	1,582.4	41.36	39.265			
6,300.0	5,817.3	5,929.7	5,817.3	35.5	19.7	-19.74	514.9	681.6	1,623.8	1,582.2	41.61	39.020			
6,400.0	5,917.3	6,029.7	5,917.3	35.6	19.8	-19.74	514.9	681.6	1,623.8	1,581.9	41.88	38.775			
6,500.0	6,017.3	6,129.7	6,017.3	35.7	19.9	-19.74	514.9	681.6	1,623.8	1,581.7	42.14	38.530			
6,600.0	6,117.3	6,229.7	6,117.3	35.8	20.1	-19.74	514.9	681.6	1,623.8	1,581.4	42.41	38.286			
6,700.0	6,217.3	6,329.7	6,217.3	35.9	20.2	-19.74	514.9	681.6	1,623.8	1,581.1	42.68	38.042			
6,800.0	6,317.3	6,429.7	6,317.3	35.9	20.4	-19.74	514.9	681.6	1,623.8	1,580.8	42.96	37.798			
6,900.0	6,417.3	6,529.7	6,417.3	36.0	20.5	-19.74	514.9	681.6	1,623.8	1,580.6	43.24	37.556			
7,000.0	6,517.3	6,629.7	6,517.3	36.1	20.7	-19.74	514.9	681.6	1,623.8	1,580.3	43.52	37.313			
7,100.0	6,617.3	6,729.7	6,617.3	36.2	20.8	-19.74	514.9	681.6	1,623.8	1,580.0	43.80	37.072			
7,200.0	6,717.3	6,829.7	6,717.3	36.3	21.0	-19.74	514.9	681.6	1,623.8	1,579.7	44.09	36.831			
7,300.0	6,817.3	6,929.7	6,817.3	36.4	21.2	-19.74	514.9	681.6	1,623.8	1,579.4	44.38	36.591			
7,400.0	6,917.3	7,029.7	6,917.3	36.4	21.3	-19.74	514.9	681.6	1,623.8	1,579.1	44.67	36.353			
7,500.0	7,017.3	7,129.7	7,017.3	36.5	21.5	-19.74	514.9	681.6	1,623.8	1,578.8	44.96	36.115			
7,538.8	7,056.1	7,168.5	7,056.1	36.6	21.5	-19.74	514.9	681.6	1,623.8	1,578.7	45.08	36.023			
7,589.7	7,107.0	7,182.4	7,070.0	36.6	21.6	-19.74	514.9	681.6	1,624.2	1,579.1	45.17	35.960			

Company:	Ursa Operating Company, LLC	Local Co-ordinate Reference:	Well Valley Farms J15
Project:	Rockies Region	TVD Reference:	Valley Farms J15 @ 5552.4ft (Original Well Elev)
Reference Site:	Valley Farms J	MD Reference:	Valley Farms J15 @ 5552.4ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Valley Farms J15	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	EDM 2003.21 Single User Db
Reference Design:	Design #1	Offset TVD Reference:	Offset Datum

Offset Design														Offset Site Error:	0.0 ft
Valley Farms J - Valley Farms J5 - Wellbore #1 - Design #1														Offset Well Error:	0.0 ft
Survey Program: 0-MWD															
Reference		Offset		Semi Major Axis			Distance								
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning		
0.0	0.0	0.0	0.0	0.0	0.0	-0.69	75.0	-0.9	75.0						
100.0	100.0	100.0	100.0	0.1	0.1	-0.69	75.0	-0.9	75.0	74.8	0.19	394.438			
200.0	200.0	200.0	200.0	0.3	0.3	-0.69	75.0	-0.9	75.0	74.4	0.64	117.251			
300.0	300.0	300.0	300.0	0.5	0.5	-0.69	75.0	-0.9	75.0	73.9	1.09	68.860			
400.0	400.0	400.0	400.0	0.8	0.8	-0.69	75.0	-0.9	75.0	73.5	1.54	48.743			
500.0	500.0	500.0	500.0	1.0	1.0	-0.69	75.0	-0.9	75.0	73.0	1.99	37.723			
600.0	600.0	600.0	600.0	1.2	1.2	-0.69	75.0	-0.9	75.0	72.6	2.44	30.767			
700.0	700.0	700.0	700.0	1.4	1.4	-0.69	75.0	-0.9	75.0	72.1	2.89	25.977			
800.0	800.0	800.0	800.0	1.7	1.7	-0.69	75.0	-0.9	75.0	71.7	3.34	22.477			
900.0	900.0	900.0	900.0	1.9	1.9	-0.69	75.0	-0.9	75.0	71.2	3.79	19.809			
1,000.0	1,000.0	1,000.0	1,000.0	2.1	2.1	-0.69	75.0	-0.9	75.0	70.8	4.24	17.706			
1,100.0	1,100.0	1,100.0	1,100.0	2.3	2.3	-0.69	75.0	-0.9	75.0	70.3	4.69	16.008 CC, ES			
1,200.0	1,200.0	1,199.8	1,199.8	2.5	2.6	-133.58	74.9	-3.5	76.8	71.7	5.10	15.058 SF			
1,300.0	1,299.6	1,298.3	1,297.9	2.7	2.8	-142.58	74.7	-11.2	83.6	78.1	5.49	15.232			
1,400.0	1,398.8	1,393.9	1,392.8	3.0	3.0	-153.97	74.3	-23.5	98.6	92.7	5.89	16.747			
1,500.0	1,497.1	1,487.3	1,484.8	3.2	3.2	-164.39	73.8	-39.4	123.9	117.6	6.30	19.677			
1,600.0	1,594.3	1,579.9	1,575.9	3.5	3.5	-171.74	73.2	-55.8	157.2	150.6	6.68	23.534			
1,700.0	1,690.2	1,670.5	1,665.1	4.0	3.8	-176.65	72.7	-71.9	197.1	190.0	7.05	27.955			
1,800.0	1,784.4	1,758.8	1,752.0	4.5	4.1	-179.98	72.2	-87.5	242.5	235.1	7.41	32.739			
1,900.0	1,876.8	1,844.6	1,836.5	5.1	4.4	177.70	71.7	-102.7	292.9	285.2	7.75	37.777			
2,000.0	1,967.1	1,927.7	1,918.2	5.8	4.7	176.04	71.2	-117.4	348.1	340.0	8.11	42.938			
2,100.0	2,054.9	2,007.9	1,997.1	6.7	4.9	174.81	70.8	-131.6	407.6	399.1	8.45	48.233			
2,200.0	2,140.2	2,084.8	2,072.9	7.7	5.2	173.85	70.3	-145.2	471.3	462.5	8.80	53.573			
2,300.0	2,222.6	2,158.4	2,145.3	8.8	5.5	173.08	69.9	-158.2	538.9	529.8	9.15	58.926			
2,400.0	2,301.9	2,228.4	2,214.1	10.1	5.8	172.42	69.5	-170.6	610.3	600.8	9.50	64.251			
2,500.0	2,377.9	2,294.6	2,279.3	11.5	6.0	171.83	69.1	-182.3	685.3	675.4	9.86	69.503			
2,519.1	2,392.1	2,306.8	2,291.3	11.7	6.1	171.72	69.1	-184.5	699.9	690.0	9.93	70.492			
2,600.0	2,451.7	2,358.1	2,341.8	12.9	6.2	171.68	68.8	-193.6	762.5	752.0	10.42	73.179			
2,700.0	2,525.3	2,421.6	2,404.3	14.4	6.5	171.65	68.4	-204.8	839.7	828.7	11.04	76.082			
2,800.0	2,598.9	2,485.1	2,466.8	15.9	6.7	171.62	68.1	-216.0	917.0	905.3	11.67	78.595			
2,900.0	2,672.6	2,548.6	2,529.3	17.4	7.0	171.59	67.7	-227.3	994.3	981.9	12.31	80.784			
3,000.0	2,746.2	2,612.1	2,591.8	18.9	7.2	171.57	67.3	-238.5	1,071.5	1,058.6	12.96	82.708			
3,100.0	2,819.9	2,675.6	2,654.3	20.5	7.5	171.55	67.0	-249.7	1,148.8	1,135.2	13.61	84.404			
3,200.0	2,893.5	2,739.1	2,716.7	22.0	7.7	171.54	66.6	-261.0	1,226.0	1,211.8	14.27	85.910			
3,300.0	2,967.2	2,802.5	2,779.2	23.5	8.0	171.52	66.2	-272.2	1,303.3	1,288.4	14.94	87.256			
3,386.6	3,030.9	2,857.5	2,833.3	24.9	8.2	171.51	65.9	-282.0	1,370.2	1,354.7	15.52	88.306			
3,400.0	3,040.8	2,866.1	2,841.7	25.1	8.2	171.58	65.9	-283.5	1,380.5	1,364.9	15.64	88.287			
3,500.0	3,116.7	2,932.0	2,906.7	26.3	8.5	172.03	65.5	-295.1	1,455.7	1,439.2	16.52	88.136			
3,600.0	3,195.8	3,001.8	2,975.3	27.5	8.7	172.37	65.1	-307.5	1,527.3	1,509.9	17.38	87.892			
3,700.0	3,278.0	3,075.2	3,047.5	28.7	9.0	172.62	64.7	-320.5	1,595.2	1,577.0	18.21	87.593			
3,800.0	3,363.1	3,152.0	3,123.1	29.7	9.3	172.81	64.3	-334.1	1,659.2	1,640.2	19.01	87.270			
3,900.0	3,450.9	3,231.9	3,201.8	30.6	9.6	172.95	63.8	-348.2	1,719.1	1,699.3	19.77	86.940			
4,000.0	3,541.0	3,314.9	3,283.4	31.4	10.0	173.03	63.3	-362.9	1,774.8	1,754.3	20.49	86.618			
4,100.0	3,633.3	3,400.5	3,367.8	32.1	10.3	173.07	62.8	-378.1	1,826.1	1,805.0	21.16	86.312			
4,200.0	3,727.4	3,488.7	3,454.6	32.8	10.7	173.07	62.3	-393.7	1,872.9	1,851.2	21.77	86.030			
4,300.0	3,823.2	3,579.2	3,543.6	33.3	11.0	173.04	61.8	-409.7	1,915.1	1,892.8	22.33	85.777			
4,400.0	3,920.3	3,671.7	3,634.6	33.7	11.4	172.98	61.3	-426.0	1,952.5	1,929.7	22.82	85.558			
4,500.0	4,018.6	3,765.9	3,727.4	34.0	11.8	172.88	60.7	-442.7	1,985.1	1,961.9	23.25	85.375			
4,600.0	4,117.7	3,861.7	3,821.6	34.3	12.1	172.75	60.2	-459.7	2,012.8	1,989.2	23.62	85.231			
4,700.0	4,217.4	3,958.7	3,917.1	34.5	12.5	172.59	59.6	-476.8	2,035.5	2,011.5	23.91	85.125			

Company:	Ursa Operating Company, LLC	Local Co-ordinate Reference:	Well Valley Farms J15
Project:	Rockies Region	TVD Reference:	Valley Farms J15 @ 5552.4ft (Original Well Elev)
Reference Site:	Valley Farms J	MD Reference:	Valley Farms J15 @ 5552.4ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Valley Farms J15	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	EDM 2003.21 Single User Db
Reference Design:	Design #1	Offset TVD Reference:	Offset Datum

Offset Design													Offset Site Error:	0.0 ft
Survey Program: 0-MWD													Offset Well Error:	0.0 ft
Reference														
Offset				Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
4,805.7	4,323.0	4,062.2	4,019.0	34.6	13.0	-58.13	59.1	-495.2	2,053.9	2,029.8	24.15	85.060		
4,900.0	4,417.3	4,463.3	4,417.3	34.6	13.9	-58.75	57.7	-535.7	2,065.2	2,040.0	25.20	81.939		
5,000.0	4,517.3	4,563.3	4,517.3	34.7	14.1	-58.75	57.7	-535.7	2,065.2	2,039.7	25.51	80.969		
5,100.0	4,617.3	4,663.3	4,617.3	34.7	14.2	-58.75	57.7	-535.7	2,065.2	2,039.4	25.81	80.003		
5,200.0	4,717.3	4,763.3	4,717.3	34.8	14.4	-58.75	57.7	-535.7	2,065.2	2,039.1	26.13	79.047		
5,300.0	4,817.3	4,863.3	4,817.3	34.9	14.5	-58.75	57.7	-535.7	2,065.2	2,038.7	26.44	78.102		
5,400.0	4,917.3	4,963.3	4,917.3	34.9	14.7	-58.75	57.7	-535.7	2,065.2	2,038.4	26.76	77.169		
5,500.0	5,017.3	5,063.3	5,017.3	35.0	14.9	-58.75	57.7	-535.7	2,065.2	2,038.1	27.09	76.248		
5,600.0	5,117.3	5,163.3	5,117.3	35.0	15.0	-58.75	57.7	-535.7	2,065.2	2,037.8	27.41	75.339		
5,700.0	5,217.3	5,263.3	5,217.3	35.1	15.2	-58.75	57.7	-535.7	2,065.2	2,037.4	27.74	74.442		
5,800.0	5,317.3	5,363.3	5,317.3	35.2	15.3	-58.75	57.7	-535.7	2,065.2	2,037.1	28.08	73.559		
5,900.0	5,417.3	5,463.3	5,417.3	35.3	15.5	-58.75	57.7	-535.7	2,065.2	2,036.8	28.41	72.687		
6,000.0	5,517.3	5,563.3	5,517.3	35.3	15.7	-58.75	57.7	-535.7	2,065.2	2,036.4	28.75	71.829		
6,100.0	5,617.3	5,663.3	5,617.3	35.4	15.8	-58.75	57.7	-535.7	2,065.2	2,036.1	29.09	70.984		
6,200.0	5,717.3	5,763.3	5,717.3	35.5	16.0	-58.75	57.7	-535.7	2,065.2	2,035.7	29.44	70.152		
6,300.0	5,817.3	5,863.3	5,817.3	35.5	16.2	-58.75	57.7	-535.7	2,065.2	2,035.4	29.79	69.332		
6,400.0	5,917.3	5,963.3	5,917.3	35.6	16.3	-58.75	57.7	-535.7	2,065.2	2,035.0	30.14	68.526		
6,500.0	6,017.3	6,063.3	6,017.3	35.7	16.5	-58.75	57.7	-535.7	2,065.2	2,034.7	30.49	67.733		
6,600.0	6,117.3	6,163.3	6,117.3	35.8	16.7	-58.75	57.7	-535.7	2,065.2	2,034.3	30.85	66.952		
6,700.0	6,217.3	6,263.3	6,217.3	35.9	16.9	-58.75	57.7	-535.7	2,065.2	2,034.0	31.20	66.184		
6,800.0	6,317.3	6,363.3	6,317.3	35.9	17.0	-58.75	57.7	-535.7	2,065.2	2,033.6	31.56	65.429		
6,900.0	6,417.3	6,463.3	6,417.3	36.0	17.2	-58.75	57.7	-535.7	2,065.2	2,033.3	31.93	64.687		
7,000.0	6,517.3	6,563.3	6,517.3	36.1	17.4	-58.75	57.7	-535.7	2,065.2	2,032.9	32.29	63.956		
7,100.0	6,617.3	6,663.3	6,617.3	36.2	17.6	-58.75	57.7	-535.7	2,065.2	2,032.5	32.66	63.239		
7,200.0	6,717.3	6,763.3	6,717.3	36.3	17.8	-58.75	57.7	-535.7	2,065.2	2,032.2	33.03	62.533		
7,300.0	6,817.3	6,863.3	6,817.3	36.4	17.9	-58.75	57.7	-535.7	2,065.2	2,031.8	33.40	61.839		
7,400.0	6,917.3	6,963.3	6,917.3	36.4	18.1	-58.75	57.7	-535.7	2,065.2	2,031.4	33.77	61.157		
7,500.0	7,017.3	7,063.3	7,017.3	36.5	18.3	-58.75	57.7	-535.7	2,065.2	2,031.0	34.14	60.487		
7,589.7	7,107.0	7,153.0	7,107.0	36.6	18.5	-58.75	57.7	-535.7	2,065.2	2,030.7	34.48	59.896		

Company:	Ursa Operating Company, LLC	Local Co-ordinate Reference:	Well Valley Farms J15
Project:	Rockies Region	TVD Reference:	Valley Farms J15 @ 5552.4ft (Original Well Elev)
Reference Site:	Valley Farms J	MD Reference:	Valley Farms J15 @ 5552.4ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Valley Farms J15	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	EDM 2003.21 Single User Db
Reference Design:	Design #1	Offset TVD Reference:	Offset Datum

Offset Design													Offset Site Error:	0.0 ft
Valley Farms J - Valley Farms J6 - Wellbore #1 - Design #1													Offset Well Error:	0.0 ft
Survey Program: 0-MWD														
Reference		Offset		Semi Major Axis			Distance							
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning	
0.0	0.0	0.0	0.0	0.0	0.0	-0.70	62.5	-0.8	62.5					
100.0	100.0	100.0	100.0	0.1	0.1	-0.70	62.5	-0.8	62.5	62.3	0.19	328.731		
200.0	200.0	200.0	200.0	0.3	0.3	-0.70	62.5	-0.8	62.5	61.9	0.64	97.719		
300.0	300.0	300.0	300.0	0.5	0.5	-0.70	62.5	-0.8	62.5	61.4	1.09	57.389		
400.0	400.0	400.0	400.0	0.8	0.8	-0.70	62.5	-0.8	62.5	61.0	1.54	40.623		
500.0	500.0	500.0	500.0	1.0	1.0	-0.70	62.5	-0.8	62.5	60.5	1.99	31.439		
600.0	600.0	600.0	600.0	1.2	1.2	-0.70	62.5	-0.8	62.5	60.1	2.44	25.641		
700.0	700.0	700.0	700.0	1.4	1.4	-0.70	62.5	-0.8	62.5	59.6	2.89	21.649		
800.0	800.0	800.0	800.0	1.7	1.7	-0.70	62.5	-0.8	62.5	59.2	3.34	18.733		
900.0	900.0	900.0	900.0	1.9	1.9	-0.70	62.5	-0.8	62.5	58.7	3.79	16.509		
1,000.0	1,000.0	1,000.0	1,000.0	2.1	2.1	-0.70	62.5	-0.8	62.5	58.3	4.24	14.757		
1,100.0	1,100.0	1,100.0	1,100.0	2.3	2.3	-0.70	62.5	-0.8	62.5	57.8	4.69	13.341 CC, ES		
1,200.0	1,200.0	1,201.2	1,201.2	2.5	2.6	-134.21	61.3	-3.2	63.2	58.1	5.09	12.410		
1,300.0	1,299.6	1,301.2	1,300.9	2.7	2.8	-145.29	57.9	-10.3	67.1	61.7	5.47	12.268 SF		
1,400.0	1,398.8	1,398.9	1,397.7	3.0	3.0	-159.90	52.3	-21.8	78.3	72.4	5.86	13.351		
1,500.0	1,497.1	1,493.6	1,490.9	3.2	3.2	-173.36	45.0	-37.1	99.7	93.5	6.27	15.916		
1,600.0	1,594.3	1,587.1	1,582.5	3.5	3.5	177.45	37.0	-53.5	130.5	123.9	6.68	19.552		
1,700.0	1,690.2	1,678.8	1,672.5	4.0	3.8	171.88	29.2	-69.6	168.1	161.0	7.09	23.725		
1,800.0	1,784.4	1,768.5	1,760.5	4.5	4.1	168.46	21.6	-85.4	211.2	203.7	7.50	28.152		
1,900.0	1,876.8	1,856.0	1,846.3	5.1	4.4	166.29	14.2	-100.7	259.2	251.3	7.93	32.692		
2,000.0	1,967.1	1,941.0	1,929.6	5.8	4.7	164.86	7.0	-115.6	311.7	303.3	8.38	37.213		
2,100.0	2,054.9	2,023.3	2,010.4	6.7	5.1	163.87	0.0	-130.1	368.4	359.6	8.83	41.728		
2,200.0	2,140.2	2,102.7	2,088.2	7.7	5.4	163.15	-6.8	-144.0	429.3	420.0	9.30	46.146		
2,300.0	2,222.6	2,178.9	2,162.9	8.8	5.7	162.57	-13.2	-157.4	494.0	484.2	9.80	50.431		
2,400.0	2,301.9	2,251.7	2,234.4	10.1	6.0	162.07	-19.4	-170.2	562.5	552.2	10.31	54.552		
2,500.0	2,377.9	2,321.0	2,302.3	11.5	6.2	161.57	-25.3	-182.4	634.5	623.6	10.85	58.465		
2,519.1	2,392.1	2,333.8	2,314.9	11.7	6.3	161.47	-26.4	-184.6	648.6	637.7	10.96	59.183		
2,600.0	2,451.7	2,387.8	2,367.8	12.9	6.5	161.87	-31.0	-194.1	708.8	697.3	11.54	61.398		
2,700.0	2,525.3	2,454.5	2,433.2	14.4	6.8	162.29	-36.6	-205.8	783.2	770.9	12.28	63.778		
2,800.0	2,598.9	2,521.2	2,498.7	15.9	7.1	162.63	-42.3	-217.5	857.6	844.6	13.03	65.837		
2,900.0	2,672.6	2,587.9	2,564.1	17.4	7.3	162.92	-48.0	-229.3	932.1	918.3	13.78	67.630		
3,000.0	2,746.2	2,654.6	2,629.5	18.9	7.6	163.16	-53.6	-241.0	1,006.5	992.0	14.54	69.201		
3,100.0	2,819.9	2,721.3	2,695.0	20.5	7.9	163.38	-59.3	-252.7	1,081.0	1,065.7	15.31	70.590		
3,200.0	2,893.5	2,788.0	2,760.4	22.0	8.2	163.56	-65.0	-264.4	1,155.4	1,139.3	16.09	71.824		
3,300.0	2,967.2	2,854.7	2,825.8	23.5	8.4	163.72	-70.6	-276.1	1,229.9	1,213.0	16.87	72.924		
3,386.6	3,030.9	2,912.5	2,882.5	24.9	8.7	163.85	-75.5	-286.3	1,294.4	1,276.9	17.54	73.787		
3,400.0	3,040.8	2,921.5	2,891.3	25.1	8.7	163.99	-76.3	-287.8	1,304.3	1,286.7	17.66	73.848		
3,500.0	3,116.7	2,990.5	2,959.0	26.3	9.0	164.90	-82.1	-300.0	1,376.6	1,358.1	18.55	74.231		
3,600.0	3,195.8	3,063.2	3,030.3	27.5	9.3	165.61	-88.3	-312.7	1,445.3	1,425.9	19.43	74.367		
3,700.0	3,278.0	3,139.2	3,104.8	28.7	9.6	166.16	-94.8	-326.1	1,510.3	1,489.9	20.32	74.332		
3,800.0	3,363.1	3,218.4	3,182.5	29.7	10.0	166.58	-101.5	-340.0	1,571.3	1,550.1	21.18	74.176		
3,900.0	3,450.9	3,300.5	3,263.0	30.6	10.3	166.88	-108.5	-354.4	1,628.1	1,606.1	22.02	73.936		
4,000.0	3,541.0	3,385.4	3,346.3	31.4	10.7	167.09	-115.7	-369.3	1,680.8	1,658.0	22.83	73.638		
4,100.0	3,633.3	3,472.7	3,431.9	32.1	11.1	167.22	-123.1	-384.7	1,729.0	1,705.5	23.59	73.301		
4,200.0	3,727.4	3,562.3	3,519.8	32.8	11.5	167.27	-130.7	-400.4	1,772.8	1,748.5	24.30	72.942		
4,300.0	3,823.2	3,653.9	3,609.7	33.3	11.9	167.25	-138.5	-416.5	1,811.9	1,787.0	24.97	72.569		
4,400.0	3,920.3	3,747.3	3,701.2	33.7	12.3	167.17	-146.4	-432.9	1,846.4	1,820.8	25.58	72.189		
4,500.0	4,018.6	3,842.2	3,794.3	34.0	12.7	167.03	-154.5	-449.5	1,876.0	1,849.9	26.13	71.808		
4,600.0	4,117.7	3,938.3	3,888.5	34.3	13.1	166.83	-162.6	-466.4	1,900.8	1,874.2	26.61	71.427		
4,700.0	4,217.4	4,035.3	3,983.7	34.5	13.5	166.57	-170.9	-483.5	1,920.8	1,893.7	27.04	71.047		

Company:	Ursa Operating Company, LLC	Local Co-ordinate Reference:	Well Valley Farms J15
Project:	Rockies Region	TVD Reference:	Valley Farms J15 @ 5552.4ft (Original Well Elev)
Reference Site:	Valley Farms J	MD Reference:	Valley Farms J15 @ 5552.4ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Valley Farms J15	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	EDM 2003.21 Single User Db
Reference Design:	Design #1	Offset TVD Reference:	Offset Datum

Offset Design													Offset Site Error:	0.0 ft
Valley Farms J - Valley Farms J6 - Wellbore #1 - Design #1													Offset Well Error:	0.0 ft
Survey Program: 0-MWD														
Reference		Offset		Semi Major Axis			Distance							
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning	
4,805.7	4,323.0	4,201.1	4,146.8	34.6	14.1	-64.51	-183.9	-510.4	1,935.9	1,908.3	27.63	70.072		
4,900.0	4,417.3	4,462.4	4,407.1	34.6	14.7	-64.97	-192.6	-528.4	1,940.5	1,912.2	28.33	68.489		
5,000.0	4,517.3	4,572.6	4,517.3	34.7	14.8	-64.97	-192.6	-528.5	1,940.5	1,911.9	28.61	67.819		
5,100.0	4,617.3	4,672.6	4,617.3	34.7	14.9	-64.97	-192.6	-528.5	1,940.5	1,911.6	28.88	67.191		
5,200.0	4,717.3	4,772.6	4,717.3	34.8	15.1	-64.97	-192.6	-528.5	1,940.5	1,911.4	29.15	66.564		
5,300.0	4,817.3	4,872.6	4,817.3	34.9	15.2	-64.97	-192.6	-528.5	1,940.5	1,911.1	29.43	65.939		
5,400.0	4,917.3	4,972.6	4,917.3	34.9	15.4	-64.97	-192.6	-528.5	1,940.5	1,910.8	29.71	65.317		
5,500.0	5,017.3	5,072.6	5,017.3	35.0	15.5	-64.97	-192.6	-528.5	1,940.5	1,910.5	29.99	64.697		
5,600.0	5,117.3	5,172.6	5,117.3	35.0	15.6	-64.97	-192.6	-528.5	1,940.5	1,910.2	30.28	64.081		
5,700.0	5,217.3	5,272.6	5,217.3	35.1	15.8	-64.97	-192.6	-528.5	1,940.5	1,910.0	30.58	63.468		
5,800.0	5,317.3	5,372.6	5,317.3	35.2	15.9	-64.97	-192.6	-528.5	1,940.5	1,909.7	30.87	62.859		
5,900.0	5,417.3	5,472.6	5,417.3	35.3	16.1	-64.97	-192.6	-528.5	1,940.5	1,909.4	31.17	62.254		
6,000.0	5,517.3	5,572.6	5,517.3	35.3	16.2	-64.97	-192.6	-528.5	1,940.5	1,909.1	31.47	61.655		
6,100.0	5,617.3	5,672.6	5,617.3	35.4	16.4	-64.97	-192.6	-528.5	1,940.5	1,908.7	31.78	61.060		
6,200.0	5,717.3	5,772.6	5,717.3	35.5	16.6	-64.97	-192.6	-528.5	1,940.5	1,908.4	32.09	60.470		
6,300.0	5,817.3	5,872.6	5,817.3	35.5	16.7	-64.97	-192.6	-528.5	1,940.5	1,908.1	32.40	59.885		
6,400.0	5,917.3	5,972.6	5,917.3	35.6	16.9	-64.97	-192.6	-528.5	1,940.5	1,907.8	32.72	59.306		
6,500.0	6,017.3	6,072.6	6,017.3	35.7	17.0	-64.97	-192.6	-528.5	1,940.5	1,907.5	33.04	58.732		
6,600.0	6,117.3	6,172.6	6,117.3	35.8	17.2	-64.97	-192.6	-528.5	1,940.5	1,907.2	33.36	58.165		
6,700.0	6,217.3	6,272.6	6,217.3	35.9	17.4	-64.97	-192.6	-528.5	1,940.5	1,906.8	33.69	57.603		
6,800.0	6,317.3	6,372.6	6,317.3	35.9	17.5	-64.97	-192.6	-528.5	1,940.5	1,906.5	34.02	57.047		
6,900.0	6,417.3	6,472.6	6,417.3	36.0	17.7	-64.97	-192.6	-528.5	1,940.5	1,906.2	34.35	56.498		
7,000.0	6,517.3	6,572.6	6,517.3	36.1	17.9	-64.97	-192.6	-528.5	1,940.5	1,905.8	34.68	55.954		
7,100.0	6,617.3	6,672.6	6,617.3	36.2	18.0	-64.97	-192.6	-528.5	1,940.5	1,905.5	35.02	55.417		
7,200.0	6,717.3	6,772.6	6,717.3	36.3	18.2	-64.97	-192.6	-528.5	1,940.5	1,905.2	35.36	54.887		
7,300.0	6,817.3	6,872.6	6,817.3	36.4	18.4	-64.97	-192.6	-528.5	1,940.5	1,904.8	35.70	54.362		
7,400.0	6,917.3	6,972.6	6,917.3	36.4	18.5	-64.97	-192.6	-528.5	1,940.5	1,904.5	36.04	53.844		
7,500.0	7,017.3	7,072.6	7,017.3	36.5	18.7	-64.97	-192.6	-528.5	1,940.5	1,904.1	36.39	53.333		
7,589.7	7,107.0	7,162.3	7,107.0	36.6	18.9	-64.97	-192.6	-528.5	1,940.5	1,903.8	36.70	52.880		

Company:	Ursa Operating Company, LLC	Local Co-ordinate Reference:	Well Valley Farms J15
Project:	Rockies Region	TVD Reference:	Valley Farms J15 @ 5552.4ft (Original Well Elev)
Reference Site:	Valley Farms J	MD Reference:	Valley Farms J15 @ 5552.4ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Valley Farms J15	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	EDM 2003.21 Single User Db
Reference Design:	Design #1	Offset TVD Reference:	Offset Datum

Offset Design														Offset Site Error:	0.0 ft
Valley Farms J - Valley Farms J7 - Wellbore #1 - Design #1														Offset Well Error:	0.0 ft
Survey Program: 0-MWD															
Reference		Offset		Semi Major Axis			Distance								
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning		
0.0	0.0	0.0	0.0	0.0	0.0	-0.71	50.0	-0.6	50.0						
100.0	100.0	100.0	100.0	0.1	0.1	-0.71	50.0	-0.6	50.0	49.8	0.19	262.833			
200.0	200.0	200.0	200.0	0.3	0.3	-0.71	50.0	-0.6	50.0	49.3	0.64	78.129			
300.0	300.0	300.0	300.0	0.5	0.5	-0.71	50.0	-0.6	50.0	48.9	1.09	45.885			
400.0	400.0	400.0	400.0	0.8	0.8	-0.71	50.0	-0.6	50.0	48.4	1.54	32.480			
500.0	500.0	500.0	500.0	1.0	1.0	-0.71	50.0	-0.6	50.0	48.0	1.99	25.136			
600.0	600.0	600.0	600.0	1.2	1.2	-0.71	50.0	-0.6	50.0	47.5	2.44	20.501			
700.0	700.0	700.0	700.0	1.4	1.4	-0.71	50.0	-0.6	50.0	47.1	2.89	17.309			
800.0	800.0	800.0	800.0	1.7	1.7	-0.71	50.0	-0.6	50.0	46.6	3.34	14.978			
900.0	900.0	900.0	900.0	1.9	1.9	-0.71	50.0	-0.6	50.0	46.2	3.79	13.199			
1,000.0	1,000.0	1,000.0	1,000.0	2.1	2.1	-0.71	50.0	-0.6	50.0	45.7	4.24	11.799			
1,100.0	1,100.0	1,100.0	1,100.0	2.3	2.3	-0.71	50.0	-0.6	50.0	45.3	4.69	10.667			
1,157.3	1,157.3	1,158.3	1,158.3	2.5	2.5	-131.72	49.4	-1.3	50.0	45.0	4.92	10.156 CC			
1,200.0	1,200.0	1,201.6	1,201.6	2.5	2.5	-134.82	48.1	-2.6	50.0	44.9	5.09	9.827 ES			
1,300.0	1,299.6	1,302.3	1,301.9	2.7	2.7	-148.01	42.7	-8.4	52.1	46.6	5.46	9.538 SF			
1,400.0	1,398.8	1,401.1	1,399.9	3.0	3.0	-165.86	33.8	-17.9	60.7	54.8	5.84	10.393			
1,500.0	1,497.1	1,497.2	1,494.4	3.2	3.2	178.04	21.9	-30.7	79.4	73.2	6.24	12.722			
1,600.0	1,594.3	1,590.3	1,585.0	3.5	3.5	166.55	7.3	-46.3	108.5	101.8	6.70	16.203			
1,700.0	1,690.2	1,682.4	1,674.3	4.0	3.8	159.84	-7.9	-62.6	145.1	137.9	7.18	20.201			
1,800.0	1,784.4	1,772.8	1,762.0	4.5	4.2	156.19	-22.9	-78.6	187.1	179.4	7.70	24.289			
1,900.0	1,876.8	1,861.2	1,847.8	5.1	4.5	154.15	-37.6	-94.3	233.6	225.3	8.25	28.305			
2,000.0	1,967.1	1,947.4	1,931.4	5.8	4.9	152.99	-51.9	-109.6	284.2	275.4	8.85	32.126			
2,100.0	2,054.9	2,031.2	2,012.6	6.7	5.3	152.30	-65.7	-124.5	338.9	329.4	9.47	35.785			
2,200.0	2,140.2	2,112.2	2,091.3	7.7	5.7	151.86	-79.2	-138.8	397.3	387.2	10.13	39.232			
2,300.0	2,222.6	2,190.4	2,167.1	8.8	6.0	151.55	-92.1	-152.7	459.5	448.7	10.82	42.460			
2,400.0	2,301.9	2,265.4	2,239.9	10.1	6.4	151.25	-104.6	-166.0	525.3	513.7	11.56	45.459			
2,500.0	2,377.9	2,337.1	2,309.5	11.5	6.7	150.93	-116.5	-178.7	594.6	582.2	12.33	48.218			
2,519.1	2,392.1	2,350.4	2,322.3	11.7	6.8	150.86	-118.7	-181.1	608.1	595.7	12.48	48.715			
2,600.0	2,451.7	2,406.5	2,376.8	12.9	7.1	151.70	-128.0	-191.0	666.1	652.9	13.20	50.468			
2,700.0	2,525.3	2,475.8	2,444.0	14.4	7.4	152.55	-139.4	-203.3	737.8	723.7	14.09	52.347			
2,800.0	2,598.9	2,545.1	2,511.2	15.9	7.7	153.25	-150.9	-215.6	809.6	794.6	15.00	53.972			
2,900.0	2,672.6	2,614.4	2,578.5	17.4	8.1	153.84	-162.4	-227.9	881.4	865.5	15.91	55.388			
3,000.0	2,746.2	2,683.8	2,645.7	18.9	8.4	154.34	-173.9	-240.2	953.3	936.5	16.83	56.630			
3,100.0	2,819.9	2,753.1	2,712.9	20.5	8.8	154.77	-185.4	-252.5	1,025.2	1,007.4	17.76	57.728			
3,200.0	2,893.5	2,822.4	2,780.2	22.0	9.1	155.15	-196.9	-264.8	1,097.1	1,078.4	18.69	58.704			
3,300.0	2,967.2	2,891.7	2,847.4	23.5	9.5	155.47	-208.4	-277.1	1,169.1	1,149.4	19.62	59.577			
3,386.6	3,030.9	2,951.7	2,905.7	24.9	9.8	155.73	-218.3	-287.7	1,231.4	1,211.0	20.43	60.260			
3,400.0	3,040.8	2,961.0	2,914.7	25.1	9.8	155.93	-219.9	-289.4	1,241.0	1,220.4	20.56	60.361			
3,500.0	3,116.7	3,032.5	2,984.1	26.3	10.2	157.27	-231.7	-302.1	1,310.8	1,289.3	21.48	61.031			
3,600.0	3,195.8	3,107.4	3,056.7	27.5	10.5	158.32	-244.1	-315.3	1,377.1	1,354.7	22.43	61.409			
3,700.0	3,278.0	3,185.4	3,132.3	28.7	10.9	159.13	-257.1	-329.2	1,439.7	1,416.3	23.39	61.563			
3,800.0	3,363.1	3,266.3	3,210.8	29.7	11.3	159.75	-270.5	-343.5	1,498.3	1,474.0	24.34	61.548			
3,900.0	3,450.9	3,349.9	3,291.9	30.6	11.8	160.21	-284.3	-358.4	1,553.0	1,527.7	25.29	61.404			
4,000.0	3,541.0	3,435.9	3,375.4	31.4	12.2	160.52	-298.6	-373.6	1,603.5	1,577.3	26.22	61.162			
4,100.0	3,633.3	3,524.2	3,461.0	32.1	12.7	160.71	-313.2	-389.3	1,649.7	1,622.6	27.11	60.847			
4,200.0	3,727.4	3,614.5	3,548.6	32.8	13.1	160.79	-328.2	-405.3	1,691.5	1,663.5	27.97	60.474			
4,300.0	3,823.2	3,706.5	3,637.9	33.3	13.6	160.77	-343.4	-421.6	1,728.8	1,700.0	28.79	60.059			
4,400.0	3,920.3	3,800.0	3,728.6	33.7	14.1	160.66	-358.9	-438.2	1,761.6	1,732.1	29.55	59.611			
4,500.0	4,018.6	3,894.8	3,820.5	34.0	14.5	160.45	-374.6	-455.0	1,789.8	1,759.6	30.27	59.137			
4,600.0	4,117.7	3,990.5	3,913.3	34.3	15.0	160.16	-390.5	-472.0	1,813.4	1,782.5	30.92	58.640			

Company:	Ursa Operating Company, LLC	Local Co-ordinate Reference:	Well Valley Farms J15
Project:	Rockies Region	TVD Reference:	Valley Farms J15 @ 5552.4ft (Original Well Elev)
Reference Site:	Valley Farms J	MD Reference:	Valley Farms J15 @ 5552.4ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Valley Farms J15	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	EDM 2003.21 Single User Db
Reference Design:	Design #1	Offset TVD Reference:	Offset Datum

Offset Design												Valley Farms J - Valley Farms J7 - Wellbore #1 - Design #1		Offset Site Error:		0.0 ft	
Survey Program: 0-MWD														Offset Well Error:		0.0 ft	
Reference		Offset		Semi Major Axis			Distance							Warning			
Measured Depth	Vertical Depth	Measured Depth	Vertical Depth	Reference	Offset	Highside Toolface	Offset Wellbore Centre		Between Centres	Between Ellipses	Minimum Separation	Separation Factor					
Depth (ft)	Depth (ft)	Depth (ft)	Depth (ft)	(ft)	(ft)	(°)	+N/-S (ft)	+E/-W (ft)	(ft)	(ft)	(ft)						
4,700.0	4,217.4	4,116.5	4,035.8	34.5	15.6	159.62	-410.6	-493.5	1,832.1	1,800.4	31.64	57.899					
4,805.7	4,323.0	4,308.9	4,225.7	34.6	16.2	-71.57	-431.7	-516.0	1,842.9	1,810.6	32.31	57.046					
4,900.0	4,417.3	4,484.6	4,401.0	34.6	16.5	-71.88	-439.4	-524.3	1,845.8	1,813.0	32.79	56.287					
5,000.0	4,517.3	4,600.9	4,517.3	34.7	16.6	-71.88	-439.6	-524.5	1,845.9	1,812.8	33.05	55.855					
5,100.0	4,617.3	4,700.9	4,617.3	34.7	16.7	-71.88	-439.6	-524.5	1,845.9	1,812.6	33.28	55.473					
5,200.0	4,717.3	4,800.9	4,717.3	34.8	16.9	-71.88	-439.6	-524.5	1,845.9	1,812.4	33.51	55.089					
5,300.0	4,817.3	4,900.9	4,817.3	34.9	17.0	-71.88	-439.6	-524.5	1,845.9	1,812.1	33.74	54.703					
5,400.0	4,917.3	5,000.9	4,917.3	34.9	17.1	-71.88	-439.6	-524.5	1,845.9	1,811.9	33.98	54.316					
5,500.0	5,017.3	5,100.9	5,017.3	35.0	17.2	-71.88	-439.6	-524.5	1,845.9	1,811.7	34.23	53.928					
5,600.0	5,117.3	5,200.9	5,117.3	35.0	17.3	-71.88	-439.6	-524.5	1,845.9	1,811.4	34.48	53.538					
5,700.0	5,217.3	5,300.9	5,217.3	35.1	17.5	-71.88	-439.6	-524.5	1,845.9	1,811.1	34.73	53.148					
5,800.0	5,317.3	5,400.9	5,317.3	35.2	17.6	-71.88	-439.6	-524.5	1,845.9	1,810.9	34.99	52.758					
5,900.0	5,417.3	5,500.9	5,417.3	35.3	17.7	-71.88	-439.6	-524.5	1,845.9	1,810.6	35.25	52.368					
6,000.0	5,517.3	5,600.9	5,517.3	35.3	17.9	-71.88	-439.6	-524.5	1,845.9	1,810.4	35.51	51.978					
6,100.0	5,617.3	5,700.9	5,617.3	35.4	18.0	-71.88	-439.6	-524.5	1,845.9	1,810.1	35.78	51.588					
6,200.0	5,717.3	5,800.9	5,717.3	35.5	18.1	-71.88	-439.6	-524.5	1,845.9	1,809.8	36.05	51.199					
6,300.0	5,817.3	5,900.9	5,817.3	35.5	18.3	-71.88	-439.6	-524.5	1,845.9	1,809.6	36.33	50.811					
6,400.0	5,917.3	6,000.9	5,917.3	35.6	18.4	-71.88	-439.6	-524.5	1,845.9	1,809.3	36.61	50.424					
6,500.0	6,017.3	6,100.9	6,017.3	35.7	18.6	-71.88	-439.6	-524.5	1,845.9	1,809.0	36.89	50.038					
6,600.0	6,117.3	6,200.9	6,117.3	35.8	18.7	-71.88	-439.6	-524.5	1,845.9	1,808.7	37.17	49.654					
6,700.0	6,217.3	6,300.9	6,217.3	35.9	18.9	-71.88	-439.6	-524.5	1,845.9	1,808.4	37.46	49.272					
6,800.0	6,317.3	6,400.9	6,317.3	35.9	19.0	-71.88	-439.6	-524.5	1,845.9	1,808.1	37.76	48.891					
6,900.0	6,417.3	6,500.9	6,417.3	36.0	19.2	-71.88	-439.6	-524.5	1,845.9	1,807.8	38.05	48.512					
7,000.0	6,517.3	6,600.9	6,517.3	36.1	19.3	-71.88	-439.6	-524.5	1,845.9	1,807.5	38.35	48.135					
7,100.0	6,617.3	6,700.9	6,617.3	36.2	19.5	-71.88	-439.6	-524.5	1,845.9	1,807.2	38.65	47.761					
7,200.0	6,717.3	6,800.9	6,717.3	36.3	19.6	-71.88	-439.6	-524.5	1,845.9	1,806.9	38.95	47.388					
7,300.0	6,817.3	6,900.9	6,817.3	36.4	19.8	-71.88	-439.6	-524.5	1,845.9	1,806.6	39.26	47.019					
7,400.0	6,917.3	7,000.9	6,917.3	36.4	19.9	-71.88	-439.6	-524.5	1,845.9	1,806.3	39.57	46.651					
7,500.0	7,017.3	7,100.9	7,017.3	36.5	20.1	-71.88	-439.6	-524.5	1,845.9	1,806.0	39.88	46.286					
7,589.7	7,107.0	7,190.6	7,107.0	36.6	20.2	-71.88	-439.6	-524.5	1,845.9	1,805.7	40.16	45.962					

Company:	Ursa Operating Company, LLC	Local Co-ordinate Reference:	Well Valley Farms J15
Project:	Rockies Region	TVD Reference:	Valley Farms J15 @ 5552.4ft (Original Well Elev)
Reference Site:	Valley Farms J	MD Reference:	Valley Farms J15 @ 5552.4ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Valley Farms J15	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	EDM 2003.21 Single User Db
Reference Design:	Design #1	Offset TVD Reference:	Offset Datum

Offset Design													Offset Site Error:	0.0 ft
Valley Farms J - Valley Farms J8 - Wellbore #1 - Design #1													Offset Well Error:	0.0 ft
Survey Program: 0-MWD														
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
0.0	0.0	0.0	0.0	0.0	0.0	-0.69	37.5	-0.5	37.5					
100.0	100.0	100.0	100.0	0.1	0.1	-0.69	37.5	-0.5	37.5	37.3	0.19	197.123		
200.0	200.0	200.0	200.0	0.3	0.3	-0.69	37.5	-0.5	37.5	36.8	0.64	58.597		
300.0	300.0	300.0	300.0	0.5	0.5	-0.69	37.5	-0.5	37.5	36.4	1.09	34.413		
400.0	400.0	400.0	400.0	0.8	0.8	-0.69	37.5	-0.5	37.5	35.9	1.54	24.360		
500.0	500.0	500.0	500.0	1.0	1.0	-0.69	37.5	-0.5	37.5	35.5	1.99	18.852		
600.0	600.0	600.0	600.0	1.2	1.2	-0.69	37.5	-0.5	37.5	35.0	2.44	15.376		
700.0	700.0	700.0	700.0	1.4	1.4	-0.69	37.5	-0.5	37.5	34.6	2.89	12.982		
800.0	800.0	800.0	800.0	1.7	1.7	-0.69	37.5	-0.5	37.5	34.1	3.34	11.233		
900.0	900.0	900.0	900.0	1.9	1.9	-0.69	37.5	-0.5	37.5	33.7	3.79	9.899		
1,000.0	1,000.0	1,000.0	1,000.0	2.1	2.1	-0.69	37.5	-0.5	37.5	33.2	4.24	8.849		
1,100.0	1,100.0	1,100.0	1,100.0	2.3	2.3	-0.69	37.5	-0.5	37.5	32.8	4.69	8.000		
1,200.0	1,200.0	1,201.5	1,201.4	2.5	2.5	-135.77	35.3	-2.0	37.2	32.1	5.09	7.310		
1,214.3	1,214.2	1,216.0	1,215.9	2.6	2.6	-137.49	34.6	-2.5	37.2	32.0	5.14	7.232 CC, ES		
1,300.0	1,299.6	1,302.2	1,301.8	2.7	2.7	-152.10	28.8	-6.7	38.4	33.0	5.45	7.054 SF		
1,400.0	1,398.8	1,401.3	1,400.1	3.0	2.9	-173.78	18.2	-14.2	46.3	40.5	5.82	7.963		
1,500.0	1,497.1	1,498.2	1,495.3	3.2	3.2	168.36	3.8	-24.5	64.3	58.1	6.23	10.318		
1,600.0	1,594.3	1,592.3	1,586.8	3.5	3.5	156.80	-13.9	-37.1	91.8	85.1	6.72	13.674		
1,700.0	1,690.2	1,683.0	1,674.0	4.0	3.8	149.53	-34.4	-51.7	127.4	120.1	7.28	17.502		
1,800.0	1,784.4	1,772.6	1,759.2	4.5	4.2	144.98	-57.0	-67.8	169.3	161.4	7.92	21.386		
1,900.0	1,876.8	1,861.3	1,843.4	5.1	4.7	142.63	-79.5	-83.9	215.4	206.8	8.62	25.003		
2,000.0	1,967.1	1,948.0	1,925.8	5.8	5.1	141.44	-101.5	-99.5	265.2	255.8	9.38	28.265		
2,100.0	2,054.9	2,032.5	2,006.1	6.7	5.6	140.85	-122.9	-114.8	318.6	308.4	10.20	31.245		
2,200.0	2,140.2	2,114.6	2,084.2	7.7	6.0	140.57	-143.8	-129.7	375.3	364.3	11.07	33.915		
2,300.0	2,222.6	2,194.2	2,159.8	8.8	6.5	140.41	-163.9	-144.0	435.5	423.5	11.99	36.318		
2,400.0	2,301.9	2,270.9	2,232.7	10.1	6.9	140.29	-183.4	-157.9	499.0	486.0	12.97	38.474		
2,500.0	2,377.9	2,344.6	2,302.7	11.5	7.4	140.12	-202.0	-171.2	565.7	551.7	14.00	40.406		
2,519.1	2,392.1	2,358.2	2,315.7	11.7	7.5	140.07	-205.5	-173.7	578.8	564.6	14.20	40.749		
2,600.0	2,451.7	2,416.1	2,370.6	12.9	7.8	141.26	-220.2	-184.2	634.7	619.6	15.09	42.067		
2,700.0	2,525.3	2,487.5	2,438.5	14.4	8.2	142.47	-238.3	-197.1	703.9	687.7	16.19	43.477		
2,800.0	2,598.9	2,559.0	2,506.4	15.9	8.7	143.47	-256.4	-210.0	773.2	755.9	17.30	44.691		
2,900.0	2,672.6	2,630.4	2,574.3	17.4	9.1	144.30	-274.5	-222.9	842.6	824.2	18.42	45.748		
3,000.0	2,746.2	2,701.9	2,642.2	18.9	9.5	145.01	-292.6	-235.8	912.2	892.6	19.54	46.674		
3,100.0	2,819.9	2,773.3	2,710.1	20.5	10.0	145.62	-310.8	-248.7	981.7	961.1	20.67	47.490		
3,200.0	2,893.5	2,844.8	2,778.0	22.0	10.4	146.15	-328.9	-261.7	1,051.4	1,029.6	21.81	48.216		
3,300.0	2,967.2	2,916.2	2,845.9	23.5	10.8	146.61	-347.0	-274.6	1,121.1	1,098.1	22.94	48.864		
3,386.6	3,030.9	2,978.1	2,904.8	24.9	11.2	146.97	-362.7	-285.8	1,181.4	1,157.5	23.93	49.372		
3,400.0	3,040.8	2,987.7	2,913.9	25.1	11.3	147.23	-365.1	-287.5	1,190.7	1,166.7	24.07	49.472		
3,500.0	3,116.7	3,061.2	2,983.7	26.3	11.7	148.95	-383.8	-300.8	1,258.4	1,233.3	25.09	50.162		
3,600.0	3,195.8	3,137.7	3,056.4	27.5	12.2	150.30	-403.2	-314.6	1,322.7	1,296.6	26.15	50.591		
3,700.0	3,278.0	3,217.1	3,131.9	28.7	12.7	151.35	-423.3	-329.0	1,383.5	1,356.3	27.23	50.811		
3,800.0	3,363.1	3,299.1	3,209.8	29.7	13.2	152.15	-444.1	-343.8	1,440.6	1,412.3	28.32	50.862		
3,900.0	3,450.9	3,383.5	3,290.0	30.6	13.7	152.73	-465.5	-359.1	1,493.8	1,464.4	29.42	50.781		
4,000.0	3,541.0	3,470.1	3,372.3	31.4	14.3	153.14	-487.4	-374.7	1,543.1	1,512.6	30.50	50.595		
4,100.0	3,633.3	3,558.6	3,456.4	32.1	14.8	153.38	-509.9	-390.7	1,588.3	1,556.8	31.56	50.328		
4,200.0	3,727.4	3,648.8	3,542.1	32.8	15.4	153.48	-532.7	-407.0	1,629.4	1,596.8	32.59	49.996		
4,300.0	3,823.2	3,740.5	3,629.2	33.3	16.0	153.44	-556.0	-423.6	1,666.3	1,632.8	33.59	49.614		
4,400.0	3,920.3	3,833.3	3,717.4	33.7	16.6	153.28	-579.5	-440.4	1,699.0	1,664.5	34.54	49.193		
4,500.0	4,018.6	3,927.1	3,806.6	34.0	17.2	153.01	-603.3	-457.3	1,727.5	1,692.0	35.44	48.742		
4,600.0	4,117.7	4,050.9	3,924.6	34.3	17.8	152.43	-633.4	-478.8	1,751.2	1,714.9	36.40	48.118		

Company:	Ursa Operating Company, LLC	Local Co-ordinate Reference:	Well Valley Farms J15
Project:	Rockies Region	TVD Reference:	Valley Farms J15 @ 5552.4ft (Original Well Elev)
Reference Site:	Valley Farms J	MD Reference:	Valley Farms J15 @ 5552.4ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Valley Farms J15	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	EDM 2003.21 Single User Db
Reference Design:	Design #1	Offset TVD Reference:	Offset Datum

Offset Design		Valley Farms J - Valley Farms J8 - Wellbore #1 - Design #1											Offset Site Error:		0.0 ft
Survey Program:		0-MWD											Offset Well Error:		0.0 ft
Reference		Offset		Semi Major Axis			Distance							Warning	
Measured Depth	Vertical Depth	Measured Depth	Vertical Depth	Reference	Offset	Highside Toolface	Offset Wellbore Centre		Between Centres	Between Ellipses	Minimum Separation	Separation Factor			
(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(°)	+N/-S (ft)	+E/-W (ft)	(ft)	(ft)	(ft)				
4,700.0	4,217.4	4,206.9	4,076.3	34.5	18.4	151.77	-662.9	-499.8	1,767.9	1,730.7	37.24	47.477			
4,805.7	4,323.0	4,377.6	4,245.1	34.6	18.9	-79.29	-683.6	-514.5	1,777.1	1,739.2	37.84	46.963			
4,900.0	4,417.3	4,532.7	4,399.9	34.6	19.1	-79.58	-691.6	-520.3	1,779.6	1,741.3	38.27	46.502			
5,000.0	4,517.3	4,650.1	4,517.3	34.7	19.3	-79.59	-692.0	-520.6	1,779.7	1,741.2	38.49	46.233			
5,100.0	4,617.3	4,750.1	4,617.3	34.7	19.4	-79.59	-692.0	-520.6	1,779.7	1,741.0	38.69	46.002			
5,200.0	4,717.3	4,850.1	4,717.3	34.8	19.5	-79.59	-692.0	-520.6	1,779.7	1,740.8	38.89	45.767			
5,300.0	4,817.3	4,950.1	4,817.3	34.9	19.6	-79.59	-692.0	-520.6	1,779.7	1,740.6	39.09	45.531			
5,400.0	4,917.3	5,050.1	4,917.3	34.9	19.7	-79.59	-692.0	-520.6	1,779.7	1,740.4	39.29	45.292			
5,500.0	5,017.3	5,150.1	5,017.3	35.0	19.8	-79.59	-692.0	-520.6	1,779.7	1,740.2	39.50	45.051			
5,600.0	5,117.3	5,250.1	5,117.3	35.0	19.9	-79.59	-692.0	-520.6	1,779.7	1,740.0	39.72	44.808			
5,700.0	5,217.3	5,350.1	5,217.3	35.1	20.0	-79.59	-692.0	-520.6	1,779.7	1,739.8	39.94	44.563			
5,800.0	5,317.3	5,450.1	5,317.3	35.2	20.1	-79.59	-692.0	-520.6	1,779.7	1,739.6	40.16	44.316			
5,900.0	5,417.3	5,550.1	5,417.3	35.3	20.2	-79.59	-692.0	-520.6	1,779.7	1,739.3	40.39	44.069			
6,000.0	5,517.3	5,650.1	5,517.3	35.3	20.3	-79.59	-692.0	-520.6	1,779.7	1,739.1	40.61	43.820			
6,100.0	5,617.3	5,750.1	5,617.3	35.4	20.4	-79.59	-692.0	-520.6	1,779.7	1,738.9	40.85	43.569			
6,200.0	5,717.3	5,850.1	5,717.3	35.5	20.6	-79.59	-692.0	-520.6	1,779.7	1,738.6	41.08	43.318			
6,300.0	5,817.3	5,950.1	5,817.3	35.5	20.7	-79.59	-692.0	-520.6	1,779.7	1,738.4	41.33	43.066			
6,400.0	5,917.3	6,050.1	5,917.3	35.6	20.8	-79.59	-692.0	-520.6	1,779.7	1,738.2	41.57	42.814			
6,500.0	6,017.3	6,150.1	6,017.3	35.7	20.9	-79.59	-692.0	-520.6	1,779.7	1,737.9	41.82	42.561			
6,600.0	6,117.3	6,250.1	6,117.3	35.8	21.1	-79.59	-692.0	-520.6	1,779.7	1,737.7	42.07	42.307			
6,700.0	6,217.3	6,350.1	6,217.3	35.9	21.2	-79.59	-692.0	-520.6	1,779.7	1,737.4	42.32	42.053			
6,800.0	6,317.3	6,450.1	6,317.3	35.9	21.3	-79.59	-692.0	-520.6	1,779.7	1,737.1	42.58	41.800			
6,900.0	6,417.3	6,550.1	6,417.3	36.0	21.4	-79.59	-692.0	-520.6	1,779.7	1,736.9	42.84	41.546			
7,000.0	6,517.3	6,650.1	6,517.3	36.1	21.6	-79.59	-692.0	-520.6	1,779.7	1,736.6	43.10	41.292			
7,100.0	6,617.3	6,750.1	6,617.3	36.2	21.7	-79.59	-692.0	-520.6	1,779.7	1,736.4	43.37	41.038			
7,200.0	6,717.3	6,850.1	6,717.3	36.3	21.8	-79.59	-692.0	-520.6	1,779.7	1,736.1	43.64	40.785			
7,300.0	6,817.3	6,950.1	6,817.3	36.4	22.0	-79.59	-692.0	-520.6	1,779.7	1,735.8	43.91	40.532			
7,400.0	6,917.3	7,050.1	6,917.3	36.4	22.1	-79.59	-692.0	-520.6	1,779.7	1,735.5	44.18	40.279			
7,500.0	7,017.3	7,150.1	7,017.3	36.5	22.3	-79.59	-692.0	-520.6	1,779.7	1,735.3	44.46	40.027			
7,589.7	7,107.0	7,239.8	7,107.0	36.6	22.4	-79.59	-692.0	-520.6	1,779.7	1,735.0	44.71	39.802			

Company:	Ursa Operating Company, LLC	Local Co-ordinate Reference:	Well Valley Farms J15
Project:	Rockies Region	TVD Reference:	Valley Farms J15 @ 5552.4ft (Original Well Elev)
Reference Site:	Valley Farms J	MD Reference:	Valley Farms J15 @ 5552.4ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Valley Farms J15	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	EDM 2003.21 Single User Db
Reference Design:	Design #1	Offset TVD Reference:	Offset Datum

Offset Design													Offset Site Error:	0.0 ft
Valley Farms J - Valley Farms J9 - Wellbore #1 - Design #1													Offset Well Error:	0.0 ft
Survey Program: 0-MWD														
Reference		Offset		Semi Major Axis			Distance							
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning	
0.0	0.0	0.0	0.0	0.0	0.0	-0.71	25.0	-0.3	25.0					
100.0	100.0	100.0	100.0	0.1	0.1	-0.71	25.0	-0.3	25.0	24.8	0.19	131.416		
200.0	200.0	200.0	200.0	0.3	0.3	-0.71	25.0	-0.3	25.0	24.3	0.64	39.065		
300.0	300.0	300.0	300.0	0.5	0.5	-0.71	25.0	-0.3	25.0	23.9	1.09	22.942		
400.0	400.0	400.0	400.0	0.8	0.8	-0.71	25.0	-0.3	25.0	23.5	1.54	16.240		
500.0	500.0	500.0	500.0	1.0	1.0	-0.71	25.0	-0.3	25.0	23.0	1.99	12.568		
600.0	600.0	600.0	600.0	1.2	1.2	-0.71	25.0	-0.3	25.0	22.6	2.44	10.251		
700.0	700.0	700.0	700.0	1.4	1.4	-0.71	25.0	-0.3	25.0	22.1	2.89	8.655		
800.0	800.0	800.0	800.0	1.7	1.7	-0.71	25.0	-0.3	25.0	21.7	3.34	7.489		
900.0	900.0	900.0	900.0	1.9	1.9	-0.71	25.0	-0.3	25.0	21.2	3.79	6.600		
1,000.0	1,000.0	1,000.0	1,000.0	2.1	2.1	-0.71	25.0	-0.3	25.0	20.8	4.24	5.899		
1,100.0	1,100.0	1,100.0	1,100.0	2.3	2.3	-0.71	25.0	-0.3	25.0	20.3	4.69	5.333		
1,200.0	1,200.0	1,201.0	1,201.0	2.5	2.5	-137.93	22.6	-1.6	24.6	19.5	5.09	4.832		
1,219.1	1,219.0	1,220.3	1,220.2	2.6	2.6	-141.19	21.6	-2.1	24.5	19.4	5.16	4.758	CC, ES, SF	
1,300.0	1,299.6	1,301.4	1,301.1	2.7	2.7	-160.46	15.6	-5.3	26.0	20.6	5.44	4.780		
1,400.0	1,398.8	1,400.5	1,399.3	3.0	2.9	173.36	4.1	-11.4	35.1	29.3	5.81	6.050		
1,500.0	1,497.1	1,497.6	1,494.8	3.2	3.2	156.06	-11.5	-19.6	54.0	47.8	6.24	8.657		
1,600.0	1,594.3	1,592.3	1,586.9	3.5	3.5	146.39	-30.8	-29.9	81.1	74.4	6.75	12.014		
1,700.0	1,690.2	1,684.1	1,675.0	4.0	3.8	140.67	-53.3	-41.8	115.1	107.8	7.35	15.659		
1,800.0	1,784.4	1,772.6	1,758.8	4.5	4.2	136.91	-78.6	-55.2	155.2	147.2	8.05	19.287		
1,900.0	1,876.8	1,857.5	1,837.8	5.1	4.7	134.17	-106.0	-69.7	201.0	192.1	8.85	22.715		
2,000.0	1,967.1	1,943.1	1,916.5	5.8	5.2	132.23	-135.7	-85.5	251.3	241.5	9.77	25.729		
2,100.0	2,054.9	2,027.7	1,994.3	6.7	5.8	131.22	-165.1	-101.0	304.6	293.8	10.76	28.303		
2,200.0	2,140.2	2,110.2	2,070.2	7.7	6.3	130.70	-193.7	-116.2	360.9	349.0	11.83	30.501		
2,300.0	2,222.6	2,190.4	2,143.9	8.8	6.9	130.43	-221.6	-131.0	420.0	407.1	12.98	32.372		
2,400.0	2,301.9	2,268.2	2,215.4	10.1	7.4	130.25	-248.6	-145.3	482.1	467.9	14.19	33.978		
2,500.0	2,377.9	2,343.2	2,284.4	11.5	8.0	130.07	-274.6	-159.1	547.0	531.6	15.47	35.367		
2,519.1	2,392.1	2,357.2	2,297.3	11.7	8.1	130.03	-279.5	-161.7	559.7	544.0	15.72	35.610		
2,600.0	2,451.7	2,416.3	2,351.6	12.9	8.5	131.41	-300.0	-172.6	614.0	597.2	16.79	36.569		
2,700.0	2,525.3	2,489.3	2,418.8	14.4	9.0	132.81	-325.4	-186.0	681.3	663.1	18.13	37.585		
2,800.0	2,598.9	2,562.4	2,486.0	15.9	9.6	133.96	-350.7	-199.5	748.7	729.2	19.47	38.450		
2,900.0	2,672.6	2,635.4	2,553.1	17.4	10.1	134.92	-376.1	-212.9	816.3	795.5	20.82	39.198		
3,000.0	2,746.2	2,708.5	2,620.3	18.9	10.7	135.75	-401.5	-226.4	884.0	861.8	22.18	39.849		
3,100.0	2,819.9	2,781.5	2,687.5	20.5	11.2	136.45	-426.8	-239.8	951.8	928.2	23.55	40.419		
3,200.0	2,893.5	2,854.6	2,754.7	22.0	11.8	137.06	-452.2	-253.2	1,019.6	994.7	24.92	40.923		
3,300.0	2,967.2	2,927.6	2,821.8	23.5	12.3	137.60	-477.6	-266.7	1,087.5	1,061.2	26.29	41.371		
3,386.6	3,030.9	2,990.9	2,880.0	24.9	12.8	138.01	-499.6	-278.3	1,146.4	1,118.9	27.48	41.721		
3,400.0	3,040.8	3,000.7	2,889.0	25.1	12.9	138.32	-503.0	-280.1	1,155.4	1,127.8	27.64	41.801		
3,500.0	3,116.7	3,075.6	2,957.9	26.3	13.5	140.33	-529.0	-293.9	1,221.6	1,192.7	28.83	42.371		
3,600.0	3,195.8	3,153.2	3,029.2	27.5	14.0	141.92	-555.9	-308.2	1,284.6	1,254.6	30.06	42.740		
3,700.0	3,278.0	3,233.3	3,102.9	28.7	14.7	143.16	-583.7	-323.0	1,344.4	1,313.1	31.31	42.942		
3,800.0	3,363.1	3,315.6	3,178.6	29.7	15.3	144.11	-612.3	-338.1	1,400.8	1,368.3	32.57	43.006		
3,900.0	3,450.9	3,400.1	3,256.3	30.6	15.9	144.81	-641.6	-353.7	1,453.7	1,419.9	33.84	42.960		
4,000.0	3,541.0	3,486.4	3,335.6	31.4	16.6	145.29	-671.6	-369.5	1,503.0	1,467.9	35.10	42.825		
4,100.0	3,633.3	3,574.3	3,416.4	32.1	17.3	145.58	-702.1	-385.7	1,548.6	1,512.3	36.33	42.621		
4,200.0	3,727.4	3,663.5	3,498.5	32.8	18.0	145.70	-733.1	-402.1	1,590.5	1,553.0	37.54	42.364		
4,300.0	3,823.2	3,753.8	3,581.5	33.3	18.7	145.66	-764.5	-418.8	1,628.6	1,589.9	38.71	42.067		
4,400.0	3,920.3	3,845.0	3,665.4	33.7	19.4	145.48	-796.1	-435.6	1,663.0	1,623.1	39.84	41.741		
4,500.0	4,018.6	3,966.2	3,777.5	34.0	20.1	144.92	-836.8	-457.1	1,693.2	1,652.1	41.02	41.272		
4,600.0	4,117.7	4,115.6	3,919.2	34.3	20.9	144.23	-878.5	-479.2	1,716.9	1,674.8	42.12	40.762		

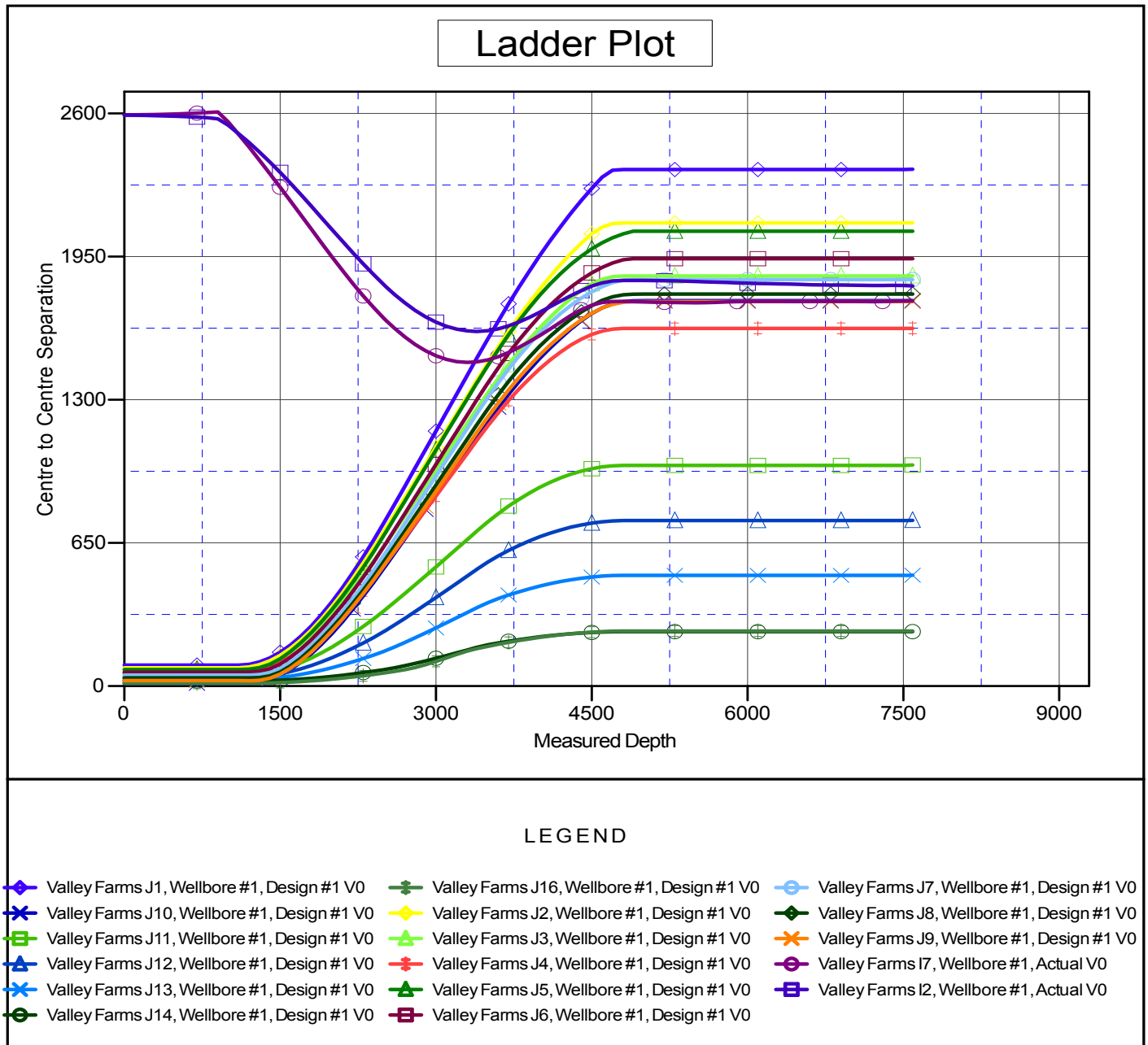
Company:	Ursa Operating Company, LLC	Local Co-ordinate Reference:	Well Valley Farms J15
Project:	Rockies Region	TVD Reference:	Valley Farms J15 @ 5552.4ft (Original Well Elev)
Reference Site:	Valley Farms J	MD Reference:	Valley Farms J15 @ 5552.4ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Valley Farms J15	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	EDM 2003.21 Single User Db
Reference Design:	Design #1	Offset TVD Reference:	Offset Datum

Offset Design												Valley Farms J - Valley Farms J9 - Wellbore #1 - Design #1		Offset Site Error:		0.0 ft
Survey Program: 0-MWD														Offset Well Error:		0.0 ft
Reference		Offset		Semi Major Axis			Distance							Warning		
Measured Depth	Vertical Depth	Measured Depth	Vertical Depth	Reference	Offset	Highside Toolface	Offset Wellbore Centre		Between Centres	Between Ellipses	Minimum Separation	Separation Factor				
(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(°)	+N/-S (ft)	+E/-W (ft)	(ft)	(ft)	(ft)					
4,700.0	4,217.4	4,271.9	4,070.9	34.5	21.5	143.63	-911.6	-496.7	1,733.5	1,690.5	42.99	40.322				
4,805.7	4,323.0	4,442.8	4,239.6	34.6	21.9	-87.42	-935.1	-509.2	1,742.8	1,699.2	43.63	39.944				
4,900.0	4,417.3	4,598.1	4,394.5	34.6	22.2	-87.74	-944.8	-514.3	1,745.7	1,701.6	44.06	39.624				
5,000.0	4,517.3	4,720.9	4,517.3	34.7	22.3	-87.77	-945.5	-514.7	1,745.9	1,701.7	44.26	39.443				
5,100.0	4,617.3	4,820.9	4,617.3	34.7	22.4	-87.77	-945.5	-514.7	1,745.9	1,701.5	44.43	39.293				
5,200.0	4,717.3	4,920.9	4,717.3	34.8	22.5	-87.77	-945.5	-514.7	1,745.9	1,701.3	44.61	39.141				
5,300.0	4,817.3	5,020.9	4,817.3	34.9	22.6	-87.77	-945.5	-514.7	1,745.9	1,701.1	44.78	38.987				
5,400.0	4,917.3	5,120.9	4,917.3	34.9	22.7	-87.77	-945.5	-514.7	1,745.9	1,701.0	44.96	38.831				
5,500.0	5,017.3	5,220.9	5,017.3	35.0	22.8	-87.77	-945.5	-514.7	1,745.9	1,700.8	45.15	38.673				
5,600.0	5,117.3	5,320.9	5,117.3	35.0	22.9	-87.77	-945.5	-514.7	1,745.9	1,700.6	45.33	38.513				
5,700.0	5,217.3	5,420.9	5,217.3	35.1	23.0	-87.77	-945.5	-514.7	1,745.9	1,700.4	45.52	38.351				
5,800.0	5,317.3	5,520.9	5,317.3	35.2	23.1	-87.77	-945.5	-514.7	1,745.9	1,700.2	45.72	38.188				
5,900.0	5,417.3	5,620.9	5,417.3	35.3	23.2	-87.77	-945.5	-514.7	1,745.9	1,700.0	45.92	38.023				
6,000.0	5,517.3	5,720.9	5,517.3	35.3	23.3	-87.77	-945.5	-514.7	1,745.9	1,699.8	46.12	37.857				
6,100.0	5,617.3	5,820.9	5,617.3	35.4	23.4	-87.77	-945.5	-514.7	1,745.9	1,699.6	46.33	37.689				
6,200.0	5,717.3	5,920.9	5,717.3	35.5	23.5	-87.77	-945.5	-514.7	1,745.9	1,699.4	46.53	37.519				
6,300.0	5,817.3	6,020.9	5,817.3	35.5	23.6	-87.77	-945.5	-514.7	1,745.9	1,699.2	46.75	37.349				
6,400.0	5,917.3	6,120.9	5,917.3	35.6	23.7	-87.77	-945.5	-514.7	1,745.9	1,699.0	46.96	37.178				
6,500.0	6,017.3	6,220.9	6,017.3	35.7	23.8	-87.77	-945.5	-514.7	1,745.9	1,698.7	47.18	37.005				
6,600.0	6,117.3	6,320.9	6,117.3	35.8	23.9	-87.77	-945.5	-514.7	1,745.9	1,698.5	47.40	36.832				
6,700.0	6,217.3	6,420.9	6,217.3	35.9	24.0	-87.77	-945.5	-514.7	1,745.9	1,698.3	47.63	36.657				
6,800.0	6,317.3	6,520.9	6,317.3	35.9	24.1	-87.77	-945.5	-514.7	1,745.9	1,698.1	47.86	36.482				
6,900.0	6,417.3	6,620.9	6,417.3	36.0	24.2	-87.77	-945.5	-514.7	1,745.9	1,697.8	48.09	36.307				
7,000.0	6,517.3	6,720.9	6,517.3	36.1	24.3	-87.77	-945.5	-514.7	1,745.9	1,697.6	48.32	36.130				
7,100.0	6,617.3	6,820.9	6,617.3	36.2	24.5	-87.77	-945.5	-514.7	1,745.9	1,697.4	48.56	35.953				
7,200.0	6,717.3	6,920.9	6,717.3	36.3	24.6	-87.77	-945.5	-514.7	1,745.9	1,697.1	48.80	35.776				
7,300.0	6,817.3	7,020.9	6,817.3	36.4	24.7	-87.77	-945.5	-514.7	1,745.9	1,696.9	49.05	35.598				
7,400.0	6,917.3	7,120.9	6,917.3	36.4	24.8	-87.77	-945.5	-514.7	1,745.9	1,696.6	49.29	35.420				
7,500.0	7,017.3	7,220.9	7,017.3	36.5	24.9	-87.77	-945.5	-514.7	1,745.9	1,696.4	49.54	35.242				
7,589.7	7,107.0	7,310.6	7,107.0	36.6	25.1	-87.77	-945.5	-514.7	1,745.9	1,696.2	49.77	35.082				

Company:	Ursa Operating Company, LLC	Local Co-ordinate Reference:	Well Valley Farms J15
Project:	Rockies Region	TVD Reference:	Valley Farms J15 @ 5552.4ft (Original Well Elev)
Reference Site:	Valley Farms J	MD Reference:	Valley Farms J15 @ 5552.4ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Valley Farms J15	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	EDM 2003.21 Single User Db
Reference Design:	Design #1	Offset TVD Reference:	Offset Datum

Reference Depths are relative to Valley Farms J15 @ 5552.4ft (Original W
Offset Depths are relative to Offset Datum
Central Meridian is 105° 30' 0.000 W °

Coordinates are relative to: Valley Farms J15
Coordinate System is US State Plane 1983, Colorado Central Zone
Grid Convergence at Surface is: -1.34°

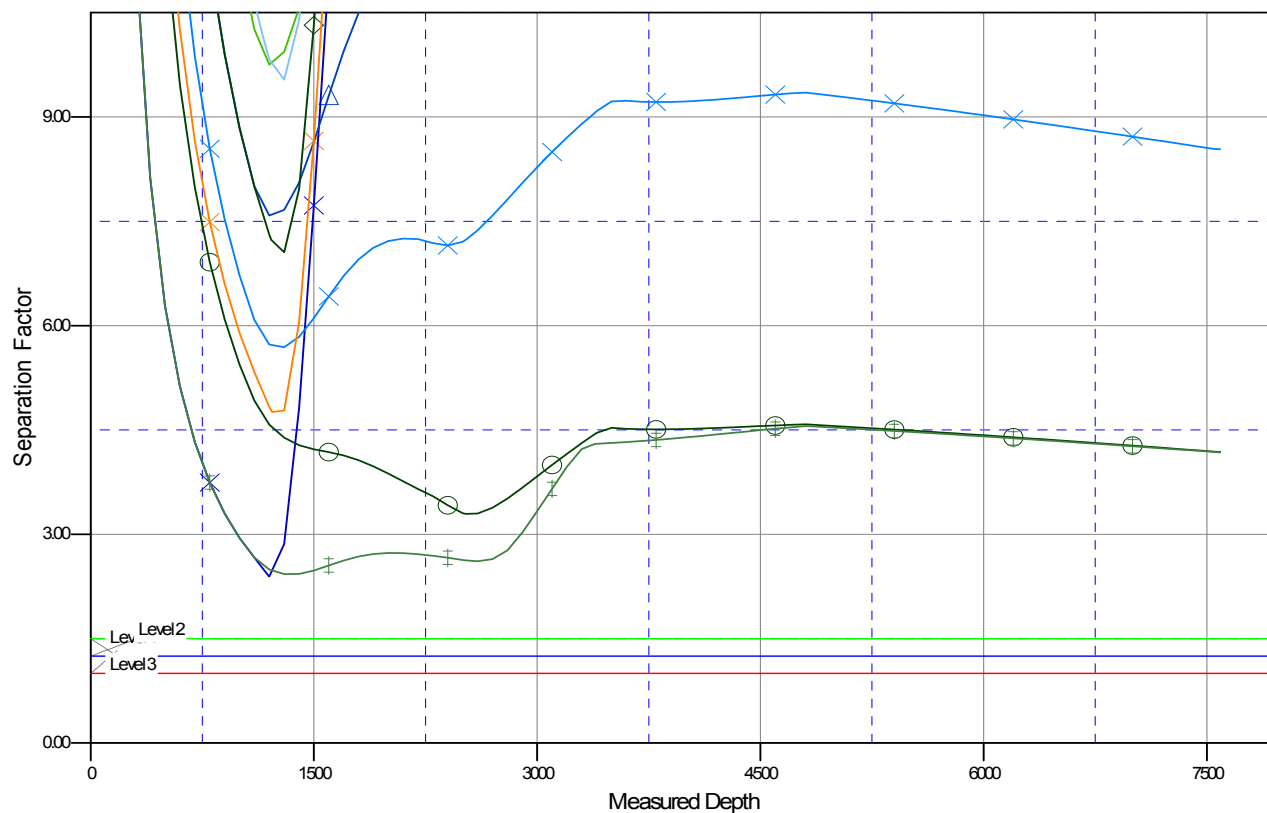


Company:	Ursa Operating Company, LLC	Local Co-ordinate Reference:	Well Valley Farms J15
Project:	Rockies Region	TVD Reference:	Valley Farms J15 @ 5552.4ft (Original Well Elev)
Reference Site:	Valley Farms J	MD Reference:	Valley Farms J15 @ 5552.4ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Valley Farms J15	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	EDM 2003.21 Single User Db
Reference Design:	Design #1	Offset TVD Reference:	Offset Datum

Reference Depths are relative to Valley Farms J15 @ 5552.4ft (Original W
Offset Depths are relative to Offset Datum
Central Meridian is 105° 30' 0.000 W °

Coordinates are relative to: Valley Farms J15
Coordinate System is US State Plane 1983, Colorado Central Zone
Grid Convergence at Surface is: -1.34°

Separation Factor Plot



LEGEND

Valley Farms J1, Wellbore #1, Design #1 V0	Valley Farms J16, Wellbore #1, Design #1 V0	Valley Farms J7, Wellbore #1, Design #1 V0
Valley Farms J10, Wellbore #1, Design #1 V0	Valley Farms J2, Wellbore #1, Design #1 V0	Valley Farms J8, Wellbore #1, Design #1 V0
Valley Farms J11, Wellbore #1, Design #1 V0	Valley Farms J3, Wellbore #1, Design #1 V0	Valley Farms J9, Wellbore #1, Design #1 V0
Valley Farms J12, Wellbore #1, Design #1 V0	Valley Farms J4, Wellbore #1, Design #1 V0	Valley Farms I7, Wellbore #1, Actual V0
Valley Farms J13, Wellbore #1, Design #1 V0	Valley Farms J5, Wellbore #1, Design #1 V0	Valley Farms I2, Wellbore #1, Actual V0
Valley Farms J14, Wellbore #1, Design #1 V0	Valley Farms J6, Wellbore #1, Design #1 V0	