



# **Ursa Operating Company, LLC**

**Rockies Region  
Valley Farms L  
33A-11-6-92**

**Wellbore #1**

**Plan: Design #1**

## **Standard Planning Report**

**16 April, 2014**



<b>Database:</b>	MasterDB	<b>Local Co-ordinate Reference:</b>	Well 33A-11-6-92
<b>Company:</b>	Ursa Operating Company, LLC	<b>TVD Reference:</b>	33A-11-6-92 @ 5564.4usft (EST Pad KB)
<b>Project:</b>	Rockies Region	<b>MD Reference:</b>	33A-11-6-92 @ 5564.4usft (EST Pad KB)
<b>Site:</b>	Valley Farms L	<b>North Reference:</b>	True
<b>Well:</b>	33A-11-6-92	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	Design #1		

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

Site		Valley Farms L			
Site Position:		Northing:	1,627,813.25 usft	Latitude:	39° 32' 16.142 N
From:	Lat/Long	Easting:	2,399,633.87 usft	Longitude:	107° 37' 44.058 W
Position Uncertainty:	0.0 usft	Slot Radius:	13-3/16 "	Grid Convergence:	-1.34 °

Well	33A-11-6-92, SHL LAT: 39.537686568 LONG: -107.629369318					
Well Position	+N/-S	-47.6 usft	Northing:	1,627,768.76 usft	Latitude:	39° 32' 15.672 N
	+E/-W	-130.9 usft	Easting:	2,399,501.87 usft	Longitude:	107° 37' 45.730 W
Position Uncertainty		0.0 usft	Wellhead Elevation:	5,564.4 usft	Ground Level:	5,549.0 usft

<b>Wellbore</b>	Wellbore #1				
<b>Magnetics</b>	<b>Model Name</b>	<b>Sample Date</b>	<b>Declination (°)</b>	<b>Dip Angle (°)</b>	<b>Field Strength (nT)</b>
	IGRF2010	4/7/2014	9.83	65.76	52,039

<b>Design</b>	Design #1			
<b>Audit Notes:</b>				
<b>Version:</b>	<b>Phase:</b>	PROTOTYPE	<b>Tie On Depth:</b>	0.0
<b>Vertical Section:</b>	<b>Depth From (TVD) (usft)</b>	<b>+N/-S (usft)</b>	<b>+E/-W (usft)</b>	<b>Direction (°)</b>
	0.0	0.0	0.0	328.25

<b>Plan Sections</b>										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	TFO (°)	Target
0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.00	0.00	
900.0	0.00	0.00	900.0	0.0	0.0	0.00	0.00	0.00	0.00	
1,967.8	32.03	328.25	1,913.0	247.3	-153.0	3.00	3.00	0.00	328.25	
3,809.1	32.03	328.25	3,474.0	1,077.8	-667.0	0.00	0.00	0.00	0.00	
4,876.9	0.00	0.00	4,487.0	1,325.1	-820.0	3.00	-3.00	0.00	180.00	33A-11-6-92 TGT
7,660.9	0.00	0.00	7,271.0	1,325.1	-820.0	0.00	0.00	0.00	0.00	

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<b>Site:</b>	Valley Farms L	<b>North Reference:</b>	True
<b>Well:</b>	33A-11-6-92	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	Design #1		

Planned Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
0.0	0.00	0.00	0.0	0.0	0.0	0.0	0.00	0.00	0.00
100.0	0.00	0.00	100.0	0.0	0.0	0.0	0.00	0.00	0.00
200.0	0.00	0.00	200.0	0.0	0.0	0.0	0.00	0.00	0.00
300.0	0.00	0.00	300.0	0.0	0.0	0.0	0.00	0.00	0.00
400.0	0.00	0.00	400.0	0.0	0.0	0.0	0.00	0.00	0.00
500.0	0.00	0.00	500.0	0.0	0.0	0.0	0.00	0.00	0.00
600.0	0.00	0.00	600.0	0.0	0.0	0.0	0.00	0.00	0.00
700.0	0.00	0.00	700.0	0.0	0.0	0.0	0.00	0.00	0.00
800.0	0.00	0.00	800.0	0.0	0.0	0.0	0.00	0.00	0.00
900.0	0.00	0.00	900.0	0.0	0.0	0.0	0.00	0.00	0.00
Start Build 3.00									
1,000.0	3.00	328.25	1,000.0	2.2	-1.4	2.6	3.00	3.00	0.00
1,100.0	6.00	328.25	1,099.6	8.9	-5.5	10.5	3.00	3.00	0.00
1,200.0	9.00	328.25	1,198.8	20.0	-12.4	23.5	3.00	3.00	0.00
1,300.0	12.00	328.25	1,297.1	35.5	-22.0	41.7	3.00	3.00	0.00
1,400.0	15.00	328.25	1,394.3	55.3	-34.2	65.1	3.00	3.00	0.00
1,500.0	18.00	328.25	1,490.2	79.5	-49.2	93.5	3.00	3.00	0.00
1,600.0	21.00	328.25	1,584.4	107.9	-66.8	126.9	3.00	3.00	0.00
1,700.0	24.00	328.25	1,676.8	140.4	-86.9	165.1	3.00	3.00	0.00
1,800.0	27.00	328.25	1,767.1	177.0	-109.5	208.2	3.00	3.00	0.00
1,900.0	30.00	328.25	1,854.9	217.6	-134.6	255.9	3.00	3.00	0.00
1,967.8	32.03	328.25	1,913.0	247.3	-153.0	290.8	3.00	3.00	0.00
Start 1841.3 hold at 1967.8 MD									
2,000.0	32.03	328.25	1,940.3	261.8	-162.0	307.9	0.00	0.00	0.00
2,100.0	32.03	328.25	2,025.1	306.9	-189.9	360.9	0.00	0.00	0.00
2,200.0	32.03	328.25	2,109.9	352.0	-217.8	414.0	0.00	0.00	0.00
2,300.0	32.03	328.25	2,194.6	397.1	-245.8	467.0	0.00	0.00	0.00
2,400.0	32.03	328.25	2,279.4	442.2	-273.7	520.1	0.00	0.00	0.00
2,500.0	32.03	328.25	2,364.2	487.3	-301.6	573.1	0.00	0.00	0.00
2,600.0	32.03	328.25	2,449.0	532.4	-329.5	626.1	0.00	0.00	0.00
2,700.0	32.03	328.25	2,533.7	577.5	-357.4	679.2	0.00	0.00	0.00
2,800.0	32.03	328.25	2,618.5	622.6	-385.3	732.2	0.00	0.00	0.00
2,900.0	32.03	328.25	2,703.3	667.7	-413.2	785.3	0.00	0.00	0.00
3,000.0	32.03	328.25	2,788.1	712.8	-441.1	838.3	0.00	0.00	0.00
3,100.0	32.03	328.25	2,872.8	757.9	-469.1	891.3	0.00	0.00	0.00
3,200.0	32.03	328.25	2,957.6	803.1	-497.0	944.4	0.00	0.00	0.00
3,300.0	32.03	328.25	3,042.4	848.2	-524.9	997.4	0.00	0.00	0.00
3,400.0	32.03	328.25	3,127.2	893.3	-552.8	1,050.5	0.00	0.00	0.00
3,500.0	32.03	328.25	3,211.9	938.4	-580.7	1,103.5	0.00	0.00	0.00
3,600.0	32.03	328.25	3,296.7	983.5	-608.6	1,156.6	0.00	0.00	0.00
3,670.4	32.03	328.25	3,356.4	1,015.2	-628.3	1,193.9	0.00	0.00	0.00
Williams Fork									
3,700.0	32.03	328.25	3,381.5	1,028.6	-636.5	1,209.6	0.00	0.00	0.00
3,809.1	32.03	328.25	3,474.0	1,077.8	-667.0	1,267.5	0.00	0.00	0.00
Start Drop -3.00									
3,900.0	29.31	328.25	3,552.1	1,117.2	-691.4	1,313.8	3.00	-3.00	0.00
4,000.0	26.31	328.25	3,640.6	1,156.9	-715.9	1,360.5	3.00	-3.00	0.00
4,100.0	23.31	328.25	3,731.3	1,192.5	-738.0	1,402.4	3.00	-3.00	0.00
4,200.0	20.31	328.25	3,824.2	1,224.1	-757.6	1,439.6	3.00	-3.00	0.00
4,300.0	17.31	328.25	3,918.8	1,251.5	-774.5	1,471.8	3.00	-3.00	0.00
4,400.0	14.31	328.25	4,015.0	1,274.7	-788.8	1,499.0	3.00	-3.00	0.00
4,500.0	11.31	328.25	4,112.5	1,293.5	-800.5	1,521.2	3.00	-3.00	0.00
4,600.0	8.31	328.25	4,211.1	1,308.0	-809.5	1,538.2	3.00	-3.00	0.00
4,700.0	5.31	328.25	4,310.4	1,318.1	-815.7	1,550.1	3.00	-3.00	0.00

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<b>Well:</b>	33A-11-6-92	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	Design #1		

Planned Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
4,800.0	2.31	328.25	4,410.1	1,323.7	-819.2	1,556.7	3.00	-3.00	0.00
4,876.9	0.00	0.00	4,487.0	1,325.1	-820.0	1,558.3	3.00	-3.00	0.00
Start 2784.0 hold at 4876.9 MD - 33A-11-6-92 TGT									
4,877.3	0.00	0.00	4,487.4	1,325.1	-820.0	1,558.3	0.00	0.00	0.00
Top of Gas									
4,900.0	0.00	0.00	4,510.1	1,325.1	-820.0	1,558.3	0.00	0.00	0.00
5,000.0	0.00	0.00	4,610.1	1,325.1	-820.0	1,558.3	0.00	0.00	0.00
5,100.0	0.00	0.00	4,710.1	1,325.1	-820.0	1,558.3	0.00	0.00	0.00
5,200.0	0.00	0.00	4,810.1	1,325.1	-820.0	1,558.3	0.00	0.00	0.00
5,300.0	0.00	0.00	4,910.1	1,325.1	-820.0	1,558.3	0.00	0.00	0.00
5,400.0	0.00	0.00	5,010.1	1,325.1	-820.0	1,558.3	0.00	0.00	0.00
5,500.0	0.00	0.00	5,110.1	1,325.1	-820.0	1,558.3	0.00	0.00	0.00
5,600.0	0.00	0.00	5,210.1	1,325.1	-820.0	1,558.3	0.00	0.00	0.00
5,700.0	0.00	0.00	5,310.1	1,325.1	-820.0	1,558.3	0.00	0.00	0.00
5,800.0	0.00	0.00	5,410.1	1,325.1	-820.0	1,558.3	0.00	0.00	0.00
5,900.0	0.00	0.00	5,510.1	1,325.1	-820.0	1,558.3	0.00	0.00	0.00
6,000.0	0.00	0.00	5,610.1	1,325.1	-820.0	1,558.3	0.00	0.00	0.00
6,100.0	0.00	0.00	5,710.1	1,325.1	-820.0	1,558.3	0.00	0.00	0.00
6,200.0	0.00	0.00	5,810.1	1,325.1	-820.0	1,558.3	0.00	0.00	0.00
6,300.0	0.00	0.00	5,910.1	1,325.1	-820.0	1,558.3	0.00	0.00	0.00
6,366.3	0.00	0.00	5,976.4	1,325.1	-820.0	1,558.3	0.00	0.00	0.00
Cameo									
6,400.0	0.00	0.00	6,010.1	1,325.1	-820.0	1,558.3	0.00	0.00	0.00
6,500.0	0.00	0.00	6,110.1	1,325.1	-820.0	1,558.3	0.00	0.00	0.00
6,600.0	0.00	0.00	6,210.1	1,325.1	-820.0	1,558.3	0.00	0.00	0.00
6,700.0	0.00	0.00	6,310.1	1,325.1	-820.0	1,558.3	0.00	0.00	0.00
6,800.0	0.00	0.00	6,410.1	1,325.1	-820.0	1,558.3	0.00	0.00	0.00
6,900.0	0.00	0.00	6,510.1	1,325.1	-820.0	1,558.3	0.00	0.00	0.00
7,000.0	0.00	0.00	6,610.1	1,325.1	-820.0	1,558.3	0.00	0.00	0.00
7,100.0	0.00	0.00	6,710.1	1,325.1	-820.0	1,558.3	0.00	0.00	0.00
7,200.0	0.00	0.00	6,810.1	1,325.1	-820.0	1,558.3	0.00	0.00	0.00
7,300.0	0.00	0.00	6,910.1	1,325.1	-820.0	1,558.3	0.00	0.00	0.00
7,361.3	0.00	0.00	6,971.4	1,325.1	-820.0	1,558.3	0.00	0.00	0.00
Rollins									
7,400.0	0.00	0.00	7,010.1	1,325.1	-820.0	1,558.3	0.00	0.00	0.00
7,500.0	0.00	0.00	7,110.1	1,325.1	-820.0	1,558.3	0.00	0.00	0.00
7,600.0	0.00	0.00	7,210.1	1,325.1	-820.0	1,558.3	0.00	0.00	0.00
7,660.9	0.00	0.00	7,271.0	1,325.1	-820.0	1,558.3	0.00	0.00	0.00
TD at 7660.9									

Design Targets									
Target Name - hit/miss target - Shape	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude
33A-11-6-92 TGT - plan hits target center - Rectangle (sides W100.0 H40.0 D2,784.0)	0.00	0.00	4,487.0	1,325.1	-820.0	1,629,112.68	2,398,713.13	39° 32' 28.768 N	107° 37' 56.197 W

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<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	Design #1		

Formations					
Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (°)
3,670.4	3,356.4	Williams Fork		0.00	
4,877.3	4,487.4	Top of Gas		0.00	
6,366.3	5,976.4	Cameo		0.00	
7,361.3	6,971.4	Rollins		0.00	

Plan Annotations				
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
900.0	900.0	0.0	0.0	Start Build 3.00
1,967.8	1,913.0	247.3	-153.0	Start 1841.3 hold at 1967.8 MD
3,809.1	3,474.0	1,077.8	-667.0	Start Drop -3.00
4,876.9	4,487.0	1,325.1	-820.0	Start 2784.0 hold at 4876.9 MD
7,660.9	7,271.0	1,325.1	-820.0	TD at 7660.9

