



# **Ursa Operating Company, LLC**

**Rockies Region**

**Valley Farms L**

**34D-11-6-92**

**Wellbore #1**

**Design: Actual**

## **End Of Well Report**

**24 November, 2014**



<b>Company:</b>	Ursa Operating Company, LLC	<b>Local Co-ordinate Reference:</b>	Well 34D-11-6-92
<b>Project:</b>	Rockies Region	<b>TVD Reference:</b>	34D-11-6-92 @ 5590.5usft (Capstar 321)
<b>Site:</b>	Valley Farms L	<b>MD Reference:</b>	34D-11-6-92 @ 5590.5usft (Capstar 321)
<b>Well:</b>	34D-11-6-92	<b>North Reference:</b>	True
<b>Wellbore:</b>	Wellbore #1	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	Actual	<b>Database:</b>	MasterDB

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 L					
Site Position:			Northing:	1,627,813.26 usft	Latitude:	39° 32' 16.142 N
From:	Lat/Long		Easting:	2,399,633.86 usft	Longitude:	107° 37' 44.058 W
Position Uncertainty:	0.0 usft		Slot Radius:	13-3/16 "	Grid Convergence:	-1.34 °

Well		34D-11-6-92, SHL LAT: 39.537632691 LONG: -107.629330336				
Well Position	+N/-S	0.0 usft	Northing:	1,627,748.87 usft	Latitude:	39° 32' 15.477 N
	+E/-W	0.0 usft	Easting:	2,399,512.40 usft	Longitude:	107° 37' 45.589 W
Position Uncertainty		0.0 usft	Wellhead Elevation:	5,590.5 usft	Ground Level:	5,577.0 usft

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

Design		Actual			
Audit Notes:					
Version:	1.0	Phase:	ACTUAL	Tie On Depth:	26.1
Vertical Section:	Depth From (TVD) (usft)		+N/-S (usft)	+E/-W (usft)	Direction (°)
	26.1		0.0	0.0	218.84

Survey Program		Date	11/24/2014		
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description	
150.5	7,534.0	Survey #1 (Wellbore #1)	MWD	MWD - Standard	

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<b>Well:</b>	34D-11-6-92	<b>North Reference:</b>	True
<b>Wellbore:</b>	Wellbore #1	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	Actual	<b>Database:</b>	MasterDB

Survey										
MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	V. Sec (usft)	N/S (usft)	E/W (usft)	DLeg (°/100usft)	Build (°/100usft)	Turn (°/100usft)	
0.0	0.00	0.00	0.0	0.0	0.0	0.0	0.00	0.00	0.00	
150.5	0.94	221.06	150.5	1.2	-0.9	-0.8	0.62	0.62	0.00	
178.5	0.88	206.28	178.5	1.7	-1.3	-1.1	0.86	-0.21	-52.79	
208.5	0.70	219.93	208.5	2.1	-1.6	-1.3	0.86	-0.60	45.50	
240.5	0.29	201.35	240.5	2.4	-1.9	-1.4	1.36	-1.28	-58.06	
270.5	0.13	236.28	270.5	2.5	-2.0	-1.5	0.66	-0.53	116.43	
300.5	0.31	260.93	300.5	2.6	-2.0	-1.6	0.66	0.60	82.17	
330.5	0.35	256.01	330.5	2.7	-2.0	-1.8	0.16	0.13	-16.40	
360.5	0.13	137.01	360.5	2.8	-2.1	-1.8	1.43	-0.73	-396.67	
390.5	0.18	333.09	390.5	2.7	-2.1	-1.8	1.02	0.17	-546.40	
420.5	0.26	53.38	420.5	2.7	-2.0	-1.8	0.97	0.27	267.63	
450.5	0.22	20.73	450.5	2.5	-1.9	-1.7	0.47	-0.13	-108.83	
480.5	0.13	351.94	480.5	2.5	-1.8	-1.7	0.41	-0.30	-95.97	
510.5	0.13	127.52	510.5	2.4	-1.8	-1.7	0.80	0.00	451.93	
540.5	0.09	44.06	540.5	2.4	-1.8	-1.6	0.50	-0.13	-278.20	
570.5	0.22	126.59	570.5	2.4	-1.8	-1.6	0.76	0.43	275.10	
600.5	0.31	135.21	600.5	2.4	-1.9	-1.5	0.33	0.30	28.73	
630.5	0.18	128.04	630.5	2.4	-2.0	-1.4	0.44	-0.43	-23.90	
660.5	0.26	154.23	660.5	2.4	-2.1	-1.3	0.42	0.27	87.30	
690.5	0.44	181.44	690.5	2.6	-2.2	-1.3	0.80	0.60	90.70	
720.5	0.66	135.21	720.5	2.7	-2.5	-1.2	1.59	0.73	-154.10	
750.5	0.40	80.14	750.5	2.6	-2.6	-0.9	1.81	-0.87	-183.57	
780.5	0.54	22.94	780.5	2.4	-2.4	-0.8	1.55	0.47	-190.67	
810.5	0.83	21.96	810.5	2.0	-2.1	-0.6	0.97	0.97	-3.27	
840.5	1.05	28.59	840.5	1.6	-1.7	-0.4	0.82	0.73	22.10	
870.5	1.14	26.48	870.5	1.0	-1.2	-0.2	0.33	0.30	-7.03	
900.5	1.05	32.11	900.5	0.4	-0.7	0.1	0.47	-0.30	18.77	

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<b>Site:</b>	Valley Farms L	<b>MD Reference:</b>	34D-11-6-92 @ 5590.5usft (Capstar 321)
<b>Well:</b>	34D-11-6-92	<b>North Reference:</b>	True
<b>Wellbore:</b>	Wellbore #1	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	Actual	<b>Database:</b>	MasterDB

Survey										
MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	V. Sec (usft)	N/S (usft)	E/W (usft)	DLeg (°/100usft)	Build (°/100usft)	Turn (°/100usft)	
930.5	0.79	19.67	930.5	0.0	-0.2	0.3	1.09	-0.87	-41.47	
960.5	1.10	29.34	960.5	-0.5	0.2	0.5	1.16	1.03	32.23	
1,036.0	1.19	27.52	1,035.9	-2.0	1.5	1.3	0.13	0.12	-2.41	
1,121.0	0.35	319.42	1,120.9	-2.9	2.5	1.5	1.30	-0.99	-80.12	
1,206.0	2.42	229.16	1,205.9	-1.2	1.5	0.0	2.88	2.44	-106.19	
1,292.0	4.00	223.23	1,291.8	3.6	-1.8	-3.5	1.87	1.84	-6.90	
1,377.0	6.33	217.65	1,376.4	11.2	-7.7	-8.4	2.80	2.74	-6.56	
1,463.0	9.98	226.39	1,461.5	23.4	-16.6	-16.7	4.47	4.24	10.16	
1,548.0	13.05	226.88	1,544.8	40.2	-28.2	-29.0	3.61	3.61	0.58	
1,633.0	15.21	226.48	1,627.2	60.7	-42.5	-44.1	2.54	2.54	-0.47	
1,719.0	17.67	222.22	1,709.7	84.9	-59.9	-61.0	3.18	2.86	-4.95	
1,804.0	19.78	217.96	1,790.2	112.2	-80.8	-78.6	2.96	2.48	-5.01	
1,889.0	22.81	214.88	1,869.4	143.0	-105.7	-96.8	3.80	3.56	-3.62	
1,975.0	25.62	216.81	1,947.8	178.3	-134.2	-117.5	3.39	3.27	2.24	
2,060.0	26.28	217.16	2,024.3	215.4	-163.9	-139.9	0.80	0.78	0.41	
2,146.0	26.67	217.74	2,101.2	253.8	-194.4	-163.2	0.54	0.45	0.67	
2,231.0	27.25	218.61	2,177.0	292.3	-224.7	-187.0	0.83	0.68	1.02	
2,317.0	26.98	218.61	2,253.6	331.5	-255.3	-211.5	0.31	-0.31	0.00	
2,402.0	26.63	217.78	2,329.4	369.8	-285.4	-235.2	0.60	-0.41	-0.98	
2,488.0	26.32	218.97	2,406.4	408.2	-315.5	-259.0	0.71	-0.36	1.38	
2,573.0	25.88	218.53	2,482.7	445.5	-344.6	-282.4	0.57	-0.52	-0.52	
2,659.0	26.41	219.84	2,559.9	483.4	-374.0	-306.3	0.91	0.62	1.52	
2,744.0	26.52	219.85	2,636.0	521.3	-403.1	-330.6	0.13	0.13	0.01	
2,830.0	27.18	221.29	2,712.8	560.1	-432.6	-355.9	1.08	0.77	1.67	
2,915.0	26.76	220.72	2,788.5	598.7	-461.7	-381.2	0.58	-0.49	-0.67	
3,000.0	26.67	221.30	2,864.4	636.8	-490.5	-406.2	0.32	-0.11	0.68	
3,086.0	26.76	221.43	2,941.3	675.5	-519.5	-431.8	0.12	0.10	0.15	

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<b>Design:</b>	Actual	<b>Database:</b>	MasterDB

Survey										
MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	V. Sec (usft)	N/S (usft)	E/W (usft)	DLeg (°/100usft)	Build (°/100usft)	Turn (°/100usft)	
3,171.0	26.32	219.27	3,017.3	713.4	-548.5	-456.4	1.25	-0.52	-2.54	
3,257.0	25.21	218.38	3,094.8	750.8	-577.6	-479.8	1.37	-1.29	-1.03	
3,342.0	24.57	217.69	3,171.9	786.6	-605.8	-501.9	0.83	-0.75	-0.81	
3,427.0	24.08	218.22	3,249.3	821.6	-633.4	-523.4	0.63	-0.58	0.62	
3,513.0	25.62	219.76	3,327.4	857.7	-661.5	-546.1	1.94	1.79	1.79	
3,598.0	25.73	219.70	3,404.0	894.5	-689.8	-569.7	0.13	0.13	-0.07	
3,684.0	25.27	220.15	3,481.6	931.6	-718.2	-593.4	0.58	-0.53	0.52	
3,769.0	25.22	219.76	3,558.5	967.8	-746.0	-616.7	0.20	-0.06	-0.46	
3,855.0	24.88	219.80	3,636.4	1,004.2	-773.9	-640.0	0.40	-0.40	0.05	
3,941.0	25.22	220.28	3,714.3	1,040.6	-801.8	-663.4	0.46	0.40	0.56	
4,026.0	24.17	219.32	3,791.5	1,076.1	-829.1	-686.2	1.32	-1.24	-1.13	
4,111.0	21.62	218.75	3,869.8	1,109.2	-854.8	-707.0	3.01	-3.00	-0.67	
4,197.0	18.94	220.90	3,950.5	1,139.0	-877.7	-726.1	3.23	-3.12	2.50	
4,282.0	16.26	220.06	4,031.5	1,164.7	-897.2	-742.8	3.17	-3.15	-0.99	
4,368.0	13.36	217.60	4,114.6	1,186.6	-914.3	-756.6	3.45	-3.37	-2.86	
4,453.0	10.50	216.33	4,197.8	1,204.2	-928.3	-767.2	3.38	-3.36	-1.49	
4,539.0	8.17	217.34	4,282.6	1,218.1	-939.5	-775.5	2.72	-2.71	1.17	
4,624.0	6.86	224.02	4,366.9	1,229.2	-948.0	-782.7	1.85	-1.54	7.86	
4,710.0	4.79	232.76	4,452.5	1,237.8	-953.8	-789.1	2.61	-2.41	10.16	
4,795.0	2.33	220.64	4,537.3	1,243.0	-957.3	-793.1	3.01	-2.89	-14.26	
4,868.5	2.18	209.03	4,610.8	1,245.9	-959.6	-794.7	0.65	-0.21	-15.79	
34D-11-6-92 TGT										
4,880.0	2.16	207.09	4,622.2	1,246.3	-960.0	-794.9	0.65	-0.13	-16.92	
4,966.0	1.89	231.81	4,708.2	1,249.3	-962.4	-796.8	1.05	-0.31	28.74	
5,051.0	1.70	231.72	4,793.1	1,251.9	-964.0	-798.9	0.22	-0.22	-0.11	
5,137.0	1.36	219.76	4,879.1	1,254.1	-965.6	-800.5	0.54	-0.40	-13.91	
5,222.0	1.45	214.75	4,964.1	1,256.2	-967.2	-801.8	0.18	0.11	-5.89	

**Company:** Ursa Operating Company, LLC  
**Project:** Rockies Region  
**Site:** Valley Farms L  
**Well:** 34D-11-6-92  
**Wellbore:** Wellbore #1  
**Design:** Actual

**Local Co-ordinate Reference:** Well 34D-11-6-92  
**TVD Reference:** 34D-11-6-92 @ 5590.5usft (Capstar 321)  
**MD Reference:** 34D-11-6-92 @ 5590.5usft (Capstar 321)  
**North Reference:** True  
**Survey Calculation Method:** Minimum Curvature  
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Survey										
MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	V. Sec (usft)	N/S (usft)	E/W (usft)	DLeg (°/100usft)	Build (°/100usft)	Turn (°/100usft)	
5,308.0	1.10	205.25	5,050.0	1,258.1	-968.9	-802.8	0.47	-0.41	-11.05	
5,393.0	0.79	185.04	5,135.0	1,259.4	-970.2	-803.2	0.53	-0.36	-23.78	
5,478.0	0.75	178.49	5,220.0	1,260.3	-971.3	-803.2	0.11	-0.05	-7.71	
5,564.0	0.79	140.92	5,306.0	1,260.9	-972.4	-802.8	0.58	0.05	-43.69	
5,649.0	0.97	133.10	5,391.0	1,261.0	-973.3	-801.9	0.25	0.21	-9.20	
5,735.0	0.40	88.36	5,477.0	1,260.9	-973.8	-801.1	0.86	-0.66	-52.02	
5,820.0	0.66	59.71	5,562.0	1,260.2	-973.5	-800.4	0.43	0.31	-33.71	
5,906.0	0.92	66.47	5,648.0	1,259.2	-973.0	-799.3	0.32	0.30	7.86	
5,991.0	0.44	27.67	5,733.0	1,258.2	-972.5	-798.5	0.75	-0.56	-45.65	
6,077.0	0.54	49.71	5,819.0	1,257.5	-971.9	-798.1	0.25	0.12	25.63	
6,162.0	0.49	75.86	5,904.0	1,256.8	-971.5	-797.4	0.28	-0.06	30.76	
6,247.0	0.48	196.25	5,989.0	1,256.9	-971.8	-797.2	0.99	-0.01	141.64	
6,333.0	0.48	164.65	6,075.0	1,257.4	-972.5	-797.2	0.30	0.00	-36.74	
6,418.0	0.44	2.27	6,160.0	1,257.4	-972.5	-797.1	1.07	-0.05	-191.04	
6,504.0	0.48	39.67	6,246.0	1,256.7	-971.9	-796.8	0.35	0.05	43.49	
6,589.0	0.70	47.67	6,331.0	1,255.9	-971.3	-796.2	0.28	0.26	9.41	
6,674.0	0.83	52.72	6,416.0	1,254.8	-970.6	-795.3	0.17	0.15	5.94	
6,760.0	0.75	75.79	6,502.0	1,253.7	-970.0	-794.3	0.38	-0.09	26.83	
6,845.0	1.10	81.56	6,586.9	1,252.7	-969.8	-792.9	0.43	0.41	6.79	
6,930.0	0.53	347.95	6,671.9	1,251.8	-969.3	-792.2	1.47	-0.67	-110.13	
7,016.0	0.92	314.33	6,757.9	1,251.5	-968.4	-792.8	0.65	0.45	-39.09	
7,101.0	1.36	354.84	6,842.9	1,250.7	-966.9	-793.4	1.05	0.52	47.66	
7,187.0	1.63	150.54	6,928.9	1,250.4	-967.0	-792.9	3.40	0.31	181.05	
7,272.0	1.76	148.26	7,013.9	1,251.3	-969.1	-791.6	0.17	0.15	-2.68	
7,357.0	2.04	142.25	7,098.8	1,252.1	-971.4	-790.0	0.40	0.33	-7.07	
7,443.0	1.98	144.70	7,184.8	1,252.8	-973.9	-788.2	0.12	-0.07	2.85	
7,477.0	1.98	140.13	7,218.7	1,253.1	-974.8	-787.5	0.46	0.00	-13.44	

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7,534.0	1.98	140.13	7,275.7	1,253.5	-976.3	-786.2	0.00	0.00	0.00

Checked By: _____	Approved By: _____	Date: _____
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