

# **CCI Paradox Upstream LLC**

**San Miguel Co., Utah**

**Sec. 31**

**HC Fed 31-31B-45-14**

**Wellbore #1**

**Survey: Leam Drilling Systems Inc. Survey #1**

## **Standard Survey Report**

**07 May, 2015**

**Archer can not certify the survey's.**

**Archer only changed the legal SHL per CCI's request.**

# Archer

## Survey Report

<b>Company:</b> CCI Paradox Upstream LLC	<b>Local Co-ordinate Reference:</b> Well HC Fed 31-31B-45-14
<b>Project:</b> San Miguel Co., Utah	<b>TVD Reference:</b> Well @ 6847.00usft
<b>Site:</b> Sec. 31	<b>MD Reference:</b> Well @ 6847.00usft
<b>Well:</b> HC Fed 31-31B-45-14	<b>North Reference:</b> True
<b>Wellbore:</b> Wellbore #1	<b>Survey Calculation Method:</b> Minimum Curvature
<b>Design:</b> Wellbore #1	<b>Database:</b> EDMDBBW

<b>Project</b> San Miguel Co., Utah		
<b>Map System:</b> US State Plane 1927 (Exact solution)	<b>System Datum:</b>	Mean Sea Level
<b>Geo Datum:</b> NAD 1927 (NADCON CONUS)		
<b>Map Zone:</b> Colorado South 503		

<b>Site</b> Sec. 31					
<b>Site Position:</b>	<b>Northing:</b>	538,358.854 usft	<b>Latitude:</b>	38° 6' 29.203 N	
<b>From:</b> Lat/Long	<b>Easting:</b>	1,148,031.698 usft	<b>Longitude:</b>	108° 27' 41.202 W	
<b>Position Uncertainty:</b> 0.00 usft	<b>Slot Radius:</b> 13-3/16"		<b>Grid Convergence:</b>	-1.82 °	

<b>Well</b> HC Fed 31-31B-45-14					
<b>Well Position</b>	<b>+N/-S</b>	0.00 usft	<b>Northing:</b>	538,358.854 usft	<b>Latitude:</b> 38° 6' 29.203 N
	<b>+E/-W</b>	0.00 usft	<b>Easting:</b>	1,148,031.698 usft	<b>Longitude:</b> 108° 27' 41.202 W
<b>Position Uncertainty</b>		0.00 usft	<b>Wellhead Elevation:</b>	0.00 usft	<b>Ground Level:</b> 6,847.00 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	2015/05/07	9.89	64.40	51,026

<b>Design</b> Wellbore #1					
<b>Audit Notes:</b>					
<b>Version:</b> 1.0	<b>Phase:</b>	ACTUAL	<b>Tie On Depth:</b>	0.00	
<b>Vertical Section:</b>	<b>Depth From (TVD) (usft)</b>	<b>+N/-S (usft)</b>	<b>+E/-W (usft)</b>	<b>Direction (°)</b>	
	0.00	0.00	0.00	184.65	

<b>Survey Program</b> Date 2015/05/07					
<b>From (usft)</b>	<b>To (usft)</b>	<b>Survey (Wellbore)</b>	<b>Tool Name</b>	<b>Description</b>	
1,722.00	9,170.00	Leam Drilling Systems Inc. Survey #1 (We	MWD	MWD - Standard	

<b>Survey</b>										
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)	
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1,722.00	0.00	0.00	1,722.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1,751.00	2.10	193.50	1,750.99	-0.52	-0.12	0.53	7.24	7.24	0.00	0.00
1,782.00	2.60	188.40	1,781.97	-1.76	-0.36	1.79	1.75	1.61	-16.45	0.00
1,813.00	3.30	190.50	1,812.93	-3.34	-0.62	3.38	2.28	2.26	6.77	0.00
1,845.00	4.00	194.70	1,844.86	-5.32	-1.08	5.39	2.34	2.19	13.12	0.00
1,876.00	4.40	199.80	1,875.78	-7.49	-1.75	7.60	1.76	1.29	16.45	0.00
1,907.00	5.10	200.20	1,906.67	-9.90	-2.63	10.08	2.26	2.26	1.29	0.00
1,938.00	6.40	199.00	1,937.51	-12.83	-3.67	13.08	4.21	4.19	-3.87	0.00
1,969.00	7.80	198.10	1,968.28	-16.46	-4.89	16.80	4.53	4.52	-2.90	0.00
2,000.00	9.20	199.70	1,998.93	-20.79	-6.37	21.24	4.58	4.52	5.16	0.00
2,031.00	10.30	199.30	2,029.49	-25.74	-8.13	26.32	3.56	3.55	-1.29	0.00
2,062.00	11.00	198.60	2,059.95	-31.16	-9.99	31.87	2.30	2.26	-2.26	0.00

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<b>Site:</b>	Sec. 31	<b>MD Reference:</b>	Well @ 6847.00usft
<b>Well:</b>	HC Fed 31-31B-45-14	<b>North Reference:</b>	True
<b>Wellbore:</b>	Wellbore #1	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	Wellbore #1	<b>Database:</b>	EDMDBBW

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)	
2,093.00	11.60	199.30	2,090.35	-36.90	-11.96	37.75	1.99	1.94		2.26
2,124.00	12.10	198.80	2,120.69	-42.92	-14.04	43.92	1.65	1.61		-1.61
2,155.00	12.70	197.90	2,150.97	-49.24	-16.13	50.39	2.03	1.94		-2.90
2,186.00	13.30	198.10	2,181.17	-55.87	-18.29	57.17	1.94	1.94		0.65
2,217.00	13.70	200.00	2,211.32	-62.71	-20.65	64.18	1.93	1.29		6.13
2,249.00	13.70	200.20	2,242.41	-69.83	-23.25	71.48	0.15	0.00		0.62
2,280.00	13.80	199.70	2,272.52	-76.75	-25.77	78.59	0.50	0.32		-1.61
2,311.00	14.40	199.70	2,302.58	-83.86	-28.31	85.88	1.94	1.94		0.00
2,341.00	15.60	201.60	2,331.56	-91.13	-31.06	93.35	4.32	4.00		6.33
2,372.00	16.40	203.40	2,361.36	-99.02	-34.33	101.48	3.04	2.58		5.81
2,403.00	16.70	204.10	2,391.08	-107.10	-37.89	109.82	1.16	0.97		2.26
2,434.00	17.10	204.80	2,420.74	-115.31	-41.62	118.30	1.45	1.29		2.26
2,465.00	17.30	205.50	2,450.35	-123.60	-45.51	126.89	0.93	0.65		2.26
2,496.00	17.50	207.40	2,479.93	-131.90	-49.64	135.49	1.94	0.65		6.13
2,527.00	17.80	210.70	2,509.47	-140.11	-54.21	144.05	3.37	0.97		10.65
2,558.00	18.60	213.60	2,538.92	-148.31	-59.36	152.63	3.90	2.58		9.35
2,589.00	19.20	215.50	2,568.25	-156.57	-65.06	161.33	2.77	1.94		6.13
2,620.00	19.80	215.10	2,597.47	-165.02	-71.04	170.24	1.98	1.94		-1.29
2,651.00	20.50	214.40	2,626.58	-173.79	-77.12	179.48	2.39	2.26		-2.26
2,682.00	21.30	212.10	2,655.54	-183.04	-83.18	189.19	3.70	2.58		-7.42
2,712.00	21.70	211.60	2,683.45	-192.38	-88.98	198.97	1.47	1.33		-1.67
2,743.00	22.20	210.90	2,712.20	-202.29	-94.99	209.33	1.82	1.61		-2.26
2,775.00	22.80	211.30	2,741.77	-212.78	-101.32	220.29	1.94	1.87		1.25
2,806.00	23.40	210.60	2,770.28	-223.21	-107.57	231.19	2.13	1.94		-2.26
2,837.00	24.40	209.30	2,798.62	-234.09	-113.84	242.55	3.65	3.23		-4.19
2,868.00	25.10	207.90	2,826.77	-245.48	-120.05	254.41	2.94	2.26		-4.52
2,899.00	25.80	208.10	2,854.77	-257.25	-126.30	266.64	2.28	2.26		0.65
2,930.00	25.90	207.20	2,882.66	-269.22	-132.58	279.08	1.31	0.32		-2.90
2,961.00	26.20	207.60	2,910.52	-281.30	-138.84	291.64	1.12	0.97		1.29
2,991.00	26.10	207.60	2,937.44	-293.02	-144.97	303.81	0.33	-0.33		0.00
3,022.00	25.90	207.60	2,965.31	-305.06	-151.26	316.33	0.65	-0.65		0.00
3,053.00	25.80	206.70	2,993.21	-317.09	-157.43	328.81	1.31	-0.32		-2.90
3,084.00	25.90	207.00	3,021.10	-329.15	-163.54	341.33	0.53	0.32		0.97
3,116.00	26.10	206.20	3,049.86	-341.69	-169.82	354.34	1.26	0.62		-2.50
3,147.00	25.90	206.30	3,077.73	-353.88	-175.83	366.98	0.66	-0.65		0.32
3,178.00	25.90	206.20	3,105.61	-366.03	-181.82	379.57	0.14	0.00		-0.32
3,209.00	25.80	205.80	3,133.51	-378.17	-187.74	392.15	0.65	-0.32		-1.29
3,302.00	25.60	206.20	3,217.31	-414.42	-205.42	429.72	0.28	-0.22		0.43
3,333.00	25.30	206.50	3,245.30	-426.36	-211.33	442.10	1.05	-0.97		0.97
3,425.00	25.10	207.20	3,328.55	-461.31	-229.02	478.36	0.39	-0.22		0.76
3,518.00	23.40	207.40	3,413.34	-495.25	-246.54	513.61	1.83	-1.83		0.22
3,549.00	22.90	207.60	3,441.84	-506.06	-252.17	524.85	1.63	-1.61		0.65
3,580.00	23.60	207.20	3,470.32	-516.93	-257.80	536.13	2.31	2.26		-1.29
3,611.00	24.80	206.90	3,498.60	-528.24	-263.58	547.88	3.89	3.87		-0.97
3,704.00	25.70	207.20	3,582.71	-563.57	-281.62	584.56	0.98	0.97		0.32
3,798.00	24.20	205.30	3,667.94	-599.12	-299.17	621.41	1.81	-1.60		-2.02
3,890.00	25.70	205.60	3,751.35	-634.16	-315.85	657.69	1.64	1.63		0.33
3,983.00	25.30	207.00	3,835.29	-670.06	-333.59	694.90	0.78	-0.43		1.51
4,077.00	24.70	204.90	3,920.49	-705.77	-350.97	731.91	1.14	-0.64		-2.23
4,170.00	25.30	204.10	4,004.77	-741.53	-367.27	768.87	0.74	0.65		-0.86
4,263.00	24.80	204.60	4,089.03	-777.41	-383.50	805.95	0.58	-0.54		0.54
4,358.00	24.30	206.30	4,175.44	-813.05	-400.46	842.84	0.91	-0.53		1.79
4,451.00	23.70	207.20	4,260.40	-846.82	-417.48	877.89	0.76	-0.65		0.97
4,544.00	23.90	207.00	4,345.49	-880.23	-434.58	912.58	0.23	0.22		-0.22

# Archer

## Survey Report

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<b>Project:</b>	San Miguel Co., Utah	<b>TVD Reference:</b>	Well @ 6847.00usft
<b>Site:</b>	Sec. 31	<b>MD Reference:</b>	Well @ 6847.00usft
<b>Well:</b>	HC Fed 31-31B-45-14	<b>North Reference:</b>	True
<b>Wellbore:</b>	Wellbore #1	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	Wellbore #1	<b>Database:</b>	EDMDBBW

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)	
4,637.00	22.40	205.60	4,431.00	-913.00	-450.79	946.55	1.72	-1.61	-1.51	
4,730.00	24.90	206.00	4,516.18	-946.58	-467.03	981.34	2.69	2.69	0.43	
4,823.00	25.10	206.20	4,600.47	-981.88	-484.32	1,017.92	0.23	0.22	0.22	
4,916.00	23.90	208.60	4,685.10	-1,016.12	-502.05	1,053.49	1.68	-1.29	2.58	
5,011.00	23.00	207.60	4,772.25	-1,049.47	-519.86	1,088.17	1.04	-0.95	-1.05	
5,103.00	23.80	205.60	4,856.68	-1,082.14	-536.21	1,122.06	1.23	0.87	-2.17	
5,197.00	26.60	208.60	4,941.73	-1,117.73	-554.48	1,159.01	3.27	2.98	3.19	
5,291.00	28.40	209.20	5,025.11	-1,155.72	-575.46	1,198.58	1.94	1.91	0.64	
5,384.00	26.40	207.40	5,107.67	-1,193.39	-595.77	1,237.77	2.33	-2.15	-1.94	
5,477.00	25.40	205.50	5,191.33	-1,229.75	-613.87	1,275.48	1.40	-1.08	-2.04	
5,570.00	23.10	203.40	5,276.12	-1,264.50	-629.71	1,311.40	2.64	-2.47	-2.26	
5,663.00	24.20	204.60	5,361.31	-1,298.57	-644.89	1,346.60	1.29	1.18	1.29	
5,762.00	25.60	208.60	5,451.11	-1,335.81	-663.57	1,385.22	2.21	1.41	4.04	
5,855.00	27.50	210.90	5,534.30	-1,371.87	-684.22	1,422.85	2.32	2.04	2.47	
5,948.00	25.90	208.10	5,617.39	-1,408.22	-704.82	1,460.74	2.19	-1.72	-3.01	
6,041.00	22.60	204.90	5,702.17	-1,442.36	-721.91	1,496.15	3.82	-3.55	-3.44	
6,134.00	21.50	207.20	5,788.37	-1,473.72	-737.23	1,528.66	1.50	-1.18	2.47	
6,228.00	24.40	214.80	5,874.94	-1,505.00	-756.19	1,561.37	4.41	3.09	8.09	
6,321.00	25.10	213.00	5,959.40	-1,537.32	-777.90	1,595.34	1.11	0.75	-1.94	
6,415.00	23.00	200.50	6,045.29	-1,571.27	-795.20	1,630.58	5.85	-2.23	-13.30	
6,508.00	22.60	190.50	6,131.05	-1,605.87	-804.82	1,665.85	4.18	-0.43	-10.75	
6,601.00	23.00	181.70	6,216.81	-1,641.61	-808.62	1,701.78	3.69	0.43	-9.46	
6,695.00	23.70	178.60	6,303.12	-1,678.86	-808.70	1,738.91	1.50	0.74	-3.30	
6,789.00	22.40	176.60	6,389.61	-1,715.62	-807.18	1,775.43	1.61	-1.38	-2.13	
6,882.00	17.40	178.90	6,477.03	-1,747.23	-805.86	1,806.83	5.44	-5.38	2.47	
6,975.00	16.90	176.50	6,565.90	-1,774.63	-804.77	1,834.05	0.93	-0.54	-2.58	
7,069.00	18.60	169.10	6,655.43	-1,802.99	-801.10	1,862.02	3.00	1.81	-7.87	
7,162.00	17.90	168.20	6,743.75	-1,831.55	-795.37	1,890.02	0.81	-0.75	-0.97	
7,255.00	17.70	151.70	6,832.36	-1,858.00	-785.74	1,915.61	5.41	-0.22	-17.74	
7,348.00	16.00	147.10	6,921.37	-1,881.22	-772.07	1,937.63	2.32	-1.83	-4.95	
7,441.00	15.00	137.40	7,011.00	-1,900.84	-756.96	1,955.97	2.98	-1.08	-10.43	
7,534.00	17.90	137.10	7,100.18	-1,920.17	-739.08	1,973.79	3.12	3.12	-0.32	
7,624.00	20.60	137.60	7,185.14	-1,942.00	-718.99	1,993.91	3.01	3.00	0.56	
7,717.00	25.10	136.00	7,270.82	-1,968.29	-694.24	2,018.10	4.88	4.84	-1.72	
7,813.00	26.60	136.40	7,357.21	-1,998.50	-665.27	2,045.87	1.57	1.56	0.42	
7,906.00	30.60	135.70	7,438.85	-2,030.53	-634.37	2,075.29	4.32	4.30	-0.75	
7,998.00	30.20	135.50	7,518.20	-2,063.79	-601.80	2,105.80	0.45	-0.43	-0.22	
8,091.00	28.40	136.90	7,599.30	-2,096.63	-570.29	2,135.97	2.07	-1.94	1.51	
8,184.00	27.00	138.30	7,681.64	-2,128.54	-541.13	2,165.41	1.66	-1.51	1.51	
8,278.00	26.40	138.00	7,765.62	-2,160.00	-512.95	2,194.49	0.65	-0.64	-0.32	
8,372.00	27.60	139.20	7,849.37	-2,192.02	-484.74	2,224.11	1.40	1.28	1.28	
8,465.00	30.00	134.50	7,930.87	-2,224.63	-454.07	2,254.13	3.55	2.58	-5.05	
8,558.00	29.60	132.30	8,011.58	-2,256.39	-420.50	2,283.06	1.25	-0.43	-2.37	
8,652.00	28.40	132.20	8,093.79	-2,287.03	-386.77	2,310.86	1.28	-1.28	-0.11	
8,745.00	28.10	127.60	8,175.72	-2,315.25	-353.03	2,336.25	2.36	-0.32	-4.95	
8,840.00	28.20	126.40	8,259.49	-2,342.22	-317.24	2,360.23	0.61	0.11	-1.26	
8,932.00	28.10	127.60	8,340.60	-2,368.34	-282.57	2,383.45	0.62	-0.11	1.30	
9,025.00	26.90	129.40	8,423.10	-2,395.06	-248.96	2,407.36	1.57	-1.29	1.94	
9,170.00	26.90	129.40	8,552.41	-2,436.70	-198.27	2,444.75	0.00	0.00	0.00	

**Archer**  
Survey Report

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<b>Project:</b>	San Miguel Co., Utah	<b>TVD Reference:</b>	Well @ 6847.00usft
<b>Site:</b>	Sec. 31	<b>MD Reference:</b>	Well @ 6847.00usft
<b>Well:</b>	HC Fed 31-31B-45-14	<b>North Reference:</b>	True
<b>Wellbore:</b>	Wellbore #1	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	Wellbore #1	<b>Database:</b>	EDMDBBW

Checked By: \_\_\_\_\_ Approved By: \_\_\_\_\_ Date: \_\_\_\_\_