

Catamount Energy Partners

**San Juan Basin
Archuleta County CO
Lamke 33-5-29 #1**

Lateral #1

Design: As Drilled

Standard Survey Report

25 April, 2016





Project: San Juan Basin
Site: Archuleta County CO
Well: Lamke 33-5-29 #1
Wellbore: Lateral #1
Design: As Drilled

WELL DETAILS

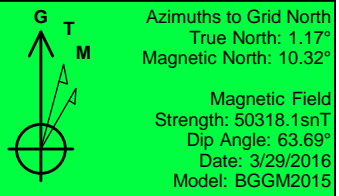
Lamke 33-5-29 #1
Ground Level: 6119.00
+N/-S +E/-W Northing Easting Latitude Longitude
0.00 0.00 1152541.71 2443521.11 37° 4' 11.971 N 107° 24' 26.481 W

SITE DETAILS: Archuleta County CO

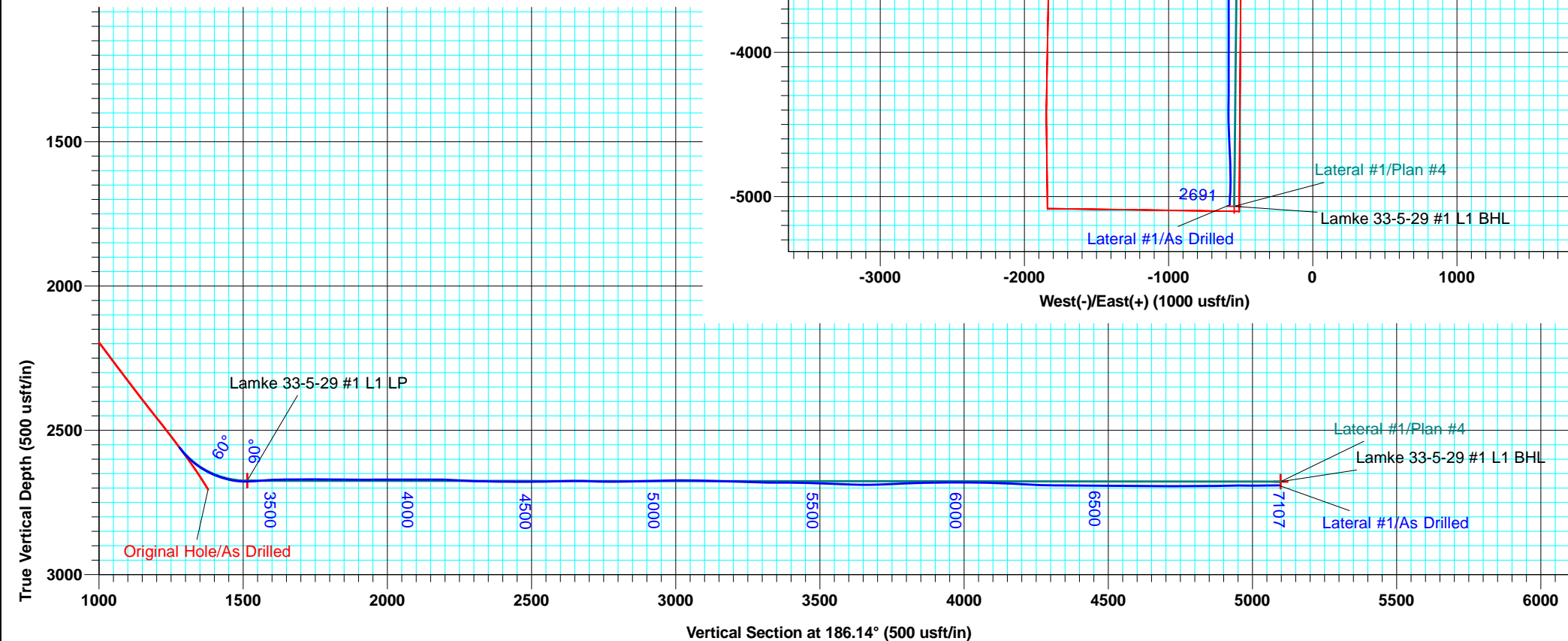
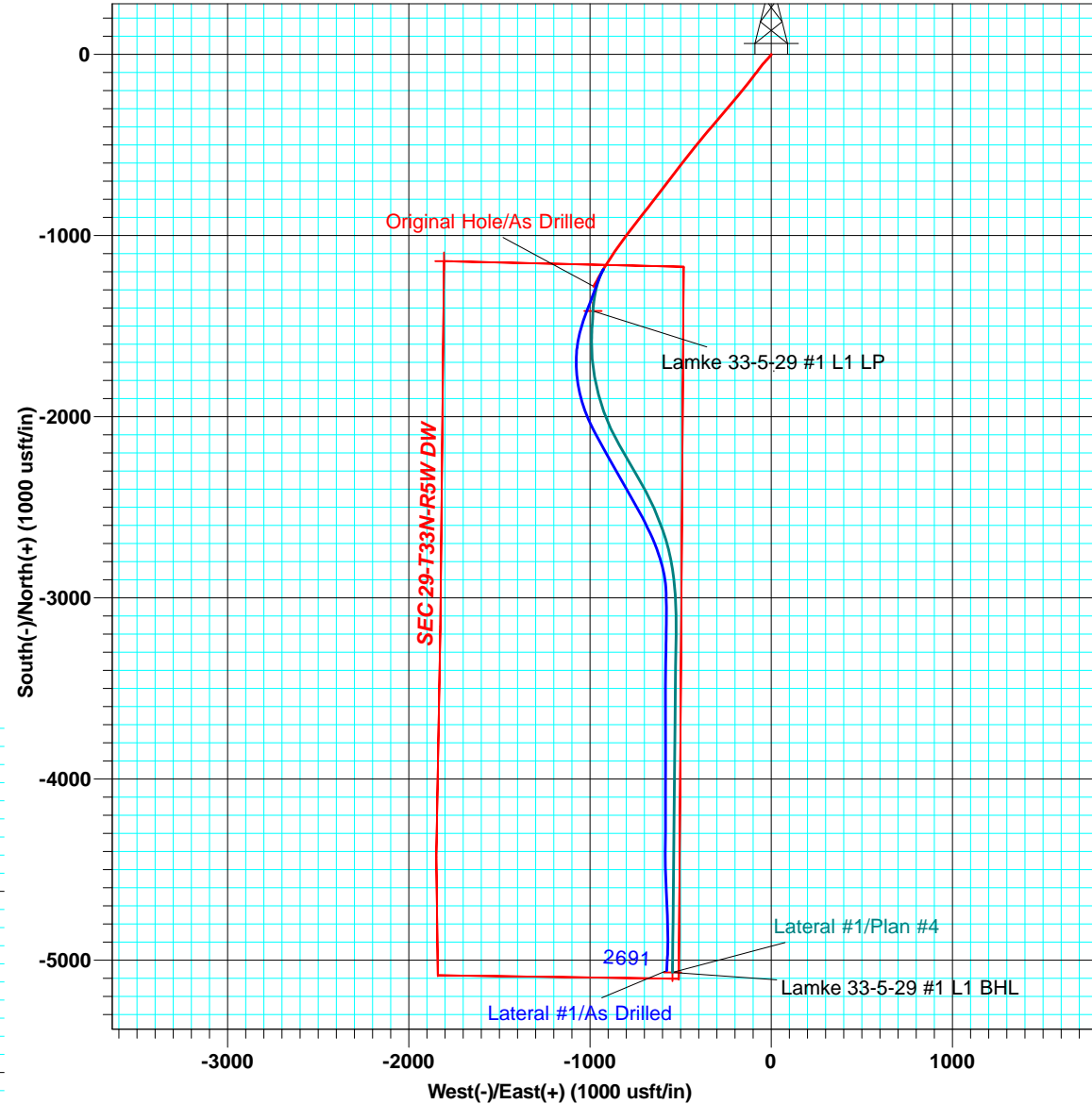
Site Centre Northing: 1152541.71
Easting: 2443521.11
Positional Uncertainty: 0.00
Convergence: -1.17
Local North: Grid

PROJECT DETAILS: San Juan Basin

Geodetic System: US State Plane 1983
Datum: North American Datum 1983
Ellipsoid: GRS 1980
Zone: Colorado Southern Zone
System Datum: Mean Sea Level



ALL AZIMUTHS MUST BE CORRECTED TO GRID NORTH
To convert Magnetic North to Grid, Add 10.32°
To convert True North to Grid, Add 1.17°



Survey Report



Company:	Catamount Energy Partners	Local Co-ordinate Reference:	Well Lamke 33-5-29 #1
Project:	San Juan Basin	TVD Reference:	6119' GL + 11' KB @ 6129.99usft
Site:	Archuleta County CO	MD Reference:	6119' GL + 11' KB @ 6129.99usft
Well:	Lamke 33-5-29 #1	North Reference:	Grid
Wellbore:	Lateral #1	Survey Calculation Method:	Minimum Curvature
Design:	As Drilled	Database:	Grand Junction District

Project	San Juan Basin, Southern Colorado, Fruitland Coal HZ		
Map System:	US State Plane 1983	System Datum:	Mean Sea Level
Geo Datum:	North American Datum 1983		
Map Zone:	Colorado Southern Zone		Using geodetic scale factor

Site	Archuleta County CO		
Site Position:		Northing:	1,152,541.71 usft
From:	Map	Easting:	2,443,521.11 usft
Position Uncertainty:	0.00 usft	Slot Radius:	6-1/8 "
		Latitude:	37° 4' 11.971 N
		Longitude:	107° 24' 26.481 W
		Grid Convergence:	-1.17 °

Well	Lamke 33-5-29 #1, Multi HZ FC Well		
Well Position	+N-S	0.00 usft	Northing: 1,152,541.71 usft
	+E-W	0.00 usft	Easting: 2,443,521.11 usft
Position Uncertainty		1.00 usft	Wellhead Elevation: 6,130.00 usft
			Latitude: 37° 4' 11.971 N
			Longitude: 107° 24' 26.481 W
			Ground Level: 6,119.00 usft

Wellbore	Lateral #1				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	BGGM2015	3/29/2016	9.15	63.69	50,318

Design	As Drilled			
Audit Notes:				
Version:	1.0	Phase:	ACTUAL	Tie On Depth: 3,062.00
Vertical Section:	Depth From (TVD) (usft)	+N-S (usft)	+E-W (usft)	Direction (°)
	0.00	0.00	0.00	186.14

Survey Program	Date	4/25/2016		
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description
108.00	3,062.00	SDI MWD (Original Hole)	MWD SDI	MWD - Standard ver 1.0.1
3,104.00	7,107.00	SDI MWD (Lateral #1)	MWD SDI	MWD - Standard ver 1.0.1

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)
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
108.00	0.71	160.99	108.00	-0.63	0.22	0.61	0.66	0.66	0.00
137.00	1.38	194.01	136.99	-1.14	0.19	1.11	3.02	2.31	113.86
167.00	2.66	212.66	166.97	-2.08	-0.27	2.10	4.74	4.27	62.17
196.00	4.43	217.68	195.92	-3.53	-1.32	3.65	6.19	6.10	17.31
225.00	5.77	218.97	224.80	-5.55	-2.92	5.83	4.64	4.62	4.45
252.00	6.66	221.23	251.64	-7.78	-4.81	8.25	3.42	3.30	8.37
283.00	7.52	219.81	282.41	-10.69	-7.29	11.41	2.83	2.77	-4.58
313.00	8.62	222.22	312.11	-13.87	-10.06	14.86	3.84	3.67	8.03
335.00	9.26	222.28	333.84	-16.40	-12.36	17.62	2.91	2.91	0.27

Survey Report



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Site:	Archuleta County CO	MD Reference:	6119' GL + 11' KB @ 6129.99usft
Well:	Lamke 33-5-29 #1	North Reference:	Grid
Wellbore:	Lateral #1	Survey Calculation Method:	Minimum Curvature
Design:	As Drilled	Database:	Grand Junction District

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)
458.00	10.13	220.07	455.08	-32.00	-25.98	34.59	0.77	0.71	-1.80
488.00	11.21	221.65	484.56	-36.20	-29.61	39.15	3.73	3.60	5.27
519.00	12.90	222.37	514.88	-41.00	-33.95	44.40	5.47	5.45	2.32
550.00	14.28	222.26	545.01	-46.39	-38.85	50.28	4.45	4.45	-0.35
581.00	14.70	221.95	575.02	-52.15	-44.05	56.56	1.38	1.35	-1.00
611.00	14.20	220.54	604.08	-57.77	-48.99	62.68	2.04	-1.67	-4.70
643.00	14.35	217.72	635.09	-63.89	-53.97	69.30	2.22	0.47	-8.81
674.00	15.48	217.08	665.04	-70.23	-58.81	76.12	3.68	3.65	-2.06
703.00	16.59	217.14	692.91	-76.62	-63.64	82.99	3.83	3.83	0.21
735.00	17.61	216.91	723.50	-84.13	-69.31	91.06	3.19	3.19	-0.72
765.00	18.94	217.75	751.99	-91.61	-75.02	99.11	4.52	4.43	2.80
797.00	19.61	218.21	782.19	-99.94	-81.52	108.08	2.15	2.09	1.44
828.00	19.66	218.31	811.39	-108.12	-87.97	116.90	0.19	0.16	0.32
859.00	19.90	217.54	840.56	-116.39	-94.41	125.82	1.14	0.77	-2.48
889.00	21.06	217.87	868.66	-124.69	-100.83	134.76	3.89	3.87	1.10
921.00	22.08	217.50	898.42	-134.01	-108.03	144.79	3.22	3.19	-1.16
952.00	22.92	217.78	927.06	-143.40	-115.27	154.90	2.73	2.71	0.90
982.00	23.82	218.08	954.60	-152.78	-122.59	165.02	3.03	3.00	1.00
1,014.00	24.73	217.87	983.77	-163.16	-130.68	176.19	2.86	2.84	-0.66
1,046.00	25.31	217.44	1,012.77	-173.87	-138.95	187.73	1.90	1.81	-1.34
1,077.00	26.16	218.86	1,040.69	-184.45	-147.26	199.14	3.39	2.74	4.58
1,109.00	27.11	219.28	1,069.30	-195.59	-156.31	211.18	3.03	2.97	1.31
1,140.00	28.35	220.00	1,096.74	-206.70	-165.51	223.21	4.14	4.00	2.32
1,172.00	29.52	219.30	1,124.74	-218.62	-175.39	236.12	3.81	3.66	-2.19
1,204.00	31.14	220.01	1,152.36	-231.06	-185.70	249.59	5.18	5.06	2.22
1,235.00	32.49	219.72	1,178.70	-243.60	-196.17	263.18	4.38	4.35	-0.94
1,267.00	33.74	220.20	1,205.50	-257.00	-207.40	277.70	3.99	3.91	1.50
1,299.00	35.19	220.56	1,231.89	-270.79	-219.14	292.67	4.58	4.53	1.13
1,330.00	36.21	219.93	1,257.06	-284.60	-230.82	307.65	3.50	3.29	-2.03
1,360.00	37.11	219.83	1,281.13	-298.35	-242.31	322.55	3.01	3.00	-0.33
1,392.00	38.07	219.82	1,306.48	-313.34	-254.81	338.79	3.00	3.00	-0.03
1,423.00	39.14	220.38	1,330.71	-328.13	-267.27	354.83	3.63	3.45	1.81
1,455.00	40.42	220.85	1,355.30	-343.67	-280.60	371.71	4.11	4.00	1.47
1,486.00	41.66	220.50	1,378.68	-359.11	-293.86	388.48	4.07	4.00	-1.13
1,517.00	41.74	220.15	1,401.83	-374.83	-307.21	405.54	0.79	0.26	-1.13
1,549.00	41.44	220.63	1,425.76	-391.01	-320.97	423.09	1.37	-0.94	1.50
1,580.00	41.09	220.57	1,449.06	-406.54	-334.28	439.95	1.14	-1.13	-0.19
1,612.00	40.45	219.93	1,473.30	-422.48	-347.78	457.25	2.39	-2.00	-2.00
1,643.00	39.99	219.52	1,496.97	-437.88	-360.57	473.93	1.71	-1.48	-1.32
1,674.00	39.32	219.50	1,520.83	-453.14	-373.16	490.45	2.16	-2.16	-0.06
1,706.00	38.78	219.86	1,545.69	-468.66	-386.03	507.25	1.83	-1.69	1.13
1,738.00	39.46	219.51	1,570.51	-484.20	-398.92	524.08	2.23	2.13	-1.09
1,769.00	40.65	219.07	1,594.24	-499.64	-411.55	540.78	3.95	3.84	-1.42

Survey Report



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Well:	Lamke 33-5-29 #1	North Reference:	Grid
Wellbore:	Lateral #1	Survey Calculation Method:	Minimum Curvature
Design:	As Drilled	Database:	Grand Junction District

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)
1,801.00	41.77	218.38	1,618.31	-516.08	-424.74	558.54	3.78	3.50	-2.16
1,863.00	42.26	218.82	1,664.38	-548.51	-450.63	593.56	0.92	0.79	0.71
1,894.00	41.96	218.22	1,687.37	-564.78	-463.58	611.11	1.62	-0.97	-1.94
1,926.00	41.53	218.24	1,711.25	-581.51	-476.76	629.16	1.34	-1.34	0.06
1,957.00	41.13	217.33	1,734.53	-597.69	-489.31	646.59	2.33	-1.29	-2.94
1,988.00	41.88	217.66	1,757.74	-613.99	-501.81	664.13	2.52	2.42	1.06
2,020.00	41.97	217.16	1,781.55	-630.97	-514.80	682.41	1.08	0.28	-1.56
2,052.00	41.86	216.35	1,805.37	-648.10	-527.59	700.80	1.73	-0.34	-2.53
2,083.00	41.70	216.51	1,828.48	-664.72	-539.86	718.64	0.62	-0.52	0.52
2,115.00	41.66	217.86	1,852.38	-681.67	-552.72	736.87	2.81	-0.13	4.22
2,146.00	42.15	219.19	1,875.46	-697.87	-565.61	754.35	3.27	1.58	4.29
2,177.00	41.73	218.81	1,898.51	-713.97	-578.65	771.76	1.58	-1.35	-1.23
2,208.00	41.57	217.44	1,921.68	-730.18	-591.37	789.23	2.98	-0.52	-4.42
2,239.00	42.29	217.30	1,944.74	-746.64	-603.94	806.94	2.34	2.32	-0.45
2,271.00	42.58	217.37	1,968.36	-763.81	-617.04	825.41	0.92	0.91	0.22
2,303.00	42.80	216.88	1,991.88	-781.11	-630.13	844.01	1.25	0.69	-1.53
2,335.00	42.73	216.94	2,015.37	-798.48	-643.18	862.68	0.25	-0.22	0.19
2,366.00	42.51	217.40	2,038.18	-815.21	-655.86	880.67	1.23	-0.71	1.48
2,397.00	42.18	217.69	2,061.10	-831.76	-668.59	898.49	1.24	-1.06	0.94
2,428.00	42.01	218.35	2,084.10	-848.13	-681.39	916.14	1.53	-0.55	2.13
2,459.00	41.44	218.53	2,107.24	-864.29	-694.22	933.57	1.88	-1.84	0.58
2,490.00	41.32	218.44	2,130.50	-880.33	-706.97	950.89	0.43	-0.39	-0.29
2,522.00	42.03	218.19	2,154.40	-897.03	-720.16	968.90	2.28	2.22	-0.78
2,552.00	41.86	218.09	2,176.71	-912.80	-732.54	985.90	0.61	-0.57	-0.33
2,584.00	41.47	217.99	2,200.62	-929.55	-745.65	1,003.96	1.24	-1.22	-0.31
2,616.00	40.74	217.44	2,224.73	-946.20	-758.52	1,021.88	2.55	-2.28	-1.72
2,647.00	41.82	217.57	2,248.03	-962.42	-770.97	1,039.35	3.49	3.48	0.42
2,678.00	41.36	217.24	2,271.21	-978.77	-783.47	1,056.94	1.64	-1.48	-1.06
2,709.00	40.54	216.97	2,294.62	-994.97	-795.73	1,074.36	2.71	-2.65	-0.87
2,740.00	41.28	216.46	2,318.05	-1,011.24	-807.87	1,091.84	2.62	2.39	-1.65
2,771.00	42.22	216.70	2,341.18	-1,027.82	-820.17	1,109.63	3.08	3.03	0.77
2,802.00	41.44	216.23	2,364.28	-1,044.45	-832.46	1,127.48	2.71	-2.52	-1.52
2,834.00	41.00	216.04	2,388.35	-1,061.48	-844.89	1,145.74	1.43	-1.38	-0.59
2,865.00	41.36	215.14	2,411.68	-1,078.07	-856.77	1,163.51	2.24	1.16	-2.90
2,896.00	42.08	213.65	2,434.82	-1,095.10	-868.42	1,181.68	3.95	2.32	-4.81
2,928.00	42.15	212.93	2,458.56	-1,113.04	-880.20	1,200.78	1.52	0.22	-2.25
2,959.00	41.22	212.10	2,481.71	-1,130.42	-891.28	1,219.25	3.49	-3.00	-2.68
2,990.00	40.12	212.06	2,505.22	-1,147.54	-902.01	1,237.41	3.55	-3.55	-0.13
3,022.00	40.73	211.12	2,529.58	-1,165.21	-912.88	1,256.15	2.69	1.91	-2.94
3,054.00	39.80	211.06	2,554.00	-1,182.92	-923.56	1,274.90	2.91	-2.91	-0.19
3,062.00	39.58	210.95	2,560.15	-1,187.30	-926.19	1,279.54	2.86	-2.71	-1.40
3,104.00	45.49	205.11	2,591.10	-1,212.37	-939.45	1,305.88	16.90	14.06	-13.90
3,136.00	51.23	201.40	2,612.36	-1,234.34	-948.85	1,328.73	19.91	17.94	-11.59

Survey Report



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Wellbore:	Lateral #1	Survey Calculation Method:	Minimum Curvature
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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)
3,168.00	57.87	200.62	2,630.91	-1,258.66	-958.18	1,353.91	20.84	20.75	-2.44
3,199.00	64.09	199.87	2,645.94	-1,284.09	-967.55	1,380.19	20.18	20.06	-2.42
3,231.00	69.63	200.07	2,658.51	-1,311.73	-977.60	1,408.75	17.32	17.31	0.63
3,262.00	74.92	200.20	2,667.94	-1,339.44	-987.76	1,437.39	17.07	17.06	0.42
3,293.00	80.53	201.20	2,674.53	-1,367.77	-998.47	1,466.70	18.37	18.10	3.23
3,324.00	87.32	201.51	2,677.81	-1,396.46	-1,009.69	1,496.43	21.93	21.90	1.00
3,355.00	94.13	201.08	2,677.42	-1,425.32	-1,020.94	1,526.33	22.01	21.97	-1.39
3,387.00	94.37	199.32	2,675.05	-1,455.27	-1,031.96	1,557.28	5.54	0.75	-5.50
3,418.00	93.40	197.32	2,672.95	-1,484.63	-1,041.68	1,587.51	7.16	-3.13	-6.45
3,450.00	91.63	195.36	2,671.54	-1,515.31	-1,050.67	1,618.97	8.25	-5.53	-6.13
3,482.00	91.01	193.40	2,670.81	-1,546.29	-1,058.61	1,650.63	6.42	-1.94	-6.13
3,513.00	89.83	190.71	2,670.58	-1,576.61	-1,065.09	1,681.46	9.48	-3.81	-8.68
3,545.00	90.10	187.80	2,670.60	-1,608.19	-1,070.23	1,713.41	9.13	0.84	-9.09
3,576.00	90.70	185.18	2,670.38	-1,638.98	-1,073.74	1,744.41	8.67	1.94	-8.45
3,608.00	89.06	182.06	2,670.45	-1,670.92	-1,075.76	1,776.37	11.01	-5.13	-9.75
3,638.00	89.23	180.31	2,670.90	-1,700.90	-1,076.38	1,806.26	5.86	0.57	-5.83
3,670.00	89.83	177.36	2,671.16	-1,732.89	-1,075.73	1,837.99	9.41	1.88	-9.22
3,701.00	89.63	175.25	2,671.30	-1,763.83	-1,073.73	1,868.53	6.84	-0.65	-6.81
3,733.00	89.56	171.95	2,671.53	-1,795.62	-1,070.16	1,899.77	10.31	-0.22	-10.31
3,765.00	90.07	170.30	2,671.63	-1,827.24	-1,065.23	1,930.67	5.40	1.59	-5.16
3,797.00	90.44	168.47	2,671.49	-1,858.69	-1,059.33	1,961.31	5.83	1.16	-5.72
3,828.00	90.57	166.11	2,671.22	-1,888.93	-1,052.51	1,990.65	7.62	0.42	-7.61
3,859.00	89.93	163.92	2,671.08	-1,918.87	-1,044.50	2,019.56	7.36	-2.06	-7.06
3,891.00	89.73	160.94	2,671.18	-1,949.37	-1,034.84	2,048.86	9.33	-0.63	-9.31
3,922.00	90.34	158.93	2,671.16	-1,978.49	-1,024.20	2,076.67	6.78	1.97	-6.48
3,954.00	89.36	156.11	2,671.24	-2,008.05	-1,011.97	2,104.76	9.33	-3.06	-8.81
3,985.00	90.40	155.01	2,671.31	-2,036.28	-999.14	2,131.44	4.88	3.35	-3.55
4,017.00	90.50	154.15	2,671.06	-2,065.18	-985.41	2,158.71	2.71	0.31	-2.69
4,048.00	88.96	152.35	2,671.20	-2,092.86	-971.46	2,184.74	7.64	-4.97	-5.81
4,080.00	87.79	150.51	2,672.11	-2,120.95	-956.16	2,211.03	6.81	-3.66	-5.75
4,111.00	87.72	150.09	2,673.32	-2,147.85	-940.81	2,236.15	1.37	-0.23	-1.35
4,142.00	87.28	150.66	2,674.68	-2,174.78	-925.50	2,261.28	2.32	-1.42	1.84
4,173.00	88.49	151.19	2,675.82	-2,201.85	-910.45	2,286.58	4.26	3.90	1.71
4,205.00	88.26	150.86	2,676.73	-2,229.83	-894.95	2,312.75	1.26	-0.72	-1.03
4,236.00	89.50	150.93	2,677.33	-2,256.91	-879.88	2,338.06	4.01	4.00	0.23
4,268.00	89.26	150.92	2,677.68	-2,284.88	-864.33	2,364.21	0.75	-0.75	-0.03
4,299.00	89.29	151.00	2,678.07	-2,311.98	-849.28	2,389.54	0.28	0.10	0.26
4,331.00	89.19	151.05	2,678.50	-2,339.97	-833.78	2,415.72	0.35	-0.31	0.16
4,362.00	89.93	149.73	2,678.74	-2,366.92	-818.47	2,440.87	4.88	2.39	-4.26
4,393.00	90.10	149.79	2,678.73	-2,393.70	-802.85	2,465.83	0.58	0.55	0.19
4,425.00	90.17	149.80	2,678.65	-2,421.36	-786.75	2,491.61	0.22	0.22	0.03
4,456.00	90.64	149.62	2,678.43	-2,448.13	-771.12	2,516.55	1.62	1.52	-0.58
4,488.00	90.60	149.74	2,678.09	-2,475.75	-754.97	2,542.28	0.40	-0.13	0.38
4,519.00	91.27	150.91	2,677.58	-2,502.68	-739.62	2,567.42	4.35	2.16	3.77

Survey Report



Company:	Catamount Energy Partners	Local Co-ordinate Reference:	Well Lamke 33-5-29 #1
Project:	San Juan Basin	TVD Reference:	6119' GL + 11' KB @ 6129.99usft
Site:	Archuleta County CO	MD Reference:	6119' GL + 11' KB @ 6129.99usft
Well:	Lamke 33-5-29 #1	North Reference:	Grid
Wellbore:	Lateral #1	Survey Calculation Method:	Minimum Curvature
Design:	As Drilled	Database:	Grand Junction District

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)
4,550.00	91.17	152.10	2,676.92	-2,529.92	-724.83	2,592.92	3.85	-0.32	3.84
4,582.00	91.31	153.05	2,676.23	-2,558.31	-710.10	2,619.58	3.00	0.44	2.97
4,613.00	90.77	154.18	2,675.67	-2,586.08	-696.33	2,645.71	4.04	-1.74	3.65
4,644.00	88.39	153.43	2,675.89	-2,613.89	-682.64	2,671.90	8.05	-7.68	-2.42
4,676.00	88.15	153.76	2,676.86	-2,642.54	-668.42	2,698.86	1.27	-0.75	1.03
4,708.00	88.89	155.69	2,677.69	-2,671.46	-654.76	2,726.16	6.46	2.31	6.03
4,739.00	89.87	159.20	2,678.02	-2,700.09	-642.87	2,753.35	11.75	3.16	11.32
4,771.00	90.23	161.41	2,677.99	-2,730.21	-632.09	2,782.15	7.00	1.13	6.91
4,802.00	89.40	161.04	2,678.09	-2,759.56	-622.11	2,810.27	2.93	-2.68	-1.19
4,833.00	90.60	162.43	2,678.09	-2,789.00	-612.40	2,838.50	5.92	3.87	4.48
4,865.00	91.85	164.68	2,677.41	-2,819.68	-603.34	2,868.03	8.04	3.91	7.03
4,896.00	91.61	167.37	2,676.47	-2,849.75	-595.86	2,897.13	8.71	-0.77	8.68
4,928.00	91.65	169.89	2,675.56	-2,881.10	-589.55	2,927.63	7.87	0.13	7.88
4,959.00	91.24	172.65	2,674.78	-2,911.73	-584.85	2,957.58	9.00	-1.32	8.90
4,990.00	91.11	176.41	2,674.14	-2,942.58	-581.90	2,987.93	12.13	-0.42	12.13
5,022.00	89.50	178.68	2,673.97	-2,974.55	-580.53	3,019.57	8.70	-5.03	7.09
5,053.00	89.26	178.27	2,674.31	-3,005.53	-579.70	3,050.29	1.53	-0.77	-1.32
5,084.00	89.23	177.90	2,674.72	-3,036.51	-578.66	3,080.98	1.20	-0.10	-1.19
5,115.00	88.82	180.24	2,675.25	-3,067.50	-578.16	3,111.74	7.66	-1.32	7.55
5,147.00	88.32	180.69	2,676.04	-3,099.49	-578.42	3,143.57	2.10	-1.56	1.41
5,178.00	88.05	180.84	2,677.03	-3,130.47	-578.83	3,174.42	1.00	-0.87	0.48
5,210.00	87.88	181.07	2,678.16	-3,162.45	-579.37	3,206.27	0.89	-0.53	0.72
5,241.00	88.66	180.48	2,679.10	-3,193.43	-579.79	3,237.12	3.15	2.52	-1.90
5,273.00	88.36	181.00	2,679.93	-3,225.42	-580.20	3,268.97	1.88	-0.94	1.63
5,304.00	87.75	181.24	2,680.98	-3,256.39	-580.81	3,299.83	2.11	-1.97	0.77
5,336.00	90.20	181.40	2,681.56	-3,288.38	-581.54	3,331.71	7.67	7.66	0.50
5,366.00	89.83	181.42	2,681.55	-3,318.37	-582.28	3,361.61	1.24	-1.23	0.07
5,398.00	89.40	180.63	2,681.76	-3,350.36	-582.85	3,393.48	2.81	-1.34	-2.47
5,429.00	88.79	180.46	2,682.25	-3,381.36	-583.15	3,424.33	2.04	-1.97	-0.55
5,460.00	88.62	180.21	2,682.95	-3,412.35	-583.33	3,455.16	0.98	-0.55	-0.81
5,492.00	88.02	180.39	2,683.89	-3,444.33	-583.50	3,486.98	1.96	-1.88	0.56
5,523.00	87.92	179.99	2,684.99	-3,475.31	-583.60	3,517.79	1.33	-0.32	-1.29
5,554.00	87.55	179.89	2,686.21	-3,506.29	-583.57	3,548.59	1.24	-1.19	-0.32
5,586.00	88.19	179.88	2,687.40	-3,538.27	-583.50	3,580.38	2.00	2.00	-0.03
5,617.00	88.12	180.14	2,688.40	-3,569.25	-583.51	3,611.18	0.87	-0.23	0.84
5,649.00	89.46	179.57	2,689.08	-3,601.24	-583.43	3,642.98	4.55	4.19	-1.78
5,681.00	90.37	179.76	2,689.12	-3,633.24	-583.24	3,674.78	2.91	2.84	0.59
5,712.00	92.32	180.59	2,688.40	-3,664.23	-583.33	3,705.60	6.84	6.29	2.68
5,744.00	92.19	180.77	2,687.14	-3,696.20	-583.71	3,737.43	0.69	-0.41	0.56
5,775.00	92.18	180.12	2,685.96	-3,727.18	-583.95	3,768.25	2.10	-0.03	-2.10
5,806.00	92.69	179.79	2,684.64	-3,758.15	-583.93	3,799.05	1.96	1.65	-1.06
5,837.00	92.68	179.98	2,683.19	-3,789.12	-583.87	3,829.83	0.61	-0.03	0.61
5,869.00	90.70	178.60	2,682.24	-3,821.10	-583.47	3,861.58	7.54	-6.19	-4.31

Survey Report



Company:	Catamount Energy Partners	Local Co-ordinate Reference:	Well Lamke 33-5-29 #1
Project:	San Juan Basin	TVD Reference:	6119' GL + 11' KB @ 6129.99usft
Site:	Archuleta County CO	MD Reference:	6119' GL + 11' KB @ 6129.99usft
Well:	Lamke 33-5-29 #1	North Reference:	Grid
Wellbore:	Lateral #1	Survey Calculation Method:	Minimum Curvature
Design:	As Drilled	Database:	Grand Junction District

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)
5,900.00	91.04	179.48	2,681.77	-3,852.09	-582.95	3,892.34	3.04	1.10	2.84
5,931.00	90.74	179.96	2,681.29	-3,883.09	-582.80	3,923.14	1.83	-0.97	1.55
5,963.00	90.24	180.56	2,681.02	-3,915.09	-582.95	3,954.97	2.44	-1.56	1.88
5,995.00	89.46	180.30	2,681.10	-3,947.08	-583.19	3,986.82	2.57	-2.44	-0.81
6,026.00	89.60	180.37	2,681.36	-3,978.08	-583.37	4,017.66	0.50	0.45	0.23
6,058.00	89.23	180.10	2,681.68	-4,010.08	-583.50	4,049.48	1.43	-1.16	-0.84
6,089.00	88.39	179.07	2,682.33	-4,041.07	-583.27	4,080.27	4.29	-2.71	-3.32
6,121.00	87.76	179.89	2,683.40	-4,073.05	-582.98	4,112.04	3.23	-1.97	2.56
6,152.00	87.78	180.43	2,684.61	-4,104.03	-583.07	4,142.85	1.74	0.06	1.74
6,183.00	87.95	180.42	2,685.76	-4,135.01	-583.30	4,173.67	0.55	0.55	-0.03
6,214.00	87.31	180.95	2,687.04	-4,165.98	-583.67	4,204.50	2.68	-2.06	1.71
6,246.00	86.70	179.74	2,688.72	-4,197.93	-583.86	4,236.30	4.23	-1.91	-3.78
6,277.00	88.49	178.69	2,690.02	-4,228.90	-583.44	4,267.04	6.69	5.77	-3.39
6,308.00	88.39	179.40	2,690.86	-4,259.88	-582.92	4,297.79	2.31	-0.32	2.29
6,340.00	89.73	180.40	2,691.39	-4,291.88	-582.87	4,329.60	5.22	4.19	3.13
6,372.00	90.10	180.99	2,691.43	-4,323.88	-583.25	4,361.45	2.18	1.16	1.84
6,403.00	89.26	181.35	2,691.61	-4,354.87	-583.89	4,392.34	2.95	-2.71	1.16
6,435.00	88.96	181.91	2,692.10	-4,386.85	-584.80	4,424.23	1.99	-0.94	1.75
6,467.00	89.29	179.73	2,692.59	-4,418.84	-585.26	4,456.09	6.89	1.03	-6.81
6,498.00	90.20	179.38	2,692.73	-4,449.84	-585.01	4,486.89	3.15	2.94	-1.13
6,529.00	90.60	179.67	2,692.51	-4,480.84	-584.76	4,517.68	1.59	1.29	0.94
6,561.00	89.39	177.54	2,692.52	-4,512.83	-583.98	4,549.40	7.66	-3.78	-6.66
6,592.00	89.19	176.80	2,692.90	-4,543.79	-582.45	4,580.02	2.47	-0.65	-2.39
6,624.00	89.56	177.25	2,693.25	-4,575.74	-580.79	4,611.61	1.82	1.16	1.41
6,656.00	89.80	177.63	2,693.43	-4,607.71	-579.36	4,643.24	1.40	0.75	1.19
6,687.00	89.56	177.74	2,693.60	-4,638.68	-578.11	4,673.91	0.85	-0.77	0.35
6,719.00	89.30	177.01	2,693.92	-4,670.65	-576.64	4,705.53	2.42	-0.81	-2.28
6,750.00	89.50	177.24	2,694.24	-4,701.61	-575.09	4,736.15	0.98	0.65	0.74
6,781.00	90.00	178.09	2,694.38	-4,732.58	-573.82	4,766.81	3.18	1.61	2.74
6,813.00	90.47	178.87	2,694.25	-4,764.57	-572.97	4,798.52	2.85	1.47	2.44
6,844.00	90.77	178.65	2,693.91	-4,795.56	-572.30	4,829.26	1.20	0.97	-0.71
6,876.00	91.01	178.08	2,693.42	-4,827.54	-571.39	4,860.96	1.93	0.75	-1.78
6,908.00	91.68	179.46	2,692.66	-4,859.53	-570.70	4,892.69	4.79	2.09	4.31
6,939.00	90.84	180.69	2,691.98	-4,890.52	-570.74	4,923.51	4.80	-2.71	3.97
6,970.00	89.43	181.47	2,691.91	-4,921.51	-571.33	4,954.39	5.20	-4.55	2.52
7,002.00	89.97	181.34	2,692.08	-4,953.50	-572.11	4,986.28	1.74	1.69	-0.41
7,033.00	90.00	182.47	2,692.09	-4,984.48	-573.14	5,017.19	3.65	0.10	3.65
7,064.00	90.97	182.88	2,691.82	-5,015.45	-574.59	5,048.13	3.40	3.13	1.32
7,107.00	90.97	182.88	2,691.10	-5,058.39	-576.75	5,091.06	0.00	0.00	0.00

Company:	Catamount Energy Partners	Local Co-ordinate Reference:	Well Lamke 33-5-29 #1
Project:	San Juan Basin	TVD Reference:	6119' GL + 11' KB @ 6129.99usft
Site:	Archuleta County CO	MD Reference:	6119' GL + 11' KB @ 6129.99usft
Well:	Lamke 33-5-29 #1	North Reference:	Grid
Wellbore:	Lateral #1	Survey Calculation Method:	Minimum Curvature
Design:	As Drilled	Database:	Grand Junction District

Design Targets

Target Name

- hit/miss target	Dip Angle	Dip Dir.	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
- Shape	(°)	(°)	(usft)	(usft)	(usft)	(usft)	(usft)		
Lamke 33-5-29 #1 L1	0.00	360.00	2,674.99	-1,417.22	-983.74	1,151,124.44	2,442,537.34	37° 3' 57.763 N	107° 24' 38.259 W
- actual wellpath misses target center by 31.89usft at 3333.96usft MD (2678.09 TVD, -1405.72 N, -1013.32 E)									
- Point									
Lamke 33-5-29 #1 L1	0.00	360.00	2,678.00	-5,068.37	-545.12	1,147,473.17	2,442,975.97	37° 3' 21.759 N	107° 24' 31.928 W
- actual wellpath misses target center by 35.66usft at 7107.00usft MD (2691.10 TVD, -5058.39 N, -576.75 E)									
- Point									

Checked By: _____ Approved By: _____ Date: _____