

# Catamount Energy Partners

## Standard Planning Report

Lamke 33-5-29 #1

Sec 29U T33N R5W

La Plata County CO

July 9, 2015



# Catamount Energy Partners

## DIRECTIONAL DRILLING PLAN

Well: Lamke 33-5-29 #1  
 STR: Sec 29U T33N R5W  
 Location (Ft.): 530FSL , 199FEL  
 Field: Ignacio Blanco Field  
 Co, State: La Plata County, Colorado

### SECTION DETAILS

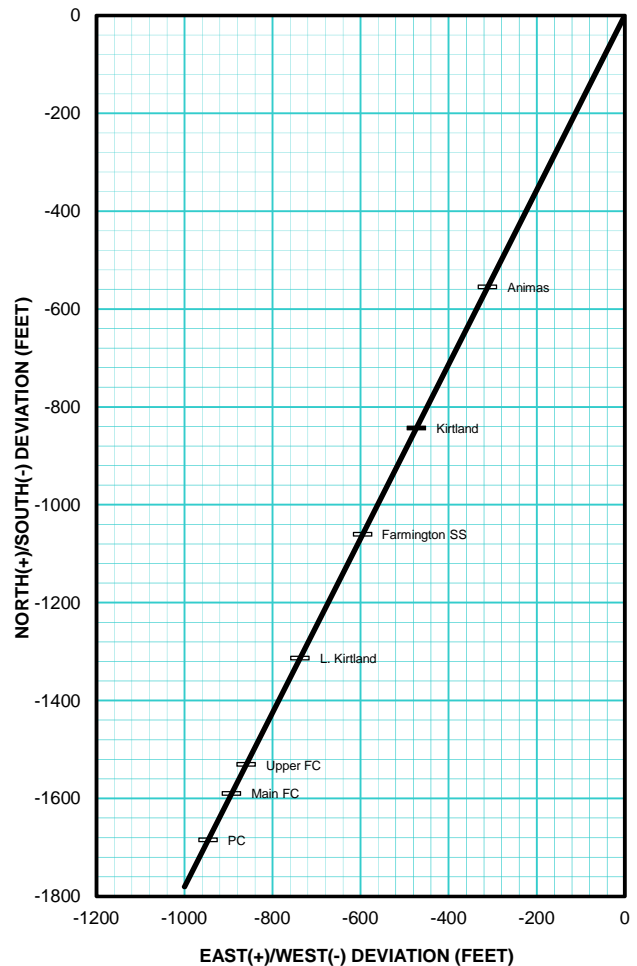
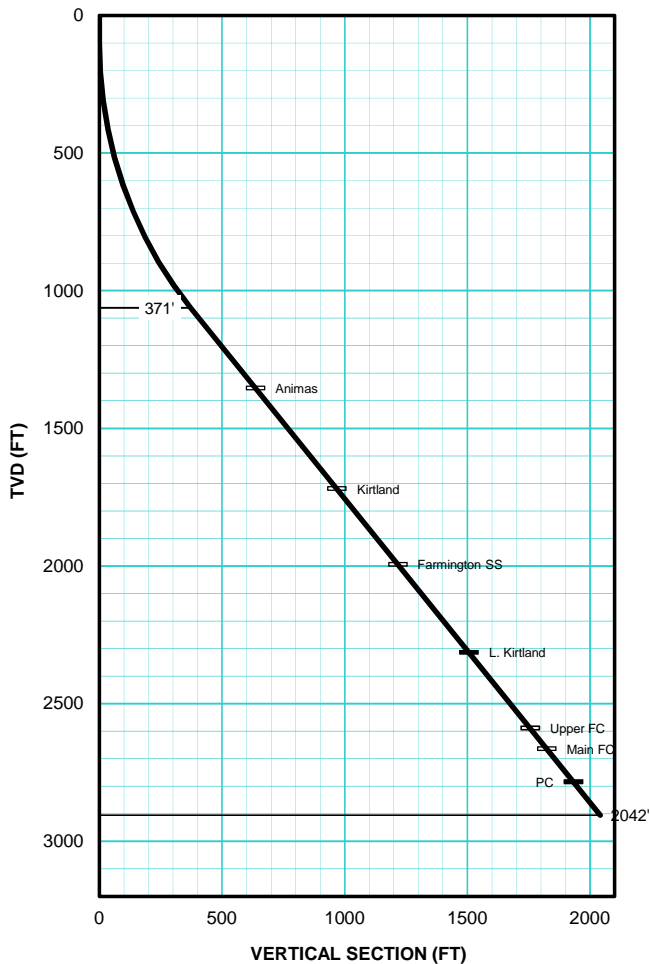
Section	MD	Incl	Azi	TVD	+N/-S	+E/-W	VSec
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2	100.00	0.00	0.00	100.00	0.00	0.00	0.00
3	1154.75	42.19	209.33	1061.99	-323.54	-181.77	371.10
4	3642.22	42.19	209.33	2905.00	-1780.00	-1000.00	2041.67 PBHL

### ESTIMATED FORMATION TOP DETAILS

Formation	TVD Path	MD Path	+N/-S	+E/-W
Animas	1355.00	1550.23	-555.10	-311.85
Kirtland Shale	1720.00	2042.86	-843.54	-473.90
Farmington Sandstone	1995.00	2414.02	-1060.86	-595.99
Lower Kirtland Shale	2315.00	2845.91	-1313.75	-738.06
Upper Fruitland Coal	2590.00	3217.07	-1531.07	-860.15
Main Fruitland Coal	2665.00	3318.30	-1590.34	-893.45
Pictured Cliffs	2785.00	3480.26	-1685.17	-946.72

GL: 6119'

KB: 6135'



**Lamke 32-5-29 #1, Plan 1**

Lamke 32-5-29 #1, Plan 1										
Operator	Catamount Energy Partners			Units	feet, °/100ft		15:50 Thursday, July 9, 2015 Page 1 of 3			
Field	Ignacio Blanco			County	Archuleta		Vertical Section Azimuth	209.33		
Well Name	Lamke 32-5-29 #1			State	CO		Survey Calculation Method	Minimum Curvature		
Plan	1			Country			Database	Access		
Location	530 FSL 199 FEL S29 T33N R5W					MapZone	UTM		Lat Long Ref	NAD83
Site						SurfaceX	0	Surface Long	107.40736	
Slot Name		UWI				SurfaceY	0	Surface Lat	37.07	
Well Number		API				Z Datum	KB			
Project						Surface Z	6135	Ground Level	6119	
DIRECTIONAL WELL PLAN										
MD*	INC*	AZI*	TVD*	N*	E*	DLS*	V. S.*	MapE*	MapN*	SysTVD*
ft	deg	deg	ft	ft	ft	°/100ft	ft	ft	ft	ft
*** RKB (at MD = 0.00)										
0.00	0.00	0.0	0.00	0.00	0.00		0.00	0.00	0.00	6135.00
50.00	0.00	0.0	50.00	0.00	0.00	0.00	0.00	0.00	0.00	6085.00
*** KOP (at MD = 100.00)										
100.00	0.00	0.0	100.00	0.00	0.00	0.00	0.00	0.00	0.00	6035.00
150.00	2.00	209.3	149.99	-0.76	-0.43	4.00	0.87	-0.43	-0.76	5985.01
200.00	4.00	209.3	199.92	-3.04	-1.71	4.00	3.49	-1.71	-3.04	5935.08
250.00	6.00	209.3	249.73	-6.84	-3.84	4.00	7.85	-3.84	-6.84	5885.27
300.00	8.00	209.3	299.35	-12.15	-6.83	4.00	13.94	-6.83	-12.15	5835.65
350.00	10.00	209.3	348.73	-18.97	-10.66	4.00	21.76	-10.66	-18.97	5786.27
400.00	12.00	209.3	397.81	-27.29	-15.33	4.00	31.30	-15.33	-27.29	5737.19
450.00	14.00	209.3	446.53	-37.10	-20.84	4.00	42.55	-20.84	-37.10	5688.47
500.00	16.00	209.3	494.82	-48.38	-27.18	4.00	55.49	-27.18	-48.38	5640.18
550.00	18.00	209.3	542.63	-61.12	-34.34	4.00	70.11	-34.34	-61.12	5592.37
600.00	20.00	209.3	589.91	-75.31	-42.31	4.00	86.38	-42.31	-75.31	5545.09
650.00	22.00	209.3	636.58	-90.93	-51.09	4.00	104.30	-51.09	-90.93	5498.42
700.00	24.00	209.3	682.61	-107.97	-60.65	4.00	123.84	-60.65	-107.97	5452.39
750.00	26.00	209.3	727.92	-126.39	-71.00	4.00	144.97	-71.00	-126.39	5407.08
800.00	28.00	209.3	772.47	-146.18	-82.12	4.00	167.67	-82.12	-146.18	5362.53
850.00	30.00	209.3	816.20	-167.31	-93.99	4.00	191.90	-93.99	-167.31	5318.80
900.00	32.00	209.3	859.05	-189.76	-106.61	4.00	217.66	-106.61	-189.76	5275.95
950.00	34.00	209.3	900.98	-213.50	-119.94	4.00	244.89	-119.94	-213.50	5234.02
1000.00	36.00	209.3	941.94	-238.50	-133.99	4.00	273.56	-133.99	-238.50	5193.06
1050.00	38.00	209.3	981.87	-264.74	-148.73	4.00	303.65	-148.73	-264.74	5153.13
1100.00	40.00	209.3	1020.73	-292.17	-164.14	4.00	335.12	-164.14	-292.17	5114.27
1150.00	42.00	209.3	1058.46	-320.76	-180.20	4.00	367.92	-180.20	-320.76	5076.54
1154.75	42.19	209.3	1061.99	-323.54	-181.77	4.00	371.10	-181.77	-323.54	5073.01
1200.00	42.19	209.3	1095.51	-350.04	-196.65	0.00	401.49	-196.65	-350.04	5039.49
1250.00	42.19	209.3	1132.56	-379.31	-213.10	0.00	435.07	-213.10	-379.31	5002.44
1300.00	42.19	209.3	1169.60	-408.59	-229.54	0.00	468.65	-229.54	-408.59	4965.40
1350.00	42.19	209.3	1206.65	-437.86	-245.99	0.00	502.23	-245.99	-437.86	4928.35
1400.00	42.19	209.3	1243.69	-467.14	-262.44	0.00	535.81	-262.44	-467.14	4891.31
1450.00	42.19	209.3	1280.74	-496.42	-278.88	0.00	569.39	-278.88	-496.42	4854.26
1500.00	42.19	209.3	1317.79	-525.69	-295.33	0.00	602.97	-295.33	-525.69	4817.21
1550.00	42.19	209.3	1354.83	-554.97	-311.78	0.00	636.55	-311.78	-554.97	4780.17
1600.00	42.19	209.3	1391.88	-584.24	-328.23	0.00	670.13	-328.23	-584.24	4743.12

**Lamke 32-5-29 #1, Plan 1**

Operator	Catamount Energy Partners			Units	feet, °/100ft		15:50 Thursday, July 9, 2015 Page 2 of 3			
Field	Ignacio Blanco			County	Archuleta		Vertical Section Azimuth		209.33	
Well Name	Lamke 32-5-29 #1			State	CO		Survey Calculation Method		Minimum Curvature	
Plan	1			Country			Database		Access	
Location	530 FSL 199 FEL S29 T33N R5W					MapZone	UTM		Lat Long Ref	NAD83
Site						SurfaceX	0	Surface Long	107.40736	
Slot Name		UWI				SurfaceY	0	Surface Lat	37.07	
Well Number		API				Z Datum	KB			
Project						Surface Z	6135	Ground Level	6119	
DIRECTIONAL WELL PLAN										
MD*	INC*	AZI*	TVD*	N*	E*	DLS*	V. S.*	MapE*	MapN*	SysTVD*
ft	deg	deg	ft	ft	ft	°/100ft	ft	ft	ft	ft
1650.00	42.19	209.3	1428.92	-613.52	-344.67	0.00	703.71	-344.67	-613.52	4706.08
1700.00	42.19	209.3	1465.97	-642.79	-361.12	0.00	737.29	-361.12	-642.79	4669.03
1750.00	42.19	209.3	1503.02	-672.07	-377.57	0.00	770.87	-377.57	-672.07	4631.98
1800.00	42.19	209.3	1540.06	-701.35	-394.02	0.00	804.45	-394.02	-701.35	4594.94
1850.00	42.19	209.3	1577.11	-730.62	-410.46	0.00	838.03	-410.46	-730.62	4557.89
1900.00	42.19	209.3	1614.15	-759.90	-426.91	0.00	871.61	-426.91	-759.90	4520.85
1950.00	42.19	209.3	1651.20	-789.17	-443.36	0.00	905.19	-443.36	-789.17	4483.80
2000.00	42.19	209.3	1688.25	-818.45	-459.80	0.00	938.77	-459.80	-818.45	4446.75
2050.00	42.19	209.3	1725.29	-847.73	-476.25	0.00	972.35	-476.25	-847.73	4409.71
2100.00	42.19	209.3	1762.34	-877.00	-492.70	0.00	1005.92	-492.70	-877.00	4372.66
2150.00	42.19	209.3	1799.39	-906.28	-509.15	0.00	1039.50	-509.15	-906.28	4335.61
2200.00	42.19	209.3	1836.43	-935.55	-525.59	0.00	1073.08	-525.59	-935.55	4298.57
2250.00	42.19	209.3	1873.48	-964.83	-542.04	0.00	1106.66	-542.04	-964.83	4261.52
2300.00	42.19	209.3	1910.52	-994.11	-558.49	0.00	1140.24	-558.49	-994.11	4224.48
2350.00	42.19	209.3	1947.57	-1023.38	-574.93	0.00	1173.82	-574.93	-1023.38	4187.43
2400.00	42.19	209.3	1984.62	-1052.66	-591.38	0.00	1207.40	-591.38	-1052.66	4150.38
2450.00	42.19	209.3	2021.66	-1081.93	-607.83	0.00	1240.98	-607.83	-1081.93	4113.34
2500.00	42.19	209.3	2058.71	-1111.21	-624.28	0.00	1274.56	-624.28	-1111.21	4076.29
2550.00	42.19	209.3	2095.75	-1140.49	-640.72	0.00	1308.14	-640.72	-1140.49	4039.25
2600.00	42.19	209.3	2132.80	-1169.76	-657.17	0.00	1341.72	-657.17	-1169.76	4002.20
2650.00	42.19	209.3	2169.85	-1199.04	-673.62	0.00	1375.30	-673.62	-1199.04	3965.15
2700.00	42.19	209.3	2206.89	-1228.31	-690.06	0.00	1408.88	-690.06	-1228.31	3928.11
2750.00	42.19	209.3	2243.94	-1257.59	-706.51	0.00	1442.46	-706.51	-1257.59	3891.06
2800.00	42.19	209.3	2280.98	-1286.87	-722.96	0.00	1476.04	-722.96	-1286.87	3854.02
2850.00	42.19	209.3	2318.03	-1316.14	-739.41	0.00	1509.62	-739.41	-1316.14	3816.97
2900.00	42.19	209.3	2355.08	-1345.42	-755.85	0.00	1543.20	-755.85	-1345.42	3779.92
2950.00	42.19	209.3	2392.12	-1374.69	-772.30	0.00	1576.78	-772.30	-1374.69	3742.88
3000.00	42.19	209.3	2429.17	-1403.97	-788.75	0.00	1610.36	-788.75	-1403.97	3705.83
3050.00	42.19	209.3	2466.21	-1433.25	-805.19	0.00	1643.94	-805.19	-1433.25	3668.79
3100.00	42.19	209.3	2503.26	-1462.52	-821.64	0.00	1677.52	-821.64	-1462.52	3631.74
3150.00	42.19	209.3	2540.31	-1491.80	-838.09	0.00	1711.10	-838.09	-1491.80	3594.69
3200.00	42.19	209.3	2577.35	-1521.07	-854.54	0.00	1744.68	-854.54	-1521.07	3557.65
3250.00	42.19	209.3	2614.40	-1550.35	-870.98	0.00	1778.26	-870.98	-1550.35	3520.60
3300.00	42.19	209.3	2651.44	-1579.63	-887.43	0.00	1811.84	-887.43	-1579.63	3483.56
3350.00	42.19	209.3	2688.49	-1608.90	-903.88	0.00	1845.42	-903.88	-1608.90	3446.51

**Lamke 32-5-29 #1, Plan 1**

<b>Operator</b>	Catamount Energy Partners	<b>Units</b>	feet, °/100ft	15:50 Thursday, July 9, 2015	Page 3 of 3
<b>Field</b>	Ignacio Blanco	<b>County</b>	Archuleta	<b>Vertical Section Azimuth</b>	209.33
<b>Well Name</b>	Lamke 32-5-29 #1	<b>State</b>	CO	<b>Survey Calculation Method</b>	Minimum Curvature
<b>Plan</b>	1	<b>Country</b>		<b>Database</b>	Access

<b>Location</b>	530 FSL 199 FEL S29 T33N R5W	<b>MapZone</b>	UTM	<b>Lat Long Ref</b>	NAD83
<b>Site</b>		<b>SurfaceX</b>	0	<b>Surface Long</b>	107.40736
<b>Slot Name</b>	<b>UWI</b>	<b>SurfaceY</b>	0	<b>Surface Lat</b>	37.07
<b>Well Number</b>	<b>API</b>	<b>Z Datum</b>	KB		
<b>Project</b>		<b>Surface Z</b>	6135	<b>Ground Level</b>	6119

**DIRECTIONAL WELL PLAN**

<b>MD*</b>	<b>INC*</b>	<b>AZI*</b>	<b>TVD*</b>	<b>N*</b>	<b>E*</b>	<b>DLS*</b>	<b>V. S.*</b>	<b>MapE*</b>	<b>MapN*</b>	<b>SysTVD*</b>
ft	deg	deg	ft	ft	ft	°/100ft	ft	ft	ft	ft
3400.00	42.19	209.3	2725.54	-1638.18	-920.32	0.00	1878.99	-920.32	-1638.18	3409.46
3450.00	42.19	209.3	2762.58	-1667.45	-936.77	0.00	1912.57	-936.77	-1667.45	3372.42
3500.00	42.19	209.3	2799.63	-1696.73	-953.22	0.00	1946.15	-953.22	-1696.73	3335.37
3550.00	42.19	209.3	2836.67	-1726.01	-969.67	0.00	1979.73	-969.67	-1726.01	3298.33
3600.00	42.19	209.3	2873.72	-1755.28	-986.11	0.00	2013.31	-986.11	-1755.28	3261.28
3642.22	42.19	209.3	2905.00	-1780.00	-1000.00	0.00	2041.67	-1000.00	-1780.00	3230.00