



Survey Report

Service Company: Altitude Energy Partners

Location: Jal

Well: Tour Bus 23 State 504H

Rig: H & P 650

API or UWI:

Job Number: AEP-1764

State: New Mexico

Operating Company: Centennial Resource Development LLC

County: Lea County

Magnetic Declination: 7.7

Country: United States

Proposed Azimuth: 171.30°

Comment:

North Reference: TRUE

Latitude: 32.211181

Longitude: -103.466983

Tie-In Data

MD	Inclination	Azimuth	TVD	NS	EW
0.00	0.00	0.00	0.00	0.00	0.00

Survey Data

MD	Inclination	Azimuth	TVD	NS	EW	CA	CD	VS	DLS	TEMP
169.00	0.53	281.12	169.00	0.15	-0.77	281.12	0.78	-0.27	0.31	
231.00	0.56	290.21	230.99	0.31	-1.33	283.12	1.37	-0.51	0.15	
326.00	0.62	300.24	325.99	0.73	-2.21	288.26	2.33	-1.06	0.13	
504.00	0.28	291.66	503.98	1.38	-3.45	291.75	3.71	-1.88	0.19	
692.00	0.06	312.20	691.98	1.61	-3.95	292.20	4.26	-2.19	0.12	
881.00	0.17	40.06	880.98	1.89	-3.84	296.23	4.28	-2.45	0.09	
1069.00	0.11	353.14	1068.98	2.28	-3.68	301.81	4.33	-2.82	0.07	
1257.00	0.06	171.81	1256.98	2.37	-3.69	302.67	4.38	-2.90	0.09	
1351.00	0.08	171.77	1350.98	2.25	-3.67	301.51	4.31	-2.78	0.02	
1540.00	0.11	256.86	1539.98	2.08	-3.83	298.50	4.36	-2.64	0.07	

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1690.00	0.13	307.20	1689.98	2.15	-4.11	297.64	4.64	-2.75	0.07	
1806.00	0.08	222.77	1805.98	2.17	-4.27	296.97	4.79	-2.79	0.13	
1900.00	0.17	211.50	1899.98	2.00	-4.39	294.56	4.82	-2.64	0.10	
1994.00	0.62	103.43	1993.98	1.77	-3.96	294.03	4.34	-2.35	0.74	
2088.00	1.68	104.75	2087.96	1.30	-2.14	301.29	2.50	-1.61	1.13	
2182.00	2.92	100.89	2181.88	0.50	1.55	72.26	1.62	-0.26	1.33	
2276.00	4.70	99.57	2275.67	-0.60	7.70	94.44	7.72	1.75	1.90	
2371.00	6.18	99.92	2370.24	-2.13	16.57	97.31	16.71	4.61	1.56	
2465.00	6.65	99.55	2463.65	-3.90	26.92	98.24	27.20	7.93	0.50	
2559.00	6.57	99.32	2557.03	-5.67	37.60	98.58	38.02	11.30	0.09	
2653.00	6.69	99.31	2650.40	-7.43	48.31	98.74	48.88	14.65	0.13	
2747.00	6.70	101.17	2743.76	-9.38	59.09	99.02	59.83	18.21	0.23	
2841.00	6.81	99.23	2837.10	-11.34	69.97	99.20	70.88	21.79	0.27	
2936.00	6.99	98.74	2931.41	-13.12	81.24	99.17	82.30	25.25	0.20	
3030.00	7.08	97.13	3024.71	-14.70	92.65	99.02	93.81	28.55	0.23	
3124.00	7.07	96.67	3117.99	-16.10	104.14	98.79	105.38	31.66	0.06	
3218.00	7.05	97.08	3211.28	-17.48	115.61	98.60	116.92	34.76	0.06	
3312.00	6.96	96.02	3304.58	-18.79	127.00	98.41	128.38	37.78	0.17	
3406.00	7.07	96.98	3397.87	-20.09	138.40	98.26	139.85	40.79	0.17	
3500.00	6.57	96.90	3491.21	-21.44	149.48	98.16	151.01	43.80	0.53	
3594.00	6.23	97.90	3584.62	-22.78	159.88	98.11	161.49	46.70	0.38	
3688.00	5.86	97.17	3678.10	-24.08	169.69	98.08	171.39	49.47	0.40	
3782.00	5.52	96.57	3771.64	-25.20	178.94	98.02	180.71	51.98	0.37	
3876.00	5.28	97.99	3865.22	-26.32	187.72	97.98	189.55	54.41	0.29	
3970.00	4.94	99.30	3958.84	-27.57	195.99	98.01	197.92	56.90	0.38	
4065.00	5.33	101.57	4053.46	-29.12	204.35	98.11	206.42	59.69	0.46	
4159.00	5.71	98.93	4147.03	-30.72	213.25	98.20	215.45	62.62	0.49	
4253.00	5.37	97.60	4240.59	-32.03	222.23	98.20	224.52	65.27	0.39	104.6°F
4347.00	5.33	98.49	4334.18	-33.25	230.91	98.20	233.29	67.80	0.10	101.0°F
4441.00	5.74	102.98	4427.74	-34.96	239.80	98.29	242.34	70.83	0.63	104.6°F
4535.00	5.94	104.39	4521.25	-37.22	249.10	98.50	251.86	74.47	0.26	104.6°F
4630.00	6.00	105.64	4615.74	-39.78	258.64	98.74	261.68	78.44	0.15	104.6°F
4724.00	6.08	106.35	4709.22	-42.51	268.15	99.01	271.50	82.58	0.12	104.6°F
4818.00	5.87	106.20	4802.71	-45.25	277.54	99.26	281.20	86.71	0.22	104.6°F

4912.00	5.72	107.13	4896.22	-47.97	286.63	99.50	290.62	90.77	0.19	104.6°F
5006.00	5.51	108.05	4989.77	-50.75	295.40	99.75	299.73	94.85	0.24	104.6°F
5100.00	5.38	108.46	5083.35	-53.54	303.87	99.99	308.55	98.89	0.14	104.6°F
5195.00	5.80	104.63	5177.90	-56.16	312.74	100.18	317.74	102.82	0.59	104.6°F
5289.00	6.21	101.73	5271.38	-58.40	322.31	100.27	327.56	106.48	0.54	104.6°F
5383.00	6.12	103.58	5364.84	-60.61	332.16	100.34	337.65	110.15	0.23	104.6°F
5477.00	5.94	104.62	5458.32	-63.01	341.74	100.45	347.50	113.98	0.22	104.6°F
5571.00	5.64	105.16	5551.84	-65.45	350.90	100.56	356.95	117.77	0.32	104.6°F
5612.00	5.75	105.66	5592.64	-66.53	354.83	100.62	361.01	119.43	0.29	104.6°F
5664.00	5.42	105.21	5644.39	-67.88	359.70	100.69	366.05	121.50	0.64	104.6°F
5758.00	5.64	106.65	5737.95	-70.36	368.41	100.81	375.07	125.28	0.28	104.6°F
5852.00	6.04	102.37	5831.46	-72.75	377.67	100.90	384.61	129.04	0.63	106.5°F
5946.00	6.30	102.87	5924.92	-74.95	387.53	100.95	394.71	132.71	0.28	108.3°F
6041.00	6.34	104.47	6019.34	-77.43	397.69	101.02	405.16	136.69	0.19	111.9°F
6135.00	6.50	103.90	6112.75	-80.00	407.88	101.10	415.65	140.78	0.18	111.9°F
6229.00	6.82	100.01	6206.12	-82.25	418.54	101.12	426.54	144.61	0.59	108.3°F
6324.00	7.11	99.91	6300.42	-84.24	429.89	101.09	438.06	148.30	0.31	111.9°F
6418.00	7.35	100.33	6393.67	-86.32	441.53	101.06	449.89	152.11	0.26	111.9°F
6512.00	7.59	100.36	6486.87	-88.52	453.55	101.04	462.11	156.10	0.26	111.9°F
6606.00	7.91	100.44	6580.01	-90.80	466.02	101.03	474.79	160.25	0.34	111.9°F
6700.00	7.68	100.53	6673.14	-93.12	478.56	101.01	487.53	164.44	0.25	115.5°F
6795.00	7.61	101.21	6767.30	-95.51	490.97	101.01	500.17	168.67	0.12	115.5°F
6889.00	7.76	101.93	6860.46	-98.03	503.28	101.02	512.74	173.03	0.19	119.1°F
6983.00	7.79	101.60	6953.59	-100.62	515.73	101.04	525.46	177.47	0.06	119.1°F
7077.00	7.54	99.24	7046.75	-102.89	528.06	101.03	537.99	181.58	0.43	119.1°F
7172.00	6.71	94.73	7141.02	-104.35	539.74	100.94	549.74	184.79	1.05	119.1°F
7266.00	5.26	97.95	7234.50	-105.40	549.49	100.86	559.50	187.30	1.58	119.1°F
7360.00	4.45	103.49	7328.17	-106.85	557.30	100.85	567.45	189.92	0.99	122.7°F
7455.00	4.79	94.00	7422.86	-107.98	564.84	100.82	575.07	192.18	0.88	122.7°F
7549.00	5.12	90.98	7516.51	-108.33	572.95	100.71	583.10	193.75	0.45	122.7°F
7643.00	5.11	101.31	7610.13	-109.22	581.25	100.64	591.42	195.89	0.98	122.7°F
7737.00	5.10	105.49	7703.76	-111.16	589.38	100.68	599.77	199.03	0.40	122.7°F
7832.00	5.10	104.77	7798.39	-113.36	597.53	100.74	608.19	202.44	0.07	126.3°F
7926.00	4.98	105.57	7892.02	-115.52	605.50	100.80	616.42	205.78	0.15	126.3°F

8021.00	4.86	99.81	7986.67	-117.32	613.44	100.83	624.56	208.76	0.53	126.3°F
8115.00	4.97	95.69	8080.33	-118.40	621.41	100.79	632.59	211.03	0.39	129.9°F
8209.00	4.71	96.55	8173.99	-119.24	629.30	100.73	640.50	213.06	0.29	129.9°F
8303.00	5.30	93.94	8267.63	-119.98	637.46	100.66	648.66	215.02	0.67	129.9°F
8397.00	5.18	93.65	8361.24	-120.55	646.03	100.57	657.18	216.88	0.13	133.6°F
8491.00	4.71	94.22	8454.89	-121.10	654.11	100.49	665.23	218.65	0.50	133.6°F
8585.00	4.24	96.45	8548.60	-121.78	661.42	100.43	672.53	220.42	0.53	133.6°F
8680.00	4.12	99.11	8643.35	-122.71	668.28	100.41	679.45	222.38	0.24	133.6°F
8774.00	5.05	97.09	8737.05	-123.76	675.72	100.38	686.96	224.54	1.00	133.6°F
8868.00	5.31	96.13	8830.67	-124.73	684.15	100.33	695.42	226.78	0.29	137.2°F
8962.00	5.07	94.94	8924.28	-125.55	692.61	100.27	703.90	228.87	0.28	137.2°F
9057.00	5.06	97.07	9018.91	-126.43	700.95	100.22	712.26	231.00	0.20	137.2°F
9151.00	4.74	100.82	9112.57	-127.67	708.88	100.21	720.28	233.43	0.48	137.2°F
9246.00	4.15	104.20	9207.28	-129.25	716.06	100.23	727.64	236.08	0.68	133.6°F
9341.00	4.60	110.25	9302.00	-131.41	722.97	100.30	734.82	239.26	0.68	133.6°F
9435.00	4.59	109.96	9395.70	-134.00	730.04	100.40	742.24	242.89	0.03	133.6°F
9529.00	2.85	91.22	9489.50	-135.34	735.92	100.42	748.26	245.09	2.23	133.6°F
9623.00	1.49	45.96	9583.44	-134.54	739.13	100.32	751.27	244.79	2.22	137.2°F
9663.00	1.59	16.61	9623.43	-133.64	739.66	100.24	751.64	243.99	1.97	137.2°F
9729.00	1.30	15.84	9689.40	-132.04	740.13	100.12	751.82	242.48	0.44	129.9°F
9760.00	1.13	176.77	9720.40	-132.01	740.24	100.11	751.92	242.46	7.73	129.9°F
9792.00	4.13	182.05	9752.36	-133.48	740.22	100.22	752.16	243.91	9.40	129.9°F
9823.00	6.63	178.83	9783.23	-136.38	740.22	100.44	752.67	246.78	8.12	129.9°F
9854.00	9.92	176.78	9813.90	-140.84	740.40	100.77	753.68	251.21	10.65	133.6°F
9886.00	12.79	178.78	9845.27	-147.13	740.63	101.24	755.11	257.47	9.05	133.6°F
9917.00	15.53	175.31	9875.32	-154.70	741.04	101.79	757.02	265.01	9.25	133.6°F
9948.00	19.12	172.53	9904.91	-163.88	742.04	102.45	759.92	274.23	11.88	133.6°F
9980.00	20.78	174.45	9934.99	-174.72	743.27	103.23	763.54	285.14	5.58	133.6°F
10012.00	23.21	176.91	9964.66	-186.67	744.16	104.08	767.22	297.09	8.12	133.6°F
10043.00	27.06	178.60	9992.72	-199.83	744.67	105.02	771.01	310.17	12.63	133.6°F
10074.00	30.06	180.21	10019.95	-214.64	744.81	106.08	775.12	324.83	9.99	137.2°F
10106.00	33.12	180.34	10047.20	-231.40	744.73	107.26	779.85	341.39	9.56	137.2°F
10137.00	36.69	179.20	10072.62	-249.14	744.81	108.50	785.37	358.93	11.71	137.2°F
10169.00	39.92	178.37	10097.73	-268.97	745.23	109.85	792.28	378.60	10.22	137.2°F

10200.00	42.24	178.02	10121.10	-289.32	745.88	111.20	800.02	398.82	7.52	137.2°F
10231.00	44.06	177.82	10143.71	-310.51	746.65	112.58	808.64	419.88	5.89	137.2°F
10263.00	46.33	176.83	10166.26	-333.19	747.71	114.02	818.59	442.45	7.43	137.2°F
10294.00	48.86	176.29	10187.16	-356.03	749.09	115.42	829.39	465.25	8.26	137.2°F
10326.00	52.83	176.90	10207.37	-380.80	750.55	116.90	841.63	489.95	12.49	137.2°F
10357.00	56.68	177.70	10225.25	-406.08	751.74	118.38	854.41	515.12	12.60	137.2°F
10389.00	60.37	178.09	10241.96	-433.35	752.74	119.93	868.57	542.23	11.58	137.2°F
10420.00	64.22	178.65	10256.37	-460.78	753.52	121.45	883.24	569.46	12.52	140.8°F
10451.00	66.08	179.06	10269.39	-488.91	754.08	122.96	898.70	597.34	6.12	140.8°F
10483.00	67.61	179.51	10281.98	-518.32	754.45	124.49	915.34	626.48	4.95	140.8°F
10514.00	69.24	179.75	10293.38	-547.15	754.64	125.94	932.12	655.00	5.31	137.2°F
10546.00	71.28	179.93	10304.18	-577.27	754.72	127.41	950.18	684.79	6.40	140.8°F
10577.00	73.33	180.24	10313.60	-606.80	754.67	128.80	968.37	713.97	6.68	140.8°F
10609.00	75.24	180.64	10322.27	-637.60	754.44	130.20	987.78	744.38	6.09	140.8°F
10640.00	77.51	180.43	10329.57	-667.73	754.16	131.52	1007.28	774.12	7.35	140.8°F
10672.00	79.50	181.22	10335.95	-699.08	753.70	132.85	1028.00	805.04	6.67	140.8°F
10703.00	80.99	181.84	10341.20	-729.62	752.89	134.10	1048.42	835.11	5.19	140.8°F
10766.00	85.91	181.92	10348.39	-792.16	750.84	136.53	1091.45	896.61	7.81	140.8°F
10785.00	86.81	181.98	10349.59	-811.11	750.19	137.23	1104.84	915.25	4.75	144.6°F
10879.00	89.10	181.97	10352.95	-904.98	746.95	140.46	1173.43	1007.56	2.44	144.6°F
10974.00	90.32	181.47	10353.43	-999.94	744.10	143.35	1246.42	1100.99	1.39	148.0°F
11068.00	89.61	180.59	10353.49	-1093.92	742.41	145.84	1322.06	1193.63	1.20	148.0°F
11162.00	89.27	179.91	10354.40	-1187.91	742.00	148.01	1400.61	1286.48	0.81	148.0°F
11256.00	89.22	179.16	10355.64	-1281.90	742.76	149.91	1481.54	1379.50	0.80	148.0°F
11351.00	90.00	179.51	10356.29	-1376.89	743.87	151.62	1564.98	1473.57	0.90	151.6°F
11445.00	91.23	179.34	10355.28	-1470.88	744.81	153.14	1648.71	1566.62	1.32	151.6°F
11539.00	90.22	179.22	10354.09	-1564.87	745.99	154.51	1733.58	1659.70	1.08	151.6°F
11633.00	91.51	179.14	10352.67	-1658.84	747.34	155.75	1819.42	1752.80	1.37	155.2°F
11728.00	91.12	179.20	10350.49	-1753.81	748.71	156.88	1906.94	1846.88	0.42	155.2°F
11822.00	89.78	179.03	10349.75	-1847.79	750.16	157.90	1994.26	1940.00	1.44	155.6°F
11916.00	87.14	178.73	10352.28	-1941.73	752.00	158.83	2082.26	2033.14	2.83	155.2°F
12010.00	86.97	178.19	10357.11	-2035.57	754.52	159.66	2170.91	2126.28	0.60	155.2°F
12104.00	87.48	178.40	10361.66	-2129.42	757.32	160.42	2260.08	2219.47	0.59	158.9°F
12199.00	87.31	178.50	10365.98	-2224.29	759.88	161.14	2350.51	2313.64	0.21	158.9°F

12294.00	86.64	178.96	10370.99	-2319.13	761.99	161.81	2441.10	2407.71	0.86	158.9°F
12388.00	86.81	179.16	10376.36	-2412.96	763.53	162.44	2530.88	2500.69	0.28	158.9°F
12482.00	86.53	179.84	10381.82	-2506.80	764.35	163.04	2620.74	2593.57	0.78	158.9°F
12576.00	86.30	180.05	10387.70	-2600.62	764.44	163.62	2710.64	2686.32	0.33	158.9°F
12670.00	87.03	180.16	10393.17	-2694.46	764.26	164.16	2800.75	2779.06	0.79	158.9°F
12765.00	88.38	180.74	10396.97	-2789.38	763.52	164.69	2891.99	2872.77	1.55	158.9°F
12859.00	89.55	181.11	10398.67	-2883.35	762.00	165.20	2982.34	2965.43	1.31	158.9°F
12953.00	89.94	180.53	10399.09	-2977.34	760.66	165.67	3072.97	3058.14	0.74	158.9°F
13047.00	89.72	180.31	10399.37	-3071.33	759.97	166.10	3163.96	3150.95	0.33	58.9°F
13142.00	90.39	180.08	10399.28	-3166.33	759.64	166.51	3256.18	3244.80	0.75	158.9°F
13236.00	89.66	180.01	10399.23	-3260.33	759.57	166.89	3347.64	3337.71	0.78	158.9°F
13330.00	88.71	180.41	10400.57	-3354.32	759.22	167.25	3439.17	3430.56	1.10	158.9°F
13424.00	89.38	180.41	10402.14	-3448.30	758.55	167.59	3530.75	3523.37	0.71	158.9°F
13518.00	90.06	180.04	10402.60	-3542.30	758.18	167.92	3622.53	3616.23	0.82	158.9°F
13613.00	89.89	180.05	10402.64	-3637.30	758.11	168.23	3715.47	3710.12	0.18	158.9°F
13707.00	89.10	179.78	10403.47	-3731.30	758.25	168.51	3807.56	3803.06	0.89	158.9°F
13801.00	89.55	179.32	10404.58	-3825.29	758.99	168.78	3899.86	3896.08	0.68	158.9°F
13895.00	90.06	179.25	10404.90	-3919.28	760.16	169.02	3992.32	3989.16	0.55	158.9°F
13989.00	87.98	179.35	10406.50	-4013.25	761.31	169.26	4084.82	4082.23	2.22	158.9°F
14084.00	88.94	179.57	10409.06	-4108.21	762.20	169.49	4178.32	4176.23	1.04	158.9°F
14178.00	88.15	179.26	10411.44	-4202.18	763.16	169.71	4270.91	4269.26	0.90	158.9°F
14273.00	88.10	178.85	10414.55	-4297.11	764.73	169.91	4364.63	4363.34	0.43	162.5°F
14367.00	88.54	178.82	10417.31	-4391.05	766.64	170.10	4457.47	4456.49	0.47	162.5°F
14461.00	88.93	178.49	10419.38	-4485.00	768.84	170.27	4550.43	4549.69	0.54	162.5°F
14556.00	89.10	178.79	10421.02	-4579.96	771.10	170.44	4644.42	4643.90	0.36	162.5°F
14650.00	89.72	178.70	10421.98	-4673.93	773.16	170.61	4737.45	4737.10	0.67	162.5°F
14719.00	90.11	178.73	10422.09	-4742.92	774.70	170.72	4805.77	4805.53	0.57	162.5°F
14782.00	90.11	178.73	10421.95	-4805.90	776.10	170.83	4868.16	4868.00	0.00	162.5°F

Bit Projection