



Survey Report

Service Company: Altitude Energy Partners

Location: Jal

Well: Tour Bus 23 State 503H

Rig: H & P 650

API or UWI:

Job Number: AEP-1763

State: New Mexico

Operating Company: Centennial Resource Development LLC

County: Lea County

Magnetic Declination: 7.7

Country: United States

Proposed Azimuth: 183.15°

Comment:

North Reference: TRUE

Latitude: 32° 23' 2.067N

Longitude: 103° 26' 32.010W

Tie-In Data

MD	Inclination	Azimuth	TVD	NS	EW
1789.00	0.40	123.90	1788.92	-5.34	-4.17

Survey Data

MD	Inclination	Azimuth	TVD	NS	EW	CA	CD	VS	DLS	TEMP
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
25.00	0.00	0.00	25.00	0.00	0.00	#DIV/0!	0.00	0.00	0.00	
186.00	0.70	353.90	186.00	0.98	-0.10	353.90	0.98	-0.97	0.43	
278.30	0.90	251.90	278.29	1.31	-0.85	326.98	1.57	-1.26	1.35	
372.00	0.60	234.90	371.98	0.80	-1.95	292.33	2.11	-0.69	0.40	
467.00	0.80	345.90	466.98	1.16	-2.52	294.69	2.78	-1.02	1.22	
561.50	0.30	175.90	561.48	1.55	-2.67	300.22	3.09	-1.40	1.16	
656.00	0.50	224.90	655.97	1.01	-2.94	289.04	3.11	-0.85	0.40	
750.60	0.60	355.90	750.57	1.22	-3.27	290.42	3.48	-1.03	1.06	
845.00	1.00	256.90	844.97	1.52	-4.10	290.35	4.38	-1.29	1.32	

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939.60	0.60	191.90	939.56	0.85	-5.01	279.63	5.08	-0.57	0.98	
1034.10	0.30	142.90	1034.06	0.17	-4.96	271.95	4.97	0.10	0.49	
1128.60	0.70	205.90	1128.55	-0.55	-5.07	263.83	5.10	0.83	0.66	
1223.10	0.50	65.90	1223.05	-0.90	-4.94	259.69	5.02	1.17	1.20	
1317.60	0.90	205.90	1317.55	-1.40	-4.89	254.04	5.09	1.66	1.40	
1380.60	1.00	141.90	1380.54	-2.28	-4.77	244.48	5.28	2.53	1.60	
1412.10	0.60	210.90	1412.04	-2.63	-4.68	240.64	5.37	2.89	3.06	
1506.80	0.40	187.90	1506.73	-3.39	-4.98	235.79	6.02	3.66	0.30	
1601.30	0.40	198.90	1601.23	-4.03	-5.13	231.90	6.52	4.30	0.08	
1695.70	0.70	135.90	1695.63	-4.75	-4.84	225.52	6.78	5.01	0.67	
1789.00	0.40	123.90	1788.92	-5.34	-4.17	217.99	6.78	5.56	0.34	
1900.00	0.95	157.02	1899.92	-6.41	-3.49	208.59	7.29	6.59	0.59	101.0°F
1994.00	1.95	215.41	1993.89	-8.43	-4.11	206.02	9.38	8.64	1.77	101.0°F
2089.00	3.12	229.50	2088.79	-11.42	-7.02	211.56	13.41	11.79	1.39	101.0°F
2183.00	4.22	233.05	2182.60	-15.16	-11.73	217.71	19.17	15.78	1.19	101.0°F
2277.00	4.63	232.49	2276.32	-19.55	-17.50	221.83	26.24	20.48	0.44	104.6°F
2371.00	4.47	233.90	2370.02	-24.02	-23.47	224.33	33.58	25.27	0.21	108.3°F
2465.00	4.65	237.39	2463.73	-28.23	-29.64	226.39	40.93	29.82	0.35	108.3°F
2559.00	4.76	241.93	2557.41	-32.12	-36.29	228.49	48.46	34.07	0.41	108.°F
2653.00	4.43	242.58	2651.11	-35.63	-42.95	230.32	55.81	37.93	0.36	108.3°F
2748.00	4.25	244.37	2745.83	-38.84	-49.38	231.81	62.83	41.50	0.24	111.9°F
2842.00	3.94	245.15	2839.59	-41.70	-55.45	233.05	69.39	44.69	0.34	111.9°F
2936.00	3.36	245.18	2933.40	-44.22	-60.88	234.01	75.25	47.50	0.62	111.9°F
3030.00	3.18	238.81	3027.25	-46.72	-65.61	234.55	80.55	50.26	0.43	108.3°F
3124.00	3.44	239.93	3121.09	-49.49	-70.29	234.85	85.96	53.27	0.29	111.9°F
3218.00	4.06	244.87	3214.89	-52.31	-75.74	235.37	92.05	56.40	0.74	111.9°F
3312.00	4.58	245.37	3308.63	-55.29	-82.16	236.06	99.03	59.72	0.55	111.9°F
3406.00	5.93	246.85	3402.23	-58.76	-90.04	236.87	107.52	63.62	1.44	111.9°F
3501.00	6.33	246.03	3496.68	-62.82	-99.34	237.69	117.54	68.18	0.43	108.3°F
3595.00	6.03	246.24	3590.14	-66.92	-108.59	238.36	127.55	72.78	0.32	111.9°F
3689.00	5.76	244.70	3683.64	-70.92	-117.38	238.86	137.14	77.26	0.33	111.9°F
3783.00	5.42	246.86	3777.19	-74.68	-125.72	239.29	146.23	81.48	0.43	111.9°F
3877.00	5.25	247.87	3870.79	-78.05	-133.79	239.74	154.89	85.28	0.21	111.9°F
3971.00	4.88	245.73	3964.42	-81.31	-141.42	240.10	163.13	88.96	0.44	111.9°F

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4065.00	4.70	246.44	4058.09	-84.49	-148.59	240.38	170.93	92.53	0.20	108.3°F
4159.00	4.49	244.43	4151.79	-87.62	-155.44	240.59	178.43	96.03	0.28	108.3°F
4254.00	4.48	242.62	4246.50	-90.93	-162.09	240.71	185.85	99.70	0.15	108.3°F
4348.00	4.33	242.40	4340.22	-94.26	-168.49	240.78	193.07	103.38	0.16	108.3°F
4442.00	4.08	243.59	4433.97	-97.39	-174.63	240.85	199.96	106.84	0.28	108.3°F
4536.00	3.89	240.63	4527.74	-100.45	-180.41	240.89	206.49	110.21	0.30	111.9°F
4630.00	3.86	243.14	4621.53	-103.44	-186.01	240.92	212.84	113.50	0.18	111.9°F
4724.00	4.53	248.95	4715.27	-106.20	-192.30	241.09	219.67	116.61	0.84	111.9°F
4818.00	4.97	253.20	4808.95	-108.71	-199.66	241.43	227.34	119.52	0.60	111.9°F
4912.00	4.85	254.27	4902.61	-110.97	-207.38	241.85	235.20	122.19	0.16	111.9°F
5007.00	4.24	253.92	4997.31	-113.03	-214.62	242.23	242.57	124.65	0.64	111.9°F
5101.00	4.19	257.14	5091.05	-114.75	-221.31	242.59	249.29	126.74	0.26	108.3°F
5195.00	4.17	259.15	5184.80	-116.16	-228.01	243.00	255.90	128.52	0.16	108.3°F
5289.00	4.06	260.06	5278.56	-117.38	-234.65	243.42	262.37	130.10	0.14	108.3°F
5383.00	4.04	261.14	5372.33	-118.46	-241.20	243.84	268.72	131.54	0.08	108.3°F
5477.00	3.03	263.86	5466.15	-119.24	-246.94	244.23	274.22	132.63	1.09	108.3°F
5540.00	2.34	268.60	5529.08	-119.45	-249.88	244.45	276.96	133.00	1.15	108.3°F
5633.00	1.50	294.03	5622.02	-119.00	-252.89	244.80	279.49	132.72	1.27	111.9°F
5664.00	1.58	298.21	5653.01	-118.63	-253.64	244.93	280.01	132.39	0.44	111.9°F
5759.00	1.21	313.26	5747.98	-117.33	-255.52	245.34	281.17	131.19	0.54	111.9°F
5853.00	1.27	309.80	5841.96	-115.98	-257.05	245.71	282.00	129.93	0.10	111.9°F
5947.00	1.03	234.52	5935.95	-115.80	-258.53	245.87	283.28	129.83	1.51	111.9°F
6041.00	1.72	218.11	6029.92	-117.40	-260.09	245.71	285.36	131.52	0.84	111.9°F
6136.00	1.63	220.56	6124.88	-119.55	-261.85	245.46	287.85	133.76	0.12	115.5°F
6230.00	1.74	221.26	6218.84	-121.64	-263.66	245.23	290.37	135.94	0.12	115.5°F
6324.00	1.95	220.13	6312.79	-123.94	-265.63	244.99	293.12	138.35	0.23	119.1°F
6419.00	0.99	223.78	6407.76	-125.76	-267.24	244.80	295.36	140.26	1.01	119.1°F
6513.00	0.76	238.90	6501.75	-126.67	-268.34	244.73	296.73	141.23	0.34	119.1°F
6607.00	0.68	238.02	6595.74	-127.29	-269.35	244.70	297.91	141.90	0.09	119.1°F
6701.00	1.06	189.24	6689.73	-128.44	-269.96	244.56	298.96	143.08	0.85	119.1°F
6795.00	1.63	178.09	6783.70	-130.64	-270.05	244.18	299.99	145.28	0.66	122.7°F
6890.00	1.24	148.55	6878.68	-132.87	-269.47	243.75	300.45	147.47	0.87	122.7°F
6984.00	1.28	132.68	6972.65	-134.45	-268.17	243.37	299.98	148.98	0.37	126.3°F
7078.00	0.63	106.71	7066.64	-135.31	-266.90	243.12	299.24	149.77	0.81	126.3°F

7172.00	0.38	43.33	7160.64	-135.23	-266.19	243.07	298.57	149.65	0.61	126.3°F
7267.00	0.38	51.76	7255.63	-134.80	-265.73	243.10	297.97	149.20	0.06	126.3°F
7361.00	0.45	45.24	7349.63	-134.35	-265.22	243.14	297.31	148.72	0.09	126.3°F
7456.00	0.20	49.54	7444.63	-133.98	-264.83	243.16	296.79	148.33	0.26	126.3°F
7550.00	0.16	53.62	7538.63	-133.80	-264.60	243.18	296.50	148.13	0.04	126.3°F
7644.00	0.28	43.28	7632.63	-133.55	-264.34	243.20	296.16	147.87	0.13	129.9°F
7738.00	0.29	5.33	7726.63	-133.15	-264.16	243.25	295.82	147.46	0.20	126.3°F
7833.00	0.23	31.10	7821.63	-132.74	-264.04	243.31	295.53	147.05	0.14	126.3°F
7927.00	0.38	3.24	7915.63	-132.27	-263.92	243.38	295.21	146.57	0.22	129.9°F
8021.00	0.41	25.60	8009.62	-131.66	-263.76	243.47	294.79	145.95	0.17	129.9°F
8116.00	0.61	12.47	8104.62	-130.86	-263.50	243.59	294.21	145.14	0.24	129.9°F
8210.00	0.57	18.18	8198.61	-129.92	-263.25	243.73	293.57	144.19	0.08	129.9°F
8304.00	0.68	24.36	8292.61	-128.97	-262.87	243.87	292.81	143.22	0.14	133.6°F
8398.00	0.82	25.07	8386.60	-127.85	-262.36	244.02	291.85	142.08	0.15	133.6°F
8492.00	0.88	41.17	8480.59	-126.70	-261.60	244.16	290.67	140.88	0.26	133.6°F
8586.00	0.90	48.28	8574.58	-125.67	-260.57	244.25	289.29	139.80	0.12	133.6°F
8681.00	1.23	52.60	8669.56	-124.55	-259.21	244.34	287.58	138.61	0.36	133.6°F
8775.00	0.73	40.06	8763.55	-123.48	-258.02	244.43	286.04	137.47	0.58	133.6°F
8869.00	0.78	43.22	8857.54	-122.55	-257.20	244.52	284.90	136.50	0.07	133.6°F
8963.00	1.22	53.77	8951.53	-121.50	-255.95	244.61	283.32	135.38	0.51	133.6°F
9058.00	1.19	129.65	9046.51	-121.53	-254.37	244.46	281.91	135.32	1.56	133.6°F
9152.00	1.65	149.65	9140.48	-123.32	-252.94	244.01	281.40	137.03	0.71	137.2°F
9246.00	0.85	131.83	9234.46	-124.95	-251.74	243.60	281.04	138.60	0.94	133.6°F
9341.00	0.73	109.83	9329.45	-125.63	-250.64	243.38	280.36	139.21	0.34	137.2°F
9435.00	0.68	143.98	9423.44	-126.28	-249.75	243.18	279.86	139.82	0.44	137.2°F
9529.00	0.64	154.16	9517.44	-127.21	-249.19	242.96	279.78	140.71	0.13	137.2°F
9655.00	0.53	192.28	9643.43	-128.41	-249.01	242.72	280.17	141.90	0.31	140.8°F
9729.00	1.08	179.91	9717.42	-129.44	-249.08	242.54	280.71	142.93	0.78	129.9°F
9760.00	3.58	159.69	9748.40	-130.64	-248.75	242.29	280.96	144.11	8.37	129.9°F
9792.00	6.54	168.94	9780.27	-133.37	-248.05	241.73	281.63	146.80	9.57	129.9°F
9823.00	10.07	171.02	9810.94	-137.78	-247.29	240.88	283.08	151.16	11.43	129.9°F
9855.00	14.64	171.51	9842.19	-144.54	-246.25	239.59	285.54	157.86	14.28	129.9°F
9886.00	18.06	173.23	9871.93	-153.19	-245.11	237.99	289.04	166.43	11.14	129.9°F
9917.00	21.85	174.77	9901.06	-163.71	-244.01	236.14	293.85	176.87	12.34	129.9°F

9949.00	26.21	173.54	9930.28	-176.67	-242.68	233.94	300.17	189.74	13.71	133.6°F
9980.00	29.50	174.82	9957.69	-191.08	-241.22	231.62	307.73	204.05	10.79	133.6°F
10012.00	31.48	178.08	9985.26	-207.28	-240.23	229.21	317.29	220.17	8.06	129.9°F
10043.00	32.86	181.76	10011.51	-223.78	-240.21	227.03	328.30	236.64	7.73	129.9°F
10075.00	34.84	184.55	10038.08	-241.57	-241.20	224.96	341.37	254.46	7.86	129.9°F
10106.00	36.71	184.15	10063.23	-259.64	-242.58	223.05	355.33	272.58	6.08	129.9°F
10153.00	39.97	181.24	10100.10	-288.75	-243.92	220.19	377.99	301.72	7.93	129.9°F
10200.00	42.38	178.47	10135.47	-319.69	-243.82	217.33	402.06	332.60	6.43	133.6°F
10247.00	46.08	180.95	10169.15	-352.46	-243.68	214.66	428.50	365.32	8.69	133.6°F
10295.00	50.52	181.47	10201.07	-388.28	-244.44	212.19	458.82	401.13	9.29	133.6°F
10342.00	56.72	180.92	10228.93	-426.09	-245.23	209.92	491.62	438.93	13.23	133.6°F
10389.00	61.62	179.01	10253.02	-466.44	-245.18	207.73	526.95	479.21	10.99	137.2°F
10436.00	64.90	179.22	10274.16	-508.40	-244.54	205.69	564.15	521.07	6.99	137.2°F
10483.00	69.65	178.96	10292.31	-551.73	-243.85	203.84	603.22	564.30	10.12	137.2°F
10531.00	75.07	179.76	10306.85	-597.46	-243.34	202.16	645.11	609.93	11.40	137.2°F
10578.00	79.21	179.97	10317.31	-643.27	-243.23	200.71	687.72	655.66	8.82	137.2°F
10625.00	81.04	179.40	10325.37	-689.57	-242.98	199.41	731.12	701.88	4.07	140.8°F
10672.00	84.21	179.77	10331.40	-736.17	-242.64	198.24	775.13	748.39	6.79	140.8°F
10704.00	86.41	180.26	10334.02	-768.06	-242.65	197.53	805.48	780.24	7.04	140.8°F
10785.00	89.78	181.45	10336.71	-849.00	-243.86	196.03	883.32	861.11	4.41	144.4°F
10879.00	88.94	182.37	10337.76	-942.94	-246.99	194.68	974.75	955.08	1.33	144.4°F
10973.00	88.54	181.48	10339.83	-1036.86	-250.15	193.56	1066.61	1049.04	1.04	144.4°F
11068.00	87.42	181.36	10343.18	-1131.77	-252.50	192.58	1159.59	1143.93	1.19	144.4°F
11162.00	87.14	181.21	10347.64	-1225.64	-254.61	191.74	1251.81	1237.78	0.34	144.4°F
11256.00	87.59	182.19	10351.96	-1319.50	-257.39	191.04	1344.37	1331.65	1.15	144.4°F
11351.00	88.04	182.37	10355.58	-1414.35	-261.17	190.46	1438.26	1426.57	0.51	144.4°F
11445.00	88.66	183.18	10358.29	-1508.20	-265.72	189.99	1531.43	1520.53	1.08	148°F
11539.00	87.98	183.09	10361.04	-1602.02	-270.86	189.60	1624.76	1614.48	0.73	148°F
11633.00	87.31	180.84	10364.91	-1695.88	-274.08	189.18	1717.88	1708.38	2.50	148°F
11727.00	87.65	180.87	10369.04	-1789.78	-275.48	188.75	1810.85	1802.21	0.36	151.6°F
11821.00	88.32	179.54	10372.35	-1883.72	-275.81	188.33	1903.80	1896.03	1.58	151.6°F
11916.00	88.82	179.22	10374.72	-1978.68	-274.79	187.91	1997.67	1990.79	0.62	155.2°F
12010.00	89.44	179.69	10376.14	-2072.67	-273.89	187.53	2090.68	2084.58	0.83	155.2°F
12104.00	88.82	179.33	10377.57	-2166.65	-273.09	187.18	2183.79	2178.38	0.76	155.2°F

12199.00	89.44	179.48	10379.01	-2261.63	-272.10	186.86	2277.94	2273.17	0.67	158.9°F
12294.00	88.77	178.70	10380.50	-2356.61	-270.59	186.55	2372.09	2367.92	1.08	158.9°F
12388.00	89.22	178.93	10382.15	-2450.59	-269.47	186.28	2465.36	2461.69	1.39	158.9°F
12482.00	90.06	179.39	10382.74	-2544.56	-267.27	186.00	2558.56	2555.40	1.02	162.5°F
12576.00	88.66	179.04	10383.79	-2638.54	-265.99	185.76	2651.92	2649.17	1.54	162.5°F
12670.00	87.26	178.57	10387.13	-2732.46	-264.03	185.52	2745.19	2742.84	1.57	158.9°F
12765.00	87.70	178.93	10391.31	-2827.35	-261.96	185.29	2839.46	2837.47	0.60	162.5°F
12859.00	87.31	178.52	10395.40	-2921.23	-259.87	185.08	2932.77	2931.10	0.60	162.5°F
12953.00	87.81	178.62	10399.40	-3015.12	-257.52	184.88	3026.10	3024.71	0.54	162.5°F
13047.00	88.54	178.87	10402.40	-3109.05	-255.46	184.70	3119.53	3118.39	0.82	162.5°F
13141.00	88.21	179.40	10405.06	-3203.00	-254.05	184.53	3213.06	3212.12	0.66	162.5°F
13236.00	86.81	179.41	10409.19	-3297.90	-253.06	184.39	3307.60	3306.83	1.47	162.5°F
13330.00	87.31	179.53	10414.01	-3391.77	-252.19	184.25	3401.14	3400.51	0.55	162.5°F
13424.00	88.09	179.96	10417.78	-3485.70	-251.77	184.13	3494.78	3494.27	0.95	162.5°F
13518.00	89.05	180.43	10420.13	-3579.67	-252.09	184.03	3588.53	3588.11	1.14	162.5°F
13613.00	88.04	179.95	10422.54	-3674.63	-252.41	183.93	3683.29	3682.95	1.18	166.1°F
13707.00	88.65	180.09	10425.26	-3768.59	-252.44	183.83	3777.04	3776.77	0.67	166.1°F
13801.00	89.78	180.73	10426.54	-3862.58	-253.11	183.75	3870.86	3870.65	1.38	169.7°F
13895.00	88.71	180.33	10427.78	-3956.57	-253.98	183.67	3964.71	3964.54	1.22	166.2°F
13989.00	87.25	179.91	10431.10	-4050.50	-254.18	183.59	4058.47	4058.35	1.62	166.1°F
14084.00	87.98	180.11	10435.05	-4145.42	-254.20	183.51	4153.21	4153.13	0.80	166.1°F
14178.00	87.03	179.96	10439.14	-4239.33	-254.26	183.43	4246.95	4246.90	1.02	169.7°F
14273.00	87.37	180.11	10443.78	-4334.22	-254.31	183.36	4341.67	4341.64	0.39	169.7°F
14367.00	89.78	180.91	10446.12	-4428.18	-255.15	183.30	4435.52	4435.51	2.70	169.7°F
14461.00	91.96	180.59	10444.69	-4522.15	-256.38	183.24	4529.41	4529.41	2.34	169.7°F
14556.00	93.25	180.98	10440.37	-4617.04	-257.68	183.19	4624.23	4624.23	1.42	169.7°F
14650.00	94.15	181.35	10434.31	-4710.83	-259.59	183.15	4717.97	4717.97	1.03	169.7°F
14714.00	94.77	181.54	10429.33	-4774.61	-261.20	183.13	4781.75	4781.75	1.01	173.3°F
14780.00	94.77	181.54	10423.84	-4840.36	-262.96	183.11	4847.50	4847.50	0.00	

Bit Projection