



Survey Report

HOBBS OCD
 APR 30 2018
 RECEIVED

Service Company: Altitude Energy Partners

Location: Lea County

Well: Tour Bus 23 State 23 301H ST03

Rig: H & P 650

API or UWI: 30-025-44289

Job Number: AEP-1817

State: New Mexico

Operating Company: Centennial Resource Operating LLC

County: Lea County

Magnetic Declination: 7.7

Country: United States

Proposed Azimuth: 180.13°

Comment:

North Reference: TRUE

Latitude: 32° 23' 1.000 N

Longitude: 103° 26' 53.645 W

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
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
143.00	0.32	239.03	143.00	-0.21	-0.34	239.03	0.40	0.21	0.22	63.0°F
237.00	0.35	47.47	237.00	-0.15	-0.36	247.63	0.38	0.15	0.71	74.0°F
332.00	0.31	37.80	332.00	0.25	0.02	3.50	0.25	-0.25	0.07	86.0°F
426.00	0.44	52.75	426.00	0.67	0.46	34.31	0.81	-0.67	0.17	63.4°F
520.00	0.29	16.30	519.99	1.12	0.81	35.99	1.38	-1.12	0.29	70.6°F
686.00	0.61	29.98	685.99	2.29	1.37	30.96	2.67	-2.29	0.20	84.6°F
780.00	0.52	38.70	779.98	3.05	1.89	31.74	3.59	-3.06	0.13	84.6°F
874.00	0.27	3.04	873.98	3.61	2.17	30.99	4.21	-3.61	0.36	84.6°F
968.00	0.13	20.46	967.98	3.93	2.22	29.43	4.51	-3.93	0.16	84.6°F

30-025-44289

1063.00	0.06	228.71	1062.98	4.00	2.22	29.01	4.57	-4.00	0.19	84.6°F
1157.00	0.40	209.80	1156.98	3.68	2.02	28.72	4.20	-3.68	0.37	84.6°F
1251.00	0.49	230.86	1250.98	3.14	1.54	26.14	3.50	-3.14	0.20	84.6°F
1345.00	0.36	217.92	1344.97	2.65	1.05	21.55	2.85	-2.66	0.17	77.7°F
1439.00	0.27	267.72	1438.97	2.41	0.65	14.98	2.50	-2.41	0.30	84.9°F
1534.00	0.42	262.87	1533.97	2.36	0.08	1.86	2.36	-2.36	0.16	92.0°F
1628.00	0.39	265.67	1627.97	2.29	-0.58	345.71	2.37	-2.29	0.04	92.0°F
1722.00	0.44	271.74	1721.97	2.28	-1.26	331.00	2.61	-2.28	0.07	92.0°F
1780.00	0.46	251.19	1779.96	2.21	-1.71	322.35	2.79	-2.21	0.28	99.1°F
1897.00	0.34	290.76	1896.96	2.18	-2.48	311.41	3.30	-2.18	0.25	70.1°F
1991.00	1.12	204.25	1990.95	1.45	-3.11	294.90	3.43	-1.44	1.22	77.7°F
2086.00	2.41	191.40	2085.91	-1.36	-3.89	250.74	4.12	1.37	1.41	84.9°F
2180.00	3.74	183.63	2179.77	-6.36	-4.48	215.15	7.77	6.37	1.48	84.9°F
2274.00	4.11	183.47	2273.55	-12.78	-4.87	200.88	13.68	12.79	0.39	84.9°F
2368.00	4.07	185.14	2367.31	-19.46	-5.38	195.44	20.19	19.48	0.13	92.0°F
2462.00	3.98	189.86	2461.08	-26.00	-6.23	193.48	26.74	26.01	0.37	92.0°F
2557.00	3.58	182.34	2555.87	-32.21	-6.92	192.12	32.95	32.23	0.67	92.0°F
2651.00	3.40	185.80	2649.70	-37.92	-7.32	190.93	38.62	37.93	0.29	92.0°F
2745.00	2.95	186.13	2743.55	-43.10	-7.86	190.34	43.81	43.11	0.48	99.1°F
2839.00	2.20	182.58	2837.46	-47.30	-8.20	189.83	48.01	47.32	0.82	99.1°F
2934.00	1.64	171.40	2932.41	-50.47	-8.08	189.09	51.11	50.49	0.71	99.1°F
3028.00	1.37	164.30	3026.37	-52.88	-7.57	188.15	53.42	52.90	0.35	99.1°F
3122.00	0.85	151.01	3120.36	-54.57	-6.93	187.24	55.01	54.59	0.61	99.1°F
3216.00	0.58	137.08	3214.35	-55.53	-6.27	186.44	55.88	55.54	0.34	99.1°F
3310.00	0.71	134.17	3308.34	-56.28	-5.53	185.61	56.56	56.30	0.14	99.1°F
3404.00	0.77	118.77	3402.33	-56.99	-4.56	184.57	57.18	57.00	0.22	106.3°F
3498.00	0.49	126.32	3496.33	-57.54	-3.68	183.66	57.65	57.54	0.31	106.3°F
3592.00	0.42	114.97	3590.33	-57.92	-3.04	183.01	58.00	57.93	0.12	106.3°F
3687.00	0.33	121.97	3685.32	-58.21	-2.50	182.45	58.27	58.22	0.11	106.3°F
3781.00	0.50	109.99	3779.32	-58.50	-1.88	181.84	58.53	58.50	0.20	106.3°F
3875.00	0.48	106.65	3873.32	-58.75	-1.12	181.09	58.76	58.75	0.04	106.3°F
3969.00	0.27	122.33	3967.32	-58.98	-0.55	180.54	58.98	58.98	0.25	106.3°F
4063.00	0.36	106.93	4061.31	-59.18	-0.08	180.08	59.18	59.18	0.13	106.3°F
4157.00	0.38	136.00	4155.31	-59.49	0.42	179.60	59.50	59.49	0.20	106.3°F

4251.00	0.29	131.68	4249.31	-59.88	0.81	179.23	59.88	59.87	0.10	106.3°F
4345.00	0.21	129.84	4343.31	-60.15	1.12	178.93	60.16	60.14	0.09	106.3°F
4440.00	0.48	133.95	4438.31	-60.53	1.54	178.54	60.55	60.53	0.29	106.3°F
4534.00	0.36	131.60	4532.30	-61.00	2.04	178.08	61.04	61.00	0.13	99.1°F
4628.00	0.54	185.00	4626.30	-61.64	2.23	177.93	61.68	61.63	0.46	99.1°F
4722.00	0.48	184.50	4720.30	-62.47	2.16	178.02	62.51	62.47	0.06	99.1°F
4816.00	0.62	177.53	4814.29	-63.37	2.15	178.06	63.41	63.37	0.16	92.0°F
4910.00	0.46	174.09	4908.29	-64.26	2.21	178.03	64.30	64.25	0.17	99.1°F
5004.00	0.42	168.91	5002.29	-64.97	2.31	177.96	65.01	64.97	0.06	92.0°F
5098.00	0.41	171.34	5096.28	-65.64	2.43	177.88	65.69	65.64	0.02	99.1°F
5192.00	0.40	160.51	5190.28	-66.28	2.59	177.76	66.33	66.28	0.08	99.1°F
5286.00	0.30	206.92	5284.28	-66.81	2.59	177.78	66.86	66.81	0.31	99.1°F
5380.00	0.66	259.87	5378.28	-67.13	1.94	178.34	67.15	67.12	0.57	99.1°F
5474.00	1.05	262.41	5472.27	-67.34	0.56	179.53	67.34	67.33	0.42	99.1°F
5568.00	1.05	262.72	5566.25	-67.56	-1.15	180.98	67.57	67.56	0.01	99.1°F
5631.00	1.23	258.12	5629.24	-67.77	-2.38	182.02	67.81	67.78	0.32	99.1°F
5735.00	1.13	253.29	5733.22	-68.30	-4.46	183.74	68.44	68.31	0.14	106.3°F
5829.00	0.36	334.98	5827.21	-68.29	-5.47	184.58	68.51	68.31	1.21	106.3°F
5923.00	0.70	11.68	5921.21	-67.46	-5.48	184.64	67.69	67.48	0.49	113.4°F
6017.00	0.63	8.99	6015.20	-66.39	-5.28	184.55	66.60	66.40	0.08	113.4°F
6112.00	0.52	14.04	6110.19	-65.46	-5.10	184.45	65.66	65.47	0.13	113.4°F
6205.00	0.61	11.64	6203.19	-64.56	-4.89	184.34	64.75	64.57	0.10	120.6°F
6299.00	0.54	3.93	6297.19	-63.63	-4.76	184.28	63.81	63.64	0.11	120.6°F
6393.00	0.67	7.63	6391.18	-62.64	-4.66	184.25	62.82	62.66	0.14	120.6°F
6455.00	3.18	81.69	6453.14	-62.04	-2.91	182.69	62.10	62.04	4.94	99.1°F
6487.00	5.15	89.91	6485.06	-61.91	-0.60	180.55	61.91	61.91	6.42	106.3°F
6518.00	6.17	89.17	6515.91	-61.88	2.46	177.72	61.93	61.87	3.30	106.3°F
6549.00	6.36	90.60	6546.72	-61.87	5.84	174.60	62.15	61.86	0.79	106.3°F
6581.00	6.35	89.37	6578.53	-61.87	9.39	171.37	62.58	61.85	0.43	106.3°F
6675.00	4.60	90.15	6672.09	-61.83	18.35	163.47	64.49	61.78	1.86	106.3°F
6769.00	3.26	97.19	6765.87	-62.17	24.81	158.25	66.94	62.11	1.53	106.3°F
6863.00	1.55	110.45	6859.78	-62.95	28.65	155.53	69.16	62.88	1.90	106.3°F
6957.00	0.67	188.24	6953.77	-63.94	29.76	155.04	70.53	63.87	1.65	120.6°F
7050.00	1.03	195.34	7046.76	-65.28	29.47	155.71	71.62	65.21	0.40	120.6°F

7144.00	0.80	199.80	7140.74	-66.71	29.02	156.49	72.75	66.65	0.26	120.6°F
7238.00	0.76	190.24	7234.74	-67.94	28.69	157.11	73.75	67.88	0.14	120.6°F
7332.00	0.86	177.15	7328.73	-69.26	28.61	157.56	74.94	69.20	0.22	120.6°F
7426.00	0.87	180.72	7422.72	-70.68	28.60	157.97	76.25	70.62	0.06	127.7°F
7520.00	0.98	185.40	7516.71	-72.19	28.52	158.44	77.62	72.13	0.14	127.7°F
7614.00	0.82	199.26	7610.69	-73.63	28.22	159.03	78.85	73.57	0.29	127.7°F
7708.00	0.91	191.00	7704.68	-75.00	27.86	159.62	80.00	74.93	0.16	127.7°F
7803.00	0.76	198.51	7799.67	-76.34	27.51	160.18	81.14	76.27	0.20	127.7°F
7897.00	0.84	209.82	7893.66	-77.52	26.97	160.82	82.08	77.46	0.19	127.7°F
7991.00	0.89	205.02	7987.65	-78.78	26.32	161.53	83.06	78.72	0.09	127.7°F
8085.00	0.84	212.28	8081.64	-80.03	25.64	162.23	84.04	79.97	0.13	127.7°F
8179.00	0.70	213.96	8175.63	-81.09	24.96	162.89	84.84	81.03	0.15	127.7°F
8273.00	0.63	204.83	8269.63	-82.03	24.42	163.42	85.59	81.98	0.13	127.7°F
8367.00	0.74	201.58	8363.62	-83.07	23.98	163.90	86.46	83.01	0.12	127.7°F
8461.00	0.28	274.86	8457.62	-83.61	23.53	164.28	86.86	83.56	0.76	127.7°F
8555.00	0.41	293.61	8551.62	-83.46	22.99	164.60	86.56	83.40	0.18	127.7°F
8648.00	0.16	275.83	8644.62	-83.31	22.55	164.85	86.31	83.26	0.28	134.9°F
8742.00	0.19	196.97	8738.62	-83.45	22.38	164.99	86.39	83.39	0.24	127.7°F
8836.00	0.38	259.27	8832.61	-83.65	22.03	165.25	86.50	83.60	0.36	134.9°F
8930.00	0.35	315.06	8926.61	-83.51	21.52	165.55	86.23	83.46	0.36	134.9°F
8961.00	0.09	276.36	8957.61	-83.44	21.43	165.60	86.14	83.39	0.92	134.9°F
9041.00	2.22	181.22	9037.59	-84.98	21.33	165.91	87.62	84.93	2.79	127.7°F
9089.00	9.57	182.49	9085.31	-89.90	21.14	166.77	92.35	89.85	15.31	127.7°F
9135.00	15.30	184.61	9130.21	-99.78	20.48	168.40	101.86	99.73	12.49	127.7°F
9182.00	21.52	185.80	9174.78	-114.55	19.11	170.53	116.14	114.51	13.26	127.7°F
9229.00	26.44	184.19	9217.71	-133.58	17.48	172.55	134.71	133.54	10.56	127.7°F
9276.00	31.26	181.41	9258.87	-156.22	16.41	174.00	157.08	156.18	10.64	127.7°F
9323.00	34.75	179.90	9298.28	-181.81	16.13	174.93	182.53	181.77	7.63	127.7°F
9370.00	37.66	179.27	9336.20	-209.57	16.34	175.54	210.20	209.53	6.24	134.9°F
9416.00	40.40	179.09	9371.93	-238.53	16.76	175.98	239.12	238.49	5.96	134.9°F
9463.00	43.62	178.87	9406.85	-269.98	17.32	176.33	270.53	269.94	6.86	134.9°F
9511.00	47.15	180.35	9440.55	-304.14	17.54	176.70	304.64	304.10	7.67	134.9°F
9558.00	53.59	181.66	9470.52	-340.31	16.88	177.16	340.73	340.27	13.87	134.9°F
9605.00	59.43	182.19	9496.44	-379.47	15.56	177.65	379.79	379.43	12.46	134.9°F

9652.00	64.94	181.50	9518.36	-421.00	14.23	178.06	421.24	420.97	11.79	134.9°F
9699.00	69.44	181.35	9536.58	-464.30	13.15	178.38	464.48	464.27	9.58	134.9°F
9746.00	72.03	181.30	9552.08	-508.65	12.13	178.63	508.80	508.62	5.51	134.9°F
9792.00	74.54	179.43	9565.32	-552.70	11.85	178.77	552.83	552.67	6.70	134.9°F
9845.00	78.91	177.98	9577.48	-604.26	13.02	178.77	604.40	604.23	8.66	134.9°F
9888.00	84.84	178.13	9583.56	-646.78	14.47	178.72	646.94	646.75	13.80	127.7°F
9935.00	87.08	177.94	9586.87	-693.63	16.07	178.67	693.82	693.60	4.78	127.7°F
9982.00	87.70	177.50	9589.01	-740.55	17.94	178.61	740.77	740.51	1.62	127.7°F
10029.00	89.33	178.44	9590.23	-787.50	19.61	178.57	787.74	787.45	4.00	127.7°F
10076.00	89.92	178.53	9590.53	-834.48	20.85	178.57	834.74	834.43	1.27	127.7°F
10169.00	90.90	178.67	9589.87	-927.45	23.12	178.57	927.74	927.40	1.06	134.9°F
10263.00	91.40	178.69	9587.98	-1021.41	25.29	178.58	1021.72	1021.35	0.53	134.9°F
10357.00	89.55	180.72	9587.20	-1115.39	25.77	178.68	1115.69	1115.33	2.92	142.0°F
10451.00	88.49	181.11	9588.81	-1209.37	24.27	178.85	1209.61	1209.31	1.20	134.9°F
10545.00	88.82	180.81	9591.02	-1303.33	22.69	179.00	1303.53	1303.27	0.47	142.0°F
10639.00	87.76	182.51	9593.82	-1397.24	19.97	179.18	1397.38	1397.19	2.13	142.0°F
10733.00	88.23	182.44	9597.11	-1491.10	15.92	179.39	1491.18	1491.06	0.51	149.1°F
10827.00	87.06	182.48	9600.97	-1584.93	11.89	179.57	1584.97	1584.90	1.25	149.1°F
10920.00	86.97	182.09	9605.82	-1677.73	8.18	179.72	1677.75	1677.71	0.43	149.1°F
11014.00	88.63	181.90	9609.42	-1771.60	4.91	179.84	1771.61	1771.58	1.78	149.1°F
11108.00	90.25	182.47	9610.34	-1865.52	1.33	179.96	1865.52	1865.51	1.83	156.3°F
11128.00	87.17	181.22	9610.79	-1885.50	0.69	179.98	1885.50	1885.50	16.62	142.00
11159.00	85.66	179.97	9612.73	-1916.44	0.36	179.99	1916.44	1916.43	6.32	149.10
11199.00	86.47	179.50	9615.48	-1956.35	0.55	179.98	1956.35	1956.34	2.34	142.00
11230.00	86.86	179.63	9617.28	-1987.29	0.78	179.98	1987.29	1987.28	1.33	142.00
11262.00	87.31	179.28	9618.91	-2019.25	1.09	179.97	2019.25	2019.24	1.78	142.00
11293.00	87.31	179.31	9620.36	-2050.21	1.47	179.96	2050.21	2050.20	0.10	142.00
11324.00	87.79	178.97	9621.69	-2081.18	1.93	179.95	2081.18	2081.17	1.90	149.10
11418.00	89.97	179.12	9623.53	-2175.14	3.50	179.91	2175.15	2175.13	2.32	149.10
11512.00	89.75	180.74	9623.75	-2269.14	3.61	179.91	2269.14	2269.13	1.74	149.10
11606.00	88.51	181.17	9625.18	-2363.11	2.05	179.95	2363.11	2363.10	1.40	149.10
11700.00	86.83	181.33	9629.00	-2457.01	0.00	180.00	2457.01	2457.00	1.80	156.30
11794.00	87.79	180.49	9633.42	-2550.89	-1.49	180.03	2550.89	2550.89	1.36	156.30
11888.00	85.76	179.77	9638.70	-2644.74	-1.71	180.04	2644.74	2644.74	2.29	156.30

11982.00	87.59	180.06	9644.15	-2738.58	-1.57	180.03	2738.58	2738.57	1.97	163.40
12076.00	88.71	179.93	9647.19	-2832.53	-1.56	180.03	2832.53	2832.52	1.20	163.40
12171.00	90.03	179.57	9648.23	-2927.52	-1.14	180.02	2927.52	2927.51	1.44	163.40
12265.00	87.95	178.35	9649.89	-3021.48	0.56	179.99	3021.48	3021.47	2.57	163.40
12359.00	89.10	177.77	9652.31	-3115.39	3.74	179.93	3115.40	3115.38	1.37	163.40
12453.00	89.50	178.91	9653.46	-3209.34	6.47	179.88	3209.35	3209.32	1.29	163.40
12547.00	89.13	180.13	9654.58	-3303.33	7.25	179.87	3303.34	3303.31	1.36	156.30
12641.00	88.68	180.53	9656.38	-3397.31	6.71	179.89	3397.32	3397.29	0.64	156.30
12735.00	89.13	182.06	9658.18	-3491.27	4.59	179.92	3491.27	3491.25	1.70	156.30
12829.00	90.00	181.85	9658.89	-3585.21	1.38	179.98	3585.21	3585.20	0.95	163.40
12923.00	88.57	180.75	9660.06	-3679.18	-0.75	180.01	3679.18	3679.17	1.92	163.40
13017.00	88.29	179.65	9662.64	-3773.14	-1.08	180.02	3773.14	3773.13	1.21	163.40
13111.00	87.96	178.77	9665.71	-3867.08	0.22	180.00	3867.08	3867.07	1.00	163.40
13205.00	88.43	180.07	9668.67	-3961.02	1.17	179.98	3961.02	3961.01	1.47	163.40
13299.00	88.74	180.90	9671.00	-4054.99	0.37	179.99	4054.99	4054.98	0.94	163.40
13393.00	89.52	180.51	9672.42	-4148.97	-0.79	180.01	4148.97	4148.96	0.93	163.40
13487.00	90.22	179.99	9672.64	-4242.97	-1.20	180.02	4242.97	4242.96	0.93	170.60
13581.00	89.22	179.97	9673.10	-4336.97	-1.16	180.02	4336.97	4336.96	1.06	163.40
13675.00	90.17	180.52	9673.60	-4430.96	-1.56	180.02	4430.96	4430.96	1.17	163.40
13769.00	89.78	180.27	9673.64	-4524.96	-2.21	180.03	4524.96	4524.96	0.49	163.40
13836.00	90.78	180.11	9673.31	-4591.96	-2.43	180.03	4591.96	4591.95	1.51	163.40
13889.00	90.78	180.11	9672.59	-4644.95	-2.54	180.03	4644.96	4644.95	0.00	163.40