



Survey Report

Service Company: Wellbenders Directional Services LLC

Location: Eddy County, New Mexico

Well: Morris Boyd State Com 3H

Rig: Silver Oak #1

API or UWI: 30-015-44732

Job Number: NMDG2018-1041

State: New Mexico

Operating Company: Percussion Petroleum LLC

County: Eddy

Magnetic Declination: 0.00

Country: US

Proposed Azimuth: 180.06

Comment

North Reference: GRID

Latitude: 32.640564

Longitude: -104.461895

**NM OIL CONSERVATION
ARTESIA DISTRICT**

Tie-In Data

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

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Survey Data

MD	Inclination	Azimuth	TVD	NS	EW	CA	CD	VS	DLS
134.00	1.50	230.10	133.98	-1.13	-1.35	230.10	1.75	1.13	1.12
226.00	1.90	230.10	225.94	-2.88	-3.44	230.10	4.48	2.88	0.43
317.00	2.00	192.90	316.89	-5.39	-4.95	222.56	7.32	5.40	1.37
409.00	2.60	145.80	408.83	-8.68	-4.14	205.48	9.62	8.69	2.08
502.00	4.10	128.70	501.67	-12.51	-0.36	181.63	12.51	12.51	1.92
593.00	5.40	126.00	592.35	-17.06	5.65	161.68	17.97	17.05	1.45
684.00	6.30	116.40	682.88	-21.79	13.58	148.07	25.68	21.78	1.46
775.00	6.30	113.20	773.33	-25.98	22.65	138.92	34.46	25.96	0.39
866.00	6.60	111.20	863.76	-29.84	32.11	132.90	43.83	29.81	0.41
958.00	7.00	109.90	955.11	-33.66	42.31	128.50	54.07	33.62	0.47
1049.00	7.00	107.90	1045.43	-37.25	52.80	125.20	64.62	37.20	0.27
1143.00	7.00	107.90	1138.73	-40.77	63.70	122.62	75.63	40.71	0.00
1175.00	7.00	107.50	1170.49	-41.96	67.42	121.90	79.41	41.89	0.15
1254.00	6.80	106.90	1248.92	-44.76	76.48	120.34	88.62	44.68	0.27
1349.00	8.00	111.50	1343.13	-48.82	88.02	119.02	100.65	48.73	1.41
1443.00	8.80	112.20	1436.12	-53.94	100.76	118.16	114.29	53.83	0.86

MD	Inclination	Azimuth	TVD	NS	EW	CA	CD	VS	DLS
1537.00	8.40	105.00	1529.06	-58.43	114.05	117.13	128.15	58.31	1.22
1631.00	8.60	102.80	1622.03	-61.77	127.54	115.84	141.70	61.63	0.41
1724.00	8.40	103.60	1714.01	-64.90	140.92	114.73	155.15	64.76	0.25
1818.00	8.30	103.70	1807.01	-68.12	154.18	113.84	168.56	67.96	0.11
1911.00	8.50	104.00	1899.02	-71.38	167.37	113.10	181.96	71.20	0.22
2005.00	8.40	105.30	1992.00	-74.87	180.74	112.50	195.63	74.68	0.23
2098.00	8.50	105.60	2083.99	-78.51	193.91	112.04	209.20	78.31	0.12
2193.00	8.90	105.50	2177.89	-82.36	207.75	111.63	223.48	82.14	0.42
2287.00	9.00	106.30	2270.75	-86.37	221.82	111.27	238.04	86.14	0.17
2380.00	10.30	123.10	2362.45	-92.95	235.77	111.52	253.43	92.71	3.32
2427.00	12.80	138.50	2408.50	-99.15	242.74	112.22	262.21	98.89	8.40
2473.00	16.00	147.10	2453.06	-108.29	249.56	113.46	272.04	108.03	8.35
2520.00	19.20	156.10	2497.86	-120.80	256.21	115.24	283.26	120.53	8.92
2566.00	21.80	163.90	2540.95	-135.93	261.65	117.45	294.85	135.65	8.19
2613.00	25.50	171.00	2584.01	-154.32	265.65	120.15	307.22	154.04	9.92
2660.00	29.20	175.40	2625.75	-175.75	268.16	123.24	320.62	175.47	8.97
2707.00	33.90	179.70	2665.80	-200.30	269.15	126.66	335.50	200.02	11.08
2754.00	38.10	182.30	2703.81	-227.91	268.63	130.31	352.29	227.63	9.51
2801.00	43.10	185.40	2739.49	-258.40	266.54	134.11	371.24	258.12	11.47
2847.00	47.90	186.40	2771.72	-291.03	263.16	137.88	392.36	290.75	10.55
2894.00	53.60	187.00	2801.45	-327.16	258.90	141.64	417.21	326.89	12.17
2940.00	58.20	186.90	2827.23	-364.96	254.30	145.13	444.82	364.69	10.00
2986.00	63.10	186.90	2849.77	-404.75	249.48	148.35	475.46	404.49	10.65
3033.00	67.50	185.50	2869.41	-447.19	244.88	151.30	509.85	446.94	9.74
3080.00	73.10	185.30	2885.24	-491.23	240.72	153.89	547.04	490.98	11.92
3127.00	77.50	184.10	2897.17	-536.53	237.00	156.17	586.54	536.28	9.68
3174.00	82.50	182.50	2905.33	-582.72	234.34	158.09	628.07	582.47	11.15
3221.00	86.60	182.50	2909.79	-629.45	232.30	159.74	670.95	629.21	8.72
3313.00	91.10	182.30	2911.64	-721.33	228.45	162.43	756.64	721.09	4.90
3406.00	91.80	179.90	2909.28	-814.27	226.66	164.44	845.23	814.04	2.69
3500.00	92.60	179.20	2905.67	-908.20	227.40	165.94	936.24	907.96	1.13
3593.00	91.50	179.00	2902.35	-1001.13	228.86	167.12	1026.95	1000.89	1.20
3685.00	90.60	178.10	2900.66	-1093.08	231.19	168.06	1117.26	1092.84	1.38
3779.00	91.40	178.30	2899.02	-1187.02	234.14	168.84	1209.89	1186.77	0.88
3872.00	87.00	176.90	2900.32	-1279.90	238.03	169.46	1301.85	1279.65	4.96
3966.00	87.50	177.00	2904.83	-1373.66	243.03	169.97	1395.00	1373.41	0.54
4058.00	88.00	177.20	2908.44	-1465.47	247.68	170.41	1486.26	1465.21	0.59

MD	Inclination	Azimuth	TVD	NS	EW	CA	CD	VS	DLS
4152.00	89.00	177.40	2910.90	-1559.34	252.11	170.82	1579.58	1559.07	1.08
4245.00	89.80	177.90	2911.88	-1652.25	255.92	171.20	1671.95	1651.98	1.01
4273.00	90.20	177.80	2911.88	-1680.23	256.97	171.30	1699.77	1679.96	1.47
4367.00	92.00	178.20	2910.07	-1774.15	260.25	171.65	1793.14	1773.88	1.96
4462.00	91.20	177.90	2907.42	-1869.06	263.48	171.98	1887.54	1868.78	0.90
4556.00	89.50	179.00	2906.84	-1963.02	266.02	172.28	1980.96	1962.74	2.15
4651.00	90.60	179.10	2906.76	-2058.00	267.60	172.59	2075.33	2057.72	1.16
4746.00	91.00	179.30	2905.44	-2152.99	268.93	172.88	2169.72	2152.70	0.47
4841.00	90.50	179.50	2904.19	-2247.97	269.92	173.15	2264.12	2247.69	0.57
4936.00	91.40	179.50	2902.62	-2342.95	270.75	173.41	2358.55	2342.67	0.95
5031.00	90.00	179.00	2901.46	-2437.94	271.99	173.63	2453.06	2437.65	1.56
5125.00	91.20	179.10	2900.47	-2531.92	273.55	173.83	2546.65	2531.63	1.28
5218.00	89.90	179.20	2899.58	-2624.90	274.93	174.02	2639.26	2624.61	1.40
5313.00	90.80	179.60	2899.00	-2719.89	275.93	174.21	2733.85	2719.60	1.04
5408.00	89.90	179.30	2898.42	-2814.89	276.84	174.38	2828.47	2814.59	1.00
5498.00	90.90	178.40	2897.79	-2904.86	278.64	174.52	2918.20	2904.57	1.49
5591.00	90.30	179.30	2896.82	-2997.84	280.51	174.65	3010.93	2997.54	1.16
5686.00	91.00	179.50	2895.74	-3092.83	281.50	174.80	3105.61	3092.53	0.77
5779.00	88.70	179.70	2895.98	-3185.82	282.15	174.94	3198.29	3185.52	2.48
5872.00	89.20	180.10	2897.69	-3278.80	282.32	175.08	3290.93	3278.50	0.69
5965.00	90.10	179.80	2898.25	-3371.80	282.40	175.21	3383.60	3371.50	1.02
6059.00	90.70	179.90	2897.60	-3465.79	282.64	175.34	3477.30	3465.50	0.65
6153.00	89.50	179.70	2897.43	-3559.79	282.97	175.46	3571.02	3559.49	1.29
6248.00	89.70	180.30	2898.10	-3654.79	282.97	175.57	3665.73	3654.49	0.67
6341.00	90.60	180.20	2897.85	-3747.79	282.57	175.69	3758.42	3747.49	0.97
6434.00	89.80	179.90	2897.53	-3840.79	282.48	175.79	3851.16	3840.49	0.92
6528.00	89.50	180.00	2898.10	-3934.78	282.57	175.89	3944.92	3934.49	0.34
6622.00	90.20	180.20	2898.35	-4028.78	282.40	175.99	4038.67	4028.48	0.77
6715.00	91.20	180.00	2897.21	-4121.77	282.24	176.08	4131.43	4121.48	1.10
6810.00	89.90	179.50	2896.30	-4216.77	282.65	176.17	4226.23	4216.47	1.47
6903.00	90.60	179.40	2895.90	-4309.76	283.55	176.24	4319.08	4309.46	0.76
6997.00	89.10	179.80	2896.14	-4403.76	284.20	176.31	4412.92	4403.46	1.65
7091.00	90.20	180.30	2896.72	-4497.75	284.12	176.39	4506.72	4497.45	1.29
7184.00	91.40	180.80	2895.42	-4590.74	283.23	176.47	4599.47	4590.44	1.40
7278.00	89.80	180.60	2894.43	-4684.72	282.08	176.55	4693.21	4684.42	1.72
7370.00	90.20	180.80	2894.43	-4776.71	280.96	176.63	4784.97	4776.42	0.49
7462.00	91.20	181.40	2893.31	-4868.69	279.19	176.72	4876.69	4868.39	1.27

MD	Inclination	Azimuth	TVD	NS	EW	CA	CD	VS	DLS
7553.00	90.00	180.80	2892.36	-4959.66	277.44	176.80	4967.42	4959.37	1.47
7645.00	89.70	180.50	2892.60	-5051.66	276.40	176.87	5059.21	5051.37	0.46
7737.00	90.40	180.70	2892.52	-5143.65	275.44	176.93	5151.02	5143.36	0.79
7829.00	91.20	180.90	2891.23	-5235.63	274.15	177.00	5242.81	5235.34	0.90
7920.00	90.20	181.00	2890.12	-5326.61	272.64	177.07	5333.59	5326.33	1.10
8011.00	89.90	181.20	2890.04	-5417.60	270.90	177.14	5424.37	5417.31	0.40
8102.00	90.70	181.70	2889.56	-5508.57	268.59	177.21	5515.11	5508.28	1.04
8193.00	91.90	181.90	2887.50	-5599.50	265.74	177.28	5605.80	5599.21	1.34
8202.00	91.90	181.90	2887.20	-5608.49	265.44	177.29	5614.76	5608.20	0.00

Projected Survey

MD	Inclination	Azimuth	TVD	NS	EW	CA	CD	VS	DLS
8275.00	91.90	181.90	2884.78	-5681.41	263.02	177.35	5687.49	5681.13	0.00