



Survey Report

NM OIL CONSERVATION
ARTESIA DISTRICT

AUG 17 2018

Service Company: Wellbenders Directional Services

Location: Eddy County

Well: South Boyd 13H

Rig: Silver Oak #1

RECEIVED

API or UWI: 30-015-44880

Job Number: NMDG2018-1085

State: New Mexico

Operating Company: Percussion Petroleum Operating

County: Eddy

Magnetic Declination: 7.37

Country: United States

Proposed Azimuth: 359.20

Comment

North Reference: GRID

Latitude: 32.62356

Longitude: -104.465951

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
132.00	0.50	132.10	132.00	-0.39	0.43	132.10	0.58	-0.39	0.38
224.00	0.30	180.80	224.00	-0.90	0.72	141.15	1.15	-0.91	0.41
316.00	1.00	153.40	315.99	-1.85	1.08	149.84	2.15	-1.87	0.81
407.00	2.90	146.90	406.93	-4.49	2.69	149.09	5.24	-4.53	2.10
499.00	5.30	136.20	498.69	-9.51	6.90	144.03	11.75	-9.61	2.73
590.00	6.70	133.90	589.19	-16.23	13.64	139.95	21.20	-16.41	1.56
682.00	6.70	133.00	680.56	-23.61	21.43	137.77	31.88	-23.90	0.11
773.00	6.50	134.20	770.96	-30.82	29.00	136.74	42.32	-31.22	0.27
865.00	6.40	135.30	862.38	-38.09	36.34	136.35	52.65	-38.60	0.17
957.00	6.50	135.40	953.80	-45.45	43.61	136.18	62.98	-46.05	0.11
1049.00	6.30	137.10	1045.22	-52.85	50.70	136.19	73.24	-53.55	0.30
1141.00	6.20	137.40	1136.68	-60.21	57.50	136.32	83.25	-61.00	0.11
1206.00	6.20	137.90	1201.30	-65.39	62.23	136.42	90.27	-66.26	0.08
1366.00	5.70	136.40	1360.43	-77.56	73.50	136.54	106.85	-78.58	0.33
1460.00	7.30	128.50	1453.83	-84.66	81.39	136.13	117.44	-85.79	1.95
1554.00	8.00	125.60	1546.99	-92.18	91.39	135.25	129.80	-93.45	0.85

MD	Inclination	Azimuth	TVD	NS	EW	CA	CD	VS	DLS
1647.00	7.60	127.00	1639.13	-99.65	101.56	134.46	142.28	-101.06	0.48
1740.00	7.40	128.20	1731.33	-107.06	111.18	133.92	154.34	-108.60	0.27
1835.00	7.40	126.60	1825.54	-114.49	120.90	133.44	166.50	-116.16	0.22
1930.00	7.30	127.30	1919.76	-121.79	130.61	133.00	178.58	-123.60	0.14
2023.00	7.30	127.80	2012.01	-128.99	139.98	132.66	190.35	-130.94	0.07
2116.00	7.60	127.90	2104.22	-136.39	149.50	132.38	202.37	-138.47	0.32
2211.00	7.80	129.50	2198.37	-144.35	159.43	132.16	215.07	-146.56	0.31
2304.00	8.30	129.80	2290.45	-152.66	169.46	132.02	228.08	-155.01	0.54
2397.00	8.50	130.20	2382.45	-161.40	179.86	131.90	241.66	-163.89	0.22
2492.00	7.30	110.80	2476.57	-168.07	190.87	131.37	254.32	-170.72	3.06
2539.00	10.60	87.80	2523.00	-168.97	197.99	130.48	260.29	-171.72	10.23
2587.00	14.70	76.50	2569.83	-167.38	208.33	128.78	267.24	-170.27	9.94
2634.00	20.00	66.60	2614.69	-162.79	221.51	126.31	274.90	-165.86	12.87
2681.00	24.90	60.30	2658.12	-154.69	237.50	123.08	283.43	-157.99	11.60
2728.00	27.80	50.00	2700.25	-142.73	254.50	119.28	291.79	-146.27	11.50
2775.00	29.90	40.90	2741.44	-126.82	270.58	115.11	298.82	-130.59	10.34
2823.00	32.40	31.50	2782.54	-106.80	285.14	110.53	304.48	-110.77	11.38
2870.00	33.70	22.20	2821.96	-83.97	296.65	105.81	308.31	-88.11	11.13
2917.00	37.30	13.80	2860.24	-58.05	304.98	100.78	310.46	-62.30	12.88
2964.00	40.70	7.80	2896.77	-29.02	310.46	95.34	311.82	-33.35	10.80
3011.00	44.80	1.90	2931.29	2.74	313.10	89.50	313.11	-1.63	12.19
3057.00	49.90	358.90	2962.45	36.56	313.30	83.34	315.42	32.18	12.08
3104.00	56.00	356.10	2990.76	74.01	311.62	76.64	320.29	69.65	13.82
3152.00	60.00	354.50	3016.19	114.56	308.28	69.61	328.88	110.25	8.80
3199.00	63.80	353.40	3038.33	155.78	303.90	62.86	341.50	151.52	8.34
3272.00	73.40	354.00	3064.93	223.26	296.46	53.02	371.13	219.10	13.17
3319.00	82.10	354.80	3074.90	268.93	291.99	47.35	396.96	264.83	18.59
3366.00	89.10	356.10	3078.50	315.61	288.28	42.41	427.45	311.56	15.15
3412.00	91.60	356.30	3078.22	361.51	285.23	38.27	460.48	357.49	5.45
3459.00	93.20	356.30	3076.25	408.37	282.20	34.65	496.39	404.39	3.40
3553.00	93.00	355.80	3071.17	502.01	275.73	28.78	572.75	498.11	0.57
3647.00	91.00	356.30	3067.89	595.72	269.26	24.32	653.75	591.90	2.19
3741.00	89.50	356.30	3067.48	689.52	263.20	20.89	738.05	685.78	1.60
3837.00	91.90	355.80	3066.30	785.28	256.58	18.09	826.13	781.62	2.55
3931.00	90.80	358.00	3064.09	879.11	251.50	15.97	914.38	875.51	2.62
4026.00	88.60	358.90	3064.59	974.06	248.93	14.34	1005.37	970.49	2.50
4119.00	88.40	359.50	3067.02	1067.02	247.64	13.07	1095.38	1063.46	0.68

MD	Inclination	Azimuth	TVD	NS	EW	CA	CD	VS	DLS
4213.00	90.80	358.80	3067.68	1161.00	246.24	11.97	1186.83	1157.45	2.66
4306.00	89.50	358.60	3067.43	1253.98	244.13	11.02	1277.52	1250.45	1.41
4399.00	89.90	359.10	3067.92	1346.96	242.27	10.20	1368.57	1343.44	0.69
4493.00	89.30	360.00	3068.58	1440.95	241.53	9.52	1461.05	1437.44	1.15
4587.00	90.20	1.10	3068.99	1534.94	242.43	8.98	1553.97	1531.41	1.51
4681.00	90.60	359.20	3068.33	1628.93	242.68	8.47	1646.91	1625.39	2.07
4772.00	90.60	359.00	3067.38	1719.92	241.25	7.98	1736.76	1716.38	0.22
4864.00	90.90	358.10	3066.17	1811.88	238.92	7.51	1827.56	1808.37	1.03
4956.00	89.70	357.00	3065.69	1903.79	234.99	7.04	1918.24	1900.33	1.77
5048.00	89.30	357.40	3066.49	1995.68	230.49	6.59	2008.94	1992.27	0.61
5139.00	88.70	358.80	3068.08	2086.61	227.47	6.22	2098.97	2083.23	1.67
5231.00	88.90	359.90	3070.01	2178.58	226.43	5.93	2190.32	2175.21	1.21
5322.00	91.10	359.60	3070.01	2269.58	226.03	5.69	2280.81	2266.20	2.44
5413.00	90.40	359.70	3068.82	2360.57	225.48	5.46	2371.31	2357.19	0.78
5505.00	89.30	359.30	3069.06	2452.56	224.68	5.23	2462.83	2449.19	1.27
5621.00	90.90	359.50	3068.86	2568.55	223.46	4.97	2578.25	2565.18	1.39
5715.00	88.80	0.30	3069.10	2662.54	223.30	4.79	2671.89	2659.17	2.39
5808.00	88.80	0.60	3071.05	2755.52	224.03	4.65	2764.61	2752.12	0.32
5904.00	89.20	1.00	3072.73	2851.50	225.37	4.52	2860.39	2848.07	0.59
5997.00	89.50	1.20	3073.78	2944.47	227.15	4.41	2953.22	2941.02	0.39
6091.00	90.10	0.60	3074.11	3038.46	228.63	4.30	3047.05	3034.97	0.90
6184.00	90.70	0.80	3073.46	3131.45	229.77	4.20	3139.87	3127.94	0.68
6279.00	90.60	359.20	3072.38	3226.44	229.77	4.07	3234.61	3222.92	1.69
6373.00	91.20	359.60	3070.90	3320.42	228.78	3.94	3328.30	3316.91	0.77
6465.00	90.10	358.10	3069.86	3412.40	226.93	3.80	3419.93	3408.89	2.02
6558.00	90.40	358.70	3069.46	3505.36	224.34	3.66	3512.53	3501.88	0.72
6651.00	90.80	359.20	3068.48	3598.34	222.63	3.54	3605.22	3594.88	0.69
6746.00	90.30	358.10	3067.57	3693.30	220.40	3.42	3699.87	3689.87	1.27
6840.00	90.90	358.60	3066.59	3787.26	217.69	3.29	3793.51	3783.85	0.83
6935.00	88.50	357.40	3067.08	3882.19	214.37	3.16	3888.11	3878.82	2.82
7026.00	88.80	357.50	3069.23	3973.08	210.33	3.03	3978.64	3969.75	0.35
7117.00	89.30	358.20	3070.74	4064.00	206.91	2.91	4069.26	4060.71	0.95
7209.00	89.70	358.40	3071.54	4155.95	204.18	2.81	4160.97	4152.70	0.49
7301.00	90.00	358.60	3071.78	4247.92	201.78	2.72	4252.71	4244.69	0.39
7393.00	90.30	359.10	3071.54	4339.90	199.93	2.64	4344.51	4336.69	0.63
7484.00	90.60	359.60	3070.82	4430.89	198.90	2.57	4435.36	4427.69	0.64
7576.00	91.20	359.80	3069.38	4522.88	198.42	2.51	4527.23	4519.67	0.69

MD	Inclination	Azimuth	TVD	NS	EW	CA	CD	VS	DLS
7667.00	91.50	0.20	3067.23	4613.86	198.42	2.46	4618.12	4610.64	0.55
7758.00	91.10	0.40	3065.17	4704.83	198.89	2.42	4709.03	4701.60	0.49
7850.00	88.70	359.40	3065.33	4796.82	198.73	2.37	4800.94	4793.58	2.83
7943.00	89.00	359.60	3067.20	4889.80	197.92	2.32	4893.80	4886.56	0.39
8035.00	89.40	359.70	3068.48	4981.79	197.36	2.27	4985.70	4978.55	0.45
8127.00	90.00	0.10	3068.96	5073.79	197.20	2.23	5077.62	5070.54	0.78
8220.00	90.70	0.70	3068.40	5166.78	197.85	2.19	5170.57	5163.52	0.99
8314.00	90.40	358.80	3067.49	5260.77	197.44	2.15	5264.48	5257.50	2.05
8408.00	90.70	358.80	3066.59	5354.75	195.47	2.09	5358.31	5351.50	0.32
8460.00	90.60	358.60	3066.00	5406.73	194.29	2.06	5410.22	5403.49	0.43

Projected Survey

MD	Inclination	Azimuth	TVD	NS	EW	CA	CD	VS	DLS
8515.00	90.60	358.60	3065.42	5461.71	192.94	2.02	5465.12	5458.49	0.00