

JUN 03 2018



Survey Report

RECEIVED

Service Company: Wellbenders Directional Services
LLC

Location: Eddy County, New Mexico

Well: Morris Boyd State Com 5H

Rig: Silver Oak #1

API or UWI: 30-015-44748

Job Number: NMDG2018-1050

State: New Mexico

Operating Company: Percussion Petroleum

County: Eddy

Magnetic Declination: 0.00

Country: United States

Proposed Azimuth: 180.06

Comment

North Reference: GRID

Latitude: 32.640573

Longitude: -104.458892

Tie-In Data

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

Survey does not go to total depth. Asked for one that went to TD & received same survey

Survey Data

MD	Inclination	Azimuth	TVD	NS	EW	CA	CD	VS	DLS
130.00	0.80	39.40	130.00	0.70	0.58	39.40	0.91	-0.70	0.62
221.00	0.50	53.70	220.99	1.43	1.30	42.31	1.93	-1.43	0.37
313.00	0.50	16.90	312.99	2.05	1.74	40.33	2.69	-2.05	0.34
404.00	0.40	54.50	403.98	2.61	2.11	38.96	3.36	-2.62	0.34
496.00	0.70	57.50	495.98	3.10	2.85	42.57	4.21	-3.10	0.33
587.00	1.80	147.80	586.96	2.19	4.08	61.76	4.63	-2.20	2.13
679.00	2.40	137.60	678.90	-0.45	6.15	94.22	6.17	0.45	0.77
771.00	3.50	132.20	770.78	-3.76	9.53	111.55	10.24	3.75	1.23
863.00	3.80	136.10	862.59	-7.85	13.72	119.76	15.81	7.83	0.42
956.00	3.50	135.80	955.40	-12.10	17.84	124.15	21.56	12.08	0.32
1047.00	3.60	136.10	1046.23	-16.15	21.76	126.59	27.10	16.13	0.11
1139.00	3.40	131.80	1138.06	-20.05	25.79	127.86	32.67	20.02	0.36
1184.00	3.60	130.00	1182.97	-21.85	27.87	128.10	35.41	21.82	0.51
1259.00	3.50	141.50	1257.83	-25.15	31.10	128.97	40.00	25.12	0.96
1353.00	3.70	138.70	1351.64	-29.68	34.89	130.39	45.80	29.64	0.28
1448.00	3.90	144.70	1446.44	-34.62	38.78	131.76	51.98	34.58	0.47

MD	Inclination	Azimuth	TVD	NS	EW	CA	CD	VS	DLS
3983.00	91.50	180.80	3084.77	-1253.55	95.00	175.67	1257.14	1253.45	0.58
4077.00	90.10	178.70	3083.46	-1347.53	95.42	175.95	1350.90	1347.43	2.68
4170.00	89.90	178.40	3083.46	-1440.50	97.77	176.12	1443.81	1440.40	0.39
4261.00	91.20	178.90	3082.59	-1531.47	99.91	176.27	1534.72	1531.36	1.53
4353.00	90.10	178.90	3081.54	-1623.44	101.68	176.42	1626.63	1623.34	1.20
4444.00	90.80	179.00	3080.83	-1714.43	103.35	176.55	1717.54	1714.32	0.78
4536.00	91.60	179.60	3078.90	-1806.40	104.47	176.69	1809.42	1806.29	1.09
4627.00	88.90	178.20	3078.50	-1897.37	106.22	176.80	1900.34	1897.26	3.34
4716.00	88.40	177.90	3080.60	-1986.29	109.24	176.85	1989.29	1986.18	0.66
4809.00	89.10	178.00	3082.63	-2079.21	112.57	176.90	2082.26	2079.09	0.76
4901.00	89.50	178.50	3083.75	-2171.16	115.38	176.96	2174.22	2171.04	0.70
4994.00	89.30	179.70	3084.73	-2264.14	116.84	177.05	2267.15	2264.02	1.31
5085.00	89.80	180.40	3085.44	-2355.14	116.76	177.16	2358.03	2355.01	0.95
5177.00	89.40	180.40	3086.08	-2447.13	116.12	177.28	2449.89	2447.01	0.43
5239.00	89.50	180.40	3086.68	-2509.13	115.69	177.36	2511.79	2509.01	0.16
5333.00	90.40	181.00	3086.76	-2603.12	114.54	177.48	2605.64	2603.00	1.15
5426.00	91.50	181.30	3085.22	-2696.09	112.67	177.61	2698.44	2695.97	1.23
5520.00	90.50	179.70	3083.58	-2790.07	111.85	177.70	2792.31	2789.95	2.01
5615.00	91.20	179.70	3082.17	-2885.05	112.35	177.77	2887.24	2884.93	0.74
5707.00	88.90	179.50	3082.09	-2977.04	112.99	177.83	2979.19	2976.92	2.51
5802.00	89.20	179.60	3083.66	-3072.03	113.74	177.88	3074.13	3071.91	0.33
5895.00	89.40	179.50	3084.80	-3165.02	114.47	177.93	3167.09	3164.90	0.24
5988.00	90.00	179.30	3085.29	-3258.01	115.44	177.97	3260.06	3257.89	0.68
6081.00	90.10	179.00	3085.21	-3351.00	116.82	178.00	3353.04	3350.88	0.34
6173.00	90.60	179.40	3084.64	-3442.99	118.10	178.04	3445.01	3442.86	0.70
6264.00	91.20	179.60	3083.22	-3533.97	118.90	178.07	3535.97	3533.85	0.69
6355.00	92.10	179.50	3080.60	-3624.93	119.61	178.11	3626.91	3624.81	1.00
6447.00	90.50	180.20	3078.51	-3716.91	119.85	178.15	3718.84	3716.78	1.90
6538.00	90.30	180.40	3077.87	-3807.90	119.38	178.20	3809.77	3807.78	0.31
6630.00	91.00	180.40	3076.83	-3899.89	118.74	178.26	3901.70	3899.77	0.76
6721.00	91.90	180.50	3074.53	-3990.86	118.02	178.31	3992.61	3990.73	1.00
6814.00	90.40	180.50	3072.66	-4083.84	117.21	178.36	4085.52	4083.71	1.61
6906.00	91.00	180.60	3071.54	-4175.82	116.33	178.40	4177.44	4175.70	0.66
6999.00	91.30	181.10	3069.67	-4268.79	114.95	178.46	4270.34	4268.67	0.63
7090.00	90.10	180.40	3068.56	-4359.78	113.76	178.51	4361.26	4359.66	1.53
7182.00	90.50	181.00	3068.08	-4451.77	112.63	178.55	4453.19	4451.65	0.78
7275.00	90.70	180.80	3067.10	-4544.75	111.17	178.60	4546.11	4544.63	0.30

MD	Inclination	Azimuth	TVD	NS	EW	CA	CD	VS	DLS
7368.00	91.30	180.70	3065.48	-4637.73	109.95	178.64	4639.03	4637.61	0.65
7462.00	91.70	181.00	3063.02	-4731.69	108.56	178.69	4732.93	4731.57	0.53
7555.00	90.70	181.00	3061.07	-4824.65	106.94	178.73	4825.84	4824.54	1.08
7648.00	90.60	180.70	3060.02	-4917.63	105.56	178.77	4918.77	4917.52	0.34
7741.00	89.30	180.40	3060.10	-5010.63	104.67	178.80	5011.72	5010.52	1.43
7834.00	89.10	180.30	3061.40	-5103.62	104.10	178.83	5104.68	5103.51	0.24
7927.00	89.10	180.60	3062.86	-5196.60	103.37	178.86	5197.63	5196.49	0.32
8020.00	89.00	180.90	3064.40	-5289.58	102.15	178.89	5290.57	5289.47	0.34
8113.00	89.60	181.50	3065.53	-5382.55	100.20	178.93	5383.49	5382.45	0.91
8207.00	90.70	180.90	3065.29	-5476.53	98.23	178.97	5477.41	5476.43	1.33
8301.00	91.10	181.40	3063.81	-5570.50	96.35	179.01	5571.33	5570.40	0.68
8341.00	91.10	181.10	3063.04	-5610.48	95.48	179.03	5611.30	5610.38	0.75

Projected Survey

MD	Inclination	Azimuth	TVD	NS	EW	CA	CD	VS	DLS
8412.00	91.10	181.10	3061.68	-5681.46	94.11	179.05	5682.24	5681.36	0.00