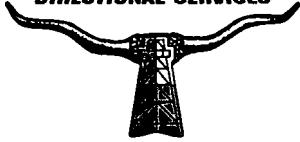


WELLBENDERS
DIRECTIONAL SERVICES

Survey Report

30-015-45124

NM OIL CONSERVATION
ARTESIA DISTRICT

Service Company: WellBenders Directional Services

Location: Eddy County, New Mexico

DEC 05 2018

Well: Mayaro 22 State #7

Rig: Silver Oak #1

API or UWI: 30-015-45124

Job Number: NMDG2018-1168

RECEIVED

State: New Mexico

Operating Company: Percussion Petroleum, LLC

County: Eddy

Magnetic Declination: 7.06

Country: United States

Proposed Azimuth: 215.95

Comment

North Reference: GRID

Latitude: 32.814967

Longitude: -104.161674

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	0.22	135.38	132.00	-0.18	0.18	135.38	0.25	0.04	0.17
224.00	0.09	171.59	224.00	-0.38	0.31	140.38	0.49	0.12	0.17
315.00	0.22	289.72	315.00	-0.39	0.16	157.83	0.42	0.22	0.30
393.00	1.01	234.87	392.99	-0.73	-0.54	216.56	0.91	0.91	1.16
479.00	2.51	230.92	478.95	-2.36	-2.63	228.09	3.53	3.45	1.75
587.00	4.04	211.49	586.77	-7.09	-6.45	222.28	9.59	9.53	1.73
679.00	7.12	211.14	678.33	-14.74	-11.09	216.96	18.45	18.44	3.35
772.00	10.07	213.16	770.27	-26.48	-18.52	214.97	32.32	32.31	3.19
864.00	12.31	213.25	860.52	-41.42	-28.30	214.34	50.16	50.14	2.43
956.00	13.49	212.90	950.20	-58.63	-39.51	213.97	70.70	70.66	1.29
1048.00	14.24	211.76	1039.51	-77.26	-51.29	213.58	92.74	92.66	0.87
1139.00	13.85	214.75	1127.79	-95.73	-63.39	213.51	114.81	114.71	0.91
1233.00	13.98	216.24	1219.04	-114.13	-76.52	213.84	137.40	137.31	0.41
1325.00	12.48	215.45	1308.59	-131.19	-88.85	214.11	158.45	158.37	1.64
1419.00	12.31	215.62	1400.40	-147.61	-100.58	214.27	178.62	178.54	0.18
1512.00	12.22	216.42	1491.28	-163.59	-112.20	214.44	198.37	198.30	0.21

MD	Inclination	Azimuth	TVD	NS	EW	CA	CD	VS	DLS
1607.00	12.22	216.42	1584.13	-179.77	-124.13	214.63	218.46	218.41	0.00
1700.00	12.09	217.29	1675.04	-195.44	-135.88	214.81	238.03	237.98	0.24
1793.00	13.27	218.00	1765.77	-211.60	-148.35	215.03	258.42	258.39	1.28
1888.00	14.02	218.61	1858.09	-229.18	-162.24	215.30	280.80	280.78	0.80
1983.00	14.29	218.44	1950.21	-247.36	-176.71	215.54	304.00	303.99	0.29
2077.00	14.90	218.70	2041.17	-265.88	-191.48	215.76	327.65	327.65	0.65
2171.00	13.63	218.09	2132.27	-284.03	-205.87	215.94	350.79	350.79	1.36
2266.00	12.75	216.68	2224.76	-301.24	-219.04	216.02	372.46	372.46	0.99
2361.00	13.01	216.68	2317.37	-318.23	-231.69	216.06	393.63	393.63	0.27
2454.00	13.63	217.03	2407.87	-335.37	-244.54	216.10	415.06	415.06	0.67
2549.00	14.07	217.47	2500.11	-353.47	-258.31	216.16	437.79	437.79	0.48
2643.00	14.64	218.26	2591.17	-371.87	-272.61	216.25	461.09	461.08	0.64
2737.00	13.10	216.59	2682.43	-389.75	-286.32	216.30	483.61	483.61	1.69
2831.00	10.42	215.54	2774.45	-405.22	-297.61	216.30	502.77	502.76	2.86
2924.00	7.82	214.39	2866.27	-417.29	-306.08	216.26	517.51	517.50	2.80
3017.00	5.58	217.12	2958.63	-426.12	-312.38	216.24	528.35	528.34	2.43
3112.00	4.31	216.77	3053.27	-432.66	-317.30	216.26	536.54	536.53	1.34
3207.00	4.35	215.98	3148.00	-438.43	-321.56	216.26	543.71	543.70	0.08
3302.00	4.48	215.71	3242.72	-444.36	-325.84	216.25	551.03	551.02	0.14
3395.00	2.24	225.91	3335.55	-448.58	-329.27	216.28	556.45	556.44	2.48
3488.00	1.10	310.46	3428.52	-449.26	-331.25	216.40	558.18	558.16	2.58
3582.00	1.45	328.04	3522.50	-447.67	-332.57	216.61	557.68	557.64	0.55
3676.00	0.35	172.56	3616.49	-446.94	-333.16	216.70	557.45	557.40	1.89
3771.00	0.79	163.15	3711.49	-447.86	-332.93	216.63	558.05	558.01	0.47
3865.00	0.79	158.32	3805.48	-449.08	-332.51	216.52	558.78	558.75	0.07
3959.00	0.84	164.74	3899.47	-450.35	-332.08	216.41	559.55	559.53	0.11
4054.00	0.97	162.27	3994.45	-451.78	-331.66	216.28	560.45	560.44	0.14
4147.00	0.92	156.56	4087.44	-453.22	-331.12	216.15	561.29	561.29	0.11
4242.00	0.22	262.73	4182.44	-453.94	-331.00	216.10	561.80	561.80	1.06
4336.00	0.35	284.09	4276.44	-453.89	-331.45	216.14	562.03	562.03	0.18
4429.00	0.48	310.72	4369.43	-453.57	-332.03	216.21	562.11	562.10	0.25
4523.00	0.44	313.18	4463.43	-453.07	-332.59	216.28	562.04	562.03	0.05
4616.00	0.44	308.88	4556.43	-452.60	-333.13	216.35	561.98	561.96	0.04
4709.00	0.57	293.85	4649.43	-452.19	-333.83	216.44	562.06	562.04	0.20
4803.00	0.62	292.79	4743.42	-451.80	-334.72	216.53	562.28	562.26	0.05
4898.00	0.57	292.70	4838.41	-451.42	-335.63	216.63	562.52	562.48	0.05

Projected Survey

MD	Inclination	Azimuth	TVD	NS	EW	CA	CD	VS	DLS
4958.00	0.57	292.70	4898.41	-451.19	-336.18	216.69	562.66	562.62	0.00