

VES SURVEY

NM OIL CONSERVATION
ARTESIA DISTRICT

JUN 21 2017

RECEIVED

I Gregg Wilson certify that I am employed by VES Survey International. That I did on the day(s) of 03/11/17 through 03/11/17 conduct or supervise the taking of a Rate Gyro survey from a depth of 0.00 feet to a depth of 8,922.14 feet; that the data is true, correct, complete and within the limitations of the tool as set forth by Vaughn Energy Services, that I am authorized and qualified to make this report; that this survey was conducted at the request of Matador Resources for the Warren Fed Com Well # 206H API # 30-015-43828 in Eddy County / Parish New Mexico; and that I have reviewed this report and find that it conforms to the principles and procedures as set forth by VES Survey International.



Gregg Wilson
Service Technician
VES Survey International



Company: Matador Resources
 Lease/Well: Warren Federal Com No/206H

VES SURVEY

Rig Name: Patterson 274
 State/County: New Mexico/Eddy
 VS-Azi: 0.00 Degrees
 Latitude: 32.26752, Longitude: -104.14329
 Grid North = True North -0.10 degs (NAD 27)
 Grid Correction Applied = -0.10 degs

Depth Reference : RKB= 28

DRILLOG MS GYRO SURVEY CALCULATIONS
 Filename: msgyro_run01-01-de_01.ut
 Minimum Curvature Method
 Report Date/Time: 3/16/2017 / 15:40

VES Survey International
 Fort Worth, Texas
 Office 817-741-3610

Surveyor: Gregg Wilson
 Warren Federal Com No 206H / API 30-015-43828

NM OIL CONSERVATION
 ARTESIA DISTRICT

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Measured Depth FT	Incl Angle Deg	Drift Direction Deg	TVD FT	+N/-S FT	+E/-W FT	Vertical Section FT	Closure Distance FT	Closure Direction Deg	Dogleg Severity Deg/100
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	****
171.98	0.87	309.78	171.97	0.83	-1.00	0.83	1.30	309.78	0.51
267.21	0.88	298.53	267.19	1.65	-2.20	1.65	2.75	306.79	0.18
362.44	0.90	292.28	362.41	2.28	-3.54	2.28	4.21	302.81	0.10
457.67	0.82	297.14	457.63	2.87	-4.83	2.87	5.62	300.74	0.11
552.90	1.19	277.05	552.85	3.30	-6.41	3.30	7.21	297.24	0.53
648.13	3.79	253.96	647.98	2.55	-10.42	2.55	10.73	283.76	2.87
743.36	5.29	247.48	742.91	0.00	-17.50	0.00	17.50	270.00	1.67
838.59	4.85	243.89	837.77	-3.45	-25.17	-3.45	25.41	262.19	0.58
933.82	4.38	241.48	932.69	-6.96	-31.98	-6.96	32.73	257.72	0.53
1029.05	4.49	245.95	1027.63	-10.22	-38.58	-10.22	39.91	255.17	0.38
1124.28	5.26	252.56	1122.52	-13.05	-46.15	-13.05	47.96	254.22	1.00
1219.51	4.62	252.61	1217.39	-15.50	-53.98	-15.50	56.16	253.98	0.67
1314.74	4.29	252.78	1312.33	-17.70	-61.04	-17.70	63.56	253.83	0.35
1409.97	4.37	260.30	1407.29	-19.37	-68.02	-19.37	70.73	254.11	0.60
1505.20	5.88	267.94	1502.16	-20.15	-76.31	-20.15	78.93	255.21	1.54
1600.43	4.20	262.42	1597.03	-20.78	-84.48	-20.78	86.99	256.18	1.63

Measured Depth FT	Incl Angle Deg	Drift Direction Deg	TVD FT	+N/-S FT	+E/-W FT	Vertical Section FT	Closure Distance FT	Closure Direction Deg	Dogleg Severity Deg/100
1695.66	4.55	258.28	1691.98	-22.01	-91.63	-22.01	94.24	256.50	0.50
1790.99	3.71	248.61	1786.97	-23.90	-98.20	-23.90	101.07	256.32	1.14
1886.12	5.39	265.12	1881.90	-25.40	-105.53	-25.40	108.54	256.47	2.22
1981.35	7.50	257.25	1976.52	-27.16	-116.05	-27.16	119.19	256.83	2.40
2076.58	7.08	259.11	2070.98	-29.64	-127.88	-29.64	131.27	256.95	0.50
2171.81	6.57	255.38	2165.54	-32.12	-138.92	-32.12	142.59	256.98	0.72
2267.04	6.06	253.98	2260.19	-34.88	-149.02	-34.88	153.05	256.83	0.55
2362.27	5.94	254.29	2354.90	-37.60	-158.60	-37.60	163.00	256.66	0.14
2457.50	6.34	255.69	2449.58	-40.24	-168.44	-40.24	173.17	256.56	0.45
2552.73	6.34	256.14	2544.23	-42.80	-178.64	-42.80	183.69	256.53	0.05
2647.96	6.21	254.17	2638.89	-45.46	-188.70	-45.46	194.10	256.45	0.26
2743.19	9.90	253.05	2733.16	-49.26	-201.49	-49.26	207.42	256.26	3.88
2838.42	11.89	253.94	2826.67	-54.36	-218.75	-54.36	225.40	256.05	2.09
2933.65	11.47	252.84	2919.93	-59.86	-237.22	-59.86	244.66	255.84	0.49
3028.88	9.74	251.65	3013.53	-65.20	-253.92	-65.20	262.16	255.60	1.84
3124.11	9.73	249.68	3107.39	-70.53	-269.11	-70.53	278.20	255.31	0.35
3219.34	9.49	249.81	3201.28	-76.03	-284.03	-76.03	294.03	255.01	0.25
3314.57	9.97	250.22	3295.14	-81.53	-299.16	-81.53	310.07	254.75	0.50
3409.80	11.57	249.52	3388.69	-87.67	-315.86	-87.67	327.80	254.49	1.70
3505.03	11.58	250.86	3481.98	-94.14	-333.84	-94.14	346.86	254.25	0.28
3600.26	11.45	251.29	3575.29	-100.31	-351.82	-100.31	365.84	254.09	0.17
3695.49	10.79	252.02	3668.74	-106.09	-369.25	-106.09	384.19	253.97	0.71
3790.72	9.64	252.27	3762.45	-111.27	-385.33	-111.27	401.07	253.89	1.20
3885.95	9.48	251.69	3856.36	-116.17	-400.37	-116.17	416.88	253.82	0.20
3981.18	9.74	252.07	3950.26	-121.11	-415.47	-121.11	432.76	253.75	0.28
4076.41	9.97	251.56	4044.08	-126.19	-430.95	-126.19	449.05	253.68	0.26
4171.64	9.48	251.79	4137.94	-131.25	-446.22	-131.25	465.12	253.61	0.52
4266.87	8.66	251.08	4231.98	-136.03	-460.44	-136.03	480.12	253.54	0.87
4362.10	8.00	249.47	4326.21	-140.68	-473.43	-140.68	493.89	253.45	0.73
4457.33	7.00	250.19	4420.62	-144.97	-485.10	-144.97	506.30	253.36	1.05
4552.56	7.46	252.70	4515.09	-148.77	-496.47	-148.77	518.28	253.32	0.59
4647.79	6.54	253.67	4609.61	-152.14	-507.58	-152.14	529.89	253.31	0.97
4743.02	6.07	259.22	4704.27	-154.61	-517.74	-154.61	540.33	253.37	0.81
4838.25	7.82	260.31	4798.79	-156.64	-529.08	-156.64	551.78	253.51	1.84
4933.48	7.53	260.36	4893.17	-158.78	-541.61	-158.78	564.41	253.66	0.30
5028.71	7.45	259.24	4987.59	-160.97	-553.83	-160.97	576.75	253.79	0.18
5123.94	8.26	255.88	5081.92	-163.80	-566.53	-163.80	589.74	253.87	0.98
5219.17	7.86	253.06	5176.21	-167.36	-579.40	-167.36	603.08	253.89	0.59
5314.40	7.61	253.89	5270.58	-171.01	-591.68	-171.01	615.90	253.88	0.29

Measured Depth FT	Incl Angle Deg	Drift		TVD FT	+N/-S FT	+E/-W FT	Vertical Section FT	Closure		Dogleg Severity Deg/100
		Direction Deg	Distance FT					Direction Deg	Distance FT	
5409.63	7.15	251.19	5365.02	-174.67	-603.34	-174.67	628.12	253.85	0.60	
5504.86	6.64	250.98	5459.56	-178.37	-614.15	-178.37	639.53	253.80	0.54	
5600.09	5.40	251.67	5554.26	-181.57	-623.61	-181.57	649.50	253.77	1.30	
5695.32	5.43	251.72	5649.07	-184.40	-632.14	-184.40	658.48	253.74	0.04	
5790.55	5.26	249.16	5743.88	-187.36	-640.50	-187.36	667.34	253.69	0.31	
5885.78	3.81	250.61	5838.81	-189.96	-647.56	-189.96	674.85	253.65	1.53	
5981.01	1.84	249.18	5933.92	-191.56	-651.97	-191.56	679.53	253.63	2.07	
6076.24	1.15	280.55	6029.12	-191.93	-654.35	-191.93	681.91	253.65	1.10	
6171.47	1.53	285.83	6124.33	-191.40	-656.51	-191.40	683.85	253.75	0.42	
6266.70	1.74	278.58	6219.52	-190.84	-659.17	-190.84	686.24	253.85	0.31	
6361.93	2.00	284.25	6314.70	-190.22	-662.21	-190.22	688.99	253.97	0.34	
6457.16	2.07	286.14	6409.87	-189.33	-665.47	-189.33	691.88	254.12	0.10	
6552.39	0.27	307.05	6505.07	-188.71	-667.31	-188.71	693.48	254.21	1.92	
6647.62	0.22	340.32	6600.30	-188.41	-667.55	-188.41	693.63	254.24	0.16	
6742.85	0.50	343.66	6695.53	-187.84	-667.73	-187.84	693.64	254.29	0.30	
6838.08	0.39	41.08	6790.76	-187.19	-667.63	-187.19	693.38	254.34	0.46	
6933.31	0.46	73.65	6885.98	-186.84	-667.05	-186.84	692.72	254.35	0.26	
7028.54	0.33	63.81	6981.21	-186.61	-666.44	-186.61	692.07	254.36	0.16	
7123.77	0.23	56.40	7076.44	-186.38	-666.03	-186.38	691.62	254.37	0.11	
7219.00	0.41	48.22	7171.67	-186.05	-665.62	-186.05	691.13	254.38	0.19	
7314.23	0.39	15.91	7266.90	-185.51	-665.28	-185.51	690.66	254.42	0.23	
7409.46	0.78	293.58	7362.12	-184.95	-665.78	-184.95	690.99	254.48	0.87	
7504.69	1.70	288.52	7457.33	-184.24	-667.72	-184.24	692.67	254.57	0.97	
7599.92	2.26	279.90	7552.50	-183.46	-670.91	-183.46	695.54	254.71	0.67	
7695.15	2.86	260.81	7647.64	-183.52	-675.11	-183.52	699.61	254.79	1.09	
7790.38	2.24	221.33	7742.78	-185.30	-678.69	-185.30	703.53	254.73	1.91	
7885.61	2.36	182.89	7837.94	-188.66	-680.02	-188.66	705.70	254.49	1.59	
7980.84	0.42	70.98	7933.14	-190.50	-679.79	-190.50	705.97	254.35	2.67	
8076.07	0.97	26.80	8028.37	-189.67	-679.10	-189.67	705.09	254.39	0.76	
8171.30	1.42	71.83	8123.58	-188.59	-677.61	-188.59	703.36	254.45	1.06	
8266.53	1.43	67.89	8218.78	-187.77	-675.39	-187.77	701.00	254.46	0.10	
8361.76	2.02	66.51	8313.97	-186.65	-672.75	-186.65	698.16	254.49	0.62	
8456.99	0.90	67.33	8409.16	-185.70	-670.52	-185.70	695.76	254.52	1.17	
8552.22	1.26	111.52	8504.38	-185.79	-668.85	-185.79	694.18	254.48	0.92	
8647.45	1.58	135.74	8599.58	-187.12	-666.96	-187.12	692.71	254.33	0.71	
8742.68	0.66	348.42	8694.80	-187.53	-666.15	-187.53	692.04	254.28	2.27	
8837.91	11.28	350.11	8789.38	-177.79	-667.86	-177.79	691.12	255.09	11.16	
8933.14	19.62	352.43	8881.09	-152.72	-671.58	-152.72	688.72	257.19	8.78	



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