



NM OIL CONSERVATION
ARTESIA DISTRICT
SEP 27 2017
RECEIVED

I Christopher Hair certify that I am employed by VES Survey International. That I did on the day(s) of 06/11/17 through 06/11/17 conduct or supervise the taking of a Rate Gyro survey from a depth of 0.00 feet to a depth of 9,345.00 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 Anne Com 15 24S 28E RB Well # 201H API # 30-015-44210 for the Matador Production 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.

A handwritten signature in blue ink, appearing to read "Chris Hair", is written over a horizontal line.

Christopher Hair
Service Technician
VES Survey International



Company: MATADOR PRODUCTION
 Lease/Well: ANNE COM 15 24S 28E RB No. /201H
30-015-44210
 Rig Name: PATTERSON 274
 State/County: NEW MEXICO/EDDY
 VS-Azi: 89.79 Degrees
 Latitude: 32.22262, Longitude: -104.08082
 Grid North = True North -0.13 degs (NAD 27)
 Grid Correction Applied = -0.13 degs



Depth Reference : RKB = 28.5 FEET

DRILLOG HA GYRO SURVEY CALCULATIONS

Filename: e-line gyro-de_01.ut

Minimum Curvature Method

Report Date/Time: 6/16/2017 / 14:20

VES Survey International

Midland, TX

(432)-563-5444

Surveyor: Christopher Hair

Anne Com 15 24S 28E RB No. 201H / API 30-015-44210

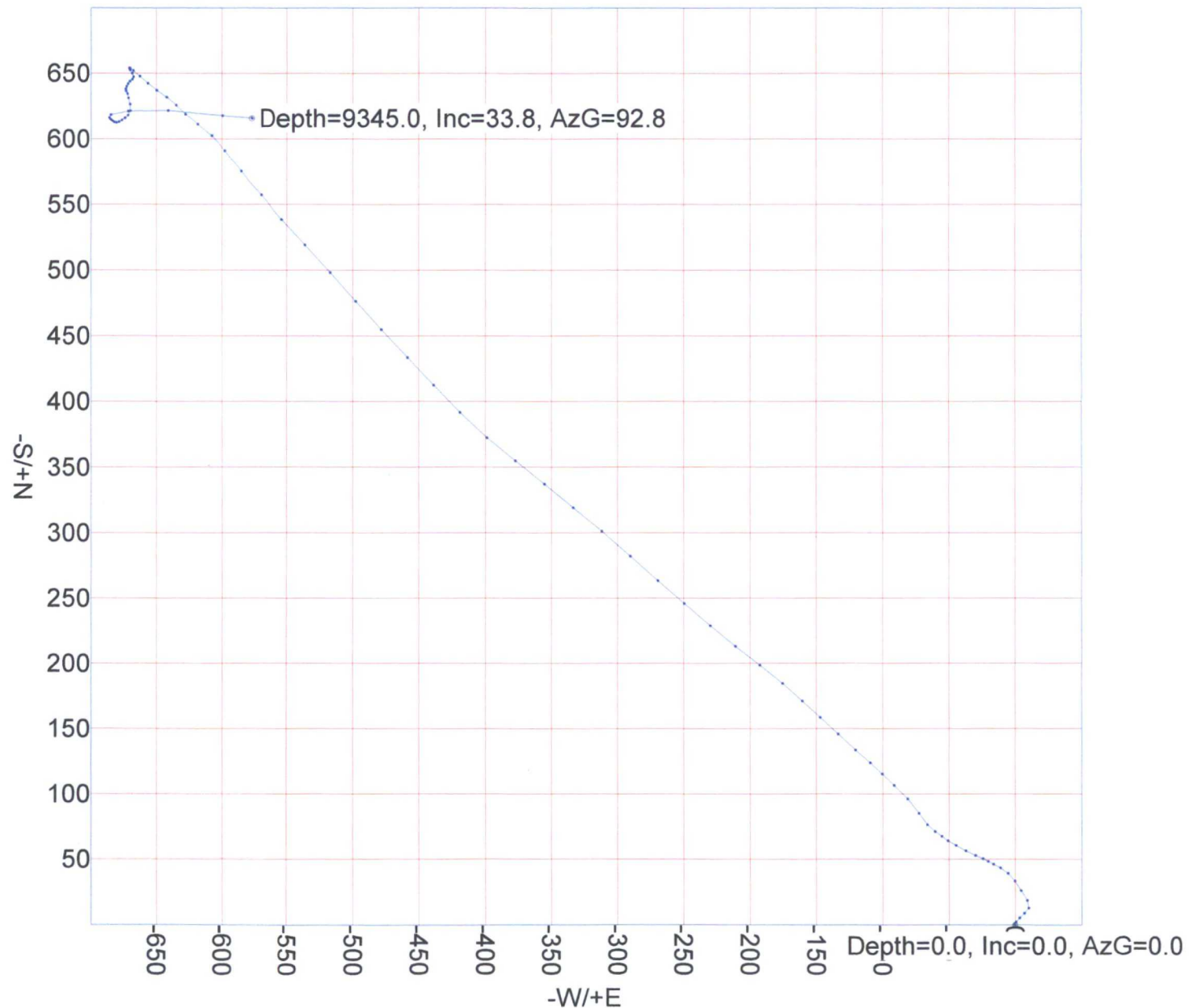
Measured Depth FT	Incl Angle Deg	Drift Direction Deg	TVD FT	+N/-S FT	+E/-W FT	Vertical Section FT	Closure Distance FT	Closure Direction Deg	Dogleg Severity Deg/100
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	****
100.00	0.36	282.51	100.00	0.07	-0.30	-0.30	0.31	282.51	0.36
200.00	0.34	268.84	200.00	0.13	-0.90	-0.90	0.91	278.14	0.08
300.00	0.48	30.53	300.00	0.48	-0.98	-0.98	1.09	296.13	0.71
400.00	2.07	41.54	399.97	2.19	0.43	0.43	2.23	11.00	1.60
500.00	2.81	45.21	499.88	5.27	3.36	3.38	6.25	32.54	0.76
600.00	2.94	44.01	599.75	8.84	6.88	6.91	11.20	37.91	0.15
700.00	3.00	34.52	699.62	12.84	10.15	10.19	16.36	38.32	0.49
800.00	5.09	324.38	799.41	18.61	9.04	9.11	20.69	25.92	4.95
900.00	5.08	331.31	899.02	26.10	4.33	4.43	26.45	9.42	0.62
1000.00	4.87	325.31	998.65	33.47	-0.21	-0.08	33.47	359.65	0.56
1100.00	4.27	310.22	1098.33	39.36	-5.46	-5.32	39.74	352.10	1.34
1200.00	3.70	300.86	1198.09	43.42	-11.07	-10.91	44.80	345.69	0.86
1300.00	3.21	294.47	1297.91	46.23	-16.39	-16.22	49.05	340.48	0.62
1400.00	2.21	304.73	1397.80	48.49	-20.53	-20.35	52.65	337.06	1.11
1500.00	2.70	293.56	1497.70	50.53	-24.26	-24.08	56.05	334.35	0.68
1600.00	4.38	292.98	1597.51	52.96	-29.94	-29.74	60.83	330.52	1.69

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
1700.00	4.92	299.65	1697.18	56.57	-37.18	-36.98	67.70	326.68	0.76
1800.00	4.93	297.33	1796.81	60.67	-44.73	-44.51	75.37	323.60	0.20
1900.00	3.01	304.68	1896.57	64.13	-50.70	-50.47	81.75	321.87	1.98
2000.00	3.60	306.07	1996.40	67.47	-55.40	-55.15	87.30	320.61	0.60
2100.00	3.67	306.30	2096.20	71.22	-60.52	-60.26	93.46	319.64	0.08
2200.00	5.52	316.07	2195.88	76.58	-66.44	-66.15	101.38	319.06	2.00
2300.00	6.75	330.30	2295.31	85.15	-72.68	-72.37	111.95	319.52	1.95
2400.00	9.26	317.26	2394.33	96.17	-81.06	-80.71	125.78	319.87	3.08
2500.00	7.58	312.93	2493.25	106.58	-91.36	-90.97	140.37	319.40	1.79
2600.00	6.83	315.48	2592.46	115.31	-100.36	-99.94	152.87	318.97	0.82
2700.00	7.41	311.11	2691.69	123.79	-109.39	-108.94	165.20	318.53	0.79
2800.00	9.69	312.11	2790.57	133.68	-120.49	-120.00	179.97	317.97	2.28
2900.00	10.90	313.71	2888.96	145.86	-133.58	-133.04	197.78	317.52	1.25
3000.00	10.42	312.73	2987.23	158.53	-147.06	-146.48	216.23	317.15	0.52
3100.00	10.82	313.50	3085.52	171.13	-160.51	-159.88	234.62	316.83	0.42
3200.00	12.49	310.75	3183.45	184.65	-175.51	-174.83	254.75	316.45	1.76
3300.00	13.08	307.45	3280.98	198.59	-192.69	-191.96	276.70	315.86	0.94
3400.00	13.83	309.20	3378.23	213.02	-210.93	-210.15	299.79	315.28	0.86
3500.00	14.87	310.48	3475.11	228.91	-229.96	-229.12	324.47	314.87	1.09
3600.00	15.20	311.34	3571.68	245.90	-249.57	-248.66	350.36	314.58	0.40
3700.00	15.60	310.90	3668.09	263.37	-269.58	-268.61	376.88	314.33	0.42
3800.00	16.83	312.40	3764.11	281.94	-290.44	-289.40	404.78	314.15	1.30
3900.00	16.63	310.49	3859.87	301.00	-312.01	-310.91	433.54	313.97	0.58
4000.00	16.02	309.60	3955.84	319.09	-333.53	-332.36	461.58	313.73	0.67
4100.00	16.68	309.57	4051.80	337.02	-355.22	-353.98	489.66	313.49	0.66
4200.00	16.29	308.25	4147.69	354.85	-377.29	-375.99	517.95	313.24	0.54
4300.00	15.81	310.45	4243.79	372.36	-398.67	-397.30	545.52	313.05	0.77
4400.00	16.81	316.45	4339.78	391.68	-419.00	-417.56	573.56	313.07	1.96
4500.00	16.50	316.03	4435.58	412.38	-438.82	-437.30	602.18	313.22	0.34
4600.00	17.19	317.37	4531.29	433.47	-458.68	-457.09	631.10	313.38	0.80
4700.00	16.70	316.89	4626.95	454.84	-478.52	-476.84	660.19	313.55	0.51
4800.00	16.90	319.16	4722.68	476.33	-497.84	-496.09	689.01	313.73	0.68
4900.00	17.08	318.21	4818.32	498.27	-517.14	-515.31	718.13	313.94	0.33
5000.00	15.79	317.23	4914.23	519.21	-536.16	-534.26	746.36	314.08	1.32
5100.00	14.48	318.62	5010.76	538.58	-553.66	-551.69	772.41	314.21	1.36
5200.00	14.33	319.65	5107.61	557.39	-569.94	-567.89	797.19	314.36	0.29
5300.00	13.12	319.35	5204.76	575.44	-585.35	-583.23	820.83	314.51	1.21
5400.00	9.66	323.52	5302.77	590.80	-597.73	-595.56	840.43	314.67	3.56
5500.00	8.24	313.45	5401.56	602.47	-607.92	-605.71	855.89	314.74	2.11

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
5600.00	7.67	305.19	5500.60	611.25	-618.58	-616.34	869.64	314.66	1.27
5700.00	6.03	314.72	5599.89	618.79	-627.77	-625.50	881.48	314.59	2.00
5800.00	5.54	312.21	5699.38	625.73	-635.07	-632.78	891.55	314.58	0.55
5900.00	5.34	306.94	5798.93	631.77	-642.37	-640.05	900.98	314.52	0.54
6000.00	5.11	304.55	5898.51	637.09	-649.76	-647.42	909.98	314.44	0.32
6100.00	4.88	309.71	5998.13	642.34	-656.70	-654.34	918.62	314.37	0.50
6200.00	4.45	313.48	6097.80	647.73	-662.79	-660.41	926.74	314.34	0.53
6300.00	3.08	308.43	6197.58	652.07	-667.71	-665.32	933.29	314.32	1.41
6400.00	0.55	283.62	6297.52	653.85	-670.29	-667.89	936.38	314.29	2.59
6500.00	0.17	25.67	6397.52	654.10	-670.69	-668.29	936.84	314.28	0.61
6600.00	0.18	172.89	6497.52	654.08	-670.61	-668.21	936.77	314.29	0.33
6700.00	0.36	209.68	6597.52	653.66	-670.75	-668.35	936.57	314.26	0.24
6800.00	1.10	140.63	6697.51	652.64	-670.29	-667.90	935.54	314.24	1.03
6900.00	2.32	148.20	6797.47	650.18	-668.62	-666.23	932.62	314.20	1.23
7000.00	1.30	182.34	6897.42	647.32	-667.60	-665.22	929.90	314.12	1.44
7100.00	1.30	231.09	6997.40	645.48	-668.53	-666.16	929.28	314.00	1.07
7200.00	1.41	228.99	7097.37	643.96	-670.33	-667.97	929.53	313.85	0.12
7300.00	1.33	207.03	7197.34	642.12	-671.79	-669.43	929.31	313.71	0.53
7400.00	1.36	210.19	7297.31	640.06	-672.91	-670.56	928.70	313.57	0.08
7500.00	0.96	190.01	7397.29	638.21	-673.66	-671.31	927.97	313.45	0.57
7600.00	1.14	151.48	7497.28	636.51	-673.32	-670.99	926.56	313.39	0.72
7700.00	1.54	154.87	7597.25	634.41	-672.28	-669.95	924.36	313.34	0.40
7800.00	2.38	172.20	7697.19	631.14	-671.42	-669.11	921.49	313.23	1.02
7900.00	3.28	160.64	7797.07	626.38	-670.19	-667.89	917.34	313.06	1.06
8000.00	2.77	198.26	7896.94	621.39	-670.00	-667.72	913.80	312.84	2.01
8100.00	1.72	222.62	7996.86	617.99	-671.78	-669.51	912.80	312.61	1.40
8200.00	1.83	233.57	8096.82	615.94	-674.08	-671.81	913.11	312.42	0.36
8300.00	1.51	235.64	8196.77	614.25	-676.45	-674.19	913.72	312.24	0.33
8400.00	1.35	245.08	8296.74	613.01	-678.60	-676.35	914.49	312.09	0.28
8500.00	1.16	265.87	8396.72	612.44	-680.68	-678.43	915.65	311.98	0.49
8600.00	0.99	310.44	8496.70	612.92	-682.35	-680.09	917.21	311.93	0.83
8700.00	0.89	298.99	8596.69	613.86	-683.68	-681.42	918.82	311.92	0.21
8800.00	0.96	313.98	8696.68	614.81	-684.95	-682.70	920.41	311.91	0.25
8900.00	1.03	331.86	8796.66	616.19	-685.98	-683.72	922.09	311.93	0.32
9000.00	2.32	50.04	8896.63	618.28	-684.85	-682.58	922.65	312.08	2.34
9100.00	13.38	82.80	8995.56	621.04	-671.77	-669.49	914.86	312.75	11.49
9200.00	22.39	92.68	9090.65	621.60	-641.20	-638.91	893.04	314.11	9.48
9300.00	27.28	97.41	9181.38	617.75	-599.42	-597.15	860.76	315.86	5.27
9345.00	33.78	92.85	9220.13	615.80	-576.67	-574.41	843.65	316.88	15.33



VES Survey International
Midland, TX
(432)-563-5444
Surveyor: Christopher Hair
Anne Com 15 24S 28E RB No. 201H / API 30-015-44210



V.E.S Survey Date: 6/10/2017