

NM OIL CONSERVATION

ARTESIA DISTRICT

OCT 10 2017

RECEIVED

I Christopher Hair certify that I am employed by VES Survey International. That I did on the day(s) of 08/13/17 through 08/13/17 conduct or supervise the taking of a Rate Gyro survey from a depth of 0.00 feet to a depth of 2,591.00 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 Matador Production for the Tom Matthews 10-24S-28E RB Well # 223H API # 30-015-44257 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.

Christopher Hair
Service Technician
VES Survey International



Company: MATADOR PRODUCTION
Lease/Well: TOM MATTHEWS 10-24S-28E RB No./223H

Rig Name: PATTERSON 274
State/County: NEW MEXICO/EDDY
VS-Azi: 89.76 Degrees
Latitude: 32.22838, Longitude: -104.08402
Grid North = True North -0.13 degs (NAD 27)
Grid Correction Applied = -0.13 degs

VES SURVEY

NM OIL CONSERVATION
ARTESIA DISTRICT

OCT 10 2017

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Depth Reference : RKB = 28.5 FEET

DRILLOG MS GYRO SURVEY CALCULATIONS

Filename: msgyro_run01-01-de_01.ut
Minimum Curvature Method
Report Date/Time: 8/21/2017 / 13:33

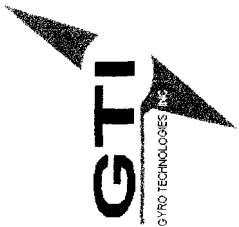
VES Survey International
Midland, TX
432-563-5444

Surveyor: Christopher Hair

Tom Matthews 10-24S-28E RB No. 223H / API 30-015-44257

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	****
63.42	0.21	191.28	63.42	-0.11	-0.02	-0.02	0.12	191.28	0.33
158.25	0.15	192.14	158.25	-0.40	-0.08	-0.08	0.41	191.53	0.07
253.08	0.30	65.00	253.08	-0.41	0.12	0.12	0.43	163.73	0.43
347.91	0.42	36.80	347.91	-0.03	0.56	0.56	0.56	92.81	0.22
442.74	0.66	32.76	442.73	0.72	1.07	1.07	1.28	56.13	0.26
537.57	0.76	40.33	537.56	1.66	1.77	1.78	2.43	46.88	0.14
632.40	0.89	45.42	632.38	2.66	2.71	2.72	3.79	45.51	0.16
727.23	0.94	52.16	727.19	3.65	3.85	3.86	5.31	46.47	0.13
822.06	0.98	52.67	822.01	4.63	5.11	5.13	6.90	47.85	0.04
916.89	1.42	46.57	916.82	5.93	6.62	6.64	8.89	48.12	0.48
1011.72	2.06	28.56	1011.61	8.24	8.29	8.32	11.68	45.17	0.88
1106.55	3.45	27.57	1106.32	12.26	10.42	10.47	16.09	40.36	1.47
1201.38	4.19	29.41	1200.94	17.81	13.44	13.52	22.31	37.04	0.79
1296.21	4.90	39.12	1295.47	23.97	17.70	17.80	29.80	36.44	1.10
1391.04	4.70	50.84	1389.97	29.57	23.27	23.39	37.63	38.20	1.05
1485.87	4.17	49.65	1484.52	34.26	28.91	29.06	44.83	40.16	0.57

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
1580.70	3.81	37.20	1579.12	39.00	33.45	33.61	51.38	40.61	0.99
1675.53	3.46	25.96	1673.76	44.09	36.60	36.79	57.30	39.70	0.84
1770.36	3.52	28.27	1768.42	49.22	39.24	39.44	62.95	38.56	0.16
1865.19	4.31	44.91	1863.03	54.31	43.13	43.36	69.35	38.45	1.45
1960.02	4.54	51.73	1957.57	59.16	48.59	48.84	76.56	39.40	0.61
2054.85	3.81	64.42	2052.15	62.85	54.38	54.65	83.11	40.87	1.24
2149.68	4.66	51.43	2146.73	66.61	60.24	60.52	89.81	42.13	1.34
2244.51	5.89	50.16	2241.15	72.13	66.99	67.29	98.44	42.88	1.30
2339.34	6.03	54.03	2335.47	78.17	74.75	75.08	108.16	43.72	0.45
2434.17	5.26	50.15	2429.84	83.88	82.12	82.47	117.39	44.39	0.90
2529.00	4.32	31.70	2524.34	89.71	87.34	87.71	125.20	44.23	1.89
2591.00	4.24	31.82	2586.17	93.64	89.77	90.17	129.72	43.79	0.13



VES Survey International
Midland, TX
432-563-5444

Surveyor: Christopher Hair

Tom Matthews 10-24S-28E RB No. 223H / API 30-015-44257

VES SURVEY
INTERNATIONAL

Depth=2591.0, Inc=4.2, AzG=31.8

80

60

40
-S/+N

20

0

Depth=0.0, Inc=0.0, AzG=0.0

0

20

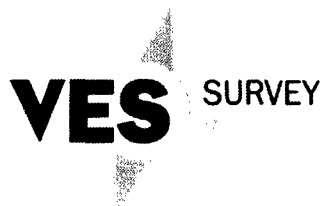
40

60

80

-W/+E

V.E.S. Survey Date: 8/13/2017



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A handwritten signature in cursive script, reading "Chris Hair", written over a horizontal line.

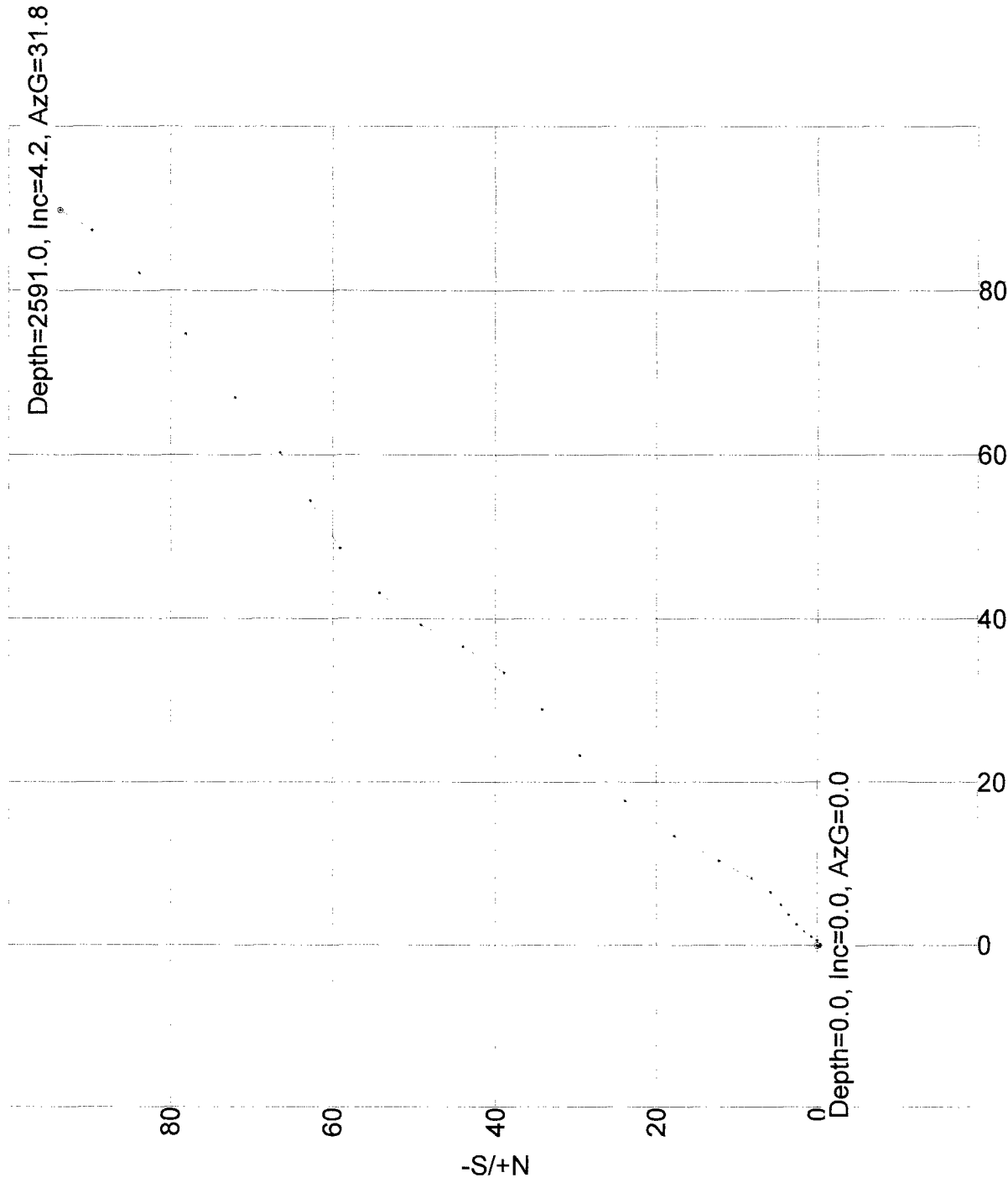
Christopher Hair
Service Technician
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V.E.S. Survey Date: 8/13/2017