

VES SURVEY

15-43824

I Michael Cook certify that I am employed by VES Survey International. That I did on the day(s) of 08/19/16 through 08/19/16 conduct or supervise the taking of a Rate Gyro survey from a depth of 0.00 feet to a depth of 10,100.00 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 Resources for the Dr Scrivner Federal 01 24S 28E RE Well # #228H API # 30-015-43824 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.

Michael Cook

Michael Cook
Service Technician
VES Survey International

09/04/02

Company: Matador Production Co.

Well Name: Dr. Scribner Fed 01-24S-28E RB 228H - OWB

Location: Eddy County, NM

Rig: Patterson #297

Job Number: DDMO-160334

API #: 30-015-43824

Vertical Section Azimuth: 269.74

Proposed Direction: 269.74

Magnetic Declination: 7.14

REFERENCED TO GRID NORTH

Survey Calculation Method:

Minimum Curvature

Proposed Direction: 269.74

PTB:	MD	INC	Azm	TVD	AZM	TVD	N/S	Surface	EW	VS
	13.646		90.7		271.6	10777.67	-236.36		-2472.17	2473.22

#	Depth	Inc	Azm	TVD	N/S	EW	Surface	Distance	Closure	DLS/	BUR/
	Feet	Degrees	Degrees	Feet	Feet	Feet	Vert Sec	Feet	Azm	100'	100'
TIE IN	10.100	1.10	221.82	10046.41	-297.28	602.63	-601.27	671.97	116.26	0.56	0.00
1	10.135	1.10	211.60	10081.40	-297.82	602.23	-600.87	671.84	116.31	3.17	2.61
2	10.254	4.20	271.30	10200.28	-298.69	597.27	-595.91	667.80	116.57	14.13	14.13
3	10.300	10.70	271.50	10245.86	-298.54	591.31	-589.95	662.40	116.79	13.14	12.13
4	10.347	16.40	281.90	10291.54	-297.06	580.45	-579.10	652.05	117.10	8.92	8.51
5	10.394	20.40	285.90	10336.13	-293.44	566.07	-564.73	637.61	117.40	8.97	8.72
6	10.441	24.50	283.30	10379.56	-288.95	548.70	-547.39	620.14	117.77	9.38	8.91
7	10.487	28.60	280.30	10420.70	-284.79	528.58	-527.28	600.42	118.32	8.11	7.87
8	10.534	32.30	278.50	10461.22	-280.92	505.08	-503.80	577.95	119.08	6.45	5.96
9	10.581	35.10	276.40	10500.31	-277.56	479.23	-477.96	553.80	120.08	4.55	4.47
10	10.628	37.20	275.70	10538.26	-274.64	451.66	-450.41	528.61	121.30	6.83	6.74
11	10.674	40.30	274.90	10574.13	-271.99	422.99	-421.75	502.89	122.74	8.15	8.09
12	10.721	44.10	274.20	10608.95	-269.49	391.53	-390.30	475.31	124.54	3.65	3.62
13	10.768	45.80	274.50	10642.21	-266.97	358.42	-357.20	446.92	126.68	4.73	4.47
14	10.815	47.90	275.50	10674.35	-263.98	324.26	-323.06	418.13	129.15	12.37	11.90
15	10.878	55.40	272.80	10713.42	-260.47	275.03	-273.84	378.79	133.44	16.63	16.52
16	10.909	58.10	272.00	10730.41	-259.38	249.13	-247.95	359.64	136.16	11.20	11.18
17	10.955	65.70	271.00	10752.06	-258.33	208.59	-207.42	332.03	141.08	7.59	7.45
18	11.057	77.10	270.20	10784.54	-257.35	112.08	-110.92	280.70	156.46	2.32	2.26
19	11.105	83.70	269.10	10792.54	-257.64	64.78	-63.62	265.66	165.89	0.57	0.57
20	11.199	90.70	270.50	10797.13	-257.96	-29.04	30.21	259.59	186.42	2.07	1.70
21	11.293	92.20	273.10	10794.75	-255.01	-122.95	124.11	283.11	205.74	4.47	4.04
22	11.386	90.10	272.60	10792.89	-250.39	-215.82	216.95	330.56	220.76	2.15	1.81
23	11.480	91.30	274.70	10791.74	-244.41	-309.61	310.72	394.45	231.71	0.48	0.43
24	11.574	91.10	274.20	10789.77	-237.12	-403.31	404.38	467.85	239.55	1.84	1.81
25	11.668	92.70	273.10	10786.65	-231.13	-497.06	498.10	548.17	245.06	0.32	0.32
26	11.762	88.90	271.30	10785.34	-227.53	-590.96	591.99	633.25	248.94	0.21	0.21
27	11.856	89.10	271.70	10786.98	-225.07	-684.91	685.93	720.94	254.13	0.08	0.08
28	11.950	90.80	272.80	10787.06	-221.38	-778.84	779.83	809.69	256.06	0.36	0.36
29	12.044	90.40	273.00	10786.08	-216.62	-872.71	873.68	899.19	257.57	1.08	1.08
30	12.138	90.70	271.30	10785.18	-213.10	-966.64	967.59	989.85	258.66	0.21	0.21
31	12.232	88.70	269.10	10785.67	-212.77	-1060.62	1061.58	1081.75	259.53	0.00	0.00
32	12.326	88.90	270.10	10787.64	-213.42	-1154.60	1155.56	1174.16	259.53	0.00	0.00

Y09 04 02

Company: Matador Production Co.
Well Name: Dr. Scribner Fed 01-24S-28E RB 228H - OWB

Location: Eddy County, NM
Rig: Patterson #297

Job Number: DDMO-160334

API #: 30-015-43824

Vertical Section Azimuth: 269.74

Survey Calculation Method: Minimum Curvature

PTB: MD 13.646 INC 90.7 AZM 271.6

Proposed Direction: 269.74

Magnetic Declination: 7.14 REFERENCED TO GRID NORTH

#	Depth Feet	Inc Degrees	Azm Degrees	TVD Feet	N/S Feet	EW Feet	Surface Vert Sec	Distance Closure	Azm	DLS/ 100	VS BUR/ 100'
33	12.420	90.10	269.50	10788.46	-213.75	-1248.59	1249.55	1266.76	260.29	1.43	1.28
34	12.515	87.50	270.90	10790.45	-213.42	-1343.56	1344.52	1360.41	260.97	3.11	-2.74
35	12.609	85.20	267.40	10796.43	-214.81	-1437.34	1438.30	1453.30	261.50	4.45	-2.45
36	12.703	87.80	266.80	10802.17	-219.56	-1531.04	1532.02	1546.70	261.84	2.84	2.77
37	12.797	90.30	265.40	10803.73	-225.95	-1624.80	1625.80	1640.43	262.08	3.05	2.66
38	12.892	90.70	264.60	10802.90	-234.23	-1719.43	1720.47	1735.31	262.24	0.94	0.42
39	12.986	97.10	268.70	10796.51	-239.72	-1812.98	1814.05	1828.76	262.47	8.08	6.81
40	13.081	94.90	270.10	10786.58	-240.70	-1907.45	1908.52	1922.57	262.81	2.74	-2.32
41	13.176	90.90	269.10	10781.77	-241.37	-2002.30	2003.38	2016.80	263.13	4.34	-4.21
42	13.270	91.30	269.80	10779.97	-242.27	-2096.28	2097.36	2110.23	263.41	0.86	0.43
43	13.364	88.80	269.80	10779.89	-242.60	-2190.27	2191.35	2203.67	263.68	2.66	-2.66
44	13.458	91.00	271.30	10780.05	-241.69	-2284.26	2285.33	2297.01	263.96	2.83	2.34
45	13.552	90.60	271.80	10778.74	-239.15	-2378.22	2379.28	2390.21	264.26	0.68	-0.43



M&S Energy Services

SURVEY CALCULATION PROGRAM

9/27/16 14:28

09/04/02

Company: Matador Production Co.

Well Name: Dr. Scribner Fed 01-24S-28E RB 228H - Sidetrack

Location: Eddy County, NM

Rig: Patterson #297

Job Number: DDMO-160334

API #: 30-015-43824

Vertical Section Azimuth: 269.74

Proposed Direction: 269.74

Magnetic Declination: 7.14

REFERENCED TO GRID NORTH

Survey Calculation Method:		Minimum Curvature		N/S		TVD		E/W		Surface		Distance		Closure		DLS/		BUR/	
PTB:		INC		AZM		TVD		E/W		Vert Sec		Distance		Azim		100'		100'	
MD		84.2		263.3		10749.94		-216.12		-4421.09		4422.03							
Depth		Inc		Azim		Feet		Feet		Feet		Feet		Feet		Feet		Feet	
#		Degrees		Degrees		Feet		Feet		Feet		Feet		Feet		Feet		Feet	
TIE IN		12,892		90.70		264.60		10802.90		-234.23		-1719.43		1720.48		1735.31		262.24	
1	12,987	90.30	272.80	10802.07	-236.38	-1814.32	1815.37	1910.17	1923.03	263.11	1.79	1.26	0.95	-0.95	3.40	0.71	-0.64	1.24	-1.06
2	13,082	91.50	274.00	10800.58	-230.75	-1909.14	1910.17	2004.88	2016.37	263.62	0.95	0.95	3.40	0.71	-0.64	1.24	-1.06	3.38	3.30
3	13,177	90.60	274.10	10798.84	-224.04	-2097.58	2098.55	2108.85	2201.45	264.48	1.24	-1.06	3.30	3.30	0.74	-0.42	0.53	0.53	-0.42
4	13,271	93.80	273.70	10795.23	-217.65	-2191.23	2284.99	2378.63	2473.92	265.16	0.53	-0.42	0.53	0.53	0.74	-0.42	0.53	0.53	-0.42
5	13,365	93.20	273.40	10789.49	-206.77	-2284.99	2378.63	2473.92	2567.39	265.48	0.53	-0.42	0.53	0.53	0.74	-0.42	0.53	0.53	-0.42
6	13,459	92.20	272.80	10785.06	-201.61	-2378.63	2473.92	2567.39	2667.75	266.02	0.53	-0.42	0.53	0.53	0.74	-0.42	0.53	0.53	-0.42
7	13,553	95.30	273.50	10778.91	-195.59	-2473.92	2567.39	2667.75	2761.34	266.19	1.21	-1.17	1.52	0.32	0.32	0.32	0.32	1.52	0.32
8	13,648	94.90	273.80	10770.47	-189.38	-2566.56	2667.75	2761.34	2854.98	266.36	1.52	0.32	1.52	0.32	0.32	0.32	0.32	1.52	0.32
9	13,742	94.20	273.80	10763.01	-185.16	-2661.33	2667.75	2761.34	2948.72	266.49	1.52	0.32	1.52	0.32	0.32	0.32	0.32	1.52	0.32
10	13,837	92.00	271.30	10754.92	-183.28	-2755.25	2756.05	2850.01	3043.53	266.60	0.43	-0.11	0.43	-0.11	0.43	-0.11	0.43	0.43	-0.11
11	13,931	91.60	271.00	10752.13	-181.39	-2849.21	2943.99	3038.98	3137.41	266.69	2.00	-0.85	2.00	-0.85	2.00	-0.85	2.00	2.00	-0.85
12	14,025	90.50	271.30	10750.89	-180.41	-3038.19	3132.97	3226.90	3231.24	266.77	4.33	3.94	4.33	3.94	4.33	3.94	4.33	4.33	3.94
13	14,119	90.80	270.30	10750.40	-181.14	-3132.18	3226.11	3319.73	3323.88	266.88	0.63	-0.32	0.63	-0.32	0.63	-0.32	0.63	0.63	-0.32
14	14,214	89.90	268.60	10747.53	-182.05	-3226.11	3319.73	3323.88	3417.60	266.97	1.66	-1.49	1.66	-1.49	1.66	-1.49	1.66	1.66	-1.49
15	14,308	89.90	270.30	10741.93	-181.15	-3318.94	3413.62	3507.57	3511.41	267.06	0.24	-0.11	0.24	-0.11	0.24	-0.11	0.24	0.24	-0.11
16	14,402	93.60	270.30	10737.67	-180.42	-3412.84	3506.79	3601.52	3605.20	267.15	0.57	-0.21	0.57	-0.21	0.57	-0.21	0.57	0.57	-0.21
17	14,495	93.30	270.80	10731.84	-179.19	-3506.79	3601.52	3695.50	3699.10	267.21	3.61	-2.45	3.61	-2.45	3.61	-2.45	3.61	3.61	-2.45
18	14,589	91.90	270.10	10731.11	-180.58	-3694.72	3789.49	3793.05	3793.05	267.26	1.62	0.64	1.62	0.64	1.62	0.64	1.62	1.62	0.64
19	14,683	91.80	270.30	10731.76	-180.58	-3788.70	3883.47	3977.45	3980.72	267.34	2.19	1.06	2.19	1.06	2.19	1.06	2.19	2.19	1.06
20	14,777	91.60	270.80	10730.28	-179.52	-3882.69	3977.45	4074.69	4074.69	267.45	2.00	-0.85	2.00	-0.85	2.00	-0.85	2.00	2.00	-0.85
21	14,871	89.30	268.30	10730.12	-181.32	-4070.65	4074.69	4168.63	4168.63	267.42	1.91	0.00	1.91	0.00	1.91	0.00	1.91	1.91	0.00
22	14,965	89.90	269.70	10731.52	-187.71	-4164.40	4168.63	4259.66	4259.66	267.34	4.52	-2.02	4.52	-2.02	4.52	-2.02	4.52	4.52	-2.02
23	15,059	90.10	268.00	10735.58	-197.55	-4258.80	4259.66	4352.83	4352.83	267.26	1.40	-1.37	1.40	-1.37	1.40	-1.37	1.40	1.40	-1.37
24	15,153	88.20	263.90	10742.87	-207.99	-4351.93	4352.83	4356.89	4356.89	267.26	2.94	-2.87	2.94	-2.87	2.94	-2.87	2.94	2.94	-2.87
25	15,247	86.90	263.30																
26	15,341																		
27	15,436																		
28	15,530																		