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Survey Company: MS Energy Services
MWD Surveyor Name: Tim Little
Survey Type: MWD
Operating Company: Matador Production Company
Well Name & Number: Jimmy Kone 05-24S-28E RB 226H
API Number: 30-015-43958
Surveyed Depths: 173' – 13,318' MD Original Wellbore;
PTB: 13,381'
12,094' – 15,202' MD Sidetrack;
PTB: 15,285'
Dates Performed: 12/09/2016 – 01/01/2017
Location: Eddy County, NM

I certify that the data is true, correct and complete and within the limitations of the tool set forth by MS Energy Services; that I am authorized and qualified to make this report and that I have reviewed this report and find it conforms to the principles and procedures as set forth by MS Energy Services.

Digitally signed by:

Title: MWD Field Specialist

Date: 2017-01-18

Email: tlittle@msenergyservices.com



SURVEY CALCULATION PROGRAM

3/7/17 16:17

Company:	Matador Production Company			
Well Name:	Jimmy Kone 05-24S-28E RB 228H - OWB			
Location:	Eddy County, NM			
Rig:	Patterson #297			
Job Number:	DDMO-160527			
API #:	30-015-43958			
Vertical Section Azimuth:	269.74			
Survey Calculation Method:	Minimum Curvature			
PTB:	MD	INC	AZM	VS
	13,381	89.9	268.3	2885.69
Magnetic Declination: 7.19				
Proposed Direction: 269.74				
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	BUR/ 100'
TIE IN	0	0.00	0.00	0.00	0.00	0.00			0.00		
1	173	1.20	270.90	172.99	0.03	-1.81	1.81	1.81	270.90	0.69	0.69
2	296	1.50	264.70	295.95	-0.10	-4.70	4.70	4.70	268.78	0.27	0.24
3	387	1.60	261.00	386.92	-0.41	-7.14	7.14	7.15	266.72	0.16	0.11
4	477	0.80	258.00	476.90	-0.74	-9.00	9.00	9.03	265.32	0.89	-0.89
5	541	0.60	224.80	540.89	-1.07	-9.67	9.68	9.73	263.71	0.69	-0.31
6	694	0.60	211.50	693.89	-2.32	-10.65	10.67	10.90	257.73	0.09	0.00
7	785	0.60	199.20	784.88	-3.17	-11.06	11.07	11.51	253.99	0.14	0.00
8	875	0.40	250.60	874.88	-3.72	-11.51	11.53	12.10	252.08	0.52	-0.22
9	969	0.60	279.30	968.88	-3.75	-12.31	12.32	12.87	253.04	0.33	0.21
10	1,063	0.80	351.20	1062.87	-3.03	-12.89	12.91	13.24	256.80	0.89	0.21
11	1,156	2.30	22.50	1155.83	-0.66	-12.28	12.28	12.30	266.93	1.79	1.61
12	1,250	4.20	35.60	1249.68	3.88	-9.55	9.53	10.31	292.12	2.16	2.02
13	1,343	5.50	33.60	1342.34	10.36	-5.10	5.06	11.55	333.78	1.41	1.40
14	1,530	4.90	34.30	1528.57	24.43	4.36	-4.47	24.81	10.11	0.32	-0.32
15	1,718	6.20	21.00	1715.70	40.54	12.52	-12.70	42.43	17.16	0.97	0.69
16	1,905	5.50	45.20	1901.75	56.28	22.50	-22.75	60.61	21.79	1.36	-0.37
17	2,092	6.80	32.00	2087.68	71.99	34.73	-35.05	79.93	25.75	1.02	0.70
18	2,279	5.80	28.10	2273.55	89.71	45.04	-45.45	100.38	26.66	0.58	-0.53
19	2,466	6.10	18.40	2459.55	107.47	52.63	-53.12	119.67	26.09	0.56	0.16
20	2,560	5.30	16.10	2553.08	116.38	55.41	-55.94	128.90	25.46	0.88	-0.85
21	2,749	8.90	22.30	2740.60	138.31	63.38	-64.01	152.14	24.62	1.94	1.90
22	2,936	10.80	24.20	2924.84	167.67	76.05	-76.81	184.12	24.40	1.03	1.02
23	3,123	12.70	22.40	3107.91	202.66	91.07	-91.99	222.18	24.20	1.03	1.02
24	3,310	12.00	21.80	3290.58	239.72	106.12	-107.21	262.16	23.88	0.38	-0.37
25	3,498	12.50	17.20	3474.31	277.30	119.40	-120.65	301.91	23.30	0.58	0.27
26	3,685	11.60	17.40	3657.18	314.57	131.00	-132.43	340.76	22.61	0.48	-0.48
27	3,872	13.70	18.30	3839.64	353.54	143.58	-145.18	381.58	22.10	1.13	1.12
28	4,059	12.30	17.10	4021.84	393.61	156.39	-158.18	423.54	21.67	0.76	-0.75
29	4,246	13.70	20.20	4204.04	433.43	169.90	-171.86	465.54	21.40	0.84	0.75
30	4,433	14.10	20.90	4385.57	475.49	185.67	-187.82	510.45	21.33	0.23	0.21
31	4,620	12.90	20.50	4567.40	516.32	201.10	-203.45	554.10	21.28	0.64	-0.64
32	4,807	10.20	19.30	4750.59	551.51	213.89	-216.39	591.53	21.20	1.45	-1.44
33	4,995	9.60	19.80	4935.79	581.97	224.70	-227.34	623.84	21.11	0.32	-0.32



SURVEY CALCULATION PROGRAM

3/7/17 15:17

Company:	Matador Production Company
Well Name:	Jimmy Kone 05-24S-28E RB 226H - OWB
Location:	Eddy County, NM
Rig:	Patterson #297
Job Number:	DDMO-160527
API #:	30-015-43958

REFERENCED TO GRID NORTH

Magnetic Declination: 7.19

Vertical Section Azimuth: 269.74

Survey Calculation Method: Minimum Curvature

PTB:	MD	13,381	INC	89.9	TVD	Feet	N/S	Feet	AZM	TVD	Feet	E/W	Feet	Surface	Vert Sec	Distance	Closure	Azm	DLS/ 100'	BUR/ 100'
							268.3					10493.96		687.87	N/S		-2888.84			2885.69

#	Depth Feet	Inc Degrees	Azm Degrees	TVD Feet	N/S Feet	AZM	TVD Feet	E/W Feet	Surface Vert Sec	Distance	Closure	Azm	DLS/ 100'	BUR/ 100'
34	5,181	10.00	21.90	5119.08	611.54		235.98		-238.75	655.49		21.10	0.29	0.22
35	5,369	8.50	22.20	5304.63	639.56		247.32		-250.22	685.71		21.14	0.80	-0.80
36	5,556	6.80	21.10	5489.96	662.68		256.53		-259.53	710.60		21.16	0.91	-0.91
37	5,744	5.40	19.80	5676.89	681.39		263.53		-266.62	730.57		21.14	0.75	-0.74
38	5,931	3.10	32.30	5863.37	693.94		269.21		-272.36	744.33		21.20	1.32	-1.23
39	6,118	0.40	19.60	6050.26	698.83		272.13		-275.30	749.95		21.28	1.45	-1.44
40	6,305	1.80	96.30	6237.23	699.13		275.27		-278.44	751.37		21.49	0.94	0.75
41	6,493	1.50	133.80	6425.16	697.10		279.98		-283.14	751.22		21.88	0.58	-0.16
42	6,679	0.40	221.70	6611.13	694.93		281.31		-284.46	749.71		22.04	0.83	-0.59
43	6,867	2.40	281.90	6799.07	695.25		277.02		-280.17	748.41		21.72	1.06	1.06
44	7,054	0.60	329.50	6986.00	696.90		272.69		-275.85	748.35		21.37	1.09	-0.96
45	7,242	0.90	310.70	7173.99	698.71		271.07		-274.24	749.45		21.20	0.20	0.16
46	7,429	0.90	272.60	7360.97	699.74		268.49		-271.66	749.48		20.99	0.31	0.00
47	7,616	1.40	175.90	7547.94	697.53		267.19		-270.35	746.95		20.96	0.94	0.27
48	7,803	1.10	272.70	7734.91	695.33		265.56		-268.71	744.32		20.90	1.01	-0.16
49	7,991	0.80	327.70	7922.89	696.53		263.05		-266.21	744.54		20.69	0.49	-0.16
50	8,178	0.50	282.90	8109.88	697.81		261.56		-264.72	745.22		20.55	0.30	-0.16
51	8,365	1.10	284.80	8296.86	698.45		259.03		-262.20	744.94		20.35	0.32	0.32
52	8,552	1.70	285.80	8483.80	699.67		254.63		-257.80	744.56		20.00	0.32	0.32
53	8,739	0.80	154.30	8670.78	699.24		252.52		-255.69	743.45		19.86	1.23	-0.48
54	8,926	0.60	141.80	8857.76	697.30		253.69		-256.86	742.02		19.99	0.13	-0.11
55	9,113	0.80	165.00	9044.75	695.27		254.64		-257.79	740.43		20.11	0.18	0.11
56	9,300	0.00	118.50	9231.75	694.01		254.98		-258.12	739.36		20.17	0.43	-0.43
57	9,488	0.30	148.20	9419.74	693.59		255.23		-258.38	739.06		20.20	0.16	0.16
58	9,675	0.40	157.00	9606.74	692.57		255.75		-258.89	738.28		20.27	0.06	0.05
59	9,830	1.20	227.80	9761.73	690.98		254.76		-257.89	736.45		20.24	0.73	0.52
60	9,935	5.10	267.00	9866.56	690.00		249.28		-252.41	733.65		19.86	4.04	3.71
61	9,982	11.90	273.40	9913.01	690.18		242.35		-245.48	731.49		19.35	14.59	14.47
62	10,029	17.90	276.00	9958.41	691.22		230.32		-233.45	728.58		18.43	12.84	12.77
63	10,076	22.40	278.20	10002.52	693.26		214.26		-217.40	725.61		17.17	9.71	9.57
64	10,122	23.70	277.10	10044.85	695.65		196.41		-199.57	722.84		15.77	2.98	2.83
65	10,169	26.20	277.50	10087.46	698.17		176.75		-179.91	720.20		14.21	5.33	5.32
66	10,216	29.60	273.50	10129.00	700.23		154.87		-158.04	717.16		12.47	8.25	7.23
67	10,263	35.90	270.90	10168.51	701.16		129.48		-132.66	713.01		10.46	13.73	13.40



100 04 02
M/S Energy Services

SURVEY CALCULATION PROGRAM

3/7/17 15:17

Company:	Matador Production Company
Well Name:	Jimmy Kone 05-24S-28E RB 226H - OWB
Location:	Eddy County, NM
Rig:	Patterson #297
Job Number:	DDMO-160527
API #:	30-015-43958

REFERENCED TO GRID NORTH

Magnetic Declination: 7.19

Vertical Section Azimuth:	289.74	Proposed Direction:	269.74
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Survey Calculation Method:		Minimum Curvature	
MD	INC	AZM	
13,381	89.9	268.3	
PTB:		VS	
		2885.69	

#	Depth Feet	Inc Degrees	Azm Degrees	TVD Feet	N/S Feet	E/W Feet	Surface Vert Sec	Distance	Closure Azm	DLS/ 100'	BUR/ 100'
68	10,310	42.10	271.80	10205.02	701.87	99.92	-103.11	708.95	8.10	13.25	13.19
69	10,357	45.10	271.20	10239.05	702.72	67.52	-70.71	705.95	5.49	6.44	6.38
70	10,404	47.50	271.00	10271.52	703.37	33.55	-36.75	704.17	2.73	5.12	5.11
71	10,451	50.60	271.20	10302.32	704.05	-1.93	-1.26	704.05	359.84	6.60	6.60
72	10,497	55.40	270.90	10329.99	704.72	-38.65	35.46	705.78	356.86	10.45	10.43
73	10,544	58.80	272.40	10355.52	705.87	-78.09	74.89	710.17	353.69	7.71	7.23
74	10,591	61.80	273.20	10378.80	707.86	-118.86	115.65	717.77	350.47	6.55	6.38
75	10,638	66.00	273.60	10399.48	710.37	-160.99	157.76	728.38	347.23	8.97	8.94
76	10,685	69.20	272.70	10417.38	712.75	-204.37	201.13	741.47	344.00	7.03	6.81
77	10,777	75.40	271.10	10445.34	715.64	-291.92	288.67	772.89	337.81	6.94	6.74
78	10,871	80.70	272.70	10464.80	718.70	-383.80	380.53	814.75	331.90	5.88	5.84
79	10,964	85.50	273.10	10475.97	723.37	-475.98	472.69	865.92	326.66	5.18	5.16
80	11,059	90.10	271.90	10479.62	727.51	-570.79	567.48	924.70	321.88	5.00	4.84
81	11,153	91.20	272.10	10478.55	730.79	-664.72	661.40	987.88	317.71	1.19	1.17
82	11,247	91.90	271.20	10476.01	733.49	-758.65	755.31	1055.25	314.03	1.21	0.74
83	11,341	93.10	270.20	10471.91	734.64	-852.55	849.21	1125.41	310.75	1.66	1.28
84	11,436	90.50	269.50	10468.92	734.39	-947.49	944.15	1198.78	307.78	2.83	-2.74
85	11,530	94.00	269.40	10465.23	733.49	-1041.40	1038.06	1273.78	305.16	3.72	3.72
86	11,625	93.40	271.10	10459.10	733.90	-1136.20	1132.86	1352.61	302.86	1.89	-0.63
87	11,719	85.60	269.50	10459.92	734.40	-1230.12	1226.77	1432.67	300.84	8.47	-8.30
88	11,813	84.10	272.40	10468.36	735.95	-1323.71	1320.36	1514.54	299.07	3.46	-1.60
89	11,907	87.40	267.70	10475.33	736.02	-1417.42	1414.06	1597.12	297.44	6.10	3.51
90	12,001	86.70	267.00	10480.17	731.68	-1511.19	1507.85	1679.00	295.84	1.05	-0.74
91	12,095	91.50	268.50	10481.64	727.99	-1605.08	1601.76	1762.45	294.40	5.35	5.11
92	12,189	90.10	267.70	10480.33	724.87	-1699.01	1695.71	1847.18	293.11	1.72	-1.49
93	12,283	88.40	266.60	10481.56	720.20	-1792.88	1789.60	1932.13	291.89	2.15	-1.81
94	12,378	87.80	267.30	10484.71	714.16	-1887.64	1884.38	2018.22	290.72	0.82	-0.63
95	12,472	91.30	267.00	10485.45	708.75	-1981.46	1978.23	2104.40	289.68	3.94	3.72
96	12,566	96.80	272.60	10478.81	708.65	-2075.16	2071.92	2192.82	288.85	8.11	5.85
97	12,660	87.60	268.80	10475.20	709.79	-2168.96	2165.72	2282.15	288.12	10.59	-9.79
98	12,754	91.60	269.40	10475.86	708.31	-2262.93	2259.69	2371.19	287.38	4.30	4.26
99	12,848	91.40	270.20	10473.40	707.98	-2356.90	2353.66	2460.94	286.72	0.88	-0.21
100	12,942	87.00	269.00	10474.71	707.33	-2450.86	2447.63	2550.89	286.10	4.85	-4.68
101	13,037	85.90	267.40	10480.59	704.35	-2545.63	2542.40	2641.27	285.47	2.04	-1.16



10/24/04 02

SURVEY CALCULATION PROGRAM

3/7/17 15:17

Company:	Matador Production Company
Well Name:	Jimmy Kone 05-24S-28E RB 226H - OWB
Location:	Eddy County, NM
Rig:	Patterson #297
Job Number:	DDMO-160527
API #:	30-015-43958

REFERENCED TO GRID NORTH

Magnetic Declination: 7.19

Proposed Direction: 269.74

Vertical Section Azimuth: 269.74

Survey Calculation Method: Minimum Curvature

#	Depth		Inc		Azimuth		TVD		N/S		E/W		Surface		Distance		Closure		DLS/		BUR/	
	Feet		Degrees		Degrees		Feet		Feet		Feet		Vert		Feet		Feet		100		100'	
PTB:	13,381	MD					INC	89.9		268.3			TV	87.87		10493.96		-2888.84		2885.69		VS
102	13,131		86.50		266.60		10486.82		699.44		-2639.29		2636.09		2730.40		284.84		1.06		0.64	
103	13,225		87.50		266.60		10491.74		693.87		-2733.00		2729.82		2819.70		284.25		1.06		1.06	
104	13,318		89.90		268.30		10493.85		689.74		-2825.87		2822.71		2908.83		283.72		3.16		2.58	
PTB:	13,381		89.90		268.30		10493.96		687.87		-2888.84		2885.69		2969.61		283.39		0.00		0.00	



VSR.04.02

MS Energy Services**SURVEY CALCULATION PROGRAM**

3/7/17 15:18

Company:	Matador Production Company
Well Name:	Jimmy Kone 05-24S-28E RB 226H - ST
Location:	Eddy County, NM
Rlg:	Patterson #297
Job Number:	DDMO-160527
API #:	30-015-43968

Magnetic Declination: 7.19

REFERENCED TO GRID NORTH

Vertical Section Azimuth:	269.74
Proposed Direction:	269.74

Survey Calculation Method:	Minimum Curvature
PTB:	MD
15,285	INC
92.6	AZM
273.2	N/S
10359.89	EW
674.33	Surface
1679.00	Distance
295.84	Azm
4785.33	Closure
4782.23	DLS/100
VS	BUR/100'

#	Depth Feet	Inc Degrees	Azm Degrees	TVD Feet	N/S Feet	EW Feet	Surface Vert Sec	Distance	Azm	DLS/ 100	BUR/ 100'
TIE IN	12,001	86.70	267.00	10480.17	731.68	-1511.19	1507.85	1679.00	295.84	5.55	-3.66
1	12,094	83.30	270.90	10488.28	729.97	-1603.79	1600.46	1762.10	294.47	7.09	4.53
2	12,189	87.60	276.10	10495.82	735.77	-1698.26	1694.90	1850.79	293.42	2.77	-0.11
3	12,283	87.50	273.50	10499.84	743.62	-1791.83	1788.44	1940.01	292.54	2.47	1.06
4	12,377	88.50	271.40	10503.12	747.64	-1885.68	1882.27	2028.49	291.63	2.01	1.06
5	12,471	89.50	269.80	10504.76	748.62	-1979.66	1976.24	2116.48	290.71	3.18	2.63
6	12,566	92.00	268.10	10503.51	746.88	-2074.63	2071.21	2204.97	289.80	1.86	1.81
7	12,660	93.70	268.50	10498.84	744.10	-2168.46	2165.06	2292.58	288.94	0.34	-0.11
8	12,754	93.60	268.20	10492.86	741.40	-2262.23	2258.85	2380.62	288.15	2.34	1.49
9	12,848	95.00	269.90	10485.81	739.84	-2355.95	2352.57	2469.39	287.43	0.64	0.00
10	12,942	95.00	270.50	10477.62	740.17	-2449.59	2446.21	2558.97	286.81	2.48	-1.70
11	13,036	93.40	268.80	10470.73	739.59	-2543.33	2539.95	2648.69	286.21	1.20	-0.32
12	13,131	93.10	267.70	10465.34	736.70	-2638.13	2634.76	2739.06	285.60	3.08	1.51
13	13,224	94.50	270.20	10459.18	734.99	-2730.90	2727.54	2828.08	285.06	0.60	-0.43
14	13,318	94.10	269.80	10452.13	734.99	-2824.64	2821.27	2918.70	284.59	1.36	-0.85
15	13,412	93.30	268.80	10446.07	733.85	-2918.43	2915.07	3009.28	284.11	0.11	0.00
16	13,506	93.30	268.90	10440.65	731.96	-3012.26	3008.91	3099.91	283.66	0.39	-0.32
17	13,599	93.00	268.70	10435.54	730.02	-3105.10	3101.75	3189.76	283.23	2.14	0.42
18	13,694	93.40	266.70	10430.24	726.21	-3199.87	3196.54	3281.24	282.79	1.01	0.32
19	13,788	93.70	267.60	10424.42	721.55	-3293.57	3290.26	3371.68	282.36	2.57	-2.34
20	13,882	91.50	266.60	10420.16	716.80	-3387.35	3384.06	3462.36	281.95	0.83	0.64
21	13,976	92.10	266.10	10417.20	710.82	-3481.11	3477.85	3552.94	281.54	2.60	2.53
22	14,071	94.50	266.70	10411.74	704.86	-3575.76	3572.52	3644.57	281.15	2.86	-2.45
23	14,165	92.20	265.30	10406.24	698.31	-3669.36	3666.15	3735.22	280.78	2.96	-2.55
24	14,259	89.80	263.90	10404.60	689.47	-3762.92	3759.75	3825.56	280.38	0.75	0.53
25	14,353	90.30	263.40	10404.52	679.07	-3856.34	3853.22	3915.67	279.99	3.10	2.53
26	14,448	92.70	265.10	10402.03	669.56	-3950.82	3947.74	4007.15	279.62	2.43	0.74
27	14,543	93.40	267.30	10396.98	663.27	-4045.47	4042.42	4099.48	279.31	2.15	-2.02
28	14,637	91.50	266.60	10392.96	658.28	-4139.25	4136.22	4191.26	279.04	1.35	-0.43
29	14,731	91.10	265.40	10390.83	651.72	-4232.99	4229.99	4282.87	278.75	7.67	3.26
30	14,826	94.20	272.00	10386.43	649.56	-4327.80	4324.81	4376.28	278.54	1.64	-0.32
31	14,919	93.90	273.50	10379.86	654.01	-4420.46	4417.45	4468.58	278.42	0.47	-0.21
32	15,013	93.70	273.10	10373.63	659.41	-4514.10	4511.06	4562.01	278.31	0.84	-0.84
33	15,108	92.90	273.10	10368.16	664.54	-4608.80	4605.74	4656.46	278.20		



V08 04.02

SURVEY CALCULATION PROGRAM

3/7/17 15:18

Company:	Matador Production Company
Well Name:	Jimmy Kone 05-24S-28E RB 226H - ST
Location:	Eddy County, NM
Rig:	Patterson #297
Job Number:	DDMO-160527
API #:	30-015-43958

Magnetic Declination: 7.19 REFERENCED TO GRID NORTH

Vertical Section Azimuth: 269.74 Proposed Direction: 269.74

Survey Calculation Method: Minimum Curvature

PTB:	MD		INC		AZM		TVD		N/S		Surface		E/W		VS	
	Depth	Inc	Depth	Inc	Depth	Inc	Depth	Inc	Depth	Inc	Depth	Inc	Depth	Inc	Depth	Inc
	Feet	Degrees	Feet	Degrees	Feet	Degrees	Feet	Degrees	Feet	Degrees	Feet	Degrees	Feet	Degrees	Feet	Degrees
	15,202	92.60	273.20	92.6	273.2	273.2	10359.89	669.70	10359.89	669.70	4785.33	278.11	4785.33	278.11	4782.23	278.11
PTB:	15,285	92.60	273.20	10363.65	674.33	674.33	-4785.33	4832.61	-4785.33	4832.61	4750.00	0.34	-4785.33	0.34	4750.00	0.34