



Job Number: SVMO-160480
 Company: Matador Resources
 Lease/Well: Black River SWD 1
 Location: Eddy County, NM
 Rig Name: Patterson 274
 RKB: 29'
 G.L. or M.S.L.: GL

State/Country: New Mexico/USA
 Declination: 7.33°
 Grid: East To Grid North
 File name: W:\2016\MATADOR\MO\BLACKR-1\SWD1.SVY
 Date/Time: 26-Aug-16 / 08:02
 Curve Name: Surface - 522' M.D. (Rate Gyro)
 Lat: 32.268056 Long: -104.126806

MS Energy

WINSERVE SURVEY CALCULATIONS
 Minimum Curvature Method
 Vertical Section Plane .00
 Vertical Section Referenced to Wellhead
 Rectangular Coordinates Referenced to Wellhead

Measured Depth FT	Incl Angle Deg	Drift Direction Deg	True Vertical Depth	N-S FT	E-W FT	Vertical Section FT	CLOSURE Distance FT	Direction Deg	Dogleg Severity Deg/100
.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
90.00	.32	137.99	90.00	-.19	.17	-.19	.25	137.99	.36
183.00	.51	128.18	183.00	-.64	.67	-.64	.92	133.60	.22
275.00	2.45	177.44	274.96	-2.85	1.08	-2.85	3.05	159.32	2.34
368.00	3.14	175.95	367.85	-7.38	1.35	-7.38	7.50	169.67	.75
460.00	3.63	173.89	459.69	-12.79	1.83	-12.79	12.92	171.84	.55
Last Survey Depth Recorded									
522.00	4.16	171.55	521.55	-16.97	2.37	-16.97	17.13	172.04	.89



3335 Pollok Drive
Conroe, Texas 77303

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Surveyor Certification Form

Survey Company: MS ENERGY SERVICES
Surveyors Name: JAMES BENSON
Survey Job Type: RATE GYRO
Customer: MATADOR RESOURCES
Well: BLACK RIVER SWD 1
API: 30-015-43807
Surveyed from: SURFACE TO A DEPTH OF 522' MD
Survey Run Date: 08-24-16
Surface 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 that it conforms to the principles and procedures as set forth by MS Energy Services.

JAMES BENSON

Digitally signed by JAMES BENSON
DN: cn=JAMES BENSON, o=MS ENERGY SERVICES, ou,
email=JBENSON@MSENERGYSERVICES.COM, c=US
Date: 2014.09.22 12:18:18 -05'00'



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Fort Worth, Texas 76140

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State of Texas

County of Tarrant

I, Joseph Mayle, certify that: I am employed by MS Energy Services;
that I did on the day(s) of 8/20/16 through 9/10/16 conduct or supervise
the taking of MWD survey(s) from a depth of 599 feet to a depth of 9,734
feet; that the data is true, correct, complete and within the limitations of the tool set forth by MS Energy
Services; that I am authorized and qualified to make this report; that this survey(s) was / were
conducted at the request of MATADOR PRODUCTION CO.
for the BLACK RIVER SWD #1, API No. 30-015-43807
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
MS Energy Services.

Signature: Joseph Mayle

Title: MWD SUPERVISOR

MS Directional

MS Guidance

MS Survey

MS Wireline

Company:	Matador Production Co.		
Well Name:	Black River SWD #1		
Location:	Eddy County, NM		
Rig:	Patterson #274	Magnetic Declination:	7.24
Job Number:	DDMO-160361		REFERENCED TO GRID NORTH
API #:	30-015-43807		

Vertical Section Azimuth:	0.00	Proposed Direction:	0.00
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Survey Calculation Method:	Minimum Curvature
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PTB:	MD		INC		AZM		TVD		N/S		E/W		VS	
	9,800		2.1		244.5		9796.41		-93.3		-39.27		-93.3	
#	Depth Feet	Inc Degrees	Azm Degrees	TVD Feet	N/S Feet	E/W Feet	Surface Vert Sec	Closure Distance		Azm	DLS/ 100	BUR/ 100'		
TIE IN	522	4.16	171.55	521.55	-16.97	2.37	-16.97	17.13	172.05					
1	599	5.20	176.00	598.29	-23.21	3.02	-23.21	23.41	172.58		1.43	1.35		
2	695	5.30	169.50	693.89	-31.91	4.14	-31.91	32.18	172.62		0.63	0.10		
3	788	4.00	149.40	786.59	-38.93	6.57	-38.93	39.48	170.42		2.22	-1.40		
4	881	3.80	117.70	879.38	-43.15	10.95	-43.15	44.52	165.76		2.30	-0.22		
5	975	3.30	104.10	973.20	-45.26	16.33	-45.26	48.12	160.16		1.04	-0.53		
6	1,068	1.90	97.90	1066.11	-46.13	20.46	-46.13	50.46	156.08		1.53	-1.51		
7	1,163	1.60	73.60	1161.06	-45.97	23.29	-45.97	51.53	153.13		0.83	-0.32		
8	1,259	1.70	41.00	1257.03	-44.51	25.51	-44.51	51.30	150.19		0.97	0.10		
9	1,353	1.90	7.10	1350.98	-41.92	26.61	-41.92	49.65	147.59		1.13	0.21		
10	1,448	2.10	347.60	1445.93	-38.65	26.44	-38.65	46.83	145.63		0.74	0.21		
11	1,543	1.60	352.40	1540.88	-35.64	25.89	-35.64	44.05	144.01		0.55	-0.53		
12	1,639	1.10	12.80	1636.85	-33.41	25.91	-33.41	42.28	142.20		0.71	-0.52		
13	1,734	0.60	44.50	1731.84	-32.17	26.46	-32.17	41.65	140.56		0.70	-0.53		
14	1,829	0.90	87.30	1826.83	-31.78	27.56	-31.78	42.06	139.07		0.65	0.32		
15	1,925	1.10	95.30	1922.82	-31.83	29.23	-31.83	43.21	137.44		0.25	0.21		
16	2,020	0.80	51.90	2017.80	-31.50	30.66	-31.50	43.96	135.78		0.80	-0.32		
17	2,115	0.80	39.70	2112.80	-30.58	31.60	-30.58	43.98	134.06		0.18	0.00		
18	2,211	0.90	69.20	2208.79	-29.80	32.74	-29.80	44.27	132.31		0.46	0.10		
19	2,306	0.70	91.40	2303.78	-29.55	34.01	-29.55	45.06	130.98		0.38	-0.21		
20	2,391	0.40	118.20	2388.77	-29.70	34.80	-29.70	45.75	130.48		0.46	-0.35		
21	2,499	0.40	207.50	2496.77	-30.21	34.95	-30.21	46.20	130.84		0.52	0.00		
22	2,595	0.30	197.60	2592.77	-30.75	34.72	-30.75	46.38	131.53		0.12	-0.10		
23	2,786	0.30	184.30	2783.77	-31.73	34.53	-31.73	46.89	132.57		0.04	0.00		
24	2,976	0.10	184.70	2973.77	-32.39	34.48	-32.39	47.31	133.20		0.11	-0.11		
25	3,167	0.30	262.90	3164.76	-32.61	33.97	-32.61	47.09	133.83		0.16	0.10		
26	3,358	0.20	250.60	3355.76	-32.79	33.16	-32.79	46.63	134.67		0.06	-0.05		
27	3,549	0.30	220.80	3546.76	-33.28	32.52	-33.28	46.53	135.66		0.08	0.05		
28	3,739	0.40	255.00	3736.76	-33.82	31.56	-33.82	46.26	136.99		0.12	0.05		
29	3,929	0.40	237.50	3926.75	-34.35	30.36	-34.35	45.84	138.53		0.06	0.00		
30	4,119	0.40	242.90	4116.75	-35.01	29.21	-35.01	45.59	140.17		0.02	0.00		
31	4,310	0.50	233.50	4307.74	-35.81	27.94	-35.81	45.42	142.04		0.06	0.05		
32	4,501	0.50	219.60	4498.73	-36.95	26.74	-36.95	45.61	144.10		0.06	0.00		

Company:	Matador Production Co.		
Well Name:	Black River SWD #1		
Location:	Eddy County, NM		
Rig:	Patterson #274	Magnetic Declination:	7.24
Job Number:	DDMO-160361		REFERENCED TO GRID NORTH
API #:	30-015-43807		

Vertical Section Azimuth:	0.00	Proposed Direction:	0.00
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Survey Calculation Method:	Minimum Curvature
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PTB:	MD	INC	AZM	TVD	N/S	E/W	VS				
	9,800	2.1	244.5	9796.41	-93.3	-39.27	-93.3				
#	Depth Feet	Inc Degrees	Azm Degrees	TVD Feet	N/S Feet	E/W Feet	Surface Vert Sec	Closure		DLS/ 100	BUR/ 100'
								Distance	Azm		
33	4,691	0.60	215.30	4688.73	-38.40	25.64	-38.40	46.17	146.27	0.06	0.05
34	4,882	0.90	228.90	4879.71	-40.20	23.93	-40.20	46.78	149.24	0.18	0.16
35	5,073	0.70	219.60	5070.69	-42.09	22.06	-42.09	47.52	152.34	0.12	-0.10
36	5,264	0.50	203.00	5261.68	-43.75	20.99	-43.75	48.53	154.37	0.14	-0.10
37	5,454	0.60	241.10	5451.67	-45.00	19.79	-45.00	49.16	156.26	0.20	0.05
38	5,644	0.80	233.60	5641.66	-46.26	17.85	-46.26	49.59	158.90	0.12	0.11
39	5,834	0.70	238.20	5831.64	-47.66	15.80	-47.66	50.21	161.66	0.06	-0.05
40	6,024	0.90	228.80	6021.62	-49.26	13.69	-49.26	51.12	164.47	0.13	0.11
41	6,215	1.00	202.30	6212.60	-51.79	11.93	-51.79	53.14	167.03	0.23	0.05
42	6,406	0.90	158.60	6403.57	-54.73	11.84	-54.73	55.99	167.79	0.37	-0.05
43	6,596	2.00	143.20	6593.51	-58.77	14.37	-58.77	60.50	166.26	0.61	0.58
44	6,787	1.50	157.10	6784.42	-63.74	17.34	-63.74	66.06	164.78	0.34	-0.26
45	6,977	1.70	173.30	6974.35	-68.83	18.64	-68.83	71.31	164.85	0.26	0.11
46	7,072	1.50	189.10	7069.31	-71.46	18.61	-71.46	73.84	165.40	0.51	-0.21
47	7,168	1.20	202.00	7165.29	-73.63	18.03	-73.63	75.81	166.24	0.44	-0.31
48	7,358	0.70	209.70	7355.26	-76.48	16.71	-76.48	78.29	167.67	0.27	-0.26
49	7,549	1.10	276.10	7546.24	-77.30	14.31	-77.30	78.62	169.51	0.54	0.21
50	7,740	1.20	271.70	7737.20	-77.05	10.49	-77.05	77.76	172.25	0.07	0.05
51	7,835	1.00	264.10	7832.18	-77.11	8.67	-77.11	77.59	173.58	0.26	-0.21
52	8,026	0.70	239.00	8023.16	-77.88	6.01	-77.88	78.11	175.59	0.25	-0.16
53	8,217	0.70	205.10	8214.15	-79.53	4.52	-79.53	79.66	176.75	0.21	0.00
54	8,407	1.10	230.30	8404.13	-81.75	2.62	-81.75	81.79	178.16	0.29	0.21
55	8,597	2.10	250.90	8594.05	-84.05	-2.07	-84.05	84.08	181.41	0.60	0.53
56	8,692	2.80	249.40	8688.96	-85.44	-5.89	-85.44	85.64	183.94	0.74	0.74
57	8,787	2.10	266.00	8783.88	-86.38	-9.80	-86.38	86.93	186.47	1.04	-0.74
58	8,882	1.70	260.70	8878.83	-86.73	-12.92	-86.73	87.69	188.48	0.46	-0.42
59	8,978	1.50	248.70	8974.79	-87.41	-15.50	-87.41	88.78	190.05	0.41	-0.21
60	9,073	1.70	259.40	9069.75	-88.13	-18.04	-88.13	89.95	191.57	0.38	0.21
61	9,168	1.40	263.80	9164.72	-88.51	-20.58	-88.51	90.87	193.09	0.34	-0.32
62	9,263	1.60	276.10	9259.68	-88.49	-23.05	-88.49	91.45	194.60	0.40	0.21
63	9,358	1.30	260.00	9354.65	-88.54	-25.43	-88.54	92.12	196.03	0.53	-0.32
64	9,454	1.80	256.90	9450.62	-89.07	-27.98	-89.07	93.36	197.44	0.53	0.52
65	9,549	1.90	246.90	9545.57	-90.03	-30.88	-90.03	95.18	198.93	0.36	0.11
66	9,644	2.10	254.60	9640.51	-91.11	-34.00	-91.11	97.25	200.47	0.35	0.21

Company:		Matador Production Co.											
Well Name:		Black River SWD #1											
Location:		Eddy County, NM											
Rig:		Patterson #274		Magnetic Declination:		7.24		REFERENCED TO GRID NORTH					
Job Number:		DDMO-160361											
API #:		30-015-43807											
Vertical Section Azimuth:				0.00		Proposed Direction:				0.00			
Survey Calculation Method:				Minimum Curvature									
PTB:	MD	INC	AZM	TVD	N/S	E/W	VS						
	9,800	2.1	244.5	9796.41	-93.3	-39.27	-93.3						
#	Depth Feet	Inc Degrees	Azm Degrees	TVD Feet	N/S Feet	E/W Feet	Surface Vert Sec	Closure Distance	Azm	DLS/ 100	BUR/ 100'		
67	9,734	2.10	244.50	9730.45	-92.26	-37.08	-92.26	99.43	201.90	0.41	0.00		