

47 10302960

Stone Energy Corporation

Heather Prospect (NAD 27)

Martin Pad

Martin 8H - Slot 8H

OH

Design: As Drilled

Standard Survey Report

25 November, 2014



Scientific Drilling

www.scientificdrilling.com

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Environmental Protection



04/14/2023



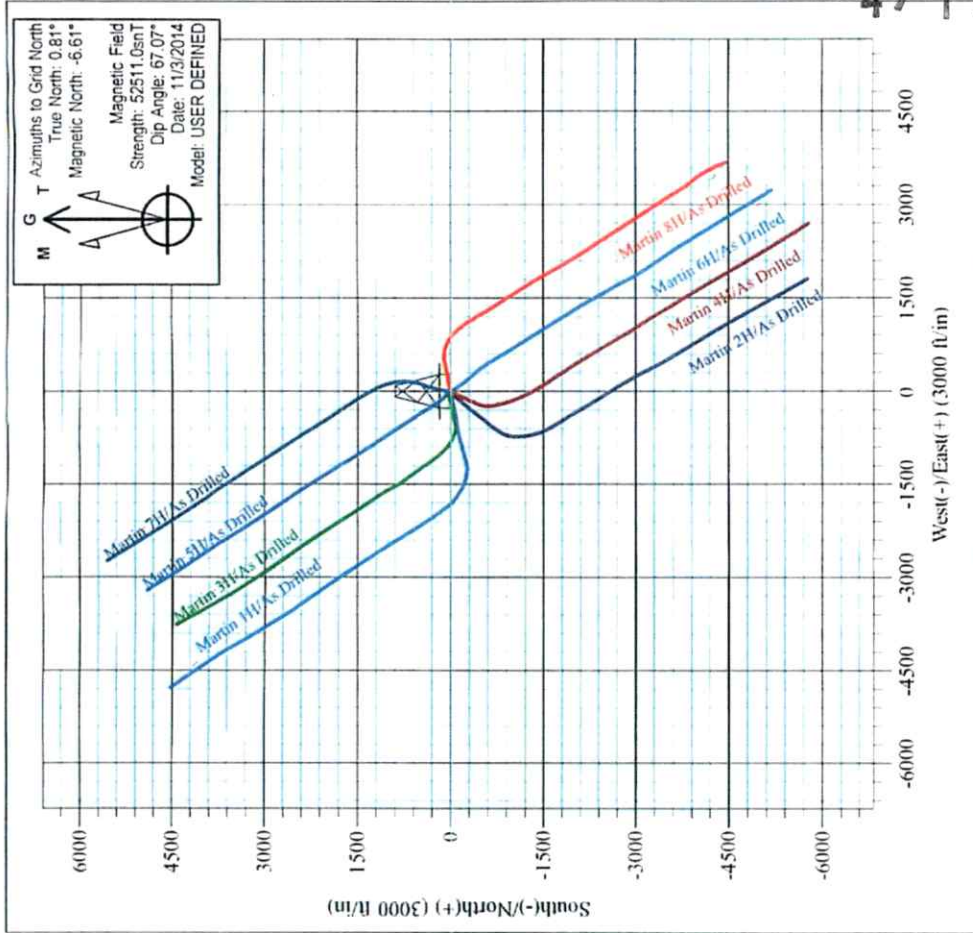
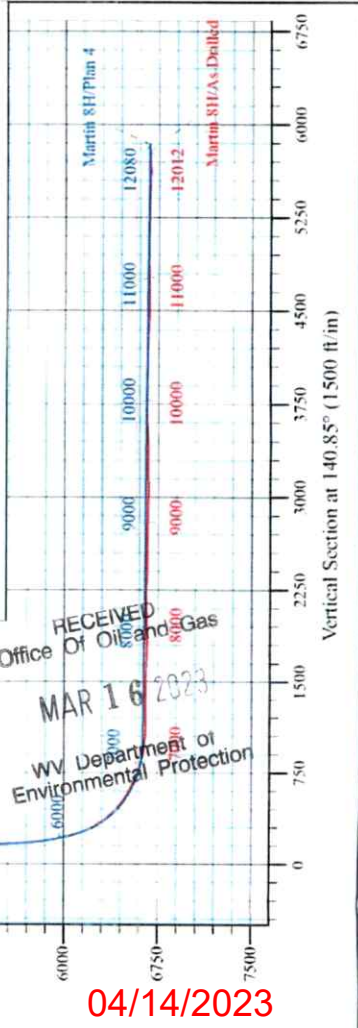
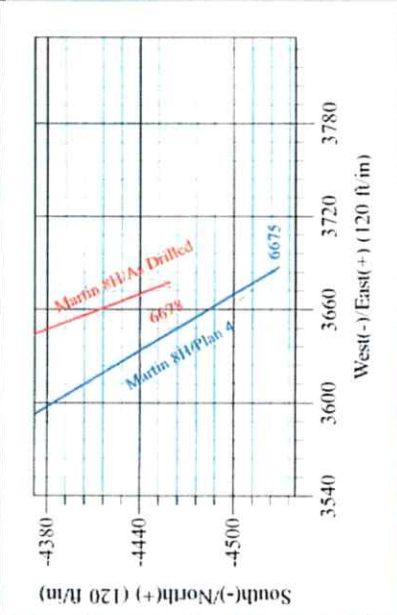
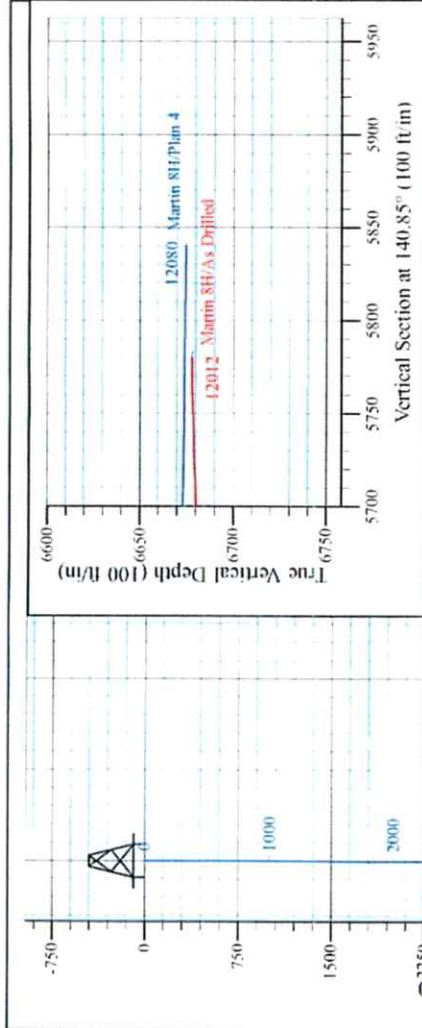
Martin Pad
 Martin 8H
 Plan 4
 GL 906 & KB 18 @ 924.00ft (Saxon 141)
 Heather Prospect (NAD 27)

PROJECT DETAILS:
 Geodetic System: US State Plane 1927 (Exact solution)
 Datum: NAD 1927 (NADCON CONUS)
 Ellipsoid: Clarke 1866
 Zone: West Virginia North 4701
 System Datum: Mean Sea Level



WELL DETAILS: Martin 8H

+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
0.00	0.00	407740.00	1643295.00	39° 36' 45.293 N	80° 45' 58.187 W



Tim Bouman
 11.20, November 25 2014
 Scientific Drilling International
 124 Vista Drive
 Charleroi, PA 15022

4710302960

04/14/2023

Scientific Drilling
Survey Report

47 1 0 3 0 2 9 6 0

Company:	Stone Energy Corporation	Local Co-ordinate Reference:	Well Martin 8H - Slot 8H
Project:	Heather Prospect (NAD 27)	TVD Reference:	GL 906 & KB 18 @ 924.00ft (Saxon 141)
Site:	Martin Pad	MD Reference:	GL 906 & KB 18 @ 924.00ft (Saxon 141)
Well:	Martin 8H	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	As Drilled	Database:	Northeast District

Project	Heather Prospect (NAD 27), Wetzel County, West Virginia		
Map System:	US State Plane 1927 (Exact solution)	System Datum:	Mean Sea Level
Geo Datum:	NAD 1927 (NADCON CONUS)		
Map Zone:	West Virginia North 4701		

Site	Martin Pad		
Site Position:		Northing:	407,759.00 usft
From:	Map	Easting:	1,643,274.00 usft
Position Uncertainty:	0.00 ft	Slot Radius:	13-3/16 "
		Latitude:	39° 36' 45.478 N
		Longitude:	80° 45' 58.459 W
		Grid Convergence:	-0.81 °

Well	Martin 8H - Slot 8H					
Well Position	+N/-S	0.00 ft	Northing:	407,740.00 usft	Latitude:	39° 36' 45.293 N
	+E/-W	0.00 ft	Easting:	1,643,295.00 usft	Longitude:	80° 45' 58.187 W
Position Uncertainty		0.00 ft	Wellhead Elevation:	0.00 ft	Ground Level:	905.00 ft

Wellbore	OH				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	BGGM2013	4/3/2014	-8.59	67.11	52.437
	BGGM2013	4/15/2014	-8.59	67.10	52.433
	BGGM2014	6/8/2014	-8.54	67.12	52.421
	User Defined	9/10/2014	-7.69	67.13	52.532
	User Defined	9/29/2014	-7.69	67.12	52.524
	User Defined	11/3/2014	-7.42	67.07	52.511

Design	As Drilled			
Audit Notes:				
Version:	1.0	Phase:	ACTUAL	
		Tie On Depth:	0.00	
Vertical Section:	Depth From (TVD) (ft)	+N/-S (ft)	+E/-W (ft)	Direction (°)
	0.00	0.00	0.00	140.85

Survey Program	Date	11/25/2014		
From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description
108.00	2,223.00	Survey 1 - SDI Gyro (OH)	SDI Standard Keeper 103	SDI Standard Wireline Keeper ver 1.0.3
2,337.00	5,601.00	Survey 2 - SDI MWD (OH)	SDI MWD	SDI MWD - Standard ver 1.0.1
5,670.00	12,012.02	Survey #3 - SDI MWD (OH)	SDI MWD	SDI MWD - Standard ver 1.0.1

Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.22	0.00
100.00	0.22	173.12	100.00	-0.19	0.02	0.16	0.22	0.22	0.00
108.00	0.24	173.12	108.00	-0.22	0.03	0.19	0.22	0.22	0.00
First SDI Gyro Survey									

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Scientific Drilling
Survey Report

Company: Stone Energy Corporation
 Project: Heather Prospect (NAD 27)
 Site: Martin Pad
 Well: Martin 8H
 Wellbore: OH
 Design: As Drilled

Local Co-ordinate Reference: Well Martin 8H - Slot 8H
 TVD Reference: GL 906 & KB 18 @ 924.00ft (Saxon 141)
 MD Reference: GL 906 & KB 18 @ 924.00ft (Saxon 141)
 North Reference: Grid
 Survey Calculation Method: Minimum Curvature
 Database: Northeast District

Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
200.00	0.22	167.43	200.00	-0.59	0.09	0.51	0.03	-0.02	-6.19
300.00	0.28	169.67	300.00	-1.01	0.18	0.89	0.05	0.05	2.24
400.00	0.40	188.28	400.00	-1.58	0.18	1.34	0.16	0.12	18.60
500.00	0.19	222.06	499.99	-2.08	0.01	1.62	0.26	-0.21	33.79
600.00	0.09	298.08	599.99	-2.16	-0.18	1.56	0.19	-0.11	76.02
700.00	0.17	248.81	699.99	-2.16	-0.37	1.44	0.13	0.08	-49.27
800.00	0.07	115.80	799.99	-2.25	-0.47	1.45	0.23	-0.10	-133.01
900.00	0.22	79.66	899.99	-2.25	-0.22	1.60	0.16	0.15	-36.13
1,000.00	0.38	36.10	999.99	-1.84	0.25	1.59	0.27	0.17	-43.56
1,100.00	0.31	37.47	1,099.99	-1.36	0.59	1.43	0.07	-0.07	1.37
1,200.00	0.48	24.50	1,199.99	-0.78	0.93	1.19	0.19	0.17	-12.97
1,300.00	0.39	37.60	1,299.98	-0.10	1.31	0.91	0.14	-0.10	13.09
1,400.00	0.54	53.80	1,399.98	0.43	1.89	0.86	0.20	0.15	16.20
1,500.00	0.71	62.48	1,499.98	0.99	2.81	1.00	0.19	0.17	8.68
1,600.00	0.54	55.39	1,599.97	1.56	3.83	1.21	0.18	-0.17	-7.10
1,700.00	0.42	39.07	1,699.97	2.10	4.43	1.16	0.18	-0.12	-16.32
1,800.00	0.42	33.91	1,799.96	2.69	4.85	0.98	0.04	0.00	-5.16
1,900.00	0.40	27.29	1,899.96	3.30	5.22	0.73	0.05	-0.02	-6.63
2,000.00	0.51	20.87	1,999.96	4.02	5.53	0.37	0.12	0.11	-6.42
2,100.00	0.64	23.04	2,099.95	4.95	5.91	-0.11	0.13	0.13	2.17
2,200.00	0.61	29.51	2,199.95	5.94	6.39	-0.58	0.08	-0.03	6.47
2,223.00	0.66	31.33	2,222.94	6.16	6.52	-0.66	0.22	0.20	7.92
Last SDI Gyro Survey									
2,238.00	0.66	30.79	2,237.94	6.31	6.61	-0.72	0.05	-0.03	-3.59
9 5/8"									
2,300.00	0.64	28.49	2,299.94	6.92	6.95	-0.98	0.05	-0.03	-3.71
2,337.00	0.63	27.06	2,336.94	7.28	7.14	-1.14	0.05	-0.03	-3.86
First SDI MWD Survey									
2,400.00	1.14	41.08	2,399.93	8.06	7.71	-1.38	0.87	0.81	22.25
2,500.00	1.91	61.99	2,499.89	9.71	9.78	-1.36	0.94	0.77	20.91
2,600.00	2.50	83.24	2,599.82	10.84	13.46	0.09	1.00	0.59	21.26
2,700.00	3.38	85.03	2,699.69	11.22	18.53	3.00	0.88	0.88	1.79
2,800.00	4.65	77.52	2,799.44	12.29	25.39	6.50	1.37	1.27	-7.51
2,900.00	5.99	71.59	2,899.01	14.81	34.30	10.17	1.45	1.34	-5.93
3,000.00	7.24	76.72	2,998.34	17.94	45.43	14.76	1.39	1.26	5.14
3,100.00	7.29	83.69	3,097.53	20.00	57.93	21.07	0.88	0.04	6.96
3,200.00	6.82	81.52	3,196.78	21.49	70.10	27.59	0.54	-0.47	-2.17
3,300.00	6.60	77.00	3,296.10	23.82	81.47	32.96	0.57	-0.47	-4.51
3,400.00	6.70	78.94	3,395.43	26.15	92.81	38.31	0.36	-0.22	1.93
3,500.00	6.48	76.43	3,494.75	28.53	104.20	43.66	0.36	-0.22	-2.50
3,600.00	6.08	73.29	3,594.17	31.50	114.56	47.90	0.53	-0.40	-3.14
3,700.00	6.30	76.83	3,693.59	34.36	124.88	52.19	0.44	-0.40	3.54
3,800.00	6.48	81.21	3,792.96	36.44	135.93	57.56	0.52	-0.40	4.38
3,900.00	6.38	78.52	3,892.33	38.17	147.00	63.20	0.32	-0.09	-2.69

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Survey Report

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Project: Heather Prospect (NAD 27)
Site: Martin Pad
Well: Martin 8H
Wellbore: OH
Design: As Drilled

Local Co-ordinate Reference: Well Martin 8H - Slot 8H
TVD Reference: GL 906 & KB 18 @ 924.00ft (Saxon 141)
MD Reference: GL 906 & KB 18 @ 924.00ft (Saxon 141)
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Database: Northeast District

Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
4,000.00	6.97	74.92	3,991.67	40.92	158.09	68.07	0.72	0.59	-3.60
4,100.00	7.48	78.77	4,090.86	43.97	170.40	73.48	0.70	0.51	3.85
4,200.00	6.85	77.68	4,190.05	46.36	182.86	79.49	0.65	-0.63	-1.08
4,300.00	6.56	77.32	4,289.38	48.93	194.14	84.62	0.30	-0.29	-0.36
4,400.00	6.87	83.48	4,388.70	50.93	205.59	90.30	0.78	0.31	6.16
4,500.00	7.38	84.07	4,487.93	52.23	217.92	97.08	0.51	0.51	0.59
4,600.00	6.78	82.88	4,587.17	53.61	230.15	103.73	0.62	-0.60	-1.18
4,700.00	6.96	79.98	4,686.45	55.44	241.99	109.79	0.39	0.18	-2.90
4,800.00	6.89	80.80	4,785.72	57.44	253.87	115.73	0.12	-0.08	0.81
4,900.00	6.99	80.63	4,885.00	59.31	265.71	121.76	0.10	0.10	-0.16
5,000.00	7.73	79.43	4,984.19	61.66	278.22	127.83	0.76	0.74	-1.20
5,100.00	8.51	81.79	5,083.16	63.92	292.35	135.00	0.85	0.78	2.36
5,200.00	8.64	81.33	5,182.04	66.01	307.13	142.70	0.15	0.13	-0.46
5,300.00	8.31	80.38	5,280.91	68.49	321.86	150.09	0.36	-0.33	-0.95
5,400.00	7.09	80.57	5,379.99	70.70	335.24	156.82	1.22	-1.22	0.20
5,500.00	6.08	76.79	5,479.35	72.75	346.29	162.21	1.10	-1.01	-3.79
5,600.00	5.90	73.21	5,578.82	75.53	356.23	166.33	0.41	-0.18	-3.58
5,601.00	5.90	73.19	5,579.81	75.56	356.33	166.37	0.16	0.03	-1.53
Last SDI MWD Survey									
5,700.00	8.66	77.44	5,678.04	78.48	368.27	171.64	2.84	2.79	4.30
5,800.00	13.90	77.68	5,776.03	82.91	387.52	180.36	5.24	5.24	0.24
5,900.00	17.96	80.70	5,872.24	87.92	414.25	193.35	4.14	4.05	3.02
6,000.00	23.70	78.66	5,965.93	94.11	448.51	210.18	5.79	5.74	-2.03
6,100.00	28.67	78.57	6,055.31	103.23	492.36	230.79	4.97	4.97	-0.10
6,200.00	35.94	85.94	6,139.52	111.82	545.41	257.61	8.25	7.26	7.37
6,300.00	37.74	97.11	6,219.28	109.39	605.59	297.49	6.92	1.80	11.17
6,400.00	40.76	104.87	6,296.94	97.33	667.35	345.84	5.76	3.02	7.76
6,500.00	46.95	111.32	6,369.25	75.91	732.91	403.84	7.63	6.20	6.45
6,600.00	51.84	118.88	6,434.40	43.94	801.60	472.00	7.53	4.88	7.56
6,700.00	58.76	128.44	6,491.82	-1.85	869.26	550.23	10.46	6.92	9.56
6,800.00	63.38	134.83	6,539.73	-60.04	934.88	636.78	7.25	4.62	6.38
6,900.00	68.01	140.52	6,580.69	-127.66	996.02	727.82	6.95	4.62	5.69
7,000.00	74.92	143.96	6,612.69	-202.42	1,054.08	822.45	7.63	6.91	3.43
7,100.00	80.11	146.99	6,634.80	-283.01	1,108.93	919.58	5.98	3.06	3.03
7,200.00	83.17	146.73	6,647.77	-366.16	1,162.91	1,018.15	3.06	3.06	-0.26
7,300.00	89.02	149.44	6,654.55	-450.17	1,216.62	1,117.21	6.45	5.85	2.71
7,400.00	90.43	151.67	6,654.11	-537.95	1,264.50	1,215.51	2.64	2.64	2.23
7,500.00	90.46	149.01	6,653.55	-624.56	1,314.47	1,314.22	2.64	0.03	-2.66
7,600.00	90.50	148.23	6,652.47	-709.88	1,366.61	1,413.31	2.38	-2.01	-0.78
7,700.00	88.49	146.95	6,653.16	-794.57	1,419.77	1,512.55	0.81	-0.81	-1.28
7,800.00	87.68	147.02	6,656.85	-878.21	1,474.46	1,611.93	0.73	0.73	0.06
7,900.00	87.85	146.30	6,660.69	-961.84	1,529.14	1,711.32	0.73	0.16	-0.72
8,000.00	91.27	148.68	6,660.85	-1,046.33	1,582.57	1,810.57	4.17	3.42	2.38

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Project: Heather Prospect (NAD 27)
Site: Martin Pad
Well: Martin 8H
Wellbore: OH
Design: As Drilled

Local Co-ordinate Reference: Well Martin 8H - Slot 8H
TVD Reference: GL 906 & KB 18 @ 924.00ft (Saxon 141)
MD Reference: GL 906 & KB 18 @ 924.00ft (Saxon 141)
North Reference: Grid
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Database: Northeast District

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
8.100.00	91.21	148.30	6,658.61	-1,131.66	1,634.66	1,909.63	0.38	-0.06	-0.38
8.200.00	90.87	147.51	6,656.60	-1,216.07	1,688.24	2,008.92	0.86	-0.34	-0.79
8.300.00	90.16	148.12	6,655.76	-1,300.69	1,741.53	2,108.18	0.93	-0.71	0.61
8.400.00	89.93	149.90	6,655.69	-1,386.28	1,793.22	2,207.20	1.80	-0.24	1.79
8.500.00	88.55	149.53	6,657.26	-1,472.72	1,843.46	2,305.96	1.42	-1.37	-0.38
8.600.00	90.02	151.55	6,658.82	-1,559.38	1,893.33	2,404.64	2.50	1.46	2.02
8.700.00	89.06	151.18	6,659.31	-1,647.24	1,941.07	2,502.92	1.03	-0.96	-0.37
8.800.00	89.48	152.36	6,661.17	-1,735.11	1,988.76	2,601.17	1.25	0.42	1.18
8.900.00	88.42	150.17	6,662.65	-1,822.96	2,036.51	2,699.44	2.43	-1.06	-2.18
9.000.00	88.69	150.95	6,665.65	-1,909.66	2,086.24	2,798.07	0.82	0.27	0.77
9.100.00	88.68	149.96	6,667.41	-1,997.02	2,134.87	2,896.52	0.99	-0.01	-0.99
9.200.00	88.69	148.12	6,670.09	-2,082.61	2,186.49	2,995.50	1.84	0.01	-1.84
9.300.00	91.99	148.50	6,670.09	-2,167.44	2,239.42	3,094.70	3.32	3.30	0.39
9.400.00	90.45	146.36	6,667.58	-2,252.09	2,292.58	3,193.91	2.64	-1.54	-2.14
9.500.00	89.88	144.38	6,667.85	-2,333.92	2,350.05	3,293.65	2.06	-0.57	-1.98
9.600.00	91.45	148.35	6,667.10	-2,416.39	2,406.56	3,393.28	4.27	1.57	3.97
9.700.00	92.08	148.94	6,663.60	-2,502.37	2,457.50	3,492.12	0.86	0.62	0.59
9.800.00	91.67	147.46	6,660.40	-2,587.26	2,510.25	3,591.26	1.53	-0.41	-1.48
9.900.00	90.89	148.30	6,658.16	-2,671.71	2,563.75	3,690.53	1.14	-0.78	0.84
10.000.00	90.40	148.47	6,657.09	-2,757.20	2,615.62	3,789.57	0.51	-0.48	0.17
10.100.00	88.94	147.69	6,657.65	-2,842.00	2,668.61	3,888.79	1.66	-1.47	-0.78
10.200.00	88.60	146.38	6,660.13	-2,925.95	2,722.89	3,988.16	1.35	-0.34	-1.31
10.300.00	89.50	147.15	6,661.72	-3,009.53	2,777.77	4,087.62	1.19	0.90	0.77
10.400.00	88.96	146.47	6,662.82	-3,093.33	2,832.32	4,187.05	0.87	-0.54	-0.69
10.500.00	88.92	145.76	6,665.09	-3,176.30	2,888.09	4,286.61	0.71	-0.04	-0.71
10.600.00	88.78	145.54	6,666.82	-3,258.90	2,944.42	4,386.23	0.26	-0.14	-0.22
10.700.00	88.62	146.76	6,669.37	-3,341.60	3,000.59	4,485.82	1.23	-0.17	1.22
10.800.00	88.66	146.11	6,672.03	-3,424.41	3,056.58	4,585.39	0.65	0.05	-0.65
10.900.00	90.60	148.20	6,672.89	-3,508.35	3,110.91	4,684.78	2.85	1.93	2.10
11.000.00	91.73	150.55	6,670.40	-3,594.58	3,161.46	4,783.58	2.61	1.14	2.35
11.100.00	89.59	146.09	6,669.49	-3,679.60	3,213.99	4,882.67	4.94	-2.15	-4.46
11.200.00	90.66	146.72	6,669.35	-3,762.71	3,269.60	4,982.23	1.24	1.07	0.62
11.300.00	89.12	143.14	6,668.87	-3,845.37	3,325.84	5,081.85	3.89	-1.53	-3.58
11.400.00	88.09	141.37	6,672.13	-3,923.12	3,388.63	5,181.78	2.05	-1.03	-1.77
11.500.00	88.83	145.60	6,675.12	-4,002.46	3,449.39	5,281.67	4.29	0.57	4.23
11.600.00	89.41	151.48	6,676.32	-4,088.32	3,500.55	5,380.55	5.90	0.57	5.88
11.700.00	88.48	149.72	6,678.24	-4,175.48	3,549.53	5,479.07	1.99	-0.93	-1.76
11.800.00	88.98	154.01	6,680.84	-4,263.30	3,597.20	5,577.27	4.31	0.50	4.28
11.900.00	91.26	159.01	6,680.64	-4,354.71	3,637.64	5,673.70	5.50	2.27	5.00
12.000.00	91.51	159.16	6,677.88	-4,448.30	3,672.76	5,768.45	0.29	0.25	0.15

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Scientific Drilling
Survey Report

47 10302960

Company: Stone Energy Corporation
Project: Heather Prospect (NAD 27)
Site: Martin Pad
Well: Martin 8H
Wellbore: OH
Design: As Drilled

Local Co-ordinate Reference: Well Martin 8H - Slot 8H
TVD Reference: GL 906 & KB 18 @ 924.00ft (Saxon 141)
MD Reference: GL 906 & KB 18 @ 924.00ft (Saxon 141)
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Database: Northeast District

Casing Points					
Measured Depth (ft)	Vertical Depth (ft)		Name	Casing Diameter (")	Hole Diameter (")
2,238.00	2,237.94	9 5/8"		9-5/8	12-1/4
12,075.00		5 1/2"		5-1/2	8-3/4

Design Annotations					
Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates		Comment	
		+N/-S (ft)	+E/-W (ft)		
108.00	108.00	-0.22	0.03	First SDI Gyro Survey	
2,223.00	2,222.94	6.16	6.52	Last SDI Gyro Survey	
2,337.00	2,336.94	7.28	7.14	First SDI MWD Survey	
5,601.00	5,579.81	75.56	356.33	Last SDI MWD Survey	

Checked By: _____ Approved By: _____ Date: _____

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Martin #8H
 API 47-103-02960
 Stone Energy Corporation

	Horizontal		Bottom (ft	Bottom	
	Top	Top	TVD)	(ft MD)	
	(ft TVD)	(ft MD)			
Sandstone & Shale	Surface	*	634		FW @ 108'
Coal	634	*	639		
Sandstone & Shale	639	*	714		
Coal	714	*	730		
Sandstone & Shale	730	*	750		
Coal	750	*	756		
Sandstone & Shale	756	*	1,883		SW @ None Reported
Little Lime	1,883	*	1,913		
Big Lime	1,913	*	2,013		
Big Injun	2,013	*	2,113		
Sandstone & Shale	2,113	*	2,477		
Berea Sandstone	2,477	*	2,507		
Shale	2,507	*	2,679		
Gordon	2,679	*	2,729		
Undiff Devonian Shale	2,729	*	5,648	5,670	
Rhinestreet	5,648	5,670 ~	6,175	6,244	
Cashaqua	6,175	6,244 ~	6,433	6,597	
Middlesex	6,433	6,597 ~	6,448	6,622	
West River	6,448	6,622 ~	6,514	6,746	
Geneseo	6,514	6,746 ~	6,530	6,778	
Tully Limestone	6,530	6,778 ~	6,564	6,857	
Hamilton Shale	6,564	6,857 ~	6,619	7,024	
Marcellus	6,619	7,024 ~	6,683	12,075	
TD			6,683	12,075	

* From Pilot Hole Log and Driller's Log
 ~ From MWD Gamma Log

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