

47 1 0 3 0 2 9 5 8



## Stone Energy Corporation

Heather Prospect (NAD 27)

Martin Pad

Martin 4H - Slot 4H

OH

Design: As Drilled

## Standard Survey Report

13 April, 2015



[www.scientificdrilling.com](http://www.scientificdrilling.com)

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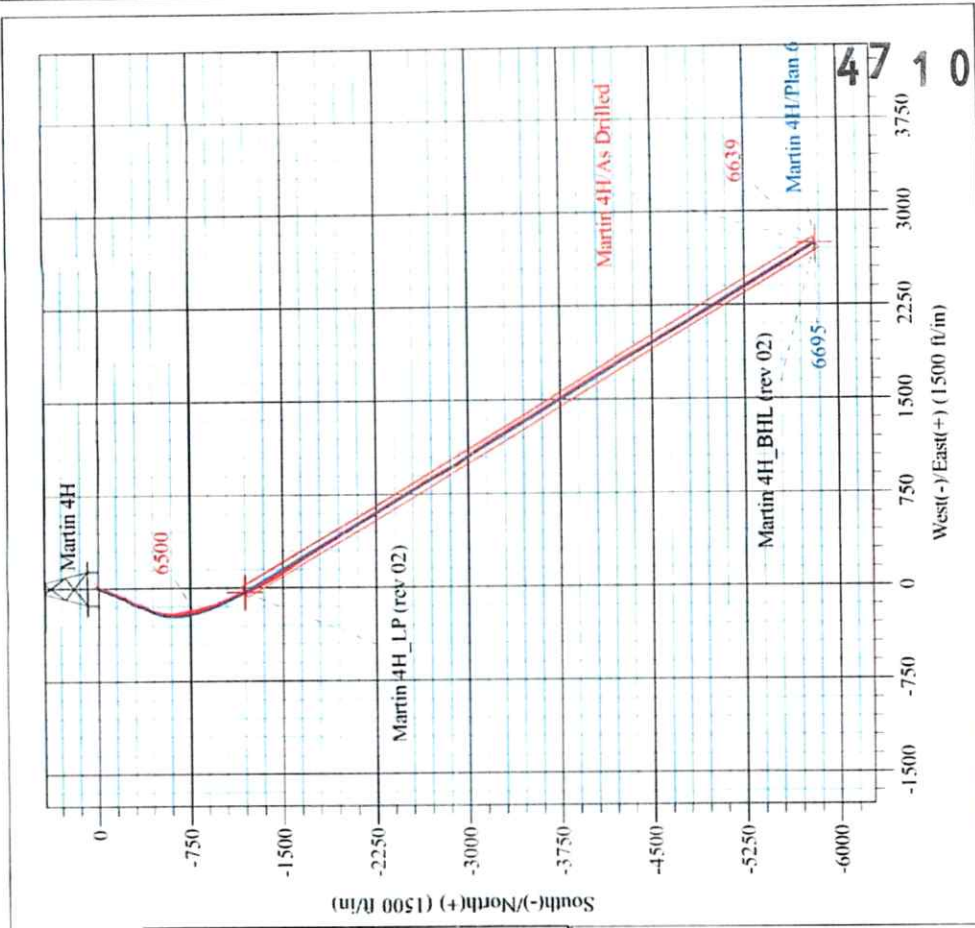
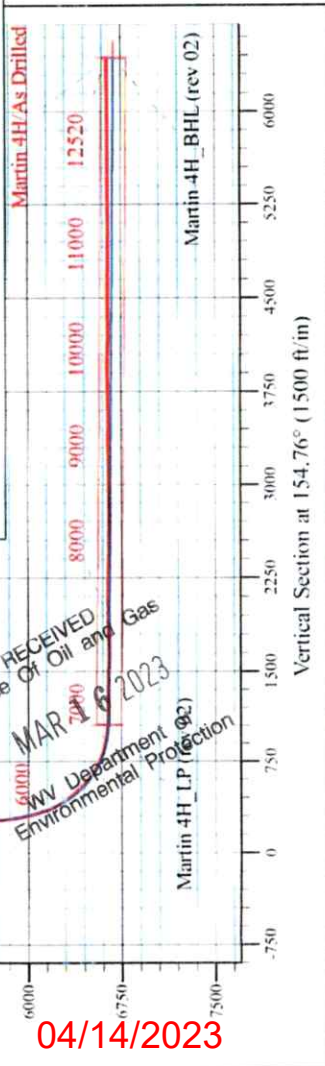
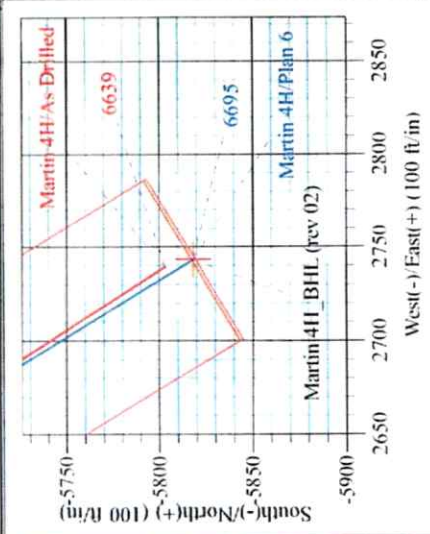
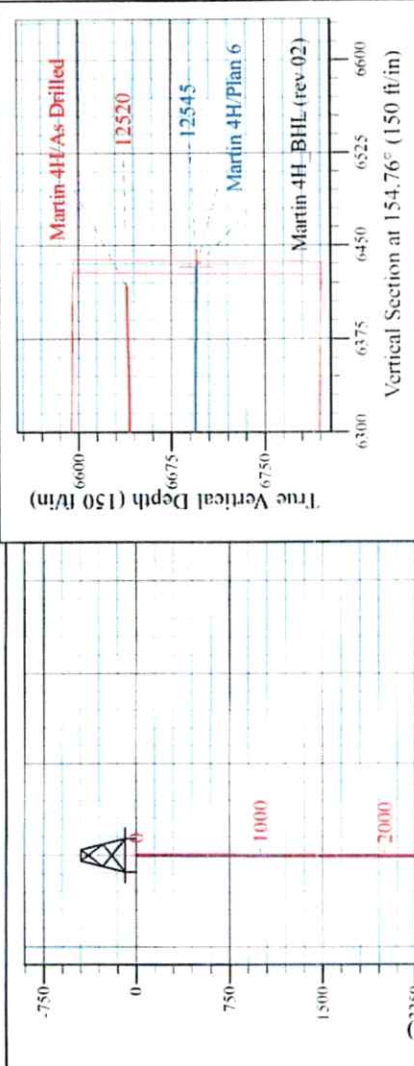
Martin Pad  
 Martin 4H  
 Plan 6  
 GI 906 & KB 18 (a) 924,00ft (Saxon 141)  
 Heather Prospect (NAD 27)

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

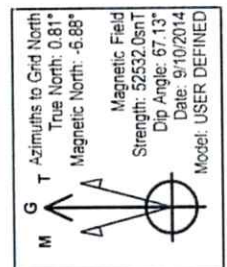


WELL DETAILS: Martin 4H

+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
0.00	0.00	407719.00	1643276.00	39° 36' 45.083 N	80° 45' 58.426 W



Shane Rhoads  
 8:32, April 13 2015  
 Scientific Drilling International  
 124 Vista Drive  
 Charleroi, PA 15022



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Scientific Drilling International  
Survey Report

4710302958  
Scientific Drilling

Company: Stone Energy Corporation  
Project: Heather Prospect (NAD 27)  
Site: Martin Pad  
Well: Martin 4H  
Wellbore: OH  
Design: As Drilled

Local Co-ordinate Reference: Well Martin 4H - Slot 4H  
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

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

Well	Martin 4H - Slot 4H					
Well Position	+N/-S	0.00 ft	Northing:	407,719.00 usft	Latitude:	39° 36' 45.063 N
	+E/-W	0.00 ft	Easting:	1,643,276.00 usft	Longitude:	80° 45' 58.426 W
Position Uncertainty		0.00 ft	Wellhead Elevation:	0.00 ft	Ground Level:	906.00 ft

Wellbore	OH				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	BGGM2013	3/27/2014	-8.59	67.11	52,440
	BGGM2013	4/15/2014	-8.59	67.10	52,433
	User Defined	9/10/2014	-7.69	67.13	52,532

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	154.76	

Survey Program	Date 4/13/2015				
From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description	
108.00	2,173.00	Survey 1 - VES GyroFlex (OH)	VES GyroFlex		
2,270.00	5,473.00	Survey 2 - SDI MWD (OH)	MWD SDI	MWD - Standard ver 1.0.1	
5,543.00	12,520.00	Survey 3 - SDI MWD 8-3/4 Hole (OH)	SDI MWD	SDI MWD - Standard	

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Rate (°/100usft)	
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
108.00	0.38	65.96	108.00	0.15	0.33	0.01	0.35	0.35	0.00	
<b>First Vaughn Gyro Survey @ 108 MD</b>										
208.00	0.43	54.90	208.00	0.50	0.94	-0.05	0.09	0.05	-11.06	
308.00	0.40	47.74	307.99	0.95	1.50	-0.22	0.06	-0.03	-7.16	
408.00	0.29	33.55	407.99	1.39	1.90	-0.45	0.14	-0.11	-14.19	

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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)	
508.00	0.24	44.66	507.99	1.75	2.19	-0.65	0.07	-0.05	11.11	
608.00	0.08	61.65	607.99	1.93	2.40	-0.73	0.17	-0.16	16.99	
708.00	0.35	50.35	707.99	2.16	2.69	-0.81	0.27	0.27	-11.30	
808.00	0.26	30.08	807.99	2.55	3.04	-1.01	0.14	-0.09	-20.27	
908.00	0.27	32.66	907.99	2.95	3.28	-1.27	0.02	0.01	2.58	
1,008.00	0.29	14.74	1,007.99	3.39	3.47	-1.59	0.09	0.02	-17.92	
1,108.00	0.48	343.41	1,107.98	4.04	3.42	-2.19	0.28	0.19	-31.33	
1,208.00	0.47	14.41	1,207.98	4.84	3.40	-2.92	0.25	-0.01	31.00	
1,308.00	0.33	352.24	1,307.98	5.52	3.46	-3.51	0.21	-0.14	-22.17	
1,408.00	0.31	356.77	1,407.98	6.07	3.41	-4.04	0.03	-0.02	4.53	
1,508.00	0.25	8.44	1,507.98	6.56	3.43	-4.47	0.08	-0.06	11.67	
1,608.00	0.05	15.51	1,607.98	6.82	3.47	-4.69	0.20	-0.20	7.07	
1,708.00	0.33	31.42	1,707.97	7.11	3.63	-4.88	0.28	0.28	15.91	
1,808.00	0.45	19.18	1,807.97	7.72	3.91	-5.32	0.15	0.12	-12.24	
1,908.00	0.57	29.03	1,907.97	8.53	4.28	-5.89	0.15	0.12	9.85	
2,008.00	0.54	10.42	2,007.96	9.43	4.61	-6.56	0.18	-0.03	-18.61	
2,108.00	0.62	26.84	2,107.96	10.37	4.94	-7.28	0.18	0.08	16.42	
2,173.00	0.79	17.85	2,172.95	11.11	5.23	-7.82	0.31	0.26	-13.83	
<b>Last Vaughn Gyro Survey @ 2173 MD</b>										
2,270.00	0.75	38.52	2,269.95	12.25	5.83	-8.59	0.29	-0.04	21.31	
<b>First SDI MWD Survey @ 2270 MD</b>										
2,364.00	0.35	278.28	2,363.94	12.77	5.93	-9.02	1.04	-0.43	-127.92	
2,458.00	2.07	214.69	2,457.92	11.42	4.68	-8.33	2.06	1.83	-67.65	
2,552.00	4.41	204.21	2,551.76	6.72	2.23	-5.13	2.56	2.49	-11.15	
2,646.00	7.17	208.40	2,645.28	-1.74	-2.04	0.70	2.97	2.94	4.46	
2,740.00	8.07	205.33	2,738.45	-12.86	-7.65	8.37	1.05	0.96	-3.27	
2,834.00	7.79	199.58	2,831.55	-24.83	-12.61	17.08	0.89	-0.30	-6.12	
2,928.00	7.52	193.53	2,924.71	-36.81	-16.18	26.39	0.90	-0.29	-6.44	
3,022.00	6.28	200.46	3,018.03	-47.61	-19.42	34.78	1.59	-1.32	7.37	
3,116.00	6.74	206.86	3,111.43	-57.34	-23.71	41.76	0.91	0.49	6.81	
3,211.00	6.44	205.30	3,205.80	-67.13	-28.50	48.57	0.37	-0.32	-1.64	
3,305.00	6.23	205.70	3,299.22	-76.50	-32.97	55.13	0.23	-0.22	0.43	
3,399.00	7.13	208.71	3,392.58	-86.21	-37.98	61.78	1.03	0.96	3.20	
3,492.00	8.19	202.97	3,484.75	-97.37	-43.34	69.59	1.40	1.14	-6.17	
3,587.00	8.11	195.70	3,578.80	-110.05	-47.80	79.16	1.09	-0.08	-7.65	
3,681.00	6.98	194.43	3,671.98	-121.97	-51.01	88.57	1.22	-1.20	-1.35	
3,776.00	5.67	203.18	3,766.40	-131.87	-54.30	96.12	1.71	-1.38	9.21	
3,870.00	6.22	212.32	3,859.90	-140.44	-58.85	101.94	0.93	0.59	9.72	
3,964.00	7.09	211.55	3,953.27	-149.69	-64.61	107.85	0.93	0.93	0.82	
4,058.00	8.24	204.62	4,046.43	-160.76	-70.45	115.37	1.57	1.10	-7.37	
4,153.00	8.29	201.23	4,140.44	-173.33	-75.77	124.47	0.52	1.10	-3.57	
4,247.00	7.82	197.06	4,233.51	-185.76	-80.10	133.87	0.80	0.50	-4.44	
4,341.00	7.13	192.51	4,326.72	-197.57	-83.24	143.21	0.97	-0.73	-4.84	
4,435.00	6.79	200.44	4,420.02	-208.47	-86.44	151.70	1.08	-0.36	8.44	

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4,529.00	6.87	211.27	4,513.36	-218.49	-91.30	158.69	1.37	0.09	11.52
4,623.00	6.56	213.19	4,606.72	-227.79	-97.16	164.60	0.41	-0.33	2.04
4,717.00	6.07	210.65	4,700.15	-236.55	-102.63	170.20	0.60	-0.52	-2.70
4,811.00	5.66	213.59	4,793.65	-244.69	-107.73	175.39	0.54	-0.44	3.13
4,906.00	6.46	214.52	4,888.12	-253.00	-113.35	180.50	0.85	0.84	0.98
5,000.00	6.76	214.28	4,981.50	-261.93	-119.46	185.97	0.32	0.32	-0.26
5,096.00	7.67	210.38	5,076.74	-272.12	-125.88	192.45	1.08	0.95	-4.06
5,190.00	8.25	204.21	5,169.83	-283.68	-131.82	200.38	1.10	0.62	-6.56
5,284.00	8.45	200.28	5,262.84	-296.31	-136.98	209.60	0.64	0.21	-4.18
5,378.00	8.20	196.57	5,355.85	-309.22	-141.29	219.44	0.63	-0.27	-3.95
5,473.00	8.05	193.21	5,449.89	-322.19	-144.74	229.70	0.52	-0.16	-3.54
5,543.00	7.97	190.74	5,519.21	-331.73	-146.76	237.46	0.50	-0.11	-3.53
5,607.00	8.53	191.29	5,582.55	-340.74	-148.52	244.87	0.88	0.88	0.86
5,670.00	7.97	190.84	5,644.90	-349.61	-150.26	252.15	0.89	-0.89	-0.71
5,734.00	7.89	196.30	5,708.29	-358.19	-152.32	259.03	1.18	-0.13	8.53
5,765.00	7.69	200.75	5,739.00	-362.17	-153.65	262.06	2.05	-0.65	14.35
5,797.00	8.76	206.01	5,770.67	-366.36	-155.48	265.07	4.08	3.34	16.44
5,829.00	11.13	209.07	5,802.19	-371.25	-158.05	268.40	7.59	7.41	9.56
5,861.00	13.18	210.18	5,833.47	-377.10	-161.39	272.27	6.45	6.41	3.47
5,893.00	14.33	210.04	5,864.55	-383.69	-165.20	276.60	3.60	3.59	-0.44
5,924.00	14.93	209.60	5,894.55	-390.48	-169.10	281.08	1.97	1.94	-1.42
5,954.00	16.09	207.24	5,923.45	-397.54	-172.91	285.84	4.40	3.87	-7.87
5,986.00	18.22	203.35	5,954.03	-406.07	-176.92	291.85	7.56	6.66	-12.16
6,017.00	19.80	201.97	5,983.34	-415.39	-180.81	298.62	5.30	5.10	-4.45
6,049.00	21.04	201.75	6,013.33	-425.75	-184.96	306.22	3.88	3.88	-0.69
6,081.00	22.89	201.92	6,043.00	-436.86	-189.42	314.37	5.78	5.78	0.53
6,113.00	24.66	201.36	6,072.28	-448.86	-194.17	323.19	5.58	5.53	-1.75
6,145.00	24.98	200.86	6,101.33	-461.39	-199.01	332.46	1.20	1.00	-1.56
6,176.00	26.04	199.60	6,129.31	-473.91	-203.62	341.83	3.84	3.42	-4.06
6,207.00	27.53	196.47	6,156.98	-487.20	-207.94	352.00	6.62	4.81	-10.10
6,237.00	29.24	192.82	6,183.37	-500.99	-211.53	362.95	8.12	5.70	-12.17
6,267.00	30.72	189.73	6,209.36	-515.69	-214.45	375.00	7.13	4.93	-10.30
6,297.00	32.72	187.10	6,234.88	-531.29	-216.75	388.13	8.10	6.67	-8.77
6,327.00	35.22	184.94	6,259.76	-547.96	-218.49	402.46	9.25	8.33	-7.20
6,358.00	37.50	182.28	6,284.72	-566.30	-219.64	418.56	8.94	7.35	-8.58
6,388.00	38.95	180.20	6,308.29	-584.85	-220.04	435.17	6.46	4.83	-6.93
6,419.00	40.33	177.81	6,332.16	-604.62	-219.69	453.20	6.63	4.45	-8.81
6,449.00	41.67	175.17	6,354.81	-624.26	-218.48	471.48	7.30	4.47	-8.80
6,480.00	43.39	171.99	6,377.65	-645.08	-216.12	491.32	8.88	5.35	-8.76
6,509.00	45.06	170.01	6,398.44	-665.05	-212.95	510.73	7.47	4.76	-6.83
6,540.00	46.35	168.90	6,420.08	-686.86	-208.89	532.20	4.89	4.16	-3.66
6,570.00	47.83	169.39	6,440.51	-708.44	-204.76	553.48	5.08	4.93	-3.66
6,599.00	49.52	169.28	6,459.66	-729.84	-200.72	574.55	5.83	5.83	-3.38

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6,630.00	51.38	168.65	6,479.40	-753.30	-196.15	597.73	6.20	5.00	-2.03
6,660.00	53.73	167.81	6,497.64	-776.62	-191.29	620.89	8.14	7.83	-2.80
6,690.00	56.14	167.03	6,514.87	-800.58	-185.94	644.84	8.31	8.03	-2.60
6,720.00	58.67	165.92	6,531.03	-825.15	-180.02	669.59	8.99	8.43	-3.70
6,751.00	61.34	165.11	6,546.53	-851.14	-173.31	695.96	8.91	8.61	-2.61
6,781.00	64.02	164.34	6,560.29	-876.85	-166.28	722.21	9.22	8.93	-2.57
6,811.00	66.37	164.02	6,572.88	-903.05	-158.86	749.08	7.89	7.83	-1.07
6,842.00	68.75	163.09	6,584.71	-930.53	-150.75	777.39	8.16	7.68	-3.00
6,872.00	71.08	161.53	6,595.01	-957.37	-142.18	805.32	9.17	7.77	-5.20
6,903.00	73.26	160.03	6,604.51	-985.23	-132.47	834.66	8.41	7.03	-4.84
6,933.00	75.76	157.90	6,612.52	-1,012.21	-122.09	863.49	10.78	8.33	-7.10
6,963.00	76.76	155.89	6,619.64	-1,039.01	-110.65	892.61	7.31	3.33	-6.70
6,993.00	77.90	155.01	6,626.22	-1,065.63	-98.49	921.88	4.76	3.80	-2.93
7,024.00	80.33	155.10	6,632.08	-1,093.23	-85.65	952.32	7.84	7.84	0.29
7,054.00	83.01	155.23	6,636.42	-1,120.17	-73.19	982.00	8.94	8.93	0.43
7,083.00	85.06	155.28	6,639.44	-1,146.36	-61.11	1,010.84	7.07	7.07	0.17
7,144.00	86.18	154.74	6,644.10	-1,201.49	-35.42	1,071.66	2.04	1.84	-0.89
7,204.00	88.39	152.83	6,646.94	-1,255.25	-8.95	1,131.58	4.87	3.68	-3.16
7,267.00	89.03	152.10	6,648.36	-1,311.10	20.17	1,194.51	1.54	1.02	-1.16
7,331.00	90.20	153.15	6,648.79	-1,367.93	49.60	1,258.46	2.46	1.83	1.64
7,394.00	90.13	150.44	6,648.60	-1,423.45	79.37	1,321.37	4.30	-0.11	-4.30
7,458.00	89.50	146.60	6,648.81	-1,478.02	112.78	1,384.98	6.08	-0.98	-6.00
7,521.00	89.46	145.81	6,649.38	-1,530.37	147.82	1,447.28	1.26	-0.06	-1.25
7,584.00	89.23	145.44	6,650.10	-1,582.36	183.39	1,509.47	0.69	-0.37	-0.59
7,648.00	89.40	146.23	6,650.87	-1,635.31	219.33	1,572.69	1.26	0.27	1.23
7,712.00	90.10	147.51	6,651.15	-1,688.91	254.31	1,636.08	2.28	1.09	2.00
7,775.00	89.97	148.60	6,651.11	-1,742.37	287.64	1,698.65	1.74	-0.21	1.73
7,839.00	90.07	148.04	6,651.09	-1,796.83	321.25	1,762.25	0.89	0.16	-0.88
7,903.00	90.30	147.96	6,650.88	-1,851.10	355.17	1,825.80	0.38	0.36	-0.13
7,967.00	90.34	148.02	6,650.52	-1,905.37	389.09	1,889.36	0.11	0.06	0.09
8,030.00	90.44	147.81	6,650.09	-1,958.75	422.55	1,951.91	0.37	0.16	-0.33
8,094.00	90.27	147.79	6,649.70	-2,012.90	456.66	2,015.43	0.27	-0.27	-0.03
8,158.00	90.84	147.87	6,649.08	-2,067.07	490.73	2,078.96	0.90	0.89	0.13
8,220.00	91.04	147.59	6,648.06	-2,119.49	523.83	2,140.49	0.55	0.32	0.45
8,282.00	89.40	148.67	6,647.82	-2,172.14	556.56	2,202.07	3.17	-2.65	1.74
8,345.00	88.63	149.32	6,648.91	-2,226.13	589.01	2,264.74	1.60	-1.22	1.03
8,407.00	88.76	149.40	6,650.32	-2,279.46	620.60	2,326.45	0.25	0.27	0.38
8,471.00	89.16	149.16	6,651.48	-2,334.47	653.29	2,390.15	0.73	0.63	0.38
8,534.00	89.10	148.72	6,652.44	-2,388.43	685.79	2,452.82	0.70	-0.10	0.70
8,598.00	89.87	148.16	6,653.01	-2,442.96	719.28	2,516.43	1.49	0.70	-0.88
8,661.00	88.19	148.75	6,654.08	-2,496.64	752.24	2,579.03	2.83	-2.67	0.94
8,724.00	88.39	149.30	6,655.96	-2,550.64	784.64	2,641.69	0.93	0.32	0.87
8,787.00	89.57	148.65	6,657.08	-2,604.61	817.11	2,704.36	2.14	1.87	-1.03
8,851.00	90.70	149.75	6,656.93	-2,659.58	849.88	2,768.06	2.46	1.77	1.72

Office of Oil and Gas  
May 16 2013  
W&A Department  
Environmental Protection





Scientific Drilling International  
Survey Report

47 10302958  
Scientific Drilling

Company: Stone Energy Corporation  
Project: Heather Prospect (NAD 27)  
Site: Martin Pad  
Well: Martin 4H  
Wellbore: OH  
Design: As Drilled

Local Co-ordinate Reference: Well Martin 4H - Slot 4H  
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)
8.915.00	90.91	151.11	6.656.03	-2.715.24	881.46	2,831.87	2.15	0.33	2.13
8.979.00	90.13	151.55	6.655.45	-2.771.39	912.16	2,895.75	1.40	-1.22	0.69
9.042.00	89.90	151.12	6.655.43	-2.826.67	942.38	2,958.64	0.77	-0.37	-0.68
9.106.00	90.54	150.02	6.655.19	-2.882.41	973.83	3,022.46	1.99	1.00	-1.72
9.169.00	91.68	146.23	6.653.96	-2.935.89	1,007.08	3,085.02	6.28	1.81	-6.02
9.233.00	91.71	145.37	6.652.07	-2.988.80	1,043.04	3,148.21	1.34	0.05	-1.34
9.296.00	92.22	146.75	6.649.91	-3.041.03	1,078.19	3,210.45	2.33	0.81	2.19
9.360.00	92.95	147.13	6.647.03	-3.094.62	1,113.07	3,273.79	1.29	1.14	0.59
9.424.00	90.60	147.71	6.645.04	-3.148.52	1,147.51	3,337.23	3.78	-3.67	0.91
9.488.00	89.30	147.70	6.645.10	-3.202.61	1,181.71	3,400.74	2.03	-2.03	-0.02
9.551.00	89.09	147.71	6.645.98	-3.255.86	1,215.36	3,463.26	0.33	-0.33	0.02
9.615.00	90.00	148.70	6.646.49	-3.310.26	1,249.08	3,526.84	2.10	1.42	1.55
9.678.00	91.04	150.05	6.645.92	-3.364.47	1,281.17	3,589.55	2.70	1.65	2.14
9.742.00	91.28	150.46	6.644.62	-3.420.02	1,312.92	3,653.34	0.74	0.38	0.64
9.805.00	91.48	150.50	6.643.11	-3.474.83	1,343.95	3,716.15	0.32	0.32	0.06
9.868.00	91.68	150.21	6.641.37	-3.529.56	1,375.10	3,778.94	0.56	0.32	-0.46
9.932.00	90.37	149.84	6.640.23	-3.584.99	1,407.07	3,842.71	2.13	-2.05	-0.58
9.995.00	89.60	149.33	6.640.24	-3.639.32	1,438.97	3,905.45	1.47	-1.22	-0.81
10.059.00	89.43	148.73	6.640.78	-3.694.19	1,471.90	3,969.13	0.97	-0.27	-0.94
10.123.00	89.30	148.62	6.641.49	-3.748.86	1,505.17	4,032.77	0.27	-0.20	-0.17
10.186.00	89.13	148.09	6.642.36	-3.802.49	1,538.22	4,095.37	0.88	-0.27	-0.84
10.250.00	89.77	147.75	6.642.97	-3.856.71	1,572.21	4,158.91	1.13	1.00	-0.53
10.313.00	90.24	148.43	6.642.96	-3.910.19	1,605.51	4,221.48	1.31	0.75	1.08
10.377.00	90.77	148.48	6.642.40	-3.964.73	1,638.99	4,285.09	0.83	0.83	0.08
10.440.00	89.93	149.08	6.642.02	-4.018.61	1,671.64	4,347.75	1.64	-1.33	0.95
10.504.00	90.00	149.86	6.642.06	-4.073.73	1,704.15	4,411.47	1.22	0.11	1.22
10.567.00	89.56	149.87	6.642.30	-4.128.22	1,735.78	4,474.24	0.70	-0.70	0.02
10.630.00	89.93	150.41	6.642.58	-4.182.85	1,767.15	4,537.04	1.04	0.59	0.86
10.694.00	90.37	149.88	6.642.41	-4.238.36	1,799.01	4,600.83	1.08	0.69	-0.83
10.758.00	89.77	149.88	6.642.33	-4.293.72	1,831.12	4,664.60	0.94	-0.94	0.00
10.822.00	88.73	150.56	6.643.17	-4.349.26	1,862.91	4,728.39	1.94	-1.63	1.06
10.885.00	88.35	150.66	6.644.77	-4.404.13	1,893.81	4,791.21	0.62	-0.60	0.16
10.949.00	88.35	149.78	6.646.62	-4.459.66	1,925.59	4,854.98	1.37	0.00	-1.38
11.013.00	88.69	149.82	6.648.27	-4.514.95	1,957.77	4,918.72	0.53	0.53	0.06
11.076.00	89.40	148.75	6.649.32	-4.569.11	1,989.94	4,981.42	2.04	1.13	-1.70
11.140.00	90.47	149.04	6.649.39	-4.623.90	2,023.01	5,045.08	1.73	1.67	0.45
11.204.00	91.11	149.59	6.648.51	-4.678.94	2,055.66	5,108.79	1.32	1.00	0.86
11.266.00	91.24	149.88	6.647.24	-4.732.48	2,086.90	5,170.54	0.51	0.22	0.47
11.331.00	91.04	149.18	6.645.95	-4.788.49	2,119.86	5,235.25	2.02	1.02	0.08
11.394.00	91.68	150.28	6.644.45	-4.842.88	2,151.61	5,297.99	2.02	1.02	1.75
11.458.00	90.64	149.95	6.643.16	-4.898.36	2,183.48	5,361.77	1.70	-1.63	-0.50
11.521.00	90.07	149.12	6.642.76	-4.952.67	2,215.42	5,424.51	1.61	-0.90	-1.33
11.585.00	89.77	147.84	6.642.85	-5.007.22	2,248.88	5,488.12	2.05	-0.47	-2.00

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Company: Stone Energy Corporation  
Project: Heather Prospect (NAD 27)  
Site: Martin Pad  
Well: Martin 4H  
Wellbore: OH  
Design: As Drilled

Local Co-ordinate Reference:  
TVD Reference:  
MD Reference:  
North Reference:  
Survey Calculation Method:  
Database:

Well Martin 4H - Slot 4H  
GL 906 & KB 18 @ 924.00ft (Saxon 141)  
GL 906 & KB 18 @ 924.00ft (Saxon 141)  
Grid  
Minimum Curvature  
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)
11,648.00	89.83	148.78	6,643.07	-5,060.83	2,281.97	5,550.72	1.50	0.10	1.49
11,712.00	89.90	149.29	6,643.22	-5,115.71	2,314.90	5,614.40	0.80	0.11	0.80
11,776.00	89.93	149.44	6,643.32	-5,170.77	2,347.51	5,678.12	0.24	0.05	0.23
11,839.00	89.87	149.39	6,643.43	-5,225.01	2,379.57	5,740.84	0.12	-0.10	-0.08
11,903.00	90.17	149.55	6,643.41	-5,280.14	2,412.08	5,804.57	0.53	0.47	0.25
11,967.00	90.03	148.78	6,643.30	-5,335.09	2,444.88	5,868.27	1.22	-0.22	-1.20
12,030.00	90.00	148.00	6,643.28	-5,388.74	2,477.90	5,930.88	1.24	-0.05	-1.24
12,094.00	90.00	147.98	6,643.28	-5,443.01	2,511.83	5,994.43	0.03	0.00	-0.03
12,157.00	89.93	147.72	6,643.32	-5,496.35	2,545.35	6,056.97	0.43	-0.11	-0.41
12,221.00	90.37	147.68	6,643.15	-5,550.45	2,579.55	6,120.49	0.69	0.69	-0.06
12,285.00	90.60	147.57	6,642.61	-5,604.50	2,613.82	6,183.99	0.40	0.36	-0.17
12,349.00	90.70	147.75	6,641.88	-5,658.57	2,648.05	6,247.50	0.32	0.16	0.28
12,412.00	90.84	147.86	6,641.04	-5,711.87	2,681.62	6,310.03	0.28	0.22	0.17
12,462.00	91.31	147.78	6,640.10	-5,754.18	2,708.24	6,359.65	0.95	0.94	-0.16
<b>Last SDI MWD Survey @12462 MD</b>									
12,520.00	91.31	147.78	6,638.77	-5,803.24	2,739.16	6,417.21	0.00	0.00	0.00
<b>Projection to Bit @ 12520 MD</b>									

Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates		Comment
		+N/-S (ft)	+E/-W (ft)	
108.00	108.00	0.15	0.33	First Vaughn Gyro Survey @ 108 MD
2,173.00	2,172.95	11.11	5.23	Last Vaughn Gyro Survey @ 2173 MD
2,270.00	2,269.95	12.25	5.83	First SDI MWD Survey @ 2270 MD
12,462.00	6,640.10	-5,754.18	2,708.24	Last SDI MWD Survey @12462 MD
12,520.00	6,638.77	-5,803.24	2,739.16	Projection to Bit @ 12520 MD

Checked By: \_\_\_\_\_ Approved By: \_\_\_\_\_ Date: \_\_\_\_\_

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Martin #4H  
 API 47-103-02958  
 Stone Energy Corporation

	Top (ft TVD)	Horizontal Top (ft MD)	Bottom (ft TVD)	Bottom (ft MD)	
Sandstone & Shale	Surface		* 628		FW @ 108'
Coal	628		* 634		
Sandstone & Shale	634		* 712		
Coal	712		* 730		
Sandstone & Shale	730		* 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		* 5,551	5,576	
Rhinestreet	5,551	5,576	~ 6,162	6,226	
Cashaqua	6,162	6,226	~ 6,424	6,546	
Middlesex	6,424	6,546	~ 6,446	6,576	
West River	6,446	6,576	~ 6,510	6,678	
Geneseo	6,510	6,678	~ 6,526	6,711	
Tully Limestone	6,526	6,711	~ 6,559	6,781	
Hamilton Shale	6,559	6,781	~ 6,612	6,932	
Marcellus	6,612	6,932	~ 6,638	12,520	
TD			6,638	12,520	

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

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