



Project: Mary Prospect  
 Site: ZMBG Pad  
 Well: 3H  
 Wellbore: OH  
 Design: 3H As Drilled



103-02894

WELL DETAILS: 3H

+N/-S	+E/-W	Northing	Ground Level: Easting	1341.00	Latitude	Longitude
0.00	0.00	418335.00	1628055.00		39° 38' 27.832 N	80° 49' 14.896 W

REFERENCE INFORMATION

Co-ordinate (N/E) Reference: Well 3H, Grid North  
 Vertical (TVD) Reference: GL 1341' & KB 18' @ 1359.00ft (Saxon 141)  
 Section (VS) Reference: Slot - (0.00N, 0.00E)  
 Measured Depth Reference: GL 1341' & KB 18' @ 1359.00ft (Saxon,141)  
 Calculation Method: Minimum Curvature

PROJECT DETAILS: Mary Prospect

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

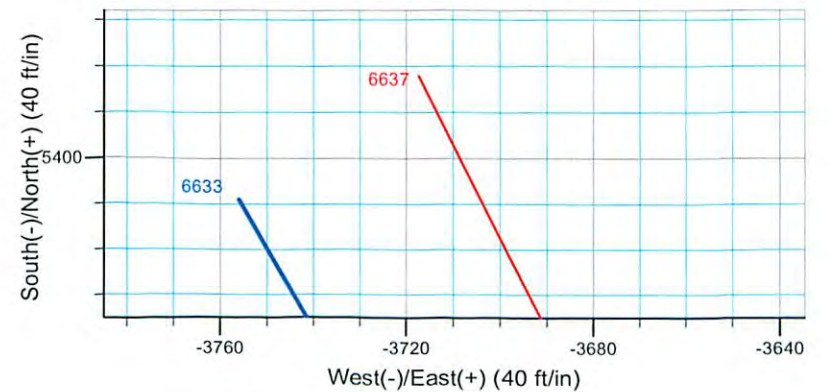
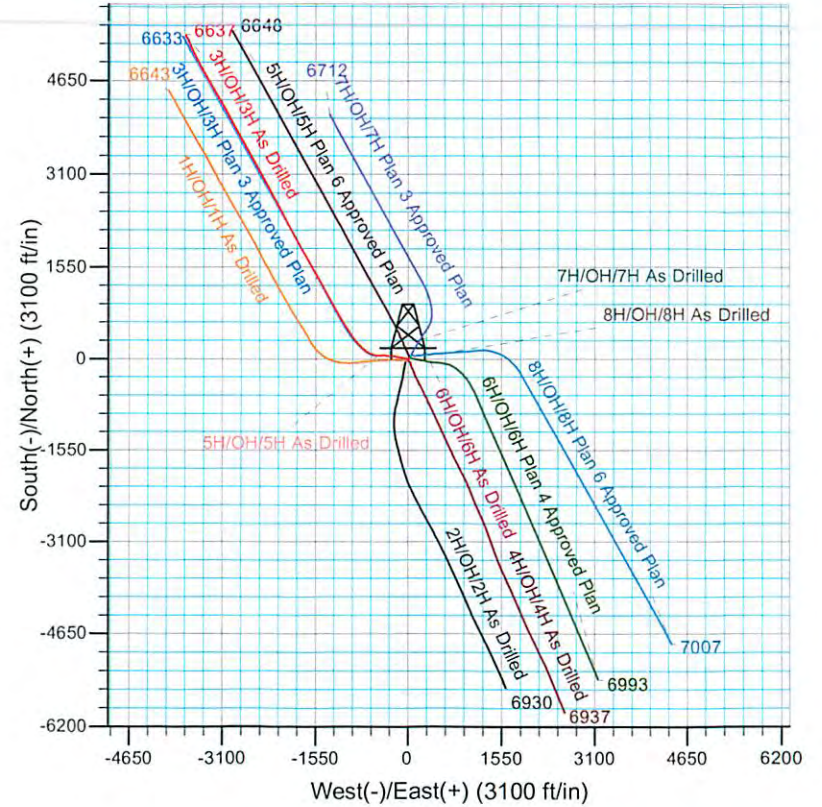
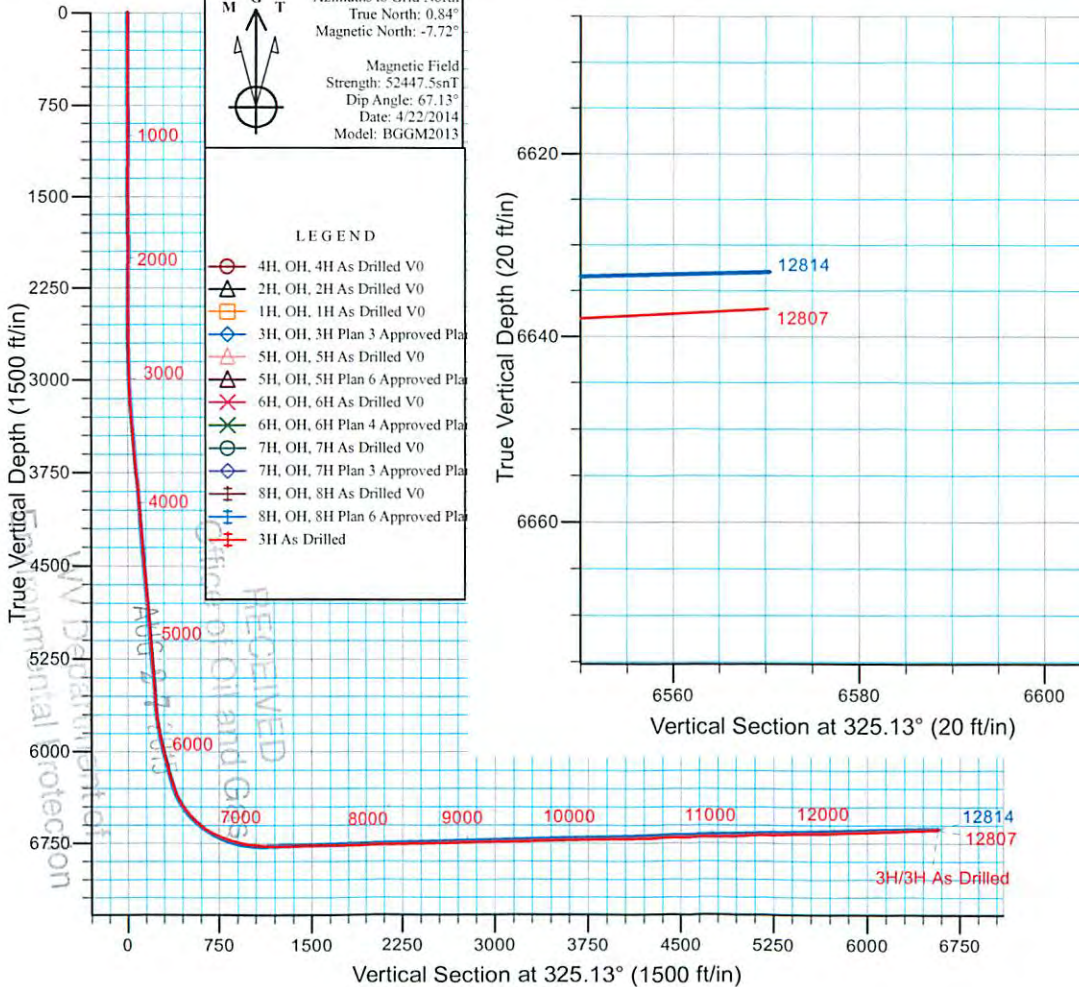
Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	V Sect	Target
1	5720.00	8.61	277.89	5698.91	53.07	-334.36	0.00	0.00	234.68	
2	5993.89	24.93	270.28	5960.29	56.18	-412.91	6.00	-11.38	282.14	
3	6316.08	24.93	270.28	6252.47	56.84	-548.70	0.00	0.00	360.31	
4	7309.77	91.50	331.00	6777.00	578.80	-1088.40	8.00	62.48	1097.09	ZMBG 3H_LP2
5	12813.79	91.50	331.00	6632.92	5391.01	-3756.01	0.00	0.00	6570.43	ZMBG 3H_BHL2

Azimuths to Grid North  
 True North: 0.84°  
 Magnetic North: -7.72°

Magnetic Field  
 Strength: 52447.5snT  
 Dip Angle: 67.13°  
 Date: 4/22/2014  
 Model: BGGM2013

LEGEND

- 4H, OH, 4H As Drilled V0
- △ 2H, OH, 2H As Drilled V0
- 1H, OH, 1H As Drilled V0
- ◇ 3H, OH, 3H Plan 3 Approved Plan
- △ 5H, OH, 5H As Drilled V0
- △ 5H, OH, 5H Plan 6 Approved Plan
- × 6H, OH, 6H As Drilled V0
- × 6H, OH, 6H Plan 4 Approved Plan
- 7H, OH, 7H As Drilled V0
- ◇ 7H, OH, 7H Plan 3 Approved Plan
- △ 8H, OH, 8H As Drilled V0
- △ 8H, OH, 8H Plan 6 Approved Plan
- △ 3H As Drilled



103-02894



## Stone Energy

Mary Prospect  
ZMBG Pad  
3H

OH

Design: 3H As Drilled

## Standard Survey Report

19 May, 2014



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

RE ENV  
Office of  
WV Department of  
Environmental Protection  
10/16/2015

103-02894



Scientific Drilling  
Survey Report



<b>Company:</b>	Stone Energy	<b>Local Co-ordinate Reference:</b>	Well 3H
<b>Project:</b>	Mary Prospect	<b>TVD Reference:</b>	GL 1341' & KB 18' @ 1359.00ft (Saxon 141)
<b>Site:</b>	ZMBG Pad	<b>MD Reference:</b>	GL 1341' & KB 18' @ 1359.00ft (Saxon 141)
<b>Well:</b>	3H	<b>North Reference:</b>	Grid
<b>Wellbore:</b>	OH	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	3H As Drilled	<b>Database:</b>	Northeast District

<b>Project</b>	Mary Prospect, West Virginia		
<b>Map System:</b>	US State Plane 1927 (Exact solution)	<b>System Datum:</b>	Mean Sea Level
<b>Geo Datum:</b>	NAD 1927 (NADCON CONUS)		
<b>Map Zone:</b>	West Virginia North 4701		

<b>Site</b>	ZMBG Pad				
<b>Site Position:</b>		<b>Northing:</b>	418,393.00 usft	<b>Latitude:</b>	39° 38' 28.413 N
<b>From:</b>	Map	<b>Easting:</b>	1,628,110.00 usft	<b>Longitude:</b>	80° 49' 14.204 W
<b>Position Uncertainty:</b>	0.00 ft	<b>Slot Radius:</b>	13-3/16 "	<b>Grid Convergence:</b>	-0.84 °

<b>Well</b>	3H					
<b>Well Position</b>	<b>+N/-S</b>	0.00 ft	<b>Northing:</b>	418,335.00 usft	<b>Latitude:</b>	39° 38' 27.832 N
	<b>+E/-W</b>	0.00 ft	<b>Easting:</b>	1,628,055.00 usft	<b>Longitude:</b>	80° 49' 14.896 W
<b>Position Uncertainty</b>		0.00 ft	<b>Wellhead Elevation:</b>	ft	<b>Ground Level:</b>	1,341.00 ft

<b>Wellbore</b>	OH				
<b>Magnetics</b>	<b>Model Name</b>	<b>Sample Date</b>	<b>Declination (°)</b>	<b>Dip Angle (°)</b>	<b>Field Strength (nT)</b>
	IGRF2010	5/16/2013	-8.48	67.19	52,608
	BGGM2013	8/28/2013	-8.54	67.19	52,532
	BGGM2013	9/16/2013	-8.54	67.19	52,526
	BGGM2013	3/7/2014	-8.55	67.14	52,464
	BGGM2013	4/22/2014	-8.56	67.13	52,447

<b>Design</b>	3H As Drilled				
<b>Audit Notes:</b>					
<b>Version:</b>	1.0	<b>Phase:</b>	ACTUAL	<b>Tie On Depth:</b>	0.00
<b>Vertical Section:</b>	<b>Depth From (TVD) (ft)</b>	<b>+N/-S (ft)</b>	<b>+E/-W (ft)</b>	<b>Direction (°)</b>	
	0.00	0.00	0.00		325.13

<b>Survey Program</b>	<b>Date</b>	5/19/2014			
<b>From (ft)</b>	<b>To (ft)</b>	<b>Survey (Wellbore)</b>	<b>Tool Name</b>	<b>Description</b>	
107.00	2,562.00	Survey 1 - Gyro (OH)	VES GyroFlex		
2,637.00	12,807.00	Survey 2 - SDI MWD (OH)	MWD SDI	MWD - Standard ver 1.0.1	

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	0.00	0.00
107.00	0.16	274.43	107.00	0.01	-0.15	0.09	0.15	0.15	0.00
<b>First Vaughn Gyro Survey</b>									
207.00	0.08	301.44	207.00	0.06	-0.35	0.25	0.10	-0.08	27.01
307.00	0.07	319.15	307.00	0.14	-0.45	0.37	0.03	-0.01	17.71
407.00	0.21	324.30	407.00	0.34	-0.59	0.62	0.14	0.14	5.15

RECEIVED  
Office of Oil and Gas  
AUG 27 2015  
WV Department of Environmental Protection  
10/16/2015

103-02894



Scientific Drilling  
Survey Report



<b>Company:</b>	Stone Energy	<b>Local Co-ordinate Reference:</b>	Well 3H
<b>Project:</b>	Mary Prospect	<b>TVD Reference:</b>	GL 1341' & KB 18' @ 1359.00ft (Saxon 141)
<b>Site:</b>	ZMBG Pad	<b>MD Reference:</b>	GL 1341' & KB 18' @ 1359.00ft (Saxon 141)
<b>Well:</b>	3H	<b>North Reference:</b>	Grid
<b>Wellbore:</b>	OH	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	3H As Drilled	<b>Database:</b>	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)	
507.00	0.18	351.42	507.00	0.64	-0.72	0.94	0.10	-0.03	27.12	
607.00	0.14	335.97	607.00	0.91	-0.80	1.20	0.06	-0.04	-15.45	
707.00	0.10	322.38	707.00	1.09	-0.90	1.41	0.05	-0.04	-13.59	
807.00	0.18	350.40	807.00	1.31	-0.98	1.64	0.10	0.08	28.02	
907.00	0.20	32.62	907.00	1.61	-0.91	1.85	0.14	0.02	42.22	
1,007.00	0.08	52.96	1,007.00	1.80	-0.76	1.92	0.13	-0.12	20.34	
1,107.00	0.07	42.92	1,107.00	1.89	-0.67	1.93	0.02	-0.01	-10.04	
1,207.00	0.06	13.40	1,207.00	1.99	-0.61	1.98	0.03	-0.01	-29.52	
1,307.00	0.09	355.11	1,307.00	2.11	-0.61	2.08	0.04	0.03	-18.29	
1,407.00	0.24	349.36	1,407.00	2.40	-0.65	2.34	0.15	0.15	-5.75	
1,507.00	0.25	353.51	1,507.00	2.82	-0.71	2.72	0.02	0.01	4.15	
1,607.00	0.27	9.77	1,606.99	3.27	-0.70	3.08	0.08	0.02	16.26	
1,707.00	0.32	23.86	1,706.99	3.76	-0.55	3.40	0.09	0.05	14.09	
1,807.00	0.19	30.14	1,806.99	4.16	-0.35	3.61	0.13	-0.13	6.28	
1,907.00	0.27	43.97	1,906.99	4.47	-0.10	3.73	0.10	0.08	13.83	
2,007.00	0.31	34.60	2,006.99	4.86	0.21	3.87	0.06	0.04	-9.37	
2,107.00	0.43	50.01	2,106.99	5.33	0.65	4.00	0.15	0.12	15.41	
2,207.00	0.53	86.51	2,206.99	5.60	1.40	3.79	0.32	0.10	36.50	
2,307.00	0.41	89.18	2,306.98	5.63	2.22	3.35	0.12	-0.12	2.67	
2,407.00	0.44	68.21	2,406.98	5.78	2.94	3.06	0.16	0.03	-20.97	
2,507.00	0.44	64.30	2,506.98	6.09	3.64	2.91	0.03	0.00	-3.91	
2,562.00	0.62	52.68	2,561.98	6.36	4.07	2.89	0.38	0.33	-21.13	
<b>Last Vaughn Gyro Survey</b>										
2,637.00	0.45	357.27	2,636.97	6.90	4.38	3.16	0.69	-0.23	-73.88	
<b>First SDI MWD Survey</b>										
2,730.00	1.03	273.50	2,729.96	7.31	3.52	3.99	1.16	0.62	-90.08	
2,822.00	2.51	266.65	2,821.92	7.25	0.69	5.55	1.62	1.61	-7.45	
2,914.00	3.44	261.79	2,913.79	6.73	-4.06	7.84	1.05	1.01	-5.28	
3,005.00	4.31	259.65	3,004.58	5.73	-10.12	10.49	0.97	0.96	-2.35	
3,096.00	5.01	268.14	3,095.28	4.99	-17.46	14.07	1.08	0.77	9.33	
3,188.00	5.76	272.21	3,186.87	5.03	-26.09	19.04	0.91	0.82	4.42	
3,282.00	7.30	274.03	3,280.26	5.64	-36.76	25.64	1.65	1.64	1.94	
3,372.00	7.77	274.54	3,369.48	6.52	-48.53	33.09	0.53	0.52	0.57	
3,462.00	7.63	276.78	3,458.67	7.71	-60.52	40.92	0.37	-0.16	2.49	
3,557.00	7.48	287.07	3,552.85	10.27	-72.70	49.98	1.43	-0.16	10.83	
3,649.00	7.91	286.89	3,644.02	13.86	-84.48	59.67	0.47	0.47	-0.20	
3,741.00	8.37	286.34	3,735.10	17.59	-96.96	69.86	0.51	0.50	-0.60	
3,834.00	8.06	282.60	3,827.14	20.91	-109.82	79.94	0.66	0.33	-4.02	
3,927.00	7.32	276.21	3,919.31	22.98	-122.07	88.64	1.21	-0.80	-6.87	
4,022.00	6.98	272.54	4,013.57	23.89	-133.86	96.12	0.60	-0.36	-3.86	
4,116.00	7.21	271.81	4,106.85	24.33	-145.46	103.11	0.26	0.24	-0.78	
4,209.00	7.51	269.10	4,199.08	24.41	-157.37	109.99	0.49	0.32	-2.91	
4,302.00	7.31	275.13	4,291.31	24.85	-169.34	117.19	0.86	-0.22	6.48	

RECEIVED  
Office of Oil and Gas  
MIG 27 2015

103-02894



Scientific Drilling  
Survey Report



<b>Company:</b>	Stone Energy	<b>Local Co-ordinate Reference:</b>	Well 3H
<b>Project:</b>	Mary Prospect	<b>TVD Reference:</b>	GL 1341' & KB 18' @ 1359.00ft (Saxon 141)
<b>Site:</b>	ZMBG Pad	<b>MD Reference:</b>	GL 1341' & KB 18' @ 1359.00ft (Saxon 141)
<b>Well:</b>	3H	<b>North Reference:</b>	Grid
<b>Wellbore:</b>	OH	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	3H As Drilled	<b>Database:</b>	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)
4,393.00	6.70	285.08	4,381.63	26.75	-180.23	124.98	1.49	-0.67	10.93
4,488.01	5.71	298.89	4,476.09	30.47	-189.72	133.46	1.88	-1.04	14.54
4,580.01	5.90	306.23	4,567.62	35.48	-197.54	142.04	0.83	0.21	7.98
4,672.01	6.06	300.52	4,659.12	40.74	-205.54	150.92	0.67	0.17	-6.21
4,763.01	6.34	289.96	4,749.59	44.89	-214.40	159.40	1.29	0.31	-11.60
4,856.01	6.55	279.39	4,842.01	47.51	-224.46	167.30	1.29	0.23	-11.37
4,948.01	7.53	272.24	4,933.31	48.60	-235.66	174.60	1.43	1.07	-7.77
5,043.01	8.14	271.00	5,027.43	48.96	-248.61	182.29	0.67	0.64	-1.31
5,134.01	8.29	269.42	5,117.49	49.01	-261.61	189.76	0.30	0.16	-1.74
5,226.01	7.57	270.84	5,208.61	49.03	-274.30	197.04	0.81	-0.78	1.54
5,319.01	6.65	272.56	5,300.90	49.36	-285.81	203.88	1.02	-0.99	1.85
5,410.01	6.75	276.31	5,391.28	50.19	-296.38	210.61	0.49	0.11	4.12
5,502.01	6.75	273.56	5,482.64	51.12	-307.15	217.53	0.35	0.00	-2.99
5,594.01	7.02	273.01	5,573.97	51.75	-318.17	224.34	0.30	0.29	-0.60
5,654.01	7.23	273.69	5,633.51	52.18	-325.59	228.94	0.38	0.35	1.13
5,675.00	7.45	274.87	5,654.33	52.38	-328.27	230.64	1.27	1.05	5.62
5,707.00	7.87	277.08	5,686.05	52.83	-332.51	233.43	1.60	1.31	6.91
5,738.00	9.63	278.80	5,716.68	53.49	-337.18	236.64	5.74	5.68	5.55
5,770.00	12.15	278.38	5,748.10	54.39	-343.16	240.79	7.88	7.88	-1.31
5,802.00	14.19	275.53	5,779.26	55.26	-350.39	245.64	6.69	6.38	-8.91
5,834.00	15.62	275.21	5,810.18	56.03	-358.59	250.96	4.48	4.47	-1.00
5,866.00	17.06	274.71	5,840.89	56.80	-367.56	256.72	4.52	4.50	-1.56
5,898.00	18.42	273.89	5,871.37	57.53	-377.28	262.88	4.32	4.25	-2.56
5,929.00	20.10	274.17	5,900.63	58.25	-387.48	269.30	5.43	5.42	0.90
5,961.00	21.77	274.00	5,930.52	59.06	-398.88	276.49	5.22	5.22	-0.53
5,993.00	23.83	273.36	5,960.02	59.86	-411.26	284.21	6.48	6.44	-2.00
6,024.00	24.68	270.97	5,988.28	60.33	-423.98	291.87	4.19	2.74	-7.71
6,056.00	24.28	268.50	6,017.41	60.28	-437.24	299.40	3.43	-1.25	-7.72
6,087.00	23.48	268.15	6,045.75	59.91	-449.78	306.27	2.62	-2.58	-1.13
6,120.00	23.62	267.67	6,076.00	59.43	-462.96	313.41	0.72	0.42	-1.45
6,151.00	24.27	268.45	6,104.33	59.00	-475.53	320.25	2.33	2.10	2.52
6,183.00	24.84	271.04	6,133.44	58.95	-488.83	327.81	3.81	1.78	8.09
6,215.00	25.41	272.41	6,162.41	59.36	-502.41	335.91	2.54	1.78	4.28
6,247.00	25.86	274.17	6,191.26	60.15	-516.23	344.46	2.76	1.41	5.50
6,279.00	25.93	275.45	6,220.05	61.33	-530.15	353.38	1.76	0.22	4.00
6,310.00	25.54	274.56	6,247.98	62.50	-543.56	362.01	1.77	-1.26	-2.87
6,342.00	25.35	278.21	6,276.87	64.03	-557.22	371.07	4.94	-0.59	11.41
6,374.00	26.06	283.39	6,305.71	66.63	-570.84	380.99	7.36	2.22	16.19
6,404.00	27.43	287.57	6,332.50	70.25	-583.84	391.39	7.75	4.57	13.93
6,434.00	28.76	290.08	6,358.97	74.81	-597.21	402.78	5.93	4.43	8.37
6,465.00	30.82	291.64	6,385.87	80.30	-611.59	415.51	7.10	6.65	5.03
6,495.00	33.59	293.66	6,411.25	86.47	-626.34	428.99	9.91	9.25	6.73
6,525.00	36.73	294.96	6,435.78	93.58	-642.08	443.83	10.76	10.47	4.33
6,555.00	40.02	297.53	6,459.29	101.83	-658.77	460.14	12.19	10.97	8.57

RECEIVED  
Office of Oil and Gas  
Aug 27 2014  
WV Department of Environmental Protection  
COMPASS 5000 v. 10.10  
10/16/2015

103-02894



Scientific Drilling  
Survey Report



<b>Company:</b>	Stone Energy	<b>Local Co-ordinate Reference:</b>	Well 3H
<b>Project:</b>	Mary Prospect	<b>TVD Reference:</b>	GL 1341' & KB 18' @ 1359.00ft (Saxon 141)
<b>Site:</b>	ZMBG Pad	<b>MD Reference:</b>	GL 1341' & KB 18' @ 1359.00ft (Saxon 141)
<b>Well:</b>	3H	<b>North Reference:</b>	Grid
<b>Wellbore:</b>	OH	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	3H As Drilled	<b>Database:</b>	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)
6,586.00	41.55	300.88	6,482.77	111.72	-676.44	478.35	8.61	4.94	10.81
6,616.00	42.90	303.63	6,504.99	122.48	-693.48	496.92	7.63	4.50	9.17
6,646.00	44.10	305.58	6,526.75	134.21	-710.47	516.26	6.00	4.00	6.50
6,677.00	45.96	308.43	6,548.66	147.41	-727.98	537.10	8.85	6.00	9.19
6,707.00	47.71	310.25	6,569.18	161.29	-744.90	558.16	7.32	5.83	6.07
6,737.00	50.15	312.46	6,588.89	176.23	-761.86	580.12	9.85	8.13	7.37
6,768.00	52.07	313.77	6,608.35	192.73	-779.47	603.72	7.01	6.19	4.23
6,798.00	54.69	315.32	6,626.25	209.62	-796.63	627.38	9.67	8.73	5.17
6,828.00	56.97	316.25	6,643.10	227.41	-813.93	651.87	8.02	7.60	3.10
6,858.00	60.21	317.36	6,658.73	246.07	-831.45	677.20	11.25	10.80	3.70
6,889.00	63.47	319.17	6,673.36	266.47	-849.64	704.33	11.71	10.52	5.84
6,918.00	65.85	320.35	6,685.77	286.48	-866.57	730.43	8.99	8.21	4.07
6,948.00	67.62	321.19	6,697.62	307.82	-883.99	757.91	6.44	5.90	2.80
6,978.00	69.73	321.18	6,708.53	329.60	-901.51	785.78	7.03	7.03	-0.03
7,008.00	71.55	322.14	6,718.47	351.80	-919.07	814.03	6.78	6.07	3.20
7,038.00	73.44	323.40	6,727.50	374.58	-936.37	842.62	7.47	6.30	4.20
7,068.00	74.81	323.82	6,735.70	397.81	-953.49	871.46	4.76	4.57	1.40
7,099.00	76.23	325.06	6,743.45	422.22	-970.95	901.48	6.00	4.58	4.00
7,129.00	77.68	326.04	6,750.22	446.32	-987.48	930.70	5.79	4.83	3.27
7,159.00	79.19	326.76	6,756.24	470.80	-1,003.74	960.08	5.56	5.03	2.40
7,189.00	80.92	327.55	6,761.42	495.63	-1,019.77	989.61	6.32	5.77	2.63
7,220.00	82.93	328.33	6,765.77	521.64	-1,036.06	1,020.27	6.95	6.48	2.52
7,250.00	83.60	328.60	6,769.29	547.03	-1,051.64	1,050.01	2.41	2.23	0.90
7,280.00	85.09	328.68	6,772.25	572.52	-1,067.17	1,079.81	4.97	4.97	0.27
7,311.00	86.87	329.44	6,774.42	599.04	-1,083.07	1,110.66	6.24	5.74	2.45
7,341.00	87.95	330.28	6,775.78	624.96	-1,098.12	1,140.52	4.56	3.60	2.80
7,371.00	88.32	330.19	6,776.75	650.99	-1,113.01	1,170.39	1.27	1.23	-0.30
7,402.00	88.96	329.56	6,777.49	677.79	-1,128.56	1,201.27	2.90	2.06	-2.03
7,465.00	91.75	330.14	6,777.10	732.26	-1,160.20	1,264.05	4.52	4.43	0.92
7,529.00	91.75	329.72	6,775.14	787.63	-1,192.25	1,327.80	0.66	0.00	-0.66
7,593.00	90.07	331.11	6,774.13	843.27	-1,223.84	1,391.51	3.41	-2.63	2.17
7,656.00	89.90	331.50	6,774.14	898.53	-1,254.09	1,454.15	0.68	-0.27	0.62
7,720.00	90.64	330.86	6,773.84	954.61	-1,284.94	1,517.79	1.53	1.16	-1.00
7,784.00	91.65	330.32	6,772.56	1,010.35	-1,316.36	1,581.49	1.79	1.58	-0.84
7,847.00	91.07	330.69	6,771.07	1,065.16	-1,347.37	1,644.19	1.09	-0.92	0.59
7,911.00	91.18	330.57	6,769.81	1,120.93	-1,378.76	1,707.89	0.25	0.17	-0.19
7,975.00	90.81	330.35	6,768.70	1,176.60	-1,410.30	1,771.60	0.67	-0.58	-0.34
8,038.00	91.11	330.59	6,767.65	1,231.41	-1,441.35	1,834.32	0.61	0.48	0.38
8,102.00	92.12	330.82	6,765.84	1,287.20	-1,472.65	1,897.99	1.62	1.58	0.36
8,166.00	91.72	330.62	6,763.70	1,342.99	-1,503.94	1,961.65	0.70	-0.63	-0.31
8,229.00	91.71	330.95	6,761.81	1,397.95	-1,534.67	2,024.32	0.52	-0.02	0.52
8,293.00	91.01	330.50	6,760.29	1,453.76	-1,565.96	2,087.99	1.30	-1.09	-0.70
8,356.00	90.81	329.38	6,759.29	1,508.28	-1,597.51	2,150.76	1.81	-0.32	-1.78

RECEIVED  
Office of Oil and Gas  
AUG 27 2013  
WV Department of Environmental Protection

103-02894



Scientific Drilling  
Survey Report



<b>Company:</b>	Stone Energy	<b>Local Co-ordinate Reference:</b>	Well 3H
<b>Project:</b>	Mary Prospect	<b>TVD Reference:</b>	GL 1341' & KB 18' @ 1359.00ft (Saxon 141)
<b>Site:</b>	ZMBG Pad	<b>MD Reference:</b>	GL 1341' & KB 18' @ 1359.00ft (Saxon 141)
<b>Well:</b>	3H	<b>North Reference:</b>	Grid
<b>Wellbore:</b>	OH	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	3H As Drilled	<b>Database:</b>	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)
8,420.00	90.77	330.05	6,758.41	1,563.54	-1,629.79	2,214.55	1.05	-0.06	1.05
8,479.00	91.31	330.91	6,757.34	1,614.87	-1,658.85	2,273.28	1.72	0.92	1.46
8,543.00	92.08	329.90	6,755.45	1,670.50	-1,690.44	2,336.99	1.98	1.20	-1.58
8,606.00	91.44	329.78	6,753.51	1,724.95	-1,722.08	2,399.74	1.03	-1.02	-0.19
8,670.00	91.51	330.29	6,751.86	1,780.37	-1,754.04	2,463.49	0.80	0.11	0.80
8,733.00	92.59	329.68	6,749.61	1,834.89	-1,785.53	2,526.22	1.97	1.71	-0.97
8,796.00	91.98	329.73	6,747.10	1,889.24	-1,817.29	2,588.97	0.97	-0.97	0.08
8,860.00	90.94	331.01	6,745.47	1,944.85	-1,848.92	2,652.68	2.58	-1.63	2.00
8,924.00	91.44	331.56	6,744.14	2,000.97	-1,879.66	2,716.30	1.16	0.78	0.86
8,987.00	91.04	332.66	6,742.78	2,056.64	-1,909.12	2,778.82	1.86	-0.63	1.75
9,051.00	90.00	333.11	6,742.19	2,113.60	-1,938.29	2,842.23	1.77	-1.63	0.70
9,115.00	90.37	333.58	6,741.99	2,170.80	-1,967.00	2,905.57	0.93	0.58	0.73
9,178.00	91.01	333.23	6,741.23	2,227.13	-1,995.20	2,967.91	1.16	1.02	-0.56
9,242.00	92.12	332.74	6,739.48	2,284.12	-2,024.26	3,031.29	1.90	1.73	-0.77
9,305.00	91.65	333.14	6,737.41	2,340.19	-2,052.90	3,093.67	0.98	-0.75	0.63
9,368.00	91.21	332.98	6,735.84	2,396.34	-2,081.44	3,156.05	0.74	-0.70	-0.25
9,432.00	92.02	331.25	6,734.03	2,452.88	-2,111.36	3,219.54	2.98	1.27	-2.70
9,496.00	91.61	331.31	6,732.01	2,508.98	-2,142.10	3,283.14	0.65	-0.64	0.09
9,559.00	91.99	330.89	6,730.03	2,564.11	-2,172.53	3,345.77	0.90	0.60	-0.67
9,623.00	91.31	330.83	6,728.18	2,619.99	-2,203.68	3,409.43	1.07	-1.06	-0.09
9,685.00	91.18	330.91	6,726.84	2,674.13	-2,233.85	3,471.10	0.25	-0.21	0.13
9,749.00	90.81	330.79	6,725.73	2,730.02	-2,265.02	3,534.77	0.61	-0.58	-0.19
9,812.00	91.07	332.08	6,724.69	2,785.34	-2,295.14	3,597.38	2.09	0.41	2.05
9,876.00	92.45	333.20	6,722.73	2,842.15	-2,324.54	3,660.80	2.78	2.16	1.75
9,940.00	92.32	332.39	6,720.06	2,899.02	-2,353.77	3,724.17	1.28	-0.20	-1.27
10,004.00	91.95	332.93	6,717.68	2,955.83	-2,383.15	3,787.58	1.02	-0.58	0.84
10,067.00	91.82	331.87	6,715.61	3,011.63	-2,412.32	3,850.04	1.69	-0.21	-1.68
10,131.00	89.97	331.65	6,714.61	3,068.00	-2,442.59	3,913.60	2.91	-2.89	-0.34
10,194.00	89.43	331.80	6,714.94	3,123.49	-2,472.44	3,976.18	0.89	-0.86	0.24
10,258.00	89.77	331.43	6,715.38	3,179.79	-2,502.86	4,039.77	0.79	0.53	-0.58
10,321.00	90.57	331.03	6,715.20	3,235.01	-2,533.18	4,102.42	1.42	1.27	-0.63
10,385.00	91.81	331.08	6,713.87	3,291.01	-2,564.15	4,166.06	1.94	1.94	0.08
10,448.00	92.25	330.06	6,711.64	3,345.84	-2,595.09	4,228.74	1.76	0.70	-1.62
10,512.00	92.46	328.89	6,709.01	3,400.92	-2,627.56	4,292.50	1.86	0.33	-1.83
10,576.00	92.29	328.70	6,706.35	3,455.62	-2,660.69	4,356.31	0.40	-0.27	-0.30
10,639.00	91.81	330.08	6,704.10	3,509.80	-2,692.75	4,419.10	2.32	-0.76	2.19
10,702.00	91.51	330.04	6,702.27	3,564.37	-2,724.18	4,481.84	0.48	-0.48	-0.06
10,766.00	91.11	330.15	6,700.81	3,619.83	-2,756.08	4,545.58	0.65	-0.63	0.17
10,830.00	91.65	331.19	6,699.27	3,675.61	-2,787.42	4,609.26	1.83	0.84	1.63
10,894.00	90.57	332.45	6,698.03	3,732.02	-2,817.64	4,672.81	2.59	-1.69	1.97
10,957.00	90.34	333.21	6,697.53	3,788.06	-2,846.40	4,735.24	1.26	-0.37	1.21
11,020.00	91.11	332.35	6,696.73	3,844.08	-2,875.22	4,797.68	1.83	1.22	-1.37
11,084.00	90.74	332.06	6,695.70	3,900.69	-2,905.06	4,861.18	0.73	-0.58	-0.45

RECEIVED  
Office of Oil and Gas  
MAY 27 2015

103-02894



Scientific Drilling  
Survey Report



<b>Company:</b>	Stone Energy	<b>Local Co-ordinate Reference:</b>	Well 3H
<b>Project:</b>	Mary Prospect	<b>TVD Reference:</b>	GL 1341' & KB 18' @ 1359.00ft (Saxon 141)
<b>Site:</b>	ZMBG Pad	<b>MD Reference:</b>	GL 1341' & KB 18' @ 1359.00ft (Saxon 141)
<b>Well:</b>	3H	<b>North Reference:</b>	Grid
<b>Wellbore:</b>	OH	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	3H As Drilled	<b>Database:</b>	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)
11,148.00	91.65	332.28	6,694.37	3,957.27	-2,934.93	4,924.69	1.46	1.42	0.34
11,211.00	93.90	331.82	6,691.32	4,012.85	-2,964.42	4,987.15	3.65	3.57	-0.73
11,275.00	93.80	331.73	6,687.02	4,069.12	-2,994.62	5,050.58	0.21	-0.16	-0.14
11,339.00	92.05	331.45	6,683.75	4,125.33	-3,025.03	5,114.09	2.77	-2.73	-0.44
11,402.00	90.87	330.48	6,682.15	4,180.40	-3,055.60	5,176.74	2.42	-1.87	-1.54
11,465.00	91.11	330.56	6,681.06	4,235.23	-3,086.59	5,239.45	0.40	0.38	0.13
11,529.00	92.46	330.26	6,679.07	4,290.86	-3,118.18	5,303.15	2.16	2.11	-0.47
11,593.00	92.82	330.18	6,676.12	4,346.35	-3,149.93	5,366.83	0.58	0.56	-0.13
11,656.00	91.14	330.60	6,673.94	4,401.08	-3,181.04	5,429.52	2.75	-2.67	0.67
11,720.00	90.84	330.07	6,672.83	4,456.69	-3,212.71	5,493.25	0.95	-0.47	-0.83
11,783.00	90.91	329.86	6,671.87	4,511.22	-3,244.24	5,556.02	0.35	0.11	-0.33
11,846.00	90.91	329.28	6,670.87	4,565.54	-3,276.15	5,618.82	0.92	0.00	-0.92
11,909.00	91.88	328.78	6,669.34	4,619.54	-3,308.56	5,681.66	1.73	1.54	-0.79
11,973.00	91.85	328.76	6,667.26	4,674.23	-3,341.72	5,745.49	0.06	-0.05	-0.03
12,037.00	91.24	330.42	6,665.53	4,729.41	-3,374.10	5,809.27	2.76	-0.95	2.59
12,100.00	91.81	330.17	6,663.85	4,784.11	-3,405.31	5,872.00	0.99	0.90	-0.40
12,164.00	90.64	331.72	6,662.48	4,840.04	-3,436.38	5,935.65	3.03	-1.83	2.42
12,227.00	91.41	334.04	6,661.36	4,896.10	-3,465.10	5,998.06	3.88	1.22	3.68
12,291.00	93.13	334.10	6,658.82	4,953.61	-3,493.06	6,061.23	2.69	2.69	0.09
12,355.00	94.00	334.43	6,654.84	5,011.15	-3,520.79	6,124.30	1.45	1.36	0.52
12,417.00	92.66	335.37	6,651.24	5,067.20	-3,547.05	6,185.29	2.64	-2.16	1.52
12,481.00	91.01	334.91	6,649.19	5,125.24	-3,573.94	6,248.29	2.68	-2.58	-0.72
12,545.00	91.01	334.31	6,648.06	5,183.04	-3,601.38	6,311.40	0.94	0.00	-0.94
12,608.00	92.18	333.58	6,646.31	5,239.62	-3,629.04	6,373.63	2.19	1.86	-1.16
12,671.00	92.76	333.42	6,643.60	5,295.95	-3,657.12	6,435.90	0.95	0.92	-0.25
12,735.00	92.59	333.80	6,640.61	5,353.21	-3,685.54	6,499.14	0.65	-0.27	0.59
12,750.00	92.92	333.76	6,639.89	5,366.66	-3,692.16	6,513.95	2.22	2.20	-0.27
<b>Last SDI MWD Survey</b>									
12,807.00	92.92	333.76	6,636.98	5,417.72	-3,717.32	6,570.23	0.00	0.00	0.00
<b>Projection to Bit</b>									

Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates		Comment
		+N/-S (ft)	+E/-W (ft)	
107.00	107.00	0.01	-0.15	First Vaughn Gyro Survey
2,562.00	2,561.98	6.36	4.07	Last Vaughn Gyro Survey
2,637.00	2,636.97	6.90	4.38	First SDI MWD Survey
12,750.00	6,639.89	5,366.66	-3,692.16	Last SDI MWD Survey
12,807.00	6,636.98	5,417.72	-3,717.32	Projection to Bit

RECEIVED  
Office of Oil and Gas  
AUG 27 2015