

# Stone Energy

Mary Prospect

Blake Pad

5H

OH

Design: As Drilled

## Standard Survey Report

02 April, 2014



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

06/02/2017



Project: Mary Prospect  
 Site: Blake Pad  
 Well: 5H  
 Wellbore: OH  
 Design: As Drilled



WELL DETAILS: 5H

REFERENCE INFORMATION

PROJECT DETAILS: Mary Prospect

+N/-S	+E/-W	Northing	Ground Level: Easting	Latitude	Longitude
0.00	0.00	420326.00	1293.00 1634356.00	39° 38' 48.416 N	80° 47' 54.724 W

Co-ordinate (N/E) Reference: Well 5H, Grid North  
 Vertical (TVD) Reference: GL 1293' & KB 10' @ 1303.00R (Highlands 2)  
 Section (VS) Reference: Slot - (0.00N, 0.00E)  
 Measured Depth Reference: GL 1293' & KB 10' @ 1303.00R (Highlands 2)  
 Calculation Method: Minimum Curvature

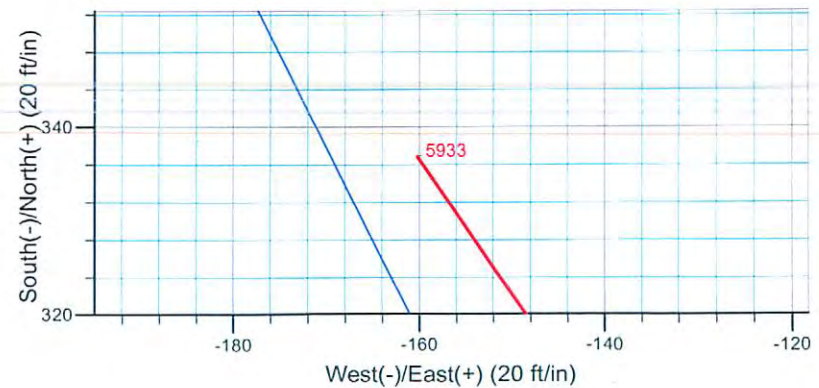
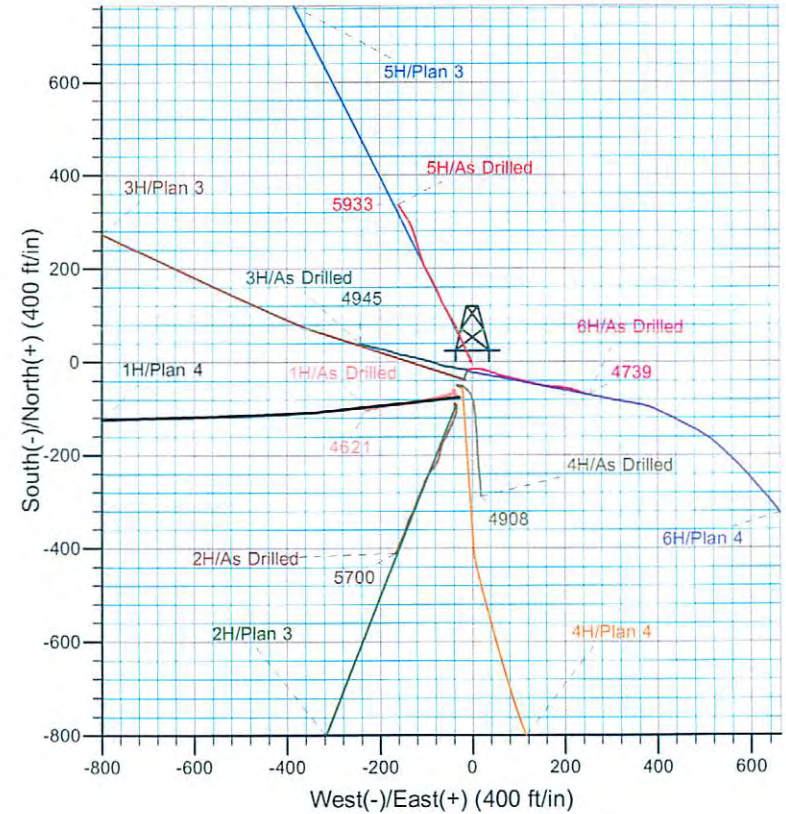
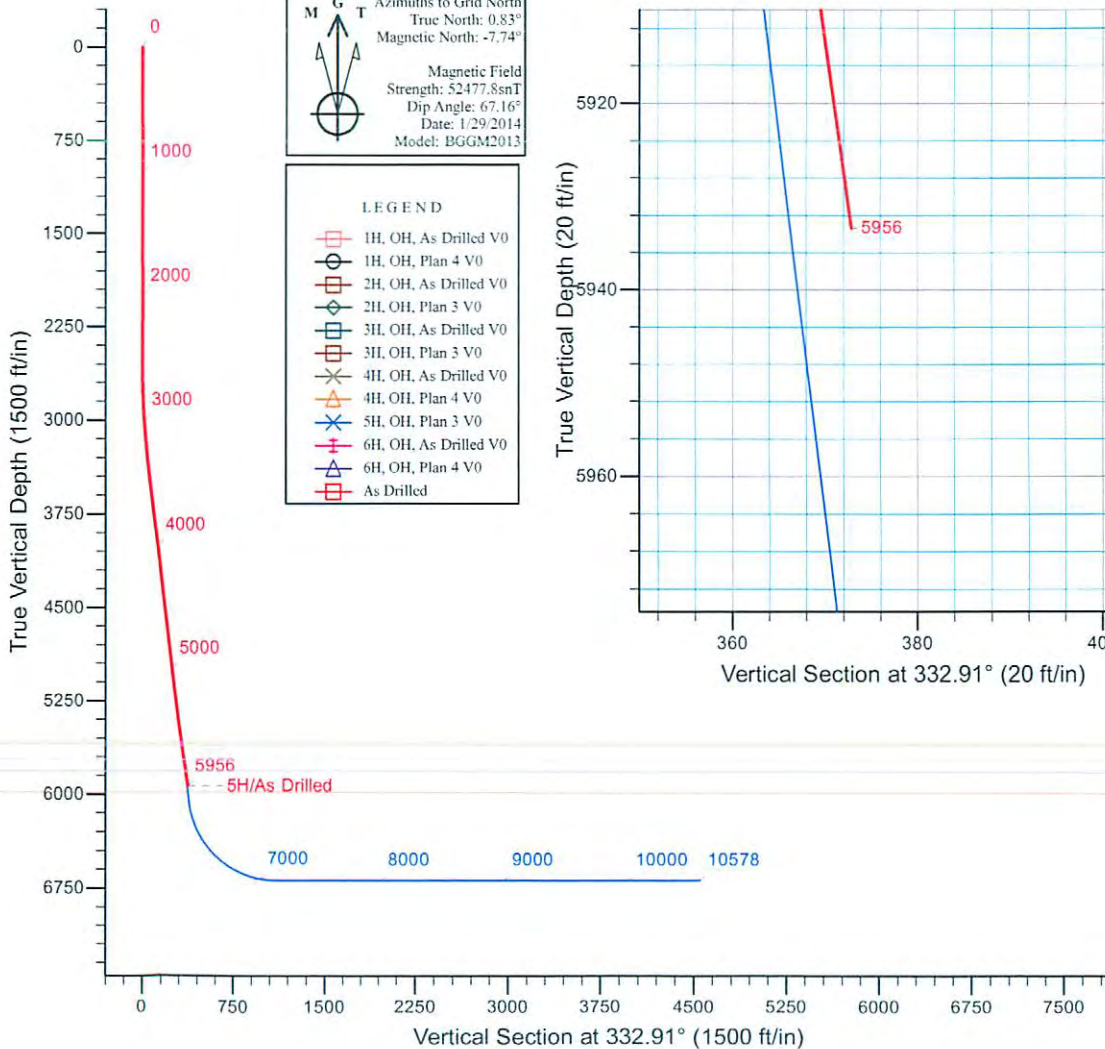
Geodetic System: US State Plane 1927 (Exact solution)  
 Datum: NAD 1927 (NADCON CONUS)  
 Ellipsoid: Clarke 1866  
 Zone: West Virginia North 4701  
 System Datum: Mean Sea Level

SECTION DETAILS										
Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	IFace	VSec	Target
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
2	2600.01	0.00	0.00	2600.01	0.00	0.00	0.00	0.00	0.00	
3	3300.01	7.00	333.29	3298.27	38.15	-19.20	1.00	333.29	42.71	
4	6081.51	7.00	333.29	6059.04	340.96	-171.56	0.00	0.00	381.68	
5	6081.57	7.00	333.29	6059.10	340.97	-171.56	0.00	0.00	381.69	
6	7119.07	90.00	333.29	6688.01	975.97	-491.08	8.00	0.00	1092.53	B5H_LP3
7	10578.09	90.00	332.28	6688.01	4052.01	-2073.00	0.03	-90.00	4551.50	B5H_PBHL

Azimuths to Grid North  
 True North: 0.83°  
 Magnetic North: -7.74°  
 Magnetic Field  
 Strength: 52477.8snT  
 Dip Angle: 67.16°  
 Date: 1/29/2014  
 Model: BGGM2013

LEGEND

- 1H, OH, As Drilled V0
- 1H, OH, Plan 4 V0
- 2H, OH, As Drilled V0
- 2H, OH, Plan 3 V0
- 3H, OH, As Drilled V0
- 3H, OH, Plan 3 V0
- 4H, OH, As Drilled V0
- 4H, OH, Plan 4 V0
- 5H, OH, Plan 3 V0
- 6H, OH, As Drilled V0
- 6H, OH, Plan 4 V0
- As Drilled



# Scientific Drilling International

## Survey Report

<b>Company:</b> Stone Energy	<b>Local Co-ordinate Reference:</b> Well 5H
<b>Project:</b> Mary Prospect	<b>TVD Reference:</b> GL 1293' & KB 10' @ 1303.00ft (Highlands 2)
<b>Site:</b> Blake Pad	<b>MD Reference:</b> GL 1293' & KB 10' @ 1303.00ft (Highlands 2)
<b>Well:</b> 5H	<b>North Reference:</b> Grid
<b>Wellbore:</b> OH	<b>Survey Calculation Method:</b> Minimum Curvature
<b>Design:</b> 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> Blake Pad					
<b>Site Position:</b>	<b>Northing:</b> 420,250.00 usft	<b>Latitude:</b> 39° 38' 47.661 N			
<b>From:</b> Map	<b>Easting:</b> 1,634,328.00 usft	<b>Longitude:</b> 80° 47' 55.068 W			
<b>Position Uncertainty:</b> 0.00 ft	<b>Slot Radius:</b> 13-3/16 "	<b>Grid Convergence:</b> -0.83 °			

<b>Well</b> 5H					
<b>Well Position</b>	<b>+N/-S</b> 0.00 ft	<b>Northing:</b> 420,326.00 usft	<b>Latitude:</b> 39° 38' 48.416 N		
	<b>+E/-W</b> 0.00 ft	<b>Easting:</b> 1,634,356.00 usft	<b>Longitude:</b> 80° 47' 54.724 W		
<b>Position Uncertainty</b>	0.00 ft	<b>Wellhead Elevation:</b> 0.00 ft	<b>Ground Level:</b> 1,293.00 ft		

<b>Wellbore</b> OH					
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	BGGM2013	11/14/2013	-8.56	67.18	52,505
	BGGM2013	1/29/2014	-8.57	67.16	52,478

<b>Design</b> As Drilled					
<b>Audit Notes:</b>					
<b>Version:</b> 1.0	<b>Phase:</b> ACTUAL	<b>Tie On Depth:</b> 0.00			
Vertical Section:	Depth From (TVD) (ft)	+N/-S (ft)	+E/-W (ft)	Direction (°)	
	0.00	0.00	0.00		332.91

<b>Survey Program</b>		<b>Date</b> 4/2/2014		
From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description
100.00	2,480.00	Survey #1 - Vaughn Gyro (OH)	NS-GYRO-MS	North sensing gyrocompassing m/s
2,617.01	5,956.00	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	
100.00	0.50	277.80	100.00	0.06	-0.43	0.25	0.50	0.50	0.00	
<b>First Vaughn Gyro Survey</b>										
200.00	0.46	281.97	200.00	0.20	-1.26	0.75	0.05	-0.04	4.17	
300.00	0.30	304.31	299.99	0.43	-1.87	1.24	0.22	-0.16	22.34	
400.00	0.31	307.13	399.99	0.74	-2.30	1.71	0.02	0.01	2.82	
500.00	0.15	295.60	499.99	0.96	-2.63	2.06	0.17	-0.16	-11.53	
600.00	0.17	278.38	599.99	1.04	-2.90	2.25	0.05	0.02	-17.22	

# Scientific Drilling International

## Survey Report

<b>Company:</b>	Stone Energy	<b>Local Co-ordinate Reference:</b>	Well 5H
<b>Project:</b>	Mary Prospect	<b>TVD Reference:</b>	GL 1293' & KB 10' @ 1303.00ft (Highlands 2)
<b>Site:</b>	Blake Pad	<b>MD Reference:</b>	GL 1293' & KB 10' @ 1303.00ft (Highlands 2)
<b>Well:</b>	5H	<b>North Reference:</b>	Grid
<b>Wellbore:</b>	OH	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	As Drilled	<b>Database:</b>	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)	
700.00	0.14	257.97	699.99	1.04	-3.16	2.36	0.06	-0.03	-20.41	
800.00	0.17	264.90	799.99	1.00	-3.43	2.45	0.04	0.03	6.93	
900.00	0.18	256.22	899.99	0.95	-3.73	2.54	0.03	0.01	-8.68	
1,000.00	0.19	291.95	999.99	0.97	-4.04	2.70	0.11	0.01	35.73	
1,100.00	0.08	293.92	1,099.99	1.06	-4.25	2.88	0.11	-0.11	1.97	
1,200.00	0.10	301.31	1,199.99	1.14	-4.39	3.01	0.02	0.02	7.39	
1,300.00	0.13	314.56	1,299.99	1.26	-4.55	3.19	0.04	0.03	13.25	
1,400.00	0.20	351.77	1,399.99	1.51	-4.65	3.47	0.12	0.07	37.21	
1,500.00	0.23	344.53	1,499.99	1.88	-4.73	3.83	0.04	0.03	-7.24	
1,600.00	0.11	333.27	1,599.99	2.16	-4.83	4.12	0.12	-0.12	-11.26	
1,700.00	0.30	339.37	1,699.99	2.49	-4.96	4.48	0.19	0.19	6.10	
1,800.00	0.24	25.00	1,799.98	2.93	-4.97	4.87	0.22	-0.06	45.63	
1,900.00	0.10	29.87	1,899.98	3.19	-4.84	5.04	0.14	-0.14	4.87	
2,000.00	0.19	79.12	1,999.98	3.30	-4.63	5.04	0.15	0.09	49.25	
2,100.00	0.04	96.01	2,099.98	3.33	-4.43	4.98	0.15	-0.15	16.89	
2,200.00	0.18	103.70	2,199.98	3.28	-4.25	4.86	0.14	0.14	7.69	
2,300.00	0.44	127.87	2,299.98	3.01	-3.79	4.41	0.29	0.26	24.17	
2,400.00	0.46	135.02	2,399.98	2.49	-3.20	3.68	0.06	0.02	7.15	
2,480.00	0.14	143.86	2,479.98	2.19	-2.92	3.27	0.40	-0.40	11.05	
<b>Last Vaughn Gyro Survey</b>										
2,617.01	0.35	94.79	2,616.99	2.02	-2.40	2.89	0.20	0.15	-35.81	
<b>First SDI MWD Survey</b>										
2,712.01	1.54	338.69	2,711.97	3.18	-2.58	4.01	1.81	1.25	-122.22	
2,806.01	2.69	334.30	2,805.91	6.35	-3.99	7.47	1.23	1.22	-4.67	
2,901.01	2.98	330.03	2,900.79	10.49	-6.19	12.16	0.38	0.31	-4.49	
2,995.01	3.82	333.14	2,994.62	15.40	-8.83	17.73	0.91	0.89	3.31	
3,089.01	4.23	336.37	3,088.39	21.37	-11.63	24.33	0.50	0.44	3.44	
3,183.01	4.07	333.65	3,182.15	27.54	-14.50	31.12	0.27	-0.17	-2.89	
3,277.01	4.88	335.62	3,275.86	34.17	-17.63	38.45	0.88	0.86	2.10	
3,371.01	6.21	337.18	3,369.42	42.50	-21.26	47.52	1.42	1.41	1.66	
3,465.01	7.35	339.68	3,462.76	52.82	-25.32	58.56	1.25	1.21	2.66	
3,560.01	7.63	337.49	3,556.95	64.35	-29.84	70.88	0.42	0.29	-2.31	
3,654.01	7.52	333.48	3,650.13	75.62	-34.98	83.25	0.57	-0.12	-4.27	
3,750.01	7.53	329.53	3,745.30	86.66	-40.97	95.81	0.54	0.01	-4.11	
3,844.01	7.61	327.48	3,838.48	97.22	-47.44	108.15	0.30	0.09	-2.18	
3,939.01	6.57	330.42	3,932.76	107.25	-53.51	119.85	1.16	-1.09	3.09	
4,033.01	6.02	328.44	4,026.19	116.12	-58.74	130.13	0.63	-0.59	-2.11	
4,127.01	5.82	332.34	4,119.69	124.54	-63.53	139.81	0.48	-0.21	4.15	
4,221.01	6.76	337.61	4,213.12	133.88	-67.85	150.09	1.17	1.00	5.61	
4,316.00	6.78	338.07	4,307.45	144.25	-72.08	161.25	0.06	0.02	0.48	
4,410.00	7.32	335.40	4,400.74	154.84	-76.64	172.76	0.67	0.57	-2.84	
4,504.00	7.23	334.35	4,493.98	165.62	-81.69	184.65	0.17	-0.10	-1.12	
4,598.00	7.00	333.05	4,587.26	176.06	-86.85	196.30	0.30	-0.24	-1.38	
4,693.00	6.78	329.32	4,681.58	186.04	-92.34	207.68	0.52	-0.23	-3.93	

## Scientific Drilling International Survey Report

<b>Company:</b>	Stone Energy	<b>Local Co-ordinate Reference:</b>	Well 5H
<b>Project:</b>	Mary Prospect	<b>TVD Reference:</b>	GL 1293' & KB 10' @ 1303.00ft (Highlands 2)
<b>Site:</b>	Blake Pad	<b>MD Reference:</b>	GL 1293' & KB 10' @ 1303.00ft (Highlands 2)
<b>Well:</b>	5H	<b>North Reference:</b>	Grid
<b>Wellbore:</b>	OH	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	As Drilled	<b>Database:</b>	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)	
4,787.00	6.51	327.54	4,774.94	195.31	-98.03	218.52	0.36	-0.29	-1.89	
4,881.00	6.47	336.92	4,868.34	204.68	-102.96	229.11	1.13	-0.04	9.98	
4,975.00	7.26	341.83	4,961.67	215.20	-106.89	240.26	1.05	0.84	5.22	
5,070.00	7.16	342.64	5,055.92	226.55	-110.53	252.03	0.15	-0.11	0.85	
5,164.00	6.94	343.64	5,149.21	237.59	-113.88	263.38	0.27	-0.23	1.06	
5,259.00	7.42	342.84	5,243.46	248.96	-117.30	275.06	0.52	0.51	-0.84	
5,353.00	7.37	343.94	5,336.68	260.55	-120.76	286.96	0.16	-0.05	1.17	
5,447.00	8.10	340.56	5,429.83	272.59	-124.63	299.44	0.91	0.78	-3.60	
5,541.00	8.16	339.42	5,522.88	285.08	-129.18	312.63	0.18	0.06	-1.21	
5,635.00	8.55	332.47	5,615.89	297.52	-134.76	326.25	1.15	0.41	-7.39	
5,729.00	8.49	327.80	5,708.85	309.59	-141.69	340.15	0.74	-0.06	-4.97	
5,823.00	8.37	325.63	5,801.83	321.11	-149.25	353.85	0.36	-0.13	-2.31	
5,886.00	8.27	325.11	5,864.17	328.61	-154.43	362.88	0.20	-0.16	-0.83	
<b>Last SDI MWD Survey</b>										
5,956.00	8.27	325.11	5,933.44	336.87	-160.19	372.86	0.00	0.00	0.00	
<b>Projection To Bit</b>										

Design Annotations					
Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates		Comment	
		+N/-S (ft)	+E/-W (ft)		
100.00	100.00	0.06	-0.43	First Vaughn Gyro Survey	
2,480.00	2,479.98	2.19	-2.92	Last Vaughn Gyro Survey	
2,617.01	2,616.99	2.02	-2.40	First SDI MWD Survey	
5,886.00	5,864.17	328.61	-154.43	Last SDI MWD Survey	
5,956.00	5,933.44	336.87	-160.19	Projection To Bit	

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