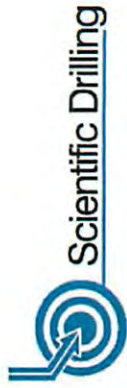




Project: Mary Prospect
 Site: Howell Pad
 Well: Howell 9H
 Wellbore: OH
 Design: As Drilled



WELL DETAILS: Howell 9H

PROJECT DETAILS: Mary Prospect

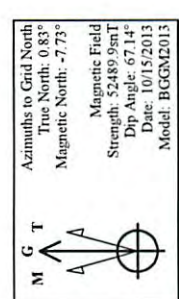
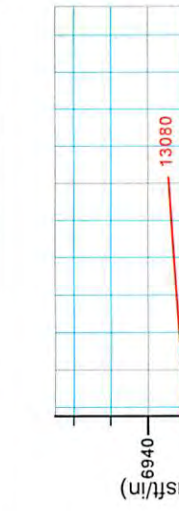
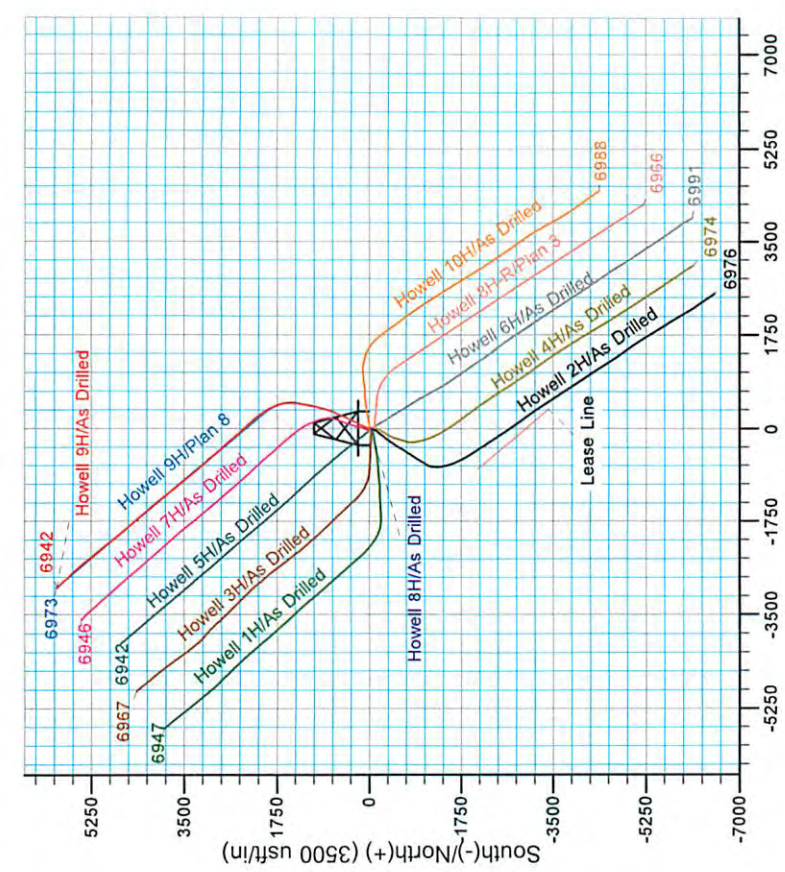
REFERENCE INFORMATION

Geographic 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

Co-ordinate (N/E) Reference: Well Howell 9H, Grid North
 Vertical (TVD) Reference: GL 1302 & KB 18' @ 1320 usft (Saxon 141)
 Section (VS) Reference: Slot - (0.0N, 0.0E)
 Measured Depth Reference: GL 1302 & KB 18' @ 1320 usft (Saxon 141)
 Calculation Method: Minimum Curvature

Ground Level: 1302.0
 Easting: 1635249.12
 Northing: 401764.78
 Longitude: 80° 47' 39.888 W
 Latitude: 39° 35' 45.108 N

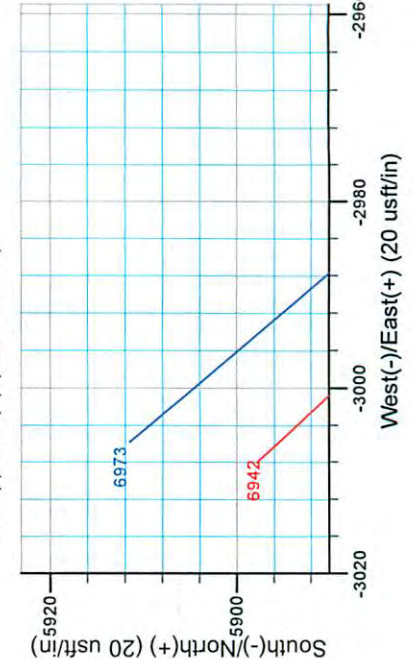
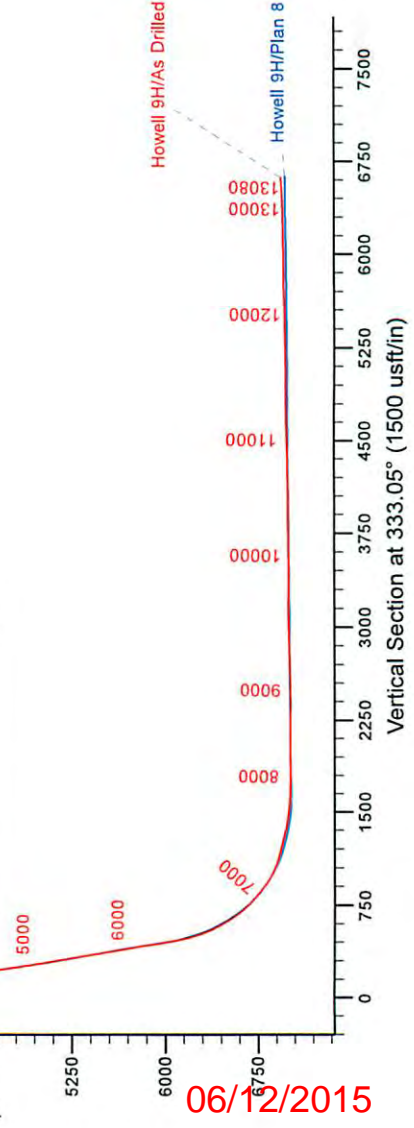
Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSett	Target
1	5750.3	15.20	25.14	5675.0	578.3	263.8	0.00	0.00	395.9	
2	6108.0	15.20	25.14	6020.1	663.2	303.7	0.00	0.00	453.5	
3	7252.3	65.53	11.03	6865.5	1356.3	478.6	4.44	-16.63	992.0	Howell 9H_LP.5
4	7944.9	90.50	319.92	7018.0	1980.0	302.0	8.00	-70.99	1628.1	Howell 9H_PPHL.4
5	13083.0	90.50	319.92	6973.0	5911.5	-3005.8	0.00	0.00	6631.8	



LEGEND

- Howell 10H, OH, As Drilled V0
- Howell 1H, OH, As Drilled V0
- Howell 2H, OH, As Drilled V0
- Howell 3H, OH, As Drilled V0
- Howell 4H, OH, As Drilled V0
- Howell 5H, OH, As Drilled V0
- Howell 6H, OH, As Drilled V0
- Howell 7H, OH, As Drilled V0
- Howell 8H, OH, As Drilled V0
- Howell 8H-R, OH, Plan 3 V0
- Howell 9H, OH, Plan 8 V0
- As Drilled

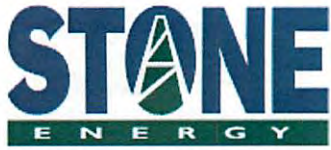
Vertical Section at 333.05° (20 usft/in)



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Stone Energy

Mary Prospect
Howell Pad
Howell 9H

OH

Design: As Drilled

Standard Survey Report

16 November, 2013



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Environmental Protection

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Company:	Stone Energy	Local Co-ordinate Reference:	Well Howell 9H
Project:	Mary Prospect	TVD Reference:	GL 1302' & KB 18' @ 1320.0usft (Saxon 141)
Site:	Howell Pad	MD Reference:	GL 1302' & KB 18' @ 1320.0usft (Saxon 141)
Well:	Howell 9H	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	As Drilled	Database:	Northeast District

Project	Mary Prospect, 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	Howell Pad				
Site Position:		Northing:	401,702.68 usft	Latitude:	39° 35' 44.492 N
From:	Map	Easting:	1,635,235.83 usft	Longitude:	80° 47' 40.046 W
Position Uncertainty:	0.0 usft	Slot Radius:	13-3/16 "	Grid Convergence:	-0.83 °

Well	Howell 9H					
Well Position	+N/-S	0.0 usft	Northing:	401,764.78 usft	Latitude:	39° 35' 45.108 N
	+E/-W	0.0 usft	Easting:	1,635,249.12 usft	Longitude:	80° 47' 39.888 W
Position Uncertainty		0.0 usft	Wellhead Elevation:	usft	Ground Level:	1,302.0 usft

Wellbore	OH				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	12/20/2012	-8.48	67.19	52,632
	IGRF2010	7/29/2013	-8.50	67.14	52,558
	BGGM2013	10/15/2013	-8.55	67.14	52,490

Design	As Drilled				
Audit Notes:					
Version:	1.0	Phase:	ACTUAL	Tie On Depth:	0.0
Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (°)	
	0.0	0.0	0.0		333.05

Survey Program	Date	11/16/2013			
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description	
100.0	5,750.3	Survey 1 - Gyro (OH)	SDI Standard Keeper 103	SDI Standard Wireline Keeper ver 1.0.3	
5,782.0	13,080.0	Survey 2 - MWD (OH)	MWD SDI	MWD - Standard ver 1.0.1	

Survey										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	
0.0	0.00	0.00	0.0	0.0	0.0	0.0	0.00	0.00	0.00	
100.0	0.36	333.14	100.0	0.3	-0.1	0.3	0.36	0.36	0.00	
First SDI Gyro Survey										
200.0	0.21	318.81	200.0	0.7	-0.4	0.8	0.16	-0.15	-14.33	
300.0	0.22	324.23	300.0	1.0	-0.6	1.2	0.02	0.01	5.42	
400.0	0.18	323.49	400.0	1.3	-0.8	1.5	0.04	-0.04	-0.74	
500.0	0.11	344.85	500.0	1.5	-1.0	1.8	0.09	-0.07	21.36	



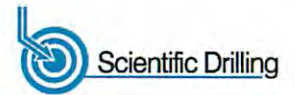
Company:	Stone Energy	Local Co-ordinate Reference:	Well Howell 9H
Project:	Mary Prospect	TVD Reference:	GL 1302' & KB 18' @ 1320.0usft (Saxon 141)
Site:	Howell Pad	MD Reference:	GL 1302' & KB 18' @ 1320.0usft (Saxon 141)
Well:	Howell 9H	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	As Drilled	Database:	Northeast District

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
600.0	0.06	343.34	600.0	1.6	-1.0	1.9	0.05	-0.05	-1.51
700.0	0.03	59.81	700.0	1.7	-1.0	2.0	0.06	-0.03	76.47
800.0	0.09	193.59	800.0	1.6	-1.0	1.9	0.11	0.06	133.78
900.0	0.06	242.63	900.0	1.5	-1.1	1.8	0.07	-0.03	49.04
1,000.0	0.10	165.02	1,000.0	1.4	-1.1	1.8	0.11	0.04	-77.61
1,100.0	0.14	203.46	1,100.0	1.2	-1.1	1.6	0.09	0.04	38.44
1,200.0	0.23	197.99	1,200.0	0.9	-1.2	1.4	0.09	0.09	-5.47
1,300.0	0.18	187.48	1,300.0	0.6	-1.3	1.1	0.06	-0.05	-10.51
1,400.0	0.10	207.63	1,400.0	0.3	-1.4	0.9	0.09	-0.08	20.15
1,500.0	0.18	264.05	1,500.0	0.3	-1.6	0.9	0.15	0.08	56.42
1,600.0	0.32	257.93	1,600.0	0.2	-2.0	1.1	0.14	0.14	-6.12
1,700.0	0.36	220.38	1,700.0	-0.1	-2.5	1.0	0.22	0.04	-37.55
1,800.0	0.33	194.05	1,800.0	-0.6	-2.7	0.7	0.16	-0.03	-26.33
1,900.0	0.42	129.06	1,900.0	-1.1	-2.5	0.1	0.41	0.09	-64.99
2,000.0	0.38	123.13	2,000.0	-1.6	-2.0	-0.5	0.06	-0.04	-5.93
2,100.0	0.44	138.99	2,100.0	-2.0	-1.4	-1.2	0.13	0.06	15.86
2,200.0	0.42	153.93	2,200.0	-2.6	-1.0	-1.9	0.11	-0.02	14.94
2,300.0	0.42	134.22	2,300.0	-3.2	-0.6	-2.6	0.14	0.00	-19.71
2,400.0	0.39	134.32	2,400.0	-3.7	-0.1	-3.3	0.03	-0.03	0.10
2,500.0	0.29	124.88	2,500.0	-4.1	0.4	-3.8	0.11	-0.10	-9.44
2,600.0	0.67	68.45	2,600.0	-4.0	1.1	-4.1	0.56	0.38	-56.43
2,700.0	1.93	25.19	2,699.9	-2.3	2.4	-3.1	1.51	1.26	-43.26
2,800.0	3.39	19.18	2,799.8	2.0	4.1	0.0	1.48	1.46	-6.01
2,900.0	4.71	16.24	2,899.6	8.8	6.2	5.0	1.34	1.32	-2.94
3,000.0	5.25	15.25	2,999.2	17.1	8.5	11.4	0.55	0.54	-0.99
3,100.0	5.43	12.64	3,098.8	26.1	10.8	18.4	0.30	0.18	-2.61
3,200.0	6.04	15.53	3,198.3	35.8	13.2	25.9	0.67	0.61	2.89
3,300.0	7.24	19.60	3,297.6	46.8	16.7	34.2	1.29	1.20	4.07
3,400.0	8.61	21.57	3,396.6	59.7	21.6	43.4	1.40	1.37	1.97
3,500.0	9.80	24.92	3,495.3	74.4	27.9	53.7	1.30	1.19	3.35
3,600.0	11.21	27.36	3,593.7	90.8	36.0	64.6	1.48	1.41	2.44
3,700.0	12.65	26.37	3,691.5	109.2	45.3	76.8	1.45	1.44	-0.99
3,800.0	13.72	24.42	3,788.9	129.8	55.1	90.7	1.16	1.07	-1.95
3,900.0	14.56	24.64	3,885.8	152.0	65.2	106.0	0.84	0.84	0.22
4,000.0	15.18	24.30	3,982.5	175.4	75.9	122.0	0.63	0.62	-0.34
4,100.0	15.23	23.81	4,079.0	199.3	86.6	138.5	0.14	0.05	-0.49
4,200.0	14.94	22.92	4,175.5	223.2	96.9	155.1	0.37	-0.29	-0.89
4,300.0	14.26	25.01	4,272.3	246.3	107.1	171.0	0.86	-0.68	2.09
4,400.0	13.71	25.02	4,369.3	268.2	117.3	185.9	0.55	-0.55	0.01
4,500.0	13.13	22.59	4,466.6	289.4	126.7	200.5	0.81	-0.58	-2.43
4,600.0	12.41	22.11	4,564.1	309.8	135.1	214.9	0.73	-0.72	-0.48
4,700.0	12.47	23.93	4,661.8	329.7	143.5	228.8	0.40	0.06	1.82
4,800.0	13.70	27.39	4,759.2	350.0	153.4	242.5	1.46	1.23	3.46
4,900.0	15.02	28.81	4,856.1	371.9	165.1	256.7	1.37	1.32	1.42

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Survey Report



Company:	Stone Energy	Local Co-ordinate Reference:	Well Howell 9H
Project:	Mary Prospect	TVD Reference:	GL 1302' & KB 18' @ 1320.0usft (Saxon 141)
Site:	Howell Pad	MD Reference:	GL 1302' & KB 18' @ 1320.0usft (Saxon 141)
Well:	Howell 9H	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	As Drilled	Database:	Northeast District

Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
5,000.0	15.03	29.44	4,952.7	394.6	177.7	271.2	0.16	0.01	0.63
5,100.0	15.98	28.55	5,049.0	417.9	190.6	286.1	0.98	0.95	-0.89
5,200.0	16.41	26.94	5,145.0	442.6	203.6	302.3	0.62	0.43	-1.61
5,300.0	16.01	24.98	5,241.1	467.7	215.8	319.1	0.68	-0.40	-1.96
5,400.0	15.71	22.57	5,337.3	492.7	226.8	336.4	0.72	-0.30	-2.41
5,500.0	15.50	21.38	5,433.6	517.7	236.9	354.1	0.38	-0.21	-1.19
5,600.0	15.31	24.26	5,530.0	542.1	247.2	371.2	0.79	-0.19	2.88
5,700.0	15.42	24.85	5,626.4	566.2	258.2	387.7	0.19	0.11	0.59
5,750.3	15.20	25.14	5,674.9	578.3	263.8	395.9	0.46	-0.44	0.58
Last SDI Gyro Survey									
5,782.0	15.41	23.28	5,705.5	585.9	267.3	401.1	1.68	0.66	-5.87
First SDI MWD Survey									
5,802.0	15.38	24.62	5,724.8	590.8	269.4	404.5	1.79	-0.15	6.70
5,864.0	14.83	23.97	5,784.6	605.5	276.1	414.6	0.93	-0.89	-1.05
5,928.0	14.37	23.65	5,846.6	620.2	282.6	424.8	0.73	-0.72	-0.50
5,991.0	15.04	25.61	5,907.5	634.8	289.2	434.7	1.32	1.06	3.11
6,054.0	13.76	25.23	5,968.5	648.9	296.0	444.3	2.04	-2.03	-0.60
6,086.0	13.25	25.08	5,999.6	655.7	299.2	448.9	1.60	-1.59	-0.47
6,118.0	13.99	24.88	6,030.7	662.5	302.3	453.5	2.32	2.31	-0.63
6,150.0	15.81	24.30	6,061.7	670.0	305.8	458.7	5.71	5.69	-1.81
6,181.0	17.21	23.72	6,091.4	678.1	309.3	464.2	4.55	4.52	-1.87
6,213.0	18.70	22.32	6,121.8	687.1	313.2	470.6	4.85	4.66	-4.38
6,246.0	20.01	21.28	6,153.0	697.3	317.3	477.8	4.10	3.97	-3.15
6,277.0	21.12	22.47	6,182.0	707.4	321.3	484.9	3.83	3.58	3.84
6,309.0	22.83	20.97	6,211.7	718.5	325.7	492.8	5.62	5.34	-4.69
6,341.0	24.29	20.81	6,241.0	730.5	330.3	501.4	4.57	4.56	-0.50
6,373.0	25.91	20.63	6,270.0	743.2	335.1	510.6	5.07	5.06	-0.56
6,405.0	27.01	19.38	6,298.6	756.6	340.0	520.3	3.85	3.44	-3.91
6,437.0	28.62	17.52	6,326.9	770.7	344.7	530.8	5.72	5.03	-5.81
6,468.0	31.15	16.23	6,353.8	785.5	349.2	541.9	8.42	8.16	-4.16
6,500.0	33.07	15.72	6,380.9	801.9	353.8	554.4	6.06	6.00	-1.59
6,532.0	34.52	16.08	6,407.5	819.0	358.7	567.4	4.57	4.53	1.13
6,564.0	35.58	16.11	6,433.7	836.6	363.8	580.9	3.31	3.31	0.09
6,594.0	36.90	15.40	6,457.9	853.7	368.6	593.9	4.62	4.40	-2.37
6,624.0	38.93	15.44	6,481.5	871.5	373.5	607.5	6.77	6.77	0.13
6,654.0	40.38	15.08	6,504.6	889.9	378.6	621.7	4.89	4.83	-1.20
6,683.0	41.42	15.22	6,526.6	908.3	383.5	635.8	3.60	3.59	0.48
6,714.0	42.00	14.64	6,549.7	928.2	388.8	651.1	2.25	1.87	-1.87
6,745.0	43.30	14.50	6,572.5	948.5	394.1	666.9	4.20	4.19	-0.45
6,775.0	44.73	13.88	6,594.1	968.7	399.2	682.6	4.98	4.77	-2.07
6,804.0	47.32	13.91	6,614.2	989.0	404.3	698.4	8.93	8.93	0.10
6,835.0	48.64	13.35	6,635.0	1,011.4	409.7	715.8	4.46	4.26	-1.81
6,865.0	49.66	13.42	6,654.6	1,033.5	414.9	734.2	3.40	3.40	0.23

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Company:	Stone Energy	Local Co-ordinate Reference:	Well Howell 9H
Project:	Mary Prospect	TVD Reference:	GL 1302' & KB 18' @ 1320.0usft (Saxon 141)
Site:	Howell Pad	MD Reference:	GL 1302' & KB 18' @ 1320.0usft (Saxon 141)
Well:	Howell 9H	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	As Drilled	Database:	Northeast District

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
6,896.0	50.78	12.71	6,674.4	1,056.7	420.3	751.4	4.02	3.61	-2.29
6,926.0	52.62	11.74	6,693.0	1,079.7	425.3	769.6	6.64	6.13	-3.23
6,957.0	54.09	10.82	6,711.5	1,104.1	430.2	789.2	5.31	4.74	-2.97
6,987.0	54.55	10.28	6,729.0	1,128.0	434.6	808.5	2.12	1.53	-1.80
7,017.0	55.08	10.26	6,746.3	1,152.1	439.0	828.0	1.77	1.77	-0.07
7,048.0	56.61	10.47	6,763.7	1,177.4	443.6	848.4	4.97	4.94	0.68
7,078.0	57.84	11.24	6,780.0	1,202.2	448.4	868.4	4.63	4.10	2.57
7,108.0	59.29	11.33	6,795.6	1,227.3	453.4	888.5	4.84	4.83	0.30
7,138.0	60.37	11.64	6,810.7	1,252.7	458.5	908.8	3.71	3.60	1.03
7,168.0	61.65	11.53	6,825.2	1,278.4	463.8	929.3	4.28	4.27	-0.37
7,198.0	62.88	10.43	6,839.2	1,304.4	468.9	950.3	5.23	4.10	-3.67
7,229.0	64.27	8.93	6,853.0	1,331.8	473.5	972.5	6.24	4.48	-4.84
7,259.0	65.81	6.94	6,865.6	1,358.7	477.3	994.9	7.91	5.13	-6.63
7,290.0	66.87	5.95	6,878.1	1,387.0	480.5	1,018.6	4.50	3.42	-3.19
7,320.0	68.54	4.26	6,889.5	1,414.6	482.9	1,042.1	7.63	5.57	-5.63
7,350.0	70.92	2.77	6,899.9	1,442.7	484.7	1,066.3	9.20	7.93	-4.97
7,381.0	72.51	1.80	6,909.6	1,472.1	485.8	1,092.0	5.93	5.13	-3.13
7,411.0	73.76	359.99	6,918.3	1,500.8	486.3	1,117.4	7.12	4.17	-6.03
7,441.0	74.29	358.32	6,926.5	1,529.6	485.8	1,143.3	5.64	1.77	-5.57
7,471.0	75.56	355.11	6,934.3	1,558.6	484.2	1,169.8	11.17	4.23	-10.70
7,502.0	76.04	352.52	6,941.9	1,588.4	480.9	1,197.9	8.25	1.55	-8.35
7,533.0	76.49	350.47	6,949.3	1,618.2	476.5	1,226.5	6.59	1.45	-6.61
7,563.0	77.05	348.81	6,956.2	1,646.9	471.2	1,254.5	5.70	1.87	-5.53
7,593.0	76.65	345.67	6,963.0	1,675.4	464.8	1,282.8	10.28	-1.33	-10.47
7,625.0	76.16	342.86	6,970.5	1,705.4	456.4	1,313.3	8.67	-1.53	-8.78
7,657.0	76.60	339.58	6,978.1	1,734.8	446.3	1,344.1	10.06	1.38	-10.25
7,689.0	78.79	337.24	6,984.9	1,763.9	434.8	1,375.2	9.89	6.84	-7.31
7,721.0	81.69	334.67	6,990.3	1,792.7	422.0	1,406.7	12.03	9.06	-8.03
7,752.0	83.11	333.50	6,994.4	1,820.3	408.6	1,437.4	5.91	4.58	-3.77
7,784.0	83.42	333.19	6,998.2	1,848.7	394.3	1,469.2	1.37	0.97	-0.97
7,816.0	83.74	332.50	7,001.7	1,877.0	379.8	1,501.0	2.36	1.00	-2.16
7,848.0	84.56	330.22	7,005.0	1,904.9	364.5	1,532.8	7.54	2.56	-7.13
7,880.0	85.56	328.64	7,007.8	1,932.4	348.3	1,564.6	5.83	3.13	-4.94
7,911.0	85.90	328.28	7,010.1	1,958.7	332.1	1,595.4	1.60	1.10	-1.16
7,943.0	86.24	328.36	7,012.3	1,985.9	315.4	1,627.3	1.09	1.06	0.25
7,975.0	86.64	328.28	7,014.2	2,013.1	298.6	1,659.1	1.27	1.25	-0.25
8,038.0	88.96	323.94	7,016.7	2,065.3	263.5	1,721.6	7.81	3.68	-6.89
8,102.0	90.13	320.49	7,017.2	2,115.9	224.3	1,784.4	5.69	1.83	-5.39
8,166.0	90.50	318.89	7,016.8	2,164.7	182.9	1,846.7	2.57	0.58	-2.50
8,229.0	90.23	318.82	7,016.4	2,212.1	141.5	1,907.8	0.44	-0.43	-0.11
8,292.0	89.76	319.40	7,016.4	2,259.7	100.2	1,968.9	1.18	-0.75	0.92
8,355.0	90.57	319.18	7,016.2	2,307.5	59.1	2,030.1	1.33	1.29	-0.35
8,419.0	90.44	318.37	7,015.7	2,355.6	17.0	2,092.1	1.28	-0.20	-1.27
8,483.0	90.37	318.47	7,015.2	2,403.5	-25.5	2,154.0	0.18	0.18	0.16

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Company:	Stone Energy	Local Co-ordinate Reference:	Well Howell 9H
Project:	Mary Prospect	TVD Reference:	GL 1302' & KB 18' @ 1320.0usft (Saxon 141)
Site:	Howell Pad	MD Reference:	GL 1302' & KB 18' @ 1320.0usft (Saxon 141)
Well:	Howell 9H	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	As Drilled	Database:	Northeast District

Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
8,546.0	90.20	317.55	7,014.9	2,450.3	-67.7	2,214.9	1.49	-0.27	-1.46
8,610.0	89.97	317.71	7,014.8	2,497.6	-110.8	2,276.6	0.44	-0.36	0.25
8,673.0	89.19	317.13	7,015.3	2,544.0	-153.4	2,337.2	1.54	-1.24	-0.92
8,737.0	90.17	318.61	7,015.6	2,591.5	-196.4	2,399.0	2.77	1.53	2.31
8,801.0	91.14	319.83	7,014.9	2,639.9	-238.1	2,461.1	2.44	1.52	1.91
8,864.0	90.70	319.38	7,013.9	2,687.9	-279.0	2,522.4	1.00	-0.70	-0.71
8,928.0	91.54	317.89	7,012.6	2,735.9	-321.3	2,584.4	2.67	1.31	-2.33
8,990.0	91.11	317.05	7,011.2	2,781.6	-363.2	2,644.1	1.52	-0.69	-1.35
9,054.0	91.21	317.66	7,009.9	2,828.7	-406.5	2,705.7	0.97	0.16	0.95
9,116.0	92.15	317.29	7,008.1	2,874.3	-448.4	2,765.4	1.63	1.52	-0.60
9,179.0	91.58	317.09	7,006.0	2,920.5	-491.2	2,826.0	0.96	-0.90	-0.32
9,243.0	91.64	316.99	7,004.2	2,967.3	-534.8	2,887.4	0.18	0.09	-0.16
9,307.0	91.61	317.87	7,002.4	3,014.5	-578.1	2,949.1	1.38	-0.05	1.38
9,371.0	90.91	318.65	7,001.0	3,062.2	-620.7	3,010.9	1.64	-1.09	1.22
9,435.0	90.77	320.23	7,000.1	3,110.8	-662.3	3,073.1	2.48	-0.22	2.47
9,498.0	90.74	319.75	6,999.3	3,159.1	-702.8	3,134.5	0.76	-0.05	-0.76
9,562.0	89.19	320.21	6,999.3	3,208.1	-743.9	3,196.8	2.53	-2.42	0.72
9,626.0	88.83	320.48	7,000.4	3,257.3	-784.8	3,259.2	0.70	-0.56	0.42
9,688.0	89.53	320.26	7,001.3	3,305.1	-824.3	3,319.7	1.18	1.13	-0.35
9,751.0	90.50	319.50	7,001.3	3,353.3	-864.9	3,381.1	1.96	1.54	-1.21
9,815.0	91.21	319.70	7,000.3	3,402.0	-906.4	3,443.3	1.15	1.11	0.31
9,879.0	91.17	319.37	6,999.0	3,450.7	-947.9	3,505.5	0.52	-0.06	-0.52
9,942.0	90.80	318.85	6,997.9	3,498.3	-989.1	3,566.7	1.01	-0.59	-0.83
10,006.0	90.40	319.73	6,997.2	3,546.8	-1,030.9	3,628.8	1.51	-0.63	1.38
10,070.0	89.66	320.24	6,997.2	3,595.8	-1,072.0	3,691.2	1.40	-1.16	0.80
10,132.0	90.44	320.75	6,997.1	3,643.7	-1,111.5	3,751.7	1.50	1.26	0.82
10,196.0	90.13	320.53	6,996.8	3,693.1	-1,152.0	3,814.2	0.59	-0.48	-0.34
10,260.0	89.76	321.10	6,996.9	3,742.7	-1,192.5	3,876.7	1.06	-0.58	0.89
10,323.0	90.74	321.65	6,996.6	3,792.0	-1,231.8	3,938.4	1.78	1.56	0.87
10,387.0	90.74	321.18	6,995.8	3,842.0	-1,271.7	4,001.1	0.73	0.00	-0.73
10,451.0	90.54	322.05	6,995.1	3,892.2	-1,311.5	4,063.8	1.39	-0.31	1.36
10,514.0	91.31	322.12	6,994.1	3,941.8	-1,350.2	4,125.7	1.23	1.22	0.11
10,578.0	91.31	321.87	6,992.6	3,992.3	-1,389.6	4,188.5	0.39	0.00	-0.39
10,641.0	90.34	319.93	6,991.7	4,041.1	-1,429.3	4,250.0	3.44	-1.54	-3.08
10,705.0	89.97	320.08	6,991.5	4,090.2	-1,470.4	4,312.4	0.62	-0.58	0.23
10,769.0	90.77	319.42	6,991.1	4,139.0	-1,511.8	4,374.7	1.62	1.25	-1.03
10,832.0	91.54	320.24	6,989.8	4,187.2	-1,552.4	4,436.0	1.79	1.22	1.30
10,895.0	91.81	319.92	6,988.0	4,235.4	-1,592.8	4,497.4	0.66	0.43	-0.51
10,959.0	91.68	319.13	6,986.0	4,284.1	-1,634.3	4,559.6	1.25	-0.20	-1.23
11,023.0	91.61	318.60	6,984.2	4,332.3	-1,676.4	4,621.6	0.83	-0.11	-0.83
11,087.0	91.21	318.36	6,982.6	4,380.2	-1,718.8	4,683.5	0.73	-0.63	-0.38
11,150.0	90.64	318.39	6,981.6	4,427.3	-1,760.7	4,745.4	0.99	0.80	0.05
11,214.0	90.60	318.17	6,980.9	4,475.0	-1,803.3	4,806.3	0.35	-0.06	-0.34

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Company:	Stone Energy	Local Co-ordinate Reference:	Well Howell 9H
Project:	Mary Prospect	TVD Reference:	GL 1302' & KB 18' @ 1320.0usft (Saxon 141)
Site:	Howell Pad	MD Reference:	GL 1302' & KB 18' @ 1320.0usft (Saxon 141)
Well:	Howell 9H	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	As Drilled	Database:	Northeast District

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
11,278.0	90.27	318.64	6,980.4	4,522.9	-1,845.7	4,868.2	0.90	-0.52	0.73
11,342.0	90.77	319.34	6,979.9	4,571.2	-1,887.7	4,930.3	1.34	0.78	1.09
11,405.0	90.67	320.40	6,979.1	4,619.4	-1,928.3	4,991.7	1.69	-0.16	1.68
11,469.0	91.61	319.40	6,977.8	4,668.3	-1,969.6	5,054.0	2.14	1.47	-1.56
11,533.0	91.54	320.60	6,976.0	4,717.3	-2,010.7	5,116.3	1.88	-0.11	1.88
11,596.0	90.80	321.55	6,974.7	4,766.3	-2,050.3	5,177.9	1.91	-1.17	1.51
11,660.0	90.37	322.09	6,974.1	4,816.6	-2,089.8	5,240.7	1.08	-0.67	0.84
11,723.0	91.78	322.73	6,972.9	4,866.5	-2,128.2	5,302.6	2.46	2.24	1.02
11,787.0	92.05	322.06	6,970.8	4,917.2	-2,167.3	5,365.4	1.13	0.42	-1.05
11,850.0	91.17	322.17	6,969.0	4,966.9	-2,205.9	5,427.3	1.41	-1.40	0.17
11,914.0	90.87	321.38	6,967.9	5,017.2	-2,245.5	5,490.0	1.32	-0.47	-1.23
11,977.0	90.10	321.43	6,967.3	5,066.4	-2,284.8	5,551.7	1.22	-1.22	0.08
12,041.0	91.07	321.20	6,966.7	5,116.4	-2,324.8	5,614.4	1.56	1.52	-0.36
12,105.0	91.17	321.16	6,965.4	5,166.2	-2,364.9	5,677.0	0.17	0.16	-0.06
12,168.0	90.37	320.63	6,964.6	5,215.1	-2,404.7	5,738.6	1.52	-1.27	-0.84
12,232.0	90.97	321.41	6,963.8	5,264.9	-2,444.9	5,801.2	1.54	0.94	1.22
12,295.0	91.78	320.78	6,962.3	5,313.9	-2,484.5	5,862.8	1.63	1.29	-1.00
12,359.0	91.85	320.75	6,960.3	5,363.4	-2,524.9	5,925.3	0.12	0.11	-0.05
12,423.0	90.17	319.42	6,959.2	5,412.5	-2,566.0	5,987.6	3.35	-2.63	-2.08
12,487.0	89.13	318.92	6,959.6	5,460.9	-2,607.8	6,049.8	1.80	-1.63	-0.78
12,550.0	89.77	319.07	6,960.2	5,508.5	-2,649.2	6,110.9	1.04	1.02	0.24
12,614.0	90.13	318.77	6,960.2	5,556.7	-2,691.2	6,173.0	0.73	0.56	-0.47
12,676.0	91.31	317.97	6,959.4	5,603.0	-2,732.4	6,232.9	2.30	1.90	-1.29
12,740.0	91.88	317.02	6,957.7	5,650.2	-2,775.6	6,294.6	1.73	0.89	-1.48
12,803.0	91.27	316.38	6,955.9	5,696.0	-2,818.8	6,355.0	1.40	-0.97	-1.02
12,865.0	92.01	316.39	6,954.1	5,740.9	-2,861.6	6,414.4	1.19	1.19	0.02
12,928.0	92.85	316.69	6,951.5	5,786.6	-2,904.9	6,474.7	1.42	1.33	0.48
12,991.0	93.43	317.07	6,948.0	5,832.5	-2,947.9	6,535.1	1.10	0.92	0.60
13,023.0	93.79	317.42	6,946.0	5,856.0	-2,969.6	6,565.9	1.57	1.13	1.09
Last SDI MWD Survey									
13,080.0	93.79	317.42	6,942.2	5,897.8	-3,008.0	6,620.6	0.00	0.00	0.00
Projection to Bit									

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
100.0	100.0	0.3	-0.1	First SDI Gyro Survey
5,750.3	5,674.9	578.3	263.8	Last SDI Gyro Survey
5,782.0	5,705.5	585.9	267.3	First SDI MWD Survey
13,023.0	6,946.0	5,856.0	-2,969.6	Last SDI MWD Survey
13,080.0	6,942.2	5,897.8	-3,008.0	Projection to Bit

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