

State of West Virginia
Department of Environmental Protection - Office of Oil and Gas
Well Operator's Report of Well Work

API 47-103-02792 County Wetzel District Magnolia
Quad New Martinsville Pad Name Smith Field/Pool Name Mary
Farm name Smith, Sonny and Charlotte Well Number #4H
Operator (as registered with the OOG) Stone Energy Corporation
Address 1300 Fort Pierpont Dr. - Suite 201 City Morgantown State WV Zip 26508

As Drilled location NAD 83/UTM Attach an as-drilled plat, profile view, and deviation survey
Top hole Northing 4,388,530 Easting 516,225
Landing Point of Curve Northing 4,388,099 Easting 516,392
Bottom Hole Northing 4,386,910 Easting 517,086

Elevation (ft) 1,321 GL Type of Well New Existing Type of Report Interim Final
Permit Type Deviated Horizontal Horizontal 6A Vertical Depth Type Deep Shallow
Type of Operation Convert Deepen Drill Plug Back Redrilling Rework Stimulate
Well Type Brine Disposal CBM Gas Oil Secondary Recovery Solution Mining Storage Other
Type of Completion Single Multiple Fluids Produced Brine Gas NGL Oil Other
Drilled with Cable Rotary

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Drilling Media Surface hole Air Mud Fresh Water Intermediate hole Air Mud Fresh Water Brine
Production hole Air Mud Fresh Water Brine
Mud Type(s) and Additive(s)
Saturated salt mud which includes Caustic Soda, Barite, Lime, New-Drill, Perma-Lose HT, Xan-Plex D, X-Cide 102, Soda Ash, and Sodium Chloride

WV Department of
Environmental Protection

Date permit issued 10/12/12 & 5/7/14 Date drilling commenced 10/24/2013 Date drilling ceased 7/2/2014
Date completion activities began 9/30/2017 Date completion activities ceased 10/14/2017
Verbal plugging (Y/N) N Date permission granted N/A Granted by N/A

Please note: Operator is required to submit a plugging application within 5 days of verbal permission to plug

Freshwater depth(s) ft 100 Open mine(s) (Y/N) depths N
Salt water depth(s) ft 2,471 Void(s) encountered (Y/N) depths N
Coal depth(s) ft 1,146 Cavern(s) encountered (Y/N) depths N
Is coal being mined in area (Y/N) N

Revieweu

Reviewed by:
DmH
02/16/2018

State of West Virginia
Department of Environmental Protection - Office of Oil and Gas
Well Operator's Report of Well Work

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Landing Point of Curve Northing 4,388,082 Easting 516,401
Bottom Hole Northing 4,388,128 Easting 517,065

Elevation (ft) 1,321 GL Type of Well New Existing Type of Report Interim Final
Permit Type Deviated Horizontal Horizontal 6A Vertical Depth Type Deep Shallow
Type of Operation Convert Deepen Drill Plug Back Redrilling Rework Stimulate
Well Type Brine Disposal CBM Gas Oil Secondary Recovery Solution Mining Storage Other _____
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API 47-103 - 02792 Farm name Smith, Sonny and Charlotte Well number #4H

CASING STRINGS	Hole Size	Casing Size	Depth	New or Used	Grade wt/ft	Basket Depth(s)	Did cement circulate (Y/N) * Provide details below*
Conductor	24"	20"	90'	New	LS - 94.1 ppf		N - GTS
Surface	17.5"	13.375"	1,323' KB - 1,308' GL	New	J55 - 54.5 ppf	121' & 201'	Y - CTS
Coal	17.5"	13.375"	1,323' KB - 1,308' GL	New	J55 - 54.5 ppf	121' & 201'	Y - CTS
Intermediate 1	12.25"	9.625"	2,502'	New	J55 - 36 ppf		Y - CTS
Intermediate 2							
Intermediate 3							
Production	8.75"	5.5"	12,022'	New	P110 - 20 ppf		N - TOC @ 906' Calculated
Tubing							
Packer type and depth set		TAM CAP Packer Set @ 1,228' On The 9.625" Casing String					

Comment Details Circulated 30 bbls cement to surface on 13.375" casing string. Circulated 30 bbls cement to surface on the 9.625" casing string. Circulated 25 bbls TunedSpacer to surface on the 5.5" casing string. TOC on 5.5" Calculated to be @ 906'.

CEMENT DATA	Class/Type of Cement	Number of Sacks	Slurry wt (ppg)	Yield (ft ³ /sks)	Volume (ft ³)	Cement Top (MD)	WOC (hrs)
Conductor	Type 1	34	15.6	1.18	40	Surface	24.0
Surface	Class "A"	987	15.6	1.19	1,175	Surface	8.0
Coal	Class "A"	987	15.6	1.19	1,175	Surface	8.0
Intermediate 1	Lead-10% Salt Tail-Class "A"	Lead-502 Tail-317	Lead-15.4 Tail-15.6	Lead-1.28 Tail-1.21	Lead-643 Tail-377	Surface	12.0
Intermediate 2							
Intermediate 3							
Production	Lead-TunedSpacer3 Tail-VariCom	Lead-178 Tail-2,340	Lead- 14.5 Tail-15.2	Lead-2.37 Tail-1.20	Lead-422 Tail-2,808	906 Calculated	7.0
Tubing							

Drillers TD (ft) 12,030 MD / 6,899 TVD Loggers TD (ft) N/A
 Deepest formation penetrated Marcellus Shale Plug back to (ft) _____
 Plug back procedure _____

Kick off depth (ft) 6,095 MD / 6,055' TVD

Check all wireline logs run caliper density deviated/directional induction
 neutron resistivity gamma ray temperature sonic

Well cored Yes No Conventional Sidewall Were cuttings collected Yes No

DESCRIBE THE CENTRALIZER PLACEMENT USED FOR EACH CASING STRING Surface casing had bow spring centralizers placed on joints 1, 5, 9, 13, 17, 21 and 25. Intermediate casing had no centralizers installed due to sloping hole conditions.
Production casing had rigid spiral centralizers placed on every fourth joint beginning with joint 1 to joint 216. Ran a total of 55 rigid spiral centralizers. Ran bow spring centralizers from joint 224 to joint 284 on every eighth joint. A total of 6 bow spring centralizers were run.

WAS WELL COMPLETED AS SHOT HOLE Yes No DETAILS _____

WAS WELL COMPLETED OPEN HOLE? Yes No DETAILS _____

WERE TRACERS USED Yes No TYPE OF TRACER(S) USED _____

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WV Department of Environmental Protection

Smith #4H
API 47-103-02792
Stone Energy Corporation

	Horizontal		Bottom (ft TVD)	Bottom (ft MD)	
	Top (ft TVD)	Top (ft MD)			
Sandstone & Shale	Surface	*	1,146		FW @ 100
Coal	1,146	*	1,148		
Sandstone & Shale	1,148	*	2,163		
Little Lime	2,163	*	2,193		SW @ 2,471
Big Lime	2,193	*	2,293		
Big Injun	2,293	*	2,393		
Sandstone & Shale	2,393	*	2,762		
Berea Sandstone	2,762	*	2,795		
Shale	2,795	*	2,986		
Gordon	2,983	*	3,033		
Undiff Devonian Shale	3,033	*	5,771	5,810	
Rhinestreet	5,771	5,810 ~	6,501	6,604	
Cashaqua	6,501	6,604 ~	6,661	6,841	
Middlesex	6,661	6,841 ~	6,690	6,891	
West River	6,690	6,891 ~	6,748	7,007	
Geneseo	6,748	7,007 ~	6,764	7,039	
Tully Limestone	6,764	7,039 ~	6,805	7,142	
Hamilton Shale	6,805	7,142 ~	6,848	7,302	
Marcellus	6,848	7,302 ~	6,899	12,030	
TD			6,899	12,030	

* From Pilot Hole Log and Driller's Log

~ From MWD Gamma Log

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Xerox WC 7535 Smith #4H Tops for WR35.xlsx Thu Jan 04 08:50:56 2018 Media Type: Default Color: Automatic Office: Display-sRGB Press: SWOP-Coated Print Quality: Standard Color Adjustments: Customized Automatic Setup



Project: Mary Prospect
 Site: Smith Pad
 Well: 4H
 Wellbore: OH
 Design: Smith 4H As Drilled



WELL DETAILS -4H

+N/-S	+E/-W	Northing	Ground Level:	1321.00	Latitude	Longitude
0.00	0.00	420212.00	Easting	1630824.00	39° 38' 46.782 N	80° 48' 39.853 W

REFERENCE INFORMATION

Co-ordinate (N/E) Reference	Well 4H, Grid North
Vertical (TVD) Reference	GL 1321' & KB 18' @ 1339 00ft (Saxon 141)
Section (VS) Reference	Slot - (0.00N, 0.00E)
Measured Depth Reference	GL 1321' & KB 18' @ 1339 00ft (Saxon 141)
Calculation Method	Minimum Curvature

PROJECT DETAILS: Mary Prospect

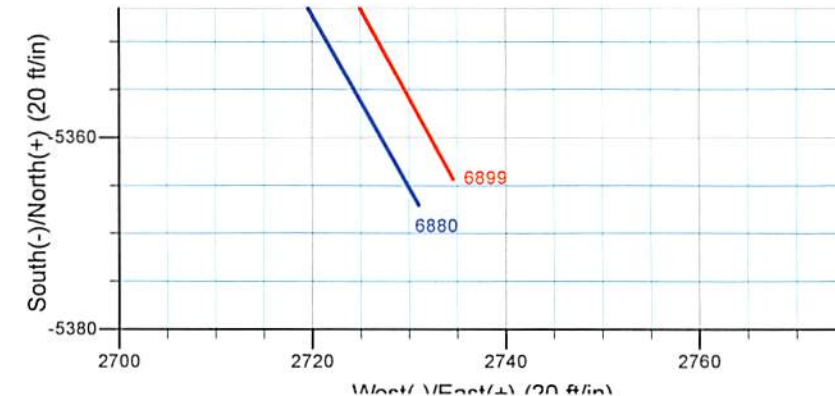
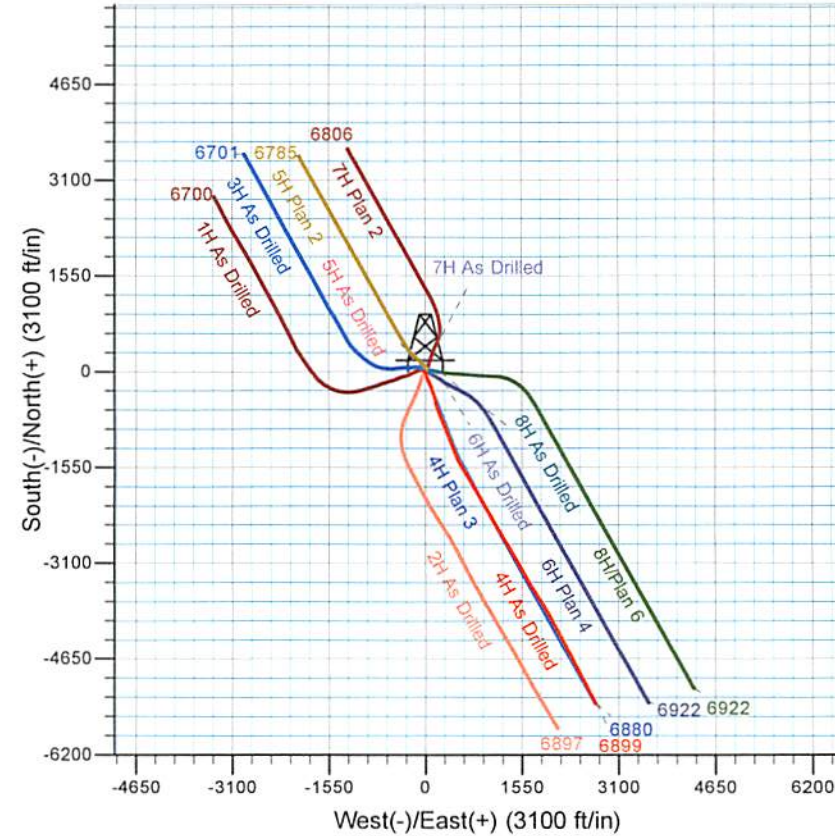
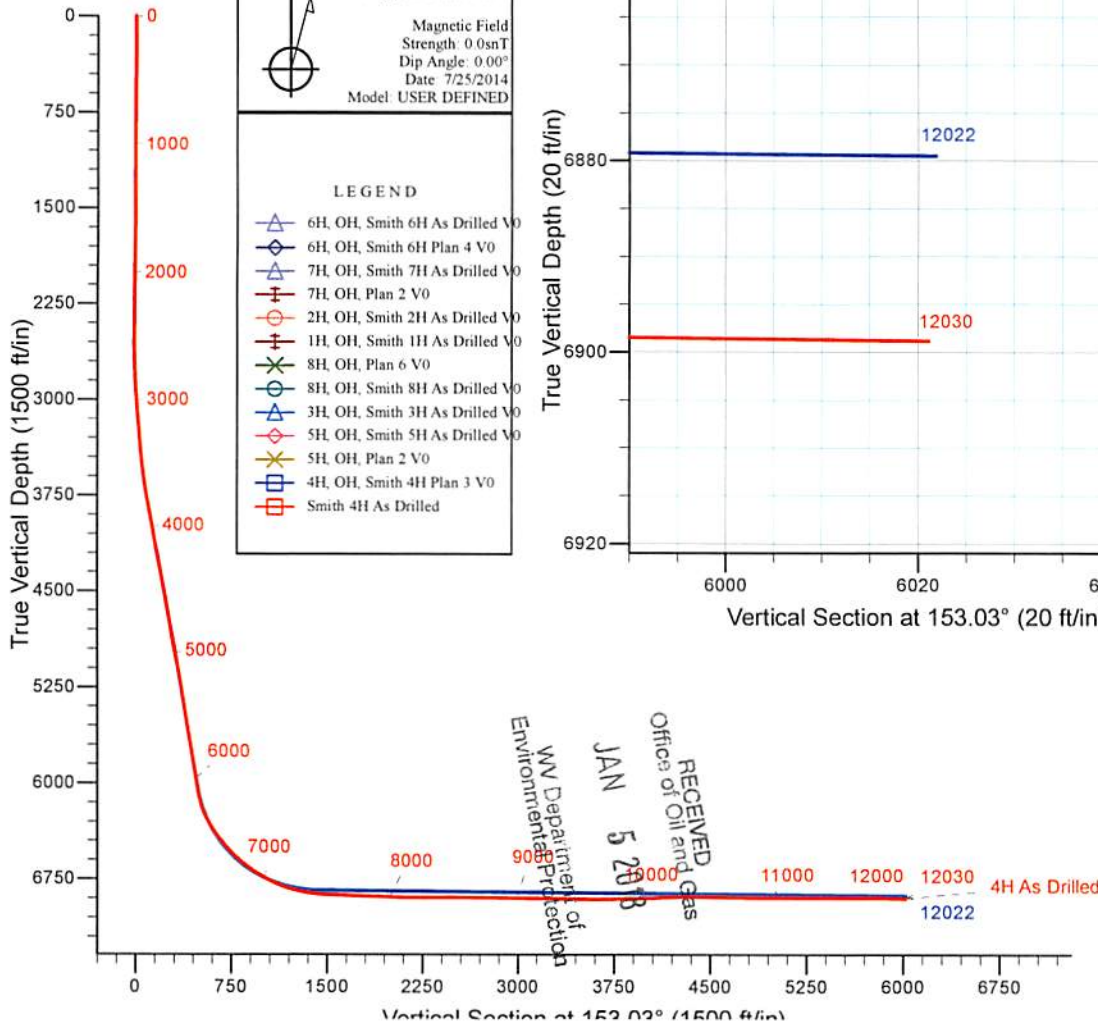
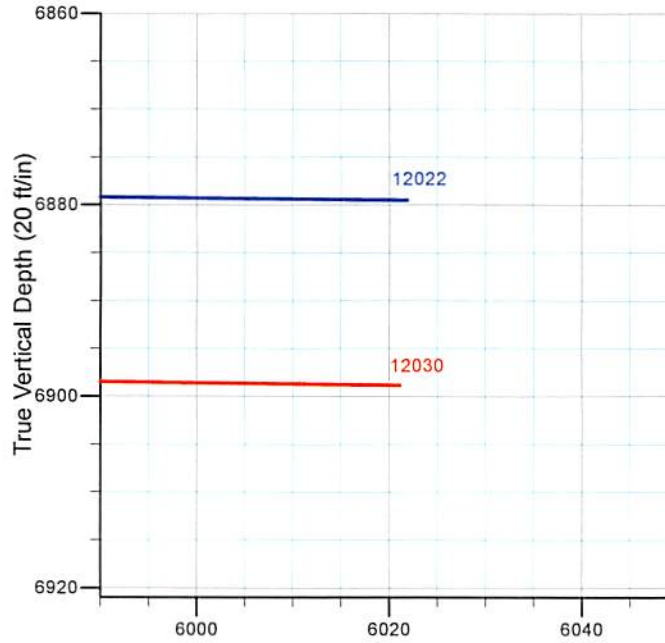
Geodetic System	US State Plane 1927 (Exact solution)
Datum	NAD 1927 (NADCON CONUS)
Ellipsoid	Clarke 1866
Zone	West Virginia North 4701
System Datum	Mean Sea Level

SECTION DETAILS										
Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSect	Target
1	5817.01	9.57	160.80	5779.68	-422.75	153.96	0.00	0.00	446.60	
2	6083.01	9.57	160.80	6041.98	-464.51	168.50	0.00	0.00	490.42	
3	7393.90	88.19	158.82	6838.00	-1316.38	493.74	6.00	-2.02	1397.14	
4	7492.96	89.50	151.00	6840.00	-1406.00	535.70	8.00	-80.60	1496.05	Smith 4H_LP4
	512021.81	89.50	151.00	6879.52	-5367.01	2731.01	0.00	0.00	6021.89	Smith 4H_BHL3

G T/M
 Azimuths to Grid North
 True North: 0.84°
 Magnetic North: 0.84°
 Magnetic Field
 Strength: 0.0snT
 Dip Angle: 0.00°
 Date: 7/25/2014
 Model: USER DEFINED

LEGEND

- 6H, OH, Smith 6H As Drilled V0
- 6H, OH, Smith 6H Plan 4 V0
- 7H, OH, Smith 7H As Drilled V0
- 7H, OH, Plan 2 V0
- 2H, OH, Smith 2H As Drilled V0
- 1H, OH, Smith 1H As Drilled V0
- 8H, OH, Plan 6 V0
- 8H, OH, Smith 8H As Drilled V0
- 3H, OH, Smith 3H As Drilled V0
- 5H, OH, Smith 5H As Drilled V0
- 5H, OH, Plan 2 V0
- 4H, OH, Smith 4H Plan 3 V0
- Smith 4H As Drilled



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Scientific Drilling
Survey Report



Company:	Stone Energy	Local Co-ordinate Reference:	Well 4H
Project:	Mary Prospect	TVD Reference:	GL 1321' & KB 18' @ 1339.00ft (Saxon 141)
Site:	Smith Pad	MD Reference:	GL 1321' & KB 18' @ 1339.00ft (Saxon 141)
Well:	4H	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	Smith 4H As Drilled	Database:	Northeast District

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Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	WV Environmental Protection Rate (°/100usft)
403.00	0.37	59.77	403.00	0.74	1.69	0.10	0.03	0.03	1.57
503.00	0.29	346.51	502.99	1.15	1.91	-0.16	0.40	-0.08	-73.26
603.00	0.33	317.31	602.99	1.61	1.65	-0.69	0.16	0.04	-29.20
703.00	0.32	344.21	702.99	2.09	1.38	-1.24	0.15	-0.01	26.90
803.00	0.31	288.90	802.99	2.45	1.05	-1.71	0.29	-0.01	-55.31
903.00	0.28	275.94	902.99	2.56	0.55	-2.03	0.07	-0.03	-12.96
1,003.00	0.10	273.17	1,002.99	2.59	0.22	-2.21	0.18	-0.18	-2.77
1,103.00	0.30	272.10	1,102.99	2.61	-0.13	-2.38	0.20	0.20	-1.07
1,203.00	0.47	280.76	1,202.99	2.69	-0.79	-2.76	0.18	0.17	8.66
1,303.00	0.44	267.53	1,302.98	2.75	-1.58	-3.17	0.11	-0.03	-13.23
1,403.00	0.56	263.05	1,402.98	2.68	-2.45	-3.50	0.13	0.12	-4.48
1,503.00	0.63	267.47	1,502.98	2.59	-3.48	-3.89	0.08	0.07	4.42
1,603.00	0.52	272.55	1,602.97	2.59	-4.49	-4.34	0.12	-0.11	5.08
1,703.00	0.43	288.95	1,702.97	2.73	-5.29	-4.83	0.16	-0.09	16.40
1,803.00	0.37	280.24	1,802.97	2.91	-5.97	-5.30	0.09	-0.06	-8.71
1,903.00	0.38	292.54	1,902.96	3.09	-6.59	-5.75	0.08	0.01	12.30
2,003.00	0.47	316.46	2,002.96	3.52	-7.18	-6.39	0.20	0.09	23.92
2,103.00	0.52	317.34	2,102.96	4.15	-7.77	-7.22	0.05	0.05	0.88
2,203.00	0.57	340.47	2,202.95	4.95	-8.24	-8.15	0.22	0.05	23.13
2,303.00	0.54	343.24	2,302.95	5.87	-8.55	-9.11	0.04	-0.03	2.77
2,403.00	0.33	1.19	2,402.95	6.61	-8.68	-9.83	0.25	-0.21	17.95
2,503.01	0.44	6.62	2,502.94	7.28	-8.63	-10.40	0.12	0.11	5.43
2,548.01	0.51	11.81	2,547.94	7.65	-8.57	-10.70	0.18	0.16	11.53
Last Vaughn Gyro Survey									
2,556.01	0.50	29.86	2,555.94	7.71	-8.54	-10.75	1.98	-0.13	225.63
First SDI MWD Survey									
2,649.01	0.78	173.87	2,648.94	7.44	-8.27	-10.38	1.31	0.30	154.85
2,739.01	2.79	145.38	2,738.89	5.02	-6.96	-7.63	2.37	2.23	-31.66
2,833.01	3.29	141.29	2,832.76	1.04	-3.97	-2.73	0.58	0.53	-4.35
2,924.01	3.85	146.07	2,923.58	-3.54	-0.64	2.86	0.70	0.62	5.25
3,016.01	4.11	143.48	3,015.36	-8.75	3.05	9.18	0.34	0.28	-2.82
3,107.01	4.91	155.47	3,106.08	-14.91	6.61	16.29	1.35	0.88	13.18
3,197.01	5.62	175.72	3,195.71	-22.81	8.54	24.20	2.20	0.79	22.50
3,289.01	5.48	174.69	3,287.28	-31.68	9.28	32.44	0.19	-0.15	-1.12
3,382.01	5.04	171.74	3,379.89	-40.14	10.28	40.44	0.56	-0.47	-3.17
3,473.01	6.04	164.97	3,470.46	-48.72	12.09	48.91	1.31	1.10	-7.44
3,568.01	7.52	162.50	3,564.80	-59.48	15.26	59.93	1.59	1.56	-2.60
3,661.01	8.99	158.70	3,656.83	-72.05	19.73	73.16	1.69	1.58	-4.09
3,754.01	10.22	158.95	3,748.52	-86.52	25.33	88.60	1.32	1.32	0.27
3,849.01	11.42	159.25	3,841.83	-103.18	31.69	106.34	1.26	1.26	0.32
3,943.01	10.87	158.27	3,934.06	-120.12	38.27	124.41	0.62	-0.59	-1.04
4,034.01	10.13	155.63	4,023.54	-135.38	44.75	140.95	0.97	-0.81	-2.90
4,128.01	10.12	153.72	4,116.07	-150.32	51.82	157.47	0.36	-0.01	-2.03



Scientific Drilling
Survey Report



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Project:	Mary Prospect	TVD Reference:	GL 1321' & KB 18' @ 1339.00ft (Saxon 141)
Site:	Smith Pad	MD Reference:	GL 1321' & KB 18' @ 1339.00ft (Saxon 141)
Well:	4H	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	Smith 4H As Drilled	Database:	Northeast District

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Survey										WV Department of Environmental Protection
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)	
4,220.01	10.77	154.23	4,206.55	-165.30	59.13	174.14	0.71	0.71	0.55	
4,313.01	10.42	158.30	4,297.97	-180.94	66.02	191.21	0.89	-0.38	4.38	
4,406.01	10.62	162.88	4,389.40	-196.95	71.65	208.03	0.92	0.22	4.92	
4,497.01	10.13	161.11	4,478.92	-212.53	76.71	224.21	0.64	-0.54	-1.95	
4,590.01	9.37	159.06	4,570.57	-227.34	82.06	239.84	0.90	-0.82	-2.20	
4,680.01	10.05	157.36	4,659.28	-241.43	87.71	254.95	0.82	0.76	-1.89	
4,772.01	9.99	154.76	4,749.88	-256.06	94.20	270.93	0.50	-0.07	-2.83	
4,863.01	9.53	152.81	4,839.56	-269.90	101.01	286.36	0.62	-0.51	-2.14	
4,954.01	10.16	156.25	4,929.22	-283.95	107.68	301.90	0.95	0.69	3.78	
5,047.01	10.63	164.96	5,020.70	-299.74	113.21	318.49	1.76	0.51	9.37	
5,140.01	10.45	164.28	5,112.13	-316.14	117.72	335.15	0.24	-0.19	-0.73	
5,232.01	9.88	163.80	5,202.69	-331.75	122.18	351.09	0.63	-0.62	-0.52	
5,323.01	9.45	160.88	5,292.40	-346.31	126.81	366.16	0.72	-0.47	-3.21	
5,417.01	9.25	158.79	5,385.15	-360.64	132.07	381.32	0.42	-0.21	-2.22	
5,509.01	8.87	156.81	5,476.00	-374.06	137.54	395.75	0.53	-0.41	-2.15	
5,602.01	9.79	162.84	5,567.77	-388.20	142.70	410.70	1.44	0.99	6.48	
5,695.01	9.89	162.72	5,659.41	-403.39	147.40	426.36	0.11	0.11	-0.13	
5,755.01	9.57	160.80	5,718.54	-413.02	150.57	436.39	0.76	-0.53	-3.20	
5,817.01	9.57	160.80	5,779.68	-422.75	153.96	446.60	0.00	0.00	0.00	
5,825.00	9.74	165.03	5,787.56	-424.03	154.35	447.92	9.13	2.13	52.95	
5,885.00	9.99	168.37	5,846.67	-434.03	156.71	457.90	1.04	0.42	5.57	
5,946.00	9.28	169.18	5,906.81	-444.04	158.70	467.73	1.18	-1.16	1.33	
6,007.00	8.77	168.51	5,967.05	-453.43	160.55	476.93	0.85	-0.84	-1.10	
6,037.00	8.57	171.80	5,996.71	-457.89	161.33	481.25	1.78	-0.67	10.97	
6,067.00	9.02	173.03	6,026.36	-462.43	161.93	485.58	1.63	1.50	4.10	
6,098.00	10.34	174.31	6,056.92	-467.61	162.50	490.46	4.31	4.26	4.13	
6,128.00	12.00	175.17	6,086.35	-473.40	163.03	495.86	5.56	5.53	2.87	
6,157.00	14.21	174.20	6,114.59	-479.95	163.65	501.97	7.66	7.62	-3.34	
6,188.00	16.15	172.78	6,144.51	-488.01	164.57	509.57	6.37	6.26	-4.58	
6,218.00	18.26	170.08	6,173.16	-496.78	165.91	518.00	7.52	7.03	-9.00	
6,249.00	20.41	167.32	6,202.41	-506.84	167.93	527.88	7.53	6.94	-8.90	
6,279.00	22.94	165.39	6,230.29	-517.60	170.55	538.66	8.76	8.43	-6.43	
6,309.00	24.99	164.26	6,257.70	-529.36	173.75	550.59	7.00	6.83	-3.77	
6,339.00	27.33	163.28	6,284.63	-542.06	177.45	563.58	7.93	7.80	-3.27	
6,370.00	28.96	162.24	6,311.96	-556.02	181.79	577.99	5.49	5.26	-3.35	
6,400.00	30.67	160.70	6,337.99	-570.16	186.53	592.75	6.24	5.70	-5.13	
6,430.00	32.53	159.96	6,363.54	-584.96	191.82	608.34	6.33	6.20	-2.47	
6,462.00	34.85	160.14	6,390.16	-601.64	197.88	625.96	7.26	7.25	0.56	
6,494.00	36.43	160.31	6,416.17	-619.19	204.19	644.45	4.95	4.94	0.53	
6,526.00	37.98	160.80	6,441.66	-637.44	210.63	663.64	4.93	4.84	1.53	
6,557.00	39.54	160.73	6,465.83	-655.76	217.02	682.87	5.03	5.03	-0.23	
6,589.00	41.50	159.96	6,490.15	-675.34	224.02	703.49	6.32	6.13	-2.41	
6,621.00	42.99	159.40	6,513.84	-695.51	231.49	724.86	4.80	4.66	-1.75	
6,653.00	44.27	159.21	6,537.00	-716.17	239.29	746.80	4.02	4.00	-0.59	

02/16/2018



Scientific Drilling
Survey Report



Company:	Stone Energy	Local Co-ordinate Reference:	Well 4H
Project:	Mary Prospect	TVD Reference:	GL 1321' & KB 18' @ 1339.00ft (Saxon 141)
Site:	Smith Pad	MD Reference:	GL 1321' & KB 18' @ 1339.00ft (Saxon 141)
Well:	4H	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	Smith 4H As Drilled	Database:	Northeast District

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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)
6,685.00	45.52	159.11	6,559.67	-737.27	247.33	769.26	3.91	3.91	-0.31
6,716.00	47.20	158.13	6,581.07	-758.16	255.51	791.59	5.88	5.42	-3.16
6,748.00	48.69	158.04	6,602.50	-780.20	264.37	815.25	4.66	4.66	-0.28
6,780.00	50.15	156.60	6,623.32	-802.63	273.75	839.49	5.70	4.56	-4.50
6,810.00	51.45	156.17	6,642.28	-823.93	283.06	862.70	4.47	4.33	-1.43
6,840.00	53.21	156.73	6,660.61	-845.69	292.55	886.40	6.05	5.87	1.87
6,872.00	54.99	157.23	6,679.37	-869.55	302.68	912.26	5.70	5.56	1.56
6,903.00	56.86	157.66	6,696.74	-893.26	312.53	937.86	6.14	6.03	1.39
6,935.00	58.44	157.99	6,713.86	-918.30	322.73	964.80	5.01	4.94	1.03
6,967.00	60.27	158.23	6,730.17	-943.84	333.00	992.22	5.76	5.72	0.75
6,998.00	61.72	158.47	6,745.20	-969.04	343.00	1,019.21	4.73	4.68	0.77
7,030.00	63.45	158.63	6,759.94	-995.48	353.39	1,047.48	5.42	5.41	0.50
7,062.00	65.01	158.74	6,773.85	-1,022.32	363.86	1,076.16	4.88	4.88	0.34
7,094.00	66.87	158.77	6,786.89	-1,049.56	374.45	1,105.23	5.81	5.81	0.09
7,124.00	68.49	158.33	6,798.29	-1,075.39	384.60	1,132.86	5.57	5.40	-1.47
7,156.00	70.63	158.87	6,809.46	-1,103.30	395.54	1,162.70	6.87	6.69	1.69
7,188.00	72.36	159.28	6,819.62	-1,131.65	406.37	1,192.87	5.54	5.41	1.28
7,219.00	74.13	159.42	6,828.55	-1,159.42	416.84	1,222.38	5.73	5.71	0.45
7,251.00	75.69	159.13	6,836.89	-1,188.32	427.77	1,253.09	4.95	4.88	-0.91
7,283.00	77.48	159.45	6,844.31	-1,217.43	438.78	1,284.03	5.68	5.59	1.00
7,315.00	78.95	159.88	6,850.84	-1,246.80	449.67	1,315.14	4.78	4.59	1.34
7,347.00	80.27	159.94	6,856.62	-1,276.36	460.48	1,346.39	4.13	4.13	0.19
7,378.00	81.86	159.48	6,861.43	-1,305.09	471.10	1,376.81	5.33	5.13	-1.48
7,410.00	84.23	158.35	6,865.30	-1,334.72	482.52	1,408.40	8.19	7.41	-3.53
7,442.00	86.01	156.92	6,868.03	-1,364.20	494.66	1,440.18	7.12	5.56	-4.47
7,474.00	86.95	155.03	6,869.99	-1,393.38	507.66	1,472.08	6.59	2.94	-5.91
7,496.32	87.54	153.28	6,871.07	-1,413.44	517.38	1,494.36	8.26	2.62	-7.85
Smith 4H_LP4									
7,506.00	87.79	152.52	6,871.46	-1,422.05	521.78	1,504.04	8.26	2.63	-7.84
7,570.00	88.19	150.37	6,873.71	-1,478.23	552.36	1,567.97	3.41	0.63	-3.36
7,633.00	87.12	149.32	6,876.28	-1,532.65	583.97	1,630.82	2.38	-1.70	-1.67
7,697.00	87.25	149.18	6,879.43	-1,587.59	616.66	1,694.60	0.30	0.20	-0.22
7,761.00	87.75	148.64	6,882.22	-1,642.34	649.68	1,758.37	1.15	0.78	-0.84
7,825.00	88.43	148.81	6,884.35	-1,697.01	682.88	1,822.16	1.10	1.06	0.27
7,889.00	88.02	149.08	6,886.33	-1,751.81	715.88	1,885.96	0.77	-0.64	0.42
7,952.00	88.22	149.50	6,888.40	-1,805.95	748.04	1,948.80	0.74	0.32	0.67
8,016.00	88.45	149.68	6,890.26	-1,861.12	780.42	2,012.65	0.46	0.36	0.28
8,079.00	88.66	148.91	6,891.85	-1,915.27	812.58	2,075.50	1.27	0.33	-1.22
8,143.00	89.43	148.78	6,892.92	-1,970.03	845.68	2,139.32	1.22	1.20	-0.20
8,207.00	89.26	150.01	6,893.65	-2,025.11	878.26	2,203.18	1.94	-0.27	1.92
8,271.00	89.90	149.90	6,894.12	-2,080.51	910.31	2,267.09	1.01	1.00	-0.17
8,334.00	90.81	150.65	6,893.73	-2,135.22	941.54	2,330.01	1.87	1.44	1.19
8,397.00	90.84	150.66	6,892.82	-2,190.13	972.41	2,392.95	0.05	0.05	0.02



Scientific Drilling
Survey Report



Company: Stone Energy
Project: Mary Prospect
Site: Smith Pad
Well: 4H
Wellbore: OH
Design: Smith 4H As Drilled

Local Co-ordinate Reference: Well 4H
TVD Reference: GL 1321' & KB 18' @ 1339.00ft (Saxon 141)
MD Reference: GL 1321' & KB 18' @ 1339.00ft (Saxon 141)
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Database: Northeast District

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Table with 10 columns: 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). Rows contain depth and rate data for well 4H.

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Scientific Drilling
Survey Report



Company:	Stone Energy	Local Co-ordinate Reference:	Well 4H
Project:	Mary Prospect	TVD Reference:	GL 1321' & KB 18' @ 1339.00ft (Saxon 141)
Site:	Smith Pad	MD Reference:	GL 1321' & KB 18' @ 1339.00ft (Saxon 141)
Well:	4H	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	Smith 4H As Drilled	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)
11,255.00	90.07	152.48	6,895.33	-4,674.84	2,380.96	5,246.25	1.16	0.00	1.16
11,319.00	89.70	153.34	6,895.46	-4,731.82	2,410.10	5,310.24	1.46	-0.58	1.34
11,382.00	90.54	153.54	6,895.32	-4,788.17	2,438.27	5,373.24	1.37	1.33	0.32
11,446.00	90.10	153.80	6,894.97	-4,845.53	2,466.66	5,437.24	0.80	-0.69	0.41
11,510.00	89.30	153.62	6,895.30	-4,902.91	2,495.01	5,501.23	1.28	-1.25	-0.28
11,573.00	89.87	153.29	6,895.76	-4,959.26	2,523.16	5,564.23	1.05	0.90	-0.52
11,636.00	90.67	152.60	6,895.46	-5,015.37	2,551.81	5,627.23	1.68	1.27	-1.10
11,700.00	90.60	152.96	6,894.75	-5,072.28	2,581.09	5,691.22	0.57	-0.11	0.56
11,763.00	89.87	152.86	6,894.49	-5,128.36	2,609.78	5,754.22	1.17	-1.16	-0.16
11,826.00	89.09	152.39	6,895.06	-5,184.31	2,638.74	5,817.22	1.45	-1.24	-0.75
11,889.00	88.42	152.24	6,896.43	-5,240.08	2,668.01	5,880.20	1.09	-1.06	-0.24
11,952.00	88.93	151.64	6,897.89	-5,295.66	2,697.63	5,943.17	1.25	0.81	-0.95
11,972.00	89.36	151.72	6,898.19	-5,313.26	2,707.12	5,963.16	2.19	2.15	0.40
Last SDI MWD Survey									
12,030.00	89.36	151.72	6,898.84	-5,364.34	2,734.60	6,021.14	0.00	0.00	0.00
Projection to Bit - Smith 4H_BHL3									

Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates		Comment
		+N/-S (ft)	+E/-W (ft)	
103.00	103.00	-0.02	0.23	First Vaughn Gyro Survey
2,548.01	2,547.94	7.65	-8.57	Last Vaughn Gyro Survey
2,556.01	2,555.94	7.71	-8.54	First SDI MWD Survey
11,972.00	6,898.19	-5,313.26	2,707.12	Last SDI MWD Survey
12,030.00	6,898.84	-5,364.34	2,734.60	Projection to Bit

Checked By: _____ Approved By: _____ Date: _____

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519134 47-103-02792-0000 - Perforations

Stage Number	Perforation Date	Top Perf Depth (ftKB)	Bottom Perf Depth (ftKB)	Number of Shots	Formation
1	9/18/2017	11,792	11,954	40	MARCELLUS
2	10/3/2017	11,592	11,754	40	MARCELLUS
3	10/3/2017	11,366	11,528	40	MARCELLUS
4	10/4/2017	11,192	11,354	40	MARCELLUS
5	10/5/2017	10,992	11,154	40	MARCELLUS
6	10/5/2017	10,792	10,954	40	MARCELLUS
7	10/6/2017	10,592	10,754	40	MARCELLUS
8	10/6/2017	10,392	10,554	40	MARCELLUS
9	10/7/2017	10,192	10,354	40	MARCELLUS
10	10/8/2017	9,992	10,154	40	MARCELLUS
11	10/8/2017	9,792	9,954	40	MARCELLUS
12	10/9/2017	9,592	9,754	40	MARCELLUS
13	10/9/2017	9,392	9,554	40	MARCELLUS
14	10/10/2017	9,192	9,354	40	MARCELLUS
15	10/10/2017	8,992	9,154	40	MARCELLUS
16	10/11/2017	8,792	8,954	40	MARCELLUS
17	10/11/2017	8,592	8,754	40	MARCELLUS
18	10/12/2017	8,392	8,554	40	MARCELLUS
19	10/12/2017	8,192	8,354	40	MARCELLUS
20	10/12/2017	7,992	8,154	40	MARCELLUS
21	10/13/2017	7,792	7,954	40	MARCELLUS
22	10/13/2017	7,592	7,754	40	MARCELLUS
23	10/13/2017	7,392	7,554	40	MARCELLUS
24	10/13/2017	7,192	7,354	40	MARCELLUS

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519134 47-103-02792-0000 - Stimulated Stages

Stage Number	Stimulation Date	Ave Pump Rate (BPM)	Ave Treatment Pressure (PSI)	Max Breakdown Pressure (PSI)	ISIP (PSI)	Amount of Proppant (lbs)	Amount of Water (bbls)	Amount of Nitrogen/other (units)
1	9/30/2017	90	8,876	10,858	5,846	371418	6,936	0
2	10/1/2017	2	5,200	8,524	0	0	1,928	0
2	10/2/2017	20	5,480	9,348	4,007	0	7,173	0
2	10/3/2017	99	7,797	8,496	4,508	426889	7,452	0
3	10/4/2017	100	7,847	8,261	3,975	452246	7,928	0
4	10/4/2017	99	7,944	8,467	3,925	450742	7,734	0
5	10/5/2017	100	7,722	8,150	4,249	450836	7,455	0
6	10/6/2017	99	7,656	9,089	4,754	451407	7,654	0
7	10/6/2017	97	7,818	8,332	3,810	452131	7,658	0
8	10/7/2017	100	7,858	8,396	4,792	451427	7,637	0
9	10/7/2017	97	8,143	9,657	4,661	411913	8,005	0
10	10/8/2017	97	8,217	9,096	4,533	439025	8,343	0
11	10/8/2017	97	7,599	8,172	5,630	451089	7,489	0
12	10/9/2017	100	7,859	8,217	4,699	451418	7,278	0
13	10/10/2017	98	7,589	8,429	4,601	450864	7,745	0
14	10/10/2017	100	7,565	7,876	4,298	450041	7,509	0
15	10/11/2017	97	7,524	7,860	4,049	450263	7,598	0
16	10/11/2017	99	7,546	8,597	4,948	427605	7,430	0
17	10/12/2017	99	7,593	7,981	4,613	450222	7,316	0
18	10/12/2017	101	7,499	7,952	4,752	450473	7,384	0
19	10/12/2017	100	7,520	7,953	4,321	450525	7,352	0
20	10/12/2017	100	7,328	7,864	4,801	450420	7,288	0
21	10/13/2017	100	7,650	9,033	4,308	449727	7,171	0
22	10/13/2017	99	7,689	9,229	4,600	440046	7,388	0
23	10/13/2017	100	7,457	8,042	4,311	450102	7,216	0
24	10/13/2017	100	7,199	8,066	4,143	450785	7,132	0

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Hydraulic Fracturing Fluid Product Component Information Disclosure

Job Start Date:	9/30/2017
Job End Date:	10/14/2017
State:	West Virginia
County:	Wetzel
API Number:	47-103-02792-00-00
Operator Name:	EQT Production
Well Name and Number:	519134
Latitude:	39.64633000
Longitude:	-80.81107000
Datum:	NAD83
Federal Well:	NO
Indian Well:	NO
True Vertical Depth:	6,848
Total Base Water Volume (gal):	7,946,358
Total Base Non Water Volume:	0



Hydraulic Fracturing Fluid Composition:

Trade Name	Supplier	Purpose	Ingredients	Chemical Abstract Service Number (CAS #)	Maximum Ingredient Concentration in Additive (% by mass)**	Maximum Ingredient Concentration in HF Fluid (% by mass)**	Comments
Water	FTS International	Carrier/Base Fluid					
			Water	7732-18-5	100.00000	85.85185	None
MC MX 8-2544	Multi-Chem Group	Live Culture - Nitrate Reducing Bacteria					
				Listed Below			

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FRW-900	FTS International	Friction Reducer					
				Listed Below			
MC MX 5-3886	Multi-Chem Group	Specialty Brine					
				Listed Below			
Sand (Proppant)	FTS International	Proppant					
				Listed Below			
CI-150	FTS International	Acid corrosion inhibitor					
				Listed Below			
Hydrochloric Acid (15%)	FTS International	Acidizing					
				Listed Below			
HVG-1	FTS International	Water Gelling Agent					
				Listed Below			
Other Chemical (s)	Listed Above	See Trade Name (s) List					
				Listed Below			
APB-1	FTS International	Gel Breaker					
				Listed Below			
CS-500-SI	FTS International	Scale inhibitor					

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				Listed Below			
Items above are Trade Names with the exception of Base Water . Items below are the individual ingredients.							
			Silica Substrate	14808-60-7	100.00000	13.76431	None
			Calcium Nitrate.4H2O	13477-34-4	100.00000	0.10546	None
			Calcium Nitrate.4H2O	13477-34-4	100.00000	0.10546	
			Hydrochloric Acid	7647-01-0	15.00000	0.02601	None
			Hydrotreated Light Distillate	64742-47-8	30.00000	0.02106	None
			Hydrotreated Light Distillate	64742-47-8	30.00000	0.02106	
			Sodium chloride	7647-14-5	100.00000	0.00947	
			Sodium chloride	7647-14-5	100.00000	0.00947	None
			Alkyl Alcohol	Proprietary	10.00000	0.00702	
			Alkyl Alcohol	Proprietary	10.00000	0.00702	None
			Oxyalkylated alcohol A	Proprietary	5.00000	0.00351	
			Oxyalkylated alcohol A	Proprietary	5.00000	0.00351	None
			Ethylene glycol	107-21-1	10.00000	0.00240	None
			Petroleum Distillate	64742-47-8	55.00000	0.00049	
			Petroleum Distillate	64742-47-8	55.00000	0.00049	None
			Sodium nitrate	7631-99-4	5.00000	0.00047	
			Sodium nitrate	7631-99-4	5.00000	0.00047	None
			Guar gum	9000-30-0	50.00000	0.00045	None
			Guar gum	9000-30-0	50.00000	0.00045	
			Isopropanol	67-63-0	30.00000	0.00010	None
			Ethylene glycol	107-21-1	30.00000	0.00010	None
			Organic amine resin salt	Proprietary	30.00000	0.00010	None
			Dimethylformamide	68-12-2	10.00000	0.00003	None
			Aromatic aldehyde	Proprietary	10.00000	0.00003	None
			Quaternary ammonium compound	Proprietary	10.00000	0.00003	None
			Surfactant	68439-51-0	2.00000	0.00002	
			Clay	14808-60-7	2.00000	0.00002	None

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			Clay	14808-60-7	2.00000	0.00002	
			Surfactant	68439-51-0	2.00000	0.00002	None
			Ammonium Persulfate	7727-54-0	95.00000	0.00002	
			Ammonium Persulfate	7727-54-0	95.00000	0.00002	None

* Total Water Volume sources may include various types of water including fresh water, produced water, and recycled water

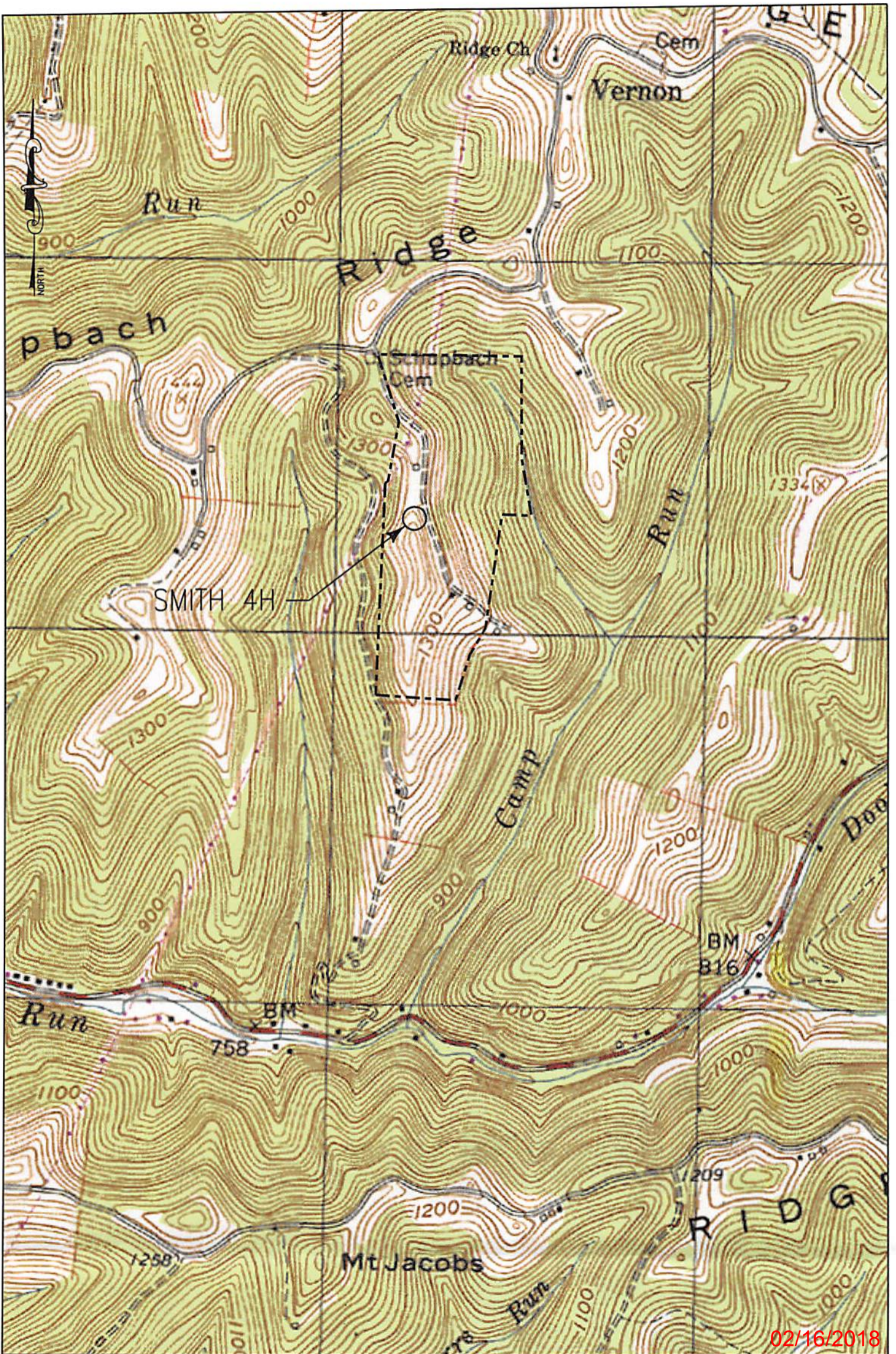
** Information is based on the maximum potential for concentration and thus the total may be over 100%

*** If you are calculating a percentage of total ingredients do not add the water volume below the green line to the water volume above the green line

Note: For Field Development Products (products that begin with FDP), MSDS level only information has been provided.

Ingredient information for chemicals subject to 29 CFR 1910.1200(i) and Appendix D are obtained from suppliers Material Safety Data Sheets (MSDS)

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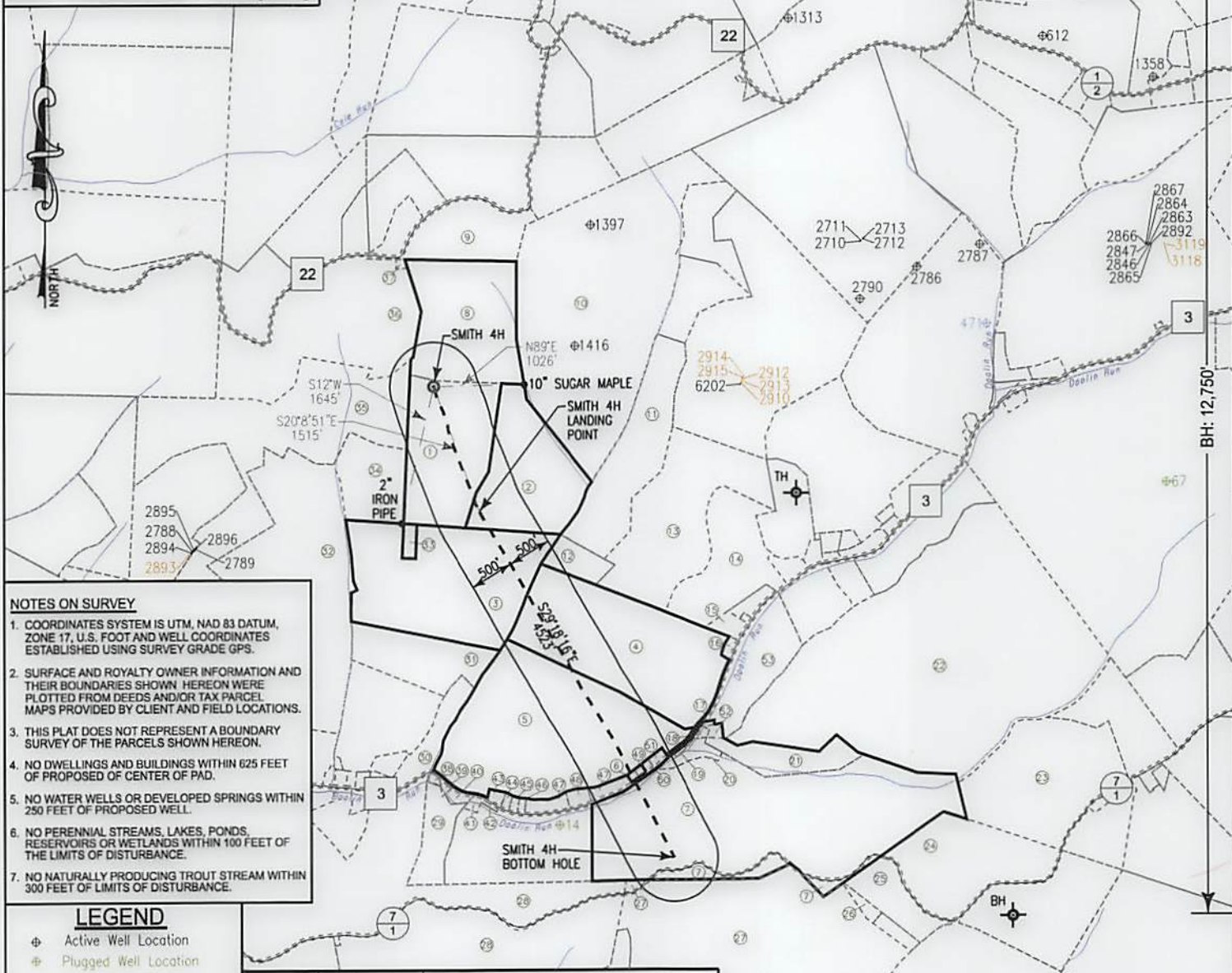
KEYSTONE CONSULTANTS, INC.
 32 EAST MAIN STREET,
 CARNEGIE, PA 15106
 412-278-2100

1" = 1000'
 NEW MARTINSVILLE 7.5'

EQT PRODUCTION COMPANY
 115 PROFESSIONAL PLACE
 PO BOX 280
 BRIDGEPORT, WV 26330

AS-BUILT

**Smith 4H
Smith
EQT Production Company**



- NOTES ON SURVEY**
- COORDINATES SYSTEM IS UTM, NAD 83 DATUM, ZONE 17, U.S. FOOT AND WELL COORDINATES ESTABLISHED USING SURVEY GRADE GPS.
 - SURFACE AND ROYALTY OWNER INFORMATION AND THEIR BOUNDARIES SHOWN HEREON WERE PLOTTED FROM DEEDS AND/OR TAX PARCEL MAPS PROVIDED BY CLIENT AND FIELD LOCATIONS.
 - THIS PLAT DOES NOT REPRESENT A BOUNDARY SURVEY OF THE PARCELS SHOWN HEREON.
 - NO DWELLINGS AND BUILDINGS WITHIN 625 FEET OF PROPOSED OF CENTER OF PAD.
 - NO WATER WELLS OR DEVELOPED SPRINGS WITHIN 250 FEET OF PROPOSED WELL.
 - NO PERENNIAL STREAMS, LAKES, PONDS, RESERVOIRS OR WETLANDS WITHIN 100 FEET OF THE LIMITS OF DISTURBANCE.
 - NO NATURALLY PRODUCING TROUT STREAM WITHIN 300 FEET OF LIMITS OF DISTURBANCE.

- LEGEND**
- ⊕ Active Well Location
 - ⊕ Plugged Well Location
 - ⊕ Abandoned Well
 - ⊕ Permit Issued
 - ① Tract Identification
 - Proposed Gas Well
 - Located Corner, as noted
 - - - Surface Tract Lines
 - Reference Line
 - Lease Boundary
 - Creek or Drain
 - WV State Route
 - WV County Route

Tract ID.	Acres	Owner
1	77.686601	Sonny L. Smith ET UX
2	31.908598	Mary Lou Thomas
3	57.763969	Mary Lou L. Thomas ET AL
4	54.815275	Ruth E. Mullett ET AL
5	73.573981	Elizabeth E. Mullett ET AL
6	0.593591	Danny Lee Neff ET UX
7	155.195314	B&R Construction Inc

(⊕) Denotes Location of Well on United States Topographic Maps



I, the undersigned, hereby certify that this plat is correct to the best of my knowledge and belief and shows all the information required by law and the regulations issued and prescribed by the Department of Environmental Protection.

Thomas C. Smith
L. L. S. 687



FILE NO: W2032 (BK 49-6)
DRAWING NO:
SCALE: 1" = 1800'
MINIMUM DEGREE OF ACCURACY: 1:2500
PROVEN SOURCE OF ELEVATION: NGS CORS Station

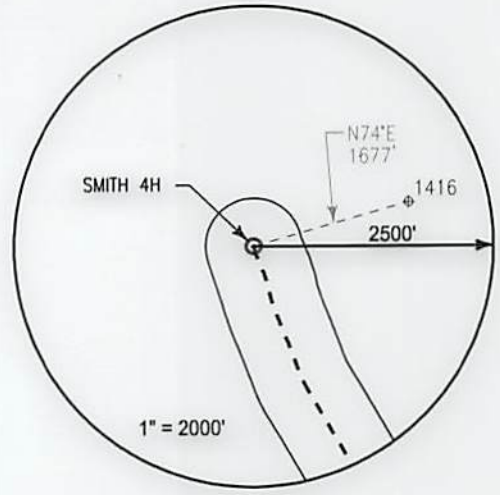
STATE OF WEST VIRGINIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
OIL AND GAS DIVISION

DATE: DECEMBER 4 20 17
OPERATORS WELL NO: SMITH 4H
API WELL NO
47 - 103 - 02792
STATE COUNTY PERMIT

WELL TYPE: OIL GAS LIQUID INJECTION WASTE DISPOSAL
 (IF GAS) PRODUCTION: STORAGE DEEP SHALLOW
 LOCATION ELEVATION: 1335' WATERSHED: TRIBUTARY OF DOOLIN RUN QUADRANGLE: NEW MARTINSVILLE 7.5'
 DISTRICT: Magnolia COUNTY: Wetzel
 SURFACE OWNER: Sonny & Charlotte Smith ACREAGE: 02/16/2018
 ROYALTY OWNER: Sonny & Charlotte Smith et al LEASE NO: 873632 ACREAGE: 77.69 ±
 PROPOSED WORK: DRILL CONVERT DRILL DEEPER FRACTURE OR STIMULATE PLUG OFF OLD FORMATION
 PERFORATE NEW FORMATION OTHER PHYSICAL CHANGE IN WELL (SPECIFY)
 PLUG AND ABANDON CLEAN OUT AND REPLUG TARGET FORMATION: Marcellus ESTIMATED DEPTH: 6,880'
 WELL OPERATOR: EQT Production Company DESIGNATED AGENT: Jason Ranson
 ADDRESS: 115 Professional Place PO Box 280 ADDRESS: 115 Professional Place PO Box 280
 Bridgeport, WV 26330 Bridgeport, WV 26330

**Smith 4H
Smith
EQT Production Company**

Tract ID	Tax Map No.	Parcel No.	County	District	Surface Tract Owner	Acres
1	8	5	Wetzel	Magnolia	Sonny L. & Charlotte Smith	38.9
2	8	6	Wetzel	Magnolia	Kocher Albert HRS	33.01
3	8	12	Wetzel	Magnolia	David L. & Ralph O. Smith	58.15
4	8	25	Wetzel	Magnolia	Cathy M. Westfall ETAL	57.68
5	8	55	Wetzel	Magnolia	Cathy M. Westfall ETAL	17.66
6	8A	5.2	Wetzel	Magnolia	Danny Lee Neff	0.22
7	8	66	Wetzel	Magnolia	Mark I. Cochran	134.66
8	5	32	Wetzel	Magnolia	Sonny L. & Charlotte L. Smith	37.5
9	5	26.2	Wetzel	Magnolia	Franklin Ray Blake	18
10	5	33	Wetzel	Magnolia	Franklin Ray Blake	108.47
11	8	7	Wetzel	Magnolia	Gary Lemons	30.19
12	8	13	Wetzel	Magnolia	Gary Lemons	5.57
13	8	14	Wetzel	Magnolia	Aaron Lloyd Lemons	43.79
14	8	14.1	Wetzel	Magnolia	James D. Johnston	24.46
15	8	26	Wetzel	Magnolia	Raymond L. & Ellen E. Ebert	1.84
16	8	25.1	Wetzel	Magnolia	Kevin A. & Sarah L. Yeater	0.56
17	8	28.1	Wetzel	Magnolia	Mark I. Cochran	0.17
18	8	66.3	Wetzel	Magnolia	Mark I. Cochran	0.32
19	8	55.1	Wetzel	Magnolia	Mark I. & Mary Beth Cochran	0.34
20	8	66.2	Wetzel	Magnolia	Mark I. & Mary Beth Cochran	2.47
21	8	66.1	Wetzel	Magnolia	Mark I. Cochran	10.53
22	9	7	Wetzel	Magnolia	James B. Stewart ETAL	164.78
23	9	15	Wetzel	Magnolia	David L. Goddard	52.95
24	9	27	Wetzel	Magnolia	David L. Goddard	59.30
25	9	24	Wetzel	Magnolia	Clinton L. & Albert E. Leasure	10.03
26	9	25	Wetzel	Magnolia	Clinton L. & Albert E. Leasure	1.26
27	8	74	Wetzel	Magnolia	Thomas Eugene Presley	97.10
28	8	73	Wetzel	Magnolia	Burwell Newman	154.12
29	8	64	Wetzel	Magnolia	Peter Pitsenberger	8.78
30	8	54	Wetzel	Magnolia	Barbara E. Palmer	7.64
31	8	24	Wetzel	Magnolia	Gary W. Linda J. Durig	18.32
32	8	22	Wetzel	Magnolia	Lawrence E. Zumpetta ETAL	107.50
33	8	12.1	Wetzel	Magnolia	Ralph Oscar & Jonee Kay Smith	1.37
34	8	4	Wetzel	Magnolia	Lawrence E. Zumpetta ETAL	15.28
35	8	3	Wetzel	Magnolia	Lawrence E. Zumpetta ETAL	79.47
36	5	31	Wetzel	Magnolia	William John Burton	66.56
37	5	31.1	Wetzel	Magnolia	Schubach Cemetery	0.27
38	8	64.1	Wetzel	Magnolia	Peter Pitsenberger	0.32
39	8	64.2	Wetzel	Magnolia	Leonard R. Oates Jr	0.25
40	8	85	Wetzel	Magnolia	Raymond L. Pribble	0.72
41	8	65	Wetzel	Magnolia	Jason T & Tracy L. Goodrich	0.53
42	8	65.1	Wetzel	Magnolia	Mark I. Cochran	0.16
43	8A	20	Wetzel	Magnolia	Cathy M. Westfall ETAL	0
44	8A	19	Wetzel	Magnolia	Daniel R. Westfall	0.35
45	8A	18	Wetzel	Magnolia	Daniel R. Westfall	0.34
46	8A	17	Wetzel	Magnolia	Daniel R. Westfall	0.3
47	8A	5	Wetzel	Magnolia	Cathy M. Westfall ETAL	2.9
48	8A	5.1	Wetzel	Magnolia	Donald L. & Brenda K. Brookover	1.07
49	8A	4	Wetzel	Magnolia	Danny Lee & Lisa A. Neff	0.23
50	8A	3	Wetzel	Magnolia	Michael J. Miller	0.24
51	8A	1	Wetzel	Magnolia	Michael J. Miller	0.46
52	8	66.4	Wetzel	Magnolia	Mark I. Cochran	0.6
53	8	28	Wetzel	Magnolia	Raymond L. & Ellen E. Ebert	17.33



Notes:
SMITH 4H As-Built coordinates are
 NAD 27 N: 420,212.000 E: 1,630,824.000
 NAD 27 Lat: 39.6426328 Long: -80.811070
 NAD 83 UTM N: 4,388,530.062 E: 516,225.345

SMITH 4H As-Built Landing Point coordinates are
 NAD 27 N: 418,789.950 E: 1,631,345.780
 NAD 27 Lat: 39.642446 Long: -80.809144
 NAD 83 UTM N: 4,388,099.483 E: 516,391.529

SMITH 4H As-Built Bottom Hole coordinates are
 NAD 27 N: 414,847.660 E: 1,633,558.600
 NAD 27 Lat: 39.631711 Long: -80.801084
 NAD 83 UTM N: 4,386,909.708 E: 517,085.695

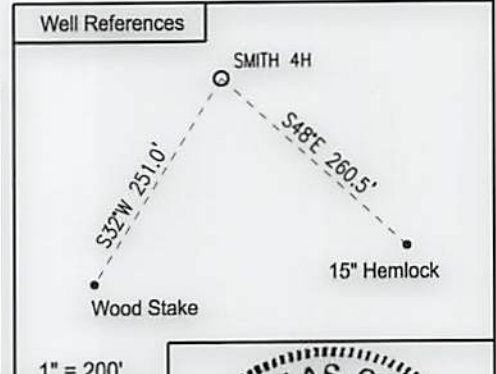
West Virginia Coordinates system of 1927 (North Zone) based upon Differential GPS Measurements
 Plat orientation, Corner and well ties are based upon the grid north meridian
 Well location references are based upon the grid north meridian.
 UTM coordinates are NAD83, Zone 17, Meters.

LEGEND

- ⊕ Active Well Location
- Proposed Gas Well
- Located Corner, as noted
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- Reference Line
- Lease Boundary
- Creek or Drain
- ⊙ WV County Route
- ⊙ WV State Route

SMITH PAD

- SMITH 3H ○ ○ SMITH 5H
- SMITH 1H ○ ○ SMITH 7H
- SMITH 2H ○ ○ SMITH 8H
- SMITH 4H ○ ○ SMITH 6H



I, the undersigned, hereby certify that this plat is correct to the best of my knowledge and belief and shows all the information required by law and the regulations issued and prescribed by the Department of Environmental Protection.

Thomas C. Smollis
 L. L. S. 687



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47 - 103 - 02792
 STATE COUNTY PERMIT

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 (IF GAS) PRODUCTION: STORAGE DEEP SHALLOW

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 ROYALTY OWNER: Sonny & Charlotte Smith, et al LEASE NO: 873632 ACREAGE: 77.69 ±

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