

Well Operator's Report of Well Work



Where energy meets innovation.

Well Number: 519165

API: 47 - 103 - 02904

Submission:  Initial  Amended

Notes: Please note that drilling operations for this well were performed by Stone Energy Corporation and that stimulation operations were performed by EQT Corporation.

RECEIVED  
Office of Oil and Gas  
AUG 24 2018  
WV Department of  
Environmental Protection

WR-35  
Rev. 8/23/13

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

API 47-103-02904 County Wetzel District Magnolia  
Quad New Martinsville Pad Name Smith Field/Pool Name Mary  
Farm name Smith, Sonny and Charlotte Well Number 519165  
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 4,388,541.959 Easting 516,226.062  
Landing Point of Curve Northing 4,388,512.542 Easting 515,675.027  
Bottom Hole Northing 4,389,375.647 Easting 515,177.812

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

RECEIVED  
Office of Oil and Gas

Drilling Media Surface hole  Air  Mud  Fresh Water Intermediate hole  Air  Mud  Fresh Water  Brine  
Production hole  Air  Mud  Fresh Water  Brine

AUG 21 2018  
WV Department of  
Environmental Protection

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

Date permit issued 7/31/2013 Date drilling commenced 11/9/2013 Date drilling ceased 7/20/2014  
Date completion activities began 5/25/2018 Date completion activities ceased 05/29/2018  
Verbal plugging (Y/N) N Date permission granted \_\_\_\_\_ Granted by \_\_\_\_\_

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 2,174 w/Oil Show Void(s) encountered (Y/N) depths N  
Coal depth(s) ft 1,017 Cavern(s) encountered (Y/N) depths N  
Is coal being mined in area (Y/N) N

Reviewed

Reviewed by:  
DMH

WR-35  
Rev. 8/23/13

API 47-103 - 02904 Farm name Smith, Sonny and Charlotte Well number 519165

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"	94'	New	LS - 94.1 ppf		N - GTS
Surface	17.5"	13.375"	1,300'	New	J55 - 54.5 ppf	121' & 203'	Y - CTS
Coal	17.5"	13.375"	1,300'	New	J55 - 36 ppf	121' & 203'	Y - CTS
Intermediate 1	12.25"	9.625"	2,579'	New	J55 - 36 ppf		Y - CTS
Intermediate 2							
Intermediate 3							
Production	8.75"	5.5"	11,032'	New	P110 - 20 ppf		N - TOC @ 1,682' Calculated
Tubing							
Packer type and depth set		TAM CAP Inflatable Packer on 9.625" Casing @ 1,199'					

Comment Details Circulated 30 bbls cement to surface on 13.375" casing string. Circulated 13 bbls cement to surface on the 9.625" casing string. Did not circulate any cement to surface on the 5.5" casing string. TOC on 5.5" calculated to be 1,682'.

CEMENT DATA	Class/Type of Cement	Number of Sacks	Slurry wt (ppg)	Yield (ft <sup>3</sup> /sks)	Volume (ft <sup>3</sup> )	Cement Top (MD)	WOC (hrs)
Conductor	Type 1	34	15.6	1.18	40	Surface	24.0
Surface	Class "A"	958	15.6	1.20	1,150	Surface	8.0
Coal	Class "A"	958	15.6	1.20	1,150	Surface	8.0
Intermediate 1	Lead-Flex Seal Tail-Class "A"	Lead-547 Tail-324	Lead-15.4 Tail 15.6	Lead-1.28 Tail-1.19	Lead-700 Tail-386	Surface	12.0
Intermediate 2							
Intermediate 3							
Production	VariCem	1,970	15.2	1.2	2,364	1,682' Calculated	7.0
Tubing							

Drillers TD (ft) 11,041 MD / 6,700 TVD Loggers TD (ft) N/A  
 Deepest formation penetrated Marcellus Shale Plug back to (ft) N/A  
 Plug back procedure \_\_\_\_\_

Kick off depth (ft) 5,922 MD / 5,875 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 21, 24, 27 and 29. Intermediate casing had bow spring centralizers placed on joints 10, 13, 18, 19, 22, 25, 28 and 31. Production casing had rigid spiral centralizers placed on every fourth joint beginning with joint 1 to joint 196. Ran a total of 50 rigid spiral centralizers. Ran bow spring centralizers from joint 204 to joint 252 on every eighth joint. A total of 7 bow spring centralizers were run.

RECEIVED  
Office of Oil and Gas  
AUG 24 2018

WAS WELL COMPLETED AS SHOT HOLE  Yes  No DETAILS \_\_\_\_\_

WV Department of Environmental Protection

WAS WELL COMPLETED OPEN HOLE?  Yes  No DETAILS \_\_\_\_\_

WERE TRACERS USED  Yes  No TYPE OF TRACER(S) USED \_\_\_\_\_

WR-35  
Rev. 8/23/13

API 47- 103 - 02904 Farm name Smith, Sonny and Charlotte Well number 519165

PERFORATION RECORD

Stage No.	Perforation date	Perforated from MD ft.	Perforated to MD ft.	Number of Perforations	Formation(s)
					Please See Attached

Please insert additional pages as applicable.

STIMULATION INFORMATION PER STAGE

Complete a separate record for each stimulation stage.

Stage No.	Stimulations 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)
								Please See Attached

RECEIVED  
Office of Oil and Gas  
AUG 24 2018  
WV Department of  
Environmental Protection

Please insert additional pages as applicable.

WR-35  
Rev. 8/23/13

API 47- 103 - 02904 Farm name Smith, Sonny and Charlotte Well number 519165

PRODUCING FORMATION(S)	DEPTHS	
<u>MARCELLUS</u>	<u>6,769'</u> TVD	<u>7,532'</u> MD
_____	_____	_____
_____	_____	_____
_____	_____	_____

Please insert additional pages as applicable.

GAS TEST  Build up  Drawdown  Open Flow OIL TEST  Flow  Pump

SHUT-IN PRESSURE Surface 1,345 psi Bottom Hole N/A psi DURATION OF TEST 442.5 hrs

OPEN FLOW Gas 7,316 mcfpd Oil N/A bpd NGL 119 bpd Water 630 bpd  
GAS MEASURED BY  Estimated  Orifice  Pilot

LITHOLOGY/ FORMATION	TOP	BOTTOM	TOP	BOTTOM	DESCRIBE ROCK TYPE AND RECORD QUANTITY AND TYPE OF FLUID (FRESHWATER, BRINE, OIL, GAS, H <sub>2</sub> S, ETC)
	DEPTH IN FT NAME TVD	DEPTH IN FT TVD	DEPTH IN FT MD	DEPTH IN FT MD	
	<u>0</u>		<u>0</u>		
See Attached Sheet					

RECEIVED  
Office of Oil and Gas

Please insert additional pages as applicable.

AUG 24 2018

Drilling Contractor Nomac (top-hole) & Saxon Drilling (horizontal)  
Address 2034 Martins Branch Rd / 9303 New Trails Drive City Mount Morris / The Woodlands State PA / TX Zip 25312 / 77381

WV Department of  
Environmental Protection

Logging Company Scientific Drilling and Schlumberger  
Address 124 Vista Drive / 1178 US HWY 33 East City Charleroi / Weston State PA / WV Zip 15022 / 26452

Cementing Company Schlumberger  
Address 1178 US HWY 33 East City Weston State WV Zip 26452

Stimulating Company ProFrac  
Address 777 Main Street, Suite 3900 City Fort Worth State TX Zip 76102

Please insert additional pages as applicable.

Completed by Brad Maddox Telephone (412) 395-7053  
Signature *Brad Maddox* Title Completions Director Date 8/23/2018

**519165 47-103-02904-00-00 Perforations**

<b>Stage Number</b>	<b>Perforation Date</b>	<b>Top Perf Depth (ftKB)</b>	<b>Bottom Perf Depth (ftKB)</b>	<b>Number of Shots</b>	<b>Formation</b>
1	4/21/2018	10,860	11,006	30	MARCELLUS
2	5/25/2018	10,660	10,837	48	MARCELLUS
3	5/26/2018	10,460	10,637	48	MARCELLUS
4	5/27/2018	10,260	10,437	48	MARCELLUS
5	5/27/2018	10,060	10,237	48	MARCELLUS
6	5/27/2018	9,860	10,037	48	MARCELLUS
7	5/27/2018	9,660	9,837	48	MARCELLUS
8	5/28/2018	9,460	9,637	48	MARCELLUS
9	5/28/2018	9,260	9,437	48	MARCELLUS
10	5/28/2018	9,060	9,237	48	MARCELLUS
11	5/28/2018	8,860	9,037	48	MARCELLUS
12	5/28/2018	8,660	8,837	48	MARCELLUS
13	5/29/2018	8,460	8,637	48	MARCELLUS
14	5/29/2018	8,260	8,437	48	MARCELLUS
15	5/29/2018	8,060	8,237	48	MARCELLUS
16	5/29/2018	7,860	8,037	48	MARCELLUS
17	5/29/2018	7,660	7,837	48	MARCELLUS

**RECEIVED**  
 Office of Oil and Gas  
**AUG 24 2018**  
 WV Department of  
 Environmental Protection

**519165 47-103-02904-00-00 - Stimulated Stages**

<b>Stage Number</b>	<b>Stimulation Date</b>	<b>Ave Pump Rate (BPM)</b>	<b>Ave Treatment Pressure (PSI)</b>	<b>Max Breakdown Pressure (PSI)</b>	<b>ISIP (PSI)</b>	<b>Amount of Proppant (lbs)</b>	<b>Amount of Water (bbls)</b>	<b>Amount of Nitrogen/other (units)</b>
1	5/25/2018	97	8,354.00	8,901.00	4,243.00	454,180.00	7,763	0
2	5/26/2018	100	7,934.00	8,308.00	3,827.00	457,280.00	7,703	0
3	5/27/2018	97	7,947.00	8,730.00	5,053.00	449,000.00	7,516	0
4	5/27/2018	99	8,005.00	8,418.00	4,565.00	450,860.00	7,457	0
5	5/27/2018	97	7,939.00	8,407.00	4,251.00	450,760.00	7,000	0
6	5/27/2018	99	7,859.00	8,616.00	4,724.00	450,600.00	7,409	0
7	5/28/2018	100	7,885.00	8,583.00	4,789.00	448,420.00	7,440	0
8	5/28/2018	100	7,934.00	8,568.00	4,245.00	450,200.00	6,889	0
9	5/28/2018	96	7,562.00	7,957.00	5,150.00	450,800.00	7,163	0
10	5/28/2018	96	7,700.00	7,995.00	4,543.00	449,160.00	7,263	0
11	5/28/2018	100	7,815.00	8,184.00	4,325.00	445,000.00	8,069	0
12	5/28/2018	100	7,406.00	8,701.00	4,468.00	450,440.00	7,279	0
13	5/29/2018	100	7,283.00	8,311.00	4,670.00	450,240.00	7,175	0
14	5/29/2018	97	7,990.00	8,612.00	4,077.00	448,540.00	7,181	0
15	5/29/2018	93	7,975.00	8,843.00	4,726.00	450,500.00	8,958	0
16	5/29/2018	92	8,380.00	8,670.00	4,614.00	444,840.00	8,112	0
17	5/29/2018	97	7,710.00	8,422.00	4,418.00	450,280.00	7,003	0

**RECEIVED**  
 Office of Oil and Gas  
**AUG 24 2018**  
 WV Department of  
 Environmental Protection

Smith #1H API 47-103-02904 Stone Energy Corporation					
Horizontal					
	Top (ft TVD)	Top (ft MD)	Bottom (ft TVD)	Bottom (ft MD)	
Sandstone & Shale	Surface		*	1,017	FW @ 100
Coal	1,017		*	1,020	
Sandstone & Shale	1,020		*	2,163	
Little Lime	2,163		*	2,193	SW w/ Oil Show @ 2,174
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		*	5,694	5,741
Rhinestreet	5,694	5,741	~	6,476	6,680
Cashaqua	6,476	6,680	~	6,613	7,007
Middlesex	6,613	7,007	~	6,636	7,054
West River	6,636	7,054	~	6,686	7,214
Geneseo	6,686	7,214	~	6,702	7,263
Tully Limestone	6,702	7,263	~	6,735	7,384
Hamilton Shale	6,735	7,384	~	6,769	7,532
Marcellus	6,769	7,532	~	6,700	11,041
TD				6,700	11,041

\* From Pilot Hole Log and Driller's Log

~ From MWD Gamma Log





Project: Mary Prospect  
 Site: Smith Pad  
 Well: 1H  
 Wellbore: OH  
 Design: Smith 1H As Drilled



WELL DETAILS 1H

+N/-S	+E/-W	Northing	Ground Level Easting	1321.00	Latitude	Longitude
0.00	0.00	420251.00	1630827.00	39° 38' 47.168 N	80° 48' 39.822 W	

REFERENCE INFORMATION

Co-ordinate (N/E) Reference: Well 1H, 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

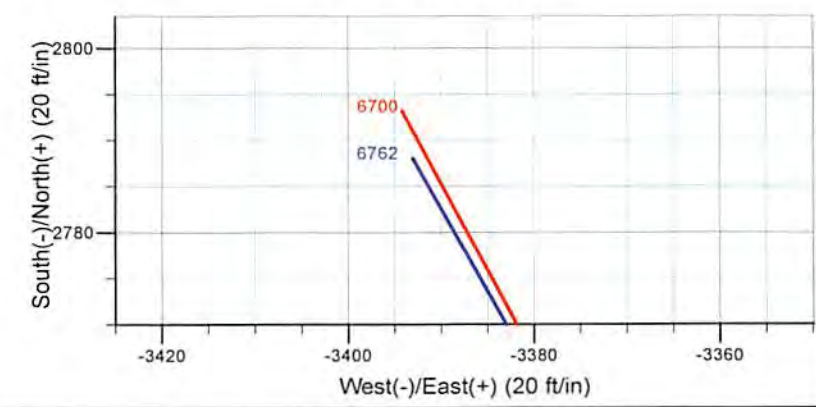
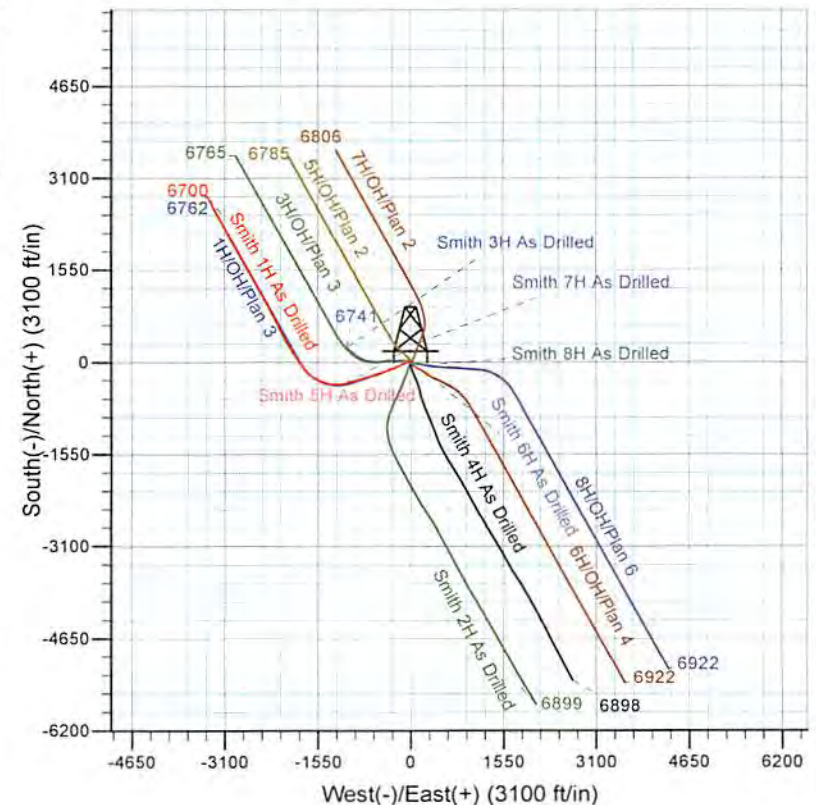
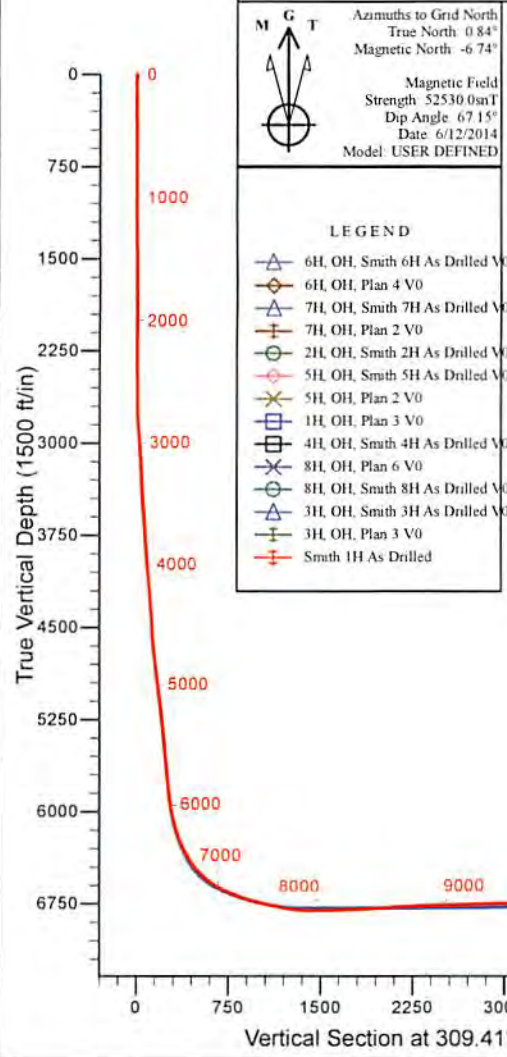
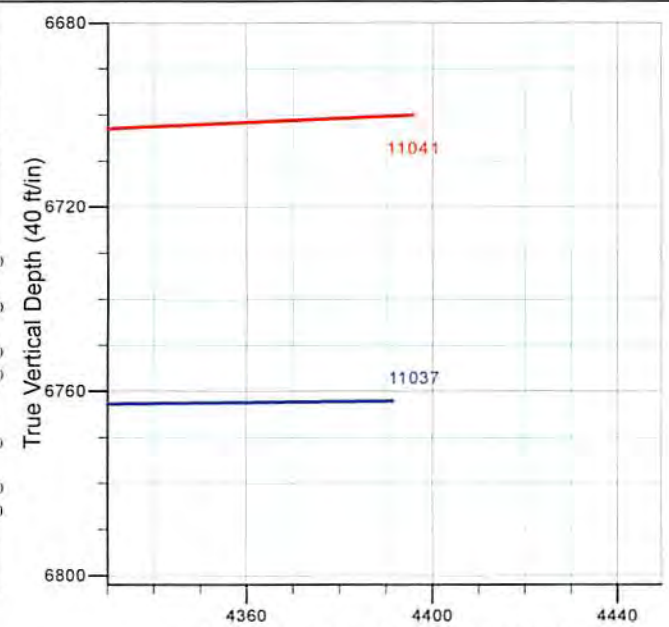
PROJECT DETAILS: Mary Prospect

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

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	V Sect	Target
1	5795.00	11.90	246.97	5749.19	-167.49	-472.92	0.00	0.00	259.06	
2	5922.00	11.90	246.97	5873.46	-177.74	-497.02	0.00	0.00	271.17	
3	6834.30	66.56	251.52	6553.76	-361.37	-1020.90	6.00	5.11	559.35	
4	7841.56	90.50	331.00	6790.00	-7.00	-1843.50	8.00	85.31	1419.90	Smith 1H_LP4
5	11037.46	90.50	331.00	6762.11	2788.01	-3393.01	0.00	0.00	4391.52	Smith 1H_PBHL4

Azimuths to Grid North  
 True North 0.84°  
 Magnetic North -6.74°  
 Magnetic Field  
 Strength 52530.0nT  
 Dip Angle 67.15°  
 Date 6/12/2014  
 Model USER DEFINED

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



RECEIVED  
 Office of Oil and Gas  
 AUG 24 2018  
 WV Department of Environmental Protection



## Stone Energy

Mary Prospect  
Smith Pad  
1H

OH

Design: Smith 1H As Drilled

## Standard Survey Report

25 July, 2014

RECEIVED  
Office of Oil and Gas  
AUG 24 2018  
WV Department of  
Environmental Protection





Scientific Drilling  
Survey Report

11/16/2018  
Scientific Drilling

<b>Company:</b>	Stone Energy	<b>Local Co-ordinate Reference:</b>	Well 1H
<b>Project:</b>	Mary Prospect	<b>TVD Reference:</b>	GL 1321' & KB 18' @ 1339.00ft (Saxon 141)
<b>Site:</b>	Smith Pad	<b>MD Reference:</b>	GL 1321' & KB 18' @ 1339.00ft (Saxon 141)
<b>Well:</b>	1H	<b>North Reference:</b>	Grid
<b>Wellbore:</b>	OH	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	Smith 1H 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>	Smith Pad				
<b>Site Position:</b>		<b>Northing:</b>	420,251.00 usft	<b>Latitude:</b>	39° 38' 47.168 N
<b>From:</b>	Map	<b>Easting:</b>	1,630,827.00 usft	<b>Longitude:</b>	80° 48' 39.822 W
<b>Position Uncertainty:</b>	0.00 ft	<b>Slot Radius:</b>	13-3/16 "	<b>Grid Convergence:</b>	-0.84 °

<b>Well</b>	1H					
<b>Well Position</b>	<b>+N/-S</b>	0.00 ft	<b>Northing:</b>	420,251.00 usft	<b>Latitude:</b>	39° 38' 47.168 N
	<b>+E/-W</b>	0.00 ft	<b>Easting:</b>	1,630,827.00 usft	<b>Longitude:</b>	80° 48' 39.822 W
<b>Position Uncertainty</b>		0.00 ft	<b>Wellhead Elevation:</b>	0.00 ft	<b>Ground Level:</b>	1,321.00 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>
	BGGM2013	8/21/2013	-8.54	67.20	52,536
	BGGM2013	9/24/2013	-8.55	67.19	52,524
	BGGM2013	10/25/2013	-8.55	67.18	52,513
	BGGM2014	6/11/2014	-8.52	67.15	52,439
	User Defined	6/12/2014	-7.58	67.15	52,530

<b>Design</b>	Smith 1H 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		

<b>Survey Program</b>	<b>Date</b>	7/25/2014			
<b>From (ft)</b>	<b>To (ft)</b>	<b>Survey (Wellbore)</b>	<b>Tool Name</b>	<b>Description</b>	
103.00	2,582.72	Survey 1 - SDI Gyro (OH)	SDI Standard Keeper 103	SDI Standard Wireline Keeper ver 1.0.3	
2,583.01	5,733.00	Survey 2 - SDI MWD (OH)	MWD SDI	MWD - Standard ver 1.0.1	
5,733.00	11,041.00	Survey 3 - SDI MWD (OH)	MWD SDI	MWD - Standard ver 1.0.1	

RECEIVED  
Office of Oil and Gas  
AUG 24 2018  
WV Department of Environmental Protection

<b>Survey</b>										
<b>Measured Depth (ft)</b>	<b>Inclination (°)</b>	<b>Azimuth (°)</b>	<b>Vertical Depth (ft)</b>	<b>+N/-S (ft)</b>	<b>+E/-W (ft)</b>	<b>Vertical Section (ft)</b>	<b>Dogleg Rate (°/100usft)</b>	<b>Build Rate (°/100usft)</b>	<b>Turn Rate (°/100usft)</b>	
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
103.00	0.24	146.78	103.00	-0.18	0.12	-0.21	0.23	0.23	0.00	
<b>First SDI Gyro Survey</b>										
203.00	0.14	281.67	203.00	-0.33	0.11	-0.30	0.35	-0.10	134.89	
303.00	0.16	299.75	303.00	-0.24	-0.13	-0.05	0.05	0.02	18.08	



Scientific Drilling  
Survey Report

11/16/2018  
Scientific Drilling

<b>Company:</b>	Stone Energy	<b>Local Co-ordinate Reference:</b>	Well 1H
<b>Project:</b>	Mary Prospect	<b>TVD Reference:</b>	GL 1321' & KB 18' @ 1339.00ft (Saxon 141)
<b>Site:</b>	Smith Pad	<b>MD Reference:</b>	GL 1321' & KB 18' @ 1339.00ft (Saxon 141)
<b>Well:</b>	1H	<b>North Reference:</b>	Grid
<b>Wellbore:</b>	OH	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	Smith 1H 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)
403.00	0.03	193.09	403.00	-0.19	-0.25	0.07	0.17	-0.13	-106.66
503.00	0.22	333.65	503.00	-0.05	-0.35	0.24	0.24	0.19	140.56
603.00	0.10	305.74	603.00	0.18	-0.50	0.50	0.14	-0.12	-27.91
703.00	0.12	282.84	703.00	0.25	-0.67	0.68	0.05	0.02	-22.90
803.00	0.28	305.79	803.00	0.42	-0.98	1.02	0.18	0.16	22.95
903.00	0.28	329.82	903.00	0.76	-1.29	1.47	0.11	-0.02	24.03
1,003.00	0.25	0.79	1,003.00	1.17	-1.40	1.82	0.14	-0.01	30.97
1,103.00	0.23	333.47	1,103.00	1.57	-1.49	2.14	0.12	-0.02	-27.32
1,203.00	0.19	270.53	1,203.00	1.75	-1.74	2.46	0.22	-0.04	-62.94
1,303.00	0.21	256.10	1,303.00	1.71	-2.08	2.69	0.05	0.02	-14.43
1,403.00	0.28	278.60	1,403.00	1.70	-2.50	3.01	0.12	0.07	22.50
1,503.00	0.29	256.37	1,502.99	1.68	-2.99	3.38	0.11	0.01	-22.23
1,603.00	0.46	305.94	1,602.99	1.85	-3.56	3.93	0.35	0.17	49.57
1,703.00	0.27	278.87	1,702.99	2.12	-4.12	4.53	0.25	-0.19	-27.07
1,803.00	0.32	298.79	1,802.99	2.29	-4.60	5.01	0.11	0.05	19.92
1,903.00	0.43	277.95	1,902.99	2.48	-5.21	5.60	0.17	0.11	-20.84
2,003.00	0.45	316.02	2,002.99	2.82	-5.86	6.31	0.29	0.02	38.07
2,103.00	0.39	326.84	2,102.98	3.38	-6.32	7.03	0.10	-0.06	10.82
2,203.00	0.19	29.70	2,202.98	3.81	-6.42	7.38	0.35	-0.20	Office of Oil and Gas
2,303.00	0.47	357.49	2,302.98	4.37	-6.36	7.68	0.33	0.28	-32.21
2,403.00	0.42	14.55	2,402.98	5.13	-6.28	8.11	0.14	-0.05	Aug 24 2018
2,503.01	0.57	47.45	2,502.97	5.82	-5.82	8.20	0.32	0.15	12.96
2,582.71	0.77	34.85	2,582.67	6.53	-5.23	8.18	0.31	0.25	Department of Environmental Protection
<b>Last SDI Gyro Survey</b>									
2,583.01	0.77	34.82	2,582.97	6.53	-5.22	8.18	0.31	0.27	-11.60
<b>First SDI MWD Survey</b>									
2,712.01	1.25	279.87	2,711.96	7.48	-6.12	9.48	1.34	0.37	-89.11
2,805.01	3.77	273.76	2,804.86	7.86	-10.17	12.84	2.72	2.71	-6.57
2,899.01	6.22	270.42	2,898.50	8.10	-18.34	19.31	2.62	2.61	-3.55
2,989.01	6.81	271.62	2,987.92	8.29	-28.55	27.32	0.67	0.66	1.33
3,081.01	5.70	260.17	3,079.37	7.66	-38.51	34.62	1.81	-1.21	-12.45
3,174.01	4.16	250.08	3,172.03	5.72	-46.23	39.35	1.89	-1.66	-10.85
3,266.01	3.75	243.48	3,263.81	3.24	-52.06	42.28	0.67	-0.45	-7.17
3,360.01	4.79	248.17	3,357.55	0.41	-58.45	45.42	1.17	1.11	4.99
3,451.01	6.46	261.29	3,448.11	-1.78	-67.04	50.67	2.30	1.84	14.42
3,542.01	6.60	262.05	3,538.52	-3.28	-77.28	57.63	0.18	0.15	0.84
3,635.01	7.26	256.81	3,630.84	-5.36	-88.30	64.82	0.98	0.71	-5.63
3,724.01	7.60	244.71	3,719.10	-9.16	-99.09	70.75	1.80	0.38	-13.60
3,818.01	8.15	240.78	3,812.21	-15.06	-110.53	75.83	0.82	0.59	-4.18
3,910.01	9.49	241.33	3,903.12	-21.89	-122.88	81.04	1.46	1.46	0.60
4,000.01	10.84	247.62	3,991.71	-28.67	-137.21	87.81	1.94	1.50	6.99
4,091.01	11.92	250.00	4,080.92	-35.14	-153.96	96.64	1.29	1.19	2.62
4,183.01	11.58	246.70	4,170.99	-42.04	-171.37	105.71	0.82	-0.37	-3.59



Scientific Drilling  
Survey Report

11/16/2018  
Scientific Drilling

<b>Company:</b>	Stone Energy	<b>Local Co-ordinate Reference:</b>	Well 1H
<b>Project:</b>	Mary Prospect	<b>TVD Reference:</b>	GL 1321' & KB 18' @ 1339.00ft (Saxon 141)
<b>Site:</b>	Smith Pad	<b>MD Reference:</b>	GL 1321' & KB 18' @ 1339.00ft (Saxon 141)
<b>Well:</b>	1H	<b>North Reference:</b>	Grid
<b>Wellbore:</b>	OH	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	Smith 1H 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)
4,275.01	11.40	242.43	4,261.15	-49.90	-187.91	113.50	0.94	-0.20	-4.64
4,368.01	11.44	240.02	4,352.31	-58.77	-204.04	120.34	0.51	0.04	-2.59
4,463.01	11.35	235.43	4,445.44	-68.78	-219.90	126.24	0.96	-0.09	-4.83
4,555.01	11.66	237.53	4,535.59	-78.91	-235.20	131.63	0.57	0.34	2.28
4,648.01	11.72	245.33	4,626.67	-87.89	-251.71	138.68	1.70	0.06	8.39
4,741.01	11.38	249.45	4,717.79	-95.06	-268.89	147.40	0.96	-0.37	4.43
4,831.01	11.91	251.22	4,805.94	-101.16	-285.99	156.74	0.71	0.59	1.97
4,924.01	12.35	257.28	4,896.86	-106.44	-304.78	167.91	1.45	0.47	6.52
5,019.01	12.18	255.39	4,989.70	-111.21	-324.39	180.03	0.46	-0.18	-1.99
5,112.01	11.93	251.97	5,080.65	-116.66	-343.02	190.97	0.81	-0.27	-3.68
5,205.00	12.28	254.23	5,171.57	-122.32	-361.68	201.79	0.63	0.38	2.43
5,296.00	11.96	250.18	5,260.54	-128.15	-379.86	212.14	1.00	-0.35	-4.45
5,391.00	11.80	247.18	5,353.51	-135.25	-398.08	221.70	0.67	-0.17	-3.16
5,484.00	11.31	244.35	5,444.62	-142.89	-415.06	229.97	0.81	-0.53	-3.04
5,576.00	11.27	246.46	5,534.84	-150.38	-431.44	237.87	0.45	-0.04	2.29
5,670.00	12.07	248.94	5,626.90	-157.59	-449.03	246.89	1.00	0.85	2.64
5,733.00	11.90	246.97	5,688.53	-162.49	-461.16	253.14	0.70	-0.27	-3.13
5,862.00	9.85	248.69	5,815.20	-171.71	-483.68	264.69	1.61	-1.59	1.33
5,894.00	9.79	250.23	5,846.73	-173.62	-488.79	267.42	0.84	-0.19	4.81
5,925.00	11.07	253.35	5,877.22	-175.37	-494.12	270.44	4.51	4.13	10.06
5,957.00	13.01	254.95	5,908.52	-177.18	-500.54	274.25	6.15	6.06	5.60
5,989.00	14.92	254.94	5,939.57	-179.19	-508.00	278.73	5.97	5.97	-0.03
6,021.00	16.99	256.16	5,970.34	-181.38	-516.52	283.93	6.55	6.47	3.41
6,053.00	19.14	256.04	6,000.76	-183.76	-526.15	289.85	6.72	6.72	-0.38
6,085.00	21.20	255.29	6,030.79	-186.50	-536.84	296.38	6.49	6.44	6.44
6,116.00	23.05	253.32	6,059.51	-189.66	-548.07	303.05	6.43	5.97	-6.35
6,148.00	24.94	252.37	6,088.74	-193.50	-560.51	310.21	6.03	5.91	-2.97
6,179.00	27.09	251.09	6,116.60	-197.77	-573.41	317.48	7.17	6.94	-4.13
6,211.00	29.24	251.48	6,144.81	-202.62	-587.72	325.45	6.74	6.72	1.22
6,243.00	31.31	251.76	6,172.44	-207.70	-603.03	334.05	6.48	6.47	0.88
6,275.00	33.64	252.09	6,199.44	-213.03	-619.36	343.29	7.30	7.28	1.03
6,307.00	35.61	251.95	6,225.77	-218.64	-636.66	353.09	6.16	6.16	-0.44
6,338.00	37.72	252.86	6,250.63	-224.23	-654.30	363.17	7.03	6.81	2.94
6,369.00	40.24	251.73	6,274.73	-230.17	-672.87	373.75	8.45	8.13	-3.65
6,401.00	42.34	251.22	6,298.77	-236.88	-692.89	384.96	6.65	6.56	-1.59
6,433.00	44.60	250.15	6,322.00	-244.17	-713.67	396.39	7.43	7.06	-3.34
6,465.00	46.72	249.84	6,344.36	-252.00	-735.17	408.03	6.66	6.63	-0.97
6,497.00	48.75	249.66	6,365.88	-260.19	-757.39	419.99	6.36	6.34	-0.56
6,528.00	50.48	251.26	6,385.97	-268.08	-779.64	432.17	6.83	5.58	5.16
6,560.00	51.85	251.38	6,406.03	-276.07	-803.25	445.35	4.29	4.28	0.38
6,592.00	52.85	251.91	6,425.58	-284.05	-827.30	458.86	3.39	3.13	1.66
6,624.00	53.59	255.47	6,444.74	-291.24	-851.89	473.30	9.21	2.31	11.13
6,656.00	55.16	255.42	6,463.38	-297.77	-877.07	488.60	4.91	4.91	-0.16
6,688.00	56.57	254.71	6,481.34	-304.60	-902.66	504.04	4.77	4.41	-2.22

RECEIVED  
Office of Oil and Gas  
AUG 24 2018  
Department of Environmental Protection



Scientific Drilling  
Survey Report

11/16/2018  
Scientific Drilling

<b>Company:</b>	Stone Energy	<b>Local Co-ordinate Reference:</b>	Well 1H
<b>Project:</b>	Mary Prospect	<b>TVD Reference:</b>	GL 1321' & KB 18' @ 1339.00ft (Saxon 141)
<b>Site:</b>	Smith Pad	<b>MD Reference:</b>	GL 1321' & KB 18' @ 1339.00ft (Saxon 141)
<b>Well:</b>	1H	<b>North Reference:</b>	Grid
<b>Wellbore:</b>	OH	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	Smith 1H 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)	
6,719.00	59.04	254.74	6,497.85	-311.51	-927.96	519.20	7.97	7.97	0.10	
6,751.00	61.04	253.52	6,513.83	-319.10	-954.63	534.99	7.07	6.25	-3.81	
6,783.00	63.55	252.63	6,528.71	-327.35	-981.73	550.69	8.22	7.84	-2.78	
6,815.00	65.70	252.76	6,542.42	-335.94	-1,009.33	566.56	6.73	6.72	0.41	
6,847.00	66.44	253.56	6,555.40	-344.42	-1,037.32	582.81	3.25	2.31	2.50	
6,878.00	66.28	255.58	6,567.83	-351.97	-1,064.70	599.16	5.99	-0.52	6.52	
6,910.00	66.68	257.50	6,580.60	-358.80	-1,093.23	616.87	5.64	1.25	6.00	
6,942.00	66.83	259.81	6,593.24	-364.58	-1,122.06	635.47	6.65	0.47	7.22	
6,974.00	67.81	261.98	6,605.58	-369.25	-1,151.21	655.03	6.97	3.06	6.78	
7,006.00	68.29	264.73	6,617.54	-372.69	-1,180.69	675.62	8.11	1.50	8.59	
7,038.00	68.46	267.46	6,629.33	-374.71	-1,210.36	697.27	7.95	0.53	8.53	
7,070.00	68.86	269.72	6,640.98	-375.45	-1,240.16	719.82	6.70	1.25	7.03	
7,101.00	70.19	271.90	6,651.82	-375.03	-1,269.19	742.52	7.86	4.29	7.03	
7,133.00	71.00	274.04	6,662.46	-373.47	-1,299.33	766.80	6.60	2.53	6.43	
7,163.00	71.21	276.73	6,672.17	-370.80	-1,327.59	790.32	8.51	0.70	8.97	
7,195.00	72.26	279.34	6,682.20	-366.55	-1,357.67	816.26	8.41	3.28	10.06	
7,226.00	72.97	282.46	6,691.47	-360.96	-1,386.72	842.25	9.87	2.29	10.06	
7,258.00	73.66	285.15	6,700.66	-353.64	-1,416.48	869.89	8.34	2.16	8.41	
7,290.00	73.80	287.89	6,709.62	-344.91	-1,445.93	898.19	8.23	0.44	8.56	
7,322.00	74.01	290.86	6,718.50	-334.71	-1,474.93	927.07	8.94	0.66	9.28	
7,354.00	73.59	293.38	6,727.43	-323.14	-1,503.39	956.41	7.68	-1.31	7.88	
7,385.00	74.25	295.98	6,736.01	-310.71	-1,530.46	985.22	8.34	2.13	8.39	
7,417.00	75.43	298.60	6,744.38	-296.54	-1,557.90	1,015.41	8.72	3.69	8.19	
7,449.00	76.72	301.33	6,752.09	-281.03	-1,584.80	1,046.05	9.21	4.03	8.53	
7,481.00	77.29	304.09	6,759.28	-264.18	-1,611.04	1,077.01	8.59	1.78	8.63	
7,513.00	78.02	306.36	6,766.13	-246.15	-1,636.57	1,108.18	7.30	2.28	7.09	
7,544.00	79.05	308.47	6,772.29	-227.69	-1,660.70	1,138.55	7.45	3.32	6.81	
7,576.00	79.96	311.13	6,778.12	-207.55	-1,684.87	1,170.01	8.65	2.84	8.31	
7,608.00	80.43	313.49	6,783.57	-186.33	-1,708.19	1,201.50	7.41	1.47	7.38	
7,640.00	80.88	316.11	6,788.77	-164.08	-1,730.59	1,232.93	8.20	1.41	8.19	
7,672.00	81.58	318.70	6,793.64	-140.80	-1,751.99	1,264.24	8.29	2.19	8.09	
7,703.00	82.46	320.95	6,797.95	-117.35	-1,771.79	1,294.44	7.73	2.84	7.26	
7,767.00	86.01	325.71	6,804.38	-66.29	-1,809.80	1,356.21	9.25	5.55	7.44	
7,831.00	90.80	326.59	6,806.16	-13.18	-1,845.42	1,417.46	7.61	7.48	1.38	
7,835.39	90.83	326.60	6,806.10	-9.51	-1,847.84	1,421.65	0.71	0.64	0.31	
<b>Smith 1H_LP4</b>										
7,895.00	91.21	326.79	6,805.04	40.30	-1,880.56	1,478.56	0.71	0.64	0.31	
7,959.00	91.81	326.21	6,803.35	93.65	-1,915.87	1,539.71	1.30	0.94	-0.91	
8,022.00	91.48	325.95	6,801.54	145.91	-1,951.02	1,600.04	0.67	-0.52	-0.41	
8,086.00	91.44	323.59	6,799.91	198.17	-1,987.92	1,661.73	3.69	-0.06	-3.69	
8,150.00	91.37	326.18	6,798.34	250.50	-2,024.72	1,723.38	4.05	-0.11	4.05	
8,214.00	92.89	328.81	6,795.96	304.43	-2,059.08	1,784.17	4.74	2.38	4.11	
8,277.00	92.65	332.72	6,792.92	359.33	-2,089.81	1,842.77	6.21	-0.38	6.21	

RECEIVED  
Office of Oil and Gas  
AUG 24 2018  
Department of  
Environmental Protection



Scientific Drilling  
Survey Report

11/16/2018  
Scientific Drilling

Company:	Stone Energy	Local Co-ordinate Reference:	Well 1H
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:	1H	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	Smith 1H 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)
8,341.00	92.58	334.60	6,780.00	416.62	-2,118.18	1,901.06	2.94	-0.11	2.94
8,404.00	93.39	335.78	6,786.72	473.73	-2,144.58	1,957.71	2.27	1.29	1.87
8,466.00	93.66	334.21	6,782.91	529.81	-2,170.73	2,013.52	2.56	0.44	-2.53
8,530.00	93.39	333.43	6,778.97	587.13	-2,198.92	2,071.69	1.29	-0.42	-1.22
8,593.00	93.46	332.70	6,775.21	643.20	-2,227.40	2,129.29	1.16	0.11	-1.16
8,656.00	91.91	331.64	6,772.26	698.85	-2,256.78	2,187.32	2.98	-2.46	-1.68
8,720.00	92.55	332.90	6,769.76	755.45	-2,286.54	2,246.25	2.21	1.00	1.97
8,783.00	92.68	333.50	6,766.89	811.63	-2,314.91	2,303.83	0.97	0.21	0.95
8,846.00	92.68	333.22	6,763.94	867.88	-2,343.13	2,361.35	0.44	0.00	-0.44
8,909.00	91.92	333.30	6,761.42	924.09	-2,371.45	2,418.92	1.21	-1.21	0.13
8,973.00	90.81	332.91	6,759.89	981.15	-2,400.39	2,477.51	1.84	-1.73	-0.61
9,036.00	90.57	331.88	6,759.13	1,036.98	-2,429.58	2,535.50	1.68	-0.38	-1.63
9,099.00	91.11	331.77	6,758.21	1,092.51	-2,459.33	2,593.73	0.87	0.86	-0.17
9,162.00	91.78	330.31	6,756.62	1,147.61	-2,489.82	2,652.27	2.55	1.06	-2.32
9,226.00	92.15	330.47	6,754.43	1,203.22	-2,521.43	2,712.00	0.63	0.58	0.29
9,289.00	92.18	331.44	6,752.05	1,258.26	-2,551.99	2,770.55	1.54	0.05	1.54
9,353.00	92.43	331.07	6,749.47	1,314.32	-2,582.74	2,829.91	0.70	0.39	-0.58
9,416.00	91.17	331.48	6,747.49	1,369.54	-2,613.01	2,888.35	2.10	-2.00	0.65
9,480.00	91.54	331.77	6,745.98	1,425.84	-2,643.41	2,947.58	0.73	0.58	0.65
9,544.00	91.68	331.81	6,744.18	1,482.21	-2,673.65	3,006.73	0.23	0.22	0.06
9,607.00	90.57	332.05	6,742.95	1,537.79	-2,703.29	3,064.92	1.80	-1.76	0.38
9,671.00	91.58	332.20	6,741.74	1,594.35	-2,733.21	3,123.94	1.60	1.58	0.23
9,734.00	92.08	331.67	6,739.73	1,649.92	-2,762.83	3,182.11	1.16	0.79	-0.84
9,798.00	91.04	330.61	6,737.99	1,705.95	-2,793.71	3,241.53	2.32	-1.63	-1.66
9,862.00	91.78	330.80	6,736.42	1,761.74	-2,825.02	3,301.15	1.19	1.16	0.30
9,925.00	92.51	330.58	6,734.06	1,816.64	-2,855.84	3,359.81	1.21	1.16	-0.35
9,989.00	92.85	330.55	6,731.06	1,872.32	-2,887.25	3,419.43	0.53	0.53	-0.05
10,053.00	91.41	330.05	6,728.69	1,927.87	-2,918.94	3,479.18	2.38	-2.25	-0.78
10,117.00	91.31	329.58	6,727.17	1,983.18	-2,951.11	3,539.15	0.75	-0.16	-0.73
10,180.00	90.13	330.04	6,726.38	2,037.63	-2,982.79	3,598.19	2.01	-1.87	0.73
10,244.00	90.81	329.32	6,725.85	2,092.87	-3,015.10	3,658.22	1.55	1.06	-1.13
10,308.00	91.44	329.25	6,724.59	2,147.88	-3,047.78	3,718.40	0.99	0.98	-0.11
10,372.00	91.78	329.59	6,722.80	2,202.96	-3,080.32	3,778.51	0.75	0.53	0.53
10,435.00	90.81	330.74	6,721.37	2,257.59	-3,111.66	3,837.41	2.39	-1.54	1.83
10,499.00	91.74	331.85	6,719.95	2,313.71	-3,142.39	3,896.78	2.26	1.45	1.73
10,563.00	92.52	331.92	6,717.57	2,370.12	-3,172.53	3,955.88	1.22	1.22	0.11
10,626.00	92.75	332.25	6,714.67	2,425.73	-3,201.99	4,013.94	0.64	0.37	0.52
10,689.00	91.17	332.99	6,712.52	2,481.64	-3,230.95	4,071.81	2.77	-2.51	1.17
10,752.00	91.64	332.64	6,710.97	2,537.66	-3,259.72	4,129.61	0.93	0.75	-0.56
10,816.00	91.98	332.10	6,708.95	2,594.34	-3,289.38	4,188.51	1.00	0.53	-0.84
10,880.00	92.45	332.31	6,706.48	2,650.91	-3,319.21	4,247.46	0.80	0.73	0.33
10,943.00	92.11	332.40	6,703.97	2,706.67	-3,348.41	4,305.43	0.56	-0.54	0.14
10,974.00	92.31	332.08	6,702.78	2,734.08	-3,362.84	4,333.98	1.22	0.65	-1.03

RECEIVED  
Office of Oil and Gas  
AUG 24 2018  
Department of Environmental Protection

Last SDI MWD Survey



Scientific Drilling  
Survey Report

11/16/2018  
Scientific Drilling

<b>Company:</b>	Stone Energy	<b>Local Co-ordinate Reference:</b>	Well 1H
<b>Project:</b>	Mary Prospect	<b>TVD Reference:</b>	GL 1321' & KB 18' @ 1339.00ft (Saxon 141)
<b>Site:</b>	Smith Pad	<b>MD Reference:</b>	GL 1321' & KB 18' @ 1339.00ft (Saxon 141)
<b>Well:</b>	1H	<b>North Reference:</b>	Grid
<b>Wellbore:</b>	OH	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	Smith 1H 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)	
11,033.33	92.31	332.08	6,700.39	2,786.46	-3,390.60	4,388.68	0.00	0.00	0.00	
<b>Smith 1H_PBHL4</b>										
11,041.00	92.31	332.08	6,700.08	2,793.24	-3,394.19	4,395.76	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)		
103.00	103.00	-0.18	0.12	First SDI Gyro Survey	
2,582.71	2,582.67	6.53	-5.23	Last SDI Gyro Survey	
2,583.01	2,582.97	6.53	-5.22	First SDI MWD Survey	
10,974.00	6,702.78	2,734.08	-3,362.84	Last SDI MWD Survey	
11,041.00	6,700.08	2,793.24	-3,394.19	Projection to Bit	

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

RECEIVED  
Office of Oil and Gas  
AUG 24 2018  
WV Department of  
Environmental Protection



## Hydraulic Fracturing Fluid Product Component Information Disclosure

Job Start Date:	5/25/2018
Job End Date:	5/29/2018
State:	West Virginia
County:	Wetzel
API Number:	47-103-02904-00-00
Operator Name:	EQT Production
Well Name and Number:	519165
Latitude:	39.64643600
Longitude:	-80.81106200
Datum:	NAD83
Federal Well:	NO
Indian Well:	NO
True Vertical Depth:	6,769
Total Base Water Volume (gal):	5,349,897
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	ProFrac	Carrier/Base Fluid					
			Water	7732-18-5	100.00000	85.14633	None
ProFe 105	ProFrac	Iron Control					
				Listed Below			

RECEIVED  
 Office of Oil and Gas  
 AUG 24 2018  
 WV Department of  
 Environmental Protection

StimSTREAM SC-398	ChemStream, Inc.	Scale Inhibitor					
				Listed Below			
Clearal 268	ChemStream, Inc.	Biocide					
				Listed Below			
StimSTREAM FR 9700	ChemStream, Inc.	Friction Reducer					
				Listed Below			
ProHib 100	ProFrac	Acid Inhibitor					
				Listed Below			
Other Chemical (s)	Listed Above	See Trade Name (s) List					
				Listed Below			
Sand (Proppant)	ProFrac	Proppant					
				Listed Below			
Hydrochloric Acid (15%)	ProFrac	Acidizing					
				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	14.59211	None
			Hydrochloric Acid	7647-01-0	15.00000	0.02739	None
			Non-Hazardous Substances	Proprietary	90.00000	0.01700	None
			Distillates (Petroleum), Hydrotreated Light	64742-47-8	30.00000	0.01692	None

RECEIVED  
 Office of Oil and Gas  
 AUG 24 2018  
 WV Department of  
 Environmental Protection

			Glutaraldehyde	111-30-8	20.00000	0.00378	None
			Alcohols, C11-14-iso-, C13-Rich, Etholylated	78330-21-9	5.00000	0.00282	None
			Alcohols, C11-14-iso-, C13-Rich, Etholylated	78330-21-9	5.00000	0.00282	
			Non-Hazardous Substances	Proprietary	90.00000	0.00226	
			Non-Hazardous Substances	Proprietary	90.00000	0.00226	None
			Citric Acid	77-92-9	100.00000	0.00076	
			Citric Acid	77-92-9	100.00000	0.00076	None
			Alkyl Dimethyl Benzyl Ammonium Chloride	68391-01-5	3.00000	0.00057	None
			Didecyl Dimethyl Ammonium Chloride	7173-51-5	3.00000	0.00057	None
			Methanol	67-56-1	90.00000	0.00034	
			Methanol	67-56-1	90.00000	0.00034	None
			Bis(HexaMethylene Triamine Penta (Methylene Phosphonic Acid) (BHMT)	34690-00-1	10.00000	0.00025	None
			Bis(HexaMethylene Triamine Penta (Methylene Phosphonic Acid) (BHMT)	34690-00-1	10.00000	0.00025	
			Xylene	1330-20-7	5.00000	0.00002	
			Xylene	1330-20-7	5.00000	0.00002	None
			Alcohols, C7-9-Iso, C8-Rich	68526-83-0	5.00000	0.00002	None
			Isopropanol	67-63-0	5.00000	0.00002	None
			Isopropanol	67-63-0	5.00000	0.00002	
			Imidazoline	61790-69-0	5.00000	0.00002	None
			Proargyl Alcohol	107-19-7	5.00000	0.00002	
			Proargyl Alcohol	107-19-7	5.00000	0.00002	None
			Imidazoline	61790-69-0	5.00000	0.00002	
			Alcohols, C7-9-Iso, C8-Rich	68526-83-0	5.00000	0.00002	

RECEIVED  
 Office of Oil and Gas  
 AUG 24 2018  
 WV Department of  
 Environmental Protection

	Ethylbenzene	100-41-4	1.00000	0.00000
	Ethylbenzene	100-41-4	1.00000	0.00000

\* 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)

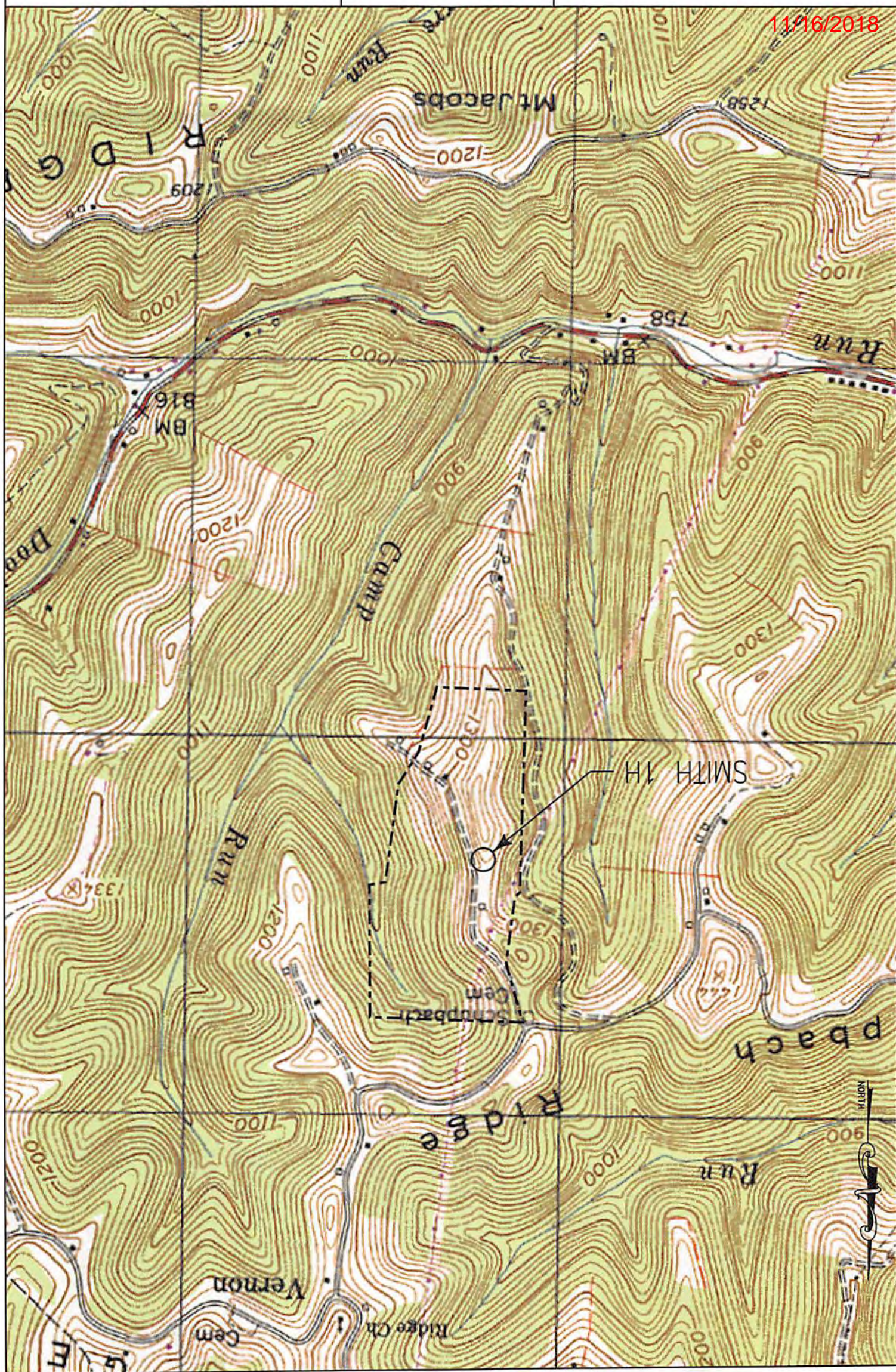
RECEIVED  
 Office of Oil and Gas  
 AUG 24 2018  
 WV Department of  
 Environmental Protection

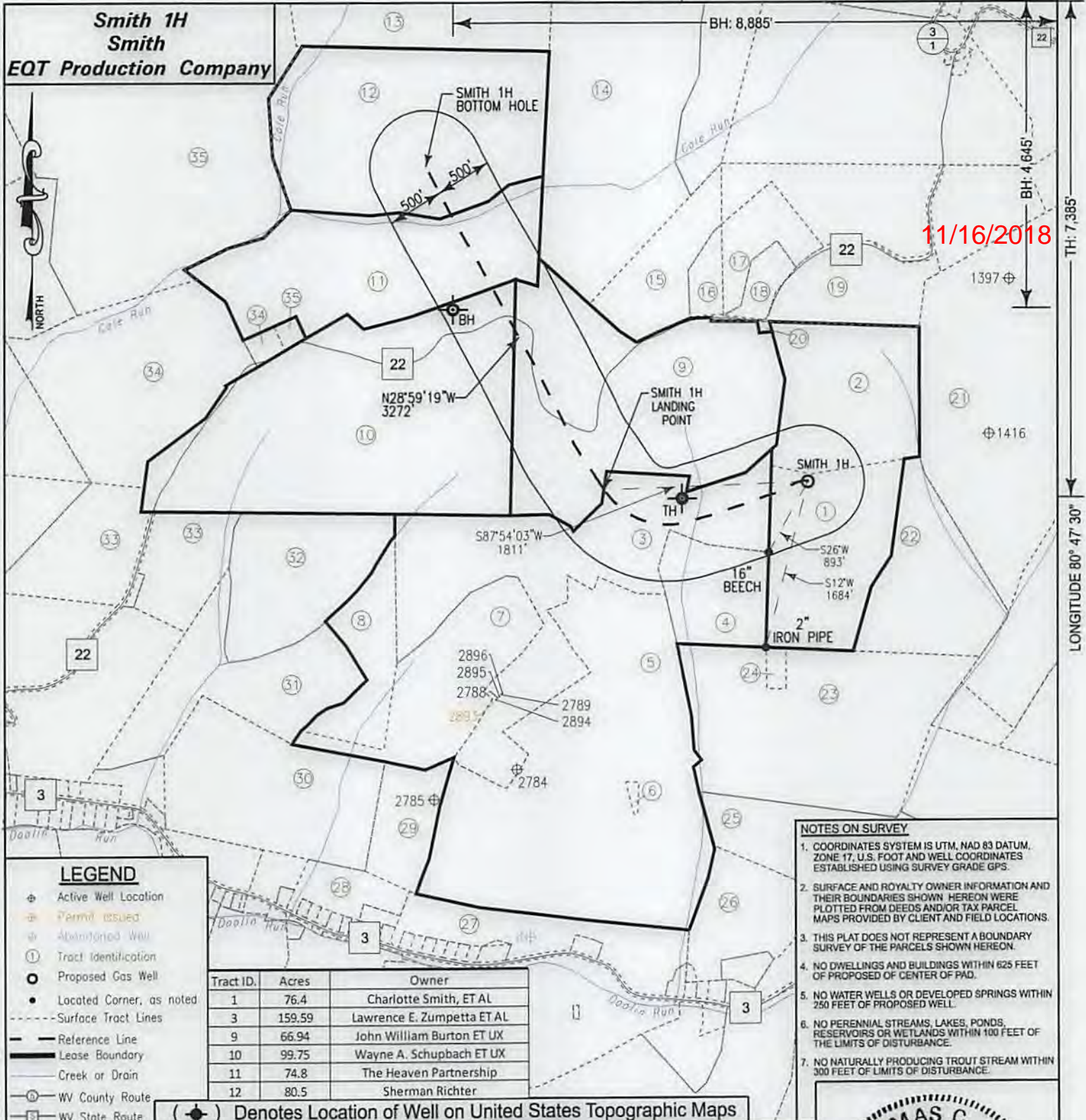
EOT PRODUCTION COMPANY  
115 PROFESSIONAL PLACE  
PO BOX 280  
BRIDGEPORT, WV 26330

NEW MARTINSVILLE 7.5'  
1" = 1000'

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

11/16/2018





11/16/2018

**LEGEND**

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

Tract ID.	Acres	Owner
1	76.4	Charlotte Smith, ET AL
3	159.59	Lawrence E. Zumpetta ET AL
9	66.94	John William Burton ET UX
10	99.75	Wayne A. Schupbach ET UX
11	74.8	The Heaven Partnership
12	80.5	Sherman Richter

**NOTES ON SURVEY**

1. COORDINATES SYSTEM IS UTM, NAD 83 DATUM, ZONE 17, U.S. FOOT AND WELL COORDINATES ESTABLISHED USING SURVEY GRADE GPS.
2. 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.
3. THIS PLAT DOES NOT REPRESENT A BOUNDARY SURVEY OF THE PARCELS SHOWN HEREON.
4. NO DWELLINGS AND BUILDINGS WITHIN 625 FEET OF PROPOSED WELL.
5. NO WATER WELLS OR DEVELOPED SPRINGS WITHIN 250 FEET OF PROPOSED WELL.
6. NO PERENNIAL STREAMS, LAKES, PONDS, RESERVOIRS OR WETLANDS WITHIN 100 FEET OF THE LIMITS OF DISTURBANCE.
7. NO NATURALLY PRODUCING TROUT STREAM WITHIN 300 FEET OF LIMITS OF DISTURBANCE.

(⊕) 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.

*L. L. S.*  
L. L. S. 687



FILE NO: W2032 (BK 49-6)  
 DRAWING NO: \_\_\_\_\_  
 SCALE: 1" = 1200'  
 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 1H  
 API WELL NO  
47 - 103 - 02904  
 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: Charlotte Smith ACREAGE: 38.9 ±  
 ROYALTY OWNER: Charlotte Smith, ET AL LEASE NO: 873632 ACREAGE: 76.4 ±

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: 6,740'

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

ADDRESS: 112 Professional Place PO Box 380  
METT OPERATOR: EOT Production Company

ADDRESS: 112 Professional Place PO Box 380  
DESIGNATED AGENT: Jason Hanson

□ BURE AND AVOID □ CLEAN OUT AND REGRIND TARGET FORMATION: Marcellus ESTIMATED DEPTH: 8,140.  
□ REFORATE NEW FORMATION □ OTHER PHYSICAL CHANGE IN METT (SPECIFY)

PROPOSED WORK: □ DRILL □ CONVECT □ DRILL DEEPER  FRACTURE OR STIMULATE □ BURE OFF OLD FORMATION

ROYALTY OWNER: Charlotte Smith, ET AL LEASE NO: 813935 ACREAGE: 18.4 ±  
SURFACE OWNER: Charlotte Smith ACREAGE: 18.16/2018

DISTRICT: Marlinton COUNTY: Mercer

LOCATION ELEVATION: 1332. WATERSHED: TRIBUTARY OF DOONIN RUN QUADRANGLE: NEW MARTINSVILLE T.S.  
(IF GAS) PRODUCTION: □ STORAGE □ DEEP  SHALLOW

METT TYPE: □ OIL  GAS □ FLUID INJECTION □ WASTE DISPOSAL

IGS CORP Station  
PROVEN SOURCE OF ELEVATION:  
13200  
MINIMUM DEGREE OF ACCURACY:  
SCALE: 1" = 1500.  
DRAWING NO:  
FILE NO: WS035 (BK 48-8)



STATE COUNTY PERMIT  
VA - 103 - 05804  
API METT NO  
OPERATORS METT NO: SMITH TH  
DATE: DECEMBER 4 20 17



1. I do hereby certify that this plat is the undersigned, registered surveyor, and shows all the information referred to and correct to the best of my knowledge and belief.  
T. G. S. 881  
Department of Environmental Protection

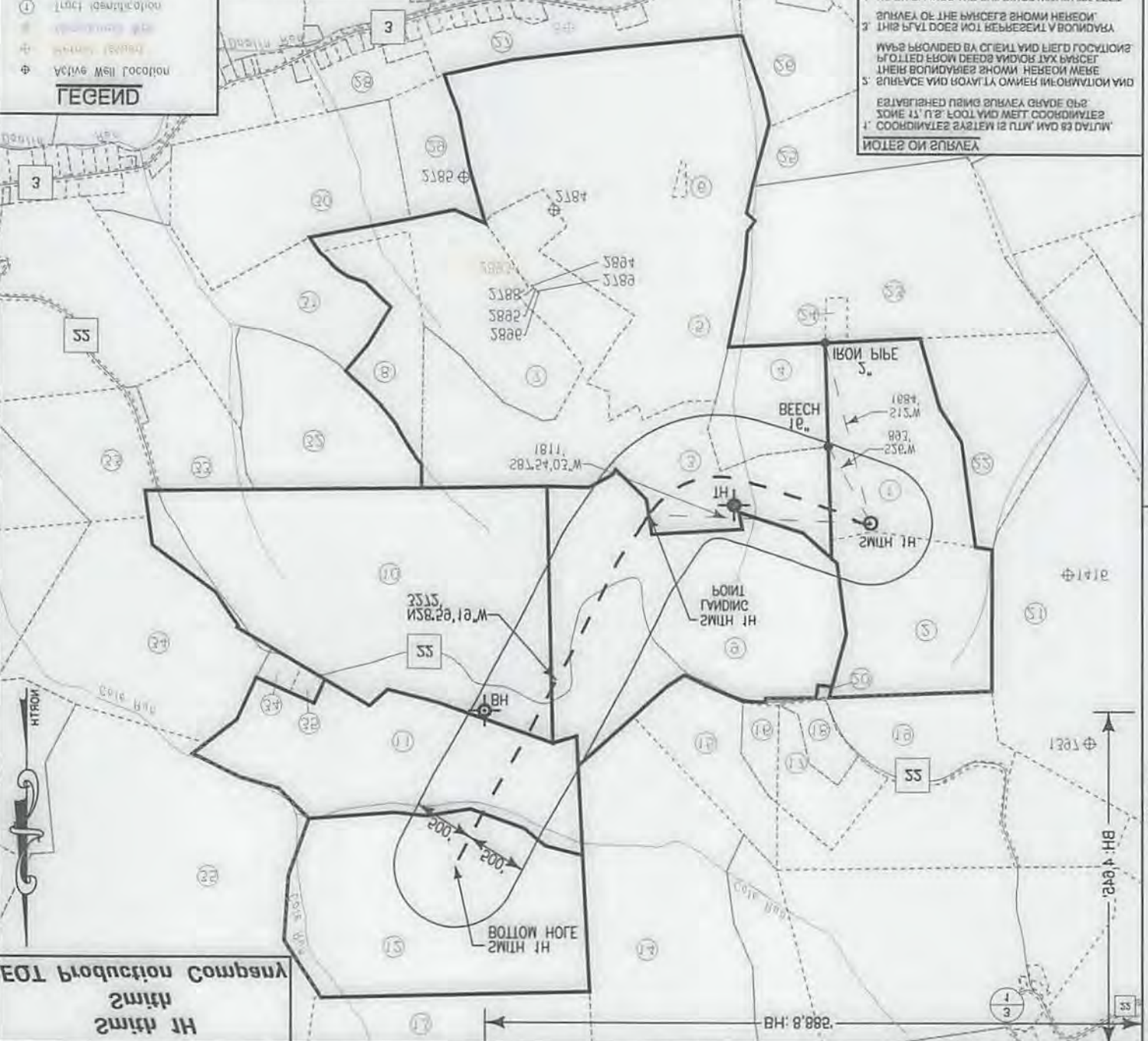


- MW State Route
  - MW County Route
  - Creek or Drain
  - Lease Boundary
  - Reference Line
  - Surface tract lines
  - Located corner, as noted
  - Proposed gas well
  - ① Tract identification
  - ⊕ Well location
  - ⊕ Active well location
- LEGEND**

(\*) Denotes location of Well on United States Topographic Maps

TS	80'2	Sherman Richter
11	14.8	The Heaven Farmhouse
10	27.25	Wayne A. Schuchbach
9	48.25	John William Blum
3	120.25	LA Tarrance & Associates
1	174.25	Charlotte Smith, ET AL
TRACT ID	2952A	OWNER

- 300 FEET OF LIMITS OF DISTURBANCE
  - NO MULTIPLE PRODUCE TRACTS WITHIN
  - THE LIMITS OF DISTURBANCE
  - RELEVANT OR METT WITHIN 100 FEET OF
  - NO REVENUE STREAMS LAKES POND
  - 300 FEET OF PROPOSED METT
  - NO WATER METTS OR DELEGATED SPRINGS WITHIN
  - OF PROPOSED OF CEILING OF BVD
  - NO DWELLINGS AND BUILDINGS WITHIN 650 FEET
  - PLACES OF THE FINCHES SHOWN HEREON
  - THIS PLAT DOES NOT REPRESENT A BOUNDARY
  - MAPS PROVIDED BY CLIENT AND FIELD LOCATIONS
  - NOTED FROM DEEDS AND/OR TAX PARCEL
  - THEIR BOUNDARIES SHOWN HEREON WERE
  - SURFACE AND ROYALTY OWNER INFORMATION AND
  - ESTABLISHED PLAIN SURVEY GRADE ONE
  - ZONE 11' N 2' FOOT AND METT COORDINATES
  - COORDINATE SYSTEM IS 12 NAD 83
- NOTES ON SURVEY**

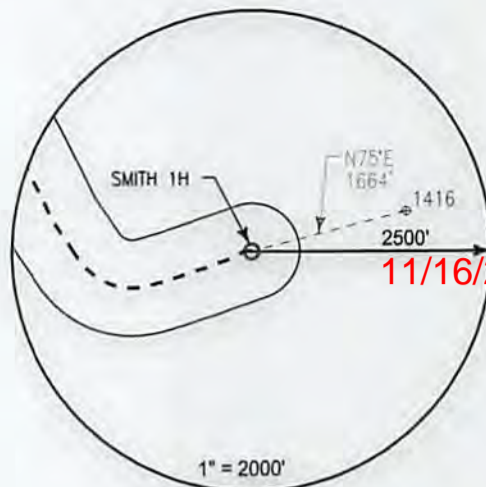


EOT Production Company  
Smith  
Smith TH

LATITUDE 38.40.00 LONGITUDE 80.41.30

**Smith 1H  
Smith  
EQT Production Company**

Tract ID	Tax Map No.	Parcel No.	County	District	Surface Tract Owner	Acres
1	8	5	Wetzel	Magnolia	Charlotte Smith	38.9
2	5	32	Wetzel	Magnolia	Charlotte Smith	37.5
3	8	3	Wetzel	Magnolia	Lawrence E. Zumpetta ET AL	72.86
4	8	4	Wetzel	Magnolia	Lawrence E. Zumpetta ET AL	15.28
5	8	22	Wetzel	Magnolia	Lawrence E. Zumpetta ET AL	107.5
6	8	23	Wetzel	Magnolia	Lawrence E. Zumpetta ET AL	0.27
7	8	11	Wetzel	Magnolia	Lawrence E. Zumpetta ET AL	36.86
8	8	2.1	Wetzel	Magnolia	Lawrence E. Zumpetta ET AL	18.15
9	5	31	Wetzel	Magnolia	John William Burton	66.56
10	5	30	Wetzel	Magnolia	Wayne A. & Virginia L. Schupbach	93.83
11	5	24	Wetzel	Magnolia	Heaven Partnership	53.59
12	5	10	Wetzel	Magnolia	Herman L. & Sherman Richter	80.66
13	5	1	Wetzel	Magnolia	Mark Edwin Scheibelhood	327.66
14	5	11	Wetzel	Magnolia	Ronald L. Schupbach	89.45
15	5	25	Wetzel	Magnolia	Stone Energy Corporation	17.64
16	5	25.1	Wetzel	Magnolia	Stone Energy Corporation	4.19
17	5	26.3	Wetzel	Magnolia	Stone Energy Corporation	10.95
18	5	26.1	Wetzel	Magnolia	Stone Energy Corporation	3.93
19	5	26.2	Wetzel	Magnolia	Franklin Ray Blake	17.73
20	5	31.1	Wetzel	Magnolia	Schupbach Cemetery	0.27
21	5	33	Wetzel	Magnolia	Franklin Ray Blake	108.47
22	8	6	Wetzel	Magnolia	Kocher Albert HRS	33.01
23	8	12	Wetzel	Magnolia	David L. & Ralph O. Smith	58.15
24	8	12.1	Wetzel	Magnolia	Ralph Oscar & Jonee Kay Smith	1.23
25	8	24.0	Wetzel	Magnolia	Gary W. & Linda J. Durig	18.32
26	8	54.1	Wetzel	Magnolia	Gary W. & Linda J. Durig	22.47
27	8	62	Wetzel	Magnolia	Gary W. & Linda J. Durig	57.15
28	8	38	Wetzel	Magnolia	George R. Mullett	8.28
29	8	21	Wetzel	Magnolia	Michael L. Mullett	12.25
30	8	20	Wetzel	Magnolia	Billy Darrell Morris	54.66
31	8	10	Wetzel	Magnolia	Myron H. Helmick	35.57
32	8	2	Wetzel	Magnolia	J W Schamp EST	37.54
33	8	1	Wetzel	Magnolia	Raymond L. Howell	40.43
34	5	29	Wetzel	Magnolia	Robert L. Goddard	54.39
35	5	8	Wetzel	Magnolia	George E. & Beth Ann Heinzman	141.4



**Notes:**  
**SMITH 1H As-Built coordinates are**  
 NAD 27 N: 420,251,000 E: 1,630,827,000  
 NAD 27 Lat: 39.646436 Long: -80.811062  
 NAD 83 UTM N: 4,388,541,959 E: 516,226,062

**SMITH 1H As-Built Landing Point coordinates are**  
 NAD 27 N: 420,184,710 E: 1,629,017,200  
 NAD 27 Lat: 39.646181 Long: -80.817484  
 NAD 83 UTM N: 4,388,512,542 E: 515,675,027

**SMITH 1H As-Built Bottom Hole coordinates are**  
 NAD 27 N: 423,044,240 E: 1,627,432,810  
 NAD 27 Lat: 39.653967 Long: -80.823260  
 NAD 83 UTM N: 4,389,375,647 E: 515,177,812

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.

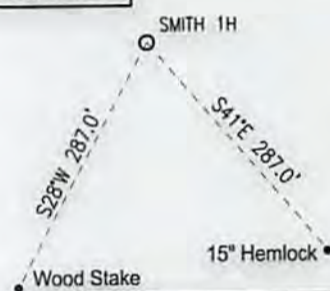
**LEGEND**

- ⊕ Active Well Location
- Proposed Gas Well
- Located Corner, as noted
- Surface Tract Lines
- 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

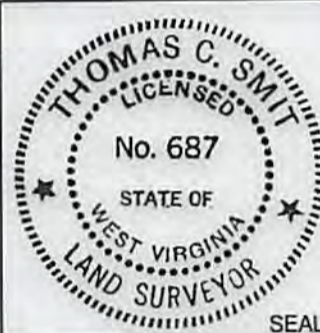
**Well References**



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.

*L. L. S.*

L. L. S. 687



FILE NO: W2032 (BK 49-6)

DRAWING NO:

SCALE: 1" = 1000'

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 1H

API WELL NO

47 - 103 - 02904

STATE COUNTY PERMIT

WELL TYPE:  OIL  GAS  LIQUID INJECTION  WASTE DISPOSAL  
 (IF GAS) PRODUCTION:  STORAGE  DEEP  SHALLOW

LOCATION ELEVATION: 1,335' WATERSHED: TRIBUTARY OF DOLLIN RUN QUADRANGLE: NEW MARTINSVILLE 7.5'

DISTRICT: Magnolia COUNTY: Wetzel

SURFACE OWNER: Charlotte Smith ACREAGE: 38.9 ±

ROYALTY OWNER: Charlotte Smith, ET AL LEASE NO: 873632 ACREAGE: 76.4 ±

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: 6,740'

WELL OPERATOR: EQT Production Company DESIGNATED AGENT: Jason Ranson

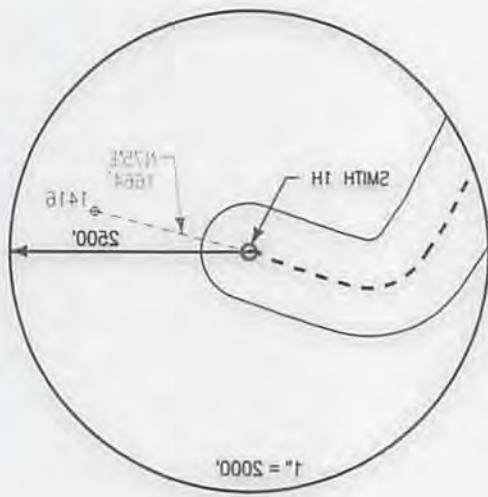
ADDRESS: 115 Professional Place PO Box 280 ADDRESS: 115 Professional Place PO Box 280  
 Bridgeport, WV 26330 Bridgeport, WV 26330

AS-BUILT



Tract ID	Tax Map No.	Parcel No.	County	District	Surface Tract Owner
25	8	2	Wetzel	Magnolia	George E. & Beth Ann Heineman
24	2	29	Wetzel	Magnolia	Robert L. Goddard
23	8	1	Wetzel	Magnolia	Raymond L. Howell
22	8	5	Wetzel	Magnolia	J. W. Schamp, EST.
21	8	10	Wetzel	Magnolia	Myron H. Heimick
20	8	20	Wetzel	Magnolia	Billy Darrell Morris
19	8	21	Wetzel	Magnolia	Michael J. Mullert
18	8	22	Wetzel	Magnolia	George R. Mullert
17	8	23	Wetzel	Magnolia	Gary W. & Linda J. Dunge
16	8	24	Wetzel	Magnolia	Gary W. & Linda J. Dunge
15	2	25.1	Wetzel	Magnolia	Stone Energy Corporation
14	2	25.2	Wetzel	Magnolia	Stone Energy Corporation
13	2	25.3	Wetzel	Magnolia	Stone Energy Corporation
12	2	25.4	Wetzel	Magnolia	Franklin Ray Blake
11	2	25.5	Wetzel	Magnolia	Franklin Ray Blake
10	2	25.6	Wetzel	Magnolia	Wayne A. & Virginia L. Schupbach
9	2	31	Wetzel	Magnolia	John William Burton
8	2	31.1	Wetzel	Magnolia	David L. & Ralph O. Smith
7	8	31.2	Wetzel	Magnolia	Kocher Albert HRS
6	2	33	Wetzel	Magnolia	Franklin Ray Blake
5	2	33.1	Wetzel	Magnolia	Schupbach Cemetery
4	2	33.2	Wetzel	Magnolia	Franklin Ray Blake
3	2	33.3	Wetzel	Magnolia	Stone Energy Corporation
2	2	33.4	Wetzel	Magnolia	Stone Energy Corporation
1	2	33.5	Wetzel	Magnolia	Stone Energy Corporation
32	8	1	Wetzel	Magnolia	Mah Edwin Schreiberhood
31	2	10	Wetzel	Magnolia	Herman J. & Sherman Richter
30	2	24	Wetzel	Magnolia	Heaven Partnership
29	2	30	Wetzel	Magnolia	Wayne A. & Virginia L. Schupbach
28	2	31	Wetzel	Magnolia	John William Burton
27	8	11	Wetzel	Magnolia	Lawrence E. Zumbetta ET AL
26	8	12	Wetzel	Magnolia	Lawrence E. Zumbetta ET AL
25	8	13	Wetzel	Magnolia	Lawrence E. Zumbetta ET AL
24	8	14	Wetzel	Magnolia	Lawrence E. Zumbetta ET AL
23	8	15	Wetzel	Magnolia	Lawrence E. Zumbetta ET AL
22	8	16	Wetzel	Magnolia	Lawrence E. Zumbetta ET AL
21	8	17	Wetzel	Magnolia	Lawrence E. Zumbetta ET AL
20	8	18	Wetzel	Magnolia	Lawrence E. Zumbetta ET AL
19	8	19	Wetzel	Magnolia	Lawrence E. Zumbetta ET AL
18	8	20	Wetzel	Magnolia	Lawrence E. Zumbetta ET AL
17	8	21	Wetzel	Magnolia	Lawrence E. Zumbetta ET AL
16	8	22	Wetzel	Magnolia	Lawrence E. Zumbetta ET AL
15	8	23	Wetzel	Magnolia	Lawrence E. Zumbetta ET AL
14	8	24	Wetzel	Magnolia	Lawrence E. Zumbetta ET AL
13	8	25	Wetzel	Magnolia	Lawrence E. Zumbetta ET AL
12	8	26	Wetzel	Magnolia	Lawrence E. Zumbetta ET AL
11	8	27	Wetzel	Magnolia	Lawrence E. Zumbetta ET AL
10	8	28	Wetzel	Magnolia	Lawrence E. Zumbetta ET AL
9	8	29	Wetzel	Magnolia	Lawrence E. Zumbetta ET AL
8	8	30	Wetzel	Magnolia	Lawrence E. Zumbetta ET AL
7	8	31	Wetzel	Magnolia	Lawrence E. Zumbetta ET AL
6	8	32	Wetzel	Magnolia	Lawrence E. Zumbetta ET AL
5	8	33	Wetzel	Magnolia	Lawrence E. Zumbetta ET AL
4	8	34	Wetzel	Magnolia	Lawrence E. Zumbetta ET AL
3	8	35	Wetzel	Magnolia	Lawrence E. Zumbetta ET AL
2	8	36	Wetzel	Magnolia	Lawrence E. Zumbetta ET AL
1	8	37	Wetzel	Magnolia	Lawrence E. Zumbetta ET AL

11/16/2018

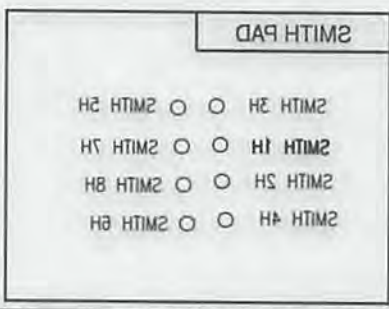
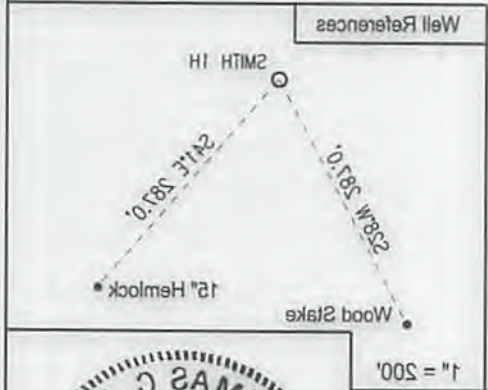


UTM coordinates are NAD83, Zone 17, Meters.  
Well location references are based upon the grid north meridian.  
Flat orientation, Corner and well ties are based upon  
based upon Differential GPS Measurements  
West Virginia Coordinates system of 1927 (North Zone)

Notes:  
SMITH 1H As-Built coordinates are  
NAD 27 N: 420,251.000 E: 1,830,827.000  
NAD 27 Lat: 39.846436 Long: -80.811082  
NAD 83 UTM N: 4,388,241.989 E: 218,228.082

SMITH 1H As-Built Landring Point coordinates are  
NAD 27 N: 420,184.710 E: 1,829,017.200  
NAD 27 Lat: 39.846181 Long: -80.817484  
NAD 83 UTM N: 4,388,212.242 E: 218,225.023

SMITH 1H As-Built Bottom Hole coordinates are  
NAD 27 N: 423,044.240 E: 1,827,432.810  
NAD 27 Lat: 39.822967 Long: -80.823280  
NAD 83 UTM N: 4,389,325.847 E: 218,177.812



**LEGEND**

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



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



DATE: DECEMBER 4 20 17	STATE OF WEST VIRGINIA DEPARTMENT OF ENVIRONMENTAL PROTECTION OIL AND GAS DIVISION	FILE NO.: W2032 (BK 49-8)
OPERATORS WELL NO.: SMITH 1H		DRAWING NO.:
API WELL NO.		SCALE: 1" = 1000'
STATE COUNTY PERMIT		MINIMUM DEGREE OF ACCURACY:
		1:2500
		PROVEN SOURCE OF ELEVATION:
		NGS CORS Station

WELL TYPE: <input type="checkbox"/> OIL <input checked="" type="checkbox"/> GAS	WATERSHED: NEW MARTINSVILLE T.S.
(IF GAS) PRODUCTION: <input type="checkbox"/> STORAGE <input type="checkbox"/> DEEP <input checked="" type="checkbox"/> SHALLOW	DISTRICT: Magnolia
LOCATION ELEVATION: 1,335'	COUNTY: Wetzel
SURFACE OWNER: Charlotte Smith	ACREAGE: 38.9 ±
ROYALTY OWNER: Charlotte Smith, ET AL	LEASE NO: 873832
PROPOSED WORK: <input type="checkbox"/> DRILL <input type="checkbox"/> CONVERT <input type="checkbox"/> DRILL DEEPER <input checked="" type="checkbox"/> FRACTURE OR STIMULATE <input type="checkbox"/> PLUG OFF OLD FORMATION	ACREAGE: 78.4 ±
<input type="checkbox"/> PERFORATE NEW FORMATION <input type="checkbox"/> OTHER PHYSICAL CHANGE IN WELL (SPECIFY)	TARGET FORMATION: Marcellus
<input type="checkbox"/> PLUG AND ABANDON <input type="checkbox"/> CLEAN OUT AND REPLUG	ESTIMATED DEPTH: 8,740'
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