

Well Operator's Report of Well Work



Where energy meets innovation.

Well Number: 519169

API: 47 - 103 - 02909

Submission: Initial Amended

Notes: Please note that Stone Energy Corporation conducted the drilling operations on this well & submitted an initial WR-35. EQT Corporation performed the stimulation operations.

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

API 47 - 103 - 02909 County Wetzel District Magnolia
Quad New Martinsville Pad Name Smith Field/Pool Name Mary
Farm name Smith, Sonny and Charlotte Well Number 519169
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 4,388,535.659 Easting 516,231.956
Landing Point of Curve Northing 4,388,372.363 Easting 516,770.806
Bottom Hole Northing 4,386,993.221 Easting 517,565.511

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

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

Date permit issued 7/31/2013 Date drilling commenced 12/3/2013 Date drilling ceased 8/18/2014
Date completion activities began 06/01/2018 Date completion activities ceased 06/13/2018
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 2,213 Void(s) encountered (Y/N) depths N
Coal depth(s) ft 1,018 Cavern(s) encountered (Y/N) depths N
Is coal being mined in area (Y/N) N

Reviewed by

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Reviewed by:
DMH

WR-35
Rev. 8/23/13

API 47-103 - 02909 Farm name Smith, Sonny and Charlotte Well number 519169

CASING STRINGS	Hole Size	Casing Size	Depth	New or Used	Grade wt/fl	Basket Depth(s)	Did cement circulate (Y/ N) * Provide details below*
Conductor	24"	20"	85'	New	LS - 94 ppf		N - GTS
Surface	17.5"	13.375"	1,300'	New	J55 - 54.4 ppf	122' & 201'	Y - CTS
Coal	17.5"	13.375"	1,300'	New	J55 - 54.4 ppf	122' & 201'	Y - CTS
Intermediate 1	12.25"	9.625"	2,555'	New	J55 - 36 ppf		Y - CTS
Intermediate 2							
Intermediate 3							
Production	8.75"	5.5"	13,138'	New	P110 - 20 ppf		N - TOC @ 1,452' Calculated
Tubing							
Packer type and depth set		TAM CAP Inflatable Packer Set on the 9.625" Casing String @ 1,067'.					

Comment Details Circulated 40 bbls cement to surface on 13.375" casing string. Circulated 10 bbls cement to surface on the 9.625" casing string. No cement was circulated to the surface on the 5.5" casing string. TOC on 5.5" calculates to @ 1,452'.

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"	1,006	15.6	1.19	1,197	Surface	8.0
Coal	Class "A"	1,006	15.6	1.19	1,197	Surface	8.0
Intermediate 1	Lead-10% Salt Tail-Class "A"	Lead-518 Tail-359	Lead-15.4 Tail-15.6	Lead-1.28 Tail-1.19	Lead-663 Tail-427	Surface	12.0
Intermediate 2							
Intermediate 3							
Production	Lead-TunedSpacer3 Tail-VariCom	Lead-178 Tail-2,460	Lead- 14.5 Tail-15.2	Lead-2.37 Tail-1.20	Lead-422 Tail-2,952	1,452 Calculated	7.0
Tubing							

Drillers TD (ft) 13,139 MD / 8,895 TVD Loggers TD (ft) N/A

Deepest formation penetrated Marcellus Shale Plug back to (ft) N/A

Plug back procedure _____

Kick off depth (ft) 5,603 MD / 5,588' 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 3, 7, 11, 15, 19, 24, 28 and 30. Intermediate casing had bow spring centralizers placed on joints 2, 5, 8, 11, 14, 17, 20, 23, 26, 29, 32, 35, 38, 41, 44, 47, 50, 53, 56 and 59. Production casing had rigid spiral centralizers placed on every fourth joint beginning with joint 1 to joint 244. Ran a total of 62 rigid spiral centralizers. Ran bow spring centralizers from joint 252 to joint 300 on every eighth joint. A total of 7 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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API 47- 103 - 02909 Farm name Smith, Sonny and Charlotte Well number 519169

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

Please insert additional pages as applicable.

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PRODUCING FORMATION(S)	DEPTHS	
<u>MARCELLUS</u>	<u>6,863'</u> TVD	<u>7,641'</u> MD
_____	_____	_____
_____	_____	_____

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Please insert additional pages as applicable.

GAS TEST Build up Drawdown Open Flow OIL TEST Flow Pump

SHUT-IN PRESSURE Surface 1.640 psi Bottom Hole N/A psi DURATION OF TEST 74 hrs

OPEN FLOW Gas 5,252 mcfpd Oil N/A bpd NGL 63 bpd Water 1,197 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 ₂ 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					

Please insert additional pages as applicable.

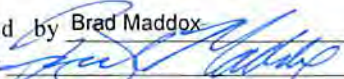
Drilling Contractor Nomac (top-hole) & Saxon Drilling (horizontal)
Address 2034 Martins Branch Rd / 9303 New Trails Drive City Mount Morris / The Woodlands State PA / TX Zip 25312 / 77381

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  Title Completions Director Date 09/10/2018

519169-47-103-02909-00-00 - 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	6/2/2018	98	8,488.00	8,846.00	4,339.00	449,580.00	8,929	0
2	6/2/2018	97	8,555.00	8,859.00	4,140.00	450,940.00	7,760	0
3	6/2/2018	98	8,403.00	8,888.00	3,946.00	451,760.00	7,865	0
4	6/2/2018	98	8,303.00	8,626.00	4,387.00	450,200.00	7,965	0
5	6/2/2018	100	8,344.00	8,744.00	4,213.00	450,260.00	7,537	0
6	6/9/2018	99	8,701.00	8,907.00	3,965.00	452,540.00	7,031	0
7	6/9/2018	100	8,696.00	8,916.00	4,063.00	450,480.00	7,362	0
8	6/9/2018	100	8,665.00	9,081.00	4,081.00	450,060.00	7,389	0
9	6/9/2018	100	8,432.00	8,719.00	3,937.00	450,280.00	7,489	0
10	6/10/2018	94	8,357.00	8,953.00	4,022.00	450,660.00	7,483	0
11	6/10/2018	99	8,579.00	9,125.00	4,064.00	450,000.00	7,290	0
12	6/10/2018	98	8,555.00	9,215.00	3,910.00	450,640.00	7,432	0
13	6/10/2018	98	8,569.00	9,036.00	3,580.00	450,700.00	7,252	0
14	6/10/2018	100	8,217.00	8,588.00	3,886.00	450,220.00	7,477	0
15	6/11/2018	97	8,175.00	9,012.00	4,148.00	451,540.00	7,486	0
16	6/11/2018	99	8,251.00	8,872.00	4,158.00	450,940.00	7,437	0
17	6/11/2018	97	8,524.00	8,965.00	4,421.00	450,380.00	7,167	0
18	6/11/2018	98	8,362.00	8,965.00	4,351.00	450,840.00	7,222	0
19	6/12/2018	99	8,168.00	9,131.00	4,621.00	387,532.00	8,445	0
20	6/12/2018	97	8,470.00	9,000.00	4,528.00	450,648.00	7,350	0
21	6/12/2018	92	8,358.00	9,147.00	4,001.00	450,880.00	7,078	0
22	6/12/2018	99	7,882.00	8,185.00	3,988.00	449,021.00	7,257	0
23	6/12/2018	98	7,754.00	8,193.00	4,037.00	451,560.00	7,082	0
24	6/12/2018	94	7,567.00	8,419.00	4,689.00	450,079.00	7,936	0
25	6/13/2018	98	7,580.00	7,971.00	3,897.00	450,140.00	7,236	0
26	6/13/2018	95	8,099.00	9,036.00	4,094.00	450,380.00	7,262	0

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519169-47-103-02909-00-00 Perforations

Stage Number	Perforation Date	Top Perf Depth (ftKB)	Bottom Perf Depth (ftKB)	Number of Shots	Formation
1	4/24/2018	12,908	13,070	40	MARCELLUS
2	6/2/2018	12,708	12,870	40	MARCELLUS
3	6/2/2018	12,508	12,670	40	MARCELLUS
4	6/2/2018	12,308	12,470	40	MARCELLUS
5	6/2/2018	12,108	12,270	40	MARCELLUS
6	6/2/2018	11,908	12,070	40	MARCELLUS
7	6/9/2018	11,708	11,870	40	MARCELLUS
8	6/9/2018	11,508	11,670	40	MARCELLUS
9	6/9/2018	11,308	11,470	40	MARCELLUS
10	6/9/2018	11,108	11,270	40	MARCELLUS
11	6/10/2018	10,908	11,070	40	MARCELLUS
12	6/10/2018	10,708	10,870	40	MARCELLUS
13	6/10/2018	10,508	10,670	40	MARCELLUS
14	6/10/2018	10,308	10,470	40	MARCELLUS
15	6/10/2018	10,108	10,270	40	MARCELLUS
16	6/11/2018	9,908	10,070	40	MARCELLUS
17	6/11/2018	9,708	9,870	40	MARCELLUS
18	6/11/2018	9,508	9,670	40	MARCELLUS
19	6/11/2018	9,308	9,470	40	MARCELLUS
20	6/12/2018	9,108	9,270	40	MARCELLUS
21	6/12/2018	8,908	9,070	40	MARCELLUS
22	6/12/2018	8,708	8,870	40	MARCELLUS
23	6/12/2018	8,508	8,670	40	MARCELLUS
24	6/12/2018	8,308	8,470	40	MARCELLUS
25	6/13/2018	8,108	8,270	40	MARCELLUS
26	6/13/2018	7,908	8,070	40	MARCELLUS
27	6/13/2018	7,708	7,870	40	MARCELLUS

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Smith #8H					
API 47-103-02909					
Stone Energy Corporation					
Horizontal					
	Top (ft TVD)	Top (ft MD)	Bottom (ft TVD)	Bottom (ft MD)	
Sandstone & Shale	Surface	*	1,018		FW @ 100
Coal	1,018	*	1,021		
Sandstone & Shale	1,021	*	2,163		
Little Lime	2,163	*	2,193		
Big Lime	2,193	*	2,293		SW @ 2,213
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	*	5,871	5,891	
Rhinestreet	5,871	5,891	~ 6,480	6,758	
Cashaqua	6,480	6,758	~ 6,668	7,106	
Middlesex	6,668	7,106	~ 6,694	7,147	
West River	6,694	7,147	~ 6,755	7,298	
Geneseo	6,755	7,298	~ 6,770	7,334	
Tully Limestone	6,770	7,334	~ 6,815	7,459	
Hamilton Shale	6,815	7,459	~ 6,863	7,641	
Marcellus	6,863	7,641	~ 6,895	13,139	
TD			6,895	13,139	

* From Pilot Hole Log and Driller's Log

~ From MWD Gamma Log

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Project: Mary Prospect
 Site: Smith Pad
 Well: 8H
 Wellbore: OH
 Design: Smith 8H As Drilled



WELL DETAILS: 8H

+N/-S	+E/-W	Northing	Ground Level Easting	1321 00	Latitude	Longitude
0.00	0.00	420230.00	1630846.00		39° 38' 46.964 N	80° 48' 39.575 W

REFERENCE INFORMATION

Co-ordinate (N/E) Reference: Well 8H, 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

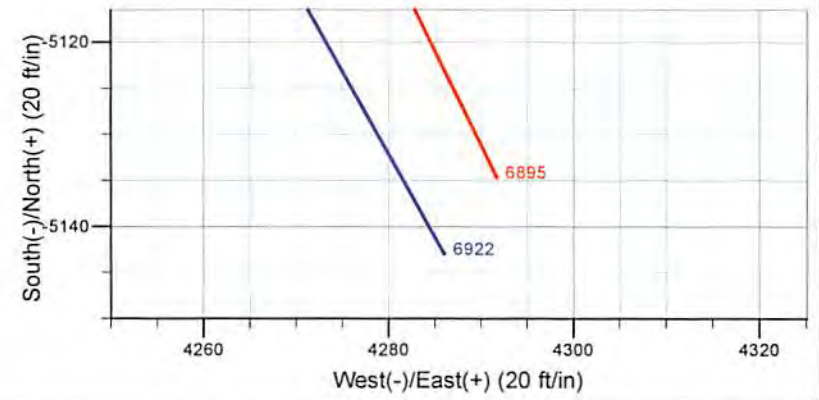
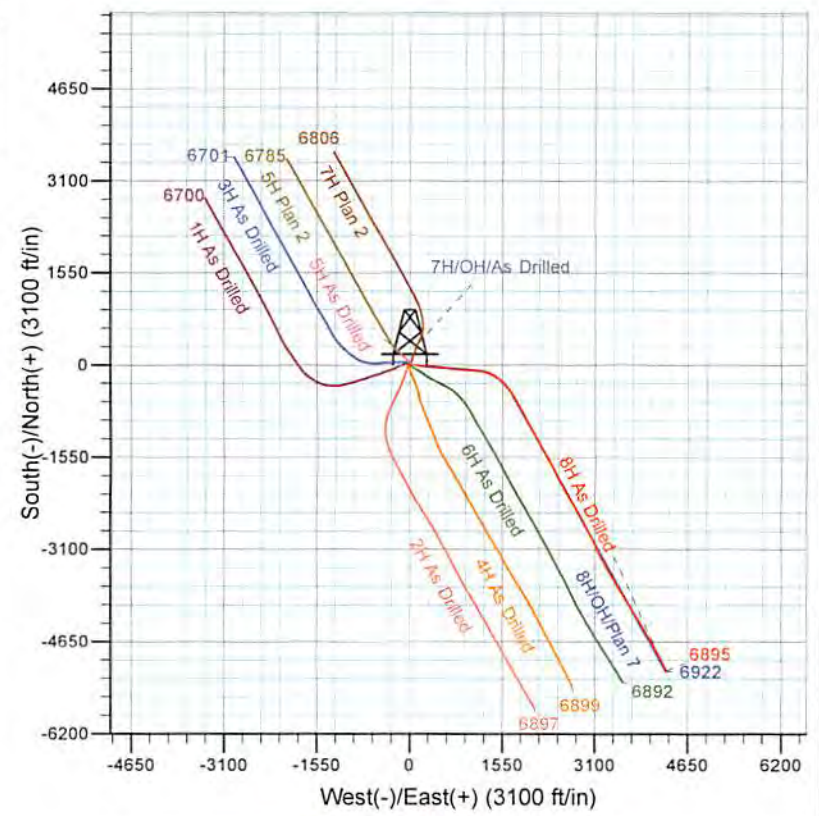
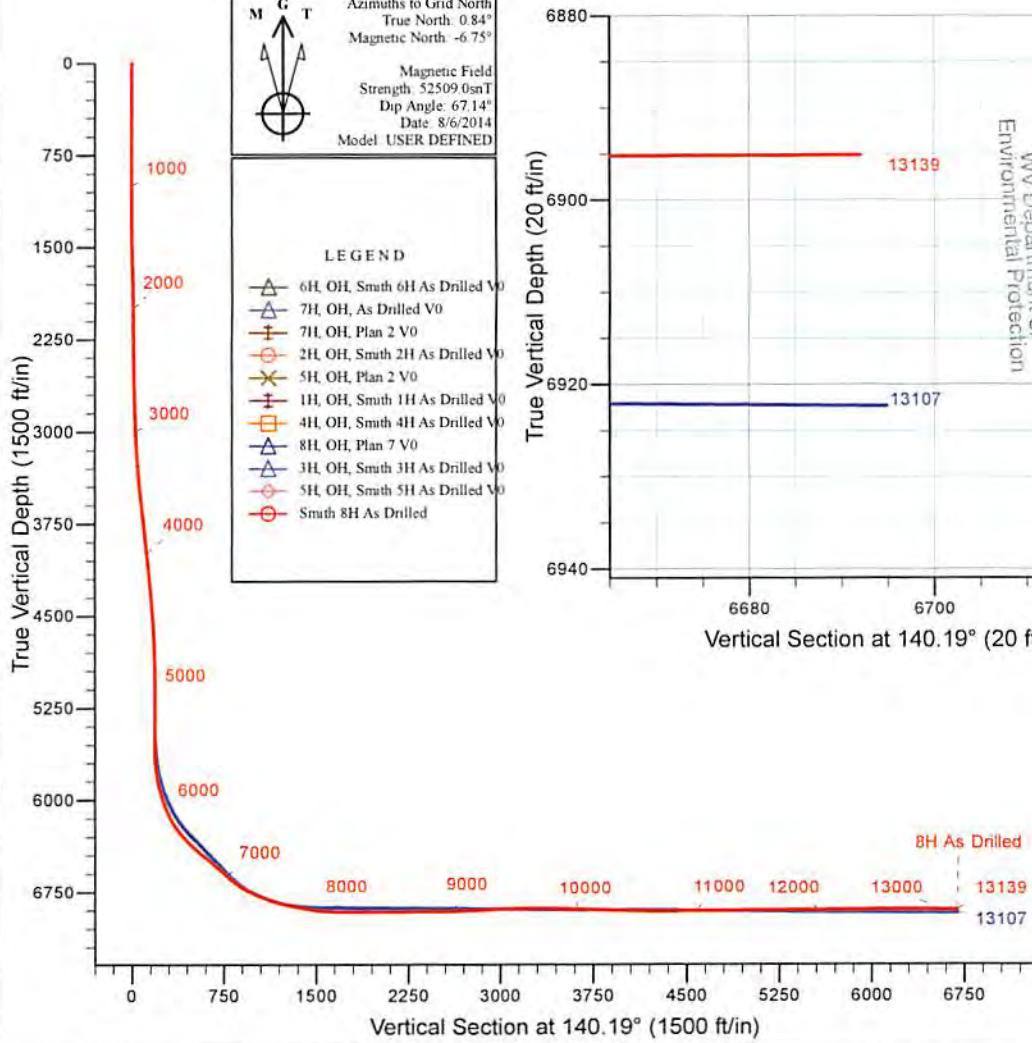
SECTION DETAILS

MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	IFace	Vsect	Target
4324.00	7.25	98.51	4311.29	-21.40	218.20	0.00	0.00	156.13	
5048.77	0.00	0.00	5034.13	-28.17	263.47	1.00	180.00	190.32	
5510.77	0.00	0.00	5496.13	-28.17	263.47	0.00	0.00	190.32	
6417.60	54.41	93.93	6272.68	-55.50	661.72	6.00	93.93	466.27	
7004.94	54.41	93.93	6614.50	-88.20	1138.22	0.00	0.00	796.44	
7797.96	89.50	151.00	6876.00	-500.00	1712.00	8.00	69.77	1480.13	Smith 8H LP3
13106.93	89.50	151.00	6922.33	-5143.01	4286.01	0.00	0.00	6694.81	Smith 8H BHL3

Azimuths to Grid North
 True North: 0.84°
 Magnetic North: -6.75°

Magnetic Field
 Strength: 52509.0snT
 Dip Angle: 67.14°
 Date: 8/6/2014
 Model: USER DEFINED

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



11/16/2018



Stone Energy

Mary Prospect

Smith Pad

8H

OH

Design: Smith 8H As Drilled

Standard Survey Report

18 August, 2014

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Scientific Drilling

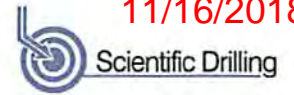
www.scientificdrilling.com





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Survey Report

Company:	Stone Energy	SEP 11 2018	Local Co-ordinate Reference:	Well 8H
Project:	Mary Prospect		TVD Reference:	GL 1321' & KB 18' @ 1339.00ft (Saxon 141)
Site:	Smith Pad	WV Department of Environmental Protection	MD Reference:	GL 1321' & KB 18' @ 1339.00ft (Saxon 141)
Well:	8H		North Reference:	Grid
Wellbore:	OH		Survey Calculation Method:	Minimum Curvature
Design:	Smith 8H As Drilled		Database:	Northeast District

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

Site	Smith Pad				
Site Position:		Northing:	420,251.00 usft	Latitude:	39° 38' 47.168 N
From:	Map	Easting:	1,630,827.00 usft	Longitude:	80° 48' 39.822 W
Position Uncertainty:	0.00 ft	Slot Radius:	13-3/16 "	Grid Convergence:	-0.84 °

Well	8H					
Well Position	+N/-S	0.00 ft	Northing:	420,230.00 usft	Latitude:	39° 38' 46.964 N
	+E/-W	0.00 ft	Easting:	1,630,846.00 usft	Longitude:	80° 48' 39.575 W
Position Uncertainty		0.00 ft	Wellhead Elevation:	0.00 ft	Ground Level:	1,321.00 ft

Wellbore	OH				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	BGGM2013	8/21/2013	-8.54	67.20	52,536
	BGGM2013	12/9/2013	-8.55	67.17	52,497
	BGGM2014	6/11/2014	-8.52	67.15	52,439
	User Defined	6/12/2014	-7.56	67.15	52,542
	User Defined	8/6/2014	-7.59	67.14	52,509

Design	Smith 8H As Drilled				
Audit Notes:					
Version:	1.0	Phase:	ACTUAL	Tie On Depth:	0.00
Vertical Section:	Depth From (TVD) (ft)	+N/-S (ft)	+E/-W (ft)	Direction (°)	
	0.00	0.00	0.00	140.19	

Survey Program	Date	8/18/2014			
From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description	
18.00	2,484.47	Survey 1 - Gyro (OH)	SDI Standard Keeper 103	SDI Standard Wireline Keeper ver 1.0.3	
2,685.00	13,139.00	Survey 2 - MWD (OH)	MWD SDI	MWD - Standard ver 1.0.1	

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)	
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
18.00	0.00	0.00	18.00	0.00	0.00	0.00	0.00	0.00	0.00	
Ground Level										
103.00	0.57	46.53	103.00	0.29	0.31	-0.03	0.67	0.67	0.00	
First SDI Gyro Survey										
203.00	0.12	180.70	203.00	0.53	0.67	0.02	0.66	-0.45	134.17	



Scientific Drilling International
Survey Report

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Company: Stone Energy
Project: Mary Prospect
Site: Smith Pad
Well: 8H
Wellbore: OH
Design: Smith 8H As Drilled

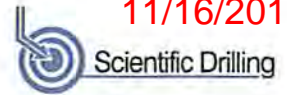
Local Co-ordinate Reference: Well 8H
TVD Reference: GL 1321' & KB 18' @ 1339.00ft (Saxon 141)
MD Reference: GL 1321' & KB 18' @ 1339.00ft (Saxon 141)
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Database: Northeast District

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)
303.00	0.18	272.76	303.00	0.43	0.51	-0.01	0.22	0.06	92.06
403.00	0.13	310.20	403.00	0.51	0.26	-0.22	0.11	-0.05	37.44
503.00	0.13	226.23	503.00	0.51	0.10	-0.33	0.17	0.00	-83.97
603.00	0.14	277.04	603.00	0.44	-0.11	-0.41	0.12	0.01	50.81
703.00	0.09	233.77	703.00	0.41	-0.29	-0.50	0.10	-0.05	-43.27
803.00	0.13	290.56	803.00	0.41	-0.46	-0.61	0.11	0.04	56.79
903.00	0.16	255.33	903.00	0.41	-0.70	-0.76	0.09	0.03	-35.23
1,003.00	0.17	275.34	1,003.00	0.39	-0.99	-0.93	0.06	0.01	20.01
1,103.00	0.32	279.49	1,103.00	0.45	-1.41	-1.25	0.15	0.15	4.15
1,203.00	0.38	296.06	1,202.99	0.64	-1.98	-1.76	0.12	0.06	16.57
1,303.00	0.32	259.27	1,302.99	0.73	-2.55	-2.20	0.23	-0.06	-36.79
1,403.00	0.83	80.43	1,402.99	0.80	-2.11	-1.97	1.15	0.51	-178.84
1,503.00	2.85	77.31	1,502.93	1.47	1.03	-0.47	2.02	2.02	-3.12
1,603.00	4.35	70.05	1,602.73	3.31	7.02	1.95	1.56	1.50	-7.26
1,703.00	4.23	68.97	1,702.45	5.93	14.02	4.43	0.14	-0.12	-1.08
1,803.00	3.22	69.15	1,802.24	8.25	20.09	6.52	1.01	-1.01	0.18
1,903.00	2.42	68.61	1,902.12	10.02	24.68	8.10	0.80	-0.80	-0.54
2,003.00	1.98	62.99	2,002.05	11.57	28.19	9.15	0.49	-0.44	-5.62
2,103.00	1.21	144.12	2,102.02	11.50	30.34	10.59	2.16	-0.77	81.13
2,203.00	1.63	162.87	2,201.99	9.29	31.38	12.96	0.62	0.42	18.75
2,303.00	1.49	180.01	2,301.95	6.63	31.80	15.27	0.49	-0.14	17.14
2,403.00	1.80	185.80	2,401.91	3.77	31.64	17.36	0.35	0.31	5.79
2,484.48	1.37	192.32	2,483.35	1.54	31.30	18.86	0.57	-0.53	8.00
Last SDI Gyro Survey									
2,685.00	2.08	70.08	2,683.83	0.44	34.22	21.57	1.52	0.35	-60.96
First SDI MWD Survey @ 2685.00 MD									
2,778.00	3.90	72.53	2,776.70	1.96	38.82	23.34	1.96	1.96	2.63
2,869.00	4.54	74.29	2,867.45	3.87	45.24	25.99	0.72	0.70	1.93
2,962.00	4.88	85.98	2,960.14	5.14	52.73	29.81	1.09	0.37	12.57
3,055.00	4.68	91.36	3,052.81	5.33	60.47	34.62	0.53	-0.22	5.78
3,148.00	4.50	89.75	3,145.52	5.26	67.91	39.44	0.24	-0.19	-1.73
3,241.00	4.86	97.01	3,238.21	4.79	75.47	44.63	0.74	0.39	7.81
3,333.00	5.99	98.31	3,329.79	3.62	84.08	51.05	1.24	1.23	1.41
3,429.00	6.89	102.46	3,425.19	1.65	94.66	59.33	1.05	0.94	4.32
3,524.00	8.41	103.99	3,519.34	-1.25	106.97	69.45	1.61	1.60	1.61
3,617.00	8.16	101.00	3,611.37	-4.16	120.05	80.05	0.54	-0.27	-3.22
3,711.00	8.72	102.50	3,704.35	-6.97	133.55	90.86	0.64	0.60	1.60
3,802.00	8.63	99.86	3,794.31	-9.64	147.01	101.52	0.45	-0.10	-2.90
3,895.00	7.94	97.71	3,886.34	-11.69	160.25	111.58	0.81	-0.74	-2.31
3,987.00	8.11	99.27	3,977.44	-13.59	172.96	121.17	0.30	0.18	1.70
4,077.00	7.67	98.61	4,066.59	-15.51	185.16	130.46	0.50	-0.49	-0.73
4,169.99	8.14	101.17	4,158.69	-17.72	197.75	140.21	0.63	0.51	2.75
4,208.00	7.92	101.86	4,196.33	-18.78	202.96	144.36	0.63	-0.58	1.82



Scientific Drilling International
Survey Report



11/16/2018

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WV Department of
Environmental Protection

Company:	Stone Energy	Local Co-ordinate Reference:	Well 8H
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:	8H	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	Smith 8H As Drilled	Database:	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)
4,272.00	7.71	99.12	4,259.73	-20.36	211.51	151.05	0.67	-0.33	-4.28
4,335.00	7.15	98.37	4,322.21	-21.60	219.56	157.16	0.90	-0.89	-1.19
4,399.00	6.65	95.67	4,385.74	-22.55	227.19	162.77	0.93	-0.78	-4.22
4,463.00	6.17	93.40	4,449.34	-23.12	234.31	167.77	0.85	-0.75	-3.55
4,526.00	5.62	94.26	4,512.01	-23.55	240.77	172.23	0.88	-0.87	1.37
4,590.00	5.08	91.84	4,575.73	-23.87	246.72	176.29	0.91	-0.84	-3.78
4,653.00	4.67	90.05	4,638.50	-23.96	252.08	179.79	0.69	-0.65	-2.84
4,717.00	3.98	85.69	4,702.32	-23.80	256.90	182.75	1.19	-1.08	-6.81
4,781.00	3.56	83.49	4,766.18	-23.41	261.09	185.13	0.69	-0.66	-3.44
4,844.00	3.26	82.19	4,829.07	-22.94	264.80	187.15	0.49	-0.48	-2.06
4,907.00	2.61	83.68	4,891.99	-22.54	268.00	188.89	1.04	-1.03	2.37
4,971.00	1.83	82.60	4,955.94	-22.25	270.47	190.24	1.22	-1.22	-1.69
5,034.00	1.24	77.23	5,018.91	-21.97	272.13	191.09	0.96	-0.94	-8.52
5,098.00	1.09	69.83	5,082.90	-21.61	273.38	191.61	0.33	-0.23	-11.56
5,162.00	0.67	44.37	5,146.89	-21.13	274.21	191.78	0.88	-0.66	-39.78
5,226.00	0.57	39.60	5,210.89	-20.62	274.67	191.68	0.18	-0.16	-7.45
5,289.00	0.62	1.21	5,273.89	-20.03	274.88	191.37	0.63	0.08	-60.94
5,353.00	0.68	350.98	5,337.88	-19.31	274.83	190.78	0.20	0.09	-15.98
5,416.00	0.48	340.22	5,400.88	-18.69	274.68	190.21	0.36	-0.32	-17.08
5,480.00	0.62	323.97	5,464.88	-18.16	274.39	189.61	0.33	0.22	-25.39
5,543.00	0.90	333.41	5,527.87	-17.44	273.96	188.79	0.49	0.44	14.98
5,575.00	0.92	313.84	5,559.87	-17.04	273.67	188.29	0.97	0.06	-61.16
5,607.00	0.81	32.08	5,591.86	-16.67	273.60	187.97	3.42	-0.34	244.50
5,637.00	2.90	74.23	5,621.85	-16.29	274.44	188.21	7.88	6.97	140.50
5,669.00	5.67	81.68	5,653.76	-15.84	276.79	189.37	8.81	8.66	23.28
5,701.00	7.91	82.02	5,685.53	-15.30	280.53	191.35	7.00	7.00	1.06
5,733.00	9.85	83.50	5,717.14	-14.69	285.43	194.02	6.10	6.06	4.63
5,764.00	11.23	86.08	5,747.62	-14.18	291.08	197.24	4.70	4.45	8.32
5,796.00	12.48	89.98	5,778.94	-13.97	297.65	201.28	4.64	3.91	12.19
5,828.00	13.99	91.50	5,810.09	-14.07	304.97	206.05	4.84	4.72	4.75
5,860.00	15.60	92.20	5,841.03	-14.33	313.14	211.48	5.06	5.03	2.19
5,892.00	17.25	94.57	5,871.72	-14.88	322.17	217.68	5.56	5.16	7.41
5,924.00	18.93	97.03	5,902.14	-15.89	332.05	224.78	5.77	5.25	7.69
5,956.00	20.17	98.01	5,932.29	-17.29	342.66	232.66	4.01	3.88	3.06
5,987.00	22.04	97.71	5,961.21	-18.82	353.72	240.91	6.04	6.03	-0.97
6,019.00	24.12	97.12	5,990.65	-20.43	366.16	250.11	6.54	6.50	-1.84
6,051.00	26.26	95.78	6,019.60	-21.96	379.69	259.95	6.92	6.69	-4.19
6,083.00	28.43	94.96	6,048.03	-23.33	394.33	270.37	6.88	6.78	-2.56
6,115.00	30.58	94.42	6,075.87	-24.62	410.03	281.41	6.77	6.72	-1.69
6,147.00	32.88	94.99	6,103.09	-26.00	426.80	293.21	7.25	7.19	1.78
6,178.00	35.33	96.28	6,128.76	-27.71	444.10	305.60	8.24	7.90	4.16
6,210.00	37.08	97.26	6,154.58	-29.94	462.87	319.33	5.76	5.47	3.06
6,242.00	38.21	97.71	6,179.91	-32.49	482.25	333.69	3.63	3.53	1.41
6,274.00	39.70	97.48	6,204.80	-35.15	502.19	348.50	4.68	4.66	-0.72



Scientific Drilling International
Survey Report

11/16/2018
Scientific Drilling

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SEP 11 2018

WV Department of
Environmental Protection

Company: Stone Energy
Project: Mary Prospect
Site: Smith Pad
Well: 8H
Wellbore: OH
Design: Smith 8H As Drilled

Local Co-ordinate Reference: Well 8H
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

Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100usft)	Buld Rate (°/100usft)	Turn Rate (°/100usft)
6,304.00	42.28	97.39	6,227.44	-37.69	521.70	362.95	8.60	8.60	-0.30
6,338.00	45.81	97.53	6,250.44	-40.58	543.75	379.29	11.04	11.03	0.44
6,368.00	48.63	97.76	6,272.17	-43.71	567.03	396.59	8.83	8.81	0.72
6,400.00	49.80	97.46	6,293.07	-46.92	591.04	414.43	3.72	3.66	-0.94
6,431.00	51.66	97.27	6,312.69	-49.99	614.85	432.03	6.02	6.00	-0.61
6,463.00	53.57	96.46	6,332.12	-53.03	640.09	450.52	6.30	5.97	-2.53
6,495.00	55.55	96.41	6,350.68	-55.95	665.99	469.35	6.19	6.19	-0.16
6,527.00	56.62	96.11	6,368.53	-58.85	692.39	488.47	3.43	3.34	-0.94
6,559.00	57.26	96.14	6,385.99	-61.71	719.06	507.74	2.00	2.00	0.09
6,622.00	57.97	95.33	6,419.73	-67.02	771.99	545.71	1.56	1.13	-1.29
6,686.00	59.04	95.96	6,453.17	-72.39	826.30	584.61	1.87	1.67	0.98
6,749.00	58.99	95.49	6,485.60	-77.78	880.04	623.15	0.64	-0.08	-0.75
6,813.00	59.30	94.85	6,518.42	-82.73	934.75	661.98	0.99	0.48	-1.00
6,876.00	59.52	94.28	6,550.48	-87.05	988.81	699.91	0.85	0.35	-0.90
6,939.00	59.24	93.83	6,582.57	-90.88	1,042.89	737.47	0.76	-0.44	-0.71
7,003.00	58.88	93.55	6,615.48	-94.41	1,097.67	775.26	0.68	-0.56	-0.44
7,033.00	58.66	93.57	6,631.03	-96.01	1,123.28	792.87	0.74	-0.73	0.07
7,064.00	59.04	93.95	6,647.07	-97.75	1,149.75	811.16	1.61	1.23	1.23
7,094.00	59.61	96.62	6,662.37	-100.12	1,175.44	829.43	7.89	1.90	8.90
7,124.00	60.65	99.82	6,677.32	-103.85	1,201.18	848.77	9.88	3.47	10.67
7,155.00	61.91	103.26	6,692.22	-109.29	1,227.81	870.00	10.55	4.06	11.10
7,185.00	62.89	106.50	6,706.12	-116.12	1,253.50	891.69	10.11	3.27	10.80
7,215.00	63.59	108.73	6,719.63	-124.22	1,279.03	914.26	7.04	2.33	7.43
7,245.00	64.40	111.36	6,732.78	-133.47	1,304.35	937.58	8.33	2.70	8.77
7,275.00	64.92	113.25	6,745.62	-143.76	1,329.43	961.54	5.95	1.73	6.30
7,305.00	65.25	115.42	6,758.26	-154.97	1,354.22	986.02	6.65	1.10	7.23
7,335.00	66.36	117.70	6,770.56	-167.21	1,378.70	1,011.09	7.86	3.70	7.60
7,366.00	67.83	120.75	6,782.63	-181.15	1,403.61	1,037.75	10.23	4.74	9.84
7,396.00	68.31	123.79	6,793.83	-196.01	1,427.14	1,064.23	9.54	1.60	10.13
7,426.00	69.60	125.49	6,804.61	-211.92	1,450.17	1,091.20	6.82	4.30	5.67
7,456.00	71.55	127.71	6,814.58	-228.79	1,472.88	1,118.69	9.54	6.50	7.40
7,487.00	72.50	129.84	6,824.15	-247.26	1,495.86	1,147.60	7.22	3.06	6.87
7,517.00	73.45	131.17	6,832.94	-265.89	1,517.67	1,175.87	5.29	3.17	4.43
7,548.00	74.93	132.74	6,841.38	-285.83	1,539.85	1,205.39	6.82	4.77	5.06
7,577.00	76.10	134.64	6,848.64	-305.22	1,560.15	1,233.28	7.52	4.03	6.55
7,608.00	77.24	136.51	6,855.78	-326.77	1,581.27	1,263.35	6.93	3.68	6.03
7,638.00	77.86	137.92	6,862.25	-348.27	1,601.16	1,292.60	5.03	2.07	4.70
7,669.00	78.16	139.49	6,868.69	-371.05	1,621.17	1,322.92	5.05	0.97	5.06
7,699.00	78.36	140.66	6,874.80	-393.57	1,640.02	1,352.29	3.88	0.67	3.90
7,729.00	78.69	141.88	6,880.77	-416.51	1,658.42	1,381.68	4.13	1.10	4.07
7,759.00	79.41	143.20	6,886.46	-439.89	1,676.33	1,411.11	4.94	2.40	4.40
7,790.00	80.37	144.41	6,891.91	-464.51	1,694.35	1,441.57	4.94	3.10	3.90
7,820.00	81.57	145.86	6,896.61	-488.82	1,711.29	1,471.08	6.23	4.00	4.83



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WV Department of
Environmental Protection

Company:	Stone Energy	Local Co-ordinate Reference:	Well 8H
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:	8H	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	Smith 8H As Drilled	Database:	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)
7,850.00	82.87	147.37	6,900.68	-513.64	1,727.64	1,500.62	6.61	4.33	5.03
7,881.00	84.26	148.61	6,904.15	-539.76	1,743.97	1,531.14	5.99	4.48	4.00
7,911.00	85.49	149.73	6,906.83	-565.42	1,759.28	1,560.65	5.53	4.10	3.73
7,971.00	88.62	152.08	6,909.91	-617.77	1,788.41	1,619.52	6.52	5.22	3.92
8,032.00	89.90	153.01	6,910.70	-671.89	1,816.53	1,679.10	2.59	2.10	1.52
8,095.00	88.46	151.45	6,911.60	-727.63	1,845.88	1,740.70	3.37	-2.29	-2.48
8,159.00	88.93	150.88	6,913.06	-783.68	1,876.74	1,803.52	1.15	0.73	-0.89
8,223.00	89.53	151.24	6,913.92	-839.68	1,907.71	1,866.36	1.09	0.94	0.56
8,286.00	90.64	151.55	6,913.83	-894.99	1,937.87	1,928.16	1.83	1.76	0.49
8,350.00	91.41	151.71	6,912.68	-951.29	1,968.27	1,990.88	1.23	1.20	0.25
8,414.00	91.14	151.32	6,911.26	-1,007.53	1,998.79	2,053.62	0.74	-0.42	-0.61
8,477.00	89.06	149.39	6,911.15	-1,062.28	2,029.95	2,115.62	4.50	-3.30	-3.06
8,541.00	90.74	152.19	6,911.26	-1,118.13	2,061.18	2,178.52	5.10	2.63	4.38
8,604.00	90.30	151.48	6,910.69	-1,173.67	2,090.91	2,240.23	1.33	-0.70	-1.13
8,668.00	91.08	150.69	6,909.92	-1,229.69	2,121.85	2,303.07	1.73	1.22	-1.23
8,731.00	91.21	151.05	6,908.66	-1,284.71	2,152.52	2,364.96	0.61	0.21	0.57
8,795.00	90.34	151.26	6,907.79	-1,340.76	2,183.39	2,427.79	1.40	-1.36	0.33
8,859.00	89.60	151.29	6,907.83	-1,396.89	2,214.15	2,490.60	1.16	-1.16	0.05
8,922.00	89.93	151.29	6,908.08	-1,452.14	2,244.41	2,552.42	0.52	0.52	0.00
8,986.00	90.17	151.31	6,908.03	-1,508.28	2,275.14	2,615.22	0.38	0.38	0.03
9,049.00	93.09	153.11	6,906.24	-1,563.98	2,304.50	2,676.80	5.44	4.63	2.86
9,112.00	93.60	152.90	6,902.56	-1,620.02	2,333.05	2,738.13	0.88	0.81	-0.33
9,176.00	92.89	152.29	6,898.94	-1,676.75	2,362.46	2,800.54	1.46	-1.11	-0.95
9,239.00	92.65	151.58	6,895.89	-1,732.27	2,392.06	2,862.15	1.19	-0.38	-1.13
9,303.00	93.36	152.05	6,892.54	-1,788.61	2,422.25	2,924.75	1.33	1.11	0.73
9,366.00	92.49	151.89	6,889.32	-1,844.14	2,451.82	2,986.34	1.40	-1.38	-0.25
9,430.00	92.02	151.37	6,886.81	-1,900.41	2,482.21	3,049.02	1.09	-0.73	-0.81
9,492.00	91.78	151.30	6,884.75	-1,954.78	2,511.93	3,109.82	0.40	-0.39	-0.11
9,556.00	90.07	150.11	6,883.72	-2,010.59	2,543.24	3,172.73	3.26	-2.67	-1.86
9,620.00	90.30	150.28	6,883.51	-2,066.12	2,575.05	3,235.76	0.45	0.36	0.27
9,684.00	89.50	149.93	6,883.62	-2,121.61	2,606.95	3,298.80	1.36	-1.25	-0.55
9,747.00	88.76	149.56	6,884.58	-2,176.02	2,638.69	3,360.92	1.31	-1.17	-0.59
9,811.00	88.29	148.59	6,886.23	-2,230.90	2,671.57	3,424.13	1.68	-0.73	-1.52
9,875.00	88.72	148.38	6,887.90	-2,285.44	2,705.01	3,487.44	0.75	0.67	-0.33
9,938.00	88.86	148.64	6,889.23	-2,339.15	2,737.91	3,549.77	0.47	0.22	0.41
10,001.00	89.13	150.56	6,890.33	-2,393.48	2,769.78	3,611.91	3.08	0.43	3.05
10,065.00	88.32	150.05	6,891.75	-2,449.06	2,801.48	3,674.90	1.50	-1.27	-0.80
10,129.00	87.95	150.42	6,893.84	-2,504.59	2,833.23	3,737.88	0.82	-0.58	0.58
10,193.00	87.81	150.72	6,896.20	-2,560.29	2,864.66	3,800.79	0.52	-0.22	0.47
10,257.00	88.05	152.16	6,898.52	-2,616.47	2,895.24	3,863.52	2.28	0.38	2.25
10,320.00	88.76	153.16	6,900.27	-2,672.41	2,924.16	3,925.01	1.95	1.13	1.59
10,384.00	88.52	153.10	6,901.79	-2,729.48	2,953.08	3,987.37	0.39	-0.38	-0.09
10,448.00	87.85	153.02	6,903.82	-2,786.50	2,982.06	4,049.73	1.05	-1.05	-0.13



Scientific Drilling International

Survey Report



11/16/2018

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WV Department of
Environmental Protection

Company: Stone Energy
 Project: Mary Prospect
 Site: Smith Pad
 Well: 8H
 Wellbore: OH
 Design: Smith 8H As Drilled

Local Co-ordinate Reference: Well 8H
 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

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)
10,511.00	88.25	153.18	6,905.96	-2,842.66	3,010.54	4,111.10	0.68	0.63	0.25
10,574.00	88.72	153.55	6,907.63	-2,898.95	3,038.78	4,172.42	0.95	0.75	0.59
10,638.00	89.13	153.95	6,908.83	-2,956.34	3,067.08	4,234.63	0.89	0.64	0.63
10,702.00	88.86	152.25	6,909.95	-3,013.40	3,096.03	4,297.00	2.69	-0.42	-2.66
10,765.00	92.22	155.96	6,909.36	-3,070.06	3,123.53	4,358.13	7.94	5.33	5.89
10,829.00	92.65	155.81	6,906.64	-3,128.42	3,149.66	4,419.69	0.71	0.67	-0.23
10,892.00	91.41	153.71	6,904.40	-3,185.36	3,176.50	4,480.62	3.87	-1.97	-3.33
10,955.00	91.08	151.92	6,903.04	-3,241.39	3,205.28	4,542.08	2.89	-0.52	-2.84
11,019.00	90.50	150.86	6,902.15	-3,297.57	3,235.92	4,604.86	1.89	-0.91	-1.66
11,083.00	89.29	150.47	6,902.27	-3,353.36	3,267.27	4,667.79	1.99	-1.89	-0.61
11,146.00	89.06	150.30	6,903.18	-3,408.12	3,298.40	4,729.79	0.45	-0.37	-0.27
11,210.00	89.50	150.13	6,903.98	-3,463.67	3,330.19	4,792.81	0.74	0.69	-0.27
11,273.00	90.50	150.82	6,903.98	-3,518.48	3,361.24	4,854.79	1.93	1.59	1.10
11,337.00	90.77	150.47	6,903.27	-3,574.26	3,392.61	4,917.73	0.69	0.42	-0.55
11,399.00	90.30	149.59	6,902.69	-3,627.97	3,423.58	4,978.81	1.61	-0.76	-1.42
11,461.00	90.74	149.00	6,902.13	-3,681.27	3,455.24	5,040.03	1.19	0.71	-0.95
11,525.00	89.80	147.92	6,901.83	-3,735.82	3,488.71	5,103.36	2.24	-1.47	-1.69
11,589.00	90.67	147.93	6,901.57	-3,790.05	3,522.70	5,166.78	1.36	1.36	0.02
11,652.00	91.01	147.93	6,900.64	-3,843.43	3,556.15	5,229.20	0.54	0.54	0.00
11,716.00	90.37	148.17	6,899.87	-3,897.73	3,590.01	5,292.59	1.07	-1.00	0.38
11,780.00	89.60	147.67	6,899.89	-3,951.96	3,624.00	5,356.01	1.43	-1.20	-0.78
11,843.00	90.37	147.65	6,899.91	-4,005.18	3,657.70	5,418.48	1.22	1.22	-0.03
11,907.00	91.08	148.12	6,899.10	-4,059.39	3,691.72	5,481.89	1.33	1.11	0.73
11,970.00	91.75	148.00	6,897.54	-4,112.83	3,725.04	5,544.28	1.08	1.06	-0.19
12,034.00	90.74	148.37	6,896.15	-4,167.20	3,758.77	5,607.64	1.68	-1.58	0.58
12,098.00	90.37	149.43	6,895.53	-4,222.00	3,791.83	5,670.90	1.75	-0.58	1.66
12,162.00	89.87	149.99	6,895.40	-4,277.26	3,824.11	5,734.02	1.17	-0.78	0.88
12,225.00	90.20	149.63	6,895.36	-4,331.72	3,855.79	5,796.14	0.78	0.52	-0.57
12,288.00	90.64	149.57	6,894.90	-4,386.05	3,887.67	5,858.29	0.70	0.70	-0.10
12,351.00	90.84	149.68	6,894.08	-4,440.40	3,919.52	5,920.43	0.36	0.32	0.17
12,414.00	89.40	149.26	6,893.95	-4,494.66	3,951.52	5,982.60	2.38	-2.29	-0.67
12,478.00	90.03	149.66	6,894.27	-4,549.79	3,984.04	6,045.77	1.17	0.98	0.63
12,542.00	90.17	150.60	6,894.16	-4,605.28	4,015.92	6,108.81	1.48	0.22	1.47
12,605.00	89.19	151.95	6,894.51	-4,660.53	4,046.20	6,170.63	2.65	-1.56	2.14
12,669.00	89.70	151.76	6,895.13	-4,716.96	4,076.38	6,233.31	0.85	0.80	-0.30
12,732.00	90.07	151.41	6,895.25	-4,772.37	4,106.36	6,295.06	0.81	0.59	-0.56
12,796.00	90.74	151.02	6,894.80	-4,828.46	4,137.18	6,357.88	1.21	1.05	-0.61
12,860.00	90.03	152.71	6,894.37	-4,884.89	4,167.36	6,420.55	2.86	-1.11	2.64
12,923.00	90.71	153.16	6,893.97	-4,940.99	4,196.02	6,482.00	1.29	1.08	0.71
12,987.00	88.86	153.72	6,894.21	-4,998.23	4,224.63	6,544.29	3.02	-2.89	0.88
13,051.00	89.46	153.51	6,895.14	-5,055.56	4,253.07	6,606.54	0.99	0.94	-0.33
13,077.00	90.10	154.07	6,895.24	-5,078.89	4,264.56	6,631.81	3.27	2.46	2.15
Last SDI MWD Survey @ 13077 MD									
13,139.00	90.10	154.07	6,895.14	-5,134.64	4,291.67	6,692.00	0.00	0.00	0.00



Scientific Drilling International
Survey Report

11/16/2018
Scientific Drilling

Company: Stone Energy	Local Co-ordinate Reference: Well 8H
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: 8H	North Reference: Grid
Wellbore: OH	Survey Calculation Method: Minimum Curvature
Design: Smith 8H 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)
Projection to Bit @ 13139.00 MD									

Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates		Comment
		+N/-S (ft)	+E/-W (ft)	
18.00	18.00	0.00	0.00	Ground Level
103.00	103.00	0.29	0.31	First SDI Gyro Survey
2,484.48	2,483.35	1.54	31.30	Last SDI Gyro Survey
2,685.00	2,683.83	0.44	34.22	First SDI MWD Survey @ 2685.00 MD
13,077.00	6,895.24	-5,078.89	4,264.56	Last SDI MWD Survey @ 13077 MD
13,139.00	6,895.14	-5,134.64	4,291.67	Projection to Bit @ 13139.00 MD

Checked By: _____ Approved By: _____ Date: _____

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Hydraulic Fracturing Fluid Product Component Information Disclosure

Job Start Date:	6/1/2018
Job End Date:	6/13/2018
State:	West Virginia
County:	Wetzel
API Number:	47-103-02909-00-00
Operator Name:	EQT Production
Well Name and Number:	519169
Latitude:	39.64637900
Longitude:	-80.81099300
Datum:	NAD83
Federal Well:	NO
Indian Well:	NO
True Vertical Depth:	6,863
Total Base Water Volume (gal):	8,502,257
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	85.20051	None
Sand (Proppant)	ProFrac	Proppant					
				Listed Below			

Hydrochloric Acid (15%)	ProFrac	Acidizing					
				Listed Below			
StimSTREAM FR 9700	ChemStream, Inc.	Friction Reducer					
				Listed Below			
Clearal 268	ChemStream, Inc.	Biocide					
				Listed Below			
Other Chemical (s)	Listed Above (s)	See Trade Name (s) List					
				Listed Below			
ProFe 105	ProFrac	Iron Control					
				Listed Below			
StimSTREAM SC-398	ChemStream, Inc.	Scale Inhibitor					
				Listed Below			
ProHib 100	ProFrac	Acid Inhibitor					
				Listed Below			

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Items above are Trade Names with the exception of Base Water . Items below are the individual ingredients.

			Silica Substrate	14808-60-7	100.00000	14.54297	None
			Hydrochloric Acid	7647-01-0	15.00000	0.02667	None
			Distillates (Petroleum), Hydrotreated Light	64742-47-8	30.00000	0.01700	None
			Non-Hazardous Substances	Proprietary	90.00000	0.01659	None

			Glutaraldehyde	111-30-8	20.00000	0.00369	None
			Alcohols, C11-14-iso-, C13-Rich, Ethoxylated	78330-21-9	5.00000	0.00283	
			Alcohols, C11-14-iso-, C13-Rich, Ethoxylated	78330-21-9	5.00000	0.00283	None
			Non-Hazardous Substances	Proprietary	90.00000	0.00226	
			Non-Hazardous Substances	Proprietary	90.00000	0.00226	None
			Citric Acid	77-92-9	100.00000	0.00075	None
			Citric Acid	77-92-9	100.00000	0.00075	
			Didecyl Dimethyl Ammonium Chloride	7173-51-5	3.00000	0.00055	None
			Alkyl Dimethyl Benzyl Ammonium Chloride	68391-01-5	3.00000	0.00055	None
			Methanol	67-56-1	90.00000	0.00033	None
			Methanol	67-56-1	90.00000	0.00033	
			Bis(HexaMethylene Triamine Penta (Methylene Phosphonic Acid) (BHMT)	34690-00-1	10.00000	0.00025	
			Bis(HexaMethylene Triamine Penta (Methylene Phosphonic Acid) (BHMT)	34690-00-1	10.00000	0.00025	None
			Xylene	1330-20-7	5.00000	0.00002	None
			Alcohols, C7-9-Iso, C8-Rich	68526-83-0	5.00000	0.00002	
			Proargyl Alcohol	107-19-7	5.00000	0.00002	
	RECEIVED Office of Oil and Gas		Imidazoline	61790-69-0	5.00000	0.00002	
	SEP 11 2018		Imidazoline	61790-69-0	5.00000	0.00002	None
	W/ Department of Environmental Protection		Xylene	1330-20-7	5.00000	0.00002	
			Proargyl Alcohol	107-19-7	5.00000	0.00002	None
			Isopropanol	67-63-0	5.00000	0.00002	
			Alcohols, C7-9-Iso, C8-Rich	68526-83-0	5.00000	0.00002	None
			Isopropanol	67-63-0	5.00000	0.00002	None

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

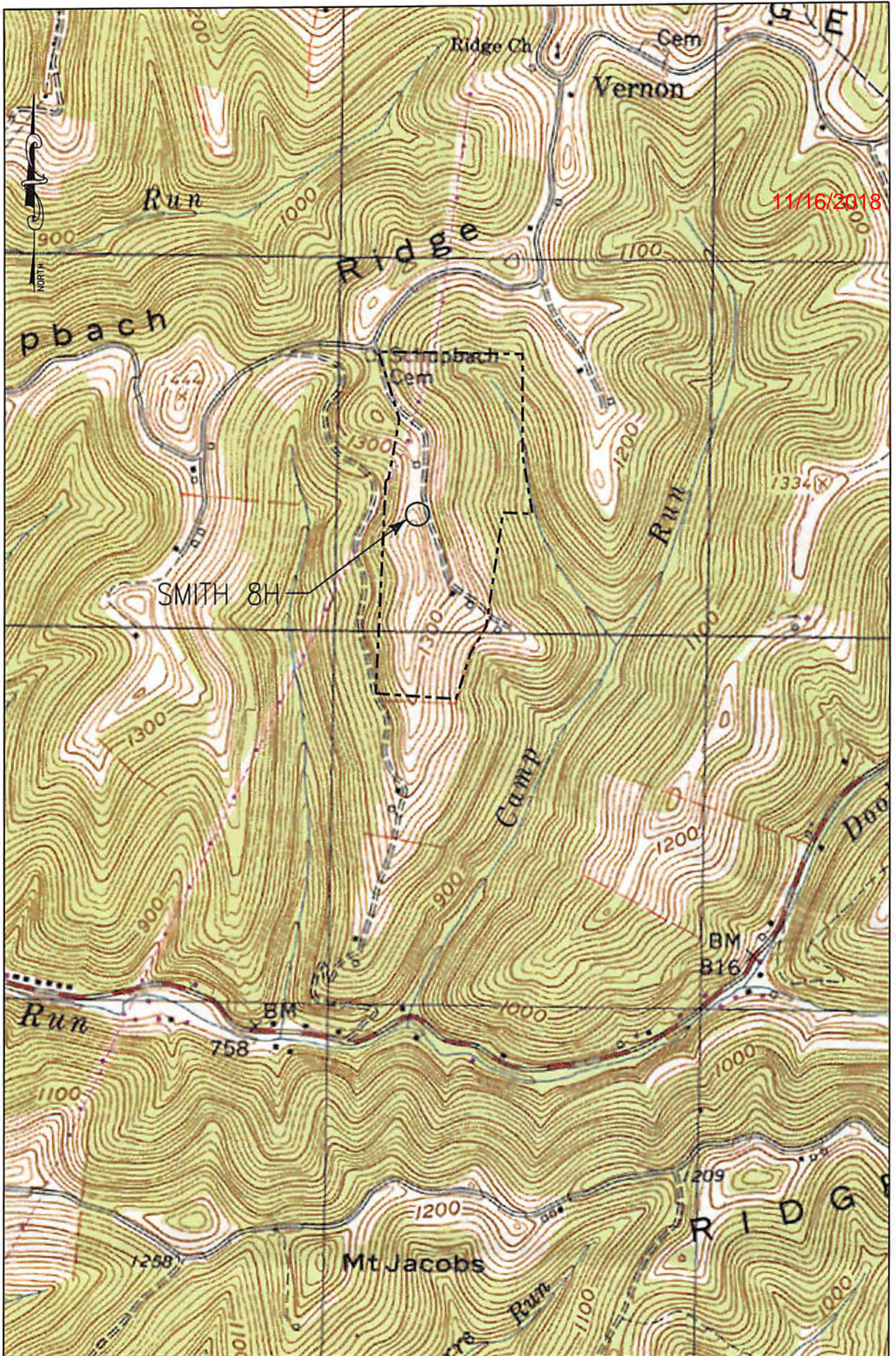
Note: For Field Development Products (products that begin with FDP), MSDS level only information has been provided.

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'

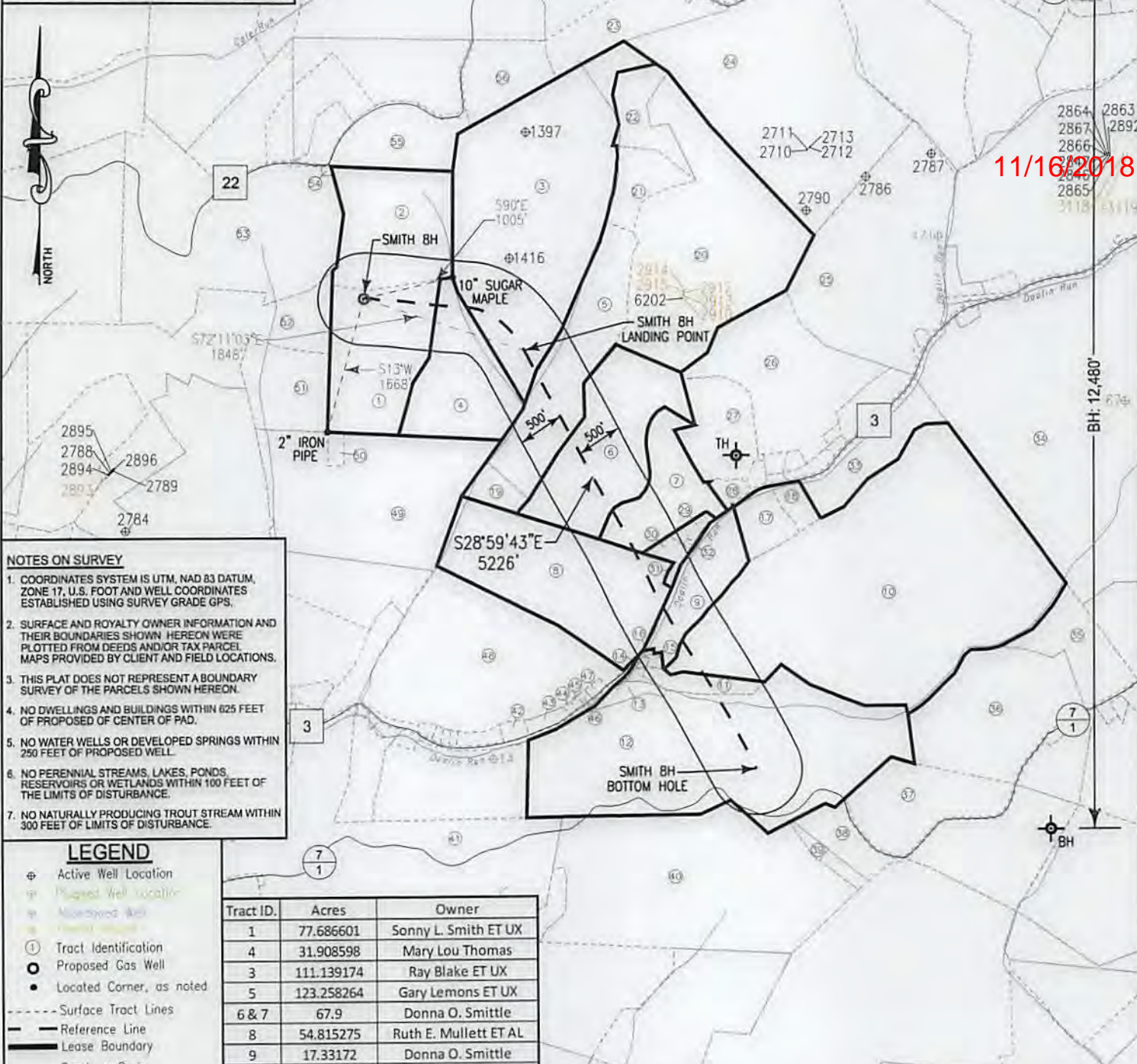
EQT PRODUCTION COMPANY
115 PROFESSIONAL PLACE
PO BOX 280
BRIDGEPORT, WV 26330

AS-BUILT

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**Smith 8H
Smith
EQT Production Company**



11/16/2018

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
 - ⊕ Proposed Well Location
 - ⊕ Abandoned Well
 - 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
4	31.908598	Mary Lou Thomas
3	111.139174	Ray Blake ET UX
5	123.258264	Gary Lemons ET UX
6 & 7	67.9	Donna O. Smittle
8	54.815275	Ruth E. Mullett ET AL
9	17.33172	Donna O. Smittle
10	1050.054587	Genna E. Powell
11 & 12	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. Smitt
L. L. S. 687



FILE NO: W2174 (BK 59-37)
DRAWING NO:
SCALE: 1" = 1600'
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

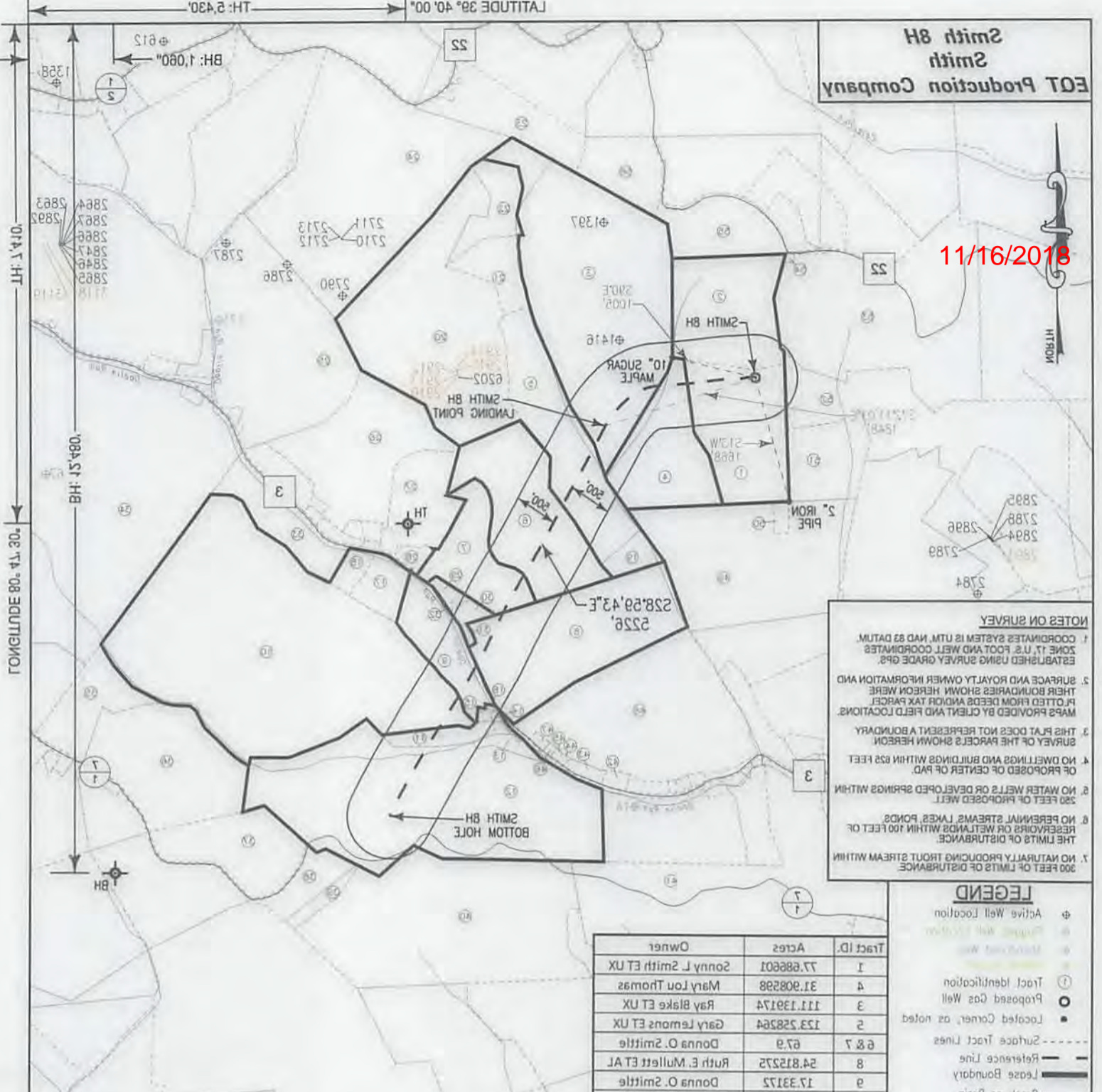
DATE: DECEMBER 4 20 17
OPERATORS WELL NO: SMITH 8H
API WELL NO
47 - 103 - 02909
STATE COUNTY PERMIT

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: 38.9 ±
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: 6,690'

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

EQT Production Company
Smith
Smith 8H

11/16/2018



NOTES ON SURVEY

1. COORDINATE 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 825 FEET OF PROPOSED OR PAD.
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 TIGHT STREAM WITHIN 300 FEET OF LIMITS OF DISTURBANCE.

LEGEND

- ⊕ Active Well Location
- ⊕ Proposed Well Location
- ⊕ Proposed Well
- ⊕ Located Corner, as noted
- ① Tract Identification
- Proposed Gas Well
- Surface Tract Lines
- - - Reference Line
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- ⊕ W County Route

Tract ID.	Acres	Owner
1	77.88601	Sonny L. Smith ET UX
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3	111.139174	Ray Blake ET UX
2	123.252564	Gary Lemons ET UX
6 & 7	67.9	Donna O. Smittle
8	24.812272	Ruth E. Mullert ET AL
9	12.33172	Donna O. Smittle
10	1020.024287	Genna E. Powell
11 & 12	122.192314	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

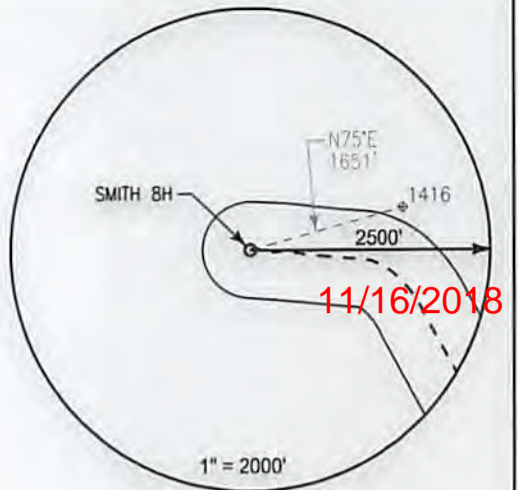


STATE PERMIT COUNTY API WELL NO OPERATORS WELL NO: SMITH 8H DATE: DECEMBER 4 20 17	STATE OF WEST VIRGINIA OIL AND GAS DIVISION DEPARTMENT OF ENVIRONMENTAL PROTECTION	FILE NO: W2174 (BK 58-37) DRAWING NO: SCALE: 1"=1800' MINIMUM DEGREE OF ACCURACY: 1:2500 PROVEN SOURCE OF ELEVATION: NGS CORS Station
DISTRICT: Magnolia COUNTY: Wetzel LOCATION ELEVATION: 135' WATERSHED: TRIBUTARY OF DOOLIN RUN QUADRANGLE: NEW MARTINSVILLE 7.5.	SURFACE OWNER: Sonny & Charotte Smith ROYALTY OWNER: Sonny & Charotte Smith, ET AL LEASE NO: 873632 ACRES: 77.89 ± ACRES: 38.9 ±	WELL TYPE: <input type="checkbox"/> OIL <input checked="" type="checkbox"/> GAS <input type="checkbox"/> LIQUID INJECTION <input type="checkbox"/> WASTE DISPOSAL (IF GAS) PRODUCTION: <input type="checkbox"/> STORAGE <input type="checkbox"/> DEEP <input checked="" type="checkbox"/> SHALLOW
PLUG AND ABANDON <input type="checkbox"/> CLEAN OUT AND REPLUG <input type="checkbox"/> TARGET FORMATION: Marcellus ESTIMATED DEPTH: 6900' PERFORATE NEW FORMATION <input type="checkbox"/> OTHER PHYSICAL CHANGE IN WELL (SPECIFY) 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	DESIGNATED AGENT: Jason Ranson ADDRESS: 115 Professional Place PO Box 280 Bridgport, WV 26330	WELL OPERATOR: EQT Production Company ADDRESS: 115 Professional Place PO Box 280 Bridgport, WV 26330

AS-BUILT

**Smith 8H
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	5	32	Wetzel	Magnolia	George S. Schubach	37.5
3	5	33	Wetzel	Magnolia	Franklin Ray Blake	108.47
4	8	6	Wetzel	Magnolia	Kocher Albert HRS	33.01
5	8	7	Wetzel	Magnolia	Gary Lemons	30.19
6	8	14	Wetzel	Magnolia	Aaron Lloyd Lemons	43.79
7	8	14.1	Wetzel	Magnolia	James D. Johnston	24.46
8	8	25	Wetzel	Magnolia	Cathy M. Westfall	57.68
9	8	28	Wetzel	Magnolia	Raymond L. & Ellen E. Ebert	17.33
10	9	7	Wetzel	Magnolia	James B. Stewart ET AL	164.78
11	8	66.1	Wetzel	Magnolia	Mark I. Cochran	10.53
12	8	66	Wetzel	Magnolia	Mark I. Cochran	134.66
13	8	66.2	Wetzel	Magnolia	Mark I. & Mary Beth Cochran	2.47
14	8	66.3	Wetzel	Magnolia	Mark I. Cochran	0.32
15	8	66.4	Wetzel	Magnolia	Mark I. Cochran	0.6
16	8	28	Wetzel	Magnolia	Mark I. Cochran	0.17
17	8	29	Wetzel	Magnolia	Kenneth F. & Mary L. Hartley	9.84
18	8	84	Wetzel	Magnolia	Kenneth F. & Mary L. Hartley	3.50
19	8	13	Wetzel	Magnolia	Gary Lemons	5.56
20	5	35	Wetzel	Magnolia	Gary Lemons	79.7
21	5	34	Wetzel	Magnolia	Gary Lemons	11.17
22	5	27	Wetzel	Magnolia	Gary Lemons	11
23	5	22	Wetzel	Magnolia	Sharon L. Bearce	37.5
24	5	28	Wetzel	Magnolia	Gary & Judy Ann Lemons	102.75
25	6	3	Wetzel	Magnolia	Gary Patrick Fitzsimmons	71.99
26	8	8	Wetzel	Magnolia	Danny L. & Orion F. Neff	42.88
27	8	15.3	Wetzel	Magnolia	David & Orion Neff	11.97
28	8	15.1	Wetzel	Magnolia	Timothy S. Myers	1.8
29	8	26.2	Wetzel	Magnolia	Timothy & Teresa Shreve	1.78
30	8	26	Wetzel	Magnolia	Ellen E. & Raymond L. Ebert	1.84
31	8	25.1	Wetzel	Magnolia	Kevin A. & Sarah L. Yeater	0.56
32	8	26.1	Wetzel	Magnolia	Teressa & Timothy Shreve	0.18
33	9	5	Wetzel	Magnolia	Raymond L. & Eli F. Pribble	16.71
34	9	1	Wetzel	Magnolia	Barbara J. Barrett ET AL	213.98
35	9	7.1	Wetzel	Magnolia	Sue Bonnie Simpkins	16.93
36	9	15	Wetzel	Magnolia	David L. Goddard	52.95
37	9	27	Wetzel	Magnolia	David L. Goddard	59.3
38	9	24	Wetzel	Magnolia	Clinton L. & Albert E. Leasure	10.03
39	9	25	Wetzel	Magnolia	Clinton L. & Albert E. Leasure	1.26
40	8	74	Wetzel	Magnolia	Thomas Eugene Presley	97.1
41	8	73	Wetzel	Magnolia	Burwell Newman	154.12
42	8A	5.1	Wetzel	Magnolia	Donald L. & Brenda K. Brookover	1.07
43	8A	5	Wetzel	Magnolia	Cathy M. Westfall	2.9
44	8A	5.2	Wetzel	Magnolia	Danny Lee Neff	0.22
45	8A	4	Wetzel	Magnolia	Danny Lee & Lisa A. Neff	0.23
46	8A	3	Wetzel	Magnolia	Michael J. Miller	0.24
47	8A	1	Wetzel	Magnolia	Michael J. Miller	0.46
48	8	55	Wetzel	Magnolia	Cathy M. Westfall ET AL	17.66
49	8	12	Wetzel	Magnolia	David L. & Ralph O. Smith	55.15
50	8	12.1	Wetzel	Magnolia	Ralph Oscar & Jonee Kay Smith	1.23
51	8	4	Wetzel	Magnolia	Lawrence E. Zumpetta ET AL	15.28
52	8	3	Wetzel	Magnolia	Lawrence E. Zumpetta ET AL	79.47
53	5	31	Wetzel	Magnolia	John William Burton	66.56
54	5	31.1	Wetzel	Magnolia	Schubach Cemetery	0.27
55	5	26.2	Wetzel	Magnolia	Franklin Ray Blake	17.73
56	5	26	Wetzel	Magnolia	Stone Energy Corporation	39.95



Notes:
SMITH 8H As-Built coordinates are
 NAD 27 N: 420,230.003 E: 1,630,846.000
 NAD 27 Lat: 39.646379 Long: -80.810993
 NAD 83 UTM N: 4,388,535.659 E: 516,231.956

SMITH 8H As-Built Landing Point coordinates are
 NAD 27 N: 419,664.583 E: 1,632,605.280
 NAD 27 Lat: 39.644897 Long: -80.804717
 NAD 83 UTM N: 4,388,372.363 E: 516,770.806

SMITH 8H As-Built Bottom Hole coordinates are
 NAD 27 N: 415,095.373 E: 1,635,137.660
 NAD 27 Lat: 39.632454 Long: -80.795491
 NAD 83 UTM N: 4,386,993.221 E: 517,565.511

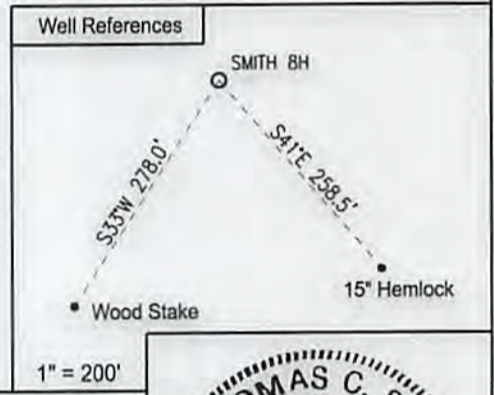
West Virginia Coordinates system of 1927 (North Zone)
 based upon Differential GPS Measurements
 Plat orientation, Corner and well ties are based upon
 the grid north meridian
 Well location references are based upon the grid north
 meridian.
 UTM coordinates are NAD83, Zone 17, Meters.

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



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. 687
 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

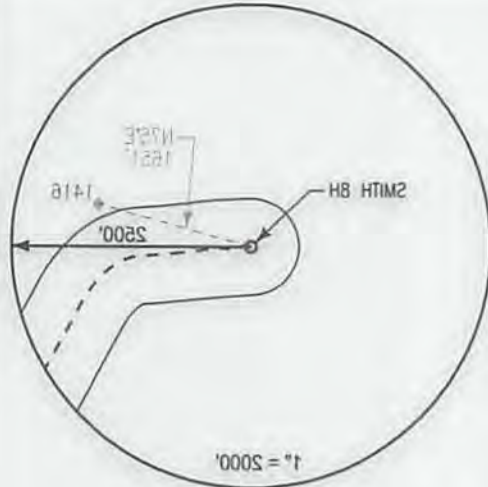
STATE OF WEST VIRGINIA
 DEPARTMENT OF ENVIRONMENTAL PROTECTION
OIL AND GAS DIVISION

DATE: DECEMBER 4 20 17
 OPERATORS WELL NO: SMITH 8H
API WELL NO
47 - 103 - 02909
 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: Sonny & Charlotte Smith ACREAGE: 38.9 ±
 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: 6,690'
 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

Tax Map No.	Parcel No.	County	District	Surface Tract Owner
28	2	Wetzel	Maingolia	Stone Energy Corporation
22	2	Wetzel	Maingolia	Fanklin Ray Blake
24	2	Wetzel	Maingolia	Schubach Cemetery
23	2	Wetzel	Maingolia	John William Burton
25	2	Wetzel	Maingolia	Lawrence E Zumbetta ET AL
20	4	Wetzel	Maingolia	Lawrence E Zumbetta ET AL
21	4	Wetzel	Maingolia	Lawrence E Zumbetta ET AL
22	4	Wetzel	Maingolia	Lawrence E Zumbetta ET AL
23	4	Wetzel	Maingolia	Lawrence E Zumbetta ET AL
24	4	Wetzel	Maingolia	Lawrence E Zumbetta ET AL
25	4	Wetzel	Maingolia	Lawrence E Zumbetta ET AL
26	4	Wetzel	Maingolia	Lawrence E Zumbetta ET AL
27	4	Wetzel	Maingolia	Lawrence E Zumbetta ET AL
28	4	Wetzel	Maingolia	Lawrence E Zumbetta ET AL
29	4	Wetzel	Maingolia	Lawrence E Zumbetta ET AL
30	4	Wetzel	Maingolia	Lawrence E Zumbetta ET AL
31	4	Wetzel	Maingolia	Lawrence E Zumbetta ET AL
32	4	Wetzel	Maingolia	Lawrence E Zumbetta ET AL
33	4	Wetzel	Maingolia	Lawrence E Zumbetta ET AL
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38	4	Wetzel	Maingolia	Lawrence E Zumbetta ET AL
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58	4	Wetzel	Maingolia	Lawrence E Zumbetta ET AL
59	4	Wetzel	Maingolia	Lawrence E Zumbetta ET AL
60	4	Wetzel	Maingolia	Lawrence E Zumbetta ET AL
61	4	Wetzel	Maingolia	Lawrence E Zumbetta ET AL
62	4	Wetzel	Maingolia	Lawrence E Zumbetta ET AL
63	4	Wetzel	Maingolia	Lawrence E Zumbetta ET AL
64	4	Wetzel	Maingolia	Lawrence E Zumbetta ET AL
65	4	Wetzel	Maingolia	Lawrence E Zumbetta ET AL
66	4	Wetzel	Maingolia	Lawrence E Zumbetta ET AL
67	4	Wetzel	Maingolia	Lawrence E Zumbetta ET AL
68	4	Wetzel	Maingolia	Lawrence E Zumbetta ET AL
69	4	Wetzel	Maingolia	Lawrence E Zumbetta ET AL
70	4	Wetzel	Maingolia	Lawrence E Zumbetta ET AL
71	4	Wetzel	Maingolia	Lawrence E Zumbetta ET AL
72	4	Wetzel	Maingolia	Lawrence E Zumbetta ET AL
73	4	Wetzel	Maingolia	Lawrence E Zumbetta ET AL
74	4	Wetzel	Maingolia	Lawrence E Zumbetta ET AL
75	4	Wetzel	Maingolia	Lawrence E Zumbetta ET AL
76	4	Wetzel	Maingolia	Lawrence E Zumbetta ET AL
77	4	Wetzel	Maingolia	Lawrence E Zumbetta ET AL
78	4	Wetzel	Maingolia	Lawrence E Zumbetta ET AL
79	4	Wetzel	Maingolia	Lawrence E Zumbetta ET AL
80	4	Wetzel	Maingolia	Lawrence E Zumbetta ET AL
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82	4	Wetzel	Maingolia	Lawrence E Zumbetta ET AL
83	4	Wetzel	Maingolia	Lawrence E Zumbetta ET AL
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88	4	Wetzel	Maingolia	Lawrence E Zumbetta ET AL
89	4	Wetzel	Maingolia	Lawrence E Zumbetta ET AL
90	4	Wetzel	Maingolia	Lawrence E Zumbetta ET AL
91	4	Wetzel	Maingolia	Lawrence E Zumbetta ET AL
92	4	Wetzel	Maingolia	Lawrence E Zumbetta ET AL
93	4	Wetzel	Maingolia	Lawrence E Zumbetta ET AL
94	4	Wetzel	Maingolia	Lawrence E Zumbetta ET AL
95	4	Wetzel	Maingolia	Lawrence E Zumbetta ET AL
96	4	Wetzel	Maingolia	Lawrence E Zumbetta ET AL
97	4	Wetzel	Maingolia	Lawrence E Zumbetta ET AL
98	4	Wetzel	Maingolia	Lawrence E Zumbetta ET AL
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100	4	Wetzel	Maingolia	Lawrence E Zumbetta ET AL

11/16/2018

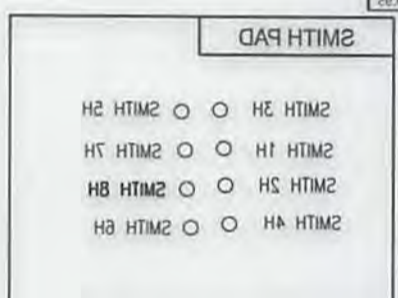
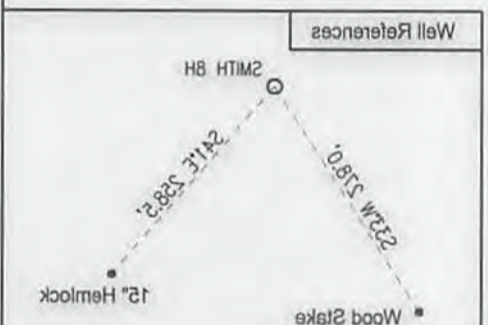


Notes:
 SMITH 8H As-Built coordinates are
 NAD 83 N: 430,230.003 E: 1,830,848.000
 NAD 83 Lat: 38.84887 Long: -80.810983
 NAD 83 UTM N: 4,388,232.889 E: 518,231.884

SMITH 8H As-Built Landing Hole coordinates are
 NAD 83 N: 419,864.883 E: 1,825,805.280
 NAD 83 Lat: 38.844897 Long: -80.804717
 NAD 83 UTM N: 4,388,372.383 E: 518,770.808

SMITH 8H As-Built Bottom Hole coordinates are
 NAD 83 N: 415,085.373 E: 1,825,137.880
 NAD 83 Lat: 38.832454 Long: -80.792491
 NAD 83 UTM N: 4,388,993.231 E: 517,885.511

West Virginia Coordinates system of 1927 (North Zone)
 based upon Differential GPS Measurements
 Plat orientation, Corner and well 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



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 49-8)
 DRAWING NO:
 SCALE: 1" = 1000'
 MINIMUM DEGREE OF ACCURACY:
 1:2500
 PROVEN SOURCE OF ELEVATION:
 NGS CORS Station

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: Maingolia COUNTY: Wetzel

SURFACE OWNER: Sonny & Charlotte Smith ACREAGE: 38.9 ±
 ROYALTY OWNER: Sonny & Charlotte Smith, ET AL LEASE NO: 873832 ACREAGE: 77.88 ±

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: 6,690'

WELL OPERATOR: EQT Production Company DESIGNATED AGENT: Jason Ranson
 ADDRESS: 115 Professional Place PO Box 280 ADDRESS: 115 Professional Place PO Box 280
 Bldgport, WV 26330 Bldgport, WV 26330

STATE COUNTY PERMIT
 47 103 02909
 API WELL NO
 OPERATORS WELL NO: SMITH 8H
 DATE: DECEMBER 4 20 17