

Well Operator's Report of Well Work



Where energy meets innovation.

Well Number: PFS27H5 (519179)

API: 47 - 103 - 02924

Submission: Initial Amended

Notes: Please Note That Stone Energy Corporation Performed The Drilling Operations On This Well And Submitted An Initial Report (Copy Attached). EQT Subsequently Performed The Stimulation Operations, Information Regarding Which Is Reported In The Following Amended WR-35 & Referenced Attachments.

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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 47-103-02924 County Wetzel District Green
Quad Porters Falls Pad Name Martin Field/Pool Name Mary
Farm name Martin, Charles and Gwendo Well Number #5H 519179
Operator (as registered with the OOG) EQT Production Company
Address 625 Liberty Ave., Ste. 1700 City Pittsburgh State PA Zip 15222

As Drilled location NAD 83/UTM Attach an as-drilled plat, profile view, and deviation survey
Top hole Northing 4,384,806.085 Easting 520,087.232
Landing Point of Curve Northing 4,385,044.122 Easting 519,906.540
Bottom Hole Northing 4,386,270.579 Easting 519,084.049

Elevation (ft) 906 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 9/30/2013 Date drilling commenced 4/30/2014 Date drilling ceased 10/26/2014
Date completion activities began 10/10/2018 Date completion activities ceased 10/25/2018
Verbal plugging (Y/N) N Date permission granted _____ Granted by _____

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

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Freshwater depth(s) ft 100 Open mine(s) (Y/N) depths N
Salt water depth(s) ft None Reported Void(s) encountered (Y/N) depths N
Coal depth(s) ft 624, 708 and 740 Cavern(s) encountered (Y/N) depths N
Is coal being mined in area (Y/N) N

Reviewed by:

Reviewed

DWH
2-21-19

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API 47- 103 - 02924 Farm name Martin, Charles and Gwendo Well number #5H 519179

CASING STRINGS	Hole Size	Casing Size	Depth	New or Used	Grade wt/ft	Basket Depth(s)	Did cement circulate (Y/N) * Provide details below*
Conductor	24"	20"	90'	New	LS - 94.1 ppf		N - GTS
Surface	17.5"	13.375"	877'	New	J55 - 54.5 ppf	111' & 184'	Y - CTS
Coal	17.5"	13.375"	877'	New	J55 - 54.5 ppf	111' & 184'	Y - CTS
Intermediate 1	12.25"	9.625"	2,236'	New	J55 - 36 ppf		Y - CTS
Intermediate 2							
Intermediate 3							
Production	8.75"	5.5"	11,947'	New	P110 - 20 ppf		N - TOC @ 783' Calculated
Tubing							
Packer type and depth set		TAM CAP Inflatable Packer on 9.625" Casing String @ 754'					

Comment Details Circulated 12 bbls cement to surface on 13.375" casing string. Circulated 28 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 @ 783'.

CEMENT DATA	Class/Type of Cement	Number of Sacks	Slurry wt (ppg)	Yield (ft ³ /sks)	Volume (ft ²)	Cement Top (MD)	WOC (hrs)
Conductor	Type 1	34	15.6	1.18	40	Surface	24.0
Surface	HalCem Class "A"	670	15.6	1.21	811	Surface	8.0
Coal	HalCem Class "A"	670	15.6	1.21	811	Surface	8.0
Intermediate 1	Lead-10% Salt Tail-HalCem	Lead-400 Tail-400	Lead-15.6 Tail-15.6	Lead-1.24 Tail-1.21	Lead-496 Tail-484	Surface	12.0
Intermediate 2							
Intermediate 3							
Production	Lead-Tuned Spacers Tail-VanCem	Lead-279 Tail-2,350	Lead-14.5 Tail-15.2	Lead-1.51 Tail-1.20	Lead-421 Tail-2,820	783' Calculated	7.0
Tubing							

Drillers TD (ft) 11,964 MD / 6,549 TVD Loggers TD (ft) N/A
 Deepest formation penetrated Marcellus Shale Plug back to (ft) N/A
 Plug back procedure _____

Kick off depth (ft) 5,668 MD / 5,685 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 4, 8, 12, 16 and 20. Intermediate casing had bow spring centralizers placed on joints 4, 8, 12, 16, 20, 24, 28 and 32. Production casing had rigid spiral centralizers placed on every fourth joint beginning with joint 7 to joint 143. Ran a total of 35 rigid spiral centralizers. Ran bow spring centralizers from joint 147 to joint 232 on every fifth joint. A total of 18 bow spring centralizers were run.

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WAS WELL COMPLETED AS SHOT HOLE Yes No DETAILS _____

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WAS WELL COMPLETED OPEN HOLE? Yes No DETAILS _____

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

519179 47-103-02924-00-00 Perforations

05/31/2019

Stage Number	Perforation Date	Top Perf Depth (ftKB)	Bottom Perf Depth (ftKB)	Number of Shots	Formation
Toe Sub	9/29/2018	11,887	11,889	0	MARCELLUS
1	10/7/2018	11,543	11,705	40	MARCELLUS
2	10/11/2018	11,343	11,505	40	MARCELLUS
3	10/11/2018	11,143	11,305	40	MARCELLUS
4	10/11/2018	10,943	11,105	40	MARCELLUS
5	10/12/2018	10,743	10,905	40	MARCELLUS
6	10/12/2018	10,543	10,705	40	MARCELLUS
7	10/12/2018	10,343	10,505	40	MARCELLUS
8	10/13/2018	10,143	10,305	40	MARCELLUS
9	10/13/2018	9,943	10,105	40	MARCELLUS
10	10/14/2018	9,743	9,905	40	MARCELLUS
11	10/15/2018	9,543	9,705	40	MARCELLUS
12	10/16/2018	9,343	9,505	40	MARCELLUS
13	10/17/2018	9,143	9,305	40	MARCELLUS
14	10/17/2018	8,943	9,105	40	MARCELLUS
15	10/18/2018	8,743	8,905	40	MARCELLUS
16	10/18/2018	8,543	8,705	40	MARCELLUS
17	10/19/2018	8,343	8,505	40	MARCELLUS
18	10/19/2018	8,143	8,305	40	MARCELLUS
19	10/19/2018	7,943	8,105	40	MARCELLUS
20	10/19/2018	7,743	7,905	40	MARCELLUS
21	10/20/2018	7,543	7,705	40	MARCELLUS
22	10/20/2018	7,343	7,505	40	MARCELLUS
23	10/20/2018	7,143	7,305	40	MARCELLUS
24	10/21/2018	6,943	7,105	40	MARCELLUS

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51917947-103-02924-00-00 - 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 (bbbls)	Amount of Nitrogen/other (units)
1	10/11/2018	76	8,966.00	9,354.00	4,057.00	450,660.00	8,323.00	0
2	10/11/2018	88	8,653.00	9,201.00	3,933.00	450,100.00	8,166.00	0
3	10/11/2018	97	8,144.00	8,446.00	3,746.00	450,000.00	7,611.00	0
4	10/12/2018	97	8,174.00	8,461.00	4,191.00	450,640.00	7,669.00	0
5	10/12/2018	100	8,456.00	8,756.00	4,103.00	450,600.00	7,775.00	0
6	10/12/2018	99	8,509.00	9,440.00	4,416.00	450,800.00	8,224.00	0
7	10/13/2018	98	8,416.00	9,140.00	4,377.00	450,160.00	7,492.00	0
8	10/13/2018	100	8,612.00	8,863.00	4,728.00	450,580.00	7,478.00	0
9	10/14/2018	100	8,448.00	8,641.00	4,502.00	451,800.00	7,390.00	0
10	10/15/2018	100	8,514.00	9,096.00	4,549.00	450,150.00	7,492.00	0
11	10/16/2018	100	8,573.00	9,144.00	4,520.00	450,200.00	7,627.00	0
12	10/17/2018	100	8,753.00	9,374.00	4,477.00	450,488.00	7,104.00	0
13	10/17/2018	86	8,801.00	9,300.00	4,448.00	450,212.00	7,422.00	0
14	10/17/2018	89	8,956.00	9,457.00	3,887.00	450,760.00	7,484.00	0
15	10/18/2018	99	8,311.00	8,652.00	4,217.00	450,680.00	7,519.00	0
16	10/18/2018	100	8,355.00	8,733.00	4,713.00	450,020.00	7,337.00	0
17	10/19/2018	98	8,776.00	9,461.00	4,590.00	450,300.00	7,152.00	0
18	10/19/2018	99	8,686.00	9,417.00	4,862.00	450,100.00	7,368.00	0
19	10/19/2018	100	8,262.00	8,618.00	4,322.00	450,780.00	7,900.00	0
20	10/20/2018	100	8,166.00	8,634.00	4,388.00	450,180.00	7,546.00	0
21	10/20/2018	99	8,603.00	9,157.00	4,551.00	450,260.00	7,374.00	0
22	10/20/2018	100	8,024.00	8,515.00	4,456.00	450,800.00	7,435.00	0
23	10/21/2018	100	8,135.00	8,719.00	4,322.00	450,540.00	7,465.00	0
24	10/25/2018	100	7,693.00	9,135.00	4,533.00	450,480.00	7,647.00	0

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Hydraulic Fracturing Fluid Product Component Information Disclosure

Job Start Date:	10/10/2018
Job End Date:	10/25/2018
State:	West Virginia
County:	Wetzel
API Number:	47-103-02924-00-00
Operator Name:	EQT Production
Well Name and Number:	519179
Latitude:	39.61269100
Longitude:	-80.76617200
Datum:	NAD83
Federal Well:	NO
Indian Well:	NO
True Vertical Depth:	6,594
Total Base Water Volume (gal):	7,644,000
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	85.25533	None
Hydrochloric Acid (15%)	ProFrac	Acidizing		Listed Below			

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	Calcium Nitrate.4H2O	13477-34-4	100.00000	0.03755	
	Hydrochloric Acid	7647-01-0	15.00000	0.02717	None
	Hydrotreated Light Petroleum Distillate	64742-47-8	30.00000	0.01671	None
	Amines, Polyethylenepoly-, Ethoxylated, Phosphonomethylated, Sodiumsalts	70900-16-2	30.00000	0.00534	None
	Methanol	67-56-1	30.00000	0.00534	None
	Ethoxylated Alcohol	Proprietary	5.00000	0.00278	None
	Poly(Oxy-1,2-Ethanediy),.Alpha.-Tridecyl-.Omega.-Hydroxy-, Branched	69011-36-5	5.00000	0.00278	None
	Proprietary	Proprietary	100.00000	0.00251	
	Proprietary	Proprietary	100.00000	0.00251	None
	Sodium Chloride	7647-14-5	5.00000	0.00089	None
	Methanol	67-56-1	90.00000	0.00041	None
	Methanol	67-56-1	90.00000	0.00041	
	Citric Acid	77-92-9	100.00000	0.00007	
	Citric Acid	77-92-9	100.00000	0.00007	None
	Alcohols, C7-9-ISO, C8-Rich	68526-83-0	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	
	Imidazoline	61790-69-0	5.00000	0.00002	None
	Xylene	1330-20-7	5.00000	0.00002	None
	Propargyl Alcohol	107-19-7	5.00000	0.00002	None
	Xylene	1330-20-7	5.00000	0.00002	
	Imidazoline	61790-69-0	5.00000	0.00002	
	Propargyl Alcohol	107-19-7	5.00000	0.00002	
	Isopropanol	67-63-0	5.00000	0.00002	None
	Ethylbenzene	100-41-4	1.00000	0.00000	None

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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 47-103-02924 County Wetzel District Green
 Quad Porters Falls Pad Name Martin Field/Pool Name Mary
 Farm name Martin, Charles and Gwendo Well Number #5H
 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 4,384,806 Easting 520,087
 Landing Point of Curve Northing 4,385,020 Easting 519,922
 Bottom Hole Northing 4,386,271 Easting 519,084

Elevation (ft) 906 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 9/30/2013 Date drilling commenced 4/30/2014 Date drilling ceased 10/26/2014
 Date completion activities began Not Yet Completed Date completion activities ceased Not Yet Completed
 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 None Reported Void(s) encountered (Y/N) depths N
 Coal depth(s) ft 624, 708 and 740 Cavern(s) encountered (Y/N) depths N
 Is coal being mined in area (Y/N) N

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Martin #5H
API 47-103-02924
Stone Energy Corporation

	Horizontal		Bottom (ft TVD)	Bottom (ft MD)	
	Top (ft TVD)	Top (ft MD)			
Sandstone & Shale	Surface	*	632		FW @ 108'
Coal	632	*	638		
Sandstone & Shale	638	*	716		
Coal	716	*	734		
Sandstone & Shale	734	*	748		
Coal	748	*	758		
Sandstone & Shale	758	*	1,883		SW @ None Reported
Little Lime	1,883	*	1,913		
Big Lime	1,913	*	2,013		
Big Injun	2,013	*	2,113		
Sandstone & Shale	2,113	*	2,477		
Berea Sandstone	2,477	*	2,507		
Shale	2,507	*	2,679		
Gordon	2,679	*	2,729		
Undiff Devonian Shale	2,729	*	5,602	5,606	
Rhinestreet	5,602	5,606 ~	6,142	6,243	
Cashaqua	6,142	6,243 ~	6,420	6,502	
Middlesex	6,420	6,502 ~	6,440	6,524	
West River	6,440	6,524 ~	6,497	6,631	
Geneseo	6,497	6,631 ~	6,512	6,655	
Tully Limestone	6,512	6,655 ~	6,545	6,721	
Hamilton Shale	6,545	6,721 ~	6,594	6,862	
Marcellus	6,594	6,862 ~	6,549	11,964	
TD			6,549	11,964	

* From Pilot Hole Log and Driller's Log

~ From MWD Gamma Log

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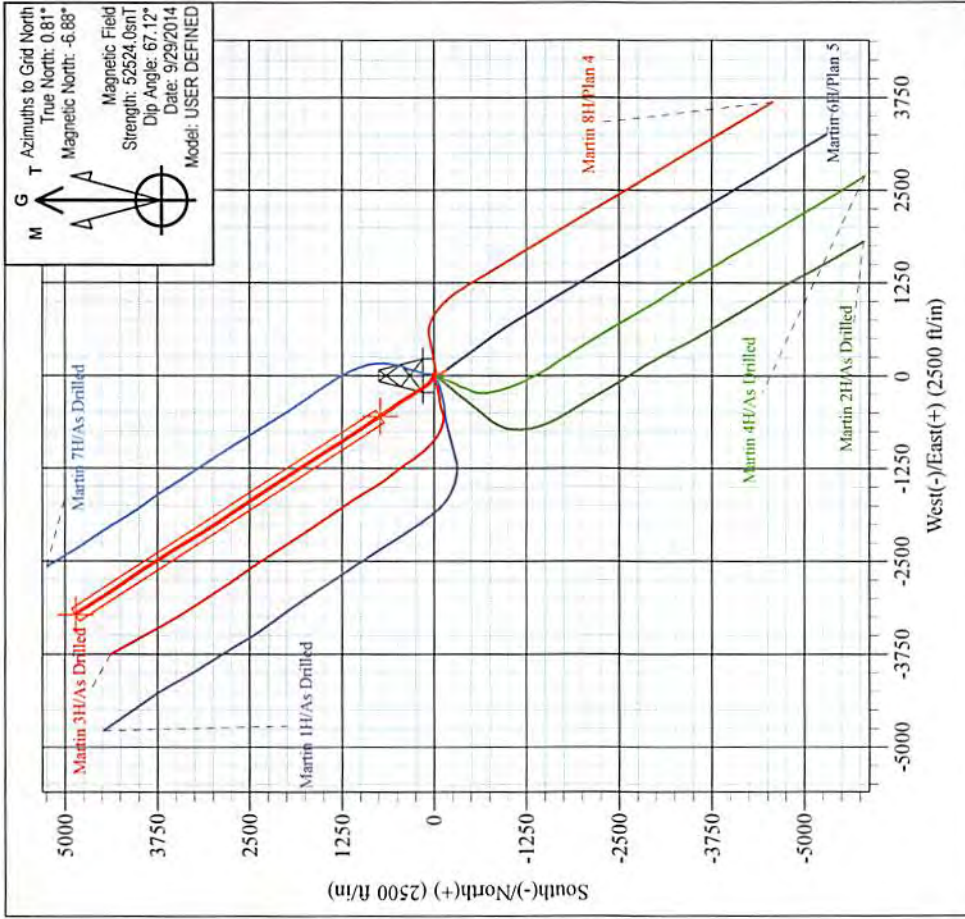
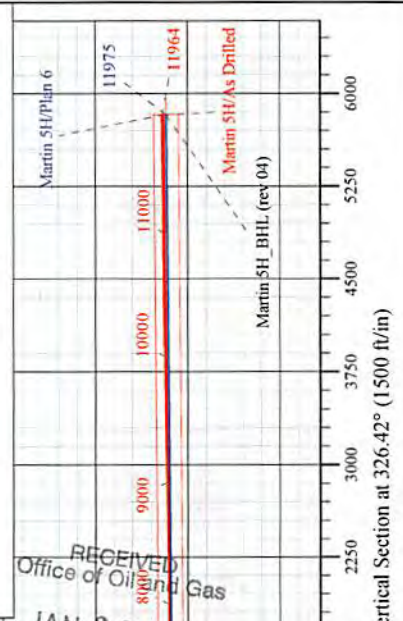
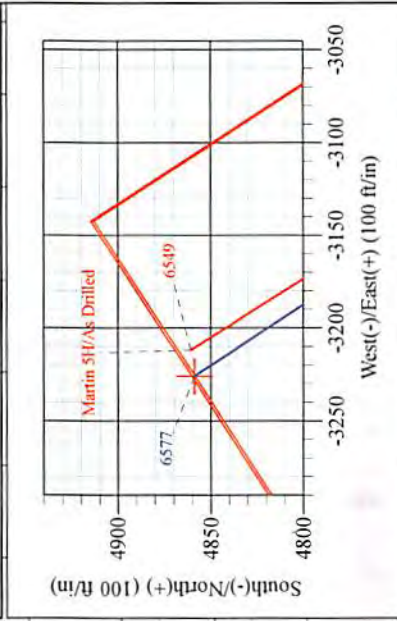
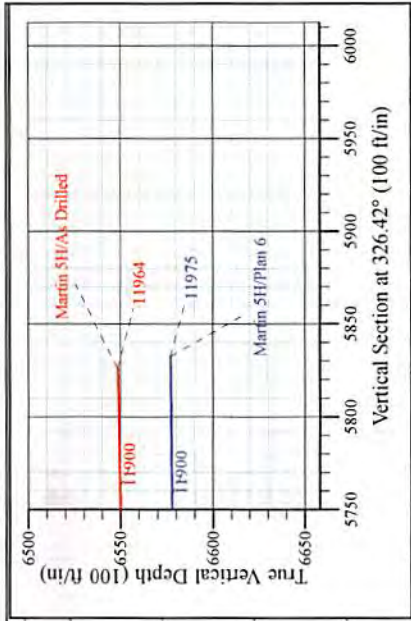
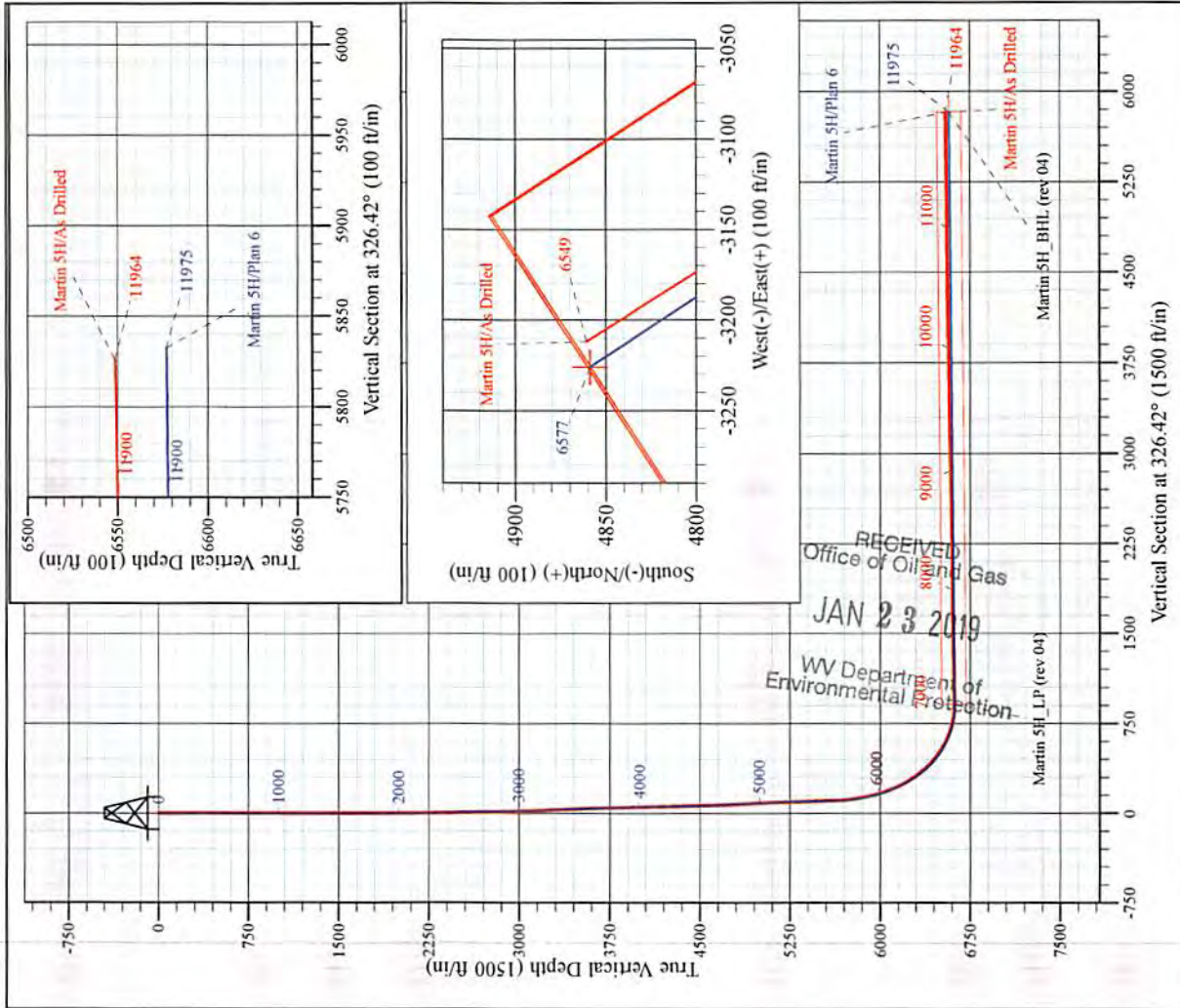
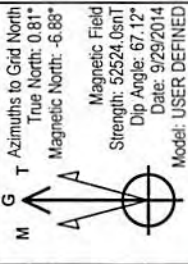
Martin Pad
 Martin 5H
 Plan 6
 GL 906 & KB 18 @ 924.00ft (Saxon 141)
 Heather Prospect (NAD 27)

PROJECT DETAILS:
 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



WELL DETAILS: Martin 5H

+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
0.00	0.00	407780.00	1643293.00	39° 36' 45.688 N	80° 45' 58.220 W



05/31/2019

Shane Rhodes
 12:32, November 02 2014
 Scientific Drilling International
 124 Vista Drive
 Charleroi, PA 15022

05/31/2019



Stone Energy Corporation

Heather Prospect (NAD 27)

Martin Pad

Martin 5H - Slot 5H

OH

Design: As Drilled

Standard Survey Report

02 November, 2014

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Scientific Drilling International
Survey Report

05/31/2019
Scientific Drilling

Company:	Stone Energy Corporation	Local Co-ordinate Reference:	Well Martin 5H - Slot 5H
Project:	Heather Prospect (NAD 27)	TVD Reference:	GL 906 & KB 18 @ 924.00ft (Saxon 141)
Site:	Martin Pad	MD Reference:	GL 906 & KB 18 @ 924.00ft (Saxon 141)
Well:	Martin 5H	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	As Drilled	Database:	Northeast District

Project	Heather Prospect (NAD 27), Wetzel County, 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	Martin Pad				
Site Position:		Northing:	407,759.00 usft	Latitude:	39° 36' 45.478 N
From:	Map	Easting:	1,643,274.00 usft	Longitude:	80° 45' 58.459 W
Position Uncertainty:	0.00 ft	Slot Radius:	13-3/16 "	Grid Convergence:	-0.81 "

Well	Martin 5H - Slot 5H					
Well Position	+N/-S	0.00 ft	Northing:	407,780.00 usft	Latitude:	39° 36' 45.688 N
	+E/-W	0.00 ft	Easting:	1,643,293.00 usft	Longitude:	80° 45' 58.220 W
Position Uncertainty		0.00 ft	Wellhead Elevation:	0.00 ft	Ground Level:	906.00 ft

Wellbore	OH				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	BGGM2013	3/27/2014	-8.59	67.11	52,440
	BGGM2013	4/15/2014	-8.59	67.10	52,433
	User Defined	9/10/2014	-7.69	67.13	52,532
	User Defined	9/29/2014	-7.69	67.12	52,524

Design	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	326.42	

Survey Program	Date 11/2/2014				
From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description	
18.00	2,238.00	Survey 1 - Vaughn Gyro (OH)	VES GyroFlex		
2,273.00	5,476.00	Survey 2 - SDI MWD (OH)	SDI MWD	SDI MWD - Standard ver 1.0.1	
5,516.00	11,964.00	Survey #3 - SDI MWD (OH)	SDI MWD	SDI MWD - Standard ver 1.0.1	

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Survey	WV Department of Environmental Protection									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
18.00	0.00	360.00	18.00	0.00	0.00	0.00	0.00	0.00	0.00	
First Vaughn Gyro Survey @ 18 MD										
108.00	0.16	45.51	108.00	0.09	0.09	0.02	0.18	0.18	0.00	
208.00	0.24	37.86	208.00	0.35	0.32	0.12	0.08	0.08	-7.65	
308.00	0.19	44.82	308.00	0.63	0.56	0.22	0.06	-0.05	6.96	



Scientific Drilling International
Survey Report

05/31/2019
Scientific Drilling

Company:	Stone Energy Corporation	Local Co-ordinate Reference:	Well Martin 5H - Slot 5H
Project:	Heather Prospect (NAD 27)	TVD Reference:	GL 906 & KB 18 @ 924.00ft (Saxon 141)
Site:	Martin Pad	MD Reference:	GL 906 & KB 18 @ 924.00ft (Saxon 141)
Well:	Martin 5H	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	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)
408.00	0.11	59.30	408.00	0.80	0.76	0.25	0.09	-0.08	14.48
508.00	0.08	64.26	508.00	0.88	0.91	0.23	0.03	-0.03	4.96
608.00	0.10	45.66	608.00	0.97	1.03	0.24	0.04	0.02	-18.60
708.00	0.06	44.88	708.00	1.07	1.13	0.26	0.04	-0.04	-0.78
808.00	0.18	70.23	808.00	1.16	1.32	0.24	0.13	0.12	25.35
908.00	0.62	69.34	907.99	1.40	1.97	0.08	0.44	0.44	-0.89
1,008.00	0.94	44.77	1,007.99	2.18	3.06	0.12	0.46	0.32	-24.57
1,108.00	0.86	38.03	1,107.97	3.35	4.10	0.53	0.13	-0.08	-6.74
1,208.00	1.10	37.27	1,207.96	4.71	5.14	1.08	0.24	0.24	-0.76
1,308.00	0.85	42.91	1,307.94	6.01	6.23	1.57	0.27	-0.25	5.64
1,408.00	0.61	66.48	1,407.94	6.77	7.22	1.65	0.38	-0.24	23.57
1,508.00	0.58	76.82	1,507.93	7.10	8.20	1.38	0.11	-0.03	10.34
1,608.00	0.59	86.50	1,607.93	7.24	9.21	0.94	0.10	0.01	9.68
1,708.00	0.96	58.17	1,707.92	7.72	10.43	0.66	0.52	0.37	-28.33
1,808.00	0.83	68.55	1,807.90	8.42	11.82	0.48	0.21	-0.13	10.38
1,908.00	1.18	65.43	1,907.89	9.12	13.43	0.17	0.35	0.35	-3.12
2,008.00	1.30	56.59	2,007.87	10.17	15.31	0.00	0.23	0.12	-8.84
2,108.00	1.37	49.79	2,107.84	11.57	17.17	0.14	0.17	0.07	-6.80
2,208.00	1.25	42.35	2,207.81	13.14	18.82	0.54	0.21	-0.12	-7.44
2,238.00	1.41	45.50	2,237.80	13.64	19.30	0.69	0.59	0.53	10.50
Last Vaughn Gyro Survey @ 2238 MD									
2,273.00	1.06	34.42	2,272.80	14.21	19.79	0.89	1.21	-1.00	-31.66
First SDI MWD Survey @ 2273 MD									
2,368.00	1.23	329.14	2,367.78	15.81	19.77	2.24	1.31	0.18	-68.72
2,462.00	2.22	297.51	2,461.74	17.52	17.63	4.84	1.42	1.05	-33.65
2,556.00	3.05	266.84	2,555.64	18.22	13.52	7.70	1.71	0.88	-32.63
2,650.00	3.06	258.14	2,649.51	17.57	8.57	9.90	0.49	0.01	-9.26
2,744.00	2.81	256.62	2,743.39	16.52	3.87	11.62	0.28	-0.27	-1.62
2,838.00	2.71	268.51	2,837.28	15.93	-0.59	13.60	0.62	-0.11	12.65
2,932.00	2.75	271.45	2,931.17	15.93	-5.07	16.07	0.15	0.04	3.13
3,027.00	2.56	270.21	3,026.07	15.99	-9.47	18.56	0.21	-0.20	-1.31
3,121.00	2.67	276.84	3,119.97	16.26	-13.74	21.15	0.34	0.12	7.05
3,215.00	2.82	292.64	3,213.87	17.41	-18.05	24.49	0.82	0.16	16.81
3,309.00	2.97	294.15	3,307.75	19.30	-22.40	28.47	0.18	0.16	1.61
3,403.00	2.53	295.19	3,401.64	21.18	-26.50	32.30	0.47	-0.47	1.11
3,499.00	2.52	296.05	3,497.54	23.01	-30.32	35.94	0.04	-0.01	0.90
3,593.00	2.02	294.51	3,591.47	24.60	-33.68	39.13	0.54	-0.53	-1.64
3,687.00	2.16	286.07	3,685.41	25.78	-36.89	41.88	0.36	0.15	-8.98
3,781.00	2.21	307.42	3,779.34	27.37	-40.03	44.95	0.86	0.05	22.71
3,875.00	2.29	316.20	3,873.27	29.83	-42.77	48.51	0.38	0.09	9.34
3,969.00	1.50	297.84	3,967.22	31.76	-45.16	51.44	1.05	-0.84	-19.53
4,063.00	1.53	282.49	4,061.19	32.60	-47.47	53.42	0.43	0.03	-16.33
4,158.00	1.27	284.43	4,156.16	33.14	-49.73	55.12	0.28	-0.27	2.04



Scientific Drilling International
Survey Report

05/31/2019
Scientific Drilling

Company:	Stone Energy Corporation	Local Co-ordinate Reference:	Well Martin 5H - Slot 5H
Project:	Heather Prospect (NAD 27)	TVD Reference:	GL 906 & KB 18 @ 924.00ft (Saxon 141)
Site:	Martin Pad	MD Reference:	GL 906 & KB 18 @ 924.00ft (Saxon 141)
Well:	Martin 5H	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	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)
4,252.00	1.05	272.69	4,250.14	33.44	-51.60	56.40	0.34	-0.23	-12.49
4,346.00	1.64	307.29	4,344.11	34.30	-53.53	58.18	1.04	0.63	36.81
4,440.00	2.08	312.54	4,438.06	36.27	-55.86	61.11	0.50	0.47	5.59
4,534.00	2.21	310.76	4,532.00	38.60	-58.49	64.51	0.16	0.14	-1.89
4,628.00	2.45	308.48	4,625.92	41.04	-61.43	68.17	0.27	0.26	-2.43
4,722.00	2.68	309.58	4,719.83	43.69	-64.70	72.18	0.25	0.24	1.17
4,816.00	2.94	306.89	4,813.71	46.53	-68.32	76.56	0.31	0.28	-2.86
4,912.00	3.31	306.39	4,909.57	49.66	-72.52	81.48	0.39	0.39	-0.52
5,006.00	2.63	308.96	5,003.44	52.62	-76.38	86.09	0.74	-0.72	2.73
5,100.00	2.65	313.08	5,097.34	55.46	-79.65	90.26	0.20	0.02	4.38
5,194.00	1.81	316.63	5,191.27	58.02	-82.25	93.84	0.91	-0.89	3.78
5,288.00	1.42	332.09	5,285.23	60.13	-83.82	96.46	0.62	-0.41	16.45
5,382.00	1.99	300.89	5,379.19	62.00	-85.76	99.09	1.14	0.61	-33.19
5,476.00	2.31	294.45	5,473.13	63.62	-88.89	102.17	0.43	0.34	-6.85
5,516.00	2.30	298.92	5,513.10	64.34	-90.32	103.57	0.45	-0.03	11.18
5,580.00	2.37	291.97	5,577.04	65.46	-92.68	105.80	0.46	0.11	-10.86
5,610.00	2.25	294.48	5,607.02	65.94	-93.79	106.81	0.52	-0.40	8.37
5,641.00	2.21	292.05	5,637.99	66.41	-94.89	107.82	0.33	-0.13	-7.84
5,671.00	3.03	303.34	5,667.96	67.07	-96.09	109.02	3.22	2.73	37.63
5,701.00	4.41	316.11	5,697.90	68.33	-97.55	110.89	5.34	4.60	42.57
5,731.00	6.53	317.86	5,727.76	70.43	-99.50	113.71	7.09	7.07	5.83
5,761.00	8.56	314.28	5,757.50	73.25	-102.24	117.58	6.94	6.77	-11.93
5,791.00	9.89	315.26	5,787.11	76.64	-105.65	122.29	4.46	4.43	3.27
5,821.00	10.17	314.86	5,816.65	80.34	-109.35	127.41	0.96	0.93	-1.33
5,852.00	10.75	315.68	5,847.14	84.34	-113.31	132.93	1.93	1.87	2.65
5,882.00	11.08	318.44	5,876.59	88.50	-117.17	138.54	2.06	1.10	9.20
5,912.00	12.23	321.39	5,905.98	93.14	-121.07	144.56	4.32	3.83	9.83
5,943.00	13.92	323.39	5,936.17	98.70	-125.34	151.55	5.64	5.45	6.45
5,973.00	15.60	325.35	5,965.18	104.91	-129.79	159.19	5.84	5.60	6.53
6,002.00	17.10	326.75	5,993.01	111.69	-134.34	167.35	5.35	5.17	4.83
6,032.00	19.13	326.13	6,021.52	119.46	-139.50	176.68	6.80	6.77	-2.07
6,062.00	20.14	325.07	6,049.77	127.77	-145.20	186.76	3.57	3.37	-3.50
6,092.00	20.64	324.62	6,077.89	136.32	-151.22	197.21	1.75	1.67	-1.50
6,122.00	21.85	325.47	6,105.86	145.23	-157.44	208.08	4.16	4.03	2.83
6,152.00	24.07	327.41	6,133.48	154.98	-163.90	219.78	7.82	7.40	6.47
6,183.00	26.18	328.95	6,161.54	166.17	-170.84	232.93	7.13	6.81	2.23
6,213.00	26.96	329.62	6,188.37	177.71	-177.69	246.33	2.79	2.60	2.23
6,244.00	28.38	329.33	6,215.83	190.11	-185.00	260.71	4.60	4.58	-0.94
6,274.00	30.49	328.72	6,241.95	202.75	-192.59	275.43	7.10	7.03	-2.03
6,304.00	33.31	326.93	6,267.42	216.16	-201.04	291.28	9.91	9.40	-5.97
6,335.00	36.35	326.34	6,292.86	230.94	-210.78	308.98	9.87	9.81	-1.90
6,366.00	36.83	325.31	6,317.76	246.23	-221.16	327.46	2.51	1.55	-3.32
6,396.00	37.75	325.35	6,341.62	261.18	-231.50	345.63	3.07	3.07	0.13
6,426.00	40.30	325.96	6,364.93	276.77	-242.15	364.52	8.60	8.50	2.03

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Scientific Drilling International
Survey Report

05/31/2019
Scientific Drilling

Company:	Stone Energy Corporation	Local Co-ordinate Reference:	Well Martin 5H - Slot 5H
Project:	Heather Prospect (NAD 27)	TVD Reference:	GL 906 & KB 18 @ 924.00ft (Saxon 141)
Site:	Martin Pad	MD Reference:	GL 906 & KB 18 @ 924.00ft (Saxon 141)
Well:	Martin 5H	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	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)
6,456.00	43.08	326.47	6,387.33	293.35	-253.24	384.47	9.34	9.27	1.70
6,487.00	46.06	327.71	6,409.41	311.62	-265.06	406.22	10.01	9.61	4.00
6,517.00	48.68	328.06	6,429.73	330.31	-276.79	428.28	8.78	8.73	1.17
6,546.00	50.87	328.24	6,448.45	349.12	-288.47	450.41	7.57	7.55	0.62
6,576.00	52.71	328.95	6,467.01	369.24	-300.75	473.97	6.41	6.13	2.37
6,607.00	54.52	329.25	6,485.40	390.65	-313.57	498.89	5.89	5.84	0.97
6,639.00	56.55	328.49	6,503.51	413.23	-327.21	525.25	6.64	6.34	-2.38
6,671.00	59.11	326.79	6,520.54	436.11	-341.71	552.33	9.18	8.00	-5.31
6,703.00	61.80	325.49	6,536.32	459.22	-357.22	580.16	9.12	8.41	-4.06
6,734.00	64.72	324.74	6,550.27	481.93	-373.05	607.84	9.66	9.42	-2.42
6,766.00	67.16	325.01	6,563.31	505.82	-389.86	637.05	7.66	7.63	0.84
6,798.00	70.21	324.70	6,574.94	530.20	-407.02	666.84	9.57	9.53	-0.97
6,830.00	72.54	324.54	6,585.16	554.92	-424.58	697.15	7.30	7.28	-0.50
6,862.00	75.12	325.22	6,594.07	580.06	-442.26	727.87	8.32	8.06	2.13
6,893.00	77.41	325.88	6,601.43	604.89	-459.29	757.98	7.67	7.39	2.13
6,925.00	80.44	326.06	6,607.58	630.91	-476.86	789.38	9.48	9.47	0.56
6,957.00	82.73	326.46	6,612.26	657.23	-494.45	821.03	7.26	7.16	1.25
6,989.00	85.12	327.31	6,615.65	683.88	-511.83	852.85	7.92	7.47	2.66
7,021.00	89.09	327.85	6,617.26	710.86	-528.96	884.79	12.52	12.41	1.69
7,053.00	90.97	327.96	6,617.25	737.96	-545.96	916.78	5.89	5.88	0.34
7,084.00	90.67	327.17	6,616.80	764.13	-562.58	947.77	2.73	-0.97	-2.55
7,116.00	90.50	327.21	6,616.48	791.02	-579.92	979.77	0.55	-0.53	0.13
7,180.00	90.20	326.64	6,616.09	844.65	-614.85	1,043.76	1.01	-0.47	-0.89
7,243.00	90.94	326.46	6,615.46	897.21	-649.57	1,106.76	1.21	1.17	-0.29
7,307.00	90.84	326.48	6,614.47	950.55	-684.92	1,170.75	0.16	-0.16	0.03
7,371.00	90.87	326.39	6,613.51	1,003.88	-720.30	1,234.74	0.15	0.05	-0.14
7,434.00	91.45	326.34	6,612.24	1,056.32	-755.19	1,297.73	0.92	0.92	-0.08
7,498.00	91.01	326.32	6,610.86	1,109.57	-790.66	1,361.71	0.69	-0.69	-0.03
7,562.00	90.64	326.74	6,609.94	1,162.95	-825.96	1,425.71	0.87	-0.58	0.66
7,626.00	91.38	326.71	6,608.81	1,216.45	-861.06	1,489.70	1.16	1.16	-0.05
7,689.00	90.70	326.93	6,607.67	1,269.17	-895.54	1,552.68	1.13	-1.08	0.35
7,752.00	90.24	327.88	6,607.15	1,322.24	-929.47	1,615.67	1.68	-0.73	1.51
7,816.00	90.60	327.35	6,606.68	1,376.29	-963.75	1,679.66	1.00	0.56	-0.83
7,880.00	90.77	326.25	6,605.92	1,429.83	-998.79	1,743.65	1.74	0.27	-1.72
7,944.00	91.61	326.95	6,604.59	1,483.25	-1,034.01	1,807.63	1.71	1.31	1.09
8,007.00	90.64	327.03	6,603.35	1,536.07	-1,068.33	1,870.62	1.54	-1.54	0.13
8,071.00	90.10	328.23	6,602.94	1,590.12	-1,102.59	1,934.60	2.06	-0.84	1.84
8,134.00	90.50	327.82	6,602.61	1,643.57	-1,135.95	1,997.57	0.91	0.63	-0.65
8,198.00	91.38	327.67	6,601.56	1,697.68	-1,170.10	2,061.55	1.39	1.38	-0.93
8,261.00	90.57	327.06	6,600.49	1,750.73	-1,204.07	2,124.53	1.61	-1.29	0.70
8,324.00	89.26	327.49	6,600.58	1,803.73	-1,238.13	2,187.52	2.19	-2.08	0.68
8,387.00	90.03	327.48	6,600.97	1,856.85	-1,271.99	2,250.51	1.22	1.22	-0.02
8,450.00	91.08	327.42	6,600.36	1,909.95	-1,305.89	2,313.49	1.67	1.67	-0.10

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Scientific Drilling International
Survey Report

05/31/2019
Scientific Drilling

Company:	Stone Energy Corporation	Local Co-ordinate Reference:	Well Martin 5H - Slot 5H
Project:	Heather Prospect (NAD 27)	TVD Reference:	GL 906 & KB 18 @ 924.00ft (Saxon 141)
Site:	Martin Pad	MD Reference:	GL 906 & KB 18 @ 924.00ft (Saxon 141)
Well:	Martin 5H	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	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)
8,512.00	91.01	327.21	6,599.23	1,962.12	-1,339.36	2,375.48	0.36	-0.11	-0.34
8,575.00	91.78	327.20	6,597.70	2,015.07	-1,373.48	2,438.45	1.22	1.22	-0.02
8,639.00	91.24	326.72	6,596.01	2,068.70	-1,408.36	2,502.43	1.13	-0.84	-0.75
8,702.00	90.84	326.66	6,594.87	2,121.34	-1,442.95	2,565.41	0.64	-0.63	-0.10
8,766.00	91.45	326.87	6,593.59	2,174.86	-1,478.02	2,629.40	1.01	0.95	0.33
8,830.00	91.34	326.28	6,592.03	2,228.26	-1,513.26	2,693.38	0.94	-0.17	-0.92
8,894.00	91.35	326.12	6,590.53	2,281.43	-1,548.86	2,757.36	0.25	0.02	-0.25
8,957.00	90.50	326.23	6,589.51	2,333.76	-1,583.92	2,820.35	1.36	-1.35	0.17
9,020.00	90.20	326.53	6,589.12	2,386.22	-1,618.80	2,883.35	0.67	-0.48	0.48
9,084.00	91.14	327.01	6,588.38	2,439.75	-1,653.87	2,947.35	1.65	1.47	0.75
9,147.00	91.38	327.12	6,586.99	2,492.61	-1,688.11	3,010.33	0.42	0.38	0.17
9,211.00	91.34	326.89	6,585.47	2,546.27	-1,722.96	3,074.31	0.36	-0.06	-0.36
9,274.00	91.24	326.00	6,584.05	2,598.76	-1,757.77	3,137.29	1.42	-0.16	-1.41
9,338.00	91.88	325.44	6,582.31	2,651.62	-1,793.80	3,201.26	1.33	1.00	-0.88
9,402.00	91.11	325.86	6,580.64	2,704.44	-1,829.90	3,265.23	1.37	-1.20	0.66
9,465.00	90.50	326.48	6,579.76	2,756.77	-1,864.97	3,328.22	1.38	-0.97	0.98
9,529.00	90.60	327.36	6,579.14	2,810.39	-1,899.90	3,392.22	1.38	0.16	1.38
9,592.00	90.57	327.17	6,578.50	2,863.39	-1,933.97	3,455.21	0.31	-0.05	-0.30
9,656.00	91.24	327.00	6,577.49	2,917.10	-1,968.74	3,519.19	1.08	1.05	-0.27
9,719.00	91.07	327.01	6,576.22	2,969.93	-2,003.04	3,582.18	0.27	-0.27	0.02
9,783.00	91.01	327.40	6,575.06	3,023.72	-2,037.70	3,646.16	0.62	-0.09	0.61
9,845.00	90.60	327.33	6,574.19	3,075.93	-2,071.13	3,708.15	0.67	-0.66	-0.11
9,909.00	90.30	328.07	6,573.68	3,130.02	-2,105.33	3,772.13	1.25	-0.47	1.16
9,972.00	91.21	328.47	6,572.85	3,183.60	-2,138.46	3,835.09	1.58	1.44	0.63
10,035.00	91.18	328.95	6,571.54	3,237.43	-2,171.17	3,898.03	0.76	-0.05	0.76
10,099.00	91.04	329.02	6,570.30	3,292.27	-2,204.14	3,961.95	0.24	-0.22	0.11
10,162.00	91.85	329.75	6,568.71	3,346.47	-2,236.22	4,024.84	1.73	1.29	1.16
10,226.00	91.27	328.96	6,566.97	3,401.51	-2,268.83	4,088.74	1.53	-0.91	-1.23
10,290.00	90.37	328.66	6,566.05	3,456.25	-2,301.97	4,152.67	1.48	-1.41	-0.47
10,353.00	90.98	328.59	6,565.31	3,510.04	-2,334.76	4,215.62	0.97	0.97	-0.11
10,416.00	91.01	328.27	6,564.22	3,563.70	-2,367.74	4,278.57	0.51	0.05	-0.51
10,480.00	90.37	328.02	6,563.44	3,618.06	-2,401.52	4,342.54	1.07	-1.00	-0.39
10,544.00	89.87	327.61	6,563.31	3,672.22	-2,435.61	4,406.52	1.01	-0.78	-0.64
10,608.00	89.73	326.68	6,563.53	3,725.99	-2,470.33	4,470.51	1.47	-0.22	-1.45
10,671.00	91.08	326.84	6,563.09	3,778.68	-2,504.86	4,533.51	2.16	2.14	0.25
10,735.00	91.95	327.03	6,561.40	3,832.29	-2,539.76	4,597.48	1.39	1.36	0.30
10,799.00	91.31	326.38	6,559.58	3,885.76	-2,574.88	4,661.46	1.43	-1.00	-1.02
10,862.00	90.71	326.77	6,558.47	3,938.34	-2,609.58	4,724.45	1.14	-0.95	0.62
10,925.00	89.77	325.77	6,558.20	3,990.73	-2,644.56	4,787.44	2.18	-1.49	-1.59
10,989.00	88.72	325.54	6,559.05	4,043.57	-2,680.67	4,851.43	1.68	-1.64	-0.36
11,053.00	89.23	325.26	6,560.19	4,096.24	-2,717.00	4,915.41	0.91	0.80	-0.44
11,116.00	89.90	325.90	6,560.67	4,148.21	-2,752.61	4,978.40	1.47	1.06	1.02
11,179.00	90.17	325.94	6,560.63	4,200.39	-2,787.91	5,041.40	0.43	0.43	0.06

RECEIVED
Office of Oil and Gas

JAN 23 2019



Scientific Drilling International
Survey Report

05/31/2019
Scientific Drilling

Company:	Stone Energy Corporation	Local Co-ordinate Reference:	Well Martin 5H - Slot 5H
Project:	Heather Prospect (NAD 27)	TVD Reference:	GL 906 & KB 18 @ 924.00ft (Saxon 141)
Site:	Martin Pad	MD Reference:	GL 906 & KB 18 @ 924.00ft (Saxon 141)
Well:	Martin 5H	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	As Drilled	Database:	Northeast District

Survey

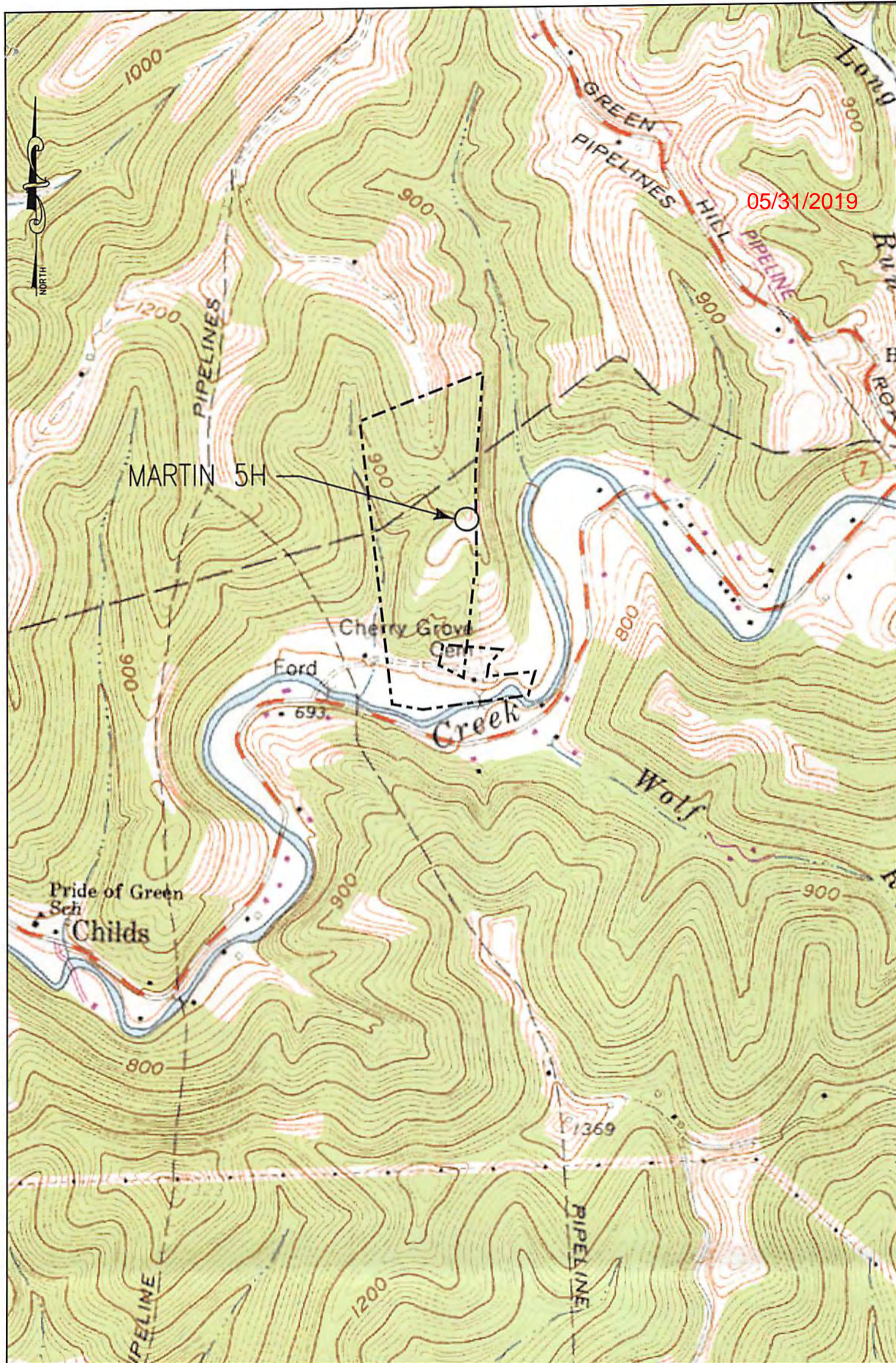
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
11,242.00	91.04	325.50	6,559.96	4,252.44	-2,823.39	5,104.39	1.55	1.38	-0.70
11,305.00	91.75	325.14	6,558.43	4,304.23	-2,859.23	5,167.36	1.26	1.13	-0.57
11,369.00	91.71	325.96	6,556.50	4,356.98	-2,895.42	5,231.32	1.28	-0.06	1.28
11,433.00	91.45	327.06	6,554.73	4,410.34	-2,930.72	5,295.30	1.77	-0.41	1.72
11,497.00	90.98	327.38	6,553.38	4,464.13	-2,965.36	5,359.28	0.89	-0.73	0.50
11,560.00	90.44	327.67	6,552.60	4,517.28	-2,999.18	5,422.26	0.97	-0.86	0.46
11,624.00	91.08	328.26	6,551.75	4,571.53	-3,033.13	5,486.23	1.36	1.00	0.92
11,686.00	90.71	328.58	6,550.78	4,624.34	-3,065.59	5,548.18	0.79	-0.60	0.52
11,748.00	89.46	328.57	6,550.69	4,677.24	-3,097.92	5,610.14	2.02	-2.02	-0.02
11,811.00	90.24	328.49	6,550.85	4,730.97	-3,130.81	5,673.09	1.24	1.24	-0.13
11,874.00	90.77	328.06	6,550.30	4,784.56	-3,163.93	5,736.06	1.08	0.84	-0.68
11,906.00	91.14	327.78	6,549.76	4,811.67	-3,180.93	5,768.04	1.45	1.16	-0.88
Last SDI MWD @ 11906 MD									
11,964.00	91.14	327.78	6,548.61	4,860.73	-3,211.84	5,826.02	0.00	0.00	0.00
Projection to Bit @ 11964 MD									

Design Annotations

Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates		Comment
		+N/-S (ft)	+E/-W (ft)	
18.00	18.00	0.00	0.00	First Vaughn Gyro Survey @ 18 MD
2,238.00	2,237.80	13.64	19.30	Last Vaughn Gyro Survey @ 2238 MD
2,273.00	2,272.80	14.21	19.79	First SDI MWD Survey @ 2273 MD
11,906.00	6,549.76	4,811.67	-3,180.93	Last SDI MWD @ 11906 MD
11,964.00	6,548.61	4,860.73	-3,211.84	Projection to Bit @ 11964 MD

Checked By: _____ Approved By: _____ Date: _____

RECEIVED
Office of Oil and Gas
JAN 23 2019
WV Department of
Environmental Protection



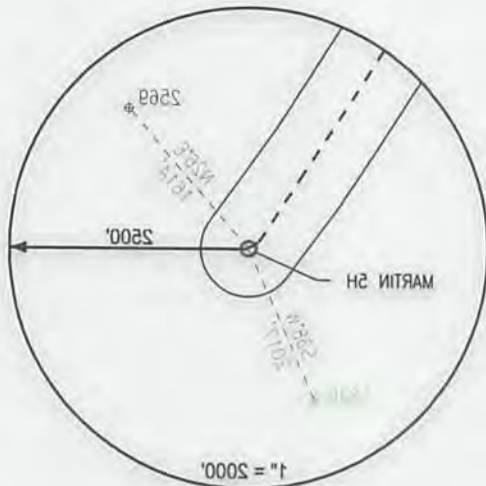
KEYSTONE CONSULTANTS, INC.
 32 EAST MAIN STREET,
 CARNEGIE, PA 15106
 412-278-2100

1" = 1000'
 PORTERS FALLS 7.5'

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

05/31/2019

Tax Map No.	Parcel No.	County	District	Surface Tract Owner	Acres
39	2.2	Wetzel	Green	Gwendolyn Lee & Charles Martin	4.92
38	9	Wetzel	Magnolia	Stevie R. & Yvonne A. Young	22.82
37	9	Wetzel	Magnolia	Randall Moore	27.71
36	9	Wetzel	Magnolia	Pamela D. Oliver	12.18
35	9	Wetzel	Magnolia	Donna O. & Dillon R. Smittle	2.03
34	9	Wetzel	Magnolia	Donna O. & Dillon R. Smittle	0.22
33	9	Wetzel	Magnolia	Edward W. Frei Est	2.70
32	9	Wetzel	Magnolia	Robert B. Litzman	24.11
31	14	Wetzel	Magnolia	Robert B. Litzman	63.22
30	9	Wetzel	Magnolia	W. D. Lemon	91.67
29	2	Wetzel	Green	Douglas J. Steele	146.31
28	3	Wetzel	Green	Gwendolyn L. Stout	42.07
27	3	Wetzel	Green	Kernel Greathouse Estate	1.69
26	3	Wetzel	Green	Ethel Greathouse Estate	1.03
25	3	Wetzel	Green	Kernel E. Greathouse Estate	42.1
24	3	Wetzel	Green	Charles W. Martin	0.32
23	3	Wetzel	Green	Charles W. Martin	10.62
22	3	Wetzel	Green	Charles W. Martin	20.2
21	14	Wetzel	Magnolia	Tacy Living Trust	100.19
20	4	Wetzel	Magnolia	W. D. Lemon	14.86
19	9	Wetzel	Magnolia	W. D. Lemon	29.74
18	9	Wetzel	Magnolia	W. D. Lemon	40.02
17	9	Wetzel	Magnolia	Doreta R. Rush	4.04
16	9	Wetzel	Magnolia	Keith R. Pyles	7.13
15	9	Wetzel	Magnolia	Delmas F. & Linda J. Neff	18.72
14	9	Wetzel	Magnolia	Delmas F. & Linda J. Neff	0.67
13	9	Wetzel	Magnolia	Delmas F. & Linda J. Neff	2.28
12	9	Wetzel	Magnolia	Delmas F. & Linda J. Neff	2.99
11	9	Wetzel	Magnolia	Ronald A. Dewitt	43.36
10	9	Wetzel	Magnolia	Elizabeth W. Hawkins	21.64
9	9	Wetzel	Magnolia	Elizabeth W. Hawkins	17.36
8	9	Wetzel	Magnolia	Delmas F. Neff	38.12
7	9	Wetzel	Magnolia	Delmas F. Neff	27.17
6	9	Wetzel	Magnolia	W. D. Lemon	20.2
5	14	Wetzel	Magnolia	W. D. Lemon	20.62
4	14	Wetzel	Magnolia	W. D. Lemon	23.19
3	14	Wetzel	Magnolia	W. D. Lemon	32.31
2	2	Wetzel	Green	Charles W. Martin	1.13
1	2	Wetzel	Green	Charles W. Martin	26.49
2	2.1	Wetzel	Green	Gwendolyn L. Stout	26.49

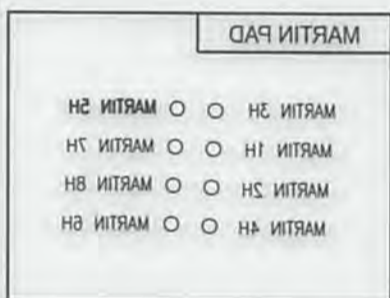
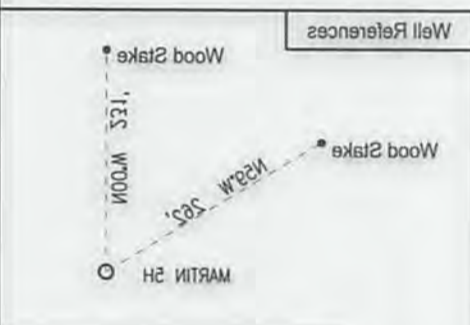


Notes:
MARTIN 5H As-Built coordinates are
NAD 27 N: 407,780.003 E: 1,843,293.000
NAD 27 Lat: 39.812691 Long: -80.768172
NAD 83 UTM N: 4,384,808.085 E: 620,087.232

MARTIN 5H As-Built Landing Point coordinates are
NAD 27 N: 408,271.023 E: 1,842,713.080
NAD 27 Lat: 39.814940 Long: -80.768270
NAD 83 UTM N: 4,385,044.122 E: 619,908.240

MARTIN 5H As-Built Bottom Hole coordinates are
NAD 27 N: 412,840.723 E: 1,840,081.160
NAD 27 Lat: 39.825910 Long: -80.777817
NAD 83 UTM N: 4,386,270.279 E: 619,084.049

West Virginia Coordinates system of 1927 (North Zone) based upon Differential GPS Measurements
Pit orientation, Corner and well ties are based upon the old north meridian
Well location references are based upon the old 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



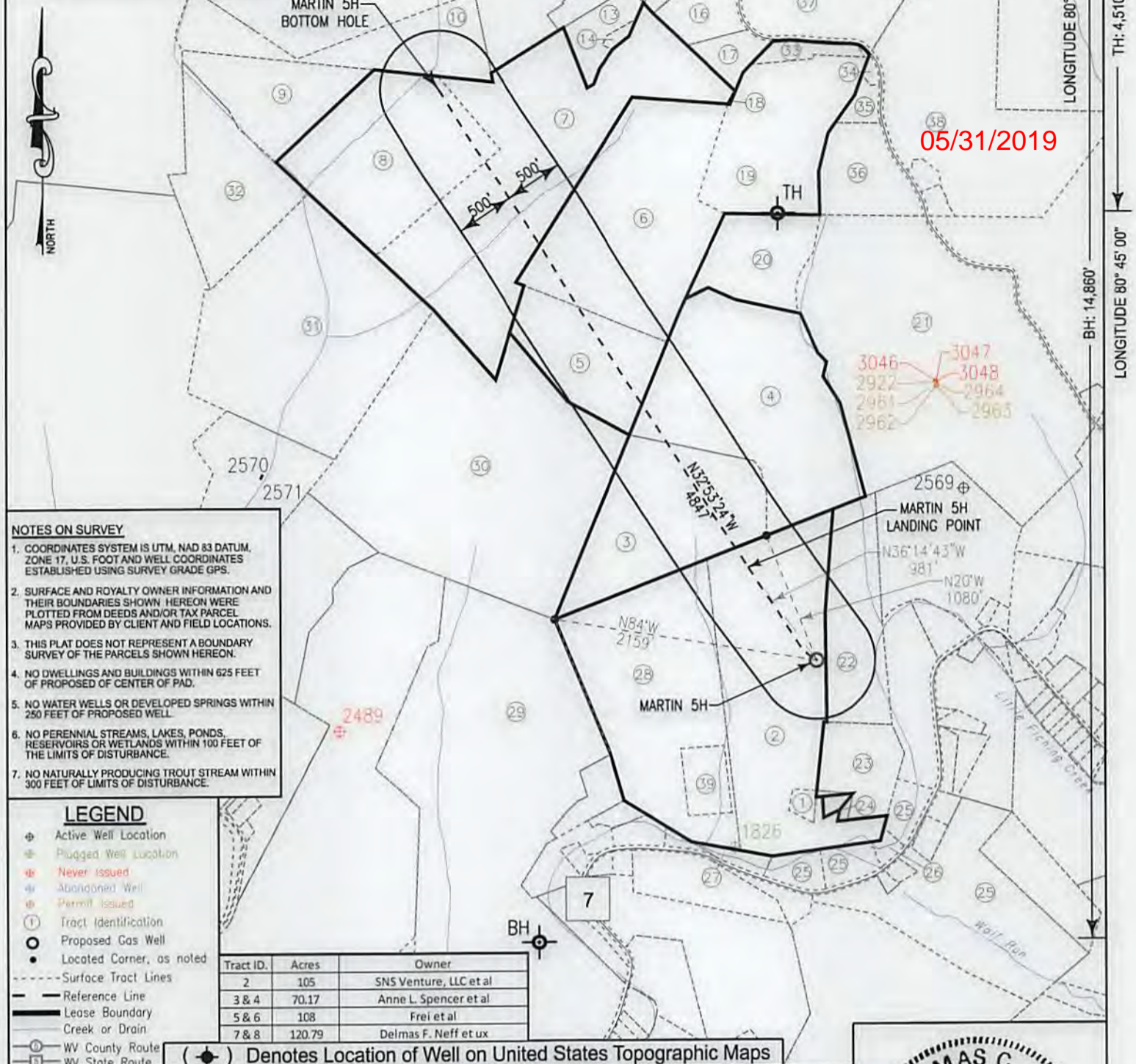
I, the undersigned, hereby certify that this plat is correct to the best of my knowledge and belief and shows all the information required by law and the regulations issued and prescribed by the Department of Environmental Protection.

Thomas C. Smittle
L. L. S. 687



DATE: JANUARY 18 20 18 OPERATORS WELL NO.: MARTIN 5H API WELL NO. STATE COUNTY PERMIT 47 - 103 - 02924	STATE OF WEST VIRGINIA DEPARTMENT OF ENVIRONMENTAL PROTECTION OIL AND GAS DIVISION	FILE NO.: W2174 (BK 29-37) DRAWING NO.: SCALE: 1" = 1000' MINIMUM DEGREE OF ACCURACY: 1:2500 PROVEN SOURCE OF ELEVATION: 2G-GPS (OPUS)
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	LOCATION ELEVATION: 909' WATERSHED: LITTLE FISHING CREEK QUADRANGLE: PORTERS FALLS 7.5'	SURFACE OWNER: Charles & Gwendolyn Martin ROYALTY OWNER: SNS Ventures, LLC et al LEASE NO: 873397 ACREAGE: 102 ± ACREAGE: 54 ±
DISTRICT: Green COUNTY: Wetzel	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 <input type="checkbox"/> PERFORATE NEW FORMATION <input type="checkbox"/> OTHER PHYSICAL CHANGE IN WELL (SPECIFY) TARGET FORMATION: Marcellus ESTIMATED DEPTH: 6,600'	DESIGNATED AGENT: Jason Ranson ADDRESS: 115 Professional Place PO Box 280 Bridgeport, WV 26330
WELL OPERATOR: EQT Production Company ADDRESS: 115 Professional Place PO Box 280 Bridgeport, WV 26330	DESIGNATED AGENT: Jason Ranson ADDRESS: 115 Professional Place PO Box 280 Bridgeport, WV 26330	ADDRESS: 115 Professional Place PO Box 280 Bridgeport, WV 26330

**Martin 5H
Martin
EQT Production Company**



NOTES ON SURVEY

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

LEGEND

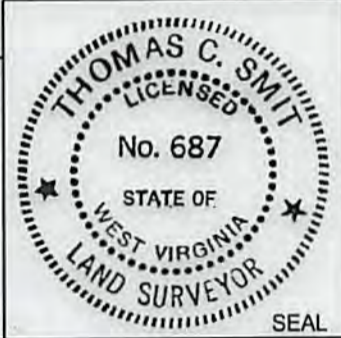
- ⊕ Active Well Location
- ⊖ Plugged Well Location
- ⊗ Never Issued
- ⊙ Abandoned Well
- ⊕ Permit Issued
- ① Tract Identification
- ⊙ Proposed Gas Well
- ⊙ Located Corner, as noted
- Surface Tract Lines
- Reference Line
- Lease Boundary
- Creek or Drain
- ⊙ WV County Route
- ⊙ WV State Route

Tract ID.	Acres	Owner
2	105	SNS Venture, LLC et al
3 & 4	70.17	Anne L. Spencer et al
5 & 6	108	Frei et al
7 & 8	120.79	Delmas F. Neff et ux



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. Smalls
L. L. S. 687



FILE NO: W2175 (BK 59-37)
DRAWING NO:
SCALE: 1" = 1200'
MINIMUM DEGREE OF ACCURACY: 1:2500
PROVEN SOURCE OF ELEVATION: SG-GPS (OPUS)

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

DATE: JANUARY 18 20 18
OPERATORS WELL NO: MARTIN 5H
API WELL NO
47 - 103 - 02924
STATE COUNTY PERMIT

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

LOCATION ELEVATION: 909' WATERSHED: LITTLE FISHING CREEK QUADRANGLE: PORTERS FALLS 7.5'
DISTRICT: Green COUNTY: Wetzel

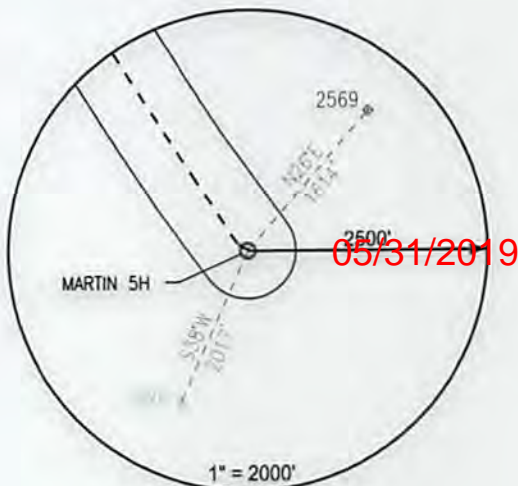
SURFACE OWNER: Charles & Gwendolyn Martin ACREAGE: 54 ±
ROYALTY OWNER: SNS Ventures, LLC et al LEASE NO: 873397 ACREAGE: 105 ±

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: 6,600'

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

**Martin 5H
Martin
EQT Production Company**

Tract ID.	Tax Map No.	Parcel No.	County	District	Surface Tract Owner	Acres
2	3	2.1	Wetzel	Green	Gwendolyn L. Stout	56.49
1	3	5	Wetzel	Green	Charles W. Martin	1.13
3	14	12	Wetzel	Magnolia	W. D. Lemon	35.31
4	14	11	Wetzel	Magnolia	W. D. Lemon	53.19
5	14	10	Wetzel	Magnolia	W. D. Lemon	20.62
6	14	30	Wetzel	Magnolia	W. D. Lemon	50.5
7	9	42	Wetzel	Magnolia	Delmas F. Neff	71.17
8	9	44	Wetzel	Magnolia	Delmas F. Neff	38.15
9	9	40	Wetzel	Magnolia	Elizabeth W. Hawkins	17.36
10	9	41	Wetzel	Magnolia	Elizabeth W. Hawkins	21.64
11	9	36.2	Wetzel	Magnolia	Ronald A. Dewitt	43.36
12	9	36	Wetzel	Magnolia	Delmas F. & Linda L. Neff	5.99
13	9	42.3	Wetzel	Magnolia	Delmas F. & Linda L. Neff	5.58
14	9	42.1	Wetzel	Magnolia	Delmas F. & Linda L. Neff	0.67
15	9	29.3	Wetzel	Magnolia	Delmas F. & Linda L. Neff	18.72
16	9	43.1	Wetzel	Magnolia	Keith R. Pyles	7.13
17	9	43	Wetzel	Magnolia	Doretta R. Rush	4.04
18	9	42.4	Wetzel	Magnolia	W. D. Lemon	0.02
19	9	45.1	Wetzel	Magnolia	W. D. Lemon	29.74
20	14	4	Wetzel	Magnolia	W. D. Lemon	14.86
21	14	5.2	Wetzel	Magnolia	Tracy Living trust	100.19
22	3	3	Wetzel	Green	Charles W. Martin	20.2
23	3	7	Wetzel	Green	Charles W. Martin	10.65
24	3	6	Wetzel	Green	Charles W. Martin	0.32
25	3	26	Wetzel	Green	Kernel E. Greathouse Estate	42.1
26	3	25	Wetzel	Green	Ethel Greathouse Estate	1.03
27	3	24	Wetzel	Green	Kernel Greathouse Estate	1.69
28	3	2	Wetzel	Green	Gwendolyn L. Stout	45.07
29	2	33	Wetzel	Green	Douglas L. Steele	146.31
30	14	9	Wetzel	Magnolia	W. D. Lemon	91.67
31	14	2	Wetzel	Magnolia	Robert B. Litman	63.22
32	9	39	Wetzel	Magnolia	Robert B. Litman	24.11
33	9	45	Wetzel	Magnolia	Edward W Frei Est	2.70
34	9	46.2	Wetzel	Magnolia	Donna O. & Dillon R. Smittle	0.52
35	9	46.3	Wetzel	Magnolia	Donna O. & Dillon R. Smittle	2.03
36	9	46.1	Wetzel	Magnolia	Pamela D. Oliver	12.16
37	9	43.2	Wetzel	Magnolia	Randall Moore	27.71
38	9	46	Wetzel	Magnolia	Stevie R. & Faye A. Young	55.82
39	3	2.2	Wetzel	Green	Gwendolyn Lee & Charles Martin	4.92



05/31/2019

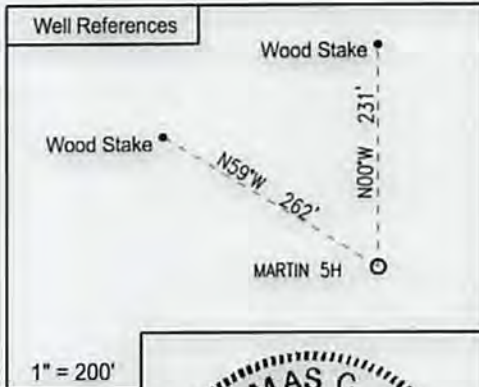
Notes:
MARTIN 5H As-Built coordinates are
 NAD 27 N: 407,780.003 E: 1,643,293.000
 NAD 27 Lat: 39.612691 Long: -80.766172
 NAD 83 UTM N: 4,384,806.085 E: 520,087.232
MARTIN 5H As-Built Landing Point coordinates are
 NAD 27 N: 408,571.023 E: 1,642,713.080
 NAD 27 Lat: 39.614840 Long: -80.768270
 NAD 83 UTM N: 4,385044.122 E: 519,906.540
MARTIN 5H As-Built Bottom Hole coordinates are
 NAD 27 N: 412,640.723 E: 1,640,081.160
 NAD 27 Lat: 39.625910 Long: -80.777817
 NAD 83 UTM N: 4,386,270.579 E: 519,084.049
 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

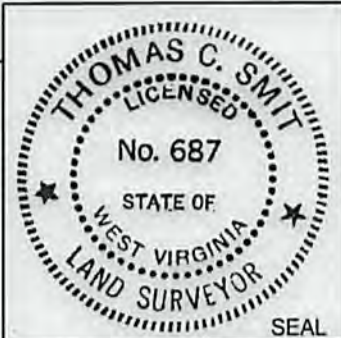
MARTIN PAD

- MARTIN 3H ○ ○ MARTIN 5H
- MARTIN 1H ○ ○ MARTIN 7H
- MARTIN 2H ○ ○ MARTIN 8H
- MARTIN 4H ○ ○ MARTIN 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.
 L. L. S. 687



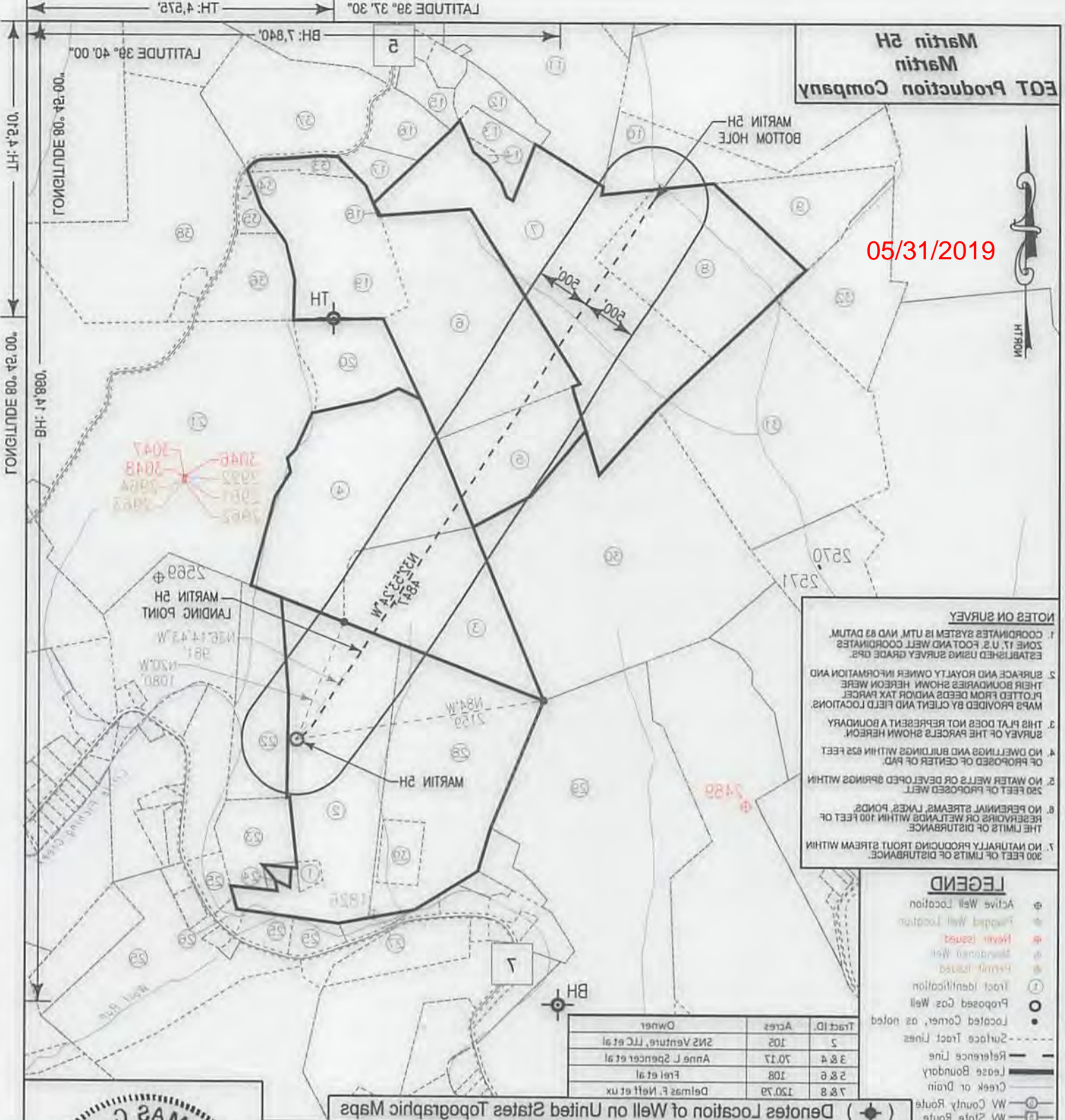
FILE NO: W2174 (BK 59-37)
 DRAWING NO:
 SCALE: 1" = 1000'
 MINIMUM DEGREE OF ACCURACY:
 1:2500
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 LOCATION ELEVATION: 909' WATERSHED: LITTLE FISHING CREEK QUADRANGLE: PORTERS FALLS 7.5'
 DISTRICT: Green COUNTY: Wetzel
 SURFACE OWNER: Charles & Gwendolyn Martin ACREAGE: 54 ±
 ROYALTY OWNER: SNS Ventures, LLC et al LEASE NO: 873397 ACREAGE: 105 ±
 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: 6,600'
 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



NOTES ON SURVEY

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

LEGEND

- Active Well Location
- Proposed Well Location
- Well Issued
- Abandoned Well
- Permit Issued
- 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



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: JANUARY 18 20 18 OPERATORS WELL NO: MARTIN 5H API WELL NO STATE COUNTY PERMIT 47 - 103 - 02924	STATE OF WEST VIRGINIA DEPARTMENT OF ENVIRONMENTAL PROTECTION OIL AND GAS DIVISION	FILE NO.: W2175 (BK 59-37) DRAWING NO.: SCALE: 1" = 1200' MINIMUM DEGREE OF ACCURACY: 1:2500 PROVEN SOURCE OF ELEVATION: 2G-GPS (OPUS)
WELLS 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	SURFACE OWNER: Charles & Gwendolyn Martin ROYALTY OWNER: SNS Ventures, LLC et al LEASE NO: 873397 ACREAGE: 102 ± ACREAGE: 54 ±	LOCATION ELEVATION: 909' WATERSHED: LITTLE FISHING CREEK QUADRANGLE: PORTERS FALLS T.2
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 <input type="checkbox"/> PERFORATE NEW FORMATION <input type="checkbox"/> OTHER PHYSICAL CHANGE IN WELL (SPECIFY) TARGET FORMATION: Marcellus ESTIMATED DEPTH: 6,600' DESIGNATED AGENT: Jason Ranson	DISTRICT: Green COUNTY: Wetzel PLUG AND ABANDON <input type="checkbox"/> CLEAN OUT AND REPLUG <input type="checkbox"/>	ADDRESS: Bhdqebort, WV 26330 ADDRESS: 115 Professional Place PO Box 280 WELL OPERATOR: EQT Production Company DESIGNATED AGENT: Jason Ranson