

Well Operator's Report of Well Work



Well Number: SHR60 H6 (514465)

API: 47 - 095 - 02341

Submission: Initial Amended

Notes: This report is for well 514465(SHR60H6). The well was top set under the API # above - 47-095-02341. However, the horizontal portion of this well was drilled under permit # 47-095-02542. Per guidance from the WV DEP the well record is being submitted using the original API.

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

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API 47-095-02341 County Tyler District McElroy
Quad Shirley Pad Name SHR60 Field/Pool Name N/A
Farm name Vivian J. Wells Et al Well Number SHR60 H6 (514465)
Operator (as registered with the OOG) EQT Production Company
Address 2400 Ansys Drive, Suite 200 City Canonsburg State PA Zip 15317

As Drilled location NAD 83/UTM Attach an as-drilled plat, profile view, and deviation survey
Top hole Northing 4,360,584.58 Easting 516,269.25
Landing Point of Curve Northing 4,360,126.07 Easting 516,941.89
Bottom Hole Northing 4,357,554.55 Easting 518,111.22

Elevation (ft) 1011' 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)

Synthetic Oil Based Mud 12.5 ppg barium sulfate, sodium chloride, xanthan gum, polyanionic cellulose, modified starch, sodium hydroxide, phosphonates and alkyl phosphates, glutaraldehyde solution, calcium hydroxide, partially hydrolyzed polyacrylamide/polyacrylate, potassium chloride, sodium carbonate, ground walnut shells, alcohol and modified fatty acid, ferrochrome lignosulfonate, calcium carbonate, fibrous cellulose

Date permit issued 03/31/2016 Date drilling commenced 1/29/2019 Date drilling ceased 04/03/2019
Date completion activities began _____ Date completion activities ceased _____
Verbal plugging (Y/N) N Date permission granted N/A Granted by N/A

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

Freshwater depth(s) ft 95,145,582,918 Open mine(s) (Y/N) depths N
Salt water depth(s) ft 1210,1877 Void(s) encountered (Y/N) depths N
Coal depth(s) ft 31,432,698,887,1327 Cavern(s) encountered (Y/N) depths N
Is coal being mined in area (Y/N) N

Reviewed by:

APPROVED

04/26/2024

API 47-095 - 02341

Farm name Vivian J. Wells Et al

Well number SHR60 H6 (514465)

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	30"	26"	85'	NEW	A-500 85.6#	N/A	Y
Surface	17-1/2"	13-3/8"	1012'	NEW	J-55 54.5#	376'	Y
Coal							
Intermediate 1	12-3/8"	9-5/8"	2812'	NEW	A-500 40#	N/A	Y
Intermediate 2							
Intermediate 3							
Production	8-1/2"	5 1/2"	17,512'	NEW	P-110 20#	N/A	N
Tubing							
Packer type and depth set							

Comment Details Production Cement job has a calculated TOC of 2735' MD, which is greater than 500' TVD above the producing formation. No issues during cement job.

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	CLASS A	90	15.6	1.18	106	0	8+
Surface	CLASS A	1010	15.6	1.13	121	0	8
Coal							
Intermediate 1	CLASS A	1164	15.6	1.02	1238	0	8
Intermediate 2							
Intermediate 3							
Production	CLASS A	2930	15.6	1.23	3604	2735	8+
Tubing							

Drillers TD (ft) 17,532' MD

Loggers TD (ft) N/A

Deepest formation penetrated MARCELLUS

Plug back to (ft) 5649'

Plug back procedure AIR DROP CEMENT PLUG FROM 6555' TO 5649' WITH 220 SACKS, TYPE 1, 17.0 PPG, 1.05 YLD

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Kick off depth (ft) 7749' MD

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

Well cored Yes No Conventional Sidewall
 Were cuttings collected Yes No

DESCRIBE THE CENTRALIZER PLACEMENT USED FOR EACH CASING STRING

CONDUCTOR- NONE

SURFACE- ON SHOE TRACK AND EVERY 500' TO SURFACE

INTERMEDIATE: ON SHOE TRACK AND EVERY 500' FEET TO SURFACE

PRODUCTION: ON SHOE TRACK AND EVERY JOINT TO 3996'

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 _____

04/26/2024

API 47- 095 - 02341

Farm name Vivian J. Wells Et al

Well number SHR60 H6 (514465)

PERFORATION RECORD

Stage No.	Perforation date	Perforated from MD ft.	Perforated to MD ft.	Number of Perforations	Formation(s)
2	11/17/2019	17233	17402	40	MARCELLUS
3	11/17/2019	17033	17205	40	MARCELLUS
4	11/18/2019	16833	17006	40	MARCELLUS
5	11/19/2019	16633	16804	40	MARCELLUS
			See Attached		
			Please see attached below		

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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)
1	1/16/201	84.4	9030	6992	3776	185163	4827	0
2	1/17/201	96.1	8850	5875	3969	435000	9662	0
3	1/18/201	98.5	8948	5602	4007	442710	9667	0
4	1/18/201	95.6	8768	5420	3824	441500	10784	0
			See Attached					
			Please see attached below					

Please insert additional pages as applicable.

04/26/2024

API 47- 095 - 02341 Farm name Vivian J. Wells Et al Well number SHR60 H6 (514465)

<u>PRODUCING FORMATION(S)</u>	<u>DEPTHS</u>	
<u>Marcellus</u>	<u>6,597-6,661</u> TVD	<u>7,973-17,532</u> MD
_____	_____	_____
_____	_____	_____
_____	_____	_____

Please insert additional pages as applicable.

GAS TEST Build up Drawdown Open Flow OIL TEST Flow Pump

SHUT-IN PRESSURE Surface 321 psi Bottom Hole _____ psi DURATION OF TEST 24 hrs

OPEN FLOW Gas 9315 mcfpd Oil _____ bpd NGL _____ bpd Water 102 bpd GAS MEASURED BY Estimated Orifice Pilot

LITHOLOGY/ FORMATION	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	
	0		0		
					See Attached

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Please insert additional pages as applicable.

Drilling Contractor Patterson UTI (Rig 578)
Address 207 Carlton Dr City Eighty-Four State PA Zip 15330

Logging Company Baker Hughes
Address 400 Technology Dr Suite 100 City Canonsburg State PA Zip 15317

Cementing Company Halliburton
Address 121 Champion Way Suite 110 City Canonsburg State PA Zip 15317

Cementing Company Boss Services, Inc
Address 3978 N. Elmdale Road City Olney State PA Zip 62450

Please insert additional pages as applicable.

Completed by Adam Hughey Telephone 724-579-5475
Signature _____ Title Director of Completions Date 2/5/2024

Submittal of Hydraulic Fracturing Chemical Disclosure Information Attach copy of FRACFOCUS Registry

04/26/2024

API 47- 095 - 02341 Farm name Vivian J. Wells Et al Well number SHR60 H6 (514465)

Drilling Contractor _____
Address _____ City _____ State _____ Zip _____

Logging Company Scientific Drilling International
Address 124 Vista Drive City Charleroi State PA Zip 15022

Logging Company Gyrodatta
Address 73 Noblestown Rd City Carnegie State PA Zip 15106

Cementing Company Universal Well Services, Inc.
Address 13549 S. Mosiertown Road City Meadville State PA Zip 16335

Stimulation Company US Well Services LLC
Address 770 S Post Oak Ln Ste 405 City Houston State TX Zip 77056

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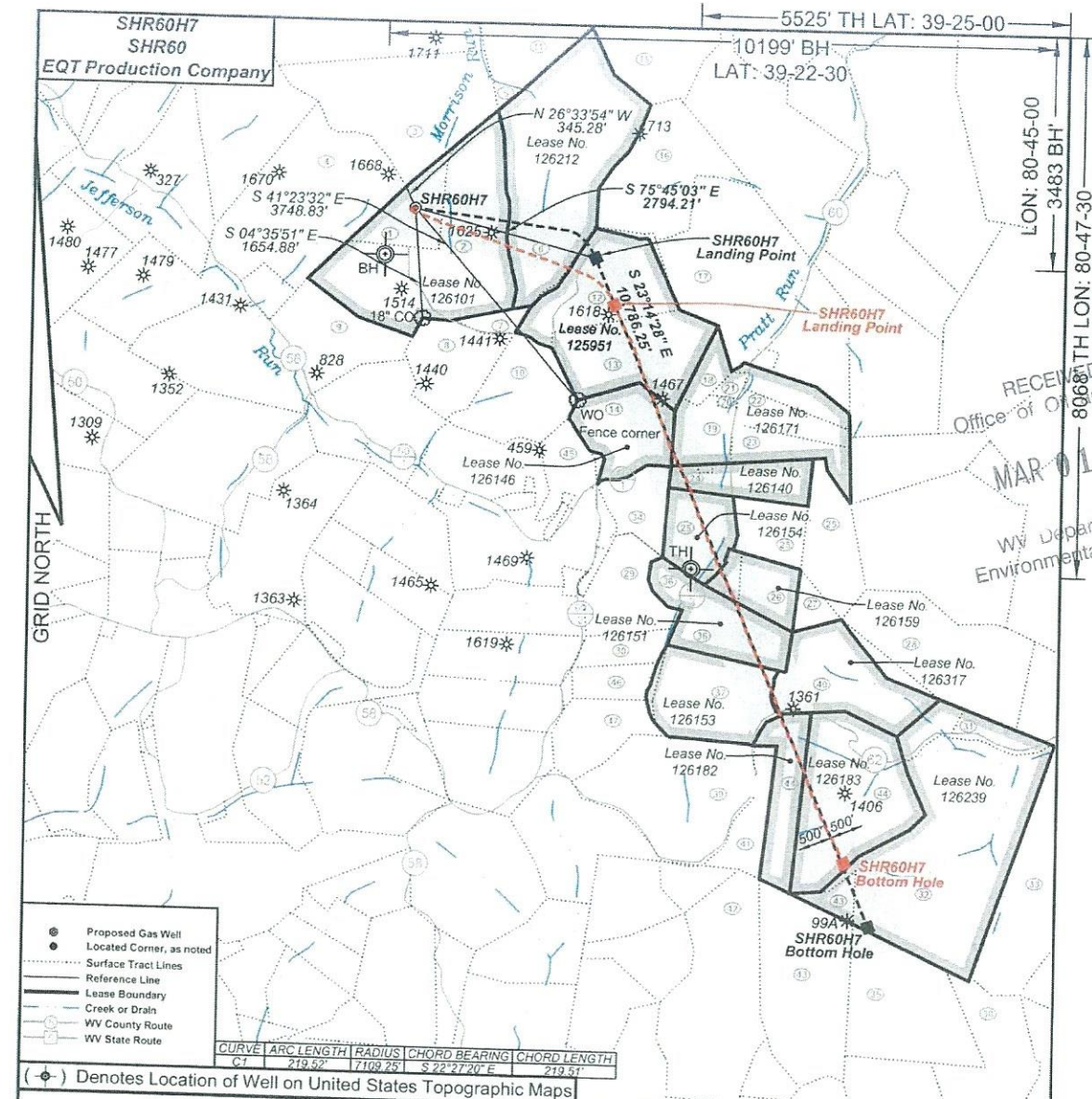
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Well# 514465 Final Formations API# 47-095-02542				
Formation Name	Drill Top MD (ftKB)	Drill Top (TVD) (ftKB)	Drill Btm MD (ftKB)	Drill Btm (TVD) (ftKB)
FRESH WATER ZONE	1	1	918	918
SAND/SHALE	1	1	31	31
COAL	31	31	35	35
SAND/SHALE	35	35	432	432
COAL	432	432	436	436
SAND/SHALE	436	436	698	698
COAL	698	698	702	702
SAND/SHALE	702	702	887	887
COAL	887	887	891	891
SAND/SHALE	891	891	1,327	1,327
COAL	1,327	1,327	1,331	1,331
SAND/SHALE	1,331	1,331	1,546	1,545
MAXTON	1,546	1,545	1,599	1,598
SAND/SHALE	1,599	1,598	1,841	1,839
BIG LIME	1,841	1,839	2,123	2,121
SAND/SHALE	2,123	2,121	2,263	2,260
WEIR	2,263	2,260	2,329	2,326
SAND/SHALE	2,329	2,326	2,380	2,377
GANTZ	2,380	2,377	2,427	2,424
SAND/SHALE	2,427	2,424	2,473	2,470
FIFTY FOOT	2,473	2,470	2,508	2,505
SAND/SHALE	2,508	2,505	2,607	2,604
THIRTY FOOT	2,607	2,604	2,648	2,645
SAND/SHALE	2,648	2,645	2,698	2,694
GORDON	2,698	2,694	2,712	2,708
SAND/SHALE	2,712	2,708	2,903	2,899
FIFTH SAND	2,903	2,899	2,932	2,928
SAND/SHALE	2,932	2,928	3,019	3,015
BAYARD	3,019	3,015	3,079	3,075
SAND/SHALE	3,079	3,075	3,351	3,347
WARREN	3,351	3,347	3,425	3,421
SAND/SHALE	3,425	3,421	3,445	3,441
SPEECHLEY	3,445	3,441	3,563	3,559
SAND/SHALE	3,563	3,559	3,867	3,863
BALLTOWN A	3,867	3,863	3,937	3,933
SAND/SHALE	3,937	3,933	4,560	4,550
RILEY	4,560	4,550	4,597	4,585
SAND/SHALE	4,597	4,585	4,977	4,948
BENSON	4,977	4,948	5,014	4,984
SAND/SHALE	5,014	4,984	5,234	5,198
ALEXANDER	5,234	5,198	5,306	5,268
ELKS	5,306	5,268	6,930	6,269
SONYEA	6,930	6,269	7,329	6,401
MIDDLESEX	7,329	6,401	7,464	6,446
GENESE	7,464	6,446	7,700	6,525
GENESE	7,700	6,525	7,786	6,553
TULLY	7,786	6,553	7,873	6,577
HAMILTON	7,873	6,577	7,973	6,597
MARCELLUS	7,973	6,597	17,532	6,661

04/26/2024



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

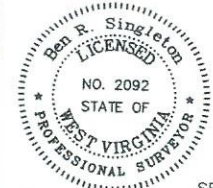
CURVE	ARC LENGTH	RADIUS	CHORD BEARING	CHORD LENGTH
CT	219.52'	7109.25'	S 22°27'20" E	219.51'

(●) 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.

Ben R. Singleton
P.S. 2092



FILE NO: 208-13
DRAWING NO: 208-13 SHR60H7
SCALE: 1" = 2000'
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: May 1, 2019
OPERATOR'S WELL NO.: SHR60H7
API WELL NO: 47-095-02543
STATE COUNTY PERMIT

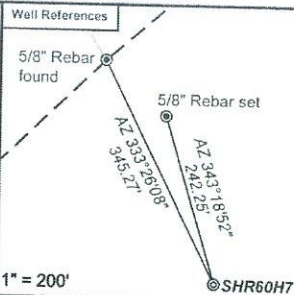
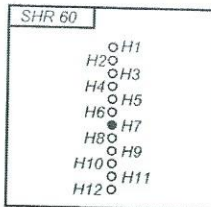
WELL TYPE: OIL GAS LIQUID INJECTION WASTE DISPOSAL
(IF GAS) PRODUCTION: STORAGE DEEP SHALLOW
LOCATION: ELEVATION: As-Built 1,011' WATERSHED: Morrison Run of McElroy Creek QUADRANGLE: Shirley
DISTRICT: McElroy COUNTY: Tyler
SURFACE OWNER: Vivian J. Wells, et al.
ROYALTY OWNER: George Birklein, et al. LEASE NO: 126101 ACREAGE: 35.38
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: 6556

WELL OPERATOR: EQT Production Company DESIGNATED AGENT: Jason Ranson
ADDRESS: 2400 Ansys Drive, Suite 200 ADDRESS: 115 Professional Place PO Box 280
Canonsburg, PA 15317 Bridgeport, WV 26330

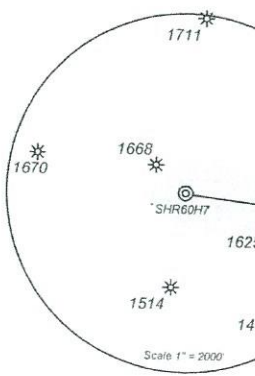
04/26/2024

SHR60H7
SHR60
EQT Production Company

Tract I.D.	Tax Map No.	Parcel No.	County	District	Surface Tract Owner	Acres
1	18	32	Tyler	McElroy	Hanna A. Underwood Estate	35.00
2	18	13	Tyler	McElroy	Blaine Underwood Estate, et al.	104.73
3	18	9	Tyler	McElroy	Lawrence Rayburn, et al.	106.00
4	18	7.1	Tyler	McElroy	Patricia A. Keys, et al.	102.31
5	18	10	Tyler	McElroy	Susan Spencer	2.92
6	18	11	Tyler	McElroy	Susan Spencer	137.00
7	18	15	Tyler	McElroy	Susan Spencer	8.00
8	18	16	Tyler	McElroy	Donald E. Blake Sr.	35.50
9	18	23	Tyler	McElroy	Clyde Sockman Estate	111.75
10	18	17	Tyler	McElroy	Allen Dale Jamash, et al.	43.00
11	15	32	Tyler	McElroy	Betty June Vasee	360.00
12	18	34	Tyler	McElroy	Terry J. Cumberledge, et al.	54.81
13	18	18	Tyler	McElroy	Terry J. Cumberledge, et al.	49.57
14	18	19	Tyler	McElroy	John Paul Davis	35.00
15	19	1.0	Tyler	McElroy	Susan L. Spencer	53.00
16	19	49	Tyler	McElroy	James Edward Cumberledge, et al.	57.50
17	19	50.0	Tyler	McElroy	Ronald L. Cumberledge	123.15
18	19	70.1	Tyler	McElroy	Edith J. Pratt	8.77
19	19	72	Tyler	McElroy	Terry A. Cumberledge, et al.	18.09
20	19	73.0	Tyler	McElroy	Terry J. & Cheryl A. Cumberledge	1.13
21	19	71.0	Tyler	McElroy	Edith J. Pratt	3.30
22	19	70.0	Tyler	McElroy	Ronald L. Cumberledge	13.99
23	19	74	Tyler	McElroy	Randall P. Clugson II	19.00
24	19	75	Tyler	McElroy	Roger L. Pratt	24.19
25	19	78	Tyler	McElroy	Roger L. Pratt, et al.	43.81
26	22	1.2	Tyler	McElroy	James B. Scott	40.00
27	22	2	Tyler	McElroy	June Pratt	7.00
28	22	4	Tyler	McElroy	Jacqueline L. Wickman Trust	72.83
29	22	20	Tyler	McElroy	James B. Scott	30.00
30	21	18	Tyler	McElroy	Richard E. & Barbara A. Mullins	20.00
31	22	13.1	Tyler	McElroy	Jacqueline L. Wickman, et al.	9.98
32	22	13	Tyler	McElroy	Warren C. Putman	147.72
33	2	11	Doddridge	West Union	Mark Ziegenfuss	99.84
34	19	80	Tyler	McElroy	John Paul Davis	25.00
35	2	2	Doddridge	West Union	Jason J. Boggs	66.87
36	21	21	Tyler	McElroy	James B. Scott	30.00
37	22	19	Tyler	McElroy	Berlina Rose, et al.	55.00
38	4	1	Doddridge	Grant	Warren C. Putman	77.00
39	22	18	Tyler	McElroy	Bruce W. Boland	86.75
40	22	3	Tyler	McElroy	Jacqueline Wickman, et al.	71.62
41	22	18.1	Tyler	McElroy	Bruce W. Boland	18.91
42	2	18	Doddridge	West Union	David B. & Elizabeth A. Browning	125.00
43	2	1	Doddridge	West Union	James M. Petrovich, et al.	70.00
44	22	34	Tyler	McElroy	Paul Dean Steiman Jr. & Marc J. Steiman	126.00
45	18	20.2	Tyler	McElroy	Richard E. Hansen	19.96
46	21	19	Tyler	McElroy	Richard E. & Barbara A. Mullins	20.00
47	21	21	Tyler	McElroy	James B. Scott	30.00



As-Drilled Well Information:
SHR60H7 coordinates are:
NAD 27 N: 328,492.21 E: 1,629,439.28
NAD 83 UTM N: 4,360,580.01 E: 516,269.36
SHR60H7 Landing Point coordinates are:
NAD 27 N: 327,106.92 E: 1,632,447.07
NAD 83 UTM N: 4,360,173.29 E: 517,192.71
SHR60H7 Bottom Hole coordinates are:
NAD 27 N: 318,845.75 E: 1,636,024.20
NAD 83 UTM N: 4,357,674.71 E: 518,324.50
West Virginia Coordinate 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



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

Sub Surface Easements

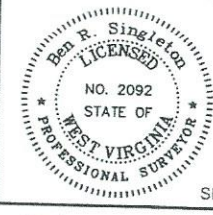
Parcel No.	Acres	Owner
05-18-11	132	Susan L. Spencer

Lease No.	Acres	Owner
126212	131	Susan L. Spencer
125951	225	Mona R. Cumberledge, et al.
126146	35	Duane Frances Bonnell, et al.
126171	78	Daniel G. Cumberledge, et al.
126140	25	Roger L. Pratt
126154	28	Regina Jo Gillespie, et al.
126159	25	Nick A. Demoss, et al.
126151	30	Dorothy H. Bode, et al.
126153	55	Jeffrey T. Hefflin, et al.
126317	62	Donna K. Fahey, et al.
126182	38	Robert J. Nichols, et al.
126183	89	Robert J. Nichols, et al.
126239	234	Paul Tallman, et al.



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.

Ben R. Singleton
P.S. 2092



FILE NO: 208-13
DRAWING NO: 208-13 SHR60H7
SCALE: 1" = 2000'
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: May 1 20 19
OPERATOR'S WELL NO.: SHR60H7
API WELL NO
47 - 095 - 02543
STATE COUNTY PERMIT

WELL TYPE: OIL GAS LIQUID INJECTION WASTE DISPOSAL
(IF GAS) PRODUCTION: STORAGE DEEP SHALLOW
LOCATION: ELEVATION: As-Built 1,011' WATERSHED Morrison Run of McElroy Creek QUADRANGLE: Shirley
DISTRICT: McElroy COUNTY: Tyler
SURFACE OWNER: Vivian J. Wells, et al. ACREAGE: 35.38
ROYALTY OWNER: George Birklein, et al. LEASE NO: 126101 ACREAGE: 240
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: 6556
WELL OPERATOR: EQT Production Company DESIGNATED AGENT: Jason Ranson
ADDRESS: 2400 Ansys Drive, Suite 200 ADDRESS: 115 Professional Place PO Box 280
Canonsburg, PA 15317 Bridgeport, WV 26330

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Proppant							
Interval Number	Type	Pumping Result	Type	Subtype	Des	Sand Size	Amount (lb)
1	Stage	Successful	Natural	Uncoated	Bulk Sand	100 mesh	185,163.00
2	Stage	Successful	Natural	Uncoated	Bulk Sand	100 mesh	435,000.00
3	Stage	Successful	Natural	Uncoated	Bulk Sand	100 mesh	442,710.00
4	Stage	Successful	Natural	Uncoated	Bulk Sand	100 mesh	441,500.00
5	Stage	Successful	Natural	Uncoated	Bulk Sand	100 mesh	445,673.00
6	Stage	Successful	Natural	Uncoated	Bulk Sand	100 mesh	447,800.00
7	Stage	Successful	Natural	Uncoated	Bulk Sand	100 mesh	440,675.00
8	Stage	Successful	Natural	Uncoated	Bulk Sand	100 mesh	440,320.00
9	Stage	Successful	Natural	Uncoated	Bulk Sand	100 mesh	443,760.00
10	Stage	Successful	Natural	Uncoated	Bulk Sand	100 mesh	440,412.00
11	Stage	Successful	Natural	Uncoated	Bulk Sand	100 mesh	441,800.00
12	Stage	Successful	Natural	Uncoated	Bulk Sand	100 mesh	441,200.00
13	Stage	Successful	Natural	Uncoated	Bulk Sand	100 mesh	441,200.00
14	Stage	Successful	Natural	Uncoated	Bulk Sand	100 mesh	441,300.00
15	Stage	Successful	Natural	Uncoated	Bulk Sand	100 mesh	440,300.00
16	Stage	Successful	Natural	Uncoated	Bulk Sand	100 mesh	441,600.00
17	Stage	Successful	Natural	Uncoated	Bulk Sand	100 mesh	441,200.00
18	Stage	Successful	Natural	Uncoated	Bulk Sand	100 mesh	440,500.00
19	Stage	Successful	Natural	Uncoated	Bulk Sand	100 mesh	445,000.00
20	Stage	Successful	Natural	Uncoated	Bulk Sand	100 mesh	441,030.00
21	Stage	Successful	Natural	Uncoated	Bulk Sand	100 mesh	439,100.00
22	Stage	Successful	Natural	Uncoated	Bulk Sand	100 mesh	439,200.00
23	Stage	Successful	Natural	Uncoated	Bulk Sand	100 mesh	441,700.00
24	Stage	Successful	Natural	Uncoated	Bulk Sand	100 mesh	439,400.00
25	Stage	Successful	Natural	Uncoated	Bulk Sand	100 mesh	439,100.00
26	Stage	Successful	Natural	Uncoated	Bulk Sand	100 mesh	441,500.00
27	Stage	Successful	Natural	Uncoated	Bulk Sand	100 mesh	444,560.00
28	Stage	Successful	Natural	Uncoated	Bulk Sand	100 mesh	440,500.00
29	Stage	Successful	Natural	Uncoated	Bulk Sand	100 mesh	440,510.00
30	Stage	Successful	Natural	Uncoated	Bulk Sand	100 mesh	438,800.00
31	Stage	Successful	Natural	Uncoated	Bulk Sand	100 mesh	435,680.00
32	Stage	Successful	Natural	Uncoated	Bulk Sand	100 mesh	441,500.00
33	Stage	Successful	Natural	Uncoated	Bulk Sand	100 mesh	442,100.00
34	Stage	Successful	Natural	Uncoated	Bulk Sand	100 mesh	440,680.00
35	Stage	Successful	Natural	Uncoated	Bulk Sand	100 mesh	439,800.00
36	Stage	Successful	Natural	Uncoated	Bulk Sand	100 mesh	438,950.00
37	Stage	Successful	Natural	Uncoated	Bulk Sand	100 mesh	439,650.00
38	Stage	Successful	Natural	Uncoated	Bulk Sand	100 mesh	445,660.00
39	Stage	Successful	Natural	Uncoated	Bulk Sand	100 mesh	441,300.00
40	Stage	Successful	Natural	Uncoated	Bulk Sand	100 mesh	439,900.00
41	Stage	Successful	Natural	Uncoated	Bulk Sand	100 mesh	440,500.00
42	Stage	Successful	Natural	Uncoated	Bulk Sand	100 mesh	440,750.00
43	Stage	Successful	Natural	Uncoated	Bulk Sand	100 mesh	440,500.00
44	Stage	Successful	Natural	Uncoated	Bulk Sand	100 mesh	440,800.00
45	Stage	Successful	Natural	Uncoated	Bulk Sand	100 mesh	442,800.00
46	Stage	Successful	Natural	Uncoated	Bulk Sand	100 mesh	440,700.00
47	Stage	Successful	Natural	Uncoated	Bulk Sand	100 mesh	441,300.00
48	Stage	Successful	Natural	Uncoated	Bulk Sand	100 mesh	442,451.00

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42	Stage	Successful	Wireline	Scale Inhibitor	Scale Inhibitor	StimSTREAM SC-398	ChemStream	0.6	gal
42	Stage	Successful	Stimulation	Scale Inhibitor	Scale Inhibitor	StimSTREAM SC-398	ChemStream	38	gal
43	Stage	Successful	Wireline	Scale Inhibitor	Scale Inhibitor	StimSTREAM SC-398	ChemStream	0.6	gal
43	Stage	Successful	Stimulation	Scale Inhibitor	Scale Inhibitor	StimSTREAM SC-398	ChemStream	42	gal
44	Stage	Successful	Wireline	Scale Inhibitor	Scale Inhibitor	StimSTREAM SC-398	ChemStream	0.5	gal
44	Stage	Successful	Stimulation	Scale Inhibitor	Scale Inhibitor	StimSTREAM SC-398	ChemStream	38	gal
45	Stage	Successful	Wireline	Scale Inhibitor	Scale Inhibitor	StimSTREAM SC-398	ChemStream	0.6	gal
45	Stage	Successful	Stimulation	Scale Inhibitor	Scale Inhibitor	StimSTREAM SC-398	ChemStream	39	gal
46	Stage	Successful	Wireline	Scale Inhibitor	Scale Inhibitor	StimSTREAM SC-398	ChemStream	0.4	gal
46	Stage	Successful	Stimulation	Scale Inhibitor	Scale Inhibitor	StimSTREAM SC-398	ChemStream	37	gal
47	Stage	Successful	Wireline	Scale Inhibitor	Scale Inhibitor	StimSTREAM SC-398	ChemStream	0.5	gal
47	Stage	Successful	Stimulation	Scale Inhibitor	Scale Inhibitor	StimSTREAM SC-398	ChemStream	38	gal
48	Stage	Successful	Wireline	Scale Inhibitor	Scale Inhibitor	StimSTREAM SC-398	ChemStream	0.3	gal
48	Stage	Successful	Stimulation	Scale Inhibitor	Scale Inhibitor	StimSTREAM SC-398	ChemStream	39	gal

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Wireline Pump In Volumes						
Interval Number	Start Date	End Date	Type	Pumping Result	Fluid Name	Total Stim Volume (bbl)
1	11/16/2019 13:51	11/16/2019 16:27	Stage	Successful	Wireline	0.00
2	11/17/2019 7:21	11/17/2019 9:17	Stage	Successful	Wireline	840.00
3	11/18/2019 1:52	11/18/2019 3:44	Stage	Successful	Wireline	638.00
4	11/18/2019 16:07	11/19/2019 2:14	Stage	Successful	Wireline	655.00
5	11/19/2019 12:16	11/19/2019 14:05	Stage	Successful	Wireline	662.00
6	11/23/2019 2:10	11/23/2019 6:15	Stage	Successful	Wireline	556.00
7	11/24/2019 2:10	11/24/2019 3:54	Stage	Successful	Wireline	612.00
8	11/25/2019 1:37	11/25/2019 3:23	Stage	Successful	Wireline	622.00
9	11/26/2019 7:59	11/26/2019 9:49	Stage	Successful	Wireline	509.00
10	11/27/2019 0:06	11/27/2019 1:54	Stage	Successful	Wireline	596.00
11	11/28/2019 1:23	11/28/2019 3:43	Stage	Successful	Wireline	606.00
12	11/28/2019 16:49	11/28/2019 18:36	Stage	Successful	Wireline	569.00
13	11/29/2019 22:40	11/30/2019 0:26	Stage	Successful	Wireline	493.00
14	11/30/2019 18:26	11/30/2019 20:12	Stage	Successful	Wireline	530.00
15	12/1/2019 15:48	12/1/2019 17:41	Stage	Successful	Wireline	497.00
16	12/2/2019 20:29	12/2/2019 22:17	Stage	Successful	Wireline	480.00
17	12/3/2019 14:19	12/3/2019 16:04	Stage	Successful	Wireline	530.00
18	12/4/2019 9:31	12/4/2019 11:20	Stage	Successful	Wireline	489.00
19	12/4/2019 23:34	12/5/2019 1:20	Stage	Successful	Wireline	472.00
20	12/5/2019 16:31	12/6/2019 4:26	Stage	Successful	Wireline	468.00
21	12/6/2019 14:20	12/6/2019 16:01	Stage	Successful	Wireline	403.00
22	12/7/2019 5:50	12/7/2019 7:52	Stage	Successful	Wireline	358.00
23	12/7/2019 17:48	12/7/2019 19:35	Stage	Successful	Wireline	359.00
24	12/8/2019 5:22	12/8/2019 7:07	Stage	Successful	Wireline	374.00
25	12/8/2019 15:36	12/8/2019 17:17	Stage	Successful	Wireline	295.00
26	12/9/2019 7:23	12/9/2019 9:04	Stage	Successful	Wireline	347.00
27	12/9/2019 19:00	12/9/2019 20:46	Stage	Successful	Wireline	284.00
28	12/10/2019 7:44	12/10/2019 9:25	Stage	Successful	Wireline	329.00
29	12/10/2019 17:24	12/10/2019 19:05	Stage	Successful	Wireline	289.00
30	12/11/2019 4:26	12/11/2019 6:08	Stage	Successful	Wireline	303.00
31	12/11/2019 22:04	12/11/2019 23:45	Stage	Successful	Wireline	293.00
32	12/13/2019 4:25	12/13/2019 6:08	Stage	Successful	Wireline	251.00
33	12/14/2019 7:14	12/14/2019 9:04	Stage	Successful	Wireline	244.00
34	12/14/2019 21:55	12/14/2019 23:36	Stage	Successful	Wireline	232.00
35	12/15/2019 8:07	12/15/2019 9:47	Stage	Successful	Wireline	226.00
36	12/15/2019 19:02	12/15/2019 20:46	Stage	Successful	Wireline	201.00
37	12/16/2019 14:43	12/16/2019 16:23	Stage	Successful	Wireline	195.00
38	12/17/2019 1:28	12/17/2019 3:08	Stage	Successful	Wireline	187.00
39	12/18/2019 9:55	12/18/2019 12:11	Stage	Successful	Wireline	175.00
40	12/18/2019 21:16	12/18/2019 22:56	Stage	Successful	Wireline	201.00
41	12/19/2019 15:27	12/19/2019 18:02	Stage	Successful	Wireline	168.00
42	12/20/2019 5:48	12/20/2019 7:28	Stage	Successful	Wireline	145.00
43	12/20/2019 16:57	12/20/2019 18:42	Stage	Successful	Wireline	159.00
44	12/21/2019 3:15	12/21/2019 4:55	Stage	Successful	Wireline	131.00
45	12/21/2019 16:48	12/21/2019 18:29	Stage	Successful	Wireline	158.00
46	12/22/2019 4:13	12/22/2019 5:52	Stage	Successful	Wireline	114.00
47	12/22/2019 15:30	12/22/2019 17:09	Stage	Successful	Wireline	120.00
48	12/23/2019 2:47	12/23/2019 4:27	Stage	Successful	Wireline	94.00

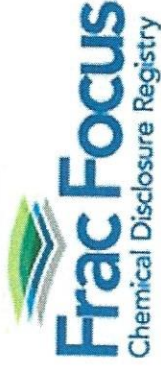
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Interval Number	Start Date	End Date	P Breakdown (psi)	P Treat (Avg (psi))	P Treat (Max (psi))	SIP (psi)	Stimulation Stages			# Pumps Start	# Pumps End	Impaired Stim Volume (bb)	Total Stim Volume (bb)
							Frac Gradient (psi/ft)	Slurry Rate Max (bb/min)	Slurry Rate Avg (bb/min)				
1	11/16/2019 13:51	11/16/2019 16:27	6,982.00	9,030.58	9,489.49	3,776.00	1.02	99.50	84.38	14.00	14.00	4,827.00	4,827.00
2	11/17/2019 7:21	11/17/2019 9:17	5,875.00	8,850.26	9,340.10	3,969.00	1.05	100.11	96.17	15.00	14.00	9,662.00	9,662.00
3	11/18/2019 1:52	11/18/2019 3:44	5,602.00	8,977.95	9,174.85	4,007.00	1.06	100.24	98.45	15.00	13.00	9,667.00	9,667.00
4	11/19/2019 16:07	11/19/2019 2:14	5,470.00	8,768.30	9,198.68	3,824.00	1.03	100.37	95.55	14.00	14.00	10,784.00	10,784.00
5	11/19/2019 12:16	11/19/2019 14:05	5,605.00	8,851.38	9,183.95	4,601.00	1.04	100.16	99.69	14.00	14.00	9,531.00	9,531.00
6	11/20/2019 2:10	11/20/2019 6:15	5,805.00	8,782.79	9,093.91	4,387.00	1.11	100.79	98.55	14.00	14.00	11,909.00	11,909.00
7	11/20/2019 2:10	11/24/2019 3:54	5,174.00	8,736.51	8,973.54	4,435.00	1.11	100.18	98.55	14.00	13.00	9,414.00	9,414.00
8	11/25/2019 1:37	11/26/2019 3:23	5,013.00	8,748.59	9,109.09	4,565.00	1.13	100.26	98.88	13.00	13.00	9,631.00	9,631.00
9	11/26/2019 7:59	11/26/2019 9:49	5,759.00	8,629.69	9,128.08	4,812.00	1.18	100.59	96.95	14.00	13.00	9,609.00	9,609.00
10	11/27/2019 0:06	11/27/2019 1:54	5,844.00	8,853.71	9,188.82	4,434.00	1.11	100.40	99.52	15.00	13.00	10,603.00	10,603.00
11	11/28/2019 1:23	11/28/2019 3:43	6,083.00	8,515.00	8,946.00	4,213.00	1.07	100.10	98.80	15.00	12.00	9,656.00	9,656.00
12	11/28/2019 16:49	11/28/2019 18:36	5,956.00	8,703.69	9,221.59	4,380.00	1.11	100.66	99.98	15.00	13.00	9,612.00	9,612.00
13	11/30/2019 18:26	11/30/2019 0:26	5,908.00	8,550.59	8,867.31	4,081.00	1.07	100.13	99.70	16.00	16.00	9,664.00	9,664.00
14	11/30/2019 15:48	12/1/2019 17:41	5,682.00	8,617.00	8,904.73	3,792.00	1.04	100.40	100.14	16.00	15.00	9,411.00	9,411.00
15	12/2/2019 20:29	12/2/2019 22:17	6,018.00	8,636.41	9,148.07	3,994.00	1.02	100.60	100.05	16.00	16.00	9,644.00	9,644.00
16	12/3/2019 14:19	12/3/2019 16:04	5,749.00	8,584.72	8,765.03	3,930.00	1.05	100.60	100.76	16.00	16.00	9,541.00	9,541.00
17	12/4/2019 9:31	12/4/2019 11:20	5,768.00	8,587.85	8,922.30	4,249.00	1.04	101.90	100.30	16.00	15.00	9,680.00	9,680.00
18	12/4/2019 23:34	12/5/2019 1:20	5,530.00	8,501.60	8,994.42	3,953.00	1.09	100.49	97.21	15.00	14.00	9,586.00	9,586.00
19	12/5/2019 16:31	12/6/2019 4:26	5,675.00	8,195.79	8,929.53	4,626.00	1.05	100.06	98.80	14.00	14.00	10,530.00	10,530.00
20	12/6/2019 14:30	12/6/2019 16:01	5,813.00	8,350.25	8,757.97	4,281.00	1.15	100.79	99.94	15.00	14.00	9,175.00	9,175.00
21	12/7/2019 5:50	12/7/2019 7:52	5,411.00	7,882.65	8,585.15	3,819.00	1.03	100.40	99.12	16.00	12.00	9,547.00	9,547.00
22	12/7/2019 17:48	12/7/2019 19:35	5,575.00	8,392.88	8,766.90	4,029.00	1.07	100.40	98.51	15.00	15.00	9,633.00	9,633.00
23	12/8/2019 5:22	12/8/2019 7:07	5,595.00	8,281.37	8,003.73	4,216.00	1.08	100.79	99.77	15.00	15.00	9,337.00	9,337.00
24	12/8/2019 15:36	12/8/2019 17:17	5,641.00	8,239.06	8,688.32	4,065.00	1.07	100.79	98.88	15.00	12.00	9,116.00	9,116.00
25	12/9/2019 7:23	12/9/2019 9:04	5,597.00	8,312.73	8,895.15	4,105.00	1.08	100.66	99.76	14.00	14.00	9,137.00	9,137.00
26	12/9/2019 19:00	12/9/2019 20:46	5,752.00	8,232.36	8,895.15	4,225.00	1.08	100.35	99.10	15.00	15.00	9,482.00	9,482.00
27	12/10/2019 7:44	12/10/2019 9:25	5,956.00	8,650.68	9,296.67	4,145.00	1.07	100.35	99.10	15.00	15.00	9,073.00	9,073.00
28	12/10/2019 17:24	12/10/2019 19:05	5,781.00	8,077.81	8,124.04	4,412.00	1.09	100.31	98.60	15.00	15.00	9,210.00	9,210.00
29	12/11/2019 4:26	12/11/2019 6:08	5,965.00	8,039.13	8,735.88	3,780.00	1.12	100.53	98.86	15.00	15.00	9,256.00	9,256.00
30	12/11/2019 27:04	12/11/2019 23:45	5,744.00	7,937.14	9,090.52	3,801.00	1.02	100.53	100.03	15.00	15.00	9,158.00	9,158.00
31	12/13/2019 4:25	12/13/2019 6:08	5,347.00	8,475.44	9,221.16	3,804.00	1.03	100.71	97.71	15.00	15.00	9,402.00	9,402.00
32	12/13/2019 7:14	12/14/2019 9:04	5,876.00	8,425.47	9,337.00	4,050.00	1.06	100.79	98.43	14.00	14.00	9,683.00	9,683.00
33	12/14/2019 21:55	12/14/2019 23:36	5,888.00	8,303.49	9,323.90	4,151.00	1.06	100.40	98.25	14.00	14.00	9,176.00	9,176.00
34	12/15/2019 8:07	12/15/2019 9:47	5,533.00	7,924.92	9,008.68	4,338.00	1.08	100.53	100.07	15.00	15.00	9,183.00	9,183.00
35	12/16/2019 19:02	12/16/2019 20:46	6,031.00	8,063.28	9,244.02	4,094.00	1.07	100.66	95.10	15.00	15.00	9,172.00	9,172.00
36	12/16/2019 14:43	12/16/2019 16:23	5,753.00	7,924.36	8,909.26	4,131.00	1.06	100.66	98.96	15.00	13.00	9,072.00	9,072.00
37	12/17/2019 1:28	12/17/2019 3:08	5,975.00	7,977.31	9,250.92	4,087.00	1.07	100.66	98.77	15.00	14.00	9,179.00	9,179.00
38	12/18/2019 9:55	12/18/2019 12:11	5,948.00	8,153.74	9,023.39	4,355.00	1.06	100.40	98.29	15.00	15.00	9,893.00	9,893.00
39	12/18/2019 21:16	12/18/2019 22:56	5,933.00	8,061.03	9,154.79	4,646.00	1.11	100.49	99.84	15.00	15.00	9,098.00	9,098.00
40	12/19/2019 15:27	12/19/2019 18:02	5,374.00	7,986.46	8,830.46	4,180.00	1.14	100.85	99.94	15.00	15.00	9,494.00	9,494.00
41	12/20/2019 5:48	12/20/2019 7:28	5,442.00	7,989.08	9,183.07	4,183.00	1.07	100.79	100.09	14.00	14.00	9,200.00	9,200.00
42	12/20/2019 16:57	12/20/2019 18:42	5,544.00	8,702.62	9,143.91	4,074.00	1.06	101.32	97.24	15.00	15.00	9,251.00	9,251.00
43	12/21/2019 3:15	12/21/2019 4:55	5,957.00	7,804.11	8,534.17	4,243.00	1.08	100.66	99.82	15.00	15.00	9,092.00	9,092.00
44	12/21/2019 16:48	12/21/2019 18:29	5,426.00	7,784.77	8,764.77	4,051.00	1.06	101.15	100.53	14.00	14.00	9,274.00	9,274.00
45	12/22/2019 4:13	12/22/2019 5:52	5,774.00	7,600.13	8,566.22	4,030.00	1.05	101.37	99.07	14.00	13.00	8,992.00	8,992.00
46	12/22/2019 15:30	12/22/2019 17:09	5,824.00	7,590.24	8,730.47	3,848.00	1.02	101.19	100.73	14.00	14.00	9,115.00	9,115.00
47	12/23/2019 2:47	12/23/2019 4:27	5,936.00	7,604.41	8,595.60	4,082.00	1.05	100.93	99.68	14.00	14.00	9,036.00	9,036.00

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Hydraulic Fracturing Fluid Product Component Information Disclosure



Job Start Date:	11/16/2019
Job End Date:	12/23/2019
State:	West Virginia
County:	Tyler
API Number:	47-095-02542-00-00
Operator Name:	EQT Production
Well Name and Number:	SHR60 6H
Latitude:	39.39444000
Longitude:	-80.81110500
Datum:	NAD83
Federal Well:	NO
Indian Well:	NO
True Vertical Depth:	6,641
Total Base Water Volume (gal):	19,704,426
Total Base Non Water Volume:	0

Hydraulic Fracturing Fluid Composition:

Trade Name	Supplier	Purpose	Ingredients	Chemical Service Number (CAS #)	Maximum Ingredient Concentration in Additive (% by mass)**	Maximum Ingredient Concentration in HF Fluid (% by mass)**	Comments
Water	EQT	Carrier/Base Fluid	Water	7732-18-5	100.00000	88.62940	None
Sand (Proppant)	EQT	Proppant					
FR-9800	ChemStream	Friction Reducer	Silica Substrate	14808-60-7	100.00000	11.27467	None
			Copolymer of 2-propenamide	Proprietary	30.00000	0.01546	None
			Petroleum Distillate	64742-47-8	20.00000	0.01031	None
			Alcohols, C12-16, ethoxylated	68551-12-2	2.00000	0.00103	None
			Oleic Acid Diethanolamide	93-83-4	2.00000	0.00103	None
			Ammonium chloride ((NH4)Cl)	12125-02-9	1.00000	0.00052	None
Clearal 268	ChemStream	Biocide					
			Non-hazardous substances	Proprietary	90.00000	0.01298	None
			Glutaraldehyde	111-30-8	20.00000	0.00288	None
			Didecyl dimethyl ammonium chloride	7173-51-5	3.00000	0.00043	None
			Alkyl dimethyl benzyl ammonium chloride	68391-01-5	3.00000	0.00043	None
StimSTREAM SC-398	ChemStream	Scale Inhibitor					
			Non-hazardous substances	Proprietary	90.00000	0.00854	None

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Hydrochloric Acid (HCl)	USWS	Acid	Bis(HexaMethylene Triamine Penta(Methylene Phosphonic Acid)(BHMT)	84690-00-1	10.00000	0.00099	None
AI-303	USWS	Acid Corrosion Inhibitor	Hydrogen Chloride	7647-01-0	15.00000	0.00307	None
			Ethylene glycol	107-21-1	40.00000	0.00001	None
			Cinnamaldehyde	104-55-2	20.00000	0.00001	None
			Butyl Cellosolve	111-76-2	20.00000	0.00001	None
			Formic Acid	64-18-6	20.00000	0.00001	None
			Polyether	Proprietary	10.00000	0.00000	None
			Acetophenone, thiourea, formaldehyde polymer	68527-49-1	5.00000	0.00000	None
Ingredients shown above are subject to 29 CFR 1910.1200(i) and appear on Material Safety Data Sheets (MSDS). Ingredients shown below are Non-MSDS.							
Other Chemical(s)	Listed Above	See Trade Name(s) List					
			Non-hazardous substances	Proprietary	90.00000	0.01298	
			Petroleum Distillate	64742-47-8	20.00000	0.01031	
			Non-hazardous substances	Proprietary	90.00000	0.00854	
			Alcohols, C12-16, ethoxylated	68551-12-2	2.00000	0.00103	
			Oleic Acid Diethanolamide	93-83-4	2.00000	0.00103	
			Ammonium chloride (NH4Cl)	12125-02-9	1.00000	0.00052	
			Alkyl dimethyl benzyl ammonium chloride	68391-01-5	3.00000	0.00043	
			Didecyl dimethyl ammonium chloride	7173-51-5	3.00000	0.00043	
			Butyl Cellosolve	111-76-2	20.00000	0.00001	
			Formic Acid	64-18-6	20.00000	0.00001	
			Cinnamaldehyde	104-55-2	20.00000	0.00001	
			Polyether	Proprietary	10.00000	0.00000	
			Acetophenone, thiourea, formaldehyde polymer	68527-49-1	5.00000	0.00000	

* Total Water Volume sources may include fresh water, produced water, and/or recycled water
 ** Information is based on the maximum potential for concentration and thus the total may be over 100%

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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