

APPROVED

NAME: *Joe A. Finkel*

DATE: *1/27/16*

WR-35 Correction Report

Operator: EQT Production Company

Well API Number: 47-017-06588

Date: 10-28-2015

Updates Needed:

- Correction to casing info. _____
- No freshwater or salt water depths reported. _____
- No open flow data reported. _____
- No details of perforated intervals submitted, or reported with insufficient detail.
- Partial or no Lithology log reported. _____
- Well e- log submitted (deep well only). _____
- Drilled as deep well but permitted as shallow. _____
- Old WR-35 form used. Updated WR-35 form is available on WVDEP webpage.

Horizontal H6A Well Deficiencies

- As-Drilled Plat (mylar) and profile not included. Mylar plat not included
- Frac Focus chemical list needed. _____
- Computer file of well profile needed.
- Perforation and Stimulation record is incomplete. _____
- See Edited WR-35 form. _____
- OTHER:

Mark as "Deep" or "Shallow" on page 2.

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Well Operator's Report of Well Work



Where energy meets innovation.

Well Number: 514139

API: 47 - 017 - 6588

Submission: Initial Amended

Notes:

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Energy Management Solutions

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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- 017 - 6588 County DODDRIDGE District New Milton
Quad 611- Smithburg 7.5' Pad Name SMI28 Field/Pool Name _____
Farm name Sue Ann Spiker Well Number 514139
Operator (as registered with the OOG) EQT Production Company
Address 625 Liberty Ave. EQT Plaza, Suite 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 4,345,995 Easting 552,581
Landing Point of Curve Northing 4,346,251 Easting 523,392
Bottom Hole Northing 4,345,156. Easting 523,925

Elevation (ft) 1,254 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 base Mud 12.4 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 11/17/2014 Date drilling commenced 1/12/2015 Date drilling ceased 4/14/2015
Date completion activities began 5/7/2015 Date completion activities ceased 5/12/2015
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

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Freshwater depth(s) ft 35, 92, 113, 136, 273, 298, 379, 403, 440, 491, 513, 583 Open mine(s) (Y/N) depths N
Salt water depth(s) ft N/A Void(s) encountered (Y/N) depths N
Coal depth(s) ft 45, 281, 557, 628, 1207, 1376 Cavern(s) encountered (Y/N) depths N
Is coal being mined in area (Y/N) N

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API 47-017 - 6588 Farm name Sue Ann Spiker Well number 514139

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"	72'	NEW	A-500 81.3LB/FT	NONE	Y
Surface	17.5"	13.375"	669'	NEW	J-55 54.5LB/FT	540'	Y
Coal							
Intermediate 1	12.375"	9.625"	5328'	NEW	P-110 40LB/FT	1084', 3162'	Y
Intermediate 2							
Intermediate 3							
Production	8.5"	5.5"	12,680'	NEW	P-110 20LB/FT	NONE	N
Tubing							
Packer type and depth set							

Comment Details _____

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	69.1	15.6	1.18	81.54	0	8
Surface	CLASS A	590	15.6	1.20	708	0	8
Coal							
Intermediate 1	CLASS A / A / A	430 / 355 / 1080	14.2 / 15.6 / 15.6	1.24 / 1.18 / 1.18	533 / 418.9 / 1274.4	0	8
Intermediate 2							
Intermediate 3							
Production	Class A, 50/50 POZ Class H	485 / 620	14.2 / 15.2	1.26 / 1.96	611.1 / 1215.2 / 1826.3	5,421'	8
Tubing							

Drillers TD (ft) 12,680' Loggers TD (ft) _____
 Deepest formation penetrated Marcellus Plug back to (ft) _____
 Plug back procedure _____

Kick off depth (ft) 5,372'

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

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DESCRIBE THE CENTRALIZER PLACEMENT USED FOR EACH CASING STRING _____
 CONDUCTOR- NONE
 SURFACE- JOINTS: 1, 5, 10
 INTERMEDIATE- RAN AT LEAST EVERY 500' FEET JOINTS: 1, 11, 23, 35, 47, 59, 69, 82, 93, 104, 115
 PRODUCTION- RAN 1 CENTRALIZER ON EVERY JOINT FROM TD to 5,300'

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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- 017 - 6588 Farm name Sue Ann Spiker Well number 514139

<u>PRODUCING FORMATION(S)</u>	<u>DEPTHS</u>	
<u>Marcellus</u>	<u>6,298'</u> TVD	<u>7,178'</u> MD
_____	_____	_____
_____	_____	_____
_____	_____	_____

Please insert additional pages as applicable.

GAS TEST Build up Drawdown Open Flow OIL TEST Flow Pump

SHUT-IN PRESSURE Surface 1,516 psi Bottom Hole N/A psi DURATION OF TEST 62.25 hrs

OPEN FLOW Gas 13,846 mcfpd Oil N/A bpd NGL 17.4 bpd Water 372.5 bpd GAS MEASURED BY Estimated Orifice Pilot

<u>LITHOLOGY/ FORMATION</u>	<u>TOP</u>	<u>BOTTOM</u>	<u>TOP</u>	<u>BOTTOM</u>	<u>DESCRIBE ROCK TYPE AND RECORD QUANTITY AND TYPE OF FLUID (FRESHWATER, BRINE, OIL, GAS, H₂S, ETC)</u>
	<u>DEPTH IN FT NAME TVD</u>	<u>DEPTH IN FT TVD</u>	<u>DEPTH IN FT MD</u>	<u>DEPTH IN FT MD</u>	
	<u>0</u>		<u>0</u>		

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Please insert additional pages as applicable.

Drilling Contractor ALPHA HUNTER DRILLING (RIG 5)
Address P.O. BOX 430 City RENO State OH Zip 45773

Logging Company Gyrodta
Address 601 Mayer St City Bridgeville State PA Zip 15017

Cementing Company Allied Services
Address 1036 East Main Street City Bridgeport State WV Zip 26330

Stimulating Company FTSI
Address 301 E 18th Street City Cisco State TX Zip 76437

Please insert additional pages as applicable.

Completed by Jim Helmick Telephone 412-395-5518
Signature [Signature] Title VP Completions Date 8/5/2015

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Drilling Contractor Orion Drilling
Address 601 Aviation Way City Reynoldsville State PA Zip 15851

Logging Company _____
Address _____ City _____ State _____ Zip _____

Logging Company _____
Address _____ City _____ State _____ Zip _____

Cementing Company CJ Energy Services
Address 2504 Smith Creek Road City Waynesburg State PA Zip 15370

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EQT Production 514139 - API # 47-1706588 Final Formations

Formation Name	Final Top MD (ftGL) (ft)	Final Top TVD (ft)	Final Btm MD (ftGL) (ft)	Final Btm TVD (ft)
FRESH WATER ZONE	1'		570'	
SAND / SHALE	1'		55'	
COAL	55'		60'	
SAND / SHALE	60'		281'	
COAL	281'		285'	
SAND / SHALE	285'		577'	
COAL	577'		650'	
COAL	628'		633'	
SAND / SHALE	633'		1,207'	
SAND / SHALE	650'		628'	
COAL	1,207'		1,210'	
SAND / SHALE	1,210'		1,376'	
COAL	1,376'		1,381'	
SAND / SHALE	1,381'		1,753'	
MAXTON	1,753'		1,954'	
BIG LIME	1,954'		2,048'	
BIG INJUN	2,048'		2,251'	
WEIR	2,251'		2,351'	
SAND / SHALE	2,351'		2,458'	
GANTZ	2,458'		2,580'	
FIFTY FOOT	2,580'		2,664'	
GORDON	2,664'		3,264'	
WARREN	3,264'		3,343'	
SPEECHLEY	3,343'		4,006'	
BALLTOWN B	4,006'		4,216'	
BRADFORD	4,216'		4,516'	
RILEY	4,516'		4,931'	
BENSON	4,931'		5,190'	
ALEXANDER	5,190'		6,363'	6,031'
RHINESTREET	6,363'	6,031'	6,509'	6,076'
SONYEA	6,571'	6,097'	6,750'	6,159'
MIDDLESEX	6,750'	6,159'	6,842'	6,191'
GENESEE	6,842'	6,191'	6,950'	6,229'
GENESE0	6,950'	6,229'	7,032'	6,255'
TULLY	7,032'	6,255'	7,088'	6,272'
HAMILTON	7,088'	6,272'	7,178'	6,298'
MARCELLUS	7,178'	6,298'		

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Hydraulic Fracturing Fluid Product Component Information Disclosure

Job Start Date:	5/7/2015
Job End Date:	5/12/2015
State:	West Virginia
County:	Doddridge
API Number:	47-017-06588-00-00
Operator Name:	EQT Production
Well Name and Number:	514139
Longitude:	-80.73843000
Latitude:	39.26290900
Datum:	NAD83
Federal/Tribal Well:	NO
True Vertical Depth:	6,298
Total Base Water Volume (gal):	6,061,230
Total Base Non Water Volume:	0



Hydraulic Fracturing Fluid Composition:

Trade Name	Supplier	Purpose	Ingredients	Chemical Abstract Service Number (CAS #)	Maximum Ingredient Concentration in Additive (% by mass)**	Maximum Ingredient Concentration in HF Fluid (% by mass)**	Comments
Water	FTS International	Carrier/Base Fluid	Water	7732-18-5	100.00000	96.09719	None
Sand (Proppant)	FTS International	Proppant	Crystalline Silica	14808-60-7	100.00000	3.39413	None
MC MX 437-5	Multi-Chem	Calcium nitrate solution	Calcium nitrate	10124-37-5	60.00000	0.06244	None
FRW-900	FTS International	Friction reducer	Hydrotreated light distillate	64742-47-8	30.00000	0.02854	None
			Alkyl Alcohol	Proprietary	10.00000	0.00951	None
			Oxyalkylated alcohol A	Proprietary	5.00000	0.00476	None
Hydrochloric Acid (15%)	FTS International	Acidizing	Hydrochloric Acid	7647-01-0	15.00000	0.03817	None
HVG-1	FTS International	Gelling agent	Petroleum distillate	64742-47-8	55.00000	0.00613	None
			Guar gum	9000-30-0	50.00000	0.00557	None
			Surfactant	68439-51-0	2.00000	0.00022	None
			Clay	14808-60-7	2.00000	0.00022	None
B-10	FTS International	High pH Buffer					

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			Potassium carbonate	584-08-7	48.00000	0.00653	None
			Potassium hydroxide	1310-58-3	20.00000	0.00272	None
CS-500-SI	FTS International	Scale inhibitor					
			Ethylene glycol	107-21-1	10.00000	0.00278	None
FE-100L	FTS International	Iron control					
			Citric acid	77-92-9	55.00000	0.00096	None
CI-150	FTS International	Acid Corrosion Inhibitor					
			Isopropanol	67-63-0	30.00000	0.00014	None
			Ethylene glycol	107-21-1	30.00000	0.00014	None
			Organic amine resin salt	Proprietary	30.00000	0.00014	None
			Quaternary ammonium compound	Proprietary	10.00000	0.00005	None
			Aromatic aldehyde	Proprietary	10.00000	0.00005	None
			Dimethylformamide	68-12-2	10.00000	0.00005	None
APB-1	FTS International	Breaker					
			Ammonium persulfate	7727-54-0	95.00000	0.00019	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.

* 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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