

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

API 47 - 095 - 02088 County Tyler District Ellsworth
Quad Paden City Pad Name Stewart / Winland Pad Field/Pool Name Middlebourne
Farm name Stewart; James L. & Martha Well Number Stewart / Winland # 1302 MH
Operator (as registered with the OOG) Triad Hunter, LLC
Address 777 Post Oak Blvd. Suite 910 City Houston State Texas Zip 77056

As Drilled location NAD 83/UTM Attach an as-drilled plat, profile view, and deviation survey
Top hole Northing 4373297.4 Easting 505125.6
Landing Point of Curve Northing 4373623.5 Easting 505446.1
Bottom Hole Northing 4375244.6 Easting 504818

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)
Synthetic Base Mud; HT Light Mineral Oil, Synvert TWA & LWA - thinner and wetting agents, Synvert L-1 primary emulsifier, and Cimbar - weighting and filler material

Date permit issued 3/26/2013 Date drilling commenced 1/28/2014 Date drilling ceased 2/23/2014
Date completion activities began 7/28/2014 Date completion activities ceased 8/28/2014
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 surface - 250' Open mine(s) (Y/N) depths N
Salt water depth(s) ft @ 1,000' Void(s) encountered (Y/N) depths N
Coal depth(s) ft 1,100' - 1,400' Cavern(s) encountered (Y/N) depths N
Is coal being mined in area (Y/N) N

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Reviewed by: WS 7/1/15
WS 6/25/15
Correction copy
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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"	105'	New	J-55 94 lb.	none	yes
Surface	17 1/2"	13 3/8"	444'	New	H-40 48 lb.	none	yes - circ. 15 bbls.
Coal							
Intermediate 1	12 1/4"	9 5/8"	2,863'	New	J-55 36 lb.	5 - 1 every 12 jts.	yes - circ. 5 bbls.
Intermediate 2							
Intermediate 3							
Production	8 3/4" & 8 1/2"	5 1/2"	12,745'	New	P-110 20 lb.	none	yes - circ. 66 bbls.
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	130	15.6	1.18	153	surface	Days
Surface	Class A (Halcem)	380	15.6	1.20	456	surface	12
Coal							
Intermediate 1	Varicem & Halcem	380 / 430	13.1 & 15.6	1.75 & 1.19	1,177	surface	12
Intermediate 2							
Intermediate 3							
Production	Varicem / Halcem	980 / 880	13.6 / 15.2	1.51 / 2.42	3610	surface	Days
Tubing							

Drillers TD (ft) TMD = 12,762' TVD = 6,151' Loggers TD (ft) ** No Open Hole Logs **
 Deepest formation penetrated Marcellus Shale Plug back to (ft) N/A
 Plug back procedure N/A

Kick off depth (ft) @ 4,350'

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

DESCRIBE THE CENTRALIZER PLACEMENT USED FOR EACH CASING STRING _____
 20" (0)
 13 3/8" (2) - 83' and 325'
 9 5/8" (7) - 1 every 10th joint
 5 1/2" (73) - 83 spiral centralizers from Toe to KOP (every 3rd jt.), and 10 bow centralizers from KOP to 250' (every 10th jt.)

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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PERFORATION RECORD

Stage No.	Perforation date	Perforated from MD ft.	Perforated to MD ft.	Number of Perforations	Formation(s)
	SEE	SPREAD	SHEET		

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)
		SEE	SPREAD	SHEET				

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PRODUCING FORMATION(S)	DEPTHS		
<u>Marcellus Shale</u>	<u>6,151'</u>	<u>TVD</u>	<u>12,762'</u> MD
_____	_____	_____	_____
_____	_____	_____	_____

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GAS TEST Build up Drawdown Open Flow OIL TEST Flow Pump

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SHUT-IN PRESSURE Surface 2,800 psi Bottom Hole 5,536 psi DURATION OF TEST 288 hrs

OPEN FLOW Gas 10,600 mcfpd Oil 288 bpd NGL _____ bpd Water 720 bpd GAS MEASURED BY Estimated Orifice Pilot

LITHOLOGY/ FORMATION	TOP DEPTH IN FT NAME TVD	BOTTOM DEPTH IN FT TVD	TOP DEPTH IN FT MD	BOTTOM DEPTH IN FT MD	DESCRIBE ROCK TYPE AND RECORD QUANTITY AND TYPE OF FLUID (FRESHWATER, BRINE, OIL, GAS, H ₂ S, ETC)
	<u>0</u>		<u>0</u>		** No Open Hole Logs **
					Pilot Hole: Stewart / Winland # 1300 UH (P # 47-095-02128)
Stewart / Winland # 1302 MH					
<u>Tully</u>	<u>6,120'</u>	<u>6,125'</u>	<u>6,818'</u>	<u>6,840'</u>	<u>Limestone</u>
<u>Marcellus</u>	<u>6,125'</u>	<u>Not Drilled</u>	<u>6,840'</u>	<u>12,762'</u>	<u>Organic Shale (Show Gas)</u>

Please insert additional pages as applicable.

Drilling Contractor Alpha Hunter Drilling
Address 28407 St. Rt. 7 City Marietta State Oh. Zip 45750

Logging Company Wildcat Wireline, LLC
Address 8583 Georgetown Road, Unit A City Cambridge State Oh. Zip 43725

Cementing Company Halliburton Energy Services
Address 4999 East Point Drive City Zanesville State Oh. Zip 43702

Stimulating Company Producers Service Corporation
Address 109 S. Graham Street City Zanesville State Oh. Zip 43701

Please insert additional pages as applicable.

Completed by Ben Smeltzer Telephone (740) 760-0570
Signature *Ben Smeltzer* Title Geologist Date 12/5/2014

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

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Stewart Winland 1302M

API	Total Depth (ft)	Landing Point MD (ft)	Landing Point Angle (Degrees)	Effective Lateral Length (ft)	TVD (ft)	Tubing Depth (ft)	Tubing Dia. (Inches)	Tubing Angle (Degrees)	Casing Depth (ft)	Casing Dia. (Inches)
47-95-02088	12,736	7,026	89	5,710	6,151				12,745	5 1/2

Stages	Perforation Intervals		Stage Intervals		Total Volume (bbl)	Average Rate (bpm)	Formation Break (PSI)	Average Pressure (PSI)	80/100 Mesh Pumped (Lb)	30/50 White Pumped (Lb)	20/40 Mesh Pumped (Lb)	20/40 CRC Pumped (Lb)	Total Sand Pumped (Lb)	ISIP (PSI)	Completed per design	Notes on Frac
	Actual Length	Footage	Actual Length	Footage												
Stage 1	12,630'-12,452'	178	12,653'-12,441'	212	8,635	77	8,760	6,667	50,600	320,200	42,800	40,000	453,600	3,016		
Stage 2	12,414'-12,254'	160	12,441'-12,240'	201	7,891	80	6,314	6,868	48,600	320,900	46,800	37,000	453,300	3,344		
Stage 3	12,215'-12,059'	156	12,240'-12,047'	193	7,180	79	6,632	7,632	49,000	152,600	0	0	201,600	5,021		
Stage 4	12,022'-11,862'	160	12,047'-11,848'	199	7,002	79	5,942	6,768	49,000	203,600	0	0	252,600	5,108		
Stage 5	11,821'-11,667'	154	11,848'-11,650'	198	8,468	75	5,671	6,690	49,100	319,900	47,100	42,000	458,100	4,925		
Stage 6	11,623'-11,470'	153	11,650'-11,453'	197	8,414	76	6,152	6,677	49,000	320,000	40,500	26,000	435,500	3,646		
Stage 7	11,426'-11,273'	153	11,453'-11,259'	194	10,980	75	5,925	7,166	48,400	320,200	46,200	46,200	461,000	3,666		
Stage 8	11,234'-11,074'	160	11,259'-11,062'	197	7,273	75	4,919	6,138	49,000	320,100	91,700	91,700	552,500	4,595		
Stage 9	11,037'-10,877'	160	11,062'-10,865'	197	8,295	77	6,115	6,508	49,500	320,500	92,000	92,000	554,000	4,423		
Stage 10	10,840'-10,680'	160	10,865'-10,664'	201	8,149	78	5,685	6,495	49,500	321,000	69,200	69,200	508,900	4,949		
Stage 11	10,643'-10,483'	160	10,664'-10,471'	193	7,838	76	5,469	6,195	48,000	321,000	58,000	34,000	461,000	4,814		
Stage 12	10,446'-10,286'	160	10,471'-10,269'	202	8,539	75	6,404	6,387	49,000	320,000	91,700	91,700	552,400	3,994		
Stage 13	10,249'-10,089'	160	10,269'-10,077'	192	8,136	76	5,566	6,469	49,000	320,300	46,000	41,700	457,000	4,199		
Stage 14	10,052'-9,892'	160	10,077'-9,875'	202	8,084	77	5,742	6,074	49,000	320,600	46,200	42,500	458,300	4,482		
Stage 15	9,855'-9,695'	160	9,875'-9,683'	192	8,539	76	4,610	5,869	49,000	320,000	46,300	42,000	457,300	5,914		
Stage 16	9,658'-9,498'	160	9,683'-9,480'	203	9,013	75	4,778	75	49,000	320,000	46,200	42,000	457,200	4,798		
Stage 17	9,461'-9,301'	160	9,480'-9,289'	191	8,274	77	5,791	6,052	49,100	320,000	46,300	42,000	457,400	3,745		
Stage 18	9,262'-9,106'	156	9,289'-9,087'	202	10,404	75	5,393	6,664	49,000	320,000	46,300	42,000	457,300	3,580		
Stage 19	9,067'-8,907'	160	9,087'-8,895'	192	8,594	76	5,867	6,549	49,000	320,000	46,900	42,000	457,900	4,118		
Stage 20	8,870'-8,710'	160	8,895'-8,690'	205	8,669	78	5,928	6,522	49,000	320,500	46,300	34,000	449,800	4,876		
Stage 21	8,665'-8,513'	152	8,690'-8,501'	189	8,336	77	5,413	6,172	49,000	308,100	46,300	42,000	445,400	4,672		
Stage 22	8,472'-8,318'	154	8,501'-8,299'	202	8,403	78	5,701	6,199	49,000	320,200	46,300	42,000	457,500	4,982		
Stage 23	8,272'-8,121'	151	8,299'-8,107'	192	8,406	76	5,665	5,834	49,000	320,000	46,300	42,000	457,300	4,118		
Stage 24	8,080'-7,924'	156	8,107'-7,912'	195	10,484	76	5,860	6,383	49,000	320,000	46,300	42,000	457,300	4,995		
Stage 25	7,883'-7,727'	156	7,912'-7,713'	199	10,107	75	6,486	6,419	49,500	320,000	46,300	42,000	457,800	4,905		
Stage 26	7,680'-7,530'	150	7,713'-7,506	207	8,324	74	5,849	5,835	49,000	320,000	46,300	42,000	457,300	4,680		
Stage 27	7,479'-7,333'	146	7,506'-7,319	187	8,611	74	5,284	5,769	49,000	320,000	43,800	42,000	454,800	4,762		
Stage 28	7,289 - 7,136	153	7,319-7,112'	207	8,371	77	5,899	5,845	49,000	320,000	46,300	42,000	457,300	4,272		
Stage 29	7,090'-6,939'	151	7,112'-	NA	8,420	77	5,241	6,297	49,000	320,000	47,000	42,000	458,000	5,140		

Total	29		4,559	5,541	247,839	2,215	169,061	179,218	1,422,300	8,989,700	1,411,400	1,276,000	13,099,400	129,749		
Average			157	198	8,546	76	5,830	6,180	49,045	309,990	48,669	44,000	451,703	4,474		

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Stewart Winland

1302

(P# 47-095-02088)

Tyler County, WV

Civil Township: Ellsworth

CHEMICAL SUMMARY

STAGE #	SURFACTANT (gals.)	BIOCIDE (gals.)	SCALE INHIBITOR (gals.)	FRICTION REDUCER (gal.)	LINEAR GEL (gal.)	SP BREAKER (gal.)	7.5%/15% FE ACID (gal.)
1	375	95	55	450	0	0	0/ 3000
2	330	95	45	439	168	1	0/ 3000
3	300	90	35	400	136	1	0/ 3000
4	265	87	50	322	0	0	0/ 3000
5	355	110	43	355	471	0.5	0/ 3000
6	357	107	47	360	483	0.5	0/ 3000
7	506	145	61	640	677	0.5	0/ 3000
8	350	125	50	425	699	0.75	3000 /0
9	360	120	47	425	274	0.38	3000 /0
10	355	130	50	438	267	0.25	3000 /0
11	350	110	45	420	164	0.25	3000 /0
12	375	120	50	390	493	0.5	3000 /0
13	350	150	38	363	482	0.5	3000 /0
14	345	120	45	350	525	0.5	3000 /0
15	380	115	45	440	664	0.5	3000 /0
16	363	121	48	328	238	0.375	3000 /0
17	348	145	40	358	512	2	3000 /0
18	420	175	55	490	851	0.8	3000 /0
19	360	140	50	330	596	0.5	3000 /0
20	350	135	40	330	455	2	3000 /0
21	362	125	45	345	490	2	3000 /0
22	350	150	40	350	582	0.5	3000 /0
23	368	138	40	370	560	2	3000 /0
24	430	155	40	510	1013	1	3000 /0
25	430	170	50	435	1029	1	3000 /0
26	365	150	44	383	540	3	3000 /0
27	350	137	51	351	603	1	3000 /0
28	365	145	39	345	558	0.5	3000 /0
29	340	140	40	360	489	0.5	3000 /0
TOTALS:							
29	10,554	3,745	1,328	11,502	14,019	24	87,000
Stages	Gals	Gals	Gals	Gals	Gals	Gals	Gals

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****CELLS WITH BLUE BACKGROUND ARE THE ONLY CELLS TO BE EDITED****

Fracture Start Date/Time:	7/28/14 23:57
Fracture End Date/Time:	08/28/2014 12:40
State:	WV
County:	Tyler
API Number:	47-095-02088-0000
Operator Number:	494494833
Well Name:	Stewart Windland 1302M
Federal Well:	No
Longitude:	-80.940378
Latitude:	39.509292
Long/Lat Projection:	NAD27
True Vertical Depth (TVD):	6,151'
Total Clean Fluid Volume* (gal):	10,409,238



Additive	Specific Gravity	Additive Quantity	Mass (lbs)
Water	1.00	10,409,238	86,865,091
Sand (Proppant)	2.65	13,099,400	13,099,400
Hydrochloric Acid (7.5%)	1.04	87,000	755,056
PROHIB II	0.97	87	704
PRO FR 2000	1.00	11,502	95,984
PRO GEL 4.0L	1.04	14,019	121,668
PRO BREAKER 4	1.26	6	63
MB 7530	1.24	3,745	38,753
PRO SCALE STOP 2000	1.06	1,328	11,747
PRO SURF 2000	1.05	10,554	92,477
		Total Slurry Mass (Lbs)	101,080,943

gal
lb
gal
gal
gal
gal
gal
gal
gal
gal
gal
gal
gal
gal
gal
gal
gal
gal

Ingredients Section:

Trade Name	Supplier	Purpose	Ingredients	Chemical Abstract Service Number (CAS #)	Maximum Ingredient Concentration in Additive (% by mass)**	Mass per Component (LBS)	Maximum Ingredient Concentration in HF Fluid (% by mass)**	Comments
Water	Company 1	Carrier/Base Fluid	Water	7732-18-5	100.00%	86,865,091	85.93617%	
Sand (Proppant)	PSC	Proppant	Silica Substrate		100.00%	13,099,400	12.95932%	
Hydrochloric Acid (7.5%)	Producers Service Corp	Acidizing	Hydrochloric Acid	7647-01-0	7.50%	56,629	0.05602%	
PROHIB II	Producers Service Corp	Inhibitor	Ethoxylated Nonylphenol	68412-54-4	10.00%	70	0.00007%	
			Dimethylcocoamine, bis(chloroethyl)ether, diquatena	68607-28-3	60.00%	423	0.00042%	
			Ethylene Glycol	107-21-1	40.00%	282	0.00028%	
			Glycol Ethers	111-76-2	40.00%	282	0.00028%	
			Methanol	67-56-1	30.00%	211	0.00021%	
			Propargyl Alcohol	107-19-7	30.00%	211	0.00021%	
PRO FR 2000	Producers Service Corp	Friction Reducer	Petroleum Distillate	064742-47-8	24.00%	23,036	0.02279%	
PRO GEL 4.0L	Producers Service Corp	Gelling Agent	Distillates (Petroleum), hydrotreated light	64742-47-8	65.00%	79,084	0.07824%	
			Nonylphenol, Ethoxylate	9016-45-9	5.00%	6,083	0.00602%	
			Guar Gum	9000-30-0	50.00%	60,834	0.06018%	
			Nonionic Surfactant	60828-78-6	5.00%	6,083	0.00602%	
			Nonionic Surfactant	60828-78-6	5.00%	6,083	0.00602%	
PRO BREAKER 4	Producers Service Corp	Breaker	Ethylene Glycol	107-21-1	40.00%	25	0.00002%	
			Sucrose	57-50-1	40.00%	25	0.00002%	
			Polyether Polyol	9003-11-6	1.00%	1	0.00000%	
			Sodium Bicarbonate	144-55-8	1.00%	1	0.00000%	
			Hexamethylenetetramine	100-97-0	1.00%	1	0.00000%	
			Proprietary Ingredient	Proprietary	1.00%	1	0.00000%	
			Proprietary Ingredient	Proprietary	1.00%	1	0.00000%	
			Proprietary Ingredient	Proprietary	1.00%	1	0.00000%	
			Water	7732-18-5	1.00%	1	0.00000%	
			Water	7732-18-5	Proprietary	0	0.00000%	
MB 7530	Producers Service Corp	Biocide	Tetrahydro-3, 5-dimethyl-2H-1,3,5-thiadiazine-2-thio	533-74-4	24.00%	9,301	0.00920%	
			Sodium Hydroxide	1310-73-2	4.00%	1,550	0.00153%	
PRO SCALE STOP 2000	Producers Service Corp	Scale Inhibitor	Organic Phosphate	71050-62-9	25.00%	2,937	0.00291%	
PRO SURF 2000	Producers Service Corp	Surfactant	Stannous Chloride	7772-99-8	10.00%	9,248	0.00915%	
			Ethoxylated Alcohol	68439-46-3	15.00%	13,872	0.01372%	
			Sulfamic Acid	5329-14-6	5.00%	4,624	0.00457%	
			Monoethanolamine	141-43-5	6.00%	5,549	0.00549%	

*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%

All component information listed was obtained from the supplier's Material Safety Data Sheets (MSDS). As such, the Operator is not responsible for inaccurate and/or incomplete information. Any questions regarding the content of the MSDS should be directed to the supplier who provided it. The Occupational Safety and Health Administration's (OSHA) regulations govern the criteria for the disclosure of this information. Please note that Federal Law protects "proprietary", "trade secret", and "confidential business information" and the criteria for how this information is reported on an MSDS is subject to 29 CFR 1910.1200(j) and Appendix D.