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WR-35  
Rev. 8/23/13

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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 47-017-06381 County Doddridge District West Union  
Quad West Union 7.5' Pad Name WEU51 Field/Pool Name \_\_\_\_\_  
Farm name Jane Hardin Trustee/Mary Well Number 514661  
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 4,345,177 Easting 520,439  
Landing Point of Curve Northing 4,344,949 Easting 520,073  
Bottom Hole Northing 4,342,344 Easting 521,342

Elevation (ft) 1208 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 Waiting on Flowback  
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)  
SBM 12.5ppg – powdered hydrocarbon resin, calcium carbonate, ground almond hulls, barium sulfate, calcium chloride, lecithin liquid, organophilic clay, polyaminated fatty acid, calcium hydroxide, polyimide surfactant, modified fatty acid, dimer.trimer fatty acid, ground walnut hulls, refined base oil.

Date permit issued 1/31/2014 Date drilling commenced 5/29/2014 Date drilling ceased 11/04/2014  
Date completion activities began 2/9/2015 Date completion activities ceased 3/1/2015  
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

Freshwater depth(s) ft 334 Open mine(s) (Y/N) depths N  
Salt water depth(s) ft \_\_\_\_\_ Void(s) encountered (Y/N) depths Received  
Coal depth(s) ft 101,170,294,314,486,555 Cavern(s) encountered (Y/N) depths Office of Oil & Gas  
Is coal being mined in area (Y/N) N

MAY 21 2015  
Reviewed by:  
A.L. 5/21/15  
W.S. 6/5/2015

API 47-017 - 06381 Farm name Jane Hardin Trustee/Mary Well number 514661

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"	40'	New	82.6#/ft	None	Y
Surface	17-1/2"	13-3/8"	1,129'	New	54.5#/ft	301', 877'	Y
Coal							
Intermediate 1	12-3/8"	9-5/8"	5,291'	New	40#/ft	630', 3190', 4503'	Y
Intermediate 2							
Intermediate 3							
Production	8-1/2"	5-1/2"	17,682'	New	20#/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 <sup>3</sup> /sks)	Volume (ft <sup>3</sup> )	Cement Top (MD)	WOC (hrs)
Conductor	Class A	49	15.6	1.18	57.82	0	8
Surface	Class A	1030	15.6	1.19	1225.7	0	8
Coal							
Intermediate 1	Class A	373/337/1165	14.2/15.6/15.6	1.26/1.18/1.18	2251.62	0	8
Intermediate 2							
Intermediate 3							
Production	Class A/Class H	450/1295	14.2/15.2	1.26/1.97	3118.15	5,375'	72
Tubing							

Drillers TD (ft) 17,682' Loggers TD (ft) \_\_\_\_\_  
 Deepest formation penetrated Marcellus Plug back to (ft) \_\_\_\_\_  
 Plug back procedure \_\_\_\_\_

Kick off depth (ft) 5,500'

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 Conductor-N/A  
 Surface-bow spring centralizers set at 1125', 686', 159'  
 Intermediate-bow spring centralizers set at 5247', 4811', 4287', 3806', 3500', 3107', 2869', 2301', 1821', 1297', 814', 333'  
 Production- Composite bodied centralizers on every joint from TD up to 5,025'

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 - 06381 Farm name Jane Hardin Trustee/Mary Well number 514661

<u>PRODUCING FORMATION(S)</u>	<u>DEPTH(S)</u>		
<u>Marcellus</u>	<u>6675'</u>	<u>TVD</u>	<u>7677'</u> <u>MD</u>
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____

Please insert additional pages as applicable.

GAS TEST  Build up  Drawdown  Open Flow OIL TEST  Flow  Pump

SHUT-IN PRESSURE Surface \_\_\_\_\_ psi Bottom Hole \_\_\_\_\_ psi DURATION OF TEST \_\_\_\_\_ hrs

OPEN FLOW Gas \_\_\_\_\_ mcfpd Oil \_\_\_\_\_ bpd NGL \_\_\_\_\_ bpd Water \_\_\_\_\_ 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 <sub>2</sub> S, ETC)
	0		0		

Please insert additional pages as applicable.

Drilling Contractor Alpha Hunter 4  
Address 28407 State Route 7 City Marietta State OH Zip 45750

Logging Company Hoss Co. Services LLC  
Address 614 Trotters Lane City Charleston State WV Zip 25312

Cementing Company Nabors  
Address 380 Southpointe Boulevard Suite 210 City Canonsburg State PA Zip 15317

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

Please insert additional pages as applicable.

Completed by Jim Helmick Telephone 412-395-5518  
Signature [Signature] Title VP Completions Date 5/20/2015

**Received**  
**Office of Oil & Gas**

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

API 47- 017 - 06381

Drilling Contractor: Savanna Drilling

Address: 2204 Timberloch Place Suite 230

City: Woodlands

State: TX

Zip: 77380

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API 47- 017 - 06381

Formation Name	Final Top MD (ftGL) (ft)	Final Top TVD (ft)	Final Btm MD (ftGL) (ft)	Final Btm TVD (ft)
FESH WATER ZONE	0	0	334	334
SAND / SHALE	0	0	101	101
WASHINGTON COAL	101	101	104	104
SAND / SHALE	104	104	170	170
WAYNESBURG A COAL	170	170	172	172
SAND / SHALE	172	172	294	294
COAL	294	294	298	298
SAND / SHALE	298	298	314	314
UNIONTOWN COAL	314	314	317	317
SAND / SHALE	317	317	486	486
REDSTONE COAL	486	486	487	487
SAND / SHALE	487	487	555	555
PITTSBURGH COAL	555	555	558	558
SAND / SHALE	558	558	1,478	1,478
MAXTON	1,478	1,478	1,874	1,874
BIG LIME	1,874	1,874	1,943	1,943
KEENER	1,943	1,943	2,173	2,173
WEIR	2,173	2,173	2,369	2,369
BEREA	2,369	2,369	2,375	2,375
GANTZ	2,375	2,375	2,489	2,489
50F	2,489	2,489	2,579	2,579
30F	2,579	2,579	2,723	2,723
4TH	2,723	2,723	2,916	2,916
BAYARD	2,916	2,916	3,233	3,233
WARREN	3,233	3,233	3,294	3,294
SPEECHLEY	3,294	3,294	3,965	3,965
BALLTOWN A	3,965	3,965	4,241	4,241
BRADFORD	4,241	4,241	4,447	4,447
RILEY	4,447	4,447	4,884	4,884
BENSON	4,884	4,884	5,131	5,130
ALEXANDER	5,131	5,130	6,750	6,314
SONYEA	6,750	6,314	7,087	6,456
MIDDLESEX	7,087	6,456	7,207	6,508
GENESEE	7,207	6,508	7,405	6,594
GENESEO	7,405	6,594	7,488	6,624
TULLY	7,488	6,624	7,583	6,650
HAMILTON	7,583	6,650	7,677	6,675
MARCELLUS	7,677	6,675	17,682	6,753

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**514661 - 47-017-06381-0000 - Perforations**

<i>Stage Number</i>	<i>Perforation Date</i>	<i>Top Perf Depth (ftKB)</i>	<i>Bottom Perf Depth (ftKB)</i>	<i>Number of Shots</i>	<i>Formation</i>
<b>Initiation Sleeve</b>	1/29/2015	17,656.00	17,659.00	10	MARCELLUS
<b>1</b>	2/10/2015	17,535.00	17,656.00	32	MARCELLUS
<b>2</b>	2/10/2015	17,355.00	17,477.00	40	MARCELLUS
<b>3</b>	2/11/2015	17,175.00	17,297.00	40	MARCELLUS
<b>4</b>	2/11/2015	16,995.00	17,117.00	40	MARCELLUS
<b>5</b>	2/11/2015	16,815.00	16,938.00	40	MARCELLUS
<b>6</b>	2/11/2015	16,635.00	16,754.00	40	MARCELLUS
<b>7</b>	2/12/2015	16,457.00	16,577.00	40	MARCELLUS
<b>8</b>	2/12/2015	16,275.00	16,397.00	40	MARCELLUS
<b>9</b>	2/12/2015	16,095.00	16,217.00	40	MARCELLUS
<b>10</b>	2/13/2015	15,915.00	16,035.00	40	MARCELLUS
<b>11</b>	2/13/2015	15,735.00	15,857.00	40	MARCELLUS
<b>12</b>	2/13/2015	15,555.00	15,677.00	40	MARCELLUS
<b>13</b>	2/14/2015	15,375.00	15,492.00	40	MARCELLUS
<b>14</b>	2/14/2015	15,195.00	15,317.00	40	MARCELLUS
<b>15</b>	2/15/2015	15,017.00	15,137.00	40	MARCELLUS
<b>16</b>	2/16/2015	14,834.00	14,957.00	40	MARCELLUS
<b>17</b>	2/16/2015	14,655.00	14,777.00	40	MARCELLUS
<b>18</b>	2/16/2015	14,475.00	14,597.00	40	MARCELLUS
<b>19</b>	2/17/2015	14,295.00	14,417.00	40	MARCELLUS
<b>20</b>	2/17/2015	14,115.00	14,237.00	40	MARCELLUS
<b>21</b>	2/18/2015	13,935.00	14,059.00	40	MARCELLUS
<b>22</b>	2/18/2015	13,760.00	13,877.00	40	MARCELLUS
<b>23</b>	2/18/2015	13,575.00	13,697.00	40	MARCELLUS
<b>24</b>	2/19/2015	13,395.00	13,517.00	40	MARCELLUS
<b>25</b>	2/19/2015	13,215.00	13,337.00	40	MARCELLUS
<b>26</b>	2/19/2015	13,035.00	13,157.00	40	MARCELLUS
<b>27</b>	2/19/2015	12,855.00	12,977.00	40	MARCELLUS
<b>28</b>	2/20/2015	12,672.00	12,797.00	40	MARCELLUS
<b>29</b>	2/20/2015	12,485.00	12,598.00	40	MARCELLUS
<b>30</b>	2/21/2015	12,315.00	12,437.00	40	MARCELLUS
<b>31</b>	2/21/2015	12,135.00	12,257.00	40	MARCELLUS
<b>32</b>	2/21/2015	11,955.00	12,078.00	40	MARCELLUS
<b>33</b>	2/22/2015	11,772.00	11,897.00	40	MARCELLUS
<b>34</b>	2/22/2015	11,595.00	11,717.00	40	MARCELLUS
<b>35</b>	2/23/2015	11,405.00	11,535.00	40	MARCELLUS
<b>36</b>	2/23/2015	11,235.00	11,357.00	40	MARCELLUS
<b>37</b>	2/23/2015	11,055.00	11,177.00	40	MARCELLUS
<b>38</b>	2/23/2015	10,875.00	11,000.00	40	MARCELLUS
<b>39</b>	2/24/2015	10,696.00	10,817.00	40	MARCELLUS
<b>40</b>	2/24/2015	10,519.00	10,637.00	40	MARCELLUS
<b>41</b>	2/25/2015	10,335.00	10,457.00	40	MARCELLUS
<b>42</b>	2/25/2015	10,155.00	10,277.00	40	MARCELLUS
<b>43</b>	2/25/2015	9,975.00	10,097.00	40	MARCELLUS
<b>44</b>	2/27/2015	9,795.00	9,917.00	40	MARCELLUS
<b>45</b>	2/27/2015	9,615.00	9,737.00	40	MARCELLUS
<b>46</b>	2/27/2015	9,435.00	9,557.00	40	MARCELLUS
<b>47</b>	2/27/2015	9,259.00	9,377.00	40	MARCELLUS
<b>48</b>	2/28/2015	9,075.00	9,197.00	40	MARCELLUS
<b>49</b>	2/28/2015	8,895.00	9,017.00	40	MARCELLUS
<b>50</b>	2/28/2015	8,715.00	8,837.00	40	MARCELLUS
<b>51</b>	2/28/2015	8,535.00	8,657.00	40	MARCELLUS
<b>52</b>	3/1/2015	8,355.00	8,477.00	40	MARCELLUS
<b>53</b>	3/1/2015	8,174.00	8,298.00	40	MARCELLUS
<b>54</b>	3/1/2015	7,995.00	8,117.00	40	MARCELLUS
<b>55</b>	3/1/2015	7,815.00	7,937.00	40	MARCELLUS

06/05/2015

**514661 - 47-017-06381-0000 - Stimulated Stages**

<b>Stage Number</b>	<b>Stimulation Date</b>	<b>Ave Pump Rate (BPM)</b>	<b>Ave Treatment Pressure (PSI)</b>	<b>Max Breakdown Pressure (PSI)</b>	<b>ISIP (PSI)</b>	<b>Amount of Proppant (lbs)</b>	<b>Amount of Water (bbls)</b>	<b>Amount of Nitrogen/other (units)</b>
Initiation Sleeve	1/29/2015	11.7	6,200	8,012	5,297	0	686	0
1	2/10/2015	79.0	9,083	9,083	4,899	221,087	9,361	0
2	2/10/2015	86.8	8,518	8,766	5,831	298,733	8,303	0
3	2/11/2015	86.8	8,655	9,271	5,535	299,444	9,762	0
4	2/11/2015	87.2	8,221	8,587	4,998	299,714	8,912	0
5	2/11/2015	95.6	8,737	8,911	5,249	297,868	8,272	0
6	2/12/2015	89.2	8,856	9,080	5,084	298,435	8,244	0
7	2/12/2015	85.5	8,194	8,992	5,232	299,159	10,225	0
8	2/12/2015	88.4	8,509	9,123	5,478	300,125	9,741	0
9	2/13/2015	89.2	8,450	9,027	5,491	301,027	9,973	0
10	2/13/2015	86.8	8,417	9,012	5,268	301,333	9,001	0
11	2/13/2015	90.0	8,561	8,857	5,163	299,680	8,482	0
12	2/14/2015	89.7	8,615	8,979	5,263	298,368	8,133	0
13	2/14/2015	85.1	8,523	9,010	5,307	302,244	8,608	0
14	2/15/2015	85.5	8,603	9,090	5,796	298,351	8,229	0
15	2/15/2015	85.9	8,626	8,877	5,463	300,229	8,712	0
16	2/16/2015	83.6	8,521	8,966	4,820	298,234	7,797	0
17	2/16/2015	87.8	8,550	8,998	4,785	300,937	7,929	0
18	2/17/2015	87.3	8,517	8,939	4,899	298,936	7,855	0
19	2/17/2015	89.6	8,565	8,923	5,149	300,009	7,834	0
20	2/18/2015	87.9	8,636	8,887	4,738	298,965	7,779	0
21	2/18/2015	96.2	8,240	8,683	5,212	297,508	7,597	0
22	2/18/2015	97.1	8,363	8,685	5,022	298,473	7,842	0
23	2/18/2015	100.7	8,225	8,519	5,249	296,975	7,599	0
24	2/19/2015	96.5	8,249	8,606	5,184	301,311	7,423	0
25	2/19/2015	97.7	8,200	8,612	5,133	299,293	7,051	0
26	2/19/2015	93.8	8,573	8,901	5,212	297,155	6,856	0
27	2/20/2015	95.9	8,461	9,119	4,315	295,123	8,979	0
28	2/20/2015	87.7	8,634	9,148	5,225	298,075	6,669	0
29	2/21/2015	98.2	8,097	8,370	5,145	294,999	7,228	0
30	2/21/2015	92.3	8,592	9,077	5,348	302,201	7,966	0
31	2/21/2015	84.3	8,519	9,072	5,146	300,333	7,470	0
32	2/22/2015	96.3	8,400	9,063	5,197	300,396	6,921	0
33	2/22/2015	95.5	8,494	8,824	5,094	297,289	7,209	0
34	2/22/2015	99.1	8,499	8,966	5,106	296,995	7,288	0
35	2/23/2015	96.3	8,530	8,767	5,167	296,815	6,909	0
36	2/23/2015	99.7	8,567	8,846	5,023	298,725	6,463	0
37	2/23/2015	99.5	8,750	9,139	5,311	299,041	6,823	0
38	2/24/2015	98.2	8,673	8,913	5,207	299,408	6,602	0
39	2/24/2015	95.2	8,631	9,143	5,364	298,999	7,205	0
40	2/24/2015	99.1	8,495	8,882	5,312	298,999	7,032	0
41	2/25/2015	100.0	8,372	8,768	5,342	298,609	7,148	0
42	2/25/2015	100.0	8,557	8,802	4,986	296,535	6,538	0
43	2/26/2015	99.5	8,348	8,622	4,193	298,676	7,449	0
44	2/27/2015	99.5	7,961	8,220	5,319	298,827	7,193	0
45	2/27/2015	99.6	8,110	8,575	5,009	299,366	6,513	0
46	2/27/2015	99.9	8,163	8,833	5,054	298,654	6,826	0
47	2/27/2015	98.9	8,421	8,585	4,966	299,055	7,236	0
48	2/28/2015	98.5	8,451	8,667	4,981	301,531	7,282	0
49	2/28/2015	99.6	8,056	8,690	5,262	300,336	7,857	0
50	2/28/2015	95.1	8,540	8,616	4,985	298,526	6,690	0
51	2/28/2015	100.2	8,358	8,648	4,880	300,733	7,270	0
52	3/1/2015	100.0	8,338	8,681	5,019	300,575	6,938	0
53	3/1/2015	100.0	8,018	8,640	5,276	299,429	6,307	0
54	3/1/2015	100.1	8,206	8,424	5,078	298,425	6,230	0
55	3/1/2015	100.2	8,421	8,699	5,298	297,490	6,123	0



# Hydraulic Fracturing Fluid Product Component Information Disclosure

Job Start Date:	2/9/2015
Job End Date:	3/1/2015
State:	West Virginia
County:	Doddridge
API Number:	47-017-06381-00-00
Operator Name:	EQT Production
Well Name and Number:	514661
Longitude:	-80.76327500
Latitude:	39.25559200
Datum:	NAD83
Federal/Tribal Well:	NO
True Vertical Depth:	6,753
Total Base Water Volume (gal):	17,747,940
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	89.71431	None
Sand (Proppant)	FTS International	Proppant	Crystalline Silica	14808-60-7	100.00000	9.91463	None
MC MX 437-5	Multi-Chem	Calcium nitrate solution	Calcium nitrate	10124-37-5	60.00000	0.05404	None
FRW-600	FTS International	Friction reducer	Hydrotreated light distillate	84742-47-8	30.00000	0.02266	None
Hydrochloric Acid (15%)	FTS International	Acidizing	Ammonium acetate	631-61-8	6.00000	0.00453	None
CI-150	FTS International	Acid Corrosion Inhibitor	Hydrochloric Acid	7647-01-0	15.00000	0.02434	None
			Isopropanol	67-63-0	30.00000	0.00736	None
			Dimethylformamide	68-12-2	10.00000	0.00248	None
			Ethylene glycol	107-21-1	30.00000	0.00009	None
			Organic amine resin salt	Proprietary	30.00000	0.00009	None
			Quaternary ammonium compound	Proprietary	10.00000	0.00003	None



B-10	FTS International	High pH buffer	Aromatic aldehyde	Proprietary	10.00000	0.00003	None
			Potassium carbonate	584-08-7	48.00000	0.00649	None
			Potassium hydroxide	1310-58-3	20.00000	0.00270	None
HV-G-1	FTS International	Gelling agent	Petroleum distillate	84742-47-8	55.00000	0.00245	None
			Guar gum	9000-30-0	50.00000	0.00223	None
			Surfactant	68439-51-0	2.00000	0.00009	None
			Clay	14808-60-7	2.00000	0.00009	None
CS-500-SI	FTS International	Scale inhibitor	Ethylene glycol	107-21-1	10.00000	0.00245	None
APP-1	FTS International	Breaker	Ammonium persulfate	7727-54-0	95.00000	0.00029	None
FE-100L	FTS International	Iron control	Citric acid	77-92-9	55.00000	0.00017	None
NE-100	FTS International	Non-emulsifier	Dodecylbenzenesulfonic acid	27176-87-0	5.00000	0.00001	None
			2-Butoxyethanol	111-76-2	10.00000	0.00001	None
			2-Propanol	67-63-0	10.00000	0.00001	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)

**EQT PRODUCTION COMPANY  
LEEMAN MAXWELL LEASE  
1000 ACRES±  
WELL NO. WV 514661**

(S.P.C. NORTH ZONE) (UTM(M) ZONE 17 NORTH)

NAD'27 S.P.C.(FT)	N. 277,717.0	E. 1,642,280.2
NAD'27 GEO.	LAT-(N) 39.255592	LONG-(W) 80.763275
NAD'83 UTM (M)	N. 4,345,176.6	E. 520,439.4

**LANDING POINT**

NAD'27 S.P.C.(FT)	N. 276,990.7	E. 1,641,066.4
NAD'27 GEO.	LAT-(N) 39.253551	LONG-(W) 80.767525
NAD'83 UTM (M)	N. 4,344,949.2	E. 520,073.3

**BOTTOM HOLE**

NAD'27 S.P.C.(FT)	N. 268,371.7	E. 1,645,085.4
NAD'27 GEO.	LAT-(N) 39.230044	LONG-(W) 80.752910
NAD'83 UTM (M)	N. 4,342,343.9	E. 521,341.5



**LEGEND**

AS DRILLED ——

PROPOSED - - - -

**AS DRILLED INFORMATION**

<b>WELL NO. WV 514661</b>	<b>BOTTOM HOLE</b>
<b>STATE PLANE COORDINATES</b>	<b>STATE PLANE COORDINATES</b>
(NORTH ZONE) NAD'27	(NORTH ZONE) NAD'27
N. 277,717.0	N. 268,372.0
E. 1,642,280.2	E. 1,645,087.3
LAT=(N) 39.255592	LAT=(N) 39.230044
LONG=(W) 80.763275	LONG=(W) 80.752903
UTM (NAD83)(METERS)	UTM (NAD83)(METERS)
N. 4,345,176.6	N. 4,342,343.9
E. 520,439.4	E. 521,342.1

**NOTES ON SURVEY**

- NO WATER WELLS WERE FOUND WITHIN 250' OF PROPOSED GAS WELL. NO AGRICULTURAL BUILDINGS ≥ 2500 SQ. FT. OR DWELLINGS WERE FOUND WITHIN 625' OF THE CENTER OF PROPOSED WELL PAD.
- AS DRILLED INFORMATION PROVIDED BY EQT.

**Professional Energy Consultants**  
A DIVISION OF SMITH LAND SURVEYING, P.C.

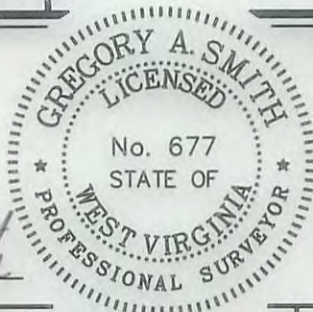
**SLS**

SURVEYORS  
ENGINEERS  
ENVIRONMENTAL  
PROJECT MGMT.

(304) 462-6034 WWW.SLSURVEYS.COM

I THE UNDERSIGNED, HEREBY CERTIFY THAT THIS PLAN 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 DIVISION OF ENVIRONMENTAL PROTECTION.

P.S. 677 *Gregory A. Smith*



(+) DENOTES LOCATION OF WELL ON UNITED STATES TOPOGRAPHIC MAPS.

DATE OCTOBER 1, 20 13

REVISED 03/05/14 & 11/13/14

OPERATORS WELL NO. WV 514661

API WELL NO. 47

STATE        COUNTY        PERMIT       

MINIMUM DEGREE OF ACCURACY 1/200 FILE NO. 8051ASDRILLED514661

HORIZONTAL & VERTICAL CONTROL DETERMINED BY DGPS (SURVEY GRADE TIE TO CORS NETWORK) SCALE 1" = 2,000'

**STATE OF WEST VIRGINIA**  
DIVISION OF ENVIRONMENTAL PROTECTION  
OFFICE OF OIL AND GAS

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

LOCATION: ELEVATION 1,224'(GROUND) 1,208'(PROPOSED) WATERSHED BLUESTONE CREEK

DISTRICT WEST UNION COUNTY DODDRIDGE QUADRANGLE WEST UNION 7.5'

SURFACE OWNER JANE HARDIN (TRUSTEE) OF MARY HOLLAND TRUST ACREAGE 1207.637±

ROYALTY OWNER LEEMAN MAXWELL HEIRS (1000 AC.±) (2164 AC.±)

PROPOSED WORK: DRILL  CONVERT  DRILL DEEPER  REDRILL  FRACTURE OR STIMULATE  PLUG OFF OLD

FORMATION        PERFORATE NEW FORMATION  PLUG AND ABANDON  CLEAN OUT AND REPLUG  OTHER

PHYSICAL CHANGE IN WELL (SPECIFY)        TARGET FORMATION MARCELLUS ESTIMATED DEPTH 6661'

WELL OPERATOR EQT PRODUCTION COMPANY DESIGNATED AGENT REX C. RAY

ADDRESS 115 PROFESSIONAL PLACE P.O. BOX 280 BRIDGEPORT, WV 26330 ADDRESS 115 PROFESSIONAL PLACE P.O. BOX 280 BRIDGEPORT, WV 26330

06/05/2015