

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

API 47-017-06714 County DODDRIDGE District SOUTHWEST  
Quad OXFORD 7.5' Pad Name OXF153 Field/Pool Name \_\_\_\_\_  
Farm name I.L. MORRIS Well Number 515969  
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 4,337,884.3 Easting 515,755.8  
Landing Point of Curve Northing 4,338,304.3 Easting 515,664.9  
Bottom Hole Northing 4,339,140.0 4,337,137.9 Easting 514,329.6 514,327.9

Elevation (ft) 1141 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)

Water base 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, ferrocchrome lignosulfonate, calcium carbonate, fibrous cellulose

Date permit issued 04/24/2015 Date drilling commenced 05/05/2015 Date drilling ceased 10/26/2015  
Date completion activities began 11/17/2015 Date completion activities ceased 11/24/2015  
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 49,442 Open mine(s) (Y/N) depths \_\_\_\_\_  
Salt water depth(s) ft 1365,1407,1457 Void(s) encountered (Y/N) depths \_\_\_\_\_  
Coal depth(s) ft 68 Cavern(s) encountered (Y/N) depths \_\_\_\_\_  
Is coal being mined in area (Y/N) N

**APPROVED**

NAME: Jaquelin Tharnta  
DATE: 6/1/2016

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API 47-017 - 06714

Farm name I.L. MORRIS

Well number 515969

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"	40'	NEW	A-500 94LB/FT	NONE	Y
Surface	17.5"	13.375"	603'	NEW	J-55 54.5LB/FT	302'	Y
Coal							
Intermediate 1	12.375"	9.625"	2988'	NEW	A-500 40LB/FT	N/A	Y
Intermediate 2							
Intermediate 3							
Production	8.5"	5.5"	12455'	NEW	P-110 20LB/FT	N?A	N
Tubing							
Packer type and depth set							

Comment Details N/A

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	38	15.6	1.18	44.84	0	8
Surface	CLASS A	545	15.6	1.20	654	0	8
Coal							
Intermediate 1	CLASS A	1123	15.6	1.18	1325.14	0	8
Intermediate 2							
Intermediate 3							
Production	Class H / Class H	580 / 765	15.2 / 15.6	1.07 / 1.84	2028.2	3763	24
Tubing							

Drillers TD (ft) 12,458' MD

Loggers TD (ft) N/A

Deepest formation penetrated Marcellus

Plug back to (ft) N/A

Plug back procedure N/A

Kick off depth (ft) 5,053' MD

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- NONE

SURFACE- JOINTS: 1, 8

INTERMEDIATE- 7 CENTRALIZERS RAN AT LEAST EVERY 500' FEET

PRODUCTION- Composite body spiral centralizers run every joint from bottom to 3,500'

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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Farm name I.L. MORRIS

Well number 515969

**PERFORATION RECORD**

Stage No.	Perforation date	Perforated from MD ft.	Perforated to MD ft.	Number of Perforations	Formation(s)
					Please See Attached

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)
						Please	See	Attached

Please insert additional pages as applicable.

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<u>PRODUCING FORMATION(S)</u>	<u>DEPTHS</u>		
<u>MARCELLUS</u>	<u>6,548.00</u>	<u>TVD</u>	<u>7,057.00</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 1,277 psi Bottom Hole N/A psi DURATION OF TEST 56.50 hrs

OPEN FLOW Gas 11,117 mcfpd Oil N/A bpd NGL 73 bpd Water 601 bpd GAS MEASURED BY  Estimated  Orifice  Pilot

LITHOLOGY/ FORMATION	TOP	BOTTOM	TOP	BOTTOM	DESCRIBE ROCK TYPE AND RECORD QUANTITY AND TYPE OF FLUID (FRESHWATER, BRINE, OIL, GAS, H <sub>2</sub> S, ETC)
	DEPTH IN FT NAME TVD	DEPTH IN FT TVD	DEPTH IN FT MD	DEPTH IN FT MD	
	0		0		

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 Phoenix Technology Services  
Address 1805 Brittmoores Road City Houston State TX Zip 77043

Cementing Company BAKER HUGHES OILFIELD OPERATIONS, INC.  
Address 837 Philippi Pike City CLARKSBURG State WV Zip 26301

Stimulating Company FTS International  
Address 301 E. 18th Street City Cisco State TX Zip 76744

Please insert additional pages as applicable.

Completed by Jim Helmick Telephone 412-395-5518  
Signature [Signature] Title VP Completions Date 3/31/2016

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

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API 47- 017 - 06714 Farm name I.L. MORRIS Well number 515969

Drilling Contractor Savanna Drilling (Rig 655)  
Address 125 Industry Road City Waynesburg State PA Zip 15370

Logging Company GYRODATA  
Address 601 MAYER ST City BRIDGEVILLE State PA Zip 15017

Logging Company \_\_\_\_\_  
Address \_\_\_\_\_ City \_\_\_\_\_ State \_\_\_\_\_ Zip \_\_\_\_\_

Cementing Company C&J Energy Services (Nabors)  
Address 2504 Smith Creek Road City Waynesburg State PA Zip 15370

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**515969 Final Formations API #47-17006714**

<b>Formation Name</b>	<b>Final Top MD (ftGL) (ft)</b>	<b>Final Top TVD (ft)</b>	<b>Final Btm MD (ftGL) (ft)</b>	<b>Final Btm TVD (ft)</b>
FRESH WATER ZONE	1		445	
SAND/SHALE	1		71	
WASHINGTON COAL	71		72	
SAND/SHALE	72		1,689.00	
MAXTON	1,689.00		1,868.00	
BIG LIME	1,868.00		1,929.00	
KEENER	1,929.00		2,098.00	
WEIR	2,098.00		2,343.00	
GANTZ	2,343.00		2,439.00	
50F	2,439.00		2,627.00	
GORDON	2,627.00		2,864.00	
5TH	2,864.00		2,906.00	
BAYARD	2,906.00		3,219.00	
WARREN	3,219.00		3,294.00	
SPEECHLEY	3,294.00		3,827.00	
BALLTOWN A	3,827.00		3,969.00	
BALLTOWN B	3,969.00		4,164.00	
BRADFORD	4,164.00		4,746.00	
RILEY	4,746.00		4,829.00	
BENSON	4,829.00		5,071.00	5,063.60
ALEXANDER	5,071.00	5,063.60	5,776.00	5,684.70
RHINESTREET	5,776.00	5,684.70	6,447.00	6,222.30
SONYEA	6,447.00	6,222.30	6,627.00	6,350.90
MIDDLESEX	6,627.00	6,350.90	6,707.00	6,400.50
GENESEE	6,707.00	6,400.50	6,902.00	6,498.20
GENESEO	6,902.00	6,498.20	6,960.00	6,519.90
TULLY	6,960.00	6,519.90	7,027.00	6,540.60
HAMILTON	7,027.00	6,540.60	7,057.00	6,548.00
MARCELLUS	7,057.00	6,548.00		

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# Hydraulic Fracturing Fluid Product Component Information Disclosure

Job Start Date:	11/17/2015
Job End Date:	11/24/2015
State:	West Virginia
County:	Doddridge
API Number:	47-017-06714-00-00
Operator Name:	EQT Production
Well Name and Number:	515969
Longitude:	-80.81772900
Latitude:	39.18997800
Datum:	NAD83
Federal/Tribal Well:	NO
True Vertical Depth:	6,548
Total Base Water Volume (gal):	9,670,752
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	89.59519	None
Sand (Proppant)	FTS International	Proppant	Silica Substrate	14808-60-7	100.00000	10.01163	None
MC MX 437-5	Multi-Chem Group LLC	Calcium nitrate solution	Calcium nitrate	10124-37-5	60.00000	0.05742	None
Hydrochloric Acid (15%)	FTS International	Acidizing	Hydrochloric Acid	7647-01-0	15.00000	0.03271	None
FRW-900	FTS International	Friction reducer	Hydrotreated light distillate	64742-47-8	30.00000	0.01575	None
			Alkyl alcohol	Proprietary	10.00000	0.00525	None
			Oxyalkylated alcohol A	Proprietary	5.00000	0.00262	None
CS-500-SI	FTS International	Scale inhibitor	Ethylene glycol	107-21-1	10.00000	0.00248	None
FE-100L	FTS International	Iron control	Citric acid	77-92-9	55.00000	0.00073	None
CI-150	FTS International	Acid corrosion inhibitor	Organic amine resin salt	Proprietary	30.00000	0.00012	None

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			Ethylene glycol	107-21-1	30.00000	0.00012	None
			Isopropanol	67-63-0	30.00000	0.00012	None
			Aromatic aldehyde	Proprietary	10.00000	0.00004	None
			Dimethylformamide	68-12-2	10.00000	0.00004	None
			Quaternary ammonium compound	Proprietary	10.00000	0.00004	None
NE-100	FTS International	Non-emulsifier					
			Methanol	67-56-1	15.00000	0.00005	None
			2-Butoxyethanol	111-76-2	10.00000	0.00004	None
			2-Propanol	67-63-0	10.00000	0.00004	None
			Dodecylbenzenesulfonic acid	27176-87-0	5.00000	0.00002	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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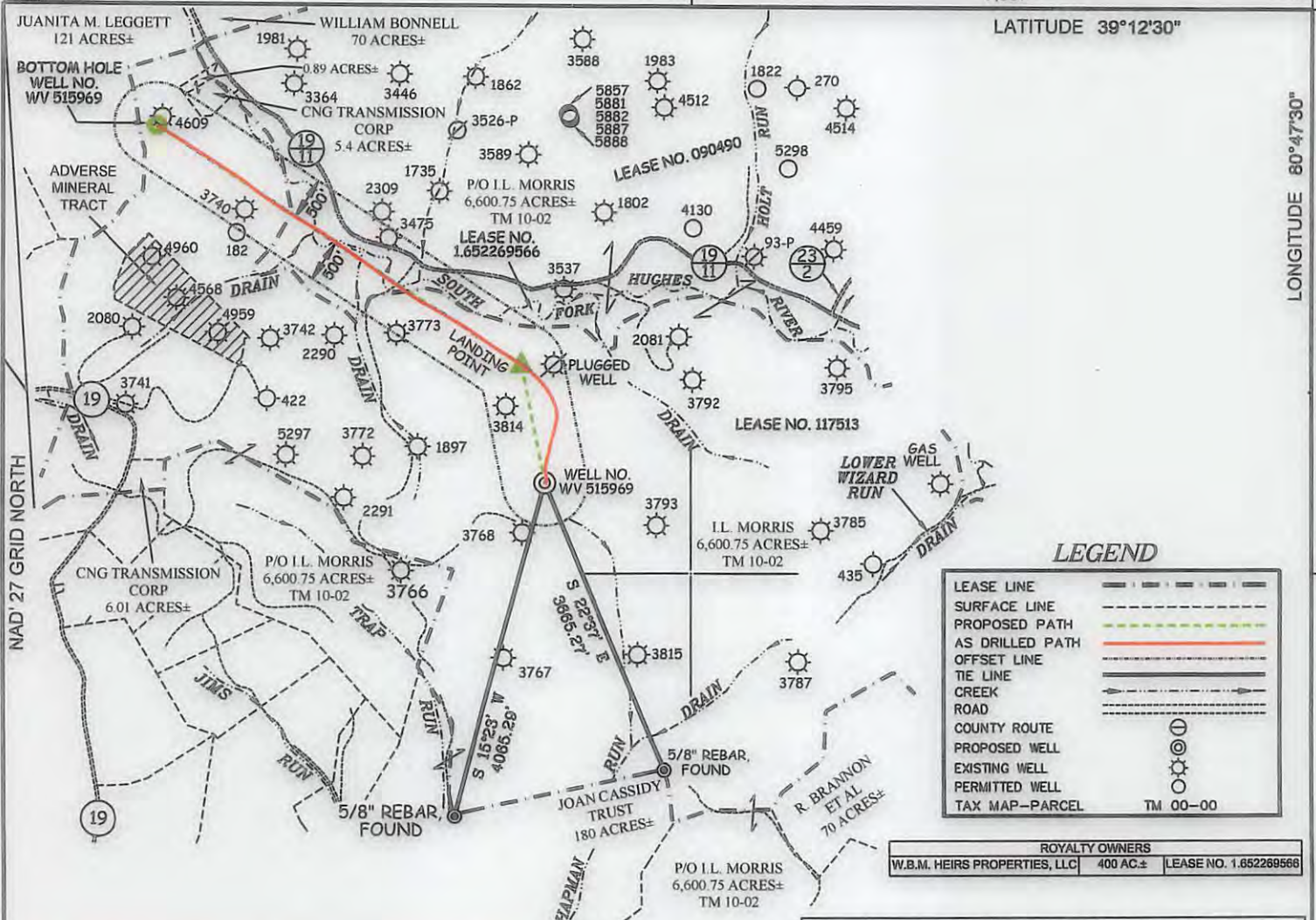
**515969- 47-017-06714-0000 - Stimulated Stages**

<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 (bbbls)</b>	<b>Amount of Nitrogen/other (units)</b>
<b>Initiation Sleeve</b>	11/17/2015	14.2	5,669	9,244	3,705	0	1,000	0
<b>1</b>	11/17/2015	99.3	8,138	8,467	2,548	250,215.00	7,160	0
<b>2</b>	11/18/2015	99.2	8,440	8,990	2,547	250,663.00	7,070	0
<b>3</b>	11/18/2015	100.4	8,042	8,505	2,783	250,417.00	6,885	0
<b>4</b>	11/18/2015	99.3	8,135	8,747	2,773	250,714.00	6,995	0
<b>5</b>	11/18/2015	98.7	8,451	9,046	2,864	250,073.00	6,508	0
<b>6</b>	11/18/2015	99.7	8,251	8,611	3,120	251,135.00	6,248	0
<b>7</b>	11/19/2015	98.8	8,417	8,711	3,052	250,752.00	6,107	0
<b>8</b>	11/19/2015	99.2	8,379	8,708	3,125	250,700.00	5,960	0
<b>9</b>	11/19/2015	96.7	8,453	8,760	2,952	250,230.00	6,695	0
<b>10</b>	11/19/2015	100.5	8,433	8,739	2,936	250,345.00	6,618	0
<b>11</b>	11/19/2015	100.1	8,066	8,822	3,261	250,309.00	5,999	0
<b>12</b>	11/20/2015	100.3	7,860	8,252	3,115	251,095.00	5,948	0
<b>13</b>	11/20/2015	99.9	7,745	8,394	3,091	250,736.00	6,308	0
<b>14</b>	11/20/2015	100.6	7,893	8,581	3,146	250,045.00	6,569	0
<b>15</b>	11/20/2015	100.5	8,097	8,612	3,077	249,632.00	6,525	0
<b>16</b>	11/20/2015	99.9	7,882	8,560	3,323	250,691.00	5,966	0
<b>17</b>	11/20/2015	100.1	8,111	8,688	3,352	250,270.00	5,969	0
<b>18</b>	11/21/2015	100.6	7,907	8,650	3,228	250,574.00	5,945	0
<b>19</b>	11/21/2015	100.1	7,468	8,121	3,170	250,375.00	6,649	0
<b>20</b>	11/21/2015	100.5	7,389	7,908	3,260	250,112.00	6,519	0
<b>21</b>	11/21/2015	100.5	7,821	8,746	3,213	250,134.00	6,443	0
<b>22</b>	11/21/2015	100	7,800	9,141	2,375	250,679.00	5,814	0
<b>23</b>	11/21/2015	100.9	7,671	8,539	3,871	250,217.00	5,860	0
<b>24</b>	11/22/2015	99.3	8,497	9,098	4,901	250,953.00	5,836	0
<b>25</b>	11/22/2015	100.6	7,694	8,762	3,783	251,036.00	5,859	0
<b>26</b>	11/22/2015	100.7	7,522	8,208	3,640	251,341.00	6,344	0
<b>27</b>	11/22/2015	100.3	7,710	8,958	3,519	251,756.00	6,407	0
<b>28</b>	11/22/2015	98.5	7,782	9,150	3,776	250,626.00	6,494	0
<b>29</b>	11/22/2015	99.6	8,023	9,845	4,271	250,386.00	5,606	0
<b>29.01</b>	11/22/2015	13.3	5,956	6,488	5,373	0.00	1,892	0
<b>30</b>	11/23/2015	100.4	7,855	8,369	5,673	251,163.00	6,500	0
<b>31</b>	11/23/2015	97	8,389	9,159	5,938	250,927.00	6,544	0
<b>32</b>	11/23/2015	86.1	8,252	9,336	4,310	249,891.00	7,552	0
<b>33</b>	11/23/2015	98.1	7,441	8,212	4,170	250,358.00	5,876	0
<b>34</b>	11/23/2015	99.6	7,473	8,326	3,826	249,791.00	5,975	0
<b>35</b>	11/24/2015	99.9	7,411	8,957	2,992	250,199.00	5,863	0
<b>36</b>	11/24/2015	99.5	7,068	8,658	3,225	249,390.00	5,748	0

**515969- 47-017-06714-0000-0000 - Perforations**

<b>Stage Number</b>	<b>Perforation Date</b>	<b>Top Perf Depth (ftKB)</b>	<b>Bottom Perf Depth (ftKB)</b>	<b>Number of Shots</b>	<b>Formation</b>
<b>Initiation Sleeve</b>	10/27/2015	12,454	12,455	10	MARCELLUS
<b>1</b>	11/17/2015	12,309	12,399	32	MARCELLUS
<b>2</b>	11/18/2015	12,159	12,281	40	MARCELLUS
<b>3</b>	11/18/2015	12,009	12,129	40	MARCELLUS
<b>4</b>	11/18/2015	11,859	11,979	40	MARCELLUS
<b>5</b>	11/18/2015	11,709	11,829	40	MARCELLUS
<b>6</b>	11/18/2015	11,559	11,679	40	MARCELLUS
<b>7</b>	11/18/2015	11,409	11,529	40	MARCELLUS
<b>8</b>	11/19/2015	11,259	11,379	40	MARCELLUS
<b>9</b>	11/19/2015	11,108	11,229	40	MARCELLUS
<b>10</b>	11/19/2015	10,959	11,079	40	MARCELLUS
<b>11</b>	11/19/2015	10,809	10,929	40	MARCELLUS
<b>12</b>	11/20/2015	10,659	10,779	40	MARCELLUS
<b>13</b>	11/20/2015	10,509	10,627	40	MARCELLUS
<b>14</b>	11/20/2015	10,359	10,479	40	MARCELLUS
<b>15</b>	11/20/2015	10,209	10,329	40	MARCELLUS
<b>16</b>	11/20/2015	10,057	10,179	40	MARCELLUS
<b>17</b>	11/20/2015	9,940	10,029	32	MARCELLUS
<b>18</b>	11/21/2015	9,759	9,879	40	MARCELLUS
<b>19</b>	11/21/2015	9,609	9,729	40	MARCELLUS
<b>20</b>	11/21/2015	9,459	9,575	40	MARCELLUS
<b>21</b>	11/21/2015	9,309	9,429	40	MARCELLUS
<b>22</b>	11/21/2015	9,159	9,279	32	MARCELLUS
<b>23</b>	11/21/2015	9,007	9,129	40	MARCELLUS
<b>24</b>	11/22/2015	8,859	8,979	32	MARCELLUS
<b>25</b>	11/22/2015	8,709	8,831	40	MARCELLUS
<b>26</b>	11/22/2015	8,559	8,679	40	MARCELLUS
<b>27</b>	11/22/2015	8,409	8,530	40	MARCELLUS
<b>28</b>	11/22/2015	8,259	8,379	40	MARCELLUS
<b>29</b>	11/22/2015	8,109	8,229	0	MARCELLUS
<b>30</b>	11/23/2015	7,961	8,079	40	MARCELLUS
<b>31</b>	11/23/2015	7,809	7,929	40	MARCELLUS
<b>32</b>	11/23/2015	7,659	7,779	40	MARCELLUS
<b>33</b>	11/23/2015	7,509	7,629	40	MARCELLUS
<b>34</b>	11/23/2015	7,359	7,479	40	MARCELLUS
<b>35</b>	11/24/2015	7,209	7,326	40	MARCELLUS
<b>36</b>	11/24/2015	7,059	7,179	40	MARCELLUS

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**LEGEND**

LEASE LINE	---
SURFACE LINE	----
PROPOSED PATH	---
AS DRILLED PATH	---
OFFSET LINE	---
TIE LINE	---
CREEK	---
ROAD	---
COUNTY ROUTE	---
PROPOSED WELL	⊙
EXISTING WELL	⊙
PERMITTED WELL	⊙
TAX MAP-PARCEL	TM 00-00

ROYALTY OWNERS		
W.B.M. HEIRS PROPERTIES, LLC	400 AC±	LEASE NO. 1.652269566

**AS DRILLED COORDINATES FOR WELL NO. WV 515969**  
 (S.P.C. NORTH ZONE) (UTM(M) ZONE 17 NORTH)

NAD'27 S.P.C.(FT)	N. 254,043.5	E. 1,626,511.2
NAD'27 GEO.	LAT-(N) 39.189979	LONG-(W) 80.817729
NAD'83 UTM (M)	N. 4,337,884.3	E. 515,755.8

**BOTTOM HOLE**

NAD'27 S.P.C.(FT)	N. 258,235.5	E. 1,621,894.2
NAD'27 GEO.	LAT-(N) 39.201300	LONG-(W) 80.834236
NAD'83 UTM (M)	N. 4,339,137.9	E. 514,327.9

**EQT PRODUCTION COMPANY  
 EAE/MAXWELL LEASE  
 1,891 ACRES±  
 WELL NO. WV 515969  
 (OXF153 H6)**

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

NAD'27 S.P.C.(FT)	N. 254,043.5	E. 1,626,511.2
NAD'27 GEO.	LAT-(N) 39.189979	LONG-(W) 80.817729
NAD'83 UTM (M)	N. 4,337,884.3	E. 515,755.8

**LANDING POINT**

NAD'27 S.P.C.(FT)	N. 255,426.8	E. 1,626,235.9
NAD'27 GEO.	LAT-(N) 39.193765	LONG-(W) 80.818772
NAD'83 UTM (M)	N. 4,338,304.3	E. 515,664.9

**BOTTOM HOLE**

NAD'27 S.P.C.(FT)	N. 258,242.6	E. 1,621,900.0
NAD'27 GEO.	LAT-(N) 39.201319	LONG-(W) 80.834216
NAD'83 UTM (M)	N. 4,339,140.0	E. 514,329.6

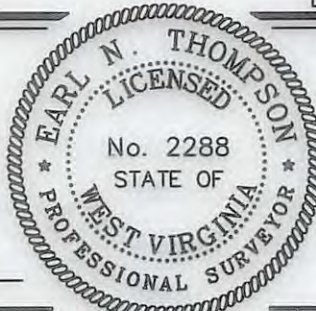
**NOTES ON SURVEY**

- 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 MITHLAND SURVEYING INC.

**SLS**  
 SURVEYORS  
 ENGINEERS  
 ENVIRONMENTAL  
 PROJECT MGMT.

(804) 462-5634 WWW.SLSURVEYS.COM



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 DIVISION OF ENVIRONMENTAL PROTECTION.

P.S. 2288 *Earl N. Thompson*

(+) DENOTES LOCATION OF WELL ON UNITED STATES TOPOGRAPHIC MAPS.  
 DATE DECEMBER 1, 20 14

REVISED 12/29/14 & 11/02/15

OPERATORS WELL NO. WV 515969  
 API WELL NO. 47 - 017 - 06714H  
 STATE COUNTY PERMIT

MINIMUM DEGREE OF ACCURACY 1/200 FILE NO. 7310AD515969  
 HORIZONTAL & VERTICAL CONTROL DETERMINED BY DGPS (SURVEY GRADE TIE TO CORS NETWORK) SCALE 1" = 2000'

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

WELL TYPE:	OIL <input type="checkbox"/>	GAS <input checked="" type="checkbox"/>	LIQUID INJECTION <input type="checkbox"/>	WASTE DISPOSAL <input type="checkbox"/>	IF "GAS" PRODUCTION <input checked="" type="checkbox"/>	STORAGE <input type="checkbox"/>	DEEP <input type="checkbox"/>	SHALLOW <input checked="" type="checkbox"/>	
LOCATION:	ELEVATION <u>1139(GROUND)1141(PROPOSED)</u> WATERSHED <u>CHAPMAN RUN OF SOUTH FORK HUGHES RIVER</u>								
	DISTRICT <u>SOUTHWEST</u> COUNTY <u>DODDRIDGE</u> QUADRANGLE <u>OXFORD 7.5'</u>								
SURFACE OWNER	<u>I.L. MORRIS</u>			ACREAGE	<u>6,600.75±</u>				
ROYALTY OWNER	<u>W.B.M. HEIRS PROPERTIES, LLC</u>			ACREAGE	<u>1,891±</u> <b>07/01/2016</b>				
PROPOSED WORK:	LEASE NO. <u>117513</u>								
DRILL <input checked="" type="checkbox"/>	CONVERT <input type="checkbox"/>	DRILL DEEPER <input type="checkbox"/>	REDRILL <input type="checkbox"/>	FRACTURE OR STIMULATE <input checked="" type="checkbox"/>	PLUG OFF OLD FORMATION <input type="checkbox"/>	PERFORATE NEW FORMATION <input type="checkbox"/>	PLUG AND ABANDON <input type="checkbox"/>	CLEAN OUT AND REPLUG <input type="checkbox"/>	OTHER <input type="checkbox"/>
PHYSICAL CHANGE IN WELL (SPECIFY)				TARGET FORMATION	<u>MARCELLUS</u>				
				ESTIMATED DEPTH	<u>TVD 6,532'</u>				

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

COUNTY NAME PERMIT