

Well Operator's Report of Well Work



Where energy meets innovation.

Well Number: 515877

API: 47 - 017 - 06723

Submission:  Initial  Amended

Notes:

Received  
Office of Oil & Gas  
FEB 25 2016

**APPROVED**

NAME: *Jacqueline Tharnta*  
DATE: *6/1/2016*

*AX  
06/28/16*

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

API 47 - 017 - 06723 County Doddridge District West Union  
Quad West Union 7.5 Pad Name WEU2 Field/Pool Name \_\_\_\_\_  
Farm name Ruth R. Davies Pierce et al C/O Tom Davies Well Number 515877  
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 4,347,029.3 Easting 519,735.6  
Landing Point of Curve  Northing 4,346,702.6 Easting 520.885.4  
Bottom Hole Northing 4,345,724.8 729.9 Easting 521,261.5 365.9

Elevation (ft) 1,156' 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, ferrochrome lignosulfonate, calcium carbonate, fibrous cellulose

Date permit issued 6/30/2015 Date drilling commenced 7/23/2015 Date drilling ceased 11/5/2015  
Date completion activities began 11/22/2015 Date completion activities ceased 11/27/2015  
Verbal plugging (Y/N) N Date permission granted N/A Granted by N/A

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

Freshwater depth(s) ft 164,272,536,833,953 Open mine(s) (Y/N) depths N  
Salt water depth(s) ft 2,053' Void(s) encountered (Y/N) depths N  
Coal depth(s) ft 246,466,548 Cavern(s) encountered (Y/N) depths N  
Is coal being mined in area (Y/N) N

Reviewed by: \_\_\_\_\_

API 47-017 - 06723 Farm name Ruth R. Davies Pierce et al C/O Tom Davies Well number 515877

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	N/A	Y
Surface	17 1/2"	13 3/8"	1,097'	NEW	J-55	509'	Y
Coal							
Intermediate 1	12 3/8"	9 5/8"	3,056'	NEW	A-500	1,199'	Y
Intermediate 2							
Intermediate 3							
Production	8-1/2"	5-1/2"	12,952'	NEW	P-110	N/A	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	38	15.6	1.18	44.8	0	8
Surface	CLASS A	886	15.6	1.20	1,063.2	0	8
Coal							
Intermediate 1	CLASS A	1,173	15.6	1.18	1,384.1	0	8
Intermediate 2							
Intermediate 3							
Production	Class H / Class H	1,068 / 469	15.2 / 15.6	1.25 / 2.06	2,301.14	3,089'	24
Tubing							

Drillers TD (ft) 12,953' Loggers TD (ft) N/A  
 Deepest formation penetrated Marcellus Plug back to (ft) N/A  
 Plug back procedure N/A

Kick off depth (ft) 4,948'

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: 3 CENTRALIZERS SET AT 1,053', 635', & 217'  
 INTERMEDIATE: 8 CENTRALIZERS SET EVERY 500' FT.  
 PRODUCTION: Composite body spiral centralizers run every joint from TD to 4,000'

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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 \_\_\_\_\_





API 47- 017 - 06723 Farm name Ruth R. Davies Pierce et al C/O Tom Davies Well number 515877

Drilling Contractor Savanna Drilling (Rig 803)  
Address 125 Industry Road City Waynesburg State PA Zip 15370

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

Logging Company Phoenix Technology Services  
Address 1805 Brittmoore Road City Houston State TX Zip 77043

Cementing Company Baker Hughes  
Address 837 Phillipi Pike City Clarksburg State WV Zip 26301

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515877 Final Formations (API #47-103-06723)				
Formation Name	Final Top MD (ftGL) (ft)	Final Top TVD (ft)	Final Btm MD (ftGL) (ft)	Final Btm TVD (ft)
FRESH WATER ZONE	1	1	963	963
SAND/SHALE	1	1	256	256
UNIONTOWN COAL	256	256	259	259
SAND/SHALE	259	259	476	476
PITTSBURGH COAL	476	476	479	479
SAND/SHALE	479	479	558	558
COAL	558	558	562	562
SAND/SHALE	562	562	1,512.00	1,511.90
MAXTON	1,512.00	1,511.90	1,566.00	1,565.90
SAND/SHALE	1,566.00	1,565.90	1,908.00	1,907.70
BIG LIME	1,908.00	1,907.70	1,977.00	1,976.60
KEENER	1,977.00	1,976.60	2,053.00	2,052.50
SAND/SHALE	2,053.00	2,052.50	2,207.00	2,206.10
WEIR	2,207.00	2,206.10	2,333.00	2,331.70
SAND/SHALE	2,333.00	2,331.70	2,409.00	2,407.40
GANTZ	2,409.00	2,407.40	2,417.00	2,415.40
SAND/SHALE	2,417.00	2,415.40	2,523.00	2,521.00
50F	2,523.00	2,521.00	2,569.00	2,566.80
SAND/SHALE	2,569.00	2,566.80	2,632.00	2,629.50
30F	2,632.00	2,629.50	2,655.00	2,652.40
GORDON	2,655.00	2,652.40	2,952.00	2,948.20
BAYARD	2,952.00	2,948.20	3,286.00	3,281.10
WARREN	3,286.00	3,281.10	3,347.00	3,342.00
B-5	3,347.00	3,342.00	3,355.00	3,350.00
SPEECHLEY	3,355.00	3,350.00	4,041.00	4,035.80
BALLTOWN B	4,041.00	4,035.80	4,041.00	4,035.80
BALLTOWN A	4,041.00	4,035.80	4,233.00	4,227.80
BRADFORD	4,233.00	4,227.80	4,505.00	4,499.80
RILEY	4,505.00	4,499.80	4,946.00	4,940.70
BENSON	4,946.00	4,940.70	5,280.00	5,263.60
ELKS	5,280.00	5,263.60	7,981.00	6,308.60
SONYEA	7,981.00	6,308.60	8,406.00	6,454.60
MIDDLESEX	8,406.00	6,454.60	8,574.00	6,512.40
GENESEE	8,574.00	6,512.40	8,792.00	6,587.00
GENESEO	8,792.00	6,587.00	8,914.00	6,628.90
TULLY	8,914.00	6,628.90	9,008.00	6,654.70
HAMILTON	9,008.00	6,654.70	9,144.00	6,685.00
MARCELLUS	9,144.00	6,685.00		

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**515877- 47-017-067230000 - 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>	11/12/2015	12,951	12,952	10	MARCELLUS
<b>1</b>	11/23/2015	12,805	12,895	32	MARCELLUS
<b>2</b>	11/23/2015	12,655	12,777	40	MARCELLUS
<b>3</b>	11/24/2015	12,505	12,625	40	MARCELLUS
<b>4</b>	11/24/2015	12,355	12,477	40	MARCELLUS
<b>5</b>	11/24/2015	12,341	12,343	40	MARCELLUS
<b>6</b>	11/24/2015	12,058	12,177	40	MARCELLUS
<b>7</b>	11/24/2015	11,905	12,043	40	MARCELLUS
<b>8</b>	11/24/2015	11,755	11,877	40	MARCELLUS
<b>9</b>	11/25/2015	11,605	11,727	40	MARCELLUS
<b>10</b>	11/25/2015	11,455	11,577	40	MARCELLUS
<b>11</b>	11/25/2015	11,305	11,427	40	MARCELLUS
<b>12</b>	11/25/2015	11,155	11,277	40	MARCELLUS
<b>13</b>	11/25/2015	11,005	11,127	40	MARCELLUS
<b>14</b>	11/25/2015	10,855	10,977	40	MARCELLUS
<b>15</b>	11/26/2015	10,705	10,827	40	MARCELLUS
<b>16</b>	11/26/2015	10,555	10,677	40	MARCELLUS
<b>17</b>	11/26/2015	10,405	10,527	40	MARCELLUS
<b>18</b>	11/26/2015	10,255	10,374	40	MARCELLUS
<b>19</b>	11/26/2015	10,105	10,227	40	MARCELLUS
<b>20</b>	11/26/2015	9,955	10,075	40	MARCELLUS
<b>21</b>	11/27/2015	9,805	9,927	40	MARCELLUS
<b>22</b>	11/27/2015	9,655	9,777	40	MARCELLUS
<b>23</b>	11/27/2015	9,505	9,627	40	MARCELLUS
<b>24</b>	11/27/2015	9,355	9,477	40	MARCELLUS

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**515877- 47-017-067230000 - 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>
<b>Initiation Sleeve</b>	11/23/2015	21.2	6,143	7,099	4,847		551	0
<b>1</b>	11/23/2015	98.1	8,551	8,823	4,678	250,240.00	6,779	0
<b>2</b>	11/23/2015	99.8	8,573	8,975	5,450	250,620.00	6,652	0
<b>3</b>	11/24/2015	100.5	8,355	8,818	4,972	251,720.00	6,641	0
<b>4</b>	11/24/2015	99.9	8,686	8,888	4,763	250,400.00	6,366	0
<b>5</b>	11/24/2015	98.6	8,743	8,997	5,379	251,240.00	6,337	0
<b>6</b>	11/24/2015	95.9	8,628	8,911	4,387	250,060.00	6,236	0
<b>7</b>	11/24/2015	95.8	8,646	8,872	4,996	249,900.00	6,493	0
<b>8</b>	11/25/2015	94.4	8,657	8,870	5,013	250,500.00	6,005	0
<b>9</b>	11/25/2015	91.4	8,646	8,889	5,082	250,760.00	6,096	0
<b>10</b>	11/25/2015	93.5	8,702	9,006	5,237	250,180.00	6,204	0
<b>11</b>	11/25/2015	92.3	8,611	8,978	5,122	249,880.00	6,178	0
<b>12</b>	11/25/2015	94.6	8,534	8,718	4,903	250,260.00	6,011	0
<b>13</b>	11/25/2015	93.3	8,509	8,729	5,084	250,940.00	5,644	0
<b>14</b>	11/26/2015	92.8	8,576	8,696	5,360	250,260.00	5,663	0
<b>15</b>	11/26/2015	91.6	8,498	8,714	4,676	250,080.00	5,669	0
<b>16</b>	11/26/2015	98.1	8,580	8,919	5,266	250,320.00	6,070	0
<b>17</b>	11/26/2015	99.4	8,550	8,912	4,579	250,220.00	6,145	0
<b>18</b>	11/26/2015	98	8,612	8,925	5,260	251,160.00	6,142	0
<b>19</b>	11/26/2015	100	8,428	8,682	5,346	250,920.00	5,497	0
<b>20</b>	11/26/2015	99.7	8,465	8,656	5,337	250,540.00	5,528	0
<b>21</b>	11/27/2015	99.2	8,362	8,704	5,298	249,560.00	5,480	0
<b>22</b>	11/27/2015	100.6	8,415	8,910	5,452	250,500.00	5,939	0
<b>23</b>	11/27/2015	100.4	8,364	8,725	4,300	253,080.00	5,789	0
<b>24</b>	11/27/2015	93.2	8,561	8,949	4,554	252,640.00	6,901	0

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# Hydraulic Fracturing Fluid Product Component Information Disclosure

Job Start Date:	11/22/2015
Job End Date:	11/27/2015
State:	West Virginia
County:	Doddridge
API Number:	47-017-06723-00-00
Operator Name:	EQT Production
Well Name and Number:	515877
Longitude:	-80.77137800
Latitude:	39.27230300
Datum:	NAD83
Federal/Tribal Well:	NO
True Vertical Depth:	6,685
Total Base Water Volume (gal):	6,174,672
Total Base Non Water Volume:	0

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## 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	Keane Group	Carrier/Base Fluid					
			Water	7732-18-5	100.00000	89.20889	None
Sand (Proppant)	Keane Group	Proppant					
			Silica Substrate	14808-60-7	100.00000	10.41536	None
MC MX 437-5	Multi-Chem	Calcium nitrate solution					
			Calcium nitrate	10124-37-5	60.00000	0.05713	None
Hydrochloric Acid (15%)	Keane Group	Acidizing					
			Hydrochloric Acid	7647-01-0	15.00000	0.03160	None
FFR760	Keane Group	Friction Reducer					
			Hydrotreated Light Distillate	64742-47-8	30.00000	0.01333	None
			Alkyl Alcohol	Proprietary	10.00000	0.00444	None
			Oxyalkylated alcohol A	Proprietary	5.00000	0.00222	None
EC6330A	Keane Group	Scale Inhibitor					
			Ethylene Glycol	107-21-1	5.00000	0.00124	None
			Sodium Phosphate, Tribasic	7601-54-9	5.00000	0.00124	None
AI 600	Keane Group	Corrosion Inhibitor					
			Ethylene Glycol	107-21-1	40.00000	0.00021	None
			Dimethylformamide	68-12-2	20.00000	0.00010	None

			Pyridine, alkyl derives, quaternized with benzyl chloride	68909-18-2	15.00000	0.00008	None
			Cinnamialdehyde	104-55-2	15.00000	0.00008	None
			2-Butoxyethanol	111-76-2	5.00000	0.00003	None
			1-Octanol	111-87-5	5.00000	0.00003	None
			Nonyl Phenol Ethoxylate, Branched	127087-87-0	5.00000	0.00003	None
			1-Decanol	112-30-1	5.00000	0.00003	None
			Methanol	67-56-1	2.50000	0.00001	None
			Triethyl Phosphate	78-40-0	2.50000	0.00001	None
			Alkyl Pyridine	68391-11-7	1.00000	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

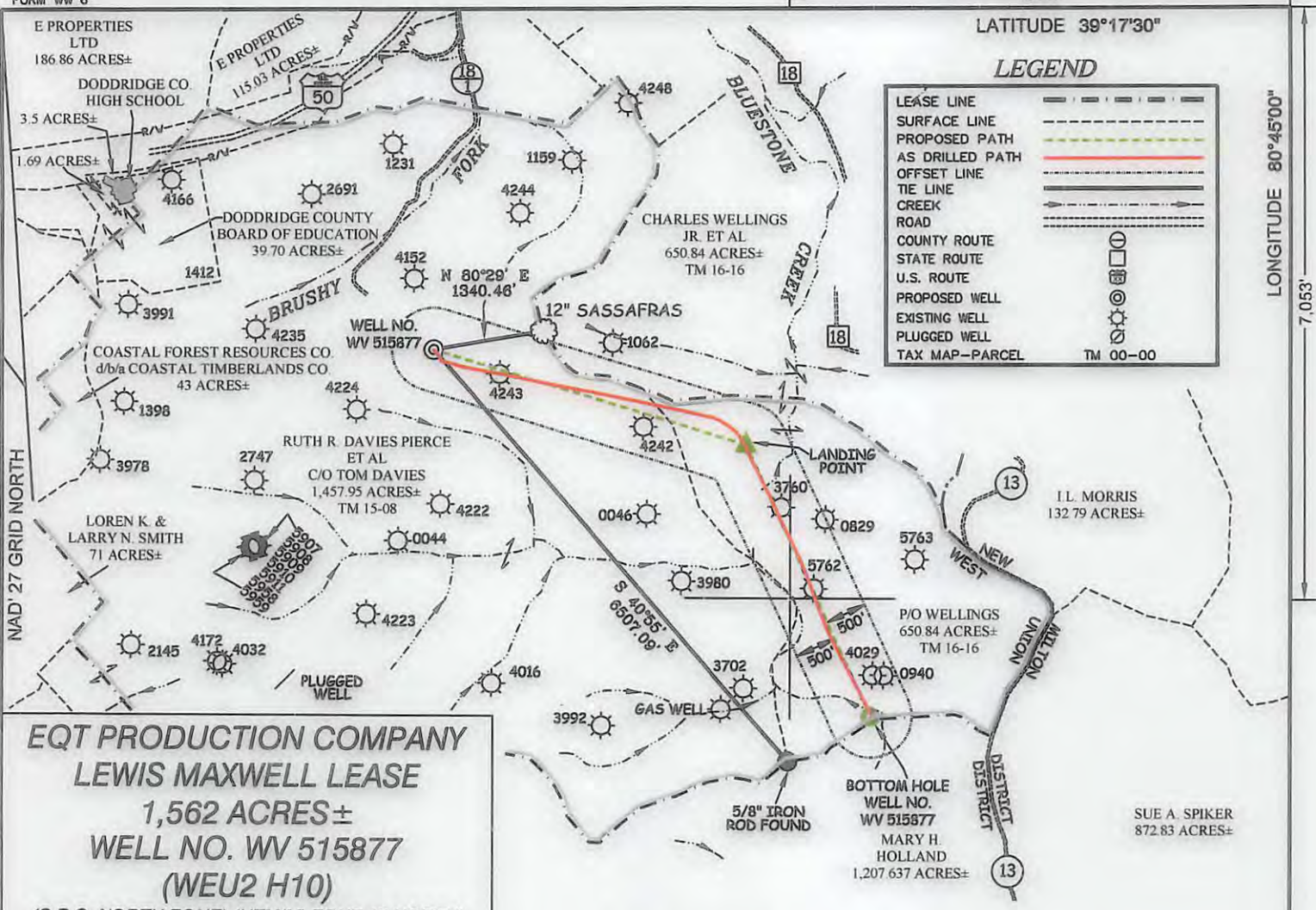
\*\* Information is based on the maximum potential for concentration and thus the total may be over 100%

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)

LEGEND

LEASE LINE	---
SURFACE LINE	----
PROPOSED PATH	---
AS DRILLED PATH	---
OFFSET LINE	---
TIE LINE	---
CREEK	---
ROAD	---
COUNTY ROUTE	○
STATE ROUTE	□
U.S. ROUTE	○
PROPOSED WELL	⊙
EXISTING WELL	⊙
PLUGGED WELL	⊙
TAX MAP-PARCEL	TM 00-00



**EQT PRODUCTION COMPANY  
LEWIS MAXWELL LEASE  
1,562 ACRES±  
WELL NO. WV 515877  
(WEU2 H10)**

(S.P.C. NORTH ZONE) (UTM(M) ZONE 17 NORTH)  
 NAD'27 S.P.C.(FT) N. 283,835.3 E. 1,640,072.1  
 NAD'27 GEO. LAT-(N) 39.272303 LONG-(W) 80.771378  
 NAD'83 UTM (M) N. 4,347,029.3 E. 519,735.6

**LANDING POINT**  
 NAD'27 S.P.C.(FT) N. 282,700.2 E. 1,643,827.3  
 NAD'27 GEO. LAT-(N) 39.269332 LONG-(W) 80.758059  
 NAD'83 UTM (M) N. 4,346,702.6 E. 520,885.4

**BOTTOM HOLE**  
 NAD'27 S.P.C.(FT) N. 279,464.6 E. 1,645,336.1  
 NAD'27 GEO. LAT-(N) 39.260507 LONG-(W) 80.752571  
 NAD'83 UTM (M) N. 4,345,724.6 E. 521,361.5

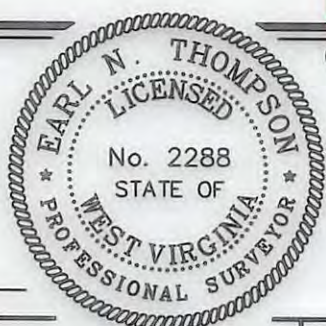
NOTES ON SURVEY

- 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.

**AS DRILLED COORDINATES  
FOR WELL NO. WV 515877**

(S.P.C. NORTH ZONE) (UTM(M) ZONE 17 NORTH)  
 NAD'27 S.P.C.(FT) N. 283,835.3 E. 1,640,072.1  
 NAD'27 GEO. LAT-(N) 39.272303 LONG-(W) 80.771378  
 NAD'83 UTM (M) N. 4,347,029.3 E. 519,735.6

**BOTTOM HOLE**  
 NAD'27 S.P.C.(FT) N. 279,481.9 E. 1,645,350.8  
 NAD'27 GEO. LAT-(N) 39.260555 LONG-(W) 80.752520  
 NAD'83 UTM (M) N. 4,345,729.9 E. 521,365.9



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 NOVEMBER 4, 20 14  
 REVISED 02/26/15, 04/17/15 & 11/16/15  
 OPERATORS WELL NO. WV 515877  
 API WELL NO. 47 - 017 - 06723H  
 STATE COUNTY PERMIT

MINIMUM DEGREE OF ACCURACY 1 / 200 FILE NO. 7245AD515877  
 HORIZONTAL & VERTICAL CONTROL DETERMINED BY DGPS (SURVEY GRADE TIE TO CORS NETWORK)  
 SCALE 1" = 2000'

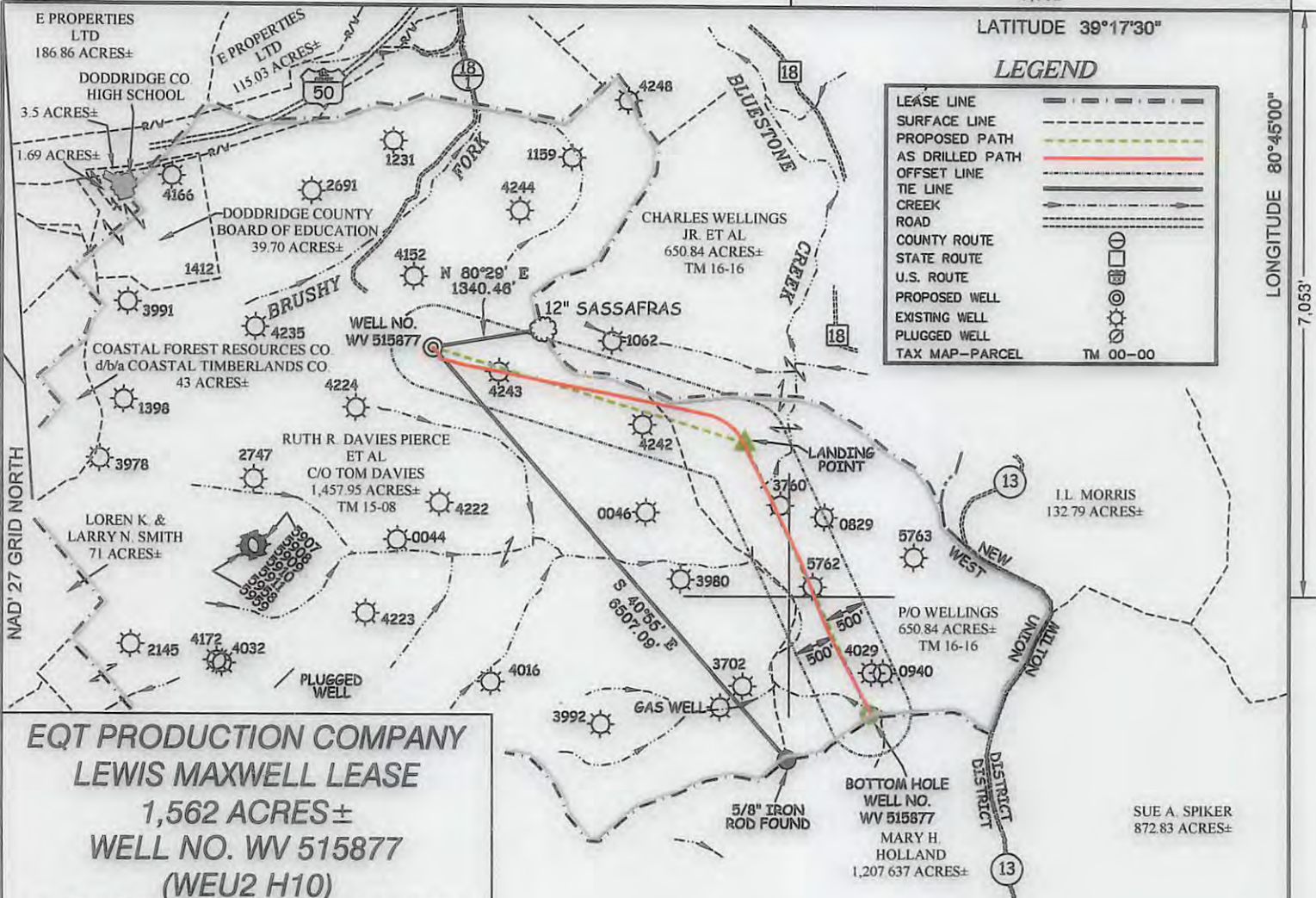
STATE OF WEST VIRGINIA  
 DIVISION OF ENVIRONMENTAL PROTECTION  
 OFFICE OF OIL AND GAS

WELL TYPE:	OIL	GAS <input checked="" type="checkbox"/>	LIQUID INJECTION	WASTE DISPOSAL	IF "GAS" PRODUCTION <input checked="" type="checkbox"/>	STORAGE	DEEP	SHALLOW <input checked="" type="checkbox"/>
LOCATION:	ELEVATION	1,153'(PAD ELEVATION)	WATERSHED	BLUESTONE CREEK	DISTRICT	WEST UNION	COUNTY	DODDRIDGE
SURFACE OWNER	RUTH R. DAVIES PIERCE ET AL C/O TOM DAVIES			ACREAGE	1,457.95±			
ROYALTY OWNER	MARY FARR SECRIST ET AL			ACREAGE	1,562±			
PROPOSED WORK:	DRILL <input checked="" type="checkbox"/>	CONVERT	DRILL DEEPER	REDRILL	FRACTURE OR STIMULATE <input checked="" type="checkbox"/>	PLUG OFF OLD FORMATION	PERFORATE NEW FORMATION	PLUG AND ABANDON
PHYSICAL CHANGE IN WELL (SPECIFY)	TARGET FORMATION			MARCELLUS				
	ESTIMATED DEPTH			TVD 6,683'				

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

LEGEND

LEASE LINE	
SURFACE LINE	
PROPOSED PATH	
AS DRILLED PATH	
OFFSET LINE	
TIE LINE	
CREEK	
ROAD	
COUNTY ROUTE	
STATE ROUTE	
U.S. ROUTE	
PROPOSED WELL	
EXISTING WELL	
PLUGGED WELL	
TAX MAP-PARCEL	TM 00-00



**EQT PRODUCTION COMPANY  
LEWIS MAXWELL LEASE  
1,562 ACRES±  
WELL NO. WV 515877  
(WEU2 H10)**

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

NAD'27 S.P.C.(FT) N. 283,835.3 E. 1,640,072.1  
NAD'27 GEO. LAT-(N) 39.272303 LONG-(W) 80.771378  
NAD'83 UTM (M) N. 4,347,029.3 E. 519,735.6

**LANDING POINT**

NAD'27 S.P.C.(FT) N. 282,700.2 E. 1,643,827.3  
NAD'27 GEO. LAT-(N) 39.269332 LONG-(W) 80.758059  
NAD'83 UTM (M) N. 4,346,702.6 E. 520,885.4

**BOTTOM HOLE**

NAD'27 S.P.C.(FT) N. 279,464.6 E. 1,645,336.1  
NAD'27 GEO. LAT-(N) 39.260507 LONG-(W) 80.752571  
NAD'83 UTM (M) N. 4,345,724.6 E. 521,361.5

**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.

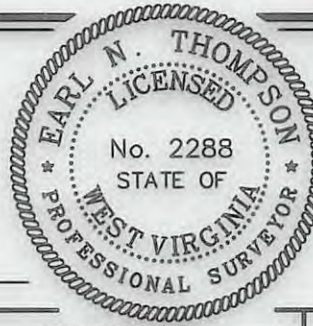
**AS DRILLED COORDINATES  
FOR WELL NO. WV 515877**

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

NAD'27 S.P.C.(FT) N. 283,835.3 E. 1,640,072.1  
NAD'27 GEO. LAT-(N) 39.272303 LONG-(W) 80.771378  
NAD'83 UTM (M) N. 4,347,029.3 E. 519,735.6

**BOTTOM HOLE**

NAD'27 S.P.C.(FT) N. 279,481.9 E. 1,645,350.8  
NAD'27 GEO. LAT-(N) 39.260555 LONG-(W) 80.752520  
NAD'83 UTM (M) N. 4,345,729.9 E. 521,365.9



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. *Earl N. Thompson*  
2288

(+) DENOTES LOCATION OF WELL ON UNITED STATES TOPOGRAPHIC MAPS.  
DATE NOVEMBER 4, 20 14

REVISED 02/26/15, 04/17/15 & 11/16/15

OPERATORS WELL NO. WV 515877

API WELL NO. **47 - 017 - 06723H**  
STATE COUNTY PERMIT

MINIMUM DEGREE OF ACCURACY 1/200 FILE NO. 7245AD515877  
SCALE 1" = 2000'

HORIZONTAL & VERTICAL CONTROL DETERMINED BY DGPS (SURVEY GRADE TIE TO CORS NETWORK)

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 1,153'(PAD ELEVATION) WATERSHED BLUESTONE CREEK

DISTRICT WEST UNION COUNTY DODDRIDGE QUADRANGLE WEST UNION 7.5'

SURFACE OWNER RUTH R. DAVIES PIERCE ET AL C/O TOM DAVIES ACREAGE 1,457.95±

ROYALTY OWNER MARY FARR SECRIST ET AL ACREAGE 1,562±

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 TVD 6,683'

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