

Well Operator's Report of Well Work



Where energy meets innovation.

Well Number: 512915

API: 47 - 103 - 03057

Submission: Initial Amended

Notes: Initial report w/ flowback

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

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API 47 - 103 - 03057 County Wetzel District Grant WV Department of
Quad Big Run 7.5 Pad Name BIG177 Field/Pool Name Environmental Protection
Farm name Coastal Forest Resources DBA Coastal Timberlands Co Well Number 512915
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 4,381,519.296 Easting 535,733.668
Landing Point of Curve Northing 4,382,042.77 Easting 535,680.21
Bottom Hole Northing 4,384,097.02 Easting 534,546.70

Elevation (ft) 811' 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 14.4 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, ferrocchrome lignosulfonate, calcium carbonate, fibrous cellulose

Date permit issued 5/3/2016 Date drilling commenced 4/30/2017 Date drilling ceased 9/16/2017
Date completion activities began 9/29/2017 Date completion activities ceased 10/26/2017
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 173', 283', 483', 633' Open mine(s) (Y/N) depths N
Salt water depth(s) ft 1,138', 1,453' Void(s) encountered (Y/N) depths N
Coal depth(s) ft 103', 156', 434', 544' Cavern(s) encountered (Y/N) depths N
Is coal being mined in area (Y/N) N

Reviewed

Reviewed by:
Don
02/16/2018

API 47-103-03057 Farm name Coastal Forest Resources DBA Coastal Timberlands Co Well number 512915

| 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" | 80' | NEW | A-500 | N/A | Y |
| Fresh Water | 24" | 18 5/8" | 327' | NEW | J-55 | 161' | Y |
| Surface | 17 1/2" | 13 3/8" | 770' | NEW | J-55 | 344' | Y |
| Intermediate 1 | 12 3/8" | 9 5/8" | 2735' | NEW | A-500 | N/A | Y |
| Intermediate 2 | | | | | | | |
| Intermediate 3 | | | | | | | |
| Production | 8-3/4" & 8-1/2" | 5-1/2" | 15273' | 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 ³ /sks) | Volume (ft ³) | Cement Top (MD) | WOC (hrs) |
|----------------|----------------------|-----------------|-----------------|------------------------------|---------------------------|-----------------|-----------|
| Conductor | Class A | 200 | 15.6 | 1.18 | 236 | 0 | 8 |
| Fresh Water | Class A | 712 | 15.6 | 1.20 | 854 | 0 | 8 |
| Surface | Class A | 668 | 15.6 | 1.20 | 802 | 0 | 8 |
| Intermediate 1 | Class A / Class A | 238 / 899 | 15.6 / 16.2 | 1.18 / 1.10 | 281 / 989 / 1270 | 0 | 8 |
| Intermediate 2 | | | | | | | |
| Intermediate 3 | | | | | | | |
| Production | Class H / Class H | 182 / 977 | 15.2 / 15.6 | 1.25 / 2.06 | 228 / 2013 / 2241 | 6400 | 72+ |
| Tubing | | | | | | | |

Drillers TD (ft) 15279' Loggers TD (ft) N/A
 Deepest formation penetrated Marcellus Plug back to (ft) N/A
 Plug back procedure N/A

Kick off depth (ft) 4911'

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
 FRESH WATER: 2 CENTRALIZERS AT 325' & 79'
 SURFACE: 3 CENTRALIZERS AT 768', 306', 36'
 INTERMEDIATE 6 CENTRALIZERS AT EVERY 500' FROM 2733' TO 207'
 PRODUCTION: Composite body spiral centralizers run every joint from 15271' to 4910'

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- 103 - 03057 Farm name Coastal Forest Resources DBA Coastal Timberlands Co Well number 512915

Drilling Contractor Savanna Drilling Rig 803
Address 125 Industry Road City Rices Landing State PA Zip 15357

Logging Company Gyro Data Inc.
Address 601 Maver St. City Bridgeville State PA Zip 15017

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

Cementing Company BJ Services
Address 2228 Philippi Pike City Clarksburg State WV Zip 26301

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Final Formations Well #512915 API #47-103-03057

| Formation Name | Drill Top MD (ftKB) | Drill Top (TVD) (ftKB) | Drill Btm MD (ftKB) | Drill Btm (TVD) (ftKB) |
|----------------|---------------------|------------------------|---------------------|------------------------|
| SAND/SHALE | 1 | 1 | 113 | 113 |
| COAL | 113 | 113 | 116 | 116 |
| SAND/SHALE | 116 | 116 | 166 | 166 |
| WAYNESBURG | 166 | 166 | 170 | 170 |
| SAND/SHALE | 170 | 170 | 444 | 444 |
| MAPLETOWN | 444 | 444 | 448 | 448 |
| SAND/SHALE | 448 | 448 | 554 | 554 |
| PITTSBURGH | 554 | 554 | 561 | 561 |
| SAND/SHALE | 561 | 561 | 1,705 | 1,702 |
| MAXTON | 1,705 | 1,702 | 1,749 | 1,746 |
| SAND/SHALE | 1,749 | 1,746 | 1,821 | 1,818 |
| BIG LIME | 1,821 | 1,818 | 1,874 | 1,871 |
| SAND/SHALE | 1,874 | 1,871 | 2,203 | 2,200 |
| WEIR | 2,203 | 2,200 | 2,231 | 2,228 |
| SAND/SHALE | 2,231 | 2,228 | 2,377 | 2,374 |
| GANTZ | 2,377 | 2,374 | 2,415 | 2,412 |
| SAND/SHALE | 2,415 | 2,412 | 2,528 | 2,525 |
| 50F | 2,528 | 2,525 | 2,573 | 2,570 |
| SAND/SHALE | 2,573 | 2,570 | 2,599 | 2,596 |
| 30F | 2,599 | 2,596 | 2,633 | 2,630 |
| SAND/SHALE | 2,633 | 2,630 | 2,646 | 2,643 |
| GORDON | 2,646 | 2,643 | 2,691 | 2,688 |
| SAND/SHALE | 2,691 | 2,688 | 2,733 | 2,730 |
| 4TH SAND | 2,733 | 2,730 | 2,744 | 2,741 |
| SAND/SHALE | 2,744 | 2,741 | 2,785 | 2,782 |
| BAYARD | 2,785 | 2,782 | 2,858 | 2,855 |
| SAND/SHALE | 2,858 | 2,855 | 3,242 | 3,239 |
| WARREN | 3,242 | 3,239 | 3,288 | 3,285 |
| SAND/SHALE | 3,288 | 3,285 | 3,392 | 3,389 |
| SPEECHLEY | 3,392 | 3,389 | 3,406 | 3,403 |
| SAND/SHALE | 3,406 | 3,403 | 3,781 | 3,778 |
| BALLTOWN A | 3,781 | 3,778 | 3,798 | 3,795 |
| SAND/SHALE | 3,798 | 3,795 | 4,241 | 4,238 |
| RILEY | 4,241 | 4,238 | 4,254 | 4,251 |
| SAND/SHALE | 4,254 | 4,251 | 4,893 | 4,890 |
| BENSON | 4,893 | 4,890 | 4,932 | 4,929 |
| ALEXANDER | 5,241 | 5,223 | 6,759 | 6,424 |
| SONYEA | 6,759 | 6,424 | 6,927 | 6,554 |
| MIDDLESEX | 6,927 | 6,554 | 7,005 | 6,615 |
| GENESEE | 7,005 | 6,615 | 7,111 | 6,691 |
| GENESEO | 7,111 | 6,691 | 7,160 | 6,722 |
| TULLY | 7,160 | 6,722 | 7,195 | 6,742 |
| HAMILTON | 7,195 | 6,742 | 7,481 | 6,843 |
| MARCELLUS | 7,481 | 6,843 | 15,279 | 6,903 |

512915 47-103-03057-0000 - Perforations

| Stage Number | Perforation Date | Top Perf Depth (ftKB) | Bottom Perf Depth (ftKB) | Number of Shots | Formation |
|--------------------------|-------------------------|------------------------------|---------------------------------|------------------------|------------------|
| Initiation Sleeve | 9/21/2017 | 15,246 | 15,273 | 10 | MARCELLUS |
| 1 | 9/30/2017 | 15,084 | 15,196 | 32 | MARCELLUS |
| 2 | 10/1/2017 | 14,886 | 15,048 | 40 | MARCELLUS |
| 3 | 10/1/2017 | 14,686 | 14,848 | 40 | MARCELLUS |
| 4 | 10/2/2017 | 14,486 | 14,648 | 40 | MARCELLUS |
| 5 | 10/3/2017 | 14,287 | 14,448 | 40 | MARCELLUS |
| 6 | 10/3/2017 | 14,086 | 14,248 | 40 | MARCELLUS |
| 7 | 10/4/2017 | 13,886 | 14,048 | 40 | MARCELLUS |
| 8 | 10/5/2017 | 13,686 | 13,848 | 40 | MARCELLUS |
| 9 | 10/7/2017 | 13,486 | 13,648 | 40 | MARCELLUS |
| 10 | 10/7/2017 | 13,286 | 13,448 | 40 | MARCELLUS |
| 11 | 10/8/2017 | 13,086 | 13,248 | 40 | MARCELLUS |
| 12 | 10/9/2017 | 12,886 | 13,048 | 40 | MARCELLUS |
| 13 | 10/10/2017 | 12,686 | 12,848 | 40 | MARCELLUS |
| 14 | 10/10/2017 | 12,486 | 12,648 | 40 | MARCELLUS |
| 15 | 10/11/2017 | 12,286 | 12,448 | 40 | MARCELLUS |
| 16 | 10/11/2017 | 12,086 | 12,248 | 40 | MARCELLUS |
| 17 | 10/12/2017 | 11,886 | 12,048 | 40 | MARCELLUS |
| 18 | 10/13/2017 | 11,686 | 11,848 | 40 | MARCELLUS |
| 19 | 10/14/2017 | 11,486 | 11,648 | 40 | MARCELLUS |
| 20 | 10/14/2017 | 11,286 | 11,448 | 40 | MARCELLUS |
| 21 | 10/16/2017 | 11,086 | 11,248 | 40 | MARCELLUS |
| 22 | 10/16/2017 | 10,886 | 11,048 | 40 | MARCELLUS |
| 23 | 10/17/2017 | 10,686 | 10,848 | 40 | MARCELLUS |
| 24 | 10/17/2017 | 10,486 | 10,648 | 40 | MARCELLUS |
| 25 | 10/18/2017 | 10,286 | 10,448 | 40 | MARCELLUS |
| 26 | 10/18/2017 | 10,086 | 10,248 | 40 | MARCELLUS |
| 27 | 10/20/2017 | 9,886 | 10,048 | 40 | MARCELLUS |
| 28 | 10/20/2017 | 9,686 | 9,848 | 40 | MARCELLUS |
| 29 | 10/20/2017 | 9,486 | 9,648 | 40 | MARCELLUS |
| 30 | 10/21/2017 | 9,286 | 9,448 | 40 | MARCELLUS |
| 31 | 10/21/2017 | 9,086 | 9,248 | 40 | MARCELLUS |
| 32 | 10/22/2017 | 8,886 | 9,048 | 40 | MARCELLUS |
| 33 | 10/22/2017 | 8,686 | 8,848 | 40 | MARCELLUS |
| 34 | 10/23/2017 | 8,486 | 8,648 | 40 | MARCELLUS |
| 35 | 10/23/2017 | 8,286 | 8,448 | 40 | MARCELLUS |
| 36 | 10/24/2017 | 8,086 | 8,248 | 40 | MARCELLUS |
| 37 | 10/25/2017 | 7,886 | 8,048 | 40 | MARCELLUS |
| 38 | 10/25/2017 | 7,686 | 7,848 | 40 | MARCELLUS |
| 39 | 10/26/2017 | 7,486 | 7,648 | 40 | MARCELLUS |

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512915 47-103-03057-0000 - Stimulated Stages

| Stage Number | Stimulation 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) |
|--------------|------------------|---------------------|------------------------------|------------------------------|------------|--------------------------|------------------------|----------------------------------|
| 1.01 | 9/29/2017 | 14 | 7,286 | 9,052 | 5,608 | 0 | 1,511 | 0 |
| 1 | 10/1/2017 | 94 | 9,150 | 9,329 | 4,249 | 452,520 | 9,375 | 0 |
| 2 | 10/1/2017 | 90 | 8,578 | 9,310 | 4,478 | 448,980 | 8,037 | 0 |
| 3 | 10/2/2017 | 80 | 8,556 | 9,305 | 4,590 | 452,909 | 11,209 | 0 |
| 4 | 10/3/2017 | 96 | 9,171 | 9,331 | 4,371 | 451,071 | 7,945 | 0 |
| 5 | 10/3/2017 | 93 | 9,187 | 9,349 | 4,436 | 448,561 | 7,912 | 0 |
| 6 | 10/4/2017 | 89 | 9,028 | 9,419 | 4,212 | 450,440 | 8,373 | 0 |
| 7 | 10/5/2017 | 79 | 8,863 | 9,291 | 4,142 | 450,264 | 10,245 | 0 |
| 8 | 10/6/2017 | 89 | 9,022 | 9,415 | 4,190 | 447,980 | 9,326 | 0 |
| 9 | 10/7/2017 | 90 | 8,795 | 8,992 | 4,447 | 449,516 | 7,823 | 0 |
| 10 | 10/8/2017 | 80 | 8,765 | 9,327 | 4,699 | 453,843 | 10,348 | 0 |
| 11 | 10/9/2017 | 90 | 8,830 | 9,167 | 4,964 | 449,989 | 8,464 | 0 |
| 12 | 10/9/2017 | 89 | 8,771 | 9,176 | 4,678 | 448,791 | 7,586 | 0 |
| 13 | 10/10/2017 | 89 | 8,331 | 8,786 | 4,279 | 449,233 | 8,574 | 0 |
| 14 | 10/12/2017 | 90 | 8,378 | 8,641 | 4,658 | 450,671 | 7,723 | 0 |
| 15 | 10/12/2017 | 93 | 8,543 | 8,758 | 4,651 | 450,923 | 7,977 | 0 |
| 16 | 10/13/2017 | 90 | 8,538 | 8,707 | 4,702 | 450,566 | 7,621 | 0 |
| 17 | 10/13/2017 | 92 | 8,700 | 9,126 | 4,501 | 450,650 | 7,999 | 0 |
| 18 | 10/14/2017 | 94 | 8,758 | 9,233 | 4,669 | 452,472 | 7,826 | 0 |
| 19 | 10/14/2017 | 87 | 8,644 | 9,141 | 4,731 | 448,340 | 7,821 | 0 |
| 20 | 10/15/2017 | 92 | 8,652 | 8,891 | 5,770 | 132,552 | 4,044 | 0 |
| 20 | 10/16/2017 | 11 | 6,151 | 6,907 | 5,925 | 0 | 2,361 | 0 |
| 20 | 10/16/2017 | 81 | 8,812 | 9,259 | 5,631 | 448,498 | 7,363 | 0 |
| 21 | 10/16/2017 | 85 | 8,841 | 9,368 | 5,331 | 450,724 | 9,975 | 0 |
| 22 | 10/17/2017 | 92 | 8,601 | 9,017 | 4,967 | 448,656 | 7,751 | 0 |
| 23 | 10/17/2017 | 95 | 8,658 | 9,332 | 4,549 | 450,714 | 7,755 | 0 |
| 24 | 10/18/2017 | 87 | 8,495 | 8,894 | 4,907 | 452,383 | 7,370 | 0 |
| 25 | 10/18/2017 | 88 | 8,660 | 9,256 | 4,912 | 450,420 | 8,574 | 0 |
| 26 | 10/19/2017 | 89 | 8,743 | 9,512 | 4,883 | 450,200 | 10,057 | 0 |
| 27 | 10/20/2017 | 100 | 8,961 | 9,329 | 5,121 | 449,117 | 7,719 | 0 |
| 28 | 10/20/2017 | 98 | 8,870 | 9,184 | 5,357 | 450,010 | 7,722 | 0 |
| 29 | 10/21/2017 | 98 | 8,946 | 9,361 | 4,644 | 449,097 | 7,671 | 0 |
| 30 | 10/21/2017 | 89 | 8,774 | 9,162 | 5,154 | 450,671 | 8,453 | 0 |

02/16/2018

Hydraulic Fracturing Fluid Product Component Information Disclosure

| | |
|--------------------------------|--------------------|
| Job Start Date: | 9/29/2017 |
| Job End Date: | 10/26/2017 |
| State: | West Virginia |
| County: | Wetzel |
| API Number: | 47-103-03057-00-00 |
| Operator Name: | EQT Production |
| Well Name and Number: | 512915 |
| Latitude: | 39.58256300 |
| Longitude: | -80.58408500 |
| Datum: | NAD83 |
| Federal Well: | NO |
| Indian Well: | NO |
| True Vertical Depth: | 6,903 |
| Total Base Water Volume (gal): | 13,908,720 |
| 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 | 86.45442 | None |
| ABP-1 | FTS International | Breaker | | | | | |
| | | | | Listed Below | | | |

| | | | | | | | |
|-------------------------|-------------------|--------------------------|--|--------------|--|--|--|
| HVG-14.0 | FTS International | Gelling Agent | | | | | |
| | | | | Listed Below | | | |
| Other Chemical (s) | Listed Above | See Trade Name (s) List | | | | | |
| | | | | Listed Below | | | |
| MX-5-3886 | Multi-Chem | Bacteria Treatment | | | | | |
| | | | | Listed Below | | | |
| CS-500-SI | FTS International | Scale Inhibitor | | | | | |
| | | | | Listed Below | | | |
| Sand (Proppant) | FTS International | Proppant | | | | | |
| | | | | Listed Below | | | |
| Hydrochloric Acid (15%) | FTS International | Acidizing | | | | | |
| | | | | Listed Below | | | |
| MX-8-2544 | Multi-Chem | Bacteria Treatment | | | | | |
| | | | | Listed Below | | | |
| CI-150 | FTS International | Acid Corrosion Inhibitor | | | | | |
| | | | | Listed Below | | | |
| FRW-900 | FTS International | Friction Reducer | | | | | |

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| | | | | Listed Below | | | |
|--|--|--|-------------------------------|--------------|-----------|----------|------|
| Items above are Trade Names with the exception of Base Water . Items below are the individual ingredients. | | | | | | | |
| | | | Silica Substrate | 14808-60-7 | 100.00000 | 13.17685 | None |
| | | | Calcium Nitrate.4H2O | 13477-34-4 | 100.00000 | 0.10598 | None |
| | | | Calcium Nitrate.4H2O | 13477-34-4 | 100.00000 | 0.10598 | |
| | | | Hydrotreated Light Distillate | 64742-47-8 | 30.00000 | 0.02460 | None |
| | | | Hydrotreated Light Distillate | 64742-47-8 | 30.00000 | 0.02460 | |
| | | | Hydrochloric Acid | 7647-01-0 | 15.00000 | 0.02145 | None |
| | | | Sodium Chloride | 7647-14-5 | 100.00000 | 0.00934 | |
| | | | Sodium Chloride | 7647-14-5 | 100.00000 | 0.00934 | None |
| | | | Alkyl Alcohol | Proprietary | 10.00000 | 0.00820 | |
| | | | Alkyl Alcohol | Proprietary | 10.00000 | 0.00820 | None |
| | | | Oxyalkylated Alcohol A | Proprietary | 5.00000 | 0.00410 | None |
| | | | Oxyalkylated Alcohol A | Proprietary | 5.00000 | 0.00410 | |
| | | | Ethylene Glycol | 107-21-1 | 10.00000 | 0.00247 | None |
| | | | Ethylene Glycol | 107-21-1 | 10.00000 | 0.00247 | |
| | | | Raffinates, Sorption Process | 64741-85-1 | 55.00000 | 0.00140 | None |
| | | | Raffinates, Sorption Process | 64741-85-1 | 55.00000 | 0.00140 | |
| | | | Guar Gum | 9000-30-0 | 50.00000 | 0.00127 | None |
| | | | Guar Gum | 9000-30-0 | 50.00000 | 0.00127 | |
| | | | Ammonium Persulfate | 7727-54-0 | 95.00000 | 0.00088 | None |
| | | | Sodium Nitrate | 7631-99-4 | 5.00000 | 0.00047 | |
| | | | Sodium Nitrate | 7631-99-4 | 5.00000 | 0.00047 | None |
| | | | Quartz | 14808-60-7 | 4.00000 | 0.00010 | |
| | | | Quartz | 14808-60-7 | 4.00000 | 0.00010 | None |
| | | | Ethylene Glycol | 107-21-1 | 30.00000 | 0.00008 | None |
| | | | Isopropanol | 67-63-0 | 30.00000 | 0.00008 | None |
| | | | Organic Amine Resin Salt | Proprietary | 30.00000 | 0.00008 | None |

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|--|--|--|------------------------------|-------------|----------|---------|------|
| | | | Isotridecanol, ethoxylated | 9043-30-5 | 2.00000 | 0.00005 | |
| | | | Isotridecanol, ethoxylated | 9043-30-5 | 2.00000 | 0.00005 | None |
| | | | Dimethylformamide | 68-12-2 | 10.00000 | 0.00003 | None |
| | | | Quaternary Ammonium Compound | Proprietary | 10.00000 | 0.00003 | None |
| | | | Aromatic Aldehyde | Proprietary | 10.00000 | 0.00003 | None |

* Total Water Volume sources may include various types of water including fresh water, produced water, and recycled water

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

*** If you are calculating a percentage of total ingredients do not add the water volume below the green line to the water volume above the green line

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)

BIG177
WV 512915
EQT PRODUCTION COMPANY

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

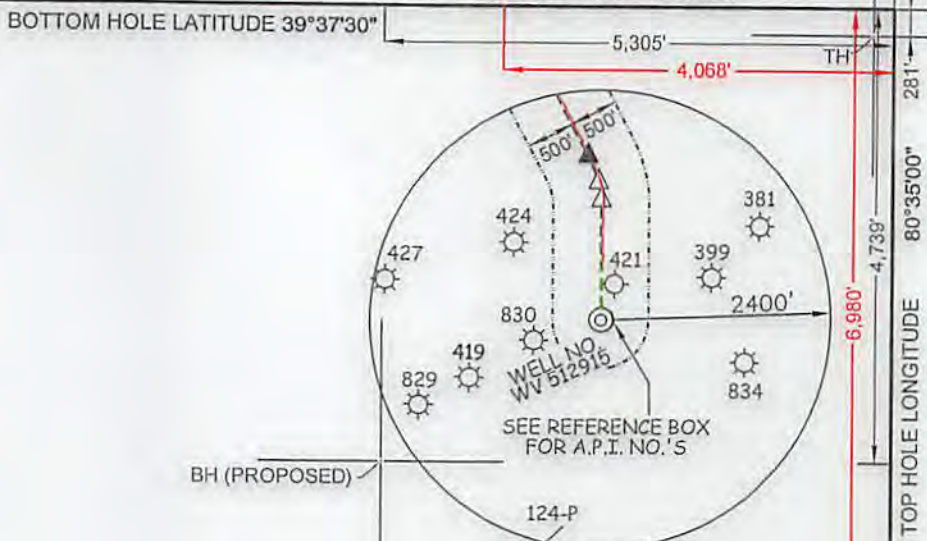
NAD27 S.P.C.(FT) N. 396,136.08 E. 1,694,455.53
NAD27 GEO. LAT-(N) 39.582563 LONG-(W) 80.584085
NAD83 UTM (M) N. 4,381,519.296 E. 535,733.668

LANDING POINT

NAD27 S.P.C.(FT) N. 397,847.24 E. 1,694,313.52
NAD27 GEO. LAT-(N) 39.587258 LONG-(W) 80.584662
NAD83 UTM (M) N. 4,382,039.90 E. 535,681.72

BOTTOM HOLE

NAD27 S.P.C.(FT) N. 406,915.99 E. 1,689,491.80
NAD27 GEO. LAT-(N) 39.611991 LONG-(W) 80.602164
NAD83 UTM (M) N. 4,384,778.23 E. 534,166.70



| ROYALTY OWNERS | | |
|--------------------------------------|-------------|------------------|
| EQT PRODUCTION COMPANY | 300 AC± | LEASE NO. 102894 |
| JOSEPH SHIBEN & MINNIE SHIBEN ESTATE | 1030 AC± | LEASE NO. 102814 |
| JAMES E. NEWMAN ET AL | P/O 332 AC± | LEASE NO. 300653 |

SEE NOTE 4

| SURFACE OWNERS - CONTINUED | | |
|----------------------------|--|--------------|
| G-TM-13-6.1 | COASTAL FOREST RESOURCES COMPANY d/b/a COASTAL TIMBERLANDS COMPANY | 55.06 ACRES± |
| G-TM-13-07 | MANSEL McDIFFITT ET AL | 51.8 ACRES± |

| SURFACE OWNERS | | |
|----------------|--|---------------|
| G-TM-2-04 | JOHN C. COMER ET UX | 104.00 ACRES± |
| G-TM-2-05 | EDWIN L. DULANEY ET UX | 104.00 ACRES± |
| G-TM-2-12 | COASTAL FOREST RESOURCES COMPANY d/b/a COASTAL TIMBERLANDS COMPANY | 3.63 ACRES± |
| G-TM-2-12.2 | TEORA & SANDRA DULANEY | 66.64 ACRES± |
| G-TM-3-05 | COASTAL FOREST RESOURCES COMPANY d/b/a COASTAL TIMBERLANDS COMPANY | 179.00 ACRES± |
| G-TM-3-13 | EDWARD L. DULANEY II | 164.75 ACRES± |
| G-TM-3-23 | COASTAL FOREST RESOURCES COMPANY d/b/a COASTAL TIMBERLANDS COMPANY | 167.75 ACRES± |
| G-TM-7-03 | COASTAL FOREST RESOURCES COMPANY d/b/a COASTAL TIMBERLANDS COMPANY | 178 ACRES± |
| G-TM-7-3.2 | COASTAL FOREST RESOURCES COMPANY d/b/a COASTAL TIMBERLANDS COMPANY | 156.98 ACRES± |
| G-TM-7-10 | COASTAL FOREST RESOURCES COMPANY d/b/a COASTAL TIMBERLANDS COMPANY | 120 ACRES± |
| G-TM-8-01 | DANNY STOCKSLAGER ET AL | 170 ACRES± |
| G-TM-8-10 | GARLAND MINOR ET AL | 48.1 ACRES± |
| G-TM-8-17 | KENNETH & LORRAINE WILDMAN | 67 ACRES± |
| G-TM-8-18 | COASTAL FOREST RESOURCES COMPANY d/b/a COASTAL TIMBERLANDS COMPANY | 337 ACRES± |
| G-TM-8-19 | PHILIP & KIMBERLY SHREVE | 46.45 ACRES± |
| G-TM-8-23 | DALE DULANEY ET AL | 70.81 ACRES± |
| G-TM-8-34 | HALLIE HARBARGER | 54.01 ACRES± |
| G-TM-8-35 | DEBORAH FRONCZEK ET AL | 15.5 ACRES± |
| G-TM-8-58 | HIGGINS CHAPEL CHURCH OF CHRIST | 0.99 ACRES± |
| G-TM-8-64 | MARY EASTHAM ET AL | 1.45 ACRES± |
| G-TM-8-65 | IKEY & TINA WILLEY | 2.15 ACRES± |
| G-TM-8-66 | EOM GATHERING OPOC LLC | 0.42 ACRES± |
| G-TM-13-06 | COASTAL FOREST RESOURCES COMPANY d/b/a COASTAL TIMBERLANDS COMPANY | 217.19 ACRES± |

NOTES ON SURVEY

- NO WATER WELLS WERE FOUND WITHIN 250' OF PROPOSED GAS WELL. NO AGRICULTURAL BUILDINGS > 2500 SQ. FT. WERE FOUND WITHIN 625' OF THE CENTER OF PROPOSED WELL PAD. SEE REFERENCE BOX FOR DWELLING WITHIN 625' OF THE CENTER OF PROPOSED WELL PAD.
- WELL SPOT CIRCLE & TOPO MARK SCALE IS 1"=2000'.
- AS DRILLED INFORMATION PROVIDED BY EQT.
- AS-DRILLED PATH DOES NOT PENETRATE LEASE NO. 300653.

AS DRILLED COORDINATES

(BIG177H4 512915)
(S.P.C. NORTH ZONE) (UTM(M) ZONE 17 NORTH)
NAD27 S.P.C.(FT) N. 396,136.08 E. 1,694,455.53
NAD27 GEO. LAT-(N) 39.582563 LONG-(W) 80.584085
NAD83 UTM (M) N. 4,381,519.296 E. 535,733.668
LANDING POINT
NAD27 S.P.C.(FT) N. 397,858.73 E. 1,694,308.71
NAD27 GEO. LAT-(N) 39.587282 LONG-(W) 80.584680
NAD83 UTM (M) N. 4,382,042.77 E. 535,680.21
BOTTOM HOLE
NAD27 S.P.C.(FT) N. 404,659.80 E. 1,690,701.51
NAD27 GEO. LAT-(N) 39.605838 LONG-(W) 80.597773
NAD83 UTM (M) N. 4,384,097.02 E. 534,546.70

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Solutions from the ground up.
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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. 849 *C. Victor Moyers*



(+) DENOTES LOCATION OF WELL ON UNITED STATES TOPOGRAPHIC MAPS.
DATE MAY 20, 20 13
REVISED 07/29/13, 12/04/13, 09/10/14, 08/25/15, 09/14/15, 10/06/16, 03/31/17, 04/20/17 & 09/20/17
OPERATORS WELL NO. WV 512915
API WELL NO. 47 - 103 - 03057
STATE COUNTY PERMIT

MINIMUM DEGREE OF ACCURACY 1 / 2500 FILE NO. 6806P512915R16AD.dwg
HORIZONTAL & VERTICAL CONTROL DETERMINED BY DGPS (SURVEY GRADE TIE TO CORS NETWORK) SCALE SEE NOTE 2

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

WELL TYPE: OIL ___ GAS X LIQUID INJECTION ___ WASTE DISPOSAL ___ IF "GAS" PRODUCTION X STORAGE ___ DEEP ___ SHALLOW X
LOCATION: PAD ELEVATION 811' WATERSHED WILLEY FORK OF NORTH FORK FISHING CREEK
DISTRICT GRANT COUNTY WETZEL QUADRANGLE BIG RUN 7.5'
SURFACE OWNER COASTAL FOREST RESOURCES CO. d/b/a COASTAL TIMBERLANDS CO. ACREAGE 27± OF 217±
ROYALTY OWNER HIGGINS FAMILY TRUST ACREAGE 242.5
PROPOSED WORK: LEASE NO. 103021
DRILL X CONVERT ___ DRILL DEEPER ___ REDRILL ___ FRACTURE OR STIMULATE X 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 6,881'

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 NO. PERMIT

BIG177
WV 512915
EQT PRODUCTION COMPANY

BOTTOM HOLE LATITUDE 39°37'30"

5,305'
 4,068'

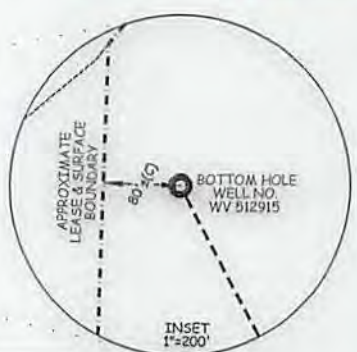
TH

80°35'00"
 281'

80°35'00"
 6,980'

80°35'00"
 4,739'

NAD'27 GRID NORTH



| WELL TIES | | |
|-----------|------------|----------|
| ID | BEARING | DISTANCE |
| L1 | N 44°47' W | 2459.66' |
| L2 | N 61°12' E | 631.44' |

| BUILD OUT DATA | | |
|----------------|------------|----------|
| ID | BEARING | DISTANCE |
| L3 | N 00°08' W | 1256.52' |

| CURVE | ARC LENGTH | RADIUS | CHORD BEARING | CHORD LENGTH |
|-------|------------|----------|---------------|--------------|
| C1 | 186.74' | 720.57' | N 08°57'15" W | 186.22' |
| C2 | 292.81' | 1365.40' | N 22°08'27" W | 292.25' |

AS DRILLED COORDINATES
(BIG177H4 512915)
(S.P.C. NORTH ZONE) (UTM(M) ZONE 17 NORTH)
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 NAD'83 UTM (M) N. 4,382,039.90 E. 535,681.72

BOTTOM HOLE
 NAD'27 S.P.C.(FT) N. 406,915.99 E. 1,689,491.80
 NAD'27 GEO. LAT-(N) 39.611991 LONG-(W) 80.602164
 NAD'83 UTM (M) N. 4,384,778.23 E. 534,166.70

SCALE 1" = 2000' FILE NO. 6806P512915R16AD.dwg
 DATE MAY 20, 20 13
 REVISED 07/29/13, 12/04/13, 09/10/14, 08/25/15, 09/14/15, 10/06/16, 03/31/17, 04/20/17 & 09/20/17

OPERATORS WELL NO. WV 512915
 API WELL NO. 47 — 103 — 03057
 STATE COUNTY PERMIT

VICTOR MOYERS
 LICENSED
 No. 849
 STATE OF WEST VIRGINIA
 PROFESSIONAL SURVEYOR

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

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

LEGEND

- LEASE LINE
- SURFACE LINE
- PROPOSED WELL
- LATERAL
- AS-DRILLED WELL
- LATERAL
- OFFSET LINE
- TIE LINE
- CREEK
- ROAD
- COUNTY ROUTE
- PROPOSED WELL
- EXISTING WELL
- PERMITTED WELL
- GRANT DISTRICT
- TAX MAP-PARCEL

G-TM-00-00

02/16/2018

WELL OPERATOR EQT PRODUCTION COMPANY DESIGNATED AGENT REX C. RAY
 ADDRESS 115 PROFESSIONAL PLACE P.O. BOX 280 ADDRESS 115 PROFESSIONAL PLACE P.O. BOX 280
 BRIDGEPORT, WV 26330 BRIDGEPORT, WV 26330

COUNTY NAME
 PERMIT

BIG177
WV 512915
EQT PRODUCTION COMPANY

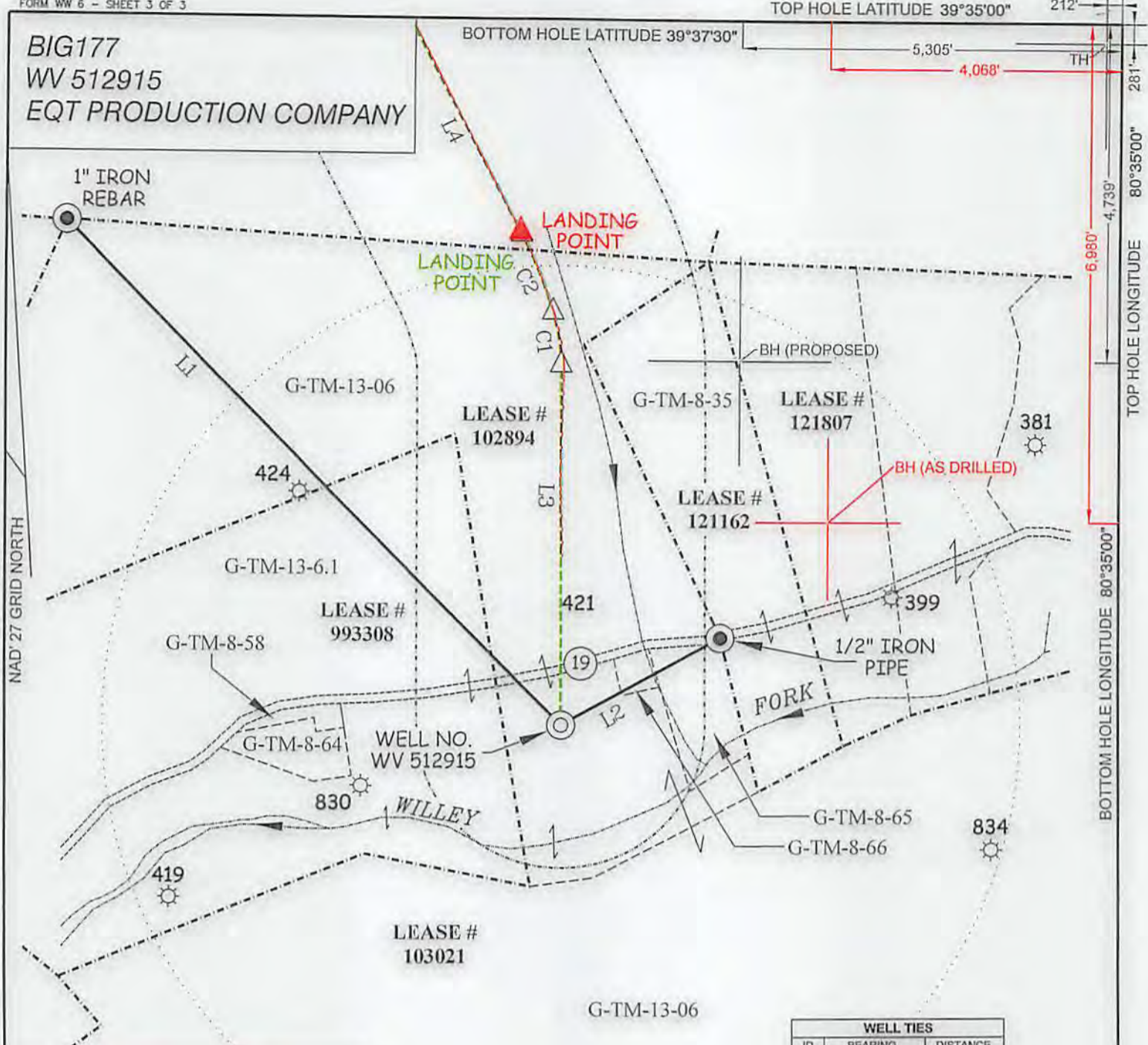
BOTTOM HOLE LATITUDE 39°37'30"

5,305'
 4,068'

TOP HOLE LONGITUDE 80°35'00"

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NAD'27 GRID NORTH



AS DRILLED COORDINATES
 (BIG177H4 512915)
 (S.P.C. NORTH ZONE) (UTM(M) ZONE 17 NORTH)

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DETAIL
 1"=500'

WELL TIES

| ID | BEARING | DISTANCE |
|----|------------|----------|
| L1 | N 44°47' W | 2459.66' |
| L2 | N 61°12' E | 631.44' |

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| CURVE | ARC LENGTH | RADIUS | CHORD BEARING | CHORD LENGTH |
|-------|------------|----------|---------------|--------------|
| C1 | 186.74' | 720.57' | N 08°57'15" W | 186.22' |
| C2 | 292.81' | 1365.40' | N 22°08'27" W | 292.25' |

LATERAL DATA

| ID | BEARING | DISTANCE |
|----|------------|------------|
| L4 | N 28°00' W | 10,270.89' |

AS-DRILLED TOTAL LATERAL LENGTH = 7701.71'

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- LATERAL: - - - - -
- AS-DRILLED WELL: - - - - -
- LATERAL: - - - - -
- OFFSET LINE: - - - - -
- TIE LINE: - - - - -
- CREEK: - - - - -
- ROAD: - - - - -
- COUNTY ROUTE: - - - - -
- PROPOSED WELL: ⊕
- EXISTING WELL: ⊙
- PERMITTED WELL: ⊗
- GRANT DISTRICT TAX MAP-PARCEL: G-TM-00-00

SCALE 1" = 2000' FILE NO. 6806P512915R16AD.dwg
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