

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

API 47-091-01344 County Taylor District Courthouse
Quad Grafton Pad Name Coalquest 2 Field/Pool Name _____
Farm name Coalquest Development LLC Well Number 202
Operator (as registered with the OOG) Arsenal Resources
Address 6031 Wallace Rd. Ext City Wexford State PA Zip 15090

As Drilled location NAD 83/UTM Attach an as-drilled plat, profile view, and deviation survey
Top hole Northing 4350291.502 Easting 576712.691
Landing Point of Curve Northing 4349789.734 Easting 576501.507
Bottom Hole Northing 4348417.130 Easting 576977.623

Elevation (ft) 1265 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 oil-based muds

Date permit issued 9/19/2017 Date drilling commenced 9/29/2017 Date drilling ceased 10/08/2017
Date completion activities began 02/03/2018 Date completion activities ceased 02/17/2018
Verbal plugging (Y/N) N/A 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 400' Open mine(s) (Y/N) depths _____
Salt water depth(s) ft 1110' Void(s) encountered (Y/N) depths _____
Coal depth(s) ft 552', 630', 712', 753', 847', 881', 910' Cavern(s) encountered (Y/N) depths _____
Is coal being mined in area (Y/N) N

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Reviewed

[Signature] 6-11-18

Reviewed by:

[Signature]

07/20/2018

API 47-091 - 01344 Farm name Coalquest Development LLC Well number 202

| 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" | 24" | 80' | New | 94.00 | NA | Y |
| Surface | 17.5" | 13 3/8" | 679' | New | 54.50 | 120' | Y |
| Coal | NA | NA | NA | NA | NA | NA | NA |
| Intermediate 1 | 12 1/4" | 9 5/8" | 1,622' | New | 40.00 | NA | Y |
| Intermediate 2 | NA | NA | NA | NA | NA | NA | NA |
| Intermediate 3 | NA | NA | NA | NA | NA | NA | NA |
| Production | 8 1/2"-8 3/4" | 5.5" | 13,279' GL | New | 20.00 | NA | N |
| Tubing | NA | NA | NA | NA | NA | NA | NA |
| Packer type and depth set | | NA | | | | | |

Comment Details Cement to surface on Conductor, Surface, and Intermediate. Top of production cement at 1,460 (GL)ft.

| 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 | A | 450 | 15.6 | 1.2 | 540 | Surface | 8+ |
| Surface | A | 631 | 15.6 | 1.2 | 757 | Surface | 8+ |
| Coal | NA | NA | NA | NA | NA | NA | NA |
| Intermediate 1 | A | 203/315 | 15.2/15.7 | 1.26/1.28 | 256/403 | Surface | 8+ |
| Intermediate 2 | NA | NA | NA | NA | NA | NA | NA |
| Intermediate 3 | NA | NA | NA | NA | NA | NA | NA |
| Production | A | 1183/1224 | 13.8/15.0 | 1.34/1.29 | 1585/1579 | 1,460(GL)' | 8+ |
| Tubing | NA | NA | NA | NA | NA | NA | NA |

Drillers TD (ft) 13,327 ft Loggers TD (ft) NA

Deepest formation penetrated Marcellus Plug back to (ft) NA

Plug back procedure NA

Kick off depth (ft) KOP of Curve at 7,250 ft, No Plug

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 20" - No centralizers 13 3/8" - one bow spring centralizer on every other joint 9 5/8" - one bow spring centralizer every third joint from TD to surface 5 1/2" - one semi rigid centralizer on every joint from TD of casing to end of curve. Then every other joint to KOP. Every third joint from KOP to 1,400'; there will be no centralizers from 1,400' to surface.

WAS WELL COMPLETED AS SHOT HOLE Yes No DETAILS 25 Stages and 1,000 perforations

WAS WELL COMPLETED OPEN HOLE? Yes No DETAILS NA

WERE TRACERS USED Yes No TYPE OF TRACER(S) USED NA

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API 47- 091 - 01344 Farm name Coalquest Development LLC Well number 202

PERFORATION RECORD

| Stage No. | Perforation date | Perforated from MD ft. | Perforated to MD ft. | Number of Perforations | Formation(s) |
|-----------|------------------|------------------------|----------------------|------------------------|--------------|
| | | See Attached | | | |
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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 Attached | | | | | |
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| Perforation Record | | | | | |
|--------------------|------------------|------------------------|----------------------|------------------------|-----------------|
| Stage No. | Perforation Date | Perforated from MD ft. | Perforated to MD ft. | Number of Perforations | Formations (s) |
| 25 | 2/16/2018 18:54 | 8,271 | 8,433 | 40 | Marcellus Shale |
| 24 | 2/16/2018 10:22 | 8,471 | 8,633 | 40 | Marcellus Shale |
| 23 | 2/15/2018 23:40 | 8,671 | 8,833 | 40 | Marcellus Shale |
| 22 | 2/15/2018 14:26 | 8,871 | 9,033 | 40 | Marcellus Shale |
| 21 | 2/15/2018 2:33 | 9,071 | 9,233 | 40 | Marcellus Shale |
| 20 | 2/14/2018 17:14 | 9,271 | 9,433 | 40 | Marcellus Shale |
| 19 | 2/14/2018 3:15 | 9,471 | 9,633 | 40 | Marcellus Shale |
| 18 | 2/13/2018 18:25 | 9,671 | 9,833 | 40 | Marcellus Shale |
| 17 | 2/13/2018 2:36 | 9,871 | 10,033 | 40 | Marcellus Shale |
| 16 | 2/12/2018 16:38 | 10,071 | 10,233 | 40 | Marcellus Shale |
| 15 | 2/12/2018 3:13 | 10,271 | 10,433 | 40 | Marcellus Shale |
| 14 | 2/11/2018 15:08 | 10,471 | 10,633 | 40 | Marcellus Shale |
| 13 | 2/11/2018 1:00 | 10,671 | 10,833 | 40 | Marcellus Shale |
| 12 | 2/10/2018 16:06 | 10,871 | 11,033 | 40 | Marcellus Shale |
| 11 | 2/10/2018 2:00 | 11,071 | 11,233 | 40 | Marcellus Shale |
| 10 | 2/9/2018 14:11 | 11,271 | 11,433 | 40 | Marcellus Shale |
| 9 | 2/9/2018 3:39 | 11,471 | 11,633 | 40 | Marcellus Shale |
| 8 | 2/8/2018 18:12 | 11,671 | 11,833 | 40 | Marcellus Shale |
| 7 | 2/8/2018 3:37 | 11,871 | 12,033 | 40 | Marcellus Shale |
| 6 | 2/7/2018 15:23 | 12,071 | 12,233 | 40 | Marcellus Shale |
| 5 | 2/7/2018 3:48 | 12,271 | 12,433 | 40 | Marcellus Shale |
| 4 | 2/5/2018 10:25 | 12,471 | 12,633 | 40 | Marcellus Shale |
| 3 | 2/4/2018 14:10 | 12,671 | 12,833 | 40 | Marcellus Shale |
| 2 | 2/3/2018 23:10 | 12,871 | 13,033 | 40 | Marcellus Shale |
| 1 | 12/20/2017 22:15 | 13,071 | 13,230 | 40 | Marcellus Shale |

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| Stimulation Information Per 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) |
| 1 | 02/03/2018 | 73 | 7,728 | 7224 | 4,788 | 492,920 | 12,935 |
| 2 | 02/04/2018 | 75 | 7,847 | 6919 | 4,837 | 502,040 | 12,277 |
| 3 | 02/05/2018 | 75 | 8,043 | 7702 | 5,191 | 502,220 | 12,206 |
| 4 | 02/06/2018 | 72 | 7,867 | 8216 | 4,970 | 495,680 | 13,001 |
| 5 | 02/07/2018 | 71 | 7,787 | 6309 | 5,468 | 504,880 | 12,982 |
| 6 | 02/07/2018 | 68.2 | 7,750 | 7818 | 5,251 | 492,900 | 13,698 |
| 7 | 02/08/2018 | 73 | 8,231 | 6435 | 5,399 | 434,080 | 14,112 |
| 8 | 02/08/2018 | 67.2 | 8,160 | 6994 | 5,394 | 500,780 | 14,254 |
| 9 | 02/09/2018 | 72 | 7,540 | 7242 | 5,808 | 500,640 | 12,394 |
| 10 | 02/09/2018 | 69.4 | 7,787 | 6583 | 4,986 | 497,200 | 12,432 |
| 11 | 02/10/2018 | 60 | 8,546 | 6282 | 5,059 | 373,440 | 14,060 |
| 12 | 02/10/2018 | 70.6 | 7,550 | 6102 | 5,291 | 503,420 | 12,195 |
| 13 | 02/11/2018 | 66 | 8,132 | 6402 | 5,224 | 498,740 | 14,431 |
| 14 | 02/11/2018 | 64.9 | 8,051 | 6390 | 5,939 | 497,300 | 13,113 |
| 15 | 02/12/2018 | 66 | 7,985 | 6464 | 5,401 | 496,720 | 15,897 |
| 16 | 02/12/2018 | 70.8 | 7,505 | 6507 | 4,972 | 495,160 | 12,550 |
| 17 | 02/13/2018 | 71 | 7,906 | 7845 | 5,698 | 498,800 | 13,916 |
| 18 | 02/13/2018 | 60.6 | 7,934 | 6770 | 5,212 | 502,820 | 13,824 |
| 19 | 02/14/2018 | 67 | 8,527 | 6973 | 5,450 | 439,800 | 13,762 |
| 20 | 02/14/2018 | 77 | 7,604 | 6590 | 5,030 | 500,320 | 11,664 |
| 21 | 02/15/2018 | 81 | 8,018 | 6291 | 5,547 | 504,440 | 11,797 |
| 22 | 02/15/2018 | 69.6 | 8,050 | 6286 | 5,846 | 495,260 | 12,937 |
| 23 | 02/16/2018 | 80 | 7,956 | 6879 | 4,985 | 495,800 | 13,817 |
| 24 | 02/16/2018 | 81 | 8,055 | 7192 | 4,909 | 496,640 | 12,386 |
| 25 | 02/17/2018 | 68 | 8,173 | 7306 | 6,026 | 500,540 | 14,297 |

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API 47- 091 - 01344 Farm name Coalquest Development LLC Well number 202

| PRODUCING FORMATION(S) | DEPTHS | | |
|------------------------|--------|-----|------------|
| Marcellus Shale | 7,793' | TVD | 13,327' MD |
| | | | |
| | | | |

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 ₂ S, ETC) |
|-------------------------|--------------------------------|------------------------------|--------------------------|-----------------------------|--|
| Sand/Silt | 0 | 552 | 0 | 552 | Freshwater @ 400' |
| Sand/Silt/Coal | 552 | 711 | 552 | 712 | Bakerstown Coal @ 552' TVD, Brush Creek Coal @ 630'TVD |
| Sand/Silt/Coal | 711 | 846 | 712 | 847 | Upper Freeport @ 711' TVD, Lower Freeport @ 753' TVD |
| Sand/Silt/Coal | 846 | 1662 | 847 | 1665 | Upper Kittanning @ 846' TVD, Middle Kittanning @ 880' TVD, Lower Kittanning @ 909' TVD, Saltwater @ 1,100' |
| Big Lime | 1662 | 1777 | 1665 | 1780 | Limestone |
| Balltown | 3265 | 3315 | 3320 | 3370 | Sandstone |
| Elk Siltstone | 4830 | 4883 | 4970 | 5023 | Siltstone |
| Burkett | 7451 | 7485 | 7638 | 7678 | Shale |
| Tully | 7485 | 7547 | 7678 | 7758 | Limestone |
| Mahantango | 7547 | 7717 | 7758 | 8067 | Shale |
| Marcellus | 7717 | 7774 | 8067 | 8276 | Shale |
| Purcell | 7774 | 7778 | 8276 | 8296 | Limestone |
| Lower Marcellus | 7778 | 7802* | 8296 | 13,327 | Shale - Gas shows through lateral |
| Onondaga | 7802* | | | | *Onondaga not penetrated - top estimated based on 4709101108thickness |

Please insert additional pages as applicable.

Drilling Contractor H&P
 Address 1437 South Boulder Ave. City Tulsa State OK Zip 74119

Logging Company NA
 Address _____ City _____ State _____ Zip _____

Cementing Company C&J Energy Services, Inc.
 Address 1650 Hackers Creek City Jane Lew State WV Zip 26378

Stimulating Company Keane Group
 Address 2121 Sage Road City Houston State TX Zip 77056

Please insert additional pages as applicable.

Completed by Arsenal Resources Telephone 304-629-6309
 Signature [Signature] Title Permitting Manager Date 5/30/18

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

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Hydraulic Fracturing Fluid Product Component Information Disclosure

| | |
|--------------------------------|--------------------|
| Job Start Date: | 2/3/2018 |
| Job End Date: | 2/17/2018 |
| State: | West Virginia |
| County: | Taylor |
| API Number: | 47-091-01344-00-00 |
| Operator Name: | Arsenal Resources |
| Well Name and Number: | Coal Quest II 202H |
| Latitude: | 39.29860800 |
| Longitude: | -80.11034500 |
| Datum: | NAD83 |
| Federal Well: | NO |
| Indian Well: | NO |
| True Vertical Depth: | 7,740 |
| Total Base Water Volume (gal): | 14,107,842 |
| 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 | Ascent | Carrier/Base Fluid | Water | 7732-18-5 | 100.00000 | 90.17889 | None |
| Sand (Proppant) | Keane | Proppant | Crystalline silica: Quartz (SiO2) | 14808-60-7 | 100.00000 | 9.36223 | None |
| Hydrochloric Acid (7.5%) | Keane | Acid Inhibitor | Water | 7732-18-5 | 92.50000 | 0.30774 | None |
| | | | Hydrochloric Acid | 7647-01-0 | 7.50000 | 0.02495 | None |
| KFR-16FW | Keane | Friction Reducer | Water | 7732-18-5 | 60.00000 | 0.06075 | None |
| | | | Distillates (petroleum), hydrotreated light | 64742-47-8 | 20.00000 | 0.02025 | None |
| | | | oleic acid diethanolamide | 93-83-4 | 1.50000 | 0.00152 | None |
| | | | ammonium chloride | 12125-02-9 | 1.50000 | 0.00152 | None |
| | | | alcohols, C12-16, ethoxylated | 68551-12-2 | 1.00000 | 0.00101 | None |
| MBC-516 | Keane | Biocide | Water | 7732-18-5 | 56.70000 | 0.00547 | None |
| | | | Glutaral | 111-30-8 | 26.70000 | 0.00258 | None |

| | | | | | | | |
|--|--------------|------------------------|---|------------|----------|---------|------|
| | | | didecyldimethylammonium chloride | 7173-51-5 | 8.00000 | 0.00077 | None |
| | | | quaternary ammonium compounds, benzyl-C12-16-alkyldimethyl, chlorides | 68424-85-1 | 5.30000 | 0.00051 | None |
| | | | ethonal | 64-17-5 | 2.80000 | 0.00027 | None |
| KLSI-21 | Keane | Scale Inhibitor | | | | | |
| | | | polyphosphoric acids, esters with triethanolamine, sodium salts | 68131-72-6 | 30.00000 | 0.00413 | None |
| KAI-12 | Keane | Acid Inhibitor | | | | | |
| | | | Ethylene glycol | 107-21-1 | 40.00000 | 0.00060 | None |
| | | | dipropylene glycol, monomethyl ether | 34590-94-8 | 20.00000 | 0.00030 | None |
| | | | Ethoxylated alcohol | 68131-39-5 | 10.00000 | 0.00015 | None |
| | | | Cinnamaldehyde | 104-55-2 | 10.00000 | 0.00015 | None |
| | | | formic acid | 64-18-6 | 10.00000 | 0.00015 | None |
| | | | Tar bases, quinoline derivs., benzyl chloride-quaternized | 72480-70-7 | 10.00000 | 0.00015 | None |
| | | | isoproyl alcohol | 67-63-0 | 5.00000 | 0.00008 | 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. | | | | | | | |
| Other Chemical(s) | Listed Above | See Trade Name(s) List | | | | | |
| | | | Water | 7732-18-5 | 92.50000 | 0.30774 | |
| | | | Distillates (petroleum), hydrotreated light | 64742-47-8 | 20.00000 | 0.02025 | |
| | | | Glutaral | 111-30-8 | 26.70000 | 0.00258 | |
| | | | oleic acid diethanolamide | 93-83-4 | 1.50000 | 0.00152 | |
| | | | ammonium chloride | 12125-02-9 | 1.50000 | 0.00152 | |
| | | | alcohols, C12-16, ethoxylated | 68551-12-2 | 1.00000 | 0.00101 | |
| | | | didecyldimethylammonium chloride | 7173-51-5 | 8.00000 | 0.00077 | |
| | | | quaternary ammonium compounds, benzyl-C12-16-alkyldimethyl, chlorides | 68424-85-1 | 5.30000 | 0.00051 | |
| | | | dipropylene glycol, monomethyl ether | 34590-94-8 | 20.00000 | 0.00030 | |
| | | | ethonal | 64-17-5 | 2.80000 | 0.00027 | |
| | | | Tar bases, quinoline derivs., benzyl chloride-quaternized | 72480-70-7 | 10.00000 | 0.00015 | |
| | | | Cinnamaldehyde | 104-55-2 | 10.00000 | 0.00015 | |
| | | | Ethoxylated alcohol | 68131-39-5 | 10.00000 | 0.00015 | |
| | | | formic acid | 64-18-6 | 10.00000 | 0.00015 | |
| | | | Water | 7732-18-5 | 85.00000 | 0.00010 | |
| | | | isoproyl alcohol | 67-63-0 | 5.00000 | 0.00008 | |

* 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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THRASHER

THE THRASHER GROUP, INC.
600 WHITE OAKS BLVD
BRIDGEPORT, WV 26330
PHONE 304-624-4108

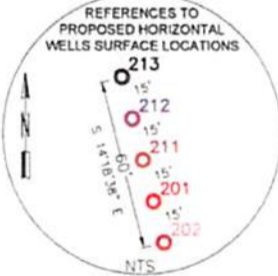
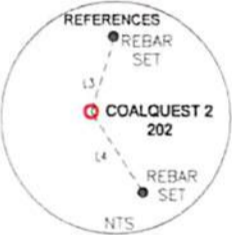
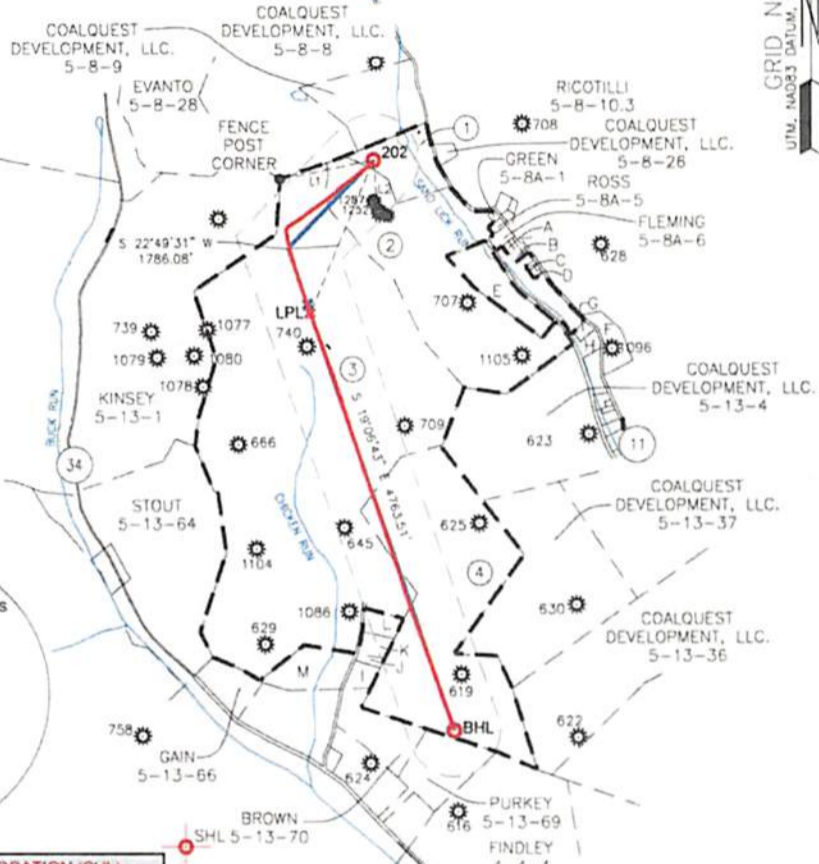
NOTES ON SURVEY

- COORDINATES SYSTEM IS UTM, NAD 83 DATUM, ZONE 17, U.S. FOOT AND WELL COORDINATES ESTABLISHED USING SURVEY GRADE GPS.
- ROYALTY OWNER INFORMATION AND THEIR BOUNDARIES SHOWN HEREON WERE PLOTTED FROM DEEDS AND/OR TAX PARCEL MAPS PROVIDED BY CLIENT AND FIELD LOCATIONS.
- THIS PLAT DOES NOT REPRESENT A BOUNDARY SURVEY OF THE PARCELS SHOWN HEREON.
- NO DWELLINGS AND BUILDINGS WITHIN 625 FEET OF PROPOSED CENTER OF PAD.
- NO WATER WELLS OR DEVELOPED SPRINGS WITHIN 250 FEET OF PROPOSED WELL.
- NO PERENNIAL STREAMS, LAKES, PONDS, RESERVOIRS OR WETLANDS WITHIN 100 FEET OF THE LIMITS OF DISTURBANCE.
- NO NATURALLY PRODUCING TROUT STREAM WITHIN 300 FEET OF LIMITS OF DISTURBANCE.

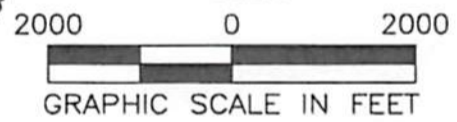
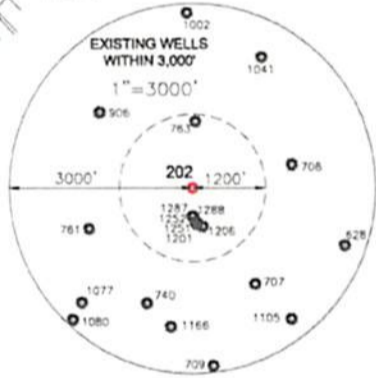
| TRACT | SURFACE OWNER | TAX PARCEL | ACRES |
|-------|---------------------------|------------|-------|
| 1 | COALQUEST DEVELOPMENT LLC | 5-8-10.2 | 10 |
| 2 | COALQUEST DEVELOPMENT LLC | 5-8-10 | 63.9 |
| 3 | COALQUEST DEVELOPMENT LLC | 5-13-3 | 224.0 |
| 4 | COALQUEST DEVELOPMENT LLC | 5-13-38 | 83.0 |

| LINE | DESCRIPTION | DISTANCE | DESCRIPTION | MONUMENT |
|------|---------------|----------|-----------------|-------------------|
| L1 | S 78°24'31" W | 1039.76 | SHL TO LANDMARK | FENCE POST CORNER |
| L2 | S 04°31'51" E | 543.98 | SHL TO LANDMARK | WELL # 1252 |
| L3 | N 17°46'23" E | 212.54 | SHL TO LANDMARK | REBAR SET |
| L4 | S 32°47'29" E | 259.11 | SHL TO LANDMARK | REBAR SET |

| TRACT | ADJOINER | TAX PARCEL |
|-------|--------------------|------------|
| A | FLEMING | 5-8A-11 |
| B | POLEN | 5-8A-12 |
| C | POLING | 5-8-11 |
| D | FELTON | 5-8-11.2 |
| E | COALQUEST DEV. LLC | 5-8-10.1 |
| F | PHILLIPS | 5-13-5.1 |
| G | CURRY | 5-13-5.4 |
| H | CURRY | 5-13-5.5 |
| I | SINES | 5-13-41 |
| J | SINES | 5-13-40 |
| K | WILLIAMS | 5-13-39.1 |
| L | SPOTLOE | 5-13-39 |
| M | SINES | 5-13-40 |



| SURFACE HOLE LOCATION (SHL): | SURFACE HOLE LOCATION (SHL): |
|--|--|
| UTM (NAD83, ZONE 17, METERS): NORTHING: 4,350,291.507 EASTING: 576,712.680 | UTM (NAD83, ZONE 17, METERS): NORTHING: 4,350,291.502 EASTING: 576,712.691 |
| LANDING POINT LOCATION (LPL): | LANDING POINT LOCATION (LPL): |
| UTM (NAD83, ZONE 17, METERS): NORTHING: 4,349,817.964 EASTING: 576,492.273 | UTM (NAD83, ZONE 17, METERS): NORTHING: 4,349,789.734 EASTING: 576,501.507 |
| BOTTOM HOLE LOCATION (BHL): | BOTTOM HOLE LOCATION (BHL): |
| UTM (NAD83, ZONE 17, METERS): NORTHING: 4,348,416.922 EASTING: 576,974.929 | UTM (NAD83, ZONE 17, METERS): NORTHING: 4,348,417.130 EASTING: 576,977.623 |



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 REGULATIONS ISSUED AND PRESCRIBED BY THE DEPARTMENT OF ENVIRONMENTAL PROTECTION.

P.S. 2270 *M.S.W. 1/12/18*

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| <p>(+) DENOTES LOCATION OF WELL ON UNITED STATES TOPOGRAPHIC MAPS</p> <p>WVDEP OFFICE OF OIL & GAS 601 57TH STREET CHARLESTON, WV 25034</p> | <p>MINIMUM DEGREE OF ACCURACY: $\frac{1}{200}$</p> <p>PROVEN SOURCE OF ELEVATION: SURVEY GRADE GPS (NAVD 88, US FT)</p> | <p>OPERATOR'S WELL #: COALQUEST 2 202</p> <p>API WELL #: 47 91 01344</p> <p>STATE COUNTY PERMIT</p> |
| | <p>WELL TYPE: OIL <input type="checkbox"/> WASTE DISPOSAL <input type="checkbox"/> PRODUCTION <input type="checkbox"/> DEEP <input type="checkbox"/> GAS <input checked="" type="checkbox"/> LIQUID INJECTION <input type="checkbox"/> STORAGE <input type="checkbox"/> SHALLOW <input checked="" type="checkbox"/></p> <p>WATERSHED: SAND LICK RUN OF SIMPSON CREEK</p> <p>DISTRICT: COURTHOUSE COUNTY: TAYLOR</p> <p>SURFACE OWNER: COALQUEST DEVELOPMENT LLC</p> <p>OIL & GAS ROYALTY OWNER: PATRIOT MINING, INC.</p> <p>DRILL <input type="checkbox"/> DRILL DEEPER <input type="checkbox"/> REDRILL <input type="checkbox"/> FRACTURE OR STIMULATE <input type="checkbox"/> PLUG OFF OLD FORMATION <input type="checkbox"/> PERFORATE NEW FORMATION <input type="checkbox"/></p> <p>CONVERT <input type="checkbox"/> PLUG & ABANDON <input type="checkbox"/> CLEAN OUT & REPLUG <input type="checkbox"/> OTHER CHANGE <input checked="" type="checkbox"/> (SPECIFY) AS-DRILLED</p> <p>TARGET FORMATION: MARCELLUS ESTIMATED DEPTH: 7,793 TWD 13,327 TWD</p> | <p>WELL OPERATOR: ARSENAL RESOURCES</p> <p>ADDRESS: 6031 WALLACE ROAD EXTENSION #300</p> <p>CITY: WEXFORD STATE: PA ZIP CODE: 15090</p> <p>DESIGNATED AGENT: WILLIAM VEIGEL</p> <p>ADDRESS: 65 PROFESSIONAL PLACE SUITE 20</p> <p>CITY: BRIDGEPORT STATE: WV ZIP CODE: 26330</p> |
| <p>REVISIONS:</p> | | <p>DATE: 01-12-2018</p> <p>DRAWN BY: K. POTH</p> <p>SCALE: 1" = 2000'</p> <p>DRAWING NO: 030-3042</p> <p>WELL LOCATION PLAT</p> |

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| LEGEND: AS-DRIILLED SURFACE HOLE / BOTTOM HOLE EXISTING / PRODUCING WELLSHEAD LANDING POINT LOCATION EXISTING WATER WELL EXISTING SPRING PROPOSED PATH AS-DRIILLED PATH 500' BUFFER LEASE BOUNDARY DRILLING UNIT SURFACED BOUNDARY | REVISIONS: DATE: 01-12-2018 DRAWN BY: K. POTH SCALE: 1" = 2000' DRAWING NO: 030-3042 WELL LOCATION PLAN |
| CITY: WEXFORD STATE: PA ZIP CODE: 15090 ADDRESS: 601 WALLACE ROAD EXTENSION #300 CITY: BRIDGEPORT STATE: WV ZIP CODE: 26330 | WELLS OPERATOR: ARSENAL RESOURCES ADDRESS: 601 WALLACE ROAD EXTENSION #300 CITY: WEXFORD STATE: PA ZIP CODE: 15090 |
| WELLS TYPE: OIL WASTE DISPOSAL PRODUCTION DEEP GAS LIQUID INJECTION STORAGE SHALLOW | WELLS OPERATOR: ARSENAL RESOURCES ADDRESS: 601 WALLACE ROAD EXTENSION #300 CITY: WEXFORD STATE: PA ZIP CODE: 15090 |
| WELLS OPERATOR: ARSENAL RESOURCES ADDRESS: 601 WALLACE ROAD EXTENSION #300 CITY: WEXFORD STATE: PA ZIP CODE: 15090 | WELLS OPERATOR: ARSENAL RESOURCES ADDRESS: 601 WALLACE ROAD EXTENSION #300 CITY: WEXFORD STATE: PA ZIP CODE: 15090 |

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| WELLS OPERATOR: ARSENAL RESOURCES ADDRESS: 601 WALLACE ROAD EXTENSION #300 CITY: WEXFORD STATE: PA ZIP CODE: 15090 | WELLS OPERATOR: ARSENAL RESOURCES ADDRESS: 601 WALLACE ROAD EXTENSION #300 CITY: WEXFORD STATE: PA ZIP CODE: 15090 |
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P.S. 2270
 M.S. Wolf

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| SURFACE HOLE LOCATION (SHL) UTM (NAD83, ZONE 17, METERS): NORTHING: 4,350,291.507 EASTING: 576,212.691 | SURFACE HOLE LOCATION (SHL) UTM (NAD83, ZONE 17, METERS): NORTHING: 4,349,789.734 EASTING: 576,501.507 |
| LANDING POINT LOCATION (LPL) UTM (NAD83, ZONE 17, METERS): NORTHING: 4,349,817.964 EASTING: 576,492.273 | BOTTOM HOLE LOCATION (BHL) UTM (NAD83, ZONE 17, METERS): NORTHING: 4,348,417.130 EASTING: 576,974.929 |



| TRACT | ADJOINER | TAX PARCEL |
|-------|--------------------|------------|
| A | FLEMING | 5-BA-11 |
| B | POLEN | 5-BA-12 |
| C | POLIN | 5-BA-11 |
| D | FELTON | 5-BA-11 |
| E | COALQUEST DEV. LLC | 5-BA-10 |
| F | PHILLIPS | 5-13-5-1 |
| G | CURRY | 5-13-5-4 |
| H | CURRY | 5-13-5-5 |
| I | SINES | 5-13-4-1 |
| J | WILLIAMS | 5-13-39.1 |
| K | WILLIAMS | 5-13-39.1 |
| L | SPOTLOE | 5-13-39 |
| M | SINES | 5-13-40 |

| LINE | DESCRIPTION | DISTANCE | DESCRIPTION | DISTANCE |
|------|---------------|----------|---------------|----------|
| L1 | S 78°24'31" W | 1039.76 | S 78°24'31" W | 1039.76 |
| L2 | S 04°31'51" E | 543.98 | S 04°31'51" E | 543.98 |
| L3 | N 17°46'23" E | 212.54 | N 17°46'23" E | 212.54 |
| L4 | S 32°47'29" E | 259.11 | S 32°47'29" E | 259.11 |

| TRACT | SURFACE OWNER | ACRES |
|-------|---------------------------|-------|
| 1 | COALQUEST DEVELOPMENT LLC | 10 |
| 2 | COALQUEST DEVELOPMENT LLC | 63.9 |
| 3 | COALQUEST DEVELOPMENT LLC | 224.0 |
| 4 | COALQUEST DEVELOPMENT LLC | 83.0 |

NOTES ON SURVEY
 THE THRASHER GROUP INC.
 800 WHITE OAKS BLVD
 BRIDGEPORT, WV 26330
 PHONE 304-624-4108

COORDINATES SYSTEM IS UTM, NAD 83 DATUM, ZONE 17, U.S. FOOT AND WELL COORDINATES ESTABLISHED USING SURVEY GRADE GPS.

SURFACE AND ROYALTY OWNER INFORMATION AND THEIR BOUNDARIES SHOWN HEREON WERE PLOTTED FROM DEEDS LOCATIONS MAPS PROVIDED BY CLIENT AND FIELD.

THIS PLAN DOES NOT REPRESENT A BOUNDARY SURVEY OF THE PARCELS SHOWN HEREON.

4. NO DWELLINGS AND BUILDINGS WITHIN 625 FEET OF PROPOSED OF CENTER OF PAD.

5. NO WATER WELLS OR DEVELOPED SPRINGS WITHIN 250 FEET OF PROPOSED WELL.

6. NO PERENNIAL STREAMS, LAKES, PONDS, RESERVOIRS OR WETLANDS WITHIN 100 FEET OF THE LIMITS OF DISTURBANCE.

7. NO NATURALLY PRODUCING TROUT STREAM WITHIN 300 FEET OF LIMITS OF DISTURBANCE.

GRID NORTH
 UTM, NAD83 DATUM, ZONE 17, US FT
 Longitude: 80°05'00"
 18,838' BHL
 12,680' SHL