

west virginia department of environmental protection

Office of Oil and Gas 601 57th Street, S.E. Charleston, WV 25304 (304) 926-0450 fax: (304) 926-0452

Austin Caperton, Cabinet Secretary www.dep.wv.gov

Wednesday, June 19, 2019 WELL WORK PERMIT Horizontal 6A / Re-Work

EQT PRODUCTION COMPANY 625 LIBERTY AVE., SUITE 1700 PITTSBURGH, PA 15222

Re: Permit approval for ERLEWINE 7H 47-103-03000-00-00

This well work permit is evidence of permission granted to perform the specified well work at the location described on the attached pages and located on the attached plat, subject to the provisions of Chapter 22 of the West Virginia Code of 1931, as amended, and all rules and regulations promulgated thereunder, and to any additional specific conditions and provisions outlined in the pages attached hereto. Notification shall be given by the operator to the Oil and Gas Inspector at least 24 hours prior to the construction of roads, locations, and/or pits for any permitted work. In addition, the well operator shall notify the same inspector 24 hours before any actual well work is commenced and prior to running and cementing casing. Spills or emergency discharges must be promptly reported by the operator to 1-800-642-3074 and to the Oil and Gas Inspector.

Please be advised that form WR-35, Well Operators Report of Well Work is to be submitted to this office within 90 days of completion of permitted well work, as should form WR-34 Discharge Monitoring Report within 30 days of discharge of pits, if applicable. Failure to abide by all statutory and regulatory provisions governing all duties and operations hereunder may result in suspension or revocation of this permit and, in addition, may result in civil and/or criminal penalties being imposed upon the operators.

Per 35 CSR 4-5.2,g this permit will expire in two (2) years from the issue date unless permitted well work is commenced. If there are any questions, please feel free to contact me at (304) 926-0450.

> James A. Martin Chief

Operator's Well Number: ERLEWINE 7H

Farm Name:

ERLEWINE, RICHARD

U.S. WELL NUMBER: 47-103-03000-00-00

Horizontal 6A Re-Work

Date Issued: 6/19/2019

API Number: 103-03000 Re-work

PERMIT CONDITIONS

West Virginia Code § 22-6A-8(d) allows the Office of Oil and Gas to place specific conditions upon this permit. Permit conditions have the same effect as law. Failure to adhere to the specified permit conditions may result in enforcement action.

CONDITIONS

- 1. Operator shall install signage per § 22-6A-8g (6) (B) at all source water locations included in their approved water management plan within 24 hours of water management plan activation.
- 2. Oil and gas water supply wells will be registered with the Office of Oil and Gas and all such wells will be constructed and plugged in accordance with the standards of the Bureau for Public Health set forth in its Legislative rule entitled Water Well Regulations, 64 C.S.R. 19. Operator is to contact the Bureau of Public Health regarding permit requirements. In lieu of plugging, the operator may transfer the well to the surface owner upon agreement of the parties. All drinking water wells within fifteen hundred feet of the water supply well shall be flow tested by the operator upon request of the drinking well owner prior to operating the water supply well.
- 3. 24 hours prior to the initiation of the completion process the operator shall notify the Chief or his designee.
- 4. During the completion process the operator shall monitor annular pressures and report any anomaly noticed to the chief or his designee immediately.
- 5. If any explosion or other accident causing loss of life or serious personal injury occurs in or about a well or well work on a well, the well operator or its contractor shall give notice, stating the particulars of the explosion or accident, to the oil and gas inspector and the Chief, within 24 hours of said accident.
- 6. The operator shall provide to the Office of Oil and Gas the dates of each of the following within 30 days of their occurrence: completion of construction of the well pad, commencement of drilling, cessation of drilling, completion of any other permitted well work, and completion of the well. Such notice shall be provided by sending an email to DEPOOGNotify@wv.gov.

EQT Production

Hydraulic Fracturing Monitoring Plan

Pad ID: Erlewine (NMA13)

County: Wetzel

February 20, 2019

Page 1 of 2

MAY 2 2010

WV Department of Environmental Protection

Purpose

The purpose of this pad-specific Hydraulic Fracturing Monitoring Plan is to identify and notify conventional well operators near EQT hydraulic fracturing in Wetzel County, WV prior to hydraulic fracturing at the following EQT wells on the Erlewine (NMA13) well site.

Due to the requirements under 35CSR8 5.11, the permittee is required to review the area surrounding the proposed well pad so as to identify and evaluate potential conduits for unintended fracture propagation.

A report is required to be submitted along with a well work permit application.

The plan is being implemented as an additional safety measure to be utilized in conjunction with existing best management practices and emergency action plans for the site. These additional measures include coordination with well operators of the timing and location of the hydraulic fracturing, establishment of measures well operators should implement, and assurance that the OOG is notified of the timeline, as well as any issues that may arise during fracturing.

1. Communications with Well Operators

EQT, using available data (WV Geological Survey, WVDEP website, and IHS data service), has identified all known wells and well operators within 500 feet of this pad and the lateral sections that are known or could reasonably be expected to be within range of the fracture propagation. A map showing these wells along with a list of the wells and operators is included in **Attachment A**.

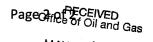
EQT will notify these operators of the hydraulic fracturing schedule for these wells, and coordinate with them throughout the fracturing process.

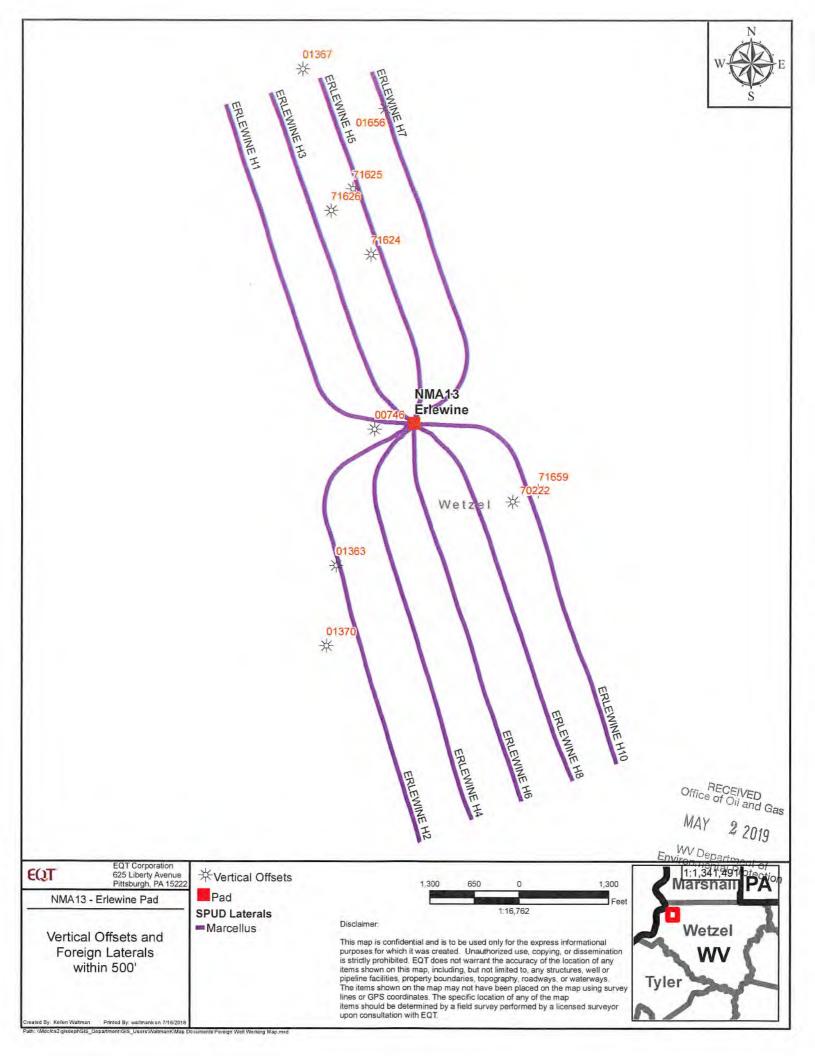
EQT will recommend to these operators at a minimum to:

- Inspect their surface equipment prior to fracturing to establish integrity and establish prefrac well conditions
- 2. Observe wells closely during and after fracturing and monitor for abnormal increases in water, gas or pressure
- Inspect or install master valves or other necessary equipment for wellhead integrity capable of a pressure recommended by EQT
- 4. Notify the OOG and EQT if any changes in water, gas production, pressure, or other anomalies are identified

2. Reporting

EQT will provide information relating to the hydraulic fracturing schedule, communication with other operators, and ongoing monitoring of the work upon request of OOG or immediately in the event of any noted abnormalities.





| API Number | Completion Date Current Operator | Elevation | Elevation Reference | Final Status I | Lat | Long | Well Name | Permit Date SPUD Date TD Formation | Total Depth Permit |
|----------------|--|-----------|---------------------|----------------|---------|-------|------------------------------|-------------------------------------|--------------------|
| 47103016560000 | 3/19/1995 ALLIANCE PETROLEUM CORPORATION | 1209 | 9 GR | OIL | 39.6960 | -80.7 | 988 1 NEWMAN REVA | 12/20/1994 12/30/1994 KEENER /SD/ | 2030 01656 |
| 47103013630000 | 11/8/1985 BLUE GROUP OPERATING INCORPORATED | 124 | 7 KB | GAS | 39.6778 | -80.8 | 014 2 WILSON WILLARD | 10/18/1985 10/28/1985 DEVONIAN /SH/ | 3000 01363 |
| 47103716250000 | UNKNOWN | | | UNKWN | 39.6928 | -80.8 | 005 3957 L & O PALMER 1-4201 | | 71625 |
| 47103716590000 | UNKNOWN | | | UNKWN | 39.6808 | -80.7 | 909 1 J W ONEIL | | 71659 |
| 47103013670000 | 12/13/1985 BLUE GROUP OPERATING INCORPORATED | 1269 | 9 KB | GAS | 39.6976 | -80.8 | 031 1 BAXTER CLARENCE | 11/8/1985 11/18/1985 DEVONIAN /SH/ | 3000 01367 |
| 47103702220000 | UNKNOWN | | | UNKWN | 39.6803 | -80.7 | 922 1 J W ONEILL | • | 70222 |

Office of Oil and Gas
MAY 2 2019

WW Department of Environmental Protection



WW-6B (04/15)

| API NO. 47-103 | _ 03000 |
|----------------|---------------------|
| OPERATOR W | ELL NO. Erlewine 7H |
| Well Pad Nar | ne: Erlewine |

STATE OF WEST VIRGINIA DEPARTMENT OF ENVIRONMENTAL PROTECTION, OFFICE OF OIL AND GAS WELL WORK PERMIT APPLICATION

| 1) Well Operator: EQT Produc | ction Company | 306686 | Wetzel | Proctor | New Martinsville |
|---|-----------------------|-----------------------|-------------------|-------------|--------------------------------------|
| · · · · · · · · · · · · · · · · · · · | - | Operator ID | County | District | Quadrangle |
| 2) Operator's Well Number: Erle | ewine 7H | Well Pad | Name: Erlew | ine | |
| 3) Farm Name/Surface Owner: | Erlewine, Richard e | et al Public Road | d Access: CR | 1/2 | |
| 4) Elevation, current ground: | 1,212' (as-built) Ele | evation, proposed p | oost-construction | on: 1,212' | |
| 5) Well Type (a) Gas X | Oil | Unde | rground Storag | ge | |
| Other | _ | | | - | |
| (b)If Gas Shall | llow X | Deep | | | |
| Hor | izontal X | | | | Drit |
| 6) Existing Pad: Yes or No Yes | · | | | | Dr17 5~23-18 |
| 7) Proposed Target Formation(s) Target Formation: Marcellus D | | • | - | , , | |
| | | | <u> </u> | 300 4,400 p | 01 |
| 8) Proposed Total Vertical Depth | | ileu) | | | |
| 9) Formation at Total Vertical D | • | | | | |
| 10) Proposed Total Measured De | epth: 11,354' (A | As-Drilled) | | | |
| 11) Proposed Horizontal Leg Le | ngth: 4,017' (As | s-Drilled) | | | |
| 12) Approximate Fresh Water St | rata Depths: | 105' | | | |
| 13) Method to Determine Fresh | Water Depths: C | Orilling - taken from | m WR-35 | | |
| 14) Approximate Saltwater Dept | hs: 1,671' | | | | |
| 15) Approximate Coal Seam Dep | pths: 374', 444' 6 | 644' 769' 868' 99 | 9' - Taken fron | n WR-35 | |
| 16) Approximate Depth to Possi | ble Void (coal min | ne, karst, other): | None reported | ., | |
| 17) Does Proposed well location | | | | v | |
| directly overlying or adjacent to | an active mine? | Yes | No | | RECEIVED |
| (a) If Yes, provide Mine Info: | Name: | | | Offic | e of Oil and Gas |
| | Depth: | | | | MAY 3 0 2019 |
| | Seam: | | | | ort Of |
| | Owner: | | | V. Envi | N Department of ronmental Protection |

| WW-6B | |
|---------|--|
| (04/15) | |

API NO. 47-103 - 03000

OPERATOR WELL NO. Erlewine 7H
Well Pad Name: Erlewine

18)

CASING AND TUBING PROGRAM

| ТҮРЕ | Size (in) | New or Used | <u>Grade</u> | Weight per ft. (lb/ft) | FOOTAGE: For Drilling (ft) | INTERVALS: Left in Well (ft) | CEMENT: Fill-up (Cu. Ft.)/CTS |
|--------------|--------------|-------------------|--------------|---------------------------|----------------------------|---|-------------------------------|
| Conductor | 20 | New | LS | 94.1 | 90' | 90' | 40 ft^3 / CTS |
| Fresh Water | 13 3/8 | New | J-55 | 54.5 | 1,218 KB - 1,208 GL | 1,218 KB - 1,208 GL | 1,074 ft^3 / CTS |
| Coal | 13 3/8 | New | J-55 | 54.5 | 1,218 KB - 1,208 GL | 1,218 KB - 1,208GL | 1,074 ft^/CTS |
| Intermediate | 9 5/8 | New | J-55 | 36 | 2,383' | 2,383' | 956 ft^3/CTS |
| Production | 5 1/2 | New | P-110 | 20 | 11,324' | 11,324' | 2,541 ft^ |
| Tubing | | | | | | May not be run, if run set 40' above top perf or 80° inclination. | |
| Liners | | | | | | | |



| TYPE | Size (in) | Wellbore Diameter (in) | <u>Wall</u> <u>Thickness</u> <u>(in)</u> | Burst Pressure (psi) | Anticipated Max. Internal Pressure (psi) | Cement Type | Cement Yield (cu. ft./k) |
|--------------|-----------|------------------------|--|----------------------|--|---------------------|--------------------------|
| Conductor | 20 | 24 | 0.375" | N/A | 40 psi | Type 1 | 1.18 |
| Fresh Water | 13 3/8 | 17 1/2 | 0.380" | 2,730 psi | 2,184 psi | HalChem Class "A" | 1.18 |
| Coal | 13 3/8 | 17 1/2 | 0.380" | 2,730 psi | 2,184 psi | HalChem Class "A" | 1.18 |
| Intermediate | 9 5/8 | 12 1/4 | 0.352" | 3,520 psi | 2,816 psi | HalChem Class "A" | 1.21 |
| Production | 5 1/2 | 8 3/4 | 0.361" | 12,360 psi | 10,112 psi | Lead: Tuned Spacer3 | 2.37/1.21 |
| Tubing | | | | | | Tail: VeriCem | |
| Liners | | | | | | | |

PACKERS

| Kind: | | |
|-------------|------|--|
| Sizes: | | |
| Depths Set: | | |

| WW-6B | |
|---------|--|
| (10/14) | |

API NO. 47-103 - 03000
OPERATOR WELL NO. Erlewine 7H
Well Pad Name: Erlewine

19) Describe proposed well work, including the drilling and plugging back of any pilot hole:

Well has been drilled to TD. EQT is proposing to perforate and fracture the Marcellus and turn into production.

DAH 5-23-47

20) Describe fracturing/stimulating methods in detail, including anticipated max pressure and max rate:

Hydraulic fracturing is completed in accordance with state regulations using water recycled from previously fractured wells and obtained from freshwater sources. This water is mixed with sand and a small percentage (less than 0.1%) of chemicals (including 15% Hydrochloric acid, gelling agent, gel breaker, friction reducer, biocide, and scale inhibitor), referred to in the industry as a "slickwater" completion. Maximum anticipated internal casing pressure is expected to be approximately 10000 psi, maximum anticipated treating rates are expected to average approximately 100 bpm. Stage lengths vary from 150 to 300 feet. Average approximately 350,000 gallons of water per stage. Sand sizes vary from 100 mesh to 20/40 mesh. Average approximately 400,000 pounds of proppant per stage.

| 21) | Total Area to be disturbed | , including roads. | stockpile area, | pits, etc., | (acres): N/A | ١ |
|-----|----------------------------|--------------------|-----------------|-------------|--------------|---|
|-----|----------------------------|--------------------|-----------------|-------------|--------------|---|

- 22) Area to be disturbed for well pad only, less access road (acres): N/A
- 23) Describe centralizer placement for each casing string:
- Surface: Bow spring centralizers placed on joints 2.5.8.11.14.17.20.23 and 26
- Intermediate: Bow spring centralizers placed on joints 4,8,12,16,20,24,28 and 32.
- Production: rigid spiral centralizers placed on every third joint beginning with joint 1 to joint 201. Ran a total of 51rigid spiral centralizers. Ran bow spring centralizers from joint 209 to joint 257 on every fourth joint. A total of 7 bow spring centralizers were run.

24) Describe all cement additives associated with each cement type:

Fresh Water/Coal cement is typically Class A w/ 0.25 pps Cello-Flake and 1.0% to 3.0% CaCl2. Intermediate cement is a lead/tail blend with the lead being Class A with 10% Salt and 0.25 pps Cello-Flake. Tail is Class A with 0.25 pps Cello-Flake and 1.0% to 3.0% CaCl2. Production cement is a lead/tail blend with the lead being HES's GASSTOP blend w/ 0.8% Retarder and tail being HES's HALCEM blend w/ 0.65% Retarder and 0.1% Dispersant or SLB with lead/tail with the lead being Class A w/ 10% Salt or Class A w/ FlexSeal and the tail being Class A w/ 0.2% Dispersant, 0.4% Fluid Loss, 0.2% Anti-Foam, 0.15% Retarder, and 0.2% Anti-Settling Agent.

25) Proposed borehole conditioning procedures:

-Fresh Water/Coal section will be conditioned by circulating air/mist through the drill string at TD for between 30 to 60 minutes until well bore is clean of cuttings.

-Intermediate section will be conditioned by circulating air/stiff foam through the drill string at TD for between 30 to 120 minutes until well bore is clean of cuttings.

-Production section will be conditioned by circulating drilling fluid through the drill string at TD for between 60 to 720 minutes (minimum of three bottoms up) until shakers are clear of cuttings and the drill string pulls free off of bottom.

*Note: Attach additional sheets as needed.

Well: Erlewine #7H State: West Virginia Wetzel

STONE ENERGY - PROPOSED HORIZONTAL Revision: 30-Sept-13

Permit Number: 47-103-Permit Issued:

Post Construction Ground Elevation:

1212"

Kelly Bushing: Rig:

Spud Date:

TD Date: Rig Release Date:

County: District: Proctor Mary Prospect: Location: Surface: North = 4,392,661 East = 517,403 (UTM NAD 83) North = 4,394,211 East = 517,210 (UTM NAD 83) PTD: 12000' MD / 6750' TVD

HOLE PILOT HOLE WELLBORE CASING & CEMENTING DATA MW & HOLE SIZE **FORMATION TOPS** DIAGRAM **DIRECTIONAL DATA** FLUID TYPE DEV. L 24" Hole then Driven 80' KB (62' BGL) CONDUCTOR PIPE Vertical 20" x 3/8" wall L/S PE @ 80' (set in bedrock & grouted to surface) Shallowest FW 75' TVD 17-1/2" Hole Pittsburgh Coal 925' TVD Air / Mist Deepest FW 930' TVD 1190' TVD SURFACE CASING Vertical 13-3/8" 54.5# J-55 STC @ 1190' MD/TVD Salt Water 1800' TVD Set through fresh water zones Little Lime 2022 TVD Set through coal zones 12-1/4" Hole Big Lime 2052' TVD Cemented to surface Stiff Foam Big Injun Sandstone 2152 TVD Base of Big Injun 2252' TVD 2400' TVD INTERMEDIATE CASING Vertical 9-5/8" 35,0# J-55 LTC @ 2400' MD/TVD Berea Sandstone 2620' TVD Set through potential salt water zones Set below base of Big Injun Gordon Sandstone 2865' TVD Cemented to surface 8-3/4" Hole Air/ Dust Environment M Of State (Base) 6186' TVD KOP @ 6069' TVD WBW 9,00 O Hiddlesex Shale 6280' TVD In Curve -34 Hole 2019 in the transport of Protection 3/4" Hole West River Shale 6310' TVD 20 Geneseo Shale 6645' TVD Tully Limestone 6665' TVD Hamilton Shale 6725' TVD Marcellus Shale 6765' TVD WBM In Lateral -90.5 Lateral Onondaga Limestone 6815' TVD TD @ 12000' MD / 6750' TVD Landing Point (LP) @ 7500' MD / 6790' TVD PRODUCTION CASING Notes: Formation tops as per vertical pilot hole ~90,5° angle 5-1/2" 20.0# P-110 CDC @ 12000' MD Curve & lateral tops will vary due to structural changes -342° azimuth Top of Cement @ 1400' (~1000' inside 9-5/8") Directional plan based upon best estimate of structure

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

| API 47 - 103 _ 03000 | County Wetze | Distr | rict Proctor | |
|--|--|--|----------------------|----------------------|
| Quad New Martinsville | Pad Name Erle | wine Field | d/Pool Name Mary | 1 |
| Farm name Erlewine, Richard | | | Il Number #7H | |
| Operator (as registered with the OOG | Stone Energy Co | orporation | | |
| Address 1300 Fort Pierpont Dr | Suite 201 City Me | organtown | State WV | Zio 26508 |
| Bottom Hole | Attach an as-dril Northing 4,392,661 Northing 4,393,087 Northing 4,394,209 | led plat, profile view, and dev Easting Easting Easting | 517,604 | Cil and Cas |
| Elevation (ft) 1,212 GL | Type of Well | ■New □ Existing | Type of Report | nterim Drinal |
| Permit Type Deviated H | lorizontal 🚪 Horizo | ontal 6A D Vertical | Depth Type | Deep Shallow |
| Type of Operation Convert I | Deepen Drill | □ Plug Back □ Redrilling | □ Rework | Stimulate |
| Well Type □ Brine Disposal □ CBM | M ■ Gas □ Oil □ S | econdary Recovery Solution | on Mining Stora | ge 🗆 Other |
| Type of Completion ■ Single □ Mu | ltiple Fluids Proc | luced Brine Gas | NGL n Oil n | Other |
| Drilled with □ Cable ■ Rotary | | | 1,01 001 0 | |
| Mud Type(s) and Additive(s) Saturated salt mud which include Soda Ash, and Sodium Chloride | | arite, Lime, New-Drill, Per | ma-Lose HT, Xa | n-Plex D, X-Cide 102 |
| | | 446 | | |
| Date permit issued 7/9/2014 | Date drilling con | nmenced8/6/2014 | Date drilling cea | sed 12/5/2014 |
| Date completion activities beganN | lot Yet Completed | Date completion activities | s ceased Not Ye | t Completed |
| Verbal plugging (Y/N) N | Date permission grant | ed(| Granted by | |
| Please note: Operator is required to s | ubmit a plugging appli | ication within 5 days of verba | l permission to plug | |
| Freshwater depth(s) ft | 105 | Open mine(s) (Y/N) depth | s | N |
| our water depth(s) it | 1,671 | Void(s) encountered (Y/N | | N |
| Coal depth(s) ft 374, 444, 644, | 769, 868 and 999 | Cavern(s) encountered (Y/ | N) depths | N |
| Is coal being mined in area (Y/N) | ADDE | OVED | | Reviewed by: |
| DA | ME: Du, | 17 | | |

| 2401. | 0.25.15 | |
|-------|---------|-------|
| API | 47- 103 | 03000 |

Farm name Erlewine, Richard

_____Well number_#7H

| CASING | Hole | Casing | | New or | Grade | Basket | Did cement circulate (Y/N) |
|-------------------|----------|---------|-----------------------|--------|----------------|-------------|-----------------------------|
| STRINGS | Size | Size | Depth | Used | wt/ft | Depth(s) | * Provide details below* |
| Conductor | 24" | 20" | 90' | New | LS - 941 ppf | | N - GTS |
| Surface | 17.5" | 13.375" | 1,218' KB - 1,208' GL | New | J55 - 54.5 ppf | 115' & 195' | Y-CTS |
| Coal | 17.5" | 13.375" | 1,218' KB - 1,208' GL | New | J55 - 54.5 ppf | 115' & 195' | Y-CTS |
| Intermediate 1 | 12.25" | 9.625" | 2,383' | New | J55 - 36 ppf | | Y - CTS |
| Intermediate 2 | | | | | | | |
| Intermediate 3 | | | | | | | |
| Production | 8.75" | 5.5" | 11,324' | New | P110 - 20 ppf | | N - TOC @ 1,265' Calculated |
| Tubing | | | | | | | |
| Packer type and d | epth set | | | | 1 | <u> </u> | <u> </u> |

suface on the 5.5° casing string. TOC on 5.5° calculated to be 1,265'.

| CEMENT DATA | Class/Type of Cement | Number of Sacks | Siurry wt (ppg) | Yield (ft ³ /sks) | Volume (ft ²) | Cement Top (MD) | WOC (hrs) |
|----------------|-------------------------------|---------------------|---------------------|----------------------------------|------------------------------|--------------------|--------------|
| Conductor | Type 1 | 34 | 15.6 | 1.18 | 40 | Surface | 24.0 |
| Surface | HalCem Class "A" | 910 | 15.6 | 1.18 | 1,074 | Surface | 8.0 |
| Coal | HalCem Class "A" | 910 | 15.6 | 1.18 | 1,074 | Surface | 8.0 |
| Intermediate 1 | HalCem Class "A" | 790 | 15.6 | 1.21 | 956 | Surface | 12.0 |
| Intermediate 2 | | | | | | | |
| Intermediate 3 | | | | | | | |
| Production | Lead-TunedSpacer3 Tail-VanCem | Lead-178 Tail-2,100 | Lead-14.5 Tail-15.2 | Lead-2.37 Tail-121 | 2,541 | 1,265' Calculated | 7.0 |
| Tubing | | | | | | | |

| Drillers TD (ft) 11,354 MD / 6,534 TVD | | | Loggers TD (ft) N/A | | | | | |
|---|--------------|------------------------------|--|-------------------------------|---|--|--|--|
| Deepest formation penetrated Mar | cellus Shale | | Plug back to (ft) | | | | | |
| Plug back procedure | | | | | | | | |
| Kick off depth (ft) 5,708 MD / 5,682 TV | D | | | | | | | |
| Check all wireline logs run | □ caliper | □ density | deviated/directional | □ induction | | | | |
| | □ neutron | □ resistivity | ■ gamma ray | □ temperature | □sonic | | | |
| Well cored □ Yes ■ No | Convention | nal Sidewa | ewall Were cuttings collected ■ Yes □ No | | | | | |
| DESCRIBE THE CENTRALIZE joints 2, 5, 8, 11, 14, 17, 20, 23 and 26. Intermediate casing | | | | G Surface casing had be | ow spring centralizers placed on | | | |
| Production casing had rigid spiral centralizers place on every eighth joint. A total of 7 bow spring central | | nt beginning with joint 1 to | o joint 201. Ran a total of 51 rigid spira | el centralizers. Ran bow spri | ng centralizers from joint 209 to joint 257 | | | |
| WAS WELL COMPLETED AS S | SHOT HOLE | □Yes ■ N | lo DETAILS | | | | | |
| WAS WELL COMPLETED OPE | N HOLE? | □ Yes ■ No | DETAILS | | | | | |
| WERE TRACERS USED | s 🖪 No | TYPE OF TRA | ACER(S) USED | | | | | |

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| • |

| WR- | 35 |
|------|---------|
| Rev. | 8/23/13 |

| API 47- 103 - 03000 | Farm name_Erlewine, Richard | Well number_#7H |
|---------------------|-----------------------------|-----------------|
|---------------------|-----------------------------|-----------------|

PERFORATION RECORD

| Stage No. | Perforation date | Perforated from MD ft. | Perforated to MD ft. | Number of Perforations | Formation(s) |
|--------------|------------------|------------------------|----------------------|---------------------------|--------------|
| | | | | | |
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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) |
|--------------|----------------------|------------------------|---------------------------------|---------------------------------|------------|-----------------------------|---------------------------|-------------------------------------|
| - | | | | | | | | |
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Please insert additional pages as applicable.

| WR-35 Rev. 8/23/13 | | | | | | | | | Page 4_ ol _ |
|-----------------------|---------------------|----------------|-------------------|-----------------|-------------------|----------|------------------|----------|---------------------------------|
| API 47- 103 | _ 03000 | Farm | name Erlewine | , Richard | | Well r | number_#7 | 'H | |
| PRODUCING I | FORMATION(| S) | DEPTHS | | | | | | |
| Not Yet Comple | | - | | TVD | | MD | | | |
| Hot Tet Compie | | - | | _ 1 V D | | MD | | | |
| - | | | | _ | | | | | |
| | | | | | | | | | |
| Please insert ad | ditional nages a | s applicable | | | | - | | | |
| | | | | | | | 9.0. | | |
| GAS TEST | □ Build up □ | Drawdown | □ Open Flow | | OIL TEST D | Flow D | Pump | | |
| SHUT-IN PRE | SSURE Surf | ace | _psi Botto | m Hole | psi | DURAT | TION OF | TEST _ | hrs |
| OPEN FLOW | | Oil pd | NGL bpd | | Water bpd | | MEASURE mated | | □ Pilot |
| LITHOLOGY? | TOP | воттом | TOP | воттом | | | | | |
| FORMATION | DEPTH IN FT | | DEPTH IN FT | | T DESCRIBE | ROCK TYI | PE AND RE | CORD QU | ANTITYAND |
| | NAME TVD | TVD | MD | MD | TYPE OF FI | UID (FRE | SHWATER, | BRINE, O | IL, GAS, H ₂ S, ETC) |
| | 0 | | 0 | | | | | | |
| See Attached Sheet | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | - | | 11120 |
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| | | | | | | | | | |
| | | | | | | | -1 | | |
| Please insert ad | lditional pages a | s applicable. | | | | | | | |
| Drilling Contra | ctor Nomac (tor | -hole) & Saxon | Drilling (horizon | ital) | | | | | |
| | fartins Branch Rd | | | | is / The Woodland | ds State | PA/TX | Zip 2531 | 2 / 77381 |
| | | | | | | | | | |
| Logging Compa | | | | Charlessi () | Mantan | - 51.7 | DA /140/ | 1500 | 20 / 26/52 |
| Address 124 Vis | sta Drive / 11/6 US | HVVI 33 East | City | Charleroi / \ | weston | State | PA/WV | Zip_1302 | 21 20432 |
| Cementing Con | npany Schlumb | erger | | | | | | | |
| Address 1178 U | S HWY 33 East | | City | Weston | | State | WV | Zip 2645 | 52 |
| Stimulating Co | mnany | | | | | | | | |
| Address | inpany | | City | | | State | | Zip | |
| Please insert ad | lditional pages a | s applicable. | | | | | | | |
| Completed by | Grea Zofchak | | | | Telephone | 304-225 | -1600 | | |
| Signature | May Boll | d | Title D | rilling Enginee | | | Date 2/16 | 17 | |
| 7 | 1 /100 | | | | | | | | |
| Submittal of Hy | ydraulic Fractur | ing Chemical I | Disclosure Info | rmation | Attach copy o | FRACE | OCUS Re | egistry | |



Stone Energy Corporation

Mary Prospect Erlewine Pad Erlewine 7H - Slot 7H

OH

Design: 7H As Drilled

Standard Survey Report

26 February, 2015





Erlewine Pad
Erlewine 7H
Plan 4
GL 1212' & KB 18' @ 1230.00ft (Saxon 141)
Mary Prospect

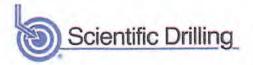
PROJECT DETAILS:

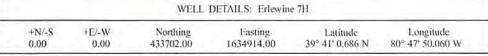
Geodetic System: US State Plane 1927 (Exact solution)
Datum: NAD 1927 (NADCON CONUS)

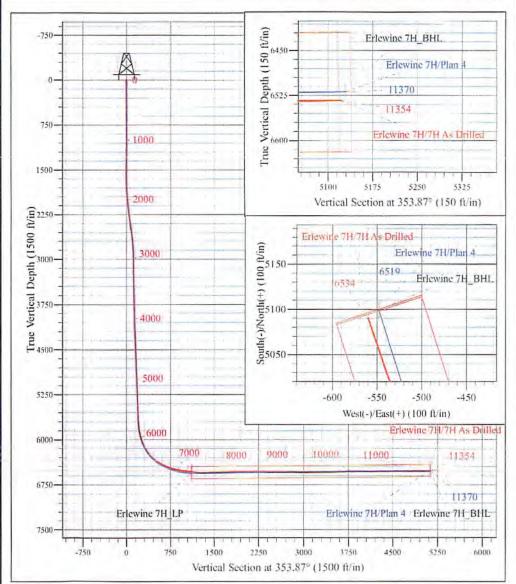
Ellipsoid: Clarke 1866

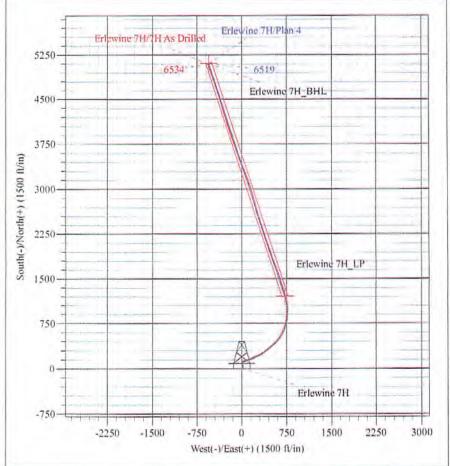
Zone: West Virginia North 4701

System Datum: Mean Sea Level









M G T Azimuths to Grid North
True North: 0.83*
Magnetic North: -6.80*
Magnetic Field
Strength: 52522.0snT
Dip Angle: 67.14*
Date: 11/18/2014
Model: USER DEFINED

Shane Rhodes 11:01, February 26 2015

Scientific Drilling International 124 Vista Drive Charleroi, PA 15022



Survey Report



Company:

Stone Energy Corporation

Project: Site:

Well:

Mary Prospect Erlewine Pad Erlewine 7H

Wellbore:

OH

7H As Drilled Design:

Local Co-ordinate Reference:

TVD Reference: MD Reference:

North Reference: Survey Calculation Method:

Database:

Well Erlewine 7H - Slot 7H

GL 1212' & KB 18' @ 1230.00ft (Saxon 141) GL 1212' & KB 18' @ 1230.00ft (Saxon 141)

Minimum Curvature

Northeast District

Mary Prospect, Wetzel County, West Virginia Project

Map System:

US State Plane 1927 (Exact solution)

Geo Datum: Map Zone:

NAD 1927 (NADCON CONUS)

West Virginia North 4701

System Datum:

Mean Sea Level

Site Erlewine Pad

Site Position:

From:

Position Uncertainty:

Map

Northing: Easting: Slot Radius:

433,674.00 usft 1,634,878.00 usft 13-3/16 "

Latitude:

Longitude: **Grid Convergence:**

39° 41' 0.404 N 80° 47' 50.515 W

-0.83

Well Erlewine 7H - Slot 7H

Well Position

+N/-S +E/-W

0.00 ft 0.00 ft

0.00 ft

Northing:

Easting:

433,702.00 usft 1,634.914.00 usft Latitude: Longitude:

39° 41' 0.686 N 80° 47' 50.060 W

Position Uncertainty 0.00 R Wellhead Elevation: 0.00 ft Ground Level: 1,212.00 ft

| Wellbore | ОН | | | | |
|-----------|--------------|-------------|-----------------|-----------|------------------------|
| Magnetics | Model Name | Sample Date | Declination (°) | Dip Angle | Field Strength (nT) |
| | HDGM | 6/17/2014 | -7.62 | 67.17 | 52,581 |
| | User Defined | 11/17/2014 | -7.63 | 67.14 | 52,523 |
| | User Defined | 11/18/2014 | -7.63 | 67.14 | 52,522 |

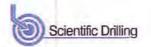
| Design | 7H As Drilled | | | | | |
|--------------------------|---------------|--------------------------|---------------|---------------|---------------|------|
| Audit Notes: Version: | 1.0 | Phase: | ACTUAL | Tie On Depth: | | 0.00 |
| Vertical Section: | | Depth From (TVD) (ft) | +N/-S (ft) | +E/-W (ft) | Direction (°) | |
| | | 0.00 | 0.00 | 0.00 | 353.87 | |

| Survey Program | Date 2/26/2015 | | |
|----------------|-----------------------------------|-------------------------|--|
| From (ft) | To (ft) Survey (Wellbore) | Tool Name | Description |
| 18.00 | 2,351.00 Survey 1 - SDI Gyro (OH) | SDI Standard Keeper 103 | SDI Standard Wireline Keeper ver 1.0.3 |
| 2,464.00 | 5,637.00 Survey 2 - SDI MWD (OH) | MWD SDI | MWD - Standard ver 1.0.1 |
| 5,658.00 | 11,354.00 As Drilled Curve (OH) | SDIMWD | SDI MWD - Standard ver 1.0.1 |

| Measured Depth (ft) | Inclination (°) | Azimuth | Vertical Depth (ft) | +N/-S (ft) | +E/-W (ft) | Vertical Section (ft) | Dogleg Rate (°/100usft) | Build Rate (°/100usft) | Turn Rate (°/100usft) |
|---------------------------|-----------------|---------|---------------------------|---------------|---------------|-----------------------------|-------------------------------|------------------------------|-----------------------------|
| 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 18.00 | 0.00 | 0.00 | 18.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 108.00 | 0.41 | 76.38 | 108.00 | 0.08 | 0.31 | 0.04 | 0.46 | 0.46 | 0.00 |
| First SDI Gy | ro Survey @ 108 | MD | | | | | | | |
| 208.00 | 0.35 | 82.86 | 208.00 | 0.20 | 0.96 | 0.09 | 0.07 | -0.06 | 6.48 |
| 308.00 | 0.20 | 91.27 | 308.00 | 0.23 | 1.44 | 0.08 | 0.15 | -0.15 | 8.41 |



Survey Report



Company:

Stone Energy Corporation

Project: Site: Well

Mary Prospect Erlewine Pad Erlewine 7H

Wellbore: OH

7H As Drilled Design:

Local Co-ordinate Reference:

TVD Reference: MD Reference: North Reference:

Survey Calculation Method:

Database:

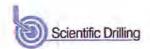
Well Erlewine 7H - Slot 7H

GL 1212' & KB 18' @ 1230.00ft (Saxon 141) GL 1212' & KB 18' @ 1230.00ft (Saxon 141)

| Measured Depth | Inclination | Azimuth | Vertical Depth | +N/-S | +E/-W | Vertical Section | Pate (************************************ | Build Rate | Turn Rate |
|-------------------|-----------------|----------|-------------------|--------|--------|---------------------|--|---------------|--------------|
| (ft) | (°) | (°) | (ft) | (ft) | (ft) | (ft) | (°/100usft) | (°/100usft) | (°/100usft) |
| 408.00 | 0.20 | 91.49 | 408,00 | 0.22 | 1.79 | 0.03 | 0.00 | 0,00 | 0,22 |
| 508.00 | 0.23 | 36.56 | 507.99 | 0.38 | 2.08 | 0.16 | 0.20 | 0.03 | -54.93 |
| 608.00 | 0.30 | 35.28 | 607.99 | 0.76 | 2.36 | 0.50 | 0.07 | 0.07 | -1.28 |
| 708.00 | 0.18 | 358.10 | 707.99 | 1.13 | 2.50 | 0.85 | 0.19 | -0.12 | -37.18 |
| 808.00 | 0.09 | 269.10 | 807 99 | 1.28 | 2.42 | 1.02 | 0.20 | -0.09 | -89.00 |
| 908.00 | 0.04 | 149,46 | 907.99 | 1.25 | 2.36 | 0.99 | 0.12 | -0.05 | -119.64 |
| 1,008.00 | 0.15 | 189.53 | 1,007.99 | 1.09 | 2,35 | 0.83 | 0.12 | 0.11 | 40.07 |
| 1,108.00 | 0.06 | 167.02 | 1,107.99 | 0.91 | 2.34 | 0.66 | 0.10 | -0.09 | -22,51 |
| 1,208.00 | 0.18 | 296.89 | 1,207.99 | 0.93 | 2.21 | 0.69 | 0.22 | 0.12 | 129.87 |
| 1,257.00 | 0.25 | 275.34 | 1,256.99 | 0.98 | 2.04 | 0.75 | 0.22 | 0.14 | -43.98 |
| 1,351.00 | 0.44 | 206.43 | 1,350.99 | 0.67 | 1.67 | 0.49 | 0.45 | 0.20 | -73.31 |
| 1,445.00 | 0.93 | 153.89 | 1,444.98 | -0.34 | 1.85 | -0.53 | 0.80 | 0.52 | -55.89 |
| 1,539.00 | 1.82 | 121.74 | 1,538.96 | -1.81 | 3.45 | -2.17 | 1.22 | 0.95 | -34.20 |
| 1,633.00 | 1.77 | 111.67 | 1,632,91 | -3 13 | 6.07 | -3.76 | 0.34 | -0.05 | -10.71 |
| 1,728.00 | 1.30 | 50.73 | 1.727 88 | -2.99 | 8.27 | -3.85 | 1.69 | -0.49 | -64.15 |
| 1,822.00 | 3.41 | 22,11 | 1,821.80 | 0.28 | 10.15 | -0.81 | 2.50 | 2.24 | -30.45 |
| 1,916.00 | 4.49 | 23.49 | 1,915.58 | 6.24 | 12.67 | 4.85 | 1.15 | 1.15 | 1.47 |
| 2,008.00 | 4.71 | 12.85 | 2,007.28 | 13.23 | 14.94 | 11.56 | 0.96 | 0.24 | -11.57 |
| 2,108.00 | 5.91 | 4.58 | 2,106.85 | 22.36 | 16.27 | 20.50 | 1.42 | 1.20 | -8.27 |
| 2,208,00 | 7.28 | 1.04 | 2,206 19 | 33.83 | 16.79 | 31.84 | 1.43 | 1.37 | -3.54 |
| 2,308.00 | 8.60 | 358.58 | 2.305.23 | 47.64 | 16.72 | 45.58 | 1.36 | 1.32 | -2.46 |
| 2,351.00 | 9.52 | 356.80 | 2,347.69 | 54.40 | 16.45 | 52.34 | 2.24 | 2.14 | -4.14 |
| Last SDI Gy | ro Survey @ 235 | 1 MD | | | | | | | |
| 2,464.00 | 9.40 | 355.87 | 2,459.15 | 72.94 | 15.26 | 70.89 | 0.17 | -0.11 | -0.82 |
| First SDI M | ND Survey @ 24 | 64.00 MD | | | | | | | |
| 2,558.00 | 7.82 | 3.58 | 2,552.09 | 86.98 | 15.11 | 84.87 | 2.08 | -1.68 | 8.20 |
| 2.653.00 | 6.64 | 9.26 | 2,646.34 | 98.85 | 16.39 | 96 53 | 1.45 | -1 24 | 5.98 |
| 2,747.00 | 4.86 | 19.43 | 2,739.86 | 107.97 | 18.59 | 105.37 | 2.17 | -1.89 | 10.82 |
| 2,841.00 | 3.63 | 41.98 | 2,833.60 | 114.06 | 22.02 | 111.05 | 2.10 | -1,10 | 23.99 |
| 2,935.00 | 4.74 | 62.77 | 2,927.34 | 118.17 | 27.57 | 114.55 | 1.90 | 0.97 | 22.12 |
| 3,029.00 | 4.83 | 73.87 | 3,021.02 | 121.05 | 34.83 | 116.63 | 0.99 | 0.10 | 11.8 |
| 3,123.00 | 5.88 | 77.58 | 3,114.61 | 123.18 | 43.33 | 117.85 | 1.18 | 1.12 | 3.95 |
| 3,217.00 | 6.44 | 80.71 | 3,208.06 | 125.07 | 53.24 | 118.67 | 0.69 | 0.60 | 3.33 |
| 3,311.00 | 7.50 | 78.01 | 3,301.37 | 127.20 | 64.44 | 119.58 | 1.18 | 1.13 | -2.87 |
| 3,405.00 | 6.81 | 71.01 | 3,394.64 | 130.28 | 75.71 | 121.45 | 1.18 | -0.73 | -7.45 |
| 3,499.00 | 7.31 | 72.42 | 3,487.92 | 133.90 | 86.68 | 123.87 | 0.56 | 0.53 | 1.50 |
| 3,593.00 | 6.51 | 65.48 | 3,581.24 | 137.92 | 97.23 | 126.74 | 1.23 | -0.85 | -7.38 |
| 3,688.00 | 5.58 | 66.27 | 3,675.71 | 142.01 | 106.36 | 129.84 | 0.98 | -0,98 | 0.83 |
| 3,783.00 | 5.81 | 69.24 | 3,770.24 | 145.58 | 115.08 | 132.45 | 0,39 | 0.24 | 3.13 |
| 3,877.00 | 5.84 | 73.26 | 3,863.76 | 148.64 | 124.11 | 134.53 | 0.44 | 0.03 | 4,28 |
| 3,971.00 | 6.09 | 74.22 | 3,957.25 | 151.38 | 133.49 | 136.24 | 0.29 | 0.27 | 1.03 |
| 4,065.00 | 7.51 | 72.42 | 4,050.59 | 154.59 | 144.14 | 138.30 | 1.53 | 1.51 | -1.9 |
| 4,159.00 | 8.16 | 69.38 | 4,143.71 | 158.79 | 156,24 | 141.19 | 0.82 | 0.69 | -3.23 |
| 4,254.00 | 7.60 | 63,10 | 4,237.81 | 164.01 | 168.16 | 145,10 | 1.08 | -0.59 | -6.61 |



Survey Report



Company:

Stone Energy Corporation

Project: Site: Well: Mary Prospect Erlewine Pad Erlewine 7H

Wellbore: OH

Design: 7H As Drilled

Local Co-ordinate Reference:

TVD Reference: MD Reference: North Reference:

Survey Calculation Method:

Database:

Well Erlewine 7H - Slot 7H

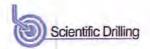
GL 1212' & KB 18' @ 1230.00ft (Saxon 141) GL 1212' & KB 18' @ 1230.00ft (Saxon 141)

Grid

| Measured Depth | Inclination | Azimuth | Vertical Depth | +N/-S | +E/-W | Vertical Section | Dogleg Rate | Build Rate | Turn Rate |
|-------------------|-------------|---------|-------------------|--------------|--------|---------------------|----------------|---------------|--------------|
| (ft) | (°) | (°) | (ft) | (ft) | (ft) | (ft) | (°/100usft) | (°/100usft) | (*/100usft) |
| 4,347.00 | 7.00 | 60.18 | 4,330.06 | 169.61 | 178.56 | 149.56 | 0.76 | -0.65 | -3.14 |
| 4,441.00 | 6.80 | 68.26 | 4,423.38 | 174.52 | 188.70 | 153.36 | 1.05 | -0.21 | 8.60 |
| 4,535,00 | 6.75 | 64.21 | 4,516.72 | 178.98 | 198.84 | 156.71 | 0.51 | -0.05 | -4.31 |
| 4,630.00 | 5.91 | 62.19 | 4,611.14 | 183.69 | 208.19 | 160.40 | 0.91 | -0.88 | -2.13 |
| 4,724.00 | 5.81 | 60.83 | 4,704.65 | 188.27 | 216.63 | 164.04 | 0.18 | -0.11 | -1.45 |
| 4,818.00 | 6.91 | 64.99 | 4,798.07 | 192,98 | 225.91 | 167.74 | 1.27 | 1.17 | 4.43 |
| 4,912 00 | 6.06 | 64.25 | 4,891 47 | 197 53 | 235,50 | 171.23 | 0.91 | -0.90 | -0.79 |
| 5,008.00 | 6.73 | 69.67 | 4,986.87 | 201.68 | 245.34 | 174.31 | 0.94 | 0.70 | 5.65 |
| 5,102.00 | 7.06 | 70,44 | 5,080.19 | 205.53 | 255.95 | 177.00 | 0.36 | 0.35 | 0.82 |
| 5,197.00 | 6.55 | 67.42 | 5,174.52 | 209.57 | 266.45 | 179.89 | 0.66 | -0.54 | -3.18 |
| 5,290.00 | 6.04 | 60.33 | 5,266.96 | 214.02 | 275.60 | 183,35 | 1.00 | -0.55 | -7.62 |
| 5,385.00 | 6.29 | 62.02 | 5,361.42 | 218.94 | 284.54 | 187.28 | 0.33 | 0.26 | 1.78 |
| 5,479.00 | 7.21 | 65.86 | 5,454.76 | 223.77 | 294.47 | 191.02 | 1.09 | 0.98 | 4.09 |
| 5,573.00 | 7.11 | 64.19 | 5.548.03 | 228 71 | 305.09 | 194.80 | 0.25 | -0.11 | -1.78 |
| 5,637.00 | 6.46 | 66 17 | 5,611 58 | 231 89 | 311.95 | 197.23 | 1.08 | -1.02 | 3.09 |
| 5,658.00 | 6.57 | 64 44 | 5,632,45 | 232.89 | 314.11 | 197.99 | 1.07 | 0.52 | -8.24 |
| 5,688.00 | 6.83 | 62.13 | 5,662.24 | 234.46 | 317.24 | 199.22 | 1.25 | 0.87 | -7 70 |
| 5,719.00 | 7.92 | 61.32 | 5,692 98 | 236 35 320 7 | | 200.72 | 3.53 | 3.52 | -2.61 |
| 5,749.00 | 9.48 | 60.07 | 5,722.64 | 238.57 | 324.70 | 202.51 | 5.24 | 5.20 | -4.17 |
| 5,779.00 | 11.43 | 59.40 | 5,752 14 | 241.32 | 329.40 | 204.74 | 6.51 | 6.50 | -2.23 |
| 5,809.00 | 13,02 | 57.88 | 5.781.46 | 244.63 | 334.82 | 207.45 | 5.41 | 5.30 | -5.07 |
| 5,839,00 | 15.04 | 58.83 | 5,810.56 | 248.44 | 341.01 | 210.58 | 6.78 | 6.73 | 3.17 |
| 5,869.00 | 17.55 | 57.17 | 5,839.35 | 252.91 | 348.14 | 214.26 | 8.51 | 8.37 | -5.53 |
| 5,899.00 | 20.03 | 54.50 | 5,867.75 | 258.35 | 356.13 | 218.81 | B.75 | 8.27 | -8.90 |
| 5,929.00 | 22.21 | 51.82 | 5,895.74 | 264.84 | 364.77 | 224.34 | 7.95 | 7.27 | -8.93 |
| 5,960.00 | 24.08 | 51.16 | 5,924.24 | 272.42 | 374.30 | 230.87 | 6.09 | 6.03 | -2.13 |
| 5,990.00 | 25.88 | 51.47 | 5,951.43 | 280.34 | 384.19 | 237.68 | 6.02 | 6.00 | 1.03 |
| 6,020.00 | 28.20 | 52.45 | 5,978.15 | 288.74 | 394.94 | 244.89 | 7.87 | 7.73 | 3.27 |
| 6,050.00 | 31.34 | 53.07 | 6,004.19 | 297.75 | 406.79 | 252.58 | 10.52 | 10.47 | 2.07 |
| 6,080,00 | 35.35 | 53.98 | 6,029.25 | 307.55 | 420.06 | 260.90 | 13.47 | 13,37 | 3.03 |
| 6,110.00 | 38.62 | 54.05 | 6,053.21 | 318 15 | 434.66 | 269.88 | 10.90 | 10.90 | 0.23 |
| 6,141.00 | 40.93 | 53.69 | 6,077.03 | 329,84 | 450.67 | 279.80 | 7.49 | 7.45 | -1.16 |
| 6,171.00 | 42.16 | 53,33 | 6,099.48 | 341.68 | 466.67 | 289.85 | 4.18 | 4.10 | -1.20 |
| 6,202.00 | 43.47 | 51.12 | 6,122,22 | 354.58 | 483,32 | 300.91 | 6.43 | 4.23 | -7.13 |
| 6,232.00 | 44.61 | 50.43 | 6,143.79 | 367.77 | 499.47 | 312.29 | 4.12 | 3.60 | -2.30 |
| 6,262.00 | 45.20 | 49.45 | 6,165.04 | 381.40 | 515.68 | 324.11 | 3.03 | 1.97 | -3.27 |
| 6,292.00 | 46.19 | 48.80 | 6,185.99 | 395.45 | 531.91 | 336.35 | 3.65 | 3.30 | -2.17 |
| 6,323.00 | 47.49 | 47,30 | 6,207.20 | 410.57 | 548.73 | 349.58 | 5.48 | 4.19 | -4.84 |
| 6,355.00 | 49.74 | 46.03 | 6,228.35 | 427.05 | 566.18 | 364.10 | 7.64 | 7.03 | -3.97 |
| 6,386.00 | 51.69 | 43,30 | 6,247.98 | 444.12 | 583.04 | 379.27 | 9.27 | 6.29 | -8.81 |
| 6,418.00 | 52.50 | 40.59 | 6,267,64 | 462.89 | 599.91 | 396.14 | 7.15 | 2.53 | -8.47 |
| 6,450.00 | 53.47 | 36.89 | 6,286,91 | 482.82 | 615.89 | 414.24 | 9.72 | 3.03 | -11.56 |



Survey Report



Company:

Stone Energy Corporation

Project: Site: Well:

Mary Prospect Erlewine Pad Erlewine 7H

ОН

Wellbore: Design: 7H As Drilled Local Co-ordinate Reference:

TVD Reference: MD Reference: North Reference:

Survey Calculation Method:

Database:

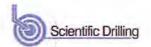
Well Erlewine 7H - Slot 7H

GL 1212' & KB 18' @ 1230.00ft (Saxon 141) GL 1212' & KB 18' @ 1230.00ft (Saxon 141)

| Measured Depth | Inclination | Azimuth | Vertical Depth | +N/-S | +EI-W | Vertical Section | Dogleg Rate | Build Rate | Turn Rate |
|-------------------|-------------|---------|-------------------|----------|--------|---------------------|----------------|---------------|--------------|
| (ft) | (°) | (*) | (ft) | (ft) | (ft) | (ft) | (°/100usft) | (°/100usft) | (°/100usft) |
| 6,513.00 | 56.04 | 32,05 | 6,323.34 | 525.23 | 644.90 | 453.31 | 7.48 | 4.59 | -7.19 |
| 6,545.00 | 57 59 | 29.85 | 6,340.86 | 548.19 | 658.67 | 474.67 | 7.52 | 4.84 | -6.88 |
| 6,577.00 | 59.57 | 26.80 | 6,357.54 | 572.23 | 671.61 | 497.19 | 10.22 | 6.19 | -9.53 |
| 6,608,00 | 61_39 | 24.02 | 6,372.82 | 596.60 | 683.18 | 520.18 | 9.76 | 5.87 | -8.97 |
| 6,638.00 | 62.83 | 21.97 | 6,386.85 | 621 00 | 693.54 | 543.34 | 7.71 | 4.80 | -6.83 |
| 6,670,00 | 63.33 | 20,95 | 6,401.34 | 647 56 | 703.97 | 568.62 | 3.24 | 1,56 | -3.19 |
| 6,700.00 | 64.65 | 19.02 | 6.414.50 | 672.89 | 713.19 | 592.83 | 7.27 | 4.40 | -6.43 |
| 6,732.00 | 65.68 | 17.07 | 6,427.94 | 700.50 | 722.18 | 619.32 | 6.40 | 3.22 | -6.09 |
| 6,764.00 | 66.59 | 14.50 | 6,440.89 | 728.66 | 730.14 | 646.47 | 7.88 | 2.84 | -8.03 |
| 6,796,00 | 67 40 | 11.99 | 6,453.39 | 757.33 | 736.88 | 674.25 | 7.65 | 2.53 | -7 84 |
| 6,827.00 | 69.43 | 10.27 | 6,464.80 | 785.61 | 742.44 | 701.78 | 8.34 | 6.55 | -5.55 |
| 6,859,00 | 72.37 | 7.54 | 6,475.27 | 815.48 | 747.12 | 730.98 | 12.22 | 9.19 | -8.53 |
| 6,891.00 | 74.94 | 6.68 | 6,484.28 | 845.95 | 750,92 | 760,86 | 8.44 | 8.03 | -2.69 |
| 6,923.00 | 76.44 | 4.87 | 6,492 19 | 876.80 | 754.03 | 791.20 | 7.21 | 4.69 | -5.66 |
| 6,955.00 | 77.37 | 2.69 | 6,499.44 | 907.89 | 756.09 | 821 90 | 7 24 | 2.91 | -6.81 |
| 6,987.00 | 78.51 | 1.00 | 6,506.12 | 939.17 | 757.09 | 852.89 | 6.27 | 3.56 | -5.28 |
| 7,019.00 | 80.02 | 359.78 | 6,512.08 | 970.61 | 757.31 | 884.13 | 6.02 | 4.72 | -3.81 |
| 7,050.00 | 81.51 | 358.94 | 6,517.06 | 1,001.20 | 756.96 | 914.58 | 5.50 | 4.81 | -2.71 |
| 7,082.00 | 82.64 | 356,26 | 6,521.47 | 1,032.86 | 755.64 | 946.21 | 9.02 | 3,53 | -8.38 |
| 7,113,00 | 82.91 | 353.93 | 6,525.37 | 1,063.50 | 753.01 | 976.95 | 7.51 | 0.87 | -7,52 |
| 7,145.00 | 82.33 | 351.77 | 6,529.48 | 1,094.99 | 749.06 | 1,008 68 | 6.94 | -1.81 | -6.75 |
| 7,176.00 | 81.72 | 349.07 | 6,533 78 | 1.125.26 | 743.95 | 1,039.32 | 8.85 | -1.97 | -8.71 |
| 7,208.00 | 81.78 | 347.23 | 6,538.38 | 1,156.25 | 737.45 | 1,070.83 | 5.69 | 0.19 | -5.75 |
| 7,240.00 | 82.07 | 344.71 | 6,542.87 | 1,186.99 | 729.77 | 1,102.21 | 7.85 | 0.91 | -7.88 |
| 7,272.00 | 82 33 | 344.33 | 6,547.21 | 1,217.54 | 721.30 | 1,133,49 | 1 43 | 0.81 | -1.19 |
| 7,303.00 | 82.49 | 343,17 | 6,551.31 | 1,247.04 | 712.71 | 1.163.74 | 3 74 | 0.52 | -3.74 |
| 7,336,00 | 83.76 | 341.68 | 6,555.26 | 1,278.27 | 702.81 | 1,195.85 | 5.91 | 3.85 | -4.52 |
| 7,399.00 | 89.33 | 340.95 | 6,559.05 | 1,337.82 | 682.67 | 1,257.21 | 8.92 | 8.84 | -1.16 |
| 7,463.00 | 92,32 | 343.11 | 6,558.13 | 1,398.68 | 662.93 | 1,319.83 | 5.76 | 4.67 | 3,38 |
| 7,527.00 | 91.71 | 342.46 | 6,555.88 | 1,459.77 | 644.00 | 1,382.60 | 1.39 | -0.95 | -1,02 |
| 7,590.00 | 92.01 | 341.17 | 6,553.84 | 1,519.59 | 624.35 | 1,444.18 | 2.10 | 0.48 | -2.05 |
| 7,654.00 | 91.07 | 339.23 | 6,552.12 | 1,579.79 | 602.68 | 1,506.34 | 3.37 | -1.47 | -3.03 |
| 7,717.00 | 90.74 | 339.26 | 6,551.12 | 1,638.69 | 580.36 | 1,567.29 | 0.53 | -0.52 | 0.05 |
| 7,781.00 | 90.84 | 340.22 | 6,550.24 | 1,698.72 | 558.20 | 1,629,35 | 1.51 | 0.16 | 1.50 |
| 7,844.00 | 89.46 | 338.54 | 6,550.07 | 1,757 68 | 536.02 | 1,690.34 | 3.45 | -2.19 | -2.67 |
| 7,908.00 | 91.14 | 341.69 | 6,549.74 | 1,817.86 | 514.25 | 1,752,50 | 5.58 | 2,63 | 4,92 |
| 7,971.00 | 91 24 | 342.31 | 6,548.43 | 1,877.76 | 494.79 | 1,814.14 | 1.00 | 0.16 | 0.98 |
| 8,035.00 | 92.42 | 342.20 | 6,545.39 | 1,938.68 | 475.29 | 1,876.80 | 1.85 | 1.84 | -0.17 |
| 8.098.00 | 91.85 | 341.43 | 6,544.04 | 1.998.50 | 455.64 | 1,938.36 | 1.52 | -0.90 | -1.22 |
| 8,162.00 | 91.21 | 341.44 | 6,542.33 | 2,059.14 | 435.27 | 2,000.84 | 1.00 | -1.00 | 0.02 |
| 8,225.00 | 91,38 | 340.77 | 6,540.91 | 2,118,73 | 414.88 | 2,062.27 | 1.10 | 0.27 | -1,06 |
| 8,289.00 | 90,50 | 341.76 | 6,539.86 | 2,179.33 | 394.32 | 2.124.72 | 2.07 | -1,38 | 1.55 |
| 8,353.00 | 90,20 | 343,42 | 6,539.47 | 2,240,40 | 375.18 | 2.187.48 | 2.64 | -0.47 | 2.59 |
| 8,416.00 | 89.93 | 341.72 | 6,539.40 | 2,300,50 | 356.31 | 2,249,26 | 2.73 | -0.43 | -2.70 |



Survey Report



Company:

Stone Energy Corporation

Project: Site: Well: Mary Prospect Erlewine Pad Erlewine 7H

Wellbore: OH

Design: 7H As Drilled

Local Co-ordinate Reference:

TVD Reference: MD Reference: North Reference:

Survey Calculation Method:

Database:

Well Erlewine 7H - Slot 7H

GL 1212' & KB 18' @ 1230.00ft (Saxon 141) GL 1212' & KB 18' @ 1230.00ft (Saxon 141)

Grid

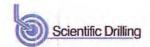
Minimum Curvature

Northeast District

| Measured | | | Vertical | | | Vertical | Dogleg | Build | Turn |
|---------------|-----------------|------------------|----------------------|----------------------|--------------------|----------------------|---------------------|---------------------|---------------------|
| Depth (ft) | Inclination (*) | Azimuth | Depth (ft) | +N/-S (ft) | +E/-W (ft) | Section (ft) | Rate (°/100usft) | Rate (°/100usft) | Rate (°/100usft) |
| 8.480.00 | 89.33 | 340.81 | 6,539.81 | 2,361.11 | 335.75 | 2,311,71 | 1.70 | -0.94 | -1.42 |
| 8,544.00 | 89.73 | 340.85 | 6,540.33 | 2,421.56 | 314.74 | 2,374.06 | 0.63 | 0.63 | 0.06 |
| 8,607.00 | 89.43 | 342.30 | 6,540.80 | 2,481.32 | 294.82 | 2,435.61 | 2.35 | -0.48 | 2.30 |
| 8,670.00 | 89.70 | 344.08 | 6,541.27 | 2,541.63 | 276.61 | 2,497.52 | 2.86 | 0.43 | 2.83 |
| 8,731.00 | 90.10 | 343.65 | 6,541.38 | 2,600 22 | 259.65 | 2,557.59 | 0.96 | 0.66 | -0.70 |
| 8,793.00 | 90.74 | 344.25 | 6,540.93 | 2,659.81 | 242.51 | 2.618.66 | 1.41 | 1.03 | 0.97 |
| 8,855.00 | 89.90 | 345.05 | 6,540.58 | 2,719.59 | 226.10 | 2,679.86 | 1.87 | -1.35 | 1.29 |
| 8,917.00 | 89.29 | 345.33 | 6,541.02 | 2.779.53 | 210.25 | 2,741.15 | 1.08 | -0.98 | 0.45 |
| 8,978.00 | 88.36 | 344.16 | 6.542.27 | 2,838 37 | 194.21 | 2,801 36 | 2 45 | -1.52 | -1.92 |
| 9.039.00 | 87.52 | 343.07 | 6,544.46 | 2,896.85 | 177.01 | 2,861.35 | 2 26 | -1.38 | -1.79 |
| 9,103.00 | 87.93 | 343.35 | 6,547.00 | 2,958.07 | 158.54 | 2,924.20 | 0.78 | 0.64 | 0.44 |
| 9,167.00 | 89.20 | 343,12 | 6,548,60 | 3,019.33 | 140.09 | 2,987.08 | 2.02 | 1.98 | -0.36 |
| 9,230.00 | 89.50 | 341.14 | 6,549.32 | 3,079.29 | 120.76 | 3,048.75 | 3.18 | 0.48 | -3.14 |
| 9,294.00 | 90.97 | 341.08 | 6,549.06 | 3.139.84 | 100.04 | 3,111.17 | 2.30 | 2.30 | -0.09 |
| 9,357.00 | 90,57 | 339.33 | 6,548.21 | 3,199 11 | 78.70 | 3,172 38 | 2 85 | -0.63 | -2.78 |
| 9,421.00 | 90.54 | 338.36 | 6,547.59 | 3,258.79 | 55.61 | 3,234 19 | 1.52 | -0.05 | -1.52 |
| 9.483.00 | 91.47 | 337.91 | 6,546.50 | 3,316.32 | 32.52 | 3,293 86 | 1.67 | 1_50 | -0.73 |
| 9,547.00 | 92 52 | 339.21 | 6,544.27 | 3,375 85 | 9.14 | 3,355.55 | 2.61 | 1 64 | 2.03 |
| 9,611,00 | 91.82 | 340.04 | 6,541 85 | 3,435.81 | -13,12 | 3,417.54 | 1.70 | -1.09 | 1.30 |
| 9,674,00 | 90.44 | 341.80 | 6,540,61 | 3,495,33 | -33 71 | 3,478.92 | 3.55 | -2.19 | 2.79 |
| 9,738.00 | 90.77 | 340.69 | 6,539,93 | 3,555,93 | -54,29 | 3,541.37 | 1.81 | 0.52 | -1.73 |
| 9,801.00 | 91.11 | 341.05 | 6,538.90 | 3,615.44 | -74.93 | 3,602.75 | 0.79 | 0.54 | 0.57 |
| 9,865.00 | 91.44 | 340.53 | 6,537.48 | 3,675.86 | -95.98 | 3.665.07 | 0.96 | 0.52 | -0.81 |
| 9,929.00 | 91.37 | 340.18 | 6,535.91 | 3,736.12 | -117.49 | 3,727.28 | 0.56 | -0.11 | -0.55 |
| 9,992.00 | 91,21 | 340,43 | 6,534.49 | 3,795,42 | -138.72 | 3,788,51 | 0.47 | -0.25 | 0.40 |
| 10,055.00 | 90,37 | 340,97 | 6,533.62 | 3,854.87 | -159.54 | 3,849.85 | 1 59 | -1,33 | 0.86 |
| 10,119.00 | 89.40 | 341.30 | 6,533.75 | 3,915,43 | -180,23 | 3,912.27 | 1.60 | -1.52 | 0.52 |
| 10,182.00 | 89.70 | 340,89 | 6,534.24 | 3,975 03 | -200,64 | 3,973.71 | 0.81 | 0.48 | -0,65 |
| 10,245.00 | 89.70 | 341.25 | 6,534.57 | 4,034.62 | -221.08 | 4,035.15 | 0.57 | 0.00 | 0.57 |
| 10,308.00 | 89.83 90.64 | 343.91 344.50 | 6,534.83 6,534.57 | 4,094.73 4,156.31 | -239,94 -257,36 | 4,096.92 4.160.01 | 4.23 1.57 | 1.27 | 4.22 0.92 |
| 10,436.00 | 91.17 | 343.92 | 6,533.56 | 4,217.89 | -274.77 | 4,223 10 | 1.23 | 0.83 | -0.91 |
| 10,499.00 | 91.00 | 343.96 | 6,532.36 | 4,278.42 | -292.20 | 4,285,14 | 0.28 | -0.27 | 0.06 |
| 10,562.00 | 90.70 | 344.06 | 6,531.43 | 4,338.97 | -309.55 | 4,347.21 | 0.50 | -0.48 | 0.16 |
| 10,626.00 | 90.84 | 343.44 | 6,530.57 | 4,400.41 | -327.46 | 4,410.21 | 0.99 | 0.22 | -0.97 |
| 10,690.00 | 90.17 | 342.68 | 6,530.01 | 4,461.63 | -346.11 | 4,473.07 | 1.58 | -1.05 | -1.19 |
| 10,754.00 | 88.93 | 342.88 | 6,530 51 | 4,522.76 | -365.05 | 4,535.87 | 1.96 | -1.94 | 0,31 |
| 10,817.00 | 89.13 | 341.73 | 6,531.58 | 4,582.77 | -384.20 | 4,597 58 | 1.85 | 0.32 | -1.83 |
| 10,881.00 | 89.70 | 341.95 | 6,532,23 | 4,643.58 | -404.14 | 4,660.17 | 0.95 | 0.89 | 0.34 |
| 10,945.00 | 89.90 | 341,63 | 6,532.45 | 4,704.37 | -424.14 | 4,722.76 | 0.59 | 0.31 | -0.50 |
| 11,009.00 | 90.44 | 340.86 | 6,532.26 | 4,764.97 | -444.72 | 4,785.21 | 1.47 | 0.84 | -1.20 |
| 11,072.00 | 89.23 | 340.18 | 6,532 44 | 4,824.36 | -465.73 | 4,846.51 | 2.20 | -1.92 | -1.08 |
| 11,136.00 | 88,83 | 340.36 | 6,533.53 | 4,884.60 | -487.33 | 4,908.70 | 0.69 | -0.63 | 0.28 |



Survey Report



Company:

Stone Energy Corporation

Project: Mary Prospect
Site: Erlewine Pad
Well: Erlewine 7H

Wellbore: Ol

Design: 7H As Drilled

Local Co-ordinate Reference:

TVD Reference: MD Reference: North Reference:

Survey Calculation Method: Database: Well Erlewine 7H - Slot 7H

GL 1212' & KB 18' @ 1230.00ft (Saxon 141) GL 1212' & KB 18' @ 1230.00ft (Saxon 141)

Grid

| Measured Depth (ft) | Inclination (°) | Azimuth | Vertical Depth (ft) | +N/-S (fi) | +E/-W (ft) | Vertical Section (ft) | Dogleg Rate (°/100usft) | Build Rate (°/100usft) | Turn Rate (°/100usft) |
|---------------------------|-----------------|---------|---------------------------|---------------|---------------|-----------------------------|-------------------------------|------------------------------|-----------------------------|
| 11,200.00 | 89.73 | 340.78 | 6,534.33 | 4,944.95 | -508.62 | 4,970.98 | 1.55 | 1.41 | 0.66 |
| 11,264.00 | 90.07 | 339.85 | 6,534.44 | 5,005.21 | -530.18 | 5,033.20 | 1.55 | 0.53 | -1.45 |
| 11,295.00 | 90.71 | 340.85 | 6,534.23 | 5,034.40 | -540.60 | 5.063.34 | 3.83 | 2.06 | 3.23 |
| Last SDI MV | VD @ 11295 MD | | | | | | | | |
| 11,354.00 | 90.71 | 340.85 | 6,533.50 | 5,090.13 | -559.95 | 5,120.82 | 0.00 | 0.00 | 0.00 |

| IV | leasured | Vertical | Local Coo | rdinates | | |
|----|---------------|---------------|---------------|---------------|-----------------------------------|--|
| | Depth (ft) | Depth (ft) | +N/-S (ft) | +E/-W (ft) | Comment | |
| | 108.00 | 108.00 | 0.08 | 0.31 | First SDI Gyro Survey @ 108 MD | |
| | 2,351.00 | 2,347.69 | 54.40 | 16.45 | Last SDI Gyro Survey @ 2351 MD | |
| | 2.464.00 | 2,459.15 | 72.94 | 15.26 | First SDI MWD Survey @ 2464.00 MD | |
| | 11,295.00 | 6,534.23 | 5,034.40 | -540.60 | Last SDI MWD @ 11295 MD | |
| | 11,354.00 | 6.533.50 | 5,090.13 | -559.95 | Projection to Bit @ 11354 MD | |

| Checked By: | Approved By: | Date: | |
|-------------|--------------|-------|--|

Erlewine #7H API 47-103-03000

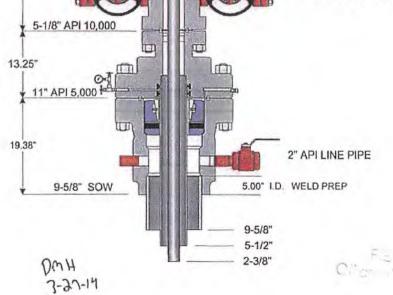
Stone Energy Corporation

| | Тор | Horizontal Top | | Bottom (ft | Bottom | |
|------------------------|----------|-------------------|---|------------|---------|-------------|
| | (ft TVD) | (ft MD) | | TVD) | (ft MD) | |
| Sandstone & Shale | Surface | | * | 374 | | FW @ 105' |
| Coal | 374 | | * | 378 | | |
| Sandstone & Shale | 378 | | * | 444 | | |
| Coal | 444 | | * | 446 | | |
| Sandstone & Shale | 446 | | * | 644 | | |
| Coal | 644 | | * | 646 | | |
| Sandstone & Shale | 646 | | * | 769 | | |
| Coal | 769 | | * | 775 | | |
| Sandstone & Shale | 775 | | * | 868 | | |
| Coal | 868 | | * | 871 | | |
| Sandstone & Shale | 871 | | * | 999 | | |
| Coal | 999 | | * | 1,003 | | |
| Sandstone & Shale | 1,003 | | * | 2,022 | | SW @ 1,671' |
| Little Lime | 2,022 | | * | 2,052 | | |
| Big Lime | 2,052 | | * | 2,152 | | |
| Big Injun | 2,152 | | * | 2,252 | | |
| Sandstone & Shale | 2,252 | | * | 2,620 | | |
| Berea Sandstone | 2,620 | | * | 2,650 | | |
| Shale | 2,650 | | * | 2,865 | | |
| Gordon | 2,865 | | * | 2,915 | | |
| Undiff Devonian Shale | 2,915 | | * | 5,664 | 5,690 | |
| Rhinestreet | 5,664 | 5,690 | ~ | 6,102 | 6,174 | |
| Cashaqua | 6,102 | 6,174 | ~ | 6,344 | 6,567 | |
| Middlesex | 6,344 | 6,567 | ~ | 6,372 | 6,607 | |
| West River | 6,372 | 6,607 | ~ | 6,427 | 6,730 | |
| Geneseo | 6,427 | 6,730 | ~ | 6,442 | 6,766 | |
| Tully Limestone | 6,442 | 6,766 | ~ | 6,483 | 6,887 | |
| Hamilton Shale | 6,483 | 6,887 | ~ | 6,524 | 7,108 | |
| Marcellus | 6,524 | 7,108 | ~ | 6,534 | 11,354 | |
| TD | | | | 6,534 | 11,354 | |

^{*} From Pilot Hole Log and Driller's Log

[~] From MWD Gamma Log

NOTE: THIS DRAWING IS NOT TO SCALE. THE DIMENSIONS REFLECTED ON THE DRAWING ARE ESTIMATED MEASUREMENTS AND FOR REFERENCE ONLY. 24.25 19.25 2-1/16" API 5,000 2-1/16" API 5,000 38.26 22.12" 2-1/16" API 5,000 5-1/8" API 10,000 19.50" 1-13/16" API 10,000 5-1/8" API 10,000



| Weatherford' | © 2010 Weatherford International Inc. All rights re | | | | |
|--|---|------------------|--|--|--|
| Customer: STONE ENERGY | Project: 46705 | Quote: 99565 v 3 | | | |
| Tender, Project or Well: 2011- 2012 CONVENTIONAL MARCELLUS | Date: 07-17-2011 | Drawn By: RF | | | |

API Number 47 - 103 - 03000 Operator's Well No. Erlewine 7H STATE OF WEST VIRGINIA DEPARTMENT OF ENVIRONMENTAL PROTECTION OFFICE OF OIL AND GAS

FLUIDS/ CUTTINGS DISPOSAL & RECLAMATION PLAN

| Operator Name EQT Production Company | OP Code 306686 |
|---|---|
| Watershed (HUC 10) Tributary of Proctor Creek | Quadrangle New Martinsville |
| Do you anticipate using more than 5,000 bbls of water to comp Will a pit be used? Yes No V | olete the proposed well work? Yes V No |
| If so, please describe anticipated pit waste: N/A | |
| Will a synthetic liner be used in the pit? Yes | No ✓ If so, what ml.? N/A |
| Proposed Disposal Method For Treated Pit Wastes: | Dell |
| Land Application Underground Injection (UIC Perm Reuse (at API Number Various Off Site Disposal (Supply form WV Other (Explain | |
| Will closed loop system be used? If so, describe: Yes, The close then prepared | d loop system will remove drill cuttings from the drilling fluid. The drill cuttings are for transportation to an off-site disposal facility. |
| Drilling medium anticipated for this well (vertical and horizon | |
| -If oil based, what type? Synthetic, petroleum, etcS | synthetic Mud |
| Additives to be used in drilling medium? See Attached | |
| Drill cuttings disposal method? Leave in pit, landfill, removed | offsite, etc. Landfill |
| -If left in pit and plan to solidify what medium will be | e used? (cement, lime, sawdust) N/A |
| -Landfill or offsite name/permit number? See Attache | |
| Permittee shall provide written notice to the Office of Oil and Owest Virginia solid waste facility. The notice shall be provided where it was properly disposed. | Gas of any load of drill cuttings or associated waste rejected at any l within 24 hours of rejection and the permittee shall also disclose |
| on August 1, 2005, by the Office of Oil and Gas of the West V provisions of the permit are enforceable by law. Violations of law or regulation can lead to enforcement action. I certify under penalty of law that I have personally application form and all attachments thereto and that, base | conditions of the GENERAL WATER POLLUTION PERMIT issued irginia Department of Environmental Protection. I understand that the of any term or condition of the general permit and/or other applicable by examined and am familiar with the information submitted on this ed on my inquiry of those individuals immediately responsible for true, accurate, and complete. I am aware that there are significant with of fine or imprisonment. |
| Company Official (Typed Name) John Zavatchan | |
| Company Official Title Landman - Permitting | |
| Subscribed and sworn before me this day of day of My commission expires 31 / 2022 | Notary Public OFFICIAL SEAL NOTARY PUBLIC STATE OF WEST VIRGINIA AMY L TODD EAT PRODUCTION COMPANY 115 PROPESSIONAL PLACE BRIDGEPORT, WV 26330 ht Completion Entires August 21, 2002 |

WW-9 Attachment

Drilling medium anticipated for this well (vertical and horizontal)? Air, freshwater, oil based, etc.

 Air is used to drill the top-hole sections of the wellbore (surface, intermediate, and pilot). Water based mud may be necessary depending on hole conditions to stabilize and drill the intermediate section. The pilot hole, curve, and lateral sections will be drilled with either air, water based mud, or oil based mud.

Additives to be used in drilling medium?

Air - biodegradable oil lubricant, detergent, defoaming, water. Water based mud – Barite, viscosifer, alkalinity control, lime, filtration control, deflocculates, biodegradable oil lubricant, defoaming, walnut shell, salt, x-cide, carbonates. Oil based mud – synthetic base oil, emulsifier, salt, lime, viscosifer, alkalinity control, filtration control, deflocculates, biodegradable oil lubricant, defoaming, carbonates.

Anticipated Frac Additives Chemical Names and CAS numbers

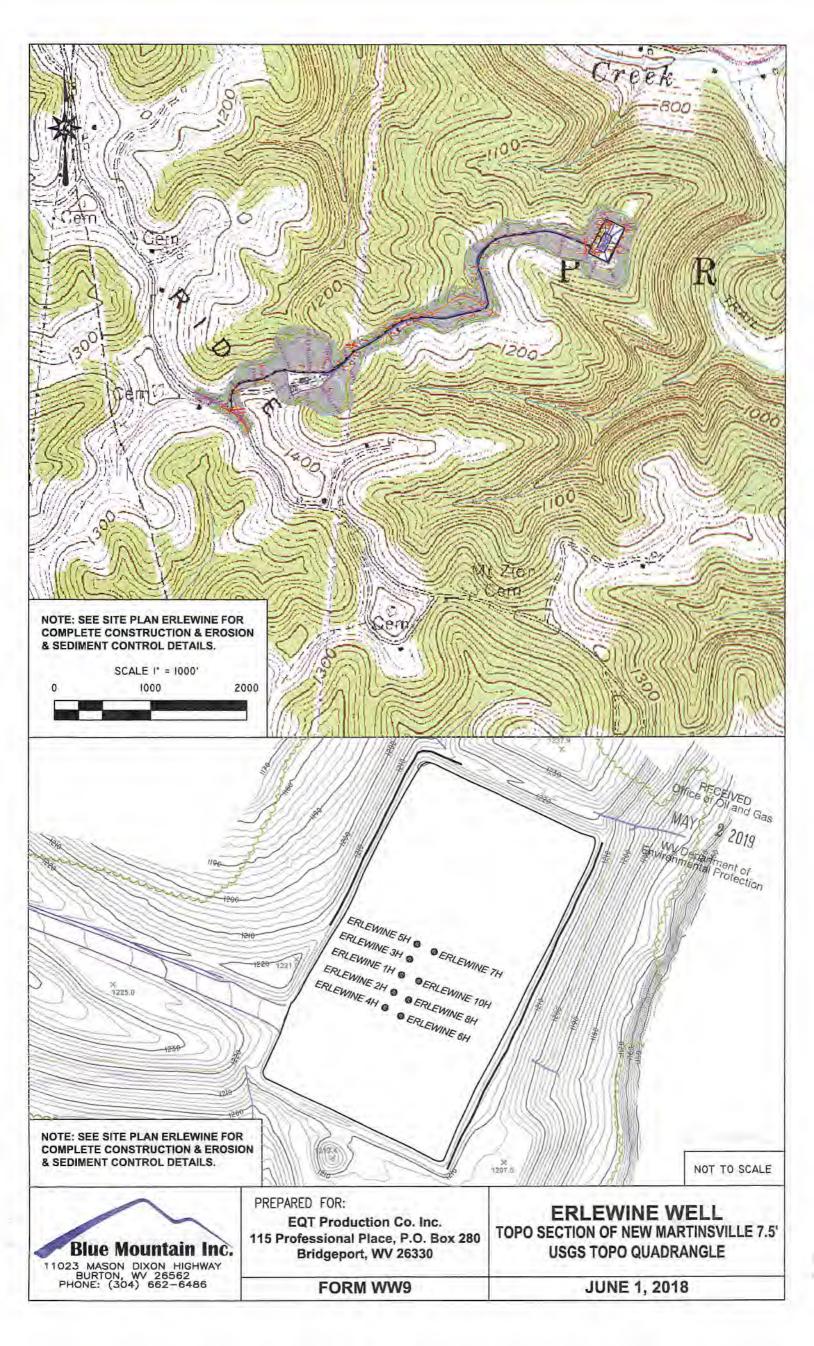
| <u>Material</u> | Ingredient | CAS Number |
|-----------------------|--|-------------------|
| | | |
| Water | | |
| Sand | Hydrotrootod light notroloum distillato | 14000 60 7 |
| Sanu | Hydrotreated light petroleum distillate Tributyl tetradecyl phosphonium | 14808-60-7 |
| Friction Reducer | chloride | 64742-47-8 |
| Biocide | Ammonium chloride | 81741-28-8 |
| Scale Inhibitor | Hydrochloric Acid | 12125-02-9 |
| 15% Hydrochloric Acid | Propargyl Alcohol | 7647-01-0 |
| Corrosion Inhibitor | Methanol | 107-19-7 |
| Corrosion Inhibitor | Guar Gum | 67-56-1 |
| Gelling Agent | Sodium Persulfate | 9000-30-0 |
| Oxidizing Breaker | Potassium Carbonate | 7775-27-1 |
| Buffering Agent | | 584-08-7 |

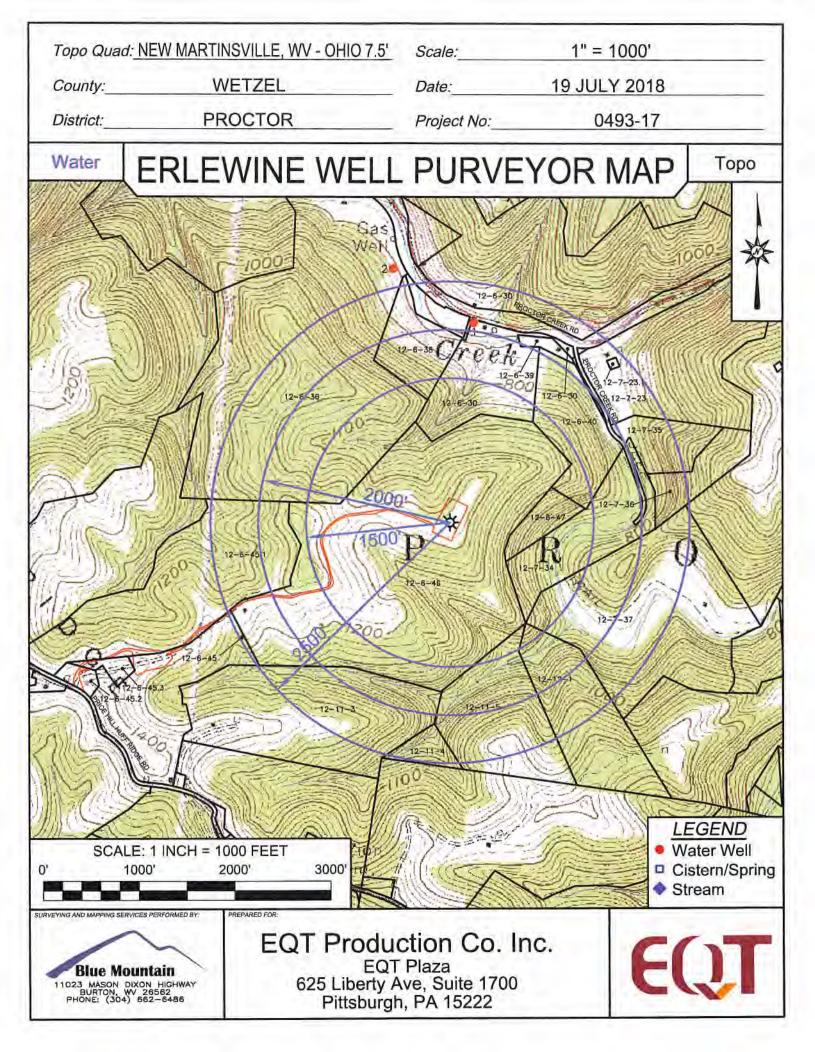
Pat 5-27-19

| | | | Production Water Pla osals for Unconvention | | | | | | · |
|--|-----------------------------|-------------|--|---------|--------------|--------------|--------------|---|--------------------|
| Facility Name | Address | Address 2 | City | State | Zip | Phone | County | State | Permit Number |
| CWS Trucking Inc. | P.O. Box 391 | | Williamstown | lwv | 26187 | 740-516-3586 | Noble | ОН | 3390 |
| | | | | | | | | | |
| Broad Street Energy LLC | 37 West Broad Street | Suite 1100 | Columbus | ОН | 43215 | 740-516-5381 | Washingotn | ОН | 8462 |
| | | | | | | | | | |
| LAD Liquid Assets Disposal Inc. | 226 Rankin Road | | Washington | PA | 15301 | 724-350-2760 | Ohio | wv | USEPA WV 0014 |
| | | | | | | | | | |
| Triad Energy | PO Box 430 | | Reno | ОН | 45773 | 740-516-6021 | Noble | ОН | 4037 |
| | | | | | | 740-374-2940 | | | |
| | | | | | | | | | |
| Tri County Waste Water Management, Inc. | 1487 Toms Run Road | | Holbrook | PA | 15341 | 724-627-7178 | Greene | PA | TC-1009 |
| | | | | | | 724-499-5647 | | | |
| | | | | | | | | ļ | |
| King Excavating Co. Advance Waste Services | 101 River Park Drive | | New Castle | PA | 16101 | | Lawrence | PA | PAR000029132 |
| | 1 | | 0:1 | 1407 | 16226 | 204 226 6627 | | 1 | CIVE 4000 00 |
| Waste Management - Meadowfill Landfill | Rt. 2, Box 68 Dawson Drive | | Bridgeport | wv_ | 16330 | 304-326-6027 | Harrison | wv | SWF-1032-98 |
| | | | | | | | | | Approval #100785WV |
| Waste Management - Northwestern Landfill | 512 E. Dry Road | | Parkersburg | - wv | 26104 | 304-428-0602 | Wood | lwv | SWF-1025 WV-010940 |
| waste Management - Northwestern Landill | S12 E. Dry Roau | - | Parkersburg | | 20104 | 304-428-0002 | wood | 1000 | 3WF-1025 WV-010940 |
| APEX Landfill | 11 County Road 78 | PO Box 57 | Amsterdam | ОН | 43903 | 740-543-4389 | Jefferson | ОН | 06-08438 |
| AFEX Calidilli | 11 County Road 78 | FO BOX 37 | Amsterdam | - 1011 | 143303 | 740-343-4383 | Jenerson | 1011 | 00-00436 |
| Advanced Disposal - Chestnut Valley Landfill | 1184 McClellandtown Road | | McClellandtown | PA | 15458 | 724-437-7336 | Favette | PA | 100419 |
| Advanced Disposal Chestilat Valley Landin | 1104 Medicilation House | | - IVICOICII GII GIOVIII | - · · · | 123 130 | 724 437 7330 | Tuyette | | 100415 |
| Westmoreland Sanitary Landfill | 901 Tyrol Boulevard | | Belle Vernon | PA | 15012 | 724-929-7694 | Westmoreland | PA | 100277 |
| | | | | | | | | | |
| Austin Master Services | 801 North 1st Street | | Martins Ferry | ОН | 43935 | 740-609-3800 | Belmont | ОН | 2014-541 |
| | | | | | | | | | |
| Belmont Solids Control | 77505 Cadiz-New Athers Road | | Cadiz | ОН | 43907 | 740-942-1739 | Harrison | ОН | 2015-511 |
| | | | | | | | | | |
| Diversified Resources | 3111 Braun Rd. | | Belpre | ОН | 45714 | 740-401-0413 | Washington | ОН | |
| | | | | | | | · | | |
| | | | | | | 740-610-1512 | | 1 | 34-031-27177 |
| | | | Coshocton | ОН | 43812 | 724-591-4393 | | ОН | 34-031-27178 |
| Buckeye Brine | 23986 Airport Road | | | | | 724 331 4333 | Coshocton | ļ | 34-031-27241 |
| | | | | | | | | ļ | |
| Central Environmental Services | 28333 West Belpre Pike | | Coolville | ОН | 45723 | 304-488-0701 | Athens | ОН | |
| | | | 1 | | | | | | |
| Nuverra - Nichols | 10555 Veto Road | | Belpre | ОН | 45714 | 330-232-5041 | Washington | ОН | 34-119-2-8776 |
| | 10250 5+ Bib. B 1 | | NI | | 42757 | 220 222 -221 | | - | 24.467.5.222 |
| Nuverra - Goff 35 | 9350 East Pike Road | | Norwich | ОН | 43767 | 330-232-5041 | Muskingum | ОН | 34-167-2-3862 |
| Nuverra - Wolf gg Z | FARR State Bauta F | | Naudan Calla | | 14444 | 220 222 5044 | | 011 | 24.455.2.4002 |
| Nuverra - Wolf g g Z C Z | 5480 State Route 5 | | Newton Falls | ОН | 44444 | 330-232-5041 | Trumbull | ОН | 34-155-2-1893 |
| | 5310 State Route 5 | | Newton Falls | ОН | 44444 | 330-232-5041 | Trumbull | ОН | 34-155-2-3795 |
| Nuverra - Pander 773 A CO | 2210 State vonte 2 | | Newton Falls | UH | 44444 | 330-232-5041 | i i unibuli | | 34-133-2-3/95 |
| Nuverra - AnnaReck D-1 | 3549 Warner Road | | Fowler | ОН | 44418 | 330-232-5041 | Trumbull | ОН | 34-155-2-2403 |
| | 12272 WALLICI NUAU | | | | | | | | 134"133"2"24U3 |

| | | | | 740-374-2940 | | | T |
|-----------------------|---|---|---|---|--|--|--------------------------|
| | Reno | ОН | 45773 | 412-443-4397 | | он | |
| 199 Bowersock Road | | | | 740-236-2135 | Washington | | 34-167-2-9577 |
| | | | | | | | |
| | ŀ | | 1 | 740-374-2940 | | | |
| | Dexter City | ОН | 45727 | 412-443-4397 | | ОН | 34-121-24037 |
| 38505 Marietta Rd. | | | | 740-236-2135 | Noble | | 34-121-24086 |
| | | | + | 740 274 2040 | | | |
| | Ellephore | 1407 | 26246 | l) | | 140/ | |
| 122 Longsoma Bina Pd | Cileriboro | *** | 20340 | | Ditabia | 1000 | 47-085-09721 |
| 122 Lonesonie i me nu | | | + | 740-230-2133 | Mitche | - | 47-083-03721 |
| | | | | | | - | 34-105-2-3619 |
| | Downland. | ļ.,, | 45770 | | | ļ.,. | 34-105-2-3652 |
| | Portiand | IOH | 45//0 | | | ОН | 34-105-2-3637 |
| 53610 TS Rd 706 | | | | /40-236-2135 | Meigs | | 34-105-2-3651 |
| | | | | | | | |
| 745 North 3rd Street | Cambridge | ОН | 43725 | 614-477-1368 | Guernsey | он | Ohio Chiefs Order 25-019 |
| | | | | | | | |
| 38 Technology Dr. | Tridelphia | wv_ | 26059 | 740-255-5727 | Ohio | wv | |
| 22/1 OH-921 | Marietta | OU | 45750 | 204 620 0176 | Machington | 011 | 34-167-2-9766 |
| | 38505 Marietta Rd. 122 Lonesome Pine Rd 53610 TS Rd 706 745 North 3rd Street | 199 Bowersock Road Dexter City 38505 Marietta Rd. Ellenboro 122 Lonesome Pine Rd Portland 53610 TS Rd 706 745 North 3rd Street Cambridge 38 Technology Dr. Tridelphia | 199 Bowersock Road Dexter City OH 38505 Marietta Rd. Ellenboro WV 122 Lonesome Pine Rd Portland OH 53610 TS Rd 706 Cambridge OH 38 Technology Dr. Tridelphia WV | 199 Bowersock Road Dexter City OH 45727 38505 Marietta Rd. Ellenboro WV 26346 Portland OH 45770 53610 TS Rd 706 Cambridge OH 43725 38 Technology Dr. Tridelphia WV 26059 | Reno OH 45773 412-443-4397 740-236-2135 740-374-2940 45727 412-443-4397 740-236-2135 740-374-2940 45727 412-443-4397 740-236-2135 740-374-2940 412-443-4397 740-236-2135 740-374-2940 412-443-4397 740-236-2135 740-374-2940 412-443-4397 740-236-2135 740-374-2940 412-443-4397 740-236-2135 745 North 3rd Street Cambridge OH 43725 614-477-1368 38 Technology Dr. Tridelphia WV 26059 740-255-5727 740-255-5727 740-255-5727 740-255-5727 740-255-5727 740-255-5727 740-255-5727 740-255-5727 740-255-5727 740-255-5727 740-255-5727 740-255-5727 740 | Reno OH 45773 412-443-4397 740-236-2135 Washington | Reno |









Site Specific Safety and Environmental Plan

EQT Erlewine Pad New Martinsville Wetzel County, WV

| 5H | 7H | For Wells: |
|--------------|-------------------|--------------------------|
| | | |
| SH | Production | WV Oil and Gas Inspector |
| 0 | dman - Permitting | Title |
| 4/30 Date | 0/19 | |

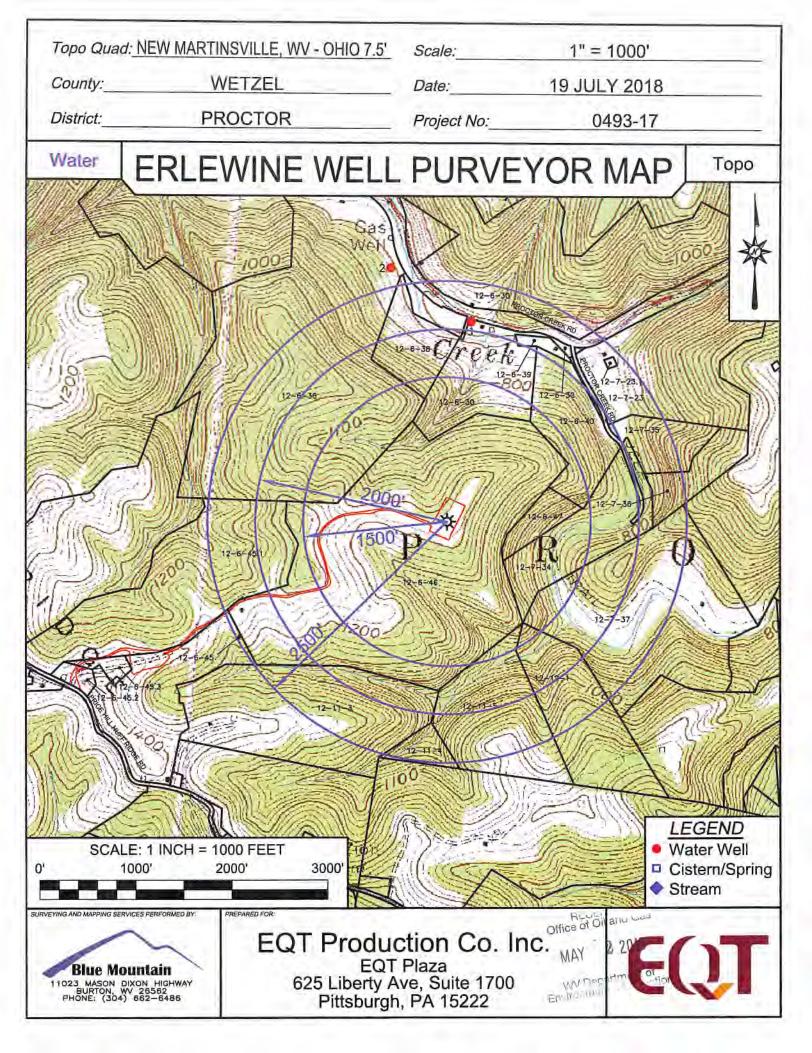




Table 1 - Water Source Identification

WN/ Department of

| FOT W-II D- I N FDI FIMINE | | | |
|--|---|--|--|
| EQT Well Pad Name: ERLEWINE Submittal Date: 7-18-2018 | | | |
| EQT Well Number: <u>ERLEWINE: 1H,2H, 3H, 4H, 5H, 6H, 7H, 8H, 10H</u> | | | |
| Survey / Engineering Company: <u>BLUE MOUNTAIN INC.</u> | | | |
| Site Number:1 Distance from Gas Well (feet):2,052+/ | | | |
| Surface Owner / Occupant: Albert Ray Anderson | ⊠ Landowner Requested | | |
| Address: 100 N. Bridge St., Box 25, New Martinsville, WV 26155 Phone #: N/A | Sampling Landowner Decline Sampling Unable to Contact | | |
| Field Located Date: 06-09-2017 Owner home during survey (yes/no): N/A | | | |
| Coordinates: 39.689185° -80.796298° +/- decimal degrees – NAD 83 | (Further contact attempts to be made by EQT's third party pre-drill sampling lab) | | |
| Contact Attempts (Date): 1st: 06-10-2017 2nd: N/A Date Door Hanger Left: N/A | | | |
| Comments: Certified mailer sent 6-5-18; 2nd certified mailer returned undelivered | | | |
| Site Number:2 Distance from Gas Well (feet): 2,659+/- | | | |
| Surface Owner / Occupant: Richard L. Earlewine | □ Landowner Requested | | |
| Address: Rt. 1 Box 72, Proctor, WV 26055 Phone #: N/A | Sampling Landowner Decline | | |
| Field Located Date: 06-09-2017 Owner home during survey (yes/no): N/A | Sampling Unable to Contact | | |
| Coordinates: 39.690677° -80.799289° (decimal degrees – NAD 83) | (Further contact attempts to be made by EQT's third party pre-drill sampling lab) | | |
| Contact Attempts (Date): 1st; 06-07-2017 2nd; 6-8-2018 Door Hanger Left: N/A | pre-unii samping lab) | | |
| Comments: Certified mailer delevered 6-7-17; 2nd certified mailer delivered 6-8-18 yes to water testing. | | | |
| Site Number:3 Distance from Gas Well (feet): N/A | | | |
| Surface Owner / Occupant: David Michael Anderson | ☐ Landowner Requested | | |
| Address: 100 N Bridge St., Box 25, New Martinsville, WV 26155 Phone #: N/A | Sampling ☐ Landowner Decline Sampling | | |
| Field Located DateN/A Owner home during survey (Yes/No): N/A | □ Unable to Contact ○ (Further contact attempts to be) | | |
| Coordinates: N/A (decimal degrees – NAD 83) | made by EQT's third party pre-drith sampling (ab) | | |
| Contact Attempts (Date): 1st; 06-10-2017 2nd: 6-5-2018 Date Door Hanger Left: N/A | 2 2019 | | |

| Site Number: 4 Distance from Gas Well (feet)N/A | |
|--|---|
| Surface Owner / Occupant: <u>David Michael Anderson</u> | ☐ Landowner Requested |
| Address: 100 N Bridge St., Box 25, New Martinsville, WV 26155 Phone #: N/A | Sampling □ Landowner Decline |
| Field Located Date: N/A Owner home during survey (Yes/No): | Sampling ☑ Unable to Contact |
| Coordinates: N/A (decimal degrees – NAD 83) | (Further contact attempts to be made by EQT's third party pre-drill sampling lab) |
| Contact Attempts (Date): 1st: <u>06-09-2017</u> 2nd: <u>6-10-17</u> Date Door Hanger Left: <u>06-09-17</u> | |
| Comments: Certified mailer sent 6-5-18; 3rd certified mailer returned undelivered | |
| | 1 |
| Site Number: 5 Distance from Gas Well (feet): N/A | |
| Surface Owner / Occupant: <u>David Michael Anderson</u> | ☐ Landowner Requested |
| Address: 100 N Bridge St., Box 25, New Martinsville, WV 26155 Phone #: N/A | Sampling Landowner Decline |
| Field Located Date N/A Owner home during survey (Yes/No): N/A | Sampling Unable to Contact |
| Coordinates: N/A (decimal degrees – NAD 83) | (Further contact attempts to be made by EQT's third party pre-drill sampling lab) |
| Contact Attempts (Date): 1st: <u>06-10-2017</u> 2nd: <u>6-5-2018</u> Date Door Hanger Left: <u>N/A</u> | |
| Comments: Certified mailer sent 6-5-18; 2nd certified mailer returned undelivered | |
| | |
| Site Number:6 Distance from Gas Well (feet): <u>N/A</u> Surface Owner / Occupant: <u>Christy Leek & Mary Wilson Est</u> | ☐ Landowner Requested |
| Address: 195 Pike St, New Martinsville, WV 26155 Phone #: N/A | Sampling ☐ Landowner Decline |
| Field Located Date N/A Owner home during survey (Yes/No): N/A | Sampling ⊠ Unable to Contact |
| Coordinates: N/A (decimal degrees – NAD 83) | (Further contact attempts to be made by EQT's third party |
| Contact Attempts (Date): 1st: <u>06-07-2017</u> 2nd: <u>6-8-2018</u> Date Door Hanger Left: N/A | pre-drill sampling lab) |
| Comments: Certified mailer sent 6-5-18, Delivered 6-8-18. Owner name change since fi | rst attemnt sent |
| | |
| Site Number:7 Distance from Gas Well (feet): N/A | |
| Surface Owner / Occupant: <u>Donald F. & Martha J. Arrick</u> | □ Landowner Requested □ Landown |
| Address: <u>17954 Energy Rd, Proctor, WV 26055</u> Cell Phone #: <u>304-780-9238.</u> | Sampling Landowner Decline |
| Field Located Date: <u>N/A</u> Owner home during survey (Yes/No): <u>N/A</u> | Sampling ☐ Unable to Contact |
| Coordinates: N/A (decimal degrees – NAD 83) | (Further contact attempts to be made by EQT's third party pre-drill sampling lab) |
| Contact Attempts (Date): 1 st : <u>06-07-2017</u> 2 nd : <u>6-7-2018</u> Date Door Hanger Left: <u>N/A</u> | |

Comments: Certified 6-7-17;2nd Certified mailer sent 6-5-18, was delivered on 6-7-18, spoke with Mr. Arrick 6-15-18 water well would like it tested. No house on property: Leave message if no answer: First call attempt to contact –left a voice med of 6-26-18.

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| Site Number: 8 Distance from Gas Well (feet): N/A | |
|--|---|
| Surface Owner / Occupant: Kevin Goff | ☐ Landowner Requested |
| | Sampling |
| Address: PO Box 222, New Martinsville, WV 26155-0222 Phone #: 304-771-8800 | ☐ Landowner Decline |
| Field Located Date: N/A Owner home during survey (Yes/No): N/A | Sampling ☐ Unable to Contact |
| Field Located Date. N/A Owner floring during survey (Tes/No). N/A | (Further contact attempts to be |
| Coordinates: N/A (decimal degrees – NAD 83) | made by EQT's third party pre-drill sampling lab) |
| Contact Attempts (Date): 1st: 6-20-2017 2nd:6-11-2018 Date Door Hanger Left: N/A | |
| Comments: Spoke with Mr. Goff 6-20-17. He stated he has 1 well. May not want water tested. Further photo Certified mailer sent 6-5-18, was delivered on 6-11-18, 7-16-18 Returned letter stating doesn't Water tested. | ne calls unreturned. |
| Site Number: 9 Distance from Gas Well (feet): N/A | |
| Surface Owner / Occupant: Kevin Goff | ☐ Landowner Requested Sampling |
| Address: PO Box 222, New Martinsville, WV 26155-0222 Phone #: 304-771-8800 | □ Sampling □ Landowner Decline □ Sampling |
| Field Located Date: N/A Owner home during survey (Yes/No): N/A | ☐ Unable to Contact (Further contact attempts to be |
| Coordinates: N/A (decimal degrees – NAD 83) | made by EQT's third party pre-drill sampling lab) |
| Contact Attempts (Date): 1st: 6-20-17 2nd: 6-11-18 Date Door Hanger Left: N/A | |
| Comments: Spoke with Mr. Goff 6-20-17. He stated he has 1 well. May not want water tested. Further pho Certified mailer sent 6-5-18, was delivered on 6-11-18, 7-16-18 Returned letter stating doesn't Water tested. | ne calls unreturned. |
| Site Number:10 Distance from Gas Well (feet):N/A | |
| Surface Owner / Occupant: Rost Energy Company Inc. | ☐ Landowner Requested Sampling |
| Address: PO Box 615, Ligonier, PA 15658-0615 Phone #: N/A | ☐ Landowner Decline Sampling |
| Field Located Date: N/A Owner home during survey (Yes/No): N/A | ☐ Unable to Contact (Further contact attempts to be |
| Coordinates: N/A (decimal degrees – NAD 83) | made by EQT's third party pre-drill sampling lab) |
| Contact Attempts (Date): 1st: 6-6-17 2nd: 6-7-2018 Date Door Hanger Left: N/A | |
| Comments: Certified mailer sent 6-5-18, was delivered on 6-7-18 | |
| | |

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| Site Number:11 Distance from Gas Well (feet): N/A | |
|--|---|
| Surface Owner / Occupant: Christy Leek & Mary Wilson Est | ☐ Landowner Requested |
| Address: 195 Pike St. New Martinsville, WV 26155 Phone #: N/A | Sampling Landowner Decline |
| Field Located Date: N/A Owner home during survey (Yes/No): N/A | Sampling ☐ Unable to Contact |
| Coordinates: N/A (decimal degrees – NAD 83) | (Further contact attempts to be made by EQT's third party pre-drill sampling lab) |
| Contact Attempts (Date): 1st: 6-6-17 2nd: 6-8-18 Date Door Hanger Left: N/A | |
| Comments: Certified mailer sent 6-5-18, was delivered on 6-8-18 | |
| | |
| Site Number: 12 Distance from Gas Well (feet): N/A | |
| Surface Owner / Occupant: Emma L. & John J. Moore | ☐ Landowner Requested |
| Address: 2616 Huff Ridge Rd. New Martinsville, WV 26155 Phone #: N/A | Sampling Landowner Decline |
| Field Located Date: N/A Owner home during survey (Yes/No): N/A | Sampling ☑ Unable to Contact |
| Coordinates: N/A (decimal degrees – NAD 83) | (Further contact attempts to be made by EQT's third party pre-drill sampling lab) |
| Contact Attempts (Date): 1st: 6-7-17 2nd: 6-7-18 Date Door Hanger Left: N/A | , |
| Comments: Certified mailer sent 6-5-18, was delivered on 6-7-18. | |
| | |
| Site Number: 13 Distance from Gas Well (feet): N/A | |
| Surface Owner / Occupant: Kevin Goff | ☐ Landowner Requested |
| Address: PO Box 222, New Martinsville, WV 26155 Phone #: 304-771-8800 | Sampling ⊠ Landowner Decline |
| Field Located Date: N/A Owner home during survey (Yes/No): N/A | Sampling ☐ Unable to Contact |
| Coordinates: N/A (decimal degrees – NAD 83) | (Further contact attempts to be made by EQT's third party pre-drill sampling lab) |
| Contact Attempts (Date): 1st: 6-20-2017 2nd: 6-11-18 Date Door Hanger Left: N/A | pre-unii sampiing lab) |
| Comments: Spoke with Mr. Goff 6-20-17. He stated he has 1 well. May not want water tested. Further phor Certified mailer sent 6-5-18, was delivered on 6-11-18, 7-16-18 Returned letter stating doesnt Water tested. | ne calls unreturned. |
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| • | MAY 2 2019 |

WV Department of

| Site Number: 14 Distance from Gas Well (feet): N/A | |
|--|--|
| Surface Owner / Occupant: <u>Linda Anderson</u> | ☐ Landowner Requested |
| Address: 2641 Huff RDG New Martinsville, WV 26155 Phone #: N/A | Sampling Landowner Decline |
| Field Located Date: N/A Owner home during survey (Yes/No): N/A Coordinates: N/A (decimal degrees – NAD 83) | Sampling Unable to Contact (Further contact attempts to be made by EQT's third party pre-drill sampling lab) |
| Contact Attempts (Date): 1st: 6-8-17 2nd: 6-8-18 Date Door Hanger Left: N/A | pro arm camping (ab) |
| Comments: Certified mailer sent 6-5-18, was delivered on 6-8-18 | |
| | |
| Site Number:15 | |
| Surface Owner / Occupant: <u>EQT Production Company</u> | ☐ Landowner Requested |
| Address: EQT Plaza, 625 Liberty Ave, Suite 1700, Pittsburgh PA 15222 Phone #: N/A | Sampling ☑ Landowner Decline |
| Field Located Date: N/A Owner home during survey (Yes/No): N/A | Sampling ☐ Unable to Contact |
| Coordinates: N/A (decimal degrees – NAD 83) | (Further contact attempts to be made by EQT's third party |
| (doomlar dogrood 147 to 00) | pre-drill sampling lab) |

Comments: <u>Certified mailer sent 6-5-18</u>, <u>was delivered on 6-12-18</u>. Stone Energy returned letter stating <u>letter needs sent to EQT. 3rd attempt sent 7-12-18</u>.

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To Whom It May Concern:

<u>BLUE MOUNTAIN</u> has been contracted by EQT Production Company (EQT) to do some preliminary work for a proposed oil and gas well permit application.

In accordance with West Virginia Code 35-8-15, the West Virginia Department of Environmental Protection (WVDEP), Office of Oil and Gas, requires gas well operators to offer pre-drill water testing for existing water wells or developed springs actually used by the surface owner or water purveyor for consumption by humans or domestic animals, which are located within 1,500 feet of the proposed gas well pad. Please note that the WVDEP requires this water testing offer to a radius of 1,500 feet; however it is EQT's standard practice to conduct the water testing to a radius of 2,500 feet from the proposed gas well pad location.

EQT hereby notifies you (the surface owner and/or water purveyor) of the following:

- · Your right to request sampling and analysis;
- The rebuttable presumption for contamination or deprivation of a fresh water source or supply;
- That refusal to allow the operator to conduct a pre-drilling water well test constitutes a method to rebut the presumption of liability;
- Your independent right to sample and analyze any water supply at your own expense;
- That EQT will utilize an independent laboratory to analyze any sample;
- That you can obtain from the Chief a list of water testing laboratories in the subject area capable of and qualified to test water supplies in accordance with standard acceptable methods.

Therefore, EQT offers, at no charge to you, water testing of your water supply(s). Results of these tests will be sent to you upon our receipt from the independent testing laboratory.

Please notify <u>BLUE MOUNTAIN</u> at your earliest convenience if you are interested in having your potable water tested. Please have this letter with you at the time of contact so that the well number may be referenced.

Thank you for your cooperation in this matter.

BLUE MOUNTAIN
11023 Mason Dixon Highway
Burton, WV 26562
Ph: (304) 662-6486

Date: 6-5-2018

Left/sent by: BLUE MOUNTAIN

EQT Well Number: ERLEWINE: 1H, 2H, 3H, 4H, 5H, 6H, 7H, 8H, 10H

*If you do not have a water well or other non-public water source, please make note of it and include your name and address when you return this sheet.

| If you do not feel the need to have your water well, spring the line below and return to the above address. This will s and has been declined. | signify that a sample has been offered to the surface | owner |
|--|---|--------------|
| Name (please print): Keyn GGF | Address: 10-15-18 MODIEM MANE, WV | · <i>1</i> / |
| Signature: | Date: | 6149 |
| | | |

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WV Department of

Parcel 12-7-34



To Whom It May Concern:

BLUE MOUNTAIN INC. has been contracted by EQT Production Company (EQT) to do some preliminary work for a proposed oil and gas well permit application.

In accordance with West Virginia Code 35-8-15, the West Virginia Department of Environmental Protection (WVDEP), Office of Oil and Gas, requires gas well operators to offer pre-drill water testing for existing water wells or developed springs actually used by the surface owner or water purveyor for consumption by humans or domestic animals, which are located within 1,500 feet of the proposed gas well pad. Please note that the WVDEP requires this water testing offer to a radius of 1,500 feet; however it is EQT's standard practice to conduct the water testing to a radius of 2,500 feet from the proposed gas well pad location.

EQT hereby notifies you (the surface owner and/or water purveyor) of the following:

- · Your right to request sampling and analysis;
- The rebuttable presumption for contamination or deprivation of a fresh water source or supply;
- That refusal to allow the operator to conduct a pre-drilling water well test constitutes a
 method to rebut the presumption of liability;
- Your independent right to sample and analyze any water supply at your own expense;
- That EQT will utilize an independent laboratory to analyze any sample;
- That you can obtain from the Chief a list of water testing laboratories in the subject area capable of and qualified to test water supplies in accordance with standard acceptable methods.

Therefore, EQT offers, at no charge to you, water testing of your water supply(s). Results of these tests will be sent to you upon our receipt from the independent testing laboratory.

Please notify <u>BLUE MOUNTAIN INC.</u> at your earliest convenience if you are interested in having your potable water tested. Please have this letter with you at the time of contact so that the well number may be referenced.

Thank you for your cooperation in this matter.

BLUE MOUNTAIN INC. 11023 Mason Dixon Highway Burton. WV 26562 Ph: (304) 662-6486

Date: 6-5-2017

EQT Well Number: ERLEWINE: 1H, 2H, 3H, 4H, 5H, 6H, 7H, 8H,

Left/sent by: BLUE MOUNTAIN INC.

10H

*If you do not have a water well or other non-public water source, please make note of it and include your name and address when you return this sheet.

| If you do not feel the need to have your wate the line below and return to the above add owner and has been declined. | r well, spring, or other non-public water s ress. This will signify that a sample ha | cource sampled, please sign on as been offered to the surface |
|---|---|---|
| Name (please print): | Address: | |
| Name (please print): | Date: 6-18 | RECEIVED Office of Oil and Gas |
| | | 0.2010 |

2 2019

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Parcel 12-12

To Whom it May Concern:

BLUE MOUNTAIN has been contracted by EQT Production Company (EQT) to do some preliminary work for a proposed oil and gas well permit application.

In accordance with West Virginia Code 35-8-15, the West Virginia Department of Environmental Protection (WVDEP), Office of Oil and Gas, requires gas well operators to offer pre-drill water testing for existing water wells or developed springs actually used by the surface owner or water purveyor for consumption by humans or domestic animals, which are located within 1,500 feet of the proposed gas well pad. Please note that the WVDEP requires this water testing offer to a radius of 1,500 feet; however it is EQT's standard practice to conduct the water testing to a radius of 2,500 feet from the proposed gas well pad location.

EQT hereby notifies you (the surface owner and/or water purveyor) of the following:

- · Your right to request sampling and analysis;
- The rebuttable presumption for contamination or deprivation of a fresh water source or supply;
- That refusal to allow the operator to conduct a pre-drilling water well test constitutes a
 method to rebut the presumption of liability;
- Your independent right to sample and analyze any water supply at your own expense;
- That EQT will utilize an independent laboratory to analyze any sample;
- That you can obtain from the Chief a list of water testing laboratories in the subject area capable of and qualified to test water supplies in accordance with standard acceptable methods.

Therefore, EQT offers, at no charge to you, water testing of your water supply(s). Results of these tests will be sent to you upon our receipt from the independent testing laboratory.

Please notify <u>BLUE MOUNTAIN</u> at your earliest convenience if you are interested in having your potable water tested. Please have this letter with you at the time of contact so that the well number may be referenced.

Thank you for your cooperation in this matter.

BLUE MOUNTAIN 11023 Mason Dixon Highway Burton. WV 26562 Ph: (304) 662-6486

Date: 6-5-2018

Left/sent by: BLUE MOUNTAIN

EQT Well Number: ERLEWINE: 1H, 2H, 3H, 4H, 5H, 6H, 7H, 8H, 10H

*If you do not have a water well or other non-public water source, please make note of it and include your name and address when you return this sheet.

| If you do not feel the need to have your water well, spring, or other non-public water source sampled, please sign on the line below and return to the above address. This will signify that a sample has been offered to the surface owner and has been declined. | | | | |
|--|---------------|--|--|--|
| Name (please print): | _ Address: | | | |
| Signature: | Date: 6-18-18 | | | |

RECEIVED
Office of Oil and Gas

MAY 2 2019

WV Department of



To Whom It May Concern:

BLUE MOUNTAIN has been contracted by EQT Production Company (EQT) to do some preliminary work for a proposed oil and gas well permit application

In accordance with West Virginia Code 35-8-15, the West Virginia Department of Environmental Protection (WVDEP), Office of Oil and Gas, requires gas well operators to offer pre-drill water testing for existing water wells or developed springs actually used by the surface owner or water purveyor for consumption by humans or domestic animals, which are located within 1,500 feet of the proposed gas well pad. Please note that the WVDEP requires this water testing offer to a radius of 1,500 feet; however it is EQT's standard practice to conduct the water testing to a radius of 2,500 feet from the proposed gas well pad location.

EQT hereby notifies you (the surface owner and/or water purveyor) of the following:

Your right to request sampling and analysis;

- The rebuttable presumption for contamination or deprivation of a fresh water source or supply;
- That refusal to allow the operator to conduct a pre-drilling water well test constitutes a method to rebut the presumption of liability;
- Your independent right to sample and analyze any water supply at your own expense;

That EQT will utilize an independent laboratory to analyze any sample;

That you can obtain from the Chief a list of water testing laboratories in the subject area capable of and qualified to test water supplies in accordance with standard acceptable methods.

Therefore, EQT offers, at no charge to you, water testing of your water supply(s). Results of these tests will be sent to you upon our receipt from the independent testing laboratory.

Please notify <u>BLUE MOUNTAIN</u> at your earliest convenience if you are interested in having your potable water tested. Please have this letter with you at the time of contact so that the well number may be referenced.

Thank you for your cooperation in this matter.

BLUE MOUNTAIN 11023 Mason Dixon Highway Burton, WV 26562 Ph: (304) 662-6486

Date:

Left/sent by: BLUE MOUNTAIN

EQT Well Number: ERLEWINE: 1H, 2H, 3H, 4H, 5H, 6H, 7H, 8H, 10H

*If you do not have a water well or other non-public water source, please make note of it and include your name and address when you return this sheet.

If you do not feel the need to have your water well, spring, or other non-public water source sampled, please sign on the line below and return to the above address. This will signify that a sample has been offered to the surface owner and has been declined.

Name (please print): <u>Jason Ranson-Director of Drillling, Land</u> Address: <u>EQT Plaza, 625 Liberty Ave, Suite</u> 1700 Pittsburgh PA 15222

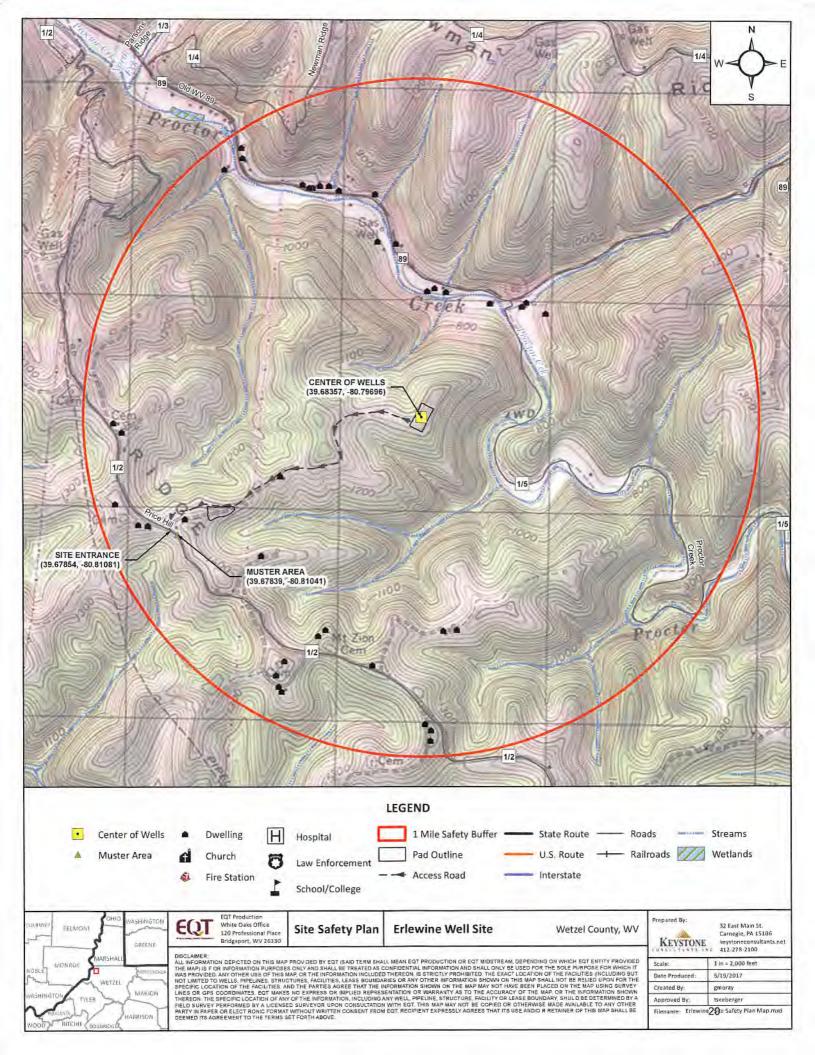
Signature:

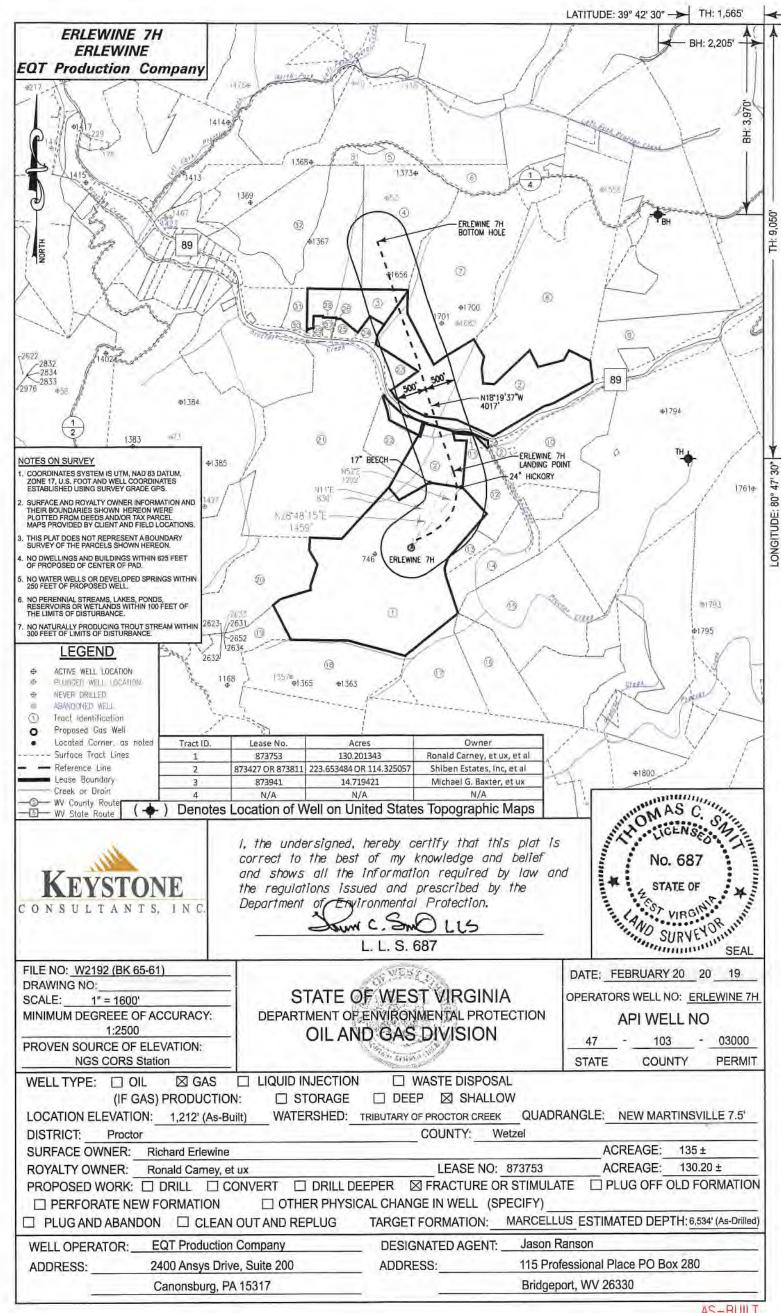
Date: 2-2

RECEIVED Office of Oil and Gas

MAY 2 2019

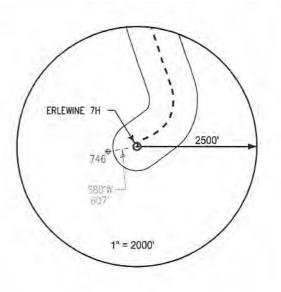
WV Department of





Erlewine 7H **Frlewine EQT Production Company**

| Tract ID. | Tax Map No. | Parcel No. | County | District | Surface Tract Owner | Acres |
|-----------|-------------|------------|--------|----------|---------------------------------|--------|
| 1 | 6 | 46 | Wetzel | Proctor | Richard L. Erlewine | 136.18 |
| 2 | 6 | 30 | Wetzel | Proctor | Albert Ray Anderson | 102.63 |
| 3 | 6 | 26.3 | Wetzel | Proctor | Michael G. & Kathleen F. Baxter | 18.7 |
| 4 | 6 | 7.3 | Wetzel | Proctor | Austin & Marlene Postlethwait | 54.57 |
| 5 | 1 | 32 | Wetzel | Proctor | Baxter Farm LLC | 76.67 |
| 6 | 6 | 52 | Wetzel | Proctor | Ronald J. & Linda L. Petrecca | 11.23 |
| 7 | 6 | 7,2 | Wetzel | Proctor | Brian Lyle & Beth Ann Hayes | 82.34 |
| .8 | 7 | 53 | Wetzel | Proctor | Scott R. & Melaney F. Langmyer | 97.41 |
| 9 | 7 | 14 | Wetzel | Proctor | Jessie A. Coleman | 29.42 |
| 10 | 7 | 23 | Wetzel | Proctor | Clegg Family Irrevocable Trust | 47.68 |
| 11 | 6 | 39 | Wetzel | Proctor | Ethyl Anderson EST | 1.42 |
| 12 | 6 | 40 | Wetzel | Proctor | Kevin S. Goff | 19.13 |
| 13 | 6 | 47 | Wetzel | Proctor | Victor Richard Reed ET AL | 5,55 |
| 14 | 7 | 34 | Wetzel | Proctor | Kevin Goff | 23.31 |
| 15 | 7 | 37 | Wetzel | Proctor | Rost Energy Company | 64.56 |
| 16 | 12 | 1 | Wetzel | Proctor | Kevin Goff | 28.69 |
| 17 | 11 | 5 | Wetzel | Proctor | Emma L. & John J. Moore | 30.34 |
| 18 | 11 | 3 | Wetzel | Proctor | Wilson Mary & Christy Leek EST | 52.33 |
| 19 | 6 | 45 | Wetzel | Proctor | Christy Leek | 29.51 |
| 20 | 6 | 45.1 | Wetzel | Proctor | Donald F. & Martha J. Arrick | 53,9 |
| 21 | 6 | 36 | Wetzel | Proctor | Richard L. Erlewine | 127.14 |
| 22 | 6 | 38 | Wetzel | Proctor | Ethyl Anderson EST | 12.56 |
| 23 | 6 | 29 | Wetzel | Proctor | Richard Lee Erlewine | 4.69 |
| 24 | 6 | 28 | Wetzel | Proctor | Ray D. & Heather D. Yoho | 2.74 |
| 25 | 6 | 27.1 | Wetzel | Proctor | Carolyn M. Lloyd | 2.13 |
| 26 | 6 | 27.2 | Wetzel | Proctor | Carolyn M. Lloyd | 0.1 |
| 27 | 6 | 27 | Wetzel | Proctor | Carolyn M. Lloyd | 1.26 |
| 28 | 6 | 26.2 | Wetzel | Proctor | Carolyn M. Lloyd | 0.09 |
| 29 | 6 | 26.1 | Wetzel | Proctor | Timothy F. Bridge | 1.25 |
| 30 | 6 | 26.4 | Wetzel | Proctor | Larry K. Keene | 0.44 |
| 31 | 6 | 26 | Wetzel | Proctor | Larry K. Keene | 6.26 |
| 32 | 6 | 6 | Wetzel | Proctor | Baxter Farm LLC | 88.5 |



ERLEWINE 7H As-Built coordinates are NAD 27 N: 433,702.003 E: 1,634,914.000 NAD 27 Lat: 39.683524 Long: -80.797239 NAD 83 UTM N: 4,392,660.735 E: 517,402.917

ERLEWINE 7H As-Built Landing Point coordinates are

NAD 27 N: 434,980.273 E: 1,635,616,810 NAD 27 Lat: 39.687061 Long: -80.794807 NAD 83 UTM N: 4,393,053.751 E: 517,610.546

ERLEWINE 7H As-Built Bottom Hole coordinates are NAD 27 N: 438,792.123 E: 1,634,354.050 NAD 27 Lat: 39.697475 Long: -80.799490 NAD 83 UTM N: 4.394,208,625 E: 517,206,481

West Virginia Coordinates system of 1927 (North Zone) based upon Differential GPS Measurements Plat orientation, Corner and well ties are based upon the grid north meridian
Well location references are based upon the grid north

meridian. UTM coordinates are NAD83, Zone 17, Meters.

Well References

Wood Stake Wood Stake O ERLEWINE 7H

1" = 200"

LEGEND

- Active Well Location
- 0 Proposed Gas Well
- Located Corner, as noted Surface Tract Lines
- Reference Line Lease Boundary
- Creek or Drain

WV County Route WV State Route

ERLEWINE PAD

ERLEWINE 5H O O ERLEWINE 7H ERLEWINE 3H O ERLEWINE 1H O O ERLEWINE 10H ERLEWINE 2H O ERLEWINE 8H ERLEWINE 4H O O ERLEWINE 6H



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 Department of Environmental Protection.

IN C. SMO LUS L. L. S. 687

MAS C. No. 68/
STATE OF
STATE OF
SURVEYOR
SEA

20 20 19

FILE NO: W2192 (BK 65-61) DRAWING NO: 1" = 1000' SCALE: MINIMUM DEGREE OF ACCURACY:

1:2500

WYES! STATE OF WEST VIRGINIA DEPARTMENT OF ENVIRONMENTAL PROTECTION OIL AND GAS DIVISION

DATE: FEBRUARY 20 20 OPERATORS WELL NO: ERLEWINE 7H API WELL NO

103 - 03000 47 COUNTY **PERMIT** STATE

| | ROVEN SOURCE OF ELEVATION: NGS CORS Station | | | |
|------------|--|-------|--------------|--|
| WELL TYPE: | □ OIL | ⊠ GAS | ☐ LIQUID IN. | |

(IF GAS) PRODUCTION:

JECTION ☐ WASTE DISPOSAL

☐ STORAGE ☐ DEEP ☐ SHALLOW

LOCATION ELEVATION: 1,212' (As-Built) WATERSHED: TRIBUTARY OF PROCTOR CREEK QUADRANGLE: NEW MARTINSVILLE 7.5'

COUNTY: Wetzel Proctor

SURFACE OWNER: Richard Erlewine ACREAGE: 135 ±

ROYALTY OWNER: Ronald Carney, et ux LEASE NO: 873753 ACREAGE: 130.20 ±

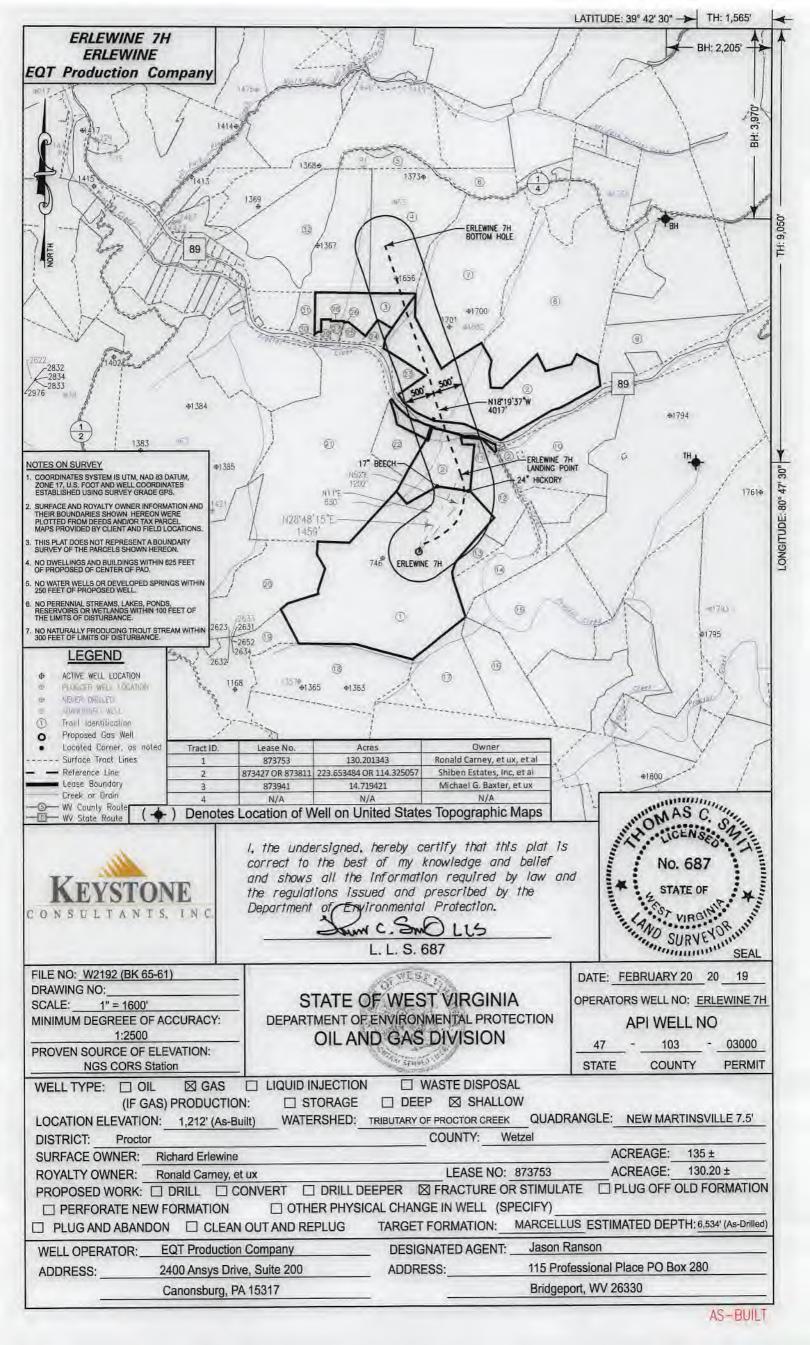
PROPOSED WORK: ☐ DRILL ☐ CONVERT ☐ DRILL DEEPER ☐ FRACTURE OR STIMULATE ☐ PLUG OFF OLD FORMATION

☐ OTHER PHYSICAL CHANGE IN WELL (SPECIFY) ☐ PERFORATE NEW FORMATION

ESTIMATED DEPTH: 6,534' (As-Drilled) ☐ PLUG AND ABANDON ☐ CLEAN OUT AND REPLUG Marcellus TARGET FORMATION:

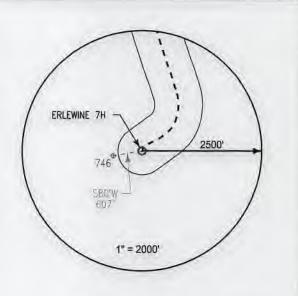
EQT Production Company Jason Ranson WELL OPERATOR:_ DESIGNATED AGENT: _ ADDRESS: 2400 Ansys Drive ADDRESS: 115 Professional Place PO Box 280

> Canonsburg, PA 15317 Bridgeport, WV 26330



Erlewine 7H Erlewine EQT Production Company

| Tract ID. | Tax Map No. | Parcel No. | County | District | Surface Tract Owner | Acres |
|-----------|-------------|------------|--------|----------|---------------------------------|--------|
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| 2 | 6 | 30 | Wetzel | Proctor | Albert Ray Anderson | 102.63 |
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| 6 | 6 | 52 | Wetzel | Proctor | Ronald J. & Linda L. Petrecca | 11.23 |
| 7 | 6 | 7.2 | Wetzel | Proctor | Brian Lyle & Beth Ann Hayes | 82.34 |
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| 9 | 7 | 14 | Wetzel | Proctor | Jessie A. Coleman | 29.42 |
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| 17 | 11 | 5 | Wetzel | Proctor | Emma L. & John J. Moore | 30.34 |
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| 19 | 6 | 45 | Wetzel | Proctor | Christy Leek | 29.51 |
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| 31 | 6 | 26 | Wetzel | Proctor | Larry K. Keene | 6.26 |
| 32 | 6 | 6 | Wetzel | Proctor | Baxter Farm LLC | 88.5 |



Notes: ERLEWINE 7H As-Bullt coordinates are
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NAD 27 Lat: 39.683524 Long: -80.797239
NAD 83 UTM N: 4,392,660.735 E: 517,402.917

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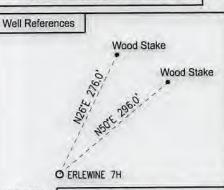
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Well location references are based upon the grid north
meridian.
UTM coordinates are NAD83, Zone 17, Meters.

LEGEND

- Active Well Location 0 Proposed Gas Well
 - Located Corner, as noted Surface Tract Lines
- Reference Line Lease Boundary Creek or Drain
- WV County Route WV State Route

ERLEWINE PAD

ERLEWINE 5H O O ERLEWINE 7H ERLEWINE 3H O ERLEWINE 1H O O ERLEWINE 10H ERLEWINE 2H O O ERLEWINE 8H ERLEWINE 4H O O ERLEWINE 6H



1" = 200'



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 Department of Environmental Protection.

LUS C. SMO LUS L. L. S. 687



FILE NO: W2192 (BK 65-61) DRAWING NO: SCALE: 1" = 1000' MINIMUM DEGREE OF ACCURACY: 1-2500

OF MESCA STATE OF WEST VIRGINIA DEPARTMENT OF ENVIRONMENTAL PROTECTION OIL AND CAS DIVISION

DATE: FEBRUARY 20 20_ OPERATORS WELL NO: ERLEWINE 7H API WELL NO

| PROVEN SOURCE OF ELEVATION: | OILAN | U GAS DIVISIO | | 47 | 103 | 03000 |
|--|----------------|--|--------------------------|-------------|----------------|------------------|
| NGS CORS Station | | THE STREET | | STATE | COUNTY | PERMIT |
| WELL TYPE: ☐ OIL ☐ GAS ☐ (IF GAS) PRODUCTION: LOCATION ELEVATION: 1,212' (As-Built | | ☐ WASTE DISPO ☐ DEEP ☒ SHAL TRIBUTARY OF PROCTOR CRE | LOW | NGLE: N | IEW MARTINSV | ILLE 7.5' |
| DISTRICT: Proctor | | COUNTY: | Wetzel | | | |
| SURFACE OWNER: Richard Erlewine | | | | ACF | REAGE: 135 | t |
| ROYALTY OWNER: Ronald Carney, et u | x | LEASE N | O: 873753 | 111111 | REAGE: 130. | |
| PROPOSED WORK: ☐ DRILL ☐ COI ☐ PERFORATE NEW FORMATION | | EEPER | OR STIMULAT (SPECIFY) | E PLU | JG OFF OLD F | ORMATION |
| | OUT AND REPLUG | TARGET FORMATION | Marcellus | ESTIMAT | TED DEPTH: 6,5 | 34' (As-Drilled) |
| WELL OPERATOR: EQT Production C | Company | DESIGNATED AGEN | IT: Jason Ra | inson | | |
| ADDRESS: 2400 Ansys Drive | | ADDRESS: | 115 Profe | ssional Pla | ce PO Box 280 | |
| Canonsburg, PA | 15317 | | Bridgepo | rt, WV 2633 | 30 | |

INFORMATION SUPPLIED UNDER WEST VIRGINIA CODE Chapter 22, Article 6A, Section 5(a)(5) IN LIEU OF FILING LEASE(S) AND OTHER CONTINUING CONTRACT(S)

Under the oath required to make the verification on page 1 of this Notice and Application, I depose and say that I am the person who signed the Notice and Application for the Applicant, and that –

- (1) the tract of land is the same tract described in this Application, partly or wholly depicted in the accompanying plat, and described in the Construction and Reclamation Plan;
- (2) the parties and recordation data (if recorded) for lease(s) or other continuing contract(s) by which the Applicant claims the right to extract, produce or market the oil or gas are as follows:

Lease Name or Number

Grantor, Lessor, etc.

Grantee, Lessee, etc.

Royalty

Book/Page

See Attached

Acknowledgement of Possible Permitting/Approval In Addition to the Office of Oil and Gas

The permit applicant for the proposed well work addressed in this application hereby acknowledges the possibility of the need for permits and/or approvals from local, state, or federal entities in addition to the DEP, Office of Oil and Gas, including but not limited to the following:

- WV Division of Water and Waste Management
- WV Division of Natural Resources WV Division of Highways
- U.S. Army Corps of Engineers
- U.S. Fish and Wildlife Service
- County Floodplain Coordinator

Office of Oil and Gas

MAY 2 2019

nvironmental Protection

The applicant further acknowledges that any Office of Oil and Gas permit in no way overrides, replaces, or nullifies the need for other permits/approvals that may be necessary and further affirms that all needed permits/approvals should be acquired from the appropriate authority before the affected activity is initiated.

Well Operator:

EQT Production Company

By:

John Zavatchan

Its:

Landman - Permitting

| Lease No. | Grantor, Lessor, etc. | Grantee, Lessee, etc. | Royalty | Book/Page |
|---------------|---|--------------------------|---------|-----------|
| 873753 | Ronald Carney, et ux, et al (current royalty owner) | | ** | _ |
| | Richard L. Erlewine (original lessor) | Stone Energy Corporation | | 134A/131 |
| | Stone Energy Corporation | EQT Production Company | | 183A/305 |
| <u>873427</u> | Shiben Estates, Inc, et al (current royalty owner) | | ** | |
| | Shiben Estates, Inc (original lessor) | Stone Energy Corporation | | 134A/131 |
| | Stone Energy Corporation | EQT Production Company | | 183A/305 |
| <u>873811</u> | Edgar D. Cook, et al (current royalty owner) | | ** | |
| | Edgar D. Cook, et al (original lessor) | Stone Energy Corporation | | 128A/959 |
| | Stone Energy Corporation | EQT Production Company | | 183A/305 |
| <u>873941</u> | Michael G. Baxter, et ux (current royalty owner) | | | |
| | Michael G. Baxter, et ux (original lessor) | Stone Energy Corporation | | 137A/334 |
| | Stone Energy Corporation | EQT Production Company | | 183A/305 |



^{**} Per West Virginia Code Section 22-6-8.



EQT Production Company 2400 Ansys Drive, Suite 200 Canonsburg, PA 15317 www.eqt.com

John Zavatchan Landman - Permitting 0:724-746-9073 jzavatchan@eqt.com

May 1, 2019

Mr. Taylor Brewer West Virginia Department of Environmental Protection Office of Oil and Gas 601 57th Street SE Charleston, WV 25304

Re: Erlewine 7H Gas Well Proctor District, Wetzel County

Dear Mr. Brewer,

EQT Production Company is applying for a new well work permit for the well referenced above. Upon information and belief, the Operator's lease and/ or other real property rights permit it to conduct drilling operations for the subject well in the location shown on the plat, including under any public roads that the well lateral crosses.

Sincerely,

John Zavatchan

Landman - Permitting

Office of Oil and Gas
MAY 2 2019

Date of Notice Certification: 05/01/2019

STATE OF WEST VIRGINIA DEPARTMENT OF ENVIRONMENTAL PROTECTION, OFFICE OF OIL AND GAS NOTICE CERTIFICATION

API No. 47- 103 - 03000

| | | Opera | ator's Well No. Erley | wine 7H |
|--|---|--|---|---|
| | | Well | Pad Name: Erlewin | e |
| | e provisions in West Virginia Code § | 22-6A, the Operator has provided t | he required parties v | with the Notice Forms listed |
| State: | tract of land as follows: West Virginia | Eastir | ng: 4,392.660.735 | |
| County: | Wetzel | UTM NAD 83 North | | |
| District: | Proctor | Public Road Access: | CR 1/2 | |
| Quadrangle: | New Martinsville | Generally used farm na | | |
| Watershed: | Tributary of Proctor Creek | | | |
| prescribed by it has provid information r of giving the requirements Virginia Cod | West Virginia Code § 22-6A-7(b), the secretary, shall be verified and sized the owners of the surface describe equired by subsections (b) and (c), se surface owner notice of entry to su of subsection (b), section sixteen o e § 22-6A-11(b), the applicant shall thave been completed by the applicant | hall contain the following information bed in subdivisions (1), (2) and (4) ction sixteen of this article; (ii) that rvey pursuant to subsection (a), see f this article were waived in writin ender proof of and certify to the second | on: (14) A certification, subsection (b), set the requirement was cation ten of this arting by the surface or | ion from the operator that (interior ten of this article, the sadeemed satisfied as a resulticle six-a; or (iii) the notice wher; and Pursuant to Wes |
| that the Ope | West Virginia Code § 22-6A, the Oprator has properly served the require ECK ALL THAT APPLY | | tice Certification | OOG OFFICE USE ONLY |
| ☐ 1. NO | TICE OF SEISMIC ACTIVITY or | ■ NOTICE NOT REQUIRED B | ECAUSE NO | ☐ RECEIVED/ |
| | | SEISMIC ACTIVITY WAS CON | DUCTED | NOT REQUIRED |
| ☐ 2. NO | TICE OF ENTRY FOR PLAT SURV | | | |
| | TICE OF ENTRY FOR PLAT SURV | | AS CONDUCTED SECAUSE | NOT REQUIRED |
| | | YEY or ■ NO PLAT SURVEY W. NOTICE NOT REQUIRED B NOTICE OF ENTRY FOR PLAT | AS CONDUCTED ECAUSE SURVEY | NOT REQUIRED RECEIVED RECEIVED |
| ■ 3. NO | | VEY or NO PLAT SURVEY WATER NOTICE NOT REQUIRED BE NOTICE OF ENTRY FOR PLAT WAS CONDUCTED OF WRITTEN WAIVER BY SU | AS CONDUCTED ECAUSE SURVEY | NOT REQUIRED RECEIVED RECEIVED |
| ■ 3. NO | TICE OF INTENT TO DRILL or | VEY or NO PLAT SURVEY WATER NOTICE NOT REQUIRED BE NOTICE OF ENTRY FOR PLAT WAS CONDUCTED OF WRITTEN WAIVER BY SU | AS CONDUCTED SECAUSE SURVEY JRFACE OWNER | NOT REQUIRED RECEIVED RECEIVED RECEIVED |

The Operator shall attach to this Notice Certification Form all Notice Forms and Certifications of Notice that have been provided to the required parties and/or any associated written waivers. For the Public Notice, the operator shall attach a copy of the Class II Legal Advertisement with publication date verification or the associated Affidavit of Publication. The attached Notice Forms and Certifications of Notice shall serve as proof that the required parties have been noticed as required under West Virginia Code § 22-6A. Pursuant to West Virginia Code § 22-6A-11(b), the Certification of Notice to the person may be made by affidavit of personal service, the return receipt card or other postal receipt for certified mailing.

By:

Certification of Notice is hereby given:

THEREFORE, I John Zavatchan , have read and understand the notice requirements within West Virginia Code § 22-6A. I certify that as required under West Virginia Code § 22-6A, I have served the attached copies of the Notice Forms, identified above, to the required parties through personal service, by registered mail or by any method of delivery that requires a receipt or signature confirmation. I certify under penalty of law that I have personally examined and am familiar with the information submitted in this Notice Certification and all attachments, and that based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

Well Operator: EQT Production Company

ion Company Address:

John Zavatchan Canonsburg, PA 15317

Its: Landman - Permitting Facsimile: 724-745-2418
Telephone: 724-746-9073 Email: jzavatchan@eqt.com

Zman. jzavatchan@eqt.com

2400 Ansys Drive, Suite 200

OFFICIAL SEAL
OFFICIAL SEAL
NOTARY PUBLIC
STATE OF WEST VIRGINIA
AMY L TODD
EOT PRODUCTION COMPANY
115 PROFESSIONAL PLACE
BRIDGEPORT, WV 26330
My Commission Expires August 21, 2022

Subscribed and sworn before me this

Notary Public

My Commission Expires

Oil and Gas Privacy Notice:

The Office of Oil and Gas processes your personal information, such as name, address and telephone number, as part of our regulatory duties. Your personal information may be disclosed to other State agencies or third parties in the normal course of business or as needed to comply with statutory or regulatory requirements, including Freedom of Information Act requests. Our office will appropriately secure your personal information. If you have any questions about our use or your personal information, please contact DEP's Chief Privacy Officer at deprivacyofficer@wv.gov.

WW-6A (9-13)

| API NO. 47-103 - 03000 |
|-------------------------------|
| OPERATOR WELL NO. Erlewine 7H |
| Well Pad Name: Erlewine |

STATE OF WEST VIRGINIA DEPARTMENT OF ENVIRONMENTAL PROTECTION, OFFICE OF OIL AND GAS NOTICE OF APPLICATION

| Notice ' | Time Requirem | ent: notice shall be provi- | ded no later thar | the filing date of permit application. | |
|--|---|--|--|--|---|
| Date of | | Date Permit Applicat | tion Filed: 05/01/ | 2019 | |
| | ERMIT FOR AN | | | ROVAL FOR THE N IMPOUNDMENT OR PIT | |
| | | ant to West Virginia Co | | | |
| _ | _ | | | | |
| | ERSONAL | REGISTERED | | DD OF DELIVERY THAT REQUIRES A | |
| SI | ERVICE | MAIL | RECEII | PT OR SIGNATURE CONFIRMATION | |
| sedimen the surfa oil and a describe operator more co well wo impound have a v provide propose subsecti records provisio Code R. | at control plan recace of the tract or gas leasehold being din the erosion at or lessee, in the al seams; (4) The rk, if the surface dment or pit as devater well, spring water for consumd well work activion (b) of this second the sheriff request of this article to \$35-8-5.7.a rec | quired by section seven of the which the well is or is proposed and sediment control plans are event the tract of land on we event the tract of land on we event to be used for the prescribed in section nine of the or water supply source local and the proposed in the pro | his article, and the posed to be local sed well work, if submitted pursual which the well proposed to the well proposed to the article; (5) A stated within one that the article; and f more than three ands, the applicant to section even holder is not that also provided the section of the article; and the article; article; and the article; art | r signature confirmation, copies of the application, the well plat to each of the following persons: (1) The ted; (2) The owners of record of the surface tract or to the surface tract is to be used for roads or other land on to subsection (c), section seven of this article; (3) The posed to be drilled is located [sic] is known to be uncts overlying the oil and gas leasehold being developed action, enlargement, alteration, repair, removal or about a surface owner or water purveyor who is known to thousand five hundred feet of the center of the well provided in common or other co-owners of interests of the transit in common or other co-owners of interests of the transit in common or other co-owners of interests of the transit in common or other co-owners of interests of the transit in common or other co-owners of interests of the transit in common or other co-owners of interests of the transit in common or other co-owners of interests of the transit in common or other co-owners of interests of the transit in common or other co-owners of interests of the transit in common or other co-owners of interests of the transit in common or other co-owners of interests of the transit in common or other co-owners of interests of the transit in common or other co-owners of interests of the control of the surface of the well site of the surface of the well site of the surface of the well site of the surface of the well of the well of the surface of the well of the well of the surface of the well of the well of the surface of the well of the wel | owners of record of racts overlying the disturbance as The coal owner, derlain by one or ed by the proposed andonment of any the applicant to ad which is used to in which the escribed in described in the otwithstanding any andowner. W. Va. |
| ☑ App | lication Notice | ☑ WSSP Notice ☑ E& | S Plan Notice | ☑ Well Plat Notice is hereby provided to: | |
| ☑ SURI | FACE OWNER(| (s) | | ☑ COAL OWNER OR LESSEE | |
| Name: | See Attached List | | _ | Name: See Attached List | - |
| Address | s: | | _ | Address: | _ |
| Name: | | | _ | COAL OPERATOR | _ |
| | | | - | Name: | |
| | THE CHARTE | () (B 1 1/ O/l B) | | Address: | - RECEIVED - Office of Oil and Ga |
| | FACE OWNER See Attached List | s) (Road and/or Other Di | | SURFACE OWNER OF WATER WELL | - May |
| | | | | AND OR WATER BURNEYOR(-) | MAY 2 2019 |
| ridures | | | | Name: See attached List | - F. W. Den- |
| Name: | | | _ | AND/OR WATER PURVEYOR(s) Name: See attached List Address: | - Environmental Protect |
| Addres | s: | | _ | ☐ OPERATOR OF ANY NATURAL GAS STOR | |
| EI SI ID | FACE OWNER | (s) (Impoundments or Pits | <u>()</u> | Name: N/A | |
| | C A44bd 1 int | (3) (Impoundments of Tita | | Address: | - |
| Addres | | | | *Please attach additional forms if necessary | _ |
| | | | | I TAMPA MIMAII MAMINICITAL LOLLING IL HAAADOMI | |

Surface Owner:

RICHARD L ERLEWINE 1834 PROCTOR CREEK RD PROCTOR WV 26055-1449

Surface Owner Access Road:

RICHARD L ERLEWINE 1834 PROCTOR CREEK RD PROCTOR WV 26055;1449

Don Arrick 17954 Energy Road Proctor, WV 26055

Emily Diane Wilson 3453 Huff Ridge Road New Martinsville, WV 26155

Linda Stoneking 6139 American Ridge Road New Martinsville, WV 26155

Christy (Leek) Wilson 2997 Huff Ridge Road New Martinsville, WV 26155

Linda (Anderson) Seagrave 2641 Huff Ridge New Martinsville, WV 26155

EQT Production Company 625 Liberty Ave, Suite 1700 Pittsburgh PA 15222

Surface Owner Pits/ Impoundment/Potential AST Site

RICHARD L ERLEWINE 1834 PROCTOR CREEK RD PROCTOR WV 26055-1449

Don Arrick 17954 Energy Road Proctor, WV 26055

Emily Diane Wilson 3453 Huff Ridge Road New Martinsville, WV 26155

Linda Stoneking 6139 American Ridge Road New Martinsville, WV 26155

Christy Leek (Leek) Wilson 2997 Huff Ridge Road New Martinsville, WV 26155

Linda (Anderson) Seagrave 2641 Huff Ridge New Martinsville, WV 26155

Coal Owners:

RICHARD L ERLEWINE 1834 PROCTOR CREEK RD PROCTOR WV 26055-1449

CNX RCPC LLC 1000 Consol Energy Dr Canonsburg PA 15317

Water Purveyors:

N/A

OPERATOR WELL NO. Erlewine 7H

Well Pad Name: Erlewine

Notice is hereby given:

Pursuant to West Virginia Code § 22-6A-10(b), notice is hereby given that the undersigned well operator has applied for a permit for well work or for a certificate of approval for the construction of an impoundment or pit.

This Notice Shall Include:

Pursuant to W. Va. Code § 22-6A-10(b), this notice shall include: (1) copies of the application; (2) the erosion and sediment control plan required by section seven of this article; and (3) the well plat.

Pursuant to W. Va. Code § 22-6A-10(f), this notice shall include: (1) a statement of the time limits for filing written comments; (2) who may file written comments; (3) the name and address of the secretary for the purpose of filing the comments and obtaining additional information; and (4) a statement that the persons may request, at the time of submitting written comments, notice of the permit decision and a list of persons qualified to test water.

Pursuant to W. Va. Code R. § 35-8-5.7.a, the operator shall provide the Well Site Safety Plan to the surface owner and any water purveyor or surface owner subject to notice and water testing as provided in section 15 of this rule.

Pursuant to W. Va. Code R. § 35-8-15.2.c, this notice shall: (1) contain a statement of the surface owner's and water purveyor's right to request sampling and analysis; (2) advise the surface owner and water purveyor of the rebuttable presumption for contamination or deprivation of a fresh water source or supply; advise the surface owner and water purveyor that refusal to allow the operator to conduct a pre-drilling water well test constitutes a method to rebut the presumption of liability; (3) advise the surface owner and water purveyor of his or her independent right to sample and analyze any water supply at his or her own expense; advise the surface owner and water purveyor whether or not the operator will utilize an independent laboratory to analyze any sample; and (4) advise the surface owner and or water purveyor that he or she can obtain from the Chief a list of water testing laboratories in the subject area capable of and qualified to test water supplies in accordance with standard acceptable methods.

Additional information related to horizontal drilling may be obtained from the Secretary, at the WV Department of Environmental Protection headquarters, located at 601 57th Street, SE, Charleston, WV 25304 (304-926-0450) or by visiting <a href="https://www.dep.ww.dep.ww.dep.ww.dep.ww.dep.ww.dep.ww.dep.ww.dep.ww.dep.ww.dep.ww.dep.ww.dep.ww.dep.ww.dep.ww.dep.ww.dep.ww.dep.ww.dep.

Well Location Restrictions

Pursuant to W. Va. Code § 22-6A-12, Wells may not be drilled within two hundred fifty feet measured horizontally for existing water well or developed spring used for human or domestic animal consumption. The center of well pads may not be located withing the hundred twenty-five feet of an occupied dwelling structure, or a building two thousand five hundred square feet or larger used to house tion or shelter dairy cattle or poultry husbandry. This limitation is applicable to those wells, developed springs, dwellings or agricultural buildings that existed on the date a notice to the surface owner of planned entry for surveying or staking as provided in section ten of this article or a notice of intent to drill a horizontal well as provided in subsection (b), section sixteen of this article was provided, whichever occurs first, and to any dwelling under construction prior to that date. This limitation may be waived by written consent of the surface owner transmitted to the department and recorded in the real property records maintained by the clerk of the county commission for the county in which such property is located. Furthermore, the well operator may be granted a variance by the secretary from these distance restrictions upon submission of a plan which identifies the sufficient measures, facilities or practices to be employed during well site construction, drilling and operations. The variance, if granted, shall include terms and conditions the department requires to ensure the safety and protection of affected persons and property. The terms and conditions may include insurance, bonding and indemnification, as well as technical requirements. (b) No well pad may be prepared or well drilled within one hundred feet measured horizontally from any perennial stream, natural or artificial lake, pond or reservoir, or a wetland, or within three hundred feet of a naturally reproducing trout stream. No well pad may be located within one thousand feet of a surface or ground water intake of a public water supply. The distance from the public water supply as identified by the department shall be measured as follows: (1) For a surface water intake on a lake or reservoir, the distance shall be measured from the boundary of the lake or reservoir. (2) For a surface water intake on a flowing stream, the distance shall be measured from a semicircular radius extending upstream of the surface water intake. (3) For a groundwater source, the distance shall be measured from the wellhead or spring. The department may, in its discretion, waive these distance restrictions upon submission of a plan identifying sufficient measures, facilities or practices to be employed during well site construction, drilling and operations to protect the waters of the state. A waiver, if granted, shall impose any permit conditions as the secretary considers necessary. (c) Notwithstanding the foregoing provisions of this section, nothing contained in this section prevents an operator from conducting the activities permitted or authorized by a Clean Water Act Section 404 permit or other approval from the United States Army Corps of Engineers within any waters of the state or within the restricted areas referenced in this section. (d) The well location restrictions set forth in this section shall not apply to any well on a multiple well pad if at least one of the wells was permitted prior to the effective date of this article. (e) The secretary shall, by December 31, 2012, report to the Legislature on the noise, light, dust and volatile organic compounds generated by the drilling of horizontal wells as they relate to the well location restrictions regarding occupied dwelling structures pursuant to this section. Upon a finding, if any, by the secretary that the well location restrictions regarding occupied dwelling structures are inadequate or otherwise require alteration to address the items

WW-6A (8-13)

API NO. 47-103 _ 03000

OPERATOR WELL NO. Erlewine 7H

Well Pad Name: Erlewine

examined in the study required by this subsection, the secretary shall have the authority to propose for promulgation legislative rules establishing guidelines and procedures regarding reasonable levels of noise, light, dust and volatile organic compounds relating to

Water Well Testing:

Pursuant to West Virginia Code § 22-6A-10(d), notification shall be made, with respect to surface landowners identified in subsection (b) or water purveyors identified in subdivision (5), subsection (b) of this section, of the opportunity for testing their water well. The operator shall provide an analysis to such surface landowner or water purveyor at their request.

Water Testing Laboratories:

Pursuant to West Virginia Code § 22-6A-10(i), persons entitled to notice pursuant to subsection (b) of this section may contact the department to ascertain the names and locations of water testing laboratories in the subject area capable and qualified to test water supplies in accordance with standard accepted methods. In compiling that list of names the department shall consult with the state Bureau for Public Health and local health departments. A surface owner and water purveyor has an independent right to sample and analyze any water supply at his or her own expense. The laboratory utilized by the operator shall be approved by the agency as being certified and capable of performing sample analyses in accordance with this section.

Rebuttable Presumption for Contamination or Deprivation of a Fresh Water Source or Supply:

drilling horizontal wells, including reasonable means of mitigating such factors, if necessary.

W. Va. Code § 22-6A-18 requires that (b) unless rebutted by one of the defenses established in subsection (c) of this section, in any action for contamination or deprivation of a fresh water source or supply within one thousand five hundred feet of the center of the well pad for horizontal well, there is a rebuttable presumption that the drilling and the oil or gas well or either was the proximate cause of the contamination or deprivation of the fresh water source or supply. (c) In order to rebut the presumption of liability established in subsection (b) of this section, the operator must prove by a preponderance of the evidence one of the following defenses: (1) The pollution existed prior to the drilling or alteration activity as determined by a predrilling or prealteration water well test. (2) The landowner or water purveyor refused to allow the operator access to the property to conduct a predrilling or prealteration water well test. (3) The water supply is not within one thousand five hundred feet of the well. (4) The pollution occurred more than six months after completion of drilling or alteration activities. (5) The pollution occurred as the result of some cause other than the drilling or alteration activity. (d) Any operator electing to preserve its defenses under subdivision (1), subsection (c) of this section shall retain the services of an independent certified laboratory to conduct the predrilling or prealteration water well test. A copy of the results of the test shall be submitted to the department and the surface owner or water purveyor in a manner prescribed by the secretary. (e) Any operator shall replace the water supply of an owner of interest in real property who obtains all or part of that owner's supply of water for domestic, agricultural, industrial or other legitimate use from an underground or surface source with a comparable water supply where the secretary determines that the water supply has been affected by contamination, diminution or interruption proximately caused by the oil or gas operation, unless waived in writing by that owner. (f) The secretary may order the operator conducting the oil or gas operation to: (1) Provide an emergency drinking water supply within twenty-four hours; (2) Provide temporary water supply within seventy-two hours; (3) Within thirty days begin activities to establish a permanent water supply or submit a proposal to the secretary outlining the measures and timetables to be used in establishing a permanent supply. The total time in providing a permanent water supply may not exceed two years. If the operator demonstrates that providing a permanent replacement water supply cannot be completed within two years, the secretary may extend the time frame on case-by-case basis; and (4) Pay all reasonable costs incurred by the real property owner in securing a water supply. (g) A person as described in subsection (b) of this section aggrieved under the provisions of subsections (b), (e) or (f) of this section may seek relief in court... (i) Notwithstanding the denial of the operator of responsibility for the damage to the real property owner's water supply or the status of any appeal on determination of liability for the damage to the real property owner's water supply, the operator may not discontinue providing the required water service until authorized to do so by the secretary or a court of competent jurisdiction.

Written Comment:

Pursuant to West Virginia Code § 22-6A-11(a), all persons described in subsection (b), section ten of this article may file worker RECEIVED

Pursuant to West Virginia Code § 22-6A-11(a), all persons described in subsection (b), section ten of this article may file worker RECEIVED

Gas application is filed with the secretary. All persons described in West Virginia Code § 22-6A-10(b) may file written comments as to the Secretary at:

Chief. Office of Oil and Gas Department of Environmental Protection 601 57th St. SE Charleston, WV 25304 (304) 926-0450

WV Department of Environmental Protection

Such persons may request, at the time of submitting written comments, notice of the permit decision and a list of persons qualified to test water. NOTE: YOU ARE NOT REQUIRED TO FILE ANY COMMENT.

WW-6A (8-13) API NO. 47- 103 - 03000 OPERATOR WELL NO. Erlewine 7H

Well Pad Name: Erlewine

Time Limits and Methods for Filing Comments.

The law requires these materials to be served on or before the date the operator files its Application. You have THIRTY (30) DAYS after the filing date to file your comments. Comments must be filed in person or received in the mail by the Chief's office by the time stated above. You may call the Chief's office to be sure of the date. Check with your postmaster to ensure adequate delivery time or to arrange special expedited handling. If you have been contacted by the well operator and you have signed a "voluntary statement of no objection" to the planned work described in these materials, then the permit may be issued at any time.

Pursuant to West Virginia Code § 22-6A-11(c)(2), Any objections of the affected coal operators and coal seam owners and lessees shall be addressed through the processes and procedures that exist under sections fifteen, seventeen and forty, article six of this chapter, as applicable and as incorporated into this article by section five of this article. The written comments filed by the parties entitled to notice under subdivisions (1), (2), (4), (5) and (6), subsection (b), section ten of this article shall be considered by the secretary in the permit issuance process, but the parties are not entitled to participate in the processes and proceedings that exist under sections fifteen, seventeen or forty, article six of this chapter, as applicable and as incorporated into this article by section five of this article.

Comment Requirements

Your comments must be in writing and include your name, address and telephone number, the well operator's name and well number and the approximate location of the proposed well site including district and county from the application. You may add other documents, such as sketches, maps or photographs to support your comments.

Disclaimer: All comments received will be placed on our web site http://www.dep.wv.gov/oil-and-gas/Horizontal-Permits/Pages/default.aspx and the applicant will automatically be forwarded an email notice that such comments have been submitted. The applicant will be expected to provide a response to comments submitted by any surface owner, water purveyor or natural gas storage operator noticed within the application.

Permit Denial or Condition

The Chief has the power to deny or condition a well work permit. Pursuant to West Virginia Code § 22-6A-8(d), the permit may not be issued or be conditioned, including conditions with respect to the location of the well and access roads prior to issuance if the director determines that:

- (1) The proposed well work will constitute a hazard to the safety of persons;
- (2) The plan for soil erosion and sediment control is not adequate or effective;
- (3) Damage would occur to publicly owned lands or resources; or
- (4) The proposed well work fails to protect fresh water sources or supplies.

A permit may also be denied under West Virginia Code § 22-6A-7(k), the secretary shall deny the issuance of a permit if the secretary determines that the applicant has committed a substantial violation of a previously issued permit for a horizontal well, including the applicable erosion and sediment control plan associated with the previously issued permit, or a substantial violation of one or more of the rules promulgated under this article, and in each instance has failed to abate or seek review of the violation within the time prescribed by the secretary pursuant to the provisions of subdivisions (1) and (2), subsection (a), section five of this article and the rules promulgated hereunder, which time may not be unreasonable.

Pursuant to West Virginia Code § 22-6A-10(g), any person entitled to submit written comments to the secretary pursuant to subsection (a), section eleven of this article, shall also be entitled to receive from the secretary a copy of the permit as issued or a copy of the order modifying or denying the permit if the person requests receipt of them as a part of the written comments submitted concerning the permit application. Such persons may request, at the time of submitting written comments, notice of the permit decision and a list of persons qualified to test water.

Office of Oil and Gas

MAY 2 2019

WW Department of Environmental Protection

WW-6A (8-13)

API NO. 47- 103 - 03000

OPERATOR WELL NO. Erlewine 7H

Well Pad Name: Erlewine

Notice is hereby given by:

Well Operator: EQT Production Company

Telephone: 724-746-9073 Email: jzavatchan@eqt.com Address: 2400 Ansys Drive, Suite 200

Canonsburg, PA 15317

Facsimile: 724-745-2418

Oil and Gas Privacy Notice:

The Office of Oil and Gas processes your personal information, such as name, address and telephone number, as part of our regulatory duties. Your personal information may be disclosed to other State agencies or third parties in the normal course of business or as needed to comply with statutory or regulatory requirements, including Freedom of Information Act requests. Our office will appropriately secure your personal information. If you have any questions about our use or your personal information, please contact DEP's Chief Privacy Officer at depprivacyofficer@wv.gov.

OFFICIAL SEAL
NOTARY PUBLIC
STATE OF WEST VIRIGINIA
AMY L TODD
EQT PRODUCTION COMPANY
115 PROFESIONAL PLACE
BRIDCEPORT, WV 26330
My Commission Expires August 21, 2022

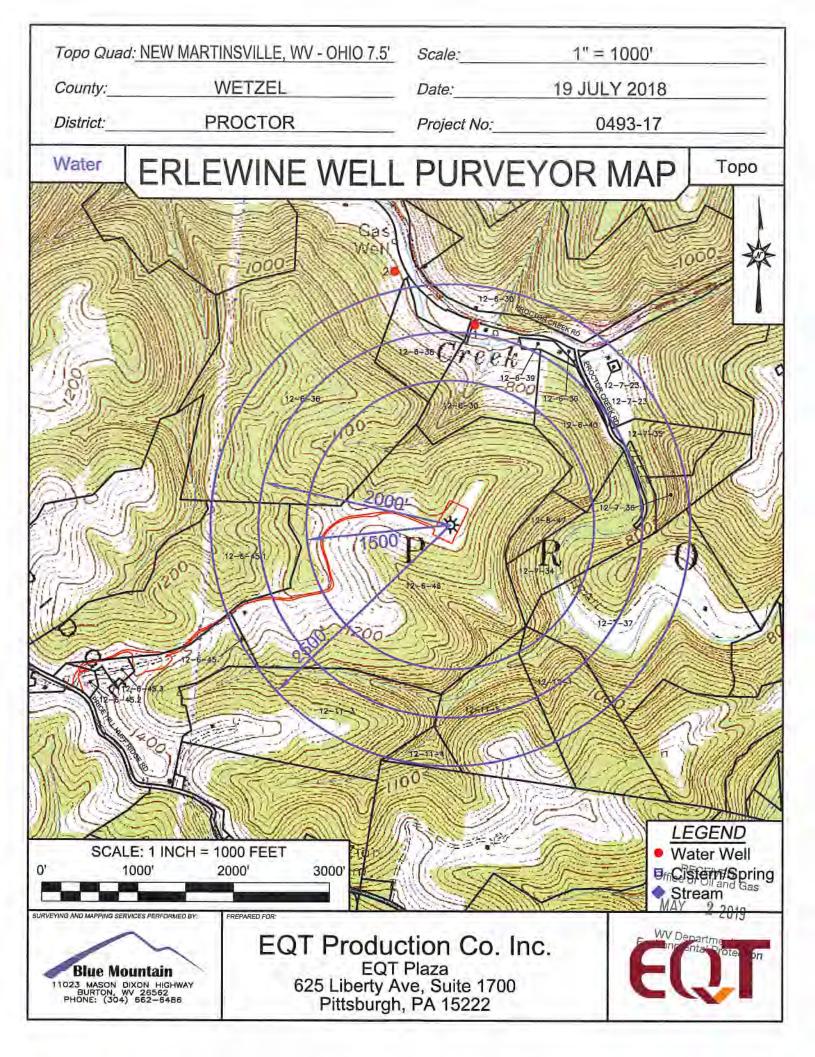
Subscribed and sworn before me this

Notary Public

My Commission Expires

Office of Oil and Gas

MAY 2 2019



| API NO. 47- 103 - 0300 | 00 |
|-------------------------|-------------|
| OPERATOR WELL NO. | Erlewine 7H |
| Well Pad Name: Erlewine | |

STATE OF WEST VIRGINIA DEPARTMENT OF ENVIRONMENTAL PROTECTION, OFFICE OF OIL AND GAS VOLUNTARY STATEMENT OF NO OBJECTION

Instructions to Persons Named on Page WW-6A

The well operator named on page WW-6A is applying for a permit from the State of West Virginia to conduct oil or gas well work. Well work permits are valid for twenty-four (24) months. Please contact the listed well operator and the Office of Oil and Gas if you do not own any interest in the listed surface tract.

Comment and Waiver Provisions

Pursuant to West Virginia Code § 22-6A-11(a), all persons described in subsection (b), section ten of this article may file written comments with the secretary as to the location or construction of the applicant's proposed well work within thirty days after the application is filed with the secretary.

Pursuant to West Virginia Code § 22-6A-8(b) No permit may be issued less than thirty days after the filing date of the application for any well work except plugging or replugging; and no permit for plugging or replugging may be issued less than five days after the filing date of the application except a permit for plugging or replugging a dry hole: *Provided*, That if the applicant certifies that all persons entitled to notice of the application under the provisions of subsection (b), section ten of this article have been served in person or by certified mail, return receipt requested, with a copy of the well work application, including the erosion and sediment control plan, if required, and the well plat, and further files written statements of no objection by all such persons, the secretary may issue the well work permit at any time.

VOLUNTARY STATEMENT OF NO OBJECTION

| es . | West Virginia | TM NAD 83 Easting: | 517,402,917 |
|-------------------------------------|--|---|-----------------------------|
| County: | vveizei | Northing | 4,392,660.735 |
| District: | | ublic Road Access: | CR 1/2 |
| Quadrangle: Watershed: | New Martinsville G | enerally used farm name: | Richard Erlewine |
| | | | |
| Please check | the box that applies | FOR EXECU | TION BY A NATURAL PERSON |
| | the box that applies CE OWNER | FOR EXECU | TION BY A NATURAL PERSON |
| | CE OWNER | Cionatura | |
| | | Signature: | |
| | CE OWNER (Road and/or Other Disturbance) | Print Name: | |
| ■ SURFAC | | | |
| ■ SURFAC | CE OWNER (Impoundments/Pits) | Print Name: Date: FOR EXECU | TION BY A CORPORATION, ETC. |
| ■ SURFAC | | Print Name: Date: FOR EXECUTOR Company: EQT 6 | |
| ■ SURFAC | CE OWNER (Impoundments/Pits) | Print Name: Date: FOR EXECU | Production Company |
| ■ SURFAC □ SURFAC □ COAL C □ COAL C | CE OWNER (Impoundments/Pits) OWNER OR LESSEE | Print Name: Date: FOR EXECU Company: EQT By: Todd Klaner | Production Company |

The Office of Oil and Gas processes your personal information, such as name, address and telephone number, as participations duties. Your personal information may be disclosed to other State agencies or third parties in the normal course of business of asion needed to comply with statutory or regulatory requirements, including Freedom of Information Act requests. Our office will appropriately secure your personal information. If you have any questions about our use or your personal information, please contact DEP's Chief Privacy Officer at depprivacyofficer@wv.gov.

STATE OF WEST VIRGINIA DEPARTMENT OF ENVIRONMENTAL PROTECTION, OFFICE OF OIL AND GAS NOTICE OF INTENT TO DRILL

Pursuant to W. Va. Code § 22-6A-16(b), the Notice of Intent to Drill is only required if the notice requirements of W. Va. Code § 22-6A-10(a) have NOT been met or if the Notice of Intent to Drill requirement has NOT been waived in writing by the surface owner.

| Notice Time Date of Noti | | provided at least TEN (10) days prior to filing a Date Permit Application Filed: | a permit application. |
|---|--|---|---|
| Delivery me | thod pursuant to West Virginia | a Code § 22-6A-16(b) | |
| ☐ HAND | ■ CERTIFIED M. | AII. | |
| DELIV | | EIPT REQUESTED | |
| receipt reque drilling a hor of this subsec subsection m | sted or hand delivery, give the surizontal well: <i>Provided</i> , That noction as of the date the notice was ay be waived in writing by the surice was the surice was as the waived in writing by the surice was the surice w | east ten days prior to filing a permit application or arface owner notice of its intent to enter upon to tice given pursuant to subsection (a), section to subsection to the surface owner: <i>Provided</i> , howerface owner. The notice, if required, shall incomic mail address of the operator and the operator | he surface owner's land for the purpose of en of this article satisfies the requirements wever, That the notice requirements of this lude the name, address, telephone number. |
| | ereby provided to the SURF | ACE OWNER(s): | |
| Name: See Atta | ached | Name: See Attached | |
| Address: | | Address: | |
| State: County: District: Quadrangle: Watershed: | WV Wetzel Proctor New Martinsville Tributary of Proctor Creek | UTM NAD 83 Easting: Northing: Public Road Access: Generally used farm name: | 517,402.92 4,392,660.74 Wetzel County Route 1/2 Richard Erlewine |
| Pursuant to Y facsimile nur related to hor | nber and electronic mail addres | 6(b), this notice shall include the name, address of the operator and the operator's authorized from the Secretary, at the WV Department of 25304 (304-926-0450) or by visiting www.de | ed representative. Additional information of Environmental Protection headquarters. |
| | reby given by: | | |
| | r: EQT Production Company | Authorized Representative: | John Zavatchan |
| Address: | 2400 Ansys Drive Suite 200 | Address: | John Zavatchan 2400 Ansys Drive Suite 200 Office of Oil and Ga Canonsburg, PA 15317 |
| | Canonsburg, PA 15317 | | Canonsburg, PA 15317 |
| Telephone: | 724-746-9073 | Telephone: | 724-746-9073 |
| Email: | jzavatchan@eqt.com | Email: | jzavatchan@eqt.com WV Department of Environmental Protection |
| Facsimile: | 724-745-2418 | Facsimile: | 724-745-2418 Environmental Pent of |
| | | | Protection |

Oil and Gas Privacy Notice:

The Office of Oil and Gas processes your personal information, such as name, address and telephone number, as part of our regulatory duties. Your personal information may be disclosed to other State agencies or third parties in the normal course of business or as needed to comply with statutory or regulatory requirements, including Freedom of Information Act requests. Our office will appropriately secure your personal information. If you have any questions about our use or your personal information, please contact DEP's Chief Privacy Officer at deprivacyofficer@wv.gov.

STATE OF WEST VIRGINIA DEPARTMENT OF ENVIRONMENTAL PROTECTION, OFFICE OF OIL AND GAS NOTICE OF INTENT TO DRILL

Pursuant to W. Va. Code § 22-6A-16(b), the Notice of Intent to Drill is only required if the notice requirements of W. Va. Code § 22-6A-10(a) have NOT been met or if the Notice of Intent to Drill requirement has NOT been waived in writing by the surface owner.

| Date of Notic | Requirement: Notice shall be ee: 11/07/2018 | Date Permit Application Filed: 05/01/2019 | |
|--|--|--|---|
| Delivery met | hod pursuant to West Virgin | ia Code § 22-6A-16(b) | |
| ☐ HAND | ■ CERTIFIED N | иап. | |
| DELIVE | | CEIPT REQUESTED | |
| receipt request drilling a horion of this subsect subsection mand if availab | sted or hand delivery, give the izontal well: <i>Provided</i> . That notion as of the date the notice way be waived in writing by the le, facsimile number and electrons. | least ten days prior to filing a permit application surface owner notice of its intent to enter upon to otice given pursuant to subsection (a), section to as provided to the surface owner: <i>Provided, how surface</i> owner. The notice, if required, shall incomic mail address of the operator and the operator | he surface owner's land for the purpose of en of this article satisfies the requirements wever, That the notice requirements of this lude the name, address, telephone number, |
| Notice is ne Name: See Atta | reby provided to the SUR | | |
| Address: | oring class | Address: | |
| Pursuant to V the surface ov | wner's land for the purpose of | 5(b), notice is hereby given that the undersigned drilling a horizontal well on the tract of land as for | ollows: |
| Pursuant to W the surface ov State: County: | Vest Virginia Code § 22-6A-10 wner's land for the purpose of West Virginia Wetzel | drilling a horizontal well on the tract of land as for the land as for the tract of land as for the land as for the land | 517,397.393 4,392,663.079 |
| Pursuant to V the surface ov State: County: District: | Vest Virginia Code § 22-6A-10 wner's land for the purpose of West Virginia Wetzel Proctor | drilling a horizontal well on the tract of land as for the tract of lan | bllows: 517,397,393 4,392,663.079 CR 1/2 |
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The Office of Oil and Gas processes your personal information, such as name, address and telephone number, as part of our regulatory duties. Your personal information may be disclosed to other State agencies or third parties in the normal course of business or as needed to comply with statutory or regulatory requirements, including Freedom of Information Act requests. Our office will appropriately secure your personal information. If you have any questions about our use or your personal information, please contact DEP's Chief Privacy Officer at deprivacyofficer@wv.gov.

Surface Owner:

RICHARD L ERLEWINE 1834 PROCTOR CREEK RD PROCTOR WV 26055-1449

Surface Owner Access Road:

RICHARD L ERLEWINE 1834 PROCTOR CREEK RD PROCTOR WV 26055-1449

Don Arrick 17954 Energy Road Proctor, WV 26055

Emily Diane Wilson 3453 Huff Ridge Road New Martinsville, WV 26155

Linda Stoneking 6139 American Ridge Road New Martinsville, WV 26155

Christy (Leek) Wilson 2997 Huff Ridge Road New Martinsville, WV 26155

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EQT Production Company 625 Liberty Ave, Suite 1700 Pittsburgh PA 15222

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Office of Oil and Gas

MAY 2 2019

WW Department of Environmental Protection

STATE OF WEST VIRGINIA DEPARTMENT OF ENVIRONMENTAL PROTECTION, OFFICE OF OIL AND GAS NOTICE OF INTENT TO DRILL

WAIVER

Pursuant to W. Va. Code § 22-6A-16(b), at least ten days prior to filing a permit application, an operator shall, by certified mail return receipt requested or hand delivery, give the surface owner notice of its intent to enter upon the surface owner's land for the purpose of drilling a horizontal well: *Provided*, That notice given pursuant to subsection (a), section ten of this article satisfies the requirements of this subsection as of the date the notice was provided to the surface owner: *Provided*, *however*, That the notice requirements of this subsection may be waived in writing by the surface owner. The notice, if required, shall include the name, address, telephone number, and if available, facsimile number and electronic mail address of the operator and the operator's authorized representative.

| notice require | ements under West Virginia Code | at I have read the notice pro § 22-6A-16(b) for the trace | t of land as fo | llows: |
|----------------|---------------------------------|--|-----------------|------------------|
| State: | West Virginia | UTMALAD 02 | Easting: | 4,392,660.735 |
| County: | Wetzel | UTM NAD 83 | Northing: | 517,402.917 |
| District: | Proctor | Public Road Acc | cess: | CR 1/2 |
| Quadrangle: | New Martinsville | Generally used t | farm name: | Richard Erlewine |
| Watershed: | Tributary of Proctor Creek | | | |
| Name: Todd Ki | laner, Regional Land Manager | Signature: | 500 | W |
| Address: 625 L | Liberty Ave. Suite 1700 | | 1. | |
| Pittsb | urgh, PA 15222 | Date: 7 | 171/19 | |

Oil and Gas Privacy Notice:

The Office of Oil and Gas processes your personal information, such as name, address and telephone number, as part of our regulatory duties. Your personal information may be disclosed to other State agencies or third parties in the normal course of business or as needed to comply with statutory or regulatory requirements, including Freedom of Information Act requests. Our office will appropriately secure your personal information. If you have any questions about our use or your personal information, please contact DEP's Chief Privacy Officer at depprivacyofficer@wv.gov.

Office of Oil and Gas

MAY 2 2019

WW Department of Environmental Protection

STATE OF WEST VIRGINIA DEPARTMENT OF ENVIRONMENTAL PROTECTION, OFFICE OF OIL AND GAS NOTICE OF PLANNED OPERATION

| Notice Time Date of Notic | e: 02/21/2019 Date Perm | nit Application Filed: 05/0 | 1/2019 | |
|---|--|---|--|---|
| Delivery met | hod pursuant to West Virginia Coo | de § 22-6A-16(c) | | |
| CERTIF | FIED MAIL | ☐ HAND | | |
| | IN RECEIPT REQUESTED | DELIVERY | | |
| | | | C. C. C. C. C. C. C. | the form the Victor |
| return receipt the planned of required to be drilling of a I damages to th (d) The notice of notice. | requested or hand delivery, give the peration. The notice required by fl provided by subsection (b), section norizontal well; and (3) A proposed e surface affected by oil and gas ope | surface owner whose land his subsection shall include ten of this article to a surfa- surface use and compens rations to the extent the da ven to the surface owner a | will be used for le: (1) A copy ace owner whos ation agreemen mages are comp | cation, an operator shall, by certified mail or the drilling of a horizontal well notice of of this code section; (2) The information we land will be used in conjunction with the transfer compensation for pensable under article six-b of this chapter, sted in the records of the sheriff at the time |
| | s listed in the records of the sheriff at | | | |
| (at the address | | | | |
| Name: See Atta | | Name: | | |
| Name: See Attack Address: Notice is here Pursuant to W | eby given: Vest Virginia Code § 22-6A-16(c), no | Address | e undersigned | well operator has developed a planned |
| Name: See Attack Address: Notice is here Pursuant to W operation on State: County; | eby given: Vest Virginia Code § 22-6A-16(c), no the surface owner's land for the purp West Virginia Wetzel | Address otice is hereby given that the pose of drilling a horizonta UTM NAD 8 | te undersigned of well on the tra Easting: Northing: | ct of land as follows: 517,402,917 4,392,660.735 |
| Name: See Attack Address: Notice is here Pursuant to W operation on State: County: District: | eby given: Vest Virginia Code § 22-6A-16(c), no the surface owner's land for the purp West Virginia Wetzel Proctor | Address otice is hereby given that the pose of drilling a horizonta UTM NAD 8 Public Road a | te undersigned of well on the tra Basting: Northing: Access: | ct of land as follows: 517.402.917 4,392,660.735 CR 1/2 |
| Name: See Attar Address: Notice is here Pursuant to W operation on State: County: | eby given: Vest Virginia Code § 22-6A-16(c), no the surface owner's land for the purp West Virginia Wetzel | Address otice is hereby given that the pose of drilling a horizonta UTM NAD 8 | te undersigned of well on the tra Basting: Northing: Access: | ct of land as follows: 517,402,917 4,392,660.735 |
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| Name: See Attar Address: Notice is here Pursuant to Woperation on State: County: District: Quadrangle: Watershed: This Notice S Pursuant to W to be provide horizontal we surface affect information r headquarters, gas/pages/def | eby given: /est Virginia Code § 22-6A-16(c), no the surface owner's land for the purp West Virginia Wetzel Proctor New Martinsville Tributary of Proctor Creek Shall Include: /est Virginia Code § 22-6A-16(c), the d by W. Va. Code § 22-6A-10(b) the d by oil and gas operations to the elated to horizontal drilling may be located at 601 57th Street, SE, of fault.aspx. | Address otice is hereby given that the cose of drilling a horizonta UTM NAD 8 Public Road a Generally use on a surface owner whose and compensation agreement extent the damages are contained from the Secret Charleston, WV 25304 (contained from the Secret Charleston) | The undersigned of well on the transitions: Access: It deforms name: A copy of this land will be understand arry, at the WV (304-926-0450) | code section; (2) The information required used in conjunction with the drilling of an offer of compensation for damages to the der article six-b of this chapter. Additional Department of Environmental Protection or by visiting www.dep.wv.gov/oil-and- |
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Office of Oil and Gas

MAY 2 2019

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Office of Oil and Gas



WEST VIRGINIA DEPARTMENT OF TRANSPORTATION

Division of Highways

1900 Kanawha Boulevard East • Building Five • Room 110 Charleston, West Virginia 25305-0430 • (304) 558-3505

Thomas J. Smith, R. E. Secretary of Transportation/ Commissioner of Highways

September 13, 2018

James A. Martin, Chief Office of Oil and Gas Department of Environmental Protection 601 57th Street, SE Charleston, WV 25304

Subject: DOH Permit for the Erlewine NMA13 Pad, Wetzel County

Erlewine 1H Erlewine 2H Erlewine 3H Erlewine 4H Erlewine 5H Erlewine 6H Erlewine 7H Erlewine 8H Erlewine 9H Erlewine 10H

Dear Mr. Martin.

Jim Justice

Governor

This well site will be accessed from an encroachment permit #06-2011-0131 transferred to EQT Production Company for access to the State Road for a well site located off of Wetzel County Route 1/2 SLS.

The operator has signed a STATEWIDE OIL AND GAS ROAD MAINTENANCE BONDING AGREEMENT and provided the required Bond. This operator is currently in compliance with the DOH OIL AND GAS POLICY dated January 3, 2012.

Very Truly Yours,

Gary K. Clayton, P.E.

Regional Maintenance Engineer Central Office O&G Coordinator

Day K. Clayton

Ce: Nick Bungardner

EQT Production Company

CH, OM, D-6

File

RECEIVED
Office of Oil and Gas

MAY 2 2019

Anticipated Frac Additives Chemical Names and CAS numbers

| <u>Material</u> | Ingredient | CAS Number |
|--|--|--|
| Water Sand | Hydrotreated light petroleum distillate Tributyl tetradecyl phosphonium | 14808-60-7 |
| Friction Reducer Biocide Scale Inhibitor 15% Hydrochloric Acid Corrosion Inhibitor Corrosion Inhibitor Gelling Agent Oxidizing Breaker Buffering Agent | chloride Ammonium chloride Hydrochloric Acid Propargyl Alcohol Methanol Guar Gum Sodium Persulfate Potassium Carbonate | 64742-47-8 81741-28-8 12125-02-9 7647-01-0 107-19-7 67-56-1 9000-30-0 7775-27-1 584-08-7 |

RECEIVED
Office of Oil and Gas

MAY 2 2019

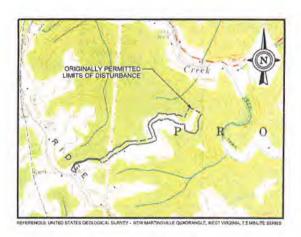
EROSION & SEDIMENT CONTROL PLAN

ERLEWINE PAD SITE MODIFICATION

PROCTOR DISTRICT, WETZEL COUNTY, WV FOR

EQT PRODUCTION COMPANY







PROJECT NO. 18070-078

SEPTEMBER 2018

DIEFFENBAUCH & HRITZ, LLC



| INDEX | | | | |
|-------------|--------------------------------|---|--|--|
| ERAWING NO. | TITLE | - | | |
| 1 | TITLE SHEET | | | |
| 2 | DVERALL SITE PLAN | | | |
| 3 | PROPOSED SITE PLAN | _ | | |
| 4 | AS-BUILT ADCESS ROAD PROFILE | | | |
| 5 | PROPOSED SITE RESTORATION PLAN | _ | | |
| | WELL PAD TYPICAL SECTIONS | | | |
| 7 | DETAILS | | | |

DMH 11/27/18

