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west virginia department of environmental protection

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

Austin Caperton, Cabinet Secretary  
[www.dep.wv.gov](http://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 5H  
47-103-02999-00-00

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 5H  
Farm Name: ERLEWINE, RICHARD  
U.S. WELL NUMBER: 47-103-02999-00-00  
Horizontal 6A Re-Work  
Date Issued: 6/19/2019

## 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

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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](mailto:DEPOOGNotify@wv.gov).

EQT Production  
Hydraulic Fracturing Monitoring Plan  
Pad ID: Erlewine (NMA13)  
County: Wetzel

February 20, 2019

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Page 1 of 2

## 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**.

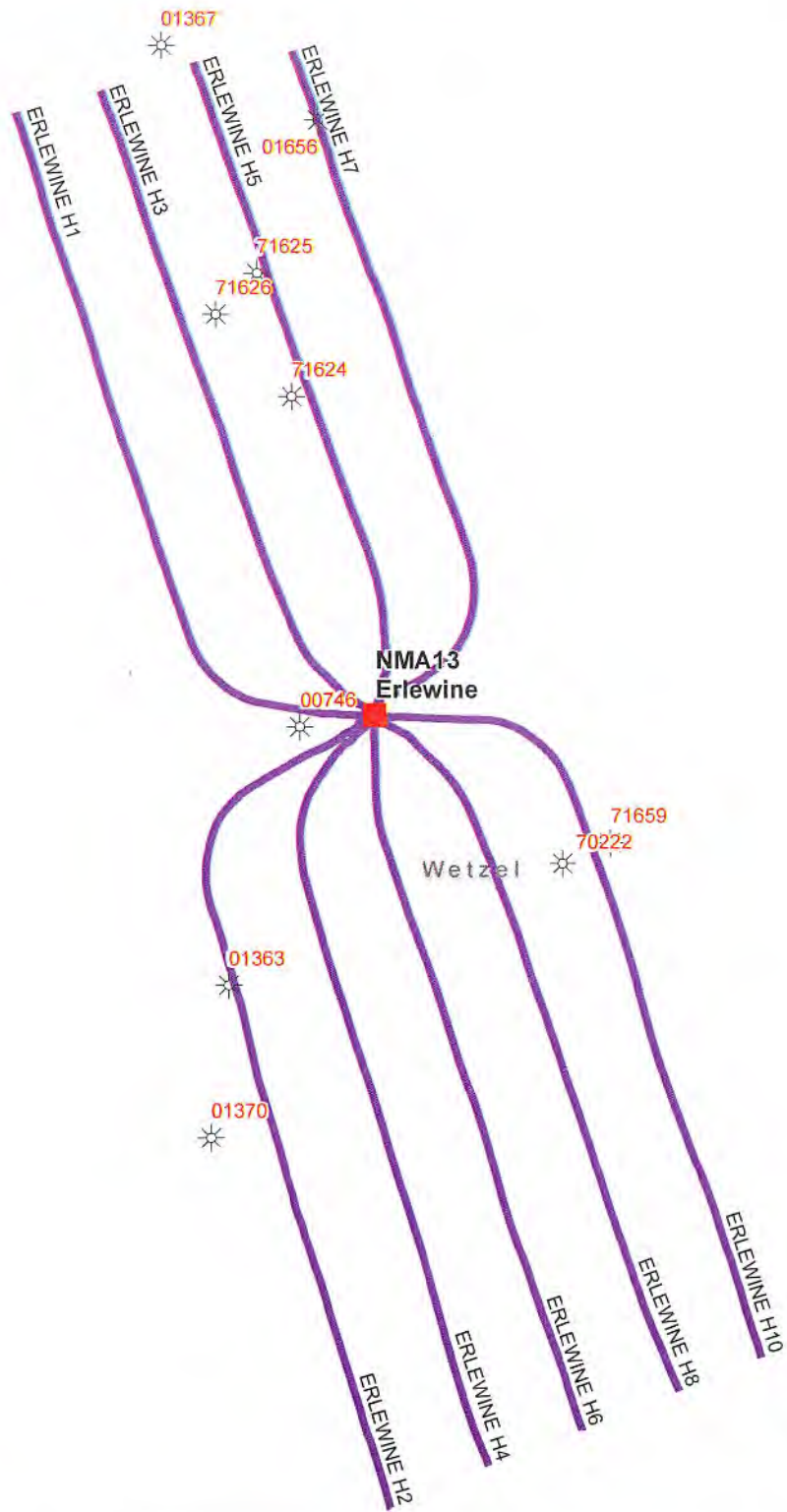
EQT will notify these operators of the hydraulic fracturing schedule for these wells, and coordinate with them throughout the fracturing process.

EQT will recommend to these operators at a minimum to:

1. Inspect their surface equipment prior to fracturing to establish integrity and establish pre-frac well conditions
2. Observe wells closely during and after fracturing and monitor for abnormal increases in water, gas or pressure
3. 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

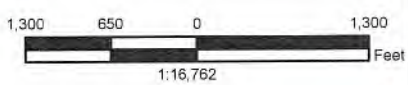
EQT will provide information relating to the hydraulic fracturing schedule, communication with other operators, and ongoing monitoring of the work upon request of OOG or immediately in the event of any noted abnormalities.



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**EQT**  
EQT Corporation  
625 Liberty Avenue  
Pittsburgh, PA 15222

☀ Vertical Offsets  
■ Pad  
SPUD Laterals  
— Marcellus



Disclaimer:  
This map is confidential and is to be used only for the express informational purposes for which it was created. Unauthorized use, copying, or dissemination is strictly prohibited. EQT does not warrant the accuracy of the location of any items shown on this map, including, but not limited to, any structures, well or pipeline facilities, property boundaries, topography, roadways, or waterways. The items shown on the map may not have been placed on the map using survey lines or GPS coordinates. The specific location of any of the map items should be determined by a field survey performed by a licensed surveyor upon consultation with EQT.



NMA13 - Erlwine Pad  
  
Vertical Offsets and Foreign Laterals within 500'

4710302999

API Number	Completion Date	Current Operator	Elevation	Elevation Reference	Final Status	Lat	Long	Well Name	Permit Date	SPUD Date	TD Formation	Total Depth	Permit
47103016560000	3/19/1995	ALLIANCE PETROLEUM CORPORATION	1209	GR	OIL	39.6960	-80.7988	1 NEWMAN REVA	12/20/1994	12/30/1994	KEENER /SD/	2030	01656
47103013630000	11/8/1985	BLUE GROUP OPERATING INCORPORATED	1247	KB	GAS	39.6778	-80.8014	2 WILSON WILLARD	10/18/1985	10/28/1985	DEVONIAN /SH/	3000	01363
47103716250000		UNKNOWN			UNKWN	39.6928	-80.8005	3957 L & O PALMER 1-4201					71625
47103716590000		UNKNOWN			UNKWN	39.6808	-80.7909	1 J W ONEIL					71659
47103013670000	12/13/1985	BLUE GROUP OPERATING INCORPORATED	1269	KB	GAS	39.6976	-80.8031	1 BAXTER CLARENCE	11/8/1985	11/18/1985	DEVONIAN /SH/	3000	01367
47103702220000		UNKNOWN			UNKWN	39.6803	-80.7922	1 J W ONEILL					70222

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

1) Well Operator: EQT Production Company 306686 Wetzel Proctor New Martinsville  
Operator ID County District Quadrangle

2) Operator's Well Number: Erlewine 5H Well Pad Name: Erlewine

3) Farm Name/Surface Owner: Erlewine, Richard et al Public Road Access: CR 1/2

4) Elevation, current ground: 1,212' Elevation, proposed post-construction: 1,212'

5) Well Type (a) Gas X Oil \_\_\_\_\_ Underground Storage \_\_\_\_\_

Other \_\_\_\_\_

(b) If Gas Shallow X Deep \_\_\_\_\_

Horizontal X \_\_\_\_\_

6) Existing Pad: Yes or No Yes

*DMH*  
*5-23-19*

7) Proposed Target Formation(s), Depth(s), Anticipated Thickness and Expected Pressure(s):  
Target Formation: Marcellus Depth: 6,532'; Thickness: 50'; Anticipated Pressure: 3,800-4,400 psi

8) Proposed Total Vertical Depth: 6,532' (As-drilled)

9) Formation at Total Vertical Depth: Marcellus

10) Proposed Total Measured Depth: 11,128' (As-Drilled)

11) Proposed Horizontal Leg Length: 4,048' (As-Drilled)

12) Approximate Fresh Water Strata Depths: 100'

13) Method to Determine Fresh Water Depths: Drilling - taken from WR-35

14) Approximate Saltwater Depths: 1,638'

15) Approximate Coal Seam Depths: 520', 721' and 950' - Taken from WR-35

16) Approximate Depth to Possible Void (coal mine, karst, other): None reported

17) Does Proposed well location contain coal seams directly overlying or adjacent to an active mine? Yes \_\_\_\_\_ No X

(a) If Yes, provide Mine Info: Name: \_\_\_\_\_

Depth: \_\_\_\_\_

Seam: \_\_\_\_\_

Owner: \_\_\_\_\_

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18)

**CASING AND TUBING PROGRAM**

TYPE	Size (in)	New or Used	Grade	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	88'	88'	40 ft <sup>3</sup> / CTS
Fresh Water	13 3/8	New	J-55	54.5	1,222 KB - 1,212 GL	1,222 KB - 1,212 GL	1,180 ft <sup>3</sup> / CTS
Coal	13 3/8	New	J-55	54.5	1,222 KB - 1,212 GL	1,222 KB - 1,212 GL	1,180 ft <sup>3</sup> /CTS
Intermediate	9 5/8	New	J-55	36	2,383'	2,383'	956 ft <sup>3</sup> /CTS
Production	5 1/2	New	P-110	20	11,127'	11,127'	L:422 T:2,502
Tubing						May not be run, if run set 40' above top perf or 80° inclination.	
Liners							

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5-23-19

TYPE	Size (in)	Wellbore Diameter (in)	Wall Thickness (in)	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 Spacers3	2.37/1.20
Tubing						Tail: VeriCem	
Liners							

**PACKERS**

Kind:				
Sizes:				
Depths Set:				

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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.

DMH  
5-23-19

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

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 4,8,12,16,20,24,37 and 39
- 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 126. Ran a total of 32 rigid spiral centralizers. Ran bow spring centralizers from joint 164 to joint 256 on every fourth joint. A total of 24 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% CaCl<sub>2</sub>. 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% CaCl<sub>2</sub>. 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 done by circulating air through the drill string at TD between 30 and 90 minutes or until the well bore clears of cuttings.

Intermediate section will be done by circulating air and/or stiff foam through the drill string at TD between 30 and 120 minutes or until the well bore clears of cuttings.

Production section will be done by circulating drilling fluid through the drill string at TD between 120 to 720 minutes (REMOVED of 3 bottoms up) until the shakers are clear of cuttings.

Office of Oil and Gas

\*Note: Attach additional sheets as needed.

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

API 47 - 103 - 02999 County Wetzel District Proctor  
Quad New Marlinsville Pad Name Erlewine Field/Pool Name Mary  
Farm name Erlewine, Richard Well Number #5H  
Operator (as registered with the OOG) Stone Energy Corporation  
Address 1300 Fort Pierpont Dr. - Suite 201 City Morgantown State WV Zip 26508

As Drilled location NAD 83/UTM Attach an as-drilled plat, profile view, and deviation survey  
Top hole Northing 4,392,663 Easting 517,397  
Landing Point of Curve Northing 4,393,020 Easting 517,386  
Bottom Hole Northing 4,394,199 Easting 516,974

Elevation (ft) 1,212 GL Type of Well  New  Existing Type of Report  Interim  Final  
Permit Type  Deviated  Horizontal  Horizontal 6A  Vertical Depth Type  Deep  Shallow  
Type of Operation  Convert  Deepen  Drill  Plug Back  Redrilling  Rework  Stimulate  
Well Type  Brine Disposal  CBM  Gas  Oil  Secondary Recovery  Solution Mining  Storage  Other  
Type of Completion  Single  Multiple Fluids Produced  Brine  Gas  NGL  Oil  Other  
Drilled with  Cable  Rotary

Drilling Media Surface hole  Air  Mud  Fresh Water Intermediate hole  Air  Mud  Fresh Water  Brine  
Production hole  Air  Mud  Fresh Water  Brine

Mud Type(s) and Additive(s)  
Saturated salt mud which includes Caustic Soda, Barite, Lime, New-Drill, Perma-Lose HT, Xan-Plex D, X-Cide 102, Soda Ash, and Sodium Chloride

Date permit issued 7/9/2014 Date drilling commenced 8/14/2014 Date drilling ceased 1/8/2015  
Date completion activities began Not Yet Completed Date completion activities ceased Not Yet Completed  
Verbal plugging (Y/N) N Date permission granted \_\_\_\_\_ Granted by \_\_\_\_\_

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

Freshwater depth(s) ft 100 Open mine(s) (Y/N) depths MAR 13 2017  
Salt water depth(s) ft 1,638 Void(s) encountered (Y/N) depths N  
Coal depth(s) ft 520, 721 and 950 Cavern(s) encountered (Y/N) depths N  
Is coal being mined in area (Y/N) N

**APPROVED**  
NAME: [Signature]  
DATE: 5-25-17

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MAR 13 2017  
WV Department of Environmental Protection  
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Reviewed by: [Signature] MAY 30 2019  
WV Department of Environmental Protection

API 47-103 - 02999 Farm name Erlewine, Richard Well number #5H

CASING STRINGS	Hole Size	Casing Size	Depth	New or Used	Grade wt/ft	Basket Depth(s)	Did cement circulate (Y/ N) * Provide details below*
Conductor	24"	20"	88'	New	LS - 94.1 ppf		N - GTS
Surface	17.5"	13.375"	1,222' KB - 1,212' GL	New	J55 - 54.5 ppf	121' & 197'	Y - CTS
Coal	17.5"	13.375"	1,222' KB - 1,212' GL	New	J55 - 54.5 ppf	121' & 197'	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"	11,127'	New	P110 - 20 ppf		N - TOC @ 1,222' Calculated
Tubing							
Packer type and depth set							

Comment Details Circulated 32 bbls cement to surface on 13.375" casing string. Circulated 35 bbls cement to surface on the 9.625" casing string. Did not circulate any cement to surface on the 5.5" casing string. TOC on 5.5" calculated to be 1,222'.

CEMENT DATA	Class/Type of Cement	Number of Sacks	Slurry wt (ppg)	Yield (ft <sup>3</sup> /sks)	Volume (ft <sup>3</sup> )	Cement Top (MD)	WOC (hrs)
Conductor	Type 1	34	15.6	1.18	40	Surface	24.0
Surface	HalCem Class "A"	1,000	15.6	1.18	1,180	Surface	8.0
Coal	HalCem Class "A"	1,000	15.6	1.18	1,180	Surface	8.0
Intermediate 1	HalCem Class "A"	790	15.6	1.21	956	Surface	12.0
Intermediate 2							
Intermediate 3							
Production	Lead-TunedSpacer3 Test-VarCam	Lead-178 Tail-2,085	Lead-14.5 Tail-15.2	Lead-2.37 Tail-1.20	Lead-422 Tail-2,502	1,222' Calculated	7.0
Tubing							

Drillers TD (ft) 11,128 MD / 6,532 TVD Loggers TD (ft) N/A  
 Deepest formation penetrated Marcellus Shale Plug back to (ft) \_\_\_\_\_  
 Plug back procedure \_\_\_\_\_

Kick off depth (ft) 5,806 MD / 5,791 TVD

Check all wireline logs run  caliper  density  deviated/directional  induction  
 neutron  resistivity  gamma ray  temperature  sonic

Well cored  Yes  No Conventional Sidewall Were cuttings collected  Yes  No

DESCRIBE THE CENTRALIZER PLACEMENT USED FOR EACH CASING STRING Surface casing had bow spring centralizers placed on joints 4, 8, 12, 16, 20, 24, 37 and 39. Intermediate casing had bow spring centralizers placed on joints 4, 8, 12, 16, 20, 24, 28 and 32. Production casing had rigid spiral centralizers placed on every third joint beginning with joint 1 to joint 128. Ran a total of 32 rigid spiral centralizers. Ran bow spring centralizers from joint 164 to joint 256 on every fourth joint. A total of 24 bow spring centralizers were run.

WAS WELL COMPLETED AS SHOT HOLE  Yes  No DETAILS \_\_\_\_\_

WAS WELL COMPLETED OPEN HOLE?  Yes  No DETAILS \_\_\_\_\_ RECEIVED Office of Oil and Gas

WERE TRACERS USED  Yes  No TYPE OF TRACER(S) USED \_\_\_\_\_ MAY 30 2019



API 47-103-02999

Farm name Erlewine, Richard

Well number #5H

PRODUCING FORMATION(S)

DEPTHS

Not Yet Completed \_\_\_\_\_ TVD \_\_\_\_\_ MD \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

Please insert additional pages as applicable.

GAS TEST     Build up    Drawdown    Open Flow            OIL TEST    Flow    Pump

SHUT-IN PRESSURE   Surface \_\_\_\_\_ psi   Bottom Hole \_\_\_\_\_ psi   DURATION OF TEST \_\_\_\_\_ hrs

OPEN FLOW   Gas                      Oil                      NGL                      Water                      GAS MEASURED BY  
                     \_\_\_\_\_ mcfpd    \_\_\_\_\_ bpd    \_\_\_\_\_ bpd    \_\_\_\_\_ bpd     Estimated    Orifice    Pilot

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

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

Please insert additional pages as applicable.

Drilling Contractor Nomac (top-hole) & Saxon Drilling (horizontal)

Address 2034 Martins Branch Rd /9303 New Trails Drive    City Mount Morris / The Woodlands    State PA / TX    Zip 25312 / 77381

Logging Company Scientific Drilling and Schlumberger

Address 124 Vista Drive / 1178 US HWY 33 East    City Charleroi / Weston    State PA / WV    Zip 15022 / 26452

Cementing Company Schlumberger

Address 1178 US HWY 33 East    City Weston    State WV    Zip 26452

Stimulating Company \_\_\_\_\_

Address \_\_\_\_\_    City \_\_\_\_\_    State \_\_\_\_\_    Zip \_\_\_\_\_

Please insert additional pages as applicable.

Completed by Greg Zofchak

Telephone 304-225-1600

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Signature *Greg Zofchak*                      Title Drilling Engineer

Date 2/16/17

Submission of Hydraulic Fracturing Chemical Disclosure Information

Attach copy of FRACFOCUS Registry

MAY 30 2019



## Stone Energy Corporation

Mary Prospect  
Erlewine Pad  
Erlewine 5H - Slot 5H

OH

Design: 5H As Drilled

## Standard Survey Report

13 January, 2015



[www.scientificdrilling.com](http://www.scientificdrilling.com)

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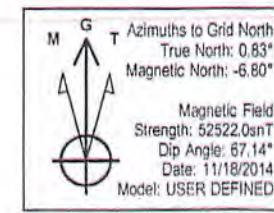
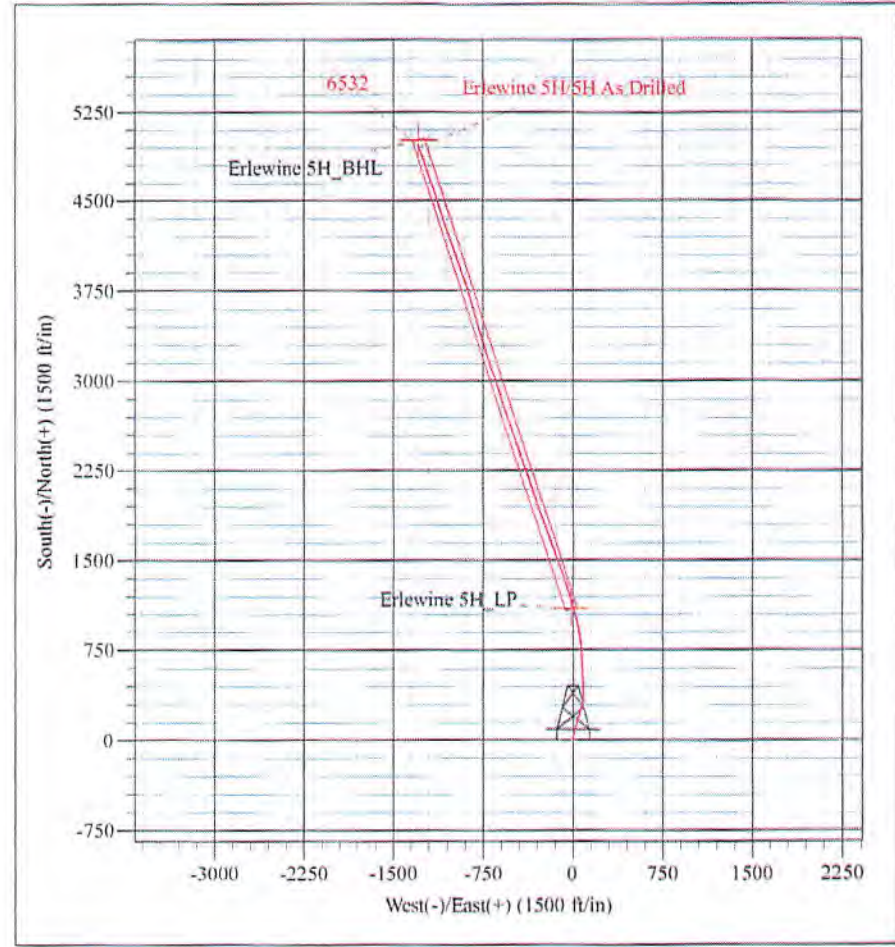
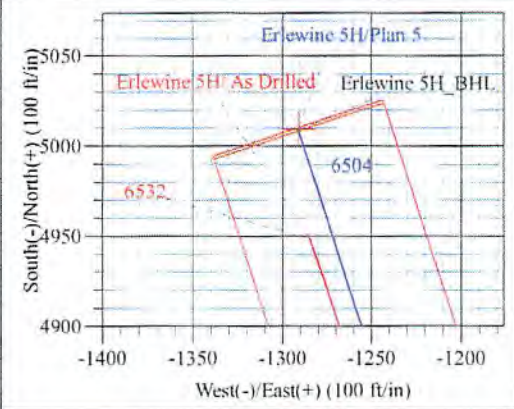
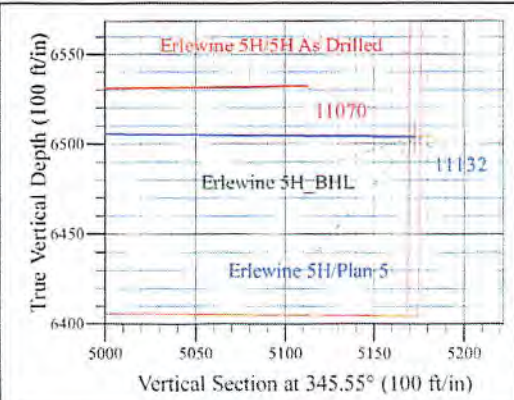
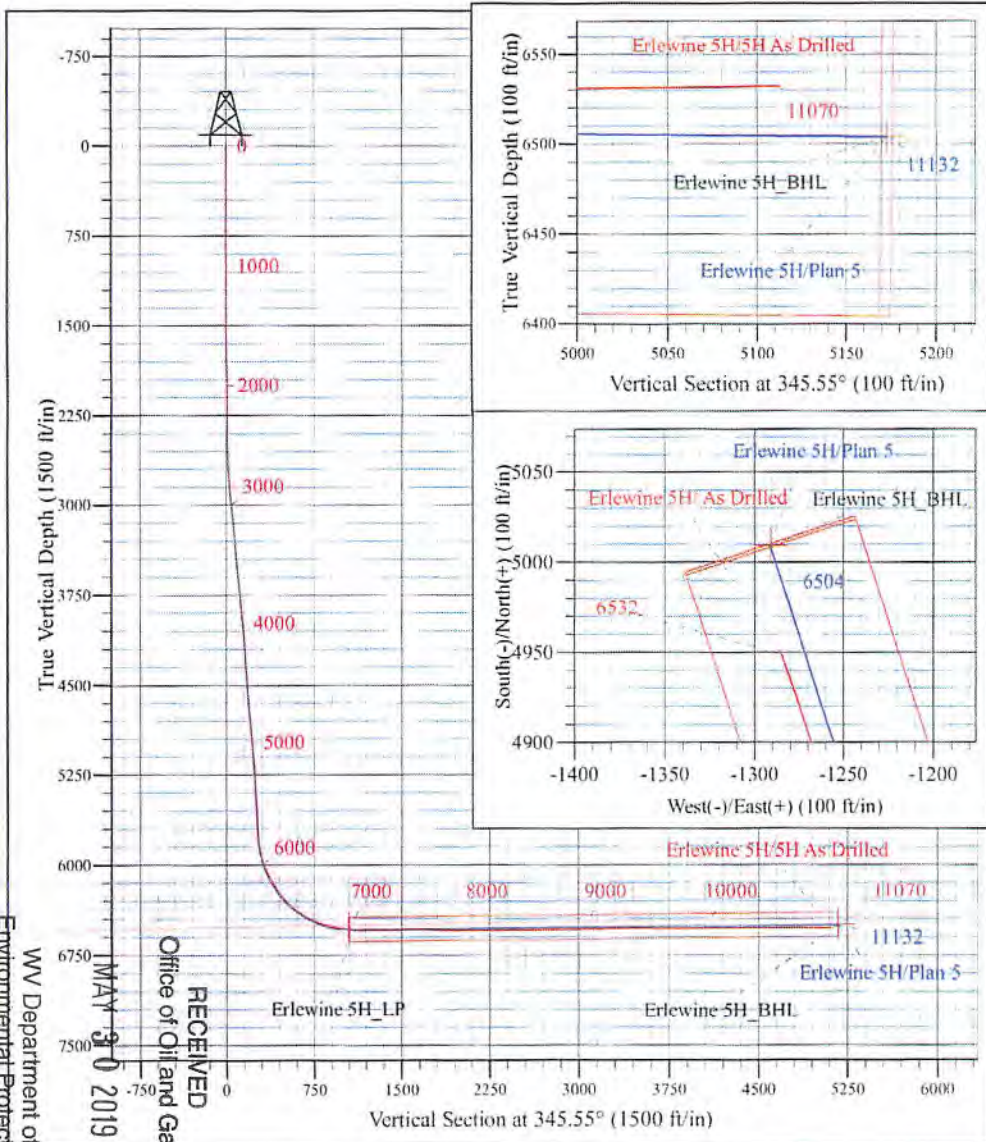
Erlewine Pad  
 Erlewine 5H  
 Plan 5  
 GL 1212' & KB 18' @ 1230.00ft (Saxon 141)  
 Mary Prospect

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



WELL DETAILS: Erlewine 5H

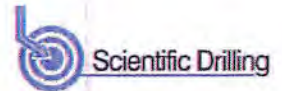
+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
0.00	0.00	433710.00	1634896.00	39° 41' 0.763 N	80° 47' 50.292 W



Shane Rhodes  
 8:19, January 13 2015  
 Scientific Drilling International  
 124 Vista Drive  
 Charleroi, PA 15022



**Scientific Drilling International**  
Survey Report



<b>Company:</b>	Stone Energy Corporation	<b>Local Co-ordinate Reference:</b>	Well Erlewine 5H - Slot 5H
<b>Project:</b>	Mary Prospect	<b>TVD Reference:</b>	GL 1212' & KB 18' @ 1230.00ft (Saxon 141)
<b>Site:</b>	Erlewine Pad	<b>MD Reference:</b>	GL 1212' & KB 18' @ 1230.00ft (Saxon 141)
<b>Well:</b>	Erlewine 5H	<b>North Reference:</b>	Grid
<b>Wellbore:</b>	OH	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	5H As Drilled	<b>Database:</b>	Northeast District

<b>Project</b>	Mary Prospect, Wetzel County, West Virginia		
<b>Map System:</b>	US State Plane 1927 (Exact solution)	<b>System Datum:</b>	Mean Sea Level
<b>Geo Datum:</b>	NAD 1927 (NADCON CONUS)		
<b>Map Zone:</b>	West Virginia North 4701		

<b>Site</b>	Erlewine Pad				
<b>Site Position:</b>		<b>Northing:</b>	433,674.00 usft	<b>Latitude:</b>	39° 41' 0.404 N
<b>From:</b>	Map	<b>Easting:</b>	1,634,878.00 usft	<b>Longitude:</b>	80° 47' 50.515 W
<b>Position Uncertainty:</b>	0.00 ft	<b>Slot Radius:</b>	13-3/16 "	<b>Grid Convergence:</b>	-0.83 °

<b>Well</b>	Erlewine 5H - Slot 5H					
<b>Well Position</b>	<b>+N/-S</b>	0.00 ft	<b>Northing:</b>	433,710.00 usft	<b>Latitude:</b>	39° 41' 0.763 N
	<b>+E/-W</b>	0.00 ft	<b>Easting:</b>	1,634,896.00 usft	<b>Longitude:</b>	80° 47' 50.292 W
<b>Position Uncertainty</b>		2.00 ft	<b>Wellhead Elevation:</b>	0.00 ft	<b>Ground Level:</b>	1,212.00 ft

<b>Wellbore</b>	OH				
<b>Magnetics</b>	<b>Model Name</b>	<b>Sample Date</b>	<b>Declination (°)</b>	<b>Dip Angle (°)</b>	<b>Field Strength (nT)</b>
	HDGM	6/17/2014	-7.62	67.17	52,581
	User Defined	7/10/2014	-7.61	67.17	52,572
	User Defined	8/12/2014	-7.62	67.16	52,559
	User Defined	11/18/2014	-7.63	67.14	52,522

<b>Design</b>	5H As Drilled				
<b>Audit Notes:</b>					
<b>Version:</b>	1.0	<b>Phase:</b>	ACTUAL	<b>Tie On Depth:</b>	0.00
<b>Vertical Section:</b>	<b>Depth From (TVD) (ft)</b>	<b>+N/-S (ft)</b>	<b>+E/-W (ft)</b>	<b>Direction (°)</b>	
	0.00	0.00	0.00	13.41	

<b>Survey Program</b>	<b>Date</b>	1/13/2015			
<b>From (ft)</b>	<b>To (ft)</b>	<b>Survey (Wellbore)</b>	<b>Tool Name</b>	<b>Description</b>	
18.00	2,388.00	Survey 1 - Vaughn Gyro (OH)	VES GyroFlex		
2,432.00	11,070.00	Survey 2 - SDI MWD (OH)	MWD SDI	MWD - Standard ver 1.0.1	

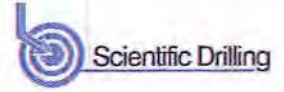
<b>Survey</b>										
<b>Measured Depth (ft)</b>	<b>Inclination (°)</b>	<b>Azimuth (°)</b>	<b>Vertical Depth (ft)</b>	<b>+N/-S (ft)</b>	<b>+E/-W (ft)</b>	<b>Vertical Section (ft)</b>	<b>Dogleg Rate (°/100usft)</b>	<b>Build Rate (°/100usft)</b>	<b>Turn Rate (°/100usft)</b>	
0.00	0.00	0.00	0.00	0.00	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	
<b>Ground Level @ 10.00 MD</b>										
108.00	0.36	190.13	108.00	-0.28	-0.05	-0.28	0.40	0.40	0.00	
<b>First Vaughn Gyro Survey @ 100.00 MD</b>										
208.00	0.21	245.80	208.00	-0.66	-0.27	-0.71	0.30	-0.15	53.67	
308.00	0.21	211.57	308.00	-0.89	-0.54	-0.99	0.12	0.00	54.29	

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**Scientific Drilling International**  
Survey Report



Company: Stone Energy Corporation  
 Project: Mary Prospect  
 Site: Erlewine Pad  
 Well: Erlewine 5H  
 Wellbore: OH  
 Design: 5H As Drilled

Local Co-ordinate Reference: Well Erlewine 5H - Slot 5H  
 TVD Reference: GL 1212' & KB 18' @ 1230.00ft (Saxon 141)  
 MD Reference: GL 1212' & KB 18' @ 1230.00ft (Saxon 141)  
 North Reference: Grid  
 Survey Calculation Method: Minimum Curvature  
 Database: Northeast District

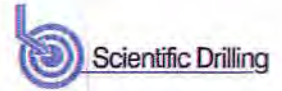
**Survey**

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)
408.00	0.21	200.75	408.00	-1.22	-0.70	-1.35	0.04	0.00	-10.82
508.00	0.10	119.91	508.00	-1.44	-0.69	-1.56	0.22	-0.11	-80.84
608.00	0.49	70.02	608.00	-1.33	-0.21	-1.35	0.43	0.39	-49.89
708.00	0.60	43.20	707.99	-0.81	0.55	-0.66	0.27	0.11	-26.82
808.00	0.38	77.49	807.99	-0.35	1.23	-0.06	0.36	-0.22	34.29
908.00	0.44	42.70	907.98	0.00	1.82	0.42	0.25	0.05	-34.79
1,008.00	0.36	48.35	1,007.98	0.49	2.31	1.02	0.09	-0.08	5.65
1,108.00	0.50	54.83	1,107.98	0.95	2.91	1.60	0.15	0.14	6.48
1,208.00	0.66	32.46	1,207.97	1.69	3.57	2.47	0.27	0.16	-22.37
1,308.00	0.49	15.25	1,307.97	2.59	3.99	3.44	0.24	-0.17	-17.20
1,408.00	0.24	350.21	1,407.97	3.21	4.07	4.06	0.29	-0.25	-25.05
1,508.00	0.31	9.30	1,507.97	3.68	4.08	4.53	0.11	0.07	19.09
1,608.00	0.29	2.44	1,607.97	4.20	4.13	5.04	0.04	-0.02	-6.86
1,708.00	0.31	318.66	1,707.96	4.66	3.96	5.45	0.22	0.02	-43.78
1,808.00	0.40	312.52	1,807.96	5.10	3.53	5.77	0.10	0.09	-6.14
1,908.00	0.26	317.80	1,907.96	5.50	3.12	6.07	0.14	-0.14	5.28
2,008.00	0.38	332.96	2,007.96	5.96	2.82	6.45	0.15	0.12	15.16
2,108.00	0.24	309.67	2,107.96	6.39	2.50	6.80	0.19	-0.14	-23.29
2,208.00	0.15	340.48	2,207.96	6.65	2.30	7.00	0.14	-0.09	30.81
2,308.00	0.55	324.69	2,307.95	7.16	1.98	7.43	0.41	0.40	-15.79
2,368.00	0.58	341.28	2,387.95	7.86	1.63	8.02	0.21	0.04	20.74
<b>Last Vaughn Gyro Survey @ 2380.00 MD</b>									
2,432.00	0.50	342.73	2,431.95	8.26	1.50	8.38	0.18	-0.18	3.30
<b>First SDI MWD Survey @ 2424.00 MD</b>									
2,527.00	1.67	346.61	2,526.93	10.00	1.05	9.97	1.23	1.23	4.08
2,621.00	2.79	357.10	2,620.86	13.62	0.62	13.39	1.26	1.19	11.16
2,715.00	3.79	13.54	2,714.70	18.92	1.23	18.69	1.45	1.06	17.49
2,809.00	4.70	18.99	2,808.45	25.58	3.21	25.63	1.06	0.97	5.80
2,903.00	5.96	17.00	2,902.04	33.89	5.89	34.33	1.35	1.34	-2.12
2,997.00	6.87	14.70	2,995.45	44.00	8.75	44.83	1.01	0.97	-2.45
3,091.00	7.02	10.02	3,088.76	55.09	11.17	56.18	0.62	0.16	-4.98
3,185.00	6.56	10.25	3,182.10	66.03	13.13	67.28	0.49	-0.49	0.24
3,279.00	6.37	17.34	3,275.50	76.29	15.64	77.84	0.87	-0.20	7.54
3,373.00	6.33	17.90	3,368.93	86.20	18.78	88.21	0.08	-0.04	0.60
3,467.00	5.97	12.33	3,462.39	95.91	21.42	98.26	0.74	-0.38	-5.93
3,562.00	6.12	10.21	3,556.86	105.72	23.37	108.26	0.28	0.16	-2.23
3,656.00	6.18	17.18	3,650.32	115.48	25.76	118.31	0.80	0.06	7.41
3,750.00	6.03	20.35	3,743.79	124.95	28.97	128.26	0.39	-0.16	3.37
3,846.00	5.95	15.55	3,839.26	134.47	32.05	138.24	0.53	-0.08	-5.00
3,940.00	6.02	10.06	3,932.75	144.02	34.22	148.03	0.61	0.07	-5.84
4,034.00	6.17	17.15	4,026.22	153.70	36.57	157.99	0.82	0.16	7.54
4,128.00	6.06	17.73	4,119.69	163.25	39.57	167.98	0.13	-0.12	0.62
4,222.00	5.30	17.23	4,213.22	172.12	42.37	177.26	0.81	-0.81	-0.53

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Scientific Drilling International  
Survey Report



Company: Stone Energy Corporation  
Project: Mary Prospect  
Site: Erlewine Pad  
Well: Erlewine 5H  
Wellbore: OH  
Design: SH As Drilled

Local Co-ordinate Reference: Well Erlewine 5H - Slot 5H  
TVD Reference: GL 1212' & KB 18' @ 1230.00ft (Saxon 141)  
MD Reference: GL 1212' & KB 18' @ 1230.00ft (Saxon 141)  
North Reference: Grid  
Survey Calculation Method: Minimum Curvature  
Database: Northeast District

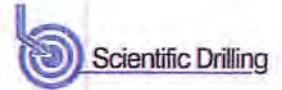
Survey

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)
4,316.00	4.41	15.26	4,306.88	179.76	44.61	185.20	0.96	-0.95	-2.10
4,410.00	4.00	12.26	4,400.63	186.45	46.25	192.09	0.49	-0.44	-3.19
4,504.00	4.98	13.85	4,494.34	193.61	47.93	199.45	1.05	1.04	1.69
4,598.00	5.81	16.65	4,587.93	202.13	50.27	208.28	0.93	0.68	2.98
4,692.00	6.13	11.96	4,681.42	211.60	52.67	216.05	0.62	0.34	-4.99
4,787.00	5.96	16.12	4,775.89	221.32	55.10	226.06	0.49	-0.16	4.38
4,881.00	6.02	16.74	4,869.37	230.74	57.88	237.87	0.08	0.04	0.66
4,975.00	6.29	11.01	4,962.83	240.51	60.28	247.94	0.71	0.29	-6.10
5,069.00	5.77	18.26	5,056.31	250.06	62.74	257.79	0.98	-0.55	7.71
5,163.00	6.06	25.22	5,149.81	259.03	66.34	267.36	0.82	0.31	7.40
5,259.00	5.00	24.49	5,245.36	267.42	70.23	276.42	1.11	-1.10	-0.76
5,353.00	3.99	29.93	5,339.07	273.99	73.56	283.58	1.17	-1.07	5.79
5,447.00	3.63	28.81	5,432.87	279.43	76.63	289.58	0.39	-0.38	-1.19
5,541.00	3.67	26.78	5,526.68	284.72	79.42	295.38	0.14	0.04	-2.16
5,635.00	3.98	25.08	5,620.47	290.36	82.15	301.50	0.35	0.33	-1.81
5,729.00	4.21	12.72	5,714.23	296.68	84.30	308.14	0.97	0.24	-13.15
5,760.00	4.46	15.39	5,745.14	298.95	84.87	310.49	1.04	0.81	8.61
5,790.00	4.50	11.00	5,775.05	301.23	85.40	312.83	1.15	0.13	-14.63
5,820.00	6.03	9.19	5,804.92	303.95	85.88	315.57	5.13	5.10	-6.03
5,851.00	8.64	4.63	5,835.66	307.87	86.33	319.50	8.62	8.42	-14.71
5,881.00	11.59	3.07	5,865.19	313.13	86.67	324.69	9.87	9.83	-5.20
5,913.00	13.94	1.54	5,896.40	320.19	86.94	331.63	7.42	7.34	-4.78
5,945.00	16.15	0.07	5,927.30	328.50	87.05	339.73	7.01	6.91	-4.59
5,977.00	18.25	358.19	5,957.87	337.96	86.90	348.90	6.79	6.56	-5.88
6,008.00	19.45	357.08	5,987.21	347.97	86.48	358.54	4.04	3.87	-3.58
6,039.00	21.74	356.80	6,016.22	358.85	85.90	368.99	7.39	7.39	-0.90
6,071.00	24.09	356.76	6,045.70	371.29	85.20	380.93	7.34	7.34	-0.13
6,103.00	26.23	357.42	6,074.66	384.88	84.51	393.99	6.74	6.69	2.06
6,135.00	27.69	357.84	6,103.18	399.37	83.92	407.95	4.60	4.58	1.31
6,167.00	29.55	358.80	6,131.27	414.69	83.47	422.75	5.99	5.81	3.00
6,198.00	32.06	358.60	6,157.89	430.56	83.11	438.10	8.10	8.10	-0.65
6,229.00	33.84	358.64	6,183.91	447.42	82.70	454.40	5.74	5.74	0.13
6,261.00	35.90	359.18	6,210.16	465.71	82.36	472.11	6.51	6.44	1.69
6,293.00	37.60	359.12	6,235.80	484.85	82.07	490.67	5.31	5.31	-0.19
6,325.00	39.33	358.37	6,260.85	504.75	81.63	509.93	5.60	5.41	-2.34
6,357.00	41.81	357.40	6,285.16	525.55	80.86	529.98	8.00	7.75	-3.03
6,389.00	44.95	356.47	6,308.41	547.49	79.68	551.05	10.01	9.81	-2.91
6,421.00	47.32	357.11	6,330.59	570.53	78.39	573.15	7.55	7.41	2.00
6,452.00	49.69	357.08	6,351.13	593.71	77.22	595.44	7.65	7.65	-0.10
6,484.00	52.06	358.07	6,371.32	618.51	76.17	619.32	7.79	7.41	3.09
6,516.00	53.23	358.09	6,390.73	643.94	75.32	643.85	3.66	3.66	0.06
6,548.00	54.29	357.37	6,409.65	669.72	74.29	668.70	3.78	3.31	2.11
6,580.00	57.01	356.59	6,427.70	696.10	72.90	694.04	8.73	8.50	2.11
6,612.00	61.56	354.89	6,444.05	723.53	70.85	720.24	14.93	14.22	-5.31

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Survey Report



Company: Stone Energy Corporation  
Project: Mary Prospect  
Site: Erlewine Pad  
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Wellbore: OH  
Design: 5H As Drilled

Local Co-ordinate Reference: Well Erlewine 5H - Slot 5H  
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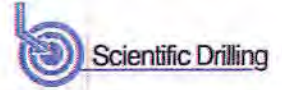
Survey

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)
6,643.00	64.84	354.41	6,458.02	751.08	68.26	746.43	10.67	10.56	-1.55
6,675.00	67.57	354.37	6,470.93	780.21	65.40	774.11	8.53	8.53	-0.13
6,707.00	69.48	354.39	6,482.65	809.85	62.49	802.26	5.97	5.97	0.06
6,738.00	71.61	353.33	6,492.97	838.91	59.36	829.81	7.59	6.67	-3.42
6,768.00	73.96	352.35	6,501.85	867.34	55.79	856.63	8.43	7.83	-3.27
6,801.00	75.59	349.98	6,510.52	898.80	50.89	886.10	8.51	4.94	-7.18
6,832.00	77.45	348.48	6,517.74	928.41	45.26	913.60	7.62	6.00	-4.84
6,864.00	79.47	347.17	6,524.14	959.05	38.65	941.88	7.48	6.31	-4.09
6,895.00	81.41	346.63	6,529.29	988.83	31.72	969.23	6.49	6.26	-1.74
6,927.00	83.59	346.64	6,533.47	1,019.69	24.38	997.55	6.81	6.81	0.03
6,958.00	85.23	345.71	6,536.49	1,049.65	17.01	1,024.98	6.07	5.29	-3.00
6,990.00	86.37	344.06	6,538.83	1,080.46	8.69	1,053.02	6.26	3.66	-5.16
7,022.00	86.78	343.83	6,540.74	1,111.15	-0.14	1,080.83	1.47	1.28	-0.72
7,086.00	90.40	342.73	6,542.32	1,172.42	-18.55	1,136.16	5.91	5.65	-1.72
7,149.00	90.44	342.97	6,541.86	1,232.62	-37.12	1,190.41	0.39	0.06	0.38
7,213.00	89.66	341.03	6,541.80	1,293.48	-56.90	1,245.03	3.27	-1.22	-3.03
7,277.00	90.03	339.85	6,541.97	1,353.79	-78.33	1,298.72	1.93	0.56	-1.84
7,340.00	89.46	338.93	6,542.25	1,412.75	-100.50	1,350.94	1.72	-0.90	-1.46
7,404.00	89.50	339.37	6,542.83	1,472.56	-123.28	1,403.83	0.69	0.06	0.69
7,467.00	90.47	339.44	6,542.85	1,531.53	-145.44	1,456.06	1.54	1.54	0.11
7,531.00	89.87	340.34	6,542.66	1,591.63	-167.45	1,509.42	1.69	-0.94	1.41
7,595.00	89.87	341.36	6,542.81	1,652.09	-188.44	1,563.36	1.59	0.00	1.59
7,658.00	89.46	341.22	6,543.17	1,711.76	-208.65	1,616.72	0.69	-0.85	-0.22
7,722.00	89.30	341.52	6,543.87	1,772.40	-229.09	1,670.97	0.53	-0.25	0.47
7,783.00	88.76	340.93	6,544.90	1,830.14	-248.72	1,722.59	1.31	-0.89	-0.97
7,846.00	88.25	340.75	6,546.54	1,889.63	-269.39	1,775.66	0.86	-0.81	-0.29
7,909.00	88.86	341.70	6,548.13	1,949.26	-289.66	1,828.96	1.79	0.97	1.51
7,973.00	89.36	341.71	6,549.13	2,010.02	-309.75	1,883.41	0.78	0.78	0.02
8,037.00	89.93	342.18	6,549.52	2,070.87	-329.59	1,938.00	1.15	0.89	0.73
8,100.00	88.99	341.55	6,550.12	2,130.73	-349.19	1,991.68	1.80	-1.49	-1.00
8,163.00	89.03	341.42	6,551.21	2,190.46	-369.20	2,045.15	0.22	0.06	-0.21
8,226.00	89.66	341.11	6,551.93	2,250.12	-389.43	2,098.49	1.11	1.00	-0.49
8,289.00	90.27	341.45	6,551.96	2,309.79	-409.65	2,151.84	1.11	0.97	0.54
8,353.00	90.57	341.38	6,551.49	2,370.45	-430.05	2,206.12	0.48	0.47	-0.11
8,416.00	90.87	340.70	6,550.70	2,430.02	-450.51	2,259.32	1.18	0.48	-1.08
8,480.00	90.94	338.97	6,549.69	2,490.09	-472.57	2,312.64	2.71	0.11	-2.70
8,543.00	91.71	341.08	6,548.24	2,549.28	-494.09	2,365.23	3.56	1.22	3.35
8,607.00	90.97	341.70	6,546.74	2,609.92	-514.50	2,419.48	1.51	-1.16	0.97
8,671.00	90.54	341.25	6,545.90	2,670.60	-534.84	2,473.79	0.97	-0.67	-0.70
8,734.00	91.31	341.29	6,544.88	2,730.25	-555.06	2,527.13	1.22	1.22	0.06
8,798.00	91.14	341.17	6,543.51	2,790.83	-575.65	2,581.28	0.33	-0.27	-0.19
8,861.00	90.90	342.18	6,542.39	2,850.63	-595.46	2,634.86	1.65	-0.38	-0.77
8,925.00	90.34	341.69	6,541.70	2,911.47	-615.30	2,689.44	1.16	-0.88	-0.77

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Scientific Drilling International  
Survey Report



Company: Stone Energy Corporation  
Project: Mary Prospect  
Site: Erlewine Pad  
Well: Erlewine 5H  
Wellbore: OH  
Design: 5H As Drilled

Local Co-ordinate Reference: Well Erlewine 5H - Slot 5H  
TVD Reference: GL 1212' & KB 18' @ 1230.00ft (Saxon 141)  
MD Reference: GL 1212' & KB 18' @ 1230.00ft (Saxon 141)  
North Reference: Grid  
Survey Calculation Method: Minimum Curvature  
Database: Northeast District

Survey

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)
8,989.00	90.17	340.70	6,541.41	2,972.05	-635.93	2,743.58	1.57	-0.27	-1.55
9,053.00	91.07	340.98	6,540.72	3,032.50	-656.94	2,797.52	1.47	1.41	0.44
9,116.00	91.07	340.81	6,539.54	3,092.02	-677.55	2,850.63	0.27	0.00	-0.27
9,180.00	90.94	340.88	6,538.42	3,152.47	-698.55	2,904.56	0.23	-0.20	0.11
9,244.00	90.94	341.96	6,537.37	3,213.13	-718.94	2,958.84	1.69	0.00	1.69
9,307.00	90.37	343.26	6,536.65	3,273.24	-737.76	3,012.95	2.25	-0.90	2.06
9,371.00	90.23	344.58	6,536.31	3,334.73	-755.49	3,068.66	2.07	-0.22	2.06
9,435.00	90.74	344.22	6,535.77	3,396.37	-772.70	3,124.63	0.98	0.80	-0.56
9,499.00	90.54	343.41	6,535.06	3,457.83	-790.54	3,180.27	1.30	-0.31	-1.27
9,562.00	88.72	343.90	6,535.46	3,518.28	-808.27	3,234.96	2.99	-2.89	0.78
9,626.00	88.96	343.86	6,536.76	3,579.75	-826.03	3,290.64	0.38	0.38	-0.06
9,690.00	89.73	343.69	6,537.49	3,641.20	-843.91	3,346.27	1.23	1.20	-0.27
9,754.00	90.34	343.27	6,537.45	3,702.56	-862.11	3,401.73	1.16	0.95	-0.66
9,817.00	90.64	341.93	6,536.91	3,762.67	-880.95	3,455.84	2.18	0.48	-2.13
9,881.00	90.34	340.38	6,536.37	3,823.24	-901.62	3,509.96	2.47	-0.47	-2.42
9,945.00	90.91	339.55	6,535.67	3,883.36	-923.55	3,563.36	1.57	0.89	-1.30
10,009.00	90.07	340.41	6,535.12	3,943.49	-945.46	3,616.77	1.88	-1.31	1.34
10,072.00	89.93	341.05	6,535.12	4,002.96	-966.25	3,669.80	1.04	-0.22	1.02
10,136.00	90.17	339.72	6,535.06	4,063.24	-987.73	3,723.46	2.11	-0.36	-2.08
10,199.00	89.80	339.97	6,535.08	4,122.39	-1,009.44	3,775.95	0.71	-0.59	0.40
10,263.00	89.30	339.90	6,535.58	4,182.50	-1,031.40	3,829.34	0.79	-0.78	-0.11
10,327.00	90.24	341.10	6,535.84	4,242.83	-1,052.76	3,883.07	2.38	1.47	1.88
10,390.00	90.94	342.29	6,535.19	4,302.63	-1,072.54	3,936.66	2.19	1.11	1.89
10,454.00	90.00	342.37	6,534.67	4,363.61	-1,091.97	3,991.47	1.47	-1.47	0.13
10,517.00	90.10	341.97	6,534.61	4,423.59	-1,111.26	4,045.33	0.65	0.16	-0.63
10,581.00	91.28	341.50	6,533.84	4,484.36	-1,131.32	4,099.80	1.98	1.84	-0.73
10,645.00	91.78	341.16	6,532.13	4,544.97	-1,151.80	4,154.01	0.94	0.78	-0.53
10,708.00	90.10	342.02	6,531.10	4,604.73	-1,171.69	4,207.53	3.00	-2.67	1.37
10,771.00	89.66	342.67	6,531.23	4,664.76	-1,190.79	4,261.49	1.25	-0.70	1.03
10,835.00	90.74	341.88	6,531.01	4,725.72	-1,210.28	4,316.27	2.09	1.69	-1.23
10,898.00	90.17	341.73	6,530.51	4,785.57	-1,229.95	4,369.93	0.94	-0.90	-0.24
10,962.00	89.06	341.57	6,530.94	4,846.31	-1,250.10	4,424.35	1.75	-1.73	-0.25
11,023.00	89.70	341.57	6,531.60	4,904.18	-1,269.38	4,476.16	1.05	1.05	0.00
11,070.00	89.93	340.04	6,531.75	4,948.57	-1,284.83	4,515.76	3.29	0.49	-3.26

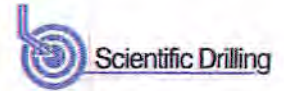
Last SDI MWD Survey @ 11070 MD

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WV Department of  
Environmental Protection



Scientific Drilling International  
Survey Report



Company: Stone Energy Corporation  
Project: Mary Prospect  
Site: Erlewine Pad  
Well: Erlewine 5H  
Wellbore: OH  
Design: 5H As Drilled

Local Co-ordinate Reference: Well Erlewine 5H - Slot 5H  
TVD Reference: GL 1212' & KB 18' @ 1230.00ft (Saxon 141)  
MD Reference: GL 1212' & KB 18' @ 1230.00ft (Saxon 141)  
North Reference: Grid  
Survey Calculation Method: Minimum Curvature  
Database: Northeast District

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)
8,989.00	90.17	340.70	6,541.41	2,972.05	-635.93	2,743.58	1.57	-0.27	-1.55
9,053.00	91.07	340.98	6,540.72	3,032.50	-656.94	2,797.52	1.47	1.41	0.44
9,116.00	91.07	340.81	6,539.54	3,092.02	-677.55	2,850.63	0.27	0.00	-0.27
9,180.00	90.94	340.88	6,538.42	3,152.47	-698.55	2,904.56	0.23	-0.20	0.11
9,244.00	90.94	341.96	6,537.37	3,213.13	-718.94	2,958.84	1.69	0.00	1.69
9,307.00	90.37	343.26	6,536.65	3,273.24	-737.76	3,012.95	2.25	-0.90	2.06
9,371.00	90.23	344.58	6,536.31	3,334.73	-755.49	3,068.66	2.07	-0.22	2.06
9,435.00	90.74	344.22	6,535.77	3,396.37	-772.70	3,124.63	0.98	0.80	-0.56
9,499.00	90.54	343.41	6,535.06	3,457.83	-790.54	3,180.27	1.30	-0.31	-1.27
9,562.00	88.72	343.90	6,535.46	3,518.28	-808.27	3,234.96	2.99	-2.89	0.78
9,626.00	88.96	343.86	6,536.76	3,579.75	-826.03	3,290.64	0.38	0.38	-0.06
9,690.00	89.73	343.69	6,537.49	3,641.20	-843.91	3,346.27	1.23	1.20	-0.27
9,754.00	90.34	343.27	6,537.45	3,702.56	-862.11	3,401.73	1.16	0.95	-0.66
9,817.00	90.64	341.93	6,536.91	3,762.67	-880.95	3,455.84	2.18	0.48	-2.13
9,881.00	90.34	340.38	6,536.37	3,823.24	-901.62	3,509.96	2.47	-0.47	-2.42
9,945.00	90.91	339.55	6,535.67	3,883.36	-923.55	3,563.36	1.57	0.89	-1.30
10,009.00	90.07	340.41	6,535.12	3,943.49	-945.46	3,616.77	1.88	-1.31	1.34
10,072.00	89.93	341.05	6,535.12	4,002.96	-966.25	3,669.80	1.04	-0.22	1.02
10,136.00	90.17	339.72	6,535.06	4,063.24	-987.73	3,723.46	2.11	0.36	-2.08
10,199.00	89.80	339.97	6,535.08	4,122.39	-1,009.44	3,775.95	0.71	-0.59	0.40
10,263.00	89.30	339.90	6,535.58	4,182.50	-1,031.40	3,829.34	0.79	-0.78	-0.11
10,327.00	90.24	341.10	6,535.84	4,242.83	-1,052.76	3,883.07	2.38	1.47	1.88
10,390.00	90.94	342.29	6,535.19	4,302.63	-1,072.54	3,936.66	2.19	1.11	1.89
10,454.00	90.00	342.37	6,534.67	4,363.61	-1,091.97	3,991.47	1.47	-1.47	0.13
10,517.00	90.10	341.97	6,534.61	4,423.59	-1,111.26	4,045.33	0.65	0.16	-0.63
10,581.00	91.28	341.50	6,533.84	4,484.36	-1,131.32	4,099.80	1.98	1.84	-0.73
10,645.00	91.78	341.16	6,532.13	4,544.97	-1,151.80	4,154.01	0.94	0.78	-0.53
10,708.00	90.10	342.02	6,531.10	4,604.73	-1,171.69	4,207.53	3.00	-2.67	1.37
10,771.00	89.66	342.67	6,531.23	4,664.76	-1,190.79	4,261.49	1.25	-0.70	1.03
10,835.00	90.74	341.88	6,531.01	4,725.72	-1,210.28	4,316.27	2.09	1.69	-1.23
10,898.00	90.17	341.73	6,530.51	4,785.57	-1,229.95	4,369.93	0.94	-0.90	-0.24
10,962.00	89.06	341.57	6,530.94	4,846.31	-1,250.10	4,424.35	1.75	-1.73	-0.25
11,023.00	89.70	341.57	6,531.60	4,904.18	-1,269.38	4,476.16	1.05	1.05	0.00
11,070.00	89.93	340.04	6,531.75	4,948.57	-1,284.83	4,515.76	3.29	0.49	-3.26

Last SDI MWD Survey @ 11070 MD

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COMPASS 5000.1 Build 74  
WV Department of  
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Erlewine #5H  
API 47-103-02999  
Stone Energy Corporation

	Horizontal		Bottom (ft TVD)	Bottom (ft MD)	
	Top (ft TVD)	Top (ft MD)			
Sandstone & Shale	Surface	*	520		FW @ 100'
Coal	520	*	528		
Sandstone & Shale	528	*	721		
Coal	721	*	730		
Sandstone & Shale	730	*	950		
Coal	950	*	959		
Sandstone & Shale	959	*	2,014		SW @ 1,638'
Little Lime	2,014	*	2,044		
Big Lime	2,044	*	2,144		
Big Injun	2,144	*	2,244		
Sandstone & Shale	2,244	*	2,612		
Berea Sandstone	2,612	*	2,642		
Shale	2,642	*	2,857		
Gordon	2,857	*	2,907		
Undiff Devonian Shale	2,907	*	5,794	5,808	
Rhinestreet	5,794	5,808 ~	6,193	6,240	
Cashaqua	6,193	6,240 ~	6,340	6,435	
Middlesex	6,340	6,435 ~	6,360	6,465	
West River	6,360	6,465 ~	6,419	6,564	
Geneseo	6,419	6,564 ~	6,433	6,589	
Tully Limestone	6,433	6,589 ~	6,473	6,681	
Hamilton Shale	6,473	6,681 ~	6,513	6,814	
Marcellus	6,513	6,814 ~	6,532	11,128	
TD			6,532	11,128	

\* From Pilot Hole Log and Driller's Log

~ From MWD Gamma Log

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WV Department of  
Environmental Protection

103-02999

Well: Erlowine #5H  
 State: West Virginia  
 County: Wetzel  
 District: Proctor  
 Prospect: Mary  
 Location: Surface: North = 4,392,663 East = 517,397 (UTM NAD 83)  
 PBHL: North = 4,394,183 East = 516,979 (UTM NAD 83)  
 PTD: 11950' MD / 6750' TVD

### STONE ENERGY - PROPOSED HORIZONTAL

Revision: 30-Sept-13

Permit Number: 47-103-  
 Permit Issued:  
 Post Construction Ground Elevation: 1212'  
 Kelly Bushing: 18'  
 Rig:  
 Spud Date:  
 TD Date:  
 Rig Release Date:

HOLE SIZE	PILOT HOLE FORMATION TOPS	WELLBORE DIAGRAM	CASING & CEMENTING DATA DIRECTIONAL DATA	MW & FLUID TYPE	HOLE DEV.	
24" Hole then Driven	80' KB (62' BGL)		<b>CONDUCTOR PIPE</b> 20" x 3/8" wall L/S PE @ 80' (set in bedrock & grouted to surface)	Oil/Gas	Vertical	
17-1/2" Hole	Shallowest FW 75' TVD Pittsburgh Coal 925' TVD Deepest FW 930' TVD 1190' TVD		<b>SURFACE CASING</b> 13-3/8" 54.5# J-55 STC @ 1190' MD/TVD Set through fresh water zones Set through coal zones Cemented to surface	Air / Melt	Vertical	
12-1/4" Hole	Salt Water 1800' TVD Little Lime 2022' TVD Big Lime 2052' TVD Big Injun Sandstone 2152' TVD Base of Big Injun 2252' TVD 2400' TVD		<b>INTERMEDIATE CASING</b> 9-5/8" 36.0# J-55 LTC @ 2400' MD/TVD Set through potential salt water zones Set below base of Big Injun Cemented to surface	Sluff Foam	Vertical	
8-3/4" Hole	Berea Sandstone 2620' TVD Gordon Sandstone 2865' TVD			Air / Dust		
			KOP @ 6065' TVD			
8-3/4" Hole	Rhinestrest Shale (Base) 6185' TVD Middlesex Shale 6280' TVD West River Shale 6310' TVD Genesee Shale 6645' TVD Tully Limestone 6685' TVD Hamilton Shale 6725' TVD				WDM In Curve	
8-3/4" Hole in Lateral	Marcellus Shale 6765' TVD				WDM In Lateral	~80.5°
	Onondaga Limestone 6815' TVD					
			Landing Point (LP) @ 7350' MD / 6790' TVD ~90.5° angle ~342° azimuth			
						TD @ 11950' MD / 6750' TVD PRODUCTION CASING 5-1/2" 20.0# P-110 CDC @ 11950' MD Top of Cement @ 1400' (~1000' inside 9-5/8")

Notes: Formation tops as per vertical pilot hole  
 Curve & lateral tops will vary due to structural changes  
 Directional plan based upon best estimate of structure

Office of Oil and Gas

WV Department of Environmental Protection

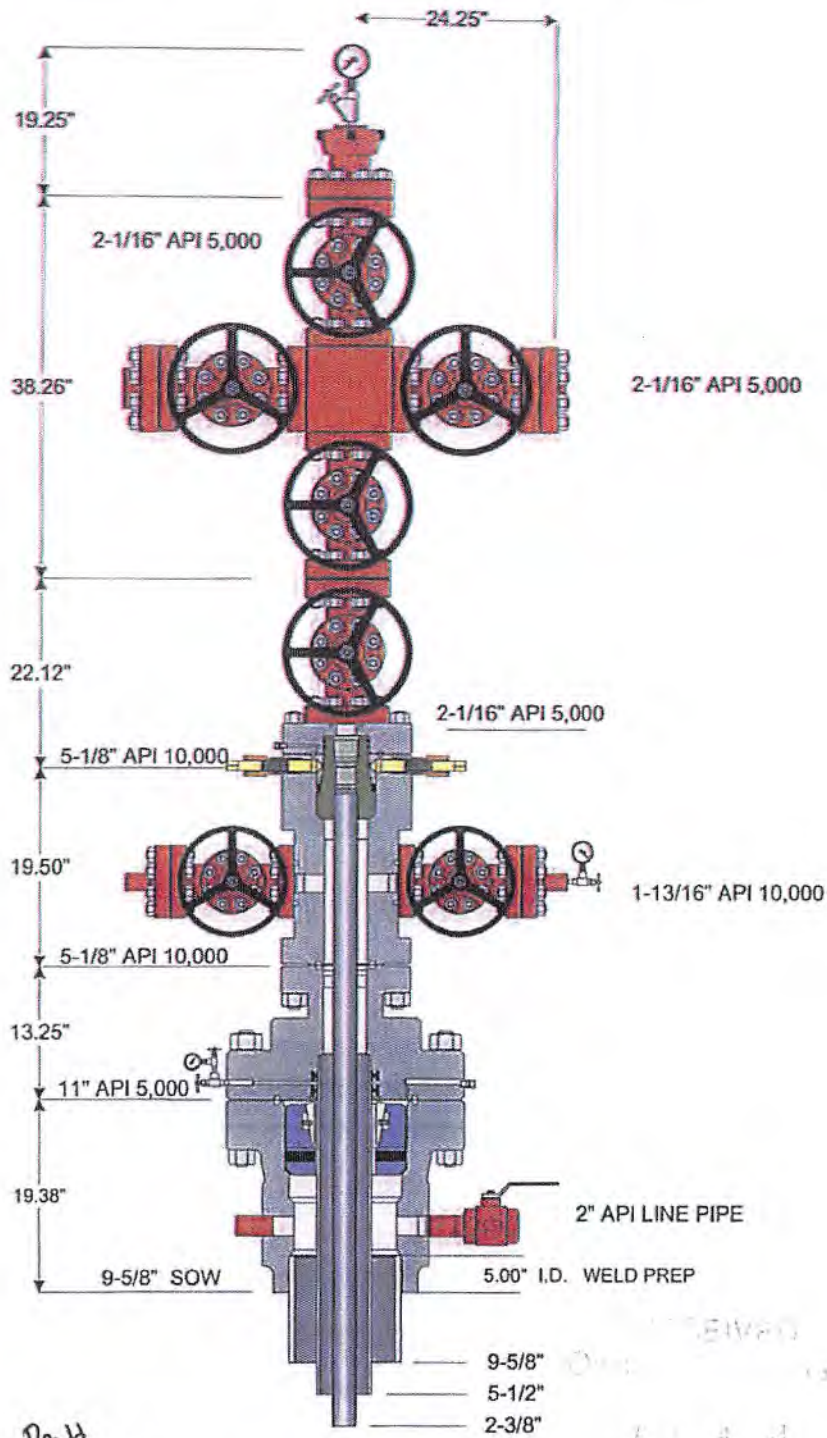
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DMH  
3-27-14

NOTE: THIS DRAWING IS NOT TO SCALE. THE DIMENSIONS REFLECTED ON THE DRAWING ARE ESTIMATED MEASUREMENTS, AND FOR REFERENCE ONLY.



*PMH  
3-27-14*



**Weatherford**

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Customer: STONE ENERGY

Project: 46705

Quote: 99565 v.3

Tender, Project or Well: 2011- 2012 CONVENTIONAL MARCELLUS

Date: 07-17-2011

Drawn By: RF  
WV Department of Environmental Protection

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Environmental Protection



WW-9  
(4/16)

API Number 47 - 103 - 02999

Operator's Well No. Erlwine 5H

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 complete the proposed well work? Yes  No

Will a pit be used? Yes  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:

- Land Application
- Underground Injection ( UIC Permit Number See Attached )
- Reuse (at API Number Various )
- Off Site Disposal (Supply form WW-9 for disposal location)
- Other (Explain \_\_\_\_\_)

*DAH  
5-23-19*

Will closed loop system be used? If so, describe: Yes, The closed loop system will remove drill cuttings from the drilling fluid. The drill cuttings are then prepared for transportation to an off-site disposal facility.

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

-If oil based, what type? Synthetic, petroleum, etc. 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 used? (cement, lime, sawdust) N/A

-Landfill or offsite name/permit number? See Attached List

Permittee shall provide written notice to the Office of Oil and Gas of any load of drill cuttings or associated waste rejected at any West Virginia solid waste facility. The notice shall be provided within 24 hours of rejection and the permittee shall also disclose where it was properly disposed.

I certify that I understand and agree to the terms and conditions of the GENERAL WATER POLLUTION PERMIT issued on August 1, 2005, by the Office of Oil and Gas of the West Virginia Department of Environmental Protection. I understand that the provisions of the permit are enforceable by law. Violations of any term or condition of the general permit and/or other applicable law or regulation can lead to enforcement action.

I certify under penalty of law that I have personally examined and am familiar with the information submitted on this application form and all attachments thereto 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 or imprisonment.

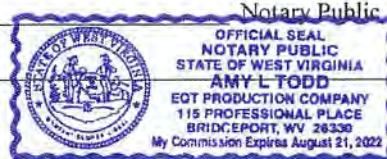
Company Official Signature *[Signature]*

Company Official (Typed Name) John Zavatchan

Company Official Title Landman - Permitting

Subscribed and sworn before me this 6<sup>th</sup> day of May, 20 19

*[Signature]*  
My commission expires 8/21/2022



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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.

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**EQT Production Company**

Proposed Revegetation Treatment: Acres Disturbed No additional disturbance Prevegetation pH \_\_\_\_\_

Lime 3 Tons/acre or to correct to pH 6.5

Fertilizer type Granular 10-20-20

Fertilizer amount 1/3 lbs/acre

Mulch 2 Tons/acre

**Seed Mixtures**

Temporary		Permanent	
Seed Type	lbs/acre	Seed Type	lbs/acre
KY-31	40	Orchard Grass	15
Alsike Clover	5	Alsike Clover	5
Annual Rye	15		

**Attach:**

Maps(s) of road, location, pit and proposed area for land application (unless engineered plans including this info have been provided). If water from the pit will be land applied, include dimensions (L x W x D) of the pit, and dimensions (L x W), and area in acreage, of the land application area

Photocopied section of involved 7.5' topographic sheet.

Plan Approved by: [Signature]

Comments: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Title: Oil & Gas Inspector Date: 5-23-19

Field Reviewed?  Yes  No

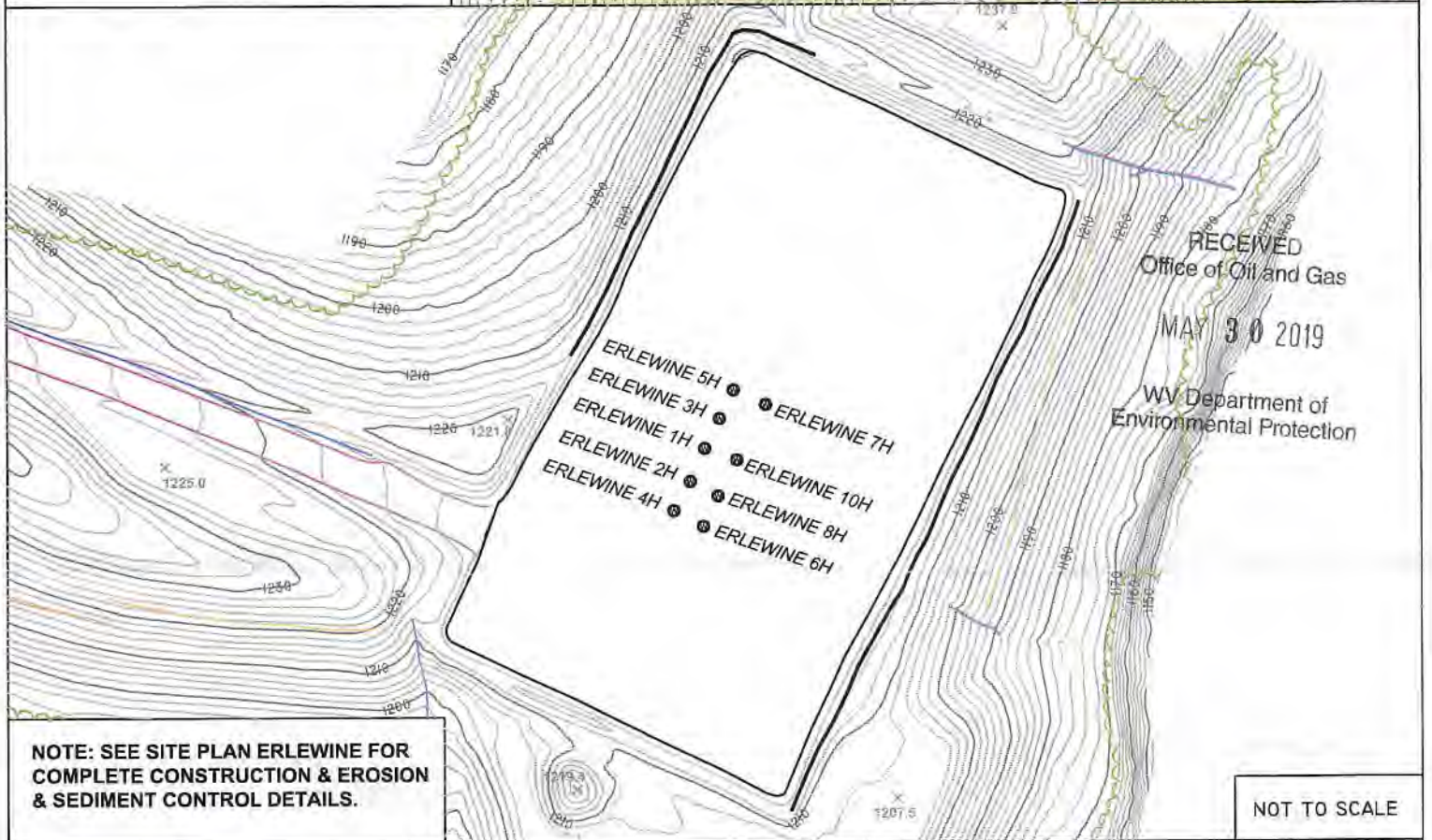
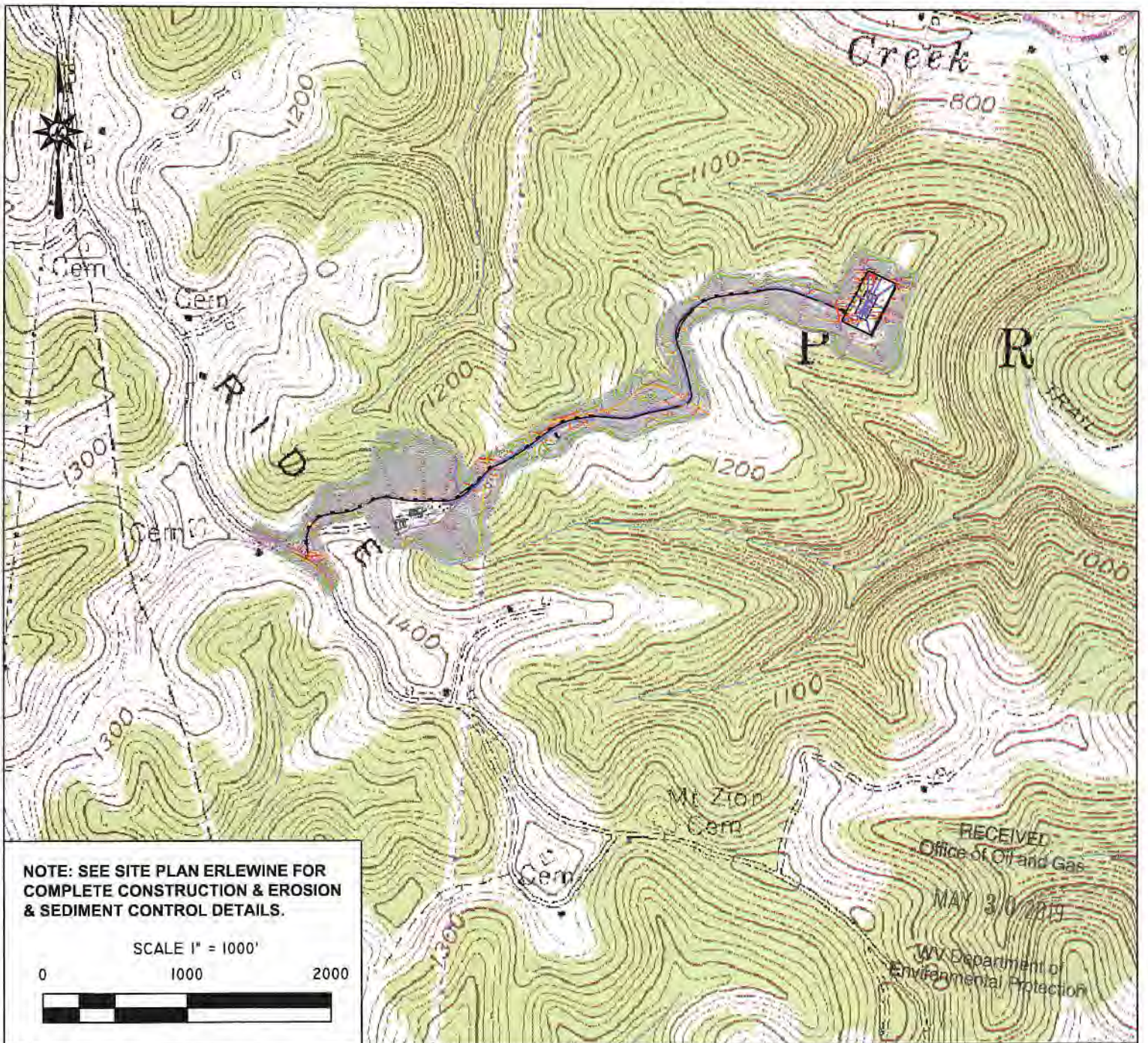
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EQT Production Water Plan									
Offsite Disposals for Unconventional Wells									
Facility Name	Address	Address 2	City	State	Zip	Phone	County	State	Permit Number
CWS Trucking Inc.	P.O. Box 391		Williamstown	WV	26187	740-516-3586	Noble	OH	3390
Broad Street Energy LLC	37 West Broad Street	Suite 1100	Columbus	OH	43215	740-516-5381	Washington	OH	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	OH	45773	740-516-6021 740-374-2940	Noble	OH	4037
Tri County Waste Water Management, Inc.	1487 Toms Run Road		Holbrook	PA	15341	724-627-7178 724-499-5647	Greene	PA	TC-1009
King Excavating Co. Advance Waste Services	101 River Park Drive		New Castle	PA	16101		Lawrence	PA	PAR000029132
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	WV	SWF-1025 WV-0109400
APEX Landfill	11 County Road 78	PO Box 57	Amsterdam	OH	43903	740-543-4389	Jefferson	OH	06-08438
Advanced Disposal - Chestnut Valley Landfill	1184 McClellandtown Road		McClellandtown	PA	15458	724-437-7336	Fayette	PA	100419
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	OH	43935	740-609-3800	Belmont	OH	2014-541
Belmont Solids Control	77505 Cadiz-New Athens Road		Cadiz	OH	43907	740-942-1739	Harrison	OH	2015-511
Diversified Resources	3111 Braun Rd.		Belpre	OH	45714	740-401-0413	Washington	OH	
Buckeye Brine	23986 Airport Road		Coshocton	OH	43812	740-610-1512 724-591-4393	Coshocton	OH	34-031-27177 34-031-27178 34-031-27241
Central Environmental Services	28333 West Belpre Pike		Coolville	OH	45723	304-488-0701	Athens	OH	
Nuverra - Nichols	10555 Veto Road		Belpre	OH	45714	330-232-5041	Washington	OH	34-119-2-8776
Nuverra - Goff	9350 East Pike Road		Norwich	OH	43767	330-232-5041	Muskingum	OH	34-167-2-3862
Nuverra - Wolf	5480 State Route 5		Newton Falls	OH	44444	330-232-5041	Trumbull	OH	34-155-2-1893
Nuverra - Pander	5310 State Route 5		Newton Falls	OH	44444	330-232-5041	Trumbull	OH	34-155-2-3795
Nuverra - AnnaRock D-1	3549 Warner Road		Fowler	OH	44418	330-232-5041	Trumbull	OH	34-155-2-2403

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FQ Helen	199 Bowersock Road		Reno	OH	45773	740-374-2940 412-443-4397 740-236-2135	Washington	OH	34-167-2-9577
FQ Dexter	38505 Marietta Rd.		Dexter City	OH	45727	740-374-2940 412-443-4397 740-236-2135	Noble	OH	34-121-24037 34-121-24086
FQ Ritchie	122 Lonesome Pine Rd		Ellenboro	WV	26346	740-374-2940 412-443-4397 740-236-2135	Ritchie	WV	47-085-09721
FQ Mills	53610 TS Rd 706		Portland	OH	45770	740-374-2940 412-443-4397 740-236-2135	Meigs	OH	34-105-2-3619 34-105-2-3652 34-105-2-3637 34-105-2-3651
Petta Enterprises - OH	745 North 3rd Street		Cambridge	OH	43725	614-477-1368	Guernsey	OH	Ohio Chiefs Order 25-019
Petta Enterprises - WV	38 Technology Dr.		Tridelpia	WV	26059	740-255-5727	Ohio	WV	
Deep Rock Disposal	2341 OH-821		Marietta	OH	45750	304-629-0176	Washington	OH	34-167-2-9766

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**Blue Mountain Inc.**  
11023 MASON DIXON HIGHWAY  
BURTON, WV 26562  
PHONE: (304) 662-6486

PREPARED FOR:  
**EQT Production Co. Inc.**  
115 Professional Place, P.O. Box 280  
Bridgeport, WV 26330

**FORM WW9**

**ERLEWINE WELL**  
**TOPO SECTION OF NEW MARTINSVILLE 7.5'**  
**USGS TOPO QUADRANGLE**

**JUNE 1, 2018**

**Anticipated Frac Additives**  
**Chemical Names and CAS numbers**

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

DMH  
5-23-19

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# Site Specific Safety and Environmental Plan

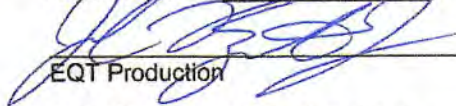
EQT  
Erlewine Pad  
New Martinsville  
Wetzel County, WV

For Wells:

5H

7H

Date Prepared: February 20, 2019



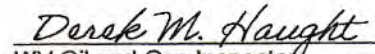
EQT Production

Landman - Permitting

Title

4/30/19

Date

  
WV Oil and Gas Inspector

Oil & Gas Inspector

Title

6/12/19

Date

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Erlewine N39.683362, W-80.797357

Erlewine Entrance N39.67875, W-80.81074

© 2016 Google

Eye alt: 15231 ft

© 2016 Google

39°40'50.16" N 80°48'17.83" W elev 1248 ft

1994

Imagery Date: 10/5/2016

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Topo Quad: NEW MARTINSVILLE, WV - OHIO 7.5'

Scale: 1" = 1000'

County: WETZEL

Date: 19 JULY 2018

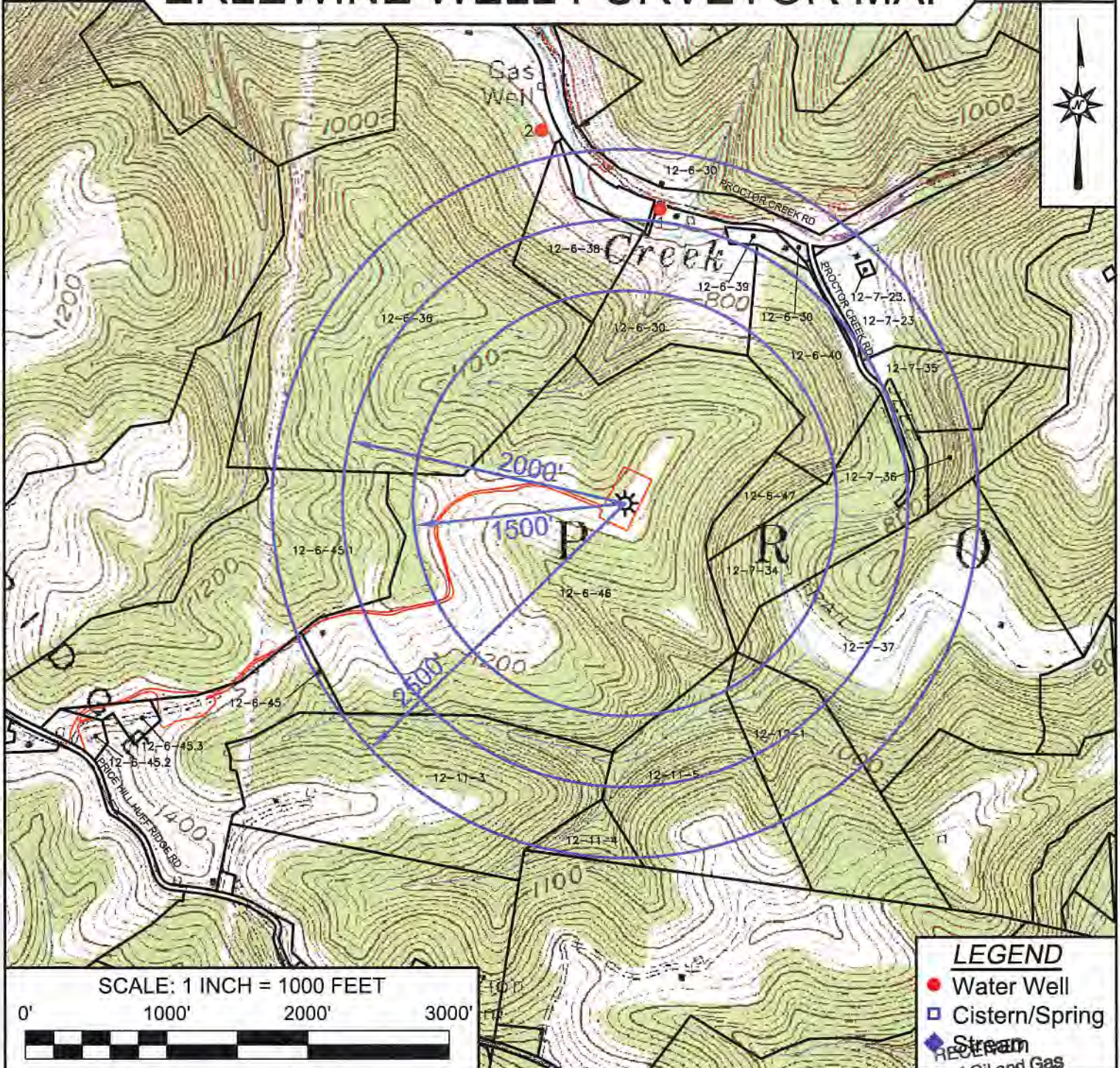
District: PROCTOR

Project No: 0493-17

Water

# ERLEWINE WELL PURVEYOR MAP

Topo



**LEGEND**

- Water Well
- Cistern/Spring
- Stream

SCALE: 1 INCH = 1000 FEET

0'      1000'      2000'      3000'

SURVEYING AND MAPPING SERVICES PERFORMED BY:

**Blue Mountain**  
11023 MASON DIXON HIGHWAY  
BURTON, WV 26562  
PHONE: (304) 662-6486

PREPARED FOR:

**EQT Production Co. Inc.**  
EQT Plaza  
625 Liberty Ave, Suite 1700  
Pittsburgh, PA 15222

Office of Oil and Gas

REC'D

8-0-2018

WV Department of Environmental Protection



### Table 1 – Water Source Identification

EQT Well Pad Name: ERLEWINE Submittal Date: 7-18-2018  
 EQT Well Number: ERLEWINE: 1H,2H, 3H, 4H, 5H, 6H, 7H, 8H, 10H  
 Survey / Engineering Company: BLUE MOUNTAIN INC.

Site Number: 1 Distance from Gas Well (feet): 2,052+/-

Surface Owner / Occupant: Albert Ray Anderson

Address: 100 N. Bridge St., Box 25, New Martinsville, WV 26155 Phone #: N/A

Field Located Date: 06-09-2017 Owner home during survey (yes/no): N/A

Coordinates: 39.689185° -80.796298° +/- decimal degrees – NAD 83

Contact Attempts (Date): 1<sup>st</sup>: 06-10-2017 2<sup>nd</sup>: N/A Date Door Hanger Left: N/A

Comments: Certified mailer sent 6-5-18; 2nd certified mailer returned undelivered

<input checked="" type="checkbox"/>	Landowner Requested Sampling
<input type="checkbox"/>	Landowner Decline Sampling
<input type="checkbox"/>	Unable to Contact (Further contact attempts to be made by EQT's third party pre-drill sampling lab)

Site Number: 2 Distance from Gas Well (feet): 2,659+/-

Surface Owner / Occupant: Richard L. Earlewine

Address: Rt. 1 Box 72, Proctor, WV 26055 Phone #: N/A

Field Located Date: 06-09-2017 Owner home during survey (yes/no): N/A

Coordinates: 39.690677° -80.799289° (decimal degrees – NAD 83)

Contact Attempts (Date): 1<sup>st</sup>: 06-07-2017 2<sup>nd</sup>: 6-8-2018 Door Hanger Left: N/A

Comments: Certified mailer delivered 6-7-17; 2nd certified mailer delivered 6-8-18 yes to water testing.

<input checked="" type="checkbox"/>	Landowner Requested Sampling
<input type="checkbox"/>	Landowner Decline Sampling
<input type="checkbox"/>	Unable to Contact (Further contact attempts to be made by EQT's third party pre-drill sampling lab)

Site Number: 3 Distance from Gas Well (feet): N/A

Surface Owner / Occupant: David Michael Anderson

Address: 100 N Bridge St., Box 25, New Martinsville, WV 26155 Phone #: N/A

Field Located Date: N/A Owner home during survey (Yes/No): N/A

Coordinates: N/A (decimal degrees – NAD 83)

Contact Attempts (Date): 1<sup>st</sup>: 06-10-2017 2<sup>nd</sup>: 6-5-2018 Date Door Hanger Left: N/A

Comments: Certified mailer sent 6-10-17; Certified mailer sent 6-5-18; 2<sup>nd</sup> certified mailer returned undelivered

<input type="checkbox"/>	Landowner Requested Sampling
<input type="checkbox"/>	Landowner Decline Sampling
<input checked="" type="checkbox"/>	Unable to Contact (Further contact attempts to be made by EQT's third party pre-drill sampling lab)

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Site Number: 4 Distance from Gas Well (feet) N/A

Surface Owner / Occupant: David Michael Anderson

Address: 100 N Bridge St., Box 25, New Martinsville, WV 26155 Phone #: N/A

Field Located Date: N/A Owner home during survey (Yes/No):

Coordinates: N/A (decimal degrees – NAD 83)

Contact Attempts (Date): 1<sup>st</sup>: 06-09-2017 2<sup>nd</sup>: 6-10-17 Date Door Hanger Left: 06-09-17

Comments: Certified mailer sent 6-5-18; 3<sup>rd</sup> certified mailer returned undelivered

<input type="checkbox"/> Landowner Requested Sampling
<input type="checkbox"/> Landowner Decline Sampling
<input checked="" type="checkbox"/> Unable to Contact (Further contact attempts to be made by EQT's third party pre-drill sampling lab)

Site Number: 5 Distance from Gas Well (feet): N/A

Surface Owner / Occupant: David Michael Anderson

Address: 100 N Bridge St., Box 25, New Martinsville, WV 26155 Phone #: N/A

Field Located Date N/A Owner home during survey (Yes/No): N/A

Coordinates: N/A (decimal degrees – NAD 83)

Contact Attempts (Date): 1<sup>st</sup>: 06-10-2017 2<sup>nd</sup>: 6-5-2018 Date Door Hanger Left: N/A

Comments: Certified mailer sent 6-5-18; 2<sup>nd</sup> certified mailer returned undelivered

<input type="checkbox"/> Landowner Requested Sampling
<input type="checkbox"/> Landowner Decline Sampling
<input checked="" type="checkbox"/> Unable to Contact (Further contact attempts to be made by EQT's third party pre-drill sampling lab)

Site Number: 6 Distance from Gas Well (feet): N/A

Surface Owner / Occupant: Christy Leek & Mary Wilson Est

Address: 195 Pike St, New Martinsville, WV 26155 Phone #: N/A

Field Located Date N/A Owner home during survey (Yes/No): N/A

Coordinates: N/A (decimal degrees – NAD 83)

Contact Attempts (Date): 1<sup>st</sup>: 06-07-2017 2<sup>nd</sup>: 6-8-2018 Date Door Hanger Left: N/A

Comments: Certified mailer sent 6-5-18, Delivered 6-8-18. Owner name change since first attempt sent.

<input type="checkbox"/> Landowner Requested Sampling
<input type="checkbox"/> Landowner Decline Sampling
<input checked="" type="checkbox"/> Unable to Contact (Further contact attempts to be made by EQT's third party pre-drill sampling lab)

Site Number: 7 Distance from Gas Well (feet): N/A

Surface Owner / Occupant: Donald F. & Martha J. Arrick

Address: 17954 Energy Rd, Proctor, WV 26055 Cell Phone #: 304-780-9238

Field Located Date: N/A Owner home during survey (Yes/No): N/A

Coordinates: N/A (decimal degrees – NAD 83)

Contact Attempts (Date): 1<sup>st</sup>: 06-07-2017 2<sup>nd</sup>: 6-7-2018 Date Door Hanger Left: N/A

Comments: Certified 6-7-17; 2<sup>nd</sup> 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 mail on 6-26-18.

<input checked="" type="checkbox"/> Landowner Requested Sampling
<input type="checkbox"/> Landowner Decline Sampling
<input type="checkbox"/> Unable to Contact (Further contact attempts to be made by EQT's third party pre-drill sampling lab)

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Site Number: 8 Distance from Gas Well (feet): N/A  
Surface Owner / Occupant: Kevin Goff

Address: PO Box 222, New Martinsville, WV 26155-0222 Phone #: 304-771-8800

Field Located Date: N/A Owner home during survey (Yes/No): N/A

Coordinates: N/A (decimal degrees – NAD 83)

Contact Attempts (Date): 1<sup>st</sup>: 6-20-2017 2<sup>nd</sup>: 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 phone calls unreturned. Certified mailer sent 6-5-18, was delivered on 6-11-18, 7-16-18 Returned letter stating doesn't Water tested.

- Landowner Requested Sampling
- Landowner Decline Sampling
- Unable to Contact  
(Further contact attempts to be made by EQT's third party pre-drill sampling lab)

Site Number: 9 Distance from Gas Well (feet): N/A

Surface Owner / Occupant: Kevin Goff

Address: PO Box 222, New Martinsville, WV 26155-0222 Phone #: 304-771-8800

Field Located Date: N/A Owner home during survey (Yes/No): N/A

Coordinates: N/A (decimal degrees – NAD 83)

Contact Attempts (Date): 1<sup>st</sup>: 6-20-17 2<sup>nd</sup>: 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 phone calls unreturned. Certified mailer sent 6-5-18, was delivered on 6-11-18, 7-16-18 Returned letter stating doesn't Water tested.

- Landowner Requested Sampling
- Landowner Decline Sampling
- Unable to Contact  
(Further contact attempts to be made by EQT's third party pre-drill sampling lab)

Site Number: 10 Distance from Gas Well (feet): N/A

Surface Owner / Occupant: Rost Energy Company Inc.

Address: PO Box 615, Ligonier, PA 15658-0615 Phone #: N/A

Field Located Date: N/A Owner home during survey (Yes/No): N/A

Coordinates: N/A (decimal degrees – NAD 83)

Contact Attempts (Date): 1<sup>st</sup>: 6-6-17 2<sup>nd</sup>: 6-7-2018 Date Door Hanger Left: N/A

Comments: Certified mailer sent 6-5-18, was delivered on 6-7-18

- Landowner Requested Sampling
- Landowner Decline Sampling
- Unable to Contact  
(Further contact attempts to be made by EQT's third party pre-drill sampling lab)

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Site Number: 11 Distance from Gas Well (feet): N/A

Surface Owner / Occupant: Christy Leek & Mary Wilson Est

Address: 195 Pike St. New Martinsville, WV 26155 Phone #: N/A

Field Located Date: N/A Owner home during survey (Yes/No): N/A

Coordinates: N/A (decimal degrees – NAD 83)

Contact Attempts (Date): 1<sup>st</sup>: 6-6-17 2<sup>nd</sup>: 6-8-18 Date Door Hanger Left: N/A

Comments: Certified mailer sent 6-5-18, was delivered on 6-8-18

- Landowner Requested Sampling
- Landowner Decline Sampling
- Unable to Contact  
(Further contact attempts to be made by EQT's third party pre-drill sampling lab)

Site Number: 12 Distance from Gas Well (feet): N/A

Surface Owner / Occupant: Emma L. & John J. Moore

Address: 2616 Huff Ridge Rd. New Martinsville, WV 26155 Phone #: N/A

Field Located Date: N/A Owner home during survey (Yes/No): N/A

Coordinates: N/A (decimal degrees – NAD 83)

Contact Attempts (Date): 1<sup>st</sup>: 6-7-17 2<sup>nd</sup>: 6-7-18 Date Door Hanger Left: N/A

Comments: Certified mailer sent 6-5-18, was delivered on 6-7-18.

- Landowner Requested Sampling
- Landowner Decline Sampling
- Unable to Contact  
(Further contact attempts to be made by EQT's third party pre-drill sampling lab)

Site Number: 13 Distance from Gas Well (feet): N/A

Surface Owner / Occupant: Kevin Goff

Address: PO Box 222, New Martinsville, WV 26155 Phone #: 304-771-8800

Field Located Date: N/A Owner home during survey (Yes/No): N/A

Coordinates: N/A (decimal degrees – NAD 83)

Contact Attempts (Date): 1<sup>st</sup>: 6-20-2017 2<sup>nd</sup>: 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 phone calls unreturned. Certified mailer sent 6-5-18, was delivered on 6-11-18, 7-16-18 Returned letter stating doesnt Water tested.

- Landowner Requested Sampling
- Landowner Decline Sampling
- Unable to Contact  
(Further contact attempts to be made by EQT's third party pre-drill sampling lab)

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Site Number: 14 Distance from Gas Well (feet): N/A

Surface Owner / Occupant: Linda Anderson

Address: 2641 Huff RDG New Martinsville, WV 26155 Phone #: N/A

Field Located Date: N/A Owner home during survey (Yes/No): N/A  
Coordinates: N/A (decimal degrees – NAD 83)

Contact Attempts (Date): 1<sup>st</sup>: 6-8-17 2<sup>nd</sup>: 6-8-18 Date Door Hanger Left: N/A

Comments: Certified mailer sent 6-5-18, was delivered on 6-8-18

- |  |
|--|
| <input type="checkbox"/> Landowner Requested Sampling  |
| <input type="checkbox"/> Landowner Decline Sampling  |
| <input checked="" type="checkbox"/> Unable to Contact<br>(Further contact attempts to be made by EQT's third party pre-drill sampling lab) |

---

Site Number: 15 Distance from Gas Well (feet): N/A

Surface Owner / Occupant: EQT Production Company

Address: EQT Plaza, 625 Liberty Ave, Suite 1700, Pittsburgh PA 15222 Phone #: N/A

Field Located Date: N/A Owner home during survey (Yes/No): N/A

Coordinates: N/A (decimal degrees – NAD 83)

Contact Attempts (Date): 1<sup>st</sup>: 6-8-17 2<sup>nd</sup>: 6-12-18 Date Door Hanger Left: N/A

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

- |   |
|---|
| <input type="checkbox"/> Landowner Requested Sampling   |
| <input checked="" type="checkbox"/> Landowner Decline Sampling  |
| <input type="checkbox"/> Unable to Contact<br>(Further contact attempts to be made by EQT's third party pre-drill sampling lab) |

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Parcel 12-6-47

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 BLUE MOUNTAIN 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): Kerry Guff Address: 6-11-18 2393 Eric Fil Rd Middlebourne, WV

Signature: [Handwritten Signature] Date: 6-11-18 2018

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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.

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- 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;
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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

Left/sent by: BLUE MOUNTAIN INC.

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: [Handwritten Signature] Date: 6-12-17

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Parcel  
12-12-1

**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 **BLUE MOUNTAIN** 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

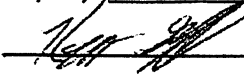
Left/sent by: **BLUE MOUNTAIN**

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  
Environmental Protection



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Date:

Left/sent by: BLUE MOUNTAIN

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

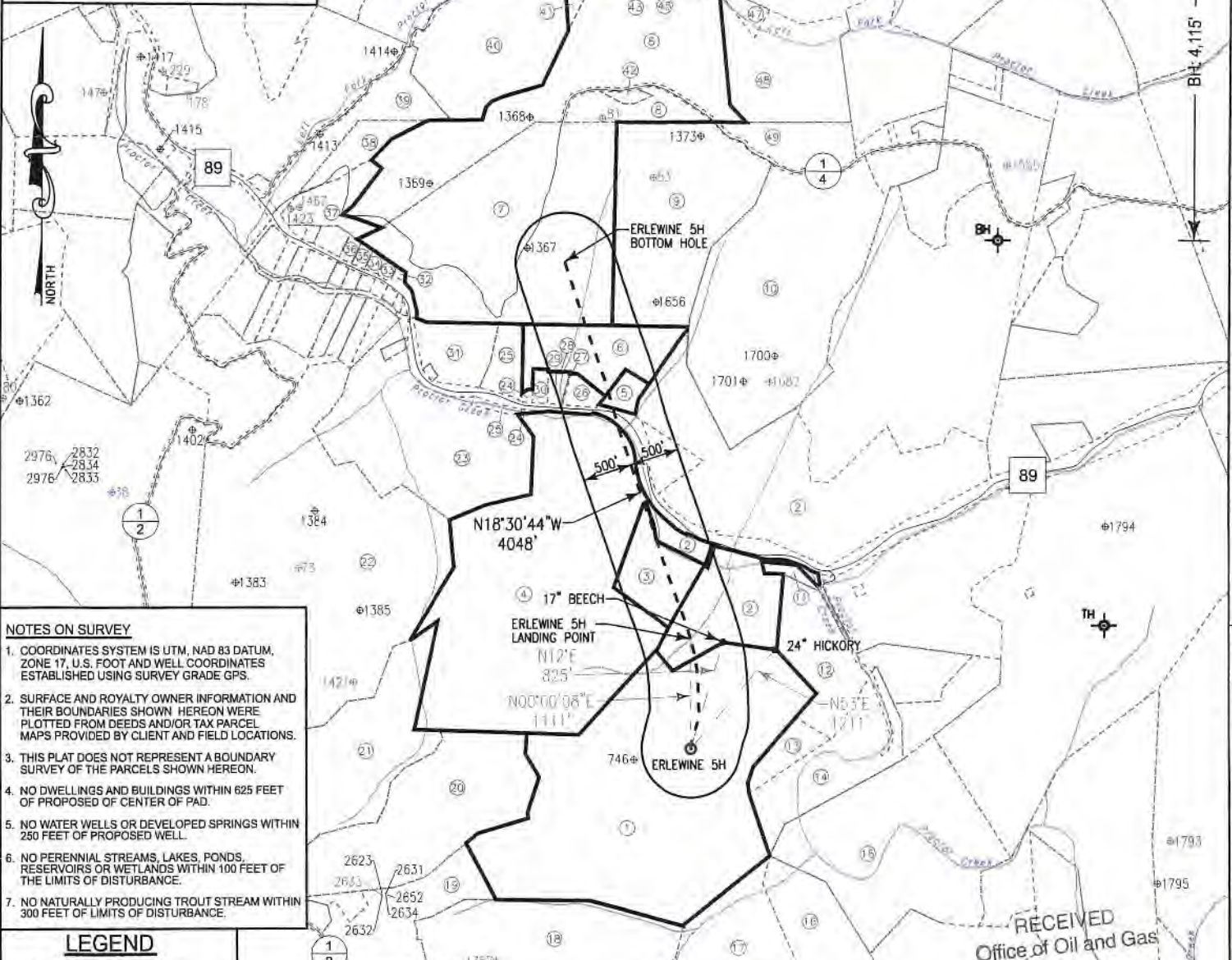
Signature:  Date: 7-22-18

RECEIVED  
Office of Oil and Gas

MAY 2 2019

WV Department of  
Environmental Protection

**ERLEWINE 5H  
ERLEWINE  
EQT Production Company**



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

- LEGEND**
- ⊕ Active Well Location
  - ⊕ Plugged Well Location
  - ⊕ Never Drilled
  - ⊕ Abandoned Well
  - ① Tract Identification
  - ⊙ Proposed Gas Well
  - Located Corner, as noted
  - Surface Tract Lines
  - Reference Line
  - Lease Boundary
  - Creek or Drain
  - ⊙ WV County Route
  - ⊠ WV State Route

Tract ID.	Lease No.	Acres	Owner
1	873753	130.201343	Ronald Carney, et ux, et al
2	873427 & 873811	223.653484 OR 114.325057	Shiben Estates, Inc, et al
3	873728	11.654079	Albert R. Anderson, et al
4	873438	126.755241	Piney Holdings, Inc
5	873964	3.75426	Ray D. Yoho, et ux
6	873941	14.719421	Micheal G. Baxter, et ux
7	873671	187.739475	Clarence W. Baxter, et ux

RECEIVED  
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MAY 30 2018  
WV Department of  
Environmental Protection



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.

*Thomas C. Smit*  
L. L. S. 687



FILE NO: W2192 (BK 65-61)  
DRAWING NO:  
SCALE: 1" = 1600'  
MINIMUM DEGREE OF ACCURACY: 1:2500  
PROVEN SOURCE OF ELEVATION: NGS CORS Station

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

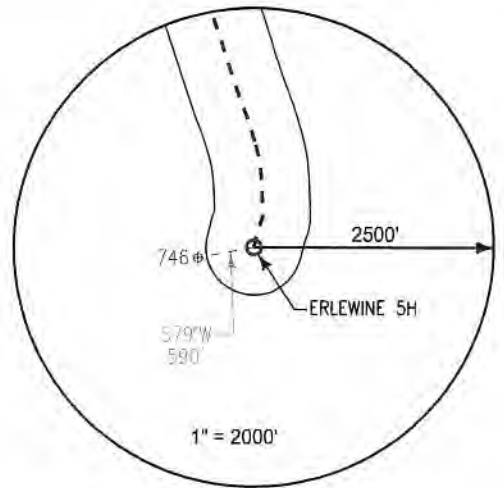
DATE: FEBRUARY 20 20 19  
OPERATORS WELL NO: ERLEWINE 5H  
API WELL NO  
47 - 103 - 02999  
STATE COUNTY PERMIT

WELL TYPE:  OIL  GAS  LIQUID INJECTION  WASTE DISPOSAL  
(IF GAS) PRODUCTION:  STORAGE  DEEP  SHALLOW  
LOCATION ELEVATION: 1,212' (As-Built) WATERSHED: TRIBUTARY OF PROCTOR CREEK QUADRANGLE: NEW MARTINSVILLE 7.5'  
DISTRICT: Proctor COUNTY: Wetzell  
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  
 PERFORATE NEW FORMATION  OTHER PHYSICAL CHANGE IN WELL (SPECIFY)  
 PLUG AND ABANDON  CLEAN OUT AND REPLUG TARGET FORMATION: Marcellus ESTIMATED DEPTH: 6,532' (As-Drilled)

WELL OPERATOR: EQT Production Company DESIGNATED AGENT: Jason Ranson  
ADDRESS: 2400 Ansys Drive, Suite 200 ADDRESS: 115 Professional Place PO Box 280  
Canonsburg, PA 15317 Bridgeport, WV 26330

**Erlewine 5H**  
**Erlewine**  
**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	38	Wetzel	Proctor	Ethyl Anderson EST	12.56
4	6	36	Wetzel	Proctor	Richard L. Erlewine	127.14
5	6	28	Wetzel	Proctor	Ray D. & Heather D. Yoho	2.74
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42	1	33	Wetzel	Proctor	William & Christina Wilkinson	0.99
43	1	N/A	Wetzel	Proctor	N/A	1.45
44	1	31	Wetzel	Proctor	Steven Jack & Susan Hafer	19.08
45	1	30	Wetzel	Proctor	Proctor Creek School	0.66
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47	1	34.1	Wetzel	Proctor	Herbert & Virginia Parsons	2.42
48	1	34	Wetzel	Proctor	Ronald J. Linda Petrecca	29.06
49	6	52	Wetzel	Proctor	Ronald J. Linda Petrecca	11.23

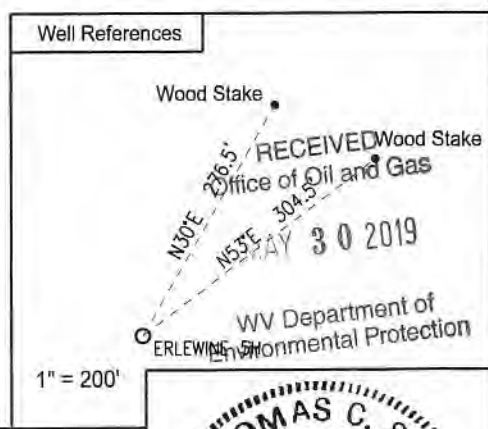


**Notes:**  
**ERLEWINE 5H As-Built coordinates are**  
 NAD 27 N: 433,710,000 E: 1,634,896,000  
 NAD 27 Lat: 39.683545 Long: -80.797303  
 NAD 83 UTM N: 4,392,663.079 E: 517,397.393

**ERLEWINE 5H As-Built Landing Point coordinates are**  
 NAD 27 N: 434,821,200 E: 1,634,896,000  
 NAD 27 Lat: 39.686596 Long: -80.797360  
 NAD 83 UTM N: 4,393,001.615 E: 517,391.751

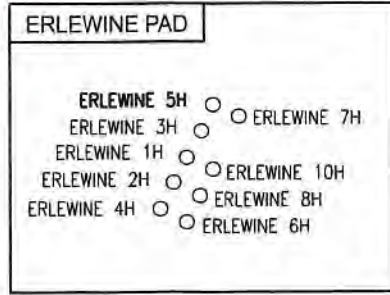
**ERLEWINE 5H As-Built Bottom Hole coordinates are**  
 NAD 27 N: 438,658,600 E: 1,633,611,000  
 NAD 27 Lat: 39.697079 Long: -80.802123  
 NAD 83 UTM N: 4,394,164.160 E: 516,980.782

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.



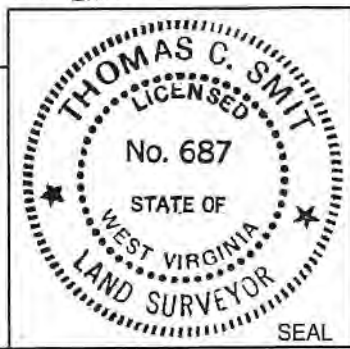
**LEGEND**

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- Located Corner, as noted
- Surface Tract Lines
- - - Reference Line
- Lease Boundary
- Creek or Drain
- ⊙ WV County Route
- ⊠ WV State Route



*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.*

*Thomas C. Smit*  
 L. L. S. 687



FILE NO: W2192 (BK 65-61)  
 DRAWING NO: \_\_\_\_\_  
 SCALE: 1" = 1000'  
 MINIMUM DEGREE OF ACCURACY:  
1:2500  
 PROVEN SOURCE OF ELEVATION:  
NGS CORS Station

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

DATE: FEBRUARY 20 20 19  
 OPERATORS WELL NO: ERLEWINE 5H  
**API WELL NO**  
47 - 103 - 02999  
 STATE COUNTY PERMIT

WELL TYPE:  OIL  GAS  LIQUID INJECTION  WASTE DISPOSAL  
 (IF GAS) PRODUCTION:  STORAGE  DEEP  SHALLOW

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

SURFACE OWNER: Richard Erlewine ACREAGE: 135 ±  
 ROYALTY OWNER: Ronald Carney, et ux LEASE NO: 873753 ACREAGE: 130.20 ±

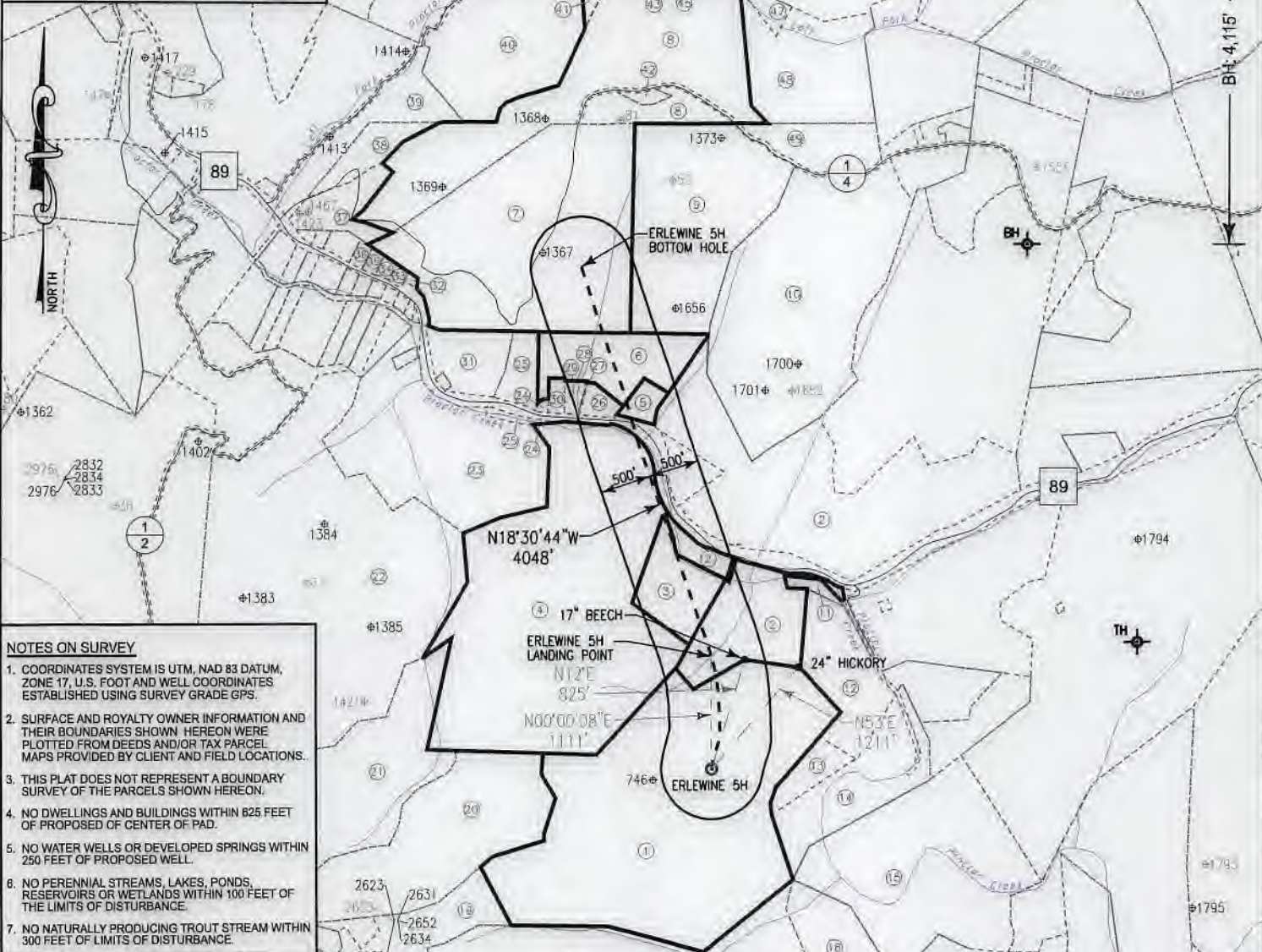
PROPOSED WORK:  DRILL  CONVERT  DRILL DEEPER  FRACTURE OR STIMULATE  PLUG OFF OLD FORMATION  
 PERFORATE NEW FORMATION  OTHER PHYSICAL CHANGE IN WELL (SPECIFY) \_\_\_\_\_

PLUG AND ABANDON  CLEAN OUT AND REPLUG TARGET FORMATION: Marcellus ESTIMATED DEPTH: 6,532' (As-Drilled)

WELL OPERATOR: EQT Production Company DESIGNATED AGENT: Jason Ranson  
 ADDRESS: 2400 Ansys Drive, Suite 200 ADDRESS: 115 Professional Place PO Box 280  
Canonsburg, PA 15317 Bridgeport, WV 26330

AS-BUILT

**ERLEWINE 5H**  
**ERLEWINE**  
**EQT Production Company**



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  - Plugged Well Location
  - Never Drilled
  - Abandoned Well
  - Tract Identification
  - Proposed Gas Well
  - Located Corner, as noted
  - Surface Tract Lines
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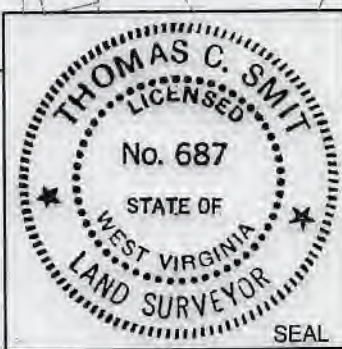
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7	873671	187.739475	Clarence W. Baxter, et ux

(\*) Denotes Location of Well on United States Topographic Maps



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*Thomas C. Smalls*  
L. L. S. 687



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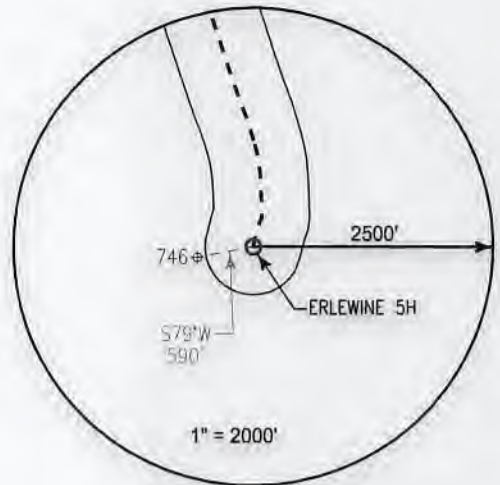
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**Erlewine 5H**  
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48	1	34	Wetzel	Proctor	Ronald J. Linda Petrecca	29.06
49	6	52	Wetzel	Proctor	Ronald J. Linda Petrecca	11.23

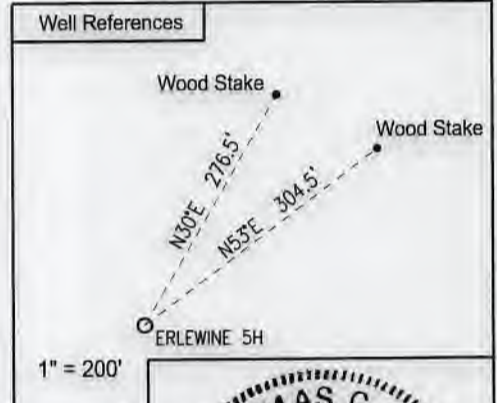


**Notes:**  
**ERLEWINE 5H As-Built coordinates are**  
 NAD 27 N: 433,710.000 E: 1,634,896.000  
 NAD 27 Lat: 39.683545 Long: -80.797303  
 NAD 83 UTM N: 4,392,663.079 E: 517,397.393

**ERLEWINE 5H As-Built Landing Point coordinates are**  
 NAD 27 N: 434,821.200 E: 1,634,896.000  
 NAD 27 Lat: 39.686596 Long: -80.797360  
 NAD 83 UTM N: 4,393,001.615 E: 517,391.751

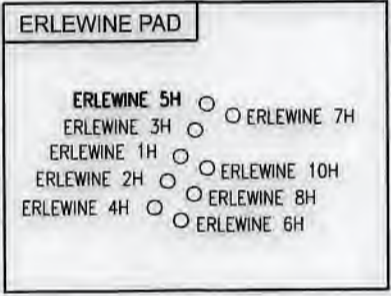
**ERLEWINE 5H As-Built Bottom Hole coordinates are**  
 NAD 27 N: 438,658.600 E: 1,633,611.000  
 NAD 27 Lat: 39.697079 Long: -80.802123  
 NAD 83 UTM N: 4,394,164.160 E: 516,960.782

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.



**LEGEND**

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



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.

*Thomas C. Smalls*  
 L. L. S. 687



FILE NO: W2192 (BK 65-61)  
 DRAWING NO:  
 SCALE: 1" = 1000'  
 MINIMUM DEGREE OF ACCURACY:  
 1:2500  
 PROVEN SOURCE OF ELEVATION:  
 NGS CORS Station

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

DATE: FEBRUARY 20 20 19  
 OPERATORS WELL NO: ERLEWINE 5H  
 API WELL NO  
 47 - 103 - 02999  
 STATE COUNTY PERMIT

WELL TYPE:  OIL  GAS  LIQUID INJECTION  WASTE DISPOSAL  
 (IF GAS) PRODUCTION:  STORAGE  DEEP  SHALLOW

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

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  
 PERFORATE NEW FORMATION  OTHER PHYSICAL CHANGE IN WELL (SPECIFY)  
 PLUG AND ABANDON  CLEAN OUT AND REPLUG TARGET FORMATION: Marcellus ESTIMATED DEPTH: 6,532' (As-Drilled)

WELL OPERATOR: EQT Production Company DESIGNATED AGENT: Jason Ranson  
 ADDRESS: 2400 Ansys Drive, Suite 200 ADDRESS: 115 Professional Place PO Box 280  
 Canonsburg, PA 15317 Bridgeport, WV 26330

AS-BUILT

**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

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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



<u>Lease No.</u>	<u>Grantor, Lessor, etc.</u>	<u>Grantee, Lessee, etc.</u>	<u>Royalty</u>	<u>Book/Page</u>
<b><u>873753</u></b>	<b><u>Ronald Carney, et ux, et al (current royalty owner)</u></b>		**	
	Richard L. Erlewine (original lessor)	Stone Energy Corporation		149A/276
	Stone Energy Corporation	EQT Production Company		183A/305
<b><u>873427</u></b>	<b><u>Shiben Estates, Inc, et al (current royalty owner)</u></b>		**	
	Shiben Estates, Inc (original lessor)	Stone Energy Corporation		134A/131
	Stone Energy Corporation	EQT Production Company		183A/305
<b><u>873811</u></b>	<b><u>Edgar D. Cook, et al (current royalty owner)</u></b>		**	
	Edgar D. Cook, et al (original lessor)	Stone Energy Corporation		128A/959
	Stone Energy Corporation	EQT Production Company		183A/305
<b><u>873728</u></b>	<b><u>Albert R. Anderson, et al (current royalty owner)</u></b>		**	
	Albert R. Anderson, et al (original lessor)	Stone Energy Corporation		102/539
	Stone Energy Corporation	EQT Production Company		183A/305
<b><u>873438</u></b>	<b><u>Piney Holdings, Inc (current royalty owner)</u></b>			
	Linzy Palmer (original lessor)	Proctor Oil & Gas Co		15A/260
	Proctor Oil & Gas Co	The Manufacturers Light & Heat Company		27A/416
	The Manufacturers Light & Heat Company	Columbia Gas and Transmission Company		263/164
	Columbia Gas and Transmission Company	Columbia Natural Resources, Inc.		72A/368
	Columbia Natural Resources, Inc.	Tustin & Harman Oil & Gas, LLC		77A/17
	Tustin & Harman Oil & Gas, LLC	Tri-County Oil & Gas Inc/Leatherwood, Inc		79A/97
	Leatherwood, Inc/CNX Gas Company LLC	Noble Energy, Inc (50%)		126A/486
	Noble Energy, Inc/CNX Gas Company LLC	Stone Energy Corporation		144A/212
	Stone Energy Corporation	EQT Production Company		183A/305
<b><u>873964</u></b>	<b><u>Ray D. Yoho, et ux (current royalty owner)</u></b>			
	Ray D. Yoho, et ux (original lessor)	Stone Energy Corporation		139A/586
	Stone Energy Corporation	EQT Production Company		183A/305
<b><u>873941</u></b>	<b><u>Michael G. Baxter, et ux (current royalty owner)</u></b>			
	Michael G. Baxter, et ux (original lessor)	Stone Energy Corporation		137A/334
	Stone Energy Corporation	EQT Production Company		183A/305
<b><u>873671</u></b>	<b><u>Clarence W Baxter, et ux (original lessor)</u></b>			

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Clarence W Baxter, et ux (original lessor)  
Clay Resources Inc  
Murvin Oil Company  
Applied Mechanics Corp  
Cobham Gas Industries, Inc  
Tri-County Oil & Gas, Inc  
B&R Construction, Inc.  
Stone Energy Corporation

Clay Resources Inc	68A/336
Murvin Oil Company	74A/475
Applied Mechanics Corp	74A/426
Cobham Gas Industries, Inc	74A/676
Tri-County Oil & Gas, Inc	80A/639
B&R Construction, Inc.	83A/483
Stone Energy Corporation	110A/41
EQT Production Company	183A/305

\*\* Per West Virginia Code Section 22-6-8.

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EQT Production Company  
2400 Ansys Drive, Suite 200  
Canonsburg, PA 15317  
[www.eqt.com](http://www.eqt.com)

John Zavatchan  
Landman - Permitting  
O:724-746-9073  
[jzavatchan@eqt.com](mailto:jzavatchan@eqt.com)

April 30, 2019

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

Re: Erlewine 5H Gas Well  
Proctor District, Wetzel County

Dear Mr. Brewer,

EQT Production Company is applying for a 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,

A handwritten signature in blue ink, appearing to read 'J. Zavatchan', is written over a faint circular stamp.

John Zavatchan  
Landman - Permitting

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

Date of Notice Certification: 05/01/2019

API No. 47- 103 - 02999

Operator's Well No. Erlewine 5H

Well Pad Name: Erlewine

**Notice has been given:**

Pursuant to the provisions in West Virginia Code § 22-6A, the Operator has provided the required parties with the Notice Forms listed below for the tract of land as follows:

State: <u>West Virginia</u>	UTM NAD 83	Easting: <u>4,392,663.079</u>
County: <u>Wetzel</u>		Northing: <u>517,397.393</u>
District: <u>Proctor</u>	Public Road Access: <u>CR 1/2</u>	
Quadrangle: <u>New Martinsville</u>	Generally used farm name: <u>Richard Erlewine</u>	
Watershed: <u>Tributary of Proctor Creek</u>		

Pursuant to West Virginia Code § 22-6A-7(b), every permit application filed under this section shall be on a form as may be prescribed by the secretary, shall be verified and shall contain the following information: (14) A certification from the operator that (i) it has provided the owners of the surface described in subdivisions (1), (2) and (4), subsection (b), section ten of this article, the information required by subsections (b) and (c), section sixteen of this article; (ii) that the requirement was deemed satisfied as a result of giving the surface owner notice of entry to survey pursuant to subsection (a), section ten of this article six-a; or (iii) the notice requirements of subsection (b), section sixteen of this article were waived in writing by the surface owner; and Pursuant to West Virginia Code § 22-6A-11(b), the applicant shall tender proof of and certify to the secretary that the notice requirements of section ten of this article have been completed by the applicant.

<p>Pursuant to West Virginia Code § 22-6A, the Operator has attached proof to this Notice Certification that the Operator has properly served the required parties with the following:</p> <p>*PLEASE CHECK ALL THAT APPLY</p> <p><input type="checkbox"/> 1. NOTICE OF SEISMIC ACTIVITY or <input checked="" type="checkbox"/> NOTICE NOT REQUIRED BECAUSE NO SEISMIC ACTIVITY WAS CONDUCTED</p> <p><input type="checkbox"/> 2. NOTICE OF ENTRY FOR PLAT SURVEY or <input checked="" type="checkbox"/> NO PLAT SURVEY WAS CONDUCTED</p> <p><input checked="" type="checkbox"/> 3. NOTICE OF INTENT TO DRILL or <input type="checkbox"/> NOTICE NOT REQUIRED BECAUSE NOTICE OF ENTRY FOR PLAT SURVEY WAS CONDUCTED or</p> <p style="padding-left: 100px;"><input type="checkbox"/> WRITTEN WAIVER BY SURFACE OWNER (PLEASE ATTACH)</p> <p><input checked="" type="checkbox"/> 4. NOTICE OF PLANNED OPERATION</p> <p><input checked="" type="checkbox"/> 5. PUBLIC NOTICE</p> <p><input checked="" type="checkbox"/> 6. NOTICE OF APPLICATION</p>	<p><b>OOG OFFICE USE ONLY</b></p> <p><input type="checkbox"/> RECEIVED/ NOT REQUIRED</p> <p><input type="checkbox"/> RECEIVED</p> <p><input type="checkbox"/> RECEIVED/ NOT REQUIRED</p> <p><input type="checkbox"/> RECEIVED</p> <p><input type="checkbox"/> RECEIVED</p> <p><input type="checkbox"/> RECEIVED</p>
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**Required Attachments:**

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.

**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:	<u>EQT Production Company</u>	Address:	<u>2400 Ansys Drive, Suite 200</u>
By:	<u>John Zavatchan</u>		<u>Canonsburg, PA 15317</u>
Its:	<u>Landman - Permitting</u>	Facsimile:	<u>724-745-2418</u>
Telephone:	<u>724-746-9073</u>	Email:	<u>jzavatchan@eqt.com</u>



Subscribed and sworn before me this 15<sup>th</sup> day of May, 2019  
Amy L Todd Notary Public  
 My Commission Expires 8/21/2022

**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](mailto:depprivacyofficer@wv.gov).

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

**Notice Time Requirement:** notice shall be provided no later than the **filing date of permit application.**

**Date of Notice:** 2/21/2019 **Date Permit Application Filed:** 05/01/2019

**Notice of:**

- PERMIT FOR ANY WELL WORK
- CERTIFICATE OF APPROVAL FOR THE CONSTRUCTION OF AN IMPOUNDMENT OR PIT

**Delivery method pursuant to West Virginia Code § 22-6A-10(b)**

- PERSONAL SERVICE
- REGISTERED MAIL
- METHOD OF DELIVERY THAT REQUIRES A RECEIPT OR SIGNATURE CONFIRMATION

Pursuant to W. Va. Code § 22-6A-10(b) no later than the filing date of the application, the applicant for a permit for any well work or for a certificate of approval for the construction of an impoundment or pit as required by this article shall deliver, by personal service or by registered mail or by any method of delivery that requires a receipt or signature confirmation, copies of the application, the erosion and sediment control plan required by section seven of this article, and the well plat to each of the following persons: (1) The owners of record of the surface of the tract on which the well is or is proposed to be located; (2) The owners of record of the surface tract or tracts overlying the oil and gas leasehold being developed by the proposed well work, if the surface tract is to be used for roads or other land disturbance as described in the erosion and sediment control plan submitted pursuant to subsection (c), section seven of this article; (3) The coal owner, operator or lessee, in the event the tract of land on which the well proposed to be drilled is located [sic] is known to be underlain by one or more coal seams; (4) The owners of record of the surface tract or tracts overlying the oil and gas leasehold being developed by the proposed well work, if the surface tract is to be used for the placement, construction, enlargement, alteration, repair, removal or abandonment of any impoundment or pit as described in section nine of this article; (5) Any surface owner or water purveyor who is known to the applicant to have a water well, spring or water supply source located within one thousand five hundred feet of the center of the well pad which is used to provide water for consumption by humans or domestic animals; and (6) The operator of any natural gas storage field within which the proposed well work activity is to take place. (c)(1) If more than three tenants in common or other co-owners of interests described in subsection (b) of this section hold interests in the lands, the applicant may serve the documents required upon the person described in the records of the sheriff required to be maintained pursuant to section eight, article one, chapter eleven-a of this code. (2) Notwithstanding any provision of this article to the contrary, notice to a lien holder is not notice to a landowner, unless the lien holder is the landowner. W. Va. Code R. § 35-8-5.7.a requires, in part, that the operator shall also provide the Well Site Safety Plan ("WSSP") 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.

Application Notice  WSSP Notice  E&S Plan Notice  Well Plat Notice is hereby provided to:

SURFACE OWNER(s)  
Name: See Attached List  
Address: \_\_\_\_\_  
Name: \_\_\_\_\_  
Address: \_\_\_\_\_

COAL OWNER OR LESSEE  
Name: See Attached List  
Address: \_\_\_\_\_

COAL OPERATOR  
Name: \_\_\_\_\_  
Address: \_\_\_\_\_

SURFACE OWNER(s) (Road and/or Other Disturbance)  
Name: See Attached List  
Address: \_\_\_\_\_  
Name: \_\_\_\_\_  
Address: \_\_\_\_\_

SURFACE OWNER OF WATER WELL AND/OR WATER PURVEYOR(s)  
Name: See attached List  
Address: \_\_\_\_\_

SURFACE OWNER(s) (Impoundments or Pits)  
Name: See Attached List  
Address: \_\_\_\_\_

OPERATOR OF ANY NATURAL GAS STORAGE FIELD  
Name: N/A  
Address: \_\_\_\_\_

\*Please attach additional forms if necessary

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**Surface Owner:**

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

**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

**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

**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 57<sup>th</sup> Street, SE, Charleston, WV 25304 (304-926-0450) or by visiting [www.dep.wv.gov/oil-and-gas/pages/default.aspx](http://www.dep.wv.gov/oil-and-gas/pages/default.aspx).

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**Well Location Restrictions**

Pursuant to W. Va. Code § 22-6A-12, Wells may not be drilled within two hundred fifty feet measured horizontally from any existing water well or developed spring used for human or domestic animal consumption. The center of well pads may not be located within six hundred twenty-five feet of an occupied dwelling structure, or a building two thousand five hundred square feet or larger used to house 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



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

**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:**

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 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. All persons described in West Virginia Code § 22-6A-10(b) may file written comments as to the location or construction of the applicant's proposed well work to the Secretary at:

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

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.**

**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.

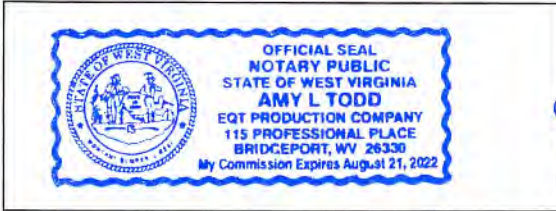
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MAY 2 2019  
WV Department of  
Environmental Protection

**Notice is hereby given by:**

Well Operator: EQT Production Company *[Signature]* Address: 2400 Ansys Drive, Suite 200  
Telephone: 724-746-9073 Canonsburg, PA 15317  
Email: jzavatchan@eqt.com 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](mailto:depprivacyofficer@wv.gov).



Subscribed and sworn before me this 15<sup>th</sup> day of May, 2019.  
*[Signature]* Notary Public  
My Commission Expires 8/21/2022

Topo Quad: NEW MARTINSVILLE, WV - OHIO 7.5'

Scale: 1" = 1000'

County: WETZEL

Date: 19 JULY 2018

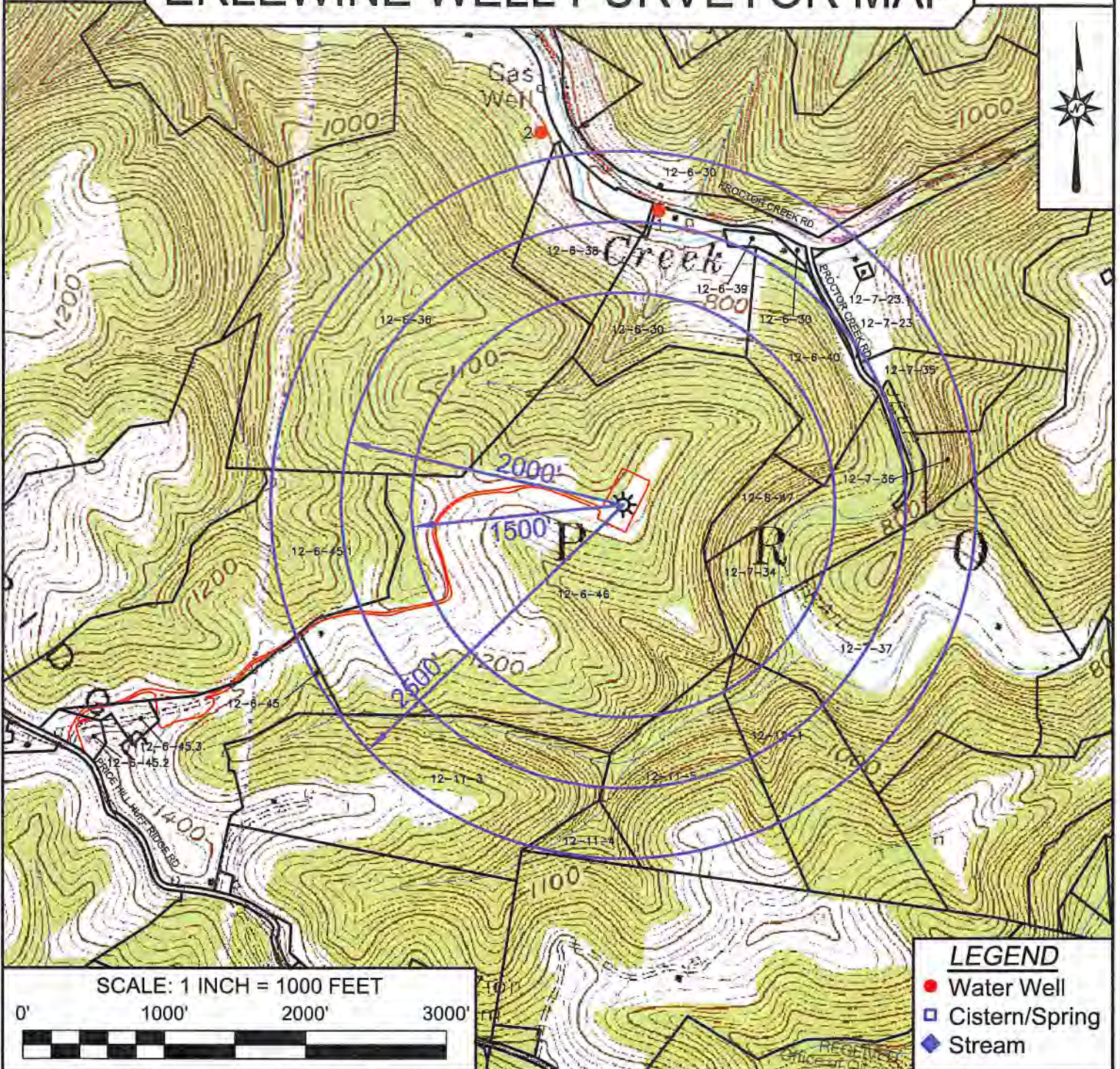
District: PROCTOR

Project No: 0493-17

Water

# ERLEWINE WELL PURVEYOR MAP

Topo



SCALE: 1 INCH = 1000 FEET



- LEGEND**
- Water Well
  - Cistern/Spring
  - ◆ Stream

SURVEYING AND MAPPING SERVICES PERFORMED BY:

PREPARED FOR:

**Blue Mountain**  
 11023 MASON DIXON HIGHWAY  
 BURTON, WV 26562  
 PHONE: (304) 662-6486

**EQT Production Co. Inc.**  
 EQT Plaza  
 625 Liberty Ave, Suite 1700  
 Pittsburgh, PA 15222

MAY 2 2019  
 WV Department  
 Environmental Protection



**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  
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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**

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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

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Environmental Protection

**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.

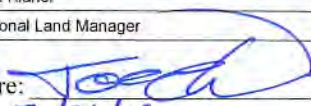
Pursuant to West Virginia Code § 22-6A-8(b) No permit may be issued less than thirty days after the filing date of the application for any well work except plugging or replugging; and no permit for plugging or replugging may be issued less than five days after the filing date of the application except 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**

I, EQT Production Company, hereby state that I have read the Instructions to Persons Named on Page WW-6A and the associated provisions listed above, and that I have received copies of a Notice of Application, an Application for a Well Work Permit on Form WW-6A and attachments consisting of pages one (1) through \_\_\_\_\_, including the erosion and sediment control plan, if required, and the well plat, all for proposed well work on the tract of land as follows:

State:	<u>West Virginia</u>	UTM NAD 83	Easting:	<u>517,397.393</u>
County:	<u>Wetzel</u>		Northing:	<u>4,392,663.079</u>
District:	<u>Proctor</u>	Public Road Access:		<u>CR 1/2</u>
Quadrangle:	<u>New Martinsville</u>	Generally used farm name:		<u>Richard Erlewine</u>
Watershed:	<u>Tributary of Proctor Creek</u>			

I further state that I have no objection to the planned work described in these materials, and I have no objection to a permit being issued on those materials.

<p>*Please check the box that applies</p> <p><input type="checkbox"/> SURFACE OWNER</p> <p><input checked="" type="checkbox"/> SURFACE OWNER (Road and/or Other Disturbance)</p> <p><input type="checkbox"/> SURFACE OWNER (Impoundments/Pits)</p> <p><input type="checkbox"/> COAL OWNER OR LESSEE</p> <p><input type="checkbox"/> COAL OPERATOR</p> <p><input type="checkbox"/> WATER PURVEYOR</p> <p><input type="checkbox"/> OPERATOR OF ANY NATURAL GAS STORAGE FIELD</p>	<p><b>FOR EXECUTION BY A NATURAL PERSON</b></p> <p>Signature: _____</p> <p>Print Name: _____</p> <p>Date: _____</p> <p><b>FOR EXECUTION BY A CORPORATION, ETC.</b></p> <p>Company: <u>EQT Production Company</u></p> <p>By: <u>Todd Klamer</u></p> <p>Its: <u>Regional Land Manager</u></p> <p>Signature: </p> <p>Date: <u>2/21/19</u></p>
--	--

**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](mailto: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 Requirement:** Notice shall be provided at least **TEN (10)** days prior to filing a permit application.

**Date of Notice:** 11/07/2018      **Date Permit Application Filed:** 05/01/2019

**Delivery method pursuant to West Virginia Code § 22-6A-16(b)**

HAND DELIVERY       CERTIFIED MAIL RETURN RECEIPT REQUESTED

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 is hereby provided to the SURFACE OWNER(s):**

Name: See Attached List  
Address: \_\_\_\_\_  
\_\_\_\_\_

Name: \_\_\_\_\_  
Address: \_\_\_\_\_  
\_\_\_\_\_

**Notice is hereby given:**

Pursuant to West Virginia Code § 22-6A-16(b), notice is hereby given that the undersigned well operator has an intent to enter upon the surface owner's land for the purpose of drilling a horizontal well on the tract of land as follows:

State:	<u>West Virginia</u>	UTM NAD 83	Easting:	<u>517,397.393</u>
County:	<u>Wetzel</u>		Northing:	<u>4,392,663.079</u>
District:	<u>Proctor</u>	Public Road Access:		<u>CR 1/2</u>
Quadrangle:	<u>New Martinsville</u>	Generally used farm name:		<u>Richard Erlwine</u>
Watershed:	<u>Tributary of Proctor Creek</u>			

**This Notice Shall Include:**

Pursuant to West Virginia Code § 22-6A-16(b), this notice 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. Additional information related to horizontal drilling may be obtained from the Secretary, at the WV Department of Environmental Protection headquarters, located at 601 57<sup>th</sup> Street, SE, Charleston, WV 25304 (304-926-0450) or by visiting [www.dep.wv.gov/oil-and-gas/pages/default.aspx](http://www.dep.wv.gov/oil-and-gas/pages/default.aspx).

**Notice is hereby given by:**

Well Operator: EQT Production Company  
Address: 2400 Ansys Drive, Suite 200  
Canonsburg, PA 15317  
Telephone: 724-746-9073  
Email: jzavatchan@eqt.com  
Facsimile: 724-745-2418

Authorized Representative: John Zavatchan  
Address: 2400 Ansys Drive, Suite 200  
Canonsburg, PA. 15317  
Telephone: 724-746-9073  
Email: jzavatchan@eqt.com  
Facsimile: 724-745-2418

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WV Department of  
Environmental Protection

**Oil and Gas Privacy Notice:**

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**Surface Owner:**

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

**Surface Owner Pits/ Impoundment/Potential AST Site**

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

Don Arrick  
17954 Energy Road  
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Linda (Anderson) Seagrave  
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**Surface Owner Access Road:**

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PROCTOR WV 26055-1449

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

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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.


**Surface Owner Waiver:**

I, EQT Production Company, hereby state that I have read the notice provisions listed above and hereby waive the notice requirements under West Virginia Code § 22-6A-16(b) for the tract of land as follows:

State: West Virginia  
County: Wetzel  
District: Proctor  
Quadrangle: New Martinsville  
Watershed: Tributary of Proctor Creek

UTM NAD 83 Easting: 4,392,663.079  
Northing: 517,397.393  
Public Road Access: CR 1/2  
Generally used farm name: Richard Erlewine

Name: Todd Klaner, Regional Land Manager  
Address: 625 Liberty Ave. Suite 1700  
Pittsburgh, PA 15222

Signature:   
Date: 2/21/19

**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 [deprivacyofficer@wv.gov](mailto:deprivacyofficer@wv.gov).

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

**Notice Time Requirement:** notice shall be provided no later than the **filing date of permit application.**

**Date of Notice:** 02/21/2019      **Date Permit Application Filed:** 05/01/2019

**Delivery method pursuant to West Virginia Code § 22-6A-16(c)**

- CERTIFIED MAIL       HAND
- RETURN RECEIPT REQUESTED      DELIVERY

Pursuant to W. Va. Code § 22-6A-16(c), no later than the date for filing the permit application, an operator shall, by certified mail return receipt requested or hand delivery, give the surface owner whose land will be used for the drilling of a horizontal well notice of the planned operation. The notice required by this subsection shall include: (1) A copy of this code section; (2) The information required to be provided by subsection (b), section ten of this article to a surface owner whose land will be used in conjunction with the drilling of a horizontal well; and (3) A proposed surface use and compensation agreement containing an offer of compensation for damages to the surface affected by oil and gas operations to the extent the damages are compensable under article six-b of this chapter. (d) The notices required by this section shall be given to the surface owner at the address listed in the records of the sheriff at the time of notice.

**Notice is hereby provided to the SURFACE OWNER(s)**

(at the address listed in the records of the sheriff at the time of notice):

Name: See Attached List	Name: _____
Address: _____	Address: _____
_____	_____

**Notice is hereby given:**

Pursuant to West Virginia Code § 22-6A-16(c), notice is hereby given that the undersigned well operator has developed a planned operation on the surface owner's land for the purpose of drilling a horizontal well on the tract of land as follows:

State: West Virginia	UTM NAD 83 Easting: 517,397.393
County: Wetzel	Northing: 4,392,663.079
District: Proctor	Public Road Access: CR 1/2
Quadrangle: New Martinsville	Generally used farm name: Richard Erlwine
Watershed: Tributary of Proctor Creek	

**This Notice Shall Include:**

Pursuant to West Virginia Code § 22-6A-16(c), this notice shall include: (1) A copy of this code section; (2) The information required to be provided by **W. Va. Code § 22-6A-10(b)** to a surface owner whose land will be used in conjunction with the drilling of a horizontal well; and (3) A proposed surface use and compensation agreement containing an offer of compensation for damages to the surface affected by oil and gas operations to the extent the damages are compensable under article six-b of this chapter. Additional information related to horizontal drilling may be obtained from the Secretary, at the WV Department of Environmental Protection headquarters, located at 601 57<sup>th</sup> Street, SE, Charleston, WV 25304 (304-926-0450) or by visiting [www.dep.wv.gov/oil-and-gas/pages/default.aspx](http://www.dep.wv.gov/oil-and-gas/pages/default.aspx).

Well Operator: EQT Production Company	Address: 2400 Ansys Drive, Suite 200
Telephone: 724-746-9073	Canonsburg, PA 15317
Email: jzavatchan@eqt.com	Facsimile: 724-745-2418

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**Surface Owner:**

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PROCTOR WV 26055-1449

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

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WV Department of  
Environmental Protection



## WEST VIRGINIA DEPARTMENT OF TRANSPORTATION

## Division of Highways

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

Jim Justice  
 Governor

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 57<sup>th</sup> 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,

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

Cc: Nick Bungardner  
 EQT Production Company  
 CH, OM, D-6  
 File

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 Office of Oil and Gas  
 MAY 2 2019  
 WV Department of  
 Environmental Protection

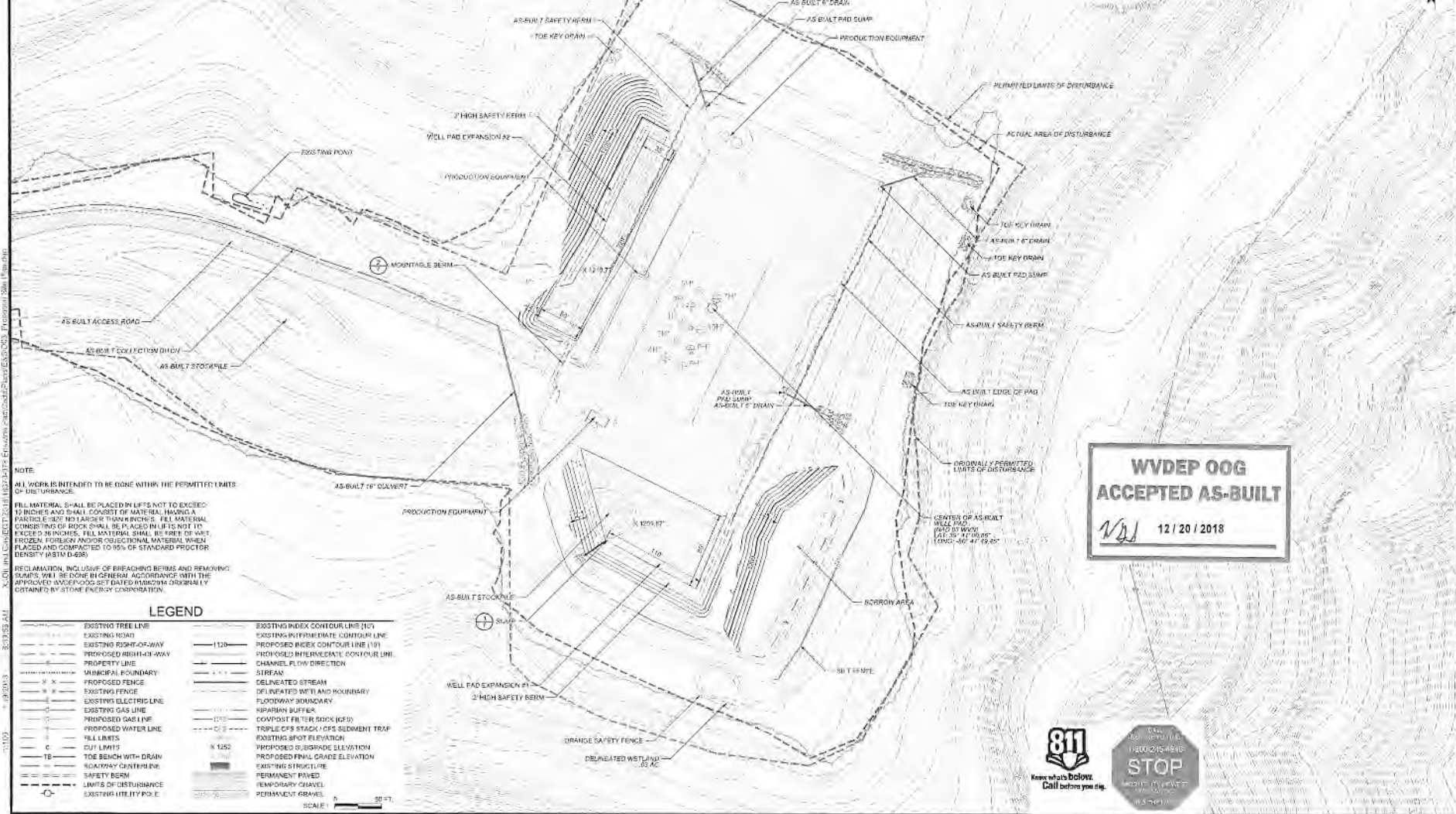
**Anticipated Frac Additives**  
**Chemical Names and CAS numbers**

<u>Material</u>	<u>Ingredient</u>	<u>CAS Number</u>
Water		
Sand	Hydrotreated light petroleum distillate	14808-60-7
Friction Reducer	Tributyl tetradecyl phosphonium 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

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ERLEWINE WELL COORDINATES					
UNIVERSAL TRANSVERSE MERCATOR (UTM Zone 17 in North)					
WELL ID	API #	NORTHING		WEST VIRGINIA NORTH STATE PLAYS IN NORTH AMERICAN DATUM (NAD 83)	
		EXISTING	AS-BUILT	EXISTING	AS-BUILT
1	103-02950	4,392,622.37	517,392.10	433,710.36	1,603,439.37
2	103-02913	4,392,646.62	517,398.49	433,692.85	1,603,430.32
3	103-02961	4,392,657.68	517,394.70	433,726.31	1,603,448.22
4	103-02962	4,392,641.15	517,396.93	433,674.51	1,603,423.62
5	103-02928	4,392,663.33	517,392.31	433,746.25	1,603,461.08
6	103-02961	4,392,638.25	517,392.22	433,665.66	1,603,438.60
7	103-03000	4,392,640.53	517,402.82	433,737.00	1,603,475.01
8	103-02954	4,392,623.32	517,393.25	433,681.52	1,603,448.45
10	103-02951	4,392,644.06	517,395.00	433,701.51	1,603,457.21
Center of Pad		4,392,623.50	517,400.20	433,722.30	1,603,472.81



**NOTE:**  
 ALL WORK IS INTENDED TO BE DONE WITHIN THE PERMITTER LIMITS OF DISTURBANCE.  
 FILL MATERIAL SHALL BE PLACED IN LIFTS NOT TO EXCEED 18 INCHES AND SHALL CONSIST OF MATERIAL HAVING A PARTICLE SIZE NOT LARGER THAN 100 MESH. FILL MATERIAL CONSISTING OF ROCK SHALL BE PLACED IN LIFTS NOT TO EXCEED 36 INCHES. FILL MATERIAL SHALL BE FREE OF HAZARDOUS, FOREIGN AND/OR OBSTRUCTIONAL MATERIAL WHEN PLACED AND COMPACTED TO 95% OF STANDARD PROCTOR DENSITY WITH 0.400.  
 RECLAMATION, INCLUDING OF BREACHING BERMS AND REMOVING SUMPS, WILL BE DONE IN GENERAL ACCORDANCE WITH THE APPROVED AND POST-CONSTRUCTION MONITORING PROGRAM OBTAINED BY STONE ENERGY CORPORATION.

LEGEND	
—	EXISTING TREE LINE
—	EXISTING ROAD
—	EXISTING RIGHT-OF-WAY
—	PROPOSED RIGHT-OF-WAY
—	PROPERTY LINE
—	MUNICIPAL BOUNDARY
—	PROPOSED FENCE
—	EXISTING FENCE
—	EXISTING ELECTRIC LINE
—	EXISTING GAS LINE
—	PROPOSED GAS LINE
—	PROPOSED WATER LINE
—	FILL LIMITS
—	CUI LIMITS
—	TOE BENCH WITH DRAIN
—	BOULEVARD CURBLINE
—	SAFETY BERM
—	LIMITS OF DISTURBANCE
—	EXISTING UTILITY POLE
—	EXISTING INDEX CONTOUR LINE (10'
—	EXISTING INDEX CONTOUR LINE
—	PROPOSED INDEX CONTOUR LINE (10'
—	PROPOSED INTERMEDIATE CONTOUR LINE
—	CHANNEL FLOW DIRECTION
—	STREAM
—	DELINEATED STREAM
—	DELINEATED WETLAND BOUNDARY
—	FLOODWAY BOUNDARY
—	RIPARIAN BUFFER
—	COMPOST FILTER SAND BOX
—	TRIPLE CFS STACK / CFS SEDIMENT TRAP
—	EXISTING SPOT ELEVATION
—	PROPOSED SUBGRADE ELEVATION
—	PROPOSED FINAL GRADE ELEVATION
—	EXISTING WETLAND
—	PERMANENT PAVED
—	TEMPORARY GRAVEL
—	PERMANENT GRAVEL

**WVDEP OOG  
 ACCEPTED AS-BUILT**  
 12 / 20 / 2018



DATE	12/20/2018
BY	W. J. H. / J. S. H.
SCALE	AS SHOWN
PROJECT	ERLEWINE PAD SITE MODIFICATION
CUSTOMER	EOT PRODUCTION COMPANY
DESIGNER	DIFFENBAUGH & HIRTZ, LLC 1000 GARDNER ROAD, SUITE 200 CHARLOTTE, NC 28203 WWW.DHLLC.COM P: 704.363.0001 F: 704.363.0002
CONTRACT NO.	18-00000000000000000000
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