

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

API 47 - 103 - 02952 County Wetzel District Proctor
Quad New Martinsville Pad Name Erlewine Field/Pool Name Mary
Farm name Erlewine, Richard Well Number #4H
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 4,392,641 Easting 517,387
Landing Point of Curve Northing 4,392,231 Easting 517,236
Bottom Hole Northing 4,390,892 Easting 517,648

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 1/8/2014 Date drilling commenced 8/20/2014 Date drilling ceased 2/12/2015
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 120 Open mine(s) (Y/N) depths RECEIVED
Salt water depth(s) ft 1,424 Void(s) encountered (Y/N) depths Office of Oil and Gas
Coal depth(s) ft 722 and 948 Cavern(s) encountered (Y/N) depths N
Is coal being mined in area (Y/N) N MAR 13 2017

APPROVED
NAME: Sen
DATE: 5-25-17

Reviewed by: DJH
WV Department of Environmental Protection
06/02/2017

API 47-103 - 02952 Farm name Erlewine, Richard Well number #4H

Table with columns: CASING STRINGS, Hole Size, Casing Size, Depth, New or Used, Grade wt/ft, Basket Depth(s), Did cement circulate (Y/N) * Provide details below*

Comment Details Circulated 22 bbls cement to surface on 13.375" casing string. Circulated 22 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 1,330'.

Table with columns: CEMENT DATA, Class/Type of Cement, Number of Sacks, Slurry wt (ppg), Yield (ft³/sks), Volume (ft³), Cement Top (MD), WOC (hrs)

Drillers TD (ft) 12,005 MD / 6,684 TVD Loggers TD (ft) N/A
Deepest formation penetrated Marcellus Shale Plug back to (ft)
Plug back procedure

Kick off depth (ft) 5,715 MD / 5,701 TVD

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

Well cored [] Yes [x] No Conventional Sidewall Were cuttings collected [x] Yes [] No

DESCRIBE THE CENTRALIZER PLACEMENT USED FOR EACH CASING STRING Surface casing had bow spring centralizers placed on joints 1, 5, 9, 13, 17, 21, 25 and 30. 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 fourth joint beginning with joint 1 to joint 232. Ran a total of 59 rigid spiral centralizers. Ran bow spring centralizers from joint 240 to joint 272 on every eighth joint. A total of 5 bow spring centralizers were run.

WAS WELL COMPLETED AS SHOT HOLE [] Yes [x] No DETAILS

WAS WELL COMPLETED OPEN HOLE? [] Yes [x] No DETAILS

WERE TRACERS USED [] Yes [x] No TYPE OF TRACER(S) USED

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PERFORATION RECORD

Stage No.	Perforation date	Perforated from MD ft.	Perforated to MD ft.	Number of Perforations	Formation(s)

Please insert additional pages as applicable.

STIMULATION INFORMATION PER STAGE

Complete a separate record for each stimulation stage.

Stage No.	Stimulations Date	Ave Pump Rate (BPM)	Ave Treatment Pressure (PSI)	Max Breakdown Pressure (PSI)	ISIP (PSI)	Amount of Proppant (lbs)	Amount of Water (bbls)	Amount of Nitrogen/other (units)

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Please insert additional pages as applicable.

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<u>PRODUCING FORMATION(S)</u>	<u>DEPTH(S)</u>
<u>Not Yet Completed</u>	<u>TVD MD</u>

Please insert additional pages as applicable.

GAS TEST Build up Drawdown Open Flow OIL TEST Flow Pump
SHUT-IN PRESSURE Surface _____ psi Bottom Hole _____ psi DURATION OF TEST _____ hrs
OPEN FLOW Gas _____ mcfpd Oil _____ bpd NGL _____ bpd Water _____ bpd GAS MEASURED BY Estimated Orifice Pilot

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

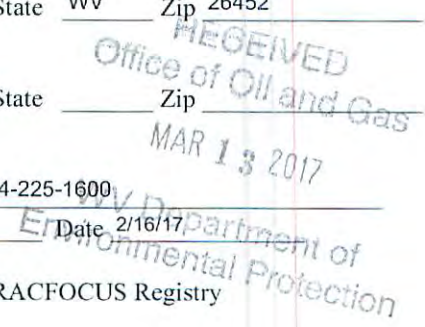
Please insert additional pages as applicable.

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
Signature  Title Drilling Engineer Date 2/16/17

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



06/02/2017

Erlewine #4H
API 47-103-02952
Stone Energy Corporation

	Horizontal		Bottom (ft TVD)	Bottom (ft MD)	
	Top (ft TVD)	Top (ft MD)			
Sandstone & Shale	Surface	*	722		FW @ 120'
Coal	722	*	730		
Sandstone & Shale	730	*	948		
Coal	948	*	957		
Sandstone & Shale	957	*	2,014		SW @ 1,424'
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	*	5,698	5,712	
Rhinestreet	5,698	5,712 ~	6,209	6,278	
Cashaqua	6,209	6,278 ~	6,351	6,514	
Middlesex	6,351	6,514 ~	6,371	6,554	
West River	6,371	6,554 ~	6,421	6,699	
Geneseo	6,421	6,699 ~	6,442	6,747	
Tully Limestone	6,442	6,747 ~	6,484	6,904	
Hamilton Shale	6,484	6,904 ~	6,539	7,076	
Marcellus	6,539	7,076 ~	6,684	12,005	
TD			6,684	12,005	

* From Pilot Hole Log and Driller's Log

~ From MWD Gamma Log