

JK

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

RECEIVED  
Office of Oil and Gas

NOV 25 2014

WV Department of  
Environmental Protection

API 47 - 033 - 05711 County Harrison District Union  
Quad Big Isaac Pad Name Corder East Field/Pool Name \_\_\_\_\_  
Farm name Corder, Gerald & Louella Well Number Hildred Unit 1H  
Operator (as registered with the OOG) Antero Resources Corporation  
Address 1615 Wynkoop Street City Denver State CO Zip 80202

As Drilled location NAD 83/UTM Attach an as-drilled plat, profile view, and deviation survey  
Top hole Northing 4341559.80 Easting 538534.10  
Landing Point of Curve Northing 4341633.26 Easting 538272.21  
Bottom Hole Northing 4343016.33 Easting 536546.30

Elevation (ft) 1405' 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 Not yet completed  
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)  
Air- Foam & 4% KCL

Mud- Polymer

Date permit issued 1/29/2013 Date drilling commenced 2/21/2014 Date drilling ceased 7/3/2014  
Date completion activities began WOC Date completion activities ceased N/A  
Verbal plugging (Y/N) N Date permission granted N/A Granted by N/A

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

Freshwater depth(s) ft 100' Open mine(s) (Y/N) depths N  
Salt water depth(s) ft None Identified Void(s) encountered (Y/N) depths N  
Coal depth(s) ft 340', 420', 900', 1240', 1320', 1680', 1860' Cavern(s) encountered (Y/N) depths N  
Is coal being mined in area (Y/N) N

Reviewed by:

12/05/2014

API 47-033 - 05711

Farm name Corder, Gerald & Louella

Well number Hildred Unit 1H

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"	40'	New	106.5#	N/A	Y
Surface	17- 1/2"	13- 3/8"	355'	New	48#	N/A	Y
Coal							
Intermediate 1	12-1/4"	9-5/8"	2562'	New	36#	N/A	Y
Intermediate 2							
Intermediate 3							
Production	8-3/4" & 8-1/2"	5-1/2"	15,332'	New	23#	N/A	Y
Tubing							
Packer type and depth set		N/A					

Comment Details \_\_\_\_\_

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	Class A	196 sx	15.6	1.18	38	0	8 Hrs.
Surface	Class A	480 sx	15.6	1.18	247	0	8 Hrs.
Coal							
Intermediate 1	Class A	934 sx	15.6	1.18	802	0	8 Hrs.
Intermediate 2							
Intermediate 3							
Production	Class H	2316 sx	14.5 Lead 15.2 Tail	1.3 Lead 1.87 Tail	3040	~500' into Intermediate Casing	8 Hrs.
Tubing							

Drillers TD (ft) 15,328' MD, 7490' TVD; 7519' TVD (Deepest point drilled)

Loggers TD (ft) 15,279'

Deepest formation penetrated Marcellus

Plug back to (ft) N/A

Plug back procedure N/A

Kick off depth (ft) 6698'

Check all wireline logs run

- caliper     density     deviated/directional     induction  
 neutron     resistivity     gamma ray     temperature

\*\* This is a subsequent well. Antero only runs wireline logs on one well on a multi-well pad (Cleta Unit 1H API# 47-033-05659). Please reference the wireline logs submitted with Form WR-35 for the Cleta Unit 2H. A Cement Bond Log has been included with this submittal.

Well cored  Yes  No

Conventional     Sidewall

Were cuttings collected  Yes  No

DESCRIBE THE CENTRALIZER PLACEMENT USED FOR EACH CASING STRING \_\_\_\_\_

Conductor- 0

Surface- 1 above guide shoe, 1 above Insert float, 1 every 4th joint to surface

Intermediate- 1 above float joint, 1 above float collar, 1 every 4th joint to surface

Production- 1 above float joint, 1 below float collar, 1 every 3rd joint to top of cement

WAS WELL COMPLETED AS SHOT HOLE  Yes  No

DETAILS Waiting on Completion

WAS WELL COMPLETED OPEN HOLE?  Yes  No

DETAILS Waiting on Completion

WERE TRACERS USED  Yes  No

TYPE OF TRACER(S) USED Waiting on Completion



API 47- 033 - 05711 Farm name Corder, Gerald & Louella Well number Hildred Unit 1H

<u>PRODUCING FORMATION(S)</u>	<u>DEPTHS</u>	
<u>Marcellus - WOC</u>	<u>7367'</u> TVD	<u>7489'</u> MD
_____	_____	_____
_____	_____	_____
_____	_____	_____

Please insert additional pages as applicable.

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

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

**\* PLEASE SEE EXHIBIT 1**

Please insert additional pages as applicable.

Drilling Contractor Patterson - UTI Drilling Company LLC  
 Address 207 Carlton Drive City Eight Four State PA Zip 15330

Logging Company Rush Wellsite Services  
 Address 600 Alpha Drive City Canonsburg State PA Zip 15317

Cementing Company Allied Oil & Gas Services, LLC  
 Address 1036 East Main Street City Bridgeport State WV Zip 26330

Stimulating Company N/A - WOC  
 Address \_\_\_\_\_ City \_\_\_\_\_ State \_\_\_\_\_ Zip \_\_\_\_\_

Please insert additional pages as applicable.

Completed by Ashlie Steele Telephone 303-357-7323  
 Signature Ashlie Steele Title Permitting Supervisor Date 11/24/2014

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

12/05/2014

## EXHIBIT 1

LITHOLOGY/ FORMATION	TOP DEPTH (TVD)	BOTTOM DEPTH (TVD)	TOP DEPTH (MD)	BOTTOM DEPTH (MD)	ROCK TYPE	FLUID PRODUCED
Undifferentiated Pennsylvanian Sedimentary Sequence	0'	2279'	0'	2279'	Sandstone/Shale/Siltstone	
Big Lime	est. 2280'	2379'	est. 2280'	2379'	Limestone	
Big Injun	est. 2380'	2682'	est. 2380'	2682'	Sandstone/Shale/Siltstone	
Gantz Sand	est. 2683'	2824'	est. 2683'	2824'	Sandstone/Shale/Siltstone	
Fifty Foot Sandstone	est. 2825'	2895'	est. 2825'	2895'	Sandstone/Shale/Siltstone	
Gordon	est. 2896'	3069'	est. 2896'	3069'	Sandstone/Shale/Siltstone	
Fifth Sandstone	est. 3070'	3111'	est. 3070'	3111'	Sandstone/Shale/Siltstone	
Bayard	est. 3112'	3887'	est. 3112'	3887'	Sandstone/Shale/Siltstone	
Speechley	est. 3888'	4142'	est. 3888'	4142'	Sandstone/Shale/Siltstone	
Baltown	est. 4143'	4677'	est. 4143'	4677'	Sandstone/Shale/Siltstone	
Bradford	est. 4678'	5193'	est. 4678'	5193'	Sandstone/Shale/Siltstone	
Benson	est. 5194'	5370'	est. 5194'	5370'	Sandstone/Shale/Siltstone	
Alexander	est. 5371'	5521'	est. 5371'	5521'	Sandstone/Shale/Siltstone	
Elk	est. 5522'	6809'	est. 5522'	6809'	Sandstone/Shale/Siltstone	
Sycamore	6810'	7032'	6819'	7059'	Sandstone/Shale/Siltstone	
Middlesex	7033'	7179'	7060'	7221'	Shale	
Burkett	7180'	7206'	7222'	7253'	Shale	Gas
Tully	7207'	7366'	7254'	7488'	Limestone	N/A
Marcellus	7367'	7519'	7489'		Shale	Gas

\*Please note Antero determines formation tops based on wireline logs that are only run on one well on a multi-well pad (Please reference Cleota Unit 1H #47-033-05659). The measured depth (MD) data on subsequent wells may be slightly different due to the well's unique departure.

9,989' to Bottom Hole

3,546' to Top Hole

LATITUDE 39 - 15 - 00

LONGITUDE 80 - 32 - 30

10,018' to Top Hole

5,130' to Bottom Hole

### Antero Resources Well No. Hildred Unit 1H As-Drilled Plat Antero Resources Corporation

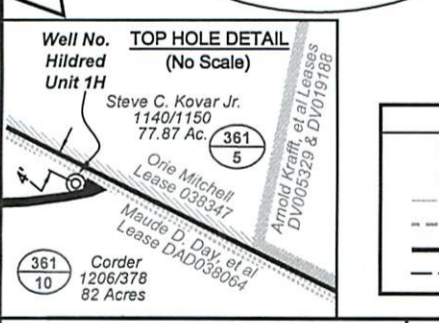
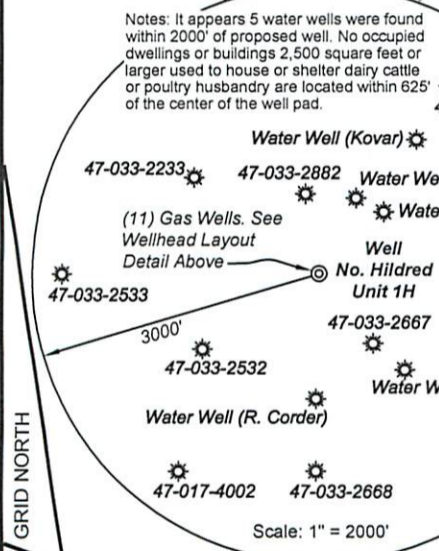
Tax Map 8 Parcels

Par	Owner	DB/Pg	Acres
1	13	Lucille Devericks Billy J. Devericks	WB42/159 23.0
2	20	Penny Freeman Jones	245/500 2.21
3	10.5	Butterfly Evolution Trust	250/468 0.41
4	10.2	Butterfly Evolution Trust	250/468 11.5
5	8.2	Zak S. Henry	287/209 0.34
6	10.1	Barbara Ann Templeton	206/575 12.67
7	9	Jonell L. Carver	265/418 21.7
8	10.6	Butterfly Evolution Trust	250/468 10.66
9	10.3	Butterfly Evolution Trust	250/468 27.8
10	11.11	Joseph & Linda Martin Trust	217/549 0.11
11	8.3	Stephanie D. Moore	277/244 0.49

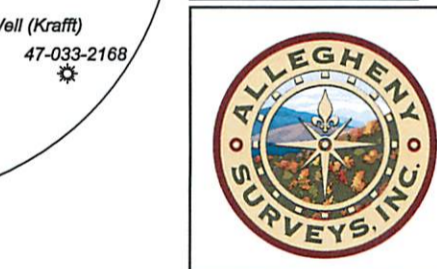
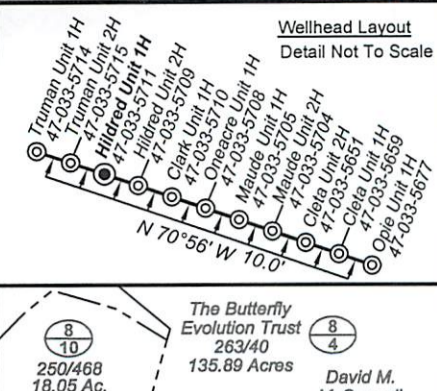
Tax Map 361 Parcels

Par	Owner	DB/Pg	Acres
11	4	Lucille Devericks	WB167/23 9.84
12	3	Lucille Devericks	WB167/23 9.70
13	5	Steve C. Kovar Jr.	1140/1150 77.87
14	2	Lucille Devericks	WB167/23 59.107

Notes: It appears 5 water wells were found within 2000' of proposed well. No occupied dwellings or buildings 2,500 square feet or larger used to house or shelter dairy cattle or poultry husbandry are located within 625' of the center of the well pad.



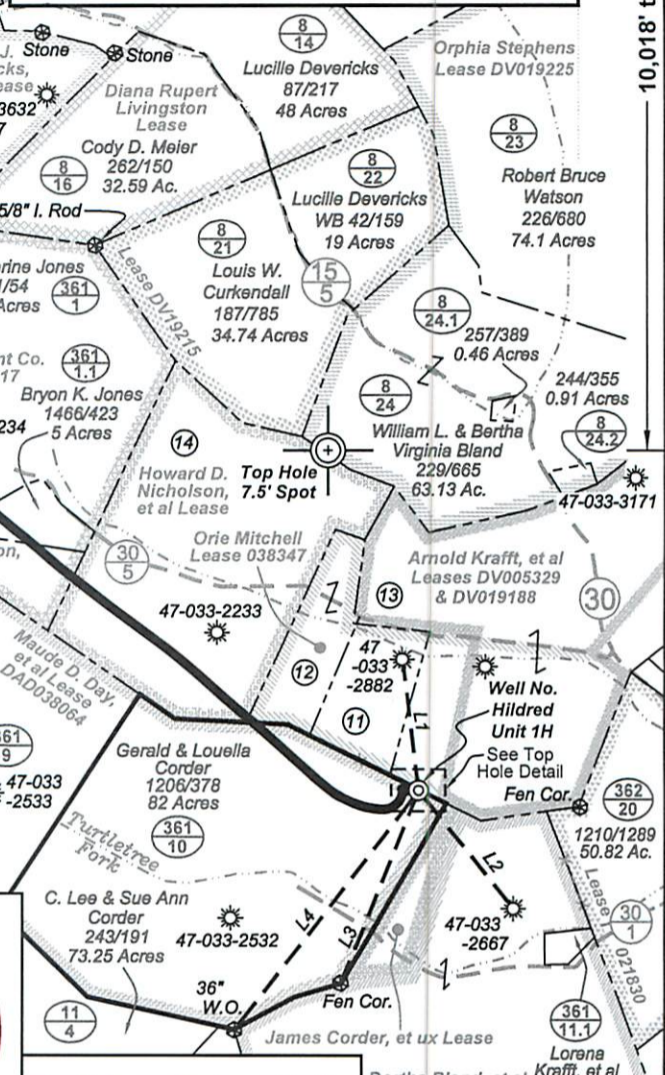
FILE NO: 232-30-G-12  
DRAWING NO: 232-12 Drilled Hildred 1H  
SCALE: 1" = 1200'  
MINIMUM DEGREE OF ACCURACY: Submeter  
PROVEN SOURCE OF ELEVATION: WVDOT, Bridgeport, WV



Legend

- Proposed gas well
- Found corner, as noted
- Creek or Drain
- Existing Road
- Surface boundary (approx.)
- Interior surface tracts (approx.)

Notes:  
West Virginia Coordinate System of 1927, North Zone based upon Differential GPS Measurements.  
Well No. Hildred Unit 1H Top Hole coordinates are  
N: 264,857.14 Latitude: 39°13'20.58"  
E: 1,701,460.04 Longitude: 80°33'13.58"  
Bottom Hole coordinates are  
N: 269,745.59 Latitude: 39°14'08.14"  
E: 1,695,016.78 Longitude: 80°34'36.19"  
UTM Zone 17, NAD 1983  
Top Hole Coordinates: Bottom Hole Coordinates:  
N: 4,341,559.802m N: 4,343,016.329m  
E: 538,534.100m E: 536,546.297m  
Plat orientation and corner and well references are based upon the grid north meridian.  
Well location references are based upon the magnetic meridian.



Top Hole coordinates verified by survey grade GPS. As-drilled data and information was provided by Antero Resources Corporation. Allegheny Surveys, Inc. (ASI) is not certifying the data and information provided. ASI is not responsible for any errors or inaccuracies with the data and information that has been provided.

Line	Bearing	Distance
L1	S 07°15' E	819.4'
L2	N 38°44' W	943.7'
L3	N 21°54' E	1296.7'
L4	N 37°20' E	1880.2'

WELL TYPE:  OIL  GAS  LIQUID INJECTION  WASTE DISPOSAL  
(IF GAS) PRODUCTION:  STORAGE  DEEP  SHALLOW  
LOCATION: ELEVATION: 1405' WATERSHED: Turtletree Fork of Tenmile Creek QUADRANGLE: Big Isaac  
DISTRICT: Union  
SURFACE OWNER: Gerald & Louella Corder  
ROYALTY OWNER: Maude D. Day, et al; Orié Mitchell; Howard D. Nicholson, et al (2)  
PROPOSED WORK:  DRILL  CONVERT  DRILL DEEPER  FRACTURE OR STIMULATE  PLUG OFF OLD FORMATION  
 PERFORATE NEW FORMATION  OTHER PHYSICAL CHANGE IN WELL (SPECIFY) As-Drilled  
 PLUG AND ABANDON  CLEAN OUT AND REPLUG TARGET FORMATION: Marcellus Shale DEPTH: MD 15,328'  
WELL OPERATOR: Antero Resources Corporation DESIGNATED AGENT: Dianna Stamper - CT Corporation System  
ADDRESS: 1615 Wynkoop Street ADDRESS: 5400 D Big Tyler Road  
Denver, CO 80202 Charleston, WV 25313

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

DATE: November 4 20 14  
OPERATOR'S WELL NO. Hildred Unit 1H  
API WELL NO:  
47 - 033 - 05711  
STATE COUNTY PERMIT

12/05/2014  
ACREAGE: 82 31.5; 76  
54; 27.95; 2.33  
ACREAGE: 147; 48.69; 59; 165