

APPROVED

NAME: [Signature]

Page ___ of ___

DATE: 11/16/16

State of West Virginia

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

WR-35
Rev. 8/23/13

API 47-017-06559 County Doddridge District West Union
 Quad West Union 7.5' Pad Name Cofor Pad Field/Pool Name -----
 Farm name Coastal Forest Resources Company Well Number Morton 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 4350031m Easting 517235m
 Landing Point of Curve Northing 4349769.16m Easting 517247.34m
 Bottom Hole Northing 4346964m Easting 518384m

Elevation (ft) 1189' 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)
Air - Foam & 4% KCL
Mud - Polymer

Date permit issued 9/29/2014 Date drilling commenced 11/12/2014 Date drilling ceased 2/8/2015
 Date completion activities began 4/1/2016 Date completion activities ceased 7/1/2016
 Verbal plugging (Y/N) N/A Date permission granted N/A Granted by N/A

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

Freshwater depth(s) ft 87' Open mine(s) (Y/N) depths -----
 Salt water depth(s) ft 737', 750' Void(s) encountered (Y/N) depths No
 Coal depth(s) ft 367', 567' Cavern(s) encountered (Y/N) depths No
 Is coal being mined in area (Y/N) No

Reviewed by: _____

TX RB016/2016
12/15/16

RECEIVED
 Department of Environmental Protection
 Office of Oil and Gas
 SE No 29 2016
 Department of Environmental Protection

API 47-017 - 06559 Farm name Coastal Forest Resources Company Well number Morton 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	30"	20"	80'	New	133# J-55	N/A	Y
Surface	17-1/2"	13-3/8"	429'	New	48# J-55	N/A	Y
Coal							
Intermediate 1	12-1/4"	9-5/8"	2503'	New	36# J-55	N/A	Y
Intermediate 2							
Intermediate 3							
Production	8-3/4"/8-1/2"	5-1/2"	17422'	New	23# P-110	N/A	Y
Tubing		2-3/8"	6964'		4.7# N-80		
Packer type and depth set		N/A					

Comment Details _____

CEMENT DATA	Class/Type of Cement	Number of Sacks	Slurry wt (ppg)	Yield (ft ³ /sks)	Volume (ft ³)	Cement Top (MD)	WOC (hrs)
Conductor	Class A	381 sx	15.2	1.18	77	0'	8 Hrs.
Surface	Class A	507 sx	15.6	1.2	298	0'	8 Hrs.
Coal							
Intermediate 1	Class A	972 sx	15.6	1.18	784	0'	8 Hrs.
Intermediate 2							
Intermediate 3							
Production	Class H	1052 sx (Lead) 1818 sx (Tail)	14.5 (Lead), 15.2 (Tail)	1.3 (Lead), 1.86 (Tail)	3532	-500' into Intermediate Casing	8 Hrs.
Tubing							

Drillers TD (ft) 17422' MD, 6763' TVD (BHL); 6872' TVD (Deepest Point Drilled) Loggers TD (ft) 17375' MD
 Deepest formation penetrated Marcellus Plug back to (ft) N/A
 Plug back procedure N/A

Kick off depth (ft) 6200'

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 _____

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 _____

WAS WELL COMPLETED OPEN HOLE? Yes No DETAILS _____

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

SEPT 29 2016
 Environmental Protection

API 47- 017 - 06559 Farm name Coastal Forest Resources Company Well number Morton Unit 1H

<u>PRODUCING FORMATION(S)</u>	<u>DEPTHS</u>	
<u>Marcellus</u>	<u>6797' (TOP)</u> TVD	<u>6992' (TOP)</u> MD
_____	_____	_____
_____	_____	_____
_____	_____	_____

Please insert additional pages as applicable.

GAS TEST Build up Drawdown Open Flow OIL TEST Flow Pump

SHUT-IN PRESSURE Surface 3000 psi Bottom Hole --- psi DURATION OF TEST --- hrs

OPEN FLOW Gas 12399 mcfpd Oil 83 bpd NGL --- bpd Water 756 bpd GAS MEASURED BY Estimated Orifice Pilot

<u>LITHOLOGY/ FORMATION</u>	<u>TOP</u>		<u>BOTTOM</u>		<u>DESCRIBE ROCK TYPE AND RECORD QUANTITY AND TYPE OF FLUID (FRESHWATER, BRINE, OIL, GAS, H₂S, ETC)</u>
	<u>DEPTH IN FT NAME TVD</u>	<u>DEPTH IN FT TVD</u>	<u>DEPTH IN FT MD</u>	<u>DEPTH IN FT MD</u>	

***PLEASE SEE ATTACHED EXHIBIT 3**

Please insert additional pages as applicable.

Drilling Contractor Frontier Drilling, LLC
Address 562 Spring Run Rd. City Pennsboro State WV Zip 26415

Logging Company Allied Horizontal Wireline Services
Address 380 Bedford Rd. City North Huntingdon State PA Zip 15642

Cementing Company Nabors Completion & Production Services, Co.
Address 1650 Hackers Creek City Jane Lew State WV Zip 26378

Stimulating Company US Well Services
Address 533 Industrial Park Dr. City Jane Lew State WV Zip 26378

Please insert additional pages as applicable.

Completed by Kara Quackenbush Telephone 303-357-7233
Signature *Kara Quackenbush* Title Permitting Agent Date 9/26/2016

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

12/16/2016

EXHIBIT 1

Stage No.	Perforation Date	Perforated from MD ft.	Perforated to MD ft.	Number of Perforations	Formations
1	1-Apr-16	17,164	17,331	60	Marcellus
2	30-Apr-16	16,965	17,133	60	Marcellus
3	1-May-16	16,767	16,934	60	Marcellus
4	1-May-16	16,568	16,736	60	Marcellus
5	1-May-16	16,370	16,537	60	Marcellus
6	2-May-16	16,171	16,339	60	Marcellus
7	2-May-16	15,973	16,140	60	Marcellus
8	2-May-16	15,774	15,941	60	Marcellus
9	2-May-16	15,575	15,743	60	Marcellus
10	3-May-16	15,377	15,544	60	Marcellus
11	3-May-16	15,178	15,346	60	Marcellus
12	3-May-16	14,980	15,147	60	Marcellus
13	3-May-16	14,781	14,949	60	Marcellus
14	4-May-16	14,583	14,750	60	Marcellus
15	4-May-16	14,384	14,551	60	Marcellus
16	4-May-16	14,185	14,353	60	Marcellus
17	4-May-16	13,987	14,154	60	Marcellus
18	5-May-16	13,788	13,956	60	Marcellus
19	5-May-16	13,590	13,757	60	Marcellus
20	5-May-16	13,391	13,559	60	Marcellus
21	5-May-16	13,193	13,360	60	Marcellus
22	7-May-16	12,994	13,161	60	Marcellus
23	7-May-16	12,795	12,963	60	Marcellus
24	7-May-16	12,597	12,764	60	Marcellus
25	8-May-16	12,398	12,566	60	Marcellus
26	8-May-16	12,200	12,367	60	Marcellus
27	8-May-16	12,001	12,169	60	Marcellus
28	8-May-16	11,803	11,970	60	Marcellus
29	9-May-16	11,604	11,771	60	Marcellus
30	9-May-16	11,405	11,573	60	Marcellus
31	9-May-16	11,207	11,374	60	Marcellus
32	9-May-16	11,008	11,176	60	Marcellus
33	10-May-16	10,810	10,977	60	Marcellus
34	10-May-16	10,611	10,779	60	Marcellus
35	10-May-16	10,413	10,580	60	Marcellus
36	11-May-16	10,214	10,381	60	Marcellus
37	11-May-16	10,015	10,183	60	Marcellus
38	11-May-16	9,817	9,984	60	Marcellus
39	11-May-16	9,618	9,786	60	Marcellus
40	11-May-16	9,420	9,587	60	Marcellus
41	12-May-16	9,221	9,389	60	Marcellus
42	12-May-16	9,023	9,190	60	Marcellus
43	12-May-16	8,824	8,991	60	Marcellus
44	12-May-16	8,625	8,793	60	Marcellus
45	13-May-16	8,427	8,594	60	Marcellus
46	13-May-16	8,228	8,396	60	Marcellus
47	13-May-16	8,030	8,197	60	Marcellus
48	13-May-16	7,831	7,999	60	Marcellus
49	13-May-16	7,633	7,800	60	Marcellus
50	14-May-16	7,434	7,601	60	Marcellus
51	14-May-16	7,235	7,403	60	Marcellus
52	14-May-16	7,037	7,204	60	Marcellus

APPROVED
Oil and Gas
SEP 29 2016

Dept of
Protection

12/16/2016

EXHIBIT 2

Stage No.	Stimulations Date	Avg Pump Rate	Avg Treatment Pressure (PSI)	Max Breakdown Pressure (PSI)	ISIP (PSI)	Amount of Proppant (lbs)	Amount of Water (bbls)	Amount of Nitrogen/ other (units)
1	30-Apr-16	70.1	7,725	5,447	5,093	309,400	7,953	N/A
2	30-Apr-16	72.5	7,257	5,636	4,967	312,020	7,942	N/A
3	1-May-16	71.8	7,415	5,758	4,764	310,400	7,948	N/A
4	1-May-16	73.7	7,317	5,686	5,182	310,800	7,927	N/A
5	1-May-16	75.2	7,531	6,531	5,046	310,085	7,912	N/A
6	2-May-16	75.7	7,551	5,693	5,009	284,595	7,873	N/A
7	2-May-16	73.9	7,381	5,686	4,027	312,000	7,886	N/A
8	2-May-16	72.8	7,437	5,618	4,907	311,500	8,216	N/A
9	2-May-16	71.8	7,438	5,508	4,859	309,955	7,949	N/A
10	3-May-16	76.3	7,472	5,411	5,117	309,310	7,816	N/A
11	3-May-16	74.0	7,358	5,221	5,050	310,320	8,399	N/A
12	3-May-16	64.9	7,360	5,819	5,096	287,300	8,347	N/A
13	3-May-16	72.8	7,352	5,462	4,921	319,710	7,709	N/A
14	4-May-16	72.3	7,312	5,356	5,089	320,555	7,710	N/A
15	4-May-16	71.8	7,421	5,407	4,967	288,800	7,692	N/A
16	4-May-16	70.0	7,262	5,472	5,311	320,500	7,725	N/A
17	4-May-16	72.8	7,275	5,601	4,731	319,395	7,676	N/A
18	5-May-16	70.2	7,314	5,403	4,983	298,565	7,596	N/A
19	5-May-16	71.5	7,160	5,482	5,457	319,660	7,690	N/A
20	5-May-16	70.3	7,193	5,504	4,781	320,000	7,724	N/A
21	5-May-16	71.3	7,499	5,611	4,745	311,030	7,804	N/A
22	7-May-16	71.3	6,997	5,575	5,032	320,300	7,686	N/A
23	7-May-16	72.5	6,918	5,686	5,057	320,900	7,652	N/A
24	7-May-16	70.6	6,846	5,463	5,089	320,770	7,618	N/A
25	8-May-16	73.5	6,738	5,561	5,008	320,000	7,615	N/A
26	8-May-16	71.2	6,652	5,550	4,907	322,500	7,653	N/A
27	8-May-16	72.0	6,675	6,191	4,917	322,200	7,661	N/A
28	8-May-16	72.7	6,720	5,715	5,109	320,550	7,593	N/A
29	9-May-16	72.5	6,798	6,001	5,054	321,590	7,589	N/A
30	9-May-16	72.0	7,041	5,422	4,685	321,100	7,657	N/A
31	9-May-16	71.9	7,073	5,425	4,570	320,600	7,635	N/A
32	9-May-16	66.0	6,941	5,283	5,066	278,370	8,992	N/A
33	10-May-16	72.2	6,841	5,243	5,159	320,890	7,537	N/A
34	10-May-16	69.7	6,664	5,436	4,953	321,200	8,577	N/A
35	10-May-16	72.2	6,951	5,427	5,144	320,450	7,539	N/A
36	11-May-16	72.3	6,756	5,482	4,992	320,530	7,527	N/A
37	11-May-16	68.7	6,813	5,887	5,225	320,100	7,546	N/A
38	11-May-16	70.9	6,917	5,919	5,132	320,100	7,558	N/A
39	11-May-16	72.1	6,817	5,815	5,221	320,430	7,479	N/A
40	11-May-16	71.7	6,591	5,672	4,667	319,320	7,805	N/A
41	12-May-16	72.8	6,597	5,273	5,170	318,910	7,473	N/A
42	12-May-16	72.0	6,804	5,704	4,066	318,500	7,475	N/A
43	12-May-16	72.2	6,734	5,711	4,331	320,500	7,477	N/A
44	12-May-16	72.0	7,121	6,423	5,393	319,900	7,476	N/A
45	13-May-16	69.6	7,184	6,083	5,590	256,000	8,352	N/A
46	13-May-16	70.2	6,841	5,468	5,382	318,800	7,429	N/A
47	13-May-16	70.0	6,779	5,754	5,646	319,260	7,441	N/A
48	13-May-16	73.4	6,746	5,697	5,329	318,000	7,443	N/A
49	13-May-16	73.9	6,864	5,937	5,547	318,800	7,440	N/A
50	14-May-16	73.7	6,794	5,955	5,658	319,100	7,440	N/A
51	14-May-16	71.9	6,619	6,080	5,618	319,750	7,385	N/A
52	14-May-16	71.9	6,673	6,716	4,503	320,780	7,448	N/A
AVG=		71.8	7,049	5,671	5,025	16,316,100	7,744	TOTAL

RECEIVED
Oil and Gas
SEP 29 2016
Department of
Environmental Protection

EXHIBIT 3

LITHOLOGY/ FORMATION	TOP DEPTH (TVD)	BOTTOM DEPTH (TVD)	TOP DEPTH (MD)	BOTTOM DEPTH (MD)
	From Surface	From Surface	From Surface	From Surface
Fresh Water	87'	N/A	87'	N/A
Sandstone	0	107	0	107
Shale	est. 107	147	est. 107	147
Sandstone	est. 147	205	est. 147	205
Shale	est. 205	367	est. 205	367
Sandstone and Coal	est. 367	447	est. 367	447
Shale	est. 447	485	est. 447	485
Sandstone	est. 485	507	est. 485	507
Shale	est. 507	567	est. 507	567
Coal & Shale	est. 567	587	est. 567	587
Shale	est. 587	687	est. 587	687
Sandstone/Siltstone	est. 687	827	est. 687	827
Shale	est. 827	1007	est. 827	1007
Sandstone	est. 1007	1025	est. 1007	1025
Shale	est. 1025	1107	est. 1025	1107
Sandstone	est. 1107	1147	est. 1107	1147
Shale	est. 1147	1247	est. 1147	1247
Shale and Trace Coal	est. 1247	1267	est. 1247	1267
Shale	est. 1267	1327	est. 1267	1327
Sandstone	est. 1327	1346	est. 1327	1346
Shale	est. 1346	1467	est. 1346	1467
Sandstone/Siltstone	est. 1467	1567	est. 1467	1567
Siltstone/Shale/Trace coal	est. 1567	1666	est. 1567	1666
Sandstone	est. 1666	1727	est. 1666	1727
Shale/Sandstone/Trace Coal	est. 1727	1846	est. 1727	1846
Shale	est. 1846	1988	est. 1846	1988
Siltstone/Shale/Sandstone	est. 1988	2125	est. 1988	2125
Shale/Limestone	est. 2125	2130	est. 2125	2128
Big Lime	2130	2627	2128	2629
Gantz Sand	2627	2743	2629	2746
Fifty Foot Sandstone	2743	2830	2746	2833
Gordon	2830	3163	2833	3166
Fifth Sandstone	3163	3964	3166	3966
Speechley	3964	4234	3966	4237
Baltown	4234	4679	4237	4681
Bradford	4679	5128	4681	5130
Benson	5128	5374	5130	5377
Alexander	5374	5573	5377	5576
Elk	5573	6079	5576	6082
Rhinestreet	6079	6415	6082	6424
Sycamore	6415	6594	6424	6629
Middlesex	6594	6723	6629	6821
Burkett	6723	6751	6821	6878
Tully	6751	6797	6878	6992 ^{1/4} Gas
Marcellus	6797	NA	6992	SEP 29 2016 NA

*Please note Antero determines formation tops based on mud logs that are only run on one well on a multi-well pad. The measured depth (MD) data on subsequent wells may be slightly different due to the well's unique departure.

Hydraulic Fracturing Fluid Product Component Information Disclosure

Job Start Date:	4/30/2016
Job End Date:	5/14/2016
State:	West Virginia
County:	Doddridge
API Number:	47-017-06559-00-00
Operator Name:	Antero Resources Corporation
Well Name and Number:	Morton 1H
Latitude:	39.17578700
Longitude:	-80.48010400
Datum:	NAD27
Federal Well:	NO
Indian Well:	NO
True Vertical Depth:	6,871
Total Base Water Volume (gal):	17,706,941
Total Base Non Water Volume:	0



Hydraulic Fracturing Fluid Composition:

Trade Name	Supplier	Purpose	Ingredients	Chemical Abstract Service Number (CAS #)	Maximum Ingredient Concentration in Additive (% by mass)**	Maximum Ingredient Concentration in HF Fluid (% by mass)**	Comments
Water	Antero Resources	Base Fluid					
			Water	7732-18-5	100.00000	89.71918	
Sand	U.S. Well Services, LLC	Proppant					
			Crystalline Silica, quartz	14808-60-7	100.00000	9.91270	
HCL Acid (12.6%-18.0%)	U.S. Well Services, LLC	Bulk Acid					
			Water	7732-18-5	87.50000	0.13509	
			Hydrogen Chloride	7647-01-0	18.00000	0.03227	
LGC-15	U.S. Well Services	Gelling Agents					
			Guar Gum	9000-30-0	50.00000	0.04973	
			Petroleum Distillates	64742-47-8	60.00000	0.04710	
			Suspending agent (solid)	14808-60-7	3.00000	0.00761	
			Surfactant	68439-51-0	3.00000	0.00298	
WFRA-405	U.S. Well Services	Friction Reducer					
			Water	7732-18-5	60.00000	0.03517	
			2-Propenoic acid, polymer with 2-propenamide	9003-06-9	30.00000	0.01758	
			Hydrated light distillate (petroleum)	64742-47-8	30.00000	0.01416	

			Ethoxylated alcohol blend	68002-97-1	4.00000	0.00234
SI-1100s	U.S. Well Services	Scale Inhibitor				
			Water	7732-18-5	80.00000	0.01026
			Copolymer of Maleic and Acrylic acid	52255-49-9	10.00000	0.00151
			Potassium salt of diethylene triamine penta (methylene phosphonic acid)	15827-60-8	7.50000	0.00130
			Hexamethylene tramine penta (methylene phosphonic acid)	34690-00-1	5.00000	0.00083
			Phosphino carboxylic acid polymer	71050-62-9	5.00000	0.00083
			Hexamethylene diamine penta (methylene phosphonic acid)	23605-74-5	2.00000	0.00033
K-BAC 1020	U.S. Well Services	Anti-Bacterial Agent				
			2,2-dibromo-3-nitrilopropionamide	10222-01-2	20.00000	0.00430
			Deionized Water	7732-18-5	28.00000	0.00246
AP One	U.S. Well Services	Gel Breakers				
			Ammonium Persulfate	7727-54-0	100.00000	0.00192
AI-302	U.S. Well Services	Acid Corrosion Inhibitors				
			Water	7732-18-5	95.00000	0.00029
			2-Propyn-1-olcompound with methyloxirane	38172-91-7	15.00000	0.00005

Ingredients shown above are subject to 29 CFR 1910.1200(i) and appear on Material Safety Data Sheets (MSDS). Ingredients shown below are Non-MSDS.

* Total Water Volume sources may include fresh water, produced water, and/or recycled water

** Information is based on the maximum potential for concentration and thus the total may be over 100%

Note: For Field Development Products (products that begin with FDP), MSDS level only information has been provided.

Ingredient information for chemicals subject to 29 CFR 1910.1200(i) and Appendix D are obtained from suppliers Material Safety Data Sheets (MSDS)

LATITUDE 39°20'00" 2,441'

LATITUDE 39°17'30"

LONGITUDE 80°45'00"

12,357'

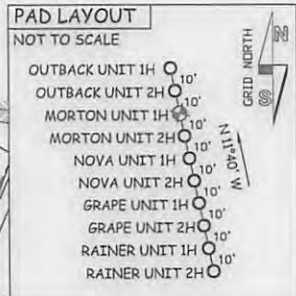
7,255' TO BOTTOM HOLE

LONGITUDE 80°47'30"

Antero Resources Corporation
Well No. Morton Unit 1H
47-017-06559 (AS DRILLED)

AS DRILLED DATA:
WELL 1H TOP HOLE INFORMATION:
N: 293,823ft E: 1,632,030ft
LAT: 39°17'57.87" LON: 80°48'01.05"
BOTTOM HOLE INFORMATION:
N: 283,696ft E: 1,635,634ft
LAT: 39°16'18.29" LON: 80°47'13.36"
WEST VIRGINIA COORDINATE SYSTEM OF 1927 NORTH ZONE. ZONE WAS DERIVED FROM MEASUREMENTS TAKEN WITH TRIMBLE GEOXT SUBMETER MAPPING GRADE GPS UNIT. PLAT ORIENTATION, CORNER, AND WELL REFERENCE TIE LINES ARE BASED ON GRID NORTH.

(NAD) 83 (UTM) ZONE 17 COORDS:
WELL 1H TOP HOLE INFORMATION:
N: 4,350,031m E: 517,235m
BOTTOM HOLE INFORMATION:
N: 4,346,964m E: 518,384m



NOTE
1. NO OCCUPIED DWELLINGS OR BUILDINGS TWO THOUSAND FIVE HUNDRED (2,500) SQUARE FEET OR LARGER USED TO HOUSE OR SHELTER DAIRY CATTLE OR POULTRY HUSBANDRY ARE LOCATED WITHIN SIX HUNDRED TWENTY-FIVE (625) FEET OF THE CENTER OF THE WELL PAD.
2. TOP HOLE DATA SHOWN HEREON WAS PROVIDED BY ALLEGHENY SURVEYS, INC.
3. AS DRILLED DATA WAS PROVIDED BY ANTERO RESOURCES CORPORATION.
4. WLS IS NOT CERTIFYING THE DATA AND INFORMATION PROVIDED LISTED IN NOTES 2 AND 3, ONLY THE RELATIONSHIP TO THE DATA AND INFORMATION PROVIDED TO THE LEASE SURVEYOR.
5. WLS IS BY NO MEANS RESPONSIBLE FOR ANY ERRORS OR INACCURACIES WITH THE DATA AND INFORMATION THAT HAS BEEN PROVIDED.
6. THIS WELLBORE IS SUBJECT TO THAT 60 FOOT STRIP OF GROUND KNOWN AS THE OLD NORTHWESTERN TURNPIKE.



NOTE:
NO WATER WELLS WERE LOCATED WITHIN 2000' OF THE CENTER OF PAD

LEGEND
--- Surface Owner Boundary Lines +/-
--- Interior Surface Tracts +/-
--- Existing Fence
⊕ Found monument, as noted
○ Proposed Well Path
⊗ As Drilled Well Path

DATE 07/10/15
OPERATOR'S WELL# MORTON UNIT #1H
API WELL # 47 - 017 - 06559
STATE COUNTY PERMIT

JOB # 14-038WA
DRAWING # MORTON1HAD
SCALE 1" = 1000'
MINIMUM DEGREE OF ACCURACY SUBMETER
PROVEN SOURCE OF ELEV. SUBMETER MAPPING GRADE GPS



STATE OF WEST VIRGINIA, DIVISION OF ENVIRONMENTAL PROTECTION, OFFICE OF OIL AND GAS
WILLOW LAND SURVEYING PLLC
220 MASONIC AVE. PENNSBORO WEST VIRGINIA 26415

STATE OF WEST VIRGINIA DEPARTMENT OF ENERGY DIVISION OF OIL AND GAS
WELL TYPE: OIL GAS LIQUID INJECTION WASTE DISPOSAL
(IF "GAS") PRODUCTION STORAGE DEEP SHALLOW
LOCATION: ELEVATION 1,222' ORIGINAL - 1,189' AS DRILLED WATERSHED HEADWATERS MIDDLE ISLAND CREEK

QUADRANGLE WEST UNION 7.5' DISTRICT WEST UNION COUNTY DODDRIDGE
SURFACE OWNER COASTAL FOREST RESOURCES COMPANY ACREAGE 102 ACRES +/-
OIL & GAS ROYALTY OWNER ALICE H. MAXWELL ET AL; JOHN B. EDWARDS ET UX; J.M.L. SMITH; LEASE ACREAGE 420 AC±; 92 AC±; 404 AC±;
WVSRA; KEENE GARNEE ET AL; LAURIE GIVENS; DONALD BARKER ET AL; WM. WOLFE 301.19 AC±; 404 AC±; 71.25 AC±; 54.5 AC±; 50.68 AC±
PROPOSED WORK: DRILL CONVERT DRILL DEEPER REDRILL FRACTURE OR STIMULATE
PLUG OFF OLD FORMATION PERFORATE NEW FORMATION OTHER PHYSICAL CHANGE IN WELL (SPECIFY) (X) AS DRILLED
TARGET FORMATION MARCELLUS ESTIMATED DEPTH 6,763' TVD 17,422' MD
WELL OPERATOR ANTERO RESOURCES CORP. DESIGNATED AGENT DIANNA STAMPER - CT CORPORATION SYSTEM
ADDRESS 1615 WYNKOOP STREET ADDRESS 5400 D BIG TYLER ROAD CHARLESTON, WV 25313
FORM WW-6 DENVER, CO 80202

12/16/2016

LATITUDE 39°20'00" 2,441'

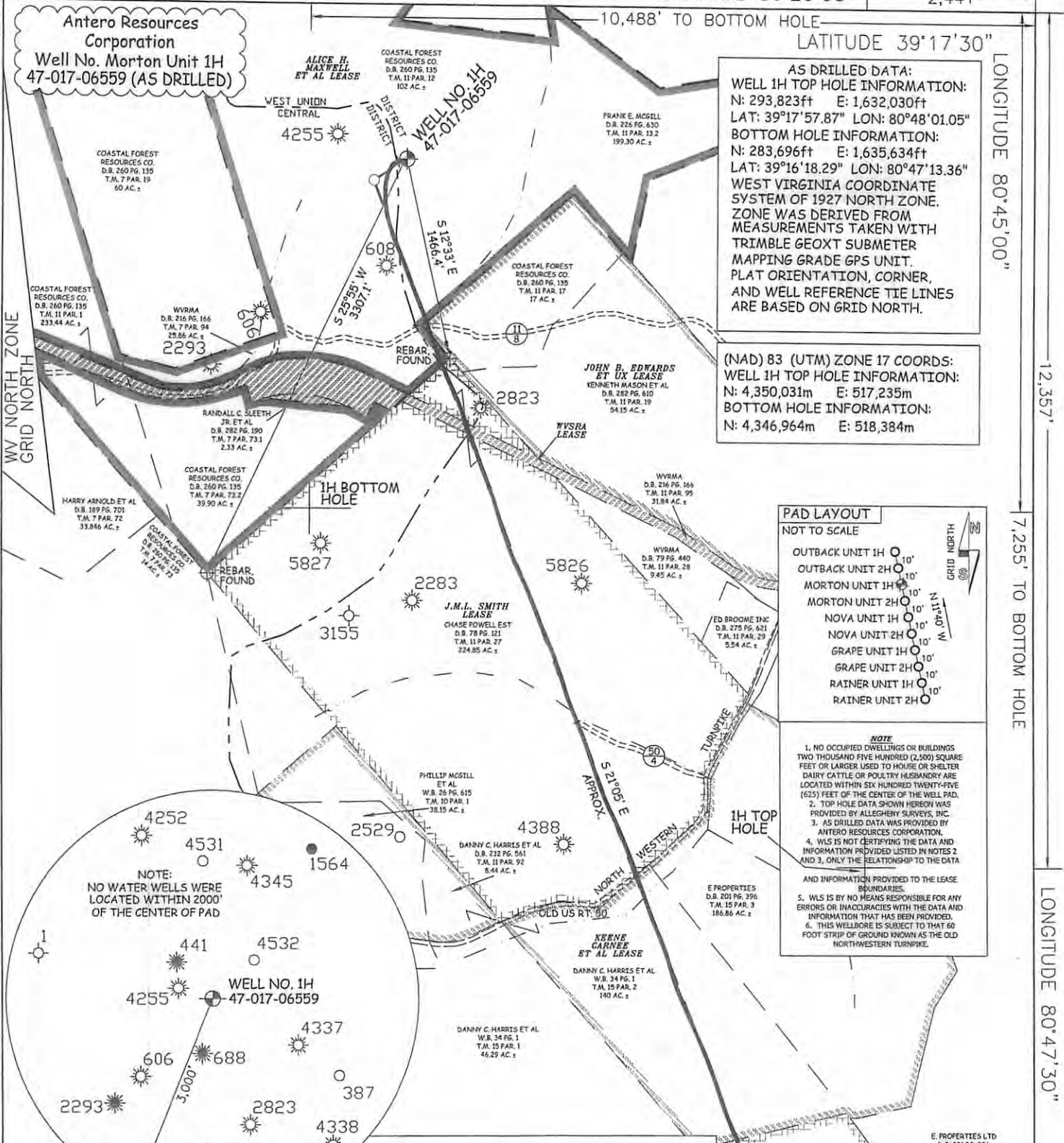
LATITUDE 39°17'30"

LONGITUDE 80°45'00"

12,357'

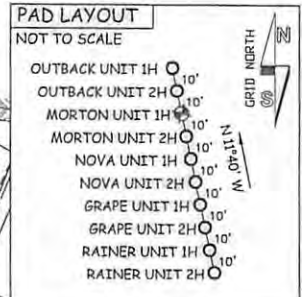
7,255' TO BOTTOM HOLE

LONGITUDE 80°47'30"



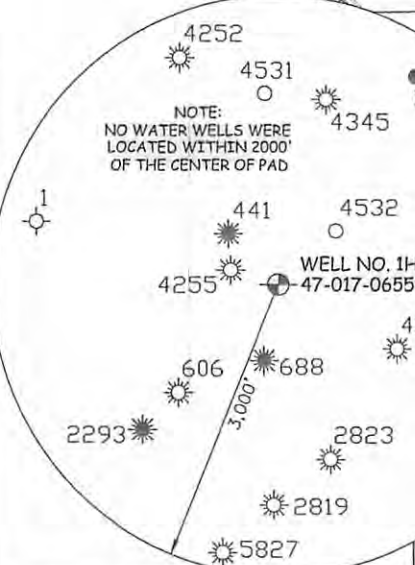
AS DRILLED DATA:
 WELL 1H TOP HOLE INFORMATION:
 N: 293,823ft E: 1,632,030ft
 LAT: 39°17'57.87" LON: 80°48'01.05"
 BOTTOM HOLE INFORMATION:
 N: 283,696ft E: 1,635,634ft
 LAT: 39°16'18.29" LON: 80°47'13.36"
 WEST VIRGINIA COORDINATE SYSTEM OF 1927 NORTH ZONE. ZONE WAS DERIVED FROM MEASUREMENTS TAKEN WITH TRIMBLE GEOXT SUBMETER MAPPING GRADE GPS UNIT. PLAT ORIENTATION, CORNER, AND WELL REFERENCE TIE LINES ARE BASED ON GRID NORTH.

(NAD) 83 (UTM) ZONE 17 COORDS:
 WELL 1H TOP HOLE INFORMATION:
 N: 4,350,031m E: 517,235m
 BOTTOM HOLE INFORMATION:
 N: 4,346,964m E: 518,384m



NOTE

- NO OCCUPIED DWELLINGS OR BUILDINGS TWO THOUSAND FIVE HUNDRED (2,500) SQUARE FEET OR LARGER USED TO HOUSE OR SHELTER DAIRY CATTLE OR POULTRY HUSBANDRY ARE LOCATED WITHIN SIX HUNDRED TWENTY-FIVE (625) FEET OF THE CENTER OF THE WELL PAD.
- TOP HOLE DATA SHOWN HEREON WAS PROVIDED BY ALLEGHENY SURVEYS, INC.
- AS DRILLED DATA WAS PROVIDED BY ANTERO RESOURCES CORPORATION.
- WLS IS NOT CERTIFYING THE DATA AND INFORMATION PROVIDED LISTED IN NOTES 2 AND 3, ONLY THE RELATIONSHIP TO THE DATA AND INFORMATION PROVIDED TO THE LEASE BOUNDARIES.
- WLS IS BY NO MEANS RESPONSIBLE FOR ANY ERRORS OR INACCURACIES WITH THE DATA AND INFORMATION THAT HAS BEEN PROVIDED.
- THIS WELLBORE IS SUBJECT TO THAT 60 FOOT STRIP OF GROUND KNOWN AS THE OLD NORTHWESTERN TURNPIKE.



LEGEND

- Surface Owner Boundary Lines +/-
- - - Interior Surface Tracts +/-
- X Existing Fence
- ⊕ Found monument, as noted
- ⊗ Proposed Well Path
- ⊗ As Drilled Well Path

DATE 07/10/15
 OPERATOR'S WELL# MORTON UNIT #1H
 API WELL # 47 - 017 - 06559
 STATE COUNTY PERMIT

JOB # 14-038WA
 DRAWING # MORTON1HAD
 SCALE 1" = 1000'
 MINIMUM DEGREE OF ACCURACY SUBMETER
 PROVEN SOURCE OF ELEV. SUBMETER MAPPING GRADE GPS



STATE OF WEST VIRGINIA, DIVISION OF ENVIRONMENTAL PROTECTION, OFFICE OF OIL AND GAS
 WILLOW LAND SURVEYING PLLC
 220 MASONIC AVE. PENNSBORO WEST VIRGINIA 26415

STATE OF WEST VIRGINIA DEPARTMENT OF ENERGY DIVISION OF OIL AND GAS
 WELL TYPE: OIL ___ GAS LIQUID INJECTION ___ WASTE DISPOSAL ___
 (IF "GAS") PRODUCTION STORAGE ___ DEEP ___ SHALLOW
 LOCATION: ELEVATION 1,222' ORIGINAL - 1,189' AS DRILLED WATERSHED HEADWATERS MIDDLE ISLAND CREEK

QUADRANGLE WEST UNION 7.5' DISTRICT WEST UNION COUNTY DODDRIDGE
 SURFACE OWNER COASTAL FOREST RESOURCES COMPANY ACREAGE 102 ACRES +/-
 OIL & GAS ROYALTY OWNER ALICE H. MAXWELL ET AL; JOHN B. EDWARDS ET UX; J.M.L. SMITH; LEASE ACREAGE 420 AC±; 92 AC±; 404 AC±; WVSRA; KEENE GARNEE ET AL; LAURIE GIVENS; DONALD BARKER ET AL; WM. WOLFE 301.19 AC±; 404 AC±; 71.25 AC±; 54.5 AC±; 50.68 AC±
 PROPOSED WORK: DRILL ___ CONVERT ___ DRILL DEEPER ___ REDRILL ___ FRACTURE OR STIMULATE ___ PLUG OFF OLD FORMATION ___ PERFORATE NEW FORMATION ___ OTHER PHYSICAL CHANGE IN WELL (SPECIFY) AS DRILLED ___ PLUG & ABANDON ___ CLEAN OUT & REPLUG ___
 TARGET FORMATION MARCELLUS ESTIMATED DEPTH 6,763' TVD 17,422' MD
 WELL OPERATOR ANTERO RESOURCES CORP. DESIGNATED AGENT DIANNA STAMPER - CT CORPORATION SYSTEM
 ADDRESS 1615 WYNKOOP STREET ADDRESS 5400 D BIG TYLER ROAD
 FORM WW-6 DENVER, CO 80202 CHARLESTON, WV 25313

12/16/2016