05/31/2019

WR-35
Rev. 8/23/13

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

API 47 - 095 - 02367 County Tyler District Ellsworth
Quad Shirley 7.5' Pad Name Weigle East Pad Field/Pool Name -----
Farm name Edwin C. Weigle Well Number Owens Unit 2H
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 4368528m Easting 512691m
Landing Point of Curve Northing 4368752.97m Easting 513008.39m
Bottom Hole Northing 4371303m Easting 512097m

Elevation (ft) 812' 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

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Mud Type(s) and Additive(s)
Air - Foam & 4% KCL
Mud - Polymer

Date permit issued 8/11/2016 Date drilling commenced 8/17/2016 Date drilling ceased 10/17/2016
Date completion activities began 5/13/2018 Date completion activities ceased 9/11/2018
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 9', 194', 366' Open mine(s) (Y/N) depths No
Salt water depth(s) ft 1136', 1931' Void(s) encountered (Y/N) depths No
Coal depth(s) ft 1380', 1461' Cavern(s) encountered (Y/N) depths No
Is coal being mined in area (Y/N) No

Reviewed

Reviewed by:
4/23/2019

API 47- 095 - 02367 Farm name Edwin C. Weigle Well number Owens Unit 2H

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"	60'	New	94#, H-40	N/A	Y
Surface	17-1/2"	13-3/8"	529'	New	48#, H-40	N/A	Y
Coal							
Intermediate 1	12-1/4"	9-5/8"	2526'	New	36#, J-55	N/A	Y
Intermediate 2							
Intermediate 3							
Production	8-3/4"/8-1/2"	5-1/2"	15781'	New	23#, P-110	N/A	Y
Tubing		2-3/8"	6956'		4.7#, P-110		
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	155 sx	15.6	1.18	120	0'	8 Hrs.
Surface	Class A	635 sx	15.6	1.18	826	0'	8 Hrs.
Coal							
Intermediate 1	Class A	1001 sx	15.6	1.18	1181	0'	8 Hrs.
Intermediate 2							
Intermediate 3							
Production	Class H	695 sx (Lead) 1322 sx (Tail)	13.5 (Lead), 15.2 (Tail)	1.62 (Load), 1.83 (Tail)	3774	~500' into Intermediate Casing	8 Hrs.
Tubing							

Drillers TD (ft) 15781' MD, 6294' TVD (BHL), 6312' (Deepest Point Drilled) Loggers TD (ft) 15781' MD

Deepest formation penetrated Marcellus Plug back to (ft) N/A

Plug back procedure N/A

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Kick off depth (ft) 6040'

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

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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 N/A

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PERFORATION RECORD

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

*PLEASE SEE ATTACHED EXHIBIT 1

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)

*PLEASE SEE ATTACHED EXHIBIT 2

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Please insert additional pages as applicable.

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PRODUCING FORMATION(S)	DEPTHS			
Marcellus	6307' (TOP)	TVD	6677' (TOP)	MD

Please insert additional pages as applicable.

GAS TEST ☐ Build up ☐ Drawdown ■ Open Flow OIL TEST ■ Flow ☐ Pump

SHUT-IN PRESSURE Surface 2800 psi Bottom Hole --- psi DURATION OF TEST --- hrs

OPEN FLOW Gas 6974 mcfpd Oil 150 bpd NGL --- bpd Water 368 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_2S, ETC)

*PLEASE SEE ATTACHED EXHIBIT 3

Please insert additional pages as applicable.

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Drilling Contractor Precision Drilling Company, LP
Address 2640 Reach Road City Williamsport State PA Zip 17701

Logging Company Allied Horizontal Wireline Service
Address 381 Colonial Manor Road City North Huntington State PA Zip 15642

Cementing Company C&J Energy Services
Address 1650 Hackers Creek City Jane Lew State WV Zip 26378

Stimulating Company Baker Hughes
Address 837 Philippi Pike City Clarksburg State WV Zip 26301

Please insert additional pages as applicable.

Completed by Megan Griffith Telephone 303-357-7223
Signature _____ Title Permitting Agent Date _____

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

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API 47-095-02367 Farm Name Edwin C. Weigle Well Number Owens Unit 2H					
EXHIBIT 1					
Stage No.	Perforation Date	Perforated from MD ft.	Perforated to MD ft.	Number of Perforations	Formations
1	7/7/2018	15510	15680	60	Marcellus
2	7/8/2018	15310	15478	60	Marcellus
3	7/8/2018	15110	15278	60	Marcellus
4	7/9/2018	14910	15078	60	Marcellus
5	7/9/2018	14710	14879	60	Marcellus
6	7/10/2018	14510	14679	60	Marcellus
7	7/10/2018	14310	14479	60	Marcellus
8	7/11/2018	14110	14279	60	Marcellus
9	7/11/2018	13910	14079	60	Marcellus
10	7/12/2018	13710	13879	60	Marcellus
11	7/12/2018	13510	13679	60	Marcellus
12	7/13/2018	13310	13479	60	Marcellus
13	7/13/2018	13110	13279	60	Marcellus
14	7/14/2018	12910	13079	60	Marcellus
15	7/14/2018	12710	12879	60	Marcellus
16	7/15/2018	12510	12679	60	Marcellus
17	7/16/2018	12310	12479	60	Marcellus
18	7/16/2018	12111	12279	60	Marcellus
19	7/17/2018	11911	12079	60	Marcellus
20	7/17/2018	11711	11879	60	Marcellus
21	7/18/2018	11511	11679	60	Marcellus
22	7/18/2018	11311	11479	60	Marcellus
23	7/19/2018	11111	11279	60	Marcellus
24	7/20/2018	10911	11079	60	Marcellus
25	7/20/2018	10711	10879	60	Marcellus
26	7/21/2018	10511	10680	60	Marcellus
27	7/21/2018	10311	10480	60	Marcellus
28	7/22/2018	10111	10280	60	Marcellus
29	7/22/2018	9911	10080	60	Marcellus
30	7/23/2018	9711	9880	60	Marcellus
31	7/23/2018	9511	9680	60	Marcellus
32	7/24/2018	9311	9480	60	Marcellus
33	7/24/2018	9111	9280	60	Marcellus
34	7/24/2018	8911	9080	60	Marcellus
35	7/25/2018	8711	8880	60	Marcellus
36	7/25/2018	8511	8680	60	Marcellus
37	7/26/2018	8311	8480	60	Marcellus
38	7/26/2018	8112	8280	60	Marcellus
39	7/27/2018	7912	8080	60	Marcellus
40	7/27/2018	7712	7880	60	Marcellus
41	7/28/2018	7512	7680	60	Marcellus
42	7/28/2018	7312	7480	60	Marcellus
43	7/29/2018	7112	7280	60	Marcellus
44	7/29/2018	6912	7080	60	Marcellus
45	7/29/2018	6712	6880	60	Marcellus

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API 47-095-02367 Farm Name Edwin C. Weigle Well Number Owens Unit 2H

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	7/7/2018	75.9	7594	5900	4759	313000	8477	N/A
2	7/8/2018	74.9	7317	5706	4711	405100	8076	N/A
3	7/8/2018	76.3	7224	5836	4268	405250	7707	N/A
4	7/9/2018	74	7125	5861	4081	404750	7637	N/A
5	7/9/2018	74.8	7256	5762	4006	404800	7619	N/A
6	7/10/2018	74.2	7222	5833	4178	405500	7905	N/A
7	7/10/2018	75.2	7149	6544	4025	405200	7602	N/A
8	7/11/2018	76.2	7248	6031	4103	405750	8473	N/A
9	7/11/2018	78.7	7355	5885	4018	405200	7716	N/A
10	7/12/2018	78.1	7079	5948	4086	404800	7504	N/A
11	7/12/2018	76.6	7109	5458	3961	404650	7743	N/A
12	7/13/2018	76.3	6966	6160	3978	404850	7621	N/A
13	7/13/2018	77.5	6944	5874	3949	404800	7543	N/A
14	7/14/2018	75.9	6859	5911	3795	404900	7511	N/A
15	7/14/2018	75.3	6681	5969	3880	404850	7552	N/A
16	7/15/2018	75.3	6993	6203	3841	405150	7525	N/A
17	7/16/2018	71.3	7122	5518	3973	405900	9217	N/A
18	7/16/2018	73	6963	6521	4120	405350	7613	N/A
19	7/17/2018	74.3	7174	6362	3997	406250	7618	N/A
20	7/17/2018	73.7	7066	6452	3915	404750	7594	N/A
21	7/18/2018	73.8	6727	6431	3916	405400	7629	N/A
22	7/18/2018	74.4	6846	5648	3784	405950	8362	N/A
23	7/19/2018	70.3	6758	5992	3879	339700	8348	N/A
24	7/20/2018	74.9	7096	6051	3677	425250	7620	N/A
25	7/20/2018	74.2	6947.7	6616	3926	420100	7954	N/A
26	7/21/2018	67.8	7894	6691	4449	405300	10802	N/A
27	7/21/2018	75.7	7315.2	5889	4002	414900	7520	N/A
28	7/22/2018	74.7	7063.8	5802	3990	419650	7652	N/A
29	7/22/2018	68.3	7516	5449	4114	405000	7710	N/A
30	7/23/2018	69.6	6693	5915	3866	404950	7398	N/A
31	7/23/2018	74.9	6763.1	5461	4163	405150	7349	N/A
32	7/24/2018	75.5	6617	5961	4038	404850	7215	N/A
33	7/24/2018	73.7	6586	5721	4164	405050	7310	N/A
34	7/24/2018	73.9	6584.7	5431	4052	404400	7322	N/A
35	7/25/2018	75.7	6506	6368	4059	405000	7249	N/A
36	7/25/2018	77.5	6582.8	6062	3883	404850	7257	N/A
37	7/26/2018	74.22	6378	6366	3982	404850	7298	N/A
38	7/26/2018	74.2	6371.2	6312	3840	404850	7273	N/A
39	7/27/2018	73.9	6286	5743	3947	405150	7249	N/A
40	7/27/2018	73.8	6581.1	6519	4387	404750	9126	N/A
41	7/28/2018	73.3	6420.5	6130	4372	404800	7481	N/A
42	7/28/2018	74.5	6504	6444	4366	405000	7335	N/A
43	7/29/2018	73.1	6548.1	6047	4303	405250	7305	N/A
44	7/29/2018	72.6	6281	6096	4276	404900	7346	N/A
45	7/29/2018	76.1	6520	6005	4626	405200	7375	N/A
	AVG=	74.4	6,907	6,020	4,082	18,131,050	348,738	TOTAL

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API 47-095-02367 Farm Name Edwin C. Weigle Well Number Owens Unit 2H				
EXHIBIT 3				
LITHOLOGY/ FORMATION	TOP DEPTH (TVD) From Surface	BOTTOM DEPTH (TVD) From Surface	TOP DEPTH (MD) From Surface	BOTTOM DEPTH (MD) From Surface
Siltstone	0	221	0	221
Siltstone & Coal	221	269	221	269
Siltstone	269	405	269	405
Sandstone w/trace Coal	405	536	405	536
Shale w/trace Coal	536	561	536	561
Shale w/trace Coal	561	761	561	761
Siltstone	761	801	761	801
Shale w/trace Coal	801	941	801	941
Siltstone	941	1,133	941	1,133
Sandstone w/trace Coal	1,133	1,195	1,133	1,195
Siltstone	1,195	1,231	1,195	1,231
Sandstone w/trace Coal	1,231	1,311	1,231	1,311
Siltstone	1,311	1,721	1,311	1,723
Big Lime	1,671	1,810	1,686	1,830
Big Injun	1,810	2,289	1,830	2,330
Gantz Sand	2,289	2,464	2,330	2,509
Fifty Food Sandstone	2,464	2,596	2,509	2,643
Gordon	2,596	2,927	2,643	2,983
Fifth Sandstone	2,927	2,975	2,983	3,032
Bayard	2,975	3,324	3,032	3,393
Warren	3,324	3,735	3,393	3,819
Speechley	3,735	4,420	3,819	4,572
Balltown	4,015	4,819	4,106	4,943
Bradford	4,420	4,819	4,572	4,943
Benson	4,819	5,071	4,943	5,203
Alexander	5,071	5,205	5,203	5,340
Elk	5,205	5,634	5,340	5,782
Rhinestreet	5,615	5,970	5,763	6,135
Sycamore	5,970	6,145	6,135	6,353
Middlesex	6,145	6,238	6,353	6,504
Burkett	6,238	6,266	6,504	6,561
Tully	6,266	6,307	6,561	6,677
Marcellus	6,307	NA	6,677	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:	7/7/2018
Job End Date:	7/29/2018
State:	West Virginia
County:	Tyler
API Number:	47-095-02367-00-00
Operator Name:	Antero Resources Corporation
Well Name and Number:	Owens Unit 2H
Latitude:	39.46616100
Longitude:	-80.85264200
Datum:	NAD83
Federal Well:	NO
Indian Well:	NO
True Vertical Depth:	6,296
Total Base Water Volume (gal):	15,093,209
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	Supplied by Operator	Base Fluid					
			Water	7732-18-5	70.00000	87.05863	
Sand (Proppant)	CWS	Propping Agent					
				Listed Below			

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DWP-111	CWS	Gel Slurry					
				Listed Below			
SANIFRAC 8844	CWS	Biocide					
				Listed Below			
DWP-641	CWS	Friction Reducer					
				Listed Below			
DAP-902	CWS	Scale Inhibitor					
				Listed Below			
Hydrochloric Acid	CWS	Clean Perforations					
				Listed Below			
CI-9100G	CWS	Corrosion Inhibitor					
				Listed Below			
DAP-103	CWS	Iron Control					
				Listed Below			
Calbreak 5501	CWS	Breaker					
				Listed Below			
Other Chemical	Listed Above	See Trade Name (s) List					

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				Listed Below			
Items above are Trade Names with the exception of Base Water . Items below are the individual ingredients.							
			Crystalline silica (Quartz)	14808-60-7	100.00000	12.54294	
			Illite	12173-60-3	1.00000	0.07500	
			Hydrochloric acid	7647-01-0	37.00000	0.06307	
			Calcite	471-34-1	1.00000	0.05040	
			Guar gum	9000-30-0	60.00000	0.03884	
			Distillates (petroleum), hydrotreated middle	64742-46-7	60.00000	0.03884	
			Polymer	26100-47-0	45.00000	0.02410	
			Distillates (petroleum), hydrotreated light	64742-47-8	30.00000	0.01607	
			Biotite	1302-27-8	0.10000	0.01254	
			Goethite	1310-14-1	0.10000	0.01254	
			Apatite	64476-38-6	0.10000	0.01254	
			Ammonium Persulfate	64742-47-8	100.00000	0.01125	
			Ilmenite	98072-94-7	0.10000	0.00750	
			Polyethylene glycol mixture	25322-68-3	54.50000	0.00633	
			2-Propenoic acid, homopolymer, sodium salt	9003-04-7	40.00000	0.00607	
			Ammonium chloride	12125-02-9	11.00000	0.00589	
			Quaternary ammonium compounds, bis (hydrogenated tallow alkyl)dimethyl, salts with bentonite	68953-58-2	5.00000	0.00324	
			2,2-Dibromo-3-Nitrilopropionamide	10222-01-2	20.00000	0.00232	
			Vinylidene chloride-methyl acrylate copolymer	69418-26-4	20.00000	0.00225	
			Sorbitan monooleate	1338-43-8	4.00000	0.00214	
			Polyethylene glycol monooleate	9004-96-0	3.00000	0.00161	

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			1,2-Propanediol	57-55-6	10.00000	0.00152	
			Sorbitol tetraoleate	61723-83-9	2.00000	0.00107	
			Oxirane, 2-methyl-, polymer with oxirane, monodecyl ether	37251-67-5	1.50000	0.00097	
			Citric acid	77-92-9	60.00000	0.00057	
			Amines, tallow alkyl, ethoxylated	61791-26-2	1.00000	0.00054	
			Sodium bromide	7647-15-6	4.00000	0.00046	
			Dibromoacetonitrile	3252-43-5	3.00000	0.00035	
			Alkyloxypolyethyleneoxy ethanol	84133-50-6	0.50000	0.00027	
			Acrylamide	79-06-1	0.10000	0.00005	
			Ethylene glycol	107-21-1	40.00000	0.00004	
			Diethylene glycol (mono) methyl ether	34590-94-8	20.00000	0.00002	
			Isopropanol	67-63-0	5.00000	0.00001	
			Tar bases, quinolone derivs, benzyl chloride-quatenized	72480-70-7	10.00000	0.00001	
			Diethylene glycol	111-46-6	1.00000	0.00001	
			Formic Acid	64-18-6	10.00000	0.00001	
			Ethoxylated alcohols	Proprietary	10.00000	0.00001	Proprietary CAS
			Tar bases, quinolone derivs	68513-87-1	1.00000	0.00001	
			Cinnamaldehyde	104-55-2	10.00000	0.00001	

* Total Water Volume sources may include various types of water including fresh water, produced water, and recycled water
** Information is based on the maximum potential for concentration and thus the total may be over 100%
*** If you are calculating a percentage of total ingredients do not add the water volume below the green line to the water volume above the green line

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)

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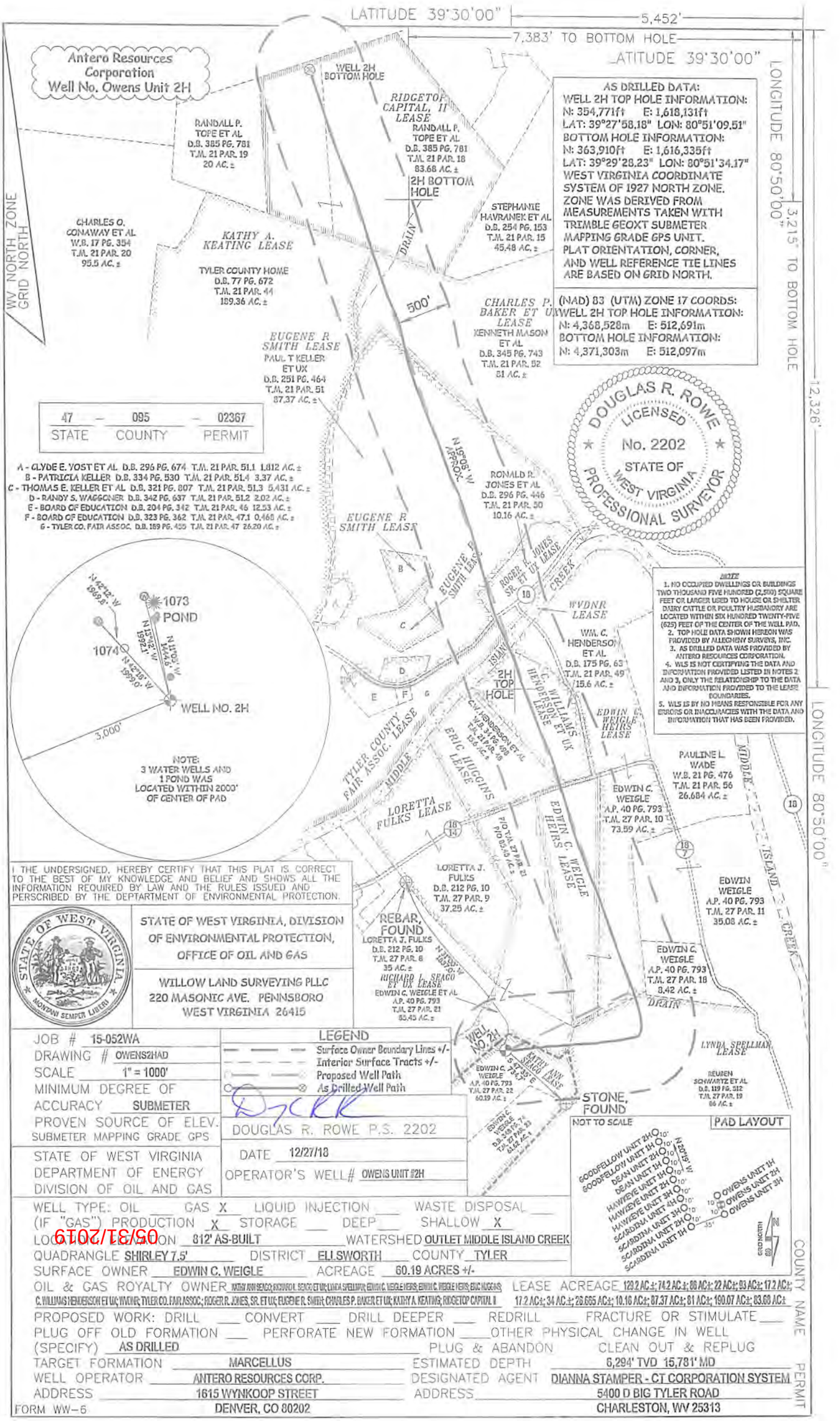


JOB # 15-052WA
DRAWING # OWENS2HAD
SCALE 1" = 1000'
MINIMUM DEGREE OF ACCURACY SUBMETER
PROVEN SOURCE OF ELEV. SUBMETER MAPPING GRADE GPS

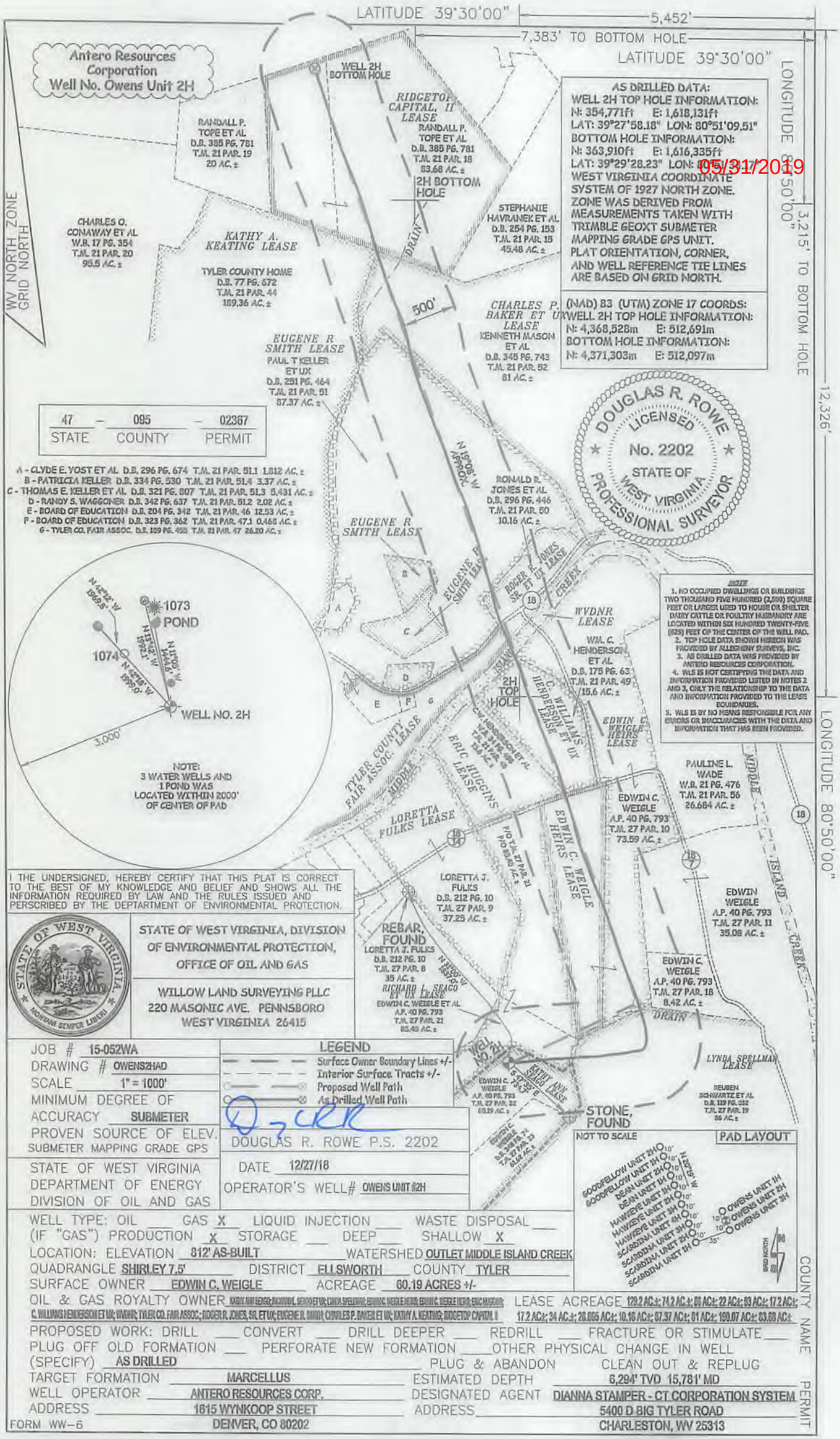
DOUGLAS R. ROWE P.S. 2202
DATE 12/27/13
OPERATOR'S WELL# OWENS UNIT #2H

STATE OF WEST VIRGINIA
DEPARTMENT OF ENERGY
DIVISION OF OIL AND GAS

WELL TYPE: OIL ___ GAS X LIQUID INJECTION ___ WASTE DISPOSAL ___
(IF "GAS") PRODUCTION X STORAGE ___ DEEP ___ SHALLOW X
LOCATION ELEVATION 812' AS-BUILT WATERSHED OUTLET MIDDLE ISLAND CREEK
QUADRANGLE SHIRLEY 7.5' DISTRICT ELLSWORTH COUNTY TYLER
SURFACE OWNER EDWIN C. WEIGLE ACREAGE 60.19 ACRES +/-
OIL & GAS ROYALTY OWNER KATHY ANN SEAGO; RICHARD L. SEAGO ET UX; LYNDA SPELLMAN; EDWIN C. WEIGLE HEIRS; EDWIN C. WEIGLE HEIRS; ERIC HUGGINS; C. WILLIAMS HENDERSON ET UX; WVDNR; TYLER CO. FAIR ASSOC.; ROGER R. JONES, SR. ET UX; EUGENE R. SMITH; CHARLES P. BAKER ET UX; KATHY A. KEATING; RIDGETOP CAPITAL II
LEASE ACREAGE 123.2 AC.±; 74.2 AC.±; 66 AC.±; 22 AC.±; 83 AC.±; 17.2 AC.±; 17.2 AC.±; 34 AC.±; 28.665 AC.±; 10.16 AC.±; 87.37 AC.±; 81 AC.±; 190.07 AC.±; 83.68 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 6,294' TVD 15,781' MD
WELL OPERATOR ANTERO RESOURCES CORP. DESIGNATED AGENT DIANNA STAMPER - CT CORPORATION SYSTEM
ADDRESS 1615 WYNKOOP STREET ADDRESS 5400 D BIG TYLER ROAD
CITY DENVER, CO 80202 CITY CHARLESTON, WV 25313
FORM WW-6

COUNTY NAME PERMIT

05/31/2019



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 RULES ISSUED AND PERSCRIBED BY THE DEPTARTMENT OF ENVIRONMENTAL PROTECTION.

STATE OF WEST VIRGINIA, DIVISION OF ENVIRONMENTAL PROTECTION, OFFICE OF OIL AND GAS

WILLOW LAND SURVEYING PLLC
220 MASONIC AVE. PENNSBORO
WEST VIRGINIA 26415

JOB # 15-052WA
DRAWING # OWENS2HAD
SCALE 1" = 1000'
MINIMUM DEGREE OF ACCURACY SUBMETER
PROVEN SOURCE OF ELEV. SUBMETER MAPPING GRADE GPS

LEGEND
Surface Owner Boundary Lines +/-
Interior Surface Tracts +/-
Proposed Well Path
As Drilled Well Path

DOUGLAS R. ROWE P.S. 2202

STATE OF WEST VIRGINIA
DEPARTMENT OF ENERGY
DIVISION OF OIL AND GAS

DATE 12/27/18
OPERATOR'S WELL# OWENS UNIT #2H

WELL TYPE: OIL ___ GAS X LIQUID INJECTION ___ WASTE DISPOSAL ___
(IF "GAS") PRODUCTION X STORAGE ___ DEEP ___ SHALLOW X
LOCATION: ELEVATION 812' AS-BUILT WATERSHED OUTLET MIDDLE ISLAND CREEK
QUADRANGLE SHIRLEY 7.5' DISTRICT ELLSWORTH COUNTY TYLER
SURFACE OWNER EDWIN C. WEIGLE ACREAGE 60.19 ACRES +/-
OIL & GAS ROYALTY OWNER KATHY ANN SEAGO; RICHARD L. SEAGO ET UX; LYNDA SPELLMAN; EDWIN C. WEIGLE HEIRS; EDWIN C. WEIGLE HEIRS; ERIC HUGGINS; C. WILLIAMS HENDERSON ET UX; WVDNR; TYLER CO. FAIR ASSOC.; ROGER R. JONES, SR. ET UX; EUGENE R. SMITH; CHARLES P. BAKER ET UX; KATHY A. KEATING; RIDGETOP CAPITAL II
LEASE ACREAGE 129.2 AC.±; 74.2 AC.±; 88 AC.±; 22 AC.±; 83 AC.±; 17.2 AC.±; 17.2 AC.±; 34 AC.±; 28.665 AC.±; 10.16 AC.±; 87.37 AC.±; 81 AC.±; 190.07 AC.±; 83.68 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 6,294' TVD 15,781' MD
WELL OPERATOR ANTERO RESOURCES CORP. DESIGNATED AGENT DIANNA STAMPER - CT CORPORATION SYSTEM
ADDRESS 1615 WYNKOOP STREET ADDRESS 5400 D BIG TYLER ROAD
DENVER, CO 80202 CHARLESTON, WV 25313

FORM WW-6

COUNTY NAME PERMIT

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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 6,294' TVD 15,781' MD
WELL OPERATOR ANTERO RESOURCES CORP.	DESIGNATED AGENT DIANNA STAMPER - CT CORPORATION SYSTEM
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COUNTY NAME PERMIT

DIVISION OF OIL AND GAS
DEPARTMENT OF ENERGY
STATE OF WEST VIRGINIA

OPERATOR'S WELL # OWENS UNIT 2H

DATE 12/27/18

DOUGLAS R. ROWE P.S. 2202

SUBMETER MAPPING GRADE GPS
PROVEN SOURCE OF ELEV.
ACCURACY SUBMETER
MINIMUM DEGREE OF
SCALE 1" = 1000'
DRAWING # OWENS2HAD
JOB # 15-052WA

LEGEND
- As Drilled Well Path
- Proposed Well Path
- Interior Surface Tracts +/-
- Surface Owner Boundary Lines +/-

05/31/2019

WILLOW LAND SURVEYING PLLC
220 MASONIC AVE. PENNSBORO
WEST VIRGINIA 26415

STATE OF WEST VIRGINIA, DIVISION
OF ENVIRONMENTAL PROTECTION,
OFFICE OF OIL AND GAS

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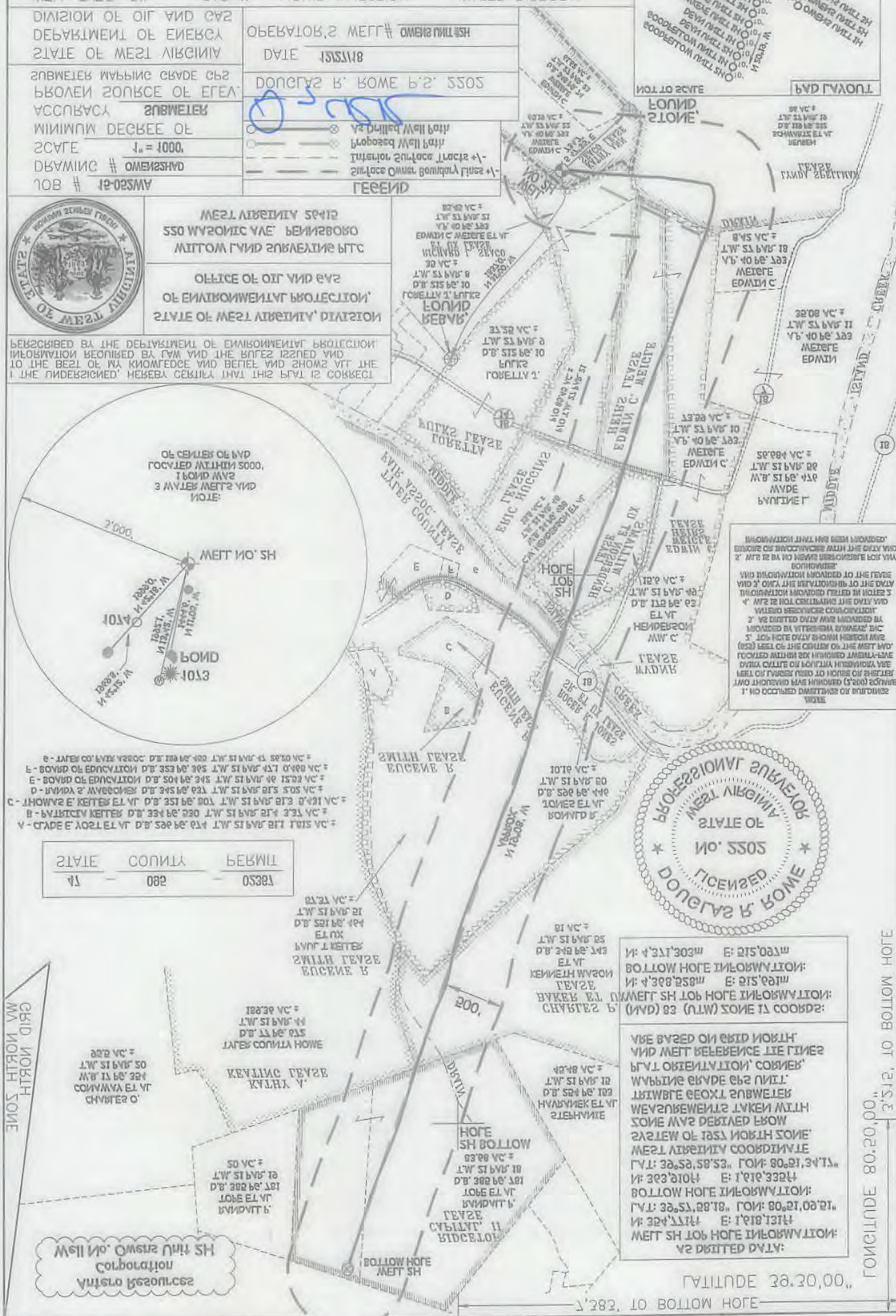

NOTE
1. NO OCCUPIED DWELLINGS OR BUILDINGS TWO THOUSAND FIVE HUNDRED (2,500) SQUARE FEET OR LARGER USED TO HOUSE OR SHELTER DAIRY CATTLE OR POULTRY HUSBANDRY ARE LOCATED WITHIN SIX HUNDRED TWENTY-FIVE (625) FEET OF THE CENTER OF THE WELL PAD.
2. TOP HOLE DATA SHOWN HEREON WAS PROVIDED BY ALLEGHENY SURVEYS, 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 BOUNDARIES.
5. WLS IS BY NO MEANS RESPONSIBLE FOR ANY ERRORS OR INACCURACIES WITH THE DATA AND INFORMATION THAT HAS BEEN PROVIDED.

A - CLYDE E. YOST ET AL D.B. 296 PG. 674 T.M. 21 PAR. 81.1 1.812 AC. ±
B - PATRICIA KELLER D.B. 334 PG. 530 T.M. 21 PAR. 81.4 3.37 AC. ±
C - THOMAS E. KELLER ET AL D.B. 321 PG. 807 T.M. 21 PAR. 81.3 6.431 AC. ±
D - RANDY S. WAGGONER D.B. 342 PG. 637 T.M. 21 PAR. 81.2 2.02 AC. ±
E - BOARD OF EDUCATION D.B. 204 PG. 342 T.M. 21 PAR. 46 12.83 AC. ±
F - BOARD OF EDUCATION D.B. 323 PG. 362 T.M. 21 PAR. 47.1 0.468 AC. ±
G - TYLER CO. FAIR ASSOC. D.B. 139 PG. 465 T.M. 21 PAR. 47 26.20 AC. ±

STATE	COUNTY	PERMIT
47	095	02367

NAD 83 (UTM) ZONE 17 COORDS:
WELL 2H TOP HOLE INFORMATION:
N: 4,368,528m E: 512,691m
BOTTOM HOLE INFORMATION:
N: 4,371,303m E: 512,097m

AS DRILLED DATA:
WELL 2H TOP HOLE INFORMATION:
N: 354,771ft E: 1,618,131ft
LAT: 39°27'58.18" LON: 80°51'09.51"
BOTTOM HOLE INFORMATION:
N: 363,910ft E: 1,616,335ft
LAT: 39°29'28.23" LON: 80°51'34.17"
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.

WV NORTH ZONE GRID

LATITUDE 39°30'00"
LONGITUDE 80°50'00"
7,383' TO BOTTOM HOLE
5,452'
3,215' TO BOTTOM HOLE
12,326'

Antero Resources Corporation
Well No. Owens Unit 2H