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Office of Oil and Gas

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

OCT 12 2017

WV Department of  
Environmental Protection

API 47-095-02166 County Tyler District McElroy  
Quad Centerpoint 7.5' Pad Name Coastal 2 Pad Field/Pool Name ----  
Farm name Coastal Lumber Company Well Number Prudence 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 4364392m Easting 523597m  
Landing Point of Curve Northing 4364245.132m Easting 524019.505m  
Bottom Hole Northing 4361008m Easting 525078m

Elevation (ft) 1188' 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 05/19/2014 Date drilling commenced 06/23/2015 Date drilling ceased 10/08/2015  
Date completion activities began 09/15/2016 Date completion activities ceased 01/16/2017  
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 60', 180', 220' Open mine(s) (Y/N) depths No  
Salt water depth(s) ft 1723', 1893' Void(s) encountered (Y/N) depths No  
Coal depth(s) ft 1301', 1561', 1701' Cavern(s) encountered (Y/N) depths No

Is coal being mined in area (Y/N) No

**APPROVED**

NAME: Sen M R  
DATE: 10-25-17

Reviewed by: \_\_\_\_\_

02/16/2018

API 47-095 - 02166 Farm name Coastal Lumber Company Well number Prudence 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	94#, K-55	N/A	Y
Surface	17-1/2"	13-3/8"	400'	New	48#, H-40	N/A	Y
Coal							
Intermediate 1	12-1/4"	9-5/8"	2570'	New	36#, J-55	N/A	Y
Intermediate 2							
Intermediate 3							
Production	8-3/4"/8-1/2"	5-1/2"	19078'	New	23#, P-110	N/A	Y
Tubing		2-3/8"	7442'		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 <sup>3</sup> /sks)	Volume (ft <sup>3</sup> )	Cement Top (MD)	WOC (hrs)
Conductor	Class A	400 sx	15.6	1.18	472	0'	8 Hrs.
Surface	Class A	470 sx	15.6	1.19	559	0'	8 Hrs.
Coal							
Intermediate 1	Class A	945 sx	15.6	1.18	1115	0'	8 Hrs.
Intermediate 2							
Intermediate 3							
Production	Class H	1141 sx (Lead) 1809 sx (Tail)	14.5 (Lead), 15.2 (Tail)	1.3 (Lead), 1.85 (Tail)	4830	~500' into Intermediate Casing	8 Hrs.
Tubing							

Drillers TD (ft) 19078' MD, 7163' TVD (BHL) & 7168' TVD (Deepest Point Drilled) Loggers TD (ft) 19029' MD

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

Plug back procedure N/A

Kick off depth (ft) 6929'

\*\* This is a subsequent well. Antero only runs wireline logs on one well on a multi-well pad (Tabor Unit 2H API #47-095-02165). Please reference the wireline logs submitted with Form WR-35 for Tabor Unit 2H. A Cement Bond Log has been included with this submittal.

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 N/A



API 47- 095 - 02166 Farm name Coastal Lumber Company Well number Prudence Unit 1H

<u>PRODUCING FORMATION(S)</u>	<u>DEPTHS</u>		
<u>Marcellus</u>	<u>7077' (TOP)</u>	<u>TVD</u>	<u>7448' (TOP)</u> <u>MD</u>
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____

Please insert additional pages as applicable.

GAS TEST  Build up  Drawdown  Open Flow OIL TEST  Flow  Pump

SHUT-IN PRESSURE Surface 3550 psi Bottom Hole --- psi DURATION OF TEST --- hrs

OPEN FLOW Gas 13542 mcfpd Oil 74 bpd NGL --- bpd Water 560 bpd GAS MEASURED BY  Estimated  Orifice  Pilot

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

**\*PLEASE SEE ATTACHED EXHIBIT 3**


Please insert additional pages as applicable.

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

Logging Company Allied Horizontal Well Services  
Address 381 Colonial Manor Rd. City North Huntington State PA Zip 15642

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

Stimulating Company CalFrac  
Address 533 Industrial Park Drive City Jane Lew State WV Zip 26378

Please insert additional pages as applicable.

Completed by Samantha Klaas Telephone 303-357-6759  
Signature [Signature] Title Permitting Agent Date 10/11/2017

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

Stage No.	Perforation Date	Perforated from MD ft.	Perforated to MD ft.	Number of Perforations	Formations
1	9/15/2016	18817	18959	60	Marcellus
2	11/11/2016	18618	18786	60	Marcellus
3	11/12/2016	18419	18587	60	Marcellus
4	11/12/2016	18220	18388	60	Marcellus
5	11/13/2016	18022	18189	60	Marcellus
6	11/14/2016	17823	17991	60	Marcellus
7	11/14/2016	17624	17792	60	Marcellus
8	11/15/2016	17425	17593	60	Marcellus
9	11/15/2016	17227	17394	60	Marcellus
10	11/16/2016	17028	17195	60	Marcellus
11	11/17/2016	16829	16997	60	Marcellus
12	11/18/2016	16630	16798	60	Marcellus
13	11/18/2016	16432	16599	60	Marcellus
14	11/20/2016	16233	16400	60	Marcellus
15	11/20/2016	16034	16202	60	Marcellus
16	11/21/2016	15835	16003	60	Marcellus
17	11/21/2016	15636	15804	60	Marcellus
18	11/22/2016	15438	15605	60	Marcellus
19	11/23/2016	15239	15407	60	Marcellus
20	11/25/2016	15040	15208	60	Marcellus
21	11/26/2016	14841	15009	60	Marcellus
22	11/26/2016	14643	14810	60	Marcellus
23	11/27/2016	14444	14612	60	Marcellus
24	11/27/2016	14245	14413	60	Marcellus
25	11/28/2016	14046	14214	60	Marcellus
26	11/28/2016	13848	14015	60	Marcellus
27	11/29/2016	13649	13816	60	Marcellus
28	11/30/2016	13450	13618	60	Marcellus
29	11/30/2016	13251	13419	60	Marcellus
30	12/1/2016	13052	13220	60	Marcellus
31	12/1/2016	12854	13021	60	Marcellus
32	12/2/2016	12655	12823	60	Marcellus
33	12/3/2016	12456	12624	60	Marcellus
34	12/3/2016	12257	12425	60	Marcellus
35	12/5/2016	12059	12226	60	Marcellus
36	12/6/2016	11860	12028	60	Marcellus
37	12/7/2016	11661	11829	60	Marcellus
38	12/7/2016	11462	11630	60	Marcellus
39	12/8/2016	11264	11431	60	Marcellus
40	12/9/2016	11065	11232	60	Marcellus
41	12/10/2016	10866	11034	60	Marcellus
42	12/10/2016	10667	10835	60	Marcellus
43	12/10/2016	10469	10636	60	Marcellus
44	12/11/2016	10270	10437	60	Marcellus
45	12/12/2016	10071	10239	60	Marcellus
46	12/12/2016	9872	10040	60	Marcellus
47	12/13/2016	9673	9841	60	Marcellus
48	12/13/2016	9475	9642	60	Marcellus
49	12/14/2016	9276	9444	60	Marcellus
50	12/14/2016	9077	9245	60	Marcellus
51	12/15/2016	8878	9046	60	Marcellus
52	12/15/2016	8680	8847	60	Marcellus
53	12/16/2016	8481	8648	60	Marcellus
54	12/17/2016	8282	8450	60	Marcellus
55	12/17/2016	8083	8251	60	Marcellus
56	12/18/2016	7885	8052	60	Marcellus
57	12/19/2016	7686	7853	60	Marcellus
58	12/19/2016	7487	7655	60	Marcellus

## EXHIBIT 2

Stage No.	Simulations 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	11/10/2016	68.4	7976	5989	5038	401500	9661	N/A
2	11/11/2016	69.6	7840	5853	5259	399450	9428	N/A
3	11/12/2016	71.3	7985	5588	4902	399850	9456	N/A
4	11/12/2016	72.2	7964	5446	4685	401900	9195	N/A
5	11/13/2016	70.6	7761	5531	4975	401950	9187	N/A
6	11/14/2016	71.4	8034	5766	4375	402750	10329	N/A
7	11/14/2016	68.0	8140	5748	4596	401350	9479	N/A
8	11/15/2016	67.5	8007	5660	4699	401050	9326	N/A
9	11/15/2016	69.3	8047	5751	5233	401500	9239	N/A
10	11/16/2016	69.9	8079	5667	5680	401300	9213	N/A
11	11/17/2016	70.7	7681	5496	4335	400900	8985	N/A
12	11/18/2016	69.9	7966	5548	4237	401500	9235	N/A
13	11/18/2016	75.8	7695	5607	4718	404450	9137	N/A
14	11/20/2016	73.8	7955	5564	4946	402500	10450	N/A
15	11/20/2016	75.4	8198	5682	5427	401850	9283	N/A
16	11/21/2016	71.2	7835	5674	4932	402500	9061	N/A
17	11/21/2016	73.1	8221	5709	4847	401150	9213	N/A
18	11/22/2016	73.5	8089	5421	5053	402350	9125	N/A
19	11/23/2016	71.3	7868	5447	5254	400950	8939	N/A
20	11/25/2016	79.5	7876	5649	4697	401500	9155	N/A
21	11/26/2016	76.6	7949	5455	5373	402050	8878	N/A
22	11/26/2016	77.7	7820	5822	5714	401000	9780	N/A
23	11/27/2016	74.3	7607	5342	5393	402050	9033	N/A
24	11/27/2016	76.0	7791	5450	5219	400850	9070	N/A
25	11/28/2016	75.2	7360	5345	5475	401800	9041	N/A
26	11/28/2016	73.8	7471	5245	5320	402200	8961	N/A
27	11/29/2016	75.8	7519	5710	5210	402150	10281	N/A
28	11/30/2016	75.1	7425	5387	5796	402950	8930	N/A
29	11/30/2016	77.9	7735	5215	5368	402600	10038	N/A
30	12/1/2016	75.9	7665	5395	5421	404050	8984	N/A
31	12/1/2016	72.7	7794	5659	4836	392400	10381	N/A
32	12/2/2016	75.2	7463	5486	5154	400950	8857	N/A
33	12/3/2016	73.9	7765	5501	5220	402250	9032	N/A
34	12/3/2016	73.1	7771	5357	5369	401450	8943	N/A
35	12/5/2016	76.4	7548	4910	4678	401500	8946	N/A
36	12/6/2016	72.5	7760	5390	5272	401300	9500	N/A
37	12/7/2016	71.1	7963	5954	5040	400650	8954	N/A
38	12/7/2016	68.7	7871	5516	4513	401000	9978	N/A
39	12/8/2016	80.0	7430	5304	5208	403550	8805	N/A
40	12/9/2016	77.9	7542	4806	5414	401050	9861	N/A
41	12/10/2016	79.7	7489	5390	5404	401250	8727	N/A
42	12/10/2016	81.7	7391	5335	5174	402350	8905	N/A
43	12/10/2016	80.1	7426	5539	4804	402150	8751	N/A
44	12/11/2016	79.9	7412	5226	4881	401750	8834	N/A
45	12/12/2016	79.8	7557	5412	4417	401850	8765	N/A
46	12/12/2016	80.4	7476	5743	5288	401450	8797	N/A
47	12/13/2016	79.5	7462	5476	5274	401700	8732	N/A
48	12/13/2016	80.1	7502	5420	5214	401650	8760	N/A
49	12/14/2016	80.4	7370	5690	5141	401700	8796	N/A
50	12/14/2016	79.8	7414	5671	5400	401800	8778	N/A
51	12/15/2016	78.3	7061	5492	5130	404610	8782	N/A
52	12/15/2016	80.3	7270	5315	5534	401950	8736	N/A
53	12/16/2016	80.6	7242	5351	5618	402150	8747	N/A
54	12/17/2016	79.9	7121	5387	5576	402300	8701	N/A
55	12/17/2016	79.8	7120	5675	5261	401400	9724	N/A
56	12/18/2016	80.2	7280	6003	5364	401250	8652	N/A
57	12/19/2016	80.0	7239	5678	5202	401150	8613	N/A
58	12/19/2016	77.7	6832	5254	4034	401500	8617	N/A
AVG=		75.4	7,657	5,519	5,097	408,100	531,766	TOTAL

## 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	60'	N/A	60'	N/A
Fresh Water	180'	N/A	180'	N/A
Fresh Water	220'	N/A	220'	N/A
Shale and Sandstone	est. 0	401	est. 0	401
Shale	est. 401	741	est. 401	741
Limestone	est. 741	801	est. 741	801
Shale	est. 801	921	est. 801	921
Limestone	est. 921	941	est. 921	941
Shale	est. 941	981	est. 941	981
Sandstone	est. 981	1001	est. 981	1001
Shale	est. 1001	1121	est. 1001	1121
Sandstone	est. 1121	1141	est. 1121	1141
Shale	est. 1141	1301	est. 1141	1301
Coal	est. 1301	1321	est. 1301	1321
Shale	est. 1321	1341	est. 1321	1341
Sandstone	est. 1341	1381	est. 1341	1381
Shale and Coal	est. 1381	1441	est. 1381	1441
Sandstone	est. 1441	1501	est. 1441	1501
Shale and Siltstone	est. 1501	1561	est. 1501	1561
Coal	est. 1561	1581	est. 1561	1581
Sandstone and Limestone	est. 1581	1621	est. 1581	1621
Shale	est. 1621	1701	est. 1621	1701
Sandstone and Coal	est. 1701	1841	est. 1701	1841
Shale	est. 1841	2021	est. 1841	2021
Sandstone	est. 2021	2192	est. 2021	2195
Big Lime	2192	2323	2195	2326
Big Injun	2323	2768	2326	2771
Gantz Sand	2768	2905	2771	2908
Fifty Foot Sandstone	2905	2984	2908	2987
Gordon	2984	3273	2987	3276
Fifth Sandstone	3273	3297	3276	3300
Bayard	3297	3713	3300	3716
Warren	3713	4075	3716	4078
Speechley	4075	4373	4078	4377
Baltown	4373	4867	4377	4884
Bradford	4867	5334	4884	5389
Benson	5334	5604	5389	5693
Alexander	5604	5792	5693	6457
Elk	5792	6290	6457	6895
Rhinstreet	6290	6685	6895	6895
Sycamore	6685	6849	6895	7084
Middlesex	6849	6985	7084	7268
Burkett	6985	7012	7268	7312
Tully	7012	7077	7312	7448
Marcellus	7077	NA	7448	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:	11/10/2016
Job End Date:	12/19/2016
State:	West Virginia
County:	Tyler
API Number:	47-095-02166-00-00
Operator Name:	Antero Resources Corporation
Well Name and Number:	Prudence Unit 1H
Latitude:	39.42874200
Longitude:	-80.72583100
Datum:	NAD83
Federal Well:	NO
Indian Well:	NO
True Vertical Depth:	7,168
Total Base Water Volume (gal):	23,145,357
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	100.00000	89.08928	
Sand (Proppant)	CWS	Propping Agent					
				Listed Below			



DWP-975	CWS	Breaker					
				Listed Below			
DWP-641	CWS	Friction Reducer					
				Listed Below			
DWP-844	CWS	Microbiocide					
				Listed Below			
Acetic Acid	CWS	Acid					
				Listed Below			
DAP-925	CWS	Acid Corrosion Inhibitor					
				Listed Below			
DWP-111	CWS	Gel Slurry					
				Listed Below			
DAP-103	CWS	Iron Control					
				Listed Below			
DAP-902	CWS	Scale Inhibitor					
				Listed Below			
Other Chemical (s)	Listed Above	See Trade Name (s) List					

				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	10.69803	
			Hydrochloric acid	7647-01-0	37.00000	0.05081	
			Polymer	26100-47-0	45.00000	0.03006	
			Distillates (petroleum), hydrotreated middle	64742-46-7	60.00000	0.02098	
			Guar gum	9000-30-0	60.00000	0.02098	
			Paraffinic hydrocarbon solvent	64742-47-8	30.00000	0.02004	
			Calcite	471-34-1	1.00000	0.01908	
			Ammonium chloride	12125-02-9	11.00000	0.00735	
			Polyethylene glycol mixture	25322-68-3	54.50000	0.00628	
			2-Propenoic acid, homopolymer, sodium salt	9003-04-7	40.00000	0.00623	
			Illite	12173-60-3	1.00000	0.00445	
			Goethite	1310-14-1	0.10000	0.00437	
			Sorbitan monooleate	1338-43-8	4.00000	0.00267	
			Biotite	1302-27-8	0.10000	0.00256	
			Apatite	64476-38-6	0.10000	0.00256	
			2,2-Dibromo-3-Nitrilopropionamide	10222-01-2	20.00000	0.00231	
			Polyethylene glycol monooleate	9004-96-0	3.00000	0.00200	
			Quaternary ammonium compounds, bis (hydrogenated tallow alkyl)dimethyl, salts with bentonite	68953-58-2	5.00000	0.00175	
			Ilmenite	98072-94-7	0.10000	0.00165	
			1,2-Propanediol	57-55-6	10.00000	0.00156	
			Sorbitol tetraoleate	61723-83-9	2.00000	0.00134	
			Amines, tallow alkyl, ethoxylated	61791-26-2	1.00000	0.00067	

			Ammonium Persulfate	7727-54-0	100.00000	0.00055
			Oxirane, 2-methyl-, polymer with oxirane, monodecyl ether	37251-67-5	1.50000	0.00052
			Citric acid	77-92-9	60.00000	0.00048
			Sodium bromide	7647-15-6	4.00000	0.00046
			Dibromoacetonitrile	3252-43-5	3.00000	0.00035
			Alcohols, C12-14, ethoxylated	84133-50-6	0.50000	0.00033
			Vinylidene chloride-methyl acrylate copolymer	25038-72-6	30.00000	0.00012
			Acrylamide	79-06-1	0.10000	0.00007
			Methanol	67-56-1	60.00000	0.00003
			Fatty acids, tall-oil	61790-12-3	30.00000	0.00002
			Poly(tetrafluoroethylene)	9002-84-0	1.00000	0.00002
			Modified thiourea polymer	68527-49-1	30.00000	0.00002
			Hydrated magnesium silicate	14807-96-6	1.00000	0.00002
			Alcohols, C14-15, ethoxylated	68951-67-7	30.00000	0.00002
			Sodium chloride	7647-14-5	1.00000	0.00001
			Alkenes, C>10 a-	64743-02-8	5.00000	0.00001
			Propargyl Alcohol	107-19-7	10.00000	0.00001
			Formaldehyde	50-00-0	0.10000	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)

LATITUDE 39°27'30"

4,991'

LATITUDE 39°25'00" 169' TO BOTTOM HOLE

LONGITUDE 80°42'30"

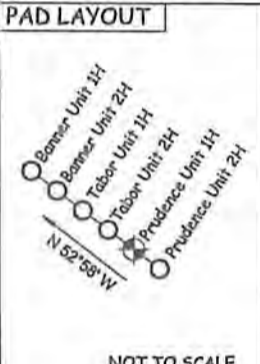
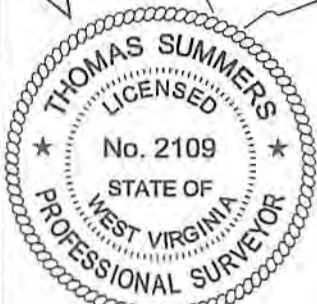
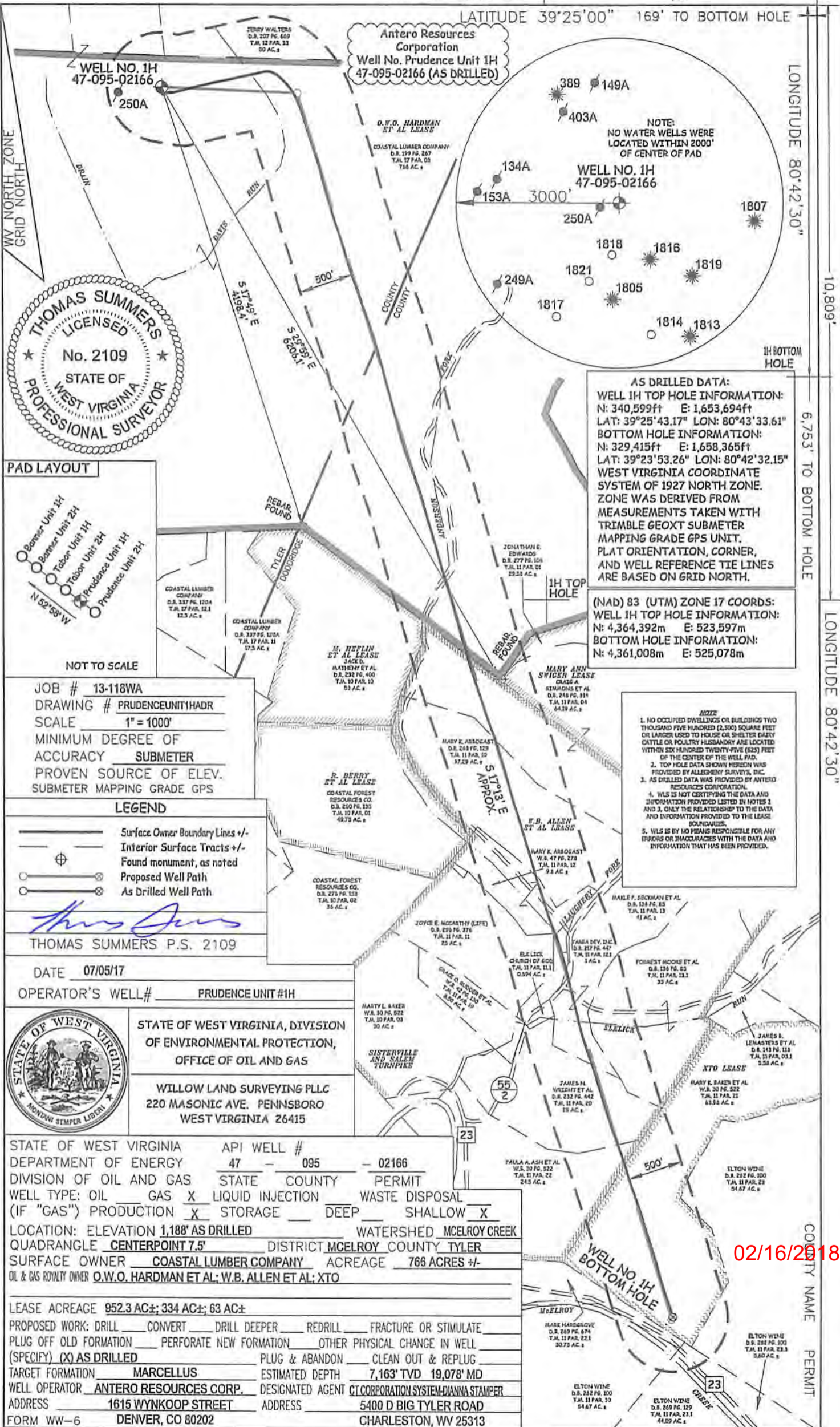
10,809'

6,753' TO BOTTOM HOLE

LONGITUDE 80°42'30"

COUNTY NAME

PERMIT



**AS DRILLED DATA:**  
**WELL 1H TOP HOLE INFORMATION:**  
 N: 340,599ft E: 1,653,694ft  
 LAT: 39°25'43.17" LON: 80°43'33.61"  
**BOTTOM HOLE INFORMATION:**  
 N: 329,415ft E: 1,658,365ft  
 LAT: 39°23'53.26" LON: 80°42'32.15"  
 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: 4,364,392m E: 523,597m  
**BOTTOM HOLE INFORMATION:**  
 N: 4,361,008m E: 525,078m

- 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 POLTRY HUSBANDRY ARE LOCATED WITHIN SIX HUNDRED TWENTY-FIVE (625) FEET OF THE CENTER OF THIS WELL PAD.
  2. TOP HOLE DATA SHOWN HEREIN 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 1 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.

JOB # 13-118WA  
 DRAWING # PRUDENCEUNIT1HADR  
 SCALE 1" = 1000'  
 MINIMUM DEGREE OF ACCURACY SUBMETER  
 PROVEN SOURCE OF ELEV. SUBMETER MAPPING GRADE GPS

**LEGEND**

- Surface Owner Boundary Lines +/-
- Interior Surface Tracts +/-
- Found monument, as noted
- Proposed Well Path
- As Drilled Well Path

THOMAS SUMMERS P.S. 2109

DATE 07/05/17  
 OPERATOR'S WELL# PRUDENCE UNIT #1H



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  
 API WELL # 47 - 095 - 02166  
 STATE COUNTY PERMIT  
 WELL TYPE: OIL GAS X LIQUID INJECTION WASTE DISPOSAL  
 (IF "GAS") PRODUCTION X STORAGE DEEP SHALLOW X  
 LOCATION: ELEVATION 1,188' AS DRILLED WATERSHED MCELROY CREEK  
 QUADRANGLE CENTERPOINT 7.5' DISTRICT MCELROY COUNTY TYLER  
 SURFACE OWNER COASTAL LUMBER COMPANY ACREAGE 766 ACRES +/-  
 OIL & GAS ROYALTY OWNER O.W.O. HARDMAN ET AL; W.B. ALLEN ET AL; XTO

LEASE ACREAGE 952.3 AC±; 334 AC±; 63 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 PLUG & ABANDON CLEAN OUT & REPLUG  
 TARGET FORMATION MARCELLUS ESTIMATED DEPTH 7,163' TVD 19,078' MD  
 WELL OPERATOR ANTERO RESOURCES CORP. DESIGNATED AGENT CT CORPORATION SYSTEM-DJANNA STAMPER  
 ADDRESS 1615 WYNKOOP STREET ADDRESS 5400 D BIG TYLER ROAD  
 FORM WW-6 DENVER, CO 80202 CHARLESTON, WV 25313

02/16/2018

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4,991'

LATITUDE 39°25'00"

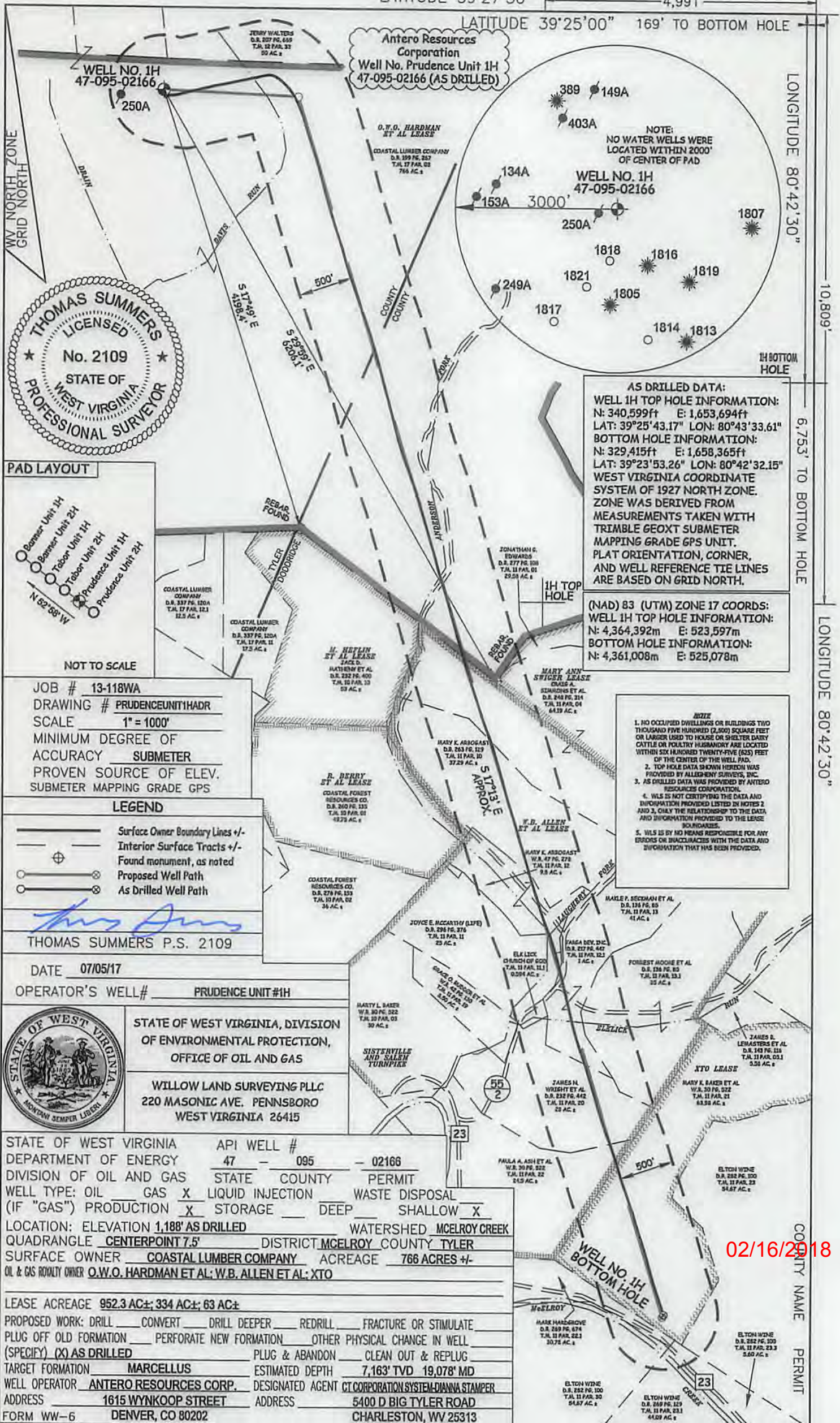
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LONGITUDE 80°42'30"

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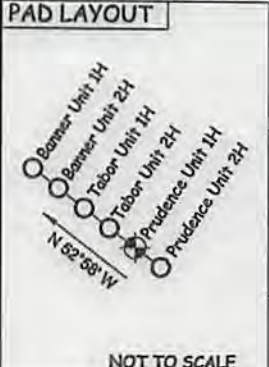
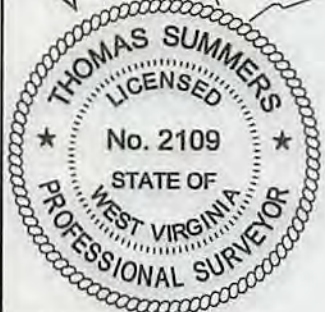
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JOB # 13-118WA  
 DRAWING # PRUDENCEUNIT1HADR  
 SCALE 1" = 1000'  
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- Interior Surface Tracts +/-
- Found monument, as noted
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THOMAS SUMMERS P.S. 2109

DATE 07/05/17  
 OPERATOR'S WELL# PRUDENCE UNIT #1H

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

API WELL # 47 - 095 - 02166

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

LOCATION: ELEVATION 1,188' AS DRILLED WATERSHED MCELROY CREEK  
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02/16/2018