

Reviewed

J. Lan 6/6/18

WR-35
Rev. 8/23/13

Page 1 of 4

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

API 47-017-06477 County Doddridge District Grant
Quad West Union 7.5' Pad Name Melody Pad Field/Pool Name ---
Farm name Melody Brown, et al Well Number Rexal 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 4356579m Easting 520760m
Landing Point of Curve Northing 4356735.82m Easting 520974.70m
Bottom Hole Northing 4359146m Easting 520020m

Elevation (ft) 1135' 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 3/21/2014 Date drilling commenced 4/13/2016 Date drilling ceased 7/1/2016
Date completion activities began 9/18/2017 Date completion activities ceased 12/2/2017
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 31', 36', 45', 46' Open mine(s) (Y/N) depths No
Salt water depth(s) ft 865', 1391', 1509' Void(s) encountered (Y/N) depths No
Coal depth(s) ft 1821' Cavern(s) encountered (Y/N) depths No
Is coal being mined in area (Y/N) No

Reviewed by:

07/20/2018

API 47-017 - 06477 Farm name Melody Brown, et al Well number Rexal 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#, H-40	N/A	Y
Surface	17-1/2"	13-3/8"	536'	New	48#, H-40	N/A	Y
Coal							
Intermediate 1	12-1/4"	9-5/8"	2577'	New	36#, J-55	N/A	Y
Intermediate 2							
Intermediate 3							
Production	8-3/4"/8-1/2"	5-1/2"	15972'	New	23#, P-110	N/A	Y
Tubing		2-3/8"			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	N/A sx	15.6	1.18		0'	8 Hrs.
Surface	Class A	670 sx	15.6	1.19		0'	8 Hrs.
Coal							
Intermediate 1	Class A	937 sx	15.6	1.18		0'	8 Hrs.
Intermediate 2							
Intermediate 3							
Production	Class H	972 sx (Lead) 1446 sx (Tail)	14.50 (Lead), 15.20 (Tail)	(Lead), (Tail)		-500' into Intermediate Casing	8 Hrs.
Tubing							

Drillers TD (ft) 16000' MD, 7000' TVD (BHL), 6910' (Deepest Point Drilled) Loggers TD (ft) 16000' MD
 Deepest formation penetrated Marcellus Plug back to (ft) N/A
 Plug back procedure N/A

Kick off depth (ft) 6757'

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

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WAS WELL COMPLETED AS SHOT HOLE Yes No DETAILS ADD 6/4/09

WAS WELL COMPLETED OPEN HOLE? Yes No DETAILS Environment

WERE TRACERS USED Yes No TYPE OF TRACER(S) USED N/A

API 47-017-06477 Farm Name Melody Brown et al Well Number Rexal Unit 1H

EXHIBIT 1

Stage No.	Perforation Date	Perforated from MD ft.	Perforated to MD ft.	Number of Perforations	Formations
1	9/18/2017	15672	15841	60	Marcellus
2	9/19/2017	15472	15641	60	Marcellus
3	9/19/2017	15271	15440	60	Marcellus
4	9/19/2017	15071	15240	60	Marcellus
5	9/20/2017	14871	15040	60	Marcellus
6	9/20/2017	14671	14839	60	Marcellus
7	9/20/2017	14470	14639	60	Marcellus
8	9/20/2017	14270	14439	60	Marcellus
9	9/21/2017	14070	14239	60	Marcellus
10	9/21/2017	13869	14038	60	Marcellus
11	9/21/2017	13669	13838	60	Marcellus
12	9/21/2017	13469	13638	60	Marcellus
13	9/21/2017	13269	13437	60	Marcellus
14	9/22/2017	13068	13237	60	Marcellus
15	9/22/2017	12868	13037	60	Marcellus
16	9/22/2017	12668	12837	60	Marcellus
17	9/22/2017	12467	12636	60	Marcellus
18	9/22/2017	12267	12436	60	Marcellus
19	9/23/2017	12067	12236	60	Marcellus
20	9/23/2017	11867	12035	60	Marcellus
21	9/23/2017	11666	11835	60	Marcellus
22	9/23/2017	11466	11635	60	Marcellus
23	9/24/2017	11266	11435	60	Marcellus
24	9/24/2017	11065	11234	60	Marcellus
25	9/24/2017	10865	11034	60	Marcellus
26	9/24/2017	10665	10834	60	Marcellus
27	9/24/2017	10465	10634	60	Marcellus
28	10/3/2017	10264	10433	60	Marcellus
29	10/4/2017	10064	10233	60	Marcellus
30	10/4/2017	9864	10033	60	Marcellus
31	10/4/2017	9664	9832	60	Marcellus
32	10/4/2017	9463	9632	60	Marcellus
33	10/4/2017	9263	9432	60	Marcellus
34	10/5/2017	9063	9232	60	Marcellus
35	10/5/2017	8862	9031	60	Marcellus
36	10/5/2017	8662	8831	60	Marcellus
37	10/5/2017	8462	8631	60	Marcellus
38	10/5/2017	8262	8430	60	Marcellus
39	10/5/2017	8061	8230	60	Marcellus
40	10/6/2017	7861	8030	60	Marcellus
41	10/6/2017	7661	7830	60	Marcellus
42	10/6/2017	7460	7629	60	Marcellus
43	10/6/2017	7260	7429	60	Marcellus

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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	9/18/2017	75.6	7826	5276	5129	418850	8690	N/A
2	9/19/2017	68.9874	7590.374	5715	5557	417400	8569.714	N/A
3	9/19/2017	68.4055	7486.502	5359	5079	418280	8475.548	N/A
4	9/19/2017	80.5686	7864.226	5483	5404	420410	8772	N/A
5	9/20/2017	80.3131	7763.78	5599	5725	418290	8698	N/A
6	9/20/2017	67.4393	7676.412	5549	5491	417730	10599.45	N/A
7	9/20/2017	68.3852	7636.688	5733	4564	420060	8701	N/A
8	9/20/2017	75.1056	7989.372	6081	5609	419680	8523	N/A
9	9/21/2017	74.7207	7895.091	6143	5394	419860	8504	N/A
10	9/21/2017	74.6991	7735.475	6778	5391	418700	8473.833	N/A
11	9/21/2017	74.1398	7673.729	6277	4844	417420	8488.595	N/A
12	9/21/2017	78.4833	8028.24	6502	4651	419060	9260	N/A
13	9/21/2017	78.9797	7934.481	6479	4780	419490	8861	N/A
14	9/22/2017	80.0711	7740.553	6264	4791	419250	8624	N/A
15	9/22/2017	76.2176	7781.324	6031	5301	418680	8585.333	N/A
16	9/22/2017	74.3605	7927.975	6097	5212	418160	8480.714	N/A
17	9/22/2017	75.4605	7741.346	6287	4105	420220	8428.262	N/A
18	9/22/2017	72.7972	7934.762	6162	4953	365760	8737	N/A
19	9/23/2017	75.5175	7812.645	6467	5300	418520	8613	N/A
20	9/23/2017	70.1195	7710.542	5851	4429	418410	9740.476	N/A
21	9/23/2017	57.9119	8377.131	6063	3936	286300	11075.69	N/A
22	9/23/2017	80.2122	7566.102	5959	4714	419190	8840	N/A
23	9/24/2017	80.3132	7583.332	6340	4811	418550	8712	N/A
24	9/24/2017	73.2541	7432.234	6460	4378	417830	8351.429	N/A
25	9/24/2017	74.2924	7320.947	5862	3920	417660	8309.095	N/A
26	9/24/2017	74.279	7425.262	6243	3807	419300	8554.714	N/A
27	9/24/2017	75.3969	7872.512	6241	4864	420810	9765	N/A
28	10/3/2017	71.0801	7862.068	6507	4332	418700	10760	N/A
29	10/4/2017	74.5171	7428.257	5890	3850	418020	8307	N/A
30	10/4/2017	73.2319	7448.097	6342	4179	418120	8334	N/A
31	10/4/2017	73.5994	7392.168	6164	4465	419640	8314	N/A
32	10/4/2017	75.7157	7230.793	6511	5135	419240	8351	N/A
33	10/4/2017	73.7825	7485.5	6547	5060	419850	8372	N/A
34	10/5/2017	73.7868	7353.644	6499	5174	418520	8259	N/A
35	10/5/2017	72.7301	7222.794	6517	4765	418530	8296	N/A
36	10/5/2017	75.7798	7390.013	6354	3952	418220	8247	N/A
37	10/5/2017	79.336	7436.534	6158	4824	419800	8227	N/A
38	10/5/2017	78.925	7248.951	6328	4949	418040	8285	N/A
39	10/5/2017	72.5864	7517.974	5795	4862	418890	9934	N/A
40	10/6/2017	77.2337	7332.861	6334	3931	419010	8215	N/A
41	10/6/2017	77.306	7660.449	5900	3901	417000	8258	N/A
42	10/6/2017	76.3547	7879.322	6220	4441	417900	8189	N/A
43	10/6/2017	76.285	7274.556	6086	4570	419420	8230	N/A
AVG=		74.2	7,709	6,085	4,816	13,217,590	283,499	TOTAL

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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	31	N/A	N/A	N/A
Fresh Water	36	N/A	N/A	N/A
Fresh Water	45	N/A	N/A	N/A
Fresh Water	46	N/A	N/A	N/A
Silt	0	100	0	81
Sandstone	100	300	81	281
Siltstone (tr coal)	300	420	281	401
Silty Sandstone	420	600	401	581
Sandy siltstone	600	780	581	761
Limestone	780	800	761	781
Sandy siltstone	800	880	781	861
Limey Siltstone	880	980	861	961
Sandy shale	980	1,300	961	1,281
Sandstone	1,300	1,420	1,281	1,401
Sandy shale	1,420	1,580	1,401	1,561
Silty Sandstone (tr coal)	1,580	1,780	1,561	1,761
Sandstone	1,780	1,840	1,761	1,821
Coal	1,840	2,020	1,821	2,001
Limey Siltstone	2,020	2,097	2,001	2,101
Big Lime	2,097	2,638	2,101	2,642
Gantz Sand	2,638	2,779	2,642	2,783
Fifty Foot Sandstone	2,779	2,860	2,783	2,863
Gordon	2,860	3,175	2,863	3,179
Fifth Sandstone	3,175	3,193	3,179	3,197
Bayard	3,193	3,999	3,197	4,003
Speechley	3,999	4,228	4,003	4,233
Baltown	4,228	4,741	4,233	4,764
Bradford	4,741	5,187	4,764	5,230
Benson	5,187	5,449	5,230	5,503
Alexander	5,449	5,638	5,503	5,701
Elk	5,638	6,133	5,701	6,223
Rhinestreet	6,133	6,457	6,223	6,614
Sycamore	6,478	6,654	6,614	6,835
Middlesex	6,654	6,790	6,835	7,052
Burkett	6,790	6,820	7,052	7,110
Tully	6,820	6,871	7,110	7,091
Marcellus	6,871	NA	7,221	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.

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Hydraulic Fracturing Fluid Product Component Information Disclosure

Job Start Date:	10/22/2016
Job End Date:	11/3/2016
State:	West Virginia
County:	Doddridge
API Number:	47-017-06478-00-00
Operator Name:	Antero Resources Corporation
Well Name and Number:	Rexal 2H
Latitude:	39.21387000
Longitude:	-80.44566500
Datum:	NAD27
Federal Well:	NO
Indian Well:	NO
True Vertical Depth:	6,783
Total Base Water Volume (gal):	16,770,782
Total Base Non Water Volume:	0

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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	Carrier/Base Fluid	Water	7732-18-5	100.00000	89.11284	
			Crystalline Silica, quartz	14808-60-7	100.00000	10.64620	
HCL Acid (12.6%-17.5%)	U.S. Well Services, LLC	Bulk Acid	Water	7732-18-5	87.40000	0.12990	
			Hydrogen Chloride	7647-01-0	17.50000	0.03020	
			Guar Gum	9000-30-0	50.00000	0.01646	
LGC-15	U.S. Well Services, LLC	Gelling Agents	Petroleum Distillates	64742-47-8	60.00000	0.01559	
			Suspending agent (solid)	14808-60-7	3.00000	0.00252	
			Surfactant	68439-51-0	3.00000	0.00099	
			2-Propenoic acid, polymer with 2-propenamide	9003-06-9	30.00000	0.01943	
WFRA-405	U.S. Well Services, LLC	Friction Reducer	Hydrated light distillate (petroleum)	64742-47-8	30.00000	0.01564	

Bioclear 2000	U.S. Well Services, LLC	Anti-Bacterial Agent					
			2,2-dibromo-3-nitrilopropionamide	10222-01-2	20.00000	0.00420	
			Deionized Water	7732-18-5	28.00000	0.00240	
SI-1100s	U.S. Well Services, LLC	Scale Inhibitor					
			Copolymer of Maleic and Acrylic acid	52255-49-9	10.00000	0.00149	
			Potassium salt of diethylene triamine penta (methylene phosphonic acid)	15827-60-8	3.00000	0.00051	
			Phosphino carboxylic acid polymer	71050-62-9	3.00000	0.00049	
			Hexamethylene tramine penta (methylene phosphonic acid)	34690-00-1	3.00000	0.00049	
AI-302	U.S. Well Services, LLC	Acid Corrosion Inhibitors					
			Water	7732-18-5	95.00000	0.00029	
			2-Propyn-1-olcompound with methyloxirane	38172-91-7	15.00000	0.00005	
AP One	U.S. Well Services, LLC	Gel Breakers					
			Ammonium Persulfate	7727-54-0	100.00000	0.00030	

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)

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 DIVISION OF OIL AND GAS
 PERMIT # 06477

AP I WELL # 47-017-06477
 WELLS: 1243, 1219, 1215, 1213, 1211, 1209, 1207, 1205, 1203, 1201, 1199, 1197, 1195, 1193, 1191, 1189, 1187, 1185, 1183, 1181, 1179, 1177, 1175, 1173, 1171, 1169, 1167, 1165, 1163, 1161, 1159, 1157, 1155, 1153, 1151, 1149, 1147, 1145, 1143, 1141, 1139, 1137, 1135, 1133, 1131, 1129, 1127, 1125, 1123, 1121, 1119, 1117, 1115, 1113, 1111, 1109, 1107, 1105, 1103, 1101, 1099, 1097, 1095, 1093, 1091, 1089, 1087, 1085, 1083, 1081, 1079, 1077, 1075, 1073, 1071, 1069, 1067, 1065, 1063, 1061, 1059, 1057, 1055, 1053, 1051, 1049, 1047, 1045, 1043, 1041, 1039, 1037, 1035, 1033, 1031, 1029, 1027, 1025, 1023, 1021, 1019, 1017, 1015, 1013, 1011, 1009, 1007, 1005, 1003, 1001, 999, 997, 995, 993, 991, 989, 987, 985, 983, 981, 979, 977, 975, 973, 971, 969, 967, 965, 963, 961, 959, 957, 955, 953, 951, 949, 947, 945, 943, 941, 939, 937, 935, 933, 931, 929, 927, 925, 923, 921, 919, 917, 915, 913, 911, 909, 907, 905, 903, 901, 899, 897, 895, 893, 891, 889, 887, 885, 883, 881, 879, 877, 875, 873, 871, 869, 867, 865, 863, 861, 859, 857, 855, 853, 851, 849, 847, 845, 843, 841, 839, 837, 835, 833, 831, 829, 827, 825, 823, 821, 819, 817, 815, 813, 811, 809, 807, 805, 803, 801, 799, 797, 795, 793, 791, 789, 787, 785, 783, 781, 779, 777, 775, 773, 771, 769, 767, 765, 763, 761, 759, 757, 755, 753, 751, 749, 747, 745, 743, 741, 739, 737, 735, 733, 731, 729, 727, 725, 723, 721, 719, 717, 715, 713, 711, 709, 707, 705, 703, 701, 699, 697, 695, 693, 691, 689, 687, 685, 683, 681, 679, 677, 675, 673, 671, 669, 667, 665, 663, 661, 659, 657, 655, 653, 651, 649, 647, 645, 643, 641, 639, 637, 635, 633, 631, 629, 627, 625, 623, 621, 619, 617, 615, 613, 611, 609, 607, 605, 603, 601, 599, 597, 595, 593, 591, 589, 587, 585, 583, 581, 579, 577, 575, 573, 571, 569, 567, 565, 563, 561, 559, 557, 555, 553, 551, 549, 547, 545, 543, 541, 539, 537, 535, 533, 531, 529, 527, 525, 523, 521, 519, 517, 515, 513, 511, 509, 507, 505, 503, 501, 499, 497, 495, 493, 491, 489, 487, 485, 483, 481, 479, 477, 475, 473, 471, 469, 467, 465, 463, 461, 459, 457, 455, 453, 451, 449, 447, 445, 443, 441, 439, 437, 435, 433, 431, 429, 427, 425, 423, 421, 419, 417, 415, 413, 411, 409, 407, 405, 403, 401, 399, 397, 395, 393, 391, 389, 387, 385, 383, 381, 379, 377, 375, 373, 371, 369, 367, 365, 363, 361, 359, 357, 355, 353, 351, 349, 347, 345, 343, 341, 339, 337, 335, 333, 331, 329, 327, 325, 323, 321, 319, 317, 315, 313, 311, 309, 307, 305, 303, 301, 299, 297, 295, 293, 291, 289, 287, 285, 283, 281, 279, 277, 275, 273, 271, 269, 267, 265, 263, 261, 259, 257, 255, 253, 251, 249, 247, 245, 243, 241, 239, 237, 235, 233, 231, 229, 227, 225, 223, 221, 219, 217, 215, 213, 211, 209, 207, 205, 203, 201, 199, 197, 195, 193, 191, 189, 187, 185, 183, 181, 179, 177, 175, 173, 171, 169, 167, 165, 163, 161, 159, 157, 155, 153, 151, 149, 147, 145, 143, 141, 139, 137, 135, 133, 131, 129, 127, 125, 123, 121, 119, 117, 115, 113, 111, 109, 107, 105, 103, 101, 99, 97, 95, 93, 91, 89, 87, 85, 83, 81, 79, 77, 75, 73, 71, 69, 67, 65, 63, 61, 59, 57, 55, 53, 51, 49, 47, 45, 43, 41, 39, 37, 35, 33, 31, 29, 27, 25, 23, 21, 19, 17, 15, 13, 11, 9, 7, 5, 3, 1, 0

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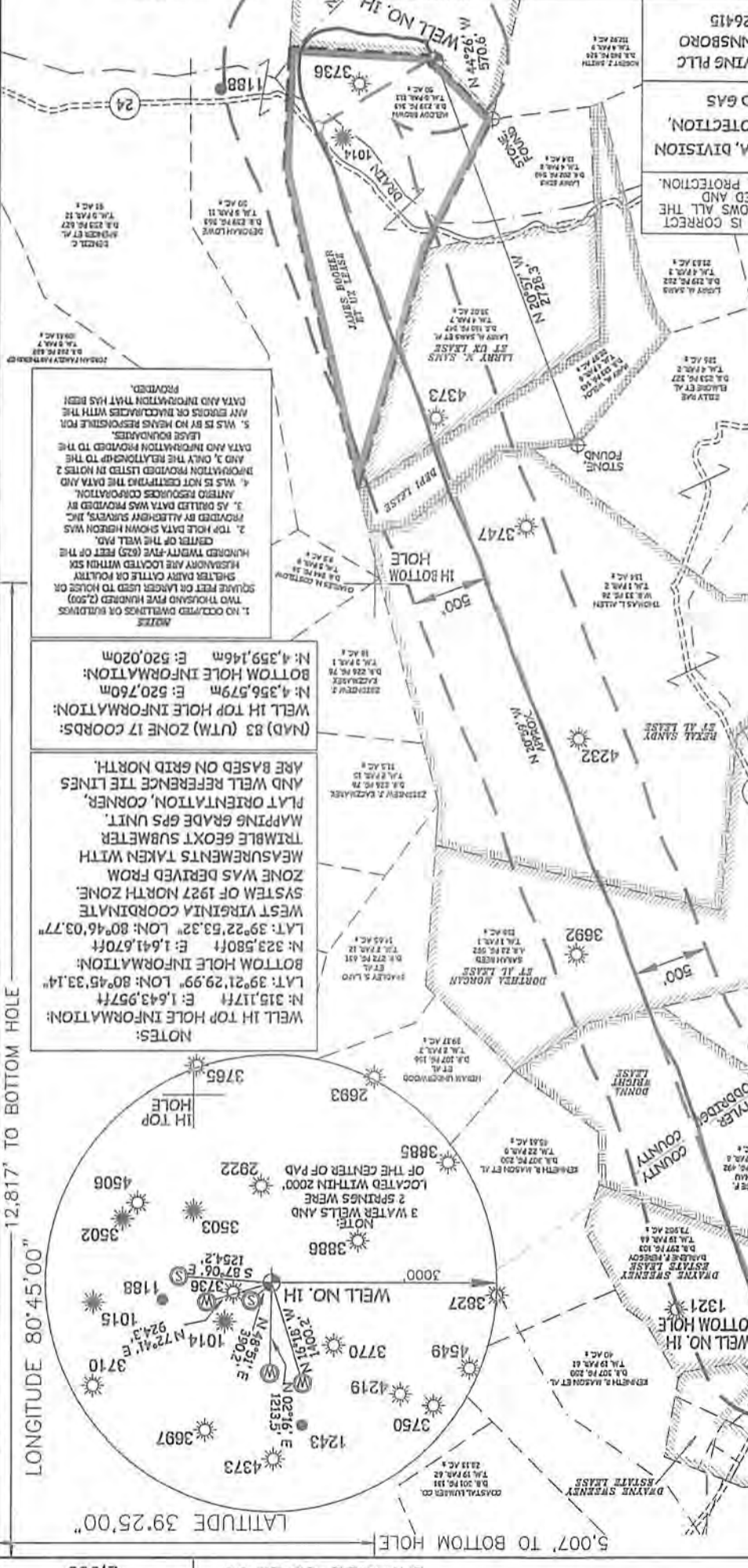
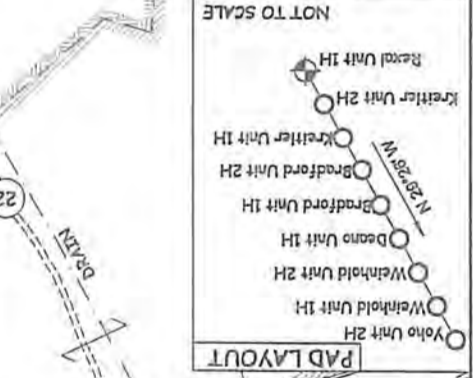
PERMIT COUNTY NAME



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

DATE 04/03/18
 OPERATOR'S WELL # RECAL UNIT #1H
 DOUGLAS R. ROWE P.S. 2202
 LEGEND: Surface Owner Boundary Lines +/-, Proposed Well Path, As Drilled Well Path

JOB # 13-025WA
 DRAWING # RECAL/1HAD
 SCALE 1" = 1000'
 MINIMUM DEGREE OF ACCURACY
 PROVEN SOURCE OF ELEV. SUBMETER MAPPING GRADE GPS



NOTES:
 1. NO OCCUPIED DWELLINGS OR BUILDINGS
 TWO THOUSAND FIVE HUNDRED (2,500)
 SQUARE FEET OR LARGER USED TO HOUSE OR
 SHEDDER DAIRY CATTLE OR POULTRY
 HESITANTLY ARE LOCATED WITHIN 500
 FEET OF THE WELL PAD.
 2. TOP HOLE DATA SHOWN HEREON WAS
 PROVIDED BY ANTERO RESOURCES CORPORATION.
 3. AS OBTAINED DATA WAS PROVIDED BY
 ANTERO RESOURCES CORPORATION.
 4. THIS IS NOT CERTIFIED DATA AND
 INFORMATION PROVIDED LISTED BY NOTES 2
 AND 3, ONLY THE RELATED TO THE
 DATA AND INFORMATION PROVIDED TO THE
 LEASE BOUNDARIES.
 5. WAS BY NO MEANS RESPONSIBLE FOR
 ANY ERRORS OR DISCREPANCIES WITH THE
 DATA AND INFORMATION THAT HAS BEEN
 PROVIDED.

WELL 1H TOP HOLE INFORMATION:
 N: 315.1174 E: 1.643.9574
 LAT: 39°21'29.99" LON: 80°45'33.14"
 BOTTOM HOLE INFORMATION:
 N: 323.5804 E: 1.641.6704
 LAT: 39°22'53.32" LON: 80°46'03.77"
 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 LINES
 ARE BASED ON GRID NORTH.

WELL 1H TOP HOLE INFORMATION:
 N: 4.359.146m E: 520.020m
 BOTTOM HOLE INFORMATION:
 N: 4.356.579m E: 520.760m

LATITUDE 39.25°00" LONGITUDE 80.45°00" LONGITUDE 80.45°00" LONGITUDE 39.22°30" 2.603' 5.007' TO BOTTOM HOLE 12.817' TO BOTTOM HOLE 6.072' 8/20/2017

LATITUDE 39°22'30" 2,603'

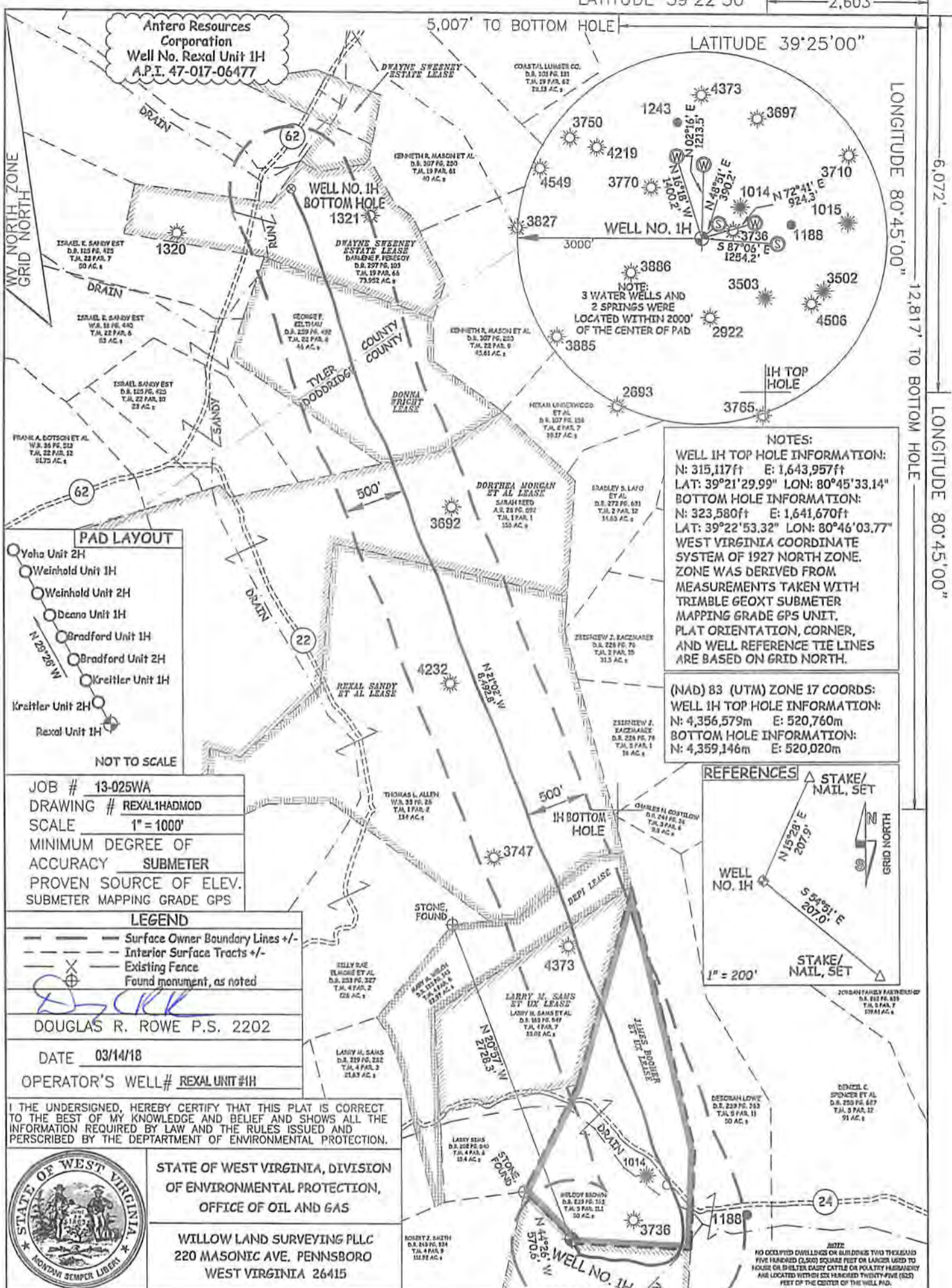
LATITUDE 39°25'00"

LONGITUDE 80°45'00"

6,072'

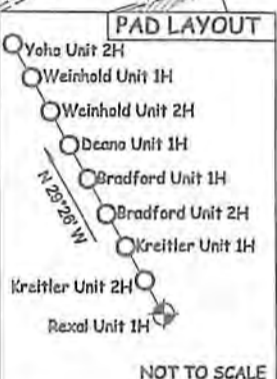
LONGITUDE 80°45'00"

12,817' TO BOTTOM HOLE



NOTES:
WELL 1H TOP HOLE INFORMATION:
 N: 315,117ft E: 1,643,957ft
 LAT: 39°21'29.99" LON: 80°45'33.14"
BOTTOM HOLE INFORMATION:
 N: 323,580ft E: 1,641,670ft
 LAT: 39°22'53.32" LON: 80°46'03.77"
 WEST VIRGINIA COORDINATE SYSTEM OF 1927 NORTH 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: 4,356,579m E: 520,760m
BOTTOM HOLE INFORMATION:
 N: 4,359,146m E: 520,020m



JOB # 13-025WA
 DRAWING # REXAL1HADMOD
 SCALE 1" = 1000'
 MINIMUM DEGREE OF ACCURACY SUBMETER
 PROVEN SOURCE OF ELEV. SUBMETER MAPPING GRADE GPS

LEGEND
 - - - Surface Owner Boundary Lines +/-
 - - - Interior Surface Tracts +/-
 X Existing Fence
 Found monument, as noted

DOUGLAS R. ROWE P.S. 2202

DATE 03/14/18

OPERATOR'S WELL# REXAL UNIT #1H

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 DEPARTMENT 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

STATE OF WEST VIRGINIA DEPARTMENT OF ENERGY DIVISION OF OIL AND GAS
 API WELL # 47 - 017 - 06477
 WELL TYPE: OIL ___ GAS X LIQUID INJECTION ___ WASTE DISPOSAL ___
 (IF "GAS") PRODUCTION X STORAGE ___ DEEP ___ SHALLOW X
 LOCATION: ELEVATION 1,135' WATERSHED McELROY CREEK
 QUADRANGLE WEST UNION 7.5 (TH SHIRLEY 7.5) DISTRICT GRANT COUNTY DODDRIE
 SURFACE OWNER MELODY BROWN ACREAGE 50 ACRES +/-
 OIL & GAS ROYALTY OWNER JAMES BOOHER ET UX; CAROLYN E. FARR; LARRY M. SAMS ET UX; DEPI; REXAL SANDY ET AL; DORTHEA MORGAN ET AL; DONNA WRIGHT; DWAYNE SWEENEY ESTATE

LEASE ACREAGE 50 AC±; 50 AC±; 35 AC±; 22.97 AC±; 134 AC±; 159 AC±; 46 AC±; 32 AC±
 PROPOSED WORK: DRILL ___ CONVERT ___ DRILL DEEPER ___ REDRILL ___ FRACTURE OR STIMULATE ___
 PLUG OFF OLD FORMATION ___ PERFORATE NEW FORMATION ___ OTHER PHYSICAL CHANGE IN WELL (SPECIFY) POE MOD
 TARGET FORMATION MARCELLUS ESTIMATED DEPTH 6,874' TVD 15,972' MD
 WELL OPERATOR ANTERO RESOURCES CORP. DESIGNATED AGENT CT CORPORATION SYSTEM-DIANNA STAMPER
 ADDRESS 1615 WYNKOOP STREET ADDRESS 5400 D BIG TYLER ROAD
 FORM WW-6 DENVER, CO 80202 CHARLESTON, WV 25313



COUNTY NAME

PERMIT

STATE OF WEST VIRGINIA
 DEPARTMENT OF ENERGY
 DIVISION OF OIL AND GAS
 PERMIT # 017 - 06477

APL WELL # 47 - 017 - 06477

WELL TYPE: OIL GAS X LIQUID INJECTION
 (IF "GAS") PRODUCTION X STORAGE DEEP SHALLOW X
 LOCATION: ELEVATION 1,135 WATERSHED MELROY CREEK
 QUADRANGLE WEST UNION 78 (78) SHEET 78 (81) DISTRICT GRANT COUNTY DODDRIDGE
 SURFACE OWNER MELODY BROWN ACREAGE 50 ACRES +/-
 OIL & GAS RIGHTS OWNER JAMES BOOHER ET UX: CAROLYN E. FARR; LARRY M. SAMS ET UX: DEPI
 REYAL SANDY ET AL; DORTHEA MORGAN ET AL; DONNA WRIGHT; DWAYNE SWEENEY ESTATE
 LEASE ACREAGE 50 AC.; 50 AC.; 35 AC.; 22.97 AC.; 134 AC.; 159 AC.; 46 AC.; 32 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
 TARGET FORMATION MARCELLUS
 WELL OPERATOR ANTERO RESOURCES CORP. DESIGNATED AGENT CT CORPORATION SYSTEM-DIANNA STAMPER
 ADDRESS 1615 WYNKOOP STREET DENVER, CO 80202
 FORM W-6

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

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

STATE OF WEST VIRGINIA
 DEPARTMENT OF ENERGY
 DIVISION OF OIL AND GAS
 PERMIT # 017 - 06477

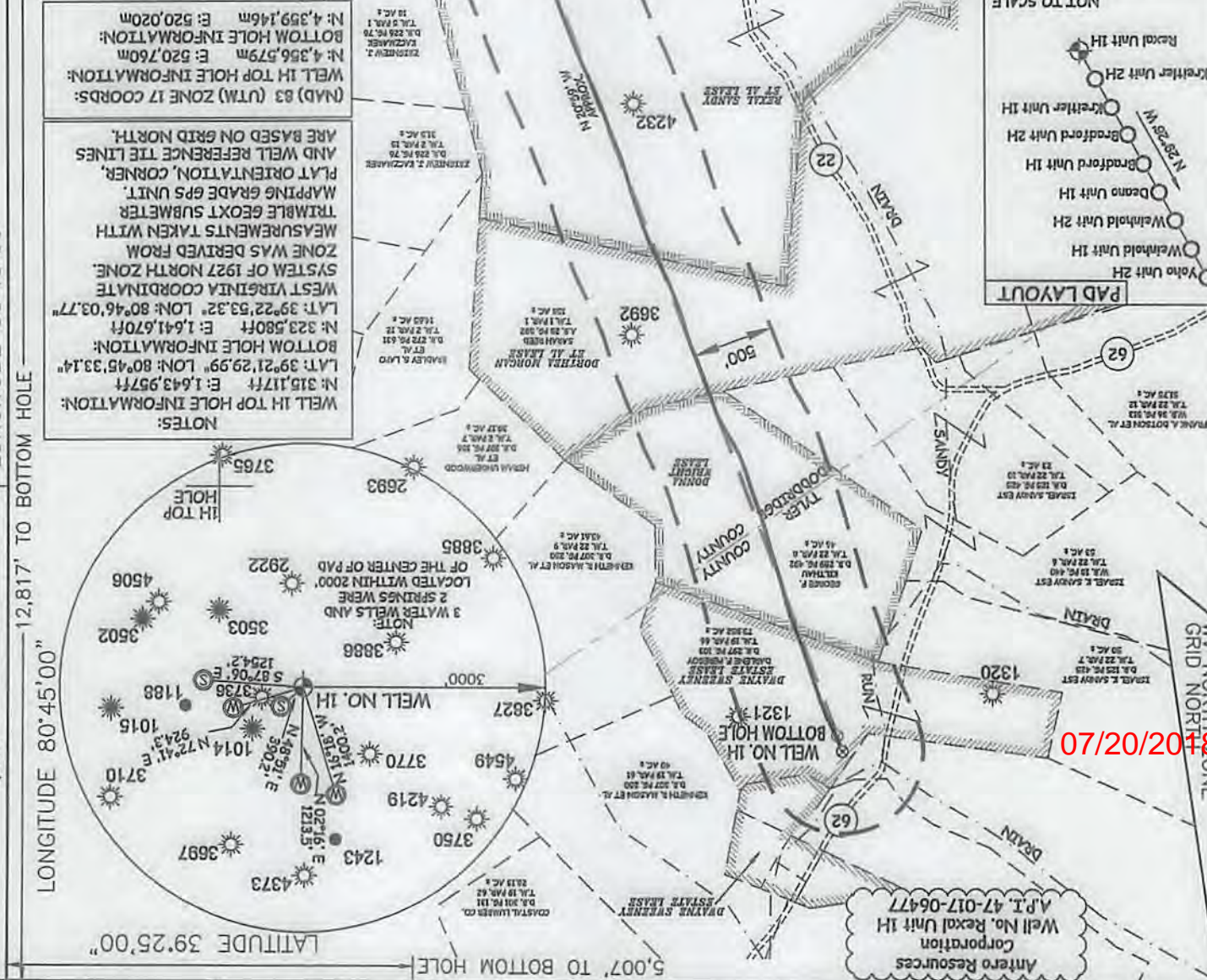
JOB # 13-025WA
 DRAWING # RECAL11AD
 SCALE 1" = 1000'
 MINIMUM DEGREE OF
 ACCURACY SUBMETER
 PROVEN SOURCE OF ELEV.
 SUBMETER MAPPING GRADE GPS

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

DATE 04/03/18
 OPERATOR'S WELL # RECAL UNIT #1H

NOTES:
 WELL 1H TOP HOLE INFORMATION:
 N: 315.117ft E: 1.643.957ft
 LAT: 39°21'29.99" LON: 80°45'33.14"
 BOTTOM HOLE INFORMATION:
 N: 323.580ft E: 1.641.670ft
 LAT: 39°22'53.32" LON: 80°46'03.77"
 (NAD) 83 (UTM) ZONE 17 COORDS:
 WELL 1H TOP HOLE INFORMATION:
 N: 4,356,579m E: 520,760m
 BOTTOM HOLE INFORMATION:
 N: 4,359,146m E: 520,020m

NOTES:
 1. NO OCCUPIED DWELLINGS OR BUILDINGS
 WITHIN THE WELL PAD.
 2. TOP HOLE DATA IS SHOWN HEREON WAS
 PROVIDED BY ANTERO SURVEYS, INC.
 ANTERO RESOURCES CORPORATION.
 3. AS DRILLED DATA WAS PROVIDED BY
 ANTERO SURVEYS, INC. AND IS NOT
 CERTIFIED BY THE DATA AND
 INFORMATION LISTED IN NOTES 2
 AND 3. ONLY THE RELATIONSHIP TO THE
 DATA AND INFORMATION PROVIDED TO THE
 LEASE BOUNDARIES.
 4. THIS IS NOT A MEASUREMENT FOR
 ANY ERRORS OR INACCURACIES WITH THE
 DATA AND INFORMATION THAT HAS BEEN
 PROVIDED.



ANTERO RESOURCES CORPORATION
 Well No. Recal Unit 1H
 A.P.L. 47-017-06477

8/20/2017



STATE OF WEST VIRGINIA
 DEPARTMENT OF ENERGY
 DIVISION OF OIL AND GAS
 STATE COUNTY PERMIT
 47 - 017 - 06477

API WELL #
 47 - 017 - 06477
 WASTE DISPOSAL DEEP SHALLOW X
 (IF "GAS") PRODUCTION X STORAGE
 LOCATION: ELEVATION 1,135 WATERSHED MELROY CREEK
 QUADRANGLE WEST UNION 7.5 (10) SHIRELY (7.5) DISTRICT GRANT
 SURFACE OWNER MELROY BROWN ACREAGE 50 ACRES +/-
 OIL & GAS ROVARY OWNER JAMES BOOHER ET UX; CAROLYN E. FARR; LARRY M. SAMS ET UX; DEPI; REXAL SANDY ET AL; DORTHEA MORGAN ET AL; DONNA WRIGHT; DWAYNE SWENEY ESTATE
 LEASE ACREAGE 50 AC.; 50 AC.; 35 AC.; 22.97 AC.; 134 AC.; 159 AC.; 46 AC.; 32 AC.

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



JOB # 13-025WA
 DRAWING # REXALHAMD
 SCALE 1" = 1000'
 MINIMUM DEGREE OF ACCURACY SUBMETER
 PROVEN SOURCE OF ELEV. SUBMETER MAPPING GRADE GPS

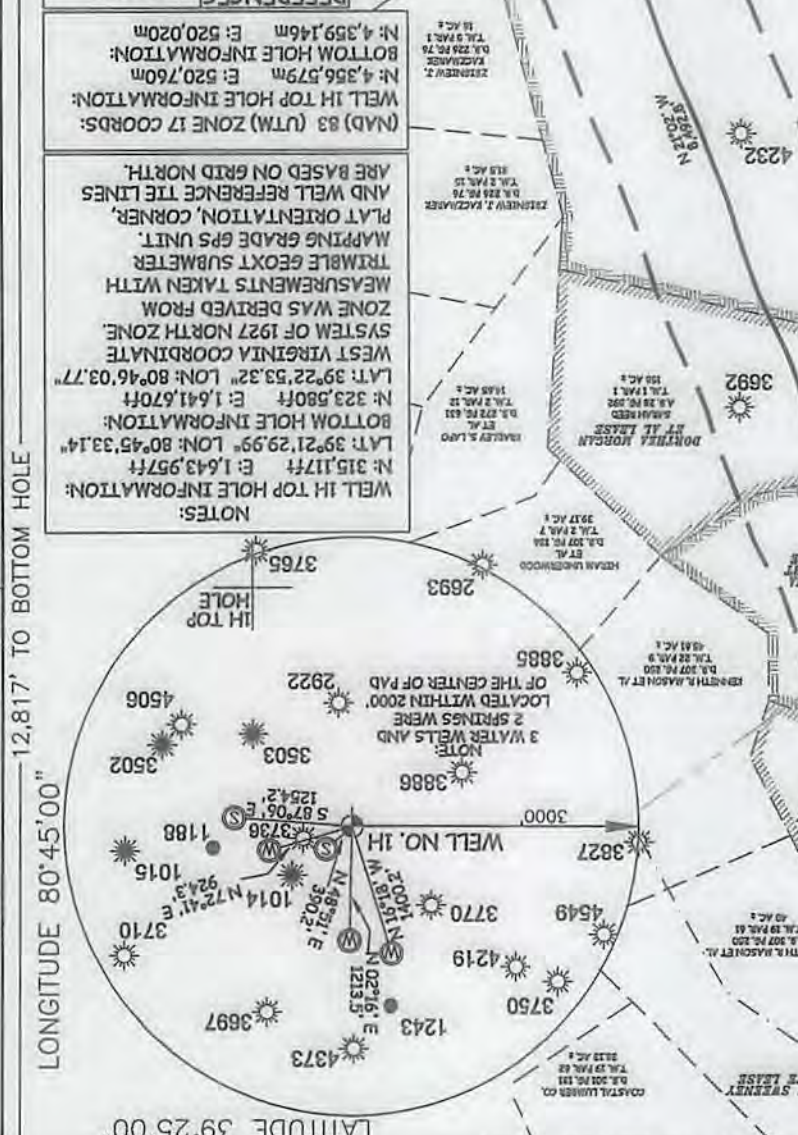
LEGEND
 --- Surface Owner Boundary Lines +/-
 --- Existing Fence
 ⊕ Found monument, as noted

DATE 03/14/18
 OPERATOR'S WELL # REXAL UNIT #11

ANTERO RESOURCES CORPORATION
 Well No. Rexal Unit 11H
 A.P.I. 47-017-06477

FORM WW-6
 ADDRESS 1615 WYNNKOP STREET DENVER, CO 80202
 WELL OPERATOR ANTERO RESOURCES CORP.
 TARGET FORMATION MARCELLUS
 (SPECIFY) POE MOD
 PLUG OFF OLD FORMATION PERFORATE NEW FORMATION
 PROPOSED WORK: DRILL CONVERT DRILL DEEPER REDRILL FRACTURE OR STIMULATE
 ESTIMATED DEPTH 6,874' TVD 15,972' MD
 DESIGNATED AGENT CT CORPORATION SYSTEM-ANNNA STAMPER
 ADDRESS 5400 D BIG TYLER ROAD CHARLESTON, WV 25313

PROFESSIONAL SURVEYOR
 STATE OF WEST VIRGINIA
 No. 2202
 LICENSED
 DOUGLAS R. ROWE



LATITUDE 39°25'00"
 LONGITUDE 80°45'00"
 12,817' TO BOTTOM HOLE
 5,007' TO BOTTOM HOLE
 2,603'

07/20/2018