

AUG 24 2015

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WR-35
Rev. 8/23/13

WV GEOLOGICAL SURVEY
MORGANTOWN, WV

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

API 47 - 017 - 06375 County Doddridge District Grant
Quad Smithburg 7.5' Pad Name Misery Pad Field/Pool Name _____
Farm name Spencer, Denzil C. et al Well Number Hardin 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 4,356,833m Easting 521,638m
Landing Point of Curve Northing 4,356,737.03m Easting 521,760.80m
Bottom Hole Northing 4,354,558m Easting 522,645m

Elevation (ft) 1,001' 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 11/20/2013 Date drilling commenced 05/08/2014 Date drilling ceased 09/27/2014
Date completion activities began 10/28/2014 Date completion activities ceased 02/07/2015
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 475' Open mine(s) (Y/N) depths No
Salt water depth(s) ft 1,477; 1,675' Void(s) encountered (Y/N) depths None
Coal depth(s) ft None Identified Cavern(s) encountered (Y/N) depths None
Is coal being mined in area (Y/N) No

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API 47-017 - 06375 Farm name Spencer, Denzil C. et al Well number Hardin 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	Yes
Surface	17 1/2"	13 3/8"	581'	New	48#; H-40	N/A	Yes
Coal							
Intermediate 1	12 1/4"	9 5/8"	2,504'	New	36#; J-55	N/A	Yes
Intermediate 2							
Intermediate 3							
Production	8 3/4" & 8 1/2"	5 1/2"	14,837'	New	23#; P-110	N/A	Yes
Tubing		2 3/8"	6,898'		4.7#; N-80	N/A	
Packer type and depth set		N/A					

Comment Details SIDETRACK: Sidetrack was performed at 2,620'.

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	100 sx	15.6	1.18	38	0'	8 Hrs.
Surface	Class A	691 sx	15.6	1.18	404	0'	8 Hrs.
Coal							
Intermediate 1	Class A	703 sx	15.6	1.18	784	0'	8 Hrs.
Intermediate 2							
Intermediate 3							
Production	Class H	960 sx (Lead); 1,266 sx (Tail)	13.5 (Lead); 15.2 (Tail)	1.4 (Lead); 1.8 (Tail)	2,940	~500' into Intermediate Casing	8 Hrs.
Tubing							

Drillers TD (ft) 14,819' MD; 6,815' TVD (BHL); 6,852' TVD (Deepest Point Drilled) Loggers TD (ft) 14,770'

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

Plug back procedure N/A

Kick off depth (ft) 6,048'

**This is a subsequent well. Antero only runs wireline logs on one well on a multi-well pad (Anne Unit 2H, API #47-017-06374). Please reference the wireline logs submitted with Form WR-35 for the Anne 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 _____

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API 47-017-06375 Farm Name Spencer, Denzil C. et al Well Number Hardin Unit 1H

EXHIBIT 1

Stage No.	Perforation Date	Perforated from MD ft.	Perforated to MD ft.	Number of Perforations	Formations
1	28-Oct-14	14,574	14,743	60	Marcellus
2	21-Nov-14	14,372	14,542	60	Marcellus
3	22-Nov-14	14,171	14,341	60	Marcellus
4	22-Nov-14	13,969	14,139	60	Marcellus
5	22-Nov-14	13,768	13,938	60	Marcellus
6	23-Nov-14	13,566	13,736	60	Marcellus
7	23-Nov-14	13,365	13,535	60	Marcellus
8	24-Nov-14	13,163	13,333	60	Marcellus
9	24-Nov-14	12,962	13,132	60	Marcellus
10	24-Nov-14	12,760	12,930	60	Marcellus
11	24-Nov-14	12,559	12,729	60	Marcellus
12	25-Nov-14	12,358	12,527	60	Marcellus
13	25-Nov-14	12,156	12,326	60	Marcellus
14	25-Nov-14	11,955	12,125	60	Marcellus
15	26-Nov-14	11,753	11,923	60	Marcellus
16	26-Nov-14	11,552	11,722	60	Marcellus
17	26-Nov-14	11,350	11,520	60	Marcellus
18	26-Nov-14	11,149	11,319	60	Marcellus
19	27-Nov-14	10,947	11,117	60	Marcellus
20	27-Nov-14	10,746	10,916	60	Marcellus
21	28-Nov-14	10,545	10,714	60	Marcellus
22	28-Nov-14	10,343	10,513	60	Marcellus
23	28-Nov-14	10,142	10,311	60	Marcellus
24	29-Nov-14	9,940	10,110	60	Marcellus
25	29-Nov-14	9,739	9,909	60	Marcellus
26	30-Nov-14	9,537	9,707	60	Marcellus
27	30-Nov-14	9,336	9,506	60	Marcellus
28	30-Nov-14	9,134	9,304	60	Marcellus
29	30-Nov-14	8,933	9,103	60	Marcellus
30	30-Nov-14	8,731	8,901	60	Marcellus
31	1-Dec-14	8,530	8,700	60	Marcellus
32	1-Dec-14	8,329	8,498	60	Marcellus
33	1-Dec-14	8,127	8,297	60	Marcellus
34	2-Dec-14	7,926	8,096	60	Marcellus
35	2-Dec-14	7,724	7,894	60	Marcellus
36	2-Dec-14	7,523	7,693	60	Marcellus
37	2-Dec-14	7,321	7,491	60	Marcellus
38	2-Dec-14	7,120	7,290	60	Marcellus
39	3-Dec-14	6,918	7,088	60	Marcellus

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API 47-017-06375 Farm Name Spencer, Denzil C. et al Well Number Hardin Unit 1H

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	21-Nov-14	63.9	7,008	5,160	4,220	251,500	6,804	N/A
2	21-Nov-14	64.2	7,495	5,953	4,153	254,600	6,757	N/A
3	22-Nov-14	63.2	7,322	5,684	4,480	252,800	6,673	N/A
4	22-Nov-14	64.7	7,324	5,822	4,687	248,900	6,708	N/A
5	22-Nov-14	64.3	7,167	5,911	4,453	252,900	6,699	N/A
6	23-Nov-14	64.2	7,519	5,971	4,512	232,100	6,718	N/A
7	23-Nov-14	64.7	7,439	5,522	4,191	198,300	7,212	N/A
8	24-Nov-14	65.1	7,153	5,588	5,068	247,100	7,149	N/A
9	24-Nov-14	62.9	7,343	5,882	5,450	250,400	6,597	N/A
10	24-Nov-14	64.9	6,869	5,485	4,878	189,100	6,594	N/A
11	24-Nov-14	64.3	7,271	5,669	5,046	250,300	6,037	N/A
12	25-Nov-14	63.6	6,793	5,601	5,139	235,000	6,626	N/A
13	25-Nov-14	63.6	6,994	5,646	4,997	247,900	6,873	N/A
14	25-Nov-14	63.4	6,937	5,938	4,797	251,800	6,424	N/A
15	26-Nov-14	64.5	6,864	5,625	5,024	243,200	6,473	N/A
16	26-Nov-14	63.9	6,992	5,677	4,986	246,500	6,431	N/A
17	26-Nov-14	65.4	6,740	5,836	4,598	245,900	6,429	N/A
18	26-Nov-14	64.4	6,850	5,675	4,371	246,100	6,549	N/A
19	27-Nov-14	64.8	7,176	5,955	4,735	254,500	6,638	N/A
20	27-Nov-14	64.2	6,927	5,830	4,807	251,100	6,385	N/A
21	28-Nov-14	65.1	6,834	5,515	5,463	234,900	6,820	N/A
22	28-Nov-14	64.3	6,721	5,859	4,965	253,300	6,396	N/A
23	28-Nov-14	64.3	6,408	5,355	5,391	249,900	6,387	N/A
24	29-Nov-14	64.5	6,392	5,215	4,505	252,600	6,389	N/A
25	29-Nov-14	64.1	6,249	5,277	5,107	249,300	6,355	N/A
26	30-Nov-14	63.9	6,496	5,442	4,875	237,600	6,951	N/A
27	30-Nov-14	65.1	6,598	5,457	4,957	249,300	6,255	N/A
28	30-Nov-14	65.9	6,502	5,281	4,907	246,400	6,264	N/A
29	30-Nov-14	65.0	6,285	5,376	5,077	222,700	6,220	N/A
30	30-Nov-14	64.8	6,771	5,441	4,974	246,300	6,743	N/A
31	1-Dec-14	66.1	6,200	5,309	4,716	250,700	6,220	N/A
32	1-Dec-14	65.9	5,966	5,142	5,544	243,900	6,205	N/A
33	1-Dec-14	64.4	5,969	5,024	5,297	250,500	6,147	N/A
34	2-Dec-14	64.3	5,992	5,379	4,980	251,200	6,149	N/A
35	2-Dec-14	63.1	6,011	5,191	4,876	247,400	6,165	N/A
36	2-Dec-14	64.1	6,310	5,757	4,629	252,200	5,997	N/A
37	2-Dec-14	64.9	5,942	5,424	5,266	247,500	6,066	N/A
38	2-Dec-14	63.9	6,169	5,580	5,602	255,400	6,081	N/A
39	3-Dec-14	64.3	5,947	5,347	4,651	156,800	6,098	N/A
	AVG=	64.4	6,717	5,559	4,881	9,447,900	252,684	TOTAL

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API 47-017-06375 Farm Name Spencer, Denzil C. et al Well Number Hardin Unit 1H

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	475'	N/A	475'	N/A
Shale/ Siltstone	0	177	0	177
Shale/ Trace Coal	est. 177	207	est. 177	207
Shale/ Siltstone	est. 207	257	est. 207	257
Shale/ Trace Coal	est. 257	277	est. 257	277
Shale/ Sandstone	est. 277	657	est. 277	657
Limestone/ Siltstone	est. 657	967	est. 657	967
Sandstone	est. 967	987	est. 967	987
Shale/ Limestone/ Siltstone	est. 987	1,117	est. 987	1,117
Siltstone/ Sandstone	est. 1117	1,177	est. 1117	1,177
Shale/ Siltstone	est. 1177	1,237	est. 1177	1,237
Sandstone	est. 1237	1,257	est. 1237	1,257
Shale/ Siltstone	est. 1257	1,397	est. 1257	1,397
Sandstone/ Siltstone	est. 1397	1,542	est. 1397	1,542
Sandstone/ Coal	est. 1542	1,602	est. 1542	1,602
Siltstone/ Shale	est. 1602	1,997	est. 1602	1,997
Big Lime	1,997	2,115	1,997	2,115
Big Injun	2,115	2,545	2,115	2,545
Gantz Sand	2,545	2,685	2,545	2,685
Fifty Foot Sandstone	2,685	2,748	2,685	2,748
Gordon	2,748	3,111	2,748	3,112
Fifth Sandstone	3,111	3,141	3,112	3,142
Bayard	3,141	3,503	3,142	3,504
Warren	3,503	3,882	3,504	3,883
Speechley	3,882	4,121	3,883	4,122
Baltown	4,121	4,604	4,122	4,606
Bradford	4,604	5,101	4,606	5,103
Benson	5,101	5,363	5,103	5,365
Alexander	5,363	5,554	5,365	5,556
Elk	5,554	6,069	5,556	6,071
Rhinstreet	6,069	6,352	6,071	6,366
Sycamore	6,352	6,532	6,366	6,562
Middlesex	6,532	6,670	6,562	6,732
Burkett	6,670	6,697	6,732	6,773
Tully	6,697	6,753	6,773	6,880
Marcellus	6,753	NA	6,880	NA

*Please note Antero determines shallow 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:	11/21/2014
Job End Date:	12/3/2014
State:	West Virginia
County:	Doddridge
API Number:	47-017-06375-00-00
Operator Name:	Antero Resources Corporation
Well Name and Number:	Hardin Unit 1H
Longitude:	-80.74883600
Latitude:	39.36067200
Datum:	NAD83
Federal/Tribal Well:	NO
True Vertical Depth:	6,852
Total Base Water Volume (gal):	10,612,728
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	Water	Water	7732-18-5	100.00000	89.90298	
Sand	Nabors Completion and Production Services	Sand - Bulk - West Virginia	Crystalline Silica, quartz	14808-60-7	99.90000	5.45108	
			Aluminum Oxide	1344-28-1	1.10000	0.06002	
			Titanium Oxide	13463-67-7	0.10000	0.00546	
			Iron Oxide	1309-37-1	0.10000	0.00546	
Sand	Nabors Completion and Production Services	Sand - Bulk - West Virginia	Crystalline Silica, quartz	14808-60-7	99.90000	3.42215	
			Aluminum Oxide	1344-28-1	1.10000	0.03768	
			Iron Oxide	1309-37-1	0.10000	0.00343	
			Titanium Oxide	13463-67-7	0.10000	0.00343	
Sand	Nabors Completion and Production Services	Sand - Bulk - West Virginia	Crystalline Silica, quartz	14808-60-7	99.90000	0.80407	
			Aluminum Oxide	1344-28-1	1.10000	0.00885	

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			Titanium Oxide				0.10000	0.00081
HCl Acid (12.5-18.0%) 22 Baume	Nabors Completion and Production Services	Bulk Acid	Iron Oxide	1309-37-1			0.10000	0.00081
			Water	7732-18-5			87.50000	0.17901
			Hydrochloric Acid	7647-01-0			18.00000	0.03682
WFR-6W	Nabors Completion and Production Services	Friction Reducer	Anionic Water-Soluble Polymer Emulsion	Proprietary			100.00000	0.06871
LSG-100L	Nabors Completion and Production Services	Gelling Agents	Petroleum Distillates	64742-47-8			70.00000	0.06475
Super TSC-LT	Nabors Completion and Production Services	Paraffin & Scale Additives	100% Non-Hazardous Mixture	Proprietary			100.00000	0.01536
AQUACAR DB 20	Nabors Completion and Production Services	Biocides	Polyethylene glycol	25322-68-3			54.50000	0.00884
			2,2-Dibromo-3-nitrilo- propionamide (DBNPA)	10222-01-2			20.00000	0.00324
			Sodium bromide	7647-15-6			4.00000	0.00065
			Dibromoacetonitrile	3252-43-5			3.00000	0.00049
Super GREEN SOLV- M	Nabors Completion and Production Services	Paraffin & Scale Additives						
			Aliphatic Hydrocarbons	Proprietary			95.00000	0.00600
			Dodecane	Proprietary			14.00000	0.00088
			Tetradecane	Proprietary			11.00000	0.00069
			Tridecane	Proprietary			9.00000	0.00057
			Undecane	Proprietary			8.00000	0.00051
Calcium Chloride (CaCl2)	Nabors Completion and Production Services	Cement Accelerators						
			Calcium Chloride	10043-52-4			100.00000	0.00427
OB-2 LT	Nabors Completion and Production Services	Gel Breakers						
			Ammonium Persulfate	7727-54-0			85.00000	0.00111
			Crystalline Silica (in the form of quartz)	14808-60-7			10.00000	0.00013
Acid Inhibitor 2 (AI-2)	Nabors Completion and Production Services	Acid Corrosion Inhibitors						
			Propargyl Alcohol	107-19-7			40.00000	0.00015
			Isopropyl Alcohol	67-63-0			40.00000	0.00015
			Glycol Ethers	111-46-6			40.00000	0.00015

EB-4L	Nabors Completion and Production Services	Gel Breakers	Tar bases, quinoline derivs, benzyl chloride-quaternized	72480-70-7	10.00000	0.00004
			Ethylene Glycol	107-21-1	40.00000	0.00016
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.						
	Nabors Completion and Production Services	Other Ingredients				
			Copolymer	Proprietary	100.00000	0.06871
			guar gum	9000-30-0	50.00000	0.04625
			Water	7732-18-5	40.00000	0.02749
			isoparaffinic Solvent	84742-47-8	26.00000	0.01787
			Water	7732-18-5	60.00000	0.00921
			Proprietary	Proprietary	50.00000	0.00768
			Water	7732-18-5	32.00000	0.00519
			Ethoxylated alcohols	Proprietary	4.00000	0.00275
			Ethylene Glycol	107-21-1	4.00000	0.00275
			Proprietary	Proprietary	15.00000	0.00230
			Proprietary	Proprietary	15.00000	0.00230
			Proprietary	Proprietary	15.00000	0.00230
			Surfactant Blend	Proprietary	3.00000	0.00206
			Surfactant	68439-51-0	2.00000	0.00185
			Crystalline Silica (in the form of quartz)	14808-60-7	2.00000	0.00185
			Sugar	57-50-1	100.00000	0.00040
			Proprietary	Proprietary	100.00000	0.00040
			Potassium Chloride	7447-40-7	5.00000	0.00021
			Sodium Chloride	7647-14-5	5.00000	0.00021
			Water	7732-18-5	100.00000	0.00020
			Alkali Chloride salt	Proprietary	15.00000	0.00020
			Water	7732-18-5	48.00000	0.00019
			Monobromo-3-nitropropionamide	1113-55-9	1.00000	0.00016
			2,2-Dibromomalonamide	73003-80-2	1.00000	0.00016
			2-Propenamide as residual	79-06-1	0.10000	0.00007
			2-Butoxyethanol	111-76-2	13.00000	0.00005
			Water	7732-18-5	1.00000	0.00004
			Proprietary	Proprietary	10.00000	0.00004
			Proprietary	Proprietary	1.00000	0.00000
			Proprietary	Proprietary	0.99000	0.00000
			Proprietary	Proprietary	1.00000	0.00000
			Proprietary	Proprietary	1.00000	0.00000
			Proprietary	Proprietary	1.00000	0.00000
			Proprietary	Proprietary	1.00000	0.00000
			Organophylic Clay	68953-58-2	0.02000	

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* 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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LATITUDE 39°22'30"

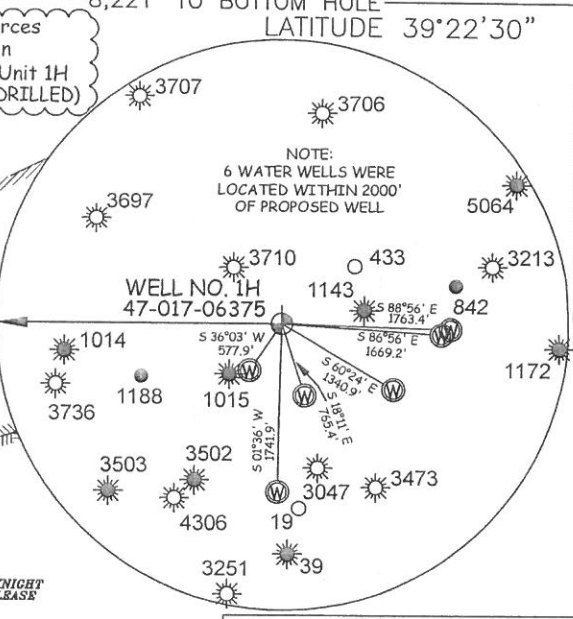
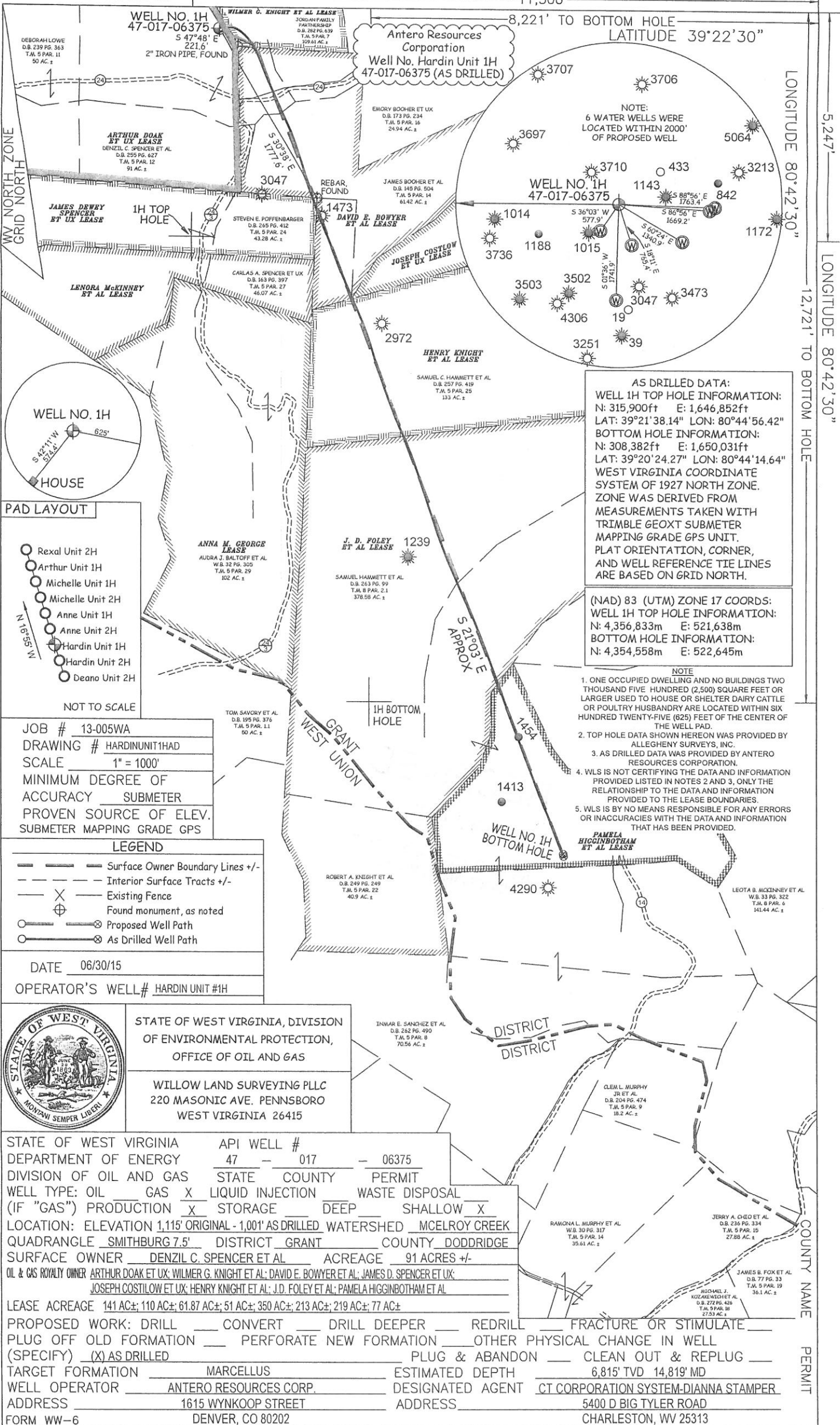
11,500'

8,221' TO BOTTOM HOLE
LATITUDE 39°22'30"

LONGITUDE 80°42'30"

LONGITUDE 80°42'30"

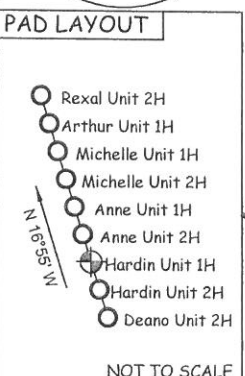
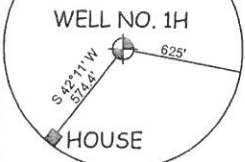
12,721' TO BOTTOM HOLE



AS DRILLED DATA:
WELL 1H TOP HOLE INFORMATION:
 N: 315,900ft E: 1,646,852ft
 LAT: 39°21'38.14" LON: 80°44'56.42"
BOTTOM HOLE INFORMATION:
 N: 308,382ft E: 1,650,031ft
 LAT: 39°20'24.27" LON: 80°44'14.64"
 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: 4,356,833m E: 521,638m
BOTTOM HOLE INFORMATION:
 N: 4,354,558m E: 522,645m

- NOTE**
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JOB # 13-005WA
 DRAWING # HARDINUNIT1HAD
 SCALE 1" = 1000'
 MINIMUM DEGREE OF ACCURACY SUBMETER
 PROVEN SOURCE OF ELEV. SUBMETER MAPPING GRADE GPS

LEGEND

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

DATE 06/30/15
 OPERATOR'S WELL# HARDIN 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 - 017 - 06375

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

LOCATION: ELEVATION 1,115' ORIGINAL - 1,001' AS DRILLED WATERSHED MCELROY CREEK QUADRANGLE SMITHBURG 7.5' DISTRICT GRANT COUNTY DODDRIDGE

SURFACE OWNER DENZIL C. SPENCER ET AL ACREAGE 91 ACRES +/-

OIL & GAS ROYALTY OWNER ARTHUR DOAK ET UX; WILMER G. KNIGHT ET AL; DAVID E. BOWYER ET AL; JAMES D. SPENCER ET UX; JOSEPH COSTILOW ET UX; HENRY KNIGHT ET AL; J.D. FOLEY ET AL; PAMELA HIGGINBOTHAM ET AL

LEASE ACREAGE 141 AC±; 110 AC±; 81.87 AC±; 51 AC±; 350 AC±; 213 AC±; 219 AC±; 77 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 ESTIMATED DEPTH 6,815' TVD 14,819' 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

LEOTA B. MCKINNEY ET AL W.B. 33 PG. 322 T.M. 5 PAR. 6 141.44 AC. ±

CLEWEL MURPHY JR ET AL D.B. 204 PG. 474 T.M. 5 PAR. 9 18.2 AC. ±

RAMONAL MURPHY ET AL W.B. 30 PG. 317 T.M. 5 PAR. 14 35.61 AC. ±

JERRY A. GHEO ET AL D.B. 236 PG. 334 T.M. 5 PAR. 15 27.88 AC. ±

JAMES B. FOX ET AL D.B. 77 PG. 33 T.M. 5 PAR. 19 36.1 AC. ±

NICHOLAS J. KUZAREWICH ET AL D.B. 278 PG. 408 T.M. 5 PAR. 18 27.53 AC. ±

INMAR E. SANCHEZ ET AL D.B. 252 PG. 490 T.M. 5 PAR. 8 70.56 AC. ±

ROBERT A. KNIGHT ET AL D.B. 249 PG. 249 T.M. 5 PAR. 22 40.9 AC. ±

TOM SAVORY ET AL D.B. 195 PG. 376 T.M. 5 PAR. 11 50 AC. ±

ANNA M. GEORGE LEASE AUDRA J. BALTOFF ET AL W.B. 32 PG. 305 T.M. 5 PAR. 29 102 AC. ±

J. D. FOLEY ET AL 1239

SAMUEL HAMWETT ET AL D.B. 253 PG. 99 T.M. 8 PAR. 2.1 378.58 AC. ±

SAMUEL C. HAMWETT ET AL D.B. 257 PG. 419 T.M. 5 PAR. 25 133 AC. ±

HENRY KNIGHT ET AL 2972

JOSEPH COSTILOW ET UX LEASE

DAVID E. BOWYER ET AL LEASE

REBAR, FOUND

1473

STEVEN E. POFFENBARGER D.B. 265 PG. 412 T.M. 5 PAR. 24 43.28 AC. ±

CARLAS A. SPENCER ET UX D.B. 163 PG. 397 T.M. 5 PAR. 27 46.07 AC. ±

JAMES BOOHER ET AL D.B. 145 PG. 504 T.M. 5 PAR. 14 61.42 AC. ±

JAMES BOOHER ET UX D.B. 173 PG. 234 T.M. 5 PAR. 16 24.94 AC. ±

JORDAN FAMILY PARTNERSHIP D.B. 282 PG. 639 T.M. 5 PAR. 7 109.61 AC. ±

WILMER G. KNIGHT ET AL LEASE

WELL NO. 1H 47-017-06375 S 47°48' E 221.6'

2" IRON PIPE, FOUND

DEBORAH LOWE D.B. 239 PG. 363 T.M. 5 PAR. 11 50 AC. ±

ARTHUR DOAK ET UX LEASE DENZIL C. SPENCER ET AL D.B. 255 PG. 427 T.M. 5 PAR. 12 91 AC. ±

JAMES DEWEY SPENCER ET UX LEASE

1H TOP HOLE

1H BOTTOM HOLE

GRANT WEST UNION DISTRICT DISTRICT

WELL NO. 1H 47-017-06375 (AS DRILLED)

NOTE: 6 WATER WELLS WERE LOCATED WITHIN 2000' OF PROPOSED WELL

3707 3706 3697 5064 3213 3710 433 1143 842 1014 1188 1015 3503 3502 4306 19 3047 3473 3251 39

AS DRILLED DATA: WELL 1H TOP HOLE INFORMATION: N: 315,900ft E: 1,646,852ft LAT: 39°21'38.14" LON: 80°44'56.42" BOTTOM HOLE INFORMATION: N: 308,382ft E: 1,650,031ft LAT: 39°20'24.27" LON: 80°44'14.64" 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.

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WV NORTH ZONE GRID NORTH

11,500'

8,221' TO BOTTOM HOLE

LATITUDE 39°22'30"

LONGITUDE 80°42'30"

LONGITUDE 80°42'30"

12,721' TO BOTTOM HOLE

HOUSE

PAD LAYOUT

NOT TO SCALE