

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

API 47-017-06399 County Doddridge District Grant
Quad Smithburg 7.5' Pad Name Chestnut Field/Pool Name _____
Farm name Trustees Chestnut Grove Church Well Number Hoskinson 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 4,357,132m Easting 524,026m
Landing Point of Curve Northing 4,356,871.13m Easting 523,901.67m
Bottom Hole Northing 4,354,015m Easting 525,052m

Elevation (ft) 1,115' 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 12/04/2013 Date drilling commenced 01/30/2014 Date drilling ceased 07/26/2014
Date completion activities began 08/02/2014 Date completion activities ceased 12/30/2014
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 67', 122' Open mine(s) (Y/N) depths No
Salt water depth(s) ft 900'; 1,143' 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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Reviewed by: JLW/24/15
08/14/2015
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API 47-017 - 06399 Farm name Trustees Chestnut Grove Church Well number Hoskinson 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	133#; J-55	N/A	Yes
Surface	17 1/2"	13 3/8"	358'	New	48#; H-40	N/A	Yes*
Coal							
Intermediate 1	12 1/4"	9 5/8"	2,502'	New	36#; H-40	N/A	Yes
Intermediate 2							
Intermediate 3							
Production	8 3/4" & 8 1/2"	5 1/2"	17,779'	New	23#; P-110	N/A	Yes
Tubing		2 3/8"	7,240'		5.45#; N-80	N/A	
Packer type and depth set		N/A					

Comment Details *1st attempt at surface casing (383 sx) failed to bring cement to surface. Grout was performed (10 sx), which was successful in bringing returns to surface.

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	15.2	1.18	38	0'	8 Hrs.
Surface	Class A	393 sx*	15.2	1.3	249	0'	8 Hrs.
Coal							
Intermediate 1	Class A	925 sx	15.6	1.18	784	0'	8 Hrs.
Intermediate 2							
Intermediate 3							
Production	Class H	1,090 sx (Lead); 1,642 sx (Tail)	14.5 (Lead); 15.2 (Tail)	1.3 (Lead); 1.86 (Tail)	3,615	-500' into Intermediate Casing	8 Hrs.
Tubing							

Drillers TD (ft) 17,779' MD; 7,023' TVD (BHL); 7,024' TVD (Deepest Point Drilled) Loggers TD (ft) 17,759'
 Deepest formation penetrated Marcellus Plug back to (ft) N/A
 Plug back procedure N/A

Kick off depth (ft) 8,290'

**This is a subsequent well. Antero only runs wireline logs on one well on a multi-well pad (Hoskinson Unit 2H, API #47-017-06400). Please reference the wireline logs submitted with Form WR-35 for the Hoskinson 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 47-017-06399 Farm Name Trustees Chestnut Grove Church Well Number Hoskinson Unit 1H

EXHIBIT 1

Stage No.	Perforation Date	Perforated from MD ft.	Perforated to MD ft.	Number of Perforations	Formations
1	2-Aug-14	17,518	17,687	60	Marcellus
2	23-Sep-14	17,318	17,487	60	Marcellus
3	24-Sep-14	17,119	17,287	60	Marcellus
4	24-Sep-14	16,919	17,087	60	Marcellus
5	6-Nov-14	16,719	16,887	60	Marcellus
6	6-Nov-14	16,519	16,687	60	Marcellus
7	7-Nov-14	16,319	16,487	60	Marcellus
8	7-Nov-14	16,119	16,287	60	Marcellus
9	7-Nov-14	15,919	16,087	60	Marcellus
10	7-Nov-14	15,719	15,887	60	Marcellus
11	8-Nov-14	15,519	15,687	60	Marcellus
12	8-Nov-14	15,319	15,487	60	Marcellus
13	8-Nov-14	15,119	15,287	60	Marcellus
14	9-Nov-14	14,919	15,088	60	Marcellus
15	9-Nov-14	14,719	14,888	60	Marcellus
16	9-Nov-14	14,519	14,688	60	Marcellus
17	9-Nov-14	14,319	14,488	60	Marcellus
18	10-Nov-14	14,119	14,288	60	Marcellus
19	10-Nov-14	13,919	14,088	60	Marcellus
20	10-Nov-14	13,719	13,888	60	Marcellus
21	11-Nov-14	13,519	13,688	60	Marcellus
22	11-Nov-14	13,319	13,488	60	Marcellus
23	11-Nov-14	13,119	13,288	60	Marcellus
24	12-Nov-14	12,919	13,088	60	Marcellus
25	12-Nov-14	12,719	12,888	60	Marcellus
26	12-Nov-14	12,519	12,688	60	Marcellus
27	12-Nov-14	12,319	12,488	60	Marcellus
28	13-Nov-14	12,119	12,288	60	Marcellus
29	13-Nov-14	11,919	12,088	60	Marcellus
30	13-Nov-14	11,719	11,888	60	Marcellus
31	14-Nov-14	11,519	11,688	60	Marcellus
32	14-Nov-14	11,319	11,488	60	Marcellus
33	14-Nov-14	11,119	11,288	60	Marcellus
34	14-Nov-14	10,920	11,088	60	Marcellus
35	15-Nov-14	10,720	10,888	60	Marcellus
36	15-Nov-14	10,520	10,688	60	Marcellus
37	15-Nov-14	10,320	10,488	60	Marcellus
38	15-Nov-14	10,120	10,288	60	Marcellus
39	16-Nov-14	9,920	10,088	60	Marcellus
40	16-Nov-14	9,720	9,888	60	Marcellus
41	16-Nov-14	9,520	9,688	60	Marcellus
42	17-Nov-14	9,320	9,488	60	Marcellus
43	17-Nov-14	9,120	9,288	60	Marcellus
44	17-Nov-14	8,920	9,088	60	Marcellus
45	17-Nov-14	8,720	8,889	60	Marcellus
46	18-Nov-14	8,520	8,689	60	Marcellus
47	18-Nov-14	8,320	8,489	60	Marcellus
48	18-Nov-14	8,120	8,289	60	Marcellus
49	18-Nov-14	7,920	8,089	60	Marcellus
50	18-Nov-14	7,720	7,889	60	Marcellus
51	18-Nov-14	7,520	7,689	60	Marcellus
52	20-Nov-14	7,320	7,489	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	23-Sep-14	69.0	7,835	N/A	5,080	150,976	6,944	N/A
2	23-Sep-14	79.0	7,804	5,943	4,603	220,803	7,444	N/A
3	24-Sep-14	74.0	7,612	5,805	5,365	236,033	7,199	N/A
4	24-Sep-14	78.0	7,733	5,946	5,869	234,883	6,787	N/A
5	6-Nov-14	63.0	6,816	6,073	4,298	240,479	6,559	N/A
6	6-Nov-14	55.0	6,895	6,009	4,492	247,732	6,756	N/A
7	7-Nov-14	65.0	6,865	5,884	5,664	242,963	6,565	N/A
8	7-Nov-14	60.0	6,811	5,746	4,729	242,940	6,733	N/A
9	7-Nov-14	64.0	6,830	5,813	4,840	247,503	6,620	N/A
10	7-Nov-14	61.0	7,053	5,626	5,279	224,366	6,285	N/A
11	8-Nov-14	65.0	6,960	5,554	4,858	246,748	6,582	N/A
12	8-Nov-14	63.0	6,965	5,633	5,254	247,113	6,570	N/A
13	8-Nov-14	65.0	6,730	5,483	4,745	247,118	6,545	N/A
14	9-Nov-14	66.0	6,987	5,672	5,391	244,525	6,878	N/A
15	9-Nov-14	62.0	6,855	5,560	5,312	244,283	6,597	N/A
16	9-Nov-14	64.0	6,774	5,798	5,063	248,012	6,588	N/A
17	9-Nov-14	64.0	7,240	5,588	4,661	239,474	6,455	N/A
18	10-Nov-14	64.0	6,834	5,848	4,886	245,884	6,502	N/A
19	10-Nov-14	63.0	6,827	5,403	4,741	248,260	6,533	N/A
20	10-Nov-14	64.0	6,698	5,640	4,884	252,531	6,557	N/A
21	11-Nov-14	63.0	6,855	5,345	4,794	245,943	7,003	N/A
22	11-Nov-14	64.0	6,866	5,674	4,982	248,665	7,083	N/A
23	11-Nov-14	63.0	6,768	1,616	4,955	250,351	6,985	N/A
24	12-Nov-14	67.0	6,831	5,601	5,073	234,895	6,761	N/A
25	12-Nov-14	61.0	6,699	5,186	5,109	244,712	6,708	N/A
26	12-Nov-14	63.0	6,649	5,641	4,899	245,735	6,790	N/A
27	12-Nov-14	67.7	6,844	6,017	4,947	240,108	6,692	N/A
28	13-Nov-14	64.9	6,745	5,754	4,979	237,760	6,655	N/A
29	13-Nov-14	80.0	6,445	5,622	4,790	248,103	6,793	N/A
30	13-Nov-14	62.0	6,568	5,688	5,007	247,596	6,783	N/A
31	14-Nov-14	63.9	6,553	5,677	5,342	240,753	6,497	N/A
32	14-Nov-14	72.0	6,635	5,660	5,143	235,401	6,621	N/A
33	14-Nov-14	65.0	6,524	5,668	5,366	239,912	6,553	N/A
34	14-Nov-14	63.0	6,706	5,619	5,068	242,244	6,400	N/A
35	15-Nov-14	64.4	6,578	5,480	5,803	237,758	6,362	N/A
36	15-Nov-14	63.0	6,656	5,865	5,377	242,694	6,518	N/A
37	15-Nov-14	64.0	6,542	5,892	5,424	246,905	6,419	N/A
38	15-Nov-14	70.7	6,615	5,855	4,921	245,635	6,295	N/A
39	16-Nov-14	65.0	6,786	5,623	4,877	244,171	6,232	N/A
40	16-Nov-14	66.0	6,518	5,812	5,334	249,066	6,349	N/A
41	16-Nov-14	65.0	6,663	6,113	5,268	247,211	6,307	N/A
42	17-Nov-14	65.5	6,540	5,967	4,990	245,568	6,281	N/A
43	17-Nov-14	64.7	6,471	5,745	5,202	243,021	6,242	N/A
44	17-Nov-14	63.1	6,619	5,906	4,754	244,664	6,182	N/A
45	17-Nov-14	66.3	6,551	5,877	4,781	258,690	6,707	N/A
46	18-Nov-14	65.1	6,645	5,614	4,976	244,270	6,157	N/A
47	18-Nov-14	65.7	6,731	5,836	4,826	243,707	6,445	N/A
48	18-Nov-14	64.0	6,564	5,874	5,522	243,113	6,057	N/A
49	18-Nov-14	65.0	6,286	5,574	4,941	244,605	6,012	N/A
50	18-Nov-14	65.4	6,473	6,057	5,017	245,839	6,118	N/A
51	18-Nov-14	61.0	6,311	6,148	5,503	246,640	5,987	N/A
52	20-Nov-14	61.8	6,299	7,359	5,161	235,199	5,935	N/A
	AVG=	65.3	6,782	5,694	5,060	12,563,560	340,628	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	67'	N/A	67'	N/A
Fresh Water	122'	N/A	122'	N/A
Shale/Siltstone	0	257	0	257
Shale w/ Coal	est. 257	347	est. 257	347
Shale and Siltstone	est. 347	377	est. 347	377
Shale/Sandstone/Siltstone	est. 377	1,457	est. 377	1,457
Shale and Siltstone w/trace coal	est. 1457	1,487	est. 1457	1,487
Shale/Sandstone/Siltstone	est. 1487	1,637	est. 1487	1,637
Sandstone	est. 1637	1,757	est. 1637	1,757
Sandstone w/trace coal	est. 1757	1,787	est. 1757	1,787
Shale/Sandstone/Siltstone	est. 1787	2,054	est. 1787	2,058
Big Lime	2,054	2,199	2,058	2,203
Big Injun	2,199	2,630	2,203	2,634
Gantz Sand	2,630	2,772	2,634	2,776
Fifty Foot Sandstone	2,772	2,844	2,776	2,848
Gordon	2,844	3,203	2,848	3,207
Fifth Sandstone	3,203	3,243	3,207	3,247
Bayard	3,243	3,578	3,247	3,582
Warren	3,578	3,958	3,582	3,962
Speechley	3,958	4,207	3,962	4,211
Baltown	4,207	4,711	4,211	4,715
Bradford	4,711	5,203	4,715	5,207
Benson	5,203	5,448	5,207	5,452
Alexander	5,448	5,651	5,452	5,655
Elk	5,651	6,211	5,655	6,215
Rhinstreet	6,211	6,516	6,215	6,547
Sycamore	6,516	6,711	6,547	6,845
Middlesex	6,711	6,851	6,845	7,076
Burkett	6,851	6,878	7,076	7,128
Tully	6,878	6,940	7,128	7,275
Marcellus	6,940	NA	7,275	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:	9/23/2014
Job End Date:	11/20/2014
State:	West Virginia
County:	Doddridge
API Number:	47-017-06399-00-00
Operator Name:	Antero Resources Corporation
Well Name and Number:	Hoskinson Unit 1H
Longitude:	-80.72110600
Latitude:	39.36331100
Datum:	NAD83
Federal/Tribal Well:	NO
True Vertical Depth:	7,024
Total Base Water Volume (gal):	15,004,710
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	Operator	Carrier	Water	7732-18-5	100.00000	90.43641	
Sand, White, 40/70	Baker Hughes	Proppant	MSDS and Non-MSDS Ingredients Listed Below	N/A		5.10947	
Sand, White, 20/40	Baker Hughes	Proppant	MSDS and Non-MSDS Ingredients Listed Below	N/A		3.35452	
Sand, White, 100 mesh	Baker Hughes	Proppant	MSDS and Non-MSDS Ingredients Listed Below	N/A		0.61421	
HCl, 10.1 - 15%	Baker Hughes	Acidizing	MSDS and Non-MSDS Ingredients Listed Below	N/A		0.19245	SmartCare Product
GW-3LDF	Baker Hughes	Gelling Agent	MSDS and Non-MSDS Ingredients Listed Below	N/A		0.09462	SmartCare Product
FRW-18	Baker Hughes	Friction Reducer	MSDS and Non-MSDS Ingredients Listed Below	N/A		0.05513	SmartCare Product
Scaletrol 720	Baker Hughes	Scale Inhibitor	MSDS and Non-MSDS Ingredients Listed Below	N/A		0.01434	SmartCare Product



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	Potassium Chloride	7447-40-7	1.00000	0.00014
	2-butloxy-1-propanol	15821-83-7	0.10000	0.00009
	Polyoxyalkylenes	68951-67-7	30.00000	0.00009
	Fatty Acids	61790-12-3	10.00000	0.00003
	Modified Thiourea Polymer	68527-49-1	7.00000	0.00002
	Propargyl Alcohol	107-19-7	5.00000	0.00002
	Olefin	64743-02-8	5.00000	0.00002
	Formaldehyde	50-00-0	1.00000	0.00000

* 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"

3,661'

326' TO BOTTOM HOLE
LATITUDE 39°22'30"

LONGITUDE 80°42'30"

4,289'

LONGITUDE 80°42'30"

COUNTY NAME PERMIT

Antero Resources Corporation
Well No. Hoskinson Unit 1H
47-017-06399 (AS DRILLED)

WV NORTH ZONE
GRID NORTH

AS DRILLED DATA:
WELL 1H TOP HOLE INFORMATION:
 N: 316,751ft E: 1,654,703ft
 LAT: 39°21'47.61" LON: 80°43'16.62"
BOTTOM HOLE INFORMATION:
 N: 306,468ft E: 1,657,900ft
 LAT: 39°20'06.41" LON: 80°42'34.16"
 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: 4,357,132m E: 524,026m
BOTTOM HOLE INFORMATION:
 N: 4,354,015m E: 525,052m

JOB # 12-136WA
 DRAWING # HOSKINSON1HAD
 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
 ⊙ Proposed Well Path
 ⊙ As Drilled Well Path

DATE 06/15/15
 OPERATOR'S WELL# HOSKINSON UNIT #1H



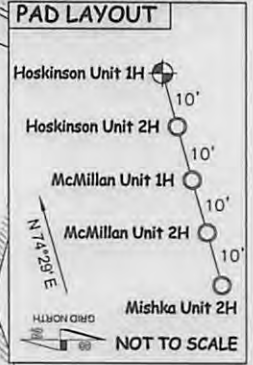
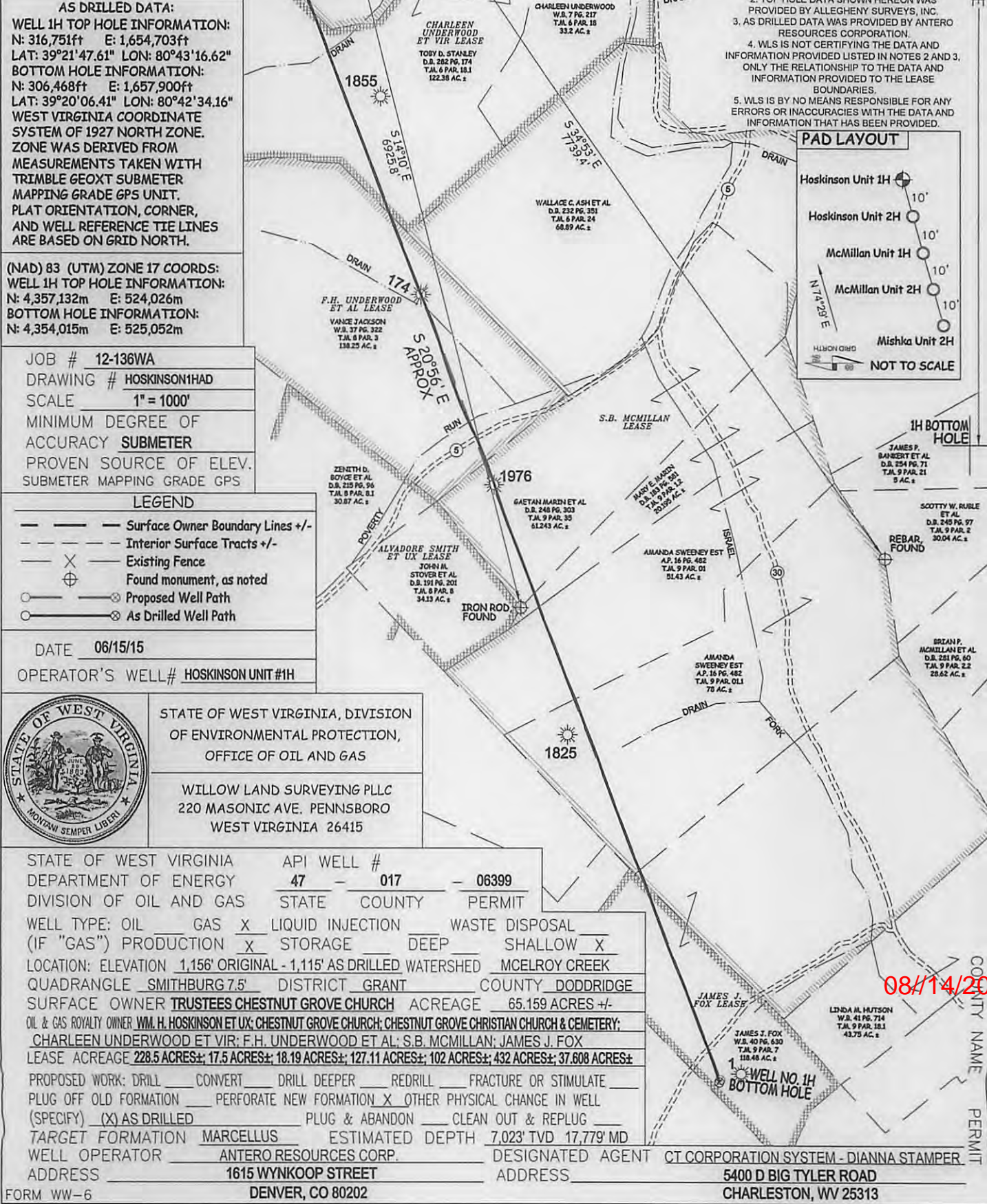
STATE OF WEST VIRGINIA, DIVISION OF ENVIRONMENTAL PROTECTION, OFFICE OF OIL AND GAS
 WILLOW LAND SURVEYING PLLC
 220 MASONIC AVE. PENNSBORO WEST VIRGINIA 26415

STATE OF WEST VIRGINIA DEPARTMENT OF ENERGY DIVISION OF OIL AND GAS
 API WELL # 47 - 017 - 06399
 STATE COUNTY PERMIT

WELL TYPE: OIL ___ GAS X LIQUID INJECTION ___ WASTE DISPOSAL ___
 (IF "GAS") PRODUCTION X STORAGE ___ DEEP ___ SHALLOW X
 LOCATION: ELEVATION 1,156' ORIGINAL - 1,115' AS DRILLED WATERSHED MCELROY CREEK
 QUADRANGLE SMITHBURG 7.5' DISTRICT GRANT COUNTY DODDRIDGE
 SURFACE OWNER TRUSTEES CHESTNUT GROVE CHURCH ACREAGE 65.159 ACRES +/-
 OIL & GAS ROYALTY OWNER WM. H. HOSKINSON ET UX; CHESTNUT GROVE CHURCH; CHESTNUT GROVE CHRISTIAN CHURCH & CEMETERY; CHARLEEN UNDERWOOD ET VIR; F.H. UNDERWOOD ET AL; S.B. MCMILLAN; JAMES J. FOX
 LEASE ACREAGE 228.5 ACRES±; 17.5 ACRES±; 18.19 ACRES±; 127.11 ACRES±; 102 ACRES±; 432 ACRES±; 37,608 ACRES±

PROPOSED WORK: DRILL ___ CONVERT ___ DRILL DEEPER ___ REDRILL ___ FRACTURE OR STIMULATE ___
 PLUG OFF OLD FORMATION ___ PERFORATE NEW FORMATION X OTHER PHYSICAL CHANGE IN WELL (SPECIFY) (X) AS DRILLED ___ PLUG & ABANDON ___ CLEAN OUT & REPLUG ___
 TARGET FORMATION MARCELLUS ESTIMATED DEPTH 7,023' TVD 17,779' MD
 WELL OPERATOR ANTERO RESOURCES CORP. DESIGNATED AGENT CT CORPORATION SYSTEM - DIANNA STAMPER
 ADDRESS 1615 WYNKOOP STREET ADDRESS 5400 D BIG TYLER ROAD
 DENVER, CO 80202 CHARLESTON, WV 25313

FORM WW-6



08/14/2015