

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

API 47 - 085 - 10138 County Ritchie District Union
Quad Pullman 7.5' Pad Name John Richards Pad Field/Pool Name ----
Farm name Richards, John Wayne Well Number Stalnaker Unit 1H
Operator (as registered with the OOG) Antero Resources Corporation
Address 1615 Wynkoop St. 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 4339579m Easting 506950m
Landing Point of Curve Northing 4339631.46m Easting 506512.33m
Bottom Hole Northing 4341489m Easting 506083m

Elevation (ft) 1025' 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 8/11/2014 Date drilling commenced 12/10/2014 Date drilling ceased 1/4/2015
Date completion activities began 9/3/2015 Date completion activities ceased 11/23/2015
Verbal plugging (Y/N) N/A Date permission granted N/A Granted by N/A

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Please note: Operator is required to submit a plugging application within 5 days of verbal permission to plug

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Freshwater depth(s) ft 42', 52', 172' Open mine(s) (Y/N) depths No
Salt water depth(s) ft None Identified Void(s) encountered (Y/N) depths No
Coal depth(s) ft None Identified Cavern(s) encountered (Y/N) depths No
Is coal being mined in area (Y/N) No

APPROVED

NAME: Michael Haft

DATE: 6/13/16

Reviewed by:

09/16/2016
RBMJ 09/15/16

API 47-085 - 10138 Farm name Richards, John Wayne Well number Stalnaker 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	30"	20"	40'	New	94# K-55	N/A	Y
Surface	17- 1/2"	13- 3/8"	417'	New	54.50# J-55	N/A	Y
Coal							
Intermediate 1	12-1/4"	9-5/8"	2487'	New	36# J-55	N/A	Y
Intermediate 2							
Intermediate 3							
Production	8-3/4" & 8-1/2"	5-1/2"	13533'	New	20# P-110	N/A	Y
Tubing		2-3/8"	6738'		5.95# N-80	N/A	
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	150 sx	15.6	1.18	38	0'	8 Hrs.
Surface	Class A	489 sx	15.6	1.18	290	0'	8 Hrs.
Coal							
Intermediate 1	Class A	967 sx	15.6	1.00	779	0'	8 Hrs.
Intermediate 2							
Intermediate 3							
Production	Class H	982 sx (Lead) 1093 sx (Tail)	14.5 Lead 15.2 Tail	1.30 Lead 1.86 Tail	2645	-500' into Intermediate Casing	8 Hrs.
Tubing							

Drillers TD (ft) 13533' MD, 6375' TVD (BHL), 6390' (Deepest Point Drilled) Loggers TD (ft) 13533'
 Deepest formation penetrated Marcellus Plug back to (ft) N/A
 Plug back procedure N/A

Kick off depth (ft) 6254'

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- 085 - 10138 Farm name Richards, John Wayne Well number Stalnaker Unit 1H

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.

API 47- 085 - 10138 Farm name Richards, John Wayne Well number Stalnaker Unit 1H

PRODUCING FORMATION(S)	DEPTHS	
Marcellus	6339' (TOP) TVD	6873' (TOP) MD

Please insert additional pages as applicable.

GAS TEST Build up Drawdown Open Flow OIL TEST Flow Pump

SHUT-IN PRESSURE Surface 3000 psi Bottom Hole --- psi DURATION OF TEST --- hrs

OPEN FLOW Gas 3825 mcfpd Oil 38 bpd NGL --- bpd Water --- 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 ₂ S, ETC)
	0		0		
*PLEASE SEE ATTACHED EXHIBIT 3					

Please insert additional pages as applicable.

Drilling Contractor Frontier Drilling LLC
Address 562 Spring Run Rd. City Pennsboro State WV Zip 26415

Logging Company Rush Wellsite Services
Address 600 Alpha Drive City Canonsburg State PA Zip 15317

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

Stimulating Company US Well Services
Address 533 Industrial Park Dr. City Jane Lew State WV Zip 26378

Please insert additional pages as applicable.

Completed by Kara Quackenbush Telephone 303-357-7233
Signature *Kara Quackenbush* Title Permit Representative Date 1/26/2016

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

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EXHIBIT 1

Stage No.	Perforation Date	Perforated from MD ft.	Perforated to MD ft.	Number of Perforations	Formations
1	3-Sep-15	13,274	13,441	60	Marcellus
2	24-Oct-15	13,075	13,243	60	Marcellus
3	25-Oct-15	12,876	13,044	60	Marcellus
4	25-Oct-15	12,678	12,845	60	Marcellus
5	25-Oct-15	12,479	12,647	60	Marcellus
6	25-Oct-15	12,280	12,448	60	Marcellus
7	26-Oct-15	12,082	12,249	60	Marcellus
8	26-Oct-15	11,883	12,051	60	Marcellus
9	26-Oct-15	11,684	11,852	60	Marcellus
10	26-Oct-15	11,486	11,653	60	Marcellus
11	26-Oct-15	11,287	11,455	60	Marcellus
12	27-Oct-15	11,088	11,256	60	Marcellus
13	31-Oct-15	10,890	11,057	60	Marcellus
14	31-Oct-15	10,691	10,858	60	Marcellus
15	1-Nov-15	10,492	10,660	60	Marcellus
16	1-Nov-15	10,293	10,461	60	Marcellus
17	1-Nov-15	10,095	10,262	60	Marcellus
18	1-Nov-15	9,896	10,064	60	Marcellus
19	2-Nov-15	9,697	9,865	60	Marcellus
20	2-Nov-15	9,499	9,666	60	Marcellus
21	2-Nov-15	9,300	9,468	60	Marcellus
22	2-Nov-15	9,101	9,269	60	Marcellus
23	2-Nov-15	8,903	9,070	60	Marcellus
24	3-Nov-15	8,704	8,872	60	Marcellus
25	3-Nov-15	8,505	8,673	60	Marcellus
26	3-Nov-15	8,307	8,474	60	Marcellus
27	3-Nov-15	8,108	8,275	60	Marcellus
28	3-Nov-15	7,909	8,077	60	Marcellus
29	3-Nov-15	7,711	7,878	60	Marcellus
30	4-Nov-15	7,512	7,679	60	Marcellus
31	4-Nov-15	7,313	7,481	60	Marcellus
32	4-Nov-15	7,114	7,282	60	Marcellus
33	4-Nov-15	6,916	7,083	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	24-Oct-15	67.0	7,451	6,770	3,416	172,910	7,102	N/A
2	24-Oct-15	70.0	7,276	7,001	4,606	249,830	7,219	N/A
3	25-Oct-15	68.0	7,351	6,333	5,120	172,760	6,421	N/A
4	25-Oct-15	70.0	7,302	5,734	4,738	173,320	6,616	N/A
5	25-Oct-15	71.0	7,098	5,774	5,226	234,670	6,290	N/A
6	25-Oct-15	70.0	7,176	6,068	4,813	137,680	6,218	N/A
7	26-Oct-15	62.0	7,065	6,119	4,807	16,640	5,775	N/A
8	26-Oct-15	71.0	7,342	6,373	5,021	169,500	6,293	N/A
9	26-Oct-15	59.0	7,686	6,024	4,672	110,300	6,748	N/A
10	26-Oct-15	71.4	7,226	6,767	4,059	244,030	6,723	N/A
11	26-Oct-15	71.2	6,990	5,830	4,946	230,480	6,372	N/A
12	27-Oct-15	53.0	7,237	5,931	7,598	57,560	5,852	N/A
13	31-Oct-15	69.5	7,263	6,412	4,567	133,240	6,277	N/A
14	31-Oct-15	70.9	7,408	6,789	4,464	193,790	6,628	N/A
15	1-Nov-15	75.4	7,884	6,121	5,357	197,460	6,878	N/A
16	1-Nov-15	73.0	6,985	5,778	5,308	173,360	6,492	N/A
17	1-Nov-15	72.4	6,884	5,794	5,087	242,140	6,332	N/A
18	1-Nov-15	74.9	7,110	6,713	4,480	229,140	6,065	N/A
19	2-Nov-15	72.7	7,487	6,117	4,828	191,340	6,256	N/A
20	2-Nov-15	70.0	7,219	5,949	4,876	228,825	6,156	N/A
21	2-Nov-15	72.0	6,759	6,049	4,960	249,790	6,234	N/A
22	2-Nov-15	73.6	6,793	6,888	3,995	233,840	6,764	N/A
23	2-Nov-15	71.8	6,633	5,662	4,825	256,454	6,178	N/A
24	3-Nov-15	72.4	6,568	6,070	5,197	257,423	6,159	N/A
25	3-Nov-15	73.0	6,617	6,199	3,858	251,380	6,204	N/A
26	3-Nov-15	73.0	6,558	6,245	4,971	251,080	6,127	N/A
27	3-Nov-15	72.6	6,262	6,179	4,995	262,920	6,143	N/A
28	3-Nov-15	72.8	6,621	6,171	4,929	255,290	6,125	N/A
29	3-Nov-15	72.4	6,425	5,867	3,545	260,360	6,097	N/A
30	4-Nov-15	73.0	7,031	6,100	3,458	251,060	6,061	N/A
31	4-Nov-15	72.0	6,766	6,470	3,646	251,970	6,072	N/A
32	4-Nov-15	71.0	6,180	5,512	4,893	172,180	5,940	N/A
33	4-Nov-15	72.5	6,278	5,464	5,050	234,250	5,730	N/A
AVG=		70.4	6,998	6,160	4,737	6,746,972	208,547	TOTAL

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EXHIBIT 3

LITHOLOGY/ FORMATION	TOP DEPTH (TVD) From Surface	BOTTOM DEPTH (TVD) From Surface	TOP DEPTH (MD) From Surface	BOTTOM DEPTH (MD) From Surface
Fresh Water	42'	N/A	42'	N/A
Fresh Water	52'	N/A	52'	N/A
Fresh Water	172'	N/A	172'	N/A
Silt	0	37	0	37
Sandstone	est. 37	97	est. 37	97
Silty Shale	est. 97	417	est. 97	417
Silty Sandstone	est. 417	657	est. 417	657
Sandy siltstone	est. 657	737	est. 657	737
Limey Shale	est. 737	817	est. 737	817
Silty Shale	est. 817	1317	est. 817	1317
Sandstone	est. 1317	1357	est. 1317	1357
Sandy shale	est. 1357	1417	est. 1357	1417
Sandstone	est. 1417	1497	est. 1417	1497
Sandy shale	est. 1497	1577	est. 1497	1577
Shale / Coal	est. 1577	1637	est. 1577	1637
Sandstone (Tr Coal)	est. 1637	1817	est. 1637	1817
Shale	est. 1817	1897	est. 1817	1897
Limey Siltstone	est. 1897	1941	est. 1897	1964
Big Lime	1941	2033	1964	2035
Big Injun	2033	2288	2035	2290
Gantz Sand	2288	2455	2290	2457
Fifty Foot Sandstone	2455	2659	2457	2661
Gordon	2659	2945	2661	2947
Fifth Sandstone	2945	3064	2947	3066
Bayard	3064	3435	3066	6441
Warren	3435	3836	6441	3862
Speechley	3836	3953	3862	3990
Baltown	3953	4509	3990	4604
Bradford	4509	4893	4604	5030
Benson	4893	5122	5030	5288
Alexander	5122	5301	5288	5486
Elk	5301	5719	5486	5952
Rhinestreet	5719	6027	5952	6308
Sycamore	6027	6182	6308	6507
Middlesex	6182	6291	6507	6707
Burkett	6291	6322	6707	6795
Tully	6322	6339	6795	6873
Marcellus	6339	NA	6873	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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Stalnaker Unit 1H
Ritchie County WV
 Northing: 14236720.88
 Easting: 1663169.80
 As Drilled



To convert Magnetic North to Grid, Subtract 8.42°
 To convert True North to Grid, Subtract 0.05°

Azimuths to Grid North
 True North: -0.05°
 Magnetic North: -8.42°

Magnetic Field
 Strength: 52184.9snT
 Dip Angle: 66.79°
 Date: 11/3/2014
 Model: BGGM2014

Frontier 23: GL 1025 + KB 23 @ 1048.0usft
 Gr: 1025.0

WELL DETAILS								Stalnaker Unit 1H	
Ground Level: 1025.0									
+N/-S	+E/-W	Northing	Easting	Latitude	Longitude				
0.0	0.0	14236720.88	1663169.80	39° 12' 19.313 N	80° 55' 10.844 W				

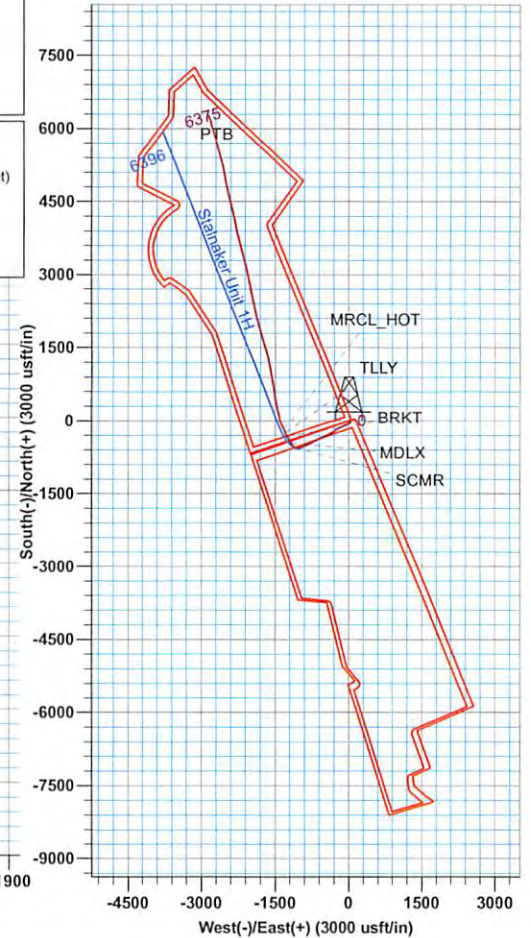
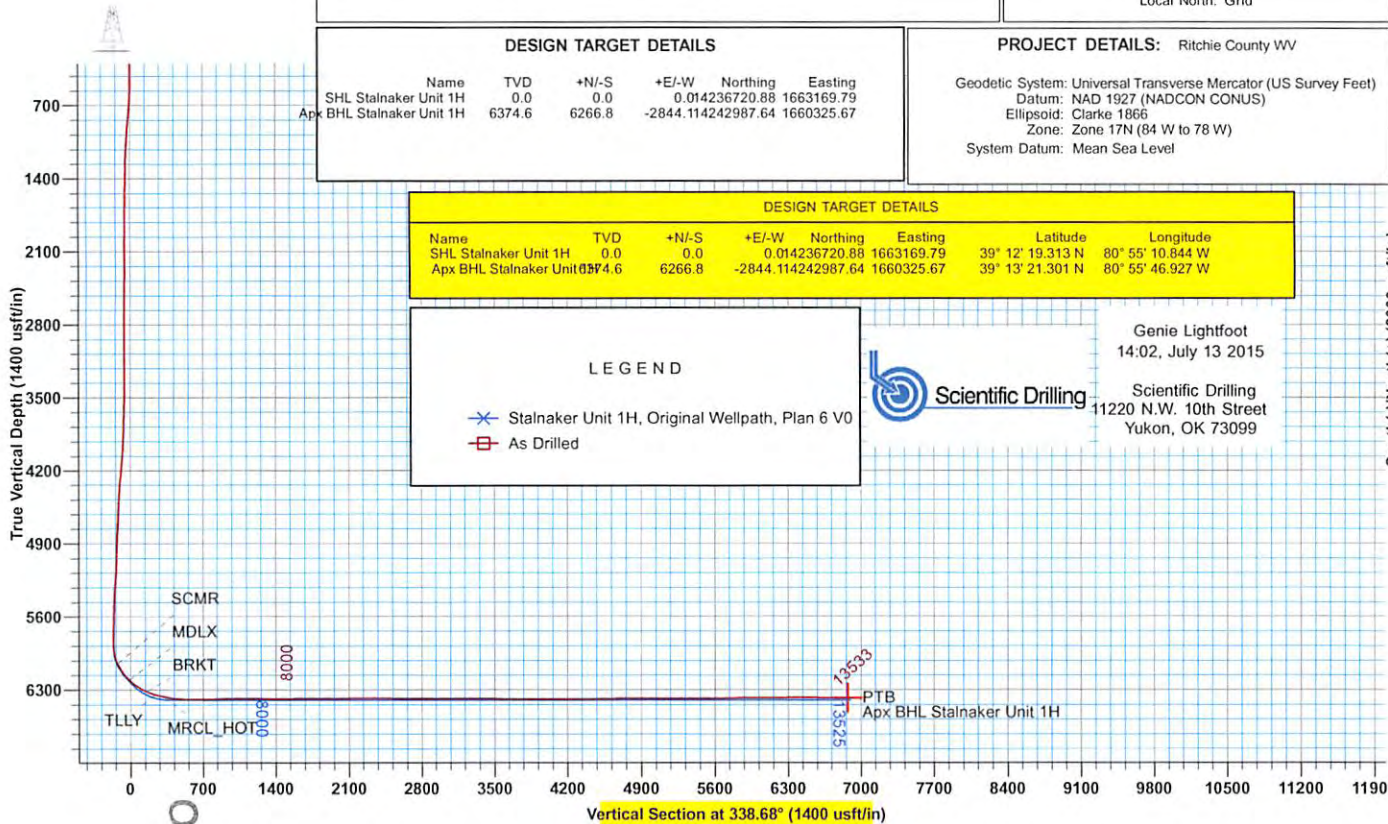
SITE DETAILS:		John Richards Pad: Duckworth/Stalnaker	
Site Centre Northing:	14236693.67	Site Centre Easting:	1663157.25
Positional Uncertainty:	0.0	Convergence:	0.05
		Local North:	Grid

DESIGN TARGET DETAILS						PROJECT DETAILS:		Ritchie County WV	
Name	TVD	+N/-S	+E/-W	Northing	Easting	Geodetic System: Universal Transverse Mercator (US Survey Feet)			
SHL Stalnaker Unit 1H	0.0	0.0	0.0	14236720.88	1663169.79	Datum: NAD 1927 (NADCON CONUS)			
Apx BHL Stalnaker Unit 1H	6374.6	6266.8	-2844.114242987.64	1660325.67		Ellipsoid: Clarke 1866			
						Zone: Zone 17N (84 W to 78 W)			
						System Datum: Mean Sea Level			

DESIGN TARGET DETAILS							
Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
SHL Stalnaker Unit 1H	0.0	0.0	0.0	14236720.88	1663169.79	39° 12' 19.313 N	80° 55' 10.844 W
Apx BHL Stalnaker Unit 1H	6374.6	6266.8	-2844.114242987.64	1660325.67		39° 13' 21.301 N	80° 55' 46.927 W

LEGEND	
	Stalnaker Unit 1H, Original Wellpath, Plan 6 V0
	As Drilled

Genie Lightfoot
 14:02, July 13 2015
 Scientific Drilling
 11220 N.W. 10th Street
 Yukon, OK 73099



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Ritchie County WV
John Richards Pad: Duckworth/Stalnaker
Stalnaker Unit 1H
Original Wellpath

Design: As Drilled

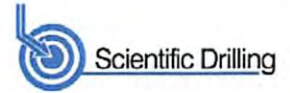
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Company: Antero	Local Co-ordinate Reference: Well Stalnaker Unit 1H
Project: Ritchie County WV	TVD Reference: Frontier 23: GL 1025' + KB 23 @ 1048.0usft
Site: John Richards Pad: Duckworth/Stalnaker	MD Reference: Frontier 23: GL 1025' + KB 23 @ 1048.0usft
Well: Stalnaker Unit 1H	North Reference: Grid
Wellbore: Original Wellpath	Survey Calculation Method: Minimum Curvature
Design: As Drilled	Database: Antero NE

Project	Ritchie County WV, Ritchie County WV, WV North		
Map System:	Universal Transverse Mercator (US Survey Feet)	System Datum:	Mean Sea Level
Geo Datum:	NAD 1927 (NADCON CONUS)		
Map Zone:	Zone 17N (84 W to 78 W)		

Site	John Richards Pad: Duckworth/Stalnaker
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Site Position:	Northing: 14,236,693.67 usft	Latitude: 39° 12' 19.044 N
From: Map	Easting: 1,663,157.25 usft	Longitude: 80° 55' 11.004 W
Position Uncertainty: 0.0 usft	Slot Radius: 13-3/16"	Grid Convergence: 0.05 °

Well	Stalnaker Unit 1H, Marcellus					
Well Position	+N/-S 0.0 usft	Northing: 14,236,720.88 usft	Latitude: 39° 12' 19.313 N			
	+E/-W 0.0 usft	Easting: 1,663,169.80 usft	Longitude: 80° 55' 10.844 W			
Position Uncertainty	2.0 usft	Wellhead Elevation: 1,048.0 usft	Ground Level: 1,025.0 usft			

Wellbore	Original Wellpath
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Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	BGGM2014	11/3/2014	-8.37	66.79	52,185

Design	As Drilled
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Audit Notes:	Version: 1.0	Phase: ACTUAL	Tie On Depth: 0.0
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Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (°)
	0.0	0.0	0.0	338.68

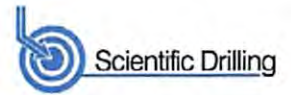
Survey Program	Date	From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description
	7/13/2015	25.0	5,971.7	Survey #5 Final Gyro (Original Wellpath)	Standard Keeper 104	Standard Wireline Keeper ver 1.0.4
		5,971.7	13,533.0	Survey #7 Corrected (Original Wellpath)	MWD SDI	MWD - Standard ver 1.0.1

Survey	MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	N/S (usft)	E/W (usft)	V. Sec (usft)	DLeg (°/100usft)
	0.0	0.00	0.00	0.0	0.0	0.0	0.0	0.00
	25.0	0.25	24.59	25.0	0.0	0.0	0.0	1.00
	50.0	0.51	55.88	50.0	0.2	0.1	0.1	1.29
	75.0	0.45	49.44	75.0	0.3	0.3	0.2	0.32
	100.0	0.18	44.41	100.0	0.4	0.4	0.2	1.08
	125.0	0.24	46.25	125.0	0.4	0.5	0.2	0.24
	150.0	0.10	76.32	150.0	0.5	0.5	0.3	0.65
	175.0	0.10	61.27	175.0	0.5	0.6	0.3	0.10
	200.0	0.02	252.29	200.0	0.5	0.6	0.3	0.48
	225.0	0.18	22.48	225.0	0.5	0.6	0.3	0.77
	250.0	0.22	28.74	250.0	0.6	0.6	0.4	0.18

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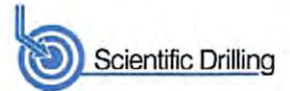
Company:	Antero	Local Co-ordinate Reference:	Well Stalnaker Unit 1H
Project:	Ritchie County WV	TVD Reference:	Frontier 23: GL 1025' + KB 23 @ 1048.0usft
Site:	John Richards Pad: Duckworth/Stalnaker	MD Reference:	Frontier 23: GL 1025' + KB 23 @ 1048.0usft
Well:	Stalnaker Unit 1H	North Reference:	Grid
Wellbore:	Original Wellpath	Survey Calculation Method:	Minimum Curvature
Design:	As Drilled	Database:	Antero NE

Survey								
MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	N/S (usft)	E/W (usft)	V. Sec (usft)	DLeg (°/100usft)	
275.0	0.09	90.38	275.0	0.7	0.7	0.4	0.78	
300.0	0.13	36.08	300.0	0.7	0.7	0.4	0.43	
325.0	0.12	339.98	325.0	0.7	0.7	0.4	0.47	
350.0	0.05	326.39	350.0	0.8	0.7	0.5	0.29	
375.0	0.12	298.24	375.0	0.8	0.7	0.5	0.32	
400.0	0.13	310.32	400.0	0.8	0.6	0.5	0.11	
425.0	0.20	252.59	425.0	0.8	0.6	0.6	0.68	
450.0	0.20	243.96	450.0	0.8	0.5	0.6	0.12	
475.0	0.56	172.89	475.0	0.7	0.5	0.4	2.12	
500.0	0.76	152.82	500.0	0.4	0.6	0.2	1.21	
525.0	1.22	146.27	525.0	0.0	0.8	-0.3	1.89	
550.0	1.49	150.32	550.0	-0.5	1.1	-0.8	1.15	
575.0	2.34	148.14	575.0	-1.2	1.5	-1.7	3.41	
600.0	2.92	141.66	599.9	-2.1	2.2	-2.8	2.60	
625.0	3.58	140.34	624.9	-3.2	3.1	-4.1	2.66	
650.0	3.91	139.22	649.8	-4.5	4.1	-5.7	1.35	
675.0	4.26	140.44	674.8	-5.8	5.3	-7.4	1.44	
700.0	4.60	142.09	699.7	-7.4	6.5	-9.2	1.45	
725.0	4.85	139.88	724.6	-8.9	7.8	-11.2	1.24	
750.0	4.73	141.71	749.5	-10.6	9.1	-13.2	0.78	
775.0	4.81	143.32	774.5	-12.2	10.4	-15.1	0.62	
800.0	4.82	144.17	799.4	-13.9	11.6	-17.2	0.29	
825.0	4.95	141.59	824.3	-15.6	12.9	-19.2	1.02	
850.0	4.96	136.81	849.2	-17.2	14.3	-21.3	1.65	
875.0	4.94	130.21	874.1	-18.7	15.9	-23.2	2.28	
900.0	4.93	126.96	899.0	-20.1	17.5	-25.1	1.12	
925.0	4.89	124.68	923.9	-21.3	19.3	-26.9	0.80	
950.0	4.41	122.87	948.8	-22.4	21.0	-28.5	2.01	
975.0	3.97	122.00	973.8	-23.4	22.5	-30.0	1.78	
1,000.0	3.90	122.26	998.7	-24.3	24.0	-31.4	0.29	
1,025.0	3.84	120.81	1,023.6	-25.2	25.4	-32.7	0.46	
1,050.0	3.73	121.43	1,048.6	-26.1	26.8	-34.0	0.47	
1,075.0	3.48	118.67	1,073.5	-26.9	28.2	-35.3	1.22	
1,100.0	3.26	120.66	1,098.5	-27.6	29.4	-36.4	1.00	
1,125.0	3.23	121.22	1,123.5	-28.3	30.7	-37.5	0.17	
1,150.0	3.20	119.75	1,148.4	-29.0	31.9	-38.6	0.35	
1,175.0	2.83	117.71	1,173.4	-29.7	33.0	-39.6	1.54	
1,200.0	2.68	118.83	1,198.3	-30.2	34.1	-40.7	0.64	
1,225.0	2.46	116.35	1,223.3	-30.7	35.1	-41.8	0.99	
1,250.0	2.44	115.23	1,248.3	-31.2	36.0	-42.9	0.21	
1,275.0	2.34	114.51	1,273.3	-31.6	37.0	-44.0	0.42	
1,300.0	2.19	114.60	1,298.3	-32.1	37.9	-45.1	0.60	
1,325.0	2.21	116.95	1,323.2	-32.5	38.7	-46.2	0.37	
1,350.0	1.98	117.35	1,348.2	-32.9	39.6	-47.3	0.92	

Received
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FEB 11 2015



EOW Completion Report



Company: Antero	Local Co-ordinate Reference: Well Stalnaker Unit 1H
Project: Ritchie County WV	TVD Reference: Frontier 23: GL 1025' + KB 23 @ 1048.0usft
Site: John Richards Pad: Duckworth/Stalnaker	MD Reference: Frontier 23: GL 1025' + KB 23 @ 1048.0usft
Well: Stalnaker Unit 1H	North Reference: Grid
Wellbore: Original Wellpath	Survey Calculation Method: Minimum Curvature
Design: As Drilled	Database: Antero NE

Survey

MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	N/S (usft)	E/W (usft)	V. Sec (usft)	DLeg (°/100usft)
1,375.0	1.91	119.97	1,373.2	-33.3	40.3	-45.7	0.45
1,400.0	1.65	118.18	1,398.2	-33.7	41.0	-46.3	1.06
1,425.0	1.64	116.81	1,423.2	-34.0	41.6	-46.8	0.16
1,450.0	1.41	114.30	1,448.2	-34.3	42.2	-47.3	0.96
1,475.0	1.29	116.88	1,473.2	-34.6	42.7	-47.7	0.54
1,500.0	1.31	113.53	1,498.2	-34.8	43.3	-48.1	0.31
1,525.0	1.30	116.21	1,523.2	-35.0	43.8	-48.6	0.25
1,550.0	1.38	111.89	1,548.2	-35.3	44.3	-49.0	0.52
1,575.0	1.31	112.84	1,573.1	-35.5	44.9	-49.4	0.29
1,600.0	1.38	117.93	1,598.1	-35.7	45.4	-49.8	0.55
1,625.0	1.24	115.36	1,623.1	-36.0	45.9	-50.2	0.61
1,650.0	1.17	122.38	1,648.1	-36.3	46.4	-50.6	0.65
1,675.0	0.98	121.13	1,673.1	-36.5	46.7	-51.0	0.77
1,700.0	0.93	120.17	1,698.1	-36.7	47.1	-51.3	0.21
1,725.0	0.99	124.76	1,723.1	-36.9	47.5	-51.7	0.39
1,750.0	0.89	129.31	1,748.1	-37.2	47.8	-52.0	0.50
1,775.0	0.82	134.61	1,773.1	-37.4	48.1	-52.3	0.42
1,800.0	0.87	129.27	1,798.1	-37.7	48.3	-52.7	0.37
1,825.0	0.92	135.28	1,823.1	-37.9	48.6	-53.0	0.43
1,850.0	0.89	133.12	1,848.1	-38.2	48.9	-53.4	0.18
1,875.0	0.83	132.43	1,873.1	-38.5	49.2	-53.7	0.24
1,900.0	0.89	140.98	1,898.1	-38.7	49.4	-54.1	0.57
1,925.0	0.79	138.53	1,923.1	-39.0	49.7	-54.4	0.42
1,950.0	0.84	146.62	1,948.1	-39.3	49.9	-54.8	0.50
1,975.0	0.69	141.36	1,973.1	-39.6	50.1	-55.1	0.66
2,000.0	0.79	138.70	1,998.1	-39.8	50.3	-55.4	0.42
2,025.0	0.71	138.89	2,023.1	-40.1	50.5	-55.7	0.32
2,050.0	0.60	139.68	2,048.1	-40.3	50.7	-56.0	0.44
2,075.0	0.58	148.90	2,073.1	-40.5	50.8	-56.2	0.39
2,100.0	0.53	145.47	2,098.1	-40.7	51.0	-56.4	0.24
2,125.0	0.45	152.12	2,123.1	-40.9	51.1	-56.7	0.39
2,150.0	0.36	146.94	2,148.1	-41.0	51.2	-56.8	0.39
2,175.0	0.34	145.41	2,173.1	-41.2	51.3	-57.0	0.09
2,200.0	0.35	149.80	2,198.1	-41.3	51.3	-57.1	0.11
2,225.0	0.34	145.01	2,223.1	-41.4	51.4	-57.3	0.12
2,250.0	0.28	164.58	2,248.1	-41.5	51.5	-57.4	0.48
2,275.0	0.30	157.29	2,273.1	-41.7	51.5	-57.5	0.17
2,300.0	0.31	136.30	2,298.1	-41.8	51.6	-57.7	0.45
2,325.0	0.27	140.21	2,323.1	-41.9	51.7	-57.8	0.18
2,350.0	0.23	134.68	2,348.1	-41.9	51.8	-57.9	0.19
2,375.0	0.18	141.64	2,373.1	-42.0	51.8	-58.0	0.22
2,400.0	0.27	187.72	2,398.1	-42.1	51.8	-58.1	0.78
2,425.0	0.30	184.74	2,423.1	-42.2	51.8	-58.2	0.13
2,450.0	0.07	185.74	2,448.1	-42.3	51.8	-58.2	0.92
2,475.0	0.09	124.10	2,473.1	-42.3	51.8	-58.3	0.34

Received
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FEB 11 2016



EOW Completion Report



Company:	Antero	Local Co-ordinate Reference:	Well Stalnaker Unit 1H
Project:	Ritchie County WV	TVD Reference:	Frontier 23: GL 1025' + KB 23 @ 1048.0usft
Site:	John Richards Pad: Duckworth/Stalnaker	MD Reference:	Frontier 23: GL 1025' + KB 23 @ 1048.0usft
Well:	Stalnaker Unit 1H	North Reference:	Grid
Wellbore:	Original Wellpath	Survey Calculation Method:	Minimum Curvature
Design:	As Drilled	Database:	Antero NE

Survey

MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	N/S (usft)	E/W (usft)	V. Sec (usft)	DLeg (°/100usft)
2,500.0	0.17	240.97	2,498.1	-42.4	51.8	-58.3	0.90
2,525.0	0.17	230.79	2,523.1	-42.4	51.7	-58.3	0.12
2,550.0	0.20	225.80	2,548.1	-42.4	51.7	-58.3	0.14
2,575.0	0.30	268.31	2,573.1	-42.5	51.6	-58.3	0.82
2,600.0	0.19	268.17	2,598.1	-42.5	51.5	-58.3	0.44
2,625.0	0.21	261.03	2,623.1	-42.5	51.4	-58.3	0.13
2,650.0	0.33	247.50	2,648.1	-42.5	51.3	-58.3	0.54
2,675.0	0.34	248.45	2,673.1	-42.6	51.2	-58.3	0.05
2,700.0	0.36	258.89	2,698.1	-42.6	51.0	-58.3	0.27
2,725.0	0.49	261.82	2,723.1	-42.7	50.8	-58.2	0.53
2,750.0	0.47	267.81	2,748.1	-42.7	50.6	-58.2	0.22
2,775.0	0.56	267.64	2,773.1	-42.7	50.4	-58.1	0.36
2,800.0	0.49	270.01	2,798.1	-42.7	50.2	-58.0	0.29
2,825.0	0.59	266.22	2,823.1	-42.7	49.9	-57.9	0.42
2,850.0	0.65	251.51	2,848.1	-42.7	49.7	-57.9	0.68
2,875.0	0.64	252.19	2,873.1	-42.8	49.4	-57.9	0.05
2,900.0	0.65	252.60	2,898.1	-42.9	49.1	-57.8	0.04
2,925.0	0.45	265.01	2,923.1	-43.0	48.9	-57.8	0.93
2,950.0	0.52	261.03	2,948.1	-43.0	48.7	-57.8	0.31
2,975.0	0.51	264.96	2,973.1	-43.0	48.5	-57.7	0.15
3,000.0	0.54	270.98	2,998.1	-43.0	48.2	-57.6	0.25
3,025.0	0.55	264.63	3,023.1	-43.0	48.0	-57.5	0.24
3,050.0	0.76	258.01	3,048.1	-43.1	47.7	-57.5	0.89
3,075.0	1.60	246.32	3,073.0	-43.3	47.2	-57.5	3.48
3,100.0	2.25	247.05	3,098.0	-43.6	46.5	-57.5	2.60
3,125.0	2.80	245.91	3,123.0	-44.0	45.5	-57.5	2.21
3,150.0	3.50	245.10	3,148.0	-44.6	44.2	-57.6	2.81
3,175.0	4.19	245.69	3,172.9	-45.3	42.7	-57.7	2.76
3,200.0	4.96	245.86	3,197.8	-46.1	40.9	-57.8	3.08
3,225.0	5.90	246.29	3,222.7	-47.1	38.7	-57.9	3.76
3,250.0	6.83	245.94	3,247.6	-48.2	36.2	-58.1	3.72
3,275.0	7.87	245.42	3,272.4	-49.5	33.2	-58.2	4.17
3,300.0	8.69	246.31	3,297.1	-51.0	30.0	-58.4	3.32
3,325.0	9.69	246.32	3,321.8	-52.6	26.3	-58.6	4.00
3,350.0	10.79	247.06	3,346.4	-54.4	22.2	-58.7	4.43
3,375.0	11.80	247.57	3,370.9	-56.2	17.7	-58.8	4.06
3,400.0	12.67	248.61	3,395.3	-58.2	12.8	-58.9	3.59
3,425.0	13.31	249.75	3,419.7	-60.2	7.5	-58.8	2.76
3,450.0	13.81	249.60	3,444.0	-62.2	2.0	-58.7	2.00
3,475.0	14.42	249.29	3,468.2	-64.4	-3.7	-58.6	2.46
3,500.0	14.85	249.64	3,492.4	-66.6	-9.6	-58.6	1.76
3,525.0	15.22	249.39	3,516.6	-68.9	-15.7	-58.5	1.50
3,550.0	15.52	249.64	3,540.7	-71.2	-21.9	-58.4	1.23
3,575.0	16.00	249.53	3,564.7	-73.6	-28.2	-58.3	1.92

Received
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FEB 11 2016



EOW Completion Report



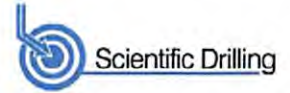
Company:	Antero	Local Co-ordinate Reference:	Well Stalnaker Unit 1H
Project:	Ritchie County WV	TVD Reference:	Frontier 23: GL 1025' + KB 23 @ 1048.0usft
Site:	John Richards Pad: Duckworth/Stalnaker	MD Reference:	Frontier 23: GL 1025' + KB 23 @ 1048.0usft
Well:	Stalnaker Unit 1H	North Reference:	Grid
Wellbore:	Original Wellpath	Survey Calculation Method:	Minimum Curvature
Design:	As Drilled	Database:	Antero NE

Survey								
MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	N/S (usft)	E/W (usft)	V. Sec (usft)	DLeg (°/100usft)	
3,600.0	16.36	248.94	3,588.7	-76.0	-34.7	-58.2	1.58	
3,625.0	16.68	248.00	3,612.7	-78.6	-41.4	-58.2	1.67	
3,650.0	17.25	244.42	3,636.6	-81.6	-48.0	-58.5	4.76	
3,675.0	17.58	243.53	3,660.5	-84.9	-54.7	-59.2	1.70	
3,700.0	18.08	243.24	3,684.3	-88.3	-61.6	-59.9	2.03	
3,725.0	18.56	242.72	3,708.0	-91.9	-68.6	-60.6	2.03	
3,750.0	19.27	242.32	3,731.7	-95.6	-75.8	-61.5	2.89	
3,775.0	19.82	242.11	3,755.2	-99.5	-83.2	-62.5	2.22	
3,800.0	20.59	241.92	3,778.7	-103.6	-90.8	-63.5	3.09	
3,825.0	21.35	241.46	3,802.0	-107.8	-98.7	-64.5	3.11	
3,850.0	22.35	241.50	3,825.2	-112.2	-106.9	-65.7	4.00	
3,875.0	23.09	241.40	3,848.3	-116.9	-115.3	-66.9	2.96	
3,900.0	23.62	241.65	3,871.2	-121.6	-124.1	-68.2	2.16	
3,925.0	24.34	241.97	3,894.1	-126.4	-133.0	-69.4	2.93	
3,950.0	24.84	242.01	3,916.8	-131.3	-142.2	-70.6	2.00	
3,975.0	25.36	242.34	3,939.5	-136.2	-151.6	-71.8	2.15	
4,000.0	25.75	242.52	3,962.0	-141.2	-161.1	-73.0	1.59	
4,025.0	25.84	242.76	3,984.5	-146.2	-170.8	-74.1	0.55	
4,050.0	25.67	242.26	4,007.0	-151.2	-180.4	-75.3	1.10	
4,075.0	25.49	241.47	4,029.6	-156.3	-189.9	-76.6	1.54	
4,100.0	25.44	240.63	4,052.2	-161.5	-199.4	-78.0	1.46	
4,125.0	25.59	239.66	4,074.7	-166.9	-208.7	-79.6	1.78	
4,150.0	25.92	238.97	4,097.2	-172.4	-218.0	-81.4	1.78	
4,175.0	25.90	238.15	4,119.7	-178.1	-227.4	-83.3	1.44	
4,200.0	25.08	237.59	4,142.3	-183.8	-236.5	-85.3	3.42	
4,225.0	24.92	236.80	4,164.9	-189.6	-245.3	-87.4	1.48	
4,250.0	24.91	236.33	4,187.6	-195.4	-254.1	-89.6	0.79	
4,275.0	24.86	236.42	4,210.3	-201.2	-262.9	-91.8	0.25	
4,300.0	24.74	237.16	4,233.0	-206.9	-271.7	-94.0	1.33	
4,325.0	25.01	237.51	4,255.7	-212.6	-280.5	-96.1	1.23	
4,350.0	24.90	237.44	4,278.3	-218.3	-289.4	-98.1	0.46	
4,375.0	24.88	237.67	4,301.0	-223.9	-298.3	-100.2	0.40	
4,400.0	24.87	238.61	4,323.7	-229.5	-307.2	-102.1	1.58	
4,425.0	24.47	239.60	4,346.4	-234.8	-316.2	-103.8	2.30	
4,450.0	24.30	240.25	4,369.2	-240.0	-325.1	-105.4	1.27	
4,475.0	24.46	240.10	4,392.0	-245.1	-334.1	-107.3	0.69	
4,500.0	24.56	241.24	4,414.7	-250.2	-343.1	-109.4	1.93	
4,525.0	24.66	241.63	4,437.4	-255.2	-352.2	-109.7	0.76	
4,550.0	24.60	241.64	4,460.2	-260.2	-361.4	-110.9	0.24	
4,575.0	24.93	241.95	4,482.9	-265.1	-370.6	-112.2	1.42	
4,600.0	25.42	242.25	4,505.5	-270.1	-380.0	-113.4	2.03	
4,625.0	25.92	242.42	4,528.0	-275.1	-389.6	-114.6	2.02	
4,650.0	26.08	242.85	4,550.5	-280.1	-399.4	-115.8	0.99	
4,675.0	26.36	243.42	4,572.9	-285.1	-409.2	-116.8	1.51	

Received
Office of Oil & Gas
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EOW Completion Report



Company: Antero	Local Co-ordinate Reference: Well Stalnaker Unit 1H
Project: Ritchie County WV	TVD Reference: Frontier 23: GL 1025' + KB 23 @ 1048.0usft
Site: John Richards Pad: Duckworth/Stalnaker	MD Reference: Frontier 23: GL 1025' + KB 23 @ 1048.0usft
Well: Stalnaker Unit 1H	North Reference: Grid
Wellbore: Original Wellpath	Survey Calculation Method: Minimum Curvature
Design: As Drilled	Database: Antero NE

Survey							
MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	N/S (usft)	E/W (usft)	V. Sec (usft)	DLeg (°/100usft)
4,700.0	26.70	243.32	4,595.3	-290.1	-419.2	-117.9	1.37
4,725.0	27.16	243.75	4,617.6	-295.2	-429.3	-118.9	2.00
4,750.0	27.34	243.74	4,639.8	-300.2	-439.6	-119.9	0.72
4,775.0	26.60	244.34	4,662.1	-305.2	-449.8	-120.8	3.15
4,800.0	25.96	244.11	4,684.5	-310.0	-459.8	-121.6	2.59
4,825.0	25.79	243.97	4,707.0	-314.8	-469.6	-122.5	0.72
4,850.0	25.82	243.75	4,729.5	-319.6	-479.3	-123.4	0.40
4,875.0	25.30	243.54	4,752.0	-324.4	-489.0	-124.4	2.11
4,900.0	24.36	242.74	4,774.7	-329.1	-498.4	-125.4	3.99
4,925.0	24.05	241.90	4,797.5	-333.9	-507.5	-126.5	1.85
4,950.0	24.17	241.74	4,820.4	-338.7	-516.5	-127.8	0.55
4,975.0	24.15	241.81	4,843.2	-343.5	-525.5	-129.0	0.14
5,000.0	24.72	242.33	4,865.9	-348.4	-534.6	-130.2	2.44
5,025.0	25.02	244.19	4,888.6	-353.1	-544.0	-131.2	3.35
5,050.0	25.57	245.17	4,911.2	-357.7	-553.7	-131.9	2.76
5,075.0	26.42	246.01	4,933.7	-362.2	-563.6	-132.5	3.71
5,100.0	27.47	247.06	4,956.0	-366.7	-574.0	-132.9	4.61
5,125.0	28.22	247.57	4,978.1	-371.2	-584.8	-133.2	3.15
5,150.0	28.83	247.72	5,000.0	-375.8	-595.8	-133.4	2.46
5,175.0	29.13	247.41	5,021.9	-380.4	-607.0	-133.7	1.34
5,200.0	28.70	246.57	5,043.8	-385.1	-618.2	-134.0	2.37
5,225.0	28.09	246.00	5,065.8	-389.9	-629.0	-134.5	2.67
5,250.0	27.49	244.98	5,087.9	-394.7	-639.6	-135.2	3.06
5,275.0	27.04	244.37	5,110.1	-399.6	-650.0	-136.0	2.12
5,300.0	26.72	243.65	5,132.4	-404.6	-660.2	-136.9	1.83
5,325.0	26.11	243.05	5,154.8	-409.6	-670.1	-137.9	2.66
5,350.0	25.32	242.22	5,177.3	-414.6	-679.7	-139.0	3.47
5,375.0	24.59	241.21	5,200.0	-419.5	-689.0	-140.3	3.38
5,400.0	24.07	240.05	5,222.8	-424.6	-698.0	-141.8	2.82
5,425.0	23.82	238.91	5,245.6	-429.8	-706.7	-143.4	2.10
5,450.0	24.39	238.87	5,268.5	-435.0	-715.5	-145.1	2.28
5,475.0	25.07	238.68	5,291.2	-440.4	-724.4	-146.9	2.74
5,500.0	25.49	238.17	5,313.8	-446.0	-733.5	-148.8	1.89
5,525.0	25.96	238.36	5,336.3	-451.7	-742.7	-150.8	1.91
5,550.0	26.27	239.10	5,358.7	-457.5	-752.2	-152.7	1.80
5,575.0	25.63	240.32	5,381.2	-463.0	-761.6	-154.3	3.33
5,600.0	25.23	240.73	5,403.8	-468.3	-770.9	-155.9	1.75
5,625.0	25.13	241.67	5,426.4	-473.4	-780.3	-157.3	1.65
5,650.0	25.03	243.43	5,449.1	-478.3	-789.7	-158.4	3.01
5,675.0	25.42	244.69	5,471.7	-482.9	-799.3	-159.3	2.65
5,700.0	25.77	246.12	5,494.2	-487.4	-809.1	-159.9	2.84
5,725.0	26.32	246.61	5,516.7	-491.8	-819.1	-160.3	2.36
5,750.0	26.89	246.66	5,539.0	-496.3	-829.4	-160.7	2.28
5,775.0	27.23	246.14	5,561.3	-500.8	-839.8	-161.2	1.66

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EOW Completion Report



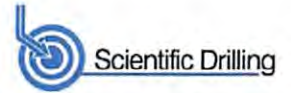
Company:	Antero	Local Co-ordinate Reference:	Well Stalnaker Unit 1H
Project:	Ritchie County WV	TVD Reference:	Frontier 23: GL 1025' + KB 23 @ 1048.0usft
Site:	John Richards Pad: Duckworth/Stalnaker	MD Reference:	Frontier 23: GL 1025' + KB 23 @ 1048.0usft
Well:	Stalnaker Unit 1H	North Reference:	Grid
Wellbore:	Original Wellpath	Survey Calculation Method:	Minimum Curvature
Design:	As Drilled	Database:	Antero NE

Survey							
MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	N/S (usft)	E/W (usft)	V. Sec (usft)	DLeg (°/100usft)
5,800.0	26.89	245.43	5,583.6	-505.5	-850.2	-161.8	1.88
5,825.0	26.49	245.29	5,605.9	-510.2	-860.4	-162.4	1.62
5,850.0	26.35	245.37	5,628.3	-514.8	-870.5	-163.1	0.58
5,875.0	26.47	246.67	5,650.7	-519.3	-880.7	-163.6	2.36
5,900.0	26.85	247.50	5,673.0	-523.7	-891.0	-163.9	2.13
5,925.0	26.75	247.86	5,695.3	-528.0	-901.4	-164.1	0.76
5,950.0	27.59	248.11	5,717.6	-532.2	-912.0	-164.2	3.39
5,971.7	28.25	256.58	5,736.8	-536.0	-921.5	-164.3	18.49
6,125.0	28.90	244.33	5,871.5	-560.5	-990.2	-162.1	3.84
6,158.0	28.10	247.71	5,900.5	-566.9	-1,004.6	-162.9	5.45
6,190.0	27.96	256.60	5,928.8	-571.5	-1,018.8	-162.0	13.05
6,222.0	28.63	267.50	5,957.0	-573.6	-1,033.8	-158.5	16.26
6,254.0	29.87	277.65	5,984.9	-572.9	-1,049.4	-152.1	15.96
6,286.0	31.90	285.43	6,012.4	-569.6	-1,065.4	-143.2	13.99
6,318.0	33.58	293.01	6,039.3	-563.8	-1,081.7	-132.0	13.84
6,331.0	33.71	296.44	6,050.1	-560.8	-1,088.3	-126.8	14.65
SCMR							
6,350.0	34.07	301.38	6,065.9	-555.7	-1,097.5	-118.6	14.62
6,382.0	35.11	309.98	6,092.3	-545.1	-1,112.3	-103.4	15.59
6,414.0	37.09	317.23	6,118.1	-532.1	-1,125.9	-86.4	14.70
6,446.0	39.73	320.91	6,143.2	-517.1	-1,138.9	-67.6	10.91
6,479.0	41.92	324.20	6,168.2	-500.0	-1,152.0	-46.9	9.30
6,511.0	44.33	327.84	6,191.5	-481.8	-1,164.2	-25.6	10.82
6,530.0	46.46	329.10	6,204.9	-470.3	-1,171.3	-12.3	12.16
MDLX							
6,543.0	47.92	329.91	6,213.7	-462.1	-1,176.1	-2.9	12.13
6,575.0	51.42	330.32	6,234.4	-440.9	-1,188.2	21.3	10.98
6,607.0	54.23	331.16	6,253.7	-418.7	-1,200.7	46.5	9.03
6,639.0	57.56	330.87	6,271.7	-395.5	-1,213.5	72.8	10.43
6,671.0	60.57	331.13	6,288.1	-371.5	-1,226.8	100.0	9.43
6,703.0	63.64	331.87	6,303.1	-346.7	-1,240.3	128.0	9.81
6,730.0	66.09	332.67	6,314.6	-325.0	-1,251.7	152.3	9.46
BRKT							
6,735.0	66.54	332.82	6,316.6	-320.9	-1,253.8	156.9	9.41
6,767.0	69.46	332.98	6,328.6	-294.5	-1,267.3	186.4	9.04
6,799.0	72.31	333.51	6,339.0	-267.5	-1,280.9	216.5	9.04
6,818.0	74.20	333.84	6,344.5	-251.2	-1,289.0	234.6	10.09
TLLY							
6,830.0	75.40	334.04	6,347.7	-240.8	-1,294.1	246.1	10.13
6,862.0	77.38	334.18	6,355.2	-212.9	-1,307.7	277.1	6.20
6,895.0	79.52	334.52	6,361.8	-183.7	-1,321.7	309.4	6.56
6,896.0	79.54	334.51	6,362.0	-182.8	-1,322.1	310.4	2.23
MRCL_HOT							
6,927.0	80.19	334.18	6,367.4	-155.3	-1,335.3	340.8	2.34
6,959.0	81.87	335.43	6,372.4	-126.7	-1,348.7	372.3	6.52

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EOW Completion Report



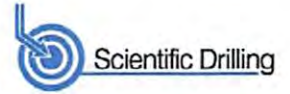
Company:	Antero	Local Co-ordinate Reference:	Well Stalnaker Unit 1H
Project:	Ritchie County WV	TVD Reference:	Frontier 23: GL 1025' + KB 23 @ 1048.0usft
Site:	John Richards Pad: Duckworth/Stalnaker	MD Reference:	Frontier 23: GL 1025' + KB 23 @ 1048.0usft
Well:	Stalnaker Unit 1H	North Reference:	Grid
Wellbore:	Original Wellpath	Survey Calculation Method:	Minimum Curvature
Design:	As Drilled	Database:	Antero NE

Survey								
MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	N/S (usft)	E/W (usft)	V. Sec (usft)	DLeg (°/100usft)	
6,992.0	82.75	337.21	6,376.8	-96.8	-1,361.9	405.0	5.97	
7,000.6	82.87	337.15	6,377.9	-88.9	-1,365.2	413.5	1.56	
7,024.0	83.20	336.97	6,380.8	-67.5	-1,374.2	436.7	1.60	
7,056.0	84.61	338.64	6,384.2	-38.1	-1,386.3	468.6	6.81	
7,088.0	86.63	342.44	6,386.6	-8.0	-1,396.9	500.4	13.42	
7,144.0	88.37	349.89	6,389.0	46.3	-1,410.3	555.9	13.65	
7,177.0	88.90	349.27	6,389.8	78.8	-1,416.2	588.3	2.47	
7,273.0	91.36	348.40	6,389.6	172.9	-1,434.8	682.8	2.72	
7,369.0	92.24	347.78	6,386.6	266.8	-1,454.6	777.4	1.12	
7,465.0	90.66	348.04	6,384.2	360.7	-1,474.7	872.1	1.67	
7,561.0	90.31	350.33	6,383.4	454.9	-1,492.7	966.5	2.41	
7,656.0	89.87	351.30	6,383.2	548.7	-1,507.9	1,059.4	1.12	
7,751.0	90.31	351.03	6,383.1	642.6	-1,522.5	1,152.2	0.54	
7,847.0	89.60	349.19	6,383.1	737.2	-1,539.0	1,246.3	2.05	
7,944.0	88.99	349.54	6,384.3	832.5	-1,556.9	1,341.6	0.73	
8,040.0	90.13	350.68	6,385.1	927.1	-1,573.4	1,435.7	1.68	
8,135.0	90.66	349.10	6,384.4	1,020.6	-1,590.0	1,528.8	1.75	
8,232.0	89.78	349.45	6,384.0	1,115.9	-1,608.1	1,624.2	0.98	
8,328.0	89.09	347.43	6,385.0	1,209.9	-1,627.3	1,718.8	2.22	
8,424.0	93.03	347.43	6,383.2	1,303.6	-1,648.2	1,813.6	4.10	
8,520.0	89.43	344.18	6,381.1	1,396.6	-1,671.7	1,908.8	5.05	
8,617.0	88.02	342.77	6,383.3	1,489.6	-1,699.3	2,005.5	2.06	
8,713.0	92.68	346.29	6,382.7	1,582.1	-1,724.9	2,100.9	6.08	
8,809.0	90.57	345.67	6,380.0	1,675.2	-1,748.2	2,196.1	2.29	
8,900.0	91.45	344.35	6,378.4	1,763.0	-1,771.7	2,286.5	1.74	
8,991.0	89.60	343.83	6,377.6	1,850.5	-1,796.6	2,377.1	2.11	
9,081.0	88.90	343.39	6,378.7	1,936.9	-1,822.0	2,466.8	0.92	
9,172.0	88.90	345.93	6,380.5	2,024.6	-1,846.1	2,557.3	2.79	
9,262.0	90.13	344.97	6,381.2	2,111.7	-1,868.7	2,646.6	1.73	
9,353.0	89.43	347.78	6,381.6	2,200.2	-1,890.1	2,736.8	3.18	
9,443.0	91.71	351.03	6,380.7	2,288.6	-1,906.7	2,825.2	4.41	
9,534.0	90.48	348.48	6,379.0	2,378.1	-1,922.9	2,914.5	3.11	
9,624.0	89.43	347.60	6,379.0	2,466.2	-1,941.5	3,003.3	1.52	
9,715.0	88.81	346.20	6,380.4	2,554.8	-1,962.1	3,093.3	1.68	
9,806.0	89.16	347.87	6,382.0	2,643.4	-1,982.5	3,183.3	1.87	
9,897.0	91.80	350.77	6,381.3	2,732.8	-1,999.4	3,272.8	4.31	
9,993.0	89.52	349.98	6,380.2	2,827.5	-2,015.5	3,366.8	2.51	
10,088.0	88.55	348.90	6,381.8	2,920.9	-2,032.9	3,460.1	1.53	
10,185.0	87.85	346.81	6,384.8	3,015.6	-2,053.3	3,555.8	2.27	
10,281.0	89.25	346.46	6,387.2	3,109.0	-2,075.4	3,650.8	1.50	
10,377.0	90.48	347.43	6,387.5	3,202.5	-2,097.1	3,745.8	1.63	
10,473.0	90.48	347.17	6,386.7	3,296.2	-2,118.2	3,840.7	0.27	
10,569.0	89.60	344.70	6,386.6	3,389.3	-2,141.6	3,936.0	2.73	
10,761.0	90.84	344.70	6,385.9	3,574.5	-2,192.2	4,126.9	0.65	

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EOW Completion Report



Company: Antero	Local Co-ordinate Reference: Well Stalnaker Unit 1H
Project: Ritchie County WV	TVD Reference: Frontier 23: GL 1025' + KB 23 @ 1048.0usft
Site: John Richards Pad: Duckworth/Stalnaker	MD Reference: Frontier 23: GL 1025' + KB 23 @ 1048.0usft
Well: Stalnaker Unit 1H	North Reference: Grid
Wellbore: Original Wellpath	Survey Calculation Method: Minimum Curvature
Design: As Drilled	Database: Antero NE

MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	N/S (usft)	E/W (usft)	V. Sec (usft)	DLeg (°/100usft)
10,857.0	89.87	344.88	6,385.3	3,667.1	-2,217.4	4,222.3	1.03
10,954.0	89.43	346.46	6,385.9	3,761.1	-2,241.4	4,318.6	1.69
11,050.0	89.96	347.52	6,386.4	3,854.6	-2,263.0	4,413.6	1.23
11,146.0	90.84	349.45	6,385.7	3,948.7	-2,282.2	4,508.2	2.21
11,243.0	90.13	347.60	6,384.9	4,043.7	-2,301.5	4,603.8	2.04
11,339.0	90.48	347.87	6,384.4	4,137.5	-2,321.9	4,698.6	0.46
11,435.0	90.57	347.34	6,383.5	4,231.3	-2,342.5	4,793.4	0.56
11,531.0	90.84	346.29	6,382.3	4,324.8	-2,364.4	4,888.4	1.13
11,627.0	89.69	346.64	6,381.9	4,418.1	-2,386.8	4,983.5	1.25
11,723.0	89.78	346.55	6,382.3	4,511.5	-2,409.1	5,078.6	0.13
11,819.0	90.48	345.93	6,382.1	4,604.7	-2,431.9	5,173.8	0.97
11,915.0	89.25	346.64	6,382.3	4,698.0	-2,454.7	5,268.9	1.48
12,011.0	89.60	348.22	6,383.3	4,791.7	-2,475.6	5,363.8	1.69
12,108.0	90.04	348.48	6,383.6	4,886.7	-2,495.2	5,459.4	0.53
12,204.0	91.01	349.89	6,382.7	4,981.0	-2,513.2	5,553.8	1.78
12,300.0	91.80	350.24	6,380.4	5,075.5	-2,529.7	5,647.9	0.90
12,396.0	90.66	349.10	6,378.3	5,169.9	-2,546.9	5,742.1	1.68
12,492.0	91.63	347.78	6,376.4	5,263.9	-2,566.2	5,836.7	1.71
12,588.0	88.81	343.83	6,376.0	5,357.0	-2,589.7	5,931.9	5.05
12,683.0	89.69	343.91	6,377.2	5,448.2	-2,616.1	6,026.5	0.93
12,779.0	90.22	345.32	6,377.3	5,540.8	-2,641.6	6,122.0	1.57
12,875.0	91.36	346.11	6,376.0	5,633.8	-2,665.3	6,217.3	1.44
12,971.0	90.57	346.90	6,374.4	5,727.1	-2,687.7	6,312.4	1.16
13,068.0	90.06	344.70	6,373.9	5,821.2	-2,711.5	6,408.6	2.33
13,163.0	89.96	342.42	6,373.8	5,912.3	-2,738.3	6,503.3	2.40
13,259.0	88.81	343.47	6,374.9	6,004.1	-2,766.5	6,599.0	1.62
13,356.0	89.60	343.83	6,376.2	6,097.1	-2,793.8	6,695.6	0.89
13,452.0	90.57	343.83	6,376.1	6,189.3	-2,820.5	6,791.2	1.01
13,472.0	91.10	342.95	6,375.8	6,208.5	-2,826.2	6,811.2	5.14
13,533.0	91.10	342.95	6,374.6	6,266.8	-2,844.1	6,872.0	0.00

PTB

Design Annotations				
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
6,331.0	6,050.1	-560.8	-1,088.3	SCMR
6,530.0	6,204.9	-470.3	-1,171.3	MDLX
6,730.0	6,314.6	-325.0	-1,251.7	BRKT
6,818.0	6,344.5	-251.2	-1,289.0	TLLY
6,896.0	6,362.0	-182.8	-1,322.1	MRCL_HOT
13,533.0	6,374.6	6,266.8	-2,844.1	PTB

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Checked By: _____ Approved By: _____ Date: _____

Hydraulic Fracturing Fluid Product Component Information Disclosure

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Job Start Date:	10/24/2015
Job End Date:	11/4/2015
State:	West Virginia
County:	Ritchie
API Number:	47-085-10138-00-00
Operator Name:	Antero Resources Corporation
Well Name and Number:	Stalnaker 1H
Longitude:	-80.91950600
Latitude:	39.20545000
Datum:	NAD83
Federal/Tribal Well:	NO
True Vertical Depth:	6,390
Total Base Water Volume (gal):	9,120,972
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	Base Fluid	Water	7732-18-5	100.00000	91.37661	
Sand	U.S. Well Services, LLC	Proppant	Crystalline Silica, quartz	14808-60-7	100.00000	8.10470	
HCL Acid (12.6%-18.0%)	U.S. Well Services, LLC	Bulk Acid	Water	7732-18-5	87.50000	0.17514	
			Hydrogen Chloride	7647-01-0	18.00000	0.04184	
LGC-15	U.S. Well Services	Gelling Agents	Guar Gum	9000-30-0	50.00000	0.09129	
			Petroleum Distillates	64742-47-8	60.00000	0.08646	
			Suspending agent (solid)	14808-60-7	3.00000	0.01396	
			Surfactant	68439-51-0	3.00000	0.00548	
WFRA-405	U.S. Well Services	Friction Reducer	Water	7732-18-5	40.00000	0.03034	
			2-Propenoic acid, polymer with 2-propenamide	9003-06-9	30.00000	0.03034	
			Petroleum Distillates	64742-47-8	20.00000	0.01221	
			Ethoxylated alcohol blend	68002-97-1	4.00000	0.00379	
SI-1100	U.S. Well Services	Scale Inhibitor					

			Water	7732-18-5	80.00000	0.01044
			Ethylene Glycol	107-21-1	25.00000	0.00369
			Copolymer of Maleic and Acrylic acid	52255-49-9	10.00000	0.00154
			Potassium salt of diethylene triamine penta (methylene phosphonic acid)	15827-60-8	7.50000	0.00132
			Hexamethylene tramine penta (methylene phosphonic acid)	34690-00-1	5.00000	0.00085
			Phosphino carboxylic acid polymer	71050-62-9	5.00000	0.00085
			Hexamethylene diamine penta (methylene phosphonic acid)	23605-74-5	2.00000	0.00034
K-BAC 1020	U.S. Well Services	Anti-Bacterial Agent				
			2,2-dibromo-3-nitrilopropionamide	10222-01-2	20.00000	0.00397
			Deionized Water	7732-18-5	28.00000	0.00227
AP One	U.S. Well Services	Gel Breakers				
			Ammonium Persulfate	7727-54-0	100.00000	0.00223
AI-301	U.S. Well Services	Acid Corrosion Inhibitors				
			Diethylene Glycol	111-46-6	30.00000	0.00013
			Methenamine	100-97-0	20.00000	0.00011
			Hydrogen Chloride	7647-01-0	10.00000	0.00005
			Polyethylene polyamine	68603-67-8	10.00000	0.00004
			Coco amine	61791-14-8	5.00000	0.00002

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.

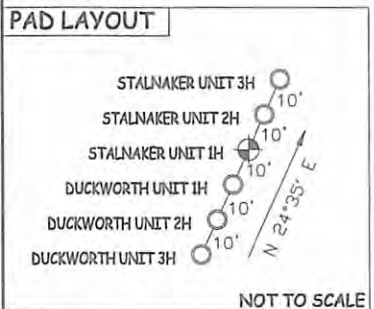
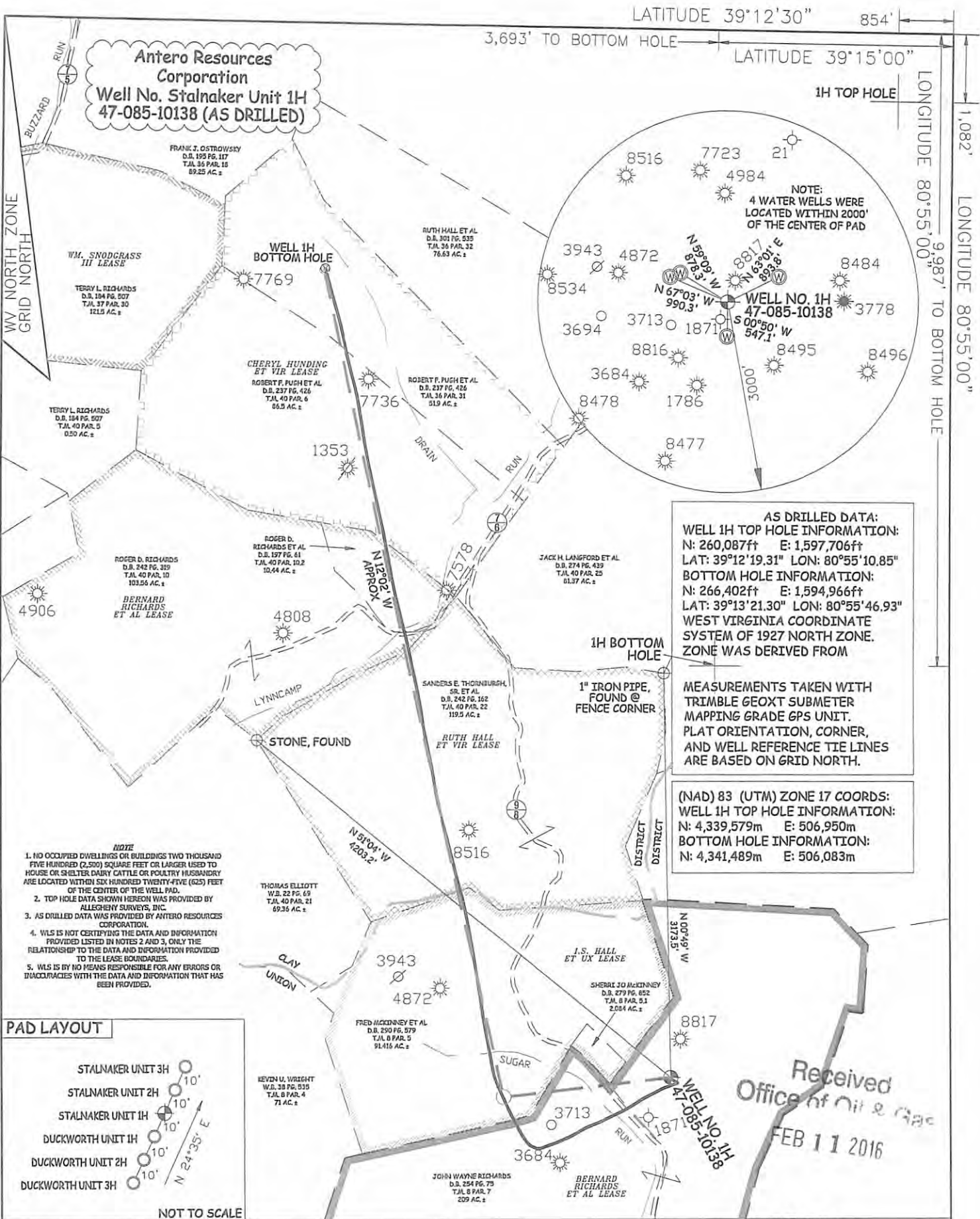
* Total Water Volume sources may include fresh water, produced water, and/or recycled water

** 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.

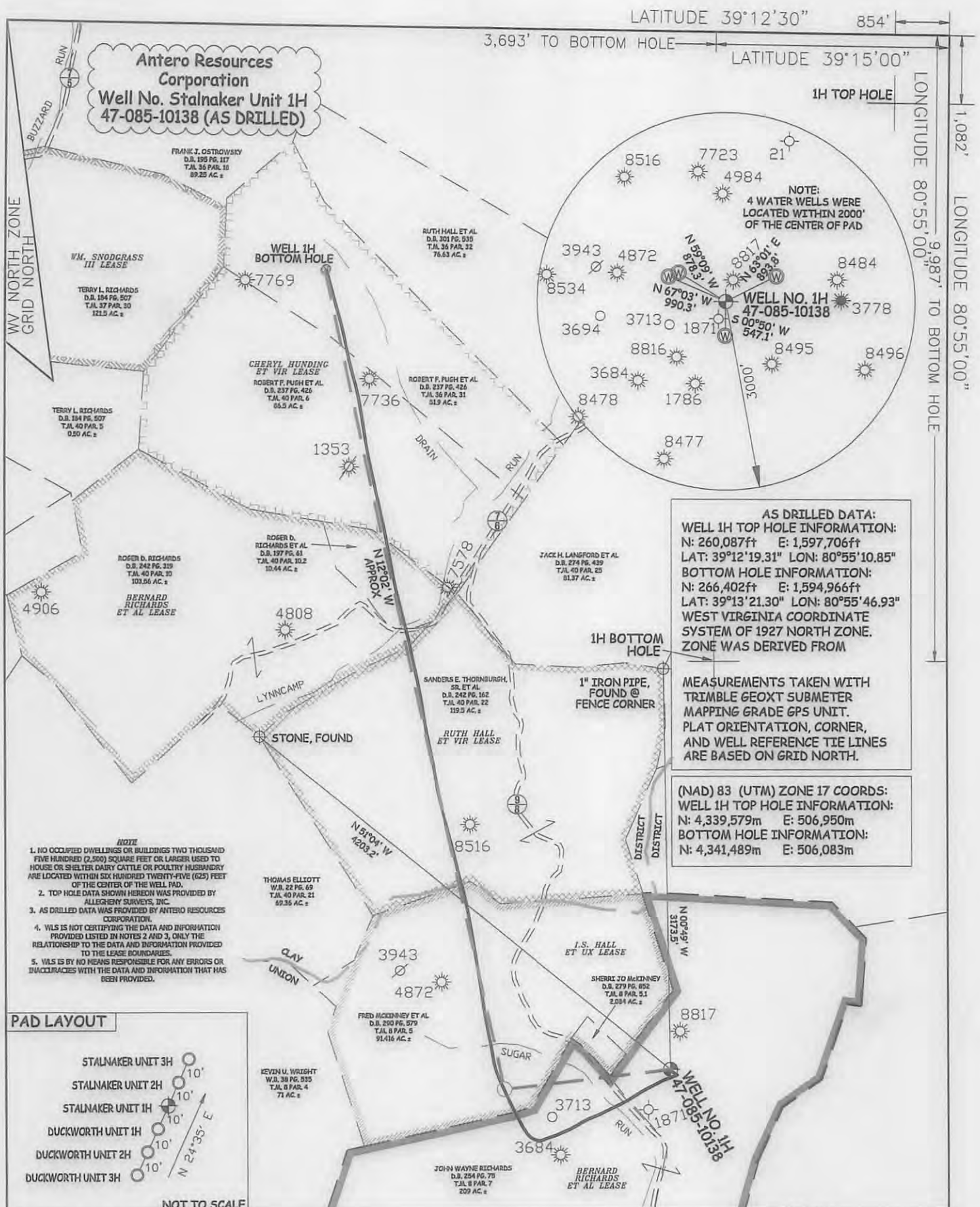
Ingredient information for chemicals subject to 29 CFR 1910.1200(i) and Appendix D are obtained from suppliers Material Safety Data Sheets (MSDS)

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JOB # 14-039 WA DRAWING # STALNAKER1HADR SCALE 1" = 1000' MINIMUM DEGREE OF ACCURACY SUBMETER PROVEN SOURCE OF ELEV. SUBMETER MAPPING GRADE GPS			STATE OF WEST VIRGINIA, DIVISION OF ENVIRONMENTAL PROTECTION, OFFICE OF OIL AND GAS WILLOW LAND SURVEYING PLLC 220 MASONIC AVE. PENNSBORO WEST VIRGINIA 26415		LEGEND - - - Surface Owner Boundary Lines +/- - - - Interior Surface Tracts +/- X Existing Fence ⊕ Found monument, as noted ⊙ Proposed Well Path ⊙ As Drilled Well Path
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 1,035' ORIGINAL - 1,025' AS DRILLED WATERSHED SOUTH FORK HUGHES RIVER QUADRANGLE PULLMAN 7.5' DISTRICT UNION COUNTY PERMIT			DATE 07/13/15 OPERATOR'S WELL# STALNAKER UNIT #1H API WELL # 47 - 085 - 10138 STATE COUNTY PERMIT		COUNTY NAME SOUTH FORK HUGHES RIVER PERMIT 09/16/2016
SURFACE OWNER JOHN WAYNE RICHARDS ACREAGE 209 ACRES +/- OIL & GAS ROYALTY OWNER BERNARD RICHARDS ET AL; I.S. HALL ET UX; RUTH HALL ET VIR; BERNARD RICHARDS ET AL; CHERYL HUNDING ET VIR LEASE ACREAGE 214 AC.±; 100 AC.±; 120 AC.±; 114 AC.±; 143 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 6,375' TVD 13,533' MD		WELL OPERATOR ANTERO RESOURCES CORP. DESIGNATED AGENT DIANNA STAMPER ADDRESS 1615 WYNKOOP ST. ADDRESS 5400 D BIG TYLER ROAD DENVER, CO 80202 CHARLESTON, WV 25313	



Antero Resources Corporation
Well No. Stalnaker Unit 1H
47-085-10138 (AS DRILLED)

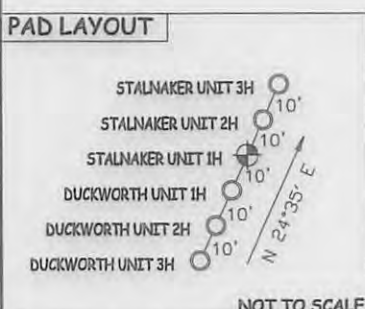
NOTE:
 4 WATER WELLS WERE
 LOCATED WITHIN 2000'
 OF THE CENTER OF PAD

AS DRILLED DATA:
WELL 1H TOP HOLE INFORMATION:
 N: 260,087ft E: 1,597,706ft
 LAT: 39°12'19.31" LON: 80°55'10.85"
BOTTOM HOLE INFORMATION:
 N: 266,402ft E: 1,594,966ft
 LAT: 39°13'21.30" LON: 80°55'46.93"
 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: 4,339,579m E: 506,950m
 BOTTOM HOLE INFORMATION:
 N: 4,341,489m E: 506,083m

- 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.



JOB # 14-039 WA DRAWING # STALNAKER1HADR SCALE 1" = 1000' MINIMUM DEGREE OF ACCURACY SUBMETER PROVEN SOURCE OF ELEV. SUBMETER MAPPING GRADE GPS			STATE OF WEST VIRGINIA, DIVISION OF ENVIRONMENTAL PROTECTION, OFFICE OF OIL AND GAS WILLOW LAND SURVEYING PLLC 220 MASONIC AVE. PENNSBORO WEST VIRGINIA 26415		LEGEND — Surface Owner Boundary Lines +/- - - - Interior Surface Tracts +/- X Existing Fence ⊕ Found monument, as noted ○ Proposed Well Path ⊗ As Drilled Well Path	
STATE OF WEST VIRGINIA DEPARTMENT OF ENERGY DIVISION OF OIL AND GAS WELL TYPE: OIL <input type="checkbox"/> GAS <input checked="" type="checkbox"/> LIQUID INJECTION <input type="checkbox"/> WASTE DISPOSAL <input type="checkbox"/> (IF "GAS") PRODUCTION <input checked="" type="checkbox"/> STORAGE <input type="checkbox"/> DEEP <input type="checkbox"/> SHALLOW <input checked="" type="checkbox"/> LOCATION: ELEVATION 1,035' ORIGINAL - 1,025' AS DRILLED WATERSHED SOUTH FORK HUGHES RIVER QUADRANGLE PULLMAN 7.5' DISTRICT UNION COUNTY 09/16/2016			DATE 07/13/15 OPERATOR'S WELL# STALNAKER UNIT #1H API WELL # 47 - 085 - 10138 STATE COUNTY PERMIT		COUNTY NAME PERMIT	
SURFACE OWNER JOHN WAYNE RICHARDS ACREAGE 209 ACRES +/- OIL & GAS ROYALTY OWNER BERNARD RICHARDS ET AL; I.S. HALL ET UX; RUTH HALL ET VIR; LEASE ACREAGE 214 AC.±; 100 AC.±; 120 AC.± BERNARD RICHARDS ET AL; CHERYL HUNDING ET VIR 114 AC.±; 143 AC.±		PROPOSED WORK: DRILL <input type="checkbox"/> CONVERT <input type="checkbox"/> DRILL DEEPER <input type="checkbox"/> REDRILL <input type="checkbox"/> FRACTURE OR STIMULATE <input type="checkbox"/> PLUG OFF OLD FORMATION <input type="checkbox"/> PERFORATE NEW FORMATION <input type="checkbox"/> OTHER PHYSICAL CHANGE IN WELL (SPECIFY) (X) AS DRILLED PLUG & ABANDON CLEAN OUT & REPLUG TARGET FORMATION MARCELLUS ESTIMATED DEPTH 6,375' TVD 13,533' MD				
WELL OPERATOR ANTERO RESOURCES CORP. DESIGNATED AGENT DIANNA STAMPER ADDRESS 1615 WYNKOOP ST. ADDRESS 5400 D BIG TYLER ROAD DENVER, CO 80202 CHARLESTON, WV 25313		FORM WW-6				