

APPROVED

WR-35
Rev. 8/23/11

Page ___ of ___

NAME: John A. ...

DATE: 5/25/16

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

API 47-017-06497 County Doddridge District Grant
Quad West Union 7.5' Pad Name Melody Pad Field/Pool Name ----
Farm name Brown, Melody Well Number Deano 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 4356592m Easting 520753m
Landing Point of Curve Northing 4356536.46m Easting 520978.45m
Bottom Hole Northing 4354289m Easting 521876m

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 6/25/2014 Date drilling commenced 10/2/2014 Date drilling ceased 12/5/2014
Date completion activities began 11/11/2015 Date completion activities ceased 1/20/2016
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.

Freshwater depth(s) ft 46' Open mine(s) (Y/N) depths No
Salt water depth(s) ft 865', 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

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API 47- 017 - 06497 Farm name Brown, Melody Well number Deano 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# H-40	N/A	Y
Surface	17- 1/2"	13- 3/8"	550'	New	48# H-40	N/A	Y*
Coal							
Intermediate 1	12-1/4"	9-5/8"	2522'	New	36# J-55	N/A	Y
Intermediate 2							
Intermediate 3							
Production	8-3/4" & 8-1/2"	5-1/2"	15398'	New	23# P-110	N/A	Y
Tubing		2-3/8"	7156'		4.7# N-80	N/A	
Packer type and depth set		N/A					

Comment Details *Initial attempt to cement Surface Casing with 655 sacks of Class A cement was unsuccessful. Several attempts with the following amounts of cement: 200 sx, 300 sx, 100sx, 150 sx, 150 sx, 150 sx were used to successfully bring returns to surface, using a total of 2005 sx of Class A cement.

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	200 sx	15.6	1.18	38	0'	8 Hrs.
Surface	Class A	2005 sx*	15.6	1.18	3382	0'	8 Hrs.
Coal							
Intermediate 1	Class A	921 sx	15.6	1.18	790	0'	8 Hrs.
Intermediate 2							
Intermediate 3							
Production	Class H	1010 sx (Lead) 1348 sx (Tail)	14.5 Lead 15.2 Tail	1.58 Lead 1.86 Tail	3064	-500' into Intermediate Casing	8 Hrs.
Tubing							

Drillers TD (ft) 15398' MD, 6944' TVD (BHL), 6968' (Deepest Point Drilled) Loggers TD (ft) 15398'
 Deepest formation penetrated Marcellus Plug back to (ft) N/A
 Plug back procedure N/A

Kick off depth (ft) 6193'

** This is a subsequent well. Antero only runs wireline logs on one well on a multi-well pad (Weinhold Unit 1H API #47-017-06495). Please reference the wireline logs submitted with Form WR-35 for Weinhold Unit 1H. 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 - 06497 Farm name Brown, Melody Well number Deano Unit 1H

PRODUCING FORMATION(S)	DEPTHS	
Marcellus	6836' (TOP) TVD	7222' (TOP) MD

Please insert additional pages as applicable.

GAS TEST Build up Drawdown Open Flow OIL TEST Flow Pump

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

OPEN FLOW Gas 14425 mcfpd Oil 65 bpd NGL --- bpd Water 25 bpd GAS MEASURED BY Estimated Orifice Pilot

LITHOLOGY/ FORMATION	TOP	BOTTOM	TOP	BOTTOM	DESCRIBE ROCK TYPE AND RECORD QUANTITY AND TYPE OF FLUID (FRESHWATER, BRINE, OIL, GAS, H ₂ S, ETC)
	DEPTH IN FT NAME TVD	DEPTH IN FT TVD	DEPTH IN FT MD	DEPTH IN FT MD	
	0		0		
*PLEASE SEE ATTACHED EXHIBIT 3					

Please insert additional pages as applicable.

Drilling Contractor Precision Drilling Company LP
Address 2640 Reach Rd. City Williamsport State PA Zip 17701

Logging Company Rush Well Site Servies
Address 600 Alpha Dr. 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 C & J Energy Services
Address 1650 Hackers Creek Rd. City Jane Lew State WV Zip 26378

Please insert additional pages as applicable.

Completed by Kara Quackenbush Telephone 303-357-7233
Signature [Signature] Title Permit Representative Date 4/12/2016

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

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API 47-017-06497 Farm Name Brown, Melody Well Number Deano Unit 1H

EXHIBIT 1

Stage No.	Perforation Date	Perforated from MD ft.	Perforated to MD ft.	Number of Perforations	Formations
1	11-Nov-15	15,146	15,312	60	Marcellus
2	22-Nov-15	14,949	15,115	60	Marcellus
3	23-Nov-15	14,752	14,918	60	Marcellus
4	23-Nov-15	14,554	14,721	60	Marcellus
5	23-Nov-15	14,357	14,524	60	Marcellus
6	24-Nov-15	14,160	14,326	60	Marcellus
7	24-Nov-15	13,963	14,129	60	Marcellus
8	24-Nov-15	13,766	13,932	60	Marcellus
9	24-Nov-15	13,569	13,735	60	Marcellus
10	24-Nov-15	13,372	13,538	60	Marcellus
11	25-Nov-15	13,175	13,341	60	Marcellus
12	25-Nov-15	12,978	13,144	60	Marcellus
13	27-Nov-15	12,780	12,947	60	Marcellus
14	27-Nov-15	12,583	12,750	60	Marcellus
15	27-Nov-15	12,386	12,552	60	Marcellus
16	27-Nov-15	12,189	12,355	60	Marcellus
17	28-Nov-15	11,992	12,158	60	Marcellus
18	28-Nov-15	11,795	11,961	60	Marcellus
19	28-Nov-15	11,598	11,764	60	Marcellus
20	28-Nov-15	11,401	11,567	60	Marcellus
21	28-Nov-15	11,203	11,370	60	Marcellus
22	29-Nov-15	11,006	11,173	60	Marcellus
23	29-Nov-15	10,809	10,976	60	Marcellus
24	29-Nov-15	10,612	10,778	60	Marcellus
25	29-Nov-15	10,415	10,581	60	Marcellus
26	29-Nov-15	10,218	10,384	60	Marcellus
27	29-Nov-15	10,021	10,187	60	Marcellus
28	30-Nov-15	9,824	9,990	60	Marcellus
29	30-Nov-15	9,627	9,793	60	Marcellus
30	30-Nov-15	9,429	9,596	60	Marcellus
31	30-Nov-15	9,232	9,399	60	Marcellus
32	1-Dec-15	9,035	9,202	60	Marcellus
33	1-Dec-15	8,838	9,004	60	Marcellus
34	1-Dec-15	8,641	8,807	60	Marcellus
35	1-Dec-15	8,444	8,610	60	Marcellus
36	2-Dec-15	8,247	8,413	60	Marcellus
37	2-Dec-15	8,050	8,216	60	Marcellus
38	2-Dec-15	7,853	8,019	60	Marcellus
39	2-Dec-15	7,655	7,822	60	Marcellus
40	3-Dec-15	7,458	7,625	60	Marcellus
41	3-Dec-15	7,261	7,428	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	22-Nov-15	61.9	62	7,740	4,497	164,100	6,741	N/A
2	22-Nov-15	63.0	63	6,862	4,849	110,300	6,389	N/A
3	23-Nov-15	64.2	64	6,738	5,861	172,100	5,985	N/A
4	23-Nov-15	62.8	63	5,881	4,819	75,600	6,825	N/A
5	23-Nov-15	70.6	71	5,617	4,438	247,500	6,442	N/A
6	24-Nov-15	68.7	69	5,404	5,338	246,000	6,887	N/A
7	24-Nov-15	69.6	70	5,815	5,188	205,700	5,890	N/A
8	24-Nov-15	67.7	68	6,577	5,188	240,300	5,208	N/A
9	24-Nov-15	71.8	72	5,596	4,937	245,000	6,461	N/A
10	24-Nov-15	68.5	69	5,528	5,488	250,500	6,378	N/A
11	25-Nov-15	70.2	70	5,714	5,373	246,600	6,339	N/A
12	25-Nov-15	69.5	70	5,925	5,635	249,300	6,391	N/A
13	27-Nov-15	71.0	71	5,947	5,061	210,900	6,901	N/A
14	27-Nov-15	70.5	71	5,810	5,218	239,300	6,247	N/A
15	27-Nov-15	69.7	70	6,138	5,356	245,100	6,162	N/A
16	27-Nov-15	69.6	70	5,867	5,688	122,100	5,688	N/A
17	28-Nov-15	68.9	69	6,676	5,374	245,000	6,295	N/A
18	28-Nov-15	71.6	72	5,920	5,385	243,900	6,214	N/A
19	28-Nov-15	71.5	72	5,370	5,120	244,800	6,231	N/A
20	28-Nov-15	70.8	71	5,545	5,310	197,400	5,732	N/A
21	28-Nov-15	70.4	70	5,588	5,581	245,300	6,231	N/A
22	29-Nov-15	74.0	74	6,057	4,849	246,500	6,164	N/A
23	29-Nov-15	71.5	72	6,394	5,239	223,900	5,873	N/A
24	29-Nov-15	72.5	73	5,692	5,299	241,000	6,080	N/A
25	29-Nov-15	73.2	73	5,619	5,152	233,900	6,015	N/A
26	29-Nov-15	76.1	76	6,086	5,303	212,000	5,820	N/A
27	29-Nov-15	65.3	65	6,167	5,098	81,900	5,953	N/A
28	30-Nov-15	73.7	74	5,898	5,057	169,400	6,197	N/A
29	30-Nov-15	72.2	72	6,067	4,951	193,500	6,618	N/A
30	30-Nov-15	73.4	73	5,628	5,244	236,100	5,866	N/A
31	30-Nov-15	70.5	71	5,979	5,438	245,400	6,208	N/A
32	1-Dec-15	71.6	72	5,524	5,670	195,800	6,409	N/A
33	1-Dec-15	69.4	69	6,535	5,080	232,400	5,953	N/A
34	1-Dec-15	69.3	69	5,758	5,277	251,300	6,058	N/A
35	1-Dec-15	69.3	69	6,255	5,351	244,400	6,056	N/A
36	2-Dec-15	69.1	69	6,568	5,177	207,400	5,414	N/A
37	2-Dec-15	69.7	70	5,503	5,477	248,700	5,998	N/A
38	2-Dec-15	68.9	69	6,173	4,997	248,100	5,990	N/A
39	2-Dec-15	68.0	68	6,182	5,193	243,300	6,014	N/A
40	3-Dec-15	70.2	70	6,865	5,105	243,000	5,952	N/A
41	3-Dec-15	70.1	70	6,124	4,797	244,400	5,891	N/A
AVG=		69.8	70	6,032	5,206	8,889,200	252,166	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	46'	N/A	46'	N/A
Silt	0	81	0	81
Sandstone	est. 81	281	est. 81	281
siltstone (tr coal)	est. 281	401	est. 281	401
Silty Sandstone	est. 401	581	est. 401	581
Sandy siltstone	est. 581	761	est. 581	761
Limestone	est. 761	781	est. 761	781
Sandy siltstone	est. 781	861	est. 781	861
Limey Siltstone	est. 861	961	est. 861	961
Sandy shale	est. 961	1281	est. 961	1281
Sandstone	est. 1281	1401	est. 1281	1401
Sandy shale	est. 1401	1561	est. 1401	1561
Silty Sandstone (tr coal)	est. 1561	1761	est. 1561	1761
Sandstone	est. 1761	1821	est. 1761	1821
Coal	est. 1821	2001	est. 1821	2001
Limey Siltstone	est. 2001	2069	est. 2001	2069
Big Lime	2069	2190	2069	2190
Big Injun	2190	2616	2190	2616
Gantz Sand	2616	2750	2616	2750
Fifty Foot Sandstone	2750	2826	2750	2826
Gordon	2826	3167	2826	3167
Fifth Sandstone	3167	3211	3167	3211
Bayard	3211	3572	3211	3572
Warren	3572	3962	3572	3962
Speechley	3962	4201	3962	4201
Baltown	4201	4680	4201	4680
Bradford	4680	5148	4680	5149
Benson	5148	5397	5149	5397
Alexander	5397	5593	5397	5593
Elk	5593	6091	5593	6091
Rhinestreet	6091	6438	6091	6449
Sycamore	6438	6616	6449	6762
Middlesex	6616	6754	6762	7025
Burkett	6754	6782	7025	7085
Tully	6782	6836	7085	7222
Marcellus	6836	NA	7222	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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Antero
Deano Unit 1H
Doddridge County WV
Northing: 14292537.54
Easting: 1708455.40
As Drilled

WELL DETAILS: Deano Unit 1H

+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Slot
0.0	0.0	14292537.54	1708455.40	39° 21' 30.419 N	80° 45' 33.453 W	

PROJECT DETAILS: Doddridge County WV

Geodetic System:	Universal Transverse Mercator (US Survey Feet)
Datum:	NAD 1983 (NAD83 CONUS)
Ellipsoid:	Clarke 1866
Zone:	Zone 17N (84 W to 78 W)
System Datum:	Mean Sea Level



Genie Lightfoot
14:49, December 11 2014

Scientific Drilling
11220 N.W. 10th Street
Yukon, OK 73099

REFERENCE INFORMATION

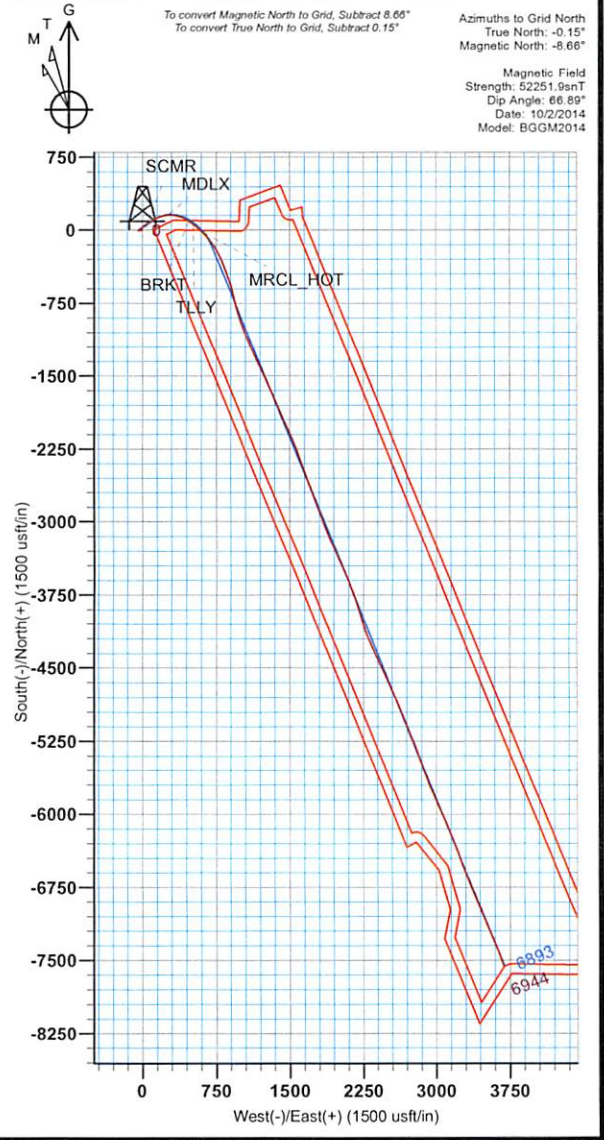
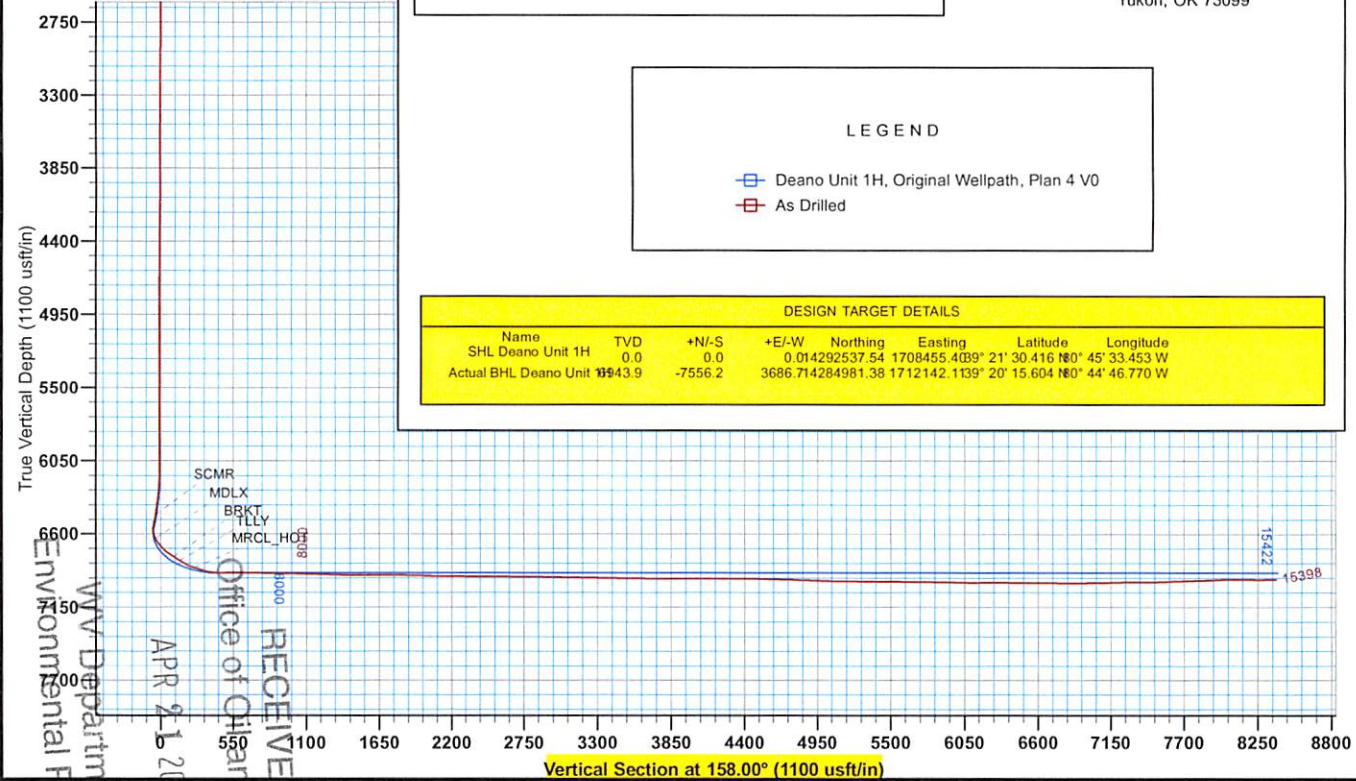
Coordinate (NE) Reference:	Well Deano Unit 1H, Grid North
Vertical (TVD) Reference:	Precision 525, OL 1135' * KB 19' @ 1154.0uath
Section (VS) Reference:	Slot - (0.2N, 0.0E)
Measured Depth Reference:	Precision 525, GL 1135' * KB 19' @ 1154.0uath
Calculation Method:	Minimum Curvature

LEGEND

- Deano Unit 1H, Original Wellpath, Plan 4 V0
- As Drilled

DESIGN TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
SHL Deano Unit 1H	0.0	0.0	0.014292537.54	1708455.40	39° 21' 30.416 N	80° 45' 33.453 W	
Actual BHL Deano Unit 1H	1543.9	-7556.2	3686.714284981.38	1712142.1139° 20'	15.604 N	80° 44' 46.770 W	



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Antero

Doddridge County WV
Melody Pad
Deano Unit 1H
Original Wellpath

Design: As Drilled

EOW Completion Report

11 December, 2014



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EOW Completion Report



Company:	Antero	Local Co-ordinate Reference:	Well Deano Unit 1H
Project:	Doddridge County WV	TVD Reference:	Precision 525: GL 1135" + KB 19' @ 1154.0usft
Site:	Melody Pad	MD Reference:	Precision 525: GL 1135" + KB 19' @ 1154.0usft
Well:	Deano Unit 1H	North Reference:	Grid
Wellbore:	Original Wellpath	Survey Calculation Method:	Minimum Curvature
Design:	As Drilled	Database:	Oklahoma District

Project	Doddridge County WV, McClellan District		
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	Melody Pad				
Site Position:		Northing:	14,292,537.54 usft	Latitude:	39° 21' 30.416 N
From:	Map	Easting:	1,708,455.40 usft	Longitude:	80° 45' 33.453 W
Position Uncertainty:	0.0 usft	Slot Radius:	13-3/16"	Grid Convergence:	0.15 °

Well	Deano Unit 1H, Marcellus					
Well Position	+N/-S	0.0 usft	Northing:	14,292,537.54 usft	Latitude:	39° 21' 30.416 N
	+E/-W	0.0 usft	Easting:	1,708,455.40 usft	Longitude:	80° 45' 33.453 W
Position Uncertainty	2.0 usft		Wellhead Elevation:	1,154.0 usft	Ground Level:	1,135.0 usft

Wellbore	Original Wellpath				
-----------------	-------------------	--	--	--	--

Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	BGGM2014	10/2/2014	-8.51	66.89	52,252

Design	As Drilled				
---------------	------------	--	--	--	--

Audit Notes:					
Version:	1.0	Phase:	ACTUAL	Tie On Depth:	0.0

Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (°)
	0.0	0.0	0.0	158.00

Survey Program	Date	From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description
	12/11/2014	106.0	5,927.0	Survey #1 Def Gyro to KOP (Original Well)	SDI Standard Keeper	Scientific Drilling Intl. Standard Wireline Keeper
		5,927.0	15,398.0	Survey #2 MWD (Original Wellpath)	SDI MWD	Scientific Drilling Intl. 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
	106.0	0.72	264.20	106.0	-0.1	-0.7	-0.2	0.68
	131.0	0.78	263.78	131.0	-0.1	-1.0	-0.3	0.24
	156.0	0.77	266.79	156.0	-0.1	-1.3	-0.4	0.17
	181.0	0.56	270.51	181.0	-0.1	-1.6	-0.5	0.86
	206.0	0.43	281.86	206.0	-0.1	-1.8	-0.6	0.66
	231.0	0.26	270.00	231.0	-0.1	-2.0	-0.6	0.73
	256.0	0.16	263.84	256.0	-0.1	-2.1	-0.7	0.41
	281.0	0.18	243.64	281.0	-0.1	-2.1	-0.7	0.25
	306.0	0.24	250.84	306.0	-0.2	-2.2	-0.7	0.26
	331.0	0.14	238.64	331.0	-0.2	-2.3	-0.7	0.43

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COMPASS 5000.1 Build 70



Company:	Antero	Local Co-ordinate Reference:	Well Deano Unit 1H
Project:	Doddridge County WV	TVD Reference:	Precision 525: GL 1135" + KB 19' @ 1154.0usft
Site:	Melody Pad	MD Reference:	Precision 525: GL 1135" + KB 19' @ 1154.0usft
Well:	Deano Unit 1H	North Reference:	Grid
Wellbore:	Original Wellpath	Survey Calculation Method:	Minimum Curvature
Design:	As Drilled	Database:	Oklahoma District

Survey								
MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	N/S (usft)	E/W (usft)	V. Sec (usft)	DLeg (°/100usft)	
356.0	0.23	228.54	356.0	-0.2	-2.4	-0.7	0.38	
381.0	0.22	216.89	381.0	-0.3	-2.4	-0.6	0.19	
406.0	0.14	213.39	406.0	-0.4	-2.5	-0.6	0.32	
431.0	0.14	202.95	431.0	-0.4	-2.5	-0.5	0.10	
456.0	0.23	210.43	456.0	-0.5	-2.5	-0.5	0.37	
481.0	0.24	212.21	481.0	-0.6	-2.6	-0.4	0.05	
506.0	0.18	217.49	506.0	-0.7	-2.6	-0.4	0.25	
531.0	0.29	216.79	531.0	-0.7	-2.7	-0.3	0.44	
556.0	0.31	224.15	556.0	-0.8	-2.8	-0.3	0.17	
581.0	0.34	223.12	581.0	-0.9	-2.9	-0.2	0.12	
606.0	0.36	223.63	606.0	-1.1	-3.0	-0.1	0.08	
631.0	0.40	227.22	631.0	-1.2	-3.1	-0.1	0.19	
656.0	0.37	233.99	656.0	-1.3	-3.2	0.0	0.22	
681.0	0.42	238.59	681.0	-1.4	-3.4	0.0	0.24	
706.0	0.42	246.61	706.0	-1.5	-3.5	0.0	0.23	
731.0	0.41	237.58	731.0	-1.5	-3.7	0.0	0.26	
756.0	0.39	249.87	756.0	-1.6	-3.9	0.1	0.35	
781.0	0.43	245.28	781.0	-1.7	-4.0	0.1	0.21	
806.0	0.41	248.85	806.0	-1.8	-4.2	0.1	0.13	
831.0	0.43	241.63	831.0	-1.8	-4.4	0.1	0.23	
856.0	0.37	246.10	856.0	-1.9	-4.5	0.1	0.27	
881.0	0.40	254.73	881.0	-2.0	-4.7	0.1	0.26	
906.0	0.25	264.61	906.0	-2.0	-4.8	0.1	0.64	
931.0	0.27	274.36	931.0	-2.0	-4.9	0.0	0.19	
956.0	0.17	298.06	956.0	-2.0	-5.0	0.0	0.53	
981.0	0.25	254.65	981.0	-2.0	-5.1	-0.1	0.69	
1,006.0	0.23	275.03	1,006.0	-2.0	-5.2	-0.1	0.35	
1,031.0	0.20	263.86	1,031.0	-2.0	-5.3	-0.1	0.21	
1,056.0	0.08	301.73	1,056.0	-2.0	-5.4	-0.2	0.58	
1,081.0	0.28	232.33	1,081.0	-2.0	-5.4	-0.2	1.05	
1,106.0	0.27	242.48	1,106.0	-2.1	-5.5	-0.1	0.20	
1,131.0	0.30	244.43	1,131.0	-2.1	-5.6	-0.1	0.13	
1,156.0	0.42	256.20	1,156.0	-2.2	-5.8	-0.1	0.56	
1,181.0	0.41	262.79	1,181.0	-2.2	-6.0	-0.2	0.19	
1,206.0	0.52	260.73	1,206.0	-2.2	-6.2	-0.2	0.44	
1,231.0	0.54	261.39	1,231.0	-2.3	-6.4	-0.3	0.08	
1,256.0	0.60	271.72	1,256.0	-2.3	-6.6	-0.4	0.48	
1,281.0	0.63	273.22	1,281.0	-2.3	-6.9	-0.5	0.14	
1,306.0	0.51	290.13	1,306.0	-2.2	-7.1	-0.6	0.82	
1,331.0	0.56	284.04	1,331.0	-2.2	-7.4	-0.8	0.30	
1,356.0	0.46	291.63	1,356.0	-2.1	-7.6	-0.9	0.48	
1,381.0	0.44	280.20	1,381.0	-2.0	-7.8	-1.0	0.37	
1,406.0	0.42	275.15	1,406.0	-2.0	-8.0	-1.1	0.17	
1,431.0	0.43	276.45	1,431.0	-2.0	-8.1	-1.2	0.06	

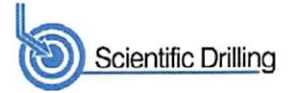


Company:	Antero	Local Co-ordinate Reference:	Well Deano Unit 1H
Project:	Doddridge County WV	TVD Reference:	Precision 525: GL 1135" + KB 19' @ 1154.0usft
Site:	Melody Pad	MD Reference:	Precision 525: GL 1135" + KB 19' @ 1154.0usft
Well:	Deano Unit 1H	North Reference:	Grid
Wellbore:	Original Wellpath	Survey Calculation Method:	Minimum Curvature
Design:	As Drilled	Database:	Oklahoma District

Survey								
MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	N/S (usft)	E/W (usft)	V. Sec (usft)	DLeg (°/100usft)	
1,456.0	0.37	257.49	1,456.0	-2.0	-8.3	-1.3	0.58	
1,481.0	0.36	260.32	1,481.0	-2.0	-8.5	-1.3	0.08	
1,506.0	0.37	246.33	1,506.0	-2.1	-8.6	-1.3	0.36	
1,531.0	0.33	243.21	1,531.0	-2.1	-8.8	-1.3	0.18	
1,556.0	0.24	242.65	1,556.0	-2.2	-8.9	-1.3	0.36	
1,581.0	0.15	226.77	1,581.0	-2.3	-8.9	-1.3	0.42	
1,606.0	0.27	226.09	1,606.0	-2.3	-9.0	-1.2	0.48	
1,631.0	0.25	218.81	1,631.0	-2.4	-9.1	-1.2	0.15	
1,656.0	0.26	220.05	1,656.0	-2.5	-9.2	-1.1	0.05	
1,681.0	0.25	208.74	1,681.0	-2.6	-9.2	-1.1	0.20	
1,706.0	0.25	212.93	1,706.0	-2.7	-9.3	-1.0	0.07	
1,731.0	0.20	217.66	1,731.0	-2.8	-9.3	-0.9	0.21	
1,756.0	0.33	232.85	1,756.0	-2.8	-9.4	-0.9	0.59	
1,781.0	0.23	220.89	1,781.0	-2.9	-9.5	-0.9	0.46	
1,806.0	0.25	232.19	1,806.0	-3.0	-9.6	-0.8	0.21	
1,831.0	0.22	246.47	1,831.0	-3.0	-9.7	-0.8	0.26	
1,856.0	0.14	262.51	1,856.0	-3.1	-9.7	-0.8	0.38	
1,881.0	0.21	289.62	1,881.0	-3.0	-9.8	-0.9	0.43	
1,906.0	0.10	236.26	1,906.0	-3.0	-9.9	-0.9	0.68	
1,931.0	0.16	292.26	1,931.0	-3.0	-9.9	-0.9	0.53	
1,956.0	0.08	267.45	1,956.0	-3.0	-10.0	-0.9	0.37	
1,981.0	0.15	263.82	1,981.0	-3.0	-10.0	-0.9	0.28	
2,006.0	0.10	252.73	2,006.0	-3.0	-10.1	-1.0	0.22	
2,031.0	0.07	326.05	2,031.0	-3.0	-10.1	-1.0	0.42	
2,056.0	0.04	8.46	2,056.0	-3.0	-10.1	-1.0	0.19	
2,081.0	0.06	327.42	2,081.0	-3.0	-10.1	-1.0	0.16	
2,106.0	0.06	299.28	2,106.0	-3.0	-10.1	-1.0	0.12	
2,131.0	0.02	219.84	2,131.0	-3.0	-10.2	-1.0	0.24	
2,156.0	0.08	215.37	2,156.0	-3.0	-10.2	-1.0	0.24	
2,181.0	0.03	173.41	2,181.0	-3.0	-10.2	-1.0	0.24	
2,206.0	0.11	220.33	2,206.0	-3.0	-10.2	-1.0	0.37	
2,231.0	0.15	217.86	2,231.0	-3.1	-10.2	-1.0	0.16	
2,256.0	0.23	251.60	2,256.0	-3.1	-10.3	-1.0	0.54	
2,281.0	0.23	254.67	2,281.0	-3.2	-10.4	-1.0	0.05	
2,306.0	0.30	274.89	2,306.0	-3.2	-10.5	-1.0	0.46	
2,331.0	0.30	287.75	2,331.0	-3.1	-10.6	-1.1	0.27	
2,356.0	0.33	280.02	2,356.0	-3.1	-10.8	-1.2	0.21	
2,381.0	0.30	312.27	2,381.0	-3.0	-10.9	-1.3	0.71	
2,406.0	0.30	299.73	2,406.0	-3.0	-11.0	-1.4	0.26	
2,431.0	0.31	295.49	2,431.0	-2.9	-11.1	-1.5	0.10	
2,456.0	0.31	303.46	2,456.0	-2.8	-11.2	-1.6	0.17	
2,481.0	0.28	284.63	2,481.0	-2.8	-11.3	-1.7	0.40	
2,506.0	0.27	267.53	2,506.0	-2.8	-11.5	-1.7	0.33	
2,531.0	0.25	276.52	2,531.0	-2.8	-11.6	-1.8	0.18	
2,556.0	0.25	287.77	2,556.0	-2.7	-11.7	-1.8	0.20	



EOW Completion Report



Company:	Antero	Local Co-ordinate Reference:	Well Deano Unit 1H
Project:	Doddridge County WV	TVD Reference:	Precision 525: GL 1135" + KB 19" @ 1154.0usft
Site:	Melody Pad	MD Reference:	Precision 525: GL 1135" + KB 19" @ 1154.0usft
Well:	Deano Unit 1H	North Reference:	Grid
Wellbore:	Original Wellpath	Survey Calculation Method:	Minimum Curvature
Design:	As Drilled	Database:	Oklahoma District

Survey

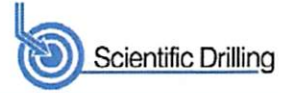
MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	N/S (usft)	E/W (usft)	V. Sec (usft)	DLeg (°/100usft)
2,581.0	0.31	275.63	2,581.0	-2.7	-11.8	-1.9	0.34
2,606.0	0.34	267.31	2,606.0	-2.7	-11.9	-1.9	0.22
2,631.0	0.24	285.41	2,631.0	-2.7	-12.1	-2.0	0.54
2,656.0	0.27	281.95	2,656.0	-2.7	-12.2	-2.1	0.13
2,681.0	0.39	266.14	2,681.0	-2.7	-12.3	-2.1	0.60
2,706.0	0.41	265.29	2,706.0	-2.7	-12.5	-2.2	0.08
2,731.0	0.47	276.17	2,731.0	-2.7	-12.7	-2.3	0.41
2,756.0	0.41	269.39	2,756.0	-2.7	-12.9	-2.3	0.32
2,781.0	0.37	272.76	2,781.0	-2.7	-13.0	-2.4	0.18
2,806.0	0.40	271.24	2,806.0	-2.7	-13.2	-2.5	0.13
2,831.0	0.48	273.15	2,831.0	-2.7	-13.4	-2.5	0.33
2,856.0	0.51	274.51	2,856.0	-2.6	-13.6	-2.6	0.13
2,881.0	0.49	268.15	2,880.9	-2.6	-13.8	-2.7	0.24
2,906.0	0.44	277.03	2,905.9	-2.6	-14.0	-2.8	0.35
2,931.0	0.53	267.02	2,930.9	-2.6	-14.2	-2.9	0.49
2,956.0	0.60	264.79	2,955.9	-2.6	-14.5	-3.0	0.29
2,981.0	0.47	275.05	2,980.9	-2.7	-14.7	-3.1	0.64
3,006.0	0.49	273.00	3,005.9	-2.6	-14.9	-3.1	0.11
3,031.0	0.39	303.19	3,030.9	-2.6	-15.1	-3.3	0.99
3,056.0	0.58	262.12	3,055.9	-2.6	-15.3	-3.4	1.54
3,081.0	0.54	276.04	3,080.9	-2.6	-15.5	-3.5	0.57
3,106.0	0.47	275.05	3,105.9	-2.5	-15.8	-3.6	0.28
3,131.0	0.47	276.87	3,130.9	-2.5	-16.0	-3.6	0.06
3,156.0	0.51	270.60	3,155.9	-2.5	-16.2	-3.7	0.27
3,181.0	0.55	271.04	3,180.9	-2.5	-16.4	-3.8	0.16
3,206.0	0.53	274.40	3,205.9	-2.5	-16.7	-3.9	0.15
3,231.0	0.62	277.92	3,230.9	-2.5	-16.9	-4.0	0.39
3,256.0	0.54	273.14	3,255.9	-2.4	-17.2	-4.2	0.37
3,281.0	0.63	270.20	3,280.9	-2.4	-17.4	-4.3	0.38
3,306.0	0.61	275.41	3,305.9	-2.4	-17.7	-4.4	0.24
3,331.0	0.58	279.04	3,330.9	-2.4	-17.9	-4.5	0.19
3,356.0	0.62	275.94	3,355.9	-2.3	-18.2	-4.6	0.21
3,381.0	0.59	277.86	3,380.9	-2.3	-18.5	-4.8	0.14
3,406.0	0.58	276.27	3,405.9	-2.3	-18.7	-4.9	0.08
3,431.0	0.58	279.96	3,430.9	-2.3	-19.0	-5.0	0.15
3,456.0	0.60	279.51	3,455.9	-2.2	-19.2	-5.2	0.08
3,481.0	0.62	279.96	3,480.9	-2.2	-19.5	-5.3	0.08
3,506.0	0.57	276.09	3,505.9	-2.1	-19.7	-5.4	0.26
3,531.0	0.60	275.07	3,530.9	-2.1	-20.0	-5.5	0.13
3,556.0	0.58	282.85	3,555.9	-2.1	-20.2	-5.7	0.33
3,581.0	0.60	276.07	3,580.9	-2.0	-20.5	-5.8	0.29
3,606.0	0.64	273.08	3,605.9	-2.0	-20.8	-5.9	0.21
3,631.0	0.61	275.39	3,630.9	-2.0	-21.0	-6.0	0.16
3,656.0	0.57	273.61	3,655.9	-2.0	-21.3	-6.2	0.18

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WV Department of
Environmental Protection
COMPASS 30001 Build

07/22/2016



Company:	Antero	Local Co-ordinate Reference:	Well Deano Unit 1H
Project:	Doddridge County WV	TVD Reference:	Precision 525: GL 1135" + KB 19' @ 1154.0usft
Site:	Melody Pad	MD Reference:	Precision 525: GL 1135" + KB 19' @ 1154.0usft
Well:	Deano Unit 1H	North Reference:	Grid
Wellbore:	Original Wellpath	Survey Calculation Method:	Minimum Curvature
Design:	As Drilled	Database:	Oklahoma District

Survey								
MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	N/S (usft)	E/W (usft)	V. Sec (usft)	DLeg (°/100usft)	
3,681.0	0.60	273.59	3,680.9	-1.9	-21.5	-6.3	0.12	
3,706.0	0.63	274.93	3,705.9	-1.9	-21.8	-6.4	0.13	
3,731.0	0.60	273.95	3,730.9	-1.9	-22.1	-6.5	0.13	
3,756.0	0.55	270.31	3,755.9	-1.9	-22.3	-6.6	0.25	
3,781.0	0.55	266.31	3,780.9	-1.9	-22.6	-6.7	0.15	
3,806.0	0.56	270.36	3,805.9	-1.9	-22.8	-6.8	0.16	
3,831.0	0.58	272.49	3,830.9	-1.9	-23.1	-6.9	0.12	
3,856.0	0.63	272.22	3,855.9	-1.9	-23.3	-7.0	0.20	
3,881.0	0.60	267.38	3,880.9	-1.9	-23.6	-7.1	0.24	
3,906.0	0.55	265.00	3,905.9	-1.9	-23.8	-7.2	0.22	
3,931.0	0.57	259.89	3,930.9	-1.9	-24.1	-7.2	0.22	
3,956.0	0.60	270.95	3,955.9	-2.0	-24.3	-7.3	0.47	
3,981.0	0.52	265.97	3,980.9	-2.0	-24.6	-7.4	0.37	
4,006.0	0.60	267.20	4,005.9	-2.0	-24.8	-7.5	0.32	
4,031.0	0.58	268.32	4,030.9	-2.0	-25.1	-7.6	0.09	
4,056.0	0.58	263.81	4,055.9	-2.0	-25.3	-7.6	0.18	
4,081.0	0.64	265.24	4,080.9	-2.0	-25.6	-7.7	0.25	
4,106.0	0.58	268.04	4,105.9	-2.0	-25.9	-7.8	0.27	
4,131.0	0.55	266.23	4,130.9	-2.1	-26.1	-7.9	0.14	
4,156.0	0.58	267.80	4,155.9	-2.1	-26.4	-8.0	0.14	
4,181.0	0.61	273.95	4,180.9	-2.1	-26.6	-8.1	0.28	
4,206.0	0.61	265.03	4,205.9	-2.1	-26.9	-8.2	0.38	
4,231.0	0.63	269.13	4,230.9	-2.1	-27.2	-8.2	0.19	
4,256.0	0.52	270.68	4,255.9	-2.1	-27.4	-8.3	0.44	
4,281.0	0.52	276.04	4,280.9	-2.1	-27.6	-8.4	0.19	
4,306.0	0.60	266.74	4,305.9	-2.1	-27.9	-8.5	0.48	
4,331.0	0.44	270.47	4,330.9	-2.1	-28.1	-8.6	0.65	
4,356.0	0.42	270.10	4,355.9	-2.1	-28.3	-8.7	0.08	
4,381.0	0.41	281.50	4,380.9	-2.1	-28.5	-8.8	0.33	
4,406.0	0.48	278.45	4,405.9	-2.0	-28.7	-8.9	0.30	
4,431.0	0.42	291.35	4,430.9	-2.0	-28.8	-9.0	0.47	
4,456.0	0.58	281.05	4,455.9	-1.9	-29.1	-9.1	0.73	
4,481.0	0.54	282.58	4,480.9	-1.9	-29.3	-9.2	0.17	
4,506.0	0.61	280.20	4,505.9	-1.8	-29.5	-9.4	0.30	
4,531.0	0.61	283.74	4,530.9	-1.8	-29.8	-9.5	0.15	
4,556.0	0.59	275.03	4,555.9	-1.7	-30.1	-9.7	0.37	
4,581.0	0.61	270.58	4,580.9	-1.7	-30.3	-9.8	0.20	
4,606.0	0.65	264.07	4,605.9	-1.7	-30.6	-9.9	0.33	
4,631.0	0.50	261.45	4,630.9	-1.7	-30.8	-9.9	0.61	
4,656.0	0.51	256.81	4,655.9	-1.8	-31.1	-10.0	0.17	
4,681.0	0.56	257.04	4,680.9	-1.8	-31.3	-10.0	0.20	
4,706.0	0.54	256.73	4,705.9	-1.9	-31.5	-10.0	0.08	
4,731.0	0.51	256.20	4,730.9	-2.0	-31.7	-10.1	0.12	
4,756.0	0.54	248.14	4,755.9	-2.0	-32.0	-10.1	0.32	



Company:	Antero	Local Co-ordinate Reference:	Well Deano Unit 1H
Project:	Doddridge County WV	TVD Reference:	Precision 525: GL 1135" + KB 19' @ 1154.0usft
Site:	Melody Pad	MD Reference:	Precision 525: GL 1135" + KB 19' @ 1154.0usft
Well:	Deano Unit 1H	North Reference:	Grid
Wellbore:	Original Wellpath	Survey Calculation Method:	Minimum Curvature
Design:	As Drilled	Database:	Oklahoma District

Survey

MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	N/S (usft)	E/W (usft)	V. Sec (usft)	DLeg (°/100usft)
4,781.0	0.49	261.16	4,780.9	-2.1	-32.2	-10.1	0.51
4,806.0	0.55	250.78	4,805.9	-2.1	-32.4	-10.2	0.45
4,831.0	0.46	253.07	4,830.9	-2.2	-32.6	-10.2	0.37
4,856.0	0.44	248.04	4,855.9	-2.3	-32.8	-10.2	0.18
4,881.0	0.44	253.30	4,880.9	-2.3	-33.0	-10.2	0.16
4,906.0	0.48	241.78	4,905.9	-2.4	-33.2	-10.2	0.40
4,931.0	0.42	250.36	4,930.9	-2.5	-33.3	-10.2	0.36
4,956.0	0.44	241.24	4,955.9	-2.6	-33.5	-10.2	0.28
4,981.0	0.34	241.28	4,980.9	-2.7	-33.7	-10.1	0.40
5,006.0	0.41	237.93	5,005.9	-2.7	-33.8	-10.1	0.29
5,031.0	0.43	239.00	5,030.9	-2.8	-34.0	-10.1	0.09
5,056.0	0.32	246.32	5,055.9	-2.9	-34.1	-10.1	0.48
5,081.0	0.32	261.95	5,080.9	-2.9	-34.2	-10.1	0.35
5,106.0	0.33	255.12	5,105.8	-3.0	-34.4	-10.1	0.16
5,131.0	0.44	242.34	5,130.8	-3.0	-34.5	-10.1	0.56
5,156.0	0.38	246.67	5,155.8	-3.1	-34.7	-10.1	0.27
5,181.0	0.37	250.81	5,180.8	-3.2	-34.8	-10.1	0.12
5,206.0	0.46	246.78	5,205.8	-3.2	-35.0	-10.1	0.38
5,231.0	0.36	254.34	5,230.8	-3.3	-35.2	-10.1	0.45
5,256.0	0.36	249.10	5,255.8	-3.3	-35.3	-10.1	0.13
5,281.0	0.37	248.67	5,280.8	-3.4	-35.5	-10.1	0.04
5,306.0	0.42	241.89	5,305.8	-3.5	-35.6	-10.1	0.27
5,331.0	0.45	240.02	5,330.8	-3.6	-35.8	-10.1	0.13
5,356.0	0.39	241.50	5,355.8	-3.7	-36.0	-10.1	0.24
5,381.0	0.35	244.44	5,380.8	-3.7	-36.1	-10.1	0.18
5,406.0	0.42	240.65	5,405.8	-3.8	-36.2	-10.0	0.30
5,431.0	0.48	240.26	5,430.8	-3.9	-36.4	-10.0	0.24
5,456.0	0.44	242.05	5,455.8	-4.0	-36.6	-10.0	0.17
5,481.0	0.44	241.09	5,480.8	-4.1	-36.8	-10.0	0.03
5,506.0	0.58	238.92	5,505.8	-4.2	-37.0	-9.9	0.57
5,531.0	0.46	238.65	5,530.8	-4.3	-37.1	-9.9	0.48
5,556.0	0.53	243.13	5,555.8	-4.4	-37.3	-9.9	0.32
5,581.0	0.59	240.97	5,580.8	-4.5	-37.6	-9.9	0.25
5,606.0	0.48	240.62	5,605.8	-4.7	-37.8	-9.8	0.44
5,631.0	0.55	239.78	5,630.8	-4.8	-37.9	-9.8	0.28
5,656.0	0.53	230.80	5,655.8	-4.9	-38.1	-9.7	0.35
5,681.0	0.61	237.69	5,680.8	-5.0	-38.3	-9.7	0.42
5,706.0	0.58	228.55	5,705.8	-5.2	-38.6	-9.6	0.40
5,731.0	0.55	240.17	5,730.8	-5.3	-38.8	-9.6	0.47
5,756.0	0.65	236.56	5,755.8	-5.5	-39.0	-9.5	0.43
5,781.0	0.49	251.05	5,780.8	-5.6	-39.2	-9.5	0.86
5,806.0	0.54	256.54	5,805.8	-5.7	-39.4	-9.5	0.28
5,831.0	0.57	263.97	5,830.8	-5.7	-39.6	-9.6	0.31
5,856.0	0.41	244.07	5,855.8	-5.8	-39.9	-9.6	0.93



EOW Completion Report



Company:	Antero	Local Co-ordinate Reference:	Well Deano Unit 1H
Project:	Doddridge County WV	TVD Reference:	Precision 525: GL 1135" + KB 19' @ 1154.0usft
Site:	Melody Pad	MD Reference:	Precision 525: GL 1135" + KB 19' @ 1154.0usft
Well:	Deano Unit 1H	North Reference:	Grid
Wellbore:	Original Wellpath	Survey Calculation Method:	Minimum Curvature
Design:	As Drilled	Database:	Oklahoma District

Survey								
MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	N/S (usft)	E/W (usft)	V. Sec (usft)	DLeg (°/100usft)	
5,881.0	0.37	247.42	5,880.8	-5.8	-40.0	-9.6	0.18	
5,906.0	0.59	234.85	5,905.8	-5.9	-40.2	-9.6	0.97	
5,927.0	0.64	241.53	5,926.8	-6.0	-40.4	-9.5	0.42	
6,014.0	0.54	246.41	6,013.8	-6.4	-41.2	-9.5	0.13	
6,103.0	0.54	240.95	6,102.8	-6.8	-41.9	-9.4	0.06	
6,148.0	2.56	50.61	6,147.8	-6.3	-41.3	-9.7	6.87	
6,193.0	7.70	52.92	6,192.6	-3.8	-38.2	-10.8	11.43	
6,237.0	12.90	47.59	6,235.9	1.3	-32.2	-13.2	12.00	
6,282.0	17.90	47.90	6,279.3	9.3	-23.3	-17.4	11.11	
6,327.0	22.60	50.40	6,321.5	19.5	-11.5	-22.4	10.62	
6,372.0	27.30	51.42	6,362.2	31.4	3.2	-27.9	10.49	
6,417.0	32.57	53.55	6,401.2	45.1	21.0	-33.9	11.95	
6,462.0	37.43	57.41	6,438.1	59.6	42.3	-39.4	11.86	
6,486.0	40.68	57.72	6,456.7	67.7	55.1	-42.2	13.58	
SCMR								
6,507.0	43.53	57.96	6,472.3	75.2	67.0	-44.7	13.58	
6,552.0	48.89	57.65	6,503.4	92.5	94.5	-50.4	11.92	
6,596.0	54.66	58.86	6,530.6	110.7	123.9	-56.2	13.29	
6,641.0	56.22	64.81	6,556.2	128.2	156.5	-60.2	11.43	
6,686.0	55.79	72.63	6,581.4	141.7	191.2	-59.7	14.44	
6,731.0	55.99	79.50	6,606.6	150.6	227.4	-54.5	12.65	
6,776.0	56.25	87.06	6,631.7	155.0	264.4	-44.7	13.96	
6,781.0	56.27	87.81	6,634.5	155.2	268.6	-43.3	12.47	
MDLX								
6,821.0	56.63	93.78	6,656.6	154.7	301.9	-30.4	12.47	
6,866.0	56.01	100.66	6,681.6	150.0	339.0	-12.1	12.79	
6,910.0	57.61	107.19	6,705.7	141.2	374.7	9.5	12.94	
6,955.0	59.71	113.42	6,729.1	127.8	410.7	35.3	12.71	
7,000.0	61.20	117.76	6,751.3	110.9	446.0	64.2	9.02	
7,044.0	61.11	123.67	6,772.6	91.2	479.1	94.9	11.76	
BRKT								
7,045.0	61.11	123.80	6,773.1	90.7	479.8	95.6	11.76	
7,090.0	61.56	129.64	6,794.7	67.2	511.5	29.3	11.48	
7,104.0	62.41	129.90	6,801.2	59.2	521.0	140.2	6.26	
TLLY								
7,135.0	64.28	130.47	6,815.1	41.4	542.1	164.7	6.26	
7,179.0	67.36	129.84	6,833.2	15.5	572.8	200.2	7.12	
7,224.0	71.18	132.76	6,849.1	-12.3	604.4	237.8	10.43	
7,241.0	71.94	134.15	6,854.5	-23.4	616.1	232.5	8.95	
MRCL_HOT								
7,269.0	73.20	136.42	6,862.9	-42.4	634.9	277.1	8.95	
7,314.0	74.99	142.44	6,875.2	-75.2	663.0	318.1	13.47	
7,359.0	80.49	143.00	6,884.8	-110.2	689.7	360.5	12.28	
7,403.0	85.74	144.23	6,890.0	-145.4	715.6	402.8	12.25	
7,448.0	90.81	147.58	6,891.4	-182.6	740.8	446.8	13.50	

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EOW Completion Report



Company:	Antero	Local Co-ordinate Reference:	Well Deano Unit 1H
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Site:	Melody Pad	MD Reference:	Precision 525: GL 1135" + KB 19' @ 1154.0usft
Well:	Deano Unit 1H	North Reference:	Grid
Wellbore:	Original Wellpath	Survey Calculation Method:	Minimum Curvature
Design:	As Drilled	Database:	Oklahoma District

Survey

MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	N/S (usft)	E/W (usft)	V. Sec (usft)	DLeg (°/100usft)
7,470.0	91.19	149.37	6,891.0	-201.3	752.3	468.5	8.32
7,515.0	89.69	154.29	6,890.7	-241.0	773.5	513.2	11.43
7,605.0	89.25	157.37	6,891.5	-323.1	810.3	603.1	3.46
7,694.0	88.81	160.44	6,893.0	-406.1	842.4	692.1	3.48
7,784.0	88.81	159.65	6,894.9	-490.7	873.1	782.0	0.88
7,874.0	89.34	163.87	6,896.3	-576.1	901.2	871.8	4.73
7,963.0	89.43	166.68	6,897.3	-662.2	923.8	960.1	3.16
8,053.0	88.37	167.39	6,899.0	-749.9	944.0	1,048.9	1.42
8,143.0	87.85	164.13	6,902.0	-837.1	966.2	1,138.0	3.67
8,233.0	87.82	161.49	6,905.4	-923.0	992.7	1,227.6	2.93
8,322.0	88.11	157.98	6,908.5	-1,006.4	1,023.5	1,316.5	3.95
8,412.0	91.54	159.47	6,908.8	-1,090.2	1,056.2	1,406.5	4.16
8,502.0	89.87	156.84	6,907.7	-1,173.8	1,089.7	1,496.5	3.46
8,591.0	89.08	154.11	6,908.5	-1,254.7	1,126.6	1,585.4	3.19
8,681.0	89.08	155.52	6,910.0	-1,336.2	1,164.9	1,675.2	1.57
8,771.0	90.04	155.96	6,910.6	-1,418.2	1,201.9	1,765.2	1.17
8,860.0	89.08	154.29	6,911.3	-1,498.9	1,239.3	1,854.0	2.16
8,950.0	89.16	156.31	6,912.7	-1,580.7	1,276.9	1,943.9	2.25
9,039.0	88.20	154.38	6,914.8	-1,661.6	1,314.0	2,032.8	2.42
9,129.0	89.69	158.07	6,916.4	-1,743.9	1,350.3	2,122.7	4.42
9,219.0	90.13	158.42	6,916.6	-1,827.5	1,383.7	2,212.7	0.62
9,312.0	89.34	156.57	6,917.0	-1,913.4	1,419.2	2,305.7	2.16
9,406.0	89.69	155.52	6,917.8	-1,999.3	1,457.4	2,399.7	1.18
9,500.0	88.99	154.64	6,918.9	-2,084.5	1,497.0	2,493.5	1.20
9,594.0	89.43	157.98	6,920.2	-2,170.6	1,534.8	2,587.5	3.58
9,687.0	89.25	160.53	6,921.2	-2,257.5	1,567.7	2,680.4	2.75
9,781.0	89.34	160.00	6,922.4	-2,346.0	1,599.4	2,774.3	0.57
9,875.0	88.64	160.09	6,924.1	-2,434.4	1,631.5	2,868.3	0.75
9,969.0	89.25	160.53	6,925.8	-2,522.8	1,663.2	2,962.2	0.80
10,063.0	88.99	159.47	6,927.2	-2,611.2	1,695.3	3,056.1	1.16
10,157.0	90.13	161.23	6,927.9	-2,699.7	1,726.9	3,150.0	2.23
10,250.0	88.29	158.60	6,929.2	-2,787.0	1,758.9	3,243.0	3.45
10,344.0	88.99	159.04	6,931.5	-2,874.6	1,792.8	3,336.9	0.88
10,433.0	89.69	160.09	6,932.5	-2,958.0	1,823.9	3,425.9	1.42
10,523.0	89.25	159.47	6,933.3	-3,042.5	1,855.0	3,515.8	0.84
10,613.0	89.43	158.40	6,934.4	-3,126.5	1,887.3	3,605.8	1.21
10,703.0	89.16	156.84	6,935.5	-3,209.7	1,921.6	3,695.8	1.76
10,792.0	89.69	154.03	6,936.4	-3,290.6	1,958.6	3,784.7	3.21
10,882.0	90.57	156.31	6,936.2	-3,372.3	1,996.4	3,874.6	2.72
10,972.0	89.69	156.22	6,935.9	-3,454.7	2,032.6	3,964.5	0.98
11,062.0	90.48	158.51	6,935.8	-3,537.7	2,067.3	4,054.5	2.69
11,151.0	90.66	158.24	6,934.9	-3,620.4	2,100.1	4,143.5	0.36
11,241.0	88.99	157.81	6,935.2	-3,703.9	2,133.7	4,233.5	1.92
11,331.0	89.16	159.39	6,936.7	-3,787.7	2,166.6	4,323.5	1.77



EOW Completion Report



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Site:	Melody Pad	MD Reference:	Precision 525: GL 1135" + KB 19' @ 1154.0usft
Well:	Deano Unit 1H	North Reference:	Grid
Wellbore:	Original Wellpath	Survey Calculation Method:	Minimum Curvature
Design:	As Drilled	Database:	Oklahoma District

Survey								
MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	N/S (usft)	E/W (usft)	V. Sec (usft)	DLeg (°/100usft)	
11,420.0	89.78	164.05	6,937.5	-3,872.2	2,194.5	4,412.3	5.28	
11,510.0	88.90	160.88	6,938.5	-3,958.0	2,221.6	4,502.0	3.66	
11,600.0	89.96	164.31	6,939.4	-4,043.8	2,248.5	4,591.7	3.99	
11,689.0	87.93	160.97	6,941.1	-4,128.7	2,275.0	4,680.4	4.39	
11,779.0	86.70	155.87	6,945.3	-4,212.3	2,308.1	4,770.2	5.82	
11,869.0	88.99	155.70	6,948.7	-4,294.3	2,345.0	4,860.1	2.55	
11,958.0	87.76	155.26	6,951.2	-4,375.3	2,381.9	4,949.0	1.47	
12,048.0	89.60	154.64	6,953.3	-4,456.8	2,420.0	5,038.8	2.16	
12,138.0	89.25	153.85	6,954.2	-4,537.8	2,459.1	5,128.6	0.96	
12,227.0	89.34	155.17	6,955.3	-4,618.2	2,497.4	5,217.4	1.49	
12,317.0	89.25	157.19	6,956.4	-4,700.5	2,533.7	5,307.4	2.25	
12,407.0	89.52	156.66	6,957.3	-4,783.3	2,569.0	5,397.4	0.66	
12,497.0	89.52	156.49	6,958.1	-4,865.9	2,604.8	5,487.3	0.19	
12,586.0	88.64	156.84	6,959.5	-4,947.6	2,640.0	5,576.3	1.06	
12,676.0	89.16	157.54	6,961.2	-5,030.5	2,674.9	5,666.3	0.97	
12,765.0	89.87	158.16	6,962.0	-5,112.9	2,708.5	5,755.3	1.06	
12,855.0	90.22	157.72	6,961.9	-5,196.4	2,742.3	5,845.3	0.62	
12,945.0	88.46	157.10	6,963.0	-5,279.4	2,776.8	5,935.2	2.07	
13,034.0	88.81	159.04	6,965.1	-5,362.0	2,810.1	6,024.2	2.21	
13,124.0	89.87	161.23	6,966.1	-5,446.6	2,840.7	6,114.1	2.70	
13,214.0	90.92	162.02	6,965.5	-5,532.0	2,869.0	6,203.9	1.46	
13,304.0	89.16	158.24	6,965.4	-5,616.6	2,899.6	6,293.9	4.63	
13,393.0	89.52	157.72	6,966.5	-5,699.1	2,933.0	6,382.9	0.71	
13,483.0	90.13	157.63	6,966.7	-5,782.4	2,967.2	6,472.9	0.69	
13,573.0	89.52	155.26	6,967.0	-5,864.9	3,003.1	6,562.8	2.72	
13,663.0	89.52	156.93	6,967.8	-5,947.2	3,039.6	6,652.8	1.86	
13,752.0	89.78	156.84	6,968.3	-6,029.0	3,074.5	6,741.7	0.31	
13,842.0	90.31	157.10	6,968.2	-6,111.8	3,109.7	6,831.7	0.66	
13,931.0	89.52	157.45	6,968.4	-6,193.9	3,144.1	6,920.7	0.97	
14,021.0	91.45	158.95	6,967.6	-6,277.5	3,177.5	7,010.7	2.72	
14,111.0	90.31	158.68	6,966.2	-6,361.4	3,210.1	7,100.7	1.30	
14,200.0	92.68	160.79	6,963.9	-6,444.8	3,240.9	7,189.6	3.56	
14,290.0	89.43	158.51	6,962.2	-6,529.2	3,272.2	7,279.5	1.41	
14,380.0	89.52	157.54	6,963.1	-6,612.7	3,305.8	7,369.5	1.08	
14,470.0	91.10	157.89	6,962.6	-6,695.9	3,340.0	7,459.5	1.80	
14,559.0	92.68	159.39	6,959.6	-6,778.8	3,372.4	7,548.5	2.45	
14,649.0	92.24	157.89	6,955.8	-6,862.5	3,405.1	7,638.4	1.74	
14,739.0	91.80	157.37	6,952.6	-6,945.7	3,439.3	7,728.3	0.76	
14,829.0	91.89	155.78	6,949.7	-7,028.2	3,475.1	7,818.2	1.77	
14,918.0	91.71	158.16	6,946.9	-7,110.1	3,509.9	7,907.2	2.68	
15,008.0	91.98	157.37	6,944.0	-7,193.3	3,543.9	7,997.1	0.93	
15,097.0	88.72	157.45	6,943.5	-7,275.5	3,578.1	8,086.1	3.66	
15,187.0	89.60	158.33	6,944.8	-7,358.9	3,612.0	8,176.1	1.38	
15,277.0	90.13	158.51	6,945.0	-7,442.6	3,645.1	8,266.1	0.62	

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Wellbore:	Original Wellpath	Survey Calculation Method:	Minimum Curvature
Design:	As Drilled	Database:	Oklahoma District

MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	N/S (usft)	E/W (usft)	V. Sec (usft)	DLeg (°/100usft)
15,339.0	90.66	160.35	6,944.6	-7,500.6	3,666.9	8,328.1	3.09
15,398.0	90.66	160.35	6,943.9	-7,556.2	3,686.7	8,387.0	0.00

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
6,486.0	6,456.7	67.7	55.1	SCMR
6,781.0	6,634.5	155.2	268.6	MDLX
7,044.0	6,772.6	91.2	479.1	BRKT
7,104.0	6,801.2	59.2	521.0	TLLY
7,241.0	6,854.5	-23.4	616.1	MRCL_HOT

Checked By: _____ Approved By: _____ Date: _____

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APR 21 2016
WV Department of
Environmental Protection

Hydraulic Fracturing Fluid Product Component Information Disclosure

Job Start Date:	11/22/2015
Job End Date:	12/3/2015
State:	West Virginia
County:	Doddridge
API Number:	47-017-06497-00-00
Operator Name:	Antero Resources Corporation
Well Name and Number:	Deano Unit 1H
Longitude:	-80.53263300
Latitude:	39.20011100
Datum:	NAD27
Federal/Tribal Well:	NO
True Vertical Depth:	6,936
Total Base Water Volume (gal):	10,360,140
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	90.65149	
Sand	C&J Well Services	Sand - Bulk - West Virginia					
			Crystalline Silica, quartz	14808-60-7	99.90000	5.03923	
			Aluminum Oxide	1344-28-1	1.10000	0.05549	
			Titanium Oxide	13463-67-7	0.10000	0.00504	
			Iron Oxide	1309-37-1	0.10000	0.00504	
Sand	C&J Well Services	Sand - Bulk - West Virginia					
			Crystalline Silica, quartz	14808-60-7	99.90000	3.13994	
			Aluminum Oxide	1344-28-1	1.10000	0.03457	
			Iron Oxide	1309-37-1	0.10000	0.00314	
			Titanium Oxide	13463-67-7	0.10000	0.00314	
Sand	C&J Well Services	Sand - Bulk - West Virginia					
			Crystalline Silica, quartz	14808-60-7	99.90000	0.88157	
			Aluminum Oxide	1344-28-1	1.10000	0.00971	
			Titanium Oxide	13463-67-7	0.10000	0.00088	
			Iron Oxide	1309-37-1	0.10000	0.00088	

last bn
0 10
10 10
10 10
10 10

GA-6A	C&J Well Services	Gelling Agents					
			Guar Gum	9000-30-0	60.00000	0.08432	
			Petroleum Distillates	64742-47-8	60.00000	0.08432	
			Surfactants	Proprietary	10.00000	0.01405	
BR-11	C&J Well Services	Gel Breakers					
			Ammonium Persulfate	7727-54-0	92.00000	0.03208	
			Cured Resin	Proprietary	13.00000	0.00453	
			Silica, Crystalline-Quartz	14808-60-7	1.00000	0.00035	
FR-16	C&J Well Services	Friction Reducer					
			Distillates (Petroleum), Hydrotreated Light	64742-47-8	45.00000	0.03143	
			Ethylene Glycol	107-21-1	5.00000	0.00349	
SV-1	C&J Well Services	Paraffin & Scale Additives					
			Alkanes, C10-24 branched and linear	848301-67-7	90.00000	0.00536	
			Dodecane	112-40-3	40.00000	0.00238	
			Tridecane	Proprietary	30.00000	0.00179	
			Tetradecane	629-59-4	30.00000	0.00179	
			Undecane	1120-21-4	30.00000	0.00179	
			Hydrocarbons	Proprietary	25.00000	0.00149	
AQUCAR DB 20	C&J Well Services	Biocides					
			Polyethylene glycol	25322-68-3	54.50000	0.00650	
			2,2-Dibromo-3-nitrilo-propionamide (DBNPA)	10222-01-2	20.00000	0.00238	
			Sodium bromide	7647-15-6	4.00000	0.00048	
			Dibromoacetonitrile	3252-43-5	3.00000	0.00036	
BR-1	C&J Well Services	Gel Breakers					
			Ammonium Persulfate	7727-54-0	100.00000	0.00156	
SI-4	C&J Well Services	Paraffin & Scale Additives					
			Bis(hexamethylene triaminepenta (methylenephosphonic acid))	Proprietary	10.00000	0.00134	
CI-3	C&J Well Services	Acid Corrosion Inhibitors					
			Ethylene Glycol	107-21-1	40.00000	0.00023	
			Dimethylformamide	68-12-2	20.00000	0.00012	
			Tar bases, quinoline derivs, benzyl chloride-quaternized	72480-70-7	15.00000	0.00009	
			2-Butoxyethanol	111-76-2	15.00000	0.00009	
			Cinnamaldehyde	104-55-2	15.00000	0.00009	
			1-DECANOL	112-30-1	5.00000	0.00003	
			Nonyphenol (branched), ethoxylated	127087-87-0	5.00000	0.00003	
			1-OCTANOL	111-87-5	2.50000	0.00002	
			Isopropyl Alcohol	67-63-0	2.50000	0.00002	
			Triethyl Phosphate	78-40-0	2.50000	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.

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Other Ingredients	C&J Well Services	Other Ingredients				
		Copolymer	Proprietary		35.00000	0.02445
		Water	7732-18-5		31.00000	0.02165
		Water	7732-18-5		96.00000	0.01289
		Organophillic Clay	Proprietary		5.00000	0.00703
		Surfactant	Proprietary		5.00000	0.00703
		Proprietary	Proprietary		12.80000	0.00446
		Water	7732-18-5		32.00000	0.00382
		Surfactant Blend	Proprietary		3.00000	0.00210
		Poly(oxy-1,2-ethanediyl), a-hydro-w-hydroxy-, mono-C10-14-alkyl esthers, phosphates	68585-36-4		3.00000	0.00210
		Alcohols, C12-18, ethoxylated propoxylated	69227-21-0		2.00000	0.00140
		Surfactant Blend	Proprietary		1.00000	0.00070
		Proprietary	Proprietary		1.00000	0.00035
		Proprietary	Proprietary		0.70000	0.00024
		Sodium Hydroxide	1310-73-2		1.00000	0.00013
		2,2-Dibromomalonamide	73003-80-2		1.00000	0.00012
		Monobromo-3-nitrilopropionamide	1113-55-9		1.00000	0.00012
		2-Propenamide as residual	79-06-1		0.10000	0.00007

* 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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Environmental Protection

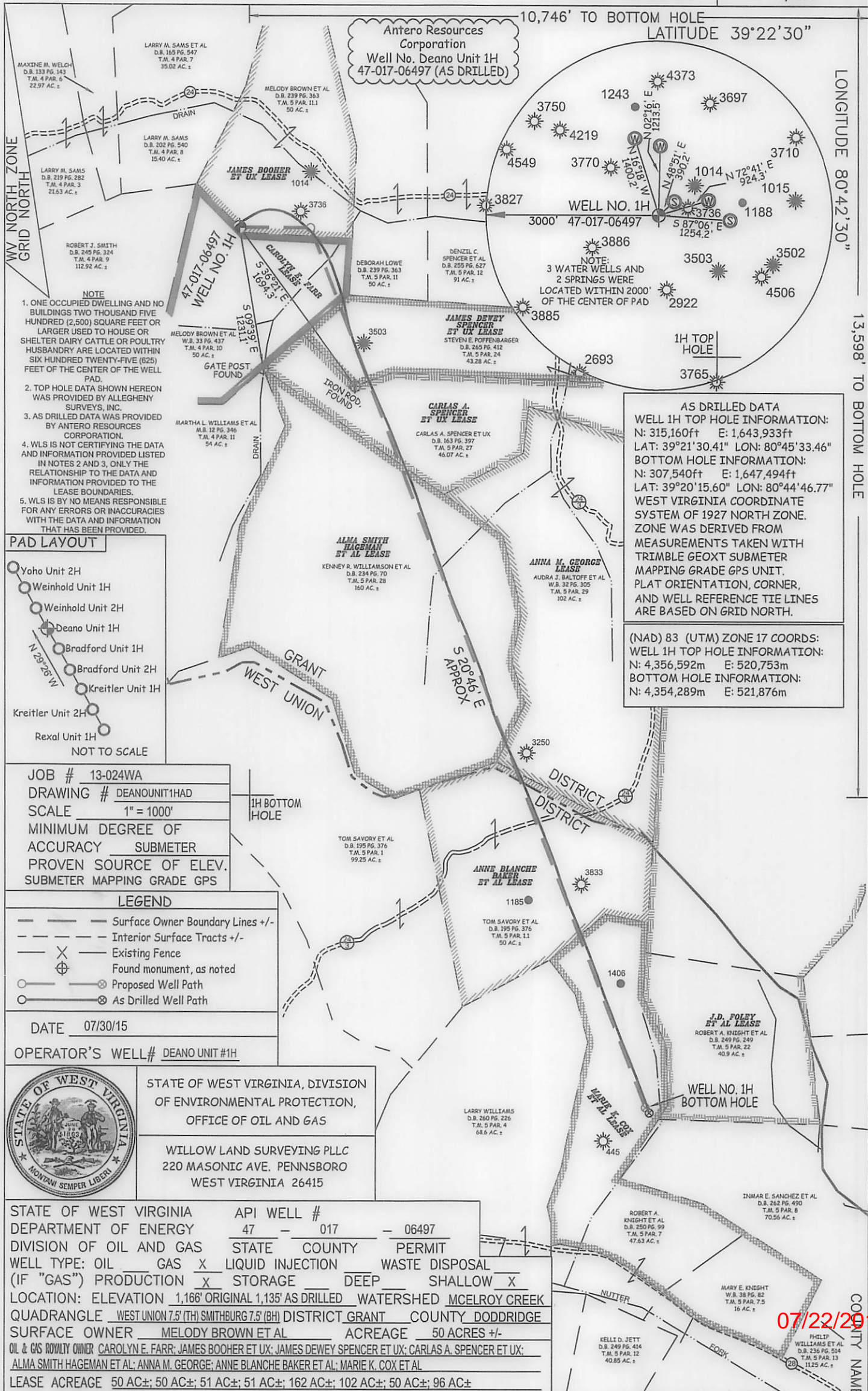
LATITUDE 39°22'30" 2,628'

10,746' TO BOTTOM HOLE
LATITUDE 39°22'30"

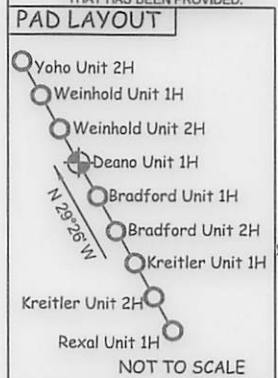
LONGITUDE 80°42'30"

13,598' TO BOTTOM HOLE

LONGITUDE 80°45'00"



- NOTE**
1. ONE OCCUPIED DWELLING AND NO 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.



AS DRILLED DATA
WELL 1H TOP HOLE INFORMATION:
 N: 315,160ft E: 1,643,933ft
 LAT: 39°21'30.41" LON: 80°45'33.46"
BOTTOM HOLE INFORMATION:
 N: 307,540ft E: 1,647,494ft
 LAT: 39°20'15.60" LON: 80°44'46.77"
 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 TIE LINES ARE BASED ON GRID NORTH.

(NAD) 83 (UTM) ZONE 17 COORDS:
WELL 1H TOP HOLE INFORMATION:
 N: 4,356,592m E: 520,753m
BOTTOM HOLE INFORMATION:
 N: 4,354,289m E: 521,876m

JOB # 13-024WA
 DRAWING # DEANOUNIT1HAD
 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 07/30/15
 OPERATOR'S WELL# DEANO 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
 WELL TYPE: OIL GAS LIQUID INJECTION WASTE DISPOSAL (IF "GAS") PRODUCTION STORAGE DEEP SHALLOW
 LOCATION: ELEVATION 1,166' ORIGINAL 1,135' AS DRILLED WATERSHED MCELROY CREEK
 QUADRANGLE WEST UNION 7.5 (TH) SMITHBURG 7.5 (BH) DISTRICT GRANT COUNTY DODDRIDGE
 SURFACE OWNER MELODY BROWN ET AL ACREAGE 50 ACRES +/-
 OIL & GAS ROYALTY OWNER CAROLYN E. FARR; JAMES BOOHER ET UX; JAMES DEWEY SPENCER ET UX; CARLAS A. SPENCER ET UX; ALMA SMITH HAGEMAN ET AL; ANNA M. GEORGE; ANNE BLANCHE BAKER ET AL; MARIE K. COX ET AL
 LEASE ACREAGE 50 AC±; 50 AC±; 51 AC±; 51 AC±; 162 AC±; 102 AC±; 50 AC±; 96 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 6,943' TVD 15,398' 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

07/22/2016

COUNTY NAME PERMIT

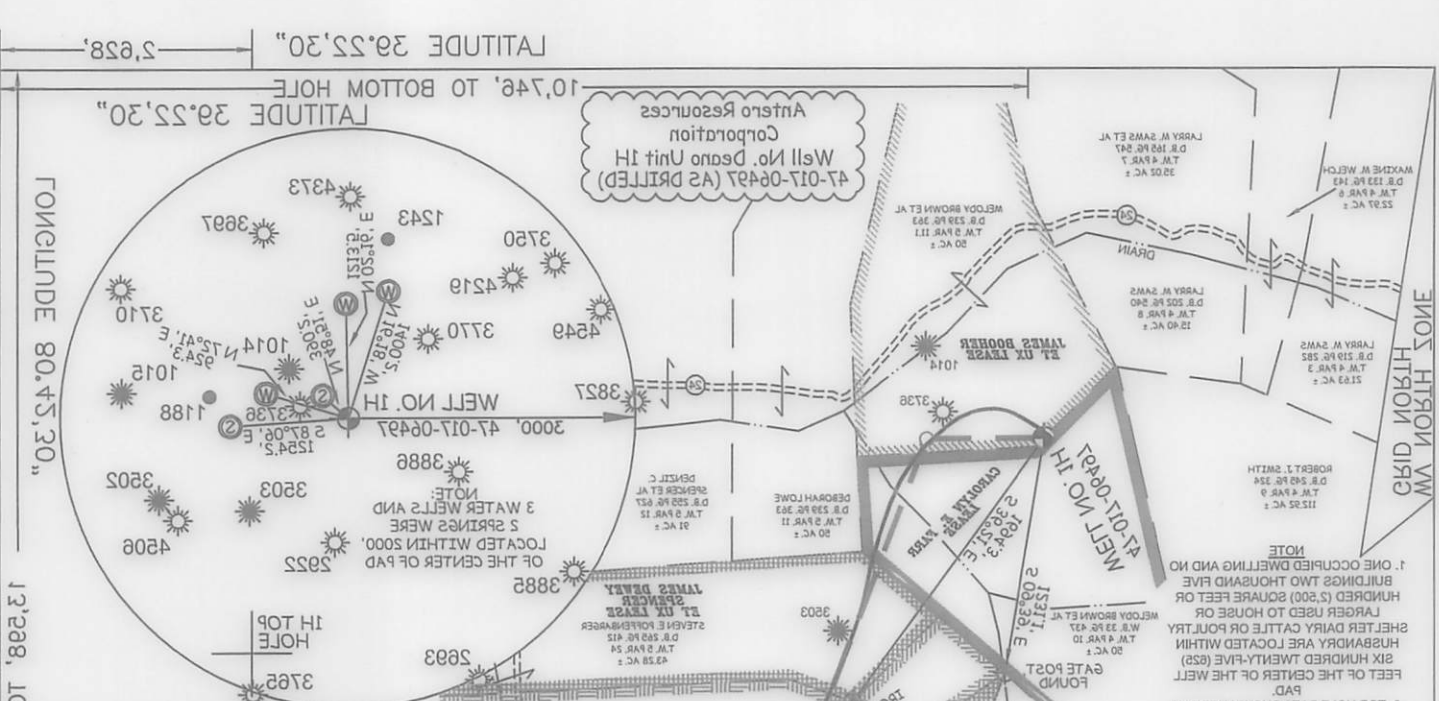
FORM WW-6 DENVER, CO 80202
 WELL OPERATOR ANTERO RESOURCES CORP.
 TARGET FORMATION MARCELLUS
 (SPECIFY) (X) AS DRILLED
 PLUG OFF OLD FORMATION PERFORATE NEW FORMATION OTHER PHYSICAL CHANGE IN WELL
 PROPOSED WORK: DRILL CONVERT DRILL DEEPER REDRILL FRACTURE OR STIMULATE
 LEASE ACREAGE 50 AC±; 50 AC±; 51 AC±; 51 AC±; 51 AC±; 102 AC±; 50 AC±; 98 AC±
 SURFACE OWNER MELODY BROWN ET AL ACREAGE 50 ACRES ±
 LOCATION: ELEVATION 1,188 ORIGINAL 1,132 AS DRILLED
 (IF "GAS") PRODUCTION STORAGE DEEP SHALLOW X
 WELL TYPE: OIL GAS X LIQUID INJECTION WASTE DISPOSAL
 DIVISION OF OIL AND GAS STATE COUNTY PERMIT
 DEPARTMENT OF ENERGY 47 - 017 - 08497
 STATE OF WEST VIRGINIA
 API WELL #

ADDRESS 1615 WYNKOP STREET
 DESIGNATED AGENT CT CORPORATION SYSTEM-DIANNA STAMPER
 ESTIMATED DEPTH 6,943 TVD 15,398 MD
 PLUG & ABANDON CLEAN OUT & REPLUG
 PERMIT
 COUNTY NAME
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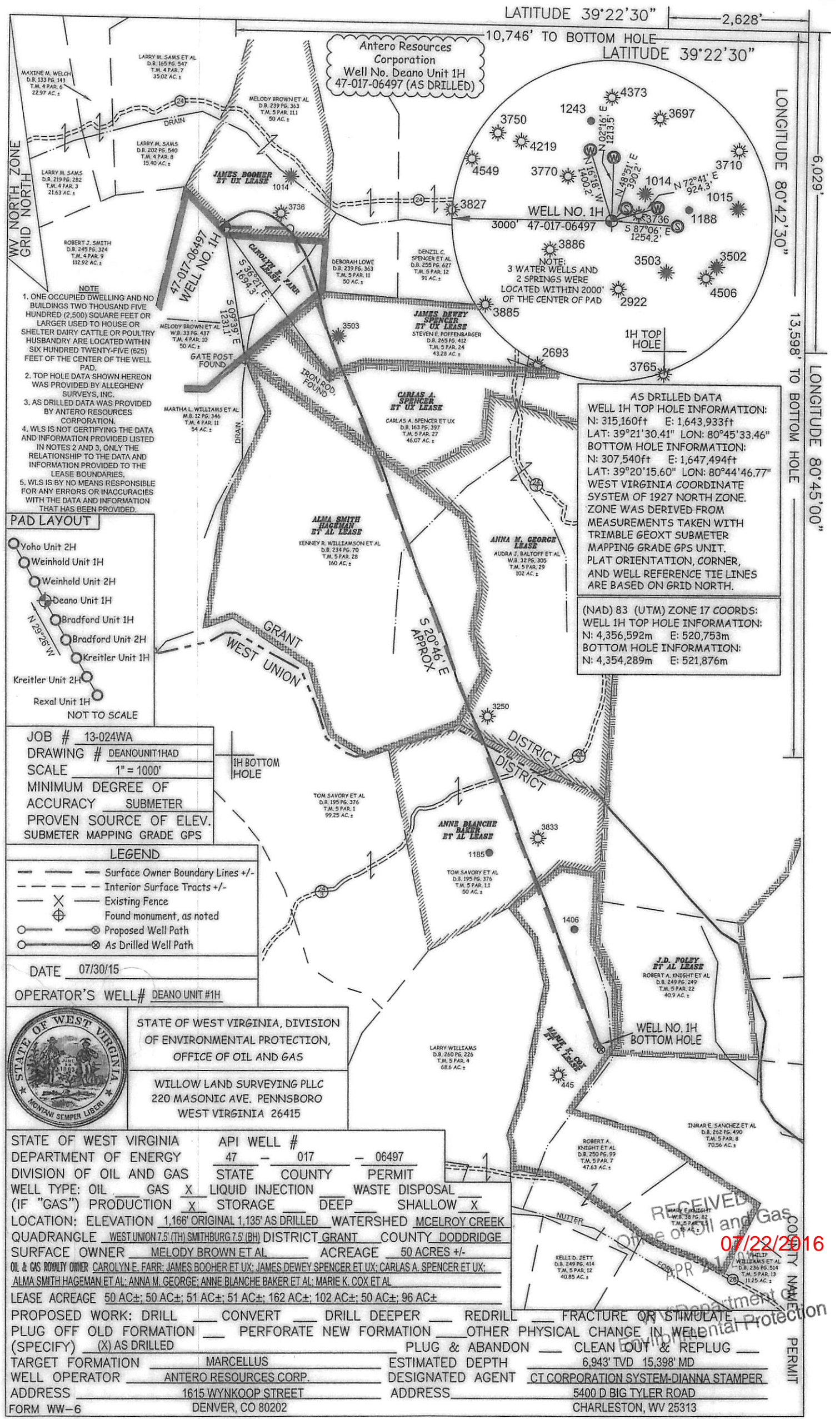
WEST VIRGINIA 26415
 520 MASONIC AVE. PENNSBORO
 WILLLOW LAND SURVEYING PLLC
 OFFICE OF OIL AND GAS
 OF ENVIRONMENTAL PROTECTION,
 STATE OF WEST VIRGINIA, DIVISION
 OPERATOR'S WELL # DEANO UNIT #1H
 DATE 07/20/16
 LEGEND
 PROVEN SOURCE OF ELEV. ACCURACY SUBMETER
 MINIMUM DEGREE OF SCALE 1" = 100'
 DRAWING # DEANUNIT1HAD
 JOB # 13-024WA
 SUBMETER MAPPING GRADE GPS

NOT TO SCALE
 Rexal Unit 1H
 Kretzler Unit 1H
 Kretzler Unit 2H
 Bradford Unit 1H
 Bradford Unit 2H
 Weirhold Unit 1H
 Weirhold Unit 2H
 YoHo Unit 1H
 PAD LAYOUT
 THAT HAS BEEN PROVIDED.
 WITH THE DATA AND INFORMATION
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 INFORMATION PROVIDED TO THE
 RELATIONSHIPS TO THE DATA AND
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 3. AS DRILLED DATA WAS PROVIDED
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 1. ONE OCCUPIED DWELLING AND NO
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 FEET OF THE CENTER OF THE WELL.
 NOTE

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 L.A.T: 39°20'15.60" L.O.N: 80°44'46.77"
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 MAPPING GRADE GPS UNIT.
 P.L.A. ORIENTATION CORNER,
 AND WELL REFERENCE THE LINES
 ARE BASED ON GRID NORTH.
 (NAD 83) (UTM) ZONE 17 COORDS:
 WELL 1H TOP HOLE INFORMATION:
 N: 4,356,525m E: 520,783m
 BOTTOM HOLE INFORMATION:
 N: 4,354,589m E: 521,876m



LONGITUDE 80.45.30" LONGITUDE 80.42.00"
 LATITUDE 39.25.30" LATITUDE 39.25.30"
 10,746' TO BOTTOM HOLE
 13,298' TO BOTTOM HOLE
 0'1052'



JOB # 13-024WA
DRAWING # DEANOUNT1HAD
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 07/30/15
OPERATOR'S WELL# DEANO UNIT #1H



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

STATE OF WEST VIRGINIA DEPARTMENT OF ENERGY DIVISION OF OIL AND GAS
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LEASE ACREAGE 50 AC±; 50 AC±; 51 AC±; 51 AC±; 162 AC±; 102 AC±; 50 AC±; 96 AC±

API WELL # 47 - 017 - 06497
STATE COUNTY PERMIT
PROPOSED WORK: DRILL CONVERT DRILL DEEPER REDRILL FRACTURE OR STIMULATE
PLUG OFF OLD FORMATION PERFORATE NEW FORMATION OTHER PHYSICAL CHANGE IN WELLBORE
(SPECIFY) (X) AS DRILLED PLUG & ABANDON CLEAN OUT & REPLUG
TARGET FORMATION MARCELLUS ESTIMATED DEPTH 6,943' TVD 15,398' 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

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Office of Oil and Gas
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COUNTY NAME PERMIT