

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

API 47-017-06821 County Doddridge District West Union  
Quad West Union 7.5' Pad Name Middle Pad Field/Pool Name -----  
Farm name William Randall Lynch & Dixie Craig Well Number Goldsmith Unit 2H  
Operator (as registered with the OOG) Antero Resources Corporation  
Address 1615 Wynkoop Street City Denver State CO Zip 80202

As Drilled location NAD 83/UTM Attach an as-drilled plat, profile view, and deviation survey  
Top hole Northing 4352587.571m Easting 516693.493m  
Landing Point of Curve Northing 4352720.64m Easting 516772.33m  
Bottom Hole Northing 4355174.692m Easting 515708.939m

Elevation (ft) 843' 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 6/19/2017 Date drilling commenced 9/29/2017 Date drilling ceased 3/17/2018  
Date completion activities began 6/5/2018 Date completion activities ceased 10/1/2018  
Verbal plugging (Y/N) N/A Date permission granted N/A Granted by N/A

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

Freshwater depth(s) ft None Identified 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

Reviewed by: \_\_\_\_\_

**Reviewed**  
*Julian 2/27/19*

API 47-017 - 06821 Farm name William Randall Lynch & Dixie Craig Well number Goldsmith Unit 2H

CASING STRINGS	Hole Size	Casing Size	Depth	New or Used	Grade wt/ft	Basket Depth(s)	Did cement circulate (Y/ N) * Provide details below*
Conductor	24"	20"	112'	New	94#, H-40	N/A	Y
Surface	17-1/2"	13-3/8"	548'	New	54#, J-55	N/A	Y
Coal							
Intermediate 1	12-1/4"	9-5/8"	2620'	New	36#, J-55	N/A	Y
Intermediate 2							
Intermediate 3							
Production	8-3/4"/8-1/2"	5-1/2"	15769'	New	23#, HCP-110	N/A	Y
Tubing		2-3/8"	6569'		4.7#, P-110		
Packer type and depth set		N/A					

Comment Details \_\_\_\_\_

CEMENT DATA	Class/Type of Cement	Number of Sacks	Slurry wt (ppg)	Yield (ft <sup>3</sup> /sks)	Volume (ft <sup>3</sup> )	Cement Top (MD)	WOC (hrs)
Conductor	Class A	204 sx	15.6	1.18	241	0'	8 Hrs.
Surface	Class A	445 sx	15.6	1.21	538	0'	8 Hrs.
Coal							
Intermediate 1	Class A	870 sx	15.6	1.22	1061	0'	8 Hrs.
Intermediate 2							
Intermediate 3							
Production	Class H	683 sx (Lead) 1470 sx (Tail)	13.5(Lead), 15.2 (Tail)	1.45 (Lead), 1.83 (Tail)	3671	-500' into Intermediate Casing	8 Hrs.
Tubing							

Drillers TD (ft) 15769' MD, 6419' TVD (BHL), 6434' (Deepest Point Drilled) Loggers TD (ft) 15769' MD

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

Plug back procedure N/A

Kick off depth (ft) 5800'

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 N/A

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API 47-017 - 06821 Farm name William Randall Lynch & Dixie Craig Well number Goldsmith Unit 2H

**PERFORATION RECORD**

Stage No.	Perforation date	Perforated from MD ft.	Perforated to MD ft.	Number of Perforations	Formation(s)
<b>*PLEASE SEE ATTACHED EXHIBIT 1</b>					

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)
<b>*PLEASE SEE ATTACHED EXHIBIT 2</b>								

Please insert additional pages as applicable.

API 47- 017 - 06821 Farm name William Randall Lynch & Dixie Craig Well number Goldsmith Unit 2H

PRODUCING FORMATION(S)	DEPTHS	
Marcellus	6355' (TOP) TVD	6635' (TOP) MD

Please insert additional pages as applicable.

GAS TEST  Build up  Drawdown  Open Flow OIL TEST  Flow  Pump

SHUT-IN PRESSURE Surface 3600 psi Bottom Hole --- psi DURATION OF TEST --- hrs

OPEN FLOW Gas 13613.45 mcfpd Oil 139.21 bpd NGL --- bpd Water 662.17 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 <sub>2</sub> S, ETC)
	DEPTH IN FT NAME TVD	DEPTH IN FT TVD	DEPTH IN FT MD	DEPTH IN FT MD	

**\*PLEASE SEE ATTACHED EXHIBIT 3**


Please insert additional pages as applicable.

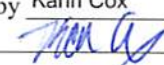
Drilling Contractor Frontier Drilling LLC  
Address 562 Spring Run Road City Pennsboro State WV Zip 26415

Logging Company Nine Energy Service  
Address 125 Museum Rd City Washington State PA Zip 15301

Cementing Company C&J Energy Services  
Address 1650 Hackers Creek City Lane Jew State WV Zip 26378

Stimulating Company Haliburton  
Address 121 Champion Way City Canonsburg State PA Zip 15317

Please insert additional pages as applicable.

Completed by Karin Cox Telephone 303-357-6820  
Signature  Title Permitting Agent Date 2/25/2019

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

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API 47-017-06821 Farm Name William Randall Lynch & Dixie Craig Well Number Goldsmith Unit 2H

**EXHIBIT 1**

Stage No.	Perforation Date	Perforated from MD ft.	Perforated to MD ft.	Number of Perforations	Formations
1	6/5/2018	15566.6	15666.1	60	Marcellus
2	7/16/2018	15369.278	15535.713	60	Marcellus
3	7/16/2018	15171.956	15338.391	60	Marcellus
4	7/17/2018	14974.634	15141.069	60	Marcellus
5	7/17/2018	14777.312	14943.747	60	Marcellus
6	7/18/2018	14579.99	14746.425	60	Marcellus
7	7/18/2018	14382.668	14549.103	60	Marcellus
8	7/19/2018	14185.346	14351.781	60	Marcellus
9	7/20/2018	13988.024	14154.459	60	Marcellus
10	7/20/2018	13790.702	13957.137	60	Marcellus
11	7/21/2018	13593.38	13759.815	60	Marcellus
12	7/21/2018	13396.058	13562.493	60	Marcellus
13	7/23/2018	13198.736	13365.171	60	Marcellus
14	7/23/2018	13001.414	13167.849	60	Marcellus
15	7/24/2018	12804.092	12970.527	60	Marcellus
16	7/24/2018	12606.77	12773.205	60	Marcellus
17	7/24/2018	12409.448	12575.883	60	Marcellus
18	7/25/2018	12212.126	12378.561	60	Marcellus
19	7/25/2018	12014.804	12181.239	60	Marcellus
20	7/26/2018	11817.482	11983.917	60	Marcellus
21	7/26/2018	11620.16	11786.595	60	Marcellus
22	7/26/2018	11422.838	11589.273	60	Marcellus
23	7/27/2018	11225.516	11391.951	60	Marcellus
24	7/28/2018	11028.194	11194.629	60	Marcellus
25	7/28/2018	10830.872	10997.307	60	Marcellus
26	7/28/2018	10633.55	10799.985	60	Marcellus
27	7/29/2018	10436.228	10602.663	60	Marcellus
28	7/29/2018	10238.906	10405.341	60	Marcellus
29	7/30/2018	10041.584	10208.019	60	Marcellus
30	7/30/2018	9844.262	10010.697	60	Marcellus
31	7/30/2018	9646.94	9813.375	60	Marcellus
32	7/31/2018	9449.618	9616.053	60	Marcellus
33	8/1/2018	9252.296	9418.731	60	Marcellus
34	8/2/2018	9054.974	9221.409	60	Marcellus
35	8/2/2018	8857.652	9024.087	60	Marcellus
36	8/3/2018	8660.33	8826.765	60	Marcellus
37	8/3/2018	8463.008	8629.443	60	Marcellus
38	8/3/2018	8265.686	8432.121	60	Marcellus
39	8/4/2018	8068.364	8234.799	60	Marcellus
40	8/4/2018	7871.042	8037.477	60	Marcellus
41	8/5/2018	7673.72	7840.155	60	Marcellus
42	8/5/2018	7476.398	7642.833	60	Marcellus
43	8/6/2018	7279.076	7445.511	60	Marcellus
44	8/6/2018	7081.754	7248.189	60	Marcellus
45	8/6/2018	6884.432	7050.867	60	Marcellus
46	8/7/2018	6687.11	6853.545	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	6/5/2018	74.54	7401	5341	4236	267130	6399.452	N/A
2	7/16/2018	75.39	6998	5400	3829	407860	8633.119	N/A
3	7/16/2018	74.86	7299	5167	3580	410000	8289.595	N/A
4	7/17/2018	75.2	7144	5102	3698	412080	8683.81	N/A
5	7/17/2018	77.56	7739	5436	3960	419500	8430.81	N/A
6	7/18/2018	77.8	7366	6112	3714	405940	8215.976	N/A
7	7/18/2018	73.73	7231	5551	5179	410060	8410.643	N/A
8	7/19/2018	76.8	7262	5114	4659	406280	8226	N/A
9	7/20/2018	72.04	7739	5933	4435	416460	8508.857	N/A
10	7/20/2018	73.3	7351	5315	6915	409880	8555.571	N/A
11	7/21/2018	72.04	7092	5625	3621	407700	8133.643	N/A
12	7/21/2018	70.3	7044	5628	4937	409200	8152.714	N/A
13	7/23/2018	69.34	6801	5477	4849	422620	8256.929	N/A
14	7/23/2018	68.6	6577	4608	4911	405400	8375.357	N/A
15	7/24/2018	73.2	6906	6642	3980	403180	8165.81	N/A
16	7/24/2018	77.2	7264	5750	3744	407960	9281.524	N/A
17	7/24/2018	74	6792	2578	5195	406620	8312.833	N/A
18	7/25/2018	74.1	6754	5200	4804	401720	8266.667	N/A
19	7/25/2018	71.08	6571	5314	4841	401800	8104.452	N/A
20	7/26/2018	72.46	7219	4928	4362	403400	8214.5	N/A
21	7/26/2018	69	7360	5999	5055	401200	8421.881	N/A
22	7/26/2018	68.12	7311	6018	3741	399420	8070.762	N/A
23	7/27/2018	66	7353	5860	4120	406840	8575.833	N/A
24	7/28/2018	70.19	7270	5456	4608	411300	8432.238	N/A
25	7/28/2018	68.7	7261	5672	3513	406240	8526.476	N/A
26	7/28/2018	72.87	6731	5408	4976	412980	8129.5	N/A
27	7/29/2018	70.33	6348	5447	4648	408280	8106.357	N/A
28	7/29/2018	72	6585	5649	4989	406280	8090.214	N/A
29	7/30/2018	72.15	6698	5864	4295	404620	8090.333	N/A
30	7/30/2018	78.8	7010	5948	5057	409340	8188.69	N/A
31	7/30/2018	77.8	6892	5833	5138	402000	8061.786	N/A
32	7/31/2018	77.59	7186	5876	4516	405740	7874.833	N/A
33	8/1/2018	72.6	7307	5834	3959	408360	9514.524	N/A
34	8/2/2018	69.5	7736	5685	5421	360220	10083.67	N/A
35	8/2/2018	71.51	7347	5582	4560	403400	9427.476	N/A
36	8/3/2018	69.64	7002	5804	3887	398220	8021.429	N/A
37	8/3/2018	67.08	7697	6363	4210	403620	9526.786	N/A
38	8/3/2018	74.92	7020	5774	5173	403880	8031.048	N/A
39	8/4/2018	75.02	6044	6044	5113	397820	7833.786	N/A
40	8/4/2018	69.14	7351	5948	3881	404420	11747.4	N/A
41	8/5/2018	74.37	7328	5656	3743	406500	8487.357	N/A
42	8/5/2018	75.51	6764	5875	4945	408960	8440.048	N/A
43	8/6/2018	74.66	6758	5821	4616	408160	8142.095	N/A
44	8/6/2018	71.89	6371	5854	3690	404820	8094.905	N/A
45	8/6/2018	76.98	6602	5755	6182	409740	8250.595	N/A
46	8/7/2018	76.29	6989	5764	4402	399360	8045.238	N/A
	AVG=	73	7,062	5,587	4,519	18,526,510	387,834	Gas 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
Sandstone	0	177	0	177
Sandstone tr coal	177	217	177	217
Sandy shale	217	232	217	232
Calcareous Shale	232	319	232	319
Sandstone	319	373	319	373
Calcareous Shale	373	1,065	373	1,065
Silty Sandstone	1,065	1,137	1,065	1,137
Silty shale	1,137	1,287	1,137	1,287
Sandy Shale	1,287	1,357	1,287	1,357
Shale	1,357	1,639	1,357	1,639
Big Lime	1,639	2,188	1,639	2,188
Fifty Foot Sandstone	2,188	2,440	2,188	2,440
Gordon	2,440	2,633	2,440	2,633
Fifth Sandstone	2,633	2,694	2,633	2,695
Bayard	2,694	3,482	2,695	3,493
Speechley	3,482	3,795	3,493	3,813
Balltown	3,795	4,276	3,813	4,306
Bradford	4,276	4,715	4,306	4,755
Benson	4,715	4,923	4,755	5,007
Alexander	4,923	5,977	5,007	6,049
Sycamore	5,977	6,156	6,049	6,262
Middlesex	6,156	6,285	6,262	6,458
Burkett	6,285	6,315	6,458	6,519
Tully	6,315	6,355	6,519	6,635
Marcellus	6,355	NA	6,635	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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# ANTERO RESOURCES CORPORATION

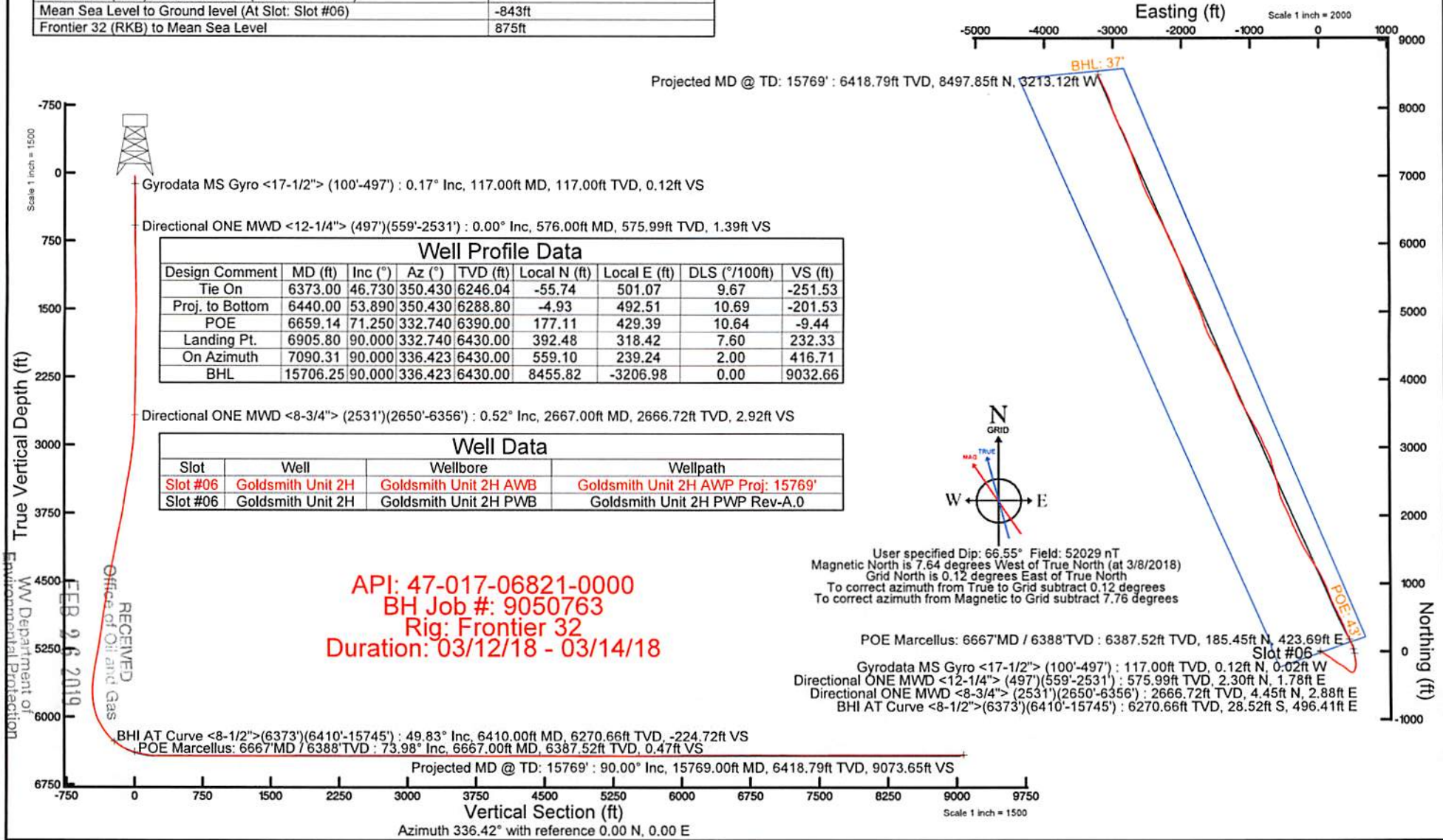
Location: Doddridge Co., WV  
 Field: Doddridge  
 Facility: Middle Pad

Slot: Slot #06  
 Well: Goldsmith Unit 2H  
 Wellbore: Goldsmith Unit 2H PWB



Location Information						
Facility Name		Grid East (US ft)	Grid North (US ft)	Latitude	Longitude	
Middle Pad		1695090.990	14279417.689	39°19'21.010"N	80°48'24.020"W	
Slot	Local N (ft)	Local E (ft)	Grid East (US ft)	Grid North (US ft)	Latitude	Longitude
Slot #06	-18.11	47.19	1695138.163	14279399.585	39°19'20.830"N	80°48'23.420"W
Comment: Goldsmith Unit 2H						
Frontier 32 (RKB) to Ground level (At Slot: Slot #06)				32ft		
Mean Sea Level to Ground level (At Slot: Slot #06)				-843ft		
Frontier 32 (RKB) to Mean Sea Level				875ft		

Plot reference wellpath is Goldsmith Unit 2H PWP Rev-A.0	Grid System: NAD27 / UTM Zone 17 North, US feet
True vertical depths are referenced to Frontier 32 (RKB)	North Reference: Grid north
Measured depths are referenced to Frontier 32 (RKB)	Scale: True distance
Frontier 32 (RKB) to Mean Sea Level: 875 feet	Depths are in feet
Mean Sea Level to Ground level (At Slot: Slot #06): -843 feet	Created by: mccecrib on 2018-05-15
Coordinates are in feet referenced to Slot	Database: WA_MPL_EASTERNUS_Defn







## Actual Wellpath Report

Goldsmith Unit 2H AWP Proj: 15769'

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REFERENCE WELLPATH IDENTIFICATION			
Operator	ANTERO RESOURCES CORPORATION	Slot	Slot #06
Area	Doddridge Co., WV	Well	Goldsmith Unit 2H
Field	Doddridge	Wellbore	Goldsmith Unit 2H AWB
Facility	Middle Pad		

REPORT SETUP INFORMATION			
Projection System	NAD27 / UTM Zone 17 North, US feet	Software System	WellArchitect® 5.1
North Reference	Grid	User	Mccrerib
Scale	0.999603	Report Generated	5/15/2018 at 8:44:03 AM
Convergence at slot	0.12° East	Database/Source file	WA_MPL_EASTERNUS_Defn/Goldsmith_Unit_2H_AWP_Proj_15769_.xml

WELLPATH LOCATION						
	Local coordinates		Grid coordinates		Geographic coordinates	
	North[ft]	East[ft]	Easting[US ft]	Northing[US ft]	Latitude	Longitude
Slot Location	-18.11	47.19	1695138.16	14279399.59	39°19'20.830"N	80°48'23.420"W
Facility Reference Pt			1695090.99	14279417.69	39°19'21.010"N	80°48'24.020"W
Field Reference Pt			0.00	0.00	0°00'00.000"	85°29'19.301"W

WELLPATH DATUM			
Calculation method	Minimum curvature	Frontier 32 (RKB) to Facility Vertical Datum	875.00ft
Horizontal Reference Pt	Slot	Frontier 32 (RKB) to Mean Sea Level	875.00ft
Vertical Reference Pt	Frontier 32 (RKB)	Frontier 32 (RKB) to Ground Level at Slot (Slot #06)	32.00ft
MD Reference Pt	Frontier 32 (RKB)	Section Origin	N 0.00, E 0.00 ft
Field Vertical Reference	Mean Sea Level	Section Azimuth	336.42°

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# Actual Wellpath Report

Goldsmith Unit 2H AWP Proj: 15769'

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REFERENCE WELLPATH IDENTIFICATION				
Operator	ANTERO RESOURCES CORPORATION		Slot	Slot #06
Area	Doddridge Co., WV		Well	Goldsmith Unit 2H
Field	Doddridge		Wellbore	Goldsmith Unit 2H AWB
Facility	Middle Pad			

WELLPATH DATA (194 stations) † = interpolated/extrapolated station																
MD (ft)	Inclination (°)	Azimuth (°)	TVD (ft)	Vert Sect (ft)	North (ft)	East (ft)	Grid East (US ft)	Grid North (US ft)	Latitude	Longitude	Closure Dist (ft)	Closure Dir (°)	DLS (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	Comments
0.00	0.00	349.460	0.00	0.00	0.00	0.00	1695138.16	14279399.59	39°19'20.830"N	80°48'23.420"W	0.00	0.000	0.00	0.00	0.00	
32.00	0.00	349.460	32.00	0.00	0.00	0.00	1695138.16	14279399.59	39°19'20.830"N	80°48'23.420"W	0.00	0.000	0.00	0.00	0.00	
117.00	0.17	349.460	117.00	0.12	0.12	-0.02	1695138.14	14279399.71	39°19'20.831"N	80°48'23.420"W	0.13	349.460	0.20	0.20	-12.40	Gyrodata MS Gyro <17-1/2"> (100'-497')
217.00	0.53	18.550	217.00	0.61	0.71	0.10	1695138.26	14279400.29	39°19'20.837"N	80°48'23.419"W	0.71	7.793	0.39	0.36	29.09	
317.00	0.64	41.270	316.99	1.19	1.57	0.61	1695138.78	14279401.15	39°19'20.845"N	80°48'23.412"W	1.68	21.354	0.25	0.11	22.72	
417.00	0.35	59.550	416.99	1.46	2.14	1.24	1695139.41	14279401.73	39°19'20.851"N	80°48'23.404"W	2.48	30.160	0.33	-0.29	18.28	
514.00	0.20	89.080	513.99	1.43	2.29	1.67	1695139.83	14279401.88	39°19'20.853"N	80°48'23.399"W	2.84	36.035	0.21	-0.15	30.44	
576.00	0.00	0.000	575.99	1.39	2.30	1.78	1695139.94	14279401.88	39°19'20.853"N	80°48'23.397"W	2.90	37.742	0.32	-0.32	-143.68	Directional ONE MWD <12-1/4"> (497')(559'-2531')
666.00	0.34	300.990	665.99	1.61	2.43	1.55	1695139.71	14279402.02	39°19'20.854"N	80°48'23.400"W	2.88	32.466	0.38	0.38	-65.57	
756.00	0.66	303.610	755.98	2.26	2.86	0.89	1695139.05	14279402.44	39°19'20.858"N	80°48'23.409"W	2.99	17.253	0.36	0.36	2.91	
847.00	0.88	295.570	846.98	3.23	3.45	-0.18	1695137.98	14279403.03	39°19'20.864"N	80°48'23.422"W	3.45	357.023	0.27	0.24	-8.84	
937.00	0.92	298.240	936.96	4.32	4.09	-1.44	1695136.72	14279403.67	39°19'20.870"N	80°48'23.438"W	4.34	340.610	0.06	0.04	2.97	
1025.00	1.03	298.480	1024.95	5.50	4.80	-2.76	1695135.41	14279404.38	39°19'20.878"N	80°48'23.455"W	5.54	330.134	0.13	0.12	0.27	
1113.00	1.36	298.680	1112.93	6.95	5.68	-4.37	1695133.80	14279405.26	39°19'20.886"N	80°48'23.475"W	7.16	322.434	0.38	0.38	0.23	
1201.00	1.52	304.370	1200.90	8.77	6.84	-6.25	1695131.92	14279406.42	39°19'20.898"N	80°48'23.499"W	9.26	317.588	0.24	0.18	6.47	
1289.00	1.38	299.510	1288.88	10.60	8.02	-8.13	1695130.03	14279407.60	39°19'20.909"N	80°48'23.523"W	11.42	314.598	0.21	-0.16	-5.52	
1377.00	0.88	306.070	1376.86	12.03	8.94	-9.60	1695128.56	14279408.52	39°19'20.919"N	80°48'23.542"W	13.12	312.956	0.59	-0.57	7.45	
1465.00	0.71	313.070	1464.85	13.12	9.71	-10.55	1695127.62	14279409.29	39°19'20.926"N	80°48'23.554"W	14.34	312.636	0.22	-0.19	7.95	
1553.00	0.36	56.750	1552.85	13.67	10.23	-10.71	1695127.45	14279409.82	39°19'20.931"N	80°48'23.556"W	14.82	313.689	0.99	-0.40	117.82	
1642.00	1.12	78.240	1641.84	13.53	10.56	-9.63	1695128.54	14279410.15	39°19'20.935"N	80°48'23.542"W	14.29	317.656	0.89	0.85	24.15	
1730.00	1.01	90.130	1729.82	13.05	10.74	-8.01	1695130.16	14279410.32	39°19'20.936"N	80°48'23.522"W	13.40	323.278	0.28	-0.12	13.51	
1818.00	0.89	94.910	1817.81	12.41	10.68	-6.55	1695131.61	14279410.26	39°19'20.936"N	80°48'23.503"W	12.53	328.459	0.16	-0.14	5.43	
1907.00	0.77	104.290	1906.80	11.71	10.47	-5.29	1695132.88	14279410.05	39°19'20.934"N	80°48'23.487"W	11.73	333.216	0.20	-0.13	10.54	
1995.00	0.80	108.640	1994.80	10.94	10.13	-4.13	1695134.03	14279409.71	39°19'20.930"N	80°48'23.472"W	10.94	337.814	0.08	0.03	4.94	
2083.00	0.66	107.220	2082.79	10.19	9.78	-3.06	1695135.10	14279409.36	39°19'20.927"N	80°48'23.459"W	10.25	342.606	0.16	-0.16	-1.61	
2171.00	0.50	97.450	2170.78	9.66	9.58	-2.20	1695135.96	14279409.16	39°19'20.925"N	80°48'23.448"W	9.83	347.072	0.21	-0.18	-11.10	
2259.00	0.72	142.810	2258.78	8.93	9.09	-1.48	1695136.68	14279408.67	39°19'20.920"N	80°48'23.439"W	9.21	350.726	0.58	0.25	51.55	
2347.00	1.16	153.360	2346.77	7.50	7.86	-0.75	1695137.41	14279407.44	39°19'20.908"N	80°48'23.429"W	7.89	354.539	0.54	0.50	11.99	
2436.00	1.13	142.950	2435.75	5.75	6.35	0.18	1695138.34	14279405.93	39°19'20.893"N	80°48'23.418"W	6.35	1.638	0.24	-0.03	-11.70	
2524.00	0.99	133.950	2523.73	4.20	5.13	1.25	1695139.41	14279404.71	39°19'20.881"N	80°48'23.404"W	5.28	13.712	0.25	-0.16	-10.23	

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# Actual Wellpath Report

Goldsmith Unit 2H AWP Proj: 15769



Operator	ANTERO RESOURCES CORPORATION
Area	Doddridge Co., WV
Field	Doddridge
Facility	Middle Pad
Slot	Goldsmith Unit 2H
Slot #06	Goldsmith Unit 2H AWP

## WELLPATH DATA (194 stations)

MD	Inclination	Azimuth	TVD	Vert Sect	North	East	Grid East	Grid North	Latitude	Longitude	Closure Dist	Closure Dir	DLS	Build Rate	Turn Rate	Comments
2548.00	0.900	122.490	2547.73	3.85	4.88	1.56	1695139.72	14279404.47	39°19'20.87"N	80°48'23.40"W	5.13	17.711	0.87	-0.37	-47.75	
2667.00	0.520	83.180	2666.72	2.92	4.45	2.88	1695141.05	14279404.03	39°19'20.874"N	80°48'23.383"W	5.30	32.969	0.50	-0.32	-33.03	Directional ONE MWD <8-3/4"> (2531)(2650-6356)
2755.00	3.090	152.950	2754.68	0.44	2.38	4.36	1695142.52	14279401.97	39°19'20.853"N	80°48'23.364"W	4.97	61.364	3.35	2.92	79.28	
2844.00	3.610	132.530	2843.53	-4.52	-1.65	7.52	1695145.68	14279397.94	39°19'20.814"N	80°48'23.324"W	7.69	102.375	1.45	0.58	-22.94	
2932.00	6.590	115.260	2931.17	-10.85	-5.68	14.13	1695152.28	14279393.91	39°19'20.774"N	80°48'23.240"W	15.22	111.897	3.77	3.39	-19.63	
3020.00	9.310	117.050	3018.32	-20.16	-11.07	25.03	1695163.19	14279388.52	39°19'20.720"N	80°48'23.102"W	27.37	113.856	3.10	3.09	2.03	
3109.00	9.000	116.340	3106.19	-31.05	-17.43	37.68	1695175.83	14279382.16	39°19'20.657"N	80°48'22.941"W	41.52	114.826	0.37	-0.35	-0.80	
3197.00	10.170	118.920	3192.96	-42.48	-24.24	50.65	1695188.80	14279375.35	39°19'20.589"N	80°48'22.776"W	56.16	115.577	1.42	1.33	2.93	
3285.00	12.290	120.440	3279.27	-56.23	-32.75	65.53	1695203.67	14279366.85	39°19'20.505"N	80°48'22.587"W	73.26	116.553	2.43	2.41	1.73	
3374.00	12.250	126.840	3366.24	-72.10	-43.21	81.25	1695219.38	14279356.39	39°19'20.401"N	80°48'22.387"W	92.03	118.003	1.53	-0.04	7.19	
3462.00	11.710	124.830	3452.32	-87.83	-53.91	96.06	1695234.18	14279345.70	39°19'20.295"N	80°48'22.199"W	110.15	119.301	0.78	-0.61	-2.28	
3638.00	10.730	120.200	3625.02	-115.63	-71.60	125.00	1695263.11	14279338.01	39°19'20.120"N	80°48'21.831"W	144.05	119.805	0.33	-0.33	-0.06	
3550.00	11.020	120.250	3538.60	-102.23	-63.24	110.65	1695248.77	14279336.37	39°19'20.203"N	80°48'22.014"W	127.45	119.750	1.29	-0.78	-5.20	
3726.00	11.940	123.710	3711.30	-129.90	-80.78	139.65	1695277.76	14279333.84	39°19'20.029"N	80°48'21.645"W	161.33	120.045	1.58	1.37	3.99	
3803.00	13.090	130.090	3803.88	-164.48	-105.04	170.53	1695308.63	14279294.59	39°19'19.915"N	80°48'21.448"W	180.53	120.745	1.91	1.36	6.20	
3903.00	12.550	125.750	3906.71	-181.44	-116.90	185.74	1695323.83	14279282.73	39°19'19.671"N	80°48'21.060"W	219.47	122.186	1.27	-0.62	-4.99	
4078.00	12.490	123.840	4054.62	-197.69	-127.79	201.40	1695339.49	14279271.85	39°19'19.563"N	80°48'20.861"W	238.52	122.395	0.48	-0.07	-2.17	
4167.00	13.040	129.080	4141.42	-214.72	-139.48	217.19	1695355.27	14279260.16	39°19'19.447"N	80°48'20.660"W	258.12	122.708	1.44	0.62	5.89	
4255.00	13.040	126.660	4227.15	-232.15	-151.66	232.86	1695370.93	14279247.98	39°19'19.326"N	80°48'20.461"W	277.90	123.076	0.62	0.00	-2.75	
4343.00	13.410	123.650	4312.82	-249.35	-163.25	249.32	1695387.38	14279236.40	39°19'19.211"N	80°48'20.252"W	298.01	123.215	0.89	0.42	-3.42	
4431.00	13.790	120.470	4398.35	-266.42	-174.22	266.85	1695404.91	14279225.44	39°19'19.102"N	80°48'20.029"W	318.69	123.139	0.95	0.43	-3.61	
4520.00	11.450	119.700	4485.20	-282.09	-183.98	283.67	1695421.72	14279215.68	39°19'19.006"N	80°48'19.815"W	338.11	122.965	2.64	-0.87	-0.23	
4608.00	11.150	119.500	4571.49	-295.90	-192.49	298.67	1695436.71	14279207.17	39°19'18.921"N	80°48'19.625"W	355.32	122.802	0.34	-0.34	-0.23	
4696.00	11.510	118.080	4657.78	-309.69	-200.82	313.82	1695451.66	14279198.85	39°19'18.839"N	80°48'19.432"W	372.57	122.616	0.52	0.41	-1.61	
4784.00	11.560	122.530	4744.00	-323.79	-209.69	329.00	1695467.03	14279189.98	39°19'18.751"N	80°48'19.239"W	390.14	122.512	1.01	0.06	5.06	
4873.00	10.120	126.200	4831.41	-337.95	-219.10	342.83	1695480.85	14279180.57	39°19'18.657"N	80°48'19.064"W	406.86	122.583	1.79	-1.62	4.12	
4961.00	8.390	131.300	4918.27	-350.45	-227.91	353.89	1695491.91	14279171.77	39°19'18.570"N	80°48'18.923"W	420.93	122.782	2.17	-1.97	5.80	
5049.00	9.100	129.700	5005.24	-362.47	-236.59	364.07	1695502.09	14279163.09	39°19'18.484"N	80°48'18.794"W	434.19	123.018	0.85	0.81	-1.82	
5138.00	9.230	129.890	5093.11	-375.15	-245.66	374.96	1695512.97	14279154.02	39°19'18.394"N	80°48'18.656"W	448.27	123.232	0.15	0.15	0.21	

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# Actual Wellpath Report

Goldsmith Unit 2H AWP Proj: 15769'

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REFERENCE WELLPATH IDENTIFICATION				
Operator	ANTERO RESOURCES CORPORATION		Slot	Slot #06
Area	Doddridge Co., WV		Well	Goldsmith Unit 2H
Field	Doddridge		Wellbore	Goldsmith Unit 2H AWB
Facility	Middle Pad			

WELLPATH DATA (194 stations) † = interpolated/extrapolated station																
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	Closure Dist [ft]	Closure Dir [°]	DLS ["/100ft]	Build Rate ["/100ft]	Turn Rate ["/100ft]	Comments
5226.00	9.240	130.170	5179.96	-387.80	-254.75	385.77	1695523.78	14279144.94	39°19'18.304"N	80°48'18.518"W	462.30	123.439	0.05	0.01	0.32	
5314.00	11.870	134.730	5266.47	-402.55	-265.68	397.60	1695535.61	14279134.01	39°19'18.196"N	80°48'18.368"W	478.20	123.751	3.13	2.99	5.18	
5402.00	12.830	127.190	5352.44	-419.48	-277.95	411.82	1695549.82	14279121.74	39°19'18.074"N	80°48'18.187"W	496.84	124.017	2.13	1.09	-8.57	
5491.00	12.240	125.220	5439.32	-436.18	-289.37	427.40	1695565.39	14279110.33	39°19'17.961"N	80°48'17.990"W	516.14	124.100	0.82	-0.66	-2.21	
5579.00	9.530	122.620	5525.73	-450.21	-298.68	441.16	1695579.14	14279101.03	39°19'17.869"N	80°48'17.815"W	532.75	124.099	3.13	-3.08	-2.95	
5623.00	10.010	116.290	5569.09	-456.16	-302.33	447.65	1695585.64	14279097.37	39°19'17.832"N	80°48'17.732"W	540.18	124.034	2.67	1.09	-14.39	
5667.00	10.870	98.670	5612.37	-461.30	-304.65	455.19	1695593.17	14279095.05	39°19'17.809"N	80°48'17.636"W	547.73	123.794	7.48	1.95	-40.05	
5712.00	11.700	85.020	5656.51	-465.02	-304.90	463.93	1695601.91	14279094.81	39°19'17.807"N	80°48'17.525"W	555.15	123.313	6.20	1.84	-30.33	
5756.00	11.190	70.650	5699.64	-466.76	-303.09	472.40	1695610.38	14279096.61	39°19'17.824"N	80°48'17.417"W	561.28	122.684	6.57	-1.16	-32.66	
5800.00	9.970	55.170	5742.90	-466.33	-299.50	479.56	1695617.53	14279100.20	39°19'17.860"N	80°48'17.326"W	565.40	121.986	7.00	-2.77	-35.18	
5844.00	12.210	43.650	5786.08	-463.79	-293.96	485.90	1695623.87	14279105.74	39°19'17.914"N	80°48'17.245"W	567.90	121.173	7.14	5.09	-26.18	
5888.00	15.770	38.310	5828.77	-459.17	-285.90	492.82	1695630.79	14279113.80	39°19'17.994"N	80°48'17.157"W	569.74	120.119	8.60	8.09	-12.14	
5932.00	17.170	28.870	5870.97	-452.39	-275.52	499.66	1695637.63	14279124.18	39°19'18.096"N	80°48'17.070"W	570.59	118.873	6.85	3.18	-21.45	
5976.00	19.250	19.760	5912.78	-443.16	-263.00	505.25	1695643.21	14279136.69	39°19'18.220"N	80°48'16.998"W	569.60	117.498	8.00	4.73	-20.70	
6020.00	22.130	14.440	5953.94	-431.35	-248.14	509.77	1695647.73	14279151.54	39°19'18.367"N	80°48'16.940"W	566.96	115.956	7.81	6.55	-12.09	
6064.00	25.260	9.230	5994.23	-416.92	-230.85	513.35	1695651.30	14279168.83	39°19'18.537"N	80°48'16.894"W	562.86	114.213	8.55	7.11	-11.84	
6109.00	28.590	4.910	6034.35	-399.38	-210.63	515.81	1695653.77	14279189.04	39°19'18.737"N	80°48'16.862"W	557.16	112.213	8.58	7.40	-9.60	
6153.00	31.230	359.920	6072.49	-379.66	-188.73	516.69	1695654.65	14279210.93	39°19'18.954"N	80°48'16.851"W	550.08	110.065	8.24	6.00	-11.34	
6197.00	32.900	356.160	6109.78	-357.95	-165.40	515.88	1695653.84	14279234.25	39°19'19.184"N	80°48'16.860"W	541.74	107.776	5.91	3.80	-8.55	
6241.00	35.330	353.260	6146.21	-334.52	-140.83	513.58	1695651.54	14279258.81	39°19'19.427"N	80°48'16.889"W	532.54	105.335	6.64	5.52	-6.59	
6285.00	38.700	351.960	6181.34	-309.09	-114.57	510.17	1695648.13	14279285.06	39°19'19.687"N	80°48'16.932"W	522.87	102.657	7.86	7.66	-2.95	
6329.00	42.520	351.290	6214.73	-281.45	-86.24	505.99	1695643.95	14279313.38	39°19'19.967"N	80°48'16.984"W	513.29	99.673	8.74	8.68	-1.52	
6373.00	46.730	350.430	6246.04	-251.53	-55.74	501.07	1695639.04	14279343.87	39°19'20.268"N	80°48'17.046"W	504.16	96.347	9.67	9.57	-1.95	
6410.00	49.830	350.140	6270.66	-224.72	-28.52	496.41	1695634.38	14279371.08	39°19'20.538"N	80°48'17.104"W	497.23	93.288	8.40	8.38	-0.78	BHI AT Curve <8-1/2">(6373')(6410'-15745')
6457.00	54.820	346.720	6299.39	-188.34	7.90	488.92	1695626.89	14279407.48	39°19'20.898"N	80°48'17.199"W	488.98	89.075	12.08	10.62	-7.28	
6490.00†	58.040	343.464	6317.63	-161.17	34.45	481.83	1695619.80	14279434.03	39°19'21.160"N	80°48'17.288"W	483.06	85.910	12.76	9.76	-9.87	Burket: 6490'MD / 6318'TVD
6505.00	59.530	342.060	6325.41	-148.42	46.70	478.03	1695616.00	14279446.27	39°19'21.281"N	80°48'17.336"W	480.31	84.420	12.76	9.93	-9.36	
6551.00†	64.042	340.434	6347.15	-108.04	85.07	464.99	1695602.97	14279484.62	39°19'21.661"N	80°48'17.501"W	472.71	79.632	10.29	9.81	-3.54	Tully: 6551'MD / 6347'TVD
6552.00	64.140	340.400	6347.59	-107.14	85.92	464.69	1695602.67	14279485.47	39°19'21.669"N	80°48'17.505"W	472.57	79.524	10.29	9.83	-3.36	
6600.00	68.840	337.570	6366.73	-63.19	126.98	448.89	1695586.88	14279526.52	39°19'22.076"N	80°48'17.705"W	466.51	74.205	11.18	9.79	-5.90	

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# Actual Wellpath Report

Goldsmith Unit 2H AWP Proj: 15769'

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REFERENCE WELLPATH IDENTIFICATION			
Operator	ANTERO RESOURCES CORPORATION		Slot #06
Area	Doddridge Co., WV		Well
Field	Doddridge		Wellbore
Facility	Middle Pad		Goldsmith Unit 2H AWP

WELLPATH DATA (194 stations) † = interpolated/extrapolated station																
MD (ft)	Inclination (°)	Azimuth (°)	TVD (ft)	Vert Sect (ft)	North (ft)	East (ft)	Grid East (US ft)	Grid North (US ft)	Latitude	Longitude	Closure Dist (ft)	Closure Dir (°)	DLS (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	Comments
6636.00†	72.378	336.483	6378.68	-29.24	158.24	435.64	1695573.63	14279557.76	39°19'22.385"N	80°48'17.872"W	463.49	70.037	10.23	9.83	-3.02	Hamilton: 6636MD / 6379'TVD
6647.00	73.460	336.160	6381.92	-18.72	167.87	431.42	1695569.41	14279567.39	39°19'22.480"N	80°48'17.926"W	462.92	68.738	10.23	9.84	-2.94	
6667.00†	73.981	336.377	6387.52	0.47	185.45	423.69	1695561.68	14279584.96	39°19'22.654"N	80°48'18.024"W	462.50	66.361	2.80	2.60	1.09	POE Marcellus: 6667MD / 6388'TVD
6695.00	74.710	336.680	6395.08	27.43	210.18	412.95	1695550.95	14279609.68	39°19'22.899"N	80°48'18.160"W	463.36	63.026	2.80	2.60	1.08	
6742.00	76.960	337.910	6406.58	73.00	252.21	395.36	1695533.37	14279651.70	39°19'23.314"N	80°48'18.382"W	468.96	57.465	5.42	4.79	2.62	
6789.00	79.600	339.170	6416.12	118.98	295.04	378.53	1695516.54	14279694.51	39°19'23.738"N	80°48'18.595"W	479.93	52.066	6.20	5.62	2.68	
6836.00	82.750	337.710	6423.33	165.39	338.22	361.47	1695499.48	14279737.68	39°19'24.165"N	80°48'18.811"W	495.03	46.902	7.37	6.70	-3.11	
6884.00	85.590	338.270	6428.21	213.12	382.49	343.57	1695481.60	14279781.92	39°19'24.603"N	80°48'19.038"W	514.14	41.932	6.03	5.92	1.17	
6931.00	89.480	337.400	6430.23	260.05	425.97	325.86	1695463.89	14279825.38	39°19'25.033"N	80°48'19.262"W	536.32	37.415	8.48	8.28	-1.85	
6979.00	90.120	334.500	6430.40	308.04	469.80	306.30	1695444.34	14279869.20	39°19'25.467"N	80°48'19.510"W	560.83	33.104	6.19	1.33	-6.04	
7074.00	90.030	333.300	6430.27	402.95	555.11	264.51	1695402.56	14279954.47	39°19'26.311"N	80°48'20.039"W	614.91	25.478	1.27	-0.09	-1.26	
7169.00	90.060	331.990	6430.20	497.74	639.48	220.86	1695358.93	14280038.81	39°19'27.146"N	80°48'20.592"W	676.55	19.053	1.38	0.03	-1.38	
7264.00	89.970	337.650	6430.18	592.66	725.42	180.45	1695318.54	14280124.72	39°19'27.996"N	80°48'21.104"W	747.53	13.969	5.96	-0.09	5.96	
7359.00	90.120	339.780	6430.10	687.58	813.94	145.97	1695284.07	14280213.20	39°19'28.872"N	80°48'21.540"W	826.92	10.167	2.25	0.16	2.24	
7454.00	90.150	339.520	6429.88	782.43	903.01	112.93	1695251.05	14280302.23	39°19'29.753"N	80°48'21.958"W	910.04	7.129	0.28	0.03	-0.27	
7549.00	90.120	336.920	6429.65	877.38	991.22	77.69	1695215.82	14280390.41	39°19'30.625"N	80°48'22.404"W	994.26	4.481	2.74	-0.03	-2.74	
7644.00	90.060	332.810	6429.50	972.32	1077.20	37.34	1695175.49	14280476.36	39°19'31.476"N	80°48'22.915"W	1077.85	1.985	4.33	-0.06	-4.33	
7739.00	90.120	331.330	6429.35	1067.04	1161.13	-7.15	1695131.01	14280560.26	39°19'32.306"N	80°48'23.479"W	1161.16	359.647	1.56	0.06	-1.56	
7834.00	90.000	327.910	6429.25	1161.36	1243.08	-55.19	1695083.00	14280642.17	39°19'33.117"N	80°48'24.088"W	1244.30	357.458	3.60	-0.13	-3.60	
7929.00	90.030	327.800	6429.23	1255.30	1323.51	-105.74	1695032.47	14280722.57	39°19'33.913"N	80°48'24.729"W	1327.73	355.432	0.12	0.03	-0.12	
8024.00	90.710	328.730	6428.62	1349.34	1404.31	-155.70	1694982.52	14280803.33	39°19'34.713"N	80°48'25.363"W	1412.91	353.673	1.21	0.72	0.98	
8119.00	89.720	329.080	6428.26	1443.52	1485.66	-204.77	1694933.48	14280884.65	39°19'35.518"N	80°48'25.985"W	1499.70	352.152	1.11	-1.04	0.37	
8214.00	90.030	334.370	6428.47	1538.17	1569.29	-249.75	1694888.51	14280968.25	39°19'36.346"N	80°48'26.555"W	1589.04	350.957	5.58	0.33	5.57	
8309.00	90.890	336.090	6427.70	1633.14	1655.54	-289.55	1694848.73	14281054.47	39°19'37.199"N	80°48'27.060"W	1680.67	350.079	2.02	0.91	1.81	
8404.00	91.110	336.150	6426.05	1728.12	1742.40	-328.00	1694810.29	14281141.29	39°19'38.058"N	80°48'27.546"W	1773.00	349.339	0.24	0.23	0.06	
8500.00	91.260	334.150	6424.06	1824.07	1829.49	-368.34	1694769.97	14281228.34	39°19'38.920"N	80°48'28.057"W	1866.20	348.617	2.09	0.16	-2.08	
8594.00	89.820	339.280	6423.17	1918.03	1915.80	-405.48	1694732.85	14281314.62	39°19'39.774"N	80°48'28.528"W	1958.24	348.050	5.67	-1.53	5.46	
8689.00	89.970	338.380	6423.35	2012.95	2004.38	-439.79	1694698.55	14281403.17	39°19'40.650"N	80°48'28.962"W	2052.06	347.625	0.96	0.16	-0.95	
8784.00	89.850	333.970	6423.50	2107.92	2091.27	-478.15	1694660.20	14281490.02	39°19'41.509"N	80°48'29.448"W	2145.23	347.121	4.64	-0.13	-4.64	
8879.00	89.110	333.590	6424.36	2202.82	2176.49	-520.12	1694618.25	14281575.20	39°19'42.353"N	80°48'29.980"W	2237.77	346.560	0.88	-0.78	-0.40	

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# Actual Wellpath Report

Goldsmith Unit 2H AWP Proj: 15769'  
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REFERENCE WELLPATH IDENTIFICATION			
Operator	ANTERO RESOURCES CORPORATION	Slot	Slot #06
Area	Doddridge Co., WV	Well	Goldsmith Unit 2H
Field	Doddridge	Wellbore	Goldsmith Unit 2H AWB
Facility	Middle Pad		

WELLPATH DATA (194 stations)																
MD (ft)	Inclination (°)	Azimuth (°)	TVD (ft)	Vert Sect (ft)	North (ft)	East (ft)	Grid East (US ft)	Grid North (US ft)	Latitude	Longitude	Closure Dist (ft)	Closure Dir (°)	DLS (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	Comments
8974.00	89.570	340.350	6425.46	2297.75	2263.86	-557.26	1694581.12	14281662.54	39°19'43.217"N	80°48'30.450"W	2331.44	346.171	7.13	0.48	7.12	
9069.00	90.740	348.720	6425.20	2391.72	2355.34	-582.57	1694555.82	14281753.98	39°19'44.122"N	80°48'30.769"W	2426.31	346.107	8.90	1.23	8.81	
9165.00	90.280	347.530	6424.34	2485.71	2449.28	-602.33	1694536.08	14281847.88	39°19'45.050"N	80°48'31.018"W	2522.25	346.184	1.33	-0.48	-1.24	
9259.00	90.180	343.790	6423.97	2578.48	2540.33	-625.60	1694512.81	14281938.90	39°19'45.951"N	80°48'31.312"W	2616.23	346.165	3.98	-0.11	-3.98	
9354.00	89.970	343.450	6423.84	2672.73	2631.47	-652.39	1694486.03	14282030.01	39°19'46.852"N	80°48'31.651"W	2711.14	346.076	0.42	-0.22	-0.36	
9449.00	89.880	345.570	6423.97	2766.78	2723.02	-677.76	1694460.67	14282121.52	39°19'47.758"N	80°48'31.971"W	2806.10	346.023	2.23	-0.09	2.23	
9544.00	90.710	344.900	6423.48	2860.65	2814.88	-701.97	1694436.47	14282213.34	39°19'48.666"N	80°48'32.277"W	2901.09	345.997	1.12	0.87	-0.71	
9639.00	89.850	334.110	6423.01	2955.37	2903.73	-735.19	1694403.27	14282302.16	39°19'49.545"N	80°48'32.697"W	2995.36	345.792	11.39	-0.91	-11.36	
9734.00	89.200	333.120	6423.80	3050.25	2988.83	-777.40	1694361.07	14282387.22	39°19'50.387"N	80°48'33.232"W	3088.28	345.420	1.25	-0.68	-1.04	
9830.00	89.750	338.550	6424.68	3146.21	3076.38	-816.68	1694321.80	14282474.74	39°19'51.253"N	80°48'33.729"W	3182.94	345.133	5.68	0.57	5.66	
9925.00	89.820	336.480	6425.04	3241.19	3164.15	-853.01	1694285.49	14282562.48	39°19'52.121"N	80°48'34.189"W	3277.12	344.912	2.18	0.07	-2.18	
10020.00	89.720	331.730	6425.42	3336.08	3249.59	-894.49	1694244.03	14282647.88	39°19'52.967"N	80°48'34.715"W	3370.45	344.610	5.00	-0.11	-5.00	
10115.00	89.600	329.930	6425.98	3430.62	3332.54	-940.79	1694197.75	14282730.79	39°19'53.787"N	80°48'35.302"W	3462.79	344.235	1.90	-0.13	-1.89	
10210.00	89.660	329.470	6426.59	3524.97	3414.56	-988.72	1694149.84	14282812.78	39°19'54.599"N	80°48'35.910"W	3554.82	343.851	0.49	0.06	-0.48	
10305.00	89.660	332.090	6427.16	3619.50	3497.46	-1035.09	1694103.48	14282895.65	39°19'55.419"N	80°48'36.497"W	3647.42	343.514	2.76	0.00	2.76	
10400.00	89.720	332.150	6427.67	3714.23	3581.43	-1079.51	1694059.08	14282979.59	39°19'56.250"N	80°48'37.061"W	3740.59	343.226	0.09	0.06	0.06	
10495.00	89.690	332.450	6428.16	3808.98	3665.54	-1123.67	1694014.94	14283063.67	39°19'57.082"N	80°48'37.620"W	3833.91	342.957	0.32	-0.03	0.32	
10591.00	89.970	334.580	6428.45	3904.85	3751.46	-1166.48	1693972.14	14283149.55	39°19'57.933"N	80°48'38.163"W	3928.63	342.727	2.24	0.29	2.22	
10686.00	89.320	339.460	6429.04	3999.82	3838.90	-1203.56	1693935.08	14283236.95	39°19'58.797"N	80°48'38.632"W	4023.14	342.593	5.18	-0.68	5.14	
10781.00	89.420	339.270	6430.08	4094.69	3927.80	-1237.04	1693901.62	14283325.82	39°19'59.677"N	80°48'39.056"W	4117.99	342.518	0.23	0.11	-0.20	
10876.00	89.850	337.040	6430.69	4189.63	4015.97	-1272.38	1693866.29	14283413.95	39°20'00.549"N	80°48'39.503"W	4212.71	342.420	2.39	0.45	-2.35	
10971.00	90.030	331.700	6430.78	4284.54	4101.59	-1313.46	1693825.22	14283499.54	39°20'01.396"N	80°48'40.024"W	4306.76	342.243	5.62	0.19	-5.62	
11066.00	89.600	333.220	6431.09	4379.31	4185.82	-1357.39	1693781.32	14283583.74	39°20'02.229"N	80°48'40.581"W	4400.41	342.033	1.66	-0.45	1.60	
11161.00	90.430	336.800	6431.07	4474.26	4271.91	-1397.51	1693741.21	14283669.79	39°20'03.081"N	80°48'41.089"W	4494.69	341.885	3.87	0.87	3.77	
11256.00	90.340	337.760	6430.43	4569.25	4359.54	-1434.20	1693704.53	14283757.38	39°20'03.948"N	80°48'41.554"W	4589.39	341.790	1.01	-0.09	1.01	
11351.00	90.060	331.330	6430.10	4664.15	4445.27	-1475.01	1693663.74	14283843.08	39°20'04.796"N	80°48'42.071"W	4683.60	341.643	6.77	-0.29	-6.77	
11445.00	89.510	326.450	6430.45	4757.31	4525.72	-1523.57	1693615.20	14283923.51	39°20'05.592"N	80°48'42.687"W	4775.29	341.394	5.22	-0.59	-5.19	
11540.00	88.030	329.790	6432.49	4851.28	4606.36	-1573.72	1693565.07	14284004.11	39°20'06.390"N	80°48'43.323"W	4867.77	341.138	3.84	-1.56	3.52	
11634.00	90.430	337.530	6433.75	4945.08	4690.53	-1615.39	1693523.42	14284088.24	39°20'07.223"N	80°48'43.851"W	4960.90	340.997	8.62	2.55	8.23	
11728.00	90.860	339.340	6432.70	5039.01	4777.94	-1649.93	1693488.89	14284175.62	39°20'08.088"N	80°48'44.288"W	5054.80	340.949	1.98	0.46	1.93	

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**Actual Wellpath Report**  
 Goldsmith Unit 2H AWP Proj: 15769



Operator	Area	Field	Facility
ANTERO RESOURCES CORPORATION	Doddrige Co., WV	Doddrige	Middle Pad
	Goldsmith Unit 2H	Well	
	Goldsmith Unit 2H AWP	Wellbore	
	Slot #06	Slot	

WELLPATH DATA (194 Stations)																
MD	Inclination	Azimuth	TVD	Vert Sect	North	East	Grid East	Grid North	Latitude	Longitude	Closure Dist	Closure Dir	DLS	Build Rate	Turn Rate	Comments
[ft]	[ft]	[ft]	[ft]	[ft]	[ft]	[ft]	[US ft]	[US ft]	[ft]	[ft]	[ft]	[ft]	[ft/100ft]	[ft/100ft]	[ft/100ft]	
14632.00	89.850	339.630	6418.71	7938.24	7454.84	-2764.44	1692374.82	14286851.46	39°20'34.568"N	80°48'58.403"W	7950.90	339.654	1.11	-0.52	-0.98	
14726.00	90.090	337.510	6418.76	8032.17	7542.34	-2798.78	1692340.50	14286938.92	39°20'35.433"N	80°48'58.838"W	8044.88	339.641	2.27	0.26	-2.26	
14819.00	90.090	335.730	6418.62	8125.16	7627.70	-2835.69	1692303.61	14287024.25	39°20'36.278"N	80°48'59.305"W	8137.75	339.607	1.91	0.00	-1.91	
14913.00	90.000	333.130	6418.54	8219.10	7712.49	-2876.25	1692263.06	14287109.00	39°20'37.117"N	80°48'59.820"W	8231.36	339.548	2.77	-0.10	-2.77	
15006.00	89.910	331.900	6418.62	8311.88	7794.99	-2919.17	1692220.15	14287191.47	39°20'37.933"N	80°49'00.364"W	8323.67	339.469	1.33	-0.10	-1.32	
15100.00	89.970	337.330	6418.72	8405.80	7879.88	-2959.46	1692179.89	14287276.33	39°20'38.773"N	80°49'00.874"W	8417.30	339.415	5.78	0.06	5.78	
15193.00	89.940	340.880	6418.79	8498.68	7966.75	-2992.62	1692146.74	14287363.16	39°20'39.632"N	80°49'01.294"W	8510.28	339.412	3.82	-0.03	3.82	
15287.00	90.060	343.230	6418.79	8592.22	8056.17	-3021.58	1692117.79	14287452.55	39°20'40.516"N	80°49'01.660"W	8604.18	339.441	2.50	0.13	2.50	
15381.00	89.910	339.840	6418.81	8685.83	8145.32	-3051.35	1692088.03	14287541.66	39°20'41.398"N	80°49'02.037"W	8698.10	339.463	3.61	-0.16	-3.61	
15475.00	90.000	335.220	6418.89	8779.79	8232.16	-3087.26	1692052.13	14287628.46	39°20'42.257"N	80°49'02.492"W	8792.02	339.443	4.92	0.10	-4.91	
15568.00	90.090	333.940	6418.81	8872.74	8316.15	-3127.18	1692012.22	14287712.42	39°20'43.088"N	80°49'02.998"W	8884.69	339.392	1.38	0.10	-1.38	
15662.00	89.970	335.070	6418.76	8966.69	8401.00	-3167.64	1691971.78	14287797.24	39°20'43.927"N	80°49'03.511"W	8978.35	339.341	1.21	-0.13	1.20	
15745.00	90.000	334.710	6418.79	9049.66	8476.16	-3202.87	1691936.57	14287872.36	39°20'44.671"N	80°49'03.957"W	9061.10	339.300	0.44	0.04	-0.43	
15769.00	90.000	334.710	6418.79	9073.65	8497.85	-3213.12	1691926.32	14287894.05	39°20'44.886"N	80°49'04.087"W	9085.02	339.288	0.00	0.00	0.00	

HOLE & CASING SECTIONS - Ret Wellbore: Goldsmith Unit 2H AWB Ret Wellpath: Goldsmith Unit 2H AWP Proj: 15769													
String/Diameter	Start MD	End MD	Interval	Start TVD	End TVD	Start N/S	End N/S	Start EW	End EW	End N/S	End EW	End N/S	End EW
	[ft]	[ft]	[ft]	[ft]	[ft]	[ft]	[ft]	[ft]	[ft]	[ft]	[ft]	[ft]	[ft]
20in Conductor	112.00	112.00	80.00	32.00	112.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-0.02
17.5in Open Hole	548.00	548.00	436.00	112.00	547.99	0.11	0.11	0.00	0.00	0.00	0.00	0.00	0.11
13.375in Casing Surface	548.00	548.00	516.00	32.00	547.99	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.30
12.25in Open Hole	548.00	2620.00	2072.00	547.99	2619.72	2.30	1.75	4.48	2.42	1.75	4.48	2.42	1.75
9.625in Casing Intermediate	32.00	2620.00	2588.00	32.00	2619.72	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4.48
8.75in Open Hole	2620.00	6440.00	3820.00	2619.72	6289.37	4.48	2.42	4.48	4.48	2.42	4.48	4.48	4.48
8.5in Open Hole	15769.00	15769.00	9329.00	6289.37	6418.79	-5.50	4.91	4.48	4.48	4.91	4.48	4.48	4.48
5.5in Casing Production	32.00	15769.00	15737.00	32.00	6418.79	0.00	0.00	0.00	0.00	0.00	0.00	0.00	8497.85

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# Actual Wellpath Report

Goldsmith Unit 2H AWP Proj: 15769'

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REFERENCE WELLPATH IDENTIFICATION			
Operator	ANTERO RESOURCES CORPORATION	Slot	Slot #06
Area	Doddridge Co., WV	Well	Goldsmith Unit 2H
Field	Doddridge	Wellbore	Goldsmith Unit 2H AWB
Facility	Middle Pad		

TARGETS								
Name	TVD [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	Shape
Goldsmith Unit 2H POE Rev-2	6390.00	177.11	429.39	1695567.38	14279576.63	39°19'22.571"N	80°48'17.951"W	point
Goldsmith Unit 2H BHL Rev-2	6430.00	8455.82	-3206.98	1691932.46	14287852.03	39°20'44.470"N	80°49'04.010"W	point
Goldsmith Unit 2H LP Rev-1	6430.00	392.48	318.42	1695456.46	14279791.91	39°19'24.702"N	80°48'19.358"W	point

WELLPATH COMPOSITION - Ref Wellbore: Goldsmith Unit 2H AWB Ref Wellpath: Goldsmith Unit 2H AWP Proj: 15769'				
Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment	Wellbore
32.00	514.00	Gyrodata standard - Drop gyro or Multi-shot	01 Gyrodata MS Gyro <17-1/2"> (100'-497')	Goldsmith Unit 2H AWB
514.00	2548.00	ISCWSA MWD, Rev. 4 (Standard)	02 Directional ONE MWD <12-1/4"> (497')(559'-2531')	Goldsmith Unit 2H AWB
2548.00	6373.00	ISCWSA MWD, Rev. 4 (Standard)	03 Directional ONE MWD <8-3/4"> (2531')(2650'-6356')	Goldsmith Unit 2H AWB
6373.00	15745.00	BHI AutoTrak Curve (Standard)	04 BHI AT Curve <8-1/2">(6373')(6410'-15745')	Goldsmith Unit 2H AWB
15745.00	15769.00	Blind Drilling (std)	Projection to bit	Goldsmith Unit 2H AWB

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## Actual Wellpath Report

Goldsmith Unit 2H AWP Proj: 15769'

Page 10 of 10



REFERENCE WELLPATH IDENTIFICATION			
Operator	ANTERO RESOURCES CORPORATION	Slot	Slot #06
Area	Doddridge Co., WV	Well	Goldsmith Unit 2H
Field	Doddridge	Wellbore	Goldsmith Unit 2H AWB
Facility	Middle Pad		

COMMENTS
<p><b>Wellpath general comments</b>            API: 47-017-06821-0000            BH Job #: 9050763            Rig: Frontier 32            Duration: 03/12/18 - 03/14/18            Gyrodata MS Gyro &lt;17-1/2"&gt; (100'-497')            Directional ONE MWD &lt;12-1/4"&gt; (497')(559'-2531')            Directional ONE MWD &lt;8-3/4"&gt; (2531')(2650'-6356')            BHI AT Curve &lt;8-1/2"&gt;(6373')(6410'-15745')            Burket: 6490'MD / 6318'TVD            Tully: 6551'MD / 6347'TVD            Hamilton: 6636'MD / 6379'TVD            POE Marcellus: 6667'MD / 6388'TVD            Projected MD @ TD: 15769</p>

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## Hydraulic Fracturing Fluid Product Component Information Disclosure

Job Start Date:	7/16/2018
Job End Date:	8/7/2018
State:	West Virginia
County:	Doddridge
API Number:	47-017-06821-00-00
Operator Name:	Antero Resources Corporation
Well Name and Number:	Goldsmith 2H
Latitude:	39.32245300
Longitude:	-80.80650600
Datum:	NAD83
Federal Well:	NO
Indian Well:	NO
True Vertical Depth:	6,687
Total Base Water Volume (gal):	16,672,248
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
Fresh Water	Operator	Base Fluid					
			Water	7732-18-5	100.00000	88.09789	Density = 8.340
Ingredients	Listed Above	Listed Above					
			Water	7732-18-5	100.00000	0.11746	

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HYDROCHLORIC ACID	Halliburton	Solvent		Listed Below			
HAI-OS ACID INHIBITOR	Halliburton	Corrosion Inhibitor		Listed Below			
EXCELERATE PS-2	Halliburton	Friction Reducer		Listed Below			
SAND-PREMIUM WHITE-40/70, BULK	Halliburton	Proppant		Listed Below			
SP BREAKER	Halliburton	Breaker		Listed Below			
SCALECHEK LP-70	Halliburton	Scale Inhibitor		Listed Below			
MC B-8614	Halliburton	Biocide		Listed Below			
WG-36 GELLING AGENT	Halliburton	Gelling Agent		Listed Below			

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SAND-COMMON WHITE - 100 MESH, 3307 LB BAG	Halliburton	Proppant					
				Listed Below			
Items above are Trade Names with the exception of Base Water . Items below are the individual ingredients.							
			Crystalline silica, quartz	14808-60-7	100.00000	11.73804	
			Guar gum	9000-30-0	100.00000	0.01840	
			Inorganic salt	Proprietary	30.00000	0.01597	
			Acrylamide acrylate polymer	Proprietary	30.00000	0.01597	Denise Tuck, Halliburton, 3000 N. Sam Houston Pkwy E., Houston, TX 77032, 281-871-6226
			Hydrotreated light petroleum distillate	64742-47-8	30.00000	0.01597	
			Hydrochloric acid	7647-01-0	15.00000	0.01030	
			Ethylene glycol	107-21-1	60.00000	0.00599	
			Glutaraldehyde	111-30-8	30.00000	0.00393	
			Telmer	Proprietary	10.00000	0.00100	
			Quaternary ammonium compounds, benzyl-C12- 16-alkyldimethyl chlorides	68424-85-1	5.00000	0.00066	
			Sodium persulfate	7775-27-1	100.00000	0.00057	
			Ethanol	64-17-5	1.00000	0.00013	
			Sodium polyacrylate	9003-04-7	1.00000	0.00010	
			Methanol	67-56-1	60.00000	0.00009	
			Modified thiourea polymer	Proprietary	30.00000	0.00004	
			Ethoxylated alcohols	Proprietary	30.00000	0.00004	
			Fatty acids, tall oil	Proprietary	30.00000	0.00004	
			Olefins	Proprietary	5.00000	0.00001	
			Phosphoric acid	7664-38-2	0.10000	0.00001	
			Propargyl alcohol	107-19-7	10.00000	0.00001	

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			Acrylic acid	79-10-7	0.01000	0.00000			
			Sodium sulfate	7757-82-6	0.10000	0.00000			

\* Total Water Volume sources may include various types of water including fresh water, produced water, and recycled water

\*\* Information is based on the maximum potential for concentration and thus the total may be over 100%

\*\*\* If you are calculating a percentage of total ingredients do not add the water volume below the green line to the water volume above the green line

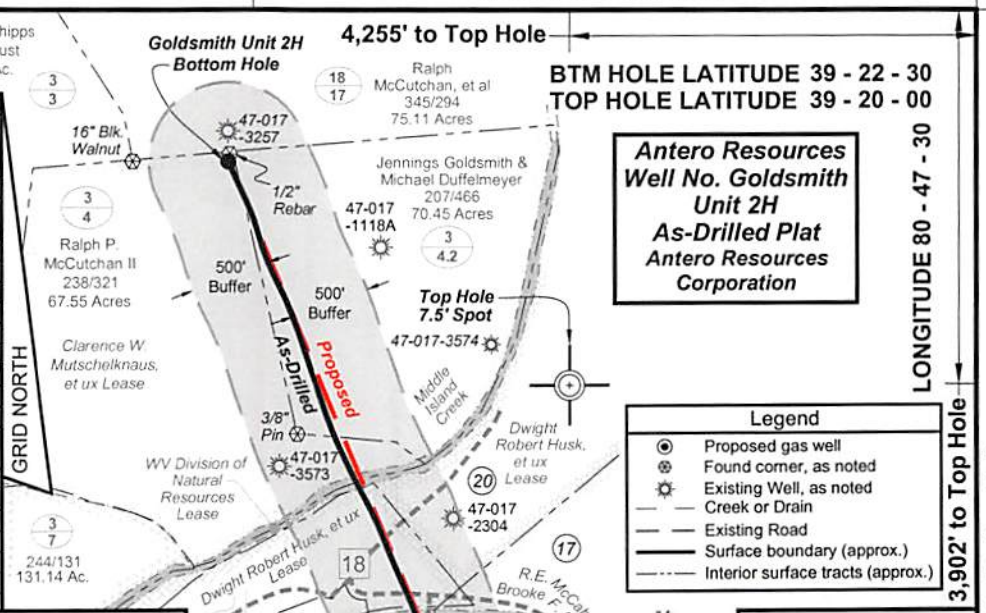
Note: For Field Development Products (products that begin with FDP), MSDS level only information has been provided.  
 Ingredient information for chemicals subject to 29 CFR 1910.1200(j) and Appendix D are obtained from suppliers Material Safety Data Sheets (MSDS)

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TM/Par	Bk/Pg	Acres	Owner(s)	
1	6/2	214/279	32.19	William Randall Lynch & Dixie Janet Craig
2	6/2.5	253/222	8.66	
3	6/2.8	305/419	2.68	
4	6/2.6	266/36	3.52	Dominion Field Services, Inc.
5	6/1.3	305/416	4.68	Equitrans, L.P.
6	6/2.4	163/44	14.98	
7	6/2.3	197/659	4.15	Carol & Alfreda Painter
8	4/28	WB 28/314	357.75	John Paul Strickling, et al
9	3/18.4	286/473	16.58	John & Jennifer Layton
10	3/18	228/723	6.84	Thomas K. Jr. / Penny A. Porter
11	3/18.2	232/135	6.00	David J. & Debra S. Smith
12	3/23	WB 47/723	3.00	Connie Ruckman
13	3/17.1	261/508	9.90	Michael A. Montgomery
14	3/16	AP 40/512	26.00	Doris F. Wisman
15	3/19.1	265/582	7.00	Glen H. Montgomery, et al
16	3/19	WB 47/333	21.64	Skyler Ora & Clifford Warren Montgomery, et al
17	3/10	259/310	75.00	James W. & Lynda S. Beatty
18	3/10.1	259/312	0.25	
19	3/9	239/114	7.39	Mary Hill Frame
20	3/5	170/587	53.00	Dale Bradford & Dwight R. Husk
21	3/8	202/8	49.52	Joseph L. & Maria McConnell
22	3/8.1	286/218	4.48	Charles A. & Ronda Gay Ford

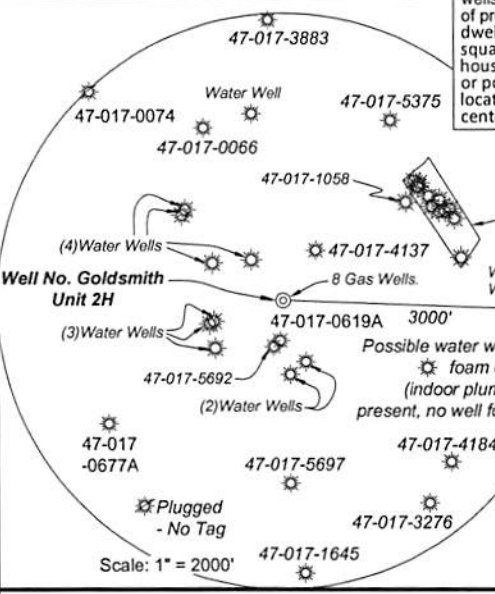


**Notes:**  
 West Virginia Coordinate System of 1927, North Zone based upon Differential GPS Measurements.  
 Well No. Goldsmith Unit 2H Top Hole coordinates are  
 N: 302,241.67' Latitude: 39°19'20.83"  
 E: 1,630,393.47' Longitude: 80°48'23.42"  
 Bottom Hole coordinates are  
 N: 310,785.35' Latitude: 39°20'44.82"  
 E: 1,627,304.27' Longitude: 80°49'04.32"  
 UTM Zone 17, NAD 1983  
 Top Hole Coordinates Bottom Hole Coordinates  
 N: 4,352,587.571m N: 4,355,174.692m  
 E: 516,693.493m E: 515,708.939m  
 Plat orientation and corner and well references are based upon the grid north meridian.  
 Well location references are based upon the magnetic meridian.

**ALLEGHENY SURVEYS, INC.**

Bearing	Dist.
L1 S 82°46' W	559.8'
L2 N 12°19' E	488.8'
L3 N 27°33' E	832.5'
L4 S 32°32' W	624.1'

Note: It appears 23 water wells were found within 2000' of proposed well. No occupied dwellings or buildings 2,500 square feet or larger used to house or shelter dairy cattle or poultry husbandry are located within 625' of the center of the well pad.



**I, the undersigned, hereby certify that this plat is correct to the best of my knowledge and belief and shows all the information required by law and the rules issued and prescribed by the Department of Environmental Protection.**

*Bradley D. Miller*  
**Bradley D. Miller, P.S. 2167**

**BRADLEY D. MILLER LICENSED No. 2167 STATE OF WEST VIRGINIA PROFESSIONAL SURVEYOR SEAL**

**Wellhead Layout Detail Not to Scale**

**STATE OF WEST VIRGINIA DEPARTMENT OF ENVIRONMENTAL PROTECTION OIL AND GAS DIVISION**

DATE: January 16 2019  
 Operator's Well No. Goldsmith Unit 2H  
 API WELL NO  
47 - 017 - 06821  
 STATE COUNTY PERMIT

FILE NO: 201-30-WU-14  
 DRAWING NO: Goldsmith 2H As-Drilled Well Plat  
 SCALE: 1" = 1200'  
 MINIMUM DEGREE OF ACCURACY: Submeter  
 PROVEN SOURCE OF ELEVATION: CORS, Marietta, OH

WELL TYPE:  OIL  GAS  LIQUID INJECTION  WASTE DISPOSAL  
 (IF GAS) PRODUCTION:  STORAGE  DEEP  SHALLOW  
 LOCATION: ELEVATION: As-Built Grade - 843' WATERSHED: Headwaters Middle Island Creek QUADRANGLE: West Union  
 DISTRICT: West Union WV Division of Natural Resources; William Mark Smith; Black Gold Group, LTD; William Randall Lynch & Dixie Craig; Dwight Robert Husk, et ux; Janice M. Ellifritt Cox; J.C. Smith, Agent for Jacob Smith Estate; ACREAGE: 32.19 20.49; 56.07; 32.15; 78.75;  
 SURFACE OWNER: William Randall Lynch & Dixie Craig COUNTY: Doddridge ACREAGE: 32.19 82.21; 290; 150;  
 ROYALTY OWNER: Clarence W. Mutschelknaus, et ux; James Douglas White; Lewis Maxwell, et al LEASE NO: \_\_\_\_\_ ACREAGE: 168; 61.361; 105  
 PROPOSED WORK:  DRILL  CONVERT  DRILL DEEPER  FRACTURE OR STIMULATE  PLUG OFF OLD FORMATION  
 PERFORATE NEW FORMATION  OTHER PHYSICAL CHANGE IN WELL (SPECIFY) As-Drilled 6,419' TVD  
 PLUG AND ABANDON  CLEAN OUT AND REPLUG TARGET FORMATION: Marcellus Shale ESTIMATED DEPTH: 15,769' MD

WELL OPERATOR: Antero Resources Corporation DESIGNATED AGENT: Dianna Stamper - CT Corporation System  
 ADDRESS: 1615 Wynkoop Street ADDRESS: 5400 D Big Tyler Road  
Denver, CO 80202 Charleston, WV 25313

7,562' to Bottom Hole

4,255' to Top Hole

BTM HOLE LATITUDE 39 - 22 - 30  
TOP HOLE LATITUDE 39 - 20 - 00

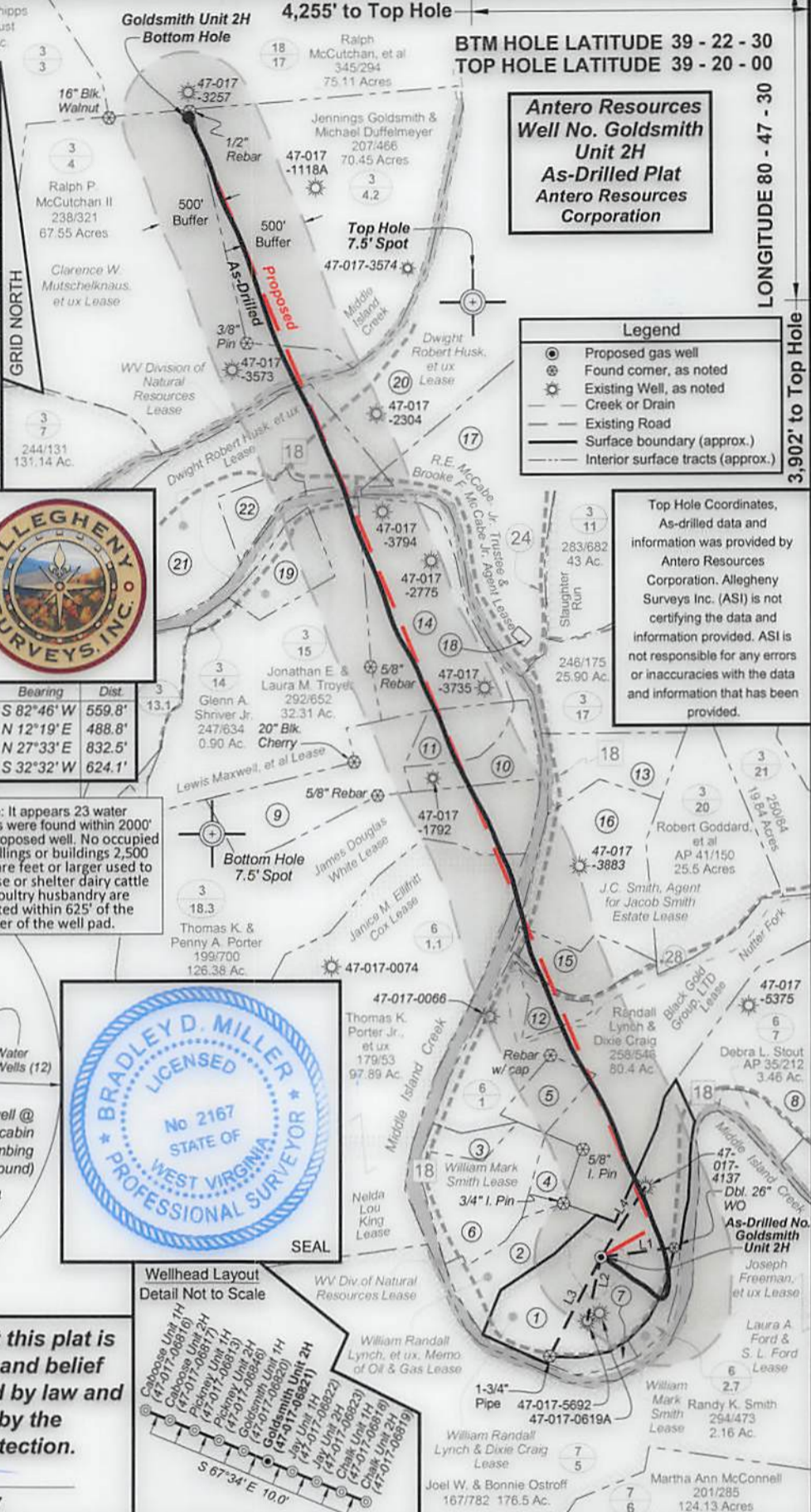
LONGITUDE 80 - 47 - 30

3,902' to Top Hole

10,532' to Bottom Hole

Ralph McCutchan II Chipp  
Revocable Living Trust  
260/379 132.61 Ac.

TM/Par	Bk/Pg	Acres	Owner(s)
1	6/2	214 / 279	32.19
2	6/2.5	253 / 222	8.66
3	6/2.8	305 / 419	2.68
4	6/2.6	266 / 36	3.52
5	6/1.3	305 / 416	4.68
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9	3/18.4	286 / 473	16.58
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13	3/17.1	261 / 508	9.90
14	3/16	AP 40/512	26.00
15	3/19.1	265 / 582	7.00
16	3/19	WB 47/333	21.64
17	3/10	259 / 310	75.00
18	3/10.1	259 / 312	0.25
19	3/9	239 / 114	7.39
20	3/5	170 / 587	53.00
21	3/8	202 / 8	49.52
22	3/8.1	286 / 218	4.48



**Antero Resources  
Well No. Goldsmith  
Unit 2H  
As-Drilled Plat  
Antero Resources  
Corporation**

**Legend**

- Proposed gas well
- Found corner, as noted
- Existing Well, as noted
- Creek or Drain
- Existing Road
- Surface boundary (approx.)
- Interior surface tracts (approx.)

Top Hole Coordinates, As-drilled data and information was provided by Antero Resources Corporation. Allegheny Surveys Inc. (ASI) is not certifying the data and information provided. ASI is not responsible for any errors or inaccuracies with the data and information that has been provided.

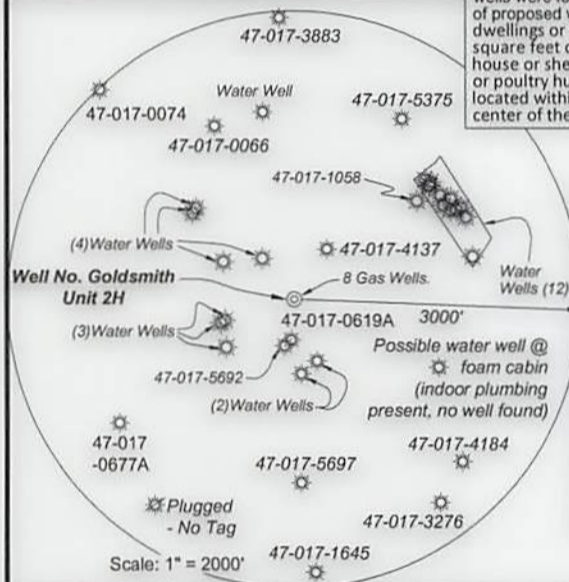


Bearing	Dist.
L1 S 82°46' W	559.8'
L2 N 12°19' E	488.8'
L3 N 27°33' E	832.5'
L4 S 32°32' W	624.1'

Note: It appears 23 water wells were found within 2000' of proposed well. No occupied dwellings or buildings 2,500 square feet or larger used to house or shelter dairy cattle or poultry husbandry are located within 625' of the center of the well pad.



**Notes:**  
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Top Hole Coordinates Bottom Hole Coordinates  
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Plat orientation and corner and well references are based upon the grid north meridian.  
Well location references are based upon the magnetic meridian.



I, the undersigned, hereby certify that this plat is correct to the best of my knowledge and belief and shows all the information required by law and the rules issued and prescribed by the Department of Environmental Protection.

*Bradley D. Miller*  
**Bradley D. Miller, P.S. 2167**

FILE NO: 201-30-WU-14  
DRAWING NO: Goldsmith 2H As-Drilled Well Plat  
SCALE: 1" = 1200'  
MINIMUM DEGREE OF ACCURACY: Submeter  
PROVEN SOURCE OF ELEVATION: CORS, Marietta, OH

**STATE OF WEST VIRGINIA  
DEPARTMENT OF ENVIRONMENTAL PROTECTION  
OIL AND GAS DIVISION**

DATE: January 16 2019  
Operator's Well No. Goldsmith Unit 2H  
API WELL NO  
47 - 017 - 06821  
STATE COUNTY PERMIT

WELL TYPE:  OIL  GAS  LIQUID INJECTION  WASTE DISPOSAL  
(IF GAS) PRODUCTION:  STORAGE  DEEP  SHALLOW  
LOCATION: ELEVATION: As-Built Grade - 843' WATERSHED: Headwaters Middle Island Creek QUADRANGLE: West Union  
DISTRICT: West Union WV Division of Natural Resources; William Mark Smith; Black Gold Group, LTD; William Randall Lynch & Dixie Craig; COUNTY: Doddridge 20.49; 56.07; Dwight Robert Husk, et ux; Janice M. Ellifritt Cox; ACREAGE: 32.19 32.15; 78.75; J.C. Smith, Agent for Jacob Smith Estate; LEASE NO: ACREAGE: 168; 61.361; 105  
ROYALTY OWNER: Clarence W. Mutschelknaus, et ux; James Douglas White; Lewis Maxwell, et al  
PROPOSED WORK:  DRILL  CONVERT  DRILL DEEPER  FRACTURE OR STIMULATE  PLUG OFF OLD FORMATION  
 PERFORATE NEW FORMATION  OTHER PHYSICAL CHANGE IN WELL (SPECIFY) As-Drilled 6,419' TVD  
 PLUG AND ABANDON  CLEAN OUT AND REPLUG TARGET FORMATION: Marcellus Shale ESTIMATED DEPTH: 15,769' MD

WELL OPERATOR: Antero Resources Corporation DESIGNATED AGENT: Dianna Stamper - CT Corporation System  
ADDRESS: 1615 Wynkoop Street ADDRESS: 5400 D Big Tyler Road  
Denver, CO 80202 Charleston, WV 25313



DEPARTMENT OF ENVIRONMENTAL PROTECTION  
**OIL AND GAS DIVISION**  
 STATE OF WEST VIRGINIA

DESIGNATED AGENT: Diana Stamper - CT Corporation System  
 ADDRESS: 1615 Wynnkoop Street  
 CHESTER, WV 25313

WELL OPERATOR: Antero Resources Corporation  
 ADDRESS: 5400 D Big Tyler Road  
 CHESTER, WV 25313

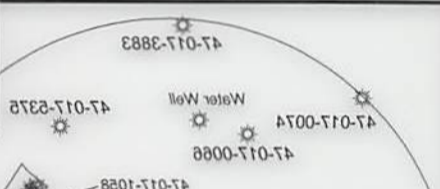
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PROVEN SOURCE OF ELEVATION: Submeter  
 MINIMUM DEGREE OF ACCURACY: 1" = 1200'  
 DRAWING NO: Goldsmith 2H As-Drilled Well Plat  
 FILE NO: 201-30-WU-14

ROYALTY OWNER: Clarence W. Mutschelknaus, et ux; James Douglas White, Lewis Maxwell, et al LEASE NO: 188; 61.381; 105  
 SURFACE OWNER: William Randall Lynch & Dixie Craig  
 DISTRICT: West Union  
 LOCATION: ELEVATION: As-Built Grade - 843'  
 WATERSHED: Headwaters Middle Island Creek QUADRANGLE: West Union

PROPOSED WORK:  PLUG AND ABANDON  CLEAN OUT AND REPLUG  OTHER PHYSICAL CHANGE IN WELL (SPECIFY) As-Drilled  
 PERFORATE NEW FORMATION  DRILL  CONVERT  DRILL DEEPER  FRACTURE OR STIMULATE  PLUG OFF OLD FORMATION

BRADLEY D. MILLER, P.S. 2167  
 I, the undersigned, hereby certify that this plat is correct to the best of my knowledge and belief and shows all the information required by law and the rules issued and prescribed by the Department of Environmental Protection.



Well location references are based upon the magnetic meridian.  
 Plat orientation and corner and well references are based upon the grid north meridian.  
 N: 4,352,857.871m E: 518,693.493m  
 N: 4,352,857.871m E: 518,708.939m  
 UTM Zone 17, NAD 1983  
 E: 1,627,304.27' Longitude: 80°49'04.32"  
 N: 3,107,882.35' Latitude: 39°20'44.82"  
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 Well No. Goldsmith Unit 2H Top Hole coordinates are based upon Differential GPS Measurements.  
 West Virginia Coordinate System of 1927, North Zone

Tract No.	Acres	Owner(s)
1	0.25	William Randall Lynch & Dixie Craig
2	0.25	William Randall Lynch & Dixie Craig
3	0.25	William Randall Lynch & Dixie Craig
4	0.25	William Randall Lynch & Dixie Craig
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15	0.25	William Randall Lynch & Dixie Craig
16	0.25	William Randall Lynch & Dixie Craig
17	0.25	William Randall Lynch & Dixie Craig
18	0.25	William Randall Lynch & Dixie Craig
19	0.25	William Randall Lynch & Dixie Craig
20	0.25	William Randall Lynch & Dixie Craig
21	0.25	William Randall Lynch & Dixie Craig
22	0.25	William Randall Lynch & Dixie Craig

Notes:  
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 UTM Zone 17, NAD 1983  
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22	0.25	William Randall Lynch & Dixie Craig

4,255' to Top Hole  
 7,562' to Bottom Hole  
 BTM HOLE LATITUDE 39 - 25 - 30  
 TOP HOLE LATITUDE 39 - 20 - 00  
 LONGITUDE 80 - 41 - 30

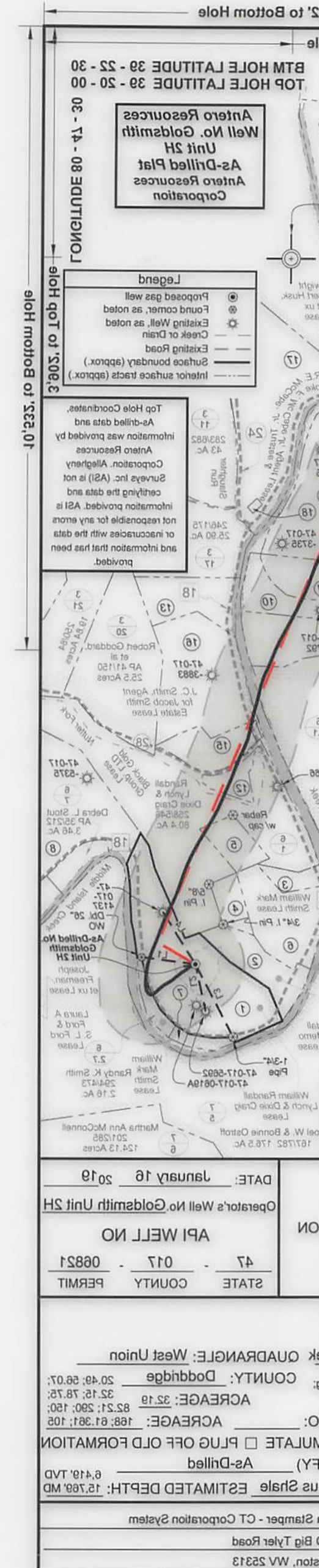


Legend:  
 Proposed gas well  
 Found corner as noted  
 Existing Well, as noted  
 Creek or Drain  
 Existing Road  
 Surface boundary (approx.)  
 Interior surface tracts (approx.)

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 As-drilled data and information is provided by Antero Resources Corporation. Allegheny Surveys Inc. (ASI) is not certifying the data and information provided. ASI is not responsible for any errors or inaccuracies with the data and information that has been provided.

BRADLEY D. MILLER, P.S. 2167  
 LICENSED PROFESSIONAL SURVEYOR  
 STATE OF WEST VIRGINIA  
 No. 2167  
 WEST VIRGINIA SURVEYORS BOARD

Antero Resources Corporation  
 1615 Wynnkoop Street  
 Chester, WV 25313



Antero Resources Corporation  
 1615 Wynnkoop Street  
 Chester, WV 25313