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

API 47 - 095 - 02337 County Tyler District Centerville
Quad Middlebourne 7.5' Pad Name Estlack Pad Field/Pool Name ---
Farm name Edna Monroe Well Number Melvin Unit 1H
Operator (as registered with the OOG) Antero Resources Corporation
Address 1615 Wynkoop Street City Denver State CO Zip 80202

As Drilled location NAD 83/UTM Attach an as-drilled plat, profile view, and deviation survey

| | | | | |
|---|---|---|---|---|
| Top hole | Northing | 4362770m | Easting | 510501m |
| Landing Point of Curve | Northing | 4362604.191m | Easting | 509842.351m |
| Bottom Hole | Northing | 4365566m | Easting | 508792m |

Elevation (ft) 1142' 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 01/29/2016 Date drilling commenced 02/19/2016 Date drilling ceased 04/10/2016
Date completion activities began 09/01/2016 Date completion activities ceased 12/01/2016
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 to plug

Freshwater depth(s) ft 46', 98' Open mine(s) (Y/N) depths No
Salt water depth(s) ft 748', 1222' Void(s) encountered (Y/N) depths No
Coal depth(s) ft 228', 1128', 1628' Cavern(s) encountered (Y/N) depths No
Is coal being mined in area (Y/N) No

APPROVED
NAME: [illegible]
DATE: 9-19-17

Reviewed by: DmH

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API 47- 095 - 02337 Farm name Edna Monroe Well number Melvin Unit 1H

| CASING STRINGS | Hole Size | Casing Size | Depth | New or Used | Grade wt/ft | Basket Depth(s) | Did cement circulate (Y/ N) * Provide details below* |
|---|---|---|---|---|---|---|---|
| Conductor | 24" | 20" | 72' | New | 94#, H-40 | N/A | Y |
| Surface | 17- 1/2" | 13- 3/8" | 411' | New | 48#, H-40 | N/A | Y |
| Coal | | | | | | | |
| Intermediate 1 | 12-1/4" | 9-5/8" | 2623' | New | 36#, J-55 | N/A | Y |
| Intermediate 2 | | | | | | | |
| Intermediate 3 | | | | | | | |
| Production | 8-3/4" | 5-1/2" | 17695' | New | 23#, P-110 | N/A | Y |
| Tubing | | 2-3/8" | 7082' | | 4.7#, N-80 | | |
| Packer type and depth set | | N/A | | | | | |

Comment Details

| CEMENT DATA | Class/Type of Cement | Number of Sacks | Slurry wt (ppg) | Yield ( $ft^3$/sks) | Volume ($ft^3$) | Cement Top (MD) | WOC (hrs) |
|---|---|---|---|---|---|---|---|
| Conductor | Class A | 143 sx | 15.6 | 1.18 | 169 | 0 | 8 Hrs. |
| Surface | Class A | 495 sx | 15.6 | 1.19 | 589 | 0 | 8 Hrs. |
| Coal | | | | | | | |
| Intermediate 1 | Class A | 1029 sx | 15.6 | 1.80 | 1852 | 0 | 8 Hrs. |
| Intermediate 2 | | | | | | | |
| Intermediate 3 | | | | | | | |
| Production | Class H | 1012 sx (Lead), 1660 sx (Tail) | 14.5 (Lead), 15.2 (Tail) | 1.33 (Lead), 1.83 (Tail) | 4384 | ~500' into Intermediate Casing | 8 Hrs. |
| Tubing | | | | | | | |

Drillers TD (ft) 17695' MD, 6592' TVD (BHL); & 6597' TVD (Deepest point drilled) Loggers TD (ft) 17667' MD

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

Plug back procedure N/A

** This is a subsequent well. Antero only runs wireline logs on one well on a multi-well pad (Lucy Unit 1H API# 47-095-02276). Please reference the wireline logs submitted with Form WR-35 for the Lucy Unit 1H. A Cement Bond Log has been included with this submittal.

Kick off depth (ft) 6423'

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- 095 - 02337 Farm name Edna Monroe Well number Melvin Unit 1H

## PERFORATION RECORD

| Stage No. | Perforation date | Perforated from MD ft. | Perforated to MD ft. | Number of Perforations | Formation(s) |
|---|---|---|---|---|---|
| | | | | | |
| | | | | | |

*** PLEASE SEE ATTACHED EXHIBIT 1**

Please insert additional pages as applicable.

## STIMULATION INFORMATION PER STAGE

Complete a separate record for each stimulation stage.

| Stage No. | Stimulations Date | Ave Pump Rate (BPM) | Ave Treatment Pressure (PSI) | Max Breakdown Pressure (PSI) | ISIP (PSI) | Amount of Proppant (lbs) | Amount of Water (bbls) | Amount of Nitrogen/other (units) |
|---|---|---|---|---|---|---|---|---|
| | | | | | | | | |
| | | | | | | | | |

*** PLEASE SEE ATTACHED EXHIBIT 2**

Please insert additional pages as applicable.

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API 47- 095 - 02337 Farm name Edna Monroe Well number Melvin Unit 1H

| PRODUCING FORMATION(S) | DEPTHS | | | |
|---|---|---|---|---|
| Marcellus | 6520' (Top) | TVD | 7145' (Top) | MD |
| | | | | |
| | | | | |
| | | | | |

Please insert additional pages as applicable.

GAS TEST □ Build up □ Drawdown ■ Open Flow OIL TEST ■ Flow □ Pump

SHUT-IN PRESSURE Surface 4100 psi Bottom Hole --- psi DURATION OF TEST --- hrs

| OPEN FLOW | Gas | Oil | NGL | Water | GAS MEASURED BY |
|---|---|---|---|---|---|
| | 11982 mcfpd | 245 bpd | --- bpd | 853 bpd | □ Estimated ■ Orifice □ Pilot |

| LITHOLOGY/ FORMATION NAME | TOP DEPTH IN FT TVD | BOTTOM DEPTH IN FT TVD | TOP DEPTH IN FT MD | BOTTOM DEPTH IN FT MD | DESCRIBE ROCK TYPE AND RECORD QUANTITY AND TYPE OF FLUID (FRESHWATER, BRINE, OIL, GAS, $H_2S$, ETC) |
|---|---|---|---|---|---|
| | 0 | | 0 | | |
| | | | | | |

*** PLEASE SEE ATTACHED EXHIBIT 3**

Please insert additional pages as applicable.

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

Logging Company Allied Horizontal Wireline Services
Address 381 Colonial Manor Rd City North Huntingdon State PA Zip 15642

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

Stimulating Company Halliburton
Address 121 Champion Way Suite 200 City Canonsburg State PA Zip 15317

Please insert additional pages as applicable.

Completed by Samantha Klaas Telephone 303-357-6759
Signature Samantha Klaas Title Permitting Agent Date 08/25/2017

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

API 47-095-02337 Farm Name Edna Monroe Well Number Melvin Unit 1H

## EXHIBIT 1

| Stage No. | Perforation Date | Perforated from MD ft. | Perforated to MD ft. | Number of Perforations | Formations |
|---|---|---|---|---|---|
| 1 | 9/1/2016 | 17424 | 17593 | 60 | Marcellus |
| 2 | 9/2/2016 | 17223 | 17392 | 60 | Marcellus |
| 3 | 9/3/2016 | 17022 | 17192 | 60 | Marcellus |
| 4 | 9/3/2016 | 16822 | 16991 | 60 | Marcellus |
| 5 | 9/4/2016 | 16621 | 16791 | 60 | Marcellus |
| 6 | 9/5/2016 | 16421 | 16590 | 60 | Marcellus |
| 7 | 9/5/2016 | 16220 | 16389 | 60 | Marcellus |
| 8 | 9/6/2016 | 16020 | 16189 | 60 | Marcellus |
| 9 | 9/7/2016 | 15819 | 15988 | 60 | Marcellus |
| 10 | 9/8/2016 | 15619 | 15788 | 60 | Marcellus |
| 11 | 9/8/2016 | 15418 | 15587 | 60 | Marcellus |
| 12 | 9/9/2016 | 15218 | 15387 | 60 | Marcellus |
| 13 | 9/9/2016 | 15017 | 15186 | 60 | Marcellus |
| 14 | 9/10/2016 | 14817 | 14986 | 60 | Marcellus |
| 15 | 9/10/2016 | 14616 | 14785 | 60 | Marcellus |
| 16 | 9/11/2016 | 14416 | 14585 | 60 | Marcellus |
| 17 | 9/11/2016 | 14215 | 14384 | 60 | Marcellus |
| 18 | 9/12/2016 | 14015 | 14184 | 60 | Marcellus |
| 19 | 9/12/2016 | 13814 | 13983 | 60 | Marcellus |
| 20 | 9/13/2016 | 13614 | 13783 | 60 | Marcellus |
| 21 | 9/13/2016 | 13413 | 13582 | 60 | Marcellus |
| 22 | 9/14/2016 | 13213 | 13382 | 60 | Marcellus |
| 23 | 9/14/2016 | 13012 | 13181 | 60 | Marcellus |
| 24 | 9/14/2016 | 12812 | 12981 | 60 | Marcellus |
| 25 | 9/15/2016 | 12611 | 12780 | 60 | Marcellus |
| 26 | 9/15/2016 | 12411 | 12580 | 60 | Marcellus |
| 27 | 9/16/2016 | 12210 | 12379 | 60 | Marcellus |
| 28 | 9/16/2016 | 12009 | 12179 | 60 | Marcellus |
| 29 | 9/17/2016 | 11809 | 11978 | 60 | Marcellus |
| 30 | 9/17/2016 | 11608 | 11778 | 60 | Marcellus |
| 31 | 9/18/2016 | 11408 | 11577 | 60 | Marcellus |
| 32 | 9/18/2016 | 11207 | 11376 | 60 | Marcellus |
| 33 | 9/19/2016 | 11007 | 11176 | 60 | Marcellus |
| 34 | 9/20/2016 | 10806 | 10975 | 60 | Marcellus |
| 35 | 9/20/2016 | 10606 | 10775 | 60 | Marcellus |
| 36 | 9/21/2016 | 10405 | 10574 | 60 | Marcellus |
| 37 | 9/21/2016 | 10205 | 10374 | 60 | Marcellus |
| 38 | 9/21/2016 | 10004 | 10173 | 60 | Marcellus |
| 39 | 9/22/2016 | 9804 | 9973 | 60 | Marcellus |
| 40 | 9/23/2016 | 9603 | 9772 | 60 | Marcellus |
| 41 | 9/23/2016 | 9403 | 9572 | 60 | Marcellus |
| 42 | 9/23/2016 | 9202 | 9371 | 60 | Marcellus |
| 43 | 9/24/2016 | 9002 | 9171 | 60 | Marcellus |
| 44 | 9/24/2016 | 8801 | 8970 | 60 | Marcellus |
| 45 | 9/25/2016 | 8601 | 8770 | 60 | Marcellus |
| 46 | 9/25/2016 | 8400 | 8569 | 60 | Marcellus |
| 47 | 9/26/2016 | 8200 | 8369 | 60 | Marcellus |
| 48 | 9/26/2016 | 7999 | 8168 | 60 | Marcellus |
| 49 | 9/26/2016 | 7799 | 7968 | 60 | Marcellus |
| 50 | 9/27/2016 | 7598 | 7767 | 60 | Marcellus |
| 51 | 9/27/2016 | 7398 | 7567 | 60 | Marcellus |
| 52 | 9/28/2016 | 7197 | 7366 | 60 | Marcellus |

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API 47-095-02337 Farm Name Edna Monroe Well Number Melvin Unit 1H

# EXHIBIT 2

| Stage No. | Stimulations Date | Avg Pump Rate | Avg Treatment Pressure (PSI) | Max Breakdown Pressure (PSI) | ISIP (PSI) | Amount of Proppant (lbs) | Amount of Water (bbls) | Amount of Nitrogen/ other (units) |
|---|---|---|---|---|---|---|---|---|
| 1 | 9/2/2016 | 70.0 | 7344 | 4945 | 4962 | 305855 | 8731.0 | N/A |
| 2 | 9/2/2016 | 73.5 | 7483 | 5703 | 4268 | 305855 | 7848.0 | N/A |
| 3 | 9/3/2016 | 71.2 | 7500 | 6141 | 4721 | 302775 | 9434.0 | N/A |
| 4 | 9/3/2016 | 68.6 | 7625 | 5689 | 3991 | 303676 | 10130.0 | N/A |
| 5 | 9/4/2016 | 74.2 | 8126 | 5653 | 4568 | 304251 | 9904.0 | N/A |
| 6 | 9/5/2016 | 72.9 | 7532 | 5465 | 5092 | 303685 | 7849.0 | N/A |
| 7 | 9/5/2016 | 75.0 | 7185 | 5570 | 3596 | 306057 | 7844.0 | N/A |
| 8 | 9/6/2016 | 72.3 | 8012 | 5646 | 7153 | 258830 | 10311.0 | N/A |
| 9 | 9/7/2016 | 73.7 | 7384 | 5374 | 4486 | 306099 | 7816.0 | N/A |
| 10 | 9/8/2016 | 70.5 | 7151 | 5681 | 3486 | 304794 | 8923.0 | N/A |
| 11 | 9/8/2016 | 75.4 | 7382 | 5771 | 3620 | 303829 | 9037.0 | N/A |
| 12 | 9/9/2016 | 75.0 | 7264 | 5696 | 3198 | 303176 | 7950.0 | N/A |
| 13 | 9/9/2016 | 76.5 | 7345 | 5695 | 3183 | 303797 | 7729.0 | N/A |
| 14 | 9/10/2016 | 71.4 | 7161 | 6176 | 0 | 286670 | 8114.0 | N/A |
| 15 | 9/10/2016 | 76.3 | 7484 | 5806 | 4503 | 284635 | 7683.0 | N/A |
| 16 | 9/11/2016 | 78.3 | 7632 | 6128 | 3492 | 304194 | 7863.0 | N/A |
| 17 | 9/11/2016 | 73.1 | 7235 | 5706 | 4728 | 286942 | 7819.0 | N/A |
| 18 | 9/12/2016 | 73.7 | 7289 | 5985 | 4307 | 304554 | 7876.0 | N/A |
| 19 | 9/12/2016 | 75.5 | 7332 | 5720 | 3745 | 304373 | 8023.0 | N/A |
| 20 | 9/13/2016 | 76.0 | 7260 | 5749 | 4251 | 304240 | 7778.0 | N/A |
| 21 | 9/13/2016 | 76.6 | 7465 | 5634 | 4405 | 304942 | 7641.0 | N/A |
| 22 | 9/14/2016 | 76.0 | 7311 | 5266 | 3348 | 305437 | 8956.0 | N/A |
| 23 | 9/14/2016 | 77.5 | 7576 | 5624 | 3441 | 304561 | 8927.0 | N/A |
| 24 | 9/14/2016 | 77.7 | 7304 | 5926 | 4415 | 303775 | 7841.0 | N/A |
| 25 | 9/15/2016 | 77.9 | 7543 | 5608 | 4148 | 306019 | 7830.0 | N/A |
| 26 | 9/15/2016 | 76.3 | 7461 | 5656 | 4192 | 304477 | 8716.0 | N/A |
| 27 | 9/16/2016 | 76.8 | 7702 | 5660 | 3758 | 306598 | 7703.0 | N/A |
| 28 | 9/16/2016 | 77.5 | 7367 | 5519 | 4917 | 303805 | 7861.0 | N/A |
| 29 | 9/17/2016 | 77.6 | 7433 | 5431 | 3996 | 304619 | 7731.0 | N/A |
| 30 | 9/17/2016 | 73.9 | 7081 | 5794 | 3895 | 305676 | 7815.0 | N/A |
| 31 | 9/18/2016 | 75.9 | 7536 | 5664 | 3693 | 304201 | 8341.0 | N/A |
| 32 | 9/18/2016 | 75.6 | 7023 | 5504 | 4680 | 304970 | 7934.0 | N/A |
| 33 | 9/19/2016 | 75.6 | 7129 | 5484 | 3607 | 305033 | 7761.0 | N/A |
| 34 | 9/20/2016 | 73.9 | 7365 | 5501 | 3705 | 303738 | 7643.0 | N/A |
| 35 | 9/20/2016 | 55.7 | 8028 | 5602 | 5284 | 133555 | 6858.0 | N/A |
| 36 | 9/21/2016 | 79.8 | 7513 | 4696 | 4182 | 303988 | 7690.0 | N/A |
| 37 | 9/21/2016 | 77.0 | 6843 | 5442 | 4013 | 305532 | 7682.0 | N/A |
| 38 | 9/21/2016 | 75.2 | 6909 | 5488 | 3297 | 305377 | 7764.0 | N/A |
| 39 | 9/22/2016 | 76.6 | 6905 | 5767 | 4589 | 306439 | 7623.0 | N/A |
| 40 | 9/23/2016 | 80.7 | 6358 | 5293 | 5293 | 304196 | 7651.0 | N/A |
| 41 | 9/23/2016 | 75.9 | 7293 | 5789 | 3669 | 304518 | 7700.0 | N/A |
| 42 | 9/23/2016 | 77.4 | 6680 | 5387 | 3334 | 304641 | 7601.0 | N/A |
| 43 | 9/24/2016 | 76.7 | 6897 | 5716 | 3714 | 304841 | 7633.0 | N/A |
| 44 | 9/24/2016 | 77.3 | 6973 | 5504 | 3151 | 305438 | 7685.0 | N/A |
| 45 | 9/25/2016 | 74.0 | 6873 | 5629 | 3177 | 305017 | 7674.0 | N/A |
| 46 | 9/25/2016 | 74.0 | 6886 | 5573 | 3243 | 303367 | 7511.0 | N/A |
| 47 | 9/26/2016 | 75.9 | 7195 | 5676 | 4124 | 304166 | 7618.0 | N/A |
| 48 | 9/26/2016 | 75.8 | 7195 | 5584 | 3398 | 307331 | 7575.0 | N/A |
| 49 | 9/26/2016 | 77.7 | 6952 | 5528 | 3414 | 304968 | 7472.0 | N/A |
| 50 | 9/27/2016 | 77.2 | 6946 | 5996 | 3524 | 305191 | 7547.0 | N/A |
| 51 | 9/27/2016 | 77.3 | 6901 | 6000 | 3555 | 303791 | 7592.0 | N/A |
| 52 | 9/28/2016 | 77.5 | 6733 | 6516 | 3178 | 300377 | 7591.0 | N/A |
| | AVG= | 75.1 | 7,271 | 5,649 | 3,956 | 15,568,871 | 417,829 | TOTAL |

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# Actual Wellpath Report

Melvin Unit 1H AWP Proj: 17695'



| REFERENCE WELLPATH IDENTIFICATION | | | |
|---|---|---|---|
| Operator | ANTERO RESOURCES CORPORATION | Slot | Slot #08 |
| Area | Tyler County, WV | Well | Melvin Unit 1H |
| Field | Tyler | Wellbore | Melvin Unit 1H AWB |
| Facility | Estlack Pad | | |

| REPORT SETUP INFORMATION | | | |
|---|---|---|---|
| Projection System | NAD27 / UTM Zone 17 North, US feet | Software System | WellArchitect® 5.0 |
| North Reference | Grid | User | Hareluk |
| Scale | 0.999601 | Report Generated | 19/Apr/2016 at 10:55 |
| Convergence at slot | 0.08° East | Database/Source file | WA_MPL_EASTERNUS_Defn/Melvin_Unit_1H_AWP_Proj__17695_.xml |

| WELLPATH LOCATION | Local coordinates | | Grid coordinates | | Geographic coordinates | |
|---|---|---|---|---|---|---|
| | North[ft] | East[ft] | Easting[US ft] | Northing[US ft] | Latitude | Longitude |
| Slot Location | -26.39 | 15.15 | 1674819.76 | 14312806.27 | 39°24'51.490"N | 80°52'41.490"W |
| Facility Reference Pt | | | 1674804.62 | 14312832.65 | 39°24'51.751"N | 80°52'41.682"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 (KB) to Facility Vertical Datum | 32.00ft |
| Horizontal Reference Pt | Slot | Frontier 32 (KB) to Mean Sea Level | 1173.00ft |
| Vertical Reference Pt | Frontier 32 (KB) | Frontier 32 (KB) to Mud Line at Slot (Slot #08) | 32.00ft |
| MD Reference Pt | Frontier 32 (KB) | Section Origin | N 0.00, E 0.00 ft |
| Field Vertical Reference | Mean Sea Level | Section Azimuth | 340.51° |

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# Actual Wellpath Report

Melvin Unit 1H AWP Proj: 17695'



| REFERENCE WELLPATH IDENTIFICATION | | | |
|---|---|---|---|
| Operator | ANTERO RESOURCES CORPORATION | Slot | Slot #08 |
| Area | Tyler County, WV | Well | Melvin Unit 1H |
| Field | Tyler | Wellbore | Melvin Unit 1H AWB |
| Facility | Estlack Pad | | |

WELLPATH DATA (381 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] | Comments |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 0.00† | 0.000 | 233.180 | 0.00 | 0.00 | 0.00 | 0.00 | 1674819.76 | 14312806.27 | 39°24'51.490"N | 80°52'41.490"W | 0.00 | 0.000 | 0.00 | |
| 32.00 | 0.000 | 233.180 | 32.00 | 0.00 | 0.00 | 0.00 | 1674819.76 | 14312806.27 | 39°24'51.490"N | 80°52'41.490"W | 0.00 | 0.000 | 0.00 | |
| 100.00 | 0.440 | 233.180 | 100.00 | -0.08 | -0.16 | -0.21 | 1674819.55 | 14312806.11 | 39°24'51.488"N | 80°52'41.493"W | 0.26 | 233.180 | 0.65 | SDI Gyro (100' - 6060.13') |
| 125.00 | 0.310 | 232.220 | 125.00 | -0.13 | -0.26 | -0.34 | 1674819.42 | 14312806.01 | 39°24'51.488"N | 80°52'41.494"W | 0.42 | 233.027 | 0.52 | |
| 150.00 | 0.120 | 197.760 | 150.00 | -0.17 | -0.32 | -0.40 | 1674819.36 | 14312805.95 | 39°24'51.487"N | 80°52'41.495"W | 0.51 | 231.236 | 0.89 | |
| 175.00 | 0.130 | 218.190 | 175.00 | -0.21 | -0.37 | -0.43 | 1674819.33 | 14312805.90 | 39°24'51.486"N | 80°52'41.495"W | 0.56 | 229.117 | 0.18 | |
| 200.00 | 0.070 | 232.140 | 200.00 | -0.23 | -0.40 | -0.46 | 1674819.30 | 14312805.87 | 39°24'51.486"N | 80°52'41.496"W | 0.61 | 228.686 | 0.26 | |
| 225.00 | 0.170 | 231.290 | 225.00 | -0.24 | -0.43 | -0.50 | 1674819.26 | 14312805.84 | 39°24'51.486"N | 80°52'41.496"W | 0.66 | 228.912 | 0.40 | |
| 250.00 | 0.060 | 224.320 | 250.00 | -0.26 | -0.47 | -0.53 | 1674819.23 | 14312805.80 | 39°24'51.485"N | 80°52'41.497"W | 0.71 | 228.952 | 0.44 | |
| 275.00 | 0.080 | 212.160 | 275.00 | -0.28 | -0.49 | -0.55 | 1674819.21 | 14312805.78 | 39°24'51.485"N | 80°52'41.497"W | 0.74 | 228.479 | 0.10 | |
| 300.00 | 0.140 | 182.070 | 300.00 | -0.32 | -0.54 | -0.56 | 1674819.20 | 14312805.73 | 39°24'51.485"N | 80°52'41.497"W | 0.78 | 226.487 | 0.33 | |
| 325.00 | 0.070 | 189.720 | 325.00 | -0.36 | -0.58 | -0.57 | 1674819.19 | 14312805.69 | 39°24'51.484"N | 80°52'41.497"W | 0.81 | 224.333 | 0.28 | |
| 350.00 | 0.100 | 202.090 | 350.00 | -0.39 | -0.62 | -0.58 | 1674819.18 | 14312805.65 | 39°24'51.484"N | 80°52'41.497"W | 0.84 | 223.185 | 0.14 | |
| 375.00 | 0.110 | 255.820 | 375.00 | -0.40 | -0.64 | -0.61 | 1674819.15 | 14312805.63 | 39°24'51.484"N | 80°52'41.498"W | 0.89 | 223.514 | 0.38 | |
| 400.00 | 0.080 | 139.070 | 400.00 | -0.42 | -0.66 | -0.62 | 1674819.14 | 14312805.61 | 39°24'51.484"N | 80°52'41.498"W | 0.91 | 223.227 | 0.65 | |
| 425.00 | 0.230 | 225.130 | 425.00 | -0.45 | -0.71 | -0.65 | 1674819.11 | 14312805.56 | 39°24'51.483"N | 80°52'41.498"W | 0.96 | 222.290 | 0.95 | |
| 450.00 | 0.470 | 235.160 | 450.00 | -0.50 | -0.80 | -0.77 | 1674818.99 | 14312805.47 | 39°24'51.482"N | 80°52'41.500"W | 1.11 | 223.597 | 0.99 | |
| 475.00 | 0.710 | 238.450 | 475.00 | -0.56 | -0.94 | -0.98 | 1674818.78 | 14312805.33 | 39°24'51.481"N | 80°52'41.502"W | 1.36 | 226.134 | 0.97 | |
| 500.00 | 0.990 | 239.690 | 499.99 | -0.63 | -1.13 | -1.30 | 1674818.46 | 14312805.14 | 39°24'51.479"N | 80°52'41.507"W | 1.72 | 228.914 | 1.12 | |
| 525.00 | 1.350 | 239.970 | 524.99 | -0.73 | -1.39 | -1.74 | 1674818.02 | 14312804.88 | 39°24'51.476"N | 80°52'41.512"W | 2.23 | 231.406 | 1.44 | |
| 550.00 | 1.720 | 240.840 | 549.98 | -0.85 | -1.72 | -2.32 | 1674817.44 | 14312804.55 | 39°24'51.473"N | 80°52'41.520"W | 2.89 | 233.494 | 1.48 | |
| 575.00 | 2.160 | 242.100 | 574.96 | -0.98 | -2.12 | -3.07 | 1674816.69 | 14312804.15 | 39°24'51.469"N | 80°52'41.529"W | 3.73 | 235.313 | 1.77 | |
| 600.00 | 2.560 | 243.160 | 599.94 | -1.12 | -2.60 | -3.98 | 1674815.78 | 14312803.68 | 39°24'51.464"N | 80°52'41.541"W | 4.75 | 236.903 | 1.61 | |
| 625.00 | 2.890 | 243.980 | 624.92 | -1.26 | -3.12 | -5.05 | 1674814.71 | 14312803.15 | 39°24'51.459"N | 80°52'41.554"W | 5.94 | 238.240 | 1.33 | |
| 650.00 | 3.390 | 244.420 | 649.88 | -1.41 | -3.72 | -6.28 | 1674813.48 | 14312802.55 | 39°24'51.453"N | 80°52'41.570"W | 7.30 | 239.360 | 2.00 | |
| 675.00 | 4.060 | 245.520 | 674.82 | -1.57 | -4.41 | -7.75 | 1674812.01 | 14312801.87 | 39°24'51.447"N | 80°52'41.589"W | 8.92 | 240.389 | 2.70 | |
| 700.00 | 4.600 | 246.900 | 699.75 | -1.71 | -5.17 | -9.48 | 1674810.28 | 14312801.11 | 39°24'51.439"N | 80°52'41.611"W | 10.80 | 241.412 | 2.20 | |
| 725.00 | 5.230 | 248.240 | 724.66 | -1.82 | -5.98 | -11.46 | 1674808.30 | 14312800.29 | 39°24'51.431"N | 80°52'41.636"W | 12.93 | 242.438 | 2.56 | |
| 750.00 | 5.780 | 248.770 | 749.55 | -1.90 | -6.86 | -13.69 | 1674806.07 | 14312799.41 | 39°24'51.422"N | 80°52'41.665"W | 15.31 | 243.388 | 2.21 | |
| 775.00 | 6.390 | 248.310 | 774.40 | -1.99 | -7.83 | -16.16 | 1674803.61 | 14312798.44 | 39°24'51.413"N | 80°52'41.696"W | 17.96 | 244.146 | 2.45 | |

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# Actual Wellpath Report

Melvin Unit 1H AWP Proj: 17695'



| REFERENCE WELLPATH IDENTIFICATION | | | |
|---|---|---|---|
| Operator | ANTERO RESOURCES CORPORATION | Slot | Slot #08 |
| Area | Tyler County, WV | Well | Melvin Unit 1H |
| Field | Tyler | Wellbore | Melvin Unit 1H AWB |
| Facility | Estlack Pad | | |

WELLPATH DATA (381 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] | Comments |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 800.00 | 6.990 | 247.690 | 799.23 | -2.12 | -8.92 | -18.86 | 1674800.91 | 14312797.35 | 39°24'51.402"N | 80°52'41.730"W | 20.86 | 244.682 | 2.42 | |
| 825.00 | 7.540 | 247.380 | 824.03 | -2.28 | -10.13 | -21.78 | 1674797.99 | 14312796.14 | 39°24'51.390"N | 80°52'41.768"W | 24.02 | 245.056 | 2.21 | |
| 850.00 | 8.170 | 246.880 | 848.80 | -2.48 | -11.46 | -24.93 | 1674794.84 | 14312794.82 | 39°24'51.377"N | 80°52'41.808"W | 27.43 | 245.313 | 2.53 | |
| 875.00 | 9.130 | 246.290 | 873.51 | -2.74 | -12.95 | -28.38 | 1674791.39 | 14312793.32 | 39°24'51.362"N | 80°52'41.852"W | 31.19 | 245.464 | 3.86 | |
| 900.00 | 10.140 | 245.100 | 898.16 | -3.10 | -14.68 | -32.19 | 1674787.58 | 14312791.60 | 39°24'51.345"N | 80°52'41.900"W | 35.38 | 245.488 | 4.12 | |
| 925.00 | 10.790 | 244.360 | 922.75 | -3.56 | -16.62 | -36.30 | 1674783.48 | 14312789.66 | 39°24'51.326"N | 80°52'41.953"W | 39.92 | 245.401 | 2.65 | |
| 950.00 | 11.500 | 243.720 | 947.27 | -4.10 | -18.73 | -40.64 | 1674779.14 | 14312787.54 | 39°24'51.305"N | 80°52'42.008"W | 44.75 | 245.253 | 2.88 | |
| 975.00 | 12.440 | 242.780 | 971.73 | -4.76 | -21.07 | -45.27 | 1674774.51 | 14312785.21 | 39°24'51.282"N | 80°52'42.067"W | 49.93 | 245.043 | 3.84 | |
| 1000.00 | 13.400 | 241.850 | 996.10 | -5.56 | -23.67 | -50.22 | 1674769.56 | 14312782.61 | 39°24'51.257"N | 80°52'42.130"W | 55.51 | 244.767 | 3.93 | |
| 1025.00 | 14.170 | 241.310 | 1020.38 | -6.48 | -26.50 | -55.46 | 1674764.33 | 14312779.78 | 39°24'51.229"N | 80°52'42.197"W | 61.46 | 244.457 | 3.12 | |
| 1050.00 | 14.880 | 240.890 | 1044.58 | -7.51 | -29.53 | -60.94 | 1674758.84 | 14312776.75 | 39°24'51.199"N | 80°52'42.267"W | 67.72 | 244.146 | 2.87 | |
| 1075.00 | 15.400 | 240.540 | 1068.71 | -8.62 | -32.73 | -66.64 | 1674753.15 | 14312773.56 | 39°24'51.167"N | 80°52'42.340"W | 74.24 | 243.844 | 2.11 | |
| 1100.00 | 15.560 | 240.340 | 1092.80 | -9.78 | -36.02 | -72.44 | 1674747.35 | 14312770.27 | 39°24'51.135"N | 80°52'42.414"W | 80.90 | 243.564 | 0.67 | |
| 1125.00 | 15.950 | 240.040 | 1116.86 | -11.00 | -39.39 | -78.33 | 1674741.46 | 14312766.89 | 39°24'51.102"N | 80°52'42.489"W | 87.68 | 243.302 | 1.59 | |
| 1150.00 | 16.510 | 239.690 | 1140.87 | -12.29 | -42.90 | -84.38 | 1674735.42 | 14312763.39 | 39°24'51.067"N | 80°52'42.566"W | 94.66 | 243.049 | 2.27 | |
| 1175.00 | 16.930 | 239.440 | 1164.81 | -13.66 | -46.55 | -90.58 | 1674729.22 | 14312759.74 | 39°24'51.031"N | 80°52'42.645"W | 101.84 | 242.803 | 1.70 | |
| 1200.00 | 17.240 | 239.180 | 1188.71 | -15.08 | -50.29 | -96.89 | 1674722.91 | 14312756.00 | 39°24'50.994"N | 80°52'42.725"W | 109.17 | 242.568 | 1.28 | |
| 1225.00 | 17.640 | 238.550 | 1212.56 | -16.60 | -54.17 | -103.31 | 1674716.49 | 14312752.12 | 39°24'50.956"N | 80°52'42.807"W | 116.65 | 242.330 | 1.77 | |
| 1250.00 | 18.290 | 237.910 | 1236.34 | -18.24 | -58.23 | -109.86 | 1674709.94 | 14312748.06 | 39°24'50.916"N | 80°52'42.891"W | 124.34 | 242.075 | 2.72 | |
| 1275.00 | 18.770 | 237.680 | 1260.04 | -19.99 | -62.46 | -116.58 | 1674703.22 | 14312743.83 | 39°24'50.874"N | 80°52'42.976"W | 132.26 | 241.818 | 1.94 | |
| 1300.00 | 19.100 | 237.690 | 1283.69 | -21.79 | -66.80 | -123.44 | 1674696.37 | 14312739.50 | 39°24'50.831"N | 80°52'43.064"W | 140.36 | 241.580 | 1.32 | |
| 1325.00 | 19.530 | 237.820 | 1307.28 | -23.61 | -71.21 | -130.43 | 1674689.38 | 14312735.09 | 39°24'50.788"N | 80°52'43.153"W | 148.61 | 241.367 | 1.73 | |
| 1350.00 | 20.030 | 238.270 | 1330.81 | -25.44 | -75.69 | -137.61 | 1674682.20 | 14312730.61 | 39°24'50.744"N | 80°52'43.245"W | 157.05 | 241.188 | 2.09 | |
| 1375.00 | 20.370 | 238.440 | 1354.27 | -27.26 | -80.22 | -144.96 | 1674674.86 | 14312726.08 | 39°24'50.699"N | 80°52'43.338"W | 165.68 | 241.041 | 1.38 | |
| 1400.00 | 20.950 | 238.460 | 1377.66 | -29.10 | -84.83 | -152.48 | 1674667.34 | 14312721.47 | 39°24'50.654"N | 80°52'43.434"W | 174.49 | 240.910 | 2.32 | |
| 1425.00 | 21.780 | 238.750 | 1400.94 | -30.98 | -89.58 | -160.25 | 1674659.57 | 14312716.73 | 39°24'50.607"N | 80°52'43.533"W | 183.59 | 240.796 | 3.35 | |
| 1450.00 | 22.420 | 238.890 | 1424.11 | -32.88 | -94.45 | -168.30 | 1674651.53 | 14312711.86 | 39°24'50.559"N | 80°52'43.636"W | 192.99 | 240.700 | 2.57 | |
| 1475.00 | 22.670 | 238.690 | 1447.20 | -34.83 | -99.41 | -176.50 | 1674643.33 | 14312706.90 | 39°24'50.510"N | 80°52'43.740"W | 202.57 | 240.609 | 1.05 | |
| 1500.00 | 22.930 | 238.210 | 1470.24 | -36.85 | -104.48 | -184.75 | 1674635.08 | 14312701.83 | 39°24'50.460"N | 80°52'43.846"W | 212.25 | 240.511 | 1.28 | |
| 1525.00 | 23.230 | 237.860 | 1493.24 | -38.97 | -109.67 | -193.07 | 1674626.77 | 14312696.64 | 39°24'50.409"N | 80°52'43.952"W | 222.04 | 240.401 | 1.32 | |

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# Actual Wellpath Report

Melvin Unit 1H AWP Proj: 17695'



| REFERENCE WELLPATH IDENTIFICATION | | | |
|---|---|---|---|
| Operator | ANTERO RESOURCES CORPORATION | Slot | Slot #08 |
| Area | Tyler County, WV | Well | Melvin Unit 1H |
| Field | Tyler | Wellbore | Melvin Unit 1H AWB |
| Facility | Estlack Pad | | |

WELLPATH DATA (381 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] | Comments |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1550.00 | 23.410 | 237.460 | 1516.20 | -41.17 | -114.97 | -201.43 | 1674618.41 | 14312691.35 | 39°24'50.356"N | 80°52'44.058"W | 231.93 | 240.284 | 0.96 | |
| 1575.00 | 23.540 | 236.700 | 1539.13 | -43.49 | -120.38 | -209.79 | 1674610.06 | 14312685.94 | 39°24'50.303"N | 80°52'44.165"W | 241.87 | 240.152 | 1.32 | |
| 1600.00 | 23.620 | 235.790 | 1562.04 | -45.95 | -125.93 | -218.10 | 1674601.75 | 14312680.39 | 39°24'50.248"N | 80°52'44.271"W | 251.85 | 239.997 | 1.49 | |
| 1625.00 | 23.640 | 235.420 | 1584.95 | -48.53 | -131.60 | -226.37 | 1674593.48 | 14312674.73 | 39°24'50.192"N | 80°52'44.376"W | 261.84 | 239.829 | 0.60 | |
| 1650.00 | 23.620 | 235.220 | 1607.85 | -51.15 | -137.30 | -234.61 | 1674585.24 | 14312669.03 | 39°24'50.136"N | 80°52'44.482"W | 271.83 | 239.663 | 0.33 | |
| 1675.00 | 23.600 | 234.890 | 1630.76 | -53.82 | -143.03 | -242.82 | 1674577.04 | 14312663.30 | 39°24'50.080"N | 80°52'44.586"W | 281.81 | 239.500 | 0.53 | |
| 1700.00 | 23.370 | 234.390 | 1653.69 | -56.55 | -148.80 | -250.94 | 1674568.92 | 14312657.53 | 39°24'50.023"N | 80°52'44.690"W | 291.74 | 239.334 | 1.22 | |
| 1725.00 | 23.090 | 233.980 | 1676.66 | -59.32 | -154.57 | -258.94 | 1674560.92 | 14312651.76 | 39°24'49.966"N | 80°52'44.792"W | 301.56 | 239.166 | 1.29 | |
| 1750.00 | 23.030 | 233.950 | 1699.66 | -62.11 | -160.33 | -266.86 | 1674553.01 | 14312646.01 | 39°24'49.909"N | 80°52'44.893"W | 311.32 | 239.003 | 0.24 | |
| 1775.00 | 23.110 | 234.190 | 1722.66 | -64.88 | -166.08 | -274.79 | 1674545.08 | 14312640.26 | 39°24'49.852"N | 80°52'44.994"W | 321.08 | 238.852 | 0.49 | |
| 1800.00 | 22.980 | 234.480 | 1745.67 | -67.60 | -171.78 | -282.74 | 1674537.13 | 14312634.56 | 39°24'49.796"N | 80°52'45.095"W | 330.84 | 238.719 | 0.69 | |
| 1825.00 | 22.370 | 234.570 | 1768.74 | -70.26 | -177.38 | -290.59 | 1674529.29 | 14312628.97 | 39°24'49.741"N | 80°52'45.195"W | 340.45 | 238.600 | 2.44 | |
| 1850.00 | 21.800 | 234.420 | 1791.90 | -72.85 | -182.83 | -298.24 | 1674521.64 | 14312623.51 | 39°24'49.687"N | 80°52'45.293"W | 349.82 | 238.490 | 2.29 | |
| 1875.00 | 21.660 | 234.760 | 1815.12 | -75.39 | -188.20 | -305.79 | 1674514.10 | 14312618.15 | 39°24'49.634"N | 80°52'45.389"W | 359.06 | 238.390 | 0.75 | |
| 1900.00 | 21.620 | 235.240 | 1838.36 | -77.86 | -193.49 | -313.34 | 1674506.55 | 14312612.86 | 39°24'49.582"N | 80°52'45.486"W | 368.26 | 238.305 | 0.73 | |
| 1925.00 | 21.620 | 235.720 | 1861.60 | -80.24 | -198.71 | -320.93 | 1674498.96 | 14312607.64 | 39°24'49.530"N | 80°52'45.582"W | 377.46 | 238.236 | 0.71 | |
| 1950.00 | 21.540 | 236.250 | 1884.85 | -82.55 | -203.85 | -328.55 | 1674491.34 | 14312602.50 | 39°24'49.480"N | 80°52'45.680"W | 386.65 | 238.182 | 0.84 | |
| 1975.00 | 21.380 | 237.220 | 1908.12 | -84.73 | -208.87 | -336.20 | 1674483.70 | 14312597.49 | 39°24'49.430"N | 80°52'45.777"W | 395.79 | 238.149 | 1.56 | |
| 2000.00 | 21.430 | 238.310 | 1931.39 | -86.74 | -213.73 | -343.91 | 1674475.98 | 14312592.62 | 39°24'49.382"N | 80°52'45.875"W | 404.92 | 238.140 | 1.60 | |
| 2025.00 | 21.520 | 238.940 | 1954.66 | -88.63 | -218.50 | -351.73 | 1674468.17 | 14312587.86 | 39°24'49.335"N | 80°52'45.975"W | 414.07 | 238.151 | 0.99 | |
| 2050.00 | 21.680 | 239.720 | 1977.90 | -90.41 | -223.19 | -359.64 | 1674460.26 | 14312583.17 | 39°24'49.289"N | 80°52'46.076"W | 423.27 | 238.177 | 1.31 | |
| 2075.00 | 22.130 | 241.200 | 2001.10 | -92.04 | -227.79 | -367.76 | 1674452.15 | 14312578.57 | 39°24'49.244"N | 80°52'46.179"W | 432.59 | 238.226 | 2.85 | |
| 2100.00 | 22.620 | 242.120 | 2024.22 | -93.50 | -232.31 | -376.13 | 1674443.78 | 14312574.06 | 39°24'49.199"N | 80°52'46.286"W | 442.09 | 238.300 | 2.41 | |
| 2125.00 | 22.890 | 242.780 | 2047.27 | -94.86 | -236.78 | -384.71 | 1674435.21 | 14312569.59 | 39°24'49.155"N | 80°52'46.396"W | 451.73 | 238.389 | 1.49 | |
| 2150.00 | 23.140 | 243.470 | 2070.28 | -96.11 | -241.20 | -393.43 | 1674426.49 | 14312565.17 | 39°24'49.111"N | 80°52'46.507"W | 461.47 | 238.489 | 1.47 | |
| 2175.00 | 23.460 | 244.100 | 2093.24 | -97.27 | -245.56 | -402.30 | 1674417.62 | 14312560.81 | 39°24'49.068"N | 80°52'46.620"W | 471.32 | 238.600 | 1.62 | |
| 2200.00 | 23.730 | 244.720 | 2116.15 | -98.33 | -249.89 | -411.32 | 1674408.60 | 14312556.48 | 39°24'49.026"N | 80°52'46.735"W | 481.28 | 238.721 | 1.47 | |
| 2225.00 | 23.840 | 244.790 | 2139.03 | -99.34 | -254.19 | -420.44 | 1674399.49 | 14312552.19 | 39°24'48.983"N | 80°52'46.851"W | 491.31 | 238.844 | 0.45 | |
| 2250.00 | 23.790 | 244.740 | 2161.90 | -100.35 | -258.49 | -429.57 | 1674390.36 | 14312547.88 | 39°24'48.941"N | 80°52'46.968"W | 501.35 | 238.963 | 0.22 | |
| 2275.00 | 23.770 | 244.830 | 2184.78 | -101.36 | -262.78 | -438.69 | 1674381.24 | 14312543.59 | 39°24'48.899"N | 80°52'47.084"W | 511.38 | 239.078 | 0.17 | |

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# Actual Wellpath Report

Melvin Unit 1H AWP Proj: 17695'



| REFERENCE WELLPATH IDENTIFICATION | | | |
|---|---|---|---|
| Operator | ANTERO RESOURCES CORPORATION | Slot | Slot #08 |
| Area | Tyler County, WV | Well | Melvin Unit 1H |
| Field | Tyler | Wellbore | Melvin Unit 1H AWB |
| Facility | Estlack Pad | | |

WELLPATH DATA (381 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] | Comments |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2300.00 | 23.620 | 244.890 | 2207.67 | -102.35 | -267.05 | -447.79 | 1674372.15 | 14312539.33 | 39°24'48.857"N | 80°52'47.200"W | 521.37 | 239.189 | 0.61 | |
| 2325.00 | 23.230 | 244.580 | 2230.61 | -103.35 | -271.29 | -456.78 | 1674363.17 | 14312535.09 | 39°24'48.815"N | 80°52'47.314"W | 531.27 | 239.293 | 1.64 | |
| 2350.00 | 22.710 | 243.980 | 2253.63 | -104.41 | -275.53 | -465.57 | 1674354.38 | 14312530.85 | 39°24'48.773"N | 80°52'47.426"W | 540.99 | 239.383 | 2.28 | |
| 2375.00 | 22.010 | 243.600 | 2276.75 | -105.52 | -279.73 | -474.10 | 1674345.85 | 14312526.66 | 39°24'48.732"N | 80°52'47.535"W | 550.47 | 239.459 | 2.86 | |
| 2400.00 | 21.180 | 243.300 | 2299.99 | -106.65 | -283.84 | -482.33 | 1674337.62 | 14312522.54 | 39°24'48.691"N | 80°52'47.640"W | 559.65 | 239.524 | 3.35 | |
| 2425.00 | 20.590 | 243.450 | 2323.35 | -107.76 | -287.83 | -490.30 | 1674329.66 | 14312518.55 | 39°24'48.652"N | 80°52'47.742"W | 568.54 | 239.585 | 2.37 | |
| 2450.00 | 20.500 | 243.840 | 2346.76 | -108.81 | -291.73 | -498.16 | 1674321.80 | 14312514.66 | 39°24'48.613"N | 80°52'47.842"W | 577.29 | 239.646 | 0.66 | |
| 2475.00 | 20.670 | 244.070 | 2370.16 | -109.81 | -295.59 | -506.06 | 1674313.91 | 14312510.80 | 39°24'48.575"N | 80°52'47.943"W | 586.06 | 239.711 | 0.75 | |
| 2500.00 | 20.510 | 244.500 | 2393.57 | -110.76 | -299.40 | -513.98 | 1674305.99 | 14312506.99 | 39°24'48.538"N | 80°52'48.044"W | 594.82 | 239.778 | 0.88 | |
| 2525.00 | 20.230 | 244.840 | 2417.00 | -111.65 | -303.13 | -521.84 | 1674298.13 | 14312503.27 | 39°24'48.501"N | 80°52'48.144"W | 603.49 | 239.849 | 1.22 | |
| 2550.00 | 20.410 | 244.690 | 2440.45 | -112.52 | -306.83 | -529.70 | 1674290.28 | 14312499.57 | 39°24'48.465"N | 80°52'48.244"W | 612.14 | 239.918 | 0.75 | |
| 2575.00 | 20.700 | 244.600 | 2463.86 | -113.41 | -310.59 | -537.63 | 1674282.35 | 14312495.81 | 39°24'48.427"N | 80°52'48.345"W | 620.89 | 239.985 | 1.17 | |
| 2600.00 | 20.840 | 244.340 | 2487.23 | -114.35 | -314.41 | -545.63 | 1674274.35 | 14312491.99 | 39°24'48.390"N | 80°52'48.447"W | 629.73 | 240.048 | 0.67 | |
| 2625.00 | 20.940 | 244.110 | 2510.59 | -115.32 | -318.28 | -553.65 | 1674266.33 | 14312488.11 | 39°24'48.352"N | 80°52'48.550"W | 638.62 | 240.106 | 0.52 | |
| 2650.00 | 20.740 | 244.000 | 2533.95 | -116.32 | -322.17 | -561.65 | 1674258.33 | 14312484.23 | 39°24'48.313"N | 80°52'48.651"W | 647.49 | 240.161 | 0.82 | |
| 2675.00 | 20.300 | 243.290 | 2557.37 | -117.37 | -326.06 | -569.50 | 1674250.48 | 14312480.34 | 39°24'48.275"N | 80°52'48.752"W | 656.24 | 240.207 | 2.02 | |
| 2700.00 | 20.270 | 242.090 | 2580.81 | -118.55 | -330.04 | -577.21 | 1674242.79 | 14312476.36 | 39°24'48.236"N | 80°52'48.850"W | 664.90 | 240.240 | 1.67 | |
| 2725.00 | 20.510 | 240.310 | 2604.25 | -119.96 | -334.24 | -584.84 | 1674235.16 | 14312472.17 | 39°24'48.194"N | 80°52'48.947"W | 673.61 | 240.252 | 2.66 | |
| 2750.00 | 20.810 | 238.580 | 2627.64 | -121.65 | -338.72 | -592.43 | 1674227.57 | 14312467.68 | 39°24'48.150"N | 80°52'49.044"W | 682.43 | 240.241 | 2.72 | |
| 2775.00 | 21.020 | 237.850 | 2650.99 | -123.55 | -343.42 | -600.02 | 1674219.98 | 14312462.99 | 39°24'48.104"N | 80°52'49.141"W | 691.35 | 240.215 | 1.34 | |
| 2800.00 | 21.100 | 237.820 | 2674.32 | -125.52 | -348.20 | -607.62 | 1674212.38 | 14312458.21 | 39°24'48.057"N | 80°52'49.238"W | 700.32 | 240.185 | 0.32 | |
| 2825.00 | 21.170 | 237.650 | 2697.64 | -127.52 | -353.02 | -615.24 | 1674204.76 | 14312453.39 | 39°24'48.009"N | 80°52'49.335"W | 709.33 | 240.154 | 0.37 | |
| 2850.00 | 20.940 | 237.240 | 2720.97 | -129.55 | -357.85 | -622.81 | 1674197.19 | 14312448.56 | 39°24'47.961"N | 80°52'49.431"W | 718.30 | 240.120 | 1.09 | |
| 2875.00 | 20.610 | 236.880 | 2744.35 | -131.61 | -362.67 | -630.26 | 1674189.76 | 14312443.74 | 39°24'47.914"N | 80°52'49.526"W | 727.15 | 240.082 | 1.42 | |
| 2900.00 | 20.730 | 236.850 | 2767.74 | -133.69 | -367.49 | -637.65 | 1674182.37 | 14312438.92 | 39°24'47.866"N | 80°52'49.620"W | 735.97 | 240.044 | 0.48 | |
| 2925.00 | 21.040 | 236.750 | 2791.10 | -135.80 | -372.37 | -645.10 | 1674174.91 | 14312434.04 | 39°24'47.818"N | 80°52'49.716"W | 744.86 | 240.005 | 1.25 | |
| 2950.00 | 21.350 | 236.690 | 2814.40 | -137.96 | -377.33 | -652.66 | 1674167.36 | 14312429.09 | 39°24'47.769"N | 80°52'49.812"W | 753.89 | 239.966 | 1.24 | |
| 2975.00 | 21.580 | 236.780 | 2837.67 | -140.14 | -382.35 | -660.31 | 1674159.72 | 14312424.07 | 39°24'47.720"N | 80°52'49.909"W | 763.02 | 239.927 | 0.93 | |
| 3000.00 | 21.850 | 237.140 | 2860.90 | -142.30 | -387.40 | -668.06 | 1674151.96 | 14312419.03 | 39°24'47.670"N | 80°52'50.008"W | 772.26 | 239.891 | 1.20 | |
| 3025.00 | 22.250 | 237.660 | 2884.07 | -144.43 | -392.45 | -675.97 | 1674144.06 | 14312413.98 | 39°24'47.620"N | 80°52'50.109"W | 781.64 | 239.862 | 1.78 | |

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# Actual Wellpath Report

Melvin Unit 1H AWP Proj: 17695'



| REFERENCE WELLPATH IDENTIFICATION | | | |
|---|---|---|---|
| Operator | ANTERO RESOURCES CORPORATION | Slot | Slot #08 |
| Area | Tyler County, WV | Well | Melvin Unit 1H |
| Field | Tyler | Wellbore | Melvin Unit 1H AWB |
| Facility | Estlack Pad | | |

WELLPATH DATA (381 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] | Comments |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 3050.00 | 22.280 | 237.480 | 2907.20 | -146.55 | -397.53 | -683.97 | 1674136.07 | 14312408.90 | 39°24'47.570"N | 80°52'50.211"W | 791.10 | 239.834 | 0.30 | |
| 3075.00 | 22.540 | 237.310 | 2930.32 | -148.72 | -402.67 | -691.99 | 1674128.04 | 14312403.76 | 39°24'47.519"N | 80°52'50.314"W | 800.62 | 239.805 | 1.07 | |
| 3100.00 | 22.840 | 237.480 | 2953.38 | -150.90 | -407.86 | -700.12 | 1674119.92 | 14312398.57 | 39°24'47.468"N | 80°52'50.417"W | 810.26 | 239.776 | 1.23 | |
| 3125.00 | 23.110 | 237.560 | 2976.40 | -153.10 | -413.10 | -708.35 | 1674111.69 | 14312393.33 | 39°24'47.416"N | 80°52'50.522"W | 820.01 | 239.750 | 1.09 | |
| 3150.00 | 23.240 | 237.550 | 2999.38 | -155.30 | -418.38 | -716.65 | 1674103.39 | 14312388.06 | 39°24'47.364"N | 80°52'50.628"W | 829.84 | 239.724 | 0.52 | |
| 3175.00 | 23.440 | 237.680 | 3022.33 | -157.51 | -423.69 | -725.02 | 1674095.03 | 14312382.75 | 39°24'47.312"N | 80°52'50.735"W | 839.74 | 239.699 | 0.83 | |
| 3200.00 | 23.840 | 238.060 | 3045.24 | -159.71 | -429.02 | -733.51 | 1674086.55 | 14312377.42 | 39°24'47.260"N | 80°52'50.843"W | 849.76 | 239.677 | 1.71 | |
| 3225.00 | 24.030 | 238.310 | 3068.09 | -161.87 | -434.36 | -742.12 | 1674077.93 | 14312372.08 | 39°24'47.207"N | 80°52'50.953"W | 859.90 | 239.660 | 0.86 | |
| 3250.00 | 23.850 | 238.190 | 3090.94 | -164.03 | -439.70 | -750.75 | 1674069.31 | 14312366.74 | 39°24'47.154"N | 80°52'51.063"W | 870.04 | 239.643 | 0.75 | |
| 3275.00 | 23.860 | 238.170 | 3113.80 | -166.18 | -445.03 | -759.34 | 1674060.72 | 14312361.41 | 39°24'47.102"N | 80°52'51.172"W | 880.15 | 239.626 | 0.05 | |
| 3300.00 | 23.950 | 238.080 | 3136.66 | -168.36 | -450.38 | -767.95 | 1674052.12 | 14312356.07 | 39°24'47.049"N | 80°52'51.282"W | 890.27 | 239.609 | 0.39 | |
| 3325.00 | 23.790 | 237.500 | 3159.52 | -170.58 | -455.78 | -776.50 | 1674043.57 | 14312350.68 | 39°24'46.996"N | 80°52'51.391"W | 900.38 | 239.589 | 1.14 | |
| 3350.00 | 23.610 | 237.110 | 3182.41 | -172.88 | -461.20 | -784.96 | 1674035.11 | 14312345.25 | 39°24'46.942"N | 80°52'51.499"W | 910.42 | 239.564 | 0.95 | |
| 3375.00 | 23.640 | 237.120 | 3205.31 | -175.20 | -466.64 | -793.37 | 1674026.70 | 14312339.81 | 39°24'46.888"N | 80°52'51.606"W | 920.43 | 239.537 | 0.12 | |
| 3400.00 | 23.530 | 236.960 | 3228.23 | -177.53 | -472.09 | -801.77 | 1674018.31 | 14312334.37 | 39°24'46.835"N | 80°52'51.713"W | 930.43 | 239.510 | 0.51 | |
| 3425.00 | 23.180 | 236.770 | 3251.18 | -179.87 | -477.50 | -810.07 | 1674010.02 | 14312328.96 | 39°24'46.781"N | 80°52'51.819"W | 940.33 | 239.482 | 1.43 | |
| 3450.00 | 23.130 | 236.870 | 3274.16 | -182.20 | -482.88 | -818.29 | 1674001.79 | 14312323.58 | 39°24'46.728"N | 80°52'51.924"W | 950.15 | 239.455 | 0.25 | |
| 3475.00 | 23.200 | 236.970 | 3297.15 | -184.51 | -488.25 | -826.53 | 1673993.56 | 14312318.22 | 39°24'46.675"N | 80°52'52.029"W | 959.97 | 239.429 | 0.32 | |
| 3500.00 | 22.850 | 236.720 | 3320.16 | -186.82 | -493.60 | -834.72 | 1673985.37 | 14312312.87 | 39°24'46.623"N | 80°52'52.134"W | 969.74 | 239.403 | 1.45 | |
| 3525.00 | 22.260 | 236.090 | 3343.24 | -189.15 | -498.90 | -842.71 | 1673977.39 | 14312307.57 | 39°24'46.570"N | 80°52'52.235"W | 979.32 | 239.373 | 2.55 | |
| 3550.00 | 22.210 | 235.790 | 3366.38 | -191.53 | -504.20 | -850.55 | 1673969.55 | 14312302.27 | 39°24'46.518"N | 80°52'52.335"W | 988.76 | 239.341 | 0.50 | |
| 3575.00 | 22.260 | 236.190 | 3389.53 | -193.90 | -509.49 | -858.39 | 1673961.72 | 14312296.98 | 39°24'46.466"N | 80°52'52.435"W | 998.20 | 239.309 | 0.64 | |
| 3600.00 | 22.020 | 236.510 | 3412.68 | -196.21 | -514.71 | -866.23 | 1673953.88 | 14312291.76 | 39°24'46.414"N | 80°52'52.535"W | 1007.61 | 239.281 | 1.07 | |
| 3625.00 | 21.500 | 236.670 | 3435.90 | -198.44 | -519.82 | -873.97 | 1673946.14 | 14312286.66 | 39°24'46.364"N | 80°52'52.634"W | 1016.87 | 239.257 | 2.09 | |
| 3650.00 | 21.310 | 237.990 | 3459.18 | -200.52 | -524.74 | -881.65 | 1673938.47 | 14312281.74 | 39°24'46.315"N | 80°52'52.732"W | 1025.99 | 239.240 | 2.07 | |
| 3675.00 | 21.530 | 239.550 | 3482.45 | -202.38 | -529.47 | -889.45 | 1673930.66 | 14312277.01 | 39°24'46.269"N | 80°52'52.831"W | 1035.12 | 239.235 | 2.44 | |
| 3700.00 | 21.690 | 240.420 | 3505.69 | -204.06 | -534.08 | -897.43 | 1673922.69 | 14312272.40 | 39°24'46.223"N | 80°52'52.933"W | 1044.33 | 239.242 | 1.43 | |
| 3725.00 | 21.640 | 240.630 | 3528.93 | -205.66 | -538.62 | -905.46 | 1673914.66 | 14312267.86 | 39°24'46.178"N | 80°52'53.036"W | 1053.55 | 239.253 | 0.37 | |
| 3750.00 | 21.830 | 240.730 | 3552.15 | -207.24 | -543.15 | -913.53 | 1673906.59 | 14312263.33 | 39°24'46.134"N | 80°52'53.138"W | 1062.81 | 239.266 | 0.77 | |
| 3775.00 | 22.250 | 241.000 | 3575.32 | -208.81 | -547.72 | -921.73 | 1673898.40 | 14312258.77 | 39°24'46.089"N | 80°52'53.243"W | 1072.19 | 239.280 | 1.73 | |

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# Actual Wellpath Report

Melvin Unit 1H AWP Proj: 17695'



| REFERENCE WELLPATH IDENTIFICATION | | | |
|---|---|---|---|
| Operator | ANTERO RESOURCES CORPORATION | Slot | Slot #08 |
| Area | Tyler County, WV | Well | Melvin Unit 1H |
| Field | Tyler | Wellbore | Melvin Unit 1H AWB |
| Facility | Estlack Pad | | |

WELLPATH DATA (381 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] | Comments |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 3800.00 | 22.540 | 241.120 | 3598.44 | -210.37 | -552.33 | -930.06 | 1673890.07 | 14312254.16 | 39°24'46.043"N | 80°52'53.349"W | 1081.71 | 239.295 | 1.17 | |
| 3825.00 | 22.570 | 241.160 | 3621.52 | -211.94 | -556.96 | -938.46 | 1673881.67 | 14312249.53 | 39°24'45.998"N | 80°52'53.456"W | 1091.29 | 239.312 | 0.13 | |
| 3850.00 | 22.740 | 241.080 | 3644.60 | -213.51 | -561.61 | -946.89 | 1673873.25 | 14312244.88 | 39°24'45.952"N | 80°52'53.564"W | 1100.91 | 239.327 | 0.69 | |
| 3875.00 | 22.650 | 240.720 | 3667.66 | -215.12 | -566.30 | -955.32 | 1673864.82 | 14312240.20 | 39°24'45.906"N | 80°52'53.671"W | 1110.56 | 239.341 | 0.66 | |
| 3900.00 | 22.180 | 240.060 | 3690.77 | -216.79 | -571.01 | -963.61 | 1673856.54 | 14312235.49 | 39°24'45.859"N | 80°52'53.777"W | 1120.09 | 239.350 | 2.13 | |
| 3925.00 | 22.080 | 239.850 | 3713.93 | -218.52 | -575.73 | -971.76 | 1673848.39 | 14312230.77 | 39°24'45.813"N | 80°52'53.881"W | 1129.50 | 239.355 | 0.51 | |
| 3950.00 | 22.140 | 239.800 | 3737.09 | -220.26 | -580.46 | -979.90 | 1673840.26 | 14312226.05 | 39°24'45.766"N | 80°52'53.985"W | 1138.91 | 239.359 | 0.25 | |
| 3975.00 | 22.010 | 239.740 | 3760.26 | -222.01 | -585.19 | -988.01 | 1673832.14 | 14312221.32 | 39°24'45.719"N | 80°52'54.088"W | 1148.31 | 239.362 | 0.53 | |
| 4000.00 | 21.470 | 239.360 | 3783.48 | -223.77 | -589.88 | -996.00 | 1673824.16 | 14312216.63 | 39°24'45.673"N | 80°52'54.190"W | 1157.57 | 239.364 | 2.23 | |
| 4025.00 | 21.410 | 239.020 | 3806.75 | -225.57 | -594.56 | -1003.85 | 1673816.32 | 14312211.95 | 39°24'45.627"N | 80°52'54.290"W | 1166.71 | 239.363 | 0.55 | |
| 4050.00 | 21.730 | 239.410 | 3830.00 | -227.37 | -599.26 | -1011.74 | 1673808.42 | 14312207.25 | 39°24'45.581"N | 80°52'54.391"W | 1175.90 | 239.361 | 1.40 | |
| 4075.00 | 21.700 | 239.860 | 3853.23 | -229.11 | -603.94 | -1019.72 | 1673800.45 | 14312202.57 | 39°24'45.534"N | 80°52'54.492"W | 1185.15 | 239.364 | 0.68 | |
| 4100.00 | 21.480 | 239.710 | 3876.47 | -230.82 | -608.57 | -1027.67 | 1673792.50 | 14312197.95 | 39°24'45.489"N | 80°52'54.594"W | 1194.35 | 239.367 | 0.91 | |
| 4125.00 | 21.770 | 239.800 | 3899.71 | -232.54 | -613.21 | -1035.63 | 1673784.54 | 14312193.31 | 39°24'45.443"N | 80°52'54.695"W | 1203.56 | 239.370 | 1.17 | |
| 4150.00 | 22.280 | 240.480 | 3922.89 | -234.23 | -617.88 | -1043.76 | 1673776.42 | 14312188.64 | 39°24'45.397"N | 80°52'54.799"W | 1212.93 | 239.376 | 2.28 | |
| 4175.00 | 22.570 | 240.960 | 3946.00 | -235.85 | -622.54 | -1052.08 | 1673768.10 | 14312183.98 | 39°24'45.351"N | 80°52'54.905"W | 1222.47 | 239.386 | 1.37 | |
| 4200.00 | 22.590 | 241.150 | 3969.08 | -237.43 | -627.19 | -1060.48 | 1673759.70 | 14312179.34 | 39°24'45.305"N | 80°52'55.012"W | 1232.06 | 239.399 | 0.30 | |
| 4225.00 | 22.850 | 241.590 | 3992.14 | -238.96 | -631.81 | -1068.96 | 1673751.23 | 14312174.71 | 39°24'45.260"N | 80°52'55.120"W | 1241.71 | 239.415 | 1.24 | |
| 4250.00 | 23.410 | 241.880 | 4015.13 | -240.46 | -636.46 | -1077.60 | 1673742.59 | 14312170.06 | 39°24'45.214"N | 80°52'55.230"W | 1251.53 | 239.433 | 2.29 | |
| 4275.00 | 23.620 | 241.780 | 4038.05 | -241.96 | -641.17 | -1086.40 | 1673733.80 | 14312165.36 | 39°24'45.167"N | 80°52'55.343"W | 1261.49 | 239.452 | 0.86 | |
| 4300.00 | 23.800 | 241.540 | 4060.94 | -243.51 | -645.94 | -1095.25 | 1673724.95 | 14312160.59 | 39°24'45.120"N | 80°52'55.455"W | 1271.54 | 239.469 | 0.82 | |
| 4325.00 | 24.050 | 241.610 | 4083.80 | -245.08 | -650.77 | -1104.16 | 1673716.04 | 14312155.76 | 39°24'45.073"N | 80°52'55.569"W | 1281.67 | 239.486 | 1.01 | |
| 4350.00 | 24.170 | 241.340 | 4106.62 | -246.69 | -655.65 | -1113.13 | 1673707.07 | 14312150.89 | 39°24'45.025"N | 80°52'55.683"W | 1291.87 | 239.502 | 0.65 | |
| 4375.00 | 24.040 | 240.650 | 4129.44 | -248.38 | -660.60 | -1122.06 | 1673698.15 | 14312145.94 | 39°24'44.976"N | 80°52'55.797"W | 1302.08 | 239.513 | 1.24 | |
| 4400.00 | 23.870 | 240.380 | 4152.28 | -250.14 | -665.59 | -1130.90 | 1673689.31 | 14312140.94 | 39°24'44.926"N | 80°52'55.910"W | 1312.23 | 239.521 | 0.81 | |
| 4425.00 | 23.640 | 240.510 | 4175.16 | -251.90 | -670.56 | -1139.66 | 1673680.56 | 14312135.98 | 39°24'44.878"N | 80°52'56.022"W | 1322.30 | 239.528 | 0.94 | |
| 4450.00 | 22.980 | 240.600 | 4198.12 | -253.61 | -675.42 | -1148.27 | 1673671.95 | 14312131.12 | 39°24'44.830"N | 80°52'56.131"W | 1332.19 | 239.536 | 2.64 | |
| 4475.00 | 22.090 | 239.800 | 4221.21 | -255.32 | -680.18 | -1156.59 | 1673663.63 | 14312126.36 | 39°24'44.783"N | 80°52'56.237"W | 1341.77 | 239.540 | 3.77 | |
| 4500.00 | 21.840 | 239.390 | 4244.40 | -257.09 | -684.92 | -1164.65 | 1673655.57 | 14312121.63 | 39°24'44.736"N | 80°52'56.340"W | 1351.12 | 239.541 | 1.17 | |
| 4525.00 | 21.850 | 239.170 | 4267.60 | -258.90 | -689.67 | -1172.65 | 1673647.58 | 14312116.88 | 39°24'44.689"N | 80°52'56.442"W | 1360.42 | 239.539 | 0.33 | |

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# Actual Wellpath Report

Melvin Unit 1H AWP Proj: 17695'



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| Operator | ANTERO RESOURCES CORPORATION | Slot | Slot #08 |
| Area | Tyler County, WV | Well | Melvin Unit 1H |
| Field | Tyler | Wellbore | Melvin Unit 1H AWB |
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WELLPATH DATA (381 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] | Comments |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 4550.00 | 21.480 | 238.250 | 4290.84 | -260.79 | -694.46 | -1180.54 | 1673639.69 | 14312112.09 | 39°24'44.642"N | 80°52'56.543"W | 1369.65 | 239.534 | 2.01 | |
| 4575.00 | 20.820 | 236.840 | 4314.15 | -262.81 | -699.30 | -1188.15 | 1673632.09 | 14312107.25 | 39°24'44.594"N | 80°52'56.640"W | 1378.67 | 239.521 | 3.33 | |
| 4600.00 | 20.570 | 236.120 | 4337.54 | -264.95 | -704.18 | -1195.52 | 1673624.72 | 14312102.37 | 39°24'44.546"N | 80°52'56.734"W | 1387.49 | 239.501 | 1.43 | |
| 4625.00 | 20.500 | 235.620 | 4360.95 | -267.17 | -709.10 | -1202.77 | 1673617.47 | 14312097.46 | 39°24'44.497"N | 80°52'56.826"W | 1396.24 | 239.478 | 0.76 | |
| 4650.00 | 20.100 | 234.930 | 4384.40 | -269.45 | -714.04 | -1209.90 | 1673610.34 | 14312092.52 | 39°24'44.449"N | 80°52'56.917"W | 1404.89 | 239.453 | 1.86 | |
| 4675.00 | 19.330 | 234.430 | 4407.93 | -271.75 | -718.91 | -1216.79 | 1673603.46 | 14312087.64 | 39°24'44.401"N | 80°52'57.005"W | 1413.30 | 239.424 | 3.15 | |
| 4700.00 | 19.190 | 235.170 | 4431.54 | -273.98 | -723.67 | -1223.52 | 1673596.73 | 14312082.89 | 39°24'44.354"N | 80°52'57.091"W | 1421.51 | 239.397 | 1.13 | |
| 4725.00 | 19.330 | 236.380 | 4455.14 | -276.08 | -728.30 | -1230.34 | 1673589.91 | 14312078.26 | 39°24'44.308"N | 80°52'57.178"W | 1429.74 | 239.376 | 1.69 | |
| 4750.00 | 19.510 | 237.130 | 4478.71 | -278.05 | -732.86 | -1237.29 | 1673582.96 | 14312073.70 | 39°24'44.263"N | 80°52'57.267"W | 1438.05 | 239.361 | 1.23 | |
| 4775.00 | 19.540 | 237.370 | 4502.28 | -279.97 | -737.38 | -1244.32 | 1673575.94 | 14312069.18 | 39°24'44.218"N | 80°52'57.356"W | 1446.40 | 239.349 | 0.34 | |
| 4800.00 | 19.570 | 237.560 | 4525.83 | -281.86 | -741.88 | -1251.38 | 1673568.89 | 14312064.69 | 39°24'44.174"N | 80°52'57.446"W | 1454.76 | 239.338 | 0.28 | |
| 4825.00 | 19.750 | 237.610 | 4549.38 | -283.74 | -746.39 | -1258.48 | 1673561.79 | 14312060.18 | 39°24'44.130"N | 80°52'57.537"W | 1463.17 | 239.328 | 0.72 | |
| 4850.00 | 19.700 | 237.310 | 4572.91 | -285.65 | -750.93 | -1265.59 | 1673554.68 | 14312055.64 | 39°24'44.085"N | 80°52'57.627"W | 1471.60 | 239.317 | 0.45 | |
| 4875.00 | 19.650 | 237.030 | 4596.45 | -287.59 | -755.49 | -1272.66 | 1673547.61 | 14312051.08 | 39°24'44.040"N | 80°52'57.718"W | 1480.01 | 239.305 | 0.43 | |
| 4900.00 | 19.750 | 236.870 | 4619.99 | -289.56 | -760.09 | -1279.73 | 1673540.55 | 14312046.49 | 39°24'43.994"N | 80°52'57.808"W | 1488.43 | 239.292 | 0.45 | |
| 4925.00 | 19.960 | 236.800 | 4643.50 | -291.57 | -764.73 | -1286.83 | 1673533.44 | 14312041.84 | 39°24'43.949"N | 80°52'57.898"W | 1496.92 | 239.278 | 0.85 | |
| 4950.00 | 20.320 | 236.780 | 4666.97 | -293.61 | -769.45 | -1294.04 | 1673526.24 | 14312037.13 | 39°24'43.902"N | 80°52'57.990"W | 1505.52 | 239.264 | 1.44 | |
| 4975.00 | 20.660 | 236.620 | 4690.39 | -295.70 | -774.25 | -1301.35 | 1673518.93 | 14312032.33 | 39°24'43.855"N | 80°52'58.083"W | 1514.26 | 239.249 | 1.38 | |
| 5000.00 | 21.380 | 236.860 | 4713.73 | -297.84 | -779.17 | -1308.85 | 1673511.44 | 14312027.41 | 39°24'43.806"N | 80°52'58.179"W | 1523.22 | 239.234 | 2.90 | |
| 5025.00 | 22.200 | 237.320 | 4736.94 | -299.99 | -784.21 | -1316.64 | 1673503.65 | 14312022.37 | 39°24'43.757"N | 80°52'58.278"W | 1532.49 | 239.221 | 3.35 | |
| 5050.00 | 22.720 | 237.830 | 4760.04 | -302.13 | -789.33 | -1324.70 | 1673495.59 | 14312017.25 | 39°24'43.706"N | 80°52'58.381"W | 1542.04 | 239.211 | 2.22 | |
| 5075.00 | 23.060 | 238.320 | 4783.08 | -304.22 | -794.47 | -1332.95 | 1673487.34 | 14312012.11 | 39°24'43.655"N | 80°52'58.486"W | 1551.76 | 239.204 | 1.56 | |
| 5100.00 | 23.670 | 238.980 | 4806.03 | -306.26 | -799.63 | -1341.42 | 1673478.88 | 14312006.96 | 39°24'43.604"N | 80°52'58.594"W | 1561.67 | 239.200 | 2.66 | |
| 5125.00 | 24.090 | 239.490 | 4828.89 | -308.24 | -804.81 | -1350.12 | 1673470.18 | 14312001.78 | 39°24'43.553"N | 80°52'58.705"W | 1571.79 | 239.201 | 1.87 | |
| 5150.00 | 24.240 | 239.680 | 4851.69 | -310.18 | -809.99 | -1358.94 | 1673461.36 | 14311996.60 | 39°24'43.502"N | 80°52'58.818"W | 1582.03 | 239.203 | 0.68 | |
| 5175.00 | 24.570 | 239.810 | 4874.46 | -312.11 | -815.19 | -1367.87 | 1673452.44 | 14311991.40 | 39°24'43.451"N | 80°52'58.932"W | 1592.36 | 239.207 | 1.34 | |
| 5200.00 | 24.940 | 239.950 | 4897.16 | -314.04 | -820.45 | -1376.92 | 1673443.39 | 14311986.15 | 39°24'43.399"N | 80°52'59.047"W | 1602.82 | 239.211 | 1.50 | |
| 5225.00 | 24.810 | 239.930 | 4919.84 | -315.97 | -825.71 | -1386.02 | 1673434.29 | 14311980.89 | 39°24'43.347"N | 80°52'59.163"W | 1613.34 | 239.216 | 0.52 | |
| 5250.00 | 24.460 | 239.860 | 4942.57 | -317.88 | -830.94 | -1395.04 | 1673425.28 | 14311975.66 | 39°24'43.296"N | 80°52'59.278"W | 1623.76 | 239.220 | 1.40 | |
| 5275.00 | 24.510 | 239.950 | 4965.32 | -319.79 | -836.14 | -1404.00 | 1673416.32 | 14311970.47 | 39°24'43.244"N | 80°52'59.392"W | 1634.12 | 239.225 | 0.25 | |

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# Actual Wellpath Report

Melvin Unit 1H AWP Proj: 17695'



| REFERENCE WELLPATH IDENTIFICATION | | | |
|---|---|---|---|
| Operator | ANTERO RESOURCES CORPORATION | Slot | Slot #08 |
| Area | Tyler County, WV | Well | Melvin Unit 1H |
| Field | Tyler | Wellbore | Melvin Unit 1H AWB |
| Facility | Estlack Pad | | |

WELLPATH DATA (381 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] | Comments |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 5300.00 | 24.850 | 240.160 | 4988.04 | -321.69 | -841.35 | -1413.05 | 1673407.28 | 14311965.26 | 39°24'43.193"N | 80°52'59.508"W | 1644.56 | 239.230 | 1.40 | |
| 5325.00 | 24.720 | 240.030 | 5010.73 | -323.58 | -846.57 | -1422.13 | 1673398.20 | 14311960.04 | 39°24'43.142"N | 80°52'59.623"W | 1655.04 | 239.235 | 0.56 | |
| 5350.00 | 24.550 | 240.040 | 5033.46 | -325.47 | -851.78 | -1431.16 | 1673389.17 | 14311954.83 | 39°24'43.090"N | 80°52'59.739"W | 1665.46 | 239.240 | 0.68 | |
| 5375.00 | 24.950 | 240.130 | 5056.16 | -327.37 | -857.00 | -1440.23 | 1673380.10 | 14311949.62 | 39°24'43.039"N | 80°52'59.854"W | 1675.92 | 239.246 | 1.61 | |
| 5400.00 | 25.470 | 240.260 | 5078.78 | -329.28 | -862.29 | -1449.47 | 1673370.87 | 14311944.33 | 39°24'42.987"N | 80°52'59.972"W | 1686.57 | 239.252 | 2.09 | |
| 5425.00 | 25.650 | 240.330 | 5101.33 | -331.19 | -867.64 | -1458.84 | 1673361.50 | 14311938.98 | 39°24'42.934"N | 80°53'00.092"W | 1697.35 | 239.258 | 0.73 | |
| 5450.00 | 25.760 | 240.500 | 5123.86 | -333.09 | -872.99 | -1468.27 | 1673352.08 | 14311933.63 | 39°24'42.881"N | 80°53'00.212"W | 1708.20 | 239.266 | 0.53 | |
| 5475.00 | 26.270 | 240.710 | 5146.33 | -334.97 | -878.37 | -1477.83 | 1673342.53 | 14311928.25 | 39°24'42.828"N | 80°53'00.334"W | 1719.16 | 239.274 | 2.07 | |
| 5500.00 | 26.310 | 240.770 | 5168.74 | -336.85 | -883.78 | -1487.49 | 1673332.87 | 14311922.84 | 39°24'42.775"N | 80°53'00.457"W | 1730.23 | 239.284 | 0.19 | |
| 5525.00 | 25.670 | 240.410 | 5191.21 | -338.74 | -889.16 | -1497.03 | 1673323.33 | 14311917.46 | 39°24'42.722"N | 80°53'00.578"W | 1741.18 | 239.292 | 2.64 | |
| 5550.00 | 24.660 | 239.690 | 5213.84 | -340.67 | -894.47 | -1506.24 | 1673314.12 | 14311912.16 | 39°24'42.669"N | 80°53'00.696"W | 1751.81 | 239.296 | 4.22 | |
| 5575.00 | 23.580 | 238.480 | 5236.66 | -342.69 | -899.71 | -1515.01 | 1673305.36 | 14311906.92 | 39°24'42.617"N | 80°53'00.808"W | 1762.02 | 239.295 | 4.75 | |
| 5600.00 | 22.540 | 237.260 | 5259.66 | -344.83 | -904.92 | -1523.30 | 1673297.07 | 14311901.71 | 39°24'42.566"N | 80°53'00.913"W | 1771.81 | 239.287 | 4.58 | |
| 5625.00 | 21.930 | 236.270 | 5282.80 | -347.08 | -910.10 | -1531.21 | 1673289.16 | 14311896.53 | 39°24'42.515"N | 80°53'01.014"W | 1781.26 | 239.274 | 2.86 | |
| 5650.00 | 22.040 | 236.040 | 5305.98 | -349.40 | -915.32 | -1538.99 | 1673281.39 | 14311891.32 | 39°24'42.464"N | 80°53'01.113"W | 1790.61 | 239.258 | 0.56 | |
| 5675.00 | 22.570 | 236.260 | 5329.11 | -351.75 | -920.60 | -1546.87 | 1673273.51 | 14311886.04 | 39°24'42.411"N | 80°53'01.214"W | 1800.08 | 239.241 | 2.15 | |
| 5700.00 | 22.890 | 236.240 | 5352.17 | -354.13 | -925.97 | -1554.90 | 1673265.49 | 14311880.67 | 39°24'42.359"N | 80°53'01.316"W | 1809.73 | 239.225 | 1.28 | |
| 5725.00 | 22.910 | 236.520 | 5375.20 | -356.51 | -931.35 | -1563.00 | 1673257.39 | 14311875.29 | 39°24'42.305"N | 80°53'01.420"W | 1819.45 | 239.210 | 0.44 | |
| 5750.00 | 22.990 | 237.990 | 5398.22 | -358.74 | -936.63 | -1571.20 | 1673249.19 | 14311870.02 | 39°24'42.253"N | 80°53'01.524"W | 1829.19 | 239.200 | 2.31 | |
| 5775.00 | 23.170 | 238.870 | 5421.22 | -360.79 | -941.76 | -1579.55 | 1673240.85 | 14311864.89 | 39°24'42.203"N | 80°53'01.631"W | 1838.99 | 239.196 | 1.56 | |
| 5800.00 | 22.930 | 238.970 | 5444.22 | -362.76 | -946.81 | -1587.93 | 1673232.47 | 14311859.84 | 39°24'42.153"N | 80°53'01.737"W | 1848.78 | 239.194 | 0.97 | |
| 5825.00 | 22.620 | 239.010 | 5467.27 | -364.69 | -951.80 | -1596.22 | 1673224.18 | 14311854.85 | 39°24'42.104"N | 80°53'01.843"W | 1858.45 | 239.193 | 1.24 | |
| 5850.00 | 23.040 | 239.260 | 5490.32 | -366.60 | -956.77 | -1604.55 | 1673215.85 | 14311849.88 | 39°24'42.055"N | 80°53'01.949"W | 1868.15 | 239.193 | 1.72 | |
| 5875.00 | 23.110 | 239.510 | 5513.32 | -368.49 | -961.76 | -1612.98 | 1673207.42 | 14311844.89 | 39°24'42.005"N | 80°53'02.057"W | 1877.95 | 239.194 | 0.48 | |
| 5900.00 | 22.680 | 239.380 | 5536.35 | -370.36 | -966.71 | -1621.36 | 1673199.05 | 14311839.95 | 39°24'41.957"N | 80°53'02.164"W | 1887.68 | 239.195 | 1.73 | |
| 5925.00 | 22.440 | 239.530 | 5559.43 | -372.20 | -971.58 | -1629.62 | 1673190.79 | 14311835.08 | 39°24'41.909"N | 80°53'02.269"W | 1897.27 | 239.197 | 0.99 | |
| 5950.00 | 22.580 | 240.100 | 5582.53 | -373.98 | -976.39 | -1637.89 | 1673182.52 | 14311830.27 | 39°24'41.861"N | 80°53'02.375"W | 1906.84 | 239.200 | 1.04 | |
| 5975.00 | 22.540 | 240.370 | 5605.62 | -375.69 | -981.15 | -1646.22 | 1673174.20 | 14311825.51 | 39°24'41.814"N | 80°53'02.481"W | 1916.43 | 239.205 | 0.44 | |
| 6000.00 | 21.990 | 240.140 | 5628.75 | -377.37 | -985.85 | -1654.44 | 1673165.98 | 14311820.81 | 39°24'41.768"N | 80°53'02.586"W | 1925.90 | 239.210 | 2.23 | |
| 6025.00 | 21.740 | 240.530 | 5651.95 | -379.02 | -990.46 | -1662.53 | 1673157.89 | 14311816.20 | 39°24'41.722"N | 80°53'02.689"W | 1935.21 | 239.215 | 1.16 | |

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# Actual Wellpath Report

Melvin Unit 1H AWP Proj: 17695'



| REFERENCE WELLPATH IDENTIFICATION | | | |
|---|---|---|---|
| Operator | ANTERO RESOURCES CORPORATION | Slot | Slot #08 |
| Area | Tyler County, WV | Well | Melvin Unit 1H |
| Field | Tyler | Wellbore | Melvin Unit 1H AWB |
| Facility | Estlack Pad | | |

WELLPATH DATA (381 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] | Comments |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 6050.00 | 22.190 | 240.630 | 5675.14 | -380.63 | -995.06 | -1670.68 | 1673149.75 | 14311811.61 | 39°24'41.677"N | 80°53'02.793"W | 1944.56 | 239.222 | 1.81 | |
| 6060.13 | 22.500 | 240.560 | 5684.51 | -381.29 | -996.95 | -1674.03 | 1673146.40 | 14311809.72 | 39°24'41.659"N | 80°53'02.835"W | 1948.41 | 239.225 | 3.07 | |
| 6277.00 | 22.940 | 239.970 | 5884.55 | -396.19 | -1038.49 | -1746.76 | 1673073.70 | 14311768.19 | 39°24'41.249"N | 80°53'03.763"W | 2032.15 | 239.267 | 0.23 | BHI AT Curve [SS+MSA] <8-1/2"> (6060.13')(6277'- 17657') |
| 6328.00 | 21.770 | 239.130 | 5931.71 | -399.88 | -1048.32 | -1763.49 | 1673056.98 | 14311758.37 | 39°24'41.152"N | 80°53'03.976"W | 2051.55 | 239.270 | 2.38 | |
| 6374.00 | 22.230 | 242.740 | 5974.37 | -402.74 | -1056.68 | -1778.54 | 1673041.93 | 14311750.01 | 39°24'41.069"N | 80°53'04.168"W | 2068.77 | 239.284 | 3.10 | |
| 6423.00 | 22.300 | 254.300 | 6019.74 | -403.38 | -1063.45 | -1795.74 | 1673024.74 | 14311743.25 | 39°24'41.003"N | 80°53'04.387"W | 2087.01 | 239.366 | 8.93 | |
| 6468.00 | 22.300 | 263.850 | 6061.38 | -400.84 | -1066.67 | -1812.45 | 1673008.03 | 14311740.02 | 39°24'40.971"N | 80°53'04.600"W | 2103.04 | 239.522 | 8.04 | |
| 6517.00 | 22.760 | 276.570 | 6106.67 | -394.53 | -1066.59 | -1831.12 | 1672989.37 | 14311740.11 | 39°24'40.972"N | 80°53'04.838"W | 2119.11 | 239.780 | 9.97 | |
| 6563.00 | 24.600 | 288.670 | 6148.82 | -384.70 | -1062.50 | -1849.05 | 1672971.45 | 14311744.20 | 39°24'41.013"N | 80°53'05.066"W | 2132.58 | 240.117 | 11.27 | |
| 6614.00 | 27.710 | 298.160 | 6194.61 | -369.37 | -1053.50 | -1869.57 | 1672950.94 | 14311753.19 | 39°24'41.102"N | 80°53'05.328"W | 2145.96 | 240.599 | 10.20 | |
| 6655.00† | 30.593 | 304.164 | 6230.43 | -353.91 | -1043.14 | -1886.62 | 1672933.90 | 14311763.55 | 39°24'41.205"N | 80°53'05.544"W | 2155.80 | 241.061 | 10.01 | Sycamore: 6655' MD |
| 6657.00 | 30.740 | 304.430 | 6232.15 | -353.09 | -1042.56 | -1887.46 | 1672933.06 | 14311764.12 | 39°24'41.210"N | 80°53'05.555"W | 2156.26 | 241.085 | 10.01 | |
| 6706.00 | 35.060 | 310.510 | 6273.29 | -330.76 | -1026.33 | -1908.50 | 1672912.02 | 14311780.35 | 39°24'41.371"N | 80°53'05.823"W | 2166.96 | 241.730 | 11.09 | |
| 6752.00 | 38.590 | 314.340 | 6310.11 | -306.43 | -1007.71 | -1928.82 | 1672891.71 | 14311798.96 | 39°24'41.555"N | 80°53'06.082"W | 2176.19 | 242.415 | 9.15 | |
| 6802.00 | 42.340 | 317.420 | 6348.15 | -276.94 | -984.40 | -1951.37 | 1672869.17 | 14311822.26 | 39°24'41.786"N | 80°53'06.369"W | 2185.61 | 243.231 | 8.50 | |
| 6848.00 | 45.830 | 320.410 | 6381.19 | -247.18 | -960.27 | -1972.38 | 1672848.17 | 14311846.38 | 39°24'42.025"N | 80°53'06.636"W | 2193.72 | 244.040 | 8.83 | |
| 6873.00† | 47.700 | 322.685 | 6398.31 | -229.96 | -946.01 | -1983.70 | 1672836.86 | 14311860.64 | 39°24'42.166"N | 80°53'06.780"W | 2197.72 | 244.504 | 9.99 | Middlesex: 6873' MD |
| 6899.00 | 49.690 | 324.910 | 6415.47 | -211.25 | -930.25 | -1995.23 | 1672825.33 | 14311876.40 | 39°24'42.322"N | 80°53'06.926"W | 2201.43 | 245.003 | 9.99 | |
| 6942.00 | 52.850 | 328.770 | 6442.38 | -178.67 | -902.16 | -2013.55 | 1672807.02 | 14311904.47 | 39°24'42.600"N | 80°53'07.159"W | 2206.42 | 245.865 | 10.15 | |
| 6990.00 | 56.520 | 332.210 | 6470.13 | -140.11 | -868.08 | -2032.81 | 1672787.77 | 14311938.54 | 39°24'42.937"N | 80°53'07.404"W | 2210.40 | 246.876 | 9.62 | |
| 7037.00† | 61.053 | 334.827 | 6494.48 | -100.22 | -832.11 | -2050.71 | 1672769.88 | 14311974.50 | 39°24'43.292"N | 80°53'07.632"W | 2213.10 | 247.914 | 10.76 | Burkett: 7037' MD |
| 7038.00 | 61.150 | 334.880 | 6494.96 | -99.35 | -831.31 | -2051.08 | 1672769.50 | 14311975.29 | 39°24'43.300"N | 80°53'07.636"W | 2213.14 | 247.937 | 10.76 | |
| 7086.00 | 63.690 | 336.180 | 6517.19 | -56.97 | -792.59 | -2068.69 | 1672751.90 | 14312014.00 | 39°24'43.683"N | 80°53'07.860"W | 2215.33 | 249.036 | 5.81 | |
| 7099.00† | 64.757 | 336.539 | 6522.84 | -45.30 | -781.87 | -2073.39 | 1672747.20 | 14312024.72 | 39°24'43.789"N | 80°53'07.920"W | 2215.91 | 249.339 | 8.57 | Tully: 7099' MD |
| 7133.00 | 67.550 | 337.450 | 6536.59 | -14.26 | -753.25 | -2085.54 | 1672735.06 | 14312053.33 | 39°24'44.072"N | 80°53'08.074"W | 2217.40 | 250.142 | 8.57 | |
| 7177.00† | 70.474 | 338.523 | 6552.34 | 26.78 | -715.16 | -2100.93 | 1672719.67 | 14312091.39 | 39°24'44.449"N | 80°53'08.270"W | 2219.32 | 251.201 | 7.02 | Marcellus Hot: 7177' MD |
| 7184.00 | 70.940 | 338.690 | 6554.66 | 33.38 | -709.01 | -2103.34 | 1672717.26 | 14312097.54 | 39°24'44.510"N | 80°53'08.300"W | 2219.62 | 251.372 | 7.02 | |
| 7227.00 | 76.430 | 340.620 | 6566.73 | 74.62 | -670.33 | -2117.67 | 1672702.94 | 14312136.21 | 39°24'44.892"N | 80°53'08.482"W | 2221.23 | 252.435 | 13.47 | |
| 7276.00 | 82.260 | 341.720 | 6575.79 | 122.75 | -624.77 | -2133.20 | 1672687.41 | 14312181.75 | 39°24'45.343"N | 80°53'08.679"W | 2222.81 | 253.676 | 12.10 | |
| 7323.00 | 87.300 | 341.740 | 6580.06 | 169.53 | -580.34 | -2147.87 | 1672672.75 | 14312226.16 | 39°24'45.782"N | 80°53'08.866"W | 2224.89 | 254.880 | 10.72 | |

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# Actual Wellpath Report

Melvin Unit 1H AWP Proj: 17695'



| REFERENCE WELLPATH IDENTIFICATION | | | |
|---|---|---|---|
| Operator | ANTERO RESOURCES CORPORATION | Slot | Slot #08 |
| Area | Tyler County, WV | Well | Melvin Unit 1H |
| Field | Tyler | Wellbore | Melvin Unit 1H AWB |
| Facility | Estlack Pad | | |

WELLPATH DATA (381 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] | Comments |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 7362.00 | 90.090 | 341.150 | 6580.95 | 208.51 | -543.38 | -2160.28 | 1672660.35 | 14312263.11 | 39°24'46.147"N | 80°53'09.023"W | 2227.57 | 255.881 | 7.31 | |
| 7417.00 | 89.970 | 338.700 | 6580.92 | 263.51 | -491.73 | -2179.15 | 1672641.48 | 14312314.74 | 39°24'46.658"N | 80°53'09.263"W | 2233.95 | 257.284 | 4.46 | |
| 7511.00 | 89.570 | 338.510 | 6581.30 | 357.45 | -404.21 | -2213.45 | 1672607.20 | 14312402.23 | 39°24'47.524"N | 80°53'09.698"W | 2250.05 | 259.651 | 0.47 | |
| 7606.00 | 89.330 | 339.040 | 6582.21 | 452.41 | -315.65 | -2247.84 | 1672572.82 | 14312490.74 | 39°24'48.399"N | 80°53'10.135"W | 2269.89 | 262.006 | 0.61 | |
| 7701.00 | 89.360 | 338.550 | 6583.30 | 547.36 | -227.09 | -2282.20 | 1672538.48 | 14312579.27 | 39°24'49.275"N | 80°53'10.571"W | 2293.47 | 264.317 | 0.52 | |
| 7796.00 | 89.640 | 343.250 | 6584.13 | 642.32 | -137.35 | -2313.27 | 1672507.41 | 14312668.97 | 39°24'50.162"N | 80°53'10.966"W | 2317.35 | 266.602 | 4.96 | |
| 7891.00 | 90.260 | 344.340 | 6584.21 | 737.17 | -46.13 | -2339.78 | 1672480.91 | 14312760.16 | 39°24'51.064"N | 80°53'11.302"W | 2340.24 | 268.871 | 1.32 | |
| 7986.00 | 90.010 | 341.020 | 6583.99 | 832.09 | 44.55 | -2368.06 | 1672452.65 | 14312850.80 | 39°24'51.961"N | 80°53'11.661"W | 2368.48 | 271.078 | 3.50 | |
| 8081.00 | 89.180 | 338.690 | 6584.66 | 927.07 | 133.73 | -2400.78 | 1672419.95 | 14312939.95 | 39°24'52.843"N | 80°53'12.076"W | 2404.50 | 273.188 | 2.60 | |
| 8175.00 | 89.300 | 337.340 | 6585.90 | 1020.97 | 220.89 | -2435.96 | 1672384.77 | 14313027.07 | 39°24'53.705"N | 80°53'12.523"W | 2445.96 | 275.181 | 1.44 | |
| 8269.00 | 89.400 | 339.630 | 6586.97 | 1114.90 | 308.33 | -2470.43 | 1672350.32 | 14313114.47 | 39°24'54.569"N | 80°53'12.961"W | 2489.60 | 277.114 | 2.44 | |
| 8363.00 | 89.150 | 341.730 | 6588.16 | 1208.89 | 397.02 | -2501.53 | 1672319.24 | 14313203.13 | 39°24'55.446"N | 80°53'13.356"W | 2532.84 | 279.018 | 2.25 | |
| 8459.00 | 89.180 | 340.100 | 6589.56 | 1304.87 | 487.73 | -2532.91 | 1672287.86 | 14313293.80 | 39°24'56.343"N | 80°53'13.754"W | 2579.44 | 280.899 | 1.70 | |
| 8554.00 | 89.300 | 337.520 | 6590.82 | 1399.81 | 576.29 | -2567.24 | 1672253.54 | 14313382.33 | 39°24'57.219"N | 80°53'14.190"W | 2631.13 | 282.652 | 2.72 | |
| 8650.00 | 89.210 | 336.390 | 6592.07 | 1495.62 | 664.62 | -2604.82 | 1672215.98 | 14313470.63 | 39°24'58.092"N | 80°53'14.668"W | 2688.27 | 284.314 | 1.18 | |
| 8745.00 | 89.430 | 339.330 | 6593.20 | 1590.50 | 752.60 | -2640.62 | 1672180.20 | 14313558.57 | 39°24'58.962"N | 80°53'15.122"W | 2745.77 | 285.908 | 3.10 | |
| 8840.00 | 89.270 | 338.140 | 6594.27 | 1685.44 | 841.13 | -2675.07 | 1672145.76 | 14313647.06 | 39°24'59.838"N | 80°53'15.560"W | 2804.19 | 287.455 | 1.26 | |
| 8935.00 | 89.490 | 338.890 | 6595.30 | 1780.38 | 929.52 | -2709.86 | 1672110.98 | 14313735.42 | 39°25'00.712"N | 80°53'16.002"W | 2864.85 | 288.933 | 0.82 | |
| 9030.00 | 90.900 | 347.720 | 6594.98 | 1875.17 | 1020.42 | -2737.12 | 1672083.73 | 14313826.28 | 39°25'01.610"N | 80°53'16.348"W | 2921.15 | 290.446 | 9.41 | |
| 9126.00 | 90.620 | 348.640 | 6593.70 | 1970.30 | 1114.38 | -2756.79 | 1672064.08 | 14313920.20 | 39°25'02.539"N | 80°53'16.597"W | 2973.50 | 292.010 | 1.00 | |
| 9220.00 | 90.560 | 345.340 | 6592.74 | 2063.68 | 1205.95 | -2777.94 | 1672042.93 | 14314011.73 | 39°25'03.445"N | 80°53'16.865"W | 3028.41 | 293.466 | 3.51 | |
| 9315.00 | 90.440 | 334.560 | 6591.90 | 2158.54 | 1295.05 | -2810.47 | 1672010.42 | 14314100.80 | 39°25'04.326"N | 80°53'17.278"W | 3094.49 | 294.740 | 11.35 | |
| 9410.00 | 90.220 | 333.980 | 6591.36 | 2252.97 | 1380.63 | -2851.71 | 1671969.20 | 14314186.35 | 39°25'05.172"N | 80°53'17.802"W | 3168.34 | 295.834 | 0.65 | |
| 9506.00 | 90.280 | 341.720 | 6590.94 | 2348.79 | 1469.48 | -2887.87 | 1671933.04 | 14314275.16 | 39°25'06.051"N | 80°53'18.262"W | 3240.24 | 296.969 | 8.06 | |
| 9601.00 | 90.840 | 343.240 | 6590.01 | 2443.73 | 1560.06 | -2916.47 | 1671904.46 | 14314365.71 | 39°25'06.946"N | 80°53'18.624"W | 3307.51 | 298.143 | 1.71 | |
| 9695.00 | 90.560 | 340.920 | 6588.86 | 2537.68 | 1649.49 | -2945.39 | 1671875.55 | 14314455.10 | 39°25'07.830"N | 80°53'18.992"W | 3375.82 | 299.250 | 2.49 | |
| 9791.00 | 89.910 | 336.880 | 6588.47 | 2633.62 | 1739.03 | -2979.94 | 1671841.01 | 14314544.61 | 39°25'08.716"N | 80°53'19.430"W | 3450.26 | 300.267 | 4.26 | |
| 9885.00 | 90.440 | 337.900 | 6588.18 | 2727.48 | 1825.81 | -3016.08 | 1671804.89 | 14314631.35 | 39°25'09.574"N | 80°53'19.889"W | 3525.66 | 301.189 | 1.22 | |
| 9980.00 | 89.950 | 340.220 | 6587.86 | 2822.44 | 1914.53 | -3050.03 | 1671770.95 | 14314720.03 | 39°25'10.451"N | 80°53'20.321"W | 3601.12 | 302.117 | 2.50 | |
| 10074.00 | 89.910 | 340.350 | 6587.97 | 2916.44 | 2003.02 | -3081.74 | 1671739.26 | 14314808.48 | 39°25'11.326"N | 80°53'20.723"W | 3675.49 | 303.022 | 0.14 | |

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# Actual Wellpath Report

Melvin Unit 1H AWP Proj: 17695'



| REFERENCE WELLPATH IDENTIFICATION | | | |
|---|---|---|---|
| Operator | ANTERO RESOURCES CORPORATION | Slot | Slot #08 |
| Area | Tyler County, WV | Well | Melvin Unit 1H |
| Field | Tyler | Wellbore | Melvin Unit 1H AWB |
| Facility | Estlack Pad | | |

WELLPATH DATA (381 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] | Comments |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 10169.00 | 90.100 | 339.050 | 6587.96 | 3011.43 | 2092.11 | -3114.70 | 1671706.31 | 14314897.55 | 39°25'12.207"N | 80°53'21.142"W | 3752.10 | 303.889 | 1.38 | |
| 10265.00 | 89.700 | 337.270 | 6588.13 | 3107.35 | 2181.22 | -3150.41 | 1671670.61 | 14314986.62 | 39°25'13.088"N | 80°53'21.596"W | 3831.81 | 304.697 | 1.90 | |
| 10360.00 | 89.980 | 338.830 | 6588.40 | 3202.25 | 2269.33 | -3185.92 | 1671635.12 | 14315074.69 | 39°25'13.960"N | 80°53'22.047"W | 3911.51 | 305.462 | 1.67 | |
| 10455.00 | 89.910 | 340.280 | 6588.49 | 3297.24 | 2358.34 | -3219.10 | 1671601.95 | 14315163.67 | 39°25'14.840"N | 80°53'22.468"W | 3990.54 | 306.227 | 1.53 | |
| 10550.00 | 89.790 | 342.270 | 6588.74 | 3392.23 | 2448.31 | -3249.60 | 1671571.46 | 14315253.60 | 39°25'15.729"N | 80°53'22.855"W | 4068.67 | 306.995 | 2.10 | |
| 10645.00 | 89.760 | 344.740 | 6589.11 | 3487.09 | 2539.39 | -3276.57 | 1671544.50 | 14315344.65 | 39°25'16.630"N | 80°53'23.198"W | 4145.41 | 307.776 | 2.60 | |
| 10739.00 | 90.100 | 346.810 | 6589.22 | 3580.69 | 2630.51 | -3299.67 | 1671521.42 | 14315435.72 | 39°25'17.531"N | 80°53'23.490"W | 4219.88 | 308.562 | 2.23 | |
| 10834.00 | 90.680 | 345.460 | 6588.58 | 3675.22 | 2722.73 | -3322.43 | 1671498.66 | 14315527.91 | 39°25'18.442"N | 80°53'23.779"W | 4295.56 | 309.335 | 1.55 | |
| 10930.00 | 90.870 | 341.710 | 6587.28 | 3771.06 | 2814.80 | -3349.55 | 1671471.55 | 14315619.94 | 39°25'19.353"N | 80°53'24.123"W | 4375.22 | 310.042 | 3.91 | |
| 11024.00 | 90.380 | 339.480 | 6586.25 | 3865.05 | 2903.44 | -3380.78 | 1671440.34 | 14315708.55 | 39°25'20.229"N | 80°53'24.520"W | 4456.42 | 310.656 | 2.43 | |
| 11118.00 | 90.380 | 338.710 | 6585.63 | 3959.02 | 2991.25 | -3414.32 | 1671406.81 | 14315796.33 | 39°25'21.097"N | 80°53'24.946"W | 4539.29 | 311.221 | 0.82 | |
| 11213.00 | 89.820 | 337.120 | 6585.46 | 4053.91 | 3079.28 | -3450.04 | 1671371.11 | 14315884.32 | 39°25'21.968"N | 80°53'25.400"W | 4624.36 | 311.750 | 1.77 | |
| 11306.00 | 89.760 | 337.560 | 6585.80 | 4146.77 | 3165.10 | -3485.86 | 1671335.29 | 14315970.10 | 39°25'22.816"N | 80°53'25.855"W | 4708.41 | 312.239 | 0.48 | |
| 11402.00 | 89.510 | 341.550 | 6586.42 | 4242.74 | 3255.03 | -3519.39 | 1671301.78 | 14316060.00 | 39°25'23.706"N | 80°53'26.281"W | 4793.89 | 312.765 | 4.16 | |
| 11496.00 | 89.820 | 344.380 | 6586.97 | 4336.64 | 3344.90 | -3546.93 | 1671274.26 | 14316149.83 | 39°25'24.594"N | 80°53'26.630"W | 4875.35 | 313.321 | 3.03 | |
| 11592.00 | 89.880 | 342.040 | 6587.22 | 4432.53 | 3436.80 | -3574.65 | 1671246.54 | 14316241.69 | 39°25'25.503"N | 80°53'26.982"W | 4958.80 | 313.874 | 2.44 | |
| 11687.00 | 89.700 | 336.920 | 6587.57 | 4527.48 | 3525.74 | -3607.94 | 1671213.26 | 14316330.60 | 39°25'26.382"N | 80°53'27.405"W | 5044.61 | 314.340 | 5.39 | |
| 11782.00 | 89.670 | 335.770 | 6588.09 | 4622.22 | 3612.76 | -3646.06 | 1671175.16 | 14316417.58 | 39°25'27.243"N | 80°53'27.889"W | 5132.81 | 314.737 | 1.21 | |
| 11877.00 | 89.820 | 339.250 | 6588.51 | 4717.08 | 3700.52 | -3682.39 | 1671138.84 | 14316505.30 | 39°25'28.111"N | 80°53'28.351"W | 5220.52 | 315.141 | 3.67 | |
| 11971.00 | 90.000 | 344.750 | 6588.66 | 4811.01 | 3789.88 | -3711.43 | 1671109.82 | 14316594.63 | 39°25'28.994"N | 80°53'28.720"W | 5304.52 | 315.599 | 5.85 | |
| 12066.00 | 90.130 | 343.720 | 6588.55 | 4905.81 | 3881.31 | -3737.24 | 1671084.02 | 14316686.02 | 39°25'29.898"N | 80°53'29.047"W | 5388.09 | 316.083 | 1.09 | |
| 12161.00 | 89.790 | 342.540 | 6588.62 | 5000.71 | 3972.22 | -3764.81 | 1671056.46 | 14316776.90 | 39°25'30.797"N | 80°53'29.397"W | 5472.87 | 316.536 | 1.29 | |
| 12256.00 | 90.100 | 340.020 | 6588.71 | 5095.69 | 4062.18 | -3795.30 | 1671025.99 | 14316866.83 | 39°25'31.686"N | 80°53'29.784"W | 5559.28 | 316.945 | 2.67 | |
| 12351.00 | 89.790 | 334.450 | 6588.80 | 5190.50 | 4149.75 | -3832.04 | 1670989.25 | 14316954.36 | 39°25'32.552"N | 80°53'30.251"W | 5648.45 | 317.279 | 5.87 | |
| 12447.00 | 90.030 | 334.390 | 6588.95 | 5285.96 | 4236.34 | -3873.49 | 1670947.82 | 14317040.91 | 39°25'33.409"N | 80°53'30.778"W | 5740.25 | 317.562 | 0.26 | |
| 12541.00 | 89.880 | 338.080 | 6589.02 | 5379.68 | 4322.35 | -3911.37 | 1670909.96 | 14317126.89 | 39°25'34.259"N | 80°53'31.259"W | 5829.37 | 317.858 | 3.93 | |
| 12636.00 | 90.130 | 343.750 | 6589.02 | 5474.64 | 4412.10 | -3942.41 | 1670878.92 | 14317216.60 | 39°25'35.147"N | 80°53'31.653"W | 5916.86 | 318.218 | 5.97 | |
| 12730.00 | 90.000 | 345.180 | 6588.91 | 5568.41 | 4502.66 | -3967.59 | 1670853.76 | 14317307.12 | 39°25'36.042"N | 80°53'31.973"W | 6001.31 | 318.615 | 1.53 | |
| 12825.00 | 89.880 | 343.140 | 6589.01 | 5663.21 | 4594.05 | -3993.52 | 1670827.84 | 14317398.48 | 39°25'36.945"N | 80°53'32.302"W | 6087.16 | 319.000 | 2.15 | |
| 12920.00 | 90.000 | 341.740 | 6589.11 | 5758.16 | 4684.62 | -4022.18 | 1670799.19 | 14317489.01 | 39°25'37.841"N | 80°53'32.666"W | 6174.43 | 319.351 | 1.48 | |

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# Actual Wellpath Report

Melvin Unit 1H AWP Proj: 17695'



| REFERENCE WELLPATH IDENTIFICATION | | | |
|---|---|---|---|
| Operator | ANTERO RESOURCES CORPORATION | Slot | Slot #08 |
| Area | Tyler County, WV | Well | Melvin Unit 1H |
| Field | Tyler | Wellbore | Melvin Unit 1H AWB |
| Facility | Estlack Pad | | |

WELLPATH DATA (381 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] | Comments |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 13013.00 | 89.820 | 341.330 | 6589.25 | 5851.14 | 4772.83 | -4051.64 | 1670769.75 | 14317577.19 | 39°25'38.713"N | 80°53'33.040"W | 6260.64 | 319.672 | 0.48 | |
| 13108.00 | 89.790 | 340.590 | 6589.58 | 5946.14 | 4862.63 | -4082.63 | 1670738.77 | 14317666.95 | 39°25'39.601"N | 80°53'33.433"W | 6349.25 | 319.983 | 0.78 | |
| 13203.00 | 89.910 | 341.440 | 6589.83 | 6041.13 | 4952.46 | -4113.53 | 1670707.88 | 14317756.75 | 39°25'40.489"N | 80°53'33.826"W | 6438.01 | 320.287 | 0.90 | |
| 13297.00 | 90.340 | 343.250 | 6589.62 | 6135.08 | 5042.03 | -4142.04 | 1670679.38 | 14317846.28 | 39°25'41.375"N | 80°53'34.188"W | 6525.22 | 320.597 | 1.98 | |
| 13392.00 | 90.310 | 345.490 | 6589.08 | 6229.86 | 5133.51 | -4167.63 | 1670653.80 | 14317937.72 | 39°25'42.279"N | 80°53'34.513"W | 6612.27 | 320.929 | 2.36 | |
| 13487.00 | 90.160 | 343.120 | 6588.69 | 6324.64 | 5224.96 | -4193.33 | 1670628.11 | 14318029.14 | 39°25'43.183"N | 80°53'34.839"W | 6699.57 | 321.251 | 2.50 | |
| 13582.00 | 90.000 | 341.810 | 6588.56 | 6419.58 | 5315.54 | -4221.95 | 1670599.50 | 14318119.68 | 39°25'44.079"N | 80°53'35.202"W | 6788.22 | 321.541 | 1.39 | |
| 13677.00 | 90.860 | 339.540 | 6587.85 | 6514.57 | 5405.18 | -4253.39 | 1670568.08 | 14318209.29 | 39°25'44.965"N | 80°53'35.601"W | 6878.03 | 321.800 | 2.56 | |
| 13772.00 | 89.910 | 337.320 | 6587.21 | 6609.50 | 5493.52 | -4288.31 | 1670533.17 | 14318297.59 | 39°25'45.839"N | 80°53'36.045"W | 6969.10 | 322.024 | 2.54 | |
| 13867.00 | 89.880 | 338.170 | 6587.38 | 6704.39 | 5581.44 | -4324.29 | 1670497.21 | 14318385.48 | 39°25'46.708"N | 80°53'36.502"W | 7060.59 | 322.233 | 0.90 | |
| 13962.00 | 89.690 | 337.230 | 6587.74 | 6799.27 | 5669.34 | -4360.33 | 1670461.17 | 14318473.33 | 39°25'47.577"N | 80°53'36.960"W | 7152.20 | 322.436 | 1.01 | |
| 14057.00 | 90.160 | 337.020 | 6587.86 | 6894.11 | 5756.86 | -4397.26 | 1670424.26 | 14318560.83 | 39°25'48.443"N | 80°53'37.430"W | 7244.13 | 322.626 | 0.54 | |
| 14152.00 | 89.970 | 337.520 | 6587.76 | 6988.96 | 5844.49 | -4433.97 | 1670387.57 | 14318648.41 | 39°25'49.309"N | 80°53'37.896"W | 7336.08 | 322.814 | 0.56 | |
| 14246.00 | 89.790 | 338.660 | 6587.95 | 7082.87 | 5931.70 | -4469.05 | 1670352.51 | 14318735.59 | 39°25'50.172"N | 80°53'38.342"W | 7426.80 | 323.005 | 1.23 | |
| 14341.00 | 89.760 | 340.500 | 6588.33 | 7177.85 | 6020.72 | -4502.19 | 1670319.37 | 14318824.58 | 39°25'51.052"N | 80°53'38.763"W | 7517.90 | 323.212 | 1.94 | |
| 14435.00 | 90.060 | 342.810 | 6588.47 | 7271.83 | 6109.94 | -4531.77 | 1670289.80 | 14318913.76 | 39°25'51.934"N | 80°53'39.138"W | 7607.12 | 323.435 | 2.48 | |
| 14529.00 | 89.820 | 342.660 | 6588.57 | 7365.76 | 6199.70 | -4559.67 | 1670261.92 | 14319003.49 | 39°25'52.822"N | 80°53'39.493"W | 7695.90 | 323.667 | 0.30 | |
| 14625.00 | 89.970 | 339.570 | 6588.75 | 7461.74 | 6290.52 | -4590.74 | 1670230.86 | 14319094.27 | 39°25'53.720"N | 80°53'39.887"W | 7787.53 | 323.879 | 3.22 | |
| 14719.00 | 90.060 | 332.950 | 6588.72 | 7555.43 | 6376.52 | -4628.56 | 1670193.05 | 14319180.24 | 39°25'54.570"N | 80°53'40.368"W | 7879.31 | 324.025 | 7.04 | |
| 14813.00 | 89.790 | 329.200 | 6588.85 | 7648.14 | 6458.78 | -4674.02 | 1670147.61 | 14319262.46 | 39°25'55.383"N | 80°53'40.946"W | 7972.60 | 324.108 | 4.00 | |
| 14908.00 | 89.760 | 333.530 | 6589.22 | 7741.91 | 6542.14 | -4719.53 | 1670102.12 | 14319345.79 | 39°25'56.208"N | 80°53'41.525"W | 8066.82 | 324.193 | 4.56 | |
| 15004.00 | 89.630 | 338.690 | 6589.73 | 7837.59 | 6629.88 | -4758.40 | 1670063.27 | 14319433.50 | 39°25'57.076"N | 80°53'42.019"W | 8160.74 | 324.332 | 5.38 | |
| 15099.00 | 89.730 | 344.280 | 6590.26 | 7932.54 | 6719.93 | -4788.55 | 1670033.13 | 14319523.51 | 39°25'57.966"N | 80°53'42.402"W | 8251.53 | 324.527 | 5.89 | |
| 15194.00 | 89.850 | 347.400 | 6590.61 | 8027.12 | 6812.03 | -4811.79 | 1670009.90 | 14319615.57 | 39°25'58.876"N | 80°53'42.697"W | 8340.09 | 324.764 | 3.29 | |
| 15289.00 | 89.510 | 347.310 | 6591.14 | 8121.44 | 6904.73 | -4832.59 | 1669989.11 | 14319708.23 | 39°25'59.793"N | 80°53'42.960"W | 8427.88 | 325.012 | 0.37 | |
| 15384.00 | 89.390 | 345.830 | 6592.05 | 8215.90 | 6997.12 | -4854.65 | 1669967.06 | 14319800.59 | 39°26'00.706"N | 80°53'43.240"W | 8516.30 | 325.247 | 1.56 | |
| 15479.00 | 89.660 | 345.330 | 6592.84 | 8310.53 | 7089.12 | -4878.31 | 1669943.41 | 14319892.55 | 39°26'01.616"N | 80°53'43.540"W | 8605.44 | 325.467 | 0.60 | |
| 15573.00 | 89.570 | 339.260 | 6593.47 | 8404.43 | 7178.63 | -4906.88 | 1669914.85 | 14319982.02 | 39°26'02.501"N | 80°53'43.903"W | 8695.41 | 325.646 | 6.46 | |
| 15669.00 | 89.540 | 337.420 | 6594.22 | 8500.36 | 7267.84 | -4942.31 | 1669879.43 | 14320071.20 | 39°26'03.383"N | 80°53'44.353"W | 8789.08 | 325.783 | 1.92 | |
| 15763.00 | 89.690 | 340.610 | 6594.85 | 8594.31 | 7355.60 | -4975.97 | 1669845.79 | 14320158.92 | 39°26'04.251"N | 80°53'44.781"W | 8880.60 | 325.922 | 3.40 | |

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# Actual Wellpath Report

Melvin Unit 1H AWP Proj: 17695'



| REFERENCE WELLPATH IDENTIFICATION | | | |
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| Operator | ANTERO RESOURCES CORPORATION | Slot | Slot #08 |
| Area | Tyler County, WV | Well | Melvin Unit 1H |
| Field | Tyler | Wellbore | Melvin Unit 1H AWB |
| Facility | Estlack Pad | | |

WELLPATH DATA (381 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] | Comments |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 15858.00 | 89.730 | 342.650 | 6595.33 | 8689.29 | 7445.75 | -5005.90 | 1669815.86 | 14320249.04 | 39°26'05.142"N | 80°53'45.161"W | 8972.08 | 326.086 | 2.15 | |
| 15953.00 | 89.880 | 343.020 | 6595.65 | 8784.21 | 7536.52 | -5033.94 | 1669787.84 | 14320339.77 | 39°26'06.039"N | 80°53'45.517"W | 9063.09 | 326.259 | 0.42 | |
| 16048.00 | 89.540 | 342.380 | 6596.14 | 8879.14 | 7627.22 | -5062.19 | 1669759.60 | 14320430.43 | 39°26'06.936"N | 80°53'45.876"W | 9154.25 | 326.428 | 0.76 | |
| 16143.00 | 89.660 | 340.380 | 6596.80 | 8974.12 | 7717.24 | -5092.52 | 1669729.28 | 14320520.42 | 39°26'07.826"N | 80°53'46.261"W | 9246.05 | 326.580 | 2.11 | |
| 16238.00 | 90.370 | 341.510 | 6596.77 | 9069.11 | 7807.03 | -5123.54 | 1669698.28 | 14320610.17 | 39°26'08.714"N | 80°53'46.655"W | 9338.11 | 326.724 | 1.40 | |
| 16333.00 | 90.740 | 344.790 | 6595.85 | 9164.00 | 7897.93 | -5151.07 | 1669670.75 | 14320701.04 | 39°26'09.613"N | 80°53'47.005"W | 9429.26 | 326.887 | 3.47 | |
| 16429.00 | 90.090 | 343.730 | 6595.16 | 9259.79 | 7990.33 | -5177.11 | 1669644.72 | 14320793.40 | 39°26'10.526"N | 80°53'47.335"W | 9520.92 | 327.060 | 1.30 | |
| 16523.00 | 90.340 | 337.940 | 6594.80 | 9353.74 | 8079.08 | -5207.96 | 1669613.89 | 14320882.12 | 39°26'11.404"N | 80°53'47.727"W | 9612.20 | 327.193 | 6.17 | |
| 16616.00 | 90.250 | 335.190 | 6594.33 | 9446.51 | 8164.40 | -5244.94 | 1669576.92 | 14320967.40 | 39°26'12.247"N | 80°53'48.197"W | 9703.96 | 327.283 | 2.96 | |
| 16710.00 | 90.430 | 335.920 | 6593.77 | 9540.16 | 8249.97 | -5283.84 | 1669538.04 | 14321052.94 | 39°26'13.094"N | 80°53'48.692"W | 9796.99 | 327.362 | 0.80 | |
| 16805.00 | 90.340 | 334.620 | 6593.13 | 9634.76 | 8336.26 | -5323.58 | 1669498.32 | 14321139.19 | 39°26'13.947"N | 80°53'49.197"W | 9891.09 | 327.437 | 1.37 | |
| 16899.00 | 89.730 | 333.840 | 6593.07 | 9728.19 | 8420.91 | -5364.44 | 1669457.47 | 14321223.80 | 39°26'14.784"N | 80°53'49.717"W | 9984.43 | 327.501 | 1.05 | |
| 16993.00 | 89.170 | 336.370 | 6593.97 | 9821.76 | 8506.16 | -5404.01 | 1669417.92 | 14321309.02 | 39°26'15.627"N | 80°53'50.220"W | 10077.60 | 327.572 | 2.76 | |
| 17088.00 | 89.820 | 338.950 | 6594.81 | 9916.63 | 8594.02 | -5440.11 | 1669381.83 | 14321396.85 | 39°26'16.496"N | 80°53'50.679"W | 10171.14 | 327.666 | 2.80 | |
| 17183.00 | 90.900 | 346.050 | 6594.21 | 10011.51 | 8684.56 | -5468.66 | 1669353.29 | 14321487.35 | 39°26'17.391"N | 80°53'51.041"W | 10262.94 | 327.801 | 7.56 | |
| 17278.00 | 91.020 | 346.520 | 6592.62 | 10106.02 | 8776.84 | -5491.18 | 1669330.78 | 14321579.59 | 39°26'18.303"N | 80°53'51.327"W | 10353.07 | 327.968 | 0.51 | |
| 17372.00 | 90.000 | 344.880 | 6591.79 | 10199.62 | 8867.92 | -5514.40 | 1669307.57 | 14321670.64 | 39°26'19.204"N | 80°53'51.621"W | 10442.63 | 328.125 | 2.05 | |
| 17468.00 | 90.030 | 342.130 | 6591.76 | 10295.48 | 8959.96 | -5541.65 | 1669280.33 | 14321762.64 | 39°26'20.114"N | 80°53'51.967"W | 10535.22 | 328.264 | 2.86 | |
| 17562.00 | 89.880 | 342.860 | 6591.83 | 10389.42 | 9049.61 | -5569.93 | 1669252.06 | 14321852.25 | 39°26'21.000"N | 80°53'52.326"W | 10626.36 | 328.388 | 0.79 | |
| 17657.00 | 89.880 | 344.040 | 6592.03 | 10484.30 | 9140.67 | -5596.99 | 1669225.01 | 14321943.28 | 39°26'21.900"N | 80°53'52.670"W | 10718.12 | 328.520 | 1.24 | |
| 17695.00 | 89.880 | 344.040 | 6592.11 | 10522.23 | 9177.20 | -5607.44 | 1669214.57 | 14321979.80 | 39°26'22.262"N | 80°53'52.803"W | 10754.74 | 328.574 | 0.00 | Projected MD at TD: 17695' |

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# Actual Wellpath Report

Melvin Unit 1H AWP Proj: 17695'



## REFERENCE WELLPATH IDENTIFICATION

| | | | |
|---|---|---|---|
| Operator | ANTERO RESOURCES CORPORATION | Slot | Slot #08 |
| Area | Tyler County, WV | Well | Melvin Unit 1H |
| Field | Tyler | Wellbore | Melvin Unit 1H AWB |
| Facility | Estlack Pad | | |

## HOLE & CASING SECTIONS - Ref Wellbore: Melvin Unit 1H AWB Ref Wellpath: Melvin Unit 1H AWP Proj: 17695'

| String/Diameter | Start MD [ft] | End MD [ft] | Interval [ft] | Start TVD [ft] | End TVD [ft] | Start N/S [ft] | Start E/W [ft] | End N/S [ft] | End E/W [ft] |
|---|---|---|---|---|---|---|---|---|---|
| 20in Conductor | 32.00 | 72.00 | 40.00 | 32.00 | 72.00 | 0.00 | 0.00 | -0.05 | -0.07 |
| 13.375in Casing Surface | 32.00 | 411.00 | 379.00 | 32.00 | 411.00 | 0.00 | 0.00 | -0.68 | -0.62 |
| 9.625in Casing Intermediate | 32.00 | 2623.00 | 2591.00 | 32.00 | 2508.72 | 0.00 | 0.00 | -317.97 | -553.01 |

## TARGETS

| Name | TVD [ft] | North [ft] | East [ft] | Grid East [US ft] | Grid North [US ft] | Latitude | Longitude | Shape |
|---|---|---|---|---|---|---|---|---|
| Melvin Unit 1H POE - Plat | 6573.00 | -721.13 | -2104.87 | 1672715.73 | 14312085.43 | 39°24'44.390"N | 80°53'08.320"W | point |
| Melvin Unit 1H BHL - Plat | 6599.00 | 9176.04 | -5607.22 | 1669214.79 | 14321978.63 | 39°26'22.250"N | 80°53'52.800"W | point |
| Melvin Unit 1H LP Rev-1 | 6599.00 | -560.27 | -2161.80 | 1672658.83 | 14312246.23 | 39°24'45.981"N | 80°53'09.043"W | point |
| Melvin Unit 1H DC | 6650.00 | 0.00 | 0.00 | 1674819.76 | 14312806.27 | 39°24'51.490"N | 80°52'41.490"W | polygon |

## WELLPATH COMPOSITION - Ref Wellbore: Melvin Unit 1H AWB Ref Wellpath: Melvin Unit 1H AWP Proj: 17695'

| Start MD [ft] | End MD [ft] | Positional Uncertainty Model | Log Name/Comment | Wellbore |
|---|---|---|---|---|
| 32.00 | 6060.13 | BHI Generic gyro - northseeking (Standard) | 01_SDI Gyro (100' - 6060.13') | Melvin Unit 1H AWB |
| 6060.13 | 17657.00 | Navitrak w/ Surcon: (MagCAD, Short spacing) | 02_BHI AT Curve [SS+MSA] <8-1/2"> (6060.13')(6277'- 17657') | Melvin Unit 1H AWB |
| 17657.00 | 17695.00 | Blind Drilling (std) | Projection to bit | Melvin Unit 1H AWB |

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# Hydraulic Fracturing Fluid Product Component Information Disclosure

| | |
|---|---|
| Job Start Date: | 9/30/2016 |
| Job End Date: | 9/30/2016 |
| State: | West Virginia |
| County: | Tyler |
| API Number: | 47-095-02337-00-00 |
| Operator Name: | Antero Resources Corporation |
| Well Name and Number: | Melvin 1H |
| Latitude: | 39.41430278 |
| Longitude: | -80.87819167 |
| Datum: | NAD27 |
| Federal Well: | NO |
| Indian Well: | NO |
| True Vertical Depth: | 6,592 |
| Total Base Water Volume (gal): | 18,475,237 |
| 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 | 90.65049 | Density = 8.330 |
| Ingredients | Listed Above | Listed Above | | | | | |
| | | | Water | 7732-18-5 | 100.00000 | 0.15552 | |

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| | | | | | | | |
|---|---|---|---|---|---|---|---|
| HCL >10% | Halliburton | Solvent | | | | | |
| | | | | Listed Below | | | |
| FR-76 | Halliburton | Friction Reducer | | | | | |
| | | | | Listed Below | | | |
| SAND-COMMON WHITE - 100 MESH, 3307 LB BAG | Halliburton | Proppant | | | | | |
| | | | | Listed Below | | | |
| MC B-8614 | Halliburton | Biocide | | | | | |
| | | | | Listed Below | | | |
| SP Breaker | Halliburton | Breaker | | | | | |
| | | | | Listed Below | | | |
| SAND-PREMIUM WHITE-40/70, BULK | Halliburton | Proppant | | | | | |
| | | | | Listed Below | | | |
| FDP-M1075-12 | Halliburton | Scale Inhibitor | | | | | |
| | | | | Listed Below | | | |
| HAI-OS ACID INHIBITOR | Halliburton | Corrosion Inhibitor | | | | | |
| | | | | Listed Below | | | |

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| | | | | | | | |
|---|---|---|---|---|---|---|---|
| WG-36 GELLING AGENT | Halliburton | Gelling Agent | | | | | |
| | | | | 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 | 9.16900 | |
| | | | Hydrochloric acid | 7647-01-0 | 30.00000 | 0.04666 | |
| | | | Guar gum | 9000-30-0 | 100.00000 | 0.02455 | |
| | | | Telomer | Proprietary | 10.00000 | | |
| | | | Ethylene Glycol | 107-21-1 | 60.00000 | | |
| | | | Olefins | Proprietary | 5.00000 | | |
| | | | Hydrotreated light petroleum distillate | 64742-47-8 | 30.00000 | | |
| | | | Acrylic acid | 79-10-7 | 0.01000 | | |
| | | | Ethoxylated alcohols | Proprietary | 30.00000 | | |
| | | | Propargyl alcohol | 107-19-7 | 10.00000 | | |
| | | | Sodium polyacrylate | 9003-04-7 | 1.00000 | | |
| | | | Reaction product of acetophenone, formaldehyde, thiourea and oleic acid in dimethyl formamide | 68527-49-1 | 30.00000 | | |
| | | | Methanol | 67-56-1 | 60.00000 | | |
| | | | Fatty acids, tall oil | Proprietary | 30.00000 | | |
| | | | Acrylamide acrylate copolymer | Proprietary | 30.00000 | | Denise Tuck, Halliburton, 3000 N. Sam Houston Pkwy E., Houston, TX 77032, 281-871-6226 |
| | | | Inorganic salt | Proprietary | 30.00000 | | |

* 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(i) and Appendix D are obtained from suppliers Material Safety Data Sheets (MSDS)

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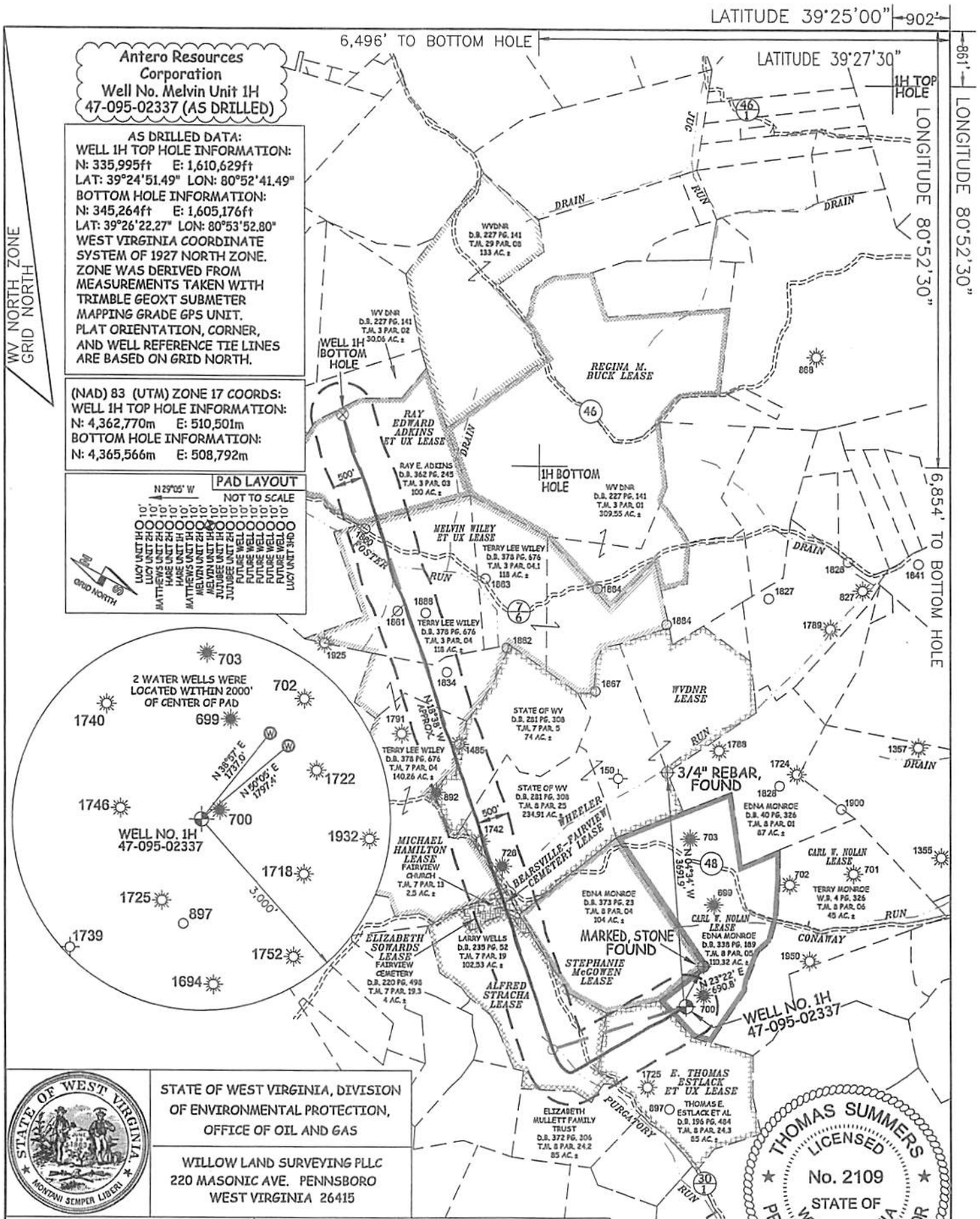


STATE OF WEST VIRGINIA, DIVISION OF ENVIRONMENTAL PROTECTION, OFFICE OF OIL AND GAS

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

JOB # 14-063WA
DRAWING # MELVIN1HADR
SCALE 1" = 2000'
MINIMUM DEGREE OF ACCURACY SUBMETER
PROVEN SOURCE OF ELEV. SUBMETER MAPPING GRADE GPS

LEGEND

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

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STATE OF WEST VIRGINIA
DEPARTMENT OF ENERGY
DIVISION OF OIL AND GAS

THOMAS SUMMERS P.S. 2109
DATE 06/28/17
OPERATOR'S WELL# MELVIN UNIT #1H

NOTE
1. NO OCCUPIED DWELLINGS OR BUILDINGS TWO THOUSAND FIVE HUNDRED (2,500) SQUARE FEET OR LARGER USED TO HOUSE OR SHELTER DAIRY CATTLE OR POULTRY HUSBANDRY ARE LOCATED WITHIN SIX HUNDRED TWENTY-FIVE (625) FEET OF THE CENTER OF THE WELL PAD.
2. TOP HOLE DATA SHOWN HEREON WAS PROVIDED BY ALLEGHENY SURVEYS, INC.
3. AS DRILLED DATA WAS PROVIDED BY ANTERO RESOURCES CORPORATION.
4. WLS IS NOT CERTIFYING THE DATA AND INFORMATION PROVIDED LISTED IN NOTES 2 AND 3, ONLY THE RELATIONSHIP TO THE DATA AND INFORMATION PROVIDED TO THE LEASE BOUNDARIES.
5. WLS IS BY NO MEANS RESPONSIBLE FOR ANY ERRORS OR INACCURACIES WITH THE DATA AND INFORMATION THAT HAS BEEN PROVIDED.

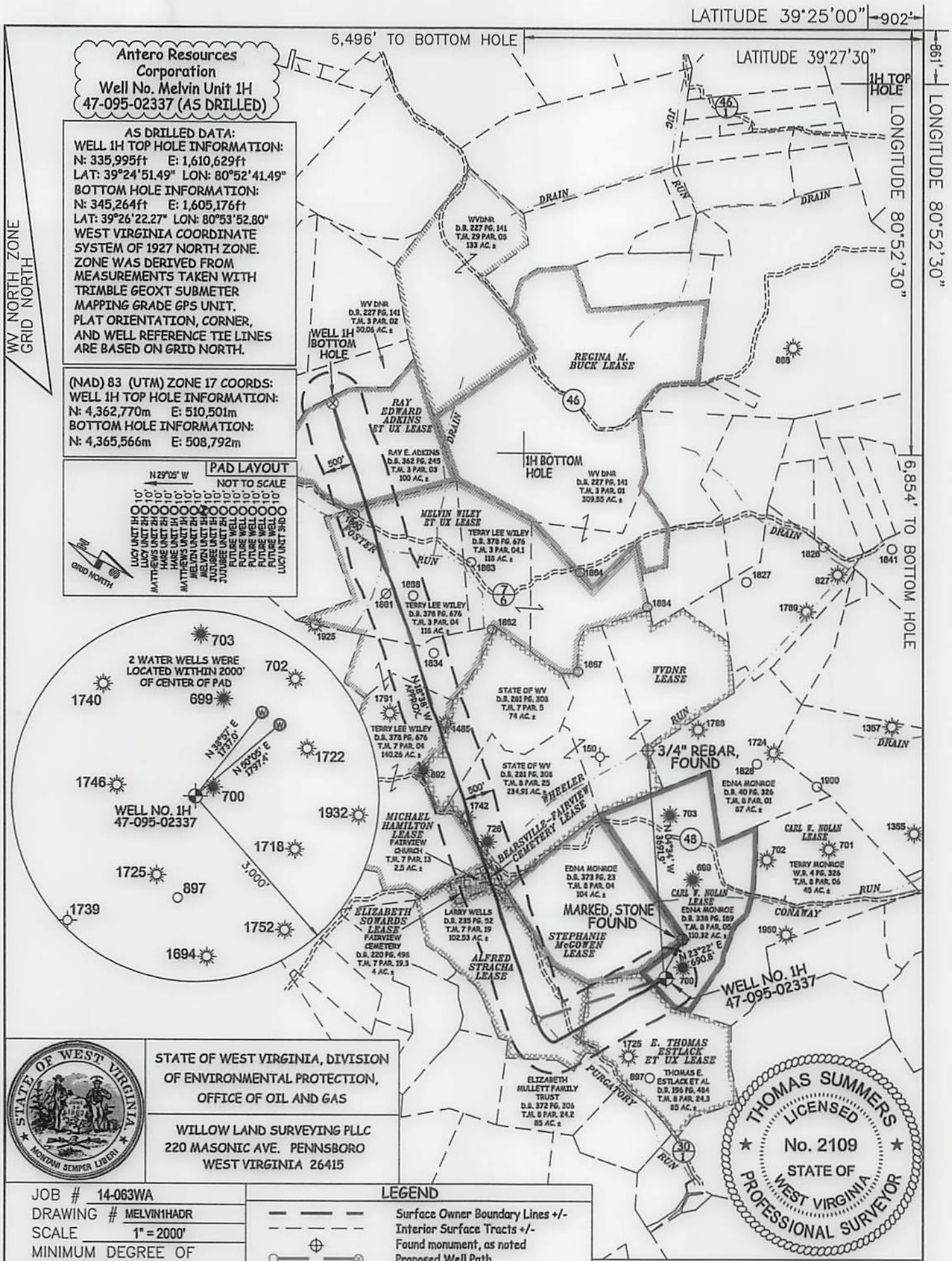
WELL TYPE: OIL ___ GAS X LIQUID INJECTION ___ WASTE DISPOSAL ___
(IF "GAS") PRODUCTION X STORAGE ___ DEEP ___ SHALLOW X

| 47 | 095 | 02337 |
|---|---|---|
| STATE | COUNTY | PERMIT |

LOCATION: ELEVATION 1,142' - AS-DRILLED WATERSHED HEADWATERS MIDDLE ISLAND CREEK
QUADRANGLE MIDDLEBOURNE 7.5' DISTRICT CENTERVILLE COUNTY TYLER
SURFACE OWNER EDNA MONROE ACREAGE 110.32 ACRES +/-
OIL & GAS ROYALTY OWNER CARL W. NOLAN; E. THOMAS ESTLACK ET UX; ALFRED STRACHA; ELIZABETH SOWARDS; MICHAEL HAMILTON; BEARSVILLE-FAIRVIEW CEMETERY; MELVIN WILEY ET UX; WVDNR; RAY EDWARD ADKINS ET UX
LEASE ACREAGE 116 AC.±; 85.5 AC.±; 101.2 AC.±; 4 AC.±; 1.8 AC.±; 2 AC±; 378 AC.±; 553.16 AC.±; 100 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 6,592' TVD 17,695' MD
WELL OPERATOR ANTERO RESOURCES CORP. DESIGNATED AGENT DIANNA STAMPER - CT CORPORATION SYSTEM
ADDRESS 1615 WYNKOOP ST. ADDRESS 5400 D BIG TYLER ROAD
DENVER, CO 80202 CHARLESTON, WV 25313

COUNTY NAME
PERMIT

FORM WW-6




STATE OF WEST VIRGINIA, DIVISION OF ENVIRONMENTAL PROTECTION, OFFICE OF OIL AND GAS

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

THOMAS SUMMERS LICENSED No. 2109 STATE OF WEST VIRGINIA PROFESSIONAL SURVEYOR

JOB # 14-063WA
DRAWING # MELVIN1HADR
SCALE 1" = 2000'
MINIMUM DEGREE OF ACCURACY SUBMETER
PROVEN SOURCE OF ELEV. SUBMETER MAPPING GRADE GPS

LEGEND

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

STATE OF WEST VIRGINIA
DEPARTMENT OF ENERGY
DIVISION OF OIL AND GAS

THOMAS SUMMERS P.S. 2109
DATE 06/28/17
OPERATOR'S WELL# MELVIN UNIT #1H

NOTE

1. NO OCCUPIED DWELLINGS OR BUILDINGS TWO THOUSAND FIVE HUNDRED (2,500) SQUARE FEET OR LARGER USED TO HOUSE OR SHELTER DAIRY CATTLE OR POULTRY HUSBANDRY ARE LOCATED WITHIN SIX HUNDRED TWENTY-FIVE (625) FEET OF THE CENTER OF THE WELL PAD.
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WELL TYPE: OIL ___ GAS X LIQUID INJECTION ___ WASTE DISPOSAL ___
(IF "GAS") PRODUCTION X STORAGE ___ DEEP ___ SHALLOW X

PERMIT: STATE 47 – COUNTY 095 – PERMIT 02337

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QUADRANGLE MIDDLEBOURNE 7.5' DISTRICT CENTERVILLE COUNTY TYLER
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