



west virginia department of environmental protection

Office of Oil and Gas
601 57th Street, S.E.
Charleston, WV 25304
(304) 926-0450
fax: (304) 926-0452

Harold D. Ward, Cabinet Secretary
www.dep.wv.gov

Thursday, December 29, 2022
WELL WORK PLUGGING PERMIT
Horizontal 6A Plugging

EQT PRODUCTION COMPANY
625 LIBERTY AVE., SUITE 1700

PITTSBURGH, PA 15222

Re: Permit approval for BIG 245 H17
47-103-03236-00-00

This well work permit is evidence of permission granted to perform the specified well work at the location described on the attached pages and located on the attached plat, subject to the provisions of Chapter 22 of the West Virginia Code of 1931, as amended, and all rules and regulations promulgated thereunder, and to any additional specific conditions and provisions outlined in the pages attached hereto. Notification shall be given by the operator to the Oil and Gas Inspector at least 24 hours prior to the construction of roads, locations, and/or pits for any permitted work. In addition, the well operator shall notify the same inspector 24 hours before any actual well work is commenced and prior to running and cementing casing. Spills or emergency discharges must be promptly reported by the operator to 1-800-642-3074 and to the Oil and Gas Inspector.

Upon completion of the plugging well work, the above named operator will reclaim the site according to the provisions of WV Code 22-6-30. Please be advised that form WR-38, Affidavit of Plugging and Filling Well, is to be submitted to this office within 90 days of completion of permitted well work, as should form WR-34 Discharge Monitoring Report within 30 days of discharge of pits, if applicable. Failure to abide by all statutory and regulatory provisions governing all duties and operations hereunder may result in suspension or revocation of this permit and, in addition, may result in civil and/or criminal penalties being imposed upon the operators.

Per 35 CSR 4-5.2.g this permit will expire in two (2) years from the issue date unless permitted well work is commenced. If there are any questions, please feel free to contact me at (304) 926- 0450.

James A. Martin
Chief

A blue ink signature of James A. Martin, written in a cursive style, is positioned to the right of his name and title.

Operator's Well Number:
Farm Name: ET BLUE GRASS, LLC
U.S. WELL NUMBER: 47-103-03236-00-00
Horizontal 6A Plugging
Date Issued: 12/29/2022

PERMIT CONDITIONS 47 1 0 3 0 3 2 3 6

West Virginia Code § 22-6-11 allows the Office of Oil and Gas to place specific conditions upon this permit. Permit conditions have the same effect as law. Failure to adhere to the specified permit conditions may result in enforcement action.

CONDITIONS

1. All pits must be lined with a minimum of 20 mil thickness synthetic liner.
2. In the event of an accident or explosion causing loss of life or serious personal injury in or about the well or while working on the well, the well operator or its contractor shall give notice, stating the particulars of the accident or explosion, to the oil and gas inspector and the Chief within twenty-four (24) hours.
3. Well work activities shall not constitute a hazard to the safety of persons.

47 1 03 03 236



400 Woodcliff Dr | Canonsburg, PA 15317
www.eqt.com

Via Email

November 23, 2022

West Virginia Department of Environmental Protection
Office of Oil and Gas
Attn: Jeff McLaughlin
601 57th Street, SE
Charleston, WV 25304

**RE: Application for a Permit to Plug & Abandon
BIG245H17
API 47-103-03236
Gran District, Wetzel County, WV**

WVDEP Recipient,

Attached is EQT Production Company's application for a permit to plug and abandon for the well referenced above.

EQT Production trusts that if any portion of the submitted documentation is found to be inadequate for processing the permit, notification will be made to our land department at your earliest convenience. It is EQT Production's intent to cooperate fully to provide any additional requested documentation and clarification in a timely manner such that permitting proceeds in a predictable and logical manner.

Sincerely,

Becky Shrum
Project Specialist - Permitting
bshrum@eqt.com
412-660-0654

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WV Department of
Environmental Protection

12/30/2022

4710303236

1) Date November 17, 2022
2) Operator's
Well No. BIG245H17
3) API Well No. 47-103 - 03236

STATE OF WEST VIRGINIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
OFFICE OF OIL AND GAS

APPLICATION FOR A PERMIT TO PLUG AND ABANDON

4) Well Type: Oil ___ / Gas X / Liquid injection ___ / Waste disposal ___ /
(If "Gas, Production ___ or Underground storage ___) Deep ___ / Shallow X

5) Location: Elevation 1430' Watershed Rockcamp Run of Wiley Fork
District Grant County Wetzel Quadrangle Big Run 7.5'

6) Well Operator EQT Production Company 7) Designated Agent Joseph C. Mallow
Address 400 Woodcliff Drive Address 427 Midstate Drive
Canonsburg PA 15317 Clarksburg, WV 26301

8) Oil and Gas Inspector to be notified
Name Steve McCoy
Address 13016 Indian Creek
Jacksonburg, WV 26377

9) Plugging Contractor
Name R&J
Address 1087 Raccoon Road
Hueysville, KY 41640

10) Work Order: The work order for the manner of plugging this well is as follows:
See Attachment for details and procedures.

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Environmental Protection

Notification must be given to the district oil and gas inspector 24 hours before permitted work can commence.

Work order approved by inspector Stephen Mccoy Digitally signed by Stephen Mccoy Date: 2022.11.23 09:16:40 -05'00' Date 11/23/22

12/30/2022

BIG245 17H
Wetzel Co., WV
HZ Marcellus well
API # 47-103-03236-00
BY: Tyler Mizgorski
DATE: 11/1/2022

47 1 0 3 0 3 2 3 6

CURRENT STATUS:

Elevation @ 1416'
26" A-500 85.6 ppf conductor @ 40' Class A Cement to Surface
13 3/8" J-55 54.4 ppf casing @ 1,182' Class A Cement to Surface
9 5/8" A-500 40 ppf casing @ 2,858' Class H Cement to Surface
5 1/2" P-110 20 ppf casing @ 13,494' Class H Cement, Estimated Cement Top 1,830'

Well not completed

Fresh water @ 229', 507', 662', 752', 1011'

Coal Show @ 925', 1024', 1132'

Salt Water @ 1970'

- 1) Notify Inspector **Steve McCoy**, (681) 344-3265, stephen.e.mccoy@wv.gov prior to beginning operations.
- 2) Check and record pressure on all casings, notify Engineer of recorded pressures.
- 3) Install 10k wireline BOP. Test BOP's and stack to regs. P/U install 10k lubricator. (**Call 8hrs before, will need crane truck**)
- 4) Equalize lubricator, if necessary and RIH w/ gauge ring to 8,260' and set a CIBP @8,240' MD above the Marcellus TVD. Do not set plug in collar. If unable to get to set depth, EQT office will call DEP to discuss options.
- 5) Hook up pump truck and pressure test lines to 8000 psi. (**Call pump truck 8hrs before**)
- 6) POOH w/ wireline and load well with 6% gel if not full. Perform CIT with pump truck to 2000 psi. Ensure leak-off is not more than 10% in thirty minutes per regulation.
- 7) RIH and set second CIBP 10' above the first @8,230' MD
- 8) POOH w/ wireline and load well with 6% gel if not full. Perform CIT with pump truck to 2000 psi. Ensure leak-off is not more than 10% in thirty minutes per regulation.
- 9) RIH with Renegade segmented bond log and pull log from CIBP to surface
- 10) TIH with tubing to CIBP.
- 11) Pump 1500' Class A or Class L cement plug. 8,230' to 6,730' Pump 500' of cement and pull 500' of tubing 2 times. Pump last 500' section and pull tubing 700' and reverse circulate with fresh water if need be.
- 12) Let cement dry for 8 hours Tag up on cement. If cement top is at 6,730' or close POOH with tubing to 3,000'
- 13) Set a 300' Class A or Class L cement plug 3,000' to 2,700'. TOOH 300' Reverse circulate full hole volume. TOOH 300' (Safety Plug, 9 5/8" Casing Seat)
- 14) Let cement dry for 8 hours. Tag up on cement. If cement top is at 2,700' or close POOH with tubing
- 15) Free Point 5 1/2" casing. Cut Casing @freepoint ~1,800' using jet cutter. Estimated freepoint @1,830'. TOOH 5 1/2" Casing.
- 16) Set a 300' Class A or Class L Cement plug 100'in/200' out of casing cut 1,930' to 1,630'. (Casing Cut Plug)
- 17) Let cement dry for 8 hours. Tag up on cement. If cement top is at 1,630' or close POOH with tubing to 1,200'
- 18) Set a 1200' Class A or Class L Cement plug from 1,200' Pump 500' of cement and pull 500; of tubing 2 times. Pump last 200' section. (13 3/8" Casing Seat, Coal, Freshwater, and surface plug)
- 19) Set Monument above ground to WV-DEP Specifications

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12/30/2022
Stephen McCoy



November 8, 2022

Mr. Taylor Brewer
West Virginia Department of Environmental Protection
Office of Oil and Gas
601 57th Street SE
Charleston, WV 25304

Re: Class L Cement Variance Request
BIG245H17 Well
Permit Number 47-103-03236
Grant District, Wetzel County

Dear Mr. Brewer,

EQT Production Company (EQT) has been notified by our cement providers that they will no longer be providing Class A cement. As a result of this, EQT is requesting the option to utilize Class L cement, if necessary, in place of Class A cement for its cement jobs.

The variance request from Legislative Rule 35CSR4 Section 11.5, related to the use of Class L Cement, was approved by the Office of Oil and Gas on September 13, 2022. A copy of the variance is included with this request.

If you have any questions, please do not hesitate to contact me at 724-746-9073.

Sincerely,

A handwritten signature in blue ink, appearing to read 'John Zavatchan'.

John Zavatchan
Project Specialist - Permitting

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Enc.

12/30/2022



west virginia department of environmental protection

Office of Oil and Gas
601 57th Street, SE
Charleston, WV 25304
Phone (304) 926-0450

Harold D. Ward, Cabinet Secretary
dep.wv.gov

**BEFORE THE OFFICE OF OIL AND GAS
DEPARTMENT OF ENVIRONMENTAL PROTECTION
STATE OF WEST VIRGINIA**

**IN THE MATTER OF A VARIANCE FROM)
LEGISLATIVE RULE 35CSR4)
SECTION 14.1. AND LEGISLATIVE RULE)
35CSR8 SECTION 20.1,)
RELATING TO THE CEMENTING)
OF OIL AND GAS WELLS)**

ORDER NO. 2022-13

REPORT OF THE OFFICE

In response to industry requests, the West Virginia Department of Environmental Protection, Office of Oil and Gas has reviewed the proposed use of American Petroleum Institute (API) Class L cement to be used in place of API Class A cement for well plugging.

FINDINGS OF FACT

1. On July 28, 2022, Diversified Gas & Oil Co. (DGO) submitted a variance request from Legislative Rule 35CSR4 for the use of API Class L cement in place of API Class A cement, relating to the plugging of conventional wells.
2. Laboratory analysis submitted by DGO on July 28, 2022, indicates API Class L cement is comparable to API Class A cement and thereby satisfies the requirements of the West Virginia Code.
3. Contemporaneously, the Chief of the Office of Oil and Gas also chose to consider a variance to Legislative Rule 35CSR8 Section 20.1., for the use of API Class L cement in place of API Class A cement, relating to the plugging of horizontal wells.

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WV Department of Environmental Protection
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4. On August 18, 2022, the Office of Oil and Gas provided public notice of acceptance of public comments on the variance consideration. During the 20-day public comment period, no comments were received.

CONCLUSIONS OF LAW

Pursuant to Article 6 and Article 6A, Chapter 22 of the Code of West Virginia, the Office of Oil and Gas has jurisdiction over the subject matter, and the persons interested therein, and jurisdiction to promulgate the hereinafter prescribed Order.

Pursuant to Legislative Rule 35CSR4, Section 18 and Legislative Rule 35CSR8, Section 14, the Chief of the Office of Oil and Gas may grant a variance from any requirement of these rules.

ORDER

It is ordered that the Class L cement product approved and monogrammed by API is approved for use in place of API Class A cement for well plugging subject to the provisions of Legislative Rule 35CSR4 and Legislative Rule 35CSR8.

Dated this, the 13th day of September, 2022.

IN THE NAME OF THE STATE OF WEST VIRGINIA

OFFICE OF OIL AND GAS
DEPARTMENT OF ENVIRONMENTAL PROTECTION
OF THE STATE OF WEST VIRGINIA



James Martin, Chief
Office of Oil and Gas

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Environmental Protection

12/30/2022

47 1 0 3 0 3 2 3 6

WW-4A
Revised 6-07

1) Date: November 17, 2022
2) Operator's Well Number
BIG245H17

3) API Well No.: 47 - 103 - 03236

STATE OF WEST VIRGINIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION, OFFICE OF OIL AND GAS
NOTICE OF APPLICATION TO PLUG AND ABANDON A WELL

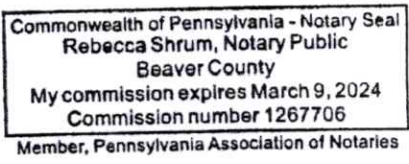
4) Surface Owner(s) to be served:	5) (a) Coal Operator
(a) Name <u>See Attached</u>	Name <u>See Attached</u>
Address _____	Address _____
(b) Name _____	(b) Coal Owner(s) with Declaration
Address _____	Name <u>See Attached</u>
(c) Name _____	Address _____
Address _____	Name _____
6) Inspector <u>Steve McCoy</u>	(c) Coal Lessee with Declaration
Address <u>13016 Indian Creek</u>	Name _____
<u>Jacksonburg, WV 26377</u>	Address _____
Telephone <u>681-344-3265</u>	_____

TO THE PERSONS NAMED ABOVE: You should have received this Form and the following documents:

- (1) The application to Plug and Abandon a Well on Form WW-1B, which sets out the parties involved in the work and describes the well its and the plugging work order; and
- (2) The plat (surveyor's map) showing the well location on Form WW-6.

The reason you received these documents is that you have rights regarding the application which are summarized in the instructions on the reverses side. However, you are not required to take any action at all.

Take notice that under Chapter 22-6 of the West Virginia Code, the undersigned well operator proposes to file or has filed this Notice and Application and accompanying documents for a permit to plug and abandon a well with the Chief of the Office of Oil and Gas, West Virginia Department of Environmental Protection, with respect to the well at the location described on the attached Application and depicted on the attached Form WW-6. Copies of this Notice, the Application, and the plat have been mailed by registered or certified mail or delivered by hand to the person(s) named above (or by publication in certain circumstances) on or before the day of mailing or delivery to the Chief.



Well Operator EQT Production Company
 By: Erin Spine *[Signature]*
 Its: Manager - Subsurface Permitting
 Address 400 Woodcliff Drive
Canonsburg PA 15317
 Telephone (724) 271-7380

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Office of Oil and Gas
NOV 30 2022
WV Department of Environmental Protection

Subscribed and sworn before me this 17th day of November, 2022
[Signature]
My Commission Expires March 9, 2024 Notary Public

Oil and Gas Privacy Notice

The Office of Oil and Gas processes your personal information, such as name, address and phone number, as a part of our regulatory duties. Your personal information may be disclosed to other State agencies or third parties in the normal course of business or as needed to comply with statutory or regulatory requirements, including Freedom of Information Act requests. Our office will appropriately secure your personal information. If you have any questions about our use of your personal information, please contact DEP's Chief Privacy Officer at depprivacyofficer@wv.gov.

12/30/2022

47 1 0 3 0 3 2 3 6

BIG245 Pad WW-4A Attachment

Surface Owners (All Disturbance):

Wanda L. Byard
1250 Meadowland Dr.
Lewisport, KY 42351

Neal Utt
1204 Big Run Rd.
Burton, WV 26562

Ikey Joe Willey
12359 Willey Fork Rd.
Pine Grove, WV 26419

ET Blue Grass LLC
PO Box 6135
Pittsburgh, PA 15212-0135

Coal Owners:

WPP, LLC
5260 Irwin Road
Huntington, WV 25727-3247

Frances E Hartman (Fluharty) Heirs & Assigns
4337 5th Avenue
Pittsburgh, PA 15213

Coal Operator:

ACNR Resources, Inc.
46226 National Road
St. Clairsville, OH 43950

Operator of Any Natural Gas Storage Field:

Equitrans Midstream
c/o Gerald Smith
2200 Energy Drive
Canonsburg, PA 15317

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WANDA L. BYARD
1250 MEADOWLAND DR.
LEWISPORT, KY 42351

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PINE GROVE, WV 26419

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Sent To
ET BLUE GRASS LLC
PO BOX 6135
PITTSBURGH, PA 15212-0135

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 Street and Apt. No. **WPP, LLC**
5260 IRWIN ROAD
HUNTINGTON, WV 25727-3247
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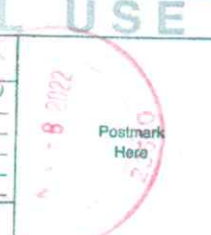
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 Street and Apt. No. **FRANCES E HARTMAN (FLUHARTY)**
HEIRS & ASSIGNS
4337 5TH AVENUE
PITTSBURGH, PA 15213
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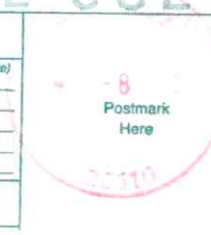
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Total Postage and Fees
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 Street and Apt. No. **ACNR RESOURCES, INC.**
46226 NATIONAL ROAD
ST. CLAIRSVILLE, OH 43950
 City, State, ZIP+4®

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 Street and Apt. No. **EQUITRANS MIDSTREAM**
C/O GERALD SMITH
2200 ENERGY DRIVE
CANONSBURG, PA 15317
 City, State, ZIP+4®

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WW-9
(5/16)

47 10303236

API Number 47 - 103 - 03236
Operator's Well No. BIG245H17

STATE OF WEST VIRGINIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
OFFICE OF OIL AND GAS
FLUIDS/ CUTTINGS DISPOSAL & RECLAMATION PLAN

Operator Name EQT Production Company OP Code 306686

Watershed (HUC 10) Rockcamp Run of Wiley Fork Quadrangle Big Run 7.5'

Do you anticipate using more than 5,000 bbls of water to complete the proposed well work? Yes No

Will a pit be used? Yes No

If so, please describe anticipated pit waste: _____

Will a synthetic liner be used in the pit? Yes No If so, what ml.? _____

Proposed Disposal Method For Treated Pit Wastes:

- Land Application (if selected provide a completed form WW-9-GPP)
- Underground Injection (UIC Permit Number _____)
- Reuse (at API Number _____)
- Off Site Disposal (Supply form WW-9 for disposal location)
- Other (Explain _____)

Will closed loop system be used? If so, describe: _____

Drilling medium anticipated for this well (vertical and horizontal)? Air, freshwater, oil based, etc. _____

-If oil based, what type? Synthetic, petroleum, etc. _____

Additives to be used in drilling medium? _____

Drill cuttings disposal method? Leave in pit, landfill, removed offsite, etc. _____

-If left in pit and plan to solidify what medium will be used? (cement, lime, sawdust) _____

-Landfill or offsite name/permit number? _____

Permittee shall provide written notice to the Office of Oil and Gas of any load of drill cuttings or associated waste rejected at any West Virginia solid waste facility. The notice shall be provided within 24 hours of rejection and the permittee shall also disclose where it was properly disposed.

I certify that I understand and agree to the terms and conditions of the GENERAL WATER POLLUTION PERMIT issued on April 1, 2016, by the Office of Oil and Gas of the West Virginia Department of Environmental Protection. I understand that the provisions of the permit are enforceable by law. Violations of any term or condition of the general permit and/or other applicable law or regulation can lead to enforcement action.

I certify under penalty of law that I have personally examined and am familiar with the information submitted on this application form and all attachments thereto and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine or imprisonment.

Company Official Signature *Erin Spine*

Company Official (Typed Name) Erin Spine

Company Official Title Manager - Subsurface Permitting

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NOV 30 2022

WV Department of
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Subscribed and sworn before me this 24th day of November, 2022

Rebecca Shrum Notary Public

My commission expires March 9, 2024

Commonwealth of Pennsylvania - Notary Seal
Rebecca Shrum, Notary Public
Beaver County
My commission expires March 9, 2024
Commission number 1267706

Member, Pennsylvania Association of Notaries
Stephan

Proposed Revegetation Treatment: Acres Disturbed 1± Prevegetation pH _____

Lime 3 Tons/acre or to correct to pH 6.5

Fertilizer type (10-20-20) or equivalent

Fertilizer amount 1/3 ton lbs/acre

Mulch 2 Tons/acre

Seed Mixtures

Temporary		Permanent	
Seed Type	lbs/acre	Seed Type	lbs/acre
Red Fescue	40	Red Fescue	15
Aslike Clover	5	Aslike Clover	5
Annual Rye	15		

Attach:

Maps(s) of road, location, pit and proposed area for land application (unless engineered plans including this info have been provided). If water from the pit will be land applied, provide water volume, include dimensions (L, W, D) of the pit, and dimensions (L, W), and area in acres, of the land application area.

Photocopied section of involved 7.5' topographic sheet.

Plan Approved by: Stephen Mccoy Digitally signed by Stephen Mccoy
Date: 2022.11.23 09:17:37 -05'00'

Comments: Seed and mulch all disturbed/reclaimed areas.

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 Office of Oil and Gas
 NOV 30 2022
 WV Department of
 Environmental Protection

Title: WV Oil and Gas Inspector Date: 11/23/22

Field Reviewed? () Yes () No

**EQT Production Water plan
Offsite disposals**

Waste Management - Meadowfill Landfill

Rt. 2, Box 68 Dawson Drive
Bridgeport, WV 26330
304-326-6027
Permit #SWF-1032-98
Approval #100785WV

Waste Management - Northwestern Landfill

512 E. Dry Road
Parkersburg, WV 26104
304-428-0602
Permit #SWF-1025 WV-0109400
Approval #100833WV

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Environmental Protection

WW-7
8-30-06



West Virginia Department of Environmental Protection
Office of Oil and Gas
WELL LOCATION FORM: GPS

API: 47-103-03236 WELL NO.: BIG 245 H17 (ET Blue Grass, LLC)

FARM NAME: BIG 245

RESPONSIBLE PARTY NAME: EQT Production Company

COUNTY: Wetzel DISTRICT: Grant

QUADRANGLE: Big Run 7.5'

SURFACE OWNER: ET Blue Grass, LLC

ROYALTY OWNER: Shiben Estates, Inc.

UTM GPS NORTHING: 4382921

UTM GPS EASTING: 537027 GPS ELEVATION: 436 m (1430 ft)

The Responsible Party named above has chosen to submit GPS coordinates in lieu of preparing a new well location plat for a plugging permit or assigned API number on the above well. The Office of Oil and Gas will not accept GPS coordinates that do not meet the following requirements:

1. Datum: NAD 1983, Zone: 17 North, Coordinate Units: meters, Altitude: height above mean sea level (MSL) – meters.
2. Accuracy to Datum – 3.05 meters
3. Data Collection Method:

Survey grade GPS _____ : Post Processed Differential _____
Real-Time Differential _____
Mapping Grade GPS X : Post Processed Differential X
Real-Time Differential _____

4. **Letter size copy of the topography map showing the well location.**

I the undersigned, hereby certify this data is correct to the best of my knowledge and belief and shows all the information required by law and the regulations issued and prescribed by the Office of Oil and Gas.

Ben R. Stoltz
Signature

P.S. 2092
Title

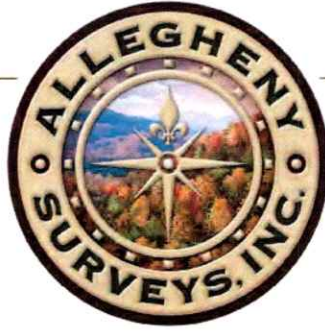
12/21/21
Date

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Office of Oil and Gas

NOV 30 2022

WV Department of
Environmental Protection

47 1 0 3 0 3 2 3 6



Site Pictures
ET Blue Grass, LLC
BIG 245 H17 47-103-03236



BIG 245 H17 Well Pad Site

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Office of Oil and Gas

NOV 30 2022

WV Department of
Environmental Protection

BIRCH RIVER OFFICE

237 Birch River Road
Birch River, WV 26610
phone: 304-649-8606 fax: 304-649-8608

BRIDGEPORT OFFICE

172 Thompson Drive
Bridgeport, WV 26330
phone: 304-848-5035 fax: 304-848-5037

CHARLESTON OFFICE

301 R.H. Boulevard - Suite 5
Charleston, WV 25309
phone: 304-756-2949 fax: 304-756-2948

ALLEGHENYSURVEYS.COM

12/30/2022

47 1 0 3 0 3 2 3 6

Topo Quad: Big Run 7.5'

Scale: 1" = 2000'

County: Wetzel

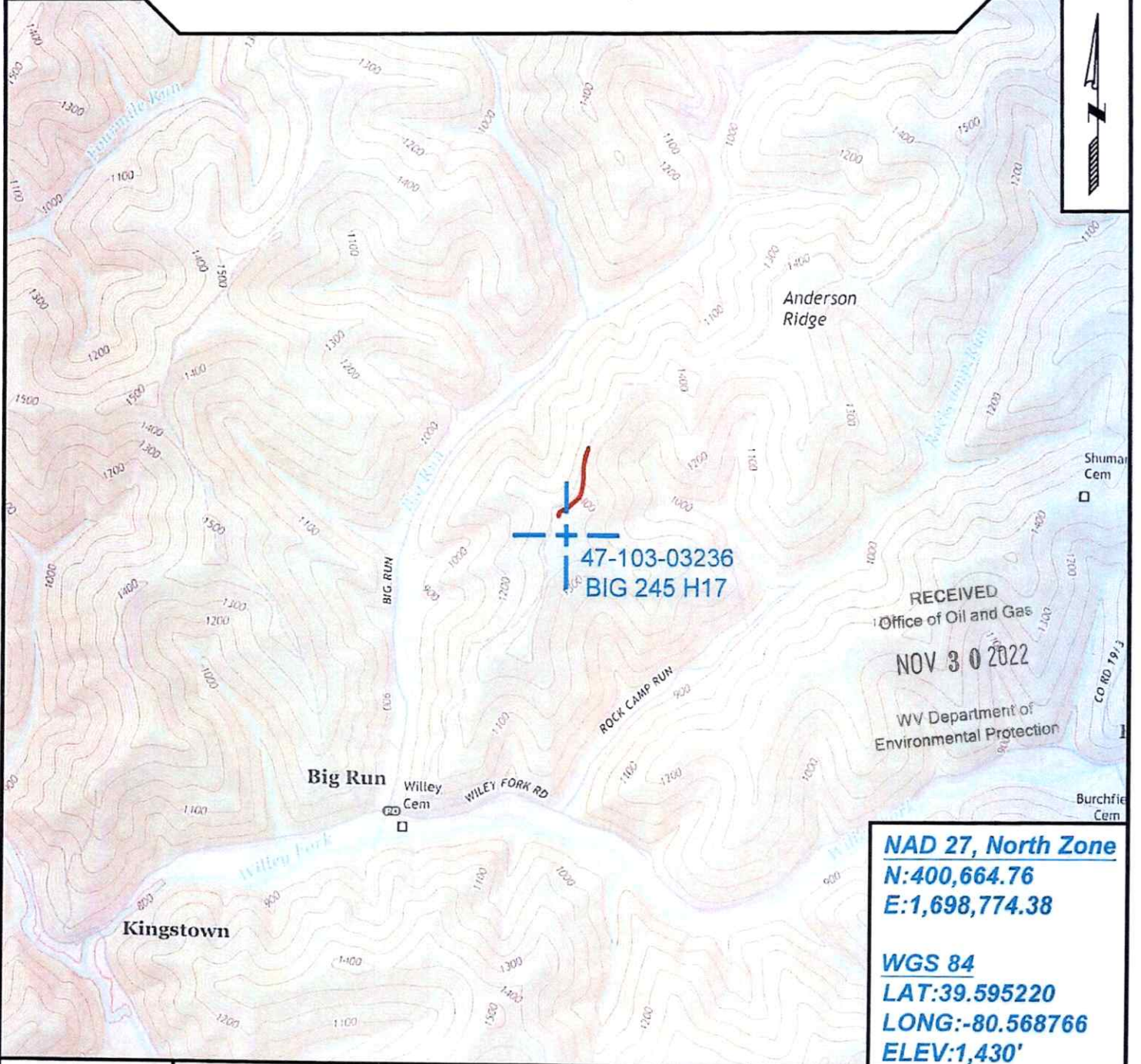
Date: December 21, 2021

District: Grant

Project No: 40-34-00-09

47-103-03236 BIG 245 H17 (ET Blue Grass, LLC)

Topo



NAD 27, North Zone
N:400,664.76
E:1,698,774.38

WGS 84
LAT:39.595220
LONG:-80.568766
ELEV:1,430'



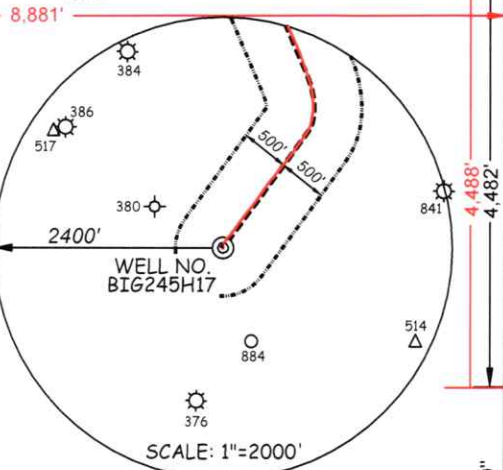
SURVEYING AND MAPPING SERVICES PERFORMED BY:
ALLEGHENY SURVEYS, INC.
 1-800-482-8606
 237 Birch River Road
 Birch River, WV 26610
 PH: (304) 649-8606
 FAX: (304) 649-8608

PREPARED FOR:
EQT Production Company
 400 Woodcliff Drive
 Canonsburg, PA 15317

12/30/2022

BIG245
BIG245H17
EQT PRODUCTION COMPANY

BOTTOM HOLE LATITUDE 39°37'30" 8,847'



TAG	TM-PAR.	SURFACE OWNERS	ACRES
A	G-TM-3-2	JOSEPH F & GAY BLAKE IRREVOCABLE GRANTOR TR.	194 AC.
B	G-TM-3-5	COASTAL FOREST RESOURCES CO	179 AC.
C	G-TM-3-14	CHARLES STONEKING ET AL.	70.50 AC.
D	G-TM-3-15	CHARLES STONEKING ET AL.	45 AC.
E	G-TM-3-16	CHARLES STONEKING ET AL.	14.11 AC.
F	G-TM-3-18	VIRGINIA RUTH BLAKE	28.75 AC.
G	G-TM-3-19	JOSEPH R PERHAC	93.50 AC.
H	G-TM-3-23	COASTAL FOREST RESOURCES CO	167.75 AC.
I	G-TM-3-24	COASTAL FOREST RESOURCES CO	35.89 AC.
J	G-TM-3-25	CHARLES STONEKING ET AL.	34.4 AC.
K	G-TM-3-26	VIRGINIA RUTH BLAKE	20.69 AC.
L	G-TM-3-27	VIRGINIA RUTH BLAKE	45.83 AC.
M	G-TM-3-30	THOMAS E & CHERYL A LEASURE	51.80 AC.
N	G-TM-3-31	HEARTWOOD FORESTLAND FUND II LP	27.56 AC.
O	G-TM-3-34	MIKE & MADELINE WHITE	30.6 AC.
P	G-TM-8-1	DANNY STOCKSLAGER ET AL.	170 AC.
Q	G-TM-8-2	MIKE & MADELINE WHITE	40.13 AC.
R	G-TM-8-3	MIKE & MADELINE WHITE	3 AC.
S	G-TM-8-7	JAMES E & MARTIN A STONEKING	19.12 AC.
T	G-TM-8-8	WANDA L BYARD	59.16 AC.
U	G-TM-8-10	GARLAND E MINOR	48.1 AC.
V	G-TM-8-11	BONNIE M HENTHORNE	63.50 AC.
W	G-TM-8-12	SHIRLEY A TITUS	41.9 AC.
X	G-TM-8-12.1	DALE F SAPP	10.1 AC.
Y	G-TM-8-14	NEAL UTT	51 AC.
Z	G-TM-8-15	JOHN MICHAEL BYARD	71.60 AC.
AA	G-TM-8-21	IKEY JOE WILLEY	76.27 AC.
BB	G-TM-8-22	ET BLUEGRASS LLC, C/O EQT PRODUCTION CO	138.93 AC.
CC	G-TM-8-23	DALE K, JAMES L & DONALD J DULANEY	70.81 AC.
DD	G-TM-8-25	JAMES ARTHUR YOHO	6.25 AC.
EE	G-TM-8-27	JAMES ARTHUR YOHO	21.75 AC.
FF	G-TM-8-28	JAMES ARTHUR & FLORENCE YOHO	61 AC.
GG	G-TM-8-4	DUANE M GOODRICH	1.625 AC.
HH	G-TM-8-5	DUANE M GOODRICH	130 SQ RDS
II	G-TM-8-6	DUANE M GOODRICH	164 SQ RDS
JJ	G-TM-8-13	NEAL UTT	3.75 AC.
KK	G-TM-8-13.1	DUANE M GOODRICH	13.56 AC.
LL	G-TM-3-28	JOHN & BONNIE RICE	5 AC.
MM	C-TM-19-14	JOSEPH R PERHAC	88.5 AC.

AS-DRILLED BH

AS-DRILLED COORDINATES
(S.P.C. NORTH ZONE) (UTM(M) ZONE 17 NORTH)

NAD'27 S.P.C.(FT)	N. 400,664.67	E. 1,698,774.30
NAD'27 GEO.	LAT-(N) 39.595137	LONG-(W) 80.568955
NAD'83 UTM (M)	N. 4,382,920.986	E. 537,026.476

LANDING POINT

NAD'27 S.P.C.(FT)	N. 402,461.93	E. 1,699,653.12
NAD'27 GEO.	LAT-(N) 39.600100	LONG-(W) 80.565912
NAD'83 UTM (M)	N. 4,383,473.020	E. 537,285.103

BOTTOM HOLE

NAD'27 S.P.C.(FT)	N. 407,068.23	E. 1,697,657.78
NAD'27 GEO.	LAT-(N) 39.612783	LONG-(W) 80.573000
NAD'83 UTM (M)	N. 4,384,866.220	E. 536,653.818

ROYALTY OWNERS

SHIBEN ESTATES INC. ET AL.	192 AC.± (160.96)	LEASE NO. 102836
EQT MINERAL PURCHASING GROUP, ET AL.	57 AC.±	LEASE NO. 125367
JOSEPH SHIBEN & MINNIE SHIBEN ESTATE ET AL.	1030 AC.±	LEASE NO. 102814

(S.P.C. NORTH ZONE) (UTM(M) ZONE 17 NORTH)

NAD'27 S.P.C.(FT)	N. 400,664.67	E. 1,698,774.30
NAD'27 GEO.	LAT-(N) 39.595137	LONG-(W) 80.568955
NAD'83 UTM (M)	N. 4,382,920.986	E. 537,026.476

LANDING POINT

NAD'27 S.P.C.(FT)	N. 402,449.73	E. 1,699,654.53
NAD'27 GEO.	LAT-(N) 39.60067	LONG-(W) 80.565907
NAD'83 UTM (M)	N. 4,383,469.311	E. 537,285.595

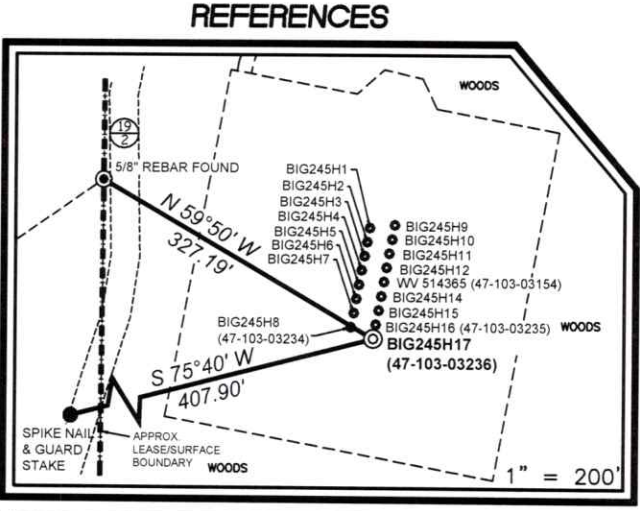
BOTTOM HOLE

NAD'27 S.P.C.(FT)	N. 407,073.49	E. 1,697,691.59
NAD'27 GEO.	LAT-(N) 39.612696	LONG-(W) 80.573068
NAD'83 UTM (M)	N. 4,384,867.995	E. 536,664.093

RECEIVED
Office of Oil and Gas
NOV 30 2022
WV Department of Environmental Protection
AS-DRILLED TOTAL LATERAL LENGTH = 5025.92'

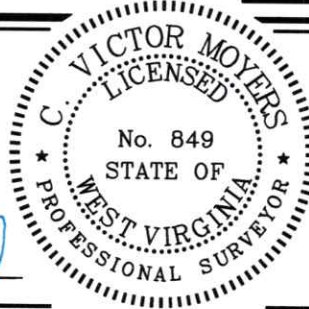
SLS
Land & Energy Development
Solutions from the ground up.
P.O. Box 150 • 12 Vanhorn Drive • Glenville, WV 26351 • (304) 462-5634
www.slsurveys.com

- NOTES ON SURVEY**
- NO WATER WELLS WERE FOUND WITHIN 250' OF PROPOSED GAS WELL. NO AGRICULTURAL BUILDINGS 2500 SQ. FT. OR GREATER WERE FOUND WITHIN 625' OF THE CENTER OF PROPOSED WELL PAD.
 - WELL SPOT CIRCLE (SHEET 1) AND TOPO MARK SCALE IS 1" = 2000'.
 - AS-DRILLED INFORMATION PROVIDED BY EQT



I THE UNDERSIGNED, HEREBY CERTIFY THAT THIS PLAN IS CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF AND SHOWS ALL THE INFORMATION REQUIRED BY LAW AND THE REGULATIONS ISSUED AND PRESCRIBED BY THE DIVISION OF ENVIRONMENTAL PROTECTION.

P.S. 849 *C. Victor Moyers*



(+) DENOTES LOCATION OF WELL ON UNITED STATES TOPOGRAPHIC MAPS.
DATE MAY 29, 20 19
REVISED _____
OPERATORS WELL NO. BIG245H17
API WELL NO. 47-103-03236
STATE 47 COUNTY 103 PERMIT 03236

MINIMUM DEGREE OF ACCURACY 1 / 2500 FILE NO. 7812PBIG245H17AD.dwg
HORIZONTAL & VERTICAL CONTROL DETERMINED BY DGPS (SURVEY GRADE TIE TO CORS NETWORK) SCALE SEE NOTE 2

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

WELL TYPE: OIL GAS LIQUID INJECTION WASTE DISPOSAL IF "GAS" PRODUCTION STORAGE DEEP SHALLOW

LOCATION: PAD ELEVATION 1430' WATERSHED ROCKCAMP RUN OF WILLEY FORK
DISTRICT GRANT COUNTY WETZEL QUADRANGLE BIG RUN 7.5'

SURFACE OWNER ET BLUE GRASS, LLC ACREAGE 138.93±
ROYALTY OWNER SHIBEN ESTATES, INC ACREAGE 140± LEASE NO. 125397

PROPOSED WORK: DRILL CONVERT DRILL DEEPER REDRILL FRACTURE OR STIMULATE PLUG OFF OLD FORMATION PERFORATE NEW FORMATION PLUG AND ABANDON CLEAN OUT AND REPLUG OTHER

PHYSICAL CHANGE IN WELL (SPECIFY) _____ TARGET FORMATION MARCELLUS
ESTIMATED DEPTH 7549'

WELL OPERATOR EQT PRODUCTION COMPANY DESIGNATED AGENT JASON RANSON
ADDRESS 2400 ANSYS DRIVE, SUITE 200 ADDRESS 115 PROFESSIONAL PLACE P.O. BOX 280
CANONSBURG, PA 15317 BRIDGEPORT, WV 26330

BOTTOM HOLE LONGITUDE 80°32'30"
TOP HOLE LONGITUDE 80°32'30"

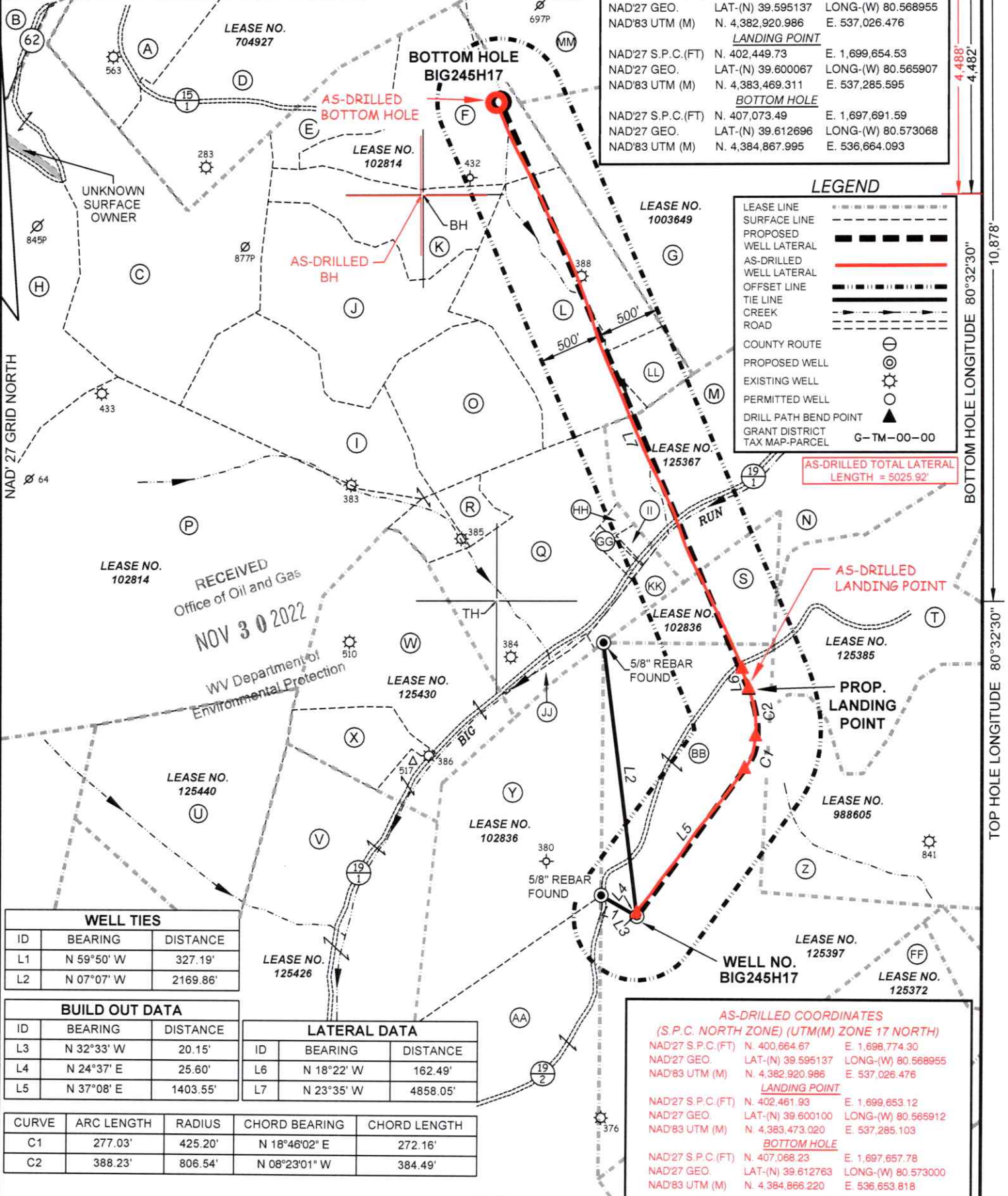
COUNTY NAME
PERMIT

12/30/2022

**BIG245
BIG245H17
EQT PRODUCTION COMPANY**

BOTTOM HOLE LATITUDE 39°37'30" 8,847'
8,881'

(S.P.C. NORTH ZONE) (UTM(M) ZONE 17 NORTH)			
NAD'27 S.P.C.(FT)	N. 400,664.67	E. 1,698,774.30	
NAD'27 GEO.	LAT-(N) 39.595137	LONG-(W) 80.568955	
NAD'83 UTM (M)	N. 4,382,920.986	E. 537,026.476	
LANDING POINT			
NAD'27 S.P.C.(FT)	N. 402,449.73	E. 1,699,654.53	
NAD'27 GEO.	LAT-(N) 39.600067	LONG-(W) 80.565907	
NAD'83 UTM (M)	N. 4,383,469.311	E. 537,285.595	
BOTTOM HOLE			
NAD'27 S.P.C.(FT)	N. 407,073.49	E. 1,697,691.59	
NAD'27 GEO.	LAT-(N) 39.612696	LONG-(W) 80.573068	
NAD'83 UTM (M)	N. 4,384,867.995	E. 536,664.093	



WELL TIES		
ID	BEARING	DISTANCE
L1	N 59°50' W	327.19'
L2	N 07°07' W	2169.86'

BUILD OUT DATA		
ID	BEARING	DISTANCE
L3	N 32°33' W	20.15'
L4	N 24°37' E	25.60'
L5	N 37°08' E	1403.55'

LATERAL DATA		
ID	BEARING	DISTANCE
L6	N 18°22' W	162.49'
L7	N 23°35' W	4858.05'

CURVE	ARC LENGTH	RADIUS	CHORD BEARING	CHORD LENGTH
C1	277.03'	425.20'	N 18°46'02" E	272.16'
C2	388.23'	806.54'	N 08°23'01" W	384.49'

AS-DRILLED COORDINATES (S.P.C. NORTH ZONE) (UTM(M) ZONE 17 NORTH)			
NAD'27 S.P.C.(FT)	N. 400,664.67	E. 1,698,774.30	
NAD'27 GEO.	LAT-(N) 39.595137	LONG-(W) 80.568955	
NAD'83 UTM (M)	N. 4,382,920.986	E. 537,026.476	
LANDING POINT			
NAD'27 S.P.C.(FT)	N. 402,461.93	E. 1,699,653.12	
NAD'27 GEO.	LAT-(N) 39.600100	LONG-(W) 80.565912	
NAD'83 UTM (M)	N. 4,383,473.020	E. 537,285.103	
BOTTOM HOLE			
NAD'27 S.P.C.(FT)	N. 407,068.23	E. 1,697,657.78	
NAD'27 GEO.	LAT-(N) 39.612763	LONG-(W) 80.573000	
NAD'83 UTM (M)	N. 4,384,866.220	E. 536,653.818	



(+) DENOTES LOCATION OF WELL ON UNITED STATES TOPOGRAPHIC MAPS.
 FILE NO. 7812PBIG245H17AD.dwg SCALE 1"=1000'
 DATE MAY 29, 2019
 REVISED _____
 OPERATORS WELL NO. BIG245H17

I THE UNDERSIGNED, HEREBY CERTIFY THAT THIS PLAT IS CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF AND SHOWS ALL THE INFORMATION REQUIRED BY LAW AND THE REGULATIONS ISSUED AND PRESCRIBED BY THE DIVISION OF ENVIRONMENTAL PROTECTION.

P.S. 849 *C. Victor Moyers*

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



WELL OPERATOR EQT PRODUCTION COMPANY
 ADDRESS 2400 ANSYS DRIVE, SUITE 200
 CANONSBURG, PA 15317

DESIGNATED AGENT JASON RANSON
 ADDRESS 115 PROFESSIONAL PLACE P.O. BOX 280
 BRIDGEPORT, WV 26330

BOTTOM HOLE LONGITUDE 80°32'30"
 TOP HOLE LONGITUDE 80°32'30"
 COUNTY NAME
 PERMIT

12/30/2022



Where energy meets innovation.

Actual Wellpath Report

Big 245 516520 AWP Proj: 13504'

Page 1 of 9



REFERENCE WELLPATH IDENTIFICATION

Operator	EQT	Slot	Slot 516520
Area	Wetzel County, WV	Well	Big 245 516520
Field	Wetzel	Wellbore	Big 245 516520 AWB
Facility	Big 245 Pad		

REPORT SETUP INFORMATION

Projection System	NAD27 / Lambert West Virginia SP, Northern Zone (4701), US feet		
North Reference	Grid	User	Jacostec
Scale	0.999941	Report Generated	5/24/2019 at 4:28:39 PM
Convergence at slot	0.68° West	Database/Source file	WA_MPL_EASTERNUS_Defn/Big_245_516520_AWP_Proj_13504_.xml
Software System	WellArchitect® 5.1		

WELLPATH LOCATION

	Local coordinates		Grid coordinates		Geographic coordinates	
	North[ft]	East[ft]	Easting[US ft]	Northing[US ft]	Latitude	Longitude
Slot Location	-58.90	-10.90	1698774.38	400664.76	39°35'42.495"N	80°34'08.236"W
Facility Reference Pt			1698785.28	400723.66	39°35'43.079"N	80°34'08.106"W
Field Reference Pt			1688243.35	385255.46	39°33'08.944"N	80°36'20.337"W

WELLPATH DATUM

Calculation method	Minimum curvature	Patterson 578 (RKB) to Facility Vertical Datum	1455.00ft
Horizontal Reference Pt	Slot	Patterson 578 (RKB) to Mean Sea Level	1455.00ft
Vertical Reference Pt	Patterson 578 (RKB)	Patterson 578 (RKB) to Mud Line at Slot (Slot 516520)	25.00ft
MD Reference Pt	Patterson 578 (RKB)	Section Origin	N 0.00, E 0.00 ft
Field Vertical Reference	Mean Sea Level	Section Azimuth	350.41°

RECEIVED
Office of Oil and Gas
NOV 30 2022
WV Department of
Environmental Protection

12/30/2022

0303236





Where energy meets innovation.

Actual Wellpath Report

Big 245 516520 AWP Proj: 13504'

Page 2 of 9



REFERENCE WELLPATH IDENTIFICATION

Operator	EQT	Slot	Slot 516520
Area	Wetzel County, WV	Well	Big 245 516520
Field	Wetzel	Wellbore	Big 245 516520 AWB
Facility	Big 245 Pad		

WELLPATH DATA (146 stations) † = interpolated/extrapolated station

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	Closure Dist [ft]	Closure Dir [°]	DLS [°/100ft]	Build Rate [°/100ft]	Turn Rate [°/100ft]
0.00†	0.000	60.960	0.00	0.00	0.00	0.00	1698774.38	400664.76	39°35'42.495"N	80°34'08.236"W	0.00	0.000	0.00	0.00	0.00
25.00	0.000	60.960	25.00	0.00	0.00	0.00	1698774.38	400664.76	39°35'42.495"N	80°34'08.236"W	0.00	0.000	0.00	0.00	0.00
112.00	0.440	60.960	112.00	0.11	0.16	0.29	1698774.67	400664.92	39°35'42.497"N	80°34'08.233"W	0.33	60.960	0.51	0.51	70.07
212.00	0.290	81.580	212.00	0.23	0.39	0.88	1698775.26	400665.15	39°35'42.499"N	80°34'08.225"W	0.96	66.292	0.20	-0.15	20.62
312.00	0.160	63.940	312.00	0.27	0.48	1.25	1698775.63	400665.24	39°35'42.500"N	80°34'08.220"W	1.34	68.893	0.15	-0.13	-17.64
412.00	0.210	60.990	412.00	0.37	0.63	1.54	1698775.92	400665.39	39°35'42.502"N	80°34'08.217"W	1.67	67.611	0.05	0.05	-2.95
512.00	0.070	330.100	512.00	0.49	0.78	1.67	1698776.05	400665.54	39°35'42.503"N	80°34'08.215"W	1.84	65.068	0.22	-0.14	-30.89
612.00	0.100	299.830	612.00	0.60	0.87	1.56	1698775.94	400665.63	39°35'42.504"N	80°34'08.217"W	1.79	60.835	0.05	0.03	-30.27
712.00	0.120	284.730	712.00	0.70	0.94	1.39	1698775.77	400665.70	39°35'42.505"N	80°34'08.219"W	1.68	55.790	0.04	0.02	-15.10
812.00	0.140	257.060	812.00	0.73	0.94	1.17	1698775.55	400665.70	39°35'42.505"N	80°34'08.222"W	1.50	51.072	0.07	0.02	-27.67
912.00	0.150	261.960	912.00	0.73	0.90	0.92	1698775.30	400665.66	39°35'42.504"N	80°34'08.225"W	1.28	45.669	0.02	0.01	4.90
1012.00	0.100	297.340	1012.00	0.79	0.92	0.71	1698775.09	400665.68	39°35'42.504"N	80°34'08.227"W	1.16	37.728	0.09	-0.05	35.38
1112.00	0.090	285.740	1112.00	0.87	0.98	0.56	1698774.94	400665.74	39°35'42.505"N	80°34'08.229"W	1.13	29.632	0.02	-0.01	-11.60
1212.00	0.060	267.540	1212.00	0.91	1.00	0.43	1698774.81	400665.76	39°35'42.505"N	80°34'08.231"W	1.09	23.259	0.04	-0.03	-18.20
1312.00	0.130	241.710	1312.00	0.88	0.94	0.28	1698774.66	400665.70	39°35'42.504"N	80°34'08.233"W	0.98	16.374	0.08	0.07	-25.83
1412.00	0.110	256.450	1412.00	0.84	0.87	0.08	1698774.46	400665.63	39°35'42.504"N	80°34'08.235"W	0.87	5.517	0.04	-0.02	14.74
1512.00	0.380	326.680	1512.00	1.14	1.12	-0.19	1698774.19	400665.88	39°35'42.506"N	80°34'08.239"W	1.14	350.285	0.36	0.27	70.23
1612.00	0.600	339.580	1612.00	1.95	1.89	-0.56	1698773.82	400666.95	39°35'42.514"N	80°34'08.244"W	1.97	343.575	0.24	0.22	12.90
1712.00	0.650	342.680	1712.00	3.03	2.92	-0.91	1698773.47	400667.68	39°35'42.524"N	80°34'08.248"W	3.06	342.726	0.06	0.05	3.10
1812.00	0.730	352.180	1812.00	4.23	4.09	-1.16	1698773.22	400668.85	39°35'42.535"N	80°34'08.252"W	4.26	344.129	0.14	0.08	9.50
1912.00	0.720	354.100	1912.00	5.49	5.35	-1.32	1698773.07	400670.11	39°35'42.548"N	80°34'08.254"W	5.51	346.189	0.03	-0.01	1.92
2012.00	0.660	357.270	2012.00	6.69	6.55	-1.41	1698772.97	400671.31	39°35'42.560"N	80°34'08.255"W	6.70	347.875	0.07	-0.06	3.17
2112.00	0.460	341.0	2112.00	7.66	7.53	-1.41	1698772.97	400672.29	39°35'42.569"N	80°34'08.256"W	7.66	349.384	0.21	-0.20	6.14
2212.00	0.310	355.790	2212.00	8.32	8.20	-1.41	1698772.97	400672.96	39°35'42.576"N	80°34'08.256"W	8.32	350.262	0.16	-0.15	-7.62
2312.00	0.250	348.990	2312.00	8.80	8.68	-1.47	1698772.91	400673.44	39°35'42.581"N	80°34'08.256"W	8.80	350.400	0.07	-0.06	-6.80
2412.00	0.250	346.590	2412.00	9.24	9.11	-1.56	1698772.82	400673.87	39°35'42.585"N	80°34'08.258"W	9.24	350.277	0.01	0.00	-2.40
2512.00	0.280	351.430	2512.00	9.70	9.56	-1.65	1698772.73	400674.32	39°35'42.589"N	80°34'08.259"W	9.70	350.223	0.04	0.03	4.84
2612.00	0.340	336.800	2612.00	10.23	10.07	-1.80	1698772.58	400674.83	39°35'42.594"N	80°34'08.261"W	10.23	349.866	0.10	0.06	-14.63
2712.00	0.350	338.880	2712.00	10.82	10.63	-2.03	1698772.35	400675.39	39°35'42.600"N	80°34'08.264"W	10.82	349.203	0.02	0.01	2.08
2812.00	0.350	314.010	2812.00	11.37	11.13	-2.36	1698772.02	400675.89	39°35'42.605"N	80°34'08.268"W	11.38	348.041	0.15	0.00	-24.87

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Actual Wellpath Report

Big 245 516520 AWP Proj: 13504'

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REFERENCE WELLPATH IDENTIFICATION

Operator	EQT	Slot	Slot 516520
Area	Wetzel County, WV	Well	Big 245 516520
Field	Wetzel	Wellbore	Big 245 516520 AWB
Facility	Big 245 Pad		

WELLPATH DATA (146 stations)

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	Closure Dist [ft]	Closure Dir [°]	DLS [°/100ft]	Build Rate [°/100ft]	Turn Rate [°/100ft]
2912.00	0.340	307.640	2911.94	11.83	11.52	-2.81	1698771.57	400676.28	39°35'42.609"N	80°34'08.274"W	11.86	346.286	0.04	-0.01	-6.37
3012.00	0.390	300.620	3011.94	12.27	11.88	-3.34	1698771.04	400676.64	39°35'42.612"N	80°34'08.281"W	12.34	344.294	0.07	0.05	-7.02
3112.00	0.430	296.870	3111.94	12.71	12.22	-3.97	1698770.41	400676.98	39°35'42.615"N	80°34'08.289"W	12.85	342.013	0.05	0.04	-3.75
3212.00	0.340	280.590	3211.94	13.04	12.44	-4.59	1698769.79	400677.20	39°35'42.618"N	80°34'08.297"W	13.27	339.378	0.14	-0.09	-16.28
3312.00	0.510	264.220	3311.93	13.17	12.45	-5.33	1698769.05	400677.21	39°35'42.618"N	80°34'08.306"W	13.55	336.837	0.21	0.17	-16.37
3367.00	0.700	255.880	3366.93	13.16	12.35	-5.90	1698768.48	400677.11	39°35'42.616"N	80°34'08.314"W	13.68	334.469	0.38	0.35	-15.16
3412.00	0.550	260.660	3411.93	13.14	12.25	-6.38	1698768.00	400677.00	39°35'42.615"N	80°34'08.320"W	13.81	332.490	0.35	-0.33	10.62
3512.00	0.580	268.140	3511.92	13.21	12.15	-7.36	1698767.02	400676.91	39°35'42.614"N	80°34'08.332"W	14.20	328.807	0.08	0.03	7.48
3612.00	0.560	270.800	3611.92	13.36	12.14	-8.35	1698766.03	400676.90	39°35'42.614"N	80°34'08.345"W	14.74	325.478	0.03	-0.02	2.66
3712.00	0.410	277.990	3711.91	13.56	12.20	-9.19	1698765.19	400676.96	39°35'42.615"N	80°34'08.356"W	15.27	322.993	0.16	-0.15	7.19
3812.00	0.360	283.660	3811.91	13.79	12.32	-9.85	1698764.53	400677.08	39°35'42.616"N	80°34'08.364"W	15.78	321.351	0.06	-0.05	5.67
3912.00	0.350	285.900	3911.91	14.05	12.48	-10.45	1698763.93	400677.24	39°35'42.617"N	80°34'08.372"W	16.28	320.051	0.02	-0.01	2.24
4012.00	0.370	288.480	4011.91	14.33	12.67	-11.05	1698763.33	400677.42	39°35'42.619"N	80°34'08.379"W	16.81	318.890	0.03	0.02	2.58
4112.00	0.390	287.860	4111.91	14.53	12.76	-11.70	1698762.68	400677.51	39°35'42.620"N	80°34'08.388"W	17.31	317.473	0.14	0.02	-20.62
4212.00	0.540	286.250	4211.90	14.78	12.87	-12.49	1698761.89	400677.63	39°35'42.621"N	80°34'08.398"W	17.94	315.865	0.21	0.15	18.39
4293.00	0.450	285.820	4292.90	15.08	13.07	-13.16	1698761.22	400677.83	39°35'42.623"N	80°34'08.406"W	18.55	314.790	0.11	-0.11	-0.53
4312.00	0.390	287.670	4311.90	15.14	13.11	-13.30	1698761.08	400677.87	39°35'42.623"N	80°34'08.408"W	18.67	314.589	0.32	-0.32	9.74
4412.00	0.410	292.090	4411.90	15.48	13.35	-13.95	1698760.43	400678.11	39°35'42.625"N	80°34'08.417"W	19.31	313.725	0.04	0.02	4.42
4512.00	0.270	316.430	4511.90	15.87	13.65	-14.45	1698759.93	400678.41	39°35'42.628"N	80°34'08.423"W	19.88	313.377	0.20	-0.14	24.34
4612.00	0.260	353.170	4611.89	16.29	14.05	-14.64	1698759.74	400678.81	39°35'42.632"N	80°34'08.425"W	20.29	313.823	0.17	-0.01	36.74
4712.00	0.290	5.870	4711.89	16.76	14.52	-14.64	1698759.74	400679.28	39°35'42.637"N	80°34'08.426"W	20.62	314.777	0.07	0.03	12.70
4812.00	0.430	66.740	4811.89	17.26	15.08	-14.39	1698759.99	400679.84	39°35'42.642"N	80°34'08.422"W	20.84	316.340	0.23	0.14	30.87
4912.00	0.540	65.840	4911.89	17.64	15.57	-13.73	1698760.65	400680.33	39°35'42.647"N	80°34'08.414"W	20.76	318.588	0.27	0.11	29.40
5012.00	0.590	65.140	5011.88	17.89	15.98	-12.84	1698761.54	400680.74	39°35'42.652"N	80°34'08.403"W	20.50	321.226	0.05	0.05	-0.70
5112.00	0.540	61.510	5111.88	18.18	16.42	-11.95	1698762.43	400681.18	39°35'42.656"N	80°34'08.392"W	20.31	323.945	0.06	-0.05	-3.63
5212.00	0.700	64.120	5211.87	18.51	16.91	-10.99	1698763.39	400681.67	39°35'42.661"N	80°34'08.379"W	20.17	326.981	0.16	0.16	2.61
5225.00	0.720	64.840	5224.87	18.55	16.98	-10.85	1698763.54	400681.74	39°35'42.662"N	80°34'08.377"W	20.15	327.435	0.17	0.15	5.54
5318.00	7.740	16.510	5317.57	24.34	23.24	-8.53	1698765.85	400688.00	39°35'42.724"N	80°34'08.349"W	24.76	339.839	7.83	7.55	-51.97
5413.00	15.450	31.000	5410.58	39.72	40.25	-0.18	1698774.20	400705.01	39°35'42.893"N	80°34'08.245"W	40.25	359.738	8.61	8.12	15.25
5508.00	19.900	36.980	5501.08	60.46	64.03	16.07	1698790.45	400728.78	39°35'43.130"N	80°34'08.041"W	66.01	14.088	5.05	4.68	68.00

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REFERENCE WELLPATH IDENTIFICATION

Operator	EQT	Slot	Slot 516520
Area	Wetzel County, WV	Well	Big 245 516520
Field	Wetzel	Wellbore	Big 245 516520 AWB
Facility	Big 245 Pad		

WELLPATH DATA (146 stations)

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	Closure Dist [ft]	Closure Dir [°]	DLS [°/100ft]	Build Rate [°/100ft]	Turn Rate [°/100ft]
5603.00	24.860	39.350	5588.90	84.70	92.40	38.47	1698812.85	400757.16	39°35'43.413"N	80°34'07.759"W	100.09	22.603	5.31	5.22	2.49
5698.00	33.280	41.040	5671.86	114.41	127.57	68.30	1698842.68	400792.32	39°35'43.764"N	80°34'07.383"W	144.70	28.164	8.90	8.86	1.78
5793.00	40.610	36.510	5747.74	152.44	172.15	103.86	1698878.24	400836.90	39°35'44.209"N	80°34'06.936"W	201.05	31.104	8.23	7.72	-4.77
5888.00	40.870	34.740	5819.73	196.11	222.54	139.97	1698914.34	400887.29	39°35'44.711"N	80°34'06.482"W	262.90	32.169	1.25	0.27	-1.86
5983.00	40.780	36.160	5891.61	240.00	273.13	175.99	1698950.36	400937.88	39°35'45.215"N	80°34'06.030"W	324.92	32.795	0.98	-0.09	1.49
6078.00	40.920	37.820	5963.48	282.70	322.76	213.38	1698987.74	400987.50	39°35'45.710"N	80°34'05.560"W	386.91	33.469	1.15	0.15	1.75
6174.00	40.880	39.460	6036.04	324.57	371.85	252.62	1699026.98	401036.59	39°35'46.200"N	80°34'05.066"W	449.54	34.191	1.12	-0.04	1.71
6268.00	40.880	38.760	6107.11	365.17	419.59	291.43	1699065.79	401084.32	39°35'46.676"N	80°34'04.578"W	510.86	34.782	0.49	0.00	-0.74
6363.00	40.090	36.310	6179.37	407.12	468.48	329.01	1699103.37	401133.21	39°35'47.164"N	80°34'04.105"W	572.47	35.080	1.87	-0.83	-2.58
6457.00	40.960	34.100	6250.83	450.47	518.39	364.21	1699138.56	401183.12	39°35'47.661"N	80°34'03.663"W	633.54	35.091	1.79	0.93	-2.35
6552.00	40.830	34.680	6322.64	495.22	569.71	399.33	1699173.69	401234.44	39°35'48.172"N	80°34'03.222"W	695.73	35.028	0.42	-0.14	0.61
6647.00	40.890	35.210	6394.49	539.53	620.66	434.93	1699209.29	401285.38	39°35'48.680"N	80°34'02.775"W	757.88	35.021	0.37	0.06	0.56
6742.00	40.980	36.860	6466.26	583.05	670.99	471.55	1699245.90	401335.70	39°35'49.182"N	80°34'02.315"W	820.11	35.098	1.14	0.09	1.74
6838.00	41.020	39.560	6538.72	625.35	720.46	510.50	1699284.85	401385.18	39°35'49.675"N	80°34'01.825"W	882.99	35.320	1.85	0.04	2.81
6932.00	40.910	38.710	6609.70	666.00	768.26	549.39	1699323.74	401432.98	39°35'50.152"N	80°34'01.335"W	944.49	35.569	0.60	-0.12	-0.90
7027.00	40.220	38.650	6681.87	707.12	816.49	588.00	1699362.35	401481.20	39°35'50.633"N	80°34'00.849"W	1006.18	35.760	0.73	-0.73	-0.06
7123.00	40.230	39.680	6755.16	747.99	864.56	627.16	1699401.50	401529.26	39°35'51.113"N	80°34'00.357"W	1068.07	35.957	0.69	0.01	1.07
7218.00	40.200	39.840	6827.71	787.95	911.71	666.39	1699440.72	401576.41	39°35'51.583"N	80°33'59.863"W	1129.28	36.164	0.11	-0.03	0.17
7313.00	40.310	37.320	6900.21	828.89	959.69	704.66	1699479.00	401624.39	39°35'52.062"N	80°33'59.381"W	1190.61	36.288	1.72	0.12	-2.65
7408.00	40.430	35.150	6972.60	871.76	1009.32	741.03	1699515.36	401674.02	39°35'52.557"N	80°33'58.924"W	1252.13	36.286	1.48	0.13	-2.28
7502.00	40.450	34.620	7044.14	915.27	1059.33	775.90	1699550.23	401724.03	39°35'53.055"N	80°33'58.486"W	1313.09	36.221	0.37	0.02	-0.56
7597.00	40.520	35.390	7116.39	959.19	1109.85	811.28	1699585.61	401774.55	39°35'53.559"N	80°33'58.042"W	1374.75	36.166	0.53	0.07	0.81
7691.00	40.520	36.890	7187.85	1001.82	1159.17	847.30	1699621.62	401823.86	39°35'54.050"N	80°33'57.589"W	1435.82	36.165	1.04	0.00	1.60
7786.00	40.850	31.670	7259.91	1046.44	1210.31	882.14	1699656.47	401875.00	39°35'54.560"N	80°33'57.152"W	1497.68	36.087	3.60	0.35	-5.49
7881.00	44.800	16.510	7329.76	1100.02	1269.03	908.05	1699682.37	401933.71	39°35'55.143"N	80°33'56.830"W	1560.44	35.585	11.59	4.16	-15.96
7976.00	52.590	9.920	7392.46	1165.78	1338.43	924.09	1699698.42	402003.11	39°35'55.831"N	80°33'56.635"W	1626.45	34.622	9.71	8.20	-6.94
8071.00	60.520	5.890	7444.79	1241.33	1416.88	934.86	1699709.18	402081.55	39°35'56.607"N	80°33'56.510"W	1697.50	33.417	9.06	8.35	-4.24
8166.00	68.470	359.170	7485.70	1325.07	1502.41	938.47	1699712.79	402167.07	39°35'57.453"N	80°33'56.477"W	1771.43	31.991	10.52	8.37	-7.07
8261.00	73.070	353.090	7517.01	1414.25	1591.82	932.35	1699706.68	402256.48	39°35'58.336"N	80°33'56.568"W	1844.77	30.358	7.74	4.84	-6.40
8356.00	79.850	346.420	7539.26	1506.49	1682.58	915.87	1699690.20	402347.24	39°35'59.231"N	80°33'56.793"W	1915.70	28.561	9.87	7.14	-7.02

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Operator	EQT	Slot	Slot 516520
Area	Wetzel County, WV	Well	Big 245 516520
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WELLPATH DATA (146 stations)

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	Closure Dist [ft]	Closure Dir [°]	DLS ["/100ft]	Build Rate ["/100ft]	Turn Rate ["/100ft]
8451.00	86.030	339.330	7550.95	1599.85	1772.57	888.10	1699662.43	402437.22	39°36'00.117"N	80°33'57.161"W	1982.61	26.612	9.85	6.51	-7.46
8500.00	90.150	339.390	7552.58	1647.90	1818.39	870.85	1699645.17	402483.04	39°36'00.568"N	80°33'57.388"W	2016.16	25.590	8.41	8.41	0.12
8546.00	90.180	341.840	7552.45	1693.23	1861.78	855.58	1699629.91	402526.42	39°36'00.995"N	80°33'57.590"W	2048.96	24.681	5.33	0.07	5.33
8640.00	90.120	343.520	7552.20	1786.37	1951.51	827.59	1699601.92	402616.15	39°36'01.878"N	80°33'57.961"W	2119.74	22.981	1.79	-0.06	1.79
8736.00	90.370	335.910	7551.79	1880.63	2041.49	794.34	1699568.67	402706.13	39°36'02.763"N	80°33'58.400"W	2190.58	21.261	7.93	0.26	-7.93
8830.00	89.910	335.400	7551.56	1971.53	2127.13	755.59	1699529.92	402791.76	39°36'03.605"N	80°33'58.908"W	2257.34	19.556	0.73	-0.49	-0.54
8926.00	89.940	336.180	7551.69	2064.42	2214.69	716.22	1699490.56	402879.31	39°36'04.466"N	80°33'59.424"W	2327.62	17.921	0.81	0.03	0.81
9021.00	90.060	333.630	7551.69	2155.96	2300.71	675.93	1699450.27	402965.33	39°36'05.311"N	80°33'59.951"W	2397.95	16.372	2.69	0.13	-2.68
9117.00	89.880	332.740	7551.74	2247.65	2386.39	632.63	1699406.97	403051.00	39°36'06.153"N	80°34'00.518"W	2468.82	14.847	0.95	-0.19	-0.93
9211.00	89.910	334.920	7551.91	2337.74	2470.75	591.17	1699365.52	403135.36	39°36'06.982"N	80°34'01.060"W	2540.49	13.456	2.32	0.03	2.32
9307.00	89.970	335.020	7552.01	2430.27	2557.73	550.55	1699324.90	403222.34	39°36'07.837"N	80°34'01.592"W	2616.32	12.148	0.12	0.06	0.10
9401.00	90.000	333.060	7552.03	2520.46	2642.24	509.41	1699283.76	403306.84	39°36'08.667"N	80°34'02.130"W	2690.90	10.912	2.09	0.03	-2.09
9496.00	89.910	333.410	7552.11	2611.22	2727.07	466.63	1699240.98	403391.66	39°36'09.500"N	80°34'02.690"W	2766.70	9.710	0.38	-0.09	0.37
9592.00	90.000	333.990	7552.18	2703.17	2813.13	424.09	1699198.45	403477.72	39°36'10.346"N	80°34'03.246"W	2844.92	8.573	0.61	0.09	0.60
9686.00	90.220	337.120	7552.00	2794.01	2898.69	385.20	1699159.55	403563.27	39°36'11.187"N	80°34'03.756"W	2924.17	7.570	3.34	0.23	3.33
9781.00	89.940	340.960	7551.87	2887.13	2987.39	351.22	1699125.58	403651.97	39°36'12.059"N	80°34'04.204"W	3007.96	6.705	4.05	-0.29	4.04
9875.00	90.280	342.140	7551.69	2980.01	3076.55	321.47	1699095.83	403741.13	39°36'12.937"N	80°34'04.597"W	3093.30	5.965	1.31	0.36	1.26
9970.00	90.150	336.550	7551.33	3073.20	3165.41	287.98	1699062.34	403829.98	39°36'13.811"N	80°34'05.039"W	3178.48	5.198	5.89	-0.14	-5.88
10065.00	90.340	336.000	7550.93	3165.32	3252.38	249.75	1699024.12	403916.94	39°36'14.666"N	80°34'05.540"W	3261.96	4.391	0.61	0.20	-0.58
10160.00	90.490	335.140	7550.24	3257.15	3338.87	210.47	1698984.83	404003.43	39°36'15.516"N	80°34'06.055"W	3345.50	3.607	0.92	0.16	-0.91
10255.00	90.680	333.460	7549.27	3348.41	3424.47	169.27	1698943.64	404089.02	39°36'16.357"N	80°34'06.594"W	3428.65	2.830	1.78	0.20	-1.77
10350.00	90.490	333.060	7548.30	3439.18	3509.30	126.53	1698900.90	404173.85	39°36'17.191"N	80°34'07.153"W	3511.58	2.065	0.47	-0.20	-0.42
10445.00	90.550	334.270	7547.44	3530.15	3594.44	84.39	1698858.76	404258.98	39°36'18.027"N	80°34'07.705"W	3595.43	1.345	1.28	0.06	1.27
10540.00	90.460	336.820	7546.60	3621.96	3680.91	45.07	1698819.44	404345.44	39°36'18.877"N	80°34'08.220"W	3681.18	0.701	2.69	-0.09	2.68
10635.00	90.430	336.600	7545.86	3714.25	3768.16	7.50	1698781.88	404432.69	39°36'19.735"N	80°34'08.713"W	3768.17	0.114	0.23	-0.03	-0.23
10731.00	90.220	337.180	7545.32	3807.59	3856.46	-30.17	1698744.21	404520.98	39°36'20.603"N	80°34'09.208"W	3856.58	359.552	0.64	-0.22	0.60
10826.00	90.370	338.020	7544.83	3900.23	3944.29	-66.38	1698708.01	404608.81	39°36'21.467"N	80°34'09.684"W	3944.85	359.036	0.90	0.16	0.88
10921.00	90.370	338.920	7544.21	3993.17	4032.66	-101.24	1698673.15	404697.17	39°36'22.336"N	80°34'10.143"W	4033.93	358.562	0.95	0.00	0.95
11016.00	90.520	336.800	7543.48	4085.89	4120.64	-137.04	1698637.35	404785.15	39°36'23.201"N	80°34'10.613"W	4122.92	358.095	2.24	0.16	-2.23
11110.00	90.030	336.560	7543.03	4177.20	4206.96	-174.25	1698600.14	404871.47	39°36'24.050"N	80°34'11.102"W	4210.57	357.628	0.58	-0.52	-0.26

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Actual Wellpath Report

Big 245 516520 AWP Proj: 13504'

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REFERENCE WELLPATH IDENTIFICATION

Operator	EQT	Slot	Slot 516520
Area	Wetzel County, WV	Well	Big 245 516520
Field	Wetzel	Wellbore	Big 245 516520 AWB
Facility	Big 245 Pad		

WELLPATH DATA (146 stations)

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	Closure Dist [ft]	Closure Dir [°]	DLS [°/100ft]	Build Rate [°/100ft]	Turn Rate [°/100ft]
11205.00	89.850	336.620	7543.12	4269.45	4294.14	-211.99	1698562.40	404958.64	39°36'24.907"N	80°34'11.597"W	4299.37	357.174	0.20	-0.19	0.06
11299.00	89.820	337.180	7543.40	4360.85	4380.61	-248.87	1698525.52	405045.10	39°36'25.757"N	80°34'12.082"W	4387.67	356.748	0.60	-0.03	0.60
11394.00	90.150	339.270	7543.42	4453.70	4468.82	-284.11	1698490.29	405133.31	39°36'26.625"N	80°34'12.545"W	4477.84	356.362	2.23	0.35	2.20
11489.00	90.180	341.280	7543.15	4547.22	4558.24	-316.17	1698458.23	405222.72	39°36'27.505"N	80°34'12.969"W	4569.19	356.032	2.12	0.03	2.12
11584.00	89.880	342.690	7543.10	4641.19	4648.58	-345.55	1698428.85	405313.06	39°36'28.394"N	80°34'13.358"W	4661.41	355.749	1.52	-0.32	1.48
11679.00	90.220	342.510	7543.01	4735.31	4739.24	-373.96	1698400.44	405403.71	39°36'29.287"N	80°34'13.734"W	4753.97	355.488	0.40	0.36	-0.19
11774.00	90.150	341.310	7542.71	4829.26	4829.54	-403.46	1698370.95	405494.00	39°36'30.176"N	80°34'14.125"W	4846.36	355.225	1.27	-0.07	-1.26
11869.00	90.150	339.950	7542.46	4922.88	4919.16	-434.97	1698339.44	405583.62	39°36'31.057"N	80°34'14.541"W	4938.35	354.947	1.43	0.00	-1.43
11964.00	90.150	339.150	7542.21	5016.18	5008.17	-468.16	1698306.25	405672.62	39°36'31.933"N	80°34'14.979"W	5030.00	354.660	0.84	0.00	-0.84
12059.00	89.750	337.770	7542.29	5109.11	5096.53	-503.04	1698271.37	405760.98	39°36'32.802"N	80°34'15.438"W	5121.30	354.363	1.51	-0.42	-1.45
12154.00	89.850	336.060	7542.62	5201.49	5183.92	-540.28	1698234.13	405848.36	39°36'33.662"N	80°34'15.927"W	5212.00	354.050	1.80	0.11	-1.80
12250.00	89.780	333.790	7542.93	5294.00	5270.87	-580.97	1698193.45	405935.31	39°36'34.516"N	80°34'16.460"W	5302.79	353.710	2.37	-0.07	-2.36
12345.00	89.750	331.650	7543.32	5384.50	5355.30	-624.51	1698149.91	406019.73	39°36'35.345"N	80°34'17.029"W	5391.59	353.349	2.25	-0.03	-2.25
12439.00	89.750	332.290	7543.73	5473.67	5438.27	-668.68	1698105.74	406102.70	39°36'36.160"N	80°34'17.606"W	5479.22	352.990	0.68	0.00	0.68
12534.00	89.780	334.990	7544.12	5564.62	5523.38	-710.86	1698063.57	406187.80	39°36'36.996"N	80°34'18.158"W	5568.94	352.666	2.84	0.03	2.84
12629.00	90.150	337.100	7544.18	5656.64	5610.19	-749.43	1698025.00	406274.61	39°36'37.850"N	80°34'18.664"W	5660.03	352.391	2.25	0.39	2.22
12724.00	90.180	335.860	7543.91	5748.85	5697.30	-787.34	1697987.09	406361.71	39°36'38.706"N	80°34'19.162"W	5751.45	352.132	1.31	0.03	-1.31
12819.00	90.120	334.330	7543.66	5840.47	5783.46	-827.34	1697947.09	406447.87	39°36'39.553"N	80°34'19.686"W	5842.34	351.859	1.61	-0.06	-1.61
12915.00	90.090	333.120	7543.48	5932.43	5869.54	-869.84	1697904.60	406533.94	39°36'40.398"N	80°34'20.242"W	5933.64	351.570	1.26	-0.03	-1.26
13009.00	90.180	331.650	7543.26	6021.81	5952.83	-913.41	1697861.03	406617.23	39°36'41.216"N	80°34'20.811"W	6022.50	351.277	1.57	0.10	-1.56
13104.00	90.030	333.310	7543.09	6112.19	6037.08	-957.30	1697817.14	406701.47	39°36'42.044"N	80°34'21.385"W	6112.51	350.990	1.75	-0.16	1.75
13199.00	90.180	336.640	7542.91	6203.76	6123.15	-997.48	1697776.96	406787.53	39°36'42.890"N	80°34'21.911"W	6203.86	350.748	3.51	0.16	3.51
13294.00	90.060	337.210	7542.72	6296.14	6210.55	-1034.72	1697739.73	406874.93	39°36'43.749"N	80°34'22.400"W	6296.15	350.541	0.61	-0.13	0.60
13389.00	90.120	335.670	7542.57	6388.32	6297.63	-1072.69	1697701.76	406962.00	39°36'44.605"N	80°34'22.899"W	6388.33	350.333	1.62	0.06	-1.62
13479.00	90.120	338.690	7542.38	6475.92	6380.57	-1107.59	1697666.86	407044.94	39°36'45.421"N	80°34'23.357"W	6475.99	350.152	3.36	0.00	3.36
13504.00	90.120	338.690	7542.33	6500.40	6403.86	-1116.67	1697657.78	407068.23	39°36'45.650"N	80°34'23.477"W	6500.49	350.109	0.00	0.00	0.00

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Actual Wellpath Report

Big 245 516520 AWP Proj: 13504'

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REFERENCE WELLPATH IDENTIFICATION

Operator	EQT	Slot	Slot 516520
Area	Wetzel County, WV	Well	Big 245 516520
Field	Wetzel	Wellbore	Big 245 516520 AWB
Facility	Big 245 Pad		

HOLE & CASING SECTIONS - Ref Wellbore: Big 245 516520 AWB Ref Wellpath: Big 245 516520 AWP Proj: 13504'

String/Diameter	Start MD [ft]	End MD [ft]	Interval [ft]	Start TVD [ft]	End TVD [ft]	Start N/S [ft]	End N/S [ft]	Start E/W [ft]	End E/W [ft]
17.5in Open Hole	25.00	1190.00	1165.00	25.00	1189.99	0.00	1.00	0.00	0.45
13.375in Casing Surface	25.00	1190.00	1165.00	25.00	1189.99	0.00	1.00	0.00	0.45
12.25in Open Hole	1190.00	2865.00	1675.00	1189.99	2864.94	1.00	11.35	0.45	-2.59
9.625in Casing Intermediate	25.00	2865.00	2840.00	25.00	2864.94	0.00	11.35	0.00	-2.59
8.75in Open Hole	2865.00	5259.00	2394.00	2864.94	5258.85	11.35	17.93	-2.59	-10.29
8.5in Open Hole	5259.00	13504.00	8245.00	5258.85	7542.33	17.93	6403.86	-10.29	-1116.67
5.5in Casing Production	25.00	13504.00	13479.00	25.00	7542.33	0.00	6403.86	0.00	-1116.67

TARGETS

Name	TVD [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	Shape
Big 245 516520 LP Rev-1	7553.00	1784.98	880.12	1699654.45	402449.64	39°36'00.239"N	80°33'57.265"W	point
Big 245 516520 BHL Rev-1	7556.00	6409.09	-1082.85	1697691.60	407073.46	39°36'45.705"N	80°34'23.046"W	point
Big 245 HL1 Rev-1	7600.00	11.90	-23.30	1698751.08	400676.66	39°35'42.610"N	80°34'08.536"W	polygon
Big 245 HL2 Rev-1	7600.00	11.90	-23.30	1698751.08	400676.66	39°35'42.610"N	80°34'08.536"W	polygon
Big 245 HL3 Rev-1	7600.00	11.90	-23.30	1698751.08	400676.66	39°35'42.610"N	80°34'08.536"W	polygon
Big 245 HL4 Rev-1	7600.00	11.90	-23.30	1698751.08	400676.66	39°35'42.610"N	80°34'08.536"W	polygon

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Big 245 516520 AWP Proj: 13504'

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REFERENCE WELLPATH IDENTIFICATION

Operator	EQT	Slot	Slot 516520
Area	Wetzel County, WV	Well	Big 245 516520
Field	Wetzel	Wellbore	Big 245 516520 AWB
Facility	Big 245 Pad		

WELLPATH COMPOSITION - Ref Wellbore: Big 245 516520 AWB Ref Wellpath: Big 245 516520 AWP Proj: 13504'

Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment	Wellbore
25.00	5225.00	Gyrodata standard - Continuous gyro	01_Gyrodata Cont Gyro <8-3/4">(100'-5213')	Big 245 516520 AWB
5225.00	13479.00	OWSG MWD rev2 + IFR1 + Multi-Station Correction	02_BH AT Curve + MagVar MSA <8-1/2">(5225')(5318'-13479')	Big 245 516520 AWB
13479.00	13504.00	Blind Drilling (std)	Projection to bit	Big 245 516520 AWB

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Big 245 516520 AWP Proj: 13504'

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REFERENCE WELLPATH IDENTIFICATION

Operator	EQT	Slot	Slot 516520
Area	Wetzel County, WV	Well	Big 245 516520
Field	Wetzel	Wellbore	Big 245 516520 AWB
Facility	Big 245 Pad		

COMMENTS

Wellpath general comments

API: 47-103-03236-0000
 BH Job#: 109788053
 Rig: Patterson 578
 Duration: 5/18/2019 - 5/23/2019
 01_Gyrodata Cont Gyro <8-3/4">(100'-5213')
 02_BH AT Curve + MagVar MSA <8-1/2">(5225')(5318'-13479')
 Projected MD at TD: 13504'

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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 47-103-03236 County Wetzel District Grant
 Quad Big Run Pad Name BIG245 Field/Pool Name N/A
 Farm name ET Blue Grass LLC Well Number BIG245 17H (L003003)
 Operator (as registered with the OOG) EQT Production Company
 Address 2400 Ansys Drive, Suite 200 City Canonsburg State PA Zip 15317

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As Drilled location NAD 83/UTM Attach an as-drilled plat, profile view, and deviation survey
 Top hole Northing 4,382,920.986 Easting 537,026.476
 Landing Point of Curve Northing 4,383,473.020 Easting 537,285.103
 Bottom Hole Northing 4,384,866.220 Easting 536,653.818

Elevation (ft) 1430' 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)
Synthetic Oil Based Mud 12.00 ppg barium sulfate, sodium chloride, xanthan gum, polyanionic cellulose, modified starch, sodium hydroxide, phosphonates and silyl phosphates, glutaraldehyde solution, calcium hydroxide, partially hydrolyzed polyacrylamide/polyacrylate, potassium chloride, sodium carbonate, ground walnut shells, alcohol and modified fatty acid, ferrochrome lignosulfonate, calcium carbonate, fibrous cellulose

Date permit issued 02/06/2019 Date drilling commenced 11/16/2018 Date drilling ceased 05/23/2019
 Date completion activities began _____ Date completion activities ceased _____
 Verbal plugging (Y/N) N 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 214,492,647,737,996 Open mine(s) (Y/N) depths N
 Salt water depth(s) ft N/A Void(s) encountered (Y/N) depths N
 Coal depth(s) ft 926,1025,1124 Cavern(s) encountered (Y/N) depths N
 Is coal being mined in area (Y/N) N

Reviewed by:
 Stephen Mccoy
Digitally signed by Stephen Mccoy
 Date: 2022.11.23 09:18:38 -0500
 12/30/2022

WR-35
Rev. 8/23/13

API 47-103 - 03236 Farm name ET Blue Grass LLC Well number BIG245 17H (L003003)

CASING STRINGS	Hole Size	Casing Size	Depth (GL)	New or Used	Grade wt/ft	Basket Depth(s) (GL)	Did cement circulate (Y/N) * Provide details below*
Conductor	30"	26"	40'	NEW	A-500 85.6#	N/A	Y
Surface	17-1/2"	13-3/8"	1157'	NEW	J-55 54.5#	987'	Y
Coal							
Intermediate 1	12-3/8"	9-5/8"	2833'	NEW	A-500 40#	N/A	Y
Intermediate 2							
Intermediate 3							
Production	8-1/2"	5-1/2"	13,469'	NEW	P-110 20#	N/A	N
Tubing							
Packer type and depth set							

Comment Details Production Cement job has a calculated TOC of 2015' GL, which is greater than 500' TVD above the producing formation. No issues during cement job.

CEMENT DATA	Class/Type of Cement	Number of Sacks	Slurry wt (ppg)	Yield (ft ³ /sks)	Volume (ft ³)	Cement Top (GL)	WOC (hrs)
Conductor	CLASS A	100	15.6	1.18	118	0	8+
Surface	CLASS A	1026	16.0	1.13	1159	0	8
Coal							
Intermediate 1	CLASS H	1188	16.8	1.02	1211	0	8
Intermediate 2							
Intermediate 3							
Production	CLASS A	2457	15.2	1.10	2702	2015'	8+
Tubing							

Drillers TD (ft) 13,479' Loggers TD (ft) N/A
 Deepest formation penetrated MARCELLUS Plug back to (ft) N/A
 Plug back procedure N/A

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Kick off depth (ft) 7,740'

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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- NONE

SURFACE- ON SHOE TRACK AND EVERY 500' TO SURFACE

INTERMEDIATE: ON SHOE TRACK AND EVERY 500' FEET TO SURFACE

PRODUCTION: ON SHOE TRACK AND EVERY JOINT TO 3402'

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 _____

WR-35
Rev. 8/23/13

API 47- 103 - 03236 Farm name ET Blue Grass LLC Well number BIG245 17H (L003003)

Drilling Contractor Falcon (Rig 25)
Address 1120 US-119 City Indiana State PA Zip 15701

Logging Company Scientific Drilling International
Address 124 Vista Drive City Charleroi State PA Zip 15022

Logging Company GyroData
Address 73 Noblestown Road City Carnegie State PA Zip 15106

Cementing Company Schlumberger Technology Corp.
Address 4600 J. Barry Court, Suite 200 City Canonsburg State PA Zip 15317

Logging Company KLX Energy Services, LLC
Address 1498 Evans City Road City Evans City State PA Zip 16033

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Well # BIG245 17H (L003003) Final Formations API# 47-103-03236				
Formation Name	Drill Top MD (ftGRD)	Drill Top (TVD) (ftGRD)	Drill Btm MD (ftGRD)	Drill Btm (TVD) (ftGRD)
Sand/Shale	1	1	926	926
Waynesburg Coal	926	926	927	927
Sand/Shale	927	927	1,025	1,025
Mapletown Coal	1,025	1,025	1,034	1,034
Sand/Shale	1,034	1,034	1,124	1,124
Pittsburgh Coal	1,124	1,124	1,130	1,130
Sand/Shale	1,130	1,130	2,295	2,295
Maxton	2,295	2,295	2,336	2,336
Sand/Shale	2,336	2,336	2,349	2,349
Big Lime	2,349	2,349	2,419	2,419
Big Injun	2,419	2,419	2,586	2,586
Sand/Shale	2,586	2,586	2,755	2,755
Weir	2,755	2,755	2,795	2,795
Sand/Shale	2,795	2,795	3,153	3,153
Gordon	3,153	3,153	3,192	3,192
Sand/Shale	3,192	3,192	3,211	3,211
Forth Sand	3,211	3,211	3,255	3,255
Sand/Shale	3,255	3,255	3,259	3,259
Bayard	3,259	3,259	3,489	3,489
Sand/Shale	3,489	3,489	3,881	3,881
Speechley	3,881	3,881	4,103	4,103
Sand/Shale	4,103	4,103	4,674	4,674
Riley	4,674	4,674	4,906	4,906
Sand/Shale	4,906	4,906	5,370	5,368
Benson	5,370	5,368	5,518	5,509
Sand/Shale	5,518	5,509	5,832	5,771
Alexander	5,832	5,771	6,148	6,010
Elks	6,148	6,010	7,542	7,069
Sonyea	7,542	7,069	7,748	7,225
Middlesex	7,748	7,225	7,817	7,277
Genesee	7,817	7,277	7,945	7,364
Geneseo	7,945	7,364	7,986	7,388
Tully	7,986	7,388	8,027	7,410
Hamilton	8,027	7,410	8,291	7,506
Marcellus	8,291	7,506	13,479	7,527

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WV Department of
Environmental Protection

12/30/2022



Kennedy, James P <james.p.kennedy@wv.gov>

Plugging permits approved 4710303234 1033235 1033236

1 message

Kennedy, James P <james.p.kennedy@wv.gov>

Thu, Dec 29, 2022 at 2:17 PM


To: "Shrum, Becky" <BShrum@eqt.com>, "Zavatchan, John" <jzavatchan@eqt.com>, OPishioneri@eqt.com, Stephen E McCoy <stephen.e.mccoy@wv.gov>, slemley@wvassessor.com


To whom it may concern, plugging permits have been issued for 4710303234 1033235 1033236.


James Kennedy


WVDEP OOG


6 attachments


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