

#### 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

Monday, August 29, 2022 PERMIT MODIFICATION APPROVAL Horizontal 6A / New Drill

EQT PRODUCTION COMPANY 625 LIBERTY AVE., SUITE 1700

PITTSBURGH, PA 15222

Re: Permit Modification Approval for HAGGARD 8H

47-103-03430-00-00

Changed well name and modified lateral leg

#### EQT PRODUCTION COMPANY

The Office of Oil and Gas has reviewed the attached permit modification for the above referenced permit. The attached modification has been approved and well work may begin. Please be reminded that the oil and gas inspector is to be notified twenty-four (24) hours before permitted well work is commenced.

If there are any questions, please feel free to contact me at (304) 926-0450.

Operator's Well Number: HAGGARD 4H

Farm Name: AMIE LEE HENDERSON

Martin

James A

U.S. WELL NUMBER: 47-103-03430-00-00

Horizontal 6A New Drill Date Modification Issued: 8/29/22

Promoting a healthy environment.

API NO. 47-103 -	03430
OPERATOR WELL	. NO. 8H
Well Pad Name:	Haggard

# STATE OF WEST VIRGINIA DEPARTMENT OF ENVIRONMENTAL PROTECTION, OFFICE OF OIL AND GAS WELL WORK PERMIT APPLICATION

1) Well Operator: EQT F	Production Company	306686	Wetzel	Center	Littleton		
, 1		Operator ID	County	District	Quadrangle		
2) Operator's Well Number	er: 8H	Well Pad	Name: Hagga	rd			
3) Farm Name/Surface Ov	vner: Amie Lee Hende	rson Public Roa	d Access: CR 8	3/2			
4) Elevation, current groun	nd: <u>1,512'</u> I	Elevation, proposed	post-construction	on: 1,512'			
5) Well Type (a) Gas Other	X Oil _	Unde	erground Storag	ge			
(b)If Gas	Shallow X Horizontal X	Deep					
6) Existing Pad: Yes or No	Yes - Currently Unde	r Construction					
7) Proposed Target Forma Marcellus, 7,618', 47', 2,	· · · · · · · · · · · · · · · · · · ·	icipated Thickness a	nd Expected Pr	essure(s):			
8) Proposed Total Vertical	Depth: 7,618'						
9) Formation at Total Vert	cical Depth: Marcellus	3					
10) Proposed Total Measu	red Depth: 10,336'						
11) Proposed Horizontal L	eg Length: 2,219'						
12) Approximate Fresh W	ater Strata Depths:	443'					
13) Method to Determine	•	Offset wells: 47-103-		)2647			
14) Approximate Saltwate	r Depths: No deep wa	ter shows listed in offse	ets				
15) Approximate Coal Sea	m Depths: 1,317'-1,3	20'; 1,415'-1,420'					
16) Approximate Depth to	Possible Void (coal n	nine, karst, other): _	N/A				
17) Does Proposed well location contain coal seams directly overlying or adjacent to an active mine? Yes NoX							
(a) If Yes, provide Mine	Info: Name:						
	Depth:						
	Seam:						
	Owner:	REC	Cil and Gas				

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WW-6B	
(04/15)	

API NO. 47- 103 - 03430	
OPERATOR WELL NO. BH	
Well Pad Name: Haggard	

18)

# CASING AND TUBING PROGRAM

TYPE	Size (in)	New or Used	Grade	Weight per ft. (lb/ft)	FOOTAGE: For Drilling (ft)	INTERVALS: Left in Well (ft)	CEMENT: Fill-up (Cu. Ft.)/CTS
Conductor	26	New	A252 GR3	85.6	40	40	50 ft^3 / CTS
Fresh Water	13 3/8	New	J-55	54.5	1470	1470	1325 ft^3 / CTS
Coal							
Intermediate	9 5/8	New	J-55	36	2908	2908	1100 ft^3 / CTS
Production	6	New	P-110	24	10336	10336	500' above intermediate casing
Tubing	The same of						
Liners							

Kenneth Greynolds Option - Committee Greynolds and - Kenneth Greynolds Greynolds or all - Kenneth Greynolds or all - Kenneth Greynolds or - ADO - HWDEP CU - Oil and Gas Deter 2022 CB 04 09:58:47 - O-100

TYPE	Size (in)	Wellbore Diameter (in)	Wall Thickness (in)	Burst Pressure (psi)	Anticipated Max. Internal Pressure (psi)	Cement Type	Cement Yield (cu. ft./k)
Conductor	26	30	0.312	1000	18	Class A	1.18
Fresh Water	13 3/8	17 1/2	0.380	2730	2184	Class A / Type 1	1.13 - 1.19
Coal							
Intermediate	9 5/8	12 3/8	0.352	3520	2816	Class A / Type 1	1.13 - 1.19
Production	5 1/2	8 1/2	0.400	14580	11664	Class A/H	1.04 - 2.10
Tubing							
Liners							

# **PACKERS**

Kind:	*		
Sizes:			
Depths Set:		RECEIVED Office of Oil and Gas	

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API NO. 47-103 - 03430
OPERATOR WELL NO. 8H
Well Pad Name: Haggard

19) Describe proposed well work, including the drilling and plugging back of any pilot hole:

Drill and complete a new horizontal well in the Marcellus Formation. Drill the vertical, kick off and drill curve. Drill the lateral in the Marcellus. Cement casing.

20) Describe fracturing/stimulating methods in detail, including anticipated max pressure and max rate:

Hydraulic fracturing is completed in accordance with state regulations using water recycled from previously fractured wells and obtained from freshwater sources. This water is mixed with sand and a small percentage (less than 0.1%) of chemicals (including 15% Hydrochloric acid, friction reducer, biocide, and scale inhibitor), referred to in the industry as a "slickwater" completion. Maximum anticipated internal casing pressure is expected to be approximately 10,000 psi, maximum anticipated treating rates are expected to average approximately 100 bpm. Stage lengths vary from 150 to 300 feet. Average approximately 350,000 gallons of water per stage. Sand sizes vary from 100 mesh to 20/40 mesh. Average approximately 200,000-600,000 pounds of proppant per stage.

- 21) Total Area to be disturbed, including roads, stockpile area, pits, etc., (acres): 15.24 acres
- 22) Area to be disturbed for well pad only, less access road (acres): 8.84 acres
- 23) Describe centralizer placement for each casing string:
- Surface: Bow spring centralizers One centralizer at the shoe and one spaced every 500'.
- Intermediate: Bow spring centralizers— One centralizer at the shoe and one spaced every 500'.
- Production: One solid body centralizer spaced every joint from production casing shoe to KOP.

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24) Describe all cement additives associated with each cement type:

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Conductor: Class A no additives

Surface: Calcium Chloride. Used to speed the setting of cement slurries

Intermediate: Calcium Chloride. Used to speed the setting of cement slurries.

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Production: Calcium Carbonate, Fluid Loss, Extender, Dispersent, Viscosifier, Defoamer, POZ, Bonding Agent, Retarder,

Anti-Settling/Suspension Agent

### 25) Proposed borehole conditioning procedures:

Surface: Circulate hole clean while rotating & reciprocating the drill string until cuttings diminish at surface.

Intermediate: Circulate hole clean while rotating & reciprocating the drill string until cuttings diminish at surface.

Production: Perform a cleanup cycle by pumping 3-8 bottoms up or until the shakers are clean. Check volume of cuttings coming across the shakers every 15 minutes.

\*Note: Attach additional sheets as needed.

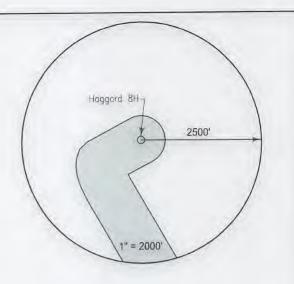
Wellbore Diagram **EQT Production** Wetzel County: Well: Haggard 8H State: West Virginia Haggard Pad: Elevation: 1512' GL 1525' KB 4710303430 Conductor @ 40' 26", 85.6#, A252 GR3, cement to surface w/ Class A 1,470' Surface 13-3/8", 54.5#, J-55, cement to surface w/ Class A/Type I 2,908' Intermediate **@** 9-5/8", 36#, J-55, cement to surface w/ Class A/Type I RECEIVED Office of Oil and Gas AUG 2 2 2022 WV Department of **Environmental Protection Production** @ 10,336' MD / 7,618' TVD 6", 24#, P-110, cement to 500' inside 9-5/8" w/ Class A/H Formation: Marcellus NO09102\$2022

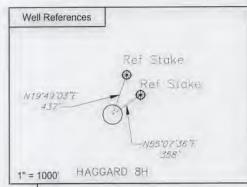
## Haggard 8H Haggard

**EQT Production Company** 

Tract ID.	Tax Map No.	Parcel No.	County	District	Surface Tract Owner		Acres	
1	10	36.0	Wetzel	Center	Amie Lee Henderson		45.50	
2	10	37.0	Wetzel	Center	enter Amie Lee Henderson		14.50	
3	10	52.0	Wetzel	Center	John G Miller ET AL		55,50	
4	10	38.0	Wetzel	Center	Rusty Lee Morris		43.92	
5	10	38.1	Wetzel	Center	David A & Mary A Morris		2,08	
6	10	52.2	Wetzel	Center	John G Miller		3.02	
-				Children Co.			D.	

Lease	Owner	Acres
186297001	Earnest Howard Cadle, et al.	95
110271016	Vivian Rine, a/k/a Vivian L. Rine, et al.	95.7
131545001	John G. Miller, et al.	55.495





#### Notes

HAGGARD 8H coordinates are NAD 27 N: 422,366,002 E: 1,684,574,817 NAD 27 Lat: 39,654239 Long: -80,620300 NAD 83 UTM N: 4,389,460,196 E: 532,590,256

HAGGARD 8H Landing Point coordinates are NAD 27 N: 421,295.618 E: 1,683,929,416 NAD 27 Lat: 39,651278 Long: -80.622544 NAD 83 UTM N: 4,389,130.803 E: 532,399.059

HAGGARD 8H Bottom Hole coordinates are NAD 27 N: 419,376.334 E: 1,685,044.110 NAD 27 Lat: 39.646047 Long: -80,618501 NAD 83 UTM N: 4,388,551,753 E: 532,748,408

West Virginia Coordinates system of 1927 (North Zone) based upon Differential GPS Measurements Plat orientation, Corner and well ties are based upon the grid north meridian Well location references are based upon the grid north

AUGUST 3

DATE:

meridian.
UTM coordinates are NAD83, Zone 17, Meters.



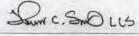
FILE NO: W2192 (BK 65-61)

DRAWING NO:

OHAGGARD 2H

HAGGARD PAD

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

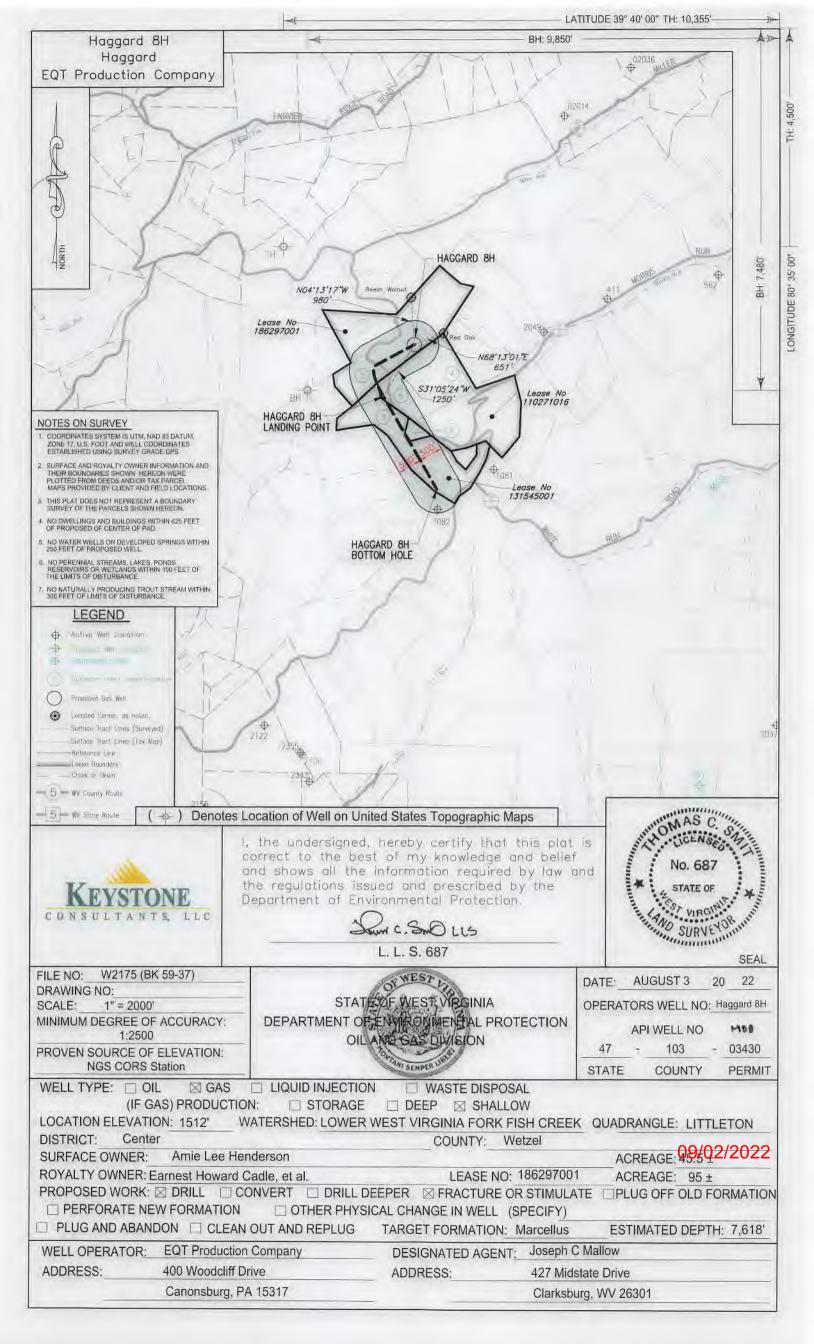


L. L. S. 687



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STATE OF WEST VIRGINIA 1" = 1000' SCALE: OPERATORS WELL NO: Haggard 8H DEPARTMENT OF ENVIRONMENTAL PROTECTION
OIL AND GAS DIVISION MINIMUM DEGREE OF ACCURACY: API WELL NO 1:2500 PROVEN SOURCE OF ELEVATION: 103 47 03430 PANI SEMPER UN NGS CORS Station STATE COUNTY PERMIT WELL TYPE: ☐ GAS ☐ LIQUID INJECTION □ OIL ☐ WASTE DISPOSAL (IF GAS) PRODUCTION: STORAGE ☐ DEEP ☐ SHALLOW 1512' WATERSHED: LOWER WEST VIRGINIA FORK FISH CREEK QUADRANGLE: LOCATION ELEVATION: LITTLETON Center COUNTY: Wetzel DISTRICT: 09/02/2022 SURFACE OWNER: Amie Lee Henderson ACREAGE: 45.5 ± ROYALTY OWNER: Earnest Howard Cadle, et al. 95 ± ACREAGE: LEASE NO: 186297001 PROPOSED WORK: ⊠ DRILL ☐ CONVERT ☐ DRILL DEEPER ☒ FRACTURE OR STIMULATE ☐ PLUG OFF OLD FORMATION ☐ PERFORATE NEW FORMATION ☐ OTHER PHYSICAL CHANGE IN WELL (SPECIFY) ☐ PLUG AND ABANDON ☐ CLEAN OUT AND REPLUG TARGET FORMATION: Marcellus ESTIMATED DEPTH: 7,618' WELL OPERATOR: **EQT Production Company** Joseph C Mallow DESIGNATED AGENT: 400 Woodcliff Drive ADDRESS: ADDRESS: 427 Midstate Drive Canonsburg, PA 15317 Clarksburg, WV 26301



WW-6A1 (5/13)

Operator's Well No.	Haggard 8H

#### INFORMATION SUPPLIED UNDER WEST VIRGINIA CODE Chapter 22, Article 6A, Section 5(a)(5) IN LIEU OF FILING LEASE(S) AND OTHER CONTINUING CONTRACT(S)

Under the oath required to make the verification on page 1 of this Notice and Application, I depose and say that I am the person who signed the Notice and Application for the Applicant, and that –

- (1) the tract of land is the same tract described in this Application, partly or wholly depicted in the accompanying plat, and described in the Construction and Reclamation Plan;
- (2) the parties and recordation data (if recorded) for lease(s) or other continuing contract(s) by which the Applicant claims the right to extract, produce or market the oil or gas are as follows:

Lease Name or Number

Grantor, Lessor, etc.

Grantee, Lessee, etc.

Royalty

Book/Page

See attached

#### Acknowledgement of Possible Permitting/Approval In Addition to the Office of Oil and Gas

The permit applicant for the proposed well work addressed in this application hereby acknowledges the possibility of the need for permits and/or approvals from local, state, or federal entities in addition to the DEP, Office of Oil and Gas, including but not limited to the following:

WV Division of Water and Waste Management

WV Division of Natural Resources WV Division of Highways

U.S. Army Corps of Engineers

U.S. Fish and Wildlife Service

County Floodplain Coordinator

Office of Oil and Gas

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The applicant further acknowledges that any Office of Oil and Gas permit in no way overrides, replaces, or nullifies the need for other permits/approvals that may be necessary and further affirms that all needed permits/approvals should be acquired from the appropriate authority before the affected activity is initiated.

Well Operator: EQT Production Company

By: John Zavatchan

Its: Project Specialist - Permitting

Page 1 of 2

Lease No.	Grantor, Lessor, etc.	Acres	Grantee, Lessee, etc.	Royalty	Book/Page
<u>186297001</u>	Earnest Howard Cadle, et al.  Earnest Howard Cadle, married dealing in his sole and			"at least 1/8th per WV Code 22-6-8"	
	separate property	95 ac	EQT Production Company		OG 273A/121
<u>110271016</u>	Vivian Rine, a/k/a Vivian L. Rine, et al. Vivian Rine, a/k/a Vivian L. Rine, a married woman			"at least 1/8th per WV Code 22-6-8"	
	dealing in her sole and separate property	95.7 ac	EQT Production Company		OG 183A/902
<u>131545001</u>	John G. Miller, et al.			"at least 1/8th per WV Code 22-6-8"	
	John G. Miller, married man dealing in his sole and separate property	55.495 ac	EQT Production Company		OG 192A/811

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Haggard 8H Addendum

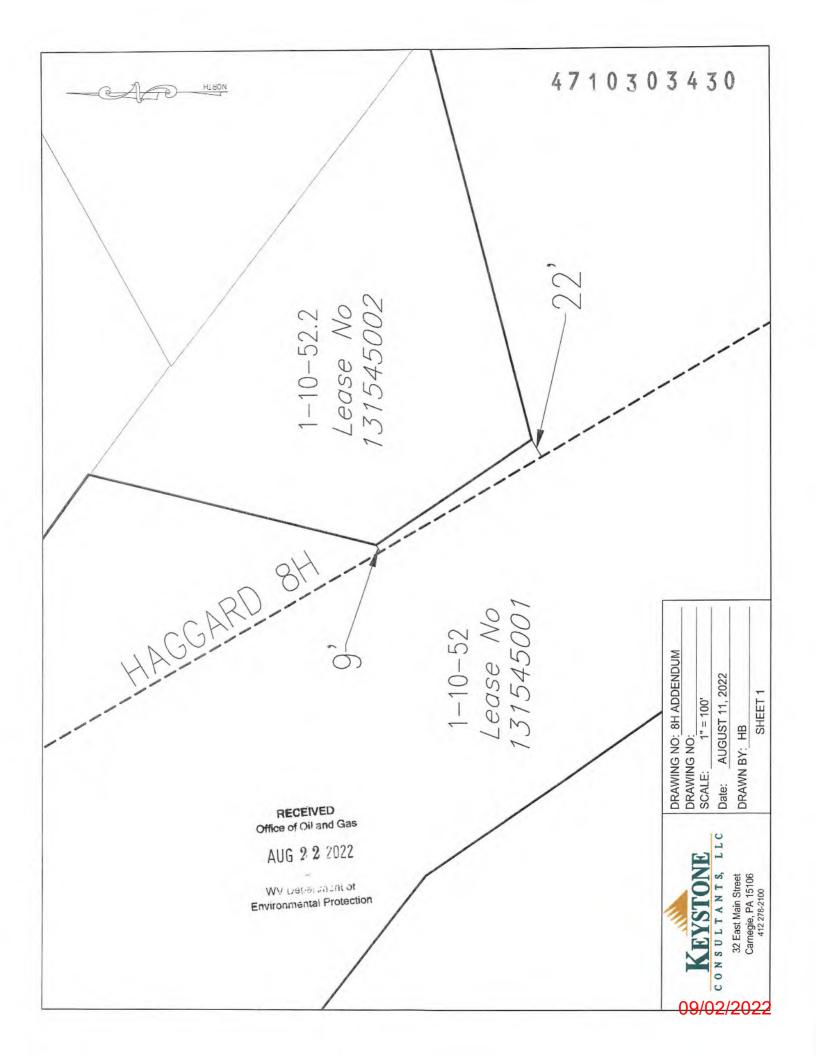
Lease No.	Grantor, Lessor, etc.	Acres	Grantee, Lessee, etc.	Royalty	Book/Page	_
131545002	John G. Miller, et al.			"at least 1/8th per WV Code 22-6-8"		
101010002	John G. Miller, married man dealing in his sole and separate			0000 == 0 0		
	property	3.025 ac	EQT Production Company		OG 192A/813	01-10-52.2

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Environmental Protection





4710303430

August 17, 2022

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

Re: Haggard 8H 6A1 Addendum

Dear Mr. Brewer,

This letter and supporting documentation serve as EQT Production Company's addendum to the WW-6A1 form associated with this well. The lease included on this addendum is a lease in which EQT "claims the right to extract, produce or market the oil or gas", but does not propose to encounter the lease with the proposed wellbore. EQT would like to report this lease as part of our Well Work Permit Application, as it is located within 50' of our proposed permitted wellbore.

If EQT does encounter this lease, an application for a permit modification will be filed with the West Virginia DEP, Office of Oil and Gas.

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

Sincerely,

John Zavatchan

Project Specialist - Permitting

Enc.

## **EQT** Production

Hydraulic Fracturing Monitoring Plan

Pad ID: Haggard

County: Wetzel

August 15, 2022

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#### **Purpose**

The purpose of this pad-specific Hydraulic Fracturing Monitoring Plan is to identify and notify conventional well operators near EQT hydraulic fracturing in Wetzel County, WV prior to hydraulic fracturing at the following EQT wells on the Haggard pad: 2H, 4H, 6H, 8H, 10H, 12H, 14H and 16H.

Due to the requirements under 35CSR8 5.11, the permittee is required to review the area surrounding the proposed well pad so as to identify and evaluate potential conduits for unintended fracture propagation.

A report is required to be submitted along with a well work permit application.

The plan is being implemented as an additional safety measure to be utilized in conjunction with existing best management practices and emergency action plans for the site. These additional measures include coordination with well operators of the timing and location of the hydraulic fracturing, establishment of measures well operators should implement, and assurance that the OOG is notified of the timeline, as well as any issues that may arise during fracturing.

#### 1. Communications with Well Operators

EQT, using available data (WV Geological Survey, WVDEP website, and IHS data service), has identified all known wells and well operators within 500 feet of this pad and the lateral sections that are known or could reasonably be expected to be within range of the fracture propagation. A map showing these wells along with a list of the wells and operators is included in **Attachment A**.

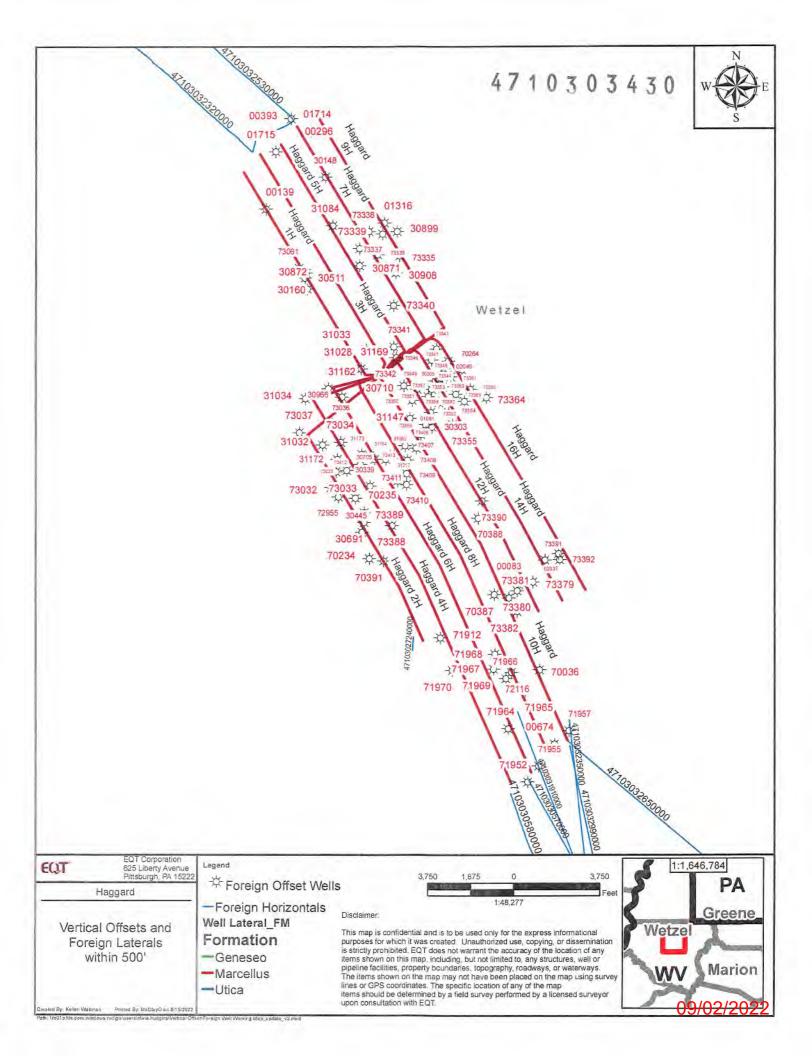
EQT will notify these operators of the hydraulic fracturing schedule for these wells, and coordinate with them throughout the fracturing process.

EQT will recommend to these operators at a minimum to:

- 1. Inspect their surface equipment prior to fracturing to establish integrity and establish prefrac well conditions
- 2. Observe wells closely during and after fracturing and monitor for abnormal increases in water, gas or pressure
- 3. Inspect or install master valves or other necessary equipment for wellhead integrity capable of a pressure recommended by EQT
- 4. Notify the OOG and EQT if any changes in water, gas production, pressure, or other anomalies are identified

#### Reporting

EQT will provide information relating to the hydraulic fracturing schedule, communication with other operators, and ongoing monitoring of the work upon request of OOG or immediately in the event of any noted abnormalities.



UWI	ACT_STATUS	CURR_OPER	FNL_CLASS	INIT_CLASS		ONGITUDE OPER_NAME	DATUM	ELEVATION T	OT_DEPTH 1	VD
73343	Completed Wells	MANUFACTURERS LIGHT & HEAT	UNCLASSIFIED	UNCLASSIFIED	39.65737800	-80.61186000 MANUFACTURERS LIGHT & HEAT	NAD27	0.00	0.00	0.00
73411 71952	Completed Wells Completed Wells	UNKNOWN	UNCLASSIFIED UNCLASSIFIED	UNCLASSIFIED	39.64010600	-80.62030500 UNKNOWN	NAD27	0.00	0.00	0.00
73406	Completed Wells	UNKNOWN	UNCLASSIFIED	UNCLASSIFIED UNCLASSIFIED	39.60569700 39.64562200	-80.59794600 UNKNOWN -80.61505000 UNKNOWN	NAD27 NAD27	0.00	0.00	0.00
73338	Completed Wells	UNKNOWN	UNCLASSIFIED	UNCLASSIFIED	39.67146800	-80.62218200 UNKNOWN	NAD27	0.00	0.00	0.00
73336	Completed Wells	UNKNOWN	UNCLASSIFIED	UNCLASSIFIED	39.66871000	-80.62086800 UNKNOWN	NAD27	0.00	0.00	0.00
73348	Completed Wells	UNKNOWN	UNCLASSIFIED	UNCLASSIFIED	39.65360400	-80.61204800 UNKNOWN	NAD27	0.00	0.00	0.00
71966 73358	Completed Wells Completed Wells	UNKNOWN	UNCLASSIFIED	UNCLASSIFIED	39.61803300	-80.60131800 UNKNOWN	NAD27	0.00	0.00	0.00
73358 73353	Completed Wells	UNKNOWN	UNCLASSIFIED UNCLASSIFIED	UNCLASSIFIED UNCLASSIFIED	39.65287800 39.65099200	-80.61148500 UNKNOWN -80.61148500 UNKNOWN	NAD27 NAD27	0.00	0.00	0.00
73061	Completed Wells	UNKNOWN	UNCLASSIFIED	UNCLASSIFIED	39.66711400	-80.63307000 UNKNOWN	NAD27 NAD27	0.00	0.00	0.00
73349	Completed Wells	UNKNOWN	UNCLASSIFIED	UNCLASSIFIED	39.65258800	-80.61486300 UNKNOWN	NAD27	0.00	0.00	0.00
73381	Completed Wells	UNKNOWN	UNCLASSIFIED	UNCLASSIFIED	39.62762400	-80.60078700 UNKNOWN	NAD27	0.00	0.00	0.00
73359	Completed Wells	UNKNOWN	UNCLASSIFIED	UNCLASSIFIED	39.65200800	-80.60885700 UNKNOWN	NAD27	0.00	0.00	0.00
70387 73354	Completed Wells Completed Wells	SOUTH PENN OIL UNKNOWN	PSEUDO-ORIGINAL WELL - UNKNOWN CLASS UNCLASSIFIED	PSEUDO-ORIGINAL WELL - UNKNOWN CLASS UNCLASSIFIED	39.62806000 39.64983100	-80.60303900 SOUTH PENN OIL	NAD27 NAD27	0.00	0.00	0.00
70234	Completed Wells	SOUTH PENN OIL	PSEUDO-ORIGINAL WELL - UNKNOWN CLASS	PSEUDO-ORIGINAL WELL - UNKNOWN CLASS	39.64983100	-80.60998300 UNKNOWN -80.62237000 SOUTH PENN OIL	NAD27 NAD27	0.00	0.00	0.00
31172	Completed Wells	UNKNOWN	UNCLASSIFIED	UNCLASSIFIED	39.64431500	-80.62724900 UNKNOWN	NAD27	0.00	0.00	0.00
73355	Completed Wells	HOPE NATURAL GAS	UNCLASSIFIED	UNCLASSIFIED	39.64837900	-80.60942000 HOPE NATURAL GAS	NAD27	0.00	0.00	0.00
73346	Completed Wells	UNKNOWN	UNCLASSIFIED	UNCLASSIFIED	39.65607200	-80.61261100 UNKNOWN	NAD27	0.00	0.00	0.00
73341	Completed Wells	UNKNOWN	UNCLASSIFIED	UNCLASSIFIED	39.65766800	-80.61842900 UNKNOWN	NAD27	0.00	0.00	0.00
71968 73350	Completed Wells Completed Wells	UNKNOWN	UNCLASSIFIED UNCLASSIFIED	UNCLASSIFIED UNCLASSIFIED	39.62093600 39.65128200	-80.60300400 UNKNOWN -80.61561300 UNKNOWN	NAD27 NAD27	0.00 0.00	0.00 0.00	0.00
73357	Completed Wells	UNKNOWN	UNCLASSIFIED	UNCLASSIFIED	39.65316900	-80.61148500 UNKNOWN	NAD27	0.00	0.00	0.00
73339	Completed Wells	UNKNOWN	UNCLASSIFIED	UNCLASSIFIED	39.66943600	-80.62368300 UNKNOWN	NAD27	0.00	0.00	0.00
71970	Completed Wells	UNKNOWN	UNCLASSIFIED	UNCLASSIFIED	39.61904900	-80.60956100 UNKNOWN	NAD27	0.00	0.00	0.00
73379	Completed Wells	UNKNOWN	UNCLASSIFIED	UNCLASSIFIED	39.62951100	-80.59703400 UNKNOWN	NAD27	0.00	0.00	0.00
31164 73391	Completed Wells Completed Wells	UNKNOWN	UNCLASSIFIED	UNCLASSIFIED	39.64431500	-80.62143100 UNKNOWN	NAD27	0.00	0.00	0.00
73391 72955	Completed Wells Completed Wells	UNKNOWN	UNCLASSIFIED UNCLASSIFIED	UNCLASSIFIED UNCLASSIFIED	39.63212400 39.63981600	-80.59515700 UNKNOWN -80.62706400 UNKNOWN	NAD27 NAD27	0.00	0.00	0.00
73351	Completed Wells	UNKNOWN	UNCLASSIFIED	UNCLASSIFIED	39.65171700	-80.61317400 UNKNOWN	NAD27 NAD27	0.00 0.00	0.00	0.00
73335	Completed Wells	UNKNOWN	UNCLASSIFIED	UNCLASSIFIED	39.66856500	-80.61749000 UNKNOWN	NAD27	0.00	0.00	0.00
73347	Completed Wells	UNKNOWN	UNCLASSIFIED	UNCLASSIFIED	39.65491000	-80.61148500 UNKNOWN	NAD27	0.00	0.00	0.00
71969	Completed Wells	UNKNOWN	UNCLASSIFIED	UNCLASSIFIED	39.61919400	-80.60675100 UNKNOWN	NAD27	0.00	0.00	0.00
73352	Completed Wells	UNKNOWN	UNCLASSIFIED	UNCLASSIFIED	39.64983100	-80.61279800 UNKNOWN	NAD27	0.00	0.00	0.00
73392 70391	Completed Wells Completed Wells	UNKNOWN SOUTH PENN OIL	UNCLASSIFIED	UNCLASSIFIED PSEUDO-ORIGINAL WELL - UNKNOWN CLASS	39.63212400 39.63212400	-80.59290500 UNKNOWN -80.62011800 SOUTH PENN OIL	NAD27 NAD27	0.00	0.00	0.00
73389	Completed Wells	UNKNOWN	PSEUDO-ORIGINAL WELL - UNKNOWN CLASS UNCLASSIFIED	UNCLASSIFIED	39.63212400 39.63792900	-80.62011800 SOUTH PENN OIL -80.62312000 UNKNOWN	NAD27 NAD27	0.00	0.00	0.00
73388	Completed Wells	UNKNOWN	UNCLASSIFIED	UNCLASSIFIED	39.63633300	-80.61880400 UNKNOWN	NAD27	0.00	0.00	0.00
71967	Completed Wells	UNKNOWN	UNCLASSIFIED	UNCLASSIFIED	39.61919400	-80.60319100 UNKNOWN	NAD27	0.00	0.00	0.00
31169	Completed Wells	CASSADY WILLIAM	PSEUDO-ORIGINAL WELL - UNKNOWN CLASS	PSEUDO-ORIGINAL WELL - UNKNOWN CLASS	39.65505600	-80.62349600 CASSADY WILLIAM	NAD27	0.00	0.00	0.00
73337	Completed Wells	UNKNOWN	UNCLASSIFIED	UNCLASSIFIED	39.67117800	-80.62011800 UNKNOWN	NAD27	0.00	0.00	0.00
73364	Completed Wells	UNKNOWN	UNCLASSIFIED	UNCLASSIFIED	39.65157200	-80.60416500 UNKNOWN	NAD27	0.00	0.00	0.00
73340 73390	Completed Wells Completed Wells	UNKNOWN	UNCLASSIFIED	UNCLASSIFIED	39.66260300	-80.61842900 UNKNOWN	NAD27	0.00	0.00	0.00
73390 31173	Completed Wells	UNKNOWN	UNCLASSIFIED UNCLASSIFIED	UNCLASSIFIED UNCLASSIFIED	39.63923500 39.64489600	-80.60491600 UNKNOWN -80.62349600 UNKNOWN	NAD27 NAD27	0.00 0.00	0.00	0.00
73036	Completed Wells	UNKNOWN	UNCLASSIFIED	UNCLASSIFIED	39.64852400	-80.62800300 UNKNOWN	NAD27 NAD27	0.00	0.00	0.00
73412	Completed Wells	SOUTH PENN OIL	UNCLASSIFIED	UNCLASSIFIED	39.64373500	-80.62368300 SOUTH PENN OIL	NAD27	0.00	0.00	0.00
73344	Completed Wells	UNKNOWN	UNCLASSIFIED	UNCLASSIFIED	39.65592600	-80.60998300 UNKNOWN	NAD27	0.00	0.00	0.00
30871	Completed Wells	QUAKER STATE OIL REFINING CORP	PSEUDO-ORIGINAL WELL - UNKNOWN CLASS	PSEUDO-ORIGINAL WELL - UNKNOWN CLASS	39.66740400	-80.62368300 QUAKER STATE OIL REFINING CORP	NAD27	0.00	0.00	0.00
73382	Completed Wells	UNKNOWN	UNCLASSIFIED	UNCLASSIFIED	39.62602800	-80.59947300 UNKNOWN	NAD27	0.00	0.00	0.00
73407 71912	Completed Wells Completed Wells	UNKNOWN	UNCLASSIFIED UNCLASSIFIED	UNCLASSIFIED UNCLASSIFIED	39.64591200 39.62296800	-80.61673900 UNKNOWN -80.61143400 UNKNOWN	NAD27 NAD27	0.00	0.00	0.00
73409	Completed Wells	UNKNOWN	UNCLASSIFIED	UNCLASSIFIED	39.64257400	-80.61655200 UNKNOWN	NAD27 NAD27	0.00	0.00	0.00
71964	Completed Wells	UNKNOWN	UNCLASSIFIED	UNCLASSIFIED	39.61208300	-80.60094300 UNKNOWN	NAD27	0.00	0.00	0.00
31162	Completed Wells	CASSADY WILLIAM	PSEUDO-ORIGINAL WELL - UNKNOWN CLASS	PSEUDO-ORIGINAL WELL - UNKNOWN CLASS	39.65273300	-80.62856300 CASSADY WILLIAM	NAD27	0.00	0.00	0.00
73410	Completed Wells	UNKNOWN	UNCLASSIFIED	UNCLASSIFIED	39.64126700	-80.61655200 UNKNOWN	NAD27	0.00	0.00	0.00
30305	Completed Wells	UNKNOWN	UNCLASSIFIED	UNCLASSIFIED	39.65258800	-80.61261100 UNKNOWN	NAD27	0.00	0.00	0.00
71957 73033	Completed Wells Completed Wells	UNKNOWN	UNCLASSIFIED UNCLASSIFIED	UNCLASSIFIED UNCLASSIFIED	39.61179200 39.64286400	-80.59157600 UNKNOWN -80.62744000 UNKNOWN	NAD27	0.00	0.00	0.00
73032	Completed Wells	UNKNOWN	UNCLASSIFIED	UNCLASSIFIED	39.64286400	-80.62744000 UNKNOWN -80.62819000 UNKNOWN	NAD27 NAD27	0.00	0.00	0.00
70392	Completed Wells	SOUTH PENN OIL	PSEUDO-ORIGINAL WELL - UNKNOWN CLASS	PSEUDO-ORIGINAL WELL - UNKNOWN CLASS	39.65287800	-80.61092200 SOUTH PENN OIL	NAD27	0.00	0.00	0.00
73413	Completed Wells	UNXNOWN	UNCLASSIFIED	UNCLASSIFIED	39.64475100	-80.62218200 UNKNOWN	NAD27	0.00	0.00	0.00
73342	Completed Wells	UNKNOWN	UNCLASSIFIED	UNCLASSIFIED	39.65636200	-80.61805300 UNKNOWN	NAD27	0.00	0.00	0.00
70388	Completed Wells	SOUTH PENN OIL	PSEUDO-ORIGINAL WELL - UNKNOWN CLASS	PSEUDO-ORIGINAL WELL - UNXNOWN CLASS	39.63720300	-80.60547900 SOUTH PENN OIL	NAD27	0.00	0.00	0.00
73360 73380	Completed Wells Completed Wells	MANUFACTURERS LIGHT & HEAT UNKNOWN	UNCLASSIFIED UNCLASSIFIED	UNCLASSIFIED UNCLASSIFIED	39.65113700 39.62849500	-80.60754300 MANUFACTURERS LIGHT & HEAT -80.59947300 UNKNOWN	NAD27 NAD27	0.00 0.00	0.00 0.00	0.00 0.00
73035	Completed Wells	UNKNOWN	UNCLASSIFIED	UNCLASSIFIED	39.64300900	-80.62575100 UNKNOWN	NAD27 NAD27	0.00	0.00	0.00
71955	Completed Wells	UNKNOWN	UNCLASSIFIED	UNCLASSIFIED	39.60758300	-80.59626000 UNKNOWN	NAD27	0.00	0.00	0.00
70265	Completed Wells	SOUTH PENN OIL	PSEUDO-ORIGINAL WELL - UNKNOWN CLASS	PSEUDO-ORIGINAL WELL - UNKNOWN CLASS	39.65258800	-80.60660500 SOUTH PENN OIL	NAD27	0.00	0.00	0.00
72116	Completed Wells	UNKNOWN	UNCLASSIFIED	UNCLASSIFIED	39.61875900	-80.60038100 UNKNOWN	NAD27	0.00	0.00	0.00
73037	Completed Wells	UNKNOWN	UNCLASSIFIED	UNCLASSIFIED	39.64750800	-80.63307000 UNKNOWN	NAD27	0.00	0.00	0.00
73361 00083	Completed Wells Completed Wells	UNKNOWN	UNCLASSIFIED DEVELOPMENT WELL-DRY (INCLUDING TEMPORARILY ABANDONED WELL)	UNCLASSIFIED DEVELOPMENT WELL	39.65404000 39.62936600	-80.60960800 UNKNOWN -80.59872300 UNKNOWN	NAD27 NAD27	0.00	0.00 2984.00	0.00
70036	Completed Wells	SOUTH PENN OIL	DEVELOPMENT WELL-DIX (INCLODING TEMPORARILY ABANDONED WELL)	DEVELOPMENT WELL	39.61904900	-80.59607200 CONTH PENN OIL	NAD27 NAD27	1555.00	3392.00	0.00
73408	Completed Wells	MANUFACTURERS LIGHT & HEAT	UNCLASSIFIED	UNCLASSIFIED	39.64417000	-80.53807200 SOOTH PENN OIL  -80.61636400 MANUFACTURERS LIGHT & HEAT	NAD27 NAD27	0.00	0.00	0.00
31033	Completed Wells	MOSES WILLIAM	DEVELOPMENT WELL-OIL	DEVELOPMENT WELL	39.65708800	-80.62612300 MOSES WILLIAM	NAD27	1167.00	3134.00	0.00
30899	Completed Wells	QUAKER STATE OIL REFINING CORP	DEVELOPMENT WELL-OIL	DEVELOPMENT WELL	39.67146800	-80.61786600 QUAKER STATE OIL REFINING CORP	NAD27	1251.00	3247.00	0.00
31084	Completed Wells	UNKNOWN	DEVELOPMENT WELL-OIL	DEVELOPMENT WELL	39.67220600	-80.62781200 UNKNOWN	NAD27	1310.00	3125.00	0.00
31034 70235	Completed Wells	MOSES WILLIAM	DEVELOPMENT WELL-OIL	DEVELOPMENT WELL	39.65157200	-80.63212900 MOSES WILLIAM	NAD27	1326.00	3306.00	0.00
70235 02049	Completed Wells Completed Wells/WHCS	SOUTH PENN OIL DIVERSIFIED PRODUCTION LLC	PSEUDO-ORIGINAL WELL - UNKNOWN CLASS SUCCESSFUL OUTPOST EXTENSION	PSEUDO-ORIGINAL WELL - UNKNOWN CLASS WILDCAT OUTPOST	39.63967100 39.65506460	-80.62443400 SOUTH PENN OIL -80.61073790 DAC CORP	NAD27 NAD27	0.00 1162.00	0.00 3588.00	0.00
02049	Completed Wells/WHCS	ALLIANCE PETROLEUM CO LLC	NEW FIELD WILDCAT-DISCOVERY	NEW FIELD WILDCAT	39.65506460 39.63285810	-80.59309550 DAC CORP	NAD27 NAD27	1162.00 1240.00	3588.00 3434.00	0.00
30339	Completed Wells	SOUTH PENN OIL	DEVELOPMENT WELL-OIL	DEVELOPMENT WELL	39.64112200	-80.62218200 SOUTH PENN OIL	NAD27	1297.00	3260.00	0.00
00393	Completed Wells	UNKNOWN	DEVELOPMENT WELL-GAS	DEVELOPMENT WELL	39.68497800	-80.63419300 UNKNOWN	NAD27	1289.00	2360.00	0.00
01081	Completed Wells	HORNER OIL & GAS PRODUCTION INC	DEVELOPMENT WELL-OIL	DEVELOPMENT WELL	39.64721800	-80.61430000 PENNZOIL CO INC	NAD27	1518.00	3401.00	0.00
30148	Completed Wells	UNKNOWN	DEVELOPMENT WELL-OIL	DEVELOPMENT WELL	39.67799900	-80.62894100 UNKNOWN	NAD27	1360.00	3395.00	0.00
31217 30705	Completed Wells Completed Wells	CASSADY WILLIAM	UNCLASSIFIED	UNCLASSIFIED	39.64170300	-80.61786600 CASSADY WILLIAM	NAD27	0.00	0.00	0.00
30705 01714	Completed Wells Completed Wells	RANDALL-ZOGG SUPPLY HORNER OIL & GAS PRODUCTION INC	DEVELOPMENT WELL-OIL DEVELOPMENT WELL-OIL	DEVELOPMENT WELL DEVELOPMENT WELL	39.64431500 39.68351500	-80.61974200 RANDALL-ZOGG SUPPLY -80.63119300 HORNER CHARLES	NAD27 NAD27	1392.00 1350.00	3350.00 3280.00	0.00
21114	completed freig	HOMES OF A GAS PRODUCTION INC	DEVELORIMENT WELL-OIL	PETECOTMENT WELL	33.00331500	-00.03213300 HORNER CHARLES	NAU2/	1330.00	3280.00	0.00

30511	Completed Wells	RAAD SUPPLY CO	DEVELOPMENT WELL-OIL	DEVELOPMENT WELL	39.66594100	-80.63212900 RAAD SUPPLY CO	NAD27	1213.00	3269.00	0.00
01316	Completed Wells/WHCS	HORNER OIL & GAS PRODUCTION INC	DEVELOPMENT WELL-OIL	DEVELOPMENT WELL	39.67248090	-80.61979700 CHASE PETROLEUM CO	NAD27	1138.00	4200.00	0.00
01715	Completed Wells	HORNER OIL & GAS PRODUCTION INC	DEVELOPMENT WELL-OIL	DEVELOPMENT WELL	39.68104700	-80.63663600 HORNER CHARLES	NAD27	1380.00	3401.00	0.00
31147	Completed Wells	QUAKER STATE OIL REFINING CORP	DEVELOPMENT WELL-OIL	DEVELOPMENT WELL	39.64910500	-80.61598900 QUAKER STATE OIL REFINING CORP	NAD27	1468.00	3407.00	0.00
30303	Completed Wells	UNKNOWN	UNCLASSIFIED	UNCLASSIFIED	39.64808900	-80.61261100 UNKNOWN	NAD27	0.00	0.00	0.00
30966	Completed Wells	QUAKER STATE OIL REFINING CORP	DEVELOPMENT WELL-OIL	DEVELOPMENT WELL	39.65171700	-80.62650100 QUAKER STATE OIL REFINING CORP	NAD27	0.00	3011.00	0.00
73356	Completed Wells	UNKNOWN	UNCLASSIFIED	UNCLASSIFIED	39.64837900	-80.61354900 UNKNOWN	NAD27	0.00	0.00	0.00
00296	Completed Wells	HORNER OIL & GAS PRODUCTION INC	DEVELOPMENT WELL-OIL	DEVELOPMENT WELL	39.68549500	-80.63094900 SOUTH PENN OIL	NAD27	1348.00	3600.00	0.00
31028	Completed Wells	HOPE NATURAL GAS	DEVELOPMENT WELL-OIL	DEVELOPMENT WELL	39.65737800	-80.62274500 HOPE NATURAL GAS	NAD27	1485.00	3453.00	0.00
30908	Completed Wells	QUAKER STATE OIL REFINING CORP	DEVELOPMENT WELL-OIL	DEVELOPMENT WELL	39.66652200	-80.61805300 QUAKER STATE OIL REFINING CORP	NAD27	0.00	3286.00	0.00
30872	Completed Wells	QUAKER STATE OIL REFINING CORP	DEVELOPMENT WELL-OIL	DEVELOPMENT WELL	39.66463500	-80.63175400 QUAKER STATE OIL REFINING CORP	NAD27	1311.00	3310.00	0.00
30710	Completed Wells	RANDALL-ZOGG SUPPLY	DEVELOPMENT WELL-OIL	DEVELOPMENT WELL	39.65302400	-80.61692700 RANDALL-ZOGG SUPPLY	NAD27	1252.00	3190.00	0.00
71965	Completed Wells	UNKNOWN	UNCLASSIFIED	UNCLASSIFIED	39.61658200	-80.59832000 UNKNOWN	NAD27	0.00	0.00	0.00
00139	Completed Wells	EAGON G F	DEVELOPMENT WELL-DRY (INCLUDING TEMPORARILY ABANDONED WELL)	DEVELOPMENT WELL	39.67422600	-80.63813700 EAGON G F	NAD27	626.00	3362.00	0.00
30445	Completed Wells	SOUTH PENN OIL	DEVELOPMENT WELL-OIL	DEVELOPMENT WELL	39.63560700	-80.62349600 SOUTH PENN OIL	NAD27	1345.00	3310.00	0.00
31032	Completed Wells	MOSES WILLIAM	DEVELOPMENT WELL-OIL	DEVELOPMENT WELL	39.64605700	-80.62950100 MOSES WILLIAM	NAD27	991.00	2975.00	0.00
30691	Completed Wells	RANDALL-ZOGG SUPPLY	DEVELOPMENT WELL-OIL	DEVELOPMENT WELL	39.63676800	-80.62312000 RANDALL-ZOGG SUPPLY	NAD27	1400.00	3359.00	0.00
30160	Completed Wells	SOUTH PENN OIL	DEVELOPMENT WELL-GAS	DEVELOPMENT WELL	39.66653300	-80.63194400 SOUTH PENN OIL	NAD27	1218.00	3195.00	0.00
73034	Completed Wells	UNKNOWN	UNCLASSIFIED	UNCLASSIFIED	39.64634700	-80.62668900 UNKNOWN	NAD27	0.00	0.00	0.00
01082	Completed Wells	HORNER OIL & GAS PRODUCTION INC	DEVELOPMENT WELL-OIL	DEVELOPMENT WELL	39.64489600	-80.61842900 SOUTH PENN OIL	NAD27	1575.00	3503.00	0.00
70264	Completed Wells	SOUTH PENN OIL	PSEUDO-ORIGINAL WELL - UNKNOWN CLASS	PSEUDO-ORIGINAL WELL - UNKNOWN CLASS	39.65491000	-80.60791900 SOUTH PENN OIL	NAD27	0.00	0.00	0.00
00674	Completed Wells	DIVERSIFIED PRODUCTION LLC	DEVELOPMENT WELL-GAS	DEVELOPMENT WELL	39.61019600	-80.59382400 CONSOLIDATED GAS SUPPLY CORP	NAD27	0.00	2989.00	0.00
Horizontals										
UWI	ACT_STATUS	CURR_OPER	FNL_CLASS	INIT. CLASS	LATITUDE LO	NGITUDE OPER NAME	DATUM	ELEVATION 1	OT DEPTH 1	TVD WELL_NAME
4710303057000	O Completed Wells	EQT PRODUCTION CO	DEVELOPMENT WELL-GAS	DEVELOPMENT WELL	39.58256300	-80.58408500 EQT PRODUCTION CO	NAD27	834.00	15279.00	6903.00 WV 512915 BIG 177
4710303058000	O Completed Wells	EQT PRODUCTION CO	DEVELOPMENT WELL-GAS	DEVELOPMENT WELL	39.58257300	-80.58415500 EQT PRODUCTION CO	NAD27	834.00	15667.00	6894.00 WV 512916 BIG 177
4710303253000	O Completed Wells	SWN PRODUCTION CO LLC	DEVELOPMENT WELL-GAS	DEVELOPMENT WELL	39.68258340	-80.63976910 SWN PRODUCTION CO LLC	NAD27	1370.00	25954.00	7108.00 405H SWN A WTZ
4710303191000	O Drilling	EQT PRODUCTION CO		DEVELOPMENT WELL	39,58255800	-80,58405000 EQT PRODUCTION CO	NAD27	811.00	0.00	0.00 H15 BIG 177
4710303235000	O Drilling	EQT PRODUCTION CO		DEVELOPMENT WELL	39.59517800	-80.58894600 EQT PRODUCTION CO	NAD27	1296.00	0.00	0.00 BIG245H16 ET BLUE GRASS LLC
4710302724000	O Completed Wells	ASCENT RESOURCES-MARCELLUS LLC	DEVELOPMENT WELL-GAS	DEVELOPMENT WELL	39.62138330	-80.61570830 HG ENERGY LLC	NAD27	939.00	3312.00	3150.00 306 CRANE S L
4710303265000	O Permit	EQT PRODUCTION CO		DEVELOPMENT WELL	39.59533200	-80.56900100 EQT PRODUCTION CO	NAD27	1430.00	0.00	0.00 H4 BIG245
4710303299000	O Drilling	EQT PRODUCTION CO		DEVELOPMENT WELL	39,58247300	-80.58404900 EQT PRODUCTION CO	NAD27	811.00	0.00	0.00 H7 BIG 177
4710303232000	0 Completed Wells	SWN PRODUCTION CO LLC	DEVELOPMENT WELL-GAS	DEVELOPMENT WELL	39.68250840	-80.63981210 SWN PRODUCTION CO LLC	NAD27	1370.00	18720.00	7177.00 3H SWN A WTZ
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