



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, September 25, 2023
PERMIT MODIFICATION APPROVAL
Horizontal 6A / New Drill

EQT PRODUCTION COMPANY
625 LIBERTY AVE., SUITE 1700

PITTSBURGH, PA 15222

Re: Permit Modification Approval for Haggard 16H
47-103-03532-00-00

Lateral Extension

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.

A blue ink signature of James A. Martin, written in a cursive style.

James A. Martin
Chief

Operator's Well Number: Haggard 16H
Farm Name: Amie Lee Henderson
U.S. WELL NUMBER: 47-103-03532-00-00
Horizontal 6A New Drill
Date Modification Issued: 09/25/2023

Promoting a healthy environment.

09/29/2023

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

1) Well Operator: EQT Production Company 306686 Wetzel Center Littleton
Operator ID County District Quadrangle

2) Operator's Well Number: 16H Well Pad Name: Haggard

3) Farm Name/Surface Owner: Amie Lee Henderson Public Road Access: CR 8/2

4) Elevation, current ground: 1,519' (built) Elevation, proposed post-construction: 1,519' (built)

5) Well Type (a) Gas Oil _____ Underground Storage _____
Other _____

(b) If Gas Shallow Deep _____
Horizontal _____

6) Existing Pad: Yes or No Yes

7) Proposed Target Formation(s), Depth(s), Anticipated Thickness and Expected Pressure(s):
Marcellus, 7,600', 47', 2,620 psi

8) Proposed Total Vertical Depth: 7,600'

9) Formation at Total Vertical Depth: Marcellus

10) Proposed Total Measured Depth: 21,549'

11) Proposed Horizontal Leg Length: 12,693'

12) Approximate Fresh Water Strata Depths: 465'

13) Method to Determine Fresh Water Depths: Offset Wells: 47-103-02236, 47-103-02647

14) Approximate Saltwater Depths: No salt water shows listed in offsets

15) Approximate Coal Seam Depths: 1,339'-1,342'; 1,437'-1,442'

16) Approximate Depth to Possible Void (coal mine, karst, other): N/A

17) Does Proposed well location contain coal seams directly overlying or adjacent to an active mine? Yes _____ No

(a) If Yes, provide Mine Info: Name: _____
Depth: _____
Seam: _____
Owner: _____

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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	68	68 ✓	50 ft ³ / CTS
Fresh Water	13 3/8	New	J-55	54.5	1492	1492 ✓	1325 ft ³ / CTS
Coal							
Intermediate	9 5/8	New	J-55	36	2909	2909 ✓	1100 ft ³ / CTS
Production	6	New	P-110	24	21549	21549 ✓	500' above intermediate casing
Tubing							
Liners							

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/L ✓	1.04 - 1.20
Fresh Water	13 3/8	17 1/2	0.380	2730	2184	Class A/L	1.04 - 1.20
Coal							
Intermediate	9 5/8	12 3/8	0.352	3520	2816	Class A/L	1.04 - 1.20
Production	6	8 1/2	0.400	14580 ✓	11664	Class A/H/L	1.04 - 2.10
Tubing							
Liners							

PACKERS

Kind:				
Sizes:				
Depths Set:				

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

This well has been drilled to an MD of 7,662' EQT will continue drilling and complete a new horizontal well in the Marcellus Formation. We will resume drilling the curve from the tie in, 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 (built)

22) Area to be disturbed for well pad only, less access road (acres): 8.84 acres (built)

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 other joint from production casing shoe to landing point. One solid body centralizer spaced every joint from landing point to planned top of cement.

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

Conductor: No additives
Surface: Calcium Chloride. Used to speed the setting of cement slurries
Intermediate: Calcium Chloride. Used to speed the setting of cement slurries.
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.

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Page 3 of 3
Stephen
Mccoy

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Mccoy
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-04'00'

*Note: Attach additional sheets as needed.

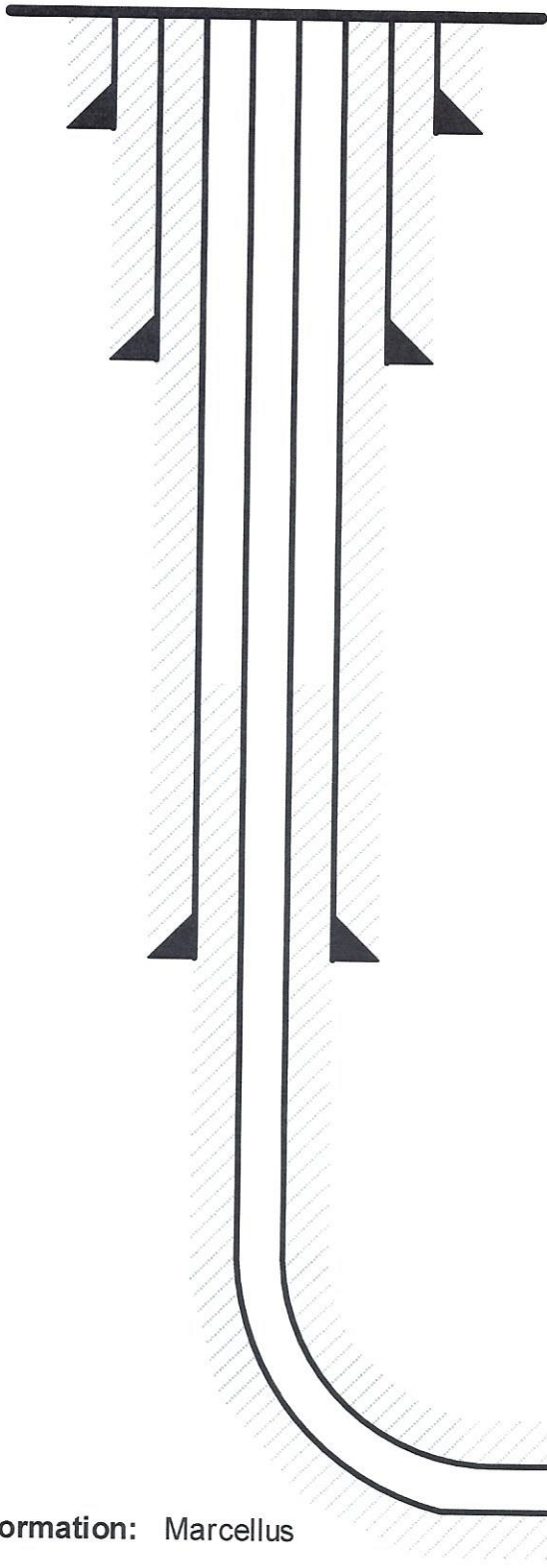
09/29/2023

EQT Production

Wellbore Diagram

Well: Haggard 16H
Pad: Haggard
Elevation: 1519' GL 1547' KB

County: Wetzel
State: West Virginia



Conductor @ 68'
26", 85.6#, A252 GR3, cement to surface w/ Class A/L

Surface @ 1,492'
13-3/8", 54.5#, J-55, cement to surface w/ Class A/L

Intermediate @ 2,909'
9-5/8", 36#, J-55, cement to surface w/ Class A/L

Production @ 21,549' MD / 7,600' TVD
6", 24#, P-110, cement to 500' inside 9-5/8" w/ Class A/H/L

Formation: Marcellus

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Stephen Mccoy
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NOT TO SCALE

09/29/2023

EQT Production
Hydraulic Fracturing Monitoring Plan
Pad ID: Haggard
County: Wetzel

September 13, 2023

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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. WV Department of Environmental Protection

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 pre-frac 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

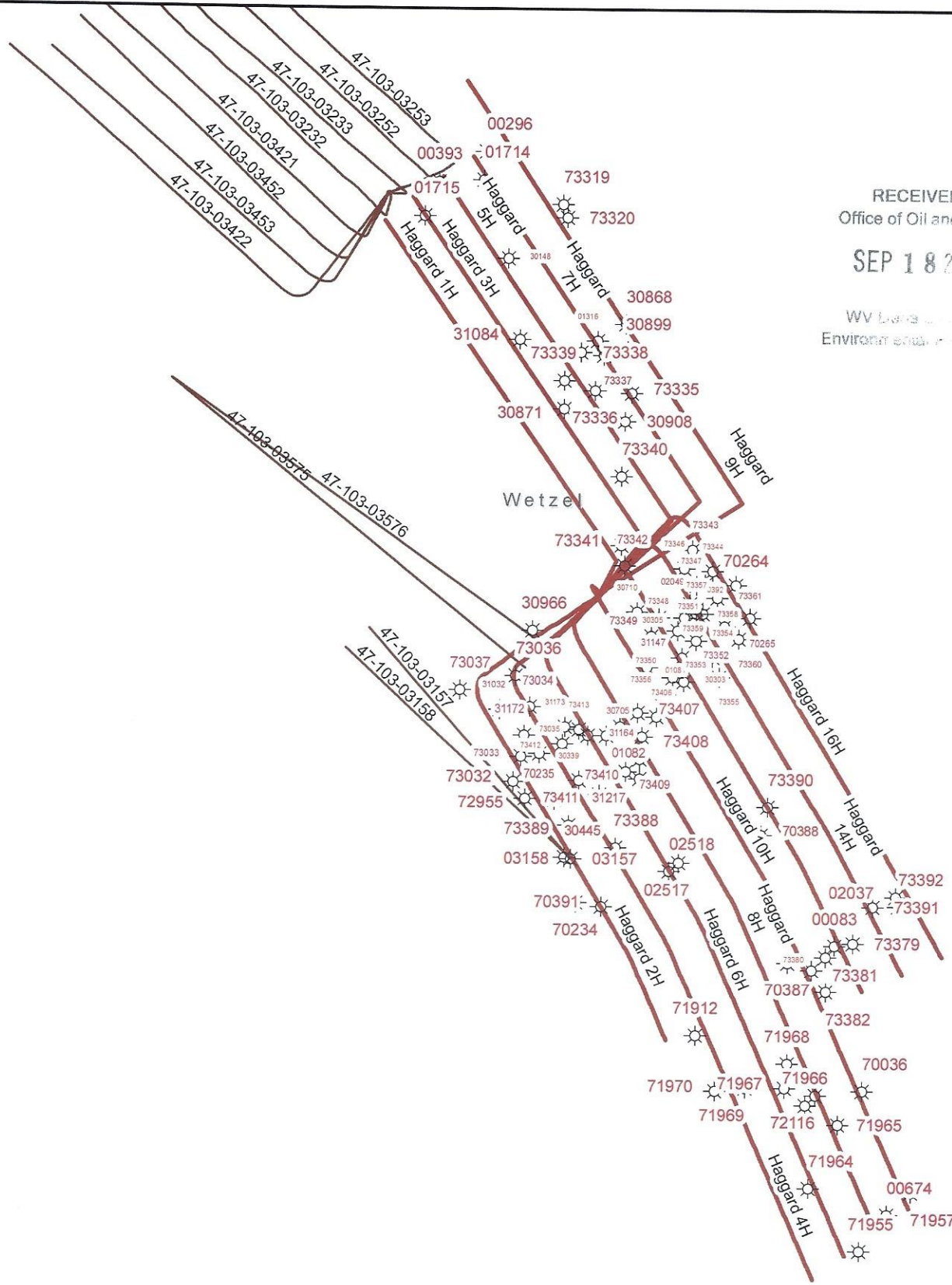
2. Reporting

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.

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EQT
EQT Corporation
625 Liberty Avenue
Pittsburgh, PA 15222

Haggard

Vertical Offsets and
Foreign Laterals
within 500'

- Legend**
- Foreign_Offset_Wells
 - Foreign_Laterals
 - Well Lateral_FM
 - Formation**
 - Geneseo
 - Marcellus
 - Utica



Disclaimer:
This map is confidential and is to be used only for the express informational purposes for which it was created. Unauthorized use, copying, or dissemination is strictly prohibited. EQT does not warrant the accuracy of the location of any items shown on this map, including, but not limited to, any structures, well or pipeline facilities, property boundaries, topography, roadways, or waterways. The items shown on the map may not have been placed on the map using survey lines or GPS coordinates. The specific location of any of the map items should be determined by a field survey performed by a licensed surveyor upon consultation with EQT.



Created By: Kellen Waltman Printed By: McClayO on 8/22/2023
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09/29/2023

00674	47-103-00674-00	DIVERSIFIED ENERGY	P & A	GAS	DIVERSIFIED PRODUCTION	39.610278	1167.00	1169.00	2989.00	2989.00	INGRAM, J. 646	GAS-P & A
73341	47-103-73341-00	(N/A)	UNREPORTED	UNREPORTED	(N/A)	-80.593637	1467.00	0.00	0.00	0.00	0.00 S C MILLER	UNREPORTED-UNREPORTED
03157	47-103-03157-00	ANTERO RESOURCES	DRILLED	GAS	DAC ENERGY	-80.618239	1471.00	1442.00	15928.00	0.00	0.00 POSTLETHWAIT IM	GAS-DRILLED
73413	47-103-73413-00	(N/A)	UNREPORTED	UNREPORTED	(N/A)	-80.627236	1498.00	0.00	0.00	0.00	T & S POSTLETHWAIT	UNREPORTED-UNREPORTED
31084	47-103-31084-00	RE VANS & GEORGE HIX	INACTIVE COMPLETED	OIL	RE VANS & GEORGE HIX	-80.621993	1369.00	0.00	3125.00	0.00	0.00 SMITH-HERS	OIL-INACTIVE COMPLETED
71957	47-103-71957-00	(N/A)	UNREPORTED	UNREPORTED	(N/A)	-80.627613	1059.00	0.00	0.00	0.00	0.00 OLIE SIX	UNREPORTED-UNREPORTED
73036	47-103-73036-00	(N/A)	UNREPORTED	GAS	DIVERSIFIED PRODUCTION	-80.627815	1247.00	1250.00	3434.00	0.00	0.00 ELLEN DELANEY	UNREPORTED-UNREPORTED
02037	47-103-02037-00	DIVERSIFIED ENERGY	UNREPORTED	UNREPORTED	(N/A)	-80.592903	1167.00	0.00	0.00	0.00	0.00 JOHN INGRAHM	UNREPORTED-UNREPORTED
71955	47-103-71955-00	(N/A)	DRILLED	GAS	DAC ENERGY	-80.596071	1028.00	1443.00	16162.00	0.00	0.00 ROCK CAMP IM	GAS-DRILLED
03158	47-103-03158-00	ANTERO RESOURCES	UNREPORTED	UNREPORTED	(N/A)	-80.623684	1422.00	0.00	0.00	0.00	0.00 JACOB YHO	UNREPORTED-UNREPORTED
71967	47-103-71967-00	(N/A)	UNREPORTED	GAS	DAC ENERGY	-80.603003	1371.00	0.00	0.00	0.00	0.00 C W POSTLETHWAIT	UNREPORTED-UNREPORTED
31217	47-103-31217-00	CASSADY, WILLIAM	INACTIVE COMPLETED	UNREPORTED	(N/A)	-80.617655	1371.00	0.00	0.00	0.00	0.00 ELLEN DELANEY	UNREPORTED-UNREPORTED
73388	47-103-73388-00	(N/A)	UNREPORTED	UNREPORTED	(N/A)	-80.618616	1240.00	0.00	0.00	0.00	0.00 ELIZABETH SOLE	UNREPORTED-UNREPORTED
73034	47-103-73034-00	(N/A)	UNREPORTED	UNREPORTED	(N/A)	-80.626500	1043.00	0.00	0.00	0.00	0.00 F E MILLER	UNREPORTED-UNREPORTED
73349	47-103-73349-00	(N/A)	UNREPORTED	UNREPORTED	(N/A)	-80.614673	1219.00	0.00	0.00	0.00	0.00 IEE WILLIAM E. WZ106	UNREPORTED-UNREPORTED
73320	47-103-73320-00	BP	UNREPORTED	GAS	HOPE NATURAL GAS COMPANY	-80.623305	1337.00	1551.00	0.00	0.00	0.00 F M BLAKE	UNREPORTED-UNREPORTED
02517	47-103-02517-00	CNX	PERMIT CANCELLED	UNREPORTED	(N/A)	-80.612758	1541.00	0.00	0.00	0.00	0.00 J N LEMASTERS	GAS-PERMIT CANCELLED
71968	47-103-71968-00	(N/A)	UNREPORTED	UNREPORTED	(N/A)	-80.620815	1301.00	0.00	0.00	0.00	0.00 B POSTLETHWAIT	UNREPORTED-UNREPORTED
73336	47-103-73336-00	(N/A)	UNREPORTED	UNREPORTED	(N/A)	-80.620678	1232.00	0.00	0.00	0.00	0.00 JENNE MORRIS	UNREPORTED-UNREPORTED
73406	47-103-73406-00	(N/A)	UNREPORTED	UNREPORTED	(N/A)	-80.614861	1473.00	0.00	0.00	0.00	0.00 T & S POSTLETHWAIT	UNREPORTED-UNREPORTED
30303	47-103-30303-00	(N/A)	UNREPORTED	UNREPORTED	(N/A)	-80.612405	1295.00	0.00	0.00	0.00	0.00 SOLOMON MILLER	UNREPORTED-UNREPORTED
73037	47-103-73037-00	C D CROUCH GAS	UNREPORTED	UNREPORTED	(N/A)	-80.623882	1091.00	0.00	0.00	0.00	0.00 JACKSON, ALONZO 1-4235	UNREPORTED-UNREPORTED
73411	47-103-73411-00	(N/A)	UNREPORTED	UNREPORTED	(N/A)	-80.620117	1300.00	0.00	0.00	0.00	0.00 A G SIDELL 1	UNREPORTED-UNREPORTED
73340	47-103-73340-00	(N/A)	UNREPORTED	GAS	OPERATOR UNKNOWN	-80.618238	1289.00	1288.00	3260.00	0.00	0.00 J N LEMASTERS	UNREPORTED-UNREPORTED
00393	47-103-00393-00	MANUFACTURERS LIGHT & HEAT CO	UNREPORTED	UNREPORTED	(N/A)	-80.635080	1289.00	0.00	0.00	0.00	0.00 T 2975.00 A G SIDELL 1	GAS-P & A
73338	47-103-73338-00	(N/A)	COMPLETED	OIL	MOSES, WILLIAM	-80.621992	1336.00	0.00	0.00	0.00	0.00 SUSAN POSTLETHWAIT 2	OIL-COMPLETED
31032	47-103-31032-00	MOSES, WILLIAM	UNREPORTED	UNREPORTED	(N/A)	-80.629286	1139.00	0.00	0.00	0.00	0.00 MARY RICHTER	OIL-INACTIVE COMPLETED
30705	47-103-30705-00	(N/A)	INACTIVE COMPLETED	OIL	MOSES, WILLIAM	-80.619531	1392.00	0.00	0.00	0.00	0.00 A C YHO	UNREPORTED-UNREPORTED
73032	47-103-73032-00	RANDALL-ZOGG SUPPLY CO.	UNREPORTED	UNREPORTED	(N/A)	-80.628002	1127.00	0.00	0.00	0.00	0.00	UNREPORTED-UNREPORTED
73035	47-103-73035-00	(N/A)	UNREPORTED	UNREPORTED	(N/A)	-80.625562	1439.00	0.00	0.00	0.00	0.00	UNREPORTED-UNREPORTED

Horizontal	APL UWI 12	ENVOwerto	ENWWellTyp	InitialOpe	Latitude	Longitude	ElevationG	ElevationK	MD_FT	TVD_FT	WellName	WellSymbol
47-103-03421-C	SOUTHWESTERN ENEF PRODUCING	ENWWellbta	GAS	SWN PROD	(N/A)	-80.639657	1343.000000	1369.00	17325.000	7372.040	SWN A WTZ 1H	GAS-PRODUCING
47-103-03158-C	ANTERO RESOURCES DRILLED	GAS	DAC ENERGY	SWN PROD	(N/A)	-80.627684	1422.000000	1443.00	16142.000	0.000	ROCK CAMP IM	GAS-DRILLED
47-103-03576-C	SOUTHWESTERN ENEF DUC	OTHER	SWN PROD	SWN PROD	(N/A)	-80.639537	1583.000000	1604.00	0.000	0.000	WILLIAM RITCHEA WTZ 410H	OTHER-DUC
47-103-03233-C	SOUTHWESTERN ENEF PRODUCING	GAS	SWN PROD	SWN PROD	(N/A)	-80.639608	1369.000000	1390.00	20865.000	7347.000	SWN A WTZ 5H	GAS-PRODUCING
47-103-03252-C	SOUTHWESTERN ENEF COMPLETED	GAS	SWN PROD	SWN PROD	(N/A)	-80.639673	1344.000000	1369.00	16741.000	7366.650	SWN A WTZ 201H	GAS-PRODUCING
47-103-03575-C	SOUTHWESTERN ENEF DUC	OIL & GAS	SWN PROD	SWN PROD	(N/A)	-80.639445	1584.000000	1605.00	25772.000	7347.000	SWN A UD WTZ 305H	OIL & GAS-COMPLETED
47-103-03422-C	SOUTHWESTERN ENEF PRODUCING	GAS	SWN PROD	SWN PROD	(N/A)	-80.639703	1343.000000	1369.00	18030.000	7368.900	SWN A WTZ 210H	OTHER-DUC
47-103-03232-C	SOUTHWESTERN ENEF PRODUCING	GAS	SWN PROD	SWN PROD	(N/A)	-80.639622	1342.000000	1368.00	18720.000	7374.760	SWN A WTZ 601H	GAS-PRODUCING
47-103-03453-C	SOUTHWESTERN ENEF PRODUCING	GAS	SWN PROD	SWN PROD	(N/A)	-80.639687	1343.000000	1369.00	17178.000	7381.520	SWN A WTZ 401H	GAS-PRODUCING
47-103-03253-C	SOUTHWESTERN ENEF PRODUCING	GAS	SWN PROD	SWN PROD	(N/A)	-80.639579	1344.000000	1368.00	25954.000	7359.110	SWN A WTZ 405H	GAS-PRODUCING
47-103-03157-C	ANTERO RESOURCES DRILLED	GAS	DAC ENERGY	SWN PROD	(N/A)	-80.627236	1421.000000	1442.00	15928.000	0.000	POSTLETHWAIT IM	GAS-DRILLED

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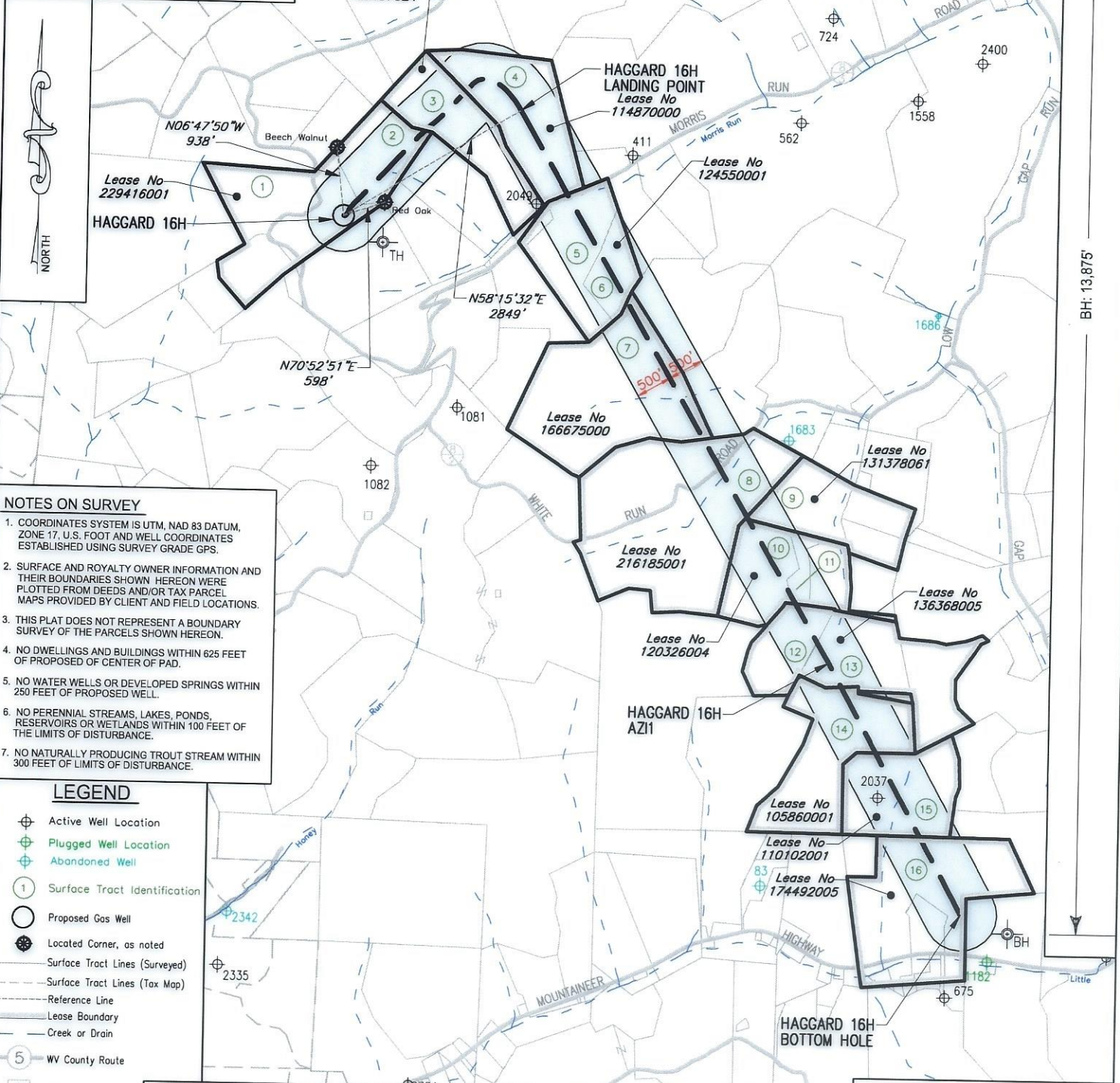
09/29/2023

LATITUDE 39° 40' 00" TH: 10,315'

BH: 1,505'

TH: 4,450'
LONGITUDE 80° 35' 00"

Haggard 16H
Haggard
EQT Production Company



- NOTES ON SURVEY**
1. COORDINATES SYSTEM IS UTM, NAD 83 DATUM, ZONE 17, U.S. FOOT AND WELL COORDINATES ESTABLISHED USING SURVEY GRADE GPS.
 2. SURFACE AND ROYALTY OWNER INFORMATION AND THEIR BOUNDARIES SHOWN HEREON WERE PLOTTED FROM DEEDS AND/OR TAX PARCEL MAPS PROVIDED BY CLIENT AND FIELD LOCATIONS.
 3. THIS PLAT DOES NOT REPRESENT A BOUNDARY SURVEY OF THE PARCELS SHOWN HEREON.
 4. NO DWELLINGS AND BUILDINGS WITHIN 625 FEET OF PROPOSED CENTER OF PAD.
 5. NO WATER WELLS OR DEVELOPED SPRINGS WITHIN 250 FEET OF PROPOSED WELL.
 6. NO PERENNIAL STREAMS, LAKES, PONDS, RESERVOIRS OR WETLANDS WITHIN 100 FEET OF THE LIMITS OF DISTURBANCE.
 7. NO NATURALLY PRODUCING TROUT STREAM WITHIN 300 FEET OF LIMITS OF DISTURBANCE.

- LEGEND**
- ⊕ Active Well Location
 - ⊕ Plugged Well Location
 - ⊕ Abandoned Well
 - ① Surface Tract Identification
 - Proposed Gas Well
 - ⊙ Located Corner, as noted
 - Surface Tract Lines (Surveyed)
 - - - Surface Tract Lines (Tax Map)
 - - - Reference Line
 - Lease Boundary
 - Creek or Drain
 - 5 WV County Route
 - 5 WV State Route

(⊕) Denotes Location of Well on United States Topographic Maps



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.
L. L. S. 687



FILE NO:
DRAWING NO:
SCALE: 1" = 2000'
MINIMUM DEGREE OF ACCURACY: 1:2500
PROVEN SOURCE OF ELEVATION: NGS CORS Station



DATE: AUGUST 18 20 23
OPERATORS WELL NO: Haggard 16H
API WELL NO: 47 - 103 - 03532
STATE COUNTY PERMIT

WELL TYPE: OIL GAS LIQUID INJECTION WASTE DISPOSAL
(IF GAS) PRODUCTION: STORAGE DEEP SHALLOW
LOCATION ELEVATION: 1519' WATERSHED: LOWER WEST VIRGINIA FORK FISH CREEK QUADRANGLE: LITTLETON
DISTRICT: Center COUNTY: Wetzel
SURFACE OWNER: Amie Lee Henderson ACREAGE: 84.94 ±
ROYALTY OWNER: Blackrock Enterprises LLC, et al. LEASE NO: 229416001 ACREAGE: 84.94 ±
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: 7,600'

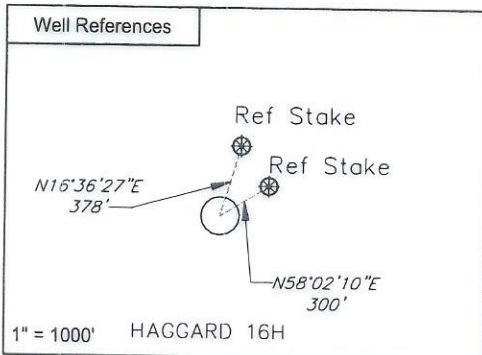
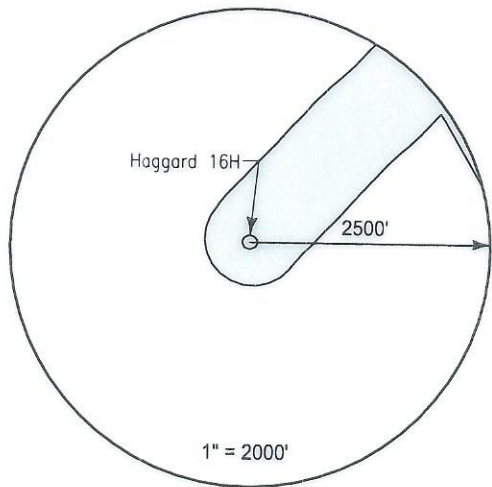
WELL OPERATOR: EQT Production Company DESIGNATED AGENT: Joseph C Mallow
ADDRESS: 400 Woodcliff Drive ADDRESS: 427 Midstate Drive
Canonsburg, PA 15317 Clarksburg, WV 26301

09/29/2023

Haggard 16H
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	27.0	Wetzel	Center	Scott L. Musgrave	35.00
3	10	28.0	Wetzel	Center	Calvin T. JR., & Monica L. Morris	47.50
4	10	29.0	Wetzel	Center	Rebecca Myers	48.75
5	10	41.0	Wetzel	Center	David Morris & Lisa Bellville	29.06
6	10	55.0	Wetzel	Center	Patrick Morris	15.00
7	10	56.0	Wetzel	Center	Patrick L. Morris	93.75
8	14	10.0	Wetzel	Center	Johnny Kenneth & Debrah K. Greathouse	122.00
9	15	8.0	Wetzel	Center	David W. & Rachel M. Morris	25.00
10	15	66.0	Wetzel	Center	Owen E. & Saloma D. Schmucker	28.87
11	15	10.0	Wetzel	Center	Owen E. & Saloma D. Schmucker	6.25
12	15	28.1	Wetzel	Center	Owen E. & Saloma D. Schmucker	22.66
13	15	28.0	Wetzel	Center	Owen E. & Saloma D. Schmucker	29.00
14	15	43.0	Wetzel	Center	Donnie P. & Donna Kirkpatrick	62.81
15	15	44.0	Wetzel	Center	John R. & Phyllis R. Bohrer	43.80
16	15	56.0	Wetzel	Center	John R. & Phyllis R. Bohrer	42.75

Lease	Owner	Acres
229416001	Blackrock Enterprises LLC, et al.	84.94 ac of 198.1275 ac
109437024	Rusty Lee Morris, et al.	47.5 ac
114870000	AMP IV, LP, et al.	48.75 ac
124550001	Cynthia A. Quigley, et al.	49.25 ac
166675000	AMP IV, LP, et al.	93.75 ac
216185001	Drilling Appalachian Corporation, et al.	122 ac
131378061	Jacqueline Ziarko, et al.	45.9 ac
120326004	Owen E. Schmucker and Saloma D. Schmucker, et al.	52.45 ac
136368005	Owen E. Schmucker and Saloma D. Schmucker, et al.	77.41875 ac
105860001	Stone Hill Minerals Holdings, LLC, et al.	1,694.69 ac
110102001	Acropolis, Inc., et al.	43.8 ac
174492005	Robert L. Roksandich, et al.	72.085 ac



Notes:
HAGGARD 16H coordinates are
 NAD 27 N: 422,411.672 E: 1,684,613.723
 NAD 27 Lat: 39.654365 Long: -80.620163
 NAD 83 UTM N: 4,389,474.308 E: 532,601.879

HAGGARD 16H Landing Point coordinates are
 NAD 27 N: 423,910.291 E: 1,687,036.295
 NAD 27 Lat: 39.658562 Long: -80.611626
 NAD 83 UTM N: 4,389,943.225 E: 533,332.346

HAGGARD 16H AZ11 Point coordinates are
 NAD 27 N: 416,335.316 E: 1,691,432.968
 NAD 27 Lat: 39.637915 Long: -80.595683
 NAD 83 UTM N: 4,387,657.829 E: 534,710.305

HAGGARD 16H Bottom Hole coordinates are
 NAD 27 N: 412,878.243 E: 1,693,312.934
 NAD 27 Lat: 39.628487 Long: -80.588859
 NAD 83 UTM N: 4,386,614.172 E: 535,300.610

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

HAGGARD PAD

- HAGGARD 16H 103-03532
- HAGGARD 14H 103-03531
- HAGGARD 12H 103-03530
- HAGGARD 10H 103-03529
- HAGGARD 8H 103-03430
- HAGGARD 6H 103-03528
- HAGGARD 4H 103-03527
- HAGGARD 2H 103-03526



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.

Thomas C. Smit
L. L. S. 687



SEAL

FILE NO: _____
 DRAWING NO: _____
 SCALE: 1" = 1000'
 MINIMUM DEGREE OF ACCURACY: 1:2500
 PROVEN SOURCE OF ELEVATION: NGS CORS Station

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



DATE: AUGUST 18 20 23
 OPERATORS WELL NO: Haggard 16H
 API WELL NO: 47 - 103 - 03532
 STATE COUNTY PERMIT

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

LOCATION ELEVATION: 1519' WATERSHED: LOWER WEST VIRGINIA FORK FISH CREEK QUADRANGLE: LITTLETON
 DISTRICT: Center COUNTY: Wetzel

SURFACE OWNER: Amie Lee Henderson ACREAGE: 84.94 ±
 ROYALTY OWNER: Blackrock Enterprises LLC, et al. LEASE NO: 229416001 ACREAGE: 84.94 ±

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: 7,600'

WELL OPERATOR: EQT Production Company DESIGNATED AGENT: Joseph C Mallow
 ADDRESS: 400 Woodcliff Drive ADDRESS: 427 Midstate Drive

Canonsburg, PA 15317

Clarksburg, WV 26301

09/29/2023

**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				

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Office of Oil and Gas

SEP 18 2023

WV Department of
Environmental Protection

**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

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

Lease No.	Grantor, Lessor, etc.	Acres	Grantee, Lessee, etc.	Royalty	Book/Page
<u>229416001</u>	<u>Blackrock Enterprises LLC, et al.</u> Blackrock Enterprises LLC Antero Resources Corporation	84.94 ac of 198.1275 ac	Antero Resources Corporation EQT Production Company	"at least 1/8th per WV Code 22-6-8"	OG 273A/383 OG 324A/748
<u>109437024</u>	<u>Rusty Lee Morris, et al.</u> Rusty L. Morris, single	47.5 ac	EQT Production Company	"at least 1/8th per WV Code 22-6-8"	OG 332A/682
<u>114870000</u>	<u>AMP IV, LP, et al.</u> Ancient, Free and Accepted Masons of the State of West Virginia, Inc. Antero Resources Corporation	48.75 ac	Antero Resources Corporation EQT Production Company	"at least 1/8th per WV Code 22-6-8"	OG 179A/793 OG 231A/59
<u>124550001</u>	<u>Cynthia A. Quigley, et al.</u> Cynthia A. Quigley, a widow	49.25 ac	EQT Production Company	"at least 1/8th per WV Code 22-6-8"	OG 225A/265
<u>166675000</u>	<u>AMP IV, LP, et al.</u> AMP IV, LP	93.75 ac	EQT Production Company	"at least 1/8th per WV Code 22-6-8"	OG 265A/549
<u>216185001</u>	<u>Drilling Appalachian Corporation, et al.</u> Drilling Appalachian Corporation	122 ac	EQT Production Company	"at least 1/8th per WV Code 22-6-8"	OG 276A/602
<u>131378061</u>	<u>Jacqueline Ziarko, et al.</u> Jacqueline Ziarko, a married woman dealing in her sole and separate property	45.9 ac	EQT Production Company	"at least 1/8th per WV Code 22-6-8"	OG 285A/383

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<u>120326004</u>	<u>Owen E. Schmucker and Saloma D. Schmucker, et al.</u> Owen E. Schmucker and Saloma D. Schmucker, husband and wife Antero Resources Corporation	52.45 ac	Antero Resources Corporation EQT Production Company	"at least 1/8th per WV Code 22-6-8"	OG 189A/408 OG 231A/59
<u>136368005</u>	<u>Owen E. Schmucker and Saloma D. Schmucker, et al.</u> Owen E. Schmucker and Saloma D. Schmucker, husband and wife Antero Resources Corporation	77.41875 ac	Antero Resources Corporation EQT Production Company	"at least 1/8th per WV Code 22-6-8"	OG 201A/886 OG 231A/59
<u>105660001</u>	<u>Stone Hill Minerals Holdings, LLC, et al.</u> Chesapeake Appalachia, L.L.C. SWN Production Company, LLC Antero Exchange Properties LLC Antero Resources Corporation	1,694.69 ac	SWN Production Company, LLC Antero Exchange Properties LLC Antero Resources Corporation EQT Production Company	"at least 1/8th per WV Code 22-6-8"	OG 166A/931 OG 177A/533 Corp. Book 13/311 OG 231A/59
<u>110102001</u>	<u>Acropolis, Inc., et al.</u> Acropolis, Inc., et al. Drilling Appalachian Corporation Grenadier Energy Partners, LLC Drilling Appalachian Corporation Statoil USA Onshore Properties Inc., et al	43.8 ac	Drilling Appalachian Corporation Grenadier Energy Partners, LLC Statoil USA Onshore Properties Inc. Statoil USA Onshore Properties Inc. EQT Production Company	"at least 1/8th per WV Code 22-6-8"	OG 82A/776 OG 124A/9 & 136A/538 OG 138A/1 OG 138A/54 OG 175A/707
<u>174492005</u>	<u>Robert L. Roksandich, et al.</u> Robert L. Roksandich, aka, Robert Roksandich a married man dealing in his sole and separate property	72.085 ac	EQT Production Company	"at least 1/8th per WV Code 22-6-8"	OG 282A/763

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September 13, 2023

Via FedEx Overnight Delivery

West Virginia Department of Environmental Protection
Office of Oil and Gas
601 57th Street, S.E.
Charleston, WV 25304

RE: Horizontal Well Work Permit Application Modification – EXPEDITED REVIEW REQUESTED
Haggard 16H
Permit Number 47-103-03532
Center District, Wetzell County, WV

WVDEP Recipient,

Attached please find the Well Work Permit Application for the well referenced above. You will find the following included with this submittal:

- Check in the amount \$2,500.00 for the permit fee and an additional \$5,000.00 for the expedited permit modification fee
- Completed WW-6B and supporting documents, approved by the O&G Inspector
- Well Location Plat
- Completed Form WW-6A1 and supporting documentation
- Hydraulic Fracturing Monitoring Plan
- Offset Well Map and Table
- Disk containing the revised Water Management Plan to add two additional sources

EQT is proposing to extend the lateral from the previously permitted length.

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 Permitting 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.

Best Regards,

John Zavatchan
Project Specialist – Permitting
jzavatchan@eqt.com
724-746-9073

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CN # 598259
2500⁰⁰
CN # 599143
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