



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

Wednesday, June 23, 2021
PERMIT MODIFICATION APPROVAL
Horizontal 6A / New Drill

EQT PRODUCTION COMPANY
625 LIBERTY AVE., SUITE 1700

PITTSBURGH, PA 15222

Re: Permit Modification Approval for ELLIOTT 5H
47-049-02501-00-00

Extend Lateral, Update Leases.

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 handwritten signature in blue ink, appearing to read 'James A. Martin', is positioned above the printed name and title.

James A. Martin
Chief

Operator's Well Number: ELLIOTT 5H
Farm Name: CONSOLIDATION COAL COMPANY
U.S. WELL NUMBER: 47-049-02501-00-00
Horizontal 6A New Drill
Date Modification Issued: 06/23/2021

Promoting a healthy environment.

06/25/2021

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

1) Well Operator: EQT Production Company 306686 Marion Mannington Glover Gap
Operator ID County District Quadrangle

2) Operator's Well Number: 5H Well Pad Name: Elliott

3) Farm Name/Surface Owner: Consolidation Coal Company Public Road Access: CR 5

4) Elevation, current ground: 1,343' (pad built) Elevation, proposed post-construction: 1,343'

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, 7,770', 101', 2,593 psi

8) Proposed Total Vertical Depth: 7,770'

9) Formation at Total Vertical Depth: Marcellus

10) Proposed Total Measured Depth: 20,050'

11) Proposed Horizontal Leg Length: 11,445'

12) Approximate Fresh Water Strata Depths: 202', 287'

13) Method to Determine Fresh Water Depths: Offset Wells - 47-049-02251, 47-049-00878

14) Approximate Saltwater Depths: 1,797', 1,895', 2,412'

15) Approximate Coal Seam Depths: 435'-437', 870'-875', 967'-975'

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: Marion County Mine
Depth: 967'-975'
Seam: Pittsburgh
Owner: Consolidation Coal Company

RECEIVED
Office of Oil and Gas

JUN 08 2021

WV Department of
Environmental Protection

18) **CASING AND TUBING PROGRAM**

TYPE	<u>Size (in)</u>	<u>New or Used</u>	<u>Grade</u>	<u>Weight per ft. (lb/ft)</u>	<u>FOOTAGE: For Drilling (ft)</u>	<u>INTERVALS: Left in Well (ft)</u>	<u>CEMENT: Fill-up (Cu. Ft.)/CTS</u>
Conductor	26	New	A-500	85.6	40	40	60 ft ³ / CTS
Fresh Water	13 3/8	New	J-55	54.5	1032	1032	900 ft ³ / CTS
Coal							
Intermediate	9 5/8	New	J-55	36	2493	2493	1000 ft ³ / CTS
Production	5 1/2	New	P-110	20	20050	20050	500' above intermediate casing
Tubing							
Liners							

Bryan Harris 6/4/21

TYPE	<u>Size (in)</u>	<u>Wellbore Diameter (in)</u>	<u>Wall Thickness (in)</u>	<u>Burst Pressure (psi)</u>	<u>Anticipated Max. Internal Pressure (psi)</u>	<u>Cement Type</u>	<u>Cement Yield (cu. ft./k)</u>
Conductor	26	30	0.312	1050	18	Class A	1.18
Fresh Water	13 3/8	17 1/2	0.380	2730	2184	Class A	1.13
Coal							
Intermediate	9 5/8	12 3/8	0.352	3520	2816	Class A	1.18
Production	5 1/2	8 1/2	0.361	14360	11488	Class A/H	1.04 - 2.098
Tubing							
Liners							

PACKERS

Kind:				
Sizes:				
Depths Set:				

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

Continue drilling and complete a new horizontal well in the Marcellus Formation. Kick off and drill curve. Drill the lateral in the Marcellus. Cement casing.

This well has been drilled vertically and the conductor, fresh water casing and intermediate casing have been set. The depths shown for these casing strings indicate actual depths.

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): 27.35 acres (pad built)

22) Area to be disturbed for well pad only, less access road (acres): 10.47 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

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

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.

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.

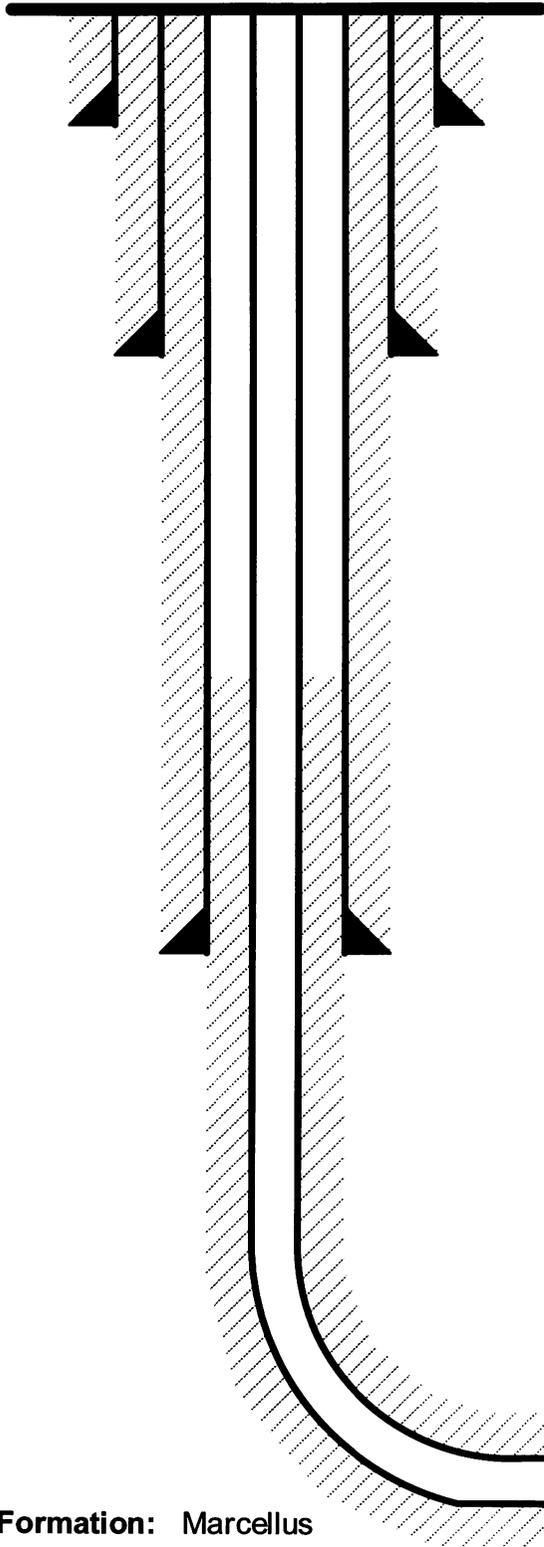
Production: Perform a cleanup cycle by pumping 3-8 bottoms up or until the shakers are clean. Check volume of cuttings coming across the shakers every 15 minutes.

*Note: Attach additional sheets as needed.

EQT Production**Wellbore Diagram**

Well: Elliot 5H
Pad: Elliot
Elevation: 1342' GL 1355' KB

County: Marion
State: West Virginia



Conductor @ 40'

26", 85.6#, A-500, cement to surface w/ Class A

Surface @ 1,032'

13-3/8", 54.5#, J-55, cement to surface w/ Class A

Intermediate @ 2,493'

9-5/8", 36#, J-55, cement to surface w/ Class A

Production @ 20,050' MD / 7,770' TVD

5-1/2", 20#, P-110, cement to 500' inside 9-5/8" w/ Class A/H

Formation: Marcellus

06/25/2021
NOT TO SCALE

EQT Production
Hydraulic Fracturing Monitoring Plan
Pad ID: Elliott
County: Marion

June 7, 2021

Purpose

The purpose of this pad-specific Hydraulic Fracturing Monitoring Plan is to identify and notify conventional well operators near EQT hydraulic fracturing in Marion County, WV prior to hydraulic fracturing at the following EQT wells on the Elliott pad: 1H, 3H, 5H, 7H, 9H, 11H, 13H, 15H and 17H.

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**.

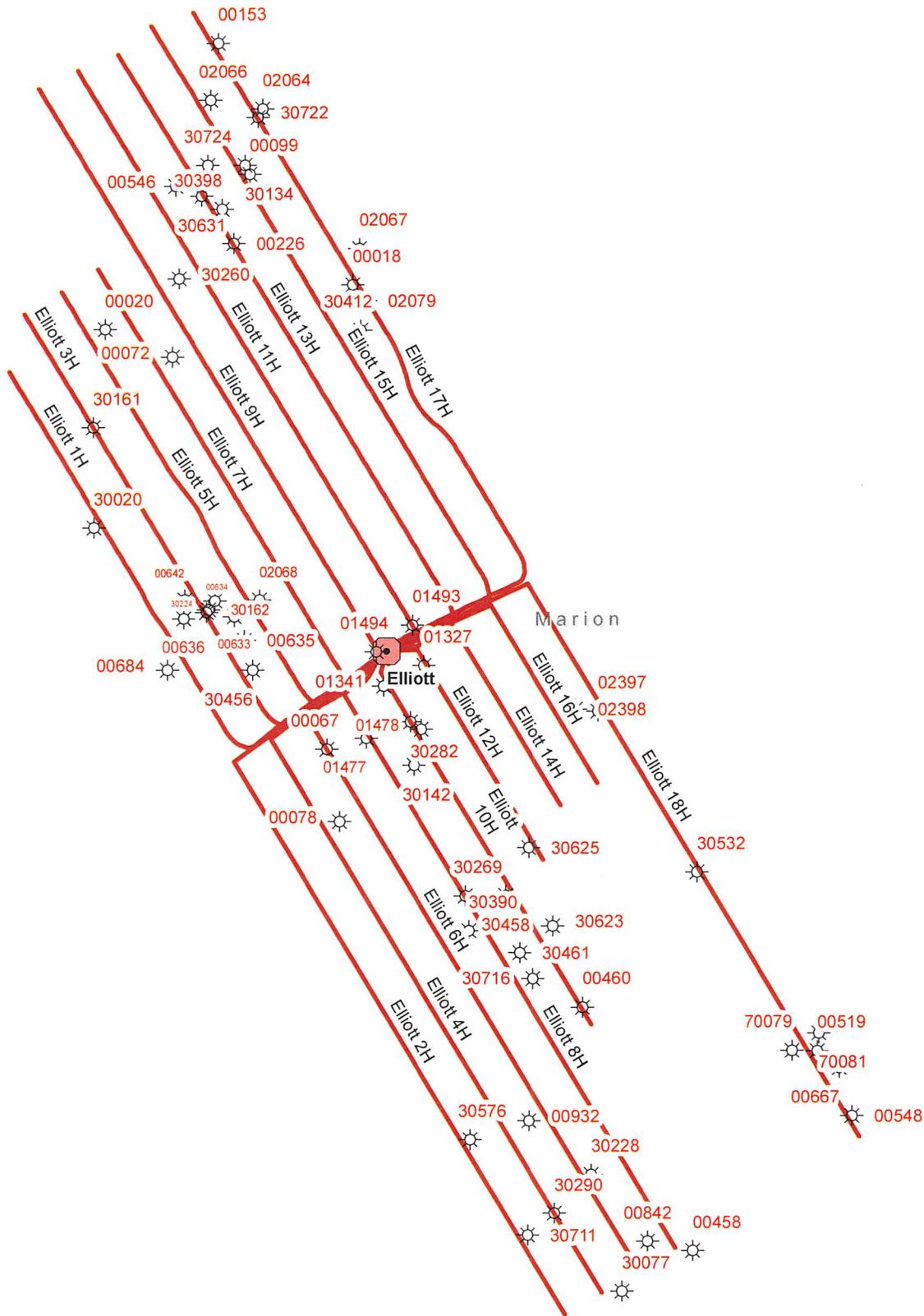
EQT will notify these operators of the hydraulic fracturing schedule for these wells, and coordinate with them throughout the fracturing process.

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.



EQT Corporation
625 Liberty Avenue
Pittsburgh, PA 15222

Elliott

Vertical Offsets and Foreign Laterals within 500'

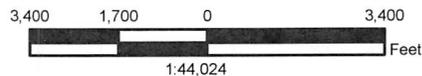
Legend

Foreign Offset Wells

Well Pad Sites

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.

1:1,646,784

PA



WellID	WellStatus	date	FmatTD	Permit	Operator	Longitude	Latitude	TargetFm	DatumEleva	TotalDepth-SS	Total Depth
4704900018	UNK	12/27/1930		00018	S N ELLIOTT	-80.3848	39.5687		1185.0000	-1981.0000	3166.0000
4704900020	UNK	9/26/1933		00020	ESHENBAUGH OIL & GAS	-80.4053	39.5660		1088.0000	-2212.0000	3300.0000
4704900067	GAS-P	1/14/1937		00067	S N ELLIOTT	-80.3872	39.5391		990.0000	-1822.0000	2812.0000
4704900072	GAS-P	11/6/1937		00072	ESHENBAUGH OIL & GAS	-80.3998	39.5642		1271.0000	-2183.0000	3454.0000
4704900078	GAS-P	11/30/1937		00078	S N ELLIOTT	-80.3862	39.5345		1197.0000	-2197.0000	3394.0000
4704900099	DRY	12/8/1941		00099	PENNZOIL	-80.3932	39.5758		1206.0000	-2414.0000	3620.0000
4704900153	GAS-P	2/13/1947		00153	W R COREY	-80.3957	39.5842		1043.0000	-1992.0000	3035.0000
4704900226	DRY	9/17/1951		00226	MONROE & LAUGHLIN	-80.3946	39.5714		1117.0000	-1904.0000	3021.0000
4704900458	UNK	8/1/1993		00458	PENNZOIL	-80.3572	39.5070		1359.0000	-879.0000	2238.0000
4704900460	GAS	7/10/1925		00460	PENNZOIL	-80.3662	39.5226		1104.0000	-2029.0000	3133.0000
4704900519	UNK	2/13/1996		00519	PENNZOIL	-80.3468	39.5197		1240.0000	-840.0000	2080.0000
4704900546	OIL	2/25/1918		00546	PENNZOIL	-80.3994	39.5751		1360.0000	-1745.0000	3105.0000
4704900548	OIL	4/1/1995		00548	PENNZOIL	-80.3440	39.5155		1248.0000	-881.0000	2129.0000
4704900633	DRY	2/22/1937		00633	CONSOL	-80.3948	39.5476		1037.0000	-1846.0000	2883.0000
4704900634	UNK			00634	CONSOL	-80.3971	39.5479		1009.0000	-9999.0000	101008.0000
4704900635	UNK			00635	CONSOL	-80.3940	39.5461		1074.0000	-9999.0000	101073.0000
4704900636	UNK			00636	CONSOL	-80.3990	39.5475		1023.0000	-9999.0000	101022.0000
4704900642	UNK			00642	CONSOL	-80.3989	39.5487		1037.0000	-9999.0000	101036.0000
4704900667	GAS	1/1/1990		00667	G L & R O BEATY	-80.3450	39.5186		1300.0000	-1755.0000	3055.0000
4704900684	UNK			00684	CONSOL	-80.4004	39.5442		1278.0000	-9999.0000	101277.0000
4704900842	UNK	9/17/1991		00842	ROSS & WHARTON	-80.3609	39.5076		1151.0000	-885.0000	2036.0000
4704900932	UNK			00932	CLOWSER	-80.3707	39.5154		1009.0000	-9999.0000	101008.0000
4704901327	UNK	10/4/2001		01327	R J A L	-80.3791	39.5444		1102.0000	-3908.0000	5010.0000
4704901341	UNK	10/12/2001		01341	R J A L	-80.3825	39.5431		1090.0000	-2270.0000	3360.0000
4704901477	GAS	3/25/2004		01477	FALCON HOLDINGS	-80.3840	39.5398		1177.0000	-2184.0000	3361.0000
4704901478	GAS	3/16/2004		01478	FALCON HOLDINGS	-80.3794	39.5403		1097.0000	-2093.0000	3190.0000
4704901493	P&A	6/14/2004		01493	FALCON HOLDINGS	-80.3801	39.5470		1330.0000	-2101.0000	3431.0000
4704901494	UNK	4/28/2004		01494	FALCON HOLDINGS	-80.3831	39.5453		1311.0000	-2039.0000	3350.0000
4704902064	UNK			02064	CONSOLIDATION COAL	-80.3921	39.5800		1118.0000	-9999.0000	101117.0000
4704902066	UNK			02066	CONSOLIDATION COAL	-80.3964	39.5806		1281.0000	-9999.0000	101280.0000
4704902067	UNK			02067	CONSOLIDATION COAL	-80.3842	39.5710		1196.0000	-9999.0000	101195.0000
4704902068	UNK			02068	CONSOLIDATION COAL	-80.3927	39.5487		1117.0000	-9999.0000	101116.0000
4704902079	UNK			02079	CONSOLIDATION COAL	-80.3837	39.5677		1234.0000	-9999.0000	101233.0000
4704902397	D&A	5/14/2015		02397	CONSOL ENERGY	-80.3648	39.5414		1193.0000	-106.0000	1299.0000
4704902398	D&A	5/18/2015		02398	CONSOL ENERGY	-80.3666	39.5416		1113.0000	-581.0000	1694.0000
4704930020	GAS			30020		-80.4064	39.5533		1088.0000	-2212.0000	3300.0000
4704930077	OIL GS			30077	SOUTH PENN	-80.3631	39.5044		1209.0000	-898.0000	2107.0000
4704930134	O&G			30134	MANUFACTURERS L & H	-80.3936	39.5764		1.0000	-3314.0000	3315.0000
4704930142	UNK			30142	OPER IN MIN.OWN	-80.3800	39.5381		1167.0000	-2012.0000	3179.0000
4704930161	OIL			30161	ESHENBAUGH O&G	-80.4064	39.5597		1035.0000	-1737.0000	2772.0000
4704930162	OIL			30162	ESHENBAUGH O&G	-80.3969	39.5481		1036.0000	-1849.0000	2885.0000

4704930224	UNK		30224	WILLIAM MOSES	-80.3964	39.5486	1222.0000	-1773.0000	2995.0000
4704930228	OIL GS	6/3/1907	30228	SOUTH PENN	-80.3655	39.5119	1485.0000	-1687.0000	3172.0000
4704930260	GAS	6/23/1919	30260	MANUFACTURERS L & H	-80.3992	39.5692	1364.0000	-2083.0000	3447.0000
4704930269	OIL	5/31/1920	30269	SOUTH PENN	-80.3758	39.5297	1304.0000	-1790.0000	3094.0000
4704930282	GAS	3/11/1914	30282	HOPE NAT GAS	-80.3803	39.5408	1148.0000	-2106.0000	3254.0000
4704930290	OIL GS	11/14/1918	30290	SOUTH PENN	-80.3686	39.5095	1099.0000	-1676.0000	2775.0000
4704930390	OIL GS	10/30/1926	30390	SOUTH PENN	-80.3756	39.5275	1103.0000	-1777.0000	2880.0000
4704930398	GAS	9/8/1917	30398	HOPE NAT GAS	-80.3956	39.5736	1218.0000	-2040.0000	3258.0000
4704930412	OIL GS	3/25/1927	30412	CARNEGIE NAT GAS	-80.3842	39.5658	1178.0000	-1858.0000	3036.0000
4704930456	OIL		30456	INTERSTATE P&S	-80.3933	39.5442	1006.0000	-1842.0000	2848.0000
4704930458	OIL GS		30458	INTERSTATE P&S	-80.3725	39.5297	1053.0000	-1778.0000	2831.0000
4704930461	OIL GS		30461	INTERSTATE P&S	-80.3714	39.5261	1176.0000	-1759.0000	2935.0000
4704930532	OIL GS	4/9/1897	30532	RAAD SUPPLY	-80.3567	39.5311	1153.0000	-1721.0000	2874.0000
4704930576	OIL	10/5/1894	30576	RAAD SUPPLY	-80.3756	39.5142	1273.0000	-1744.0000	3017.0000
4704930623	OIL GS	8/13/1894	30623	OPER IN MIN.OWN	-80.3686	39.5278	972.0000	-1770.0000	2742.0000
4704930625	OIL	9/10/1894	30625	RAAD SUPPLY	-80.3706	39.5328	1071.0000	-1789.0000	2860.0000
4704930631	OIL GS	5/22/1918	30631	RAAD SUPPLY	-80.3972	39.5744	1044.0000	-1979.0000	3023.0000
4704930711	OIL GS	8/25/1894	30711	RAAD SUPPLY	-80.3708	39.5081	1.0000	-3056.0000	3057.0000
4704930716	OIL	7/17/1894	30716	RAAD SUPPLY	-80.3703	39.5244	1.0000	-1984.0000	1985.0000
4704930722	UNK	7/31/1909	30722	OPER IN MIN.OWN	-80.3925	39.5794	0.0000	-99999.0000	99999.0000
4704930724	OIL	7/19/1918	30724	OPER IN MIN.OWN	-80.3967	39.5764	1365.0000	-1781.0000	3146.0000
4704970079	OIL		70079	BURT OIL	-80.3489	39.5197	1.0000	-2630.0000	2631.0000
4704970081	OIL		70081	HARTMAN OIL	-80.3467	39.5208	1.0000	-2983.0000	2984.0000

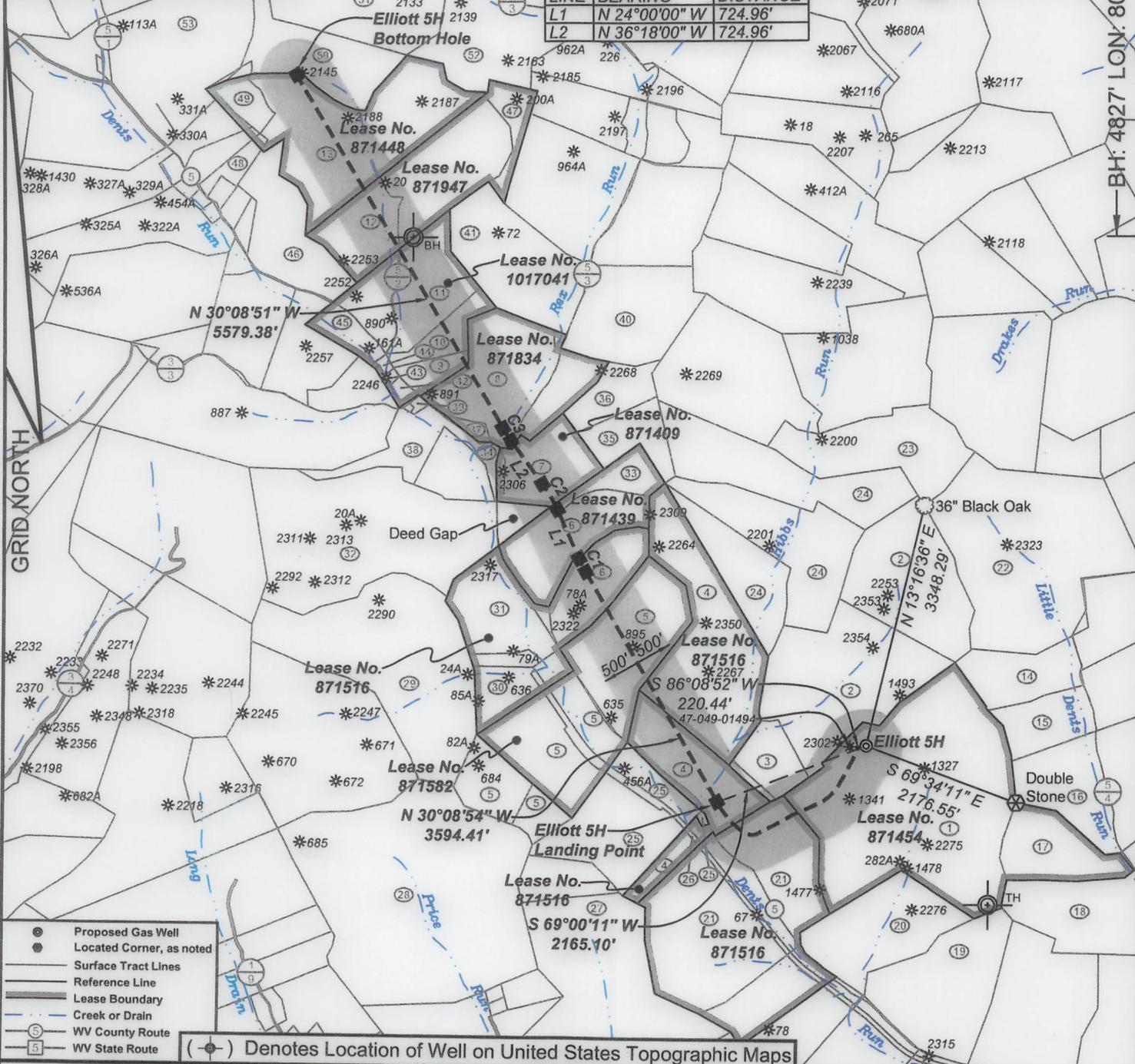
TH: 2067' LAT: 39-35-00

BH: 9919' LAT: 39-35-00

**Elliott 5H
GLO176
EQT Production Company**

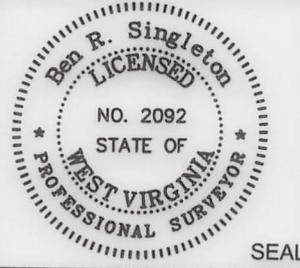
CURVE	RADIUS	ARC LENGTH	CHORD BEARING	CHORD LENGTH
C1	1910.07'	204.93'	N 27°04'27" W	204.83'
C2	2030.62'	409.88'	N 30°09'00" W	409.19'
C3	2528.45'	205.03'	N 33°13'25" W	204.97'

LINE	BEARING	DISTANCE
L1	N 24°00'00" W	724.96'
L2	N 36°18'00" W	724.96'



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.

Ben R. Singleton
P.S. 2092



FILE NO: 48-18
DRAWING NO: Elliott 5H
SCALE: 1" = 2000'
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: June 02 20 21
OPERATOR'S WELL NO.: Elliott 5H
API WELL NO MOD
47 - 49 - 02501
STATE COUNTY PERMIT

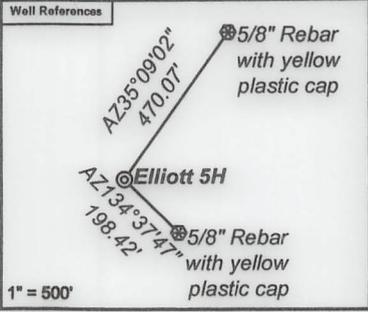
WELL TYPE: OIL GAS LIQUID INJECTION WASTE DISPOSAL
(IF GAS) PRODUCTION: STORAGE DEEP SHALLOW
LOCATION: ELEVATION: 1343' WATERSHED Tributary of Dents Run QUADRANGLE: Glover Gap
DISTRICT: Mannington COUNTY: Marion
SURFACE OWNER: Consolidated Coal Company ACREAGE: 153.25
ROYALTY OWNER: Randy J. Elliott and Leonard W. Stafford LEASE NO: 871454 ACREAGE: 183
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: 7,770'

WELL OPERATOR: EQT Production Company DESIGNATED AGENT: Joseph C. Mallow
ADDRESS: 400 Woodcliff Drive ADDRESS: 115 Professional Place PO Box 280
Canonsburg, PA 15317 Bridgeport, WV 26330

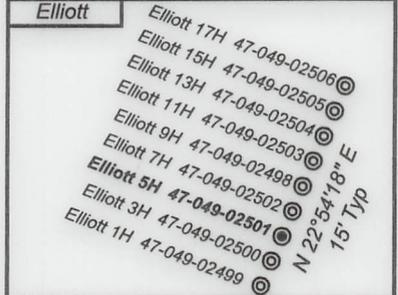
06/25/2021

**Elliott 5H
GLO176
EQT Production Company**

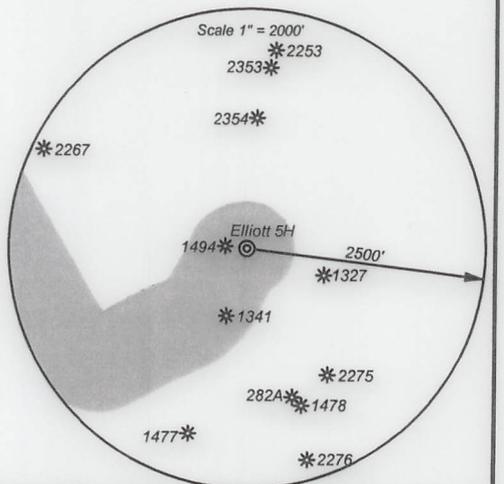
Tract I.D.	Tax Map No.	Parcel No.	County	District	Surface Tract Owner	Acres
1	34	40	Marion	Mannington	Consolidation Coal Company	153.25
2	34	37	Marion	Mannington	Consolidation Coal Company	133.37
3	34	38	Marion	Mannington	Consolidation Coal Company	17.00
4	34	36	Marion	Mannington	Consolidation Coal Company	120.00
5	36	19	Marion	Mannington	Consolidation Coal Company	123.50
6	36	16	Marion	Mannington	Consolidation Coal Company	60.11
7	36	15	Marion	Mannington	Mark A. & Carrie A. Hendershot	24.00
8	36	7	Marion	Mannington	Mark A. & Carrie A. Hendershot	62.38
9	36	4.1	Marion	Mannington	Patrick M. & Christina M. Dunigan	7.06
10	36	4	Marion	Mannington	Harry C. & Dorothy E. Bertschy	11.31
11	36	2	Marion	Mannington	Douglas L. & Kimberly J. Cyphers	29.45
12	36	1	Marion	Mannington	Lee R. & Sherri L. Taylor	67.35
13	36	13	Marion	Mannington	Lee R. & Sherri L. Taylor	86.49
14	34	49	Marion	Mannington	Dennis M. & Lisa A. Hayes	24.78
15	34	47	Marion	Mannington	Edward F. Price	23.00
16	33	1	Marion	Mannington	Thomas D. & Aimee J. Haught	106.82
17	34	40.1	Marion	Mannington	Raymond F. & Betty J. Fluharty	29.75
18	34	45	Marion	Mannington	City of Mannington	42.50
19	34	41	Marion	Mannington	Consolidation Coal Company	47.00
20	34	39	Marion	Mannington	Consolidation Coal Company	42.75
21	34	33	Marion	Mannington	Consolidation Coal Company	0.00
22	32	11	Marion	Mannington	Consolidation Coal Company	118.00
23	36	21	Marion	Mannington	Consolidation Coal Company	169.49
24	36	20	Marion	Mannington	Consolidation Coal Company	131.10
25	34	34	Marion	Mannington	Consolidation Coal Company	48.85
26	34	52	Marion	Mannington	CNX Transportation	12.62
27	35	9	Marion	Mannington	The Harrison County Coal Company	125.75
28	35	11	Marion	Mannington	CNX Land LLC	135.19
29	37	30	Marion	Mannington	Consolidation Coal Company	107.00
30	36	18	Marion	Mannington	CNX Land LLC	18.50
31	36	17	Marion	Mannington	Consolidation Coal Company	35.00
32	37	31	Marion	Mannington	Consolidation Coal Company	109.20
33	36	14	Marion	Mannington	Mark A. & Carrie A. Hendershot	11.04
34	37	32.1	Marion	Mannington	Mark A. & Carrie A. Hendershot	1.00
35	36	13	Marion	Mannington	Mark A. & Carrie A. Hendershot	16.20
36	36	12	Marion	Mannington	Mark A. & Carrie A. Hendershot	15.20
37	36	7.1	Marion	Mannington	Mark A. & Carrie A. Hendershot	2.07
38	37	32	Marion	Mannington	Mark A. & Carrie A. Hendershot	14.31
39	37	33	Marion	Mannington	CNX Land LLC	1.31
40	36	11	Marion	Mannington	Fredrick E. & Deborah S. Lilley	46.25
41	36	8	Marion	Mannington	Fredrick E. & Deborah S. Lilley	52.12
42	36	6.1	Marion	Mannington	Douglas L. & Kimberly J. Cyphers	1.94
43	36	6	Marion	Mannington	Douglas L. Cyphers	1.07
44	36	5	Marion	Mannington	Douglas L. Cyphers	1.55
45	36	3	Marion	Mannington	Douglas L. Cyphers	24.24
46	39	12	Marion	Mannington	Lynn E. Strum	40.19
47	36	9	Marion	Mannington	Fredrick E. & Deborah S. Lilley	136.22
48	39	11.3	Marion	Mannington	Kerri F. & Michael F. Berby	9.11
49	39	13.1	Marion	Mannington	Gerald M. & Iris A. Carnes	9.26
50	39	14	Marion	Mannington	Lee R. & Sherri L. Taylor	36.09
51	28	19	Marion	Mannington	Rickey C. Bennett	94.12
52	28	20	Marion	Mannington	Sportsman Square Circle Club Inc	102.85
53	39	9	Marion	Mannington	John Pheasant & Dennis Markel	62.50



Notes:
 Elliott 5H coordinates are
 NAD 27 N: 381,935.18 E: 1,751,183.90
 NAD 27 Lat: 39.545281 Long: -80.382330
 NAD 83 UTM N: 4,377,481.37 E: 553,088.85
 Elliott 5H Landing Point coordinates are
 NAD 27 N: 381,159.39 E: 1,749,162.57
 NAD 27 Lat: 39.543096 Long: -80.389470
 NAD 83 UTM N: 4,377,234.74 E: 552,476.96
 Elliott 5H Bottom Hole coordinates are
 NAD 27 N: 391,046.49 E: 1,743,420.09
 NAD 27 Lat: 39.570082 Long: -80.410187
 NAD 83 UTM N: 4,380,217.81 E: 550,677.27
 West Virginia Coordinate 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.



Lease No.	Owner	Acres
871516	Lee and Hall Royalties, a partnership, et al.	109.25
871516	Lee and Hall Royalties, a partnership, et al.	160.1
871582	Geneva L. Straight, et al.	110
871516	Ann L. Cain, et al.	148
871439	John L. Berry, et al.	47.24
871409	Mark A. Hendershot and Carrie A. Hendershot, et al.	24
871834	Scott C. Jones, et al.	64.45
1017041	Persis E. Sosiak, et al.	73.24
871947	Jennifer L. Benn, et al.	79
871448	Nell Baker, et al.	95.75



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.

Ben R. Singleton
 P.S. 2092



SEAL

FILE NO: 48-18
 DRAWING NO: Elliott 5H
 SCALE: 1" = 2000'
 MINIMUM DEGREE OF ACCURACY: 1:2500
 PROVEN SOURCE OF ELEVATION: NGS CORS Station



DATE: June 02 20 21
 OPERATOR'S WELL NO.: Elliott 5H
 API WELL NO M&D
 47 - 49 - 02501
 STATE COUNTY PERMIT

WELL TYPE: OIL GAS LIQUID INJECTION WASTE DISPOSAL
 (IF GAS) PRODUCTION: STORAGE DEEP SHALLOW
 LOCATION: ELEVATION: 1343' WATERSHED: Tributary of Dents Run QUADRANGLE: Glover Gap
 DISTRICT: Mannington COUNTY: Marion
 SURFACE OWNER: Consolidated Coal Company ACREAGE: 153.25
 ROYALTY OWNER: Randy J. Elliott and Leonard W. Stafford LEASE NO: 871454 ACREAGE: 183
 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: 7,770'

WELL OPERATOR: EQT Production Company DESIGNATED AGENT: Joseph C. Mallow
 ADDRESS: 400 Woodcliff Drive ADDRESS: 115 Professional Place PO Box 280
 Canonsburg, PA 15317 Bridgeport, WV 26330

06/25/2021

**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
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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

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: 
 Its: Project Specialist - Permitting

Lease No.	Grantor, Lessor, etc.	Acres	Grantee, Lessee, etc.	Royalty	Book/Page
<u>871454</u>	<u>Randy J. Elliott and Leonard W. Stafford</u> Randy J. Elliott, a married man dealing in his sole/sep. property	183 ac	EQT Production Company	"at least 1/8th per WV Code 22-6-8"	DR 1213/441
<u>871516</u>	<u>Lee and Hall Royalties, a partnership, et al.</u> Lee and Hall Royalties, a partnership, et al.	109.25 ac	EQT Production Company	"at least 1/8th per WV Code 22-6-8"	DR 1242/83
<u>871516</u>	<u>Lee and Hall Royalties, a partnership, et al.</u> Reita J. Hall, widow American Shale Development, Inc. Republic Energy Ventures, LLC, Republic Partners VIII, LLC, et al Trans Energy, Inc. and American Shale Development, Inc.	160.1 ac	American Shale Development, Inc., 50%, and Republic Energy Ventures, LLC, 50% Republic Partners VIII, LLC EQT Production Company EQT Production Company	"at least 1/8th per WV Code 22-6-8"	DR 1132/908 AB 47/469 AB 51/525 DR 1228/1
<u>871582</u>	<u>Geneva L. Straight, et al.</u> Geneva L. Straight, widow	110 ac	EQT Production Company	"at least 1/8th per WV Code 22-6-8"	DR 1231/1084
<u>871516</u>	<u>Ann L. Cain, et al.</u> Ann L. Cain, a widow American Shale Development, Inc. Republic Energy Ventures, LLC, Republic Partners VIII, LLC, et al Trans Energy, Inc. and American Shale Development, Inc.	148 ac	American Shale Development, Inc., 50%, and Republic Energy Ventures, LLC, 50% Republic Partners VIII, LLC EQT Production Company EQT Production Company	"at least 1/8th per WV Code 22-6-8"	DR 1122/500 AB 47/469 AB 51/525 DR 1228/1

<u>871439</u>	<u>John L. Berry, et al.</u>	47.24 ac		"at least 1/8th per WV Code 22-6-8"
	John L. Berry		Tenmile Land, LLC	DR 1096/64
	Tenmile Land, LLC		Trans Energy, Inc., 50%, and Republic Energy Ventures, LLC, 50%	DR 1104/388
	Trans Energy, Inc.		American Shale Development, Inc.	AB 43/420
	Republic Energy Ventures, LLC, Republic Partners VIII, LLC, et al		EQT Production Company	AB 51/525
	Trans Energy, Inc. and American Shale Development, Inc.		EQT Production Company	DR 1228/1
<u>871409</u>	<u>Mark A. Hendershot and Carrie A. Hendershot, et al.</u>	24 ac		"at least 1/8th per WV Code 22-6-8"
	Mark A. Hendershot and Carrie A. Hendershot, his wife		Trans Energy, Inc., 50%, and Republic Energy Ventures, LLC, 50%	DR 1090/501
	American Shale Development, Inc.		Republic Partners VIII, LLC	AB 47/469
	Republic Energy Ventures, LLC, Republic Partners VIII, LLC, et al		EQT Production Company	AB 51/525
	Trans Energy, Inc. and American Shale Development, Inc.		EQT Production Company	DR 1228/1
<u>871834</u>	<u>Scott C. Jones, et al</u>	64.45 ac		"at least 1/8th per WV Code 22-6-8"
	Scott C. Jones		EQT Production Company	DR1250/1060
<u>1017041</u>	<u>Persis E. Sosiak, et al</u>	73.24 ac		"at least 1/8th per WV Code 22-6-8"
	Persis E. Sosiak		EQT Production Company	DR 1234/129
<u>871947</u>	<u>Jennifer L. Benn, et al.</u>	79 ac		"at least 1/8th per WV Code 22-6-8"
	Jennifer L. Benn		Republic Energy Ventures, LLC	DR 1199/979
	Republic Energy Ventures, LLC, et al		EQT Production Company	AB 52/491

871448 **Nell Baker, et al.**

95.75 ac

"at least 1/8th per
WV Code 22-6-8"

Nell Baker

American Shale Development, Inc., (50%) and
Republic Energy Ventures, LLC, (50%)

DR 1153/346

American Shale Development, Inc.

Republic Energy Ventures, LLC

AB 48/496

Republic Energy Ventures, LLC, Republic Partners VIII, LLC, et al

EQT Production Company

AB 51/525

Trans Energy, Inc. and American Shale Development, Inc.

EQT Production Company

DR 1228/1



EQT PRODUCTION COMPANY
400 Woodcliff Drive | Canonsburg, PA 15317
P: 724-746-9073 | www.eqt.com

June 7, 2021

Via FedEx Overnight

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

RE: Well Work Permit Modification Application
Elliott 5H Well
Permit Number 47-049-02501
Mannington District
Marion County, WV

CK#
0000587892
\$5000⁰²
4/9/21

EXPEDITED REVIEW REQUESTED

WVDEP Recipient,

Attached please find following information to modify the existing Well Work Permit for this well:

- Check in the amount of \$5,000.00, payable to "West Virginia Department of Environmental Protection," for the expedited review fee
- Completed Form WW-6B and supporting documents, approved by the Oil and Gas Inspector
- Revised Well Bore Diagram
- Well Location Plat
- Completed Form WW-6A1 and supporting documentation
- Updated Hydraulic Fracturing Monitoring Plan

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

The Marion County Mine has been added to the WW-6B form. This mine was not listed on the original permit applications. The mine operator, however, had been notified prior to submittal of the original application.

This well has been drilled vertically. The conductor, fresh water casing and intermediate casing have been set to the depths shown on the WW-6B form and wellbore diagram.

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

RECEIVED
Office of Oil and Gas
JUN 08 2021
WV Department of
Environmental Protection

06/25/2021