



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

Jim Justice, Governor
Austin Caperton, Cabinet Secretary
www.dep.wv.gov

PERMIT MODIFICATION APPROVAL
Horizontal 6A / Horizontal 6A Well - 1

EQT PRODUCTION COMPANY
120 PROFESSIONAL PLACE
BUILDING II
BRIDGEPORT, WV 26330

Re: Permit Modification Approval for 514461
47-095-02264-00-00

Lengthen lateral and to change the conductor casing size.

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.

James A. Martin
Chief

Operator's Well Number: 514461
Farm Name: WELLS, VIVIAN J.
U.S. WELL NUMBER: 47-095-02264-00-00
Horizontal 6A / Horizontal 6A Well - 1
Date Issued: 8/22/2017

Promoting a healthy environment.

08/25/2017

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

1) Well Operator: EQT Production Company 306686 Tyler McElroy Shirley
Operator ID County District Quadrangle

2) Operator's Well Number: 514461 Well Pad Name: SHR60

3) Farm Name/Surface Owner: Vivian J. Wells et al Public Road Access: 60/2

RECEIVED
Office of Oil and Gas

4) Elevation, current ground: 1011' Elevation, proposed post-construction: 1011'

AUG 21 2017

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

WV Department of
Environmental Protection

(b) If Gas Shallow Deep
Horizontal

6) Existing Pad: Yes or No Yes

DMA 8/17/17

7) Proposed Target Formation(s), Depth(s), Anticipated Thickness and Expected Pressure(s):
Marcellus, 6590', 52', 2747 PSI

8) Proposed Total Vertical Depth: 6590'

9) Formation at Total Vertical Depth: Marcellus

10) Proposed Total Measured Depth: 21206

11) Proposed Horizontal Leg Length: 14083

12) Approximate Fresh Water Strata Depths: 86, 136, 572, 909'

13) Method to Determine Fresh Water Depths: From offset wells

14) Approximate Saltwater Depths: 1201, 1868'

15) Approximate Coal Seam Depths: 22, 423, 689, 878, 1318'

16) Approximate Depth to Possible Void (coal mine, karst, other): None reported

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: _____

WW-6B
(04/15)

API NO. 47- 095 - 02284
 OPERATOR WELL NO. 514481
 Well Pad Name: SHR60

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	A-500	85.6	40	40	49 ft ³ / CTS
Fresh Water	13 3/8	New	J-55	54.5	1003	1003	844 ft ³ / CTS
Coal							
Intermediate	9 5/8	New	A-500	40	2797	2797	1091 ft ³ / CTS
Production	5 1/2	New	P-110	20	21206	21206	500' above top producing zone
Tubing	2 3/8		J-55	4.7		May not be run, if run set 40' above top perf or 80' inclination	
Liners							

DMAH 8/17/17

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	.312	1378	17	Class A	1.18
Fresh Water	13 3/8	17 1/2	.38	2700	2160	See Variance 2014-17	1.19
Coal							
Intermediate	9 5/8	12 3/8	.395	3950	3160	See Variance 2014-17	1.25 / 1.19
Production	5 1/2	8 1/2	.361	12640	10112	Class H	1.123/2.098
Tubing	2 3/8	NA	.19	7700			
Liners							

RECEIVED
 Office of
 AUG 21 2017
 WV Department of
 Environmental Protection

PACKERS

Kind:				
Sizes:				
Depths Set:				

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 to an approximate depth of 5,115'. Kick off and drill curve. Drill the lateral in the Marcellus. Cement casing.

DMAH 8/17/17

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 0.3%) 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 10000 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 400,000 pounds of sand per stage.

21) Total Area to be disturbed, including roads, stockpile area, pits, etc., (acres): no additional

22) Area to be disturbed for well pad only, less access road (acres): no additional

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.

RECEIVED
Office of Oil and Gas

AUG 21 2017

WV Department of
Environmental Protection

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

Conductor: Class A no additives
 Surface (Class A Cement) 0-3% Calcium Chloride Used to speed the setting of cement slurries
 Intermediate (Class A Cement) 0-3% Calcium Chloride Used to speed the setting of cement slurries
 Production:
 Lead (Class H Cement) 0.2% CD-20 (dispersant makes cement easier to mix) .15% SuperFL-300 (fluid loss/lengthens thickening time) .15% SEC-10 (fluid loss) 60 50 POZ (extender)
 Tail (Class H Cement): 0.2% Super CR-1 (Retarder) Lengthens thickening time 3% Super FL-200 (fluid loss) .2% SEC-10 (Fluid loss) .2% SuperFL-350 (fluid loss) Reduces amount of water lost to formation. 60 % Calcium Carbonate Acid solubility.

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: Pump marker sweep with nut plug to determine actual hole washout. Calculate a gauge holes bottoms up volume. Perform a cleanup cycle by pumping 3-5 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.

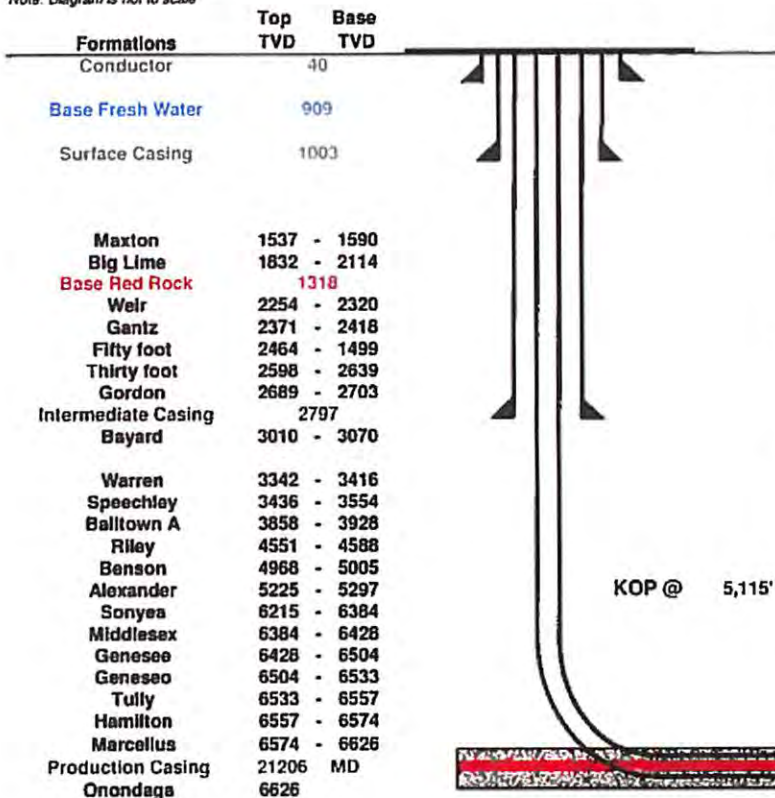
095-02264

Well 514461(SHR60H2)

EQT Production
Shirley Quad
Tyler County, WV

Azimuth 156
Vertical Section 14346

Note: Diagram is not to scale



Casing and Cementing				Deepest Fresh Water: 909'
Type	Conductor	Surface	Intermediate	Production
Hole Size, In.	30	17 1/2	12 3/8	8 1/2
Casing Size, OD In.	26	13 3/8	9 5/8	5 1/2
Casing Wall Thickness, In.	0.312	0.380	0.395	0.361
Depth, MD	40'	1,003'	2,797'	21,206'
Weight	85.6#	54.5#	40#	20#
Grade	A-500	J-55	A-500	P-110
New or Used	New	New	New	New
Burst (psi)	1378	2,700	3,950	12,640
Cement Class	A	A / Type 1	A / Type 1	A / H
Cement Yield	1.18	1.19	1.19	1.123 / 2.098
Top of Cement (Planned)	Surface	Surface	Surface	500' above top Producing Zone
Method	Displacement	Displacement	Displacement	Displacement
Est. Volume (cu ft)	49	844	1,091	4,275
Possible Additives	N/A	Calcium Chloride	Calcium Chloride	Calcium Carbonate, Fluid Loss, Extender, Dispersant, Viscosifier, Defoamer, POZ, Bonding Agent, Retarder, Anti-Settling/Suspension Agent

RECEIVED
Office of Oil and Gas
AUG 21 2017
WV Department of
Environmental Protection

Proposed Well Work:
Drill and complete a new horizontal well in the Marcellus formation.
Drill the vertical to an approximate depth of 5115'.
Kick off and drill curve. Drill lateral in the Marcellus. Cement casing.

14,083' Lateral

DMG 8/17/17

095-02264

WW-6A1
(5/13)

Operator's Well No. 514461

**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				

RECEIVED
Office of Oil and Gas
AUG 21 2017
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: Victoria J Roark
 Its: Regional Land Supervisor

095-02264

Lease No.	Grantor, Lessor, etc.	Grantee, Lessee, etc.	Royalty	Book/Page
<u>126101</u>	<u>George Birklein, et al (current royalty owner)</u> W.M. Blaine Underwood Et ux et al (original lessor) Equitable Gas Co. Equitrans, Inc./Equitable Gas Company/Equitable Resources, Inc. Equitrans, L.P. Equitrans, L.P.	Equitable Gas Co. Equitrans, Inc. Equitrans, L.P. EQT Production Company EQT Production Company	**	DB186/86 DB274/471 DB433/777 DB396/640 OG420/10
<u>126167</u>	<u>Berdina Rose, et al (current royalty owner)</u> Savannah Pratt, et al (original lessor) Equitable Gas Co. Equitrans, Inc./Equitable Gas Company/Equitable Resources, Inc. Equitrans, L.P.	Equitable Gas Co. Equitrans, Inc. Equitrans, L.P. EQT Production Company	**	DB192/425 DB274/471 DB433/777 DB396/640
<u>126161</u>	<u>John A. Dillon, et al (current royalty owner)</u> John M. Pierpoint, et al (original lessor) Equitable Gas Co. Equitrans, Inc./Equitable Gas Company/Equitable Resources, Inc. Equitrans, L.P.	Equitable Gas Co. Equitrans, Inc. Equitrans, L.P. EQT Production Company	**	DB192/368 DB274/471 DB433/777 DB396/640
<u>126211</u>	<u>Below the Fifth Sand</u> <u>John A. Dillon, et al (current royalty owner)</u> Mary E. Underwood, et vir (original lessor) Hope Natural Gas Co. Consolidated Gas Supply Corp. Consolidated Gas Transmission Corp. CNG Development Co. Dominion Appalachian Development, Inc. Consol Gas Appalachian Development, LLC CNX Gas Co., LLC CNX Gas Co., LLC/Noble Energy, Inc	Hope Natural Gas Co. Consolidated Gas Supply Corp. Consolidated Gas Transmission Corp. CNG Development Co. Dominion Appalachian Development, Inc. Consol Gas Appalachian Development, LLC CNX Gas Co., LLC EQT Production Co. EQT Production Co.	**	DB70/477 DB169/26 DB249/287 DB253/57 DB337/340 CB9/131 name change CB9/206 name change DB479/55 AB505/222
<u>126134</u>	<u>Dorothy H. Bode (current royalty owner)</u> Mollie Susan Scott (original lessor) Equitable Gas Co. Equitrans, Inc./Equitable Gas Company/Equitable Resources, Inc. Equitrans, L.P.	Equitable Gas Co. Equitrans, Inc. Equitrans, L.P. EQT Production Company	**	DB191/420 DB274/471 DB433/777 DB396/640
<u>126137</u>	<u>S.A. Smith and C. Burke Morris Trust, et al (current royalty owner)</u> Carl C. Weekley, et al (original lessor) Equitable Gas Co. Equitrans, Inc./Equitable Gas Company/Equitable Resources, Inc. Equitrans, L.P.	Equitable Gas Co. Equitrans, Inc. Equitrans, L.P. Equitable Production Company	**	DB191/536 DB274/471 DB433/777 DB396/640
<u>126152</u>	<u>Linda Sue Lamb, et al (current royalty owner)</u> Carl C. Weekley, et al (original lessor) Equitable Gas Co. Equitrans, Inc./Equitable Gas Company/Equitable Resources, Inc. Equitrans, L.P.	Equitable Gas Co. Equitrans, Inc. Equitrans, L.P. EQT Production Company	**	DB191/489 DB274/471 DB433/777 DB396/640
<u>126153</u>	<u>Jeffrey T. Heflin, et al (current royalty owner)</u> John W. Ash, et al (original lessor) Equitable Gas Co. Equitrans, Inc./Equitable Gas Company/Equitable Resources, Inc. Equitrans, L.P.	Equitable Gas Co. Equitrans, Inc. Equitrans, L.P. EQT Production Company	**	DB192/80 DB274/471 DB433/777 DB396/640
<u>105456</u>	<u>Kimberly Wilcox (current royalty owner)</u> Olive I. Stewart, et vir (original lessor) J. L. Newman The Philadelphia Company of West Virginia Pittsburgh and West Virginia Gas Company Equitable Gas Co. Equitrans, Inc./Equitable Gas Company/Equitable Resources, Inc. Equitrans, L.P.	J L Newman The Philadelphia Company of West Virginia Pittsburgh and West Virginia Gas Company Equitable Gas Co. Equitrans, Inc. Equitrans, L.P. EQT Production Company	**	LB69/42 OG455/390 DB101/36 132/414 DB274/471 DB433/777 DB396/640

RECEIVED
Office of Oil and Gas
AUG 21 2017
WV Department of
Environmental Protection

095-02264

126170 **Mary Ann Ketelsen (current royalty owner)**

Charles N. Welch, et al (original lessor)
Equitable Gas Company
Equitrans, Inc.
Equitrans, L.P.

Equitable Gas Company
Equitrans, Inc.
Equitrans, L.P.
EQT Production Company

LB193/351
DB274/471
DB433/777
DB396/640

126177 **Regina M. Buck, et al (current royalty owner)**

J.S. Buck, et ux (original lessor)
Equitable Gas Company
Equitrans, Inc
Equitrans, L.P.

Equitable Gas Company
Equitrans, Inc
Equitrans, L.P.
EQT Production Company

DB97/533
154/475
329/645
DB396/640

126368 **Robin A. Smith, et al. (current royalty owner)**

Wilbur F. Robinson and Virginia Lee Robinson (original lessor)
Stonewall Gas Company/Dominion Appalachian Development, Inc
Consol Gas Appalachian Development, LLC
CNX Gas Co., LLC
CNX Gas Co., LLC/Noble Energy, Inc
Antero Resources Corporation

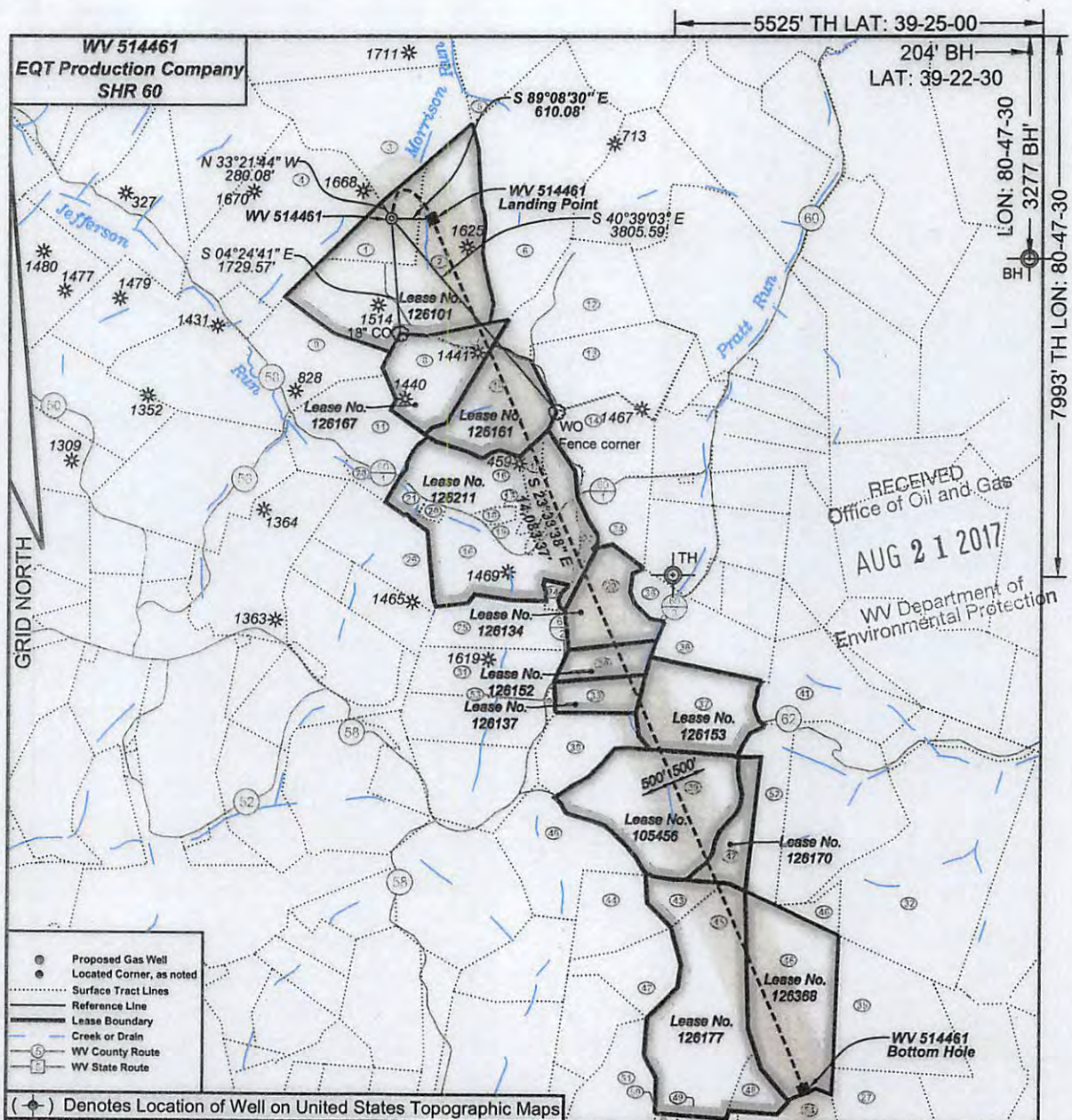
Stonewall Gas Company
Consol Gas Appalachian Development, LLC
CNX Gas Co., LLC
Noble Energy, Inc (50%)
Antero Resources Corporation
EQT Production Company

152/79
CB9/131 name change
CB9/206 name change
260/39
317/379
568/760 Doddridge

** Per West Virginia Code Section 22-6-8.

RECEIVED
Office of Oil and Gas
AUG 21 2017
WV Department of
Environmental Protection

08/25/2017



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. Singletor
P.S. 2092



FILE NO: 208-13
DRAWING NO: 208-13 SHR 60 H2
SCALE: 1" = 2000'
MINIMUM DEGREE OF ACCURACY: 1:2500
PROVEN SOURCE OF ELEVATION: NGS CORS Station

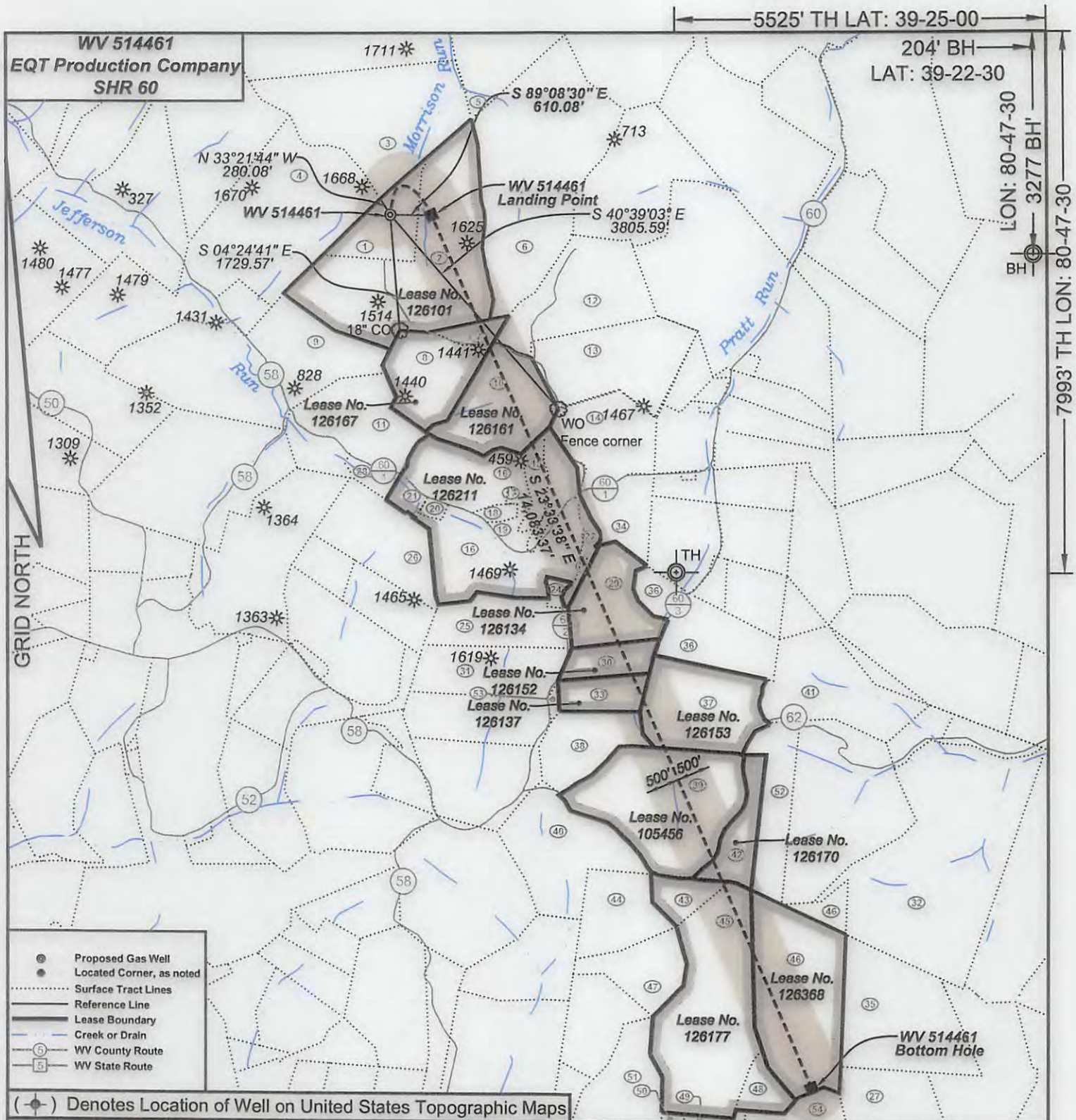
STATE OF WEST VIRGINIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
OIL AND GAS DIVISION

DATE: August 7 20 17
OPERATOR'S WELL NO.: WV 514461
API WELL NO
47 - 95 - 02264
STATE COUNTY PERMIT

WELL TYPE: OIL GAS LIQUID INJECTION WASTE DISPOSAL
(IF GAS) PRODUCTION: STORAGE DEEP SHALLOW
LOCATION: ELEVATION: As-Built 1,011' WATERSHED Morrison Run of McElroy Creek QUADRANGLE: Shirley
DISTRICT: McElroy COUNTY: Tyler
SURFACE OWNER: Vivian J. Wells, et al. ACREAGE: 35.38
ROYALTY OWNER: George Birklein, et al. LEASE NO: 126101 ACREAGE: 240
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: 6596

WELL OPERATOR: EQT Production Company DESIGNATED AGENT: Rex C. Ray
ADDRESS: 115 Professional Place PO Box 280 ADDRESS: 115 Professional Place PO Box 280
Bridgeport, WV 26330 Bridgeport, WV 26330

08/25/2017



5525' TH LAT: 39-25-00

204' BH
LAT: 39-22-30

LON: 80-47-30
BH
3277' BH

7993' TH LON: 80-47-30

GRID NORTH

- ⊙ Proposed Gas Well
- Located Corner, as noted
- Surface Tract Lines
- Reference Line
- Lease Boundary
- Creek or Drain
- Ⓢ WV County Route
- Ⓟ 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.

Ben R. Singleton

P.S. 2092



SEAL

FILE NO: 208-13
DRAWING NO: 208-13 SHR 60 H2
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: August 7 20 17
OPERATOR'S WELL NO.: WV 514461
API WELL NO **MOD**
47 - 95 - **02264**
STATE COUNTY PERMIT

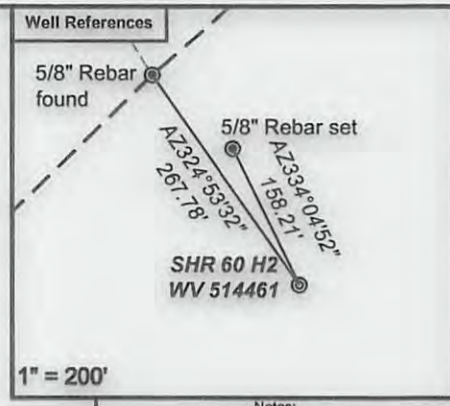
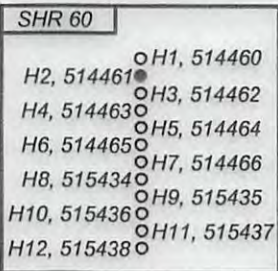
WELL TYPE: OIL GAS LIQUID INJECTION WASTE DISPOSAL
(IF GAS) PRODUCTION: STORAGE DEEP SHALLOW
LOCATION: ELEVATION: As-Built 1,011' WATERSHED Morrison Run of McElroy Creek QUADRANGLE: Shirley
DISTRICT: McElroy COUNTY: Tyler
SURFACE OWNER: Vivian J. Wells, et al. ACREAGE: 35.38
ROYALTY OWNER: George Birklein, et al. LEASE NO: 126101 ACREAGE: 240
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: 6596

08/25/2017

WELL OPERATOR: EQT Production Company DESIGNATED AGENT: Rex C. Ray
ADDRESS: 115 Professional Place PO Box 280 ADDRESS: 115 Professional Place PO Box 280
Bridgeport, WV 26330 Bridgeport, WV 26330

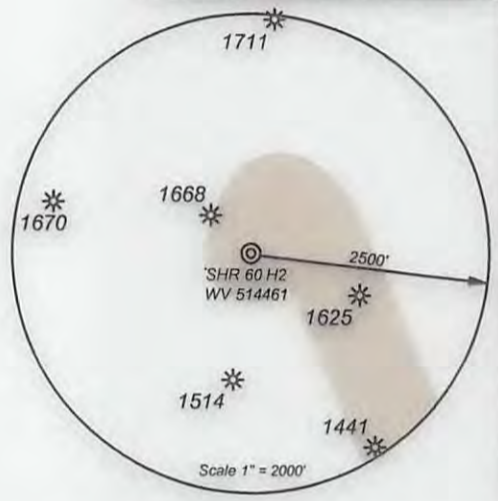
WV 514461
EQT Production Company
SHR 60

Tract I.D.	Tax Map No.	Parcel No.	County	District	Surface Tract Owner	Acres
1	18	12	Tyler	McElroy	Hanna A. Underwood Estate	35.00
2	18	13	Tyler	McElroy	Blaine Underwood Estate, et al.	104.73
3	18	9	Tyler	McElroy	Lawrence Rayburn, et al.	100.00
4	18	7.1	Tyler	McElroy	Patricia A. Keys, et al.	102.31
5	18	10	Tyler	McElroy	Susan Spencer	2.92
6	18	11	Tyler	McElroy	Susan Spencer	132.00
7	18	15	Tyler	McElroy	Susan Spencer	8.00
8	18	16	Tyler	McElroy	Donald E. Bible Sr.	35.50
9	18	23	Tyler	McElroy	Clyde Seckman Estate	111.75
10	18	17	Tyler	McElroy	Allen Dale Fornash, et al.	43.00
11	18	22	Tyler	McElroy	Donald E. Bible Sr.	39.26
12	18	14	Tyler	McElroy	Terry J. Cumberledge, et al.	54.81
13	18	18	Tyler	McElroy	Terry J. Cumberledge, et al.	49.87
14	18	19	Tyler	McElroy	John Paul Davis	35.00
15	18	20.2	Tyler	McElroy	Richard E. Hansen	19.96
16	18	20	Tyler	McElroy	Clarence G. Dillon, et al.	113.42
17	18	20.6	Tyler	McElroy	Clarence G. Dillon Jr.	0.71
18	18	20.5	Tyler	McElroy	Clarence G. Dillon Jr.	2.94
19	18	20	Tyler	McElroy	Clarence G. Dillon, et al.	113.42
20	18	20.4	Tyler	McElroy	John A. Dillon	2.04
21	18	20.3	Tyler	McElroy	Peter H. Mueller	4.69
22	18	20.1	Tyler	McElroy	William R. Doll Jr, et al.	3.06
23	21	44	Tyler	McElroy	William R. Doll Jr, et al.	2.43
24	21	45	Tyler	McElroy	Clarence G. Dillon, et al.	2.43
25	21	15	Tyler	McElroy	Paul Weekley	36.00
26	21	14	Tyler	McElroy	Donnie N. & Kim M. Wilmoth	73.39
27	2	10	Doddridge	West Union	Susan Walker, et al.	88.65
28	18	21	Tyler	McElroy	Barbara Willer	5.90
29	22	20	Tyler	McElroy	James B. Scott	30.00
30	21	18	Tyler	McElroy	Richard E. & Barbara A. Mullins	20.00
31	21	16	Tyler	McElroy	Paul Weekley	36.00
32	22	13	Tyler	McElroy	Warren C. Putman	147.77
33	21	19	Tyler	McElroy	Richard E. & Barbara A. Mullins	20.00
34	19	80	Tyler	McElroy	John Paul Davis	25.00
35	2	2	Doddridge	West Union	Jason J. Boggs	66.87
36	21	21	Tyler	McElroy	James B. Scott	30.00
37	22	19	Tyler	McElroy	Berdina Rose, et al.	55.00
38	21	21	Tyler	McElroy	James B. Scott	30.00
39	22	18	Tyler	McElroy	Bruce W. Boland	86.75
40	21	33	Tyler	McElroy	Bruce W. Boland	52.46
41	22	3	Tyler	McElroy	Jacqueline Wickman, et al.	71.62
42	22	18.1	Tyler	McElroy	Bruce W. Boland	18.91
43	22	17	Tyler	McElroy	David R. & Elizabeth A. Beveridge	12.00
44	22	16	Tyler	McElroy	Leah Weekley	29.00
45	2	18	Doddridge	West Union	David R. & Elizabeth A. Beveridge	125.00
46	2	1	Doddridge	West Union	James M. Petrovich, et al.	70.00
47	22	15	Tyler	McElroy	Isaiah Weekley	25.00
48	2	5.4	Doddridge	West Union	David R. & Elizabeth A. Beveridge	11.90
49	2	5.1	Doddridge	West Union	David R. & Elizabeth A. Beveridge	20.88
50	2	4.1	Doddridge	West Union	Robert B. & Marry E. Simpson	20.00
51	2	4	Doddridge	West Union	Robert B. & Marry E. Simpson	38.50
52	22	14	Tyler	McElroy	Paul Dean Steinman Jr. & Marc J. Steinman	126.00
53	22	20	Tyler	McElroy	James B. Scott	30.00
54	2	9	Doddridge	West Union	Charles C. Hittel III	115.78



Notes:
 WV 514461 coordinates are
 NAD 27 N: 328,567.11 E: 1,629,438.89
 NAD 27 Lat: 39.394686 Long: -80.811238
 NAD 83 UTM N: 4,360,602.83 E: 516,268.86
 WV 514461 Landing Point coordinates are
 NAD 27 N: 328,557.97 E: 1,630,048.87
 NAD 27 Lat: 39.394685 Long: -80.809080
 NAD 83 UTM N: 4,360,603.15 E: 516,454.74
 WV 514461 Bottom Hole coordinates are
 NAD 27 N: 315,648.60 E: 1,635,678.22
 NAD 27 Lat: 39.359469 Long: -80.788508
 NAD 83 UTM N: 4,356,698.93 E: 518,235.35

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.



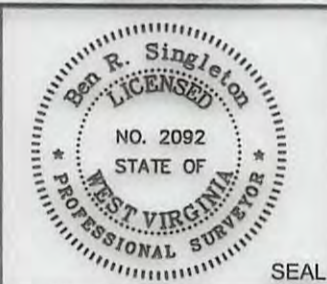
Lease No.	Acres	Owner
126167	43	Berdina Rose, et al.
126161	43	John A. Dillon, et al.
126211	145	John A. Dillon, et al.
126134	30	Dorothy H. Bode
126137	20	S. A. Smith, et al.
126152	20	Linda Sue Lamb, et al.
126153	55	Jeffrey T. Heflin, et al.
105456	96	Kimberly Wilcox
126170	15	Mary Ann Ketelson
126177	138	Regina M. Buck, et al.
126368	75	Robin A. Smith, et al.

- Proposed Gas Well
- Located Corner, as noted
- Surface Tract Lines
- Reference Line
- Lease Boundary
- Creek or Drain
- WV County Route
- WV State Route



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: 208-13
 DRAWING NO: 208-13 SHR 60 H2
 SCALE: 1" = 2000'
 MINIMUM DEGREE OF ACCURACY: 1:2500
 PROVEN SOURCE OF ELEVATION: NGS CORS Station



DATE: August 7 20 17
 OPERATOR'S WELL NO.: WV 514461
 API WELL NO: MOD 47 - 95
 STATE COUNTY PERMIT

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

LOCATION: ELEVATION: As-Built 1,011' WATERSHED Morrison Run of McElroy Creek QUADRANGLE: Shirley
 DISTRICT: McElroy COUNTY: Tyler

SURFACE OWNER: Vivian J. Wells, et al. ACREAGE: 38.38
 ROYALTY OWNER: George Birklein, et al. LEASE NO: 126101 ACREAGE: 240

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: 6596

WELL OPERATOR: EQT Production Company DESIGNATED AGENT: Rex C. Ray
 ADDRESS: 115 Professional Place PO Box 280 ADDRESS: 115 Professional Place PO Box 280
Bridgeport, WV 26330 Bridgeport, WV 26330

08/25/2017