



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

Tuesday, August 29, 2017
WELL WORK PERMIT
Horizontal 6A / New Drill

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

Re: Permit approval for BIG177H5
47-103-03189-00-00

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

Please be advised that form WR-35, Well Operators Report of Well Work is to be submitted to this office within 90 days of completion of permitted well work, as should form WR-34 Discharge Monitoring Report within 30 days of discharge of pits, if applicable. Failure to abide by all statutory and regulatory provisions governing all duties and operations hereunder may result in suspension or revocation of this permit and, in addition, may result in civil and/or criminal penalties being imposed upon the operators.

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


James A. Martin
Chief

Operator's Well Number: BIG177H5
Farm Name: COASTAL FOREST RESOURCES CO. D/B/A COASTAL TIMBER
U.S. WELL NUMBER: 47-103-03189-00-00
Horizontal 6A / New Drill
Date Issued: 8/29/2017

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PERMIT CONDITIONS

West Virginia Code § 22-6A-8(d) allows the Office of Oil and Gas to place specific conditions upon this permit. Permit conditions have the same effect as law. Failure to adhere to the specified permit conditions may result in enforcement action.

CONDITIONS

1. This proposed activity may require permit coverage from the United States Army Corps of Engineers (USACE). Through this permit, you are hereby being advised to consult with USACE regarding this proposed activity.
2. If the operator encounters an unanticipated void, or an anticipated void at an unanticipated depth, the operator shall notify the inspector within 24 hours. Modifications to the casing program may be necessary to comply with W. Va. Code § 22-6A-5a (12), which requires drilling to a minimum depth of thirty feet below the bottom of the void, and installing a minimum of twenty (20) feet of casing. Under no circumstance should the operator drill more than one hundred (100) feet below the bottom of the void or install less than twenty (20) feet of casing below the bottom of the void.
3. When compacting fills, each lift before compaction shall not be more than 12 inches in height, and the moisture content of the fill material shall be within limits as determined by the Standard Proctor Density test of the actual soils used in specific engineered fill, ASTM D698, Standard Test Method for Laboratory Compaction Characteristics of Soil Using Standard Effort, to achieve 95 % compaction of the optimum density. Each lift shall be tested for compaction, with a minimum of two tests per lift per acre of fill. All test results shall be maintained on site and available for review.
4. Operator shall install signage per § 22-6A-8g (6) (B) at all source water locations included in their approved water management plan within 24 hours of water management plan activation.
5. Oil and gas water supply wells will be registered with the Office of Oil and Gas and all such wells will be constructed and plugged in accordance with the standards of the Bureau for Public Health set forth in its Legislative rule entitled *Water Well Regulations*, 64 C.S.R. 19. Operator is to contact the Bureau of Public Health regarding permit requirements. In lieu of plugging, the operator may transfer the well to the surface owner upon agreement of the parties. All drinking water wells within fifteen hundred feet of the water supply well shall be flow tested by the operator upon request of the drinking well owner prior to operating the water supply well.
6. Pursuant to the requirements pertaining to the sampling of domestic water supply wells/springs the operator shall, no later than thirty (30) days after receipt of analytical data provide a written copy to the Chief and any of the users who may have requested such analyses.
7. 24 hours prior to the initiation of the completion process the operator shall notify the Chief or his designee.
8. During the completion process the operator shall monitor annular pressures and report any anomaly noticed to the chief or his designee immediately.
9. If any explosion or other accident causing loss of life or serious personal injury occurs in or about a well or well work on a well, the well operator or its contractor shall give notice, stating the particulars of the explosion or accident, to the oil and gas inspector and the Chief, within 24 hours of said accident.
10. During the casing and cementing process, in the event cement does not return to the surface, the oil and gas inspector shall be notified within 24 hours.

PERMIT CONDITIONS

11. The operator shall provide to the Office of Oil and Gas the dates of each of the following within 30 days of their occurrence: completion of construction of the well pad, commencement of drilling, cessation of drilling, completion of any other permitted well work, and completion of the well. Such notice shall be provided by sending an email to DEPOOGNotify@wv.gov.

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 Grant Big Run
Operator ID County District Quadrangle

2) Operator's Well Number: BIG177H5 Well Pad Name: BIG177

3) Farm Name/Surface Owner: Coastal Forest Resources Co. DBA Coastal Timberlands Co. Public Road Access: Rt 19

4) Elevation, current ground: 811' Elevation, proposed post-construction: 811'

5) Well Type (a) Gas Oil Underground Storage

Other _____

(b) If Gas Shallow Deep

Horizontal

6) Existing Pad: Yes or No Yes

DmH
5-26-17

7) Proposed Target Formation(s), Depth(s), Anticipated Thickness and Expected Pressure(s):
Marcellus, 6881', 53', 2620 PSI

8) Proposed Total Vertical Depth: 6881

9) Formation at Total Vertical Depth: Marcellus

10) Proposed Total Measured Depth: 17720

11) Proposed Horizontal Leg Length: 9512

12) Approximate Fresh Water Strata Depths: 173,283,483,633

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

JUN 5 2017

14) Approximate Saltwater Depths: 1138, 1453

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15) Approximate Coal Seam Depths: 103,156,434,544

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: _____

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	80	80	98 ft ³ / CTS
Fresh Water	13 3/8	New	J-55	54.5	768	768	811 ft ³ / CTS
Coal							
Intermediate	9 5/8	New	A-500	40	2731	2731	1073 ft ³ / CTS
Production	5 1/2	New	P-110	20	17720	17720	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							

DMH
47 526-1.0

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	884	35	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	Class H	1.07
Production	5 1/2	8 1/2	.361	12640	10112	Class H	1.123/2.098
Tubing	2 3/8	NA	.19	7700			
Liners							

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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 3388'. Kick off and drill curve. Drill the lateral in the Marcellus. Cement casing.

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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 proppant 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:

- Freshwater: Bow spring centralizers – One at the shoe and one spaced every 500'.
- Intermediate: Bow spring centralizers– One cent at the shoe and one spaced every 500'.
- Production: One solid body cent spaced every joint from production casing shoe to KOP

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

Conductor: Class A no additives
 Freshwater (Type 1 Cement): 0-3% Calcium Chloride. Used to speed the setting of cement slurries. 25% Flake Loss Circulation Material (LCM)
 Intermediate (Class H Cement): 0-3% Calcium Chloride. Used to speed the setting of cement slurries. 0.25% flake. Loss Circulation Material (LCM) .6% Super FL-300 (fluid loss/lengthens thickening time)
 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) 50:50 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 % Calcuim Carbonate. Acid solubility.

25) Proposed borehole conditioning procedures:

Freshwater: 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.

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Well **BIG177H5**
EQT Production
Big Run Quad
Wetzel County, WV

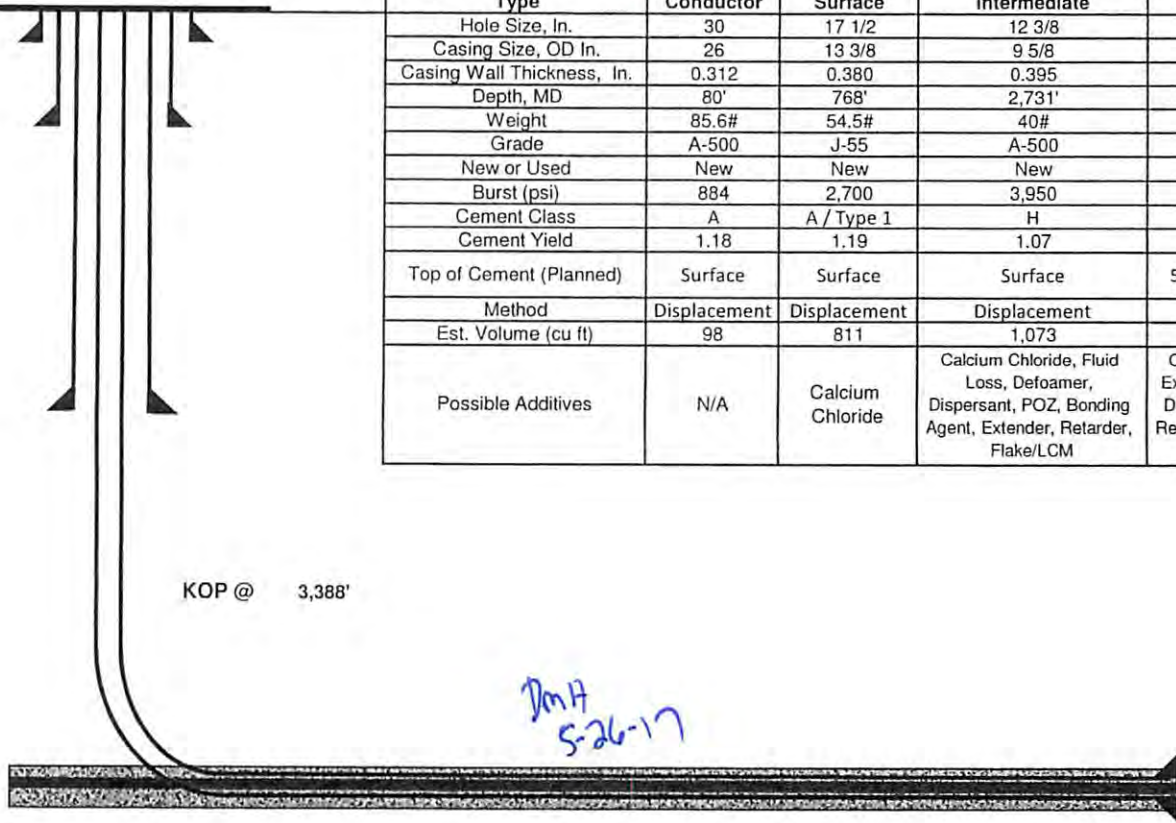
Azimuth 332
Vertical Section 11990

Note: Diagram is not to scale

Formations	Top TVD	Base TVD
Conductor	80	
Base Fresh Water	633	
Surface Casing	768	
Base Red Rock	1654	
Maxton	1695 - 1739	
Big Lime	1811 - 1864	
Weir	2193 - 2221	
Gantz	2367 - 2405	
Fifty foot	2518 - 2563	
Thirty foot	2589 - 2623	
Gordon	2636 - 2681	
Forth Sand	2723 - 2734	
Intermediate Casing	2731	
Bayard	2775 - 2848	
Warren	3232 - 3278	
Speechley	3382 - 3396	
Balltown A	3771 - 3788	
Riley	4231 - 4244	
Benson	4883 - 4922	
Alexander	5231 - 5257	
Sonyea	6421 - 6591	
Middlesex	6591 - 6636	
Genesee	6636 - 6713	
Geneseo	6713 - 6747	
Tully	6747 - 6770	
Hamilton	6770 - 6862	
Marcellus	6862 - 6914	
Production Casing	17720 MD	
Onondaga	6914	

Casing and Cementing				Deepest Fresh Water: 633'
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	80'	768'	2,731'	17,720'
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)	884	2,700	3,950	12,640
Cement Class	A	A / Type 1	H	A / H
Cement Yield	1.18	1.19	1.07	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)	98	811	1,073	3,871
Possible Additives	N/A	Calcium Chloride	Calcium Chloride, Fluid Loss, Defoamer, Dispersant, POZ, Bonding Agent, Extender, Retarder, Flake/LCM	Calcium Carbonate, Fluid Loss, Extender, Dispersant, Viscosifier, Defoamer, POZ, Bonding Agent, Retarder, Anti-Settling/Suspension Agent

4710303189



Land curve @ 6,881' TVD
8,208' MD

Est. TD @ 6,881' TVD
17,720' MD

9,512' Lateral

Proposed Well Work:

Drill and complete a new horizontal well in the Marcellus formation.
Drill the vertical to an approximate depth of 3388'.

Kick off and drill curve. Drill lateral in the Marcellus. Cement casing.



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Earl Ray Tomblin, Governor
Randy C. Huffman, Cabinet Secretary
dep.wv.gov

March 18, 2014

Nabors Completion & Production Services Company
1380 Route 286 Hwy E #121
Indiana PA 15701

Re: Cement Variance Request

Dear Sir or Madam,

This agency is approving a variance request for the cement blend listed below to be used on surface and coal protection strings for the drilling of oil and gas wells in the state of West Virginia. The variance cannot be used without requesting its use on a permit application and approval by this agency:

- Type 1 (2% Calcium Chloride-Accelerator, 0.25% Super Flake-Lost Circulation, 5.2% Water, 94% Type "1" Cement)

If you have any questions regarding this matter feel free to contact me at 304-926-0499, ext. 1653.

Sincerely,

James Peterson
Environmental Resources Specialist / Permitting

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

IN THE MATTER OF A VARIANCE FROM) ORDER NO. 2014 - 17
REGULATION 35 CSR § 4-11.4/11.5/14.1)
AND 35 CSR § 8-9.2.h. 4/5/6/8 OF THE)
THE OPERATIONAL)
REGULATIONS OF CEMENTING OIL)
AND GAS WELLS)

REPORT OF THE OFFICE

Nabors Completion & Production Services Co. requests approval of a different cement blend for use in cementing surface and coal protection casing of oil and gas wells.

FINDINGS OF FACT

- 1.) Nabors Completion & Production Services Co. proposes the following cement blend:
 - 2% Calcium Chloride (Accelerator)
 - 0.25 % Super Flake (Lost Circulation)
 - 94% Type "1" Cement
 - 5.20 % Water

- 2.) Laboratory testing results indicate that the blend listed in Fact No.1 will achieve a 500 psi compressive strength within 6 hours and a 2,435 psi compressive strength within 24 hours.

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CONCLUSIONS OF LAW

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

Pursuant to 35 CSR § 4-11.5 and 35 CSR § 8-9.2.h.8 the Chief of the Office of Oil and Gas may approve different cement blends upon the well operator providing satisfactory proof that different cement types are adequate.

ORDER

It is ordered that Nabors Completion & Production Services Co. may use the cement blend listed in Findings of Fact No.1 for the cementing of surface and coal protection casing of oil and gas wells in the State as may be requested by oil and gas operators. The waiting time on the cement blend shall be 8 hours. The cement blend shall be mixed in strict accordance with the specifications for each blend and weight measurements made on-site to assure the cement slurries meet the minimum weight specifications. A sample shall be collected and, if after 8 hours the cement is not set up, additional time will be required. Nabors Completion & Production Services Co. shall keep a record of cement blend jobs in which the cement blend approved under this order is to be used and made available to the Office of Oil and Gas upon request.

Dated this, the 18th day of March, 2014.

IN THE NAME OF THE STATE OF WEST VIRGINIA

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



James Martin, Chief
Office of Oil and Gas

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EQT Production
Hydraulic Fracturing Monitoring Plan
Pad ID: BIG177
Wetzel County, WV

5/22/17

4710505100

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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 BIG177 pad: BIG177H2, BIG177H5, BIG177H6, and BIG177H15

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.

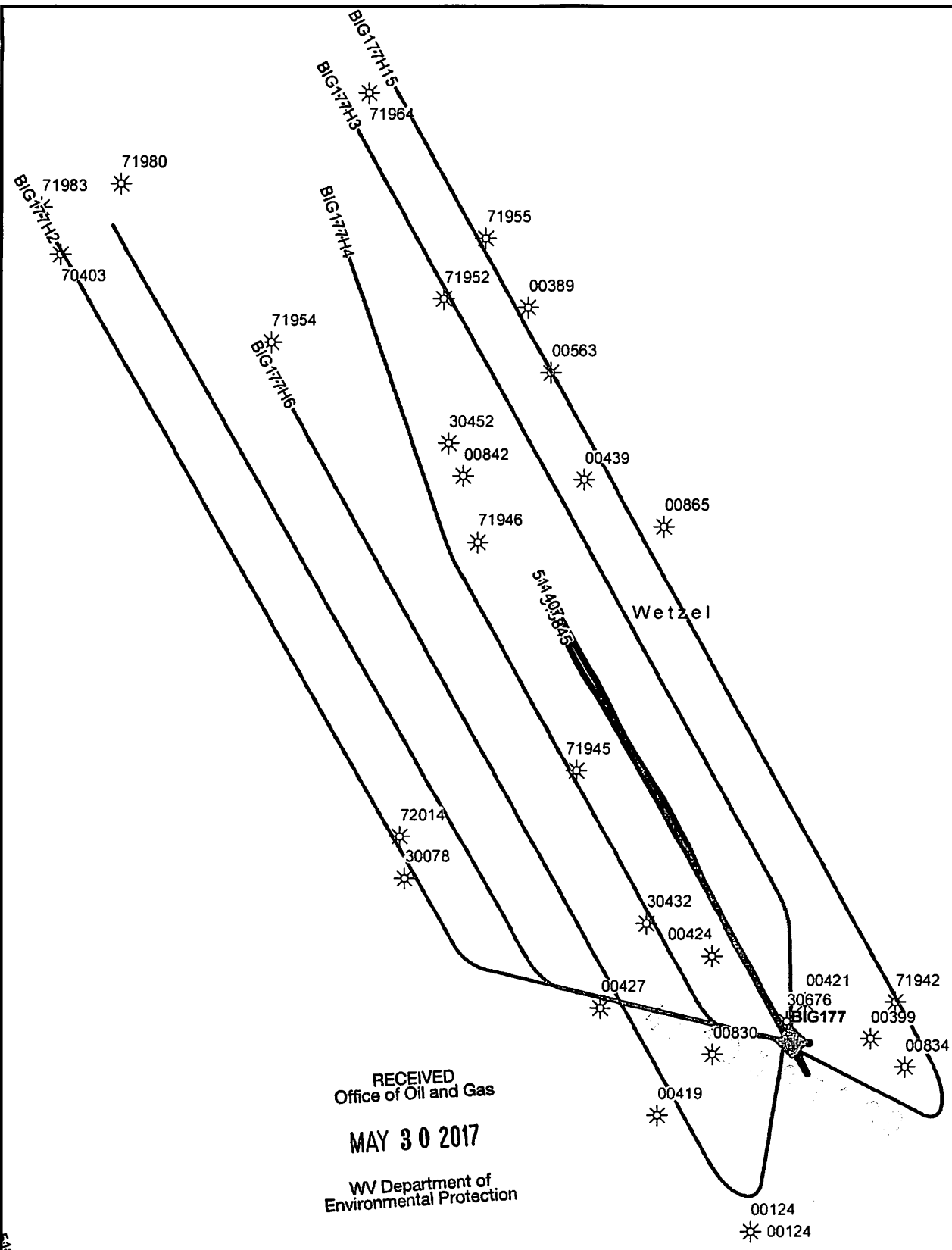
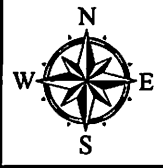
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EQT
EQT Corporation
625 Liberty Avenue
Pittsburgh, PA 15222

BIG177

**Vertical Offsets and
Foreign Laterals
within 500'**

Created By: Ryan Mears Printed By: mearsR on 5/19/2017

- Legend**
- BIG177 Vertical Offsets
 - Genesee Spud
 - Middlesex Spud
 - Marcellus Spud
 - Point Pleasant Spud
 - GENESEO
 - MARCELLUS
 - MIDDLESEX
 - POINT PLEASANT
 - 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.

1:1,282,586

Wetzel
WV
Tyler

09/01/2017

WELL ID	ABAND DATE	COMP DATE	OPERATOR	ELE	STATUS	LAT	LONG	PERMIT DATE
47103005630000		12/1/1964	J C R PETROLEUM INCORPORATED	1025	GAS-CB	39.6034	-80.5937	10/17/1964
47103304520000	9/28/1943	8/1/1904	PITTSBURGH & W VA GAS	1380	ABD-GW	39.6012	-80.5978	5/17/1904
47103306760000	2/25/1949		PITTSBURGH & W VA GAS	851	ABD-GW	39.5832	-80.5843	
47103008300000			UNKNOWN		PSEUDO	39.5822	-80.5873	
47103008340000			EQT PRODUCTION COMPANY		PSEUDO	39.5817	-80.5795	
47103008420000	12/6/1990		EQUITABLE GAS COMPANY		PSEUDO	39.6002	-80.5972	
47103008650000			EQT PRODUCTION COMPANY		PSEUDO	39.5986	-80.5891	
47103304320000	8/2/1943		PITTSBURGH & W VA GAS		PSEUDO	39.5863	-80.5899	
47103704030000			SOUTH PENN OIL		PSEUDO	39.6071	-80.6133	
47103001240000		9/1/1936	UNKNOWN	1198	GAS	39.5767	-80.5858	7/18/1936
47103003990000		7/1/1954	J C R PETROLEUM INCORPORATED	812	GAS-CB	39.5826	-80.5809	5/17/1954
47103004190000		10/1/1955	J C R PETROLEUM INCORPORATED	803	GAS-CB	39.5803	-80.5895	8/17/1955
47103004210000	6/4/1956	11/1/1955	UNKNOWN	823	D&A	39.5838	-80.5835	9/17/1955
47103004240000		2/1/1956	J C R PETROLEUM INCORPORATED	1117	GAS-CB	39.5852	-80.5873	12/18/1955
47103004270000		4/23/1956	J C R PETROLEUM INCORPORATED	1153	GAS-CB	39.5836	-80.5918	3/28/1956
47103004390000	11/21/1956	10/1/1956	UNKNOWN	1469	D&A-G	39.6000	-80.5923	8/17/1956
47103003890000		9/1/1953	J C R PETROLEUM INCORPORATED	930	GAS-CB	39.6054	-80.5946	7/18/1953
47103300780000	8/3/1932		HOPE NATURAL GAS	998	ABD-GW	39.5877	-80.5996	
47103719420000			UNKNOWN		UNKWN	39.5838	-80.5799	
47103719450000			UNKNOWN		UNKWN	39.5910	-80.5927	
47103719460000			UNKNOWN		UNKWN	39.5981	-80.5966	
47103719520000			UNKNOWN		UNKWN	39.6057	-80.5979	
47103719540000			HOPE NATURAL GAS		UNKWN	39.6044	-80.6049	
47103719550000			UNKNOWN		UNKWN	39.6076	-80.5963	
47103719640000			UNKNOWN		UNKWN	39.6121	-80.6009	
47103719800000			UNKNOWN		UNKWN	39.6093	-80.6109	
47103719830000			UNKNOWN		UNKWN	39.6086	-80.6141	
47103720140000			UNKNOWN		UNKWN	39.5890	-80.5998	
47103001240001		7/26/1945	EQUITABLE GAS COMPANY	1198	GAS	39.5767	-80.5858	6/11/1945

* No Perf data for these wells*

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SPUD DATE	TD FORM	TD	Permit
11/1/1964	CONEMAUGH /SERIES/	813	00563
6/1/1904	HURON LOWER	3200	30452
	HAMPSHIRE	2763	30676
			00830
			00834
			00842
			00865
			30432
			70403
8/2/1936	BIG INJUN /SD/	2250	00124
6/1/1954	PITTSBURGH COAL	507	00399
9/1/1955	PITTSBURGH COAL	497	00419
10/2/1955	PITTSBURGH COAL	521	00421
1/2/1956	AMES /LM/	862	00424
4/12/1956	PITTSBURGH COAL	925	00427
9/1/1956	CONEMAUGH /SERIES/	1183	00439
8/2/1953	CONEMAUGH /SERIES/	721	00389
	HURON LOWER	2896	30078
			71942
			71945
			71946
			71952
			71954
			71955
			71964
			71980
			71983
			72014
6/26/1945	BAYARD	3262	00124

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WW-9
(4/16)

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47 103 03 189

API Number 47 - 103 - _____
Operator's Well No. BIG177H5

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

FLUIDS/ CUTTINGS DISPOSAL & RECLAMATION PLAN

Operator Name EQT Production Company OP Code 306686

Watershed (HUC 10) Willey Fork of North Fork Fishing Creek Quadrangle Big Run

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

Will a pit be used? Yes No

If so, please describe anticipated pit waste: N/A

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

Proposed Disposal Method For Treated Pit Wastes:

- Land Application
- Underground Injection (UIC Permit Number 014, 8462, 4037)
- Reuse (at API Number _____)
- Off Site Disposal (Supply form WW-9 for disposal location)
- Other (Explain _____)

Will closed loop system be used? If so, describe: Yes, The closed loop system will remove drill cuttings from the drilling fluid. The drill cuttings are then prepared for transportation to an off-site disposal facility.

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

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

Additives to be used in drilling medium? See Attached

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

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

-Landfill or offsite name/permit number? See Attached List

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

I certify that I understand and agree to the terms and conditions of the GENERAL WATER POLLUTION PERMIT issued on August 1, 2005, by the Office of Oil and Gas of the West Virginia Department of Environmental Protection. I understand that the provisions of the permit are enforceable by law. Violations of any term or condition of the general permit and/or other applicable law or regulation can lead to enforcement action.

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

Company Official Signature [Signature]

Company Official (Typed Name) Todd Klaner

Company Official Title Manager, Permitting

Subscribed and sworn before me this 24 day of May, 2017

My commission expires 8-24-22

Notary Public



OFFICIAL SEAL
STATE OF WEST VIRGINIA
NOTARY PUBLIC
Pamela Sykes
EQT Production
PO Box 280
Bridgeport, WV 26330
My Commission Expires Aug. 24, 2022

09/01/2017

DmH
5-26-17

EQT Production Company

Proposed Revegetation Treatment: Acres Disturbed no additional Prevegetation pH 5.2

Lime 3 Tons/acre or to correct to pH 6.5

Fertilizer type Granular 10-20-20

Fertilizer amount 1/3 lbs/acre

Mulch 2 Tons/acre

RECEIVED
Office of Oil and Gas

JUN 5 2017

WV Department of
Environmental Protection

Seed Mixtures

Temporary

Permanent

Seed Type	lbs/acre
KY-31	40
Alsike Clover	5
Annual Rye	15

Seed Type	lbs/acre
Orchard Grass	15
Alsike Clover	5

Attach:

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

Photocopied section of involved 7.5' topographic sheet.

Plan Approved by: 

Comments: _____

4710303189

Title: Oil + Gas Inspected Date: 5-26-17

Field Reviewed? () Yes () No

WW-9 Attachment

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

- Air is used to drill the top-hole sections of the wellbore (surface, intermediate, and pilot). Water based mud may be necessary depending on hole conditions to stabilize and drill the intermediate section. The pilot hole, curve, and lateral sections will be drilled with either air, water based mud, or oil based mud.

Additives to be used in drilling medium?

- Air - biodegradable oil lubricant, detergent, defoaming, water. Water based mud – Barite, viscosifer, alkalinity control, lime, filtration control, deflocculates, biodegradable oil lubricant, defoaming, walnut shell, salt, x-cide, carbonates. Oil based mud – synthetic base oil, emulsifier, salt, lime, viscosifer, alkalinity control, filtration control, deflocculates, biodegradable oil lubricant, defoaming, carbonates.

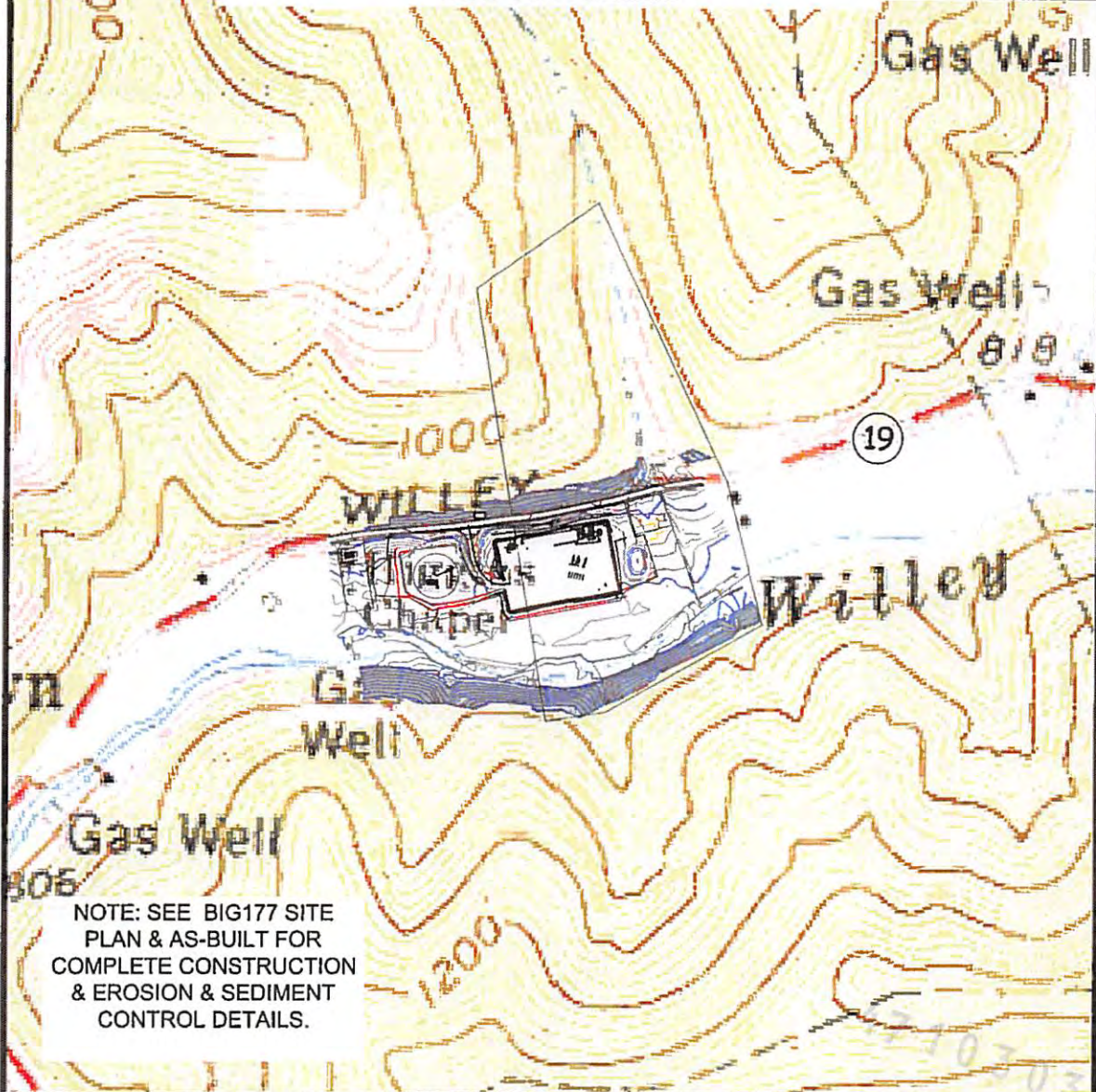
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RECEIVED
Office of Oil and Gas

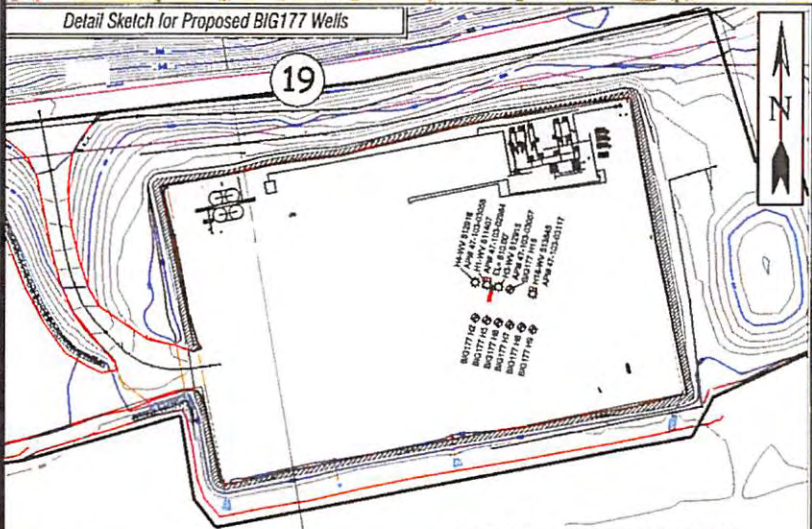
MAY 30 2017

WV Department of
Environmental Protection

09/01/2017



NOTE: SEE BIG177 SITE PLAN & AS-BUILT FOR COMPLETE CONSTRUCTION & EROSION & SEDIMENT CONTROL DETAILS.



Not To Scale

NOTE: SEE BIG177 SITE PLAN & AS-BUILT FOR COMPLETE CONSTRUCTION & EROSION & SEDIMENT CONTROL DETAILS

TOPO SECTIONS OF BIG RUN
7.5' TOPO QUADRANGLE

SCALE: 1"=500'

0' 500' 1000'

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www.slsenergy.com

DRAWN BY: K.G.M.	FILE NO. 6806	DATE 03-30-17	CADD FILE: 6806REC.WD12515R4.DWG
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RECEIVED
Office of Oil and Gas

MAY 30 2017

WV Department of
Environmental Protection

09/01/2017

EQT Production Water plan

Offsite disposals for Marcellus wells

CWS TRUCKING INC.

P.O. Box 391
Williamstown, WV 26187
740-516-3586
Noble County/Noble Township
Permit # 3390

BROAD STREET ENERGY LLC

37 West Broad Street
Suite 1100
Columbus, Ohio 43215
740-516-5381
Washington County/Belpre Twp.
Permit # 8462

LAD LIQUID ASSETS DISPOSAL INC.

226 Rankin Road
Washington, PA 15301
724-350-2760
724-222-6080
724-229-7034 fax
Ohio County/Wheeling
Permit # USEPA WV 0014

TRIAD ENERGY

P.O. Box 430
Reno, OH 45773
740-516-6021 Well
740-374-2940 Reno Office Jennifer
Nobel County/Jackson Township
Permit # 4037

TRI COUNTY WASTE WATER MANAGEMENT, INC.

1487 Toms Run Road
Holbrook, PA 15341
724-627-7178 Plant
724-499-5647 Office
Greene County/Waynesburg
Permit # TC-1009

KING EXCAVATING CO.

Advanced Waste Services
101 River Park Drive
New Castle, Pa. 16101
Facility Permit# PAR000029132

Waste Management - Meadowfill Landfill

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

Waste Management - Northwestern Landfill

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

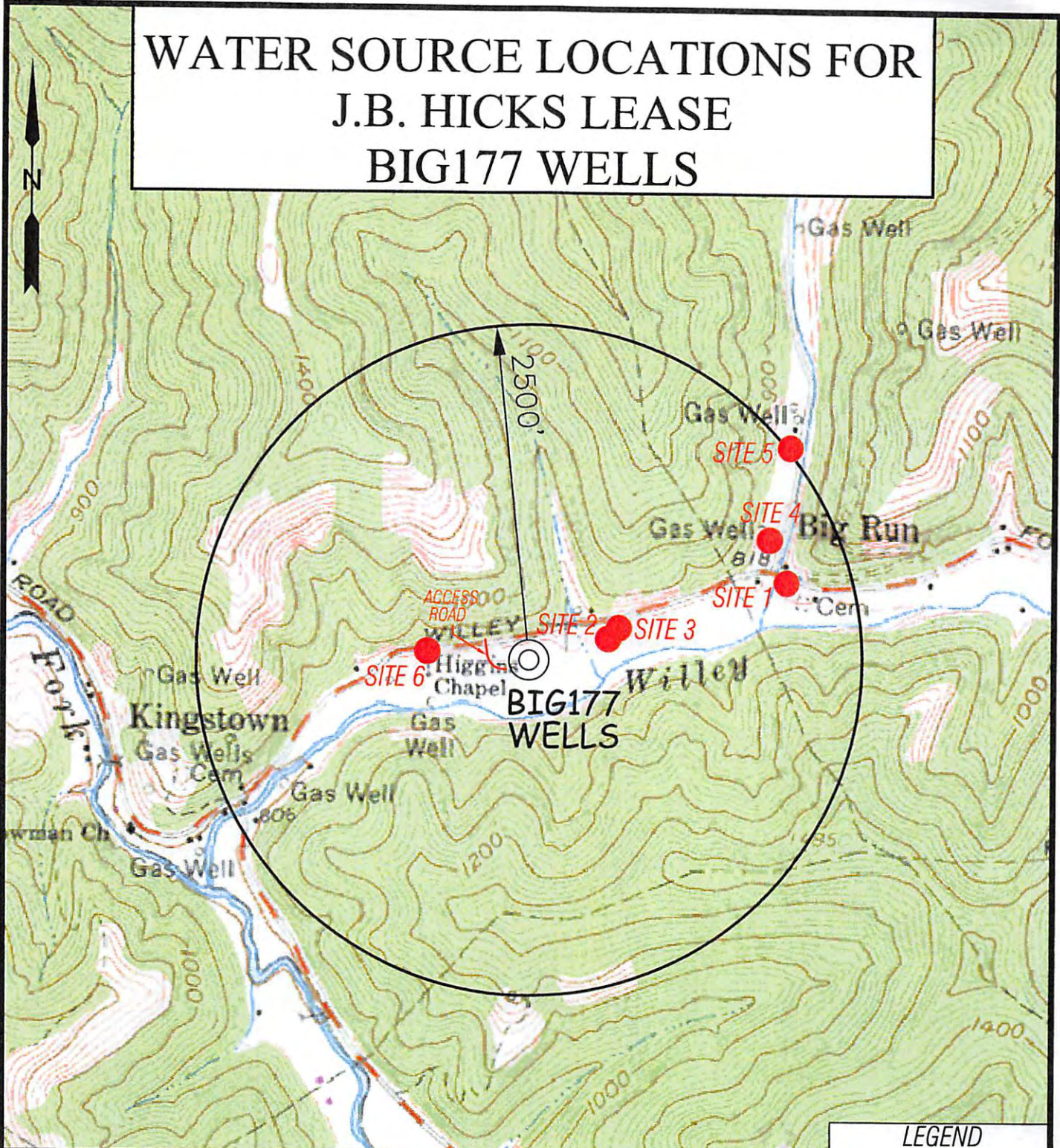
RECEIVED
Office of Oil and Gas

MAY 30 2017

WV Department of
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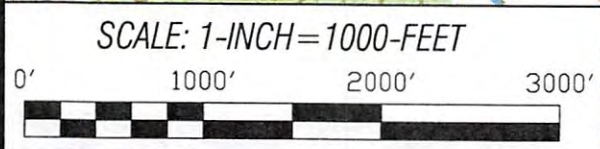
09/01/2017

WATER SOURCE LOCATIONS FOR J.B. HICKS LEASE BIG177 WELLS



LEGEND

- WATER WELL
- ACCESS ROAD



Professional Energy Consultants
A DIVISION OF SMITH LAND SURVEYING, INC.

SLS
SURVEYORS
ENGINEERS
ENVIRONMENTAL
PROJECT MGMT.

(904) 452-5834
WWW.SLSURVEYS.COM

DRAWN BY: A.D.W. FILE NO.: 6806 DATE: 04/03/17 CADD FILE: 6806WSEIG177.dwg

TOPO SECTION OF:
BIG RUN, WV 7.5' QUAD

DISTRICT	COUNTY	TAX MAP-PARCEL NO.
GRANT	WETZEL	13-06

OPERATOR:
EQT PRODUCTION COMPANY
 115 PROFESSIONAL PLACE
 P.O. BOX 280
 BRIDGEPORT, WV 26330



47 10303189

Where energy meets innovation.™

Site Specific Safety Plan

EQT
BIG 177 Pad
Jacksonburg Township
Wetzel County, WV

RECEIVED
Office of Oil and Gas

JUN 5 2017

WV Department of
Environmental Protection

BIG177H5

For Wells:

47 10303189

Date Prepared: December 29, 2016

[Signature]
EQT Production
[Signature]
Title
5-26-17
Date

[Signature]
WV Oil and Gas Inspector
Oil & Gas Inspector
Title
5-26-17
Date

09/01/2017

BIG177H5
EQT PRODUCTION COMPANY

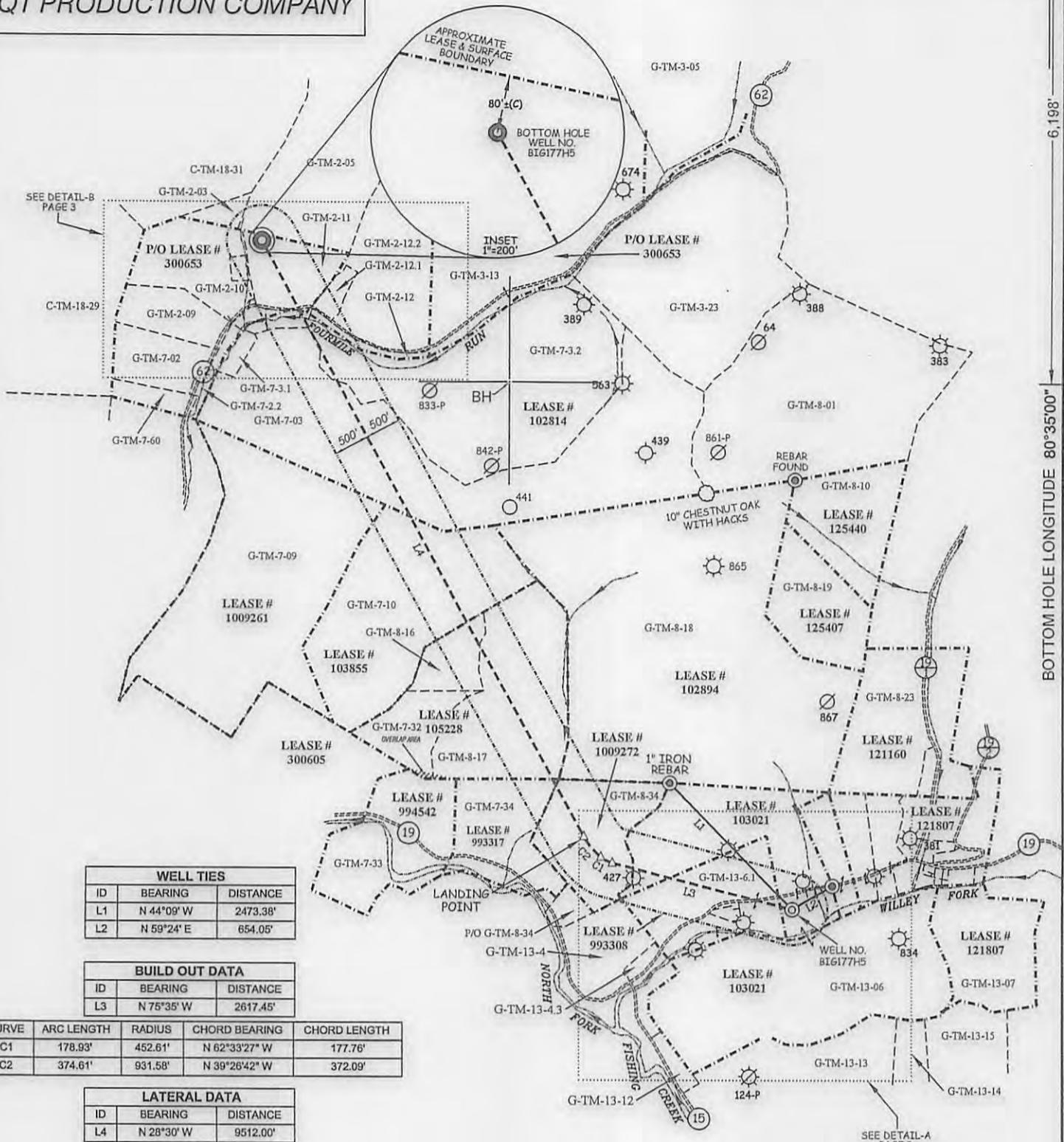
BOTTOM HOLE LATITUDE 39°37'30"
7,802'

TH

TOP HOLE LONGITUDE 80°35'00"

BOTTOM HOLE LONGITUDE 80°35'00"

NAD' 27 GRID NORTH



WELL TIES		
ID	BEARING	DISTANCE
L1	N 44°09' W	2473.38'
L2	N 59°24' E	654.05'

BUILD OUT DATA		
ID	BEARING	DISTANCE
L3	N 75°35' W	2617.45'

CURVE	ARC LENGTH	RADIUS	CHORD BEARING	CHORD LENGTH
C1	178.93'	452.61'	N 62°33'27" W	177.76'
C2	374.61'	931.58'	N 39°26'42" W	372.09'

LATERAL DATA		
ID	BEARING	DISTANCE
L4	N 28°30' W	9512.00'

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(S.P.C. NORTH ZONE) (UTM(M) ZONE 17 NORTH)
 NAD'27 S.P.C.(FT) N. 396,107.39 E. 1,694,445.87
 NAD'27 GEO. LAT-(N) 39.582484 LONG-(W) 80.584118
 NAD'83 UTM (M) N. 4,381,510.506 E. 535,730.872
LANDING POINT
 NAD'27 S.P.C.(FT) N. 397,128.64 E. 1,691,516.76
 NAD'27 GEO. LAT-(N) 39.585190 LONG-(W) 80.594554
 NAD'83 UTM (M) N. 4,381,806.722 E. 534,833.291
BOTTOM HOLE
 NAD'27 S.P.C.(FT) N. 405,487.95 E. 1,686,978.02
 NAD'27 GEO. LAT-(N) 39.607986 LONG-(W) 80.611024
 NAD'83 UTM (M) N. 4,384,330.357 E. 533,408.083



(+) DENOTES LOCATION OF WELL ON UNITED STATES TOPOGRAPHIC MAPS.

LEGEND

- LEASE LINE
- SURFACE LINE
- WELL LATERAL
- OFFSET LINE
- TIE LINE
- CREEK
- ROAD
- COUNTY ROUTE
- PROPOSED WELL
- EXISTING WELL
- PERMITTED WELL
- DRILL PATH BEND POINT
- GRANT DISTRICT TAX MAP-PARCEL G-TM-00-00
- CENTER DISTRICT TAX MAP-PARCEL C-TM-00-00

SCALE 1" = 2000' FILE NO. 6806PBIG177H5.dwg
 DATE MAY 4, 20 17
 REVISED _____
 OPERATORS WELL NO. BIG177H5
 API WELL NO. 47 - 103 - 03189 HUA
 NO. STATE COUNTY PERMIT

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

DESIGNATED AGENT REX C. RAY
 ADDRESS 115 PROFESSIONAL PLACE P.O. BOX 280 BRIDGEPORT, WV 26330

WELL OPERATOR EQT PRODUCTION COMPANY
 ADDRESS 115 PROFESSIONAL PLACE P.O. BOX 280 BRIDGEPORT, WV 26330

COUNTY NAME PERMIT

09/01/2017

BIG177H5
EQT PRODUCTION COMPANY

BOTTOM HOLE LATITUDE 39°37'30"
7,802'

TH

6,198'

80°35'00"

TOP HOLE LONGITUDE

BOTTOM HOLE LONGITUDE

80°35'00"

COUNTY NAME

PERMIT

SURFACE OWNERS

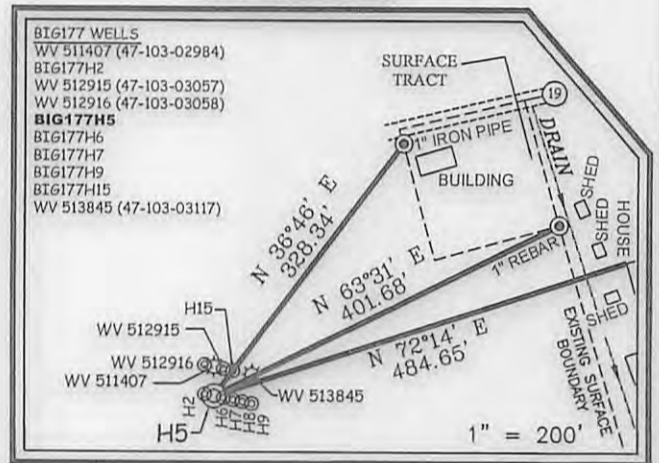
G-TM-2-03	DALE K. DULANEY ET UX	5.57 ACRES±	G-TM-7-32	STELLA & LEEK POSTLETHWAIT ET AL.	44.60 ACRES±
G-TM-2-04	JOHN C. COMER ET UX	104.00 ACRES±	G-TM-7-33	JOHN R. & ROSA MARGELLEA COOK	20 ACRES±
G-TM-2-05	EDWIN L. DULANEY ET UX	104.00 ACRES±	G-TM-7-34	KENNETH & LORRAINE WILDMAN	44.60 ACRES±
G-TM-2-09	ROBERT W. DULANEY	22.87 ACRES±	G-TM-7-60	CODY N. & WALTER N., JR. NORRIS	10 ACRES±
G-TM-2-10	HARLEY R. DULANEY	38 ACRES±	G-TM-8-16	O. J. & MINNIE M. WYATT HEIRS	31.89 ACRES±
G-TM-2-10.1	TEORA L. & SANDRA J. DULANEY	1.53 ACRES±	G-TM-8-17	KENNETH & LORRAINE WILDMAN	67 ACRES±
G-TM-2-10.2	ROBERT W. DULANEY	.45 ACRES±	G-TM-8-18	COASTAL FOREST RESOURCES COMPANY d/b/a COASTAL TIMBERLANDS COMPANY	337 ACRES±
G-TM-2-10.3	ROBERT W. DULANEY	.09 ACRES±			
G-TM-2-10.4	HARLEY R. DULANEY	0.130 ACRES±	G-TM-8-19	PHILLIP & KIMBERLY SHREVE	46.45 ACRES±
G-TM-2-11	EDWIN LEO & LINDA L. DULANEY	26.4 ACRES±	G-TM-8-23	DALE DULANEY ET AL.	70.81 ACRES±
G-TM-2-12	COASTAL FOREST RESOURCES COMPANY d/b/a COASTAL TIMBERLANDS COMPANY	3.63 ACRES±	G-TM-8-34	HALLIE HARDBARGER	54.01 ACRES±
			G-TM-8-35	DEBORAH FRONCZEK ET AL.	15.5 ACRES±
G-TM-2-12.1	TEORA L. & SANDRA DULANEY	4.72 ACRES±	G-TM-8-58	HIGGINS CHAPEL CHURCH OF CHRIST	0.99 ACRES±
G-TM-2-12.2	TEORA & SANDRA DULANEY	66.64 ACRES±	G-TM-8-64	MARY EASTHAM ET AL.	1.45 ACRES±
G-TM-2-13	ROBERT W. DULANEY	2.14 ACRES±	G-TM-8-65	IKKEY & TINA WILLEY	2.15 ACRES±
G-TM-2-14	TEORA L. & SANDRA J. DULANEY	.498 ACRES±	G-TM-8-66	HOM GATHERING OPOC LLC	0.42 ACRES±
G-TM-2-15	TEORA L. & SANDRA J. DULANEY	1.023 ACRES±	G-TM-13-4	JEFF, VIRGIL, JR. & DONNAH WILLEY	26.80 ACRES±
G-TM-2-16	TEORA L. DULANEY	3.187 ACRES±	G-TM-13-4.3	JEFFERY L. WILLEY	3.35 ACRES±
G-TM-3-05	COASTAL FOREST RESOURCES COMPANY d/b/a COASTAL TIMBERLANDS COMPANY	179.00 ACRES±	G-TM-13-06	COASTAL FOREST RESOURCES COMPANY d/b/a COASTAL TIMBERLANDS COMPANY	217.19 ACRES±
G-TM-3-13	EDWARD L. DULANEY II	164.75 ACRES±	G-TM-13-07	MANSEL McDIFFITT ET AL.	51.8 ACRES±
G-TM-7-02	ROBERT W. DULANEY	19.43 ACRES±	G-TM-13-12	LESHIE & MIRACLE SUSAN LYDICK	15.02 ACRES±
G-TM-7-2.1	HARLEY R. DULANEY, JR.	2 ACRES±	G-TM-13-13	LEEMAN E. & LINDA L. DUNN	67.5 ACRES±
G-TM-7-2.2	CODY N. & WALTER N., JR. NORRIS	2.43 ACRES±	G-TM-13-14	LEEMAN E. & LINDA L. DUNN	12.5 ACRES±
G-TM-7-03	COASTAL FOREST RESOURCES COMPANY d/b/a COASTAL TIMBERLANDS COMPANY	178 ACRES±	G-TM-13-15	ROBERT COLE ET AL.	27.75 ACRES±
			C-TM-18-29	BERNARD LEE, JR. & EVELYN M. YOHO	372.90 ACRES±
G-TM-7-3.1	ROBERT W. DULANEY	4 ACRES±	C-TM-18-31	JAMES L. DULANEY, (L/E) DONALD & OLIVE DULANEY	130 19/32 ACRES±
G-TM-7-3.2	COASTAL FOREST RESOURCES COMPANY d/b/a COASTAL TIMBERLANDS COMPANY	156.98 ACRES±			
G-TM-7-9	COASTAL FOREST RESOURCES COMPANY d/b/a COASTAL TIMBERLANDS COMPANY	170.875 ACRES±			
G-TM-7-10	COASTAL FOREST RESOURCES COMPANY d/b/a COASTAL TIMBERLANDS COMPANY	120 ACRES±			

BH

NOTES ON SURVEY

- NO WATER WELLS WERE FOUND WITHIN 250' OF PROPOSED GAS WELL. NO AGRICULTURAL BUILDINGS 2500 SQ. FT. OR GREATER, WERE FOUND WITHIN 625' OF THE CENTER OF PROPOSED WELL PAD. SEE REFERENCE BOX FOR DWELLING WITHIN 625' OF THE CENTER OF PROPOSED WELL PAD.
- WELL SPOT CIRCLE (SHEET 3) AND TOPO MARK IS SCALE 1" = 2000'.

REFERENCES

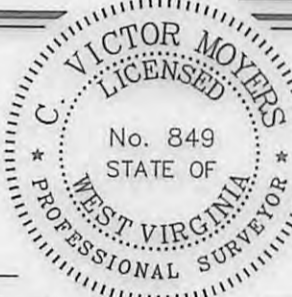


(S.P.C. NORTH ZONE) (UTM(M) ZONE 17 NORTH)
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 NAD27 GEO. LAT-(N) 39.582484 LONG-(W) 80.584118
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 NAD27 GEO. LAT-(N) 39.607996 LONG-(W) 80.611024
 NAD83 UTM (M) N. 4,384,330.357 E. 533,408.083



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

P.S. 849 *C. Victor Moyers*



(+) DENOTES LOCATION OF WELL ON UNITED STATES TOPOGRAPHIC MAPS.
 DATE MAY 4, 20 17

REVISED _____
 OPERATORS WELL NO. BIG177H5
 API WELL NO. 47-103-03189
 STATE COUNTY PERMIT

MINIMUM DEGREE OF ACCURACY 1 / 2500 FILE NO. 6806PBIG177H5.dwg
 HORIZONTAL & VERTICAL CONTROL DETERMINED BY DGPS (SURVEY GRADE TIE TO CORS NETWORK) SCALE SEE NOTE 2

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

WELL TYPE: OIL GAS LIQUID WASTE INJECTION DISPOSAL IF "GAS" PRODUCTION STORAGE DEEP SHALLOW
 LOCATION: PAD ELEVATION 811' WATERSHED WILLEY FORK OF NORTH FORK FISHING CREEK
 DISTRICT GRANT COUNTY WETZEL QUADRANGLE BIG RUN 7.5'
 SURFACE OWNER COASTAL FOREST RESOURCES CO. d/b/a COASTAL TIMBERLANDS CO. ACREAGE 27± OF 217±
 ROYALTY OWNER HIGGINS FAMILY TRUST ET AL. ACREAGE 242.5
 PROPOSED WORK: LEASE NO. 103021
 DRILL CONVERT DRILL DEEPER REDRILL FRACTURE OR STIMULATE PLUG OFF OLD FORMATION PERFORATE NEW FORMATION PLUG AND ABANDON CLEAN OUT AND REPLUG OTHER
 PHYSICAL CHANGE IN WELL (SPECIFY) _____ TARGET FORMATION MARCELLUS
 ESTIMATED DEPTH 6,881'

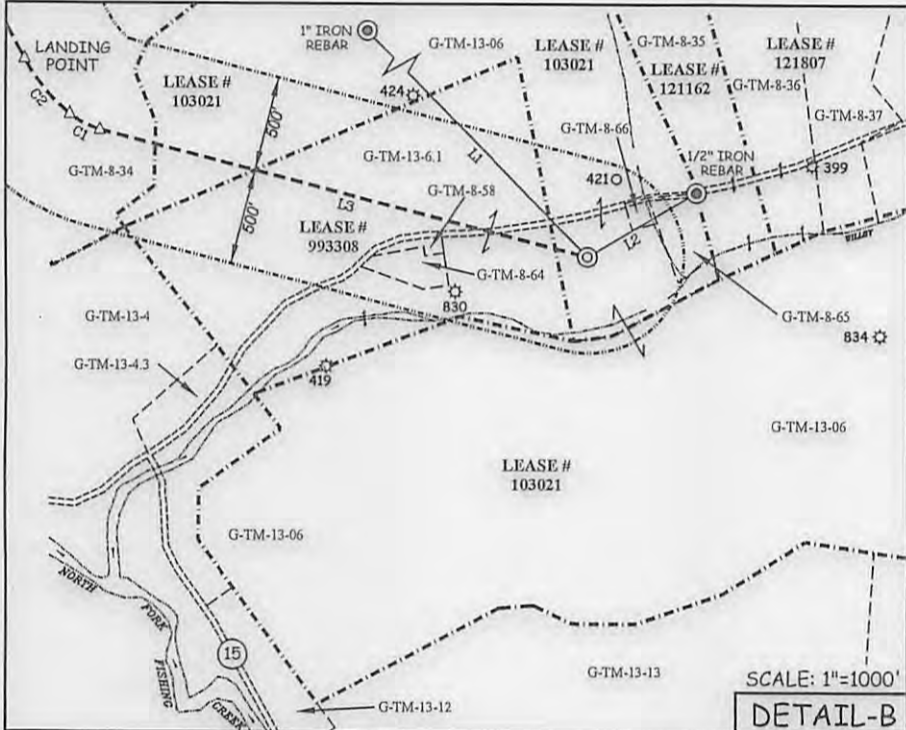
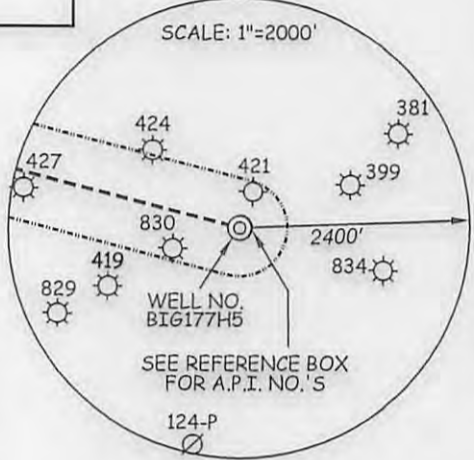
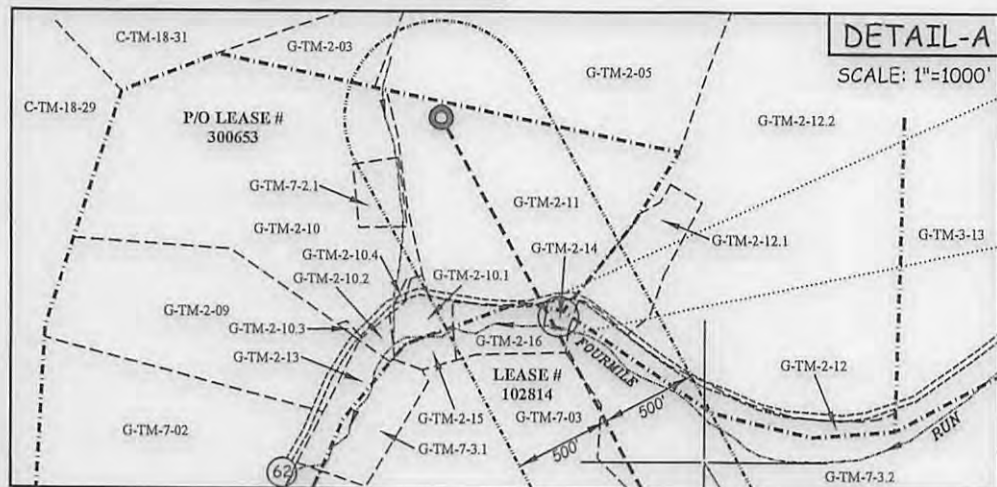
WELL OPERATOR EQT PRODUCTION COMPANY DESIGNATED AGENT REX C. RAY
 ADDRESS 115 PROFESSIONAL PLACE P.O. BOX 280 BRIDGEPORT, WV 26330 ADDRESS 115 PROFESSIONAL PLACE P.O. BOX 280 BRIDGEPORT, WV 26330

09/01/2017

BIG177H5
EQT PRODUCTION COMPANY

TOP HOLE LONGITUDE 80°35'00"
6,198'
BOTTOM HOLE LONGITUDE 80°35'00"

NAD '27 GRID NORTH



ROYALTY OWNERS		
COASTAL FOREST RESOURCES CO. d/b/a COASTAL TIMBERLAND CO., ET AL	57.5 AC±	LEASE NO. 993308
KEVIN GOFF	48.25 AC±	LEASE NO. 1009272
HIGGINS FAMILY TRUST ET AL	51.750 AC±	LEASE NO. 993317
IRREVOCABLE INTERVIVOS TRUST OF BILLY J. HIGGINS & FRANCES J. HIGGINS, ET AL	142.5 AC±	LEASE NO. 105228
SHIBEN ESTATES INC.	101 AC±	LEASE NO. 103855
JOSEPH SHIBEN & MINNIE SHIBEN ESTATE ET AL	1030 AC±	LEASE NO. 102814
JAMES E. NEWMAN ET AL.	332 AC±	LEASE NO. 300653

WELL TIES		
ID	BEARING	DISTANCE
L1	N 44°09' W	2473.38'
L2	N 59°24' E	654.05'

BUILD OUT DATA		
ID	BEARING	DISTANCE
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CURVE	ARC LENGTH	RADIUS	CHORD BEARING	CHORD LENGTH
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(+) DENOTES LOCATION OF WELL ON UNITED STATES TOPOGRAPHIC MAPS.



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



LEGEND	
LEASE LINE	---
SURFACE LINE	- - - - -
WELL LATERAL	---
OFFSET LINE	---
TIE LINE	---
CREEK	~ ~ ~ ~ ~
ROAD	---
COUNTY ROUTE	---
PROPOSED WELL	⊙
EXISTING WELL	⊙
PERMITTED WELL	○
DRILL PATH BEND POINT	△
GRANT DISTRICT TAX MAP-PARCEL	G-TM-00-00
CENTER DISTRICT TAX MAP-PARCEL	C-TM-00-00

09/01/2017

SCALE SEE DETAILS FILE NO. 6806PBIG177H5.dwg
DATE MAY 4, 20 17
REVISED _____
OPERATORS WELL NO. BIG177H5
API WELL NO. 47 STATE 103 COUNTY 03189 PERMIT _____

WELL OPERATOR EQT PRODUCTION COMPANY DESIGNATED AGENT REX C. RAY
ADDRESS 115 PROFESSIONAL PLACE P.O. BOX 280 BRIDGEPORT, WV 26330 ADDRESS 115 PROFESSIONAL PLACE P.O. BOX 280 BRIDGEPORT, WV 26330

COUNTY NAME PERMIT

**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

4710503109

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**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: _____

Lease No.	Grantor, Lessor, etc.	Grantee, Lessee, etc.	Royalty	Book/Page
	<u>Higgins Family Trust, et al. (current royalty owner)</u>		**	
<u>103021</u>	James V. Higgins (Original Lease)	The Philadelphia Company of West Va.		DB 60/414
	The Philadelphia Company of West Va.	Pittsburgh & West Virginia Gas Company		DB 98/146
	Pittsburgh & West Virginia Gas Company	Equitable Gas Company		DB 187/321
	Equitable Gas Company	Equitrans, Inc.		OG 71A/453
	Equitrans, Inc.	Equitrans, LP		AB 105/915
	Equitrans, L.P.	EQT Production Company		DB 131A/81
	Coastal Forest Resources Company, d/b/a Coastal		**	
<u>993308</u>	Lumber Company, et al.	EQT Production Company		DB 147A/664
<u>1009272</u>	Kevin S. Goff	EQT Production Company		OG 163A/843
<u>993317</u>	Higgins Family Trust, et al.	EQT Production Company	**	DB 149A/198
	<u>The Irrevocable Intervivos Trust of Billy J. Higgins and Frances J. Higgins Family Trust dated January 10, 2012, et al. (current royalty owner)</u>		**	
<u>105228</u>	J. E. Bartlett, et al. (Original Lease)	The Philadelphia Company of West Virginia		DB 111/491
	The Philadelphia Company of West Virginia	Pittsburgh & West Virginia Gas Company		DB 22A/352
	Pittsburgh & West Virginia Gas Company	Equitable Gas Company		DB 187/321
	Equitable Gas Company	Equitrans, Inc.		AB 71/453
	Equitrans, Inc.	Equitrans, LP		AB 105/915
	Equitrans, LP	Equitable Production-Eastern States Inc. (EPES)		AB 23/899 Marion Co.
	Equitable Production-Eastern States Inc. (EPES)	Equitable Production Company		see attached
	Equitable Production Company	EQT Production Company		CB 13/14
	<u>Shiben Estates Inc. (current royalty owner)</u>		**	
<u>103855</u>	C.J. Lavelle (Original Lease)	Fisher Oil Company		DB 58/49
	Fisher Oil Company	Philadelphia Company of WV		DB 22A/352
	Philadelphia Company of WV	Pittsburgh and WV Gas Company		DB 187/321
	Pittsburgh and WV Gas Company	Equitable Gas Company		DB 71A/453
	Equitable Gas Company	Equitrans, Inc.		AB 71/453
	Equitrans, Inc.	Equitrans, LP		AB 105/915
	Equitrans, LP	Equitable Production-Eastern States Inc. (EPES)		AB 23/899 Marion Co.
	Equitable Production-Eastern States Inc. (EPES)	Equitable Production Company		see attached
	Equitable Production Company	EQT Production Company		CB 13/14
<u>102814</u>	Joseph Shiben and Minnie Shiben Estate, et al.	EQT Production Company	**	DB 182A/84
	<u>James E. Newman, et al. (Current Royalty Owner)</u>		**	
<u>300653</u>	John Ingram (Original Lease)	South Penn Oil Company		DB 46/228
	South Penn Oil Company	Hope Natural Gas Company		DB 91/468
	Hope Natural Gas Company	Consolidated Gas Supply Corporation		DB 233/387
	Consolidated Gas Supply Corporation	Consolidated Gas Transmission Corporation		LB 66A/69
	Consolidated Gas Transmission Corporation	CNG Transmission Corporation		CB 46/654 (Marion County)
	CNG Transmission Corporation	Eastern States Oil and Gas, Inc.		LB 76A/232
	Eastern States Oil and Gas, Inc.	Blazer Energy Corp.		CB 12/253
	Blazer Energy Corp.	Eastern States Oil and Gas, Inc.		CB 12/259
	Eastern States Oil and Gas, Inc.	Equitable Production-Eastern States Oil & Gas		CB 13/14
	Equitable Production-Eastern States Oil & Gas	Equitable Production Company		CB 13/14
	Equitable Production Company	EQT Production Company		CB 13/14

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

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PENNSYLVANIA DEPARTMENT OF STATE
CORPORATION BUREAU
ROOM 308 NORTH OFFICE BUILDING
P.O. BOX 8722
HARRISBURG, PA 17105-8722

315

EQUITABLE PRODUCTION COMPANY *PA*

THE CORPORATION BUREAU IS HAPPY TO SEND YOU YOUR FILED DOCUMENT.
PLEASE NOTE THE FILE DATE AND THE SIGNATURE OF THE SECRETARY OF THE
COMMONWEALTH. THE CORPORATION BUREAU IS HERE TO SERVE YOU AND WANTS
TO THANK YOU FOR DOING BUSINESS IN PENNSYLVANIA. IF YOU HAVE ANY
QUESTIONS PERTAINING TO THE CORPORATION BUREAU, CALL (717) 787-1057.

43 91 31
ENTITY NUMBER: 2980374

MICROFILM NUMBER: 2001032

1297-1300

C T CORP SYSTEM
COUNTER

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05/01/2017

200132-1297

APR 30 2001

Microfilm Number _____

Filed with the Department of State on _____

Entity Number 2980374

N. Tom Pappajohn
Secretary of the Commonwealth

ARTICLES OF MERGER-DOMESTIC BUSINESS CORPORATION

DSCB:15-1926 (Rev 90)

JD

In compliance with the requirements of 15 Pa.C.S. § 1926 (relating to articles of merger or consolidation), the undersigned business corporations, desiring to effect a merger, hereby state that:

1. The name of the corporation surviving the merger is: Equitable Production Company

2. (Check and complete one of the following):

The surviving corporation is a domestic business corporation and the (a) address of its current registered office in this Commonwealth or (b) name of its commercial registered office provider and the county of venue is (the Department is hereby authorized to correct the following information to conform to the records of the Department):

(a) _____
Number and Street City State Zip County

(b) c/o: CT Corporation System Allegheny
Name of Commercial Registered Office Provider County

For a corporation represented by a commercial registered office provider, the county in (b) shall be deemed the county in which the corporation is located for venue and official publication purposes.

____ The surviving corporation is a qualified foreign business corporation incorporated under the laws of _____ and the (a) address of its current registered office in this Commonwealth or (b) name of its commercial registered office provider and the county of venue is (the Department is hereby authorized to correct the following information to conform to the records of the Department):

(a) _____
Number and Street City State Zip County

(b) c/o: _____
Name of Commercial Registered Office Provider County

For a corporation represented by a commercial registered office provider, the county in (b) shall be deemed the county in which the corporation is located for venue and official publication purposes.

____ The surviving corporation is a nonqualified foreign business corporation incorporated under the laws of _____ and the address of its principal office under the laws of such domiciliary jurisdiction is:

Number and Street City State Zip

3. The name and the address of the registered office in this Commonwealth or name of its commercial registered office provider and the county of venue of each other domestic business corporation and qualified foreign business corporation which is a party to the plan of merger are as follows:

Name of Corporation Address of Registered Office or Name of Commercial Registered Office Provider County
Equitable Production Company CT Corporation System Allegheny

Equitable Production-Eastern States, Inc. CT Corporation System Allegheny

PA025 - 10/14/99 CT System Online

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ARTICLES OF MERGER-DOMESTIC BUSINESS CORPORATION

200132-1298

DSCB:15-1926 (Rev 90)-2

4. (Check, and if appropriate complete, one of the following):

The plan of merger shall be effective upon filing these Articles of Merger in the Department of State.

The plan of merger shall be effective on: April 30, 2001 at _____
Date Hour

5. The manner in which the plan of merger was adopted by each domestic corporation is as follows:

Name of Corporation	Manner of Adoption
<u>Equitable Production Company</u>	<u>Adopted by Board of Directors pursuant to Sec. 1924 of the PA BCL</u>
_____	_____
_____	_____

6. (Strike out this paragraph if no foreign corporation is a party to the merger). The plan was authorized, adopted or approved, as the case may be, by the foreign business corporation (or each of the foreign business corporations) party to the plan in accordance with the laws of the jurisdiction in which it is incorporated.

7. (Check, and if appropriate complete, one of the following):

The plan of merger is set forth in full in Exhibit A attached hereto and made a part hereof.

____ Pursuant to 15 Pa.C.S. § 1901 (relating to omission of certain provisions from filed plans) the provisions, if any, of the plan of merger that amend or constitute the operative Articles of Incorporation of the surviving corporation as in effect subsequent to the effective date of the plan are set forth in full in Exhibit A attached hereto and made a part hereof. The full text of the plan of merger is on file at the principal place of business of the surviving corporation, the address of which is:

Number and Street	City	State	Zip	County
_____	_____	_____	_____	_____

IN TESTIMONY WHEREOF, the undersigned corporation or each undersigned corporation has caused these Articles of Merger to be signed by a duly authorized officer thereof this 26th day of April, 2001.

Equitable Production Company

(Name of Corporation)

BY: Henry E. Reich
Henry E. Reich, Jr. (Signature)

TITLE: Vice President

Equitable Production - Eastern States, Inc.

(Name of Corporation)

BY: Johanna G. O'Loughlin
Johanna G. O'Loughlin (Signature)

TITLE: Corporate Secretary

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AGREEMENT AND PLAN OF MERGER
BETWEEN
EQUITABLE PRODUCTION – EASTERN STATES, INC.
AND
EQUITABLE PRODUCTION COMPANY

AGREEMENT AND PLAN OF MERGER, dated this 30th day of April 2001, pursuant to Section 251 of the General Corporation Law of the State of Delaware between Equitable Production – Eastern States, Inc., a Delaware corporation, and Equitable Production Company, a Pennsylvania corporation.

WHEREAS, the constituent corporations desire to merge into a single corporation.

NOW, THEREFORE, the corporations, parties to this Agreement, in consideration of the mutual covenants, agreements and provisions hereinafter contained, do hereby prescribe the terms and conditions of said merger and mode of carrying the same into effect as follows:

FIRST: Effective on April 30, 2001, Equitable Production Company hereby merges into itself Equitable Production – Eastern States, Inc., and Equitable Production Company shall be the surviving corporation.

SECOND: The Articles of Incorporation of Equitable Production Company as heretofore amended and as in effect on the date of the merger provided in this Agreement, shall continue in full force and effect as the Articles of Incorporation of the corporation surviving this merger.

THIRD: The outstanding shares of the capital stock of Equitable Production – Eastern States, Inc. shall be cancelled as of the effective date of the merger pursuant to this Agreement and no new shares issued therefor.

FOURTH: The terms and conditions of the merger are as follows:

- (a) The by-laws of the surviving corporation as they shall exist on the effective date of this Agreement shall be and remain the by-laws of the surviving corporation until the same shall be altered, amended and repealed as therein provided.
- (b) The directors and officers of the surviving corporation shall continue in office until the next annual meeting of the shareholders

09/01/2017

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and until their successors shall have been elected and qualified.

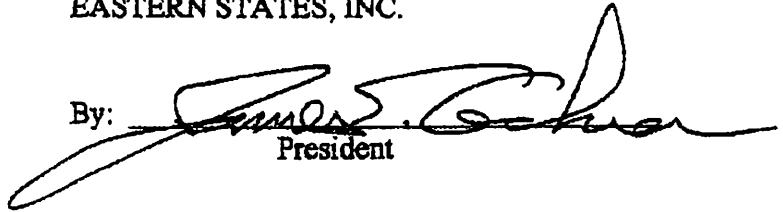
- (c) Upon the merger becoming effective, all the property, rights, privileges, franchises, patents, trademarks, licenses, registrations and other assets of every kind and description of the merged corporation shall be transferred to, vested in and devolved upon the surviving corporation without further act or deed and all property, rights, and every other interest of the surviving corporation and the merged corporation shall be effectively the property of the surviving corporation as they were of the surviving and the merged corporations, respectively. The merged corporation hereby agrees from time to time, as and when requested by the surviving corporation or by its successors or assigns, to execute and deliver or cause to be executed and delivered all such deeds and instruments and to take or cause to be taken such further or other action as the surviving corporation may deem to be necessary or desirable in order to vest in and confirm to the surviving corporation title to and possession of any property of the merged corporation acquired or to be acquired by reason of or as a result of the merger herein provided for and otherwise to carry out the intent and purposes hereof and the proper officers and directors of the merged corporation and the proper officers and directors of the surviving corporation are fully authorized in the name of the merged corporation or otherwise to take any and all such action.

IN WITNESS WHEREOF, the parties to this agreement, pursuant to the approval and authority duly given by resolutions adopted by their Board of Directors have caused these presents to be executed by the President of each party hereto as the respective act, deed and agreement of said corporations on this 30th day of April 2001.

ATTEST:

EQUITABLE PRODUCTION -
EASTERN STATES, INC.

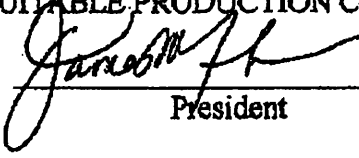

Corporate Secretary

By: 
President

ATTEST:

EQUITABLE PRODUCTION COMPANY


Corporate Secretary

By: 
President

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COMMONWEALTH OF PENNSYLVANIA

DEPARTMENT OF STATE

APRIL 30, 2001

4770305189

TO ALL WHOM THESE PRESENTS SHALL COME, GREETING:

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EQUITABLE PRODUCTION COMPANY

I, Kim Pizzingrilli, Secretary of the Commonwealth of Pennsylvania do hereby certify that the foregoing and annexed is a true and correct photocopy of Articles of Merger

which appear of record in this department



IN TESTIMONY WHEREOF, I have hereunto set my hand and caused the Seal of the Secretary's Office to be affixed, the day and year above written.

A handwritten signature in cursive script, reading "Kim Pizzingrilli".

Secretary of the Commonwealth

DPOS

09/01/2017



47 1 0 3 0 3 1 8 9

May 12, 2017

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

Re: BIG177H2, BIG177H5, BIG1776, BIG177h15
Grant District, Wetzel County

Dear Mr. Martin,

EQT Production Company is submitting an application for a new well work permit for the above well number. Upon information and belief, Operator's lease and/ or other real property rights permit it to conduct drilling operations for the subject well in the location shown on the plat, including under any public roads that the well lateral crosses.

Sincerely,

Vicki Roark
Permitting Supervisor-WV

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**STATE OF WEST VIRGINIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION, OFFICE OF OIL AND GAS
NOTICE CERTIFICATION**

Date of Notice Certification: 5-25-17

API No. 47- 103 - _____
Operator's Well No. BIG177H5
Well Pad Name: _____

Notice has been given:

Pursuant to the provisions in West Virginia Code § 22-6A, the Operator has provided the required parties with the Notice Forms listed below for the tract of land as follows:

State:	<u>WV</u>	UTM NAD 83	Easting:	<u>535,730.872</u>
County:	<u>Wetzel</u>		Northing:	<u>4,381,510.506</u>
District:	<u>Grant</u>	Public Road Access:		<u>Rt 19</u>
Quadrangle:	<u>Big Run</u>	Generally used farm name:		<u>Coastal Forest Resources Co dba Coastal Timberlands Co</u>
Watershed:	<u>Willey Fork of North Fork Fishing Creek</u>			

Pursuant to West Virginia Code § 22-6A-7(b), every permit application filed under this section shall be on a form as may be prescribed by the secretary, shall be verified and shall contain the following information: (14) A certification from the operator that (i) it has provided the owners of the surface described in subdivisions (1), (2) and (4), subsection (b), section ten of this article, the information required by subsections (b) and (c), section sixteen of this article; (ii) that the requirement was deemed satisfied as a result of giving the surface owner notice of entry to survey pursuant to subsection (a), section ten of this article six-a; or (iii) the notice requirements of subsection (b), section sixteen of this article were waived in writing by the surface owner; and Pursuant to West Virginia Code § 22-6A-11(b), the applicant shall tender proof of and certify to the secretary that the notice requirements of section ten of this article have been completed by the applicant.

Pursuant to West Virginia Code § 22-6A, the Operator has attached proof to this Notice Certification that the Operator has properly served the required parties with the following: *PLEASE CHECK ALL THAT APPLY <input type="checkbox"/> 1. NOTICE OF SEISMIC ACTIVITY or <input checked="" type="checkbox"/> NOTICE NOT REQUIRED BECAUSE NO SEISMIC ACTIVITY WAS CONDUCTED <input type="checkbox"/> 2. NOTICE OF ENTRY FOR PLAT SURVEY or <input checked="" type="checkbox"/> NO PLAT SURVEY WAS CONDUCTED <input checked="" type="checkbox"/> 3. NOTICE OF INTENT TO DRILL or <input type="checkbox"/> NOTICE NOT REQUIRED BECAUSE NOTICE OF ENTRY FOR PLAT SURVEY WAS CONDUCTED or <input type="checkbox"/> WRITTEN WAIVER BY SURFACE OWNER (PLEASE ATTACH) <input checked="" type="checkbox"/> 4. NOTICE OF PLANNED OPERATION <input checked="" type="checkbox"/> 5. PUBLIC NOTICE <input checked="" type="checkbox"/> 6. NOTICE OF APPLICATION		OOG OFFICE USE ONLY <input type="checkbox"/> RECEIVED/ NOT REQUIRED <input type="checkbox"/> RECEIVED <input type="checkbox"/> RECEIVED/ NOT REQUIRED <input type="checkbox"/> RECEIVED <input type="checkbox"/> RECEIVED <input type="checkbox"/> RECEIVED
RECEIVED Office of Oil and Gas MAY 30 2017		

Required Attachments:

The Operator shall attach to this Notice Certification Form all Notice Forms and Certifications of Notice that have been provided to the required parties and/or any associated written waivers. For the Public Notice, the operator shall attach a copy of the Class II Legal Advertisement with publication date verification or the associated Affidavit of Publication. The attached Notice Forms and Certifications of Notice shall serve as proof that the required parties have been notified as required under West Virginia Code § 22-6A. Pursuant to West Virginia Code § 22-6A-11(b), the Certification of Notice to the person may be made by affidavit of personal service, the return receipt card or other postal receipt for certified mailing.

WV Department of
Environmental Protection

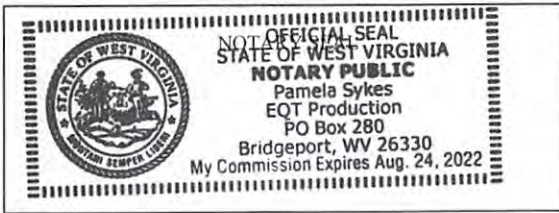
Certification of Notice is hereby given:

[Handwritten signature]

THEREFORE, I Todd Klamer, have read and understand the notice requirements within West Virginia Code § 22-6A. I certify that as required under West Virginia Code § 22-6A, I have served the attached copies of the Notice Forms, identified above, to the required parties through personal service, by registered mail or by any method of delivery that requires a receipt or signature confirmation. I certify under penalty of law that I have personally examined and am familiar with the information submitted in this Notice Certification and all attachments, and that based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

Well Operator: EQT Production Company
By: Todd Klamer
Its: Manager, Permitting
Telephone: 304.848.0076

Address: 115 Professional Place PO Box 280
Bridgeport WV 26330
Facsimile: 304.848.0041
Email: vroark@eqt.com



Subscribed and sworn before me this 24 day of May 2017.
Pamela Sykes Notary Public
My Commission Expires 8.24.22

Oil and Gas Privacy Notice:

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

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STATE OF WEST VIRGINIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION, OFFICE OF OIL AND GAS
NOTICE OF APPLICATION

Notice Time Requirement: notice shall be provided no later than the **filing date of permit application.**

Date of Notice: 5-25-17 **Date Permit Application Filed:** 5-25-17

Notice of:

- PERMIT FOR ANY WELL WORK
- CERTIFICATE OF APPROVAL FOR THE CONSTRUCTION OF AN IMPOUNDMENT OR PIT

Delivery method pursuant to West Virginia Code § 22-6A-10(b)

- PERSONAL SERVICE
- REGISTERED MAIL
- METHOD OF DELIVERY THAT REQUIRES A RECEIPT OR SIGNATURE CONFIRMATION

Pursuant to W. Va. Code § 22-6A-10(b) no later than the filing date of the application, the applicant for a permit for any well work or for a certificate of approval for the construction of an impoundment or pit as required by this article shall deliver, by personal service or by registered mail or by any method of delivery that requires a receipt or signature confirmation, copies of the application, the erosion and sediment control plan required by section seven of this article, and the well plat to each of the following persons: (1) The owners of record of the surface of the tract on which the well is or is proposed to be located; (2) The owners of record of the surface tract or tracts overlying the oil and gas leasehold being developed by the proposed well work, if the surface tract is to be used for roads or other land disturbance as described in the erosion and sediment control plan submitted pursuant to subsection (c), section seven of this article; (3) The coal owner, operator or lessee, in the event the tract of land on which the well proposed to be drilled is located [sic] is known to be underlain by one or more coal seams; (4) The owners of record of the surface tract or tracts overlying the oil and gas leasehold being developed by the proposed well work, if the surface tract is to be used for the placement, construction, enlargement, alteration, repair, removal or abandonment of any impoundment or pit as described in section nine of this article; (5) Any surface owner or water purveyor who is known to the applicant to have a water well, spring or water supply source located within one thousand five hundred feet of the center of the well pad which is used to provide water for consumption by humans or domestic animals; and (6) The operator of any natural gas storage field within which the proposed well work activity is to take place. (c)(1) If more than three tenants in common or other co-owners of interests described in subsection (b) of this section hold interests in the lands, the applicant may serve the documents required upon the person described in the records of the sheriff required to be maintained pursuant to section eight, article one, chapter eleven-a of this code. (2) Notwithstanding any provision of this article to the contrary, notice to a lien holder is not notice to a landowner, unless the lien holder is the landowner. W. Va. Code R. § 35-8-5.7.a requires, in part, that the operator shall also provide the Well Site Safety Plan ("WSSP") to the surface owner and any water purveyor or surface owner subject to notice and water testing as provided in section 15 of this rule.

Application Notice WSSP Notice E&S Plan Notice Well Plat Notice is hereby provided to:

SURFACE OWNER(s)

Name: Coastal Forest Resources Co dba Coastal Timberlands Co ✓
 Address: PO Box 709
Buckhannon WV 26201

Name: _____
 Address: _____

SURFACE OWNER(s) (Road and/or Other Disturbance)

Name: Coastal Forest Resources Co dba Coastal Timberlands Co
 Address: PO Box 709
Buckhannon WV 26201

Name: _____
 Address: _____

SURFACE OWNER(s) (Impoundments or Pits)

Name: Coastal Forest Resources Co dba Coastal Timberlands Co
 Address: PO Box 709
Buckhannon WV 26201

COAL OWNER OR LESSEE

Name: See Attached
 Address: _____ RECEIVED
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COAL OPERATOR

Name: _____ MAY 30 2017
 Address: _____ WV Department of
 Environmental Protection

SURFACE OWNER OF WATER WELL AND/OR WATER PURVEYOR(s)

Name: See Attached
 Address: _____

OPERATOR OF ANY NATURAL GAS STORAGE FIELD

Name: _____
 Address: _____

*Please attach additional forms if necessary

Surface Owner:

Coastal Forest Resources Co
DBA Coastal Timberlands Co
PO Box 709
Buckhannon WV 26201

Surface Owner: Access Road

Coastal Forest Resources Co
DBA Coastal Timberlands Co
PO Box 709
Buckhannon WV 26201

Surface Owner: Pit/Impoundment

Coastal Forest Resources Co
DBA Coastal Timberlands Co
PO Box 709
Buckhannon WV 26201

7016 1970 0000 3938 0378

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CERTIFIED MAIL® RECEIPT
Domestic Mail Only

For delivery information, visit our website at www.usps.com.

OFFICIAL US

Certified Mail Fee \$ _____

Extra Services & Fees (check box, add fee as appropriate)

<input type="checkbox"/> Return Receipt (hardcopy)	\$ _____
<input type="checkbox"/> Return Receipt (electronic)	\$ _____
<input type="checkbox"/> Certified Mail Restricted Delivery	\$ _____
<input type="checkbox"/> Adult Signature Required	\$ _____
<input type="checkbox"/> Adult Signature Restricted Delivery	\$ _____

Postage \$ _____

Total Postage and Postage \$ _____

Sent To _____

Street and Apt. No. _____

City, State, ZIP+4 _____

Coastal Forest Resources Co.
dba Coastal Timberlands Co
P.O. Box 709
Buckhannon, WV 26201

Postmark Here
MAY 25 2017
26330-USPS

BIG177 Permit Ap. & Planned Op

PS Form 3800, April 2015 PSN 7530-02-000-9047 See Reverse for Instructions

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Owners of Water Sources:

Ike Willey
12359 Willey Fork Rd
Pine Grove WV 26419

John D Parks
12301 Willey Fork Rd
Pine Grove WV 26419

Higgins Chapel Church of Christ
10460 N Fork Rd
Pine Grove WV 26419



Mary Eastham
12653 Willey Fork Rd
Pine Grove WV 26419

[Faint, illegible handwritten text]

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Coal Owners:

WPP LLC
5260 Irwin Road
Huntington WV 25705

Billy James Higgins
531 Franklin Terrace
Washington PA 15301

Deanna Merle Weber
633 Carothers Rd
Weirton WV 26062

Coastal Forest Resources
DBA Coastal Timberlands Co
PO Box 709
Buckhannon WV 26201



Robin Barr
8480 Possum Hollow Rd
Apt 24
Dundee OH 44624

CNX Land LLC
Engineering Operations Support Dept. Coal
1000 Consol Energy Dr
Canonsburg PA 15317

Murray American Energy Inc WV
1 Bridge St
Monongah WV 26554

0510307101

Murray American Energy Inc OH
C/O Murray Energy Corporation
46226 National Rd St
Clairsville OH 43950

Doris E Hamilton
55 Parker St
Wheeling WV 26003

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09/01/2017

WW-6A
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API NO. 47- 103 - _____
OPERATOR WELL NO. BIG177H5 _____
Well Pad Name: _____

WV Department of
Environmental Protection

Notice is hereby given:

Pursuant to West Virginia Code § 22-6A-10(b), notice is hereby given that the undersigned well operator has applied for a permit for well work or for a certificate of approval for the construction of an impoundment or pit.

This Notice Shall Include:

Pursuant to W. Va. Code § 22-6A-10(b), this notice shall include: (1) copies of the application; (2) the erosion and sediment control plan required by section seven of this article; and (3) the well plat.

Pursuant to W. Va. Code § 22-6A-10(f), this notice shall include: (1) a statement of the time limits for filing written comments; (2) who may file written comments; (3) the name and address of the secretary for the purpose of filing the comments and obtaining additional information; and (4) a statement that the persons may request, at the time of submitting written comments, notice of the permit decision and a list of persons qualified to test water.

Pursuant to W. Va. Code R. § 35-8-5.7.a, the operator shall provide the Well Site Safety Plan to the surface owner and any water purveyor or surface owner subject to notice and water testing as provided in section 15 of this rule.

Pursuant to W. Va. Code R. § 35-8-15.2.c, this notice shall: (1) contain a statement of the surface owner's and water purveyor's right to request sampling and analysis; (2) advise the surface owner and water purveyor of the rebuttable presumption for contamination or deprivation of a fresh water source or supply; advise the surface owner and water purveyor that refusal to allow the operator to conduct a pre-drilling water well test constitutes a method to rebut the presumption of liability; (3) advise the surface owner and water purveyor of his or her independent right to sample and analyze any water supply at his or her own expense; advise the surface owner and water purveyor whether or not the operator will utilize an independent laboratory to analyze any sample; and (4) advise the surface owner and or water purveyor that he or she can obtain from the Chief a list of water testing laboratories in the subject area capable of and qualified to test water supplies in accordance with standard acceptable methods.

Additional information related to horizontal drilling may be obtained from the Secretary, at the WV Department of Environmental Protection headquarters, located at 601 57th Street, SE, Charleston, WV 25304 (304-926-0450) or by visiting www.dep.wv.gov/oil-and-gas/pages/default.aspx.

Well Location Restrictions

Pursuant to W. Va. Code § 22-6A-12, Wells may not be drilled within two hundred fifty feet measured horizontally from any existing water well or developed spring used for human or domestic animal consumption. The center of well pads may not be located within six hundred twenty-five feet of an occupied dwelling structure, or a building two thousand five hundred square feet or larger used to house or shelter dairy cattle or poultry husbandry. This limitation is applicable to those wells, developed springs, dwellings or agricultural buildings that existed on the date a notice to the surface owner of planned entry for surveying or staking as provided in section ten of this article or a notice of intent to drill a horizontal well as provided in subsection (b), section sixteen of this article was provided, whichever occurs first, and to any dwelling under construction prior to that date. This limitation may be waived by written consent of the surface owner transmitted to the department and recorded in the real property records maintained by the clerk of the county commission for the county in which such property is located. Furthermore, the well operator may be granted a variance by the secretary from these distance restrictions upon submission of a plan which identifies the sufficient measures, facilities or practices to be employed during well site construction, drilling and operations. The variance, if granted, shall include terms and conditions the department requires to ensure the safety and protection of affected persons and property. The terms and conditions may include insurance, bonding and indemnification, as well as technical requirements. (b) No well pad may be prepared or well drilled within one hundred feet measured horizontally from any perennial stream, natural or artificial lake, pond or reservoir, or a wetland, or within three hundred feet of a naturally reproducing trout stream. No well pad may be located within one thousand feet of a surface or ground water intake of a public water supply. The distance from the public water supply as identified by the department shall be measured as follows: (1) For a surface water intake on a lake or reservoir, the distance shall be measured from the boundary of the lake or reservoir. (2) For a surface water intake on a flowing stream, the distance shall be measured from a semicircular radius extending upstream of the surface water intake. (3) For a groundwater source, the distance shall be measured from the wellhead or spring. The department may, in its discretion, waive these distance restrictions upon submission of a plan identifying sufficient measures, facilities or practices to be employed during well site construction, drilling and operations to protect the waters of the state. A waiver, if granted, shall impose any permit conditions as the secretary considers necessary. (c) Notwithstanding the foregoing provisions of this section, nothing contained in this section prevents an operator from conducting the activities permitted or authorized by a Clean Water Act Section 404 permit or other approval from the United States Army Corps of Engineers within any waters of the state or within the restricted areas referenced in this section. (d) The well location restrictions set forth in this section shall not apply to any well on a multiple well pad if at least one of the wells was permitted prior to the effective date of this article. (e) The secretary shall, by December 31, 2012, report to the Legislature on the noise, light, dust and volatile organic compounds generated by the drilling of horizontal wells as they relate to the well location restrictions regarding occupied dwelling structures pursuant to this section. Upon a finding, if any, by the secretary that the well location restrictions regarding occupied dwelling structures are inadequate or otherwise require alteration to address the items

09/01/2017

examined in the study required by this subsection, the secretary shall have the authority to propose for promulgation legislative rules establishing guidelines and procedures regarding reasonable levels of noise, light, dust and volatile organic compounds relating to drilling horizontal wells, including reasonable means of mitigating such factors, if necessary.

Water Well Testing:

Pursuant to West Virginia Code § 22-6A-10(d), notification shall be made, with respect to surface landowners identified in subsection (b) or water purveyors identified in subdivision (5), subsection (b) of this section, of the opportunity for testing their water well. The operator shall provide an analysis to such surface landowner or water purveyor at their request.

Water Testing Laboratories:

Pursuant to West Virginia Code § 22-6A-10(i), persons entitled to notice pursuant to subsection (b) of this section may contact the department to ascertain the names and locations of water testing laboratories in the subject area capable and qualified to test water supplies in accordance with standard accepted methods. In compiling that list of names the department shall consult with the state Bureau for Public Health and local health departments. A surface owner and water purveyor has an independent right to sample and analyze any water supply at his or her own expense. The laboratory utilized by the operator shall be approved by the agency as being certified and capable of performing sample analyses in accordance with this section.

Rebuttable Presumption for Contamination or Deprivation of a Fresh Water Source or Supply:

W. Va. Code § 22-6A-18 requires that (b) unless rebutted by one of the defenses established in subsection (c) of this section, in any action for contamination or deprivation of a fresh water source or supply within one thousand five hundred feet of the center of the well pad for horizontal well, there is a rebuttable presumption that the drilling and the oil or gas well or either was the proximate cause of the contamination or deprivation of the fresh water source or supply. (c) In order to rebut the presumption of liability established in subsection (b) of this section, the operator must prove by a preponderance of the evidence one of the following defenses: (1) The pollution existed prior to the drilling or alteration activity as determined by a predrilling or prealteration water well test. (2) The landowner or water purveyor refused to allow the operator access to the property to conduct a predrilling or prealteration water well test. (3) The water supply is not within one thousand five hundred feet of the well. (4) The pollution occurred more than six months after completion of drilling or alteration activities. (5) The pollution occurred as the result of some cause other than the drilling or alteration activity. (d) Any operator electing to preserve its defenses under subdivision (1), subsection (c) of this section shall retain the services of an independent certified laboratory to conduct the predrilling or prealteration water well test. A copy of the results of the test shall be submitted to the department and the surface owner or water purveyor in a manner prescribed by the secretary. (e) Any operator shall replace the water supply of an owner of interest in real property who obtains all or part of that owner's supply of water for domestic, agricultural, industrial or other legitimate use from an underground or surface source with a comparable water supply where the secretary determines that the water supply has been affected by contamination, diminution or interruption proximately caused by the oil or gas operation, unless waived in writing by that owner. (f) The secretary may order the operator conducting the oil or gas operation to: (1) Provide an emergency drinking water supply within twenty-four hours; (2) Provide temporary water supply within seventy-two hours; (3) Within thirty days begin activities to establish a permanent water supply or submit a proposal to the secretary outlining the measures and timetables to be used in establishing a permanent supply. The total time in providing a permanent water supply may not exceed two years. If the operator demonstrates that providing a permanent replacement water supply cannot be completed within two years, the secretary may extend the time frame on case-by-case basis; and (4) Pay all reasonable costs incurred by the real property owner in securing a water supply. (g) A person as described in subsection (b) of this section aggrieved under the provisions of subsections (b), (e) or (f) of this section may seek relief in court... (i) Notwithstanding the denial of the operator of responsibility for the damage to the real property owner's water supply or the status of any appeal on determination of liability for the damage to the real property owner's water supply, the operator may not discontinue providing the required water service until authorized to do so by the secretary or a court of competent jurisdiction.

Written Comment:

Pursuant to West Virginia Code § 22-6A-11(a), all persons described in subsection (b), section ten of this article may file written comments with the secretary as to the location or construction of the applicant's proposed well work within thirty days after the application is filed with the secretary. All persons described in West Virginia Code § 22-6A-10(b) may file written comments as to the location or construction of the applicant's proposed well work to the Secretary at:

Chief, Office of Oil and Gas
Department of Environmental Protection
601 57th St. SE
Charleston, WV 25304
(304) 926-0450

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Such persons may request, at the time of submitting written comments, notice of the permit decision and environmental protection. **NOTE: YOU ARE NOT REQUIRED TO FILE ANY COMMENT.**

Time Limits and Methods for Filing Comments.

The law requires these materials to be served on or before the date the operator files its Application. You have **THIRTY (30) DAYS** after the filing date to file your comments. Comments must be filed in person or received in the mail by the Chief's office by the time stated above. You may call the Chief's office to be sure of the date. Check with your postmaster to ensure adequate delivery time or to arrange special expedited handling. If you have been contacted by the well operator and you have signed a "voluntary statement of no objection" to the planned work described in these materials, then the permit may be issued at any time.

Pursuant to West Virginia Code § 22-6A-11(c)(2), Any objections of the affected coal operators and coal seam owners and lessees shall be addressed through the processes and procedures that exist under sections fifteen, seventeen and forty, article six of this chapter, as applicable and as incorporated into this article by section five of this article. The written comments filed by the parties entitled to notice under subdivisions (1), (2), (4), (5) and (6), subsection (b), section ten of this article shall be considered by the secretary in the permit issuance process, but the parties are not entitled to participate in the processes and proceedings that exist under sections fifteen, seventeen or forty, article six of this chapter, as applicable and as incorporated into this article by section five of this article.

Comment Requirements

Your comments must be in writing and include your name, address and telephone number, the well operator's name and well number and the approximate location of the proposed well site including district and county from the application. You may add other documents, such as sketches, maps or photographs to support your comments.

Disclaimer: All comments received will be placed on our web site <http://www.dep.wv.gov/oil-and-gas/Horizontal-Permits/Pages/default.aspx> and the applicant will automatically be forwarded an email notice that such comments have been submitted. The applicant will be expected to provide a response to comments submitted by any surface owner, water purveyor or natural gas storage operator noticed within the application.

Permit Denial or Condition

The Chief has the power to deny or condition a well work permit. Pursuant to West Virginia Code § 22-6A-8(d), the permit may not be issued or be conditioned, including conditions with respect to the location of the well and access roads prior to issuance if the director determines that:

- (1) The proposed well work will constitute a hazard to the safety of persons;
- (2) The plan for soil erosion and sediment control is not adequate or effective;
- (3) Damage would occur to publicly owned lands or resources; or
- (4) The proposed well work fails to protect fresh water sources or supplies.

A permit may also be denied under West Virginia Code § 22-6A-7(k), the secretary shall deny the issuance of a permit if the secretary determines that the applicant has committed a substantial violation of a previously issued permit for a horizontal well, including the applicable erosion and sediment control plan associated with the previously issued permit, or a substantial violation of one or more of the rules promulgated under this article, and in each instance has failed to abate or seek review of the violation within the time prescribed by the secretary pursuant to the provisions of subdivisions (1) and (2), subsection (a), section five of this article and the rules promulgated hereunder, which time may not be unreasonable.

Pursuant to West Virginia Code § 22-6A-10(g), any person entitled to submit written comments to the secretary pursuant to subsection (a), section eleven of this article, shall also be entitled to receive from the secretary a copy of the permit as issued or a copy of the order modifying or denying the permit if the person requests receipt of them as a part of the written comments submitted concerning the permit application. Such persons may request, at the time of submitting written comments, notice of the permit decision and a list of persons qualified to test water.

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WV Department of
Environmental Protection

09/01/2017

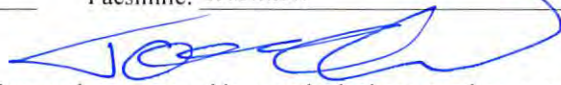
WW-6A
(8-13)

API NO. 47- 103 - _____
OPERATOR WELL NO. BIG177H5
Well Pad Name: _____

Notice is hereby given by:

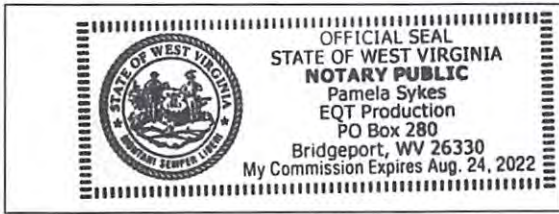
Well Operator: EQT Production Company
Telephone: 304.838.0076
Email: vroark@eqt.com

Address: 115 Professional Place PO Box 280
Bridgeport WV 26330
Facsimile: 304.848.0041

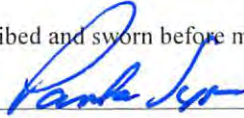


Oil and Gas Privacy Notice:

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



Subscribed and sworn before me this 24 day of May, 2017.



Notary Public

My Commission Expires 8-24-22

4710303103

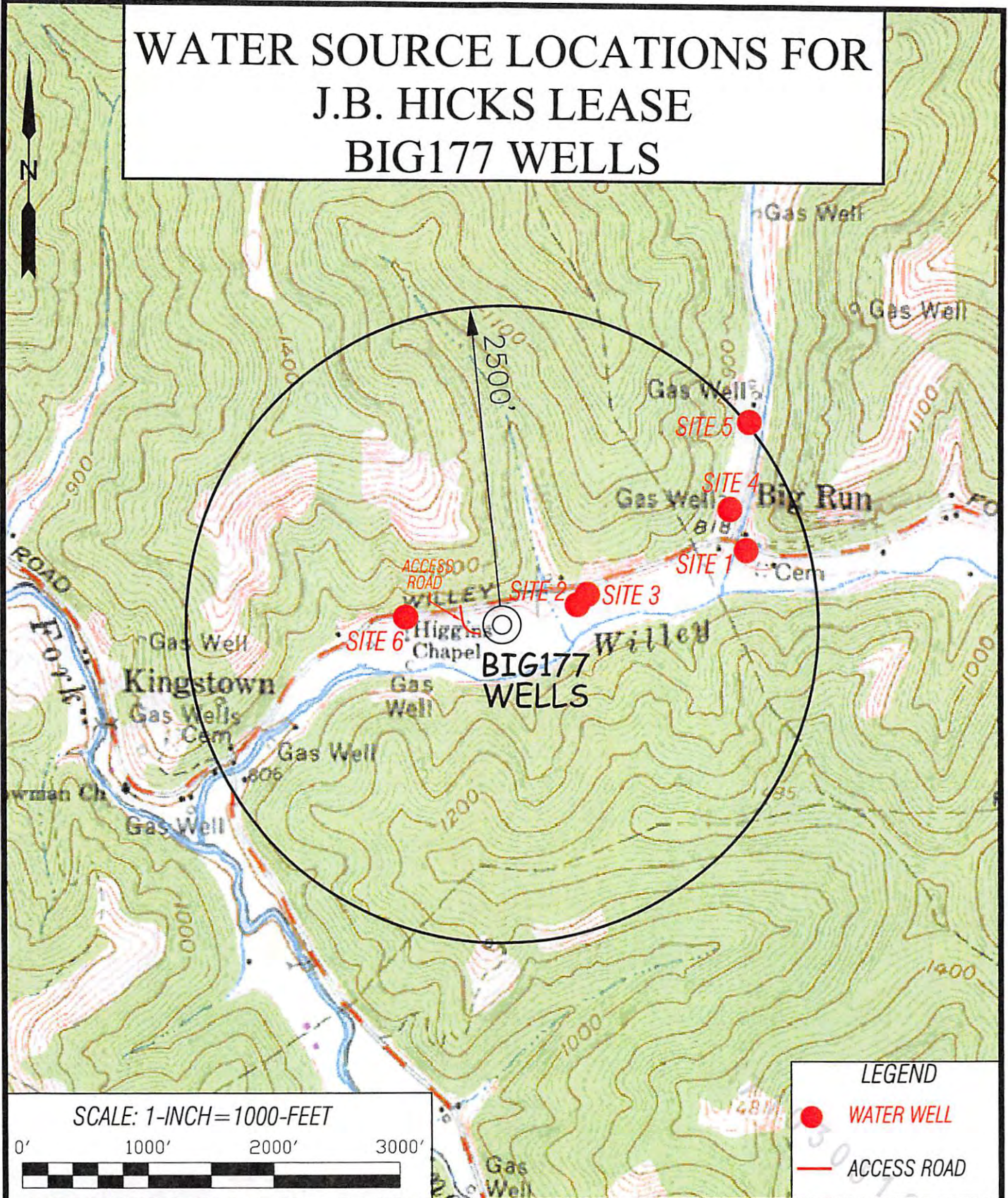
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WV Department of
Environmental Protection

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WATER SOURCE LOCATIONS FOR J.B. HICKS LEASE BIG177 WELLS



LEGEND

- WATER WELL
- ACCESS ROAD

SCALE: 1-INCH = 1000-FEET

0' 1000' 2000' 3000'

Professional Energy Consultants
A DIVISION OF SMITH LAND SURVEYING, INC.

SLS SURVEYORS
ENGINEERS
ENVIRONMENTAL
PROJECT MGMT.

(304) 482-5634 WWW.SLSURVEYS.COM

DRAWN BY: A.D.W. **FILE NO.:** 6806 **DATE:** 04/03/17 **CADD FILE:** 6806WSB177.dwg

TOPO SECTION OF:
BIG RUN, WV 7.5' QUAD

DISTRICT	COUNTY	TAX MAP-PARCEL NO.
GRANT	WETZEL	13-06

OPERATOR:
EQT PRODUCTION COMPANY
115 PROFESSIONAL PLACE
P.O. BOX 280
BRIDGEPORT, WV 26330

09/01/2017

STATE OF WEST VIRGINIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION, OFFICE OF OIL AND GAS
NOTICE OF INTENT TO DRILL

Pursuant to W. Va. Code § 22-6A-16(b), the Notice of Intent to Drill is only required if the notice requirements of W. Va. Code § 22-6A-10(a) have NOT been met or if the Notice of Intent to Drill requirement has NOT been waived in writing by the surface owner.

Notice Time Requirement: Notice shall be provided at least **TEN (10)** days prior to filing a permit application.

Date of Notice: 05/05/2017 **Date Permit Application Filed:** 05/15/2017

Delivery method pursuant to West Virginia Code § 22-6A-16(b)

HAND DELIVERY CERTIFIED MAIL
RETURN RECEIPT REQUESTED

4770303100

Pursuant to W. Va. Code § 22-6A-16(b), at least ten days prior to filing a permit application, an operator shall, by certified mail return receipt requested or hand delivery, give the surface owner notice of its intent to enter upon the surface owner's land for the purpose of drilling a horizontal well: *Provided*, That notice given pursuant to subsection (a), section ten of this article satisfies the requirements of this subsection as of the date the notice was provided to the surface owner: *Provided, however*, That the notice requirements of this subsection may be waived in writing by the surface owner. The notice, if required, shall include the name, address, telephone number, and if available, facsimile number and electronic mail address of the operator and the operator's authorized representative.

Notice is hereby provided to the SURFACE OWNER(s):

Name: Coastal Forest Resources dba Coastal Timberlands Co
Address: PO Box 709
Buckhannon WV 26201

Name: _____
Address: _____

Notice is hereby given:

Pursuant to West Virginia Code § 22-6A-16(b), notice is hereby given that the undersigned well operator has an intent to enter upon the surface owner's land for the purpose of drilling a horizontal well on the tract of land as follows:

State:	<u>WV</u>	UTM NAD 83	Easting:	<u>535,730.872</u>
County:	<u>Wetzel</u>		Northing:	<u>4,381,510.506</u>
District:	<u>Grant</u>	Public Road Access:	<u>Rt 19</u>	
Quadrangle:	<u>Big Run</u>	Generally used farm name:	<u>Coastal Forest Resources Co dba Coastal Timberlands Co</u>	
Watershed:	<u>Willey Fork of North Fork Fishing Creek</u>			

This Notice Shall Include:

Pursuant to West Virginia Code § 22-6A-16(b), this notice shall include the name, address, telephone number, and if available, facsimile number and electronic mail address of the operator and the operator's authorized representative. Additional information related to horizontal drilling may be obtained from the Secretary, at the WV Department of Environmental Protection headquarters, located at 601 57th Street, SE, Charleston, WV 25304 (304-926-0450) or by visiting www.dep.wv.gov/oil-and-gas/pages/default.aspx.

Notice is hereby given by:

Well Operator: EQT Production Company
Address: 115 Professional Place PO Box 280
Bridgeport WV 26330
Telephone: 304.848.0076
Email: vroark@eqt.com
Facsimile: 304.848.0041

Authorized Representative: Victoria Roark
Address: 115 Professional Place PO Box 280
Bridgeport WV 26330
Telephone: 304.848.0076
Email: vroark@eqt.com
Facsimile: 304.848.0041

Oil and Gas Privacy Notice:

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

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**STATE OF WEST VIRGINIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION, OFFICE OF OIL AND GAS
NOTICE OF PLANNED OPERATION**

Notice Time Requirement: notice shall be provided no later than the filing date of permit application.

Date of Notice: 5-25-17 **Date Permit Application Filed:** 5-25-17

Delivery method pursuant to West Virginia Code § 22-6A-16(c)

- CERTIFIED MAIL HAND
RETURN RECEIPT REQUESTED DELIVERY

Pursuant to W. Va. Code § 22-6A-16(c), no later than the date for filing the permit application, an operator shall, by certified mail return receipt requested or hand delivery, give the surface owner whose land will be used for the drilling of a horizontal well notice of the planned operation. The notice required by this subsection shall include: (1) A copy of this code section; (2) The information required to be provided by subsection (b), section ten of this article to a surface owner whose land will be used in conjunction with the drilling of a horizontal well; and (3) A proposed surface use and compensation agreement containing an offer of compensation for damages to the surface affected by oil and gas operations to the extent the damages are compensable under article six-b of this chapter. (d) The notices required by this section shall be given to the surface owner at the address listed in the records of the sheriff at the time of notice.

Notice is hereby provided to the SURFACE OWNER(s)

(at the address listed in the records of the sheriff at the time of notice):

Name: Coastal Forest Resources co
Address: PO Box 709
Buckhannon WV 26201

Name: _____
Address: _____

Notice is hereby given:

Pursuant to West Virginia Code § 22-6A-16(c), notice is hereby given that the undersigned well operator has developed a planned operation on the surface owner's land for the purpose of drilling a horizontal well on the tract of land as follows:

State:	<u>WV</u>	UTM NAD 83	Easting:	<u>535,730.872</u>
County:	<u>Wetzel</u>		Northing:	<u>4,381,510.506</u>
District:	<u>Grant</u>	Public Road Access:		<u>RL 19</u>
Quadrangle:	<u>Big Run</u>	Generally used farm name:		<u>Coastal Forest Resources Co dba Coastal Timberlands Co</u>
Watershed:	<u>Willey Fork of North Fork Fishing Creek</u>			

This Notice Shall Include:

Pursuant to West Virginia Code § 22-6A-16(c), this notice shall include: (1) A copy of this code section; (2) The information required to be provided by **W. Va. Code § 22-6A-10(b)** to a surface owner whose land will be used in conjunction with the drilling of a horizontal well; and (3) A proposed surface use and compensation agreement containing an offer of compensation for damages to the surface affected by oil and gas operations to the extent the damages are compensable under article six-b of this chapter. Additional information related to horizontal drilling may be obtained from the Secretary, at the WV Department of Environmental Protection headquarters, located at 601 57th Street, SE, Charleston, WV 25304 (304-926-0450) or by visiting www.dep.wv.gov/oil-and-gas/pages/default.aspx.

Well Operator: EQT Production Company
Telephone: 304.848.0076
Email: vroark@eqt.com

Address: 115 Professional Place PO Box 280
Bridgeport WV 26330
Facsimile: 304.848.0041

Oil and Gas Privacy Notice:

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

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WV Department of
Environmental Protection

09/01/2017

WW-6RW
(1-12)

EQT PRODUCTION COMPANY
PO BOX 280
BRIDGEPORT, WV 26330-0280

API NO. 47- _____
OPERATOR WELL NO. H5-512917
Well Pad Name: BIG 177

STATE OF WEST VIRGINIA DEPARTMENT OF ENVIRONMENTAL PROTECTION, OFFICE OF OIL AND GAS WELL LOCATION RESTRICTION WAIVER

The well operator, EQT Production Company is applying for a permit from the State of West Virginia to conduct oil or gas well work. Please be advised that well work permits are valid for twenty-four (24) months.

Well Location Restrictions

Pursuant to West Virginia Code § 22-6A-12(a), Wells may not be drilled within two hundred fifty feet measured horizontally from any existing water well or developed spring used for human or domestic animal consumption. The center of well pads may not be located within six hundred twenty-five feet of an occupied dwelling structure, or a building two thousand five hundred square feet or larger used to house or shelter dairy cattle or poultry husbandry. This limitation is applicable to those wells, developed springs, dwellings or agricultural buildings that existed on the date a notice to the surface owner of planned entry for surveying or staking as provided in section ten of this article or a notice of intent to drill a horizontal well as provided in subsection (b), section sixteen of this article was provided, whichever occurs first, and to any dwelling under construction prior to that date. This limitation may be waived by written consent of the surface owner transmitted to the department and recorded in the real property records maintained by the clerk of the county commission for the county in which such property is located. Furthermore, the well operator may be granted a variance by the secretary from these distance restrictions upon submission of a plan which identifies the sufficient measures, facilities or practices to be employed during well site construction, drilling and operations. The variance, if granted, shall include terms and conditions the department requires to ensure the safety and protection of affected persons and property. The terms and conditions may include insurance, bonding and indemnification, as well as technical requirements.

WAIVER

I, _____, hereby state that I have read the Instructions to Persons Named on Page WW-6A and the associated provisions listed above, and that I have received copies of a Notice of Application, an Application for a Well Work Permit on Form WW-6A and attachments consisting of pages one (1) through _____, including the erosion and sediment control plan, if required, and the well plat, all for proposed well work on the tract of land as follows:

State: West Virginia UTM NAD 83 Easting: _____
County: Wetzel UTM NAD 83 Northing: _____
District: Grant Public Road Access: CR 19 / Willey Fork Road
Quadrangle: Big Run 7.5" Generally used farm name: _____
Watershed: Willey Fork

I further state that I have no objection to the planned work described in these materials, and I have no objection to a permit being issued on those materials and I therefore waive all well site restrictions listed under West Virginia Code § 22-6A-12(a).

WELL SITE RESTRICTIONS BEING WAIVED	
*Please check all that apply	
<input type="checkbox"/>	EXISTING WATER WELLS
<input type="checkbox"/>	DEVELOPED SPRINGS
<input checked="" type="checkbox"/>	DWELLINGS
<input type="checkbox"/>	AGRICULTURAL BUILDINGS

FOR EXECUTION BY A NATURAL PERSON	
Signature: <u>Ikey Joe Willey</u>	Print Name: <u>Ikey Joe Willey</u>
Date: <u>7-31-2013</u>	
FOR EXECUTION BY A CORPORATION	
Company: _____	By: _____
Its: _____	Signature: _____
Date: _____	

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MAY 30 2017
WV Department of
Environmental Protection

Carol S. Haught
Wetzel County 02:27:09 PM
Instrument No 154550
Date Recorded 12/03/2013
Document Type MS
Pages Recorded 1
Book Page 105-675
Record Price \$5.00
Production Fee \$6.00

Well Operator: EQT Production Company
By: John W. Damato
Its: Attorney-in-Fact

Signature: _____
Telephone: _____

OFFICIAL SEAL
COMMISSIONER FOR WEST VIRGINIA
Bryson J. Karp
Weston, WV
My Commission Expires January 1, 2021

Subscribed and sworn before me this 31 day of July 2013
Bryson J. Karp Notary Public
My Commission Expires Jan 1, 2021

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

09/01/2017

WW-6RW
(1-12)

EQT PRODUCTION COMPANY
PO BOX 280
BRIDGEPORT, WV 26330-0280

API NO. 47- _____
OPERATOR WELL NO. HS-512917

Well Pad Name: BIG 177

STATE OF WEST VIRGINIA DEPARTMENT OF ENVIRONMENTAL PROTECTION, OFFICE OF OIL AND GAS **WELL LOCATION RESTRICTION WAIVER**

The well operator, EQT Production Company is applying for a permit from the State of West Virginia to conduct oil or gas well work. Please be advised that well work permits are valid for twenty-four (24) months.

Well Location Restrictions

Pursuant to West Virginia Code § 22-6A-12(a), Wells may not be drilled within two hundred fifty feet measured horizontally from any existing water well or developed spring used for human or domestic animal consumption. The center of well pads may not be located within six hundred twenty-five feet of an occupied dwelling structure, or a building two thousand five hundred square feet or larger used to house or shelter dairy cattle or poultry husbandry. This limitation is applicable to those wells, developed springs, dwellings or agricultural buildings that existed on the date a notice to the surface owner of planned entry for surveying or staking as provided in section ten of this article or a notice of intent to drill a horizontal well as provided in subsection (b), section sixteen of this article was provided, whichever occurs first, and to any dwelling under construction prior to that date. This limitation may be waived by written consent of the surface owner transmitted to the department and recorded in the real property records maintained by the clerk of the county commission for the county in which such property is located. Furthermore, the well operator may be granted a variance by the secretary from these distance restrictions upon submission of a plan which identifies the sufficient measures, facilities or practices to be employed during well site construction, drilling and operations. The variance, if granted, shall include terms and conditions the department requires to ensure the safety and protection of affected persons and property. The terms and conditions may include insurance, bonding and indemnification, as well as technical requirements.

WAIVER

I, _____, hereby state that I have read the Instructions to Persons Named on Page WW-6A and the associated provisions listed above, and that I have received copies of a Notice of Application, an Application for a Well Work Permit on Form WW-6A and attachments consisting of pages one (1) through _____, including the erosion and sediment control plan, if required, and the well plat, all for proposed well work on the tract of land as follows:

State: <u>West Virginia</u>	UTM NAD 83 Easting: _____
County: <u>Wetzel</u>	UTM NAD 83 Northing: _____
District: <u>Grant</u>	Public Road Access: <u>CR 19 / Willey Fork Road</u>
Quadrangle: <u>Big Run 7.5"</u>	Generally used farm name: _____
Watershed: <u>Willey Fork</u>	

I further state that I have no objection to the planned work described in these materials, and I have no objection to a permit being issued on those materials and I therefore waive all well site restrictions listed under West Virginia Code § 22-6A-12(a).

WELL SITE RESTRICTIONS BEING WAIVED

*Please check all that apply

- EXISTING WATER WELLS
- DEVELOPED SPRINGS
- DWELLINGS
- AGRICULTURAL BUILDINGS

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Office of Oil and Gas

MAY 30 2017

WV Department of
Environmental Protection

FOR EXECUTION BY A NATURAL PERSON

Signature: Tina M. Willey
 Print Name: Tina M. Willey
 Date: 7-31-2013
 FOR EXECUTION BY A CORPORATION, ETC
 Company: _____
 By: _____
 Its: _____
 Signature: _____
 Date: _____

DEPARTMENT TYPE HS
 Pages Recorded 1
 Book Page 105-676
 Recording Fee \$1.00
 Indexing Fee \$4.00
 Date Recorded 12/03/2013
 Instrument No 154551
 WETZEL County 02:28:00 PM
 Date Recorded 12/03/2013

Well Operator: EQT Production Company
 By: John W. Damato
 Its: Attorney-in-Fact

Signature: _____
 Telephone: _____

OFFICIAL SEAL
 COMMISSIONER FOR WEST VIRGINIA
 NOTARY SEAL
 Bryson J. Karp
 Weston, WV
 My Commission Expires January 1, 2021

Subscribed and sworn before me this 31 day of July 2013
Bryson J. Karp Notary Public
 My Commission Expires Jan 1 2021

Oil and Gas Privacy Notice:

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

09/01/2017



WEST VIRGINIA DEPARTMENT OF TRANSPORTATION

Division of Highways

1900 Kanawha Boulevard East • Building Five • Room 110
Charleston, West Virginia 25305-0430 • (304) 558-3505

Jim Justice
Governor

Thomas J. Smith, P. E.
Secretary of Transportation/
Commissioner of Highways

Reissued May 19, 2017

James A. Martin, Chief
Office of Oil and Gas
Department of Environmental Protection
601 57th Street, SE
Charleston, WV 25304

47 103 031 00

Subject: DOH Permit for the BIG177 Well Site, Wetzel County

BIG177H2
BIG177H6

BIG177H5 47-103-03189
BIG177H15

Dear Mr. Martin,

This well site will be accessed from existing Permit # 06-2013-0292 issued to EQT Production Company for access to the State Road for a well site located off of Wetzel County Route 19 SLS.

The operator has signed a STATEWIDE OIL AND GAS ROAD MAINTENANCE BONDING AGREEMENT and provided the required Bond. This operator is currently in compliance with the DOH OIL AND GAS POLICY dated January 3, 2012.

Very Truly Yours,

Gary K. Clayton
Regional Maintenance Engineer
Central Office Oil & Gas Coordinator

Cc: Nick Bumgardner
EQT Production Company
CH, OM, D-6
File

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Office of Oil and Gas

MAY 30 2017

09/01/2017
Department of
Environmental Protection

Anticipated Frac Additives
Chemical Names and CAS numbers

<u>Material</u>	<u>Ingredient</u>	<u>CAS Number</u>
Water		
Sand	Hydrotreated light petroleum distillate	14808-60-7
	Tributyl tetradecyl phosphonium chloride	64742-47-8
Friction Reducer	Ammonium chloride	81741-28-8
Biocide	Hydrochloric Acid	12125-02-9
Scale Inhibitor	Propargyl Alcohol	7647-01-0
15% Hydrochloric Acid	Methanol	107-19-7
Corrosion Inhibitor	Guar Gum	67-56-1
Corrosion Inhibitor	Sodium Persulfate	9000-30-0
Gelling Agent	Potassium Carbonate	7775-27-1
Oxidizing Breaker		584-08-7
Buffering Agent		

Anticipated Frac Additives

RECEIVED
Office of Oil and Gas

MAY 30 2017

WV Department of
Environmental Protection
09/01/2017

BIG-177 AS-BUILT SITE PLAN EQT PRODUCTION COMPANY



PROJECT INFORMATION

PROJECT NAME: BIG-177 SITE AS BUILT

TAX PARCEL:
GRANT DISTRICT
MAP 13-6, 13-6-1

SURFACE OWNER:

COASTAL FOREST RESOURCES COMPANY D/B/A
GRANT DISTRICT
WETZEL COUNTY, WV
TOTAL PROPERTY AREA: 27± ACRES OR 217± ACRES
AND 56± ACRES

ROYALTY OWNER:

HIGGINS FAMILY TRUST (LEASE NO. 103021)
GRANT DISTRICT
WETZEL COUNTY, WV
TOTAL PROPERTY AREA: 242.5± ACRES

SITE LOCATION:

THE BIG-177 SITE IS LOCATED IN THE BOTTOM NORTH OF WILLEY FORK APPROXIMATELY 2,300 FT EAST OF THE CO RT 10 AND CO. RT 15 INTERSECTION

BIG 177 LOCATION COORDINATES

BIG-177 SITE ENTRANCE
LATITUDE: 39.58303 LONGITUDE: -80.58527 (NAD 83)

BIG-177 WELL PAD (CENTER PAD)
LATITUDE: 39.58293 LONGITUDE: -80.58412 (NAD 83)

BIG-177 WELL PAD (CENTER OF TANK)
LATITUDE: 39.58252 LONGITUDE: -80.58570 (NAD 83)

SITE DISTURBANCE COMPUTATIONS

ORIGINAL LIMITS OF DISTURBANCE = 6.9 ± ACRES

GENERAL DESCRIPTION

THE WELL PAD AND TANK PAD HAVE BEEN CONSTRUCTED TO AID IN THE DEVELOPMENT OF INDIVIDUAL MARCELLUS SHALE GAS WELLS.

PERMITTED WELLS: API# 47-103-02984, 47-103-03117, 47-103-03057, & 47-103-03058

PROPOSED WELLS: BIG177H2, BIG177H5, BIG177H6, BIG177H7, BIG177H8, BIG177H9, & BIG177H15.

SITUATE ON THE WATERS OF WILLEY FORK OF NORTH FORK FISHING CREEK
IN GRANT DISTRICT, WETZEL COUNTY, WEST VIRGINIA.

LOCATION MAP



LIST OF DRAWINGS

- 1 - COVER SHEET
- 2 - CONSTRUCTION NOTES
- 3 - TANK PAD MODIFICATION PLAN
- 4 - DETAILS
- 5 - DETAILS
- 6 - DETAILS

LEGEND

PROPOSED LIMITS OF DISTURBANCE	---
COMPOST FILTER SOCK	---
EX BOUNDARY LINE	---
EX ROAD EDGE OF GRAVEL/DIRT	---
EX ROAD EDGE OF PAVEMENT	---
EX ROAD CENTERLINE	---
EX DITCHLINE	---
EX CULVERT	---
EX FENCELINE	---
EX OVERHEAD UTILITY	---
EX OVERHEAD UTILITY R/W	---
EX POWER POLE	---
EX CITY WIRE	---
EX TELEPHONE LINE	---
EX GASLINE	---
EX GASLINE R/W	---
EX WATERLINE	---
EX MONITORING WELL	---
EX THESELINE	---
EX REFERENCE TREE	---
EX DELINEATED STREAM	---
EX DELINEATED WETLAND	---
EX STRUCTURE	---
EX PIPELINE MARKER	---
EX FOOTPRINT	---
EDGE OF BRM	---
EX SUPER SILT FENCE	---
EX REINFORCED SILT FENCE	---
BERM	---
GRAVEL	---
EX RAP	---
ORIGINAL GROUND 2' CONTOURS	---
AS BUILT 2' CONTOURS	---
PHOTO NUMBER & LOCATION	---
PERMITTED WELL LOCATIONS	---
PROPOSED WELL LOCATIONS	---
SPOT ELEVATIONS	---
MATCHLINE	---

BIG RUN QUAD



SCALE: 1"=2000'

MISS Utility of West Virginia
1-800-245-4848
West Virginia State Law
(Section XIV: Chapter 24-C)
Requires that you call two
business days before you dig in
the state of West Virginia.
IT'S THE LAW!!

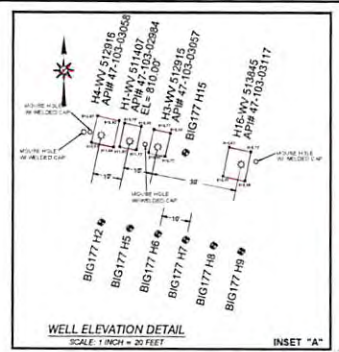
DESCRIPTION: _____
DATE: _____
REASON: _____

THIS DOCUMENT WAS PREPARED BY SLS LAND AND ENERGY DEVELOPMENT FOR EQT

BIG-177 AS-BUILT SITE PLAN
THIS DOCUMENT HAS BEEN PREPARED BY SLS LAND AND ENERGY DEVELOPMENT FOR EQT PRODUCTION COMPANY

DATE: 3/29/17
EQT
SCALE: 1"= 2000'
DESIGNED BY: WAW
FILE NO. 6906
SHEET: 1 OF 6
SPL

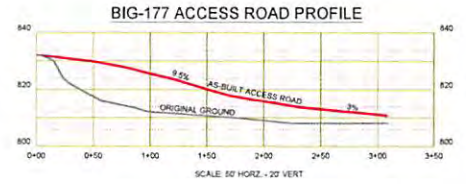
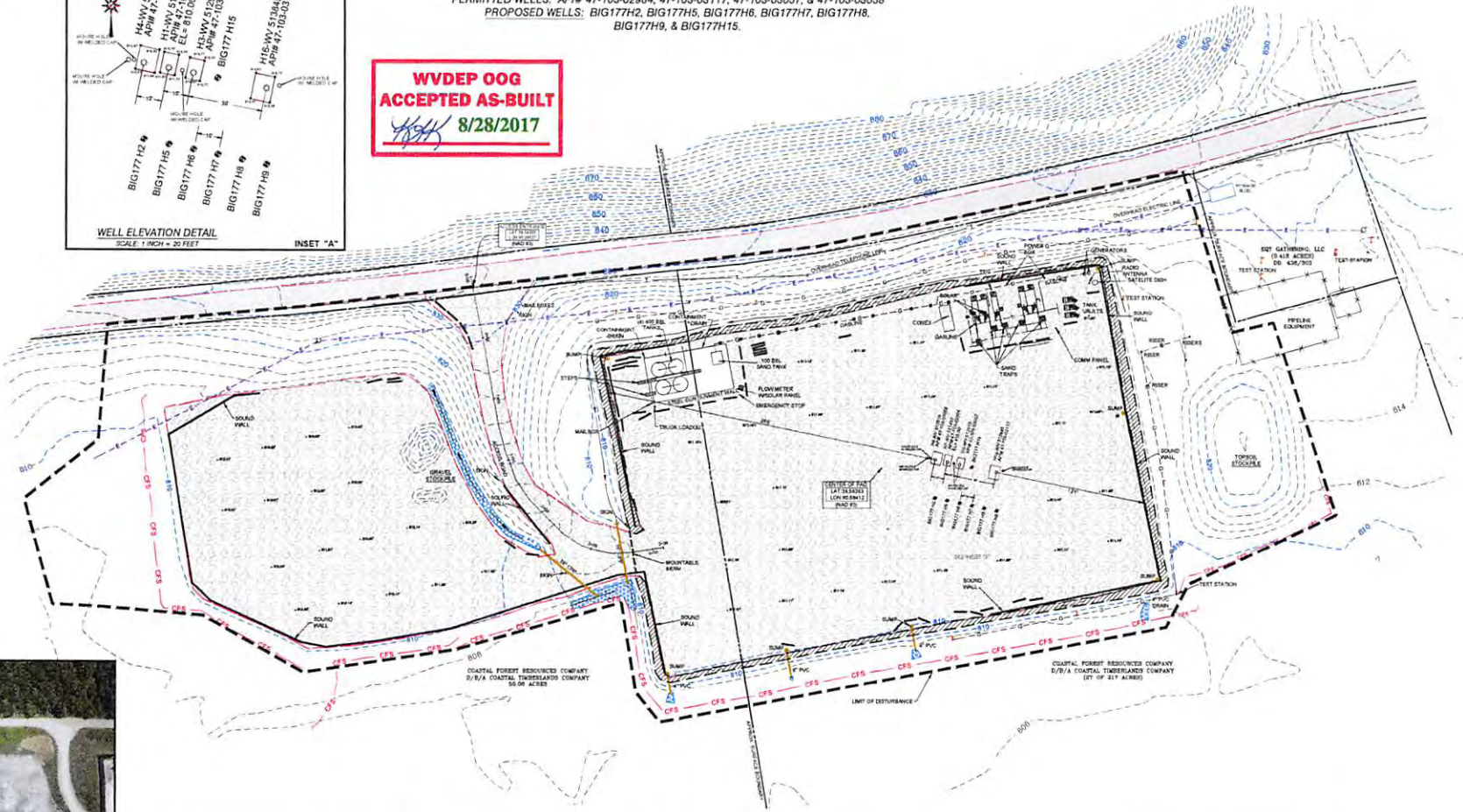
GRID NORTH AND SURVEYED ELEVATIONS SHOWN HEREON WERE ESTABLISHED BY DGPS SURVEY GRADE.



BIG-177 PAD AS-BUILT

PERMITTED WELLS: API# 47-103-02984, 47-103-03117, 47-103-03057, & 47-103-03058
 PROPOSED WELLS: BIG177H2, BIG177H5, BIG177H6, BIG177H7, BIG177H8, BIG177H9, & BIG177H15.

WVDEP OOG
ACCEPTED AS-BUILT
 8/28/2017



LEGEND

- LIMIT OF DISTURBANCE
- - - JERSEY BARRIER
- - - FENCE
- - - EDGE OF GRAVEL
- - - CENTERLINE OF DITCH
- - - GASLINE (AS NOTED)
- - - RP RAP
- - - CONTAINMENT BERM
- - - GRAVEL
- - - AS BUILT 2' CONTOURS
- WELL LOCATIONS
- GASLINE MARKER
- SPOT ELEVATIONS
- COMPOST FILTER ROCK

REVISION	DATE	DESCRIPTION
1	3/27/17	UPDATE PER FIELD CHECK
2	5/17/17	UPDATE PER FIELD CHECK
3	7/25/17	UPDATE PER FIELD CHECK
4	7/25/17	UPDATE PER FIELD CHECK
5	8/15/17	ADDED MOUNTAIN DOLE



BIG-177 WELL PAD AS-BUILT SITE PLAN
 PREPARED BY: SLS
 ALL LAND AND EXISTING DEVELOPMENT POS. ELEV.

DATE: 3/29/17
 SCALE: 1" = 40'
 DRAWN BY: WAW
 FILE NO.: 6806
 SHEET: 3 OF 6

4710303189

BIG-177 AS-BUILT SITE PLAN EQT PRODUCTION COMPANY

PERMITTED WELLS: API# 47-103-02984, 47-103-03117, 47-103-03057, & 47-103-03058

PROPOSED WELLS: BIG177H2, BIG177H5, BIG177H6, BIG177H7, BIG177H8, BIG177H9, & BIG177H15.

SITUATE ON THE WATERS OF WILLEY FORK OF NORTH FORK FISHING CREEK
IN GRANT DISTRICT, WETZEL COUNTY, WEST VIRGINIA.

PROJECT INFORMATION

PROJECT NAME: BIG-177 SITE AS BUILT

TAX PARCEL
GRANT DISTRICT
MAP 13-6. 13-6-1

SURFACE OWNER:

COASTAL FOREST RESOURCES COMPANY D/B/A
GRANT DISTRICT
WETZEL COUNTY, WV
TOTAL PROPERTY AREA 272 ACRES OR 217.4 ACRES
AND 55.1 ACRES

ROYALTY OWNER:

HIGGINS FAMILY TRUST (LEASE NO 1030021)
GRANT DISTRICT
WETZEL COUNTY, WV
TOTAL PROPERTY AREA 242.5± ACRES

SITE LOCATION:

THE BIG-177 SITE IS LOCATED IN THE BOTTOM NORTH OF WILLEY FORK APPROXIMATELY 2300 FT EAST OF THE CO. RT 10 AND CO RT 15 INTERSECTION

BIG 177 LOCATION COORDINATES

BIG-177 SITE ENTRANCE
LATITUDE 39.58303 LONGITUDE -80.58527 (NAD 83)

BIG-177 WELL PAD (CENTER PAD)
LATITUDE 39.58203 LONGITUDE -80.56412 (NAD 83)

BIG-177 WELL PAD (CENTER OF TANK)
LATITUDE 39.58252 LONGITUDE -80.56570 (NAD 83)

SITE DISTURBANCE COMPUTATIONS

ORIGINAL LIMITS OF DISTURBANCE = 6.9 ± ACRES

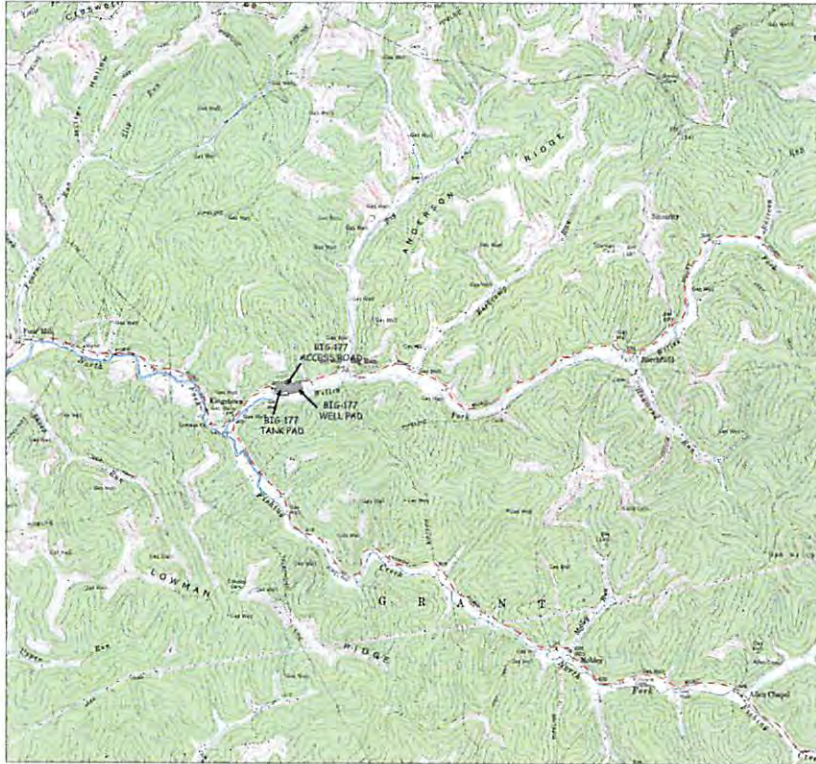
GENERAL DESCRIPTION

THE WELL PAD AND TANK PAD HAVE BEEN CONSTRUCTED TO AID IN THE DEVELOPMENT OF INDIVIDUAL MARCELLUS SHALE GAS WELLS.

MISS Utility of West Virginia
1-800-245-4848
West Virginia State Law
(Section XIV: Chapter 24-C)
Requires that you call two
business days before you dig in
the state of West Virginia
IT'S THE LAW!!

GRID COORDINATE SYSTEMS
SHOWN IN THIS MAP
ESTABLISHED BY SURVEY
GRADE DATUM

LOCATION MAP



BIG RUN QUAD
0 2000 4000 6000
SCALE: 1"=2000'

LIST OF DRAWINGS

- 1 - COVER SHEET
- 2 - CONSTRUCTION NOTES
- 3 - TANK PAD MODIFICATION PLAN
- 4 - DETAILS
- 5 - DETAILS
- 6 - DETAILS

LEGEND	
PROPOSED LIMITS OF DISTURBANCE	---
COMPOST FILTER SOCK	---
EX BOUNDARY LINE	---
EX ROAD EDGE OF GRAVEL/DIRT	---
EX ROAD EDGE OF PAVEMENT	---
EX ROAD CENTERLINE	---
EX DITCHLINE	---
EX CULVERT	---
EX FENCELINE	---
EX OVERHEAD UTILITY	---
EX OVERHEAD UTILITY R/W	---
EX POWER POLE	---
EX GUY WIRE	---
EX TELEPHONE LINE	---
EX GASLINE	---
EX GASLINE R/W	---
EX WATERLINE	---
EX MONITORING WELL	---
EX TREELINE	---
EX REFERENCE TREE	---
EX DELINEATED STREAM	---
EX DELINEATED WETLAND	---
EX STRUCTURE	---
EX PIPELINE MARKER	---
BIG FOOTPRINT	---
EDGE OF BERM	---
EX SUPER SILT FENCE	---
EX REINFORCED SILT FENCE	---
BERM	---
GRAVEL	---
TOP CAP	---
ORIGINAL GROUND 2 CONTOURS	---
AS BUILT 2 CONTOURS	---
PHOTO NUMBER & LOCATION	---
PERMITTED WELL LOCATIONS	---
PROPOSED WELL LOCATIONS	---
SPOT ELEVATIONS	---
MATCHLINE	---

DmH
5-26-17

REVISION DATE DESCRIPTION

EQT
Where energy meets innovation

SLS
SLS Land Services, Inc.
Land Services, Inc.

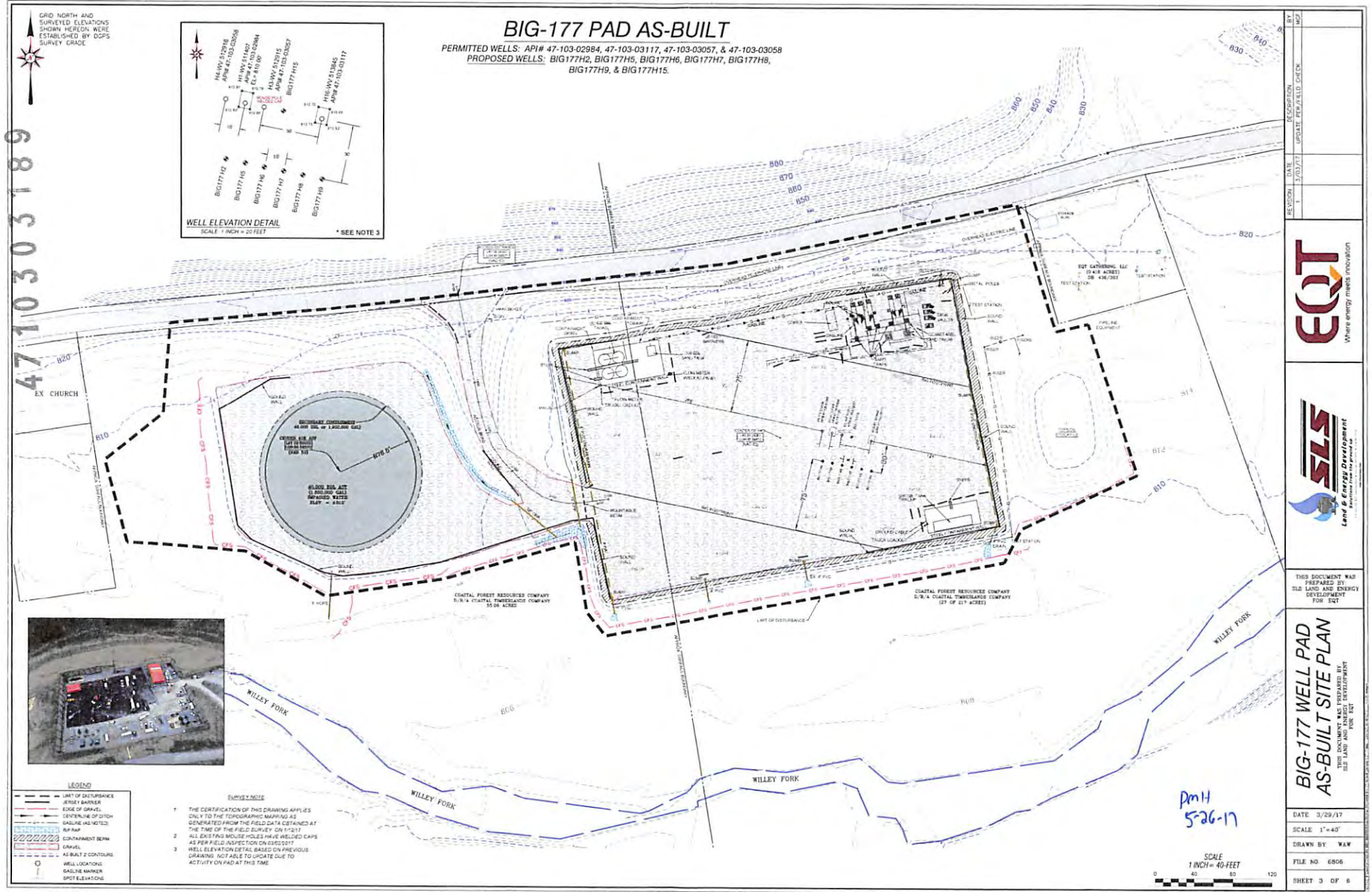
THIS DOCUMENT WAS PREPARED BY SLS LAND AND ENERGY DEVELOPMENT FOR EQT

WETZEL COUNTY REGISTERED ENGINEER
12471
2017

BIG-177 AS-BUILT SITE PLAN
THIS DOCUMENT WAS PREPARED BY SLS LAND AND ENERGY DEVELOPMENT FOR EQT PRODUCTION COMPANY

DATE 3/29/17
EXT
SCALE 1"= 2000'
DESIGNED BY WAW
FILE NO 6606
SHEET 1 OF 6
S3/16

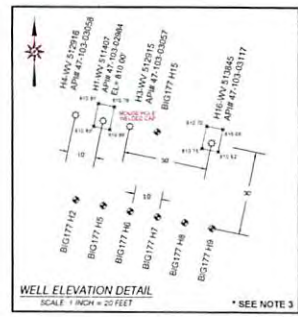
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Office of Oil and Gas
JUN 5 2017
WV Department of
Environmental Protection



47110303189

BIG-177 PAD AS-BUILT

PERMITTED WELLS: API# 47-103-02984, 47-103-03117, 47-103-03057, & 47-103-03058
 PROPOSED WELLS: BIG177H2, BIG177H5, BIG177H6, BIG177H7, BIG177H8, BIG177H9, & BIG177H15.



LEGEND

- LIMIT OF DISTURBANCE
- JERSEY BARRIER
- EDGE OF GRAVEL
- CENTERLINE OF DITCH
- GALSIANE (AS NOTED)
- ASP RAMP
- CONTAINMENT BERM
- DRAINWELL
- AIR BUILT 2' CONTIGUOUS
- WELL LOCATION
- GALSIANE MARKER
- SPOT ELEVATIONS

SURVEY NOTE

- 1 THE CERTIFICATION OF THIS DRAWING APPLIES ONLY TO THE TOPOGRAPHIC MAPPINGS AS GENERATED FROM THE FIELD DATA OBTAINED AT THE TIME OF THE FIELD SURVEY ON 11/20/17
- 2 ALL EXISTING MOUSE HOLES HAVE WELDED CAPS AS PER FIELD INSPECTION ON 03/23/17
- 3 WELL ELEVATION DETAIL BASED ON PREVIOUS DRAWING, NOT ABLE TO UPDATE DUE TO ACTIVITY ON PAD AT THIS TIME

AmH
526-17

SCALE
1 INCH = 40 FEET

<p>REVISION 1 11/20/17 UPDATE FIELD CHECK</p>	<p>DATE 3/29/17</p> <p>SCALE 1"=40'</p> <p>DRAWN BY WAW</p> <p>FILE NO 6806</p> <p>SHEET 3 OF 6</p>
<p>THIS DOCUMENT WAS PREPARED BY SLS LAND AND ENERGY DEVELOPMENT FOR EQT</p> <p>BIG-177 WELL PAD AS-BUILT SITE PLAN</p> <p>THIS DOCUMENT WAS PREPARED BY SLS LAND AND ENERGY DEVELOPMENT FOR EQT</p>	

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Office of Oil and Gas

JUN 5 2017

WV Department of
Environmental Protection