

west virginia department of environmental protection

Office of Oil and Gas 601 57th Street SE Charleston, WV 25304 (304) 926-0450 (304) 926-0452 fax Earl Ray Tomblin, Governor Randy C. Huffman, Cabinet Secretary www.dep.wv.gov

PERMIT MODIFICATION APPROVAL

November 09, 2015

EQT PRODUCTION COMPANY 120 PROFESSIONAL PLACE BRIDGEPORT, WV 26330

Re: Permit Modification Approval for API Number 10302732, Well #: 513923 EQT PRODUCTION CO.

Revised Lateral Length

Oil and Gas Operator:

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

Please call James Martin at 304-926-0499, extension 1654 if you have any questions.

Sincerely,

Gene Smith

Assistant Chief of Permitting

Office of Oil and Gas

Promoting a healthy environment.



August 24, 2015

4710302732 No

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

Re: Modification of 103-02732

Dear Mr. Smith,

Enclosed is an updated WW-6B, schematics, WW-6A1 and mylar plat, signed by the inspector. EQT would like to revise the length of the lateral. The top hole has not changed.

If you have any questions, please do not hesitate to contact me at (304) 848-0076.

Sincerely,

Vicki Roark

cc:Douglas Newlon

Permitting Supervisor-WV

Enc.

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WV Department of Environmental Protection

API NO.	47		103	-	02732
OPERATO	R WE		513923		
Well Par	t Nar		PICIO		

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

1) Well Operator:	EQT Product	ion Company		306686	103	1		
				Operator ID	County	District	254 Quadrangle	
2) Operator's Well I	Number						Guddiangle	
z) Operators Well	Number:	Coastal Fores	513923	Callia Casatal	_ Well Pad Name	eE	BIG190	
3) Farm Name/Surf	ace Owner : _	Coastai i Gres	Lumber Co	Jo ika Coastal	Public Road Ac	CASS.		
4) Elevation, curren	t grouna:	1,473.5	_ Elevati	on, proposed p	ost-construction:	1,473.5	[
5) Well Type: (a) Ga	ıs <u> </u>	Oil	Unc	lerground Stora	age			
Ot	her							
(b)	If Gas:	Shallow		Deep				
	,	forizontal						
						21111	10/20/10	
6) Existing Pad? Yes	s or No:	yes				DMH	8/20/15	
7) Proposed Target	Formation(s)	Denth(s) Antici	nated Thickey	A	-1-1-10	e e		
Target formation is								
		July 1	with the anticipa	ned mickness to be	51 feet and anticip	ated target pressu	re of 2620 PSI	
8) Proposed Total Ve	ertical Depth:				7560			
9) Formation at Tota	Vertical Dept	1:			Marcellus			
10) Proposed Total N	Measured Dept	h:			14,379			
Proposed Horizo			6,263					
12) Approximate Fre			675, 680, 747					
13) Method to Deterr			By offset wells					
14) Approximate Salt			N/A					
15) Approximate Coa				4	11, 1166, 1198			
16) Approximate Dep	th to Possible	Void (coal mine	e, karst, other):		None repor	ted	
17)Does proposed w		tain coal seam	s directly over	lying or				
adjacent to an ac						No		
(a) If Yes, provide	e Mine Info:	Name:				DECE!	VED	
		Depth:				REUDI	and Gas	
		Seam:			0	ffice of On		
		Owner:					5 2015	
						AUG		
						WV Depa	artiplent of age 1 of 3 on tal Protection	
					E	vironmen	Tal Flore	

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API NO.	<u>47</u>	٠.	103	02732
OPERATO	R WE	LL NO		513923
Nell Par	d Nar	na.		 DIC 100

CASING AND TUBING PROGRAM

18)

TYPE	Size	New	Grade	Weight per ft.	FOOTAGE: For	INTERVALS:	CEMENT:
	(in)	<u>or</u> Used		(lb/ft)	<u>Drilling (ft)</u>	Left in Well (ft)	Fill- up (Cu.Ft.)
Conductor	20	New	MC-50	81	40	40	38 C.T.S.
Fresh Water	13 3/8	New	J-55	54.5	844	844	738 C.T.S.
Coal		_	-	_	_	-	_
Intermediate	9 5/8	New	A-500	40	2,750	2,750	1,078 C.T.S.
Production	5 1/2	New	P-110	20	14,379	14,379	See Note 1
Tubing	2 3/8		J-55	4.6			May not be run, if run will be set
Liners							

DMH 8/20/15

TVDC	. D: (1)	T		·		+ 8/20/15	
ТҮРЕ	Size (in)	<u>Wellbore</u> <u>Diameter (in)</u>	<u>Wall</u> <u>Thickness</u> (in)	<u>Burst Pressure</u> (psi)	Anticipated Max. Internal Pressure (psi)	Cement Type	Cement Yield (cu. ft./k)
Conductor	20	24	0.375	-	18	Construction	1.18
Fresh Water	13 3/8	17 1/2	0.38	2,730	2,184	* See Note 2	1.21
Coal							
Intermediate	9 5/8	12 3/8	0.395	3,950	3,160	* See Note 2	1.21
Production	5 1/2	8 1/2	0.361	12,640	10,112	•	1.27/1.86
Tubing							
Liners							<u> </u>

Packers

N/A	
\$17.6	
N/A	
N/A	
	N/A

Note 1: EQT plans to bring the TOC on the production casing cement job 1,000' above kick off point, which is at least 500' above the shallowest production zone, to avoid communication.

Note 2: Reference Variance 2014-17. (Attached)

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VVVV - DB	APINO. <u>47</u> - <u>103</u> - <u>02732</u>
(10/14)	OPERATOR WELL NO. 513923
	Well Pad Name: BIG190
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. The vertical drill to go down	n to an approximate depth of 5981 then kick
off the horizontal leg into the Marcellus using a slick water frac.	
00 5	
20) Describe fracturing/stimulating methods in detail, including anticipated max p	
Hydraulic fracturing is completed in accordance with state regulations using water recycled from proving freshwater sources. This water is mixed with sand and a small percentage (less than 0.3%) of chemical states of the sand and a small percentage (less than 0.3%) of chemical states of the sand and a small percentage (less than 0.3%) of chemical states of the sand and a small percentage (less than 0.3%) of chemical states of the sand and a small percentage (less than 0.3%) of the	viously fractured wells and obtained from
gelling agent, gel breaker, friction reducer, biocide, and scale inhibitor), referred to in the industry as a	a "slickwater" completion. Maximum
anticipated internal casing pressure is expected to average approximately 8500 psl, maximum anticipapproximately 100 bpm. Stage lengths vary from 150 to 300 feet. Average approximately 200,000 bpm.	pated treating rates are expected to average
vary from 100 mesh to 20/40 mesh. Average approximately 200,000 pounds of sand per stage.	parreis of water per stage. Sand sizes
21) Total area to be disturbed, including roads, stockpile area, pits, etc. (acres):	no additional
22) Area to be disturbed for well pad only, less access road (acres):	no additional
 23) Describe centralizer placement for each casing string. Surface: Bow spring centralizers – One at the shoe and one spaced every 500'. 	
 Intermediate: Bow spring centralizers—One cent at the shoe and one spaced every soor. 	very 500'.
Production: One spaced every 1000' from KOP to Int csg shoe	
24) Describe all cement additives associated with each cement type.	ce (Type 1 Cement): 0-3% Calcium Chloride
Used to speed the setting of cement slurries	
0.4% flake. Loss Circulation Material (LCM) is used to combat the loss of the cement slum Intermediate [Type 1 Cement]: 0-3% Calcium Chloride. Salt is used in shallow, low temperature	ry to a thief zone.
slurries. 0.4% flake. Loss Circulation Material (LCM) is used to combat the loss of whole of	re formations to speed the setting of cement drilling fluid or cement slurry (not filtrate)
to a thief zone.	
Production:	DMH 8/20/15
Lead (Type 1 Cement): 0.2-0.7% Lignosulfonate (Retarder). Lengthens thickening time.	
0.3% CFR (dispersant). Makes cement easier to mix.	4710302732 Nov
Tail (Type H Cement): 0.25-0.40% Lignosulfonate (Retarder). Lengthens thickening time.	
0.2-0.3% CFR (dispersant). This is to make the cement easier to mix.	
60 % Calcuim Carbonate. Acid solubility.	
0.4-0.6% Halad (fluid loss). Reduces amount of water lost to formation.	
water lost to formation.	
25) Proposed borehole conditioning procedures. <u>Surface</u> : Circulate hole clean (Appro	nyimately 30.45 minutes) rotating 9 ensingerating
one full joint until cuttings diminish at surface. When cuttings returning to surface diminish	
minutes. To ensure that there is no fill, short trip two stands with no circulation. If there is	
and circulate hole clean. A constant rate of higher than expected cuttings volume likely in	
Intermediate: Circulate hole clean (Approximately 30-45 minutes) rotating & reciprocating one fu	
surface. When cuttings returning to surface diminish, continue to circulate an additional 5	minutes. If foam drilling, to enhance
hole cleaning use a soap sweep or increase injection rate & foam concentration.	
Production: Pump marker sweep with nut plug to determine actual hole washout. Calculate a gain	
Perform a cleanup cycle by pumping 3-5 bottoms up or until the shakers are clean. Check	volume of cuttings coming acresions of Oil and Gas
the shakers every 15 minutes.	
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*Note: Attach additional sheets as needed.

WW - 6B

MV Department of Erasionmental Protection Page 3 of 3



west virginia department of environmental protection

Office of Oil and Gas 601 57th Street, SE Charleston, WV 25304 (304) 926-0450 (304) 926-0452 fax

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.

4710302732 MOV 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 I (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.

Environmental Resources Specialist / Permitting

Promoting a healthy environment.

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M/V/ Department of Environmental Protection

11/13/2015



west virginia department of environmental protection

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

(304) 926-0452 fax Charleston, WV 25304 (304) 926-0450 601 57th Street, SE Office of Oil and Gas

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

0302732 Map ORDER NO. 2014 - 17

VAD GVS MELLS RECULATIONS OF CEMENTING OIL THE OPERATIONAL VAD 32 CSB § 8-9.7.P. 4/5/6/8 OF THE REGULATION 35 CSR § 4-11.4/11.5/14.1 IN THE MATTER OF A VARIANCE FROM

REPORT OF THE OFFICE

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

FINDINGS OF FACT

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

- 94% Type "1" Cement

- 5.20 % Water
- psi compressive strength within 6 hours and a 2,435 psi compressive strength within 24 2.) Laboratory testing results indicate that the blend listed in Fact No.1 will achieve a 500

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Environmental Protection WV Department of

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

\$710302732MOD 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 easing 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

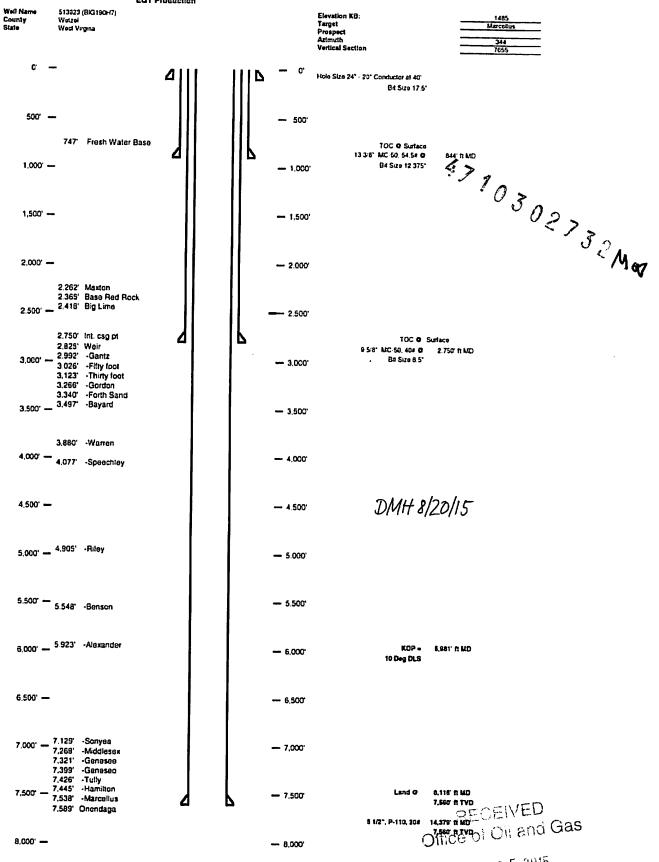
James Martin, Chief Office of Oil and Gas

> RECEIVED Office of Oil and Gas

> > AUG 2 5 2015

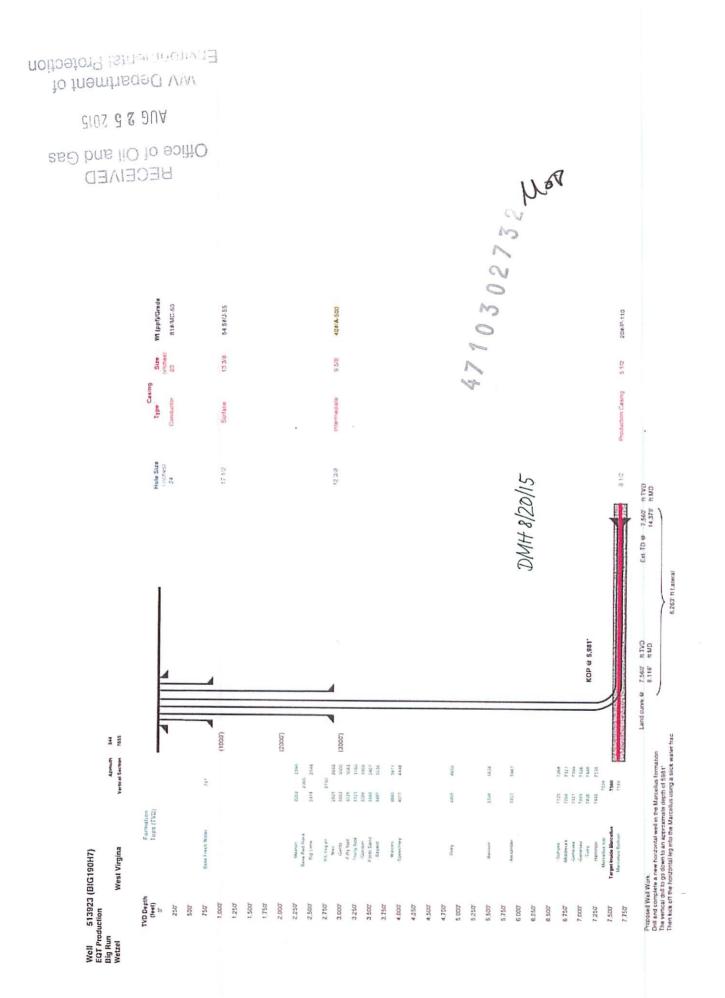
Environmental Protection

Well Schematic EQT Production



AUG 2 5 2015

Constitution 11/13/2015



INFORMATION SUPPLIED UNDER WEST VIRGINIA CODE

Under the oath required to make the verification on page 1 of this Notice and Application. I depose and so that 12 7 5 2 tract of land is the same tract described in this Application, partly or missing described in the Construction and Page 1. 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;
- 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 of	or			
Number	Grantor, Lessor, etc.	Grantee, Lessee, etc.	Royalty	Book/Page
<u>988530</u>		N	fin 1/8 pd	
	Mills Wetzel Lands, Inc.	EQT Production Company	-	OG 126A/288
		N	fin 1/8 pd	
<u>708354</u>			•	
	Margaret Sloan, et al	Carnegie Natural Gas Company		DB 2A/409
	Carnegie Natural Gas Company	Eastern States Oil & Gas Company		LB 81A/133
	Eastern States Oil & Gas Company	Equitable Production - Eastern States (Oil & Gas	CB 13/14
	Equitable Production - Eastern States Oil & Gas	Equitable Production Co.		CB 13/14
	Equitable Production Co.	EQT Production Company		CB 13/14
<u>300710</u>		N	fin 1/8 pd	
	A. H. Low & S. T. M. Low	Hope Natural Gas Co.	-	OG 5A/123
	Hope Natural Gas Co.	Consolidated Gas Supply Corp.		DB 223/387
	Consolidated Gas Supply Corp.	Consolidated Gas Transmission Corp.		LB 66A/69
	Consolidated Gas Transmission Corp.	CNG Transmission Corp.		CB 13/151
	CNG Transmission Corp.	Eastern States Oil & Gas Compa		LB 76A/232
	Eastern States Oil & Gas Company	Blazer Energy Corp		CB 12/253
	Blazer Energy Corp	Eastern States Oil & Gas Company		CB 12/259
	Eastern States Oil & Gas Company	Equitable Production - Eastern States (Oil & Gas	CB 13/14
	Equitable Production - Eastern States Oil & Gas	Equitable Production Co.		CB 13/14
	Equitable Production Co.	EQT Production Company		CB 13/14

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.

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MAY Department of Environmental Protection 11/13/2015

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: Permitting Supervisor

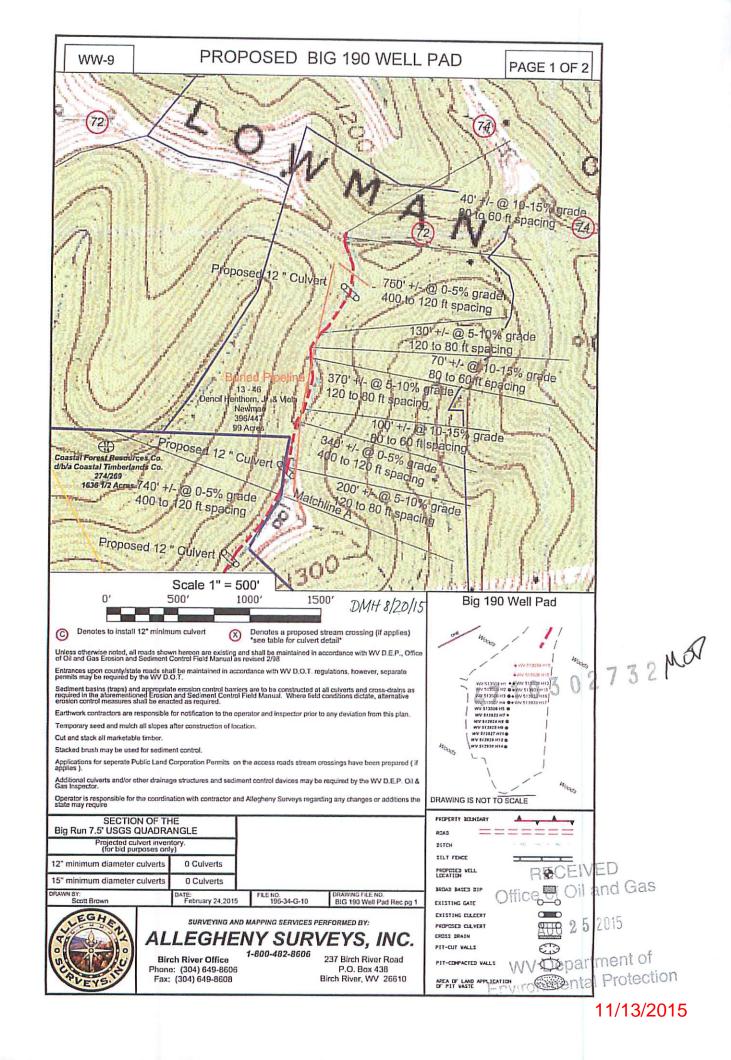
Page 1 of 1

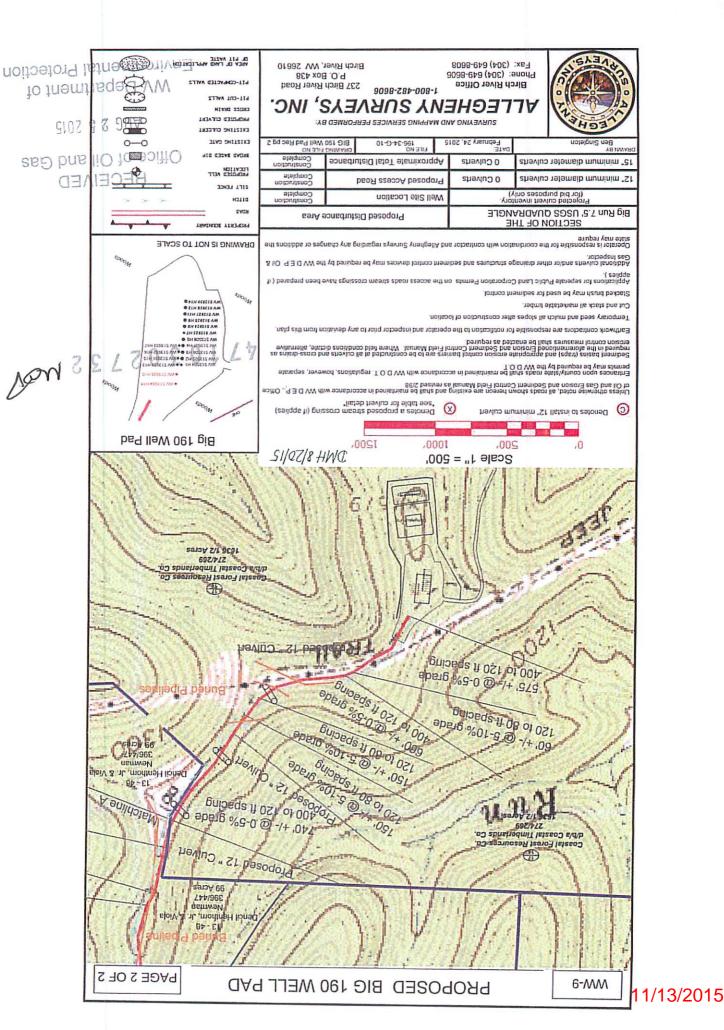
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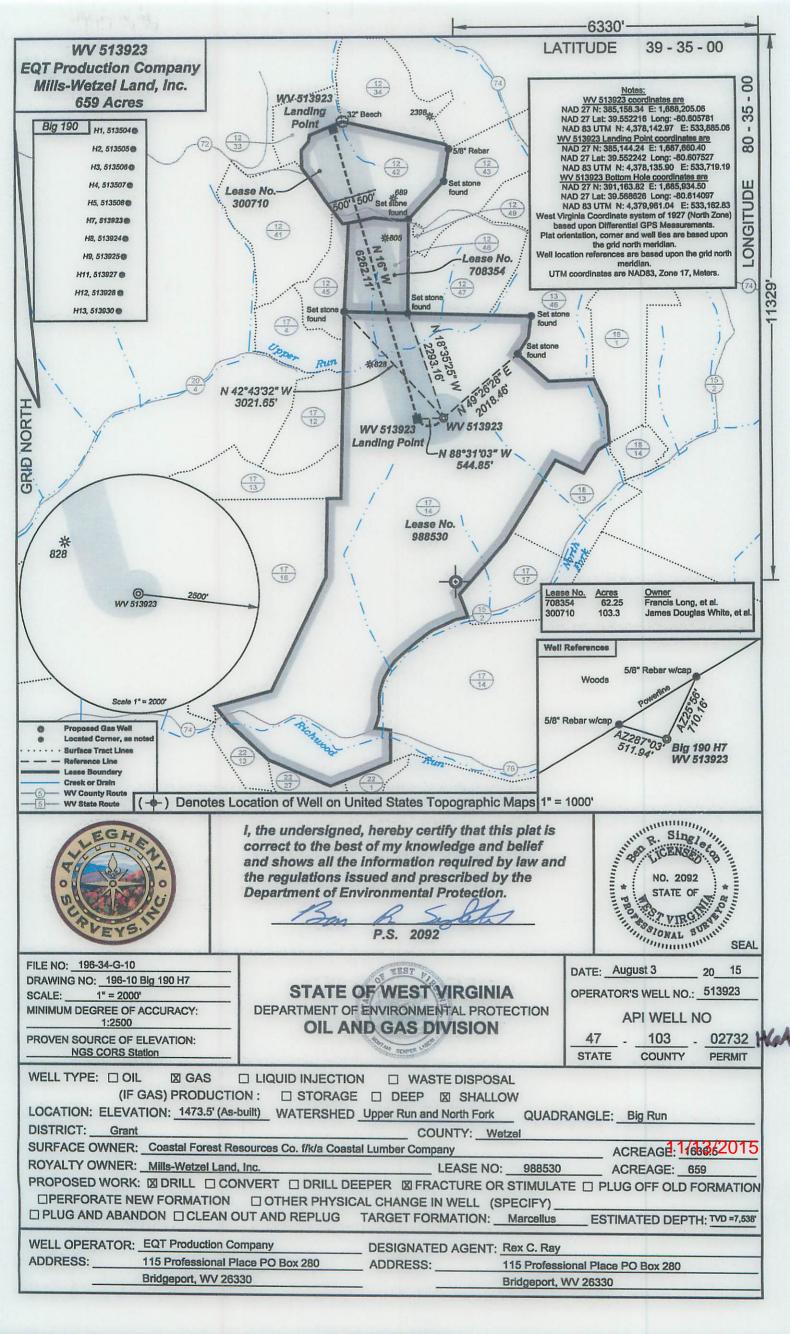
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Office of Oil and Gas

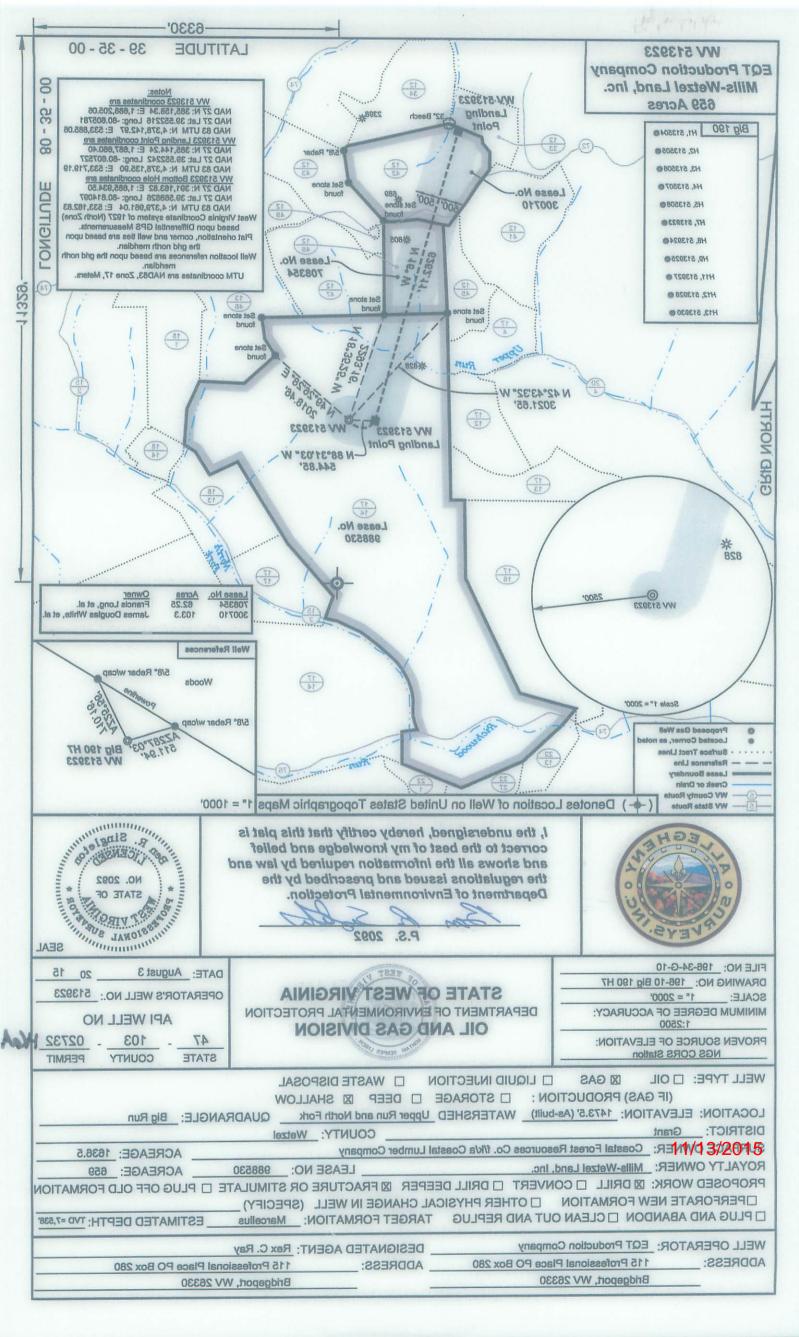
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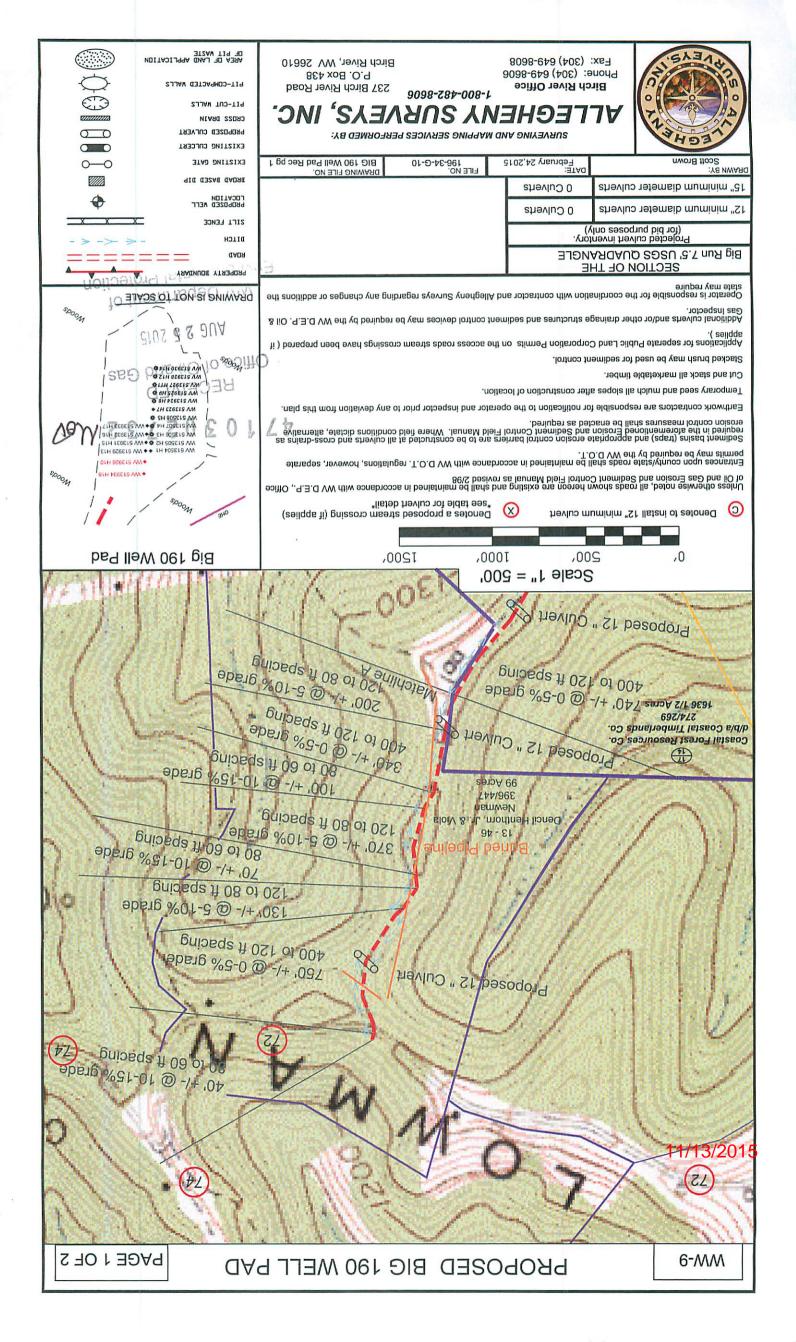
WV Department of Environmental Protection

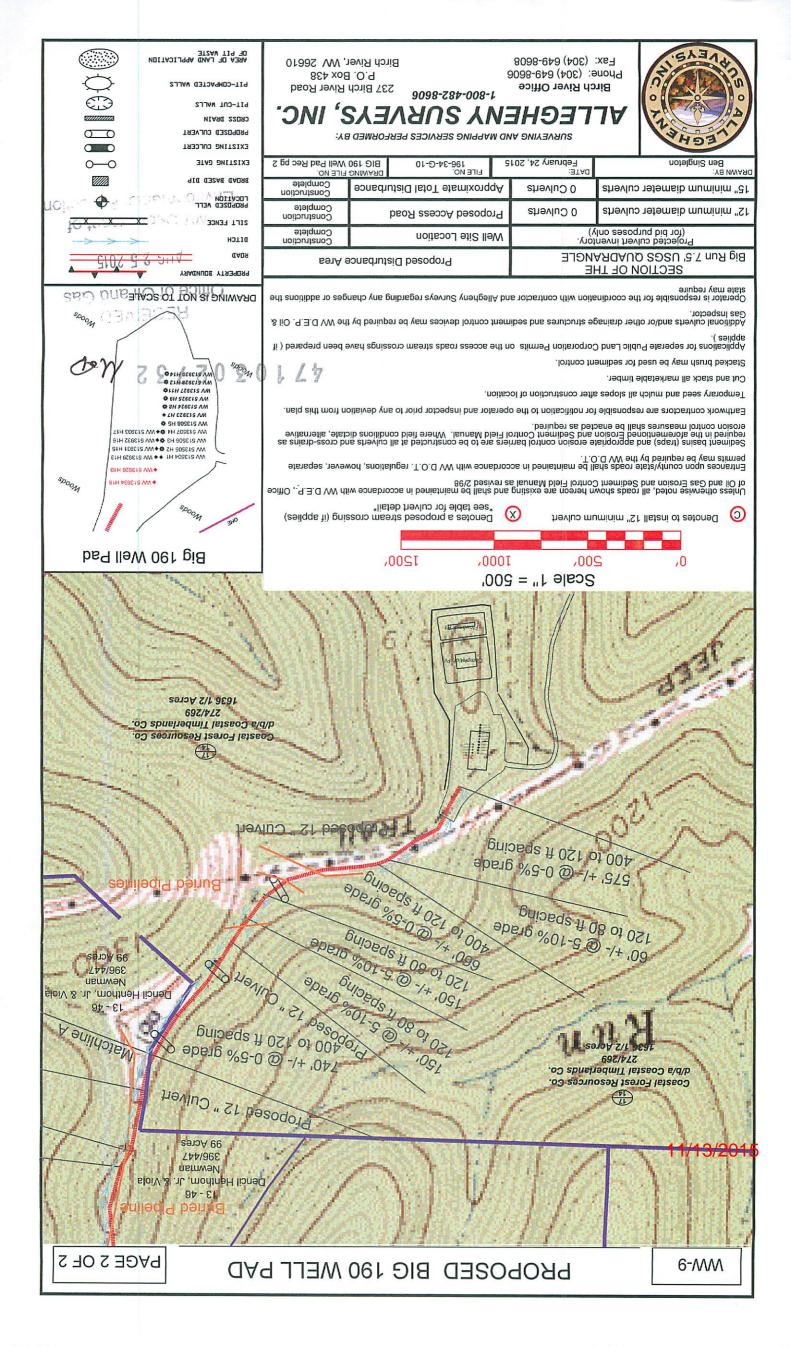












rewer, Charles T

From:

Brewer, Charles T

Sent:

Thursday, September 03, 2015 11:00 AM

To:

'Roark, Vicki'

Subject:

RE: modification of 103-02732 (513923)

Vicki,

Upon review of this modification, I see that the intermediate string was shortened from 3,474 (originally permitted length), to 2,750 (on the requested mod). Is this the case? If so, reducing the length of the intermediate casing would require re-noticing coal owners (or obtaining a signed waiver) as this string is covering two of the coal seams listed.

Thanks,

Taylor Brewer, B.S., M.S. Environmental Resource Specialist 3 Permit Review WVDEP Office of Oil and Gas 601 57th Street, SE Charleston, WV 25304 304-926-0499 ext. 1547

----Original Message-----

From: Roark, Vicki [mailto:VRoark@eqt.com] Sent: Monday, August 31, 2015 8:41 AM

To: Brewer, Charles T

Subject: modification of 103-02732 (513923)

Taylor, please let me know if you need anything further.

- 1) The BIG190 pad construction was completed in May 2012.
- 2) Below is the list of wells we have spud and current status
- a. 103-02731, 513508: Spud June 2012, TD'd Sept 2012 Currently producing
- b. 103-02730, 513507: Spud May 2012, TD'd August 2012 Currently Producing
- c. 103-02729, 513506: Spud June 2012, P&A'd.
- d. 103-02728, 513505: Spud June 2012, TD'd August 2012 Currently Producing
- e. 103-02727, 513504: Spud Feb. 2014, Currently top set only
- f. 103-02732, 513923: Spud March 2014, Currently top set only
- g. 103-02733, 513924: Spud Nov. 2013, TD'd Jan. 2014 Currently Producing
- h. 103-02734, 513925: Spud Nov. 2013, TD'd Jan 2014 Currently Producing
- i. 103-02735, 513927: Spud Sept. 2012, October 2012TD'd Currently Producing
- j. 103-02736, 513928:Spud Oct. 2012, TD'd Nov. 2012 Currently Producing
- k. 103-02856, 513930: Spud Nov. 2013, TD'd Jan. 2014 Currently Producing

I recently received a modification request for the Big 190 pad, for the above referenced API number. Could you please send me some info (a timeline of sorts) including the following information:

- When the construction of the pad was completed?
- What drilling has occurred on the pad and when?
- Where this specific well stands as far as drilling that has been conducted?

Thanks,

Taylor

Taylor Brewer, B.S., M.S. Environmental Resource Specialist 3 Permit Review WVDEP Office of Oil and Gas 601 57th Street, SE Charleston, WV 25304 304-926-0499 ext. 1547

EQT - Where energy meets innovation. www.eqt.com WW-6A (9-13)

API NO. <u>47</u>	103	 02732
OPERATOR WELL NO.		513923
Well Pad Name:		BIG190

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

	NOTICE OF A	PLICATION
Notice Time Requirement: n Date of Notice:	otice shall be provided no later than the filin Date Permit Application	· · · · · · · · · · · · · · · · · · ·
Notice of:		•
PERMIT FOR ANY WELL WORK	CERTIFICATE OF APP CONSTRUCTION OF A	PROVAL FOR THE AN IMPOUNDMENT OR PIT
Delivery method pursuant	to West Virginia Code § 22-6A-10(b)	02>
PERSONAL SERVICE		METHOD OF DELIVERY THAT REQUIRES A RECEIPT OR SIGNATURE CONFIRMATION
requires a receipt or sign plat to each of the follow the surface tract or tracts disturbance as described lessee, in the event the trecord of the surface tracconstruction, enlargeme water purveyor who is k which is used to provide work activity is to take p in the lands, the applican article one, chapter eleve unless the lien holder is the surface owner and ar Application Notice SURFACE OWNER Name: Address:	nature confirmation, copies of the applying persons: (1) The owners of recision persons: (1) The owners of recision and gas leasehold in the erosion and sediment controllect of land on which the well proport or tracts overlying the oil and gas not, alteration, repair, removal or abanown to the applicant to have a water water for consumption by humans place. (c)(1) If more than three tenant may serve the documents required the landowner. W. Va. Code R. § 3. By water purveyor or surface owner was water purveyor or surface owner. WSSP Notice B&S Plan Notice O	COAL OWNER OR LESSEE Name: CNX Land Resources, Inc. Address: CNX Center, 1000 Consol Energy Drive Canonsburg, PA 15317-6506 See attached for additional coal owners.
Name: Address:	0 0 0	COAL OPERATOR Name: Address:
Name:	S(s) (Road and/or Other Disturbance)	
Address:	0	SURFACE OWNER OF WATER WELL AND/OR WATER PURVEYOR(s) Name: 0
Name: Address:	0 0	Address: 0
SURFACE OWNER Name: Address:	(s) (Impoundments/Pits) 0 0 0 0 0 0	OPERATOR OF ANY NATURAL GAS STORAGE FIELD Name: Address:
	<u> </u>	*Please attach additional forms if necessary

WW6-A

Additional Coal Owners:

Mills-Wetzel Land Inc. C/O Michael Beemer Suite 2400 222 North LaSalle St. 26th Chicago, IL 60601-1100

Reserve Coal Properties Company Consolidation Coal Company C/O Leatherwood, Inc. CNX Center, 1000 Consol Energy Canonsburg, PA 15317-6506 4710302732 MOD

WW-6A (8-13)

API NO. 47 - 103 - 02732

OPERATOR WELL NO. 513923

Well Pad Name: BIG190

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.go.woilland 7 3 2 000 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

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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 consultivity the standard accepted methods. In compiling that list of names the department shall consultivity the standard accepted methods. 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

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. NOTE: YOU ARE NOT REQUIRED TO FILE ANY COMMENT.

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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.

11/13/2015

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Well Operator:	EQT Production Company	Address:	115 Professional Place P.O. Box 280
Telephone:	304-848-0082		Bridgeport, WV 26330
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.

1 certify under penalty of law that I have personally examined and am familiar with the information submitted on this application form 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.

My Commission Expir

STATE OF WEST VIRGINIA
HOTARY PUBLIC
Pamela Sykes
EQT Production
PO Box 280
Bridgeport, WY 26330
My Commission Expire Aug. 24, 2022

By: Victoria Reark

Its: Permitting Supervisor

Subscribed and sworn before n / 8 day of , 2015

Notary Public

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