



DEP USE ONLY
Application Tracking # 1565406

Proposed Alternate Method or Material for Casing, Plugging, Venting or Equipping a Well

Well Operator Range Resources Appalachia, LLC		DEP ID# 141142		Well Permit or Registration Number 37-125-29248	
Address 3000 Town Center Blvd.			Well Farm Name SCHWOTZER ARTHUR 12705		
City Canonsburg	State PA	Zip Code 15317	Well # 9H	Serial #	
Phone 724-743-6700	Fax	County Washington		Municipality BLAINE	

A proposed alternate method is subject to provisions in §3221 of the 2012 Oil and Gas Act, 58 Pa. C.S. §3221 Section 13 of the Coal and Gas Resource Coordination Act, 58 P.S. §513 and 25 PA Code §§78.75-78.75a (relating to Alternate Methods.) **Attach proof of notification of coal operator(s).**

Describe in reasonable detail using a written description and / or diagram:

- 1. the proposed alternate method or materials, and**
- 2. the manner in which the alternative will satisfy the goals of the laws and regulations.**

25 PA Code Chapter 78a.84(f) requires that Casing which is attached to a blow-out preventer with a pressure rating of greater than 3,000 psi shall be pressure tested after cementing. A passing pressure test must be holding the anticipated maximum pressure to which the casing will be exposed for 30 minutes with not more than a 10% decrease. Certification of the pressure test shall be confirmed by entry and signature of the person performing the test on the driller's log. Range is requesting to perform a Casing Integrity Test (CIT) immediately following cementing operations and verifying the plug bumped and reducing the test from 30 minutes to 10 minutes. This will be done per API Standard 65 - Part 2, Second Edition - 12/2010 Section 5.10.2 "Regulations may require casing to be pressure tested.

Preferably, pressure testing casing should be done before significant gel strength has developed. However, such pressure testing will be limited by the pressure ratings of plugs, floats, cementing heads and other equipment. Pressure testing can be done after the cement has set but this can result in micro-annulus formation or damage to the cement sheath. The pressure should be held on the casing for the shortest length of time required to accomplish the test." Reducing the test duration to 10 minutes ensures the cement is still in its liquid phase when the pressure test is completed. Performing the test for the full 30 minutes could allow the cement to enter the critical gel phase where it transitions from a liquid to a solid. While in this critical gel phase, any disturbance of the cement could create an opportunity of microannuli to form which could affect the cement bond. In the event the plug does not bump, the cement head will be shut in to maintain final pressure balance until a minimum compressive strength of 350 psi is achieved and the CIT would then be performed per requirements in applicable statutes and regulations.

Optional: Approval by Coal Owner or Operator		Signature of Applicant / Well Operator	
Signature	Date	Signature <i>Drew Gabrielson</i>	Date 4/6/2026
Print or Type Signer's Name and Title		Print or Type Signer's Name and Title Drew Gabrielson - Operations Engineer I	

If optional approval is signed by coal owner or operator, the 15-day objection period may be waived.

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Approved by (DEP Manager) 	Conditions <input type="checkbox"/> YES, See Attached <input checked="" type="checkbox"/> NO	Date 6/1/2026



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PA Code Title 25 Chapter 78a, 78a.85 (c) prohibits an operator from disturbing, releasing pressure, or nipping up within 8 hours of cementing a casing string. Range is requesting approval to perform surface work on the wellhead prior to waiting 8 hours when casing equipment check valves are holding. Range will not enter the wellbore with anything other than wireline prior to waiting 8 hours on cement.

Range plans to utilize a "MBS" Multibowl System wellhead on this well which encompasses three strings of casing (mine, intermediate, and production). The casing weight is suspended at surface by way of a base plate in the cellar which supports the casing head. After installation of the casing head, subsequent casing strings are supported through mandrel hangers within the wellhead system. This wellhead design negates the need for the rig to support the casing string while the cement is curing. Without the need for the rig to support the casing string, the removal of cementing equipment & installation of wellhead equipment which is required for the next phase of drilling operations can be accomplished without disturbing the subsurface cemented portion of the casing. This equipment can include but is not limited to BOP equipment, flowline, and associated piping.

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