Subject: : Conservation
Topic: : Natural gas drilling accident along the Loyalsock?
Re: Natural gas drilling accident along the Loyalsock?
Author: : Maurice
Date: : 2012/9/12 18:50:49
URL:

Quote:

> troutbert wrote:
> I have some technical questions, for the constructions experts on the board.
>
> Why would they be using bentonite in a "open trench cut across the stream." I know they use that when tunneling under streams, for lubrication, but if they're doing a trench cut, what would the bentonite be used for?
>
> Second question. In a trench cut across a stream like Loyalsock Creek, how deep do they cut the trench? Do they just dig down into the streambed cobble and gravel? Or do they dig down deeper, cutting down into the underlying bedrock?
>
> In many cases on the stream in that region, the streambed consists of a pretty shallow layer of loose material (cobble and gravel) lying on top of bedrock. You often seen exposures of bedrock in the streambeds.
>
> So if they just dig down a few feet through the cobble and gravel, and lay the pipeline on top of the bedrock, then cover it up with cobble and gravel, the pipeline will likely be exposed to severe scour during major floods. Because during major floods, all that cobble and gravel is hurtled downstream, and the stream scours right down to bedrock, then cobble and gravel drops out again when the floodwaters come down.
>
> I believe that was the problem with the pipeline break on the Yellowstone River. The pipeline wasn't buried deep enough and scour during a major flood cut down through the streambed substrates and damaged the pipe.

TB,. you are correct. Placing a pipeline in the streambed cobble exposes it to the potential for scour during flood events. Natural grade control like bedrock would be preferred over constructed grade control structure. Therefor it makes sense that they were probably cutting through the bedrock to provide stability. This is more than a in and out project and IMHO there should have definitely been a pump around BMP mandated.

Watersheds like the Loyalsock and Muncy get epic flooding/scour events. It is possible to build a grade control structure below the pipeline but likely as you say the bedrock was probably shallow below the transported

bedload.

It could have been the case that the BMP for the dirtbag failed by exploding because it wasn't changed in time and the event was short lived. (flushed soon after with clean water from the pumparound.) But as stated if the base flow was inadequate, this would explain the prolonged turbidity.