

From: David S. Decroix
 To: wxg@lanl.gov
 CC: awolf@lanl.gov; Neu, Mary P; Decroix, David S; Zyvoloski, George A; Black, Stephen J; dqosulli@lanl.gov
 Sent: 5/21/2010 7:56:16 PM
 Subject: Re: Fwd: Further on the NIC Flow Rate Working Group and their request for lab support

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One of the unresolved issues has to do with the coupling of the reservoir flow to the well bore annular flow. We know the pressure, temperature, and EOS of the fluid, but there are many complexities in describing the flow from the reservoir to the bottom of the well bore.

In a telecon with BP yesterday afternoon, they have modeled the porous media flow from the reservoir, through the "skin", to estimate a flowing pressure at the bottom of the well bore. The "skin" is the concrete, etc. that is part of the well "completion." The state of the "skin" is a big unknown; they are not sure how much of the concrete is fractured, some portion may be missing (blown away), etc. BP has many scenarios they have modeled for different "skin factors".

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