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Deepwater Oil Spill - Top Kill "Stage 2," Junk Shots, and Live Comment Thread

Posted by Heading Out on May 27, 2010 - 2:02pm
Topic: Supply/Production
Tags: deepwater horizon, mud, oil spill, top kill [list all tags]

New thread, please redirect to http://www.theoildrum.com/node/6531.

New thread, please redirect to http://www.theoildrum.com/node/6538.

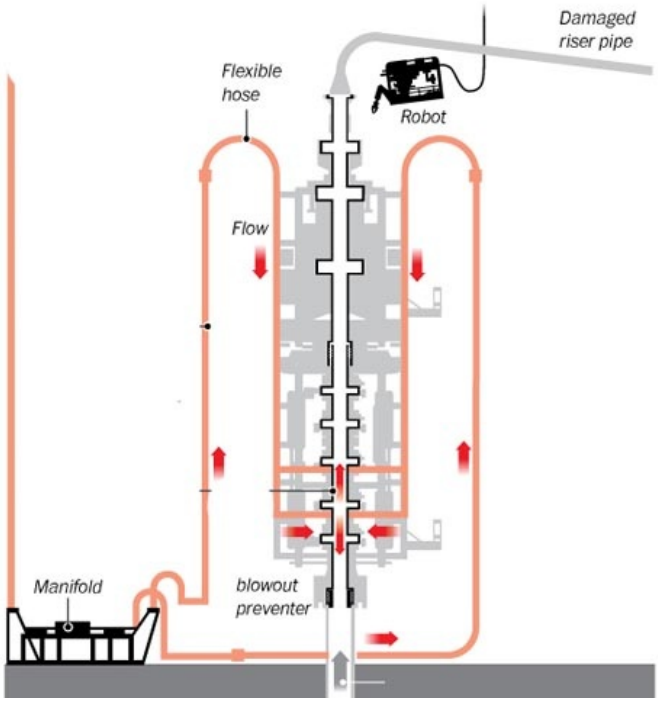
The leakage rate is significant (I calculated earlier that it was around 17,000 bd, which lies within the newly reported range of 12,000 to 19,000 bd, and may have been higher than BP were actually anticipating. (Though the leak may also have increased a little as the mud was injected at higher pressures). The operation has already used all the mud on one of the supply boats, and has moved to the second (there is a third standing by so they won't run out). The concern, however is now with the volume of cement that will be required for the seal.

The high volume that is leaking would require that additional amount to the volume needed for the seal itself, and that may be closer to the available capacity of the system that they have in place, or the supplies that they have on site to achieve the seal. If that is the case, one can understand the desire to at least partially plug the leaks in the BOP, and to wait until the mud column fully balances the pressure in the oil reservoir before starting this phase of the operation.

Until this point in the operation the volume of cement required to create an effective plug has not been seen as an issue.

Edit - New Section Added:

Unfortunately as I write the feed from the leak has moved to look at other things, but the last glance I had seemed to suggest that they have been able to reduce the flow somewhat, though I guess not enough. Just to remind you of the problem, this is what the internal flow path through the BOP looks like:



Section through the BOP, showing the anticipated mud flow path (initially from BP)

Now they have to get relatively large particles (larger than the smallest diameter of the flow path) through the feed lines, which have a size of 3-inches, and those of us who pump particles in fluids much prefer that the particle diameter be no more than 30% of the pipe diameter - which is to say in this case an inch. And so if the orifice in the BOP is larger than that, then there is a problem in working out how to get something in there that will be effective, remembering that it has to work through all the flow convolutions of the supply line that has just been installed for the mud.