

No Mud Enters the Wellbore

From: Thomas Gebeli
Sent: Saturday, 24 May 2014 09:47:26
To: Mic, Kurt, Ryyg, Ole (Unknown Business Partner)
Subject: Final 322 441 runs
Importance: Normal
Attachments: history_matching_28may_severeest_pipe.xls

Matched previous pumping data applying a system as follows:

- flow up B-cannula, which is essential to the Annulus
- flow continues down A-cannula and on drill pipe
- pipe runs seal around drill pipe
- drill pipe is severed, No B remaining
- drill pipe is placed at end with an opening of approx 2" id

Simulating pumping at 78 bpm shows a flat pressure curve, fairly low max pressure and hardly any drop in pressure, consistent with a situation where basically no mud enters the wellbore.

There are other combinations that would give the same outcome, e.g. opening around rams etc., nonetheless, comparing the actual pressure curve with the simulations, there are strong indications that a curve with this shape is the result of a situation where there is not enough restriction at surface to create enough pressure to force the mud into the well. All simulations indicate that in order to get mud down, a fairly steep pressure increase must be observed early in the process, followed by a pressure decline as the hydrostatic head increases.

Best regards,

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