From: Ole B. Rygg
Sent: Sun May 16 20:49:36 2010
To: Mix, Kurt
Subject: Top kill - 5000 and 15000 bopd
Importance: Normal
Attachments: image001.jpg; Shut-in flow outside 3000 3800 psi - Bullheading R1 May 16 2010.pptx

Kurt,
look at the presentation. interesting results.
Looks like with 15 000 bopd, you can not kill it with 50 bpm.

Let's discuss and QC these before distributing.

Ole

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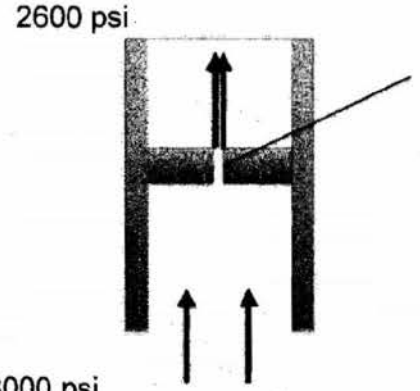
Presented 16 May 2010

Flow Through Stack



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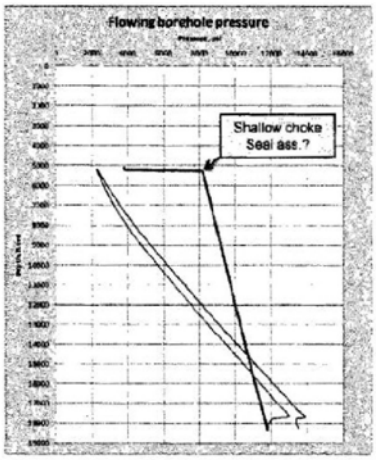
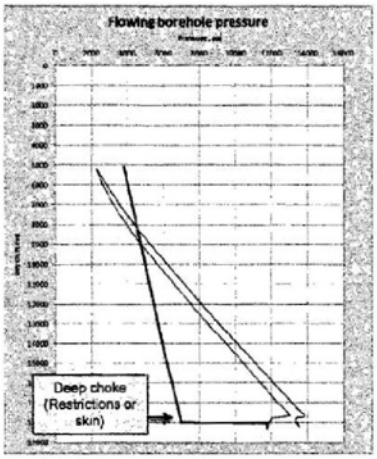
TREX-008537.0002

Flow in annulus - How to match 5000 bopd? (3800 psi at WH)





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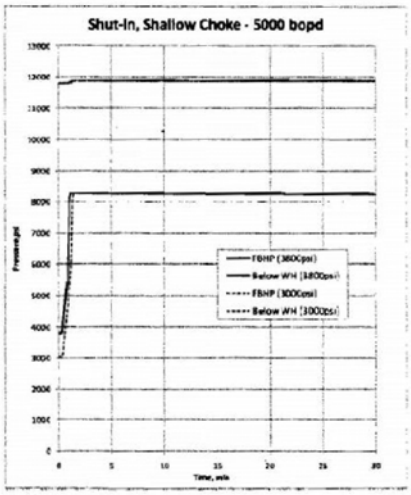
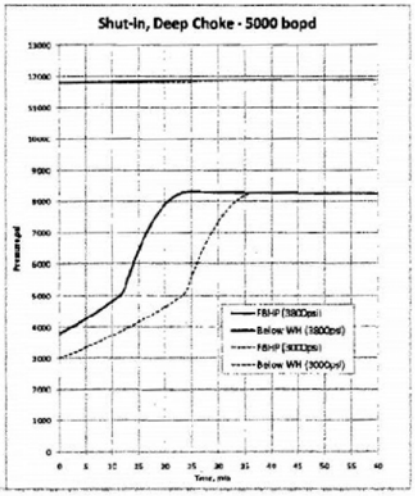
Flow in annulus – 5000 bopd

Effect of drop in WH pressure from 3800 psi to 3000 psi

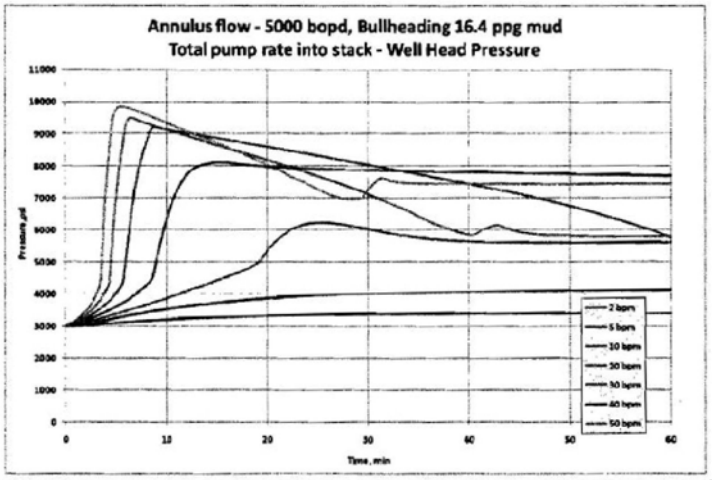




æ add energy

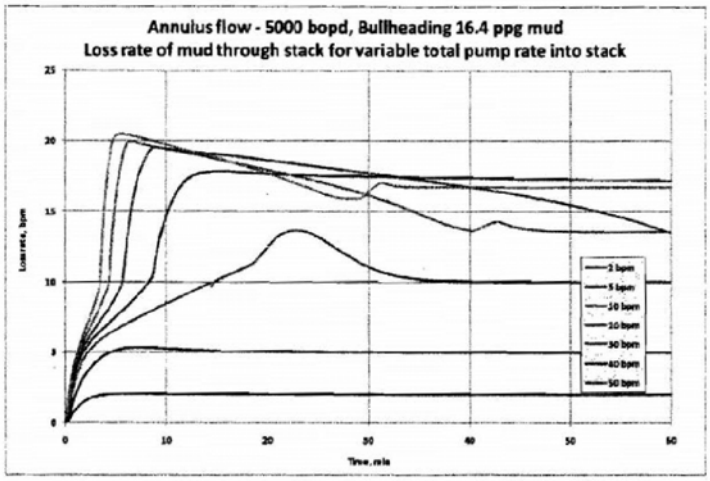
TREX-008537.0004

Bullheading/dynamic kill - Wellhead pressure vs total pump rate into the stack



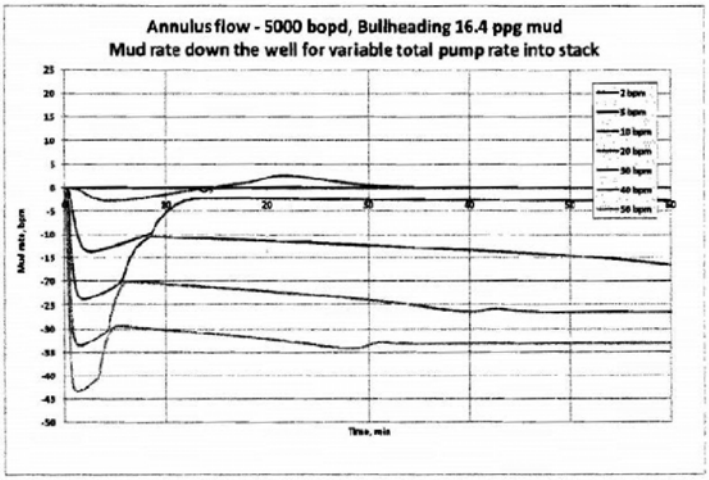
æ add energy

Bullheading/dynamic kill - Loss rate of mud through stack



add energy

Bullheading/dynamic kill - Rate of mud going down the well



æ add energy

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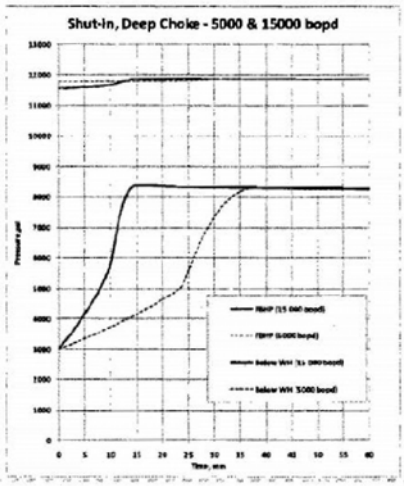
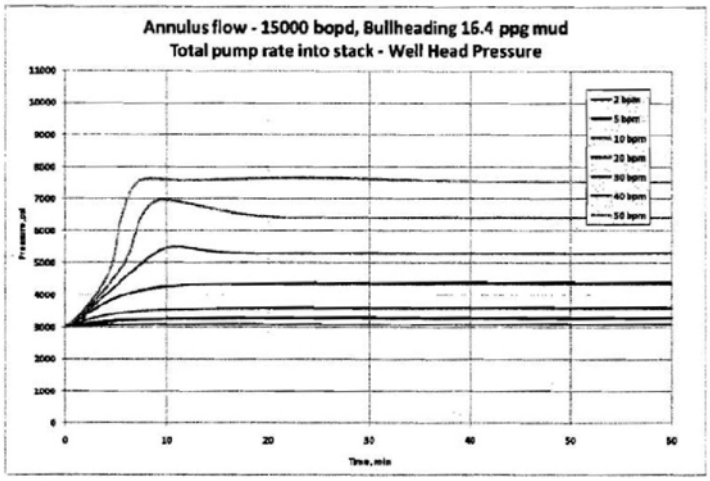
Flow in annulus – Deep choke

Effect of oil rate on build-up time



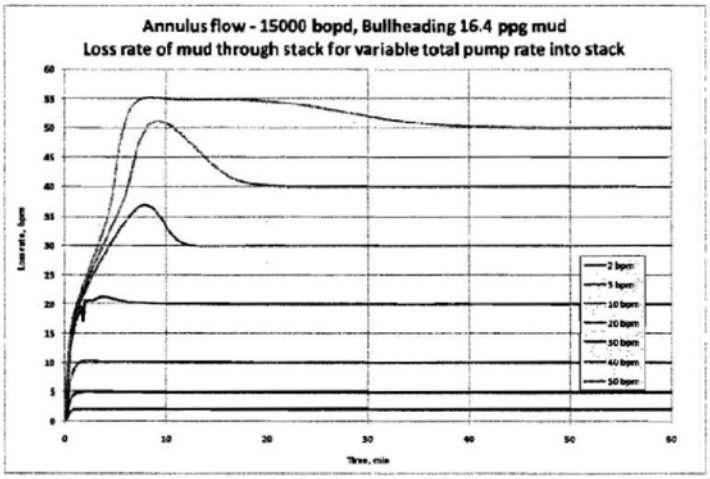
æ add energy

Bullheading/dynamic kill - Wellhead pressure vs total pump rate into the stack



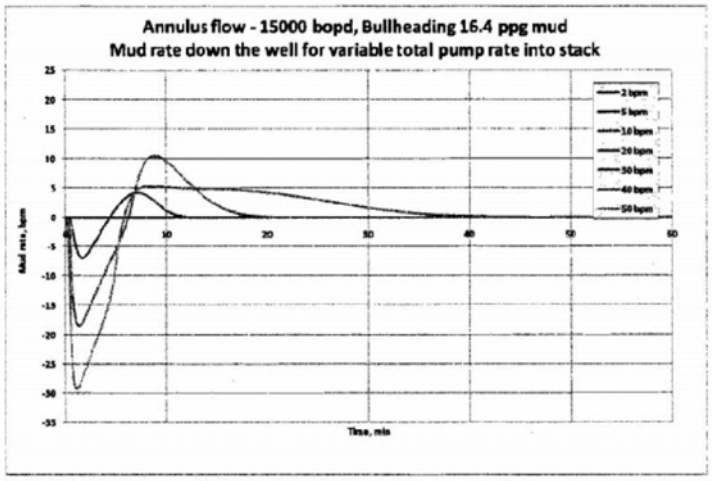
æ add energy

Bullheading/dynamic kill - Loss rate of mud through stack



add energy

Bullheading/dynamic kill - Rate of mud going down the well



add energy

TREX-008537.0011