

From: Cunningham, Erick
Sent: Mon Mar 08 20:00:32 2010
To: Morel, Brian P
Subject: RE: Nitrogen Production Job
Importance: Normal

Brian,

I would like to get a little information on the foamed cement job that you are planning. Is this a production liner, or a "long" string that is hung off in the SSWH? If it is a liner there are a number of risks that we need to mitigate. I do not have the HAL software, only BJ and SLB but I would like to get with HAL and review the design at some point.

I believe we were discussing placing non-foamed cap slurry on top of the foamed cement to ensure that we did not have nitrogen breakout. Foaming cement after swapping to SOBMs presents some significant stability challenges for foam, as the base oil in the mud destabilizes most foaming surfactants and will result in N2 breakout if contamination occurs. This drives the need for a lot of attention to the spacer programs and often results in non-foamed cap slurries being placed on top of the foamed slurry to mitigate breakout.

Let me know if you would like to discuss this job further I will be happy to.

On BJ, Fourchon bulk plant was interesting, neat and clean but very small. Will requires some planning to execute the first foamed cement job and to be able to test the blended product for the surface foam job before loading it onto the supply vessel as there is currently no storage capacity there for blends. The currently blend straight into the boats. BJ have offered to bring in some temporary storage for the blended foamed cement job. No ability to sample blends other than when transferring to the boat so we will need a portable sampling set up as well. I saw some troublesome liquid storage practices such as storing bulk chemicals without secondary containment, mixing of retarders in tote tanks with no lot numbers indicated on the tote, filling of tote tanks with a forklift on the driveway of the warehouse, etc.. After visiting it was clear why no liquid or water samples were in the lab. Again, another facility that will require BP specific procedures; and someone to police them.

I spent some good quality time on Friday with Elxeious (their initial plan for in-house support) in Tomball.

Unfortunately, he demonstrated very low competency in deepwater cementing and is no where near meeting contract requirements (glad we have them in there). Never worked deepwater, never worked HPHT, he has spent his entire career in East Texas cutting and pasting the same cementing recommendation. I was kind of surprised that he did not even have a good grasp of some fundamental things like gas migration mechanisms, and fluid displacement. BJ will absolutely have to find an alternative support person for us, the sooner the better on this.

I will have the report out before the end of this week, and will set up a meeting with you to review before we call in BJ (hopefully sometime next week).

Regards,

Erick

Erick Cunningham

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From: Morel, Brian P
Sent: Monday, March 08, 2010 7:57 AM
To: Cunningham, Erick

Subject: Nitrogen Production Job

Brick

Can you send details of what you would want for the nitrogen cap we talked about on production jobs? We are attempting to get a nitrogen job to design for our current casing layout and want to make sure we include everything in the models.

Also, do you have the Halliburton software that you could review the design and tell us if we are capturing everything in the model or if there is something we can do to make the job better?

Thanks

Brian

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From: Cunningham, Erick
Sent: Tue Mar 09 15:13:02 2010
To: Morel, Brian P
Subject: RE: Updated: Options Review
Importance: Normal

Ok sounds, good. Good luck with the well; this seems to be a tough one.

Regards,

Erick

From: Morel, Brian P
Sent: Tuesday, March 09, 2010 9:03 AM
To: Cunningham, Erick
Subject: RE: Updated: Options Review

No, we are in well control for this well and will be a few days before this is sorted out. Once we get back on track we can get together and talk about the production cementing.

Thanks

Brian

From: Cunningham, Erick
Sent: Tuesday, March 09, 2010 9:01 AM
To: Morel, Brian P
Subject: RE: Updated: Options Review

Brian,

I was not able to move my other meeting this morning. We can get together at 1:00 PM with Jesse if you have time and want to do this.

Regards,

Erick

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-----Original Appointment-----

From: Cunningham, Erick
Sent: Tuesday, March 09, 2010 7:38 AM
To: Morel, Brian P
Subject: Tentative: Updated: Options Review
When: Thursday, March 11, 2010 9:00 AM-10:30 AM (GMT-06:00) Central Time (US & Canada).
Where: Ops Room

From: Morel, Brian P
Sent: Thu Mar 11 23:21:46 2010
To: Cunningham, Erick
Subject: RE: 16.4 ppg Plug test
Importance: Normal
Attachments: image001.jpg

Thanks for the response Erick. Seems to be a constant argument on our team.

From: Cunningham, Erick
Sent: Thursday, March 11, 2010 5:17 PM
To: Morel, Brian P
Subject: RE: 16.4 ppg Plug test

Brian,

The guidance in the BP SRP's around fluid loss control in plugs is based on the permeability of the formation you are setting the plug in. Exact wording below:

Fluid Loss Control:

If setting a plug across a permeable formation and the over-balance exceeds 200 psi, API Fluid Loss should be controlled to 50 – 100 ml/30 min at BHSqT. For plugs set across impermeable formations / casing there is no requirement for fluid loss control in the slurry design

I agree with this guidance and have seen instances where setting plugs across very large high permeability sand sections with no fluid loss control can lead bad things happening. So this is probably the message we should communicate back to Jesse. This concern increases in a reduced water design (such as the 17.2 ppg system) as they are more susceptible to performance changes with small percent changes of the water to solids ratio.

Jesse's argument about the delay of static gel strength development is hard to have an opinion on, not having worked in the lab with their additives. It could be that this is a secondary effect of this additive, I do not have the answer to this, but typically gels are controlled with dispersants.

Could challenge him to produced static gel strength measurements from the lab on this design and an alternative design without fluid loss control in the future. One thing he needs to understand is that one can hang their hat on lab data much better than words of assurance.

If you are setting a 16.4 ppg Lafarge Class H plug across a shale section, I see absolutely no reason for fluid loss additives. 17.2 ppg is a bit more worrisome just due to the fact it has less water. But I have designed plugs and pumped them successfully both with and without fluid loss at both of these densities. At the end of the day I would go back to formation and overbalance guidance.

Regards,
Erick

From: Cunningham, Erick
Sent: Mon Mar 22 19:32:30 2010
To: Jesse Gagliano
Subject: FW: Production Cement Job
Importance: Normal

When: Tuesday, March 23, 2010 2:00 PM-3:00 PM (GMT-06:00) Central Time (US & Canada).

Note: The GMT offset above does not reflect daylight saving time adjustments.

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Can you attend?

From: Cunningham, Erick
Sent: Monday, March 22, 2010 2:11 PM
To: Morel, Brian P; Cunningham, Erick
Subject: Production Cement Job
When: Tuesday, March 23, 2010 2:00 PM-3:00 PM (GMT-06:00) Central Time (US & Canada).

Where:

When: Tuesday, March 23, 2010 2:00 PM-3:00 PM (GMT-06:00) Central Time (US & Canada).

Note: The GMT offset above does not reflect daylight saving time adjustments.

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Brian,
Will this timing work for you?
Regards,
Erick

From: Morel, Brian P
Sent: Monday, March 22, 2010 1:35 PM
To: Cunningham, Erick
Subject: Production Cement Job
Attachments: OptiCem Graph

Erick,

Can you come over and meet with us tomorrow regarding the production cement job on Macondo. We are looking at needing 7-5/8" pipe and right now based on the data we currently have the models show us not getting enough cement lift. Need to try and figure out how to make this work, as we are struggling to find 7" pipe. Please let me know what timeframe works best for you and I will set something up.

Thanks

Brian