

From: Morel, Brian P
Sent: Mon Apr 05 18:50:50 2010
To: Sant, Randall; Albertin, Martin L.
Cc: Alberty, Mark W; Bodek, Robert; Bellow, Jonathan M; Zhang, Jianguo X.; LeBleu, John B
Subject: RE: Macondo Sand pressures
Importance: Normal

Multiple sands open, with the bottom three being ~20, ~70, and ~10. We have pumped (2) 200 bbl 84 ppb pills which haven't done much too slow losses at this point. We did cut the mud weight in the riser with base oil, to a 14.0 ppg surface equivalent and this has slowed losses to <3 bbl/hr.

We are looking to have a formula for new sands, which might be encountered once when we fix these and can drill ahead. I don't think many of us believe putting more calcium carbonate into the mud will help to fix these sands with how much mud has been lost so far.

Brian

-----Original Message-----

From: Sant, Randall
Sent: Monday, April 05, 2010 1:00 PM
To: Morel, Brian P; Albertin, Martin L.
Cc: Alberty, Mark W; Bodek, Robert; Bellow, Jonathan M; Zhang, Jianguo X.; LeBleu, John B
Subject: RE: Macondo Sand pressures

Brian,

If we have had losses to the extent you mentioned below, then it would be very hard to model for a StressCage solution as the fracture length and width would have grown beyond what we are comfortable with. I am following up with Jianguo about modeling the fracture width based on the losses observed. With the advent of losses, what remediation methods were employed to curtail these observations? Did these abate losses? Can you tell me the approximate thicknesses of these sands?

Thanks

Randall V. Sant

PPFG Specialist
Exploration and Production Technology Group
Drilling Team - Houston

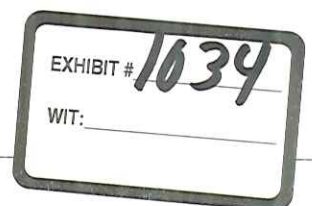
Direct: 281-366-8886
Mobile: 713-244-4869
Email: santrb@bp.com

-----Original Message-----

From: Morel, Brian P
Sent: Monday, April 05, 2010 11:44 AM
To: Sant, Randall; Albertin, Martin L.
Cc: Alberty, Mark W; Bodek, Robert; Bellow, Jonathan M; Zhang, Jianguo X.; LeBleu, John B
Subject: RE: Macondo Sand pressures
Total losses are 1159 bbls.

-----Original Message-----

From: Sant, Randall
Sent: Monday, April 05, 2010 11:24 AM
To: Albertin, Martin L.; Morel, Brian P
Cc: Alberty, Mark W; Bodek, Robert; Bellow, Jonathan M; Zhang, Jianguo X.; LeBleu, John B
Subject: RE: Macondo Sand pressures



Brian,

In reference to the two sands packages that Marty mentions in his note, did we have lost circulation in them? If so, can you quantify the lost volume? If they have had losses, a StressCage implementation may not work as expected.

Thanks

Randall V. Sant

PPFG Specialist

Exploration and Production Technology Group

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-----Original Message-----

From: Albcrtin, Martin L.

Sent: Monday, April 05, 2010 11:20 AM

To: Sant, Randall

Cc: Alberty, Mark W; Morel, Brian P; Bodek, Robert; Bellow, Jonathan M

Subject: Macondo Sand pressures

Randall,

Brian Morel mentioned you might want the latest surprising data from Macondo (see attached PPFG plot).

We have collected two Geotap pressure measurements, and both look to be valid. The deeper measurement at 18079' TVDKB is in a sand lobe just above the main sand lobe we drilled yesterday. The deeper low pressure sand appears to be the problematic one, and the most likely candidate for yesterday's loss event. There is a thicker lobe of sand less than 50 ft deeper than the deepest geotap pressure measurement - tool died while attempting to measure its pressure. I assume it will have a similar pressure

Our KB=75'

| TVDSS | TVDKB | PPG | PSI | FG (est) | OB |
|-------|-------|-------|-------|----------|-------|
| 17722 | 17797 | 14.15 | 13082 | 13460 | 14835 |
| 18004 | 18079 | 12.58 | 11815 | 13912 | 15136 |

Let me know what other data you might need.

Marty

Martin L. Albcrtin

Geophysical Advisor

BP Deepwater Exploration

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