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**Sent:** Fri Apr 23 03:23:50 2010  
**To:** Haffe, Mark E  
**Cc:** LeBleu, John B; Armand, Tim J  
**Importance:** Normal  
**Attachments:** Macondo Displacement to Seawater (2).pdf

Here is procedure sent to me. Nothing about weighting up to a 16.0 ppg spacer. spacer originally mixed at 14.0 ppg. May I see your document that references a 16.0 ppg spacer?

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BP / Deepwater Horizon  
Rheliant Displacement Procedure  
"Macondo" OCS-G 32306

1. Before displacing to seawater, conduct a THINK DRILL with all.
2. *Remember it's very important that we must avoid trapping SBM in pits, pumps, lines and hole. We will displace SBM from all four mud pumps, both stand pipes, choke, kill, boost lines, casing and riser.*
3. Pump excess volume to Bankston, and have boat on starboard with mud hose on her.
4. Line up on sea chest.
5. Build 450 bbl **WBM spacer** in pit # 5, and use Duo Vis to thicken up.
6. Capacities:  
**Choke 100 bbls/794 strokes;                      Kill 100 bbls/794 strokes;**  
**Boost 73 bbls/579 strokes;                      Drill pipe 170 bbls/1349 strokes;**  
**Casing/Riser w/drill pipe 2334 bbls/18,523 stks**  
**Total displaced volume for hole and drill string, 2504 bbls/19,873 strokes**  
Pump Output 0.126 bbls/stk.

Displacement

1. Line up for all SBM returns to go to the pits and bypass sandtraps. Function test dump valve.
2. Displace choke, kill, and boost lines, and close lower valves after each. Zero stroke counter. (Note: when displacing choke line, over displace 8 bbls (63 strokes) for surface lines.
3. Pump 450 bbl **WBM spacer** from **pit # 5** down drill pipe.
4. Continue displacement up casing until spacer is 500ft past BOP stack (992 bbls 7873 strokes). After the mud has past the stack, we can boost riser.
5. Do not shut down until displacement is complete.
6. When WBM spacer returns, over-displace until interface is incorporated. When interface is incorporated, take sample for Static Sheen test and ROC and shut down pumps. Switch to overboard discharge.
7. If static sheen is an apparent pass, discharge remaining spacer and seawater down overboard line. Mud Engineer will advise.

NOTE: Good communication will be necessary to accomplish a successful displacement. If you are not sure, stop and ask.