



Drilling & Completions MOC Initiate

MOC #: DCMOC-10-0069
Date Initiated: 4/14/2010
Initiator: Hafie, Mark
Stage: Review
Status: Unapproved

Asset/Project: CoM
Type of Change: Technical
Rg: Horizon
Well (i.e., GC 823 #1 or N/A): MC 252#1 Macondo
Verifier: Hafie, Mark
Priority: A (High) - Immediate
Coordinator: Hafie, Mark
Desired Completion Date: 04/15/2010
Proceed with MOC? Yes No/Cancel Clarify

Title:
Production Casing for Macondo

Scope:
Macondo is a successful exploration well. The primary objective has been met.
A secondary objective is to make this a keeper well, for a future sub-sea completion and tie-back.
The current plan we are seeking approval for is to run a tapered long string of 9-7/8" x 7" production casing.
If the wellbore conditions deteriorate (additional losses, wellbore stability, hole fill, etc.) during the planned conditioning trip, then the recommendation will be made to run a liner instead of the long string.

Justification (include financial impact where appropriate):
The current cement model suggests that we should be able to achieve a successful primary cement job on the long string (see attached design document in the .pdf file)
The long string provides the best economic case and well integrity case for future completion operations.
The liner, if required, is also an acceptable option, but will add an additional \$7 - \$10 MM to the completion cost.
The complete summary of the options and current wellbore conditions are attached in the .ppt file.
The plan forward decision tree is also attached.

Risk/Mitigation (attach risk documentation where appropriate):
Lost circulation during the cement job:
The model estimates the maximum ECD to be 14.583 ppg. The FIT on the previous shoe was 18.0 ppg. There have been two lost circulation events in this hole section. The first occurred when ECD exceeded 14.9 prior to drilling the pay sands. The second event (major losses) occurred when ECD exceeded 14.7. Losses for this event were cured with Form-e-Seal and MW reduction. Since that second event we have been using a 14.5 arbitrary frac gradient that we are attempting to abide by based on actual circulating conditions we have put the wellbore under since having losses and fixing them. The cement job has been designed to minimize the ECD as low as practical. Foam cement, light weight spacer, and a small base oil spacer, along with low pump rates, will be used together to keep ECD below an acceptable level.
Single barrier in annulus for TA:
If losses occur during the cement job, possible cement evaluation, remedial cement operations, dispensations and/or MMS approvals will be required prior to performing TA operations due to a lower than required Top of Cement in the annulus. Possible hydrocarbon zones could be left exposed in the annulus with only the casing hanger seal as the single barrier for the TA. The attached decision tree addresses these options. A perf and squeeze operation could be performed to add a second barrier in the annulus.



Drilling & Completions MOC Review

MOC #: DCMOC-10-0068
Date Initiated: 4/14/2010
Initiator: Hafie, Mark
Stage: Review
Status: Unapproved

Level 1 Reviews

Table with 4 columns: Review, Responsible Person, Disposition, Completed By. Rows include Engineering, Operations, Engineering Authority, and Asset.

Level 2 Reviews

Table with 4 columns: Review, Responsible Person, Disposition, Completed By. Row includes Operations.

EXHIBIT # 2659
WIT: _____

