From: Kerry L. Girlinghouse
Sent: Tuesday, April 27, 2010 2:42 PM
To: bob.franklin@bp.com
Cc: David W Moody; David Barnett; Dicky J. Robichaux
Subject: PM#13 -SS Well Capping Rev2
Attachments: WWCI Project Memo-13 Capping Options Rev2.doc; image001.gif

Attached SS Well Capping doc R2

Regards,

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"Experience Makes The Difference"

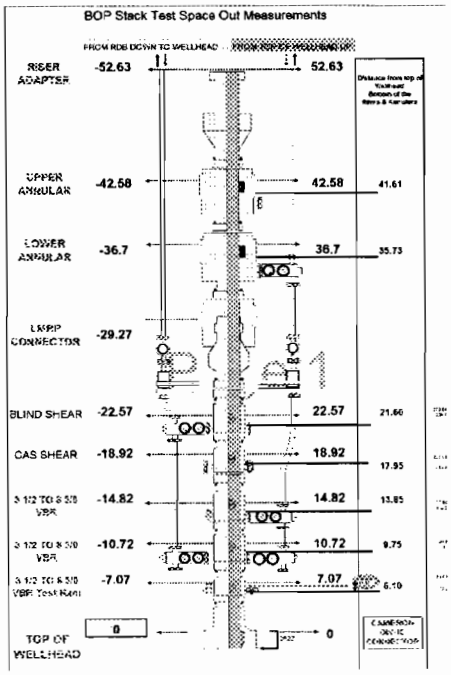
Project Memo - #13 Rev-2

Operator:	BP GoM Deepwater Exploration	**Well Name:**	Macondo – MC252#1
Date:	27 Apr 2010	**Time:**	
To:	Mark Mazzella John Shaughnessy	**From:**	K. Girlinghouse, D. Moody
CC:	Joe Dean Thompson, Dicky Robichaux , Chris Murphy, Rolly Gomez, Freddy Gebhardt, David Barnett		
Subject:	SS Well Capping		

In the event that current ROV intervention attempts to secure the well by functioning the existing BOP and the well continues to flow. The following options should be considered for review and deployment. It is anticipated that the flow from the well will be restricted to facilitate this operation.

Well Capping

Installation of Capping Stack on existing BOP



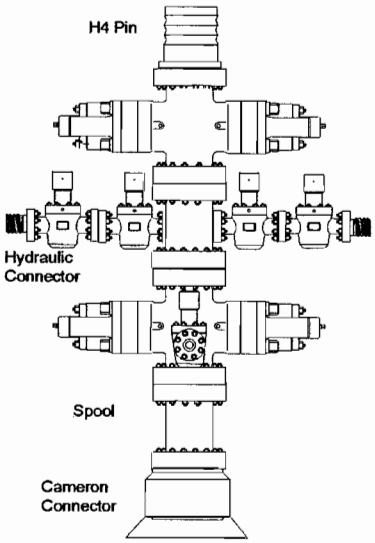
Intervention Option - Installation of Capping Stack on existing BOP

Summary Procedure:

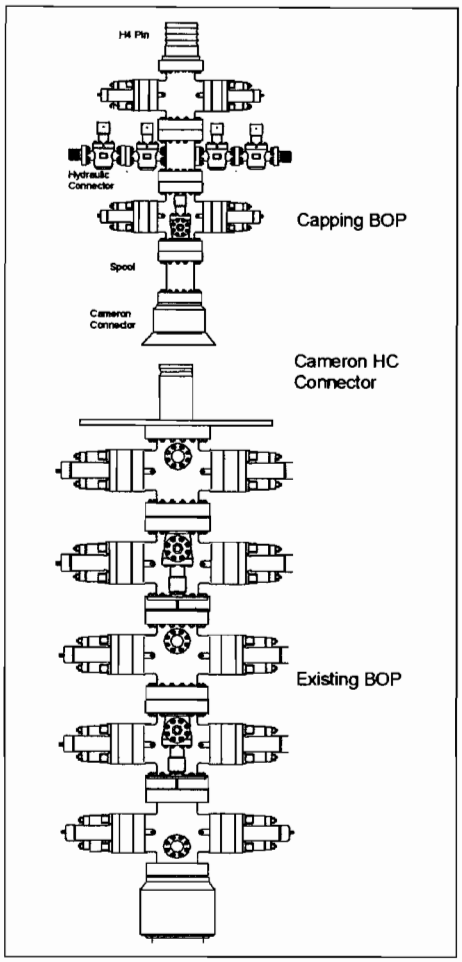
1. Cut and remove damaged riser from the top of the existing LMRP
   Note: See detailed procedure on this operation
2. Deploy 2-point guiding cable and blocks to lower BOP stack and thread through capping stack.
   NOTE: Slings and cable guidance to facilitate cable snubbing on the capping stack. Should snubbing of the capping stack be required a 20 ton counter balance winch should be utilized.
3. ROV to connect guidance and pull-in cables to capping stack
4. ROV to install guidance/pull-in cables to snub on capping stack
5. With capping stack deployed at depth on separate MSV, Connect other MSV surface crane to upper subsea BOP and utilize ROV to function LMRP connector disconnect
6. Recover LMRP for possible refurbishment
7. As upper BOP is removed and moved off site capping stack MSV should be moved into place (lower wellhead connector w/ guide funnel, two (2) single BOPs, upper connector).
8. ROV to function wellhead connector to latched position
9. ROV to detach guidance/pull-in cable from crane
10. ROV to function BOP rams to CLOSED position.

Note:

1. Stabbing stack ROV controlled. Also need to look at the possibility of designing a Pod controlled BOP function.
2. Will require Cameron connector to match Pin connector on LMRP.
3. Snubbing the stack onto well may not be a requirement according to well bore flow rate.
4. If there is a DP stub protruding from existing BOP, plans are to cut this stub as close as possible to the connector without damaging the HC pin connector.



Capping BOP



Pros:

- Secures well providing well control and stopping hydrocarbon release
- Allows wellbore access for future control mitigation
- Recovers damaged LMRP
- Provides ability to attach remedial BOP's
- Provides the ability to suspend operations with a secure well in the event of hurricane evacuation.

Cons:

- Impact of flow on cutter is unknown
- Wellbore open to environment with no barriers in place until capping stack is installed
- Unable to release secondary wellhead disconnect and recover stack
- Unable to install capping stack due to flow or connector malfunction.
- Damage to wellhead connector possible
- Requires suitable weather conditions