



The BP Deepwater Oil Spill - LMRP Attempt Continued and Sunday's Open Thread

Posted by [Gail the Actuary](#) on May 30, 2010 - 7:29am

Topic: [Supply/Production](#)

Tags: [deepwater horizon](#), [lmp](#), [lower marine riser package](#), [oil spill](#) [[list all tags](#)]

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BP is now saying that its Top Kill approach has failed, and it is moving on to LMRP. A few comments from the press:

[Top Kill Fails To Plug Oil Spill, BP Now To Try LMRP Cap](#)

BP said preparations have been made for the possible deployment of the lower marine riser package (LMRP) cap containment system, which would be complex because of the depth of the oil leak.

Deployment would first involve removing the damaged riser from the top of the failed BOP to leave a cleanly-cut pipe at the top of the BOP's LMRP.

The cap, a containment device with a sealing grommet, will be connected to a riser from the Discoverer Enterprise drillship, 5,000 feet above on the surface, and placed over the LMRP with the intention of capturing most of the oil and gas flowing from the well.

Mr Suttles said it should capture "most of the oil" and was expected to last at least four days but "we cannot guarantee success at this time."

Under the fold (click "there's more"), I talk a bit about the Lower Marine Riser Package (LMRP) and what we know at this point. Please elaborate other facts in the comments.

(PG here, and following Gail's post below are HO's thoughts on the press conference...)

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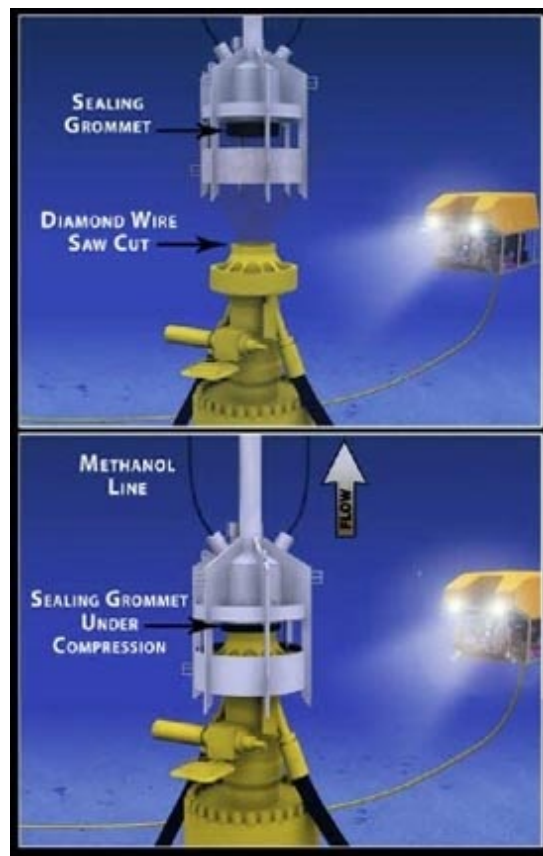
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This is a diagram that Heading Out posted a few days ago, of the LMRP.



The [Lower Marine Riser Package](#) (LMRP) option

According to [Upstream Online](#):

If the top kill does not work, the UK supermajor plans to cut off the riser from the lower marine riser package (LMRP) and attach another to collect the flow.

The device would be coupled to a flex joint above the LMRP with a sealing grommet to keep water out of the flow and control gas hydrate formation.

The cap also has valves to inject methanol or hot water into the production stream.

BP has already lowered the LMRP cap to the seafloor so it could be deployed immediately after a failed top kill.

Installing the cap would take about four days, Suttles said, and it could be in place early next week.

The LMRP cap would allow BP to capture as much of the flow from the well as possible while it works on other options to kill the well, he said.

He announced Wednesday that BP preferred option in that instance would be to add a second BOP on top of the first.

Heading Out's Thoughts on the Press Conference

BP and Admiral Landry just held a Press Conference in which they said that, based on a decision 90 minutes ago, by the “best and brightest minds” that it was time to move on the next option, the Lower Marine Riser Package (LMRP). BP was unable to block sufficient flow out of the well to make the injection of cement possible, and thus to kill the well. They had made, I believe he said, three attempts to inject material (the junk shots) without being able to get that material to block the passages through the Blow-Out Preventer (BOP). (Unfortunately I missed a large part of his opening remarks, and thus have only the question response to go on at present.) The volume of mud used did not appear to have changed from earlier reports at some 30,000 barrels.

Mr Suttles said that they had given the technique every chance, but could not get it to start to provide an effective seal. They had, however, determined that the majority of the pressure restrictions to the flow of oil was coming from some resistance within the well itself, and from the BOP. Since the riser above the BOP was not contributing much to the resistance, and thus to control of the oil flow, the next plan is to remove it, using a band saw device (of which pictures will be available) and then to lower the LMRP onto the existing BOP. They intend to cut the surface flat that the LMRP will sit on, so that it will give a good, but not perfect, seal. Thus there will be some leakage around the joint, and they will monitor that and use dispersant as appropriate.

The new change should take somewhere between 4 and 7 days to implement. The assembly, which has been constructed, is not the Top Hat assembly built earlier, to fit on the bottom of a riser. Flow of oil from the LMRP will rise up a 6 7/8 inch drill pipe within the riser (the same size as the one currently fitted to the RIT). The riser will also carry hot water down to the LMRP to protect against the formation of hydrates.

He noted that their inability to stop the well “scares everybody” but is reasonably confident (no success percentage estimates) that this will collect the majority of the oil and gas. Because they do not know the flow path of the oil below the seabed, it is difficult to estimate what is actually going on in terms of oil path below the BOP. Thus they are, again, trying something that has never been done before, but expect, based on the RIT, that it will work.

On being asked about the cleanup of the dispersed oil – he pointed out that the reason that the

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dispersant was used was to break the oil into small droplets. These are small enough to be consumed by the microbes in the sea, and thus there is no plan to do other than let nature take its course. For the oil on the surface, they are getting better at spotting oil pools and sending skimmers to deal with them.

The Admiral drew attention to the article on [Hurricanes and the Oil Spill](#) which is available at the Unified Command Web site.

The relief well is about half-way through the rock it must drill (about 6,000 ft below sea level) but progress will slow as the well deepens. A diagram of the LMRP is as shown above by Gail, from one of my previous posts.



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