

**From:** Gullion, Steve D (Clover Staffing)  
**Sent:** Mon Feb 01 17:11:39 2010  
**To:** Tippetts, Brad  
**Cc:** Skidmore, Ross R (SWIFT TECHNICAL SERVICES); Ellis, Gary G (SWIFT TECHNICAL SERVICES); Albers, Shane; Kelley, Merrick M  
**Subject:** RE: Macondo lock down sleeve  
**Importance:** Normal  
**Attachments:** 21Apr08 2 LDS gage.jpg; uvs080423-008.JPG

Attached is a photo of the LDS measurement tool the Horizon ROV guys built for me for King South. We used one tool to measure the depth of both the LDS body and the LDS actuator ring. When measuring the elevation of the LDS body, the measurement tool is lowered down the middle of the LDS to ensure it would not hang up on the LDS actuator. The measure the elevation of the LDS actuator ring, we relowered the tool in the wellhead offset of the centerline to make sure the bottom bar would sit on top of the actuator ring.

Gullion quiz: In the attached photo (-008), what is the depth of the LDS body?

Steve

**From:** Gullion, Steve D (Clover Staffing)  
**Sent:** Monday, February 01, 2010 10:08 AM  
**To:** Tippetts, Brad  
**Cc:** Skidmore, Ross R (SWIFT TECHNICAL SERVICES); Ellis, Gary G (SWIFT TECHNICAL SERVICES); Albers, Shane; Kelley, Merrick M  
**Subject:** RE: Macondo lock down sleeve

~~Recommend that you locate the LDS measurement tool. Ed Galloway may know where it is. We mobbed it for the Dorado tree installation campaign. I believe it got sent back with the RWOCs stuff.~~

**From:** Kelley, Merrick M  
**Sent:** Saturday, January 30, 2010 2:33 PM  
**To:** Tippetts, Brad  
**Cc:** Skidmore, Ross R (SWIFT TECHNICAL SERVICES); Ellis, Gary G (SWIFT TECHNICAL SERVICES); Albers, Shane; Gullion, Steve D (Clover Staffing)  
**Subject:** FW: Macondo lock down sleeve

Brad

As discussed last week, please see official notice below from Mark that they wish to proceed with LDS installation provided the well is a keeper and they run production casing. I know the procedures are finished but would like for you to get with Steve Gullion to ensure anything rig specific to the Horizon is captured in this procedure. Steve ran a LDS from the Horizon for King South well in 2008 so there is a little history we can leverage from.

You will need to start communicating to Mark very soon on your requirements, i.e. drill collar for weight below the tool, etc so they can get this into their plan and work process.



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My expectation is for you, Shane and Randy to be offshore for this operation. Randy will likely be staying onboard to get the rig ready for the Nile P&A work immediately following Macondo.  
Merrick

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**From:** Hafle, Mark E  
**Sent:** Tuesday, January 12, 2010 9:58 AM  
**To:** Kelley, Merrick M  
**Subject:** RE: Macondo lock down sleeve

Merrick,

I have discussed this further with David Sims, and we agree we should move forward with the LDS installation prior to TA of the Macondo well.

I will chase up the required financial approval, if you can have your guys get the procedure in order for the DW Horizon. ( most likely rig, with operations restarting in early February )

We have approx. 45 days left on the well once operations resume.

Regards,

Mark Hafle  
Drilling Engineer  
BP Deepwater GOM  
281-366-4237 (o)  
~~281-687-3216 (m)~~

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**From:** Kelley, Merrick M  
**Sent:** Tuesday, January 05, 2010 9:29 AM  
**To:** Hafle, Mark E  
**Subject:** RE: Macondo lock down sleeve

Mark

The 5.5 days assumes that you would have to install the LDS with a rig when the rig is mobilized for the completion. Since we are using HXT now, you would be required to latch BOPs, test and run LDS, then unlatch BOPs, install and test tree, and then latch BOPs back to tree before re-entry for completion can begin. This sequence of activity is typically 7 days whereas if you ran the LDS after production casing you are looking at 1.5 days (39.5 hours is our best run so far). So basically I assumed the actual LDS portion is still the same amount of time, i.e. 1.5 days but you have now used 7 days total (7 days - 1.5 days = 5.5 days extra time and cost) to perform the same operation.

- Incremental cost = 5.5 rig days at \$400,000 = \$2,200,000 - So if you didn't install the LDS after production casing run and did it when the rig came back to start the completion, this is the additional expense associated with this decision.

As I said, we are going to use the open water tool (or at least try to depending on Thunderhorse letting us have access to it) so that difference in cost now is as follows:

For the open water cost of installing the LDS, if you assume a separate mobilization to perform this you are looking at around 6 days total (dock to dock) at \$80,000/day of vessel time or total cost of associated job to cost \$480,000.

If you do it with the rig at the time of the original drilling the LDS installation cost would be 1.5 days x \$400,000 = \$600,000.

So, assuming that the open water installation goes smooth, there is a small amount of cost savings, however, the risk you are exposed to is if the LDS does not land out correctly or the nose seals are damaged and the LDS has to be retrieved (can happen but has not happened to us in the past 5 years).

At the end of the day it boils down to the amount of risk we are willing to take to potentially save \$120,000 by using a boat. To be honest and frank with you, performing this operation from the rig is the easiest and simplest way I know to install a LDS. As with all teams, I have a finite amount of resources and using the rig means I don't have to use as many of my folks, selfishness on my part in some ways, but I can nearly guarantee success because all of the current tools are designed to run the LDS from the rig through marine riser. In my opinion, the only reason TH uses the open water tool is because they have two rotary tables, if they didn't they would still run the LDS through the marine riser on drill pipe. I'm not sure how Atlantis installs their LDS but suspect it is on drill pipe through the marine riser.

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I'm not trying to stir anything up with you and I appreciate your willingness to ask the questions and look at the entire picture on this. For my money, it is just the right thing to do each time we have a development well drilled.

Any other questions please let me know.

Thanks

Merrick

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**From:** Hafle, Mark E  
**Sent:** Tuesday, January 05, 2010 8:15 AM  
**To:** Kelley, Merrick M  
**Subject:** RE: Macondo lock down sleeve

Merrick,

I discussed with David Sims. If there is really a major savings to be had by installing the LDS prior to



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Suspending the well, then we should look into it a bit more.

What does the 5.5 incremental day estimate consist of?

Mark

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**From:** Kelley, Merrick M  
**Sent:** Monday, January 04, 2010 7:51 PM  
**To:** Hafle, Mark E  
**Subject:** RE: Macondo lock down sleeve

We are building the necessary components to convert the Thunderhorse open water tool for use on a H-4 wellhead at present. We plan to use this tool for the Isabela LDS mid this year. Not sure how successful we will be but will have to rely on the rig as a contingency if necessary. At the end of the day whose decision is it to run or not run the LDS on this Macondo well?

**From:** Hafle, Mark E  
**Sent:** Monday, January 04, 2010 9:08 AM  
**To:** Kelley, Merrick M  
**Subject:** RE: Macondo lock down sleeve

Merrick,

I was told the LDS could be installed off critical path with an intervention type vessel. Is this possible?

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Mark

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**From:** Kelley, Merrick M  
**Sent:** Thursday, December 31, 2009 3:05 PM  
**To:** Hafle, Mark E  
**Subject:** RE: Macondo lock down sleeve

Mark

Appreciate the quick reply back and understand. The subsea wells team will remove the Macondo LDS from our scope of work unless told otherwise. Just FYI, we have installed a LDS from the Horizon on a well last year and everything went very smooth and took a minimal amount of time. I know you are aware but just want to reiterate that doing it when you all drill the well originally saves an incremental 5.5 days of rig time on the back side when we get the wellhead ready for completion activities. I realize that development wells are not your responsibility but upper management in drilling should be aware of this.

Merrick

**From:** Hafie, Mark E  
**Sent:** Thursday, December 31, 2009 11:19 AM  
**To:** Kelley, Merrick M  
**Cc:** Morel, Brian P; Sims, David C  
**Subject:** Re: Macondo lock down sleeve

Merrick

In success cas we will run prod csg as part of TA plan.

We do not plan on installing lock down sleeve with the Horizon.

That piece of work was added to the Marianas task list when we thought there would be extra time before end of contract

Mark

**From:** Kelley, Merrick M  
**To:** Hafie, Mark E  
**Cc:** Guide, John  
**Sent:** Thu Dec 31 11:00:48 2009  
**Subject:** Macondo lock down sleeve

Mark

Hope all is well on your end, just doing some resource planning with my team and wanted to touch base with you on the previous plan of running production casing and installing the lock down sleeve prior to rig demob on the Macondo well. I believe the well is now on the Horizon schedule so I wanted to ensure that I am aware of the drilling team's expectations.....do you plan to install the lock down sleeve as part of your new drilling program?

Thanks

Merrick

J. Merrick Kelley

Subsea Wells Team Leader - GOM DWD Projects

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