From: Pat Campbell
To: 'David Barnett'
CC: 'David W Moody'
Sent: 7/30/2010 6:53:55 PM
Subject: RE: BP Macondo Hydrostatic Kill

Thanks for the comments.
I did raise the issue of the holes through the wall of the riser at the kink above the flex joint.
I was reassured that the erosion was caused by fractures or pin holes in the severely damaged drill pipe at the same location which focused the flow like a water jet cutter on specific small areas at the kink within the riser.
BP's inspection of the riser showed that here was no erosion or wall loss on the ID of the riser and that wall thickness measurements were 0.875" at every location inspected.

I answered OK, but just between you and me..... I can't help wondering if abrasive liquid would not still be the cause?????

What the f*#K do you or I know?

II can't help feeling that the underlying message was: "You do your s#?t and we'll take care of the thinkin."

Pat Campbell
Executive Vice President
Technology Solutions Group
Superior Energy Services, Inc.

From: David Barnett
Sent: Friday, July 30, 2010 1:31 PM
To: Pat Campbell
Cc: Freddy L. Gebhardt
Subject: RE: BP Macondo Hydrostatic Kill
Sensitivity: Confidential

Pat:

Is that the same solids free flow stream that cut holes through the 0.875" thick wall of the riser just above the BOPs?

Thanks for taking the time to go through all this. My apologies that me and/or my team were not able to define and illustrate all of the various assumptions, logic and risk vs reward perceptions from the BP side. We have had numerous conversations and have consistently expressed that we feel that the risk associated with the static kill are very high and that the chances of successfully controlling the well with the relief well is very good. My understanding is that John Wright sent a letter similar to yours – I don't know what the outcome was.

This is a difficult atmosphere to exert the influence that we are accustomed to. Lots of reasons for that including the sheer size of the group, the disconnect between the decision makers (upper management, scientific community & government), the fact that BP is applying their normal well delivery process & project management scheme to this situation even though it clearly does not fit and nobody (not even BP) understands how to develop Basis of Design & Statements of Requirements or how to maneuver through the "stage gates" (evaluate, select, define, execute, etc.). It has been a 3 ring circus with an incredible amount of disconnect between the various groups.

Anyway, enough belly aching from me.

dB

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"Experience Makes The Difference"

From: Pat Campbell
Sent: Friday, July 30, 2010 12:46 PM
To: David Barnett; David W Moody; Michael Drieu; Mike Cargol; Joe Dean Thompson; William Burch; Kerry L. Girlinghouse
Cc: Freddy L. Gebhardt; Bill Mahler; Bryan M. Ellis; Bernard, Pat; Blanchard, Ken; Dunlap, Dave
Subject: BP Macondo Hydrostatic Kill
Importance: High
Sensitivity: Confidential

Regarding the letter I sent to Richard Lynch @ BP and ADM Allen at Unified Command:

Richard replied and said I may not have had access to some data, and that I had some misconceptions or incorrect information resulting from data that may not have been made available to me.

Richard requested a meeting for 3:00 pm yesterday, at BP Incident Command, Westlake 4 to discuss the content of my letter.

Attending:

Richard Lynch	BP EVP Team Leader (Hydrostatic Kill and other initiatives)
Mark Mazzella	BP – World Wide WC Advisor (Source Control/top kill/Junk Shot/Hydrostatic Kill)
Paul Tombs	BP - Mgr. Engineering N. America
Brian Domain	??
? Bernard	BP -
James DuPree	BP – Source control
M. Owens	DOE
Travis Tread	DOE
D. Blankenship	DOE, Sandia National Laboratories (Macondo Project Consultant)
Patrick Little	USCG - Capt. Patrick Little Commanding Officer Marine Safety Center (Sitting in for RADM Cook)
??	USCG
Pat Campbell	Superior Energy Services EVP/Wild Well Control CEO

Overview:

All present introduced themselves and stated what their role was with respect to the Macondo Project.
Richard provided the meeting intro narrative and suggested that we discuss my letter point by point and asked me to begin.
I declined. I told the group that I 'wrote what I wrote', and I would be happy to clarify or amplify any of the content that was not clear.
I explained that if the group would like to point out errors, omissions, or the misunderstood status of any item, that they should do so.
Most of the rest of the meeting was led by Paul Tombs who addressed numerous points in my letter, one at a time, in which they disagreed with some of my comments or conclusions.

SUMMARY

Existing Casing damage may compromise the integrity of the casing and failure could occur at any pressure above the present pressure:

1. They said the well has produced no solid particulate matter to their knowledge throughout the entire 100+ day event. They don't believe erosion due to acceleration of wellbore fluids passing DP tool joints lying adjacent to casing wall is any concern. Flow velocity of xxx/second is lower than in some of the production wells in the GoM (which exhibit no such erosion). I agreed that the well was not flowing at sonic velocity. If there is no solid particulate matter in the produced media, they need to write a paper for SPE because it is unique in the history

of blowouts. Also, why do you spend +- 1MM on gravel packing every production well in the area? Save it and go to Baskin & Robbins for a party.

2. I raised a couple of issues that were not included in my letter, with the objective of not detracting from the overall purpose of the letter. They were:
   a. Drill Pipe (DP) dropped down hole. Hard banded tool joints (TJ's) on DP often damage the casing as that occurs.
   b. If the DP dropped downhole it would suggest a train wreck where the first 5 ½" DP TJ encountered the 9 7/8" x 7" casing crossover.
   c. Their response was: Who said the DP fell? They indicated that they thought it was hanging in the VBRS in the DH BOP stack.
   d. My response was: How do you know? Their response was: We don't. But it's as likely as your theory. OK.

A Relief well kill is not as easy as I indicated in the letter.

   e. It would require the Macondo well be opened to the sea again.
   f. They made it clear that that is not going to be authorized for any reason.
   g. The reasoning of their reply was basically framed around their belief that the surface vessels (Q-4000, Enterprise/Clear Leader/ Helix Producer) were not capable of **A)** handling the open flow volume and **B)** not able to process the dirty end of the kill with mud/chemicals, spacers, etc. Only the Helix producer is a true production flowback vessel and the Producer is only designed for clean hydrocarbons. Apparently, during the testing phase, dirty production keeps tripping all the Pop-Off relief valves.
   h. I agreed that the dirty end of the kill and subsequent circulations from the DD III through the MC 252 well would be both inconvenient and as BP suggested, very difficult to manage.
   i. Relief well mud weight is severely overbalanced vs. current formation pressure at the producing zone in the MC 252 blowout well.. Communication between the two wells at intersect would create an instant pressure increase at the wellhead/wellbore of the Macondo well of +- 2,000 PSI.
      i. The comment assumes the MC 252 well is shut in at intercept.
      ii. I replied that the excess margin on the mud weight of the relief well could be reduced slightly at intercept.
      iii. If one was flowing the MC 252 to the surface collection vessels - the flowing seafloor pressure would be considerably less than the present shut-in pressure - and the surge at intercept (would still exist) wouldn't exceed (or even match) the current or probable future shut-in pressure at the time of kill.
      iv. I agreed that if the total combined capacity of the surface collection vessels is not sufficient, then some hydrocarbons would have to be vented to the sea during the kill.
      v. I explained that my thoughts were always that the MC 252 would be in flowback at the time of the intercept and kill. I also thought that application of choke induced control of the flowrate would make it possible to control the volume at surface, the flowing pressure, and the kill rate from the DD III. Clearly that was not their view. It is an entirely different scenario if BP did not share the same view in their scenario of a kill from the relief well. Clearly their thoughts were entirely different.
      vi. The CDP seafloor manifold has hydraulic subsea chokes on it, but they are ROV manipulated, rather than surface manipulated. I agreed that's cumbersome, and ill-suited to handle the adjustments due to latency between read-out periods to surface (10 to 20 seconds), and rather long lag-times in pressure response to orifice size. I agree with their observations about that.
      vii. Everything is rigged up and tested and it would be a humongous job to revamp for the relief well kill. I agreed. In my view BP couldn't possibly have a more unsuitable hookup for a relief well kill.
      viii. BP expressed concern about substantial additional cumulative risk as a result of having to have the +- 1500 people in the field working and the number of vessels and proximity of vessels to each other during a relief well kill and cementing operation. I agree with their comment on this subject. BP operated with +- 1500 people for about 60 days out of the 100+ days safely and without LTI's, but Nonetheless, the elevated risk is real.

I think that these are perhaps the main two issues discussed and they're the ones that are most important. We discussed many, many other individual items related to both methodologies for killing the well. BP's Paul Tombs, in particular, was most helpful in clearing up any lack of understanding or misconception I might have been holding. BP did clarify that they intend to have the 9 7/8" liner run, cemented, and tested on Relief Well 1 prior to initiating the

Hydrostatic kill operation.

Earlier documents had suggested to me that they planned to proceed with operation even if the DD III had not yet achieved this status with Relief Well 1. BP reassured me that's not the case.

To wrap up the meeting BP and the USCG asked:
'Where we stand presently with respect to your letter?'
I thanked them. I confirmed that lots of the data they provided was most helpful. Much of what they had relayed in the meeting increased my confidence level about their planned operation. A number of technical issues had been resolved by relaying information to which WWCI had not been privy (as far as I know) in the course of events.
Relief Well Kill: inconvenient, messy, expensive, heightened risk for personnel safety. Has no articulated failure mode to create further significant downside or catastrophic consequence.
Hydrostatic Kill: less problematic surface and subsea arrangement (hookup); cleaner procedurally, far less time in preparation. Has potential failure mode that could be very problematic if not catastrophic.

What is known now that would change the content of my letter?
Some technical points
A better understanding of how BP arrived at the conclusions that are driving the event planning

PJC Comments:

Neither party added any **facts** that materially impact either my letter to BP or the BP Plan as explained to me.
They provided great data for the basis of many assumptions, but, they remain assumptions.
I arrived for the meeting knowing only that the MC 252 well is capable of holding 6,920 PSI shut in pressure at the seafloor
I depart from the meeting knowing only that the MC 252 well is capable of holding 6,921 PSI shut in pressure at the seafloor (buildup is .5 PSI/Hr.)

I explained that I felt it was my obligation to BP to provide them with my comments. BP has done the same via this meeting.
I promised WWCI's absolute and devoted 100% support to the project going forward.

BP or USCG had a steno person make notes that will be circulated to all. Those notes will become part of the official record. That will serve as BP's acknowledgement of WWCI's Concerns.

I did have a very good and frank visit briefly with Mark Mazzella after the main meeting was concluded.

If you have questions please let me know.

Regards,

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