4473
Exhibit No. _____
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From: Byrd, Michael L.
Sent: Wed Nov 14 22:35:01 2001
To: Jackson, Curtis W; Weisinger, Don
Cc: Kirton, Bill; Stover, Ginny; Naylor, Jasper; Vern Buzarde (E-mail); Hernandez, Doug (Clover Staffing)
Subject: PREP Exercise
Importance: Normal

Don/Curtis,

I wanted to follow-up and see if there are any lessons my team can take away from today. For Crazy Horse, I am pr obably the one who would get the call on a BOP situation like this one. This morning I worked this with Vern Buzarde, who is a member of my team.

Situation:

Horizon has driven off
Well is flowing at 100,000 - 300,000 bbls / day
BOP is open - no rams closed
Do not know if Dead-Man has actuated or not
ROV flow rate for override is 0.12 GPM

Question:

Can we close the shear rams with ROV over-ride without further damage to the BOP at 100, 200, & 300BPD flow rate

Answer:

No. Closing the shear rams at any of the above flow rates will probably cause them to wash out. One has to assume given that rate, there is a lot of sand being transported as well which only accelerates the erosion process. No one on my team was available at WL1. Vern, located at Mustang Eng., and I discussed the situation and came to this conclusion.

We have since spoken with Cameron and others and offer the following:

Issues:

1. Best case is that the dead man activated and closed the blind shears.
2. In the case of a dead man failure, the ROV may be utilized assuming visibility is such that the hot stabs can be located.
   a.) The Horizon stack has casing super shears on the top and conventional blind shears in the second cavity.
   b.) Volume required to close super shears - 60 gallons (Time to close approximately 8 hours)
   c.) Volume required to close blind shears - 30 gallons (Time to close is approximately 4 hours)
   d.) The rams are well bore assist so closing energy required is not effected.
   e.) The casing super shears will not seal on open hole.
   f.) There is a significant chance the blind shear rams would be washed prior to sealing.

The safest scenario may be to close the top casing super shears first to reduce the flow rate then close the blind shears. However, this would take quite a while due to the 60 gallons required and may result in the super shears washing well before closing. Assuming the ROV could pump 1.5 gpm (more realistic) this would take 40 minutes before closing the second set could commence. Closing the second set would require another 20 minutes, however the flow rate would be reduced significantly unless the super shears washed out first.

As a point of reference, 300MBD through an 18-3/4" bore equates to a velocity of about 10.2 fps. Normal flow of 50MBD through a 9"ID flow line is about 7.4 fps

Another issue is the ROV. I have two ROV experts on my team and have offered the following. If you were to jump an ROV it would be difficult to actually see the hot stab port since the panel is located high on the stack frame but it probably could be done. Unsure of how much time it would take. Oceaneering has a skid which can accommodate 300 gal of fluid. Pump rate is about 5gpm which would close the super shear in about 12 min.

I would appreciate any feedback from you guys on how we handled the situation and how we might position ourselves in the future to handle a problem like this.

Thanks,

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