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To: Glen Prater, Night Tool Pusher – Jim Cunningham

Re: Jim Cunningham Blowout Incident

## Dear Glen:

As you are aware, following the August 20, 2004 blowout on the Jim Cunningham, an exhaustive investigation was undertaken independently by Transocean and our client Rashpetco and their partners to determine the root causes of this incident. As a result of this investigation and the causation analysis that evolved from it, I have determined that our response to the blowout was positive in several areas, yet we made some significant errors which led to this catastrophic event.

On the positive side, once the blowout and fire occurred, the over-riding approach during the emergency response was to ensure the safety of the personnel on board. Our personnel were mustered, communication was made to the shore-based managers to attempt to line up evacuation choppers, the stand-by boats were utilized to help fight the fire and evacuate personnel, and all personnel were evacuated safely. For this, I commend you and your team.

On the negative side however, some of our key personnel failed to follow basic procedures in some significant areas which allowed this event to occur, as indicated below.

## **LOSS OF WELL CONTROL:**

- 1. In general, there was an overall complacent attitude. The key personnel did not provide leadership and competent oversight and guidance to ensure all parties fulfilled their respective responsibilities. This put the personnel and rig at extreme risk, and is considered gross negligence. Specific examples are outlined below.
- 2. JIC team did not heed clear and specific warnings in the drilling program of possible zones of concern. It is rig managements and key drilling personnel's responsibility to review well programs and properly address known risks.
- 3. Key personnel did not set up and maintain a disciplined, coordinated set of procedures to monitor the well.

November 7, 2004

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- As a minimum, well stability must be confirmed during connections, by checking that
  there is no flow with the pumps off (or alternatively as BP prefers, to check "finger-print"
  of flow back to the pits on each connection while keeping the riser boost pump left on.).
  The important point is that a specific, consistent method has to be employed that all key
  individuals understand. The boost pump was normally turned off on connections, but was
  left on during the connection the influx occurred on, making it impossible to identify the
  well flow.
- Transocean is ultimately responsible for controlling the pits with respect to fluid transfers
  to ensure we can accurately monitor pit levels both while drilling and during connections.
  The JIC team did not ensure that these controls were strictly adhered to. Several pit
  transfers were allowed, against specific verbal instructions from the Rashpetco company
  man. One transfer corresponded to the time just before and during the connection when
  the influx occurred, making it impossible to identify the influx.
- The shaker hand was taken off the shakers during connections to help on the rig floor, making it impossible to identify an influx at the shakers.
- Audible PVT level alarms were routinely turned off, although the alarm light was still in effect. Had this audible alarm been on, it may have given the driller several moments of warning in order to shut in the well before the bubble reached surface.
- 4. No preliminary kick sheet calculations were maintained as per company policy. Had this been done, the mud logger lag time error would have been identified, and the Rashpetco pore pressure engineer may have been able to identify the pore pressure increase through his analysis.

#### **EMERGENCY RESPONSE:**

- 5. Driller attempted to close diverter at first indication of well flow as opposed to first closing in at the BOP (as per policy).
- 6. Team did not attempt to close any other preventers after functioning the shear rams. It was not identified that the well continued to blowout and that it was likely that the shear rams failed to close in the well. In this incident, had another preventer been closed as opposed to disconnecting the LMRP (or before disconnecting the LMRP), this would likely have killed the well and reduced the damage. The OIM was convinced the shear rams effectively closed in the well, and he believed the continued blow was the residual gas venting from the riser. On this basis (OIM assuming well was safely closed in), the Emergency Response Manual states that there is no need to disconnect and winch off. This was a strategic error that increased the rig damage significantly.
- 7. Emergency response command and control was weak.

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Note that the actions / inactions prior to the blowout (loss of well control) are the most significant in my view, and my accountability calls are based primarily on this phase. There are issues during the emergency response phase (after blowout) that need to be considered, but these are not weighted the same in my accountability decisions.

As a result of this investigation, I am holding you and several other supervisors accountable for this incident. Specifically, I am holding you accountable for items 1, 2, 3, 4 & 6 above. As you are aware, the Tool Pusher sets the expectations for the drilling team, and it is his responsibility to ensure the drillers and their teams are controlling the work safely & effectively. It is also the TP's responsibility to advise the OIM on well control issues.

There is no doubt that we were extremely fortunate that we did not have significant injuries or fatalities from this event. It is imperative that we learn from this incident, and we have no ensure this avoidable event does not ever happen again.

Accordingly, I have recommended to the EAU HR department that you be terminated from Transocean, effective immediately. I trust that you understand the firm position I am taking in my accountability decision.

Regards,

A. M. Polhamus MED District Manager