Short term and long haul

Bill Lehr to: Juan Lasheras, 'Franklin Shaffer', ira.leifer, pdy, savas, pedro.espina, 'Steven T. Wereley', aaliseda

05/31/2010 01:33 PM

Cc: 'Marcia K McNutt', pmbommer, rileyj, Chris Barker

Please respond to Bill.Lehr

PLUME TEAM

Dear experts,

With the failure of Top Kill, I anticipate a long time period of oil leakage. I think we need to look at expectations for the short term and for the long haul.

SHORT TERM:

Conference call on Thursday to define min/max flow rate based upon the new videos. I have attached a suggested format and sample report for researcher's individual reports so we can quickly assemble the results into a more organized final report than as was the case for the interim released last week. I have asked BP to provide me the averaged gas/oil ratio from the RITT from May 17 till the start of Top Kill. This may help compute an average gas/oil ratio for the whole flow. Of course, it will not give you values for any particular 30 minute clip.

LONG HAUL

We have asked for high quality video of the severed riser flow. According to BP, this should increase flow approximately 20%. Since this process could go on for some time, you might want to look for additional assistance such as graduate students etc. Following my own advice, I have added Dr. Chris Barker to this email. Omer, he is one of yours, a Berkeley grad. Said he took a course from you.

Good luck and thanks for your help, everyone.

Bill PLUME TEAMFormat.docx

PLUME TEAM

SUGGESTED FORMAT FOR INDIVIDUAL REPORTS

- Description of Method Used – Short narrative of technique applied, quality assurance utilized and possible sources of error
- Specific video clips selected and analyzed
- Calculated result and error bounds
- Discussion
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Sample individual report

SAMPLE REPORT

Method

Researcher measured blood flow from Caesar by Chicken Entrail Examination Method (CEE). Researcher examined dagger videos provided by Brutus Publius (BP) using the CEE Method described in *Roman Times,* **IV,** pp MLXII-MLXIX, (4 BCE). Standard Tuscany chickens at a plucking speed of 1 cluck/sec were used. In lieu of feathers, gems on the blade were utilized as substitutes. Twelve gems were used with adjustments made for location and viewing angle of gem. Due to robe interference the actual speed of the blade fluctuated and blood from Caesar was intermittent with a period that seemed to correspond to heart rate.

Results (UPPER WOUNDS)

Date/time Of video	Number of gem points	Duration of video	Average blood flow	Maximum flow	Minimum flow	Average Blood/phlegm ratio estimate

Discussion :Blood ratio to phlegm varied over the video as seen in graph below

Research was delayed due to the fact that videos will not be invented for 2000 years.

If everyone would standardize on this format, then it will bring some coherence to the phase 2 report and simplify our discussions on Thursday.

Right now, I have the following expectations:

Juan :PIV and intermittency analysis
Pedro : quality assurance (no permission yet to do PIV?)
Omer :PIV analysis
Steve :PIV analysis
Jim: PIV analysis
Ira: PIV analysis?
Frank: PIV analysis
Pooji: narrative on plume and droplets (see separate email)
Paul: narrative on well and oil/gas (see separate email)
Bill: Background on accident site and narrative on fate and behavior of spilled oil

Planned format for group report

Introduction
Summary
Background on accident site
Background on well and oil/gas
Individual reports
Summary of individual reports
Plume behavior narrative
Oil fate and behavior discussion
Conclusions
Appendix
    BP provided documents
    Any individual comments