

UNITED STATES DISTRICT COURT  
EASTERN DISTRICT OF LOUISIANA

<b>IN RE: OIL SPILL BY THE OIL RIG</b>	:	<b>MDL No. 2179</b>
<b>“DEEPWATER HORIZON” IN THE GULF</b>	:	
<b>OF MEXICO, ON APRIL 20, 2010</b>	:	<b>SECTION J</b>
	:	
<b>THIS DOCUMENT RELATES TO:</b>	:	<b>JUDGE BARBIER</b>
	:	
<b>Civil Action No. 12-970</b>	:	<b>MAGISTRATE JUDGE SHUSHAN</b>
	:	

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**MEMORANDUM OF THE UNITED STATES OF AMERICA IN RESPONSE TO  
“BP DEFENDANTS’ MEMORANDUM IN SUPPORT OF MOTION  
FOR FINAL APPROVAL OF *DEEPWATER HORIZON* ECONOMIC AND  
PROPERTY DAMAGES SETTLEMENT” [REC. DOC. 7114]**

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### PRELIMINARY STATEMENT

On August 13, 2012, Defendant BP filed its “Motion For Final Approval of *Deepwater Horizon* Economic and Property Damages Settlement.” [Rec. Doc. 7114, “BP Motion”] The United States wishes to state clearly that it does not take a position as to the merits of the ultimate relief sought by BP, approval of the settlement. Indeed, until receiving BP’s Motion, it is unlikely that the United States would have felt compelled to file any type of response related to the proposed settlement.

That changed, however, as a result of arguments, new evidence, and plainly misleading representations in BP’s papers concerning liability and Natural Resource Damage (“NRD”) issues. Specifically, BP’s papers assert:

1. That BP’s actions did not constitute gross negligence or willful misconduct – despite testimony of witnesses and, not least, the admissions and testimony of its own drilling expert, Dr. J.J. Azar [Exh. 1 to Declaration of Underhill (“counsel’s Declaration”), filed herewith];
2. That errors and omissions of BP’s co-defendants were *superseding* causes that broke the chain of causation and thus would *absolve* BP of liability – an argument that unabashedly runs counter to *Exxon Co., U.S.A. v. Sofec, Inc.*, 517 U.S. 830 (1996), and that is impeached by the sworn testimony of BP’s own witnesses and even its own “Internal Investigation” (colloquially called the “Bly Report”);
3. That liability is “divisible” among BP and its co-defendants, meaning that BP would seek to *avoid* paying for damages to injured parties – despite that the Court has already rejected BP’s claim that damages can be “apportioned,” an instead held that BP’s liability is “joint and several.” [Rec. Doc. 5809 at 12.]; and
4. That “at any Trial, BP would establish that the Gulf is undergoing a robust recovery, further weakening claims for economic damages.” BP Motion at 69 – 75. But BP’s selective look at certain resources attempts to pre-judge the results of the multi-year, multi-million dollar Natural Resource Damage Assessment (“NRDA”) that is already showing indications of harm to natural resources, such as:

- Dolphins in Barataria Bay, Louisiana, are showing signs of severe ill health.
- Certain deep-sea corals have been identified as dead or dying, and populations of plankton-eating fish that reside on certain corals are significantly decreased.
- Heavy marsh oiling that “could cause negative impacts to marsh vegetation for years to decades.”

Rule 23 requires the Court to hold a hearing, and to make certain findings, before approving the proposed class settlement. Fed. R. Civ. P. 23(e)(2). The Court has scheduled that “Fairness Hearing” for November 8, 2012, but it is not clear whether the hearing will be an evidentiary hearing or merely an oral argument (a matter within this Court’s discretion). Apparently, however, BP seeks to admit evidence and obtain findings that would go to the heart of the claims of the United States and other non-settling plaintiffs. If findings along the foregoing lines are what is sought by BP, there are several fundamental problems.

First, if the United States were to remain silent, BP later may urge that its arguments had assumed the status of agreed facts or, alternatively, that the non-settling parties somehow had waived the right to contest BP’s false assertions.

Second, if it is BP’s or any other party’s intention to present live testimony at the fairness hearing, the United States (and presumably other parties) may need to cross-examine BP’s witnesses and provide rebuttal evidence.<sup>1</sup>

Third, to the extent that BP’s evidence and arguments are merely a veiled motion for

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<sup>1</sup> If it is BP’s intention to put on live testimony, the United States respectfully suggests that it would be inconsistent with the Court’s prior Order denying discovery related to the class settlement. The United States would reserve the right to seek reconsideration of the Court’s discovery Order as appropriate.

summary judgment, such a motion would not survive the standards of Fed. R. Civ. P. 56.<sup>2</sup>

Fourth, in approving a settlement, the Court should not attempt to reach the merits of claims, nor hold what amounts to a trial. The Phase One Trial is already scheduled, and the Fairness Hearing should not be used as BP's forum to poison the well for Phase One or other stages.

Therefore, as a matter of prudence, the United States files this memorandum to provide a *limited and cursory* counterpoint to BP's misleading presentation on liability and NRD issues.<sup>3</sup> We stress that by setting out its counterpoint below, the United States does *not* ask the Court to take evidence or make factual and legal findings regarding liability and damages issues; that is what we are concerned that BP is asking the Court to do. To the contrary, we ask that the Court reserve for trial (or for later and properly filed motions) any and all findings on liability and NRD issues that *even potentially* could affect parties who are not part of the proposed class action settlement. The Court can and should make findings as to the fairness of the proposed settlement, without making findings on the merits of the claims of the United States, the States, or other plaintiffs. Instead, the Court should make only those findings sufficient to assure itself that the settlement meets the legal test for approval.

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<sup>2</sup> BP's arguments would not survive the standards of Fed. R. Civ. P. 56, even if they had been asserted in a motion for summary judgment – which BP's motion most assuredly is not. *Daniels v. City of Arlington Tex.*, 246 F.3d 500, 502 (5<sup>th</sup> Cir. 2001) (“A motion for summary judgment is properly granted only if there is no genuine issue as to any material fact. [Footnote, citing Fed.R.Civ.P. 56(c).] An issue is material if its resolution could affect the outcome of the action. [Footnote omitted.] In deciding whether a fact issue has been created, the court must view the facts and the inferences to be drawn from them in the light most favorable to the nonmoving party. [Footnote omitted.]” *See also*, this Court's Order on the United States' Motion for Summary Judgment. [Rec. Doc. 5809, pp. 3-4.]

<sup>3</sup> This brief is filed today pursuant to the “Preliminary Approval Order [As to the Proposed Economic and Property Damages Class Action Settlement]” [Rec. Doc. 6418], at ¶ 38, page 39 (those wishing to object to any aspect of the Agreement must file a written statement of the objection(s) with the Court” by August 31, 2012). The United States expressly, and without exception, reserves its right to contest any and all issues of fact and law relating to or pertaining to, *inter alia*, liability and NRD as against BP or any other party.

While litigation risk may be a factor in approving a settlement, the Court can address that by simply noting that there is litigation risk for all the parties to the proposed settlement. The Court should avoid making findings that the settling plaintiffs' claims were weak – a matter that presumably would be disputed by the settling plaintiffs themselves, and certainly is disputed by those plaintiffs who are not included within the proposed settlement classes (including the United States and other governmental and private parties).

### **DISCUSSION**

#### **I. THE COURT SHOULD MAKE NO FINDINGS REGARDING GROSS NEGLIGENCE, WILLFUL MISCONDUCT, OR THE HARM TO THE ENVIRONMENT**

BP's support for the class settlements it sponsors is understandable and predictable, but BP overreaches in seeking to establish either that it acted without gross negligence and willful misconduct or that the environment has recovered without harm from the discharge of millions of barrels of oil. To seek determination of those disputes equates to asking the Court to try elements of the PSC's case in order to approve settlement of it.

Balancing the strength of a claim against the payment offered to resolve it is a key factor in assessing adequacy of the proposed settlement, *Petrovic v. Amoco Oil Co.*, 200 F.3d 1140, 1150 (8<sup>th</sup> Cir. 1999), but does not require the fact finding of trial. Definitive statements on the merits are to be avoided as a settlement may fail and the case may come to trial. *Managing Class Action Litigation: A Pocket Guide for Judges* (2d ed.) Federal Judicial Center (2009), at 11. Or as here, regardless of whether the class settlements are approved or anyone opts out of them, the Court will be trying some of the very same underlying issues in adjudicating the elements of the claims presented by the United States, States, and other plaintiffs. A proper Rule 23 evaluation

should avoid findings on the underlying facts relevant to the claim and instead consider or estimate a range of possible outcomes, along with some estimation of the probabilities of each. *Reynolds v. Beneficial National Bank*, 288 F.3d 277 (7<sup>th</sup> Cir. 2002). Whatever method one uses to assess the strength of the case, that effort must not transform the Rule 23 fairness hearing into a trial on any of the merits or findings about them – if only to protect those who opt out of the settlement, and also parties like the United States and the States of Alabama and Louisiana, which will litigate these same issues of fact in the phase one trial set for January 2013, or in trial phases or civil actions still to come.

BP's views are of little value here in any case – the fairness issue to be tested under Rule 23 is not for BP's benefit, but for the tens of thousands of claimants who may be bound by the settlements. In any event, BP's declarations are untested and cannot be expected to serve anything but its previously-stated interest – settlement. If BP's submissions are relevant to the assessment required under Rule 23, so too would be information tending to show that BP may well be found grossly negligent or willful in its misconduct. The same is true for information tending to show that the environment harmed by BP's unprecedented behavior continues to suffer lasting damage and degradation.

If BP's declarations are to be considered in assessing the range of possible outcomes for the claims that would be settled through these class actions, then the information supplied in the following sections by the United States should be considered, as well.

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## II. UNDERLYING CAUSES OF THE BP/DEEPWATER HORIZON DISASTER

### A. A Culture of Corporate Recklessness<sup>4</sup>

On April 17, 2010, BP's Houston-based "Wells Team Leader" for the Macondo well, John Guide, e-mailed David Sims, another Houston-based BP executive and Guide's boss:

David, over the past four days there has [sic] been so many last minute changes to the operation that the WSL's [BP's rig-based Well Site Leaders] have finally come to their wits end. The quote is 'flying by the seat of our pants.' Moreover, we have made a special boat or helicopter run every day. Everybody wants to do the right thing, but, this huge level of paranoia from engineering leadership is driving chaos. This operation is not Thunderhorse. Brian [BP's Brian Morel, a Houston-based engineer] has called me numerous times trying to make sense of all the insanity. Last night's emergency evolved around the 30 [barrels] of cement spacer behind the top plug and how it would affect any bond logging (I do not agree with putting the spacer above the plug to begin with). This morning Brian called me and asked my advice about exploring opportunities both inside and outside of the company.

What is my authority? With the separation of engineering and operations, I do not know what I can and can't do. The operation is not going to succeed if we continue in this manner. [TREX-00096.]<sup>5</sup>

The same day, Sims responded to Guide's e-mail and its references to "wits end . . . 'flying by the seat of the pants' . . . paranoia . . . chaos":

John, I've got to go to dance practice in a few minutes. Let's talk this afternoon. . . . We've both [been] in Brian's position before. The same goes for him. We need to remind him that this is a great learning opportunity, it will be over soon, and that the same issues - or worse - exist anywhere else . . . I'll be back soon and we can talk. We're dancing to the Village People. [*Id.*, TREX-00096.]

On April 20<sup>th</sup>, only three days after the exchange of these e-mails between BP executives responsible for the Macondo well, hydrocarbons traveled *three nautical miles* from the bottom of

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<sup>4</sup> See also the Plaintiffs "Class Action Complaint for Property Damage and Economic Losses" and the section beginning at page 78 titled, "Defendants' Culture of Complacency," filed in Case 2:12-cv-00970-CJB-SS at Rec. Doc. 1.

<sup>5</sup> Exh. 2 to Counsel's Declaration. Unless stated otherwise, all references to exhibits filed as part of this Memorandum refer to exhibits or testimony attached to the Underhill Declaration.



the well, up thirteen thousand feet of well casing, through five thousand feet of ocean and marine riser, and blew out onto the *Deepwater Horizon* before either BP or Transocean were aware of the blowout – despite the mandate of 30 C.F.R. § 250.401, which required BP and Transocean (and others) to take all “necessary precautions to keep the well under control at all times.”

Tony Hayward, BP’s erstwhile “Group Chief Executive,” was asked in deposition, “Can you see how a reasonable person and, indeed, a reasonable jurist, could look at Mr. Guide’s last sentence [*i.e.*, ‘The operation is not going to succeed if we continue in this manner’], and look at it not as a statement, but as prophecy?” Over BP’s objection, Hayward answered, “I can imagine how that could be interpreted that way. Indeed.” Indeed. [Exh. 3, Deposition of Tony Hayward, p. 429.]

BP published an internal investigation that set out its analysis of why this tragedy occurred. [Exh. 4, BP’s “Bly Report,” TREX-00001.] The report focused on immediate technical and mechanical rig-based causes of the blowout, fire, explosions, and their aftermath. To be sure, the rig-based functional causes of the BP/Deepwater Horizon tragedy can be traced to the failure of the cementing job, to the recklessly performed and grossly negligent “negative pressure test” undertaken by BP and Transocean, to the failure of the BOP to close in the well, and to the host of other failures set out in the “swiss cheese” causation model in BP’s report. [Exh. 4, pp. 32, 181; *infra* at page 9.]

But what is most striking about the so-called “Bly Report” is the utter lack of any semblance of investigation of the systemic management causes deeply implicating the corporate managers and leadership who caused and allowed the rig-based mechanical causes to fester and ultimately explode in a fireball of death, personal injury, economic catastrophe, and environmental devastation.

How could BP’s report, which consisted of 190 pages and another 569 pages of Appendices, not mention, even in a single footnote, the Guide-Sims e-mails that sounded such a clarion cry of

impending disaster? The answer is not that the “Bly Team” was unaware of the April 17<sup>th</sup> e-mail (and ones like it) because both the Bly Team and BP’s Board of Directors received it. [Exh. 5, BP Director Sir William Castell’s deposition, pp. 209-12.] Despite BP’s efforts to keep the reason hidden under the cloak of “privilege,” and in spite of representations in the press, to Congress, and at innumerable public *fora* that the investigation was “transparent” and would be “complete,” the truth won out over BP’s eight to ten days of deposition “preparation” of [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED] – *but at all cost*, not upon [REDACTED]

[REDACTED]

These decisions by BP’s highest corporate levels to ignore fundamental organizational safety-based systemic causes ran afoul of BP’s Group Practices for investigations, but more importantly, ran wholly counter to the recommendations of the “Baker Report” (headed by James Baker, the former Secretary of State) and other investigations following the fifteen deaths sustained in another BP industrial debacle, the 2005 explosion at BP’s Texas City refinery. [Baker Report, TREV-02430.] BP management’s internally expressed, but publicly hidden contempt for the “lessons” of Texas City, it is shown in the BP executive’s e-mail that derisively dismissed as “clutter” the sincere efforts by lower level employees to implement and understand the safety program to which the global oil field giant professed to be committed. [TREV-00786.]

Ignoring the remarkable Guide-Sims e-mails would be bad enough. But it is only when we

understand the sheer magnitude of the evidence that BP sought to hide by its rigidly circumscribed investigation that we understand BP's motivation for purposely ignoring the lessons of the Texas City tragedy, the Baker Report, and the civil and criminal cases and probation stemming from that disaster – and others. Very simply, the Guide-Sims exchanges were only the merest tip of the culture of corporate recklessness that pervaded management and operation of the Macondo well.

We provide a *sampling* of the testimony and e-mails:

- o David Sims, Guide's boss, was unable (or refused) unequivocally to answer the simple question of whether he and Guide, the Wells Team Leader, had more responsibility for safety aboard *Deepwater Horizon* than the rig's cook or bed maker. [Exh. 6, Deposition of David Sims, pp. 266-76.]
- o Following the Guide e-mail of April 17<sup>th</sup>, Sims *never* talked to Guide to follow up on his warnings about “paranoia . . . chaos . . . insanity . . .,” *etc.* [*Id.*, pp. 249-66.]
- o On April 20<sup>th</sup>, only hours before the *Deepwater Horizon* was wracked by the first deadly explosion, Sims met and spoke with Robert Kaluza, one of the BP Well Site Leaders described as being at his “wits end” and “flying by the seat of the pants.” [*Id.*, pp. 251-54.] Sims did not see fit to ask Kaluza what it was that caused him to be in such a remarkable mental and professional state – remarkable, at least, for a Well Site Leader responsible for a deepwater well that, by its very nature, posed such challenges and dangers to the rig, its crew, and the environment. This same Kaluza was one of the two BP WSLs who participated in and approved the infamous “negative pressure test” that, as will be demonstrated below and at trial, constituted gross negligence on the part of both BP and Transocean.
- o On April 15<sup>th</sup>, learning that Halliburton's cement modeling showed that the critical (and ultimately failed) cement job would be subject to “severe channeling” unless 21 “centralizers” were used, BP Houston engineer Brett Cocales caused 15 extra centralizers to be sent to the rig in addition to the six already aboard. The next day, Guide ordered that the extra centralizers *not* be used. In an e-mail that is striking not only for its cavalier nature, but also its unfortunate *lack* of prophecy, Cocales succumbed to Guide's demand and e-mailed another BP Houston engineer, “But, who cares, it's done, end of story. Will probably be fine. . . .” [Exh. 7, TREN-01367.]

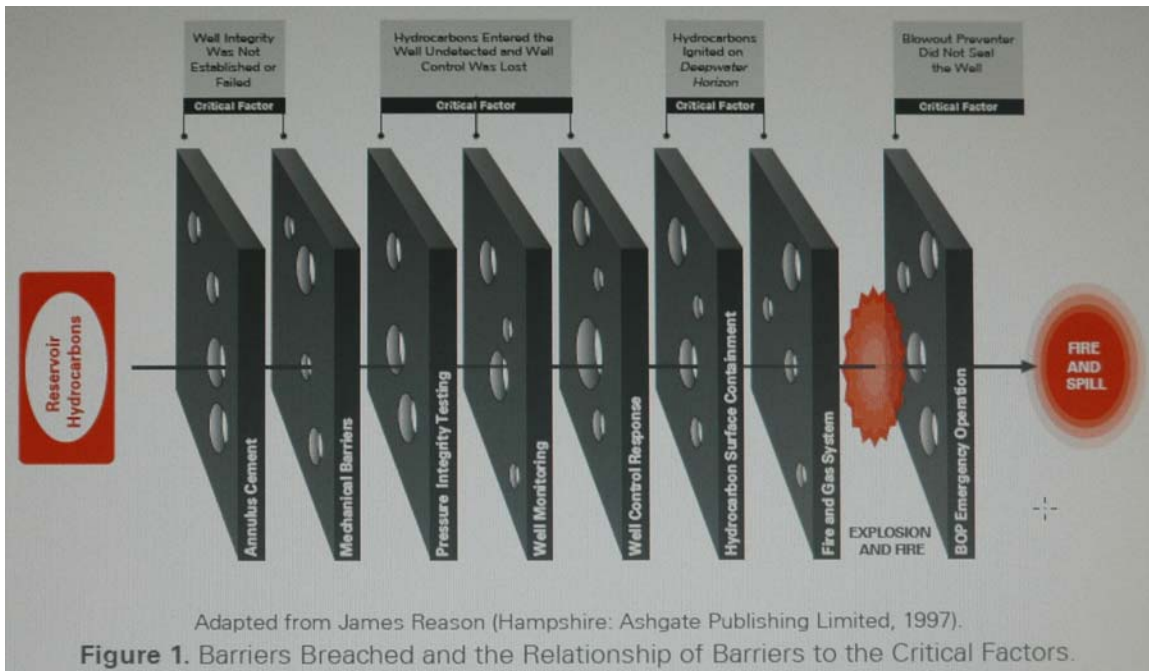
To understand the fundamental cause of the deaths and destruction caused by the *Deepwater Horizon* blowout, one must first grasp the significance of the extraordinary admissions contained

in these e-mails and documents. Just as BP attempted to have the public, Congress, and others focus only on what happened on the rig or in the shoreside offices of its contractors, the BP engineers and executives who drafted these and other documents were the people who actually exercised the direct authority and control over nearly every aspect of what ultimately went wrong on the rig on April 20<sup>th</sup>. The behavior, words, and actions of these BP executives would not be tolerated in a middling size company manufacturing dry goods for sale in a suburban mall. Yet they were condoned in a corporation engaged in an activity that no less a witness than Tony Hayward himself described as comparable to exploring outer space. [Exh. 3, Hayward Deposition, pp. 863-64.]

BP did not act alone, by any means, and its gross negligence and willful misconduct are inextricably joined with the acts and omissions of Transocean. Nowhere is this more evident than BP's and Transocean's co-joined conduct of the negative pressure test, well monitoring, and well control in the final hours before the first explosion aboard the rig. This limited memorandum focuses on aspects of that conduct, and as limited *examples* of the gross negligence and willful misconduct that allowed this disaster to happen.

**B. April 20, 2010: Recklessness Made Manifest**

Three days after the Guide-Sims “paranoia . . . chaos . . . insanity . . . the operation is not going to succeed . . . dancing to the Village People” e-mails, the Macondo well blew out onto the rig floor and set in motion the explosions and conflagration that culminated in the BP Gulf Oil Spill. Months later, BP's Bly Report traced the causes of the *Deepwater Horizon* tragedy to a series of actions summarized in its “swiss cheese” causation model, copied below from the report.



Chronologically from left to right, BP’s model details a series of inter-related failure modes, *e.g.*, failure of cement, failed negative pressure test, failure to monitor and control the well, *etc.*, that lined up in an unbroken sequence and created the chain of causation that led to the disaster. Leaving aside the model’s glaring omission of the ultimate and over-riding causation mode – *i.e.*, the systemic management and corporate-driven, “profit over safety” causes that allowed the individual mechanical and technical failures to manifest – BP’s model nevertheless reveals many of the rig-based causes upon which BP would have the Court and others focus all of their attention. Unwittingly, however, BP’s model and related deposition admissions of Mark Bly, principal author of the Bly Report, also evince its liability for willful misconduct.

The United States intends to prove gross negligence or wilful misconduct at the Phase One trial. Gross negligence or wilful misconduct are relevant under both the Oil Pollution Act of 1990 (“OPA”), 33 U.S.C. §§ 2701, *et seq.*, and under section 311(b)(7) of the Clean Water Act (“CWA”),

33 U.S.C. § 1321(b)(7).

In *Water Quality Insurance Syndicate v. United States* (“*WQIS 2007*”), 522 F.Supp.2d 220, 2008 A.M.C. 284 (D.D.C. 2007), the court summarized OPA’s standard of “willful misconduct” by looking to the Second Circuit’s decision in *In re Tug OCEAN PRINCE*, 584 F.2d 1151 (2d Cir.1978), which defined willful misconduct under the Clean Water Act. The court held:

... [T]he agency was wrong under the statute to focus on any one occurrence, event or cause as the proximate cause of the spill. It should have looked at the ‘series of occurrences’ or events that together constitute the ‘incident’ that led to the spill.

Second, the agency erred in concluding that ‘willful misconduct’ must be a single act ‘intentionally done’ and that a series of negligent acts can never constitute willful misconduct. . . . As plaintiff points out, the question of the definition of ‘willful misconduct’ under the predecessor statute to the Oil Pollution Act [the CWA] was addressed by the Second Circuit in *In re Tug OCEAN PRINCE*, 584 F.2d 1151 (2d Cir.1978).

*Id.*, 522 F.Supp.2d at 228-29. The court continued:

The court in *OCEAN PRINCE* made clear that its conclusion that there was willful misconduct was based on no single proximate cause, but on an ‘accumulation of acts,’ ‘a chain of circumstances which [were] a contributing cause even though not the immediate or proximate cause of the casualty.’ *In re Tug OCEAN PRINCE*, 584 F.2d at 1158. ...

*WQIS 2007*, *id.*, 522 F.Supp.2d at 230.

Against the backdrop of this legal standard, BP’s Mark Bly came to this case not only as the leader of the “Bly Investigation,” but as the current “Group Executive Vice President of Safety and Operational Risk,” meaning that he is the highest ranking executive responsible for safety within all of BP’s group of worldwide companies. Not least, Bly was appointed to head BP’s investigation by Tony Hayward, then the Chief Executive of all BP companies. In short, Bly has the power to speak for – and bind – BP through his testimony and admissions. Without objection from BP, Bly testified:

Q. . . . Can you explain to me that diagram in your own words, what does it purport to do? And I'm talking about that diagram on Page 32 of the Bly report, Exhibit 1 [referring to the model shown above in text].

A. It purports to, in a structured way, describe the barriers that were meant to be in place or that would normally be in place to prevent hydrocarbons in the reservoir getting out and causing a fire. And the analysis is to say, well, these are the barriers that failed or were penetrated. And the fact that eight of them failed was what allowed the accident to go from the very initiation all the way to the end.

\* \* \* \* \*

A. You have to be careful because if you look at any particular thing on here, that's the chronological sequence of how they came together in this accident. There may be different timelines associated with -- you know, the press understanding one of them. The blowout prevention equipment, it didn't close, it could have been to do with maintenance that wasn't done six months prior to the accident.

\* \* \* \* \*

Q. Now, let's go back to our overview. If I understand the intent of this diagram is that all the holes line up in sequence to allow that causation chain to shoot through all eight elements of causation, the cement, pressure testing, all the way through BOP; correct?

A. Yeah, that's -- what it says is that all of these things had to -- barriers had to be penetrated to get to the end of them.

\* \* \* \* \*

Q. . . . Before we move away from this, we're about to see if we are reading each other on the same page here. This Figure 1 on Page 32 of the BP report, it indicates that the DEEPWATER HORIZON tragedy wasn't based on the failure of only one of the barriers listed, but it was based on an accumulation of actions, a chain of actions and events, if you will, that taken together contributed to the blowout, fire and resulting oil spill?

A. Yeah. I think you have to say not actions only, but there is equipment involved and, you know, there's cement that failed, you know, there was things that -- some of it was action, some of it was mechanical failure, some of it was decisions made. But in aggregate, multiple things had to happen to get from the beginning to the end.

Q. So all of those things -- actions, decisions, failures of equipment, possibly failures to maintain equipment -- all of those things taken together, ... accumulated together, allowed the DEEPWATER HORIZON tragedy to occur.

A. They did not prevent it from occurring, if that's saying the same thing. If you conceptualize these barriers as preventions or protective measures, and getting through them means they did not prevent it from happening in aggregate.

Q. In aggregate?

A. Yeah.

[Exh. 8, Deposition of Mark Bly, pp. 287-289, 294-298.]<sup>6</sup> BP's reckless management of the Macondo well, as exemplified in the Guide-Sims e-mails and other examples described below, of themselves constituted gross negligence *and* willful misconduct. Likewise, individual "slices" of BP's swiss cheese model, such as the infamous "negative pressure test," cannot be seen as anything but recklessly extreme and grossly negligent conduct on BP's part, as well as Transocean's.

But BP's actions with respect to multiple causation slices exemplified in the Bly Report place BP squarely within the scope of willful misconduct. Bly's testimony and the Bly Report's causation model dovetail with the Second Circuit's holding in *Tug OCEAN PRINCE*, *supra*, 584 F.2d at 1164, which in turn provides the guiding legal framework for judging BP's and Transocean's conduct in this case. Indeed, *Tug OCEAN PRINCE* could be describing *this* case:

It is . . . the combination of factors which together indicate a probable consequence of damage resulting from several failures to act, and by continuing to fail to act in the face of that probability, that indicates a reckless disregard of the consequences. While any one of the faults of [the responsible party] alone, even within privity, may not constitute 'willful misconduct', on the entire record the various inactions and gross disregard of the potential harm amount, in our opinion, to willful misconduct within the meaning of the statute [the Clean Water Act].

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<sup>6</sup> BP's argument that it is not liable due the doctrine of "superseding cause" is barely worthy of serious comment even if we were to look no farther than Bly's testimony concerning the "aggregate" and inter-connected causes of the BP/Deepwater Horizon tragedy. As BP itself acknowledges, citing *Exxon Co., U.S.A. v. Sofec, Inc.*, *supra*, 517 U.S. 830, 837 (1996), superseding cause only applies "where the defendant's negligence in fact substantially contributed to the plaintiff's injury, *but the injury was actually brought about by a later cause of independent origin that was not foreseeable.*" [Rec. Doc. 7114-1 at p. 78, emphasis added.] *See also*, the discussion below regarding the negative pressure test and the Hafle-Vidrine ten minute phone call between 8:52 and 9:52, which ended only 47 minutes before the first explosion.



### **III. THE RIG-BASED CAUSES OF BP/GULF SPILL**

For the limited purposes of responding to BP's assertions, we highlight just three examples relevant to BP's culpability for three of the causation "slices" set out in BP's model of interconnected causation: the negative pressure test, well monitoring, and well control. Conversely, we do not discuss here, for example, BP's (or any other party's) faults with respect to cement<sup>7</sup> and float collar, the BOP, gas dispersion, *etc.*<sup>8</sup>

#### **A. The Negative Pressure Test: The Epitome of Gross Negligence**

There is a tragic irony that cuts to the core of this case. Although deepwater drilling is as complex as it is dangerous, the "negative pressure test" performed by BP and Transocean only hours before the blowout was not only simple to perform, but equally simple to comprehend – even for laymen unschooled in the most rudimentary principles of drilling. That such a simple, yet fundamental and safety-critical test could have been so stunningly, blindingly botched in so many ways, by so many people, demonstrates gross negligence.

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<sup>7</sup> Given BP's assertion that it bears no responsibility for the failure of the cement job on the Macondo well – an assertion contradicted by BP's own Bly Report [Exh. 4, p. 66] – we have attached the expert report of Glen Benge, which details BP's fault and role in the cement job that failed to prevent the blowout. Exh.9, counsel's Declaration. The Benge report shows that – to save time and money – BP knowingly took additional risks on the Macondo cement job, assuming it could perform a remedial "squeeze job" later, including: using a leftover cement blend not appropriate for foamed cementing, ignoring Haliburton's advice on the appropriate number of centralizers, pumping the job without complete test results from Haliburton, disregarding BP's own recommended practices on cement lab testing (including temperature guidelines), adding risks to the foam cement stability by changing the cement formulation, and limiting cement volume, pre-job circulation, and pump rates.

<sup>8</sup> Even as to the negative pressure test, well monitoring, and well control, this Memorandum provides only a brief overview and does *not* encompass the myriad failures and evidence relevant to BP's or any other party's culpability. The Memorandum also does not address *any* post-April 20<sup>th</sup> actions of BP that independently may give rise to additional bases of gross negligence and willful misconduct, either directly or through issue and/or claim preclusion stemming from judgments entered in this case or in other proceedings.

**1. A Primer on the Negative Pressure Test: Why It Is Performed And How To Know If It Has Been Successful**

During normal drilling operations of a well like Macondo, the primary means of controlling a well and preventing blowouts is by maintaining an “over-balanced” well condition. In very simple terms, the hydrostatic pressure (weight) of drilling fluids (primarily “drilling mud”) in the marine riser and well casing is kept greater than the open hole formation pressures seeking to “push” hydrocarbons or other fluids out of the formation, into the casing, and up to the surface. Conversely, if exposed formation pressures in an open hole are allowed to exceed the hydrostatic pressure of the drilling fluids (an “under-balanced” well condition), a blowout can ensue.

In the weeks prior to April 20<sup>th</sup>, BP hit “pay sands” in the Macondo well, stoking the oil company’s gilded projections of “an elephant” – that is, a well of potentially profound abundance and profit. The well was drilled to 18,360 and total depth (“TD”) was declared, after which the final casing string (the production string) was set. Because the *Deepwater Horizon* was a drilling and exploration rig, not a production rig, BP needed to prepare and cap the well at the seafloor until a production rig later would complete it and bring the reservoir’s wealth to the surface.

The first major step in the temporary abandonment procedure was to cement the production casing in order to prevent the influx of hydrocarbons from the pay sands into the well bore and, as subsequently transpired on April 20<sup>th</sup>, geysering to the surface in a deadly confluence of fuel (oil and gas), oxygen (ambient air at surface), and multiple combustion sources aboard the rig (*e.g.*, generators). As subsequent events made clear, the cement job failed for a variety of reasons. [*See, e.g.*, Exh. 9, Bengé Report.]

As part of the temporary abandonment procedure, the 5,000 feet of mud-filled marine riser between the seafloor and the rig would be taken away by the *Deepwater Horizon*, thereby removing

5,000 feet of the drilling fluids that kept the well in an over-balanced and non-flowing condition. In turn, the drilling mud and other fluids in the riser would need to be displaced to seawater before the riser could be removed – else oil-based drilling fluids would flood into the sea and cause significant pollution. During the displacement of the riser to seawater, BP fully understood that the Macondo well would be in a seriously under-balanced condition, which meant that the newly placed cement “barrier” needed to be tested so as to assure that hydrocarbons would be prevented from flowing into the well and potentially causing a blowout.<sup>9</sup>

A “negative” pressure test first “bleeds” any built up pressure *out* of the well casing, reducing the pressure within the casing to zero (or close to it). If the pressure thereafter builds back up, that is an indication that something – such as hydrocarbons – is flowing *into* what should be a closed and sealed system, thereby causing the pressure to rise from zero to some higher number. That in turn is a clear indication that the cement “barrier” has failed to isolate the hydrocarbons and prevent them from dangerously flowing into the well casing and to the surface.

Once the supposedly closed system has been bled to zero, the negative pressure test can be accomplished by monitoring pressure gauges to see if they hold at zero (good) or rise (bad), or even more simply by conducting a “flow check” and monitoring “flow out.” In the latter method, one or more apertures at the top of the system and on the rig (*e.g.*, the drill pipe, the choke line, or the kill line) are left open after the pressure is bled down to zero. If fluids thereafter flow out the opening(s) on the rig, that is a clear indication that something (*e.g.*, hydrocarbons) is entering the supposedly closed system and forcing fluids to spill out the opening at the top.

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<sup>9</sup> These descriptions of the test are supported by the expert report of Richard Heenan, Exh. 11 to counsel’s Declaration.

The concept underlying a successful negative pressure test is *exceedingly* simple to understand: once the pressure is bled down to zero, the pressure should *remain* at or near zero if the test is conducted by measuring pressure gauges; alternatively, if the test is a flow check, no fluids should overflow the top of the open aperture, *e.g.*, the drill pipe, kill line, *etc.* It is really that simple.

## **2. BP's and Transocean's Performance of the Negative Pressure Test**

By now, the extended blow-by-blow actions of BP's conduct leading up to the negative pressure test, including BP's (and Transocean's) actions in conducting the test itself, are well known. Fundamentally, BP's (and Transocean's) inexplicable decision to call the safety-critical test a "success" was an extreme and reckless violation of the relevant standard of care.<sup>10</sup>

The negative pressure test, which should have been completed in a relatively short time, was conducted over a period of hours during the late afternoon and early evening of April 20<sup>th</sup>. The reason for the abnormally long time was the fact that both Transocean and BP were faced with repeatedly anomalous pressure readings and other phenomena, *e.g.*, continued flow and pressure build-ups after pressures were bled down, all of which were unmistakably clear indications of an unsuccessful cement job and a flowing well. [Exh. 10, Boots and Coots Report.]

BP nevertheless stubbornly refused to accept the clear implications of the hard data with which it was faced. As a final test, BP and Transocean rigged up to measure pressures from *both* the drill pipe and the kill line. After attempting to bleed both down to zero, the kill line remained at zero (good), but the drill pipe rose to 1,400 pounds per square inch (psi) of pressure (potentially

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<sup>10</sup> With respect to the general sequence of events below, see Exh. 10, TRES-00190, the report of Boots and Coots (hired by BP to examine the negative pressure test), as well as the expert report of Richard Heenan, Exh. 11 to counsel's Declaration. The general time line is also set out in detail in BP's own Bly Report, Exh. 4.

very, very bad).<sup>11</sup>

The one thing that the pressure differential anomaly would *preclude* would be a determination that the negative pressure test was *successful* or that the well was secure and not a danger. And yet, that is precisely what multiple senior BP and Transocean personnel concluded – with deadly results – by disastrously declaring that the zero pressure reading on the kill line proved that the well pressure was zero. In fact, the opposite was true: the 1,400 psi on the drill pipe told the true story of a flowing well, whereas the zero pressure on the kill line was the false reading.<sup>12</sup>

If the foregoing incomprehensible failings were all that led to the botched negative pressure test, the sketched canvas of gross negligence and willful misconduct already could be considered nearly complete. But it actually gets far worse. As described above, both BP (Well Site Leaders Vidrine and Koluza, plus one of BP’s “Well Site Leaders of the Future”) and Transocean (its Assistant Toolpusher and Assistant Driller) needed to explain the differential between the 1,400 psi in the drill pipe vs. the zero psi in the kill line in order to declare the test a success.

According to BP’s Bly Report [Exh. 4], the negative pressure test anomaly was accepted based on the theory of a “bladder effect” or “annular compression.” However, both BP’s Bly Report and Transocean’s Report stated, without equivocation, that no such phenomenon could be discovered or was even known to exist. Indeed, the Bly Investigation was fielded with

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<sup>11</sup> Exh. 10, Boots and Coots Report; Exh. 11, Heenan Report.]

<sup>12</sup> Both BP and Transocean (and other parties) have provided post-blowout theories concerning the false reading on the kill line. Essentially, the arguments posit that it was caused by an untested glutinous “spacer” mix that, for lack of a better term, “clogged” the kill line at or near the BOP and blocked the ability of the true well pressure – 1,400 psi – from reaching the surface and being read by BP and Transocean. This theory and the use of the spacer mix carry various implications for both BP and Transocean. On another level, however, it irrelevant to the underlying issue of approval of the negative pressure test. Quite simply, regardless of the reason for the anomaly, the negative pressure test should *never* have been declared a “success” unless and until the anomaly was satisfactorily resolved. *See*, Exh. 11, Heenan Report, pp. 15-16.

approximately 50 investigative personnel and spent approximately \$10 million, yet *still* could find *no* evidence of such a phenomenon.<sup>13</sup> Quoting from the damning admission in the Bly Report:

After discussing this concept [the bladder effect], the rig crew and the well site leader reportedly concluded that the explanation was plausible. However, the investigation team [Bly investigators] could find no evidence that such a phenomenon is possible, leaving the 1,400 psi unexplained *unless it was caused by pressure from the reservoir*.<sup>14</sup>

Beginning at 8:52 p.m. on April 20<sup>th</sup>, Houston-based BP Senior Engineer Mark Hafle had a ten minute telephone conversation with WSL Vidrine.<sup>15</sup> In one of the tragic ironies of the *Deepwater Horizon* disaster, the Hafle-Vidrine call took place at the same time, literally to the minute, that BP's Bly Report acknowledges that hydrocarbons began their deadly upward migration from the well's bottom to the rig floor. Hafle confessed that in that call:

... Vidrine told Mark that the crew had zero pressure on the kill line, but that they still had pressure on the drill pipe. Mark said he told Don that you can't have pressure on the drill pipe and zero pressure on the kill line in a test that's properly lined up. Mark said that he told Don he might consider whether he had trapped pressure in the line or perhaps he didn't have a valve properly lined up. Don told Mark that he was fully satisfied that the rig crew had performed a successful negative test.<sup>16</sup>

This exchange between the most senior BP representative on the rig and a senior BP official in Houston is beyond comprehension. Hafle clearly understood the patently obvious and told Vidrine that the negative pressure test could not be considered a success given the two inconsistent

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<sup>13</sup> Exh. 4, Bly Report, p. 89; Transocean Report, TRES-04248, p. 123; Exh. 10, Boots and Coots Negative Pressure Test Report for BP; Exh. 8, Mark Bly Deposition, p. 374.

<sup>14</sup> Exh. 4, Bly Report, p. 89 (emphasis added).

<sup>15</sup> See, TRES-03574 and TRES-03575, phone log and summary of log regarding April 20<sup>th</sup> communications between BP Houston headquarters and the Deepwater Horizon.

<sup>16</sup> Exh. 12, Bly Team interview of Mark Hafle, TRES-00296, page BP-HZN-BLY00103037 (emphasis added).

pressures on the kill line and drill pipe. Yet Hafle did absolutely *nothing* to countermand Vidrine's disastrously conclusory statement that he was "fully satisfied that the rig crew had performed a successful negative test." As BP's own drilling expert explained:

Q. Sure. Can you declare a negative pressure test to be successful if you have 1400 pounds' pressure upon the drill pipe and zero on the kill line if they're both measuring the same fluid?

A. You cannot say it is successful.

\* \* \* \* \*

Q. And if Mr. Vidrine was one of those well site leaders that was involved in conducting the negative pressure test, that means that he also -- if he had any doubt as to the integrity of the test, he should not have deemed it a success, correct?

A. Correct.

\* \* \* \* \*

Q. Is this about as basic as you can get in hydrostatics when you're drilling a well to know that you can't have a successful negative pressure test if you have 1400 on the drill pipe and zero on the kill line?

A. You can't get any more basic than that. That's simple hydrostatic.

Q. Is this something that one of your undergraduate students who had taken the basics of well control should understand?

A. I expect them to do.<sup>17</sup>

According to the log of the call between Hafle and Vidrine, the conversation ended at 9:02 p.m., ten minutes after the well began to flow. BP's Bly Report states that the hydrocarbons did not pass the BOP and enter the riser until approximately 9:38 p.m. [Exh. 4, p. 98], which means that BP had over a full half hour after the conclusion of the call to close in the well through normal operation of the BOP. BP, perhaps without understanding the significance of its admission, attached as part of its moving papers excerpts from the deposition of Transocean's drilling expert, Calvin Barnhill

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<sup>17</sup> Exh. 1, deposition excerpts of BP expert, Dr. Azar, pp. 82-84.

[Rec. Doc. 7114-2], in which Mr. Barnhill testified – and BP now agrees – that a different outcome would have occurred had the well been shut in by 9:31 or 9:32.

As for the senior BP representative on the rig and BP senior on-shore engineer? They did nothing between the end of the call and the moment that oil and gas shot onto the rig. Repeat: *they did nothing*. We quote from BP's own expert:

Q. (BY MR. UNDERHILL) So according to this document, Mr. Vidrine now has information that that negative pressure test that he has previously approved can't be considered a successful negative pressure test based upon what Mr. Hafle told him, according to this document?

MR. REGAN: Object to the form.

Q. (BY MR. UNDERHILL) Correct?

A. Correct.

Q. Now, do you have any evidence whatsoever, any evidence, any testimony, any documents, any interview notes that Mr. Vidrine, after he hung up with Mr. Hafle at 9:02 p.m. on April 20<sup>th</sup>, that Mr. Vidrine went down and provided this information to anybody aboard the rig?

A. I'm not aware of that, no, sir.

Q. Reverse it a little bit. Do you have any information at all, testimony, documents, hearsay, hints, anything, to indicate that Mr. Hafle took action after he hung up the phone with Vidrine at 9:02 p.m. to warn anybody that they had an unsuccessful negative pressure test and a potential kick underway?

A. No, sir.

Q. So you have no documents, no testimony, no information whatsoever that two BP employees, the well site leader, Vidrine, and senior drilling engineer in Houston, Hafle, took any action after the 9:02 conversation, 9:02 p.m. conversation, to warn anybody that the negative pressure test they declared successful at 7:55p.m. in fact should not be considered a successful test?

MR. REGAN: Object to form.

A. No knowledge of that.



Q. (BY MR. UNDERHILL) You have no information that they gave any warning to anybody aboard the rig, do you?

A. No, sir.<sup>18</sup>

The most senior BP person on the rig and the BP Senior Drilling Engineer in Houston for the Macondo well had it in their power to prevent the deaths of eleven men and avoid the largest oil spill in the country's history. Not only was it within their power to prevent the tragedy, it was their *responsibility* because Vidrine was one of the very men who had approved the negative pressure test and called it "successful."<sup>19</sup>

**B. Well Control and Well Response**

According to BP's admissions, the well began to flow at 8:52 p.m., after which the first explosion followed at 9:49 p.m. [Exh. 4, pp. 92, 106.] In short, the well was flowing for approximately an hour or more before the first explosion. By the time of the first explosions, BP estimates that the phenomenal amount of approximately 2,000 barrels (approximately 84,000 gallons) of the Macondo reservoir had flowed into the well bore and riser. Looked at another way, Transocean estimates that the flow peaked at 4,465 gallons *per minute* only a short time before the explosions wracked the rig.<sup>20</sup> Given the ability of a deepwater well like Macondo and others like

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<sup>18</sup> Exh. 1, deposition excerpts of BP expert, Dr. Azar, pp. 65-72, 134-137.

<sup>19</sup> BP argues that Transocean's failure to shut in the well was a "superseding cause" that absolves BP of liability. As stated above, pursuant to *Exxon Co., U.S.A. v. Sofec, Inc., supra*, 517 U.S. at 837, superseding cause only applies "where the defendant's negligence in fact substantially contributed to the plaintiff's injury, but the injury was actually brought about by a later cause of independent origin that was not foreseeable." BP can hardly claim that the blowout, explosions, fire, deaths, personal injuries, Gulf Oil Spill, and the ensuing environmental and economic devastation were "independent" and "not foreseeable" given, among many other facts, BP's role in the cement failure, its original approval of the negative pressure test, and perhaps most importantly, the gross negligence and/or willful misconduct stemming from the Vidrine-Hafle conversation.

<sup>20</sup> Exh. 4, Bly Report, p. 106. *See also*, Transocean Report (Vol. 2), TRES-04304, Appendix G, p. 144.

it to wreak the extent of the damage and destruction the people of the Gulf and elsewhere have witnessed, this is a truly frightening revelation.

The details concerning BP's (and Transocean's) failure to control the well and then respond to the blowout in time to prevent the catastrophe are set out in detail in the reports of expert witnesses.<sup>21</sup> It is sufficient to note that the specific legal *duty* to prevent blowouts is established by federal regulation. For example, 30 C.F.R. 250.300 ("Pollution prevention") requires of lessees like BP:

(a) During the exploration, development, production, and transportation of oil and gas or sulphur, the lessee shall take measures to prevent unauthorized discharge of pollutants into the offshore waters. The lessee shall not create conditions that will pose unreasonable risk to public health, life, property, aquatic life, wildlife, recreation, navigation, commercial fishing, or other uses of the ocean.

...

More specifically, 30 C.F.R. 250.400 ("Who is subject to the requirements of this subpart?") applies subsequent regulations to BP (and Transocean and others) and states: "The requirements of this subpart apply to lessees, operating rights owners, operators, and their contractors." The regulation which immediately follows, 30 C.F.R. 250.401 ("What must I do to keep wells under control?"), therefore governs BP (and Transocean). 30 C.F.R. 250.401 requires (emphasis added):

You must take necessary precautions to keep wells under control *at all times*.  
You *must*:

(a) Use the best available and safest drilling technology to *monitor* and *evaluate* well conditions and to *minimize* the potential for the well to flow or kick;

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<sup>21</sup> See, e.g., Exh. 11, Heenan Report. The reports explain that the failures to recognize the incipient blowout stemmed from multiple actions and inactions. These faults included the failure to recognize fundamental danger signs in the data available to BP and Transocean through two *separate* well monitoring systems, *i.e.*, Transocean's "Hi-Tech" system and the Sperry-Sun "Insight" system, the latter of which was monitored aboard the rig and also sent shoreside in "real time" for simultaneous viewing by BP. The faults also encompass affirmative rig actions by BP and Transocean that masked the ability to monitor the well in critical respects.

This comprehensive regulation encompasses BP's (and Transocean's) performance of the negative pressure test *and* subsequent well monitoring after the test ("monitor . . . and evaluate well conditions"). The regulation likewise governs both parties' failed well control actions once they knew or should have known that the well was flowing and had the potential to blowout ("minimize the potential for the well to flow or kick").

BP attempts to separate responsibility for the negative pressure test, well control monitoring, and well control response into discrete and wholly separable actions. For example, BP's Bly Report admits responsibility or partial responsibility for the negative pressure test, but not so much its responsibility for well monitoring and well control (which BP would prefer to place on Transocean) – hence the Bly Report separates those three actions into separate "slices" of its causation model in order that BP can attempt to absolve itself from culpability for the well monitoring and well control.

In reality, however, BP legally is *fully* responsible, *along with Transocean*, for the well monitoring and well control failures that occurred after the negative pressure test was falsely declared a success. The failure of well monitoring and well control are entirely *foreseeable and proximate* consequences of the bungled negative pressure test and the failure, by BP, to rectify and reverse the failure once Hafle was told by Vidrine of the conflicting pressure data.

At the time of this singularly critical conversation between Hafle and Vidrine, the riser was being displaced and the well had gone into an under-balanced condition. For Hafle to say or do nothing at that point is beyond all rationale excuse.

If Hafle had ordered Vidrine *immediately* to find the reason for the failed negative pressure test, the very actions that would have been taken would have accomplished the well monitoring and well control actions that would have saved the rig and the lives of its crew. [Exh. 11, Heenan Report

at pp. 5, 26-27, 30.] Very simply, in order to re-perform the negative pressure test the BOP would have been closed in – just as it had been in the earlier failed negative test – thereby shutting in the well before hydrocarbons passed the stack and entered the riser. Likewise, the well would have been monitored during the negative pressure test and the flow would have been discovered, after which the kick slowly could have been circulated out in accordance with standard well control procedures. *Id.* These well monitoring and well control actions were *not* taken, however, due in part to Hafle’s and Vidrine’s inexcusable non-action following their 8:52 to 9:02 p.m. phone call.

**IV. THE COURT SHOULD IGNORE BP’S ONE-SIDED ARGUMENT THAT THE NATURAL RESOURCES OF THE GULF ARE “UNDERGOING A ROBUST RECOVERY.”**

The United States and the five Gulf States are conducting a multi-year, multi-million dollar Natural Resource Damage Assessment (“NRDA”) to comprehensively address the environmental impact from the Spill.<sup>22</sup> *Status Update for the Deepwater Horizon Oil Spill Natural Resource Damage Assessment 5* (April 2012) (“Status Update”) (Exh 13).<sup>23</sup> In this motion, BP is apparently seeking to pre-judge the results of the NRDA by inviting the Court to make factual findings on environmental injury based on BP’s selective and misleading account of environmental conditions.

BP argues that “at any Trial, BP would establish that the Gulf is undergoing a robust recovery, further weakening claims for economic damages,” and provides declarations from various purported experts. BP Motion at 69 – 75. In support of this assertion, BP selectively offers four aspects of the Gulf that it claims are recovering: (1) coastal areas; (2) wetlands; (3) water; and (4)

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<sup>22</sup> BP argues that the damages are “divisible” among BP and its co-defendants. BP Motion at 62-63. The Court has already rejected BP’s claim that its liability to the United States and others under OPA can be “apportioned,” holding that BP’s liability is “joint and several.” [Rec. Doc. 5809 at 12].

<sup>23</sup> *See* Fed. R. Evid. 803(8). The Status Report is available at [http://www.gulfspillrestoration.noaa.gov/wp-content/uploads/FINAL\\_NRDA\\_StatusUpdate\\_April2012.pdf](http://www.gulfspillrestoration.noaa.gov/wp-content/uploads/FINAL_NRDA_StatusUpdate_April2012.pdf).

seafood.<sup>24</sup> BP's simplified characterization is subject to substantial scientific debate.

While it is true that many resources are in a better condition than at the height of the Spill – after all, they are no longer slathered in layers of BP's oil – it is also true they continue to suffer significant harm from the Spill, and it is not possible at this time to conclude that they have recovered, despite the information that BP presents. Furthermore, BP completely ignores numerous other aspects of the Gulf that demonstrate the continuing ecological disruption resulting from the Spill.

The NRDA regulations, under OPA, designate federal, state and tribal natural resource trustees to conduct NRDA's on behalf of the public. Ultimately, the trustees have a mandate to restore, rehabilitate, replace or acquire the equivalent of the injured natural resources. The Deepwater Horizon NRDA, given the Spill's unprecedented duration of nearly 3 months, geographic size, three-dimensional nature and ecological complexity, may continue for years. With potential natural resource injury spanning five states and their waters, as well as federal waters, this is the largest damage assessment ever undertaken. *Status Update* (Exh 13). The Gulf of Mexico is a complex, productive ecosystem. Figures 3-5 from the *Status Update*, illustrate the complexity of assessing the effects of the Spill on the Gulf ecosystem. It is clear from these figures that the superficial approach adopted by BP in this motion is completely inadequate for purposes of assessing the environmental effects of the Spill.

The ongoing NRDA represents a comprehensive and widespread assessment of the effects of the Spill on not only water and sediment quality, but on associated resources. Over 50,000

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<sup>24</sup> BP also attempts to draw conclusions from limited data on recovery of tourism. BP Br. at 74-75. The NRDA is conducting an economic study of public losses resulting from changes in recreational trips to the Gulf. *See Status Update* at 86-88. This study will include an analysis of when the effect of the Spill on recreational visits has ended. *Id.* at 88. Therefore, any conclusions on this topic are premature.

environmental samples have been collected and are being analyzed, and the results of many are currently available to the public. *See Status Update* at 21. Over 200 workplans covering the wide ranging assessment efforts (and publically available data associated with them) have been implemented and are available on the NRDA website: <http://www.gulfspillrestoration.noaa.gov/oil-spill/gulf-spill-data/>. Data continue to come in.

Thus, until those studies are completed, BP's cherry-picked assertions of robust recovery are at best premature judgments on the health of the overall Gulf ecosystem. Below we provide examples of readily available public information and government records that cast doubt on BP's view of each of the four topic areas that BP has selected. We also provide examples of public information addressing other elements of the Gulf ecosystem that BP has ignored. The examples summarized below are not intended to serve as a point-by-point "rebuttal" of BP's arguments. Rather, they provide evidence that BP's characterization is overly simplified, premature, and subject to debate at a later time.

***Coastal Areas.*** With respect to coastal areas, BP offers the opinion of Dr. Elliott Taylor, an advisor to the Shoreline Cleanup and Assessment Teams (SCAT) deployed as part of cleanup efforts during the Spill. BP asserts that Dr. Taylor reached "the clear conclusion that the Gulf was undergoing a strong recovery." BP Br. at 69. But these are BP's words, not Dr. Taylor's. Dr. Taylor merely observes that there has been a reduction in the extent of shoreline subject to response measures since the Spill. Declaration of Elliott Taylor, Ph. D. ("Taylor Decl."), at ¶ 33.

It is important to note that the primary purpose of the SCAT teams was to provide operational support for decisions on shoreline cleanup. Mississippi Canyon 252 Incident Shoreline Cleanup Assessment Team (SCAT) Plan 2 (April 2010) (Exh. 14); *see also* Taylor Decl. at ¶ 13.

It was not designed to measure the full extent of environmental damage and is not part of the NRDA. The fact that a section of shoreline is no longer considered suitable for response action does *not* mean that it is not suffering continuing injury from the Spill. For example, an important consideration in deciding on appropriate response action is whether a cleanup technique will cause more harm than good. *See, e.g.*, Taylor Decl. at ¶¶ 26, 27. Thus, a section of shoreline may be classified as inappropriate for cleanup even though it is still being subjected to injury from residual oil. It is the NRDA that evaluates the environmental injury, the degree of recovery and the need for restoration.<sup>25</sup> And restoration measures will usually differ from, and often extend far beyond, cleanup techniques.

**Wetlands.** Next, BP offers the opinions of Dr. Harold Leggett and Edward Wharton, who made site visits by helicopter and boat to Louisiana coastal marshes to observe their condition. BP Br. at 70. Dr. Leggett and Mr. Wharton did not conduct any quantitative scientific studies of the marshes, but base their opinions largely on personal observation. See Declaration of Harold Leggett (“Leggett Decl.”) at ¶¶ 12, 15; Declaration of Tre’ Wharton (“Wharton Decl.”) at ¶¶ 17-21. They conclude that the marshes they observed are healthy and recovering. BP Br. at 70.

Unfortunately, the personal observations of Dr. Leggett and Mr. Wharton seem to be undermined by the conclusions of scientists who do conduct quantitative field studies. For example, one study of the effects of oil from the Spill on two species of coastal marsh plants found significant

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<sup>25</sup> Furthermore, Dr. Taylor’s figures seem to suggest that the annual decrease in oiled shoreline is slowing, not accelerating. He states that at the peak of shoreline oiling, 1,100 miles of the coast contained oil. Taylor Decl. at ¶ 20. At one year, the miles of oiled shoreline decreased by 530 miles, a reduction of 50%. *Id.* at ¶ 21. In the next year, he states that oiling had decreased to less than 430 miles, a reduction of 18%. *Id.* at ¶ 22.

impacts.<sup>26</sup> Lin and Mendelsohn (2012) found that heavy oiling caused complete mortality of both species, which “most likely resulted from oil exposure of the shoots and oil contact on/in the marsh soil, as well as repeated oiling events.” Lin and Mendelsohn (2012) at 3737. They state that in general, heavy soil oiling “could cause negative impacts to marsh vegetation for years to decades, primarily upon the oil concentration in the soil and oil type.” Lin and Mendelsohn (2012) at 3741-

42. Mendelsohn, et al. have also concluded that for shorelines affected by the Spill,

as of the fall of 2011, many of the most heavily oiled shorelines had minimal to no recovery, and only time will tell whether these shorelines will revegetate naturally before shoreline erosion occurs.<sup>27</sup>

A study by Silliman, et al. reported that “oil-driven plant death on the edges of [Louisiana] marshes more than doubled rates of shoreline erosion, further driving marsh platform loss that is likely to be permanent.”<sup>28</sup>

Mendelsohn, et al. (2012) compiled recovery times for previous oil spills significantly smaller than this Spill, and found that visible environmental impacts remained for anywhere from two to forty years after the spills. Mendelsohn, et al. (2012) at 563. Mendelsohn, et al. have suggested that there may be wider effects from oil on bottom-dwelling organisms associated with marshes.

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<sup>26</sup> See Exh. 15, Lin Q. and I.A. Mendelsohn, *Impacts and Recovery of the Deepwater Horizon Oil Spill on Vegetative Structure and Function of Coastal Salt Marsh in the Northern Gulf of Mexico*, 46 *Environmental Science & Technology* 3737-43 (2012) (“Lin and Mendelsohn (2012)”).

<sup>27</sup> Exh. 16, Mendelsohn, I.A., Gary L. Andersen, D. M. Baltz, R.H. Caffey, K.R. Carman, J. W. Fleeger, S.B. Joye, Q. Lin, E. Maltby, E. B. Overton and L. P. Rozas, *Oil Impacts on Coastal Wetlands: Implications for the Mississippi River Delta Ecosystem after the Deepwater Horizon Oil Spill*, 62 *BioScience* 562-574, 568 (2012) (“Mendelsohn, et al. (2012)”).

<sup>28</sup> Exh. 17 Silliman, Brian R., Johan van de Koppel, Michael W. McCoy, Jessica Diller, Gabriel N. Kasozi, Kamala Earl, Peter N. Adams and Andrew R. Zimmerman, *Degradation and resilience in Louisiana salt marshes after the BP–Deepwater Horizon oil spill*, 109 *Proceedings of the National Academy of Sciences* 11234–11239, 11234 (2012).



[A]lthough the broader impacts of such changes in species composition are not well understood, an increasing body of literature indicates that indirect effects can ripple through communities and ecosystems, and such effects can be more significant than those of direct oil toxicity.

Mendelsohn, et al. (2012) at 569.

**Water.** BP next argues that the reports conducted by the Operational Science Advisory Team (OSAT) of the U.S. Coast Guard's Unified Area Command for purposes of response indicate the lack of environmental injury from water and sediments. BP Br. at 72. Once again, BP confuses response with damage assessment. The OSAT reports used standard human health and aquatic toxicity benchmarks to guide response decisions. They were not intended to provide an incident-specific evaluation of the environmental effects of the Spill, which is the function of the damage assessment.

Assessing non-response questions, including quantitative estimates of remaining oil and the long-term environmental impacts of the DWH oil spill, are beyond the scope of this report. Additional monitoring and assessment efforts will be conducted in accordance with Natural Resource Damage Assessment (NRDA) processes.<sup>29</sup>

The NRDA is conducting numerous laboratory and field studies of the effects of the Spill on aquatic organisms and their habitats.

Existing scientific studies conducted outside the NRDA suggest that there may be significant continuing impacts on aquatic organisms from the Spill. For example, one study has found that Gulf killifish collected from coastal areas contaminated by the Spill have tissue damage and changes in

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<sup>29</sup> Operational Science Advisory Team, Summary Report for Sub-Sea and Sub-Surface Oil and Dispersant Detection: Sampling and Monitoring 1 (Dec. 17, 2010) (OSAT-1); *see also* Operational Science Advisory Team, Summary Report for Fate and Effects of Remnant Oil in the Beach Environment 7 (Feb. 10, 2011) (OSAT-2) (both available at <http://www.restorethegulf.gov/release/2011/07/29/osat-summary-report-sub-sea-and-sub-surface-oil-and-dispersant-detection-ecotoxic>).

gene expression indicative of physiological and reproductive problems.<sup>30</sup> Exposure of killifish to sediment collected in the field led to delayed hatching times and reduced hatching success in the laboratory.<sup>31</sup> Thus, while the OSAT data may be perfectly appropriate for response decisions, site-specific NRDA studies may be necessary to determine the true extent of environmental injury.

**Seafood.** BP focuses on seafood safety and commercial catch rates of selected fish and shellfish in an attempt to minimize the long-term environmental consequences of the Spill. BP Br. at 72-74. But health standards for human consumption do not address the health of the fish and shellfish themselves, and commercial catch rates in the short-term do not necessarily reflect the overall long-term health of an aquatic ecosystem. Controlled scientific studies, not commercial catch-rates, are necessary to appropriately evaluate the health of fish. Again, these are issues being addressed by the NRDA.

The scientific literature provides important indications that there may be systemic, long-term impacts on the Gulf ecosystem that could eventually affect commercially or recreationally important fish species. The problems with Gulf killifish collected from the Spill area and the continuing toxicity of contaminated sediments were noted above. *See* Whitehead, et al. (2011); SOST Report. Other studies show that exposure to oil and dispersant can affect the growth of larval fish, cause

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<sup>30</sup> Exh. 18, Whitehead, A., B. Dubansky, C. Bodinier, T.I. Garcia, S. Miles, C. Pilley, V. Raghunathan, J.L. Roach, N. Walker, R.B. Walter, C.D. Rice, and F. Galvez, *Genomic and physiological footprint of the Deepwater Horizon oil spill on resident marsh fishes*, Proceedings of the National Academy of Sciences, doi: 10.1073/pnas.1109545108 (2011) (“Whitehead, et al. (2011)”), available at <http://www.pnas.org/content/early/2011/09/21/1109545108.abstract>.

<sup>31</sup> National Science and Technology Council, Subcommittee on Ocean Science and Technology, Final Report, Deepwater Horizon Oil Spill Principal Investigator Workshop 21 (Oct. 25-26, 2011) (“SOST Report”) (Excerpt attached as Exh. 19).

physical deformity and affect gene expression.<sup>32</sup> This is particularly troubling since satellite imagery of the surface oiling from the Spill cover historical spawning areas for large pelagic fish such as tuna and blue marlin.<sup>33</sup>

*Ecosystem Topics that BP Chose to Avoid.* BP also chooses to ignore other natural resources in the Gulf, many of which have been shown to be adversely impacted by the spill, or are still under study. Below we mention some examples.

First, the Status Report, in addition to describing the studies which have yet to be concluded, does offer several examples of preliminary findings of the governmental investigations of the NRDA.

*Bottlenose dolphins.* Dolphins in Barataria Bay, Louisiana, are showing signs of severe ill health. Barataria Bay received heavy and prolonged exposure to oil during the Deepwater Horizon oil spill. Based on comprehensive physicals of 32 live dolphins from Barataria Bay (summer of 2011), preliminary results show that many of the dolphins in the study are underweight, anemic, have low blood sugar, and/or some symptoms of liver and lung disease, and that nearly half also have abnormally low levels of the hormones that help with stress response, metabolism, and immune function. *Status Report* at 54.

*Deepwater, Hard bottom Coral.* Two hard-bottom coral communities, which may be hundreds of years old, have been impacted by the oil spill, both within 7 miles of the Macondo wellhead. At both locations many corals have been identified as dead or dying. *See Status Report* at 16, 35.

*Mesophotic Coral Reefs.* Preliminary evidence from the cruises targeting these reefs has indicated that populations of resident plankton-eating fish are significantly decreased. *Status Report* at 36.

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<sup>32</sup> See Exh. 20, Griffitt, J., N. Brown-Peterson, I. Boube, Effects of Dispersed Oil on Larval Sheepshead Minnows (Abstract of Presentation) (Aug. 14, 2011); Exh. 21, Kleinow, K., A. Bui, L. Thibodeaux, X. Ray, A. Penn, S. Fritz-Kleinow, Effect of Light Crude Oil Emulsion with and Without the Dispersant Correxite, on Early Fish Development (Abstract) (Jan. 17, 2012).

<sup>33</sup> Exh. 22, Frias-Torres, S. and C.R. Bostater Jr., *Potential impacts of the Deepwater Horizon oil spill on large pelagic fishes*, 8175 Proceedings of International Society of Optics and Photonics (“SPIE”) 81750F-81750F-7 (2011).

*Sea Turtles*: Since the spill occurred, field teams have collected 456 visibly oiled sea turtles, beyond the 613 dead turtles collected. *Status Report* at 20. The NRDA is conducting studies of the physical condition of female turtles, and collecting turtle eggs for chemical and toxicological analysis, to evaluate whether exposure of turtles to oil is affecting nesting and reproduction. *Status Report* at 59.

Second, the Status Report notes that the NRDA will involve extensive testing for toxicity of oils and hydrocarbons for various aquatic animals such as crab, oyster, shrimp, and finfish. *Status Report* at 29. These tests may show that low-level or residual oils and hydrocarbons could have chronic, long term impacts on resources. Until the results of these tests are known, it is impossible to categorically state that the Gulf is undergoing a robust recovery.

Third, many researchers, outside of the NRDA, have also studied various Gulf resources and found ongoing harm, or toxicity at levels that imply harm to resources. For example, samples of oil from the Spill have been shown to decrease phytoplankton and other components of the Gulf food web.<sup>34</sup> The introduction of contaminants into the food web may have had effects which persisted after the well had been capped.<sup>35</sup> Researchers have confirmed damage to deepwater coral communities.<sup>36</sup> A million migratory shorebirds were potentially exposed to the Spill, and many have

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<sup>34</sup> Exh. 23, Gilde, K. and J.L. Pinckney, *Sublethal effects of crude oil on the community structure of estuarine phytoplankton*, 35 *Estuaries and Coasts* 853–861 (2012); Exh. 24, Ortmann, A.C., J. Anders, N. Shelton, L. Gong, A.G. Moss, and R.H. Condon, *Dispersed oil disrupts microbial pathways in pelagic food webs*, 7 *PLoS ONE* 42548 (2012).

<sup>35</sup> Exh. 25, Mitra, S., D.G. Kimmel, J. Snyder, K. Scalise, B.D. McGlaughon, M.R. Roman, G.L. Jahn, J.J. Pierson, S.B. Brandt, J.P. Montoya, R.J. Rosenbauer, T.D. Lorenson, F.L. Wong, and P.L. Campbell, *Macondo-1 well oil-derived polycyclic aromatic hydrocarbons in mesozooplankton from the northern Gulf of Mexico*, 39 *Geophysical Research Letters* L01605 6 (2012).

<sup>36</sup> Exh. 26, White, H.K., P.-Y. Hsing, W. Cho, T.M. Shank, E.E. Cordes, A.M. Quattrini, R.K. Nelson, R. Camilli, A.W.J. Demopoulos, C.R. German, J.M. Brooks, H.H. Roberts, W. Shedd, C.M. Reddy, and C.R. Fisher, *Impact of the Deepwater Horizon oil spill on a deep-water coral community in the Gulf of Mexico*, *Proceedings of the National Academy of Sciences*, doi:10.1073/pnas.1118029109 (2012), available at <http://www.pnas.org/content/early/2012/03/23/1118029109.abstract>

been observed with visible oiling.<sup>37</sup> Bird eggs exposed to oil have resulted in reduced hatching success.<sup>38</sup>

### CONCLUSION

As is clear from the foregoing, there is an on-going dispute between the United States and BP about (1) various liability issues, including BP's gross negligence and wilful misconduct; and (2) the environmental consequences of BP's oil spill. The first of those disputes is set for the Phase One trial in January of 2013. Therefore, at the Fairness Hearing, the Court can, and should, refrain from taking live testimony from BP's witnesses on these issues; if the Court does so, the United States would not need to present at the Hearing. Further, the Court should refrain from making any Findings of Fact related to the merits of these disputes. Rather, the Court should make only those findings sufficient to assure itself that the settlement meets the standard for approval. Litigation risk may be a factor in approving a settlement, but the Court can address that by simply noting that there was litigation risk for all parties to the proposed settlement.

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<sup>37</sup> Exh. 27, Henkel J.R., B.J. Sigel, C.M. Taylor, *Large-Scale Impacts of the Deepwater Horizon Oil Spill: Can Local Disturbance Affect Distant Ecosystems through Migratory Shorebirds?* 62 *BioScience* 676-685 (2012).

<sup>38</sup> Exh. 28, Finch, B.E., K.J. Wooten, and P.N. Smith, *Embryotoxicity of weathered crude oil from the Gulf of Mexico in mallard ducks (*Anas platyrhynchos*)*, 30 *Environmental Toxicology and Chemistry* 1885-1891 (2011).

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**CERTIFICATE OF SERVICE**

I hereby certify that, today, the above and foregoing document has been served on all counsel by electronically uploading the same to Lexis Nexis File & Serve in accordance with Pretrial Order No. 12, and that the foregoing was electronically filed with the Clerk of Court of the United States District Court for the Eastern District of Louisiana by using the CM/ECF System, which will send a notice of electronic filing in accordance with the procedures established in MDL 2179.

Dated: August 31, 2012.

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