

UNITED STATES DISTRICT COURT
EASTERN DISTRICT OF LOUISIANA

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IN RE: OIL SPILL BY THE DOCKET NO. MDL-2179
OIL RIG *DEEPWATER HORIZON* SECTION "J"
IN THE GULF OF MEXICO ON NEW ORLEANS, LA
APRIL 20, 2010 MONDAY, SEPTEMBER 30, 2013

IN RE: THE COMPLAINT AND DOCKET NO. 10-CV-2771
PETITION OF TRITON ASSET SECTION "J"
LEASING GMBH, ET AL

UNITED STATES OF AMERICA DOCKET NO. 10-CV-4536
V. SECTION "J"
BP EXPLORATION & PRODUCTION,
INC., ET AL

DAY 1 MORNING SESSION
TRANSCRIPT OF NONJURY TRIAL PROCEEDINGS
HEARD BEFORE THE HONORABLE CARL J. BARBIER
UNITED STATES DISTRICT JUDGE

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P-R-O-C-E-E-D-I-N-G-S

MONDAY, SEPTEMBER 30, 2013

M O R N I N G S E S S I O N

(COURT CALLED TO ORDER)

08:12:24 6

08:12:25 7

THE DEPUTY CLERK: All rise.

08:12:26 8

THE COURT: Good morning, everyone. Please be seated.

08:12:49 9

VOICES: Good morning, Your Honor.

08:12:50 10

THE COURT: Stephanie, go ahead and call the case,

08:12:53 11

please.

08:12:53 12

THE DEPUTY CLERK: MDL 10-2179, In re: Oil spill by

08:12:57 13

the Oil Rig *Deepwater Horizon* in the Gulf of Mexico on

08:13:00 14

April 20, 2010; Civil Action 10-2771, In re: The Complaint and

08:13:07 15

Petition of Triton Asset Leasing GmbH, et al.;

08:13:14 16

Civil Action 10-4536, United States of America v.

08:13:18 17

BP Exploration and Production, Incorporated, et al.

08:13:22 18

THE COURT: All right. Good morning, again. This is

08:13:29 19

Phase Two of the Transocean *Deepwater Horizon* limitation

08:13:37 20

liability trial, and also the consolidated civil action by the

08:13:41 21

United States under the Clean Water Act and Oil Pollution Act

08:13:47 22

against BP and Anadarko.

08:13:49 23

We have segregated this Phase Two into two

08:13:54 24

segments. The first segment is called source control. This

08:13:58 25

will involve evidence and testimony as to what occurred from

08:14:03 1 the time the *Deepwater Horizon* sank and the riser fractured and
08:14:12 2 the oil began to escape until, I think it was, approximately
08:14:16 3 87 days later when the well was capped. That's source control.

08:14:23 4 In this first phase, which is going to take
08:14:26 5 four days, I've allowed each side of that case to have 15 hours
08:14:32 6 of testimony. We really only have two sides to this phase, and
08:14:40 7 that is the aligned parties on one side versus BP on the other
08:14:43 8 side. The aligned parties include the private claimants
08:14:48 9 represented by the Plaintiffs' Steering Committee, the States,
08:14:52 10 Transocean and Halliburton, as I said, against BP on the other
08:14:56 11 side, 15 hours per side.

08:14:58 12 Starting next Monday, we'll begin the second
08:15:01 13 segment of Phase Two, which is the so-called Quantification
08:15:06 14 segment. In that case, the parties are the United States on
08:15:10 15 one side versus BP and Anadarko on the other side. I've
08:15:17 16 allowed 12 days, a total of 45 hours for each side, for
08:15:21 17 quantification.

08:15:23 18 For the benefit of the press and public, I want
08:15:27 19 to emphasize that this Phase Two will not include the assessing
08:15:31 20 of any actual penalties. That will have to be the subject of a
08:15:36 21 later trial.

08:15:37 22 I want to remind everyone about your cell phones,
08:15:40 23 iPads, tablets, laptops, any other electronic device must be
08:15:44 24 turned off or silent in the courtroom. If you need to use your
08:15:48 25 phone, please step out into the hallway and away from the

08:15:51 1 courtroom doors to do so.

08:15:53 2 We've already had a breach of the court rules and
08:15:56 3 policies here this morning. Before I walked in the courtroom,
08:16:00 4 somebody showed me a picture that some group called Restore the
08:16:03 5 Delta -- I don't know who is here from Restore the Delta, but
08:16:06 6 you or your representatives have already violated court rules
08:16:10 7 by standing in the courtroom and taking a photograph of the
08:16:14 8 interior of this courtroom. That's a clear breach of court
08:16:18 9 rules and policies.

08:16:20 10 As a result of that, I've ordered that anyone who
08:16:22 11 is not a lawyer and not a member of the press must turn in
08:16:26 12 their phones, cell phones, laptops, cameras, everything. It's
08:16:32 13 unfortunate. I try to be as liberal as I can on allowing
08:16:34 14 people to bring these devices into the courtroom nowadays, but
08:16:38 15 if we have people that start violating the rules, then other
08:16:42 16 people have to suffer for your violation.

08:16:46 17 So whoever is here for Restore the Delta, you've
08:16:48 18 already caused a problem for everybody else. I'll just point
08:16:53 19 that out.

08:16:53 20 No food or drinks are allowed in the courtroom.
08:16:57 21 The exception, of course, is the lawyers can have water at
08:17:00 22 their counsel tables.

08:17:01 23 I'll repeat again, the taking of any photographs,
08:17:05 24 video anywhere, not only inside the courtroom, but inside the
08:17:07 25 federal courthouse complex, is strictly prohibited. This is

08:17:12 1 not just my rule, by the way, this is a rule or policy of the
08:17:14 2 United States Judicial Conference overseen by the United States
08:17:20 3 Supreme Court.

08:17:21 4 So any recording, broadcasting or transmitting of
08:17:25 5 any part of a trial in a federal courthouse is strictly
08:17:29 6 prohibited. Anyone who violates these rules may be subjected
08:17:32 7 to sanctions, including fines, seizure of the device and
08:17:35 8 possible ejection from the courtroom and courthouse.

08:17:38 9 These rules and other matter pertaining to public
08:17:43 10 access to the trial are set forth in the Court's Order of
08:17:46 11 August 22nd, 2013, which is Record Document 11086, a copy of
08:17:53 12 which is posted on the Court's public website at
08:17:56 13 www.laed.uscourts.gov, and at the MDL 2179 link.

08:18:05 14 There is one overflow courtroom for this trial.
08:18:06 15 That's Room 311, which is on the third floor. The same rules
08:18:10 16 that apply in this courtroom and in the courthouse, of course,
08:18:13 17 apply up there in Room 311.

08:18:19 18 As we did during Phase One, copies of deposition
08:18:23 19 which are used at trial, exhibits which are introduced at trial
08:18:26 20 and, of course, trial testimony will be regularly posted to a
08:18:28 21 public website -- who is in charge of that website? Is it the
08:18:35 22 same one we had last time -- www.mdl2179trialdocs.com.

08:18:43 23 That is not a court-supervised or sanctioned
08:18:45 24 website. It's set up by the parties, but that's where those
08:18:49 25 matters will be posted on a regular basis.

08:18:53 1 All right. As last time, we have two rows up
08:18:56 2 front on my left, but at the right as you enter the courtroom
08:19:01 3 up front, for members of the press.

08:19:03 4 Our trial schedule will be 8:00 a.m. to
08:19:07 5 6:00 p.m., Monday through Thursday. We'll have a slightly
08:19:12 6 different schedule during the week of October 14.

08:19:17 7 October 14 is Columbus Day. We will not hold
08:19:21 8 trial on that day. Instead, we will hold trial on that Friday,
08:19:25 9 October 18.

08:19:26 10 There is also one other exception or difference
08:19:31 11 in scheduling that week. That Wednesday, October 16, I will be
08:19:37 12 unable to hold trial that afternoon because of an important
08:19:45 13 en banc court meeting that I have to attend, which will take up
08:19:48 14 most all of that afternoon. So, for that reason, October 16, I
08:19:52 15 plan to recess at noon.

08:19:53 16 What I would like to do now is have counsel who
08:19:58 17 plan to appear during the trial to make their appearances at
08:20:01 18 this time for the record.

08:20:03 19 MR. BARR: Your Honor, Brian Barr for the plaintiffs.

08:20:09 20 MR. LUNDY: Your Honor, Matt Lundy for the plaintiffs.

08:20:10 21 MS. GREENWALD: Good morning, Your Honor,

08:20:13 22 Robin Greenwald for the plaintiffs.

08:20:13 23 MR. PETOSA: Good morning, Your Honor, Frank Petosa for
08:20:17 24 the plaintiffs.

08:20:18 25 MR. IRPINO: Good morning, Judge. Anthony Irpino for

08:20:21 1 the plaintiffs.

08:20:24 2 MR. GODWIN: Good morning, Judge. Don Godwin for
08:20:27 3 Halliburton.

08:20:27 4 MR. YORK: Alan York, also for Halliburton.

08:20:32 5 MR. SMITH: Prescott Smith for Halliburton.

08:20:35 6 MR. MILLER: Kerry Miller for Transocean.

08:20:38 7 MR. BRIAN: Brad Brian for Transocean and the aligned
08:20:41 8 parties.

08:20:42 9 MR. LI: Luis Li for Transocean, Your Honor.

08:20:43 10 MR. DOYEN: Your Honor, Mike Doyen for Transocean, as
08:20:46 11 well.

08:20:48 12 MR. MAZE: Corey Maze for the State of Alabama.

08:20:49 13 MR. KANNER: Allan Kanner for the State of Louisiana.

08:20:51 14 MR. KRAUS: Doug Kraus for the State of Louisiana.

08:20:53 15 MR. SINCLAIR: Winfield Sinclair for the State of
08:20:55 16 Alabama.

08:20:56 17 THE COURT: All right.

08:20:58 18 MR. BROCK: Your Honor, Mike Brock for BP.

08:21:00 19 We have trial team members here this morning who
08:21:03 20 will be participating in quantification only. Would you like
08:21:06 21 for them to identify themselves?

08:21:09 22 THE COURT: They can go ahead and introduce themselves.

08:21:10 23 MS. KARIS: Good morning, Your Honor. Hariklia Karis
08:21:13 24 for BP.

08:21:14 25 MR. HAYCRAFT: Don Haycraft, BP.

08:21:17 1 MR. COLLIER: Good morning, Your Honor. Paul Collier
08:21:19 2 for BP.

08:21:20 3 MR. REGAN: Good morning, Your Honor. Matt Regan on
08:21:24 4 behalf of BP.

08:21:25 5 MR. FITCH: Your Honor, good morning. Tony Fitch on
08:21:30 6 behalf of Anadarko for the quantification phase.

08:21:31 7 MS. KIRBY: Ky Kirby for Anadarko.

08:21:33 8 MR. FLYNN: Good morning, Your Honor. Stephen Flynn
08:21:34 9 for the United States.

08:21:37 10 MR. O'ROURKE: For the United States, Steve O'Rourke.

08:21:40 11 MR. CHAKERES: Good morning, Your Honor. Nat Chakeres
08:21:43 12 for the United States.

08:21:46 13 MR. FIELDS: Good morning, Your Honor. Barry Fields
08:21:48 14 for BP.

08:21:49 15 MR. BOLES: Good morning, Your Honor. Martin Boles for
08:21:52 16 BP.

08:21:54 17 THE COURT: You all can check with Stephanie and with
08:22:00 18 our court reporters because what we're going to do, like we did
08:22:03 19 last time, rather than take roll every day, we're just going to
08:22:06 20 have minute entries each day that the following counsel
08:22:11 21 appeared at various times during the trial, okay?

08:22:14 22 All right. Does anybody have any other
08:22:16 23 preliminary matters before we proceed to opening statements?

08:22:21 24 Okay. Each side has one hour allotted for
08:22:23 25 opening statements. Who is going to make the opening

08:22:26 1 statements for the aligned parties?

08:22:27 2 MR. BARR: Your Honor, Brian Barr on behalf of the
08:22:30 3 plaintiffs. Mr. Brian will be speaking as well, and
08:22:33 4 Mr. Godwin.

08:22:34 5 THE COURT: Who is going first? All right. You're up,
08:22:37 6 Mr. Barr.

08:22:40 7 Again, I'll remind everyone. It would be very
08:22:42 8 helpful, because of the number of lawyers and parties, and
08:22:45 9 we're going to have five different court reporters during the
08:22:49 10 course of this month-long trial, I ask anyone to please
08:22:52 11 remember to identify yourself and who you represent each time
08:22:55 12 you stand to speak. Try to make sure you're speaking into a
08:22:59 13 microphone somewhere in the courtroom. Speak up loudly and
08:23:02 14 clearly, so we can hear you and so it gets recorded and so
08:23:05 15 forth.

08:23:06 16 Go ahead, Mr. Barr.

08:23:07 17 MR. BARR: Good morning, Your Honor. Brian Barr on
08:23:10 18 behalf of the plaintiffs and the aligned parties. May I
08:23:12 19 proceed?

08:23:12 20 THE COURT: Yes.

08:23:13 21 OPENING STATEMENTS BY MR. BARR:

08:23:17 22 87 days. The evidence will show that BP's
08:23:20 23 failure to prepare source control plans and its outright lies
08:23:23 24 to Unified Command and the federal government caused oil to
08:23:28 25 flow from the Macondo Well for 87 days.

08:23:30 1 BP refused to spend any time or money preparing
08:23:35 2 to stop a deepwater blowout at its source. As a result, it had
08:23:42 3 no source control plans, and it provided no training on how to
08:23:45 4 conduct such an operation.

08:23:46 5 All of this was a direct result of BP's decision
08:23:50 6 to ignore decades of warnings, warnings that set out that BP
08:23:55 7 did not have adequate plans or procedures to use existing
08:23:59 8 technology for deepwater source control.

08:24:02 9 BP then made the situation worse by compounding
08:24:06 10 its preparedness failures and corrupting the decision-making
08:24:10 11 process by lying about the amount of flow from the well, the
08:24:14 12 risks, likelihoods of success and reasons for failure of the
08:24:18 13 actions it was taking to stop the flow. Lies have
08:24:22 14 consequences, Your Honor.

08:24:24 15 The consequence of BP's lies was to extend the
08:24:27 16 time the well was allowed to flow by months. Counsel for
08:24:32 17 Transocean, Mr. Brian, will address these lies during his
08:24:34 18 opening statement. I'm going to focus my time, Your Honor, on
08:24:38 19 BP's failure to prepare.

08:24:40 20 BP knew how important source control was. In its
08:24:48 21 Oil Spill Response Plan, controlling the source was the second
08:24:50 22 highest priority in any spill response, right after ensuring
08:24:56 23 the safety of citizens and response personnel. For this
08:25:01 24 highest priority, the evidence will show that BP paid lip
08:25:06 25 service to it.

08:25:07 1 In the words of Andy Inglis, the CEO of
08:25:11 2 BP Exploration and Production, BP literally spent zero dollars
08:25:17 3 in preparation for containment of a deepwater spill.

08:25:23 4 BP itself will testify, through its 30(b)(6)
08:25:27 5 designee, James Rolhoff, that it was unaware of any funds that
08:25:32 6 had ever been allocated to identify ways to shut in a deepwater
08:25:35 7 well subsea other than through the use of a BOP.

08:25:39 8 BP knew of the gaps in its ability to control the
08:25:42 9 source of a deepwater blowout. However, BP had a policy under
08:25:47 10 its Risk Management Plan that risks were could be deemed
08:25:52 11 acceptable because they were too expensive to mitigate. In
08:25:57 12 accordance with this policy, BP ignored its obligation to
08:26:02 13 mitigate the consequences of a deepwater catastrophe.

08:26:07 14 In BP's initial Exploration Plan for the
08:26:09 15 Macondo Well, BP certified that it had the capability to
08:26:13 16 respond, to the maximum extent practicable, to a worst-case
08:26:18 17 discharge. The evidence will show that BP knew this
08:26:22 18 certification was false. It knew it did not have the
08:26:26 19 capability to respond to a worst-case discharge. In fact, the
08:26:30 20 evidence will show that BP knew it didn't have the capability
08:26:33 21 to respond to a discharge substantially less than worst case.

08:26:38 22 As the Court will hear from Lars Herbst, the
08:26:43 23 Regional Director of the MMS for the Gulf of Mexico, "I would
08:26:47 24 say that they were not prepared to respond to whatever the
08:26:51 25 actual rate that was on this incident."

08:26:53 1 BP's highest corporate officers even agree that
08:26:57 2 they did not have the plans or equipment needed to
08:27:00 3 appropriately respond. Tony Hayward: "The ability to
08:27:05 4 intervene in the subsea was not in any way, shape or form
08:27:09 5 complete. We certainly didn't have all of the tools with the
08:27:13 6 benefit of hindsight we could have had. Yes, we didn't have
08:27:17 7 some of the things that you would ideally want."

08:27:21 8 Not only did BP not have all the tools it needed
08:27:25 9 or the knowledge of how to use existing technology to stop a
08:27:29 10 deepwater blowout, it had nothing for its employers and other
08:27:34 11 responders to review in determining how best to respond.

08:27:37 12 BP's employees were not trained on how to control
08:27:41 13 the source of the deepwater blowout. BP had never even
08:27:47 14 conducted a drill response in deepwater. Its employees were
08:27:51 15 asked to do a job they had not been taught to do.

08:27:55 16 As will best be described by Charles Holt, one of
08:28:00 17 the source control -- one of the leaders of the source control
08:28:03 18 effort, when discussing the preexisting plans that were created
08:28:07 19 and provided to him, he will testify and agree that BP was
08:28:13 20 essentially creating plans on how to kill this well.

08:28:18 21 People like Mr. Holt were left to create plans
08:28:21 22 from scratch as they waited on the only measure they had, a
08:28:25 23 relief well, a process known to take 90 to 150 days. All the
08:28:31 24 while, the well kept flowing.

08:28:34 25 Federal Regulations require BP to have the

08:28:36 1 ability to do more than this. Under the Federal Regulations,
08:28:40 2 30 C.F.R. 254.5, BP was required to take all appropriate
08:28:48 3 actions necessary to immediately abate the source of the spill.

08:28:53 4 Now, what did BP have to address this
08:28:56 5 requirement? BP's plan was to activate its Oil Spill Response
08:29:02 6 Plan, use ROV's to intervene and attempt to actuate the BOP,
08:29:07 7 and then wait for a relief well, with thousands upon thousands
08:29:11 8 of barrels of oil flowing into the Gulf every day.

08:29:16 9 Let's talk a minute about BP's Oil Spill Response
08:29:20 10 Plan. What is in BP's Oil Spill Response Plan? BP's Oil Spill
08:29:26 11 Response Plan is a nearly 600 page document that contains a
08:29:30 12 total of one page on source control.

08:29:34 13 What does this one page provide? Here it is
08:29:37 14 right here, Your Honor. "In the event the spill source cannot
08:29:42 15 be controlled by the facility operator or remotely with a
08:29:46 16 safety system, BP will activate the Oil Spill Response Plan and
08:29:50 17 assemble a team of technical experts to respond to the
08:29:53 18 situation." That is the entirety of the plan.

08:29:58 19 Source control was BP's highest response
08:30:03 20 priority, and it received a grand total of one bullet point in
08:30:07 21 its 600-page plan.

08:30:09 22 BP's think about it in the middle of a crisis
08:30:12 23 approach to response planning left nothing for responders to
08:30:16 24 actually look to in order to make intervention decisions. BP's
08:30:18 25 plan was nothing more than a plan to plan.

08:30:24 1 Yes, BP's plan operated as BP expected it would.
08:30:28 2 Responders were left to make things up on the fly as oil gushed
08:30:35 3 into the Gulf.

08:30:38 4 Now, Your Honor, the evidence will show that BP
08:30:40 5 actually believes its response plan worked. BP is proud of the
08:30:45 6 work it did in allowing this well to flow for 87 days, nearly
08:30:49 7 three months. BP believes it was acceptable to wait until the
08:30:55 8 midst of a crisis to design the first source control plan.

08:30:59 9 Now, Your Honor, the evidence will show that BP
08:31:04 10 brought in some of the best source control experts in the world
08:31:08 11 to help it figure out how to stop its well from flowing,
08:31:12 12 companies like Wild Well Control, Cameron, other oil companies
08:31:16 13 like Exxon, deepwater drillers like Transocean.

08:31:21 14 BP brought these experts in and then refused to
08:31:24 15 listen to what they had to say. Time and time again, BP's
08:31:29 16 outside technical experts recommended one thing, and BP did
08:31:33 17 something else.

08:31:34 18 Now, Your Honor, one of the things BP is going to
08:31:40 19 talk a lot about in this trial is the MMS's approval of its
08:31:45 20 Oil Spill Response Plan. They are going to point to that as a
08:31:49 21 defense to the time it took to stop Macondo from flowing.

08:31:52 22 But, Your Honor, the MMS's approval of BP's
08:31:56 23 Oil Spill Response Plan, the evidence will show, is irrelevant.
08:32:00 24 BP did not even consider the Oil Spill Response Plan to be a
08:32:06 25 source control plan.

08:32:07 1 Earnest Bush, BP's 30(b)(6) Designee on the
08:32:11 2 source control section of the Oil Spill Response Plan and the
08:32:14 3 person who had responsibility for the plan of BP, will testify
08:32:19 4 that this plan was not meant to address source control. This
08:32:24 5 plan is not about source control.

08:32:27 6 So, Your Honor, in a trial about preparing for
08:32:32 7 source control, a plan that's not about source control, the
08:32:36 8 MMS's approval of that plan, irrelevant.

08:32:39 9 Now, let's talk about the other things BP had
08:32:45 10 other than the Oil Spill Response Plan. The other source
08:32:48 11 control techniques known to BP were the use of ROV's, as we
08:32:49 12 talked about, and to wait for a relief well.

08:32:52 13 The evidence will show that BP knew that ROV's
08:32:56 14 were unlikely to be able to close in a deepwater blowout like
08:33:01 15 Macondo. BP had been told for years that, in the face of a
08:33:05 16 flowing well, the deepwater ROV's were unlikely to work and
08:33:09 17 should not be relied upon.

08:33:11 18 As for relief wells, given the time it takes to
08:33:15 19 drill a relief well, particularly when dealing with a well
08:33:19 20 capable of flowing at 162,000 barrels a day, relief wells
08:33:26 21 should be considered a measure of last resort.

08:33:30 22 But for BP, relief wells were a measure of only
08:33:34 23 resort. Relief wells were the only thing that BP had that they
08:33:40 24 knew could stop a deepwater blowout.

08:33:42 25 BP knew ROV's and relief wells could not

08:33:47 1 immediately abate the source, and its reliance upon these
08:33:52 2 procedures left BP unprepared.

08:33:53 3 Lars Herbst, again, the Designee for the
08:33:58 4 regulator. He was quite clear on BP's failures to meet the
08:34:03 5 federal government's expectations on its ability to respond to
08:34:06 6 a deepwater blowout. He will testify that, "We expected them
08:34:11 7 to be able to contain a deepwater blowout. They did not,
08:34:14 8 obviously, contain it as quick as our expectations were. The
08:34:20 9 government expected BP to have, consistent with its
08:34:23 10 certification in its initial Exploration Plan, the capability
08:34:26 11 to close in a blowout long before 87 days."

08:34:32 12 Now, throughout this trial, BP is going to
08:34:35 13 attempt to pass the buck to the federal government as a shield
08:34:39 14 to defend itself against its failures in the time it allowed
08:34:43 15 the Macondo Well to flow. It will try to convince this Court
08:34:46 16 that the government was fully embedded and an equal participate
08:34:50 17 in the response effort and approved BP's actions after only an
08:34:55 18 independent and thorough analysis. The evidence will show this
08:34:59 19 is simply not true.

08:35:00 20 Prior to Macondo, BP knew that the United States
08:35:03 21 Coast Guard enters a response with the idea that they are there
08:35:06 22 to assist the responsible party, BP. The evidence will show
08:35:11 23 that the government relied upon BP, and that BP was in charge
08:35:15 24 of identifying and developing source control techniques, not
08:35:19 25 the government.

08:35:21 1 This makes sense. The government is not in the
08:35:24 2 business of drilling wells. That's BP's business.

08:35:28 3 As the federal on-scene coordinator recognized,
08:35:33 4 "As subsea drilling systems are not an area of Coast Guard
08:35:37 5 cognizance and expertise, the federal on-scene coordinator was
08:35:40 6 unfamiliar with the technology and capabilities of the
08:35:43 7 deepwater drilling industry. Neither the Coast Guard nor any
08:35:47 8 other federal agency had experience with a massive deepwater
08:35:51 9 spill. Ultimately, source control had to be achieved through
08:35:54 10 the responsible party, BP."

08:35:57 11 The Coast Guard's Report on Preparedness echoes
08:36:02 12 this statement. "The federal government has neither the
08:36:05 13 skilled personnel nor the appropriate equipment to respond
08:36:08 14 immediately to an oil blowout in deepwater and must rely wholly
08:36:13 15 on the responsible party."

08:36:15 16 The government knew that it did not have the
08:36:19 17 training and expertise to determine the best way to shut in
08:36:23 18 Macondo. That expertise was expected to rest with the
08:36:26 19 operator, BP. What the government did not understand was that
08:36:30 20 BP did not have the training, experience, plans or procedures
08:36:35 21 either.

08:36:37 22 Now, the evidence will show that it was only
08:36:41 23 after BP's deceptive analysis of the failed Top Kill that the
08:36:47 24 government role changed. According to the Report of the
08:36:50 25 federal on-scene coordinator, "There was a lack of transparency

08:36:55 1 by BP on source control. Major decisions were made outside of
08:37:01 2 the incident command structure. Tactical planning occurred
08:37:06 3 behind closed doors by BP personnel without government
08:37:09 4 participation in the formation of those plans."

08:37:13 5 This changed in late May 2010, when the National
08:37:17 6 Incident Command representative, who the Court will hear is
08:37:23 7 Admiral Cook, vigorously insisted on participating in an
08:37:27 8 internal BP meeting to assess the failed Top Kill, establishing
08:37:30 9 a new paradigm.

08:37:31 10 Now, Your Honor, BP's also going to claim it met
08:37:35 11 the industry standard on source control. You're going to hear
08:37:39 12 a lot about that. BP bases this statement primarily on its
08:37:44 13 Oil Spill Response Plan, the same Oil Spill Response Plan that
08:37:47 14 it does not consider to be a source control plan.

08:37:50 15 BP has no actual evidence of any other company's
08:37:57 16 internal procedures and policies. It will bring to this Court
08:37:59 17 no evidence of any other company's internal source control
08:38:04 18 plans, procedures or training. The only evidence that will be
08:38:08 19 presented during this trial is that BP had no such internal
08:38:13 20 plans or procedures.

08:38:14 21 But even if BP had evidence of other companies'
08:38:19 22 internal plans or preparations, that does not excuse BP,
08:38:23 23 particularly a company like BP that calls itself a leader in
08:38:28 24 deepwater drilling in the Gulf of Mexico.

08:38:31 25 Reckless conduct is still reckless conduct even

08:38:35 1 if other companies are doing it. BP does not get a pass
08:38:39 2 because other companies failed in the same way it did.

08:38:42 3 Now, Your Honor, I'm going to slow down for a
08:38:47 4 minute here and kind of talk to you a little bit about what BP
08:38:51 5 knew prior to Macondo and the warnings it had been given to
08:38:55 6 suggest to it that it was not ready for such a response.

08:38:59 7 The evidence will show that BP's failure to
08:39:02 8 prepare was particularly egregious given the evidence, given
08:39:07 9 the decades of warnings that preexisted Macondo. BP was aware
08:39:12 10 of these warnings and disregarded them. The direct result, a
08:39:17 11 well that was allowed to flow for 87 days.

08:39:20 12 Going back to at least 1991, and for the next
08:39:24 13 20 years prior to Macondo, BP was told that it needed to do
08:39:30 14 more.

08:39:32 15 In 1991, a joint industry program published a
08:39:38 16 study on blowout control. This is the Joint Industry Blowout
08:39:41 17 Control Report. It will often be referred to throughout this
08:39:44 18 trial as DEA-63.

08:39:47 19 The focus of this report was on deepwater. It
08:39:52 20 emphasized subsea source control and recognized that no
08:39:58 21 practical solutions currently exist as of 1991.

08:40:03 22 The 1991 DEA-63 Report specifically discussed
08:40:10 23 capping stacks, modified BOPs and other capping devices and
08:40:14 24 their potential use. Then DEA-63, in 1991, went through
08:40:19 25 details, through the many types of possibilities for the use of

08:40:23 1 subsea equipment.

08:40:27 2 After providing BP details on the types of
08:40:30 3 devices that could be used for source control in deepwater,
08:40:35 4 DEA-63 went on to provide some dire warnings. It told BP,
08:40:41 5 "Current technology is considered inadequate," and that capping
08:40:46 6 methods would further limit the probability of a long-term
08:40:51 7 solution. This last point on capping methods, the evidence
08:40:55 8 will show, was something BP fully understood.

08:40:58 9 BP recognized in 2001 that capping stacks were
08:41:06 10 considered best available technology in onshore and shallow
08:41:09 11 water drilling environments. BP had conducted a study to
08:41:14 12 determine best available technology comparing relief wells to
08:41:19 13 capping stacks, and the conclusion of that study was that
08:41:22 14 capping stacks could reduce response time by 50 percent.

08:41:26 15 BP fully understood the benefits of a
08:41:30 16 capping stack in reducing the amount of time a well was allowed
08:41:33 17 to flow and did nothing to apply this technology to deepwater,
08:41:39 18 its most dangerous environment.

08:41:41 19 The warnings of DEA-63 were not an isolated
08:41:48 20 event. They were repeated multiple times from 1991 to 2010.
08:41:52 21 The evidence will show that BP was repeatedly told that a
08:41:57 22 deepwater blowout would happen, and that new blowout control
08:42:00 23 measures were necessary. From 1991 to 2010, BP did nothing to
08:42:07 24 advance source control technology.

08:42:09 25 Now, the last thing I want to talk about briefly,

08:42:12 1 Your Honor, throughout this trial you're going to hear BP
08:42:16 2 describe the Macondo event as unique, unpredictable, something
08:42:21 3 that could not be foreseen in the drilling industry.

08:42:26 4 They are going to point to Admiral Allen to
08:42:30 5 attempt to support that. With all due respect to the Admiral,
08:42:34 6 he did not and could not know what BP knew and had known for
08:42:39 7 decades. He certainly would not know, as BP did, what DEA-63
08:42:45 8 predicted in 1991, nearly 20 years prior to Macondo.

08:42:50 9 As you can see, Macondo was predicted with
08:42:54 10 precision. Just like Macondo, a broken riser separated from
08:43:01 11 the vessel and falling to the ocean floor, a kink in the riser
08:43:06 12 above the BOP, flow to the BOP, the kink in the riser and the
08:43:09 13 end of the drill pipe, and a listing BOP.

08:43:13 14 In fact, the BOP depiction in DEA-63 is actually
08:43:17 15 worse than what occurred at Macondo, making Macondo an even
08:43:22 16 easier source control effort than what was shown in DEA-63.

08:43:27 17 Now, Your Honor, no question, BP spent a large
08:43:31 18 amount of money responding to the Macondo spill. BP finally
08:43:36 19 funded the research called for decades earlier, and it
08:43:40 20 completed it in three months. However, BP should not have
08:43:44 21 waited 20 years to do the work it knew was necessary.

08:43:49 22 It should not have treated the Gulf of Mexico as
08:43:51 23 its own private laboratory for a research and development
08:43:55 24 project that was called for and due to be funded decades
08:43:59 25 earlier. It should not have come into the Macondo response

08:44:04 1 having spent no money, provided no training and having no plans
08:44:06 2 on how to stop Macondo from flowing.

08:44:08 3 Had BP prepared, as a prudent and responsible
08:44:11 4 company, the evidence shows that Macondo would have been capped
08:44:16 5 within days to weeks, and the people of the Gulf would have
08:44:20 6 been spared millions of barrels of BP's oil.

08:44:24 7 Thank you, Your Honor.

08:44:35 8 THE COURT: Thank you. Mr. Brian.

08:44:35 9 OPENING STATEMENTS BY MR. BRIAN:

08:44:43 10 Good morning, Your Honor. Brad Brian on behalf
08:44:45 11 of Transocean and the aligned parties.

08:44:48 12 I'm going to focus my remarks on BP's
08:44:51 13 misrepresentations about the flow rate in April and May of
08:44:55 14 2010, and how those misrepresentations delayed the capping of
08:45:00 15 the well.

08:45:02 16 The evidence will show that BP repeatedly
08:45:06 17 misrepresented that 5,000 barrels a day was the best estimate
08:45:13 18 of flow rate. The evidence will show that BP repeatedly
08:45:19 19 withheld documents showing significantly higher flow rates.

08:45:25 20 The consequences of BP's misrepresentations and
08:45:31 21 concealment were bad decisions, a false diagnosis of why the
08:45:38 22 Top Kill source control method that they used failed, and
08:45:43 23 tragically, the rejection in May of an alternative strategy,
08:45:49 24 the BOP-on-BOP that was ready to be installed and would have
08:45:53 25 capped this well long before it was eventually capped on

08:45:58 1 July 15th of 2010.

08:46:00 2 Your Honor, we have prepared this timeline to
08:46:08 3 show BP's conduct in the two months, that critical two-month
08:46:13 4 period after April 20th of 2010.

08:46:16 5 BP misrepresented the flow rate in a meeting on
08:46:20 6 April 28th between the head of its response team, Doug Suttles,
08:46:25 7 and Admiral Landry, when he represented that the best estimate
08:46:27 8 was actually 2500 barrels, with an upward bound of
08:46:32 9 5,000 barrels.

08:46:33 10 Then, as you can see in the timeline, on
08:46:37 11 May 10th, Mr. Suttles showed Admiral Landry a model, a graph,
08:46:42 12 in which they represented that the most likely model was
08:46:46 13 5,000 barrels of oil per day. Neither representation, 2500 nor
08:46:54 14 the 5,000, was remotely accurate, and BP knew it.

08:46:58 15 BP's own records show, and this chart shows just
08:47:04 16 some of the internal estimates that BP had, that were much,
08:47:08 17 much higher than the best estimates they represented to the
08:47:12 18 government.

08:47:13 19 As you'll see on this timeline, during this time
08:47:17 20 period, BP was considering three options to cap the well, two
08:47:23 21 capping methods, the BOP-on-BOP and a separately designed
08:47:27 22 capping stack, and the so-called Top Kill.

08:47:31 23 BP was told by its outside consultant in the
08:47:34 24 middle of May that the Top Kill procedure that they were
08:47:38 25 contemplating, which I'll discuss in more detail later, was

08:47:40 1 unlikely to work if the rate -- the flow rate was in excess of
08:47:46 2 50,000 barrels a day.

08:47:50 3 Nevertheless, BP pressed ahead and falsely
08:47:54 4 claimed that it was a slam-dunk or that they had a 60 to
08:47:59 5 70 percent chance of success. Those statements were false.
08:48:07 6 With the heavy flow rate that they knew was coming out of that
08:48:10 7 well, the Top Kill was not a slam-dunk, not even close. It
08:48:15 8 failed just as its outside consultants had predicted. The flow
08:48:22 9 path was too big and the flow rate was too great.

08:48:26 10 But BP would not and did not admit the true
08:48:32 11 reasons why the Top Kill had failed, because doing so would
08:48:35 12 have required BP to admit that it had misrepresented the
08:48:40 13 flow rate in the first place.

08:48:43 14 So BP falsely claimed that ruptured disks were
08:48:48 15 the only plausible cause of the Top Kill failure. That was not
08:48:53 16 true. And because of that skewed analysis, BP recommended that
08:48:58 17 the BOP-on-BOP alternative, which was ready to go, be
08:49:04 18 abandoned. The Coast Guard relied on BP and agreed. And it
08:49:10 19 was abandoned and the well was allowed to flow for weeks and
08:49:14 20 weeks and weeks that were unnecessary.

08:49:17 21 Now, let me go through the timeline in a little
08:49:21 22 more detail, Your Honor.

08:49:25 23 Within two days of the blowout, one of the
08:49:28 24 modelers at BP calculated a rate of 82,000 barrels per day.
08:49:35 25 When the higher-ups at BP saw this, they sent another e-mail,

08:49:39 1 and they told people to tell Alistair -- he was the modeler who
08:49:45 2 calculated 82,000 -- tell Alistair not to communicate to anyone
08:49:49 3 on this, because we've had difficult discussions with
08:49:53 4 United States Coast Guard on the numbers.

08:49:58 5 Within five days, a BP vice-president had done
08:50:02 6 its own modeling where he got as high as 92,000 barrels per
08:50:08 7 day. The following day, Mr. Suttles, April 28th, met with
08:50:13 8 Admiral Landry. As I mentioned, Mr. Suttles was the head of
08:50:18 9 BP's response team. Admiral Landry was the head of the
08:50:23 10 government's response team.

08:50:27 11 And Mr. Suttles told Admiral Landry that the
08:50:32 12 range was 1,000 to 5,000 with the best estimate of
08:50:37 13 2,500 barrels. By April 28th of 2010, BP had calculated far
08:50:44 14 higher flow rates.

08:50:47 15 Now, Mr. Brock will tell you, and we agree, that
08:50:50 16 there was uncertainty about the rates, Your Honor. But when
08:50:54 17 there is uncertainty, what the engineers do is they do modeling
08:50:59 18 in order to bound those rates so they have some idea, a good
08:51:04 19 idea what they are doing.

08:51:05 20 The range that Mr. Suttles gave Admiral Landry
08:51:10 21 had no basis in fact. And was, in fact, inconsistent with the
08:51:16 22 range that BP's own engineers had calculated by that time,
08:51:20 23 which was between 2,500 barrels and 65,000 barrels. That
08:51:26 24 range, that document was not communicated to the government nor
08:51:32 25 did BP share its vice-president's calculation as high as

08:51:37 1 92,000 barrels.

08:51:41 2 One of the things that BP admitted in its guilty
08:51:44 3 plea was that it withheld multiple internal documents with
08:51:49 4 flow rates estimates that were significantly higher,
08:51:52 5 significantly greater than 5,000 barrels of oil per day that it
08:51:56 6 did not share with the Unified Command.

08:51:59 7 Mr. Suttles' representation of 2,500 barrels was
08:52:03 8 not only false, it was deeply flawed because it's based on the
08:52:09 9 assumption that effective orifice size of the BOP through which
08:52:14 10 the oil would be flowing was less than half an inch. There was
08:52:18 11 no basis, no basis for that assumption.

08:52:23 12 Admiral Landry vividly recalls that April 28th
08:52:27 13 meeting with Doug Suttles. She publicly announced that day, in
08:52:32 14 reliance on what Mr. Suttles said, that the well was flowing at
08:52:36 15 5,000 barrels of oil per day, and she testified at her
08:52:41 16 deposition that in making that announcement, she relied on the
08:52:44 17 work of BP through Doug Suttles.

08:52:51 18 On May 10th, Mr. Suttles sent this chart to
08:52:56 19 Admiral Landry. And you'll see, Your Honor, that BP labeled in
08:53:00 20 this chart 5,000 barrels of oil per day in the lower right-hand
08:53:05 21 corner as the most likely model, that blue line at the bottom
08:53:10 22 is at 5,000 barrels of oil per day. There is nothing to
08:53:14 23 support that claim.

08:53:15 24 But it's worse than that, Your Honor. Because
08:53:17 25 what the evidence is going to show is that a few days before

08:53:21 1 that the BP modelers sent to higher-ups at BP the model on the
08:53:27 2 left of this demonstrative showing flow rates as high -- the
08:53:33 3 162,000, Your Honor, was a flow rate calculated in 2009 prior
08:53:38 4 to, but even if you discard that, showing the high flow rates
08:53:43 5 as high as 110,000 barrels per day.

08:53:47 6 But what BP did before May 10th was they took
08:53:50 7 that chart on the left and they edited it, and that's a word
08:53:56 8 that comes right out of the e-mails. They took out five or six
08:53:59 9 of these lines, they reduced the scale to show a much lower
08:54:04 10 worst-case scenario, and they inserted the most likely model of
08:54:09 11 5,000 barrels a day.

08:54:13 12 On May 16, the Unified Command approved BP's
08:54:18 13 recommendation to do the Top Kill. Within hours of that
08:54:22 14 decision, they learned from their outside consultants, Dr. Rygg
08:54:29 15 at Add Energy, that the procedure that they were contemplating
08:54:33 16 using for Top Kill would not work if the well was flowing at
08:54:37 17 15,000 barrels per day or higher.

08:54:41 18 They were contemplating at that time of injecting
08:54:45 19 50 barrels -- I guess it's 50 barrels per minute of mud down to
08:54:49 20 fill it. And what he says in his e-mail was, "Looks like with
08:54:53 21 15,000 barrels per day, you cannot kill it with 50 barrels per
08:54:58 22 minute of mud."

08:55:02 23 The BP engineers understood the significance of
08:55:07 24 Dr. Rygg's analysis. Because a couple days later, one of the
08:55:10 25 BP modelers sent this e-mail in which he said, "The apparent

08:55:14 1 reliance in Ole" -- that's Ole Rygg -- "Ole's e-mail on the
08:55:19 2 5,000 number, which has little, if no origin, is concerning.
08:55:24 3 From all the different ways we have looked at flow rate, 5,000
08:55:29 4 would appear to err on the low side."

08:55:33 5 Another BP engineer agreed the next day. "Tim's
08:55:38 6 points" -- Tim was the modeler who sent the previous e-mail --
08:55:42 7 "Tim's points are both valid and have an impact on the
08:55:46 8 viability of the kill option working."

08:55:51 9 BP should have shared these e-mails with the
08:55:53 10 government, but it didn't. Instead, the evidence in this trial
08:55:56 11 will show that BP tried desperately to keep confidential, both
08:56:03 12 externally and internally, information about the flow rate.

08:56:07 13 Around this same time one of the BP modelers
08:56:15 14 engineers sent an e-mail asking for information, and he got
08:56:18 15 this response. "We remain in a position where no flow rate
08:56:23 16 information can be released internally or externally."

08:56:30 17 BP's policy of not releasing the flow rate
08:56:34 18 information was enforced at the highest levels of the company.

08:56:41 19 On May 5th, one of its engineers named Mike Mason
08:56:44 20 sent this extraordinary e-mail to Andy Inglis. Andy Inglis was
08:56:49 21 the CEO of BP Production and Exploration. He had seen a report
08:56:55 22 on CNN that reported very high flow rates. He had done his own
08:57:00 23 calculations. He sent this e-mail to the CEO. "We should be
08:57:04 24 very cautious standing behind a 5,000 barrels per day figure as
08:57:10 25 our modeling shows that this well could be making anything up

08:57:15 1 to approximately 100,000 barrels of oil per day."

08:57:21 2 What will the evidence show happened when
08:57:24 3 Mr. Mason sent this e-mail?

08:57:27 4 Well, Mr. Inglis' executive assistant came to him
08:57:32 5 and said, "If you have a thought like this, come walk over and
08:57:37 6 talk to us." In other words, don't put it in writing.

08:57:41 7 Mr. Mason asked, "What's the problem?"

08:57:45 8 Mr. Inglis' assistant answered, "It's the high
08:57:50 9 number, the 100,000 barrels of oil per day."

08:57:53 10 Mr. Mason met with government scientists that
08:57:56 11 very day and did not disclose his own concerns about the
08:58:01 12 5,000 barrels of oil per day or that the flow rate could be 20
08:58:06 13 times higher. Instead of revealing these concerns, BP provided
08:58:15 14 fabricated estimates of the likely success of Top Kill.

08:58:18 15 BP told the Secretary of Energy, Mr. Steven Chu,
08:58:24 16 that the Top Kill was a slam-dunk. And Tony Hayward, the CEO
08:58:30 17 of BP, went on international news and said that there was a 60
08:58:34 18 to 70 percent chance of success.

08:58:41 19 (WHEREUPON, a videotape was played.)

08:58:45 20 Based on what I read in BP's pretrial papers,
08:58:48 21 Your Honor, I anticipate that BP will argue in this case that
08:58:50 22 the 5,000 flow rate wasn't just BP's estimate, that it was the
08:58:55 23 Unified Command or NOAA's estimate; that they disclosed to the
08:58:59 24 government flow rates that were higher than 5,000 barrels; and
08:59:02 25 that they disclosed Dr. Rygg's opinion that Top Kill might not

08:59:06 1 succeed or was likely not to succeed if the flow rate was over
08:59:10 2 15,000.

08:59:11 3 None of those arguments will work. And here is
08:59:13 4 why. Because the evidence will show that NOAA did not do any
08:59:18 5 well modeling and based its estimates on the unreliable visual
08:59:22 6 observations from flyovers and some video clips. Only BP had
08:59:28 7 all the information about its well to do the modeling that was
08:59:32 8 necessary to make good source control decisions.

08:59:37 9 And while it's true that BP did provide the
08:59:41 10 government with some higher numbers, they were careful, and
08:59:43 11 you'll see the documents, to couch them as *worst-case*
08:59:48 12 *scenarios*. And as I've already shown you through the
08:59:51 13 comparison of the two charts, they actually doctored one of the
08:59:55 14 charts in order to understate the worst-case scenario.

08:59:59 15 They did provide Dr. Rygg's opinion that the
09:00:02 16 Top Kill would not work if the flow rate was in excess of
09:00:06 17 15,000, but they continued to represent that the best estimate
09:00:11 18 of flow rate was 5,000 barrels of oil per day.

09:00:16 19 The evidence will show, Your Honor, that they
09:00:19 20 made that representation not once, not twice, but at least 14
09:00:26 21 separate times to admirals who were participating in the
09:00:29 22 decisions, in public filings, in letters to Congress.

09:00:35 23 BP made six separate attempts with Top Kill
09:00:39 24 between May 26th and May 28th, all failed. The BP engineers
09:00:45 25 watching those failures, they understood why it failed. The

09:00:49 1 flow path was too big and the flow rate was too great.

09:00:52 2 The plan had been that if Top Kill failed, they
09:00:57 3 would go ahead with the BOP-on-BOP, which was ready to go.

09:01:03 4 As early as May 4, they had done a hazardous risk
09:01:07 5 analysis, and this e-mail went out, this report, saying, "We've
09:01:11 6 completed the HAZID for the well capping effort. We have
09:01:15 7 mitigations for all the risks."

09:01:16 8 They had a two-day Peer Assist Team look at the
09:01:21 9 BOP-on-BOP, and they concluded on May 13th and May 14th that
09:01:24 10 the BOP-on-BOP operation is feasible and can be managed safely.

09:01:29 11 Unified Command had approved the procedures to
09:01:33 12 cut the riser and to remove the low marine riser package all in
09:01:43 13 preparation for the installation of the BOP-on-BOP. And on
09:01:44 14 May 29th, they had a detailed schedule calling for it to be
09:01:48 15 installed and the well shut-in by June 6th.

09:01:51 16 If it had been installed, the well would have
09:01:53 17 been sealed long before it was. So why wasn't it?

09:01:56 18 Because even after Top Kill failed, BP still
09:02:01 19 would not come clean about the flow rate. They knew why the
09:02:06 20 Top Kill had failed. This is a text message from Kurt Mix
09:02:10 21 saying, "There was too much flow rate. Over 15,000 and too
09:02:15 22 large an orifice."

09:02:18 23 BP presented the government with three scenarios,
09:02:22 24 three possible scenarios for the cause of the failure of
09:02:25 25 Top Kill. The first two they said were possible, but not

09:02:29 1 plausible. Only the third, which they said that the ruptured
09:02:34 2 disks had collapsed on April 20th during the explosion, only
09:02:37 3 the third did they represent was plausible.

09:02:42 4 Everyone agrees that this scenario was not
09:02:45 5 correct. The ruptured disks never failed.

09:02:48 6 The problem was, Your Honor, is that they told
09:02:50 7 the government that this scenario, this third scenario was the
09:02:54 8 only one that was plausible. They knew that the more likely
09:02:58 9 explanation was the one they knew about all along, the
09:03:02 10 flow rate was too great and the flow path was too big. Their
09:03:07 11 false diagnosis was the direct result of their fraud.

09:03:12 12 If BP had been open from the beginning about the
09:03:15 13 flow rate, it would have been obvious to everyone beforehand
09:03:19 14 that the Top Kill would fail and obvious to everyone afterward
09:03:25 15 why it had failed.

09:03:26 16 So why do we care? Why does any of this matter?
09:03:31 17 Because the false diagnosis and the false statements,
09:03:33 18 Your Honor, shape the recovery efforts that took place during
09:03:36 19 this time period and delayed the capping of this well for many,
09:03:41 20 many weeks.

09:03:41 21 BP told the government that because the ruptured
09:03:48 22 disks were likely open, shutting-in the well via the BOP-on-BOP
09:03:53 23 is likely to lead to broaching. It wasn't true. There was no
09:03:58 24 path open to the formation. BP could not admit to the larger
09:04:02 25 truth, that the flow rate was too great.

09:04:05 1 They recommended -- because of this false
09:04:07 2 analysis, they recommended abandoning the BOP-on-BOP. The
09:04:11 3 Coast Guard relied on that recommendation. And on May 29th
09:04:17 4 wrote this saying, "The BOP-on-BOP is no longer a choice."

09:04:21 5 BP has argued, and I'm sure they'll argue during
09:04:25 6 this trial this week, that the BOP-on-BOP was not ready in the
09:04:29 7 middle of May. Whether or not it was ready in the middle of
09:04:34 8 May, after that peer assist review said it was feasible and
09:04:37 9 ready to go, it was clearly ready, and the evidence will show
09:04:40 10 without a doubt that it was ready to be installed by the end of
09:04:43 11 May.

09:04:44 12 And you don't have to take our word for it,
09:04:46 13 Your Honor, because it's in the documents written by the man at
09:04:50 14 BP who ran the team.

09:04:52 15 This is what he wrote on August 26th, about
09:04:56 16 six weeks after the well was shut-in. "We were in a position
09:05:01 17 early on to install a cap, and a decision was made to do the
09:05:06 18 Top Kill first. After the Top Kill failed, we were again going
09:05:09 19 to install the cap, then the decision was made to use the
09:05:13 20 Top Hat and containment."

09:05:16 21 Now, BP is going to tell you that there were
09:05:18 22 venting issues and maintenance issues, but all of those were
09:05:22 23 taken care of by May 29th, when there was a schedule to land
09:05:26 24 the BOP stack on the *Horizon* BOP to open the choke to vent the
09:05:31 25 shut-in and to close it down by June 6th.

09:05:36 1 The well was finally capped, as you know, on
09:05:38 2 July 15th through the capping stack. Now, we think that proves
09:05:41 3 that the BOP-on-BOP would have worked earlier.

09:05:43 4 We're going to hear testimony at this trial about
09:05:45 5 the similarities between the capping stack procedure that was
09:05:49 6 used and the BOP-on-BOP. So let me just make a couple of quick
09:05:53 7 points. And, first, the capping stack that effectively closed
09:05:58 8 in the well used the exact same ram that would have been used
09:06:01 9 for the BOP-on-BOP. And the same venting option that was used
09:06:06 10 for the capping stack existed for the BOP-on-BOP.

09:06:09 11 What the success in July shows is that it could
09:06:13 12 have been done earlier through the BOP-on-BOP that was ready to
09:06:17 13 be installed, and it would have been done earlier but for BP's
09:06:21 14 misrepresentations and concealment.

09:06:25 15 So let me end my remarks by saying this,
09:06:28 16 Your Honor, within days of the blowout, within hours of the
09:06:31 17 blowout, men and women from around the world, including some
09:06:35 18 good folks at BP, gathered to do everything they could to
09:06:40 19 shut-in this well.

09:06:41 20 Unfortunately, some other folks at BP, whether
09:06:43 21 it's because of the instinct to minimize responsibility or
09:06:46 22 whether because there was concern of their stock price,
09:06:50 23 whatever the reason, and it doesn't really matter in this case,
09:06:53 24 some folks just would not admit the true scope of this
09:06:57 25 disaster. And one lie begets another lie. And that's what

09:06:57 1 happened.

09:07:02 2 And as a result of that, there were worse
09:07:05 3 consequences than there should have been. Consequences that
09:07:08 4 lie at the feet of BP.

09:07:10 5 Thank you, Your Honor.

09:07:11 6 THE COURT: All right. Thank you.

09:07:11 7 All right. Mr. Godwin.

09:07:22 8 OPENING STATEMENTS BY MR. GODWIN: Thank you, Your Honor. Good
09:07:23 9 morning, Judge, Don Godwin for Halliburton.

09:07:25 10 Your Honor, as you've heard, Halliburton and other members
09:07:28 11 of the aligned parties will present conclusive evidence that BP
09:07:32 12 completely was unprepared for a blowout in the Gulf of Mexico.
09:07:36 13 You will also hear that BP's misrepresentations not only had a
09:07:41 14 profound impact on the very source control options, but these
09:07:45 15 misrepresentations actually delayed the capping of the well by
09:07:49 16 weeks, if not months.

09:07:52 17 Your Honor has previously stated that the evidence
09:07:55 18 presented during the source control portion of the Phase Two
09:07:58 19 trial may impact the Court's allocation of fault. It is
09:08:03 20 Halliburton's position that BP's lack of preparation and its
09:08:08 21 misrepresentations should substantially increase BP's overall
09:08:11 22 liability.

09:08:12 23 And to be clear, Your Honor, there is no evidence in
09:08:16 24 Phase Two that Halliburton did anything other than an exemplary
09:08:21 25 job during the source control efforts. Moreover, none,

09:08:26 1 Your Honor, none of the parties to Phase Two are maintaining
09:08:28 2 any allegations of misconduct relating to any of Halliburton's
09:08:34 3 source control activities.

09:08:36 4 But, beyond the allocation of liability issues,
09:08:39 5 Your Honor, raised by BP's conduct, BP's decision to make
09:08:44 6 several key misrepresentations relating to source control to
09:08:47 7 the Unified Command was unforeseeable to Halliburton. And
09:08:52 8 these misrepresentations, Your Honor, had serious implications
09:08:55 9 and consequences, including a significant delay during which
09:08:59 10 the well was -- the well continued to flow for approximately
09:09:03 11 87 days. As a result of this, BP's misrepresentations acted as
09:09:08 12 a superseding cause as it pertains to Halliburton.

09:09:12 13 Thank you, Your Honor.

09:09:22 14 THE COURT: All right. Mr. Brock, you're up.

09:09:24 15 MR. BROCK: I need just one minute to get the
09:09:27 16 technology switched over in the back.

09:09:29 17 THE COURT: All right.

09:09:29 18 OPENING STATEMENTS BY MR. BROCK:

09:09:53 19 Good morning, Your Honor, and opposing counsel.

09:09:55 20 The Court will not hear any testimony in this case
09:09:59 21 from any representative of government or industry that BP was
09:10:04 22 not doing every single thing that it could to get the well
09:10:09 23 shut-in as quickly as possible.

09:10:14 24 It defies common sense to accept that BP would
09:10:18 25 undertake to execute a Top Kill procedure knowing that it would

09:10:26 1 not work.

09:10:27 2 We'll talk a little bit about what goes on with
09:10:30 3 Top Kill, but essentially, Your Honor, that was a procedure
09:10:33 4 that was planned over a two-month period of time, the work
09:10:39 5 stream for that was begun immediately after the incident. Five
09:10:45 6 ships, vessels, were involved in the setup of that procedure.
09:10:53 7 There was an underground complex of valves and chokes and pipe
09:10:59 8 that were installed to conduct that procedure. Over 300 people
09:11:04 9 out in the Gulf of Mexico on those ships, hundreds more in
09:11:08 10 Houston monitoring it.

09:11:09 11 And the aligned parties say, BP went forward with
09:11:14 12 that procedure knowing that it would not be successful. That
09:11:18 13 makes no common sense, and it's not supported by the evidence
09:11:22 14 as we will demonstrate to you in this trial.

09:11:32 15 We're going to frame the issues around four
09:11:35 16 essential issues here, Your Honor. First, that our source
09:11:38 17 control efforts in shutting in the Macondo well were
09:11:40 18 extraordinary. The quality and the scale of the work carried
09:11:45 19 out by BP and industry and the United States Government was
09:11:48 20 unprecedented.

09:11:50 21 Second, and this is critical, we think, to your
09:11:54 22 analysis of the evidence. Source control decisions had to be
09:11:58 23 made in the face of significant uncertainty. And the decisions
09:12:02 24 made by BP, industry, and government will, you will see,
09:12:07 25 reflect sound engineering judgment.

09:12:10 1 What do I mean by that, "made in the face of
09:12:13 2 significant uncertainty"? It's important to know that during
09:12:17 3 the response, especially in the early weeks, almost nothing was
09:12:21 4 known about what was going on in the well. Where was the pipe?
09:12:25 5 Where the were the rams closed? What was the path of flow?
09:12:30 6 What was the flow?

09:12:30 7 All of those things were unknown to BP and the
09:12:35 8 United States and industry who were involved in this response.
09:12:39 9 And so decisions had to be made in the absence of information.

09:12:47 10 It's not so hard to come in to court today, these
09:12:51 11 many years later, and say: We've culled the records. We've
09:12:54 12 looked at everything. We believe that there was a better way.

09:12:57 13 That, Your Honor, is Monday-morning
09:13:00 14 quarterbacking at its worst.

09:13:03 15 What we would like to ask the Court to do is to
09:13:06 16 think about these decisions, the sequence in which they were
09:13:10 17 made, and the information that was available to the decision
09:13:13 18 makers when those decisions were made. And I think if you do,
09:13:16 19 you will see that the story is a much different one than has
09:13:23 20 been shared with you this morning.

09:13:23 21 The United States of America was not misled by BP
09:13:26 22 with regard to source control decisions. You know, in the
09:13:43 23 usual fraud case where someone says that there was a
09:13:46 24 misrepresentation, the party that says that something was
09:13:48 25 misrepresented to them usually comes to court and says: You

09:13:53 1 told me something that wasn't true. It was material. I relied
09:13:57 2 on it to my detriment or to the detriment of others.

09:14:01 3 You're not going to hear in this case that the
09:14:04 4 United States of America says that BP misrepresented flow rate
09:14:11 5 information to it that drove decisions. You've heard the
09:14:14 6 presentation about what the lawyers believe to be the case,
09:14:17 7 we're going to show you the evidence in terms of what
09:14:22 8 representatives of the United States say they knew about
09:14:24 9 flow rate.

09:14:25 10 And, Your Honor, what was understood from the
09:14:27 11 very beginning by the United States, by BP, by people that were
09:14:32 12 looking at this issue independently, was that it was not
09:14:36 13 possible to understand the rate of flow given the numerous
09:14:41 14 uncertainties that existed in the well during this period of
09:14:44 15 time. We'll spend some time talking about that.

09:14:49 16 And last, Your Honor, BP had in place a response
09:14:53 17 plan that was approved by the United States government. It was
09:14:56 18 fully consistent with industry standards for spill
09:14:59 19 preparedness.

09:15:02 20 Now, immediately after the accident, BP's team
09:15:09 21 went to work in terms of developing potential responses to the
09:15:14 22 blowout and gathering information. I think this will be
09:15:17 23 helpful to the Court as we go through the case just to
09:15:20 24 understand the significant structure that was in place in order
09:15:23 25 to respond to this spill.

09:15:26 1 Admiral Thad Allen was the National Incident
09:15:29 2 Commander for this and you will see some of his testimony
09:15:32 3 during this case.

09:15:34 4 Admiral Landry was also a significant player in
09:15:36 5 terms of decision-making and in terms of understanding how to
09:15:40 6 make decisions in the face of significant unknowns.

09:15:44 7 Marcia McNutt you will hear from in this case.

09:15:46 8 James Dupree, who was leading the BP team, you
09:15:49 9 will hear from in this case.

09:15:51 10 And within this structure, industry stepped in,
09:15:56 11 as well as numerous contractors to help pull together the right
09:16:00 12 kind of response to this incident.

09:16:03 13 Now, one thing that is going to be hard for us to
09:16:07 14 convey to you in the context of this trial is the diligence and
09:16:11 15 the dedication of the people that were involved in this
09:16:15 16 response.

09:16:16 17 In the Houston center located at BP, on a daily
09:16:24 18 basis, on many of the days during the spill, 700 engineers and
09:16:30 19 technicians would be at work, two shifts a day. They have a
09:16:33 20 morning report at 6:30 where one set of teams would report to
09:16:37 21 the next set of teams working on a particular issue, and all of
09:16:41 22 these people were dedicated to getting this well shut-in as
09:16:45 23 quickly as possible.

09:16:47 24 I'll say it again. It defies common sense to say
09:16:52 25 that we would delay by two months the shut-in of this well

09:16:56 1 because we didn't want to say something about why Top Kill had
09:16:59 2 failed. And I'm going to get to that in a little more detail
09:17:02 3 in a bit.

09:17:03 4 The allegation has been made that we didn't have
09:17:06 5 a plan in place, that we didn't do anything, and we didn't know
09:17:10 6 what to do when the incident occurred. This is BP's planning
09:17:17 7 and implementation source control document. Within two days,
09:17:23 8 these teams were set up at the Houston center to start working
09:17:30 9 options in parallel for the shut-in of the well. There was an
09:17:33 10 engineering and support team, a Top Kill team, a relief well
09:17:37 11 team, a capping team, containment teams.

09:17:40 12 This was preplanned, it was organized, it moved
09:17:44 13 forward in an orderly fashion, as it should, and it allowed for
09:17:49 14 the early capping of the well before the intersection of the
09:17:56 15 relief well. But it was a significant undertaking that was
09:18:02 16 handled in an appropriate way.

09:18:02 17 Underlying everything that occurred in the
09:18:09 18 response, Your Honor, were three guiding principles. First,
09:18:15 19 don't take any action that makes matters worse.

09:18:19 20 You're going to see when we look at the decision
09:18:22 21 about BOP-on-BOP versus Top Kill versus other options like
09:18:27 22 collection, that this is a significant overriding principle.
09:18:32 23 It is what the government instructed us to do. It is within
09:18:36 24 our own policy that this is the right approach to take.

09:18:41 25 Work options in parallel. You will see in this

09:18:45 1 case the numerous interventions that were in place.

09:18:50 2 Leave no stone unturned, spare no expense. Over
09:18:56 3 \$1.6 billion was spent by the company. They pursued every
09:19:00 4 single option that was reasonably that was put forward, either
09:19:04 5 by BP, by industry or the government.

09:19:06 6 This is not a company that would delay the
09:19:10 7 shut-in of a well over the kinds of things that the plaintiffs
09:19:15 8 are alleging.

09:19:17 9 I've mentioned the issue about uncertainty in
09:19:20 10 terms of flow rate. These are just a few comments, and we'll
09:19:24 11 see some more as we go through the case.

09:19:27 12 Tom Hunter, the Director of the Sandia National
09:19:31 13 Lab: "There was not sufficient data from the well to make a
09:19:33 14 flow rate estimate."

09:19:35 15 Ole Rygg from Add Energy: "Didn't have enough
09:19:38 16 information."

09:19:38 17 Admiral Thad Allen: "All of God's children had a
09:19:41 18 flow rate number. People were modeling, they were looking at
09:19:45 19 possibilities. There were flow rate estimates that were at the
09:19:49 20 high end, there were flow rate estimates at the low end, but
09:19:54 21 what was understood at that time, April, May, June, even up to
09:19:58 22 the shut-in of the well with the capping stack, that you
09:20:01 23 couldn't use these models to accurately understand flow rate
09:20:06 24 because of the significant unknowns."

09:20:10 25 I have here also Mr. Wilson, Transocean's expert.

09:20:12 1 He agrees that BP didn't attempt to model.

09:20:17 2 Where did the 5,000 number come from? This was
09:20:21 3 referenced in one of the statements by the aligned parties.
09:20:25 4 The 5,000 number came from Bill Lehr of NOAA. That's where
09:20:34 5 that number was derived. That's where it was first set forth.
09:20:38 6 Everyone understood that there was significant uncertainty that
09:20:40 7 went with that number.

09:20:43 8 I'll show you just another something on that in
09:20:45 9 just a second.

09:20:48 10 These are some of the flow rate numbers that were
09:20:50 11 disclosed, shared with the government in the period of time
09:20:55 12 before Top Kill. I'm going to show Your Honor some other
09:20:58 13 documents on this later.

09:20:58 14 Pre-spill, the company estimated the flow could
09:21:04 15 be as high as 62,000 barrels a day.

09:21:08 16 On April the 22nd, there is an internal e-mail
09:21:13 17 between the US Coast Guard and other government folks talking
09:21:17 18 about the range being 64 to 110.

09:21:20 19 On April the 30th, there is a note from Nick
09:21:25 20 Wetzel, who is within government, about his conversation with
09:21:30 21 representations of BP where we are telling him that we think
09:21:32 22 the flow rate is in the range of five to 40,000 barrels a day.

09:21:38 23 Now, this is important to the issue of the
09:21:42 24 Top Kill procedure, where the allegation is, well, you
09:21:45 25 shouldn't have done it because you knew the flow rate was more

09:21:49 1 than 15,000. That's not accurate. I'll get to that in a
09:21:52 2 little bit.

09:21:53 3 Then last, we have May 19, 2010, it's conveyed
09:21:56 4 five to 40,000 barrels, could be as high as a hundred thousand
09:22:01 5 barrels a day.

09:22:02 6 The government may not have had every single
09:22:06 7 flow rate evaluation that was done by BP, but they had
09:22:10 8 significant information with regard to our estimates, and they
09:22:15 9 knew that these estimates were not going to be precise or
09:22:19 10 reliable.

09:22:20 11 A lot of talk about Doug Suttles misrepresenting
09:22:26 12 flow rate. This is sort of the rest of the story as relates to
09:22:30 13 Doug Suttles and his statements.

09:22:32 14 First of all, the Securities and Exchange
09:22:36 15 Commission: "Accurate estimation of the flow rate is
09:22:38 16 difficult."

09:22:39 17 Doug Suttles: "It's impossible to get a precise
09:22:42 18 number. We know it's highly uncertain." He doesn't know, it's
09:22:46 19 difficult to measure. "What we can do is actually look at the
09:22:51 20 expression of it on the surface. 5,000 barrels a day was the
09:22:55 21 best estimate, but we also stressed from the beginning that
09:22:58 22 this number is very uncertain."

09:23:00 23 The plaintiff's expert, Wilson, has not bothered
09:23:06 24 to look at the data that BP shared with the government. He's
09:23:11 25 going to tell you later today, I think, that we misrepresented

09:23:14 1 things. He didn't go to the trouble of looking at what the
09:23:17 2 government had and what the government knew.

09:23:20 3 Now, there was reference in Mr. Brian's statement
09:23:26 4 to Admiral Thad Allen. He basically shared with the Court that
09:23:30 5 the government really wasn't involved, the government didn't
09:23:33 6 know, the government wasn't knowledgeable, they didn't know
09:23:37 7 what we were doing.

09:23:38 8 I think when Your Honor sees his point of view,
09:23:41 9 you'll see that's not quite accurate.

09:23:45 10 (WHEREUPON, a video clip was played.)

09:24:54 11 MR. BROCK: This, Your Honor, was an open situation in
09:25:01 12 Houston. Just as Admiral Allen describes, the United States
09:25:04 13 scientists and technicians were embedded in the center. They
09:25:09 14 were working hand in glove with BP folks. They were talking at
09:25:12 15 the water cooler. They were sharing openly data at that
09:25:16 16 center.

09:25:16 17 The United States of America had access to
09:25:20 18 significant information, and, as you can see from
09:25:25 19 Admiral Allen, nothing went forward, nothing was approved
09:25:28 20 without their review and their approval.

09:25:31 21 This just confirms that this is a fair summary of
09:25:35 22 the interaction between the government and BP at the response
09:25:40 23 site.

09:25:40 24 This, Your Honor is something that we hope will
09:25:43 25 just be helpful to you during the trial of the case. It is a

09:25:46 1 *Deepwater Horizon* source control timeline.

09:25:49 2 Some of the important events that we'll be
09:25:51 3 talking about right here, the plaintiffs say -- Mr. Barr does,
09:25:56 4 well, we weren't really organized, we didn't know what to do,
09:26:00 5 we didn't know how to get our plan off the ground.

09:26:03 6 On April the 21st, we applied for a permit to
09:26:06 7 drill a relief well. By May the 2nd, 12 days later, we had a
09:26:10 8 rig in place, and the first relief well was spudded.

09:26:16 9 Of course, everyone understood that this would be
09:26:19 10 out here, the guaranteed, hoped for shut-in time, but it's also
09:26:26 11 understood that the team could not take actions between May 2nd
09:26:32 12 and September 17th that would jeopardize this work or this work
09:26:38 13 here. That's going to be important in a few minutes.

09:26:41 14 We'll also talk about this May 26th to May 28th
09:26:45 15 timeframe when Top Kill was attempted. Then we'll get over to
09:26:50 16 this June 4th to July 10th timeframe when it was decided to
09:26:57 17 move to a collection strategy and away from shutting in the
09:27:02 18 well, and how that developed and the actions that were taken.

09:27:07 19 We'll talk about this one a little bit in this
09:27:09 20 case, too, Your Honor, because I think it demonstrates
09:27:12 21 diligence. It demonstrates the company's commitment to get the
09:27:17 22 well shut in. It shows that there was not fraud or
09:27:19 23 misrepresentation.

09:27:21 24 All of these work streams were underway and
09:27:24 25 working in parallel. Each one had a team. It's being

09:27:30 1 evaluated, it's being risk assessed. Each one of them,
09:27:33 2 including the BOP-on-BOP, all of these are being looked at,
09:27:36 3 looked at, risk assessed, planned, and all of this is happening
09:27:40 4 in parallel.

09:27:45 5 You heard reference to Secretary Chu. Let's see
09:27:48 6 if he thinks we weren't interested in getting the well shut-in
09:27:52 7 as quickly as possible.

09:27:56 8 (WHEREUPON, a video clip was played.)

09:28:57 9 MR. BROCK: Would a company that wanted to shut the
09:28:58 10 well in as quickly as possible go forward with a
09:29:02 11 multi-million-dollar procedure involving five ships knowing
09:29:05 12 that it wouldn't work; and, would a company that wanted to shut
09:29:09 13 the well in as quickly as possible make up a reason for its
09:29:12 14 failure that would delay the shut in of the well simply to
09:29:17 15 cover up flow rate estimates that everyone understood were not
09:29:23 16 reliable? Judge Barbier, that makes no sense.

09:29:27 17 This is the don't make it worse strategy that
09:29:32 18 we've talked about. Don't do any harm to any of the options as
09:29:36 19 you pursue things in parallel.

09:29:39 20 Now, there is criticism here about the sequencing
09:29:45 21 of the source control efforts, that is, did we get them in the
09:29:48 22 right sequence, what does the government think about that, do
09:29:51 23 they think we didn't do it the right way? Here is Thad Allen
09:29:57 24 again.

09:29:57 25 (WHEREUPON, a video clip was played.)

09:30:40 1 MR. BROCK: Thad Alan, as part of his due diligence,
09:30:43 2 was exploring with other companies whether or not BP was
09:30:46 3 proceeding in an industry standard kind of way with their
09:30:50 4 recommendations, were there other things that could be done.

09:30:53 5 He's answering that question saying, I've been in
09:30:56 6 contact with industry, and they've let me know that we're doing
09:31:01 7 things in the right way in the right sequence.

09:31:04 8 We'll show Your Honor during the trial, I went on
09:31:08 9 to ask him, who are these people that you talked to. He had
09:31:11 10 said -- he really didn't want to do it at the press
09:31:16 11 conference -- Rex Tillerson, of Exxon, and Halliburton. That's
09:31:19 12 who he talked to, to see if we were proceeding in an industry
09:31:23 13 standard kind of way using the sequencing in the right way.

09:31:28 14 No one was being critical back at the time about
09:31:30 15 how things were being done and conducted. It's only now that
09:31:36 16 there is criticism from these parties about this.

09:31:39 17 Now, we've talked a little bit about -- we've
09:31:44 18 heard about the BOP-on-BOP option. From the papers that the
09:31:49 19 plaintiffs filed, I think I understand that they believe that
09:31:52 20 we should have used a BOP-on-BOP in mid May. Now I'm hearing
09:31:58 21 them say, well, maybe not mid May, maybe early June.

09:32:02 22 But what's clear is that the BOP-on-BOP solution
09:32:09 23 was not ready before the Top Kill procedure was instituted.
09:32:14 24 We're talking about now the period of time May 15th or so up to
09:32:21 25 May 28th, when the Top Kill procedure was instituted. That

09:32:26 1 solution was not ready.

09:32:28 2 There is going to be a dispute in this case about
09:32:31 3 whether BOP-on-BOP was ever ready. We'll have a conversation
09:32:35 4 about that during this trial.

09:32:37 5 The BOP-on-BOP presented greater risks than did
09:32:42 6 Top Kill. This was evaluated. It was documented.

09:32:48 7 It's further the case that if they are saying
09:32:51 8 still, well, we should have done BOP-on-BOP before Top Kill,
09:32:56 9 Transocean's own records reflect, as of May 18th, that a
09:33:01 10 solution on this venting capability is still 10 to 14 days
09:33:07 11 away.

09:33:08 12 There was another problem. The Deadman on the
09:33:16 13 Transocean BOP had a design issue and was not functioning
09:33:21 14 properly. We've heard about that before. That's another
09:33:25 15 reason the *DD II* BOP was not ready before the Top Kill
09:33:31 16 procedure was run.

09:33:34 17 Transocean's own witness, who I believe will be
09:33:37 18 testifying in this case, will tell you that Top Kill and junk
09:33:41 19 shot occurred between May 26th and May 28th. We were still
09:33:44 20 working on it during that period of time on the *DD II* with the
09:33:50 21 venting option.

09:33:51 22 The Transocean BOPs were not ready when the
09:33:57 23 Top Kill procedure was conducted, and Top Kill was a less risky
09:34:04 24 option. Why is that?

09:34:08 25 This is just a photograph that's taken from an

09:34:11 1 animation that I think Your Honor will see during the trial.
09:34:15 2 To execute the BOP-on-BOP option -- this would be the
09:34:22 3 *Deepwater Horizon* BOP -- the ROV's would have to unlatch this
09:34:28 4 piece of the BOP, the Lower Marine Riser Package.

09:34:33 5 What was not known is whether or not it would
09:34:36 6 cause a complete separation because it was not known precisely
09:34:41 7 where the drill pipe was and if it would hang up.

09:34:46 8 This here, if this outcome were to occur, does
09:34:50 9 not meet the don't make it worse policy because if you have
09:34:54 10 this, it's very unlikely that you could get it to reseal, and
09:35:01 11 it would be difficult, if not impossible, to cut this drill
09:35:07 12 pipe here because these devices would have difficulty getting
09:35:11 13 their cutting tools from the edge of the BOP down into the
09:35:16 14 pipe.

09:35:17 15 So it was a significant issue, and this made
09:35:19 16 things worse if this outcome occurred when you tried to
09:35:25 17 unlatch. That's one of the reasons that the Top Kill procedure
09:35:28 18 is better.

09:35:29 19 The other issue is, if you use the *DD II* BOP, you
09:35:35 20 would be putting this massive device, 360 tons, on top of the
09:35:41 21 lower BOP. If you were successful in getting this off, if you
09:35:45 22 didn't damage this seal here that's very finally ground and has
09:35:49 23 to be there in very good condition to create a seal, if you're
09:35:53 24 able to do this, then this device goes on top of the lower BOP.

09:35:58 25 There was an issue. When the rig sank, the BOP

09:36:03 1 was pulled over. When that happened, it did not go back all
09:36:09 2 the way to straight up. It still was leaning, and you can see
09:36:14 3 this crater area here.

09:36:16 4 So there were issues about BOP-on-BOP and its
09:36:21 5 stability, that is, the fact that it was leaning, the fact that
09:36:26 6 there were issues with that. That's another reason that was
09:36:30 7 not the right option.

09:36:31 8 So given these things, the fact that the BOP
09:36:35 9 wasn't ready, the fact that there were engineering issues that
09:36:39 10 were not resolved, Top Kill was the reasonable choice given
09:36:44 11 what the team was faced with in late May 2010.

09:36:48 12 I don't think there can be any dispute about
09:36:50 13 that. From the way I heard them present it today, I'm not even
09:36:54 14 sure they are arguing that, but we'll see when the evidence
09:36:56 15 starts coming in.

09:36:57 16 Now, there is something that -- this is just
09:37:00 17 going to take a little work, and I apologize for this -- we
09:37:04 18 have to be very careful with our terminology, Your Honor, as it
09:37:09 19 relates to Top Kill.

09:37:10 20 We've got a stipulation regarding source control
09:37:14 21 events. Top Kill is comprised of two techniques, one, momentum
09:37:23 22 kill, and the other, junk shot. Momentum kill refers to the
09:37:28 23 operation by which you pump the fluid into the BOP. Junk shot
09:37:33 24 is different. It refers to the operation where bridging
09:37:37 25 materials are added to the BOP trying to clog up the spaces,

09:37:41 1 reduce the flow rate, and give you an opportunity to shut the
09:37:44 2 well in.

09:37:45 3 This is just a very brief animation of that.
09:37:49 4 I'll just run this just for a second in the interest of time.

09:37:54 5 So, if Your Honor can see it on the screen, this
09:37:58 6 piping system here goes over some manifolds and then back up to
09:38:01 7 the ships that I was telling you about earlier. This is the
09:38:04 8 mud coming into the BOP. You'll see that it continues to run.

09:38:10 9 This is dynamic kill. This is using the flow of
09:38:15 10 mud only to try to shut in the well.

09:38:18 11 Now we've got the junk coming in. This is just
09:38:22 12 for illustration purposes, but you can see that if it works as
09:38:26 13 designed, it has the effect of filling the holes, filling the
09:38:31 14 spaces in the BOP, which would allow for you to kill the well
09:38:37 15 using mud. That's the junk shot component of the procedure.

09:38:41 16 This was risk assessed, and they looked at the
09:38:47 17 options of how to do it, how to go through it, and it was
09:38:50 18 determined it was a low risk, high reward procedure; unlike
09:38:57 19 BOP-on-BOP, which yes, it was high reward, but it was also very
09:39:03 20 high risk.

09:39:03 21 A peer review was conducted in a very careful
09:39:06 22 way, where representatives of industry, as well as contractors,
09:39:09 23 came in and looked very carefully at this procedure. You can
09:39:13 24 see Dr. John Smith from LSU; Ted Burgoyne, who you heard from
09:39:22 25 in the first phase of the trial; representatives of Exxon;

09:39:23 1 representatives of Boots & Coots; representatives of Shell and
09:39:27 2 EMI, were all there to evaluate this and to help the engineers
09:39:33 3 understand what they needed to do.

09:39:36 4 It was risk assessed. We'll go through these all
09:39:38 5 during the trial. But one of the important things is that they
09:39:42 6 needed to be sure that the relief well was deep enough, that if
09:39:47 7 there was migration of oil or gas into the formation, that the
09:39:51 8 relief well would be deep enough and cemented in, that it would
09:39:56 9 not be affected by that. So that was another mitigation that
09:39:59 10 had to be in place to make sure that that went well.

09:40:03 11 Now, there is the issue about Top Kill and the
09:40:12 12 two components to it.

09:40:15 13 In mid May, based on some data that the engineers
09:40:20 14 were seeing, it was believed that it was possible that the
09:40:25 15 momentum kill only would be sufficient to shut in the well.

09:40:31 16 There was pressure data coming from a device
09:40:33 17 called a PTB. There had been a decrease of about six or
09:40:37 18 700 psi. They thought it might work, but that was just
09:40:41 19 momentum kill.

09:40:43 20 It's clear, and we'll show this during the trial,
09:40:45 21 that if you incorporate the junk shot part of the procedure, it
09:40:53 22 reduces the path size by plugging it with various materials.

09:40:58 23 Why is that important? Mr. Brian said that BP
09:41:00 24 had determined that if the flow rate was over 15,000 barrels a
09:41:05 25 day, we couldn't shut in the well. That was an evaluation that

09:41:11 1 was done. That's right here. Modeling indicates that a
09:41:14 2 dynamic kill cannot be successfully executed if the oil flow
09:41:18 3 rate is 15,000 stock tank barrels.

09:41:22 4 This was being done on May 8th when they were
09:41:24 5 looking at doing momentum kill only. This is because of the
09:41:30 6 change in pressure. Mr. Rygg has testified about this, and he
09:41:34 7 has been clear, that 15,000 barrels per day, this modeling here
09:41:44 8 doesn't have anything to do with junk shot, so don't deduce
09:41:48 9 anything on the junk shot based on this modeling.

09:41:51 10 Why is that? The understanding was that junk
09:41:55 11 shot -- or Top Kill, when you include both components, was not
09:42:01 12 flow rate dependent because of the junk's ability to reduce
09:42:06 13 flow rate and create backpressure. We'll present evidence on
09:42:09 14 that during this trial.

09:42:10 15 That was understood by Richard Brannon and others
09:42:15 16 in government. I'll just read the last question: "Well, and
09:42:18 17 based on this modeling at 15,000 barrels a day, a pure dynamic
09:42:22 18 kill was not going to be successful. That was the prediction.
09:42:26 19 When they were thinking about just doing dynamic kill, that was
09:42:29 20 true. This does not address how a junk shot will allow for the
09:42:34 21 creation of additional backpressure that could allow a Top Kill
09:42:37 22 as implemented at different flow rates." And the answer to
09:42:41 23 that is, "Yes." There was no misrepresentation from BP about
09:42:48 24 flow rate, about the ability for Top Kill to be successful.

09:42:56 25 This is what I referred to earlier about why it

09:42:59 1 was so difficult to understand the flow rate. There were just
09:43:01 2 too many unknowns at that time to be able to understand that.

09:43:05 3 But notwithstanding that, if we're going to talk
09:43:08 4 about a fraud case, and we're going to say that we misled the
09:43:12 5 government, it's important to understand what they knew; not
09:43:16 6 just what we told them, but what they knew from all sources.

09:43:19 7 This is April 25th, Glen Watabayashi has done an
09:43:27 8 evaluation, 64,000 barrels a day. This is the note we looked
09:43:31 9 at earlier. This is from Moore to Owens: "Nick Wetzel spoke
09:43:37 10 to BP who indicated that it was between five and 40,000 barrels
09:43:41 11 perfect day." This is before the Top Kill procedure was run.
09:43:44 12 It was communicated by BP that higher numbers than
09:43:50 13 5,000 barrels were in play and possibilities.

09:43:53 14 Here is another workup that the government had
09:43:56 15 done where one of their scientists estimates it at
09:44:00 16 65,000 barrels a day. If restrictions are taken into account,
09:44:05 17 30,000 barrels per day are suggested.

09:44:07 18 Here is one where Professor Worley gives the
09:44:13 19 government a number of 70,000 barrels a day. He later became a
09:44:16 20 member of the Flow Rate Technical Group.

09:44:17 21 So, as Admiral Allen has said, "All God's
09:44:21 22 children have flow rate estimates." Everyone was trying to
09:44:23 23 figure it out, plugging in into models, things that were not
09:44:31 24 known and seeing what they looked like.

09:44:32 25 But what happened was, because of the confusion,

09:44:34 1 the Flow Rate Technical Group was established by Admiral Allen.
09:44:38 2 Here are the participants: US Coast Guard, NOAA, Department of
09:44:42 3 Energy, Coast Guard, others.

09:44:45 4 BP was not a member of the Flow Rate Technical
09:44:47 5 Group. This is the organization that was established to state
09:44:51 6 the government's number. There were diverted models, other
09:44:57 7 opinions. That's fine because at this point there wasn't
09:44:59 8 virtual certainty on anything.

09:45:02 9 Now, after the Flow Rate Technical Group was
09:45:07 10 formed, before the Top Kill procedure was started on May 26th,
09:45:13 11 Marcia McNutt, who is leading the Flow Rate Technical Group,
09:45:17 12 says, "Multiple lines of scientific evidence agree that the
09:45:21 13 rate of release is at least 14 to 20,000 barrels of oil per
09:45:26 14 day."

09:45:28 15 The United States of America was not misled in
09:45:32 16 terms of flow rate going into the Top Kill procedure. It knew
09:45:37 17 and was aware that the flow rate could be over 15,000 barrels
09:45:42 18 per day. There were many lines of evidence to support that.
09:45:48 19 In fact, they weren't worried about it because it was
09:45:52 20 understood that the Top Kill procedure, when you include
09:46:00 21 junk shot, is not expected to be flow rate dependent.

09:46:04 22 This is the same number being shared by
09:46:09 23 Doug Suttles with Mary Landry. You've heard about Doug Suttles
09:46:13 24 kept saying five. He's saying here the expected range of
09:46:16 25 possible flow rates is five to 40.

09:46:20 1 We could go on and on in these, but I do want to
09:46:22 2 make this point: Mary Landry, who is the federal on-scene
09:46:27 3 coordinator, was asked about some of these things that
09:46:30 4 Mr. Brian showed you, that he says weren't conveyed to the
09:46:34 5 government and that caused them to not understand what was
09:46:37 6 going on. So these are shown to her in the deposition. She
09:46:44 7 says: "I would have looked at them in the order of my
09:46:47 8 business."

09:46:47 9 "Did you rely on them for any purpose?"

09:46:49 10 "No, because we were standing up the Flow Rate
09:46:55 11 Technical Group, and I was deferring to that Group to be the
09:46:57 12 expertise."

09:47:00 13 "Did you rely on any of these documents," the
09:47:03 14 ones that were shown to her.

09:47:05 15 She says, in my response, "No."

09:47:07 16 This is just Admiral Allen saying again that the
09:47:10 17 Coast Guard and the Unified Command always assumed from the
09:47:15 18 outset that this could be a catastrophic event. The last
09:47:22 19 sentence, I think, is significant: "We never relied on the one
09:47:23 20 to 5,000 barrels a day. The government understood, BP
09:47:27 21 understood, independent scientists understood there were too
09:47:30 22 many uncertainties."

09:47:34 23 Knowing all of this, this is Admiral Landry and
09:47:36 24 Mr. Brannon signing off on the Top Kill procedure that includes
09:47:42 25 both momentum kill and this alternative LCM pills here that is

09:47:49 1 the junk shot aspect of that procedure. There is no
09:47:52 2 misrepresentation here.

09:47:53 3 Just a couple things on the issue of whether or
09:47:59 4 not we misled the government on probability of success.

09:48:04 5 This is a note from Dr. McNutt to Secretary Chu,
09:48:09 6 where she says -- I'm sorry, it's a note to someone else
09:48:13 7 responding about a question from Secretary Chu: "The secretary
09:48:17 8 asked me what were the chances of Top Kill. I told him it is a
09:48:23 9 nonsense question. Top Kill's have worked 60 to 70 percent of
09:48:28 10 the time when one has access to the wellhead to shut in flow
09:48:31 11 from the top. There has never been success of Top Kill in
09:48:34 12 other situations, including in the Outer Continental Shelf."

09:48:40 13 Your Honor, there was nothing -- no way that the
09:48:44 14 government was misled about the success of Top Kill. This is
09:48:48 15 Dr. McNutt explaining what actually is accurate. This number
09:48:53 16 had been discussed, that when we have access to the well, when
09:48:58 17 we're not at 5,000 feet, this technique works pretty well, but
09:49:01 18 it had never been tried at 5,000 feet, and everyone understood
09:49:05 19 that.

09:49:05 20 This is Tom Hunter, Your Honor, who was the
09:49:13 21 co-head of the science team. This is his testimony about
09:49:19 22 whether or not, whether or not in the response government
09:49:24 23 relied on any estimate of 5,000 barrels per day.

09:49:28 24 (WHEREUPON, a video clip was played.)

09:50:14 25 MR. BROCK: Fraud cannot exist without reasonable

09:50:16 1 reliance. There was no fraud, but there was certainly no
09:50:21 2 reliance on the behalf of the government on anything that was
09:50:25 3 said or done in the flow rate space. Mr. Hunter makes it clear
09:50:31 4 here.

09:50:31 5 Now, what happened at Top Kill? These are the
09:50:37 6 vessels that were organized to execute the procedure. We'll
09:50:41 7 talk about those in a little detail.

09:50:43 8 This shows some of the subsea setup, the
09:50:48 9 manifolds and other things that had to be in place in order to
09:50:52 10 execute the Top Kill.

09:50:55 11 These ships here, there is just all kinds of
09:50:57 12 redundancy here, there is pumps and backup pumps. There is mud
09:51:02 13 and backup mud. There is the ability to do all kinds of
09:51:06 14 different things.

09:51:07 15 On this one here, you see some of the subsea
09:51:09 16 structure.

09:51:09 17 This is my point. I can't get my head around an
09:51:13 18 allegation that BP would do all of this knowing that it wasn't
09:51:17 19 going to work. That's just beyond my ability to comprehend in
09:51:22 20 these circumstances.

09:51:23 21 But the procedure was run. It was not
09:51:26 22 successful. At that point, it came to the responsibility of
09:51:33 23 the engineers and technicians of both BP and the United States
09:51:36 24 to evaluate why Top Kill did not work.

09:51:43 25 The aligned parties say we made up an excuse

09:51:48 1 because we didn't want to admit that the flow rate was high.
09:51:52 2 We just made it up. We thought we could hide the flow rate by
09:51:58 3 making up this excuse. That's their allegation.

09:52:02 4 Now, one thing they don't point out is what we
09:52:06 5 were going to next was collection. If you were trying to hide
09:52:09 6 something, why would you set up a system of collection where
09:52:13 7 you might prove that 15 or 20 or 30,000 barrels a day of oil
09:52:19 8 are coming out of the well? That doesn't make any sense.

09:52:23 9 But they went to a system of collection because
09:52:28 10 of the interpretation that collapse disks may have ruptured
09:52:36 11 during the blowout. These collapse disks are in place down in
09:52:46 12 the 16 -- I think it's in the 16-inch casing, and they are
09:52:50 13 there to protect the well in the event that you get a
09:52:57 14 differential pressure between the 18-inch casing and the
09:52:59 15 16-inch casing. If that differential pressure is created,
09:53:04 16 those disks will open.

09:53:05 17 The significance of that is that -- I think I
09:53:09 18 have this right, I hope I do -- the 18-inch casing here is open
09:53:14 19 to the formation. So when you're thinking about what to do
09:53:19 20 next, if that's the right interpretation -- and there was data
09:53:23 21 that supported that from the way that they were analyzing and
09:53:27 22 looking at the data during the Top Kill procedure and in the
09:53:30 23 weeks thereafter -- if that has occurred, then if you do a hard
09:53:38 24 shut in of the well, there is little doubt that the outcome is
09:53:43 25 going to be you're going to release oil and gas into the

09:53:46 1 formation. That was a significant risk if that has occurred.

09:53:51 2 The calculation were done by BP. They were
09:53:54 3 reviewed by the United States. The conclusion was we cannot
09:53:59 4 rule that out.

09:54:00 5 This is just demonstrating what the outcome can
09:54:05 6 be. It's also the case that the outcome can be that these
09:54:09 7 things release way over from the well and could put at risk the
09:54:14 8 relief well operations.

09:54:15 9 Now, they didn't show you this document, but they
09:54:20 10 referred to it in their 30-page pretrial statement. This is
09:54:27 11 the language that they are focused on. "On the day after the
09:54:30 12 event, one of the evaluations that was done by BP is that this
09:54:34 13 was a possible and plausible outcome." That's what it said in
09:54:40 14 the document.

09:54:41 15 But that's not the end of the story here,
09:54:44 16 Judge Barbier. This is not the last piece of work that was
09:54:47 17 done on this event. They engaged Phil Pattillo to look at it
09:54:55 18 in detail. He ran the calculations. He said, "An event
09:54:59 19 related rupture of a collapsed disk can be conjecture. It's in
09:55:05 20 play. It's possible."

09:55:06 21 This is May the 30th. They didn't tell you about
09:55:09 22 this either. This is a communication to Admiral Allen,
09:55:13 23 "Diagnostics and data acquired suggest that the ruptured disk
09:55:15 24 in the 16-inch casing may have failed during the initial well
09:55:19 25 control event. If they failed and we shut in the well, it

09:55:23 1 could cause hydrocarbons to flow to shallow formations and
09:55:27 2 onwards to the sea floor."

09:55:28 3 Under the first do no harm rubric, this is what
09:55:33 4 the team is trying to avoid, the "may" and the "if."

09:55:40 5 This was presented to Secretary Salazar on
09:55:44 6 May the 31st. These are his notes on his slide set. "An event
09:55:48 7 related rupture of a collapsed disk can be conjecture."

09:55:53 8 Now, we asked Dr. McNutt, the Director of USGS,
09:55:58 9 chair of the Flow Rate Technical Group, "Do you believe the
09:56:01 10 evidence strongly suggested that the hypothesis was true?"

09:56:05 11 "There was an interpretation of the data that
09:56:07 12 allowed it. It was not unique. It was not the only
09:56:10 13 interpretation." What word does she use? "It was a plausible
09:56:16 14 interpretation" -- the same language used by BP in its slide
09:56:20 15 deck that they showed you; they didn't show you the other
09:56:22 16 stuff, but what they showed you -- "and carried such a great
09:56:26 17 risk that if it was correct it was worth taking seriously."

09:56:29 18 Secretary Chu had discussions and interaction
09:56:37 19 with BP on this issue. He was very keen to have this
09:56:42 20 independently reviewed by his own scientist, that is, is what
09:56:47 21 BP is putting forward reasonable, is it plausible?

09:56:52 22 He says here that, "It is reasonable, the
09:56:56 23 scenarios are reasonable, but I see other scenarios."

09:56:59 24 Here is Dr. Chu talking about it: "We have been
09:57:03 25 getting the data at the same time as the BP engineers,

09:57:05 1 conducting our own independent analysis of the data so that we
09:57:09 2 can verify the conclusions that BP is making at every step."

09:57:13 3 He did these calculations himself with the actual
09:57:17 4 data. Just like BP, he could not rule out that this had
09:57:24 5 occurred. Under first do no harm, he did not believe going
09:57:28 6 forward with BOP-on-BOP was appropriate because if you shut in
09:57:32 7 that well, you run the risk of blowing out and losing the BOP.

09:57:38 8 Now, BP didn't dig in and say there is only one
09:57:43 9 explanation. No. There is interaction with Secretary Chu and
09:57:48 10 Andy Inglis. Here Secretary Chu says: "There are two equally
09:57:54 11 plausible explanations for this." Andy Inglis doesn't say, no,
09:58:00 12 you're wrong, it can only be one thing, it can only be the
09:58:04 13 thing that protects us from having to say about flow rate. He
09:58:08 14 doesn't say that. He says, "I agree, there are two scenarios
09:58:09 15 that could explain the observations from Top Kill, the
09:58:13 16 collapsed disk failure or mud down the well from the reservoir
09:58:18 17 with counterflow of oil and gas upwards."

09:58:21 18 We did not -- BP did not, we did not,
09:58:22 19 misrepresent our understanding of what happened during
09:58:27 20 Top Kill. It is appropriate to proceed on the do no harm
09:58:33 21 approach.

09:58:33 22 This is Marcia McNutt. This is the conclusion.
09:58:38 23 "The initial interpretation by both BP and the National Labs is
09:58:43 24 that the ruptured disk in the 16-inch casing may have blown in
09:58:48 25 the initial incident. If that is the case, then the well

09:58:50 1 should not be shut in from above."

09:58:52 2 That was the conclusion of the United States. It
09:58:55 3 was the conclusion of BP. It was a possibility. It could not
09:59:00 4 be ruled out. It was the right engineering decision based on
09:59:05 5 what was known then because, if you remember, no one knew the
09:59:10 6 path of flow at that time. It was an uncertainty that they
09:59:13 7 were dealing with, and they made a reasonable decision based on
09:59:16 8 what was known. Not looking at it in retrospect, in hindsight,
09:59:22 9 based on what was known at the time.

09:59:25 10 So they moved to a collection strategy. We'll
09:59:28 11 talk in detail about this, but one of the issues with regard to
09:59:34 12 BOPs is that the capping stack, now that they're thinking about
09:59:38 13 collection as opposed to other methodologies, allows for more
09:59:43 14 collection; in the way it was configured compared to the BOP
09:59:47 15 option as it was configured at the time, it allows for more
09:59:52 16 collection.

09:59:52 17 You're going to hear in this case, Your Honor, a
09:59:56 18 fascinating story of how the company working with industry
10:00:01 19 figured out how to attach a capping stack to the top of the
10:00:06 20 BOP, to the flange that's basically expected to move with the
10:00:15 21 riser, because that's the purpose of it. This flange here,
10:00:22 22 which is this right here, it was damaged on the back side, it
10:00:26 23 had bolts that were injured, it had a piece of pipe in it.
10:00:31 24 What had to be done was to figure out how to attach that
10:00:35 25 capping stack to this very, very -- to a piece of equipment

10:00:42 1 that was not designed to receive it, I think is the best way to
10:00:45 2 put it.

10:00:46 3 These three options for attachment were all
10:00:49 4 worked in parallel by the teams.

10:00:53 5 Now, I think I understand the parties'
10:00:58 6 allegations to be in this case that -- in terms of source
10:01:04 7 control -- there's a lot of allegations about we weren't ready
10:01:08 8 for this, and we weren't ready for that, but I think the
10:01:11 9 allegation comes down to you should have had a prebuilt
10:01:14 10 capping stack.

10:01:15 11 One of the key issues here on the causation side
10:01:17 12 of things is this: The only way to get this device onto the
10:01:25 13 BOP without lifting the Lower Marine Riser Package, which had
10:01:31 14 its own risks as we've discussed, was to attach it to the top
10:01:35 15 of the BOP.

10:01:41 16 Much of the time that was involved in getting the
10:01:46 17 capping stack ready to be attached -- and it was initially
10:01:49 18 designed just to be attached for collection -- was spent
10:01:53 19 developing these ways of doing that. They actually had to
10:02:01 20 build, engineer, test tools that would allow for the
10:02:05 21 attachment.

10:02:06 22 Each of these were running in the range of
10:02:09 23 70 tests. A lot of them were conducted underwater to see if
10:02:13 24 they could make it work. That took a lot of time. That's
10:02:15 25 where a lot of the time was spent in terms of getting the

10:02:19 1 capping stack ready.

10:02:20 2 So there is a question, could you have shut the
10:02:25 3 well in earlier, knowing everything you know now, looking in
10:02:30 4 retrospect, if you had a capping stack available.

10:02:36 5 Admiral Allen says: "How long it takes to put a
10:02:39 6 capping stack in place is dependent on a lot of different
10:02:41 7 factors. I don't think there is any way to estimate that."

10:02:44 8 It's a unique situation. It was a unique
10:02:49 9 blowout. As you've heard, there were no capping stacks
10:02:52 10 anywhere in the world prior to this event. It had never been
10:02:59 11 proven that a capping stack could work in deepwater. It was
10:03:01 12 proven here, with a massive engineering effort and commitment
10:03:05 13 that it would work here; but, before this, no one had a
10:03:10 14 capping stack.

10:03:11 15 The government did not require it. This is
10:03:15 16 Lars Herbst that you've heard from: "MMS did not require a
10:03:20 17 capping stack. No one in industry had a capping stack."

10:03:23 18 Well, with regard to preparing for an incident,
10:03:27 19 he tells Mr. Barr, "There is no real historical context as what
10:03:32 20 would be needed. I don't believe the expectation they would
10:03:35 21 develop something or have something available for a low
10:03:39 22 probability event. The context of historically there has been
10:03:44 23 no events related to that, so planning for events that have
10:03:47 24 never occurred would be difficult."

10:03:49 25 Now, I'll skip over this one because they haven't

10:03:55 1 mentioned it yet, but I'll mention this one. DEA-63, this
10:03:59 2 seems to be the focus of the plaintiffs' case here in terms of
10:04:02 3 why we should have had a capping stack.

10:04:04 4 One important issue that comes out of this
10:04:08 5 document, Your Honor, is that this group here that looked at
10:04:13 6 this issue and made recommendations, not to just BP, this is
10:04:16 7 recommendations to industry, says, "Continuing into Phase Two
10:04:21 8 is not warranted at this time." In other words, the group is
10:04:25 9 saying, we don't believe proceeding to phase two is justified
10:04:30 10 or warranted at this point in time.

10:04:32 11 Now, there has been a reference to this, but I
10:04:39 12 think I'll just touch on this briefly. What is it that was
10:04:43 13 expected of BP in terms of its response to a blowout in
10:04:49 14 deepwater?

10:04:51 15 This here, Your Honor, is the industry standard
10:04:54 16 for response to a deepwater blowout prior to the Macondo event.
10:05:01 17 What did we need to do?

10:05:02 18 "Quickly commence relief well drilling." We did
10:05:05 19 that. We had it spudded and underway by May the 2nd.

10:05:10 20 "Use ROV's to attempt to activate the BOP." You
10:05:12 21 heard about it in Phase One, the efforts that made there.
10:05:15 22 You'll hear a little more today.

10:05:16 23 "Stand up a team of well control experts to
10:05:20 24 analyze the well and additional methods for controlling the
10:05:23 25 blowout." That was done here. It was done immediately. By

10:05:28 1 the following morning, BP's well control experts were present
10:05:32 2 and working to develop solutions to the blowout, to understand
10:05:37 3 the data, to understand what might could be done.

10:05:43 4 Our well control plan is consistent with every
10:05:46 5 other operator in the Gulf of Mexico. It cannot be argued that
10:05:49 6 we did not meet industry standard in the way that we were
10:05:52 7 organized to respond to a blowout.

10:05:55 8 Here are the documents showing that we began to
10:05:58 9 develop plans for drilling both a shallow and deep intercept
10:06:04 10 well using the *Discover Enterprise* and the *DD II* and *DD III*,
10:06:07 11 and this team was led by Pat O'Bryan.

10:06:11 12 This is the industry standard as it existed
10:06:13 13 before April the 20th in terms of what should be done:
10:06:18 14 "Assemble a team of technical experts." That is what BP did.
10:06:22 15 It met the industry standard.

10:06:23 16 Now, ultimately, Your Honor, as you know, the
10:06:27 17 capping stack was utilized to seal the well on July the 15th.
10:06:30 18 Just one word about that, and then I'll have one other thing to
10:06:33 19 share.

10:06:34 20 The idea with the capping stack was primarily to
10:06:38 21 use it as a collection tool. The access points on the
10:06:43 22 capping stack were going to be very beneficial for that.

10:06:46 23 But in the months of June and July, it was also
10:06:51 24 developed that it was possible with the capping stack to
10:06:54 25 conduct a well test to understand what was the pressure

10:06:58 1 response to the well if it was shut in.

10:07:01 2 So a decision was made to go forward with the
10:07:06 3 capping stack, conduct those tests, and see if the well could
10:07:10 4 be safely shut in. The capping stack had the ability to let
10:07:15 5 off pressure, that is, if the pressure built up to an
10:07:18 6 unacceptable level after shut in, to let that pressure off and
10:07:22 7 let the well either flow or begin to collect oil again.

10:07:26 8 So the test was run. The capping stack was
10:07:29 9 actually installed, I think, on the 12th. After a couple of
10:07:32 10 days of testing, the well was eventually successfully shut in
10:07:37 11 on July 15th.

10:07:38 12 I just wanted to conclude with one more clip by
10:07:46 13 Admiral Allen that I think summarizes his view of the work of
10:07:52 14 BP and industry in getting this well shut in, in a timely way.

10:07:58 15 (WHEREUPON, a video clip was played.)

10:09:31 16 MR. BROCK: Your Honor, BP did not misrepresent
10:09:35 17 flow rate in a way that caused a delay of the shut in of the
10:09:39 18 well. It made reasonable engineering decisions based on what
10:09:45 19 was known at each step along the way, keeping in mind the
10:09:52 20 principles of do no harm, work all options in parallel, leave
10:09:59 21 no stone unturned.

10:10:01 22 That's not fraud. That's not gross negligence.
10:10:06 23 We just look forward to presenting to you our side of this, our
10:10:10 24 evidence on this, over the next four days. Thank you very
10:10:13 25 much.

10:10:13 1 THE COURT: All right. Thank you.

10:10:15 2 We'll take a 15-minute recess. We'll come back
10:10:17 3 and start the testimony.

10:10:31 4 (WHEREUPON, at 10:10 a.m., the Court took a recess.)

10:10:31 5 THE DEPUTY CLERK: All rise.

10:29:11 6 THE COURT: All right. Go ahead and swear in the
10:29:13 7 witness.

10:29:14 8 THE DEPUTY CLERK: Would you please raise your right
9 hand. Do you solemnly swear that the testimony which you are
10 about to give will be the truth, the whole truth and nothing
11 but the truth, so help you God?

12 THE WITNESS: I do.

13 **JOHN WILSON**

14 was called as a witness and, after being first duly sworn by
15 the Clerk, was examined and testified on his oath as follows:

16 THE DEPUTY CLERK: Please state and spell your name for
17 the record.

10:29:29 18 THE WITNESS: My name is John Wilson, W-I-L-S-O-N.

10:29:33 19 MS. KARIS: Your Honor --

10:29:36 20 THE COURT: Before you speak, we apparently had a
10:29:44 21 confession by the person who took the picture this morning:
10:29:54 22 Mr. Reamer (spelled phonetically) from the Restore the Delta
10:30:02 23 Group.

10:30:02 24 Mr. Reamer, where are you? Are you in the
10:30:03 25 courtroom?

10:30:05 1 MR. REAMER: Here.

10:30:06 2 THE COURT: Okay. There you are. Since you were
10:30:11 3 courageous enough to confess, we're going to just penalize you
10:30:17 4 for the time being. We'll keep your phone for a while. And
10:30:23 5 I'll lift the ban on everyone else. I know people are under a
10:30:27 6 great state of anxiety without their electronic devices. So
10:30:33 7 the phones, when you want to retrieve them, are down in the
10:30:38 8 clerk's office, in a box in the clerk's office.

10:30:41 9 So we'll keep the ban on Mr. Reamer for the day,
10:30:48 10 at least, and we'll see. But I accept your apology,
10:30:54 11 Mr. Reamer, and thank you for fessing up.

10:31:03 12 Okay.

10:31:03 13 MS. KARIS: Hariklia Karis for BP and I recognize we're
10:31:06 14 on the clock so I did not want to interrupt Mr. Li's
10:31:13 15 examination, but we have filed a *Daubert* challenge to a portion
10:31:15 16 of Dr. Wilson's testimony that I would like to raise and review
10:31:20 17 at this time.

10:31:21 18 THE COURT: Yes. I've read the report and -- I mean
10:31:24 19 the -- I'm sorry, the Motion to Exclude certain portions of his
10:31:27 20 report. I'm going to allow him to testify. If we get to
10:31:36 21 certain areas of questions that you think are objectionable or
10:31:42 22 beyond his expertise, you can object, and I'll rule on it at
10:31:47 23 that time. Okay?

10:31:48 24 MS. KARIS: Thank you, Your Honor. Yes.

10:31:50 25 THE COURT: All right. Go ahead.

10:31:53 1 MR. LI: Thank you, Your Honor. Good morning. Luis Li
10:31:56 2 on behalf of Transocean and the aligning parties. Nice to be
10:31:56 3 before you again, Your Honor.

10:31:56 4 DIRECT EXAMINATION BY MR. LI:

10:31:59 5 Q. Good morning, Dr. Wilson. Can you tell the Court where
10:32:02 6 you currently are employed?

10:32:03 7 A. Yes. I'm employed at the New Mexico Institute of Mining
10:32:07 8 and Technology in Socorro, New Mexico.

10:32:11 9 Q. What do you do there, sir?

10:32:12 10 A. I teach science and engineering in the Department of Earth
10:32:16 11 and Environmental Sciences.

10:32:18 12 Q. How long have you been teaching at the New Mexico
10:32:21 13 Institute of Mining and Technology?

10:32:23 14 A. Almost 30 years.

10:32:25 15 Q. Now, you have a Ph.D.?

10:32:26 16 A. Yes.

10:32:27 17 Q. And what is your Ph.D.?

10:32:28 18 A. It's in hydrodynamics from the Massachusetts Institute of
10:32:33 19 Technology, MIT.

10:32:35 20 Q. And you also have a bachelor's degree I take it?

10:32:37 21 A. Yes. I have a bachelor's degree in civil engineering from
10:32:40 22 Georgia Tech.

10:32:40 23 Q. Now, if you could tell the Court, we obviously submitted a
10:32:44 24 very long CV, but if you could tell the Court just generally
10:32:48 25 how your experience and research relate to the topic you're

10:32:52 1 here to testify about today, BP's internal flow rate modeling
10:32:55 2 in April and May of 2010.

10:32:57 3 A. Well, for the last 45 years I've been focused both in
10:33:02 4 teaching and research and study on the mechanics of fluids, and
10:33:06 5 particularly mechanics of fluids related to processes in the
10:33:11 6 geosphere, underground and aboveground, particularly flow and
10:33:15 7 force media.

10:33:16 8 Q. Just so we're clear, layperson's terms, *force media*, you
10:33:20 9 mean rocks, sediment, dirt?

10:33:21 10 A. That's right.

10:33:23 11 Q. And fluids can be water, gas, oil?

10:33:25 12 A. That's correct.

10:33:26 13 Q. Now, does hydrology share principles in technology with
10:33:32 14 the gas and oil industry?

10:33:32 15 A. Oh, yes. Many of these principles and technologies are
10:33:37 16 shared between the fields actually with correspondence back and
10:33:41 17 forth and papers published across the fields.

10:33:45 18 Q. Have you published articles in the oil and gas field?

10:33:47 19 A. Yes, I have.

10:33:48 20 Q. Now, did you prepare a report in this litigation?

10:33:53 21 A. Yes.

10:33:53 22 Q. And if we could pull up TREX-11900.1.1.TO.

10:34:06 23 Dr. Wilson, is this your report?

10:34:07 24 A. Yes, it is.

10:34:08 25 Q. What did you review in order to form the opinions in your

10:34:12 1 report?

10:34:14 2 A. I reviewed depositions and e-mails and memos and reports
10:34:20 3 and PowerPoint presentations.

10:34:23 4 Q. And those e-mails and the reports and other items, were
10:34:27 5 they part of the discovery in this particular case?

10:34:29 6 A. Yes, they were.

10:34:30 7 Q. And who were these reports and e-mails and correspondence
10:34:35 8 by?

10:34:36 9 A. Most of them were internal to BP. Some were between BP
10:34:42 10 and the government.

10:34:43 11 Q. Now, did you prepare a demonstrative or help prepare a
10:34:47 12 demonstrative of these opinions?

10:34:48 13 A. Yes, I did.

10:34:48 14 Q. Now, if we could take a look at D-25019, first slide.

10:34:56 15 Sir, are these your opinions?

10:34:58 16 A. Yes, they are.

10:34:59 17 Q. If you could just read the first opinion and explain a
10:35:02 18 little to the Court what you mean by this.

10:35:03 19 A. Well, the first one says: "Immediately after the blowout
10:35:06 20 of the Macondo well, BP began conducting flow rate -- well
10:35:12 21 flow rate modeling to inform its source control efforts,
10:35:16 22 including the Top Kill operation."

10:35:17 23 Q. If you could explain to the Court in layperson's terms,
10:35:21 24 what we're talking about?

10:35:23 25 A. Well, basically, just after the accident, even before the

10:35:25 1 rig sank, engineers at BP went back and visited the model they
10:35:32 2 had prepared for the original permit application to the
10:35:35 3 Minerals Management Service and revised that and looked at what
10:35:39 4 might happen if the rig sank, if the riser broke off and sank
10:35:46 5 to the bottom of the ocean -- and other conditions.

10:35:49 6 Q. Now let's take a look at the Opinion B. Read it and just
10:35:54 7 briefly explain what you did.

10:35:55 8 A. "In the weeks following the blowout, BP's computer models
10:36:00 9 suggested higher flow rates than those BP reported to the
10:36:02 10 government, the press and the public."

10:36:04 11 So over the period of April and May that I looked at
10:36:07 12 is this information, there were a wide number of computer
10:36:10 13 simulations done under a variety of conditions examining what
10:36:15 14 the range of flow rates might be from the well, and literally
10:36:21 15 dozens of these. And those were used to inform source control
10:36:26 16 efforts.

10:36:26 17 Q. And you mentioned that there were certain flow rates that
10:36:30 18 reported -- that BP reported to the government, the press and
10:36:33 19 the public. What was that flow rate estimate?

10:36:36 20 A. Well, typically, almost exclusively, they reported
10:36:40 21 5,000 barrels of oil per day whereas the computer simulations
10:36:44 22 they were running were most often showing rates higher than
10:36:47 23 that.

10:36:47 24 Q. Now let's take a look at Opinion C, which is -- if you'd
10:36:51 25 just read it and explain briefly what you did.

10:36:53 1 A. "BP knew or should have known from its modeling efforts
10:36:57 2 that the Top Kill was very likely to fail because the well
10:37:00 3 flow rate exceeded a 15,000 barrel oil per day threshold rate."

10:37:05 4 This is referring to some work done by a consultant
10:37:10 5 contractor to BP examining the Top Kill and finding through
10:37:15 6 hydraulic modeling of the Top Kill that if the flow rate was
10:37:18 7 sufficiently high that it would fail to execute properly; that
10:37:22 8 is, the injection of mud would simply not go down, it would
10:37:25 9 come up.

10:37:26 10 Q. All right. And your last opinion: "After the Top Kill
10:37:29 11 failed, BP was informed that the failure was most likely due to
10:37:33 12 flow rate."

10:37:34 13 Just tell the Court briefly what you did and what
10:37:36 14 that means.

10:37:38 15 A. Well, in that particular case, because of the study
10:37:43 16 referred to in part C, there was knowledge that a high
10:37:45 17 flow rate would lead to a failure of the Top Kill, particularly
10:37:50 18 the momentum part of that Top Kill.

10:37:51 19 And the engineers examining this afterwards,
10:37:56 20 particularly those specializing on the Top Kill, like a company
10:37:59 21 called Wild Well Control, concluded that it was mud coming out
10:38:02 22 of the top of the blowout preventer through the riser not going
10:38:06 23 down the well that was responsible for it because the flow rate
10:38:09 24 was too high.

10:38:10 25 Q. Now, Dr. Wilson, with respect to the documents and

10:38:14 1 depositions you reviewed, did they contain sufficient
10:38:20 2 information for you to form and support your opinions to a
10:38:24 3 reasonable degree of scientific certainty?

10:38:26 4 A. Yes, I did.

10:38:26 5 Q. Now, Dr. Wilson, let's start with your first opinion,
10:38:31 6 which is this same exhibit -- or Demonstrative Slide 2.

10:38:35 7 In your opinion, you state: Immediately after the
10:38:38 8 blowout, BP began conducting well flow exercises.

10:38:42 9 First let's talk about who at BP was doing it. Did
10:38:45 10 you identify different groups at BP that was -- that were doing
10:38:48 11 these studies?

10:38:48 12 A. Yes. After looking over all the information, it appears
10:38:52 13 that you could subdivide people working on this into four
10:38:56 14 different engineering groups who were exploring -- trying to
10:38:59 15 diagnose the well and then look at source control efforts using
10:39:03 16 modeling.

10:39:03 17 Q. Now, Dr. Wilson, did you help prepare an organizational
10:39:08 18 chart, Demonstrative 25013B?

10:39:12 19 A. Yes.

10:39:12 20 Q. And we've got it up on an easel here. It's a little hard
10:39:15 21 to see, so I'm not going to make you try to read every word on
10:39:19 22 it. I'll just point on it and we can go from there.

10:39:22 23 Or with the Court's permission, if I could walk up
10:39:25 24 there, Your Honor, and I could point to it.

10:39:29 25 THE COURT: As long as you have the lapel mike on,

10:39:33 1 that's fine.

10:39:33 2 EXAMINATION BY MR. LI:

10:39:35 3 Q. Now, Dr. Wilson, you have here four groups. Were these
10:39:38 4 the groups you identified?

10:39:39 5 A. Yes, they are.

10:39:40 6 Q. Now, on the left, you have three groups here: Flow
10:39:44 7 assurance, petroleum engineers and reservoir engineers. Are
10:39:48 8 these preexisting groups within BP?

10:39:51 9 A. Well, they are associated with preexisting groups. The
10:39:55 10 group on the left is a group that actually has that title, flow
10:39:58 11 assurance.

10:39:59 12 And the middle group, then, on the left -- I'm not
10:40:03 13 sure what color that is. It may be purple. I'm color-blind --
10:40:08 14 I think are people focused on production engineering.

10:40:10 15 And the next group over, the reservoir engineers,
10:40:14 16 were basically involved in exploration for their everyday
10:40:18 17 business.

10:40:18 18 Q. So let's focus on these first three groups here that are
10:40:23 19 groups that are normally associated with BP. What's their
10:40:26 20 general job? Is their job to figure out how much oil might
10:40:31 21 flow out of a well?

10:40:32 22 A. Well, all of them, in the course of their daily
10:40:35 23 activities, model flow from wells. And so they are all
10:40:37 24 familiar with the computer software typically used to model
10:40:41 25 hydraulics of wells and reservoirs.

10:40:43 1 THE COURT: Mr. Li.

10:40:43 2 MR. LI: Yes, sir.

10:40:44 3 THE COURT: I'm getting a complaint by someone who is
10:40:49 4 listening elsewhere in the courthouse that they still can't
10:40:53 5 hear you. I think you have that lapel mike way too low.

10:40:57 6 MR. LI: How about now?

10:40:57 7 THE COURT: We'll see if Judge Shushan is happy now.

10:40:57 8 EXAMINATION BY MR. LI:

10:41:09 9 Q. Let's focus for a second on the far right of this chart
10:41:12 10 here in light blue. It's called the Hydraulic Kill Team. It
10:41:15 11 has Kurt Mix, Ole Rygg, Tom Selbekk and Bill Burch. What was
10:41:21 12 this group?

10:41:22 13 A. This was more or less an ad hoc group assembled together
10:41:26 14 because of the blowout to look at the control options.

10:41:29 15 Q. If we can just focus on a couple of these folks, who is
10:41:31 16 Ole Rygg?

10:41:32 17 A. He's a consultant at a company called Add Energy that
10:41:36 18 specializes in software for modeling well flow.

10:41:39 19 Q. Is this a sophisticated company?

10:41:41 20 A. Yes. One of the most sophisticated in this kind of
10:41:44 21 business.

10:41:44 22 Q. And then Bill Burch, what's his job?

10:41:47 23 A. He's with a company called Wild Well Control, a company
10:41:50 24 that's particularly aimed at dealing with blowouts.

10:41:51 25 Q. Now, you had mentioned -- all of those groups, did they

10:41:54 1 produce modeling related to flow rate?

10:41:59 2 A. All of these groups did hydraulic modeling related to
10:42:02 3 flow rate.

10:42:02 4 Q. And in your review of the documents, the e-mails and the
10:42:05 5 PowerPoints, and what have you, did you see those flow rate
10:42:09 6 estimates get communicated up to the executives?

10:42:13 7 A. Yes. They were some communications between individual
10:42:17 8 engineers within a group, from time to time between groups, but
10:42:20 9 there was also communications upward quite frequently, into the
10:42:24 10 leadership roles at the top of this chart.

10:42:26 11 Q. So I'm going to point out a couple of folks at the
10:42:29 12 leadership roles. So here we have Tony Hayward, CEO of BP.
10:42:35 13 Did you see communications involving him?

10:42:36 14 A. Yes.

10:42:36 15 Q. Here we have Andy Inglis, CEO of Exploration & Production.
10:42:41 16 Did you see communications from the modeling groups up to
10:42:44 17 Mr. Inglis?

10:42:44 18 A. Yes.

10:42:45 19 Q. And then here we have a person who is identified as
10:42:50 20 Jasper Peijs. We have a little dotted line here, and we call
10:42:53 21 him an executive assistant to the chief of staff to
10:42:57 22 Andy Inglis. Did you see communication from the flow rate
10:43:00 23 modelers up to Mr. Peijs?

10:43:02 24 A. Yes, I did.

10:43:02 25 Q. Now, over here in a grayed-out box, we have a couple of

10:43:06 1 letters, UAC. What did you understand that to mean?

10:43:09 2 A. Unified Area Command.

10:43:11 3 Q. And that was the group that was in charge of -- a
10:43:14 4 multi-agency group in charge of shutting in the well?

10:43:17 5 A. Yeah, government agencies -- excuse me -- BP and others.

10:43:20 6 Q. Do you need some water?

10:43:21 7 A. No, I'm fine.

10:43:22 8 Q. And here we have Mr. Suttles, Doug Suttles. He's the COO
10:43:27 9 of Exploration & Production. What was his role?

10:43:33 10 A. He was tasked to communicate directly with the government
10:43:38 11 at the UAC, and he was principally responsible for that. And
10:43:43 12 Dave Rainey appeared to be his assistant --

10:43:45 13 Q. Did you see communications between the engineering team
10:43:50 14 through the executives over to Mr. Suttles?

10:43:52 15 A. Yes.

10:43:53 16 Q. Now, let's talk a second about -- there is an issue,
10:44:02 17 Mr. Brock brought it up in his opening statement, as to what
10:44:05 18 does flow rate even mean. And if you could tell the Court what
10:44:09 19 you mean by flow rate.

10:44:11 20 A. Well, I was reviewing these modeling efforts over a period
10:44:15 21 of a little over a month by BP engineers, their consultants and
10:44:19 22 contractors, and they were looking at a variety of issues
10:44:23 23 related to source control. And doing that, they were
10:44:27 24 simulating pressures and temperatures and flows in the well.
10:44:30 25 And they were simulating ranges of flow rates, not a particular

10:44:34 1 number, not a daily flow rate, just what is the likely range of
10:44:38 2 flow rate in the well.

10:44:38 3 Q. So when you say estimate, do you mean -- what do you mean?

10:44:42 4 A. I mean an approximation of what the flow rate is likely to
10:44:47 5 be, so between some range of numbers, and within some range of
10:44:50 6 numbers.

10:44:50 7 Q. Let me ask you, in your experience as a Ph.D. from MIT who
10:44:57 8 specializes in hydrodynamic analysis, do you do estimates in
10:45:01 9 your field?

10:45:02 10 A. I do estimates of that kind dealing with uncertainty and
10:45:05 11 probabilities all the time.

10:45:06 12 Q. Now, you are familiar, are you not, with Dr. Ballard, one
10:45:13 13 of BP's experts in this case?

10:45:14 14 A. Yes, I am.

10:45:15 15 Q. Now, he appears -- I'm going to point to it with the
10:45:18 16 laser -- he is actually in the flow assurance group down here.

10:45:22 17 Did you see that?

10:45:24 18 A. Yes, I saw that.

10:45:25 19 Q. Dr. Ballard has criticized your opinion by saying BP was
10:45:29 20 not modeling estimates of daily discharge from the well.

10:45:32 21 When you refer to estimates, what are you talking --
10:45:36 22 do you agree with Mr. Ballard or not?

10:45:38 23 A. I agree with him. They weren't doing daily flow rate
10:45:41 24 estimates.

10:45:42 25 Q. What were they doing?

10:45:44 1 A. They were estimating range of flow rates to inform their
10:45:47 2 source control efforts.

10:45:48 3 Q. You just preempted my next question.

10:45:50 4 So once you have a bunch of estimates, and they may
10:45:53 5 be rough, can you do something with those estimates?

10:45:56 6 A. Absolutely.

10:45:56 7 Q. What can you do with them?

10:45:58 8 A. It's the whole reason for doing it. To examine
10:46:01 9 alternatives for source control to see how each source control
10:46:08 10 option you may consider will perform for different flow rates,
10:46:13 11 which are in a range of reasonable or likely flow rates. But
10:46:16 12 you're not doing this for a single flow rate, but for rather a
10:46:20 13 range of possible flow rates.

10:46:21 14 Q. So were BP's flow rate estimates reliable in the sense
10:46:27 15 that they could inform source control decisions?

10:46:29 16 A. They were highly reliable for that purpose.

10:46:31 17 Q. So we've talked a moment about modeling and flow rates
10:46:35 18 estimates. Why don't we tell the Court what you mean by
10:46:37 19 modeling?

10:46:37 20 A. Well, modeling is used in engineering and science and
10:46:42 21 finance and economics and a variety of other things to
10:46:47 22 conceptualize a system, you convert it into mathematical form,
10:46:53 23 and in the case here, on to a computer, and then you use that
10:46:56 24 to simulate the system you're trying to understand. And you do
10:46:59 25 that perhaps to reconstruct the past, forensic modeling, or

10:47:05 1 predict the future.

10:47:05 2 Q. Now, based on your experience and education, are you
10:47:07 3 familiar with the types of modeling, flow modeling, that BP did
10:47:11 4 in this case?

10:47:12 5 A. Yes, I am.

10:47:12 6 Q. Have you used similar modeling in your career in 45 years?

10:47:16 7 A. Yes.

10:47:16 8 Q. Now, in your opinion, how did -- or did BP's modeling deal
10:47:22 9 with uncertainty?

10:47:24 10 A. Well, uncertainty in -- almost everything in science is
10:47:29 11 uncertain except fundamental principles, that is, you make a
10:47:29 12 measurement of something like a temperature. You don't know it
10:47:35 13 exact, but you have an approximation that's based on the
10:47:36 14 instrument you're using, or, if it's subjective, just your
10:47:39 15 feeling, your belief on what the temperature is.

10:47:43 16 But there are certain fundamental principles models
10:47:47 17 always have. They consider earth mass, for example. There are
10:47:50 18 other principles they preserve.

10:47:51 19 In this case, there was a great deal of information
10:47:53 20 known about the well and the reservoir and the fluids, for
10:47:59 21 example, and so they were using modeling to understand those
10:48:04 22 parts of the system which were less certain.

10:48:06 23 Q. Okay. Dr. Ballard, down there on that chart, he's opined
10:48:10 24 that the input parameters that you put into these models were
10:48:16 25 too uncertain to estimate flow rates. Would you agree or

10:48:18 1 disagree with that?

10:48:20 2 A. Well, I would disagree with that. They were too uncertain
10:48:23 3 maybe to estimate a flow rate on a particular day, but they
10:48:26 4 were certainly good to estimate ranges of flow rate that could
10:48:29 5 be used to inform decision-making.

10:48:32 6 That's how they are used probabilistically in many
10:48:36 7 other areas of activity, including petroleum engineering.

10:48:38 8 Q. Did you see examples of BP modeling to deal with
10:48:44 9 uncertainty?

10:48:44 10 A. Yes, I did.

10:48:45 11 Q. If we could have TREX-5063.1.1.TO. Now, this is an e-mail
10:48:50 12 from Trevor Hill to Gordon Birrell on April 28, 2010, attaching
10:48:56 13 modeling of system flow behavior. These individuals are on the
10:49:02 14 chart. I'm not going to make you try to have an eyesight exam,
10:49:05 15 but one of the fellows is here, and he's sending off this
10:49:11 16 e-mail.

10:49:11 17 He says, "We have modeled the whole system from
10:49:14 18 reservoir to sea in order to bound the answers on flow rate."
10:49:19 19 What did you understand that to had mean?

10:49:22 20 A. Well, there are two issues in here. One is what the model
10:49:25 21 actually was trying to represent as the system. In this case,
10:49:27 22 it's everything from the reservoir all the way up to the
10:49:30 23 connection to the well, through the well, up to the wellhead,
10:49:33 24 BOP, the riser, and then out to sea.

10:49:36 25 Q. I'm going to stop you for a second right there. So the

10:49:38 1 first part is to measure the entire system. Is this a normal
10:49:42 2 thing you would do in your area of expertise?

10:49:46 3 A. Well, this is a normal thing one would do in this kind of
10:49:50 4 application.

10:49:50 5 Q. All right. Then the second part of the phrase is -- or
10:49:53 6 sentence is, "in order to bound the answers on flow rate."

10:49:55 7 What did you understand that to mean?

10:49:57 8 A. That's the kind of thing I was talking about a few minutes
10:50:00 9 ago, a range of flow rates, to get some idea of what the likely
10:50:06 10 flow rate -- what the flow rate is likely to be, within what
10:50:09 11 range is it likely to be, to bound it.

10:50:11 12 Q. Is that the kind of thing you typically do as an expert in
10:50:15 13 hydrodynamics?

10:50:18 14 A. You would do something like this, yes.

10:50:19 15 Q. Let's take a look at the report that was attached to this
10:50:22 16 e-mail, which is TREX-5063.4.1.TO. This is a memoranda that
10:50:31 17 was attached. It says, "There are four data points in which we
10:50:33 18 have good confidence," reservoir pressure, seabed water
10:50:38 19 pressure, fluid properties and flow path.

10:50:41 20 If you could just explain to us what the -- what's
10:50:48 21 being conveyed here?

10:50:49 22 A. Well, these are some things that the person writing this
10:50:54 23 memo thought were more certain, better known. These are
10:51:00 24 reservoir pressures and seabed pressures, which are the
10:51:02 25 pressures driving the flow. It's the difference between those

10:51:05 1 two pressures that causes the flow. That turns out to be one
10:51:08 2 of the more important parameters in a system.

10:51:11 3 Of course, the fluid properties refer to the
10:51:14 4 hydrocarbons. The flow path is, this case, referring to the
10:51:17 5 riser. We know that the exit for the hydrocarbon from the well
10:51:20 6 goes out through the riser.

10:51:22 7 Q. So on April 28th, at least this set of engineers believed
10:51:27 8 there was good confidence in this data; is that correct?

10:51:32 9 A. That is correct.

10:51:32 10 Q. Now, there are some things where -- let's pull up
10:51:38 11 TREX-5063.4.2.TO.

10:51:42 12 So in this memo, the author writes, "We are currently
10:51:46 13 less certain of the following aspects," and he lists a number
10:51:50 14 of aspects. Are you familiar with this document?

10:51:50 15 A. Yes.

10:51:53 16 Q. Are these the type of uncertainties that modeling --

10:51:53 17 A. Yeah.

10:51:56 18 Q. -- is designed to deal with?

10:51:57 19 A. They express uncertainties regarding how the well and
10:52:02 20 reservoir are connected and how the flow moves up through the
10:52:08 21 well itself. Then how it then exits the wellhead to the BOP --
10:52:15 22 to the riser.

10:52:16 23 Q. Let's pull up -- so there were certain uncertain things,
10:52:21 24 but did they generate an estimate out of this?

10:52:23 25 A. Yes.

10:52:24 1 Q. Let's pull up TREX-5063.4.5.TO.

10:52:32 2 Here, we have a chart that we pulled out. Using the
10:52:35 3 knowns and less certain estimates, was BP able to get a
10:52:41 4 range -- to bound the answers on flow rate?

10:52:43 5 A. Yes. They have a range here.

10:52:44 6 Q. What was the range?

10:52:48 7 A. In this set of scenarios, it was from 2500 barrels of oil
10:52:53 8 per day at the low end up to 65,000 at the high end.

10:52:58 9 Q. So there is some interesting language here that's probably
10:53:02 10 not obvious. Here it says, "orifice size inches diameter." In
10:53:06 11 the context of this chart, what does orifice size mean?

10:53:11 12 A. Well, there were obstructions to flow in the BOP and the
10:53:18 13 first part of the riser, where the riser had fallen and kinked
10:53:21 14 over. The details of that obstruction were not known. So the
10:53:42 15 BP engineers chose to take that complexity in terms of what the
10:53:47 16 obstruction might be and simplify it into something called an
10:53:52 17 orifice. That is, you take a pipe, you put a plate of steel
10:53:56 18 across it, and you punch a hole through it to let fluid flow go
10:53:59 19 through that hole.

10:54:01 20 If the hole is really teeny, you get less flow. The
10:54:04 21 bigger the hole is, the more flow occurs. The orifice size
10:54:07 22 here is the diameter of that hole in that plate. So the
10:54:09 23 smaller the hole, the bigger the barrier, or resistance to
10:54:14 24 flow, the lower the flow rate.

10:54:16 25 Q. So this orifice size, it's an extraction?

10:54:18 1 A. It's an extraction -- it's sometimes called an equivalent
10:54:24 2 orifice size. It's sort of an equivalent resistance to what
10:54:27 3 may actually be taking place in the BOP and part of the riser.

10:54:31 4 Q. Now, the first estimate, which yields 2500 barrels per
10:54:39 5 day, how big is the orifice, the effective orifice size of
10:54:44 6 that?

10:54:44 7 A. Well, that effective orifice is a quarter of an inch,
10:54:48 8 .025 inches.

10:54:48 9 Q. We're talking about the size of this pen cap here?

10:54:53 10 A. Right. It could be an orifice that small.

10:54:56 11 Q. How would you characterize that restriction, extracting
10:55:00 12 all of the BOP, the riser and everything else?

10:55:04 13 A. Well, it's a teeny hole, and therefore it's a very large
10:55:08 14 restriction.

10:55:08 15 Q. Now, if you could take a look at the 1-inch diameter, what
10:55:11 16 is the flow rate for 1 inch?

10:55:14 17 A. 33,000 barrels of oil per day.

10:55:16 18 Q. So if instead of this pen cap, the flow is actually coming
10:55:21 19 through an effective orifice of this quarter, which is about an
10:55:26 20 inch, we're talking 33,000 barrels a day?

10:55:29 21 A. Right. It's an effective orifice of just less than an
10:55:32 22 inch or about an inch.

10:55:34 23 Q. Now, Dr. Wilson, as BP learned more about the well, did it
10:55:42 24 incorporate that data into its models to lessen uncertainty?

10:55:47 25 A. Any modeling exercise involves taking advantage of new

10:55:50 1 information to improve the model, and BP did that.

10:55:52 2 Q. Let's take a look at TREX-9266.1.1.TO.

10:55:57 3 This is an e-mail from Ole Rygg to Kurt Mix, the
10:56:02 4 subject is blowout rates, and it has a number of attachments.

10:56:05 5 You mentioned you knew Ole Rygg or you knew who he
10:56:08 6 was?

10:56:08 7 A. Yes.

10:56:08 8 Q. Tell us what he does.

10:56:12 9 A. Well, he's one of the software developers for Add Energy
10:56:12 10 that's developed a computer code called OLGA, all capital
10:56:22 11 letters, O-L-G-A, which is one of the more sophisticated
10:56:25 12 packages in the business for modeling multi-phase flow in pipes
10:56:29 13 and wells and things like that. He was the consultant on this
10:56:32 14 job and did the simulations.

10:56:34 15 Q. Let's take a look at this attachment here,
10:56:42 16 TREX- 9266.2.1.TO. You'll see here, there is a 3800
10:56:47 17 backpressure measurement here.

10:56:49 18 A. Yes, sir.

10:56:50 19 Q. How did that come about?

10:56:53 20 A. Well, just before this memo was written and computer
10:56:56 21 simulation done, a measurement was finally made at the bottom
10:57:00 22 of the BOP. This subdivided the system into two parts, below
10:57:06 23 the BOP and above it, where there were measurements of pressure
10:57:09 24 at each of those points.

10:57:11 25 Now, they could understand the pressure difference

10:57:12 1 between the reservoir and the bottom of the BOP and use that to
10:57:16 2 model the reservoir flow and well flow up to the BOP using this
10:57:20 3 pressure.

10:57:20 4 Q. So by adding this pressure data, did they narrow some of
10:57:26 5 the uncertainty?

10:57:28 6 A. That's right. They now knew more about to what extent the
10:57:31 7 flow was restricted through the BOP and riser, as opposed to
10:57:34 8 restricted at, say, the connection between the reservoir and
10:57:36 9 the well.

10:57:36 10 Q. So tell us, is there a relationship between flow rate and
10:57:41 11 wellhead pressure?

10:57:43 12 A. Well, in this case, the higher the pressure at this point,
10:57:47 13 the lower the flow rate would be.

10:57:48 14 Q. So it's like a garden hose, where you've got your finger
10:57:52 15 at the tip of the hose?

10:57:55 16 A. Yeah.

10:57:55 17 Q. Now, is it standard or unusual practice to incorporate new
10:58:02 18 data such as pressure into modeling?

10:58:06 19 A. It's standard practice.

10:58:06 20 Q. Let's focus for a second on the flow path column here.
10:58:13 21 There is a number of different cases, annulus, casing, and
10:58:17 22 both. What do you understand this column to represent?

10:58:21 23 A. Well, this is an example of a scenario analysis to deal
10:58:25 24 with uncertainty about which of several possible flow paths
10:58:30 25 were believed to be acting for flow-up through the well.

10:58:33 1 One was through the production casing. That's the
10:58:36 2 one labeled casing here. The other was in the annulus, between
10:58:40 3 the production casing and outside of that. That's referred to
10:58:44 4 as annulus. There is more resistance to flow in the annulus
10:58:49 5 than there is in the casing itself.

10:58:50 6 Q. So they are essentially taking three different possible
10:58:52 7 flow paths and modeling all three?

10:58:53 8 A. The third one, which I failed to mention, is where there
10:58:59 9 is flow-ups in both.

10:59:00 10 Q. They are taking all three, and they're modeling them and
10:59:02 11 giving results?

10:59:03 12 A. Yes, that's right.

10:59:04 13 Q. What are the ranges at 3800-barrel-per-day -- sorry,
10:59:08 14 3800 psi, what are the ranges?

10:59:10 15 A. Well, the low flow rate is that through the annulus. It's
10:59:13 16 37,000. Then, when they look at flow through the production
10:59:17 17 casing, it's 55,000 barrels of oil per day.

10:59:20 18 Q. Then when it's both?

10:59:21 19 A. 74,000 barrels of oil per day.

10:59:24 20 Q. Now, Dr. Wilson -- if we could go to D-25019, slide
10:59:36 21 three -- this is your second opinion: "In the weeks following
10:59:41 22 the blowout, BP's computer models suggested higher well
10:59:45 23 flow rates than those BP reported to the government, the press
10:59:48 24 and the public."

10:59:52 25 Dr. Wilson, is that your opinion?

10:59:53 1 A. Yes.

10:59:53 2 Q. Now, did you help prepare a demonstrative of BP's modeling
10:59:59 3 in the late April and May timeframe, 2010?

11:00:02 4 A. Yes, I did.

11:00:02 5 Q. We've put it up on this easel here. It's D25015C.

11:00:12 6 Dr. Wilson, could you walk us through what this chart
11:00:16 7 here depicts.

11:00:22 8 A. Well, over this period of time, memorialized through
11:00:25 9 PowerPoint presentations, reports, memos and e-mails, were
11:00:31 10 documentation of simulations, computer simulations using these
11:00:35 11 hydraulic flow models for a number of purposes, to look at
11:00:41 12 pressures and temperatures and flow rate. All of those
11:00:44 13 simulations produce a flow rate. Every report -- almost every
11:00:47 14 report I read gave the flow rate for that simulation.

11:00:51 15 So this chart represents all of those simulations
11:00:54 16 done over that period that I assembled for the purposes of this
11:00:59 17 chart.

11:00:59 18 Q. I'm going to approach. Dr. Wilson, there is some little
11:01:03 19 diamonds here. What are these?

11:01:08 20 A. Those are individual computer simulations. That is a
11:01:11 21 particular scenario, a particular condition in the well and
11:01:14 22 reservoir.

11:01:14 23 Q. For example, here, this random diamond sitting right here,
11:01:18 24 which is about April 22nd, is that a single test?

11:01:23 25 A. That's a single computer run.

11:01:24 1 Q. That yielded what, a result in what?

11:01:26 2 A. Looks like 82,000.

11:01:29 3 Q. When you have a range like this, or a line through a
11:01:33 4 number of diamonds, what does that represent?

11:01:35 5 A. Well, many of these are scenario analyses, where a variety
11:01:40 6 of things were changed. We just saw a slide that had six
11:01:43 7 things. It would consist of a vertical line with six numbers
11:01:47 8 on it that were the six numbers in that table.

11:01:49 9 Q. I think you said, and just so we're absolutely clear, what
11:01:54 10 documents and reports did you use to populate, to create this
11:01:57 11 chart?

11:01:57 12 A. It was consistent with e-mails and memos, reports and
11:02:03 13 PowerPoint presentations. I don't think there is any other
11:02:06 14 category of information used.

11:02:08 15 I may point out that when there is a scenario of
11:02:12 16 quite a few simulations, the individual simulations are shown
11:02:15 17 as separate little diamonds or dots on that vertical line;
11:02:20 18 although, in some cases, for reasons I describe later, I didn't
11:02:25 19 do that.

11:02:25 20 Q. Now, there are some red lines here. It's very hard to
11:02:30 21 read, and I apologize to the Court, but one here says
11:02:35 22 5,000 BOPD estimate. It's right down here. Why did you put
11:02:39 23 this line?

11:02:39 24 A. Well, the 5,000 estimate is the one that BP consistently
11:02:43 25 brought forth to the public and press and in reports to the

11:02:47 1 government.

11:02:47 2 Q. We'll focus on this a little more later. Here is a line
11:02:52 3 that says 15,000 BOPD limit, and it goes across here. Why did
11:02:57 4 you put that line on --

11:02:59 5 A. Well, that turns out to be critical flow rate that I
11:03:03 6 already mentioned that Ole Rygg found in simulating the dynamic
11:03:10 7 kill portion of the Top Kill, that at a rate of that high or
11:03:15 8 higher, the Top Kill would fail.

11:03:16 9 Q. I think I walked away too quick because there's a few
11:03:21 10 diamonds here that are actually right on the 5,000 line. We'll
11:03:26 11 get into this a little more, but if you could explain to the
11:03:30 12 Court what you concluded about those results that were on the
11:03:33 13 5,000 line?

11:03:34 14 A. Well, some of these simulations are where you take a
11:03:38 15 measured or assumed pressure at two different points and look
11:03:41 16 at the flow between them. Others were where you would have a
11:03:47 17 target flow rate, what do I have to do to create this? Given
11:03:49 18 these two pressures, how do I get a certain flow rate?

11:03:51 19 An example would be, then, to change the resistance
11:03:54 20 and size. Sort of like screwing down an old-fashioned brass
11:03:59 21 nozzle on a garden hose to get the flow rate down to the rate I
11:04:05 22 want, in this case 5,000.

11:04:06 23 So it was a target simulation. Most of the 5,000
11:04:09 24 simulations here were targeted to be 5,000 by adjusting the
11:04:13 25 resistance in the system.

11:04:14 1 Q. So when you saw evidence of adjusting the resistance in
11:04:18 2 the system, did you see any evidence that those adjustments
11:04:22 3 were based on empirical data?

11:04:24 4 A. No.

11:04:24 5 Q. Dr. Wilson, there are a number of red dots on the chart
11:04:30 6 here, big fat red dots there. What do those represent
11:04:35 7 generally?

11:04:37 8 A. Those represent four of the reports I was just referring
11:04:40 9 to. These are all reports to the government.

11:04:43 10 Q. Let's focus for a second, if you would, on the dot of
11:04:50 11 April 28, 2010.

11:04:54 12 First of all, did you review the deposition of
11:04:56 13 Admiral Landry?

11:04:57 14 A. Yes.

11:04:57 15 Q. Did you watch it?

11:04:59 16 A. Yes.

11:04:59 17 Q. Let's take a look at TREX-92 -- I'm sorry, 9628.1.1.TO.

11:05:06 18 Do you know what this document is?

11:05:09 19 A. Yes, that's something that she drew in her deposition.

11:05:12 20 Q. What did it represent?

11:05:15 21 A. It represented a meeting that she had with Doug Suttles up
11:05:21 22 here on the chart.

11:05:21 23 Q. Right up here in the UAC box?

11:05:26 24 A. Yes.

11:05:26 25 Q. The COO of E&P?

11:05:29 1 A. That's correct.

11:05:29 2 Q. Tell us what happened.

11:05:32 3 A. Well, she referred to a meeting with him in which he had
11:05:36 4 drawn this diagram -- or this diagram was drawn indicating that
11:05:42 5 BP felt the flow rate was between 1,000 and 5,000 barrels of
11:05:47 6 oil per day, with a best estimate, her words, of 2500. He drew
11:05:52 7 this after he said he consulted with somebody in Houston.

11:05:54 8 Q. Okay. So focusing on April 28, 2010, did you see any
11:06:00 9 evidence in this testing that took place before Doug Suttles
11:06:06 10 told Admiral Landry that the range was between 1,000 to 5,000
11:06:10 11 barrels a day, with 2500 barrels a day being the most likely,
11:06:14 12 did you see any support for that?

11:06:15 13 A. Well, I think the chart is pretty clear. These flow rates
11:06:19 14 up until that date are all pretty much higher than that.
11:06:23 15 Almost none are as low or lower. It was clear that the
11:06:29 16 hydraulic modeling did not support such an estimate.

11:06:32 17 Q. Dr. Wilson, I'm going to focus you on the next red dot
11:06:38 18 there, which is placed at May 10, 2010. If we could pull up
11:06:44 19 TREX-9155.1.1.TO.

11:06:50 20 This is an e-mail from Doug Suttles, right up there,
11:06:54 21 to Rear Admiral Landry and Admiral Thad Allen dated May 10,
11:07:01 22 2010. Do you recognize this document?

11:07:03 23 A. Yes, I do.

11:07:03 24 Q. There is an attachment to it, so let's bring that up.

11:07:08 25 91 -- this is sort of a cover e-mail with an

11:07:11 1 attachment of a letter, so let's bring up that letter.

11:07:13 2 9155.2.1.TO. This is a letter from Doug Suttles. What does it

11:07:20 3 say up here?

11:07:21 4 A. "Contains proprietary information."

11:07:23 5 Q. Now, is well data typically proprietary?

11:07:29 6 A. Yes.

11:07:30 7 Q. If you could read the "re" line, what does it say there?

11:07:35 8 A. "MC 252 Response -- United States Coast Guard Request for

11:07:43 9 Proprietary Information Regarding Potential Productive Capacity

11:07:47 10 of the Maconda Well."

11:07:48 11 Q. Obviously, they mean to write Macondo.

11:07:48 12 A. Yes.

11:07:51 13 Q. But what do you understand potential productive capacity

11:07:54 14 to mean?

11:07:54 15 A. Well, they are asking for flow rates.

11:07:59 16 Q. Let's take a look at the interior of this letter,

11:08:04 17 TREX-9155.3.1.TO, and focus on the first paragraph.

11:08:11 18 "If the well continues to flow at its currently

11:08:13 19 estimated rate of 5,000 barrels per day." Did you see, by

11:08:19 20 May 10, Dr. Wilson, which is right here on this chart, by

11:08:25 21 May 10, did you see evidence from BP's flow rate modeling that

11:08:31 22 the current estimate was 5,000 barrels per day?

11:08:36 23 A. Well, once again, if you look at the various scenarios

11:08:39 24 simulated back in here in the period before that, the

11:08:45 25 significant majority of them are higher than 5,000. There is

11:08:49 1 no support for the best estimate of 5,000 in this memo.

11:08:52 2 Q. Let's go on in this memo. "The estimated unrestricted
11:08:59 3 full-stream capacity of the well is approximately
11:09:02 4 55,000 barrels per detail."

11:09:03 5 Let's just show where that is. I'm sorry about
11:09:05 6 the -- I should have probably made these a little bigger.
11:09:09 7 55,000 barrels per day, I think, is right about here.

11:09:12 8 A. That's correct.

11:09:12 9 Q. Now, did you see evidence in BP's hydraulic modeling
11:09:17 10 related to the flow rate that supported the contention that BP
11:09:20 11 was giving to the United States Government that the worst case
11:09:26 12 discharge was 55,000 barrels per day?

11:09:29 13 A. Well, I think you can see on the chart that a large number
11:09:32 14 of simulations in the period before this letter or memo came
11:09:37 15 out are better than 55,000, so they are up in here, as well as
11:09:41 16 some below 55,000.

11:09:43 17 So it's certainly not, according to their hydraulic
11:09:47 18 modeling, extremely rare and representing theoretical downside.

11:09:50 19 Q. You just read something out of the text of this letter
11:09:54 20 here. It says, "This would be extremely rare and represents a
11:09:59 21 theoretical downside."

11:10:00 22 Is the 55,000-barrel-a-day estimate that's contained
11:10:04 23 in this representation to the United States Government, is it
11:10:07 24 extremely rare in the modeling?

11:10:09 25 A. Not in the modeling.

11:10:10 1 Q. Now, let's go to the chart which is also attached to this
11:10:19 2 letter. It's at TREX-9155.4.1.TO.

11:10:24 3 Do you recognize this chart?

11:10:25 4 A. Yes. This was attached to that letter and e-mail.

11:10:29 5 Q. Could you describe for us what this chart depicts.

11:10:33 6 A. This is a PowerPoint slide of a plot of production in
11:10:41 7 barrels of oil per day versus time following the accident. It
11:10:46 8 has two results on it. Each one represents the depletion of
11:10:51 9 the reservoir. As oil is produced, pressures drop and
11:10:55 10 flow rates drop.

11:10:56 11 It does it for two different cases, one starting at
11:10:59 12 what I believe to be 55,000 barrels of oil per day, and the
11:11:02 13 other starting at 5,000 barrels of oil per day.

11:11:05 14 Q. Focusing for a second on the one that starts at
11:11:08 15 5,000 barrels per day, what does BP entitle this estimate?

11:11:13 16 A. They call it a most likely model.

11:11:14 17 Q. Does it purport to rely on actual reservoir conditions?

11:11:18 18 A. Yes, it does.

11:11:19 19 Q. Now, with respect to the red line here, how does BP choose
11:11:23 20 to identify this case?

11:11:26 21 A. They identify this in the slide as worst case model.

11:11:29 22 Q. Again, do they purport to base this representation on,
11:11:34 23 quote, unquote, actual reservoir conditions?

11:11:36 24 A. Yes. They did.

11:11:37 25 Q. In your review of all of these charts, did you have an

11:11:45 1 opportunity to see how this chart was created? Did you look at
11:11:48 2 some metadata, other things?

11:11:50 3 A. Yes.

11:11:50 4 Q. So let's take a look at TREX-1 -- sorry, 9157.1.1.TO.
11:12:07 5 This is an e-mail from Kelly McAughan to Jasper Peijs and
11:12:14 6 others. Kelly McAughan is somewhere down here.

11:12:17 7 A. She's right there.

11:12:18 8 Q. Right there. She sends this e-mail to Jasper Peijs.

11:12:28 9 She says, "Here are the plots that were discussed,"
11:12:28 10 WCD plots. What did you understand WCD plots to mean?

11:12:32 11 A. These are plots of worst case discharge, which I don't
11:12:36 12 think we've defined yet.

11:12:40 13 Q. Let's bring up the next e-mail in the chain. It's at
11:12:45 14 9157.1.2.TO. What does Mr. Peijs say about the modeling that
11:12:51 15 he's received from Kelly McAughan?

11:12:53 16 A. Writing to her, he says, "Both Tony and Andy have seen it
11:12:57 17 and are impressed with the fast turn-around. This is exactly
11:13:00 18 what they asked for. This information is sensitive, please do
11:13:03 19 not forward."

11:13:04 20 Q. So she sends an e-mail -- I'm sorry, Jasper Peijs says
11:13:09 21 both Andy and Tony are satisfied --

11:13:12 22 A. Right.

11:13:13 23 Q. -- and please do not forward this -- or do not pass it
11:13:15 24 around. What does he say? Do not forward.

11:13:26 25 Let's pull up the chart she attached, which is at

11:13:30 1 TREX-9157.2.1.TO.

11:13:34 2 Dr. Wilson, was this chart attached to the e-mail?

11:13:39 3 A. Yes.

11:13:40 4 Q. What does this depict?

11:13:44 5 A. This is an Excel spreadsheet chart showing production
11:13:49 6 through the Macondo Well versus time for six different
11:13:53 7 scenarios, each one starting out at a different initial
11:13:56 8 flow rate and then changing over time as the reservoir is
11:14:01 9 depleted, from the time of the accident into August, with the
11:14:04 10 right-hand column annotating what each of the plots represent
11:14:07 11 in terms of reservoir or other conditions, plus input
11:14:10 12 assumptions at the bottom give universal numbers used in all of
11:14:15 13 the simulations.

11:14:15 14 Q. All right. So up here you have some input assumptions.
11:14:18 15 Some of these might be proprietary data?

11:14:20 16 A. Some of those might be proprietary data, yes.

11:14:23 17 Q. These boxes here, you have the various assumptions to
11:14:26 18 generate these models?

11:14:27 19 A. That's correct.

11:14:28 20 Q. What do they range from in numbers? From the top -- you
11:14:31 21 don't have to read them all, but just from the top to the
11:14:33 22 bottom?

11:14:34 23 A. Well, the top one starts out at 162,000 barrels of oil per
11:14:38 24 day.

11:14:38 25 Q. The bottom?

11:14:39 1 A. At 5,000 barrels of oil per day.

11:14:41 2 Q. So the very bottom one is 5,000 barrels a day.

11:14:44 3 Does it say anywhere on this chart most likely model?

11:14:48 4 A. No. It doesn't say anywhere.

11:14:50 5 Q. What's the worst case discharge on this particular model?

11:14:54 6 A. 162,000, with 110,000 being the next worst.

11:14:58 7 Q. Dr. Wilson, we're going to keep our eye on this chart

11:15:02 8 because it's going to change a little.

11:15:04 9 Let's pull up TREX-9330.1.1.

11:15:09 10 Here we have an e-mail Kelly McAughan to

11:15:13 11 Jasper Peijs, again. If you could just read the entire e-mail.

11:15:17 12 A. Yes, Kelly ran two more simulations. She writes, "Ran the

11:15:22 13 new cases and put them in a graph with the other 6 (total of

11:15:26 14 8 cases now). I attached the Excel file as well so you can

11:15:32 15 edit freely. Let me know if there is anything else!"

11:15:35 16 Q. Now, in your review of this document and other documents,

11:15:38 17 did you see evidence that the chart that Kelly McAughan sent to

11:15:44 18 Jasper Peijs was, in fact, edited freely?

11:15:48 19 A. Yes, I did.

11:15:49 20 Q. Did you help prepare a demonstrative to explain what you

11:15:53 21 observed?

11:15:53 22 A. Yes.

11:15:53 23 Q. Let's pull up TREX- 25011A.

11:15:56 24 If you could help -- using this demonstrative, help

11:15:59 25 walk us through what you discovered.

11:16:04 1 A. Well, the chart on the right is the one we saw attached in
11:16:12 2 that report sent to Admiral Landry and others. The chart on
11:16:16 3 the left is the new chart with eight different scenarios on it
11:16:23 4 sent by Kelly McAughan up the line to Jasper Peijs.

11:16:29 5 It's essentially the same chart we looked at a few
11:16:32 6 minutes ago with two more simulations on it.

11:16:33 7 Q. Did they proceed to edit?

11:16:37 8 A. Yes. Jasper Peijs took the file, edited it in Excel to
11:16:47 9 change scales and to eliminate some of the simulations, leaving
11:16:51 10 only two, one for 5,000 barrels of oil per day and another for
11:16:55 11 55, with a vertical scale now fixed so 55 sort of fills it up.

11:17:02 12 He then imported it into a PowerPoint -- actually, it
11:17:06 13 was in PowerPoint. He edited it in PowerPoint and then added
11:17:11 14 some annotations that we saw on the final slide shown here,
11:17:13 15 such as the two boxes with most likely model at the bottom and
11:17:17 16 worst case model at the top.

11:17:20 17 Q. Now, in the preparation of this demonstrative to explain
11:17:23 18 how this chart was edited, did you have the opportunity to
11:17:29 19 review the Excel files at issue that were actually edited?

11:17:33 20 A. Yes, I did.

11:17:34 21 Q. I'm going to ask you to take a look at TREN-11906. I
11:17:41 22 provided a copy to counsel.

11:17:42 23 Do you recognize that exhibit?

11:17:43 24 A. Yes, I do.

11:17:44 25 Q. Is that the document you used to help generate this chart?

11:17:47 1 A. Yes.

11:17:47 2 Q. Dr. Wilson, let's now move to the next dot on this chart,
11:18:00 3 which is dated May 19th. It's another big red dot.

11:18:08 4 And let's pull up TREX-3218.1.1.TO. This is an
11:18:14 5 e-mail from Doug Suttles to Admiral Landry and Admiral Allen on
11:18:19 6 May 19th.

11:18:19 7 Do you recognize this e-mail?

11:18:20 8 A. Yes, I do.

11:18:21 9 Q. And let's pull up one of the things that -- well, first of
11:18:24 10 all, it says, "Attached below is our most recent work on
11:18:27 11 flow rate estimation."

11:18:28 12 We'll get back to that phrase in a second, but first
11:18:32 13 let's take a look at an attachment. Let's take a look at
11:18:36 14 3218.15.1.TO.

11:18:38 15 Are you familiar with this chart as part of the
11:18:42 16 package that was sent to Admiral Landry and Admiral Allen?

11:18:45 17 A. Yes, I am.

11:18:46 18 Q. And there is an oil and water estimate. And the best
11:18:49 19 guess is how much?

11:18:51 20 A. 5,700 barrels of oil per day.

11:18:53 21 Q. And this is really hard to read, but what's the date on
11:18:57 22 this?

11:18:57 23 A. The 17th of May, 2010.

11:18:59 24 MS. KARIS: Your Honor, I'm going to object to beyond
11:19:03 25 the scope. Dr. Wilson, in his report and his deposition and I

11:19:06 1 think even in his qualifications, established that he looked at
11:19:10 2 hydraulic modeling. This is not based on hydraulic modeling.
11:19:15 3 This is based on surface expression work, which as Mr. Barr
11:19:19 4 said in his opening, is unrelated and unreliable for purposes
11:19:23 5 of estimating flow.

11:19:24 6 Dr. Wilson has not considered surface expression
11:19:27 7 work and said he isn't qualified to do surface expression work,
11:19:31 8 so this is beyond the scope.

11:19:33 9 MR. LI: Your Honor, we're just presenting what they
11:19:36 10 gave to the government. I'm not asking any more questions
11:19:38 11 about it.

11:19:38 12 THE COURT: About this?

11:19:40 13 MR. LI: Yeah. I'm moving on.

11:19:41 14 THE COURT: All right. Let's move on.

11:19:45 15 EXAMINATION BY MR. LI:

11:19:45 16 Q. Let's go back to opening slide, which is TREX-3218.1.1.TO.
11:20:03 17 And it says, "Attached below is our most recent work on
11:20:07 18 flow rate estimation."

11:20:09 19 Have you reviewed, Dr. Wilson, this whole letter?

11:20:11 20 A. Yes, and the two attachments.

11:20:15 21 Q. How many pages are we talking about?

11:20:18 22 A. Eleven pages of attachments.

11:20:19 23 Q. And one page of an e-mail?

11:20:20 24 A. And one page of the e-mail, yes.

11:20:22 25 Q. So based on your review of the hydraulic flow rate

11:20:26 1 modeling that BP did prior to May 19, 2010, did this contain
11:20:31 2 all of BP's most recent work on flow rate?

11:20:36 3 A. It contained very little, if any, of BP's most recent work
11:20:40 4 on flow rate using hydraulic models.

11:20:43 5 Q. Let's take a look at TREX-9156.1.1.TO.

11:20:50 6 This is an e-mail dated May 11th from Mike Mason to a
11:20:53 7 number of people. And the body of the e-mail says, "All,
11:20:58 8 Jasper's feedback, after reviewing with Andy Inglis" -- up here
11:21:02 9 (indicating) -- "is very positive."

11:21:03 10 Did you review this document?

11:21:06 11 A. Yes.

11:21:07 12 Q. Who is Mr. Mason?

11:21:09 13 A. He's the leader of this group marked on the diagram.
11:21:13 14 You're pointing to it. The label on the diagram is petroleum
11:21:18 15 engineers, but a group of people doing production engineering.

11:21:21 16 Q. And he's reporting communications with Andy Inglis?

11:21:25 17 A. That's correct.

11:21:29 18 Q. Let's pull up from TREX-9156.5.1.TO. This is an
11:21:34 19 attachment to Mr. Mason's e-mail.

11:21:38 20 And what do we see here, Dr. Wilson?

11:21:41 21 A. This is one of several attachments looking over a suite of
11:21:45 22 scenarios examining what flow would be like under different
11:21:48 23 conditions in the reservoir and in the well.

11:21:51 24 Q. And this is, in fact, hydraulic modeling, is it not?

11:21:55 25 A. This is hydraulic modeling using the new pressure

11:21:59 1 measurement at the bottom of the well, BOP of 3800 psi.

11:22:02 2 Q. Is this the typical kind of modeling you would see
11:22:07 3 reservoir engineers do?

11:22:08 4 A. In this kind of -- well, this is the typical kind of
11:22:12 5 modeling you see in the presence of some uncertainty about flow
11:22:15 6 path and the like, and so there are a suite of scenarios here
11:22:19 7 to deal with that uncertainty.

11:22:21 8 So the answer is yes, it's a typical kind of result
11:22:24 9 you would expect for this kind of analysis.

11:22:25 10 Q. So Mr. Mason from the petroleum engineering group creates
11:22:28 11 this model. What are the ranges here?

11:22:31 12 A. Well, for the upper diagram, they go from 21 to
11:22:35 13 82,000 barrels of oil per day, and that's with the new pressure
11:22:39 14 measurement at the bottom of the BOP of 3800 psi.

11:22:41 15 And the bottom figure -- the bottom table is 24 to
11:22:47 16 96,000 barrels of oil per day. And that's with the BOP
11:22:51 17 removed.

11:22:51 18 Q. Were these flow rates -- was this particular document
11:22:54 19 provided to the government on that May 19th?

11:22:57 20 A. This document was not provided to the government.

11:22:59 21 Q. Let's take a look at TRES-9156.12.1.TO.

11:23:06 22 This is a FAQ, or a frequently asked question, slide
11:23:11 23 from that package.

11:23:12 24 If you could just read this for us and tell us what
11:23:14 25 you understand it to mean.

11:23:15 1 A. Well, this is self-asked questions, frequently asked
11:23:20 2 questions by the modelers who put the package together.

11:23:23 3 And he says: "What gives you confidence in your
11:23:25 4 understanding of the data?"

11:23:27 5 "We know: The pressure below the BOP." That's the
11:23:30 6 3800 psi thing.

11:23:31 7 "We know: Something about the reservoir. The
11:23:34 8 properties, the fluid characteristics, the pressure of the
11:23:37 9 reservoir and depths."

11:23:38 10 "We know: Something about the current state of the
11:23:40 11 BOP. And geometries in the well." The various flow paths.

11:23:45 12 And, "With this data we can anticipate the expected
11:23:48 13 range of rates."

11:23:48 14 Q. What did you understand Mr. Mason to be saying in this
11:23:53 15 slide pack?

11:23:54 16 A. That we're doing scenario analysis to look at the range of
11:23:59 17 flow rates that is likely to encompass the actual flow rate at
11:24:02 18 the well.

11:24:02 19 Q. Now, Dr. Ballard says that there is no confidence in these
11:24:07 20 rates because the inputs were too uncertain.

11:24:11 21 Do you agree with him?

11:24:11 22 A. No.

11:24:12 23 Q. From your review of the documents, did it appear that BP
11:24:15 24 engineers at the time had confidence in their understanding of
11:24:20 25 the data?

11:24:20 1 A. Yes.

11:24:23 2 MS. KARIS: I object to form, Your Honor, and this is
11:24:25 3 part of the basis for our *Daubert* motion as well. Dr. Wilson
11:24:30 4 is not qualified to speak to what BP engineers believed.
11:24:33 5 That's speaking as to their state of mind.

11:24:37 6 THE COURT: I'll sustain the objection.

11:24:39 7 EXAMINATION BY MR. LI:

11:24:40 8 Q. Dr. Wilson, if we could move on to a topic that we
11:24:43 9 discussed earlier, which you called *targeted rates*. What did
11:24:47 10 you mean by that?

11:24:48 11 A. That's where you describe a flow rate as a target and then
11:24:52 12 adjust resistances in the system to get flow to meet that rate.

11:24:57 13 Q. Let's take a look at TRES-9156.8.1.TO. This is from that
11:25:04 14 same slide pack.

11:25:07 15 "The case for 5,000 bopd at 3800 psi."

11:25:13 16 What is this?

11:25:15 17 A. This is a targeted flow rate calculation done as part of
11:25:18 18 this package. 5,000 didn't pop up in the kind of scenarios we
11:25:23 19 looked at a minute ago in the analysis done by this group.

11:25:27 20 So they targeted 5,000 and looked at what conditions
11:25:29 21 could be used to create a rate of 5,000 barrels of oil per day.

11:25:34 22 Q. How would you have characterize these various
11:25:38 23 restrictions?

11:25:38 24 A. Well, the permeability of 170 -- and permeability refers
11:25:43 25 to the resistance to flow in the reservoir. The permeability

11:25:49 1 of 170 is the lowest that this package used.

11:25:53 2 Q. What about reservoir?

11:25:54 3 A. The reservoir thickness of 10 feet is the lowest, I
11:25:59 4 believe the lowest used in the package. Much lower than in the
11:26:02 5 previous slide or other slides in the package, which were
11:26:05 6 88 feet and 44 feet.

11:26:06 7 Q. Now --

11:26:09 8 A. I'm --

11:26:09 9 Q. I'm sorry. In the interest of time, you reviewed this
11:26:12 10 entire package?

11:26:13 11 A. Yes.

11:26:13 12 Q. What was the lowest flow rate estimate in this entire
11:26:17 13 package?

11:26:18 14 A. 5,000 barrels of oil per day.

11:26:20 15 Q. Now, with this 5,000 barrel per day figure in mind,
11:26:28 16 Dr. Wilson, did you ever see any -- did you ever see Mike Mason
11:26:32 17 from the reservoir engineers expressing doubts or writing
11:26:37 18 e-mails about making the case of 5,000 barrels of oil per day?

11:26:40 19 A. Yes.

11:26:41 20 Q. Let's pull up TRES-3220.1.1. This is an e-mail from
11:26:50 21 Mike Mason to Andy Inglis, up there (indicating). And what
11:26:56 22 does he say, if you could just read the highlighted portion?

11:27:00 23 A. He says, "We should be very cautious standing behind a
11:27:05 24 5,000 barrels of oil per day figure as our modeling shows that
11:27:10 25 this well could be making anything up to approximately 100,000

11:27:14 1 barrels of oil per day."

11:27:14 2 Q. And if you can read the last sentence.

11:27:18 3 A. "We can make the case for 5,000 barrels of oil per day
11:27:21 4 only based on certain assumptions and in the absence of other
11:27:26 5 information, such as a well test."

11:27:27 6 Q. Now, Dr. Wilson, I'm going to take you out of the context
11:27:32 7 of this oil spill for a second and just put you in your office
11:27:35 8 in New Mexico. You get a call from a colleague who says:
11:27:39 9 John, this figure we have been using doesn't sound very good.
11:27:44 10 We have been modeling things that could show up to 20 times
11:27:47 11 higher.

11:27:48 12 You as a professor, what do you do?

11:27:52 13 MS. KARIS: Your Honor, this is beyond the scope of
11:27:55 14 Dr. Wilson's opinion. He specifically said he has not done
11:27:59 15 anything to assess what he would have done, what was
11:28:01 16 reasonable. He strictly looked at what BP's engineers were
11:28:04 17 doing and not communicating his opinion.

11:28:09 18 THE COURT: I don't believe this is in his report, is
11:28:11 19 it?

11:28:12 20 MR. LI: Not this exact phrase.

11:28:14 21 THE COURT: I sustain the objection.

11:28:16 22 MS. KARIS: Thank you.

11:28:17 23 EXAMINATION BY MR. LI:

11:28:17 24 Q. Dr. Wilson, what happened next after Mr. Mason sent this
11:28:22 25 e-mail?

11:28:22 1 A. He got a phone call or an e-mail back from Jasper Peijs,
11:28:27 2 the executive assistant to Andy Inglis as listed on the board,
11:28:32 3 asking him to talk to him. And this was done on a Saturday. I
11:28:36 4 think Mike Mason's e-mail was on a Saturday. The reply was on
11:28:40 5 a Saturday. The meeting was on a Saturday.

11:28:41 6 And he went to see Jasper Peijs and had a
11:28:46 7 conversation about this. And he was asked not to put this kind
11:28:50 8 of thing in writing. And he asked sort of, what do you mean by
11:28:54 9 that? And he got the feeling, pretty clear feeling that it was
11:28:59 10 the big number, that the idea of putting down the 100,000
11:29:04 11 barrel of oil per day number in this e-mail was what was
11:29:07 12 upsetting to the executive assistant.

11:29:09 13 Q. Dr. Wilson, your report discusses an apparent effort to
11:29:13 14 conceal flow rate estimates at BP. In your review of the BP's
11:29:17 15 flow rate modeling documents, did you see other examples of BP
11:29:20 16 making an apparent effort to conceal flow rate estimates?

11:29:23 17 A. Yes. Both internally and externally.

11:29:25 18 Q. Is that good engineering practice?

11:29:28 19 A. No, it's not.

11:29:29 20 Q. Let's take a look at TREX-9475.3.1.TO.

11:29:35 21 This is an e-mail from Richard Lynch, who is up here
11:29:37 22 in the executive range, to Adam Ballard, the forthcoming BP
11:29:44 23 expert.

11:29:46 24 And what does he tell -- what is in this e-mail?

11:29:50 25 A. Well, he says, "We remain in a position where no flow

11:29:55 1 related information can be released internally or externally."

11:30:01 2 Q. Can not releasing flow rates internally or externally
11:30:08 3 produce bad results?

11:30:11 4 A. Well, in the course of normal business, I -- it would be
11:30:15 5 dependent on the management.

11:30:17 6 In the course of an accident investigation like this
11:30:19 7 where you're trying to marshal all sorts of resources to figure
11:30:22 8 out what's going on, I think hiding information is not a good
11:30:26 9 idea.

11:30:27 10 MS. KARIS: Your Honor, we move to strike.

11:30:29 11 Again, Dr. Wilson has said he hasn't look at how
11:30:32 12 source control decisions were made. He hasn't looked at what
11:30:35 13 the government had, what the government relied on, or how the
11:30:38 14 government made its decisions. So what information would or
11:30:40 15 wouldn't be valid is beyond the scope.

11:30:42 16 THE COURT: I overrule the objection, go ahead.

11:30:42 17 EXAMINATION BY MR. LI:

11:30:46 18 Q. Dr. Wilson, let's take a look at TREX-9474.1.2. This is
11:30:52 19 an e-mail from Farah Saidi. She writes to Trevor Hill, who is
11:30:59 20 on this chart right there, "Since the rates are confidential
11:31:03 21 and I was told by Mike Brown not to write anything about it, he
11:31:06 22 advises to call Paul Tooms."

11:31:08 23 Is this one of the e-mails you reviewed in reaching
11:31:10 24 your conclusion that there was evidence that BP attempted to
11:31:14 25 conceal the flow rate?

11:31:17 1 A. Yes, this is one of the things that I talked about in
11:31:19 2 limited communication within and without BP regarding
11:31:23 3 flow rates.

11:31:23 4 Q. In your review of the documents and testimony, including
11:31:26 5 Admiral Allen's testimony, did you see any evidence that BP at
11:31:31 6 the time told the government that they were conceal -- that
11:31:34 7 they were keeping flow rate information confidential?

11:31:36 8 A. No, they never expressed that opinion to any of the
11:31:39 9 government folks that I could see, at least not the decision
11:31:43 10 makers.

11:31:44 11 Q. Let's take a look at --

11:31:45 12 MR. LI: Just so the record is clear, "at least not the
11:31:48 13 decision makers," is what he said.

11:31:50 14 EXAMINATION BY MR. LI:

11:31:50 15 Q. Let's take a look at TREX-9164.1.1.TO. This is an e-mail
11:31:57 16 from Paul Tooms to a number of folks. It says, "The purpose of
11:32:03 17 this note was meant to put a limit on the people outside the
11:32:08 18 circle of trust getting the data."

11:32:10 19 In light of this e-mail, did you see evidence that
11:32:14 20 government officials were in or outside of the circle of trust?

11:32:17 21 A. They were out.

11:32:18 22 Q. Now, you've worked with the government before, have you
11:32:21 23 not?

11:32:21 24 A. Yes.

11:32:21 25 Q. Is it a good engineering practice to keep information from

11:32:24 1 the government?

11:32:26 2 MS. KARIS: Your Honor, objection. Again, it's beyond
11:32:28 3 the scope.

11:32:29 4 MR. LI: I'll move on, Your Honor.

11:32:30 5 THE COURT: Okay.

11:32:32 6 EXAMINATION BY MR. LI:

11:32:32 7 Q. Are you familiar with the deposition of Marcia McNutt?

11:32:35 8 A. Yes.

11:32:36 9 Q. What did she say about the circle of trust?

11:32:39 10 A. "I guess I'm not in the circle of trust."

11:32:41 11 Q. I want to return to the bar chart here, D25015. Let's
11:32:59 12 look at the last red dot there that's dated May 24th. Let's
11:33:06 13 pull up TREX-1651.1.1.TO.

11:33:11 14 This is a letter that BP sent to Congressman Markey.
11:33:17 15 I'm going to go very quickly.

11:33:20 16 Dr. Wilson, are you aware that this letter forms the
11:33:23 17 basis of BP's guilty plea?

11:33:26 18 A. Yes.

11:33:26 19 Q. If we could the pull up TREX-52673.17.3, this is from BP's
11:33:35 20 factual allocution in their guilty plea. Did you review this
11:33:41 21 in forming part of your opinion?

11:33:42 22 A. Yes.

11:33:42 23 Q. So it says, "BP falsely suggested in it's May 24th letter
11:33:47 24 that the Unified Command's flow rate estimate of 5,000 barrels
11:33:53 25 of oil per day was the most scientifically informed judgment."

11:33:55 1 I'm just going to stop right there. Based on your
11:33:58 2 review of all the evidence in the case, do you agree or
11:34:02 3 disagree with that statement?

11:34:07 4 MS. KARIS: Your Honor --

11:34:09 5 MR. LI: Let me rephrase that.

11:34:10 6 THE COURT: I sustain that objection.

11:34:11 7 MS. KARIS: Thank you.

11:34:12 8 THE COURT: I assume that was an objection.

11:34:14 9 MS. KARIS: Yes.

11:34:15 10 MR. LI: It was well stated. I heard it loud and
11:34:19 11 clear.

11:34:21 12 MS. KARIS: Sometimes the best objections are silent.

11:34:24 13 MR. LI: Well, it was a good one.

11:34:26 14 EXAMINATION BY MR. LI:

11:34:26 15 Q. Let me just rephrase the question. Based on your review
11:34:29 16 of the documents, was 5,000 barrels per day the most
11:34:32 17 scientifically informed judgment of flow rate?

11:34:35 18 A. No, it was not. You can see many computer simulations
11:34:39 19 higher than that appear.

11:34:41 20 Q. I would like to turn to your third opinion. Let's pull up
11:34:46 21 D-25019, slide four. Thank you.

11:34:51 22 "BP knew or should have known from its modeling
11:34:53 23 efforts that the Top Kill was very likely to fail because the
11:34:56 24 well flow rate exceeded a 15,000-barrels-per-day threshold
11:35:02 25 rate."

11:35:02 1 Now, another witness will testify about Top Kill and
11:35:06 2 what it involves, so we're not going to go into depth on this,
11:35:10 3 but if you could just explain very briefly what Top Kill is?

11:35:14 4 A. Top Kill consisted of two stages. One was to inject mud
11:35:18 5 at the wellhead through the bottom of the BOP, down the
11:35:24 6 wellbore, and have weight and rate of mud be sufficient to
11:35:30 7 overcome the momentum of the well due to the up-flowing
11:35:33 8 hydrocarbon.

11:35:33 9 The second stage was to also inject obstacles, junk,
11:35:40 10 in a junk shot into the well to catch in various bits and
11:35:44 11 pieces in the BOP, and therefore allow a greater probability
11:35:48 12 that mud would go down and arrest the well, rather than come
11:35:51 13 up.

11:35:51 14 Q. Let's just keep those two things separate for a second.

11:35:54 15 So we've got the dynamic kill or a momentum kill, and
11:35:57 16 we have a junk shot. Did you see any testing in your review of
11:36:02 17 the evidence at all, any BP modeling at all about the junk
11:36:02 18 shot?

11:36:06 19 A. There was no modeling of the junk shot.

11:36:07 20 Q. Did you see testing relating -- or documents relating to
11:36:12 21 testing for the dynamic kill?

11:36:14 22 A. There was hydraulic modeling of the dynamic kill.

11:36:18 23 Q. Is the dynamic kill dependent on flow rate?

11:36:22 24 A. Yes.

11:36:22 25 Q. Why is that?

11:36:25 1 A. Well, one name is momentum kill. If you know anything
11:36:29 2 about momentum, it has to do with velocity, and velocity has to
11:36:33 3 do with flow rates. So the memorandum kill is very much
11:36:37 4 dependent on flow rates.

11:36:38 5 Q. So you need enough momentum to fight the other momentum to
11:36:42 6 win?

11:36:42 7 A. You need enough force to overcome the momentum of the
11:36:45 8 upward flowing well.

11:36:46 9 Q. Is the viability of the junk shot, is there any impact of
11:36:52 10 flow rate on the viability of junk shot?

11:36:56 11 A. Well, in an indirect sense in that there are -- it's a
11:37:02 12 higher flow rate. It's more likely that there are fewer
11:37:03 13 obstructions or bigger openings in the BOP, less for the junk
11:37:08 14 to catch on, so a higher flow rate would suggest a lower
11:37:13 15 probability that the junk shot would succeed.

11:37:14 16 Q. What modeling did you see about the momentum or dynamic
11:37:18 17 kill?

11:37:23 18 A. Ole Rygg of Add Energy did modeling of the momentum kill.
11:37:26 19 There was some earlier modeling, but that was modeling at the
11:37:31 20 time of the design, and it was the modeling relied on BP and
11:37:33 21 others for making a decision about the momentum kill.

11:37:35 22 Q. What did Ole Rygg determine?

11:37:38 23 A. He determined that if the flow rate was as high as
11:37:42 24 15,000 barrels of oil per day, then it would not succeed. That
11:37:47 25 you simply couldn't overcome the upward momentum of the well.

11:37:51 1 Q. Let's take a look at TREX-9132.2.1. Are you familiar with
11:37:56 2 this document?

11:37:57 3 A. Yes, I am.

11:37:58 4 Q. I'm going to skip ahead and just take at a look here.
11:38:02 5 "Knowledge of the flow rate is needed to form a view of the
11:38:05 6 probability of success, as is knowledge of the position of flow
11:38:14 7 restrictions." Do you agree or disagree with that statement?

11:38:16 8 A. Oh, I agree.

11:38:17 9 Q. Then what is this? If you could just read this, please.

11:38:21 10 A. This next is one of five bullets: "Modeling indicates
11:38:26 11 that a dynamic kill cannot be successfully executed if the oil
11:38:30 12 flow rate is 15,000 barrels of oil per day."

11:38:33 13 Q. Now, there's a number of e-mail exchanges about the
11:38:42 14 Top Kill. I'm going to ask you to look at 9250.2.2.TO.

11:38:51 15 If you could just focus on -- let's set the stage a
11:38:56 16 little for the Court. There is a wellhead pressure drop of
11:38:58 17 about 700 psi, correct?

11:39:00 18 A. At the pressure transducer below the BOP, the pressure had
11:39:05 19 changed and dropped.

11:39:05 20 Q. What does Ole Rygg say about one of the possibilities for
11:39:11 21 what would account for that pressure drop?

11:39:13 22 A. He -- I'll paraphrase it first. He's suggesting that if
11:39:15 23 the pressure drops, it's because there's less resistance to
11:39:20 24 flow. He puts it this way: "This means a large hole in the
11:39:23 25 BOP stack has less chance of ever being able to do a dynamic

11:39:31 1 Top Kill, since the required rate through the stack to achieve
11:39:33 2 the required pressure drop is too high."

11:39:35 3 Q. Then what he is saying next?

11:39:38 4 A. "Be aware that we are working on the 5,000 barrel of oil
11:39:42 5 per day case. That could be too optimistic."

11:39:45 6 Q. Let's take a look at TREX-9250.1.2. This is part of the
11:39:51 7 chain in the e-mail. Let's read the first paragraph. "The
11:39:56 8 apparent reliance in Ole's e-mail on the 5,000 barrels per day
11:40:02 9 number, which has little if no origin, is concerning. From all
11:40:05 10 the different ways we have looked at flow rate, 5,000 barrels
11:40:08 11 per day would appear to err on the low side."

11:40:11 12 Now, Dr. Wilson, from all of the evidence you
11:40:14 13 reviewed, do you agree or disagree with Mr. Lockett, a BP
11:40:18 14 engineer, would you agree or disagree with his statement?

11:40:21 15 A. Well, if you look at hydraulic modeling, which is what
11:40:25 16 Tim Lockett does, at the date preceding the time of this note,
11:40:30 17 the significant majority of those computer simulations are
11:40:34 18 greater than 5,000 barrels of oil per day.

11:40:36 19 Q. Then a second phrase here, "Maybe I'm being pessimistic,
11:40:40 20 but my first thought when I heard of this fall in pressure
11:40:45 21 upstream of the BOP is that this is bad news rather than good.
11:40:47 22 My thought would go to reduced restrictions within the BOP."

11:40:50 23 Do you agree or disagree with that as at least one
11:40:53 24 possibility?

11:40:55 25 A. Yes, I would agree with that.

11:40:56 1 Q. Now, Dr. Wilson, in your review of the flow rate modeling
11:41:02 2 that BP had done prior to this date, did you see any evidence
11:41:04 3 in your review that the likelihood of success for the Top Kill
11:41:09 4 was 60 to 70 to 80 percent?

11:41:14 5 A. There is no evidence for that in the hydraulic modeling.

11:41:16 6 Q. Did you see any evidence suggesting that the Top Kill was
11:41:19 7 a slam dunk?

11:41:22 8 A. I saw no evidence that it was a slam dunk. And, in fact,
11:41:26 9 I would be quite worried about the Top Kill chance of success
11:41:30 10 after reviewing the hydraulic modeling.

11:41:33 11 MS. KARIS: I'm going to move to strike. Again, the
11:41:35 12 chance of success of Top Kill is beyond the scope of
11:41:38 13 Dr. Wilson's opinions. In fact, he specifically told me in his
11:41:41 14 deposition, "I did not evaluate the dynamic kill itself. I
11:41:45 15 have no prior experience evaluating dynamic kills." That's at
11:41:50 16 page 122 of his deposition.

11:41:52 17 Likewise, when I asked him if he has any prior
11:41:55 18 will experience with momentum kills, answer, "I do not. I've
11:41:59 19 never done it prior in this case. I've never actually
11:42:01 20 evaluated the momentum kill even in this case beyond looking at
11:42:05 21 the estimates done by the modelers."

11:42:08 22 That's why I object to him speaking to that
11:42:11 23 estimate --

11:42:12 24 THE COURT: Let me ask Mr. Lee to respond.

11:42:14 25 MR. LI: Yes, Your Honor. We're just asking, based on

11:42:17 1 what he looked in the modeling and based on looking at what
11:42:20 2 Ole Rygg's modeling was, did you see any evidence --

11:42:21 3 THE COURT: The problem is it sounds like it wasn't in
11:42:23 4 his report or something that he's opined on.

11:42:26 5 MR. LI: It is in his report, Your Honor. He says that
11:42:27 6 BP knew or should have known that the Top Kill had a very low
11:42:31 7 chance of success. It's his third opinion.

11:42:35 8 THE COURT: All right. I'm not going to strike his
11:42:38 9 testimony, but let's move on.

11:42:39 10 MR. LI: Yes, sir. In fact, I'm moving on.

11:42:42 11 EXAMINATION BY MR. LI:

11:42:43 12 Q. Let's take a look at slide five of D25019, which is your
11:42:47 13 last opinion. "After the Top Kill failed, BP was informed that
11:42:51 14 the failure was most likely due to flow rate."

11:42:54 15 Let's just cut right to the chase. Let's look at
11:42:59 16 TREX-9160.1.1.

11:43:02 17 Do you recognize this document?

11:43:04 18 A. Yes, I do.

11:43:05 19 Q. This is a text message from Kurt Mix to John Sprague dated
11:43:11 20 May 27, 2010. It says -- what does it say, Dr. Wilson?

11:43:16 21 A. It says, "Too much flow rate -- over 15000 and too large
11:43:21 22 an orifice."

11:43:21 23 Q. What do you understand that to mean?

11:43:25 24 A. Well, he was concluding, based on the failure of the
11:43:31 25 momentum kill that they attempted up to that point in time on

11:43:34 1 the rig, that the flow rate was too high, and that's why it had
11:43:37 2 not succeeded. And refers to then over 15,000, using
11:43:42 3 Ole Rygg's simulation results as a guidepost, that the
11:43:47 4 flow rate must be over 15,000, or it wouldn't have failed.

11:43:50 5 Q. Did Wild Well Control come to the same conclusion?

11:43:53 6 A. Yes, they did.

11:43:53 7 Q. Kurt Mix is at least one of the members of the Hydraulic
11:43:56 8 Kill Team, correct?

11:43:59 9 A. Yes, he is.

11:44:01 10 Q. Now, let's take a look -- we're about to wrap up. Let's
11:44:05 11 take a look at -- well, strike that.

11:44:08 12 Now, Dr. Wilson, have you reviewed various statements
11:44:12 13 made by BP to the government, the press and the public about
11:44:16 14 flow rate?

11:44:16 15 A. Yes, I have.

11:44:16 16 Q. Did you prepare a chart summarizing some of those
11:44:19 17 statements?

11:44:20 18 A. Yes.

11:44:20 19 Q. Let's bring up D-25018A.

11:44:26 20 What the does this chart represent?

11:44:27 21 A. This is a summary of those times at which BP offered
11:44:34 22 5,000 barrels of oil per day, or something close to it, as a
11:44:37 23 best estimate or most likely estimate.

11:44:39 24 Q. Now, to be fair, some of these statements include
11:44:44 25 statements that this is NOAA's estimate, or that it's UAC's

11:44:49 1 estimate; is that correct?

11:44:49 2 A. That is correct.

11:44:50 3 Q. In your review of these press reports in which 5,000 or
11:44:56 4 close to 5,000 barrels per day was described as best estimate
11:45:02 5 from April 28th all the way through May 24th, 2010, did you
11:45:06 6 ever see in any of those press statements representatives from
11:45:11 7 BP standing up and saying, this is incorrect, it's actually not
11:45:17 8 5,000 barrels per day, all of our modeling shows something
11:45:20 9 different? Did you ever see that?

11:45:22 10 A. Not to the public or to the press or to the government.

11:45:29 11 MR. LI: Your Honor, I have no more questions.

11:45:31 12 THE COURT: Okay.

11:45:35 13 I imagine you're going to be a few minutes.

11:45:37 14 MS. KARIS: A few, Your Honor.

11:45:38 15 THE COURT: Why don't we go ahead and break for lunch,
11:45:40 16 and come back at 1 o'clock. Okay.

11:45:43 17 MS. KARIS: Thank you.

11:45:44 18 THE DEPUTY CLERK: All rise.

19 (WHEREUPON, at 11:45 a.m. the Court was in luncheon
20 recess.)

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