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UNITED STATES DISTRICT COURT  
EASTERN DISTRICT OF LOUISIANA

IN RE: OIL SPILL BY THE OIL RIG	*	Docket 10-MD-2179
DEEPWATER HORIZON IN THE	*	
GULF OF MEXICO ON APRIL 20, 2010	*	Section J
	*	
Applies to:	*	New Orleans, Louisiana
	*	
Docket 10-CV-02771,	*	April 4, 2013
IN RE: THE COMPLAINT AND	*	
PETITION OF TRITON ASSET	*	
LEASING GmbH, et al	*	
	*	
Docket 10-CV-4536,	*	
UNITED STATES OF AMERICA v.	*	
BP EXPLORATION & PRODUCTION,	*	
INC., et al	*	
	*	
* * * * *		

DAY 22, MORNING SESSION  
TRANSCRIPT OF NONJURY TRIAL  
BEFORE THE HONORABLE CARL J. BARBIER  
UNITED STATES DISTRICT JUDGE

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1 MORNING SESSION

2 (April 4, 2013)

3 \* \* \* \* \*

07:43 4 **THE DEPUTY CLERK:** All rise.

08:10 5 **THE COURT:** Good morning, everyone. You may be  
08:10 6 seated.

08:10 7 Mr. Godwin?

08:10 8 **MR. GODWIN:** Yes, Your Honor. Don Godwin for  
08:10 9 Halliburton, Judge.

08:10 10 Earlier in the week, Judge, we played the video  
08:10 11 clips for John Gisclair and Kurt Kronenberger. And I gave to,  
08:11 12 Your Honor, to your folks here, Stephanie, the hard copies.  
08:11 13 I've got the flash drive of that testimony. I'd like to offer  
08:11 14 that into evidence at this time.

08:11 15 **THE COURT:** All right. Without objection, that's  
08:11 16 admitted.

08:11 17 **MR. GODWIN:** Thank you, Judge.

08:11 18 **MR. BROCK:** Good morning, Your Honor, Mike Brock for  
08:11 19 BP. Two matters, briefly.

08:11 20 First of all, as Your Honor is aware,  
08:11 21 Halliburton served on the plaintiffs last night additional  
08:11 22 discovery materials, including documents that relate to  
08:11 23 Mr. Roth, Mr. Probert, and Mr. Quirk. Included in these  
08:11 24 materials are some test results we certainly would have used in  
08:11 25 deposition and trial. I'm not raising that issue right now,



08:11 1 except to say we have before the Court motions for sanctions.  
08:11 2 We don't really have the desire to furnish an additional brief  
08:11 3 on these materials to the Court, but just would ask that this  
08:11 4 late production be considered as part of our -- as part of the  
08:11 5 facts that relate to our motion for sanctions.

08:12 6 **THE COURT:** Yes. Thank you. I received -- I'm not  
08:12 7 sure what time it was delivered. But Mr. Langan, I guess,  
08:12 8 hand-delivered the first letter yesterday evening.

08:12 9 **MR. LANGAN:** 5:00, Your Honor.

08:12 10 **THE COURT:** I saw it right after we recessed  
08:12 11 yesterday evening, raising the issue of this recent discovery  
08:12 12 of production by Halliburton.

08:12 13 And Mr. Langan's letter, in the last paragraph,  
08:12 14 requested that the Court order Halliburton to produce, or log,  
08:12 15 no later than 8:00 a.m. today, Thursday, April 4th, any as yet  
08:12 16 unproduced documents pertaining to any testing -- to the  
08:12 17 testing of any cement relevant to the Macondo well, including  
08:12 18 any cement carried over from the Kodiak well and any testing of  
08:12 19 rig samples or lab samples.

08:13 20 In response to Mr. Langan's letter, I then  
08:13 21 e-mailed everyone, particularly Halliburton's counsel, inviting  
08:13 22 them to respond by 8:00 last night.

08:13 23 We did get a response by e-mail from Mr. Godwin  
08:13 24 at about 8:00 last night. And after reading that response, I  
08:13 25 instructed that I was ordering Halliburton to comply with the

08:13 1 request in Mr. Langan's last paragraph, which I just read.

08:13 2 The only variation is that I allowed  
08:13 3 Halliburton -- I ordered Halliburton to make this production no  
08:13 4 later than 12:00 noon today. That occurred somewhere around  
08:13 5 9:00 last night, and I don't have the exact time.

08:13 6 Around that same time, I received a second -- a  
08:14 7 reply from Mr. Langan that I had not seen when I issued my  
08:14 8 e-mail order. I don't know whether that changes anything or  
08:14 9 not or if we need to revisit.

08:14 10 Mr. Langan, do you want to come down and talk  
08:14 11 about this, and then I'll let Mr. Godwin respond.

08:14 12 **MR. LANGAN:** Your Honor, I think the same relief is  
08:14 13 appropriate. Our second letter -- obviously, these events  
08:14 14 unfolded pretty quickly. But the second letter serves the  
08:14 15 purpose of pointing out that there was actually a prior order  
08:14 16 of this Court from September of 2011 that required this  
08:14 17 production.

08:14 18 So the fact that this stuff was produced  
08:14 19 yesterday for the first time is a problem, for the additional  
08:14 20 reason that it violated Record Document 4128, which required  
08:14 21 production of precisely these materials, dated September 27th,  
08:14 22 2011.

08:14 23 So that was the point we wanted to make.

08:14 24 **THE COURT:** I guess my question for you now is, are  
08:14 25 you satisfied with the order I issued last night, or are you

08:14 1 requesting any further relief at this time?

08:14 2 **MR. LANGAN:** No, Your Honor. Beyond what Mr. Brock  
08:14 3 has just said, I'm not sure we are.

08:15 4 **MR. BROCK:** I had one other thing I wanted to ask  
08:15 5 for, Your Honor.

08:15 6 And that is that out of the production that we  
08:15 7 received yesterday, which is quite voluminous, there is a  
08:15 8 document that we would like to use today in the  
08:15 9 cross-examination of Mr. Beck. By Halliburton's numbering  
08:15 10 system, it's Halliburton -- for the parties' convenience --  
08:15 11 1352434. And we have attached a new TREX number to this  
08:15 12 document, 48285. I know Your Honor has a rule about producing  
08:15 13 exhibits that we intend to use at trial before the trial  
08:15 14 starts, including rebuttal materials. But we believe that this  
08:15 15 is an exceptional circumstance that would justify our use of  
08:15 16 this exhibit.

08:15 17 **THE COURT:** All right. Let me hear from Mr. Godwin.

08:15 18 **MR. GODWIN:** Thank you, Your Honor, for giving me an  
08:15 19 opportunity to respond briefly.

08:15 20 Judge, Don Godwin for Halliburton.

08:16 21 Judge, last week when we and my law firm --

08:16 22 **THE COURT:** Excuse me for one second. Ben?

08:16 23 **MR. ALLUMS:** Yes, sir.

08:16 24 **THE COURT:** One second, Mr. Godwin.

08:16 25 **(OFF THE RECORD)**

08:16 1 THE COURT: All right. Go ahead, Mr. Godwin.

08:16 2 MR. GODWIN: Thank you, Your Honor.

08:16 3 Judge, as I pointed out in the letter yesterday,  
08:16 4 and with the file and the e-mail that I circulated to everyone,  
08:16 5 when my law firm was made aware last week of the documents that  
08:16 6 we provided yesterday by way of production, and when the  
08:16 7 privilege log for the four documents that we put there on the  
08:16 8 log -- not very many documents at all.

08:17 9 When we learned of those, we immediately looked  
08:17 10 into it, saw it for the first time, and then we went about  
08:17 11 dispatching Jenny Martinez and a group of others to take look  
08:17 12 at them and go through them.

08:17 13 I made a decision with the client that we needed  
08:17 14 to turn those over immediately. Because, Judge, I've been  
08:17 15 doing this for 40 years, trying lawsuits all over the country,  
08:17 16 and I understand and take very seriously my obligations to  
08:17 17 supplement discovery on a prompt basis when it's uncovered.

08:17 18 We could have sat back and done nothing, but  
08:17 19 that's not who we are. We immediately responded.

08:17 20 The client takes seriously, as well, its  
08:17 21 obligation to supplement. We did supplement, Judge, and we  
08:17 22 provided the privilege log, and we did that.

08:17 23 Then whenever -- yesterday, when we got the  
08:17 24 letter from Andy, Mr. Langan, asking for information, as you  
08:17 25 read there, Judge, in the last paragraph of his letter, it, in

08:17 1 fact, Judge, requested -- and I submit this to you  
08:17 2 respectfully -- it requested information that was not requested  
08:18 3 before, such as the testing on the Kodiak well.

08:18 4 I'm not here to argue that here this morning or  
08:18 5 disagree or be disrespectful to the Court in any way. But  
08:18 6 they're asking for information that was beyond what was  
08:18 7 requested in discovery before.

08:18 8 It's my client's position, Judge, that we have  
08:18 9 fully complied and we provided all information that my law firm  
08:18 10 is aware of, certainly we know about, in response to all  
08:18 11 discovery.

08:18 12 And then when I received the letter from Andy  
08:18 13 wanting additional information, my thought this morning was I  
08:18 14 was going to ask Andy -- when he's talking about cement  
08:18 15 relevant to the Macondo well, I want a clarification about what  
08:18 16 they're after.

08:18 17 When Your Honor wrote me last night, through  
08:18 18 Ben, and said, "Get it in by tomorrow at noon," I immediately,  
08:18 19 Judge, at 9:30 last night, dispatched four lawyers to the  
08:18 20 Broussard lab. And they worked all night, along with another  
08:18 21 group of my folks, along with Jenny Martinez and others. I've  
08:18 22 been up most all night myself, making sure that we've looked at  
08:19 23 everything we can.

08:19 24 We're going to be prepared to respond,  
08:19 25 Your Honor, by noon today, per your order. We take anything

08:19 1 you say very seriously. We're going to be prepared to respond  
08:19 2 today and provide all of the information, the documents, that  
08:19 3 we can gain access to, if any, although we think they've all  
08:19 4 been produced. But if not, by noon today we're going to be  
08:19 5 able to say that.

08:19 6 Further, with the understanding, Your Honor,  
08:19 7 that if there's something that we've not been able to find or  
08:19 8 whatever it may be, I'm going to tell you that in writing. I'm  
08:19 9 not going to leave anything to guess, I'm not going to leave  
08:19 10 anything to doubt. Because I would never in my lifetime be  
08:19 11 disrespectful of this Court or not do what's required under the  
08:19 12 rules, nor would I allow my client to do that.

08:19 13 So we take very seriously what you've said.  
08:19 14 We're going to comply.

08:19 15 But I would say to you, Judge, that what Andy --  
08:19 16 Mr. Langan has asked us to produce today by noon goes far  
08:20 17 beyond what's been asked before. But I'm not whining about it,  
08:20 18 I'm not here asking you to give me more time or whatever. I'm  
08:20 19 saying we're going -- we've got people working on at this very  
08:20 20 moment trying to comply with your request, Judge.

08:20 21 **THE COURT:** All right. Thank you.

08:20 22 **MR. GODWIN:** Thank you, Your Honor.

08:20 23 **THE COURT:** Anybody want to respond?

08:20 24 Mr. Langan?

08:20 25 **MR. LANGAN:** Your Honor, we think your order ought to

08:20 1 stand as it is.

08:20 2 **THE COURT:** Respond to the issue of whether these  
08:20 3 documents should have been produced earlier.

08:20 4 **MR. LANGAN:** Well, I think so, because the  
08:20 5 September 27th, 2011 order covers, we believe, this material as  
08:20 6 quoted in the letter we sent last night. I think it was  
08:20 7 Judge Shushan indicated --

08:20 8 **THE COURT:** Is that Judge Shushan's order?

08:20 9 **MR. LANGAN:** I believe it is.

08:20 10 **THE COURT:** Okay.

08:20 11 **MR. LANGAN:** And it says that: "HESI reports that  
08:20 12 documents related to the non-privileged post-incident  
08:20 13 activities which have not been produced were of two types:  
08:20 14 One, documents which were recently discovered; and, two,  
08:20 15 documents which were inadvertently withheld from production and  
08:21 16 logged as privileged. HESI contends that because it agreed to  
08:21 17 produce these documents, no order is required."

08:21 18 Then the order goes on to say: "By Wednesday,  
08:21 19 October 12th, 2011, HESI shall complete production of these  
08:21 20 documents."

08:21 21 We think they fall within that ambit,  
08:21 22 Your Honor. We think we've asked for documents related to the  
08:21 23 cement testing related to the Macondo well.

08:21 24 **THE COURT:** Okay. I understand.

08:21 25 **MR. GODWIN:** May I respond very briefly, Judge?

08:21 1           **THE COURT:** Go ahead.

08:21 2           **MR. GODWIN:** Thank you, Your Honor, for allowing me  
08:21 3 to do so.

08:21 4                         Judge, even with what Andy just read, there's  
08:21 5 absolutely nothing there in that order that Judge Shushan  
08:21 6 entered. And I was aware of that order and I understood it,  
08:21 7 and my client understood it. There's nothing there regarding  
08:21 8 the Kodiak well, and that's the big issue --

08:21 9           **THE COURT:** Well, here's the problem with that,  
08:21 10 Mr. Godwin.

08:21 11           **MR. GODWIN:** Yes, Judge.

08:21 12           **THE COURT:** It's clear that you knew, your client  
08:21 13 knew, everybody's known for some time now that the Kodiak well  
08:21 14 and the Kodiak cement was implicated in this case.

08:22 15                         Now, there can be arguments about what the Court  
08:22 16 should make of that evidence, but there's no doubt that that  
08:22 17 evidence is arguably relevant to this case, to the Macondo  
08:22 18 well, because the undisputed evidence is that the underlying or  
08:22 19 initial cement blend that was used on Macondo was left over  
08:22 20 from Kodiak.

08:22 21           **MR. GODWIN:** Yes, Your Honor.

08:22 22           **THE COURT:** So to say that you or your client had no  
08:22 23 knowledge that this evidence could be relevant and should have  
08:22 24 been produced in this case, I can't understand or accept that.  
08:22 25 That's number one.



08:22 1           Number two, I've got to tell you, with no  
08:22 2           disrespect to you, personally, but I'm very troubled in this  
08:22 3           case by -- this has become a pattern now of Halliburton. This  
08:22 4           is not the first time.

08:22 5           I mean, this has been drip, drip, drip, drip,  
08:23 6           that we've seen in this case, where evidence all of a sudden is  
08:23 7           discovered -- whether it be a bucket of cement, whether it be  
08:23 8           documents -- that should have been produced, clearly, long ago,  
08:23 9           has not been produced and now all of a sudden it's discovered  
08:23 10          and now we're all faced with this issue.

08:23 11          It troubles me greatly. I don't know what I'm  
08:23 12          going to do. There's a pending motion for sanctions. I'm not  
08:23 13          making any ruling on that now. I don't have to because this is  
08:23 14          a bench trial. But I've got to tell you, it's very troubling  
08:23 15          the way Halliburton has handled this entire matter. I'll just  
08:23 16          leave it at that.

08:23 17                 **MR. GODWIN:** May I --

08:23 18                 **THE COURT:** No. Let's just resume the trial. I did  
08:23 19                 talk to Judge Shushan this morning -- one more thing.

08:23 20                 **MR. GODWIN:** Yes, Your Honor.

08:23 21                 **THE COURT:** I've asked her to -- she's going to be  
08:23 22                 meeting with counsel today when we conclude for a marshaling  
08:23 23                 conference.

08:23 24                 **MR. GODWIN:** Yes, Judge.

08:23 25                 **THE COURT:** I've asked her to further discuss this

## FREDERICK E. BECK - CROSS

08:23 1 document production with you-all and make sure that if there  
08:24 2 are any privilege issues that the Court has to rule on, she'll  
08:24 3 be looking at those first for me, and we'll go forward from  
08:24 4 there. Okay.

08:24 5 **MR. LANGAN:** Thank you, Your Honor.

08:24 6 **MR. GODWIN:** Judge, thank you for giving me an  
08:24 7 opportunity to respond.

08:24 8 **MR. BROCK:** Judge, are we okay --

08:24 9 **THE COURT:** Yes, you can use that document -- or  
08:24 10 those documents, yes.

08:24 11 Dr. Beck, you're still under oath, sir. Okay?

08:24 12 **THE WITNESS:** Yes, sir.

08:24 13 **THE COURT:** Good morning, by the way.

08:24 14 **THE WITNESS:** Good morning.

08:24 15 **MR. REGAN:** Good morning, Your Honor.

09:20 16 (WHEREUPON, **FREDERICK E. BECK**, having been previously  
09:20 17 duly sworn, testified as follows.)

**CROSS-EXAMINATION**

08:24 19 **BY MR. REGAN:**

08:24 20 **Q.** Good morning, Dr. Beck.

08:24 21 **A.** Good morning.

08:24 22 **Q.** I'm Matt Regan. I represent BP. I have you on  
08:24 23 cross-examination.

08:24 24 Dr. Beck, you produced an expert report that was  
08:24 25 about 121 pages long; correct?

## FREDERICK E. BECK - CROSS

08:24 1 A. I don't remember the page count, but I did produce an  
08:24 2 expert report, yes.

08:24 3 Q. Substantial report?

08:24 4 A. I thought so, yes.

08:24 5 Q. And you produced about a 60-page or substantial rebuttal  
08:24 6 report; correct?

08:24 7 A. Correct.

08:24 8 Q. Yesterday you testified for more than five hours; correct?

08:24 9 A. Yes.

08:25 10 Q. And your primary focus in your testimony and in your  
08:25 11 reports was about BP's drilling of the Macondo deepwater well;  
08:25 12 correct?

08:25 13 A. Correct.

08:25 14 Q. Dr. Beck, do you present yourself in this proceeding as a  
08:25 15 deepwater drilling expert?

08:25 16 A. Mr. -- I have never presented myself as a deepwater  
08:25 17 drilling expert. My answer was, no, I do not, and I still do  
08:25 18 not present myself as a deepwater drilling expert.

08:25 19 Q. You've told the United States Senate on May 11th, 2010,  
08:25 20 shortly after the accident, that you were not a deepwater  
08:25 21 drilling expert; correct?

08:25 22 A. Correct.

08:25 23 Q. And you said to them that you did not view that as a  
08:25 24 hinderance; perhaps it was even an advantage because you had no  
08:25 25 preference for any process, practice, or equipment package

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08:25 1 exclusive to deepwater drilling. Correct?

08:25 2 A. I believe I used those words, yes, sir.

08:25 3 Q. So with respect to the standard of care in deepwater  
08:25 4 drilling, with respect to processes, practices, or equipment  
08:25 5 packages, you're not an expert in that; correct?

08:26 6 A. Well, I'm not an expert in the deepwater, particularly the  
08:26 7 equipment packages; but as I've said before, the part of my  
08:26 8 report that I focused on was not really related to the  
08:26 9 equipment packages. I focused on the subsea and the well  
08:26 10 design and operations of that well external, really, to the  
08:26 11 equipment that we're looking at.

08:26 12 Q. Your world is onshore drilling; correct?

08:26 13 A. That's been my primary experience, yes.

08:26 14 Q. You told the United States Congress that it's quite a bit  
08:26 15 different in deepwater drilling from your world, which is  
08:26 16 onshore drilling; correct?

08:26 17 A. What I meant by that was that --

08:26 18 Q. My question is: Did you say that? Did you use those  
08:26 19 words --

08:26 20 A. Repeat what I said.

08:26 21 Q. Did you tell the United States Congress on May 11th, that  
08:26 22 quote, deepwater drilling, it's quite a bit different, of  
08:26 23 course, from my world, which would be onshore drilling?

08:26 24 Did you use those words?

08:27 25 A. I used those words, but I think it needs to be explained

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08:27 1 in what context I used those words.

08:27 2 Q. Let's go through some of the context. I'd like to explore  
08:27 3 some of the differences between your world, which would be  
08:27 4 onshore drilling, and the drilling activities at Macondo that  
08:27 5 you testified about and submitted in your expert reports.

08:27 6 I think Mr. Roy said yesterday he wanted to focus  
08:27 7 yesterday on your real-world practical experience. Do you  
08:27 8 remember those questions?

08:27 9 A. Yes.

08:27 10 Q. You testified and have a report about the actions of BP  
08:27 11 drilling engineers at Macondo; correct?

08:27 12 A. Yes.

08:27 13 Q. You've never served as a drilling engineer on a deepwater  
08:27 14 well anywhere, including the Gulf of Mexico; correct?

08:27 15 A. Correct.

08:27 16 Q. You testified and have a report about the actions of BP  
08:27 17 drilling engineers on casing design decisions at Macondo;  
08:27 18 correct?

08:27 19 A. Correct.

08:27 20 Q. You've never designed a deepwater well, have you?

08:27 21 A. No, I have not.

08:27 22 Q. You've never made decisions as a drilling engineer on a  
08:27 23 deepwater well as to what type of casing to use; correct?

08:27 24 A. No, I have not.

08:27 25 Q. You testified yesterday and have a report about a decision

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08:27 1 about a long string and liner; correct?

08:27 2 A. Correct.

08:27 3 Q. You've never personally been involved in making a choice  
08:28 4 between using a long string or a liner for a deepwater well,  
08:28 5 have you?

08:28 6 A. No, I have not.

08:28 7 Q. You testified yesterday and have a report about drilling  
08:28 8 margin issues at Macondo; correct?

08:28 9 A. Correct.

08:28 10 Q. You've never been asked to evaluate drilling margin on a  
08:28 11 deepwater well prior to the work you've done in this case;  
08:28 12 correct?

08:28 13 A. I have not.

08:28 14 Q. You testified yesterday about the temporary abandonment  
08:28 15 procedure, and you have a report about temporary abandonment at  
08:28 16 Macondo; correct?

08:28 17 A. Correct.

08:28 18 Q. You have never developed a temporary abandonment procedure  
08:28 19 for a deepwater well, have you?

08:28 20 A. No, I have not.

08:28 21 Q. You testified yesterday and have a report about bottoms-up  
08:28 22 that was done at Macondo; correct?

08:28 23 A. Correct.

08:28 24 Q. You have no experience circulating bottoms-up in deepwater  
08:28 25 wells, do you?

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08:28 1 A. I have not.

08:28 2 Q. You testified yesterday and have a report about the float  
08:28 3 collar and the float shoe combination used at Macondo; correct?

08:28 4 A. Correct.

08:28 5 Q. You've never made decisions as a drilling engineer on a  
08:28 6 deepwater well about what type of float equipment to use, that  
08:28 7 is, whether you should use a float collar or the float shoe or  
08:28 8 a reamer shoe, have you?

08:28 9 A. No, I have not.

08:28 10 Q. You've never actually run float equipment on a deepwater  
08:29 11 well, have you?

08:29 12 A. No, I have not.

08:29 13 Q. You've never actually run a float shoe on a deepwater  
08:29 14 well, have you?

08:29 15 A. No, I have not.

08:29 16 Q. You testified yesterday -- maybe you didn't testify  
08:29 17 yesterday. You have a report about the lockdown sleeve at  
08:29 18 Macondo; correct?

08:29 19 A. Correct.

08:29 20 Q. You have never run a lockdown sleeve in a deepwater well,  
08:29 21 have you?

08:29 22 A. No, I have not.

08:29 23 Q. You've never done any work to determine when operators who  
08:29 24 drill deepwater wells typically run lockdown sleeves, have you?

08:29 25 A. Would you repeat that for me, please?

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08:29 1 Q. Have you ever done any work to determine when operators  
08:29 2 who drill deepwater wells typically run lockdown sleeves?

08:29 3 A. Well, the only work I've done there -- I mean, I've  
08:29 4 considered the timing on when to install the sleeve and what  
08:29 5 the purpose of the sleeve is in the context of developing my  
08:29 6 report.

08:29 7 MR. REGAN: Deposition, page 320, please. Lines 20  
08:29 8 to 23.

08:29 9 BY MR. REGAN:

08:29 10 Q. My question, Dr. Beck, is: Were you asked this question  
08:29 11 under oath and did you give this answer:

08:29 12 "QUESTION: Have you done any work to determine when  
08:29 13 operators who drill deepwater wells typically run lockdown  
08:30 14 sleeves?

08:30 15 "ANSWER: No, I have not."

08:30 16 Were you asked that question and did you give that  
08:30 17 answer under oath at your deposition?

08:30 18 A. Well, it appears so, sir. But I can't remember every  
08:30 19 question I answered. I'm trusting the transcript to be  
08:30 20 accurate.

08:30 21 Q. So am I.

08:30 22 With respect to the cement slurry for the deepwater,  
08:30 23 you agree you are not a cement slurry expert for a deepwater  
08:30 24 well; correct?

08:30 25 A. I agree.



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08:30 1 Q. Foam cement, you personally have no experience pumping  
08:30 2 foam cement; correct?

08:30 3 A. No, I don't.

08:30 4 Q. CBL, cement bond logs, you testified yesterday about the  
08:30 5 cement bond log decision at Macondo and you have those issues  
08:30 6 in your report; correct?

08:30 7 A. Correct.

08:30 8 Q. You have never run a cement bond log on a deepwater well;  
08:30 9 correct?

08:30 10 A. No, sir.

08:30 11 Q. Is that correct?

08:30 12 A. I have never run one, that's correct.

08:30 13 Q. You've never looked at whether an operator should or  
08:30 14 should not run a cement bond log on a deepwater well other than  
08:30 15 the work you've done in this case with respect to Macondo;  
08:30 16 correct?

08:30 17 A. Correct.

08:30 18 Q. You testified yesterday and have a report about the  
08:30 19 negative pressure test done at Macondo; correct?

08:31 20 A. Correct.

08:31 21 Q. You have never developed a negative pressure test  
08:31 22 procedure for a deepwater well, have you?

08:31 23 A. No, sir.

08:31 24 Q. Is that correct?

08:31 25 A. That's correct.

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08:31 1 Q. You testified yesterday and have a report about the spacer  
08:31 2 that was used in a negative pressure test at Macondo; correct?

08:31 3 A. Correct.

08:31 4 Q. You are not an expert on the use of spacers during  
08:31 5 displacement procedures, are you?

08:31 6 A. Oh, I don't agree with that. I've used a lot of spacers  
08:31 7 in my career on displacement procedures, so I do have some  
08:31 8 specific job knowledge.

08:31 9 MR. REGAN: Okay. Deposition, page 413, lines 8 to  
08:31 10 14.

08:31 11 BY MR. REGAN:

08:31 12 Q. My question, Dr. Beck, is: Were you asked this question,  
08:31 13 and did you give this answer under oath at your deposition:

08:31 14 "QUESTION: Are you an expert on the use of spacers  
08:31 15 during displacement procedures in deepwater wells?

08:31 16 "ANSWER: With specific reference to deepwater wells,  
08:31 17 no."

08:31 18 Were you asked that question, and did you give that  
08:31 19 answer?

08:31 20 A. I was and I gave that answer and that's a different  
08:31 21 question than what you just asked in the trial, so . . .

08:31 22 Q. In fact, you have no experience displacing a riser to  
08:32 23 seawater in a deepwater Gulf of Mexico environment, do you?

08:32 24 A. No, I don't.

08:32 25 Q. So with that background, Dr. Beck, in your report and in

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08:32 1 your testimony yesterday, you've opined that the people who  
08:32 2 were involved in these various deepwater drilling activities  
08:32 3 and who did have experience in deepwater acted recklessly.

08:32 4 Do you recall that testimony?

08:32 5 A. I do.

08:32 6 Q. And you're not giving a legal opinion, are you?

08:32 7 A. No, I'm not.

08:32 8 Q. And you said yesterday, I think, that that's based on your  
08:32 9 engineering background; is that right?

08:32 10 A. It's based on my engineering and operations management  
08:32 11 background, sir.

08:32 12 Q. Now, that term "reckless," though, that's not a term you  
08:32 13 ever recall using before as a petroleum engineer, is it?

08:32 14 A. Oh, I can't say if I've -- I don't know what context I'm  
08:32 15 supposed to answer that in, if I've ever used a word or not in  
08:32 16 my career, so I'm not going to agree to that.

08:32 17 MR. REGAN: Deposition, page 34, lines 18 to 19.

08:33 18 BY MR. REGAN:

08:33 19 Q. If we go up above that, do you see in the lines above, I  
08:33 20 asked you if you could define the term "reckless." Do you see  
08:33 21 that in line 10?

08:33 22 A. Yes.

08:33 23 Q. And you give your definition. And then on line 17:

08:33 24 "QUESTION: Is that a term you've used as a petroleum  
08:33 25 engineer?

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08:33 1 "ANSWER: I don't recall, no."

08:33 2 Is that the answer you gave in your deposition?

08:33 3 A. That's what it says in the transcript.

08:33 4 Q. Okay. It's also true, Dr. Beck, that you cannot identify  
08:33 5 anything that you've ever written before, prior to your expert  
08:33 6 reports in this case, where you expressed an opinion that an  
08:33 7 entity or an individual acted recklessly or was reckless;  
08:33 8 correct?

08:33 9 A. No, I don't -- I don't believe ever writing anything about  
08:33 10 somebody being reckless, no.

08:33 11 Q. So not being a deepwater drilling expert, not having  
08:34 12 personal experience with the procedures that you wrote in your  
08:34 13 report, and not recalling ever using the term reckless before  
08:34 14 as a petroleum engineer and not having ever used that term in  
08:34 15 anything you had written before your expert reports, it seems  
08:34 16 that that word, reckless, was something that was given to you  
08:34 17 to put in your report, wasn't it?

08:34 18 A. No, I don't think so. I chose the words for my report,  
08:34 19 sir.

08:34 20 Q. So it's your testimony that that was your choice. For the  
08:34 21 first time in your career, you decided, I'm now going to say  
08:34 22 this is reckless. Is that your testimony?

08:34 23 A. Well, this is the first time in my career I've evaluated  
08:34 24 actions such as this, in a context such as this, and had a  
08:34 25 cause to use such a word.

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08:34 1 Q. And the context you had for the well that you were looking  
08:34 2 at is you looked at one well; correct?

08:34 3 A. Correct.

08:34 4 Q. So you -- it's your testimony that employees of BP were  
08:34 5 reckless?

08:34 6 A. That's in my report, sir.

08:34 7 Q. Employees of Transocean were reckless?

08:35 8 A. I do believe that they were included in that statement,  
08:35 9 yes, sir.

08:35 10 Q. Including several of the individuals who passed away?

08:35 11 A. You know, Mr. Regan, I don't know -- I don't remember the  
08:35 12 names of the individuals. I didn't consider that in the  
08:35 13 context of writing my report.

08:35 14 Q. You were retained by Halliburton in this case; correct?

08:35 15 A. Correct.

08:35 16 Q. But you didn't see any evidence of any reckless conduct,  
08:35 17 however you want to define that, by Halliburton, did you?

08:35 18 A. In the context of the operations that I reviewed leading  
08:35 19 up to -- leading up to the blowout and with the area that I was  
08:35 20 investigating, I did not see any evidence of recklessness by  
08:35 21 Halliburton, no.

08:35 22 Q. Okay. Now -- do you think you're independent of  
08:35 23 Halliburton, or do you view yourself as an advocate for them  
08:35 24 here today?

08:35 25 A. No, sir, I'm not an advocate of anyone. I have given my

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08:35 1 opinion from day one.

08:36 2 Long before I was ever retained to give an opinion, I  
08:36 3 gave an opinion to the United States Senate that's very  
08:36 4 consistent with my opinion today on what -- you know, the issue  
08:36 5 of barriers and barrier management and root causes of blowouts.

08:36 6 And my opinion has maintained fairly constant. I've  
08:36 7 obviously changed specifics of it as additional facts become  
08:36 8 known to me. But my general opinion has been consistent the  
08:36 9 whole time.

08:36 10 Q. You're keeping an open mind; is that right?

08:36 11 A. I believe I had an open mind, but I had my own mind, sir.  
08:36 12 I did not rely on what other people did. I did not look at --  
08:36 13 I looked at the fact that this well blew out. The well blew  
08:36 14 out, that means there had to be some terrible mistakes made.  
08:36 15 And I don't think it's reasonable to go look and see and use an  
08:36 16 excuse that other people are doing the same thing that could  
08:37 17 lead to the same event.

08:37 18 I looked at it independently from my abilities as an  
08:37 19 operations manager, a drilling manager, and a drilling  
08:37 20 engineer. That's how I evaluated this well.

08:37 21 Q. In your review, is it correct that you saw no terrible  
08:37 22 mistakes by Halliburton?

08:37 23 A. I did not.

08:37 24 Q. But you told me in your deposition that you intended to  
08:37 25 keep an open mind through the time of trial; is that right?

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08:37 1 A. Yes, sir.

08:37 2 Q. Okay. So I'd like to show you some things, and we'll get  
08:37 3 into some of the detail --

08:37 4 A. Let me back up. Once again, I'm pretty sure you could  
08:37 5 flash up my deposition right there and I probably said, I'll  
08:37 6 keep an open mind through the time of trial. So -- but if you  
08:37 7 want to show me that, then I can agree to it. But I'll believe  
08:37 8 you on that. Because I do have an open mind. I'm okay with  
08:37 9 that.

08:37 10 Q. Good. You used to be a professor at Texas A&M; correct?

08:37 11 A. Yes, I did -- I was.

08:37 12 Q. Were you ever a tenured professor?

08:37 13 A. No, I was not.

08:37 14 Q. Have you written a textbook on drilling engineering?

08:37 15 A. No. I contributed a chapter in a textbook some years ago.  
08:37 16 I don't even keep track of that textbook at all.

08:38 17 Q. You know that Dr. Ted Burgoyne is an expert for BP in this  
08:38 18 case?

08:38 19 A. Yes.

08:38 20 Q. And you know Dr. Burgoyne?

08:38 21 A. Yes.

08:38 22 Q. You've written articles with him; correct?

08:38 23 A. Yes, I have.

08:38 24 Q. Do you believe Dr. Burgoyne is an expert in his field?

08:38 25 A. Yes, I do.

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08:38 1 Q. You know that Dr. Azar of Tulsa is also an expert for BP  
08:38 2 in this case?

08:38 3 A. Yes, sir.

08:38 4 Q. Do you agree that he is an expert in drilling engineering?

08:38 5 A. I really don't have full knowledge of Dr. Azar's  
08:38 6 background, so I'll reserve judgment.

08:38 7 I don't know him nearly as well as I know  
08:38 8 Dr. Burgoyne.

08:38 9 Q. It's not critical, but do you recall in your deposition  
08:38 10 saying that you would agree that actually Dr. Azar was an  
08:38 11 expert in this field?

08:38 12 A. Yes. And I think, based on his publication record, he  
08:38 13 could claim expert status.

08:38 14 Q. I'd like to know what you actually did. In reaching your  
08:38 15 opinions about the Macondo well, the only well you examined was  
08:38 16 the Macondo well itself; correct?

08:38 17 A. That's correct.

08:38 18 Q. You didn't look at any other deepwater wells either in the  
08:38 19 Gulf or around the world; correct?

08:38 20 A. No, I did not.

08:38 21 Q. Yesterday you said you reviewed real-time data from the  
08:39 22 closure of the BOPs backwards to a time that you saw fit;  
08:39 23 correct?

08:39 24 A. Correct.

08:39 25 Q. You were looking for the direct cause and root cause of



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08:39 1 the blowout; correct?

08:39 2 A. Correct.

08:39 3 Q. You looked at Sperry data, e-mail, governing documents,  
08:39 4 depositions, and expert reports; correct?

08:39 5 A. I believe I listed those yesterday, yes.

08:39 6 Q. You looked at BP's public investigation materials;  
08:39 7 correct?

08:39 8 A. I did.

08:39 9 Q. You looked at Transocean's public investigation materials;  
08:39 10 correct?

08:39 11 A. I did.

08:39 12 Q. Did you look at any investigation materials by  
08:39 13 Halliburton?

08:39 14 A. No, I didn't see an investigation by Halliburton, sir.

08:39 15 Q. You describe in your report that BP, as the majority owner  
08:39 16 and operator of the Macondo well, was responsible for all  
08:39 17 aspects of the design, development, and operation of the well  
08:39 18 from inception to completion; correct?

08:39 19 A. Correct.

08:39 20 Q. And you criticized, as we talked before and as we're to go  
08:39 21 into this morning, numerous actions by BP; correct?

08:39 22 A. Yes, I did.

08:39 23 Q. You were also critical of actions by Transocean; correct?

08:39 24 A. Yes, to a lesser extent.

08:40 25 MR. REGAN: I'd like to pull up 8140.17.2, which is

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08:40 1 from your report.

08:40 2 **BY MR. REGAN:**

08:40 3 **Q.** It is your opinion, Dr. Beck, that Halliburton and Sperry  
08:40 4 did not in any way cause and are not responsible for the  
08:40 5 blowout. That's your opinion; correct?

08:40 6 **A.** That's my opinion.

08:40 7 **Q.** Still the opinion you have today; correct?

08:40 8 **A.** Yes, sir.

08:40 9 **MR. REGAN:** Pull up 8141.9.1.

08:40 10 **BY MR. REGAN::**

08:40 11 **Q.** This is from your rebuttal report. Again, in your  
08:40 12 rebuttal report, you say: "BP, and to a lesser extent  
08:40 13 Transocean, are responsible for the Macondo well blowout and  
08:40 14 the consequences thereof. Any attempt to shift blame to  
08:40 15 Halliburton and Sperry is improper and without evidentiary  
08:40 16 support."

08:40 17 That was your opinion in your rebuttal report;  
08:40 18 correct?

08:40 19 **A.** That's my opinion, yes, sir.

08:40 20 **Q.** So you would agree with the testimony of Tim Probert, a  
08:41 21 president of Halliburton, who came to court and testified at  
08:41 22 trial that he believed Halliburton was zero percent responsible  
08:41 23 for the accident?

08:41 24 **A.** I don't know what Mr. Probert's testimony was. You'll  
08:41 25 have to show me that.

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08:41 1 Q. Okay. Let me show you a new document that we got last  
08:41 2 night, TRES-48285.

08:41 3 First, this is an e-mail --

08:41 4 MR. REGAN: If we can start at the bottom e-mail.

08:41 5 BY MR. REGAN:

08:41 6 Q. -- from a Michel Baritieu on October 16th, 2010. And my  
08:41 7 assumption, Dr. Beck, is that you've never seen this document  
08:41 8 either. Have you?

08:41 9 A. No, I have not.

08:41 10 Q. Okay. And it's sent to Mr. Tim Probert. Do you see that?

08:41 11 A. Yes.

08:41 12 Q. And in the first paragraph he says: "Tim, I was present  
08:41 13 at this year's AFTP in Paris where I heard a presentation given  
08:41 14 by Andrew Gould on operational excellence during his closing  
08:41 15 remarks from the last day."

08:41 16 Do you see that?

08:41 17 A. Yes.

08:41 18 Q. "During his speech he emphasized that SLB was dedicated to  
08:42 19 SQ and OE and he commented, 'when you miss a cement job, you  
08:42 20 need to say it.'

08:42 21 "He made no specific reference to BP, Macondo, or  
08:42 22 Halliburton; however, I very much doubt that his choice of  
08:42 23 words was random."

08:42 24 Do you see that?

08:42 25 A. Yes.

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08:42 1 Q. And would you agree that when a cement contractor misses a  
08:42 2 cement job, it needs to say it?

08:42 3 A. Sir, I don't know what you mean by "miss a cement job."

08:42 4 Q. Okay.

08:42 5 A. I don't know what he meant by "miss a cement job."

08:42 6 Q. Let's go to the response, then, the e-mail that's above,  
08:42 7 October 17th from Mark Edwards sent to Tim Probert.

08:42 8 Do you see where he says, starting in the second  
08:42 9 sentence, "There were many contributing parties to ensuring a  
08:42 10 sound cement job, including Weatherford, BP, and, of course,  
08:42 11 ourselves."

08:42 12 Do you see those words?

08:42 13 A. Yes.

08:42 14 Q. Have you ever seen Halliburton make a similar statement in  
08:43 15 public, that it was a contributing party to ensuring a sound  
08:43 16 cement job?

08:43 17 A. I haven't -- I haven't tracked Halliburton's public  
08:43 18 comments relative to this case, Mr. Regan. So I can't answer  
08:43 19 that question.

08:43 20 Q. And do you see, then, that this e-mail has been sent to --  
08:43 21 above in the top e-mail to Mr. Tommy Roth? Do you see that?

08:43 22 A. Yes.

08:43 23 Q. And would you agree with me that if we needed to know the  
08:43 24 context of that statement that was sent to Mr. Probert, we'd  
08:43 25 have to ask Mr. Probert? Do you agree with that?

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08:43 1 A. I'm sorry. I -- you're losing me in your logic right  
08:43 2 here.

08:43 3 Q. Let me ask it more simply.

08:43 4 A. Yes.

08:43 5 Q. The best people to ask about this e-mail would be the  
08:43 6 people who either wrote it or received it?

08:43 7 A. I would agree with that.

08:43 8 Q. Dr. Beck, you agree that Halliburton's primary  
08:43 9 responsibility with respect to cementing services provided at  
08:43 10 Macondo was (1) for the design and testing of the slurry, and  
08:44 11 (2) to pump the slurry into the well; correct?

08:44 12 A. Yeah. They were tasked with working on a design for the  
08:44 13 slurry; and when you work on a design, you work with the  
08:44 14 operator, right, to come up with acceptable parameters for the  
08:44 15 design. And typically a cement contractor then will go into  
08:44 16 the lab and develop the slurry to meet the appropriate  
08:44 17 properties.

08:44 18 Q. Do you agree --

08:44 19 A. So that's their part, is to get in the lab and find out,  
08:44 20 okay, if we need a slurry with these properties, let's go see  
08:44 21 if we can build a slurry that looks like that.

08:44 22 Q. Do you agree it was Halliburton's primary responsibility  
08:44 23 for the specific slurry, the design and testing of the slurry,  
08:44 24 and then pumping the slurry into the well -- do you agree that  
08:44 25 that was their primary responsibility in terms of Macondo with

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08:44 1 respect to cement?

08:44 2 A. Well, I'm struggling with your use of "their primary  
08:44 3 responsibility." As I said, a cement contractor works with the  
08:45 4 operator to develop a slurry that is acceptable, that they feel  
08:45 5 is going to work and that the operator feels meets his needs.  
08:45 6 That's the way you design cement slurries.

08:45 7 So I -- so if we're going to be stuck on a word  
08:45 8 "primary," it's part of their job to do that, whether you want  
08:45 9 me to say it's a primary job or not.

08:45 10 MR. REGAN: Deposition page 350, line 23 to 351,  
08:45 11 line 7.

12 BY MR. REGAN:

08:45 13 Q. Were you asked this question and did you give this answer,  
08:45 14 Dr. Beck:

08:45 15 "QUESTION: Dr. Beck, what was Halliburton's  
08:45 16 responsibility for its work with respect to the cementing  
08:45 17 services that it was providing at Macondo?

08:45 18 "ANSWER: Well, I think the primary responsibility  
08:45 19 is -- is for the -- the specific slurry and design and  
08:45 20 testing of the slurry and then pumping the slurry into the  
08:45 21 well. I mean, those are the main responsibilities -- two  
08:46 22 main responsibilities that a cementer has."

08:46 23 Were you asked that question, and did you give that  
08:46 24 answer at your deposition?

08:46 25 A. I did, and I think that's very consistent with the answer

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08:46 1 that I just gave you. I just want to make sure that it's taken  
08:46 2 in context.

08:46 3 Q. The words "primary responsibility" were your words;  
08:46 4 correct?

08:46 5 A. They appear to be right there, yes.

08:46 6 Q. Yesterday you were asked by counsel for Transocean,  
08:46 7 Mr. Brian, if it was important for BP to give accurate and full  
08:46 8 information to its contractors. Do you remember that question?

08:46 9 A. Yes.

08:46 10 Q. Do you agree also that it's important for the contractors,  
08:46 11 including Halliburton, to give accurate and full information to  
08:46 12 BP?

08:46 13 A. Yeah, I agree with that.

08:46 14 Q. And if Halliburton didn't give accurate and full  
08:46 15 information to BP, that could comprise BP's ability to make  
08:46 16 decisions on a going-forward basis; correct?

08:46 17 A. Yes.

08:46 18 Q. Same thing's true with respect to Transocean. If  
08:46 19 Transocean had internal information about events or things that  
08:46 20 had taken place, like riser and loading events, it should have  
08:46 21 shared those with BP so that BP could have been then aware and  
08:47 22 taken whatever steps it needed to take; correct?

08:47 23 A. I'm not sure what context you're talking about in terms of  
08:47 24 operations specific to a BP-operated well or operations  
08:47 25 specific to another operator's well, and I don't want to offer

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08:47 1 an opinion on that because sometimes those operations are  
08:47 2 confidential.

08:47 3 Q. With respect to your report on regulatory issues, you've  
08:47 4 never drafted a permit to drill for the MMS, have you, or  
08:47 5 BOEMRE?

08:47 6 A. Personally filling out the paperwork, a permit to drill,  
08:47 7 as you're aware I work onshore, right, and we work under  
08:47 8 multiple regulatory environments, state by state by state. And  
08:47 9 even sometimes we work on BLM land where these permits to drill  
10 come into play.

08:47 11 Typically, you have a regulatory specialist in your  
08:47 12 organization that helps actually fill those reports out; and  
08:48 13 the drilling engineers provide the information for those  
08:48 14 permits -- excuse me, not reports.

08:48 15 Q. You're not an MMS or BOEMRE expert, and you don't work  
08:48 16 either MMS or BOEMRE rules; correct?

08:48 17 A. I don't portray myself as an expert. I do want to say  
08:48 18 that I've read a lot of regulations in my day, and I feel fully  
08:48 19 capable of reading a regulation and deciding what it means to  
08:48 20 follow that regulation or how to follow that regulation.

08:48 21 And I'm not totally positive right now what the  
08:48 22 current structure is in BLM Drilling, who has control of that,  
08:48 23 because at one time the MMS did control drilling on BLM land.

08:48 24 Q. You were asked about some regulations, and you have them  
08:48 25 in your report. Were those regulations solely applicable to



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08:48 1 BP?

08:48 2 A. What regulations are you referring to, sir?

08:48 3 Q. The ones in your report, 30 CFR 250.401 and some other  
08:49 4 ones in that section. Does that apply solely to BP?

08:49 5 A. Well, I'd have to go back and look at the context of those  
08:49 6 reports again -- of those regulations, but in my experience,  
08:49 7 when you're looking at regulatory issues, the operator is  
08:49 8 responsible for regulatory issues to a great extent, but there  
08:49 9 are also some reporting requirements from subcontractors.

08:49 10 MR. REGAN: TREX-4026.1.4.

08:49 11 BY MR. REGAN:

08:49 12 Q. Dr. Beck, I'm putting up 30 CFR 250.400.

08:49 13 Are you aware that that CFR provision, which is the  
08:49 14 first provision in -- ahead of the ones you cite in the report,  
08:49 15 are you aware that it says, "The requirements of this subpart  
08:49 16 apply to lessees, operating rights owners, operators, and their  
08:49 17 contractors and subcontractors"?

08:49 18 Were you aware of that?

08:49 19 A. I don't particularly remember that statement, no, sir.  
08:50 20 I'm not going to say if I was aware of it or not aware of it.  
08:50 21 I don't have these regulations committed to memory. I doubt  
08:50 22 that I ever will.

08:50 23 Q. All right. So in evaluating BP's compliance with  
08:50 24 regulations, you did not look as to whether the regulations  
08:50 25 also applied to contractors and subcontractors, did you?

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08:50 1 A. I don't think I agree with that statement. I think that  
08:50 2 when I looked at whether the regulations were complied with, I  
08:50 3 looked at the decisions that were made and how they were made  
08:50 4 and then, in the context of the regulation, did it meet the  
08:50 5 regulation or not. That's what I looked at.

08:50 6 And my opinion and practice is that the operator  
08:50 7 ultimately is responsible for making sure that regulations are  
08:50 8 followed.

08:50 9 Q. But it's fair to say you don't know whether the  
08:50 10 regulations would actually comport with your opinion?

08:51 11 A. I -- this is -- you're working -- I mean, this is very  
08:51 12 nonspecific questions about, you know -- what particular  
08:51 13 decision or what particular regulation are we talking about? I  
08:51 14 mean, I'd like to see something more specific, if I can.

08:51 15 Q. Let me just ask you, before you submitted your expert  
08:51 16 report where you opined that BP engaged in regulatory  
08:51 17 violations, did you feel that you had enough time to read the  
08:51 18 full regulations and determine who they applied to?

08:51 19 A. Yeah, I had time. There was time involved. I wasn't  
08:51 20 under time pressure.

08:51 21 Q. Were you in court when Mr. Newman, the CEO of Transocean,  
08:51 22 testified about Transocean's contractual responsibilities with  
08:51 23 respect to its relationship with BP?

08:51 24 A. No, I was not.

08:51 25 Q. Were you in court when Mr. Probert, the president of

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08:51 1 Halliburton, testified about Halliburton's contractual  
08:51 2 responsibilities with respect to the work it does with BP?

08:51 3 A. No, I was not.

08:52 4 Q. Are you aware of anyone, Dr. Beck, other than you and  
08:52 5 perhaps Mr. Probert, who has reviewed the accident at Macondo  
08:52 6 and found that Halliburton had absolutely no causal role?

08:52 7 A. I don't remember the specific findings, but I can't answer  
08:52 8 that. I can't -- I'd have to go back through each report again  
08:52 9 and determine if anybody else had reached that conclusion. You  
08:52 10 know, I'm -- I can't commit all this to memory, so I'd have to  
08:52 11 be able to go back and look at the documents. I can't remember  
08:52 12 it all.

08:52 13 Q. Were you here when Mr. Richard Heenan, or Dick Heenan, the  
08:52 14 expert for the United States of America, testified that a  
08:52 15 series of events and decisions resulted in the Macondo blowout  
08:52 16 that involved a number of different people and companies,  
08:52 17 including BP, Transocean and Halliburton? Were you here for  
08:53 18 that testimony?

08:53 19 A. No, I was not.

08:53 20 Q. Were you here for Calvin Barnhill's testimony, drilling  
08:53 21 expert for Transocean, when he testified that the Macondo  
08:53 22 blowout was the culmination of multiple factors, decisions,  
08:53 23 oversights, and mistakes taken by multiple parties, including  
08:53 24 BP, Transocean, Sperry-Sun and Halliburton? Were you here --  
08:53 25 did you hear that testimony?

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08:53 1 A. No, I did not.

08:53 2 Q. Were you here when Mr. Ambrose, who led the Transocean  
08:53 3 investigation, testified that he found that BP, Transocean, and  
08:53 4 Halliburton's conduct combined on the evening of April 20th to  
08:53 5 cause the accident?

08:53 6 A. I wasn't here for anybody's testimony, Mr. Regan. This  
08:53 7 is -- I've only been here yesterday and today.

08:53 8 Q. All right. Well, in fairness to you, you did have  
08:53 9 Dr. Burgoyne's expert reports when you were working in 2011 on  
08:53 10 this case; right?

08:53 11 A. I did see them towards the end of -- towards the end, yes.

08:53 12 Q. And you're aware that Dr. Burgoyne concluded that there  
08:54 13 were mistakes made in this case by BP, Transocean, Halliburton,  
08:54 14 and Sperry-Sun that were a part of a series of breakdowns that  
08:54 15 allowed the blowout to happen?

08:54 16 A. And I do believe that in my rebuttal report, I responded  
08:54 17 to some of his concerns; and some of his concerns, I don't  
08:54 18 think, were warranted in terms of responsibilities.

08:54 19 Q. You looked at BP's DWOP document yesterday. You called it  
08:54 20 a governance document. Do you recall that?

08:54 21 A. Yes.

08:54 22 Q. You found it to be a good document?

08:54 23 A. Yeah, in general, I think the DWOP is a good framework for  
08:54 24 working within.

08:54 25 Q. In that document it talks about the use of sound

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08:54 1 engineering and judgment. What does that phrase mean to you in  
08:54 2 the drilling context?

08:54 3 A. I think it means that you rely on people that have  
08:54 4 experience, that can pull information in from a lot of  
08:54 5 different areas, use their experience and in some cases even  
08:54 6 their intuition, to try to make the right decision on things.

08:54 7 Q. And as you said yesterday -- and we'll go into it a little  
08:55 8 bit later, but in drilling you're always balancing risks;  
08:55 9 correct?

08:55 10 A. Always.

08:55 11 Q. So in terms of the chart that Mr. Roy put up of increased  
08:55 12 risks, he's actually -- he needs a denominator, doesn't he? He  
08:55 13 needs to compare risks, doesn't he?

08:55 14 A. Yeah, that would -- there would be what -- to what level  
08:55 15 was the risk increased. I think I tried to point that out.

08:55 16 Q. Right.

08:55 17 A. That, you know, where -- where -- you know, how much risk  
08:55 18 or how much are you changing the risk.

08:55 19 Q. If you were doing that chart, you would say, well, you  
08:55 20 have to measure this decision against a different decision and  
08:55 21 determine -- weigh the different risks; correct?

08:55 22 A. Correct.

08:55 23 Q. And you'd have to think about the time frame of the risks,  
08:55 24 that is, what's the risk today versus the risk tomorrow versus  
08:55 25 the risk in completion, when someone comes back to this well

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08:55 1 three years later; correct?

08:55 2 A. I agree with that. I think I've been very -- I think --  
08:55 3 in my report, I think the -- the context that I wrote my report  
08:55 4 recognized that.

08:55 5 I did try to evaluate decisions that were made in the  
08:56 6 context of the day that they were made, not only in hindsight.

08:56 7 Q. Right.

08:56 8 A. I'm very careful about not just using hindsight in this.

08:56 9 Q. Right, right.

08:56 10 And in terms of saving money, you wouldn't just look  
08:56 11 at that day; but in terms of -- you'd have to look at the life  
08:56 12 cycle of the well; that is, the exploration of the well, the  
08:56 13 abandonment of the well, the completion of the well and how  
08:56 14 long the well is on production.

08:56 15 So when you're drilling a well, that's what you are  
08:56 16 thinking about; right?

08:56 17 A. That's what I think about, yes.

08:56 18 Q. Right.

08:56 19 So in terms of -- he's talking about saving money.  
08:56 20 Did he have anything on there about the time frame of the  
08:56 21 expenditure of money?

08:56 22 A. No.

08:56 23 Q. So there was no balancing of the potential risks of  
08:56 24 alternative engineering judgments; correct?

08:56 25 A. No, there wasn't.

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08:56 1 Q. There was no measure of the savings of money relative to  
08:56 2 the spudding of the well to the time that it's determined that  
08:56 3 it can no longer produce, was there?

08:56 4 A. No. It was a very simple chart that I was asked to look  
08:56 5 at.

08:56 6 Q. And as a drilling engineer, as somebody who evaluates  
08:56 7 risks and costs in this business, you would need to look at all  
08:57 8 of those things to determine whether something was riskier or  
08:57 9 cheaper, wouldn't you? That's the context, isn't it?

08:57 10 A. Yeah. When you look at risks, you look at -- obviously  
08:57 11 cost comes into play and safety -- I mean, risk and safety are  
08:57 12 very closely related. And what you're working on when you're  
08:57 13 looking at risk is, you know, do I need to spend money to be  
08:57 14 safe. All right? And that's the real -- that's the real  
08:57 15 difficulty in a lot of people's daily jobs. Do I invest money  
08:57 16 to be safe today with the expectation that in the long run  
08:57 17 you're going to come out ahead.

08:57 18 I think this is a perfect example of a well like  
08:57 19 that. Had a little bit of money been invested at the right  
08:57 20 time, it might have been painful then, but it would have been a  
08:57 21 lot less painful than we're in today.

08:57 22 Q. People also make decisions based on their past  
08:57 23 experiences; correct?

08:57 24 A. Yeah, they do.

08:57 25 Q. So if somebody had experience a couple weeks or a couple

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08:58 1 years earlier with a casing hung up in a wellbore because of  
08:58 2 the centralizers, that's a valid thing for them to think about  
08:58 3 in exercising their engineering judgment about the risks;  
08:58 4 right?

08:58 5 A. It is, Mr. Regan. And to add to that, I've seen many  
08:58 6 times in my career events such as that skew somebody's opinion  
08:58 7 on how a task ought to be conducted, right? The recent  
08:58 8 activity, right, the recent disaster says, "Well, I'm never  
08:58 9 going to do that again because of the pain of that disaster."  
08:58 10 The disaster being hanging up your centralizers in the  
08:58 11 wellhead.

08:58 12 Yeah, you do lose sight sometimes of the value of  
08:58 13 running those centralizers; and you have to step back and  
08:58 14 evaluate the risk, how many times have you done that and how  
08:58 15 many times is it going to hang up.

08:58 16 Q. Right. You have to balance the fact that -- what's the  
08:58 17 risk of having a well control event with casing stuck in the  
08:58 18 BOP because of centralizers and not being able to fish out of  
08:58 19 the hole versus the risk to the cement job by using 6 versus  
08:59 20 21? You have to balance that?

08:59 21 A. Yeah, I agree with that. I think I was very clear in my  
08:59 22 testimony that I was sympathetic to that concern but with the  
08:59 23 expectation, then, that if you did that, the risk that you're  
08:59 24 accepting is that you're probably going to get a bad cement job  
08:59 25 and you'll have to go in and squeeze the well.



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08:59 1 Q. You have to use judgment?

08:59 2 A. Sound judgment, sir.

08:59 3 Q. And you have to use engineering judgment on a variety of  
08:59 4 these things that you've testified about; right?

08:59 5 A. Daily.

08:59 6 Q. You have a difference in your engineering judgment than  
08:59 7 the engineering judgments of the people who were working on the  
08:59 8 well. Fair?

08:59 9 A. Well, but -- and, of course, you know, I was asked to look  
08:59 10 at the events based on my experience.

08:59 11 I'm -- you know, I have been around, and I've drilled  
08:59 12 a lot of wells. You may not think that the wells that I have  
08:59 13 drilled pertain to your deepwater wells, but I argue that,  
08:59 14 right, just because you come on the coast a few miles doesn't  
08:59 15 really change things a lot once you go below ground level.

08:59 16 Q. The wells you drilled are BOPs on the surface; correct?

09:00 17 A. They are on the surface.

09:00 18 Q. The wells you drilled don't have risers; correct?

09:00 19 A. They don't.

09:00 20 Q. The wells you drilled have different casing profiles than  
09:00 21 deepwater wells?

09:00 22 A. Not necessarily, sir. We drill wells with very narrow  
09:00 23 margins at the bottom of them onshore, the difference being  
09:00 24 that when you put a riser on a well and you have -- you know,  
09:00 25 you have a column of water to deal with. That's what creates

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09:00 1 the narrow margin. The rock itself is very similar.

09:00 2 Q. The water can change the overburden; correct?

09:00 3 A. Yes, it does. It changes -- it changes -- it creates the  
09:00 4 narrow margin that you're dealing with.

09:00 5 Q. In your report you state that BP -- if it had followed its  
09:00 6 internal standards, the blowout would not have occurred.

09:00 7 That's what you state; correct?

09:00 8 A. And I think that because I think the DWOP in general is a  
09:00 9 good document, that if you go by the DWOP, you're going to have  
09:00 10 a pretty chance of drilling a good well.

09:00 11 Q. You also say that Transocean should have followed its  
09:00 12 written practices, both in spirit and in detail; correct?

09:00 13 A. Say that again because I --

09:01 14 Q. Yes. You also agree that Transocean should have followed  
09:01 15 its written practices in spirit and in detail; correct?

09:01 16 A. I'm not sure -- I don't remember reviewing written  
09:01 17 practices from Transocean.

09:01 18 Q. Do you remember reviewing Transocean's well control  
09:01 19 manual?

09:01 20 A. I think I had it in my documents. I'm not sure how much I  
09:01 21 went through it on a line-by-line basis, but I did look at it.

09:01 22 Q. Do you remember quoting it in your reports?

09:01 23 A. I may have, yes, sir.

09:01 24 Q. Okay. Do you remember testifying in your deposition that  
09:01 25 you agreed that Transocean should have followed its own written

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09:01 1 practices, both in spirit and in detail?

09:01 2 A. Well, and that's a good concept. I'm not arguing with  
09:01 3 that. I'm just trying to be specific on what I remembered  
09:01 4 saying or not and what I remembered out of specific documents.

09:01 5 Q. Do you agree that Halliburton should have followed its  
09:01 6 written practices in spirit and in detail?

09:01 7 A. Yeah. I think everybody's held to that standard.

09:01 8 Q. But you didn't look at Halliburton's written practices,  
09:01 9 did you?

09:01 10 A. I wasn't asked to evaluate the cement slurry.

09:02 11 Q. Halliburton knew you were expressing opinions on the cause  
09:02 12 of the accident; correct?

09:02 13 A. Correct.

09:02 14 Q. But you weren't asked to look at Halliburton's policies  
09:02 15 and procedures, were you?

09:02 16 A. Well, the policies and procedures are relative to their  
09:02 17 lab practices and cementing design test -- cement testing,  
09:02 18 excuse me. I wasn't asked to look at the cement testing.

09:02 19 Q. So if one of the causes of accident was the cement  
09:02 20 testing, that was not something that you looked at; correct?

09:02 21 A. I did not look at the -- at the slurry design and the  
09:02 22 cement design.

09:02 23 Q. So if somebody is looking at the cause in a broader  
09:02 24 spectrum than you -- that is, they are also including the  
09:02 25 design and testing of the slurry -- your causation opinion

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09:02 1 would be -- wouldn't apply because you didn't look at it?

09:02 2 A. State that again for me. Let me -- let me grasp it real  
09:02 3 quick.

09:02 4 Q. Sure. When you determined and opined that Halliburton did  
09:02 5 not in any way cause the blowout. That's what you opined;  
09:02 6 right? You did not look at all at Halliburton's design and  
09:03 7 testing of the slurry pumps; correct?

09:03 8 A. I did not look at their slurry testing. But I have to say  
09:03 9 this, that when I reached that conclusion, that it would be  
09:03 10 external to the design and testing of the cement. Because when  
09:03 11 I looked at the causes of the blowout, I don't see that the  
09:03 12 well blew out because we pumped cement into it.

09:03 13 Q. Right.

09:03 14 A. I see that the well blew out because we ignored an --  
09:03 15 "we" -- the negative pressure test was ignored, right, and the  
09:03 16 well was underbalanced, and the formation came in.

09:03 17 That's why the well blew out, and that's what -- I  
09:03 18 don't see where you sit there and you say the mud logger did  
09:03 19 this or the cementer did that. I mean, the cause of the  
09:03 20 blowout was a much higher level than that. It was  
09:03 21 underbalancing the well and allowing it to flow.

09:03 22 Q. The real issue here was kick detection, wasn't?

09:03 23 A. As I said yesterday, okay, there was a lack of kick  
09:03 24 detection. Because when the well kicked, the kick detection  
09:04 25 was -- basically, there was no kick detection in the well.

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09:04 1 Q. Right. And if that kick had been detected, all of these  
09:04 2 issues about bottoms-up, centralizers, pump rate, float collar  
09:04 3 conversion, slurry design, D-Air 3000, they don't matter  
09:04 4 because the people who have the responsibility of watching the  
09:04 5 well, no matter what the operations are, they're there for a  
09:04 6 sole purpose, which is to see if the well kicks; right?

09:04 7 A. To try and identify if the well kicks. And I think I  
09:04 8 pointed out that this well kicked so late and was so strong  
09:04 9 that most of the kick detection data was invalid. There was no  
09:04 10 data to detect. There was no information to detect that said  
09:04 11 the well was kicking.

09:04 12 Q. Have you ever seen a 300-barrel kick go undetected,  
09:04 13 Dr. Beck?

09:04 14 A. Rephrase that. I'm sorry. You have to rephrase that.

09:04 15 Q. Okay.

09:04 16 A. I have seen crews miss 300-barrel kicks. Yes, I have.

09:05 17 Q. Were they your crews?

09:05 18 A. No. They were working for a drilling contractor that I  
09:05 19 was working for, but they weren't working for me directly.

09:05 20 Q. Do you think that was appropriate for them to miss a  
09:05 21 300-barrel kick?

09:05 22 A. No. They got in trouble for doing that.

09:05 23 Q. They're supposed to catch that kick at the earliest  
09:05 24 possible moment; correct?

09:05 25 A. That's the basic well control, is you try to catch a kick

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09:05 1 as early as you possibly can.

09:05 2 Q. That's true in Texas?

09:05 3 A. That's true around the world.

09:05 4 Q. True in North Dakota?

09:05 5 A. That's true everywhere.

09:05 6 Q. That's true for your operations that are going on right  
09:05 7 now?

09:05 8 A. That's correct.

09:05 9 Q. Who's watching those wells?

09:05 10 A. I have a staff, right. I have drilling engineers, I have  
09:05 11 drilling superintendents, and I have well site supervisors that  
09:05 12 are all watching that.

09:05 13 And I have mud loggers on the rig. I know that's  
09:05 14 what you want me to say, and I'm not ashamed to say it. We  
09:06 15 have mud loggers out there, I'm saying that, and we also have  
09:06 16 drillers.

09:06 17 Q. The people with primary responsibility to watch the well  
09:06 18 are the drillers; correct?

09:06 19 A. The drill crew is there -- you know, one of their jobs is  
09:06 20 kick detection, yes.

09:06 21 Q. It's their primary job, of all of the people you just  
09:06 22 mentioned; correct?

09:06 23 A. Yes. They have the first and foremost responsibility to  
09:06 24 detect kicks, and they have the responsibility to shut the well  
09:06 25 in when they do detect a kick.

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09:06 1 Q. Changing topics.

09:06 2 On the cement, you didn't analyze the design of the  
09:06 3 cement pumped by Halliburton, did you?

09:06 4 A. What do you mean, "analyze"?

09:06 5 Q. My question is, you didn't analyze the design of the  
09:06 6 cement?

09:06 7 A. The slurry design, are you saying?

09:06 8 Q. Yes.

09:06 9 A. No, I didn't evaluate the slurry design.

09:06 10 MR. REGAN: I'd like to show D-4474, which is from  
09:06 11 Jesse Gagliano's testimony in his deposition.

09:06 12 BY MR. REGAN:

09:06 13 Q. He was asked this question and he gave this answer at page  
09:06 14 507, lines 17 to 23.

09:06 15 "QUESTION: If you have an inherently unstable foam  
09:06 16 cement by design, i.e., the design itself rendered it  
09:07 17 unstable, was there anything BP could do operationally to  
09:07 18 turn an unstable foam cement into a stable foam cement  
09:07 19 slurry?

09:07 20 And his answer was:

09:07 21 "ANSWER: I don't believe so."

09:07 22 Do you see that?

09:07 23 A. Yes.

09:07 24 Q. Do you disagree with Mr. Gagliano?

09:07 25 A. I can't disagree with him. That's -- it's not within the

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09:07 1 context of what I've studied on this well and within -- I've  
09:07 2 already said I'm not a cement slurry expert.

09:07 3 So I don't know -- you know, I'm not going to agree  
09:07 4 or disagree.

09:07 5 Q. Let me ask it this way.

09:07 6 MR. HILL: Your Honor, I'm sorry. We're starting to  
09:07 7 wander into areas about cement design. He's testified several  
09:07 8 times that he's not -- I know this is within the four corners  
09:07 9 of his report, yet he's being asked questions about the  
09:07 10 stability of cement --

09:07 11 THE COURT: Well, it's cross-examination. I think  
09:07 12 it's fair to allow him to -- you know, Mr. Regan to probe. And  
09:07 13 the witness is explaining what he's capable of answering and  
09:08 14 what he's not. I think he's able to do that.

09:08 15 So go ahead.

09:08 16 MR. REGAN: If we could keep that up.

09:08 17 BY MR. REGAN:

09:08 18 Q. Just to be clear, you studied the operational issues in  
09:08 19 terms of the placement of the cement at Macondo; correct?

09:08 20 A. Correct.

09:08 21 Q. But as you sit here today, you don't think you're capable  
09:08 22 of agreeing that if the actual slurry that was pumped was  
09:08 23 unstable, there's nothing that you can do operationally to make  
09:08 24 it stable?

09:08 25 A. I don't have any experience to base an opinion on that on,



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09:08 1 so I'm going to withhold any opinion on that.

09:08 2 Q. All right. As of the time of your deposition, you were  
09:08 3 not aware that Halliburton had not reported certain testing  
09:08 4 that was done prior to April 20th, 2010; correct?

09:08 5 A. I was not aware, no.

09:08 6 MR. REGAN: D-4309-A.

09:08 7 BY MR. REGAN:

09:08 8 Q. You were not aware of a February 12th, 2010 test that was  
09:08 9 done by Halliburton, correct, that said "slurry is settling,  
09:09 10 will repeat"?

09:09 11 A. I'm struggling to remember if I looked at the prior test.  
09:09 12 I do know that I considered it. At some point in time I did  
09:09 13 consider it because it was an issue.

09:09 14 When I looked at what happened, what I was concerned  
09:09 15 with, was there a successful test on the slurry? That's what I  
09:09 16 was looking at. So to go back and say did I know how many  
09:09 17 tested or didn't test, you know, that's beyond my memory  
09:09 18 capability.

09:09 19 Q. Was there a successful foam stability test on the slurry  
09:09 20 that was pumped?

09:09 21 A. Well, I -- it looked to me like there was a test that was  
09:09 22 accepted by both parties that said that the cement slurry's  
09:09 23 good to go, let's pump it.

09:09 24 Q. Were you aware that the April 17th test was not -- the  
09:09 25 results were not provided by Halliburton to BP until after the

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09:09 1 accident?

09:10 2 A. I'm aware of the timing issues, but I'm not -- I don't  
09:10 3 recall the details of that.

09:10 4 Q. Now, before you were retained by Halliburton, you were  
09:10 5 giving interviews to the press -- do you recall doing that --  
09:10 6 in 2010?

09:10 7 A. That was -- part of my assignment at Texas A&M was to try  
09:10 8 to field -- field questions from the press. And in some  
09:10 9 instances, you know, I did have to discuss things with the  
10 press.

09:10 11 MR. REGAN: TREN-8150.1.

09:10 12 BY MR. REGAN:

09:10 13 Q. This is a transcript of an interview that you gave to NPR.  
09:10 14 And I'd like to go to .1.1, October 29th, 2010.

09:10 15 My question is a simple one, Mr. Beck.

09:10 16 Do you recall being asked this question by a reporter  
09:10 17 and giving this answer, as is reported in TREN-8150?

09:10 18 Question by the interviewer, Brady: "After the  
09:11 19 accident, investigators asked Chevron, which played no role in  
09:11 20 the well blowout, to test a nearly identical mixture in the  
09:11 21 company's well-respected cementing facility.

09:11 22 "Chevron said, after nine tries, its lab personnel  
09:11 23 were not able to create a stable foam cement.

09:11 24 "Gene Beck, with Texas A&M, says that raises  
09:11 25 questions about the one successful test Halliburton says it

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09:11 1 conducted.

09:11 2 "Mr. Beck: It's a little -- more than a little bit  
09:11 3 of a concern that they weren't able to duplicate the test in an  
09:11 4 independent laboratory."

09:11 5 Do you recall giving that answer to a reporter on or  
09:11 6 about October 29, 2010?

09:11 7 A. I have a very vague recollection of that interview. I  
09:11 8 believe it was a telephone interview. And I think, in the  
09:11 9 context of the audience that I'm talking to in that interview,  
09:11 10 I was trying to give just very general answers, what's logical,  
09:11 11 what's illogical.

09:11 12 And if somebody tells you, "Oh, well, we couldn't  
09:12 13 duplicate the test," then, of course, it's logical to say,  
09:12 14 "Well, yeah, that would concern me."

09:12 15 Q. How about this audience, this courtroom right now? Do you  
09:12 16 change your -- the answer that you gave?

09:12 17 A. I go back to an attitude that I've had operationally for  
09:12 18 years, is -- what I'm concerned with with cement tests aren't  
09:12 19 the failed tests, aren't the tests that fail. I'm looking for  
09:12 20 tests that pass. I'm looking for the final test that says the  
09:12 21 slurry design is where it needs to be.

09:12 22 I have waited, sometimes days, for testing to be  
09:12 23 completed before I pump a job to make sure that we see the  
09:12 24 tests. So failed tests don't mean as much as successful tests.

09:12 25 And I think I've been consistent -- I think I've said

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09:12 1 that before in other -- in other places. I can't tell you  
09:12 2 exactly where I said that, but the important test is the final  
09:12 3 test.

09:12 4 Q. Right.

09:12 5 A. As opposed to the prior test.

09:13 6 Q. What were the results of foam stability tests on the  
09:13 7 .09-gallon retarder that was done by Halliburton before the  
09:13 8 accident?

09:13 9 A. So now, again, I'm --

09:13 10 Q. If you know.

09:13 11 A. I'm going back to my review, that when the cement job was  
09:13 12 pumped, that there was a final -- there was a -- maybe it  
09:13 13 wasn't the final test, but there was a test that said "Slurry's  
09:13 14 good. Let's go. Let's pump the job."

09:13 15 Q. You --

09:13 16 A. And both sides agreed with that.

09:13 17 Q. You would have assumed that Halliburton would have, A,  
09:13 18 tested the actual slurry that was going to be pumped; right?

09:13 19 A. That's not necessarily true either because sometimes you  
09:13 20 make tweaks to the very final additives that you have in  
09:13 21 understanding the -- in the lab testing you can tweak some  
09:13 22 final additives and have an expectation that they're going to  
09:13 23 work correctly and not run a final test. That becomes a  
09:14 24 decision between an operator and a cement contractor, in my --

09:14 25 Q. How about if the cement contractor decided to cancel that

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09:14 1 test? Do you think the cement contractor should let the  
09:14 2 operator know, "You know what? I've decided to cancel the foam  
09:14 3 stability test."

09:14 4 You would expect them to let the operator know,  
09:14 5 wouldn't you?

09:14 6 A. I don't know the full context of what you're saying right  
09:14 7 there. It's a -- you know, it really would depend, then, on  
09:14 8 everything else that had been happening and the discussions.

09:14 9 When you design cement, you're designing it in  
09:14 10 context with your cementing engineer, your -- the lab and --  
09:14 11 the drilling engineer or above him, you know, a senior engineer  
09:14 12 or superintendent that's looking at everything going on.

09:14 13 Q. It's a simple question.

09:14 14 A. So every case is unique.

09:14 15 Q. A simple question, Dr. Beck. Would you have expected  
09:14 16 Halliburton to tell BP that it had failed cement tests prior to  
09:14 17 recommending the slurry that was pumped in Macondo? Would you  
09:15 18 have expected them to tell BP?

09:15 19 A. In my experience -- okay. In my experience, the lab  
09:15 20 results are communicated to an operator.

09:15 21 Q. Okay.

09:15 22 A. That's the answer that I can give you on that.

09:15 23 MR. REGAN: D-4309-A.

09:08 24 BY MR. REGAN:

09:08 25 Q. Dr. Beck, just briefly, were you aware that Halliburton

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09:15 1 did tests, after the accident, on the cement slurry that are  
09:15 2 indicated here in red, in late April, early May 2010?

09:15 3 A. I'm not aware of any of that, sir.

09:15 4 Q. At any point in time, in preparing your conclusion that  
09:15 5 Halliburton had no responsibility for the cause of the  
09:15 6 accident, were you told that one of those tests, the first one  
09:15 7 that was done by Rickey Morgan, the slurry would not foam?  
09:15 8 Were you ever told that?

09:15 9 A. No.

09:15 10 Q. Were you aware that the results of these tests were not  
09:15 11 retained?

09:15 12 A. No.

09:15 13 Q. Were you aware that the actual physical samples were  
09:15 14 destroyed?

09:15 15 A. No.

09:15 16 Q. Would it have been helpful to you in reaching causation  
09:15 17 opinions to be able to see those tests, or is that outside of  
09:16 18 the work that you're doing?

09:16 19 A. As I've said several times, I wasn't tasked with slurry  
09:16 20 design.

09:16 21 Q. Okay. So lastly, with respect to looking at Halliburton  
09:16 22 policies and procedures, you would not have looked at  
09:16 23 Halliburton's policies and procedures about what additives  
09:16 24 should or should not be used in a foam cement?

09:16 25 A. I did not look at their lab policies and procedures.

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09:16 1 Q. I think we've had a number of witnesses on that, so I'm  
09:16 2 going to move forward.

09:16 3 Do you remember giving a presentation on  
09:16 4 February 11th, 2011?

09:16 5 A. Would you refresh my memory, please.

09:16 6 MR. REGAN: Sure. TREN-8143.1.

09:08 7 BY MR. REGAN:

09:16 8 Q. This is a transcript of a presentation that you gave on --  
09:16 9 the actual presentation was on February 11th, 2011.

09:16 10 Do you recall seeing this at your deposition?

09:16 11 A. Just vaguely, sir. Vaguely, yeah.

09:17 12 MR. REGAN: Let's go to page 7, 8143.7.

09:17 13 I'm sorry. It should be .8.

09:08 14 BY MR. REGAN:

09:08 15 Q. Do you see at line 9 in your presentation that you said:  
09:17 16 "Now, another major failure of the kick detection in the well  
09:17 17 failed. An ounce of prevention is worth a pound of cure. The  
09:17 18 industry is taught, drilling people are taught, to identify  
09:17 19 kicks early, keep them small. You can handle them, you don't  
09:17 20 have to deal with high pressures when you're doing that, or  
09:17 21 much lower pressures.

09:17 22 "What happened with the kick detection? A major,  
09:17 23 major piece of the incident that allowed the whole process to  
09:17 24 escalate quite quickly from a situation where the well could be  
09:17 25 underbalanced and flow to where it was underbalanced and began

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09:17 1 flowing."

09:17 2 Do you recall using those words?

09:17 3 A. I don't, but I'm relying on the transcript, because that  
09:17 4 was a presentation from quite sometime ago.

09:17 5 Q. Well, that was your opinion as of February 11th, 2011;  
09:18 6 right?

09:18 7 A. Correct.

09:18 8 Q. And in your deposition, do you recall saying that there  
09:18 9 was nothing in that that you would change?

09:18 10 A. Correct.

09:18 11 Q. Okay. I want to talk about Joe Keith's role in kick  
09:18 12 detection.

09:18 13 Do you agree that mud loggers should be aware of the  
09:18 14 well's status at all times?

09:18 15 A. They're there to monitor the well, yeah. They're trying  
09:18 16 to look at a variety of parameters and look for anomalies.

09:18 17 Q. But does the driller's responsibility to monitor the well  
09:18 18 in any way reduce the mud logger's responsibility to be  
09:18 19 vigilant and monitor the well?

09:18 20 A. I think they're independent monitors.

09:18 21 Q. If a mud logger sees something that looks anomalous, he's  
09:18 22 supposed to notify the drill crew; correct?

09:18 23 A. That's correct.

09:18 24 Q. You've never been a mud logger; correct?

09:18 25 A. No, I have not.



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09:18 1 Q. And Mr. Keith, who was there that night -- he's testified.  
09:18 2 You were not here for his testimony; correct?

09:18 3 A. Correct.

09:18 4 Q. And I think Mr. Brian asked you some questions about this  
09:19 5 yesterday, so I just want to ask a few things.

09:19 6 But your opinion in your report was that the  
09:19 7 activities on the rig April 20th, 2010, complicated Mr. Keith's  
09:19 8 monitoring; correct?

09:19 9 A. Correct.

09:19 10 Q. He was the person there; right?

09:19 11 A. He was.

09:19 12 Q. And his testimony was that the operations that took place  
09:19 13 that night were normal rig activities; correct?

09:19 14 A. Repeat that.

09:19 15 Q. Were you aware that his testimony at trial was that the  
09:19 16 operations on the night of April 20th were normal rig  
09:19 17 activities?

09:19 18 A. Once again, I wasn't there for his testimony, so I don't  
09:19 19 recall him saying -- I mean, maybe we looked at that yesterday.  
09:19 20 I'd have to see the transcript, but . . .

09:19 21 Q. Do you recall seeing his testimony at deposition, which  
09:19 22 was available to you before your report, where he said there  
09:19 23 was nothing unusual about the activities on the night of  
09:19 24 April 20th?

09:19 25 A. I did read his deposition in its entirety. But once

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09:19 1 again, I can't remember every line in the deposition.

09:19 2 But I think the attitude of, you know, nothing  
09:20 3 abnormal going on was fairly consistent throughout the rig,  
09:20 4 from everything I've looked at.

09:20 5 Q. You criticized BP and Transocean for diverting flow  
09:20 6 overboard after the sheen test; correct?

09:20 7 A. I'd have to see what context. You're saying I criticized.  
09:20 8 That was an action that was taken, and when that action was  
09:20 9 taken, the fluid was no longer going to the pits. And you  
09:20 10 don't -- you didn't have an opportunity to monitor the pits  
09:20 11 anymore.

09:20 12 MR. REGAN: TREX-8140.104.3.

09:08 13 BY MR. REGAN:

09:08 14 Q. This is from your report.

09:20 15 You say, "BP and Transocean decided to divert  
09:20 16 lost circulation material spacer overboard after the sheen  
09:20 17 test. This one decision left the Sperry mud logger blind to  
09:20 18 flow out of the well and to any resulting pit gains, a fact  
09:20 19 known to both BP and Transocean"; right?

09:20 20 A. I did say that. And I don't see that as a criticism of  
09:21 21 anybody. I see it as a fact.

09:21 22 Q. Right. Mr. Keith didn't think he was blind to that  
09:21 23 happening, did he?

09:21 24 A. You'd have to show me his deposition again. But...

09:21 25 MR. REGAN: Trial transcript page 3698.1.

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09:08 1 **BY MR. REGAN:**

09:08 2 **Q.** I'm going to show you Mr. Keith's trial testimony about  
09:21 3 the decision about diverting overboard.

09:21 4 **MR. REGAN:** This is a different diversion than the  
09:21 5 9:45 question, Your Honor. This is about during the sheen  
09:21 6 test, so 9:08.

09:21 7 So it's page 3698 of the trial testimony.  
09:21 8 Line 8.

09:21 9 Mr. Keith was asked:

09:21 10 "QUESTION: You didn't raise any safety concerns or  
09:21 11 ring any bells when you were not able to observe flow  
09:21 12 after diversion overboard, did you?

09:21 13 "ANSWER: No, sir. They have always diverted it,  
09:21 14 every displacement we have done before, the same way."

09:08 15 **BY MR. REGAN:**

09:08 16 **Q.** Does that appear to you that Mr. Keith was concerned or  
09:22 17 unaware or blind to how to do his job after diversion overboard  
09:22 18 happened?

09:22 19 **A.** I think he accepted the fact that at that point in time he  
09:22 20 wasn't going to be able to monitor the pits, because that's how  
09:22 21 they had done it over and over and over.

09:22 22 It doesn't change the fact that he couldn't monitor  
09:22 23 the pits. He couldn't. You couldn't monitor them at that  
09:22 24 point in time. And it doesn't really make it a good decision  
09:22 25 just because it's always been done that way.

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09:22 1 You know, I think it's been clear by, you know,  
09:22 2 numerous testimony and basic practices, is that the best way to  
09:22 3 maintain constant kick detection is to do closed-loop  
09:22 4 displacements to where, you know, you're pulling mud out of the  
09:22 5 pit, metering it, and putting fluid back in a pit and metering  
09:22 6 it and not going overboard with things.

09:22 7 If you were looking for the best way of doing a  
09:22 8 displacement, that's the one that would give you kick  
09:22 9 detection right up to the end of the displacement.

09:23 10 Q. Let me show you transcript 3673, lines 20 to 25. My  
09:23 11 question, Dr. Beck, is just whether I've read this correctly.  
09:23 12 There is Mr. Keith's testimony.

09:23 13 Line 20:

09:23 14 "QUESTION: Mr. Keith, you've never told anyone from  
09:23 15 BP at any time that you were not able to monitor the  
09:23 16 parameters that you were required to monitor?

09:23 17 "ANSWER: No, sir. I was able to do my job, perform  
09:23 18 my job.

09:23 19 "QUESTION: Never told anyone from Transocean that?

09:23 20 "ANSWER: No, sir."

09:23 21 You were not here for that testimony, but did I read  
09:23 22 that correctly?

09:23 23 A. You read it correctly and --

09:23 24 Q. That's my question. My only question was whether I read  
09:23 25 that correctly.

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09:23 1 You were asked yesterday about Mr. Keith's testimony  
09:23 2 at trial that he, in fact, saw 100-psi increase before 9:08  
09:23 3 and, in fact, saw a 200- to 250-psi increase during the sheen  
09:23 4 test. And again, I think you said yesterday that you  
09:23 5 recognized that as different from what he said in his  
09:23 6 deposition.

09:23 7 Do you recall being asked those questions?

09:23 8 A. Yes.

09:23 9 Q. But Mr. Keith, he would have been trained that if the  
09:23 10 pumps are off, he should not be seeing an increase in drill  
09:24 11 pipe pressure; correct?

09:24 12 A. I think I pointed out in my report that when it comes to  
09:24 13 monitoring drill pipe pressure, mud loggers are typically  
09:24 14 trained to look for decreases. That's a sign of a kick when  
09:24 15 you're drilling, that decreases in pressure are indications of  
09:24 16 kicks.

09:24 17 So I think the increase in pressure would have been  
09:24 18 anomalous for him. He wouldn't have had a concept of why the  
09:24 19 pressure was increasing. So I don't agree that they're trained  
09:24 20 to look for increases in drill pump pressure.

09:24 21 Q. Let's see what Mr. Keith said.

09:24 22 MR. REGAN: Transcript, Trial, 3681.2, lines 12 to  
09:24 23 20.

09:24 24 Again, my question, Dr. Beck, is just whether  
09:24 25 I've read this correctly.

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09:24 1 "QUESTION: Mr. Keith, has Halliburton trained you  
09:24 2 that if the pumps are off, you should not be seeing an  
09:24 3 increase in drill pipe pressure?

09:24 4 "ANSWER: On the *Horizon*, yes, they trained me in  
09:24 5 certain ways like that.

09:24 6 "QUESTION: The answer is yes?

09:24 7 "ANSWER: Yes.

09:24 8 "QUESTION: Halliburton has trained you that?

09:25 9 "ANSWER: Yes."

09:25 10 Did I read Mr. Keith's testimony correctly, Dr. Beck?

09:25 11 A. Actually, yes, you did. You're --

09:25 12 Q. Can you give me --

09:25 13 A. -- a very good reader.

09:25 14 Q. You might get a little bit more of it.

09:25 15 Can you tell me anything that was going on, Dr. Beck,  
09:25 16 on the rig between 9:08 and 9:14 that can explain a 20 percent  
09:25 17 increase in drill pipe pressure?

09:25 18 A. Can you just put it in a little different context? That's  
09:25 19 a lot more complicated question than just the simple one  
09:25 20 sentence that you have right there.

09:25 21 Q. Can you give me anything that was going on on the rig that  
09:25 22 you, Dr. Beck, believe explains a 20 percent increase in drill  
09:25 23 pipe pressure from 9:08 to 9:14? Crane movement, mud pits,  
09:25 24 offloading, anything?

09:25 25 A. Refresh my memory. Was the well shut in at that point?

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09:26 1 That was during the sheen test before the final displacement  
09:26 2 was started, 9:08 to 9:14?

09:26 3 Q. Correct. Pumps are off.

09:26 4 A. Pumps are off, and you're sitting there looking at the  
09:26 5 drill pipe. I think that in hindsight -- when you go back and  
09:26 6 look at the data real quick, I think many people, myself  
09:26 7 included, reached the conclusion now that when you look at that  
09:26 8 signature, that's probably the well kicking right there, which  
09:26 9 is consistent with when I said the well started kicking.

09:26 10 So I don't know of any activities at the rig that  
09:26 11 would have necessarily generated that pressure increase. I  
09:26 12 mean, my -- my assumption is -- my assumption, my  
09:26 13 interpretation is that was the well communicating right there.

09:26 14 Q. All of your things in your report, which you testified  
09:26 15 yesterday about simultaneous operations, there's not a single  
09:26 16 one of those that you would say explains the 20 percent  
09:26 17 increase in drill pipe pressure from 9:08 to 9:14 when the  
09:26 18 pumps are off?

09:26 19 A. At that particular instance, I agree with you.

09:26 20 Q. How about 9:30? Do you see anything -- any evidence of  
09:27 21 simultaneous operations, crane movement, mud pit shifts, that  
09:27 22 would have explained the pressure increasing on the drill pipe  
09:27 23 after 9:30, after the pumps were shut down?

09:27 24 A. No, I mean, I think it's fairly clear, looking at evidence  
09:27 25 and knowing what happened, that those were pressure signatures

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09:27 1 that were due to the hydrocarbons flowing up -- up the well and  
09:27 2 into the drill pipe.

09:27 3 Q. And it's your view, Dr. Beck, that at 9:30, when the pumps  
09:27 4 were shut down and the drill pipe pressure climbed, a mud  
09:27 5 logger who was continuously monitoring the well should have  
09:27 6 noticed that as an anomaly; correct?

09:27 7 A. Well, I think at that point in time everybody noticed it  
09:27 8 as an anomaly. I think -- you know, whether the mud logger saw  
09:27 9 it or not, my opinion would be that there was a flurry of  
09:27 10 activity going on at the rig and that the Transocean crew had  
09:27 11 already noted these pressure anomalies and were responding to  
09:28 12 them.

09:28 13 Now -- and I haven't seen Mr. Keith's testimony, you  
09:28 14 know, what he saw, what he didn't see, at that point in time;  
09:28 15 but I do know at that point in time there was rig activity  
09:28 16 responding to those pressure changes.

09:28 17 Q. I want to ask about Mr. Keith, sitting in a mud logger  
09:28 18 shack constantly monitoring the screens. You agree it was his  
09:28 19 responsibility at 9:30 to see that anomaly and contact the rig  
09:28 20 floor; correct?

09:28 21 A. I think he would have been looking at the anomaly and  
09:28 22 maybe trying to figure out what was going on before he said,  
09:28 23 "Hey, something's going on here."

09:28 24 Q. It was his responsibility to see that anomaly and contact  
09:28 25 the rig floor; correct?



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09:28 1 A. I -- once again, I think that -- I would want to know what  
09:28 2 he was thinking when he was seeing that anomaly, you know, what  
09:28 3 time frame, what other information did he have. Did he have a  
09:29 4 sense that there was activity on the rig floor? Did he hear on  
09:29 5 the squawk box that things were going on? Was there already a  
09:29 6 response and he sat down and kept his mouth shut because he saw  
09:29 7 that they were already interacting or working on the well at  
09:29 8 that point in time?

09:29 9 So I don't -- you know --

09:29 10 Q. Let me --

09:29 11 A. It's a response. I'll back up. Now, having said all  
09:29 12 that, okay --

09:29 13 Q. Okay. Let me ask you a new question.

09:29 14 THE COURT: Well, wait, wait.

09:29 15 THE WITNESS: I'd like to finish the answer.

09:29 16 BY MR. REGAN:

09:29 17 Q. Okay.

09:29 18 A. I'm not trying to say the mud logger doesn't have the  
09:29 19 responsibility of monitoring the pressures. They do. But when  
09:29 20 you're monitoring the pressures, you don't just sit there and  
09:29 21 monitor blindly. If you sat there and called the rig floor  
09:29 22 every time the pressure changed by 20 psi, you would never be  
09:29 23 off the phone and nobody would ever get any work done.

09:29 24 You have to look at in the context of does this mean  
09:29 25 something, is this an important anomaly. Okay? That pressure

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09:29 1 response was so complicated that it's virtually impossible to  
09:30 2 figure out, right? People at BP or working for BP, right, did  
09:30 3 a lot of modeling work trying to figure out what that pressure  
09:30 4 response meant; and it's a very complicated situation going on  
09:30 5 in the well with varying flow rates with densities -- different  
09:30 6 density fluids moving around the well.

09:30 7 So it's really hard to sit there and say, "Well, why  
09:30 8 didn't you understand that that was a kick in the well? Why  
09:30 9 didn't you call the rig floor?"

09:30 10 I'm pretty sure he was confounded, would have been my  
09:30 11 assumption of how he felt right there.

09:30 12 Q. At 9:30 the rig crew shut off the pumps; correct?

09:30 13 A. I -- show me the chart again, but that's about right. I  
09:30 14 think that the well was shut in and -- or shut down and people  
09:30 15 were looking to see what was going on.

09:30 16 Q. Mr. Keith would have known that?

09:30 17 A. Yeah.

09:30 18 Q. After 9:30 the drill pipe pressure increased with the  
09:30 19 pumps off; correct?

09:30 20 A. I -- once again, timing-wise, but yeah, there was a period  
09:31 21 of time where the pressure kept rising.

09:31 22 Q. Mr. Keith would have had that information; correct?

09:31 23 A. Yes, he would have.

09:31 24 Q. Mr. Keith's job was to -- if he saw something that was  
09:31 25 anomalous -- that is, pressure increasing with the pumps off --

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09:31 1 to call somebody; correct?

09:31 2 A. I'm not disagreeing with that. That would have been his  
09:31 3 job. I just know that in the context of him doing it, he's  
09:31 4 going to be confounded by those very complex pressure  
09:31 5 signatures.

09:31 6 Q. Now, you think it's complex that when the pumps are off  
09:31 7 and there's no rig activity and the pressure's increasing --

09:31 8 A. It's complex, everything going on either side of that when  
09:31 9 he was pumping on it.

09:31 10 Q. Let me show you on the ELMO D-4368, is the number. It's a  
09:31 11 picture of the rig floor.

09:31 12 This is 9:30. You're familiar with the layout of the  
09:31 13 *Deepwater Horizon*, or are you?

09:31 14 A. I'm not going to say I'm conversive with it. I've looked  
09:31 15 at rig diagrams, but I do want to -- you know, I was looking at  
09:32 16 operations up to the moment -- as I said before, up to the  
09:32 17 moment of the blowout. I didn't look real hard at the surface  
09:32 18 apparatus on this drilling rig.

09:32 19 Q. You see there's a mud logger shack here?

09:32 20 A. Yes.

09:32 21 Q. Do you see here, it's right behind where the driller's  
09:32 22 cabin is? Do you know that?

09:32 23 A. Okay.

09:32 24 Q. You don't have to know that for this --

09:32 25 A. I --

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09:32 1 Q. Let me just ask you the follow-up question in terms of  
09:32 2 9:32. At 9:32, in the driller's cabin you had David Young, the  
09:32 3 chief mate; Jason Anderson, Dewey Revette, and Vincent Tabler  
09:32 4 as cementer.

09:32 5 You've seen that in the documents; right?

09:33 6 A. No. I've -- as I said before, I really didn't get  
09:33 7 involved in personnel names of the rig crew. I didn't look at  
09:33 8 that.

09:33 9 Q. Do you agree with me that at 9:30 they shut the pumps  
10 down?

09:33 11 A. I think the Sperry log shows at -- that that would be  
12 consistent, yes.

09:33 13 Q. Do you agree with me that there is testimony in  
14 depositions that at that time in the rig crew, there was a  
15 discussion of differential pressure between Mr. Anderson and  
16 Mr. Revette?

09:33 17 A. I do recall that --

09:33 18 Q. And would you agree with me --

09:33 19 A. -- vaguely, Mr. Regan. I mean, I -- you're talking an  
20 area at the bitter end, this -- the 9:30-plus response that I  
21 didn't have a lot of data to look at that was related to  
22 subsurface.

09:33 23 Q. So you would agree with me that if Joe Keith was watching  
24 the data in the mud logger shack at 9:30 and had seen that the  
25 pumps were shut down and had seen that the standpipe pressure

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09:34 1 was building and picked up the phone and called the rig floor,  
09:34 2 called the driller's cabin, as he is trained to do, there were  
09:34 3 people there looking at an issue who could have benefited from  
09:34 4 that information from him? Do you agree with that?

09:34 5 A. Well, I agree that there are people there, but what I  
09:34 6 don't know is what -- is what they had already seen. They had  
09:34 7 already seen pressure anomalies that they were discussing.

09:34 8 Q. Okay.

09:34 9 A. So you're saying it would be a benefit for him to call  
09:34 10 them and tell -- to tell them what they've already seen.

09:34 11 Q. Did he ever make that phone call?

09:34 12 A. I don't recall that he did, no.

09:34 13 Q. New topic, drilling margin.

09:34 14 You've never been asked to evaluate drilling margins  
09:34 15 on a deepwater well before this case; correct?

09:34 16 A. Correct.

09:34 17 Q. And your drilling margin analysis doesn't relate in any  
09:35 18 way to anything prior to April 9th, 2010; correct?

09:35 19 A. Correct. And once again you're asking me to remember the  
09:35 20 dates. I looked at the drilling margins on the final hole  
09:35 21 section when they drilled into the final phase zone. So I  
09:35 22 didn't concern myself with final casing points.

09:35 23 Q. You said yesterday where there are losses, you need to  
09:35 24 stop and try and repair and remedy the situation; correct?

09:35 25 A. Correct.

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09:35 1 Q. One thing you can do, you said, was you could fill the  
09:35 2 well up with cement and abandon it at that point; right?

09:35 3 A. You can.

09:35 4 Q. You can set casing; correct?

09:35 5 A. Yes.

09:35 6 Q. There's other things you could do; right?

09:35 7 A. Such as?

09:35 8 Q. Lost circulation material?

09:35 9 A. That -- the lost circulation material is a common  
09:35 10 treatment, but it doesn't necessarily repair your drilling  
09:35 11 margin.

09:35 12 Q. It's a standard procedure to use lost circulation material  
09:35 13 when you encounter a lost zone in a well; correct?

09:36 14 A. And what that does is lets you reestablish circulation of  
09:36 15 drilling fluid, but in general, it doesn't repair your drilling  
09:36 16 margin.

09:36 17 Q. You would not agree that LCM pills are used to cure  
09:36 18 losses?

09:36 19 A. They're used to cure losses, but they're not necessarily  
09:36 20 used to cure drilling margin.

09:36 21 Q. If Jesse Gagliano testified yesterday that the  
09:36 22 WellLife 734 product that was a fibrous material added to the  
09:36 23 cement to increase fracture gradient, would you disagree with  
09:36 24 him that you can increase fracture gradient through additives?

09:36 25 A. There are processes that you can do through -- through --

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09:36 1 with cement, and other materials that generally require you to  
09:36 2 place pressure on the well when you add it in there.

09:36 3           Repairing the native fracture gradient, okay, is very  
09:37 4 difficult to do in those manners. Okay. Those are marginally  
09:37 5 successful, in my experience. I have used those techniques to  
09:37 6 reestablish circulation in wells, right, and cement squeezed  
09:37 7 into place can repair a drilling margin.

09:37 8 Q. Well, lost circulation material, you've used that in wells  
09:37 9 that you've drilled; correct?

09:37 10 A. Correct.

09:37 11 Q. And you didn't immediately cement the well and abandon it;  
09:37 12 correct?

09:37 13 A. That's correct.

09:37 14 Q. You didn't set casing at that point every time you had a  
09:37 15 loss, did you?

09:37 16 A. Not every time I had a loss, no.

09:37 17 Q. You had wells where you used lost circulation material,  
09:37 18 established that you were no longer losing returns, and drilled  
09:37 19 ahead; correct?

09:37 20 A. Not in the face of having open -- a massive, you know,  
09:37 21 high permeability pay zone.

09:37 22           That's -- that's the difference, Mr. Regan, is that  
09:37 23 if you're drilling up shallow in the well and you have losses  
09:38 24 and you don't have this high-pressure zone that you're dealing  
09:38 25 with, you do try to repair and reestablish circulation and

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09:38 1 drill to a suitable casing point.

09:38 2 But when you have this massive zone -- that's a very  
09:38 3 impressive zone that's in the well and, I mean, when I look at  
09:38 4 it -- and I've been in this same situation. When I look at it  
09:38 5 and I see a zone like that, I get very nervous because I know  
09:38 6 if that zone kicks, it's going to be tough to control.

09:38 7 Q. The last --

09:38 8 A. So in this situation you have to respect the actual  
09:38 9 formation that you've opened up and its potential to flow.

09:38 10 Q. The last date of losses was April 9th, 2010; correct?

09:38 11 A. I don't remember that that's the last date of losses.

09:38 12 Q. The wellbore was open then from April 10th through  
09:38 13 April 19th; correct?

09:38 14 A. The well -- yeah, at the -- at the end it was  
09:38 15 established -- it was established that there was a mud weight  
09:38 16 that they could circulate.

09:38 17 Q. Okay.

09:38 18 A. When I look at the report, okay, I see that they could  
09:39 19 circulate a mud weight. I got the sense that they could not  
09:39 20 raise the mud weight or lower the mud weight without something  
09:39 21 happening.

09:39 22 Q. Did they have any losses after April 9th through  
09:39 23 April 19th?

09:39 24 A. Not that I -- I'd have to go back and look at the reports  
09:39 25 again. Not that I recall that there were losses. They did



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09:39 1 cure those losses, but that didn't repair -- that does not  
09:39 2 repair the margin.

09:39 3 Q. Okay. So you would agree that they used lost circulation  
09:39 4 material that cured the losses and they had no further losses  
09:39 5 for about a ten-day period? You would agree with that?

09:39 6 A. I agree. That's factual.

09:39 7 Q. And do you agree -- have you looked at Transocean's flow  
09:39 8 chart policy on how to repair losses while drilling? Did you  
09:39 9 ever see that?

09:39 10 A. No, I don't recall seeing that.

09:39 11 Q. Do you disagree that what you've just described -- that  
09:39 12 is, pumping LCM pills, seeing if you can establish circulation  
09:39 13 without losses and then moving ahead -- do you see that that is  
09:39 14 an uncommon thing to do in the industry?

09:39 15 A. I think that, as I said -- I'm going to say it again.  
09:40 16 Okay. Typically, you cure your losses and you try to drill  
09:40 17 ahead to a casing point, but not in the face of having drilled  
09:40 18 your primary pay zone and knowing that you have a highly  
09:40 19 productive -- and you can tell this from the well logs.

09:40 20 You have to use extreme caution once you open a zone  
09:40 21 up like that, and it would be very worrisome to drill ahead  
09:40 22 where you can't raise your mud weight or lower your mud weight  
09:40 23 without something happening to you.

09:40 24 And you had -- even though you didn't have losses,  
09:40 25 you had a lot of risk of losses; right? It was a concern going

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09:40 1 forward that you could lose circulation at any point in time --  
09:40 2 at any point in time and have the well kick.

09:40 3 Q. Right.

09:40 4 A. And had it kicked at that point in time, it would have  
09:40 5 been a very difficult kick to control.

09:40 6 Q. Because of that risk of losses that didn't happen, whether  
09:40 7 there was a risk at any time, you would agree it was prudent to  
09:41 8 not circulate a full bottoms-up before cement because you had a  
09:41 9 risk of losses at any time?

09:41 10 A. But you -- as you said, you had gone ten days without  
09:41 11 losses, and you have circulated -- you have established  
09:41 12 circulation. And so you did have the ability to circulate  
09:41 13 bottoms-up right there.

09:41 14 Q. Okay.

09:41 15 A. And I did say yesterday, I'm -- you know, I'm somewhat  
09:41 16 sympathetic. I know you don't want to lose returns, but there  
09:41 17 are other things to be aware of. As I said, when you're  
09:41 18 circulating bottoms-up, one of the first things you're trying  
09:41 19 to do is get the gas out of the well.

09:41 20 Q. Okay. Let me ask you about M57B.

09:41 21 Dr. Beck, do you believe that M57B -- do you believe  
09:41 22 that zone was causal to the blowout on April 20th, 2010?

09:41 23 A. No.

09:41 24 Q. Did you ever examine the permeability of that zone?

09:41 25 A. I looked at the log. So when you say did I examine the

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09:41 1 permeability, to my knowledge, I don't think there was any  
09:41 2 sampling of the permeability of that zone. It was a log  
09:42 3 response that indicated a probable -- in my mind -- which I've  
09:42 4 done enough log analysis -- I look at it -- as a drilling  
09:42 5 engineer and as someone who works with well logs. I would look  
09:42 6 at that as a stringer that had -- that I would suspect as  
09:42 7 having gas in it.

09:42 8 Q. You relied on the analysis of Dr. Strickland; correct?

09:42 9 A. I did.

09:42 10 Q. And Dr. Strickland has already testified, so I think we  
09:42 11 have that testimony in the record.

09:42 12 Do you agree there's no industry definition of  
09:42 13 "hydrocarbon-bearing zone" as that term is used in the federal  
09:42 14 regulations?

09:42 15 A. I do think I went looking for a definition. I don't think  
09:42 16 I ever found one.

09:42 17 Q. Are you aware -- were you here for Dr. Strickland's  
09:42 18 testimony about whether or not the M57B zone ever flowed, even  
09:42 19 though it was underbalanced during that April 9th to  
09:42 20 April 19th time period?

09:42 21 A. I didn't -- I did not hear Dr. Strickland's testimony, so  
09:43 22 I -- I mean, everything that you just said, I don't have an  
09:43 23 agreement or disagreement with.

09:43 24 Q. Long string or liner, you say a prudent operator would  
09:43 25 have used a liner rather than a long string; correct?

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09:43 1 A. Correct.

09:43 2 Q. And just to be clear, when you talk about a liner, you're  
09:43 3 not talking about a liner tieback, are you?

09:43 4 In terms of at that time, for this exploration well,  
09:43 5 what you're comparing is the decision to set a liner versus a  
09:43 6 long string, not a liner tieback versus a long string?

09:43 7 A. Well, I didn't exclude the tieback from it, but the  
09:43 8 critical part is that you install the liner first. And in my  
09:43 9 opinion, in doing that, you create a dependable, testable  
09:43 10 barrier in the well that would isolate you from this  
09:43 11 high-pressure zone that's down below.

09:43 12 Q. You agree in your report that you say typically people  
09:43 13 would install a tieback when they came back to produce the  
09:44 14 well?

09:44 15 A. That was my understanding from looking. And I don't  
09:44 16 really remember where I came up with that understanding, but  
09:44 17 that was my understanding at the time of my report.

09:44 18 Q. You have never personally been involved in making the  
09:44 19 choice between using a long string production liner or line --  
09:44 20 or a long -- you've never been involved in making the choice of  
09:44 21 a long string versus a liner for a deepwater well; correct?

09:44 22 A. Not for a deepwater well, no. I have made that choice, of  
09:44 23 course, onshore.

09:44 24 Q. You didn't look at any other deepwater wells or Gulf of  
09:44 25 Mexico wells other than Macondo before coming to the conclusion

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09:44 1 that the long string was an imprudent decision; correct?

09:44 2 A. No. I did that analysis on my own, on my own opinion, not  
09:44 3 influenced by what anybody else in the industry is doing,  
09:44 4 because I felt that the fact that the well blew out made me  
09:44 5 want to look at the procedures that were used, because if other  
09:44 6 people are using those same procedures, I believe that they're  
09:45 7 at risk of a blowout as well, and I didn't want to warp my  
09:45 8 opinion based on saying, "Well, everybody was doing it, that  
09:45 9 makes it okay." I don't believe that for a minute, right.

09:45 10 Q. In determining whether somebody made a reasonable choice,  
09:45 11 you didn't want to look at what other people in that same  
09:45 12 situation -- what choices they have made?

09:45 13 A. No. I looked at the well on its own, as a stand-alone,  
09:45 14 with the choices -- with the people that were drilling the well  
09:45 15 and the history of the well, the condition of the wellbore.  
09:45 16 And I did look at the Macondo well; I didn't study other  
09:45 17 operators or other wells.

09:45 18 Q. And in reaching your conclusion that you would have used a  
09:45 19 liner at Macondo which, I take it, would have been the first  
09:45 20 deepwater well casing design that you would have done -- in  
09:45 21 terms of that liner, you've made that decision without  
09:45 22 considering any of the challenges that are unique in deepwater  
09:45 23 about setting liners or doing liner tiebacks, did you?

09:45 24 A. Well, Mr. Regan, I wouldn't make -- now you've put me in a  
09:46 25 position of being a deepwater drilling engineer actually

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09:46 1 drilling a well. I wouldn't make my decisions in a vacuum at  
09:46 2 that point in time. I would have other information to look at.  
09:46 3 But when I made that decision, I would understand and I would  
09:46 4 factor in the risk and the well control risk and my ability --  
09:46 5 which would be very important to me, my ability to establish a  
09:46 6 tested -- multiple tested barriers in a well.

09:46 7 And my opinion that was given in this report was  
09:46 8 based -- is based on the fact that I believe it's very  
09:46 9 difficult on a long string to establish your barriers, to test  
09:46 10 them correctly; and on a liner, you have a much clearer method  
09:46 11 and process for establishing that your casing and your cement  
09:46 12 is acting as a barrier.

09:46 13 Q. I'm going to show you TREX-8147, and I'll show you the  
09:46 14 cover.

09:46 15 MR. REGAN: If we could do this one on the ELMO,  
09:46 16 please.

09:46 17 BY MR. REGAN:

09:46 18 Q. This is a presentation that was given by Halliburton on  
09:46 19 June 3rd, 2010, by Mr. Tommy Roth. I'm going to go to page 5.  
09:47 20 And in this presentation, Halliburton first described the  
09:47 21 liner.

09:47 22 So that we can make sure that this Court understands  
09:47 23 what we're about to discuss in this presentation, it shows a  
09:47 24 liner, which is this right down here; correct?

09:47 25 A. Correct.

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09:47 1 Q. That's the liner.

09:47 2 Halliburton's told the Congress on June 3rd, 2010,  
09:47 3 that the liner provides two barriers to annular flow; correct?

09:47 4 A. That's what he says in his presentation.

09:47 5 Q. Right. The first barrier is the cement around the liner;  
09:47 6 correct?

09:47 7 A. Correct.

09:47 8 Q. The second barrier is the liner hanger seal; correct?

09:47 9 A. Correct.

09:47 10 Q. In that same presentation, he compared that to a  
09:47 11 full-string casing; correct?

09:47 12 A. Correct.

09:47 13 Q. Halliburton told Congress on June 3rd, 2010, full-string  
09:47 14 casing provides two barriers to annular flow; correct?

09:47 15 A. That's what he -- that's what he said, yeah.

09:47 16 Q. The first barrier is the cement; correct?

09:47 17 A. Correct.

09:47 18 Q. The second barrier is the hanger assembly; correct?

09:48 19 A. Correct.

09:48 20 Q. So comparing a long string and a liner in terms of the  
09:48 21 number of barriers, as done by Halliburton to Congress on  
09:48 22 June 3rd, 2010, both of them have the same number of barriers;  
09:48 23 correct?

09:48 24 A. That's his assessment of it.

09:48 25 Q. One is just longer than the other; correct?

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09:48 1 A. The difference being that the liner also has the packer on  
09:48 2 top of it, which is a mechanical barrier, which you can go down  
09:48 3 and specifically test close to the zone of interest what's  
09:48 4 happening on that well. And even if you didn't, even if you  
09:48 5 didn't set that packer, okay, you can go in and specifically  
09:48 6 test the annular cement and its ability to act as a barrier.  
09:48 7 That's the difference between a liner and a long string.

09:48 8 Q. Okay. Let me just ask about --

09:48 9 A. So you can test the cement as a barrier on the liner, and  
09:48 10 you can't do it on the long string.

09:49 11 Q. The cement that's used for both long string and liner is  
09:49 12 the cement around the production zone; correct?

09:49 13 A. Correct.

09:49 14 Q. Okay. Would you negative-test the liner?

09:49 15 A. Yes, I would.

09:49 16 Q. And you'd negative-test the full-string casing; correct?

09:49 17 A. But the negative test on the liner would test that annular  
09:49 18 barrier, and the negative test on the long string does not.

09:49 19 Q. Right. But in terms of determining whether the primary  
09:49 20 cement was holding, the negative test on the full string and  
09:49 21 the liner would be asking the same question of the well;  
09:49 22 correct?

09:49 23 A. Wait. I don't -- you're going to have to rephrase that  
09:49 24 because I don't think I agree with you on that.

09:49 25 Q. Okay. You would do a negative test on the full-string



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09:49 1 casing and in the liner of the cement that was at the bottom of  
09:49 2 that casing, however long it was; correct?

09:49 3 A. So when you conduct a negative test on the liner, the  
09:49 4 negative test on the liner is testing what we call the "liner  
09:49 5 lap." Okay. If you have a packer right there, it's testing  
09:50 6 that packer. Okay. If you don't have a packer right there, it  
09:50 7 would directly test the cement.

09:50 8 Q. Exactly. So what you're saying is the liner is more  
09:50 9 advantageous because it could have a packer right here;  
10 correct?

09:50 11 A. You're drawing it wrong. The packer is in between -- but  
09:50 12 what you did draw is good because you can run a packer into the  
09:50 13 well, deep into the well, and test specifically that point so  
09:50 14 that you know what you're testing.

09:50 15 Q. I can't do an engineering drawing of a liner packer, but  
09:50 16 I'm just trying to show that directionally it's in this area --

09:50 17 A. Right there.

09:50 18 Q. -- correct?

09:50 19 A. Correct.

09:50 20 Q. So when you do negative testing --

09:50 21 A. Mr. Regan, you have to realize I'm a little cautious  
09:50 22 because you might pull this back out in a while and you'd say,  
09:50 23 "Didn't you agree that was a liner packer right there?"

09:50 24 Q. I'm bound to do that. I'm bound to do that. That's why I  
09:50 25 put a number on it.

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09:50 1 When you negative-test that packer, are you testing  
09:50 2 the cement or the packer?

09:50 3 A. If the packer's there, you're testing the packer.

09:50 4 Q. Okay. So if you wanted to do a negative test to determine  
09:50 5 if the cement was providing a barrier under a long string or a  
09:51 6 liner, you would do the test in the long string without a  
09:51 7 packer there and in a liner without the packer at the liner  
09:51 8 lap; correct?

09:51 9 A. Your negative test, of course, is on the inside of the  
09:51 10 casing. Okay. So you're setting up, you're dropping pressure  
09:51 11 on the inside of the casing. When you run a negative test on a  
09:51 12 long string, you don't put a negative test pressure on the  
09:51 13 annulus at all. You put a -- when you test the liner, okay --  
09:51 14 and the packer is advantageous, but you don't have to use the  
09:51 15 packer.

09:51 16 When you test the lap, you're testing a barrier  
09:51 17 specifically, and that barrier is in between the formation that  
09:51 18 has the hydrocarbon in it and the surface. So you can test a  
09:51 19 liner more directly than you can test a long string for what's  
09:51 20 happening with the annulus cement.

09:51 21 Q. BP was willing to do either of these casing designs at  
09:51 22 Macondo based on what it saw in its final conditioning trip on  
09:52 23 the well; correct?

09:52 24 A. I don't think it was based on the final conditioning --  
09:52 25 well, I'd have to go back and look at their -- you're once

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09:52 1 again challenging my memory, and as you probably realize by  
09:52 2 now, that's not a good thing. Show me the documents.

09:52 3 Q. It's going to extend this a little bit, but I'm happy  
09:52 4 to --

09:52 5 A. That's okay.

09:52 6 Q. I'm happy to show you the -- I think other people might  
09:52 7 disagree with you.

09:52 8 Let me show you the -- let me show the memorandum of  
09:52 9 change, 2659.1.1. You were shown this yesterday.

09:52 10 You recall seeing that BP did do a memorandum of  
09:52 11 change for the long string/liner decision; correct?

09:52 12 A. Yes.

09:52 13 Q. Okay. And you were shown that sentence, among a few  
09:52 14 others, "The liner is an acceptable option but will add an  
09:52 15 additional 7 to \$10 million to completion costs."

09:52 16 Do you see that?

09:52 17 A. Yes.

09:52 18 Q. So is that a cost savings or is that just cost timing?

09:53 19 A. Well, the liner does cost -- it cost -- it's not a  
09:53 20 savings; it's an incremental cost if you install a liner,  
09:53 21 strictly from the standpoint that there's additional rig time  
09:53 22 involved in installing the liner.

09:53 23 Q. But the issue of the cost -- the cost is during completion  
09:53 24 operations; right? Not during the exploration well; right?

09:53 25 A. Well, if you're saying that the completion operations

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09:53 1 occur after the log is on the bank and everything that was  
09:53 2 going on, but the operation that -- the well was being  
09:53 3 completed when the blowout happened, under that definition,  
09:53 4 which is fine.

09:53 5 **Q.** Let me ask you the first sentence in the MOC. It says:  
09:53 6 "The current cement model suggests that we should be able to  
09:53 7 achieve a successful primary cement job on the long string.  
09:53 8 See attached design document in the PDF file."

09:53 9 Who did the current cement modeling?

09:53 10 **A.** I would say that was probably an OptiCem run from  
09:54 11 Halliburton, but I -- you know, that's -- but that is an  
09:54 12 assumption on my part.

09:54 13 **MR. REGAN:** Let's go to 2033 at 92. TREX-2033 at 92.

09:54 14 **BY MR. REGAN:**

09:54 15 **Q.** Mr. Gagliano was asked this question in an interview with  
09:54 16 Congress, June 11th, 2010. This question right here:

09:54 17 "QUESTION: So when the decision was made to do the  
09:54 18 full string of casing, that didn't strike you -- that  
09:54 19 didn't strike you as surprising based on your prior  
09:54 20 interaction with BP?

09:54 21 "ANSWER: I guess indifferent. That was the plan  
09:54 22 going forward. Looking at the model at the time, it  
09:54 23 seemed reasonable that we can get the cement job in place  
09:54 24 without losses. So nothing really struck me as  
09:54 25 surprising."

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09:54 1 Were you aware of that --

09:54 2 A. I haven't seen those statements before.

09:54 3 MR. REGAN: Let's go back to the MOC, TRES-2659,  
09:54 4 page 1. Again, just magnify this as best we can see.

09:54 5 BY MR. REGAN:

09:54 6 Q. It says: "The long string provides the best economic case  
09:55 7 and well integrity case for future completion operations."

09:55 8 What's "well integrity case" mean?

09:55 9 A. After reviewing a lot of the information, I think -- I  
09:55 10 think that the well integrity is probably talking about the  
09:55 11 ability for the well to withstand annular pressure buildup.

09:55 12 Q. So this was not solely an economic decision, was it?

09:55 13 A. No. They had some long-term concerns on how they were  
09:55 14 going to make the well sustainable.

09:55 15 Q. They were balancing competing risks; correct?

09:55 16 A. Not -- not -- they were balancing some risks. I think  
09:55 17 what I find -- what I find striking -- okay. Where is the  
09:55 18 statement that says "Which one of these is the safest option?"

09:55 19 Q. Okay. You also looked at the PowerPoints that were  
09:55 20 done --

09:55 21 MR. REGAN: Actually, let's go -- same document, if  
09:55 22 you could just go to 26599, page 1. And zoom in right here.

09:55 23 Actually, Diane, let's do -- yeah, this place  
09:56 24 right here. Okay.

25

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09:56 1 **BY MR. REGAN:**

09:56 2 **Q.** You saw that there was a discussion about the fact of what  
09:56 3 the ECDs were in the well. Can you see that, or do you need to  
09:56 4 make it larger? Can you see that, Dr. Beck?

09:56 5 **A.** I can't see it, no. I'm sorry. I've even got my glasses  
09:56 6 on, and I can't see it.

09:56 7 **Q.** All right. Okay. Actually, let me just do this part  
09:56 8 right here, then.

09:56 9 Do you see in the risk mitigation there was a  
09:56 10 discussion of single barrier and annulus for TA. Do you see  
09:56 11 that?

09:56 12 **A.** I see that.

09:56 13 **Q.** And BP's MOC says: "If losses occur during a cement job,  
09:56 14 possible cement evaluation, remedial cement operations,  
09:56 15 dispensations and/or MMS approvals will be required prior to  
09:56 16 performing TA operations due to a lower than required top of  
09:56 17 cement. Possible hydrocarbons zones could be left exposed in  
09:56 18 the annulus with only the casing hanger seal as the single  
09:57 19 barrier in the TA. The attached decision tree addresses these  
09:57 20 options. A perf and squeeze operation could be performed to  
09:57 21 add a second barrier in the annulus."

09:57 22 So there was a discussion of if there were problems  
09:57 23 seen when the cement job was poured, there could be  
09:57 24 different -- different options -- different techniques could be  
09:57 25 used; right?

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09:57 1 A. Agreed.

09:57 2 Q. And if we go to -- there's a PowerPoint attached to this.

09:57 3 MR. REGAN: If we go to TREN-8145 -- these are my  
09:57 4 last questions on this. 8145. It's a native file. And I want  
09:57 5 to go to page 10. Page 10 of the PDF.

09:57 6 There was -- here we go. Sorry. Maybe 8146.  
09:57 7 8146.

09:58 8 BY MR. REGAN:

09:58 9 Q. My apologies, Dr. Beck. Let me ask you some questions  
09:58 10 while he's pulling that up.

09:58 11 There was a third option other than liner and long  
09:58 12 string; correct? You saw that?

09:58 13 A. I mean, you could have plugged the well and walked away  
09:58 14 from it at some point in time, right?

09:58 15 Q. Right. And that was part of the risk analysis here;  
09:58 16 correct?

09:58 17 A. May I take a minute to refresh my memory?

09:58 18 Q. Yeah.

09:58 19 A. I've only seen this once and that was at my deposition,  
09:58 20 so . . .

09:58 21 Q. Sure.

09:58 22 One option was plug open hole and TA the well;  
09:58 23 correct?

09:58 24 A. Correct.

09:58 25 Q. That would have minimized the dollars and NPT exposure;

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09:58 1 correct?

09:58 2 A. Correct.

09:58 3 Q. And it would have increased the cost of completion;  
09:58 4 correct?

09:58 5 A. Okay. So that's a recognition that they could plug and  
09:59 6 then come back in and redrill the well, which is one of my  
09:59 7 suggestions, right.

09:59 8 Q. So BP did not pick the cheapest option for temporarily  
09:59 9 abandoning this well, did they?

09:59 10 A. So --

09:59 11 Q. That's my question, did they pick the cheapest option?

09:59 12 A. But it's not just a matter of picking the cheapest -- so  
09:59 13 did they pick the cheapest? They picked what was the most  
09:59 14 economic for them; right.

09:59 15 Q. But do you have my question: Did they pick the cheapest  
09:59 16 option? That's my question.

09:59 17 A. Well, and I'm going to answer it, but I'm going to answer  
09:59 18 it with a "but." Okay. So according to this analysis, in  
09:59 19 their minds, they could have spent more money, right -- let me  
09:59 20 look at the rest of the slides.

09:59 21 Now you've got me -- you're looking -- this looks  
09:59 22 like -- it says "minimizes today's dollars." It doesn't  
09:59 23 minimize future dollars; it would maximize the total expense on  
09:59 24 the well, right. So this would have been the most expensive  
09:59 25 option.



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10:00 1 Q. Okay.

10:00 2 A. Am I correct? Am I reading this correct?

10:00 3 Q. I'm asking questions.

10:00 4 A. Okay. I just want to make sure. I haven't -- I didn't  
10:00 5 develop these slides. So when I look at this, this tells me  
10:00 6 that to plug the well back and redrill it would have been the  
10:00 7 most expensive. So I have one more question on top of that.  
10:00 8 Okay.

10:00 9           Would this also have been the safest option going  
10:00 10 forward? And my opinion was and is that this would have been  
10:00 11 the safest option going forward.

10:00 12 Q. Right. So in reaching an expert report, where you claim  
10:00 13 people acted recklessly by putting cost over safety, is it your  
10:00 14 testimony now that you're not fully familiar with the actual  
10:00 15 documents that the people who you claim were reckless were  
10:00 16 using to evaluate their decisions?

10:00 17 A. The first I saw this document was at my -- the deposition.  
10:00 18 I did not review this document in my report. But in my view,  
10:00 19 looking at this document, this basically, it -- what I'm  
10:01 20 missing when I see this document is where is the assessment of  
10:01 21 what was the safest thing to do.

10:01 22           Because you are tasked by DWOP to do things in the  
10:01 23 safest possible manner, and I don't see where the safety part  
10:01 24 came.

10:01 25 Q. I'm going to go to the TA procedure.

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10:01 1 You've never developed a temporary abandonment  
10:01 2 procedure for a deepwater well; correct?

10:01 3 A. That's correct.

10:01 4 MR. REGAN: If we could pull up TREN-97.1.1.

10:01 5 BY MR. REGAN:

10:01 6 Q. You're familiar with this document, right, Dr. Beck?

10:01 7 A. Yes, I have seen that document.

10:01 8 Q. Are you aware that the United States' expert, Mr. Heenan,  
10:01 9 testified that this April 20th, 2010 document met the standard  
10:01 10 of care for an operator in the way that a negative pressure  
10:01 11 test should be written?

10:01 12 A. I wasn't aware of his testimony regarding that, no.

10:01 13 Q. Were you aware that Transocean's expert, Mr. Barnhill,  
10:01 14 that he testified that this document was consistent with the  
10:02 15 standard of care in the industry?

10:02 16 A. Not aware of that.

10:02 17 Q. And do you have a difference of opinion with Dr. Heenan  
10:02 18 and Dr. Barnhill about whether this procedure is consistent  
10:02 19 with the standard of care in the industry, as it existed on  
10:02 20 April 20th, 2010?

10:02 21 A. So when I look at the temporary abandonment procedure,  
10:02 22 okay, I still use the same standard. I'm trying to work within  
10:02 23 the DWOP and do the safest possible thing.

10:02 24 So in terms of what the standard of care in the  
10:02 25 industry is, other people are doing the same thing, I would

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10:02 1 worry that other people doing the same thing might end up with  
10:02 2 the same result.

10:02 3           So my standard of care is to look at how do I leave  
10:02 4 the well in the safest possible condition, and that's what I  
10:02 5 want to achieve in a temporary abandonment.

10:02 6 Q. Your standard of care is to look at one well and make a  
10:02 7 decision about whether you think it was appropriate or not.  
10:02 8 Fair?

10:02 9 A. I'm looking at the well that blew out, though, sir, not  
10:02 10 wells that were successful. You sometimes reach the wrong  
10:03 11 conclusion, you attribute success to the wrong things when you  
10:03 12 only look at successful wells.

10:03 13 Q. Okay. And if you're trying to determine how something  
10:03 14 compares to the standard of care in the industry, do you think  
10:03 15 you should look at one well or maybe more than one?

10:03 16 A. I would love to look at a number of wells. And to be  
10:03 17 honest, I didn't have access to look at a number of wells.  
10:03 18 That's, you know, neither here nor there.

10:03 19           At the end of the day, I really wanted to look at the  
10:03 20 Macondo well and the specific actions that were taken and were  
10:03 21 those actions taken within the governance framework, within the  
10:03 22 directives of how to drill the wells.

10:03 23 Q. Bottoms-up, 8140.78.2. This is a sentence in your report,  
10:03 24 Dr. Beck, where you state, "In this expert's experience" --  
10:03 25 that's your experience; correct? -- "not circulating bottoms-up

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10:04 1 is an extraordinary decision."

10:04 2 Those are the words you used; correct?

10:04 3 A. That's correct.

10:04 4 Q. And what experience, as referenced in this report, did you  
10:04 5 have in circulating bottoms-up in deepwater wells?

10:04 6 A. Well, my experience that I was referring to -- obviously,  
10:04 7 I've stated my experience numerous times. My experience is, in  
10:04 8 deep high-pressure onshore wells, where, you know, many of --  
10:04 9 as I've pointed out, many of the challenges are the same in the  
10:04 10 subsurface. And it is my -- in my experience that I just find  
10:04 11 it remarkable, and I stand by that opinion.

10:04 12 I find it remarkable that you don't circulate  
10:04 13 bottoms-up on a production casing cement job or any other  
10:04 14 cement job.

10:04 15 Q. The fact of the matter is, Dr. Beck, you had no experience  
10:04 16 with respect to circulating bottoms-up in deepwater wells and  
10:04 17 no knowledge about how many deepwater wells had full bottoms-up  
10:04 18 performed before a primary cement job; correct?

10:05 19 A. That doesn't change my opinion as to whether it's a good  
10:05 20 practice or not.

10:05 21 Q. I'm not asking if it changes your opinion. You've made  
10:05 22 your opinion clear in your report. I'm just asking about the  
10:05 23 basis for it.

10:05 24 Did you have any experience in circulating bottoms-up  
10:05 25 in deepwater wells?

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10:05 1 A. No.

10:05 2 Q. Did you have any experience or any knowledge about how  
10:05 3 many deepwater wells have full bottoms-up performed before a  
10:05 4 primary cement is poured on the production casing?

10:05 5 A. No.

10:05 6 Q. What was Halliburton's knowledge about the decision with  
10:05 7 respect to whether to perform a full bottoms-up?

10:05 8 A. My recollection is that the cementer on the rig expected a  
10:05 9 full bottoms-up to be pumped. And whether he requested or not,  
10:05 10 he -- I think he asked, "Are we going to pump a bottoms-up?"  
10:05 11 and he was told, "No, we're not." That's my recollection on  
10:06 12 Halliburton's input on the bottoms-up.

10:06 13 Q. Are you aware of any recommendation by Halliburton to not  
10:06 14 pump the cement because a full bottoms-up was not being  
10:06 15 performed?

10:06 16 A. Well, at that point in time, they've asked for a full  
10:06 17 bottoms-up; and the operator says, "No, we're not going to pump  
10:06 18 a full bottoms-up. We're going to pump cement."

10:06 19 At that point in time, the decision is made. The  
10:06 20 leader has made that decision, and the cementer's going to go  
10:06 21 ahead and do what he's asked to do.

10:06 22 Q. Are you aware of any communication by Halliburton that  
10:06 23 they did not want to go forward with the cement job because  
10:06 24 there was not a full bottoms-up?

10:06 25 A. I think I've just discussed what I knew from Halliburton

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10:06 1 was that they asked, "Are we going to pump bottoms-up?"

10:06 2 The reason he asked that is because he wants to pump  
10:06 3 bottoms-up, right. That's a de facto recommendation, in my  
10:06 4 mind. And then the decision was clearly made. This is above  
10:06 5 the cementer at the rig. The decision was made by BP to not  
10:06 6 pump bottoms-up and go ahead and pump cement.

10:06 7 Q. Are you aware of any communication from Halliburton that  
10:06 8 it did not want to go forward with the cement job because there  
10:06 9 was not a full bottoms-up being performed?

10:07 10 A. Well, I'm still back to the discussion from the cementer.  
10:07 11 To me, that was a recommendation that you pump bottoms-up.  
10:07 12 Now, was it a written recommendation that came from the office?  
10:07 13 No, I haven't seen any recommendation like that.

10:07 14 But you have the guy at the rig saying, you know,  
10:07 15 "Are we going to pump bottoms-up here?" and the answer was,  
10:07 16 "No, we're not."

10:07 17 Q. Let me try it one more time.

10:07 18 You do know that Halliburton, before it pumped the  
10:07 19 cement job, was aware that a full bottoms-up was not going to  
10:07 20 be performed. You know that; correct?

10:07 21 A. That is -- yes. The cementer knew that.

10:07 22 Q. That's all I'm asking.

10:07 23 A. Okay.

10:07 24 Q. And after Halliburton knew that a full bottoms-up was not  
10:07 25 going to be performed, can you point to anything where

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10:07 1 Halliburton said, "We don't recommend going forward with this  
10:07 2 cement job because you, BP, are not deciding to not do  
10:07 3 bottoms-up"? That's all I'm asking.

10:07 4 A. No, I don't -- I didn't see any recommendation or protest  
10:07 5 from Halliburton on that.

10:07 6 MR. REGAN: Your Honor, I'm going to change topics  
10:07 7 now. I probably have 30 to 45 minutes left.

10:08 8 THE COURT: All right. Let's take a 15-minute  
10:08 9 recess.

10:08 10 THE DEPUTY CLERK: All rise.

10:08 11 (WHEREUPON, the Court took a recess.)

10:29 12 THE DEPUTY CLERK: All rise.

10:29 13 THE COURT: Please be seated.

10:29 14 MR. REGAN: May I proceed, Your Honor?

10:29 15 THE COURT: Yes, sir.

10:29 16 BY MR. REGAN:

10:29 17 Q. Dr. Beck, I want to return to the float collar.

10:29 18 MR. REGAN: If we can go to TREN-8140.78.1.

10:29 19 BY MR. REGAN:

10:29 20 Q. In your report, you state in your opinion, "the failure to  
10:29 21 convert the float collar without damaging it was a root cause  
10:29 22 of blowout"; correct?

10:29 23 A. Yes.

10:29 24 MR. REGAN: I'd like to go to TREN-8143.6.1 --  
25

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10:29 1 BY MR. REGAN:

10:29 2 Q. -- which, again, is the transcript from your presentation  
10:29 3 on February 11th, 2011.

10:29 4 The question is, did you state that day:

10:29 5 "QUESTION: When the float valves in the shoe track  
10:29 6 don't work following a cement job, that is not a good  
10:30 7 situation. And it's even worse when it goes unrecognized,  
10:30 8 which is apparently what happened in this well. So  
10:30 9 there's one barrier of compromise. Did it cause the  
10:30 10 incident? No."

10:30 11 Did I read that correctly?

10:30 12 A. Will you say again? What transcript was this from?

10:30 13 Q. This is a presentation you gave on February 11th, 2011,  
10:30 14 before you were retained by Halliburton as an expert in this  
10:30 15 case.

10:30 16 A. Okay.

10:30 17 Q. Did I read your statement correctly?

10:30 18 A. Yes.

10:30 19 Q. One of the criticisms you have is that BP should have  
10:30 20 converted the float collar before running it down into the  
10:30 21 bottom of the well; correct?

10:30 22 A. Correct.

10:30 23 Q. The purpose, though, of an autofill float collar is so  
10:30 24 that you can allow the wellbore fluids to come inside the  
10:30 25 casing when you're running it; correct?



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10:30 1 A. Correct.

10:30 2 Q. What you're trying to avoid there are surge pressures;  
10:31 3 that is, if you put a closed casing and run it down three miles  
10:31 4 into the well, you can create surge pressures in the well;  
10:31 5 correct?

10:31 6 A. That's correct. That's one of the functions of an  
10:31 7 autofill collar, yes.

10:31 8 Q. And so a benefit of an autofill collar being run in the  
10:31 9 open position, that is, with the tube in it, while you're  
10:31 10 running the casing, you can avoid those surge pressures;  
10:31 11 correct?

10:31 12 A. That is correct.

10:31 13 Q. I don't know -- I can't remember for sure if you said it  
10:31 14 yesterday or not. But you are aware that, in fact -- well, you  
10:31 15 testified yesterday that BP's DWOP had a policy of converting  
10:31 16 float collars before running them; correct?

10:31 17 A. Before running them, it says, through hydrocarbon-bearing  
10:31 18 zones.

10:31 19 MR. REGAN: TREX-41245-N.9.1.

10:29 20 BY MR. REGAN:

10:29 21 Q. This is an MOC from 2009 with respect to the title  
10:31 22 "Autofill Float Equipment." Do you see that?

10:31 23 A. Yes.

10:31 24 Q. It's an MOC for Macondo. Do you see that at the top?

10:32 25 A. Yes.

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10:32 1 Q. Do you see where it says, "Autofill float equipment may be  
10:32 2 run through hydrocarbon-bearing zones without tripping autofill  
10:32 3 float equipment"?

10:32 4 And then it quotes the DWOP. The same thing is  
10:32 5 quoted, correct?

10:32 6 A. Yes.

10:32 7 Q. And then it says, "Hole conditions in narrow ppg  
10:32 8 environments may lead to the operational practice of running  
10:32 9 the casing strings through the subject sections prior to  
10:32 10 converting the autofill float equipment"; correct?

10:32 11 A. Correct.

10:32 12 Q. And then there's a dispensation; correct?

10:32 13 A. It says -- "Dispensation is requested," it says, yes.

10:32 14 Q. And this MOC was granted; correct?

10:32 15 A. I assume that it's signed off on the bottom. I don't see  
10:32 16 that in the document that you have up there.

10:32 17 Q. Well, I have a native one up so it's cleaner to read.

10:32 18 But do you agree, Dr. Beck, based on your review of  
10:32 19 the materials, that BP actually had an MOC that allowed it to  
10:32 20 run this float equipment at Macondo in an unconverted fashion  
10:33 21 because of the issues that we just read from the MOC?

10:33 22 A. I agree that that -- you know, assuming this was signed  
10:33 23 off on -- that they did have a management of change.

10:33 24 But any time you do a management of change, as I  
10:33 25 pointed out in my report, right, when you do so many management

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10:33 1 of changes and give dispensations to your good drilling  
10:33 2 practices, at some point in time you render your good drilling  
10:33 3 practices useless.

10:33 4 So this was one of those situations where it was --  
10:33 5 and I will admit, I'm sympathetic to it. It's a risk/reward,  
10:33 6 right, what happens A versus what happens B. The desire was to  
10:33 7 get the casing in the ground without losing returns. But once  
10:33 8 again, it's a risk/reward.

10:33 9 The assessment was done on doing it, but that doesn't  
10:33 10 mean that the decision was correct. It just means that people  
10:34 11 got together and made a decision. And my concern becomes, when  
10:34 12 you give a dispensation to a good drilling practice, that if  
10:34 13 you do it enough, you render your DWOP toothless. Because  
10:34 14 people say, "Well, I don't want to do that. Let's write a  
10:34 15 management of change and do something else."

10:34 16 Q. Does the document state under Justification, quote, Offset  
10:34 17 wells have encountered hydrocarbons in the subject hole  
10:34 18 sections. Disabling the autofill function may add unnecessary  
10:34 19 surge pressure and may contribute to significant mud losses and  
10:34 20 cementing problems if the float equipment is activated prior to  
10:34 21 reaching TD?

10:34 22 Did I read the document correctly?

10:34 23 A. That's correct. But it doesn't point out that there are  
10:34 24 risks in not doing it, that -- and it doesn't balance the risk  
10:34 25 of actually running it in the hole and either taking a kick up

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10:34 1 your casing or plugging your float equipment and your guide  
10:34 2 shoe because of that.

10:34 3 So there's a justification, but I don't think it's a  
10:35 4 full -- I don't think it balanced the risks, like --

10:35 5 Like we discussed earlier, I mean, this -- it's, you  
10:35 6 know, give a little, take a little. But where was the  
10:35 7 recognition that there could be some downside to doing what  
10:35 8 they're doing?

10:35 9 Q. Dr. Beck --

10:35 10 MR. REGAN: If we could go to the ELMO.

10:29 11 BY MR. REGAN:

10:29 12 Q. I'd like to show you a document you were shown yesterday.  
10:35 13 I'm going to mark it as D-4781.

10:35 14 Is this a picture of the float collar?

10:35 15 A. Yes.

10:35 16 Q. You were asked yesterday about the theory of the ball  
10:35 17 being blown out the bottom of the float collar. Do you recall  
10:35 18 that?

10:35 19 A. Yes.

10:35 20 Q. You weren't asked anything about these little things right  
10:35 21 here. Let me focus in on what these are.

10:35 22 What are these white dots?

10:35 23 A. I'm assuming that those are the shear pins holding the  
10:35 24 tube in place.

10:35 25 Q. Right. So the Transocean testing that you relied upon

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10:35 1 about blowing this ball through the bottom of the float collar,  
10:35 2 they actually bolted that tube and did not allow those shear  
10:36 3 pins to activate in that testing, did they not?

10:36 4 A. They did that. They conducted their testing in two steps.  
10:36 5 One of the tests was to see how much pressure it takes to blow  
10:36 6 the ball out, and then they did another test to see how much  
10:36 7 pressure it would take to just function correctly and blow the  
10:36 8 tube out.

10:36 9 Q. Right. But as designed, those shear pins have a pressure  
10:36 10 rating at which they will shear; correct?

10:36 11 A. Those shear pins can --

10:36 12 Q. Correct?

10:36 13 A. I need to say something about shear pins, though. So it's  
10:36 14 important to know, while you may design this and pin it to  
10:36 15 shear at a certain pressure rating, I've seen shear pins not  
10:36 16 shear when they're supposed to shear before. And more  
10:36 17 importantly, I've seen issues where there's debris in a  
10:36 18 wellbore that prevents shear pins from ever shifting at all.

10:36 19 So the fact that -- was it designed correctly? Was  
10:36 20 it designed to shear correctly? Yes. It's a mechanical tool.  
10:37 21 It's subject to failure when you run it in the well.

10:37 22 Q. Was the float collars tested for Transocean by Stress  
10:37 23 Engineering the exact same float collar model that was used at  
10:37 24 Macondo?

10:37 25 A. I remember the term "exemplar float collar," which I would

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10:37 1 take to mean was -- was the same float collar. I -- I can't  
10:37 2 remember right now if they tested the exact one or one that was  
10:37 3 similar, to be honest with you.

10:37 4 Q. You did not --

10:37 5 THE COURT: Let me ask something, Mr. Regan, so I can  
10:37 6 understand this.

10:37 7 Are you saying by your question -- I want to  
10:37 8 understand this. This is post-casualty testing you're talking  
10:37 9 about, obviously; right?

10:37 10 MR. REGAN: Yes, sir.

10:37 11 THE COURT: Are you saying that these shear pins were  
10:37 12 used in the testing but were not part of the actual device in  
10:37 13 the -- as it's used in the field?

10:37 14 MR. REGAN: No. The shear pins exist in the way the  
10:38 15 float collar is used in the field, and they have a differential  
10:38 16 pressure.

10:38 17 THE COURT: They're designed into it.

10:38 18 MR. REGAN: Exactly. But when Transocean did its --

10:38 19 THE COURT: And they're designed to give away at a  
10:38 20 certain pressure?

10:38 21 MR. REGAN: They are. The differential pressure --

10:38 22 THE COURT: What are you suggesting that what was  
10:38 23 done in the test was different?

10:38 24 MR. REGAN: Yes. The test that was done by Stress  
10:38 25 Engineering for Transocean is they bolted this, they actually

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10:38 1 secured it, so that the two shear pins would not shear.

10:38 2 THE COURT: You used bolts -- some sort of bolts  
10:38 3 instead of shear pins?

10:38 4 MR. REGAN: Yes. Because they just wanted to then  
10:38 5 put pressure on this ball to see how hard they could push this  
10:38 6 ball to blow out the bottom.

10:38 7 The problem, of course, is, if you do that,  
10:38 8 you've taken out the way that the tube is actually designed to  
10:38 9 work.

10:38 10 THE COURT: Okay.

10:38 11 MR. REGAN: And we'll have witnesses who testify --

10:38 12 THE COURT: Well, I understand the premise of where  
10:38 13 you're going now. Okay. Thank you.

10:38 14 MR. REGAN: Okay.

10:38 15 BY MR. REGAN:

10:38 16 Q. Dr. Beck, do you know the differential pressure that was  
10:38 17 required to make those shear pins actually shear through that  
10:38 18 resin tube?

10:39 19 A. I -- you're talking about -- so the upper shear pins, not  
10:39 20 on the ball seat?

10:39 21 Q. Yes, sir.

10:39 22 A. Yeah, I recall that number. I want to say it was -- well,  
10:39 23 I'd have to go back and look at the document. Why don't you  
10:39 24 refresh my memory.

10:39 25 But it was 400, 5- -- 700 psi, I think, in that

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10:39 1 range.

10:39 2 Q. Lower than 3100 psi; correct?

10:39 3 A. Much lower than 3100 psi.

10:39 4 Q. So do you know what the difference of pressure is to  
10:39 5 actually blow this --

10:39 6 MR. REGAN: It's actually concrete, Your Honor,  
10:39 7 inside of the float collar.

10:29 8 BY MR. REGAN:

10:29 9 Q. What the differential pressure is for that concrete itself  
10:39 10 to actually get blown through the device?

10:39 11 A. I believe I saw a pressure rating on the device of  
10:39 12 6800 psi, which would be how much internal pressure you could  
10:39 13 put on that collar.

10:39 14 Q. And the Delta P, or differential pressure, that you relied  
10:39 15 on from Transocean, was a number of, what, 1400 to 1800 to blow  
10:39 16 the ball out the bottom if you bolt the top; right?

10:39 17 A. Correct.

10:39 18 Q. I think you said this was 400 to 500, in your view,  
10:40 19 somewhere around there? Did I get those numbers right?

10:40 20 A. Yes. And I think, particularly from a relative  
10:40 21 standpoint, those pressures are correct.

10:40 22 Q. Now, just to be clear, you posit two possibilities in the  
10:40 23 clogging of the float collar in your report. This is Figure 13  
10:40 24 of your report. I've just got it here on the ELMO.

10:40 25 Do you see that?



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10:40 1 A. Yes.

10:40 2 Q. Possibility 1 is that there's a clog in the float collar  
10:40 3 itself; right?

10:40 4 A. Correct.

10:40 5 Q. Possibility 2 is that there's a clog below the float  
10:40 6 collar; correct?

10:40 7 A. Correct.

10:40 8 Q. If you cannot circulate the well -- that's the premise of  
10:40 9 my question, meaning you cannot move the fluids, and it is  
10:40 10 Possibility 2, meaning the debris is below the float collar --  
10:40 11 is there any differential pressure being seen by the float  
10:40 12 collar in the nine attempts to pressure up?

10:40 13 A. No.

10:40 14 Q. To be clear, then, when you see this chart shown to you  
10:41 15 yesterday, if, in fact, that clog was in the reamer shoe, the  
10:41 16 float collar itself is not seeing any differential pressure on  
10:41 17 these eight attempts if it is true that the debris is below the  
10:41 18 float collar; correct?

10:41 19 A. I think so, and I think I was very clear on that, that if  
10:41 20 the debris in the guide shoe --

10:41 21 Q. Correct.

10:41 22 A. And let's make sure we say "guide shoe." If it's in the  
10:41 23 guide shoe, if that's what's plugged, then the pressure  
10:41 24 differential is being placed across the guide shoe and not  
10:41 25 across the float collar.

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10:41 1 Q. Right. So in terms of those attempts to create  
10:41 2 circulation, that is, actually make fluid move, if the blockage  
10:41 3 is below, no fluid can move inside the float collar, which  
10:41 4 means there's no differential pressure, which means the float  
10:41 5 collar isn't seeing any increased pressure in that scenario;  
10:41 6 correct?

10:41 7 A. That is correct, yes. I agree with you.

10:41 8 Q. In Scenario 1, where the clog is in the float collar or  
10:42 9 above it, okay, in that scenario, when there is pressure being  
10:42 10 applied to create circulation or break circulation, that  
10:42 11 pressure would be seen by the float collar; correct?

10:42 12 A. Correct.

10:42 13 Q. One more predicate question. These numbers, zero to  
10:42 14 2,000, or zero to 3,000, the float collar is sitting in a  
10:42 15 pressure environment in the well; correct?

10:42 16 A. Correct.

10:42 17 Q. It's at about 13,000 psi down there; correct?

10:42 18 A. Correct.

10:42 19 Q. So we would have to say this is not a question of zero to  
10:42 20 1,000, it's a question of 13,000 to 14,000 for the float  
10:42 21 collar, the pressure it would see in Scenario 1, where the clog  
10:42 22 is actually in the float collar; correct?

10:42 23 A. No. Because the conversion -- okay. There's a pressure  
10:42 24 differential. So the numbers that we're recording are the  
10:42 25 excess pressures. So the fact that the float collar is

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10:42 1 sitting in mud and is under the pressure of the mud, that  
10:42 2 doesn't have anything to do with the conversion process.

10:43 3 Q. All right. And just to make sure we're clear,  
10:43 4 differential pressure, we're talking the difference in two  
10:43 5 pressures, above and below a port.

10:43 6 The way that the float collar is designed is, as  
10:43 7 stuff flows through it, it goes through some holes in the  
10:43 8 bottom, which creates a differential, which then, by design,  
10:43 9 allows it to come out; correct?

10:43 10 A. I think that's how I described it yesterday, yes.

10:43 11 Q. But if the clog is in the float collar itself, the float  
10:43 12 collar would be seeing the pressures that are being used;  
10:43 13 right?

10:43 14 A. Correct.

10:43 15 Q. And the pressures that were used to convert -- people  
10:43 16 dispute whether it did or not -- were those higher or lower  
10:43 17 than the pressures to shear the pins or even, under your  
10:43 18 analysis, with Transocean's stress engineering testing, to blow  
10:43 19 the ball out? Was it higher or lower than these numbers?

10:43 20 A. Well, the pressure used was over 3000 psi. It exceeded --

10:43 21 Q. Right.

10:43 22 A. -- any of those pressures.

10:43 23 Q. Right. So when they went to 1500, it would have been  
10:43 24 higher than those numbers; right?

10:44 25 A. Yes.

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10:44 1 Q. If they went to 2000, it was way higher than those  
10:44 2 numbers?

10:44 3 A. Absolutely.

10:44 4 Q. Right.

10:44 5 And does that suggest to you that, in fact, because  
10:44 6 nothing converted at these higher pressures, even though they  
10:44 7 were double the differential pressure numbers, that, in fact,  
10:44 8 it is more likely that the clog was in Situation 2, because in  
10:44 9 Situation 2, where it's below, the float collar isn't seeing  
10 10 any of those pressures?

10:44 11 A. So this is where we disagree. You say is it more likely.  
10:44 12 It -- and I said it yesterday, it could be the guide shoe. It  
10:44 13 could be the float collar. It could be both of them.

10:44 14 Now, when I reached my conclusion that I say I think  
10:44 15 that ball shot out that float tube --

10:44 16 Q. Uh-huh.

10:44 17 A. -- okay, I used some other evidence, right, some -- the  
10:44 18 evidence that the well blew out unrestricted into this casing,  
10:44 19 that if those float valves -- if the conversion had happened --  
10:45 20 you've got two valves there that are very tough, strong valves,  
10:45 21 particularly over the 24-hour period that you're running casing  
10:45 22 and putting cement or mud back pressure on it. Those are two  
10:45 23 very good valves that would have, as a minimum, restricted the  
10:45 24 flow from the well.

10:45 25 Q. Okay.

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10:45 1 A. Okay. In my opinion, it would have completely stopped the  
10:45 2 flow from the well. You wouldn't have seen -- that would have  
10:45 3 acted as a barrier, and you wouldn't have seen the blowout.

10:45 4 So I reached the conclusion that the upper float  
10:45 5 collar must have been plugged. Okay. It's more likely to be  
10:45 6 plugged because the smallest hole in that whole flow path is  
10:45 7 right there in the float tube, the smallest hole. It's more  
10:45 8 likely to be plugged at the float collar.

10:45 9 And once you plug things up, okay, all bets are off  
10:45 10 on the performance of shear pins.

10:45 11 Q. Okay. Let me ask you about, then, finally, on this theory  
10:45 12 of the ball being blown out of the tube. You were shown some  
10:46 13 testimony -- or I guess asked a question by Mr. Underhill about  
10:46 14 that yesterday from the United States. Do you remember that?

10:46 15 A. I don't remember the specific question, so . . .

10:46 16 Q. Do you remember looking at testimony or e-mails about a  
10:46 17 Weatherford person saying it could blow the ball out the bottom  
10:46 18 of the tube? Do you recall seeing that or referring to that in  
10:46 19 your report?

10:46 20 A. Yes.

10:46 21 Q. Now, we've just been talking about this phenolic ball  
10:46 22 right here; right?

10:46 23 A. Correct.

10:46 24 Q. Now, the ball that the Weatherford guy was talking about  
10:46 25 is a different ball; right?

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10:46 1 A. I'm not -- I'm not sure. I'm probably -- I -- why don't  
10:46 2 you clarify it on me and let me reach a conclusion on that.

10:46 3 Q. Okay. Let me ask a few more questions, and then I'll show  
10:46 4 you his testimony.

10:46 5 Do you know what a diverter test device is?

10:46 6 A. A diverter test device?

10:46 7 Q. Yes, sir.

10:46 8 A. Be more clear.

10:46 9 Q. A DTD that's used in deepwater drilling to test whether a  
10:47 10 diverter is closed in the system that's being used --

10:47 11 A. Okay.

10:47 12 Q. -- for cementing a well. Not the diverters up on the rig,  
10:47 13 but actually in the -- in a riser or in the well.

10:47 14 A. It's the downhole tool in the drill pipe above the casing  
10:47 15 that lets flow divert from inside the casing to the annulus.

10:47 16 Q. You've got it.

10:47 17 A. Okay.

10:47 18 Q. So we're talking about the same thing. I'm going to call  
10:47 19 it a DTD, diverter test device. You know that the way to  
10:47 20 activate that is actually dropping a ball. It lands on a seat,  
10:47 21 and then it shifts; right?

10:47 22 A. Yes.

10:47 23 Q. Okay. Were you aware that the ball that Mr. Clawson was  
10:47 24 talking about, that could be blown through, was actually a DTD  
10:47 25 ball that would just land up here on top of the float collar, a

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10:47 1 different ball?

10:47 2 A. Okay. No, I'll admit I wasn't aware that that was the  
10:47 3 ball that he was referring to.

10:47 4 Q. Let me show you Mr. Clawson's deposition, page 365 to 366.  
10:48 5 365 to 366.

10:48 6 Do you see from the question on 356 starting on 10  
10:48 7 for context he says:

10:48 8 "QUESTION: I'm hoping to find out more -- you  
10:48 9 testified about the Allamon ball. At 1300 pounds per  
10:48 10 square inch, it could have been blown through the  
10:48 11 retainer; correct?"

10:48 12 "ANSWER: Yes."

10:48 13 If we go back to the ELMO quickly. You understand  
10:48 14 that the retainer is this -- this cage right here. You know  
10:48 15 that; right?

10:48 16 A. Yes.

10:48 17 Q. Okay. Back to the deposition.

10:48 18 And Mr. Clawson says -- with the question at 22.

10:49 19 "QUESTION: What did you mean by that? What did you  
10:49 20 say -- it wasn't there? What does that mean?

10:49 21 "ANSWER: They would drop the ball from the surface  
10:49 22 to be able to close the Allamon tool.

10:49 23 "QUESTION: This, of course, is a separate ball from  
10:49 24 the one in the float collar?"

10:49 25 "ANSWER: Right. The ball in the float collar is

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10:49 1 retained where it can't come out. So once the Allamon  
10:49 2 ball tool goes in the tool, it closes the tool. Now you  
10:49 3 can start circulating down the casing string."

10:49 4 So my question is: With respect to this opinion  
10:49 5 about the ball being blown out in Mr. Clawson's testimony, do  
10:49 6 you know what ball he was talking about?

10:49 7 A. Well, I think I probably didn't pay much attention to that  
10:49 8 ball, what ball he was talking about. I went directly to the  
10:49 9 test pressures that Transocean got, and I really relied on  
10:49 10 those test pressures. And if I saw a similar pressure that  
10:49 11 Mr. Clawson was referring to -- I apologize if I made that  
10:49 12 mistake in reading his deposition.

10:49 13 Q. No apology necessary. There's a lot of information.

10:50 14 A. The key -- the key in my mind was, you know, what kind of  
10:50 15 pressure would be required to blow that ball through that ball  
10:50 16 seat.

10:50 17 Q. Okay. Now, finally, with respect to the float collar  
10:50 18 conversion, it's true that Mr. Gagliano was actually contacted  
10:50 19 and aware of the issues with the float collar conversion during  
10:50 20 the conversion tests; right?

10:50 21 A. Once again, I don't recall that directly. If there's  
10:50 22 testimony that he gave as such, I accept that --

10:50 23 Q. Okay.

10:50 24 A. -- that he knew about it.

10:50 25 Q. Let me just show you TRES-2033, pages 64 to 65. I'll try



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10:50 1 to do it quickly.

10:50 2 This again, is the interview he gave a couple months  
10:50 3 after the accident. The question is -- starts in that entry,  
10:50 4 "Yes"; and it goes to the bottom of page.

10:50 5 Let's just start with that. He was asked:

10:50 6 "QUESTION: Can you explain" -- it was an entry in  
10:50 7 the document.

10:50 8 "ANSWER: At the time I received one, possibly two,  
10:51 9 calls before the job. They were having issues with  
10:51 10 converting floats. And that is indicated -- let's see.  
10:51 11 Where was it? They had problems with pressuring up and  
10:51 12 converting the floats. They had tried it several  
10:51 13 different times. And when they were finally able to  
10:51 14 circulate, they were seeing lower than expected pressures.  
10:51 15 So he had called me and let me know what happened. I  
10:51 16 actually got a call beforehand saying they couldn't  
10:51 17 convert the floats and they couldn't circulate the well.

10:51 18 "So he notified me of that. And then I guess the  
10:51 19 concern was, after the fact, that it took so much pressure to  
10:51 20 convert the float that they may have broke something else down  
10:51 21 or something else happened. So they just called to give me an  
10:51 22 FYI about what had happened on the rig."

10:51 23 Does that appear to you, from Mr. Gagliano's  
10:51 24 testimony, that he was aware of the float collar conversion  
10:51 25 issues before he recommended that the cement be pumped into the

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10:51 1 well?

10:51 2 A. Well, he was aware of the issue before the pump -- the  
10:51 3 cement was pumped in the well. I'm not sure he was aware of it  
10:52 4 before -- did he make the recommenda- -- I don't know if he  
10:52 5 made the recommendation after that point in time. So I don't  
10:52 6 know the sequence of the recommendation.

10:52 7 Q. All right. Lastly, with respect to the float collars, you  
10:52 8 talked about a float check yesterday. Do you recall that?

10:52 9 A. Yes.

10:52 10 Q. And you know that Halliburton personnel on the rig were  
10:52 11 directly involved in doing the float check after the cement was  
10:52 12 poured; correct?

10:52 13 A. Yes.

10:52 14 Q. And that the Halliburton procedure actually had a specific  
10:52 15 number of barrels to look for for the float check; correct?

10:52 16 A. Correct.

10:52 17 Q. And the number of barrels that were bled back were lower  
10:52 18 than what was specified in that procedure, meaning it was  
10:52 19 within the tolerance of the bleed-back amount; correct?

10:52 20 A. Correct.

10:52 21 Q. And after the job, Halliburton's post-job report said that  
10:52 22 the floats held; correct?

10:52 23 A. Correct.

10:52 24 Q. Now, I'm going to ask you a few questions about the flow  
10:53 25 path theory that you had in your report and that you testified

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10:53 1 about yesterday.

10:53 2 First, you're aware that Halliburton had a flow path  
10:53 3 theory in 2010 that the flow was up the back side of the  
10:53 4 annulus. Do you recall that?

10:53 5 A. I've seen some descriptions of it, yes.

10:53 6 Q. Okay. Actually, the document I showed you, that June  
10:53 7 presentation was talking about annular flow up the back side of  
10:53 8 the well; correct?

10:53 9 A. Correct.

10:53 10 Q. And if the flow was up the back side -- let's just pull  
10:53 11 up -- bear with me one second, and I'll put the document back  
10:53 12 up.

10:53 13 If the flow is up the back side, that means it's not  
10:53 14 flowing through the cement and through the shoe track.  
10:53 15 Actually, it's going up the outside of the casing and then  
10:53 16 through this casing here, seal assembly; correct?

10:54 17 A. Right. It would have to leave the formation, pass through  
10:54 18 the annulus, the cement in the annulus, then in the uncemented  
10:54 19 annulus until it got to the mud line.

10:54 20 Q. Right. And that was a theory that --

10:54 21 Did you see Dr. Ravi's PowerPoint in September of  
10:54 22 2010 about annular flow?

10:54 23 A. I don't recall that specific PowerPoint, no.

10:54 24 Q. Okay. In any event, were you familiar with Mr. Vargo's  
10:54 25 testimony in November of 2010 that, actually, there might have

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10:54 1 been a breach at the crossover of the well? Did you ever see  
10:54 2 that?

10:54 3 A. I did hear some discussions on that, yes. Let's.

10:54 4 MR. REGAN: Pull up D-4342.1 just to quickly clarify.  
10:54 5 It's easier to see than to say.

10:54 6 BY MR. REGAN:

10:54 7 Q. So there's a flow path through the cement, down and around  
10:54 8 and up the casing; right?

10:54 9 A. Right.

10:54 10 Q. There's a flow path up the outside and up the back side  
10:54 11 into the casing here, a seal assembly; correct?

10:54 12 A. Correct.

10:54 13 Q. And Mr. Vargo, in November of 2010, suggested, "Well,  
10:54 14 maybe it was up the back side and then breached at the  
10:55 15 crossover. That's the junction of the 9 7/8 and 7-inch  
10:55 16 production casing; correct?"

10:55 17 A. Correct.

10:55 18 Q. And you have a different theory?

10:55 19 A. I do.

10:55 20 Q. So let's put up your picture from your report, page 85  
10:55 21 of -- of your opening report. So 8140.85.

10:55 22 This is your theory; right?

10:55 23 A. That's one of them. I propose that this is an explanation  
10:55 24 that could have happened that would have explained some of the  
10:55 25 other facts or observations or circumstances of the blowout.

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10:55 1 So, yeah, it is a theory of flow path, for sure.

10:56 2 Q. I have a couple of simple questions about it, and then  
10:56 3 I'll move on.

10:56 4 When did that happen? When did the casing part under  
10:56 5 your theory?

10:56 6 A. I think the casing would have parted at the conversion of  
10:56 7 the float collar.

10:56 8 Q. So it's your theory that the float collar had debris on  
10:56 9 the top of it; right? On the top of it; right?

10:56 10 A. Yes.

10:56 11 Q. That then a pressure of 3142 released that debris; right?

10:56 12 A. Yes.

10:56 13 Q. And then that pressure still had enough energy, after  
10:56 14 clearing that clog, to then go down further and then breach  
10:56 15 casing; correct?

10:56 16 A. Well, that's not my full theory. So in conjunction with  
10:56 17 that pressure, there's additional stresses on that casing.

10:56 18 And what's important to note about that pressure,  
10:56 19 okay, that's not just 3000 psi being placed on the bottom of  
10:56 20 the casing. It's a shock wave. So when that sudden drop in  
10:56 21 pressure that we saw from 3142 psi all the way down to 200 --

10:57 22 Q. Uh-huh.

10:57 23 A. -- just like you had opened a valve at the surface and  
10:57 24 bled the pressure off, like all the other pressure responses  
10:57 25 before. When that happens, when you have that sudden of a

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10:57 1 pressure surge on a well, there's a shock wave -- not only in  
10:57 2 the fluid, but a shock wave in the casing itself -- that  
10:57 3 magnifies whatever stresses are in that casing.

10:57 4 Q. Okay. So -- so that pressure --

10:57 5 A. So --

10:57 6 Q. -- so a pressure from 3140 --

10:57 7 MR.HILL: Your Honor, could he finish his answer?

10:57 8 MR. REGAN: I thought he had.

10:57 9 THE COURT: Sometimes you tend to talk over him.

10:57 10 MR. REGAN: I apologize. I know I do.

10:57 11 THE WITNESS: So to be clear, I'm not talking about  
10:57 12 just 3000 psi being applied to the shoe track. Okay. I'm no  
10:57 13 fool, Mr. Regan. I know 3000 psi is not going to break the  
10:57 14 shoe track. Okay. There's -- it takes a lot of stress to  
10:57 15 break a shoe track. And -- I mean, if you'd like to see it, I  
10:57 16 have a demonstrative that shows what my theory is in more  
10:57 17 detail than this. But this meets the needs.

10:57 18 My theory is that there was extreme stress  
10:58 19 placed in the casing when you ran it. Okay. We had fill in  
10:58 20 the casing, right. We ran into something in the bottom of the  
10:58 21 well. The shoe track was plugged up either at the guide shoe  
10:58 22 or at the guide shoe and at the float collar. Okay.

10:58 23 Something gave way. It doesn't even have to be  
10:58 24 the float collar that gave way for the shock wave to occur. If  
10:58 25 the shoe track came apart or cleared or broke, right, there's

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10:58 1 still this same shock wave.

10:58 2 So what's critical is that there was a shock  
10:58 3 wave that occurred. That's fairly clear from the pressure  
10:58 4 data. And we had the casing in an additional stress condition;  
10:58 5 we know that because it had fill in it. It had to shove that  
10:58 6 fill up in there. And so there were conditions where the  
10:58 7 casing had extra stress in it. And my theory is that the shock  
10:58 8 wave broke the casing at some point.

10:58 9 **BY MR. REGAN:**

10:58 10 **Q.** What was the grade of casing?

10:58 11 **A.** That was Q125 casing on the 7-inch.

10:59 12 **Q.** Was it HC casing?

10:59 13 **A.** I believe it was, yes.

10:59 14 **Q.** "HC" stands for "high collapse"?

10:59 15 **A.** High collapse, yes.

10:59 16 **Q.** What was the -- the burst rating of the casing.

10:59 17 **A.** I don't remember right now, but 7-inch, 32-pound Q, that's  
10:59 18 got to be up in the 12,000 to 14,000-psi range.

10:59 19 **Q.** Collapse rating?

10:59 20 **A.** Probably very similar.

10:59 21 **Q.** You agree, understanding that you have the shock wave  
10:59 22 theory --

10:59 23 **A.** Let me back up. Okay.

10:59 24 I'm just pulling numbers. This is -- I don't  
10:59 25 normally pull numbers out. I go to a book and look those

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10:59 1 numbers up, but I do know that that's the general range.

10:59 2 That's very strong casing. I'm not -- I don't propose this  
10:59 3 theory lightly. That's very strong casing.

10:59 4 Q. Yesterday you said you think about 140,000 pounds was  
10:59 5 taken when they were running the casing; is that correct?

10:59 6 A. I think right at the very end, right landing out, it  
10:59 7 was -- it was a very sneaky time to start taking weight, but  
10:59 8 right when it landed out, I see 140,000 pounds of compression  
11:00 9 being placed in the casing.

11:00 10 MR. REGAN: TREX-41071.3.

11:00 11 BY MR. REGAN:

11:00 12 Q. This is the daily drilling report when they ran the  
11:00 13 casing.

11:00 14 MR. REGAN: If we could go, I believe, it's on the  
11:00 15 bottom half there. Go to the top. My apology. Go to the  
11:00 16 preceding page then. Okay. The top of that page and highlight  
11:00 17 the text. Yeah. All right. I think it may be one paragraph  
11:00 18 down.

11:00 19 BY MR. REGAN:

11:00 20 Q. Let me ask the question and then I can show you. Did you  
11:00 21 see a daily drilling report where it says how much weight they  
11:00 22 actually took when they ran the casing?

11:00 23 A. I saw a daily drilling report that reported what they  
11:00 24 observed as their weight. But the daily drilling report is a  
11:00 25 written verbal report as opposed to the Sperry data being



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11:00 1 actual recorded data on a very high frequency, by being  
11:01 2 recorded, you know, every second or less.

11:01 3 Q. Okay.

11:01 4 A. So you're looking at two different data sets right here.

11:01 5 Q. But just -- I just want to show you the daily drilling  
11:01 6 report. It's in TREX-41071.

11:01 7 MR. REGAN: If we can go to the ELMO.

11:01 8 BY MR. REGAN:

11:01 9 Q. I can clean it up later.

11:01 10 Do you see in the daily drilling report, with respect  
11:01 11 to the casing, when they ran it, it says: "Saw 10,000  
11:01 12 weight" -- I'm not as good at this as -- "at 18,218'. Okay."

11:01 13 Do you see that?

11:01 14 A. I see that, yes.

11:01 15 Q. All right. So just for purposes of what the people who  
11:01 16 were running the casing wrote down that day, they say they saw  
11:01 17 a 10,000 weight.

11:01 18 You looked at other information. You just said that.  
11:01 19 But the people, who were doing it at the time, saw 10,000;  
11:01 20 correct?

11:01 21 A. Correct.

11:01 22 Q. When you run casing, you can have drill pipe stretch and  
11:01 23 casing stretch; correct?

11:01 24 A. Yeah, you can -- you do. I mean, it's not that you can;  
11:01 25 you do.

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11:02 1 Q. So if you are looking at hook load or -- when you are  
11:02 2 looking at hook load or weight on the bit, you have to take  
11:02 3 into account some stretch issues; correct?

11:02 4 A. Yes, you do.

11:02 5 Q. Centralizers. Dr. Beck, do you think the placement of the  
11:02 6 centralizers was causal of the accident?

11:02 7 A. No, I don't. I -- once again, I know we've discussed this  
11:02 8 at deposition before, and I'm trying to maintain -- the  
11:02 9 centralizer placement, I don't think, was causal. I think it  
11:02 10 was more consistent with a decision that just increased the  
11:02 11 overall risk in the well.

11:02 12 Q. Have you seen -- you know that the OptiCem model on  
11:02 13 April 18th had centralizers placed in it by Mr. Gagliano;  
11:02 14 correct?

11:02 15 A. Correct.

11:02 16 Q. And you are aware that the centralizers that he had in  
11:02 17 this model were of the wrong size; correct?

11:02 18 A. Correct.

11:03 19 Q. And they were put in the wrong place; correct?

11:03 20 A. Correct.

11:03 21 Q. And would it surprise you that Halliburton, in its manual,  
11:03 22 says when modeling a slim hole well in OptiCem, it is important  
11:03 23 to input the collar and centralizer dimensions, as they can  
11:03 24 have a significant impacts on the pressure/ECD profile?

11:03 25 MR. REGAN: Let's just put up 2133.321. Down at the

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11:03 1 bottom. What I just read.

11:03 2 **BY MR. REGAN:**

11:03 3 **Q.** It would not surprise you that Halliburton would say, when  
11:03 4 you're running centralizing in OptiCem, slim holes, annular  
11:03 5 clearance of 1.5 inches or less: ". . . input the collar and  
11:03 6 centralizer dimensions [correctly] as they can have a  
11:03 7 significant impact on the pressure/ECD profile."

11:03 8 You wouldn't disagree with that?

11:03 9 **A.** No, I have no disagreement with that.

11:03 10 **Q.** So in terms of looking at the outputs of that April 18th  
11:03 11 model, would you agree with me that having the wrong size  
11:03 12 centralizers in the wrong place could impact the output of the  
11:04 13 model?

11:04 14 **A.** I think that's a fair statement. I can't disagree with  
11:04 15 that statement.

11:04 16 **Q.** Channeling. Do you have any opinion, Dr. Beck, about  
11:04 17 whether there was channeling in the annulus cement at Macondo?

11:04 18 **A.** My only opinion -- and I'm going to qualify this because  
11:04 19 it's only an opinion -- I haven't seen direct evidence that  
11:04 20 says there was channeling. My opinion is that the condition of  
11:04 21 the hole, with the centralization, with the washout in the  
11:04 22 hole, okay, and the long sections of uncentralized pipe, those  
11:04 23 are conditions that are conducive to channeling. That's my  
11:04 24 opinion.

11:04 25 So can I tell you there was channeling? No. We

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11:04 1 don't have a bond log to look at that to find out.

11:04 2 Q. Would it be fair to say that you have no opinion as to  
11:04 3 whether, in fact, there was channeling in the annular side of  
11:05 4 the cement used on the production casing at Macondo?

11:05 5 A. And my opinion -- I'm going to restate it. My opinion is  
11:05 6 that there were conditions that were conducive to channeling,  
11:05 7 and I don't -- but I don't see -- I haven't seen data that says  
11:05 8 there was channeling. All I know is that there were conditions  
11:05 9 conducive to channeling.

11:05 10 Q. CBL. We talked earlier about how you've never run a CBL  
11:05 11 or looked at whether or not an operator should run a CBL on a  
11:05 12 deepwater well; correct?

11:05 13 A. Well, what I looked at as to whether an operator should  
11:05 14 run one or not is your own DWOP. I base my opinion on whether  
11:05 15 one should be run or not on either the DWOP or your general  
11:05 16 engineering practice that was published.

11:05 17 Q. I might have asked an imprecise question.

11:05 18 But you've never looked at whether an operator should  
11:06 19 or should not run a cement bond log on a deepwater well other  
11:06 20 than what you've looked at in this case; correct?

11:06 21 A. Correct.

11:06 22 Q. Do you know that BP used a decision tree to determine  
11:06 23 whether or not to run a CBL?

11:06 24 A. Yes, I do know that.

11:06 25 Q. And on that decision tree, if there were full returns --

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11:06 1 that is, no losses -- the decision was then that a CBL would be  
11:06 2 unnecessary; correct?

11:06 3 A. Correct.

11:06 4 Q. There's no MMS requirement for the use of a CBL when there  
11:06 5 has been no evidence of lost returns; correct?

11:06 6 A. Not that I'm aware of.

11:06 7 Q. Halliburton reported that the job was pumped as planned  
11:06 8 with no losses; correct?

11:06 9 A. Correct.

11:06 10 Q. BP was ready to run the CBL if, in fact, the cement job  
11:06 11 had been reported back to have losses; correct?

11:06 12 A. Correct.

11:06 13 Q. That's why they paid to have a team out there; correct?

11:06 14 A. Yes, that's correct.

11:06 15 Q. And there's nothing in that decision tree or the evidence  
11:06 16 that you saw that indicated that BP chose to not run a CBL  
11:06 17 because it wanted to save time and money?

11:06 18 A. So the basis of the decision tree -- okay. So they follow  
11:06 19 their own decision tree, but that doesn't mean that the  
11:06 20 decision tree was good -- was a good decision tree.

11:07 21 It doesn't mean that it was basing -- that it was  
11:07 22 based on other -- you know, solid practice of when do you need  
11:07 23 to run one or not.

11:07 24 So did they follow their decision tree? Yes. I'm  
11:07 25 not endorsing that it was a good decision tree, though.

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11:07 1 Q. Did you see anything in that flow chart, Dr. Beck, that  
11:07 2 said, "Don't run a CBL if we can save time and money"?

11:07 3 A. No, I did not.

11:07 4 Q. Yesterday you said you've never seen any document that  
11:07 5 says full returns is an accurate way to assess top of cement.

11:07 6 Do you recall that testimony?

11:07 7 A. I would have to see the specific words used, but I do  
11:07 8 remember the general context of it.

11:07 9 Q. I believe you said -- you were asked if you could identify  
11:07 10 anything in your review of any provision that said full returns  
11:07 11 was a way to accurately assess top of cement, and you said no.

11:07 12 A. I think so, yes. I'll agree to that.

11:07 13 Q. Let me show you Halliburton's U.S. Land Offshore Methods  
11:07 14 document, TREX-2133, at page 319.

11:08 15 This is a section on bond log interpretation. Have  
11:08 16 you ever seen it?

11:08 17 A. I don't believe I have, no.

11:08 18 MR. REGAN: Go to the second page, please, the next  
11:08 19 page.

11:08 20 So this would be 2133.320, Your Honor.

11:08 21 BY MR. REGAN:

11:08 22 Q. Do you see there paragraph A, "Losses during the job"? Do  
11:08 23 you see that?

11:08 24 A. Yes.

11:08 25 Q. And have I read this correctly, Dr. Beck: "If no apparent

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1 losses occurred during a cement job, one should expect that the  
2 top of cement should be at least as high as that calculated  
3 from hole size and volume of cement pumped."

4 Did I read that correctly?

5 A. Yes.

6 Q. And that's in a Halliburton manual; correct?

7 A. Correct.

8 Q. Wait on cement. You believe BP should have waited a  
9 minimum of 24 hours before it engaged in any operations after  
10 pumping the cement job; correct?

11 A. I do believe that, yes.

12 Q. You're not aware of any Halliburton employee that objected  
13 to the timing of the positive pressure test on April 20th;  
14 correct?

15 A. No.

16 Q. Is that correct?

17 A. That's correct.

18 Q. Are you aware of any Halliburton employee that objected to  
19 the timing of the negative pressure test?

20 A. I'm not aware of an employee -- of any Halliburton  
21 objection.

22 Q. Are you aware of any Halliburton objection to the timing  
23 of the displacement after the negative test?

24 A. No, I'm not aware.

25 Q. Halliburton provided BP with a time period under which the

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11:09 1 cement would reach a compressive strength of 500 psi; correct?

11:09 2 A. Correct.

11:09 3 Q. And Mr. Gagliano was comfortable that after eight hours  
11:09 4 and 40 minutes, that BP could proceed with casing tests because  
11:09 5 the cement would have reached 500 psi; correct?

11:09 6 A. I believe that I saw that that was in his testimony that  
11:09 7 he gave at trial.

11:09 8 MR. REGAN: Let's go to 2033.72.1.

11:09 9 BY MR. REGAN:

11:09 10 Q. It's actually his testimony -- you may have seen this at  
11:10 11 your deposition -- testimony in his Congressional interview.  
11:10 12 He was asked about that eight hour and 40 minute entry.

11:10 13 And I'll just start with his answer, but you can see  
11:10 14 the question.

11:10 15 A. May I clarify this as Mr. Gagliano's testimony?

11:10 16 Q. It is, yes.

11:10 17 A. Okay. Thank you.

11:10 18 Q. He was asked to explain what it means in terms of  
11:10 19 compressive strength and when you do positive and negative  
11:10 20 pressure tests.

11:10 21 "ANSWER: What this is showing..." -- and he's  
11:10 22 looking at the document -- "there's that thing that says  
11:10 23 50 psi at 8:12 and then 500 psi at 8:40:30. That is  
11:10 24 letting you know numerically at what time you reached  
11:10 25 500 psi. We are comfortable with doing casing tests



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11:10 1 and/or drillouts when the cement has reached 500 psi."

11:10 2 Do you see that answer?

11:10 3 A. Yes, I do.

11:10 4 Q. And BP could rely on Mr. Gagliano in terms of when it  
11:10 5 could proceed with casing tests after the cement had been  
11:10 6 pumped; correct?

11:10 7 A. Well, see, that's where I disagree with you. I think that  
11:11 8 that's one piece of information that they could rely on.

11:11 9 But in reality, as an operator -- and this is a call  
11:11 10 that I have to make all the time -- one thing you look at is  
11:11 11 your thickening time, when do you achieve 500 psi, but you have  
11:11 12 to -- you have to be realistic about well conditions.

11:11 13 And 500 psi are laboratory conditions. We don't pump  
11:11 14 cement in a well in laboratory conditions; we pump in field  
11:11 15 conditions, of course. And so if you want to use a safety  
11:11 16 factor, which I feel is prudent and I'm not alone in that  
11:11 17 thought, okay, you wait a little bit longer on cement than what  
11:11 18 the lab test for 500 psi says.

11:11 19 Now, I'm just -- I disagree with Halliburton on this,  
11:11 20 and when they recommend this, I don't take their advice on it.  
11:11 21 I wait longer on cement, okay?

11:11 22 Q. Mr. Gagliano, who was the Halliburton adviser to BP on  
11:11 23 this well, was asked why he was comfortable, and he says:

11:11 24 "ANSWER: That's the best practices that Halliburton  
11:11 25 uses. You could probably test the casing with a lower

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11:11 1 psi, but we like to wait until 500 psi in case the  
11:12 2 temperature is off by a little bit and the compression  
11:12 3 development is lower than we expected. This gives us a  
11:12 4 little safety factor to have in place."

11:12 5 You would accept that that's his perspective?

11:12 6 A. That's his perspective, and --

11:12 7 Q. And --

11:12 8 A. -- that perspective is different than mine.

11:12 9 Q. Okay. Negative pressure tests. I think you were asked a  
11:12 10 few questions about this yesterday by Mr. Brian, so I'll try to  
11:12 11 be brief.

11:12 12 With respect to the spacer that was used during the  
11:12 13 negative pressure test, would you consider yourself an expert  
11:12 14 in those spacer materials?

11:12 15 A. Well, I've used similar -- so the spacer materials or lost  
11:12 16 circulation materials, I've used similar. I don't know that  
11:12 17 I've used those specific materials, but I've used lost  
11:13 18 circulation pills before for the purpose of treating lost  
11:13 19 circulation.

11:13 20 I can't say that I ever used lost circulation pills  
11:13 21 for the purpose of separating seawater from oil-based drilling  
11:13 22 fluid.

11:13 23 Q. With respect to the negative pressure test, you're  
11:13 24 familiar that the pressure that -- ultimately on the drill pipe  
11:13 25 was 1400 psi; right?

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11:13 1 A. Yes.

11:13 2 Q. And you saw in the documents that the pressure built over  
11:13 3 30 minutes. From 6:00 p.m. to 6:30, it built up to 1400 psi;  
11:13 4 correct?

11:13 5 A. Yes.

11:13 6 Q. It didn't immediately go to 1400 psi; correct?

11:13 7 A. Correct.

11:13 8 Q. But under your theory, the casing at that point in time  
11:13 9 would be partially or fully breached at the bottom and there  
11:13 10 would be no float collar; correct?

11:13 11 A. Correct.

11:13 12 Q. And so under your theory, you had a wide-open shoe track  
11:13 13 to the reservoir and as soon as they underbalanced the well,  
11:13 14 there was no barriers down there, either cement or float  
11:13 15 collar, to hold it back; correct?

11:13 16 A. Well, the only thing that's going on -- and you can see it  
11:13 17 in the data -- you're having to push the plug up the hole,  
11:13 18 which is a few hundred psi. And the rate of build on that  
11:14 19 pressure test, the -- there's two segments on the negative  
11:14 20 pressure test that I think are important to understand.

11:14 21 And when I looked at the negative pressure test, of  
11:14 22 course, there were problems with the test in terms of where the  
11:14 23 pressure was going, right? Where was the pressure? Was it --  
11:14 24 why was it in the kill line? That's going to impact the build  
11:14 25 rates that we see.

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11:14 1 Q. Let me show you TRES-8140.14.1.

11:14 2 It's your opinion that both TO, Transocean, and BP  
11:14 3 incorrectly interpreted the negative pressure test, as  
11:14 4 indicated here in your report; correct?

11:14 5 A. Yes.

11:14 6 Q. You were aware that Transocean was experienced in  
11:14 7 conducting negative pressure tests; correct?

11:15 8 A. I want to make sure -- when you say I was aware, I  
11:15 9 probably made the assumption that this was not their first  
11:15 10 negative pressure test. So in that manner, I would say it's  
11:15 11 more of an assumption than a proven -- a proven knowledge of  
11:15 12 it.

11:15 13 Q. And you would agree that anyone involved in a negative  
11:15 14 pressure test had the ability to stop that job if they thought  
11:15 15 the operations should not proceed; correct?

11:15 16 A. I think particularly the Transocean people and the BP  
11:15 17 people have to be -- have to look at that decision. That  
11:15 18 doesn't change that the decision is BP's, but -- and I do hold  
11:15 19 the contractor to a higher standard because it is their rig.

11:15 20 Q. And they have the opportunity, under well-established  
11:15 21 drilling practices, that if they disagree, they would not  
11:15 22 proceed, they'd stop the job?

11:15 23 A. That should happen, yes.

11:15 24 Q. You were asked about Mr. Lambert's testimony, I think, by  
11:16 25 Mr. Brian.

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11:16 1 MR. REGAN: Let me pull up D-4429.

11:16 2 BY MR. REGAN:

11:16 3 Q. I think the question was whether Mr. Lambert, in his  
11:16 4 testimony, ever specifically said that he had heard this term  
11:16 5 "bladder effect" from Mr. Anderson.

11:16 6 Do you recall that question from Mr. Brian yesterday?

11:16 7 A. Vaguely. This one is not jumping out at me right now.

11:16 8 Q. All right. Well, I'll try to do it quickly.

11:16 9 I just want to show that Mr. Lambert, in his  
11:16 10 deposition, did specifically refer to the fact that he talked  
11:16 11 to Mr. Anderson, that he asked him where the pressure was  
11:16 12 coming from.

11:16 13 And in his answer, he, meaning Mr. Anderson, gave me  
11:16 14 the explanation of -- and this is -- we're speaking of the  
11:16 15 question to Jason Anderson -- of what's being coined the  
11:16 16 "bladder effect" now, where the mud in the riser would transmit  
11:16 17 through the annular and put pressure on the wellbore, which you  
11:16 18 would see up the drill pipe.

11:16 19 You don't have any reason to dispute that that was  
11:16 20 Mr. Lambert's testimony?

11:16 21 A. No reason at all.

11:17 22 Q. You haven't seen any evidence that any of the men involved  
11:17 23 in the negative pressure test were trying to get it wrong?

11:17 24 A. No, I have not.

11:17 25 Q. You haven't seen any evidence that they were acting

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11:17 1 indifferent to the safety of themselves or others?

11:17 2 A. No.

11:17 3 Q. They had every incentive to get the test; correct?

11:17 4 A. I agree, yeah, they did.

11:17 5 Q. Yeah. You didn't see any evidence of any intent of those  
11:17 6 people to affirmatively misrepresent or skip or just ignore the  
11:17 7 negative pressure test; correct?

11:17 8 A. No, I don't see that intent. It still makes the  
11:17 9 acceptance of the test -- it's -- the gentlest way I can say,  
11:17 10 it's puzzling. It's puzzling how men with this experience, you  
11:17 11 know, with an incentive to get it right, how they can miss the  
11:17 12 test. That's the big question that I don't think we're ever  
11:17 13 going to answer.

11:17 14 Q. Right.

11:17 15 And understanding what you just said, though, knowing  
11:18 16 where they were and appreciating that they were 45 miles  
11:18 17 offshore and that they were making a decision about the  
11:18 18 integrity of the well that they were sitting on top of, those  
11:18 19 people had no reason to get that test wrong or to ignore its  
11:18 20 results or to just, in essence, say, "It doesn't matter, let's  
11:18 21 just keep going," did they?

11:18 22 A. I don't think that -- I mean, I don't think they had a  
11:18 23 reason to do it. Now, I can't speak for -- you know, for their  
11:18 24 own -- their own mental state at the time, but I can't see  
11:18 25 where they would have that incentive.

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11:18 1 Q. Okay. But you think their decision was reckless?

11:18 2 A. Well, and I use that very carefully, again, because when  
11:18 3 you're in a position to supervise a well of this caliber and  
11:18 4 you're conducting a safety-critical test, okay, the one  
11:18 5 decision you can't make is to bleed pressure off a live well.  
11:18 6 Okay? That is a critical decision. You can't make that  
11:18 7 decision. Okay?

11:19 8 So regardless of intent of -- let me phrase my words  
11:19 9 correctly here. Regardless of their incentive or lack of  
11:19 10 incentive to do things right, the reason I say "reckless" in  
11:19 11 that situation is that when you bleed that pressure off, you  
11:19 12 have to wonder what's going to happen in the future.

11:19 13 And I don't see them wondering, "Hey, what's wrong  
11:19 14 here? When we bleed the pressure off, what's going to happen  
11:19 15 to the well?" So --

11:19 16 Q. Was there anything about -- I'm sorry.

11:19 17 A. So I just want to make it clear, okay, that it's -- I know  
11:19 18 that's a tough word to use and I use it in the context that:  
11:19 19 Where was the regard for the consequences?

11:19 20 Q. With respect to the well monitoring obligations of the  
11:19 21 drill crew, those were not contingent in any way on well  
11:19 22 design; correct?

11:19 23 A. Would you repeat that? I --

11:19 24 Q. With respect to the drilling crew's well monitoring  
11:19 25 responsibilities, those were not contingent in any way on the

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11:19 1 well design that was used; correct?

11:20 2 A. No.

11:20 3 Q. They were not contingent in any way on the type of cement  
11:20 4 that was poured; correct?

11:20 5 A. Correct.

11:20 6 Q. The whole premise of well monitoring is, in essence, to  
11:20 7 assume whatever has been done or is being done, something bad  
11:20 8 could happen, so let's keep an eye on the well. Fair?

11:20 9 A. Fair. Very fair question. They might be able to hire you  
11:20 10 as a drilling engineer someday, too.

11:20 11 Q. I think I've had my fill.

11:20 12 With respect to -- finally, you testified that -- in  
11:20 13 several places in your report that you believe BP put costs  
11:20 14 over safety; is that right?

11:20 15 A. Yes.

11:20 16 Q. I'd like to show you some trial testimony of some of the  
11:20 17 people who were out on the rig and ask whether you are familiar  
11:20 18 with their perspective on that question.

11:20 19 **MR. REGAN:** Trial testimony 2024.1. This is from  
11:20 20 Mr. Ronnie Sepulvado.

11:20 21 **BY MR. REGAN:**

11:20 22 Q. Were you aware, Mr. Beck, that Mr. Sepulvado, a well site  
11:20 23 leader on the rig, testified:

11:20 24 "QUESTION: Did anyone -- did you ever ask anyone to  
11:20 25 hurry to finish up this well because you needed to get



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11:21 1 somewhere else?

11:21 2 "ANSWER: No, ma'am.

11:21 3 "QUESTION: And at any time, did you ever ask anyone

11:21 4 to cut any corners to save time or money?

11:21 5 "ANSWER: No, ma'am."

11:21 6 Were you aware of that?

11:21 7 A. I don't -- I -- was this out of his deposition or trial

11:21 8 testimony?

11:21 9 Q. This was a few weeks ago.

11:21 10 A. Okay. So I haven't seen his trial testimony.

11:21 11 MR. REGAN: If we go to 2025.1, also from

11:21 12 Mr. Sepulvado.

11:21 13 BY MR. REGAN:

11:21 14 Q. Do you see that Mr. Sepulvado testified whether he ever

11:21 15 felt pressure because of costs to sacrifice safety while he was

11:21 16 a company man at *Deepwater Horizon*?

11:21 17 His answer was: "No, I didn't."

11:21 18 Correct? That was his answer; correct?

11:21 19 A. Correct, yes.

11:21 20 Q. And he never felt at any time that he was sacrificing

11:21 21 safety because of costs in connection with the well.

11:21 22 That was his answer; correct?

11:21 23 A. Correct.

11:21 24 Q. Do you know who Mr. Ezell is?

11:21 25 A. Yes.

## FREDERICK E. BECK - CROSS

11:21 1 MR. REGAN: Trial testimony 1850.1.

11:21 2 BY MR. REGAN:

11:21 3 Q. Mr. Ezell, the senior toolpusher on the rig, was asked:

11:22 4 "QUESTION: And at all times when you were on the  
11:22 5 *Deepwater Horizon*, you felt that Transocean and BP  
11:22 6 personnel on board the rig were acting in a careful, safe,  
11:22 7 and prudent manner?

11:22 8 "ANSWER: Yes, sir."

11:22 9 Correct?

11:22 10 A. That's correct.

11:22 11 Q. Mr. David Young, chief mate, second in command on the  
11:22 12 maritime side --

11:22 13 MR. REGAN: Trial testimony 5880.1.

11:22 14 BY MR. REGAN:

11:22 15 Q. -- asked Mr. Young:

11:22 16 "QUESTION: To your knowledge, nobody from BP ever  
11:22 17 asked you or your crew to do something that you considered  
11:22 18 unsafe; correct?

11:22 19 "ANSWER: No."

11:22 20 Did I read that correctly?

11:22 21 A. Yes, you did.

11:22 22 Q. Mr. Keith. We've already talked about Mr. Keith a fair  
11:22 23 amount, who was the mud logger; correct?

11:22 24 A. Correct.

11:22 25 MR. REGAN: Trial testimony 3713.1.

## FREDERICK E. BECK - CROSS

11:22 1 BY MR. REGAN:

11:22 2 Q. Mr. Keith was asked --

11:22 3 MR. REGAN: I'm sorry. 3713.1.

11:22 4 BY MR. REGAN:

11:22 5 Q. Mr. Keith was asked whether he was feeling that he was  
11:22 6 overworked.

11:23 7 The answer was: "I was never overworked on the  
11:23 8 *Horizon*. I was never overworked. I was able to perform my  
11:23 9 job. I never felt pressured or overworked at all."

11:23 10 Do you see that?

11:23 11 A. I see that.

11:23 12 Q. Finally, let me show you Mr. Gagliano's trial testimony.  
11:23 13 Trial testimony 6608.1. I'm not going to read it all. You can  
11:23 14 read it all if you'd like.

11:23 15 Mr. Gagliano was asked here:

11:23 16 "QUESTION: When you were involved in the Macondo  
11:23 17 well, was there ever a time when you thought the decisions  
11:23 18 that were being made by BP warranted or justified you  
11:23 19 exercising your stop work authority?

11:23 20 "ANSWER: No.

11:23 21 "QUESTION: As a man who has worked in the oil  
11:23 22 industry for most of your adult life, if you thought  
11:23 23 anything you were -- anybody with BP was doing was  
11:23 24 creating a risk for anybody's lives on the rig, you would  
11:23 25 have used stop work authority?"

## FREDERICK E. BECK - CROSS

11:23 1 "ANSWER: Yes."

11:23 2 Correct?

11:23 3 A. That's what he said, yes.

11:24 4 Q. Finally, TREX-2033 at 93. Mr. Gagliano was asked a  
11:24 5 similar question in his Congressional interview.

11:24 6 "QUESTION: Did you have any sense that BP was in a  
11:24 7 rush?

11:24 8 "ANSWER: No. In the oilfield in general, we always  
11:24 9 try to plan our business to be as efficient as possible.  
11:24 10 I saw nothing out of the ordinary other than just trying  
11:24 11 to be efficient and get things done. Nobody came to me  
11:24 12 and said, You need to get it done sooner or you have got  
11:24 13 to push your people. Nobody told me that."

11:24 14 Did I read that correctly?

11:24 15 A. Yes, you did.

11:24 16 MR. REGAN: I have no further questions, Mr. Beck.

11:24 17 THE COURT: All right. Redirect?

11:25 18 Mr. Regan, I guess you didn't follow Abe  
11:25 19 Lincoln's policy. I don't think you got shorter overnight.

11:25 20 MR. REGAN: I'll tell you, Your Honor, my questions  
11:25 21 were shorter.

11:25 22 THE COURT: Okay.

11:25 23 MR. HILL: Objection.

11:25 24 Gavin Hill for Halliburton redirecting Dr. Beck.  
11:25 25 Your Honor. May I proceed?

## FREDERICK E. BECK - CROSS

## 1 REDIRECT EXAMINATION

11:25 2 BY MR. HILL:

11:25 3 Q. Gene, Mr. Regan, BP's counsel, at the beginning of his  
11:25 4 cross-examination, asked you a series of questions about what  
11:25 5 you have not done in deepwater. And I think you testified that  
11:25 6 you have not done a lot of deepwater; correct?11:25 7 A. I haven't done any deepwater. I've never portrayed that I  
11:25 8 have.11:25 9 Q. Right. So let's talk about what I think he was trying to  
11:25 10 do. Let me ask you a couple of questions.11:25 11 As between the difference between deepwater drilling  
11:25 12 and land drilling, are the physics any different on land or  
11:26 13 offshore as applied to circulating mud in a wellbore?11:26 14 A. The laws of physics, of course, are not shoreline  
11:26 15 dependent, right. They don't change just because you go  
11:26 16 offshore. So that the engineering principles that you see  
11:26 17 onshore and deep wells, right, when you're -- when you're  
11:26 18 working in wells, but the engineering principles are underlying  
11:26 19 in both environments.11:26 20 Q. If I asked you that same question with respect to the  
11:26 21 physics involved with converting a float collar, managing  
11:26 22 drilling margins, setting up pressure testing, and doing  
11:26 23 barrier management, are the physics involved when doing those  
11:26 24 activities on land the same principles of physics that apply  
11:26 25 when it's being done offshore?

## FREDERICK E. BECK, - REDIRECT

11:26 1 A. Right. At the level of engineering and physics that  
11:26 2 you're looking at, you understand the relationships, the  
11:26 3 physics that are going on, and then you apply them to the very,  
11:26 4 you know, specific well conditions, which may be different.  
11:26 5 But you apply them -- the physics that you're applying, the  
11:27 6 skill set is exactly the same.

11:27 7 Q. Do you feel like your opinions in any way have been  
11:27 8 inhibited or your -- by a lack of knowledge or a lack of  
11:27 9 experience, having not done these things offshore?

11:27 10 A. Well, I -- you know, I wrote my report and I focused on my  
11:27 11 areas of strength, which are operations management and well  
11:27 12 design and, you know, wellbore mechanics, so things that are  
11:27 13 occurring below the mud line, and that's where I focused my  
11:27 14 report on. And I don't think I was inhibited at all in  
11:27 15 reaching an engineering understanding of what was going on in  
11:27 16 this wellbore.

11:27 17 Q. Let me shift focus a little bit. You were also asked in  
11:27 18 the context of cement slurry designs and things that weren't  
11:27 19 within the four corners of your report. Mr. Regan was asking  
11:27 20 you this in the context of causation. So I want to go there  
11:27 21 for a minute.

11:27 22 After the cement job was pumped at Macondo, when it  
11:27 23 was completed, was the well static?

11:28 24 A. Yes, by all accounts the well's static up until the  
11:28 25 negative pressure test.

## FREDERICK E. BECK, - REDIRECT

11:28 1 Q. And that was about how many hours later?

11:28 2 A. I think the number was 16 hours after they bumped the  
11:28 3 plug, the negative pressure test was conducted.

11:28 4 Q. All right. Now, yesterday you testified that a blowout  
11:28 5 doesn't occur unless a well was underbalanced; correct?

11:28 6 A. Correct.

11:28 7 Q. Who made the decision to underbalance the well at Macondo  
11:28 8 on April 20th, 2010?

11:28 9 A. BP. BP made that decision.

11:28 10 Q. Now, I don't want to put up a lot of demonstratives. I'm  
11:28 11 trying to be cognizant of the Court's time and yours. But  
11:28 12 there was discussion about the shear pins in the float collar,  
11:28 13 and I think His Honor asked you some questions about it. Do  
11:28 14 you recall that?

11:28 15 A. Yes.

11:28 16 Q. Those shear pins, in your opinion, would packing off of  
11:28 17 debris in and around the float collar equipment affect the rate  
11:28 18 or the ability to shear those pins when properly -- when trying  
11:28 19 to -- when attempting to properly convert the float collar?

11:28 20 A. In my opinion and experience, when there's debris and  
11:29 21 shear pins involved, you don't get the shearing -- you don't  
11:29 22 get the results that you were hoping for from the shear pin.

11:29 23 Q. Now, I wrote this down. And I think your exact quote was:  
11:29 24 "Once things are plugged up, all bets are off on performance of  
11:29 25 shear pins."

## FREDERICK E. BECK, - REDIRECT

11:29 1 Is this what you're referring to?

11:29 2 A. Yes.

11:29 3 Q. Can you explain a little bit, in the context of Macondo,  
11:29 4 what this means to you?

11:29 5 A. Well, this means -- okay. So one of the questions is if  
11:29 6 you place 3,000 psi on an apparatus that's supposed to shift at  
11:29 7 either 4 or 500 psi or 13- or 1400 psi, how did it take  
11:29 8 3000 psi? Well, the explanation is there was debris in the  
11:29 9 well, there -- there was interference around that float tube,  
11:29 10 you know.

11:29 11 When you have debris around mechanical devices, okay,  
11:29 12 the performance of that device is not always as designed. And  
11:29 13 that's based on experience. I mean, I've had this happen  
11:30 14 before where shear pins don't shear when they're supposed to  
11:30 15 when -- when you're working in an unclean wellbore environment.

11:30 16 Q. Let's see if we can bring this to a close with this  
11:30 17 question. If debris packed off in and around the autofill tube  
11:30 18 and there was sufficient pressure to shoot that ball out but  
11:30 19 not shear the pins, do you believe that something like that  
11:30 20 occurred at Macondo?

11:30 21 A. That's what I do believe occurred, that the autofill tube,  
11:30 22 you know, for whatever reason, but debris related, was more or  
11:30 23 less locked in place and that the extreme pressure ultimately  
11:30 24 sheared the ball before the tube released.

11:30 25 Q. Okay. Lastly, I just want to turn to your -- your opinion



## FREDERICK E. BECK, - REDIRECT

11:30 1 of what happened with respect to flow path. Okay? And I think  
11:30 2 in response to BP's counsel's question, he said he understood  
11:30 3 that you think that there were greater compressional forces  
11:30 4 as -- according to you, based on your analysis of the Sperry  
11:30 5 data. Do you recall that?

11:30 6 A. Yes.

11:30 7 Q. All right. The 10 kips that he referenced you to that he  
11:31 8 showed you in the daily drilling report, do you dispute that  
11:31 9 the casing experienced 10 kips of compressional load before it  
11:31 10 bottomed out? I'm sorry, and just in terms of sequence, not  
11:31 11 total compression.

11:31 12 A. In sequence, I mean, there was a point in time that it saw  
11:31 13 a little -- a bobble, a 10-kip bobble, or a 10,000-pound  
11:31 14 bobble.

11:31 15 Q. And do you think -- is that the only -- based on your  
11:31 16 analysis of the various Sperry data he referenced, is that the  
11:31 17 only compressional load that that casing took when they ran it  
11:31 18 into the hole?

11:31 19 A. No, I don't -- I don't think so. I think that the morning  
11:31 20 report got it wrong, and maybe they just didn't notice what  
11:31 21 happened. But when I look at the Sperry data, I see evidence  
11:31 22 of 140,000 pounds of compression placed on that casing.

11:31 23 Q. In your opinion, when that compressional load is applied  
11:31 24 to the casing at the bottom -- when it's run into the hole,  
11:31 25 what is the effect?

## FREDERICK E. BECK, - REDIRECT

11:31 1 A. Okay. So when you place that much compression -- that is  
11:31 2 a lot of compression to place on a casing string,  
11:31 3 particularly -- on any string. But a 7-inch string, it's going  
11:32 4 to buckle the daylights out of it. That string is going to be  
11:32 5 buckled for a long way up the hole.

11:32 6 And when you buckle the string, you're not only --  
11:32 7 you're magnifying; right? You're increasing that  
11:32 8 140,000 pounds of stress by factors of 1 1/2 to 2 1/2 in terms  
11:32 9 of the stresses on that casing.

11:32 10 Q. In your opinion, Dr. Beck, was the compressional loads  
11:32 11 applied to that casing sufficient to compromise, in conjunction  
11:32 12 with the shock that you talked about during the float collar  
11:32 13 conversion, sufficient to comprise the integrity of the casing  
11:32 14 below the float collar?

11:32 15 A. I believe it was. I believe that there was enough stress  
11:32 16 that with that amount of the compression, with the buckling on  
11:32 17 the well, with the buckling on the casing, and with this  
11:32 18 pressure shock wave, I believe that that broke the shoe track  
11:32 19 when -- at the float collar conversion.

11:32 20 MR. HILL: Now, Your Honor, respectfully, this is  
11:32 21 exactly what the animation that you did not want to see -- or  
11:33 22 that you ruled that we wouldn't be able to play yesterday  
11:33 23 shows. In response to BP's counsel's questions, I think he  
11:33 24 opened the door.

11:33 25 Dr. Beck has testified about the underpinning of

## FREDERICK E. BECK, - REDIRECT

11:33 1 that. If you would like to see a graphical representation of  
11:33 2 what he believed happened, we could shorten the clips at the  
11:33 3 beginning and show Your Honor.

11:33 4 **MR. REGAN:** I would have liked to see it at his  
11:33 5 deposition, and I'd like to see it in his report. It wasn't in  
11:33 6 either one, and that's the problem. I asked him about the  
11:33 7 picture in his report. I put it up on the screen. I asked him  
11:33 8 for his basis for how he thought the casing --

11:33 9 **THE COURT:** I'll sustain the -- maintain the  
11:33 10 objection.

11:33 11 **MR. HILL:** With that, Your Honor, Halliburton is  
11:33 12 done.

11:33 13 **THE COURT:** You're done, sir.

11:33 14 **THE WITNESS:** Thank you, sir.

11:33 15 **THE COURT:** Back to Austin. Get a good lunch before  
11:33 16 you leave town.

11:33 17 **THE WITNESS:** Thank you. I appreciate it.

11:33 18 **THE COURT:** Okay.

11:33 19 Mr. Godwin, any additional witnesses or evidence  
11:33 20 from Halliburton?

11:33 21 **MR. GODWIN:** Your Honor, no additional witnesses. At  
11:33 22 this time, Judge, I do want to -- we had some exhibits that we  
11:34 23 used in the direct examination of Glen Stevick, and we've  
11:34 24 circulated those, Your Honor.

11:34 25 There was a question last evening by TO. We've

11:34 1 resolved that this morning, Jenny Martinez and one of the TO  
11:34 2 lawyers did. We got that worked out. There may be some on the  
11:34 3 behalf of the PSC, perhaps. I don't know. But we think we got  
11:34 4 that worked out.

11:34 5 But anyway, Your Honor, I have these exhibits  
11:34 6 for Dr. Stevick. I do not know of any objections in addition  
11:34 7 to those I've mentioned, and I will offer those into evidence  
11:34 8 at this time.

11:34 9 **MR. DOYEN:** I'm sorry, Don. I just asked if we could  
11:34 10 have until Monday to report back on that. I suspect that's  
11:34 11 right, but I haven't been able to talk to my team while I was  
11:34 12 here in court.

11:34 13 **MR. BROCK:** Same for us, Your Honor.

11:34 14 **THE COURT:** We'll hold off on those for Monday.

11:34 15 Judge Shushan is -- I'm going to call her.  
11:34 16 You-all stay here for a few minutes. We're going to call her.  
11:35 17 I think she's going to want to come over right now and do the  
11:35 18 marshaling conference with you-all for up to whatever day. I'm  
11:35 19 not sure whatever day we can do that. Obviously, it won't be  
11:35 20 through today. Probably for last week, which we didn't do.  
11:35 21 And I don't know if it will include any day this week or not.

11:35 22 What are you-all prepared to marshal today? Are  
11:35 23 we ready to do up through what day? Can someone tell me?

11:35 24 **MR. IRPINO:** My understanding -- Anthony Irpino for  
11:35 25 the PSC.

11:35 1 MR. GODWIN: Judge, do you want me to, at this time,  
11:35 2 rest now or do it at a later time?

11:35 3 THE COURT: Yeah, you can go ahead and rest. I know  
11:35 4 you want to hold your case open for, as I understand it, beyond  
11:35 5 getting the documents in, for the limited purpose of calling  
11:35 6 Dr. Ravi, in the event BP decides to call Mr. --

11:35 7 MR. GODWIN: Ronald Crook, Your Honor.

11:35 8 THE COURT: -- Crook. Okay.

11:35 9 MR. GODWIN: May I proceed, Judge?

11:35 10 THE COURT: Yes, you may.

11:35 11 MR. GODWIN: Briefly I will, Judge. At this time,  
11:35 12 Your Honor, and respectfully, Halliburton rests its case  
11:36 13 subject to the following.

11:36 14 Halliburton reserves its right to call Dr. Kris  
11:36 15 Ravi as a rebuttal expert -- Halliburton reserves its right to  
11:36 16 call Dr. Kris Ravi as a rebuttal expert witness in the event BP  
11:36 17 calls Ronald Crook as an expert witness in its case in chief.

11:36 18 Second, Your Honor, Halliburton will submit a  
11:36 19 list of deposition bundles it will request be admitted into  
11:36 20 evidence at the April 11th, 2013 marshaling conference.

11:36 21 THE COURT: Very well.

11:36 22 MR. GODWIN: Third, Your Honor, Halliburton has  
11:36 23 conditionally tendered a video, a deposition cut from the  
11:36 24 deposition of Greg Walz, a BP drilling engineer that was on the  
11:36 25 rig you've heard about, that it requests be played in court in

11:36 1 the event Mr. Walz does not appear to testify live. And I have  
11:36 2 here his transcript, Your Honor, that I can give you.

11:36 3 I also have a thumb drive of his testimony that  
11:37 4 I can hold. And in the event they don't call him, I would ask  
11:37 5 that my case be left open to allow me to then play that  
11:37 6 deposition, certain parts of it, of Greg Walz, but not  
11:37 7 otherwise.

11:37 8 **THE COURT:** Well, let me ask. Is he expected to  
11:37 9 testify live?

11:37 10 **MR. BROCK:** We don't anticipate that Mr. Walz will  
11:37 11 testify live. I don't believe he's on our will-call list. I  
11:37 12 can check that, but I don't believe that he is.

11:37 13 **MR. MILLER:** May call. He's your one may-call  
11:37 14 witness.

11:37 15 **MR. BROCK:** He's not on the will-call list.

11:37 16 **THE COURT:** He's not on the will-call list?

11:37 17 **MR. BROCK:** He's not on the will-call list, and we  
11:37 18 don't intend to call him.

11:37 19 **THE COURT:** Okay. Do you want to play his deposition  
11:37 20 before you rest then?

11:37 21 **MR. GODWIN:** I'd like to, Judge.

11:37 22 **THE COURT:** Okay. How long is his deposition going  
11:37 23 to take?

11:37 24 **MR. BROCK:** I don't think we've seen Walz' clips  
11:37 25 either. I'll just mention that.

11:37 1 THE COURT: Why don't we do it this way. Anything  
11:37 2 else that you --

11:37 3 MR. GODWIN: It's about --

11:38 4 THE COURT: -- you're resting subject to anything  
11:38 5 else besides what you've just recited?

11:38 6 MR. GODWIN: Two last things, Judge, quickly.

11:38 7 Halliburton reserves the right to move for  
11:38 8 admission of any trial exhibits used with its witnesses but not  
11:38 9 yet formally admitted. I think they all have been admitted,  
11:38 10 but I need to say that, if there are none.

11:38 11 And lastly, Your Honor, in the event that the  
11:38 12 Court alters its ruling on the admissibility of fact and/or  
11:38 13 expert witnesses upon which Halliburton has relied, Halliburton  
11:38 14 reserves its right to request to call responsive fact and/or  
11:38 15 expert witnesses in rebuttal, if any, or to seek admission of  
11:38 16 the expert reports, and that would be the end of it --

11:38 17 THE COURT: I don't have a clue what that means, that  
11:38 18 last one.

11:38 19 MR. GODWIN: Alan wrote it for me, Judge, and I  
11:38 20 didn't either. But I will tell you, I think what he's saying  
11:38 21 here, Judge, is in the event that you should make the decision  
11:38 22 to say, "I'm going to go back and I'm not going to consider the  
11:38 23 evidence of this witness or that document" --

11:38 24 THE COURT: Well, we're not going to reopen the case.  
11:39 25 You're going to find that out when I decide the case, and I'm

11:39 1 not going to say, "Now, you can come back and have a second  
11:39 2 bite of the apple." That's not going to happen.

11:39 3 **MR. GODWIN:** I've stated it, Judge, and I've told you  
11:39 4 what I thought it is. I didn't write it --

11:39 5 **THE COURT:** So other than the last thing, I think  
11:39 6 we're okay.

11:39 7 **MR. GODWIN:** Okay, Judge.

11:39 8 So I'll hold the Stevick documents over until  
11:39 9 Monday. And as far as Greg Walz, let me ask here, do you want  
11:39 10 me to play it now or play it Monday morning, Judge?

11:39 11 **THE COURT:** Well, since Judge Shushan's here and I  
11:39 12 think everybody's raring to go, we can just agree to let you  
11:39 13 play that when we start Monday morning.

11:39 14 **MR. GODWIN:** Yes, sir. I can certainly just  
11:39 15 circulate it --

11:39 16 **THE COURT:** It's short; correct?

11:39 17 **MR. GODWIN:** Very short, Judge.

11:39 18 **THE COURT:** You can play that, and then we'll go  
11:39 19 right into BP's case.

11:39 20 **MR. GODWIN:** That will give me a chance to circulate  
11:39 21 it today as to what we're going to play and see if there are  
11:39 22 any objections, and then be ready to go Monday.

11:39 23 **THE COURT:** Okay.

11:39 24 **MR. GODWIN:** And then subject to that and to Dr. Ravi  
11:39 25 and the other things, then we will rest, Judge.



11:39 1 THE COURT: Okay. Perfect. Thank you.

11:39 2 All right. We have the list of witnesses that  
11:39 3 BP intends to call on Monday. I think that's been circulated.

11:40 4 MR. BROCK: Yes, sir. It was a revised list  
11:40 5 circulated last night. Our first witness is Mr. Bourgoyne.

11:40 6 THE COURT: I think your first three are experts;  
11:40 7 correct?

11:40 8 MR. BROCK: Second is Emilsen; and third is Steve  
11:40 9 Robinson, who is a company employee, but he has fact and expert  
11:40 10 testimony.

11:40 11 THE COURT: Okay.

11:40 12 MR. BRIAN: Your Honor, Brad Brian for Transocean.

11:40 13 I spoke with Mike about this this morning.  
11:40 14 There's a question in our mind about at least two of the  
11:40 15 witnesses they've indicated for next week. Mr. Robinson is  
11:40 16 one, Mr. Cowie is another, and there would be a third, Mr.  
11:40 17 Corser, who I think will be called the following week.

11:40 18 All of those have been designated as nonretained  
11:40 19 experts who may provide opinions consistent with various  
11:40 20 sections of the Bly report.

11:40 21 THE COURT: Did they render expert reports?

11:40 22 MR. BRIAN: No, they did not. They were designated  
11:40 23 as nonretained experts, and the designations say that they may  
11:40 24 provide expert opinion testimony consistent with various  
11:41 25 designated sections of the Bly report.

11:41 1 You'll recall that Mark Bly was on the stand  
11:41 2 for, I think, more than two days. BP --

11:41 3 **THE COURT:** I remember that vividly, yes.

11:41 4 **MR. BRIAN:** BP did a full and very detailed and very  
11:41 5 lengthy direct examination and then a redirect. I think the  
11:41 6 testimony of these three individuals, to the extent they're  
11:41 7 going to testify about the conclusions and opinions set forth  
11:41 8 in the Bly report, are cumulative.

11:41 9 And I would ask the Court to inquire of counsel  
11:41 10 for BP and possibly give an offer of proof. Because I --  
11:41 11 otherwise, we're going to have objections on a  
11:41 12 question-by-question basis. I think their testimony is  
11:41 13 cumulative, if that's what they intend to do, as set forth in  
11:41 14 this pleading.

11:41 15 **MR. ROY:** We join them in that.

11:41 16 **THE COURT:** Well, I'm kind of confused --

11:41 17 **MR. UNDERHILL:** So does the United States.

11:41 18 **THE COURT:** I didn't know who these people were. I  
11:41 19 saw the names, and I was told they were experts. I assumed  
11:41 20 they had rendered expert reports. Now, it sounds like they  
11:42 21 have not rendered expert reports. Because they're going to --

11:42 22 **(OFF THE RECORD)**

11:42 23 **THE COURT:** So let me hear from Mr. Brock.

11:42 24 **MR. BROCK:** Yes, Your Honor. The three witnesses  
11:42 25 that we are talking about presently are Mr. Robinson,

11:42 1 Mr. Corser, and Mr. Cowie. Mr. Robinson is identified as the  
11:42 2 first company witness who we will call next week. As I  
11:42 3 mentioned, he is listed as third on the list.

11:42 4 We had interaction with the parties and with  
11:42 5 Judge Shushan on this particular issue. And the resolution of  
11:42 6 that was that for company witnesses who had opinions, who  
11:42 7 would be expressing opinions at trial, we disclosed them on the  
11:43 8 topics about which they would testify.

11:43 9 And for Mr. Robinson, Mr. Corser, and Mr. Cowie,  
11:43 10 those are not the same topics. In fact, when we made those  
11:43 11 disclosures, we were very careful not to have a lot of overlap.

11:43 12 So where we are with these witnesses,  
11:43 13 Robinson --

11:43 14 **THE COURT:** But the question is: Have you  
11:43 15 disclosed -- if they're going to be asked to give opinion  
11:43 16 testimony, has there been disclosure of their opinions?

11:43 17 **MR. BROCK:** We have disclosed the topics about which  
11:43 18 they will testify. Since they are not retained experts, the  
11:43 19 Rules permitted us, to our understanding, to disclose the  
11:43 20 topics about which they would be testifying at trial as opposed  
11:43 21 to the lengthy expert reports that we've talked about.

11:43 22 **THE COURT:** I don't know what went on with  
11:43 23 Judge Shushan. I'm looking at her now, and she may have a  
11:43 24 recollection of this. But --

11:44 25 **MR. BROCK:** You're --

11:44 1           **THE COURT:** But I'll say this: The rule that you're  
11:44 2 relying on about non-retained experts -- it does say that, but  
11:44 3 I've always interpreted that -- let me give you an example.

11:44 4           A classic example of that is a treating  
11:44 5 physician. We don't usually require someone to go to their  
11:44 6 treating physician to get an expert report, but you have  
11:44 7 medical records and office notes and things like that that you  
11:44 8 typically would know what the expert is expected to say, not  
11:44 9 just a general topic.

11:44 10          **MR. BROCK:** For these experts, we identified  
11:44 11 specifically sections of the Bly report where they provided  
11:44 12 expertise in the writing of that report, the areas in which  
11:44 13 they were knowledgeable and their testimony will match sections  
11:44 14 of the Bly report in detail. They are some of the subject  
11:44 15 matter experts that helped put that report together.

11:44 16          **THE COURT:** But Mr. Brian raises a good point. We  
11:45 17 spent two and a half days, as I recall, with Mr. Bly on the  
11:45 18 stand going almost line by line through this report and now  
11:45 19 we're going to hear it all again?

11:45 20          **MR. BROCK:** I don't think you're going to hear it all  
11:45 21 again, Your Honor. We're going to be careful that that's not  
11:45 22 the case, but my recollection is Mr. Bly, in his testimony,  
11:45 23 often referred to the fact that there were subject matter  
11:45 24 experts for many of the topics he's talking about.

11:45 25          **THE COURT:** Well, I understand that, but he was --

11:45 1 you took him through it pretty extensively, as I recall. And  
11:45 2 he was allowed to testify and -- you know, as the leader. I  
11:45 3 don't know if he's proud to have his name on it at this point  
11:45 4 or not. He seemed a little reluctant about that.

11:45 5           Regardless, he was allowed to testify, you know,  
11:45 6 to all of these conclusions that, yes, in large part, he relied  
11:45 7 on members of his team; but he was relaying the findings of his  
11:46 8 team. So why do we have to have them come in and say the same  
11:46 9 thing?

11:46 10           **MR. BROCK:** Because I think the depth and the  
11:46 11 background of the witnesses that we plan to bring will not be  
11:46 12 cumulative. It will add in some areas to what he has said. I,  
11:46 13 quite frankly, have not gone back and scrubbed his transcript  
11:46 14 to identify those areas where it might be cumulative.

11:46 15           But it is not our intent to replot ground, but  
11:46 16 rather to bring these subject matter experts that assisted in  
11:46 17 the writing of that report to share with the Court their  
11:46 18 perspective on those issues.

11:46 19           **THE COURT:** I wish I had known that six weeks ago  
11:46 20 because I think I would have cut his testimony a lot shorter  
11:46 21 than it ended up being.

11:46 22           I'll have to give this some thought, but I would  
11:46 23 strongly recommend that you revisit this over the weekend and  
11:46 24 see if you can't really shorten and focus narrowly on what  
11:47 25 these witnesses are going to be called to --

11:47 1           **MR. BROCK:** We've definitely planned to do that.  
11:47 2 I've shared that with lawyers here that we do have a couple of  
11:47 3 examinations that will be lengthy, but we plan for our -- the  
11:47 4 witnesses that we call to get right to the issues that we are  
11:47 5 bringing them here to talk about and to not have overlap in  
11:47 6 terms of the witnesses that we'll be presenting at trial.

11:47 7           So I hear what Your Honor is saying, and it is  
11:47 8 our intent to move our witnesses through quickly.

11:47 9           **THE COURT:** All right.

11:47 10          **MR. BRIAN:** Your Honor, Brad Brian again.

11:47 11           The only -- the last point I would make on that,  
11:47 12 while Your Honor considers it, is, of course, that the Bly  
11:47 13 report itself is in evidence.

11:47 14          **THE COURT:** I understand.

11:47 15          **MR. BRIAN:** That was my point.

11:47 16          **THE COURT:** All right. Thank you.

11:47 17           Mr. Miller?

11:47 18          **MR. MILLER:** Yeah, Your Honor. Kerry Miller for  
11:47 19 Transocean. I meant to mention this yesterday in connection  
11:47 20 with Cameron's dismissal from the case.

11:47 21           During the marshaling conference, I think we're  
11:47 22 going to formally admit the Transocean bundles, the 26 or 28  
11:48 23 Transocean deposition bundles that I think have been put on a  
11:48 24 thumb drive, and all that needs to be done is they get handed  
11:48 25 over to Stephanie.

11:48 1 Your Honor will recall that Cameron had made  
11:48 2 objections to some of the designated testimony in the  
11:48 3 Transocean bundles. We would ask, Your Honor, that those  
11:48 4 objections be denied as moot in light of Cameron's status in  
11:48 5 the case now.

11:48 6 **THE COURT:** So ordered.

11:48 7 **MR. MILLER:** Thank you.

11:48 8 **MR. BRIAN:** The only thing I would add to that is I  
11:48 9 actually think the deposition bundles were already admitted.

11:48 10 **THE COURT:** There were two or three deposition  
11:48 11 bundles, and Judge Shushan and I had a conversation about that.  
11:48 12 I don't know if this -- are you planning to take that up, Judge  
11:48 13 Shushan, today?

11:48 14 **JUDGE SHUSHAN:** Yes.

11:48 15 **THE COURT:** That had some issues and unresolved  
11:48 16 issues as of last week; and frankly, I can't remember exactly  
11:48 17 what the issues are, if I ever knew what the issues are. But  
11:48 18 she's going to try to resolve that with you-all today.

11:48 19 **MR. BRIAN:** And my only point was: You'll recall  
11:48 20 that because she was on vacation, we didn't have a marshaling  
11:49 21 conference; but they were admitted and subject to Cameron's  
11:49 22 objections.

11:49 23 **THE COURT:** Mr. Irpino?

11:49 24 **MR. IRPINO:** Good morning, Your Honor. Anthony  
11:49 25 Irpino. You had asked what day through trial the exhibits were

11:49 1 going to be introduced.

11:49 2 **THE COURT:** You can deal with Judge Shushan on that.  
11:49 3 You don't have to tell me that. Whatever she agrees with and  
11:49 4 you-all work out is fine with me.

11:49 5 **MS. HANKEY:** Hi, Rachel Hankey for the United States.  
11:49 6 I just wanted to clarify for the record, the objections that  
11:49 7 Cameron made to two of the deposition bundles being submitted  
11:49 8 by Transocean, the United States has actually joined in those  
11:49 9 objections because the objections are based on the Court's  
11:49 10 order that DNV's opinions and analysis are not admissible,  
11:49 11 including the reports by DNV, which are included in those  
11:49 12 deposition bundles.

11:49 13 **THE COURT:** Okay. Well --

11:49 14 **MS. HANKEY:** I understand --

11:49 15 **THE COURT:** -- if there's anything in there, I'll --  
11:49 16 you know, I'll just disregard that, obviously, you know. Okay?  
11:50 17 Yes, Mr. Godwin.

11:50 18 **MR. GODWIN:** Yeah, Don Godwin, Halliburton.

11:50 19 Judge, I've been informed by the folks that are  
11:50 20 working on complying with Your Honor's order that we will have  
11:50 21 produced by noon on an FTP site the documents that Your Honor  
11:50 22 ordered as we understand it. We think it's going to be  
11:50 23 all-encompassing.

11:50 24 I have here -- they've brought down to me the  
11:50 25 documents that they and I believe are responsive. It's



11:50 1 somewhere between 15 and 20 pages without counting, Judge.

11:50 2 These are test reports back in the '09 time frame dealing with  
11:50 3 Kodiak and one in January of 2010. Nothing beyond that we're  
11:50 4 able to locate. Everything else has been produced, Judge; and  
11:50 5 I just wanted to bring this to your attention.

11:50 6 **THE COURT:** All right. Thank you. Judge Shushan is  
11:50 7 going to follow up with you-all. So we're going to recess the  
11:50 8 trial now until 8:00 Monday. Judge Shushan -- well, those of  
11:50 9 you who need to stay for the marshaling conference,  
11:50 10 Judge Shushan is here. She's also, immediately following that,  
11:50 11 going to take up any issues regarding the Halliburton discovery  
11:51 12 matter.

11:51 13 **THE DEPUTY CLERK:** All rise.

11:51 14 **MR. ROY:** May I raise one issue? Just to bookmark  
11:51 15 it, Your Honor, BP has, if my count is correct, almost  
11:51 16 20 experts listed. There are a bunch of them regardless,  
11:51 17 several in drilling and so forth and so on. Obviously, we're  
11:51 18 going to be, and as I'm sure other parties are going to be  
11:51 19 raising issues of cumulative objections and so forth.

11:51 20 **THE COURT:** Well, I think I've made it clear that I'm  
11:51 21 not going to let them call 23 experts or anything close to  
11:51 22 that.

11:51 23 **MR. ROY:** Well, here is the precise point I rise to  
11:51 24 address, Your Honor. It would seem obvious to all -- perhaps  
11:51 25 not all here but at least to us -- that they're not all going

11:51 1 to be testifying; and yet, we are faced with the obligation to  
11:52 2 prepare for all of these witnesses. We ask that the Court  
11:52 3 consider setting a deadline --

11:52 4 **THE COURT:** I have the same problem. You know, every  
11:52 5 night I take these expert reports home and read them; and I've  
11:52 6 already read 50- and 100-page reports and Daubert motions and  
11:52 7 then come in the next morning to find out they're not being  
11:52 8 called, you know?

11:52 9 So, yes, you are making a very good point. We  
11:52 10 need to have some, as firm as can be, indication from BP, I  
11:52 11 guess, by early next week as to which experts are really going  
11:52 12 to be called in this case. Okay? It's only fair to do that  
11:52 13 since we're now into your case.

11:52 14 **MR. ROY:** Just one last observation. We anticipate a  
11:52 15 likely response would be that they're going to testify about  
11:52 16 different aspects. But the point is, unless their reports are  
11:52 17 truncated in advance by editing out the rest of it, the record  
11:53 18 will reflect that point in time, three completes, for example,  
11:53 19 drilling engineers --

11:53 20 **THE COURT:** Okay. I understand the point. I think  
11:53 21 Mr. Brock does.

11:53 22 **MR. ROY:** Thank you, Your Honor. We appreciate it.

11:53 23 **MR. BROCK:** We would appreciate the opportunity to  
11:53 24 present our case. And I've already given a list to the parties  
11:53 25 in the case, as I promised a couple weeks ago, of experts that

11:53 1 we do not intend to call. That was five or so names that were  
11:53 2 disclosed to the parties.

11:53 3 As we get to the place where we understand that  
11:53 4 we're not calling some of these experts, we will let the --

11:53 5 **THE COURT:** Yeah. Hopefully, we're not doing this,  
11:53 6 you know, drip by drip again.

11:53 7 **MR. BROCK:** We're going to stay out of the  
11:53 8 drip-by-drip category, yes, sir.

11:53 9 **THE COURT:** Let's do it -- I mean, it's not -- when  
11:53 10 you list 23 experts -- and I think you now know you're not  
11:53 11 going to call them and I know you're not going to call  
11:53 12 23 experts. It's unfair to opposing counsel, and to the Court  
11:54 13 for that matter, to keep everybody in suspense as to which ones  
11:54 14 you really intend to call.

11:54 15 **MR. BROCK:** Our list is not 23. That's the total  
11:54 16 number of witnesses, and we've already cut it down --

11:54 17 **THE COURT:** It was 23 when I first saw the first  
11:54 18 list.

11:54 19 **MR. BROCK:** I understand.

11:54 20 **THE COURT:** All right. Everybody have a good  
11:54 21 weekend. Judge Shushan is here.

11:54 22 (WHEREUPON, the Court took a recess.)

11:54 23 (WHEREUPON, the following proceedings were held  
11:54 24 before Judge Sally Shushan.)

11:55 25 **THE COURT:** Okay. Guys, who's participating in the

11:55 1 marshaling conference?

11:57 2 All right. Everybody, whoever is participating  
11:57 3 in marshaling, let's get that taken care of. Anybody who  
11:57 4 doesn't want to stay, need not. That includes you,  
11:57 5 Mr. Roberts.

11:57 6 **MR. ROBERTS:** I'm going to sit and stay, but  
11:57 7 Mr. Brock's going to move by me. There's never enough room.

11:57 8 **THE COURT:** All right. So where's Anthony? There's  
11:57 9 Anthony. Good morning.

11:57 10 **MR. IRPINO:** Good morning, Judge.

11:57 11 **THE COURT:** Mr. Nomellini, how are you today?

11:57 12 **MR. NOMELLINI:** I'm doing well, Judge. How about  
11:58 13 yourself?

11:58 14 **THE COURT:** Good. I'm fine. Thank you.

11:58 15 Let's talk about what we're marshaling, what  
11:58 16 days. Let's put that down for the record first.

11:58 17 **MR. NOMELLINI:** Judge, it's March 18th through  
11:58 18 April 2nd, Your Honor.

11:58 19 **THE COURT:** Okay. Go ahead, Anthony.

11:58 20 **MR. IRPINO:** Just to be specific, it's March 18th,  
11:58 21 Mr. Barnhill, through April 2nd, Mr. Gagliano.

11:58 22 **THE COURT:** Okay.

11:58 23 **MR. IRPINO:** Mr. Stevick also testified on the 2nd,  
11:58 24 but we're saving those for the next marshaling conference.

11:58 25 **THE COURT:** The next one. Okay. Good enough.

11:58 1 Well, let's go ahead and take care of that list  
11:58 2 first. It's the marshaling conference of 4/4, list of  
11:58 3 exhibits, demonstratives offered and admitted 3/18 through 4/2,  
11:58 4 as itemized by Mr. Irpino.

11:58 5 Have all objections been resolved and the lists  
11:59 6 finalized?

11:59 7 **MR. IRPINO:** Yes, Your Honor, they have. But if  
11:59 8 anybody has any objections now, I guess they can speak or  
11:59 9 forever hold their peace.

11:59 10 **THE COURT:** Well, I think it's better that they hold  
11:59 11 their peace. So that list will be admitted as the official  
11:59 12 marshaling for those dates.

11:59 13 **MR. IRPINO:** Your Honor, I will approach Stephanie  
11:59 14 and provide her with a copy of that.

11:59 15 **THE COURT:** Perfect. Stephanie had some cleanup  
11:59 16 items that she wanted us to take care of. At the conference on  
11:59 17 March 14th, there was a deposition bundle offered by plaintiffs  
11:59 18 regarding Richard Coronado.

11:59 19 It does not look as though that has been  
11:59 20 submitted to her or formally introduced into the record. So  
11:59 21 let's just take care of that next week.

11:59 22 **MR. IRPINO:** Well, if you want, Your Honor, what I  
11:59 23 also have today, in addition to the list that we've just  
11:59 24 provided, we also have the actual bundles on a drive -- a thumb  
12:00 25 drive that has been provided by inData. The thumb drive I have

1 is EMTEC 16-gigabyte. It's labeled "Court." It's actually  
2 back in the packaging. I can provide that.

3 We also have a list of all of the -- that are on  
4 the thumb drive.

5 I know, Stephanie, that you need that.

6 So if you want -- these have already been  
7 admitted into evidence by Judge Barbier. We have them listed,  
8 though; and if you'd like, I can provide that list and the  
9 thumb drive to Stephanie.

10 **THE DEPUTY CLERK:** Perfect. Does that include the  
11 Coronado bundle?

12 **MR. IRPINO:** It does. What -- I can be specific.  
13 These are what are being provided on this thumb drive, the  
14 Fifth Amendment witnesses that the PSC previously submitted and  
15 which were previously admitted. There are 13 of those.  
16 The 30(b)(6) depositions that the PSC previously submitted and  
17 which were previously admitted, there are 11 of those.

18 There is also the Coronado bundle. And then  
19 there are Transocean's list of deposition bundles, which were  
20 previously submitted by Transocean and previously admitted.  
21 And there are -- bear with me, there are 28 of those deposition  
22 bundles.

23 That is what is what I'm told, by inData, on  
24 this drive. And these are -- this is the list of those  
25 depositions. I will provide them to Stephanie now.

12:01 1 THE COURT: Good. That makes Stephanie much happier.  
12:01 2 So thank you. Those will be admitted.

12:01 3 Now, next up we had deposition bundles admitted  
12:01 4 or tendered by Halliburton. Does Halliburton have its disc and  
12:01 5 list? No?

12:01 6 MR. YORK: I'm sorry.

12:01 7 THE COURT: Were you not paying attention, Alan?

12:02 8 MR. YORK: No, Your Honor. Actually, BP had  
12:02 9 requested that we give them a list, give them an opportunity to  
12:02 10 review those bundles. And, therefore, we had suggested that we  
12:02 11 would actually move for formal admission at next week's  
12:02 12 marshaling conference --

12:02 13 THE COURT: That's fine.

12:02 14 MR. YORK: -- to allow everyone a chance to --

12:02 15 THE COURT: Good enough. Thank you.

12:02 16 Okay. Next up, I see a hanging participle  
12:02 17 regarding bundles of Winslow and McMahan. Is that something we  
12:02 18 need to cover today?

12:02 19 Andy, what do you know about that?

12:02 20 MR. WILLIAMS: Your Honor, Carter Williams on behalf  
12:02 21 of Transocean.

12:02 22 THE COURT: Sorry.

12:02 23 MR. WILLIAMS: Those are our witnesses. The issue  
12:02 24 was we were just taking a look to see if there was an easy way  
12:02 25 to divide what was fact witness testimony --

12:02 1 THE COURT: Oh, that's right.

12:02 2 MR. WILLIAMS: -- and the 30(b)(6). That review  
12:02 3 should be done. I don't have a status for you today; but if  
12:02 4 it's not done, it's almost done; and we'll make a proposal to  
12:02 5 PSC on that.

12:02 6 THE COURT: Can you believe I forgot about that since  
12:03 7 we last talked about it, which was what, three weeks ago.

12:03 8 MR. IRPINO: Your Honor, I think I could be of help,  
12:03 9 at least with the McMahan bundle. If I am not mistaken,  
12:03 10 Transocean did not, in fact, call Mr. McMahan, which was  
12:03 11 planned on.

12:03 12 And the thought process there was we're not  
12:03 13 going to introduce -- they didn't want his individual testimony  
12:03 14 introduced into the bundle since he was going to be live but  
12:03 15 that his 30(b)(6) testimony could be introduced because,  
12:03 16 irrespective of live or not, that comes in.

12:03 17 He was never called, unless I've got that  
12:03 18 mistaken.

12:03 19 MR. CARTER WILLIAMS: He was not called by  
12:03 20 Transocean. I don't know whether BP intends to call him or  
12:03 21 not.

12:03 22 MR. LANGAN: Your Honor, Andy Langan for BP.

12:03 23 That's an open issue --

12:03 24 THE COURT: Okay.

12:03 25 MR. LANGAN: -- about when we present our case



12:03 1 whether we are going to ask for Mr. McMahan.

12:03 2 **THE COURT:** Okay. So we'll just put a question mark  
12:03 3 there.

12:03 4 And then, Carter, you can remind me next time  
12:03 5 this comes up whether it is again.

12:03 6 **MR. CARTER WILLIAMS:** Absolutely.

12:03 7 **THE COURT:** Okay.

12:03 8 **MR. CARTER WILLIAMS:** And I think the way you put it,  
12:04 9 Your Honor, was that the 30(b)(6) testimony was unconditionally  
12:04 10 admitted and that the individual testimony was conditionally  
12:04 11 admitted.

12:04 12 **THE COURT:** Yeah, and I wished you luck on  
12:04 13 segregating those, too, if I remember correctly.

12:04 14 **MR. IRPINO:** We'll see what Carter gets.

12:04 15 **THE COURT:** So anything else on marshaling that we  
12:04 16 need to cover?

12:04 17 **MS. HANKEY:** Your Honor, Rachel Hankey for the  
12:04 18 United States.

12:04 19 With respect to the Transocean deposition  
12:04 20 bundles that were submitted, there were two DNV employees that  
12:04 21 were included in the bundle. Unfortunately, the judge's order  
12:04 22 regarding the exclusion or inadmissibility of the DNV analysis  
12:04 23 and opinions came after most of the designations had been made.  
12:04 24 So there's actually a lot of testimony included in those  
12:04 25 bundles that are excluded from the judge's order.

12:04 1 But we will be filing something later today --  
12:04 2 we couldn't possibly earlier, since Cameron had already filed  
12:04 3 something -- and we'll just ask that the objections be included  
12:04 4 in the bundle.

12:04 5 **THE COURT:** That's fine. And I think that  
12:04 6 Judge Barbier indicated that he understood and he would  
12:04 7 disregard the testimony with regard to DNV.

12:05 8 So I'm glad I came in at the tail end of that.

12:05 9 **MS. HANKEY:** Thank you.

12:05 10 **MR. IRPINO:** For the record, I guess, Stephanie, at  
12:05 11 least we should notify her on the list that that's -- I think  
12:05 12 that's No. 6, Kenney and Thompson.

12:05 13 **MS. HANKEY:** Kenney and Neil Thompson.

12:05 14 **THE COURT:** Kenney and Thompson.

12:05 15 **MR. IRPINO:** And Thompson. So No. 6, Kenney, and  
12:05 16 Thompson is No. 8. I guess those are conditionally --

12:05 17 **THE COURT:** Yeah. I think those are going to be  
12:05 18 admitted subject to the objection. And I think Judge Barbier  
12:05 19 has already said he will, you know, regard the objections and  
12:05 20 disregard the DNV testimony. Okay?

12:05 21 **MS. HANKEY:** Thank you.

12:05 22 **THE COURT:** Okay. Anything else on marshaling?

12:05 23 **MR. IRPINO:** I guess it's related, Your Honor.

12:05 24 **THE COURT:** Okay.

12:05 25 **MR. IRPINO:** These are now -- I guess these are

12:05 1 already -- the list of these depo bundles on the thumb drive  
12:06 2 that we provided to Stephanie have all already been admitted.

12:06 3           These, as I appreciate it, with the exception  
12:06 4 of -- I guess there's still the outstanding issue on No. 4,  
12:06 5 under 30(b)(6) witnesses, Larry McMahan. I thought the other  
12:06 6 was Mr. Ambrose, No. 10.

12:06 7           **MR. CARTER WILLIAMS:** McMahan and Ambrose were both  
12:06 8 30(b)(6) and fact witnesses. So those are the two.

12:06 9           **MR. IRPINO:** What we do is then put it up on the  
12:06 10 "mdl2179trialdocs" site.

12:06 11           My understanding is, other than those two and  
12:06 12 other than Kenney and Thompson, that all of that can go up now.

12:06 13           **THE COURT:** All right. Good. Okay. Thank you,  
12:06 14 Anthony.

12:06 15           **MR. IRPINO:** Thank you, Judge.

12:06 16           **THE COURT:** Let's have a quick update on where we  
12:06 17 stand on the Halliburton production.

12:06 18           Andy?

12:06 19           **MR. LANGAN:** Well, Your Honor, I'm happy to let  
12:07 20 Mr. Godwin take the lead on that. I think Your Honor's aware  
12:07 21 of the recent events about production yesterday.

12:07 22           We raised a question about it; it led to an  
12:07 23 exchange of letters; led to an order from Judge Barbier last  
12:07 24 night, I think confirmed at 8:00 this morning.

12:07 25           I see now Mr. Godwin's partner, Ms. Raines, has

12:07 1 sent an e-mail around talking about production, and I'll let  
12:07 2 Mr. Godwin explain that, I guess.

12:07 3 **THE COURT:** Good enough.

12:07 4 **MR. GODWIN:** Yes, Judge. Don Godwin for Halliburton.

12:07 5 Your Honor, as I explained there at the end of  
12:07 6 the session today, per Judge Barbier's order, we have now -- as  
12:07 7 I understand it from Jenny Martinez and Carolyn Raines, we have  
12:07 8 uploaded to our FTP site all of the documents that would be  
12:07 9 responsive to what we understand to be Andy Langan's request in  
12:07 10 his letter of yesterday, which Judge Barbier said we had to  
12:07 11 adhere to and follow. We did. That's been uploaded, produced.

12:07 12 There's been also a letter circulated on my  
12:08 13 behalf, that I approved, Judge, to Judge Barbier, you, Ben, and  
12:08 14 others -- Mike, and all lawyers -- explaining what we've  
12:08 15 produced and what we found.

12:08 16 And as I've said also, very briefly, Your Honor,  
12:08 17 the result was that there's about -- it looked to me like -- I  
12:08 18 didn't count the pages, but I looked at them quickly. It  
12:08 19 looked like there was about 15 to 20 pages of total documents  
12:08 20 that would be responsive to that expanded request that BP  
12:08 21 submitted through Andy's letter beyond what we believed had  
12:08 22 been requested before.

12:08 23 We're not here to argue that.

12:08 24 **THE COURT:** Right.

12:08 25 **MR. GODWIN:** But there's about 15 to 20 pages that we

1 submitted. They appear to be test results regarding the Kodiak  
2 well back in the '09 time frame, and I think one in January of  
3 2010. And beyond that, nothing else has been located, so far  
4 as I know. But it's my understanding that's been handled.

5 I don't know if Jenny's here -- they're  
6 upstairs. They're still working. But that's all been done.

7 That's the latest, Judge. That's what I've been  
8 told, and I think we've fully complied. But should anyone,  
9 including the Court, think that something has not been provided  
10 or we didn't do what was required, if they'll let me know, I'll  
11 make certain that we do everything we can to do that. But we  
12 think we have.

13 **THE COURT:** Don, I guess my only question, from  
14 reading the correspondence last night, was the overlay issue,  
15 and I want to make sure I understand it.

16 There were a hundred-and-something overlays that  
17 were --

18 **MR. GODWIN:** 168 pages, as I recall the number.

19 **THE COURT:** Could you explain that so I make sure  
20 that Mike and I understand that issue? Thanks, Alan.

21 **MR. YORK:** Yes, Your Honor. This is something that  
22 many of the parties have had to go through with their  
23 discovery.

24 **THE COURT:** Right.

25 **MR. YORK:** It's a situation where a document has

12:09 1 already been produced but we find that that same document  
12:09 2 existed in another custodial file, and so there's an overlay  
12:09 3 that can be produced.

12:09 4 What it does is it updates the list of  
12:10 5 custodians and in whose possession that file was.

12:10 6 **THE COURT:** That's what I thought it was, but I  
12:10 7 wanted to make sure I was understanding it.

12:10 8 **MR. YORK:** Yes, Your Honor. These are not new  
12:10 9 documents.

12:10 10 **THE COURT:** So these are documents, as I understood  
12:10 11 it, that had been produced, that had not been identified in  
12:10 12 Mr. Roth's custodial file, and these overlays identify them as  
12:10 13 being in his custodial file.

12:10 14 **MR. YORK:** That's correct, Your Honor.

12:10 15 **THE COURT:** Okay. Good. Thank you.

12:10 16 **MR. LANGAN:** Your Honor, we had the same  
12:10 17 understanding. I appreciate the efforts that counsel has made.  
12:10 18 We'll digest what we've been given. I mean, we're capable of  
12:10 19 understanding it. And if there's an issue, I guess we'll ask  
12:10 20 for the opportunity to come back and raise the issue with  
12:10 21 Your Honor or with Judge Barbier.

12:10 22 **THE COURT:** The only reason I wanted to raise it  
12:10 23 today is because we don't have a conference tomorrow, and we  
12:10 24 might as well get what we can under our belts.

12:10 25 **MR. LANGAN:** Very good, Your Honor.

12:10 1 THE COURT: Okay.

12:10 2 MR. GODWIN: Just one last point, Judge. I sent  
12:10 3 Jenny an e-mail asking, with regard to the production that we  
12:10 4 made, were there any documents that we claimed privilege on.

12:10 5 I don't know --

12:11 6 THE COURT: Other than the ones we saw last night?

12:11 7 MR. GODWIN: Other than the four that you saw  
12:11 8 yesterday. She has not responded back, but I can't imagine  
12:11 9 there were. I've looked at them. But if there are, we'll let  
12:11 10 you know. But I did want to say that as well.

12:11 11 THE COURT: All right.

12:11 12 MR. GODWIN: Thank you, Your Honor.

12:11 13 THE COURT: Anything else anybody wants to cover?

12:11 14 Mr. Roberts, is that a yes?

12:11 15 MR. ROBERTS: Yes, ma'am.

12:11 16 THE COURT: Come limping on up.

12:11 17 MR. ROBERTS: Very quickly, Judge, BP has requested  
12:11 18 an opportunity to go back out and photograph the riser section.  
12:11 19 As you'll recall, several weeks ago there was a request to  
12:11 20 examine the riser. This is a Phase Two-ish sort of issue.

12:11 21 And we've just sent around an e-mail that the  
12:11 22 photographing of the riser will be tomorrow morning at 10:30.  
12:11 23 So I just wanted to make everybody aware of it.

12:11 24 Anybody's invited to attend, or just obtain  
12:11 25 copies of the photographs that BP has indicated it will provide

12:11 1 to anyone that wants them.

12:11 2 THE COURT: That seems like an easy way to take care  
12:11 3 of that.

12:12 4 MR. ROBERTS: Or they can go look at a riser in a  
12:12 5 dirty yard in the rain tomorrow.

12:12 6 THE COURT: Oh, is it supposed to rain?

12:12 7 MR. ROBERTS: Pardon me?

12:12 8 THE COURT: Is it supposed to rain?

12:12 9 MR. ROBERTS: It seems to always rain when I go to a  
12:12 10 yard.

12:12 11 THE COURT: Well, that's a good prediction.

12:12 12 Carter?

12:12 13 MR. CARTER WILLIAMS: Your Honor, just wanted to add  
12:12 14 I did get a status update. We will circulate the proposed  
12:12 15 Ambrose/McMahan treatment by Monday, and then we can take it up  
12:12 16 at next week's conference.

12:12 17 THE COURT: Okay. That will work. All right.

12:12 18 Thanks, everybody. Go have a lunch.

12:12 19 (WHEREUPON, the proceedings were concluded.)  
20  
21  
22  
23  
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2 CERTIFICATE

3 I, Jodi Simcox, RMR, FCRR, Official Court Reporter  
4 for the United States District Court, Eastern District of  
5 Louisiana, do hereby certify that the foregoing is a true and  
6 correct transcript, to the best of my ability and  
7 understanding, from the record of the proceedings in the  
8 above-entitled and numbered matter.

9  
10  
11 *s/Jodi Simcox, RMR, FCRR*  
12 Jodi Simcox, RMR, FCRR  
13 Official Court Reporter  
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\$10 million [1] 7317/15	1700 [1] 7232/5	3,000 psi [1] 7378/6
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