

# Deposition Testimony of:

## **Patrick Campbell**

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00008:14 Before we get into some other  
15 things, I wanted to turn back to some of the  
16 testimony you gave yesterday. One of the  
17 things you talked about was an attempt by  
18 Wild Well Control and others to create a  
19 collaborative or joint effort in the industry  
20 to put together some response assets, if you  
21 will; is that right?  
22 A. Yes, sir.  
23 Q. Okay. Are you familiar with  
24 the -- the Marine Well Containment Company?  
25 A. Yeah. Oh, yes.  
00009:01 Q. And is that an industrywide  
02 initiative to put together response, assets  
03 for deployment in the Gulf of Mexico?  
04 A. It is.  
05 Q. Okay. And is that similar to  
06 what you were attempting to establish?  
07 A. Yes, except the difference being  
08 we were doing it in 1973, and this has taken  
09 place since the Macondo incident.  
10 Q. Okay. So yesterday when you  
11 were talking about attempts at a joint  
12 collaboration within the industry, that was  
13 talking about in the '70s, not in -- in the  
14 last --  
15 A. Correct.  
16 Q. -- couple of years, correct?  
17 A. Yes, sir.  
18 Q. Now, you mentioned before that  
19 you had testified or at least given  
20 deposition testimony before; is that right?  
21 A. Yes, sir.  
22 Q. Okay. And in those cases were  
23 you being offered as an expert in well  
24 control?  
25 A. No.  
00010:01 Q. Were you a fact witness then?  
02 A. A fact witness or we were a  
03 named party in the suits and just having  
04 knowledge of the events.  
05 Q. Have you ever testified as an  
06 expert before?  
07 A. No.

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00010:15 Q. Were you aware that the  
16 government had established a flow rate  
17 technical group to analyze flow rate during  
18 the response?  
19 A. I did hear that.  
20 Q. Did any of the work that you

21 were doing rely on the estimates provided by  
22 the flow rate technical group, to your  
23 knowledge?  
24 A. Not that I'm aware of.  
25 Q. But you just don't know one way  
00011:01 or another?  
02 A. That's correct.  
03 Q. Yesterday you were asked  
04 questions about walking off the job for  
05 reasons of safety, environment, or loss of  
06 assets. Do you recall those --  
07 A. Yes.  
08 Q. -- conversations?  
09 A. Yes, sir.  
10 Q. Okay. Have you ever walked off  
11 of a job for BP in deepwater drilling for  
12 safety concerns?  
13 A. No.  
14 Q. Have you ever had any concerns  
15 with the safety of BP's operations in  
16 deepwater drilling?  
17 A. No.  
18 Q. Yesterday you also mentioned  
19 that during the peer assist on the top kill  
20 or the junk shot that several of the outside  
21 people brought in to provide their opinions  
22 did not think it was a good idea because the  
23 flow path was likely too large for the junk  
24 shot to work; is that right?  
25 A. The short answer is yes.  
00012:01 Actually, the junk shot was in combination  
02 with a momentum kill. And the momentum kill  
03 in this instance required injection very near  
04 the surface, in other words, not via a long  
05 drill string or something of that nature.  
06 So it was thought that the  
07 combination of the two elements, the size of  
08 the flow path and the nature of the technical  
09 limitations about a momentum kill -- your  
10 words were not a good idea. I think our  
11 words were, had a very low likelihood of  
12 success.  
13 Q. Okay. So it was your  
14 understanding coming out of that meeting that  
15 there was a chance of success but perhaps not  
16 a great chance of success?  
17 A. Yes.  
18 Q. Okay. In going forward with  
19 that operation, the top kill operation, do  
20 you believe that that any way delayed the  
21 ability to cap the well?  
22 A. No.  
23 Q. Okay. Would you also agree with  
24 me that during the top kill operation, BP  
25 Science Team and the others involved in the

00013:01 response were able to learn more about the  
02 wellbore pressures and geometry through the  
03 injection of that mud?  
04 A. Data was collected. Its -- its  
05 value would be interpretive.  
06 Q. But that was data that was not  
07 available prior to the top kill operation?  
08 A. Correct.

Page 16:16 to 35:19

00016:16 What is hot tapping?  
17 A. It is making a safe penetration  
18 from the exterior of a pipe -- a pipe being  
19 the best example -- to the interior of the  
20 pipe but without allowing anything to escape.  
21 Q. And the hot tapping or hot tap  
22 idea as it related to Macondo was to attach a  
23 saddle to the riser that was bent over on the  
24 seafloor and then attempt to pull fluids  
25 directly out of that tap into the riser,  
00017:01 correct?  
02 A. Out of that tap into a riser  
03 back to the surface, yes.  
04 Q. Yes. And to do that, one of the  
05 issues or one of the concerns was the  
06 erosional rate on the kink to be flowing all  
07 that fluid through the riser, through the hot  
08 tap up that second riser for collection,  
09 correct?  
10 A. It's a concern.  
11 Q. Were you part of the team that  
12 was looking at the riser integrity?  
13 A. I was not part of the team that  
14 was doing the -- the analysis of the  
15 collapsed riser, although I had two members  
16 of our group that were part of that.  
17 Q. Was it your understanding that  
18 that group was led by Paul Tooms?  
19 A. Yes.  
20 Q. Why did you write this May 12th  
21 letter?  
22 A. I was just trying to share my  
23 opinion about the risk/reward of certain  
24 operations that were being planned and --  
25 and, mind you, I knew Mark very well from  
00018:01 previous --  
02 Q. Mark Patteson or Mark Mazzella?  
03 A. Mark Patteson.  
04 Q. Okay.  
05 A. Mark Patteson.  
06 -- from previous blowout jobs,  
07 et cetera, et cetera, et cetera, over a  
08 number of years.  
09 And I -- I just wanted to share

10 my thinking about some of these initiatives  
11 that were taking place and if BP was  
12 considering early implementation of one or  
13 more of those initiatives, what I thought  
14 about them.

15 Q. Okay. Well, let -- let's go  
16 through the letter a little bit in detail and  
17 see what some of the comments were about  
18 these.

19 First off, I think this sort of  
20 goes back to what you just said. If you look  
21 on the second page, the third paragraph up,  
22 you say, "It's my personal opinion that the  
23 risks associated with most of the initiatives  
24 is too high and that too little is known with  
25 certainty about the wellbore status (the  
00019:01 opponent in this case), to attempt to perform  
02 the work associated with most of these  
03 initiatives. . .

04 Was that your opinion as of  
05 May 12th, May 14th?

06 A. Yes.

07 Q. And so let's talk -- you see  
08 Attachment 1 lists the different initiatives,  
09 correct?

10 A. Yeah -- yes, sir.

11 Q. All right. And these are  
12 basically similar to the initiatives that  
13 were listed on the first page of your letter  
14 by bullet point to show the ones that you  
15 had -- you or Wild Well had been involved in,  
16 correct?

17 A. Yes, sir.

18 Q. Okay. I wanted to go to the  
19 junk shot manifold. What did you say about  
20 that in -- in No. 3 as a potential or a  
21 reason or an issue to consider with regards  
22 to the junk shot manifold?

23 A. What did I say about it?

24 Q. Yes, if you could read No. 3.

25 A. I'll be happy to.

00020:01 Q. Thank you.

02 A. "Junk shot manifold. Objective.  
03 Inject bridging agents from a pre-placed ROV  
04 controlled manifold directly into the  
05 high-pressure choke and kill lines of the  
06 DEEPWATER HORIZON's BOP stack. Excellent  
07 project. Continue with manifold placement,  
08 rigging, preparation of the 3" ID choke and  
09 kill valves for cycling and testing. . .

10 No. 3, "Perform diagnostic  
11 pumping to learn the flowing pressure at the  
12 injection point. See if pumped fluid (with  
13 markers of some type) will reveal useful  
14 information about the internal well" --

15 "wellbore geometry (i.e., is the injected  
16 fluid traveling down the casing by drill pipe  
17 annulus and then exiting via the drill pipe,  
18 et cetera, et cetera. . .  
19           There are many potential  
20 configurations there.  
21           "Do not inject solid objects  
22 (preloaded in the manifold sections) unless  
23 the diagnostic pumping results increase BP's  
24 confidence about the predictability of  
25 successful results of injection of junk. . .  
00021:01       Q.       Okay. And focusing on -- on  
02 No. 3 within that -- that description of the  
03 junk shot that you just read, this is what we  
04 were talking about before about using the  
05 diagnostic pumping in order to attempt to  
06 gain useful information about wellbore  
07 geometry, correct?  
08       A.       Yes. Yes, sir.  
09       Q.       So even setting aside whatever  
10 opinions people may have had about the  
11 likelihood of success -- success about the  
12 top kill operations, there was benefit to  
13 moving forward with that, at least in your  
14 opinion as of May 12th, in -- in order to  
15 determine certain diagnostic characteristics  
16 through this pumping?  
17       A.       Yes.  
18       Q.       Okay. Let's move on to -- the  
19 next item here is capping BOP on BOP,  
20 correct?  
21       A.       Yes, sir.  
22       Q.       Okay. And this is what we've  
23 talked about before. You would remove the  
24 LMRP and then use -- I think it was  
25 considered the DDII BOP as the second BOP on  
00022:01 top of the original DEEPWATER HORIZON stack.  
02       A.       Well, that -- that was one of  
03 several that were all being worked at  
04 precisely the same time and precisely the  
05 same group.  
06       Q.       Okay.  
07       A.       Yeah.  
08       Q.       And one of the other  
09 alternatives was the BOP on the ENTERPRISE;  
10 is that right?  
11       A.       That is correct.  
12               Another option was just a  
13 customized BOP that would be created -- a  
14 capping assembly that would be created and --  
15 and not take away either of those other two  
16 existing BOP stacks.  
17       Q.       Okay. Your recommendation to  
18 Mark Patteson on May 12th with regard to  
19 capping on BOP -- and I'm down on 4 -- is,

20 "Do not initiate this action if the pollution  
21 capture system is operating well."  
22 Did I read that correctly?  
23 A. Yes, sir.  
24 Q. Okay. Is it fair to say, then,  
25 that as of May 14th or May 12th when you  
00023:01 wrote the letter to Mark Patteson that it was  
02 your advice to BP that they should not at  
03 that point in time cap the well with the  
04 second BOP?  
05 A. Well, the -- the key words here  
06 is do not initiate this action if the  
07 pollution capture system is operating well.  
08 That means the top hat and the flow-back  
09 system to the surface and so on.  
10 Operating well is a very short  
11 answer and is not very descriptive. But, in  
12 other words, they would have to discuss among  
13 themselves. If you put that in place and  
14 your capture ratio was 80 percent,  
15 90 percent, then I would not proceed with  
16 trying to cap the well while the relief well  
17 was being completed.  
18 Q. Okay. So operating well in  
19 terms of collection of the pollution for you  
20 meant something 80 to 90 percent?  
21 A. Well, once again, it would be a  
22 joint decision. We would have to evaluate  
23 and say what did we think we could deal with,  
24 what residual amount that we're not capturing  
25 could we actually physically deal with.  
00024:01 Q. Okay. On May 12th --  
02 A. Yes.  
03 Q. -- when you wrote this letter,  
04 what was the understanding of the amount of  
05 hydrocarbons that could be captured via the  
06 planned top hat or flow-back system?  
07 A. We -- we thought that it would  
08 be just about what it turned out to be,  
09 that -- that -- somewhere in the vicinity of  
10 25,000 barrels of oil equivalent per day and  
11 some, say, 50 million cubic feet of gas.  
12 Q. And was there an understanding  
13 or did you believe that that would be  
14 sufficient to operate well, as you used that  
15 term?  
16 A. Well, that would be speculation  
17 on my part. I was -- I was still looking  
18 forward to -- hoping that we would find  
19 another vessel that would increase the  
20 capacity for flow-back.  
21 Q. Okay. And if we go back up to  
22 hot tap real fast in your letter --  
23 A. Yes.  
24 Q. -- you say under 3, "In my

25 opinion, this will eventually be the  
00025:01 successful methodology for capture/recovery  
02 of blowout hydrocarbons."  
03 Did I read that right?  
04 A. Yes.  
05 Q. Okay. And so it was your  
06 opinion on May 14th that the hot tap was  
07 probably the best solution in terms of  
08 pollution collection in order to capture as  
09 much of the hydrocarbon as possible, correct?  
10 A. Right, correct.  
11 Q. Okay. And you still would have  
12 been --  
13 A. Combine -- com -- if I may,  
14 combined with the device that we'd put on the  
15 drill pipe on the end and we were collecting  
16 some 6- to 7,000 barrels per day there.  
17 Q. Okay. I thought -- my  
18 understanding of the hot tap is that you were  
19 going to crimp the riser behind the hot tap  
20 to force it up through the riser system to  
21 the processing vessel. Is that not right?  
22 A. Well, the -- the idea -- that  
23 that certainly was part of the consideration.  
24 However, no one knew what impact that would  
25 have on anything. So if we could use the  
00026:01 siphon or venturi tube effect, we would try  
02 that first --  
03 Q. Uh-huh.  
04 A. -- and then if that was not  
05 efficient or sufficient, then we would have  
06 to consider a crimp.  
07 Now, when you say a crimp, it  
08 doesn't mean total shutoff by crimping, it  
09 just means restricting the flow enough to  
10 increase the back pressure at the takeoff  
11 point. Sorry. I hope that makes sense.  
12 Q. No, it does.  
13 For -- going back to the capping  
14 BOP on BOP No. 5, you say, "We should -- that  
15 BP should only initiate this action in  
16 response to a change in the pollution capture  
17 system or circumstances that suggest a  
18 deteriorating situation with respect to the  
19 flow path, volumes emitted from the wellbore,  
20 change in the flow rate velocity from the  
21 wellbore."  
22 Did I read that right?  
23 A. Yet all of that takes into  
24 account if the top hat and the collection  
25 system are operating efficiently.  
00027:01 Q. Okay. So you didn't have any  
02 concerns at that point with the installation  
03 of a capping mechanism causing more problems  
04 than simply going with pollution collection



05 and the relief well?  
06 A. Sorry. You'll have to restate  
07 that one for me.  
08 Q. Okay. Yeah. Well, let me just  
09 withdraw it and get back to that point in a  
10 moment.  
11 If you look at the capping BOP  
12 on flex joint, which is the next option.  
13 A. Yes, sir.  
14 Q. You have -- that is actually  
15 what was ultimately done with the three ram  
16 capping stack, correct?  
17 A. Correct, yeah.  
18 Q. They attached that to the flex  
19 joint?  
20 A. Below the flex joint where the  
21 flex joint had been connected by flange.  
22 Q. Okay. And if you flip over the  
23 page, you'll see you make the same similar  
24 recommendations with regard to whether or not  
25 that should be a preferential methodology in  
00028:01 mid-May as compared to, say, the capping  
02 stack -- I'm sorry -- the BOP on BOP or -- or  
03 a collection. It's similar recommendations,  
04 right?  
05 A. Yes, they're similar  
06 recommendations.  
07 Q. Okay. If you flip over to page  
08 6 of your letter, after the bullet points or  
09 at least the -- the numbering, there's a  
10 first full paragraph there, it says, "Without  
11 the ability to gather important data  
12 resulting from diagnostic work prior to  
13 initiating a capping and/or kill attempt, BP  
14 can't determine with certainty that the  
15 capping and/or kill attempt won't worsen the  
16 flow rate situation."  
17 Was that your understanding as  
18 of mid-May?  
19 A. Yes, sir.  
20 Q. And going back to all of these  
21 options, you still considered that -- or  
22 still suggested that BP should continue to  
23 pursue the development of all of these  
24 different initiatives, correct?  
25 A. Absolutely.  
00029:01 Q. Oh, you mentioned the flange  
02 before having a -- a rating of 5,000 psi?  
03 A. The flex joint itself having a  
04 rating --  
05 Q. Right.  
06 -- of 5,000 psi.  
07 Q. Let me -- let me reask that the  
08 right way, then, because you're --  
09 A. Okay.

10 Q. -- you're right.  
11 You recall yesterday you were  
12 talking about the flex joint having a rating  
13 of 5,000 psi?  
14 A. Yes, sir.  
15 Q. Were you involved with the  
16 destructive testing that BP did to determine  
17 the actual capacity of the flex joint?  
18 A. I -- I was not involved in the  
19 process, no.  
20 Q. And you understand that they  
21 came to a higher psi rating through  
22 destructive testing --  
23 A. Yes.  
24 Q. -- than the rated testing?  
25 A. Yes.  
00030:01 Q. Do you recall what that was?  
02 A. I thought it was 7,500 psi.  
03 Q. Okay.  
04 A. Is that correct?  
05 Q. I think it was a little higher  
06 than that --  
07 A. Possibly --  
08 Q. -- but --  
09 A. -- yes.  
10 Q. -- the records will reflect  
11 that --  
12 A. Yeah.  
13 Q. -- correct?  
14 So as of mid-May if there had  
15 been a cap available or a BOP available,  
16 would you have recommended that BP proceed  
17 with a capping option at that point in time  
18 knowing what they knew about the wellbore?  
19 A. I'm -- I'm very sorry, but your  
20 question just can't be answered that simply.  
21 Q. Okay. Why not?  
22 A. If you're going to install a  
23 capping assembly and just simply shut it,  
24 there are a thousand variables that you don't  
25 know about the geometry of that wellbore and  
00031:01 the potential damage to it. The advantage of  
02 installing the capping assembly is that you  
03 would be able to shut it, the advantage over  
04 the top hat, if the top hat is operating at a  
05 high level of efficiency. Fair enough?  
06 Q. Sure.  
07 A. So if I don't intend to shut it,  
08 the -- the primary advantage of installing it  
09 just went away. Does -- does that make  
10 reasonable --  
11 Q. Sure.  
12 A. -- sense?  
13 Okay. So I -- I would like to  
14 get on the record and be clear about this

15 issue. Basically what we do is cap wells.  
16 Now, we cap them and divert them. We very  
17 often avoid a hard shut-in because of unknown  
18 circumstances downhole that we have not yet  
19 had the opportunity to do diagnostic work  
20 that would reveal the real circumstance or  
21 condition of those tubulars.  
22 So quite honestly, I'm telling  
23 you I don't give -- everybody says you don't  
24 know what it's flowing, you don't know how  
25 much it's making, you don't know this and  
00032:01 that. The truth is don't give a shit. What  
02 you see is what you get. So either you know  
03 how to install a capping assembly on that or  
04 you don't.  
05 Q. Uh-huh.  
06 A. Now, nobody's done it in  
07 5,000-foot water depth, so there are still  
08 things to be learned.  
09 What is my advantage to  
10 installing a capping assembly? None if the  
11 top hat and the collection system are working  
12 adequately. How much is it flowing? We  
13 don't know. Nobody knows. We're going to  
14 find out when we start flowing back to the  
15 HELIX 4000, when we start flowing back to  
16 ENTERPRISE, we'll start to learn more about  
17 what the total flow rate is.  
18 Other things that we need that  
19 could be done in the meantime is the  
20 installation of some sort of a gauge -- and I  
21 say a gauge, meaning that could be all sorts  
22 of different types of devices -- below the  
23 BOP stack, below the rams in the BOP stack,  
24 so that we can begin to learn something about  
25 what is the flowing pressure upstream --  
00033:01 upstream of the BOP stack.  
02 Q. Okay.  
03 A. Just a whole bunch of things  
04 like that, without knowing them, I actually  
05 stand a -- a greater chance of doing harm.  
06 You remember all the discussion  
07 about burst disks --  
08 Q. Uh-huh.  
09 A. -- about possibly ruptured  
10 casing, collapsed casing, parted casing, et  
11 cetera, et cetera? I have no way to do  
12 diagnostic work --  
13 Q. Okay.  
14 A. -- that will let me determine  
15 those things with certainty. So anything  
16 that I do to shut in a capping assembly I  
17 think is far too high a risk --  
18 Q. Okay.  
19 A. -- I think is -- that's --

20 that's what I'm expressing to Mark in this  
 21 letter.  
 22 Q. Okay. Well, I appreciate --  
 23 let's -- let's try to break that down a  
 24 little --  
 25 A. Yes, sir. Sorry.  
 00034:01 Q. -- a little bit.  
 02 So overall you're trying to  
 03 express to Mark Patteson that at this point  
 04 given what was known about the well and the  
 05 wellbore that the risks were too high with  
 06 going with a capping option; is that right?  
 07 A. If your intention is to shut the  
 08 well in.  
 09 Q. Okay. And if your intention is  
 10 to use it to divert the flow, you'll need  
 11 surface processing vessels in order to handle  
 12 that flow, correct?  
 13 A. Right.  
 14 Q. And at that point in time in  
 15 mid-May, such processing vessels didn't exist  
 16 anywhere --  
 17 A. Right.  
 18 Q. -- in the world, did they?  
 19 A. Right. Not available.  
 20 Q. Right. You go on in -- in your  
 21 letter, if we -- we go back to Exhibit 3922,  
 22 on the bottom of page 6, you say, "No one  
 23 wants to wait for a relief well intercept,  
 24 but quite often there's no acceptably  
 25 low-risk alternative," correct?  
 00035:01 A. Why didn't I think of just  
 02 saying that a minute ago.  
 03 Q. But that's -- that's my point --  
 04 A. Yes, sir, yeah.  
 05 Q. -- that -- that is essentially  
 06 what you're getting at here. It introduces  
 07 the capping element in mid-May --  
 08 A. Right.  
 09 Q. -- without knowing the flow  
 10 rate, without doing the flow capture that  
 11 they did with the top hat --  
 12 A. Right, exactly.  
 13 Q. -- and the Q-4000, didn't  
 14 know -- BP, others, didn't know what kind of  
 15 risk the cap might cause --  
 16 A. That's correct.  
 17 Q. -- if they were to use it to  
 18 shut in the well in mid-May?  
 19 A. That's correct.

Page 36:14 to 40:16

00036:14 you sent with copies to Mark -- Mark  
 15 Mazzella, Admiral Allen, and Admiral Cook

16 regarding your concerns about the proposed  
17 static kill operation, correct?

18 A. Yes, sir.

19 Q. And in the first paragraph here,  
20 you run through your background and some of  
21 the work that you and Wild Well Control had  
22 been doing as part of the response, correct?

23 A. Yes, sir.

24 Q. Can you read that second  
25 paragraph into the record, please?

00037:01 A. The second paragraph?

02 Q. Yep.

03 A. "I wasn't privy to the  
04 discussions surrounding the decision to  
05 select a bullhead kill, as opposed to the  
06 relief well bottom kill. There are no doubt  
07 issues about which I am not fully informed.  
08 The purpose of this memo is to convey my  
09 personal experience and Wild Well Control's  
10 experience concerning the technology rather  
11 than the smallest details. . .

12 Q. Okay. And is it fair to say,  
13 then, that you wrote this letter not based on  
14 your personal knowledge of the specific  
15 factors of Macondo or --

16 A. Yeah.

17 Q. -- all of the available specific  
18 factors of the Macondo but based on your  
19 prior experience, correct?

20 A. Right.

21 Q. And you weren't embedded as part  
22 of the static kill team, right?

23 A. No, that's correct.

24 Q. Okay. But there were Wild Well  
25 Control employees that were on the static  
00038:01 kill team; is that right?

02 A. Yes, there were.

03 Q. Okay. At the time of your --  
04 that you wrote this letter, do you know if  
05 they shared your concerns that you expressed?

06 A. Yes, some did. Perhaps I could  
07 say the majority did.

08 Q. Okay. But there were some  
09 within Wild Well that wasn't as concerned  
10 about this as you were?

11 A. They were pretty happy with it.

12 Q. Okay. At the time of the  
13 letter, do you know if those folks from Wild  
14 Well Control who were embedded in the project  
15 had expressed any of these concerns to the  
16 team, the overall team, so that they could  
17 deal with them as part of planning for the  
18 operation?

19 A. I know that David Barnett had  
20 expressed some of the same issues that I

21 raise here.

22 Q. Okay. You raise an interesting

23 point, because it sounds like some of the

24 Wild Well Control team was fine with moving

25 forward with static kill and some had

00039:01 concerns. Is that fair?

02 A. Yes, sir.

03 Q. Okay. And wouldn't call it --

04 would you call that a disagreement?

05 A. No, no, I call it a difference

06 of -- of opinion and a difference of how they

07 view some of the factual data that's been

08 accumulated which, of course, has taken place

09 over time.

10 Q. Okay. And sort of stepping back

11 from just Wild Well, would you agree that in

12 the -- the course of a large response like

13 this, there are going to be, as you would

14 say, differences of opinion on how to

15 interpret the data that's been provided?

16 A. Many, many, many, yes.

17 Q. Okay. And -- and by pursuing

18 one action that some of the group thinks

19 based on their interpretation is the right

20 course, that's not a reckless way to handle

21 the response, is it?

22 MR. HASSINGER:

23 Objection.

24 MR. CUNNINGHAM:

25 Object to the form.

00040:01 EXAMINATION BY MR. OCCHUIZZO:

02 Q. You can answer the question.

03 A. It -- no. In other words, fully

04 evaluating all of the options is part of your

05 responsibility.

06 Q. And so even though there may be

07 some that disagree with the particular

08 approach, that doesn't mean there was --

09 someone was acting irresponsibly by going

10 that direction if there are some facts and

11 data that support their opinion as well?

12 MR. HASSINGER:

13 Objection.

14 A. It's -- it kind of would be

15 conjecture on my part, but in the general

16 sense, I would agree with your statement.

Page 41:15 to 48:25

00041:15 Q. Okay. Now, if you flip over to

16 the second page of 3908, numbered Paragraph 3

17 talks about why you support a dynamic or

18 circulated bottom kill -- type kill from the

19 relief well, correct?

20 A. I think I skipped a page.

21 Sorry.  
22 Yes, sir.  
23 Q. All right.  
24 A. Yes, sir.  
25 Q. Okay. And one of the issues or  
00042:01 one of the reasons that you were favoring a  
02 bottom kill is because at that time, in your  
03 opinion, we weren't sure what the flow path  
04 was up the wellbore and out the top of the --  
05 the BOP stack, correct?  
06 A. Yes, sir.  
07 Q. Okay. And if you -- if you look  
08 at what you said, can you just read into the  
09 record after the -- under Paragraph 3 under  
10 the dark bullets that you see the two light  
11 ones, if you could read those first two  
12 starting with "if flowing outside the  
13 casing."  
14 A. "If flowing outside the casing,  
15 what has happened to the open hole gauge of  
16 the wellbore along its length. Is the casing  
17 burst, collapsed, split, parted? No one  
18 knows and, moreover, no one could know at  
19 what elevation that damage exists. . .  
20 Q. Is it fair to say that at this  
21 point in time there was no way to know what  
22 the flow path was of the well?  
23 A. Correct.  
24 Q. Okay. Are you aware that during  
25 the static kill they pumped mud down the  
00043:01 casing in order to determine, in part, the  
02 flow path, correct?  
03 A. Yes.  
04 Q. Okay. And are you aware that it  
05 was BP's opinion that the flow path was down  
06 the casing?  
07 A. Yes.  
08 Q. And did Wild Well Control share  
09 that opinion based on the data collected from  
10 the static kill pumping?  
11 A. Well, based on the data  
12 collected from the static kill pumping, yes.  
13 Based on what was known prior to shutting the  
14 well in, no.  
15 Q. And one of the reasons why you  
16 always wanted to keep in mind that there  
17 might be annular flow is that that would  
18 include the worst-case scenario of bringing  
19 in to play the burst disks?  
20 A. Yes, sir.  
21 Q. So -- correct?  
22 A. Yes, sir.  
23 Q. So any of the options considered  
24 prior to static kill, if you will, had to  
25 take into account these burst disks because

00044:01 of the possibility of annular flow, right?  
02 A. Correct.  
03 Q. Okay. And so when we see these  
04 assumptions -- I think you saw in an earlier  
05 document we're going to assume an annular  
06 flow -- that was because annular flow was the  
07 worst-case scenario that needed to be planned  
08 for in terms of flow path; is that right?  
09 A. Correct.  
10 Q. Now, what happened in response  
11 to this letter; do you recall?  
12 A. Both Richard Lynch and  
13 Mark Mazzella called and asked if we could  
14 arrange for a meeting at BP's office the  
15 following day.  
16 Q. Okay. And did you attend a  
17 meeting --  
18 A. I did.  
19 Q. -- the following day?  
20 A. Yes.  
21 Q. And what happened at that  
22 meeting?  
23 A. There was a review of data and a  
24 review of certain of the commentary that I  
25 made in this letter. And so, as I recall, it  
00045:01 was about a two-hour meeting.  
02 Q. Was it just BP or were there  
03 other folks there?  
04 A. There were other folks there.  
05 Q. Who -- who else was at the  
06 meeting, if you recall?  
07 A. Representatives of Admiral Allen  
08 from the Coast Guard, local regional  
09 representatives from the Coast Guard,  
10 Paul Tooms, Richard Lynch, Mark Mazzella, and  
11 I believe one other gentleman from BP, but he  
12 may not have been an employee. He might have  
13 been a contract person. And I'm trying to  
14 recall who else. There -- there was someone  
15 else, but I don't recall who.  
16 Q. Do you recall anybody from  
17 the -- from the national labs from the  
18 federal Science Team?  
19 A. There was one person, yes.  
20 Q. Okay. Who's Doug Blankenship,  
21 if you recall?  
22 A. I -- I don't -- I know the name,  
23 but I couldn't tell you what -- what his role  
24 was.  
25 Q. Okay. Do you recall drafting a  
00046:01 summary of that meeting?  
02 A. Yeah.  
03 Q. Okay. Based on that meeting,  
04 were you made aware of data that you did not  
05 know at the time that you wrote your letter



06 on July 28th?  
07 A. Some.  
08 Q. Some?  
09 What did you learn that was new?  
10 A. There was great discussion. And  
11 it -- it was -- it was clear to me that  
12 Paul Tooms, manager of engineering -- a  
13 brilliant guy, by the way -- was -- was sold  
14 on certain notions, if you -- I'm going to  
15 call it a notion. I'm not going to call it a  
16 fact -- that -- that he relayed to me and  
17 explained that Well, that's where you're  
18 wrong, and you just simply didn't have  
19 benefit of all of the known data.  
20 Q. Okay.  
21 A. Okay? And to be sure, Mr. Lynch  
22 and Mr. Tooms said to me at that meeting, You  
23 are welcome here at any time, and you are  
24 welcome here at all times, and if there is  
25 something you wish to know, just ask and  
00047:01 we'll let you know that.  
02 Q. Okay. So -- so BP appreciated  
03 your opinions and thoughts and experience --  
04 A. Yes.  
05 Q. -- as it relates to this  
06 project, correct?  
07 A. Yeah.  
08 Q. And they brought you in and  
09 attempted to provide you with additional  
10 information they had that they thought you  
11 might not have in order to help inform your  
12 opinion, correct?  
13 A. Correct.  
14 Q. At the conclusion of that  
15 meeting, what was your -- did that change  
16 your opinion at all with regard to whether or  
17 not static kill was a less risk -- risky  
18 operation at that point?  
19 A. They did -- they did not really  
20 alter my position much. The -- the -- the  
21 one thing that could not be known was if you  
22 shut the well in, what is the instant shut-in  
23 pressure going to be? And so that was still  
24 a matter of conjecture. The reservoir folks  
25 did lots and lots of work, very hard work,  
00048:01 very good work in trying to determine the  
02 near wellbore drawdown and what one  
03 anticipated that the shut-in pressure would  
04 be.  
05 Q. Okay. All right.  
06 A. But you follow me? There's a  
07 difference between that and a fact.  
08 Q. Right. They had -- BP and  
09 others on the Science Team had certain  
10 interpretations or understanding of the

11 data --  
 12 A. Right.  
 13 Q. -- that was somewhat different  
 14 than your understanding --  
 15 A. Correct.  
 16 Q. -- of the data, correct?  
 17 And that didn't mean that one  
 18 was perfectly correct and the other one was  
 19 perfectly wrong.  
 20 A. Absolutely not.  
 21 Q. This was interpretation in a bit  
 22 of gray area, correct?  
 23 A. (Moving head up and down.)  
 24 Q. And, ultimately, the static kill  
 25 was successful?

Page 49:06 to 51:16

00049:06 As you sit here today in your  
 07 capacity as Wild Well Control's  
 08 representative, would you agree that  
 09 Wild Well has done no independent  
 10 investigation of the cause of the Macondo  
 11 incident?  
 12 A. None whatsoever.  
 13 Q. Okay. Is it fair to say that  
 14 Wild Well Control and you have not formed any  
 15 independent opinion as to who was at fault  
 16 for the incident?  
 17 A. No, not at all.  
 18 Q. Okay. And would you agree, as  
 19 you sit here today, that Wild Well Control  
 20 has no independent evidence or opinion that  
 21 BP acted recklessly or with gross negligence  
 22 leading up to the incident?  
 23 MR. VON STERNBERG:  
 24 Object to the form of the  
 25 question.  
 00050:01 MR. CUNNINGHAM:  
 02 Object to the form.  
 03 A. No, I have no knowledge of  
 04 anything like that.  
 05 EXAMINATION BY MR. OCCHUIZZO:  
 06 Q. Okay. As you sit here today as  
 07 a representative of Wild Well Control, would  
 08 you agree that Wild Well Control has no  
 09 incident evidence or opinion that BP acted  
 10 recklessly or with gross negligence in how  
 11 they conducted the response operations?  
 12 MR. CUNNINGHAM:  
 13 Object to the form.  
 14 MR. VON STERNBERG:  
 15 Object to form.  
 16 MS. PATTY:  
 17 Object to form.

18 A. No.  
 19 EXAMINATION BY MR. OCCHUIZZO:  
 20 Q. Okay. Would you agree that  
 21 Wild Well Control put forth its best efforts  
 22 to support BP during the response?  
 23 A. Absolutely.  
 24 Q. Is it your opinion that BP put  
 25 forth its best efforts during the course of  
 00051:01 the response?  
 02 MR. HASSINGER:  
 03 Object to the form.  
 04 MR. CUNNINGHAM:  
 05 Object to the form.  
 06 MS. PATTY:  
 07 Object to form.  
 08 A. Yes.  
 09 EXAMINATION BY MR. OCCHUIZZO:  
 10 Q. Would you agree with me that  
 11 Wild Well Control has no formal opinion as to  
 12 what the flow rate was at any point during  
 13 the course of the response?  
 14 MS. PATTY:  
 15 Object to the form.  
 16 A. It's all conjecture.

Page 52:08 to 52:09

00052:08 mentioned, my name is Kate Easterling, and I  
 09 represent Transocean along with Amy Jaasma.

Page 55:17 to 55:22

00055:17 Q. Okay. And did you have any  
 18 disagreements with the findings of, say, the  
 19 Bly report?  
 20 A. There -- there is not anything  
 21 that sticks out to me as, say, to be a  
 22 disagreement.

Page 58:14 to 65:05

00058:14 Q. Okay. I wanted to clear  
 15 something up because I was a little confused  
 16 yesterday. I -- there was discussion of a  
 17 master service agreement that used to exist  
 18 between Wild Well Control and BP. And from  
 19 what I gather, it no longer exists; is that  
 20 correct?  
 21 A. I believe that it does exist.  
 22 Q. Okay.  
 23 A. It's just that there was a  
 24 parallel effort going on to create an even  
 25 broader umbrella between Superior Energy

00059:01 Services and all of their product service  
02 lines and BP. That was BP's wish.  
03 It was complicated by the fact  
04 that Wild Well's business doesn't exactly fit  
05 the traditional model when it comes to  
06 certain liability issues, pollution, and  
07 things of that nature.  
08 So I -- I must say I should have  
09 inquired yesterday, but I didn't, to see if  
10 it had ever been concluded.  
11 Q. Okay. So you don't know for  
12 sure whether or not there is a master service  
13 agreement between Wild Well Control and BP;  
14 is that right?  
15 MS. MINCE:  
16 Object to --  
17 A. I know --  
18 MS. MINCE:  
19 -- the form.  
20 UNIDENTIFIED COUNSEL:  
21 Objection, form.  
22 A. -- there is one between  
23 Wild Well and BP.  
24 EXAMINATION BY MS. EASTERLING:  
25 Q. Okay. Just not --  
00060:01 A. But I --  
02 Q. -- just not --  
03 A. -- don't know if it --  
04 THE REPORTER:  
05 One at a time, please.  
06 THE WITNESS:  
07 Sorry.  
08 EXAMINATION BY MS. EASTERLING:  
09 Q. Go ahead.  
10 A. What I don't know is if it is by  
11 now been supplanted by the overall agreement  
12 with Superior.  
13 Q. Okay. Got it. Thank you.  
14 Under the master service  
15 agreement that you are familiar with between  
16 Wild Well and BP, what type of services are  
17 provided for -- are -- that are supposed to  
18 be provided by Wild Well to BP?  
19 A. Well, there are -- sort of split  
20 into two categories --  
21 Q. Okay.  
22 A. -- if you will. And one is what  
23 you would call an emergency response work,  
24 and the other is what we would call peacetime  
25 work.  
00061:01 Q. Okay. And let's talk about  
02 emergency response work. What do you mean by  
03 that?  
04 A. Emergency response work would  
05 include a very long list of engineering

06 services, for example, and it goes beyond  
07 that to say could be conducted from our  
08 facility, from the customer's facility, from  
09 the rig site, et cetera.  
10 Then there are certain hands-on  
11 services, so-called well control services.  
12 It could be firefighting --  
13 Q. Okay.  
14 A. -- in conjunction with well  
15 capping, well diversion, any number of events  
16 that typically fall under the classification  
17 of well control operations.  
18 Q. And the other type of service,  
19 you said it was peacetime services --  
20 A. Yes.  
21 Q. -- is that what you called it?  
22 A. Yes.  
23 Q. Okay. Can you describe what  
24 those are?  
25 A. They have nothing to do with a  
00062:01 specific event.  
02 Q. Okay.  
03 A. They have to do with work that  
04 is being performed at the customer's request  
05 that you and I would probably describe as  
06 routine.  
07 Q. Do those services include things  
08 such as training?  
09 A. Yes.  
10 Q. Does it also include things such  
11 as kick detection or kick prevention?  
12 A. Those -- those would be issues  
13 that would come under training --  
14 Q. Okay.  
15 A. -- and/or just through  
16 discussion with our staff.  
17 Q. And you mentioned that you would  
18 describe those services as routine. What is  
19 the routine of that training? Is it provided  
20 monthly, annually?  
21 A. There is only one regulatory  
22 requirement with respect to well control, and  
23 that is that people who have certain defined  
24 responsibilities have to have well control  
25 training, accredited -- by an accredited  
00063:01 professional trainer.  
02 Q. Who are those people with those  
03 certain defined responsibilities?  
04 MR. OCCHUIZZO:  
05 Object to form.  
06 A. Who -- who are they? Oh, well,  
07 if you work offshore -- if I tell you, I'm  
08 going to tell you wrong, I'm sure.  
09 But if you were a driller or a  
10 toolpusher, a rig manager, there are lots of

11 terminologies for once you get up to a  
 12 significant management level and so on.  
 13 But if you have well control  
 14 responsibilities for your employer, you have  
 15 to undergo this training. It goes once every  
 16 two years, and on the off year, there is a  
 17 refresher.

18 EXAMINATION BY MS. EASTERLING:

19 Q. Okay. And with regard to the  
 20 Macondo, you -- Wild Well Control was  
 21 providing this training to BP employees; is  
 22 that right?

23 MR. OCCHUIZZO:

24 Object to form.

25 A. To be really specific, I can't  
 00064:01 answer that, because a -- a group from BP  
 02 would come very often for a class, and it  
 03 might have people from western Siberia --  
 04 EXAMINATION BY MS. EASTERLING:

05 Q. Okay.

06 A. -- from Angola, from China, from  
 07 the US Gulf of Mexico. I -- I would have to  
 08 consult records to see who -- who was  
 09 involved.

10 In any case, it is most unlikely  
 11 for that level of certification that anyone  
 12 would focus upon something as narrow as, say,  
 13 Macondo or, for that matter, even a deepwater  
 14 Gulf of Mexico operation.

15 Q. You talked about yesterday a  
 16 four-day classroom training that Wild Well  
 17 Control provides. Do --

18 A. Yes.

19 Q. -- you remember that?

20 A. Yes.

21 Q. And you mentioned that there  
 22 were some simulations that Wild Well can  
 23 provide to an operator that are built  
 24 specifically for a project. Do you remember  
 25 discussing that?

00065:01 A. It can be customized to fit  
 02 any -- any requirement for a project.

03 Q. Has Wild Well Control done such  
 04 a specific simulation for the Macondo well?

05 A. The short answer is no.

Page 66:02 to 67:12

00066:02 Q. Has Wild Well Control been  
 03 consulted by BP to help write other manuals?

04 A. Could I -- could I, first of  
 05 all, say that, you know, nothing's easy  
 06 anymore. BP is not just BP. BP UK, for  
 07 example, for the North Sea who operate under  
 08 what is known as the safety case for each

09 well --  
10 Q. Uh-huh.  
11 A. -- they -- they have certain  
12 requirements that they have to include in  
13 their -- for example, their emergency  
14 response manual, their this, their --  
15 their -- they had a well control manual, all  
16 of those things.  
17 Q. Well, let's talk about in  
18 particular manuals that would -- would apply  
19 to the Gulf of Mexico deepwater operations.  
20 A. I would -- I would have to  
21 consult our -- our engineering records to see  
22 if or what level we would have participated  
23 in any of those. I -- I do not know the  
24 answer.  
25 Q. Okay. Is that a service that  
00067:01 Wild Well Control does provide to companies,  
02 they can help draft those kind of --  
03 A. Oh, yes.  
04 Q. -- recommended practices?  
05 A. Yes.  
06 Q. Okay. When it comes to response  
07 to well control events, does Wild Well  
08 Control recommend to operators that they  
09 document or report while -- well control  
10 events so that they can learn lessons from  
11 them in the future?  
12 A. Certainly.

Page 67:14 to 69:02

00067:14 yesterday -- you were asked whether or not BP  
15 had reacted or responded reasonably to the  
16 March 8th kick, and I believe your response  
17 was that -- that they kept with industry  
18 standards in response to the March 8th kick.  
19 Do you remember that?  
20 A. Well, I don't know if industry  
21 standard would be the terminology. But --  
22 but, yes.  
23 Q. Okay. Do you know whether or  
24 not BP kept with their own standard  
25 practices?  
00068:01 A. I do not.  
02 Q. Okay. So you're just not  
03 familiar with what their --  
04 A. We -- we had no role prior to  
05 the incident occurring.  
06 Q. But after the March 8th  
07 incident, do you know whether or not BP  
08 responded in accordance with their own  
09 drilling and wells operation recommended  
10 practices?  
11 A. I do not know.

12 Q. And that's because you're not  
 13 familiar with BP's drilling and wells  
 14 operation practices; is that right?  
 15 A. That's right.  
 16 Q. After the March 8, 2010 kick,  
 17 did BP ask Wild Well Control to help them in  
 18 drafting a lessons learned document?  
 19 A. Not that I recall.  
 20 Q. Okay. And so you're not aware  
 21 of any input that Wild Well Control had into  
 22 a document created by BP after the March 8th  
 23 kick; is that right?  
 24 MR. OCCHUIZZO:  
 25 Objection to form.  
 00069:01 A. I -- I would have no knowledge  
 02 of it.

Page 69:10 to 74:13

00069:10 Q. Okay. And you mentioned that  
 11 you had attended a meeting with Mr. Sims, and  
 12 it was not related to the Macondo?  
 13 A. Right.  
 14 Q. What was that meeting related  
 15 to?  
 16 A. I'm sorry. I can't -- I can't  
 17 recall.  
 18 Q. Okay.  
 19 A. It was not unusual that -- if  
 20 you want to call it a focus group or a task  
 21 force or a response team would be called to  
 22 BP's office to discuss an issue.  
 23 Q. Okay.  
 24 A. The issue might just go away or  
 25 it might become more of an issue.  
 00070:01 Q. Were these issues generally  
 02 things like a kick or a well-control event  
 03 that --  
 04 A. Something well control related.  
 05 Q. Related?  
 06 A. Yes.  
 07 Q. Okay. Could it have been just  
 08 training or would it have been an actual  
 09 event?  
 10 A. No. Those meetings would have  
 11 been about either an event or -- or the  
 12 potential for an event or perhaps how to  
 13 mitigate the potential for an event. I -- I  
 14 couldn't tell you specifically.  
 15 Q. Okay. And you mentioned  
 16 meetings about mitigating the potential for  
 17 an event. Those are the type of services  
 18 that Wild Well does provide to BP?  
 19 A. Part of the services, yes.  
 20 Q. When, in general, or if you can



21 think of specific instances, that would be  
22 good, too. But when does BP usually ask  
23 Wild Well to come over and help mitigate the  
24 potential for an event?  
25 MR. OCCHUIZZO:  
00071:01 Object to form.  
02 A. When they want us to.  
03 EXAMINATION BY MS. EASTERLING:  
04 Q. Okay. Are there any particular  
05 risk factors that they look at or is it  
06 the -- you know, being designated a critical  
07 well, those are the instances where they  
08 really make sure to get you guys involved?  
09 MR. OCCHUIZZO:  
10 Objection to form.  
11 A. It would -- it would just be  
12 conjecture on my part --  
13 EXAMINATION BY MS. EASTERLING:  
14 Q. Okay.  
15 A. -- what the -- what the basis --  
16 internal basis is for BP.  
17 Q. All you know is that you get a  
18 call from --  
19 A. Yes.  
20 Q. -- BP saying come over --  
21 A. Yes.  
22 Q. -- and we need your help; is  
23 that right?  
24 A. Right.  
25 Q. Okay. Do you remember when the  
00072:01 meeting with Mr. Sims was in relation to the  
02 Macondo blowout?  
03 A. I -- I don't. It would just  
04 have been in the incident command center  
05 and --  
06 Q. Was it before the blowout?  
07 A. No.  
08 Q. Okay. It was after the blowout?  
09 A. Yes.  
10 You mentioned that some  
11 of the training that Wild Well Control  
12 provides touches on selecting BOP  
13 configurations for specific well  
14 applications. Do you remember testifying  
15 about that yesterday?  
16 A. Yes.  
17 Q. Okay. The operator is the one  
18 that selects the BOP configuration; is that  
19 correct?  
20 MR. OCCHUIZZO:  
21 Objection to form.  
22 A. I'm not sure that you could ever  
23 just simplify it to that point.  
24 EXAMINATION BY MS. EASTERLING:  
25 Q. Okay.

00073:01 A. The -- the configuration has to  
 02 do, I would think, with a collaborative  
 03 effort between the rig owner and the  
 04 operator, because the rig owner might be  
 05 aware of certain operations that will have to  
 06 take place perhaps related to testing, other  
 07 things.  
 08 Q. And those particular operations  
 09 that they might become aware of, that's based  
 10 on information or data or well specifications  
 11 provided by the operator; is that right?  
 12 MR. OCCHUIZZO:  
 13 Objection to form.  
 14 A. I would -- I would not be able  
 15 to say with any certainty that it all comes  
 16 from the operator.  
 17 EXAMINATION BY MS. EASTERLING:  
 18 Q. Okay.  
 19 A. The -- the rig owner may have  
 20 their own internal rules that one is not  
 21 allowed to violate.  
 22 Q. You would agree that the  
 23 operator is the party that's in the position  
 24 to make the final decision of which BOP  
 25 configuration is selected; is that right?  
 00074:01 MR. OCCHUIZZO:  
 02 Objection to form.  
 03 A. With respect to a  
 04 drilling-related operation or a well-control  
 05 operation, yes.  
 06 EXAMINATION BY MS. EASTERLING:  
 07 Q. Yes. Okay.  
 08 A. I'm sorry. I just have to say  
 09 that even with respect to a well-control  
 10 operation, the far greater likelihood is that  
 11 it's a collaborative effort.  
 12 Q. Okay.  
 13 A. Okay.

Page 74:24 to 75:04

00074:24 Q. Yes. And I apologize. I'm also  
 25 referring to the March 8, 2010 kick modeling  
 00075:01 that was performed by Wild Well Control.  
 02 A. Oh, the March 8th. Okay.  
 03 Q. Did -- did Wild Well Control  
 04 provide those modeling results to BP?

Page 76:11 to 83:01

00076:11 Q. So you let him know that these  
 12 results are available --  
 13 A. Right.  
 14 Q. -- and here's how to obtain

15 those results?  
16 A. Right.  
17 Q. Okay. And do you know one way  
18 or the other whether that was done?  
19 A. I do know it was done.  
20 Q. Okay. Are there any services  
21 that Wild Well Control offers to an operator  
22 related to temporary abandonment procedures?  
23 A. Any services that we do?  
24 Q. Right, like planning services  
25 or --  
00077:01 A. Sure.  
02 Q. Okay. And what type of services  
03 would be available to BP?  
04 A. Well, just as you said. We --  
05 we would assist them with planning --  
06 Q. Okay.  
07 A. -- a TA.  
08 Q. Okay.  
09 A. And -- and the TA -- the design  
10 of the temporary abandonment may be based  
11 upon future objectives.  
12 Q. Okay.  
13 A. Do they intend to reenter this  
14 wellbore, do they this, do they that. I  
15 mean, there is not like -- you can't just  
16 say, There's a little pro forma and you fill  
17 it out.  
18 Q. Right.  
19 A. Right.  
20 Q. You want to see what the plan is  
21 going forward to know how to best approach  
22 the temporary --  
23 A. Well, how to best help them.  
24 Q. Okay. Do you think that if Wild  
25 Well Control had participated in the planning  
00078:01 of this temporary abandonment procedure that  
02 this blowout could have been prevented?  
03 MR. OCCHUIZZO:  
04 Objection to form.  
05 A. I haven't any idea.  
06 EXAMINATION BY MS. EASTERLING:  
07 Q. Okay.  
08 A. It would just be conjecture.  
09 Q. Okay. You testified yesterday  
10 that the factors that help in preventing a  
11 blowout include things such as well planning,  
12 well execution, well design, well  
13 construction, and well integrity, right?  
14 A. Yes.  
15 Q. Did Wild Well Control review the  
16 well data in this case?  
17 MR. OCCHUIZZO:  
18 Object to form.  
19 A. You're referring to the Macondo

20 well?  
21 EXAMINATION BY MS. EASTERLING:  
22 Q. Correct.  
23 A. And you're referring to before  
24 the well was drilled?  
25 Q. I'm -- the data that was  
00079:01 available prior to the blowout.  
02 A. We -- we had -- we had no  
03 involvement that I'm aware of prior to the  
04 blowout -- I mean, other than what we had  
05 done in the -- March the 8th --  
06 Q. Right.  
07 A. -- the kick resolution.  
08 Q. But after the blowout occurred,  
09 did you look at the well data that was  
10 available prior to --  
11 A. Everything that was made  
12 available to us we looked at.  
13 Q. Okay. And did you review the  
14 well design?  
15 A. It was not a -- a function that  
16 we were requested to do. We -- the short  
17 answer is no.  
18 Q. Okay. So you don't have an  
19 opinion about whether or not there were any  
20 problems in the well design prior to the  
21 blowout?  
22 A. Are you -- are you asking me  
23 personally?  
24 Q. Yes.  
25 A. I would have said it's a rather  
00080:01 unusual design.  
02 Q. What do you mean by that?  
03 A. Well, goodness. It -- it is a  
04 design that -- and I'm not a well designer.  
05 Q. Okay.  
06 A. Okay? It's a design that has  
07 been assembled to accommodate certain  
08 limitations about the formations that will be  
09 encountered in the wellbore while drilling  
10 and while picking a cement seat and while  
11 cementing and so on, so on. Actually, the  
12 fact that it's -- that I would consider it to  
13 be unusual pretty much doesn't mean anything.  
14 Q. What about Wild Well Control?  
15 Did the company see any problems with the  
16 well design?  
17 MR. OCCHUIZZO:  
18 Object to form.  
19 A. You know, it's never as simple  
20 as the way you phrased it.  
21 EXAMINATION BY MS. EASTERLING:  
22 Q. Are you aware of anyone within  
23 Wild Well Control that saw problems with the  
24 well design?

25 MR. OCCHUIZZO:  
00081:01 Objection to form.  
02 A. Saw -- saw problems with it.  
03 I -- I'm just -- I'm just going to have to  
04 say I can't answer that. I don't --  
05 potentially.  
06 EXAMINATION BY MS. EASTERLING:  
07 Q. Okay.  
08 A. Potentially. But that would  
09 have to do with if and whether you tied  
10 certain strings back to the surface that were  
11 run as intermediate liners and so on.  
12 Q. Okay. Who --  
13 A. And so --  
14 Q. Who brought up those concerns?  
15 A. Well, all -- all of my well  
16 engineers.  
17 Q. Okay. So all of your well  
18 engineers had concerns about --  
19 A. The problem is --  
20 MR. OCCHUIZZO:  
21 Object to form.  
22 A. -- the concerns that they had  
23 are not the concerns that you're talking  
24 about.  
25 EXAMINATION BY MS. EASTERLING:  
00082:01 Q. Okay. Explain that.  
02 A. The concerns that they had were  
03 that the liner tieback -- a tieback of a  
04 liner is always a potential leak path.  
05 History says -- history says we've gone on a  
06 thousand jobs --  
07 Q. Right.  
08 A. -- and we have problems because  
09 the liner top leaked.  
10 So this is not something to  
11 indict BP about or anyone else specifically.  
12 It's just that this is perhaps a little bit  
13 cumbersome, and there -- just that there is  
14 potential for issues.  
15 Now, I'm talking about  
16 post-blowout. I'm -- I'm not talking about  
17 during the design phase of the well.  
18 Q. Okay.  
19 A. I'm saying now I have a wellbore  
20 with a lot of pressure on it, and I don't  
21 even know how much.  
22 Q. So you're talking about issues  
23 that arose while trying to plan the killing  
24 of the well or the relief efforts; is that  
25 right?  
00083:01 A. Or the shutoff of the well, yes.

00083:24 Q. I want to turn your attention to  
25 Exhibit 3908, and I believe it's right there  
00084:01 in front of you. And it's the letter that  
02 you wrote to Mr. Lynch.  
03 A. Yeah.  
04 Q. On page 2, down at No. 4, and it  
05 says, "What's wrong with this picture" -- are  
06 you -- are you with me?  
07 A. Yes.  
08 Q. If you go down in that section  
09 about halfway, you're -- you're talking about  
10 that "The kill team has established a max  
11 surface pump pressure of 8,000 psi during the  
12 bullhead kill."  
13 Did I read that correctly?  
14 A. Yes.  
15 Q. And if you go down a couple -- a  
16 couple of bullet points, you go on to say,  
17 "That's plus or minus 1,000 psi greater than  
18 the current shut-in pressure," and in  
19 parentheses it says, "and it's very  
20 convenient."  
21 What did you mean by that?  
22 A. 8,000 psi is still below the  
23 threshold of failure of numerous components  
24 in the wellbore. So -- I'm sorry. I could  
25 be sitting here, and I could just pick a  
00085:01 number. Based on what?  
02 Q. So was it your opinion when you  
03 wrote this letter that BP had just picked a  
04 number?  
05 A. Not necessarily BP.  
06 Q. Okay.  
07 A. All of the participants in the  
08 team that were making this assessment.  
09 Q. Okay. And -- and the assessment  
10 having to do with the relief efforts; is that  
11 right?  
12 A. This assessment had to do with  
13 the static kill --  
14 Q. Okay.  
15 A. -- which I called here the  
16 bullhead kill. I don't know where somebody  
17 came up with static kill.  
18 Q. You go on to say, "The only  
19 rationale for the 8,000 psi max injection  
20 pressure is some derivative from reducing/  
21 down" -- "down rating the original casing  
22 performance values by some factor."  
23 What were you trying to  
24 communicate there?  
25 A. You don't think I said it?  
00086:01 Q. Well, just that you -- that they  
02 had picked a number -- everybody involved in  
03 the planning had just kind of picked a number

04 based on what the equipment could do, the  
 05 same thing?  
 06 MR. OCCHUIZZO:  
 07 Objection to form.  
 08 A. Yes.  
 09 EXAMINATION BY MS. EASTERLING:  
 10 Q. Okay. And the original casing  
 11 performance values.  
 12 Did you have some kind of  
 13 concern about whether that casing was  
 14 appropriate for the pressures that --  
 15 A. Not under normal circumstances.  
 16 Q. Okay.  
 17 A. There -- but there are all of  
 18 these things that we don't know about the  
 19 integrity of the burst disks, et cetera,  
 20 et cetera.

Page 88:08 to 89:13

00088:08 Q. Okay. Yesterday the BP attorney  
 09 read a couple of excerpts from the book that  
 10 you co-authored, the firefighting and blowout  
 11 control --  
 12 A. Yes.  
 13 Q. -- book?  
 14 A. Yes.  
 15 Q. I just wanted to go over one --  
 16 since he pointed out a few sentences within  
 17 this book, I wanted to look at page 4 with  
 18 you and -- oh, excuse me. And right there  
 19 above the bold print where it says "public  
 20 hazards," that last little paragraph --  
 21 A. Uh-huh.  
 22 Q. -- you see there?  
 23 A. Uh-huh.  
 24 Q. You would agree that it states,  
 25 "In the end the blowout will generally be  
 00089:01 regarded as the operator's problem regardless  
 02 of the cause since the operator is in control  
 03 of the well and is ultimately responsible for  
 04 specifying, directing, and implementing  
 05 almost all aspects of the drilling and  
 06 production of the well."  
 07 Did I read that correctly?  
 08 A. Yes, you did.  
 09 Q. And you still agree with that  
 10 statement; is that right?  
 11 A. As a general statement --  
 12 Q. Yes.  
 13 A. -- yes.

Page 91:25 to 93:07

00091:25 Q. Okay. If I understand what  
00092:01 you've told us already, Wild Well Control is  
02 a company that provides training and  
03 certification for people who work offshore in  
04 the oil and gas industry; is that correct?  
05 A. Actually offshore and onshore.  
06 Q. Okay. So you do onshore as  
07 well?  
08 A. Yes.  
09 Q. Okay. And you certainly provide  
10 those services for BP; is that correct?  
11 A. Yes, we do.  
12 Q. Okay. Now, you personally have  
13 been in the well control business for over 30  
14 years; is that right?  
15 A. Yes, sir.  
16 Q. Okay. Over a thousand wells  
17 you've helped contain?  
18 A. Yes, sir.  
19 Q. Okay. And worked on several  
20 others that you weren't personally involved  
21 in --  
22 A. Right.  
23 Q. -- but helped? Okay.  
24 You personally consider yourself  
25 an expert in well control?  
00093:01 A. I consider myself to be very  
02 knowledgeable.  
03 Q. Okay. And you said yesterday  
04 that others might talk behind your back and  
05 call you an expert, but you haven't really  
06 discussed it with them directly, is that  
07 right?

Page 93:11 to 93:12

00093:11 Discussed it with them directly.  
12 A. Yes, sir.

Page 93:14 to 98:15

00093:14 Q. Okay. Just so we're very clear  
15 in my mind and the judge's mind, you haven't  
16 formed any opinions about either the mud  
17 loggers or the cementing operators on board  
18 the vessel at the time of the incident or  
19 just before; is that correct?  
20 A. That's correct.  
21 Q. Now, Wild Well Control -- or you  
22 actually through Superior Energy Services  
23 control a company called CSI?  
24 A. That is correct.  
25 Q. And as I understand it, CSI did  
00094:01 do an investigation on behalf of BP in



02 reference to the cementing that occurred on  
03 board the vessel?  
04 A. They did.  
05 Q. Okay. You had no involvement in  
06 that whatsoever; is that right?  
07 A. No.  
08 Q. And the only information you've  
09 received about any cementing issues or mud  
10 logging issues would have been through the  
11 Chief Counsel's report that you read?  
12 A. That's correct.  
13 Q. Okay. You didn't have any  
14 discussions with any Halliburton or  
15 Sperry-Sun employees prior to the incident,  
16 obviously?  
17 A. No.  
18 Q. Okay. To your knowledge, did  
19 you have any discussions with Halliburton  
20 employees after the incident?  
21 A. No, not -- not about this.  
22 Q. Okay. And Wild Well Control,  
23 Inc., since you are the corporate  
24 representative, have made no conclusions as  
25 to what caused the incident whatsoever?  
00095:01 A. No.  
02 Q. Okay. Now, let's talk a little  
03 bit more specifically about the training  
04 schools that you provide. As I understand  
05 it, you've got the standard school that  
06 everybody takes; is that right?  
07 A. Correct.  
08 Q. And then you can create specific  
09 schools if someone asks you for a specific  
10 issue to be discussed?  
11 A. There is a second school which  
12 is accredited that is called Advanced Welcap,  
13 W-e-l-c-a-p.  
14 Q. Okay.  
15 A. And -- and that's a trademark of  
16 International Association of Drilling  
17 Contractors.  
18 Q. Okay.  
19 A. And so there is the basic  
20 course, and then there is the advanced course  
21 that are fully accredited.  
22 Q. Okay.  
23 A. After that we create specialty  
24 schools based on the requirements and/or  
25 wishes of the customers.  
00096:01 Q. Okay. So if I understand,  
02 the -- the first level of accredited classes  
03 is in reference to well control, correct?  
04 A. Yes.  
05 Q. Your second accredited class is  
06 Advanced Welcap, which would be something

07 beyond standard well control?  
08 A. That's correct.  
09 Q. Okay. Now, would the  
10 Advanced Welcap school have emergency  
11 procedures involved?  
12 A. Yes, it does discuss those --  
13 those --  
14 Q. Okay.  
15 A. -- issues, yes, as does the  
16 basic course.  
17 Q. Okay. Am I correct in assuming  
18 that well control takes into consideration  
19 the various barriers between the formation  
20 and the well? Just very --  
21 A. Yes, to some extent.  
22 Q. Okay. Do your classes discuss  
23 cementing in any form?  
24 A. No. I -- now, I should probably  
25 say in a very elementary form, we say there's  
00097:01 a long-way cement job, there's a balanced  
02 plug, there's a stage cementing, but we're  
03 not being specific about anything.  
04 Q. Okay. Do your well control  
05 classes discuss the various methods to  
06 determine if a cement job has been  
07 successful?  
08 A. To the -- to the extent that we  
09 have some language in there about that it is  
10 customary to try to determine to your  
11 satisfaction that you do have a cement job  
12 and that is generally accomplished by the use  
13 of a cement bond log, electric log run on  
14 wire, blah, blah, blah.  
15 Q. Okay. Can you describe a cement  
16 bond log a little more specifically?  
17 A. Oh, well --  
18 Q. I only have an hour and 15  
19 minutes.  
20 A. I'm sorry. It's -- it's not my  
21 area of specialty.  
22 Q. Right.  
23 A. But it is a tool which has bands  
24 that ride the casing wall and from which you  
25 emit, and I don't recall what sort of a wave  
00098:01 it is, but you are trying to determine any  
02 differences in the density of what resides  
03 outside the pipe.  
04 Q. Okay. And your class discusses  
05 cement bond logs as the method to determine  
06 whether or not the cementing has been  
07 successful?  
08 A. We do.  
09 Q. Okay. But your classes don't  
10 discuss issues of how to cement like whether  
11 or not you should do a full bottoms-up

12 circulation prior to cementing?  
 13 A. No. Well, I couldn't say that  
 14 they don't comment on that, but I don't think  
 15 that it's a written part of the curriculum.

Page 99:19 to 101:09

00099:19 questioning from counsel for Transocean, you  
 20 talked about the limitations of this  
 21 particular well, and you mentioned  
 22 difficulties in drilling. Can you describe  
 23 some of those issues --  
 24 A. Actually --  
 25 Q. -- more specifically?  
 00100:01 A. Actually, I was discussing  
 02 difficulties that might arise --  
 03 Q. Certainly.  
 04 A. -- as a result of the way that  
 05 the geometry of the well is. And, now, I  
 06 couldn't even tell you if it was planned as  
 07 it was done or whether it was done as it was  
 08 imposed upon the operator to meet certain  
 09 criteria.  
 10 Q. And one of those issues was the  
 11 pore pressure fracture margin of the well?  
 12 A. That's correct.  
 13 Q. Which made it difficult to pump  
 14 pressures down into the well as you might  
 15 fracture the formation?  
 16 MR. OCCHUIZZO:  
 17 Objection to form.  
 18 A. My -- my belief is that -- and  
 19 I'm just giving you an opinion because I do  
 20 not know about on the Macondo well. Where  
 21 one would be more worried about if well  
 22 pressure were to be imposed followed by pump  
 23 pressure because pump pressure is  
 24 controllable, and so well pressure may or may  
 25 not be controllable.  
 00101:01 EXAMINATION BY MR. VON STERNBERG:  
 02 Q. So sitting here today, you don't  
 03 know what limitations were placed upon the  
 04 cementing job, for instance, by the fact that  
 05 the pore pressure gradients were a difficult  
 06 problem at Macondo?  
 07 MR. OCCHUIZZO:  
 08 Objection to form.  
 09 A. I do not know.

Page 101:11 to 104:07

00101:11 Q. Let me show you a document that  
 12 I don't believe has been marked in the record  
 13 yet. It's Tab No. 7 on your radio dial.

14 (Exhibit No. 3923 marked for  
15 identification.)  
16 EXAMINATION BY MR. VON STERNBERG:  
17 Q. Okay. We've marked this for  
18 identification as Exhibit No. 3923.  
19 Do you recognize that document,  
20 sir?  
21 A. Daily operations report for 26  
22 April --  
23 Q. Okay.  
24 A. -- of 2010.  
25 Q. And this would have been a  
00102:01 document produced by your company, Wild Well  
02 Control; is that right?  
03 A. Yes.  
04 Q. If you'll go down to the 2145  
05 time frame, the last sentence says, "Require  
06 4,600 psi to shear the 6-5/8" drill pipe  
07 tube. . .  
08 Do you see that?  
09 A. Yeah, I see it, but it's got to  
10 be an error.  
11 Q. I was going to say, do you have  
12 any idea how they came up with that number?  
13 A. Well, I'm not so worried about  
14 the number as I am 6-5/8 drill pipe tube,  
15 because the 6-5/8, I believe, had all been  
16 recovered from the well.  
17 Q. Well, I was going to ask you  
18 that as well. At one point during the  
19 intervention, wasn't it believed that the  
20 6-5/8-inch drill pipe might have still been  
21 in the BOP?  
22 MR. OCCHUIZZO:  
23 Objection to form.  
24 A. At one point there was confusion  
25 about that issue.  
00103:01 EXAMINATION BY MR. VON STERNBERG:  
02 Q. Okay. And we now know that the  
03 5-1/2-inch drill pipe was actually in the --  
04 A. That's correct.  
05 Q. -- BOP?  
06 Now, 4,600 psi to shear,  
07 that's -- is that beyond the capabilities of  
08 that BOP that was out there?  
09 MR. OCCHUIZZO:  
10 Objection to form.  
11 A. It -- number one, they're not  
12 being fully descriptive here.  
13 EXAMINATION BY MR. VON STERNBERG:  
14 Q. Okay.  
15 A. Okay? They're not saying  
16 whether they're talking about the blind shear  
17 ram or the casing super shears.  
18 Q. Well, I'm -- I didn't read the

19 whole thing to you. It does say the blind  
 20 shear ram at the top --  
 21 A. Okay.  
 22 Q. -- using ROV.  
 23 A. Okay. And then -- I can't --  
 24 you know, it's -- 4,600 is not unreasonable  
 25 to apply to that BOP to shear the pipe if  
 00104:01 that's what's required.  
 02 Q. In this instance --  
 03 A. It's high.  
 04 Q. Yeah. In this instance the ROV  
 05 wasn't able to get to that high. That's  
 06 right.  
 07 A. That is correct, yeah.

Page 105:04 to 109:03

00105:04 So if I understand your  
 05 testimony from yesterday, Wild Well Control  
 06 was not asked to participate whatsoever in  
 07 reference to the design of the original  
 08 configuration of the BOP back in 1999 to 2001  
 09 when the vessel was designed and  
 10 commissioned; is that correct?  
 11 A. No, sir.  
 12 Q. Okay. So, yes, you -- it was a  
 13 bad question.  
 14 A. Okay.  
 15 Q. You did not participate --  
 16 A. We did not participate.  
 17 Q. Okay. But you did participate  
 18 in 2007 -- Wild Well Control, not you  
 19 personally -- in reference to a discussion as  
 20 to whether or not you could do a  
 21 bidirectional test ram; is that right?  
 22 A. Actually, I did participate in  
 23 it.  
 24 Q. You did?  
 25 A. Yes.  
 00106:01 Q. Okay. Well, that's -- that's an  
 02 interesting question, then.  
 03 Was that the only ram that was  
 04 discussed during the safety evaluation of the  
 05 BOP?  
 06 MR. OCCHUIZZO:  
 07 Objection to form.  
 08 A. No.  
 09 EXAMINATION BY MR. VON STERNBERG:  
 10 Q. Okay. What other rams were  
 11 discussed?  
 12 A. Well, in certain issues there  
 13 may be technical limitations, and for other  
 14 issues there may be operational limitations.  
 15 Q. Okay.  
 16 A. And in any case, you have a

17 70-ton BOP stack that is operated on a  
18 trolley on the rig that's already maxed out,  
19 and it already has no further head room. You  
20 can't -- you can't make your stack taller and  
21 still handle it.

22 Q. It can't go on the vessel  
23 because it would be too tall?

24 A. Yes.

25 Q. Okay.

00107:01 A. And you could wind up in the  
02 position where to recover a BOP stack you  
03 have to essentially do what's called a kill  
04 hauling operation, which is bring it up,  
05 pierce the water, air interface, take ahold  
06 of it with something else and bring it up  
07 there. So there -- so all of those things  
08 are limitations.

09 So when BP asked us to work --  
10 participate in a workshop to solve one issue,  
11 one problem, the problem was they  
12 continuously had difficulty with the variable  
13 bore rams wearing out and not holding and  
14 looking for alternatives. That's -- that's a  
15 whole thing in its own right about all of the  
16 participants who are in this workshop make a  
17 list of, you know, either what would you do  
18 or if you did that, what would be the problem  
19 with that or if so and so and so. And so  
20 then you have to remove the things that are  
21 problems that cannot be readily overcome or  
22 at least overcome, whether readily or not.

23 Then you have to say what are  
24 the technical difficulties about the  
25 implementation of what's being suggested.

00108:01 And then what are the risk factors. What  
02 happens. There's a very low probability of  
03 failure but a very high consequence if it  
04 does fail. The opposite is true, blah, blah,  
05 blah, blah, blah. And so you finally wind up  
06 with a matrix spreadsheet that would indicate  
07 to you what might be a suitable course of  
08 action.

09 Q. And, obviously, y'all produced a  
10 matrix such as that for BP --

11 A. We did.

12 Q. -- back in 2007?

13 A. We did. I believe Transocean  
14 was a participant also.

15 Q. Okay. Do you recall whether you  
16 saw it in preparation for this deposition?

17 A. I didn't want to look at it  
18 again. I didn't want to look at it the first  
19 time.

20 Q. I take it you don't recall  
21 seeing it, then. Because I haven't seen it.

22 I was just wondering if you knew if it was in  
 23 the records.  
 24 A. I believe it was in records that  
 25 were produced by Mr. Fred Ng and by myself as  
 00109:01 participants for Wild Well. But if you say  
 02 where'd it go and who's got it, I don't know  
 03 the answer to that --

Page 109:06 to 114:09

00109:06 Q. All right. I noticed also in a  
 07 document that was produced yesterday that  
 08 initially during the intervention you wanted  
 09 to assist in trying to figure out why the BOP  
 10 had what you called failed in sealing the  
 11 well; is that correct?  
 12 MR. NICHOLS:  
 13 Objection, form.  
 14 A. We -- we were -- Wild Well  
 15 was --  
 16 EXAMINATION BY MR. VON STERNBERG:  
 17 Q. Yes.  
 18 A. -- tasked by BP incident command  
 19 to participate in trying to find a solution.  
 20 At that time we were trying to find a  
 21 solution to still go ahead and make it  
 22 work --  
 23 Q. Okay.  
 24 A. -- make something work.  
 25 Q. Right. Okay.  
 00110:01 And in one of the letters that  
 02 you saw yesterday, you made the statement  
 03 that it's not unusual for debris to get  
 04 caught into a blind shear ram to keep it from  
 05 sealing. Do you recall that?  
 06 MR. OCCHUIZZO:  
 07 Objection to form.  
 08 A. I don't know if I said it in  
 09 exactly that way. If you want me to expand  
 10 on that, I will.  
 11 EXAMINATION BY MR. VON STERNBERG:  
 12 Q. You may.  
 13 A. You have a number of different  
 14 suppliers of blind shear ram BOPs, and all of  
 15 their designs are not identical. And there  
 16 are -- there is one school of thought that  
 17 says, I need to help myself -- the pipe will  
 18 very rarely ever be centered in and of its  
 19 own. It will generally be offset. Maybe not  
 20 fully offset but offset.  
 21 So I would like to do that which  
 22 would help me to centralize the pipe before  
 23 cutting it. If you look at a -- and then, of  
 24 course, there are a lot of different blind  
 25 shear ram designs.

00111:01 Q. And -- and let's talk about that  
02 for a moment. I want to step back just  
03 generally.  
04 You would agree with me,  
05 wouldn't you, that since 1999 deep-sea --  
06 ultra deep-sea drilling has gotten more  
07 demanding?  
08 A. Yes.  
09 Q. And one of the reasons it's more  
10 demanding is because they're going deeper and  
11 deeper, and that requires the pipe to be more  
12 robust and thicker; is that correct?  
13 MR. OCCHUIZZO:  
14 Objection to form.  
15 A. Generally speaking, as you go  
16 deeper you'll have to increase the tensile  
17 strength of the pipe.  
18 EXAMINATION BY MR. VON STERNBERG:  
19 Q. Exactly.  
20 Now, Wild Well wasn't asked to  
21 participate in the design of the BOP that was  
22 on this particular vessel. But considering  
23 what you know about ultra deep-sea drilling,  
24 would you not have chosen the blind shear ram  
25 that had the most capabilities of shearing  
00112:01 pipe if you were going to build that vessel?  
02 MR. OCCHUIZZO:  
03 Objection, form.  
04 A. If I were going to build that  
05 vessel? But you're speaking about what, 1999  
06 and 2000?  
07 EXAMINATION BY MR. VON STERNBERG:  
08 Q. Correct.  
09 A. It then becomes a matter of what  
10 was the state of the art at that time.  
11 Q. Exactly.  
12 A. Okay.  
13 Q. Now, if there was a BSR on --  
14 A. See, you know the answer. I  
15 understand.  
16 Q. If there was a BSR on the shelf  
17 at Cameron Ironworks that was better than the  
18 BSR they chose to put on that vessel,  
19 wouldn't you feel uncomfortable with not  
20 picking the best one?  
21 A. You -- you -- you would have to  
22 tell me better for what reason.  
23 Q. Okay. The evidence is that  
24 Cameron had available a double-V blind shear  
25 ram that had an upper and a lower V-shaped  
00113:01 cutting surface. The BSR they put on this  
02 particular BOP had an upper V and a lower  
03 block that was flat.  
04 A. Flat.  
05 Q. The testimony is that the



06 double-V centers more efficiently and cuts  
 07 more efficiently.  
 08 That's what I'm asking.  
 09 Wouldn't you rather have the double-V?  
 10 A. I would.  
 11 Q. Okay. Now --  
 12 A. However, I'm -- if you went back  
 13 just -- just to the point when it was being  
 14 manufactured -- it's -- it's never as easy as  
 15 one puts it. The -- the lower solid flat  
 16 block combined with the upper V had been used  
 17 for a considerable period of time. There was  
 18 a considerable body of data about its  
 19 efficiency, and there was a considerable body  
 20 of testing about its efficiency. And the  
 21 bodies of the blowout preventers had been  
 22 modified numerous times to put ever larger  
 23 boosters on them to enhance their ability,  
 24 where you went from Grade E pipe to Grade G  
 25 to S-135, et cetera, et cetera, larger pipes,  
 00114:01 so on and so on.  
 02 So it's -- your question is just  
 03 not quite as easy to answer as you put it.  
 04 Q. Okay. You mentioned boosters.  
 05 They also were available back in 1999.  
 06 Wouldn't you have put a booster on this BOP  
 07 if you were going to do ultra deep drilling?  
 08 A. It's a matter of conjecture on  
 09 my part.

Page 114:24 to 115:07

00114:24 Q. Okay. At the time that y'all  
 25 did your analysis of the BOP in 2007 -- and I  
 00115:01 know you were talking about the variable bore  
 02 rams -- did you discuss the blind shear rams  
 03 at all, to your knowledge?  
 04 A. There -- there was no -- no  
 05 issue with the adequacy of the blind shear  
 06 ram -- I mean, there was no issue raised by  
 07 either Transocean or BP.

Page 116:02 to 116:04

00116:02 Q. Morning, Mr. Campbell.  
 03 David Yamin for the Anadarko Petroleum  
 04 Corporation.

Page 116:10 to 118:02

00116:10 Q. You've talked a little bit about  
 11 the concept of a lessons learned analysis.  
 12 You've been asked a couple of questions, I

13 think, in reference to the March 8, 2010,  
14 kick.

15 I'm just curious as to what your  
16 understanding of a lessons learned analysis  
17 is in that kind of context. What do you have  
18 in mind when -- when you say "lessons  
19 learned"?

20 A. Well, in a general sense, it is  
21 what potentially might one have done  
22 differently that would have either mitigated,  
23 reduced, or eliminated the problem that --  
24 that ended up being the result.

25 Q. Okay. So it's -- would it be  
00117:01 fair to say that that kind of analysis has  
02 some sort of a retrospective and a  
03 prospective quality? I mean, you're looking  
04 to see retrospectively what went wrong?

05 A. Right.

06 Q. And then the benefit of that or  
07 the -- what you get out of it is  
08 prospectively you prevent it from happening  
09 again?

10 A. That's right, or -- or -- or  
11 you'll do a better job.

12 Q. Right.

13 A. Yeah.

14 Q. Do you think -- when it comes to  
15 well control and handling kicks, do you think  
16 these sort of lessons learned analyses are an  
17 important thing for an operator to be doing?

18 A. I do.

19 MR. OCCHUIZZO:

20 Objection to form.

21 EXAMINATION BY MR. YAMIN:

22 Q. Why is that?

23 A. It -- it has been demonstrated  
24 over time that the application of the  
25 proactive result, as you mentioned, can, in  
00118:01 fact, be beneficial -- may be beneficial in  
02 future situations.

Page 118:17 to 118:19

00118:17 back on the record. And just for the record,  
18 my name is Eric Nichols, and I'm one of the  
19 lawyers representing Cameron in the case. Do

Page 119:06 to 129:05

00119:06 Q. Now, Mr. Campbell, for how many  
07 decades has your company, Wild Well Control,  
08 been helping operators and drillers with  
09 wells that have blown out or which are in a  
10 loss of well control situation?

11 A. Wild Well Control has been doing  
12 it since their start-up or inception in 1975.

13 Q. Okay. And even before there was  
14 a well -- Wild Well Control and even before  
15 you got in the business that we're talking  
16 about, were there other companies and  
17 individuals dedicated to containing blowouts  
18 and controlling wells that had blown out  
19 around the world?

20 A. Yes, sir.

21 Q. And in terms of taking a  
22 slightly broader view for purposes of this  
23 question, Mr. Campbell, would you agree in  
24 terms of the safety of personnel involved in  
25 drilling operations and production operations  
00120:01 and potential environmental impact that in a  
02 perfect world, we wouldn't have blowouts in  
03 oil and gas drilling and production  
04 operations?

05 A. I would agree.

06 Q. Do we live in that perfect  
07 world?

08 A. No.

09 Q. And without question, would you  
10 agree, Mr. Campbell, the greatest risk  
11 undertaken while drilling and producing an  
12 oil and gas -- oil or gas well is the  
13 potential for a blowout and complete loss of  
14 control?

15 A. I would agree.

16 Q. And you may recognize that  
17 language. Do you recognize or remember that  
18 language coming out of the book that you  
19 co-authored and published back in 1994?

20 A. Yes, sir.

21 Q. And is this risk which -- what  
22 you-all call the greatest risk associated  
23 with drilling and producing an oil and gas  
24 well, is that risk well-known in the  
25 industry, to your knowledge?

00121:01 A. Yes.

02 Q. Has it been well-known in the  
03 industry for decades?

04 A. Yes.

05 Q. Now, Mr. Campbell, in your  
06 experience are there things that operators  
07 and drillers can do to address that risk, the  
08 greatest risk of a blowout?

09 A. Yes.

10 Q. First, can operators and  
11 drillers attempt to control kicks during  
12 drilling and well testing operations?

13 A. Certainly.

14 Q. And I believe -- do you recall  
15 that you put in the book that you co-authored

16 that in your view if kicks could be  
17 eliminated all well control problems might be  
18 removed?

19 A. Might be removed, yes.

20 Q. And can you describe in general  
21 terms -- again, recognizing we all have time  
22 limitations here today, can you describe in  
23 general terms some of the techniques that  
24 operators and drillers can use to avoid kicks  
25 from happening in the first place? In --

00122:01 A. Well --

02 Q. -- general.

03 A. Well, first and foremost, if you  
04 have prior data about the specific place that  
05 you're drilling, about the subsea geology --  
06 sub -- surface geology and geophysics and  
07 mechanics, then -- and you can accurately  
08 predict pore pressures as a result of prior  
09 data, offset data, exploratory well data, et  
10 cetera, then you are -- you are enhancing the  
11 possibility that you will be able to  
12 eliminate or at least mitigate risk.

13 Q. Okay. And so in terms of the --  
14 of the process that you're talking about, is  
15 that a process by which during the well  
16 planning process, the operator will gather as  
17 much information as is available from that  
18 prospect or nearby prospects on pore  
19 pressures and fracture gradients?

20 A. Certainly.

21 Q. And try to use that information  
22 to plan the well in a way that with respect  
23 to conventional well control techniques such  
24 as drilling mud and drilling fluids?

25 A. Right.

00123:01 Q. That well will be controlled in  
02 a manner that will avoid a kick from  
03 occurring?

04 A. If -- if you can drill the well  
05 at balance or overbalanced, if those make  
06 sense, then you won't have a kick.

07 Q. Now, is another thing that can  
08 be done to address this greatest risk of  
09 drilling and production operations, that is,  
10 the risk of a blowout, that you can attempt  
11 to control a kick if one occurs before the  
12 kick goes from being a kick into becoming a  
13 blowout?

14 A. Certainly.

15 Q. And is another thing that  
16 you-all wrote and put in your book published  
17 first back in 1994 that the simple truth of  
18 the matter is that almost all major  
19 well-control events would not have occurred  
20 if the events were properly handled during

21 the initial phases of the control operation?  
22 MR. OCCHUIZZO:  
23 Objection to form.  
24 A. In retrospect, I'm not sure that  
25 I would choose that exact language, but the  
00124:01 intent is yes.  
02 EXAMINATION BY MR. NICHOLS:  
03 Q. Okay. And -- and the intent is  
04 that -- to express the view that it is  
05 extremely important to handle kicks in a  
06 rapid and efficient manner?  
07 A. It cannot be overstated.  
08 Q. Okay. And, in other words,  
09 proper kick handling can prevent blowouts,  
10 correct?  
11 A. I don't know if you have  
12 assurance of that, but it -- but the  
13 likelihood is reduced greatly by proper kick  
14 detection and handling.  
15 Q. And -- and -- and I'm not  
16 pulling that language out of the air, just to  
17 let you know. I mean, does that sound like  
18 language that you would have put into that  
19 book that you published in 1994, that is --  
20 A. Yeah.  
21 Q. -- proper kick handling prevents  
22 blowouts?  
23 A. Yes.  
24 Q. Okay. And I believe you may  
25 have been asked about this yesterday. But  
00125:01 did you also put in that book back in 1994  
02 that early kick detection and proper handling  
03 of the kick is the best insurance for the  
04 prevention of blowouts?  
05 A. Yes.  
06 Q. And is that something that you  
07 still believe today?  
08 A. Yes.  
09 Q. Now, I'm going to ask you  
10 another general question, given the time  
11 limitations that we have, but can you  
12 describe for us in general some of the  
13 techniques in your experience that operators  
14 and drillers can use to control a kick and  
15 prevent it from becoming a blowout?  
16 MS. EASTERLING:  
17 Objection, form.  
18 A. And you want me to just tell you  
19 what --  
20 EXAMINATION BY MR. NICHOLS:  
21 Q. Just in general terms.  
22 A. -- what that would be?  
23 Q. Some of the -- if you could just  
24 list for us some of the techniques.  
25 A. In general terms, the number one

00126:01 issue would be early kick detection which  
02 limits the amount of wellbore fluids -- of  
03 formation fluids that enter the wellbore.  
04 Q. And I believe you testified  
05 yesterday that -- that in many instances when  
06 you have kicks, you -- operators and drillers  
07 will control those kicks in such a manner  
08 that the hydrocarbon remains well down within  
09 the well, correct?  
10 MS. EASTERLING:  
11 Objection, form.  
12 A. A smaller -- the smaller the  
13 kick, the less annular capacity it fills up;  
14 therefore, the height, the volume that has  
15 entered the wellbore and the resulting height  
16 of that column, you -- if you make that ever  
17 smaller, then you're reducing the impact of  
18 pressure on the well at the surface.  
19 EXAMINATION BY MR. NICHOLS:  
20 Q. Yes, sir. And I appreciate your  
21 answer.  
22 My question is a little  
23 different --  
24 A. Okay.  
25 Q. -- which is that you have seen  
00127:01 many examples in your long career in this  
02 industry where kicks have been controlled in  
03 such a manner that the hydrocarbon, whatever  
04 hydrocarbon enters that wellbore, is kept  
05 down inside that wellbore?  
06 MS. EASTERLING:  
07 Objection, form.  
08 A. Initially.  
09 EXAMINATION BY MR. NICHOLS:  
10 Q. Yes, sir.  
11 A. Initially.  
12 Q. Yes, sir. And you've been asked  
13 a number of questions, for example, about the  
14 March 8th kick event at Macondo. Do you  
15 recall those questions?  
16 A. Yes, sir.  
17 Q. And you-all at Wild Well Control  
18 were involved in helping BP respond to that  
19 kick event, correct?  
20 A. Yes.  
21 Q. And do you understand in general  
22 terms that that was a -- well, first of all,  
23 let me ask you, do you know how long that  
24 well flowed before there was a response to  
25 the kick?  
00128:01 MS. EASTERLING:  
02 Objection, form.  
03 A. In my case, it would be hearsay.  
04 EXAMINATION BY MR. NICHOLS:  
05 Q. Sure.

06           A.       I heard that it was about  
07 30 minutes.  
08           Q.       Okay. And you understand from  
09 your work on that particular incident that  
10 the BOP equipment was successfully deployed  
11 in response to that kick?  
12           A.       Oh, yes.  
13           Q.       And whether it was the upper  
14 annular preventer or the lower annular  
15 preventer, you understand one of those  
16 annular preventers was closed in on that  
17 well?  
18           A.       Yes, sir.  
19           Q.       And sealed the well?  
20           A.       Yes, sir.  
21           Q.       On March 8, 2010?  
22           A.       Yes.  
23           Q.       Okay. And in terms of the  
24 techniques that operators and drillers can  
25 use to control a kick and prevent it from  
00129:01 becoming a blowout, does part of that  
02 kick-control process involve the proper  
03 deployment and use of blowout-preventer  
04 equipment?  
05           A.       Yes. Part of it, yes.

Page 129:22 to 130:03

00129:22 Q.       And just as you're -- you and  
23 your company have been involved in the --  
24 this business that you've just described for  
25 decades, you understand that Cameron has been  
00130:01 in the business of manufacturing blowout  
02 prevention equipment for decades, correct?  
03           A.       Oh, yes.

Page 130:21 to 131:10

00130:21 And, sir, with all  
22 modesty, do you consider your company to be  
23 an industry leader in helping operators and  
24 drillers control wells that have blown out?  
25           A.       I do.  
00131:01 Q.       And that's not only in the  
02 United States but worldwide?  
03           A.       Worldwide.  
04           Q.       And just as your company is an  
05 industry leader in that field, would you  
06 consider Cameron to be an industry leader in  
07 designing and manufacturing equipment that is  
08 designed to be used to prevent blowouts from  
09 occurring in the first place?  
10           A.       Yes.

Page 131:21 to 133:20

00131:21 And in terms of a big-picture  
22 definition of a blowout preventer, is a  
23 big-picture definition equipment installed at  
24 the wellhead to prevent the escape of  
25 pressure either from the annulus or open  
00132:01 hole? Is that a big-picture definition?  
02 A. Correct.  
03 Q. And, in fact, does that sound an  
04 awful lot like language I would have pulled  
05 out of your definitions in your book from  
06 1994?  
07 A. Oh, I wasn't paying attention  
08 about that, but yes.  
09 Q. Okay. And is Cameron's status  
10 as an industry leader in the area of the  
11 manufacture and design of blowout-preventer  
12 equipment just as true today as it has been  
13 over past decades?  
14 A. It is.  
15 Q. Do you know from your work in  
16 the industry that Cameron equipment is used  
17 in drilling and production operations onshore  
18 and offshore across the world?  
19 A. It is.  
20 Q. And do you know from your  
21 experience in the industry that operators  
22 routinely advertise and represent to the  
23 industry and to the public that they use  
24 Cameron equipment or is that something you're  
25 aware of?  
00133:01 A. Generally speaking, yes.  
02 Q. Okay.  
03 A. You want an example?  
04 Q. Yes, sir.  
05 A. Just bought a -- three  
06 18-3/4-type TTs for subsea use to a shear  
07 ram, blind shear rams.  
08 Q. And for whose -- for application  
09 in -- in -- in deep offshore?  
10 A. (Moving head up and down.)  
11 Q. And I'm sorry. You have to  
12 answer audibly.  
13 A. Yes, sir.  
14 Q. And for -- who was the operator  
15 involved with those purchases?  
16 A. We are.  
17 Q. Oh. So it's actually equipment  
18 that -- that you intend to use as part of  
19 Wild Well Control's operations?  
20 A. That's correct.

Page 135:02 to 135:24



00135:02 Q. So my general question to you  
03 is: Were you or your team involved in any  
04 effort to determine when the Macondo well  
05 started to flow after the drilling fluid was  
06 displaced from the wellbore and replaced with  
07 seawater on April 20th?  
08 A. No.  
09 Q. And were or your team involved  
10 in any effort to determine what signs of a  
11 potential kick were detected during negative  
12 pressure testing on April the 20th?  
13 A. No.  
14 Q. Or who conducted that negative  
15 pressure testing?  
16 A. No.  
17 Q. Or who was involved in  
18 monitoring the results of that negative  
19 pressure testing?  
20 A. No.  
21 Q. Or who was involved in  
22 interpreting the results of that negative  
23 pressure testing?  
24 A. No.

Page 136:07 to 137:21

00136:07 Q. And is it true that if you  
08 review serious well-control events such as  
09 blowouts and fires on drilling wells, one  
10 will find that more than 80 percent first  
11 encounter problems while the work string was  
12 off bottom?  
13 MR. OCCHUIZZO:  
14 Objection to form.  
15 A. I would say -- I don't know if I  
16 could always say the majority, but a high  
17 percentage of them, yes.  
18 EXAMINATION BY MR. NICHOLS:  
19 Q. And again, I'm -- I'm telling  
20 you, I'm not pulling that language out of the  
21 air. Is that language that sounds like it  
22 would be --  
23 A. Oh.  
24 Q. -- in that famous book we've  
25 talked about?  
00137:01 A. Okay.  
02 Q. See, one thing, Mr. Campbell,  
03 you understand that when you -- when you  
04 write a book --  
05 A. Yeah.  
06 Q. -- it's with you forever, right?  
07 A. Yeah, yeah, yeah. That's why I  
08 started burning them last week.  
09 Q. And do you also recall in that

10 book that you were trying to -- to maybe  
11 forget about that another common activity  
12 that has frequently led to a blowout is when  
13 some sort of bottom kill is underway and  
14 complete loss of control occurs?

15 A. Yes.

16 Q. And is the -- are these things  
17 well-known in the industry, that many  
18 blowouts occur in situations where the drill  
19 string is off bottom or some sort of kill  
20 operations are underway?

21 A. Yes.

Page 140:17 to 142:05

00140:17 Q. Now, you were asked some  
18 questions, Mr. Campbell, about the efforts  
19 post-blowout to engage in ROV intervention of  
20 the blowout prevention equipment. Do you  
21 remember those questions?

22 A. Yes, sir.

23 Q. And I think that the lawyer from  
24 BP had asked you a question with respect to  
25 the plumbing. Did it come out that -- that  
00141:01 the plumbing from one of the ROV panels had  
02 been modified from its original design as  
03 provided by Cameron?

04 A. Yes.

05 Q. And were you also aware that  
06 during the process of attempting ROV  
07 intervention with the BOP stack that -- that  
08 the operator and personnel encountered  
09 difficulty with the ROV pumps building  
10 sufficient pressure?

11 A. That is correct.

12 Q. And so bottom line, were you  
13 ever able to determine whether or not any of  
14 the ROV intervention efforts resulted in the  
15 actual activation of any of the rams or  
16 annular preventers on the BOP stack?

17 MS. EASTERLING:

18 Objection, form.

19 A. Short answer is no.

20 EXAMINATION BY MR. NICHOLS:

21 Q. And I -- I -- one follow-up  
22 question about what you testified yesterday  
23 on ROVs. You testified along the lines of,  
24 you know, it was a very quick learning curve  
25 on the ROV capabilities. You know, the  
00142:01 question was, was it a flying highball? I  
02 think that was your language.

03 A. Eyeball.

04 Q. Eyeball?

05 A. Yes.

Page 143:01 to 144:24

00143:01 Q. Now, you were asked a very  
02 general question yesterday that I need to ask  
03 you about. And -- and you were asked a  
04 question about the so-called failure of the  
05 HORIZON BOP equipment to operate.  
06 Now, when we're talking about  
07 language like that, failure of a BOP to  
08 operate, would you agree with me that that's  
09 very general and loose terminology?  
10 A. Yes. Yes.  
11 Q. Now, that language could  
12 describe a situation, for example, where, for  
13 whatever reason, someone does not activate or  
14 place in motion the BOP equipment.  
15 A. That's possible.  
16 Q. And one example of that would be  
17 where the personnel who were conducting a  
18 negative pressure test failed to recognize a  
19 kick and don't act to shut in the well using  
20 the BOP equipment, correct?  
21 MS. EASTERLING:  
22 Objection, form.  
23 A. One possibility, yes.  
24 EXAMINATION BY MR. NICHOLS:  
25 Q. And I'm not pulling that one out  
00144:01 of the air --  
02 A. Right.  
03 Q. -- either. You know that that's  
04 basically what the Bly report concluded?  
05 A. Right.  
06 MS. EASTERLING:  
07 Objection, form.  
08 EXAMINATION BY MR. NICHOLS:  
09 Q. Now, this language about the BOP  
10 failing to operate could also include, for  
11 example, a situation in which you have a  
12 blowout and the blowout destroys the ability  
13 of the rig to communicate with the BOP stack  
14 and thus the ability to activate that  
15 equipment from the rig, correct?  
16 A. Correct.  
17 Q. But bottom line, for purposes  
18 of -- of your deposition, you weren't charged  
19 and don't know what part of the BOP stack, if  
20 any, was used or not used by the crew in  
21 response to the April 20th kick, correct?  
22 A. On the 20th?  
23 Q. Yes, sir.  
24 A. Yes, that's correct.

Page 145:06 to 145:07

00145:06 Q. Now, I put back before you  
07 Exhibit 3922.

Page 145:13 to 145:15

00145:13 Was this letter, 3922, sent over  
14 to BP for its consideration?  
15 A. Yes.

Page 146:01 to 146:11

00146:01 Q. Okay. And so here we are in  
02 mid-May of 2010, and in fairness to everyone,  
03 you were in the process of gathering data  
04 concerning the blowout at this time, correct?  
05 A. Yes, sir.  
06 Q. And so in fairness to you and  
07 everyone else, although you may have offered  
08 opinions in this letter, those opinions were  
09 obviously subject to change based on  
10 additional data you might receive later?  
11 A. Certainly.

Page 146:19 to 146:23

00146:19 But in making these opinions  
20 that you've put in this letter, were you  
21 relying in part on your decades of experience  
22 in the industry?  
23 A. Yes, sir.

Page 148:08 to 149:10

00148:08 Q. And so if we look at that  
09 language at the bottom of page 5 and the top  
10 of page 6, the paragraph that begins with the  
11 number 6 and has Subparagraphs A, B, C, and D  
12 there, do those paragraph contain information  
13 that's based in part on your years of  
14 experience in the industry?  
15 A. Right, yes, sir.  
16 Q. And so, for example, did you put  
17 in those paragraphs that based on your  
18 experience in the industry, a ram and a BOP  
19 stack may not work if you have both casing  
20 and drill pipe running across that BOP?  
21 A. Surely.  
22 Q. And is that something that was,  
23 in your opinion, well-known in the industry?  
24 A. Yes, sir.  
25 Q. And did you also put in this  
00149:01 language from your letter in May of 2010 that  
02 based on your industry experience, that

03 obstructions in a BOP stack can affect the  
04 proper functioning of a BOP stack?  
05 A. Correct.  
06 Q. And, again, is that another  
07 thing that in your years of the industry,  
08 your perception would be well-known -- that  
09 would be well-known in the industry?  
10 A. Yes, sir.

Page 149:16 to 149:19

00149:16 Q. And you were asked certain  
17 questions, for example, about cement. Is it  
18 your experience that having cement debris in  
19 a BOP stack can affect its functionality?

Page 149:23 to 149:23

00149:23 A. Very often.

Page 149:25 to 150:04

00149:25 Q. And under those circumstances is  
00150:01 that one of the reasons why you want to have  
02 a good cement job, because you don't want  
03 cement debris to be coming up into that BOP  
04 stack?

Page 150:10 to 150:10

00150:10 A. That is a reason, yes.

Page 150:12 to 150:22

00150:12 Q. Okay. Now, did you also put in  
13 this language from May of 2010 that failures  
14 to obtain a 100 percent seal through blowout  
15 prevention equipment occur all the time for a  
16 broad variety of reasons?  
17 A. Yes, sir.  
18 Q. And, again, is that a fact that  
19 in your experience dealing with people in  
20 this industry day in and day out, is that a  
21 fact that is well-known in the industry?  
22 A. Yes, sir.

Page 151:01 to 151:04

00151:01 Q. And did you also put in this  
02 language from May of 2010 that failure to  
03 function on a BOP stack is extremely rare?  
04 And I'm --

Page 151:08 to 151:13

00151:08 Q. -- I'm looking at  
09 Subparagraph --  
10 A. D.  
11 Q. -- D. Yes, sir. Did you put  
12 that in -- in this letter?  
13 A. Yes, I did.

Page 151:18 to 152:02

00151:18 Q. And is that your experience?  
19 A. It is my experience.  
20 Q. And did you also put in here  
21 that it was your experience that any  
22 extremely rare failure to function almost  
23 always is traced back to simple hydraulic or  
24 air over hydraulic land-based BOP control  
25 systems that were not maintained or that lost  
00152:01 all fluid or that lost precharge in the  
02 stored energy part of the system?

Page 152:06 to 152:09

00152:06 Q. Did you put that in your -- in  
07 your letter?  
08 A. I did.  
09 Q. And did you believe that then?

Page 152:12 to 153:13

00152:12 A. Yes.  
13 EXAMINATION BY MR. NICHOLS:  
14 Q. Do you believe it now?  
15 A. Yes. But I -- I -- I did say,  
16 you know, the fact is you have on the rig a  
17 backup system, which is, I believe,  
18 electrical or hydraulic or -- or air over  
19 hydraulic, whichever it may be, but the basic  
20 system is a electrohydraulic multiplex system  
21 and -- but I think my point I'm trying to  
22 convey here is that those simple mechanical  
23 things that occur with what would have been  
24 the backup system on this rig versus the very  
25 robust and hearty system that was actually  
00153:01 being used as a primary means of operating  
02 the BOP, it would be extremely unusual that  
03 all of these functions just simply don't  
04 work.  
05 Q. And it would be extremely  
06 unusual in your view to have a situation  
07 where the capacity of those systems, those

08 robust systems that you're talking about that  
09 are on the rig, are destroyed --  
10 A. Yes.  
11 Q. -- in such a manner that they  
12 can no longer be used, correct?  
13 A. Correct.

Page 154:04 to 154:15

00154:04 So the system that you're  
05 talking about on page 6 of your letter, which  
06 is Exhibit 3922, you're talking about the  
07 backup system that is based off of such  
08 things as subsea accumulator bottles,  
09 correct?  
10 A. Correct.  
11 Q. And when you talk about systems  
12 that were not maintained or lost all fluid,  
13 those -- that's the system you're talking  
14 about?  
15 A. That's correct.

Page 154:19 to 160:04

00154:19 Q. Now, Mr. Campbell, is it your  
20 understanding based on your years of  
21 experience in the industry that if you  
22 unfortunately have flow of hydrocarbons  
23 through a BOP and debris through the BOP, the  
24 longer the duration of the flow, the more  
25 potential there is for damage to the packers  
00155:01 associated with the rams in the BOP?  
02 A. To the elastomeric element --  
03 Q. Yes, sir.  
04 A. -- in the rams?  
05 Q. Yes.  
06 A. Yes, yes.  
07 Q. And if a -- if the rams in a  
08 blowout preventer are exposed to uncontrolled  
09 well flow before making a seal, these packers  
10 or elastomeric elements can be eroded or  
11 eaten away, correct?  
12 A. Yes.  
13 MR. OCCHUIZZO:  
14 Objection to form.  
15 A. Yes.  
16 EXAMINATION BY MR. NICHOLS:  
17 Q. And if the packers and  
18 elastomeric elements are eaten away or  
19 eroded, for example, a blowout preventer's  
20 blind shear rams, even if they cut pipe, may  
21 not seal the well, correct?  
22 MR. HASSINGER:  
23 I object.

24 MR. VON STERNBERG:  
 25 Object to the form of the  
 00156:01 question.  
 02 A. That's correct. Now, there  
 03 are -- there are packers and there are  
 04 packers. There are packers in which the  
 05 elastomeric element is front and center to  
 06 the wellbore.  
 07 EXAMINATION BY MR. NICHOLS:  
 08 Q. Right.  
 09 A. And there are packers like a  
 10 blind shear ram design where they are by  
 11 design in a recessed area that is, one hopes,  
 12 somewhat protected.  
 13 Q. Right.  
 14 A. Okay.  
 15 Q. But in this instance did you  
 16 recognize based on your work at Macondo  
 17 post-blowout that we had a very significant  
 18 amount of uncontrolled flow of hydrocarbon  
 19 and debris through that BOP stack for a long  
 20 period of time?  
 21 A. Yes.  
 22 MS. EASTERLING:  
 23 Objection, form.  
 24 MR. OCCHUIZZO:  
 25 Objection to form.  
 00157:01 EXAMINATION BY MR. NICHOLS:  
 02 Q. And you were asked a little bit  
 03 yesterday, I think, about a company called  
 04 Olga Well Flow Modeling. Do you remember  
 05 those questions or that --  
 06 A. Yes.  
 07 Q. -- reference to that company?  
 08 A. Yes, sir.  
 09 Q. I mean, do you remember that  
 10 they estimated that the differential pressure  
 11 across the annular preventer was over  
 12 8,000 psi after the annulus was sealed?  
 13 MR. OCCHUIZZO:  
 14 Objection to form.  
 15 A. Yes.  
 16 EXAMINATION BY MR. NICHOLS:  
 17 Q. And do you also recall that  
 18 fluid velocity of that magnitude to a BOP  
 19 stack could reach levels that were orders of  
 20 magnitude greater than drill pipe steel  
 21 erosion velocity?  
 22 MR. OCCHUIZZO:  
 23 Objection to form.  
 24 A. Yes.  
 25 EXAMINATION BY MR. NICHOLS:  
 00158:01 Q. And just for --  
 02 A. Now, you're --  
 03 Q. Yes.



04           A.       -- you're -- first of all, those  
05 are predictive values.  
06           Q.       Yes, sir, I understand.  
07           A.       Yeah, okay.  
08           Q.       But if -- if you do have a  
09 velocity of predict -- or a velocity that --  
10 of that magnitude that which is predicted, it  
11 basically carries what's called steel erosion  
12 velocity, correct?  
13           A.       Yeah.  
14           Q.       And --  
15           A.       Yes.  
16           Q.       -- what does that mean, steel  
17 erosion velocity?  
18           A.       Well, it simply means that  
19 either the inside of one string of pipe where  
20 the well is flowing or the outside of a  
21 string of pipe that is concentric within it  
22 are subject to metal loss erosion as a result  
23 of this velocity. It's impacted by many  
24 factors, though, that we don't know about,  
25 which includes what sort of solids are coming  
00159:01 from the formation, the zone of interest, et  
02 cetera, et cetera, and in what ratio to the  
03 oil and gas, and where is the expansion of  
04 free gas taking place in relation to the oil.  
05                   And so one would never achieve  
06 everybody's wholehearted support, but, yes,  
07 generally what you're saying is true.  
08           Q.       And with respect to that steel  
09 erosion velocity at -- at flow rates of that  
10 magnitude, when you have that flow running  
11 through a BOP, the BOP elements and rams and  
12 ram blocks can be subjected to that same --  
13 the forces --  
14           A.       They -- they --  
15           Q.       -- of that velocity?  
16           A.       -- they are, yes.  
17           Q.       And I think you testified  
18 yesterday that you saw pictures -- have seen  
19 pictures of the ram blocks and their faces as  
20 recovered from the DEEPWATER HORIZON BOP  
21 stack?  
22           A.       Yes, sir.  
23           Q.       And is what you saw in those  
24 pictures consistent with steel erosion  
25 velocity fluids having passed through those  
00160:01 elements of the BOP stack?  
02           MR. OCCHUIZZO:  
03                   Objection to form.  
04           A.       Yes, sir.

Page 160:10 to 160:24

00160:10 And I'm not going to mark

11 this again. It's already been marked as  
12 Exhibit 1166.  
13 And if you turn over from the  
14 first page, just to orient you, this has been  
15 identified as a WEST Engineering Services  
16 report or evaluation that was done for the  
17 MMS. Do you see that on that first page?  
18 A. Yes.  
19 Q. And I'll ask you first,  
20 obviously: Have you -- do you recall ever  
21 having a chance to review this report from  
22 back in March of 2003?  
23 A. No, I -- I don't even know what  
24 it's in relation to.

Page 161:18 to 162:04

00161:18 Q. And so the first statement  
19 that's made there is that the pumping  
20 capacity of all ROVs is extremely limited,  
21 usually just a few gallons per minute.  
22 Is that consistent with your  
23 experience?  
24 A. I believe it to be more true in  
25 2003 than it is today.  
00162:01 Q. Okay. And so to cut to the  
02 chase, do you believe that the statements  
03 that are made here are applicable to the  
04 technology that we had in place in 2010?

Page 162:07 to 162:08

00162:07 A. That the statements that are  
08 made here.

Page 162:10 to 162:24

00162:10 Q. About the pumping capacity --  
11 A. Yeah.  
12 Q. -- of ROVs, for example.  
13 A. No, it -- it had increased  
14 rather significantly in the intervening  
15 period.  
16 Q. Okay. If you can get them to  
17 pump?  
18 A. If you can get it to pump, yes,  
19 sir.  
20 Q. And we talked about it?  
21 A. Yeah.  
22 Q. Had some issues on that with  
23 respect to the ROV intervention at Macondo?  
24 A. Yes, we did.

Page 163:09 to 163:21

00163:09 Q. Now, the next statement is the  
10 one I want to really ask you about, which is,  
11 "Closing a ram BOP with low volume hydraulic  
12 source while a well is flowing would almost  
13 certainly result in damage to the sealing  
14 components of the ram and would not be able  
15 to seal the wellbore."  
16 Did I read that correctly?  
17 A. Yes.  
18 Q. Now, based on our discussion a  
19 minute ago, is that a statement you would  
20 agree with?  
21 A. I would.

Page 164:18 to 165:13

00164:18 It says, "Unfortunately, if an  
19 ROV is needed for well control, there is a  
20 good chance it will be incapable of closing a  
21 ram for one or more reasons."  
22 Did I read that correctly?  
23 A. Yes.  
24 Q. Is that consistent with your  
25 experience?  
00165:01 A. While it has improved, it's  
02 still a problem.  
03 Q. And read the next sentence for  
04 you. "As a result, reliance on ROV systems  
05 as the sole means" for "securing the well if  
06 the primary system has failed has a high  
07 probability of failure unless the ROV is  
08 docked at the appropriate ROV  
09 panel. . .during drilling."  
10 Did I read that correctly?  
11 A. Yes.  
12 Q. And is that a sentiment that you  
13 would agree with?

Page 165:16 to 165:17

00165:16 A. Well, the hypothesis I would  
17 agree with.

Page 165:19 to 165:23

00165:19 Q. Okay. And we know during the  
20 response to the Macondo well that the ROVs  
21 that were attempted to be used were not  
22 docked at the appropriate ROV panel during  
23 drilling, correct?

Page 166:01 to 166:01

00166:01 A. Correct.

Page 166:03 to 166:19

00166:03 Q. If you turn now to page 75 of  
04 85, and there's a statement at the very  
05 bottom of that page -- it's right underneath  
06 the picture --  
07 A. Yeah.  
08 Q. -- that I would just ask you to  
09 read that language that appears right below  
10 that picture there.  
11 A. "Ram preventers are not designed  
12 to close and seal under high rate  
13 conditions," high rate meaning high flow  
14 rate, "if closure rates are slow."  
15 Q. And do you agree with that basic  
16 sentiment --  
17 A. Yes.  
18 Q. -- that's expressed there?  
19 And also -- if we go on, it also

Page 167:15 to 168:15

00167:15 And this has previously been marked as  
16 Exhibit 3321.  
17 First of all, I'm going to ask  
18 you: Have you ever seen this particular  
19 chart before, to your knowledge?  
20 A. I -- I may have seen this chart  
21 before but not in this context.  
22 Q. Yes, sir. And do you recognize  
23 it generally as being what we might call a  
24 shear limitation chart?  
25 A. Correct.  
00168:01 Q. And do you recognize this as  
02 being the type of information that would be  
03 provided by an original equipment  
04 manufacturer of blowout prevention equipment  
05 to the operator and to the driller to advise  
06 the operator and driller of the shearing  
07 limitations?  
08 A. Right.  
09 Q. And there's some language --  
10 you -- you testified yesterday that -- along  
11 the general lines of that no one in the  
12 industry has enough experience to know  
13 exactly when a set of shear rams will shear,  
14 correct, under what circumstances?  
15 A. Yes.

Page 168:21 to 170:16

00168:21 And I just want to ask you about  
22 the language that appears at the bottom of  
23 this chart. It's kind of small, so I'm going  
24 to give you an eye test here. But do you  
25 see -- Note 3 for this chart says, "All shear  
00169:01 pressures listed are calculated values."  
02 A. Right.  
03 Q. "Actual shear pressures may  
04 differ due to variations in tubular  
05 mechanical properties, age or condition of  
06 tubular, and condition of ram blades."  
07 Did I read that correctly?  
08 A. Yes, sir.  
09 Q. And is that language consistent  
10 with your experience in the industry?  
11 A. It certainly is.  
12 Q. And it also indicates at Note 4,  
13 quote, "Calculated pressures in excess of  
14 2700 psi should be verified by an actual  
15 shear test."  
16 Did I read that correctly?  
17 A. Yes, sir.  
18 Q. And is that something that you  
19 have seen in the industry people do? They  
20 actually do shear tests under certain  
21 conditions to demonstrate when and where a  
22 set -- a particular set of rams will shear  
23 pipe or shear casing?  
24 A. Right. Typically, that's --  
25 that's our own policy --  
00170:01 Q. Yes, sir.  
02 A. -- is that we would do that,  
03 particularly on a critical operation, say, a  
04 blowout or whatever. We -- we would  
05 replicate the circumstances that exist,  
06 possibly except for flow, but if there's  
07 internal pressure, if there's this, if  
08 there's that, and we would conduct a test  
09 before we would feel confident about doing  
10 that in the field.  
11 Q. Yes, sir. Now, one more subject  
12 and I'm done, which is this 2007 study that  
13 you did for BP on the DEEPWATER HORIZON BOP  
14 stack. Do you recall some of those questions  
15 that you were asked?  
16 A. Yes, sir.

Page 172:04 to 172:22

00172:04 Q. So now let me direct your  
05 attention to what you've just marked as  
06 Exhibit 3925, and I'll ask if you can look  
07 through this and recognize this as being the

08 proposal that was transmitted to BP by Wild  
09 Well Control for the deepwater BOP risk  
10 assessment.  
11 A. Yes, sir.  
12 Q. And this assessment concerns  
13 specifically the DEEPWATER HORIZON BOP stack,  
14 correct?  
15 A. It does.  
16 Q. And if we turn over to the third  
17 page of the exhibit, just to make sure that  
18 we're all together, does this proposal  
19 actually set out a schematic drawing of the  
20 DEEPWATER HORIZON BOP stack?  
21 A. A very elementary drawing, but  
22 yes.

Page 174:11 to 175:17

00174:11 Q. Now, if you turn -- we looked at  
12 the -- the diagram, which is on page 3. So  
13 now if you turn over to page 4, I just want  
14 to ask you about some of the language here.  
15 Under the background section, it talks about  
16 how the DEEPWATER HORIZON is equipped with a  
17 five-ram dual annular BOP stack out of which  
18 only two sets of rams are currently installed  
19 with pipe rams, VBR, that can close on the  
20 drill string.  
21 Did I read that correctly?  
22 A. Yes, sir.  
23 Q. And that was the configuration  
24 as it existed in 2007, correct?  
25 A. Yes, sir.  
00175:01 Q. And the reason why there were  
02 only two sets of rams that are currently  
03 installed with pipe rams that can close in on  
04 the drill string is because one of the  
05 original of the three sets of rams had been  
06 converted to a test ram?  
07 A. Yes.  
08 Q. For purposes of expediting  
09 the -- the pressure testing on the BOP stack,  
10 correct?  
11 A. Yes, sir.  
12 Q. Now -- and if I understand your  
13 assignment, you were asked to come in and  
14 give BP some advice on potential ways to  
15 mitigate the issues that would arise as a  
16 result of having converted that lowermost  
17 pipe ram to a test ram, correct?

Page 175:20 to 175:20

00175:20 A. Yes.

Page 175:22 to 177:17

00175:22 Q. And you list here or Wild Well  
 23 Control lists here two general categories of  
 24 options, correct?  
 25 A. Yes, sir.

00176:01 Q. And the first category of  
 02 options involves equipment modification,  
 03 correct?  
 04 A. Yes, sir.  
 05 Q. That would include upgrading the  
 06 test VBR to a bidirectional ram that could  
 07 hold pressure in both directions, correct?  
 08 A. Yes, sir.  
 09 Q. That was one of the equipment  
 10 modification options that was available back  
 11 in 2007, correct?  
 12 A. Yes, sir.  
 13 Q. And if you did this equipment  
 14 modification, you would, in effect, add one  
 15 set of backup pipe rams, correct?  
 16 A. They -- let's see. Another  
 17 option is to add another ram cavity, yes.  
 18 Q. Let me -- let me --  
 19 A. Sorry.  
 20 Q. Let me back up because I didn't  
 21 mean to -- to mislead you.  
 22 A. Okay.  
 23 Q. I'm still talking about the  
 24 bidirectional ram.  
 25 A. Oh, yes.

00177:01 Q. And if you change that test ram  
 02 to a bidirectional ram, you would, in effect,  
 03 add one set of backup pipe rams?  
 04 A. That's correct.  
 05 Q. Okay. And then you have another  
 06 option in here, which is to add another ram  
 07 cavity to the BOP, making it a six-ram stack,  
 08 correct?  
 09 A. Yes, sir.  
 10 Q. And if you were to do that, you  
 11 could use that ram cavity to house a pipe  
 12 ram --  
 13 A. Anything.  
 14 Q. -- a -- or a blind shear ram?  
 15 A. Anything.  
 16 Q. And both of those were solutions  
 17 that were available in 2007?

Page 177:20 to 177:20

00177:20 A. Yes.

Page 177:22 to 178:05

00177:22 Q. Now, let's --  
23 A. Available, but whether they were  
24 applicable or not is a different matter.  
25 Q. Sure. It was up to --  
00178:01 A. Yeah.  
02 Q. -- up to BP to decide whether --  
03 A. Right.  
04 Q. -- they wanted to do something,  
05 correct?

Page 178:09 to 178:13

00178:09 Q. I mean, is that your  
10 understanding, Mr. Campbell? You were making  
11 a -- some suggestions or proposal, but  
12 ultimately BP would make that decision,  
13 correct?

Page 178:16 to 178:18

00178:16 A. I can't imagine that they would  
17 make it without consultation with Transocean,  
18 but, yes.

Page 178:24 to 179:08

00178:24 Q. Now, another general category of  
25 option that was being considered here was to  
00179:01 continue well operations as long as the top  
02 annular preventer and one set of VBRs was  
03 tested to required pressure.  
04 Did I read that correctly?  
05 A. Yes, sir.  
06 Q. And so this was another option  
07 that was being presented for BP's  
08 consideration?

Page 179:12 to 179:13

00179:12 Q. Correct?  
13 A. Yes.

Page 180:05 to 180:12

00180:05 Q. Now I want to direct your  
06 attention to the material under Tab 3 of your  
07 book. I'm going to ask you to mark this with  
08 this sticker, which is going to make it  
09 Exhibit 3926.



10 (Exhibit No. 3926 marked for  
11 identification.)  
12 A. Yes, sir.

Page 180:14 to 180:22

00180:14 Q. And do you recognize this as  
15 being a -- an e-mail that Mr. Ng -- is that  
16 the right pronunciation?  
17 A. Mr. Ng, yes.  
18 Q. -- Mr. Ng of Wild Well Control  
19 would have sent to the folks who actually  
20 participated in this risk assessment work  
21 session?  
22 A. Yes, sir.

Page 181:03 to 181:06

00181:03 You see that a few of the people  
04 who attended the work session included  
05 David Sims, John Guide, and John Shaughnessy?  
06 A. Yes, sir.

Page 181:19 to 182:10

00181:19 Q. And then if you turn back to the  
20 sixth page of the document, it's a -- keep  
21 going on the -- on the -- it's a -- it's a  
22 document. You may have to turn sideways.  
23 It's called Deepwater BOP Risk Assessment.  
24 A. Oh, yes.  
25 Q. And remember you were asked just  
00182:01 a few minutes ago about whether or not you've  
02 seen the risk assessment for this project?  
03 A. Yes.  
04 Q. Does this page and the page that  
05 follows it, does this represent the risk  
06 ranking matrix and risk table summary that  
07 was used in connection with this risk  
08 evaluation for the DEEPWATER HORIZON BOP  
09 stack back in 2007?  
10 A. Yes, sir.

Page 182:23 to 182:25

00182:23 Q. Good afternoon, sir. My name is  
24 Dennis Barrow, and I represent Dril-Quip. Do  
25 you understand that?

Page 183:02 to 186:13

00183:02 Q. All right. I'd like to talk to

03 you about your May 12, 2010 letter and your  
04 July 28, 2010 letter, okay?  
05 A. All right, sir.  
06 Q. You testified a few moments ago  
07 that your May 12, 2010 letter, which is  
08 Exhibit 3922 --  
09 A. Yes, sir.  
10 Q. -- that in writing that letter,  
11 you were making no guess as to what is  
12 happening or what was happening within the  
13 Macondo well. Do you recall that?  
14 A. Correct. Oh, I -- I'm trying to  
15 be clear that I do not know what is  
16 happening.  
17 Q. And -- and -- and that was my  
18 next question.  
19 A. Yes.  
20 Q. At that point in time, when you  
21 wrote this letter on May 12th of 2010, you  
22 were unaware of what was going on inside the  
23 Macondo well?  
24 A. That's correct.  
00184:01 Q. You were unaware of the wellbore  
02 geometry and the status of the equipment  
03 within the -- the Macondo well?  
04 A. I was generally familiar with  
05 the wellbore geometry as designed, but I was  
06 not aware of the present condition of that  
07 geometry.  
08 Q. And that would include the fact  
09 that you were unaware of the present status  
10 or position of the casing hanger and the seal  
11 assembly?  
12 A. That's correct.  
13 Q. Turning now to -- well, let me  
14 ask you this: You personally were unaware of  
15 the position of the casing hanger and the  
16 seal assembly. It's also accurate, isn't it,  
17 that no one at Wild Well would have been  
18 aware of the status or position of the casing  
19 hanger and seal assembly as of May 12, 2010?  
20 A. No one could know that.  
21 Q. All right. Turning now to your  
22 July 28, 2010 letter, which is marked as  
23 Exhibit 3908. At the time that you wrote  
24 your July 28, 2010 letter, you were still  
25 unaware of the current status or condition of  
00185:01 the equipment inside the Macondo well?  
02 A. That's correct.  
03 Q. And, therefore, you were unaware  
04 as of July 28, 2010, as to the condition or  
05 position of the casing hanger and the seal  
06 assembly?  
07 A. That's correct.  
08 Q. Likewise, no one at Wild Well

08 could have known of the current position or  
09 status of the casing hanger or the seal  
10 assembly?  
11 A. They could not have known.  
12 Q. Right. And -- and you state  
13 that clearly, do you not, sir, in your letter  
14 of July 28, 2010, that it was not possible  
15 for anyone to know the current status of  
16 equipment including the casing hanger and  
17 seal assembly?  
18 A. Right.  
19 Q. If one were to look through the  
20 Wild Well documents and see in various  
21 e-mails or other documents Wild Well  
22 employees talking about the position or  
23 status of the casing hanger seal assembly, is  
24 it fair to assume that those discussions  
25 would be either guesses or speculation?  
00186:01 A. It could only be --  
02 MS. MINCE:  
03 Object to form.  
04 A. -- speculation.  
05 EXAMINATION BY MR. BARROW:  
06 Q. For the record is it accurate  
07 that discussions within Wild Well documents  
08 as to the status or position of the casing  
09 hanger seal assembly could only be  
10 speculation?  
11 MS. MINCE:  
12 Same.  
13 A. Yes.