

# Deposition Testimony of:

## **Perrin Roller**

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Page 7:08 to 7:10

00007:08 PERRIN ROLLER

09 having been first duly sworn,  
10 was examined and testified as follows:

Page 7:12 to 7:13

00007:12 BY MR. LEGER:

13 Q. Mr. Roller, my name is Walter Leger,

Page 8:10 to 9:02

00008:10 Q. Okay. Mr. Roller, can you give me

11 an idea of your educational background first?

12 A. I have a Bachelor's of Science in  
13 geological engineering from University of  
14 Missouri School of Mines and Metallurgy, which  
15 has recently changed to the Missouri University  
16 of Science and Technology, so. . . That's my  
17 educational background.

18 Q. Okay. And when did you graduate?

19 A. 1980.

20 Q. And what did you do after  
21 graduating?

22 A. Went to work in the oil industry.  
23 Started off working for Chevron.

24 Q. And did you work onshore or did  
25 you -- did you work offshore originally?

00009:01 A. I started a mix between onshore and

02 offshore as a company man.

Page 9:06 to 16:07

00009:06 Q. Now, how long did you work for  
07 Chevron?

08 A. Worked for Chevron until early 1994.

09 Q. What did you do after that?

10 A. I left Chevron and went to work for  
11 the Red Adair Company in Houston.

12 Q. And what did you do for Red Adair?

13 A. I was an engineering service manager  
14 for them.

15 Q. What does that mean? What were your  
16 responsibilities?

17 A. The responsibility at the time was  
18 trying to build a new group for the company that  
19 would handle the aspects mainly of relief well  
20 operations, and, you know, other technical things  
21 that they didn't have the capabilities for at  
22 that time.

23 Q. And how long were you there?

24 A. Really was there only about -- I

25 want to say six or seven months.

00010:01 Q. Okay. And why did you leave?

02 A. The six senior people, which

03 included myself, started another company.

04 Q. And what company was that?

05 A. That was International Well Control.

06 Q. And what did International Well

07 Control do?

08 A. Basically the same -- same business.

09 Q. And what is that?

10 A. It was basically firefighting,

11 blowout control.

12 Q. And how long -- so that would have

13 been also '94-'95 time?

14 A. That was summer of '94 until about

15 April -- end of March or first of April, '95.

16 Q. And then how long were you involved

17 with International Well Control?

18 A. Until the end of March in 1995.

19 Q. Okay. And then what did you do

20 after that?

21 A. I left and started working as an

22 independent consultant.

23 Q. And did you have a company name or a

24 "doing business as" or --

25 A. Yeah. I incorporated myself,

00011:01 basically.

02 Q. And what was the name of the

03 company?

04 A. Poseidon Engineering, Incorporated.

05 Q. And is Poseidon Engineering still in

06 existence?

07 A. No, it's not.

08 Q. How long did you operate under the

09 name Poseidon Engineering?

10 A. I think effectively for about --

11 from spring of '95 until, I think, late May of

12 1998.

13 Q. Okay. And, now, when you say

14 Poseidon Engineering, I assume the concentration

15 may have been offshore?

16 A. That was the original intent.

17 Q. Did it not work out that way?

18 A. I did -- I did projects for other

19 people that had onshore stuff, too.

20 Q. Okay. And I want to get back to, I

21 guess 1999, but before that, when you worked --

22 sorry, was it Chevron from 1980 to 1994?

23 A. That would have been early '81 until

24 1994.

25 Q. You said you worked as a company man

00012:01 offshore. You didn't go to work immediately as a

02 company man, did you?

03 A. Yes, I did, as a -- I went through a

04 training program, and that was --

05 Q. Okay.  
06 A. -- what they did.  
07 Q. Now, up until 1999, were you  
08 developing a particular expertise, from your  
09 perspective?  
10 A. I'm sorry, did you say 1999?.  
11 Q. Up until 1999. From 1981 until  
12 1999.  
13 A. Okay. I'm not sure I understand.  
14 Q. Well, I -- we were talking  
15 chronologically up to '99.  
16 A. Right.  
17 Q. And that's why I'm using that date.  
18 A. Okay. I was not with Chevron in  
19 1999.  
20 Q. No, no. I mean during that period  
21 of time, were you moving toward developing a  
22 particular expertise in a particular field of the  
23 oil industry?  
24 A. The -- it was a general drilling  
25 engineering background that I was focusing on.  
00013:01 Q. Do you think, you know, through  
02 1999, that you had particular expertise in well  
03 control activities?  
04 A. Okay. I'm -- I'm a little confused  
05 here between '94 and '99. Because '99, I was  
06 working for another company at that point.  
07 Q. Okay. What company were you working  
08 for in '99?  
09 A. Chronologically, in 1998, I went to  
10 work for Ocean Energy.  
11 Q. Okay. And what is Ocean Energy?  
12 A. They're an independent oil and gas  
13 operator.  
14 Q. Out of where?  
15 A. Houston.  
16 Q. And what did you do for Ocean  
17 Energy?  
18 A. I started as a project manager for  
19 them in drilling.  
20 Q. And what does that mean, project  
21 manager? What was your job?  
22 A. Basically, I was -- started  
23 overseeing some international drilling operations  
24 in startup countries.  
25 Q. And would you oversee the drilling  
00014:01 operations on behalf of drilling companies or the  
02 oil company, or who were you overseeing on behalf  
03 of?  
04 A. I was an employee of the oil  
05 company.  
06 Q. Okay. So Ocean Energy was a  
07 leaseholder? Was an actual operator?  
08 A. Yes.  
09 Q. Or was it a contractor to operators?

10 A. Ocean Energy was an oil and gas  
11 operator.  
12 Q. Okay. Got you. Now, how long were  
13 you with Ocean Energy?  
14 A. Well, Ocean Energy was purchased by  
15 Devon in 2003. So with Ocean, the Legacy Company  
16 with Devon, I believe was total of 11 years.  
17 Q. Okay. And so you stayed on with  
18 Devon afterwards?  
19 A. Yes.  
20 Q. After Ocean Energy?  
21 A. Yes.  
22 Q. And how long did you work with  
23 Devon? Or until when did you work with Devon?  
24 A. The Devon acquisition was in 2003,  
25 if I remember correctly, and I stayed there until  
00015:01 May of 2009.  
02 Q. Okay. And what did you do after May  
03 of 2009?  
04 A. After May of 2009, I went back to my  
05 consulting role as an independent consultant.  
06 Q. And what was -- did you have a  
07 business name beginning in 2009?  
08 A. Yes, I did.  
09 Q. And what was that?  
10 A. Upstream Forensics.  
11 Q. And that is the name of the  
12 consulting firm you're involved in today?  
13 A. That's correct.  
14 Q. Now, does Upstream Forensics have  
15 any other employees?  
16 A. No.  
17 Q. Now, as I see it, as I appreciate  
18 it, you were at some point retained by Transocean  
19 to assist in the development of a report  
20 regarding the Deepwater Horizon. Is that  
21 correct?  
22 A. Yes, that's correct.  
23 Q. Okay. When -- how did you come to  
24 be involved in the Deepwater Horizon  
25 investigation?  
00016:01 A. I was contacted in May of 2010 to --  
02 and asked to -- if I wanted to join the  
03 investigation.  
04 Q. And who contacted you?  
05 A. I was originally contacted by a  
06 gentleman from a third party, and then was  
07 referred to Mr. Ambrose.

Page 16:17 to 18:16

00016:17 Q. Okay. And why were you contacted?  
18 A. My understanding was that Transocean  
19 needed some drilling engineering-type help from  
20 an operator's perspective, and they knew my

21 background from working with me over quite a few  
 22 years, and they had asked if I would be --  
 23 consider working for them.

24 Q. Had you done some work with  
 25 Transocean before?

00017:01 A. Only as a customer of theirs.  
 02 so. . .

03 Q. And in what regard had you worked as  
 04 a customer of theirs?

05 A. They were drilling contractor, and  
 06 we were oil and gas company.

07 Q. Okay. Now, had you done work in  
 08 deepwater drilling before this involvement in  
 09 this investigation?

10 A. Yes.

11 Q. And what was the extent of your  
 12 experience in deepwater?

13 A. It goes back to -- subsea and  
 14 floating drilling operations would go back to the  
 15 time with Chevron in the late '80s, early '90s.  
 16 And then again with Chevron as a consultant.

17 Q. Okay.

18 A. And then with Ocean Energy and  
 19 Devon, the main time I spent there was as the  
 20 worldwide deepwater drilling manager.

21 Q. Is your expertise generally drilling  
 22 engineering? Or can you tell me what you  
 23 consider your expertise to be?

24 A. The expertise generally is drilling  
 25 operations and engineering over the bulk of my  
 00018:01 career.

02 Q. Now, you had never worked as a  
 03 toolpusher or a driller or in that capacity,  
 04 correct?

05 A. No, I have not.

06 Q. Have you worked as a drilling  
 07 engineer?

08 A. Yes.

09 Q. And have you worked as an operations  
 10 manager?

11 A. Yes, for drilling.

12 Q. And you've obviously worked as a  
 13 company man, correct?

14 A. That's correct.

15 Q. Have you ever done any work for BP?

16 A. Not for -- not for BP proper, no.

Page 18:24 to 20:03

00018:24 Q. Okay. What was your role in the  
 25 investigation from Transocean's perspective?

00019:01 A. My role, as I understood it, is that  
 02 they hired me to more or less lead the team of  
 03 the engineers that were looking at the well  
 04 construction side and things from the operator's

05 perspective.  
06 Q. And what do you mean by "well  
07 construction"?  
08 A. The drilling engineering and  
09 operations side of the business.  
10 Q. Now, there is a document that -- and  
11 by the way, just for the purposes of discussion,  
12 the Transocean investigation report has been  
13 marked as an exhibit, No. 4248. That's Volume 1,  
14 I believe. And No. -- and Volume 2 has been  
15 marked as 4304, previously.  
16 MR. LEGER: No? 4304 is the appendices.  
17 BY MR. LEGER:  
18 Q. Let's just talk about Volume 1. And  
19 you've looked at -- you've seen the final report,  
20 correct?  
21 A. I have seen it.  
22 Q. Did you participate in drafting any  
23 particular part of the final report?  
24 A. Yes.  
25 Q. What part were you -- were you  
00020:01 involved in drafting?  
02 A. My team was focused on, I believe,  
03 Section 3.1 and 3.2 of the final report.

Page 20:12 to 20:12

00020:12 (EXHIBIT NO. 5000 WAS MARKED FOR THE RECORD.)

Page 21:02 to 21:21

00021:02 Q. I can only help you by telling you I  
03 looked at it through a magnifying glass, and the  
04 column which is the third from the right seems to  
05 have you at the head of it. Can you read it?  
06 A. Just barely.  
07 Q. You can use my glasses to help,  
08 also, if you want. It seems -- as I recall, and  
09 honestly, I can't read it right now. It seems to  
10 indicate "process."  
11 A. Yes.  
12 Q. And what -- is that basically what  
13 your team was, the process team? Or what does  
14 that mean?  
15 A. That was -- I'm trying to remember.  
16 I think the "process" designation came out of a  
17 format from the company that Transocean was using  
18 for the formal investigation of the -- of the  
19 incident. So -- but in essence, the process team  
20 was the well design and well construction in --  
21 part of the team.

Page 22:09 to 22:11

00022:09 Q. Okay. Have you reviewed the entire  
10 report?  
11 A. No, I have not.

Page 22:20 to 24:12

00022:20 Q. Okay. What parts have you read?  
21 A. I have read the Section 3.1 and 3.2.  
22 I have read Section 2, which is a chronology.  
23 Reviewed the executive summary, and reviewed  
24 Section 3.3, and reviewed the -- I think it was  
25 Section 4 was the summary.  
00023:01 Q. Do you think as a -- as a  
02 consequence of your experience before entering  
03 into this endeavor, do you think that you had any  
04 particular expertise in performance of negative  
05 pressure tests?  
06 A. I think based on the -- on the  
07 background and the -- and the number of years and  
08 looking at things going to well control school  
09 and as a sum total of that, I think I had enough  
10 experience to look at that.  
11 Q. Over the years, have you personally  
12 been involved in the performance or  
13 interpretation of the results of negative  
14 pressure tests?  
15 A. I don't remember if I actually had  
16 done one on a rig, and I would have to go back to  
17 see if -- the exact operational reports of people  
18 that worked under me later on in my career. I  
19 can't say for sure.  
20 Q. Have you read the BP's investigation  
21 report?  
22 A. I have read portions of it.  
23 Q. Were there any parts of that report  
24 that you recall disagreeing with?  
25 A. It's been a -- it's been a very  
00024:01 long time since I read it, and as I recall, there  
02 were -- there some portions where I disagreed  
03 with.  
04 Q. Have you read the presidential  
05 commission report?  
06 A. I have not read the entire report,  
07 no.  
08 Q. Were there any parts of it that you  
09 did read that you disagreed with?  
10 A. On the -- there were -- there were  
11 some portions that I just seem to recall that I  
12 didn't think were correct.

Page 26:07 to 26:19

00026:07 Q. Have you been retained in any



08 capacity in connection with the litigation, as  
09 far as you're concerned?  
10 A. Yes.  
11 Q. And so beyond the -- as I appreciate  
12 it, this investigation report is not supposed to  
13 have been prepared for litigation. Is that your  
14 understanding?  
15 A. Yes.  
16 Q. But you are retained as a consulting  
17 expert in connection with litigation, in addition  
18 to the work that did you in this report?  
19 A. That's correct.

Page 27:01 to 27:17

00027:01 Do you -- do you think that there's  
02 any -- to your knowledge, was there any reason  
03 that it took Transocean so long to produce their  
04 report as opposed to BP, which produced their  
05 report real fast?  
06 A. Yes.  
07 Q. And what was the reason?  
08 A. Well, I think there were several.  
09 Q. What is your opinion as to the  
10 several reasons?  
11 A. The -- there was a -- there was a  
12 significant lag time, from what I saw, in being  
13 able to acquire a lot of data. It seemed that  
14 the investigation team for Transocean was -- you  
15 know, was way behind what BP was doing, because  
16 they -- BP basically had, you know, almost all  
17 the data.

Page 28:07 to 28:24

00028:07 Q. Does it appear that BP's was  
08 thorough, to you, the portion that you read?  
09 A. I guess I struggled because of --  
10 with the -- with the -- with the speed with which  
11 the report was put out. And I don't -- I don't  
12 recall -- I don't recall how -- if -- with  
13 respect to footnotes and referencing, I don't  
14 recall how thorough that was.  
15 Q. Are you familiar with the concept of  
16 root cause analysis?  
17 A. Yes.  
18 Q. Did Transocean endeavor to do a root  
19 cause analysis in its investigation report  
20 development?  
21 A. There was a -- there was a method,  
22 and I don't know that I would call it a root  
23 cause analysis. It was commonly referred to as  
24 that, but. . .

Page 29:12 to 29:19

00029:12 Q. Have you seen such a document -- and  
13 we will call it Exhibit 96, and it speaks for  
14 itself. I don't think there's anything  
15 misquoting about "flying by the seat of their  
16 pants," "chaos," "paranoia."  
17 A. I recall seeing something along  
18 those lines, but if you had something to review,  
19 I could certainly tell if I had seen it for sure.

Page 30:03 to 30:10

00030:03 Q. Okay. Have you ever seen those type  
04 of accusations or those type of comments being  
05 made by a wells team leader being made to his  
06 superiors regarding the operation of a deepwater  
07 drilling vessel?  
08 A. Referring to the e-mail?  
09 Q. Yes, sir.  
10 A. I don't recall that I have.

Page 31:03 to 32:07

00031:03 I'm just going to jump into some  
04 questions about your investigation into the  
05 temporary abandonment, which I believe you -- the  
06 TO investigation team addresses in 3.2 of the  
07 report. Is that correct?  
08 A. Yes, I believe that's correct.  
09 Q. And as part of that temporary  
10 abandonment investigation, am I correct that you  
11 conducted an investigation into negative pressure  
12 tests that had been conducted on other rigs in  
13 the TO fleet?  
14 A. That was -- we did take a look at  
15 what was -- had -- I guess would be going on with  
16 the other deepwater rigs in the fleet.  
17 Q. And you assembled a spreadsheet that  
18 summarized the information that you collected in  
19 that regard; is that correct?  
20 A. That's correct.  
21 Q. And when you looked at those -- when  
22 you looked at those other negative pressure  
23 tests, were you able to draw any conclusions  
24 about whether there was a standard procedure for  
25 a negative test in the TO fleet?  
00032:01 A. Yes.  
02 Q. And what did you conclude?  
03 A. I believe that I -- actually, there  
04 was a memo put together on that, that highlighted  
05 that. And I'm just speaking from memory without  
06 looking at the spreadsheet or the memorandum that

07    went with it.

Page 32:12 to 33:03

00032:12           Q.       Okay. And did you make any  
 13       conclusions as to whether there was a standard  
 14       procedure for conducting negative pressure tests  
 15       in deepwater wells within the Transocean fleet?  
 16       A.       Yes.  
 17       Q.       And what was your conclusion?  
 18       A.       Again, I'm just quoting from memory  
 19       without looking at the document. If you have  
 20       that, it would be great, and I could refer to it.  
 21       But the negative test procedures, there are  
 22       several that are -- that are common in the -- in  
 23       the fleet.  
 24       Q.       And those negative test procedures  
 25       are Transocean procedures?  
 00033:01       A.       I don't know if they are  
 02       specifically Transocean. This is what the  
 03       information that was returned back to us.

Page 33:09 to 34:22

00033:09           Q.       Certainly. So you looked at a  
 10       number of rigs in the Transocean fleet and what  
 11       their negative test procedures were, correct?  
 12       A.       Yes, I looked at some rigs in the  
 13       deepwater fleet.  
 14       Q.       And did each or any of those  
 15       deepwater rigs in the Transocean fleet have what  
 16       you would have called a standard negative  
 17       pressure test procedure that was used on that  
 18       particular rig?  
 19       A.       I would say yes, that some did.  
 20       Q.       Did you make any conclusions as to  
 21       whether the Deepwater Horizon had a standard  
 22       negative pressure test procedure that was used on  
 23       the Deepwater Horizon rig?  
 24       A.       Yes.  
 25       Q.       And what was your conclusion?  
 00034:01       A.       Again, without referring to the --  
 02       either the notes or the spreadsheet, the  
 03       Deepwater Horizon had performed negative tests by  
 04       a couple of different methods.  
 05       Q.       And to the best of your  
 06       recollection, what were those methods?  
 07       A.       Best of my recollection, that one  
 08       method was going -- monitoring the negative test  
 09       on the drill pipe using seawater. Another was on  
 10       the killer choke line using seawater. Another  
 11       one would have been the negative pressure test  
 12       down the drill pipe with base oil. And I believe  
 13       another procedure was going down the choke or

14 kill line with base oil.  
 15 Q. Did Transocean, either onshore or on  
 16 the Deepwater Horizon rig, maintain any written  
 17 procedures that summarized or laid out the  
 18 procedures that you just described to me?  
 19 A. Yes.  
 20 Q. And were those -- copies of those  
 21 kept on the Deepwater Horizon rig?  
 22 A. Yes.

Page 35:12 to 35:24

00035:12 Q. Did you determine whether copies of  
 13 any of those negative pressure test procedures  
 14 were provided to anyone from BP prior to the --  
 15 I'm sorry, let me get the time period right.  
 16 With regard to the Macondo Well. I'm talking  
 17 about the Macondo Well. Were copies of any of  
 18 those written procedures provided to anyone from  
 19 BP prior to the negative pressure test that was  
 20 conducted April 20, 2010, on the Deepwater  
 21 Horizon?  
 22 A. I guess my understanding is that  
 23 those were developed in conjunction with one or  
 24 more of the BP well site leaders.

Page 36:01 to 36:10

00036:01 THE WITNESS: I thought it --  
 02 BY MR. CERNICH:  
 03 Q. Maybe we're -- I'm sorry. Go ahead  
 04 and finish.  
 05 A. I thought it was that -- my  
 06 understanding was that at least one of those  
 07 procedures was -- and the most recent one, was  
 08 developed in conjunction with the -- with the BP  
 09 well site leaders. And I presume that it is --  
 10 that they are aware of it.

Page 36:17 to 38:06

00036:17 My question earlier was whether  
 18 there existed standard Transocean written  
 19 procedures on the Deepwater Horizon for  
 20 conducting a negative pressure test. And I  
 21 believe your answer was yes?  
 22 A. Yes.  
 23 Q. And am I correct that those standard  
 24 Transocean procedures for conducting a negative  
 25 pressure test are different from the negative  
 00037:01 pressure test procedure that was ultimately used  
 02 on April 20th to conduct the negative pressure  
 03 test on the Macondo Well on the Deepwater

04 Horizon?

05 A. Yeah, I've -- I'm -- yeah, I'm a bit  
06 confused on exactly what you're asking on that,  
07 so. . .

08 Q. Okay. Did the rig crew on April 20,  
09 2010, when conducting the negative pressure test  
10 on the Deepwater Horizon, use one of the standard  
11 Transocean negative test procedures that you  
12 testified existed on the Deepwater Horizon rig  
13 prior to April 20, 2010?

14 A. It -- based on the -- what we saw  
15 forensically, looking back at the evidence, it  
16 appears that they used a procedure that basically  
17 describes how to physically line up to do a  
18 negative test, and that's the extent of the  
19 Transocean procedures on the rig.

20 Q. So they used -- so to conduct a  
21 negative pressure test on April 20, 2010, you're  
22 telling me that the rig crew used a standard  
23 Transocean negative pressure test procedure?

24 A. I can't say for certain if -- what  
25 procedure they used or were discussing, but I  
00038:01 know -- I'm pretty sure, looking back, that we  
02 saw that the method that they used was outlined  
03 in one of the procedures that we found on the rig  
04 server that describes how to physically set up  
05 the test and open valves and by what means you  
06 were going to monitor the test pressure.

Page 38:20 to 39:20

00038:20 Q. But in order to conduct a negative  
21 pressure test on a Transocean rig, it's necessary  
22 for Transocean personnel to actually be involved  
23 in the mechanics of conducting that test; for  
24 example, opening and closing valves, pumping  
25 fluids and things along those lines; is that  
00039:01 right?

02 A. The rig personnel have to understand  
03 what means the operator wants to monitor the  
04 negative test, and then they would physically  
05 line it up either down the drill pipe or choke or  
06 kill line to accomplish that for the operator.

07 Q. And with regard to the negative  
08 pressure test that was conducted on the Deepwater  
09 Horizon rig on April 20, 2010, did you  
10 investigate whether Transocean personnel met with  
11 BP personnel prior to conducting the negative  
12 pressure test to review the procedures for  
13 conducting that test?

14 A. Yes.

15 Q. And do you know -- do you recall the  
16 names of the personnel from Transocean who met  
17 with BP personnel on the rig?

18 A. No. This was done in conjunction

19 with the pre-tour safety meeting that -- where  
20 the test procedures were given out.

Page 41:02 to 41:16

00041:02 Q. Certainly. Did you take notes  
03 during those interviews?  
04 A. I had a -- had a note-taker in the  
05 interviews.  
06 Q. Okay. And did --  
07 A. And I did have some personal notes,  
08 yes.  
09 Q. Were those notes compiled into any  
10 sort of summaries or memoranda?  
11 A. Yes.  
12 Q. And did you review those summaries?  
13 A. Yes.  
14 Q. And do you believe that the -- those  
15 summaries accurately reflect the interviews that  
16 you had with those individuals?

Page 41:18 to 41:19

00041:18 THE WITNESS: To the best of my  
19 recollection, yes.

Page 41:21 to 41:24

00041:21 Q. And you attempted, in taking your  
22 notes and preparing those memoranda, to  
23 accurately reflect the conversations you had with  
24 those individuals?

Page 42:01 to 42:01

00042:01 THE WITNESS: Yes.

Page 42:20 to 42:25

00042:20 Q. Page 94. I'm directing you to page  
21 94 of the Transocean investigation report. This  
22 is in Section -- I'm sorry, Chapter 3.2,  
23 Temporary Abandonment, which I believe you  
24 testified you worked on and authored in part?  
25 A. Yes. Our team worked on this.

Page 43:07 to 44:16

00043:07 Q. Certainly. Did you read and approve  
08 of Chapter 3.2?  
09 A. I reviewed it, and I -- it basically  
10 reflects the findings of the investigation team.

11 Q. I'd like to direct you to the second  
 12 paragraph there on page 94, which reads, "The  
 13 drill crew began setting up the negative pressure  
 14 test around 3:00 p.m. on April 20th, 2010." Do  
 15 you know how the drill crew knew how to begin  
 16 setting up that negative pressure test on  
 17 April 20, 2010?

18 A. Yes.

19 Q. And how did -- how did they know how  
 20 to set that up?

21 A. They had -- this was -- the negative  
 22 test and temporary abandonment procedures were  
 23 given to them, I believe, at the pre-tour meeting  
 24 around 11:00 a.m., so they had the procedures  
 25 and -- on how -- on how to perform the  
 00044:01 negative -- on how they would perform the  
 02 negative test. I believe that was discussed at  
 03 the pre-tour meeting.

04 Q. And then the next sentence reads,  
 05 "It was not finally approved as successful by the  
 06 BP well site leaders until close to 8:00 p.m."  
 07 So do I read that correctly to say that the  
 08 Transocean crew had no role in approving the  
 09 negative pressure test as successful?

10 A. Yes, that's my understanding on the  
 11 interpretation.

12 Q. So if the Transocean crew had  
 13 determined that the negative pressure test was  
 14 unsuccessful, would the Transocean crew have  
 15 moved forward with further rig operations after  
 16 8:00 p.m. on April 20, 2010?

Page 44:18 to 44:23

00044:18 THE WITNESS: I don't believe if the  
 19 Transocean crew -- and by "crew," I mean the  
 20 supervisory personnel. I don't believe that they  
 21 knowingly knew that it was unsuccessful. They --  
 22 I don't -- I don't -- they wouldn't have moved  
 23 forward.

Page 45:11 to 46:04

00045:11 Q. I'll move on to the next sentence,  
 12 which says, "It is now clear that the negative  
 13 pressure test conducted on April 20, 2010, should  
 14 not have been approved as a successful test." In  
 15 going back to my question earlier, in order to  
 16 move forward with further rig operations after  
 17 8:00 p.m. on April 20, 2010, did you determine,  
 18 in the course of your investigation, whether it  
 19 would have been necessary for Transocean  
 20 personnel on the rig to have also approved or  
 21 concurred that the negative pressure test was

22 successful?  
23 A. Well, the Transocean crew's  
24 responsibility is to facilitate the negative  
25 pressure test. The design and interpretation of  
00046:01 that test is the responsibility of the operator.  
02 The Transocean crew would, you know, have to know  
03 from the operator that that was a successful test  
04 and.

Page 46:07 to 46:13

00046:07 BY MR. CERNICH:  
08 Q. So if the operator concluded  
09 erroneously that the negative pressure test was  
10 successful, would the Transocean rig crew accept  
11 that as correct and move forward despite the fact  
12 that the -- that the data available indicated  
13 that the negative pressure test was unsuccessful?

Page 46:15 to 47:03

00046:15 THE WITNESS: If the Transocean crew knew  
16 that that was an indication of an unsuccessful  
17 test, I don't believe they would have moved  
18 forward. It's a bit -- it's a bit difficult to  
19 second-guess the operator on a lot of these  
20 matters, because they have all the engineering  
21 expertise. They know the well pressures, and  
22 they designed the negative test differential,  
23 things like that -- what's the actual negative  
24 test pressure they need to simulate the reservoir  
25 pressure they're going to experience before they  
00047:01 disconnect the BOP. So they rely on the operator  
02 to have that technical expertise to make that  
03 determination.

Page 47:17 to 49:20

00047:17 Q. And -- but you have worked as a --  
18 as a drilling engineer?  
19 A. Yes.  
20 Q. And as a drilling engineer, did you  
21 conduct negative pressure tests?  
22 A. I don't recall that I personally  
23 conducted a negative pressure test while I was  
24 acting as a drilling engineer.  
25 Q. Okay. Were you ever out on a rig  
00048:01 while a negative pressure test was conducted?  
02 A. I don't recall that we ever did one  
03 while I was on a rig.  
04 Q. Was anyone on your investigation  
05 team a driller or a toolpusher or a former  
06 driller or a former toolpusher?



07 A. I don't know if they were or not. I  
08 don't know all the history of all of them.

09 Q. Did you conduct any investigation as  
10 to whether the conduct of the driller or the  
11 toolpusher on the Deepwater Horizon on April 20,  
12 2010, was appropriate or comported with standard  
13 industry practices?

14 A. No. That wasn't part of what we --  
15 at what we looked at on the -- on investigation.

16 Q. All right. Can you tell me why that  
17 wasn't part of what you looked at on the  
18 investigation?

19 A. Well, what we were -- what we were  
20 tasked with looking at was basically the physical  
21 causes of the blowout. So we didn't get into the  
22 other issues of policy training, things of that  
23 nature.

24 Q. I'm not sure that quite answers my  
25 question. So you -- so you're telling me you  
00049:01 were only tasked with looking at the physical  
02 causes of the -- of the blowout?

03 A. That's what our group was looking  
04 at, was what physically caused the hydrocarbons  
05 to get in the wellbore and how did they get to  
06 the rig.

07 Q. Did the conduct of the negative  
08 pressure test physically cause the blowout?

09 A. The negative pressure test was, in  
10 hindsight looking at it -- because we've had a  
11 lot of time to study this. So in hindsight, we  
12 can see that the negative pressure test failed.  
13 So that was indication that the wellbore was not  
14 secure.

15 Q. And in hindsight, having a lot of  
16 time to study this, you -- I believe you  
17 testified that you didn't study whether the  
18 conduct of the Transocean personnel on the  
19 Deepwater Horizon with regard to the negative  
20 pressure test was appropriate. Is that right?

Page 49:22 to 50:02

00049:22 THE WITNESS: The Transocean personnel,  
23 with respect to the negative pressure test, their  
24 responsibilities are to physically line up and  
25 pump the required fluids as per the design of the  
00050:01 negative pressure test by the operator. And  
02 that's their function, and that's what they did.

Page 50:05 to 50:20

00050:05 Q. I'd like to direct you back to page  
06 94 in the report.

07 A. Okay.

08 Q. And the next paragraph states, "The  
 09 investigation team concluded that several factors  
 10 may have contributed to the incorrect  
 11 interpretation of the test, including the  
 12 following." I'm going to direct you to the  
 13 second bullet there, which says, "BP's insistence  
 14 that the drill crew monitor the kill line, which  
 15 contained heavy drilling fluid, as specified in  
 16 approved MMS permit, despite 1,400-psi pressure  
 17 reading on the drill pipe."

18 Do I read that to say that the drill  
 19 crew was not monitoring the drill pipe during the  
 20 negative pressure test?

Page 50:22 to 52:21

00050:22 THE WITNESS: No. When the negative  
 23 pressure test started, they started monitoring  
 24 the drill pipe.

25 BY MR. CERNICH:

00051:01 Q. Okay. And then at some point, they  
 02 moved to the kill line; is that right?

03 A. I -- at some point, they were  
 04 redirected by the well site leaders to monitor  
 05 this -- the test results via the kill line,  
 06 that's correct.

07 Q. And when they were monitoring the  
 08 test results via the kill line, was anyone  
 09 monitoring the pressure on the drill pipe, that  
 10 you're aware of?

11 A. Yes.

12 Q. And who was that?

13 A. I have -- the team has documents  
 14 that -- and I don't recall if it was -- I don't  
 15 recall everyone that was monitoring that, but I  
 16 do recall seeing one document where they  
 17 commented on the -- that there was 1,400 psi on  
 18 the drill pipe.

19 Q. And who commented?

20 A. I believe it was in a -- in a -- in  
 21 a witness statement from BP well site leaders,  
 22 there was discussion of that.

23 Q. Was any Transocean employee  
 24 monitoring the drill pipe?

25 A. I don't -- you know, without making  
 00052:01 assumptions, but, you know, there's 1400 psi on  
 02 the drill pipe, so it's going to be on a pressure  
 03 gauge there for -- to be seen, so. . .

04 Q. To be seen by whom?

05 A. The driller and toolpusher. I just  
 06 don't recall seeing any exact -- the documents  
 07 that refer to that, though.

08 Q. And that pressure gauge is in the  
 09 driller shack?

10 A. There would be -- there would be a

11 drill pipe pressure gauge in the driller shack,  
12 that's true.

13 Q. And where else would the reading  
14 from that pressure gauge be available?

15 A. Well, that pressure is also picked  
16 up by Sperry-Sun monitoring system, and that is  
17 monitored at various places around the rig, and  
18 potentially onshore, too.

19 Q. But it was available to Transocean  
20 personnel during the negative pressure test?

21 A. I believe it was, yes.

Page 53:11 to 54:18

00053:11 Q. And I'm asking you whether you  
12 investigated which, if any, Transocean personnel  
13 were monitoring the drill pipe pressure gauge  
14 during the negative pressure test.

15 A. During the negative pressure test,  
16 the people on the drill crew, the key personnel,  
17 would have been looking at the pressure on the  
18 drill pipe. There may be some confusion there.

19 Q. If I could direct you to page 99,  
20 please, of the investigation report. And I'd  
21 like to direct you to the paragraph under the  
22 blocked off section in communication with the  
23 formation. If we drop right below that. That  
24 paragraph says, "After the pressure stabilized at  
25 1,400 psi, both BP well site leaders arrived rig

00054:01 floor. One of the BP well site leaders  
02 instructed the drill crew to pump down the kill  
03 line to ensure that it was full. At 6:41 p.m.,  
04 the drill crew pumped approximately 0.25 barrels  
05 into the kill line, and the kill line pressure  
06 immediately increased to 489 psi, suggesting that  
07 the kill line was full."

08 Then The next paragraph starts,  
09 "Discussions resumed regarding the drill pipe  
10 pressure anomalies and the method of monitoring  
11 the well for the negative pressure test."

12 Do you know what -- can you tell me  
13 what those discussions were?

14 A. No, I cannot.

15 Q. Can you tell me the basis of that  
16 statement in the report that discussions resumed?

17 A. There's an endnote there, so maybe  
18 we can -- we can look.

Page 54:21 to 55:15

00054:21 Q. And I'm looking at, I believe,  
22 Footnote 88.

23 A. Okay. 88.

24 Q. BP investigation team interview of

25 Don Vidrine testimony, testimony of Christopher  
 00055:01 Pleasant, hearing before the Deepwater Horizon  
 02 joint investigation team, May 28, 2010. BP  
 03 investigation team interview of Robert Kaluza  
 04 April 28, 2010.  
 05 So do I read correctly from this  
 06 that Mr. Pleasant was aware of or participated in  
 07 those discussions?  
 08 A. Chris Pleasant was in the -- I  
 09 believe he was in the driller shack during those  
 10 discussions.  
 11 Q. So Transocean employees participated  
 12 in those discussions regarding the drill pipe  
 13 pressure anomalies?  
 14 A. That -- yes, that's my  
 15 understanding.

Page 55:23 to 58:03

00055:23 Q. -- from the section of the report we  
 24 were just looking at. It says, "Discussions  
 25 resumed regarding the drill pipe pressure  
 00056:01 anomalies and the method of monitoring the well  
 02 for the negative pressure test." And my question  
 03 is, did Transocean personnel participate in those  
 04 discussions that are described in that sentence  
 05 there?  
 06 A. Yes, that's our understanding.  
 07 Q. Okay. If I could direct you to page  
 08 102 of the report please. This section that's  
 09 blocked out here, the Bladder Effect, it says,  
 10 "the Transocean investigation team --" I'm  
 11 looking at the second paragraph. "The Transocean  
 12 investigation team found no evidence that the  
 13 bladder effect is a phenomenon known to experts  
 14 in the drilling industry. Further, the  
 15 investigation team did not identify any members  
 16 of the crew of the Deepwater Horizon familiar  
 17 with the term, including the colleagues and  
 18 supervisors of the drill crew members who were  
 19 killed in the incident and allegedly used the  
 20 term. Nor did the investigation team encounter  
 21 any Deepwater Horizon drill crew members who  
 22 recall this term being used to explain the drill  
 23 pipe pressure reading during the negative  
 24 pressure test."  
 25 Can you describe to me the  
 00057:01 investigation that went into supporting this  
 02 paragraph in your report?  
 03 A. I'm not totally familiar with the  
 04 entire process on that. My understanding is,  
 05 this was based on discussions with Transocean  
 06 personnel, verbal conversations with them.  
 07 Q. Have you ever heard of the bladder  
 08 effect?

09 A. No, I never have heard of anything  
10 like the bladder effect.

11 Q. And did you make any conclusions as  
12 to whether or not any of the deceased members --  
13 deceased personnel from Transocean ever discussed  
14 the bladder effect with anyone, whether  
15 Transocean employees or BP employees, during the  
16 negative pressure test?

17 A. The -- we have -- my -- from what I  
18 remember here, I don't believe there was any  
19 notes of conversations that stated that this was  
20 discussed with any of the Transocean personnel  
21 that had survived the incident. I believe the  
22 only place that the team saw this noted was in  
23 the BP internal investigation notes from one of  
24 the well site leaders, and I don't recall which  
25 one. It's one or both of them.

00058:01 Q. Did you interview anyone from BP in  
02 preparing your Transocean investigation report?

03 A. No. No, we did not.

Page 60:11 to 60:14

00060:11 Q. Okay. And when did you end your  
12 work related to the Transocean investigation?

13 A. My personal involvement with the  
14 investigation ended -- would have been mid-June.

Page 61:13 to 62:07

00061:13 Can you tell me how you were

14 compensated related to your work?

15 A. Basically compensated on an hourly  
16 basis for the work.

17 Q. Do you know the total amount that  
18 you billed related to your work related to the  
19 investigation?

20 A. Not off the top of my head, no, I  
21 don't.

22 Q. Can you give me an approximate? We  
23 can go by hours or we can go by an approximate  
24 amount of money. Do you want to start with how  
25 many hours that you worked from May of 2010 until  
00062:01 June of 2011 related to the investigation?

02 A. Yeah, I don't know the number of  
03 hours. Could I make a rough approximation on the  
04 total sum?

05 Q. Go ahead, please.

06 A. Give me a minute here. I want to  
07 say roughly 450,000.

Page 63:07 to 64:01

00063:07 Q. And I'm going to represent to you  
 08 that that report was issued in September of 2010.  
 09 I know you also mentioned that you read portions  
 10 of the chief counsel report that was issued by  
 11 the president's office. Correct?  
 12 A. That's correct.  
 13 Q. All right. And I'm going to  
 14 represent to you that that report was issued in  
 15 January of 2011. Now, your report -- not your  
 16 report. The Transocean report was issued in June  
 17 of 2011. And I know you were asked some  
 18 questions about why the Transocean report was  
 19 issued after those two reports, and you mentioned  
 20 something about lag time, lag time of data  
 21 provided to, I guess your investigation group.  
 22 What data, specifically, are you talking about  
 23 that wasn't available to you certainly by the  
 24 time the Bly report was issued and certainly  
 25 wasn't available to you when the president -- the  
 00064:01 chief counsel report was issued?

Page 64:03 to 64:10

00064:03 THE WITNESS: Well, let's -- I'll try to  
 04 recite from memory here. I think one of the --  
 05 one of the key components was that the -- none of  
 06 the data -- it -- the data for the BOP test and  
 07 results of those tests at issue didn't come in  
 08 until, well, quite some time after the fall, when  
 09 the -- when the Bly report was issued. I think  
 10 that was the context in that question.

Page 64:12 to 66:08

00064:12 Q. Okay.  
 13 A. So that's -- that was a key part of  
 14 the investigation. Those test results weren't in  
 15 until much later.  
 16 Q. Your work did not have anything to  
 17 do with the BOP; is that correct?  
 18 A. That's correct. Our team was not  
 19 focused on the BOP itself.  
 20 Q. When did -- but your work didn't  
 21 finish related to the investigation until June,  
 22 correct?  
 23 A. That's correct.  
 24 Q. What data were you relying on or  
 25 were you without that you needed to complete your  
 00065:01 portions of the report?  
 02 A. It's -- I guess the short answer is,  
 03 we're not sure what was missing, because there --  
 04 we were assuming some things that you would  
 05 normally see during the course of operations. We  
 06 just -- we weren't -- we weren't comfortable

07 early on that we had all the same data that BP  
08 necessarily had for their report.

09 Q. What data did you collect subsequent  
10 to October of -- I'm sorry, September of 2010  
11 that you weren't -- well, strike that.

12 The Bly report contained data,  
13 correct?

14 A. That's correct.

15 Q. And you relied, in part, on that  
16 data?

17 A. I believe that the team looked at  
18 some of the results of the Bly report and their  
19 attachments, yes.

20 Q. Okay. So once you have got that  
21 information, that data and those attachments,  
22 what data did you obtain subsequent to that date,  
23 the issuance of the Bly report, other than DMV  
24 study?

25 A. Okay. Our team was still looking at  
00066:01 a detailed hydraulic analysis of what occurred  
02 during the initial choke/kill boost line  
03 displacement and the negative test final  
04 displacement. That was a -- that was a key  
05 report that was provided by a third party.  
06 There was also a report by an  
07 external cementing expert that we had to wait on  
08 those results.

Page 71:04 to 71:05

00071:04 Q. You weren't able to talk to anybody  
05 from Halliburton; is that correct?

Page 71:07 to 71:07

00071:07 THE WITNESS: That's correct.

Page 71:22 to 72:23

00071:22 Q. Why did you choose not to review --  
23 or why didn't you review any of the deposition  
24 transcripts?

25 MR. DOYEN: I just would caution you as  
00072:01 you -- in answering that, you can't answer as to  
02 anything that you've heard from counsel or  
03 instructed from counsel in connection with that  
04 question.

05 THE WITNESS: I don't think I can answer  
06 that question.

07 BY MR. KRAUS:

08 Q. Okay. Would that be something you  
09 think would be relevant to your -- to your  
10 investigation?

11 A. Would I think that the test -- the  
12 depositions of BP would be relevant to the  
13 investigation?  
14 Q. Yes.  
15 A. Yes.  
16 Q. Okay. Because I've seen you at  
17 depositions before; isn't that true?  
18 A. Yes, that's correct.  
19 Q. Okay. Related to the investigation,  
20 did Transocean's investigation find any action by  
21 a Transocean employee that caused or contributed  
22 to the events of April 20, 2010, and specifically  
23 the sinking of the Deepwater Horizon?

Page 73:01 to 73:05

00073:01 Q. Yes. Did you guys find in your  
02 investigation -- the investigation team, did they  
03 find anything that Transocean did wrong that led  
04 to the sinking of the Deepwater Horizon?  
05 A. No, they did not.

Page 73:21 to 74:17

00073:21 I just want to follow up on some  
22 questions that the U.S. and states had. First of  
23 all, can you tell us what your hourly rate is for  
24 your work on the investigation?  
25 A. The hourly rate was 277 per hour.  
00074:01 Q. Okay. And is that the same rate for  
02 your work on the investigation and your work  
03 testifying today, or is there a different rate  
04 for testifying?  
05 A. There's a different rate for  
06 depositions and court time.  
07 Q. Okay. So does that include a  
08 different rate for your preparation for  
09 depositions?  
10 A. No.  
11 Q. Okay. And what is that rate?  
12 A. Are you referring to the deposition?  
13 Q. That's right.  
14 A. I have to check the schedule to be  
15 sure, but it's probably about \$100 an hour more.  
16 Q. All right.  
17 A. Maybe a little bit more.

Page 75:14 to 75:17

00075:14 Q. Okay. So you attended about ten  
15 interviews, correct?  
16 A. Something around whatever the number  
17 I recited, plus or minus.



Page 76:04 to 76:10

00076:04 Q. Okay. Now, when were you retained  
05 to consult for the litigation?  
06 A. I believe it was -- I had mentioned  
07 it was mid-June, after we finished the report.  
08 Q. When was the prospect of consulting  
09 for the litigation first mentioned to you?  
10 A. That was quite some time ago.

Page 76:13 to 76:15

00076:13 Q. Okay. Was it summer or was it fall?  
14 A. I believe it was in -- it was in the  
15 summer of 2010.

Page 76:18 to 76:19

00076:18 Q. Before the Bly report or after?  
19 A. It was before the Bly report.

Page 77:02 to 77:09

00077:02 Q. Okay. Now, earlier you said that  
03 you were charged with reviewing the -- reviewing  
04 the facts from an operator's perspective, right?  
05 A. Yes.  
06 Q. So specifically, what areas did you  
07 review from an operator's perspective?  
08 A. Our team reviewed the well design  
09 and construction aspects of the Macondo Well.

Page 77:14 to 78:03

00077:14 Q. Did you review well control?  
15 A. The -- well control with respect of  
16 the incident to some extent, yes.  
17 Q. Anything else that you reviewed?  
18 A. I think well design and construction  
19 is pretty comprehensive. It covers a lot of  
20 things.  
21 Q. Okay. Can you break down those  
22 things for me? What are the different parts of  
23 well design and construction that you reviewed?  
24 A. Well, the team looked at the aspects  
25 of the subsea wellhead, the casing, float -- the  
00078:01 float equipment, the cement, and the temporary  
02 abandonment program, the negative test  
03 procedures, and the riser displacement.

Page 78:23 to 79:17

00078:23 Q. Did you find anything wrong with the  
24 selection of the subsea wellhead for this well?  
25 The choice of subsea wellhead.

00079:01 A. We -- I don't know that we assessed  
02 the selection, per se, but the wellhead that  
03 was -- that was implemented, there were no -- the  
04 investigation found there were no failure points  
05 associated with the subsea wellhead system or its  
06 components.

07 Q. Okay. So nothing -- you didn't find  
08 anything wrong with the wellhead?

09 A. No.

10 Q. The next thing, casing design.  
11 Setting aside the production casing, was there  
12 anything that you found that was wrong with the  
13 design of the casing -- of the well casing up  
14 until the production casing?

15 A. For the investigation, those other  
16 casing strings, they were not assessed. That was  
17 not part of the evaluation.

Page 80:06 to 81:22

00080:06 Q. Okay. You agree with me, on  
07 April 9th, they reached what they call total  
08 depth, and then they spent a period of five days  
09 or so logging the well, right?

10 A. I'd have to refer to the timeline in  
11 the reports.

12 Q. Well, that's not exact dates. But  
13 you recall early April, they finished drilling,  
14 they spent some time logging the well?

15 A. Yes, that's the way I recall it.

16 Yes.

17 Q. And you would agree with me that the  
18 well was static during that period of time; it  
19 was not flowing?

20 A. Yes, the well was not flowing at  
21 that period -- at that point in time.

22 Q. And would you agree with me that  
23 nothing that had been done to the well prior to  
24 that logging would affect the events of  
25 April 19th and 20th? I mean, the well was  
00081:01 static, right?

02 A. Well, as I mentioned, they -- we  
03 didn't look at anything that happened prior --  
04 any prior casing strings or anything before that,  
05 specifically. So to the extent that may have had  
06 some impact, no, we didn't -- we didn't look at  
07 that. Beyond that, you know, that's -- we had --  
08 we had no indication other than the -- it was a  
09 very difficult and challenging well to drill. I  
10 mean, there were a lot of -- there were a lot of  
11 issues with, you know, pore pressure frac

12 gradient that influenced a lot of decisions.  
13 Q. And are issues with pore fracture --  
14 pore pressure and frac gradient, typical in  
15 deepwater wells drilled in the Gulf of Mexico?  
16 A. I would say that pore pressure and  
17 frac gradient issues are relatively common.  
18 Q. And so based on your investigation,  
19 you did not find anything that occurred prior to  
20 early April, when they started logging the well,  
21 to have affected the events on April 19th and  
22 20th?

Page 82:08 to 82:15

00082:08 THE WITNESS: Other than to the extent that  
09 it -- the change in the -- in the drilling  
10 program had a cascading effect on the decisions  
11 that were made. So I would say, yeah, some of  
12 the -- some of the results of the drilling,  
13 earlier in the well particularly, the last whole  
14 section, had some influence on those decisions  
15 that were subsequently made.

Page 82:17 to 83:08

00082:17 Q. What were those results that you're  
18 referring to, the impacts?  
19 A. The -- I'm going a lot from memory  
20 here, but what we reviewed was that there were --  
21 there was challenge drilling the last hole  
22 section, in particular amongst others prior to  
23 that, and that TD was -- the total depth was cut  
24 short.  
25 Q. But you agree with me that after  
00083:01 drilling that hole section, the well was stable  
02 and quiet for a week?  
03 A. The well was static during that  
04 period of logging.  
05 Q. So the -- whatever difficulties were  
06 encountered was managed over that week, and the  
07 well was quiet before additional activities took  
08 place, running the casing, etcetera?

Page 83:10 to 83:14

00083:10 THE WITNESS: The well was static from the  
11 time the drilling ceased on that last hole  
12 interval until the time they undertook the casing  
13 and cementing operations, and other operations  
14 subsequent to that.

Page 83:16 to 83:22

00083:16 Q. When did the well start flowing?  
17 A. With respect to the timeline?  
18 Q. Right. Or just give me the day.  
19 A. Well, the day that the well started  
20 flowing was April -- in the final hole section,  
21 the well started flowing after the casing was  
22 installed on April the 20th.

Page 84:07 to 84:10

00084:07 Q. So before April 20th, you would  
08 agree with me, from a well control perspective,  
09 none of the decisions or activities before  
10 April 20th impacted well control on April 20th?

Page 84:13 to 84:13

00084:13 Q. Based on your investigation.

Page 84:15 to 84:16

00084:15 THE WITNESS: No, I couldn't necessarily  
16 agree with that.

Page 84:18 to 87:17

00084:18 Q. Can you explain which decisions  
19 prior to April 20th impacted the well control on  
20 April 20th?  
21 A. Well, as we refer to investigation  
22 in the investigation, the -- we can go back  
23 and -- I can't cite from memory here. We can go  
24 back and look at the -- some of the findings in  
25 the investigation, I could cite them out.  
00085:01 Q. Absolutely. Anything that happened  
02 before April 20th that had an impact on well  
03 control.  
04 A. Well, there were a number of  
05 decisions that were made.  
06 Q. Okay. What page are you looking at,  
07 sir?  
08 A. I'm on page 72.  
09 Q. Okay. Okay. So let's just take  
10 them one by one. That first bullet point. Did  
11 that affect well control on April 20th?  
12 A. Based on the findings here, these  
13 decisions all had a cascading effect that  
14 eventually impacted the situation that caused the  
15 well control situation on April 20th.  
16 Q. Okay. Let me be more specific.  
17 did -- this first bullet point is BP's selection  
18 of a long string production casing, correct?  
19 A. Yes.

20 Q. Did that impact the ability of  
21 Transocean or anyone else to control the well on  
22 April 20th?  
23 A. The summary here in bullet points of  
24 what has been put together on the investigation  
25 is, these things were all interrelated in the --  
00086:01 what occurred on the final hours on the 20th of  
02 April.  
03 Q. I appreciate that, Mr. Roller. I'm  
04 asking you how is it related. How is bullet  
05 point -- that first bullet point on Page 72  
06 related to Transocean's ability to control the  
07 well on April 20th?  
08 A. Well, the -- if you install a casing  
09 string, that changes your temporary abandonment  
10 procedures tremendously at the end of the well.  
11 So there are a number of things that had a  
12 cascading impact on what happened at the -- at  
13 the end of the well that the investigation team  
14 found were all contributory in the cause of  
15 the -- of the well control incident.  
16 Q. Okay. And maybe I'm not being  
17 clear. What are the elements of well control?  
18 What is the driller's key responsibility?  
19 A. Okay. The driller has a number of  
20 key job responsibilities.  
21 Q. What does the operator expect the  
22 driller to do?  
23 A. Based on my past experience?  
24 Q. Absolutely.  
25 A. Based on my past experience, you'd  
00087:01 expect the driller to operate the rig in a safe  
02 and workmanlike manner. I think that's the  
03 overarching principal.  
04 Q. Is one of the things that an  
05 operator expects a driller to do is continuously  
06 monitor the well?  
07 A. Monitoring the well is a -- is a key  
08 job responsibility for the driller.  
09 Q. Would you agree with me that  
10 continuously monitoring the well?  
11 A. And I don't know that we couldn't  
12 say that someone is -- a driller is continuously  
13 monitoring the well every second he's up there,  
14 but the driller or drill crew has that  
15 responsibility to monitor the well.  
16 Q. To continuously monitor the well?  
17 A. To monitor the well.

Page 88:01 to 92:05

00088:01 Q. And who -- what does the driller  
02 have to keep his eyes on?  
03 A. The driller, based on my experience,  
04 has to keep his eyes on the functions that he's

05 performing as driller, in addition to monitoring  
06 the well.

07 Q. Okay. All times?

08 A. He continue -- he moni- -- he will  
09 monitor the well in conjunction with his other  
10 activities.

11 Q. At all times, right?

12 A. The driller or someone on that crew  
13 is designated to monitor the well.

14 Q. And that's what the operator expects  
15 from the driller?

16 A. Yes, I would -- I would say that's  
17 safe, to expect that from the operator.

18 Q. And driller also needs to take  
19 action in response to the data that the well is  
20 giving him?

21 A. The -- to the extent that the  
22 driller has the available data, that, you know,  
23 he would monitor the data and base his actions on  
24 the interpretation of that data that he's seeing.

25 Q. So the driller -- operator would  
00089:01 also expect the driller to shut in the well if  
02 there's a kick?

03 A. Yes. He would expect that -- he  
04 would expect that if the driller recognizes  
05 there's a kick, that he would shut it -- he would  
06 shut it in.

07 Q. Fair enough. So other than  
08 monitoring the well, detecting a kick, shutting  
09 in the well, what other activities do you  
10 consider part of well control?

11 A. Part of the well control  
12 specifically?

13 Q. Yes.

14 A. Monitoring the well, shutting it in  
15 if there's a kick. There's a number of things  
16 that drillers are responsible for within the  
17 realm of well control operations. I don't have  
18 those in front of me right now for Transocean,  
19 so. . .

20 Q. Okay. But as an operator, what  
21 other well control responsibilities does an  
22 operator expect a driller to do?

23 A. I would expect that they would --  
24 they would have all the equipment lined up, and  
25 he would know what the operating status of the  
00090:01 equipment, the blowout preventers and such, is,  
02 that he knows what's available to him.

03 Q. Okay. So now turn back to page 72.

04 First of all, did BP's choice of a long string  
05 production casing design impact the driller or  
06 the drilling crew's well control -- ability to  
07 control the well on April 20th?

08 A. Now, I believe that, you know, if  
09 they cased hole application of this, that it

10 changed -- that it was a change beyond normal  
 11 drilling operations, obviously, for what they --  
 12 what they typically do. This was a change in  
 13 temporary abandonment procedures so that they had  
 14 -- it was not a drilling operation that they were  
 15 -- that they were looking at.

16 Q. Okay. I'm not sure that answers my  
 17 question. So we just discussed the different  
 18 pieces that constitute well control, correct?

19 A. Yes.

20 Q. All right. Are any of those pieces  
 21 impacted by the fact that it's a production  
 22 casing as opposed to a liner?

23 A. The principles -- the basic  
 24 principles of the driller's responsibilities  
 25 would be similar, you know, throughout the  
 00091:01 operations.

02 Q. So the basic principles would be  
 03 similar, correct?

04 A. Yes.

05 Q. And would the driller's ability to  
 06 execute those principles be similar?

07 A. I don't know specifically on what  
 08 they see out there monitoring, from the data  
 09 monitors, you know, what they have for a cased  
 10 hole application versus drilling application.  
 11 There's some -- there's a -- obviously, a number  
 12 of things that aren't available to them to use as  
 13 tools. So there is -- there are some  
 14 differences.

15 Q. So you're saying you don't know what  
 16 the driller had his screen set at?

17 A. No, I do not.

18 Q. But would you expect that the  
 19 driller would have his screen set in a way such  
 20 that he could detect kicks?

21 A. I would expect a driller to have his  
 22 screen set up to where he can monitor everything  
 23 on a well, including what the -- pressure and  
 24 flow and things like that.

25 Q. And for the purpose of detecting  
 00092:01 kicks if they occur, right?

02 A. That would be part of it. He would  
 03 be set up to where he could perform his job,  
 04 whatever he has to do, and well control is part  
 05 of that.

Page 92:25 to 93:17

00092:25 Q. Okay. So let me ask again. Would  
 00093:01 Devon or any other operator expect that its  
 02 drillers have its equipment set up to monitor for  
 03 a kick?

04 A. I believe that any operator that --  
 05 would expect that the drillers would have

06 monitors available to them set up so he could  
07 access the data he needed to perform his job,  
08 whichever phase of the operation that might be.  
09 Q. And part of his job is to watch for  
10 kicks?  
11 A. Yes, that's part of his job.  
12 Q. So does BP's choice of long string  
13 production casing prevent the driller from  
14 watching for a kick?  
15 A. The fact that we had a -- as I  
16 mentioned, we had a long string casing design in  
17 there. It changes the aspects of it.

Page 94:03 to 94:09

00094:03 Q. Okay. So would you agree with me  
04 that BP's choice of a long string production  
05 casing does not prevent a driller from detecting  
06 a kick on April 20th?  
07 A. I would agree that the choice of  
08 long string casing, in and of itself, does not  
09 prevent a driller from detecting a kick.

Page 94:16 to 94:24

00094:16 Q. Now, did BP's choice of long string  
17 production casing prevent the driller or the  
18 drilling crew from shutting in the well on  
19 April 20th?  
20 A. No, it did not.  
21 Q. Okay. So did BP's choice of a long  
22 string production casing prevent the Transocean  
23 drilling crew from executing any of its well  
24 control responsibilities on April 20th?

Page 95:05 to 95:16

00095:05 Q. Based on your investigation, this  
06 first bullet, did BP's choice of long string  
07 production casing prevent Transocean's drilling  
08 crew from exercising well control on April 20th?  
09 A. No, it did not prevent them from  
10 exercising well control.  
11 Q. Next bullet. Did the use of -- next  
12 bullet relates to foam cement, right?  
13 A. That's correct.  
14 Q. Does the second bullet, relating to  
15 foam cement, prevent Transocean's drill crew from  
16 exercising well control on April 20th?

Page 95:18 to 96:04

00095:18 THE WITNESS: No, the use of foam cement,



19 in and of itself, does not prevent a drill crew  
 20 from exercising well control functions.  
 21 BY MR. CHEN:  
 22 Q. Okay. Third bullet goes to -- why  
 23 don't you summarize what the third bullet tells  
 24 us.  
 25 A. Okay. The third bullet says,  
 00096:01 "Bottom hole static temperature utilized for  
 02 cement testing was incorrect, causing doubts as  
 03 to the accuracy of the bottom hole circulating  
 04 temperature."

Page 96:08 to 96:18

00096:08 THE WITNESS: Let me -- let me -- let me  
 09 slow down. I'll repeat. "The bottom hole static  
 10 temperature utilized for cement testing was  
 11 incorrect, causing doubts as to the accuracy of  
 12 the bottom hole circulating temperature." That's  
 13 the first sentence. Do you want me to go on?  
 14 BY MR. CHEN:  
 15 Q. No, no. So does anything in that  
 16 third bullet point on page 72 prevent the  
 17 Transocean crew -- drilling crew from exercising  
 18 well control on April 20th?

Page 96:20 to 97:05

00096:20 BY MR. CHEN:  
 21 Q. Based on your investigation.  
 22 A. No. No, it does not.  
 23 Q. Okay. Now, the fourth bullet point  
 24 goes to cement testing program, correct?  
 25 A. Yes, it's in reference to cement --  
 00097:01 excuse me, to the cement testing program.  
 02 Q. Now, does anything in that fourth  
 03 bullet point on page 72 prevent the Transocean  
 04 drilling crew from exercising well control on  
 05 April 20th, based on your investigation?

Page 97:07 to 97:10

00097:07 THE WITNESS: No, there's nothing in that  
 08 bullet that would automatically preclude the  
 09 Transocean drilling crew from performing well  
 10 control duties.

Page 98:02 to 98:04

00098:02 Q. Okay. Let's move to the fifth  
 03 bullet point on page 72.  
 04 A. Okay.

Page 98:11 to 98:24

00098:11 Q. So the fifth bullet point relates to  
 12 the attempts to convert the float collar,  
 13 correct?  
 14 A. Yes.  
 15 Q. Now, did anything in that fifth  
 16 bullet point prevent the Transocean drilling crew  
 17 from exercising well control on April 20th, 2010,  
 18 based on your investigation?  
 19 MR. DOYEN: Same objection to the form.  
 20 BY MR. CHEN:  
 21 Q. Do you understand my question,  
 22 Mr. Roller?  
 23 A. I think I do. There's a lot in this  
 24 bullet, so. . .

Page 99:04 to 99:08

00099:04 Q. Sure. Does anything listed in  
 05 bullet point 5 on page 72 prevent the Transocean  
 06 crew from exercising well control on the  
 07 Deepwater Horizon on April 20, 2010, based on  
 08 your investigation?

Page 99:10 to 99:16

00099:10 THE WITNESS: There's nothing in that  
 11 bullet point that would prevent the drill crew  
 12 from exercising well control.  
 13 Q. Okay. What about bullet six,  
 14 relating to circulation? Does anything in that  
 15 bullet point prevent the Transocean crew from  
 16 exercising well control on April 20th?

Page 99:18 to 100:14

00099:18 THE WITNESS: No, I don't see anything  
 19 specific in that bullet point that would preclude  
 20 the drill crew from exercising well control.  
 21 BY MR. CHEN:  
 22 Q. Okay. Now seventh bullet point,  
 23 which is, mud or spacer may have contaminated the  
 24 cement slurry. Do you see that?  
 25 A. Yes.  
 00100:01 Q. Okay. Does anything in that seventh  
 02 bullet point prevent the Transocean crew from  
 03 exercising well control on April 20th on the  
 04 Deepwater Horizon?  
 05 A. No, I don't see anything in that  
 06 bullet point that would preclude the drill crew  
 07 from exercising well control on April 20th.  
 08 Q. Okay. Last bullet relates to cement

09 possibly being lost to the formation, correct?  
10 A. That's correct.  
11 Q. Now, does anything in that last  
12 bullet, bullet 8 on page 72, prevent the  
13 Transocean drilling crew from exercising well  
14 control on April 20th, on the Deepwater Horizon?

Page 100:16 to 101:02

00100:16 THE WITNESS: No, I don't see anything in  
17 bullet point 8, the last bullet point here, that  
18 would preclude the drill crew from exercising  
19 well control on that date.  
20 BY MR. CHEN:  
21 Q. So, Mr. Roller, would you agree with  
22 me that the well design -- nothing in the well  
23 design and production casing cement findings of  
24 fact as presented on this page and in this  
25 section of the report impacted the Transocean  
00101:01 crew's ability to exercise well control on  
02 April 20th?

Page 101:05 to 101:09

00101:05 THE WITNESS: There's the -- based on the  
06 bullet points here in the well design summary,  
07 there's nothing in any individual bullet point  
08 that would preclude the drill crew from  
09 exercising well control on the rig.

Page 101:11 to 101:17

00101:11 Q. Okay. And are you putting any  
12 qualification on that? Because you said "not in  
13 any individual bullet point."  
14 A. Well, I think we discussed earlier  
15 the trickle-down effect of a combination of  
16 things in the well design, which had some impact  
17 down the road.

Page 101:22 to 101:25

00101:22 Q. So looking at these eight bullet  
23 points, what combination of bullet points would  
24 prevent the driller from being able to exercise  
25 well control on April 20th?

Page 102:03 to 102:08

00102:03 Q. If you considered that.  
04 A. I believe I'm referring to the  
05 report in total. There's -- the bullet points

06 here on the well design itself does not impact  
07 the ability of the drill crew to exercise well  
08 control.

Page 102:19 to 102:24

00102:19 Q. Okay. Let me ask that again. So I  
20 thought we had gotten there. Let me ask you  
21 again, Mr. Roller. Does anything in Chapter 3.1,  
22 Well Design and Production Casing Cement, prevent  
23 the Transocean's crew from exercising well  
24 control on April 20th?

Page 103:01 to 103:01

00103:01 THE WITNESS: No.

Page 108:10 to 108:12

00108:10 Q. Did you perform any cement testing?  
11 A. Our team did not, in and of itself,  
12 perform any cements testing, no.

Page 109:02 to 109:09

00109:02 Q. Did you perform any OptiCem  
03 modeling?  
04 A. No.  
05 Q. Did you take any other cement  
06 software and perform modeling, like CemCADE or  
07 anyone else's cement software?  
08 A. We don't -- we did not use any  
09 CemCADE modeling in the analysis.

Page 109:13 to 109:21

00109:13 Q. Did anyone conduct any cement  
14 modeling, to your knowledge?  
15 A. I believe Mr. Birch did initially.  
16 Q. What type of modeling did he do?  
17 A. I believe he was running a CemCADE  
18 model, initially.  
19 Q. What were the -- what were the  
20 results of that modeling?  
21 A. They were inconclusive.

Page 113:04 to 114:18

00113:04 Q. Okay. Fair enough. I want to  
05 ask you some questions about Stress. Stress  
06 prepared -- well, at least there's four  
07 appendices attached to the TO report. There's a

08     condo casing calculations prepared by Stress.  
 09     Are you familiar with that report?  
 10         A.     Yes, I am.  
 11         Q.     And then there's also a testing of  
 12     cement float report by Stress. Are you familiar  
 13     with that?  
 14         A.     Yes, I am.  
 15         Q.     And so the -- for the record, the  
 16     first two were Appendix B and C. Appendix G  
 17     attaches the hydraulic analysis in the Macondo  
 18     252 well prior to incident April 20, 2010, by  
 19     Stress Engineering. Are you familiar with that  
 20     report?  
 21         A.     Yes, I am.  
 22         Q.     And then Appendix N is structural  
 23     analysis of Macondo 252 work string. Are you  
 24     familiar with that report?  
 25         A.     Yes, I'm familiar with the report.  
 00114:01         Q.     Other than those four reports, did  
 02     Stress Engineering prepare any other reports for  
 03     your team?  
 04         A.     I don't -- I don't recall that they  
 05     did a lot of work for us. So it was -- for my  
 06     team, I don't believe that there was anything  
 07     else done for my team from Stress.  
 08         Q.     Okay. Do you know of any other  
 09     reports that Stress prepared for any of the other  
 10     teams for the entire Transocean investigation?  
 11         A.     Oh. Well, the -- I think you  
 12     referred to one of the Stress reports -- I  
 13     believe it was maybe the last one that you  
 14     mentioned that had to do with drill string.  
 15         Q.     Right. Structural analysis of the  
 16     Macondo 252 work string.  
 17         A.     I believe that was -- that was  
 18     prepared for another group.

Page 114:25 to 115:09

00114:25         Q.     What work did you ask Stress to do  
 00115:01     or do you know of that Stress was doing on behalf  
 02     of the investigation team that did not result in  
 03     a report?  
 04         A.     Oh. Stress did some other analyses  
 05     for -- as part of another team's work on that.  
 06         Q.     Can you tell me the subject matter  
 07     of that analysis?  
 08         A.     I believe they had done some float  
 09     calculations for the mud gas separator.

Page 127:16 to 127:18

00127:16         Q.     So your team investigated whether  
 17     flow came up the annulus or it went down and up

18 the shoe track up the casing, correct?

Page 127:20 to 127:20

00127:20 THE WITNESS: Yes.

Page 129:02 to 129:13

00129:02 Q. And so does that mean that the  
03 hydrocarbons entered up the casing, went up the  
04 casing to the wellhead?  
05 A. Yes.  
06 Q. And is that not only the  
07 Transocean -- what the Transocean report says,  
08 but also your team's finding?  
09 A. Yes.  
10 Q. And you agree with that?  
11 A. Yes, I agree with that.  
12 Q. Based on everything you've reviewed?  
13 A. Yes, based on --

Page 129:15 to 129:16

00129:15 THE WITNESS: Yes, based on what we  
16 reviewed.

Page 135:04 to 135:06

00135:04 Q. What was the process for  
05 investigating the areas that you were responsible  
06 for on the investigation?

Page 135:09 to 135:14

00135:09 Q. Were there daily meetings? weekly  
10 meetings?  
11 A. Yes.  
12 Q. Was that daily? Yes to daily or. . .  
13 A. Yes. We had daily ops meetings with  
14 the investigation team.

Page 138:08 to 138:12

00138:08 Q. Okay. Did you have daily meetings  
09 with your team, or also other teams?  
10 A. I don't recall that we had a  
11 team-on-team interaction-type meeting with one  
12 team to the other.

Page 138:18 to 138:22

00138:18 Q. Okay. Did the team leaders meet  
19 amongst themselves to confer about the progress?  
20 A. Yes.  
21 Q. How often did that occur?  
22 A. That was generally on a daily basis.

Page 139:08 to 139:18

00139:08 Q. Okay. So what daily meetings did  
09 you have?  
10 A. There were a daily operations  
11 meetings that occurred generally on a --  
12 generally on a daily basis.  
13 Q. Okay. What happened at the  
14 operations meetings?  
15 A. There was discussion about project  
16 progress in general and some of the areas that  
17 people were working on, data request, things like  
18 that.

Page 144:20 to 145:04

00144:20 Q. Do you know of any other team leads  
21 that were asked to provide litigation support?  
22 A. Yes.  
23 Q. Okay. Do you know of any team leads  
24 that were not -- okay. Which team leads?  
25 A. I believe Derek Hart was also doing  
00145:01 litigation support.  
02 Q. Okay. Who else?  
03 A. I don't know what the other team  
04 leads were doing in that respect.

Page 146:22 to 146:23

00146:22 Q. Mr. Roller, when were you informally  
23 retained to work on litigation matters?

Page 146:25 to 147:02

00146:25 THE WITNESS: I believe my first  
00147:01 interaction with that was in the -- in the summer  
02 of 2010.

Page 150:18 to 150:25

00150:18 Q. I think you said end of summer,  
19 2010, you did your first litigation project,  
20 correct?  
21 A. Yes.  
22 Q. So would there be any way, any  
23 document you could point to or anything that

24 could show us the date that you were asked to do  
25 that project?

Page 151:02 to 151:02

00151:02 THE WITNESS: Yes.

Page 151:07 to 151:08

00151:07 Q. Just describe it. Is it an e-mail?  
08 Is it an invoice? Is it. . .

Page 151:13 to 151:14

00151:13 THE WITNESS: There -- I think there would  
14 be e-mails, would probably be one way.

Page 155:16 to 155:20

00155:16 Q. At any time between July 2010 and  
17 June of 2011, did you ever take any work  
18 information, analysis, facts from your litigation  
19 work -- side of your work and bring it into your  
20 investigation side of your work?

Page 155:22 to 155:24

00155:22 THE WITNESS: I guess I would have to have  
23 some more clarification on what is -- you mean by  
24 a fact, and by some specific examples.

Page 158:20 to 159:08

00158:20 Q. Okay. Mr. Roller, before we broke,  
21 the question was whether or not you took anything  
22 from your work on the litigation consulting side  
23 and brought it into your work on the  
24 investigation side.  
25 A. At various times that -- when I did  
00159:01 learn facts during the work for litigation.  
02 Q. So the answer is yes, at times you  
03 did learn facts from the litigation work that you  
04 brought into the investigation side?  
05 A. That's correct.  
06 Q. Did you bring in any analysis that  
07 you did on the litigation side into your  
08 investigative work?

Page 159:10 to 159:10

00159:10 THE WITNESS: No.



Page 161:05 to 161:08

00161:05 Q. Okay. What types of transcripts did  
06 you review four your investigative work?  
07 A. The investigation team reviewed  
08 transcripts from the Coast Guard MMS hearing.

Page 162:19 to 163:06

00162:19 Q. What were the subject matters of the  
20 transcripts you reviewed as part of your  
21 investigation?  
22 A. The subject matters were witness  
23 statements related to the incident.  
24 Q. Were they BP transcripts, or were  
25 they transcripts of other employees? I mean,  
00163:01 what company were the transcripts for?  
02 A. There were transcripts that were  
03 from BP that were of the witness statements that  
04 were transcribed.  
05 Q. Did you review the entire transcript  
06 or only a portion of the transcript?

Page 163:08 to 163:22

00163:08 THE WITNESS: I need to make sure we're  
09 clear on the -- the witness statements from the  
10 Bly investigation team. I don't know how all of  
11 those transcripts, you know -- I -- were  
12 reviewed. I read a lot of them, and so did the  
13 team members.  
14 BY MR. CHEN:  
15 Q. Okay. So now you're saying that you  
16 also reviewed the notes, the Bly investigation  
17 team member notes of their interviews?  
18 A. Yes.  
19 Q. Okay. So that is in addition to  
20 reviewing the Coast Guard testimony?  
21 A. Yes. Those -- I guess I would  
22 classify those as transcripts.

Page 167:22 to 168:03

00167:22 Q. Okay. Articles. What types of  
23 articles did you consider as part of your  
24 investigation?  
25 A. There were -- the exhibits that were  
00168:01 brought up in the House Energy and Commerce, the  
02 government hearings, and in the Coast Guard MMS,  
03 MBI hearings.

Page 172:15 to 172:20

00172:15 Q. Well, let's clear something up. Do  
 16 you consider the TO attorneys to be part of the  
 17 TO investigative team?  
 18 A. The attorneys were in our team.  
 19 Q. Okay. Did the TO attorneys provide  
 20 you with any facts, the members of the team?

Page 172:22 to 172:22

00172:22 THE WITNESS: Yes.

Page 173:24 to 174:01

00173:24 Q. Okay. Let's move on. If you could  
 25 turn your -- turn to the report, page 102.  
 00174:01 A. Okay.

Page 174:06 to 175:21

00174:06 Q. Now, it says, second paragraph, "The  
 07 Transocean investigation team found no evidence  
 08 that the bladder effect is a phenomenon known to  
 09 experts in the drilling industry. Furthermore,  
 10 the investigation team did not identify any  
 11 members of the crew of the Deepwater Horizon  
 12 familiar with the term, including the colleagues  
 13 and supervisors of the drill crew members who  
 14 were killed in the incident allegedly used the  
 15 term." Did I read that correctly?  
 16 A. Yes, I believe you did.  
 17 Q. And did you write this insert?  
 18 A. No, I did not.  
 19 Q. Did you contribute to this insert?  
 20 A. I don't recall that I did.  
 21 Q. Okay. Did you -- do you agree with  
 22 this insert?  
 23 A. Yes, I agree with this insert.  
 24 Q. Okay. So during your interview of  
 25 the ten or so Transocean employees, did you ask  
 00175:01 them whether or not they were familiar with the  
 02 bladder effect? Well, let's take that back a  
 03 step. Did you ask any of them if they had heard  
 04 of the term "bladder effect"?  
 05 A. I don't remember specifically on  
 06 those interviews.  
 07 Q. Okay. But do you personally  
 08 remember asking them about the bladder effect?  
 09 A. I don't remember.  
 10 Q. What about the interview notes that  
 11 the other employees that were interviewed that  
 12 you reviewed, but you did not sit in on, do you

13 remember any of those addressing whether bladder  
14 effect was asked or not?  
15 A. I don't remember.  
16 Q. What about your colleagues, when you  
17 talked to them about the bladder effect, did you  
18 ask them if they had checked with the colleagues  
19 and the supervisors of the drill crew members to  
20 see if they were familiar with the term?  
21 A. I don't remember if they did.

Page 176:22 to 177:07

00176:22 Q. So the question was, do you know  
23 what the basis of these two sentences that I read  
24 earlier is?  
25 A. I don't remember who specifically  
00177:01 wrote that. I'm not sure who did, so I don't  
02 know that basis for that.  
03 Q. Did you review the Transocean well  
04 control manual as part of your investigation  
05 work?  
06 A. I have looked through portions of  
07 the well control manual.

Page 177:20 to 178:06

00177:20 Q. The well control manual. Did you  
21 consider whether the Transocean drilling crew's  
22 actions on April 20th were in compliance with the  
23 well control manual?  
24 A. The well design and process team did  
25 not get into the policies and procedures of the  
00178:01 well control manual.  
02 Q. So you did not -- your team, as far  
03 as you can tell, did not consider whether or not  
04 they were in compliance or not in compliance with  
05 the Transocean well control manual?  
06 A. No.

Page 178:12 to 178:13

00178:12 Whose team was in charge of  
13 evaluating well control on April 20th?

Page 178:15 to 178:20

00178:15 THE WITNESS: The well design, well  
16 construction team was. And part of that task was  
17 looking at to what happened in the last phases of  
18 the well with the temporary abandonment and  
19 subsequent blowout. So part of that did include  
20 some areas that related to well control.

Page 178:22 to 178:24

00178:22 Q. Is it fair to say that your team was  
23 in charge of the evaluating those areas of well  
24 control?

Page 179:01 to 179:02

00179:01 THE WITNESS: I would say that our team  
02 looked at some areas of well control.

Page 179:04 to 179:12

00179:04 Q. Okay. Was there another team that  
05 was responsible for looking at areas of well  
06 control on April 20th besides your team?  
07 A. You know, I would have to refer you  
08 to the report. And there are other sections that  
09 discuss what occurred during well control  
10 operations.  
11 Q. Well control operations on  
12 April 20th during the displacement?

Page 179:14 to 179:17

00179:14 THE WITNESS: In a -- in a -- that's a more  
15 general term. But the well control operations  
16 during the displacement were part of what our  
17 team looked at.

Page 180:15 to 180:15

00180:15 (EXHIBIT NO. 5001 WAS MARKED FOR THE RECORD.)

Page 180:21 to 182:24

00180:21 Q. So this is an e-mail chain, starting  
22 with an e-mail from you, Mr. Roller, to Mr. Bill  
23 Ambrose, copy Wesley Bell and Steve Myers, on  
24 July 29th, 2010, correct?  
25 A. Oh, starting on the back? Yes.  
00181:01 Q. Okay. And do you recognize this  
02 e-mail?  
03 A. It looks like it came from me.  
04 Q. Okay. Is this something you did in  
05 the course of your work for Transocean?  
06 A. Yes, it was.  
07 Q. And it was kept in your files as  
08 part of your work?  
09 A. Yes.  
10 Q. I want you to flip to the second

11 page under the heading Review Well Operations  
 12 Versus TO Operations Policies and Procedures.  
 13 A. Yes. Correct.  
 14 Q. Do you see that?  
 15 A. Yes.  
 16 Q. Now, was there an analysis reviewing  
 17 the well operations against the TO operation's  
 18 policies and procedures?  
 19 A. There was not an analysis of that.  
 20 Q. Now, this indicates that that was an  
 21 area of investigation, correct?  
 22 A. That indicates that was a portion  
 23 that when the investigation started, that was  
 24 being -- the manuals were -- those were being  
 25 reviewed, yes.  
 00182:01 Q. Okay. Was that investigation --  
 02 that portion of the investigation completed?  
 03 A. No, it was not.  
 04 Q. Why was it not completed?  
 05 A. That portion of the investigation  
 06 was not completed because there -- for several  
 07 reasons.  
 08 Q. Okay. Can you provide some of those  
 09 reasons?  
 10 A. Yes. The -- one of the reasons, and  
 11 primarily, was that the team was focused on the  
 12 physical occurrences with the well and the rig at  
 13 that time. And those were a priority to find out  
 14 how the hydrocarbons entered the wellbore and how  
 15 they got to the rig and, you know, how they  
 16 eventually ignited and exploded. So that was --  
 17 that was taking priority over some of the other  
 18 aspects of the investigation.  
 19 Q. Did you have sufficient time to  
 20 complete this task by June 2011? As I see that  
 21 this is dated July 2010, and the report wasn't  
 22 issued until ten or eleven months later.  
 23 A. No, it did not have sufficient time  
 24 for us to complete that aspect of it.

Page 183:06 to 183:09

00183:06 Q. Based on your background as someone  
 07 who's worked as a company man for an operator, do  
 08 you believe that operators trust their drilling  
 09 contractors to have competent well control plans?

Page 183:11 to 183:14

00183:11 THE WITNESS: My experience with an  
 12 operator has been that I would typically vet what  
 13 the contractors have and make sure that I'm  
 14 comfortable with it.

Page 183:19 to 184:20

00183:19 Q. And is that because the drilling  
20 contractor needs to have a reliable well control  
21 policy?

22 A. From my experience, I would review  
23 the contractor's well control plan, and if I or  
24 people working for me thought that it was  
25 sufficient, then we were fine. If we didn't, we  
00184:01 thought we would -- we would supplement it.

02 Q. And my question was slightly  
03 different. My question is whether or not an  
04 operator expects its drilling contractor to have  
05 a competent well control plan.

06 A. The -- the -- my experience with an  
07 operator has been to work with them and review  
08 their well control plans and make sure that I am  
09 comfortable or my people are comfortable that  
10 the -- it is sufficient. And if we feel that  
11 it's lacking, we would default to either  
12 different standards that we had for the company,  
13 or we would talk to the contractor about working  
14 that out between us with a bridging document or  
15 something like that.

16 Q. So let me ask. Are you saying that  
17 it's the operator's obligation to check the  
18 drilling contractor's well control plan?

19 A. No. You asked me what, based on my  
20 experience --

Page 185:06 to 185:08

00185:06 Q. Are you telling me that it is the  
07 operator's responsibility to check the drilling  
08 operator's well control plan?

Page 185:10 to 185:14

00185:10 THE WITNESS: Based on my experience, I  
11 believe that the -- it's an effort that should be  
12 discussed and communicated between both companies  
13 to be sure that you can -- you have the best plan  
14 in effect.

Page 188:04 to 189:02

00188:04 BY MR. CHEN:

05 Q. So earlier, I believe you said that  
06 while at Devon, you used Transocean as a drilling  
07 contractor before?

08 A. Yes, we did.

09 Q. And did you specifically use  
10 Transocean as a drilling contractor on a well

11 that you were responsible for or worked on?  
 12 A. Transocean had some rigs working for  
 13 Devon in my group.  
 14 Q. Okay. And did you review the well  
 15 control manual for each of those rigs working  
 16 under you?  
 17 A. As -- in my position?  
 18 Q. That's right.  
 19 A. As worldwide drilling manager?  
 20 Q. Yeah.  
 21 A. No, I did not.  
 22 Q. Did you make sure that someone else  
 23 reviewed the drilling well control manual for  
 24 each of those rigs that was working under your  
 25 purview?  
 00189:01 A. I don't recall the exact nature of  
 02 how we organized that at the -- right now.

Page 190:11 to 190:12

00190:11 Q. So for Devon are you allowed to stop  
 12 work if you don't understand the operation?

Page 190:14 to 190:15

00190:14 THE WITNESS: I'm not employed by Devon, so  
 15 I don't know what their --

Page 190:21 to 190:21

00190:21 Q. While you were there.

Page 190:23 to 191:05

00190:23 THE WITNESS: Based on my experience in the  
 24 industry, the contractors on the rig, all of the  
 25 contractors, service companies, anybody, has the  
 00191:01 ability to stop work if they see something that's  
 02 unsafe.  
 03 BY MR. CHEN:  
 04 Q. Not only the ability, the duty to  
 05 stop work, right?

Page 191:07 to 191:12

00191:07 THE WITNESS: Well, all of the personnel on  
 08 the rig, as part of their being on the rig, part  
 09 of what they are suppose to do out there, is if  
 10 they see any acts, unsafe acts or unsafe  
 11 situation, they are -- have the ability to stop  
 12 work. That's anybody.

Page 191:22 to 192:03

00191:22 Q. Absolutely. The negative test. Do  
23 you agree that the negative test is a critical  
24 operation?  
25 A. I would agree that the negative test  
00192:01 is a key part of the abandonment procedure of the  
02 well.  
03 Q. Got to get the negative test right?

Page 192:05 to 192:11

00192:05 THE WITNESS: Yes, a negative test has to  
06 be done before they can abandon the well.  
07 BY MR. CHEN:  
08 Q. Right. And you want to get it  
09 right?  
10 A. Yes, you want to -- you want to make  
11 sure the negative test is right.

Page 193:04 to 193:11

00193:04 Q. Well, I'm asking you right now.  
05 A. Oh, okay.  
06 Q. If the drilling contractor -- if the  
07 operator made the wrong call on the negative test  
08 and the drilling contractor had the same  
09 information about the negative test, would you  
10 expect the drilling contractor to go along with  
11 the operator's call?

Page 193:14 to 193:16

00193:14 THE WITNESS: The drilling contractor  
15 personnel that were involved would have to --  
16 would have to understand that it was incorrect.

Page 195:08 to 195:13

00195:08 Q. I am saying that the drilling  
09 contractor believes that the test was not  
10 successful. What does the operator rely on that  
11 drilling contractor to do? Does it rely on that  
12 drilling contractor to stop work until it's  
13 figured out?

Page 195:16 to 195:20

00195:16 THE WITNESS: If the personnel -- the  
17 drilling contractor understand and know that the  
18 negative test is wrong, then there should -- you  
19 would think there would be a discussion to be



20 held with the operator personnel.

Page 196:02 to 196:04

00196:02 Q. They would not proceed until they  
03 discussed it and understood why it was being  
04 called a successful test?

Page 196:06 to 196:09

00196:06 THE WITNESS: If the drilling contractor  
07 personnel knew that the test was not good, then,  
08 yes, you would expect them to stop and discuss it  
09 with the operator before proceeding forward.

Page 196:11 to 196:14

00196:11 Q. Okay. Now, I want to change the  
12 question slightly. Drilling contractor doesn't  
13 understand why the test is called successful.  
14 What do you expect them to?

Page 196:16 to 197:06

00196:16 BY MR. CHEN:  
17 Q. Based on your background as an  
18 operator, expect them to do.  
19 A. From my background as an operator,  
20 based on my experience, the operator has all of  
21 the technical backing and support from, you know,  
22 the whole organization, whether it's geologists  
23 to the engineers that are designing this and the  
24 well site leaders that are interpreting it.  
25 So, you know, my experience has been  
00197:01 that as an operator, I as an operator have to  
02 make those decisions because I don't expect the  
03 contractor to have that degree of technical  
04 background to interpret something that is -- you  
05 know, let's just use the Macondo for an example  
06 that was fairly complex.

Page 197:09 to 197:11

00197:09 Would you expect your contractor,  
10 drilling contractor, to blindly follow a decision  
11 that it did not understand?

Page 197:14 to 197:14

00197:14 Q. On the negative test.

Page 197:16 to 197:21

00197:16 THE WITNESS: I believe that the contractor  
17 would -- if they had an issue, they understood  
18 and had a problem, that they would discuss that  
19 with the drilling foreman or the company reps on  
20 a rig and explain to them, you know, why does it  
21 do this.

Page 198:04 to 198:06

00198:04 Q. The drilling contractor should not  
05 proceed until he gets that explanation and he  
06 understands why the negative test was successful?

Page 198:09 to 198:13

00198:09 THE WITNESS: The drilling contractor would  
10 stop and talk to the operator personnel and  
11 discuss it if they -- if they either were --  
12 thought that it was incorrect or if they didn't  
13 understand it.

Page 203:10 to 203:20

00203:10 Q. Okay. Can you flip to Tab 43 in  
11 your binder? Do you recognize this document?  
12 It's titled, "InTuition Energy Associates,  
13 Deepwater Horizon Macondo Blowout, Review of  
14 Cement Designs and Procedures, Final Report -  
15 Draft Copy Only," and it's signed Phil Ray, the  
16 20th of October, 2010.  
17 A. Yes, I recognize that document.  
18 Q. Okay. And I'll ask you to put a  
19 sticker on the bottom right of it. It's  
20 Exhibit 5002.

Page 203:25 to 204:04

00203:25 Q. And is this one of the reports that  
00204:01 your cementing specialist prepared for your team?  
02 A. This is one of the reports that was  
03 prepared for our well design and construction  
04 team.

Page 205:02 to 205:10

00205:02 Q. Okay. So looking at the date  
03 October 20, 2010, does that tell you whether it's  
04 a final or not?  
05 A. If you're asking me strictly to take  
06 kind of a wild guess at that if it is --

07 Q. A reasoned guess. I don't want a  
08 wild guess.  
09 A. Okay. My recollection is that that  
10 was approximately the date of the final version.

Page 205:13 to 205:17

00205:13 Q. Okay. Now, if you could flip to Tab  
14 40. I will ask to put Tab 40, I'll ask you to  
15 put a sticker 5003 on that. If you could take a  
16 look at this and let me know if it's a draft  
17 report from Mr. Ray.

Page 205:19 to 206:06

00205:19 THE WITNESS: It says preliminary report on  
20 it.  
21 BY MR. CHEN:  
22 Q. It's dated a little bit earlier?  
23 A. It looks like it's the 20th or 28th  
24 of August. I can't tell for sure. A couple of  
25 months earlier.  
00206:01 Q. Right. And so these two documents  
02 were prepared as part of your investigation?  
03 A. Yes, they were.  
04 Q. And they were kept in your files as  
05 part of your investigation?  
06 A. Yes, they were.

Page 206:12 to 206:13

00206:12 Q. I'll ask you to put this sticker on  
13 it. So we'll mark that as Exhibit 5004.

Page 206:16 to 207:12

00206:16 Q. And take a look at this document and  
17 let me know if you recognize it.  
18 A. Yes, I do.  
19 Q. And is this a report prepared for  
20 you from Mr. George Birch?  
21 A. The distribution says here that it's  
22 for Dan Farr and myself.  
23 Q. And is this also a cement report  
24 that was prepared for part as part of your  
25 investigation?  
00207:01 A. Yes, it was.  
02 Q. And was it kept in your files as  
03 part of the course of your work on the  
04 investigation?  
05 A. Yes, it was.  
06 Q. Do you know if this version is  
07 final? Because we didn't locate any other

08 drafts.  
09 A. I would have to cross-reference the  
10 date, but, yes --  
11 Q. Okay.  
12 A. -- I believe it's the final.

Page 209:04 to 209:06

00209:04 cementing contractors. Will you agree that an  
05 operator hires a cementing contractor to design  
06 the cement job?

Page 209:08 to 209:15

00209:08 THE WITNESS: Yes, I would agree that's one  
09 of the reasons an operator would hire a cementing  
10 contractor.  
11 BY MR. CHEN:  
12 Q. Cementing contractors are also hired  
13 to test the cement it's going to pump?  
14 A. Cementing contractors are hired to  
15 test the cement, among other things.

Page 209:21 to 210:14

00209:21 Q. So one of the -- I mean, in addition  
22 to the cement, you have to design a cement  
23 program, including the spacer and any other  
24 things that are pumped with the cement, correct?  
25 A. Yes, that's correct.  
00210:01 Q. Can we call that a cement program?  
02 A. That's -- my definition of a cement  
03 program, that would be part of the cement  
04 program.  
05 Q. Okay. What else is in a cement  
06 program?  
07 A. Based on my experience, the other  
08 parts of the cement program would be calculating  
09 the rheologies of the various fluids, testing  
10 those, and looking at displacement rates, looking  
11 at the proper densities of the fluid, looking at  
12 formation fracture gradient, and looking at the  
13 centralization program and effectiveness, among a  
14 number of other things.

Page 210:23 to 210:25

00210:23 Q. Is it reasonable for an operator to  
24 rely on the cementing contractor to design the  
25 cementing program?

Page 211:04 to 211:07

00211:04 THE WITNESS: I believe that the operator  
05 hires a cement contractor for a number of things.  
06 One of the primary things they do is design  
07 cement programs.

Page 211:25 to 212:01

00211:25 Q. Can an operator rely on a cementing  
00212:01 contractor to test the cementing program?

Page 212:04 to 212:07

00212:04 THE WITNESS: I believe the -- that's one  
05 of the reasons why the operator hires a cementing  
06 contractor, is to test the cement. They're  
07 contemplating using a cementing program.

Page 212:17 to 212:20

00212:17 BY MR. CHEN:  
18 Q. Well, you agree that the operator  
19 hires the cementing contractor to design the  
20 cement program, correct?

Page 212:22 to 212:22

00212:22 THE WITNESS: Yes.

Page 213:07 to 213:10

00213:07 BY MR. CHEN:  
08 Q. I'll move on. Is it reasonable for  
09 the operator to rely on the cementing contractor  
10 to execute the cementing program?

Page 213:12 to 213:19

00213:12 THE WITNESS: Yes, I believe it's  
13 reasonable for the operator to rely on the  
14 cementing contractor to execute the cementing  
15 program.  
16 BY MR. CHEN:  
17 Q. Now, does the operator rely on the  
18 cementing contractor both in the field and back  
19 in the office?

Page 213:24 to 214:18

00213:24 BY MR. CHEN:  
25 Q. Based on your experience?

00214:01           A.       Based on my experience, we would  
02       work with the cementing company both at the well  
03       site and in the office, be working with the  
04       engineering staff that was preparing the well  
05       programs, and they would work side by side in  
06       planning out the whole well program, including  
07       cost and technical aspects of the cement.  
08           Q.       So the operator -- you would expect  
09       the operator to work with the cementing  
10       contractor to develop the plan for the well?  
11           A.       Yes, I would expect the operator's  
12       engineers and staff people would -- and their  
13       specialists would work with the cementing company  
14       personnel to develop that.  
15           Q.       And would you expect the operator to  
16       rely on the cementing contractor to provide  
17       cementing expertise, provide the right answers  
18       when they have questions about cement?

Page 214:21 to 214:24

00214:21   THE WITNESS: One of my expectations in  
22       working with the cementing contractor that they  
23       would provide expertise for that particular  
24       discipline.

Page 215:08 to 215:23

00215:08           Q.       Would you agree that there are  
09       benefits and disadvantages to running more  
10       centralizers?  
11           A.       Are you asking me based on my  
12       experience?  
13           Q.       Absolutely.  
14           A.       Okay. There are various times with  
15       well conditions where there are pluses and  
16       minuses to be considered when running  
17       centralizers.  
18           Q.       And one of the cons is that a  
19       centralizer can break?  
20           A.       That would totally depend on the  
21       type of centralizer that was employed.  
22           Q.       But that's one of the possible  
23       disadvantages?

Page 215:25 to 216:03

00215:25   THE WITNESS: If you were contemplating  
00216:01   using a type of centralizer that was say, let's  
02       say, less robust than some other types, then that  
03       would be a possibility.

Page 216:24 to 217:03

00216:24 Q. Okay. And now, centralizers can  
25 also slide and bunch up?  
00217:01 A. Certain types of centralizers could  
02 slide if there weren't measures taken to ensure  
03 that they did not.

Page 218:25 to 219:05

00218:25 Q. So you would agree that an inline  
00219:01 bowstring centralizer is a good choice?  
02 A. You would have to show me a picture  
03 to make sure we're talking about the same thing.  
04 Q. Well, it's a bowstring, and it's  
05 screwed on between two casing joints.

Page 219:08 to 219:18

00219:08 THE WITNESS: Are you saying it's a  
09 bowstring on a sub, is a threaded sub that screws  
10 in between the pin end of one joint of casing and  
11 the box end of the other?  
12 BY MR. CHEN:  
13 Q. Absolutely.  
14 A. If that's a type you're referring to  
15 and we're talking about the same thing, then I  
16 would say that's probably okay.  
17 Q. It's a good choice, right? It  
18 doesn't slide around?

Page 219:20 to 219:21

00219:20 THE WITNESS: I wouldn't expect it to slide  
21 around.

Page 220:07 to 220:17

00220:07 Q. Sure. Well, let's just take it one  
08 at a time. Sometimes operators don't run  
09 centralizers at all when they're cementing casing  
10 or a liner?  
11 A. In a very, very broad sense, that  
12 might be correct. But in recent history, that's  
13 not -- that's not my experience.  
14 Q. Okay. At times in recent history,  
15 sometimes they cement casing or liner with zero  
16 or very few centralizers. Would you agree with  
17 that?

Page 220:20 to 220:22

00220:20 THE WITNESS: That would totally depend on

21 which casing string or liner string you're  
22 specifically referring to.

Page 220:24 to 221:13

00220:24 Q. Okay. Have you ever cemented a  
25 well -- cemented a casing or a liner with six or  
00221:01 less centralizers installed on it, any interval?  
02 A. Any interval?  
03 Q. Yes.  
04 A. In any interval, including all  
05 conductor and surface strings, yes.  
06 Q. Excluding conductors and surface.  
07 A. Well, you'd have to tell me what  
08 string you're talking about.  
09 Q. The third string or deeper.  
10 A. Talking about production string?  
11 Q. Final production string.  
12 A. I don't remember running that few or  
13 less centralizers on a final production string.

Page 222:08 to 223:21

00222:08 Q. And can you take a look at Tab 7.  
09 A. I think that's where we were, right?  
10 Q. Yep. This is an e-mail from George  
11 Birch to you dated September 28, 2010, correct?  
12 A. Yeah, that's what it says.  
13 Q. This was kept in your files as part  
14 of your investigation?  
15 A. Okay.  
16 Q. And it was created in the ordinary  
17 course of your investigation?  
18 A. Okay.  
19 Q. Is that a yes?  
20 A. If we're referring back to the  
21 e-mail, I see the e-mail. Yes, now I recognize  
22 the attachment.  
23 Q. Okay. And I would like to flip to  
24 Item 7. And George's note to you says, "From our  
25 own evaluations simulator, the indications are  
00223:01 there should have been practically no channeling  
02 over that centralized interval where we had six  
03 centralizers." Do you see that? .7.  
04 A. Oh, 7, I'm sorry. .  
05 Q. Specifically I want to talk about  
06 George's comment to you.  
07 A. Okay, so this is a comment -- okay,  
08 that's the -- I believe that's a statement by Mr.  
09 Roth.  
10 Q. So, No. 7 is a statement by Mr.  
11 Roth?  
12 A. Okay.  
13 Q. And under No. 7 is George's comment



14 to that statement, correct?  
15 A. Yes.  
16 Q. And George writes, "From our own  
17 evaluations with a simulator, the indications are  
18 there should have been practically no channeling  
19 over that centralized interval where we had six  
20 centralizers," correct?  
21 A. Yes, that's correct.

Page 224:04 to 224:07

00224:04 Q. And if there's practically no  
05 channeling over the centralized interval, that  
06 means that centralized interval was filled with  
07 cement?

Page 224:10 to 224:10

00224:10 THE WITNESS: That's what he says here.

Page 224:12 to 224:14

00224:12 Q. And do you agree that if there's no  
13 channeling there, it should be filled with  
14 cement?

Page 224:17 to 224:21

00224:17 Q. By definition.  
18 A. Barring any other complications in  
19 the cement job. You can't say -- you would have  
20 to be -- you would have to exclude a whole lot of  
21 other problems.

Page 225:06 to 225:13

00225:06 Q. So we're talking about the area  
07 where there was six centralizers, right?  
08 A. That's correct.  
09 Q. And Mr. Birch is indicating that  
10 based on Transocean's modeling, there should be  
11 no channeling over that centralizer interval,  
12 correct?  
13 A. That's correct.

Page 226:06 to 226:10

00226:06 Q. So we would have to ask Mr. Birch --  
07 A. Mr. Birch.  
08 Q. -- what he's talking about? So,  
09 when you received this, what did you understand  
10 it to mean?

Page 226:12 to 226:24

00226:12 THE WITNESS: In the discussions relating  
13 to this, we understood that the bottom portion of  
14 the well, based on the discussions with Mr. Birch  
15 on this, we understood from him that on the  
16 bottom portion of the well, there would have been  
17 good centralization with that particular  
18 configuration. But above that, there was very  
19 likely channeling was occurred -- above where the  
20 top centralizer was.  
21 BY MR. CHEN:  
22 Q. So focusing in the area with the  
23 good centralization and no channeling, would you  
24 expect there to be cement there?

Page 227:02 to 227:05

00227:02 Q. If you know.  
03 A. You would have to -- I don't know  
04 with 100 percent certainty whether you could  
05 expect cement to be there.

Page 235:05 to 235:17

00235:05 Q. Okay. Tell me about the good times.  
06 A. The -- used Halliburton as a company  
07 man for, you know, various times over my career.  
08 Q. Sure. I mean, they're one of the  
09 premier cementers in the world along with, what,  
10 Schlumberger and maybe a couple others?  
11 A. Say Halliburton's one of the big  
12 three.  
13 Q. Okay. And for purposes of the  
14 record, who are the other two?  
15 A. That would be Schlumberger and Baker  
16 BJ. I'm not sure what their new title is right  
17 now.

Page 236:12 to 237:03

00236:12 Q. Sure. You're the operator. You're  
13 getting ready to have a cement job done on  
14 production casing, and the cementer says, Look,  
15 if you do it the way you're going to do it,  
16 you're going to have severe channeling. Let's  
17 just stop right there. Would you have proceeded  
18 without stopping and trying to analyze the  
19 channelling?  
20 A. Based on my experience, if that had  
21 been brought up by the cementing company, either  
22 when I was working as a drilling engineer or as a

23 manager that were working, we would have to have  
24 more discussions with them to determine just what  
25 the issues were.  
00237:01 Q. You wouldn't have just proceeded  
02 helmel and ignored their recommendations, would  
03 you?

Page 237:05 to 237:14

00237:05 THE WITNESS: When I was working in  
06 drilling operations, we had cement companies  
07 embedded with us and, you know, we would discuss  
08 these things with them before we proceeded on.  
09 BY MR. BOWMAN:  
10 Q. And that's what you would expect to  
11 to happen, correct? Have a discussion?  
12 A. I believe it's -- that, you know,  
13 we, as operators, would have discussions with all  
14 of our contractors.

Page 239:06 to 239:14

00239:06 Q. Okay. By the way, do you know that  
07 there has been cement testing performed by the  
08 Joint Investigation Team that has now come out?  
09 And I'm talking about -- do you know what the  
10 Joint Investigation Team is it?  
11 A. Yes.  
12 Q. And do you know that Judge Barbier  
13 signed an order authorizing testing to be done on  
14 slurries by the Joint Investigation Team?

Page 239:21 to 239:22

00239:21 Q. And have you seen the reports?  
22 A. Yes, I've seen the reports.

Page 241:08 to 241:20

00241:08 Q. Would you have liked to have had  
09 those tests before you completed the Transocean  
10 report?  
11 A. I think we always wanted to have as  
12 much data as we possibly could have to do an  
13 investigation.  
14 Q. Okay. And you know that the test  
15 done by the Joint Investigation Team included  
16 tests of whatever was left from rig samples,  
17 don't you?  
18 A. That's my understanding, that there  
19 were some rig samples used in the testing  
20 process.

Page 242:02 to 242:04

00242:02 Q. Why do you test the rig sample as  
03 opposed to just pulling an ingredient off the  
04 shelf?

Page 242:07 to 242:08

00242:07 THE WITNESS: It's been my -- based on my  
08 experience?

Page 242:10 to 242:17

00242:10 Q. Um-hum (affirmative response.)  
11 A. It's been my experience that you  
12 test samples that are shipped to the rig, you  
13 test samples that come from the rig to be sure  
14 that there are no contamination issues of the  
15 cement that's actually on the rig, that it is the  
16 properties that arrive at the rig as was  
17 specified.

Page 244:16 to 244:18

00244:16 Q. I mean, here's my question. Can  
17 cement properly be considered a barrier until  
18 it's been tested, pressure tested?

Page 244:21 to 245:07

00244:21 THE WITNESS: I think to call it a barrier  
22 that it has to be -- it would need to be tested.  
23 BY MR. BOWMAN:  
24 Q. And that's the reason you test, to  
25 make sure it's a barrier and it's going to work,  
00245:01 right?  
02 A. The reason that you test cement  
03 barriers, to make sure that there, they're in  
04 place, and they're holding.  
05 Q. I understand. And until you know  
06 that you have that barrier, it is not safe to  
07 underbalance a well, is it?

Page 245:09 to 245:25

00245:09 THE WITNESS: I believe that you would rely  
10 on the cement would need to be set and tested to  
11 ensure it's set before you could underbalance the  
12 well.  
13 BY MR. BOWMAN:  
14 Q. And that brings up something else.

15 I'll be kind of quick through there. But through  
16 the Transocean report as I read it, some of the  
17 comments on the cement is that your committee or  
18 your team did not believe that there was  
19 sufficient time for the cement to fully set? Is  
20 right or wrong, or what's your memory on that?

21 A. That was the conclusion of the team  
22 based on Mr. Birch's analysis.

23 Q. Yeah. And that, what, the negative  
24 pressure test was done too quickly, based on that  
25 analysis; is that correct?

Page 246:02 to 246:09

00246:02 THE WITNESS: I don't recall exactly what  
03 he said on the timing on that. I would have to  
04 refer to our report.

05 BY MR. BOWMAN:

06 Q. Do you know who it was that decided  
07 to go ahead and have the negative pressure test  
08 less than 24 hours after the cement had been  
09 poured?

Page 246:11 to 246:12

00246:11 THE WITNESS: Are you asking the specific  
12 person?

Page 246:14 to 246:25

00246:14 Q. No. If you know that, throw it in.  
15 But I doubt if you do.

16 A. The operations that were drawn up  
17 and then the go-ahead to do that was done at the  
18 direction of the operator.

19 Q. The operator being BP in this case,  
20 right?

21 A. That's correct.

22 Q. Okay. During your investigation,  
23 did anyone indicate to you that there was a, I'll  
24 say a higher pay zone than had been told to  
25 Halliburton?

Page 247:02 to 247:03

00247:02 THE WITNESS: I don't remember if that came  
03 up.

Page 247:07 to 247:10

00247:07 Q. Let me ask you this. As of today,  
08 do you have an understanding as to whether there

09 is a hydrocarbon zone, about two foot of sand,  
10 located around 17,467 feet?

Page 247:12 to 247:14

00247:12 THE WITNESS: I would have to go back and  
13 look at the reports and the different documents  
14 to agree with that. I don't know.

Page 247:16 to 248:07

00247:16 Q. I understand. Let me go this way.  
17 Let's assume -- follow me on this one. Okay?  
18 That the cement was designed per BP's request to  
19 be 500 feet above what Halliburton was told was  
20 the highest hydrocarbon zone. Okay? All right?  
21 A. (Witness nods head affirmatively).  
22 Q. And that that would turn out to be  
23 17,300 feet. That is, the highest hydrocarbons  
24 zone supposedly being 17,800 feet. Okay?  
25 A. Okay.  
00248:01 Q. Are you with me so far?  
02 A. I'm with you so far.  
03 Q. What would be the effect if, in  
04 fact, it turns out to have been a hydrocarbon  
05 bearing zone at 17,467 feet so you only had a  
06 little over a hundred and something feet of  
07 cement?

Page 248:10 to 248:19

00248:10 THE WITNESS: If you had designed a cement  
11 job based on some original conditions and it  
12 turned out -- that gave you a specified height of  
13 cement above production zone, and it turned out  
14 that, indeed, that it was much closer to that top  
15 of cement, 106 -- whatever the small amount was  
16 there --  
17 BY MR. BOWMAN:  
18 Q. Yes, sir.  
19 A. -- that would be a problem.

Page 249:18 to 249:24

00249:18 Q. And what if, in fact, the mud being  
19 used was -- that's interesting. There's one  
20 thing in your report that talks about the mud  
21 being 14 -- 14 pounds as opposed to 14.7 pounds.  
22 But let's assume that the mud was 14 pounds and  
23 the pore pressure of the highest zone 14.15.  
24 What would that do from a drill standpoint?

Page 250:01 to 250:02

00250:01 THE WITNESS: You're asking me  
02 theoretically speaking?

Page 250:04 to 250:07

00250:04 Q. Well, obviously that's a lawyer  
05 question, so you know ultimately we're going to  
06 have some facts to show that. But theoretically  
07 right now.

Page 250:10 to 250:18

00250:10 THE WITNESS: Theoretically speaking, if  
11 your -- if you have -- if your fluid density is  
12 of a lighter density than the pore pressure in  
13 your formation, you would probably expect to see  
14 flow from that formation.  
15 BY MR. BOWMAN:  
16 Q. Okay. Which is what you're trying  
17 to keep from happening, correct?  
18 A. Yes.

Page 250:25 to 251:24

00250:25 Q. Yeah, let me be more specific. I  
00251:01 think we can all probably assume the flow is  
02 going to have to start from the annulus  
03 somewhere, right?  
04 A. I think that's a good place to  
05 start.  
06 Q. Common sense. Now, let's assume we  
07 actually have six zones: Bottom point, halfway,  
08 12.6 pore pressure, highest 14.15 pore pressure,  
09 we have a 13.1, we have some more 12.6s. Did  
10 y'all try to make a determination as to actually  
11 which zone you believe the flow started from?  
12 A. I don't recall that the  
13 investigation team specifically addressed which  
14 zone.  
15 Q. Okay. I didn't find that. I just  
16 wanted to make sure. Now, it's my understanding  
17 that -- well, once the hydrocarbons came into the  
18 annulus, where did they go?  
19 A. The investigation's findings were  
20 that the flow path was from the formations --  
21 Q. Yes, sir.  
22 A. -- around the annulus, around the  
23 shoe track and up through the shoe track and up  
24 the casing.

Page 253:16 to 253:20

00253:16 Q. We'll look at that. Moving to the  
17 float collar. Okay? In your report ultimately  
18 you concluded that the float did not converge.  
19 Did the float get damaged and pushed down in any  
20 way?

Page 253:22 to 253:25

00253:22 THE WITNESS: I believe the report -- I  
23 would have to refer to that exactly, but I  
24 believe -- I would be happy to look at that  
25 section.

Page 254:02 to 254:21

00254:02 Q. Well, I will try to find it. I  
03 don't think we have much time, but might as well  
04 give it a whirl. You can look on page 27 for one  
05 thing where it says, second paragraph, that  
06 there's no definitive evidence existed that the  
07 float valves had converted. Page 27, second  
08 paragraph, last phrase.  
09 A. 27? Second paragraph?  
10 Q. Yeah, last phrase, "No definitive  
11 evidence existed that the float valves  
12 converted." Do you see that?  
13 A. Okay. Let me go through this. Yes,  
14 I see that.  
15 Q. Okay. And you agreed with that?  
16 A. Yes, those were the findings, and we  
17 agreed.  
18 Q. And we know it's an anomaly these  
19 valves were suppose to be converted at a whole  
20 lot less than 3200 psi and it's not suppose to  
21 generally take nine attempts, right?

Page 254:23 to 255:01

00254:23 THE WITNESS: From the work that the  
24 investigation team did, the float valves should  
25 have converted at a much lower, much lower  
00255:01 pressure.

Page 255:18 to 256:10

00255:18 Q. Okay. Let me hand you quickly what  
19 was marked yesterday as Exhibit 4792. This is  
20 something prepared by Mr. Bob Walsh. And you  
21 know him, don't you?  
22 A. Yes, I know Mr. Walsh.  
23 Q. Yeah. And let's go to the second  
24 page, second paragraph, "Contributory factors."



25 And it says, "The BOP should have been closed as  
00256:01 soon as there was a detectable influx into the  
02 wellbore from the formation. However, a number  
03 of factors, including simultaneous mud transfers,  
04 contributed to the lack of early detection." Do  
05 you see that?  
06 A. Yes, I see that.  
07 Q. Okay. So, do you know who was  
08 responsible for these number of factors,  
09 including simultaneous mud transfers? Was that  
10 BP?

Page 256:12 to 256:15

00256:12 THE WITNESS: I don't know with any  
13 certainty who was responsible for -- who was  
14 ultimately responsible for simultaneous mud  
15 transfers.

Page 256:17 to 256:21

00256:17 Q. We can assume pretty safely it was  
18 not Halliburton, can't we?  
19 A. Based on my experience, I would not  
20 expect that to be a responsibility of  
21 Halliburton.

Page 258:03 to 258:14

00258:03 Q. Would you mind turning to Tab 16 in  
04 my book. This is Section 2 of a larger document,  
05 the performance and operation policy and  
06 procedure manual for Transocean. It has  
07 previously been marked as Exhibit 1474. Do you  
08 recall seeing this document during the course of  
09 your investigation?  
10 A. This was 16?  
11 Q. Yes, sir, I hope. Yes, sir. That's  
12 it.  
13 A. I'm on the -- I'm on Section 2,  
14 subsection 1, page 1 of 18.

Page 258:18 to 258:25

00258:18 Q. Do you recognize this document from  
19 your investigation?  
20 A. Yes, I recognize the document.  
21 Q. And did you review it in connection  
22 with the investigation?  
23 A. I believe that I have seen the  
24 document, and I did a cursory review of this  
25 document.

Page 259:05 to 260:12

00259:05 Q. This document outlines various  
06 policies of Transocean in dealing with well  
07 construction and planning. Did you do a  
08 comparison of what this document says that  
09 Transocean should do versus what was actually  
10 done on the rig as a practical matter?  
11 A. We did not do a side-by-side  
12 comparison with respect to the company policies.  
13 It was not included, and that was not performed  
14 or put in the investigation report.  
15 Q. Would you please read for the record  
16 that first paragraph number one policy for the  
17 record.  
18 A. "Well construction planning must be  
19 performed for each well by the installation  
20 supervisors and managers -- and managers, in  
21 collaboration with the customer. The  
22 installation supervisors and managers must take  
23 into the account all information from the  
24 customer's well program, the installation  
25 capabilities, and the required maintenance to  
00260:01 ensure that all requirements are known,  
02 communicated, and executed in a safe and  
03 efficient manner."  
04 Q. And if I can turn your attention to  
05 the second-to-last bullet on that page, it says,  
06 "To communicate Transocean's methods of  
07 operation, understand the customer's  
08 expectations, identify risks, opportunities for  
09 operational improvement require resources for  
10 well site information required for safe and  
11 efficient operation." Did I read that correctly?  
12 A. Yes, I believe you did.

Page 261:22 to 262:09

00261:22 Q. I tried to be as specific as I could  
23 before. What do you know about BP's or  
24 Transocean's involvement in the planning of this  
25 well?  
00262:01 A. Based on what we saw in the  
02 investigation, the -- Transocean's involvement  
03 with the planning of this well with the Deepwater  
04 Horizon was looking at the rig's capabilities  
05 versus the Transocean Marianas, which was the  
06 original drilling program was written for.  
07 Q. And what was Transocean's  
08 involvement with the planning of the well with  
09 regard to the Marianas?

Page 262:12 to 262:13

00262:12 THE WITNESS: I don't know what that  
13 involvement was with the Marianas.

Page 262:15 to 262:17

00262:15 Q. Does Transocean have any expertise  
16 in well planning and design as is usually thought  
17 of as an operational responsibility?

Page 262:19 to 262:19

00262:19 THE WITNESS: Not to my knowledge.

Page 262:21 to 262:25

00262:21 Q. Is the well planning and design the  
22 responsibility of the operator, BP in this case?  
23 A. Yes.  
24 Q. Did BP solicit Transocean's input  
25 regarding the design of the Macondo well?

Page 263:05 to 263:16

00263:05 Q. Outside of the rig capabilities, did  
06 BP solicit Transocean's input regarding the  
07 design of the Macondo well plan?  
08 A. There were two rigs that  
09 participated in drilling this well. I do not  
10 know to the extent of what happened on the --  
11 with the Marianas and the planning that went on  
12 then.  
13 We have, based on what I know, I do  
14 not believe that BP solicited Transocean's  
15 comments on the -- on the well program as it  
16 related to the Deepwater Horizon.

Page 263:19 to 263:23

00263:19 Q. Do you recall the initial well plan  
20 stated that an LCM would be used as a spacer  
21 under temporary abandonment procedure?  
22 A. I don't remember seeing anything  
23 about that in an original well plan.

Page 264:23 to 265:01

00264:23 Q. Based on your investigation, did BP  
24 give Transocean advance notice that it intended  
25 to use six centralizers instead of 21 on the  
00265:01 production casing?

Page 265:05 to 265:11

00265:05 THE WITNESS: Based on what the  
 06 investigation team found, there -- I don't -- I  
 07 don't think there were -- the team found any  
 08 evidence that there was communications to  
 09 Transocean about any of the well design  
 10 parameters, but -- and I don't recall seeing  
 11 anything about centralizers.

Page 265:19 to 265:23

00265:19 Q. I'll ask the question. Based upon  
 20 your team's investigation, did BP give advance  
 21 notice to Transocean that it was not going to run  
 22 a cement bond log to verify top cement or confirm  
 23 the success of the cement job?

Page 265:25 to 266:08

00265:25 THE WITNESS: I don't know if -- if BP gave  
 00266:01 any notice to Transocean regarding cement bond  
 02 log.  
 03 BY MR. GUIDRY:  
 04 Q. Based on your investigation, do you  
 05 know if BP gave Transocean advance notice about  
 06 whether it was going to pump cement slurry  
 07 without having completed all the tests and having  
 08 them in hand?

Page 266:10 to 266:19

00266:10 THE WITNESS: Based on what the  
 11 investigation -- what our -- based on what our  
 12 investigation team saw, there was no notification  
 13 that BP gave to Transocean about pumping a cement  
 14 job without having all the adequate tests.  
 15 BY MR. GUIDRY:  
 16 Q. Based on your investigation, did BP  
 17 give Transocean advance notice that it was going  
 18 to use Form-A-Set and Form-A-Squeeze LCM that was  
 19 already on the rig as a spacer?

Page 266:22 to 267:09

00266:22 THE WITNESS: Could you better define  
 23 "advance notice"?  
 24 BY MR. GUIDRY:  
 25 Q. I'm asking these questions regarding  
 00267:01 Section 4.3.7, Management of Change.  
 02 A. Okay.  
 03 Q. I'm -- in order to perform an

04 adequate risk assessment as required by  
05 Transocean Management of Change, 4.3.7, does BP  
06 have to provide advance notice to Transocean of  
07 any changes to its procedures to be executed by  
08 Transocean?  
09 A. Okay.

Page 267:11 to 267:21

00267:11 THE WITNESS: I'm not -- I'm not an -- a  
12 Transocean employee, and I don't understand their  
13 philosophy, but in general, you would have to --  
14 you would have to give the contractor plenty of  
15 advance notice and time to evaluate something  
16 like that.  
17 BY MR. GUIDRY:  
18 Q. And if you weren't given advance  
19 notice, that would impede Transocean's ability to  
20 perform a risk assessment on the execution of any  
21 given procedure; is that correct?

Page 267:23 to 268:01

00267:23 THE WITNESS: Yes, I believe that would  
24 impede the Transocean's performance to --  
25 Transocean's ability to perform a management of  
00268:01 change or risk analysis.

Page 268:24 to 269:11

00268:24 Q. And this is your interview of Jimmy  
25 Harrell on September 21, 2010, at 9:30 a.m.; is  
00269:01 that correct? Sorry, 9:00 a.m.; is that correct?  
02 A. That's correct.  
03 MR. GUIDRY: And for the record, this is  
04 TRN-INV-0748343 through 44, which we'll mark as  
05 Exhibit 5006.  
06 (EXHIBIT NO. 5006 WAS MARKED FOR THE RECORD.)  
07 BY MR. GUIDRY:  
08 Q. If you wouldn't mind looking at the  
09 second-to-last line on that first page. It says  
10 "BP came up with procedures for the negative test  
11 and displacement."

Page 269:13 to 269:16

00269:13 THE WITNESS: Yes, I see that.  
14 BY MR. GUIDRY:  
15 Q. Is it your understanding that that's  
16 an accurate and correct statement?

Page 269:18 to 270:17

00269:18 THE WITNESS: Let me just read it. "BP  
 19 came up with procedures for negative test and  
 20 displacement." Yes, my understanding is, that's  
 21 an accurate statement.  
 22 BY MR. GUIDRY:  
 23 Q. And if you look at the next one, it  
 24 says, "Did not know about extra spacer that was  
 25 included in procedures."  
 00270:01 A. Yes, I see that.  
 02 Q. Is that an accurate statement of  
 03 what Jimmy Harrell told you?  
 04 A. Yes, that's an accurate statement of  
 05 what Mr. Harrell said during the phone interview.  
 06 Q. And then if you turn to the next  
 07 page, seven down, says, "Never saw a BP plan for  
 08 temporary abandonment or bridge plug." Is that  
 09 an accurate statement of your interview with Mr.  
 10 Harrell?  
 11 A. Yes, that was an accurate statement  
 12 from Mr. Harrell.  
 13 Q. So according to this document and  
 14 your memory, Mr. Harrell did not know about the  
 15 extra spacer that was included in the procedures  
 16 and never saw a BP plan for temporary abandonment  
 17 or bridge plug, correct?

Page 270:19 to 270:21

00270:19 THE WITNESS: That's what Mr. Harrell  
 20 stated here during the -- during the phone  
 21 interview.

Page 270:23 to 271:02

00270:23 Q. Did Transocean investigation --  
 24 investigative team determine that BP should have  
 25 informed Mr. Harrell regarding the spacer,  
 00271:01 negative pressure test, displacement, and  
 02 temporary abandonment procedures as the OIM?

Page 271:06 to 271:11

00271:06 specifically. But in general -- and I'm going  
 07 from memory here, so refer to the report to  
 08 accurately state the findings -- is that there  
 09 was -- that the communication was bad between BP  
 10 and Transocean and that -- and the risks were not  
 11 communicated to the Transocean personnel. That's

Page 271:14 to 271:17

00271:14 Q. Did BP's failure to provide this

15 information to Mr. Harrell prevent Transocean  
16 from doing an adequate risk assessment on the  
17 execution of BP's last-minute changes?

Page 271:19 to 272:01

00271:19 THE WITNESS: I'd have to frame that in the  
20 aspect that I'm not -- I'm not an expert with  
21 Transocean's policies and procedures. But in  
22 general, based on experience, that anytime  
23 there's a number of last-minute changes, and they  
24 increase risk by different levels, if you don't  
25 inform the drilling contractor early, they can't  
00272:01 do a proper risk assessment for their own part.

Page 272:03 to 272:11

00272:03 Q. Do you mind turning to Tab 18,  
04 please. This is Bates stamped TRN-INV-00847616  
05 through 623. And this purports to be a July 26,  
06 2010, memorandum from you to Bill Ambrose, with  
07 the re being: Investigation of negative test and  
08 riser displacement procedures preliminary report.  
09 Are these the substance of conclusions regarding  
10 the negative pressure tests used versus the  
11 standard Transocean tests?

Page 272:19 to 273:01

00272:19 THE WITNESS: I don't know how to  
20 characterize that versus a standard Transocean  
21 test, but these -- I'd have to go through and  
22 read this whole document again to see what's  
23 written. But this is a preliminary report of  
24 what we found on -- during the first part of the  
25 investigation on a negative test and riser  
00273:01 displacement procedures.

Page 273:03 to 274:12

00273:03 Q. Earlier you were asked a lot of  
04 questions about Transocean's standard procedures  
05 used for a negative pressure test on various rigs  
06 in the past. But in this case, the negative  
07 pressure test that was incorporated into the  
08 final temporary abandonment procedure was far  
09 from standard by Transocean's standards, correct?  
10 A. I would agree that this particular  
11 test was not, quote, standard.  
12 Q. Please turn to Tab 20. This is an  
13 e-mail from you to Bill Ambrose dated July 2nd,  
14 2010. And it is Bates stamped TRN-INV-01143327.  
15 A. Okay.

16 Q. Through 3328. Do you recognize this  
17 e-mail?  
18 A. Yes, I recognize this e-mail.  
19 Q. You state in this e-mail, "I'm  
20 withholding my final official opinion on the BP  
21 procedure until I have thoroughly looked at  
22 everything, but unofficially the BP prog was  
23 severely flawed by the fact they counted unset  
24 cement, on a marginal and risky job, and a float  
25 collar as the two required barriers." Is that  
00274:01 your opinion now?  
02 A. The -- yes, I believe -- and let me  
03 qualify this. What I wrote here was a -- was a  
04 preliminary just opinion on the status of the  
05 negative test of temporary abandonment  
06 procedures. So I said I'll withhold my final  
07 opinion on BP procedures until I've looked  
08 through everything. But as we -- we believe that  
09 BP program was flawed by -- on several accounts.  
10 Just -- and just one of those was, they counted  
11 on unset cement and -- based on a marginal and  
12 risky cement job.

Page 275:12 to 275:25

00275:12 I want to hand you back now what was  
13 just marked as 5007. And I'm also going to hand  
14 you what's been previously marked as 4263. And  
15 just for the record, what I've given you now in  
16 these two exhibits, do these exhibits represent  
17 your summary of your findings with respect to the  
18 survey that was done on negative pressure testing  
19 used in connection with Transocean rigs?  
20 A. That's the same document.  
21 Q. And I'll represent to you, it looks  
22 like that may be two -- the reason why I gave you  
23 both is because I think they may be two different  
24 versions. They have the same date, though.  
25 A. Quickly check it here.

Page 276:06 to 278:10

00276:06 Q. Let's just start with the one that  
07 you have over there, the one that's got the Bates  
08 label. So with respect to 4263, does this appear  
09 to be a summary report that you put together  
10 containing your findings following the survey of  
11 the Transocean rigs on the negative pressure test  
12 procedures?  
13 A. This is a -- this is a -- I believe  
14 this is still a preliminary report that doesn't  
15 contain all of the data that we used to assess  
16 this.  
17 Q. So on this particular document, we



18 have a date of July 26, 2010?  
19 A. Yes.  
20 Q. And was there a later version of  
21 this report generated, to your knowledge, after  
22 July 26th, 2010? And I will represent to you  
23 that now two lawyers have pulled versions of that  
24 document, both having that same date. So if that  
25 helps.

00277:01 A. If. . .  
02 Q. All we can ask you is, are you aware  
03 of any later version of that report other than  
04 the ones I've shown you here today?  
05 A. You know, I don't -- I don't  
06 remember if there was a later version or not.  
07 Q. Okay. And then with respect to the  
08 attachment to that report, let me hand you what's  
09 been marked 5009 and ask you if that appears to  
10 be your summary of the results of the survey that  
11 was done with respect to the Transocean rigs and  
12 their negative pressure test procedures.  
13 A. This appears to be a summary of the  
14 -- of the other Transocean rigs that provided  
15 information, with the exception of the Deepwater  
16 Horizon, obviously.  
17 Q. Yes, sir. So if I understand the  
18 process, you and your team members did a survey  
19 of all of the Transocean rigs on their negative  
20 test procedures as well as their displacement  
21 procedures, and as a result of that survey, you  
22 ended up producing the chart we see as 5009, as  
23 well as the report that we see here on July 26th  
24 of 2010?  
25 A. Okay. Just so I'm clear, this

00278:01 was -- this was a preliminary report, and it did  
02 not encompass all the rigs in the Transocean  
03 fleet. It was from the rigs that we were able to  
04 get information from and -- in that timeframe.  
05 Q. Yes, sir. And so just to make sure  
06 that we're talking apples and apples, you took  
07 all the data that you got back from rigs that  
08 provided that data, and you summarized into the  
09 chart we see as 5009; is that correct?  
10 A. Yes, I believe that's correct.

Page 278:22 to 279:02

00278:22 Q. Does that reflect your analysis  
23 based on your review of the survey information  
24 that you received from the various Transocean  
25 rigs?  
00279:01 A. They were -- the preliminary report  
02 and preliminary conclusions from that survey.

Page 279:23 to 280:05

00279:23 Q. And you drew upon the survey  
24 information to help inform the conclusions that  
25 were reached in the Transocean report, correct?  
00280:01 A. We draw on -- I -- without seeing  
02 that this is the final report, there are some  
03 similarity -- there are some things the  
04 preliminary conclusions that were -- looked like  
05 they were drawn upon in the final report.

Page 283:24 to 284:05

00283:24 Q. And was there an effort as part of  
25 the Transocean investigation team to put together  
00284:01 kind of a minute-by-minute chronology based on  
02 various reports that the team had received from  
03 various persons who were involved in the  
04 incident?  
05 A. Yes.

Page 285:06 to 285:06

00285:06 BY MR. LEMOINE:

Page 285:09 to 285:10

00285:09 Q. My name is Michael Lemoine, and I  
10 represent Weatherford. So I will talk fast to

Page 285:12 to 287:18

00285:12 You have a document that I placed in  
13 front of you which, on the disc, is Tab No. 39.  
14 Can you tell me whether you have ever seen this  
15 Transocean document before? Looks to be sort of  
16 like a PowerPoint presentation dated June of  
17 2010. Am I right?  
18 A. Yes.  
19 Q. You have seen it?  
20 A. Yes, I believe I've seen this  
21 before.  
22 Q. Did you have anything to do with its  
23 preparation.  
24 A. That's been quite some time ago, and  
25 that preparation, the contents of the report  
00286:01 contain information that looks like it may have  
02 been prepared by someone on our team.  
03 Q. On your team?  
04 A. Or portions of the -- some of the  
05 information.  
06 Q. Would you turn to page 7.  
07 A. Yeah.  
08 Q. And there's a section in there I'm

09 looking over -- and you can find this towards the  
10 bottom about the float collar. And you see the  
11 section that talks about that it is a  
12 double-flapper-type valve? Do you see that?  
13 A. Yes.  
14 Q. Okay. And it says it requires back  
15 pressure from annulus side to close?  
16 A. Yes, that's what it says.  
17 Q. And then under that, it says, "Less  
18 than 40 psi back pressure from annulus by  
19 calculation." It says that, doesn't it?  
20 A. That's what it says.  
21 Q. And then it says, "potential to open  
22 while cement is setting," correct?  
23 A. That's what it says.  
24 Q. Well, do you -- do you -- now as you  
25 sit with the investigations that you have  
00287:01 conducted in preparation of the final report in  
02 June of 2011, do you agree or disagree with those  
03 statements? And if you want to, I can break them  
04 down. Do you agree or disagree that the  
05 Weatherford float collar needs back pressure in  
06 order for the flappers to close?  
07 A. My understanding of the mechanism of  
08 the flapper valve is that it is a check valve,  
09 and that they will close, that there's a --  
10 there's a spring to close the flapper.  
11 Q. But my question, though, is very  
12 specific to what this statement is.  
13 Hypothetically, if the -- if the -- if a float  
14 collar was in a vacuum, would the flappers close  
15 with the hinge, the spring hinge? Would they  
16 close?  
17 A. Could you -- could you define the  
18 vacuum on that? Is --

Page 287:22 to 288:13

00287:22 BY MR. LEMOINE:  
23 Q. Let me just ask this. I was just  
24 using a silly hypothetical to show there would be  
25 no back pressure in a vacuum. Do you -- have you  
00288:01 -- have you reached a different conclusion, or do  
02 you have the same conclusion or assumption that  
03 this report says that I need to have back  
04 pressure for the flapper valve on the Weatherford  
05 float collar to close and seal?  
06 A. Just basic on memory, I'd have to go  
07 back to our report and reference that to be  
08 precise.  
09 Q. Okay. So you can't answer me today.  
10 And that's okay.  
11 A. I can -- I can -- I would -- I'm  
12 just basing on memory on the numbers, but if we  
13 want to review the report, I'd be --

Page 288:15 to 288:25

00288:15 at Tab 49. I'm going to come back to that tab,  
 16 but look at Tab 49, please. And this -- while  
 17 you're flipping, we retrieved this from your  
 18 custodial files. Go ahead and take your time and  
 19 flip it. And it appears to be an e-mail that you  
 20 sent to George Roth on July 6th, 2010. And  
 21 because of time, I'm going to paraphrase it.  
 22 Look at the section that you have "desired  
 23 information from test." Do you see that?  
 24 "Desired information from test."  
 25 A. Is that on the first page?

Page 289:02 to 289:02

00289:02 A. Second page?

Page 289:05 to 289:19

00289:05 Q. Okay. Do you see it now?  
 06 A. Yes, I do.  
 07 Q. Do you see it says, "Cyclic testing  
 08 for low pressure (particularly interested in the  
 09 flapper valve ability to handle low pressure.)"  
 10 And then a couple of lines down, "Confirm the  
 11 closing force of the springs on the flapper  
 12 valves." What I -- do I read that right in that  
 13 you were wanting Stress to test whether what was  
 14 stated in that earlier document is correct?  
 15 A. Yes, that's correct.  
 16 Q. And what was the result of those  
 17 tests?  
 18 A. I'd have to review the Stress  
 19 report, which --

Page 289:23 to 291:17

00289:23 A. It's an attachment.  
 24 Q. Okay. Well, I didn't know whether  
 25 you were going to come under oath today and say,  
 00290:01 you know, I know from independent recollection, I  
 02 can tell you those flapper valves, unless they  
 03 have some back pressure, are not going to seal,  
 04 they're not going to close. But you're not  
 05 saying that under oath today?  
 06 A. I don't know all the entire findings  
 07 of the Stress report and float collars without  
 08 going back and looking for specifically.  
 09 Q. That's fine. That's fine. Okay.  
 10 Now, I want you to turn to -- well, I you may be  
 11 -- may be referring to the Transocean

12 investigative report somewhere on the table. Are  
13 you using a master copy? Would you please take a  
14 look at Volume 1?  
15 A. Okay.  
16 Q. And, again, I'm doing this quick.  
17 Please, Volume 1, would you like at page 58.  
18 Towards the bottom of that page, there's a  
19 paragraph that says, "Extended thickening times  
20 results in delays in the development of the  
21 compressive strength of the cement, and thus  
22 require additional time for the cement to set.  
23 If the cement was in the temperature range  
24 outlined above, it is likely that the cement  
25 would not have set when the well was subjected to  
00291:01 the negative pressure test." Did I read that  
02 right?  
03 A. Yes, I believe you did.  
04 Q. Was the negative pressure test, from  
05 what you understand from your investigation,  
06 designed to test the integrity of the cement?  
07 A. The negative pressure test, in our  
08 understanding, was designed to test the integrity  
09 of the -- of the shoe track cement.  
10 Q. Of the cement? Of the cement?  
11 A. Yes.  
12 Q. And during that negative pressure  
13 test, the BOP was closed, was it not?  
14 A. Yes, it was.  
15 Q. So that you had an additional  
16 barrier to flow as a safeguard?  
17 A. Yes, it was.

Page 291:20 to 292:11

00291:20 Roller. Would you agree with me, from your  
21 investigation, that if that statement in the  
22 Transocean report is correct, that the cement was  
23 not set at the time of the negative pressure  
24 test, would you agree with me that it also would  
25 not have been set hours earlier that day when  
00292:01 they performed the positive pressure test?  
02 A. I would -- I -- if the cement was  
03 not set at the time of the negative pressure  
04 test, I don't know how it could have been set  
05 earlier.  
06 Q. Right. It's logical to assume that  
07 at 11:00 in the morning when they did the  
08 positive pressure test, that cement was not set,  
09 as Transocean concludes, it also was not set six  
10 hours later when they did the negative pressure  
11 test? That's an accurate assumption?

Page 292:13 to 292:16

00292:13 BY MR. LEMOINE:

14 Q. That an accurate assumption?  
15 A. It's a -- it's a -- it's a logical  
16 assumption.

Page 292:23 to 293:08

00292:23 Can you tell me what the condition

24 of the cement would have been if it was unset?

25 A. I wouldn't be able to tell you what  
00293:01 condition it was in.

02 Q. Do you have an opinion as to whether  
03 whatever condition it was in, it could flow if it  
04 could -- it had the potential to flow, to move,  
05 if in contact with pressure?

06 A. It would depend on some very  
07 specific parameters and properties of the cement  
08 at that time.

Page 293:13 to 295:12

00293:13 Q. Okay. I'm moving on. Look at Tab

14 45. Tab 45, please. And I'll set the -- I'll  
15 set the stage for my questions for the friends  
16 outside -- outside here. This is a report that I  
17 found in Dan Farr's custodial files from  
18 InTuition Energy Associates. InTuition Energy  
19 Associates. Are you familiar with this outfit?

20 A. Yes, I am.

21 Q. Did you work in connection with them  
22 during your investigation for Transocean?

23 A. Yes, we did.

24 Q. Did you -- did you prepare any part  
25 of that report that is identified in Tab 45?

00294:01 A. Could you be more specific?

02 Q. No. That's okay, because I'm  
03 running out time. Would you look at page 21 of  
04 the InTuition report?

05 A. Okay.

06 Q. Do you find the paragraph that says,  
07 "Pressure testing of the casing so soon after the  
08 cement job was not wise"? Do you see that?

09 A. Yes, I do.

10 Q. Okay. Now, if you go a little bit  
11 further down the paragraph, pick up from the  
12 sentence, "to pressure the casing positively."  
13 Do you see that sentence? It's after words  
14 "16 hours."

15 A. Yes, I see that.

16 Q. Good. Let's read it. "To pressure  
17 the casing positively and negatively, thereby  
18 causing casing expansion and contraction, when  
19 the cement was not conclusively proven to be set  
20 and mechanically competent, and under conditions

21 were other barriers may have been compromised,  
 22 was dangerous." Do you see that?  
 23 A. Yes, I see that.  
 24 Q. Says, "The floating equipment had  
 25 caused concerns and conversion, and while the  
 00295:01 plug had bumped and the flappers reportedly held  
 02 on backflow, the differential was so low that  
 03 little flow would have occurred in any case." Do  
 04 you see that?  
 05 A. Okay. Yes, I see that.  
 06 Q. Do you disagree with those  
 07 statements?  
 08 A. I don't believe they're 100 percent  
 09 accurate, but in some respects.  
 10 Q. Do you agree that there was some  
 11 hazards associated with pressure the casing  
 12 positively if the cement was not set?

Page 295:17 to 295:20

00295:17 Q. Do you agree that there are some  
 18 hazards/dangers to well integrity if the casing  
 19 was positively tested when the cement was not  
 20 set?

Page 295:22 to 296:25

00295:22 THE WITNESS: I would have to refer you to  
 23 Mr. Birch on a cementing expertise.  
 24 BY MR. LEMOINE:  
 25 Q. But I know that you were primarily  
 00296:01 responsible or testing and analyzing float  
 02 collar. Correct?  
 03 A. The float collar analysis was part  
 04 of what our team looked at.  
 05 Q. Now, would you agree with me that  
 06 when the top plug lands -- landed on the Macondo  
 07 Well on the float collar in question, the cement  
 08 job was over?  
 09 A. That's typically a good reference  
 10 point for the ending of the cement job.  
 11 Q. Would you agree with me that when  
 12 that top plug landed, there would have been  
 13 cement inside the float collar as well as the  
 14 shoe track?  
 15 A. There could be.  
 16 Q. Right. It would seem logical that  
 17 there would be -- there would be cement inside  
 18 the float collar; is that an accurate statement?  
 19 A. There could be, barring any issues  
 20 of contamination or fluid swapping.  
 21 Q. If that cement was not set and in a  
 22 state where it could flow under pressure, what  
 23 effect, in your opinion, would it have on the

24 cement in the float collar when the casing was  
25 tested positively at 2500 psi?

Page 297:03 to 297:19

00297:03 THE WITNESS: I'm not sure what the -- what  
04 the net effect would be -- would be on that.  
05 BY MR. LEMOINE:  
06 Q. Could one net effect be that the  
07 pressure -- the positive pressure placed at 25  
08 psi on the top plug, which are rubber devices,  
09 are they not? Are they rubber? Are they  
10 rubber-type material?  
11 A. My understanding is, the top plugs  
12 are rubber or some similar type synthetic  
13 material.  
14 Q. And would you agree with me that one  
15 possibility, at least, one net effect, as you  
16 mentioned, is that at 2500 psi, that pressure on  
17 the top plug would transmit into the float  
18 collar, causing the cement to flow through the  
19 collar and open the flapper valves?

Page 297:21 to 298:18

00297:21 THE WITNESS: I don't -- I don't know for  
22 certainty if that would occur.  
23 BY MR. LEMOINE:  
24 Q. Would you turn back, then, to Tab  
25 39, which is the earlier Transocean report of  
00298:01 June, 2010. And would you go back to page 7  
02 again.  
03 A. Yes. Okay.  
04 Q. Towards the end of the page, do you  
05 see the bullet point that says, "First positive  
06 test on casing against Wiper plug at ten hours  
07 set time potential to slightly open flappers  
08 during cure time." Would you agree with me that  
09 what is stated on that Transocean report is  
10 basically the same thing that I've been  
11 suggesting through my questions? Do you agree  
12 with that?  
13 A. That is the same principal that  
14 you're stating on your suggestions.  
15 Q. And if those flapper valves were  
16 open as a result of this, could you think of any  
17 malfunction or defect on the part of the float  
18 collar to allow that to happen?

Page 298:23 to 298:24

00298:23 THE WITNESS: If the flapper -- you're  
24 referring to if the flapper valves were closed?



Page 299:01 to 299:02

00299:01 Q. And then opened by the flow of  
02 cement during the positive pressure test.

Page 299:09 to 299:23

00299:09 Q. Well, let me ask this. My question  
10 is simply this. Let's just say it happened  
11 hypothetically. Can you attribute in any way  
12 those flappers being open to any defect in the  
13 product, in float collar?  
14 A. Assuming the flappers were closed --  
15 Q. Yeah.  
16 A. -- in the first place, and  
17 theoretically assuming that that could happen, I  
18 don't know that that would be attributed to a  
19 defect in the float collar, per se.  
20 Q. Someone with Transocean hypothesized  
21 that scenario and put that down in this  
22 PowerPoint, did they not?  
23 A. It is in this PowerPoint.

Page 300:06 to 300:08

00300:06 Q. Why was this not discussed in the  
07 June 2011 report? And I can tell you it wasn't.  
08 A. Yeah.

Page 300:10 to 300:17

00300:10 THE WITNESS: The investigation team's  
11 testing on the float collar and the results of  
12 that and the other data that the team had said it  
13 was -- it was -- I'd have to refer to the exact  
14 wording. But it was possible or likely that  
15 based on the high pressures and a number of  
16 attempts, that the possibility is that the float  
17 collar just did not convert.

Page 300:23 to 300:25

00300:23 to that. Is it your opinion that this Macondo  
24 Well Weatherford float collar was a well control  
25 device?

Page 301:03 to 301:10

00301:03 THE WITNESS: Are you asking me personally,  
04 any opinion?  
05 BY MR. LEMOINE:

06 Q. I can start with that.  
07 A. You know, typically, you think as --  
08 I couldn't characterize it well control device as  
09 opposed to examining if it was a barrier.  
10 Q. Was there a barrier?

Page 301:13 to 301:24

00301:13 THE WITNESS: Based on my experience, you  
14 would -- you would rely on the -- on set cement  
15 in the shoe track as a barrier.  
16 BY MR. LEMOINE:  
17 Q. All right. In fact, the function of  
18 the float collar, from your investigation and  
19 perhaps from your personal knowledge, with  
20 respect to the cement is to keep it from  
21 U-tubing, to keep it from ingressing past the  
22 float collar due to differential pressure greater  
23 in the annulus than in the shoe track. Did I say  
24 that right?

Page 302:02 to 303:04

00302:02 THE WITNESS: The function of a float  
03 collar or float shoe with a valve in it is to  
04 stop the flowback of heavier cement in the  
05 annulus back into -- inside the casing.  
06 BY MR. LEMOINE:  
07 Q. Now, you -- well, did you physically  
08 touch the float collar that was tested by Stress  
09 Engineering? Did you put your hands on it?  
10 A. Yes, I did.  
11 Q. Did you see that -- or feel. Did  
12 you see that the flappers valves were made of  
13 aluminum?  
14 A. I only had access to the float  
15 equipment when it was crated up, so. . .  
16 Q. Okay. Well, do you know now that it  
17 was made of aluminum?  
18 A. That the flapper valves were?  
19 Q. Yes.  
20 A. I'd have to refer back to --  
21 Q. I want you to assume that that is  
22 the case. Do you agree that that float collar  
23 has to be made out of soft metal material to  
24 allow it to be drilled?  
25 A. Yes, that would be -- that would be  
00303:01 kind of a standard design requirement.  
02 Q. And you would agree that that factor  
03 alone would distance it from ever being  
04 considered as a well control device?

Page 303:07 to 303:08

00303:07 THE WITNESS: Being made of aluminum would  
 08 limit its pressure containment capabilities.

Page 303:10 to 303:15

00303:10 Q. Would the fact that the back  
 11 pressure rating of those flapper -- aluminum  
 12 flapper valves being 5,000 psi as compared to  
 13 pore pressure somewhere around 12,000 psi also  
 14 distance the float collar from being considered  
 15 as a well control device?

Page 303:17 to 304:09

00303:17 THE WITNESS: I would -- I would consider  
 18 the -- and again, based on my personal opinion, I  
 19 would consider that the pressure rating of the  
 20 float collar is lower than what the formation  
 21 pressure is would limit its ability.  
 22 BY MR. LEMOINE:  
 23 Q. Right. Then what was your  
 24 conclusion -- and if it differs from  
 25 Transocean's, let me know -- as to the relevance  
 00304:01 of the report's conclusion that the float collar  
 02 did not convert? What is the relevancy of that?  
 03 It was mentioned in the report that it didn't  
 04 convert, that the flappers were held open by a  
 05 tube that didn't sheer. Am I saying that right?  
 06 A. That -- based on my knowledge of the  
 07 operation of the auto-fill tube, that if the tube  
 08 wasn't displaced, it would hold the flapper  
 09 valves open.

Page 304:18 to 304:25

00304:18 Q. Well, I want you to assume that the  
 19 -- that everything shows that the float collar  
 20 did not convert, the tube was there, the flappers  
 21 are wide open, a wide open path for hydrocarbons  
 22 coming up the shoe track. Can we go with that?  
 23 And now can I ask you the question again: What's  
 24 the relevancy of that, in your opinion, as to the  
 25 cause of the blowout?

Page 305:02 to 306:24

00305:02 THE WITNESS: I am -- I am strictly -- I am  
 03 strictly going from memory --  
 04 BY MR. LEMOINE:  
 05 Q. Okay.  
 06 A. -- of the report, so I stand to be  
 07 corrected. But from the report and the

08 appendices, the flapper -- the flapper valve  
 09 assembly, as I recall, going from memory, was  
 10 tested to about 3,000 psi with water.  
 11 Q. Okay.  
 12 A. And it held pressure. So therefore,  
 13 the team's assumption on that being that it held  
 14 3,000 psi with water, that the time of the  
 15 negative test, the pressure differential would  
 16 have been less than that. So it would -- had  
 17 converted and been closed, then it would have --  
 18 it would have been able to seal that -- whatever  
 19 the differential was with cement.  
 20 Q. It would have held back the cement?  
 21 A. It -- the pressure differential from  
 22 the negative test was less than what it was  
 23 tested to in the trial.  
 24 Q. No, I understand that. I'm running  
 25 out of time. But let's -- fine. That's all  
 00306:01 fine. That's just another -- as you feel, is  
 02 another verification of Transocean's conclusion  
 03 that the valves were open. I'm with you. I got  
 04 that. My question is simply this. However you  
 05 want to show me as to the proof of why you think  
 06 it's open, I will give you that for this  
 07 hypothetical. It's wide open. What relevance  
 08 does that have to the cause of the blowout?  
 09 A. If it was wide open at that time, it  
 10 would have provided a path for the cement to flow  
 11 up. If -- with -- unset cement from flowing up.  
 12 Q. Okay. Now, how would that have  
 13 caused the blowout?  
 14 A. Well, we were -- we were asked to  
 15 look at the -- what factors contributed to the  
 16 flow of hydrocarbons into the casing.  
 17 Q. Right.  
 18 A. So that was -- that was one of the  
 19 factors that the team looked at.  
 20 Q. Right. But we went through some  
 21 questions a while ago, and I think that you're  
 22 agreeing with me that the float collar is never  
 23 intended to be a device to hold back hydrocarbon  
 24 float. Would you agree with that?

Page 307:01 to 307:12

00307:01 THE WITNESS: The -- a float collar or  
 02 float shoe's purpose is not to hold back  
 03 hydrocarbon flow.  
 04 BY MR. LEMOINE:  
 05 Q. So it's not designed --  
 06 A. Based on my experience, it's to hold  
 07 cement in place until it gets hard.  
 08 Q. And so if the hydrocarbons came bat  
 09 out of hell through the float collar, that float  
 10 collar, even in pristine shape, valves closed, is

11 not designed to hold oil and gas flowing; is that  
12 an accurate statement?

Page 307:14 to 308:05

00307:14 THE WITNESS: My understanding of float  
15 collar design is, it's not -- it's intended to  
16 withhold hydrocarbons.  
17 BY MR. LEMOINE:  
18 Q. Now, let me -- let me finish this  
19 last line of questions. I'll do this quick.  
20 Stress performed some testing on exemplar float  
21 collars. One of the tests, or maybe several,  
22 confirmed that at 400 psi, the float collar tube,  
23 as designed and manufactured within the body of  
24 the float collar, would sheer, would it not?  
25 A. As I recall, based on memory,  
00308:01 without the reviewing the report --  
02 Q. Sure.  
03 A. -- that the -- the test that they  
04 performed, that the auto-fill tube sheered within  
05 expected design range.

Page 309:19 to 310:08

00309:19 Q. And it comes from the section that I  
20 think you helped author. Pertaining -- you said  
21 -- you said -- or Transocean report says, "The  
22 following outlines the investigation team's  
23 finding that BP's final temporary abandonment  
24 plan contributed to the cause of the incident."  
25 It gives some bullets. This is the one that I'm  
00310:01 interested in. "Risk resulting from the  
02 questionable cement operations and float collar  
03 conversion was not adequately accounted for by  
04 the operator." And I -- now I'll say it in  
05 regular English. What I read this to say is that  
06 Transocean is saying BP didn't handle/recognize  
07 the risk of the float collar not converting. Do  
08 you agree?

Page 310:10 to 310:11

00310:10 THE WITNESS: Yes, that's a finding of the  
11 -- of the investigation.

Page 310:23 to 311:05

00310:23 Q. What was the risk that BP did not  
24 consider, according to the Transocean report, of  
25 the -- if the float collar did not convert?  
00311:01 What's the risk?  
02 A. The risk is, if the float collar did

03 not convert, it would provide an open path for  
04 the -- for unset cement to flow back into the  
05 casing.

Page 311:13 to 311:21

00311:13 Q. Would the negative pressure test  
14 have given an indication that that was happening?  
15 A. The -- a negative pressure test is  
16 typically designed to test the competency of the  
17 casing and shoe track.  
18 Q. And would you agree with me that  
19 people on the rig -- I'm not naming names --  
20 people on the rig that were responsible for  
21 monitoring that failed in their responsibility?

Page 312:03 to 312:04

00312:03 THE WITNESS: I would say go -- refer to  
04 the report and our -- and our findings in that.

Page 312:19 to 313:14

00312:19 BY MR. DOYEN:  
20 Q. Mr. Roller -- Mike. All right.  
21 Mr. Roller, earlier today, counsel for BP was  
22 asking you some questions relating to page 72 of  
23 the internal report. Do you have that in front  
24 of you?  
25 A. Yes, I do.  
00313:01 Q. And just to set the context, I don't  
02 have your question and answer in front of me  
03 right now, but you used the word "cascading" at  
04 some point to describe the way these series of  
05 decisions that are pointed out here on this page  
06 relating to the design of the production casing  
07 and cement. Do you recall that?  
08 A. Yes.  
09 Q. And did you reach any conclusion as  
10 to whether this -- what you described as the  
11 cascading effect of these decisions had any  
12 impact on well control on April 20, 2010, at the  
13 Macondo Well?  
14 A. Yes.

Page 313:17 to 314:05

00313:17 Q. And what was that conclusion?  
18 A. The investigation team found that  
19 the -- there were risks involved in each of the  
20 decisions that were made along in the casing,  
21 cementing, abandonment phases of the entire last  
22 portion of the Macondo Well, and that each of

23 these specific phases had risks associated with  
24 it.  
25 We did not find any evidence that BP  
00314:01 communicated any of these risks to the Transocean  
02 personnel either singularly or as a -- as a  
03 combined group of things rolled up into a single  
04 risk that compounds. And we feel that did impact  
05 well control.

1	CORRECTION PAGE:			
2	WITNESS NAME:	PERRIN ROLLER	DATE:	08/25/11
3	PAGE	LINE	CHANGE	REASON
4	16	12	Change "Nagtegal" to "Nagtegaal"	Spelling
5	29	2	Change "Yon" to "Jon"	Typo
6	34	10	Change "killer choke" to "kill or choke"	Typo
7	39	25	Change "Evette" to "Revette"	Typo
8	40	16	Change "Kleppinger" to "Keplinger"	Spelling
9	67	3	Change "Kleppinger" to "Keplinger"	Spelling
10	72	11	Delete "test"	Errant word
11	106	20	Change "Ray" to "Rae"	Spelling
12	106	21	Change "Ray" to "Rae"	Spelling
13	115	8	Change "float" to "flow"	Typo
14	115	14	Change "ignition gas" to "ignition and gas"	Typo
15	201	15	Change "Ray" to "Rae"	Spelling
16	204	22	Change "Ray" to "Rae"	Spelling
17	205	15	Change "Ray" to "Rae"	Spelling
18	212	6	Change "the cement. They're" to "the cement they're"	Typo
19	231	20	Change "simulation" to "stimulation"	Typo
20	235	11	Insert "I'd" in front of "Say"	Missing
21	237	19	Change "Ray" to "Rae"	Spelling
22	238	17	Change "Ray" to "Rae"	Spelling
23	239	1	Change "Ray" to "Rae"	Spelling
24	288	6	Change "basic" to "based"	Typo
25	307	15	Change " it's not - - it's intended" to "it's not - - intended"	Errant word
26	308	4	Change "sheered" to "sheared"	Spelling



PERRIN ROLLER



DATE