

1 UNITED STATES DISTRICT COURT
 2 EASTERN DISTRICT OF LOUISIANA

3
 4 IN RE: OIL SPILL BY THE OIL RIG * Docket 10-MD-2179
 DEEPWATER HORIZON IN THE *
 5 GULF OF MEXICO ON APRIL 20, 2010 * Section J
 *

6 Applies to: * New Orleans, Louisiana
 *
 7 Docket 10-CV-02771, * October 1, 2013
 *
 8 IN RE: THE COMPLAINT AND *
 PETITION OF TRITON ASSET *
 LEASING GmbH, et al. *
 9 *

10 Docket 10-CV-4536, *
 UNITED STATES OF AMERICA v. *
 11 BP EXPLORATION & PRODUCTION, *
 INC., et al. *
 *

12 * * * * *

13
 14 DAY 2, AFTERNOON SESSION
 TRANSCRIPT OF NONJURY TRIAL BEFORE
 15 THE HONORABLE CARL J. BARBIER
 16 UNITED STATES DISTRICT JUDGE

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 computer-aided transcription software.

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AFTERNOON SESSION

(October 1, 2013)

THE COURT: Please be seated, everyone.

MR. LI: Good afternoon, Your Honor. Luis Li on behalf of the aligned parties. I would like to file, offer, and have introduced exhibits from John Wilson's examination. Opposing counsel has seen the list and there are no objections.

THE COURT: Without objection, those are admitted.

MR. LI: Thank you, Your Honor.

MR. IRPINO: Good afternoon, Your Honor. Anthony Irpino for the PSC. A couple of things. First, the aligned parties -- there was a typo on our list for the Gregg Perkin exhibits admitted earlier that one of the parties caught. They alerted us to it. The difference is Exhibit 11465 should have said 11465R, as in "Rick." We made the change. This is the amended list. We would like to have that admitted.

THE COURT: Without objection, that corrected list is admitted.

MR. IRPINO: Additionally, Your Honor, the aligned parties would like to offer, file, and introduce into evidence our list of 20 deposition bundles that are being admitted in Phase Two. We have -- in addition to the list itself, we have a thumb drive for Stephanie, the Court, that is labeled Deposition Bundles Offered, Admitted by the Aligned Parties, PSC, State of Alabama, State of Louisiana, Halliburton, and

1 Transocean, dated October 1, 2013.

2 **THE COURT:** These are just your depositions or all
3 the depositions that are offered by any of the parties?

4 **MR. IRPINO:** They are our depositions that we
5 designated as aligned parties. They contain all parties'
6 designations within those all parties' exhibits. They are just
7 the ones we designated.

8 **THE COURT:** How many depositions?

9 **MR. IRPINO:** There are 20 total, 15 from Phase Two
10 and five from Phase One.

11 **THE COURT:** I think Mr. Langan wants to say
12 something.

13 **MR. LANGAN:** Yes, Your Honor. We have talked about
14 this with the aligned parties and we understand and agree with
15 the procedure. I just wanted to note that there's a little bit
16 of back-and-forth going on about some of the details of the
17 bundles. There's been some tweaks in the last couple of days
18 and we may suggest some additional ones and we reserve the
19 right to do that.

20 Also, Your Honor, as we did in Phase One, we are
21 hoping that there will be a disclaimer posted when they are
22 made public that the testimony and exhibits contained within
23 the bundles are in some cases being objected to and it's
24 possible that Your Honor, at the end of the day, may strike or
25 find some of the evidence inadmissible and that ought to be

13:06 1 made clear to whoever might be looking at that.

13:06 2 **THE COURT:** How did we do that last time?

13:06 3 **MR. LANGAN:** I think there was a notice on the
13:06 4 website, I think.

13:06 5 **MR. IRPINO:** Yes, Your Honor.

13:06 6 **THE COURT:** Make sure that's there again, Mr. Irpino.

13:06 7 **MR. IRPINO:** Will do, Your Honor.

13:06 8 **MR. LANGAN:** Lastly, I just want to note that he
13:06 9 mentioned there's five depositions from Phase One. That's
13:06 10 true. Under the conventions that we have adopted after a lot
13:06 11 of discussion with Judge Shushan is that for four of those
13:06 12 five, they can simply be used for purposes of the findings and
13:06 13 conclusions at the end of the case as opposed to being argued
13:06 14 here in this courtroom.

13:06 15 **THE COURT:** Tell me about those five again.

13:06 16 **MR. LANGAN:** Out of the 20 that are being offered,
13:06 17 five of them are from Phase One and the rule that was adopted
13:06 18 was that to sort of lessen the burden on the Court, the only
13:06 19 use of those five would be for post-trial findings and
13:07 20 conclusions as opposed to being read into court and played in
13:07 21 court. I think I have that right.

13:07 22 **MR. IRPINO:** I think what it specifically was we
13:07 23 couldn't play any video clips of those five. They could
13:07 24 certainly be used for cross or something of that nature.

13:07 25 **MR. LANGAN:** Fair enough.

1 **THE COURT:** Okay. With that understanding, those are
2 admitted.

3 **MR. IRPINO:** Specifically, Judge, we have the thumb
4 drive that's labeled as I stated. We have a list of the 20,
5 which is titled Deposition Bundles Offered, Admitted by the
6 Aligned Parties, October 1, 2013. And then we -- separate and
7 apart from those two, we have a list of the exhibits that are
8 within the bundles, and those are all parties' exhibits.

9 **THE COURT:** Give all that to Stephanie.

10 **MR. IRPINO:** Thank you, Judge.

11 **THE COURT:** Thank you.

12 Mr. Brock.

13 **ROBERT BEA,**

14 having been duly sworn, testified as follows:

15 **CROSS-EXAMINATION**

16 **BY MR. BROCK:**

17 **Q.** Good afternoon, Dr. Bea.

18 **A.** Good afternoon.

19 **Q.** I'm Mike Brock and I represent BP, as I think you know.

20 **A.** Yes.

21 **Q.** I just want to clear up a couple of things right here at
22 the front end. First, the opinions that you offer pertain to
23 decisions made by BP relative to source control prior to
24 April 20, 2010, correct?

25 **A.** Correct.

ROBERT BEA - CROSS

13:08 1 Q. You offer no opinions relating to the efforts post
13:08 2 April 20, 2010 to regain control of the well, correct?

13:08 3 A. That's correct.

13:08 4 Q. You did not independently look at BP's post-incident
13:08 5 conduct, correct?

13:08 6 A. Correct.

13:08 7 Q. Now, prior to your engagement for this case, you had never
13:08 8 written a source control plan for a deepwater well for anyone,
13:08 9 had you?

13:08 10 A. That's correct.

13:08 11 Q. Had you even seen one before you were engaged for this
13:08 12 case?

13:08 13 A. Yes.

13:08 14 Q. But prior to this case, you had never written a pre-spill
13:09 15 source control plan for any company, had you?

13:09 16 A. That's correct.

13:09 17 Q. You had not written one for submission to the government,
13:09 18 had you?

13:09 19 A. That's correct.

13:09 20 Q. You had not written one for internal use at any company,
13:09 21 had you?

13:09 22 A. That's correct.

13:09 23 Q. Now, in this case you cannot offer an opinion as to what
13:09 24 would be required of a BOP or a capping stack to constitute a
13:09 25 sufficient mitigation for this risk assessment tool that you

ROBERT BEA - CROSS

1 call ALARP, correct?

2 A. Not quite.

3 Q. Let's look at your deposition, page 56, line 20 to
4 page 57, line 7.

5 Were you asked this question and did you give this
6 answer, 56, line 20 to 57, line 7:

7 "QUESTION: What modifications or requirements for a
8 BOP were necessary for it to be a sufficient mitigation
9 barrier, in your view?

10 "ANSWER: Well, I can't opine as an expert on
11 specific requirements for a BOP to be a sufficient
12 mitigation in the sense of meeting process safety
13 requirements for as low as reasonably practicable or the
14 U.S. Minerals Management Service requirements and for
15 rapid abatement of the source because of the limitations
16 in my expertise."

17 Were you asked that question, and did you give
18 that answer?

19 A. Yes.

20 Q. I want to turn now to a few questions about the oil spill
21 response plan that you mentioned in your direct examination.
22 Are we together on the topic?

23 A. Yes.

24 Q. You did not undertake to review the oil spill response
25 plans of other companies in preparing your opinions in this

ROBERT BEA - CROSS

1 case, did you?

2 A. That's correct, and I stated so in my deposition.

3 Q. It's also true that you do not have detailed knowledge of
4 what the industry standard is for well control in a
5 post-blowout situation. That's true also, isn't it?

6 A. Well, to the extent that I could not locate an industry
7 standard for post-blowout source control.

8 Q. What you reviewed indicated that the industry plan to
9 respond to deepwater blowouts on a case-by-case basis, correct,
10 sir?

11 A. Well, the only situation I can testify to are the
12 preparations by BP for Macondo.

13 Q. Let's look at your deposition just to be clear. Page 125,
14 lines 16 to 24, please.

15 "QUESTION: So you're unaware of what the industry
16 standard is in responding to a potential deepwater blowout
17 as of April 20, 2010, correct?

18 "ANSWER: I'm unable to identify, quote, a universal
19 industry standard for these conditions. Rather, they seem
20 to be a case-by-case basis."

21 Were you asked that question, and did you give
22 that answer?

23 A. Yes.

24 Q. Now, you do know that BP's oil spill response plan
25 followed the MMS requirements and was approved by the MMS?

ROBERT BEA - CROSS

1 A. Yes. To the extent of what was written in the oil spill
2 response plan, but as testified by the MMS principally, Lars
3 Herbst, the expectations went beyond what was written in the
4 oil spill response plan.

5 Q. We are going to look at some of Mr. Herbst's testimony in
6 a few moments. If you would just try to focus on my question,
7 please.

8 BP's plan met the MMS requirements, didn't it?

9 A. Well, I think I testified otherwise, as I said earlier
10 this morning.

11 Q. Let's look at your deposition, page 106, lines 9 through
12 11.

13 "QUESTION: Yes, exactly. And you would agree that
14 MMS approved this OSRP, correct?

15 "ANSWER: Yes."

16 Were you asked that question, and did you give
17 that answer?

18 A. Yes.

19 Q. You know that under normal conditions, MMS would not
20 approve a plan if it did not conform with the regulations?

21 A. Correct.

22 Q. Now, BP also submitted an initial exploration plan to the
23 MMS, correct?

24 A. Yes.

25 Q. You discussed that in your direct examination, did you

ROBERT BEA - CROSS

1 not?

2 A. Yes.

3 Q. As part of that plan, BP represented that it had the
4 financial capability and the resources to drill a relief well
5 in the event of an underground incident in deepwater, correct?

6 A. That was one of the assurances.

7 Q. Now, one of the things you mentioned on your direct
8 examination, I hope I wrote it down here correctly, but I think
9 you said that BP had never rehearsed or conducted drills with
10 regard to its response plan. Did you say that?

11 A. I don't believe I said that but rather BP's Mr. Bush.

12 Q. You gave some testimony that BP had never rehearsed or
13 conducted drills. Did you testify to that this morning?

14 A. I was citing a reference of testimony to that effect, yes.

15 Q. Have you done a complete review of the BP records to
16 ascertain whether or not there were any drills conducted to
17 prepare in the event of a deepwater emergency?

18 A. No.

19 Q. Now, you do know, do you not, that MMS conducted an
20 unannounced test of BP's spill preparedness in January of 2009,
21 correct?

22 A. I do not recall that documentation.

23 Q. Let's look at Exhibit 8975, please. If you could go to
24 8975.1.1.

25 Do you see that this is a January 12, 2009 letter

ROBERT BEA - CROSS

13:16 1 to -- directed to Earnest Bush of BP America?

13:16 2 A. Yes.

13:16 3 Q. You would agree that this is, just by virtue of the date,
13:16 4 prior to the *Deepwater Horizon* incident?

13:16 5 A. Yes.

13:16 6 Q. Now, if you go to 8975.1.2, do you see here that this
13:16 7 letter says: "In accordance with the regulation, the Minerals
13:16 8 Management Service, MMS, conducted an unannounced oil spill
13:16 9 drill with BP America."

13:16 10 Did you see that?

13:16 11 A. Yes.

13:16 12 Q. Had you seen that before now?

13:16 13 A. I don't recall. In addition, this is addressing oil spill
13:17 14 drill, not source control drill.

13:17 15 Q. Well, if you haven't seen it, you don't really know what
13:17 16 it's about, do you?

13:17 17 A. I know what it's called here.

13:17 18 Q. Now let's look at 8975.1.3. It says: "The purpose of
13:17 19 this drill was to test your spill response preparedness and to
13:17 20 assess the effectiveness of" -- what?

13:17 21 A. Your oil spill response plan.

13:17 22 Q. Thank you.

13:17 23 Now, if we come down a little bit to 8975.1.4, do you
13:17 24 see here that the drill date is November 20, 2008?

13:17 25 We looked at the letter was January of 2009. And it

ROBERT BEA - CROSS

13:17 1 shows the folks who are involved in administering the drill,
13:17 2 including representatives of MMS and the United States
13:18 3 Coast Guard. Do you see that?

13:18 4 A. Yes.

13:18 5 Q. Let's look and see how BP did on the drill.

13:18 6 MR. BROCK: 8975.2.1. This is 8975.2.1.

13:18 7 You can go back a little bit just quickly.

13:18 8 Thank you. This is 8975.1.5.

13:18 9 BY MR. BROCK:

13:18 10 Q. Do you see that MMS conveys: "The purpose of this letter
13:18 11 is to provide you with an evaluation of this drill."

13:18 12 Do you see that?

13:18 13 A. Yes, sir.

13:18 14 Q. Now let's look at 8975.2.1. "Organizational Design
13:18 15 Objectives. Rating: Pass."

13:18 16 Do you see that?

13:18 17 A. Yes, sir.

13:18 18 Q. Let's look at 8975.2.3. "Operational Response Objectives.
13:18 19 Rating: Pass."

13:18 20 Do you see that?

13:18 21 A. Yes.

13:18 22 Q. "Response Support Objectives" at 8975.2.4, "Rating:
13:19 23 Pass."

13:19 24 Do you see that?

13:19 25 A. Yes.

ROBERT BEA - CROSS

13:19 1 Q. "Requested Documentation. Rating: Pass."

13:19 2 Do you see that?

13:19 3 A. Yes.

13:19 4 Q. Let's look at 8975.2.5.

13:19 5 Do you see that it is communicated that safety was
13:19 6 the highest priority during the response?

13:19 7 A. Yes.

13:19 8 Q. Is that what you would expect?

13:19 9 A. Yes.

13:19 10 Q. Is that what you would want to see?

13:19 11 A. Yes.

13:19 12 Q. Now, you see that Mr. Danenberger is copied on this note?

13:19 13 A. Yes.

13:19 14 Q. I believe that you have testified that you hold him in
13:19 15 very high regard?

13:19 16 A. Yes.

13:19 17 Q. And there's Mr. Danenberger and his call-out is 8975.3.2,
13:19 18 correct?

13:19 19 A. Correct.

13:19 20 Q. Mr. Saucier, the regional supervisor of field operations,
13:19 21 is also listed there as a sender of this note, correct?

13:20 22 A. Yes.

13:20 23 Q. Now, the OSRP includes a plan for source control, does it
13:20 24 not?

13:20 25 A. Well, not a plan for rapid abatement in source control,

ROBERT BEA - CROSS

13:20 1 but rather the three points you had applied.

13:20 2 Q. Correct. So I want to come to that, but I want to make
13:20 3 one point first.

13:20 4 MR. BROCK: If we could go to 11753, please.

13:20 5 BY MR. BROCK:

13:20 6 Q. This is a document titled "Notice to Lessees and Operators
13:20 7 of Federal, Oil, Gas, and Sulphur Leases and Pipeline
13:20 8 Right-Of-Way Holders in the Outer Continental Shelf, Gulf of
13:20 9 Mexico Region."

13:20 10 Do you see that?

13:20 11 A. Yes, sir.

13:20 12 Q. You are familiar with this document, are you not?

13:20 13 A. No.

13:21 14 Q. Pardon?

13:21 15 A. No, I don't think so.

13:21 16 Q. Do you recall telling us in your deposition, "Yes, I've
13:21 17 seen this document"?

13:21 18 A. No, I don't.

13:21 19 Q. Well, I'll tell you what. We'll pass on the impeachment
13:21 20 because I can make the points I need to make. We'll just keep
13:21 21 going.

13:21 22 If we look at -- well, I'm sorry. I have to do this.
13:21 23 I do need to do it.

13:21 24 MR. BROCK: Let me see deposition transcript 94, 22
13:21 25 to 95, 6.

ROBERT BEA - CROSS

1 BY MR. BROCK:

2 Q. And I will just show you this to refresh your
3 recollection.

4 A. Okay.

5 Q. Do you see it's there at the bottom?

6 "QUESTION: And, Dr. Bea, this is an MMS notice to
7 lessees, 2006. Are you familiar with this?

8 "I will -- I was curious. I think that's very
9 helpful. Thank you.

10 "So back to this document, this is MMS Notice to
11 Lessees 2006-G21. Are you familiar with this document?

12 "ANSWER: Yes, I've seen this document before."

13 Does that refresh your recollection as to the
14 answer that you gave at your deposition?

15 A. Yes. Thank you.

16 Q. And you understand that this exhibit is a notice to
17 lessees that provides guidance on oil spill response plans?

18 A. Yes.

19 Q. Now, if we go to TREN-11753.12.1, Section 6, do you see
20 that the notice involves three areas in which the MMS is
21 looking to operators to provide information? Do you see that?

22 A. Yes, sir.

23 Q. It includes spill detection, pipeline spill detection, and
24 source control. Do you see that?

25 A. Yes.

ROBERT BEA - CROSS

1 Q. According to the MMS, Section 6c of an OSRP is supposed to
2 briefly describe general procedures developed and instituted by
3 the organization to ensure that the source of a discharge is
4 controlled as soon as possible after a spill occurs, correct?

5 A. Correct.

6 Q. That's TREG-11753.12.2, correct?

7 A. Yes.

8 Q. Now, we have looked at this before. Let's just take
9 another quick look at it. TREG-11754.29.7.

10 This is the language from BP's oil spill response
11 plan that relates to what should be done in the event of a
12 deepwater blowout, correct?

13 A. It basically outlines the response, yes.

14 Q. It also follows the notice to parties as to what should be
15 included in the oil spill response plan, does it not?

16 A. Yes.

17 Q. The three components are to have -- I'll just summarize
18 this -- is that the facility should be equipped with emergency
19 support systems and they should operate by alarming the
20 operator and automatically shutting down individual processes
21 or the entire platform.

22 Do you see that?

23 A. Yes.

24 Q. Is your interpretation of that bullet point for deepwater
25 drilling basically to have a BOP that will shut in the well in

ROBERT BEA - CROSS

1 the event of emergency?

2 A. Repeat your question, please.

3 Q. I'm going to withdraw that one and ask another one.

4 A. Okay.

5 Q. Because I don't think that was a good question.

6 Is the first bullet point essentially activating
7 emergency equipment?

8 A. Yes.

9 Q. That could be the BOP and other things, correct?

10 A. Correct.

11 Q. So thank you for that.

12 The second bullet point goes to the issue of remotely
13 activating emergency equipment, correct?

14 A. Yes.

15 Q. And that would be for deepwater drilling, would include at
16 least an intervention using ROVs?

17 A. Yes.

18 Q. The third bullet point is that in the event the spill
19 source cannot be controlled by the facility operator or
20 remotely with the safety system, BP will activate the oil spill
21 response plan and assemble a team of technical experts to
22 respond to the situation. The team will be comprised of
23 personnel familiar with the facility, including production
24 superintendents, foremen. The deputy incident commander or
25 operations section chief will be responsible for monitoring

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1 information produced by the team.

2 That is the component of the plan that involves
3 standing up the resources that are necessary to develop a plan
4 to shut in the well, correct?

5 A. Yes.

6 Q. Now, you agree that having experts in the field to respond
7 to a blowout is a mitigation barrier?

8 A. Please repeat your question.

9 Q. Sure. You agree that having experts in the field to
10 respond to a blowout is a mitigation barrier?

11 A. It can be.

12 Q. Let's look at your deposition because I don't think you
13 qualified it there. Transcript 103, 21 to 25, please.

14 "QUESTION: And you would agree that having experts
15 in the field of responding to blowouts is a mitigation
16 barrier?"

17 Was your answer to that: "Yes"?

18 A. Yes.

19 Q. Now, you talked a little bit earlier today about Lars
20 Herbst. You agree that Lars Herbst, the regional director for
21 the Gulf of Mexico for MMS, testified he would expect BP to
22 staff up a team to identify source control options, correct?

23 A. Yes.

24 Q. He said that in part because every blowout is unique?

25 A. I would infer that. I don't know that he said that.

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13:28 1 Q. Let's look at your deposition, page 107, lines 15 to 20,
13:28 2 please.

13:28 3 "QUESTION: He understood -- he also testified that
13:28 4 every blowout is unique and will require different tools,
13:28 5 correct?"

13:28 6 Was your answer to that question: "Yes"?

13:28 7 A. Yes.

13:28 8 Q. Now, you have talked some today about the 1991 joint
13:28 9 industry study referred to as DEA, correct?

13:28 10 A. Correct.

13:28 11 Q. What you have said about that is that DEA offered some
13:28 12 conclusions on how to mitigate consequences that can occur from
13:28 13 a blowout, correct?

13:28 14 A. Correct.

13:28 15 Q. Now, it's true, is it not, that that document, in fact,
13:29 16 the first sentence of that document, recognizes that all
13:29 17 blowouts are different to various degrees?

13:29 18 A. Yes.

13:29 19 Q. Let's look at 11755.20.1.

13:29 20 This makes that very point, does it not?

13:29 21 A. Yes.

13:29 22 Q. In addition to that call-out 11755.20.3, this document
13:29 23 also recognizes it is impossible to generate a single optimized
13:29 24 cookbook procedure that will work in all cases and
13:29 25 circumstances. That's true too, isn't it?

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1 A. These things are in general true for most emergency
2 response systems.

3 Q. This document recognizes that it's also true in the
4 deepwater drilling environment, correct?

5 A. Yes.

6 Q. It proves that there was awareness and knowledge of that
7 at this point in time?

8 A. Yes.

9 Q. And that's still true today, isn't it?

10 I'll just do it this way. That was still true as of
11 April 20, that is, that every underwater deepwater blowout
12 presents -- would present differences to various degrees?

13 A. Well, the answer to that is yes, that's one of the key
14 reasons for detailed mitigation planning well in advance to
15 address the critical types of uncertainties, variabilities that
16 the responders will be faced with.

17 I've been here for the past two days listening to the
18 experts testify, Mr. Wilson, Turlak, and the impression I got
19 was the uncertainties that they were addressing and testifying
20 to in the court were the very kinds of uncertainties and
21 factors that should be addressed before a high-hazard project
22 like this is started.

23 Q. You would agree that because there is no cookbook
24 procedure that would work in all cases and circumstances that
25 you would need an enormous amount of equipment to cover a

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1 reasonable number of blowout scenarios?

2 A. Well, I would have to know what you consider to be an
3 enormous amount of equipment.

4 Q. Let me just direct you then to your deposition. I'm going
5 to ask you the question the way it was asked then, page 133,
6 lines 10 through 15. This is referring to some testimony of
7 Mr. Barnett.

8 "QUESTION: So Mr. Barnett testified that you would
9 need an enormous amount of equipment to cover a reasonable
10 amount of scenarios. Do you have any basis to disagree
11 with that?

12 "ANSWER: No. In fact, I agree with it."

13 Do you see that?

14 A. Yes.

15 Q. Did you testify to that?

16 A. Yes.

17 Q. Then 135, lines 9 through 12.

18 "QUESTION: And you ultimately agree that you would
19 need an enormous amount of equipment?

20 "ANSWER: Yes."

21 A. Yes.

22 Could I comment?

23 Q. I think your lawyer will have a chance to ask you some
24 questions.

25 Let's look at 7353.1. You also cite the October 1998

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1 IADC Deepwater Well Control Guidelines, do you not?

2 A. Yes.

3 Q. One of the key provisions to this policy is found at
4 7353.354.1 under "Emergency Response, Blowout Contingency
5 Planning." Does this document tell us that: "The key to a
6 sound, effective blowout contingency plan is to designate and
7 properly organize a team of individuals with the right
8 combination of technical and operational capabilities"?

9 A. Yes. That's very, very true.

10 Q. To do that is a good policy and represents risk
11 mitigation, does it not?

12 A. Yes.

13 Q. Now, if we look at 7353.357.5, also in this document, it
14 says, like the 1991 document: "Blowouts do not always have a
15 straightforward solution. There are many instances where
16 precise plans cannot be formulated until certain information is
17 obtained."

18 Do you see that?

19 A. Yes.

20 Q. It says: "It is important that the BTF be capable of
21 formulating feasible strategies based on experience and
22 judgment"?

23 A. Yes.

24 Q. Now, you are aware of the fact that BP had engaged well
25 control specialists to be available to it in the event of an

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13 : 35 1 emergency, correct?

13 : 35 2 A. Yes.

13 : 35 3 Q. And one of the companies that BP engaged to assist in the
13 : 35 4 event of an emergency was a company by the name of Wild Well
13 : 35 5 Control, correct?

13 : 35 6 A. Yes.

13 : 35 7 Q. Do you recognize that company as a leader in the field?

13 : 35 8 A. Yes.

13 : 35 9 Q. Do you know that BP had contracts with many other
13 : 35 10 companies to provide specialty services if called on in the
13 : 35 11 event of an emergency?

13 : 35 12 A. No, I don't.

13 : 35 13 Q. You don't know that?

13 : 35 14 A. That's correct.

13 : 35 15 Q. So to the extent that that represents part of their
13 : 35 16 preparation and plan, you don't have awareness of that,
13 : 35 17 assuming that it does?

13 : 35 18 A. That's correct.

13 : 35 19 Q. Now, by virtue of the contracts that are in place, if we
13 : 35 20 could look at 11467.4.1, you see that this is just the
13 : 35 21 introductory piece to the agreement between Wild Well Control
13 : 35 22 and BP? Do you see that?

13 : 36 23 A. Your question?

13 : 36 24 Q. I'm just asking you to confirm for the record that this is
13 : 36 25 the agreement between BP and Wild Well Control.

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1 A. Well, I've only got one page right here in front of me,
2 but it's titled "Agreement."

3 "This contract is made between the following parties:
4 BP America Production Company."

5 Q. You remember that we talked to you about this document at
6 your deposition?

7 A. Yes. And Wild Well Control.

8 Q. Yes.

9 In this document, Wild Well is representing to BP
10 what its capabilities are as part of being included in the
11 response to an emergency, correct?

12 A. Yes.

13 Q. If we look at 11467.11.1, do you see here that Wild Well
14 is representing that it has "competence to perform the services
15 and has or shall obtain the necessary tools, products,
16 equipment, and personnel to provide the services"?

17 A. Yes.

18 Q. Then very quickly at 11467.69.1 --

19 **MR. BROCK:** If you can just highlight beginning at
20 "In the event."

21 **BY MR. BROCK:**

22 Q. "In the event of a well control incident, contractor will
23 assist company in evaluation of the situation, mobilization of
24 materials, personnel and services required in the firefighting,
25 recovery, capping, and relief well operations."

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1 Do you see that?

2 A. Yes.

3 Q. Do you believe that it's prudent to have a company like
4 this on standby in the event of an emergency?

5 A. Well, yes, it's prudent. That's part of a predesigned
6 mitigation plan.

7 Q. If we'll look at one more, please -- and I'll keep going
8 with this -- 11467.69.2. You see here under 6.1, "Well Control
9 Services," that "Contractor shall provide or have access to, as
10 well as identify personnel to provide, but not limit itself to:
11 Firefighting, surface blowout control, capping on fire
12 capabilities, subsurface blowout control, engineering response
13 and prevention capability, relief well design, and intervention
14 and explosive expertise."

15 Do you see that?

16 A. Yes.

17 Q. I want to turn to a different topic, now.

18 You have characterized Shell's Process Safety
19 Management System as "outstanding" and an "A-plus," have you
20 not?

21 A. For the period 1990 and specific -- or '90s and the
22 specific group I was working with, that is correct.

23 Q. Let me ask you to look at your deposition at 72, line 17
24 through 22. Were you asked this question and did you give this
25 answer?

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1 "QUESTION: And do you have an opinion with respect
2 to Shell's Process Safety Management System globally?

3 "ANSWER: Yes.

4 "QUESTION: And what is your opinion there?

5 "ANSWER: It's A-plus, outstanding."

6 Were you asked those questions and did you give
7 those answers?

8 A. Yes.

9 Q. Let's look at Exhibit 142244.1.1. Do you see that this is
10 the cover page of "Shell Offshore Gulf of Mexico Regional Oil
11 Spill Response Plan"?

12 A. Yes.

13 Q. Then if we will go to 142244.65.1 --

14 MR. BROCK: And if you will, highlight the last
15 section there.

16 BY MR. BROCK:

17 Q. Do you see that Shell's source control response plan --
18 oil spill response plan says: "A source control group is named
19 on the spill management team. Their duties are to assess the
20 situation, contact well control specialists or divers, as
21 necessary."

22 Do you see that?

23 A. Yes.

24 Q. Do you agree that the source control portion of Shell's
25 regional oil spill response plan does not have any specific

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1 source control procedures?

2 A. Well, I don't know that to be a fact because we are
3 looking at a form submitted to the Minerals Management Service.
4 A source control plan in process safety management consists of
5 much more than these things.

6 Q. Sure. Let's see what you said about this document in your
7 deposition, page 117, lines 2 through 7.

8 "QUESTION: So in Shell's source control portion of
9 their regional oil spill response plan, they don't have
10 any specific source control procedures, correct?

11 "ANSWER: That is correct."

12 A. That's correct.

13 Q. Shell's plan is to contract well control specialists or
14 divers, correct?

15 A. Well, I don't know Shell's plan. I know what they
16 responded to in the source control, and as you know, this
17 document was not part of the formation of my opinions.

18 Q. Is it correct, sir, that you told us in deposition that
19 Shell's source control portion of their regional oil spill
20 response plan does not have any specific source control
21 procedures?

22 A. I believe that's true.

23 Q. Now, you have also characterized Exxon's process safety
24 management system as "outstanding," have you not?

25 A. Again, as I attested to during deposition, in a certain

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1 group and a certain time period, the 1990s.

2 Q. You know, as you sit here today, that Exxon's oil spill
3 response plan contains language similar to BP's, does it not?

4 A. Yes. It looks like they were all written by the same
5 group using cut-and-paste technology.

6 Q. Would you please answer my question.

7 Is Exxon's oil spill response plan similar to BP's?

8 A. It is almost identical.

9 Q. Let's look at Exhibit 142243.268.2. If you look at the
10 third bullet point.

11 "In the event the spill source cannot be controlled
12 by the facility operator or remotely with a safety system,
13 ExxonMobil will activate the oil spill response plan and
14 assemble a team to respond to the situation."

15 Do you see that?

16 A. Yes, sir.

17 Q. Similarly, Chevron -- who you have characterized as having
18 A-plus for their safety management system -- says that it will
19 activate its oil spill response plan and assemble a team of
20 experts in the event of a well control emergency, correct?

21 A. Could you please break your question or subdivide your
22 question?

23 Q. Yes. First of all, do you have an opinion with respect to
24 Chevron's process safety management system globally?

25 A. The answer is yes, specific to the 1990s and ExxonMobil's

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1 Global Risk Management Group.

2 MR. BROCK: Let me see the first page of Dr. Bea's
3 transcript, the one that has the quote at 73, lines 1 through
4 9. I just want to show the date of the deposition, please.

5 BY MR. BROCK:

6 Q. Do you see it's the 14th of November 2011?

7 A. Yes.

8 Q. Page 73, lines 1 through 9, the question was asked of you
9 in 2011:

10 "QUESTION: Do you have an opinion with respect to
11 Chevron's process safety management system globally?

12 "ANSWER: Yes, I do."

13 A. Yes.

14 Q. What is that opinion? Did you say "outstanding"?

15 A. Yes.

16 Q. Another "A-plus"?

17 A. Yes.

18 Q. Let's look at 142242.241.3. Do you see here in the third
19 bullet point that Chevron, as part of its plan, will "activate
20 its oil spill response plan and assemble a team of technical
21 experts to respond to the situation"?

22 A. Yes, we have seen that statement before.

23 Q. Chevron's language is similar to the language that is used
24 in BP's oil spill response plan, correct?

25 A. Very similar.

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1 Q. Now, BP had in place a strategic performance unit well
2 control response guide for the Gulf of Mexico, didn't it?

3 A. Please repeat your question.

4 Q. I'm sorry. I probably went a little too fast. Changing
5 subjects now. I try to do that and I forgot, and I apologize.

6 BP had in place at the time of this incident a
7 strategic performance unit well control response guide for the
8 Gulf of Mexico?

9 A. I believe that's correct.

10 Q. If we look at 2386.1, do you see that this is the document
11 I was just referring to?

12 A. Yes, sir.

13 Q. As a process safety expert, you agree that developing an
14 SPU well control response guide is a good thing for a company
15 like BP to be doing?

16 A. It's part of development of a process safety management
17 system. It is very good.

18 Q. Thank you.

19 If we look at 2386.9.1, at the objectives of the
20 document, the objectives are to "provide a clear concise
21 instruction to key personnel in the event of a well control
22 incident that are compatible with BP's tiered emergency
23 response system. This will include the call out procedures,
24 the incident management team formation for a well control
25 emergency."

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1 Do you see that?

2 A. Yes.

3 Q. Is this the right kind of thing to communicate to team
4 members? That is, we are going to give you clear, concise
5 instructions as to where to go and what to do in the event of
6 an emergency?

7 A. Yes.

8 Q. Your research did not take you to the level of
9 understanding how BP implemented this plan after the event
10 occurred; is that correct?

11 A. Well, that's fundamentally correct. After the well
12 control-specific guideline I referred to in my direct testimony
13 this morning was the next step I went to that would have
14 articulated Macondo-specific elements, and I was never able to
15 locate that document.

16 Q. In terms of the way in which BP's plan was implemented at
17 Macondo -- it's a little bit different question than I think
18 you answered -- the way it was implemented at Macondo, you did
19 not undertake to study that other than the citation that you
20 have just given us?

21 A. That's correct.

22 Q. So in terms of how quickly teams were set up, what kind of
23 concurrent operations were going on, the number of people
24 involved, whether they were organized or not in terms of going
25 forward, that's not part of your opinion to the Court?

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13 : 49 1 A. That's correct.

13 : 49 2 Q. New topic. I want to talk to you about ALARP for just a
13 : 49 3 minute.

13 : 49 4 MR. BROCK: Let me just have TREX-11750R.18.5.

13 : 49 5 BY MR. BROCK:

13 : 49 6 Q. This is the section of your report where you say that
13 : 50 7 "Acceptable and effective process safety management as low as
13 : 50 8 reasonably practicable mitigation barriers were non-existent."

13 : 50 9 Do you see that?

13 : 50 10 A. Yes.

13 : 50 11 Q. Then you go on and make an analysis under ALARP that I
13 : 50 12 described for the Court today?

13 : 50 13 A. Yes.

13 : 50 14 Q. Let's go down to 11750R.10.1. This is just an excerpt
13 : 50 15 from your report, but you say: "Three general approaches have
13 : 50 16 been used to define the as low as reasonably practicable
13 : 50 17 region: Cost/benefit analyses, historic precedent analyses,
13 : 51 18 and standards of care analyses."

13 : 51 19 Correct?

13 : 51 20 A. Yes.

13 : 51 21 Q. You did not undertake to do a cost/benefit analysis, did
13 : 51 22 you?

13 : 51 23 A. No, I didn't.

13 : 51 24 Q. You did not -- you did not undertake to conduct a historic
13 : 51 25 precedent analysis, did you?

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1 A. I did. That's Figure 4 in my report.

2 Q. You did not undertake to do a standards of care analysis,
3 did you?

4 A. For sure on the standard of care, because for this class
5 of system, there has not yet been established a standard of
6 care. That's a work in progress.

7 Q. Let's look at your deposition, page 123, lines 19 to 23,
8 relating to one of the components of the analysis.

9 "QUESTION: So you didn't take analysis to determine
10 the industry standard to respond to a blowout in the Gulf
11 of Mexico on any kind of well, correct?

12 "ANSWER: Correct."

13 Were you asked that question and did you give
14 that answer at your deposition?

15 A. Yes.

16 Q. Thank you.

17 As we discussed earlier, you cannot say that any
18 particular device would pass a cost/benefit economic analysis,
19 correct?

20 A. Well, in process safety management, devices -- equipment
21 are only one of several -- seven -- components that have to be
22 put together to define the system. So never can a single piece
23 of equipment satisfy that requirement.

24 Q. Let me ask my question again just so -- let me see if I
25 can get a question and an answer.

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1 You could not say that any particular device would
2 pass a cost/benefit economic analysis, correct?

3 A. That's correct.

4 Q. And in fact, in your study of this case, you have not
5 identified any technology that was required to be ALARP,
6 correct?

7 A. Please repeat your question.

8 Q. Let me show you your deposition, just see if this
9 refreshes your recollection. Page 58 lines 12 to 15, were you
10 asked this question and did you give this answer and does this
11 refresh your recollection:

12 "QUESTION: But you haven't identified technology
13 that was required to be ALARP?"

14 "ANSWER: Correct."

15 A. Answer "Correct" in the context of my answer at the top of
16 this page.

17 Q. Just to fill it out, if we can see the next question and
18 answer.

19 "QUESTION: So you just think something needed to be
20 there, but you can't specify what?"

21 "ANSWER: Correct."

22 A. Correct.

23 Q. You agree that, in the context of industrial activities,
24 that all risks cannot be completely eliminated?

25 A. Correct.

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1 Q. That some exposure to risk has to be tolerated?

2 A. Accepted.

3 Q. No perfect approach to determining what is acceptable and
4 desirable risk associated with an engineering system?

5 A. Please repeat your question.

6 Q. Do you agree there is no perfect approach to determine
7 what is an acceptable and desirable risk associated with an
8 engineering system?

9 A. Yes.

10 Q. Now, I want to talk to you a little bit about the
11 historical data that relates to blowouts as relates to what we
12 were talking about just a little bit earlier in the area of
13 historic precedent.

14 Do you agree that, in evaluating the risk of a
15 blowout, you need to know not only the frequency that a blowout
16 occurs, but the results of the blowouts?

17 A. First, I need to know critically the frequency.

18 Q. I just apologize. If you would say that again, I didn't
19 understand it.

20 A. I said you need to know first critically the frequency.

21 Q. Is it also important to know the results of the blowouts,
22 frequency and results?

23 A. Could you define what you mean by "results"?

24 Q. Let me ask you the question the way I asked it in the
25 deposition, page 69, line 15 to 20. Were you asked this

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1 question and did you give this answer?

2 "QUESTION: And you would agree that in evaluating
3 the risk of a blowout, you would need to not -- need to
4 know not only the frequency that a blowout occurs, but the
5 results of a blowout?

6 "ANSWER: Yes, sir."

7 A. Yes.

8 Q. As part of your work in this case, you did not do any
9 investigation into how many wells actually were flowing until a
10 relief well could intersect. Correct, that was not part of
11 your analysis?

12 A. Please repeat your question.

13 Q. Right. So you have some assumptions in your analysis
14 about how long a well might flow. When you did your look at
15 this case, you didn't consider how many wells actually flow
16 until a relief well would intersect, correct?

17 A. Well, from the process safety management standpoint,
18 there's not a sufficient database yet established for this
19 class of hydrocarbon reservoir to, in fact, define stable
20 statistics, which is the direction you're reaching in.

21 Q. Thank you for that and that's helpful.

22 Can you confirm that you didn't look into the issue
23 of relief well intersect as part of your analysis of this case?

24 A. Well, let's see. I need to hear your question again to
25 get the parts correct.

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1 13:58 Q. Will you confirm for the Court that, as part of your
2 13:58 analysis that you have presented here today, you did not
3 13:58 undertake to study with what frequency and during what times
4 13:58 relief wells were utilized to intercept to shut in a well?

5 13:59 A. That's correct.

6 13:59 Q. Likewise, you didn't investigate or cite to the Court the
7 13:59 number of wells that actually bridge in the process of
8 13:59 blowouts? That is, shut themselves in.

9 13:59 A. Correct.

10 13:59 Q. Now, there is some data available to us about blowouts in
11 13:59 the Gulf of Mexico, isn't there?

12 13:59 A. There is some data available, but, again, data applicable
13 13:59 to this category of hydrocarbon reservoir is severely limited.

14 13:59 Q. One of the reasons for that -- we just have to look at
15 13:59 what's available, but one of the reasons for that is that
16 13:59 deepwater blowouts are very, very rare?

17 13:59 A. That's part of it, but the uniqueness of the hydrocarbon
18 14:00 environment is a critical component in a determination of risk.

19 14:00 Q. Do you agree that deepwater blowouts are very, very rare?

20 14:00 A. What do you mean by "very, very rare"? Please quantify.

21 14:00 Q. Can you not answer the question?

22 14:00 A. Not when I don't know what you mean by "very, very rare."

23 14:00 Q. Thank you.

24 14:00 Let's look at the MMS study on this issue, 11752.1.1.
25 14:00 This study summarizes information about blowouts that occurred

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1 14:00 during drilling operations on the Outer Continental Shelf from
2 14:00 1992 to 2006. Are you aware of that?

3 14:00 A. Yes.

4 14:00 Q. If we look at 11752.2.2, do you see that this is a summary
5 14:01 of the findings of the MMS for this period of time?

6 14:01 A. Yes.

7 14:01 Q. It cites that "The blowout with the longest duration
8 14:01 during the current study was a period of 11 days, compared with
9 14:01 more than 30 days in the previous period." I think there was a
10 14:01 15-year period they looked at previous to this?

11 14:01 A. And this is true for shallow water on the shelf wells.

12 14:01 Q. This is the data that's available, the Outer Continental
13 14:01 Shelf, correct? From 1996?

14 14:01 A. At this time, yes.

15 14:01 Q. If we look over at 11 -- I'm sorry. If you look at the
16 14:02 second sentence of the first call-out, it says: "Like the
17 14:02 previous study, a significant number of blowout events were of
18 14:02 short duration. During the current study, 49 percent of the
19 14:02 blowouts stopped flowing in 24 hours or less compared with
20 14:02 57 percent during the previous study."

21 14:02 Do you see that?

22 14:02 A. Yes.

23 14:02 Q. "And the current study, 41 percent lasted between one and
24 14:02 seven days." Do you see that?

25 14:02 A. Yes.

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1 Q. So for the data set that was available by this time point,
2 2006, roughly 90 percent of the wells were shut in within seven
3 days.

4 A. Well, of course, that's true for this data set. That's
5 not the data set that I have been concerned with for the past
6 41 months.

7 Q. You cite in your report -- I can't remember if you
8 mentioned it this morning -- I think you did -- a West
9 Engineering study with regard to the success of BOPs in a
10 testing environment.

11 Do you recall that?

12 A. The one I cited this morning was ROV intervention.
13 There's approximately 10 or so of the West Engineering studies.

14 Q. One of the things you cited in your report -- I'll move
15 on. That's fine. Thank you for that.

16 Now, a few questions about capping stacks. As we
17 talked earlier, you're not a qualified expert in the design of
18 blowout preventers or capping stacks, correct?

19 A. That's correct.

20 Q. You don't know what was called for across industry with
21 respect to a deepwater capping stack at the time of this
22 incident, do you?

23 A. I have not made an industry search.

24 Q. You're aware that a capping stack will not work in every
25 blowout. You know that, though?

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1 1 4 : 0 4 A. Well, I'm not even sure I know that.

2 My expertise is process safety management. I rely on
3 domain experts to support that, to help develop systems that
4 will be as low as reasonably practicable.

5 1 4 : 0 4 Q. Let me just show you --

6 1 4 : 0 4 A. I'm not the main expert in that area.

7 1 4 : 0 4 Q. Are you done?

8 1 4 : 0 4 A. Yes, sir.

9 1 4 : 0 4 Q. I'm sorry. I apologize for interrupting.

10 Just one more question and answer from your
11 deposition. Page 46, lines 6 through 10.

12 1 4 : 0 5 "QUESTION: Are you aware that a capping stack will
13 not work on every blowout?

14 1 4 : 0 5 "ANSWER: Yes."

15 1 4 : 0 5 A. Yes.

16 1 4 : 0 5 Q. You are aware that Shell did not have a capping stack as
17 of April 20, 2010, suitable for deepwater usage, correct?

18 1 4 : 0 5 A. Please repeat your question.

19 1 4 : 0 5 Q. Okay. And you're aware that Shell did not have a capping
20 stack as of April 20, 2010, suitable for deepwater usage?

21 1 4 : 0 5 A. I think that's correct.

22 1 4 : 0 5 Q. Chevron did not have a deepwater capping stack as of
23 April 20, 2010?

24 1 4 : 0 5 A. I think that's also correct.

25 1 4 : 0 6 Q. Exxon did not have a capping stack as of April 20, 2010?

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1 14:06 A. Well, that's due to limitations in my expertise.

2 14:06 Certainly I don't have that domain expertise.

3 14:06 Q. I'm just going to show you another deposition excerpt
4 14:06 here, page 51, line 23 to 52, line 8. So the first question is
5 14:06 about Shell, and then the question is:

6 14:06 "QUESTION: And that's the same for Exxon, correct?

7 14:07 "ANSWER: Correct. Exxon did not have a capping
8 14:07 stack as of April 20, 2010."

9 14:07 A. That's my knowledge, yes.

10 14:07 Q. You're also aware that as of April 20, 2010, the MMS did
11 14:07 not require of operators a prebuilt capping stack?

12 14:07 A. Well, their requirements did not carry to that level, but
13 14:07 the requirement was to abate as rapidly as possible.

14 14:07 Q. Are you aware that Mr. Herbst has testified that he did
15 14:07 not believe the expectation would be that BP would develop
16 14:07 something or have something available for a very low
17 14:07 probability event like the Macondo incident?

18 14:08 Do you remember that testimony?

19 14:08 A. I don't.

20 14:08 Q. Do you want to see it?

21 14:08 A. Please.

22 14:08 Q. Lars Herbst transcript, 301, lines 13 to 23:

23 14:08 "QUESTION: What about in regards to preparing for a
24 14:08 low probability, high consequence event like the Macondo
25 14:08 incident?

ROBERT BEA - CROSS

1 "ANSWER: There is no real historical context as far
2 as what would be needed. I don't believe the expectation
3 would be that they would develop something or have
4 something available for a very low probability event."

5 Then if we could go to 458, lines 5 through 8:

6 "QUESTION: Was there any MMS regulation that
7 required a drilling contractor to have a capping stack
8 assembled?

9 "ANSWER: No."

10 BY MR. BROCK:

11 Q. Were you familiar with that testimony?

12 A. I think so. My impression -- I'm recalling this testimony
13 is the exact reason for diligent qualified process safety
14 management because low probability events that are severe in
15 consequences, in fact, have to be prepared for.

16 Q. I was asking you the question oriented to MMS
17 expectations. And you agree, do you not, that MMS did not
18 expect that an operator or a drilling contractor would have a
19 capping stack, correct?

20 A. And that's as he testified.

21 Q. Yes. Thank you.

22 Now, let's turn back just for a minute to DEA-63. I
23 have just a few more questions about that.

24 The report was issued in 1991, correct?

25 A. Yes. The first one.

ROBERT BEA - CROSS

1 Q. You note that DEA-63 offered multiple conclusions on how
2 to mitigate the high consequences of a deepwater event,
3 correct?

4 A. Yes.

5 Q. Then you have also talked about the SPE IADC conference
6 that took place in 2003, right?

7 A. Yes.

8 Q. I want to turn your attention now to TREN-6299.1.1. It's
9 fairly old, so I don't think we have the best copy. But you
10 see that's dated February 21, 2003, correct?

11 A. Yes, sir.

12 Q. That's the document you were talking about, correct?

13 A. Yes, I believe so.

14 Q. Let's turn to Slide 6 of that presentation, 6299.6.1.

15 Can you see, it has a list there of blowout
16 containment procedures? And it reads: "The most recent
17 blowout containment procedures can be found in the DEA-63
18 floating vessel blowout control which was released in 1990."

19 Do you see that?

20 A. Yes.

21 Q. At that time DEA considered deepwater to be 1500, correct?

22 A. Correct.

23 Q. Operators were in deeper water than that at this point in
24 time, were they not?

25 A. Yes. They envisioned it, and I testified to that earlier

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1 today.

2 Q. Now, if we look at 11755.1.1, this is the joint industry
3 program for floating vessel blowout control that's referenced
4 in the slide that we just looked at, isn't it?

5 A. Yes, sir.

6 Q. Let's look at who participated in this presentation and
7 meeting. 11755.18.1. This is the list of participants there,
8 correct?

9 A. Yes.

10 Q. Then if we go forward a little more, we see that all of
11 the companies and regulatory agencies that were listed on that
12 previous slide had awareness of the project. Correct?

13 A. Yes.

14 Q. MMS was a participant?

15 A. Yes. Amoco as well, who was a member of BP.

16 Q. Amoco was a predecessor to BP?

17 A. Correct.

18 Q. Yeah, I know.

19 TREX-11755.23.1 talks about vertical intervention
20 requires that there is some mechanical competence to the well
21 at the seafloor. Do you see that?

22 A. Yes, sir.

23 Q. It concludes: "If not, relief well drilling is probably
24 the only alternative." Do you see that, the last sentence?

25 A. I see the two sentences you have read, but the intervening

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1 sentences provide more context.

2 Q. Sure. Technique may not be possible if it is broached
3 around the structural pipe and the well is cratered. And it
4 talks about other conditions, doesn't it?

5 A. Yes.

6 Q. But as of 2003, the standard, as reflected in these slides
7 at least, is to the effect that if there are complications, at
8 that point relief well drilling is the only alternative,
9 correct?

10 A. For the ecocenter (phonetic) whom they identify, correct.

11 Q. Now, if we go to TRES-11755.42.1, this again is from DEA,
12 but it's what's referred to in 2003 as the standard, isn't it?

13 A. Appears to be.

14 Q. Yes. It says here: "Affixing the capping stack to casing
15 that is bent at an angle, egged, lipped, eroded, or split may
16 be difficult."

17 Do you see that?

18 A. Yes.

19 Q. It's saying: "It is recognized that this will probably be
20 applicable only in certain low pressure situations."

21 Do you see that?

22 A. I see the sentence, yes. Mr. Turlak this morning
23 addressed such issues.

24 Q. If you'll just please focus on my questions, I'm almost
25 done. Okay?

ROBERT BEA - CROSS

1 A. Yes, sir.

2 Q. Will you do that?

3 A. Of course.

4 Q. Okay. Thank you.

5 If you will look at TREX-11755.49.3. Referring to
6 DEA-63, it specifically states that "equipment design is beyond
7 the scope of this Phase I study," does it not?

8 A. Yes, that's what it says.

9 Q. Phase I study was at the idea-generation stage of looking
10 at potential solutions, correct?

11 A. Yes.

12 Q. If we look next at 11755.49.2, do you see that it says:
13 "Initiation of Phase II of this study is not recommended at
14 this time"? Do you see that?

15 A. Yes. I address the reasons for that in my testimony.

16 Q. Sure. But this is the standard that still applies over in
17 2003, isn't it?

18 A. Well, it's not a -- or a standard. The intent is to alert
19 industry to the forthcoming risks and challenges so the
20 industry owners/operators can be properly prepared when those
21 opportunities are being developed.

22 Q. "Continuing into Phase II is not warranted at this time,
23 however." Do you see that?

24 A. Yes.

25 Q. And IADC, the document you cite, says that in 2003 this is

ROBERT BEA - CROSS

1 still the standard, correct?

2 A. Yes.

3 Q. In fact, if we go back to IADC 7353.414.1, the
4 recommendation that comes out of that body -- after citing
5 back, I believe it does -- is that additional research needs to
6 be conducted. Do you see that?

7 A. Yes.

8 Q. It says: "The concept of injection at the source of the
9 blowout on the seabed merits further study." Do you see that?

10 A. Yes.

11 Q. If you look at the three things they are talking about --
12 offering the best strategy to minimize the effects of deepwater
13 well blowouts -- they are talking about mechanical
14 containment -- that's like boom, right?

15 A. Correct.

16 Q. -- dispersants and burning. But IADC is not saying that a
17 capping stack is standard of care, are they?

18 A. I don't know. That's not what I did in this case.

19 Q. What I'm saying is that as of this date IADC is not saying
20 that development of a capping stack is required. They are not
21 saying that, are they?

22 A. I don't recall. Certainly they are not listing it here in
23 these conclusions.

24 Q. Last topic. BP Alaska's surface capping stack.

25 Do you remember giving testimony earlier today that

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1 14:18 BP had concluded that the use of a capping stack can reduce
2 14:18 shut-in time by 50 percent? Do you remember saying that?

3 14:18 A. Yes, sir.

4 14:18 Q. But you know and you agree that the BP Alaska document is
5 14:18 referring to surface capping?

6 14:18 A. Surface capping onshore shallow water.

7 14:18 Q. Did you tell us in your deposition that the Alaska
8 14:19 document that you referred to today, 11 -- I don't have the
9 14:19 exhibit number, but the BP Alaska document that you refer to in
10 14:19 your report is a document that refers to surface capping?

11 14:19 A. Yes.

12 14:19 Q. And so when they said that you can reduce capping time by
13 14:19 50 percent on a surface well with the use of a capping stack,
14 14:19 you can't just translate that over to a deepwater well, can
15 14:19 you?

16 14:19 A. No. You have to interpret for the conditions.

17 14:19 MR. BROCK: Thank you.

18 14:20 THE COURT: Redirect.

19 14:20 MS. GREENWALD: Robin Greenwald for the plaintiffs
20 14:20 and the aligned parties.

21 14:20 REDIRECT EXAMINATION

22 14:20 BY MS. GREENWALD:

23 14:20 Q. Dr. Bea, I'm going to jump around a little bit and just
24 14:20 pick up on a couple of points.

25 14:20 Dr. Bea, Mr. Brock showed you 8975, which was either

ROBERT BEA - REDIRECT

1 a 2006 or a 2008 surprise MMS drill. Do you remember that
2 document at the beginning of your cross-examination?

3 A. Yes.

4 Q. It's your opinion, isn't it, that BP never conducted any
5 drills on deepwater source control measures, right?

6 A. Yes.

7 Q. It is not your testimony that BP never conducted any drill
8 at all involving anything involving the oil spill response
9 plan?

10 A. Correct.

11 Q. Now, Mr. Brock was also asking you questions about the oil
12 spill response plan, and you wanted to continue an answer about
13 whether expert -- this was the question -- about experts in the
14 field can be -- whether they can be a mitigation barrier, and
15 you wanted to explain that. He invited me to ask it, so I'm
16 asking it.

17 In what way -- when do you think experts in the field
18 can be a mitigation measure, and when can't they be?

19 A. They can't be if they are not true experts. Having worked
20 55 years in this field, I've learned that there are many
21 different quality levels -- I'll call it expertise levels -- in
22 experts. Very difficult problems require very competent
23 experts. So I have just got a natural concern when I hear
24 experts are a mitigation barrier. Sometimes they can in fact
25 promote trouble.

ROBERT BEA - REDIRECT

1 MS. GREENWALD: Carl, can you please pull up 11467 --
2 TRENX, I'm sorry.

3 BY MS. GREENWALD:

4 Q. Now, Mr. Brock showed you his contract between BP and
5 Wild Well Control -- well, he showed you excerpts of it?

6 A. Yes.

7 Q. I'm going to show you another one.

8 A. Yes.

9 MS. GREENWALD: If you could please go to 11467.66.1.
10 If you can please highlight the whole Section 5.1, the title 5
11 and 5.1. Section 5 is called "Preparations for Well Control
12 Incidents."

13 Thank you, Carl.

14 BY MS. GREENWALD:

15 Q. Right below that it says "Emergency Response Plans." I
16 would like to read to you what it says.

17 It says: "As part of its planned response to a well
18 control incident, company will have fully developed emergency
19 response procedures."

20 Am I correct, Dr. Bea, that you assume that "company"
21 here refers to BP and not to Wild Well Control?

22 A. That's correct.

23 Q. "When requested, contractor" -- would that be Wild Well
24 Control?

25 A. Correct.

ROBERT BEA - REDIRECT

1 Q. -- "contractor shall jointly develop emergency response
2 plans for the specific operations."

3 MS. GREENWALD: If you can also, now, Carl, please go
4 to TREN-11467.69.1. Nope, I'm wrong. I'm sorry. .89.1.

5 Thank you. If you can pull up the box that says
6 "Capping Stacks (Optional)" and take it down to the number 2
7 under notes and call that out, please.

8 BY MS. GREENWALD:

9 Q. Now, if you can see the notes, it says, "Completion of the
10 capping stack table is optional, as company shall endeavor to
11 have a separate contract to address these"; is that right?

12 A. That's correct.

13 Q. Did Mr. Brock show you such a contract?

14 A. No.

15 Q. Number 2: "The possible configurations of capping stacks
16 is unlimited."

17 Then it goes on to talk about all the various options
18 of capping stacks; is that right?

19 A. Yes.

20 Q. Now, Mr. Brock asked you a lot of questions about whether
21 there could be a cookbook recipe for any possible scenario of a
22 blowout. Do you remember several questions about that?

23 A. Yes.

24 Q. In the world of process safety management, is it ever an
25 excuse to not endeavor in a process safety management risk

ROBERT BEA - REDIRECT

1 assessment because there may be a scenario in which a cookbook
2 recipe might not work for the situation?

3 **MR. BROCK:** I'm going to object to leading,
4 Your Honor.

5 **THE COURT:** Overruled.

6 **THE WITNESS:** One of the key things we have learned
7 in process safety management is you can never forecast and
8 predict everything that's important. And consequently, within
9 process safety management are approaches and strategies that we
10 have developed through very, very painful experience to address
11 what we call the unknown unknowables. There are situations
12 that you can't foresee and have to be addressed by domain
13 experts. We'll call it -- "I don't know what to do" is never
14 an excuse in mature process safety management.

15 One of the examples that I use is, a very good
16 friend of mine, goes back 10 years, is Captain Sully
17 Sullenberger. Captain Sullenberger came to our group at
18 Berkeley because he wanted to learn what we had been learning
19 about this process safety management, interactive management in
20 unpredictable, unknowable situations.

21 Well, Captain Sullenberger does become a hero.
22 The engineers who engineered the airplane that landed on the
23 Hudson had also learned -- that's air jets -- and he had put
24 back flow valves over the air intakes so that the plane,
25 normally landing on land, could land on water. So this

ROBERT BEA - REDIRECT

1 marvelous combination of preparing people to succeed in
2 impossible situations is exactly what process safety management
3 is about.

4 **BY MS. GREENWALD:**

5 **Q.** Dr. Bea, this is not an impossible situation, though,
6 right, the Macondo well, because, in fact, existing technology
7 worked to cap the well, right?

8 **A.** That's what's so frustrating.

9 **MS. GREENWALD:** Thank you. I have no further
10 questions.

11 **THE COURT:** Thank you, Dr. Bea.

12 **THE WITNESS:** Thank you.

13 **MR. BRIAN:** Brad Brian for Transocean and the aligned
14 parties.

15 Before calling our last live witness, we would
16 propose to play the two remaining deposition clips of Lars
17 Herbst, the Minerals Management Service representative on the
18 Unified Command who signed off on Top Kill and attended the
19 May 29 presentation by BP, and Charles Holt, BP's ops manager
20 for Top Kill. They are about 20 minutes between the two of
21 them.

22 **THE COURT:** Let's go ahead and play those two. Then
23 we'll take our afternoon recess before the last live witness.

24 **MR. BRIAN:** Thank you, Your Honor.

25 (Video deposition clips of Lars Herbst and Charles

1 Holt played.)

2 **THE COURT:** Let's take a 15-minute recess.

3 (Recess.)

4 **THE COURT:** Please be seated. Okay.

5 **MS. GODLEY:** Your Honor, Tammy Godley on behalf of
6 Transocean for the aligned parties. I want to file, offer, and
7 introduce a flash drive with the video of the clips played by
8 the aligned parties during our case in chief, along with the
9 binders that were provided to the Court with the transcripts
10 and exhibit call-outs used with the video clips.

11 **THE COURT:** Any objections from anyone? Hearing
12 none, those are admitted.

13 Next witness.

14 **MR. SMITH:** Your Honor, Prescott W. Smith for
15 Halliburton and for the aligned parties. The aligned parties
16 would call Edward Ziegler.

17 **MS. KARIS:** If we may address one issue before
18 Mr. Ziegler begins to testify?

19 **THE COURT:** Closer to the microphone.

20 **MS. KARIS:** I'm sorry. Hariklia Karis for BP. I
21 wanted to address with the Court one issue before Mr. Ziegler
22 begins his testimony.

23 **THE COURT:** Okay.

24 **MS. KARIS:** Having heard Mr. Perkin, Mr. Wilson,
25 Dr. Bea -- Dr. Wilson, Mr. Perkin, and Dr. Bea and reviewing

1 the report of Mr. Ziegler, there appears to be a substantial
2 amount of overlap and cumulateness between what Mr. Ziegler
3 has in his report and the testimony that the parties -- I'm
4 sorry, the aligned parties have already offered.

5 We have raised this issue previously with
6 Magistrate Shushan that this may occur, and Docket Order 11310
7 specifically says that the aligned parties will not be
8 permitted to present duplicative testimony and opinions through
9 either fact or expert witnesses. By way of example,
10 Mr. Ziegler in his report speaks to the regulations that were
11 applicable to BP's pre-spill preparedness plan, exactly what
12 Dr. Bea just addressed. He speaks to the effectiveness of
13 Top Kill and the company's decision to go forward with
14 Top Kill. He speaks to the post Top Kill analysis and the
15 conclusion with respect to the subsea broach. He speaks to
16 the --

17 **THE COURT:** Hold on, because maybe we can solve your
18 problem.

19 What do you intend to cover with him? Do you
20 intend to cover these items that do seem to be duplicative?

21 **MR. SMITH:** To the extent there has been previous
22 testimony on any of these topics, obviously it's in the aligned
23 parties' interest to cover them as briefly as possible or skip
24 them. We have organized our trial presentation in order to
25 accomplish that goal.

1 I would also point out that Mr. Brock, on
2 cross-examination, examined Dr. Bea to the effect he was not an
3 engineer, he was not an expert in source control, and so forth.
4 That is what Mr. Ziegler is here for today. And he is also the
5 wrap-up of the aligned parties' case. He is tying together the
6 source control opinions.

7 **THE COURT:** I'll give you some leeway, but I did read
8 his report and it does seem like there's a lot of overlap. If
9 we get into areas that appear to be cumulative, then I'm sure
10 Ms. Karis will object and I'll probably sustain it at that
11 time.

12 **MR. SMITH:** Thank you, Your Honor.

13 **THE COURT:** I can't really do it in the abstract. I
14 will say this, though, that the *Daubert* motion that was filed,
15 one issue that they -- seems like some of his opinions border
16 on the -- really were more Phase One issues talking about the
17 diverter system, the BOP configuration, the casing design. We
18 had a lot of testimony about all that in Phase One. I don't
19 intend to sit through another expert talking about the same
20 issues in Phase Two.

21 **MR. SMITH:** It's my understanding that issues like
22 the diverter that the parties agreed were Phase One have
23 already been redacted from his --

24 **THE COURT:** Well, it could be. Okay. So let's see
25 where it goes.

1 **MS. KARIS:** Your Honor, I can speak to the remaining
2 *Daubert* issues at this time, but the one caveat I would say is
3 while the diverter issue has been redacted, we agree there
4 remain opinions in Mr. Ziegler's report with respect to the
5 casing design --

6 **THE COURT:** Well, if he tries to go there, you object
7 and I'll probably sustain it.

8 **MS. KARIS:** Very well.

9 **THE COURT:** Maybe he got the message and won't go
10 there.

11 **MS. KARIS:** I tried to discuss this in advance, but
12 we couldn't reach agreement.

13 **THE COURT:** All right.

14 **MS. KARIS:** Then with respect to the two other
15 issues, perhaps I will reserve on those as well because one
16 pertains to interpretation of the regulations, which we just
17 heard Dr. Bea testify about and Mr. Herbst speak to, and then
18 the other one is testimony regarding BP's beliefs or state of
19 mind. This was the same issue I raised previously with
20 Dr. Wilson and the Court sustained the objection.

21 **THE COURT:** Yeah, I agree with you on that. I don't
22 think it's proper for this witness to talk about BP's -- I
23 think it dealt with his belief as to why BP may have wanted to
24 use the Top Kill, some motive, and I don't think that's a
25 proper subject for expert testimony. So I'm not going to allow

1 him to testify about that.

2 **MR. SMITH:** Okay.

3 **MS. KARIS:** Thank you, Your Honor.

4 **THE COURT:** Swear in the witness.

5 **EDWARD ZIEGLER,**

6 having been duly sworn, testified as follows:

7 **THE DEPUTY CLERK:** State your full name and correct
8 spelling for the record, please.

9 **THE WITNESS:** My name is Edward, E-D-W-A-R-D, Ray,
10 R-A-Y, Ziegler, Z-I-E-G-L-E-R.

11 **VOIR DIRE**

12 **BY MR. SMITH:**

13 **Q.** Mr. Ziegler, when did you first start working in the oil
14 and gas industry?

15 **A.** I'm third generation in the oil and gas business. My
16 grandfather and father both had drilling rigs and wells. I
17 started when I was about 15 years old in 1965. I grew up
18 10 miles from the Drake well, so it was a natural business to
19 be in, the first oil well in the United States.

20 **Q.** So is it fair to say you have about 40 years of
21 experience?

22 **A.** I've got 40 years after college at this point, more total.

23 **Q.** Have you operated oil and gas wells?

24 **A.** Yes. I've operated hundreds of oil and gas wells, drilled
25 several thousand, and have owned drilling rigs.

EDWARD ZIEGLER - VOIR DIRE

1 15:16 Q. What degrees or credentials do you have that relate to
2 15:16 your opinions on the issues in this case?

3 15:16 A. I have a Bachelor of Science degree in petroleum and
4 15:16 natural gas engineering from Penn State in 1972. I have been
5 15:16 certified in well control several times. I'm a registered
6 15:16 professional petroleum engineer in Texas. I'm a certified
7 15:16 safety professional.

8 15:16 I've been certified by the MMS for -- as an offshore
9 15:16 installation manager and some Coast Guard certifications. I've
10 15:16 been a member of some industry -- oil and gas industry safety
11 15:16 committees.

12 15:16 Q. Can you tell us where you have worked throughout the
13 15:16 world.

14 15:16 A. I first started working for Marathon Oil Company in 1972.
15 15:16 I started working in the Gulf of Mexico offshore in 1973. I've
16 15:17 worked in about 20 different states, including Alaska. I've
17 15:17 worked in about 20 different countries around the world, both
18 15:17 onshore and offshore, and I've worked on semisubmersible and
19 15:17 drillship type drilling rigs.

20 15:17 Q. Have you had any involvement in drafting or reviewing
21 15:17 emergency response plans in the oil and gas industry?

22 15:17 A. Yes.

23 15:17 Q. Have you trained others in that area?

24 15:17 A. Yes.

25 15:17 Q. What about your experience with the application of

EDWARD ZIEGLER - VOIR DIRE

1 regulations to oil and gas operations?

2 A. I've worked all over the world with different regulatory
3 schemes. I've written programs and permits, made applications
4 to different regulators. I've followed those regulations in
5 operations and have worked with regulators about those
6 regulations.

7 Q. Have you worked to ensure compliance?

8 A. Yes.

9 Q. Who retained you to offer opinions in connection with
10 Phase Two?

11 A. Halliburton Energy Services, Inc.

12 MR. SMITH: Christina, can you call up TREX-11578R.

13 For the Court's reference, that's the first page
14 of Mr. Ziegler's May 1, 2013 opening report.

15 Christina, 11579R. That would be the first page
16 of Mr. Ziegler's rebuttal report.

17 Your Honor, at this time the aligned parties
18 would tender Mr. Ziegler as an expert on the topic of oil and
19 gas operations, source control, and safety. There are
20 additional details about Mr. Ziegler's experience and expertise
21 in his résumé attached as Exhibit A to his opening expert
22 report.

23 THE COURT: Any objection to his qualifications?

24 MS. KARIS: None to his qualifications.

25 THE COURT: Okay. I'll accept him as an expert in

15:18 1 that field.

15:18 2 **DIRECT EXAMINATION**

15:18 3 **BY MR. SMITH:**

15:18 4 **Q.** Mr. Ziegler, why did you focus your attention on BP's
15:19 5 conduct in connection with the blowout of the Macondo well?

15:19 6 **A.** BP is the operator of the well. It is one of the lessees
15:19 7 of the lease block and is what's called in the industry the
15:19 8 responsible party.

15:19 9 **Q.** Can you just briefly describe what BP's obligations were
15:19 10 with respect to source control.

15:19 11 **MS. KARIS:** Your Honor, I object. I think that calls
15:19 12 for a legal conclusion. RP is defined under the regulations,
15:19 13 and BP's responsibilities under those regulations is a legal
15:19 14 issue.

15:19 15 **THE COURT:** It seems like we have had several
15:19 16 witnesses already to testify -- are you asking him just to
15:19 17 quote the language from the regulation?

15:19 18 **MR. SMITH:** I'm asking for his understanding of it in
15:19 19 connection with his own experience within the oil and gas
15:19 20 industry and to put the context of his opinions in the court --
15:19 21 I believe BP had no objections to Bea --

15:20 22 **THE COURT:** I'll let him answer that. Go ahead.

15:20 23 **THE WITNESS:** The responsibility or requirement is
15:20 24 that the source flow be abated as soon as possible.

25

EDWARD ZIEGLER - DIRECT

1 BY MR. SMITH:

2 Q. Let me ask you this. What about after --

3 THE COURT: Which is what the regulation says,
4 correct?

5 MS. KARIS: Right. Your Honor, not to interrupt
6 Mr. Smith's examination, but this is exactly my point.
7 Mr. Smith just said BP had no objections to Dr. Bea speaking to
8 this issue, which is correct. I think Mr. Bea didn't present
9 it from a legal perspective, but to the extent we are now
10 getting into the regulations require immediate abatement,
11 immediate as soon as practicable, that's exactly what Dr. Bea
12 just told us about and that's exactly what the video we just
13 observed told us about. So this is my concern about we are
14 going into entirely cumulative testimony.

15 THE COURT: Well, the videos were fact witnesses.

16 MR. SMITH: Your Honor, I said I was going to touch
17 on this very briefly. I'm just trying to frame where he is
18 going with this.

19 THE COURT: Okay. But I think Ms. Karis raises some
20 good points, so let's move this along.

21 MS. KARIS: Thank you, Your Honor.

22 THE COURT: Sure.

23 BY MR. SMITH:

24 Q. So, Mr. Ziegler, after a blowout has occurred, does BP
25 still have source control obligations?

EDWARD ZIEGLER - DIRECT

1 A. The regulation I just mentioned says to abate the source
2 flow as soon as possible, which is after the source has already
3 started flowing so that whatever the responsibilities are
4 continued.

5 Q. Now, in your opinion, was it foreseeable to BP that a
6 deepwater well in the Gulf of Mexico might blow out?

7 A. Yes.

8 Q. Was it foreseeable to BP that the BOP on that well might,
9 for whatever reason, fail to stop the flow of hydrocarbons from
10 the well?

11 A. Yes.

12 Q. What does an operator like BP need to have in order to
13 deal with these kinds of foreseeable risks?

14 A. A proper and robust source control plan.

15 Q. Now, in the sense you just described, did BP have an
16 effective and robust source control plan for Macondo?

17 A. No.

18 Q. What is your basis for that conclusion?

19 A. Well, two obvious things are the well flowed for 87 days.
20 With a plan to meet a requirement to abate the source flow
21 immediately or as soon as possible, 87 days would not have been
22 the flow time.

23 Secondly, we have information that BP, for example,
24 said -- they stated that they spent zero dollars on research
25 and development of source plans.

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1 15 : 2 2 Q. How do expenditures connect with the lack of a plan?

2 15 : 2 2 MS. KARIS: Your Honor, respectfully --

3 15 : 2 2 THE COURT: I would sustain the objection.

4 15 : 2 2 MS. KARIS: Thank you.

5 15 : 2 2 THE COURT: This is exactly what Dr. Bea just talked
6 about.

7 15 : 2 3 MR. SMITH: Christina, can you call up TREX-10072,
8 please. Let's go to .1.1.HESI.

9 15 : 2 3 BY MR. SMITH:

10 15 : 2 3 Q. Do you recognize this document, Mr. Ziegler?

11 15 : 2 3 A. Yes.

12 15 : 2 3 Q. What is it?

13 15 : 2 3 A. This is a Cameron Iron Works internal e-mail dated May 29,
14 2010.

15 15 : 2 3 Q. Is this one of the documents that you considered in
16 connection with your conclusion that BP did not have an
17 effective source control plan?

18 15 : 2 3 A. Yes.

19 15 : 2 3 MR. SMITH: Christina, can you go to 10072.4.1.HESI.

20 15 : 2 3 BY MR. SMITH:

21 15 : 2 3 Q. Can you just read the text that's called out there,
22 Mr. Ziegler.

23 15 : 2 3 A. "Paralysis by analysis. Situation normal."

24 15 : 2 3 MR. SMITH: Can you please call up .3.1.HESI.

25

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1 BY MR. SMITH:

2 Q. What about that second call-out, Mr. Ziegler?

3 A. "Good summary and analysis. Let's face it. They are
4 running this show like a game of Scrabble. I suggest you go
5 home. By morning they will have enough letters to attempt a
6 new word."

7 MR. SMITH: Christina, .3.2.HESI.

8 BY MR. SMITH:

9 Q. How about that final call-out, Mr. Ziegler?

10 A. "Agree totally. They have no clue what to do next, simply
11 running around like chickens with their heads cut off."

12 Q. What is the significance of these sorts of comments from a
13 third party like Cameron observing BP's source control in
14 action?

15 A. When you have a crisis or a situation is when you need to
16 immediately have a proper source control plan. This
17 information from a contractor working on the project shows the
18 frustration and the inability of a plan to function or to
19 achieve source control.

20 Q. These are the kinds of comments you might expect to see if
21 there's an absence of a plan or the absence of an effective
22 plan?

23 A. Yes, sir.

24 Q. You have heard a lot of testimony about flow rate
25 misrepresentations by BP. Does the lack of planning relate to

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1 BP's flow rate misrepresentations?

2 MS. KARIS: Your Honor, I'm going to object to
3 cumulateness. And the lack of planning relating to BP's flow
4 rate misrepresentations does go to the issue of motive that I
5 believe the Court has sustained the objection.

6 THE COURT: I sustain the objection.

7 MS. KARIS: Thank you.

8 BY MR. SMITH:

9 Q. Mr. Ziegler, did you analyze the expert report of Dan
10 Gibson, one of BP's source control experts?

11 A. Yes.

12 Q. Did you prepare a rebuttal report addressing Mr. Gibson's
13 opinions?

14 A. Yes.

15 Q. Were you responding to Mr. Gibson's opinions about the
16 rupture disks that were placed on the Macondo well?

17 A. Yes.

18 Q. Can you briefly explain to the Court what a rupture disk
19 is?

20 A. A rupture disk is a designed weak spot in the casing
21 string so that either in the burst direction or the collapse
22 direction, the casing would not fail before the rupture disk
23 opens.

24 MS. KARIS: Your Honor, I'm going to object. I'm
25 sorry to interrupt again. But the casing design, the placement

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1 of burst disks was the subject of Phase One. It was the
2 subject of testimony by Dr. Lewis as well as others whether the
3 casing design used for Macondo met the standard of care in the
4 industry. So this is one of the Phase One issues that I
5 raised.

6 **THE COURT:** I want to know what his next question is
7 going to be. It depends on what the next question is.

8 **BY MR. SMITH:**

9 **Q.** Mr. Ziegler, are you familiar with BP's contentions
10 regarding the significance of rupture disks in Phase Two for
11 source control?

12 **A.** Yes.

13 **Q.** Do you disagree with Mr. Gibson's contentions?

14 **A.** I agree in general with Mr. Gibson making the calculation,
15 but I disagree at what time it's appropriate to make the
16 calculations. You need to make the calculations about things
17 that affect the integrity of the well during source control
18 before you drill the well so that you can plan your source
19 control.

20 **Q.** Do you recall that Mr. Gibson opined that these
21 calculations are relatively simple?

22 **A.** Yes, I agree with him. They are simple engineering
23 calculations, hydrostatic columns, the type of fluid pressures,
24 etc.

25 **Q.** At what point in time would you have the data to be able

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1 to perform those calculations?

2 A. Knowing fluid types, well pressures from area wells that
3 BP had experience with, the depth, etc., you could make all of
4 those calculations before you ever drilled the well so you
5 would know what your source control issues were.

6 **THE COURT:** What calculations are you talking about?
7 Make what calculations?

8 **THE WITNESS:** Mr. Gibson makes calculations as to the
9 pressure in the well at certain depths where he makes a
10 calculation when the well started flowing whether the burst
11 disks would have collapsed or not.

12 **MS. KARIS:** If I may respond?

13 **THE COURT:** I'll sustain the objection.

14 **MS. KARIS:** Thank you.

15 **BY MR. SMITH:**

16 Q. Mr. Ziegler, are you familiar with BP's designing of the
17 two-ram and then a three-ram capping device?

18 A. Yes, sir.

19 Q. Is that another example in your opinion of BP's lack of a
20 plan?

21 A. Yes. They changed their plan and by the time they put the
22 actual capping device on the well in July of 2010, that was the
23 sixth different device they had started on, but they had never
24 finished any of them until they got to that point. They kept
25 changing the plan in midstream.

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1 15:29 Q. Can you briefly give us another example of evidence that
2 15:29 supports your opinion that BP lacked an effective source
3 15:29 control plan.

4 15:29 A. Well, they had different methods they tried, such as
5 15:29 initially a BOP-on-BOP plan. Then they changed that. They
6 15:29 then ended up with a different rig. They changed rigs. They
7 15:29 had several different rigs, and they could have used the
8 15:29 existing BOPs on those rigs for their source control plan.

9 15:29 Q. Now, are you familiar with BP's position concerning its
10 15:29 oil spill response plan?

11 15:29 A. Yes.

12 15:29 Q. In your opinion, what is the relationship between what you
13 15:29 described as a real-world or an effective source control plan
14 15:29 and an oil spill response plan?

15 15:29 A. The oil spill response plan that has been talked about
16 15:29 most in this case is actually a regulatory document. It's a
17 15:29 piece of paper. Paper does not stop a well from flowing. If
18 15:29 you want to cap a well, for example, you need to have a cap.

19 15:30 Q. Now, are you aware that the MMS approved BP's oil spill
20 15:30 response plan?

21 15:30 MS. KARIS: Your Honor, this is precisely the
22 15:30 testimony we just heard from Dr. Bea with respect to what the
23 15:30 plan requires, what the regulations require, the approval of
24 15:30 that plan, Dr. Bea's views as to what the meaning of that
25 15:30 approval is. This is exactly the issue I raised with

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1 Mr. Prescott before.

2 **THE COURT:** It does sound like it. Where are you
3 going with this question?

4 **MR. SMITH:** It's Mr. Smith. Second, there was
5 cross-examination, Your Honor, to Mr. Bea on the basis that he
6 was not an engineer, he doesn't have experience in the oil and
7 gas industry. So I guess the suggestion by BP would be he
8 doesn't understand what it means to have an oil spill response
9 plan, what it means for an operator in the industry about the
10 approval or not of the plan. And I was going to ask him to
11 describe his own personal experience with approval of paperwork
12 and how that relates to a real-world plan.

13 **MS. KARIS:** Your Honor, if I may respond? The reason
14 we cross-examined Dr. Bea on it is because he offered opinions
15 as to the applicability of the oil spill response plan and
16 whether BP's pre-spill preparedness plan and those various
17 boxes that we saw from the OSRP had been satisfied.
18 Cross-examination does not allow a party to then bring another
19 witness to respond to an earlier witness' cross-examination of
20 subject. It is the exact same subject. It's entirely
21 cumulative.

22 **THE COURT:** It does sound like it. I'll give you a
23 little more rope here, but --

24 **BY MR. SMITH:**

25 **Q.** Let me ask you this, Mr. Ziegler. Have you ever

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1 personally been involved in the development of source control
2 plans?

3 A. Yes.

4 Q. Have you been involved in the submission of paperwork to
5 regulatory authorities?

6 A. Yes.

7 Q. What about regulatory authorities in the United States?

8 A. Yes, including the MMS.

9 Q. Did those regulatory authorities approve that paperwork?

10 A. Yes.

11 Q. So in your capacity as the company man or as an OIM, given
12 your experience in the industry, did you ever regard the
13 approval of that sort of regulatory paperwork as satisfying
14 your obligations to have a source control plan?

15 THE COURT: I sustain the objection.

16 MS. KARIS: Thank you, Your Honor.

17 BY MR. SMITH:

18 Q. Let me turn to your concept of a capping device. I think
19 you are unique in this case and throughout your expert reports
20 in using this concept of a capping device.

21 Can you explain to the Court what you mean by the
22 phrase "capping device"?

23 A. The capping device is the method to shut off the flow from
24 a well. There are many different terms that have been used in
25 this case, but we have industry definitions that I use that

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1 says a capping device has a blowout preventer to shut off the
2 flow and has flow or venting capability.

3 **MS. KARIS:** Your Honor, again, my apologies, but
4 someone who I believe might still be in the courtroom testified
5 precisely to the issue of capping devices, BOPs, whether
6 they're the same, venting systems. In fact, I believe, using
7 the demonstratives that are sitting on the table, we went
8 through this exact scenario.

9 **MR. SMITH:** Your Honor, I believe Mr. Ziegler is
10 unique in using capping devices as the operative analytical
11 framework in explaining why there's a functional equivalency
12 between them both offshore and for surface applications.

13 **THE COURT:** Go ahead. I'll let you get into this a
14 little bit.

15 **BY MR. SMITH:**

16 **Q.** So, Mr. Ziegler, is this a functional definition of
17 "capping device"?

18 **A.** Yes, it doesn't matter what the device is. If it's a
19 blowout preventer, a pre-made stack, a valve, a Christmas tree,
20 the function of the capping device is to be able to control the
21 well, pinch the flow down, choke the well down, to be able to
22 exercise source control.

23 **Q.** Is that kind of functional definition of a capping device,
24 is that unique to you? Or do others in the industry employ it?

25 **A.** The function is described in industry publications and

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1 documents to be able to control the source.

2 MR. SMITH: Christina, can you call up
3 TREG-11625.1.HESI. That's the DEA-63. Then go to .27.1.HESI.

4 MS. KARIS: Your Honor, this is the same document we
5 just saw with Dr. Bea on this exact same issue.

6 MR. SMITH: And can you -- well, I'm sorry.

7 THE COURT: Let's see what issue he is going to. I'm
8 not sure what part he is going to.

9 THE WITNESS: This defines the capping assembly as a
10 blind ram with diverter lines, so some way to shut the well in
11 and some way to control it, so you can shut it in when you get
12 pressures or plug the well, etc.

13 BY MR. SMITH:

14 Q. Mr. Ziegler, are you aware of BP's position that capping
15 devices in the manner you use that phrase were somehow not
16 feasible for use at Macondo?

17 A. Yes.

18 Q. Did you analyze the expert reports and the deposition of
19 Iain Adams and Richard Carden, who were two of BP's source
20 control experts?

21 A. Yes.

22 Q. Is it your understanding that most of those experts claim
23 that capping devices were somehow not feasible prior to
24 Macondo?

25 MS. KARIS: Your Honor, to be clear, it is not BP's

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1 position that capping devices in general were not feasible.
2 Whether the specific capping device designed for and
3 purpose-built for Macondo had been conceived of, whether you
4 could have conceived of that precise device, I think, is the
5 issue.

6 **THE COURT:** Well, I think, from what I understand,
7 the device that was used was not very unique. It was existing
8 technology, just had to be some mechanism to fit to the well,
9 to the Macondo BOP. So I'm not sure what you mean by that,
10 Ms. Karis.

11 I don't know what BP's position is. I thought,
12 from Mr. Brock's cross-examination, that you all were arguing
13 somehow that it was not feasible or practical to have a capping
14 device ready and standing by before this blowout.

15 Is that your position?

16 **MS. KARIS:** Our position is that it wasn't practical
17 or foreseeable to have a device such as the one that was used
18 at Macondo, not that it was not possible to have any capping
19 device.

20 **THE COURT:** Because you now have one; we know that,
21 right? You now have one?

22 **MS. KARIS:** Absolutely, as a result of the incident.

23 **THE COURT:** So that's pretty obvious.

24 I'm trying to understand BP's position in terms
25 of exactly what you are contending in terms of -- you can make

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1 other arguments, but I don't see how you could contend that you
2 couldn't have had one standing by if you had elected to before
3 this happened. I understand the arguments -- other arguments
4 that nobody else had one, it wasn't required, and all of that.
5 So what is your position in terms of feasibility or
6 practicability?

7 **MS. KARIS:** Our position is that, while it was
8 feasible and practical to have a type of capping device, for
9 deepwater operations, there were no capping stacks specifically
10 designed for deepwater blowouts.

11 **THE COURT:** What's the one that BP now has that they
12 say is available and sitting in Houston?

13 **MS. KARIS:** It is the one that was purpose-built for
14 Macondo and has, as a result of the industry, been fitted with
15 different equipment and devices.

16 **THE COURT:** But it's not -- okay. All right.

17 **MR. SMITH:** Your Honor, the aligned parties also have
18 some difficulty understanding precisely the contours of BP's
19 position about feasibility. That's part of what we are
20 offering Mr. Ziegler for, and that's part of what his rebuttal
21 opinions to Mr. Carden's --

22 **THE COURT:** Well, as the fact finder in this case,
23 I'm interested in understanding what the state of the
24 technology was, what was available, what was feasible, what was
25 not feasible. And that's why I'm asking these questions, so

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1 both sides can reply or comment at the appropriate time through
2 your witnesses or whatever.

3 Go ahead. Go ahead.

4 **BY MR. SMITH:**

5 **Q.** So I believe we left off, Mr. Ziegler: So what is your
6 opinion about the feasibility of capping devices used in the
7 way you understand that phrase prior to Macondo?

8 **A.** Capping devices were feasible. They had been used in the
9 industry for decades. You could put together a capping device
10 out of available existing parts. There were other rigs in the
11 Gulf of Mexico, including Transocean rigs that were under
12 contract or available to BP, to immediately use one of those
13 existing blowout preventers as a capping device. Transocean
14 had a complete blowout preventer that had been ordered for the
15 *DDII* and *DDIII* rig backup that was in pieces to be bolted
16 together sitting down in the Morgan City area.

17 All you need is to put the connector -- there's a
18 Vetco connector and a Cameron collet connector, basically two
19 types used on the bottom of BOPs in the industry. All you had
20 to do was bolt it together. You could have everything,
21 including the connector, prestaged and bolted together. You
22 could change a connector if you needed to on the rig or on the
23 boat going out to the rig in just a couple of hours, all
24 readily available equipment. Just a few adaptors on the BOP
25 preventer itself. You have the 18 and 3/4-inch flanges.

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1 So virtually you have about three or four different
2 connection points and different sizes on virtually every
3 blowout preventer in the Gulf. So you could make an adapter
4 and you could make anything you want in a couple of days.
5 Mr. Turlak, for example, described going to essentially an oil
6 field junkyard and getting flanges or piping and putting
7 something together in a few days. That's how the industry
8 would do it.

9 **MR. SMITH:** Christina, could you call up 9827 --

10 **THE COURT:** Let me ask the witness a couple
11 questions.

12 What's your understanding is the difference
13 between what BP ultimately used, the equipment they used, the
14 capping stack that they ultimately used to cap this well, as
15 opposed to a so-called off-the-shelf blowout preventer? Size?

16 **THE WITNESS:** Yes, sir. The one they used with three
17 rams is a little bit lighter, but you could take these other
18 stacks apart in a day and end up with the same thing.

19 They also had a good choke and valves on each
20 side of the ultimate capping stack they used, but those chokes
21 and equipment were available all over the Gulf Coast and
22 Transocean even had that type of equipment. So we just need to
23 realize what your connection is, look at your weight, and you
24 need to consider all those type of situations. But within a
25 couple of days, you could bolt together exactly the existing

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1 components with the connector and flow capability and just do
2 exactly what you needed.

3 The regular blowout preventer stacks up to the
4 riser system. You would have flow capability through the choke
5 and kill lines back to the rig on the surface. Now, you don't
6 necessarily want to do that -- at least, initially -- so you
7 can add on the ports on the side of the blowout preventer like
8 these small flanges --

9 **THE COURT:** What Mr. Turlak was talking about
10 earlier.

11 **THE WITNESS:** Yes, sir.

12 **THE COURT:** Okay.

13 **THE WITNESS:** And you can put anything you want on
14 there as far as valves and chokes.

15 All of the flow options -- if you don't want to
16 shut the well in completely, because if you think or say -- and
17 it's important to consider that you might have well integrity
18 issues. That's important to consider that. But any of these
19 devices I'm describing, you could put on the seafloor on the
20 well and slowly close the well, monitor pressures, and have
21 done what they did with the pressures in May -- by mid May, in
22 my opinion, exactly as they did two months later in July -- and
23 know that your well had integrity. But you need to put
24 something on the seafloor and cap the well immediately so you
25 can do that.

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1 THE COURT: Go ahead.

2 BY MR. SMITH:

3 Q. Mr. Ziegler, let's be brief with this because the Alaska
4 capping stack documents were touched on previously, but --

5 MR. SMITH: Christina, can you call up .1.1.HESI.

6 BY MR. SMITH:

7 Q. Can you describe the significance of this document,
8 Mr. Ziegler?

9 A. Yes. I know it's in Alaska, and I know it was for wells
10 on ice islands or offshore. I've worked up there. What I'm
11 looking at in this document is three things: First of all, it
12 was to evaluate what to do with a high-volume, worst-case
13 scenario well. So a high-volume blowout situation, what do you
14 do with it?

15 Number two, the data that BP Alaska used to analyze
16 this situation was data from Gulf of Mexico and North Sea
17 offshore well blowouts. So we are talking about an offshore
18 type of blowout.

19 The third thing is, this shows that BP, when they
20 made the effort, actually sat down and made a determination of
21 what the best technology was and how to control a high-volume
22 well based on offshore experience and data. So I'm looking not
23 where the well is -- obviously, it's in Alaska, not the Gulf of
24 Mexico -- but what the situation was that had to be solved and
25 how BP determined to do it, capping the well.

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1 1 5 : 4 4 Q. Can you explain for the Court whether or not there's a
2 1 5 : 4 4 difference in principle between a surface cap that we see
3 1 5 : 4 4 discussed in these sorts of Alaska documents and a subsurface
4 1 5 : 4 5 cap?

5 1 5 : 4 5 A. No difference in principle. Existing technology for
6 1 5 : 4 5 decades. The industry has tremendous capability to lower this
7 1 5 : 4 5 equipment to the seafloor and land it on a wellhead or another
8 1 5 : 4 5 blowout preventer. It happens virtually every day in the
9 1 5 : 4 5 industry in deep water somewhere in the world.

10 1 5 : 4 5 Q. Before I forget this, you had responded to a question from
11 1 5 : 4 5 the Court about data collection using a capping stack. Had a
12 1 5 : 4 5 capping stack been landed -- let's suppose towards the end of
13 1 5 : 4 5 April or early May -- could it have been equipped with
14 1 5 : 4 5 temperature gauges and pressure gauges such that you could
15 1 5 : 4 5 acquire data and test the integrity of the well?

16 1 5 : 4 5 A. Yes. Gauges, temperature -- because that affects your
17 1 5 : 4 5 pressure situation -- and a choke and shut-in valves, all that
18 1 5 : 4 5 was readily available. Transocean had that. There's a
19 1 5 : 4 6 Wild Well Control document that was the contract that was put
20 1 5 : 4 6 up here, and in the back section of Section 8 of that contract,
21 1 5 : 4 6 it says: "Well control equipment" -- and those scenarios in a
22 1 5 : 4 6 blowup -- "are unlimited."

23 1 5 : 4 6 Now, that sounds like there's a lot of things you
24 1 5 : 4 6 would need to do initially, but then you look at the next part
25 1 5 : 4 6 of that paragraph and it says: By the way, Wild Well Control's

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1 related company down the road has all of that equipment if you
2 need to get it.

3 So the flanges, the valves, all of that stuff is
4 available in the industry and existing technology.

5 Q. Just to focus on the question about data collection, you
6 understand that, in mid July, data was acquired after the well
7 was shut in with a three-ram capping stack, and certain
8 individuals were able to get comfortable with leaving the well
9 shut in at that point. So my question is: Could BP have
10 gathered that kind of crucial data earlier than mid July -- for
11 example, in late April?

12 A. Yes. They could have. And that's important when we look
13 at concerns, which you have to consider all the concerns about
14 whether your well had integrity for whatever reason. And the
15 way to know if your well has integrity is to carefully and
16 precisely start closing the well in, get pressure data. You
17 can see if the shape of your curve changes as the pressure
18 buildup is occurring to know if you have a leak underground and
19 just do it. That way, the unknowns and uncertainties that I
20 heard the BP gentleman talk about in the opening that there
21 were so many uncertainties and that's why -- and so many
22 unknowns and that's why BP couldn't do certain things. You
23 have to get the data, and the way to get the data is to put the
24 cap on there with control and flow equipment and obtain the
25 data. Instead of worrying about it and fretting and wringing

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1 your hands for two months, just do it immediately. Get the
2 data, be very careful. And ultimately we know the well had
3 integrity, and that would have been known two months earlier.

4 Q. Even with a relatively simple capping stack?

5 A. Yes, sir.

6 Q. Also just a quick question: Is it your opinion that, if
7 the BOP-on-BOP capping operation, had that been conducted at
8 some point in May, is it your opinion that that would have
9 succeeded in shutting in the Macondo well?

10 A. Yes, it's just another capping device and it was readily
11 available on the *Enterprise* drilling rig, which they planned
12 that on a timeline with that exact rig starting on April 28.

13 Also, the *DDIII* that started drilling the first
14 relief well about May 2 also had a blowout preventer system
15 that was capable, and Transocean even had other BOPs. So all
16 that equipment to do a BOP-on-BOP as one capping option was
17 there to be done by the middle of May.

18 Q. Looping back to the issue of feasibility, are you aware of
19 any examples of capping-type operations having been conducted
20 in a deep sea environment?

21 A. Yes. Mr. Turlak talked about one in Malaysia in 1988.
22 There was another one in the eastern Mediterranean about the
23 year 2004.

24 Q. What was the name of that rig?

25 A. It was the *Jim Cunningham*, and it was also a BOP-on-BOP

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1 process.

2 Q. Now, are you saying that the second BOP in the *Jim*
3 *Cunningham* incident actually stopped the flow of hydrocarbons?

4 A. No, I believe that well had already bridged over, but what
5 it demonstrated was -- years before Macondo -- that the
6 technology and the application of setting a BOP-on-BOP in
7 deeper water from a floating rig was achievable and existed as
8 a technique in the industry.

9 Q. Okay.

10 MR. SMITH: Christina, can you call up
11 TREX-011581.1.1.HESI.

12 BY MR. SMITH:

13 Q. When it comes up, Mr. Ziegler, can you explain what this
14 document is?

15 A. This is an e-mail from Apache Corporation to -- it's part
16 of the data request that Secretary Salazar made to get ideas
17 from the industry right after the Macondo event started. This
18 is dated April 30.

19 Q. Can you turn to .2.1.HESI.

20 Mr. Ziegler, can you read the language that's been
21 highlighted up here in yellow.

22 A. "If the LMRP" -- lower marine riser package, I guess
23 everybody knows that term by now -- "can be removed from the
24 BOP, conventional wisdom would suggest that another subsea BOP
25 could be placed on top of the *Horizon's* BOP in order to close

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1 the well in."

2 Q. So in connection with Macondo, we are seeing an outside
3 party suggesting that BOP-on-BOP capping operations are
4 conventional wisdom. Does that support your conclusion that we
5 are not talking about novel or untested devices?

6 A. Yes, sir. Immediately after Macondo, Apache Corporation,
7 another deepwater operator here in the Gulf of Mexico, had this
8 suggestion.

9 MR. SMITH: Christina, can you call up D-26007, since
10 we have been talking about feasibility and the routine nature
11 of these sorts of operations. Don't start the tape yet.

12 BY MR. SMITH:

13 Q. Mr. Ziegler, can you explain what we are seeing? What is
14 this operation and what is the date?

15 A. This is a video clip from July 12, 2010, that will show
16 the actual capping event with the three-ram capping stack set
17 down on the flowing Macondo well in the Gulf of Mexico.

18 MR. SMITH: Christina, can you start the tape at
19 1.19.80.

20 BY MR. SMITH:

21 Q. Mr. Ziegler, can you just narrate for the Court what we
22 are seeing and the significance?

23 A. The white device in the upper left with the skirt on the
24 bottom is the connector on the bottom of the three-ram capping
25 stack.

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1 1 5 : 5 2 Q. Feel free to use your laser pointer.

2 1 5 : 5 2 A. The well is flowing. There's a small white hose here
3 1 5 : 5 2 that's not even buffeted when it was near the flow. The ROVs
4 1 5 : 5 3 that don't have a great deal of pushing force are helping to
5 1 5 : 5 3 center the capping device. With the well flowing at whatever
6 1 5 : 5 3 rate it's flowing at, the device is simply pushed over,
7 1 5 : 5 3 centered on the well. This is a routine operation like I
8 1 5 : 5 3 described before that happens with landing blowout preventers
9 1 5 : 5 3 and other devices on subsea equipment many places in the world
10 1 5 : 5 3 almost every day in the deepwater industry. There, the device
11 1 5 : 5 3 is being set down and the well is capped.

12 1 5 : 5 3 Q. At this point, it has actually been set down?

13 1 5 : 5 3 A. Setting down right there to be latched on, and that's the
14 1 5 : 5 3 adapter where the flex joint connector to the riser would have
15 1 5 : 5 3 been at that flange right there.

16 1 5 : 5 3 Q. Okay.

17 1 5 : 5 3 A. So it's that easy. It's done.

18 1 5 : 5 3 Q. Again, I'm trying to be brief here, but you probably heard
19 1 5 : 5 3 Mr. Collier for BP raising some concerns in his questioning
20 1 5 : 5 4 about visibility with the ROVs or potential problems with
21 1 5 : 5 4 forces moving the device off of the intended landing target.
22 1 5 : 5 4 Does this kind of video indicate any of those sorts of those
23 1 5 : 5 4 problems?

24 1 5 : 5 4 A. No, it does not indicate those problems. Also, this was a
25 1 5 : 5 4 flowing well. There had been hydrate questions and those type

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1 of issues. There are no hydrates here. This is simply flowing
2 out of the top of the Macondo well. The open device is set
3 down on top of it. The flow is going to continue right up
4 through the blowout preventer, so there will be no hydrate or
5 impingement problem from the flow striking anything. Until you
6 set it down on the well, it's wide open up through the middle.
7 And then you close the BOPs later on. So all of those issues,
8 visibility, hydrates, none of those things existed that would
9 be a problem.

10 There are always things you should think about and
11 consider, but for months at this point in time -- and it would
12 have been even days, if the capping had occurred back in the
13 middle of May -- ROVs with cameras had been down there and you
14 could see there were no visibility problems. There were no
15 hydrates that were related to the top of the well situation.
16 So all of those things would have been known. There are things
17 you have to think about, but they were not problems.

18 **Q.** Also briefly on the topic of hydrates: Based on your
19 experience in the industry, are hydrates a problem only for
20 nongaseous or liquid hydrocarbons?

21 **A.** No, they are a problem with a straight gas well, C1
22 through C5 hydrocarbons, which are ethane, methane, butane,
23 isobutane, and pentane. So it's light gas products that would
24 cause hydrates on an oil well.

25 **MR. SMITH:** Christina, could you call up

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15:55 1 TREX-3918.1.1.HESI.

15:55 2 BY MR. SMITH:

15:55 3 Q. Mr. Ziegler, can you explain what this document is once
15:56 4 it's on the screen? It's TREX-3918.1.1.HESI. It's a Wild Well
15:56 5 Control document.

15:56 6 The first call-out, do you recognize that document,
15:56 7 sir?

15:56 8 A. Yes.

15:56 9 Q. What is it?

15:56 10 A. This was a plan put on -- well, first of all, it's an
15:56 11 e-mail dated April 27, 2010, from Wild Well Control to a BP
15:56 12 person and it's about a subsea well capping procedure.

15:56 13 Q. That's what you think "SS" stands for?

15:56 14 A. SS in the title is "subsea."

15:56 15 Q. Is this the first draft?

15:56 16 A. It says "Revision 2."

15:56 17 MR. SMITH: Christina, can you go to .2.1.HESI,
15:56 18 please.

15:56 19 BY MR. SMITH:

15:57 20 Q. Briefly, can you describe, Mr. Ziegler, what we are seeing
15:57 21 here?

15:57 22 A. This is a drawing with the dimensions of the
15:57 23 *Deepwater Horizon* BOP that was sitting on the seafloor at that
15:57 24 time.

15:57 25 MR. SMITH: Christina, can you go to .4.1.HESI,

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1 please.

2 **BY MR. SMITH:**

3 **Q.** Now, Mr. Ziegler, is this the plan that Wild Well Control
4 was circulating to BP in late April in connection with Macondo?

5 **A.** Yes.

6 **Q.** Can you describe for the Court the significance of this
7 drawing?

8 **A.** This shows that, as of April 27, Wild Well Control, a
9 contractor for BP for well control events, had already placed
10 on paper a diagram of a two-ram capping device. It has a
11 connector on the bottom. The Cameron connector would go on the
12 top of the lower *Horizon* BOP package. That's the type of
13 connector that was at that point. It has two valves on each
14 side --

15 **Q.** Can you indicate those with your laser pointer?

16 Those are the two valves you have testified to?

17 **A.** Well, let me start it with the pointer.

18 This is the connector on the bottom. This is one
19 pipe ram, another pipe ram, and then you have -- this would be
20 a blind ram on top to close the well in. Then you have flow
21 capability out each side. There's two or redundant valves on
22 each side. You could put chokes on there. You could put
23 pressure gauges on there. But this was put on paper as a
24 capping option already by April 27.

25 **Q.** Does this early relatively simple capping device, in your

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1 opinion, already have venting capability, if that's what's
2 desired?

3 A. Yes, it does. And in a similar document to this, it says
4 that you have flow capability from this stack.

5 Q. Now, you are aware that, when the three-ram capping stack
6 was installed in mid July, it had venting capability and it had
7 chokes attached to it.

8 Could you have attached the same choke that was used
9 on the three-ram capping stack to the device?

10 A. Yes. And as a matter of fact, Transocean already had
11 almost identical chokes in their yard near Morgan City,
12 Louisiana, that could have been used in late April.

13 Q. Mr. Ziegler, I want to switch gears with you. You also
14 used, throughout your expert report, the concept of the "ideal
15 minimum." I want to be clear about timing. Let's just assume
16 that BP has a capping device as of a certain date. Maybe that
17 date is in early April, maybe it's sometime in May, but from
18 that starting point date, in your opinion, what is the ideal
19 minimum period of time to install that capping device?

20 A. Seven days is my opinion.

21 Q. What do you base that on?

22 A. Well, I base it on my experience and work with offshore
23 equipment of this type. I went through and made a list of the
24 tasks that you would accomplish.

25 MR. SMITH: Christina, can you call up D-26009A,

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1 please.

2 **BY MR. SMITH:**

3 **Q.** Can you just walk us through this, Mr. Ziegler?

4 **A.** Real quickly, the first thing you do is mobilize the
5 equipment, three days. Remove the riser. Now, normally, the
6 riser would be removed from the well by releasing the LMRP and
7 moving the riser LMRP off the location with the rig. At
8 Macondo, it had -- the riser had fallen, so it had to be cut.
9 It was cut with hydraulic shears.

10 The next thing you do is clear the capping area.
11 This is what I talked about a little bit earlier. There's
12 connection points, the LMRP connector, the well head or BOP
13 connector, or you can unbolt and fabricate a connection at any
14 of the flanges on the stack. One day to accomplish that.

15 Install the cap day. Contingency of one day, which
16 is about 15 percent. That's a total of seven days.

17 **Q.** That's how you arrive at your ideal minimum capping time?

18 **A.** Yes. I have a number of sources also that support that in
19 addition to my experience.

20 **Q.** Can you very briefly describe those for the Court?

21 **A.** One source is in a BP document prepared based on their
22 experience with Macondo. One is based on a Wild Well Control
23 speech that was made after Macondo, saying that Wild Well
24 Control thought the process could be done in three days, eight
25 days, or one to three weeks, depending on exactly what you had

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1 to do.

2 **MR. SMITH:** For the Court's reference, that's
3 TREX-009345.

4 **BY MR. SMITH:**

5 **Q.** I'm sorry. Go on.

6 **A.** And then we also have some other industry materials. We
7 have the actual days that were used at Macondo. And then
8 there's another organization in the North Sea called OGP, Oil
9 and Gas Producers Association.

10 **MR. SMITH:** For the Court's reference, that's
11 TREX-144043.

12 **THE WITNESS:** And they have a capping time for their
13 system based on -- they say in their document based on a study
14 of the Macondo actual time that it took of one to four weeks to
15 cap a well depending on where it is in the world.

16 **MS. KARIS:** Your Honor, I'm going to -- sorry. I
17 have an objection to the reference to these documents because
18 these documents are not cited as support for this exhibit. In
19 fact, there's been an ongoing issue with respect to what
20 support there was.

21 As the Court recalls, in connection with
22 demonstratives, the Court has ordered us to identify what TREXs
23 we are relying on. And neither one of those that we just heard
24 of is part of this demonstrative.

25

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1 16:03 BY MR. SMITH:

2 16:03 Q. Are these documents referenced in your expert,
3 16:03 Mr. Ziegler?

4 16:03 A. Yes.

5 16:03 Q. Did you discuss them in your expert report?

6 16:03 A. Yes.

7 16:03 THE COURT: Well, I was under the impression -- maybe
8 16:03 I misunderstood -- that the witness came up with -- this is his
9 16:03 timeline?

10 16:03 MR. SMITH: Yes, Your Honor.

11 16:03 THE COURT: It's not necessarily derived from other
12 16:03 documents but that he is saying he can refer to other documents
13 16:03 which support his timeline. Is that --

14 16:04 MR. SMITH: Yes, Your Honor.

15 16:04 MS. KARIS: I thought he testified that the source
16 16:04 for these dates and the basis for these dates were these TREXs
17 16:04 that Mr. Smith just identified.

18 16:04 THE COURT: Let's ask him. That's not exactly what I
19 16:04 heard.

20 16:04 BY MR. SMITH:

21 16:04 Q. What is the significance of these documents to your
22 16:04 analysis, sir?

23 16:04 A. Well, I set out, based on my experience, and made a
24 16:04 timeline. By then, to make sure my timeline was reasonable,
25 16:04 looked at some other things just to get a frame of reference

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1 that I was putting something down on paper that my opinion was
2 reasonable.

3 Q. Let me just wrap up this particular line of questioning.
4 What, to you, is the significance of the calculation of a
5 seven-day ideal minimum capping time?

6 A. It's called ideal minimum because there could be weather,
7 there could be some other things. But based on these tasks on
8 my list, seven days is my opinion of the time.

9 The significance is that capping a well in that time
10 frame or something very close to it, you would save 60 to
11 80 days of flow time at Macondo. So the well would have been
12 capped, if you had a preexisting device, by around May 1. If
13 you put together a device or used a blowout preventer, like I
14 have talked about, maybe the middle of May. And that would
15 still save 60 to 80 days of flow time. That's very significant
16 if you plan and accomplish that.

17 MR. SMITH: Christina, can you call up TREX-011578R,
18 please.

19 BY MR. SMITH:

20 Q. Mr. Ziegler, that's going to be Figure 4 from your opening
21 expert report. Let's go to .52.1.HESI. Figure 4.

22 MR. SMITH: TREX-11578R.52.1.HESI, Figure 4, on
23 page 52 of his report.

24 BY MR. SMITH:

25 Q. Mr. Ziegler, you examined the expert report of Iain Adams,

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1 16:06 one of BP's experts?

2 16:06 A. Yes.

3 16:06 Q. Do you agree with his opinion that it was somehow
4 16:06 unforeseeable or could not have been considered in advance, the
5 16:06 possibility of attaching a capping device to the flex joint?

6 16:06 A. I disagree with him.

7 16:06 Q. Why do you disagree with that?

8 I think we have Figure 4 now.

9 16:06 A. Yes.

10 16:06 Q. Can you indicate what you mean --

11 16:07 A. Well, an engineer who sits down to look at this blowout
12 16:07 preventer stack and to plan for events that might occur when
13 16:07 you are drilling a well, in my opinion, would look at the stack
14 16:07 and see the different places and different tools you would need
15 16:07 if you want to attach a capping device or anything to this
16 16:07 stack.

17 16:07 Q. What do you mean by your Figure 1 here?

18 16:07 A. Figure 1 is the connector between the blowout preventer
19 16:07 and the wellhead.

20 16:07 Q. How about your Number 2 here?

21 16:07 A. Number 2 is the connector between the LMRP and the lower
22 16:07 blowout preventer package.

23 16:07 Q. What are you indicating in your Number 3 on Figure 4?

24 16:07 A. Number 1 is the actual flange connection at the base of
25 16:07 the riser or above the flex joint, where the capping device was

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1 actually landed on the Macondo well.

2 Now, I'm not saying that someone would envision that
3 exact point, but it's one of the many flanges on this stack.
4 So an engineer could envision that you might want to connect at
5 any point on the stack. That just happens to be on Macondo,
6 what was chosen.

7 Q. Now, are you saying that's the optimal attachment point or
8 just a possible attachment point?

9 A. It's just possible and feasible. It's not optimal.
10 Ideally you would use one of the connectors because they are
11 made to quickly disconnect or connect a new device on.

12 But at any flange, such as on the top or bottom of
13 the BOPs we have over here on these models, any one of those
14 flanges is a place that you could take the stack apart and put
15 a flange on?

16 You just need to make a quick adaptor. Mr. Turlak
17 described making one in a few days this morning as how he would
18 do that. An engineer would envision that if you are going to
19 plan for source control, take a very little amount of time to
20 sit down and do that one particular task well ahead of time and
21 have the adapters you need.

22 Q. To the extent that Mr. Adams opines that competent
23 engineers could not have identified that as a possibility, even
24 though they had plenty of time and plenty of money, you would
25 disagree with that?

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1 A. I disagree.

2 Q. Then again, very briefly, Mr. Adams talks about
3 engineering first that BP supposedly developed in connection
4 with Macondo source control. I know you talk about this in
5 your rebuttal report, but can you briefly describe for the
6 Court your disagreement with Mr. Adams on that point about
7 engineering first.

8 A. I have no disrespect for engineers, of course, because I
9 am one. But as Mr. Turlak stated it, these are just simple oil
10 field fabrication exercises. Experienced people can sit down
11 and look at a flange, acquire a flange, whether you get one
12 from a supplier or a new one through a welding shop, a machine
13 shop. You could make any connector you need on this stack in a
14 couple of days.

15 Q. This is something that could be done in advance, with
16 advance planning?

17 A. Sure, because, again, on this particular stack there's
18 only 18 3/4-inch API flanges and two different types of
19 connectors. So you could make several starting stubs to put
20 any connector or flange on you want and just have two or three
21 items, is all you would need for this particular stack to have
22 made in advance.

23 Q. We are not talking about hundreds of different kinds of
24 adapters or flanges or tools or anything of that sort?

25 A. Well, that's correct. But we have to go back and think

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1 about what's in the Wild Well Control contract where it says
2 the number of things you might want to connect to are
3 unlimited. And I also agree with that.

4 But the next sentence says: "Any rental company down
5 the road has all of that stuff. So you can get off-the-shelf
6 items, you can get things people have thought about before; or
7 for your particular application, you can make a few."

8 Q. I'm going to switch gears again and ask you some final
9 questions about the advantages of having an effective and
10 real-world source control plan.

11 At what point in time do you see the benefits of
12 having a real plan?

13 A. You need the real plan immediately when the event starts.
14 That way you can go down the road of solving a problem. You
15 have a well flowing out of control, so you don't start having
16 meetings and groups and trying things and different options.
17 You actually have a plan and you immediately do it.

18 That's why I say, if you have the equipment
19 preplanned or available, you could cap the well by around
20 May 1; and if you even have to put together or change an
21 adapter on one of your existing blowout preventer stacks on
22 another rig, you could do it by mid-May. You know what you are
23 going to do. There's no confusion, no unresponsiveness, no
24 change of plans. You just do it.

25 Q. Is it important to generate and collect information that's

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1 relevant to source control decision making?

2 A. Yes.

3 Q. What about the handling of that data and information?

4 A. It needs to be shared. It needs to be transparent.

5 People who need it have to have it. You use it for -- you use
6 all the data you have or all the data you can acquire.

7 Q. Let me ask you about inaccurate information. How does
8 inaccurate information affect source control responses?

9 A. Inaccurate information can slow up the process, cause you
10 to take wrong turns, cause a huge problem to become a bigger
11 problem if you don't have all the data. So you have to have
12 straightforward data.

13 MR. SMITH: Thank you, Mr. Ziegler.

14 I will pass the witness.

15 THE COURT: Ms. Karis.

16 MS. KARIS: Thank you, Your Honor.

17 CROSS-EXAMINATION

18 BY MS. KARIS:

19 Q. Good afternoon, Mr. Ziegler. Hariklia Karis on behalf of
20 BP.

21 A. Good afternoon.

22 Q. We are going to get into your opinions in a couple of
23 minutes.

24 MS. KARIS: Just to set out the groundwork, if we can
25 put up D-23 917, please.

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1 BY MS. KARIS:

2 Q. Sir, you hold yourself out as an expert in no fewer than
3 approximately 30 different areas of specialty, correct?

4 A. You mean -- well, different pieces of equipment and that
5 sort of thing, but basically just a couple areas.

6 Safety, I'm an OSHA instructor and that sort of
7 thing, certified safety professional. Construction. And oil
8 field-related issues.

9 So I would say that's most of it. Within those areas
10 there are a lot of things, yes.

11 Q. You have held yourself out as an expert in lightning
12 strikes and lightning protection, correct?

13 A. Yes. There's an American Petroleum Institute standard
14 about lightning protection for oil field facilities, for
15 example.

16 Q. You have held yourself out as an expert in hospital
17 safety, OSHA regulations, correct?

18 A. That would be OSHA regulations, yes.

19 Q. You have held yourself out as an expert in ergonomics,
20 road construction, and building construction, correct?

21 A. Yes. Ergonomics, I just presented a paper in Atlanta at
22 an international conference on human factors and ergonomics.

23 Q. You have held yourself out as an expert in ventilation
24 systems, human factors, and even circular saw design, correct?

25 A. I'm not sure about design, but use for construction, there

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1 could be some design issues, another OSHA safety issue in
2 construction.

3 Q. You don't refute that you have held yourself out as an
4 expert in circular saw design, correct, and construction?

5 A. Well, and construction, yes, I would agree with that.
6 Warnings and things for people using saws, I'm familiar with
7 that --

8 Q. You have held yourself out as an expert in accident
9 reconstruction --

10 A. Yes.

11 Q. -- and home construction projects, correct?

12 A. I'm sorry. Yes.

13 Q. You have held yourself out as an expert as a door
14 maintenance procedures expert, correct?

15 A. That's one, I think, when Ms. Brown asked me in my
16 deposition, I didn't recall. It's possible, but I don't
17 recall. I don't know what that would be.

18 Q. You have held yourself out, likewise, as an expert in
19 mines and safety in mines, correct?

20 A. Yes. Two of my consultants do mine safety up in Wyoming
21 and Montana in one of my consulting businesses.

22 Q. And now you are holding yourself out as an expert in
23 source control, correct?

24 A. Yes. It's pretty basic in the oil field that wells can --
25 need source control.

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1 Q. That includes, in your opinion, pretty basic to design
2 this capping stack that we have been talking about, correct?

3 A. I'm sorry. I didn't hear the whole question.

4 Q. It's pretty basic, in your opinion, to design this capping
5 stack that you say could have solved this problem in seven
6 days, correct?

7 A. Well, not really. I mean, it's not really a design; it's
8 using one. You may have to make one; you may have to put one
9 together with parts; you may use a BOP from another rig. But,
10 yes, that's pretty basic.

11 Q. You're an expert in that?

12 A. Yes.

13 Q. You're also an expert in flow rate modeling, correct?

14 A. I didn't do that in this case, but I have done that many
15 times, yes.

16 Q. That's just another area of your expertise?

17 A. Regular petroleum engineering function, yes.

18 Q. Now, you testified on direct examination that in your
19 opinion -- let me get the quote here -- it was conventional
20 wisdom to use a BOP-on-BOP to shut in a blown-out well in
21 deepwater operations.

22 Did I hear that correctly?

23 A. No. I think I read that out of the Apache document, the
24 term "conventional wisdom." I basically agree with it, but
25 that wasn't my quote; that was out of an Apache document we

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1 read.

2 Q. I'm glad you raised that. Let's look at that Apache
3 document, 11581.

4 It's your opinion that the industry had equipment
5 that was readily available, that you could go get off the
6 shelf, to assemble pretty quickly to shut in this well,
7 correct?

8 A. Absolutely.

9 Q. And you used this document with Mr. Smith to tell us
10 how -- proof that the industry had this equipment available --
11 is this Exhibit 11581.

12 MS. KARIS: If we can go to paragraph C, which is
13 page 2. I'm sorry. Top paragraph.

14 BY MS. KARIS:

15 Q. Now, relying on this paragraph -- in fact, I think the
16 first couple sentences, you say: In order to address sealing
17 the well at the BOP, if the LMRP can be removed from the well,
18 conventional wisdom would suggest that another subsea BOP could
19 be placed on top of the *Horizon's* BOP in order to shut in the
20 well.

21 That's what you relied on to say it was conventional
22 wisdom to use BOP-on-BOP; is that correct?

23 A. Again, ma'am, I didn't say it was conventional wisdom.
24 The document says that. But I basically agree with that. I
25 didn't use this to say conventional wisdom. The document says

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16:19 1 that.

16:19 2 Q. Let's look at what else the document says.

16:19 3 Do you understand what the origin of this document
16:19 4 is?

16:19 5 A. Yes, I do.

16:19 6 Q. The origin of this document is that Secretary Salazar, on
16:19 7 behalf of the United States government, asked the industry to
16:20 8 come forth with ideas that might work in order to shut in the
16:20 9 Macondo well, correct? And that was in late April?

16:20 10 A. Yes. I believe that's exactly what I said the source was
16:20 11 a few moments ago.

16:20 12 Q. Someone sent this document that you say supports your
16:20 13 opinions in response to Secretary Salazar's request, correct?

16:20 14 A. Not someone. I believe it's from Apache Corporation,
16:20 15 which is a deepwater Gulf of Mexico operator.

16:20 16 Q. Okay. Let's see what they actually say on the first page.

16:20 17 MS. KARIS: I'm sorry. Page 1. If you can call out
16:20 18 through this paragraph that ends with "we believe." From the
16:20 19 beginning to there, please.

16:20 20 BY MS. KARIS:

16:20 21 Q. It says: "In response to Secretary Salazar's request for
16:20 22 support and suggestions relating to the *Deepwater Horizon*
16:20 23 incident, we have compiled the following items as a response
16:20 24 from Apache Corporation. There are three sections covering the
16:21 25 following topics."

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1 One is immediate recovery options, and that's what
2 paragraph C is under, correct, the one we looked at, the
3 suggestion to use a BOP-on-BOP, perhaps, correct?

4 A. Well, I can't see that page, but I think that's what it
5 was, yes.

6 Q. Let's see what Apache actually says about their
7 recommendation.

8 MS. KARIS: If you can call out the first paragraph.

9 BY MS. KARIS:

10 Q. Apache puts forth these ideas, which you told us support
11 your view. And they say: "We believe the following list of
12 three items are worth consideration for recovery operations."

13 They go on to say: "They are off the wall, fairly
14 nonconventional, and require further engineering, but we
15 believe they have merit and are worth consideration by the
16 teams at BP."

17 That's what they stated, correct?

18 A. Yes. For a reason.

19 Q. These considerations were in fact passed on to BP. Do you
20 know whether they were taken into consideration?

21 A. Well, I have no idea whether BP considered them, but they
22 sure didn't do it.

23 Q. Now, you're aware that as part of these source control
24 response efforts, the industry, over 100 service providers and
25 all of the major oil manufacturers, including Apache, were

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1 invited to come and participate in those efforts?

2 You're aware of that fact, correct?

3 A. Well, I don't know who was invited.

4 I think you mean oil producers.

5 Q. Sorry. Yes, oil and gas producers.

6 A. I don't know exactly who was invited.

7 Q. Are you aware of any of the oil manufacturers coming
8 forward, including Shell, that you identify from this document,
9 and saying they had a ready-to-be-designed solution in seven
10 days that could be used to shut in the Macondo well?

11 A. I don't really know what everyone came forward with,
12 but -- I just don't know.

13 Q. All right. And are you aware that 45 days later, after BP
14 and the industry were working to try and shut in this well,
15 Secretary Salazar and Secretary Chu called for yet another
16 meeting to understand what, if any, additional information or
17 equipment existed to shut in the well?

18 Are you aware of that fact?

19 A. I think I'm aware of that, a meeting about the end of May.
20 I don't know a lot about it, but I'm familiar with it.

21 Q. June 15, does that ring a bell for that meeting?

22 A. No, but I'll accept your word for it.

23 MS. KARIS: If we can pull up TREN-142994.0001,
24 please.

25

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1 16:24 BY MS. KARIS:

2 16:24 Q. I know you told Ms. Brown in your deposition that you have
3 16:24 been working on this case almost every day for over half a
4 16:24 year. Did you review this document during the course of that
5 16:24 time period?

6 16:24 A. I think I did. It looks familiar.

7 16:24 MS. KARIS: If we can call out the top, please.

8 16:24 BY MS. KARIS:

9 16:24 Q. From the beginning -- this is Mr. James Dupree. Do you
10 16:24 know what role Mr. Dupree had in the response?

11 16:24 A. Not precisely.

12 16:24 Q. How about generally?

13 16:24 A. I think he was a vice president of BP.

14 16:24 Q. Do you know what role he had in the response?

15 16:24 A. I don't recall right now.

16 16:24 Q. On June 16 of 2010, Mr. Dupree sends a letter to attendees
17 16:24 of the June 15 industry meeting, care of the Department of the
18 16:25 Interior of the United States of America, correct?

19 16:25 A. Yes.

20 16:25 Q. He says, "Dear Attendees, thank you for your participation
21 16:25 at the June 15th meeting at the Department of the Interior,
22 16:25 hosted by Secretaries Salazar and Chu, correct?"

23 16:25 A. Yes.

24 16:25 Q. He says: "BP's primary action from the meeting was to
25 16:25 generate a wish list of resources that would either improve the

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1 current containment schedule, increase the containment
2 capacity, or provide additional redundancy above the current
3 planned redundancy level." Then it attaches that list.

4 Are you aware of anyone, as of June 15, following
5 this industry meeting, coming forward and saying, "I have the
6 solution in seven days"? Are you aware of anyone doing that?

7 A. I'm not aware of it, but this is talking about
8 containment. I'm not sure what that means. Normally it means
9 skimming up oil or collecting oil.

10 Q. The good news is Mr. Dupree will be here, and he will tell
11 us exactly what we asked for.

12 I'm asking whether you know what this was about.

13 A. If you had the list attached, we could see right now what
14 he asked for.

15 Q. Do you know if anyone stepped forward and said, "I have
16 the solution, and you can shut this well in in seven days"?

17 A. He is not asking for solutions. First of all, he is
18 asking for equipment, and I don't know what someone responded
19 with.

20 Q. You certainly don't know of anyone, including yourself,
21 that stepped forward and said, "I can solve this problem
22 because there's existing on-the-shelf equipment we can go get,
23 screw together, and solve this problem"?

24 A. He was asking for containment equipment, which at that
25 time BP was trying to collect the oil. That's what they were

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1 calling containment. But I don't know what he was referring
2 to. At this time BP was calling containment collecting oil.
3 That has nothing to do with blowout preventers.

4 Q. We will talk about whether he was looking for containment
5 equipment. My question is whether you were aware of anyone
6 coming out of this meeting with Secretaries Salazar and Chu --

7 A. No, ma'am.

8 Q. -- with the United States government, including yourself,
9 saying, "I have the solution for this problem, seven days."

10 A. No, ma'am. For the third time, I do not know.

11 Q. You testified that the *Jim Cunningham* incident was one
12 incident that you relied on with respect to talking about the
13 effectiveness of capping a well. Is it in deep water?

14 A. Yes.

15 Q. And you mentioned "but that well had bridged."

16 A. I believe it had, yes.

17 Q. Tell the Court what it means for a well to have bridged.

18 A. Well, by itself -- I believe this was the fact situation.
19 By itself, through plugging up or a formation down the well,
20 going into the tubing or drill pipe or whatever, that the well
21 had just stopped flowing.

22 Q. That well had stopped flowing when they used the device
23 that you told this Court about, correct?

24 A. I said that, yes.

25 Q. The Macondo well had not stopped flowing while they were

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1 16:28 1 trying to design and engineer a solution, including considering
2 16:28 2 a capping stack, correct?

3 16:28 3 A. It had not, which is one reason I showed the video of how
4 16:28 4 easy it is to set a device on a flowing well.

5 16:28 5 Q. Have you ever set a device on a blown-out well?

6 16:28 6 A. Yes.

7 16:28 7 Q. Was that in deep water?

8 16:28 8 A. I'm sorry. I misanswered. I've set a device on a flowing
9 16:28 9 well.

10 16:28 10 Q. My question is whether you have set a device on a
11 16:28 11 blown-out deepwater well 5,000 feet below the surface.

12 16:29 12 A. Well, when I did it, about 1974, deep water was defined in
13 16:29 13 the industry as about 600 to 1,000 feet. So I have not done it
14 16:29 14 at this depth, but it's an easy task that's done frequently.

15 16:29 15 Q. It's an easy task that was done frequently, but you're not
16 16:29 16 aware of anyone in the industry coming forward and saying,
17 16:29 17 "This is easy, it's done frequently, and I have the solution
18 16:29 18 for you in seven days"?

19 16:29 19 A. Well, what I'm talking about, easy, is, routinely in the
20 16:29 20 deepwater industry, Transocean and Sedco and Ensco and all the
21 16:29 21 offshore rig operators and drilling contractors every day
22 16:29 22 somewhere in the world, and probably more than once a day, they
23 16:29 23 are landing, unlatching, pulling, setting blowout preventers or
24 16:29 24 other devices on a wellhead or connector. And it's as easy as
25 16:29 25 we saw in this video with this well flowing. There's no

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1 16:30 difference.

2 16:30 Q. In your opinion, it's as easy and the same to land a
3 16:30 device on a control well as it is to land a device on a
4 16:30 blown-out well?

5 16:30 A. Yes, ma'am. That's why I wanted to show that video. It's
6 16:30 a piece of cake. It's done every day in the industry.

7 16:30 Q. Did you come forward at any time and go to the secretaries
8 16:30 of the United States, to the Minerals Management Service, to
9 16:30 any agency of the United States government and tell them that
10 16:30 shutting in this well was a piece of cake, seeing as you are an
11 16:30 expert in all these areas?

12 16:30 A. I didn't say anything about shutting in the well being a
13 16:30 piece of cake. I'm talking about landing the device.

14 16:30 Q. For what purpose are you landing the device?

15 16:30 A. You are landing the device, first of all, to get data so
16 16:30 all those unknowns and things that the gentleman talked about
17 16:30 in his opening -- the way to eliminate an unknown, instead of
18 16:30 sitting there with an unknown for 60 or 75 days, is to do
19 16:31 what's necessary from an engineering perspective to get the
20 16:31 data. And then you don't have the unknowns.

21 16:31 If you set a cap on the well, pinch it down, close
22 16:31 it, watch the pressures, open it back up if you need to, then
23 16:31 you get the data. So that's why you put the cap on the well
24 16:31 initially, is to both control it and to get data so you know
25 16:31 what your well integrity is. Then you don't have to worry

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1 16:31 1 about it. You either have well integrity or you go to the next
2 16:31 2 step.

3 16:31 3 Here we know they would have had well integrity if
4 16:31 4 they would have just done it in May.

5 16:31 5 Q. So just to be clear, you are not saying capping a flowing
6 16:31 6 well 5,000 feet below the surface of the water in the
7 16:31 7 conditions that existed at Macondo would have been a piece of
8 16:31 8 cake?

9 16:31 9 A. Yes, that's what I'm saying. Setting the device down, we
10 16:31 10 saw the video, would be a piece of cake. Once you have that
11 16:31 11 device set on there, you have the well capped, and then you
12 16:31 12 decide what you are going to do with it as far as well as
13 16:31 13 closing the blowout preventers, how much you choke it down, or
14 16:32 14 if you can shut it in completely and watch the pressures. But
15 16:32 15 we saw in that video that was the actual capping event. That's
16 16:32 16 easy.

17 16:32 17 Q. Do you have any idea how much engineering, design, testing
18 16:32 18 man-hours were spent in order to accomplish that task that we
19 16:32 19 saw in that video?

20 16:32 20 A. Well --

21 16:32 21 Q. Do you know?

22 16:32 22 A. I do.

23 16:32 23 Q. How many? Quantify for the Court how many hours, how many
24 16:32 24 people, how many weeks were spent in order to achieve that
25 16:32 25 piece-of-cake operation.

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1 A. Many, many hours and days and that's why the best option
2 is to have done all of those thousands of hours and everything
3 you accomplish, do it in 2008 or 2009. Do it before you drill
4 Macondo so that you don't have to do it all immediately after
5 the event. That's why you have a proper source control plan.

6 But that's a very good point. If BP says -- and I
7 wouldn't disagree with them -- that they spent a lot of money
8 and a lot of time and a lot of man-hours and a lot of effort on
9 creating that capping situation, then that's all the more
10 reason, if it's going to take so long, to have this plan before
11 you ever drill the well.

12 Q. You agree that it was BP's goal to shut in that well as
13 soon as possible?

14 A. That's an interesting question. I think that certainly
15 people would want to shut in the well, but wanting and doing
16 are two different things.

17 Q. All right.

18 A. I heard the expression that it defies common sense why
19 they would not want to shut the well in. Well, to me it defies
20 common sense that they would not have a plan, it defies common
21 sense that they wouldn't shut the well in as soon as possible,
22 and it defies common sense they would not have determined the
23 well integrity as soon as possible. That's what defies common
24 sense to me.

25 Q. Mr. Dupree will be here, and he will tell us what he did

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1 with respect to each of those efforts.

2 Now, it is your view the government did not have the
3 ability, quote, let alone the desire to accomplish source
4 control. Is that correct?

5 A. No. I didn't say it that way. I said as far as -- I
6 think you're talking about -- which I didn't cover here today,
7 but in my report I do talk about that the government is not in
8 charge. I think that's what you are referring to.

9 MS. KARIS: We can pull up page 43 of Mr. Ziegler's
10 report, please.

11 BY MS. KARIS:

12 Q. This is your report, 11578R.43. This is from your report,
13 correct, last couple sentences?

14 A. Yes, ma'am, this is from my report.

15 Q. What you state there is: "Even the 'regulators' acted as
16 a filter..."

17 And then you go on to say: "for example, where the
18 government in several documents says it does not have the
19 ability, let alone the desire, to accomplish source control, so
20 must 'rely wholly on the responsible party'..."

21 That's what you stated in your report, correct?

22 A. Absolutely. It's not that they -- it's not that they
23 didn't want to do it. It's not their job. They were forced
24 into this. They didn't go in and take control, in my opinion.
25 BP had the responsibility. It was a huge mess and the

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1 government had to get involved because of the Oil Pollution Act
2 and other reasons.

3 But I would not assume that Admiral Allen or Admiral
4 Landry or anyone wanted to spend their time in Houston or here
5 on the Gulf Coast, even though it's a nice place, controlling
6 the well rather than doing what their normal duties were. They
7 were forced into this because BP had such a huge miserable
8 failure, somebody had to make every effort they could to try to
9 help it along.

10 Q. You agree that ultimately, in the words of the President
11 of the United States, BP was operating at the government's
12 direction?

13 A. I disagree with that. We have quotes from --

14 MS. KARIS: Put up 142364.001.

15 BY MS. KARIS:

16 Q. You were shown this in your deposition. These are remarks
17 of the President of the United States of America. I think you
18 disagreed with them at that time as well. This paragraph that
19 begins with, "But make no mistake."

20 "But make no mistake: BP is operating at our
21 direction."

22 You disagree with the President in stating that,
23 correct?

24 A. Yes, I do. With all due respect, I'm sure it was a very
25 important issue for him to deal with. It's a very important

1 issue for all of us. But I don't think this is a well control
2 statement by the President.

3 **MS. KARIS:** I have no further questions. Thank you.

4 **THE COURT:** Any redirect?

5 **MR. SMITH:** No further questions, Your Honor.

6 **THE COURT:** Thank you, Mr. Ziegler.

7 **MR. MILLER:** Good afternoon, Your Honor. Kerry
8 Miller on behalf of the aligned parties. At this time,
9 Your Honor, the aligned parties would like to rest their case
10 subject to the following, and this is kind of like we did in
11 Phase One.

12 As Your Honor knows, we have a pretrial order in
13 this case, and it's sort of a unique proceeding which set forth
14 the various types of evidence that are going into the record
15 for Your Honor's consideration as the judge in admiralty and as
16 the fact finder who will fashion findings of fact and
17 conclusions of law. The live testimony is only a portion of
18 the evidence that goes into that record, Your Honor. So we are
19 resting our case subject to the following caveats.

20 Number 1, we have not yet introduced the
21 exhibits used with Dr. Bea.

22 Number 2, the aligned parties have not yet
23 introduced into evidence the exhibits used with Mr. Ziegler.

24 Number 3, Your Honor, under the order we have in
25 place that was the subject of much discussion with Magistrate

1 Shushan over the summer, the aligned parties are entitled to
2 rely and cite to and forms part of the record the deposition
3 bundles that will be introduced in connection with the
4 quantification segment of this trial, Your Honor.

5 Number 4, also in connection with the
6 much-negotiated pretrial orders with Magistrate Shushan, there
7 is a category of exhibits at one point known as Category 4
8 exhibits or catchall exhibits, which is subject to discussion
9 amongst the parties at the end of the quantification segment.
10 Again, those exhibits would come into the record and would be a
11 part of the source control trial and information and evidence
12 that the aligned parties can rely upon in their submission to
13 the Court on proposed findings of fact and conclusions of law.

14 Finally, Your Honor, there was one oversight in
15 connection with Dr. Wilson's testimony yesterday. We did not
16 officially tender him as an expert in a particular field,
17 although he gave his substantive opinions and his report's been
18 admitted. The field in which we would like to tender
19 Dr. Wilson is in hydraulic modeling.

20 **THE COURT:** Well, he was allowed to testify as an
21 expert and gave opinion testimony, so I don't know that it
22 makes much difference.

23 **MR. MILLER:** I feel the same way but --

24 **THE COURT:** I found out the first time I went to
25 Texas to try cases that they don't even -- I must have people

1 here from Texas, huh? They don't even tender experts; they
2 just put somebody on the stand and start asking them questions,
3 and if at some point somebody thinks it's improper, then you
4 object and then you go through --

5 **MR. MILLER:** It's funny you say that, Your Honor --

6 **THE COURT:** So why he should be allowed to give
7 expert --

8 **MR. MILLER:** I had a question from a colleague as to
9 why we go through all this stuff about tendering in a
10 particular field, that they don't do that elsewhere.

11 **THE COURT:** Yeah.

12 **MR. MILLER:** Your Honor, I also forgot to admit
13 Mr. Turlak, who was not an expert, also had exhibits. We have
14 not moved his exhibits into the record either. So there's
15 actually a fifth category of exhibits that still need to come
16 into the record.

17 **THE COURT:** Obviously y'all are resting subject to
18 getting all your exhibits in and -- I was a little confused
19 about your reference to deposition bundles that will be
20 introduced during the quantification segment as somehow being
21 relevant to the source control issue. I'm not --

22 **MR. MILLER:** Your Honor, in the order that we had
23 many discussions with Magistrate Shushan over the summer and
24 it's the subject of a Court order, the bundles that are coming
25 in for Phase Two -- that is, you had some bundles that I think

1 Anthony introduced yesterday. I think the number was 20, 15
2 from Phase Two and five from Phase One. I think BP will
3 introduce its 20, I guess, tomorrow or Thursday. I guess
4 Thursday.

5 The U.S. and BP and Anadarko can rely upon --
6 some of the witnesses, Your Honor, testified as to both source
7 control and quantification topics. We have talked a lot about
8 the fact that with respect to some witnesses, the line between
9 source control and quantification was not clear; it was very
10 blurry. So some depositions do include -- some deposition
11 bundles do include, both in the same bundle, testimony that
12 relates to source control and quantification.

13 So for the purposes of Phase Two, all parties,
14 including the parties that have not been here for this segment,
15 the United States and Anadarko, can rely upon all testimony
16 that's in all the bundles for Phase Two and their proposed
17 findings of fact and conclusions of law. I hope that clarifies
18 it.

19 **THE COURT:** It looks like Mr. Langan wants to say
20 something.

21 **MR. MILLER:** Your Honor, I would make one more remark
22 before turning it over to Andy and that is, since we have gone
23 almost two full days and I think we are about seven hours or
24 seven and a half hours apiece, we are basically halfway there
25 on the chess clock and we got through five witnesses. BP has

1 eight witnesses it is slated to call. To the extent BP knows
2 it's not going to call some of those experts, because they can
3 pull them back, we sure would appreciate knowing and I think
4 the Court probably feels the same way, given the work we do at
5 night. So I would make that request from BP --

6 **THE COURT:** All right. We'll talk about witnesses in
7 a minute.

8 **MR. LANGAN:** Your Honor, Andy Langan for BP. We
9 would like to move under Rule 52(c) for judgment on partial
10 findings. We have a brief that we can file either tonight or
11 first thing in the morning. I'm happy to talk about it, but we
12 do have a short brief we'd like to file.

13 **THE COURT:** Why don't you just file your brief and if
14 there's anything you want to -- anything you want to add
15 tomorrow, I'll entertain that.

16 **MR. LANGAN:** Okay. So I would maybe take care of
17 that first thing. Is it okay if we file first thing in the
18 morning? Would you rather see it tonight or --

19 **THE COURT:** The sooner you can file it, the better it
20 is for me. And I'm sure they would like to have a chance to
21 respond.

22 **MR. LANGAN:** For purposes of the record, we do
23 move -- we have some things to say about partial findings and
24 we'd like an opportunity --

25 **THE COURT:** In addition to filing it, Ben, if they

1 e-mail it to you, you can e-mail it to me.

2 **MR. LANGAN:** Very good, Your Honor. Thank you.

3 **THE COURT:** Do you agree with what Mr. Miller -- is
4 there any issue about --

5 **MR. LANGAN:** He was talking pretty fast, but
6 generally I think we do. I don't think it makes any difference
7 to our motion, you know, the quantification --

8 **THE COURT:** In other words, there's no dispute on the
9 issue about the representation that that's what you-all had
10 agreed through -- worked through with Judge Shushan about there
11 could be overlapping in these deposition bundles?

12 **MR. LANGAN:** That is certainly true, Your Honor.
13 Thank you.

14 **THE COURT:** Very well.

15 **MR. MILLER:** Kerry Miller again for the aligned
16 parties, Your Honor. I'm not quite sure how you can file a
17 Rule 52(c) motion when you have an incomplete record. We would
18 like to take a look at it, but we think the issue is premature
19 at this time given the status of the record.

20 **THE COURT:** Well, we'll see after he files his
21 motion.

22 I'm looking at BP's source control witness list.
23 I do see you have eight witnesses listed in -- in order, three
24 fact witness followed by five experts. Can you-all tell us now
25 whether it's possible that you-all may not call some of these

1 witnesses?

2 **MR. BROCK:** Yes, Your Honor. Mike Brock for BP. At
3 this point our first three witnesses are James Dupree, who is
4 here and we are ready to go with him -- with him this
5 afternoon. I do anticipate that Mark Mazzella will be our
6 second witness, followed by Trevor Smith.

7 **THE COURT:** Those three are fact witnesses, correct?

8 **MR. BROCK:** Yes.

9 **THE COURT:** I've got them noted as fact witnesses.

10 **MR. BROCK:** Correct. Then our team will meet
11 tonight. I need to see where we are on the clock and how much
12 time we have left to do the other witnesses. If I can get to a
13 decision on that tonight, I will send an e-mail to the Court
14 and to the parties. I don't expect that we will call all
15 eight. We will probably call -- well, I don't want to make a
16 guess on that, but I don't think we will call all eight.

17 **THE COURT:** Well, in fairness, if you are not going
18 to call the first couple that are listed, I think we need to
19 know that tonight because these fellas will be prepared for
20 cross-examination.

21 **MR. BROCK:** So we can do that. We can let the Court
22 know tonight and the other parties --

23 **THE COURT:** Okay.

24 **MR. BROCK:** -- in terms of the first couple of
25 experts that are listed, Carden and Ballard.

1 **THE COURT:** Actually, I need to know, too, because
2 I --

3 **MR. BROCK:** I was including Your Honor in the
4 distribution list. You're going to be at the top of the list,
5 actually.

6 **THE COURT:** Believe me, I do not want to read expert
7 reports if they are not going to be called.

8 **MR. BROCK:** Sure. We will do that early this
9 evening.

10 **MR. BRIAN:** Your Honor, Brad Brian for Transocean.
11 May I ask the Court to inquire of Mr. Brock how long he expects
12 those first three witnesses to stay on? Will they take up the
13 whole day or will you definitely get --

14 **THE COURT:** You mean today?

15 **MR. BRIAN:** I mean through tomorrow. I'm assuming we
16 are going to get somebody past the three he identified
17 tomorrow.

18 **MR. BROCK:** Yes, I would expect that. I would expect
19 Mr. Dupree to take the rest of the day and if we adjourn at
20 6:00, I think he will still be on direct exam for a little bit
21 tomorrow. I don't know how long your cross is, so that makes
22 it a little harder to predict.

23 Mazzella and Smith, I would think, would take
24 until -- they will go into the afternoon, to be followed by
25 Carden or Ballard, depending on what we decide on those two.

1 **MR. BRIAN:** I ask, Your Honor, because obviously some
2 of us have an interest in those two people he identified. We
3 would like to know as early as possible tonight if that's
4 possible.

5 **THE COURT:** Well, I think that's what he said he is
6 going to give us.

7 **MR. BROCK:** Plaintiff has just rested. We are
8 evaluating where we are. We will let the parties know when
9 we -- after we have talked it through.

10 **THE COURT:** Okay. Are you ready to call your first
11 witness?

12 **MS. KARIS:** Yes, Your Honor. May I go get
13 Mr. Dupree, Your Honor?

14 **THE COURT:** I'll step off the bench for about five
15 minutes. We'll keep this to a short, short recess.

16 **MS. KARIS:** Thank you, Your Honor.

17 (Recess.)

18 **THE COURT:** Please be seated, everyone.

19 **JAMES DUPREE,**
20 having been duly sworn, testified as follows:

21 **THE DEPUTY CLERK:** State your full name and correct
22 spelling for the record, please.

23 **THE WITNESS:** My name is James Dupree, D-U-P-R-E-E.

24 **MS. KARIS:** May I proceed, Your Honor?

25 **THE COURT:** Yes.

1 **MS. KARIS:** Good afternoon, Mr. Dupree.

2 And for the record, Hariklia Karis on direct
3 examination. We just finished cross, so I'm going to try to
4 remember I'm on direct now.

5 **DIRECT EXAMINATION**

6 **BY MS. KARIS:**

7 **Q.** Who do you work for?

8 **A.** I work for BP.

9 **Q.** What is your current position at BP?

10 **A.** I'm currently the chief operating officer of resource
11 development and technology.

12 **Q.** What are some of your responsibilities as the chief
13 operating officer for resource development and technology?

14 **A.** I am responsible for -- as the chief operating officer of
15 resource development, it's a global role. I'm responsible for
16 the reservoirs, all the reservoirs that BP owns around the
17 world, for the development of those reservoirs, the
18 development, planning, the drilling, the execution, completion
19 plans of those particular reservoirs.

20 On the technology side, I'm head of upstream
21 technology in BP, so I'm responsible for all the technology
22 deployment in the upstream of the business.

23 **Q.** Where is your office located?

24 **A.** I'm located in Houston in Westlake, Westlake Plaza in
25 Houston.

JAMES DUPREE - DIRECT

1 Q. To orient ourselves for your examination, can you tell the
2 Court what position you held at the time of the
3 *Deepwater Horizon* incident?

4 A. I led the source control efforts on behalf of BP.

5 Q. What was your position or job title at that time?

6 A. I was the strategic performance unit leader for the Gulf
7 of Mexico.

8 Q. So that would have been the seniormost member of the Gulf
9 of Mexico upstream operations?

10 A. That is correct.

11 Q. And the Court has previously heard from Mr. Shaw, Neil
12 Shaw, in connection with Phase One. Did you take over for
13 Mr. Shaw?

14 A. Yes, Mr. Shaw was my predecessor in the role.

15 Q. How long had you held that position at the time of the
16 incident?

17 A. I had only been there about three to four months before
18 the incident.

19 Q. Now, as the strategy performance unit leader for BP, what
20 role did you play in the source control aspect after the
21 incident?

22 A. I led the source control effort on behalf of BP in
23 Houston.

24 Q. When you say you led that effort, can you describe
25 generally for the Court what that entailed.

JAMES DUPREE - DIRECT

1 A. I had the organization in place to bring forward and
2 recommend source control options to Unified Command and to
3 execute those options, BP's assets and people.

4 Q. How long did you work on the source control efforts?

5 A. I was in the crisis center for, say, approximately
6 150 days.

7 Q. Tell the Court what the crisis center was.

8 A. The crisis center is our purpose-built crisis center in
9 Westlake, Westlake 1 on our Houston campus. It's in the Gulf
10 of Mexico building. There's a purpose-built center there, and
11 that's where we responded, in that crisis center.

12 Q. We will discuss the work you did as part of the source
13 control operations briefly, but before that I would like to
14 discuss your background a little bit.

15 MS. KARIS: If we can pull up D-23215, please.

16 BY MS. KARIS:

17 Q. Mr. Dupree, there's a slide here that summarizes some of
18 your background, and I would like to talk a little bit with you
19 about it.

20 First, can you the tell the Court what your
21 educational background is.

22 A. I have a Bachelor of Sciences in natural sciences from the
23 University of Texas and a master's degree in petroleum
24 engineering from the University of Texas. I also have a
25 master's degree in management from Stanford University and a

JAMES DUPREE - DIRECT

1 Sloan Fellow from Stanford University.

2 Q. When did you graduate with your master's in petroleum
3 engineering?

4 A. End of 1984.

5 Q. At the time that you graduated with your master's, did you
6 join the oil and gas industry?

7 A. Yes, that is correct. I joined Sohio Petroleum Company,
8 which was mostly owned by BP.

9 **BY MS. KARIS:**

10 Q. So have you worked in the oil and gas industry from 1984
11 until now, approximately 29 years?

12 A. That's correct, yes.

13 Q. In the interest of time, we are not going to walk through
14 your 29-year career every position you have held, but can you
15 summarize for the Court your employment history reflected in
16 part here on Demonstrative 23215.

17 A. So in my early career I worked in Alaska, which was a
18 large resource area for Sohio and BP. I worked on the North
19 Slope of Alaska. I worked as a reservoir engineer and
20 production engineer, a workover engineer. I worked in
21 South America in my early career, in Columbia, in a reservoir
22 called Cupiagua. I was the staff engineer, the development
23 engineer for those fields.

24 Later on, I worked in the headquarters of BP. Then
25 after working in headquarters for about a year and a half, I

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1 became the president of the Canadian oil business for BP. I
2 later was the business unit leader for the Gulf of Mexico
3 production business in '99, 2003. I went to Russia when we did
4 our joint venture in Russia with TNK-BP. I was the executive
5 vice president of developments, technology, and exploration for
6 our joint venture. I was the president of our Angola business,
7 after that, after returning from Russia. And I had run our
8 offshore -- or Russia/Kazakhstan business from London before
9 moving to the Gulf of Mexico.

10 Q. Sounds like a pretty complete career.

11 Had you worked in deep water before you got the
12 position of strategic performance unit leader in late 2009,
13 early 2010?

14 A. Yes. As I said earlier, I was the business unit leader
15 for the deepwater Gulf of Mexico in the early stages of the
16 business for the production side of the business. I also, in
17 Angola, the West Africa business, I was the president of the
18 West Africa business, which is all offshore. And in my time in
19 the headquarters in London, the senior vice president I was
20 working for also had North Sea operations underneath him, and I
21 reported to him and assisted him in those operations.

22 Q. Can you tell the Court what the circumstances were that
23 led to you coming to the Gulf of Mexico to become the strategic
24 performance unit leader?

25 A. So until 2008, I was living in London, working on Russia

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1 business for BP. My wife got very ill and I requested and was
2 granted from BP a leave of absence from the company for about a
3 year, year and a half. I moved my family and my wife back to
4 Houston because she was in dire need of a transplant, and she
5 did get a transplant in November of 2009.

6 And coming right out of that, I requested to return
7 to BP. Talked to Tony and Andy about returning to BP, and they
8 offered me the role in the Gulf of Mexico to run the deepwater
9 business in the Gulf of Mexico. Because of my wife's medical
10 condition, I needed to remain in Houston for some period of
11 time until she -- until we resolved her condition.

12 Q. Are you still in Houston today?

13 A. Yes, I am still in Houston today.

14 Q. Now, after -- you testified earlier that you worked in the
15 source control side of this incident for about 150 days. What
16 position did you obtain after that?

17 A. Upon completion of the source control efforts, the company
18 asked me to become the regional president for the Gulf of
19 Mexico and to kind of restore BP's business in the Gulf of
20 Mexico and also to incorporate the lessons learned into BP's
21 business.

22 Q. We have walked through some of your career. The slide
23 here also says that you're the author of multiple technical
24 publications and you're the recipient of industry awards. Can
25 you briefly describe what that is?

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1 17:05 A. In my early career, I authored multiple subsurface
2 17:05 technical publications, usually about reservoir engineering or
3 17:05 logging techniques. A lot of them were associated with the
4 17:05 work I was doing as an engineer at the time. And I was a
5 17:05 distinguished lecturer in certain industry forums.

6 17:05 Q. In your capacity as the regional president for the Gulf of
7 17:05 Mexico, did you serve on any boards that were related to the
8 17:05 *Deepwater Horizon* source control efforts?

9 17:05 A. Yes. As -- when I took over as the regional president, I
10 17:06 also decided that it was important -- and BP decided it was
11 17:06 important that, in order to share in the lessons learned in the
12 17:06 business, that we would actively participate in several boards.
13 17:06 The Marine Well Containment Company was one. I represented BP
14 17:06 on the Marine Well Containment Company board. The Marine Well
15 17:06 Containment Company is a company that's a consortium of 10
16 17:06 different companies. All came together post the spill to
17 17:06 create an avenue for source control equipment preparation and
18 17:06 to have source control equipment. My main purpose on that
19 17:06 board was to ensure that all the Macondo equipment that we used
20 17:06 and built during the response get refurbished and be put into
21 17:06 the Marine Well Containment Company to be used by the industry
22 17:06 potentially in the future.

23 17:06 I also was on the board of the Center for Offshore
24 17:06 Safety. It was a new initiative by the industry trying to do a
25 17:07 similar thing that the nuclear agency does where companies

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1 self-police themselves. And so in the Center for Offshore
2 Safety, we set up initially to do safety environmental systems
3 and management audits as -- regulatory audits to be able to
4 share information. Also to be able to share other information
5 with each other in the interest of improving offshore safety.
6 Because today incidents can happen in certain companies, and
7 they don't get shared with other companies. So learning -- so
8 the Center for Offshore Safety's purpose was built to do that.

9 The only thing I will mention here is: I also was a
10 member of the American Petroleum Institute, API, upstream
11 executive committee. As you know, the API is where standards
12 get written in this industry, and my role there was really to
13 make sure that the lessons learned from the event were
14 incorporated in the standards and that we advocated for at
15 least the changes that BP made in the business -- in our
16 business relative to our plea that those changes were also well
17 represented with the API in the standard setting for the
18 industry.

19 **BY MS. KARIS:**

20 **Q.** Mr. Dupree, as a result of your involvement in these
21 professional organizations as well as your involvement in BP's
22 source control efforts, did you come to learn what equipment
23 and technology existed at the time of the blowout for deepwater
24 source control?

25 **A.** Yes, I'm aware of the kind of equipment that might have

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17:08 1 been available prior to -- certainly from my experience in the
17:08 2 Marine Well Containment Company.

17:08 3 Q. We'll talk about that a little later, as we get into some
17:08 4 of the substance of your testimony.

17:08 5 How long did you remain on these boards?

17:08 6 A. I remained on these boards until the end of last year, so
17:08 7 January of this year.

17:09 8 Q. Why did you step down from the boards?

17:09 9 A. I changed roles from regional president of the Gulf of
17:09 10 Mexico to this global role. So I handed these roles to my --
17:09 11 to the person that came in behind me to take over regional
17:09 12 president of the Gulf of Mexico.

17:09 13 Q. Does BP continue its involvement in these organizations?

17:09 14 A. Yes.

17:09 15 Q. Now, I would like to talk a little bit about the structure
17:09 16 of the overall source control efforts. Let's begin with how
17:09 17 did you learn about the *Deepwater Horizon* incident?

17:09 18 A. On April 20, at night, I was at home. I got a phone call
17:09 19 from one of the ops managers that happened to be in the
17:09 20 crisis -- was in the crisis center because we were responding
17:09 21 to try to get our people home from the volcanic event that was
17:09 22 going on. People were stranded in Europe. We were trying to
17:09 23 get them home.

17:09 24 He called me and he said, "Do you know anything about
17:10 25 what's going on on the *Deepwater Horizon*?"

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17:10 1 I said, "No."

17:10 2 He said, "Let me forward you an e-mail."

17:10 3 He forwarded it to me. It was an e-mail from the
17:10 4 *Damon Bankston* that essentially said: "Rig on fire. Send
17:10 5 help."

17:10 6 I asked him, "Have you raised the Incident Management
17:10 7 Team," the IMT.

17:10 8 And he said, "Yes."

17:10 9 And then I immediately got dressed and went into the
17:10 10 crisis center.

17:10 11 Q. What is the IMT, the Incident Management Team?

17:10 12 A. In the Gulf of Mexico business and in most businesses that
17:10 13 have operations, there is a rota, a call-out so -- of all the
17:10 14 people you would need to respond. So people are on call every
17:10 15 week, and that call-out list is the immediate -- is what you
17:10 16 would immediately use in order to call in the team. So those
17:10 17 people are on call that week, and that list is always updated.
17:10 18 So when I say, "Call out the IMT," is to make the phone calls
17:10 19 to those people who are on call and get them into the crisis
17:10 20 center immediately.

17:10 21 Q. Did you, in fact, do that immediately, activate the
17:11 22 Incident Management Team?

17:11 23 A. Yes. This individual had already started that activation,
17:11 24 but yes, we immediately activated our Incident Management Team
17:11 25 and all went to the crisis center.

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17:11 1 Q. If we can pull up D-23250.

17:11 2 Mr. Dupree, I put up the slide D-23250 for the
17:11 3 record, titled "*Deepwater Horizon* Source Control Response
17:11 4 Teams." Using this slide, I would like you to tell the Court
17:11 5 what the overall structure was of the team that worked on
17:11 6 responding to the source control efforts to stop the flow of
17:11 7 oil from the Macondo well.

17:11 8 A. So from the top, the national incident commander was
17:11 9 Admiral Thad Allen, who was based in New Orleans -- or based
17:11 10 where -- traveled around quite a bit. The Unified Area Command
17:11 11 that was structured to run the whole response was based in
17:11 12 New Orleans. There was a federal on-scene coordinator that led
17:11 13 the Unified Command. The names here are of the different
17:11 14 on-scene coordinators that held the role.

17:12 15 Within the first day of the response, April 21, there
17:12 16 was a very active discussion between the parties involved about
17:12 17 where to have source control versus where to have the surface
17:12 18 response. It was agreed that the source control operations
17:12 19 would be run out of Houston because that was where all the
17:12 20 engineers were and that was where a majority of the industry
17:12 21 was. So rather than try to move everybody to Louisiana, that
17:12 22 was agreed.

17:12 23 So the source control teams were in the Houston
17:12 24 offices at that crisis center in the Westlake building.

17:12 25 Q. Now, in the top left-hand corner here, there's something

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1 titled -- and I realize it can't be read very well -- "Federal
2 Agencies Involved in Response." Can you tell the Court what
3 the role of the federal agencies -- which agencies were
4 involved and generally what their role was?

5 A. So within the first day or two, the U.S. Coast Guard came
6 to the crisis center, arrived at the crisis center, was from
7 the Coast Guard strike team. It was Commander Brannon;
8 Commander Shepherd showed up. So the Coast Guard arrives very
9 early. The MMS also sends representation to the crisis center
10 in Houston. And then the Department of Interior and Department
11 of Energy also get involved early, with Secretary Salazar and
12 Secretary Chu both coming and being involved at the crisis
13 center. And the formation of the Federal Science Team at the
14 order of Admiral Allen formed the Federal Science Team. And
15 the Federal Science Team and Secretary Chu were also very
16 involved at the crisis center in Houston as well as other
17 members of the Department of the Interior.

18 Q. Let me stop you there.

19 We have heard some about the Federal Science Team.
20 Can you tell the Court what the involvement or role of the
21 Federal Science Team was in source control efforts?

22 A. So the Federal Science Team was enacted by Thad Allen. It
23 was to give the government the opportunity to investigate
24 source control options and to understand the options that were
25 being brought forward. It was led by Secretary Chu. He also

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1 drew on resources from the National Labs, Sandia Labs, Lawrence
2 Livermore. He drew from the labs and he also drew from
3 academia and other experts that he typically drew upon in his
4 role as Department of Energy.

5 **Q.** Then over here on the right-hand side references the Flow
6 Rate Technical Group. Generally, what was the role of the Flow
7 Rate Technical Group in the response effort?

8 **A.** The Flow Rate Technical Group was formed to calculate the
9 flow rate. It was formed under Admiral Thad Allen. BP was not
10 a participant, but it was led by Ms. Marcia McNutt. She was
11 the head of the USGS at the time. She was Secretary Salazar's
12 representative at the source control offices in Houston when he
13 wasn't there. She spent a significant amount of time with us
14 in Houston. She had her own office there.

15 **Q.** Then there's a reference to "Industry Companies" and then
16 "Service Providers." What was their role in the response
17 effort?

18 **A.** Early into the response, the industry obviously offered
19 people and expertise to us, and we drew on certain individuals
20 and certain expertise that we needed, expertise about hydrates,
21 expertise in drilling. And also drew on their expertise or
22 their cooperation for equipment or access to their vessels.

23 The service providers were available. We drew on all
24 the potential -- the service providers that could help us,
25 including the Wild Well Control, Boots & Coots, Schlumberger,

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1 all the larger service companies. Especially Oceaneering,
2 which has particular expertise in engineering deepwater
3 solutions.

4 Q. Then, finally, there's a box here for "BP Source Control
5 Teams" with you leading that team and then a variety of teams
6 under that. Can you describe for the Court how those teams fit
7 together and what relationship you had with them?

8 A. So in order to get organized in Houston, we -- I was the
9 lead of the source control operations and then I set up several
10 teams beneath it -- you see six of the teams there -- with
11 leadership. In this crisis center that we had in Houston, it
12 was purpose-built, but it also has a training and learning
13 center right next to it. We broke open the training and
14 learning center so that we had a significant amount of square
15 footage to work with. These teams were all on that third floor
16 in the training and learning center, and the way it was
17 organized, we had the crisis center and the training and
18 learning center. And each of these teams would have their own
19 area that they were working in. And the Coast Guard had a
20 group that sat in the middle that participated, and also MMS
21 had offices there with us and so did the Department of the
22 Interior folks. The science team sometimes was so large that
23 we had to move them to another floor, where they had their own
24 conference rooms. But in general, we were all on one big floor
25 and we were all together in that floor.

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17:17 1 Q. Approximately how large -- how many people were involved
17:17 2 in this overall source control effort that were working out of
17:17 3 BP's Houston-based offices?

17:17 4 A. It was -- in the Houston-based offices, not to mention the
17:17 5 contractors and the people that were working over the site,
17:18 6 over the well, 5- to 800 people 24/7 were in that crisis center
17:18 7 at any one point in time. So between 500 and 800 people. That
17:18 8 includes the Coast Guard, the MMS, and all the engineering
17:18 9 teams that we had there running during the response.

17:18 10 Q. Now, given the size of these operations, was there a
17:18 11 system in place -- or how did you structure, I guess I should
17:18 12 ask, the coordination of all of these teams?

17:18 13 A. So every morning -- I had set a series of meetings. I sat
17:18 14 in there with these teams in the ops room. Every morning at
17:18 15 6:30 and another meeting at 4:30, I would set a meeting -- the
17:18 16 first meeting at 6:30 in the morning, where we all got together
17:18 17 in a conference room that sat in the middle of this area. It
17:18 18 was an interface meeting. And in that meeting, I asked the
17:18 19 leaders of each of these efforts that were ongoing for source
17:19 20 control to tell me what they had done in the last 24 hours and
17:19 21 what they planned to do in the next 24 hours. So it was a very
17:19 22 quick meeting to get together and understand what was happening
17:19 23 with regards to each -- the accomplishments of what was moving
17:19 24 on each of these teams.

17:19 25 At the same time that this meeting was attended by --

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17:19 1 it could be attended by pretty much anyone. The Coast Guard,
17:19 2 the MMS, certainly Secretary Salazar would attend this meeting
17:19 3 when he was there, because it was the place where everybody
17:19 4 understood what was actually going on. It was also shift time.
17:19 5 6:30 a.m. is when the night shift was coming off and the day
17:19 6 shift was coming on. So that was how I coordinate that. I had
17:19 7 a similar meeting at 4:30 in the afternoon where we would have
17:19 8 a discussion about what we have done in the last 24 hours and
17:19 9 what we plan to do in the next 24 hours, and it's also
17:19 10 coincident with the shift change going on on the floor, where
17:19 11 the night team is coming in and we are going to have a
17:20 12 discussion.

17:20 13 Also, the phone line is open to Unified Command while
17:20 14 we are having those discussions, while the reports are being
17:20 15 read out about the progress being made. So certain members of
17:20 16 the Unified Command in New Orleans could hear directly from us
17:20 17 what we were doing.

17:20 18 Then at the end of every meeting, I would go around
17:20 19 and make sure everybody was complete, whether they needed any
17:20 20 more information or if there was anything else they wanted to
17:20 21 contribute. I tried to keep them short and quick because I
17:20 22 knew I had people that needed to do work.

17:20 23 Q. In addition to having the twice-daily interface meetings,
17:20 24 were there other ways in which you shared information with
17:20 25 senior members of the government, including Secretary Salazar

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1 and Secretary Chu?

2 A. Very early on in the response, Secretary Salazar set up a
3 standing call at either 7:00 or 7:30. No matter where he was
4 in the world, he wanted to have a call with us. And so I
5 would -- coming out of this interface meeting at 6:30 with my
6 team, we would huddle in another conference room and I would
7 provide the exact same briefing that we had heard at 6:30 to
8 Secretary Salazar. And in that meeting, other members --
9 whoever -- other members that represented him, Dr. McNutt or
10 Secretary Chu or the Coast Guard, senior officials would be in
11 the room because he would potentially ask questions of them or
12 myself. But every day, I had a standing call with him to
13 update him on our progress.

14 Q. In addition to updating him on your progress, would you
15 also discuss various source control options that were under
16 consideration?

17 A. Yes. Secretary Salazar always liked the high-level Gantt
18 chart or a chart that showed timelines. He always wanted to
19 know timelines, updates on timelines. So at a high level, we
20 always provided him some form of update on what was the
21 timeline, what were the next options, what were we doing.

22 Q. Did you also discuss what your strategy was or reasons for
23 your recommendations?

24 A. Yes. We would always be very connected on what the
25 strategy was, what we were recommending, how much progress we

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1 were making. Because ahead of every option we have -- we would
2 have had a deep discussion, and if we were progressing with an
3 operation or about to execute an operation, we would tell him
4 what the status of where we were on that.

5 The phone line was also open. It was Secretary
6 Salazar's phone line. Admiral Allen would call in as well and
7 listen. Secretary Chu was often on the phone. And whomever
8 Secretary Salazar wanted on the phone was on the phone on his
9 end. It was just us talking into the phone. We always knew he
10 was there. I'm not sure who else was being briefed as well.

11 Q. What was the process for authorizing source control
12 operations?

13 A. The process for authorizing a source control operation was
14 that we would prepare the recommended operation and write the
15 detailed procedures and discuss the operation. And then we
16 would recommend that to the Unified Command.

17 Q. Who had ultimate approval authority for source control
18 options?

19 A. The FOSC -- the Unified Command had the ultimate. We
20 would recommend the options; they would approve it.

21 Q. Let's change topics now. We have talked a little bit
22 about the structure and the teams you had in place. I want to
23 talk a little bit now about the approach that you took to
24 responding to the incident.

25 Were there any guiding principles that you operated

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1 under in advancing source control options?

2 A. So, very early on, we discussed and decided on three
3 guiding principles: One was that we were very intent not to
4 make the situation worse. And the other one was that we would
5 engineer everything in parallel. We could have engineered
6 things in series and done one thing, but we would start and
7 engineer everything that we could in parallel. So we would
8 start everything right then and then we would leave no stone
9 unturned as far as trying to access the industry, the
10 community, the science teams, anybody that could assist us in
11 the effort.

12 Q. I want to go back to the first principle you stated, the
13 "don't make things worse." We have heard that statement before
14 in this proceeding. As the person that was operating under
15 that principle, can you describe for the Court what does that
16 mean?

17 A. In this situation, it meant that we didn't want to make
18 it -- we didn't want to lose options to potentially kill the
19 well. We always wanted to have future options. We certainly
20 didn't want to make it worse in that it would reduce our
21 ability to potentially kill the well.

22 Q. Did you operate with that guiding principle throughout the
23 entire period that you were involved in the source control
24 options?

25 A. Yes, we did.

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1 17:25 Q. The third principle you mentioned was -- we'll talk about
2 17:25 the parallel track. I haven't forgotten it. We will just put
3 17:25 it to the side for a second.

4 17:25 On the "no stone unturned" guiding principle, as part
5 17:25 of that principle, did you reach out to the industry service
6 17:25 providers, anyone that could possibly lend a helping hand,
7 17:25 equipment, engineering talent, or otherwise?

8 17:25 A. Yes. Through the various networks and our industry
9 17:25 colleagues, we reached out and some of them reached in -- would
10 17:25 reach in and ask us if we needed anything.

11 17:25 Also, Secretary Salazar ran several sessions. One,
12 17:26 particularly, he invited me to in Washington where he invited
13 17:26 industry CEOs and executives and went around the room and
14 17:26 specifically asked them after we had given him lists of
15 17:26 equipment and concepts we were interested in. And he went
16 17:26 around the room and asked people did they have anything that
17 17:26 they could provide. It was especially around equipment,
18 17:26 drillships, equipment, flexible hoses, anything that they could
19 17:26 provide for us.

20 17:26 Q. Was this a meeting in mid-June of 2010?

21 17:26 A. Yes.

22 17:26 Q. During that meeting, were you also looking for equipment
23 17:26 that could help shut in the well, BOP equipment and the like?

24 17:26 A. We were looking for any potential equipment that would
25 17:26 help us from the industry, and he was assisting us in that

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1 effort.

2 Q. Did anybody in that meeting come forth and say they had
3 the solution for how to shut this well in within a matter of
4 weeks?

5 A. No. We had very few offers of large amounts of equipment,
6 very few offers on equipment.

7 Q. Did you come to learn why it was that you had very few
8 offers of equipment, given what you were trying to accomplish?

9 A. Well, not that many people had anything -- we were the
10 largest operator in the deepwater Gulf of Mexico, and a lot of
11 the other operators didn't have near as much equipment as we
12 had.

13 Q. We are going to talk later about equipment availability
14 with capping stacks, but in this meeting, did it include a
15 request for any capping stack equipment that might have
16 existed?

17 A. Yes, any type of equipment that would assist us in killing
18 the well.

19 Q. Now, let's move to the "parallel track" principle that you
20 told us about.

21 If we can look at D-23231A, please. This is a chart
22 titled "Source Control Options Progressed on Parallel Tracks."
23 Can you explain to the Court what this chart depicts?

24 A. So these are the major options that we were embarking on,
25 the ones that you will be familiar with mostly that we

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1 initiated almost immediately. So at the top, obviously, the
2 first thing we tried to do on April 20, 21 was to intervene on
3 the BOP, do an ROV intervention to shut the BOP, which is the
4 industry standard. And then the immediate spudding of a relief
5 well, one relief well and then a second -- permitting and
6 displaying of the second relief well.

7 As we go down, we are engineering, as I said,
8 everything immediately: Cofferdam, capping stack, Top Kill,
9 BOP-on-BOP, RITT insertion tools, Top Hat, and then what we
10 call "containment," which is collection options: How we are
11 going to collect as much hydrocarbons as we possibly can,
12 provided some of these things don't work out for us?

13 Q. There's some shading in here and then there's solid lines.
14 Just tell us briefly: What's the difference between those two?

15 A. So the shade and the hashing is the engineering time, the
16 preparation, and the dark area is the execution. So you can
17 see on cofferdam, we engineered for and we executed. That was
18 one of the first things that we executed on other than the BOP
19 intervention. You can see us move to execute different options
20 in time.

21 Q. When did you begin the relief well operations?

22 A. So we started the relief well permitting and preparation
23 the next day.

24 Q. Now, were there other source control options that were
25 being progressed at the same time that are not on this chart?

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1 17:29 A. Yes, there were numerous numbers of things that we were
2 17:29 engineering at the time that -- valves that we could
3 17:29 potentially put on top of the LMRP, strengthening devices for
4 17:29 the kink. Lots of different options were being engineered at
5 17:30 this point in time. And also, inside of each of these options,
6 17:30 you will find multiple different things being engineered, for
7 17:30 example, RITT tools, the Top Hats. We might have engineered
8 17:30 five or six RITT tools but only deployed one. Top Hats, we
9 17:30 engineered probably a numerous number of Top Hat designs; we
10 17:30 deployed one at the time.

11 17:30 Q. Why were you working on parallel tracks for these options?

12 17:30 A. Well, we had no idea what we were going to be facing in
13 17:30 the future, and we wanted as many options as possible to --
14 17:30 immediately available, if they could be, in order to be
15 17:30 executed if we needed them.

16 17:30 Q. When you say "we had no idea what we could be facing,"
17 17:30 were there unknowns associated with the condition of the
18 17:30 Macondo well following the blowout?

19 17:30 A. Well, there were multiple unknowns. We didn't understand
20 17:30 the -- how effective the kink was going to be through time. We
21 17:31 didn't understand the ratings of the flex joint, how effective
22 17:31 it was going to be over time. We didn't understand the
23 17:31 configuration inside the BOP at all. We didn't know if the
24 17:31 flow path was up the annular or up the middle or up both. And
25 17:31 we didn't know the situation of the pipe inside the BOP at the

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1 time or whether or not there had been something else
2 catastrophic had gone on below the mud line, whether or not any
3 of the casing had collapsed or some other catastrophic event
4 had occurred.

5 Q. What effect did those uncertainties have upon the decision
6 and planning?

7 A. Well, it just meant that we had to plan and move on as
8 many openings as we possibly could.

9 Q. Was the cost a consideration in any of these decisions?

10 A. No, absolutely not.

11 Q. You talked about the use of these options. You said you
12 tried to activate the BOP. Was that the first source control
13 response action?

14 A. Yes. That night.

15 Q. Tell the Court what happened in connection with trying to
16 activate the BOP, just briefly.

17 A. Well, we -- it was one of the first operations we embarked
18 on. We got a workboat from -- we were on a large operation, so
19 we were able to move a workboat over to the BOP fairly quickly
20 with ROVs. The rig was still burning at the time and was
21 moving with the current.

22 We were able to get to the BOP with the workboat and
23 the ROVs. We pulled out the -- we tried to stab in and
24 activate the BOP, and we couldn't get any pressure to build
25 when we stabbed and we were trying to activate the blind shear

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1 rams.

2 Q. Were there plumbing problems that impacted your
3 going-forward strategies?

4 A. It turns out that there were multiple leaks in the BOP,
5 and we were unable to -- and we had the wrong drawings. The
6 drawings that were provided, that we were using at the time to
7 respond, were the wrong drawings for the BOP.

8 Q. Now, there's a reference here to the relief wells. Why
9 were two relief wells spudded?

10 A. So we had initiated one relief well fairly quickly. We
11 had to move -- so we have rigs in our fleet. We were able to
12 move one rig over really quickly. We spudded a second well
13 slightly later. We decided on two relief wells because as we
14 drill down, we never know if one of the wells ends up with a
15 problem, gets stuck pipe, some type of issue. So we would have
16 actually two, two going at the same time, and have them compete
17 to a certain depth. Because you really only want one relief
18 well going all the way down. You're going to use magnetics to
19 try to find the Macondo well, and you don't want to go find the
20 other relief well.

21 So we would have another relief well that would go to
22 certain depth, and then we would take this relief well down.
23 If we needed to -- or if there were any problems on this well,
24 we had another well directly to take down right afterwards.

25 Q. Which rig was used in order to assist with the operations

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1 to drill the relief wells?

2 A. The *DDII* and the *DDIII*.

3 Q. Now, you also referenced some collection effort, and we'll
4 talk about those briefly. Describe generally what were the
5 collection efforts that began on May 13. I'm sorry.

6 Containment. I said collection. Containment.

7 A. So this is the flow back to the *Q4000*. And as we have the
8 BOP configured after Top Kill, we were able to take
9 hydrocarbons off of the choke and kill line. We have the
10 Top Hat in place. We use -- the same manifold that we were
11 pumping mud to try to kill the well in, we are using that same
12 manifold then to produce the well back to the *Q4000* and burn
13 about 8,000 barrels a day, is what we started doing on May 13.

14 Q. We'll talk about some of those operations.

15 There was reference earlier today to the fact that
16 the *Discoverer Enterprise* was being worked on as a BOP-on-BOP
17 option but then was pulled for the RITT operations.

18 Why was the *Discoverer Enterprise* pulled as part of
19 these RITT operations?

20 A. The *Discoverer Enterprise* is a very unique vessel. It's
21 one of the most unique drillships in the fleet because it has
22 the ability to store hydrocarbons on board the vessel. It has
23 storage capability to store hydrocarbons on board, which made
24 it ideal for collection efforts. So not only does it have
25 production processing equipment on board and a flare -- it's a

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1 drillship -- but it also can store hydrocarbons, which meant
2 that you didn't have to have a continuous lightering operation
3 ongoing.

4 If you try to outfit a different rig or use the
5 Q4000, you would have to not only process the hydrocarbons
6 on board your vessel, but you would have to have a lightering
7 operation pumping to another boat somewhere in order to store
8 the hydrocarbons, have a place to put the hydrocarbons.

9 So the *Enterprise* was a very unique vessel for that
10 particular operation, for any collection operation.

11 Q. Was the *Enterprise* taken in order to move it to operations
12 that would allow for collection of oil?

13 A. Yes.

14 Q. In order to avoid it hitting the Gulf?

15 A. Yes, absolutely. To mitigate the environmental issues
16 that we were facing.

17 Q. Now, let's change topics. One of the issues the Court has
18 heard a lot of testimony about, that I want to spend time
19 discussing with you, is the BOP-on-BOP operations.

20 First, describe briefly what the BOP-on-BOP option
21 is.

22 A. So BOP-on-BOP would be an operation where you would have
23 the Macondo BOP, you would take the LMRP off of the Macondo,
24 the lower marine riser package off the Macondo BOP, and then
25 land another BOP on top of that BOP.

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1 17:37 Q. When did the planning for BOP-on-BOP begin, as
2 17:37 evidenced --

3 17:37 A. April 27.

4 17:37 Q. You said "land another BOP." Would that be a BOP from a
5 17:37 different rig?

6 17:37 A. It would have to come from one of the drilling rigs, yes.

7 17:37 Q. Now, in mid-May, prior to the execution of Top Kill, was
8 17:37 any BOP ready to use in order to act as an intervention BOP?

9 17:37 A. No. We weren't ready to do BOP-on-BOP.

10 17:37 Q. Why not?

11 17:37 A. Well, there were several outstanding engineering issues
12 17:38 that were not completed in order to prepare the BOP to actually
13 17:38 be landed on the other BOP. Also, there was execution issues
14 17:38 that still had not been sorted out at the time.

15 17:38 Q. When you say "execution issues," what do you mean
16 17:38 generally?

17 17:38 A. Well, there was concern of the removal -- for me
18 17:38 particularly, the removal of the LMRP, how to actually do that
19 17:38 safely and be successful in the removal of the LMRP. And also,
20 17:38 I was concerned about the weight. We were very concerned about
21 17:38 the weight of another BOP on top of the BOP.

22 17:38 Q. We'll get into that in a little more detail.

23 17:38 Now, I asked you if the equipment was ready in
24 17:38 mid-May, prior to Top Kill. Moving forward in the timeline,
25 17:38 was the BOP-on-BOP ready at the end of May, just after the

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17:38 1 execution of Top Kill?

17:38 2 A. No. I think the indications were still that it was
17:38 3 probably going to be into June, sometime in June before the BOP
17:39 4 would be ready.

17:39 5 MS. KARIS: If we could pull up 142347N.2.8. If I
17:39 6 get through half of these numbers, that is, it will be
17:39 7 surprising.

17:39 8 If we can go down to the bottom here. I realize
17:39 9 this is so small now we can't read it. Let's see the last
17:39 10 couple. There you go. Thank you.

17:39 11 BY MS. KARIS:

17:39 12 Q. First of all, what is this document that we are looking
17:39 13 at?

17:39 14 A. So this document is an engineering -- what we call a Gantt
17:39 15 chart. There was a gentleman by the name of David Clarkson
17:39 16 that worked on the team. His job was to make sure that every
17:39 17 one of these options that were engineered, that we were looking
17:39 18 at in parallel paths -- that he would make sure and meet with
17:39 19 the teams. He usually had a standing meeting at 10:00 to 10:30
17:39 20 every morning. And it was his job to update the charts on the
17:40 21 engineering effort and the timelines. It was very important
17:40 22 for planning purposes that we knew exactly where each option
17:40 23 was and we had those options updated. This is his
17:40 24 engineering -- the engineering Gantt chart that was presented
17:40 25 right before Top Kill.

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17:40 1 Q. For the record, this is a draft dated May 27, 2010, which
17:40 2 would have been during the Top Kill operations.

17:40 3 The columns to the right, do those reflect -- what do
17:40 4 those reflect?

17:40 5 A. Those are the dates for the expected completion of
17:40 6 different options.

17:40 7 So you can see that there's still modifications
17:40 8 ongoing of the BOP. A stump test of the *DDII* BOP scheduled to
17:40 9 be completed May 28. The integration and testing with the
17:40 10 guide frame is June 4. Riser deployment is June 6.

17:40 11 These dates move depending on the progress the teams
17:41 12 make overnight, whether -- anything that they come across
17:41 13 during testing, integration. So these are the dates that were
17:41 14 being presented by the team at the time.

17:41 15 Q. Mr. Dupree, we are going to talk much more about the
17:41 16 decision to go forward with Top Kill, but there's been an
17:41 17 assertion that the BOP was ready to go before the execution of
17:41 18 Top Kill.

17:41 19 What does this Gantt chart tell you with respect to
17:41 20 whether the BOP-on-BOP option was ready to be executed prior to
17:41 21 May 26, 2010?

17:41 22 A. The BOP-on-BOP option wasn't ready.

17:41 23 The teams and the individuals that reported to me
17:41 24 weren't telling me that BOP-on-BOP was ready. They were
17:41 25 telling me -- they were providing me these types of timelines

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1 and updating me on the progress they were making in preparing
2 the BOP -- the *DDII* BOP.

3 Q. Does this Gantt chart reflect outstanding problems with
4 respect to equipment?

5 A. Yes.

6 Q. You referenced also that you had some operational
7 concerns, and you mentioned the removal of the LMRP. I would
8 like to discuss that a little further with you.

9 First describe for the Court -- let's pull up an
10 exhibit first. D-23769.1.1.

11 Before we use this document, just describe for the
12 Court generally, what was your concern about removing the LMRP,
13 which was necessary in order to execute the BOP-on-BOP option?

14 A. So the engineering and the way the teams are preparing the
15 options and bringing them forward is one thing. At the end of
16 the day, we have to address some critical risks and
17 uncertainties that go against our principles of not making it
18 worse.

19 So this is an animation that's going to -- that will
20 demonstrate the concerns we had with removing the LMRP. So
21 here you have --

22 Q. Do you want us to start running the LMRP animation?

23 A. No. Here you have the lower marine riser package. You
24 have the BOP. You have a very sophisticated connector here and
25 seal. There's drill pipe in the well. We will either activate

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1 the -- activate and open this with either the yellow pod, which
2 is on the LMRP, or we'll have to try to use the ROVs to
3 activate it.

4 Go ahead and show it.

5 Q. Let's run the animation.

6 Describe for the Court what we are seeing.

7 A. We are going to activate and release this latch. And our
8 big concern was with the 5 1/2 -- we've got heavy-weight drill
9 pipe inside, that we can't get the LMRP lifted, that we have
10 got pipe stuck inside of here. We are banging it around.

11 There's a very soft seal in here. If you bang it up, you are
12 going to ruin the seal potentially. And then, as we saw on the
13 cofferdam, the amount of hydrocarbons flowing around here would
14 cause hydrates. So the likelihood of us being able to put it
15 back down at the time would have been -- it would have been
16 highly unlikely, and also with the pipe in the way.

17 So the scenario -- and because of the very tight
18 clearances here, you're not -- it's going to end in -- the way
19 the male connector sits up here, it's going to be very
20 difficult to intervene with the hydrocarbons and the hydrates.

21 So the scenario for me is I have to be fairly certain
22 that I can get that off, because if I end up in this situation,
23 I've lost a lot of options, almost all options. If I'm sitting
24 here with this LMRP, trying to pull it off, and if I can't set
25 it down and if I have hydrocarbons flowing out the side of it,

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1 a lot of my options to cap the well are gone. Because, I mean,
2 what am I going to do. I'm going to just list it over and
3 leave it there, I guess. I can't execute on that particular --
4 I have just limited a lot of the operations, my forward
5 operations, in order to kill the well.

6 Q. There's been suggestions that LMRPs are removed from BOPs
7 all the time. Is it pretty standard to remove the LMRP from
8 the BOP?

9 A. Yes. Drilling rigs remove LMRPs from BOPs all the time,
10 but not with heavy-weight drill pipe stuck inside and
11 hydrocarbons flowing through them.

12 Q. Did the fact that the well was flowing present
13 complications in trying to remove the LMRP?

14 A. Absolutely. Because of the potential hydrate formation
15 that would occur in here and the visibility issues we would
16 have, just to see what was going on once we lifted it, if it
17 didn't come free to begin with.

18 Q. The Court just heard testimony about hydrates not being a
19 problem, prior to you. Now, was hydrates one of the concerns
20 that you had in connection with this removal?

21 A. Absolutely.

22 Q. What caused that concern?

23 A. Well, when we -- one of our first operations with the
24 cofferdam -- which is a big steel box that we are going to
25 siphon off the top of -- when we brought it and took it over

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1 the end of the riser, we immediately saw hydrate formation on
2 the steel there, and so much hydrate formation that the
3 cofferdam itself began to -- the weight started to lift -- the
4 ice formation started to lift the cofferdam. We had to move it
5 off. So much hydrate formed, it was almost like a -- it was a
6 buoyancy action that was happening on it.

7 So, yeah, hydrates were a concern everywhere then
8 because we knew then that we were definitely in the hydrate
9 window. When this hydrocarbon hit the water at 32 degrees
10 Fahrenheit and it touched steel, it was going to try to
11 hydrate. It was going to form an ice crystal.

12 Q. Last question on the removal of the LMRP. You said you
13 might ruin your seals in trying to move it. What are you
14 referencing there about ruining the seals and what effect that
15 would have?

16 A. There's a connector here, and that connector is required.
17 In order to put another BOP on and to seal it, the integrity of
18 that connector needs to be maintained. And you certainly don't
19 want it to be banged up or damaged during this removal process.

20 Q. Was that an outstanding concern of yours even at the end
21 of May, coming out of Top Hat?

22 A. Absolutely.

23 Q. You referenced earlier one of the operational concerns
24 that you had related to the weight of the second BOP. Can you
25 describe for the Court what that engineering concern was.

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1 A. So we knew from almost the first day that as the rig
2 drifted off -- when it was burning and it drifted in the
3 current, the BOP had been pulled way over and then afterwards
4 the rig sank. And the riser released and the drill pipe -- we
5 know that the BOP shot back up. But it was still listing.
6 Because there's a bull's-eye on every BOP, that has a little
7 ball on it. And that night we flew to the bull's-eye and saw
8 that the BOP was off. That's what you use to see if your BOP
9 is standing straight or not.

10 Also, there's impressions --

11 Q. I'm sorry. Let me just interrupt you one second.

12 D-23249.

13 Go ahead. You were about to reference impressions.
14 Tell the Court what we are looking at.

15 A. As we observed when we first looked at the BOP -- you can
16 see this mud impression here. It goes all the way out here,
17 from the very base. So you can see that the BOP was pulled
18 way, way over during that, and it wouldn't spring back.

19 So the concern here was the integrity of this
20 connection, the piece of pipe, and can we put more weight on
21 top of this particular -- another BOP and an LMRP and not have
22 it fall over.

23 So there was still a lot of engineering that needed
24 to be done, at least a lot of convincing of me that needed to
25 be done that you could actually install that and not threaten

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1 the integrity of this particular connector down here.

2 Q. Now, there's been a prior description of the capping stack
3 and BOP. Is there a weight difference between using the
4 capping stack as opposed to using the BOP?

5 A. Yes, absolutely. The capping stack is a much smaller and
6 lighter piece of equipment, and it actually -- because of its
7 weight, it could be placed on top of the LMRP -- or this flex
8 joint connector up here, it could be put on top of there. It
9 has more utility, a much smaller piece of equipment,
10 lighter-weight piece of equipment.

11 Q. Mr. Dupree, what role would you have had in recommending
12 the execution of BOP-on-BOP?

13 A. Well, as I said earlier, we would have -- as we would have
14 prepared -- if we were going to go forward, we would have
15 prepared the -- finalized the engineering, and then we would
16 have started multiple interactions with the government on that
17 particular option. And then we would have -- well, at least I
18 would have had to be convinced that we could mitigate these
19 issues before we went forward. And then we would make the
20 recommendation to Unified Command.

21 Q. Did you continue working on these engineering issues
22 throughout the month of May?

23 A. Yes.

24 Q. At the time that Top Kill was executed, were you satisfied
25 that all of the outstanding issues with BOP-on-BOP had been

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17:50 1 sufficiently mitigated so that you could recommend it?

17:50 2 A. No. BOP-on-BOP was not ready.

17:50 3 Q. Let's talk about Top Kill now. We can look at D-23231A.

17:51 4 MS. KARIS: Your Honor, I'm happy to proceed. I am
17:51 5 moving on to a whole other subject, so whatever the Court's
17:51 6 pleasure is.

17:51 7 THE COURT: Let's keep going for a few more minutes.

17:51 8 MS. KARIS: Very well.

17:51 9 BY MS. KARIS:

17:51 10 Q. We just talked about BOP-on-BOP, and now I want to talk
17:51 11 about one of the other issues the Court has heard a lot about,
17:51 12 and that is the issue of Top Kill.

17:51 13 Was Top Kill ready to be executed before BOP-on-BOP
17:51 14 was ready?

17:51 15 A. Yes.

17:51 16 Q. When did the planning for Top Kill begin?

17:51 17 A. The planning for Top Kill began on April 25.

17:51 18 Q. We are going to talk more about Top Kill, but can you
17:51 19 describe for the Court how Top Kill is supposed to work?

17:51 20 A. So the Top Kill is an injection of mud and particulates
17:51 21 into the well in combination with a high-rate injection of mud
17:52 22 with particulates that are intended to restrict or reduce the
17:52 23 flow up the BOP or into the BOP in order to give the mud a
17:52 24 chance to force down into the well.

17:52 25 MS. KARIS: Let's pull up D-23829A.1.5, please.

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1 BY MS. KARIS:

2 Q. Using this demonstrative and your pointer, please, can you
3 describe how Top Kill is supposed to work. Then we can run the
4 animation.

5 Go ahead.

6 A. So these are the choke and kill lines.

7 Can you stop for a second?

8 Q. Stop.

9 A. These are the choke and kill lines right here. What we
10 had done is we had taken flexible connectors and were able to
11 cut and get on top of the choke and kill lines so that we could
12 inject mud.

13 We had also rebuilt the yellow pod inside of the LMRP
14 so that we could actuate the valves down here.

15 What we're doing is -- the particulates in this
16 particular animation look like balls. We are pumping balls,
17 triangles, rubber -- there are materials that are purpose-built
18 for this particular operation sold in industry. Rope with
19 knots in it. All kinds of things that we can get into the well
20 that we think would hopefully clog or position itself up into
21 the well so that we can push the mud down the well.

22 So in the animation -- you can start the animation
23 now. The particulates are injected from the top side or the
24 manifold nearby. They are injected into the well. They are
25 intended to go up and clog. You see the carrier fluid for the

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1 particulates is mud, and the mud then gets a chance to force
2 its way down the well. As it can't go this way, it actually
3 starts -- if you pump at a higher rate, it will push down the
4 well, and eventually the weight of that mud going down the well
5 kills the well.

6 Q. So is it the case that your ultimate goal was to plug the
7 opening and then get your mud to go downhole, traveling
8 downhole and then ultimately kill the well?

9 A. We only need the plugging to occur for just a very small
10 period of time. It doesn't need to plug -- just enough time
11 for us to get the mud going down into the well and pushing
12 back.

13 Q. You told the Court how this is supposed to work. I want
14 to have you describe for the Court what BP's overall planning
15 process was in order to execute this Top Kill operation.

16 A. So we were engineering the equipment and certainly
17 preparing to get on the choke and kill lines, preparing to have
18 a manifold nearby. Because in the industry what's typically
19 done is you inject the junk right next to the well. So we
20 purpose-built a manifold with junk inside of it, different
21 options to lodge -- to inject the junk inside. And also, we
22 had the Q4000 sitting by where we were going to pump the mud
23 from to go into the well.

24 So we were engineering the options and the operation.
25 And then there were multiple meetings with the Unified Command,

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1 the science teams, Department of Interior to discuss this
2 particular option.

3 Q. Was a peer assist performed in connection with the
4 Top Kill operation?

5 A. Yes. On many of the different options, before we executed
6 them, there were peer assists -- there was a peer assist
7 performed on Top Kill, inviting academic experts, industry
8 experts, and the government to participate.

9 Q. What is the purpose of a peer assist?

10 A. The purpose of peer assist is to get external parties to
11 look at the operation and what you're about to do and provide
12 you feedback, identify risks and concerns, and also to
13 potentially point out something that you might have missed.

14 Q. The peer assist that took place for the Top Kill
15 operation, did it include members of the industry as well as
16 members from BP?

17 A. Yes. And academia.

18 Q. Were risks identified as part of that peer-review process?

19 A. Yes. My understanding is that they went through the
20 process, identified risks, spoke and talked about the risks.

21 Q. After those risks were identified for Top Kill, did you
22 participate in a meeting with government officials in which you
23 communicated that information to those government officials?

24 A. Yes.

25 MS. KARIS: If we can now look at 142819N.1, please.

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1 **BY MS. KARIS:**

2 **Q.** This is the cover from that presentation dated May 16,
3 2010.

4 Can you tell the Court, first of all, what was the
5 purpose of this presentation?

6 **A.** So we were going to discuss Dynamic and Momentum Kill as
7 well as discuss other options that were ongoing for killing the
8 well.

9 **Q.** Do you recall who some of the members from the government
10 were who participated in this presentation?

11 **A.** It was Secretary Salazar, Secretary Chu, Admiral Allen,
12 Tom Hunter. From the Coast Guard it was Captain Little,
13 Commander Brannon, and I think Commander Shepherd was still
14 there.

15 **Q.** So some folks from various government agencies, including
16 members of the Federal Science Team?

17 **A.** Yes.

18 **MS. KARIS:** Now if we can look at 14281N.11.

19 **BY MS. KARIS:**

20 **Q.** There's a slide here titled "Option Summary." Can you
21 tell us what you discussed with those individuals from the
22 government at this May 16 meeting in connection with various
23 options.

24 **A.** So we discussed Dynamic and Momentum Kill, and we also
25 have the execution issues and the risks. We discussed

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1 BOP-on-BOP. We discussed Dynamic and Momentum Kill with
2 Junk Shot, the combination of the two, and we also discussed
3 the progression of a valve on top of the LMRP to try to shut in
4 the well.

5 Q. You mentioned that you discussed BOP-on-BOP at this
6 presentation. In the middle column there it states "Execution
7 Issues." Are those some of the same engineering concerns that
8 remained outstanding as of mid-May with respect to the
9 BOP-on-BOP option?

10 A. Yeah, these are the same concerns that I described and
11 testified just a little earlier: How do we remove the LMRP?
12 What's going on with the hydrates? Will the hydrates cause a
13 problem?

14 If there's drill pipe in there, it could be very,
15 very difficult to pull that off, pull it off smoothly and
16 cleanly if the hydrate -- if the drill pipe is stuck.

17 Q. Now, next to the BOP-on-BOP, just going back for a minute,
18 there's a reference to a risk of breach at the 18-inch.

19 Can you tell the Court what that concern is.

20 A. So on an option like the BOP-on-BOP where you just shut
21 the well in at the surface, as I stated -- as I testified
22 earlier, there were still issues and unknowns down in the well,
23 particularly the status of the rupture disks in the well, in
24 the 16-inch.

25 The most vulnerable area for hydrocarbons or mud to

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17:59 1 escape was at the bottom of the 18-inch shoe. That was the
17:59 2 most -- if an area was going to break open and if hydrocarbons
18:00 3 or mud were going to leave, it would be at that 18-inch shoe.

18:00 4 MS. KARIS: Pull up 142819N.8, please.

18:00 5 BY MS. KARIS:

18:00 6 Q. Is this one of the slides that was presented at that
18:00 7 meeting that you referenced with government officials?

18:00 8 A. Yes. This slide describes the issue in a simple way. You
18:00 9 have the reservoir down at the base. We have the oil coming
18:00 10 up. If you shut in immediately at the surface and if you don't
18:00 11 have integrity of your rupture disks, this 18-inch shoe at
18:00 12 about 8,000, 8,900 feet below the mud line could be
18:00 13 compromised, meaning that there will be enough pressure --
18:00 14 because when we drill the well, we test what the breakdown
18:00 15 pressure is right there. On every well we drill what's called
18:00 16 leakoff tests. We test what the breakdown pressure would be
18:00 17 there.

18:00 18 And we know, based on the pressures we measured here,
18:00 19 that if you just shut in here, you have a risk that this oil
18:01 20 will crack that open, will reopen the shoe, and then that oil
18:01 21 will start running out underneath the seafloor at about 8,000
18:01 22 feet. But it will eventually find its way into different sands
18:01 23 and sand stringers and eventually will show up at the seafloor.
18:01 24 There's an actual calculation here assuming that it would take
18:01 25 about 30,000 barrels of injection potentially to reach the

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18:01 1 seafloor.

18:01 2 Q. There's the relief well here. What impact might this risk
18:01 3 present on the relief well operations?

18:01 4 A. So obviously we are very concerned about that because, you
18:01 5 know, the relief well is our ultimate solution. It's our
18:01 6 fall-backup plan. It's going to take a while. But if
18:01 7 hydrocarbons end up pressurizing these sands and start moving
18:01 8 around below the mud lines, these gentlemen over here on the
18:02 9 rig drilling this relief well could unexpectedly hit some high
18:02 10 pressure hydrocarbon-bearing sands they didn't think were going
18:02 11 to be there, and this well is only 2800 feet from the main
18:02 12 Macondo well. It would be a very dangerous situation for them.
18:02 13 It also makes it very difficult to set pipe and cement pipe
18:02 14 once you encounter a big change in pressure in the sands. So
18:02 15 it would potentially compromise the relief well progress if
18:02 16 they have these -- if we charge these sands with oil below.

18:02 17 Q. Now, we are going to get back to the well integrity
18:02 18 concerns coming out of Top Kill, but when we reference concern
18:02 19 over a breach or well integrity concerns over rupture disc
18:02 20 breach, is this part of the concern that you are describing?

18:02 21 A. Yes, absolutely.

18:02 22 THE COURT: Ms. Karis, let's call it a day right
18:02 23 here.

18:02 24 MS. KARIS: Thank you, Your Honor.

18:02 25 THE COURT: It's 6:00. We will recess until

1 8:00 a.m. tomorrow. You're going to let us know this evening.

2 **MR. BROCK:** Yes, sir, we will go back and probably by
3 7:00, 7:15.

4 **THE COURT:** All right. Have a good evening.
5 (Proceedings adjourned.)

6 * * *

7 **CERTIFICATE**

8 I, Toni Doyle Tusa, CCR, FCRR, Official Court
9 Reporter for the United States District Court, Eastern District
10 of Louisiana, do hereby certify that the foregoing is a true
11 and correct transcript, to the best of my ability and
12 understanding, from the record of the proceedings in the
13 above-entitled matter.

14
15
16 *s/ Toni Doyle Tusa*
17 Toni Doyle Tusa, CCR, FCRR
18 Official Court Reporter
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