

# Deposition Testimony of:

## **Brad Billon**

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Page 347:13 to 347:18

00347:13 Q. I'm going to hand you initially  
14 what's been previously marked as  
15 Exhibit 2801. I believe you looked at this  
16 yesterday with Mr. Bruno. It's a copy of the  
17 30(b)(6) deposition notice to M-I, LLC.  
18 A. Right.

Page 348:01 to 348:10

00348:01 On Topic 1, dealing with  
02 contracts, drilling contract service  
03 agreements, are you aware of any contract  
04 between M-I and Halliburton relating to the  
05 provision of services?  
06 A. I do not.  
07 Q. Are you aware of any contract  
08 with Halliburton and M-I related to the  
09 provision of goods?  
10 A. Not to my knowledge.

Page 354:12 to 354:18

00354:12 Q. And we'll get into it a little  
13 bit more momentarily about the actual  
14 decision-making process and how that went  
15 about. But as M-I and BP were deciding,  
16 recommending, or trying to determine whether  
17 to use this as a spacer, was Halliburton  
18 involved in any of those discussions?

Page 354:20 to 354:20

00354:20 THE WITNESS: Not that I'm aware of.

Page 355:05 to 355:11

00355:05 Q. In either your conversations  
06 with Mr. Maxie or Mr. Lindner or your review  
07 of those e-mails, did you see anything  
08 suggesting that Halliburton was involved in  
09 the decision to use the LCM spacer?  
10 A. I don't recall seeing anything  
11 like that.

Page 359:13 to 359:22

00359:13 Q. So your understanding is that  
14 after initially typing up the displacement  
15 procedure, BP informed Mr. Lindner that they  
16 were going to do a negative test?

17 A. Yes.  
18 Q. After being informed of that,  
19 Mr. Lindner typed up a new displacement  
20 procedure in which the negative test were  
21 prepared?  
22 A. That's correct.

Page 362:01 to 362:05

00362:01 Q. Did you discuss that with  
02 Mr. Lindner in preparation for your  
03 deposition?  
04 A. I did not discuss whether or not  
05 he led the discussion around the spacer, no.

Page 362:07 to 362:10

00362:07 Q. Did you and he discuss the  
08 meeting held on the Deepwater Horizon on  
09 April 20th in which the displacement  
10 procedure was discussed?

Page 362:12 to 362:17

00362:12 THE WITNESS: We did not discuss the  
13 actual meeting. He told me that the meeting  
14 occurred.  
15 BY MR. HARTLEY:  
16 Q. Did he convey any details about  
17 what was discussed in that meeting?

Page 362:19 to 363:16

00362:19 THE WITNESS: They discussed -- you  
20 know, he presented the -- well, let's talk  
21 about -- let me back up one minute. Let's  
22 talk about -- which meeting are you talking  
23 about? We're talking about two meetings,  
24 right? The meeting where he was informed  
25 they were going to change the procedure, and  
00363:01 then there was a meeting where the rig crew  
02 was there.  
03 BY MR. HARTLEY:  
04 Q. Or certain members of the rig  
05 crew?  
06 A. Right. Right.  
07 Q. So there's two meetings. The  
08 first, as I understand it, is, BP well site  
09 leader and Mr. Lindner alone?  
10 A. Or -- I don't know if they were  
11 alone, but it was between Leo and the well  
12 site leader, yes.  
13 Q. And in that meeting, it was

14 conveyed to Mr. Lindner that a negative test  
15 would be run?  
16 A. Right.

Page 363:23 to 364:02

00363:23 Q. After that meeting, then there  
24 was a larger meeting with some members of the  
25 rig crew to discuss the upcoming operations,  
00364:01 and primarily the displacement procedure?  
02 A. Right.

Page 364:05 to 364:11

00364:05 Q. I'm going to hand you what has  
06 been previously marked as Exhibit 967. This  
07 is the displacement procedure that Mr. Lindner  
08 typed up after being informed that BP  
09 wanted -- was going to run a negative test;  
10 is that right?  
11 A. It looks to be, yes.

Page 366:19 to 367:25

00366:19 Q. And I'm wondering why -- are you  
20 suggesting Mr. Lindner didn't prepare the  
21 procedure, he got it from somebody else, and  
22 he just merely was transcribing it, or did he  
23 actually prepare this, solicit comments from  
24 others? I'm wondering about the genesis of  
25 it.

00367:01 A. Okay. I'll try to give you  
02 what -- you know, what I understand.

03 Q. Your understanding.

04 A. My understanding is that yes, he  
05 is -- he prepares a draft, and he vets it out  
06 with all of the parties involved, you know,  
07 which I'm not sure who all he talked to. And  
08 then, of course, presents it to BP. They  
09 look at it, they that finalize it, and that's  
10 what they go with, and it becomes, you know,  
11 BP's procedure.

12 Q. And I think you mentioned that  
13 they start from some sort of form? Did I  
14 hear that right yesterday? That's why it's  
15 on the M-I letterhead? It starts with a  
16 form, and then they go from there?

17 A. I don't believe I called it a  
18 form. This is just basically a Word  
19 document. You know, it's a -- I mean, it's a  
20 template. I think they probably have --

21 Q. "Template" may be what I --

22 A. Yeah, they probably have done

23 these before, you know, and it's just a good  
24 way to communicate, you know, what they're  
25 actually going to do.

Page 368:06 to 369:06

00368:06 Q. On the second step, towards the  
07 top of the displacement procedure, it says,  
08 the first sentence, "Remember it's very  
09 important that we must avoid trapping SBM in  
10 pits, pumps, lines and hole." Did I read  
11 that correctly?  
12 A. Yes.  
13 Q. Do you have an understanding of  
14 why it's important not to have SBMN in the  
15 pits, pumps, lines, and holes?  
16 A. Well, you want -- you want to  
17 clean all of those lines, you know, pits,  
18 pumps, and, you know, everything out. That's  
19 what we're trying to do. And it's the  
20 prudent thing to flush them out, you know.  
21 Q. Is that a general procedure on  
22 making sure those aspects are clean, or is it  
23 something unique to running it with the LCM  
24 pill?  
25 A. No. This is just -- this  
00369:01 would -- this would be in every displacement  
02 procedure, I would think.  
03 Q. So wanting to keep SBM away, it  
04 has nothing to do with potential  
05 contamination of the LCM?  
06 A. Not at all.

Page 369:24 to 371:23

00369:24 Q. Towards the bottom of  
25 Exhibit 967, under the displacement aspect of  
00370:01 this Procedure, No. 8 reads, in part,  
02 "Compliance engineer will take a sample for  
03 static sheen test and ROC and shut down  
04 pumps." Did I read that correctly?  
05 A. Yes.  
06 Q. Is the compliance engineer  
07 referred there -- to there Mr. Lindner?  
08 A. No. That was Greg Meche.  
09 Q. So during the sheen test,  
10 Mr. Meche will take a sample and actually  
11 conduct the test?  
12 A. Yes.  
13 Q. Do you know whether that  
14 occurred on April 20th?  
15 A. From what I was told, it did.  
16 Q. And then after conducting that  
17 sheen test, Mr. Meche advised the rig that

18 there was a pass or successful sheen test?  
 19 A. Yes.  
 20 Q. The last line -- sentence of  
 21 Step 8 says, "Switch to overboard discharge."  
 22 Did I read that correctly?  
 23 A. Yes.  
 24 Q. Was it M-I's proposal to switch  
 25 to overboard discharge, or was this  
 00371:01 something -- some input received by another  
 02 company?  
 03 A. I wouldn't know. It certainly  
 04 wouldn't be our call. I mean, you know. . .  
 05 Q. Which was my question. Do you  
 06 know why it was in this displacement  
 07 procedure to switch to overboard discharge at  
 08 that point?  
 09 A. Well, that's -- that was the  
 10 purpose. You weren't going to catch the  
 11 spacer, you were going to dispose of the  
 12 spacer overboard, and the remaining seawater,  
 13 you know.  
 14 Q. Dump it into the Gulf?  
 15 A. Into the Gulf, yes.  
 16 Q. Do you know whether it's  
 17 feasible to run the returns through a pit and  
 18 then overboard?  
 19 A. I would think that it is.  
 20 Q. Do you know why the decision was  
 21 made to divert directly overboard rather than  
 22 running through the pits?  
 23 A. No, I don't.

Page 372:12 to 372:16

00372:12 Q. Do you know whether M-I was  
 13 involved in the decision to divert or  
 14 discharge directly overboard rather than  
 15 going through the pits?  
 16 A. I don't believe we were.

Page 373:23 to 374:21

00373:23 Q. Do you know whether tanks were  
 24 being cleaned simultaneous with the  
 25 displacement procedure?  
 00374:01 A. I have heard that they were  
 02 cleaning some tanks, but that's the -- that's  
 03 the extent of my knowledge.  
 04 Q. Okay. Was M-I involved at all  
 05 in the decision to clean pits simultaneous  
 06 with the mud -- with the mud displacement  
 07 procedure?  
 08 A. Not that I'm aware of.  
 09 Q. Was M-I involved at all in the

10 discussions with those on the rig cleaning  
11 the pits?  
12 A. I wouldn't know.  
13 Q. Is that a role M-I would  
14 typically serve, having discussions with the  
15 contractor cleaning the pits?  
16 A. That's not in the scope of our  
17 work.  
18 Q. Do you know whether it's common  
19 during displacement procedures like reflected  
20 in Exhibit 967 to have simultaneous movement  
21 of the fluids on the rig?

Page 374:23 to 374:23

00374:23 THE WITNESS: I wouldn't know.

Page 374:25 to 375:02

00374:25 Q. Is that something that M-I would  
00375:01 typically recommend in putting together a  
02 displacement procedure like 967?

Page 375:04 to 375:06

00375:04 THE WITNESS: That's not something that  
05 we would recommend. That's out of the --  
06 that's not our operation.

Page 375:08 to 375:20

00375:08 Q. Other than the displacement  
09 procedure on the Deepwater Horizon on  
10 April 20th, M-I had been involved in  
11 preparing/typing up other displacement  
12 procedures for other rigs; is that fair?  
13 MS. SCOFIELD: Object to the form.  
14 THE WITNESS: That's fair.  
15 BY MR. HARTLEY:  
16 Q. That's within the scope of  
17 services provided under the BP contract and  
18 contract with other operators, like Shell?  
19 MS. SCOFIELD: Object to the form.  
20 THE WITNESS: I would think so, yeah.

Page 375:24 to 376:02

00375:24 Q. Do you know whether it is common  
25 or uncommon for M-I to recommend cleaning of  
00376:01 the pits while there's simultaneous movement  
02 of fluids during a displacement procedure?

Page 376:04 to 376:06

00376:04 THE WITNESS: Like I said, that's  
05 not -- that's not in the scope of our work,  
06 so I would say no.

Page 376:08 to 376:15

00376:08 Q. So it is, though, within the  
09 scope of your work to prepare the  
10 displacement procedure or type it up, in  
11 collaboration with the operator?  
12 MS. SCOFIELD: Object to the form.  
13 THE WITNESS: I would say that in this  
14 case, we did do that, yes. In collaboration  
15 with the operator, yes.

Page 377:13 to 378:21

00377:13 Q. Do you know whether M-I was  
14 involved at all in the decision to, you know,  
15 empty trip tanks or wash certain pits at  
16 certain times?  
17 A. I don't know.  
18 Q. That's beyond the scope of your  
19 services provided to BP on this rig?  
20 A. Yes.  
21 Q. I want to talk for a few minutes  
22 about the LCM spacer. We talked a lot about  
23 it yesterday. You did. I sat and listened.  
24 And I understand it's a combination of  
25 Form-a-Set AK and Form-a-Squeeze. Is that  
00378:01 right?  
02 A. That's correct.  
03 Q. And those were then combined and  
04 used as a spacer?  
05 A. Well, they were combined, and  
06 then some adjustments were made to the  
07 rheological properties of the viscosity, if  
08 you will, to make them suitable for a spacer.  
09 Q. And what adjustments were made  
10 other than the addition of barite?  
11 A. Duo-Vis, the xanthan gum  
12 polymer, was added to increase the viscosity  
13 of the spacer to make it suitable.  
14 Q. Okay. And how does adding the  
15 Duo-Vis make it suitable as a spacer?  
16 A. It increased the viscosity. It  
17 thickened it, you know.  
18 Q. Other than thickening it, did it  
19 change its properties, characteristics in a  
20 way to make it suitable for a spacer?  
21 A. No.



Page 379:22 to 381:11

00379:22 Q. All right. Had M-I ever used  
23 Form-A-Set AK as a spacer before?  
24 A. Not that I'm aware of.  
25 Q. Has M-I ever used Form-A-Squeeze  
00380:01 as a spacer before?  
02 A. Not that I'm aware of.  
03 Q. Has M-I ever used the  
04 combination Form-A-Set AK and Form-A-Squeeze  
05 as a spacer before?  
06 A. No.  
07 Q. Has M-I ever used LCM spacer, as  
08 we understand that term, as a spacer before?  
09 A. Not that I'm aware of.  
10 Q. Has M-I ever run any test on the  
11 suitability of the LCM spacer as a spacer?  
12 MS. SCOFIELD: Object to the form.  
13 THE WITNESS: I -- what do you mean by  
14 "suitability"?  
15 BY MR. HARTLEY:  
16 Q. In the term you used it when you  
17 referred to the addition of certain -- making  
18 certain adjustments to ensure the suitability  
19 as the spacer.  
20 A. Okay. Leo Lindner actually took  
21 a sample of each pit, combined them into a  
22 container, stirred them up, mixed them up in  
23 the, you know, ratios that they have been,  
24 you know, put together, and checked the  
25 rheology, and determined that it was thin,  
00381:01 you know, it was a little -- well, not as  
02 thick as he would like it. So that's when he  
03 made the adjustment, you know, with the  
04 Duo-Vis to raise the viscosity, to make it  
05 more suitable or just like any other spacer.  
06 BY MR. HARTLEY:  
07 Q. Did he do that on April 19th?  
08 A. I'm not sure of the day. It  
09 was -- it was certainly prior to.  
10 Q. Was it a day or two before the  
11 LCM spacer was actually used?

Page 381:13 to 381:20

00381:13 THE WITNESS: I'm not sure on -- on the  
14 date.  
15 BY MR. HARTLEY:  
16 Q. Okay. So if I understand, then,  
17 the only test M-I has conducted on the  
18 suitability of LCM spacer as a spacer was the  
19 test you just discussed of Mr. Lindner?  
20 A. That's correct.

Page 381:22 to 383:07

00381:22 BY MR. HARTLEY:

23 Q. Other than adding a  
24 proportionate aspect of each LCM pill, what  
25 did he do to evaluate its suitability as a

00382:01 spacer?

02 A. As I said, he checked rheology  
03 of the pill, or the spacer, as you call it.

04 Q. How did he check the rheology?

05 A. With a FANN 35 rheometer.

06 Q. And what were the results of  
07 that test?

08 A. I don't have the exact results  
09 in front of me, but from what I understand,  
10 from what he told me, the results, he felt,  
11 were -- it was a little bit, you know, thin,  
12 I guess, if you will, and needed to be  
13 thickened up.

14 Q. How did he determine the  
15 quantity Duo-Vis and/or barite to add to make  
16 it suitable and viscous for use as a spacer?

17 A. I think -- I didn't ask  
18 Mr. Lindner exactly, you know, how that took  
19 place, but I would -- I would assume he added  
20 the Duo-Vis, you know, some amount at a time  
21 and observed the viscosity, you know.

22 Q. How did he determine at which  
23 point it was viscous enough to use as a  
24 spacer?

25 A. I couldn't tell you. I don't  
00383:01 know.

02 Q. Do you know whether he tested  
03 the rheological properties after adding the  
04 barite and Duo-Vis?

05 A. You know, I'm trying to recall.  
06 He may have. I'm just -- I just can't  
07 recall.

Page 385:11 to 385:13

00385:11 Q. Okay. Are you aware of any test  
12 conducted by M-I or others as to the  
13 suitability of Form-A-Set AK as a spacer?

Page 385:15 to 385:25

00385:15 BY MR. HARTLEY:

16 Q. Setting aside Mr. Lindner's  
17 test.

18 A. Before the incident or after  
19 incident?

20 Q. Let's start before.

21 A. No.  
 22 Q. Similarly, before the incident,  
 23 are you aware of any test regarding the  
 24 suitability of Form-A-Squeeze as a spacer?  
 25 A. No.

Page 386:02 to 387:10

00386:02 BY MR. HARTLEY:

03 Q. Other than the test Mr. Lindner  
 04 conducted as to the viscosity and the  
 05 prebiological properties, are you aware of  
 06 any test prior to April 20th as to the  
 07 suitability of the LCM spacer for use a  
 08 spacer?  
 09 A. No.  
 10 Q. Turning our attention to  
 11 post-April 20th, are you aware of any test  
 12 regarding the suitability of Form-A-Set AK as  
 13 a spacer?  
 14 A. No.  
 15 Q. Are you aware of any test  
 16 post-April 20th, 2010, regarding the  
 17 suitability of Form-A-Squeeze as a spacer?  
 18 A. No.  
 19 Q. Are you aware of any test after  
 20 April 20th, 2010, regarding the suitability  
 21 of the LCM spacer for use as a spacer?  
 22 A. Yes.  
 23 Q. What tests are those?  
 24 A. I think that's the BP report  
 25 where we provided them with the, you know,  
 00387:01 materials and samples in and around -- I  
 02 think it was May -- May 11th or so.  
 03 Q. Right. And we saw some of that  
 04 material yesterday?  
 05 A. Yes.  
 06 Q. Other than that test, are you  
 07 aware of any other testing conducted by M-I  
 08 or others as to the suitability of the LCM  
 09 spacer for use as a spacer?  
 10 A. No, I'm not.

Page 387:20 to 388:06

00387:20 Q. Okay. Did M-I conduct any  
 21 compatibility test of the LCM spacer with any  
 22 other fluids downhole, whether it be water,  
 23 brine, SBM?  
 24 A. Not the LCM spacer.  
 25 Q. Okay. Prior to pumping the LCM  
 00388:01 spacer on April 20th, then, there were no  
 02 tests -- no compatibility tests regarding the  
 03 LCM spacer with other fluids that maybe met

04 downhole?  
05 MS. SCOFIELD: Object to the form.  
06 THE WITNESS: That's correct.

Page 388:24 to 389:11

00388:24 Q. Would the LCM spacer coming into  
25 contact with synthetic-based mud contaminate  
00389:01 the spacer, contaminate the LCM spacer?  
02 A. It would -- it would --  
03 certainly there would be a mixture, yeah. It  
04 would contaminate, yes.  
05 Q. Would the meeting of the LCM  
06 spacer with synthetic-based mud change the  
07 properties expected of the LCM spacer?  
08 A. Of that -- of that interface,  
09 you know, where they meet, I would say yes.  
10 Q. Would it risk accelerating the  
11 setup time associated with the LCM spacer?

Page 389:13 to 389:13

00389:13 THE WITNESS: No.

Page 389:15 to 389:18

00389:15 Q. Would it delay the setup time of  
16 the LCM spacer?  
17 A. No. In this case, the  
18 cross-linking material was not in the spacer.

Page 390:02 to 390:17

00390:02 Q. What effect, if any, would the  
03 synthetic-based mud have on the LCM spacer  
04 were they to come into contact?  
05 A. It would create that interface  
06 that I talked about. And what that interface  
07 looks like, unless we -- you know, unless we  
08 did some actual testing, I couldn't, you  
09 know, be precise -- I couldn't precisely tell  
10 you what the effect would be.  
11 Q. Right. There aren't any tests  
12 on that?  
13 A. Not that -- not that M-I SWACO  
14 has done.  
15 Q. Would the LCM spacer similarly  
16 be affected by coming into contact with  
17 water?

Page 390:19 to 390:19

00390:19 THE WITNESS: I don't know.

Page 390:21 to 391:21

00390:21 Q. I think in response to some of  
 22 Mr. Leopold's questions yesterday, there was  
 23 discussion on certain transfers or settling  
 24 because the LCM spacer was heavy. Do you  
 25 recall that?

00391:01 A. Yes.

02 Q. Would that affect the  
 03 suitability of the LCM spacer for use as a  
 04 spacer?

05 A. No, because it's just like any  
 06 other spacer. You know, any other spacer is  
 07 going to be heavy with barite and viscous.

08 Q. Would coming into contact with  
 09 synthetic-based mud and/or water change the  
 10 viscosity of the LCM spacer?

11 A. In that particular interface,  
 12 where they come into contact. But to the --  
 13 to what extent, I couldn't say.

14 Q. We will need testing on that?

15 A. Yes.

16 Q. Do you know whether that  
 17 contamination, so to speak, with either water  
 18 or synthetic-based mud would change the  
 19 viscosity to the extent that it would no  
 20 longer make the LCM spacer suitable as a  
 21 spacer?

Page 391:23 to 392:04

00391:23 THE WITNESS: I would just be  
 24 speculating. Like you say, we will have to  
 25 do some testing on that.

00392:01 BY MR. HARTLEY:

02 Q. Has M-I done any testing on  
 03 these issues since April 20th?

04 A. No, they have not.

Page 392:06 to 392:13

00392:06 BY MR. HARTLEY:

07 Q. Has M-I utilized an LCM spacer  
 08 as a spacer since April 20th?

09 A. I don't believe we have.

10 Q. I want to talk for a minute  
 11 about the decision to use the LCM spacer as a  
 12 spacer. Did M-I recommend to BP that it be  
 13 used as a spacer?

Page 392:15 to 393:12

00392:15 THE WITNESS: M-I SWACO, or some  
16 employees of M-I SWACO, probably suggested to  
17 BP that it was an option, a possibility.  
18 And. . .  
19 BY MR. HARTLEY:  
20 Q. Now, do you know why they  
21 initially made that suggestion?  
22 A. According to Doyle Maxie -- and  
23 I've asked him that question, and M-I made  
24 that suggestion because it certainly -- just  
25 -- it was to reuse it in some form or  
00393:01 fashion, you know. So. . .  
02 Q. Why was there a desire to reuse  
03 it?  
04 A. I think to reuse it in some way  
05 where we wouldn't have to -- well, dispose or  
06 just throw it away, you know. It's worth  
07 something, you know.  
08 Q. So the option, then, is between  
09 disposing of it as either industrial or  
10 hazardous waste or running it downhole and  
11 dumping it into the ocean? Are those the two  
12 options?

Page 393:14 to 393:16

00393:14 BY MR. HARTLEY:  
15 Q. Once those LCM pills were in  
16 Tanks 3 and 5?

Page 393:18 to 394:13

00393:18 THE WITNESS: If you couldn't use them  
19 on another well or a -- you know, another  
20 event, you know, or keep them in -- you know,  
21 keep them there.  
22 BY MR. HARTLEY:  
23 Q. They couldn't be used on a  
24 subsequent well, could they?  
25 A. Possible.  
00394:01 Q. Wouldn't the bacterial  
02 degradation prevent their use as LCM pills in  
03 the future?  
04 A. That's why I said possibly.  
05 Just depend -- it depends upon time. If it  
06 would have been days after, you know, or  
07 something like that, possibly. But --  
08 Q. When these discussions were  
09 being held between M-I and BP as to the  
10 potential use as a spacer, it wasn't going to  
11 be matter of days before getting to the next  
12 well potentially using it, was it?  
13 A. I don't believe so.

Page 394:18 to 394:21

00394:18 Q. M-I understood at the time that  
19 those LCM pills that were built would not be  
20 used as LCM pills on a future well, didn't  
21 it?

Page 394:23 to 395:10

00394:23 THE WITNESS: I believe they did, yes.  
24 BY MR. HARTLEY:  
25 Q. So recognizing that those pills  
00395:01 would not be used in a future well, what  
02 options were left with respect to those pills  
03 other than disposal as either hazardous or  
04 industrial waste or dumping them in the Gulf  
05 if you run them downhole?  
06 A. I think those were the two  
07 options.  
08 Q. So the suggestion was made to  
09 use it as a spacer, to run it downhole, and  
10 then dump it into the Gulf? Is that fair?

Page 395:12 to 395:19

00395:12 THE WITNESS: Yes.  
13 BY MR. HARTLEY:  
14 Q. Well, what I'm trying to wrap my  
15 head around is the phrase "beneficial reuse."  
16 I've heard that as an explanation, and I'm  
17 trying to figure out how is it there a  
18 beneficial reuse if the end result is dumping  
19 it in the Gulf?

Page 395:21 to 397:21

00395:21 BY MR. HARTLEY:  
22 Q. Is it because it's being used as  
23 a spacer?  
24 A. Well, I think you have to  
25 consider that it would have to be taken  
00396:01 ashore and handled by people -- you know,  
02 tanks and trucks and, you know, what have  
03 you, and disposed of in a -- some sort of  
04 landfill or injection well or -- I don't  
05 know. I'm not familiar with all of that  
06 stuff, but. . .  
07 Q. Do you know whether any of those  
08 arrangements had been made for the logistics  
09 of getting those LCM pills to shore to  
10 dispose of properly?  
11 A. I don't know.

12 Q. Do you know how long it would  
 13 take for that process to occur?  
 14 A. I don't know.  
 15 Q. Is it in the order of a week or  
 16 two?  
 17 A. I don't know. We -- typically,  
 18 you know, BP is the generator of the waste,  
 19 of course, and we are not, so we don't  
 20 typically -- we're not involved in disposing  
 21 of the waste.  
 22 Q. Once, then, the material is  
 23 handed off to BP, it's their waste, and they  
 24 deal with the logistics of getting it off?  
 25 A. That's correct.  
 00397:01 Q. Is M-I typically involved in  
 02 making those logistical arrangements or  
 03 suggesting how that LCM material ought to be  
 04 dis- -- ought to be disposed of?  
 05 A. No.  
 06 Q. Do you know how much it would  
 07 cost to dispose of the material properly?  
 08 A. I don't -- I don't know.  
 09 Q. Do you know how much it would  
 10 cost to construct a spacer for use on the  
 11 Macondo Well rather than using the LCM in  
 12 Pits 3 and 5?  
 13 A. I could give you a ballpark  
 14 number, if you would like.  
 15 Q. What would that be?  
 16 A. I would say somewhere 8- to  
 17 \$10,000.  
 18 Q. So not an expensive -- I think  
 19 you mentioned yesterday it wasn't expensive.  
 20 A. Right. And I -- again, that's  
 21 just a -- you know, give or take, you know.

Page 398:07 to 398:09

00398:07 As M-I made that suggestion to  
 08 BP to use the LCM as a spacer, what was the  
 09 benefit in M-I's opinion?

Page 398:11 to 399:20

00398:11 THE WITNESS: Reuse.  
 12 BY MR. HARTLEY:  
 13 Q. What do you mean by "reuse"?  
 14 A. Well, to actually use it in the  
 15 well, you know.  
 16 Q. As opposed to constructing a  
 17 spacer separate and apart from the LCM?  
 18 A. Yes.  
 19 Q. Then it seems to me, and correct  
 20 me if I'm wrong, that really the point in



21 using the LCM spacer as a spacer was to save  
 22 time and money. Would that be a fair  
 23 characterization?  
 24 MS. SCOFIELD: Object to the form.  
 25 MR. HAYCRAFT: Object to the form.  
 00399:01 THE WITNESS: I don't know if it's fair  
 02 or not, but it's -- Im sure you would save  
 03 some time and you would save some money.  
 04 BY MR. HARTLEY:  
 05 Q. Do you know whether there were  
 06 any operational decisions that led to the use  
 07 of the LCM spacer as a spacer?  
 08 A. I don't know.  
 09 Q. Were there any operational  
 10 benefits to using it?  
 11 MS. SCOFIELD: Object to the form.  
 12 THE WITNESS: Again, it's not our  
 13 operation, so I wouldn't know.  
 14 BY MR. HARTLEY:  
 15 Q. Being familiar with the  
 16 Form-A-Set AK and Form-A-Squeeze, are you  
 17 aware of any operational benefit to using  
 18 those as a spacer?  
 19 MS. SCOFIELD: Objection to form.  
 20 THE WITNESS: No.

Page 399:22 to 400:01

00399:22 Q. Are you aware of any operational  
 23 detriment to building a typical spacer rather  
 24 than using the LCM spacer?  
 25 MS. SCOFIELD: Object to the form.  
 00400:01 THE WITNESS: No.

Page 400:10 to 400:14

00400:10 Q. Are you aware of any benefit to  
 11 using the LCM spacer other than saving time  
 12 and saving money?  
 13 MS. SCOFIELD: Object to the form.  
 14 THE WITNESS: I don't know.

Page 401:12 to 402:22

00401:12 Q. I was asking about the bases for  
 13 utilizing the LCM spacer as a spacer, whether  
 14 there were any operational benefits that were  
 15 the basis for that decision. I believe you  
 16 said that you did not know.  
 17 A. No, I didn't know. Okay.  
 18 Q. Okay.  
 19 A. I just wanted to estab- -- I was  
 20 thinking, again, about the -- I guess maybe

21 I'm not getting the questions in order, but I  
22 was just thinking about your prior question  
23 about time and money, what it would save, and  
24 thinking that there would be some time and  
25 some money saved, but also you would save  
00402:01 building a new spacer and having to dispose  
02 of it. I just -- I was trying to --  
03 Q. Right. That would --  
04 A. Yeah, just trying to make sure  
05 you got that.  
06 Q. Right. That would be both the  
07 material utilized for that spacer and 8- to  
08 \$10,000 or so that it would cost to do that?  
09 A. Right. And then having to  
10 dispose of that, you know, spacer one way or  
11 the other.  
12 Q. And that --  
13 A. Okay. I just wanted -- that was  
14 implied in my answer, but I just wanted to  
15 make sure you --  
16 Q. Understood. And if a new spacer  
17 had been constructed, the type of spacers  
18 typically used run downhole. That, too,  
19 would have been discharged?  
20 A. Yes. It would have been  
21 additional waste, yeah. Okay. I just wanted  
22 to make sure that --

Page 403:15 to 403:18

00403:15 Q. Okay. If you would, turn to the  
16 second page of Exhibit 2815; the Bates in the  
17 lower right end, 3817. Do you see that?  
18 A. Yes.

Page 404:10 to 404:18

00404:10 Q. Do you know whether the  
11 Form-A-Squeeze and Form-A-Set AK pills that  
12 were sitting in Pits 3 and 5 were agitated  
13 during that week they were in those pits?  
14 A. I couldn't tell you that.  
15 Q. Do you know whether anything was  
16 done to them during that week to prevent  
17 solidifying and consolidation setting up?  
18 Anything?

Page 404:20 to 404:20

00404:20 THE WITNESS: I don't know that.

Page 404:22 to 405:05

00404:22 Q. Okay. Further in the e-mail,  
23 Mr. Maxie writes, "Is there a chance that the  
24 Form-A-Squeeze," or "FAS," "will plug and  
25 dewater?" Do you see that?  
00405:01 A. I do.  
02 Q. Do you know whether M-I did any  
03 testing as to whether Form-A-Squeeze would  
04 plug or dewater?  
05 A. No, we did not.

Page 406:08 to 406:20

00406:08 Q. Right. Turning to the prior  
09 page, the last e-mail in the string, the one  
10 we started off with at the very top. . .  
11 A. Yes.  
12 Q. Mr. Armand, who is BP project  
13 engineering manager for M-I, writes, "Not a  
14 problem as long as there are no operational  
15 risk as we discussed." Did I read that  
16 correctly?  
17 A. Yes.  
18 Q. Were there operational risks  
19 discussed within M-I as to the use of the LCM  
20 spacer as a spacer?

Page 406:22 to 407:01

00406:22 THE WITNESS: I think his statement  
23 reads that "Not a problem as long as there  
24 are no operational risk as we discussed." In  
25 other words, we discussed that there was no  
00407:01 operational risk.

Page 407:06 to 407:09

00407:06 Q. So M-I had a discussion about  
07 the use of the LCM spacer as a spacer and  
08 determined that there were no operational  
09 risks?

Page 407:11 to 407:20

00407:11 THE WITNESS: I think we determined --  
12 he vetted everything out, as you've read the  
13 e-mails, with our team, as we talked about  
14 with. . .  
15 BY MR. HARTLEY:  
16 Q. Probably Mr. LeBleu.  
17 A. Mr. Lebleu or who -- I can't  
18 remember exactly who we talked about that  
19 with yesterday. But -- and then it was  
20 presented to the BP drilling team.

Page 408:16 to 408:20

00408:16 Q. Do you know whether potential  
17 operational risks were discussed by M-I with  
18 BP?  
19 A. I don't. I don't know. I don't  
20 know of that conversation.

Page 408:24 to 408:24

00408:24 (Exhibit No. 2816 was marked for the record.)

Page 409:01 to 409:07

00409:01 Q. Let me hand you now what I've  
02 marked as Exhibit 2816. It is Tab 21  
03 on the Halliburton disc. The top e-mail  
04 on Exhibit 2816 is from James Hoggan to  
05 Mr. LeBleu, Mr. Maxie, and others, dated  
06 April 18th. Do you see that?  
07 A. Yes.

Page 409:16 to 410:13

00409:16 Q. The top e-mail on this page is  
17 from Mr. LeBleu to Tracy Dyer, Doyle Maxie,  
18 Brian Morel, copying Mr. Hoggan and Mr.  
19 Cocalles. Do you see that?  
20 A. Yes.  
21 Q. Mr. LeBleu was drilling fluids  
22 engineer for BP, right?  
23 A. That's right.  
24 Q. He had discussions with  
25 Doyle Maxie about the use of the LCM as --  
00410:01 material as a spacer?  
02 A. Yes.  
03 Q. In this e-mail, Mr. LeBleu  
04 writes, "I don't think the pill can be held  
05 and reused because of bacterial degradation  
06 of the biopolymer." Did I read that  
07 correctly?  
08 A. Yes.  
09 Q. And this relates to the  
10 discussion we had before the break about  
11 potential to beneficial reuse of the LCM  
12 pills?  
13 A. Right.

Page 411:06 to 411:22

00411:06 Q. Do you know when the

07 conversation first began about whether to use  
08 the LCM spacer as a spacer?

09 A. I believe I've answered that  
10 before. I think there was a -- in talking to  
11 Leo Lindner, he said this was talked about --  
12 it could have been the prior week or two or,  
13 you know, whatever -- with our mud engineers  
14 and with the BP well site leader.

15 Q. I was trying to get as precise a  
16 timeframe as we can or you can provide.

17 A. That's all I -- that's all I  
18 know.

19 Q. It may have been a week or two  
20 before April 16th?

21 A. It could have been. I don't  
22 have that information.

Page 413:20 to 415:01

00413:20 Q. Do you know how it was decided,  
21 the nature of the mixture between the  
22 Form-A-Set AK and Form-A-Squeeze, the volumes  
23 of each in proportion to each other?

24 A. No, I don't.

25 Q. Was there any testing or  
00414:01 decision-making done as to the propriety of  
02 the proportion of each of those pills?

03 A. Not that I know of.

04 Q. Do you know whether there was  
05 any testing or analytical criteria applied to  
06 the quantity of Duo-Vis or barite added to  
07 those LCM pills?

08 MS. SCOFIELD: Objection to form.

09 THE WITNESS: I don't know. I don't  
10 know.

11 BY MR. HARTLEY:

12 Q. M-I has software that it  
13 utilizes to construct or design LCM pills; is  
14 that right?

15 A. For the Form-A-Set AK, yes.

16 Q. For the Form-A-Set AK. Do you  
17 know whether that software was utilized by  
18 Mr. Lindner or others at M-I in designing the  
19 LCM spacer?

20 A. Not this spacer, as you -- as we  
21 agreed to talk about it, no.

22 Q. It may have been originally  
23 utilized in developing the Form-A-Set AK pill  
24 that was initially put in the pit, but not  
25 when it was going to be used as a spacer?

00415:01 A. That's correct.

Page 417:19 to 418:13

00417:19 Q. Is there any program software  
 20 modeling written guidelines regarding the  
 21 amount of Duo-Vis or barite that would be  
 22 added, if any?  
 23 A. Barite or Duo-Vis to?  
 24 Q. To the Form-A-Squeeze.  
 25 A. Form-A-Squeeze? You would add  
 00418:01 primarily just barite. And it can be  
 02 weighted up. And it has a viscosifier in it,  
 03 you know, that you can, you know, essentially  
 04 weight that pill up to -- I believe it's 16  
 05 and a half pounds per gallon.  
 06 Q. How is that calculation  
 07 performed by the M-I mud engineer?  
 08 A. By hand.  
 09 Q. That's simply based on the  
 10 weight of the LCM pill you want, and  
 11 calculate that and the amount barite you have  
 12 to add to get to that level?  
 13 A. That's correct, yes.

Page 424:01 to 424:11

00424:01 First, I'd like to ask you just  
 02 initial questions about Anadarko. Are you  
 03 aware of any involvement by Anadarko  
 04 concerning the displacement procedure,  
 05 developing the displacement procedure?  
 06 A. No.  
 07 Q. Are you involved -- are you  
 08 aware of any involvement by Anadarko in the  
 09 execution of the displacement procedure on  
 10 Macondo on April 20th?  
 11 A. No, I'm not.

Page 424:24 to 425:02

00424:24 Q. Well, let me ask you this way,  
 25 then. In your experience, is it normal to do  
 00425:01 a negative pressure test during a  
 02 displacement?

Page 425:04 to 425:05

00425:04 THE WITNESS: I have not -- I have not  
 05 done one like that.

Page 426:13 to 426:15

00426:13 Q. And, in fact, you've never seen  
 14 it done before in your experience; is that  
 15 correct?

Page 426:17 to 426:21

00426:17 THE WITNESS: That's correct.  
18 BY MS. SCHNELL:  
19 Q. Did you talk to others about  
20 that concept after the incident on the  
21 Macondo Well?

Page 426:23 to 427:20

00426:23 THE WITNESS: Just recently, I spoke to  
24 Leo Lindner and several of our other  
25 employees, project engineer types, and asked  
00427:01 if we had ever done a displacement, you know,  
02 or a -- or had the operator conducted a  
03 negative test or had we ever parked the  
04 spacer, you know, above the BOP. And no  
05 one -- all of the people that I talked to  
06 said they had -- they had never experienced  
07 that.  
08 BY MS. SCHNELL:  
09 Q. They had not. And you said you  
10 spoke to Mr. Lindner; is that correct?  
11 A. Yes.  
12 Q. And he has, I believe you said  
13 yesterday, as many as 30 years experience?  
14 A. No, I don't think Mr. Lindner  
15 has. I'm not sure of his years of  
16 experience. But I did speak to Mr. Lindner  
17 and asked if we had ever done that at BP  
18 before, and he indicated yes, on the Horizon,  
19 and he said he believes it's maybe two other  
20 times on prior wells.

Page 428:20 to 429:12

00428:20 Q. Do you know John LeBleu?  
21 A. Yes, I do.  
22 Q. Did he used to work for M-I?  
23 A. He did.  
24 Q. How long did Mr. LeBleu work for  
25 M-I, if you know?  
00429:01 A. I believe probably -- well, I  
02 don't know the exact time, but probably  
03 25 years or so.  
04 Q. And Mr. LeBleu, at the time of  
05 the incident on the Macondo, was BP's  
06 drilling fluid specialist; is that correct?  
07 A. That's what I understand, yes.  
08 Q. And given that he had 25 years  
09 of experience working for M-I, was Mr. LeBleu  
10 familiar with M-I products, including  
11 Form-A-Set and Form-A-Squeeze?

12           A.       I believe he was, yes.

Page 430:11 to 430:16

00430:11 MS. SCHNELL: I'm going to give you  
12 guys a copy to look at before I ask any  
13 questions. But this came up yesterday. It  
14 was used by one of the lawyers.  
15       COUNSEL: It's Exhibit 1039?  
16       MS. SCHNELL: Exhibit 1039.

Page 431:08 to 434:08

00431:08       Q.       On that -- down in the bottom of  
09 that -- of the page that you're holding, you  
10 will see an e-mail from Doyle Maxie, dated  
11 April 16, to John LaBleu. And it says -- I'm  
12 going to show it you -- "John, we need to  
13 have a conversation about these pills. They  
14 are water-based, and they have dumped them on  
15 Enterprise, but need clarification from BP as  
16 to what we can and should do with them."  
17       A.       Yes.  
18       Q.       Did I read that correctly?  
19       A.       I believe you did, yes.  
20       Q.       And do you see on that e-mail  
21 who is copied?  
22       A.       It looks like Brett Cocalles,  
23 Brian Morel.  
24       Q.       And your understanding is that  
25 Brett Cocalles was the well site leader on  
00432:01 Macondo in April of 2010; is that right?  
02       A.       I don't know that.  
03       Q.       Do you know who -- what  
04 Brian Morel's role was?  
05       A.       It's my understanding that  
06 Brett Cocalles and Brian Morel are drilling  
07 engineers that work for BP.  
08       Q.       Okay. And then --  
09       A.       Oh, I'm sorry.  
10       Q.       And then if you look for --  
11 MS. SCOFIELD: He really needs to have  
12 a copy of the document in front of him.  
13       MS. SCHNELL: I'm sorry. Does anybody  
14 have a copy of 1039 from yesterday?  
15       MS. SCOFIELD: Maybe she could read it  
16 off.  
17       MS. SCHNELL: This is 1030. I can read  
18 off of here. Here you go.  
19       MR. TANNER: Thank you, Don.  
20       MS. SCHNELL: Sorry, guys.  
21 BY MS. SCHNELL:  
22       Q.       And above that, you will see  
23 that Mr. LeBleu responds by e-mail dated



24 April 16th, still Friday, at 8:40 a.m. And  
 25 his response is to Doyle Maxie, with a copy  
 00433:01 to Brett Cocalles, Brian Morel, James Hoggan,  
 02 and Tracy Dyer.  
 03 A. Yes, I see that.  
 04 Q. And, again, the reference is  
 05 Water-based FAS Pills. In the first  
 06 paragraph, Mr. LeBleu states that he's  
 07 contacted James Hoggan, who is BP's  
 08 environmental specialist, who said that  
 09 "Since it has not been in the well, we will  
 10 have to send it in for disposal." Did I read  
 11 that right?  
 12 A. Yes.  
 13 Q. Okay. If we go up, then, to the  
 14 e-mail that is right before that one, and it  
 15 is from Doyle Maxie, Friday April 16th, at  
 16 9:17 a.m. to Leo Lindner. And Mr. Maxie  
 17 says, "Leo, had a discussion with John, and  
 18 he ran it by the Environmental group, and we  
 19 cannot dump them. The," which I assume is  
 20 supposed to be "they," "want to dispose if we  
 21 cannot use as spacers. I am checking on the  
 22 possibility of this option. Given the  
 23 water-based nature and the fact that we will  
 24 T&A, may not want to --" it says "us," but I  
 25 assume it's "use," "as spacer and dump." Did  
 00434:01 I read that correctly?  
 02 A. Yes.  
 03 Q. So on April 16th, Mr. Maxie is  
 04 raising a question as to whether or not the  
 05 LCM material would be appropriate to use as a  
 06 spacer, given its water-based nature and the  
 07 fact that the process is to T&A; is that  
 08 right?

Page 434:10 to 434:16

00434:10 THE WITNESS: I don't think he -- well,  
 11 I don't know about appropriate. I think he's  
 12 just. . .  
 13 BY MS. SCHNELL:  
 14 Q. He's just saying we may not want  
 15 to use it; is that right?  
 16 A. Exactly.

Page 435:12 to 436:17

00435:12 Q. If you turn to Tab D in your  
 13 binder?  
 14 A. D, did you say?  
 15 Q. "D" as in "dog." And if you  
 16 could flip for me to the M-I document with  
 17 Bates number 15966.

18 A. Can I pull this out of here?  
19 Q. Sure.  
20 A. Okay.  
21 Q. And at the top of that page,  
22 there's an e-mail from Leo Lindner dated  
23 Saturday, April 17, at 2:42 p.m., and it's  
24 addressed to Doyle Maxie. And again, the  
25 subject line is same, Water-based FAS Pills.  
00436:01 And it reads, "Doyle, talked to Brian Morel  
02 about the issue, and he is for using it as a  
03 spacer. Regards, Leo."  
04 Is it your understanding that  
05 Brian Morel approved the use of the LCM  
06 material as a spacer in this displacement  
07 process?  
08 A. Yes.  
09 MS. SCHNELL: I'd like to attach the  
10 document which is M-I Bates No. 15966 as  
11 Exhibit 2817.  
12 (Exhibit 2817 was marked for the record.)  
13 BY MS. SCHNELL:  
14 Q. Is it also your experience, Mr.  
15 Billon, that nothing can be pumped down the  
16 hole without the operator's approval?  
17 A. Yes.

Page 437:06 to 437:25

00437:06 Q. Let's back up a little bit. So  
07 the spacer before it was weighted up, its  
08 density was 14 pounds per gallon, right?  
09 A. That's what I understand, yeah.  
10 Q. And then it was weighted up, and  
11 the weight was increased by 2 pounds per  
12 gallon to 16; is that right?  
13 A. That's correct.  
14 Q. Okay. And what is your  
15 understanding of the reason that that was  
16 weighted up?  
17 A. My understanding is that, I  
18 guess, that is -- that is typical to weight  
19 up the spacer, in this particular operation,  
20 to about approximately 2 pounds per gallon  
21 over the original mud weight, which was  
22 14 pounds, I assume. And the purpose of that  
23 is that over time, people have learned that  
24 if they do that, it provides for a much  
25 cleaner displacement.

Page 438:15 to 438:21

00438:15 Q. Okay. Let me ask you, then.  
16 There's been some talk about the difference  
17 between the weight of the LCM material at

18 16 pounds per gallon after it was weighted up  
19 and the density of seawater, which I believe  
20 is 8.6 pounds per gallon. Is that correct?  
21 A. That's correct.

Page 439:25 to 440:04

00439:25 Q. Wouldn't it be obvious that a  
00440:01 material of 16 pounds per gallon will settle  
02 through and mix into a material, in this  
03 instance, seawater, that's 8.6 pounds per  
04 gallon?

Page 440:07 to 440:08

00440:07 Q. Assuming that they are stacked  
08 vertically.

Page 440:10 to 440:13

00440:10 THE WITNESS: I would say -- I don't  
11 know the circumstances, but some testing  
12 would have to be done, you know, to show  
13 that. But I couldn't say to what degree.

Page 447:12 to 447:16

00447:12 Q. All right. Did M-I receive a  
13 test matrix from BP concerning the LCM  
14 material that was going to be used on  
15 April 20th, for the Macondo?  
16 A. No, we did not.

Page 458:10 to 458:17

00458:10 Q. With respect to the LCM spacer  
11 that was going to be used on Macondo as part  
12 of the displacement job, are you aware of any  
13 compatibility testing, during the course of  
14 your research, of that particular material  
15 and its interface with the particular  
16 materials that were on the Macondo on  
17 April 20th?

Page 458:20 to 458:23

00458:20 THE WITNESS: The combined materials is  
21 what you're talking about? No, not other  
22 than the testing that Leo Lindner did at the  
23 rig site.

Page 459:15 to 459:18

00459:15 Q. And if there was any testing to  
16 be done, wouldn't it be the role of the  
17 operator -- in this instance, BP -- to  
18 specify what tests are needed?

Page 459:20 to 459:21

00459:20 THE WITNESS: If they wanted to do some  
21 testing, yes.

Page 469:15 to 474:16

00469:15 Q. I've handed you an exhibit that  
16 I've marked 2819 for the deposition record,  
17 and I'll represent to you that I printed this  
18 out from the company's website a couple of  
19 days ago. And I just want to go over some  
20 materials from your company's website.

21 A. Okay.

22 Q. And in one of the tabs, a  
23 company profile is listed, and I'm just going  
24 to read the first paragraph of the company  
25 profile and then ask you a question at the  
00470:01 conclusion.

02 "With over 13,000 employees in  
03 more than 75 countries around the world, M-I  
04 SWACO is a vital part of the world's  
05 hydrocarbon exploration and production  
06 industry. We are the leading supplier of  
07 drilling fluid systems engineered to improve  
08 drilling performance by anticipating  
09 fluids-related problems, fluids systems, and  
10 specialty tools designed to optimize wellbore  
11 productivity, production technology solutions  
12 to maximize production rates, and  
13 environmental solutions that safely manage  
14 waste volumes generated in both drilling and  
15 production operations." Did I read that  
16 correctly, sir?

17 A. Yes.

18 Q. Is that an accurate summary of  
19 the company's activities?

20 A. I would say it is.

21 Q. Okay. And further down on the  
22 page, there's a paragraph from the website  
23 stated -- entitled Drilling Fluid Systems and  
24 Products. And I'm just going to read that  
25 out loud again, sale drill. "This is the  
00471:01 very foundation of our business. We have  
02 continued to develop solutions for drilling  
03 that help our clients maximize rate of  
04 penetration, eliminate nonproductive time,

05 achieve --" my copy is cut off. "Achieve  
06 quality" would be my guess. But "achieve"  
07 something "performance objectives and obtain  
08 quality data from the wellbore. We  
09 strengthen our systems and products by  
10 providing regionally and globally based  
11 experts to support the application of M-I  
12 SWACO technology and by developing new  
13 technology and process solutions to optimize  
14 client results."

15 With the exception of the word  
16 that was cut off there, did I read that  
17 accurately?

18 A. Yes.

19 Q. Is that an accurate statement of  
20 M-I SWACO's abilities?

21 A. Yes.

22 Q. And in relation to the Macondo  
23 252 and Deepwater Horizon drilling  
24 activities, was M-I SWACO the expert that was  
25 providing its client with drilling fluid  
00472:01 systems and products?

02 A. We were the drilling fluids  
03 company of your choice, providing the  
04 services that we did.

05 Q. And did you provide regionally  
06 and globally based experts to support the  
07 application of M-I SWACO's technology?

08 A. Yes.

09 Q. And turning the page, there's a  
10 paragraph entitled Waste Management. And  
11 I -- we can read it for the record, but I  
12 just want to ask you, basically, was one of  
13 the services that M-I SWACO provided to BP  
14 for Macondo 252 was assisting BP in waste  
15 management activities?

16 A. Yes. But to be a little more  
17 definitive on the -- what we categorize as  
18 waste management, on Deepwater Horizon, we  
19 were, I guess, involved in the drying of the  
20 cuttings and being sure that you met your  
21 obligations to the M-I synthetic-based fluid  
22 on those cuttings.

23 Q. And that included providing  
24 expert advice on whether the cuttings were  
25 permissible for discharging overboard?

00473:01 A. Well, we provided a gentleman  
02 there to run the tests, to collect the data  
03 to let you know if you were in compliance or  
04 not.

05 Q. And that would be the compliance  
06 engineer supplied?

07 A. That's correct. Yeah.

08 Q. And that was Mr. Meche, at least  
09 at the time of April 20, 2010?

10           A.       Yes.  
 11           Q.       Okay. The next tab in the -- at  
 12 the website that I printed, couple of them,  
 13 one was called Drilling Fluid Systems, and  
 14 the other tab was called Drilling Fluid  
 15 Products. Are both of those tabs -- do both  
 16 of those tabs from the website provide  
 17 information summarizing M-I SWACO's drilling  
 18 fluid systems and drilling fluid products as  
 19 they specifically pertain to the Deepwater  
 20 Horizon in April 2010?  
 21           A.       Yes. I'd say yes.  
 22           Q.       Obviously some -- not all  
 23 services described were provided, but these  
 24 are general descriptions of some of the  
 25 services provided to BP by M-I SWACO?  
 00474:01       A.       Exactly. General descriptions.  
 02           Q.       Right. So, for example, in the  
 03 drilling fluid systems' tab where it states  
 04 Solutions for all Drilling Applications, the  
 05 following statement, tell me whether it's an  
 06 accurate statement.  
 07           A.       Where are you, now? I'm not --  
 08           Q.       Where it says "Drilling." It's  
 09 the tab --  
 10           A.       Yeah, I've got the page. I just  
 11 thought --  
 12           Q.       Okay. I'm --  
 13           A.       -- you were reading something on  
 14 the page.  
 15           Q.       Right. Underneath where it says  
 16 Solutions for all Drilling Applications.

Page 474:20 to 474:24

00474:20       Q.       It might be on the next -- flip  
 21 to the very last -- there you go.  
 22           A.       Oh. The one that says  
 23 "Systems," right? Is that correct?  
 24           Q.       Yeah, "Systems."

Page 475:05 to 476:15

00475:05       Q.       I'm going to read out loud, sir.  
 06 "M-I SWACO leads the industry in engineering  
 07 drilling fluid systems and additives that  
 08 improve efficiencies, reduce costs, and  
 09 minimize HSE impact. We customize drilling  
 10 fluid systems and associated additives to  
 11 reduce NPT in the most demanding  
 12 applicationS, including HTHP --" that would  
 13 be high temperature, high pressure?  
 14           A.       That's correct.  
 15           Q.       "-- deepwater and depleted

16 wells. M-I SWACO is widely recognized for  
 17 developing solutions to for downhole  
 18 problems, from the simple to the complex. We  
 19 were the first to introduce cost effective  
 20 and high efficiency micronized barite  
 21 technology to water and oil-based drilling  
 22 fluids.

23 "A leader in R&D, we develop  
 24 drilling fluid systems for specific  
 25 applications, such as deepwater shale gas,  
 00476:01 and heavy oil extraction. Complementing our  
 02 drilling fluid systems are specialized  
 03 additives that optimize efficiencies by  
 04 targeting performance-impacting downhole  
 05 problems that increase costs." Did I read  
 06 all of that accurately, sir?

07 A. Yes

08 Q. And are all those accurate  
 09 statements?

10 A. Yes, they are.

11 Q. Turn from that to the contract  
 12 between M-I SWACO and BP, which is  
 13 Exhibit 2804, that you looked at yesterday,  
 14 and I just want to go over a couple of items  
 15 on that contract.

Page 476:25 to 477:01

00476:25 Q. Okay. Reading in the General  
 00477:01 Conditions portion of the contract --

Page 477:04 to 477:07

00477:04 THE WITNESS: Well, that's what he's  
 05 telling us now.  
 06 I'm going to wait until you tell me  
 07 what page.

Page 477:09 to 478:02

00477:09 Q. Right. I'm going to tell you  
 10 that right -- momentarily. In Exhibit 2804,  
 11 the M-I SWACO-BP contract, looking in the  
 12 General Conditions of the Contract, Section 2  
 13 specifically at Section 4 -- Section 4, which  
 14 is entitled Contractor's General Obligations.  
 15 So it will be in the front part of the  
 16 contract?  
 17 A. Does yours have the M-I number  
 18 on bottom, Bates number?  
 19 Q. I don't have the -- we're  
 20 looking at different versions, so you'll have  
 21 to bear with me. It's page 6 of 43, is

22 another identifying feature. And it's near  
23 the front, sir.  
24 A. Okay.  
25 Q. The general conditions.  
00478:01 A. Yeah. I just -- I'm getting  
02 there.

Page 478:04 to 478:04

00478:04 THE WITNESS: Yes, I've got it.

Page 478:06 to 479:19

00478:06 Q. Right. Contractor's General  
07 Obligations. You see that, sir?  
08 A. Yes.  
09 Q. Okay. And I'm going to read out  
10 loud Section 4.1. "Contractors shall, in  
11 accordance with Section 3, carry out all of  
12 its obligations under the contract and  
13 provide all management, supervision,  
14 personnel, materials and equipment," paren,  
15 "except materials and equipment specified to  
16 be provided by company," end paren, "plant,  
17 consumables, facilities, and all other  
18 things, whether of a temporary or permanent  
19 nature, so far as the necessity for providing  
20 the same is expressed with reasonable clarity  
21 in the contract."  
22 Section 4.2: "Contractors shall  
23 carry out all of its obligations under the  
24 contract and shall execute the work with all  
25 due care and diligence and with the skill to  
00479:01 be expected of a reputable contractor  
02 experienced in the types of work to be  
03 carried out under the contract."  
04 And Section 4.3: "Contractors  
05 shall take full responsibility for the  
06 adequacy, stability, health, safety, and  
07 environmental protection of all its  
08 operations and methods necessary for the  
09 performance of the work and shall keep  
10 strictly to the provisions of Section 7,  
11 Health, Safety, Security, and Environment."  
12 Sir, did I read Sections 4.1,  
13 4.2, and 4.3 of the contract accurately?  
14 A. Yes, you have.  
15 Q. And do you understand that those  
16 were M-I SWACO's general obligations to BP in  
17 the Gulf of Mexico and particularly with  
18 respect to Deepwater Horizon in the drilling  
19 operations at Macondo 252?



Page 480:04 to 489:22

00480:04 Q. Would you agree, sir, that  
05 Sections 4.1, 4.2, and 4.3 were among the  
06 general obligations of M-I SWACO toward BP as  
07 they pertain to operations at Macondo 252  
08 aboard the Deepwater Horizon?  
09 A. They are part of this contract,  
10 and we signed and, you know, executed this  
11 contract with BP.  
12 Q. And you understood these were  
13 your -- that is, M-I SWACO understood these  
14 were their obligations?  
15 A. Yes.  
16 Q. If we'll turn to the Scope of  
17 Work portion of the contract, which is -- at  
18 least in the Scope of Work section is page 36  
19 of 49 that I'm going to reference next.  
20 A. Okay. Just give me a second to  
21 get there.  
22 Q. Sure.  
23 A. 36, you say?  
24 Q. Yeah, page 36 of 49 in the Scope  
25 of Work. And I'll direct your attention to  
00481:01 Section 9.3.15. Are we there?  
02 A. Yes.  
03 Q. And I'll read it out loud.  
04 A. Okay.  
05 Q. The lead sentence for this is on  
06 the proceeding page. It's Section 9.3. "The  
07 lead mud engineer is the primary liaison with  
08 the company and shall be competent in all  
09 required skill sets necessary to support the  
10 activities listed herein." And then looking  
11 over at 9.3.15, do you see the words  
12 "Monitors company's PFM waste stream  
13 management plan. This includes daily  
14 documentation of date, time, quantity,  
15 quality of material discharged, entry of  
16 solids control and waste management data into  
17 contractor's database and computer program  
18 for the record-keeping on the rig"? Did I  
19 read all of that accurately?  
20 A. Yes, you did.  
21 Q. That would -- in the case of  
22 Deepwater Horizon on April 20, that would be  
23 Mr. Leo Lindner who was the mud engineer to  
24 provide that activity?  
25 A. I believe he was categorized as  
00482:01 lead mud engineer, yes.  
02 Q. And looking up the page to  
03 Section 9.3.7, Mr. Lindner would have been  
04 responsible for executing -- or -- excuse me,  
05 for "Accurately recording and documenting the  
06 solid and fluid waste streams produced from

07 the well. Contractor rig site personnel will  
08 work proactively with company and third-party  
09 personnel to minimize waste disposal volumes  
10 and costs." Did I read that accurately?  
11 A. Yes.  
12 Q. So in -- do I understand your  
13 testimony from previous questioners, your  
14 responses to those, that among M-I SWACO's  
15 duties out at Deepwater Horizon would be to  
16 work proactively to minimize waste?  
17 A. Yes.  
18 Q. Would the decisions to use LCM  
19 as spacer in lieu of constructing a new  
20 spacer be consistent with that obligation  
21 under the contract?  
22 A. I believe so.  
23 Q. Turning a few more pages and  
24 just reading -- it's page 39 of 49. And I'll  
25 read 9.6.15 out loud. "Manages all  
00483:01 completions activities, including wellbore  
02 displacement, cleanup, tool makeup, tool  
03 operation, packer fluid, spacers and pill  
04 construction."  
05 And with the caveat that this  
06 paragraph is within the completion engineer's  
07 scope of work, would you agree with me, sir,  
08 that one of the jobs of M-I SWACO out on the  
09 rig on April the 20th was to manage spacer  
10 construction?  
11 A. This -- I think this is talking  
12 about the completion engineer's duties, and  
13 we're talking here -- we're talking about  
14 wellbore displacement. We're talking about  
15 spacers probably prior to putting completion  
16 fluids in the wellbore.  
17 Q. I understand that. I understand  
18 9.6.15 is in the section about --  
19 A. Yes.  
20 Q. -- the completion engineer. But  
21 my question is, was the makeup -- the  
22 management of construction of the spacer in  
23 April 2010, or April 20th, 2010, part of  
24 Mr. Lindner's job as mud engineer?  
25 A. To put it together? Yes. Yes.  
00484:01 Q. Now, you understand that at the  
02 very beginning of this deposition yesterday,  
03 Mr. Bruno showed you Exhibit 2802, which was  
04 Defendant M-I LLC's responses to this  
05 30(b)(6) deposition notice?  
06 A. Yes.  
07 Q. And you understand that you've  
08 been designated to speak for the corporation  
09 on Topics 10, 11, 12, and 23(IV)?  
10 A. Can I have another -- are we  
11 done with the contract here?

12 Q. Yes, we're done with the  
13 contract.  
14 A. Let me put that away.  
15 Q. And I'll repeat the number so  
16 you won't have trouble following.  
17 Okay. You understand that  
18 you're designated to speak for the company  
19 for Topics 10 -- for the information  
20 available to M-I SWACO for the Topics 10, 11,  
21 12, and then 23(IV)? Among others, but those  
22 specifically?  
23 A. 10, 11, 12 -- I'm sorry, I'm not  
24 writing this down, so --  
25 Q. 10, 11, 12, and then 23(IV).  
00485:01 A. I just can't remember the  
02 numbers.  
03 Q. That's why I have them written  
04 down.  
05 A. Yes.  
06 Q. Okay. And you understand  
07 generally those topics have to do with the  
08 subject of the LCM use as a spacer?  
09 A. Which topic?  
10 Q. Actually, all of those topics  
11 have some bearing on the activities of  
12 constructing a spacer in the time period that  
13 we've been discussing.  
14 A. I couldn't say that. I'd have  
15 to go back through them and -- I mean, you  
16 said that, but I couldn't say that for sure.  
17 Q. Okay. Well, take a look, then,  
18 at 10, 11, 12, and 23(IV) and just make sure  
19 that I'm right, that generally speaking,  
20 you've been designated to speak for the  
21 corporation with regard to the use of LCM as  
22 spacer on or about April 20th, 2010.  
23 A. Okay. I want to just -- let me  
24 just --  
25 Q. Sure. No problem. Take your  
00486:01 time.  
02 A. (Reviews document.) Okay. I'm  
03 ready.  
04 Q. Can you answer the question,  
05 then?  
06 A. Sure. Well, go ahead and ask --  
07 can you ask the question again?  
08 Q. Yeah. You agree that you are  
09 designated as the spokesman or the -- you're  
10 speaking for the corporation, I should say,  
11 generally on the topic of the use of LCM as a  
12 spacer on or about April 20th, 2010, that's  
13 included in those topics?  
14 A. Yes, sir.  
15 Q. Okay. So I'm asking you a bunch  
16 of these questions, and I just want you to

17 have highlighted in your mind that you're  
18 speaking on behalf of M-I SWACO and giving  
19 M-I SWACO's answer.  
20 Yesterday you testified that M-I  
21 relies on BP to provide it with information  
22 it needs to provide its goods and services to  
23 BP. Do you recall that?  
24 A. Yes.  
25 Q. Do you recognize that M-I is  
00487:01 relied upon by BP for M-I's expertise?  
02 A. Yes.  
03 Q. And do you agree that M-I's  
04 expertise offered -- provided and offered to  
05 BP includes engineering the mud, the drilling  
06 fluid to be used in drilling a well such as  
07 Macondo 252?  
08 A. Yes.  
09 Q. And you -- and when you say  
10 "you," I mean M-I SWACO. You understand  
11 that?  
12 A. Yes.  
13 Q. And that you recognize that M-I  
14 SWACO's expertise includes putting together  
15 LCM pills in general?  
16 A. Yes.  
17 Q. And that M-I considers itself an  
18 expert in putting together LCM pills?  
19 A. Yes.  
20 Q. Do you agree that lost returns  
21 are an expected consequence in the drilling  
22 of wells?  
23 A. Yes.  
24 Q. Do you agree that lost returns  
25 are particularly anticipated in exploratory  
00488:01 wells?  
02 A. In some, yes.  
03 Q. And why is it that returns are  
04 even more to be anticipated in an exploratory  
05 well as opposed to another well?  
06 A. Well, I believe, you know, just  
07 as the word implies, you're exploring. You  
08 don't know -- you know, these are what people  
09 typically call wildcat wells for that reason.  
10 I guess -- I would assume that BP has a lot  
11 less information, you know, on an exploratory  
12 well than you would after you've drilled  
13 several, you know, within the field.  
14 Q. And I recall from yesterday on  
15 the bonus schedule in the BP-M-I SWACO  
16 contract that there was sort of a scale of  
17 awards or penalties for loss of fluids. And  
18 there was a higher bracket for exploratory  
19 wells than for the other types of wells  
20 anticipated, right?  
21 A. You're right.

22 Q. And based on what you know from  
23 review of the materials and talking to M-I  
24 SWACO personnel, the amount of LCM used  
25 during the Deepwater Horizon's time on  
00489:01 Macondo 252 was not particularly unusual;  
02 fair to say?  
03 A. No. Given the conditions and,  
04 you know -- no.  
05 Q. That is fair to say?  
06 A. It's fair to say, yes.  
07 Q. And you recall you were asked  
08 some questions by the United States attorney  
09 about whether the maximum amount of LCM was  
10 placed aboard the Deepwater Horizon. Do you  
11 read that discussion?  
12 A. Yes.  
13 Q. Do you remember the document  
14 that the attorney provided to you?  
15 A. Yes.  
16 Q. Okay. I'm going to show you  
17 Exhibit 2809, and I'm going to turn to the  
18 second page and just ask you to read the  
19 paragraph at the end of that page. And  
20 you'll notice that I've highlighted a  
21 particular few words at the end of that  
22 paragraph.

Page 490:01 to 502:17

00490:01 Q. Just read it silently.  
02 A. ((Reviews document.)) Okay.  
03 Q. Now that you've read that,  
04 following up on the government's questions  
05 yesterday, is it fair to say that what that  
06 document is referring to as maximum LCM is in  
07 connection with available space to store LCM  
08 material?  
09 A. You're correct.  
10 Q. Okay. One of the reasons --  
11 fair to say that one of the reasons that M-I  
12 had a drilling fluid specialist out on  
13 Deepwater Horizon was because lost returns  
14 were an anticipated and reasonable --  
15 reasonably anticipated possibility, correct?  
16 A. I wouldn't say that that's the  
17 only reason that they had drilling fluid  
18 specialists out there, but -- so I don't  
19 understand your question.  
20 Q. Yeah. Fair enough. I agree  
21 with you. One of the reasons that M-I SWACO  
22 had personnel available to provide expertise  
23 to BP in the operation of the well was that  
24 M-I SWACO offered expertise in anticipating  
25 the possibility of lost returns?  
00491:01 A. Or -- I don't think we have

02 expertise in anticipating lost returns. We  
03 have the expertise in treating those losses  
04 when they occur or treating to -- ahead of  
05 time to -- well, not to anticipate, but to --  
06 I guess I'm trying to think of a more  
07 accurate word.

08 Q. To pre-cure?  
09 A. Yeah, to pre-cure, I guess it  
10 would be. Yeah.

11 Q. That's "pre" hyphen "cure"?  
12 A. Yeah.

13 Q. Okay. In the case of Macondo  
14 252 in the drilling fluids program that M-I  
15 SWACO put together for BP, M-I SWACO designed  
16 -- was the designer of the Rheliant drilling  
17 fluid, correct?

18 A. Yes. That is a proprietary  
19 system that we reload in the Gulf of Mexico.

20 Q. And M-I SWACO is a specialist in  
21 the knowledge of the characteristics of that  
22 particular product, correct?

23 A. Yes.

24 Q. And M-I SWACO knows the chemical  
25 product of -- excuse me, the chemical  
00492:01 properties of that drilling fluid called  
02 Rheliant?

03 A. Yes.

04 Q. In fact, that drilling fluid, as  
05 you say, is a proprietary, right?

06 A. Yes.

07 Q. And M-I SWACO holds patents on  
08 that material?

09 A. I believe we do, yes.

10 Q. And the same question for the  
11 Form-A-Set AK and the Form-A-Squeeze  
12 materials. Those are specialized products  
13 that are in the repertoire of M-I SWACO's  
14 drilling fluids products, correct?

15 A. Those are products in our  
16 product line, yes.

17 Q. And M-I SWACO is the specialist  
18 in the knowledge of each of those products,  
19 correct?

20 A. Yes, you could say that.

21 Q. And, again, those are  
22 proprietary?

23 A. What is proprietary?

24 Q. That is, Form-A-Set AK and  
25 Form-A-Squeeze.

00493:01 A. Yes, they are.

02 Q. And both -- for both materials  
03 both products, or both products, the nature  
04 of them is subject to patents in M-I SWACO's  
05 name?

06 A. Yes. I believe that was

07 attached in some of the documentation that we  
08 had received.

09 Q. Does M-I SWACO believe that it  
10 was reasonable for Brian Morel to rely upon  
11 M-I SWACO's expertise in the areas in which  
12 M-I SWACO offered expertise?

13 A. I think it's his position to  
14 take our suggestions or recommendations and  
15 to make that decision on whether or not, you  
16 know, they make sense to him or they fit into  
17 his -- you know, into the operation. Again,  
18 we're only supplying just a part of that  
19 operation, and only BP knows, you know, the  
20 big picture, I should say.

21 Q. Understood. But people like  
22 Brian Morel -- and I'm not picking him out in  
23 particular, although I will go through the  
24 others involved. M-I SWACO understands that  
25 Brian Morel is going to rely upon M-I SWACO  
00494:01 for its particularized expertise in the  
02 fluids, including the LCM materials?

03 A. I think he would rely on our --  
04 yeah, again, on our recommendations and  
05 suggestions, along with BP's drilling fluids  
06 specialists, or drilling fluids engineers, as  
07 they're called.

08 Q. Like John LeBleu?

09 A. Yes.

10 Q. Same question for Don Vidrine,  
11 Mark Hafle, and for that matter, John LeBleu,  
12 you'd give the same answer for each of those  
13 gentlemen?

14 A. Yes.

15 Q. Does M-I SWACO believe that the  
16 combination of the Form-A-Set AK and the  
17 Form-A-Squeeze with the additives that you've  
18 discussed earlier made a suitable LCM -- that  
19 made a suitable spacer?

20 A. Yes, we do.

21 Q. And your view -- that was true  
22 between April 16th and April 20th, 2010?

23 A. Yeah. Whenever the decision was  
24 that we made, you know, to -- well, that BP  
25 made to go ahead with it.

00495:01 Q. Okay.

02 A. Yes.

03 Q. BP ultimately went ahead with  
04 it.

05 A. Right.

06 Q. But M-I SWACO's recommendation  
07 was to use that LCM as a spacer, correct?

08 A. Well, let's go back. It was our  
09 suggestion. We -- and all of the e-mails  
10 support that, that we made a suggestion to  
11 BP. And I think you'll find in one of the

12 e-mails Doyle Maxie said: It's up to you  
13 guys. If you don't want to use it, we'll  
14 dispose of it.  
15 Q. Okay. We'll talk about that --  
16 A. Okay.  
17 Q. -- in a minute. But that was  
18 the view, that the suggestion was made that  
19 that was a suitable spacer by M-I SWACO in  
20 the period April 16th to April 20th, correct?  
21 A. Right. As far as we could see,  
22 and, you know, from what we knew about the  
23 operation at the time.  
24 Q. And from what you knew about the  
25 materials to be combined, that's --  
00496:01 A. Right.  
02 Q. -- what you believed then?  
03 A. That's right.  
04 Q. And today, June 2011, does M-I  
05 SWACO still maintain that view; that is, that  
06 the LCM pills combined made a suitable spacer  
07 with the additives that you've discussed?  
08 A. Yes.  
09 Q. Mr. Lindner, out on the rig,  
10 tested the compatibility of those materials?  
11 A. I explained that to you, yeah,  
12 the test that they did. He combined the  
13 materials, checked the rheology, and, you  
14 know, made some adjustments, to be sure that  
15 it was suitable, you know, rheologically for  
16 a spacer.  
17 Q. And you mentioned a little while  
18 ago called VAN 35 rheometer?  
19 A. It's a FANN or -- there are  
20 many -- there are several test rheometers,  
21 but FANN is the manufacturer's name, but it's  
22 a 35 rheometer, yes.  
23 Q. And can you spell that just so  
24 we'll have an accurate record?  
25 A. R-h-e-o-m-e-t-e-r.  
00497:01 Q. And the manufacturer name?  
02 A. FANN, F-A-N-N, 35.  
03 Q. If I told you I thought it was  
04 V-A, and then would you agree or disagree?  
05 It's either one? But you think it's FANN?  
06 A. Well, it is FANN. I --  
07 Q. Okay. It's your business,  
08 right?  
09 A. Yeah. No, I know it is.  
10 Q. Okay. The displacement  
11 procedure that was discussed earlier and is  
12 the subject of a number of different exhibit  
13 numbers, you've already told us how that --  
14 how M-I SWACO understands that came about.  
15 That procedure called for the base or bottom  
16 of the spacer material to be above the BOP,



17 did it not?  
18 A. That's what he says.  
19 Q. And, in fact, the procedure  
20 called for the bottom of the spacer material  
21 to be -- to land 500 feet above the BOP,  
22 right?  
23 A. I'm not sure if that's the case.  
24 Again, like I didn't do the calculations on  
25 the strokes.

00498:01 Q. Okay. Well, just take a quick  
02 look at -- for -- to refresh your memory, of  
03 Exhibit 967, Item 6 under displacement part,  
04 just to refresh your memory about where the  
05 displacement procedure provided for the base  
06 of the LCM to be --  
07 A. Yeah, I see it. 500 feet past  
08 the BOP stack.  
09 Q. So that's above the BOP stack?  
10 A. Yes. That's right.  
11 Q. And in the displacement  
12 procedure -- and I'm asking this kind of  
13 generally -- you see that the mud engineer  
14 and the compliance engineer each have roles  
15 during the displacement procedure, correct?  
16 A. Yes.  
17 Q. And I think you told us  
18 yesterday that the mud engineer -- in this  
19 case, Mr. Lindner -- wasn't responsible for  
20 monitoring the pumps or the pump strokes,  
21 correct?  
22 A. That's correct. He doesn't run  
23 the pumps.  
24 Q. Based on your experience with  
25 drilling rigs, who do you understand to be  
00499:01 actually running the pumps and monitoring the  
02 counter of pump strokes?  
03 A. Based on my experience, of  
04 course, the drilling contractor would run the  
05 pumps. I'm sure they would monitor the  
06 strokes, along with BP.  
07 Q. And the monitoring of pump  
08 strokes, that's part of the calculations that  
09 Mr. Lindner made in preparing the  
10 displacement procedure; that is, pump strokes  
11 provide information --  
12 A. That's correct.  
13 Q. -- on where the materials go in  
14 the drill string?  
15 A. That's correct.  
16 Q. Now, let's talk a bit about the  
17 size of the spacer. You testified that 200  
18 barrels is a typical size of a spacer for  
19 this displacement operation, correct?  
20 MS. SCOFIELD: Objection to form.  
21 THE WITNESS: I think I said 200 could

22 be --  
23 BY MR. HAYCRAFT:  
24 Q. Plus or minus?  
25 A. Plus or minus, yes.  
00500:01 Q. Okay. Just -- plus or minus 200  
02 is typical, right?  
03 A. Yes.  
04 Q. 425 may be atypical, correct?  
05 A. It may be.  
06 Q. Okay. Is there a reason for a  
07 minimum size of a spacer? That is, for the  
08 purpose of the spacer.  
09 A. I think we've found, based on  
10 experience over time, especially in these  
11 large volumes, you know, of the riser -- I  
12 should say, large volumes but large internal  
13 diameters, you know, when you're pumping the  
14 fluid up, it does require, and we've found  
15 overtime, that 200 barrels of -- you know, or  
16 more is probably necessary to get the most  
17 efficient displacement.  
18 Q. Okay. So would it be fair,  
19 then, to say at the spacer in this context  
20 and this size of riser should be at least  
21 200 barrels?  
22 A. Give or take, yes.  
23 Q. So if Mr. Lindner prepares a  
24 spacer that is 425 barrels, the 425 barrels  
25 aspect of that does not exceed some parameter  
00501:01 that M-I SWACO employs?  
02 A. No, it doesn't.  
03 Q. And that the larger the spacer  
04 does not present any detrimental aspect to  
05 the function of the spacer material, correct?  
06 A. No, it doesn't.  
07 Q. Okay. We're going to look at  
08 Exhibit 2813 from yesterday. And what I  
09 really want to ask you first is, apparently  
10 on -- at some point prior to May the 11th, BP  
11 asked M-I SWACO to do its own search and  
12 investigation and provide answers to some  
13 questions to BP, correct?  
14 A. Yes.  
15 Q. And this was following the  
16 disaster on April 20th, correct?  
17 A. Correct.  
18 Q. And BP wanted to know everything  
19 that M-I SWACO could provide by way of  
20 information about the spacer, correct?  
21 A. Well, and other things, yeah.  
22 Q. But including the spacer?  
23 A. Yeah. Correct.  
24 Q. And you personally, you,  
25 Mr. Billon, took part in the project of  
00502:01 gathering the information?

02 A. Yes, I did.  
 03 Q. And was M-I SWACO -- did M-I  
 04 SWACO offer BP its full cooperation in that?  
 05 A. Yes, we did.  
 06 Q. Did you hold back anything?  
 07 A. No, we did not.  
 08 Q. Did you do a reasonable search  
 09 for all the e-mails and documents that  
 10 pertained to that --  
 11 A. Yes, we did.  
 12 Q. -- to that riser displacement  
 13 operation?  
 14 A. Yes, we did.  
 15 Q. And you understood that BP's --  
 16 BP, itself, wanted to know everything it  
 17 could about all the spacer issues, correct?

Page 502:23 to 504:06

00502:23 Q. Let me try that one again. Did  
 24 you understand, from your point of view at  
 25 M-I SWACO, that BP wanted everything you had  
 00503:01 and not to hold back anything?  
 02 A. When you say "anything we had" --  
 03 Q. Yeah. Anything you had on the  
 04 subject of that displacement operation and  
 05 the decisions regarding the spacer.  
 06 A. We were supplied a list of items  
 07 that BP would like to have, and, again, we  
 08 gave everything we had with regards to those  
 09 items requested.  
 10 Q. Did you do a reasonable search  
 11 of your e-mails -- of your company's internal  
 12 e-mails that pertained to this subject  
 13 matter?  
 14 A. Yes, we did.  
 15 Q. Look at Exhibit 2814. And was  
 16 the -- was the work product that M-I SWACO  
 17 then provided to BP in connection with their  
 18 questions that's contained in that exhibit,  
 19 2813?  
 20 A. Yes, it was.  
 21 Q. Okay. And that included the  
 22 string -- or several strings of e-mails from  
 23 around April the 16th, moving forward to  
 24 April 20th?  
 25 A. I believe you're correct.  
 00504:01 Q. Okay. We're going to -- I know  
 02 we've looked at those in numerous iterations,  
 03 and we're going to do it again with  
 04 Exhibit 2814.  
 05 A. Okay. Let Denise get hers  
 06 pulled out here.

Page 504:16 to 506:10

00504:16 Q. But you sort of stepping back  
 17 and sort of having looked at these e-mails  
 18 fairly thoroughly over the last day and a  
 19 half, and I'm sure for you before that, the  
 20 first written communication that we see an  
 21 e-mail record is dated April 16th in the  
 22 morning from Doyle Maxie to John LeBleu,  
 23 correct?  
 24 A. I don't -- let me go back and --  
 25 Q. And I'll show you --  
 00505:01 A. I don't -- I don't have the one  
 02 from --  
 03 Q. Okay. Let's look at --  
 04 A. Unless I back up. Maybe I have  
 05 to go to the back of the document to -- okay.  
 06 I think I'm with you.  
 07 Q. And just in case we're --  
 08 A. This is -- I'm with you. I've  
 09 got it now.  
 10 Q. Good. And I just want to verify  
 11 that the e-mail that starts, "John, we need  
 12 to have a conversation about these pills,"  
 13 which is dated Friday, April 16th, 2010, at  
 14 8:04 a.m., is -- as far as M-I SWACO is  
 15 concerned, that's the earliest written  
 16 communication M-I SWACO has concerning this  
 17 issue of the combination of the LCM as a  
 18 spacer?  
 19 A. I'm not -- I don't remember the  
 20 dates exactly, so I can't be sure that that  
 21 is the first one, but. . .  
 22 Q. Well, this is important, and I  
 23 want you to take your time, but --  
 24 A. Okay.  
 25 Q. I think over -- certainly  
 00506:01 yesterday and today and then before that when  
 02 we were all preparing for this deposition,  
 03 we've looked at these numerous times. I need  
 04 to know M-I SWACO's sworn testimony of  
 05 whether that April 16th, 8:00 a.m.  
 06 communication is the first writing known to  
 07 M-I SWACO regarding what's to be done with  
 08 the LCM pills that had been made up earlier  
 09 on the Deepwater Horizon.  
 10 A. Okay.

Page 506:12 to 506:17

00506:12 THE WITNESS: I couldn't tell you right  
 13 at the -- at this moment. I would have to go  
 14 back and -- again, I'm not -- I never did  
 15 look at them that way. I've looked at the  
 16 e-mails, but, again, I just don't know

17 exactly which one was the first one.

Page 506:19 to 506:24

00506:19 Q. Okay. Well, let me ask this,  
20 then. Do you have -- do you know of any  
21 e-mails before April 16th at 8:00 a.m. that  
22 deal with the disposition of the LCM  
23 materials that had been made up on the  
24 Deepwater Horizon in April 2010?

Page 507:01 to 507:03

00507:01 THE WITNESS: And, again, I haven't put  
02 these in a chronological order and looked at  
03 the dates, so I couldn't say precisely.

Page 507:05 to 508:19

00507:05 Q. Well, let me -- let me ask,  
06 because my time is very limited.  
07 A. Okay.  
08 Q. If, in reading this transcript,  
09 you learn of an earlier e-mail that was not  
10 provided in response to the deposition  
11 production of documents request, and there is  
12 an earlier e-mail that M-I SWACO has in its  
13 possession that predates April the 16th at  
14 8:00 a.m., I would like you to note that in  
15 your corrections for this transcript.  
16 A. Fair enough. We can do that.  
17 Q. Right. In looking -- and I'm on  
18 Exhibit -- I'm switched to 2810. Or I think  
19 I've switched. Here's 2810. It's another  
20 string that very bottom e-mail, the very  
21 first e-mail in the string starts with  
22 Doyle Maxie e-mailing to John LeBleu at  
23 8:04 a.m. on April 16th, 2010. So I'm going  
24 to start at the bottom and work my way up in  
25 time for this exhibit. Do you see the first  
00508:01 e-mail --  
02 A. Yes.  
03 Q. -- says, "John, we need to have  
04 a conversation about these pills."  
05 A. Yes.  
06 Q. All right. And then at least in  
07 this e-mail string, John LeBleu replies to  
08 Doyle Maxie at 8:40, 36 minutes later, and  
09 says he's contacted James Hoggan, and he says  
10 that since it -- "it" meaning the LCM  
11 material -- has not been in the well, we will  
12 have to send it for disposal. That was John  
13 LeBleu's reply to Doyle Maxie, right?

14           A.       Yes.  
 15           Q.       So at that point in time, at  
 16 8:40 a.m., you can tell that BP -- M-I SWACO  
 17 can tell that it's BP's intent at that point  
 18 in time to send the unused LCM to the beach,  
 19 right?

Page 508:24 to 509:16

00508:24           Q.       Did you understand my question?  
 25           A.       And I hate to make you repeat it  
 00509:01 again, but I just want to be sure I  
 02 understand. I don't quite understand.  
 03           Q.       Okay. Let's try again. You see  
 04 the words on paper here in the e-mail from  
 05 John LeBleu to -- returning -- you see it's a  
 06 reply to his e-mail about --  
 07           A.       Right. I understand that.  
 08           Q.       -- conversation. "And he says  
 09 since it has not been in the well, we will  
 10 have to send it in for disposal." Do you see  
 11 that, sir?  
 12           A.       Yes.  
 13           Q.       And that indicated to  
 14 Doyle Maxie that BP, meaning John LeBleu, at  
 15 that point in time, believed the material had  
 16 to be sent to the beach, correct?

Page 509:20 to 509:24

00509:20 THE WITNESS: He -- all he's saying is  
 21 that he talked to James Hoggan, and if it --  
 22 since it had not been in the well, it would  
 23 have to be sent in for disposal. That's the  
 24 way I read it.

Page 510:01 to 510:04

00510:01           Q.       And that's what that means.  
 02 Those words mean BP, Mr. LeBleu, at that  
 03 point in time, was proposing that the  
 04 material be sent to the beach for disposal?

Page 510:07 to 510:07

00510:07 THE WITNESS: I don't. . .

Page 510:09 to 517:24

00510:09           Q.       You don't know?  
 10           A.       I don't see that. I mean, I --  
 11 that's not the way I read it.

12 Q. Tell me again how you read it.  
13 A. It says, "I contacted  
14 James Hoggan, BP environmental specialist,  
15 and he said that since it has -- it has not  
16 been in the well, we will have to dispose --  
17 we will have to send it in for disposal."  
18 All he's saying, if it hasn't been in the  
19 well, you'll have to send it in for disposal.  
20 Q. Okay. Then let's turn to the  
21 next e-mail up. And this one is from  
22 Doyle Maxie to Andrew -- is it Wild or Wilde?  
23 A. Wilde.  
24 Q. Wilde. Okay. So in this  
25 string, the very next e-mail is same date,  
00511:01 Friday, April 16th, at 8:56 a.m., correct?  
02 A. Yes.  
03 Q. Okay. And just looking at the  
04 sentence in the middle of that short e-mail,  
05 it says, "Can we or would you recommend them  
06 to be used as spacers for displacement?" Did  
07 I read that right?  
08 A. Yes.  
09 Q. Okay. And the "we" -- this is  
10 an internal e-mail, not outside to BP. This  
11 is within M-I SWACO, right?  
12 A. It is.  
13 Q. Okay. So the internal  
14 discussion at this point is: What can we,  
15 M-I SWACO, recommend to BP, right, with  
16 regard to those LRM pills?  
17 A. That's correct.  
18 Q. Okay.  
19 A. That's what it says.  
20 Q. M-I SWACO is vetting that idea  
21 among the personnel in the company, right?  
22 A. Right.  
23 Q. Okay. And then we go up one  
24 more to Friday, April 16th at 9:22, just a  
25 half hour later. You see Andrew Wilde is  
00512:01 communicating with Doyle Maxie, right?  
02 A. Right.  
03 Q. And he says, among other things,  
04 "If you have not added the XL --" XL would be  
05 the cross-linking additive?  
06 A. That's correct.  
07 Q. "If you've not added the XL to  
08 the fluid, it should not set up, so that  
09 would be a great option." Do see that?  
10 A. Option, yes.  
11 Q. Great option. That's what  
12 Andrew Wilde was telling Doyle Maxie, right?  
13 A. Right.  
14 Q. Okay. And we go up one more,  
15 and you see -- again, this is an internal  
16 e-mail. Oops. Well, I'll -- I skipped one,

17 but now I see I have skipped it. We're now  
18 on the front page of Exhibit 2810, and we're  
19 going chronologically.

20 A. Okay.

21 Q. The next e-mail is April the  
22 16th at 9:25 a.m. from Andrew Wilde to  
23 Doyle Maxie again. And it says, "My  
24 suggestion would be to go for it." From M-I  
25 SWACO's standpoint, what does that sentence  
00513:01 mean, "My suggestion would be to go for it"?  
02 A. We made the suggestion that you  
03 could use this -- we could present this to BP  
04 and use this as a spacer.

05 Q. Okay. And then moving right  
06 along to the next point in time, Friday,  
07 April 16th at 9:29 a.m., we see another  
08 internal e-mail among M-I SWACO people,  
09 right?

10 A. Yes.

11 Q. And Doyle Maxie tells his  
12 colleagues, "Gentlemen, BP will not let us  
13 dump the water-based version of FAS and the  
14 FAS AK. I checked with Andrew about using --  
15 about using as displacement spacer and then  
16 go overboard after circulating it through  
17 wellbore, and he says okay. What are your  
18 thoughts?" Obviously the internal discussion  
19 continues, right?

20 A. Exactly. Exactly.

21 Q. And the internal decision is to  
22 make a suggestion to BP at this point that  
23 it's M-I SWACO's view that putting the --  
24 using the LCM as a spacer and then  
25 discharging overboard is a good suggestion?

00514:01 A. Yes, at this point, and then  
02 Doyle will continue to vet things out with  
03 the remaining people of the team, and when he  
04 comes together with all of his con- --  
05 either -- ideas or whatever it may be, then  
06 he would present that to BP. And I think he  
07 did that.

08 Q. And then it's up to BP whether  
09 to accept that suggestion?

10 A. You're right.

11 Q. But the team of people  
12 that was involved at M-I SWACO in evaluating  
13 that proposal included Timothy Armand,  
14 Andrew Wilde, Jamie Manuel, J.R. Smith, and  
15 then ultimately Leo Lindner, correct?

16 A. Yes.

17 Q. And it also included Doyle Maxie,  
18 correct?

19 A. Well, that's what I was going to  
20 say, you left out one.

21 Q. Yeah, I left out a keeper.



22 A. The one you were talking about.  
23 Q. Yeah, the project manager.  
24 A. Yeah.  
25 Q. And if you combine those  
00515:01 gentlemen's experience in the makeup of  
02 spacers and the constitution of LCM and the  
03 properties of drilling fluids, that level  
04 of -- those years of experience would add up  
05 to probably more than 100 years of combined  
06 experience in those materials?  
07 A. More than likely. More than  
08 likely.  
09 Q. Okay. And the oper- -- you saw  
10 the e-mail that talked about whether  
11 operational issues had been considered. You  
12 know what I'm talking about?  
13 A. Um-hum (affirmative response).  
14 Q. And those operational issues  
15 that were considered was whether the combined  
16 LCM as a spacer would have any detrimental  
17 clogging effect on the tool to be used to  
18 flow the material into the wellbore, right?  
19 A. Yes.  
20 Q. And that tool, in that e-mail  
21 was thought perhaps to be a stinger at the  
22 end of the drill string?  
23 A. Yes.  
24 Q. Is that a typical tool for the  
25 application in a displacement procedure of  
00516:01 the fluids, the spacer, the seawater, the  
02 displacement of the mud?  
03 A. I don't know if it's typical,  
04 but it could be used.  
05 Q. But at any rate, the orifices in  
06 some such bottom hole assemblies, the  
07 orifices could be, for example, as small as  
08 three-tenths of an inch, correct?  
09 A. Could be.  
10 Q. Okay. And it was M-I SWACO's  
11 understanding, based on the composition of  
12 those materials, without the cross-linking  
13 additive being added to the composition, that  
14 that aperture or that orifice size would not  
15 present a problem to this material being  
16 applied as a spacer to this application,  
17 correct?  
18 A. That's correct, because we run  
19 LCM while drilling in the -- what we call,  
20 like I mentioned yesterday, background -- we  
21 call it background LCM. We run a lot of  
22 concentrations -- high concentration of LCM,  
23 you know, in the -- in the drilling fluid  
24 itself while we're drilling.  
25 Q. Could I -- would I be fair to  
00517:01 say that this discussion in the morning on

02 April 16th among these expected experienced  
03 gentlemen, that the -- while the use of LCM  
04 materials as a spacer had not been previously  
05 done by M-I SWACO, that M-I -- at least from  
06 M-I SWACO's perspective, no red flags were  
07 being raised about any novelty or any  
08 unsuitability of these materials; fair to  
09 say?

10 A. Fair to say. Most of our people  
11 -- well -- we're aware of the make up of  
12 these pills, the products and, you know, the  
13 components. And, you know, again that's why  
14 they made their suggestion.

15 Q. Would you agree, based on your  
16 review of the materials and in your position  
17 as -- speaking on behalf of the company in  
18 this respect, that for this episode, this  
19 time period of April 16th and for the days  
20 thereafter, BP wasn't exerting any pressure  
21 on M-I SWACO to come up with a plan to save  
22 money or time, and that's why BP was pushing  
23 such a concept?

24 A. No. We felt no pressure.

Page 518:03 to 519:06

00518:03 Q. Do you agree that the M-I SWACO  
04 personnel who weighed in on this option of  
05 using the LCM as a spacer concurred in the  
06 use of the two LCM pills with the additives  
07 as a spacer for this displacement operation?

08 A. You kind of lost me with your  
09 question there.

10 Q. Yeah, I got a little long-winded  
11 there.

12 Did the gentlemen we discussed  
13 earlier, the M-I SWACO personnel, fair to say  
14 that they concurred in the suggestion that  
15 the two pills be combined and used as a  
16 spacer with the additives?

17 A. With the additives, you mean --

18 Q. The barite.

19 A. Ad the Duo-Vis?

20 Q. The Duo -- Duo --

21 A. Duo-Vis.

22 Q. Yeah. Say it again?

23 A. Duo-Vis.

24 Q. Duo-Vis. Thank you.

25 A. Yes.

00519:01 Q. Okay. None of these men and --  
02 from your perspective as speaking on behalf  
03 of M-I SWACO, did not foresee any risk of the  
04 spacer, as so composed, clogging up any part  
05 of the BOP?

06 A. No.

Page 519:12 to 519:16

00519:12 Q. The men we discussed earlier  
13 from M-I SWACO, those gentlemen concurred in  
14 making the suggestion of using the two pills  
15 as spacer for this displacement job, correct?  
16 THE WITNESS: Yes.

Page 519:18 to 519:21

00519:18 Q. And those gentlemen in M-I SWACO  
19 did not foresee any risk of that material  
20 clogging up any part of the BOP, correct?  
21 A. That's correct.

Page 519:24 to 521:07

00519:24 Q. Would -- tell us the  
25 significance of not adding the cross-linking  
00520:01 material to the pill, to the Form-A-Set  
02 material.  
03 A. If the cross-linking --  
04 Q. Form-A-Set AK material.  
05 A. Form-A-Set AK material. If you  
06 do not add the cross-linking material, then  
07 the pill could be mixed and stored and, you  
08 know, it can stay there for quite some time.  
09 It won't set up.  
10 Q. Okay. Does the -- does the  
11 setting or the sitting of these -- of either  
12 the Form-A-Set AK or the Form-A-Squeeze  
13 pills, does either of those have its  
14 viscosity reduced by biodegradation over  
15 time?  
16 A. It could over time.  
17 Q. Does -- would it be fair to say  
18 that the viscosity of either material doesn't  
19 increase over time just by sitting?  
20 A. These are water-based pills.  
21 And if one was to dry out, if you will, you  
22 know, over a long period of time, I guess you  
23 could say it would increase. But this will,  
24 you know --  
25 Q. Over the long haul, it would,  
00521:01 but in the short term, the biodegradation  
02 would thin it rather than thicken it?  
03 A. Yeah. The polymer would  
04 decompose, yeah.  
05 Q. And that would thin it rather  
06 than thicken it?  
07 A. That will thin it, yeah.

Page 521:11 to 522:12

00521:11 Q. Spacer is made of water,  
12 biopolymer -- spacer is constructed of water,  
13 biopolymer, and barite?  
14 A. Yes.  
15 Q. And Form-A-Set material is  
16 similar to just normal, ordinary spacers?  
17 A. Form-A-Set material contains  
18 a -- you know, a polymer, or blend of  
19 polymers, and, of course, the fine  
20 lost-circulation material.  
21 Q. Does -- in your experience, or  
22 M-I SWACO's experience, does BP routinely  
23 send unused materials to shore for  
24 appropriate disposal?  
25 A. I would think they do. You  
00522:01 know, on drilling rigs, I'm sure there's  
02 times when they clean out some tanks or pits.  
03 I mean, I'm sure they -- there is some waste  
04 on a drilling rig, you know, that has to go  
05 in for disposal.  
06 Q. You would agree, wouldn't you,  
07 that the e-mail traffic that you've reviewed  
08 on this subject does not show that there was  
09 pressure on M-I SWACO from BP to reuse -- or  
10 engage in this beneficial reuse rather than  
11 send it to the beach?  
12 THE WITNESS: I agree.

Page 522:23 to 523:22

00522:23 Q. Turning your attention back to  
24 the contractual issues that were discussed  
25 yesterday, I want to call your attention to  
00523:01 the incentives, the reward, penalty provision  
02 of the contract that, as I recall, M-I SWACO  
03 wasn't thrilled to enter into, but did enter  
04 into it. Correct?  
05 A. We did.  
06 Q. And the lost -- the lost  
07 returns, the lost fluid that formed the basis  
08 of that program created incentives to  
09 minimize lost fluids, correct?  
10 A. That was what I believed BP's  
11 intention was, yes.  
12 Q. Well, that's what you  
13 understood?  
14 A. Yes.  
15 Q. And M-I SWACO has the ability,  
16 the technical skills, if provided with  
17 information about the anticipated formation  
18 that drilling is penetrating, M-I SWACO can  
19 provide LCM, in advance, that will tend to  
20 reduce that possibility of lost returns when

21 entering that particular characteristic of  
22 the formation, right?

Page 523:24 to 523:24

00523:24 THE WITNESS: In some cases, yes.

Page 524:01 to 524:07

00524:01 Q. Do you agree, perhaps, that --  
02 well -- do you agree, sir, that the  
03 incentives to BP to avoid lost returns would  
04 be to give the mud engineer as much  
05 information as they could so that he could  
06 devise fluid makeup to potentially minimize  
07 lost returns?

Page 524:11 to 524:16

00524:11 Q. You can answer that.  
12 A. I believe so.  
13 Q. And that way, with M-I SWACO's  
14 assistance, both parties could minimize or  
15 have the opportunity to minimize lost --  
16 losses in the first place?

Page 524:18 to 524:21

00524:18 THE WITNESS: I believe that both  
19 parties work together, anyway, you know, with  
20 or without the incentive, like I said  
21 yesterday, to minimize losses.

Page 524:23 to 525:01

00524:23 Q. But the incentives certainly  
24 didn't de-incentivise BP in that respect,  
25 based on your understanding of that  
00525:01 provision?

Page 525:03 to 525:04

00525:03 THE WITNESS: Yeah. Based on my  
04 understanding, yes.

Page 525:06 to 526:03

00525:06 Q. Yeah. Now, I'm sort of stepping  
07 away from that question and going rather big  
08 picture on you. With the benefit of all the  
09 information that you've been able to gather,

10 the discussions with the M-I SWACO people,  
 11 including any discussions with Mr. Wilde, Mr.  
 12 Smith, Mr. Manuel, Mr. Lindner, Mr. Maxie,  
 13 does M-I SWACO believe it committed error in  
 14 suggestion -- in its suggestion of the use of  
 15 LCM as spacer for this displacement  
 16 operation?

17 A. No.

18 Q. Same question with a twist.

19 Does M-I SWACO believe that BP committed an  
 20 error in accepting M-I SWACO's suggestion  
 21 regarding the use of LCM as spacer for this  
 22 procedure?

23 A. We don't have opinion on that.

24 Q. Well, if M-I SWACO doesn't  
 25 believe it made a mistake in its suggestion,  
 00526:01 you're stating that M-I SWACO has no position  
 02 on whether BP made a mistake in accepting M-I  
 03 SWACO's suggestions?

Page 526:06 to 526:09

00526:06 Q. You can answer that.

07 A. I don't think BP made a -- made  
 08 a mistake in accepting our recommendation to  
 09 use that spacer.

Page 526:12 to 526:16

00526:12 Q. I think I understand. So fair  
 13 to say that M-I SWACO's position, and you as  
 14 a 30(b)(6) witness for M-I SWACO, do not cast  
 15 any blame on BP for accepting that suggestion  
 16 of using LCM as spacer in this application?

Page 526:19 to 526:20

00526:19 THE WITNESS: As using that spacer,  
 20 yes.

Page 528:16 to 528:19

00528:16 Q. If I were to come to you and I  
 17 would ask you to tell me what is a suitable  
 18 spacer for that purpose, what would you tell  
 19 me?

Page 528:21 to 528:25

00528:21 THE WITNESS: I would tell you that it  
 22 would have to be viscous, of course, and,  
 23 again, the rule -- or the practice is to

24 weight it up, to have a density of 2 pounds  
25 per gallon over the mud weight.

Page 529:21 to 530:20

00529:21 Q. Okay. All right. Now, if I  
22 were to ask you to give me a suitable spacer  
23 for a displacement procedure that I had --  
24 I'm contemplating with regard to a temporary  
25 abandonment, would you, in that case,  
00530:01 volunteer that the suitable spacer should be  
02 made up of a combination of Form-A-Set and  
03 Form-A-Squeeze?  
04 MS. SCOFIELD: Objection to form.  
05 THE WITNESS: No.  
06 BY MR. BRUNO:  
07 Q. No. And why is that?  
08 A. Well, if we were building -- if  
09 we had no options and were building one from  
10 scratch --  
11 Q. Right.  
12 A. We would build it with the  
13 biopolymer, water, and barite.  
14 Q. All right. And I -- again, not  
15 trying to be difficult with you, but with  
16 regard to the use of the word "suitable," the  
17 combination Form-a-Set/Form-a-Squeeze was not  
18 a suitable spacer, it was an acceptable  
19 spacer, according to your company. Isn't  
20 that more accurate?

Page 530:22 to 530:23

00530:22 THE WITNESS: I feel it was -- it was  
23 both. It was suitable and acceptable.

Page 531:07 to 532:11

00531:07 Q. And I got a definition for  
08 "suitable." The one I found was the  
09 following: "It's right or appropriate for a  
10 particular person or situation." Would you  
11 agree with me that that's a reasonable  
12 definition for the word "suitable"?  
13 MS. SCOFIELD: Objection to form.  
14 THE WITNESS: Yes.  
15 BY MR. BRUNO:  
16 Q. Sure.  
17 A. Yes.  
18 Q. Okay. So it's appropriate for  
19 the situation. Which is pretty much what  
20 you've told me.  
21 A. Exactly.

22 Q. And appropriate for the  
 23 situation in this case would have been  
 24 something viscous, something weighted of an  
 25 appropriate volume, correct?  
 00532:01 A. That's correct.  
 02 Q. Right. So it would not have  
 03 been to select Form-a-Set/Form-a-Squeeze --  
 04 MS. SCOFIELD: Object --  
 05 BY MR. BRUNO:  
 06 Q. -- that would not have been what  
 07 you would have chosen as a suitable spacer;  
 08 isn't that true?  
 09 MS. SCOFIELD: Objection to form.  
 10 THE WITNESS: No. If we had to build  
 11 one from scratch, no.

Page 533:14 to 534:02

00533:14 Q. Now, what I was trying to  
 15 confirm was whether or not the procedure that  
 16 is outlined on those documents was, in fact,  
 17 the procedure intended to be utilized to use  
 18 the Form-a-Set/Form-a-Squeeze combination as  
 19 a spacer in the displacement of the riser,  
 20 contemplating that there would be, at the  
 21 same or similar time, a negative test  
 22 conducted.  
 23 MS. SCOFIELD: Objection to form.  
 24 THE WITNESS: This procedure was  
 25 probably number two. There was an earlier  
 00534:01 procedure, which didn't have a negative test  
 02 mentioned into it.

Page 536:16 to 537:25

00536:16 Q. All right. Now, what is your  
 17 understanding of the role, if any, that this  
 18 exhibit number played -- Exhibit No. 2820 --  
 19 MR. BRUNO: Was it 2820?  
 20 MS. SCOFIELD: 2821.  
 21 BY MR. BRUNO:  
 22 Q. 2821, I'm sorry. -- played with  
 23 regard to the change of the procedure from  
 24 one to the other?  
 25 A. It is my understanding that this  
 00537:01 communication initiated the change in the  
 02 displacement procedure.  
 03 Q. Great. Now, would you share  
 04 with us exactly what is the change in the  
 05 procedure? What is different between the  
 06 procedure previous to this ops note versus  
 07 the procedure that was, we believe,  
 08 ultimately utilized?  
 09 A. The fact that they were going to



10 do a -- the fact that they were going to do a  
11 negative test in the middle of the  
12 displacement.

13 Q. Is that the only change? Did  
14 the pump strokes, did the location of the  
15 spacer change in any way?

16 A. Let me be sure I'm looking at  
17 the -- I'm just comparing the two here.

18 Q. Let me get this out of your way,  
19 though. Those two and that. Yeah.

20 A. In the initial displacement, you  
21 wouldn't have stopped. The spacer would not  
22 have been parked, as they refer to it, you  
23 know, above the BOP. But other than that,  
24 the volume, you know, should have been the  
25 same.

Page 549:20 to 550:04

00549:20 Q. And I think you -- in response  
21 to questions by Mr. Haycraft, you said, well,  
22 you know, at least 200, but more than that's  
23 not a problem. Right?

24 A. Right.

25 Q. Now, it's not a problem, but the  
00550:01 fact is that the larger the volume -- the  
02 larger volume may produce a different  
03 location for the bottom and/or the top of the  
04 spacer?

Page 550:06 to 550:10

00550:06 BY MR. BRUNO:

07 Q. Isn't that true?

08 A. As compared to a smaller spacer?

09 Q. Yes.

10 A. Yes.

1	CORRECTION PAGE			
2	WITNESS NAME: BRAD BILLON DATE: 06/24/11			
3	PAGE	LINE	CHANGE	REASON
4	458	6	"pollutants" to "contaminants"	Reporter error
5	464	19	"That as" to "That is"	Reporter error
6	466	16	"approval the" to "approve of the"	Reporter error
7	491	19	"reload" to "use"	Reporter error
8	548	12	"wanted" to "want"	Reporter error
9	548	12	"in" to "and"	Reporter error
10	548	21	"wellbore to see" to "wellbore hydrostatic to see"	Reporter error
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