

Deposition Testimony of:

Doyle Maxie

Date: November 4, 2011

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Page 9:13 to 9:15

00009:13 DOYLE WAYNE MAXIE
14 was called as a witness by the Plaintiffs and,
15 being first duly sworn, testified as follows:

Page 10:03 to 11:13

00010:03 Q. Let's start with some easy ones, then.
04 Would you please tell us for whom you are -- you
05 work or who -- by whom are you employed?
06 A. I'm employed by M-I SWACO, a Schlumberger
07 company.
08 Q. All right. And what is your job title?
09 A. My job title is Project Engineer 3.
10 Q. All right. What was your job title at
11 the time of the catastrophe on April 20th, 2010?
12 A. Project Engineer 3.
13 Q. All right. Same job title then, correct?
14 A. Yes.
15 Q. Okay. Would you tell us, what does a
16 Project Engineer 3 do?
17 A. Project Engineer 3 works -- I'm
18 in-house -- I was in-house with BP. I prepare
19 Fluid Proposals for BP. I monitor the Daily
20 Activity of reports that come in from the rig. I
21 talk to my Fluid Specialists on the rig, daily,
22 help them facilitate with logistics, getting
23 product to the rig. I prepare VIRTUAL
24 HYDRAULICS, at BP's request, during the course of
25 the -- drilling the well. That's the major
00011:01 function of my duties.
02 Q. All right. Great. Now, when you say
03 "in-house," share with us, please, and for the
04 record, what does that mean?
05 A. That means I'm assigned to the BP
06 account.
07 Q. All right. Does that mean you're
08 physically located at their offices, or are
09 you --
10 A. In and out.
11 Q. In and out?
12 A. Yes, sir.
13 Q. Okay.

Page 11:18 to 14:11

00011:18 Q. (By Mr. Bruno) -- from which location do
19 you generally do what you do as a Project
20 Engineer 3?
21 A. I don't -- I don't understand.
22 Q. In other words, where are you physically
23 located back in April of 2010?
24 A. In Houston, Texas.

25 Q. All right. In what offices precisely?
00012:01 A. BP offices.
02 Q. All right. So you're physically located
03 in their offices?
04 A. Yes.
05 Q. Okay. Now, again, for -- for the record,
06 generally, what does SWACO do for BP,
07 specifically with regard to the Macondo Well --
08 or what did --
09 A. M-I SWACO?
10 Q. Yeah.
11 A. We provide fluids used in the drilling of
12 the well. We provide technical assistance based
13 on fluid properties --
14 Q. All right.
15 A. -- in the fluids that we use.
16 Q. All right. What kinds of fluids do you
17 provide?
18 A. In this particular case, it was RHELIANT
19 Fluid System, synthetic-based mud.
20 Q. All right. Do you provide other kinds of
21 materials?
22 A. We provide the chemicals and products
23 associated with maintaining the fluids on the
24 rig.
25 Q. Okay. How about materials like
00013:01 FORM-A-SET or FORM-A-SQUEEZE?
02 A. FORM-A-SET AK.
03 Q. Yes.
04 A. And FORM-A-SQUEEZE are M-I SWACO
05 products --
06 Q. All right. But --
07 A. -- that we provided to BP.
08 Q. Yeah. I'm sorry. I -- I -- what I was
09 trying to get at --
10 A. Okay.
11 Q. -- was, would you put those in the
12 category of drilling fluids, or would you put
13 those in the categories of chemicals? I'm just
14 trying to understand the full scope of the
15 materials that M-I SWACO provides to BP -- or
16 provided to BP in the context of the Macondo
17 Well.
18 A. The FORM-A-SET AK and the FORM-A-SQUEEZE
19 are lost circulation pills provided to BP.
20 Q. Okay. What is a "lost circulation pill"?
21 A. A lost circulation pill, when you --
22 when losses are experienced while drilling the
23 well, a fluid loss pill can be mixed, and
24 spotted, and may or may not alleviate the losses
25 to the wellbore.
00014:01 Q. Okay. Now, forgive me. I have a couple
02 of questions -- with regard to those -- those
03 issues.
04 First of all, you said FORM-A-SET AK.

05 There are -- there's another product called
06 FORM-A-SET, is there not?
07 A. Yes.
08 Q. All right. Do I gather from your
09 responses that you don't sell the FORM-A-SET?
10 A. We did not provide FORM-A-SET on the
11 Macondo Well.

Page 15:04 to 15:07

00015:04 Q. -- let me ask it this way: Whose
05 decision was it to provide the FORM-A-SET AK as
06 opposed to the FORM-A-SET? Was it SWACO's or was
07 it BP's?

Page 15:09 to 16:08

00015:09 A. M-I SWACO recommended the product.
10 Q. (By Mr. Bruno) Okay. Here we go. Now,
11 who at SWACO recommended the product? Was that
12 you or was that somebody else?
13 A. Myself was involved in the process.
14 Q. Okay.
15 A. There were several individuals that
16 recommended this product.
17 Q. Okay. When you say "several
18 individuals," are they --
19 A. At M-I SWACO.
20 Q. At SWACO?
21 A. Yes, sir.
22 Q. Okay. Could you share with us what it is
23 about the FORM-A-SET AK that makes it a superior
24 product to the FORM-A-SET?
25 A. The FORM-A-SET AK was designed so it can
00016:01 be mixed ahead of time, and kept in the pits. So
02 when it's needed, it can be pumped. That could
03 be two, three weeks. And when it's used, the --
04 the XL, which is the crosslinker, can be added at
05 the time the pill is being pumped for the
06 purposes it's being pumped --
07 Q. All right.
08 A. -- to stop losses.

Page 17:04 to 18:09

00017:04 Q. So I assumed, perhaps incorrectly, that
05 it was the speed with which one could use the
06 pill, that is, the AK, that made it the more
07 desirable product over the FORM-A-SET product.
08 A. FORM-A-SET -- yes. Yes.
09 Q. Okay.
10 A. FORM-A-SET AK could be mixed in advance,
11 before using, to be held in the ca -- event of

12 losses.
 13 Q. All right. Is it -- was it your -- and
 14 you participated in these discussions?
 15 A. Yes.
 16 Q. Okay. All right. Do I gather, then,
 17 that there was some concern expressed by someone,
 18 okay, that there was likely going to be loss of
 19 mud on this particular well which would
 20 necessitate the use of the pill?
 21 A. The decision was made at the first lost
 22 circulation event on Macondo. That's when we
 23 decided to use the FORM-A-SET AK.
 24 Q. All right. So it was the fact of the --
 25 of a loss of material that provoked the
 00018:01 discussion about pills, generally, is --
 02 A. The loss --
 03 Q. -- that fair?
 04 A. -- of fluid.
 05 Q. Loss of fluids.
 06 A. (Nodding.)
 07 Q. Okay. And that, for the record, was in
 08 February of '10?
 09 A. Yes.

Page 18:16 to 18:19

00018:16 All right. So loss of fluid is something that's
 17 generally expected when one drills a well in the
 18 Gulf; isn't that true?
 19 A. In an exploration well, yes.

Page 19:14 to 20:04

00019:14 Q. Okay. Do you recall, in your discussions
 15 about an appropriate lost circulation pill or
 16 lost circulation material, after lost circulation
 17 event in February, what considerations were
 18 discussed about the choice for a lost circulation
 19 material?
 20 A. The losses we were experiencing were --
 21 were what BP would categorize as catastrophic
 22 losses. This was the product that gave us the
 23 best choice that -- that -- well, this was a
 24 product that we discussed would -- was -- was our
 25 best choice at the time to stop the losses -- to
 00020:01 try and stop the losses.
 02 Q. All right.
 03 A. We had tried several other conventional
 04 LCM without stopping the losses.

Page 20:09 to 20:18

00020:09 Do you know whether or not, in fact, BP

10 characterized the loss of mud in February as
11 "catastrophic"?
12 A. I don't recall.
13 Q. Okay. All right. Just share with us,
14 then, what information that you had available to
15 you back in February, March, or April of 2010,
16 which allows you to believe that BP would have
17 characterized the loss that they experienced in
18 February, as a catastrophic loss?

Page 20:20 to 21:04

00020:20 A. In my Fluid Program, we include BP's Best
21 Practices for lost circulation.
22 Q. (By Mr. Bruno) Okay.
23 A. And they categorize the -- the separate
24 losses. I don't recall exactly what they
25 categorize, but over a hundred barrels an hour
00021:01 only as catastrophic losses.
02 Q. Okay. All right. Fair enough. So you
03 had their book, if you will, which described what
04 a catastrophic loss was?

Page 21:06 to 21:06

00021:06 Q. (By Mr. Bruno) Is that correct?

Page 21:09 to 21:24

00021:09 A. Yes.
10 Q. (By Mr. Bruno) All right. I'm calling it
11 a book, you called it something else. Let's --
12 let's be specific about what -- you called it
13 their --
14 A. Insert.
15 Q. It's an insert?
16 A. Yes.
17 Q. Okay. What is an insert?
18 A. It's a document given to me that I insert
19 into my program.
20 Q. Okay.
21 A. I don't recall how many pages it is, but
22 it's in my program.
23 Q. But it is a BP document; is that
24 accurate?

Page 22:01 to 22:01

00022:01 A. Yes.

Page 22:25 to 25:13

00022:25 Q. (By Mr. Bruno) All right. Do you recall
00023:01 any suggestion that the SWACO Personnel onboard
02 the HORIZON were not mixing the pills
03 appropriately; that is, those pills that were
04 being used to attempt to stop the loss of
05 materials in -- at the February event?
06 A. Can you be a little more specific on
07 which pill? We pumped several pills.
08 Q. Okay. Fair enough.
09 A. Okay.
10 Q. Any of the pills.
11 A. I'll start with our first pill we pumped,
12 the FORM-A-SQUEEZE.
13 Q. That's fine.
14 A. We mixed the pill, we pumped it, no
15 success in -- in stopping the losses. We mixed
16 the first FORM-A-SET AK pill.
17 Q. The second?
18 A. The second.
19 Q. Okay.
20 A. This is the second pill we pumped.
21 Q. Okay.
22 A. There were some mixing issues with the
23 second pill. The -- we formulated a formulation
24 for the pill, and the temperature was not what we
25 expected in the pits. When we added the
00024:01 crosslinker, the XL, the pill was getting thick.
02 The XL was crosslinking the pill.
03 Q. Too soon?
04 A. Too -- too soon, because of the heat.
05 Q. Okay.
06 A. The pill was formulated for a hundred
07 degrees, and the temperature in the pit was a
08 hundred and thirty.
09 Q. All right.
10 A. So they pumped the pill. Didn't have any
11 problems with -- with the pill going in the pipe,
12 going down, it just did not set up properly. It
13 was not successful in stopping the losses.
14 Q. Okay. Now, are you aware of any
15 criticism made by anyone about how that pill was
16 mixed?
17 A. I'm sure I was questioned about the pill
18 from John LeBleu.
19 Q. Right. And John had expressed some
20 dissatisfaction with regard to his perception
21 that Mr. Lindner wasn't mixing it properly; isn't
22 that correct?
23 A. That's correct.
24 Q. All right. Now, in fact, in your
25 opinion, did Mr. Lindner mix the pill properly?
00025:01 A. Mr. Lindner mixed the pill properly based
02 on the formulation, the initial formulation. The
03 temperature was overlooked. It started setting
04 up early.

05 Q. All right. Whose responsibility was it
06 to monitor the temperature?
07 A. We based the temperature -- the pill --
08 the pill is formulated on a bottomhole
09 circulating temperature. At that time it was
10 between 85 and a hundred degrees, and that's what
11 the formulation was on the pill. And we
12 overlooked the temperature in the pit.
13 Q. Okay. So did Mr. Lindner make a mistake?

Page 25:15 to 26:08

00025:15 A. No.
16 Q. (By Mr. Bruno) Okay. And that's because
17 he was advised that the temperature was going to
18 be less than a hundred; is that correct?
19 A. He mixed the pill according to the
20 formulation that we sent -- that was sent to the
21 rig.
22 Q. Okay.
23 A. That -- excuse me, that everyone agreed
24 on. We all looked this over and agreed on it,
25 and --
00026:01 Q. Now, when you say "we all" --
02 A. Oh, excuse me.
03 Q. -- who's "we all"?
04 A. BP and M-I SWACO.
05 Q. All right. So BP was intimately involved
06 with regard to the decision to use the
07 FORM-A-SET AK first, correct?
08 A. Yes.

Page 26:10 to 26:11

00026:10 Q. (By Mr. Bruno) BP was intimately involved
11 and had knowledge of the mixing procedure?

Page 26:13 to 26:18

00026:13 A. Yes.
14 MR. TANNER: Let him finish.
15 Q. (By Mr. Bruno) Okay. And BP would have
16 had knowledge and information about the
17 conditions under which the pill was going to be
18 mixed; isn't that correct?

Page 26:20 to 26:23

00026:20 A. Yes.
21 Q. (By Mr. Bruno) And BP would have
22 knowledge of the conditions under which the pill
23 was going to be pumped into the well --

Page 26:25 to 27:01

00026:25 Q. (By Mr. Bruno) -- isn't that true?
00027:01 A. They would have had knowledge.

Page 27:10 to 28:01

00027:10 Q. All right. M-I SWACO has employees on
11 the rig, correct?
12 A. Yes.
13 Q. All right. And at that time, do you
14 recall how many employees SWACO had on the
15 HORIZON?
16 A. I don't recall the total number.
17 Q. All right. Do you recall the names of
18 any personnel that were onboard the HORIZON?
19 A. Leo Lindner and Steve Johnson.
20 Q. And Steve Johnson. Okay.
21 What -- what is Mr. Lindner's job title?
22 A. I don't recall what his title is.
23 Q. Okay. What was his function?
24 A. He was a Fluid Specialist on the rig.
25 Q. Okay. How about Mr. Johnson?
00028:01 A. Mr. Johnson was also a Fluid Specialist.

Page 29:04 to 31:06

00029:04 Q. All right. Describe for us what the
05 decision process might have been or was, I should
06 say, with regard to the decision to use the
07 FORM-A-SET AK? Was it merely a phone call
08 between you and Leo, or were there other folks
09 involved in that discussion?
10 A. As I stated earlier, there were other
11 folks involved in that discussion.
12 Q. All right. And did that take place on --
13 on -- on one call or discussion or was it more
14 than one?
15 A. I don't recall the -- the -- the number
16 of discussions. I was in -- in-house with BP at
17 the time, so I mean, I could talk to John LeBleu
18 and -- and others daily, but I don't recall
19 the -- the conver -- all the conversations we
20 had.
21 Q. All right. You at least recall that
22 there were some conversations about the use of
23 the FORM-A-SET AK pill, correct?
24 A. Yes, yes.
25 Q. All right. And you can recall
00030:01 specifically having spoken to Mr. LeBleu?
02 A. Yes.
03 Q. And anybody else, about this particular
04 issue?

05 A. I don't recall.
 06 Q. Okay. But you do recall speaking to
 07 Mr. LeBleu?
 08 A. Mr. LeBleu is my direct contact at BP.
 09 Q. All right.
 10 A. He was their Fluid Specialist.
 11 Q. And is he in-house in the same office as
 12 you?
 13 A. He's in -- he's in the same building.
 14 Q. Same building?
 15 A. Yes, sir.
 16 Q. Okay. So when you communicate to him, do
 17 you communicate by phone or you see him
 18 face-to-face?
 19 A. Face-to-face.
 20 Q. Okay. All right. Would there have been
 21 a writing which would have indicated the mixing
 22 procedure, as well as the presumed temperatures
 23 for the FORM-A-SET AK?
 24 A. A writing?
 25 Q. Something black-and-white, written down?
 00031:01 A. Yes.
 02 Q. Okay. And would Mr. LeBleu have seen
 03 that?
 04 A. Yes.
 05 Q. Okay. And he would have obviously
 06 approve -- approved that?

Page 31:08 to 32:06

00031:08 Q. (By Mr. Bruno) Is that correct?
 09 A. Yes.
 10 Q. Okay. Now, that second attempt to stop
 11 the loss of circulation failed, correct?
 12 A. Yes.
 13 Q. All right. What did you guys do next?
 14 A. The next pills that were pumped after
 15 these two did not yield results was a Turbo-Chem
 16 E Z Squeeze pill and a Turbo-Chem SwellLCM pill.
 17 Q. Were they pumped together or was
 18 this number three and number four?
 19 A. It was a Turbo-Chem product -- I'm sorry,
 20 I can't an -- I -- I can't answer how they
 21 were -- they were pumped.
 22 Q. All I'm trying to understand is --
 23 A. Okay.
 24 Q. -- was this the third attempt or was this
 25 the third and fourth attempt?
 00032:01 A. Oh, this was the third attempt with
 02 specialty pills.
 03 Q. Understand. Okay.
 04 A. Okay.
 05 Q. All right. Did that work?
 06 A. Did not.

Page 32:17 to 33:16

00032:17 Q. (By Mr. Bruno) All right. All right.
 18 Now, when that failed, what -- what did you do
 19 next or what did the Group do next?
 20 A. The Group -- BP and M-I SWACO had a
 21 meeting that morning. My boss, Mr. Rafferty,
 22 came over to BP, and we had a meeting that
 23 morning in the conference room, and we decided
 24 that we were going to pump what is called the
 25 tandem pill, FORM-A-SQUEEZE, FORM-A-SET AK.
 00033:01 Tandem pill.
 02 Q. Okay. Was a procedure drawn up or
 03 written up or typed up --
 04 A. The procedure --
 05 Q. -- that described --
 06 A. -- was typed up --
 07 MR. TANNER: Hold on.
 08 Q. (By Mr. Bruno) Let me finish the
 09 question.
 10 A. Yes. I apologize. I apologize.
 11 Q. That's okay.
 12 Was a procedure written up describing the
 13 mixing of these pills and how these pills
 14 would -- were to be pumped into the well?
 15 A. Yes.
 16 Q. All right. And was that approved by BP?

Page 33:18 to 34:10

00033:18 A. It was submitted to BP for review and
 19 approval.
 20 Q. (By Mr. Bruno) All right. Was it, in
 21 fact, approved?
 22 A. Yes.
 23 Q. By whom?
 24 A. John Guide, Brian Morel, Mark Hafle, John
 25 LeBleu.
 00034:01 Q. Okay. And did that pill work?
 02 A. This pill was mixed correctly and
 03 successfully cured the losses in the wellbore.
 04 Q. Okay. All right. Now, I take it, then,
 05 that there were discussions after this event
 06 regarding what types of pills should be
 07 considered for use in the event that such a lost
 08 circulation event be encountered in the future.
 09 Is that accurate?
 10 A. Yes.

Page 34:20 to 35:01

00034:20 Q. (By Mr. Bruno) Yes, sir, of course.
 21 Based upon the fact that there had been

22 this catastrophic loss of drilling fluids that
 23 occurred in about February, okay, did that fact
 24 standing alone, okay, that it -- suggest that
 25 there was the potential that that -- or something
 00035:01 like that might occur again?

Page 35:03 to 35:15

00035:03 A. No.
 04 Q. (By Mr. Bruno) Okay.
 05 A. It's an exploration well.
 06 Q. Would you --
 07 A. You don't know. You don't know what
 08 you're drilling into --
 09 Q. Right.
 10 A. -- at all times.
 11 Q. Right. Well, if you don't know, then you
 12 need to -- one would suspect that you would need
 13 to prepare for the possibility that it might
 14 occur again?
 15 A. Yes.

Page 36:09 to 37:16

00036:09 Q. Okay. And so what I'm -- I'm just
 10 wondering as a -- a nonexpert, is -- is this:
 11 You had this event in February. There's a
 12 discussion about what kinds of pills ought to be
 13 available for use on the rig, and what is
 14 selected is a material which could be mixed two
 15 weeks in advance, which would suggest to me, a
 16 mere outsider looking in, that you wanted
 17 something that would be ready and available to be
 18 pumped in the event that there was a lost
 19 circulation event that occurred. Am I accurate?
 20 A. I understand your question.
 21 Q. Okay. So now can you answer it?
 22 (Laughter.)
 23 A. There was a discussion held --
 24 Q. (By Mr. Bruno) Right.
 25 A. -- after this pill was successful that we
 00037:01 would keep the FORM-A-SET AK, along with the
 02 Turbo-Chem products, on the rig for any other
 03 lost circulation events that might occur.
 04 Q. Okay. Now -- and what I'm trying to
 05 differentiate, Mr. Maxie, is whether or not it
 06 was the fact of the February event that provoked
 07 that decision, or do rigs always have these kinds
 08 of pills onboard for use in the event of a lost
 09 circulation event? Did you understand that
 10 question?
 11 A. Yes.
 12 Q. Okay.
 13 A. Because of the success of mixing the

14 pill, it was decided to have those pill -- that
 15 pill readily available if we encountered any more
 16 losses.

Page 38:03 to 38:11

00038:03 Q. All right. But in any event, decision is
 04 made to have the FORM-A-SET FORM-A-SQUEEZE
 05 materials available, as well as the Turbo
 06 material available --
 07 A. (Nodding.)
 08 Q. -- correct?
 09 A. Yes.
 10 Q. All right. And that decision was made in
 11 conjunction with the BP personnel?

Page 38:13 to 38:16

00038:13 A. Yes.
 14 Q. (By Mr. Bruno) All right. And that was
 15 approved by John Guide, a -- as well as other BP
 16 personnel; isn't that true?

Page 38:18 to 38:18

00038:18 A. Yes.

Page 41:04 to 42:11

00041:04 Q. -- did you all pump any lost circulation
 05 material into the well after the lost circulation
 06 event in February but before the catastrophe on
 07 April the 20th?
 08 A. Yes.
 09 Q. All right. And when was that?
 10 A. I don't recall the exact date, but around
 11 the first of April --
 12 Q. Okay.
 13 A. -- the first week, two weeks of April.
 14 Q. All right.
 15 A. April 6th, April 7th.
 16 Q. Was there an occasion when between
 17 April 1, or the -- or whatever date you were
 18 contemplating in your head, and April 20th where
 19 you pumped lost circulation materials?
 20 A. I don't recall if we had -- when we
 21 experienced the lost circulation event, I don't
 22 recall if we had it mixed ahead of time then; the
 23 first pill we pumped, the first pill we pumped
 24 cured the losses.
 25 Well, let me back up. The first pill we
 00042:01 pumped, they pumped it, they set it, they opened
 02 up -- they were still experiencing 20 barrel

03 losses down from roughly 400 --
04 Q. M-h'm.
05 A. -- approximately 400. So they mixed
06 another pill. The decision was made to go ahead
07 and mix another one. We were going to pump
08 another one. When they started to pump the
09 second one, they gained full returns. So that
10 second pill that they mixed was not used in the
11 lost circulation event.

Page 43:03 to 44:21

00043:03 Q. -- was it mixed before the lost
04 circulation event or mixed after the lost
05 circulation event?
06 A. I don't recall if the first pill was
07 mixed before the lost circulation event.
08 Q. But we do know the second pill was mixed
09 after the lost circulation event?
10 A. Yes.
11 Q. Okay. And so it -- I'm sorry?
12 A. During the lost circulation event.
13 Q. During?
14 A. Yes.
15 Q. Okay. Fair enough.
16 And the second pill was not used?
17 A. The second pill was not used.
18 Q. All right. Now, I'm a little confused,
19 because when we started this conversation, I
20 asked you what characteristic about these
21 FORM-A-SET AK made it the more desirable choice,
22 and I thought you told me it's because it could
23 be mixed in advance, up to two weeks in advance.
24 Okay? You recall that?
25 A. Yes.
00044:01 Q. All right. So I'm just trying to
02 understand if, in fact, they didn't premix the
03 material, all right, why was that a
04 consideration, if not an important consideration,
05 with regard to the selection of the FORM-A-SET AK
06 in the first place?
07 A. That was one of the benefits. The other
08 benefits is you can keep it and add accelerator
09 to it and pump it down wellbore, and it will give
10 you -- it -- it sets up as a gel when the
11 crosslinker is added to it to give you lost --
12 to help --
13 Q. Sure.
14 A. -- maybe cure the lost circulation.
15 Just because it's a benefit doesn't mean
16 you have to mix it in advance.
17 Q. Right.
18 A. It can be if you're experiencing great
19 amounts of losses, okay --
20 Q. I hear you.

21 A. -- one right after the other.

Page 45:02 to 45:05

00045:02 Q. (By Mr. Bruno) All right, sir. We're
03 going to go to No. 1, which is an E-mail from you
04 dated Thursday, April 1, to Mr. LeBleu, among
05 others. It is Bates number M-I 2479.

Page 46:01 to 46:03

00046:01 MR. BRUNO: And we're going to mark
02 this as Exhibit 7600.
03 (Exhibit No. 7600 marked.)

Page 47:09 to 48:03

00047:09 Q. Okay. Can you tell me what is meant by
10 "Emergency pill" in the context of this E-mail?
11 A. In the flow program, we keep -- and --
12 and on the rig, we keep a certain amount of LCM
13 built ahead of time, which is synthetic-based
14 fluid and lost circulation materials in it, 84
15 pounds per barrel.
16 Q. Okay.
17 A. This is just -- this is the first line --
18 if you experience losses, this would be the first
19 pills we pump.
20 Q. All right. Now, do I gather from that,
21 then, that there is, customarily, onboard a rig
22 that's doing an explore -- exploratory well, a
23 certain amount of emergency pill material?
24 A. Yes.
25 Q. Is that generally true?
00048:01 A. Generally true, yeah. Yes.
02 Q. We know it's true here on the Macondo?
03 A. Yes.

Page 48:09 to 50:08

00048:09 Q. Okay. All right. And -- and how much of
10 this emergency pill material is customarily mixed
11 and available onboard for use in an emergency
12 circumstance?
13 A. Depending on what pit they decide to
14 build it in, it could from two to 400 barrels.
15 Q. All right. Now, if this material is not
16 used, how do you dispose of it, an emergency
17 pill?
18 A. This is conventional LCM. This is the
19 same LCM that we run background through the whole
20 system while we're drilling. It's just screened
21 out. At the end of the well, we -- we will -- we

22 will pump this and screen it out through the
 23 shakers, pump it from the pit to the shaker,
 24 screen this lost circulation material out of the
 25 fluid.

00049:01 Q. All right. Bottom line is: There's no
 02 need to dispose of it, correct?
 03 A. That's correct.

04 Q. And what do you do with the material that
 05 is removed through the use of the shaker?
 06 A. It is dried, through the dryer. It goes
 07 through the normal drying of cuttings and
 08 discharged.

09 Q. Okay. Discharged as normal?
 10 A. As -- as normal operating under the --
 11 yes.

12 Q. Okay. Can it be thrown overboard?
 13 A. No, sir.

14 Q. Okay. Do you know how it's disposed of,
 15 the -- the material that's removed from the
 16 shaker?
 17 A. It goes through the shunt line.

18 Q. Okay.

19 A. It goes through a -- it is -- it's not
 20 thrown overboard. It goes through the normal
 21 process of drying cuttings and removing the
 22 synthetic-based mud from them so they can be
 23 discharged as permitted.

24 Q. Into the water?
 25 A. In -- into the water.

00050:01 Q. Well, which means it's thrown overboard,
 02 right? I mean it's not --
 03 A. I don't like the term "thrown overboard."
 04 Q. Okay. That's fair enough.

05 A. Okay.

06 Q. But it's pumped -- it's pumped through a
 07 hose into the water?
 08 A. Yes.

Page 52:11 to 52:13

00052:11 MR. BRUNO: -- 7601 and is, in fact,
 12 M-I 2472, and it consists of a series of E-mails.
 13 (Exhibit No. 7601 marked.)

Page 52:20 to 54:07

00052:20 Q. Can you tell us what's going on here?
 21 A. This is a conversation between myself and
 22 Ron Domangue, our Warehouse Manager --
 23 Q. All right.

24 A. -- talking about keeping enough LCM in
 25 the warehouse readily available for us to order
 00053:01 to the rig.

02 Q. All right. And I note you say: "We will

03 be drilling a critical section" in "the next few
 04 days."
 05 What -- what did you mean by that?
 06 A. I don't recall exactly what the -- the
 07 next -- the next interval we were drilling at
 08 this -- I -- it's -- it's been two years. I
 09 don't recall exactly what was going on at this
 10 time, based on this E-mail.
 11 Q. I understand.
 12 A. I'm just -- we're just talking about
 13 having LCM ready.
 14 Q. What -- what -- but in your parlance,
 15 what does that mean, "critical section"?
 16 A. I -- I -- I just don't recall what the
 17 criticality of the next section was --
 18 Q. Well, I don't --
 19 A. -- at that time.
 20 Q. Yeah. I -- I -- I didn't ask you why it
 21 was critical, but just what does it mean? Does
 22 it mean that there's a higher than normal
 23 likelihood of a lost circulation event?
 24 A. I can't say that --
 25 Q. Well --
 00054:01 A. -- because I -- I don't know the
 02 operation at that time. I -- I just -- I don't
 03 remember or recall what was going on at this
 04 time.
 05 Q. Well, whatever you meant, would it have
 06 been based upon information supplied to you by
 07 BP?

Page 54:09 to 54:12

00054:09 A. As I stated, I just don't recall.
 10 Q. (By Mr. Bruno) Well, generally speaking,
 11 where did you get any information about what's
 12 going on with regard to the drilling of the well?

Page 54:14 to 54:14

00054:14 A. From -- from BP.

Page 55:02 to 55:05

00055:02 Q. Okay.
 03 A. I do not recall any information about
 04 this "critical section." I -- I just don't
 05 recall. It's been --

Page 55:14 to 56:02

00055:14 Q. I conclude, and it's just me, that
 15 "critical" had something to do with lost

16 circulation materials, and maybe I'm way off
 17 base.
 18 But I'm -- I'm -- I'm suggesting to you
 19 that, based upon what I'm reading here, you've
 20 got information from BP which suggests that
 21 they're moving into a -- a strata of the -- of
 22 the -- of the formation which is a -- a -- an
 23 area of the well that may be more likely to
 24 experience a lost circulation event, and that is
 25 why you're talking to your warehousemen and
 00056:01 saying to them, "Let's" -- you know, "What are
 02 our stocks of LCM?"

Page 56:04 to 56:05

00056:04 Q. (By Mr. Bruno) "Do we have some? Do we
 05 have enough," that kind of thing?

Page 56:07 to 56:15

00056:07 Q. (By Mr. Bruno) Do you at least understand
 08 my question?
 09 A. Yes.
 10 Q. Okay.
 11 A. BP asked us -- John LeBleu asked us to
 12 have these materials readily available. So I'm
 13 expressing in this E-mail to Ron Domangue that it
 14 is critical that we keep these ready for the next
 15 section.

Page 57:07 to 58:01

00057:07 I'm going to ask you to look at, first of
 08 all, M-I 2391 to 2455.
 09 MR. BRUNO: I'm going to mark that
 10 as 7602.
 11 (Exhibit No. 7602 marked.)
 12 Q. (By Mr. Bruno) Can you tell us what this
 13 is?
 14 A. (Reviewing document.)
 15 This is the Fluids Program that I wrote
 16 for the Macondo Well, as per BP's request.
 17 Q. All right. And is it -- was it updated
 18 after the February lost circulation event in any
 19 way?
 20 A. No.
 21 Q. So this is the last version of the plan?
 22 A. Yes.
 23 Q. Okay. All right. And does this plan
 24 indicate anything about lost circulation
 25 materials?
 00058:01 A. Yes.

Page 63:03 to 63:09

00063:03 Q. All right. And the next location?
 04 A. I'm on Page M-I 0002431.
 05 Q. All right. Second screen shot?
 06 A. I -- I can -- yes. Well, first screen
 07 shot, "Seepage." This is where we go back to our
 08 background LCM. They're telling us what to --
 09 what to keep in the system.

Page 64:01 to 65:09

00064:01 Q. And then on the right-hand side, it says:
 02 "To Regain Control of Well & Locate loss zone."
 03 That's when you use those materials?
 04 A. Yes.
 05 Q. So that would indicate when you're
 06 actually experiencing a loss of materials?
 07 A. Loss of fluid.
 08 Q. Lo -- I'm sorry. Loss of fluids.
 09 A. Okay.
 10 Q. Okay.
 11 A. Okay. I'm on Page M-I 00002432.
 12 Q. All right.
 13 A. Okay. I'm at -- here's where I make --
 14 need to make a correction on -- on something I
 15 stated a little earlier.
 16 Q. Okay.
 17 A. I categorized catastrophic losses greater
 18 than a hundred. It's my mistake. According to
 19 the BP, it's called "Severe" losses of greater
 20 than 60 barrels. Okay? Now --
 21 Q. And it would be fair --
 22 A. Okay.
 23 Q. Is ca -- do we -- is "catastrophic" not
 24 the right word? Is the right word "Severe," or
 25 are we saying --
 00065:01 A. According -- according to this document,
 02 "Severe" --
 03 Q. Okay.
 04 A. -- is greater than 60 barrels an hour.
 05 Q. All right. And -- but you all were
 06 losing more than a hundred?
 07 A. Yes.
 08 Q. And that's why it's called
 09 "catastrophic" --

Page 65:11 to 65:12

00065:11 Q. (By Mr. Bruno) -- right?
 12 A. Yes.

Page 66:01 to 66:08

00066:01 Q. All right. So help us understand here.
02 It looks to me like what was originally
03 contemplated is the FORM-A-SET, not the
04 FORM-A-SET AK?
05 A. This is -- this is BP's document. I --
06 I -- I can't tell you why they wrote this or how
07 they wrote this. This -- it is what it says
08 here.

Page 69:04 to 69:18

00069:04 Q. But it -- what's clear, though, is that
05 the reason why you use FORM-A-SET AK is because
06 you mix it in advance?
07 A. Okay, yes.
08 Q. That's the whole purpose?
09 A. Yes. Okay.
10 Q. All right. Now, why would one use
11 FORM-A-SET AK as opposed to FORM-A-SQUEEZE?
12 A. I don't know that there's a distinction
13 or reason why you would use one over the other.
14 Q. All right.
15 A. You're going to attempt to stop losses.
16 You may try one, the other, or --
17 Q. Okay.
18 A. -- to see what works in these cases.

Page 69:23 to 71:03

00069:23 Q. I'm going to mark this as BP -- I'm
24 sorry. I'm going to mark this as 20 -- 7603. It
25 is Bates numbered BP-HZN-MBI 118578 through 81.
00070:01 (Exhibit No. 7603 marked.)
02 Q. (By Mr. Bruno) First, do you recognize
03 the document?
04 A. Yes.
05 Q. All right. I have only one question.
06 A. Okay.
07 Q. If you would go to the "Safety
08 Considerations" at the -- near the end, it's the
09 second-to-last page, you'll see the sentence:
10 "Do not allow pill to mix with the mud in the
11 active pits as this may crosslink the surface
12 volume."
13 Do you know if that is a true statement,
14 or is it an inaccurate statement?
15 A. That's an inaccurate statement.
16 Q. All right. First of all, why is it
17 inaccurate?
18 A. When mud gets mixed in with this pill, it
19 will not set up. It causes it not to set up. It
20 will not allow it to crosslink it if it's
21 contaminated with synthetic-based fluid.

22 Q. Do you know --
23 A. That's why they pump spacers in the front
24 of it and on -- on then back of it when we're
25 pumping it downhole.
00071:01 Q. So why is this here?
02 A. This is software generated guide. This
03 has since been taken out.

Page 72:20 to 74:15

00072:20 Q. And this has been previously marked as
21 Exhibit 2810.
22 A. (Reviewing document.)
23 (Discussion off the record.)
24 A. Okay. Okay.
25 Q. (By Mr. Bruno) Have you looked at all of
00073:01 the -- this?
02 A. Yes.
03 Q. Okay. Now, were you the first person to
04 suggest the use of the pills as a spacer?
05 A. No.
06 Q. Okay. Who was the first person to make
07 that suggestion?
08 A. I'm not exactly sure. I had a
09 conversation with Leo when he got to the rig.
10 After they had pumped the -- the LCM material the
11 first time, and we had the leftover, him and I
12 talked about he said he had mentioned to the BP
13 Drilling Foreman about the possibility of using
14 this as a spacer. After that discussion with
15 him, I started pursuing it through BP in our
16 offices.
17 Q. Okay. Let's talk first about what was
18 there. We said that we mixed a FORM-A-SET AK
19 batch, because we thought we may need a second
20 batch of material to -- to stop those losses, in
21 early April, correct?
22 A. A FORM-A-SQUEEZE and a FORM-A-SET AK,
23 yes.
24 Q. That's what I --
25 A. That's correct.
00074:01 Q. Well, that -- you got my question,
02 because I didn't know -- had you also mixed a
03 FORM-A-SQUEEZE?
04 A. Yes.
05 Q. Okay. All right. And so you all were
06 using a tandem pill at that time?
07 A. Yes.
08 Q. Okay. All right. So we had a certain
09 amount of both of these materials left over. All
10 right.
11 My -- my first question to you is: Do
12 you know why anybody would care as to whether or
13 not these materials could be used as a spacer, as
14 opposed to being disposed of the way they would

15 normally be disposed of?

Page 74:17 to 75:13

00074:17 A. This is the beginning of a conversation
 18 process.
 19 Q. (By Mr. Bruno) Right.
 20 A. We're all discussing this at this time as
 21 an option. As we work for BP, at the end of a
 22 well, you know, we're -- we're grading our
 23 performance on the well. So we look for options
 24 to help BP, make recommendations to them on ways
 25 that we can have beneficial reuse on some things,
 00075:01 and this was the beginning of a conversation.
 02 Q. All right. Now, you said "We look for
 03 options to help BP."
 04 A. Yes.
 05 Q. What I'm trying to understand is: How
 06 would this have helped BP?
 07 A. By -- how would this have helped BP in --
 08 Q. Well, would it save them money? Would it
 09 save them time? Would it have made the work
 10 effort more efficient? In other words, what was
 11 the criteria utilized when we -- when we think
 12 about the use of the word "help"?
 13 A. Okay.

Page 75:15 to 76:01

00075:15 A. You have a material that's readily
 16 available, okay?
 17 Q. (By Mr. Bruno) (Nodding.)
 18 A. There's two options. You dump it, or you
 19 use it beneficial reuse. This would save time,
 20 us mixing -- having to mix another pill. It
 21 would save the cost of mixing another pill. It
 22 would also serve an -- help a -- an environmental
 23 benefit by not generating more waste on land.
 24 When by the -- by the -- the guidelines of the
 25 permitted discharge, if we use it as a spacer, we
 00076:01 can discharge it.

Page 76:07 to 76:16

00076:07 Q. -- Mr. Maxie? But as a -- again, I'm --
 08 I'm not in your business, but I'm just trying to
 09 understand this notion that it's better to pump
 10 it into the water, as opposed to take it on land
 11 and put it into a fill, a -- a site for the
 12 disposal of -- of -- of waste.
 13 What is the difference in -- with regard
 14 to the environment of -- of -- of putting it in
 15 the water, as opposed to putting it into a --

16 a -- a -- a hole on land --

Page 76:18 to 76:22

00076:18 Q. (By Mr. Bruno) -- in -- in your mind?
 19 A. I can't -- I can't answer that. There
 20 are costs involved with sending that to land.
 21 Q. All right. What's -- I get the cost.
 22 A. There's a cost.

Page 77:04 to 77:06

00077:04 Q. So the fact of the matter is, it would
 05 have saved them some money, right?
 06 A. Yes.

Page 78:02 to 78:06

00078:02 Q. When you were contemplating using this
 03 material as a spacer for the displacement
 04 operation, did you have in the back of your mind
 05 that BP might be doing a negative pressure test
 06 as a part of that displacement operation --

Page 78:08 to 78:09

00078:08 Q. (By Mr. Bruno) -- or did you contemplate
 09 that it would just be a displacement operation?

Page 78:17 to 79:19

00078:17 A. I had no knowledge that there would be --
 18 that this pill would -- okay -- that there would
 19 be a negative test done.
 20 Q. (By Mr. Bruno) Right, exactly. And you
 21 couldn't --
 22 A. Okay.
 23 Q. -- have known, because that decision
 24 wasn't made until the morning of the 20th.
 25 A. The -- made on the 20th, and I'm not
 00079:01 privy to those rig operations.
 02 Q. Exactly.
 03 A. I work in the office. I don't -- I don't
 04 make those decisions. I don't have any input in
 05 the type, how, way, shape, or form they do a
 06 negative test.
 07 Q. All right. So for this record, I want it
 08 crystal clear. You, Doyle Maxie, in
 09 contemplating the use of these materials as a
 10 spacer, had contemplated using the material as a
 11 spacer in connection with the displacement
 12 operation. Isn't that correct?

13 A. I contemplated using this as a spacer
 14 in -- to -- to displace our fluid from the
 15 wellbore entirely.

16 Q. All right. You did not, during any --
 17 any time when you were even thinking about this,
 18 contemplate using this as a spacer in connection
 19 with a negative pressure test; isn't that true?

Page 79:21 to 81:03

00079:21 A. I did not have any knowledge of them
 22 using this during the negative test.

23 Q. (By Mr. Bruno) All right. Now --

24 A. Unaware they were going to do the
 25 negative test.

00080:01 Q. At the time that -- let -- let -- let's
 02 just talk about the 19th and the 20th. Were you
 03 doing any other work on this well? Were you
 04 doing any modeling, for example, of any kind
 05 or -- of the well?

06 A. Yes.

07 Q. All right. Describe for us what you were
 08 doing.

09 A. I model hydraulics all throughout the
 10 well.

11 Q. Okay.

12 A. Okay? This particular instance, I was
 13 asked to model circulating with a long string of
 14 casing in the wellbore at different flow rates.
 15 The flow rates were provided by Brian Morel, what
 16 he -- what he asked me to model.

17 Q. All right. Can you remember when this
 18 request came to you?

19 A. Not -- not exactly. I -- not exactly.

20 Q. All right. Let me see if I can -- let me
 21 show you a document which I will mark as Exhibit
 22 No. 7605.

23 (Exhibit No. 7605 marked.)

24 MR. BRUNO: And, folks in the room,
 25 that these are separate from your disc.

00081:01 Q. (By Mr. Bruno) It's a -- it's an E-mail
 02 dated April the 16, and it's Bates numbered M-I
 03 79985 in seriatim to 79987.

Page 81:15 to 81:16

00081:15 one. Go ahead and mark it by hand. We -- we're
 16 calling that 7605.

Page 82:10 to 90:07

00082:10 Q. Does this help us remember when Mr. Morel
 11 asked you to do that model?

12 A. Yes.
13 Q. Okay. When -- when did he ask you to do
14 the model?
15 A. April 16th, 2010.
16 Q. April, that was the Friday?
17 A. Friday, April 16th, 2010, at -- let's
18 see -- 11:40 a.m. 11:59. There's a couple of
19 different times on here.
20 Q. All right. Now, did he tell you why he
21 wanted this model?
22 A. No, sir.
23 Q. Did you have any understanding as to why
24 he wanted the model?
25 A. None other than he was wanting to be able
00083:01 to pump four barrels a minute downhole, so
02 that's -- I was just going to model for him --
03 Q. All right.
04 A. -- to see what it gave me.
05 Q. He wanted to pump four barrels per minute
06 downhole of what?
07 A. Synthetic-based mud.
08 Q. All right. Was this for the cementing
09 procedure?
10 A. I -- I don't re -- I don't recall.
11 Q. All right. Is four barrels per minute a
12 high rate or a low rate for pumping?
13 A. It's a low rate.
14 Q. It's a real low rate, isn't it?
15 A. Yes.
16 Q. All right. But you didn't know whether
17 this was for the cement operation or displacement
18 or what, you didn't know at all?
19 A. No.
20 Q. All right. And what -- what -- what did
21 the model show?
22 A. I don't have the model in front of me.
23 Q. Oh, okay.
24 A. I -- I would have to see that model.
25 I've ran so many, I'd -- I would have to see the
00084:01 exact model.
02 Q. Let's look at -- I'm sorry, we gave
03 you --
04 MR. BRUNO: Hugh, I gave you the
05 whole stack.
06 MR. TANNER: Oh, all right.
07 A. Okay.
08 Q. (By Mr. Bruno) If I mark them for you --
09 A. Sure.
10 Q. -- it'll make life easier.
11 MR. BRUNO: Which one is this,
12 number --
13 (Discussion off the record.)
14 MR. BRUNO: All right. I'm going to
15 mark this one -- I'm marking 7606 --
16 (Exhibit No. 7606 marked.)

17 (Discussion off the record.)
18 MR. BRUNO: -- an E-mail dated --
19 well, the top last E-mail is April 20, and it's
20 M-I 82930, in seriatim to 82931 (tendering).
21 Q. (By Mr. Bruno) Do this -- does this help
22 us at all, or is this another model?
23 A. (Reviewing document.) I don't recall if
24 this is the same model. But --
25 Q. All right. It says here: "I have gone
00085:01 through my inputs for VH..."
02 What is "VH"?
03 A. VIRTUAL HYDRAULICS.
04 Q. All right. "...for the modeling I did
05 for circulating prior to" a "cementing" of the
06 "casing."
07 All right. Well, if we assume for the
08 sake of this question that they slowed down the
09 pumping in order to do the cementing, then this
10 might be a different model, right?
11 A. This could be a different model from
12 the --
13 Q. From the --
14 A. -- previous --
15 Q. -- other one. Okay.
16 A. Yes, sir.
17 Q. Does this help you remember that that
18 initial model was in connection with the
19 cementing?
20 A. No, sir.
21 Q. It doesn't?
22 A. (Shaking head.)
23 Q. Because you say here: I've -- "gone
24 through my inputs" --
25 A. In this particular model that I was asked
00086:01 to run --
02 Q. Right.
03 A. -- was in relation -- after we run
04 casing, he wanted to be able to circulate prior
05 to cementing.
06 Q. Right.
07 A. Prior to -- prior to cementing casing.
08 Q. Right.
09 A. And -- yes.
10 Q. And that's when he was looking to go down
11 to four barrels per minute?
12 A. I -- I -- I would have to see the models
13 exactly.
14 Q. All right.
15 A. This -- this could have been something
16 entirely different. Because it -- this is the
17 16th, and this is the 20th.
18 Q. Well, this is --
19 A. I --
20 Q. -- referring back to that one now. It
21 says: "I have gone through my inputs for the..."

22 modeling I did for circulating prior to" the
23 "cementing" of --
24 A. Okay.
25 Q. -- the "casing."
00087:01 A. Okay.
02 Q. And then you say: "I have tried several
03 different inputs, and the closest I can get is
04 480" pat -- "psi..."
05 So you're referring back to the modeling
06 that you did before the cementing. This one here
07 is written on the 20th.
08 A. I was asked to model this prior to
09 cementing.
10 Q. Right. And then --
11 A. This model's right here. But I'm not --
12 I don't -- I can't say that this -- I may have
13 done other scenarios during that time --
14 Q. Okay.
15 A. -- during this time. This was -- this
16 was done for modeling prior to cementing casing.
17 Q. All right.
18 A. From my understanding, was they were
19 seeing lower pressures than what VIRTUAL
20 HYDRAULICS had modeled, okay? I was asked to go
21 back through my inputs to make sure that my
22 inputs were correct, because there -- BP did not
23 agree with my model and what it was modeling
24 then, what it was modeling for them at the time.
25 My pressure was higher than what they
00088:01 were actually seeing on the well. I had no
02 knowledge of that until after they had already --
03 this was sent -- I -- I did this prior to
04 circulating casing, and I was told I -- they
05 needed to look at. They were told they were
06 seeing -- I was told by BP that they were seeing
07 lower pressures than what I had modeled while
08 they were circulating prior to running casing.
09 Q. All right.
10 A. So they -- they wanted to go back through
11 my model, go through my inputs, and check my
12 inputs to make sure my data was correct.
13 Q. All right. If we -- if we just assume
14 for the sake of discussion that the cementing was
15 the 16th, on Friday. This is the 20th.
16 A. Okay. I don't recall what day they
17 cemented.
18 Q. All right. Just say -- just assume for
19 the purposes of this discussion that it was
20 the 16th, okay? This is the 20th. This is the
21 day of the catastrophe. Now all I'm trying to
22 understand is, is that on the day of the
23 catastrophe, you were asked to check something?
24 A. Yes.
25 Q. Okay. And you're asked to check your
00089:01 inputs because you're showing in your model

02 higher pressures than they're actually
 03 experiencing on the well?
 04 A. Yes.
 05 Q. All right. What might that indicate, if
 06 you know?
 07 A. I don't know. I can't make an assumption
 08 on that.
 09 Q. Now, you say: "I would be interested to
 10 see what Landmark would predict as circulating
 11 pressures."
 12 All right. After -- let's assume, again,
 13 for the sake of discussion, that there's a cement
 14 job that's been done on Friday. Would there be
 15 circulation in the well before the displacement
 16 procedure?
 17 A. I want to understand your question. One
 18 more time, please.
 19 Q. Assume --
 20 A. Okay.
 21 Q. -- that the cementing was done on Friday,
 22 okay?
 23 A. Okay.
 24 Q. My simple question is: To your
 25 knowledge --
 00090:01 A. Okay.
 02 Q. -- would there have been any need to
 03 circulate materials in the well before this
 04 Displacement Procedure?
 05 A. Not to my knowledge.
 06 Q. Okay. So what pressures are we talking
 07 about that BP wanted you to check?

Page 90:09 to 90:15

00090:09 A. I -- I was just asked to model the casing
 10 before they cemented, the circulating before the
 11 cementing, to see if they could circulate to give
 12 them the pressures.
 13 Q. (By Mr. Bruno) All right. So they wanted
 14 to know what pressures they should be seeing?
 15 A. That's what the model does. It predicts.

Page 91:14 to 92:21

00091:14 Q. I'm asking you whether or not, if you can
 15 recall --
 16 A. Okay.
 17 Q. -- you ran a model which considered the
 18 cementing process?
 19 A. (Shaking head.)
 20 Q. "No"?
 21 A. "No."
 22 Q. All right. So you were modeling --
 23 A. It had nothing to do with cementing.

24 Q. All right.
 25 A. You've got --
 00092:01 Q. It's before cementing?
 02 A. Yes.
 03 Q. All right. And you were -- you were --
 04 you were asked to model at a -- at a -- at a rate
 05 of about four barrels per minute, right?
 06 A. Yes, sir.
 07 Q. And they want -- and then that yielded a
 08 certain pressure?
 09 A. Yes.
 10 Q. All right. At the bottom of the hole,
 11 right?
 12 A. Yes.
 13 Q. Okay. Go ahead.
 14 A. No.
 15 Q. If you have something to add --
 16 A. It yielded a pressure of what they would
 17 see on the standpipe pressure.
 18 Q. The standpipe pressure?
 19 A. Yes.
 20 Q. Okay. All right. And apparently, he got
 21 a different reading than what you had predicted?

Page 92:23 to 93:22

00092:23 Q. (By Mr. Bruno) Is that accurate?
 24 A. Yes.
 25 Q. Now, the fact that he got a reading would
 00093:01 suggest that they had circulated at the four
 02 barrels per minute, right?
 03 In other words, they can't get a realtime
 04 number to compare with your virtual number unless
 05 they actually do it. Does that make sense?
 06 A. I -- I can't re -- yes, I can't recall
 07 exactly what they pumped at prior to. I -- I
 08 can't -- I don't recall.
 09 Q. All right. But if -- if -- just
 10 logically, if I'm going to compare what your
 11 model output shows to anything and have it make
 12 any sense, I'm going to compare your model to
 13 realtime, utilizing the same parameters, right?
 14 Does that make sense?
 15 A. Yes, that makes sense.
 16 Q. Okay. And I know you don't know that
 17 that occurred, but at least that --
 18 A. That's correct.
 19 Q. -- that makes some sense?
 20 A. (Nodding.)
 21 Q. And then so for whatever reason, they say
 22 to you, "Go check."

Page 93:24 to 95:10

00093:24 Q. (By Mr. Bruno) Right?
 25 A. They ask -- BP asked me to review my
 00094:01 inputs.
 02 Q. Yeah. "John and I went through some
 03 scenario's this morning and we could not do any
 04 better than 480 psi."
 05 Do you see that? That's on the second
 06 page. What does that mean?
 07 A. (Reviewing document.) John LeBleu, BP's
 08 Fluid Specialist that I was working with --
 09 Q. All right.
 10 A. I -- I'm not sure on his exact title --
 11 Q. Okay.
 12 A. -- but their -- their fluid person had my
 13 job at BP prior to me coming onto BP. I came
 14 into BP and replaced him when he went to work for
 15 BP. He knows our software. He knows how to use
 16 VIRTUAL HYDRAULICS. Does not have a copy of it,
 17 but he used it for years.
 18 Q. Sure.
 19 A. We sat at my desk together, went through
 20 inputs, looked at all my inputs -- there's -- and
 21 there's a lot of inputs you have to put in
 22 there -- checked all our inputs, and -- and the
 23 best we came up with was 480 psi.
 24 Q. All right. Which was higher or lower
 25 than what you had predicted?
 00095:01 A. The -- the lower -- my -- I don't recall
 02 the -- the -- I don't recall the model pressure,
 03 but the closest I could get was bring mine down
 04 was 480 psi. As -- if I had my snapshots, I
 05 could better answer your question as to what
 06 the -- what my model pressure was.
 07 Q. All right.
 08 A. 480 was -- was the closest I could get
 09 down to where their lower number, change -- by
 10 changing a few of the inputs.

Page 95:15 to 97:11

00095:15 Q. But let -- let's look at Tab No. 44.
 16 (Exhibit No. 7607 marked.)
 17 (Discussion off the record.)
 18 MR. BRUNO: And we're going to mark
 19 this as M-I -- I'm sorry, 7607. It is, in fact,
 20 M-I 3704, 3705.
 21 Q. (By Mr. Bruno) Can you tell us what this
 22 is?
 23 A. There are two pages.
 24 Q. Yes, sir.
 25 A. What specific pages are you asking, and
 00096:01 I'll tell you what it is?
 02 Q. Well, both of them.
 03 A. Okay. This is an E-mail from Leo to
 04 myself, April 19th, at 12:58 p.m., and this is a

05 Displacement Procedure, that -- the initial
 06 Displacement Procedure that he worked up.
 07 Q. All right. Now, this is Monday,
 08 the 19th --
 09 A. Yes.
 10 Q. -- which is the day before the
 11 catastrophe?
 12 A. Yes.
 13 Q. It's 12:58 p.m. in the morning?
 14 A. (Nodding.)
 15 Q. I'm so sorry, in the afternoon?
 16 A. Yes.
 17 Q. Okay. And this, if you look at the --
 18 the procedure, clearly shows that there's not
 19 going to be any negative pressure test done
 20 contemporaneously with the displacement; isn't
 21 that true?
 22 A. Yes.
 23 Q. Is this the Displacement Procedure that
 24 was to be used utilizing the FORM-A-SET,
 25 FORM-A-SQUEEZE as a spacer?
 00097:01 A. Yes.
 02 Q. And the reason is because it refers to
 03 450 barrels of the material, right?
 04 A. Yes.
 05 Q. That's a whole lot more material that you
 06 would have utilized had you not contemplated
 07 using --
 08 A. Yes.
 09 Q. -- the leftover LCMs as a spacer; isn't
 10 that accurate?
 11 A. Yes.

Page 98:07 to 98:18

00098:07 Q. Mr. Maxie, I want to start out by
 08 actually going over an exhibit that the PSC
 09 did -- just discussed. I believe they marked it
 10 as Exhibit 7605, and I believe it's that right in
 11 front of you.
 12 At the top of that, you'll see the first
 13 thing that is stated in the E-mail from Brian
 14 Morel, at the very top of the page, to you, and
 15 it says, and I read: "Thanks Doyle, this will
 16 all be over soon!"
 17 Did I read that correctly?
 18 A. You read that correctly.

Page 99:16 to 99:20

00099:16 Q. (By Ms. Strippoli) Okay. So you don't
 17 know what he was referring to --
 18 A. No.
 19 Q. -- by "...this will all be over soon"?

20 A. No, I do not.

Page 99:22 to 99:23

00099:22 Q. (By Ms. Strippoli) Okay. Is it your
23 impression that Brian Morel was overworked?

Page 99:25 to 100:02

00099:25 A. No.
00100:01 Q. (By Ms. Strippoli) Was it your impression
02 that he was maybe stressed out around this time?

Page 100:04 to 100:04

00100:04 A. No.

Page 101:03 to 101:05

00101:03 Q. Just taking a step back, how many years
04 have you worked for M-I SWACO?
05 A. 14 years and, I think, three months.

Page 101:22 to 102:07

00101:22 Q. Okay. Is there anyone that you report
23 to?
24 A. Yes.
25 Q. And who were they?
00102:01 A. At the time of -- was with BP, it would
02 have been Mike Rafferty. He was the Project
03 Engineering Manager. And at some point in there,
04 Brad Billon took over that responsibility.
05 Q. And are those gentlemen in BP, or are
06 they in M-I SWACO?
07 A. They're at M-I SWACO.

Page 102:17 to 102:19

00102:17 a Fluids Program. Would the Fluids Program have
18 to be approved by someone at BP?
19 A. Yes.

Page 102:21 to 103:02

00102:21 Q. (By Ms. Strippoli) In your experience,
22 did the Macondo Well experience high losses?
23 A. Yes.
24 Q. And so would you say that lost
25 circulation was a recurring problem at this
00103:01 particular well?

02 A. Yes.

Page 103:05 to 103:08

00103:05 MS. STRIPPOLI: And I'd like to mark
 06 this Exhibit 7608.
 07 (Exhibit No. 7608 marked.)
 08 A. Okay.

Page 103:15 to 105:09

00103:15 Q. Okay. Do you recognize this exhibit,
 16 Mr. Maxie?
 17 A. Yes.
 18 Q. Okay. And what is this?
 19 A. It's an E-mail.
 20 MR. TANNER: (Indicating.)
 21 Q. (By Ms. Strippoli) Is it an E-mail chain
 22 discussing with --
 23 A. It's a cop --
 24 Q. -- basically BP about the maximum LCM to
 25 be kept on HORIZON?
 00104:01 A. Yes, that's a conversation between John
 02 LeBleu and myself. Initially, we were asked
 03 to -- to keep on the well a certain amount of LCM
 04 to meet the needs if any more losses were
 05 encountered during the well.
 06 Q. Okay.
 07 A. All right.
 08 Q. I'd like to -- oh, I'm sorry. Are you --
 09 A. Go ahead.
 10 Q. Okay. I'd like to direct your attention
 11 to your E-mail, which is dated March 29th, on the
 12 back, and it was sent to John LeBleu --
 13 A. Okay.
 14 Q. -- and some others. In the first
 15 sentence, I'm going to read: "...the Fluids team
 16 for Horizon, are discussing with Well site
 17 Leaders along with Transocean, plans forward to
 18 keep the maximum allowable LCM materials on
 19 location without hindering daily operations. We
 20 are determining what that maximum amount is and
 21 what materials it will consist of."
 22 Did I read that correctly?
 23 A. You read that correctly.
 24 Q. Okay. And I'd just like to flip back to
 25 the one after that, which is from John LeBleu to
 00105:01 you on March 30th that states: "Doyle, To be
 02 clear, we should have three things in our Horizon
 03 plan, max LCM we can keep on the Horizon,
 04 emergency LCM 1st order when losses occur, and the
 05 minimum staged LCM that will be kept in Fourcnon
 06 for the Horizon."
 07 Did I read that correctly, minus my

08 little slip-up, Fourchon?
09 A. You read that collect -- correctly.

Page 105:14 to 107:01

00105:14 Q. (By Ms. Strippoli) So why were you
15 approached about keeping a maximum allowable LCM
16 materials on location on the HORIZON?
17 A. During our first lost -- lost circulation
18 event back in, if I can recall correctly,
19 February --
20 Q. M-h'm.
21 A. -- the -- the first LCM, the first loss
22 we had was if -- approximately 350 barrels an
23 hour. We made several attempts with conventional
24 LCM to stop the losses before pumping the
25 specialty pills, okay.
00106:01 At that time, we ran out of one
02 particular component of the emergency LCM. If I
03 recall, it was the KWIK SEAL. They had -- we had
04 diminished our supply at the rig, and -- and we
05 had some on order. There was some
06 complication -- not complications. There were
07 some -- they -- they did not have any at the
08 warehouse.
09 So as a result of that, we were asked to
10 formulate a plan to have the maximum onboard, and
11 the max -- and to -- to make sure we could
12 replenish that from the warehouse.
13 Q. Okay. So it would be fair to say that
14 this was prompted by an incident of lost returns
15 and not having the necessary supplies on the rig?
16 A. Let's back up. I don't like the word
17 "not enough."
18 Q. Okay.
19 A. We ran out --
20 Q. Okay.
21 A. -- because we threw every -- we basically
22 used what we had on the rig and we had to
23 reorder.
24 So, yes, we -- we were responding to a
25 request by BP to come up with a plan to mitigate
00107:01 that happening again.

Page 108:07 to 108:09

00108:07 MS. STRIPPOLI: And I'm going to
08 mark this as Exhibit 7609.
09 (Exhibit No. 7609 marked.)

Page 109:13 to 109:25

00109:13 Q. (By Ms. Strippoli) Do you recognize --

14 A. Yes.
15 Q. -- this exhibit?
16 And what is it?
17 A. The results of the event, we were asked
18 to come up -- we were asked to formulate a plan
19 to keep the maximum LCM onboard without hindering
20 operations on the rig for space limitations. And
21 tha -- and thi -- that is what we did.
22 If you turn to Exhibit M-I 2353, this
23 is -- this is -- was the final agreement between
24 us and BP to keep onboard. This was the maximum
25 LCM onboard. Okay?

Page 110:17 to 111:06

00110:17 Q. All right. Now -- oh, I'm sorry. Are
18 you done?
19 A. Okay. I'm -- I'm going to make a comment
20 on it.
21 Q. Sure.
22 A. This is the end product. I'm referring
23 to 2355, and I'm -- I'm -- I'm -- there was a
24 request by John LeBleu to make sure we include
25 this in our programs forward for the HORIZON, and
00111:01 that's what you're looking at. No. 2355 and
02 No. 2356, these were included in the Kaskida
03 Program, which I was program -- working on at the
04 time we were drilling Macondo.
05 Q. Okay.
06 A. Ongoing operations.

Page 111:24 to 111:25

00111:24 Q. (By Ms. Strippoli) And, now, is it normal
25 to keep this quantity as backup?

Page 112:02 to 113:13

00112:02 A. In an exploration well, you have to be
03 ready for loss. You -- you don't know what
04 you're drilling. So we formulated a plan to have
05 enough to mitigate those losses if we encountered
06 them again.
07 Q. (By Ms. Strippoli) I understand that,
08 but --
09 A. Okay.
10 Q. It seems to me you have a wealth of
11 experience in this field. And in your experience
12 have you ever seen this amount of material kept
13 on a rig for backup in this quantity?
14 A. Yes.
15 Q. When?
16 A. Yes, I have.

17 I've worked for various other operators.
 18 Q. Okay.
 19 A. Exploration.
 20 Q. So you would say this is --
 21 A. And we kept -- we -- we -- we -- it may
 22 not be the exact same formulations, but we kept
 23 LCM onboard in quantities just in case we -- we
 24 encountered losses.
 25 Q. And matched quantities, the same high
 00113:01 amount of --
 02 A. I'm not going to say the --
 03 Q. Or similar. It doesn't have to be a
 04 one-to- --
 05 A. Similar.
 06 Q. -- one.
 07 A. Similar.
 08 Q. Similar high quantities?
 09 A. Yes, similar.
 10 Q. Okay. And would you say that that's a
 11 normal business practice for ex -- drilling
 12 wells, exploratory drilling wells?
 13 A. Yes.

Page 114:19 to 114:19

00114:19 Q. Did BP require this prior to February?

Page 115:01 to 116:03

00115:01 A. Prior -- like -- like I said, I can't
 02 answer exactly what we had onboard. We evi -- we
 03 had -- we had enough LCM onboard to pump pills.
 04 I'd have to compare the quantities of what we
 05 started off with. They just wanted us to put in
 06 a plan what we could keep onboard, the maximum we
 07 could keep onboard, and that's what this is; a
 08 maximum LCM we can keep onboard during -- during
 09 the well.
 10 Is this abnormally high? No.
 11 Q. (By Ms. Strippoli) Okay. Would you agree
 12 that there was FORM-A-SET AK and FORM-A-SET
 13 SQUEEZE left over and not used as pills when it
 14 came time to start the procedure for TA?
 15 A. Yes.
 16 Q. Okay. So we have this material that's
 17 left over, and if this material wasn't circulated
 18 through the wellbore, would it have to be
 19 disposed of on land?
 20 A. Yes.
 21 Q. And who would pay for that?
 22 A. BP.
 23 Q. And would that have been expensive?
 24 A. I -- I don't know what it cost. As --
 25 being it is the responsibility of the Operator

00116:01 that we're working for to pay those costs, I
02 don't have any idea what it would cost. I can't
03 answer.

Page 116:12 to 117:03

00116:12 Q. (By Ms. Strippoli) Whose decision was it
13 to use the LCM pills as a spacer?
14 A. As I stated earlier, I talked with Leo
15 Lindner the morning -- or I don't recall exact
16 time -- but we had a conversation that morning
17 that he discussed it with -- with -- as an option
18 with the Drilling Foreman on the rig. So who --
19 who made the initial? I don't have a clue.
20 Okay? I don't -- I didn't say, "Well, who -- who
21 did this?" It was a conversation started, and
22 then --
23 Q. Sorry. I wasn't asking who initially
24 recommended it --
25 A. Oh.
00117:01 Q. -- I was asking whose decision was it to
02 ultimately use that LCM?
03 A. Ultimately BP's --

Page 117:05 to 117:05

00117:05 A. -- decision to use this.

Page 117:13 to 118:03

00117:13 Q. (By Ms. Strippoli) Are you aware of
14 FORM-A-SET AK or FORM-A-SQUEEZE being used for
15 applications other than LCM?
16 A. No.
17 Q. And are you aware of any other instances
18 where the tandem pill of FORM-A-SET AK and
19 FORM-A-SQUEEZE has been used as a spacer before?
20 A. No.
21 Q. And are you aware of any instances where
22 an LCM pills were used as a spacer?
23 A. No.
24 Q. Maybe not this particular combination.
25 A. Not to my knowledge.
00118:01 Q. Okay.
02 A. That's not to say it hadn't been done,
03 but to my knowledge, no.

Page 118:06 to 118:13

00118:06 Now, although it's not marked as such in
07 our binder, this was previously marked as 2810,
08 but we're just going to look at our exhibit for
09 reference.

10 (Discussion off the record.)
11 Q. (By Ms. Strippoli) The Bates number is
12 going to be M-I 00016419 through, it appears,
13 422.

Page 118:19 to 120:25

00118:19 Q. Okay? And do you recognize this
20 document?
21 A. Yes.
22 Q. Okay. And what is it?
23 A. After I spoke with Leo, this is the
24 initial starting process of talking with BP about
25 the pills and what we should do with them,
00119:01 understanding BP had already purchased these
02 pills, they own these and they're their pills.
03 Okay? So we begin a process of -- of what we can
04 do with them.
05 Q. Okay. I'm going to direct your attention
06 to the very top portion on Page 16419 to the
07 E-mail from Jamie Manuel to yourself.
08 A. Okay.
09 Q. And also to Mr. Armand.
10 I'm going to read this.
11 A. Okay.
12 Q. "That would work, it needs to pass
13 through the well bore before going overboard and
14 the vis of the pill should give you a nice spacer
15 and a benefit for using the pill, though not as
16 planned but as" alternative used -- I'm sorry --
17 "alternate use. We had planned on doing this
18 with the turbo chem. Pills but that didn't
19 happened, it locked up the pits and had to shovel
20 out instead."
21 Did I read that almost correctly?
22 A. You read it almost correctly.
23 Q. Okay. My question here is: Can you tell
24 us a little bit about these Turbo-Chem pills?
25 A. No, ma'am.
00120:01 Q. Okay.
02 A. Turbo-Chem is not our product.
03 Q. Okay.
04 A. Turbo-Chem is a Turbo-Chem product. It's
05 not an M-I product. So I can't -- I can't give
06 you any benefit or background or anything about
07 those pills.
08 Q. Okay. Now, can you back me up a step
09 and -- and identify who Jamie Manuel is and who
10 Timothy Armand is?
11 A. Okay. Tim -- Timothy Armand is the
12 Account BP Representative, okay? He is our
13 Representative there for -- he -- he's not a
14 Project Engineer, he kind of oversees all the
15 guys at -- in the Operations at BP for M-I SWACO.
16 Jamie Manuel is another Project Engineer, like

17 myself. I'm sending this E-mail out to other
18 people to get a consensus, this is our people,
19 about using this as a spacer, if we can do it.
20 Q. Okay.
21 A. It's just a general think tank, think
22 proactive in -- in looking at options.
23 Q. So but both Jamie Manuel and Timothy
24 Armand are M-I SWACO employees?
25 A. Yes, yes.

Page 121:14 to 123:05

00121:14 Q. Okay. So -- but this E-mail is
15 discussing another pill that was going to be used
16 as a spacer.
17 A. (Reviewing document.) Okay. Let's back
18 up one E-mail. My E-mail from, to Timothy
19 Armand, Jamie Manuel, J.R. Smith: "Gentlemen:
20 Bp will not let us dump the water based version
21 of FAS...FAS AK. I checked with Andrew about
22 using as displacement spacer and then go
23 overboard after circulating through" the "well
24 bore and he says ok. What are your thoughts."
25 These are M-I personnel. "That would
00122:01 work..." He sent me that the FAS AK, in his
02 opinion, would work and be an option for a
03 spacer.
04 Q. Okay.
05 A. Not Turbo-Chem.
06 Q. Oh, and -- and -- and I am not
07 disagreeing with you on the fact --
08 A. Okay.
09 Q. -- that what these two E-mails are
10 specifically addressing, and what you just read,
11 are those two chemical composi -- the -- the
12 FORM-A-SET AK and the FORM-A-SQUEEZE. However,
13 if you'll read the last sentence --
14 A. Uh-huh.
15 Q. -- with me again: "We had planned on
16 doing this with the turbo chem." What is "we had
17 planned on doing this," what is the "this" he's
18 referring to?
19 A. Using them as a spacer.
20 Q. Okay. So that E-mail is talking about
21 using pills as a spacer?
22 A. Using a -- a pill other than the -- the
23 FORM-A-SET and the FORM-A-SET A -- FORM-A-SQUEEZE
24 and the FORM-A-SET AK, yes.
25 Q. Right. But just to break it down, it was
00123:01 talking about using another pill, albeit not the
02 one used at Macondo and not the FORM-A-SET and
03 the FORM -- but a pill nonetheless, the
04 Turbo-Chem, as a spacer?
05 A. Yes.

Page 123:11 to 123:13

00123:11 A. At the time of my association with
12 Mr. Manuel he was at BP. But I can't answer the
13 question that this was on a BP rig or not.

Page 123:25 to 124:04

00123:25 Q. Okay. Would you agree with the statement
00124:01 that viscosity is an important factor in
02 determining what would make a good spacer?
03 A. I would agree that it's one of the
04 components, yes.

Page 126:17 to 126:22

00126:17 "My question to you, Mr. Maxie, is, would the
18 concept of knowing that viscosity is an important
19 factor in determining what would make a good
20 spacer, something that a Fluids Engineer, in your
21 position or a similar position, is that something
22 they should know?

Page 126:24 to 128:06

00126:24 A. Yes.
25 Q. (By Ms. Strippoli) Are you aware of
00127:01 FORM-A-SET AK or FORM-A-SQUEEZE being marketed or
02 advertised as a spacer by M-I SWACO?
03 A. No.
04 Q. And to your knowledge, does M-I SWACO
05 market or advertise any other LCM as a spacer?
06 A. No.
07 Q. If this tandem pill had never been used
08 before as a spacer, did you have any concerns
09 about using it in that capacity?
10 A. No concerns.
11 Q. None?
12 A. (Shaking head.)
13 Q. Can I refer you to Tab 16. And this was
14 previously marked Exhibit 1015. And about
15 halfway down in this E-mail, which is from you,
16 to John LeBleu and others, regarding the
17 FORM-A-SQUEEZE and the FORM-A-SET AK --
18 A. M-h'm.
19 Q. -- beginning with the sentence "With that
20 tool in hole we do not feel there would be any
21 restriction that would cause the FORM A SQUEEZE
22 to set up and without the XL in the" FORM-A-SET
23 AK "there is no cross linking agent to cause it
24 to set up. I do not know the exact tool that
25 will be used but if there are any small
00128:01 restrictions in the assembly this would be a

02 risk."
03 Can you tell me --
04 A. You read that correctly.
05 Q. Okay. And can you tell me what you were
06 referring to, what was your concern there?

Page 128:08 to 129:01

00128:08 A. I was being proactive, discussing. I was
09 looking for what we were particularly going to
10 have -- anything other than a cement stinger in
11 the hole. I just needed to -- to follow up and
12 check and see what tools were going to be on the
13 bottomhole assembly before pumping this through
14 here.
15 Cement stinger, there's no concerns. We
16 pumped a couple of these through the well, and we
17 pumped through openings as small as twelve
18 thirty-seconds in a bit, so I just wanted to make
19 sure that if they had any tools in the hole, I
20 needed to check with the manufacturers to see if
21 they had any restrictions of what we pumped
22 through their tools, or that nature.
23 Q. (By Ms. Strippoli) Okay. Now, would you
24 agree with the statement that the material that
25 was pumped downhole was pumped downhole for a
00129:01 purpose that it was not designed for?

Page 129:03 to 129:17

00129:03 A. It does not say anywhere in our Bulletin
04 that it -- it can be used as a spacer, but it
05 doesn't say it can't. This is inert material.
06 It did not have the crosslinker in it which would
07 not cause it to set up. You have to understand
08 all a spacer is, we're using a spacer to keep the
09 synthetic fluid from being -- from water invading
10 it as we are displacing it, so we do not market
11 it as a -- a spacer. It was discussed about
12 beneficial reuse of it as a spacer.
13 Q. (By Ms. Strippoli) But -- so M-I SWACO's
14 never marketed it as a spacer, it had never used
15 it as a spacer, but your testimony is that you
16 don't see this as a material pumped downhole for
17 a purpose it wasn't designed for?

Page 129:19 to 129:20

00129:19 A. It was not marketed for a spacer, it had
20 never been used before as a spacer.

Page 130:05 to 131:13

00130:05 Q. (By Ms. Strippoli) Okay. Okay. So let
 06 me -- let me take a step back here and -- and
 07 move on to one thing that -- we have this idea of
 08 using these remaining pills as the spacer, and we
 09 float this idea out. Now what? So Leo Lindner
 10 contacts you and says, "Hey, I've got this idea
 11 of maybe using these -- these two chemicals, the
 12 pills, as a spacer."

13 How -- can you take me through the steps
 14 of okay, you just have, you know, this Engineer
 15 come to you with this idea, now what? Who do you
 16 go to, what steps did you take? You just kind of
 17 walk me through what happened next, once you kind
 18 of have the recommendation from Mr. Lindner.

19 A. The initial E-mail I sent to John LeBleu
 20 started the -- the process. I would have to go
 21 back through the E-mails and walk that trail, but
 22 the discussion had to be held with BP, and BP had
 23 to approve it.

24 Q. Okay. Did -- internally at M-I SWACO
 25 what did you have to do, did you have to speak to
 00131:01 anyone internally?

02 A. I -- I sent the E-mail that we referenced
 03 earlier --

04 Q. Okay.

05 A. -- to -- to a few individuals just to get
 06 their input that this was a viable alternative
 07 for the pill.

08 Q. Okay. And did you need approval from
 09 anyone in M-I SWACO to do this, or was --

10 A. No, I didn't need approval.

11 Q. Okay. And -- but you did need approval,
 12 you stated, from someone from BP?

13 A. From BP.

Page 131:25 to 132:03

00131:25 Q. If you were going to move forward with
 00132:01 this, and you knew that you needed approval from
 02 BP, who, just on your recollection, would you
 03 need to get the okay from in order to move on?

Page 132:05 to 132:06

00132:05 Q. (By Ms. Strippoli) Who would you hear
 06 from?

Page 132:08 to 132:15

00132:08 A. John LeBleu.

09 Q. (By Ms. Strippoli) John LeBleu?

10 A. The Drilling Engineer.

11 Q. Okay.

12 A. I had no contact with the Drilling
13 Foreman on the rig, so it would been the -- the
14 office pers -- the Drilling Engineers, Mark
15 Hafle, Brian Morel, and John -- John LeBleu.

Page 132:18 to 132:25

00132:18 Q. (By Ms. Strippoli) Okay. What tests were
19 run prior to the use of this LCM pill as a
20 spacer?
21 A. If I recall, Leo performed a -- he
22 checked the rheology of the pill prior to pumping
23 it.
24 Q. Okay. And the purpose of this was?
25 A. To see if the pill would suspend barite.

Page 133:07 to 133:12

00133:07 Q. -- was there -- was there a protocol in
08 place for what tests to be run or -- sorry,
09 ran --
10 A. No protocol --
11 Q. Okay.
12 A. -- no.

Page 133:16 to 134:09

00133:16 Q. Okay. Did he construct a test on his
17 own?
18 A. No.
19 Q. Okay.
20 A. His tests are already in place. It's the
21 FANN 35. He ran a rheology on it. We run the
22 same tests on regular drilling fluid.
23 Q. Okay. And is that --
24 A. To check the --
25 Q. -- in a document, or --
00134:01 A. It's an SPE document.
02 Q. Okay.
03 A. It's -- it's just --
04 Q. Standard practice?
05 A. Standard practice. It's --
06 Q. Okay.
07 A. -- it -- the mud tests we run.
08 Q. And was that something that BP had to
09 sign off on?

Page 134:11 to 134:11

00134:11 A. No.

Page 135:17 to 135:19

00135:17 Q. (By Ms. Strippoli) Okay. Did M-I SWACO
 18 do any after-the-fact testing?
 19 A. Not to my knowledge.

Page 135:22 to 136:25

00135:22 Did you by any chance have any
 23 involvement with the float collar conversion for
 24 the Macondo Well?
 25 A. No.
 00136:01 Q. None whatsoever?
 02 A. No.
 03 Q. Were consulted on this issue at all?
 04 A. No.
 05 Q. Okay. Was M-I SWACO's Mud Engineers,
 06 were they in the practice of drafting
 07 Displacement Procedures?
 08 A. Yes. That would have been done on the
 09 rig. The -- the -- the initial procedure would
 10 have been drafted to start a process and a
 11 discussion with BP. Ultimately, BP would tell us
 12 how we were going to displace the well.
 13 Q. Okay.
 14 A. Okay? We would present them with a -- a
 15 basic Displacement Procedure, tell them what we
 16 needed for our fluid, okay? Just basic
 17 guideline. Then they will -- they will go
 18 through the strokes, and they will do that on the
 19 rig. They will make the decisions at the rig
 20 site. BP will make the final decision on how the
 21 well is displaced.
 22 Q. Okay. So M-I SWACO, and -- and maybe in
 23 this parti -- particular case, Leo Lindner, they
 24 create a Displacement Procedure, and that gets
 25 reviewed by BP?

Page 137:02 to 137:12

00137:02 A. Yes. It is reviewed by BP. It is a
 03 recommendation.
 04 Q. (By Ms. Strippoli) By M-I SWACO?
 05 A. By M-I --
 06 Q. To --
 07 A. -- SWACO --
 08 Q. -- BP?
 09 A. -- to BP.
 10 Q. Okay. And at that point, who in -- just
 11 for clarification, who in BP would review this?
 12 A. The --

Page 137:14 to 138:07

00137:14 Q. (By Ms. Strippoli) At what level or --

15 A. On --
 16 Q. -- position?
 17 A. -- the rig.
 18 Q. On the rig. So --
 19 A. That would be the DS -- the -- yeah,
 20 the -- the BP personnel on the rig. I -- I don't
 21 know exactly what their hierarc -- because I --
 22 I -- I did not deal with them on a -- on a
 23 regular basis. But I -- a -- a Drilling Foreman.
 24 Q. Okay. And would anyone at M-I SWACO
 25 check, let's say, Lindner's proposed
 00138:01 recommendation for the --
 02 A. When you say --
 03 Q. -- Displacement Procedure?
 04 A. -- "check"?
 05 Q. Would anyone review it, from M-I SWACO,
 06 or would he submit it directly just to the BP
 07 Represen -- the Driller on --

Page 138:09 to 139:09

00138:09 Q. (By Ms. Strippoli) -- on the rig?
 10 A. He submitted a copy of the initial
 11 Displacement Procedure to me, as I requested, to
 12 get them -- the process started on the rig for
 13 them to have a discussion about the upcoming
 14 procedure for the -- the upcoming displacement.
 15 Okay? So --
 16 Q. Okay.
 17 A. -- I received a copy of it, but I don't
 18 review it and say, "No, don't do this."
 19 Q. Okay.
 20 A. Simple request to get the process
 21 started.
 22 Q. So --
 23 A. And to remind them that they need to have
 24 a discussion with the rig that, well, you have an
 25 upcoming displacement that we need to get a
 00139:01 perp -- a plan together with BP and let B -- you
 02 know, discuss with BP how they're going to
 03 displace the well.
 04 Q. Okay.
 05 A. So I would not approve his Displacement
 06 Procedures.
 07 Q. Okay. So it would be the Well Site
 08 Leader that would have to approve the procedure?
 09 A. Yes.

Page 139:18 to 140:04

00139:18 Q. Can you tell me about the Program?
 19 A. VIRTUAL HYDRAULICS is a model. It is
 20 used with the inputs that is provided by BP. We
 21 can input these into a -- the VIRTUAL HYDRAULICS

22 model. We can predict and model, based on mud
 23 weights, formation temperature, depths, BHA's,
 24 what they're inclined to see as far as standpipe
 25 pressure. It -- it -- it models equivalent
 00140:01 circulating densities, ECDs.
 02 Q. Okay.
 03 A. And equivalent static densities based on
 04 mud weight, pumping gallons per minute.

Page 144:18 to 146:02

00144:18 I'm going to start off talking about the
 19 LCM spacer that was used on the Macondo Well.
 20 And my understanding is, it was a FORM-A-SET AK
 21 pill, a FORM-A-SQUEEZE pill were then combined
 22 together, mixed together, and used as a spacer
 23 for the Displacement Procedure; is that right?
 24 A. That's correct.
 25 Q. Okay. So I'm going to refer to it as an
 00145:01 "LCM spacer." If I use that terminology, will
 02 you understand what I'm talking about, rather
 03 than using more language, FORM-A-SET AK and
 04 FORM-A-SQUEEZE?
 05 In other words, when I refer to -- refer
 06 to "LCM spacer," I'm referring to the combining
 07 of the two pills --
 08 A. Okay.
 09 Q. -- to use as a spacer.
 10 A. Okay.
 11 Q. My understanding is that the benefit or
 12 advantage of FORM-A-SET AK was that you could mix
 13 it in advance and it could sit in -- in the pit
 14 for a while for potential future anticipated use;
 15 is that right?
 16 A. That is one of the benefits.
 17 Q. Okay. How long can that pill sit in a
 18 pit and still be functional for use?
 19 A. I don't know the exact time. The most --
 20 I don't know the exact time. I know with time,
 21 you will -- I don't know the exact length of
 22 time. I don't think the Bulletin states an exact
 23 length of -- length of time that you can keep
 24 that mixed in a pit.
 25 Q. Now -- now, once it's mixed and sitting
 00146:01 in the pit, over time it's going to experience
 02 bacterial degradation. Is that fair?

Page 146:04 to 147:08

00146:04 A. In the Product Bulletin it says without
 05 the use of a Myacide, it can degrade over time.
 06 Q. (By Mr. Hartley) There wasn't a Myacide
 07 used in the FORM-A-SET on the DEEPWATER HORIZON,
 08 was there?

09 A. Yes.
 10 Q. What was the Myacide that was used?
 11 A. The Myacide 25, I -- if I recall
 12 correctly. That's the -- the product that was
 13 used on the Report.
 14 Q. Okay. Was that used in both the
 15 FORM-A-SQUEEZE and the FORM-A-SET AK pills?
 16 A. I don't recall.
 17 Q. Okay. Was a biopolymer added to the
 18 FORM-A-SET AK when it was mixed on April 6?
 19 A. Bio -- biopolymer? I don't know the --
 20 the exact differentiation between "biopolymer"
 21 and "polymer." XCD or DUO-VIS was added to it, to
 22 my recollection.
 23 Q. So there was DUO-VIS put into the
 24 FORM-A-SET AK when --
 25 A. For the initial mixing, yes.
 00147:01 Q. Okay. Do you know how much DUO-VIS was
 02 added on April 6 when Leo Lindner first made that
 03 FORM-A-SET AK pill?
 04 A. I don't recall exactly how much.
 05 Q. Okay. Now, over the course of the about
 06 two weeks that that FORM-A-SET AK sat in the pit
 07 until it was used, is it fair to say that there
 08 was some bacterial growth on the DUO-VIS?

Page 147:10 to 148:05

00147:10 A. I disagree. With the pill sitting on the
 11 rig, I -- there were no tests run. I can't
 12 answer that question.
 13 Q. (By Mr. Hartley) And which part is it
 14 that you disagree with, that the pill was on the
 15 rig for --
 16 A. That it was biodegrading while it was on
 17 the rig.
 18 Q. Okay. Do you know whether Leo Lindner or
 19 anybody else with M-I SWACO ran any tests on the
 20 FORM-A-SET AK as to whether there was bacterial
 21 degradation?
 22 A. No, I do not know if there was a test
 23 run.
 24 Q. Now -- now, in your E-mail exchanges with
 25 BP, the issue of bacterial degradation was raised
 00148:01 by BP, wasn't it, as a reason why the -- the pill
 02 could not be used again on a future well?
 03 A. On a future well, yes.
 04 Q. Okay. And -- and what would -- why would
 05 it not be able to be used on a future well?

Page 148:07 to 148:14

00148:07 A. At this particular point in the well, we
 08 were getting ready to go to the Nile P&A. We

09 were preparing the rig to take on completion
10 fluids, so we were not going to be able to carry
11 that pill with us at that time. I do not know at
12 that time if there was another rig that could
13 have taken the pill. I don't know the operations
14 of the other rig at that time.

Page 148:21 to 148:24

00148:21 Q. (By Mr. Hartley) Did you have a
22 conversation with John LeBleu about bacterial
23 degradation of the FORM-A-SET AK pill?
24 A. Yes.

Page 149:16 to 149:18

00149:16 Q. (By Mr. Hartley) As -- as the pill sits
17 in a -- in a pit or tank over time, is it fair to
18 say that it -- it will degrade in some respects?

Page 149:20 to 150:18

00149:20 A. According to the Product Bulletin, it can
21 degrade.
22 Q. (By Mr. Hartley) Okay. And -- and what
23 sort of effects would that degradation have,
24 according to the Product Bulletin, in your
25 experience?
00150:01 A. I've never had one degrade on me. I
02 couldn't -- I couldn't answer that. I -- I --
03 you know, we pumped them on this well. We did
04 not have any problem with the biodegrade. I
05 can't tell you exactly how long we kept them in
06 the pit, but with -- with my knowledge of the
07 pill and my use of the pill on this well, we did
08 not have any biode -- degradation that I know of.
09 Q. From when the pills were used for loss
10 control events?
11 A. Yes.
12 Q. Or lost circulation events, rather.
13 Do you know whether the same is true by
14 April 20th when the pill was going to be used as
15 a part of that LCM spacer for displacement?
16 A. As I stated earlier, I -- I don't have
17 access to that pill. I can't tell you what it --
18 whether it was degrading or not degrading.

Page 151:10 to 151:13

00151:10 Q. (By Mr. Hartley) Were any tests run on
11 the FORM-A-SET AK or the LCM spacer as a whole as
12 to what effects, if any, biodegradation had had
13 since those pills were originally constructed?

Page 151:15 to 152:21

00151:15 A. I'm not aware of any tests that were run.
16 Q. (By Mr. Hartley) Okay. Was that a
17 question or concern in your mind?
18 A. No.
19 Q. So John LeBleu raises the question about
20 biodegradation, but there's -- was anything done
21 in response to determine what effect, if any,
22 that may have had on the pill?
23 MR. PIECH: Object to form.
24 A. No.
25 Q. (By Mr. Hartley) Okay. Do you know if
00152:01 there's any effect while that -- while the
02 FORM-A-SET AK pill sits in the pit on its gel
03 strength over time?
04 A. No.
05 Q. Do you know whether, as it sits there, if
06 it's a week, two weeks, whether it's going to
07 have less gel strength by the time it's used?
08 A. I'm not aware of any.
09 Q. Okay. Do you know whether M-I SWACO has
10 done any testing of that?
11 A. I'm not aware of any.
12 Q. Okay. Do you know whether on April 20th
13 or April 19th, Leo Lindner did any testing of the
14 gel strength of using the FORM-A-SET AK or the
15 FORM-A-SQUEEZE that was going to be used in the
16 LCM spacer?
17 A. I'm aware of -- of a rheology that Leo
18 Lindner performed on that pill.
19 Q. Okay. Are you aware of any tests of the
20 gel strength of those -- either pill?
21 A. I don't recall.

Page 153:06 to 153:12

00153:06 Q. Do you know what material Leo used when
07 he conducted that FANN 35 testing?
08 A. No, sir.
09 Q. Okay. Did you have a conversation with
10 Leo about the material to use for that testing?
11 A. A Displacement Procedure was sent to the
12 rig.

Page 153:23 to 154:01

00153:23 Q. Okay. What do you recall about the
24 rheology results, if anything?
25 A. The numbers looked good to me. The yield
00154:01 point looked good to me.

Page 154:05 to 154:08

00154:05 Q. Okay. Did you have any concerns at that
06 time about the ability the LCM spacer to suspend
07 barite when used as a spacer?
08 A. No.

Page 154:13 to 154:19

00154:13 Q. Did you have any discussions with Leo
14 about whether the LCM spacer would be able to
15 suspend the barite throughout the Displacement
16 Procedure?
17 A. We had a discussion that he would have to
18 add some DUO-VIS to the final pill. We might
19 want to add some DUO-VIS to the final pill.

Page 155:03 to 155:08

00155:03 Q. Do you recall having a conversation after
04 viewing the yield point and thinking the LCM
05 spacer looked good?
06 A. I -- I don't think I told him per se, but
07 I didn't have any red flags or I didn't have any
08 concerns about it.

Page 155:15 to 155:18

00155:15 Q. Was there a concern that the existing
16 quantity of DUO-VIS in the FORM-A-SET AK was not
17 sufficient to suspend the barite throughout
18 the displacement procedure?

Page 155:20 to 155:20

00155:20 A. No.

Page 156:11 to 156:20

00156:11 Q. All right. I'm going to hand you what
12 you saw earlier today, it's Exhibit 2810. It's
13 in Tab 14 of our materials. You've probably seen
14 it several times. And I want to talk for a
15 minute about the -- the -- the genesis of the
16 idea and the implementation of the idea to use
17 these LCM pills as a spacer. So my understanding
18 is --
19 A. Can I read this document again just to
20 make -- make sure?

Page 156:25 to 157:04

00156:25 Q. My understanding is that you had a
00157:01 conversation with Leo in which he said -- he
02 raised the prospect of using the LCM pills as a
03 spacer, and then you broached that topic with BP;
04 is that right?

Page 157:06 to 162:08

00157:06 A. That's not totally correct.
07 Q. (By Mr. Hartley) Okay. Explain to me
08 how -- how the process or the idea originated.
09 A. Leo and I had a conversation, and he
10 mentioned that he discussed it with the BP
11 Drilling Foreman about the prospects of using
12 this as a spacer. From that conversation, I then
13 started the process of contacting my contact at
14 BP, which was John LeBleu, saying we needed to
15 have a talk about these -- these pills, they were
16 BP pills, so we needed to talk about what we're
17 doing, we get toward the end of well so we were
18 going to have to --
19 Q. Figure out what to do with the --
20 A. -- make room -- figure out what to do
21 with them and -- and get ready for the Nile P&A.
22 Q. Okay. Let's start with the E-mail,
23 the -- the first E-mail at the very end of
24 Exhibit 2810. It's from you to Mr. LeBleu on
25 April 16. Is this original E-mail on April 16th
00158:01 at 8:04 a.m. where you were first raising with
02 Mr. LeBleu the prospect of using those LCM pills
03 as a spacer?
04 A. (Reviewing document.) To the best of my
05 recollection, yes.
06 Q. Okay. Were you familiar with any
07 discussions prior to this point about potentially
08 using FORM-A-SET AK and/or FORM-A-SQUEEZE as a
09 spacer for this well, or prior ones, with the
10 DEEPWATER HORIZON?
11 A. No.
12 Q. And let me explain where part of my
13 confusion lies. As I'm reading these E-mails, we
14 start with this April 16th E-mail, where it
15 appears to me that you are opening a conversation
16 with
17 Mr. LeBleu about how we dispose of these pills.
18 You get a response from Mr. LeBleu that says you
19 can't dispose of them because they haven't been
20 run downhole. Then the -- your next E-mail to
21 Mr. Wilby is -- then raises the opportunity of
22 potentially using them as a spacer.
23 So I -- I guess my question is: Was your
24 initial inquiry to Mr. LeBleu just: "Can we just
25 dump these or can we dispose of these," and then
00159:01 later the spacer arises as a potential use?
02 A. "We need to have a conversation about

03 these pills." This was the starting process of
04 discussing the option of these pills, what BP
05 wanted to do with these pills.

06 Q. Okay. And at that point, are you of the
07 frame of mind that it can be used as a spacer, or
08 is that arising later, once it's realized that
09 you can't dispose of them like the ENTERPRISE?

10 A. Please repeat that one more time.

11 Q. As I read these E-mails, it appears to
12 me -- and, obviously, I wasn't a participant, so
13 that's why I'm trying to get your clarification,
14 is that the first E-mail is basically: "We have
15 some LCM pills left over, so, John, we need to
16 talk about what we're going to do with them"?

17 A. Okay.

18 Q. "We've disposed of them in a prior well."

19 The response comes back "We can't because
20 they haven't been run downhole." Then the spacer
21 as an option arises. Is that a -- is that
22 consistent with your memory of how the
23 conversation developed?

24 A. That was the starting process. It was
25 developing into a discussion about them.

00160:01 Q. Okay.

02 A. This was the first E-mail back from me,
03 but I followed through with Andrew and started
04 contacting some people at M-I SWACO to get their
05 input.

06 Q. Who else at M-I SWACO did you contact to
07 get their input?

08 A. Andrew Wilde, Tim Armand, Jamie Manuel,
09 J.R. Smith.

10 Q. Now, as you're having those conversations
11 with the other folks at M-I SWACO and with BP
12 about using these, are you discussing the effects
13 or implications of using these specific pills, or
14 is your conversation strictly from an
15 Environmental Regulation standpoint can we do
16 this?

17 A. From -- twofold: Environmentally can we
18 do it, and operationally can we do it. Is it a
19 viable option to use as a spacer.

20 Q. Okay. So a -- as a course of those
21 discussions, did you consider the compatibility
22 issues that these materials may have with
23 downhole fluids?

24 A. Compati -- compatibility with downhole
25 fluids?

00161:01 Q. Whether it's drilling fluids, seawater,
02 whatever, were there compatibility issues?

03 A. It wasn't going to be exposed to downhole
04 fluids. It was going to be used as a spacer
05 between seawater and synthetic.

06 Q. So it would -- there would be an
07 interface between the LCM spacer and synthetic

08 mud?
09 A. Yes.
10 Q. There would also be an interface between
11 the LCM spacer and water?
12 A. Yes.
13 Q. Did you consider the -- the stability of
14 those interfaces?
15 A. Not at this point in time. We were just
16 simply discussing, and I was using these
17 gentlemen as a sounding board within our company.
18 Q. Okay. So at any point, before the LCM
19 spacer's actually pumped, were there discussions
20 or tests done on the stability of the interfaces
21 between the LCM spacer and the synthetic mud and
22 the interface between the LCM spacer and the
23 water?
24 A. There was no testing done.
25 Q. Was there any testing on the settlement
00162:01 potential -- potential of solids suspended within
02 the LCM spacer?
03 A. No. You have to realize, this spacer is,
04 with the exception of the -- the LCM material,
05 was -- was just like any other spacer, water,
06 DUO-VIS, and barite, so with the right properties
07 it will suspend anything in -- in -- in that
08 spacer.

Page 162:15 to 163:13

00162:15 A. The -- the numbers on the rheology, and I
16 don't have them in front of me, were sufficient
17 to support the barite.
18 Q. Let me hand you what was previously
19 marked as Exhibit 5145. It's Tab 31 in our
20 material.
21 This -- the top of this exhibit has an
22 E-mail from Mr. Lindner to you --
23 A. Okay.
24 Q. -- which appears to report to you the
25 results of his testing. Is -- are these the
00163:01 numbers you're referring to?
02 A. This is the rheology I'm referring to,
03 yes.
04 Q. Okay. So looking at those rheology
05 numbers, at the top of Exhibit 5145, what were
06 the right properties, as you put it, that would
07 allow this LCM spacer to be utilized as a spacer?
08 A. Yield point of 14.
09 Q. Okay. What does the yield point tell
10 you?
11 A. Pounds per square foot in the wellbore,
12 that it will suspend and push the LCM through the
13 wellbore.

Page 163:18 to 164:01

00163:18 Q. -- to Mr. Lindner, you sent him, at 8:31
19 A.m. on April 19th, "I am thinking maybe a pilot
20 test. Just mix 2" gallons "each together and see
21 what happens."
22 Is it your understanding that that is the
23 rheological test Mr. Lindner conducted?
24 A. I'm not for sure if he tested this part
25 right here. I -- I can't answer whether he
00164:01 tested that two gallons right there.

Page 167:04 to 168:06

00167:04 Q. -- the -- the yield point of 14 that is
05 reflected in Mr. Lindner's E-mail, do you know
06 whether that reflects the actual yield point of
07 the LCM spacer that was pumped downhole?
08 A. I do not know.
09 Q. Okay. Well, what about the PV -- that's
10 plastic viscosity, right?
11 A. Yes.
12 Q. -- do you know whether the PV of 47
13 actually reflects the plastic viscosity of the
14 LCM spacer that was pumped downhole?
15 A. I would have to -- that's what this --
16 that's what this rheology test says, 47, PV of
17 47.
18 Q. And do you know whether that reflects the
19 plastic viscosity of the LCM spacer that was
20 actually --
21 A. I can't --
22 Q. -- pumped downhole?
23 A. I don't know.
24 Q. And the same is true for all of those
25 numbers --
00168:01 A. Okay.
02 Q. -- you don't know whether -- whether any
03 of those reflect the actual material that was
04 pumped downhole?
05 A. I do not know that these -- any of these
06 numbers reflect the actual materials.

Page 169:07 to 169:20

00169:07 Q. In other words, on or about April 6th
08 Mr. Lindner has the two pills separately
09 constructed, right?
10 A. They were in separate pits at the time,
11 yes.
12 Q. Right. So on or about April 6th, the
13 FORM-A-SET AK is in one pit, the FORM-A-SQUEEZE
14 is another pit, and it's -- it's in those pits
15 for a series of time?

16 A. Yes.
17 Q. Okay. Do you know whether at any point
18 after those pills were constructed on or about
19 April 6th anything additional was added to them,
20 whether it's DUO-VIS, barite, or anything?

Page 169:22 to 169:25

00169:22 A. I know barite was added to them.
23 Q. (By Mr. Hartley) Okay. Anything other
24 than barite?
25 A. Don't know of anything other than barite.

Page 170:22 to 171:17

00170:22 Q. And you had said you talked to Leo about
23 the possibility of using -- of adding additional
24 DUO-VIS if needed?
25 A. Possibility.
00171:01 Q. Possibility. Did that possibility ever
02 happen where there was a perceived need to add
03 more DUO-VIS?
04 A. We never had a discussion about it.
05 Q. Okay. Do you know whether, in fact, any
06 more DUO-VIS was ever added?
07 A. I do not know.
08 Q. Okay. Can you explain to me what the
09 purpose of DUO-VIS is in the L -- LCM pill?
10 A. DUO-VIS is used to not just in an -- LCM
11 pill, and any form of pill, to give you viscosity
12 and yield point --
13 Q. And --
14 A. -- to suspend particles.
15 Q. Okay. What would happen if there's not a
16 sufficient amount of DUO-VIS in a pill to suspend
17 particles?

Page 171:19 to 172:02

00171:19 A. What would happen if there's not --
20 please repeat that.
21 Q. (By Mr. Hartley) You -- if I understand
22 correctly, the purpose of DUO-VIS in -- is to
23 increase the viscosity and allow a particular
24 fluid to suspend solid particles?
25 A. Yes.
00172:01 Q. Okay. If there's not sufficient DUO-VIS
02 added to the fluid, what is the effect?

Page 172:04 to 172:11

00172:04 A. You would have settling.
05 THE WITNESS: Sorry.

06 Q. (By Mr. Hartley) Now, do you know whether
07 Mr. Lindner or anybody else on the DEEPWATER
08 HORIZON conducted any testing of the LCM spacer
09 to determine whether there was sufficient
10 viscosity to suspend barite throughout the
11 Displacement Procedure?

Page 172:13 to 173:09

00172:13 A. No other testing, other than it being in
14 the pit, and no noticeable settlement in the pit
15 with the amount of DUO-VIS we added initially and
16 weighted up to 14 pounds.
17 Q. (By Mr. Hartley) Okay. Did you have a
18 conversation with Mr. Lindner about that?
19 A. I sent the mixing procedure to the rig
20 with -- along with BP's approval, and we mixed
21 the pills with -- with BP's approval on the
22 mixing that we sent to the rig.
23 Q. Okay. And how -- how does that process
24 work in terms of -- of the mixing and spotting
25 procedures? Is that something that -- that M-I
00173:01 SWACO creates in the first instance?
02 A. We initially create it in the first
03 instance, and then it's sent to BP for their
04 approval. We -- where the Team looks at it, and
05 they approve it. In these particular instances,
06 there were several back and forths on these
07 mixing procedures and spotting procedures through
08 the event of coming up with the final pumping
09 schedule for pumping the pills.

Page 174:04 to 174:06

00174:04 Q. (By Mr. Hartley) So the individuals on
05 the rig, to your knowledge, had conversations
06 with BP about the procedure for the LCM spacer?

Page 174:08 to 179:16

00174:08 A. Yes.
09 Q. (By Mr. Hartley) Okay. Do you -- are you
10 aware of what the nature of those conversations
11 was?
12 A. Was the initial -- yes. It was the
13 initial conversation that we had giving them a
14 proposed Displacement Procedure at the beginning,
15 before we did it, for them to review and to
16 decide on how we were going to displace and
17 spot -- excuse me, spot.
18 Q. So that was -- that was in conjunction
19 with conversations about the Displacement
20 Procedure?

21 A. Say that one more time.
22 Q. Were those -- were those conversations in
23 the context of discussing the Displacement
24 Procedure?
25 A. They were discussing the Displacement
00175:01 Procedure on the rig.
02 Q. Okay. Now, if I understood correctly,
03 you received a copy of the anticipated
04 Displacement Procedure from Mr. Lindner on April
05 19th, and that's Exhibit 7607; is that right?
06 A. Yes.
07 Q. At the time you were having discussions
08 or proposing utilization of the LCM spacer, were
09 you aware that the displacement would --
10 procedure would be stopped for a period of time
11 to conduct the negative test?
12 A. (Reviewing document.)
13 No. It's nowhere on this procedure.
14 Q. Okay. So I -- I want to start -- back
15 when you -- when you first started having your
16 conversation with Mr. LeBleu about April 16th,
17 you -- you sort of raised the idea of using these
18 LCM pills as a spacer. At that point did you
19 know that -- that the Displacement Procedure
20 would stop for a period of time to conduct the
21 negative test?
22 A. No, I was not aware of that.
23 Q. And then a few days later, on April 19th,
24 when Mr. Lindner, in Exhibit 7607, sends you the
25 Draft Displacement Procedure, at that point,
00176:01 you're still not aware that the Displacement
02 Procedure will stop at some point to conduct a
03 negative test; is that right?
04 A. I'm not aware of that, yes.
05 Q. Okay. Would that change your opinion on
06 whether to use the LCM spacer, had you known that
07 there -- that the procedure would stop for a
08 period of time?
09 A. No. It's our -- it is our
10 recommendation, no matter what pill is used, no
11 matter what spacer is used, to not stop during a
12 displacement. But that is a recommendation --
13 Q. M-h'm.
14 A. -- okay? That's a recommendation. And
15 the reason why we recommend that --
16 Q. Is my next question.
17 A. Okay. I'm sorry.
18 Q. No. Go ahead.
19 A. The -- the reason why we recommend that,
20 is because the fluid that we're displacing is a
21 synthetic-based fluid. We want to minimize any
22 water infiltration to that fluid. We want a
23 clean -- a clean displacement. If the
24 displacement is not clean, you put water into the
25 synthetic-based mud, and then BP has to pay for

00177:01 that fluid to have it reconditioned back to what
02 it was sent out at.

03 Q. Okay.

04 A. So we always want a clean displacement.

05 Q. Okay.

06 A. We recommend a clean displacement.

07 Q. Can you explain to me -- I mean, I'm
08 having difficulty understanding. How -- how is
09 the Displacement Procedure not going to be clean
10 if it -- if it stops for a period of time?

11 Maybe another way of phrasing it: What
12 do you mean by a "clean displacement"?

13 A. We -- we want to minimize the invasion of
14 water into the synthetic fluid.

15 Q. And how could stopping a Displacement
16 Procedure introduce water to the synthetic fluid?

17 A. They get put together.

18 Q. Okay. How would they get put together?

19 A. Well, if you pump water next to synthetic
20 during the course of their -- as they're pumping
21 and flowing, they will commingle. If you stop,
22 it will allow it to -- more of the commingling of
23 the fluids.

24 Q. So when you're referring to synthetic
25 fluid, that would include the -- the --

00178:01 A. Some kind of --

02 Q. -- spacer?

03 A. -- spacer, yes.

04 Q. Okay. Not -- you're not referring to
05 fluid --

06 MR. TANNER: Objection, form.

07 Q. (By Mr. Hartley) -- to synthetic-based
08 mud?

09 A. Repeat that again?

10 Q. You're -- you're not referring to
11 synthetic-based mud exclusively when you talk
12 about the -- the synthetic fluids?

13 MR. TANNER: Objection --

14 Q. (By Mr. Hartley) It's my understanding --

15 MR. TANNER: -- form.

16 Q. (By Mr. Hartley) -- that what you'll do,
17 you're -- you're going to displace the
18 synthetic-based mud. So the first thing you're
19 doing is you're running the LCM spacer down,
20 followed by seawater. So the spacer is the
21 interface between the two fluids, right?

22 A. Yes.

23 Q. And is there a concern that if you stop
24 mid displacement, about the interfaces between
25 those three fluids?

00179:01 A. There's no concerns.

02 Q. It -- it increases the opportunity for
03 the -- the fluids to mix and mingle at those
04 interfaces?

05 MR. TANNER: Objection, form.

06 A. As I stated, we recommend that -- as this
07 procedure recommends, it is our recommendation
08 that you do not shut down during displacement.
09 BP has the ultimate and final decision in this
10 Displacement Procedure.

11 Q. (By Mr. Hartley) I agree. You recommend
12 not stopping the displacement. Can you explain
13 to me what effects stopping would have when
14 you're using an -- a mat -- LCM material as a
15 spacer?

16 A. You're getting --

Page 179:18 to 180:12

00179:18 A. You're getting one fluid mixed in with
19 the other.

20 Q. (By Mr. Hartley) Okay. Now, if the
21 displacement stops at some point, and fluid is
22 static, you have on -- on top, you'll have the
23 synthetic-based mud you're trying to displace,
24 right?

25 A. Correct.

00180:01 Q. And below that, you'll have the -- in
02 this case, the LCM spacer?

03 A. Correct.

04 Q. Below that, you have the seawater?

05 A. Correct.

06 Q. So if you stop the Displacement Procedure
07 at some point, it increases the opportunity for
08 the synthetic-based mud and the LCM spacer to
09 interact and interface with each other?

10 A. Correct.

11 Q. It also does the same thing with respect
12 to the LCM spacer and the water.

Page 180:14 to 180:25

00180:14 A. But that's not the -- that's not -- that
15 is not the purpose of a displacement. The
16 purpose of a displacement is to get the synthetic
17 out of the wellbore.

18 Q. (By Mr. Hartley) Understood. Understood.

19 A. The concern is not whether the water and
20 the spacer are mixing; the concern is whether the
21 spacer and the synthetic-based fluid are mixing.

22 Q. Right. But in any event, there is an --
23 more of an opportunity for the spacer and the
24 water to mix and mingle when the procedure is
25 stopped mid course?

Page 181:02 to 181:03

00181:02 Q. (By Mr. Hartley) You would agree with

03 that, at least?

Page 181:05 to 181:05

00181:05 A. Our procedure --

Page 181:07 to 181:10

00181:07 THE WITNESS: Apologize.

08 A. Our procedure is to displace the
09 synthetic-based mud from the wellbore without
10 getting water in it, to minimize the reclamation.

Page 181:17 to 182:05

00181:17 Q. (By Mr. Hartley) Do you know how heavy
18 the LCM spacer utilized during the Macondo
19 displacement was?
20 A. 16 -- excuse me, I did not know til after
21 the fact.
22 Q. Okay. But as you sit here today, you
23 know it was a 16 ppg spacer?
24 A. As of -- we sit here today, yes.
25 Q. And it was displacing about a, what, 14
00182:01 ppg synthetic-based mud?
02 A. Yes.
03 Q. And then the water was what, 8 -- 8.6 ppg
04 or --
05 A. 5, 8.6, depending on the --

Page 182:20 to 183:13

00182:20 Q. At the point when the Displacement
21 Procedure is stopped, you have a 16 ppg spacer
22 sitting on top of an -- roughly 8 ppg water?
23 A. Okay.
24 Q. Is it -- do you agree with that?
25 A. Yes.
00183:01 Q. Does it raise any concerns in your mind
02 as to solids in the 16 ppg spacer settling into
03 the 8 ppg water?
04 A. No.
05 Q. Why is that?
06 A. I'm not concerned with the spacer or the
07 water. I'm concerned with the synthetic-based
08 fluid.
09 Q. But -- but are you concerned at all with
10 the -- with the solid suspending -- suspended in
11 that spacer, settling out and affecting downhole
12 conditions?
13 A. No.

Page 183:21 to 183:24

00183:21 Q. Okay. Is -- is that something you would
22 want to -- you -- that would concern you on
23 whether barite settles out and clogs lines
24 downhole?

Page 184:01 to 184:14

00184:01 A. We recommended not to stop.
02 Q. (By Mr. Hartley) Right.
03 A. We recommended that it be displaced in
04 the wellbore. After that, I can't -- I --
05 Q. Okay. So that may bring us --
06 A. -- can't answer.
07 Q. -- that may bring us full circle back to
08 my -- my original --
09 A. Okay.
10 Q. -- question. When you were recommending
11 use of the LCM spacer, you didn't know that the
12 Displacement Procedure was going to stop mid
13 course, right?
14 A. That's correct.

Page 184:20 to 184:22

00184:20 Q. Okay. Faced with that situation, would
21 you raise -- would it raise concerns in your
22 mind?

Page 184:24 to 184:24

00184:24 A. No.

Page 185:01 to 185:02

00185:01 A. No, it would not raise concerns in my
02 mind.

Page 185:09 to 185:21

00185:09 Q. (By Mr. Hartley) The Displacement
10 Procedure that Mr. Lindner sent you on April
11 19th, in Exhibit 7607, on the bottom part --
12 that's the one right in front of you.
13 A. Oh, okay.
14 Q. -- the bottom part under the Displacement
15 Procedure, line 5, can you read that out loud for
16 me?
17 A. "Do not shut down until displacement is
18 complete."
19 Q. And that's consistent with what you're

20 talking about, the M-I recommendation to BP is?
21 A. Yes.

Page 186:04 to 186:17

00186:04 Q. Are you aware, as you sit here today,
05 that a negative test was conducted during the
06 Displacement Procedure?
07 A. After the fact, yes.
08 Q. Okay. After the incident, you became
09 aware of that?
10 A. After the incident, I became aware of it.
11 Q. Okay. Does that raise any concerns or
12 questions in your mind as to the viability of
13 using the LCM spacer as part of the Displacement
14 Procedure?
15 A. No.
16 Q. No concerns?
17 A. No concerns.

Page 187:15 to 189:02

00187:15 Q. (By Mr. Hartley) All right. Mr. Maxie,
16 before we talk about the other exhibit, I wanted
17 to jump back just for a minute to Exhibit 967,
18 that I've just handed you. It's Tab 33 in our
19 materials. This is a copy of the Displacement
20 Procedure that was actually run on the Macondo
21 Well on April 20th, 2010. And if you put this
22 one side by side with 7607, that Mr. Lindner sent
23 you on April 19th, I want you to look at Line 5
24 under the "Displacement" at the bottom, and you
25 read the -- Line 5 from the April 19th one. And
00188:01 how does that compare to Exhibit 967?
02 A. Exhibit 961 has been changed -- or 967
03 has been changed.
04 Q. How has it been changed?
05 A. On your reference to Line 5, the one --
06 the one that I have seen earlier, says: "Do not
07 shut down until displacement is complete."
08 5, says: "Close annular and conduct
09 negative test. After successful negative test,
10 open bag."
11 Q. So the difference, then, is the procedure
12 Mr. Lindner sent you on April 19th rec -- with
13 the M-I recommendation, says: "Don't shut down
14 the displacement," then the displacements
15 actually run, includes under Line 5 the
16 conducting of a negative test in the middle of a
17 Displacement Procedure; is that right?
18 A. That is correct.
19 Q. Okay. And now, did you know that prior
20 to today that -- that the Displacement Procedure
21 had been stopped to conduct a negative test?

22 A. I recall stating earlier that after
23 the -- after the incident, I -- I -- I was
24 informed that they had stopped to do a negative
25 test.
00189:01 Q. Do you know how long they had stopped?
02 A. No, I do not.

Page 189:23 to 190:25

00189:23 Q. Okay. Knowing that the Displacement
24 Procedure's going to stop for a period of time to
25 conduct a negative test, does that cause any
00190:01 issues or concerns in your mind as to the fluids
02 remaining static for a period of time?
03 A. Going back to my statement earlier, our
04 recommendation is not to shut down during a
05 displacement, with any spacer used. That is our
06 recommendation: Do not shut down until
07 displacement is complete.
08 Q. Okay. Now, if displacement is going to
09 be shut down and the fluids are going to remain
10 static for two to three hours, does that cause
11 you any issues or concerns with the gel strength
12 of the fluids, the viscosity, or their ability to
13 suspend barite during that period of time?
14 A. No.
15 Q. You're not concerned that barite or other
16 solids suspended in a heavy spacer sitting above
17 water would descend or settle down?
18 A. No.
19 Q. Would it increase the importance in your
20 mind of running settlement tests on the spacer?
21 A. No.
22 Q. Would it concern you at all about the
23 ability of the spacer to suspend barite in a
24 static position over a period of hours?
25 A. No.

Page 192:04 to 193:02

00192:04 Q. (By Mr. Hartley) Okay.
05 A. Once again, I have nothing to do with the
06 displacement procedures. Okay? Those are all
07 done at the rig, those are all done and agreed to
08 by BP, they tell us how to pump these, with their
09 procedure for displacing the well. I had no --
10 no -- I had no role in designing this procedure.
11 Q. Right. As the Project Engineer onshore,
12 you're not involved in designing --
13 A. That is correct. I'm not involved in --
14 in -- in designing the way BP is going to
15 displace their well. All we can do is make
16 recommendations. We started the process with
17 this right here, with this that Leo sent me, and

18 that's where my involvement in it stopped.
 19 Q. And Leo, the Drilling Fluid Specialist on
 20 the rig, is involved through the -- through the
 21 course of revising --
 22 A. He --
 23 Q. -- and arranging the Displacement
 24 Procedure?
 25 A. He is involved, but he's not the ultimate
 00193:01 say-so. BP is the ultimate say-so in this
 02 procedure.

Page 194:10 to 194:13

00194:10 Q. (By Mr. Hartley) Do you have, you being
 11 M-I, a Policy or procedure with respect to how to
 12 deal with your recommendations being rejected or
 13 disregarded --

Page 194:16 to 194:16

00194:16 Q. (By Mr. Hartley) -- or not accepted?

Page 194:18 to 194:23

00194:18 A. I'm not aware of any.
 19 Q. (By Mr. Hartley) Okay.
 20 A. We operate as directed.
 21 Q. As a service contractor, you make rec --
 22 recommendations to BP, they ultimately make the
 23 final decision on how to displace?

Page 194:25 to 194:25

00194:25 A. Correct.

Page 195:13 to 196:12

00195:13 FORM-A-SQUEEZE. So orienting you in that sense,
 14 my understanding is FORM-A-SET AK, as you said,
 15 requires the addition of another material to
 16 crosslink for it to gel up, right?
 17 A. Yes.
 18 Q. Okay. FORM-A-SQUEEZE isn't like that,
 19 though, is it?
 20 A. FORM-A-SQUEEZE is not like FORM-A-SET AK
 21 in the fact there's nothing else added.
 22 FORM-A-SQUEEZE is a one-sack material.
 23 Q. Okay. And how does FORM-A-SQUEEZE, then,
 24 work downhole as a lost circulation material?
 25 A. It is -- FORM-A-SQUEEZE is designed to
 00196:01 dewater when it is introduced into a fracture or
 02 a sand that is losing fluid. It needs a matrix

03 to make it dewater, such as -- an example would
 04 be a screen, it needs something to make it
 05 dewater.

06 Q. So in other words, there's pressure
 07 applied to the FORM-A-SQUEEZE against some sort
 08 of matrix, and then it will dewater and form a
 09 solid plug?

10 A. When I say "matrix," I -- I was very
 11 clear about something the size of a screen or a
 12 fracture or a formation, yes.

Page 196:21 to 200:02

00196:21 Q. Do you know whether there was any -- any
 22 testing done on whether the FORM-A-SQUEEZE would
 23 dewater once pumped downhole after combination
 24 with FORM-A-SET AK?

25 A. No.

00197:01 Q. I'm going to hand you what was previously
 02 marked as Exhibit 1026, a version of which you
 03 saw earlier. I think the only difference were
 04 the Bates numbers, but this is the "Drilling
 05 Fluids Program" for the Macondo Well. Does that
 06 look familiar to you --

07 A. Whew.

08 Q. -- to the extent you can read those small
 09 charts?

10 (Laughter.)

11 A. This is my -- this is the Fluid Program.

12 Q. (By Mr. Hartley) Okay. You prepared this
 13 for the Macondo Well, right?

14 A. Yes.

15 Q. I want to direct your attention first to
 16 Page 33 of 65. The top bullet point reads: "If
 17 casing casing is going to be set at td, pump spot
 18 heavy pad mud (16.5 ppg) on bottom prior to
 19 tripping out of well bore."

20 Do you see that bullet point?

21 A. Yes.

22 Q. Can you explain to me what -- what this
 23 means?

24 THE WITNESS: Thank you.

25 A. This is -- this is a common practice that
 00198:01 we recommend, to spot heavy mud in the bottom of
 02 the wellbore.

03 Q. (By Mr. Hartley) Why do you recommend
 04 doing that?

05 A. To help the cement turn when they're
 06 cementing.

07 Q. Can you explain to me how it helps the
 08 cement turn?

09 A. I'm not a cementing expert. I -- I -- I
 10 can't answer that. All I -- this is just a
 11 recommendation.

12 Q. Right.

13 A. That's what I -- it's just a common
14 practice to spot, and it's a recommendation to
15 spot 16.5 in the bottom of the wellbore --
16 Q. So --
17 A. -- to help the cement turn.
18 Q. So down at the bottom of the wellbore and
19 into the rat hole you'll have this -- this heavy
20 mud to sort of decrease the opportunity of
21 contamination with the cement as it's turning the
22 corner?
23 A. I -- I don't -- I -- like I said, I'm not
24 a cementing expert. What I can answer is that
25 it's -- it's -- it's a recommendation to help
00199:01 cement turn when it's pumped through the bottom
02 of the shoe.
03 Q. Okay. Do you know whether BP followed
04 this recommendation?
05 A. To my knowledge, they did not spot. They
06 did not follow this recommendation.
07 Q. Okay. And can you explain what they did
08 that differs from what you were recommending in
09 your drilling fluids program?
10 In other words, do you recommend --
11 A. I recommended spotting 16.5, and they did
12 not spot it.
13 Q. Okay. Did they spot anything, to your
14 knowledge?
15 A. To my knowledge, no. I wasn't -- go
16 ahead. Not to my knowledge.
17 Q. Okay.
18 A. No, I don't -- I don't recall them
19 spotting anything. I was not informed that they
20 spotted anything.
21 Q. Okay. Is that something you would
22 typically be informed of?
23 A. No. This is a recommendation. They can
24 choose to follow it, or choose not to follow it.
25 Q. Right.
00200:01 A. Ultimately, they're in control of the
02 well.

Page 203:06 to 203:19

00203:06 Q. So generally, you would want to -- you
07 would not want to mix your weighted pills too far
08 in advance because they'll settle over time?
09 A. Yes, that's what that's -- that's what
10 that reads.
11 Q. Okay. Do you know whether the FORM-A-SET
12 AK and the FORM-A-SQUEEZE pills were in pits that
13 had agitators?
14 A. Yes, they were.
15 Q. Okay. So you -- you -- when you
16 mentioned earlier that you weren't concerned
17 about settling because you didn't see any

18 settlement in the pits, was that a product of
19 them being periodically agitated in those pits?

Page 203:21 to 204:07

00203:21 A. That was one of the -- that was one of
22 the components of it. The other component was we
23 had a -- it was a one-sack material with the
24 polymers already in it. And with the -- with the
25 one-sack material and weighted up, we did not see
00204:01 any settling, or I'm not aware of any settling on
02 the rig. I'm not on the rig, so --
03 Q. (By Mr. Hartley) Do you know whether any
04 testing or analysis was done as to the settlement
05 effects on either the FORM-A-SET AK or
06 FORM-A-SQUEEZE after built in a non-agitated
07 state?

Page 204:09 to 204:15

00204:09 A. No.
10 THE WITNESS: Sorry.
11 Q. (By Mr. Hartley) Okay. Do you know
12 whether there was any settlement testing done at
13 any point after their construction on April 6th,
14 2010?
15 A. No.

Page 205:11 to 205:13

00205:11 Q. Was a FANN 70 conducted on those
12 materials?
13 A. No.

Page 207:21 to 209:02

00207:21 Q. Do you recall whether BP ever requested
22 any FANN 70 testing after January 31st, 2010
23 through April 20th, 2010?
24 A. I just don't recall. I -- I'm not saying
25 there wasn't, but I just don't recall.
00208:01 Q. Okay. Do you know whether M-I SWACO
02 performed any testing of drilling fluids that
03 actually depicted the rheological properties of
04 those fluids at downhole conditions?
05 A. I don't recall.
06 Q. You don't recall seeing any such tests?
07 A. I don't recall any -- seeing any FANN 70
08 data.
09 Q. Who would typically conduct that testing?
10 A. The lab, M-I SWACO laboratory.
11 Q. At -- at whose direction?
12 A. As per request of BP.

13 Q. Okay. Would that be something that would
14 go through you, as the Project Engineer?

15 A. Not necessarily. If -- if they
16 request -- if John LeBleu or anybody at BP would
17 request, I would notify the rig that they needed
18 to fill the lab request, and it should -- should
19 accompany the sample when it went to -- when it
20 went to the shore, but I don't recall doing any.

21 Q. Okay. The -- the rheological properties
22 of the drilling fluids will, in fact, differ
23 downhole than they do at -- at surface, right?

24 A. That's correct.

25 Q. The pressure and temperature will affect
00209:01 the viscosity, the yield point, things of that
02 nature?

Page 209:04 to 209:08

00209:04 A. It will test the yield point, PV, and the
05 gels.

06 Q. (By Mr. Hartley) Okay. The gel strength
07 downhole may be different from the gel strength
08 testing at -- at surface on the rig?

Page 209:10 to 209:10

00209:10 A. Yes.

Page 209:18 to 209:20

00209:18 Q. (By Mr. Hartley) Do you know how much
19 difference there would be between, say, the yield
20 point at surface versus the yield point downhole?

Page 209:22 to 209:25

00209:22 A. No, not unless a FANN 70 was run on it.

23 Q. (By Mr. Hartley) Do you have any idea of
24 what the difference in the plastic viscosity at
25 surface versus downhole would be?

Page 210:02 to 210:02

00210:02 A. No.

Page 210:08 to 210:13

00210:08 Q. (By Mr. Hartley) Okay. And running the
09 FANN 70 data would be the only way to actually
10 determine the rheological properties of the
11 fluids downhole?

12 MR. TANNER: Objection, form.

13 A. Of the fluids downhole? Yes.

Page 212:02 to 212:08

00212:02 Q. If you would have been aware prior to
03 raising the idea of using the LCM pill as a
04 spacer that the displacement would have been
05 stopped to perform a negative pressure test
06 during the middle of the displacement, would you
07 still have raised that idea of using the LCM pill
08 as a spacer?

Page 212:10 to 212:13

00212:10 A. I -- I can't really answer that. I
11 wasn't informed that they were going to.
12 Q. (By Mr. Thibodeaux) Why can't you answer
13 that? It's a "Yes" or "No" question.

Page 212:15 to 212:18

00212:15 A. Would I still recommend it -- I'm still
16 trying to understand your question. Would I
17 still recommend it even if I knew we were going
18 to shut down and do a negative test?

Page 212:20 to 213:10

00212:20 A. As I stated earlier, the reason -- we --
21 we make the recommendation to not stop pumping
22 during the Displacement Procedure. There were
23 other instances where we had had success with
24 stopping in the middle of a Displacement
25 Procedure on other wells with -- with BP, and
00213:01 they had no issues with spacers settling there.
02 So it -- it would not change. I would not say
03 "No." I would still pursue using it.
04 Q. I'm asking specifically with respect to
05 the negative pressure test part of it, though. I
06 understand what you're saying about stopping.
07 But if you would have known that a negative
08 pressure test would have been run during the
09 middle of the displacement, would you have still
10 recommended using an LCM as a spacer?

Page 213:12 to 214:06

00213:12 A. Ah, yes.
13 Q. (By Mr. Thibodeaux) Okay. There's
14 nothing about conducting a negative pressure test
15 during a displacement that would concern you in
16 using an LCM as a spacer?

17 A. No.

18 Q. Okay. And what's that based on?

19 A. This spacer, it's no different than any
20 other spacer other than the fact it had some LCM
21 material in it. We ran background LC -- LCM
22 material through the whole well. This -- we had
23 LCM material in it, but it's basically made up of
24 gel, water, and barite -- excuse me, DUO-VIS,
25 water, and barite.

00214:01 So it's no different than any other pill
02 that -- spacer, excuse me, that was used on, say,
03 Kodiak. The only difference being the LCM in it.
04 It had success shutting down for a negative test
05 with another spacer in the well. So I -- I did
06 not have any concerns about using the LCM.

Page 215:12 to 215:14

00215:12 Q. (By Mr. Thibodeaux) You were aware at the
13 time that there were issues in April with the
14 conversion of the float collar?

Page 215:18 to 216:11

00215:18 A. I don't have any -- I don't have any
19 say-so or any conversation or anything about
20 converting flows. That's not my -- that's not my
21 expertise.

22 Q. (By Mr. Thibodeaux) So when you were
23 asked to run models -- and I believe like you
24 testified earlier, to attempt to see if you could
25 get the model pressures to come down -- it wasn't
00216:01 your understanding that you were doing that based
02 on the circulation pressures that were seen after
03 the float collars were possibly converted?

04 A. I was not aware of why I was running the
05 models. I was aware that my pressure predicted,
06 that my model was higher than what they actually
07 saw in the well.

08 Q. But you didn't know that it was related
09 to the float collar conversion and whether or not
10 the --

11 A. No. I was not aware --

Page 216:13 to 216:15

00216:13 Q. (By Mr. Thibodeaux) -- the float collar
14 converted?

15 A. No.

Page 219:10 to 220:06

00219:10 Q. All right. Have you ever been aboard the

11 DEEPWATER HORIZON?

12 A. No.

13 Q. Okay. Nobody ever made -- nobody ever
14 told you or -- or you never became aware that --
15 of any concerns with the competency of the
16 Transocean drill crew, right?

17 A. No.

18 Q. You don't believe that the Transocean
19 drill crew was callous or indifferent as to the
20 safety of individuals or the environment, right?

21 A. Having not been on the rig, I don't think
22 I could fairly answer that.

23 Q. You've never heard anybody say that,
24 though, before?

25 A. I've never heard anybody say that.

00220:01 Q. Okay. Let's get back to the -- the --
02 the float collar conversion circulating pressures
03 we were talking about a second ago.

04 Mr. Cocales, or Brett Cocales, came to
05 you and asked you to run -- to rerun the
06 circulating pressure model, right?

Page 220:08 to 220:17

00220:08 A. I don't recall.

09 Q. (By Mr. Thibodeaux) You don't recall who
10 at BP you worked with to do that?

11 A. I -- I don't recall Mr. Cocales coming to
12 me.

13 Q. Who do you recall coming to you?

14 A. Brian Morel.

15 Q. Brian Morel? Okay. And what did Brian
16 Morel tell you was the point of running --
17 rerunning the models?

Page 220:19 to 222:11

00220:19 A. I did not rerun the models. I was just
20 asked to check my press -- I was asked to check
21 my inputs. I was just asked to check my inputs
22 to make sure that what I was given was correct.

23 Q. Okay. And what did you determine?

24 A. That my -- my -- my ori -- well, the
25 closest I could get was 480 psi. I don't -- as I
00221:01 stated earlier, I don't recall what my initial --
02 what my original first model represented. I
03 don't remember the pressure on the first model I
04 ran. Then I was checked to -- asked to check my
05 inputs, and as per the E-mail, the lowest I could
06 get was 480 psi.

07 Q. Was this an effort to determine if
08 acceptable ECDs would be present in the well,
09 equivalent circulating densities?

10 A. That wasn't relayed to me.

11 Q. Do you know what the cause was for the
 12 discrepancy between the actual pressures that
 13 were being seen and the 480 psi that you were
 14 getting in your model?
 15 A. No.
 16 Q. Did you ever undertake any Investigation
 17 to determine --
 18 A. No.
 19 Q. -- why there was that discrepancy?
 20 MR. TANNER: Let him finish.
 21 Q. (By Mr. Thibodeaux) That's okay.
 22 MR. TANNER: I'm telling him, not
 23 you.
 24 A. No.
 25 Q. (By Mr. Thibodeaux) No one from BP
 00222:01 ever -- stri -- strike that.
 02 After you reported that 480 psi was as
 03 low as you could get, did anyone with BP follow
 04 up with you about circulating pressures again?
 05 A. No.
 06 Excuse me.
 07 Q. No one asked you to look at the
 08 circulating pressures in the context of the
 09 potential for a float collar not converting or
 10 for a casing breach?
 11 A. No.

Page 222:14 to 222:22

00222:14 A. No, they did not.
 15 Q. (By Mr. Thibodeaux) Did you participate
 16 in the decision to proceed with the cement job
 17 despite the discrepancy between your model
 18 pressure and the actual pressures that were being
 19 seen?
 20 A. No.
 21 Q. John Guide never called you and talked to
 22 you about your model pressure?

Page 222:24 to 223:23

00222:24 A. I don't recall him ever contacting me.
 25 Q. (By Mr. Thibodeaux) Do you ever recall
 00223:01 talking to John Guide about your model pressure?
 02 A. Yes, I do.
 03 Q. And what was that conversation about?
 04 A. He didn't agree with the -- with the --
 05 the -- the pressure that I was predicting. He
 06 told me he was -- he told me to check my inputs
 07 and get with Brian and them, and they -- they
 08 asked me to recheck the inputs.
 09 Q. Was this after you had already rechecked
 10 the inputs --
 11 A. This was --

12 Q. -- and reported that it was 480 psi?
 13 A. -- this was in the process of them asking
 14 me to redo it. He was the first one to say that
 15 he didn't believe them. So then Brian came to
 16 me, asked me to redo them.
 17 Q. Okay. And after you redid them and
 18 reported to them that the lowest you could get
 19 was 480 psi, did you have any other conversations
 20 with Morel or Guide?
 21 A. No.
 22 Q. You did not?
 23 A. No. Not that I recall.

Page 224:12 to 224:18

00224:12 Q. Okay. You see the second sentence of
 13 your E-mail: "Here is our displacement procedure
 14 recommending that they pump 962 barrels instead
 15 of the 365 barrels that BP took upon themselves
 16 to pump not going by our planned
 17 recommendations"? Do you see that?
 18 A. I see it.

Page 225:15 to 227:01

00225:15 MR. THIBODEAUX: I'm going to mark
 16 Tab 4 as Exhibit 7612.
 17 (Exhibit No. 7612 marked.)
 18 Q. (By Mr. Thibodeaux) All right. If we're
 19 taking a look at -- that -- that was one of my
 20 questions, I believe.
 21 MR. TANNER: (Indicating.)
 22 THE WITNESS: Okay.
 23 Q. (By Mr. Thibodeaux) It looks to me
 24 like --
 25 A. Okay. Okay.
 00226:01 Q. -- the 992 barrels --
 02 A. Okay.
 03 Q. -- set forth in Exhibit 7612 --
 04 A. Okay.
 05 Q. -- is represented as 962 barrels in
 06 Exhibit 7611. That's probably a -- that's a
 07 typo, right?
 08 A. (Reviewing document.) "Continue"
 09 displace "up casing until spacer is 500 foot"
 10 above "BOP stack (992 barrels...strokes).
 11 "After" it "has past the" mud "stack" -- can "we
 12 can boost riser."
 13 Okay. What was your question?
 14 Q. The 992 barrels that's set forth in what
 15 you just read --
 16 A. Okay.
 17 Q. -- in the E-mail on Exhibit 7611 --
 18 A. Okay.

19 Q. -- is referring to that 992 barrels --
20 A. Okay.
21 Q. -- but it's a typo. It's 962. Right?
22 A. Okay, yes.
23 Q. Okay. Now -- now, going back to the
24 E-mail, 7611 --
25 A. To which E-mail?
00227:01 Q. 7611.

Page 227:20 to 228:06

00227:20 Q. Okay. M-I calculated to pump 962 barrels
21 to ensure that the spacer ended up being 500 feet
22 above the BOP stack, right?
23 A. Okay. Let's back up. This is the
24 Preliminary Displacement Procedure. I don't
25 think the strokes had been calculated for this
00228:01 yet. This was the initial Dis -- this was the
02 initial Displacement Procedure that was sent that
03 we got started in the process before it was
04 submitted to BP. So this is -- I -- I'm not sure
05 all these strokes are correct. I -- I don't
06 calculate these, so I can't answer to this.

Page 228:17 to 229:17

00228:17 Q. -- which is Exhibit 7611, the E-mail.
18 And on June 2nd, 2010, which is after the
19 incident --
20 A. Okay.
21 Q. -- right?
22 A. Right.
23 Q. You wrote to Mike Freeman. And who is
24 Mike Freeman?
25 A. Mike Freeman is our -- our Scientist at
00229:01 the M-I SWACO Lab. He is the -- he's an --
02 I'm -- I'm not sure of his whole title.
03 Q. Okay. And you wrote to him --
04 A. M-h'm.
05 Q. -- that "Here is our displacement
06 procedure recommending that they pump 962 barrels
07 instead of the 365 barrels that BP took upon
08 themselves to pump not going by our planned
09 recommendations," right?
10 A. Okay. This is the -- this is the
11 procedure I was given. Okay? This is the
12 procedure I was initially given. This is all I
13 had to go by. So I was asked the question -- I
14 don't know what the question was. I don't have
15 that in the E-mail. I simply relayed what the
16 original -- what was on the original plan. I --
17 I can't answer anything after that.

Page 229:20 to 230:11

00229:20 Q. (By Mr. Thibodeaux) I'm just asking you
 21 if on June 2nd --
 22 A. Okay.
 23 Q. -- 2010, you wrote to Mike Freeman:
 24 "Here is our displacement procedure recommending
 25 that" the -- "that they pump 962 barrels" --
 00230:01 A. Okay.
 02 Q. -- "instead of the" three-hundred
 03 sixty -- 65 "barrels that BP took upon themselves
 04 to pump not going by our planned
 05 recommendations."
 06 A. Okay.
 07 Q. You wrote that, right?
 08 A. Okay. Yes. That is my E-mail.
 09 Q. Okay.
 10 A. I don't recall where I pulled 365 barrels
 11 from. I don't -- I don't recall.

Page 232:10 to 232:12

00232:10 MR. THIBODEAUX: And I'm going to
 11 mark this as Exhibit 7613. 7613.
 12 (Exhibit No. 7613 marked.)

Page 232:16 to 234:13

00232:16 Q. I'd like to direct your attention to
 17 the -- to the -- to the E-mail on the first page,
 18 at the very top, from Timothy Armand?
 19 A. Okay. One more second. (Reviewing
 20 document.)
 21 Okay.
 22 Q. All right. You see where he writes to
 23 you: "Not a problem as long as there are no
 24 operational" risks "as we discussed"?
 25 A. Yes.
 00233:01 Q. Okay. Were any operational risks
 02 identified with respect to running the LCM as a
 03 spacer?
 04 A. No.
 05 Q. Okay. Who undertook a determination as
 06 to whether there are any operational risks?
 07 A. I questioned Brian Morel. I
 08 questioned -- I -- I questioned as to what tools
 09 we would have in the hole at the time. That was
 10 the only operational risks that -- that may have
 11 been a -- a risk at the time. I wasn't concerned
 12 with it, but I just needed to be proactive and
 13 find out exactly what tools we were going to have
 14 in the well at the time.
 15 Q. And -- and why would that have been an
 16 operational risk?

17 A. If there were tools in the hole that --
 18 that -- that were going to be used, I needed to
 19 see what tools those were, and contact the
 20 manufacturers to see if there was any
 21 restrictions of pumping LCM through them.

22 Q. And the fear would be to -- to
 23 potentially plug those tools, correct?

24 A. No, not necessarily.

25 Q. Okay. What else would there be?

00234:01 A. They may have limitations on what pound
 02 per barrel you could pump through their tools.
 03 And if that was a concern, I needed to know what
 04 that -- if that was a risk. And if they had
 05 limits set on their tools, I needed to know about
 06 them.

07 Q. Did you, or anyone you're aware of,
 08 assess whether there was any operational risks to
 09 plugging as a result of using the LCMs as
 10 spacers?

11 A. There were no concerns about this
 12 plugging.

13 Q. So you didn't look at that issue?

Page 234:15 to 235:13

00234:15 A. I didn't look for anything, because it --
 16 I didn't feel there were -- there -- there was no
 17 issues that were identified. Brian Morel
 18 responded to me in an E-mail saying they were
 19 going to have a cement stinger in the wellbore.
 20 So there wasn't any concern about it plugging. I
 21 didn't have any concern about it plugging a three
 22 and a half-inch cement stinger.

23 Q. (By Mr. Thibodeaux) Did you asset -- did
 24 you assess any potential operational risks that
 25 would be assoc -- be associated with the spacer
 00235:01 being above the BOP?

02 A. At the time I was recommending these, I
 03 wasn't aware it was going to be above the BOP,
 04 but -- I wasn't -- I wasn't aware of that.

05 Q. Well, had you been made aware that the
 06 spacer was going to be above the BOP --

07 A. No.

08 Q. -- well --

09 A. No.

10 Q. Let me finish my question. Had you been
 11 made aware that the spacer was going to be above
 12 the BOP, would you have considered that to be --
 13 or would that have raised any operational risks?

Page 235:15 to 235:16

00235:15 A. No.

16 Q. (By Mr. Thibodeaux) And why is that?

Page 235:18 to 235:23

00235:18 A. There were other instances where spacers
19 were stopped above the BOP, and a negative test
20 was performed. This spacer was no different from
21 any other spacer, except -- with the exception of
22 having some LCM particles in the pill. The pill
23 was made up of water, DUO-VIS, and barite.

Page 236:01 to 236:03

00236:01 MR. THIBODEAUX: I'll mark this as
02 Exhibit 7614.
03 (Exhibit No. 7614 marked.)

Page 236:19 to 237:10

00236:19 Q. (By Mr. Thibodeaux) Okay. In your E-mail
20 of April 16th to John LeBleu, Cocalles, Morel, and
21 Hafle, you write: "I do not know the exact tool
22 that" will we -- but -- "that will be used but if
23 there are any small restrictions" --
24 "restrictions in" this "assembly" -- or "in the
25 assembly this" will be -- "would be a risk." Is
00237:01 that right?
02 A. You read that correctly.
03 Q. All right. And Morel responds: "Cement
04 plug will be set with 3-1/2 inch stinger open
05 ended."
06 A. Yes, you read that correctly.
07 Q. Okay. Is that the only small restriction
08 that was considered with respect to the LCM being
09 run as a spacer?
10 A. Yes.

Page 238:07 to 238:24

00238:07 Q. To your knowledge, did Anadarko
08 participate in the decision to use the LCM as a
09 spacer during the displacement on April 20?
10 A. Not to my knowledge.
11 Q. To your knowledge, did Anadarko
12 participate in the design of the displacement
13 process that was used on April 20th?
14 A. Not to my knowledge.
15 Q. And to your knowledge, did Anadarko
16 participate in any way in the interpretation of
17 the negative pressure tests that were done on
18 April 20?
19 A. Not to my knowledge.
20 Q. And then you aren't aware of any input at
21 all, then, from Anadarko in the Displacement

22 Procedure that was done on April 20; is that
23 correct?
24 A. I'm not aware of any.

Page 239:22 to 241:15

00239:22 Q. Now, you've told us earlier today that
23 you've been working with M-I SWACO for over 14
24 years, right?
25 A. Yes.
00240:01 Q. And I think we've pretty clearly
02 established that you are the M-I SWACO Project
03 Engineer overseeing the Macondo Well, right?
04 A. Yes.
05 Q. And in that capacity, you were located --
06 your office was located in Houston, correct?
07 A. Yes.
08 Q. Not out on the DWH rig, correct?
09 A. "DWH"?
10 Q. DEEPWATER HORIZON.
11 A. That's correct.
12 Q. Now, before you became an M-I SWACO
13 Project Engineer, at one point, you were an M-I
14 SWACO Mud Engineer, correct?
15 A. Yes.
16 Q. And in that role, you were out on various
17 rigs, correct?
18 A. Yes.
19 Q. Okay. So you do have experience being
20 out on rigs, but you were not out on the
21 DEEPWATER HORIZON Rig as it was drilling Macondo,
22 correct?
23 A. Yes.
24 Q. Now, after 14-plus years at M-I SWACO in
25 the various positions that you've held, I assume
00241:01 that you consider yourself an experienced
02 specialist in the realm of drilling fluids; is
03 that correct?
04 A. Yes.
05 Q. And your M-I SWACO Team that was working
06 on the Macondo Well were Specialists in drilling
07 fluids, as well, right?
08 A. Yes.
09 Q. And your employer, M-I SWACO, is the
10 world's leading expert in drilling fluids. Would
11 you agree with that? If -- if you're hesitating
12 because you don't want to say they're "the
13 leading," let's say they're "a leading" expert
14 in -- in the realm of drilling?
15 A. They're one of the leading experts.

Page 241:18 to 241:23

00241:18 Q. Now, you understand that BP retained M-I

19 SWACO to provide the Drilling Fluids Program and
20 the Drilling Fluids personnel out on the
21 DEEPWATER HORIZON Rig for the Macondo Well,
22 correct?
23 A. Yes.

Page 242:08 to 242:11

00242:08 You know that BP was depending on you and
09 your Team of M-I SWACO Specialists for your
10 knowledge of the M-I SWACO drilling fluid
11 products, correct?

Page 242:13 to 242:16

00242:13 A. Our role to BP was to facilitate the
14 drilling of their wells and to make
15 recommendations based on our fluid on the -- on
16 the rig.

Page 242:24 to 243:02

00242:24 Q. Was there anybody working on the Project
25 that would have had more knowledge of M-I SWACO's
00243:01 products than M-I SWACO's own people working on
02 the Project?

Page 243:04 to 243:04

00243:04 A. Not to my knowledge.

Page 243:19 to 245:06

00243:19 Q. (By Mr. Piech) And I think we've already
20 looked at this today. This is the Drilling
21 Fluids Program that shows you in a row near the
22 center of the first page as -- the "Prepared
23 by" --
24 A. Okay. Yes.
25 Q. -- person?
00244:01 A. Okay.
02 Q. All right. Now, this Drilling Fluid
03 Program that's marked Exhibit 1026 provides
04 guidance regarding competition -- composition and
05 use of M-I SWACO products like the RHELIANT
06 Drilling Fluid System, for example?
07 A. Yes.
08 Q. Okay. And RHELIANT -- and that's
09 R-H-E-L-I-A-N-T -- is a specialized M-I SWACO
10 Drilling Fluid System, right?
11 A. It is a Drilling Fluid System provided by
12 M-I SWACO --

13 Q. Okay.
 14 A. -- RHELIANT System.
 15 Q. So -- so RHELIANT is proprietary to M-I
 16 SWACO, right?
 17 A. Yes.
 18 Q. Okay. And even the name RHELIANT itself,
 19 with the "H" in it, is trademarked by M-I SWACO,
 20 right?
 21 A. Yes.
 22 Q. Okay. Now, the Drilling Fluid Program
 23 we're looking at here that's marked Exhibit 1026
 24 also provides guidance on use of M-I SWACO LCM
 25 products, like the FORM-A-SQUEEZE and FORM-A-SET
 00245:01 AK, that we've talked about today, right?
 02 A. Yes.
 03 Q. Okay. And FORM-A-SQUEEZE is an M-I SWACO
 04 proprietary product, right?
 05 A. FORM-A-SQUEEZE is an Alpine product under
 06 the M-I SWACO umbrella.

Page 245:09 to 248:06

00245:09 Q. So M-I SWACO owns Alpine?
 10 A. Yes.
 11 Q. Okay. And FORM-A-SET AK is an M-I SWACO
 12 proprietary product?
 13 A. Yes.
 14 Q. Okay. Now, these LCM materials, like
 15 FORM-A-SQUEEZE and FORM-A-SET AK, are used to
 16 plug and seal off lost circulation zones in a
 17 formation being drilled, right?
 18 A. They're used in an attempt to seal off,
 19 yeah.
 20 Q. Okay.
 21 A. They're not always successful.
 22 Q. Okay. Now, when they -- when they are
 23 successful in sealing off and plugging up a lost
 24 circulation zone, they -- they essentially have
 25 the effect of strengthening the formation, right?
 00246:01 A. No, they're sealing off a zone.
 02 Q. Okay. And -- and in doing so, there --
 03 there -- where -- where there formerly would be a
 04 zone into which losses could occur, if the LCM
 05 material works appropriately, the -- the losses
 06 won't occur off into that zone, right?
 07 A. Yes.
 08 Q. That -- that zone will no longer, you
 09 know, take losses. It will be strong enough to
 10 keep from allowing losses?
 11 A. If it's suc -- that doesn't mean it won't
 12 ever lose in that zone again. You can lose in
 13 that zone again.
 14 Q. Okay.
 15 A. Okay? If it plugs initially and it stops
 16 the losses, you can go drill down, and you can,

17 again, crack that zone and start losses in that
 18 zone again.
 19 Q. Okay. And in which case you would,
 20 again, try --
 21 A. Try to --
 22 Q. -- try lost circulation material to --
 23 A. Yes.
 24 Q. -- firm up that zone once more?
 25 A. Yes.
 00247:01 Q. Okay. Now, when a well begins to
 02 experience losses, there are a number of
 03 strategies that can be pursued in attempting to
 04 stop those losses, right?
 05 A. Yes.
 06 Q. I think we've -- we've seen in the
 07 Drilling Fluids Program here at 1026 a number of
 08 flow charts that describe various strategies one
 09 could pursue, right?
 10 A. Yes.
 11 Q. So it wouldn't be the case that, you
 12 know, if you were to experience a loss, you just
 13 automatically drop your mud weight by, you know,
 14 .5 pounds per gallon or something like that?
 15 A. I wouldn't make that call. I'm not -- I
 16 don't recommend mud weights. I'm asked by the
 17 Operator to provide LCM material. If they decide
 18 to cut the mud weight back, that's their
 19 decision.
 20 Q. Okay. And in your experience, when you
 21 encounter, you know, lost circulation zone, is a
 22 first step typically to explore use of lost
 23 circulation material?
 24 A. Yes.
 25 Q. Okay. Now, in addition to being used to
 00248:01 combat lost circulation zones, LCM can also be
 02 used for other things, as well, right, like --
 03 I'll throw out one example -- to improve cutting
 04 removal from a well? And I'm -- I'm not trying
 05 to stump you --
 06 A. I understand. I'm trying to think.

Page 248:09 to 249:05

00248:09 Q. I -- I can point you to something. If we
 10 look at Page 51 of 65 here in Exhibit 1026,
 11 particularly the --
 12 A. Page 51.
 13 Q. I'll let you get to it.
 14 A. Yeah, please. Thank you. Okay.
 15 Q. I'm particularly looking at the paragraph
 16 three-quarters of the way down that's headed "LCM
 17 in Sweeps"?
 18 A. Okay. I see it.
 19 Q. And my question was: LCM can also be
 20 used for things like improving cutting removal

21 from a well --
 22 A. Yes.
 23 Q. -- right?
 24 A. (Nodding.)
 25 Q. Okay. I want to talk about another
 00249:01 alternate use for LCM, and that's the use of LCM
 02 as spacer. And if we could flip to Tab 7 in the
 03 book, which is Exhibit 2815, and actually I want
 04 to start on the -- this page that is M-I series
 05 of zeros 3188, if you could flip to that?

Page 249:11 to 251:05

00249:11 A. (Reviewing document.) Okay.
 12 Q. Okay. And I want to point you to the
 13 April 16th, 8:04 a.m. E-mail from you to John
 14 LeBleu at the bottom of the page. I think we've
 15 talked about this being you reaching out to BP to
 16 start a conversation about the FORM-A-SET AK and
 17 FORM-A-SQUEEZE pill that had been prepared on the
 18 rig, but not pumped, correct?
 19 A. This was the beginning of a conversation,
 20 yes.
 21 Q. Okay. And -- and if we see the E-mail
 22 above on that page, 3188, is John LeBleu's
 23 response back to you --
 24 A. M-h'm.
 25 Q. -- on April 16th, at 8:40, so just 36
 00250:01 minutes later, right?
 02 A. Yes.
 03 Q. And in his response, he says, these
 04 haven't been downhole. They're going to need to
 05 be disposed of. Here's some contact information
 06 for the people to coordinate with to dispose of
 07 these pills onshore. Right?
 08 A. This is a discussion going on, yes.
 09 Q. Okay. And -- and part of his reaction in
 10 this 8:40 E-mail is to say, "Since it has not
 11 been in the well, we will have to send in for
 12 disposal." Correct?
 13 A. Right.
 14 Q. And if they were sent in for disposal,
 15 as -- as John LeBleu indicates here, that would
 16 have cost BP money to do that disposal, right?
 17 A. Yes.
 18 Q. Okay. Now, sometime after you received
 19 that response from John LeBleu, where he
 20 indicated that they would have to go for disposal
 21 because they had not been circulated down the
 22 well, you began E-mailing some of your M-I SWACO
 23 co-workers for their thoughts on proposing use of
 24 the two LCM pills as a spacer for displacement,
 25 correct?
 00251:01 A. Yes.
 02 Q. Okay. And let's flip to Tab 9, which is

03 Exhibit 1015. This is an E-mail from you to John
04 LeBleu, Brett Cocalles, Brian Morel, and Mark
05 Hafle on the afternoon of the 16th?

Page 251:13 to 252:23

00251:13 Q. (By Mr. Piech) So this is an E-mail from
14 you to John LeBleu, Brett Cocalles, Brian Morel,
15 and Mark Hafle on -- on April 16th, at 3:00
16 o'clock in the afternoon, right?
17 A. Oh, yes.
18 Q. Okay. And in this E-mail you -- you
19 propose an option of using the two LCM pills as a
20 spacer for the displacement, right?
21 A. Yes.
22 Q. Okay. And you indicate that you've
23 spoken within M-I SWACO with four people about
24 this proposed option, correct?
25 A. Yes.
00252:01 Q. Now, we've talked a little bit about some
02 of these folks. You mentioned that Mr. Manuel
03 and Mr. Smith were Project Engineers?
04 A. Yes.
05 Q. Similar to yourself?
06 A. Yes.
07 Q. Okay. Mr. Wilde was a -- a Project
08 Engineering Manager?
09 A. Yes.
10 Q. Would that have been a -- a level senior
11 to you and Mr. Manuel and Mr. Smith?
12 A. Yes.
13 Q. Okay. Then even higher up the chain was
14 Mr. Armand, correct?
15 A. Armand was the BP Account Rep at the
16 time.
17 Q. Okay.
18 A. So he would have been just in there with
19 us as the Account Rep. We're the -- we are the
20 Project Engineers, and Andrew Wilde is our
21 contact.
22 Q. Okay.
23 A. He's our boss.

Page 253:01 to 254:18

00253:01 Q. So Wilde would have been your boss?
02 A. Yes.
03 Q. And then -- and then Armand is sort of
04 your interface with the client, BP, generally?
05 A. The client -- yes.
06 Q. Okay. So fair to say that the concept of
07 using the two LCM pills as spacer for
08 displacement was discussed at a fairly high level
09 in the M-I SWACO organization?

10 A. Yes.

11 Q. Now, on April 19th, 2010, you also had
12 Leo Lindner, a Senior Drilling Fluid Specialist,
13 out on the DEEPWATER HORIZON rig, conduct testing
14 regarding use of the two LCM pills as spacer for
15 displacement, correct?

16 A. A rheology was run on the pill, and the
17 pills were folded together, yes.

18 Q. Okay. So on April 20th, 2010, based on
19 your training and experience, you believe that
20 using the two LCM pills as spacer would make a
21 suitable -- suitable spacer for displacement at
22 Macondo, right?

23 A. Yes.

24 Q. You still feel that way today, correct?

25 A. Yes.

00254:01 Q. Okay. You didn't perceive any increased
02 risk created by using these two LCM pills as
03 spacer for displacement back in the April 20th,
04 2010 time frame, did you?

05 A. No.

06 Q. You still feel that way today, no
07 increased risk, right?

08 A. No increased risk.

09 Q. Okay. In fact, you believe that use of
10 the LCM pills as spacer was a beneficial use of
11 material that otherwise would have gone to waste,
12 correct?

13 A. A beneficial reuse for BP, yes.

14 Q. Okay. In your time working together with
15 BP, did anyone at BP ever ask you to do something
16 that in your mind would cut a corner on safety to
17 save time or money?

18 A. No.

Page 270:01 to 270:07

00270:01 Q. (By Mr. Bruno) Okay. Now, if the
02 FORM-A-SET, FORM-A-SQUEEZE combination which was
03 being used as a spacer had been allowed to sit at
04 the BOP with the valves open, do you have an
05 opinion as to whether or not the -- that kind of
06 material may have in any way impeded flow in the
07 kill, boost, or -- I forgot my --

Page 270:09 to 270:09

00270:09 Q. (By Mr. Bruno) -- choke lines?

Page 270:12 to 270:16

00270:12 A. I had no concerns that this would plug
13 anything.

14 Q. (By Mr. Bruno) All right. Isn't there a
15 potential for fallout from the material if it's
16 just sitting there?

Page 270:19 to 270:25

00270:19 A. With the rheologies that we had on the --
20 on the pills, I felt confident that nothing would
21 settle.

22 Q. (By Mr. Bruno) Well, you couldn't have
23 felt confident because you didn't know it was
24 going to be used with the block preventer valves,
25 the kill lines being open, did you?

Page 271:02 to 271:05

00271:02 A. I did not know.

03 Q. (By Mr. Bruno) Okay. All right. So you
04 didn't consider it; isn't that true?

05 A. True, yes.

CHANGES AND SIGNATURE

WITNESS NAME: DOYLE WAYNE MAXIE

DATE OF DEPOSITION: NOVEMBER 4, 2011

PAGE	LINE	CHANGE	REASON
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73 13 Delete "Drilling Foreman" Add "Wellsite Leader" Clarification

116 18 Delete "Drilling Foreman" Add "Wellsite Leader" Clarification

132 12-13 Delete "Drilling Foreman" Add "Wellsite Leader" Clarification

137 23 Delete "Drilling Foreman" Add "Wellsite Leader" Clarification

146 9 Delete "." (after the "Yes") Add ", there was a Myacide used." Clarification

157 11 Delete "Drilling Foreman" Add "Wellsite Leader" Clarification

Journal of Management Inquiry 23(1) 3-17
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DOI: 10.1177/1056492614525001
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