

Deposition Testimony of:

David Barnett

Date: December 14, 2012

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Page 15:09 to 15:16

00015:09 THE VIDEOGRAPHER: Today is December
10 14th, 2012. This is the deposition of David
11 Barnett regarding the oil spill of the Oil Rig
12 DEEPWATER HORIZON on April 20th, 2010. The time
13 is 8:38 a.m. We're on the record.
14 DAVID ARNOLD BARNETT
15 was called as a witness by the United States and,
16 being first duly sworn, testified as follows:

Page 15:19 to 15:19

00015:19 Q. Good morning, Mr. Barnett. I'm Nancy

Page 17:07 to 17:16

00017:07 Q. All right. You understand that today
08 you're appearing on behalf of Wild Well as a
09 Corporate Designee?
10 A. Yes.
11 Q. Okay. What did you do to prepare for
12 your deposition?
13 A. I met with Ms. Mince and reviewed some
14 Daily Operations Reports, various memos, looked
15 at a few things on the Internet, and basically
16 just tried to refresh my memory.

Page 18:11 to 19:25

00018:11 Q. (By Ms. Flickinger) And the very first
12 document there should be the "NOTICE OF VIDEO
13 DEPOSITION." Okay. And have you seen that
14 document before?
15 A. No.
16 Q. Those are the Topics on which you were --
17 A. I'm sorry. Yes, I have.
18 Q. -- designated for Wild Well. So that,
19 you've seen?
20 A. Yes.
21 Q. And you're prepared to speak as to each
22 of those Topics, correct?
23 A. Yes.
24 Q. Okay. And, in particular, Topic 6. Let
25 me direct your attention to that. And that's:
00019:01 "Wild Well's...knowledge and involvement in any
02 estimation or determination of the following:
03 (a) the flow rate and/or volume of hydrocarbons
04 released from the Deepwater Horizon riser; (b)
05 the pressure of the Macondo reservoir; (c) the
06 pressure at the Macondo wellhead; (d) the
07 condition of the Macondo reservoir and/or
08 wellbore; and (e) the potential, expected, or

09 anticipated shut-in pressure of the Macondo
10 well."
11 So you're prepared to talk about that
12 Topic, correct?
13 A. Yes.
14 Q. And all the sub-topics. Okay.
15 And as we go through the deposition, I'll
16 probably say "you," but when I say, "Did you do
17 this? Did you do that," I'm going to mean "you"
18 in your Corporate capacity on behalf of Wild
19 Well, probably in your personal capacity, as
20 well. So --
21 A. Okay.
22 Q. -- if you feel like you can't speak for
23 Wild Well, but only in your personal capacity,
24 you'll have to make that clarification.
25 A. Okay.

Page 20:08 to 21:01

00020:08 Q. Okay. Let's like very briefly go through
09 your background and your experience. Just what
10 is your educational experience?
11 A. I have a Bachelor's in Mechanical
12 Engineering from the University of Houston.
13 Q. Okay. And did you do any course work or
14 professional training after that?
15 A. No.
16 Q. When did you get your degree?
17 A. 1996.
18 Q. Okay. What is your work experience,
19 maybe starting from when you graduated with your
20 engineering degree, forward? Did you start
21 working with Wild Well right away?
22 A. Actually, I was working for Wild Well
23 Control before I graduated. I started with Wild
24 Well Control in April of 1993.
25 Q. April of 1993?
00021:01 A. Yeah.

Page 21:14 to 23:06

00021:14 Q. Why don't you start with your initial
15 position at Wild Well and then --
16 A. My position initially with Wild Well
17 was -- I believe I was called an Engineering
18 Technician, and that was in 1993, again.
19 Q. Okay.
20 A. I was -- initially worked on a contract
21 basis with Wild Well Control for, I want to say
22 two years, and then I was brought on as a
23 full-time employee in 1995.
24 Q. All right. And then what was your next
25 position?

00022:01 A. Once I graduated, I was designated as a
 02 Well Control Engineer and -- oh, I can't recall
 03 the date -- but at some point, I was promoted to
 04 Manager of the Engineering Department, eventually
 05 to -- promoted to the Vice President of
 06 Engineering, and prior to my departure, I was a
 07 Senior Vice President for Wild Well Control.
 08 Q. Okay. At the time of the Macondo
 09 Incident in 2010?
 10 A. I was Vice President of Engineering at
 11 that time.
 12 Q. Okay. All right. So that's some 20-odd
 13 years with Wild Well Control, correct?
 14 A. Yes.
 15 Q. And when did you leave Wild Well?
 16 A. In September of this -- of 2012.
 17 Q. And are you employed now?
 18 A. Yes.
 19 Q. Okay. Where are you employed?
 20 A. I'm the Chief Operations Officer of IPT
 21 Global.
 22 Q. And what -- what does that company do?
 23 A. It's a software technology company that
 24 provides digital pressure analysis for BOP
 25 testing.
 00023:01 Q. And what's your position with them?
 02 A. Chief Operations Officer.
 03 Q. Oh, that's right.
 04 During your time with Wild Well, about
 05 how many wells did you work with that you had to
 06 control?

Page 23:10 to 36:13

00023:10 Q. (By Ms. Flickinger) When I say "you," I
 11 mean -- I mean Wild Well.
 12 MS. MINCE: So your question is
 13 during his 20-plus-year tenure, about how many --
 14 MS. FLICKINGER: Okay.
 15 MS. MINCE: -- wells --
 16 Q. (By Ms. Flickinger) In -- in your
 17 personal capacity, Mr. Barnett.
 18 A. Oh, gosh. I would say that I was
 19 personally involved with -- that's a hard number
 20 to come up with. I -- I'm going to say 300.
 21 Q. All right. And were most of those in the
 22 United States, or were some of them --
 23 A. No --
 24 Q. -- abroad?
 25 A. -- I would say probably roughly 60
 00024:01 percent in the U.S. and 40 percent outside the
 02 U.S.
 03 Q. Okay. How many in the Gulf of Mexico,
 04 ballpark?
 05 A. Oh, maybe 50.

06 Q. All right. In -- in the course of
07 working to control these various wells, did you
08 typically -- were you typically involved in
09 drilling relief wells?
10 A. Yes.
11 Q. Okay. And was that kind of your area of
12 concentration?
13 A. It became my -- my specialty, if you
14 will, but I did many other forms of intervention.
15 Q. Okay. And, again, ballpark, how many
16 relief wells?
17 A. 20.
18 Q. 20.
19 A. Yeah.
20 Q. All right. And in the course of doing
21 the well control work that you did and the relief
22 wells, was part of your work to run computer
23 simulations?
24 A. Yes.
25 Q. All right. And also to review the
00025:01 results of computer simulations that other people
02 had run?
03 A. Yes.
04 Q. Okay. Turning to the Macondo, Wild Well
05 was involved in a number of the Source Control
06 Efforts at Macondo, correct?
07 A. Yes.
08 Q. All right. And you personally were --
09 were involved in a number of different areas of
10 Source Control, as well?
11 A. That's correct.
12 Q. All right. What were the ones -- your --
13 your major areas of involvement at Macondo
14 post-spill?
15 A. Well, the major area that I was involved
16 with was the planning and implementation of the
17 kill operations, both the dynamic kill that was
18 planned for the eventual intercept of the relief
19 well, and the top kill operations, and the
20 eventual static kill that was implemented.
21 Q. Okay. And the relief well, was the
22 relief well being -- being drilled primarily to
23 effect the dynamic kill?
24 A. Yes.
25 Q. Okay. And in connection with that work,
00026:01 Wild Well performed computer modeling and flow
02 estimates?
03 A. The flow estimation was done by a company
04 that BP engaged, Add Wellflow.
05 Q. I see. Did you have people at Wild Well
06 that did some modeling, including modeling of
07 flow rates and reservoir pressures?
08 A. None was done in an official capacity.
09 Q. All right.
10 A. But we -- we performed those services on

11 other jobs. But in this particular instance, BP
12 engaged Add Wellflow to provide all that
13 information for us.
14 Q. I understand that. But did you have
15 people at Wild Well that did perform computer
16 simulations?
17 A. Well, probably so, yes.
18 Q. You probably did. How about -- and who
19 were those people?
20 A. I know Bill Burch was trying to compare
21 the model that we had in-house at Wild Well
22 Control to the results that were being obtained
23 by Add Wellflow.
24 Q. Okay. And what model was he using
25 in-house?
00027:01 A. He was using what's called the OLGA-ABC
02 model.
03 Q. Okay. What does "ABC" stand for?
04 A. Advanced Blowout Control.
05 Q. All right. And that's a model that you
06 all had in-house, correct?
07 A. Yes.
08 Q. And you used that in your work -- your
09 modeling work for well control efforts --
10 A. Yes, we do.
11 Q. -- on other projects --
12 A. Yes.
13 Q. -- correct?
14 And you used it on this one, as well,
15 correct?
16 A. Not officially.
17 Q. Not officially, but unofficially, there
18 was computer simulation work being performed,
19 correct?
20 A. Yes.
21 Q. All right. And to what extent were you
22 involved in the capping stack, Wild Well Control?
23 It seemed like --
24 A. Not too much. I was just -- I was kept
25 abreast of the activities.
00028:01 Q. But mostly you were involved in the kill
02 efforts?
03 A. Correct.
04 Q. All right. And I just want to get the --
05 kind of the nomenclature and the definitions
06 down. Can you tell me just real quickly what a
07 "top kill" is?
08 A. Well, a "top kill," in the broadest sense
09 that has been used for years, is any kind of a
10 kill operation that's done by pumping in at the
11 surface.
12 Q. Right.
13 A. In the context of the Macondo Incident,
14 it was probably in at the surface, but it was an
15 attempt to do a -- a dynamic kill by pumping in

16 at the exit point.
17 Q. All right. So -- and that's one of the
18 questions I had. There's something called a
19 "momentum kill"?
20 A. Yes.
21 Q. You've heard that term?
22 A. I have.
23 Q. And then there's a term "dynamic kill"?
24 A. Yes.
25 Q. Can you tell -- can you explain those two
00029:01 terms for me?
02 A. A "dynamic kill" generally refers to
03 pumping from the bottom or at least at some
04 significant depth in the well to inject fluid at
05 a rate sufficient to overcome the flow, that --
06 so it's a matter of increasing the flowing
07 density by injecting mud to the point to where
08 the reservoir is balanced.
09 Q. Okay.
10 A. The "momentum kill" is done from the top
11 of the well, and essentially, it has to do with
12 pumping fast enough to create enough friction at
13 the top of the hole to force the reservoir fluid
14 back into the reservoir.
15 So the big distinction is increasing the
16 flowing density from the bottom or some
17 significant depth versus forcing the reservoir
18 fluids back into the formation.
19 Q. Okay. So moment -- momentum -- a
20 momentum kill maybe is a little bit more like a
21 car crash or something, you are really trying to
22 weight it down from the top?
23 A. It is, yes.
24 Q. All right. And a dynamic kill, you're
25 just gradually making the fluids heavier, so
00030:01 that --
02 A. You're -- you're injecting into the flow
03 stream from bottom so that the flowing density
04 increases to a point to where the reservoir is
05 balanced.
06 Q. Okay. Thank you.
07 What's a "bullhead"?
08 A. A "bullhead" is essentially the same as
09 the momentum kill, but the well is contained, so
10 it's -- there is no flow at the surface. But
11 you're still forcing the reservoir fluid back
12 into the formation.
13 Q. All right. All right. So once you've
14 got the flow stopped, then you're injecting
15 the --
16 A. Yes.
17 Q. -- hydrocarbons or whatever back into the
18 formation?
19 A. Correct.
20 Q. I see. And then the "junk shot," how --

21 just explain to me briefly what a "junk shot" is.
22 A. Well, it -- a "junk shot" is an attempt
23 to seal the leak point, either completely or
24 sufficiently that you can pump fast enough to --
25 if you -- if you seal the leak completely, you
00031:01 will then shut the well in and do a bullhead
02 kill.
03 If you reduce the size of the leak path
04 sufficiently, then you can do essentially a
05 momentum kill. You still have some leakage, but
06 you have enough pressure for the fluid to be
07 forced back down the well.
08 Q. Okay. And then, finally, the "static
09 kill"?
10 A. Well, I have to say that a "static kill,"
11 I've only heard it applied to the Macondo Well,
12 and it's essentially what I would call a bullhead
13 kill. You -- you stop the flow at the surface,
14 you shut the well in, and you inject fluid down
15 and displace the reservoir fluid into the
16 formation to be replaced with kill mud.
17 Q. Are any of these techniques more common
18 than others?
19 A. I would say they're -- that's a good
20 question. I -- I think probably the bullhead
21 kill is more -- is applied more often than the
22 dynamic kill.
23 The momentum kill, it's very rare.
24 Sometimes it's attempted. It doesn't have a very
25 high percentage of success.
00032:01 Q. All right. All right. And as I go
02 through, I'm going to be asking you about flow
03 rate. And I just want to be clear, when I talk
04 about "flow rate," I'm talking about usually the
05 oil and gas coming out of the Macondo Well.
06 A. Okay.
07 Q. It's probably maybe also called
08 "production rate."
09 And sometimes I see in the documents a
10 reference to "flow rate" as the flow of mud
11 that's being injected at a particular pump rate,
12 so I just want to make sure you understand how
13 I'm using it.
14 A. I think I do.
15 Q. And if you need to clarify it, you can
16 ask me.
17 A. Okay.
18 Q. All right. All right. You said that
19 Bill Burch was doing some modeling work on the
20 Macondo Well for Wild Well, correct?
21 A. Yes.
22 Q. And was his work reviewed? Did you
23 work some of -- did you review some of his work?
24 A. Well, it was brought to my attention, but
25 I -- I considered it to be an attempt to try to

00033:01 align the model that we had with the model that
02 was being used by Add Wellflow.
03 Q. Right. But since you were responsible
04 for the kill efforts, you wanted to make sure
05 that you had some sense of comfort in the
06 modeling that was being done, I take it?
07 A. Well, yes, but I would point out that the
08 model that Wild Well Control has is less
09 sophisticated than the one that was being used by
10 Add Wellflow. So I put my confidence on the
11 one -- on the -- the results that were produced
12 by Add Wellflow.
13 Q. Understood. Now let's just talk
14 generally about modeling, then.
15 Well, you said that Mr. Burch was using
16 OLGA-ABC?
17 A. Yes.
18 Q. Right?
19 And that Add Energy, and the gentleman
20 that worked at Add Energy who did the modeling
21 was Ole --
22 A. Ole Rygg.
23 Q. Ole Rygg?
24 A. Yes.
25 Q. Okay. So let's just talk a little bit
00034:01 generally about these models.
02 OLGA-ABC, what are some of the inputs
03 that go into the models? Just -- and, again,
04 just very general sense.
05 A. The reservoir characteristics such as
06 depth, pressure, height of the reservoir, and
07 well geometry, depth, internal diameters of the
08 various pipe strings, and some reservoir fluid
09 properties, fracture gradients, that's -- that's
10 the primary -- some temperature things, from time
11 to time, if they -- if they tend to have an
12 influence on the outcome.
13 Q. If you have that data. Okay.
14 A. Yeah.
15 Q. And then if you put all those data in --
16 if you put all those data in, will that generate
17 a flow rate or an estimate?
18 A. Yes.
19 Q. And then, conversely, sometimes you can
20 assume a flow rate and then work backward and
21 generate some other characteristic of the well?
22 A. Yeah. If you know what the flow rate is,
23 you can adjust the reservoir parameters to give
24 you that flow rate and then determine what rate
25 of mud is required to kill it.
00035:01 Q. Okay. And then another question is: Do
02 you have to put in some assumption about flow in
03 order to calculate the mud weight that you need
04 and the pump that you need for a kill effort?
05 A. Yes.

06 Q. All right. So, in other words, to -- to
 07 plan for a top kill, a momentum kill, you have to
 08 put in some factor for flow rate? You have to
 09 have some information concerning flow rate,
 10 correct?
 11 A. Yes, you do.
 12 Q. In working on the -- on the kill efforts
 13 at the well, presumably you worked with BP
 14 employees, correct?
 15 A. Yes.
 16 Q. All right. And one of those employees
 17 was Kurt Mix?
 18 A. It was.
 19 Q. Did -- was there interaction with --
 20 well, who were some of the other BP employees
 21 that you worked with?
 22 A. Well --
 23 Q. And by "you," again, I mean Wild Well.
 24 A. Mark Mazzella, Brent Reeves, Pat O'Bryan,
 25 Jon -- I can never remember Jon's last name. I
 00036:01 want to say Jon Sprague, I think it was.
 02 Q. Okay. And Mark Mazzella, was he Lead on
 03 this Project?
 04 A. He -- he had a leadership position in the
 05 Project, yes.
 06 Q. All right. Brent Reeves, what was
 07 his position?
 08 A. Brent, I believe he -- within BP, he was
 09 a Drilling Superintendent.
 10 Q. All right. Jon Sprague?
 11 A. Jon is, I'll say, Engineering Manager.
 12 He was one of the engineering leadership people
 13 at BP.

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00037:02 Q. Okay. So to the extent Mr. Burch was
 03 doing some modeling, the data that he inputted,
 04 did that come from BP?
 05 A. Yes.
 06 Q. All right. And that's because BP had
 07 most of the data about the well, correct?
 08 A. Yes.
 09 Q. All right. We're going to turn to some
 10 documents now. But, first, I want to ask you a
 11 few questions.
 12 When you were communicating -- you know,
 13 while you were trying to do the well control
 14 efforts -- you used E-mails frequently, correct?
 15 A. Oh, yes.
 16 Q. They were a regular form of
 17 communication?
 18 A. Yes.
 19 Q. All right. And you E-mailed data and
 20 summaries about the well back and forth by

21 E-mail, as well, correct?
22 A. We did, yes.
23 Q. Okay. And that was just the routine part
24 of the business communications?
25 A. Yes.
00038:01 Q. All right. And, typically, the data and
02 the communications were done by people that had
03 knowledge of what they were talking about?

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00038:06 A. Generally so, yes.
07 Q. (By Ms. Flickinger) All right. And it
08 was done about the -- it was done during the
09 course of the well control efforts?
10 A. Yes.
11 Q. All right. And you relied on those
12 communications in order to make decisions about
13 what to do next and to better understand the well
14 and to perform your work responsibilities?
15 A. Yes.
16 Q. All right. All right. Why don't we turn
17 to the documents. Turn to Tab 1, please.
18 Have you seen this document before, Mr.
19 Barnett?
20 A. (Reviewing document.) I don't recall
21 seeing it, no.
22 Q. Okay. Tab 1 is Bates No.
23 WW-MDL-00131911. And it's an E-mail from William
24 Burch to Roland Gomez. Roland Gomez is a Wild
25 Well employee, correct?
00039:01 A. Yes.
02 Q. And it's dated April 21st, 2010, at
03 12:13 p.m. And in it, Mr. Burch writes: "Kurt
04 Mix at BP called - he's working with the team on
05 the BP issue and is forwarding his OLGA-ABC
06 simulation run file to me shortly for secondary
07 confirmation of..." the "results."
08 Correct?
09 A. Yes.
10 Q. Okay. So this communication took place
11 very early on after the explosion, correct?
12 A. It did.
13 Q. All right. And it showed that BP is
14 already engaging in well control efforts?
15 A. Yes.
16 Q. All right. And they're coordinating with
17 Mr. Burch in those efforts --
18 A. Yes.
19 Q. -- with that date.
20 Okay. If you turn to
21 Tab 2. And this is Bates No. WW-MDL-0061918, and
22 it's an E-mail from Mr. Burch to Christopher
23 Murphy and other individuals at Wild Well with
24 copies to Pat Campbell.

25 Who's -- who's Pat Campbell?
00040:01 A. At that time, Pat was the President of
02 Wild Well Control.
03 Q. All right. Freddy Gebhardt?
04 A. Well, at the time, he was the Executive
05 Vice President. He's now President of Wild Well
06 Control.
07 Q. Okay. So these are Managers. Joe Dean
08 Thompson, was he also a Manager at Wild Well?
09 A. Yes.
10 Q. Okay. And the E-mail is dated Thursday,
11 April 22nd, 2010.
12 A. Yes.
13 Q. And it says: "Here's" a "synopsis of the
14 meeting today with Kurt Mix and" the
15 "Reservoir/Geology Group," correct?
16 A. Yes.
17 Q. So this indicates that Wild Well had met
18 with the Reservoir Geology Group and with Kurt
19 Mix on April 22nd, correct?
20 A. Yes.
21 Q. Now -- and then -- and then it goes on to
22 talk about various modeling efforts. Was the
23 purpose of this meeting -- well, were you aware
24 of this meeting at the time?
25 A. No.
00041:01 Q. Okay. Mr. Burch was meeting with the
02 Reservoir Geology Group, it says, to get data
03 concerning the reservoir, correct?
04 A. Yes.
05 Q. All right. And that data, then, could be
06 used in the modeling efforts as you --
07 A. That's correct --
08 Q. -- described earlier?
09 A. Yes.
10 Q. All right. Let me direct your attention
11 down to these bullets. There's a -- partway down
12 the page it says: "Here's" one -- "what's known
13 at the moment (from" an "R/G group perspective)."
14 And then it talks about different aspects of the
15 well. Are -- are -- is this the kind of
16 information, then, that would be put in the
17 modeling efforts into the model?
18 A. Yes.
19 Q. Okay. And partway down it says: "PI
20 equals 50 barrels per day psi and possibly 55
21 barrels per day psi (but the" num -- "the first"
22 one "is the one there is more faith in..."
23 Can you tell me what that means, please?
24 A. What PI means, or the -- the statement
25 about the two numbers?
00042:01 Q. "PI" means Productivity Index --
02 A. Productivity Index.
03 Q. -- correct?
04 A. Yes.

05 Q. And then what are those two numbers?
 06 A. Well, that is the number that describes
 07 how many barrels of oil per day will flow from
 08 the reservoir per psi of pressure drop across the
 09 sand face.
 10 Q. Okay. So in other words, if you're
 11 measuring pressure somewhere and you see a
 12 pressure drop, you can take that information and
 13 figure out how much oil has flowed out of the
 14 reservoir --
 15 A. Yes.
 16 Q. -- is that -- okay.
 17 "GOR equals" 300 "scf/stb"?
 18 MS. MINCE: "3000."
 19 Q. (By Ms. Flickinger) "3000." I'm sorry.
 20 GOR is gas/oil ratio?
 21 A. Yes, it is.
 22 Q. Okay. And "API crude is reported as" a
 23 "35 degree," so that's a temperature; is --
 24 A. That's --
 25 Q. -- that correct?
 00043:01 A. -- actually a -- a measure of
 02 viscosity in --
 03 Q. All right.
 04 A. -- API degrees.
 05 Q. Okay. So it's fair to say, then, those
 06 were the initial inputs used in the modeling, at
 07 least when Wild Well was doing the modeling with
 08 OLGA-ABC, correct?
 09 A. I would say so, yes.

Page 43:25 to 44:03

00043:25 MS. FLICKINGER: Okay. So Tab 1
 00044:01 we're going to mark as Exhibit 10482, and Tab 2
 02 we're going to mark as 10483.
 03 (Exhibit Nos. 10482 and 10483 marked.)

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00044:07 MS. FLICKINGER: And this we'll mark
 08 as Exhibit 10484. WW-MDL-00131916.
 09 (Exhibit No. 10484 marked.)
 10 Q. (By Ms. Flickinger) And, again, this is
 11 aner -- another early communication with respect
 12 to the modeling efforts. And it's an E-mail from
 13 John Shaughnessy of BP, correct?
 14 A. M-h'm.
 15 Q. To Mr. Burch, dated April 22nd, 2010.
 16 A. Yes.
 17 Q. And Mr. Burch has sent him some OLGA-ABC
 18 model results. So if you see the first E-mail,
 19 it says, from Mr. Burch to Mr. Shaughnessy and
 20 some others: "Here's the OLGA-ABC model results

21 for the worst-case scenario of flowing up the"
 22 nine by -- nine -- by -- "up the seven by nine
 23 and seven-eighths-inch casing and exiting at the
 24 seafloor..."

00045:01 25 Okay. And then some charts on the back
 02 show different results that have kicked out of
 03 this OLGA-ABC run.
 04 A. Yes.
 05 Q. When it says: "Liquid flow rate out,"
 06 can you explain that chart to me? Is that -- is
 07 that -- "Liquid flow rate out," is that the flow
 08 of oil?
 09 A. It is.
 10 Q. Okay. And can you just explain what that
 11 chart reflects?
 12 A. Well, I probably should say it's the flow
 13 of reservoir fluids. So it would be oil, gas
 14 that's in the liquid form at that pressure, and
 15 possibly water.
 16 Q. Okay.
 17 A. But the total liquid flow rate is in
 18 barrels per day, and it's -- shows to be near
 19 140,000.
 20 Q. All right. Okay. And then -- then
 21 Mr. Shaughnessy says, in response: "Thanks...
 22 That number is going to be high focus in the
 23 morning." Correct?
 24 A. It does.
 25 Q. So were folks early on, as they're trying
 00046:01 to get a sense of the -- what's going on at the
 02 well, looking at flow rate as one of the pieces
 03 of data that they were interested in?
 04 A. That's how I would view this
 05 communication, yes.
 06 Q. Okay. And that's because you need that
 07 piece of information in order to plan some of
 08 your well kill efforts, correct?
 09 A. That's correct.
 10 Q. All right.
 11 MS. FLICKINGER: Okay. Tab No. 5 is
 12 going to be Exhibit 10485. Again,
 13 WW-MDL-00071350.
 14 (Exhibit No. 10485 marked.)
 15 Q. (By Ms. Flickinger) And this is an E-mail
 16 from Bill Burch to Fred --
 17 And I can't pronounce his last name --
 18 A. "Ing."
 19 Q. "Ing"?
 20 A. It's as if it has an "I" in it.
 21 Q. Okay. Thank you.
 22 -- Ng, and that's April 22nd, 2010. And
 23 first E-mail is from Mr. Burch to Mr. Ng, April
 24 22nd, saying: "...can you look over" --
 25 basically saying: "...can you look over the two
 cases" I've generated to "make sure I'm seeing

00047:01 this clearly..." --
02 A. (Nodding.)
03 Q. -- "...especially the second case of the
04 seafloor exit."
05 And Mr. Ng writes back and says,
06 basically, I've reviewed the data, the
07 assumptions are reasonable and make sense to me.
08 Correct?
09 A. Yes.
10 Q. So there already, you can see
11 Mr. Burch is -- is doing some preliminary
12 modeling of the well, correct?
13 A. Correct.
14 Q. All right. Tab No. 6.
15 (Exhibit No. 10486 marked.)
16 Q. (By Ms. Flickinger) Exhibit 10486. And
17 that's WW-MDL-00071353. And Mr. Mix is E-mailing
18 some materials to Mr. Burch on Friday, April
19 23rd, 2010, at 12:39 p.m. Can you take a look at
20 this and just identify for me what -- what
21 Mr. Mix is sending to Mr. Burch?
22 A. I believe that -- well, let me look at
23 the rest of it. (Reviewing document.)
24 Q. Right. Are -- are these outputs from the
25 OLGA model?
00048:01 A. I do not know. I've -- I've never seen
02 this --
03 Q. This kind of --
04 A. -- format before.
05 Q. -- format?
06 A. What I can tell you is that this -- these
07 files that were attached to the E-mail --
08 Q. Yes.
09 A. -- are what they call "run files" from
10 the OLGA-ABC model. So --
11 Q. Okay.
12 A. -- you can import these -- these files
13 would have all of the input parameters for the
14 well modeling.
15 Q. All right. So it would -- it would show
16 all of the inputs that Mr. Mix put in --
17 A. Yes.
18 Q. -- correct?
19 A. (Nodding.)
20 Q. And then does it also show what the
21 results -- what results are generated?
22 A. It would, yes.
23 Q. Okay. But it wouldn't typically arrive
24 in this kind of format?
25 A. No. Typically, it would be just as
00049:01 attachments to an E-mail. I'm not sure why it
02 came across like it did. It looks almost like
03 computer code was printed out.
04 Q. Okay. But typically, it would just be a
05 list that lists all the inputs?

06 A. Well, even more simple than that. It
07 would just be a -- the -- it -- it is a file
08 that's generated if -- if you input all of the
09 information manually, and cause the Program to
10 run and -- and have results, it would store all
11 of both the input and the results in this DML
12 file. So if you sent that to someone else, they
13 could open that file with OLGA-ABC, and they
14 would have both the input parameters and the
15 results.
16 Q. All right.
17 A. They could change the settings and run
18 the model over to investigate various scenarios.
19 Q. So really, they're almost sharing the
20 Modeling Program at that time?
21 A. Yes.
22 Q. Okay. Okay. If you could turn to Tab 8.
23 And, again, this is just a -- another
24 document that shows some of the early modeling
25 efforts that were going on concerning the Macondo
00050:01 Well.
02 A. M-h'm.
03 MS. FLICKINGER: So Tab 8, we'll
04 mark this as Exhibit 10487.
05 (Exhibit No. 10487 marked.)
06 Q. (By Ms. Flickinger) And it's
07 WW-MDL-00131931. And it's an E-mail from Bill
08 Burch to Kurt Mix dated April 24th, 2010,
09 entitled: "IPR Curve vs. OLGA FBHP Numbers."
10 A. M-h'm.
11 Q. And I -- and then attached to that is a
12 chart?
13 A. Yes.
14 Q. Okay. And "IPR" means Informed
15 Performance Relationship, correct?
16 A. It does.
17 Q. Okay. And "FBHP" is Flowing Bottomhole
18 Pressure --
19 A. It is.
20 Q. -- Numbers? All right.
21 And so can you explain to me what -- and
22 this is, again, using the assumption of 50
23 barrels per day psi?
24 A. Yes.
25 Q. All right. So just briefly, can you
00051:01 identify for me what this chart --
02 A. Well, along --
03 Q. -- information shows?
04 A. -- the Y axis, you have reservoir
05 pressure.
06 Q. M-h'm.
07 A. So -- and along the X axis, you have
08 volume, which, although it doesn't say, would be
09 in barrels per day.
10 Q. Okay.

11 A. It says "barrels," but it would actually
12 be barrels per day.

13 Q. All right. And barrels per day, is that
14 stock tank barrels per day? Do you know if it --

15 A. Yes.

16 Q. Okay. All right. And then if I can
17 direct your attention to the next page, which has
18 a table. Right. And this is a table where
19 they're correlating the flowing bottomhole
20 pressure with barrels per day in tabular form,
21 correct?

22 A. Yes.

23 Q. All right. And so, for example, at a
24 flowing bottomhole pressure of 9626, following a
25 particular flow path, the output is going to be
00052:01 69,500 barrels per day?

02 A. Yes.

03 Q. Okay. And are they modeling different
04 scenarios?

05 A. They appear to be. Each of these sets of
06 numbers -- I'm trying to figure out, it says:
07 "Flow out seafloor behind 7 inch by 9 7/8 casing
08 annulus thru 5,000 feet of 5 inch ID." And that
09 repeats with 4 inch ID, 3 inch ID and 2 inch ID.

10 Q. And ID stands for inter diameter?

11 A. Internal diameter. I'm not quite sure
12 what that -- what that's referring to. Why it
13 would be flowing through 5,000 feet, unless
14 it's -- they are trying to model some flow
15 through the drill string that's in the well.

16 Q. Okay.

17 A. That --

18 Q. Right.

19 A. That would be my --

20 Q. So it's just another effort to get -- to
21 get more information --

22 A. To characterize the flow, yes.

23 Q. Okay.

24 A. I might point out, just for the record,
25 that I didn't arrive at the -- the BP office
00053:01 until the 23rd of April. I was overseas when the
02 event happened, so I had to mobilize back over to
03 the U.S.

04 Q. Okay. So you were in the middle of
05 another Project and they brought you over?

06 A. Correct. Right.

07 Q. So you arrived on April 23rd?

08 A. I arrived in the office on -- I arrived
09 back late on the 22nd; in the office on the 23rd.

10 Q. Okay. And -- and then thereafter, you
11 worked on trying to kill the well, correct?

12 A. Correct.

13 Q. And so where were you located? Were you
14 on the rig? Well, not the rig, but the --

15 A. I was in the -- I worked in the office,

16 but I did go to the rig during the kill
 17 operations.
 18 Q. All right. So mostly you were in the
 19 offices in Houston. And were you embedded in the
 20 BP offices?
 21 A. Yes.
 22 Q. Okay. And then when the kill was
 23 actually being implemented, the top kill and the
 24 other kills, you would actually physically go out
 25 onto the --
 00054:01 A. That's correct.
 02 Q. Okay. And you had mentioned earlier that
 03 another -- another piece of data that goes into
 04 the modeling under OLGA is data concerning the
 05 fluid, correct?
 06 A. Yes.
 07 Q. Okay. So turn to Tab 14, please. And
 08 this document has been previously marked as an
 09 exhibit. It's 10123. And this is an E-mail from
 10 Kurt Mix dated April 27th to William Burch.
 11 "Preliminary Compositional & Viscosity Data."
 12 A. Yes.
 13 Q. Correct?
 14 Have you seen this document before?
 15 A. I don't recall seeing it before, no.
 16 Q. All right. Is this the data that was
 17 given to Wild Well to put into the -- to put into
 18 the OLGA model?

Page 54:21 to 55:01

00054:21 A. It appears to be since it was sent from
 22 Kurt to Bill Burch, yeah.
 23 Q. (By Ms. Flickinger) Okay. Okay. And
 24 that data is what they had at that time
 25 correctly -- correct?
 00055:01 A. Yes.

Page 55:03 to 56:02

00055:03 Q. (By Ms. Flickinger) Okay. Turn to Tab
 04 15, please.
 05 (Exhibit No. 10488 marked.)
 06 Q. (By Ms. Flickinger) And this is going to
 07 be Exhibit 10488, Bates No. WW-MDL-00071476.
 08 And, again, this is a memo -- this is an E-mail
 09 from Kurt Mix to William Burch dated April 28th,
 10 2010?
 11 A. Yes.
 12 Q. All right. And take a look at the
 13 spreadsheet, and if you could tell me what this
 14 is.
 15 A. (Reviewing document.) At the
 16 spreadsheet?

17 Q. At the PowerPoint that's attached.
 18 A. Oh. It appears to be a presentation
 19 about the results of the preliminary well control
 20 modeling. There's a "Surface Exit Up The Riser"
 21 scenario.
 22 Q. Okay. And these were done April 22nd,
 23 2010, correct?
 24 A. Yes.
 25 Q. All right. So apparently this is what
 00056:01 BP, through Mr. Mix, had -- had generated April
 02 22nd?

Page 56:04 to 57:13

00056:04 A. I'm not sure if it says who the author of
 05 the presentation is. I assume since Kurt sent it
 06 to Bill, that Kurt was the originator.
 07 Q. (By Ms. Flickinger) Okay. And what does
 08 this -- what does this PowerPoint show?
 09 A. Well, for the "Surface Exit Up The Riser"
 10 scenario, it has a range of oil and gas flow
 11 rates and barrels of oil equivalent, and,
 12 similarly, for the "Seafloor Exit @ 4,992" feet
 13 it has a range of flow rates, oil and gas, up the
 14 7 by 9 and seven-eighths casing string, so, okay.
 15 I'm kind of getting the scheme now.
 16 It's -- so you have the exit point
 17 scenario, which in the first case, is the -- up
 18 the riser to the surface, that would -- that
 19 would imply that the rig is still over the well
 20 and that the -- the flow is exiting at the sea --
 21 at -- at the surface of the water.
 22 And then they have oil rates for flow up
 23 the 9 7/8 casing and they have flow behind the
 24 7 inch by 9 and seven-eighths casing. Then the
 25 next scenario is exit at the seafloor, with oil
 00057:01 and gas rates for flow up the 7 inch, so internal
 02 to the casing and external to the casing.
 03 Q. Okay. And so they're modeling and this
 04 is OLGA-ABC?
 05 A. Yes.
 06 Q. And OLGA-ABC was a Program that BP had,
 07 correct?
 08 A. That's correct.
 09 Q. Is -- did Ole Rygg use OLGA-ABC or did he
 10 use a different modeling Program?
 11 A. He uses a different modeling Program.
 12 Q. Okay. So presumably BP is generating
 13 this, correct?

Page 57:15 to 59:10

00057:15 A. It doesn't really specify who
 16 generated -- I could only say since Kurt sent the

17 E-mail out with the attachment, I would assume
 18 that he is the guy who made the result, but I
 19 couldn't guarantee it.

20 Q. (By Ms. Flickinger) All righty. But
 21 they're looking and analyzing the potential flow
 22 rate of oil from different flow paths, correct?

23 A. There are -- yes. There are estimations
 24 of flow rate and then further on, there are
 25 estimations of kill rate, which means the rate of
 00058:01 mud that we would have to pump in order to
 02 dynamically kill the well.

03 Q. All righty. So first you have to kind of
 04 get some information concerning the flow rate --

05 A. Yes.

06 Q. -- in order to calculate the kill rate
 07 and the mud weight and so forth, right?

08 A. That's correct.

09 Q. All right. And the flow that they're
 10 putting here for oil rates, is for flow up the
 11 9 and -- the 7 and 9 and seven-eighths casing
 12 string is 138,300 BPD, barrels per day?

13 A. Yes, for the -- for the "Surface Exit Up
 14 The Riser" scenario, yes.

15 Q. With no drill pipe, and with a drill pipe
 16 at the surface it's 110,000 BPD and -- correct?

17 A. Yes.

18 Q. And if the drill pipe has dropped, "DP @
 19 Dropped," is 93,000 barrels of oil per day,
 20 correct?

21 A. Yes.

22 Q. Then if it's up the annulus, it's 64,000
 23 barrels per day, correct?

24 A. That's correct.

25 Q. All right. And so on, and so forth.

00059:01 On the next page, if it's up the casing
 02 string, with no drill pipe, it's 146,000 BPD?

03 A. Yes.

04 Q. And if the drill pipe is dropped, it's
 05 70,000 -- 77,000?

06 A. 77,000.

07 Q. Okay. So this, then, is what the early
 08 results were showing in terms of the potential
 09 flow rate as an initial step in calculating how
 10 to -- how to kill the well?

Page 59:12 to 62:22

00059:12 A. Yes.

13 Q. (By Ms. Flickinger) Okay. If you could
 14 turn to Tab 20. This will be Exhibit 10489.
 15 (Exhibit No. 10489 marked.)

16 Q. (By Ms. Flickinger) And, again, it's
 17 WW-MDL-00057987. And this is an E-mail from
 18 William Burch to Kurt Mix, dated April -- April
 19 29th, 2010. And it's an entitled -- it's

20 entitled "Revised Numbers for Choked Cases. And
21 attached to it is a spreadsheet, dated -- saying
22 "Well Control Simulation Results" for "Macondo
23 Prospect," April --
24 MS. MINCE: PowerPoint.
25 Q. (By Ms. Flickinger) PowerPoint, thank
00060:01 you.
02 A. Yes.
03 Q. And that's dated April 29th, 2010. Do
04 you want to take a minute and look at that and
05 tell me when you're --
06 A. (Reviewing document.) Well, it seems to
07 be another evolution of the previous modeling.
08 Again, we have some various cases, "Case 1 -
09 Surface Exit Up The Riser," internal to the
10 casing and with no drill pipe. And it has an oil
11 rate and a gas rate.
12 A second case, again, "Surface Exit"
13 through "The Riser," the only difference being
14 that there's "Drillstring in" the "Rotary Table,"
15 and they have an oil and gas rate.
16 "Case 3," again "...Up The Riser,
17 internal casing flow, "Drillstring Dropped into
18 7-inch Casing," oil rate and gas rate
19 corresponding to that scenario.
20 "Case 4" is another surface exit
21 scenario. It looks like it's external to the
22 casing, so it's in the annulus of the 7 by 9 7/8,
23 and associated oil and gas rate for that
24 scenario, and on and on.
25 And then the "Seafloor Exit" cases
00061:01 repeating the internal and external flow paths
02 with drill pipe and without drill pipe.
03 These numbers appear to be similar to the
04 earlier calculated results.
05 Q. Correct. And they're showing flows for
06 Case No. 1, of 138,300 BPD; and for Case No. 2,
07 110,000 BPD; Case 3, Surface Exit Up The Riser
08 93,000, and so forth. Those are similar.
09 On -- on the cover memo, it says "Revised
10 Numbers For Choked Cases." What does that mean?
11 A. It would mean that there is some kind of
12 restriction to the flow either from the -- well,
13 most likely from the drill pipe -- the presence
14 of the drill pipe in the -- in the well.
15 Q. Okay. And do you have any memory of this
16 early period of trying to do modeling to better
17 get a sense of what was happening with the well?
18 A. Yes. I remember when it was being done.
19 I wasn't directly involved in it, but I was,
20 seemed like almost daily, getting some kind of
21 official or unofficial report, either an E-mail
22 or verbal report, of what the modeling results
23 were.
24 Q. Okay. And do you have any memory here of

25 where the interest in the choked cases comes
00062:01 from, and that would be on Slide No. 8.
02 A. (Reviewing document.)
03 Q. I think. Case No. 8.
04 A. (Reviewing document.) What was the
05 question?
06 Q. Was BP asking for modeling concerning
07 choked cases?
08 A. Well, I think there was an attempt to try
09 to model, as closely as they could, what the
10 actual situation was. So the results that we saw
11 earlier, that we discussed, were very
12 preliminary, and this is just an evolution of
13 trying to further refine the model and make it
14 appropriate for the actual situation.
15 So we knew that the riser was crimped and
16 bent over at the top of the BOP. We assumed that
17 there was drill pipe in there, but there was at
18 that point, I don't believe we had any
19 confirmation of that, so to me it's just an
20 attempt to try to make the modeling fit the real
21 world scenario.
22 Q. Okay. Or to put in -- okay.

Page 63:09 to 63:17

00063:09 Q. (By Ms. Flickinger) Mr. Barnett, I've now
10 marked a number of kind of PowerPoints where Bill
11 Burch and Kurt Mix are exchanging Flow Rate
12 Estimates for various scenarios for the well
13 flow, correct?
14 A. Yes.
15 Q. To the best of your knowledge, that's the
16 best data that existed at that point in time
17 concerning flow rate for the well?

Page 63:19 to 64:10

00063:19 A. Yes, to the best of my knowledge that I
20 recall, that was --
21 Q. (By Ms. Flickinger) That was what BP
22 had --
23 A. -- that was what was guiding them -- that
24 was what was going on at the time. It was very
25 preliminary, and I don't know that there was a
00064:01 huge amount of confidence placed on it, but
02 that's what we had at the time, yes.
03 Q. That's what you had for numbers at the
04 time, correct?
05 A. Yeah.
06 Q. All right. And turning here to Case
07 No. 8, on -- at Tab 20 --
08 A. M-h'm.
09 Q. -- which is Exhibit --

10

THE COURT REPORTER: 10489.

Page 64:12 to 64:15

00064:12 Q. (By Ms. Flickinger) -- did BP actually
13 have any information concerning the location and
14 the status of the drill pipe at that -- as of
15 that date, April 29th?

Page 64:18 to 64:22

00064:18 A. As I recall, they had located some drill
19 pipe on the seafloor, but I don't know that there
20 was any conclusive information about whether
21 there were drill pipe in the BOP or through the
22 crimped riser above the BOP at that time.

Page 65:02 to 65:08

00065:02 (Exhibit No. 10490 marked.)
03 Q. (By Ms. Flickinger) Okay. This is an
04 E-mail thread that has a series of E-mails,
05 starting with an E-mail from Debbie Kercho to
06 Kurt Mix on April 27th, 2010, and ending with an
07 E-mail from Kurt Mix to Debbie Kercho of May 2nd,
08 2010, Bates No. WW-MDL-00022283.

Page 65:14 to 65:25

00065:14 Q. So basically in this E-mail, BP employees
15 are trying to figure out if reservoir depletion
16 is going to cushion the pressure buildup if they
17 put a BOP on top of a BOP, correct?
18 A. Yes. It all goes to what would be the
19 initial shut-in pressure if a BOP were to be
20 installed and the well was shut-in and how
21 quickly would the reservoir recover to its
22 maximum pressure.
23 Q. All right. And why did they want to know
24 about the reservoir recovery?
25 A. Well, it's --

Page 66:02 to 67:25

00066:02 A. -- it's all a matter of what stresses are
03 going to be put on the wellbore when it's
04 shut-in. In -- initially, you would expect that
05 the -- the reservoir pressure is depleted
06 somewhat, from being from flowing for ever how
07 long and that there would be an initial shut-in
08 pressure and then there would be a final pressure
09 that it would build to sometime after that. So

10 reservoir properties would define how quickly it
 11 would recover to its maximum pressure.
 12 Q. (By Ms. Flickinger) Okay. So the
 13 Reservoir people are evaluating some of the data
 14 concerning the reservoir, correct?
 15 A. Yes.
 16 Q. And so Ms. Kercho -- do -- do you know
 17 who Debbie Kercho is?
 18 A. I do not.
 19 Q. Okay. On -- on May 22nd, 2010, talks
 20 about the relationship between Productivity Index
 21 and kind of injectivity, correct?
 22 A. On May --
 23 Q. Right here on the first page.
 24 MS. MINCE: You said May 22nd.
 25 A. Oh.
 00067:01 Q. (By Ms. Flickinger) May 2nd, sorry.
 02 A. Yes. That's correct.
 03 Q. Okay. And on her second paragraph here,
 04 she says: "Under normal well conditions where we
 05 understand where the flow is coming from & the
 06 completion, it would be reasonable to assume an
 07 equivalent PI for injection if we're injecting a
 08 relatively small volume...of produced fluid. In
 09 the case of Macondo, we can't assume that."
 10 Correct? And "PI" is Productivity Index?
 11 A. Yes.
 12 Q. All right. And she's saying: "...it's
 13 highly likely that the injection" Productivity
 14 Index "will be a lot lower than the assumed
 15 production PI." And then she lists a number of
 16 factors: "skin damage," "collapsed formation,"
 17 "part of the zone...covered with cement," and so
 18 forth, correct?
 19 A. Correct.
 20 Q. All right. And is that your memory, that
 21 in the modeling done for purposes of planning the
 22 top kill and the dynamic kill, BP was using an
 23 Injectivity Index smaller than the Productivity
 24 Index?
 25 A. I do --

Page 68:02 to 68:19

00068:02 A. -- recall that, yes.
 03 Q. (By Ms. Flickinger) Okay. And then she
 04 also says: "My understanding...we should assume
 05 50 mbopd for the first 2 days and 5 mbopd
 06 thereafter." What -- what is "mbopd"?
 07 A. That would be thousand barrels of oil per
 08 day.
 09 Q. So she's saying for the first two days of
 10 discharge, it should be 50,000 and then go down
 11 to 5,000 BOPD, correct?
 12 A. That's how I read it, yes.

13 Q. And that's the scenario she's outlining
 14 for Kurt Mix?
 15 A. Yes.
 16 Q. Okay. Do you know where BP got the
 17 scenario of two days at 50,000 and 5,000 BOPD
 18 thereafter?
 19 A. I do not.

Page 68:21 to 68:23

00068:21 Q. (By Ms. Flickinger) Okay. Do you recall
 22 any discussions around this time about selecting
 23 that scenario?

Page 68:25 to 69:10

00068:25 A. Well, by this time, there was plenty of
 00069:01 discussion about what we would be faced with if
 02 we were to shut the well in.
 03 Q. (By Ms. Flickinger) Okay.
 04 A. What kind of pressures should we expect
 05 and what would -- our ability to perform a
 06 bullhead kill. So this all goes to the -- the
 07 idea of either shutting-in and bullheading or
 08 doing the top kill.
 09 Q. Okay. My question really is: Why the
 10 drop from 50,000 to 5,000 BOPD?

Page 69:12 to 69:14

00069:12 A. If you'll allow me to read this, see if I
 13 can get an understanding. "My understanding..."
 14 (Reviewing document.)

Page 69:16 to 70:21

00069:16 A. I don't recall, and as I sit here right
 17 now, I don't know that it makes any sense to me
 18 as I read it now.
 19 Q. Okay. All right. Let's turn to
 20 Tab 33. Tab 33 was originally marked at -- as
 21 Exhibit 9935, and the Bates number is
 22 ANA-MDL-000241075.
 23 A. (Reviewing document.)
 24 Q. And this is an E-mail from Barbara Lasley
 25 to Dave Barnett, you, dated May 5th, 2010, and it
 00070:01 is forwarding a document entitled "BP EXPLORATION
 02 & PRODUCTION, MISSISSIPPI CANYON 252 #1 RELIEF
 03 WELL, INTERCEPT & KILL OPERATIONS PLAN," dated
 04 May 5th. And then it's forwarded on to other
 05 people. Okay.
 06 And Barbara Lasley, cou -- do you
 07 remember who Barbara Lasley was?

08 A. She -- she was a Drilling Engineer with
 09 BP.
 10 Q. With BP?
 11 A. Yeah.
 12 Q. Okay. And was she involved on planning
 13 for the top kill or --
 14 A. Yes.
 15 Q. -- for the relief --
 16 A. She -- she was working on the various
 17 kill options that we were planning.
 18 Q. All right. And the E-mail says: "DO NOT
 19 DISTRIBUTE PAST THIS LIST! The work can be
 20 conducted in our workroom and saved, but DO NOT
 21 FORWARD." Do you know why that is?

Page 70:23 to 71:23

00070:23 A. I do not.
 24 Q. (By Ms. Flickinger) Okay. If you could
 25 turn to the document that's attached. And
 00071:01 looking on Page 2, in the section that's entitled
 02 "2.0 Dynamic Kill Modeling." So this is a
 03 preliminary draft of the planning for the dynamic
 04 kill, correct?
 05 A. Yes.
 06 Q. And it says in that paragraph, among
 07 other things: "The modeling was done using SPT
 08 Group's OLGA Advanced Blowout Control model which
 09 is a transient, multiphase dynamic kill model."
 10 So that's OLGA ABT -- ABC?
 11 A. Yes.
 12 Q. "OLGA model output will be provided by
 13 David Barnett, WWCI. Also, calculations will be
 14 provided by Jerry Shursen for kill operations."
 15 Did I read that correctly?
 16 A. Yes.
 17 Q. Okay. And it outlines a number of the
 18 different flow path scenarios, and then on the
 19 next page, it has "Table 1 - Flow Scenarios &
 20 Kill Rates Vs Fluid Density." So here, again,
 21 there's some calculation what the flow rate is in
 22 order to calculate the mud weight and the -- and
 23 the pump rate, correct?

Page 71:25 to 72:07

00071:25 A. Yes.
 00072:01 Q. (By Ms. Flickinger) All right. And it --
 02 it's a little hard to read, but it says "Oil
 03 Rate," "146,000 bpd"?
 04 A. Yes.
 05 Q. And then the next one, which is really
 06 hard to read, I think says "77,000 bpd"?
 07 A. Well --

Page 72:10 to 73:16

00072:10 A. -- on my copy, I can't --
 11 Q. (By Ms. Flickinger) That's --
 12 A. -- tell.
 13 Q. That's a little hard to tell?
 14 And then the third one says "69,500 bpd,"
 15 correct?
 16 A. Yes.
 17 Q. All right. And this, then, are the flow
 18 scenarios that are derived from the -- the
 19 simulations that we've been looking at
 20 previously?
 21 A. That's correct.
 22 Q. Correct?
 23 Now, going back to the E-mail, is --
 24 is -- now that you know that that's part of the
 25 information that's contained herein, does that
 00073:01 help you understand why -- is that one reason why
 02 there is this statement saying: "DO NOT
 03 DISTRIBUTE PASS THIS LIST!"?
 04 A. I don't -- these -- I mean, these
 05 numbers, there's -- there's nothing that I see in
 06 this write-up that hasn't been passed around in
 07 PowerPoints already.
 08 My guess is that this -- this instruction
 09 to not forward is -- probably has more to do with
 10 the preliminary nature of the document than
 11 anything contained in it.
 12 Q. Okay. So you -- your understanding or
 13 your recollection is that some of the earlier
 14 modeling that we've been looking at in the prior
 15 exhibits with the multiple scenarios was
 16 distributed fairly openly within BP?

Page 73:18 to 74:24

00073:18 A. I don't know how widely it was
 19 distributed, but, obviously, it was passed back
 20 and forth between Bill Burch and Kurt Mix and
 21 probably some few others fairly openly.
 22 Q. (By Ms. Flickinger) Okay. And do you
 23 know who else at BP had that information?
 24 A. I do not, no.
 25 Q. Do you recall getting this E-mail at the
 00074:01 time?
 02 A. I can't say I remember this specific
 03 E-mail, no.
 04 Q. All right. Now, during this period in --
 05 in May, did -- did Kurt Mix and Bill Burch work
 06 with Add Energy, do you recall?
 07 A. You know, I'm not exactly sure when Add
 08 Energy showed up or -- or they were engaged. It

09 seemed like it was within the first couple of
10 weeks after the incident.

11 I know that Kurt and Bill both worked
12 with Ole Rygg and others at Add Energy, and
13 the -- the reason for that is that you have to
14 understand OLGA-ABC is sort of a user friendly
15 version of a much more robust modeling program.

16 So that caused there to be some doubt
17 about the legitimacy of the results from ABC, and
18 that's -- and my recollection of what drove BP to
19 engage Add Wellflow to do a -- to apply the more
20 robust model to the program, because it was --
21 there were so many unknowns, and there was such a
22 high amount of turbulence in the wellbore and
23 things that needed to be modeled more exactly
24 than you could probably do with the ABC model.

Page 75:05 to 75:10

00075:05 Q. (By Ms. Flickinger) All right. And then
06 at a certain point, Add Energy came onboard, and
07 I guess my -- my question is: Was there a period
08 where both Wild Well and Add Energy were running
09 models and -- and trying to check the accuracy of
10 one model against the other?

Page 75:12 to 78:18

00075:12 A. Here's what I recall. I would
13 characterize it as Add Energy was engaged to take
14 over all of the flow rate and kill modeling, and
15 that they would be the official source for
16 information to do planning; and that Kurt Mix,
17 who, mind you, BP has their License for
18 OLGA-ABC --

19 Q. (By Ms. Flickinger) M-h'm.

20 A. -- and Bill Burch, who was our -- Wild
21 Well Control's somewhat resident expert on ABC,
22 were running models and comparing to the results
23 from the full OLGA program, I considered it more
24 an effort to try to calibrate their model than
25 anything else.

00076:01 Q. Okay. That's helpful. Thank you.

02 So let's look at some of the documents
03 from this period. If you could turn to -- to
04 Tab 36, please, Bates No. WW-MDL-00133369, and
05 it's exhibit --

06 MS. FLICKINGER: We'll mark it as
07 Exhibit 10491.

08 (Exhibit No. 10491 marked.)

09 (Discussion off the record.)

10 Q. (By Ms. Flickinger) This is an E-mail
11 thread between Bill Burch and a company called
12 drillbenchsupport@sptgroup.com and with Fred Ng.

13 What is "sptgroup.com"? Do you --
14 A. SPT Group is the company that markets
15 OLGA-ABC.
16 Q. Okay. And it -- it looks to me from this
17 thread as if Mr. Burch is working with that
18 company to try to figure out how to input some of
19 the characteristics of the fluid; is that
20 correct?
21 A. Yes. As I recall, there were some issues
22 about the PVT relationships and the gas/oil
23 ratios that were seriously questioned.
24 Q. Okay. And "PVT," again, stands for?
25 A. Pressure/volume/temperature relationship.
00077:01 Q. All right. And that relationship affects
02 the --
03 A. Density of the fluid -- well, let's just
04 say the characteristics of the fluid. As the
05 pressure and temperature change, the volume,
06 viscosities, and other aspects of the fluid
07 change, too.
08 Q. Okay. So if I can point you to the first
09 page, and Mr. Burch is E-mailing a Mr. Inge
10 Mosti, who I think is with SPT Group, on May 9th?
11 A. M-h'm.
12 Q. And SPT is trying to tell him how to work
13 through some of the fluid characteristics, and
14 he -- and Mr. Burch says: It's not that simple
15 on the GOR," gas/oil ratio.
16 Correct?
17 A. (Nodding.)
18 Q. "Ole Rygg is here and we are comparing
19 OLGA Wellkill to OLGA-ABC numbers and I'm hitting
20 the same wall with the GOR. Ole's" gas/oil
21 "rates are for example 38,000 bopd and 107 MMscf
22 which if you divide the numbers, is approximately
23 3000 GOR. Makes sense."
24 And then he -- Mr. Burch continues:
25 "Kurt Mix and I have a model (based on the same
00078:01 PVT file that Ole is using) of" 53,000 -- "53,500
02 bopd and 93 MMscf which is" 17,000 [sic]
03 "scf/stb..."
04 Did I read that correctly?
05 A. Yes.
06 Q. Okay. So Mr. Burch is trying to
07 reconcile the output from his model, which is
08 53,500 barrels of oil per day, with the output
09 from Mr. Rygg's model, which is 38,000 barrels of
10 oil per day, correct?
11 A. Yes.
12 Q. And he's trying to look at some of the
13 fluid characteristics in order to make that
14 reconciliation; is that right?
15 A. That's correct.
16 Q. Okay. And that's what they're focusing
17 on at that -- at that point in -- yeah, at that

18 point in time.

Page 78:21 to 82:18

00078:21 Q. (By Ms. Flickinger) Okay. And,
22 initially, what kicked this whole discussion off
23 is, if you look at the last page from Mr. Burch,
24 it says: "The GOR value entered into OLGA-ABC
25 has been seriously questioned by peer-review."
00079:01 Do you recall that there was peer review
02 of some of the modeling being performed?
03 A. You know, I don't recall if there was an
04 official -- officially sanctioned peer review
05 like there were on other aspects of the job. I
06 think he's referring to just day-to-day review of
07 the results.
08 Q. Okay. And then turn to Tab 37. This has
09 been previously marked as Exhibit 9240. And it's
10 a memo from Jonathan Sprague to the Hydraulic
11 Kill Team, Kurt Mix, Ole Rygg, and William Burch,
12 dated Sunday, May 9th.
13 And here Mr. Sprague talks about some of
14 the modeling for the different flow paths, and
15 says: "... a model calibration was performed by
16 two separate modelers using two independent
17 simulation models (SPT OLGA-ABC and...OLGA-Well
18 Kill)?"
19 Then he lists the calibration results,
20 correct?
21 A. Yes.
22 Q. All right. And then he says: "Add
23 Energy OLGA...will serve as the primary source of
24 simulation data for this estimation due to OLGA
25 ABC single flow exit limitation."
00080:01 Correct?
02 A. Correct.
03 Q. So is this consistent with what your
04 memory was?
05 A. Yes.
06 Q. Okay. But then he also notes that
07 OLGA-Well-Kill gives 38,000 bopd, and OLGA-ABC
08 gives 53,500 bopd, correct?
09 A. Correct.
10 Q. So he has selected a model that gives a
11 lower modeling result, correct?
12 MR. BENTSEN: Objection, form.
13 A. Well, he's -- he's selected a model
14 that's considered to be much more accurate, and
15 it happens that it is -- does have a lower flow
16 rate, yeah.
17 Q. (By Ms. Flickinger) It happens it does
18 have a lower flow rate?
19 A. Yes.
20 Q. And, in fact, if you look at the chart --
21 yeah. Strike that.

22 Okay. And if you could, turn to Tab 38.
23 MS. FLICKINGER: This is Exhibit
24 10492.
25 (Exhibit No. 10492 marked.)
00081:01 Q. (By Ms. Flickinger) And the Bates number
02 is WW-MDL-00018188, and it's a memo from William
03 Burch to you dated May 10th, and he's forwarding
04 modeling comparisons. And then attached to it is
05 a table with different modeling outputs, correct?
06 A. Yes.
07 Q. All right. Do you -- do you recall in
08 this period of time working with Mr. Burch to try
09 to compare the well kill -- the OLGA-Well-Kill
10 and the OLGA-ABC outputs?
11 A. I remember Bill trying to figure out why
12 the ABC model was different than the OLGA model,
13 but I -- I didn't -- I didn't consider that to be
14 really material to what we were doing. It was
15 more of an -- an effort on his part to better
16 understand the limitations of the ABC model
17 versus the full OLGA-Well-Kill model.
18 Q. And, again, if you look at these
19 comparisons for similar scenarios -- okay.
20 So this table is comparing different
21 fluids, a black -- black oil versus a custom PVT
22 fluid data, correct?
23 A. Yes.
24 Q. But, again, for similar runs, the -- for
25 similar assumptions, OLGA is giving a lower
00082:01 outcome, correct? OLGA-Well-Kill is giving a
02 lower outcome than ABC?
03 A. It appears across the board the results
04 are lower with OLGA-Well-Kill versus ABC, yes.
05 Q. Okay.
06 A. Now, I might point out that the oil flow
07 rates are considerably lower with the
08 OLGA-Well-Kill, but the gas flow rates are
09 higher. So it has to do with all of this gas/oil
10 ratio and being able to model the gas that's in
11 solution with the oil and at what point does that
12 gas liberate from the oil and then exit the --
13 the BOP.
14 So it's -- as I recall, those were the --
15 the issues that led us to think that the ABC
16 model was not accurate, because there was --
17 it -- it wasn't handling the multiphase flow, as
18 well as the full Well-Kill model.

Page 82:21 to 83:24

00082:21 (Exhibit No. 10493 marked.)
22 MS. FLICKINGER: And this will be
23 Exhibit 10493. Okay. And this Bates No.
24 WW-MDL-00071702, and it's an E-mail from Bill
25 Burch, William Burch to Fred Ng, dated May 12th.

00083:01 Q. (By Ms. Flickinger) And there's a long
 02 discussion. I'm only going to ask you about the
 03 top page.
 04 A. Okay.
 05 Q. There's a long discussion where they're
 06 trying to figure out how to input oil and oil
 07 characteristics into ABC. And then Mr. Burch
 08 says -- Mr. Ng writes him: "...could it be that
 09 Ole's gas rate is just hard wired to multiply the
 10 oil rate by GOR, rather than a gas rate generated
 11 by simulation? He has it exactly at 3000."
 12 And Burch responds: "No, I did some
 13 digging.
 14 "Ole has put a smaller equivalent ID at
 15 the wellhead and applied a choke at the top of
 16 the BOPs. If he removed them, I'd bet he'd be in
 17 the" same "ballpark too."
 18 Did I read that correctly?
 19 A. Yes.
 20 Q. And "ID" means "inner diameter," correct?
 21 A. That's correct.
 22 Q. And so what Mr. Rygg has done, at least
 23 in these modeling runs, is -- is put in a
 24 different kind of well geometry; is that correct?

Page 84:01 to 84:07

00084:01 A. Well, that appears to be what Bill's
 02 saying. I don't know -- I couldn't confirm that
 03 that was true or not.
 04 Q. (By Ms. Flickinger) Okay. You don't have
 05 any memory of this exchange?
 06 A. No. As far as I understood it, they were
 07 modeling the same wellbore geometry.

Page 84:10 to 85:21

00084:10 (Exhibit No. 10494 marked.)
 11 Q. (By Ms. Flickinger) WW-MDL-00132085. And
 12 Mr. Burch then writes back to Kurt Mix and copies
 13 other people at Wild Well, including you?
 14 A. M-h'm.
 15 Q. About the differences between the two
 16 models. And he says: "Although we & SPT Group
 17 recognize...OLGA-ABC has some issues with GOR and
 18 the black oil model, there's been some difficulty
 19 understanding (at least" on "my part) how the
 20 OLGA-WellKill simulations are significantly less
 21 than what has been reported by OLGA-ABC."
 22 Did I read that correctly?
 23 A. Yes.
 24 Q. "After a few discussions, there" have
 25 "been several assumptions...which may have
 00085:01 significantly helped to reduce" the "oil flow

02 rates:" And he identifies what those assumptions
03 are.

04 A different -- an assumption about the
05 8 1/2 Open Hole, wellhead choke and Effective
06 Riser Choke, correct?

07 A. Yes.

08 Q. So "It certainly doesn't
09 negate...simulations by OLGA-WellKill nor the
10 validity of the dynamic kill rates if the
11 conditions are a better representation of the
12 flow path. In short, we can't make fair
13 comparisons between apples and oranges."

14 Did I read that correctly?

15 A. You did.

16 Q. So really, it turns out that at least --
17 at least part of the discrepancy between the well
18 kill and the ABC computer models in OLGA is that
19 Mr. Rygg and Add Energy have put in a number of
20 chokes that would serve to reduce the oil flow;
21 is that correct?

Page 85:23 to 86:04

00085:23 A. Well, it -- it -- I would -- I would
24 interpret this to mean that they have refined the
25 flowing geometry for both models.

00086:01 Q. (By Ms. Flickinger) I think Mr. Burch is
02 saying he hasn't made those same assumptions in
03 his modeling. At -- at this point in time, folks
04 are modeling worst-case scenarios, correct?

Page 86:06 to 86:09

00086:06 A. Well, that was generally the case, yes.

07 Q. (By Ms. Flickinger) Okay. And -- but
08 Mr. Rygg put in these chokes that are outlined
09 here in this memo, correct?

Page 86:11 to 86:13

00086:11 A. Yes. He -- he input the -- the, I guess,
12 more precise geometry of the open hole and the
13 wellhead flow paths.

Page 86:24 to 87:01

00086:24 Q. But, in fact, at this point in time, BP
25 didn't have that much specific information about
00087:01 the flow paths, correct?

Page 87:03 to 87:05

00087:03 A. That's correct.
 04 Q. (By Ms. Flickinger) About the
 05 restrictions --

Page 87:07 to 87:15

00087:07 Q. (By Ms. Flickinger) -- right?
 08 A. Correct.
 09 Q. Because very little was actually known
 10 about the flow paths through the wellbore?
 11 A. That's correct.
 12 Q. Okay. And Mr. Burch was assuming that he
 13 was modeling a worst-case discharge scenario
 14 without restrictions, correct?
 15 A. Yes.

Page 87:18 to 87:18

00087:18 (Exhibit No. 10495 marked.)

Page 87:24 to 88:16

00087:24 Q. All right. Okay. And this starts out
 25 with an E-mail -- the other side -- from John
 00088:01 Hatteberg --
 02 A. M-h'm.
 03 Q. -- to Bill Burch, and then copies other
 04 people at -- at Wild Well. Correct?
 05 A. That's correct.
 06 Q. Dated May 11th?
 07 A. Yes.
 08 Q. And this concerns a -- a different Wild
 09 Well Control client than BP. Am I right?
 10 A. Correct.
 11 Q. And apparently they have a matter in
 12 Greenland, where they're going to be drilling two
 13 Cairn wells, correct?
 14 A. That's correct.
 15 Q. Okay.
 16 A. Cairn is the operator.

Page 93:17 to 93:18

00093:17 Q. Did Wild Well have any concerns about
 18 fitting an answer to meet a certain scenario?

Page 93:20 to 94:02

00093:20 A. No, there was never any -- any concern or
 21 attempt to make the numbers match anything; we
 22 were just trying to determine for the purposes of
 23 the kill operation what the flow rates were.

24 Q. (By Ms. Flickinger) All right. And did
 25 Wild Well have any concerns about undercutting
 00094:01 the risk by an Order of Magnitude?
 02 A. No.

Page 94:05 to 94:16

00094:05 Q. (By Ms. Flickinger) Okay. Can you turn
 06 to Tab 44?
 07 THE COURT REPORTER: 44?
 08 MS. FLICKINGER: 44, please. This
 09 will be Exhibit 10496.
 10 (Exhibit No. 10496 marked.)
 11 Q. (By Ms. Flickinger) And it's Bates No.
 12 WW-MDL-00139313. This is an E-mail thread
 13 between Mr. Burch and Chris White?
 14 A. (Nodding.)
 15 Q. Do you know who Chris White might be?
 16 A. I do not.

Page 95:19 to 96:04

00095:19 Q. Okay. Mr. Burch, among other things,
 20 responds that: "It's been interesting...the ROV
 21 temp survey around the kinked riser is between 80
 22 degrees Fahrenheit on the outside and 160 degrees
 23 Fahrenheit on the center. Reservoir" temperature
 24 "is about 260 degrees static. Any bets on the
 25 5,000 bopd media number?" Correct?
 00096:01 A. Correct.
 02 Q. Is it -- is one way of estimating flow
 03 from the well a difference in temperature at the
 04 wellhead and at the bottom?

Page 96:06 to 96:08

00096:06 A. A very imprecise method, yes.
 07 Q. (By Ms. Flickinger) But you can get a
 08 ballpark number by doing that?

Page 96:10 to 96:15

00096:10 A. I don't know that anyone has ever
 11 attempted to do that, no.
 12 Q. (By Ms. Flickinger) All right. Is
 13 Mr. Burch here looking at that data and -- and
 14 saying -- expressing some skepticism about the
 15 5,000 bopd?

Page 96:17 to 97:23

00096:17 A. That's how I would interpret that, yes.

18 Q. (By Ms. Flickinger) All right. But you
19 don't recall any conversations with him around
20 this time expressing a similar circu --
21 skepticism?

22 A. Well -- well, I don't know that I would
23 say that we had conversations specifically about
24 that. There were lots of conversations about the
25 range of the flow and different ways to try to
00097:01 estimate and whether the models were accurate,
02 and the -- but nothing about any kind of a
03 conspiracy to purposely say that it was lower
04 than it -- than we actually knew it was.

05 Q. All right. Did you, yourself, have any
06 views as to whether 5,000 bopd was a reasonable
07 Flow Rate Estimate at this time?

08 A. I could -- I could accept that at 5,000
09 barrels per day. But, you know, look, no one has
10 any experience visually estimating flow rates
11 from wells in 5,000 feet of water. Nobody. Not
12 me, not anyone else. So they said 5,000 barrels
13 per day, I didn't really give it much thought.
14 They said that's what it was, and -- I guess I
15 probably thought that was a little bit low, but I
16 had no scientific basis to -- to say it was
17 higher than that.

18 Q. So at this point in time, there was a lot
19 of uncertainty, correct?

20 A. Lots of uncertainty.

21 Q. And -- and you would say, as a range,
22 then, 5,000 bopd was at the low end of that
23 range, correct?

Page 97:25 to 98:23

00097:25 A. That's fair to say. Now, mind you, when
00098:01 I first got to the BP office, as far as I knew,
02 the well wasn't flowing at all. And, oh, I
03 believe it was later that day that someone -- I
04 walked across up on a conversation where someone
05 was saying, "Have you heard that the well is
06 flowing?" I had not.

07 And they had found that through an ROV
08 observation, and then they found subsequently
09 some other leak points. So, you know, at --
10 early on, before the well eroded the -- the riser
11 at the top of the BOP, there were multiple leak
12 path out the riser and the drill pipe, and it
13 very -- it made it even more difficult to
14 estimate than when it eventually was coming right
15 straight through the BOP.

16 Q. (By Ms. Flickinger) Do you recall Pat
17 Campbell calling the well "one bad-ass well"?
18 Have you seen some of those E-mails and
19 communications?

20 A. It sounds characteristic. I don't

21 remember it --
 22 Q. Right.
 23 A. -- specifically, yeah.

Page 99:05 to 99:12

00099:05 Q. It sounds like something he would say?
 06 A. Yes.
 07 Q. And was he saying when he said that, that
 08 this was a more difficult well to kill?
 09 A. I would interpret it that way.
 10 Q. Okay. And as one of the factors that
 11 made Macondo difficult to kill, the fact that it
 12 had a -- a significant flow rate of oil?

Page 99:14 to 99:14

00099:14 A. One of the factors.

Page 99:18 to 100:19

00099:18 Q. M-h'm.
 19 MS. FLICKINGER: And this will be
 20 Exhibit 10497.
 21 (Exhibit No. 10497 marked.)
 22 Q. (By Ms. Flickinger) Bates
 23 WW-MDL-00132092. And this is a thread of E-mails
 24 between Kurt Mix and William Burch, copy to Ole
 25 Rygg, dated May 16th. And Kurt Mix, in this
 00100:01 E-mail on May 16th at 11:26 a.m. -- do you see
 02 where I am -- asks Bill: "let's re-do it at
 03 5000, 10000 & 25000 bopd rate."
 04 A. (Reviewing document.) Okay. I see that.
 05 Q. You see that. And -- and he's trying to
 06 model flowing bottomhole pressure, correct?
 07 A. Yes.
 08 Q. And Burch responds: "Flowing bottom
 09 hole" pressure "will vary obviously as a function
 10 of flow rate but only Ole can model the low/high
 11 choke" case. And then he says: "(the original
 12 case was 38,300 bopd in OLGA-WellKill. Shut in
 13 pressures don't vary as a function of flow rate
 14 (obviously.)"
 15 Did I read that correctly?
 16 A. Yes.
 17 Q. Okay. In essence here, Mr. Burch is --
 18 is declining to do the modeling at 5,000, 10,000,
 19 20 -- and 25,000 bopd rate, correct?

Page 100:21 to 102:20

00100:21 A. Well, yes. I think he's -- I think he's
 22 handing the ball over to Ole, if you will.

23 Q. (By Ms. Flickinger) He's handing the ball
24 over to Ole --
25 A. Yeah.
00101:01 Q. -- that's right?
02 Do you know if -- if Wild Well ever
03 modeled flow out of the Macondo well -- well at
04 5,000 bopd, as you sit here today?
05 A. Well, I do not recall that, no.
06 Q. Okay. How about 10,000?
07 A. No.
08 Q. How about 25,000?
09 A. No.
10 Q. Okay.
11 A. Now, I -- I guess I should point out that
12 these -- this is now having to do with the relief
13 well kill. And the earlier part of this E-mail
14 has to do with where the relief well
15 intercepts --
16 Q. Correct.
17 A. -- and generally speaking, the -- the
18 shallower you intercept the blowout with the
19 relief well, the more the -- the -- the -- the
20 rate increases and the volume required to do the
21 kill increases.
22 So that's kind of what all this is
23 speaking to. And I don't know why they would
24 want to do specific flow rates, unless they're
25 talking about the -- the injection of the mud.
00102:01 Q. Right. For some reason, they wanted to
02 know the flowing bottomhole pressure, apparently.
03 MR. BENTSEN: Objection, form.
04 A. Well, they did. The -- the -- the reason
05 they want to know it, is if -- if you read this
06 bottom part of here, they're talking about the
07 fracture gradient. So Bill says that you --
08 you -- "you're never above fracture gradient on
09 the relief well design unless you are shallower
10 than the 22-inch casing point."
11 So in other words, if you intercept the
12 blowing well above the 22-inch casing point, you
13 are going to have to develop a pressure at that
14 point, to subdue the reservoir, that is more than
15 the sediment can withstand. So it will fracture.
16 That's what all of that goes to.
17 So it has to do with, essentially, what
18 is the pressure required at the -- at that
19 intercept point. The -- a shut-in pressure, if
20 you will.

Page 103:10 to 103:23

00103:10 Q. (By Ms. Flickinger) Okay. Let's talk
11 about the top kill a little bit. I think we've
12 established that flow and the amount of flow is
13 one of the parameters you have to look at when

14 you're planning a top kill, correct?
 15 A. Yes.
 16 Q. Because that goes into your pump rate and
 17 your mud weight and various other things,
 18 correct?
 19 A. Correct.
 20 Q. All right. Was Wild Well aware that the
 21 top kill could not succeed if the flow or the
 22 production rate from Macondo exceeded a certain
 23 amount?

Page 103:25 to 104:11

00103:25 A. I overheard some conversations that there
 00104:01 were some calculations being done to that effect,
 02 but I personally never put much importance on it.
 03 It -- essentially, it was a matter of assembling
 04 all of the pumping horsepower and fluid volume
 05 that was reasonable to do, and pumping as fast as
 06 we could, and hoping for the best.
 07 Q. (By Ms. Flickinger) All right. Were you
 08 aware that Add Energy had done some modeling that
 09 said that top kill wouldn't succeed if the flow
 10 rate exceeded 15,000 standard barrels of oil per
 11 day?

Page 104:13 to 104:19

00104:13 Q. (By Ms. Flickinger) Does that ring a
 14 bell?
 15 A. I do remember hearing that, yes.
 16 Q. Okay. And did -- based on your
 17 experience with killing wells, did that seem
 18 reasonable to you, giving the -- given the
 19 pumping capacity you had available?

Page 104:22 to 106:14

00104:22 A. Did -- did it seem reasonable that we
 23 could not -- that we wouldn't be successful with
 24 the top kill if the flow was over 15,000 barrels?
 25 Q. (By Ms. Flickinger) (Nodding.)
 00105:01 A. You know, I -- I -- not to sound dumb,
 02 but I don't guess I ever really gave it much
 03 thought.
 04 Q. All right. Did Wild Well recommend
 05 proceeding with the top kill, do you recall?
 06 A. We -- we pointed out some of the
 07 potential problems that could be associated with
 08 the -- with the top kill. As I recall, we
 09 expressed our lack of confidence that the top
 10 kill would be successful, but we were in
 11 agreement to go implement it, if that was BP's

12 wishes.

13 Q. All right. And were -- what were some of
14 the reasons why you weren't confident that it
15 would be successful?

16 A. Well, as a general rule, I don't have
17 much confidence in being able to control a well
18 in that manner, either this well or -- or any
19 other. The -- the idea is that you're going to
20 create enough friction through an unknown
21 geometry to essentially effect a shut-in of the
22 well.

23 Well, the first thing that has to happen
24 for this top kill to even start being successful
25 is you have to establish a pressure at the
00106:01 wellhead that balances the reservoir with the
02 reservoir fluid in the well.

03 That -- that sort of friction pressure at
04 the surface just seems very difficult to
05 establish, to me.

06 Q. Very difficult to attain that kind of
07 pressure?

08 A. Yes, yes.

09 Q. Okay. Pat Campbell wrote some things
10 saying he thought BP was going forward with the
11 top kill because it was the first thing available
12 to do next.

13 Do you recall any discussions of that
14 nature at -- in Wild Well?

Page 106:16 to 110:09

00106:16 A. I recall that there were lots of
17 discussions on a daily basis about what was the
18 best way to proceed, and it had -- oh, there were
19 so many things that had to be considered about
20 our ability to contain and the risk of capping
21 and the risk of shutting in.

22 I don't recall any conversations that
23 basically said, "Let's do this because it's the
24 only thing available to us at the time."

25 Q. (By Ms. Flickinger) Okay. But you had
00107:01 said earlier the momentum kill was a more unusual
02 tool to use to kill a well, correct?

03 A. Yes.

04 Q. Okay.

05 A. Very -- very rarely attempted.

06 Q. Okay. Let's go to Tab 56. And this has
07 been previously marked as Exhibit 9250. It's an
08 E-mail thread. All right. And starting -- let's
09 start on the second page. And Ole Rygg sends to
10 Mr. Trevor Hill, on May 16th, a PowerPoint
11 Presentation that has to do with planning for the
12 dynamic top kill, correct?

13 A. Yes.

14 Q. All right. And then there's an E-mail

15 from a Mr. Tim Lockett to Trevor Hill on
16 May 17th.
17 Now, do you -- do you know who Trevor
18 Hill is?
19 A. I do not.
20 Q. Do you know who Mr. Tim Lockett is?
21 A. I do not.
22 Q. Okay. I'll represent to you that they're
23 BP employees --
24 A. Okay.
25 Q. -- involved in -- in flow matters.
00108:01 And Mr. Lockett writes to Mr. Hill: "The
02 apparent reliance in Ole's email on the 5 mbd
03 number, which has little if no origin, is
04 concerning. From all the different ways we have
05 looked at flowrate, 5 mbd would appear to err on
06 the low side. I will therefore be looking to
07 see...the dynamic well kill modelling that has
08 been tested at higher well rates."
09 Did I read that correctly?
10 A. Yes.
11 Q. Do you recall discussions where -- and 5
12 mbd is 5,000, correct?
13 A. That's correct.
14 Q. All right. Do you recall discussions
15 saying that "5 mbd appears to err on the low
16 side"?
17 A. Yes.
18 Q. You do?
19 A. Yes.
20 Q. Okay. And, in fact, when you did the
21 dynamic kill modeling, did Wild Well make sure
22 that it was tested at higher flow rates?
23 A. Well, my -- my interpretation is that
24 he's referring to the dynamic kill modeling that
25 would be done through the relief well. And as
00109:01 we've already seen, it was done at much higher
02 rates.
03 Q. Was different modeling done for top kill
04 and dynamic kill in -- in terms of the
05 assumptions --
06 A. Oh, yes.
07 Q. -- concerning the discharge from the
08 well?
09 A. Well --
10 Q. I mean, the mud weights and the pump
11 rates and all of that presumably are different.
12 But in terms of the basic well characteristics,
13 wasn't the modeling essentially the same?
14 A. Well, the -- the dynamic kill modeling
15 had to do with the injection of fluid at the
16 bottom of the well. So there's a -- a mixing of
17 kill mud with reservoir fluids and building of
18 the flowing density from the bottom up versus the
19 modeling that was done for the top kill that's

20 essentially a frictional model through various
 21 geometries to determine what it would take to --
 22 to establish the -- the necessary pressure.
 23 Q. Right. But the reservoir characteristics
 24 are going to be the same in both kinds of
 25 modeling, correct?
 00110:01 A. Yes.
 02 Q. And the flowing bottomhole pressure is
 03 going to be the same in both kinds of modeling,
 04 correct?
 05 A. Yes.
 06 Q. And this 5,000 mobd, that's the -- the
 07 number -- that's one of the numbers representing
 08 the flow from the well, correct?
 09 A. That's correct.

Page 110:11 to 111:16

00110:11 A. (Nodding.)
 12 Q. (By Ms. Flickinger) All right. Okay.
 13 And then Mr. Hill forwards the E-mail thread,
 14 including the statements from Mr. Lockett, to
 15 Mr. Doug Wood, and I'll represent he's also a BP
 16 employee.
 17 A. (Nodding.)
 18 Q. Are you familiar with that name?
 19 A. No.
 20 Q. Okay. And Doug Wood then writes back
 21 both to Mr. Lockett and Mr. Hill and says:
 22 "Trevor,
 23 "I spent some time in review of the kill
 24 option today with third parties and then had a
 25 1:2:1 with Ole afterwards.
 00111:01 He has worked up a number of scenarios
 02 which he has presented." Tim "points" -- "Tim's
 03 points are both valid and have an impact on the
 04 viability of the kill option working."
 05 Did I read that correctly?
 06 A. Yes.
 07 Q. All right. "Kate and I have passed our
 08 thoughts on the probability of success and the
 09 risks that may be introduced along to Paul."
 10 Do you have any understanding of who
 11 "Paul" is?
 12 A. I don't.
 13 Q. Okay. But you can tell from this E-mail
 14 thread that the concern about 5,000 bopd is being
 15 elevated within BP prior to the top kill; isn't
 16 that right?

Page 111:19 to 115:11

00111:19 A. Yes.
 20 Q. (By Ms. Flickinger) Okay. If you could,

21 turn to Tab 65.

22 A. I'm -- if I could, I would like to just
23 draw your attention that the subject of these --
24 this E-mail train that we're looking at has to do
25 with pressure buildup. So it could very well be
00112:01 that they're more concerned with what the initial
02 shut-in pressure would be versus what the actual
03 flow rate is.

04 Obviously, if the well is flowing a
05 lesser amount, then the depletion will be less,
06 and the buildup would be higher, or -- or the
07 shut-in -- the initial shut-in pressure would be
08 higher and the buildup would be faster.

09 Q. Right. But conceptually, you had said
10 the top kill, you have to create a certain amount
11 of pressure at the top in order to stop the
12 upward flow of the oil?

13 A. Yes.

14 Q. So they presumably also are talking about
15 that, correct?

16 A. Well, so, you know, in its very basic
17 form, the -- the top kill requires you to
18 establish a certain pressure, and so it all has
19 to do with what is the geometry of this flow
20 path. And that pressure is related to the -- the
21 flow rate because that allows you to estimate
22 what the depletion is and what the initial
23 shut-in pressure would be.

24 That initial shut-in pressure is what we
25 have to attain with the top kill with -- with
00113:01 nothing but friction. We have no hydrostatic
02 component to this kill at all. It's all friction
03 going through this unknown geometry.

04 Q. Right. And the geometry -- so,
05 obviously, if it's a higher flow rate, the
06 friction that you have to establish at the outset
07 has to be greater, correct?

08 A. Only because that -- that, then, implies
09 that the geometry is larger.

10 Q. All right. And if you have a larger
11 geometry, then you're going to have a greater
12 flow?

13 A. Right.

14 Q. And it's going to be difficult to have a
15 successful top kill?

16 A. Correct.

17 Q. Okay. Looking at Tab 65.

18 MS. FLICKINGER: This will be
19 Exhibit 10498.

20 (Exhibit No. 10498 marked.)

21 Q. (By Ms. Flickinger) The Bates is
22 WW-MDL-00096776. It's an E-mail from Fred Ng to
23 you and other people at -- at Wild Well, and I
24 think all those people are from Wild Well,
25 correct?

00114:01 A. It appears so, yes.
 02 Q. All right. And it's entitled "Leakage
 03 calibration..."
 04 "Attached is the first draft of the
 05 Leakage Calibration Procedure developed by Fred
 06 Ng. We can discuss in tomorrow's meeting."
 07 And then there's an attachment. And it's
 08 dated May 22nd, 2010. Now, do you recall when
 09 the top kill began?
 10 A. Oh, seems like it was around May 26th.
 11 Q. Right. So this is right -- a few days
 12 before the top kill?
 13 A. Yes.
 14 Q. And it says the "Objective" of this
 15 leakage calibration is to "Conduct diagnostic
 16 pumping before" start "of kill and before
 17 starting to pump cement to estimate leakage rate
 18 through BOP and rig riser. Data can also be
 19 compared with OLGA modeling results to estimate
 20 equivalent flow area of" the "leak."
 21 And by "leakage rate," I assume, by
 22 "leakage rate," they mean the amount of oil and
 23 gas that's leaking out of the well into the Gulf
 24 in -- through the BOP and the rig riser, correct?
 25 A. Well, I think the -- the objective of
 00115:01 this procedure that he outlined is to pump mud in
 02 a diagnostic fashion to try to determine what
 03 that geometry is.
 04 Q. Well, he says here the leakage rate.
 05 A. Yes.
 06 Q. Right? He's not -- the diagnostic may
 07 assist with understanding the well geometry, but
 08 here, this particular procedure, isn't it
 09 looking -- isn't it a proposed procedure to
 10 estimate the leakage rate through the BOP on the
 11 rig riser?

Page 115:13 to 116:01

00115:13 A. By pumping mud at various rates and
 14 measuring the frictional pressure, yes.
 15 Q. (By Ms. Flickinger) Okay.
 16 A. So I'm not sure if it refers to the
 17 leakage of oil and gas or the leakage of mud
 18 through the geometry, but it would all relate to
 19 the same estimation of the geometry.
 20 Q. Okay. Do you -- do you have any memory
 21 of working on these procedures?
 22 A. Yes.
 23 Q. And do you recall an interest in trying
 24 to have a protocol in place to estimate the flow
 25 rate, the leakage rate coming out of the Macondo
 00116:01 Well at that time?

Page 116:03 to 116:16

00116:03 A. Well, no, as I recall, our interest was
 04 in trying to determine only what -- what -- what
 05 the restrictions were within the BOP stack and if
 06 we could estimate geometry and determine our
 07 ability to create enough frictional pressure to
 08 be successful with the top kill. It was more of
 09 a -- a diagnostic procedure that was going to be
 10 implemented, ahead of the -- the actual well kill
 11 operations or attempted operations.
 12 Q. (By Ms. Flickinger) Okay. Do you know if
 13 there was any diagnostic attempt to further
 14 refine the flow rate and to calibrate those
 15 results with OLGA modeling results, prior to the
 16 top kill?

Page 116:18 to 117:21

00116:18 A. Well, the calibration would have been
 19 with trying to model mud -- the kill mud flowing
 20 through the passageway internal to the BOP.
 21 Q. (By Ms. Flickinger) Right. So you're
 22 saying the diagnostic test that you recall was to
 23 further gain information about the geometry of
 24 the wellbore, correct?
 25 A. The exit pathway, yes.
 00117:01 Q. All right. But you don't recall any
 02 attempts to try to gain information through
 03 diagnostic testing concerning the flow
 04 estimates --
 05 A. I don't.
 06 Q. -- rate of discharge?
 07 Okay. All right. Then the top kill was
 08 implemented and performed, correct?
 09 A. (Nodding.) It was.
 10 Q. And it wasn't successful, you remember
 11 that?
 12 A. It was not. I do remember that, yes.
 13 Q. Right. And were there complaints at Wild
 14 Well about the Wild Well role during
 15 implementation of the top kill, its role in the
 16 decision-making, do you recall any concerns about
 17 that?
 18 A. No. Nothing significant, no.
 19 Q. Do you recall any discussions internal at
 20 Wild Well about being excluded from the
 21 decision-making by BP?

Page 117:23 to 118:11

00117:23 A. No, I -- I seem to recall that there were
 24 some frustrations, I guess, about the -- whether
 25 our concerns were being taken into account, I

00118:01 guess, but, you know, when you -- when you're in
 02 the role of giving advice, and someone else is in
 03 the role of making a decision based on that
 04 advice, well, sometimes you don't necessarily
 05 agree with -- with what they choose to do, so
 06 that's -- that's one of the pitfalls of being a
 07 Technical Advisor, I guess.
 08 Q. (By Ms. Flickinger) Right. So Wild Well
 09 had some concerns and was frustrated because BP
 10 was not necessarily making a decision reflecting
 11 those concerns?

Page 118:14 to 118:21

00118:14 A. Well, I don't want to make a bigger deal
 15 out of it than it -- than it really was, but I
 16 wouldn't -- I wouldn't disagree with your
 17 characterization, I guess.
 18 Q. (By Ms. Flickinger) All right. Was there
 19 concern around this time that Wild Well was going
 20 to be the scapegoat for the failure of the top
 21 kill?

Page 118:23 to 118:25

00118:23 A. None that I was aware of.
 24 Q. (By Ms. Flickinger) If you could turn to
 25 Tab 76 in the second binder.

Page 119:02 to 121:08

00119:02 (Exhibit No. 10499 marked.)
 03 Q. (By Ms. Flickinger) Okay. Tab 76 will be
 04 Exhibit 10499. And the Bates is WW-MDL-00144018.
 05 And this is -- again, is an E-mail thread back
 06 and forth among Wild Well Managers.
 07 And if you turn to the first one, to
 08 the -- to the second page, you wrote to Freddy
 09 Gebhardt and Pat Campbell on May 29th, 2010, and
 10 you say initially, "Despite the fact that WWCI
 11 was opposed to even implementing this procedure
 12 it appears...we are being set up to take the
 13 blame for its failure?"
 14 Do you recall -- did I read that
 15 correctly?
 16 A. Yes.
 17 Q. So that's how you felt at the time,
 18 correct?
 19 A. Ah, evidently so, yes.
 20 Q. All right. But then eventually
 21 presumably --
 22 A. I think it was a momentary frustration.
 23 Q. Yes. Do you recall writing a final

24 Project memo for the top kill?
 25 A. I do.
 00120:01 Q. All right. What conclusions did you
 02 reach as to why it did not succeed?
 03 A. I'm sorry?
 04 Q. What conclusions did you reach as to why
 05 it did not succeed?
 06 A. That the -- essentially the flow path
 07 through the BOP was too large to either plug with
 08 the debris, or certainly to create enough
 09 frictional pressure by just pumping alone.
 10 Q. Okay. So -- so to the extent it was
 11 thought that there were restrictions in the
 12 wellbore that would make it possible to plug with
 13 debris, it turned out that was not the case?
 14 A. That's correct.
 15 Q. And that it was a larger flow path than
 16 originally -- than -- than anticipated?
 17 A. Well, we never really knew whether it was
 18 a series of small flow paths or one larger flow
 19 path. We -- I think one could conclude by the
 20 fact that we pumped two-and-a-half inch diameter
 21 debris, that there was at least a flow path that
 22 was larger than that.
 23 Q. All right. And you also concluded that
 24 there was very little restriction offered by some
 25 of the rams in the BOP?
 00121:01 A. Yes, especially -- excuse me, especially
 02 the upper portion of the BOP, as I recall.
 03 Q. Okay. So that was your conclusion at the
 04 time?
 05 A. Yeah.
 06 Q. All right. Do you recall what BP
 07 announced was the reason for the failure of the
 08 top kill?

Page 121:10 to 121:13

00121:10 A. I honestly don't.
 11 Q. (By Ms. Flickinger) Do you recall them
 12 saying that burst rupture disks were the reasons
 13 the top kill failed?

Page 121:15 to 121:23

00121:15 A. Well, I remember that there was some
 16 speculation that some of the kill fluid went down
 17 the well and that that could be an indication
 18 that the burst disks were ruptured. I do recall
 19 that.
 20 Q. (By Ms. Flickinger) And do you recall
 21 that Wild Well did not agree with that assessment
 22 of that analysis of the reason for the top kill
 23 failure?

Page 121:25 to 122:02

00121:25 A. I do. I -- I personally didn't agree
00122:01 with it, and I think that was the consensus among
02 Wild Well Control.

Page 122:08 to 122:12

00122:08 If you could turn to Tab 80. And it's
09 going to be Exhibit 10600. And this is a Memo
10 from Fred Ng to Pat Campbell, dated May 29th,
11 WW-MDL-0064837. That's probably all I'm going
12 to -- that's enough.

Page 122:16 to 122:20

00122:16 (Exhibit No. 10600 marked.)
17 Q. (By Ms. Flickinger) Okay. So after
18 the -- after the top kill, BP started to focus on
19 other Source Control measures, correct?
20 A. Yes.

Page 122:22 to 122:25

00122:22 Q. (By Ms. Flickinger) And do you recall
23 what the next -- I guess they then turned to
24 collecting oil and gas through the -- through the
25 riser insertion tool?

Page 123:02 to 124:12

00123:02 A. As I recall, the -- the riser insertion
03 tool, the removal of the riser, the installation
04 of the -- a series of Top Hat devices, and
05 recovery of the oil and gas back to Q4000, and
06 the ENTERPRISE.
07 Q. (By Ms. Flickinger) Right. And work on
08 the relief well continued?
09 A. Oh, yes.
10 Q. And you continued to plan because the
11 relief -- the relief well was to implement the
12 dynamic kill?
13 A. That's correct.
14 Q. So you continued to do your planning on
15 the dynamic kill --
16 A. Yes.
17 Q. -- right?
18 A. (Nodding.)
19 Q. Then the modeling you did continued to
20 use some of the earlier modeling that we saw. Do
21 you -- do you --

22 A. As I recall, that modeling was refined to
 23 a -- a set of scenarios that was -- there were
 24 three scenarios. One was that the flow was
 25 internal to the casing string.

00124:01 Q. M-h'm.

02 A. The other scenario was that the flow was
 03 external to the production casing string. And
 04 the third one was that the flow could be up both
 05 those pathways.

06 Q. All right. The Productivity Index that
 07 we saw earlier, 50 barrels per day per psi, that
 08 continued to be the Productivity Index that was
 09 used?

10 A. As far as I know, yes.

11 Q. All right. And the same fluid properties
 12 were used?

Page 124:14 to 127:04

00124:14 A. Oh, there was some refinements. I
 15 remember that there were different estimations of
 16 fluid density within the wellbore, mainly having
 17 to do with what the initial shut-in pressure
 18 would be. So there -- there continued to be
 19 refinement, but I don't recall that there were
 20 any significant changes.

21 Q. (By Ms. Flickinger) Do you recall that
 22 the injectivity -- the number for injectivity
 23 changed, so it became one-tenth --

24 A. I recall --

25 Q. -- of the --

00125:01 A. -- that we -- we -- or they finally
 02 settled on 10 percent for injectivity at --

03 Q. Okay.

04 A. -- and that came along with the -- the
 05 idea that that was probably a bit conservative,
 06 but would -- would be useful for modeling the
 07 bullhead kill back into the reservoir.

08 Q. Okay. That was a conservative number?

09 A. Yes.

10 Q. All right. Do you recall some analysis
 11 of reservoir depletion?

12 A. Yes.

13 Q. And why was -- why were people looking at
 14 reservoir depletion?

15 A. Well, in terms of the dynamic kill, we
 16 wanted to tailor the mud weight to what we
 17 expected the final shut-in pressure of the
 18 reservoir would be. In a deepwater dynamic kill
 19 such as the one that we were planning, there are
 20 difficulties that are created by the fact that
 21 you have -- basically, the -- the water column is
 22 a missing part of the U-tube that you're trying
 23 to create to establish bottomhole pressure.

24 So if the pressure in the reservoir

25 exceeds a certain amount, the mud weight that you
00126:01 need to circulate back to the seafloor exceeds
02 the strength of the -- of the sediment, if you
03 extend that fluid column all the way back up to
04 the rig, so --
05 Q. Oh, okay. Like the --
06 A. So we wanted to use the lowest possible
07 mud weight that would create sufficient pressure
08 at the reservoir.
09 Q. If you have a depleted reservoir, does
10 that change your fracture gradient --
11 A. Yes.
12 Q. -- at the bottom of the --
13 And so that's what they're trying to get
14 a handle on --
15 A. Well -- -
16 Q. -- when they --
17 A. -- it changes the fracture gradient in
18 that flowing sand, but not necessarily for the
19 impermeable sediments that --
20 Q. I gotcha.
21 A. -- surround that -- that --
22 Q. All right.
23 A. -- sand.
24 Q. So there would be this one point, as you
25 go up and down the wellbore, where the fracture
00127:01 gradient would change?
02 A. Yes.
03 Q. Okay. And did BP begin to favor one flow
04 path over another?

Page 127:06 to 127:12

00127:06 A. Well, I think there were personal
07 opinions about what the flow path was, but we
08 tried to -- to remain focused on being prepared
09 for the flow to be an either or both. So from
10 a -- an official capacity, we -- we always
11 considered the potential for the flow to be
12 either side, or both.

Page 127:18 to 134:23

00127:18 Q. And this is -- will be Exhibit 10601.
19 (Exhibit No. 10601 marked.)
20 Q. (By Ms. Flickinger) And it's an E-mail
21 from you to Kurt Mix. And it's an INTERCEPT &
22 KILL OPERATIONS PLAN, dated May 14th, 2010, for
23 the Mississippi Canyon 252 #1 Relief Well. And
24 this is an early -- you know, one of the drafts
25 of the -- this document for the operations
00128:01 planning.
02 A. Yes.
03 Q. And really, I just want to direct your

04 attention to Page 3, where there's a chart that
05 talks about "Oil Rate versus permeability,
06 Blowouts with release to seabed - no
07 restrictions." Can you just walk me through that
08 graph?
09 A. Well, we have the oil discharge rate
10 along the Y axis.
11 Q. M-h'm.
12 A. And the permeability measured in
13 millidarcies --
14 Q. M-h'm.
15 A. -- along the X axis. We had information
16 that told us that the permeability of the Macondo
17 Reservoir was somewhere around 300 millidarcies.
18 So we have what appears to be three
19 different scenarios inside the casing: Scenario
20 A, outside the casing; Scenario B and -- outside
21 and inside; and Scenario AB.
22 Q. Okay. And the permeability of -- of 300
23 millidarcies, that came from actual sampling of
24 the rock by BP?
25 A. I believe it was from core samples of the
00129:01 actual reservoir.
02 Q. All right. And can you tell me for that
03 base case -- of flow, that base case scenario,
04 can you tell me what oil rates and bopd were for
05 each of the three scenarios? Let's --
06 A. It's a --
07 Q. -- just do --
08 A. -- little hard to make out without the
09 color, but --
10 Q. M-h'm.
11 A. -- I'm going to -- I -- I believe that
12 the top line is the combined scenario, if you
13 will, and that 300 millidarcies, it appears to be
14 around 88,000 barrels of oil per day.
15 Q. Okay. Thank you.
16 All right. Let's turn to Tab 89. All
17 right. And this is 10602.
18 (Exhibit No. 10602 marked.)
19 Q. (By Ms. Flickinger) Bates No.
20 WW-MDL-0003080 -- 846. And it's an E-mail from
21 Bill Burch to you, June 8th, 2010. And then this
22 incorporates -- it's a -- it's an initial
23 description of different interception points in
24 the computer simulations for the each of the
25 different cases, correct?
00130:01 A. Okay.
02 Q. And then it incorporates some slides,
03 PowerPoint slides, from Add Energy, who have done
04 some of the modeling --
05 A. Yes --
06 Q. -- correct?
07 A. -- that's correct.
08 Q. And -- and if you -- if you look at the

09 slides where they're calculating injectivity at
10 different mud weights, it says that it's using
11 an -- an annulus blowout of 43,000 bopd.
12 A. Well, I --
13 Q. Okay? And --
14 A. -- I see that, yes.
15 Q. Do you have any memory as to why -- so in
16 other words, in your planning for the dynamic
17 kill, you're looking at the annulus flow path at
18 43,000 bopd, correct?
19 A. Correct.
20 Q. All right. Do you have any understanding
21 as to why that particular flow assumption was
22 used?
23 A. Well, only that it is a result of the
24 modeling that was done to plan the relief well --
25 or the dynamic kill. The -- as we said before,
00131:01 the -- the modeling first requires that you
02 establish the flow rate. And then based upon
03 that, it determines what the rate of mud is
04 required at various densities to control it.
05 Q. Okay.
06 A. So --
07 Q. And at this point in time, they were
08 using 43,000 bopd through an annulus blowout flow
09 path?
10 A. Yes.
11 Q. All right. But you don't recall
12 particularly why that was selected?
13 A. No.
14 Q. Okay. If you could turn to Tab 97. This
15 is Exhibit 10603.
16 (Exhibit No. 10603 marked.)
17 Q. (By Ms. Flickinger) Bates No.
18 WW-MDL-00143667, and it's an E-mail from Bill
19 Burch to Kurt Mix and yourself on June 20th,
20 2010. And he's forwarding the Final Version of
21 the Dyna -- Dynamic Kill Technical Fact Note. Do
22 you see that?
23 A. I do.
24 Q. And then attached to it is, in fact, the
25 Dynamic Kill Technical File Note?
00132:01 A. Correct.
02 Q. All right.
03 A. Yes.
04 Q. Okay.
05 A. Oh, sorry.
06 Q. And is this a document you used in
07 planning for the dynamic kill?
08 A. Yes, one of many.
09 Q. One of many.
10 A. (Nodding.)
11 Q. And -- and in Part 2, Introduction, he
12 outlines, again, the scenarios for the modeling,
13 many of which we've already covered.

14 And then at the bottom of Page 6, there's
15 a paragraph that begins: "The blowout rate
16 estimations by add well..."
17 A. Yeah.
18 Q. Do you see that? Okay.
19 A. I do.
20 Q. "The" -- "The blowout rate estimations by
21 add well...as indicated" -- a-s -- "indicated a
22 maximum rate up the production casing annulus of
23 43,000 bopd, up the production casing of 63,000
24 bopd, and up a combination of production casing
25 and annulus of 87,000 bopd was possible at the
00133:01 seafloor."
02 Did I read that correctly?
03 A. Yes.
04 Q. Okay. "Again, all simulations are run
05 for worst-case dynamic kill...which means no
06 restrictions..." and so forth.
07 Is it -- is it your memory that those
08 were the numbers that were being used for
09 planning purposes at that time?
10 A. Yes, that is my recollection.
11 Q. All right. All right. Let's talk a
12 little bit about -- well, there's one last
13 E-mail. And, eventually, was a dynamic kill ever
14 implemented?
15 A. No.
16 Q. So in -- in fact, there was a capping
17 stack put on the well?
18 A. Yes.
19 Q. And that was used to actually stop the
20 discharge of oil from the well?
21 A. That's correct, yes.
22 Q. And then did they do a bullhead --
23 A. Yes.
24 Q. -- once the well was stopped?
25 Were you involved in the bullhead at all?
00134:01 A. I was, yes.
02 Q. You were?
03 A. (Nodding.)
04 Q. And then eventually, they cemented after
05 they did the bullhead?
06 A. That's correct.
07 Q. Okay. Was any injectivity testing ever
08 done? Do you recall?
09 A. Well, yes, I do seem to recall. I mean,
10 the -- the -- the bullhead kill operation
11 essentially started out as an injectivity test
12 which --
13 Q. Right.
14 A. -- we deemed to be successful because the
15 surface pressure remained below the maximum limit
16 that we had imposed.
17 Q. M-h'm.
18 A. So we proceeded along and increased the

19 rates and completed the bullhead kill.
20 Q. Okay. Do you recall what the final --
21 what the injectivity at the bottom of the well
22 formation was determined to be?
23 A. I'm afraid I don't.

Page 135:16 to 137:01

00135:16 (Exhibit No. 10604 marked.)
17 Q. (By Ms. Flickinger) WW-MDL-0061802[sic].
18 And it's just an E-mail from you to Pat Campbell,
19 dated August 3rd. Is this about the time the
20 bullhead -- the static kill is being done?
21 A. Yes.
22 Q. Okay. And you write to him:
23 "Calculations indicate flow down nine and
24 seven-eighths-inch casing with no drill pipe
25 inside (at least at" the "surface)."
00136:01 Can you tell me what you're communicating
02 there?
03 A. Well, we had -- we had developed
04 predictions of the pressure versus the volume of
05 kill fluid that we pumped into the well --
06 Q. M-h'm.
07 A. -- based on establishing a certain
08 hydrostatic column, per barrel pumped, so
09 obviously, the various geometries would indicate
10 to us how deep the mud was at 10 barrels or 20
11 barrels or 50 barrels.
12 Based on our predictions versus the
13 results, the indications were that we were
14 displacing mud directly down the inside of the
15 nine and seven-eighths casing, and there was no
16 drill pipe which would have caused that column of
17 mud to be much longer than if the drill pipe
18 wasn't there.
19 Q. Okay. So there was no restriction from
20 the "dill" pipe -- drill pipe inside the 9 and
21 seven-eighths inch casing, correct?
22 A. Correct.
23 Q. Okay. And the flow was going down the
24 production casing. Does that also mean that the
25 discharge from the Macondo Well had been going up
00137:01 the production casing?

Page 137:03 to 138:13

00137:03 A. That was our conclusion at the time, yes.
04 Q. (By Ms. Flickinger) All right. So for
05 all the scenar -- the scen -- the modeling for
06 the different scenarios, the one that really
07 turned out to be the case was the flow up the
08 production casing?
09 A. Yeah. It's probably worth pointing out

10 that had the drill pipe had numerous holes in it,
 11 that it would be almost impossible to
 12 distinguish; in other words, if we were pumping
 13 mud and it was going both around the drill pipe
 14 and inside the drill pipe, the difference in
 15 displacement only from the wall of the drill pipe
 16 itself probably wouldn't have been enough to
 17 distinguish which flow path it was.

18 Q. Okay.

19 A. (Indicating.)

20 Q. Does that mean it was not a very big
 21 restriction on your flow down?

22 A. Well, no. I mean, that -- that only
 23 means that the -- the appearance was that there
 24 was no drill pipe, but there could have been
 25 drill pipe there if it had holes in it that
 00138:01 allowed the mud to fill the inside of the drill
 02 pipe, also.

03 Q. All right. Do you have any information
 04 as you sit here today as to whether the drill
 05 pipe was -- where the drill pipe was?

06 A. Ah, oddly enough, I don't recall. I
 07 remember that there was -- it seems like there
 08 was drill pipe in the BOPs once they eventually
 09 got the BOP recovered to the surface. But mind
 10 you, pretty much as soon as the -- the kill
 11 operation and the cementing was done, I -- I went
 12 on -- and I was on a job in Nigeria soon after
 13 that, so I --

Page 138:15 to 138:16

00138:15 A. -- I was only kind of peripherally in --
 16 involved with what the findings were.

Page 138:21 to 140:02

00138:21 (Exhibit No. 10605 marked.)

22 Q. (By Ms. Flickinger) WW-MDL-00059175. And
 23 the cover transmittal memo is from Steve Willson
 24 to William Burch, on June 29th -- June 21st.

25 A. Yes.

00139:01 Q. And attached to this, it looks like Bill
 02 Burch is calling a meeting to discuss depletion
 03 and possible reduction in fracture pressure,
 04 correct, which is --

05 A. That's correct --

06 Q. -- what we discussed earlier?

07 A. Yeah.

08 Q. And then the attachment is an analysis
 09 done by Steve Willson of BP, about post-blowout
 10 fracture pressure?

11 A. Yes.

12 Q. Have you seen this document before?

13 A. I believe that I have, yes.
 14 Q. Okay. And Steve Willson, do you recall
 15 him?
 16 A. Yes.
 17 Q. And who is he?
 18 A. An employee of BP, a -- a Geologist, as I
 19 recall.
 20 Q. All right. And do you recall Bob
 21 Merrill?
 22 A. I don't.
 23 Q. All right. So I'm not going to ask a lot
 24 of questions about this. But this is the
 25 analysis and the work that was being done by BP
 00140:01 to estimate depletion, for purposes of helping
 02 you plan the dynamic kill, correct?

Page 140:04 to 140:21

00140:04 A. That's correct.
 05 Q. (By Ms. Flickinger) All right. And if
 06 you could just turn to one, two, three -- the
 07 fourth page, that begins "Estimated depletion" --
 08 A. The fourth page in the presentation?
 09 Q. Right.
 10 A. Okay.
 11 Q. -- "(from Bob Merrill and Bill Burch)."
 12 And it says: "Reservoir depletion
 13 calculations made for flow rates between 20,000
 14 barrels per day and 80,000 barrels per day.
 15 Observed depletion at wellhead is 8 to 13 psi per
 16 day." Did I read that correctly?
 17 A. Yes.
 18 Q. All right. And then they vary the
 19 assumptions a li -- a little bit. But this
 20 represents their analysis for reservoir depletion
 21 at that time?

Page 140:23 to 140:23

00140:23 Q. (By Ms. Flickinger) Correct?

Page 140:25 to 140:25

00140:25 A. Yes.

Page 141:03 to 141:14

00141:03 (Exhibit No. 10606 marked.)
 04 Q. (By Ms. Flickinger) This will be Exhibit
 05 10606, WW-MDL-00059524. And this is an E-mail
 06 from Bob Merrill, dated July 21st, to Bob Merrill
 07 and William Burch and Gary Wulf and a number of
 08 other people. And it's entitled "RE: Devised

09 [sic] Depletion Values for Well Control
10 Calculations."
11 All right. And this is a transmittal of
12 a -- of a BP Technical Note concerning depleted
13 pressure for well control planning, correct --
14 A. Yeah.

Page 143:23 to 144:14

00143:23 Q. Okay. Do you recall at a -- at a certain
24 point preceding the static kill, that Pat
25 Campbell wrote a letter to BP expressing concern
00144:01 about doing the static kill?
02 A. Yes. If it's -- excuse me. If it's the
03 letter I'm thinking of, it expressed more general
04 concerns about shutting the well in at all.
05 Q. M-h'm. And do you recall that as a
06 result of that letter, BP decided to meet with
07 him to talk about some of those concerns?
08 A. Yes.
09 Q. And then Mr. Campbell summarized the
10 meeting in a couple of memos. Do you have any
11 memory of that?
12 A. Yes.
13 Q. All right. So I'd like you to turn to
14 Page 125.

Page 144:19 to 145:19

00144:19 (Exhibit No. 10607 marked.)
20 Q. (By Ms. Flickinger) WW-MDL-00143463 is
21 the initial Bates number. And I'm not going to
22 go through the whole memo, but on the second page
23 there's a "SUMMARY," and one thing he does is
24 summarize some statements that were made to him
25 by BP.
00145:01 And the point is: "Existing Casing
02 damage may compromise the integrity of the casing
03 and failure could occur at any pressure above the
04 present pressure."
05 And then he writes: "They said the well
06 has produced no solid particulate matter to their
07 knowledge throughout the entire 100+ day event.
08 They don't believe erosion due to acceleration of
09 wellbore fluids passing DP tool joints lying
10 adjacent to casing wall is any concern. Flow
11 velocity of xxx per second is lower than in some
12 of the production wells in the GoM (which exhibit
13 no such erosion). I agreed the well was not
14 flowing at sonic velocity."
15 Did I read that correctly?
16 A. Yeah.
17 Q. And to the best of your knowledge, does
18 that accurately reflect what BP said to

19 Mr. Campbell prior to the static kill?

Page 145:22 to 147:01

00145:22 A. I -- I -- I could only go by what's in
23 the letter.
24 Q. (By Ms. Flickinger) All right. And this
25 letter was sent to you -- this -- if -- if you
00146:01 look at this E-mail, it's to you and to
02 Mr. Moody. So this --
03 A. Yes.
04 Q. -- was sent to you shortly after that
05 meeting, correct?
06 A. That's correct.
07 Q. All right. And then he writes -- you --
08 you kind of raised some questions about those
09 statements.
10 And Mr. Campbell responds to you: "I did
11 raise the issue of the holes through the wall of
12 the riser at the kink above the flex joint. I
13 was reassured that the erosion was caused by
14 fractures or pin holes in the severely damaged
15 drill pipe at the same location, which focused
16 the flow like a water jet cutter on specific
17 small areas at the kink within the riser. BP's
18 inspection of the riser showed that there was no
19 erosion or wall loss on the ID" -- the inner
20 diameter?
21 A. M-h'm.
22 Q. -- "of the riser and that wall thickness
23 measurements were 0.875 inches at every location
24 inspected."
25 Did I read that correctly?
00147:01 A. Yes.

Page 147:04 to 147:06

00147:04 Q. (By Ms. Flickinger) -- the best of your
05 knowledge, Mr. Campbell is accurately summarizing
06 what BP told him at the meeting, correct?

Page 147:09 to 147:09

00147:09 A. Yes. To the best of my knowledge, yes.

Page 147:18 to 148:14

00147:18 (Exhibit No. 10608 marked.)
19 Q. (By Ms. Flickinger) WW-MDL-00143431. And
20 this is a cover memo from Pat Campbell to Freddy
21 Gebhardt and other people at Wild Well, including
22 yourself, dated April [sic] 15th, 2010?
23 A. Yes.

24 Q. And he says: "This is what I plan to
 25 send to management as an update," correct?
 00148:01 A. Yes.
 02 Q. And then attached to that is a memo, an
 03 interoffice memo, on Superior Energy letterhead,
 04 dated April [sic] 15th, and it -- it summarizes
 05 the -- it summarizes some of the information
 06 communicated to him at the meeting, correct?
 07 A. Yes.
 08 Q. And, again, in Point 1, he summarizes the
 09 same statements made to him by BP, "...that the
 10 well has produced no solid particular [sic]
 11 matter..." and that "BP doesn't believe erosion
 12 due to acceleration of wellbore fluids..." is any
 13 concern, correct?
 14 A. Yeah.

Page 149:07 to 149:07

00149:07 (Exhibit No. 10609 marked.)

Page 150:24 to 151:04

00150:24 Q. Okay. I think I marked an exhibit and I
 25 said it was from April. What exhibit was that?
 00151:01 So Exhibit 10608, which is at Tab 129 --
 02 apparently when I identified it on the record, I
 03 said "April 2010," and it should have been August
 04 2010. So --

Page 151:18 to 151:18

00151:18 (Exhibit Nos. 10610 through 10614 marked.)

Page 152:24 to 153:01

00152:24 Q. What about Transocean, is Transocean a
 25 customer of IPT Global?
 00153:01 A. Yes.

Page 153:08 to 153:18

00153:08 Q. Okay. What do y'all do for Transocean?
 09 A. Our software is a digital means of
 10 pressure testing choke manifolds and blowout
 11 preventers. And we actually have an agreement
 12 with Transocean to provide that technology to the
 13 Operators on their deepwater drilling rigs.
 14 Q. Okay. When did that agreement arise?
 15 A. Sometime in 2011, about, I want to say,
 16 the middle of 2011, June, July.
 17 Q. Okay. How long has this technology been

18 available from IPT Global?

Page 153:20 to 153:25

00153:20 A. Commercially around three years.
21 Q. (By Mr. Williamson) Okay. So before
22 Macondo or not before Macondo?
23 A. It wasn't comm -- it was not commercially
24 available -- well, let me think. It was limited
25 availability just before Macondo.

Page 154:16 to 159:16

00154:16 Q. The -- and I believe you had also said
17 that you had had experience, when you were in
18 Wild Well, you'd had experience with multiple
19 blowout scenarios and multiple wells.
20 Did I understand that right?
21 A. That's correct.
22 Q. With kind of a subspecialty in relief
23 wells.
24 Did I understand that correctly?
25 A. That's correct.
00155:01 Q. Okay. Was this the first time you had
02 ever worked on an uncontrolled blowout in 5,000
03 feet of water?
04 A. No.
05 Q. Okay. When had you worked on that
06 before?
07 A. In nineteen -- two thousand and -- late
08 2002.
09 Q. Where?
10 A. Offshore Indonesia.
11 Q. Okay. And for what company, whose well?
12 A. Unocal.
13 Q. Okay. And that was an uncontrolled
14 blowout where you still had access to the
15 wellbore, or you didn't have access to the
16 wellbore?
17 A. There, actually, we had access to the
18 wellbore, but it was -- it was a well that had
19 been abandoned, an exploratory well that had been
20 abandoned and severed below the mud line, so
21 there was no wellhead or BOP present.
22 Q. Okay. And what method -- methodology did
23 you use to try to cap or contain that well?
24 A. A relief well.
25 Q. Okay. So the relief well was the
00156:01 strategy there because you didn't have any
02 wellhead or access -- any realistic surface
03 access to the wellbore?
04 A. We pursued and investigated some options
05 about trying to install a -- a device at the
06 surface, but the -- the primary strategy was the

07 relief well.
08 Q. Sure. And I guess another strategy would
09 be some sort of a capping device?
10 A. Yes.
11 Q. One type of capping device would be a
12 BOP?
13 A. Correct.
14 Q. One type of capping device would be
15 something like -- that's pretty well known as a
16 capping stack?
17 A. Correct.
18 Q. And those devices have literally been
19 around for decades in land applications?
20 A. Well, a capping stack would consist of
21 conventional BOPs arranged in a certain order to
22 accomplish whatever you were trying to -- to do.
23 Q. Right. And that technology has been
24 around for decades?
25 A. Yes.
00157:01 Q. Okay. Had BP ever approached Wild --
02 Wild Well worked for BP as a vendor, right?
03 A. Yes.
04 Q. On blowout situations for a number of
05 years, correct?
06 A. Correct.
07 Q. BP was a very subs -- large, substantial
08 customer of Wild Well's?
09 A. Correct.
10 Q. Did BP ever approach Wild Well before
11 Macondo and say, "We want to think about how to
12 utilize a capping stack in the event we have an
13 uncontrolled blowout in deep water"?
14 A. We -- well, the -- the short answer is
15 "No." The -- the -- the request wasn't that
16 specific. There were requests to develop blowout
17 contingency plans in a wide range of operational
18 settings, one of those being in deep water.
19 Q. Okay. And what is the best alternative
20 for stopping the flow from a deepwater,
21 uncontrolled blowout?
22 A. Well, there's -- it's -- it's hard to say
23 one answer, but what -- what I would say is that
24 the relief well is applicable to the widest range
25 of scenarios.
00158:01 Q. Okay. So a relief well is one
02 possibility as an intervention method in the
03 event you have an uncontrolled blowout?
04 A. Yes.
05 Q. And there's certain risks that are
06 affiliated with a relief well?
07 A. Some, yes.
08 Q. Like, for example, I noticed, in this
09 case, one of the things y'all were worried about
10 is that when you did the intercept, if you would
11 have pressure.

12 Did I understand that correctly?
 13 A. That we would -- I -- I don't recall
 14 there being any real concern about there being an
 15 excess of pressure. We expected that our fluid
 16 column in the relief well would U-tube, for lack
 17 of a better term, into the -- into the blowout
 18 well.
 19 Q. Right. Was there any concern that there
 20 might be a concern that you would get a pushback
 21 from the Macondo Well when you made the
 22 intercept?
 23 A. No.
 24 Q. Okay. The -- were you in charge of the
 25 relief well effort?
 00159:01 A. I was in -- no. I was in charge of the
 02 kill operations, so I had a counterpart. His
 03 name was John Wright, who was in charge of the
 04 actual construction, the drilling of the relief
 05 well, and I was in charge of implementing --
 06 planning and implementing the kill operation that
 07 would ensue upon the intercept.
 08 Q. Okay. Meaning once the intercept was
 09 made, you were in charge of planning how you
 10 would actually get the Macondo Well killed with
 11 the --
 12 A. Correct.
 13 Q. -- with the relief well?
 14 A. Correct.
 15 Q. Okay. And was there any problems with
 16 that? Were there any challenges with that?

Page 159:18 to 162:25

00159:18 A. Challenges with the dynamic kill?
 19 Q. (By Mr. Williamson) Yeah. The re -- the
 20 relief well?
 21 A. Yes.
 22 Q. Okay.
 23 A. Lots of challenges.
 24 Q. Would you call the relief well effort a
 25 dyn -- a dynamic kill?
 00160:01 A. Yes.
 02 Q. Okay. What were the challenges with the
 03 relief well?
 04 A. Oh, there were challenges around trying
 05 to anticipate what the actual flowing pressure
 06 was.
 07 Q. You're talking about in Macondo?
 08 A. In the Macondo Well.
 09 Q. Right.
 10 A. We were unsure what the flow path was.
 11 Q. Okay.
 12 A. We -- as I stated earlier, we were faced
 13 with a large imbalance between where we were
 14 injecting fluid from the rig, which was at the

15 ocean surface, versus where the mud and oil was
16 exiting out of the Macondo Well 5,000 feet down
17 at the seafloor.

18 So there are issues about how you balance
19 that fluid column once you get the well under
20 control.

21 Q. Okay. And did that play into the
22 fracture gradient --

23 A. Yeah.

24 Q. -- analysis?

25 A. Yes.

00161:01 Q. And you want to have mud heavy enough to
02 control the well, and you don't want to exceed
03 the fracture gradient?

04 A. That's correct.

05 Q. And that's basically an engineering
06 challenge that has to be kind of looked at and
07 anticipated with the relief well effort?

08 A. Right.

09 Q. Okay. And so that's one of the problems
10 with trying to make sure the relief well effort
11 will be successful?

12 A. Yes.

13 Q. Okay. And then I suppose another way --
14 another way to approach a well intervention
15 method would be with the capping stack or some
16 sort of capping device?

17 A. Yes.

18 Q. One would be a BOP on BOP?

19 A. Right.

20 Q. One would be a capping stack which you
21 would attach to some portion of the BOP?

22 A. Yes. So -- so your distinction being a
23 complete BOP on BOP versus a customized set of
24 BOPs that we'd call a capping stack?

25 Q. Correct.

00162:01 A. Yeah.

02 Q. Right. The -- was -- wasn't there a rig
03 that was dedicated -- that they were -- started
04 off -- I think it was the ENTERPRISE, they were
05 going to use the ENTERPRISE BOP and put a BOP on
06 BOP.

07 Do you remember that?

08 A. I remember some planning towards that.
09 I -- and I remember the ENTERPRISE being
10 mentioned. I actually thought that the DDII rig
11 was the -- the eventual candidate for the
12 BOP-on-BOP capping.

13 Q. There were -- I'm pretty sure there were
14 two candidates. At one time it was the
15 ENTERPRISE, at one time it was the DDII, and I
16 can't remember which one was first.

17 A. You're probably right.

18 Q. Do you remember which one was first? Not
19 important. I'm getting --

20 A. I don't know.
21 Q. I'm getting to another quest -- I'm
22 getting to what my real question was.
23 A. Yeah.
24 Q. Why did the BOP-on-BOP option get
25 canceled in early to mid-May?

Page 163:02 to 163:08

00163:02 A. Well, I'm not sure that I have the total
03 answer to that. There were -- there were lots of
04 influences on that decision.
05 Q. (By Mr. Williamson) Did Wild Well --
06 okay. I'll ask you this way: Did Wild Well want
07 the BOP-on-BOP option to be abandoned in early to
08 mid-May --

Page 163:10 to 163:10

00163:10 Q. (By Mr. Williamson) -- 2010?

Page 163:12 to 165:09

00163:12 A. Did Wild Well want it to be abandoned?
13 Q. (By Mr. Williamson) M-h'm.
14 A. I don't believe that was the case, no.
15 Q. All right. Wild Well wanted to pursue
16 the BOP-on-BOP option in May, right?
17 A. Yes.
18 Q. But Wild Well was not the entity that was
19 making the decisions?
20 A. That's correct. We were providing
21 technical advice and special -- specialized
22 advice based on our experience.
23 Q. Right. And some of your advice was
24 accepted, and some of your -- Wild Well, I'm
25 talking about, the Company.
00164:01 A. (Nodding.)
02 Q. Because you understand you're a Company
03 Rep -today here to speak --
04 A. Yeah.
05 Q. -- for the Company, correct?
06 A. Correct. Yeah.
07 Q. And the Company in this case is Wild Well
08 Control, correct?
09 A. Yeah.
10 Q. By the way, a technicality, I noticed
11 there's multiple times in here where I see
12 E-mails to Wild Well and from Wild Well.
13 Correct?
14 A. Yes.
15 Q. I'm sure that's a regular and customary
16 part of your business to send E-mails in the

17 course of your business for clients like BP?
 18 A. That's correct.
 19 Q. I'm sure it's a regular and customary
 20 part of your business to receive E-mails?
 21 A. Yes.
 22 Q. I'm sure Wild Well wants you to do
 23 business with E-mails with customers and they
 24 want you to receive and read E-mails from
 25 customers?
 00165:01 A. Yeah.
 02 Q. And that's in the regular and ordinary
 03 course of your business and job duties for Wild
 04 Well employees, correct?
 05 A. That's correct.
 06 Q. So pretty much if I see a Wild Well
 07 E-mail coming in, or a Wild Well E-mail coming
 08 out, those are business records of Wild Well
 09 company?

Page 165:12 to 165:13

00165:12 Q. (By Mr. Williamson) Would you agree with
 13 that?

Page 165:16 to 166:05

00165:16 A. Well, if they pertain to business, yeah,
 17 I would say they are --
 18 Q. (By Mr. Williamson) Yeah, very well put.
 19 You may see a joke come in or you may see someone
 20 talk about how they moved last week into their
 21 personal home?
 22 A. True.
 23 Q. I'm not talking about that. I'm talking
 24 about the E-mails direct with the sub -- in this
 25 case, the "Subject" matter "Macondo"?
 00166:01 A. M-h'm.
 02 Q. What to do, how to do, when to do it,
 03 engineering thoughts, problems, solutions, those
 04 would be ordinary business records of Wild Well
 05 Control, as far as you know?

Page 166:07 to 166:13

00166:07 A. As far as I know, yes, sir.
 08 Q. (By Mr. Williamson) Right. The -- and
 09 you understood I asked that question for the
 10 Company?
 11 A. Yes.
 12 Q. I'm asking you as a Company Rep, and
 13 that's your belief as the Company Representative?

Page 166:18 to 167:24

00166:18 Q. (By Mr. Williamson) Did I understand you
 19 to say "Yes"?
 20 A. Yes.
 21 Q. Okay. I'm going to hand you what I've
 22 marked as 10610. It came out of my binder as Tab
 23 No. 18. This is an E-mail that you received on
 24 or about July 23rd, 2010. Does that sound right?
 25 A. Yes.
 00167:01 Q. Okay. And it says: "No one from" Wild
 02 Well "(that I am aware of) has spoken to" the
 03 "writer" at the "Wall Street Journal." Right?
 04 A. Right.
 05 Q. I assume you didn't speak to the writer
 06 from the "Wall Street Journal"?
 07 A. I did not.
 08 Q. Mr. Campbell says: "I am pretty sure
 09 this comes from the Exxon Mobil guys that walked
 10 out on the process."
 11 Was ExxonMobil at one time involved in
 12 trying to help the Macondo?
 13 A. I remember some employees of ExxonMobil
 14 attending some of the peer review sessions.
 15 Q. All right. And Mr. Campbell said, quote,
 16 "They didn't feel" -- meaning ExxonMobil --
 17 "didn't feel that BP was listening or had any
 18 interest in their input, or that BP was not
 19 showing any respect for EOM's contribution."
 20 Now, first of all, did I read
 21 Mr. Campbell's words correctly?
 22 A. Yes.
 23 Q. Okay. And is that what Mr. Campbell
 24 thought at the time?

Page 168:01 to 169:23

00168:01 Q. (By Mr. Williamson) As far as you know?
 02 A. Well, I can only judge from what I'm
 03 seeing that that was his feelings, yes.
 04 Q. Okay. I didn't see an E-mail back from
 05 you disagreeing with that. Do you remember any
 06 E-mail you sent where you disagreed with
 07 Mr. Campbell's opinion on this subject?
 08 A. I don't.
 09 Q. Okay. And ExxonMobil, even though they
 10 started having people, their people left the
 11 process relatively early on?
 12 A. I recall having ExxonMobil people in the
 13 peer review for the kill operations, which were,
 14 I think -- well, it was around this time; so, I
 15 mean, this is in July. So it's not early on in
 16 the -- in the process --
 17 Q. Right.
 18 A. -- right?
 19 Q. My only question is: ExxonMobil had

20 their employees there, and at some point those
 21 ExxonMobil employees quit coming to the meetings
 22 or participating?
 23 A. That, I couldn't tell you.
 24 Q. Okay. Do you have any disagree -- reason
 25 to disagree with Mr. Campbell's assertions that
 00169:01 he set forth in Exhibit 10610?
 02 A. Well, I -- I don't know what the article
 03 says, so I -- I can't really speak to whether --
 04 what BP's opinion about Exxon's input into the
 05 process was. I --
 06 Q. Do you remember that "Wall Street
 07 Journal" article?
 08 A. Oh, I should, but I can't say that I do.
 09 Q. If I refer -- it's my memory, and I don't
 10 have it here with me, or I'd show it to you.
 11 A. M-h'm.
 12 Q. It's my memory that article talked about
 13 the fact that maybe a capping solution, like a
 14 BOP on BOP should have been pursued -- pursued
 15 earlier. Does that help refresh your memory?
 16 Not really?
 17 A. Not really.
 18 Q. Okay. Speaking of that, did you have any
 19 interaction at these meetings with Transocean?
 20 A. Yes.
 21 Q. Okay. Was Transocean -- did they say,
 22 "We've already anticipated this scenario, and we
 23 know what we think we should do"?

Page 169:25 to 170:01

00169:25 Q. (By Mr. Williamson) Did Transocean have a
 00170:01 thought about what should be done?

Page 170:03 to 170:06

00170:03 A. In terms of the capping?
 04 Q. (By Mr. Williamson) In terms of stopping
 05 the flow -- I'll make it broader than just
 06 capping. Stopping the flow.

Page 170:08 to 170:12

00170:08 A. I don't recall them ever expressing that,
 09 no.
 10 Q. (By Mr. Williamson) Okay. Was Transocean
 11 just there saying, "We'll do whatever we're asked
 12 to do"?

Page 170:14 to 170:17

00170:14 A. They were collaborating, just like the

15 rest of us.
 16 Q. (By Mr. Williamson) Okay. But were they
 17 calling the shots?

Page 170:19 to 170:23

00170:19 A. No.
 20 Q. (By Mr. Williamson) Okay. Did they have
 21 concrete solutions where they said, "We have a
 22 plan and we want to put our plan into effect,"
 23 did they ever communicate that to you?

Page 170:25 to 171:04

00170:25 A. No.
 00171:01 Q. (By Mr. Williamson) Did they ever
 02 communicate that to Wild -- did Transocean ever
 03 communicate that to Wild Well that you know of?
 04 A. Not that I know of.

Page 171:06 to 171:09

00171:06 Q. (By Mr. Williamson) Did Transocean ever
 07 say: "This is our blowout preventer and we have
 08 planned for the fact that the blowout preventer
 09 might fail and this is our plan"?

Page 171:11 to 171:12

00171:11 Q. (By Mr. Williamson) Was anything like
 12 that ever communicated to you from Transocean?

Page 171:14 to 175:03

00171:14 A. No.
 15 Q. (By Mr. Williamson) Okay. All right.
 16 I'm going to hand you what's been marked as
 17 Exhibit No. 10611. It's Tab 4 in my binder.
 18 This is from Pat Campbell, and I believe it's
 19 an -- also an E-mail that you received on or
 20 about May 17th, 2010. Does that sound correct?
 21 A. Yeah.
 22 Q. Okay. And here I want to -- I want to
 23 point you to the No. 3 thing on Mr. Campbell's
 24 E-mail of May 17th. And -- and he says, and I
 25 quote: "This option (Capping BOP on Existing
 00172:01 BOP) is the clear choice among the alternative
 02 capping / diversion scenarios."
 03 Did I read Mr. Campbell's words
 04 correctly?
 05 A. Yes.
 06 Q. I assume you have nothing but respect for

07 Mr. Campbell and his experience and expertise in
08 this matter?

09 A. I have a very high regard for his
10 experience, yes.

11 Q. Right. Did you agree with Mr. Campbell,
12 on this day, that BOP on existing BOP is a clear
13 choice among the alternative capping diversion
14 scenarios?

15 A. I would say so at that point in time,
16 yes.

17 Q. Okay. Now, I assume he's distinguishing
18 between -- he's not saying don't do the relief
19 well?

20 A. M-h'm, oh, no.

21 Q. Right. The relief well needed to go
22 forward, of course, right?

23 A. Yes.

24 Q. So what he's referring to is not counting
25 the relief well, among our other options, the
00173:01 clear winner is capping BOP on existing BOP?

02 A. Yes. Among -- among the options that we
03 had to place anything on the Well to stem the
04 flow, that was the best choice we had at the
05 time.

06 Q. Okay. The -- and that was generally
07 shared by Wild Well personnel, right?

08 A. I believe so, yes.

09 Q. And Wild Well personnel have literally
10 shut-in thousands of flowing wells, haven't they?

11 A. We have.

12 Q. Including a number that were in water,
13 correct?

14 A. A few.

15 Q. Okay. The -- because water includes not
16 only 5,000 feet of water, there's also drilling
17 on the Continental Shelf, for example, in the
18 Gulf of Mexico, right?

19 A. That's right.

20 Q. And they have had blowouts on those rigs
21 from time to time that require services from a
22 vendor like Wild Well?

23 A. Yes.

24 Q. Okay. Okay. Did BOP -- did BP -- sorry.
25 Sometimes I say "BOP" when I mean "BP" and vice
00174:01 versa.

02 Did BP accept the advice of Mr. Campbell
03 and Wild Well in connection with thinking that
04 the capping BOP on existing BOP was the clear
05 choice?

06 A. I think they took it into consideration.

07 Q. I'm not saying they disrespected you, but
08 they didn't accept that as their No. 1 choice,
09 did they? BP did not accept that as their No. 1
10 choice?

11 A. I'm not sure that I -- that I know

12 whether they accepted that or not at that point
13 in time.

14 Q. Right. I'd like you to turn to the next
15 page of the same exhibit, 10611. You know, and
16 the last sentence of Mr. Campbell's E-mail is:
17 "In all likelihood they will elect to try a top
18 kill because it is the 'first available' thing to
19 try. The decision should not be based on what's
20 available first."

21 A. (Nodding.)

22 Q. Did I read Mr. Campbell's words
23 correctly?

24 A. Yes.

25 Q. Do you agree with Mr. Campbell? It turns
00175:01 out that's right, they elected to try top kill
02 first, right?

03 A. I think that assumes --

Page 175:05 to 175:11

00175:05 A. -- that you know what BP was thinking at
06 a level that we really didn't know.

07 Q. (By Mr. Williamson) Okay. Anyway, well,
08 it turns out his prognostication that he sets
09 forth here, they're going to try top kill first,
10 that prognostication by Pat Campbell turned out
11 to be correct?

Page 175:13 to 175:14

00175:13 Q. (By Mr. Williamson) After May 17th, that
14 was the next thing they try?

Page 175:16 to 176:10

00175:16 A. His assertion is that they're going to
17 try the top kill because it's the first available
18 thing to try. I'm not sure that I --

19 Q. (By Mr. Williamson) Okay.

20 A. -- agree that that's the only reason they
21 attempt --

22 Q. Fair enough. Let me back up and ask it a
23 slight -- slightly different way.

24 The first thing they tried after May 17th
25 in terms of a strategy to stop the flow was the
00176:01 top kill?

02 A. That's correct.

03 Q. Got it.

04 What you're saying is but we can't really
05 know why BP made -- you don't know why BP made
06 that decision?

07 A. That's correct.

08 Q. Okay. But Mr. Campbell and Wild Well was

09 clearly representing -- recommending another
10 course, namely, BOP on BOP?

Page 176:12 to 177:12

00176:12 A. Well, as I recall Pat's approach, and
13 I -- and I hate to speak for him, but recalling
14 what I -- my conversation with him, and the --
15 the memos that he issued, his preferred path was
16 to proceed with the containment but to keep the
17 primary control option the relief well.
18 Q. (By Mr. Williamson) Okay.
19 A. So --
20 Q. There's no --
21 A. Well, I was just going to say, if -- if
22 there's going to be a capping stack of any sort
23 placed on the Macondo Well, what he's saying in
24 this memo, in this E-mail, is that the -- the
25 clear best choice, at that point in time, would
00177:01 be a BOP on BOP.
02 Q. Right. Mr. Campbell was not recommending
03 they don't try to capture any oil that was
04 released?
05 A. Oh, absolutely not.
06 Q. Right. And he wasn't trying to say:
07 "Don't do the relief well"?
08 A. Absolutely not.
09 Q. But for the options for stopping the
10 flow, not just capturing it, stopping it, he
11 thought this was the best options. He laid it
12 out in his memo, Exhibit No. 10611.

Page 177:14 to 178:02

00177:14 A. Well, again, I -- I don't think Pat's
15 idea was that they should try to stop the flow,
16 that they should try to contain the flow and kill
17 the well with the relief well, so --
18 Q. Okay.
19 A. -- insomuch as placing a BOP on top of
20 the BOP would allow you to better recover the
21 oil, at this point in time, given that we had
22 very few options available to us, the BOP on BOP
23 was the best option at that point.
24 Q. Because a BOP on BOP option would give
25 you the option of trying to capture oil through
00178:01 the choke lines or the kill lines?
02 A. Yes. The --

Page 178:04 to 178:13

00178:04 A. -- the BOP would be deployed from a
05 vessel that had control systems that were

06 existing. It was immediately available. It
07 required no fabrication, testing, construction of
08 controls and -- so it was -- it was an expedient
09 solution, and it had the advantages of already
10 having an -- an existing Control System.

11 Q. (By Mr. Williamson) And that was the
12 reason Mr. Campbell, among others, thought that
13 would be a preferred approach?

Page 178:15 to 178:15

00178:15 A. Yes.

Page 179:19 to 179:23

00179:19 Q. Okay. So when you use the word "top
20 kill" or "momentum kill" or "dynamic kill," in
21 your mind, those are -- those are all akin to
22 each other, similar methods of trying to pump
23 into a flowing well?

Page 179:25 to 181:08

00179:25 A. They are, but with the distinction being
00180:01 that the dynamic kill would be done from the
02 bottom of the well, and the momentum kill or
03 dy -- or top kill would be done by point --
04 pumping into the exit point.

05 Q. Okay. So the top kill procedure that was
06 utilized in this one was trying to pump in from
07 the top?

08 A. Yes.

09 Q. And that was the one you said that's
10 rarely successful?

11 A. Yeah.

12 Q. How do you know? What makes -- what --
13 what, in your experience, makes you know that top
14 kills, or what's called "momentum kills," are
15 rare -- rarely successful?

16 A. Well, they are rarely attempted.

17 Q. Fair enough. Why not?

18 A. Because it's obvious that their chances
19 of success are not very high.

20 Q. And, in fact, the top kill/momentum kill
21 here did not work?

22 A. It did not.

23 Q. And, in fact, Mr. Campbell and Wild Well
24 predicted the top kill/momentum kill would
25 probably not work?

00181:01 A. The top kill alone, we didn't feel had
02 much chance of success.

03 Q. Okay.

04 A. But inasmuch as it was supplemented with

05 the junk shot to decrease the flow path, that, we
06 thought, had a better chance of success.
07 Q. But even that was a low chance of
08 success?

Page 181:10 to 186:12

00181:10 A. Oh, well -- you know, I would say the --
11 the probability of success for that operation
12 depend on what -- depended on what the geometry
13 of the flow path was, and we had virtually no
14 information about what that looked like.
15 So if the flow path turned out to be a
16 series of small pathways, well, then, the -- the
17 probability of success for that junk shot
18 operation was fairly high.
19 If it turns out that the -- the flow path
20 was a -- a small number of larger flow paths,
21 well, then, the -- there was a less probability
22 that the junk would plug it.
23 Q. (By Mr. Williamson) And, in fact, another
24 problem with the junk shot, on -- while I'm on
25 that subject, the problem with the junk shot is
00182:01 you're limited -- you're having to put your junk
02 in through the choke/kill line?
03 A. That's correct.
04 Q. And the choke/kill line has an ID of four
05 inches. Do I remember that correctly?
06 A. It's actually three and one-sixteenth.
07 Q. You're right. I stand corrected.
08 The OD is four inches?
09 A. Ah, probably about that.
10 Q. Okay. So since your interior diameter,
11 your inside diameter, your ID, is three and
12 one-sixteenth inches, you have to put things that
13 will flow through a three and one-sixteenth inch
14 pipe?
15 A. Yes.
16 Q. Therefore, you're limited on the size of
17 things you can put in?
18 A. Yes.
19 Q. And because of that, that hurts your
20 chance of the junk being able to achieve a
21 decrease or a complete stoppage of the flow path?
22 A. Yes.
23 Q. The -- if the junk shot had worked, I
24 assume -- let's assume it's 100 percent
25 successful. I assume that would then stop the
00183:01 flow?
02 A. Complete plugging of the flow path, yes,
03 would stop it completely.
04 Q. And what would happen to the internal
05 wellbore pressure?
06 A. It would increase to whatever the initial
07 shut-in pressure was.

08 Q. Okay. And what if that initial shut-in
09 pressure -- one of the fears was that the initial
10 shut-in pressure would be too high for the casing
11 design and the casing configuration as it existed
12 at that time, correct?
13 A. Correct.
14 Q. Okay. Would there be -- if you try the
15 junk shot, would there be any well [sic] to
16 relieve that pressure?
17 A. I'm trying to recall what -- what we had
18 connected to the choke and kill lines, but I
19 believe there was a way to relieve the pressure
20 through the subsea manifold, if we had to.
21 Q. Okay. Do you remember, or are you
22 just -- I -- I'm not trying to fuss at you. I'm
23 trying to --
24 A. Yeah.
25 Q. -- figure out if you're just --
00184:01 A. No --
02 Q. -- kind of making a guess or you're
03 just -- or you're just thinking, "Gee, maybe,"
04 or -- I'm trying to figure out what you're
05 thinking, in terms of your memory.
06 A. Well, I do recall that there seemed --
07 well, I -- look, I -- I can't say with certainty.
08 Q. Okay.
09 A. But I seem to remember that we had a
10 point on the subsea manifold that we would be
11 able to open back to the sea to relieve pressure.
12 Q. That was below the junk. And, obviously,
13 for that to be effective, it has to be below the
14 place where the junk would be stopping the flow?
15 A. Yes.
16 Q. All right. The -- what about if you
17 bullhead? What if -- what if the top kill had
18 been such that you could actually get a momentum
19 kill going and -- and stop the flow of
20 hydrocarbons? I assume that would have been a
21 successful top kill operation?
22 A. It would. If -- if -- if the debris had
23 plugged the leak path completely, we would have
24 continued with a bullhead kill from that point.
25 Q. Okay. And if you successfully bullhead,
00185:01 do you include -- are you including cement in
02 that, that you're going to bullhead with cement?
03 A. We had plans to perform a cement job if
04 we were able to do a -- a successful kill.
05 Q. Sure. The bullhead would start with
06 fluid and then go to cement?
07 A. Yes. Well, the -- the -- the -- the
08 bullhead kill would be completed, and I -- as I
09 recall, the plan was to monitor the well to
10 ensure that it was static, and then we would
11 implement a cement job, much like what was done
12 in the static kill after the capping operation.

13 Q. Okay. So would the bullheading have led
14 to higher pressures in the wellbore?
15 A. It's possible that it could have. As it
16 turns out, there was a negligible increase in
17 pressure when we started to inject kill mud.
18 Q. I know. But, you know, we know the top
19 kill and the junk shot did not work.
20 A. Right.
21 Q. We know that, right?
22 A. Right. But based on the kill operation
23 that was eventually implemented, we know that the
24 pressure increase in the wellbore was slight when
25 we started injecting kill mud. Now, this is
00186:01 after the capping operation.
02 So those operations would have looked one
03 and the same. The bull --
04 Q. Tell me what two operations you mean.
05 The momentum kill in May 29th and the kill in
06 July 15th or --
07 A. Yes. So --
08 Q. -- late July? Is that -- is those the
09 two operations you're referring to?
10 A. Right.
11 Q. Okay. I may have interrupted you, so --
12 A. No.

Page 186:15 to 187:24

00186:15 A. I was just going to say for clarity that
16 had we plugged the flow path completely, the well
17 would have been shut-in.
18 Q. (By Mr. Williamson) This is approximately
19 May 30th?
20 A. Right.
21 Q. Okay.
22 A. We would have at that point implemented a
23 bullhead kill.
24 Q. Right.
25 A. As it turns out, that operation wasn't
00187:01 conducted until after the capping operation and
02 the shut-in.
03 Q. Okay.
04 A. But those operations, had we been able to
05 do that after the top kill, the two would have
06 looked the same.
07 Q. Okay. If that's true, then if you had
08 put a capping stack on, on May 29th, the two
09 operations would have looked the same?
10 A. I would -- I would expect so, yes.
11 Q. Okay. So the capping operation that got
12 put on and shut the well in on July 15th would
13 have looked the same had that operation been
14 carried out on May 29th, in your opinion?
15 A. Well, we were losing several psi per day
16 of reservoir pressure, according to the

17 predictions. So the shut-in pressure in May
18 would have been somewhat higher than it
19 eventually was in July.

20 Q. Right. But what we now know is that that
21 would have worked. I think that's what you were
22 saying, based upon -- you now know the May 29th
23 momentum kill would have had a success because
24 you can now look at what y'all did in July?

Page 188:01 to 188:12

00188:01 A. I'm saying that the bullhead operation
02 probably would have been successful if we had
03 been able to close the well off with the junk --

04 Q. (By Mr. Williamson) Right.

05 A. -- and the well could have sustained the
06 shut-in pressure at that time, which would have
07 been somewhat higher than it actually was when it
08 was shut-in in July.

09 Q. Sure. So that's the basis of your
10 opinion that the momentum kill, had the junk shot
11 been able to close it, would have been successful
12 in May 29th, based upon what you see in July?

Page 188:14 to 188:25

00188:14 A. Yes.

15 Q. (By Mr. Williamson) Okay.

16 A. Provided that the well could contain the
17 pressure at that time.

18 Q. Okay. Well, could it, or do you know?

19 A. Don't know.

20 Q. Okay. The -- Let me hand you an exhibit
21 that was in my binder as Tab No. 7, and I marked
22 it as Exhibit 10612.

23 A. All right.

24 Q. Would you hand that back to me? I may
25 not have handed you the whole exhibit.

Page 189:04 to 190:08

00189:04 Q. (By Mr. Williamson) Let me hand you all
05 three pages. I've got it right here.

06 Yeah, let me hand it back to you. I'm
07 handing you Exhibit 10612. This is an E-mail
08 from Christopher Murphy, who I'm assuming is with
09 Wild Well --

10 A. Yes.

11 Q. -- June 12, 2010 to Pat Campbell,
12 correct?

13 A. Yes.

14 Q. And Chris Murphy is saying to Pat
15 Campbell: "Unbelievable. If they would only

16 listen we could stop the flow. It is a nightmare
 17 to see the oil gushing out."
 18 Do you see that?
 19 A. I see that.
 20 Q. Okay. What's Mr. Christopher Murphy's
 21 job at Wild Well?
 22 A. He is a Manager level in the Marine
 23 Department.
 24 Q. Okay. And he was obviously frustrated
 25 when he sent this E-mail, that he could not get
 00190:01 someone to listen to the recommendations?
 02 A. I would in -- I would interpret it that
 03 way, yes.
 04 Q. Okay. And I believe you've expressed
 05 that was a general feeling at Wild Well, that
 06 they were -- they were frustrated that their
 07 recommendations were not being get -- listened
 08 to?

Page 190:10 to 192:16

00190:10 A. Oh, I don't think it's fair to
 11 characterize it as everyone was frustrated all
 12 the time.
 13 Q. (By Mr. Williamson) Fair enough. Many
 14 people in Wild Well were frustrated about their
 15 limited role in the re -- in the effort?
 16 A. Well, again, I think there were moments
 17 where we had very strong feelings about certain
 18 issues and operations. And when your suggestions
 19 are not followed, that's only natural that you
 20 have a bit of frustration.
 21 Q. Okay. And -- and, obviously, Mr. Murphy
 22 is one of the Wild Well people who was expressing
 23 that frustration in the E-mail marked Exhibit
 24 10612.
 25 A. On -- on June 12th at midnight, he was
 00191:01 frustrated.
 02 Q. Right. M-h'm. The -- as a matter of
 03 fact, below that, you see Chris Murphy says, on
 04 June 11th, 2010, at 10:00 p.m., 24 hours earlier,
 05 25 hours earlier, he says: "If the decision were
 06 mine I would cap the well with the ability to
 07 choke the flow and continue to produce to a
 08 suitable vessel."
 09 A. (Nodding.)
 10 Q. That was Wild Well's Christopher Murphy
 11 on June 11th, wasn't it?
 12 A. Yes.
 13 Q. A capping stack wasn't put on for another
 14 month after that, was it?
 15 A. Roughly, yes.
 16 Q. Okay.
 17 A. M-h'm.
 18 Q. Let me show you another document, I've --

19 it comes out of my binder as a Tab Exhibit No. 6.
 20 It's 10613. There's my -- that's from Mike
 21 Cargol. Is that how he says his name?
 22 A. Cargol.
 23 Q. Cargol.
 24 A. Yes.
 25 Q. And he's with Wild Well?
 00192:01 A. Yes.
 02 Q. And what is Mr. Cargol's position with
 03 Wild Well as of June 24, 2010?
 04 A. At that time, he was also at some
 05 Management level in the Marine Department.
 06 Q. Okay. And he is sending it to Thomas
 07 Avery. Was Thomas Avery also with Wild Well?
 08 A. I don't know who Thomas Avery is.
 09 Q. Okay. But Mr. Cargol is in the Marine
 10 Division of Wild Well, correct?
 11 A. Yes.
 12 Q. And he says: "Thanks anyway. Seems
 13 Everyone is more worried About protocol and BS
 14 and less worried about getting the leak fixed!"
 15 Is that another example of a Wild Well
 16 employee expressing his frustration?

Page 192:18 to 193:02

00192:18 A. Well, he is -- he is apparently
 19 frustrated, yes.
 20 Q. (By Mr. Williamson) M-h'm.
 21 A. But more about the protocols, I'm taking
 22 it of purchasing and logistics than well
 23 intervention.
 24 Q. Well, yeah. That's my point. He's --
 25 he's frustrated with the bureaucracy that's
 00193:01 surrounding his role in the affair, whatever his
 02 role was at that particular moment?

Page 193:04 to 198:05

00193:04 Q. (By Mr. Williamson) Is that a fair way to
 05 put it?
 06 A. That's fair enough.
 07 Q. I'll hand you -- is another document that
 08 was marked as Exhibit No. 13 in my binder that's
 09 been marked 10614. This is from Pat Campbell to
 10 Patrick Zuber, Ken Blanchard, Dave Dunlap, and
 11 Terry Hall, who are all -- and to Pat Bernard.
 12 Were all of those Wild Well employees?
 13 A. Those are all employees of Superior
 14 Energy Services.
 15 Q. Sure. And Superior Energy Services is
 16 the sub -- is the parent company to Wild Well
 17 Control during this time period?
 18 A. That's correct.

19 Q. So they're all affiliated with the same
20 Corporate entity?
21 A. Yes.
22 Q. Okay. Did y'all consider -- Superior, I
23 assume, didn't have a direct role, or did they?
24 A. They may have provided some Marine
25 Support, but -- but no real direct material role
00194:01 in the well intervention, no.
02 Q. I guess I should ask you: Are these Pat
03 Campbell's bosses? Are these the people he kind
04 of reports to --
05 A. Yes.
06 Q. -- because he -- he's Head of Wild Well,
07 and he's now support -- reporting to his bosses
08 within Superior?
09 A. As I recall, Pat reported to Ken
10 Blanchard at that time.
11 Q. Okay.
12 A. Dave Dunlap, well, he's the CEO of
13 Superior now.
14 Q. Okay. So he is the big boss?
15 A. Oh, yeah, yeah. Terry Hall was the --
16 the Chairman of the Board of Directors at this
17 point.
18 Q. Okay.
19 A. Oh, yeah, they're all --
20 Q. So the answer is --
21 A. -- Executive Level Superior folks.
22 Q. Pat Campbell, who's the top person within
23 Wild Col -- Well Control is writing to -- this
24 E-mail to his bosses at Superior Oil, correct?
25 A. Superior Energy Services, yeah.
00195:01 Q. For Superior Energy Services. Fair?
02 A. Yes.
03 Q. Well, what Mr. Campbell reports to his
04 boss is -- on August 15th, 2010, is: "There is a
05 lot going on at present. The underlying
06 situation is they really don't know what they
07 should do." Right?
08 A. Yes.
09 Q. The answer, I guess attaches, that's a
10 forward in your E-mail where -- from you,
11 yourself, where you're saying: "We're getting
12 all kinds of mixed up messages," right?
13 A. Right.
14 Q. Were you kind of frustrated yourself?
15 A. Apparently so.
16 Q. Okay. So you joined that list of Wild
17 Well Control employees who, at one point or
18 another during this process, had some
19 frustration --
20 A. Ah --
21 Q. -- with how the process went?
22 A. Yes.
23 Q. Okay. Okay. Do we know how long it will

24 take to put -- to -- when we talk about if we're
25 going to be drilling an 18,000-foot well, and in
00196:01 5,000 feet of water, and you have an uncontrolled
02 blowout, one of the strategic options available
03 to you is a relief well?
04 A. Yes.
05 Q. And you have quite a bit of experience
06 and expertise in that?
07 A. Yes.
08 Q. How long will it take to drill that
09 relief well? And I -- I know there's no precise
10 number, so you can give me a reasonable range.
11 A. I would start off with a guess of 90
12 days.
13 Q. Okay. It would be hard to get it done in
14 less than 90 days, wouldn't it?
15 A. Yes.
16 Q. You've got to mobilize the rig, get it on
17 site, make sure you've had good seisming, set the
18 wellhead, set the BOP, set the riser, set
19 casing --
20 A. M-h'm.
21 Q. -- as you go down, correct?
22 A. Right.
23 Q. You've got to make sure the relief well
24 is done properly, so you don't have a mistake on
25 the relief well?
00197:01 A. That's correct.
02 Q. And that means you have to log, test, set
03 casing, set cement, right, to get it down?
04 A. Right.
05 Q. What was your intercept target?
06 A. In terms of depth or -- or --
07 Q. Yeah --
08 A. -- the point --
09 Q. -- that's --
10 A. -- in the well?
11 Q. -- that's what I meant --
12 A. Well, it --
13 Q. -- in terms of cement.
14 A. -- seemed like it was 17,000-something
15 feet. It was designed to intercept into the
16 Macondo Well just below the 9-7/8 casing shoe.
17 Q. Okay. So basically, you're going to have
18 to drill a 17,000-foot well, from scratch, in
19 order for the relief well to be effective?
20 A. Yes.
21 Q. And, of course, 90 days is a long time to
22 have uncontrolled flow from a wellhead, correct?
23 A. Correct.
24 Q. And I assume that's one of reasons you
25 would want to look to strategies other than
00198:01 merely a relief well?
02 A. Yes.
03 Q. Well, do you plan for that? Do you plan

04 for other strategies other than merely relief
05 wells?

Page 198:07 to 198:14

00198:07 A. We plan to deploy whatever is appropriate
08 and whatever gets to the solution quickest.
09 Q. (By Mr. Williamson) Right. I'm -- and
10 what I mean by that is, since a relief well could
11 take 90 days, and possibly longer, correct --
12 A. Right.
13 Q. -- you would want to plan for options
14 that would be quicker.

Page 198:16 to 198:21

00198:16 A. That would make sense.
17 Q. (By Mr. Williamson) Okay. And for a well
18 that had the potential to flow 140,000 barrels a
19 day, that could get to be a very serious
20 situation if you have to wait 90 days before you
21 can stop it.

Page 198:23 to 199:01

00198:23 A. I would agree.
24 Q. (By Mr. Williamson) Okay. So somebody
25 needs to plan for the eventuality of having a
00199:01 quicker intervention method.

Page 199:05 to 201:14

00199:05 Q. (By Mr. Williamson) Correct?
06 A. Correct.
07 Q. And what are the possible, possible
08 quicker intervention methods, other than the
09 90-day relief well?
10 A. Well, they would include efforts to
11 activate the BOP, if that were the -- was the
12 problem.
13 Q. Fair enough.
14 A. There would be efforts to directly
15 intervene at the wellhead, either reenter the
16 well and effect a dynamic kill or --
17 Q. Like tertiary control?
18 A. Yes.
19 Q. Okay. Go ahead.
20 A. -- or capping.
21 Q. Right. Now, in this particular case --
22 this isn't true for every case -- but in the
23 Macondo case, tertiary control wasn't really
24 available because you didn't have access to the
25 wellhead?

00200:01 A. No, we had access to the wellhead.
 02 Q. Okay. Was -- okay. Why didn't somebody
 03 try bullheading on April 22nd?
 04 A. Well, we didn't have the ability to stop
 05 the flow. We --
 06 Q. Okay.
 07 A. -- we -- we couldn't activate the -- the
 08 BOPs and form a seal.
 09 Q. Right. And we all know that, and I'm
 10 not -- I'm not going to go into specifics. But
 11 what we all now know is the BOP that was on
 12 Macondo did not stop the flow. That's
 13 intuitively obvious, correct?
 14 A. Right.
 15 Q. Okay. And for whatever the reasons are,
 16 for why that particular BOP failed, that BOP
 17 failed to shut the well in?
 18 A. Agreed.
 19 Q. So the planning has to be -- by the way,
 20 BOPs do fail, right?
 21 A. Occasionally, yes.
 22 Q. Right. I mean, I'm sure in your career
 23 with Wild Well, you saw, on numerous instances,
 24 where a BOP did not achieve a complete shear and
 25 seal?
 00201:01 A. Oh, in a handful of occasions. I would
 02 say that they are highly dependable, though.
 03 Q. Okay. And -- but sometimes they fail?
 04 Would that be a fair way to put it?
 05 A. It's fair.
 06 Q. And, therefore, you have -- and the
 07 consequence of a BOP failing is pretty serious?
 08 You'll agree with that?
 09 A. If you have no redundancy, yes.
 10 Q. Okay. Yeah. If your BOP fails in all
 11 modalities, the consequence is pretty serious?
 12 A. Yes.
 13 Q. So you need to plan for that consequence.
 14 A. Yes.

Page 201:16 to 202:06

00201:16 Q. (By Mr. Williamson) Okay. And part of
 17 the planning would, I guess, be a BOP on BOP
 18 option. In other words, let's take -- bring out
 19 another mechanical piece of equipment that we
 20 know works and put it on that wellhead. That
 21 would be one possible contingency --
 22 A. It would --
 23 Q. -- to do?
 24 A. -- be a possible contingency, yes.
 25 Q. One possible contingency plan would be to
 00202:01 take a BOP variation, that we all call a "capping
 02 stack," and put that mechanical piece of
 03 equipment on the wellhead.

04 A. Yes.
05 Q. Okay. Did you see any evidence that
06 anyone had planned for that contingency --

Page 202:08 to 202:10

00202:08 Q. (By Mr. Williamson) -- before April 20th,
09 2010, with respect to a 5,000-foot deepwater
10 well?

Page 202:12 to 202:20

00202:12 A. There was a considerable amount of work
13 done back around 1990, in the DEA Study No. 63.
14 Q. (By Mr. Williamson) Okay.
15 A. That was entitled: "Floating Vessel
16 Blowout Control."
17 Q. Okay. Did you see any evidence that that
18 DEA Study was incorporated by BP into BP's
19 Governance Plans before Macondo?
20 A. I couldn't say that I did, no.

Page 203:02 to 203:05

00203:02 Q. Fair enough. Did you see any evidence
03 that Transocean incorporated this DEA Study from
04 1990, a DEA Study 63, into their -- into
05 Transocean's contingency plans?

Page 203:07 to 203:19

00203:07 A. I'm not aware of -- of any measures that
08 they took to incorporate it.
09 Q. (By Mr. Williamson) Okay. You, I guess,
10 must have been aware of this Study?
11 A. Yes.
12 Q. Were you aware of it back in 1990?
13 A. Probably not in 1990, but shortly
14 thereafter, in the early '90s, I was aware of it.
15 Q. I'll take the early '90s. So you had
16 known this to be a known potential problem in the
17 Gulf of Mexico since the early 1990s, you, David
18 Barnett, had known that?
19 A. Yeah.

Page 203:21 to 204:02

00203:21 Q. (By Mr. Williamson) Wild Well Control had
22 known that?
23 A. That there's a possibility a well would
24 blowout? Yes.
25 Q. M-h'm. Deepwater Gulf of Mexico?

00204:01 A. Yeah.
 02 Q. Okay. Did BP know it?

Page 204:04 to 204:08

00204:04 A. I can only assume that they did.
 05 Q. (By Mr. Williamson) Yeah. Would
 06 Transocean, the world's largest drilling company,
 07 would they know there's a chance that they can
 08 have a blowout in deep water?

Page 204:10 to 204:17

00204:10 A. I would have to assume that they did.
 11 Q. (By Mr. Williamson) Okay. It's really
 12 inconceivable that any sophisticated offshore
 13 person who's a Drilling Contractor, an Operator,
 14 or a Blowout Prevention Specialist, like Wild
 15 Well is, it's impossible to believe they would
 16 not know it, that there's a potential for a
 17 deepwater blowout?

Page 204:20 to 205:10

00204:20 A. Well -- is that a question?
 21 Q. (By Mr. Williamson) Yeah.
 22 A. Yes.
 23 Q. Okay. After Macondo -- oh, I didn't
 24 ask -- I don't think I asked this for Wild Well.
 25 I know that BP is a customer of Wild Well's.
 00205:01 I've asked that question, correct?
 02 A. Yes.
 03 Q. Is Transocean a customer of Wild Well
 04 Control?
 05 A. Not to my knowledge.
 06 Q. Has Transocean ever come to Wild Well and
 07 says, "We want to plan, you know, for what
 08 happens in case our equipment that we put on the
 09 wellhead fails"? Has Transocean ever hired Wild
 10 Well for that?

Page 205:12 to 205:16

00205:12 A. Not to my knowledge.
 13 Q. (By Mr. Williamson) Okay. After this
 14 incident, after Transocean's blowout preventer
 15 did fail, did Transocean come to Wild Well and
 16 say, "We want help planning for the next event"?

Page 205:18 to 205:19

00205:18 Q. (By Mr. Williamson) By the time you left

19 Wild Well, had that happened?

Page 205:21 to 206:06

00205:21 A. Well, there were a number of initiatives
22 that were started after Macondo.
23 Q. (By Mr. Williamson) Right now I'm talking
24 about Transocean.
25 A. H'm --
00206:01 Q. Did Transocean come to Wild Well and hire
02 Wild Well and says, "We want to plan" -- after
03 Macondo, we're now almost three years -- has
04 Transocean ever come to Wild Well and said, "We
05 want to hire Wild Well to plan for what happens
06 when our equipment fails"?

Page 206:08 to 206:14

00206:08 A. No, not as the distinct Project aside
09 from the other initiatives, no.
10 Q. (By Mr. Williamson) Okay. Has Transocean
11 ever hired any other vendor, similar to Wild Well
12 that you know of, in the three years since
13 Macondo to say, "We want to plan in case our
14 blowout preventer fails"?

Page 206:16 to 206:16

00206:16 A. I'm not aware of it.

Page 207:03 to 207:03

00207:03 (Exhibit No. 10615 marked.)

Page 207:08 to 208:03

00207:08 Q. (By Mr. Williamson) Okay. Mr. Mart --
09 Barnett, did I understand you correctly in your
10 earlier testimony, that you said one of the
11 things that made planning difficult on this
12 particular well, Macondo, when you showed up, was
13 the fact that the reservoir was unknown because
14 it was an exploratory well?
15 A. No. I -- I think we had a relatively
16 good description of the reservoir.
17 Q. Okay.
18 A. I -- I was speaking about an exploratory
19 well the -- in Greenland that we were talking
20 about earlier that was --
21 Q. Oh, okay. I assume when you -- when
22 you're drilling an exploratory well, you have
23 more unknown variables than you do when you're

24 drilling a production well?
 25 A. Yes.
 00208:01 Q. And because you have more unknown
 02 variables when you're drilling an exploratory
 03 well, you've got to be even more careful?

Page 208:05 to 212:17

00208:05 A. Okay. Yes.
 06 Q. (By Mr. Williamson) So that did you say
 07 "Okay," yeah?
 08 A. Yes.
 09 Q. Okay. Thank you.
 10 Turn to Tab 83, in the Department of
 11 Justice's binder. I think that's the second
 12 binder.
 13 A. Eighty -- 83?
 14 Q. 83. And it's marked 10615. Are you
 15 there?
 16 A. Yeah.
 17 Q. Okay. Exhibit 10615 is actually you
 18 forwarding an E-mail that you received from Pat
 19 Campbell, and you're forwarding it on to William
 20 Burch, correct?
 21 A. Yes.
 22 Q. In Mr. Campbell's E-mail dated June 2nd,
 23 2010, his question is -- he attaches this article
 24 about the top kill, correct?
 25 A. Yes.
 00209:01 Q. And Mr. Campbell says: "Am I living in a
 02 parallel universe where an infinite number of
 03 outcomes and existences are possible? What is
 04 said in the attached has no basis in real life
 05 that I'm aware of."
 06 That's Mr. Campbell's commentary about
 07 the journal, right?
 08 A. Okay.
 09 Q. Is that true? Did I read it correctly?
 10 A. You read it correctly.
 11 Q. Right. And you did not express any
 12 disagreement when you forwarded it on to
 13 Mr. Burch, did you?
 14 A. I did not.
 15 Q. And, in fact, the article that's
 16 attached -- and I don't want to go into the
 17 details -- but the title of it is: "BP Cites"
 18 the "Broken Disk in" the "'Top Kill' Failure."
 19 Right?
 20 A. That's the title, yes.
 21 Q. It's obvious Mr. Campbell did not agree
 22 with what was in the article, correct?
 23 A. I would say that he did not.
 24 (Exhibit No. 10616 marked.)
 25 Q. (By Mr. Williamson) Would you please turn
 00210:01 to Tab No. 81. Have you seen those E-mails

02 before, because I believe you are in that E-mail
03 chain?
04 A. I'm sure that I have, yes.
05 Q. Right. And I've marked Tab No. 81 as
06 10616. I want -- on the next page, the E-mail
07 from Mister -- how does Mr. N-g pronounce his
08 last name?
09 A. "Ing."
10 Q. "Ing"?
11 A. As if there's an "I."
12 Q. Okay. So Fred Ng -- and he's with Wild
13 Well, if I remember correctly, correct?
14 A. Yes.
15 Q. And he has an E-mail that says: Model --
16 "I" have -- "only have a side" -- "side line seat
17 in this project, so I may be totally off base,
18 but here's my two peso's worth:
19 "Modeling is not the answer to all the
20 world's" problem. "There seems to be quite a bit
21 of effort at BP in this project to make reality
22 or interpretation of data fit modeling results,
23 which does not seem logical."
24 Right?
25 A. Correct. I mean, that's what it says.
00211:01 Q. Sure. What he's expressing is there were
02 a number of un -- as of June -- the date he sent
03 this E-mail, May 29th, 2010, there's a number of
04 unknown factors?
05 A. The -- that's part of it, yes.
06 Q. Right. There's flow -- could be flow
07 inside the casing, could be flow outside the
08 casing, could be both, for example?
09 A. Right.
10 Q. Right?
11 A. Yes.
12 Q. You could have material in the BOP, you
13 could not have material in the BOP?
14 A. Yes.
15 Q. You could have drill collars or multiple
16 pieces of pipe or BHA in the BOP, for example,
17 right?
18 A. Well, I don't recall that there were any
19 drill collars in this well, but, yes.
20 Q. Okay. The -- you could have -- or, yeah,
21 you could have had a BHA, for example, right?
22 A. Well, there were lots of unknowns.
23 I will --
24 Q. I'll rephrase.
25 A. I will talk and see.
00212:01 Q. That's my point.
02 A. Yes.
03 Q. That's the point I'm trying to get to.
04 I'm not trying to argue about drill collars or
05 BHAs.
06 A. Okay.

07 Q. The point is the flow path, the exact,
 08 precise flow path through the BOP up to the riser
 09 was unknown at this point in time?
 10 A. That's true.
 11 Q. The exact volume, pressures, temperature
 12 were not -- were only known within certain
 13 ranges, correct?
 14 A. Right.
 15 Q. Okay. And so what he's expressing is you
 16 can't just take your models and base everything
 17 based on what the models say?

Page 212:19 to 213:02

00212:19 A. Well, I honestly don't know what he's
 20 getting at. I would have to read the entire
 21 E-mail, I guess, but he seems to be expressing
 22 that they're trying to interpret the data to fit
 23 what the results of the models are.
 24 Q. (By Mr. Williamson) Okay. The point is,
 25 Mr. Ng joins the list -- the long list of Wild
 00213:01 Well employees who are expressing frustration at
 02 the process?

Page 213:04 to 213:09

00213:04 Q. (By Mr. Williamson) Would that be one
 05 fair conclusion?
 06 A. He's expressing some concern.
 07 Q. Okay. Would you please turn to Tab --
 08 Tab No. 74.
 09 (Exhibit No. 10617 marked.)

Page 213:15 to 215:11

00213:15 Q. (By Mr. Williamson) This is an E-mail
 16 from Christopher Murphy to you, May 29th, 2010,
 17 right?
 18 A. Yes.
 19 Q. The second sentence that Mr. Murphy tells
 20 you on May 29th is: "Personally i have never
 21 been invited to a decision making meeting which
 22 makes me very, very uncomfortable. One can only
 23 bend" back -- "over backwards so far before it
 24 goes beyond a joke."
 25 Did I quote Mr. Murphy correctly?
 00214:01 A. You did.
 02 Q. Okay. Mr. Murphy is expressing pretty
 03 extreme frustration on May 29, isn't he?
 04 A. Yes. I would agree.
 05 Q. Okay. And he says: "Needless to say I
 06 explained very clearly that if WWCI been in our
 07 normal role (part" of "the decision making team)

08 we would have used all resources available and
 09 explained precisely what was going to be
 10 attempted."
 11 Correct?
 12 A. Yes.
 13 Q. So W -- BP did not have WWCI, Wild Well
 14 Control, Inc., in their normal situation,
 15 correct?
 16 A. No, I wouldn't agree with that at all. I
 17 think that's Chris Murphy's personal opinion.
 18 Q. Okay. So you believe that's Mr. Murphy's
 19 opinion?
 20 A. Mr. Murphy wasn't being invited to some
 21 decision-making meetings evidently.
 22 Q. Sure. Go ahead and read on down where
 23 Mister -- okay. Mr. Murphy is complaining that
 24 he's not being invited to those meetings,
 25 correct?
 00215:01 A. Correct.
 02 Q. All right. And down below that, he says:
 03 "I have multiple conversations with the top kill
 04 team lead John Smart but even he is not involved
 05 in all the 'decision making meetings'.
 06 That's Mr. Murphy's observation, correct?
 07 A. Okay.
 08 Q. Do you see the sentence I was reading?
 09 A. Yes. I do now.
 10 Q. Okay.
 11 A. Yes, that's correct.

Page 215:15 to 215:18

00215:15 MR. WILLIAMSON: 10617.
 16 (Exhibit No. 10618 marked.)
 17 Q. (By Mr. Williamson) Would you please turn
 18 to Tab 72.

Page 215:22 to 216:24

00215:22 Q. -- which has now been marked as 10618.
 23 Are you there?
 24 A. Yes.
 25 Q. This is an E-mail that -- chain that
 00216:01 involves you, May 28th, 2010. Correct?
 02 A. Yes.
 03 Q. And it's from David Moody of Wild Well
 04 Control, Manager of Well Control Operations?
 05 A. That's correct.
 06 Q. And he says, "Bill,
 07 "I don't care what is going on in Houston
 08 but the people that MATTER (BP management) know
 09 that this is not a WWCI show - it is BP. This is
 10 NOT what we recommended but we don't need to go
 11 around and publicly state that."

12 Did I read --
 13 A. That's correct.
 14 Q. Okay. So Mr. Moody's joining the voices
 15 at Wild Well that says, "Wild Well is not in
 16 control, they're not calling the shots, BP is"?
 17 A. Well, the purpose of this E-mail is to
 18 tell Bill Burch to not be going around publicly
 19 saying that BP is not following our
 20 recommendation.
 21 Now, I would point out to you that Bill
 22 Burch is relatively new in the well control
 23 business and probably has not been through very
 24 many of these situations.

Page 217:04 to 217:20

00217:04 Q. You don't want to publicly disrespect
 05 them, no matter what your private opinion is. I
 06 mean, that's just good business?
 07 A. Well, that's true enough. But further,
 08 Bill needed to understand that we were providing
 09 one of many streams of information that was
 10 coming into -- to BP. So, as he says, "This is
 11 not a Wild Well Control show. This is a BP
 12 decision."
 13 Q. Okay.
 14 A. So that was the purpose of the E-mail, in
 15 my opinion.
 16 Q. Okay. So the purpose of the E-mail is to
 17 say, "We don't need to be publicly making
 18 statements that would be disrespectful or" -- "of
 19 BP, you know, even though this is not a Wild Well
 20 controlled situation"?

Page 217:22 to 218:18

00217:22 A. The purpose of the E-mail, in my opinion,
 23 is to express to Bill Burch that, as it says, the
 24 people who need to know all of the information,
 25 BP's Management, knows. They are getting
 00218:01 technical advice from many sources, not only Wild
 02 Well Control.
 03 Q. (By Mr. Williamson) All right. Well,
 04 let's talk about Mr. Burch's E-mail that
 05 precipitated the second one, down at the bottom
 06 of Exhibit 10618.
 07 Mr. Burch's perception was: "When" --
 08 "When Kurt and I get told we're not part of the
 09 brain trust, I about laughed outloud."
 10 "Nevertheless, they don't want to hear
 11 the truth so it does not matter HOW you bring it
 12 up."
 13 That was Mr. Burch's comment, wasn't it?
 14 A. Yes.

15 Q. And what is Mr. Burch's job with Wild
 16 Well Control on May 28, 2010?
 17 A. A Senior Well Control Engineer.
 18 Q. Was he good at his job?

Page 218:20 to 219:08

00218:20 A. Generally so, yes.
 21 Q. (By Mr. Williamson) Okay. And Kurt. He
 22 refers to "Kurt." Who is Kurt?
 23 A. I would assume that would refer to Kurt
 24 Mix.
 25 Q. And Kurt Mix is what at Wild Well?
 00219:01 A. No, he is a BP employee.
 02 Q. Kurt Mix is a BP employee?
 03 A. Yes.
 04 Q. Okay.
 05 (Exhibit No. 10619 marked.)
 06 Q. (By Mr. Williamson) I'm going to ask you
 07 to turn to Tab 71, which has now been marked as
 08 10619.

Page 219:12 to 220:07

00219:12 Q. (By Mr. Williamson) Okay. This is an
 13 E-mail chain from Pat Campbell to Pat Bernard,
 14 right?
 15 A. Yes.
 16 Q. And then, again, this is Mr. Campbell
 17 reporting to the people at Superior who are above
 18 him?
 19 A. Yes.
 20 Q. And Mr. Cam -- and this is May 27, 2010,
 21 right?
 22 A. Yes.
 23 Q. And Mr. Pat Campbell, when he's reporting
 24 to his bosses at Superior, says, about the fourth
 25 line down: "Clearly the volume of the blowout
 00220:01 exceeded our estimate - which put a serious crimp
 02 in our ability to succeed right from the outset."
 03 That's what Mr. Campbell reported to his
 04 bosses, correct?
 05 A. Yes.
 06 Q. Okay.
 07 (Exhibit No. 10620 marked.)

Page 220:16 to 220:16

00220:16 I have marked Tab No. 66 as 10620.

Page 220:24 to 223:21

00220:24 Q. This is an E-mail in which you're in the

25 E-mail chain, Wild Well, May 23rd, 2010, correct?
00221:01 A. Yes.
02 Q. And this is from Joe Dean Thompson,
03 correct?
04 A. Yes.
05 Q. Who is Joe Dean Thompson?
06 A. He was an employee of Wild Well Control.
07 At that point in time he was Vice President of
08 Well Control Operations.
09 Q. Okay. So he was -- was he knowledgeable
10 in his job?
11 A. Yes.
12 Q. Was he good at his job?
13 A. I believe so, yeah.
14 Q. Uh-huh. Was he your boss at that time?
15 A. No. He was parallel. I was --
16 Q. Ah.
17 A. -- Vice President of Engineering. He was
18 Vice President of Operations.
19 Q. Okay. So he was on the same Corporate
20 level as you?
21 A. Yes.
22 Q. Okay. And he says -- Mr. Joe Dean
23 Thompson says, on May 23rd, 2010: "I believe all
24 of us" (Wild Well Control) believe the way to go
25 is: Emergency diverting/production through the
00222:01 full BOP capping stack until the relief well can
02 intercept and kill.
03 "But we have seen that option be totally
04 disregarded for pumping/cementing option with
05 open BOP at the ML."
06 Did I read what Mr. Joe Dean Thompson
07 said?
08 A. Yes.
09 Q. Do you think Mr. Joe Dean Thompson, the
10 Vice President of Operations for Wild Well
11 Control, knew what he was talking about when he
12 wrote that E-mail on May 23rd?
13 A. I think he's incorrect to say that our --
14 that option was totally disregarded.
15 Q. Okay. Well, was he correct to say that's
16 what Wild Well Control believed?
17 A. Well, I would say that's Joe Dean
18 Thompson's personal opinion.
19 Q. Okay. So the Vice President of
20 Operations for Wild Well Control, he's expressing
21 his opinion that that was the way to go, correct?
22 A. Yes.
23 Q. Okay.
24 A. Now, this -- this -- this was essentially
25 intended to be much like a private conversation
00223:01 between the people on the E-mail list, not a
02 recommendation to BP.
03 Q. Yeah. I understand. At the time, this
04 was a private thought process within Wild Well,

05 right?
 06 A. Yeah.
 07 Q. But this thought is being communicated to
 08 BP that this is Wild Well's professional opinion?
 09 A. H'm, not via this E-mail.
 10 Q. No, I'm not saying that --
 11 A. But we -- we have -- "we" being Wild Well
 12 have issued memos, and I recall that Pat Campbell
 13 had issued memos where he pointed out that it
 14 might be a better course of action to divert and
 15 produce as much of the oil as possible and wait
 16 for the relief wells.
 17 Q. I'm grinning because I -- you've
 18 sanitized Mr. Campbell's vocabulary quite a bit
 19 in your description, haven't you?
 20 A. I find myself in that position a lot,
 21 yes.

Page 224:03 to 224:19

00224:03 Q. Yes, exactly.
 04 So -- anyway, so we know Mr. Campbell's
 05 E-mails -- and we've previously deposed him, so I
 06 haven't asked you about a lot of Mr. Campbell's
 07 views.
 08 A. M-h'm.
 09 Q. But then he's pretty much expressed his
 10 own views, correct?
 11 A. Yes.
 12 Q. Okay. And apparently we now know from
 13 this E-mail -- we know Mr. Joe Dean Thompson's
 14 views, at least as of May 23rd, 2010. Fair?
 15 A. Correct.
 16 Q. Fair?
 17 A. Yes.
 18 Q. Okay.
 19 (Exhibit No. 10621 marked.)

Page 225:02 to 225:04

00225:02 Q. This is actually an E-mail you sent to
 03 William Burch on May 10th, 2010, correct?
 04 A. Yes.

Page 230:16 to 231:19

00230:16 What date did Wild Well begin working on
 17 the Macondo Incident?
 18 A. As I recall, we received notification, it
 19 was either late on the 20th of April or early in
 20 the morning on the 21st.
 21 Q. Okay. What date did your involvement
 22 end? And by "your," I mean Wild Well's.

23 A. Oh, well, I'm afraid I may not be able to
 24 answer that very well, because my involvement
 25 ended just after the top kill and cementation,
 00231:01 and I know that Wild Well Control's involvement
 02 went through the re-entry and complete
 03 abandonment of the -- of the well.
 04 Q. So yours would have been at least through
 05 July of 2010?
 06 A. Yes.
 07 Q. Okay. And I'm not going to try to make
 08 you pin down a specific date. The reason I ask
 09 is actually a little different. The E-mails that
 10 Mr. Williamson just showed you, Exhibits 10610
 11 through 10621, each of those was written during
 12 the period in which Wild Well was working on the
 13 Macondo Incident, correct?
 14 A. Yes.
 15 Q. Was it BP who contacted Wild Well to work
 16 on the Macondo Incident?
 17 A. Yes.
 18 Q. Were you working as an agent or
 19 contractor of BP during the Macondo Incident?

Page 231:21 to 232:03

00231:21 A. Wild Well Control?
 22 Q. (By Mr. Maze) Yes, Wild Well.
 23 A. We were working as a contractor to BP.
 24 Q. Is it fair to say that each of the
 25 E-mails that Mr. Williamson showed you were done
 00232:01 in Wild Well's capacity, or the Wild Well
 02 employee's capacity, as part of the Macondo
 03 Incident?

Page 232:06 to 235:13

00232:06 A. Well, they were done more as a matter of
 07 an exchange of ideas, not as official advice to
 08 BP.
 09 Q. (By Mr. Maze) Right. But all of the
 10 exchange of ideas were in relation to Wild Well's
 11 work on the Macondo Incident?
 12 A. Yes.
 13 Q. Which was, again, begun because you were
 14 working for BP as a contractor?
 15 A. Yes.
 16 Q. Okay. You were asked a question by
 17 Mr. Williamson, and I'll just read the question
 18 back: "Did BP ever approach Wild Well before
 19 Macondo and say, 'We want to think about how to
 20 utilize a capping stack in the event we have an
 21 uncontrolled blowout in deep water'?"
 22 And part of your answer was, "There were
 23 requests to develop blowout contingency plans,

24 and a wide range of operational settings, one of
25 those being in deep water."

00233:01 Do you remember the question --

02 A. M-h'm.

03 Q. -- and answer?

04 A. Yes.

05 Q. Those requests, did they come from BP?

06 A. Yes.

07 Q. So what do you mean by "request to
08 develop a blowout contingency plan"? Sort of
09 expand on what you were talking about.

10 A. Well, one of the services that Wild Well
11 Control provides is the development of a well
12 control or a blowout contingency plan. It
13 consists of organization to manage a well control
14 event, from relatively minor to more serious
15 events, and the identification of equipment and
16 resources that would be required to -- to
17 intervene.

18 Q. And those plans that -- strike that.
19 The plans that we're talking about are
20 not just digging relief wells, correct?

21 A. Correct.

22 Q. They could have included capping stacks
23 or BOP on BOP, correct?

24 A. Yes.

25 Q. And these -- this request to develop
00234:01 these plans was before the Macondo Incident?

02 A. Yes.

03 Q. You didn't get into it earlier, but I --
04 it sounded like you were about to allude to it.
05 Since Macondo, there have been two organizations
06 created, and I may get the names wrong, but one
07 of them is the Helix Containment Group and the
08 other is the Marine Well Containment Group.

09 Are you familiar with those?

10 A. I am.

11 Q. Is it fair to say that they have created
12 a type of containment plan for future blowouts?

13 A. Yes. They have equipment and operational
14 procedures for capping and diverting and
15 containment of the oil, yes.

16 Q. Is this the type of blowout contingency
17 plan that BP had asked -- or the Wild Well to
18 develop or discuss before the Macondo Incident?

19 A. No. There were -- there were, as I
20 recall, no -- no efforts specifically at capping
21 operations in deep water.

22 Q. So what was the plan they asked you to
23 develop?

24 A. Well, again, it was the -- the personnel
25 organization, methods to intervene at the BOP,
00235:01 and make sure that there were ROVs in the area of
02 operation, because, mind you, this could have
03 been in the Gulf of Mexico or in the

04 Mediterranean or anywhere around the world, so to
 05 determine that there were specialty tools
 06 available to diagnose underground flow problems,
 07 to ensure that there were BOPs with the correct
 08 tooling to intervene on the BOPs, those sort of
 09 things, but no real planning to do subsea
 10 capping.

11 Q. And is it fair to say that none of these
 12 requests for a plan ever manifested itself into a
 13 full, complete containment plan before Macondo?

Page 235:15 to 236:05

00235:15 A. Well, by a "full and complete containment
 16 plan," if you mean that it -- that they included
 17 the ability to cap and flow back to vessels, no,
 18 that -- it would -- it never got to that point.

19 Q. (By Mr. Maze) And, certainly, there
 20 wasn't such a plan that was instituted on the
 21 Macondo Well?

22 A. I'm not -- I don't --

23 Q. I mean, you -- you never agreed to a plan
 24 with BP --

25 A. Oh.

00236:01 Q. -- that ended up being used at Macondo?

02 A. No.

03 Q. Okay.

04 A. Aside from possibly some elements of the
 05 personnel organization.

Page 237:07 to 244:13

00237:07 Q. Thank you for taking the time to testify
 08 today. I believe you testified earlier that you
 09 had concluded the top kill had failed because the
 10 flow path through the BOP was too large. Do you
 11 recall that testimony?

12 A. Yes.

13 Q. You did not attribute the top kill's
 14 failure to the burst disk. Is that correct?

15 A. That's correct.

16 Q. Okay. The consensus at Wild Well Control
 17 was that the top kill had failed because the flow
 18 path through the BOP was too large, rather than
 19 because of the burst disk. Is that correct?

20 A. I believe that's true, yes.

21 Q. Okay. Wild Well Control shared that
 22 conclusion with BP, right?

23 A. In my memo, yes.

24 Q. Yes. And that's a memo that you sent in
 25 late May of 2010, correct?

00238:01 A. Or the -- or the first part of June, yes.

02 Q. Okay. Let's -- I'm going to show you
 03 what's our Tab 42. It's Exhibit 10622.

04 (Exhibit No. 10622 marked.)
05 Q. (By Mr. Davis-Denny) And is this exhibit
06 what you were just referring to as your memo?
07 A. Yes, it is.
08 Q. Okay. This is a memo that you sent to
09 BP's Mark Mazzella and Mark Patteson on May 31st
10 of 2010. Is that correct?
11 A. Yes.
12 Q. You sent this in the course of your work
13 for BP; is --
14 A. Yes.
15 Q. -- that right?
16 A. That's right.
17 Q. You made every effort to be as
18 accurate as possible when you wrote this memo,
19 right?
20 A. That was my intention.
21 Q. Okay. If you'll please look at the
22 second page of the memo.
23 A. (Complying.)
24 Q. And if you look at three paragraphs from
25 the bottom, this is where you communicated to BP
00239:01 the Wild Well Control consensus view that the top
02 kill had failed because the flow path through the
03 BOP was too large, correct?
04 A. Yes.
05 Q. Okay. Did you have any subsequent
06 discussions with BP about your memo?
07 A. Not too much, not really.
08 Q. Okay. Did you have any subsequent
09 discussions with BP about why the top kill had
10 failed?
11 A. Yes, we had some discussions about it.
12 Q. When did those discussions occur?
13 A. Well, when we returned, of course, we
14 were offshore on the rig, implementing this kill
15 operation, so we had some discussions there on
16 the rig after the kill operation failed and then
17 a series of discussions once me and the -- the
18 Team arrived back at the office.
19 Q. Who from BP was involved in these
20 discussions?
21 A. Oh, Mark Patteson, Jon Sprague, Mark
22 Mazzella.
23 Q. Were Patteson, Sprague, and Mazzella all
24 out on the rig during the top kill?
25 A. Mazzella was.
00240:01 Q. Mazzella. Okay. And so when you talked
02 about having conversations on the rig about why
03 the top kill had failed, that was with
04 Mr. Mazzella?
05 A. Well, he was the only -- the -- the BP
06 Representative, yes. There were others.
07 Q. Okay. Who were the others involved in
08 that conversation?

09 A. Oh, Bob Grace, Jace Larrison, who was
10 also a BP employee. Primarily, that was it.

11 Q. Okay. Did anyone in those conversations
12 on the rig express a view as to why they thought
13 the top kill may have failed?

14 A. As far as I recall, everyone was in
15 fairly close agreement that it was simply a
16 matter of the flow path was too big.

17 Q. Okay. So Mr. Mazzella agreed with that
18 view?

19 A. I believe that was -- yes.

20 Q. Mr. Grace agreed with that view?

21 A. Yes.

22 Q. And Mr. Larrison agreed with that view?

23 A. Yes.

24 Q. Okay. All right. Then you returned to
25 shore, and you said that there were some
00241:01 conversations that occurred back onshore. Is
02 that correct?

03 A. Yes.

04 Q. All right. About why the top kill had
05 failed?

06 A. Yes. Well, mind you, we -- we were --
07 the -- the Kill Team was working in a room
08 generally half of the size of this one. And we
09 were all around a very large table. So these
10 kinds of discussions went on over the course of
11 the day quite regularly.

12 Q. Is this table discussion that you're
13 talking about, is this something that occurs back
14 onshore?

15 A. Yes.

16 Q. Okay. And who -- who was involved in
17 those discussions about why the top kill failed
18 back --

19 A. Oh --

20 Q. -- onshore?

21 A. -- gosh. A number of people. Just
22 whoever happened to be in the room at the time.

23 Q. Okay. Who from BP specifically do you
24 recall having conversations with onshore about
25 why the top kill had failed?

00242:01 A. Well, I -- I seem to remember Mark
02 Patteson and Jon Sprague.

03 Q. Okay. And did you express to
04 Mr. Patteson and Mr. Sprague, in conversations
05 around the table onshore, the view that the top
06 kill had failed because the flow path was too
07 large?

08 A. Yes. Most of the discussion was around
09 the ideas that were being expressed by certain
10 other folks that some of the mud went down the
11 well, and there were wellbore integrity issues
12 that were being expressed. And so most of the
13 conversations with the Group that I'm referring

14 to had to do with those topics.
 15 Q. Did any of the BP employees that you
 16 spoke with about why the top kill had failed ever
 17 express the view to you that the notion that the
 18 top kill had failed because the flow path was too
 19 large was an implausible view --
 20 A. I --
 21 Q. An implausible view. In other words, did
 22 anyone ever say to you that your view of why the
 23 top kill had failed was an implausible one?
 24 A. No.
 25 Q. Okay. I'm going to hand you a -- another
 00243:01 document. It's Tab 22, and it is Exhibit 10623.
 02 (Exhibit No. 10623 marked.)
 03 Q. (By Mr. Davis-Denny) And I'd actually
 04 like to start at the bottom of the E-mail chain,
 05 so if you'll flip to the -- I think it's four
 06 pages back. It's the E-mail from William Burch
 07 that's sent on May 29th. The --
 08 A. Okay.
 09 Q. Got it?
 10 A. M-h'm.
 11 Q. Okay. And Mr. Burch, we've established,
 12 was one of your colleagues at Wild Well Control,
 13 correct?
 14 A. Correct.
 15 Q. And you were copied on this E-mail. Is
 16 that correct?
 17 A. That's correct.
 18 Q. It was sent on May 29th. Is that right?
 19 A. Right.
 20 Q. That's just one day after the top kill
 21 effort had concluded?
 22 A. Right.
 23 Q. Okay. And it was directed to Fred Ng,
 24 who we've spoken about earlier, correct?
 25 A. M-h'm, right.
 00244:01 Q. He was a colleague of yours at Wild Well
 02 Control?
 03 A. Yes.
 04 Q. He was General Manager of Engineering?
 05 Is that correct?
 06 A. That's correct.
 07 Q. And you and ten other colleagues from
 08 Wild Well Control were copied on this E-mail,
 09 right?
 10 A. Yes.
 11 Q. And do you know Mr. Burch to be a
 12 generally -- to have been generally truthful and
 13 accurate in his E-mail communications?

Page 244:15 to 246:12

00244:15 A. I'm not sure that I'd go that far.
 16 Q. (By Mr. Davis-Denny) Okay.

17 A. Bill was -- is prone to dramatize things
 18 a bit.
 19 Q. Okay. Did -- did you read this E-mail at
 20 the time?
 21 A. I'm sure I did.
 22 Q. Did you have any reason to doubt the
 23 accuracy of this E-mail when you received it?
 24 A. Well, in -- insofar as that the burst
 25 disks were gone, I -- I had reason to believe
 00245:01 that that was inaccurate.
 02 Q. That's right. And that -- that's a view
 03 that Mr. Burch agreed with, as well? In other
 04 words, he held the same view that you did?
 05 A. I believe so, yes.
 06 Q. Okay. Now, in this E-mail, he's
 07 referring to a -- actually, I want to start by
 08 reading the second paragraph real quick, and then
 09 we'll -- we'll -- I have a few questions for you
 10 about it.
 11 He says: "I've talked with Kurt Mix to
 12 confirm the story. He was in communication with
 13 Jon Sprague earlier and is chasing down with Phil
 14 Pattillo. If I'm gathering my information
 15 correctly, the analysis was made from the data
 16 from pumping yesterday with Dr. Steve Willson and
 17 Phil early this afternoon (I just so happened to
 18 stumble in to their conversation while I was
 19 talking with Thomas.) Kurt" is -- or "Kurt
 20 agrees with me that this data could be very
 21 misleading and limiting options on uncertain data
 22 is not prudent."
 23 Now, first question for you is: Kurt Mix
 24 is the same BP employee, Mr. Mix, that you
 25 referred to earlier in -- in your testimony,
 00246:01 correct?
 02 A. Yes.
 03 Q. Okay. And Bill Burch was your colleague
 04 who wrote the E-mail on about May 28th, I believe
 05 it was, that said he and Kurt Mix were being
 06 excluded from BP's brain trust. Do you recall
 07 that?
 08 A. I do.
 09 Q. Okay. Bill Burch also had written in
 10 that E-mail that on -- on May 28th that BP
 11 apparently did not want to hear the truth. Is
 12 that correct?

Page 246:14 to 248:06

00246:14 A. I believe he did say that.
 15 Q. (By Mr. Davis-Denny) Okay. Now,
 16 Mr. Burch and Mr. Mix had a conversation on -- on
 17 May 29th that's detailed here in this -- this
 18 E-mail, correct?
 19 A. Yes.

20 Q. And that conversation related to data
21 that had come out of the top kill operation,
22 correct?
23 A. Correct.
24 Q. Mr. Burch and Mr. Mix had discussed
25 certain analysis of that data, right?
00247:01 A. Yes, evidently so.
02 Q. And the analysis that they had discussed
03 was this claim that the top kill had failed
04 because the burst disks were gone, right?
05 A. I don't know that they're expressing that
06 that was the reason for failure. I think that
07 they are saying that that was a diagnostic result
08 of the top kill operation.
09 Q. I -- I had the same read. I -- I didn't
10 mean to suggest otherwise.
11 They're discussing the idea that some
12 people had that the burst disks had been the
13 reason why the top kill had failed, right?
14 A. Yeah. There was a certain amount of
15 pressure decline at a constant pump rate, as
16 stated in my memo, that led some people to
17 believe that mud was being injected down the
18 annulus and into the failed burst disk.
19 Q. Okay. Now, if we look at the first
20 paragraph of this E-mail, he says: "Mike Cargol
21 heard from his containment group that the latest
22 is that the burst disks are gone. According to
23 his sources, the only option forward is
24 containment until the relief well gets done.
25 Capping is out of the question."
00248:01 And so what he was saying was, based on
02 this notion that the top kill had failed because
03 of the burst disk, capping the well was being
04 taken off the table as an option for Source
05 Control, right?
06 A. Well, yeah --

Page 248:08 to 249:07

00248:08 A. -- but, look. I mean, this is the whole
09 problem with some of Bill Burch's communications,
10 is, "Well, so-and-so heard from such-and-such,"
11 and "I think," and "If I got this right."
12 So, you know, I -- I just -- I just don't
13 put a lot of importance to all that.
14 Q. (By Mr. Davis-Denny) Well, he went and
15 confirmed that story with BP's Kurt Mix, correct?
16 A. H'm --
17 Q. That's what he describes in that second
18 paragraph.
19 A. Well, to -- the way he's interpreting all
20 his conversations is that now -- that the focus
21 is going to be on the relief well and that
22 capping is no longer an option.

23 Q. Well, it's true, isn't it, that --
 24 A. Obviously, that --
 25 Q. -- after the top kill failed, the BOP on
 00249:01 BOP strategy was abandoned.
 02 A. Yes.
 03 Q. Is that correct?
 04 A. That's correct.
 05 Q. Okay. And that was because BP had
 06 attributed the failure of the top kill to the
 07 burst disk, correct?

Page 249:09 to 249:19

00249:09 A. That was my understanding, that at -- at
 10 least that had a -- a huge influence on the
 11 decision.
 12 Q. (By Mr. Davis-Denny) Okay. Now,
 13 Mr. Burch was expressing in this E-mail his
 14 concern that the top kill data could be very
 15 misleading. Is that correct?
 16 A. That's correct.
 17 Q. And BP's Kurt Mix had told him that he
 18 agreed with that concern, correct?
 19 A. Correct.

Page 249:21 to 250:04

00249:21 Q. (By Mr. Davis-Denny) Okay. And Mr. Mix,
 22 from BP, had also told Wild Well Control's Bill
 23 Burch that limiting Source Control options based
 24 on uncertain data was not prudent, correct?
 25 A. That is correct.
 00250:01 Q. Okay. And was one of -- one of those
 02 options, one of those Source Control options that
 03 Mix appears to have been referring to, was the
 04 BOP on BOP strategy that was abandoned, correct?

Page 250:06 to 251:11

00250:06 A. That is probably correct, yes.
 07 Q. (By Mr. Davis-Denny) Okay. Okay. I'd
 08 like to have you look at the first page --
 09 A. All right.
 10 Q. -- of this E-mail. And I -- I want to
 11 start at the bottom. And you may recognize this.
 12 A version of this E-mail was shown to you
 13 earlier, but we didn't really get a chance to --
 14 to dive into it very far.
 15 A. M-h'm.
 16 Q. But this is an E-mail that Mr. Ng sent on
 17 the night of Saturday, May 29th, 2010, correct?
 18 A. Correct.
 19 Q. And you were copied on this E-mail,

20 correct?
 21 A. Yes.
 22 Q. Okay. And in the second paragraph of
 23 this E-mail, which was discussed earlier with
 24 you, he's commenting on the problems with relying
 25 on the top kill modeling to conclude that the
 00251:01 burst disks are gone, correct?
 02 A. That is correct.
 03 Q. And when he uses the abbreviation in the
 04 last sentence of that paragraph, "BDs are gone,"
 05 you understand he's referring to burst disks,
 06 correct?
 07 A. Yes, m-h'm.
 08 Q. Okay. So Mr. Ng had the same concern
 09 that BP's Kurt Mix had about the -- the
 10 interpretation of the top kill data?
 11 A. Yes.

Page 251:13 to 251:15

00251:13 Q. (By Mr. Davis-Denny) And he had the same
 14 concern that you had about the interpretation of
 15 the top kill data?

Page 251:17 to 254:24

00251:17 A. Well, we had a difference of opinion,
 18 yes.
 19 Q. (By Mr. Davis-Denny) Okay. I'd like you
 20 to look at the third paragraph of that E-mail,
 21 where he says: "May be these guys need to look
 22 at the video data besides the pressure data."
 23 And by "these guys," you understood him
 24 to mean the -- BP. Is that correct?
 25 A. I would interpret it that way, yes.
 00252:01 Q. Okay. And then he says: "It is quite
 02 apparent from the" bid -- "video that most, if
 03 not all, the mud pumped in these operations went
 04 out the DWH riser and now down the hole."
 05 Now, when he says "now" there, you
 06 understand he meant -- means "not"?
 07 A. Not.
 08 Q. Correct?
 09 A. Yes.
 10 Q. Okay. And the importance of Mr. Ng's
 11 sentence there is that if the top kill mud went
 12 out the DEEPWATER HORIZON's riser and not down
 13 the hole, it did not exit out the burst disks,
 14 correct?
 15 A. Correct.
 16 Q. Okay. And then he goes on and writes:
 17 "In spite of increasing pump rate, junk shot,
 18 cubes and balls, et cetera, there was little
 19 change in the mud plume exiting the riser. The

20 pressure data simply shows that the surface leaks
21 are too large to be sealed by the materials
22 introduced and therefore there was no backstop to
23 build up enough injection pressure for the top
24 kill. Maybe I am missing something, but I fail
25 to see how that can be any indication of the
00253:01 integrity of the 16 inch before or after the top
02 kill."
03 Did I read that correctly?
04 A. You did.
05 Q. And "the 16 inch" was the 16-inch casing
06 where the burst disks were at? Is that correct?
07 A. That's correct.
08 Q. Okay. And then if you'll look at the
09 E-mail at the top of the page, there's an E-mail
10 from Christopher Murphy, sent on May 30th of
11 2010, correct?
12 A. Yes.
13 Q. And you were copied on this E-mail, as
14 well?
15 A. Yeah.
16 Q. Okay. And it was sent back to Mr. Ng?
17 A. Right.
18 Q. And he writes -- the -- the sum total of
19 his E-mail is: "Fred, you have captured
20 precisely what we all think. Well said.
21 Regards, Chris Murphy."
22 Did I get that correct?
23 A. Yes.
24 Q. Okay. And that's consistent with your
25 testimony earlier about the consensus that
00254:01 existed at Wild Well Control about why -- why
02 the top kill had failed?
03 A. It is consistent. I -- it seems a little
04 strong to say that it is precise and applicable
05 to everyone at Wild Well, but the general
06 consensus was that there was no indication of
07 damage to the burst disks.
08 Q. Okay. Did you have any conversations
09 with Kurt Mix about why the top kill had failed?
10 A. None that I recall, but it's very likely
11 that we at least had a conversation in the room
12 where we were all working.
13 Q. Okay. That's all I have for you on that
14 subject. I want to move on to a different Topic
15 now.
16 You testified earlier about some
17 discussions that were -- that occurred regarding
18 5,000 barrels per day as a Flow Rate Estimate
19 erring on the low side. Do you recall that --
20 A. Yes.
21 Q. -- testimony?
22 A. Yes.
23 Q. Were BP employees involved in those
24 discussions?

Page 255:02 to 256:16

00255:02 A. I don't recall any specific discussions
03 specifically about that the 5,000 barrel per day
04 estimate was low. There were -- I mean, now,
05 mind you, there's -- there are hundreds of people
06 milling around in this area where we work and
07 there are untold side conversations going on
08 about various topics.
09 And there is no small amount of
10 speculation about what the flow rate is. And
11 some people think it's very high. Some people
12 speculate that it's very low. Truth is, we don't
13 know. And there is no experience to base any
14 kind of visual estimation on, so it was --
15 people's estimate of the flow rate varied wildly,
16 and there were lots of discussions about that.
17 Q. (By Mr. Davis-Denny) Do you have any
18 expertise in PIV analysis, Particle Image
19 Velocimetry analysis?
20 A. No, I do not.
21 Q. Okay.
22 A. Obviously. I didn't know what it was.
23 (Laughter.)
24 Q. (By Mr. Davis-Denny) Fair enough.
25 But you do recall there being discussions
00256:01 about the 5,000 barrel per day estimate erring on
02 the low side, correct?
03 A. Yes.
04 Q. And do you recall any specific
05 individuals participating in those discussions?
06 A. Oh, it -- you know, it would have been my
07 colleagues, primarily.
08 Q. Okay. I take it you're not aware of any
09 analysis that would suggest that a 5,000 barrel
10 per day estimate was the most likely model of the
11 flow rate, right?
12 A. Can you ask that again?
13 Q. Sure. You're not aware of any analysis
14 that would suggest that a 5,000 barrel per day
15 estimate was the most likely estimate of the flow
16 rate?

Page 256:18 to 258:02

00256:18 A. No, I don't recall any modeling or --
19 that -- that suggested that.
20 Q. (By Mr. Davis-Denny) Okay.
21 A. So what I would say is early -- in the --
22 in the early days, the situation was quite
23 different than it was after the riser eroded just
24 above the BOP. The -- the estimates were made on
25 individual leaks in the riser, out the drill
00257:01 pipe, which made it even more difficult to get

02 a -- a clear number.
 03 Q. Okay. Let me just clarify, then, because
 04 at -- there are different time periods during the
 05 response effort, as you --
 06 A. Right.
 07 Q. -- point out. And so in -- in late April
 08 2010, you're not aware of any analysis that would
 09 suggest that 5,000 barrels per day was the most
 10 likely estimate of the flow rate, correct?
 11 A. No, I'm not aware of any.
 12 Q. And you're not aware, throughout May of
 13 2010, of any analysis showing that 5,000 barrels
 14 per day was the most likely estimate of the flow
 15 rate, correct?
 16 A. Correct.
 17 Q. Okay. You were shown some analysis and
 18 estimates this morning, numerous estimates of the
 19 flow rate from late April and May 2010. Do you
 20 recall those?
 21 A. Yes.
 22 Q. And those use pressure and temperature
 23 data, as well as a number of other parameters, to
 24 estimate the flow. Do you recall those?
 25 A. Yeah.
 00258:01 Q. And those were estimates that were made
 02 by BP and its contractors, correct?

Page 258:04 to 259:23

00258:04 A. Correct.
 05 Q. (By Mr. Davis-Denny) Okay. Now, I'd like
 06 to show you our Tab 11.
 07 (Discussion off the record.)
 08 Q. (By Mr. Davis-Denny) And this will look
 09 familiar to you. It's an exhibit that's been
 10 marked with a couple of different numbers in
 11 previous depositions, but you saw this earlier
 12 today.
 13 A. M-h'm.
 14 Q. This is previously marked Exhibit 9159.
 15 I think a version of it has also been previously
 16 marked as Exhibit 9240. You saw the 9240 version
 17 of it earlier today.
 18 A. Okay.
 19 Q. Just to reorient ourselves, this was the
 20 memo from the Hydraulic Kill Team that was
 21 comprised of Kurt Mix, Ole Rygg, and William
 22 Burch?
 23 A. (Nodding.)
 24 Q. Do you recall this?
 25 A. Yes.
 00259:01 Q. And it was sent to Jonathan Sprague of BP
 02 on May 9th of 2010?
 03 A. Yes.
 04 Q. Okay. I'd like you to focus on the Table

05 on the second page of this memo. And do you see
 06 where this Table, the fourth column over, has
 07 some Flow Rate Estimates in barrels of oil per
 08 day?
 09 A. I do.
 10 Q. Okay. And you understand that these
 11 estimates were calculated using the OLGA-WellKill
 12 software?
 13 A. Either OLGA-WellKill or OLGA-ABT, but --
 14 Q. Okay. You'll see at the bottom of the
 15 first page where it says: "Add Energy OLGA Well
 16 Kill will serve" --
 17 A. Yes.
 18 Q. -- "as the primary source of simulation
 19 data"?
 20 A. Yep.
 21 Q. Okay. So this Table on the back has the
 22 OLGA-WellKill data, right?
 23 A. That's right.

Page 259:25 to 262:07

00259:25 A. Okay.
 00260:01 Q. (By Mr. Davis-Denny) And the Table shows
 02 a range of Flow Rate Estimates going from 37,000
 03 barrels of oil per day to 87,000 barrels of oil
 04 per day. Is that correct?
 05 A. That is.
 06 Q. And that -- the -- the factor -- the
 07 input parameter that varies is the flow path. Is
 08 that correct?
 09 A. Yes.
 10 Q. Okay. And some of these flow paths are
 11 up the annulus, correct?
 12 A. Yes.
 13 Q. Some of them are up the casing?
 14 A. Yes.
 15 Q. Some of them take into account both
 16 possibilities?
 17 A. Correct.
 18 Q. And some of them also in -- incorporate
 19 current restrictions measured, correct?
 20 A. Correct.
 21 Q. Okay. Now, since it takes into account
 22 restrictions that are measured, the -- you would
 23 agree these are not worst-case discharge numbers,
 24 right?
 25 A. I'm not exactly sure what was measured.
 00261:01 I -- I -- I guess the backpressure was measured,
 02 so, yes, this would be a -- a refinement from a
 03 worst-case scenario.
 04 Q. Okay. Because a worst-case scenario
 05 would be one where you have an op -- open hole
 06 condition, right?
 07 A. Yes.

08 Q. Okay. Do you have any idea what "Marl"
09 means, by the way? Do you see where it says
10 "Marl" in the "Flow Path" column in a few
11 different places?

12 A. Yeah. I may have this wrong, but I seem
13 to remember that there was a Marl formation that
14 was not far below the 18-inch shoe. So this --
15 what this is referring to, that there's --
16 there's no potential for flow to be going to that
17 zone under these 3,800 psi conditions.

18 Q. Okay. Now, none of the estimates that
19 are presented in this Table are 5,000 barrels of
20 oil per day, correct?

21 A. That's correct.

22 Q. None of them are 15,000 barrels of oil
23 per -- per day?

24 A. No.

25 Q. In fact, there's nothing below 30,000
00262:01 barrels of oil per day in this Table, correct?

02 A. That's correct.

03 Q. And these are the results -- the Flow
04 Rate Estimates that were reported by a company
05 that you testified BP had put in charge of
06 modeling Flow Rate Estimates, correct?

07 A. Yes.

Page 262:09 to 262:20

00262:09 Q. (By Mr. Davis-Denny) Okay. I'd like to
10 have you take a look at --

11 MR. DAVIS-DENNY: Can we pull out
12 10489? It's U.S. Tab 20.

13 Q. (By Mr. Davis-Denny) I'm going to hand
14 you what you saw earlier today marked as Exhibit
15 10489. This was U.S. Tab 20.

16 MS. SARGENT: Sorry.

17 Q. (By Mr. Davis-Denny) And just to reorient
18 ourselves, these are Flow Rate Estimates that
19 Wild Well Control's Bill Burch sent to BP's Kurt
20 Mix on April 29th of 2010. Is that correct?

Page 262:22 to 263:05

00262:22 A. I had actually thought that it was
23 something that Kurt Mix sent to Bill. But, no, I
24 guess you are correct. The -- the E-mail is from
25 Bill to Kurt.

00263:01 Q. (By Mr. Davis-Denny) Okay. And it's
02 based on data that Wild Well Control had received
03 from BP, correct?

04 A. Correct.

05 Q. Okay.

Page 263:07 to 263:09

00263:07 Q. (By Mr. Davis-Denny) And it -- including
 08 pressure and temperature data that Wild Well
 09 Control had received from BP?

Page 263:11 to 264:12

00263:11 A. Yes.
 12 Q. (By Mr. Davis-Denny) Okay. If you look
 13 at Case 8 in the slide presentation that's
 14 attached to Mr. Burch's E-mail, I have a few
 15 questions for you about that slide.
 16 A. (Complying.)
 17 Q. The slide makes some assumptions,
 18 correct?
 19 A. Yes.
 20 Q. Okay. One -- one of those assumptions is
 21 that it's a "Casing Annulus Flowpath," right?
 22 A. Yes.
 23 Q. Okay. And then it also makes an
 24 assumption about the "Crushed Riser." Is that
 25 correct?
 00264:01 A. Correct.
 02 Q. It assumes that there is a -- a "Crushed
 03 Riser" that "splits" the "5-1/2 inch drill pipe
 04 at subsea BOP and" af -- "and allows flow out the
 05 6-5/8 inch drill pipe," correct?
 06 A. Yes.
 07 Q. Okay. And then there's a number of Flow
 08 Rate Estimates that are listed below that,
 09 correct?
 10 A. Yes.
 11 Q. Okay. And these are not Worst Case Flow
 12 Rate Estimates, correct?

Page 264:14 to 265:07

00264:14 A. No. These are estimates through
 15 particular geometries as listed here.
 16 Q. (By Mr. Davis-Denny) Okay. And nine of
 17 the 11 cases here present flow rates of 23,000
 18 barrels of oil per day or above. Is that
 19 correct?
 20 A. That's correct.
 21 Q. Eight of them present flow rates of
 22 39,000 barrels of oil per day or above, correct?
 23 A. I'm sorry. Ask again.
 24 Q. Sure. Eight of the eleven cases here
 25 present flow rates of 39,000 barrels of oil or --
 00265:01 per day or above?
 02 A. Yes.
 03 Q. Okay. Were you aware of any evidence in
 04 April or May of 2010 that the ID through which

05 the oil was flowing was two inches or less?
06 A. I had no indication that it was two
07 inches or less, no.

Page 265:12 to 270:21

00265:12 Q. (By Mr. Davis-Denny) Okay. I want to ask
13 you about what I think is a nomenclature issue,
14 and this goes back to the discussion you had
15 earlier about what a "dynamic kill" means. Do
16 you recall this?

17 A. M-h'm.

18 Q. Because I'm a little worried that it --
19 and you -- you had suggested, yourself, earlier
20 that at a certain point in time there was a
21 change in the nomenclature, right, to avoid some
22 of the confusion?

23 A. There was a change from conventional
24 nomenclature.

25 Q. I guess let -- let me ask the question
00266:01 flat out. And that is, that the phrase "dynamic
02 kill," it's sometimes used by those in the
03 industry to refer to what you called a momentum
04 kill or a top kill, right? I mean, you defined
05 it differently. I understand that, but it --
06 it -- it --

07 A. All the people who I know in the -- in
08 the well control business, if you -- if you came
09 to them and said, "We are planning a dynamic
10 kill," that would imply to them that we have a
11 conduit at the bottom of the well that we're
12 going to use to inject kill mud.

13 Q. Okay. Let me ask you about a specific
14 exhibit. This was actually the one that was
15 handed to you right before I started asking you
16 questions.

17 A. Okay.

18 Q. And it's Exhibit 9132. I think it was
19 passed out to the other attorneys in the room
20 before I began.

21 And I actually want you to look at the
22 memo that's attached to this E-mail. And do you
23 see up at the top it's called "Summary points
24 from the Kill the Well on Paper Discussion" of
25 May 18th, 2010?

00267:01 A. Yes.

02 Q. Okay. And if you look at the third
03 bullet point, under the Summary Points there, and
04 it says: "Modeling indicates that a dynamic kill
05 cannot be successfully executed if the oil flow
06 rate is 15000 stock tank barrels per day."

07 Do you see that?

08 A. I do.

09 Q. Okay. And 15,000 stock tank barrels per
10 day, that's the same upper limit on the top kill

11 that you had heard about, correct?

12 A. Yes.

13 Q. Okay. Now, do you see the fifth bullet

14 point, where it says: "The dynamic kill

15 operation is likely to put solids-laden fluid at

16 a substantial rate through the BOP stack and

17 riser, which may erode restrictions"?

18 A. Yes.

19 Q. Okay. And then if you'll turn back to

20 the -- to the back page of that, there's a

21 paragraph two "bar" -- paragraphs from the bottom

22 that I think sheds some light on what they mean

23 here when they're using the phrase "dynamic

24 kill." And that is the last sentence of that

25 next to the last paragraph, the one that begins:

00268:01 "This same solids-laden fluid..." Do you see

02 that?

03 A. M-h'm.

04 Q. It says: "This same solids-laden fluid

05 must also travel through the choke and kill lines

06 to access the flowing well."

07 A. Yes.

08 Q. That's -- when -- when you put

09 solid-ladens [sic] fluid in through the choke and

10 kill lines to access a flowing well, that's a top

11 kill, right?

12 A. Well, it would apply to a dynamic kill

13 with a -- a bottom Intercept flow path or the top

14 kill. To me, someone is misusing the term

15 "dynamic kill," and they are meaning to say "top

16 kill," in the sense --

17 Q. Okay.

18 A. -- that it eventually became known.

19 Q. That's -- I agree that was my

20 interpretation, as well, but I just wanted to

21 make sure that the record was clear that when --

22 when the term "dynamic kill" is used in this

23 memo --

24 A. M-h'm.

25 Q. -- it has a different meaning than the

00269:01 one that you gave it earlier, correct?

02 A. That's correct.

03 Q. Okay. That's all I have on that.

04 Thanks. Excuse me.

05 Now, you've testified earlier Wild Well

06 Control was hired by BP to work on the Macondo

07 response effort, correct?

08 A. Yes.

09 Q. And you understood BP to be the Operator

10 of the Macondo Well, right?

11 A. Right.

12 Q. And it's typically the case that Wild

13 Well Control is hired by Well Operators in these

14 types of situations, correct?

15 A. Yes.

16 Q. Okay. You -- Wild Well Control is
 17 typically not hired by the Drilling Contractor.
 18 Is that right?
 19 A. That's correct.
 20 Q. Okay. And you understood Transocean to
 21 be the Drilling Contractor here, right?
 22 A. Yes.
 23 Q. Okay. Tra -- you understood Transocean
 24 was not the Operator of the well?
 25 A. I did.
 00270:01 Q. And Wild Well Control was not hired by
 02 Transocean, correct?
 03 A. Correct.
 04 Q. Wild Well Control, during the Macondo
 05 response, did not report to Transocean; is that
 06 correct?
 07 A. Correct.
 08 Q. Wild Well Control, during the Macondo
 09 response effort, did not share its Flow Rate
 10 Estimates with Transocean. Is that correct?
 11 A. Correct.
 12 Q. It shared that flow rate data with BP,
 13 correct?
 14 A. Yes.
 15 Q. Okay. By the way, in all the
 16 communications we saw this morning and this
 17 afternoon about flow rates, that went back and
 18 forth between Wild Well Control and BP, the
 19 United States was not -- no -- no United States
 20 Government employee was copied on those
 21 communications, correct?

Page 270:23 to 271:06

00270:23 A. Ah, I'm not sure if that's the case or
 24 not, to be honest with you.
 25 Q. (By Mr. Davis-Denny) Okay. Do you ever
 00271:01 recall sharing any of your Flow Rate Estimates
 02 with the United States Government employees?
 03 A. Not specifically, no.
 04 Q. Okay. Did BP ever ask you or ask Wild
 05 Well Control to share its Flow Rate Estimates
 06 with the Government?

Page 271:08 to 275:10

00271:08 A. No.
 09 Q. (By Mr. Davis-Denny) Did you have any
 10 communications with Transocean employees during
 11 the response effort?
 12 A. Yes.
 13 Q. Who did you communicate with from
 14 Transocean?
 15 A. I believe Steve Hand.

16 Q. Okay. Did you have any negative
17 experiences with Mr. Hand?
18 A. No.
19 Q. Okay. Did you think highly of his work
20 during the response effort?
21 A. I do.
22 Q. Okay. Was there anyone else from
23 Transocean that you recall communicating with
24 during the response effort?
25 A. Well, unfortunately, I probably don't
00272:01 recall any names, but -- oh, I do, too. The
02 Toolpusher from one of the rigs. I can't recall
03 his name.
04 Q. Okay.
05 A. But we -- we interacted with the -- the
06 Rig Teams on the -- the DDII for the relief well,
07 and as we assembled all the kill equipment and
08 installed the lines and did all of the
09 preparatory work for the dynamic kill, we -- we
10 interacted quite frequently with the -- with the
11 Rig Team, with Transocean.
12 Q. And were you impressed with the effort
13 put forward by the Transocean Teams?
14 A. Yes.
15 Q. Okay. Are you aware of any misconduct by
16 Transocean in connection with the Macondo
17 response effort?
18 A. No.
19 Q. All right. Did you ever see any evidence
20 that would indicate that Transocean was the one
21 who was making decisions about which Source
22 Control procedures to attempt?
23 A. No.
24 Q. Did you ever see any evidence that would
25 suggest Transocean was the one making decisions
00273:01 about how to sequence the Source Control
02 procedures that were chosen?
03 A. That they were making the decisions? No.
04 Q. Okay. I'd like to hand you Tab 17 from
05 Transocean's binder.
06 (Exhibit No. 10624 marked.)
07 Q. (By Mr. Davis-Denny) This will be
08 Exhibit 10624. And if you could please look at
09 the second E-mail on that page -- on the first
10 page. Do you see the E-mail from Fred Ng to
11 Christopher Murphy, sent on May 26th of 2010?
12 A. Yes.
13 Q. And Mr. Murphy, he worked at Wild Well
14 Control at the time; is that correct?
15 A. Yes.
16 Q. Okay. And so did Mr. Ng, correct?
17 A. Yes.
18 Q. And Mr. Ng wrote: "Chris,
19 "Thanks for the update.
20 "What are the hole volumes for inside the

21 casing, and for the annulus?
 22 "How much mud capacity on the rig /
 23 barge?
 24 "May be all this is in the top kill
 25 procedure, but I do not have a copy of it. If
 00274:01 so, can you send me one?
 02 "Thanks,
 03 "Fred Ng."
 04 Did I read that correctly?
 05 A. Yes.
 06 Q. And it -- this E-mail was sent on the
 07 first day of the top kill, correct?
 08 A. Yes, it was.
 09 Q. And if I understand it correctly, Mr. Ng
 10 is asking for a copy of the top kill procedure
 11 because he doesn't have a copy of that procedure,
 12 correct?
 13 A. Yes.
 14 Q. Okay. Now, there's an E-mail at the top
 15 of the page from Mr. Murphy that's a response
 16 back to Mr. Ng's E-mail, correct?
 17 A. Correct.
 18 Q. He writes in the first two lines: "If I
 19 had a copy I would send it to you but the
 20 procedures are need to know basis and WWCI are
 21 not on the list.
 22 "I know it is a ridiculous situation to
 23 be in but here we are anyway."
 24 Did I read that correctly?
 25 A. You did.
 00275:01 Q. Okay. So Mr. Murphy did not have the top
 02 kill procedures either, correct?
 03 A. That's correct.
 04 Q. And the reference to "WWCI," that's a
 05 reference to Wild Well Control, right?
 06 A. Yes.
 07 Q. And so BP apparently had not included
 08 Wild Well Control on the list of parties who
 09 could get the top kill procedure; is that
 10 correct?

Page 275:12 to 276:05

00275:12 A. No. That's clearly not correct.
 13 Q. (By Mr. Davis-Denny) Okay. Can you --
 14 A. We had several people working on the top
 15 kill procedure. Now, Chris Murphy is a Marine --
 16 works in the Marine Department. So his focus was
 17 on subsea intervention activities and things to
 18 do with vessels, and not directly related to the
 19 kill operation or the direct intervention.
 20 Nor was Fred Ng, for that matter. Fred
 21 Ng, to my recollection, was not directly involved
 22 in the Macondo Incident ever.
 23 Q. Okay.

24 A. So --
 25 Q. If they were not involved, why are they
 00276:01 trying to get the top kill procedure here? Do
 02 you have an understanding of that?
 03 A. Curiosity, I suppose. Now, Fred has a
 04 tendency to contribute even if he's not asked to.
 05 He's just that kind of guy.

Page 276:09 to 277:23

00276:09 Q. (By Mr. Davis-Denny) Look at the E-mail
 10 on the second page, please. And this is an
 11 E-mail that Fred Ng sent on May 26th of 2010.
 12 A. Yes.
 13 Q. He writes: "Chris,
 14 "I've been watching the live video feed
 15 from BP at the following link all night.
 16 Flow" -- "flow from the holes above the LMRP,
 17 which holes appeared to be getting visibly more
 18 washed out all the time" seem "to be as strong or
 19 may be stronger than before."
 20 Did I read that correctly?
 21 A. Yes.
 22 Q. And if I understand correctly, what he is
 23 referring there to is that it appeared that
 24 the -- during the top kill, the holes in the
 25 riser were -- appeared to be increasing in size;
 00277:01 is that right?
 02 A. You'll have to -- well, yeah, you'll have
 03 to remind me if we were actually doing pumping
 04 operations on May 26th. I think we were doing
 05 diagnostic pumping operations at that time, which
 06 were very low rate.
 07 Q. Okay. And even at those low rates,
 08 Mr. Ng was observing increased erosion of the
 09 holes in the -- in the riser; is that correct?
 10 A. Well, that's his opinion, yes. I'm not
 11 sure if that's shared by many.
 12 Q. You're testifying on behalf of Wild Well
 13 Control, correct?
 14 A. I am.
 15 Q. All right. Let me ask you about a
 16 different E-mail. Let's look at Tab 20.
 17 (Exhibit No. 10625 marked.)
 18 MR. DAVIS-DENNY: Thanks.
 19 Q. (By Mr. Davis-Denny) This is
 20 Exhibit 10625. (Tendering.) This is an E-mail
 21 that Chris Murphy sent on May 29th of 2010,
 22 correct?
 23 A. Yes.

Page 277:25 to 278:24

00277:25 Q. (By Mr. Davis-Denny) And he writes in the

00278:01 first sentence: "I talked this evening to Harry
 02 Thierens and then later to Gordon Berrill (Senior
 03 VP Operations, HSSE & Engineering). Both
 04 confirmed the following:"
 05 Before I go any further, Mr. Thierens and
 06 Mr. Birrell, they worked for BP, correct?
 07 A. Yes.
 08 Q. Okay. It says in the first paragraph:
 09 "DD II rig has been reassigned to drilling the
 10 second relief well. Therefore, the capping
 11 option has been made dormant." Correct?
 12 A. Yes.
 13 Q. And then look at No. 5, the fifth
 14 paragraph, and go about five sentences down. At
 15 the end of -- I'm sorry, five lines down. At the
 16 end of that line, it begins: "The poor
 17 communication..."
 18 Do you see that?
 19 A. Yes.
 20 Q. He says: "The poor communication"
 21 with -- "within BP has always been an issue..."
 22 What -- do you have an understanding of
 23 what "poor communication within BP" he was
 24 referring to?

Page 279:01 to 279:08

00279:01 A. Well, I think that's a reference to the
 02 complexity of the situation and the difficulty of
 03 everyone feeling like that they were fully
 04 informed all the time.
 05 Q. (By Mr. Davis-Denny) M-h'm. And there
 06 were -- as I understand it, there were concerns
 07 even within BP that they were not -- that
 08 information was not being shared within BP?

Page 279:10 to 280:11

00279:10 A. Okay. Are you --
 11 Q. (By Mr. Davis-Denny) Did you -- did
 12 you -- did --
 13 A. Oh, did I?
 14 Q. Did you perceive that?
 15 A. Well, I knew that there were challenges
 16 trying to make sure that all the information flow
 17 was done correctly and timely.
 18 Q. Okay. If you'll turn to the last page of
 19 the E-mail.
 20 A. Okay.
 21 (Discussion off the record.)
 22 Q. (By Mr. Davis-Denny) Do you see the one
 23 from Dave -- from you --
 24 A. H'm, yes.
 25 Q. -- on May 29th?

00280:01 A. Yes.
02 Q. And you actually are asking for some
03 information from Chris and Bill, "Bill" being
04 Bill Burch, correct?
05 A. Yes.
06 Q. Okay. And you say, at the -- in the last
07 sentence: "Bill - you said something the other
08 day about being told that you and Kurt Mix were
09 told that your input was not needed?"
10 Do you see that?
11 A. Yes.

Page 280:25 to 285:11

00280:25 Q. If you'll turn two pages back, I want you
00281:01 to look at the E-mail from Terry Foster on
02 May 29th.
03 A. Yes.
04 Q. And you see where he writes: "I talked
05 to Chris this morning and Mazzella is not
06 including WWC in any of the decisions but now is
07 trying to blame the failure of the 'Top Kill' and
08 other problems on WWC.
09 "The perception within BP is WWC is not
10 doing our 'normally good' job.
11 "I think this is turning BAD for WWC
12 quickly but we are not being invited to the party
13 to help make the decisions.
14 "Mazzella is looking for an escape goat
15 and he has chosen WWC."
16 Did you have any conversations with any
17 of the individuals on -- on this E-mail about
18 these concerns with BP?
19 A. Yes, I'm sure I did.
20 Q. What do you recall about those
21 discussions?
22 A. Well, there were so many people from Wild
23 Well working in so many different capacities, and
24 as we said, the -- it was challenging to ensure
25 that everything was communicated to everyone all
00282:01 the time.
02 And people tended to have perceptions
03 about how BP was viewing our performance.
04 Q. M-h'm.
05 A. And I attempted to assure everyone that
06 those operations, such as the top kill operation,
07 were being well-managed and that we -- we had no
08 need to try to keep everyone in the loop with
09 every single iteration of what was going on with
10 the planning of the top kill operation.
11 So a lot of the frustration came from the
12 guys who were involved with the Marine Operations
13 wondering what was happening with the kill
14 planning and implementation.
15 Q. There were a number of different

16 employees within Wild Well Control that we've, I
17 think, now seen had expressed in writing concerns
18 in May of 2010 about Wild Well Control not being
19 included by BP in decision-making about Source
20 Control, correct?
21 A. Yes.
22 Q. Okay. It wasn't limited to just one or
23 two individuals, correct?
24 A. There were at least a handful, yes.
25 Q. At least a handful. Okay.
00283:01 I'd like to show you --
02 (Discussion off the record.)
03 Q. (By Mr. Davis-Denny) I'd like to show you
04 Tab 18, which will be Exhibit 10626.
05 (Exhibit No. 10626 marked.)
06 A. (Reviewing document.)
07 Q. (By Mr. Davis-Denny) This is an E-mail
08 that you received from Chris Murphy on May 27th
09 of 2010, correct?
10 A. Yes.
11 Q. And he sent it to three other colleagues
12 of yours at Wild Well Control, correct?
13 A. Yes.
14 Q. And he writes in the first sentence: "In
15 case you are like Bill and I, 'procedure less',
16 here is a copy I managed to talk my way into this
17 evening."
18 Did I read that correctly?
19 A. Yes.
20 Q. And he has a number of attachments to his
21 E-mail, correct?
22 A. Yes.
23 Q. One of those is a "...Momentum Kill
24 Pumping Operations..." Is that correct?
25 A. Yes.
00284:01 Q. One is a "Kill Well Plan -50 & 40bpm
02 injection" --
03 A. Yes.
04 Q. -- spreadsheet, it looks like?
05 A. Correct.
06 Q. And then there's a "kill profile 2.pdf,"
07 correct?
08 A. Correct.
09 Q. He goes on, and he says: "Also attached
10 is a 'kill well plan -50 & 40 etc.xls'..." and
11 then to save time, I'm going to skip down a
12 couple of sentences.
13 "Apparently this workbook was issued to
14 the BP kill team. Our having this could cause my
15 BP source problems if it were made public. Call
16 me paranoid but when the well kill experts are
17 not included in procedure generation and issue I
18 see reasons I do not like."
19 Did I read that correctly?
20 A. You read it correctly. I'm not sure if I

21 understand it; but, yes.
22 Q. Okay. Well, it -- it appears to be
23 another example of a Wild Well Control employee
24 being frustrated about not being included in --
25 in Source Control procedures, correct?
00285:01 A. He didn't need to be included, so I guess
02 his frustration, yeah, was -- I didn't think it
03 was justified, but he evidently did.
04 Q. You didn't think what was justified, sir?
05 A. Frustration on the part of Chris Murphy.
06 Q. Okay.
07 A. Chris Murphy's job was to deal with the
08 Marine issues, not the kill issues.
09 Q. Okay. Just to be clear, I didn't ask you
10 what his job was. I was asking you: He -- he
11 was expressing frustration, correct?

Page 285:13 to 286:01

00285:13 A. He is expressing frustration.
14 Q. (By Mr. Davis-Denny) Okay.
15 A. He's actually expressing concern that
16 Wild Well Control is not involved in the creation
17 of these documents, and he's wrong about that,
18 because we were involved with the creation of
19 these documents. He might not have been, but
20 Wild Well Control was.
21 Q. Okay. And so, sir, did -- you seem to
22 be, at various points, stepping away from
23 comments that were made by your colleagues at
24 Wild Well Control and defending procedures that
25 occurred on the Source Control side. Is that --
00286:01 is that your position?

Page 286:03 to 286:03

00286:03 A. Well my --

Page 286:05 to 286:15

00286:05 A. -- my intent is to put these frustrations
06 into context, and that they were due primarily to
07 maybe poor communication between the Teams and an
08 expectation on the part of the people involved
09 with the Marine Operations that they should be
10 made more fully aware of what was being done on
11 the kill operation side.
12 Q. (By Mr. Davis-Denny) Okay. But the poor
13 communication issues weren't just about the
14 Marine Operations side of Wild Well Control,
15 right?

Page 286:17 to 287:01

00286:17 A. Well, when I -- when I refer to the "poor
 18 communications," I'm referring to the
 19 communication between the Teams, the lack of
 20 keeping the people on the Marine side of the
 21 intervention up to date on what was being planned
 22 on the kill intervention side of the operation.
 23 Q. (By Mr. Davis-Denny) But you, yourself,
 24 were concerned about the processes and the
 25 communication that was going on at -- with BP,
 00287:01 correct?

Page 287:03 to 288:04

00287:03 A. I was concerned with -- with the com --
 04 well, I was concerned about the frustration
 05 within some of my colleagues that their ideas
 06 were not being fully considered.
 07 (Discussion off the record.)
 08 Q. (By Mr. Davis-Denny) By BP?
 09 A. Yes.
 10 Q. Okay.
 11 A. Well, let me say by BP and by others on
 12 the Kill Planning Team.
 13 Q. Okay. What others are you thinking
 14 about?
 15 A. Well --
 16 Q. Who -- who are the others that you're
 17 thinking about?
 18 A. Well, myself, for one.
 19 (Exhibit No. 10627 marked.)
 20 Q. (By Mr. Davis-Denny) I thought we were
 21 talking about a frustration with others who were
 22 not taking into account Wild Well Control's
 23 views. I assumed you were taking into account
 24 Wild Well Control's views.
 25 A. Yes.
 00288:01 Q. Okay. So -- and -- and I think we've
 02 agreed there was -- you had a concern that BP was
 03 not taking into account Wild Well Control's views
 04 in making its decisions?

Page 288:06 to 289:20

00288:06 A. I didn't have too much of a concern, but
 07 my -- some of my colleagues did. And I tried to
 08 reassure them that their views and the -- the
 09 consolidated views of Wild Well Control were
 10 being fully considered by BP.
 11 Q. (By Mr. Davis-Denny) I'd like to hand you
 12 Exhibit 10627, and it's Tab 29. Sir, this is
 13 an -- if you'll look at the second E-mail on the
 14 first page.
 15 A. M-h'm.

16 Q. It is an E-mail that you sent; is that
 17 correct?
 18 A. Yes.
 19 Q. It's an E-mail you sent to Pat Campbell;
 20 is that right?
 21 A. Yes.
 22 Q. Mr. Campbell was the Head of -- of your
 23 organization at the time?
 24 A. Yes.
 25 Q. Okay. You write in the second paragraph:
 00289:01 "This is a difficult atmosphere to exert the
 02 influence that we are accustomed to. Lots of
 03 reasons for that including the sheer size of the
 04 group, the disconnect between the decision makers
 05 (upper management, scientific community &
 06 government), the fact that BP is applying their
 07 normal well delivery process & project management
 08 scheme to this situation even though it clearly
 09 does not fit and nobody (not even BP) understands
 10 how to develop Basis of Design & Statements of
 11 Requirements or how to maneuver through the
 12 'stage gates' (evaluate, select, define, execute,
 13 etc.). It has been a 3 ring circus with an
 14 incredible amount of disconnect between the
 15 various groups." Is that correct?
 16 A. That is correct.
 17 Q. And you believed that to be true when you
 18 wrote it, correct?
 19 A. I did.
 20 Q. Okay.

Page 289:22 to 292:21

00289:22 Q. (By Mr. Davis-Denny) I want to get a
 23 sense of just how involved you were and how
 24 involved some of the other employees at Wild Well
 25 Control were in the incident, because I
 00290:01 understand there were a significant number of
 02 Wild Well Control employees involved, and I
 03 assume the level of their involvement may have
 04 varied; is that correct?
 05 A. That's correct.
 06 Q. Okay. Was there one person or a small
 07 group of people who were more involved in the
 08 response effort than -- than others?
 09 A. Well, I say there were -- there were
 10 smaller groups of people who were involved
 11 with -- with the individual initiatives.
 12 Q. Okay. So take flow rate, for example.
 13 A. M-h'm.
 14 Q. It seems like we see Bill Burch's name
 15 appearing on a lot of communications about flow
 16 rate.
 17 A. Right.
 18 Q. Is it fair to say that Mr. Burch was more

19 involved than you were in the flow rate --
20 A. Yes.
21 Q. -- discussions; is that correct?
22 A. That's correct.
23 Q. Okay. Were there other employees who
24 were more involved than you were in the flow rate
25 discussions?
00291:01 A. No.
02 Q. Okay. Mr. Burch, you would agree, was --
03 is more knowledgeable about the flow rate
04 discussions that were occurring than -- than you
05 are, because he was more involved, correct?
06 A. Yes.
07 Q. Okay. And we've established that you did
08 not talk with Mr. Burch to find out what he knew,
09 in preparing for your deposition today; is that
10 correct?
11 A. That's correct.
12 Q. Okay. Was there -- were there any
13 employees at Wild Well Control who were more
14 involved than you were in the top kill effort?
15 A. No.
16 Q. Were -- were there other employees who
17 were equally as involved as you were in the top
18 kill effort?
19 A. Well, they were equally as involved, but
20 I was responsible for the planning from -- from
21 the Wild Well Control side.
22 Q. Okay. Who were the employees who were
23 equally as involved as you were in the top kill
24 effort?
25 A. Rolle Gomez, Kerry Girlinghouse, Larry
00292:01 Nixon. I think that's about it.
02 Q. Okay. Did you talk with any of those
03 individuals in preparation for today's
04 deposition?
05 A. No.
06 Q. Okay. Was there anyone who was more
07 involved than you were in the analysis of why the
08 top kill had failed?
09 A. I don't believe so.
10 Q. Okay. Were there any in -- individuals
11 who were specifically focused on the BOP on BOP
12 Project?
13 A. Yes.
14 Q. All right. Who were those individuals?
15 A. David Moody, Chris Murphy, and probably
16 Mike Cargol.
17 Q. And you didn't talk with any of those
18 employees in preparation for today's deposition,
19 did you?
20 A. No.
21 Q. Okay.

00294:20 Q. But your firm, Wild Well Control, was
 21 involved pretty much from the beginning, were
 22 they not?
 23 A. That's true.
 24 Q. Okay. In fact, as I understand
 25 Mr. Campbell's earlier testimony, Wild Well
 00295:01 Control had an Agreement with BP or a Contract
 02 where they were called out in reference to well
 03 control events when they occurred. Is that a
 04 fair statement?
 05 A. That's a fair statement.
 06 Q. In fact, that did happen in March of
 07 2010; is that true?
 08 A. Yes.
 09 Q. And Mr. Girlinghouse went out to the --
 10 to the vessel, or at least assisted in a -- a
 11 Well Control Event, true?
 12 A. Yes, true.
 13 Q. And your job there, being Wild Well
 14 Control in April of 2010 onward, was to consult
 15 with BP and assist them in attempting to deal
 16 with the blowout. Is that a fair statement?

Page 295:18 to 296:02

00295:18 A. Well, I don't know that there was ever
 19 any blowout. There was a pressure control
 20 situation that they asked us to help resolve.
 21 Q. (By Mr. von Sternberg) Okay. So by the
 22 time you got there, the blowout had already
 23 occurred, and you were trying to deal with the
 24 pressure situation and the loss of oil?
 25 A. I don't know that there ever was really a
 00296:01 blowout on that -- on that situation, on
 02 the March 8th.

Page 296:12 to 297:17

00296:12 Q. Let's get to April 20th of 2010.
 13 A. All right.
 14 Q. Wild Well Control was called out in
 15 reference to the Macondo Incident to assist and
 16 consult with BP in reference to stopping the flow
 17 of oil into the environment, so to speak?
 18 A. Right.
 19 Q. Okay. And at least on -- as of April
 20 20th of 2010, the oil was coming from the
 21 reservoir up onto the vessel and then burning.
 22 Is that a fair statement?
 23 A. Yes.
 24 Q. So at least on April 20th of 2010, after
 25 the explosion and blowout, or blowout and
 00297:01 explosion, depending on who you talk to, the oil

02 was burning off and not going into the
03 environment, so to speak?
04 A. Well, at least part of it was.
05 Q. Wouldn't you say a vast majority of it
06 was burning off?
07 A. I would say a majority, yes.
08 Q. And then when the vessel sank on the 22nd
09 of April of 2010, the well was -- or the fire was
10 extinguished. Is that a fair statement?
11 A. Yes.
12 Q. Okay. And then it was a few days after
13 that when they determined, or they observed an
14 actual leak from the riser or the end of the
15 drill pipe, and oil began flowing into the ocean,
16 true?
17 A. That's how I recall it, yes.

Page 297:24 to 301:16

00297:24 Q. Okay. So when you first got to the
25 Westlake facility on April 23rd of 2010, oil
00298:01 wasn't escaping from the riser at that point. Is
02 that a fair statement?
03 A. That's a fair statement, yes.
04 Q. Okay. It wasn't until a few days after
05 that, that you recall?
06 A. Well, we thought that there was no flow.
07 Q. Okay.
08 A. Obviously there was. We just hadn't
09 discovered it yet.
10 Q. Okay. So at least as of April 23rd of
11 2010, you thought there was no flow from the well
12 into the ocean; is that true?
13 A. That's true.
14 Q. Okay. Who was it from Wild Well Control
15 that was initially involved; meaning, who was the
16 earliest contact from Wild Well Control that went
17 to or assisted BP after the explosion?
18 A. I seem to remember that the call, the
19 initial call was made to Joe Dean Thompson. And,
20 again, I think I seem to recall that that was
21 quite late at night, and the message at that
22 point was: "We have an event. Stand by for more
23 news, and we're going to need to mobilize people.
24 We're just not quite sure what we're up against
25 yet."
00299:01 Q. Okay. Do you have an understanding,
02 either as the Representative of Wild Well Control
03 here or personally yourself, as to when the first
04 Wild Well Control employee actually made it to
05 the Command Center at Westlake offices of BP in
06 Houston, Texas?
07 A. I want to say it was on the morning of
08 the 21st of April.
09 Q. Okay. And would you recall at this point

10 who that was?

11 A. I'm going to say it was probably David
12 Moody.

13 Q. Okay. Now, let me jump back a little
14 bit. In reference to Halliburton's participation
15 and what you particularly did from April 23rd
16 until you were done with this Project, did they
17 have any input into any of the decisions that you
18 personally made or the recommendations that you
19 made to BP?

20 A. Only in regard to how we would implement
21 some of the kill operations.

22 Q. Okay. And that was going to be my next
23 question. They did participate in July of 2010
24 in reference to the dynamic kill after the
25 capping of the well and after the relief well was
00300:01 drilled; is that true?

02 A. Yes. And they participated in the May
03 top kill operation.

04 Q. Okay. And either the May top kill
05 operation or the July dynamic kill operation, do
06 you have any complaints about anything that
07 Halliburton did that you witnessed in reference
08 to the operations that were being performed by BP
09 at that time?

10 A. No, not at all.

11 Q. Okay. Now, there's been some discussion
12 about flow rate calculation. As I understand it,
13 Wild Well Control was never asked to do a
14 specific flow rate calculation to say: "This is
15 exactly what we believe was coming out of the
16 well at any given time." Is that correct?

17 A. Well, it's true in the sense that the
18 focus was not on trying to determine just what
19 the flow rate coming out of the well was. The --
20 the focus really was to determine the
21 requirements for the relief well, because the
22 first thing we need to know before we go out and
23 start drilling a relief well is: How big does
24 that hole need to be when I make the intercept?
25 If I drill a -- a relief well that's too small to
00301:01 pump the required mud rate through, well, it's
02 just a waste of time.

03 So the real intention of all the modeling
04 was to try to determine what would be the maximum
05 mud pump rate required and the maximum volume
06 required to kill the well.

07 The flow rate was just associated with
08 that determination.

09 Q. Okay. And other than the modeling we've
10 discussed already today in reference to Add
11 Energy and to what your colleague utilized with
12 the OLGA software, to your knowledge, Wild Well
13 Control didn't do any more specific modeling in
14 reference to flow rates?

15 A. No.
16 Q. Okay.

Page 302:05 to 302:05

00302:05 (Exhibit No. 10628 marked.)

Page 302:15 to 305:10

00302:15 Q. (By Mr. von Sternberg) All right. Now,
16 you're looking at this document that's been
17 marked as 10628, sir, and it looks to me like
18 it's an -- a Project Memo from Wild Well Control;
19 is that correct?
20 A. Yes.
21 Q. And it's dated April 22 of 2010; is that
22 correct?
23 A. Yes.
24 Q. Approximately 0430 in the morning. Is
25 that a fair statement?
00303:01 A. Yes.
02 Q. Okay. Do you recall seeing this Project
03 Memo before?
04 A. It looks familiar.
05 Q. Okay. Only a couple of things I want to
06 focus on quickly, because, like I said, I'm
07 running out of time already.
08 As of 22 April, 2010, at least what's in
09 this Project Memo, Wild Well Control had already
10 recommended that the riser be disconnected from
11 the wellhead such that the vessel could be
12 released. Is that a fair statement?
13 If you look at the third bullet point on
14 the first page --
15 A. M-h'm. Yes.
16 Q. Okay. And, in fact, the second bullet
17 point even says: "WWCI recommends that the riser
18 package be disconnected ASAP from the subsea
19 BOP/wellhead." Is that a fair statement?
20 A. Yes.
21 Q. Okay. And then if you go to the first
22 bullet point, about the -- let's see, second
23 sentence where it starts with 16 inches.
24 A. Yes.
25 Q. "16" liner may be subjected to excessive
00304:01 wellbore pressure should the current BOP Blind
02 rams be functioned to the CLOSED position." Do
03 you see that, sir?
04 A. Yeah.
05 Q. Is that in reference to the burst discs
06 that we've been talking about today?
07 A. Well, although it doesn't say it, it's
08 a -- they're -- they're implying that there
09 may -- there might be some damage to the 9 and

10 seven-eighths, and if the well was shut-in, then
 11 that pressure would be exerted on the 16 inch. I
 12 see no mention of the disc in that statement,
 13 but --

14 Q. But your understanding is that's what it
 15 would be talking about?

16 A. Yeah. Well, they -- if you put pressure
 17 on the 16 inch, you'll put pressure on the burst
 18 disc.

19 Q. And then if you'll go to Page 3 of 5,
 20 which ends in Bates number 15489, you'll see
 21 again the -- one of the "Cons" in reference to
 22 functioning the BOP to the closed position is it
 23 may result in "equipment failure and wellbore
 24 broach (i.e., the 16-inch casing)."

25 Do you see that, sir?

00305:01 A. Yes.

02 Q. Okay. And that was Wild Well Control's
 03 statement as of 22 April of 2010 at 4:30 a.m. Is
 04 that a fair statement?

05 A. That's a fair statement.

06 Q. Okay. And for the ladies and gentlemen
 07 out in the crowd, Tab 2 is the next thing I'm
 08 going to hand you. I'm going to mark it as
 09 Exhibit 10629.

10 (Exhibit No. 10629 marked.)

Page 305:13 to 306:06

00305:13 MR. VON STERNBERG: You're welcome.

14 Q. (By Mr. von Sternberg) This starts with
 15 an E-mail from Kerry Girlinghouse who is a
 16 Representative of Wild Well Control; is that
 17 true?

18 A. Yes.

19 Q. And the date is April 22 of 2010 at
 20 5:13 p.m., but below that if you go down two
 21 E-mails, is an E-mail from Freddy Gebhardt. Do
 22 you know who he is?

23 A. Yes.

24 Q. He's a Wild Well Control person as well;
 25 is that true?

00306:01 A. Yes.

02 Q. Okay. And, in fact, his signature block
 03 says he's the President at the time; is that
 04 right?

05 A. I thought he became President later, but
 06 obviously he was.

Page 306:12 to 307:07

00306:12 Q. And once again, it looks like Wild Well
 13 Control is recommending that the riser be cut as
 14 soon as possible so that the vessel can be saved.

15 Is that a fair statement, the fourth bullet point
16 under "SSBOP Intervention"?

17 A. (Reviewing document.) I'm seeing a
18 statement about explosives on the fourth bullet
19 point.

20 Q. Well, if you look at the one above it, it
21 says we "need to look at other cutting options."
22 He's talking about the riser. Is that a fair
23 statement?

24 A. I would assume so, yeah.

25 Q. Yeah. And then the -- the liner-shaped
00307:01 charges would be around the riser to cut it
02 immediately or remotely. Is that a fair
03 statement?

04 A. Yes.

05 Q. Okay. Now, there's an exhibit previously
06 marked as Exhibit 3918 that we discussed in
07 Mr. Campbell's deposition.

Page 307:19 to 308:03

00307:19 Q. (By Mr. von Sternberg) Anyway, sir, if we
20 go to the second page of that document, it looks
21 like a Project Memo No. 13 dated 27, April of
22 2010. Is that a fair statement?

23 A. Yes.

24 Q. So at least as of April 27th of 2010,
25 Wild Well Control had already provided BP with a
00308:01 similar procedure of a BOP-on-BOP remedy; is that
02 correct?

03 A. Yes.

Page 308:16 to 309:21

00308:16 Q. Good afternoon, Mr. Campbell (sic). My
17 name is David Jones, and I represent Cameron.
18 Earlier today you were asked about Exhibit 10607,
19 which I think is Tab 125 in the Department of
20 Justice binder. And I want to direct you to a
21 specific sentence on the bottom of the second
22 page. In an E-mail from Mr. Campbell dated July
23 30, 2010, at the very bottom of the page he says:
24 "If there is no solid particulate matter in the
25 produced media, they need to write a paper for
00309:01 SPE because it is unique in the history of
02 blowouts." Do you see that?

03 A. Yes.

04 Q. And I believe you were asked about that
05 sentence earlier and whether or not that
06 reflected what Mr. Campbell's thoughts were, and
07 I just want to ask you: In your experience, do
08 blowouts produce solid particulate matter?

09 A. Always.

10 Q. And in your experience, do wells that are

11 blowing out produce more solids at the beginning
12 and taper off over time, or are you able to make
13 such a generalization?

14 A. I don't think I could say that, no.

15 Q. Okay. In your experience, do wells that
16 are blowing out produce more solids than wells
17 that are produced, say, in an orderly fashion to
18 be --

19 A. Yes.

20 Q. -- produced for production?

21 A. Yes.

Page 310:15 to 311:06

00310:15 Q. And in your preparation for this
16 deposition, you didn't meet with any lawyers who
17 represent BP, correct?

18 A. Correct.

19 Q. All right. We'd like to start talking
20 about top kill. We've seen some documents
21 earlier, and we -- I think we can just go without
22 them unless we need to refresh your recollection,
23 about Mr. Campbell believing that BP was going to
24 go with top kill because it was the first
25 available intervention procedure. Do you recall

00311:01 that?

02 A. Yes.

03 Q. Was Mr. Campbell involved in all the
04 decision-making within BP, so that he would know
05 all of the rationales behind such a procedure?

06 A. No.

Page 311:08 to 311:13

00311:08 Q. (By Mr. Bentsen) Is it Wild Well's
09 position that top kill was, in fact, the first
10 available intervention procedure at the end of
11 May?

12 A. Well, the -- aside from the capping
13 procedure, I suppose.

Page 312:04 to 312:04

00312:04 (Exhibit No. 10630 marked.)

Page 312:06 to 312:24

00312:06 Q. (By Mr. Bentsen) And if you look down
07 towards the bottom of the page, it appears to be
08 an E-mail from Kerry Girlinghouse of Wild Well.
09 Do you see that?

10 A. Yes.

11 Q. Okay. And that's May 28th, and it

12 indicates, the first line, that BOP testing is
13 ongoing, correct, or that it has started?
14 A. Correct.
15 Q. And that the subsea test ram will remain
16 on the stack until the ram has been tested,
17 correct?
18 A. Yeah.
19 Q. And then it will be changed to a blind
20 ram, correct?
21 A. Yes.
22 Q. So based on this information, the DDII
23 BOP stack was not available in -- at May 28th,
24 correct?

Page 313:01 to 313:10

00313:01 A. I don't know that I would interpret that
02 to mean that it's not available. It's being
03 tested.
04 Q. (By Mr. Bentsen) All right. Is Wild Well
05 aware that, during this time period, testing was
06 going on on the BOP that showed several leaks?
07 A. I don't know that I was ever aware of
08 that.
09 Q. All right. Sitting here today, is Wild
10 Well aware of that?

Page 313:12 to 313:16

00313:12 A. Some of my colleagues may have been.
13 Q. (By Mr. Bentsen) Okay. And is Wild Well
14 aware that there were problems with the Deadman
15 on the DDII BOP that required repairs at this
16 time period?

Page 313:18 to 313:24

00313:18 A. Again, some of -- some of my colleagues
19 were probably aware, that I wasn't personally
20 aware of it.
21 Q. (By Mr. Bentsen) Okay. So sitting here
22 today, Wild Well cannot say, though, that the
23 BOP-on-BOP procedure was available at the end of
24 May?

Page 314:01 to 314:16

00314:01 A. Well, I -- I -- I'm not sure that I can
02 agree with that statement.
03 Q. (By Mr. Bentsen) What do you -- what
04 information do you have to disagree with that
05 statement?
06 A. Well, I'm not sure that there was

07 anything with the -- I'm not aware of anything on
 08 the DDII BOP stack that would preclude us from
 09 using it to install on top of the HORIZON BOP
 10 stack.

11 Q. Is it Wild Well's position that a BOP
 12 that was leaking and nonfunctional would be
 13 advisable to be installed?

14 A. No, that would not be --

15 Q. Okay.

16 A. -- our recommendation.

Page 314:19 to 314:23

00314:19 Q. (By Mr. Bentsen) If modifications to the
 20 BOP were required for the procedure that had not
 21 yet been done at the end of May, is it Wild
 22 Well's position that it was ready to go at that
 23 time?

Page 314:25 to 315:07

00314:25 A. It -- it would not be our recommendation
 00315:01 to install the BOP unless it was competent and
 02 ready to function.

03 Q. (By Mr. Bentsen) Okay. So if whatever
 04 modifications needed -- needed to be made had not
 05 yet been made at the end of May, the procedure
 06 would not be ready to go, in Wild Well's
 07 position -- view?

Page 315:09 to 315:12

00315:09 A. That's correct.

10 Q. (By Mr. Bentsen) Okay. Going back to top
 11 kill, during the initial efforts to engage in top
 12 kill, it appeared to Wild Well --

Page 315:16 to 315:19

00315:16 Q. (By Mr. Bentsen) -- that the top kill was
 17 having positive results; is that right?

18 A. There was a brief moment in time where we
 19 thought it was having positive results, yes.

Page 315:22 to 316:16

00315:22 Q. (By Mr. Bentsen) Will you -- this will be
 23 Exhibit 10631. And this is an E-mail from Pat
 24 Campbell, correct, on --

25 A. Yes.

00316:01 Q. -- on May 26th?

02 A. (Nodding.)

03 Q. And the first line is: "Mood is good at
 04 this time," correct?
 05 A. Correct.
 06 Q. And it says: "Progress is" -- "Progress
 07 is positive at this time." Correct?
 08 A. Yes.
 09 Q. "Flow at the seafloor has been stopped at
 10 this time." Correct?
 11 A. Yes.
 12 Q. So it indicates, at least in Pat
 13 Campbell's view as of May 26th, that the top kill
 14 efforts were having a positive impact in
 15 potentially succeeding?
 16 A. Po --

Page 316:18 to 317:06

00316:18 A. -- potentially.
 19 Q. (By Mr. Bentsen) Okay.
 20 A. But he also goes on to say that it's --
 21 by no means, confers that it's a permanent
 22 success --
 23 Q. Certainly. And --
 24 A. -- for top kill.
 25 Q. -- at -- at the end of day, we know that
 00317:01 it did not --
 02 A. Right.
 03 Q. -- ultimately succeed. But the
 04 contemporaneous views were that you -- they were
 05 seeing positive results?
 06 A. Correct.

Page 317:09 to 318:02

00317:09 Q. (By Mr. Bentsen) Okay. When you're
 10 pumping mud for a dynamic kill, is it true that
 11 you would initially expect to see pressures
 12 increase as pumping begins?
 13 A. Well, we're back to the nomenclature
 14 problem. You're talking about the --
 15 Q. I'm sorry. The top kill, the --
 16 A. Top kill.
 17 Q. -- the momentum kill or dynamic kill,
 18 whichever of those terms you would like, the mud
 19 pumping for the top kill procedure into the BOP
 20 choke and kill lines?
 21 A. If you were being successful, you would
 22 expect that the pressure would increase and then
 23 start to decrease.
 24 Q. Okay. And that's ultimately what was
 25 seen. Although the pressure decreased, did not
 00318:01 decrease to a level to kill the well, correct?
 02 A. Correct.

Page 318:05 to 318:21

00318:05 Q. (By Mr. Bentsen) We will mark this as
 06 10632. It's a document you've already seen
 07 today, but just for ease, we'll mark it again.
 08 If we go to Page 2 of 18, the fourth
 09 paragraph down, the last line says: "This is a
 10 strong indication that the mud is either being
 11 expelled from the top of the BOP, or at least not
 12 being injected into and moving downward through
 13 any of the flow paths between the BOP and the
 14 flowing reservoir."
 15 That's your ultimate con -- that was Wild
 16 Well's ultimate conclusion regarding the failure
 17 of the top kill, correct?
 18 A. Correct.
 19 Q. And there are multiple ways that this
 20 could be true, other than simply having mud
 21 expelled from the top of the BOP, correct?

Page 318:23 to 319:02

00318:23 A. I'm not sure I follow.
 24 Q. (By Mr. Bentsen) Okay. So, for example,
 25 we've -- we've -- you've mentioned that pressures
 00319:01 were de -- were decreasing as though mud was
 02 being pumped down the well, correct?

Page 319:04 to 319:08

00319:04 A. Yes.
 05 Q. (By Mr. Bentsen) Okay. And so there
 06 could be alternative flow paths as mud went down
 07 the well, for example, a back -- backup through a
 08 drill pipe. That could explain the top kill?

Page 319:10 to 319:14

00319:10 A. It's a possibility.
 11 Q. (By Mr. Bentsen) All right. Or if mud
 12 went down the well and out through burst disks,
 13 that would also be an orifice-size problem.
 14 Correct?

Page 319:16 to 319:20

00319:16 A. Correct.
 17 Q. (By Mr. Bentsen) So it is possible to
 18 explain top kill's failures in other ways, other
 19 than just mud being expelled through the BOP,
 20 correct?

Page 319:22 to 320:03

00319:22 A. It's possible. It's conceivable.
23 Q. (By Mr. Bentsen) All right. During --
24 as -- as we've seen one of the -- BP's potential
25 explanations for top kills failures was the --
00320:01 the failure of the 16-inch burst disks at the
02 time of the acc -- accident itself. Correct?
03 A. Yes.

Page 320:05 to 320:12

00320:05 Q. (By Mr. Bentsen) And that -- that was a
06 concern that had been raised throughout the
07 response, correct?
08 A. Yes, very early on.
09 Q. All right. So that wasn't something that
10 BP had simply explained after top kill as being a
11 concern. Correct?
12 A. No, in fact --

Page 320:14 to 320:21

00320:14 A. -- I recall seeing a memo from the very
15 first few days here, saying that there could be
16 damage to the 9 and seven-eighths and exposure to
17 the 16-inch.
18 Q. (By Mr. Bentsen) Okay. And that was a
19 concern in the various Source Control methods
20 that could be tried, correct?
21 A. Yes.

Page 320:23 to 320:25

00320:23 Q. (By Mr. Bentsen) Throughout the response,
24 the exact geometry of the wellbore was unknown,
25 correct?

Page 321:02 to 321:13

00321:02 A. Well, the exact geometry of the flow path
03 was unknown.
04 Q. (By Mr. Bentsen) Sure. Orifice size,
05 exactly where the mud was flowing, was not known?
06 A. Correct.
07 Q. Okay. And that is the reason why it was
08 not possible at the time to definitively
09 determine flow rate. Correct?
10 A. Yes.
11 Q. All right. And Wild Well Control did not
12 attempt to determine an estimate of what the
13 actual flow rate from the well was, correct?

Page 321:15 to 322:08

00321:15 A. We made no attempts to make a physical
16 measurement at the wellhead, no.
17 Q. (By Mr. Bentsen) I mean, there was
18 various modeling done that made assumptions,
19 correct?
20 A. Yes.
21 Q. But those were always assumptions that
22 looked at different potential scenarios, correct?
23 A. Yes, with the understanding that there
24 was always plenty of things that we may not know
25 about the --
00322:01 Q. Okay. So now --
02 A. -- condition of the wellbore and flow
03 paths and all.
04 Q. I apologize for talking over you.
05 A. No, that's okay.
06 Q. So all of modeling that was done was not
07 an attempt to determine or say this is, in fact,
08 the flow rate from the Macondo Well?

Page 322:11 to 323:11

00322:11 A. Well, I guess it's -- I would agree with
12 that characterization, because the idea was to --
13 again, the focus was to determine what the kill
14 rate requirements were, the -- at least myself
15 and all of the people that I worked with, it
16 wasn't our intent to try to determine what the
17 flow rate was for any other reason other than to
18 plan a kill operation.
19 Q. (By Mr. Bentsen) Okay.
20 A. And the modeling results that were done
21 assumed that there were clean flow paths, that
22 there was no rubble, that there was no resistance
23 around in the annulus. It -- it -- it always
24 assumed a -- lots of things. So --
25 Q. Okay. And for the -- the modeling that
00323:01 was done for the top kill, ultimately, that
02 concluded that the momentum kill portion of the
03 proce -- of the overall top kill procedure was
04 unlikely to be successful over a 15,000 barrel
05 per day rate. Is that --
06 A. Yes.
07 Q. -- your understanding?
08 A. That is my understanding.
09 Q. But that sets aside the junk shot portion
10 of the top kill procedure, correct?
11 A. Correct.

Page 323:13 to 323:18

00323:13 Q. (By Mr. Bentsen) All right. And the
14 whole purpose of the junk shot portion of the top
15 kill procedure would be to change the orifice
16 size so that a dynamic kill could be successful,
17 regardless of what the initial flow rate it was,
18 correct?

Page 323:20 to 325:05

00323:20 A. Right. The idea was to reduce the flow
21 path size by plugging it with various material.
22 Q. (By Mr. Bentsen) Okay. And I believe you
23 testified to this earlier, and I just want to
24 confirm my understanding of it. I believe you
25 stated that the top -- the top kill procedure was
00324:01 not designed around a particular flow rate?
02 A. That's correct.
03 Q. It was designed to the pumping capacities
04 that the Team was able to put together, and
05 ultimately, there were pressure limitations on
06 what the Team was willing to pump so as to not
07 cause damage in the wellbore; is that correct?
08 A. Well, more a matter of we were at the
09 limits of the capabilities of the surface --
10 Q. Cor --
11 A. -- equipment.
12 Q. Correct. Ultimately, you didn't reach
13 the pressure limits that would have caused
14 concerns for the wellbore integrity?
15 A. No.
16 Q. And so, ultimately, the limitations on
17 the top kill effort were the pumping capacity
18 that the -- was able to be developed on the
19 surface?
20 A. Yes.
21 Q. All right. Would you agree that the --
22 the top kill procedure has two separate portions:
23 The dynamic kill or the momentum kill, whichever
24 terminology you'd use for the pumping of mud,
25 along with the junk shot procedure?
00325:01 A. I would agree.
02 Q. Okay. Throughout the response, do you
03 have any reason to believe that BP was not
04 operating in good faith?
05 A. No.

Page 325:07 to 325:10

00325:07 Q. (By Mr. Bentsen) Do you believe that BP
08 was working to its fullest capabilities to solve
09 these -- the problem?
10 A. I absolutely --

Page 325:12 to 325:15

00325:12 A. -- do.
13 Q. (By Mr. Bentsen) Do you agree that Teams
14 were working in parallel with -- with each other
15 to advance different Source Control options?

Page 325:17 to 326:04

00325:17 A. Yes, there were many, many parallel
18 initiatives going on.
19 Q. (By Mr. Bentsen) All right. At any point
20 in time during your work during the response, was
21 cost ever an option or a concern?
22 A. No.
23 Q. Okay. And during the response, the
24 various different equipment -- and I'll list them
25 out, momentarily -- had to be fabricated because
00326:01 they did not exist. And for that, I mean, a
02 cofferdam converted to a pollution dome did not
03 exist as of April 20, 2010?
04 A. That's correct.

Page 326:06 to 326:13

00326:06 Q. (By Mr. Bentsen) The riser insertion tube
07 tool did not exist as of April 20, 2010, correct?
08 A. True.
09 Q. Top Hat suitable for deepwater usage did
10 not exist as of April 20, 2010?
11 A. Correct.
12 Q. A capping stack suitable for subsea, deep
13 sea usage did not exist as of April 20, 2010?

Page 326:15 to 328:21

00326:15 A. Not one specifically designed for
16 capping, no.
17 Q. (By Mr. Bentsen) Okay. As I understand
18 it, the general role of companies like Wild Well
19 in the -- in the oil and gas industry is to
20 provide resources and expertise in responding to
21 the loss of well control, correct?
22 A. Yes. Correct.
23 Q. And that applies for other companies
24 similar to Wild Well, Boots & Coots, or Cudd or
25 any of the other smaller providers?
00327:01 A. Yes.
02 Q. And, essentially, if there's a problem,
03 Operators will call a well control company, such
04 as Wild Well, and will then bring them in to
05 provide the equipment necessary to respond, as
06 well as additional expertise?

07 A. Correct.

08 Q. And that expertise and equipment is
09 generally not held within the comp -- the
10 operator itself as of April 20, 2010?

11 A. Well, that's correct. And Wild Well
12 Control and the other companies in the well
13 control business have a certain stock of
14 specialized equipment that they make available.

15 Q. Essentially, much like many other
16 services that are provided in the oil and gas
17 industry, well control companies come in and have
18 the equipment and knowledge to assist in the
19 appropriate situations?

20 A. Yes, but we bring only that equipment
21 that's not available for rental through
22 conventional rental companies.

23 Q. And capping stacks are not available for
24 rental, are they?

25 A. Well, not one configured for use in 5,000
00328:01 feet of water, no.

02 Q. Okay. Even if Wild Well Control had been
03 called in for a blowout on the surface, they
04 would source a capping stack, correct?

05 A. Correct.

06 Q. Okay. I think we've talked earlier
07 during other questioning that Mr. Campbell's
08 recommendation was for collection; is that
09 correct?

10 A. Yes.

11 Q. Okay. And at the time of the incident,
12 the DISCOVERER ENTERPRISE was the only vessel in
13 the Gulf of Mexico that could collect in the
14 manner necessary for the Macondo Response,
15 correct?

16 A. I believe that was true at the time, yes.

17 Q. Okay. And if collections were to
18 proceed, the ENTERPRISE had to be available to
19 undertake whatever collection op -- operations
20 there were?

21 A. That's true.

Page 328:23 to 328:25

00328:23 Q. (By Mr. Bentsen) And Wild Well agreed
24 with the use of the ENTERPRISE to collect oil and
25 gas, correct?

Page 329:02 to 333:04

00329:02 A. We had no opposition to it.

03 Q. (By Mr. Bentsen) Okay. And, ultimately,
04 the ENTERPRISE was able to collect to its full
05 capacity using the Top Hat, correct?

06 A. Yes. I believe that -- that before it

07 was all said and done, it was collecting very
08 efficiently.

09 Q. Okay. There was some talk about using
10 the BOP option -- BOP-on-BOP option, excuse me,
11 to collect from the new BOP's choke and kill
12 line. Do you recall that?

13 A. Yeah.

14 Q. Are you aware that the choke and kill
15 lines from the DEEPWATER HORIZON BOP were used to
16 collect to the Q4000?

17 A. Yeah.

18 Q. All right. And, ultimately, to the
19 maximum capability of the Q4000, correct?

20 A. Correct.

21 Q. And had the DEEPWATER HORIZON's LMRP been
22 removed, the choke and kill lines would have
23 failed closed on the DEEPWATER HORIZON's BOP,
24 correct?

25 A. If the LMRP was removed? Yes, without
00330:01 the Control Pods, they would fail closed.

02 Q. Okay. So the addition of a new BOP on
03 top of the DEEPWATER HORIZON's BOP would not have
04 provided additional off-take points via the choke
05 and kill lines, correct?

06 A. Well, not from the -- from the DEEPWATER
07 HORIZON BOP.

08 Q. Correct. But you would have had the same
09 number of choke and kill lines available. You've
10 closed the DEEPWATER HORIZON's BOPs, but you
11 could use the -- whatever the new BOP's choke and
12 kill lines were, correct?

13 A. Yeah.

14 Q. So there's no additional choke and kill
15 lines?

16 A. Unless you fashion some way to connect to
17 the DEEPWATER HORIZON choke and kill lines and
18 could manipulate them through ROV intervention
19 possibly.

20 Q. Okay. Is -- sitting here today, is Wild
21 Well able to say with a certainty that you could
22 manipulate the choke and kill line valves that
23 failed closed via the ROV?

24 A. Oh, yes. We could figure out a way to do
25 it.

00331:01 Q. Do you know how much time that would
02 take?

03 A. Oh, it would be, just guessing, a couple
04 of weeks, at least.

05 Q. Okay. But, ultimately, that procedure
06 was not developed or worked, correct?

07 A. Well, correct. And I -- and, look, I
08 don't know how that would have looked with the
09 BOP on BOP, what access you would have had to
10 the -- to the choke and kill stabs at the top of
11 the BOP, so I -- I'm -- I'm reluctant to sit here

12 and say that that was a -- an option that was
13 available to us.

14 Q. Okay. So it's something to be considered
15 and looked into, but sitting here today, we
16 couldn't say that that's an option that could
17 have succeeded?

18 A. Correct.

19 Q. Okay. You've been shown several E-mails
20 throughout the day relating to top kill by Fred
21 Ng and Chris Murphy. Do you recall those?

22 A. Yes.

23 Q. I believe I understood you to say that
24 neither of their roles called for the
25 interpretation of kill data; is that correct?

00332:01 A. Correct.

02 Q. All right. And you had mentioned in 2002
03 working on a deepwater blowout in Indonesia, I
04 believe; is that right?

05 A. That's right.

06 Q. And, ultimately, that was solved via a
07 relief well --

08 A. Yes.

09 Q. -- is that right?

10 Were there -- and while other options
11 were looked at, none were implemented?

12 A. None were ever found that were very
13 practical.

14 Q. Okay. Subsequent to the -- Wild Well
15 Control's experience in that, did Wild Well
16 Control develop or fabricate any additional
17 deepwater intervention equipment?

18 A. No.

19 Q. All right. Post-Macondo, Wild Well
20 Control has developed a capping stack device --

21 A. Correct.

22 Q. -- that's suitable for deepwater usage,
23 correct?

24 A. Yes.

25 Q. Okay. And as far as Wild Well Control
00333:01 knows, no one in the world had developed such a
02 device prior to its development during Macondo;
03 is that correct?

04 A. That is correct.

Page 333:07 to 333:09

00333:07 Q. (By Mr. Bentsen) If we can turn to
08 Tab 18, please, and that will be marked as
09 Exhibit 10633.

Page 333:13 to 334:17

00333:13 Q. (By Mr. Bentsen) Have you seen this
14 document before, sir?

15 A. Well, I'm sure I have, since I was in the
 16 list of addressees.
 17 Q. Okay. Okay. Is this a view of Wild Well
 18 Control that each individual blowout is likely to
 19 present different circumstances that would
 20 require a different response?
 21 A. That's a general sense at Wild Well
 22 Control, yes.
 23 Q. Okay.
 24 A. They all have their unique challenges.
 25 Q. So the development of any particular
 00334:01 device may or may not be useful in a future
 02 blowout?
 03 A. Oh, absolutely.
 04 Q. Okay. So each scenario that Wild Well
 05 Control, or another entity like it, will respond
 06 to requires custom-made equipment. Is that fair?
 07 A. That's fair. And I think a large part of
 08 the reason why nothing ever developed out of the
 09 discussions for deepwater intervention is because
 10 the scenarios are so varied, and the small
 11 changes from one scenario to the other makes
 12 certain things that are applicable here
 13 completely unapplicable over here, so --
 14 Q. Uh-huh.
 15 A. -- you would wind up with a -- an
 16 enormous amount of equipment to cover a
 17 reasonable amount of scenarios.

Page 334:21 to 335:08

00334:21 Q. (By Mr. Bentsen) And I believe you have
 22 seen the -- the cover part of this E-mail before,
 23 at least the first portion, I believe, you -- we
 24 discussed earlier. And I'm going to have you
 25 flip over to the second page of it. And this is
 00335:01 an E-mail from Pat Campbell on June 19th,
 02 correct, 2010?
 03 A. Yes.
 04 Q. And it says: "It seems...Steven Chu, The
 05 Energy Secretary, and his" -- "his team are
 06 making most of the big decisions."
 07 Does Wild Well Control agree with Pat
 08 Campbell's view as of June 19th?

Page 335:10 to 335:20

00335:10 A. I don't think there was any general
 11 agreement on that -- those decisions were being
 12 made by the Secretary of Energy.
 13 Q. (By Mr. Bentsen) Okay. So this one is
 14 limited to Pat's view at the time?
 15 A. I would have to say so.
 16 Q. Okay. Would you agree that in addition

17 to Wild Well Control, there were multiple
18 different entities involved in the response that
19 needed input?
20 A. Oh, yes.

Page 335:22 to 336:02

00335:22 Q. (By Mr. Bentsen) For example, other well
23 control companies that were involved?
24 A. There were other well control companies
25 involved.
00336:01 Q. Who were having input into the -- the
02 decision-making process?

Page 336:04 to 336:17

00336:04 A. Yes, at least into the relief well, for
05 sure.
06 Q. (By Mr. Bentsen) Okay. And are you
07 familiar with the -- what's called -- been called
08 the "Federal Science Team"?
09 A. Yes.
10 Q. Are you aware of what their involvement
11 was?
12 A. Well, generally. I -- I know that we
13 responded to numerous requests for information
14 that went to the Science Team.
15 Q. Is it fair to say that it was Wild Well
16 Control's view that they required information for
17 Source Control procedures to move forward?

Page 336:19 to 337:01

00336:19 A. Yeah. I -- yes, I -- I believe that
20 would be a fair statement.
21 Q. (By Mr. Bentsen) And is it fair to say
22 that their input was part of the process --
23 A. Yeah.
24 Q. -- in having a Source Control procedure
25 approved?
00337:01 A. Yes.

Page 337:04 to 337:08

00337:04 Q. (By Mr. Bentsen) Are you aware that the
05 Secretary of Energy was involved?
06 A. Yes, I am aware of that.
07 Q. And, again, do you believe that his views
08 needed to be considered?

Page 337:11 to 338:01

00337:11 A. Well, I believe it was the Agreement
12 between BP and the Federal Science Team that
13 their views would be considered.
14 Q. (By Mr. Bentsen) Certainly, but he's --
15 he's one of the input -- he's one of the people
16 that have input into the process?
17 A. Yes.
18 Q. All right. The same with the Secretary
19 of the Interior?
20 A. Yes.
21 Q. All right. What was ini -- at the time
22 of the event, referred to as "MMS," also having
23 input into the process?
24 A. Yes.
25 Q. The United States Coast Guard?
00338:01 A. Yes.

Page 338:03 to 338:06

00338:03 Q. (By Mr. Bentsen) All right. And then,
04 ultimately, decisions were undertaken by the
05 Unified Command structure; is that right?
06 A. Correct.

Page 338:21 to 339:02

00338:21 Q. (By Mr. Bentsen) Mr. Barnett, we've
22 talked a little bit about the analysis that led
23 BP to conclude that there was a possibility that
24 the burst disks had ruptured.
25 A. Yes.
00339:01 Q. Wild Well Control was not involved in
02 that analysis, correct?

Page 339:04 to 339:15

00339:04 A. Our only official analysis was what was
05 contained in my memo.
06 Q. (By Mr. Bentsen) Okay. And Wild Well
07 Control wasn't involved in the meeting between BP
08 and Representatives of the United States
09 Government that discussed this. Correct?
10 A. I don't believe we had any
11 Representatives at that meeting.
12 Q. Okay. Is Wild Well Control aware that
13 the Federal Science Team also shared these
14 concerns about the burst disks?
15 A. Yes.

Page 339:18 to 339:20

00339:18 Q. (By Mr. Bentsen) Is Wild Well aware that
19 the Secretary of Energy delayed the shut-in of

20 the well due to these concerns --

Page 339:22 to 339:23

00339:22 Q. -- around the burst disks and the well
23 integrity?

Page 340:01 to 340:10

00340:01 A. Well, I can't say that I knew it was the
02 Secretary of Energy alone. I -- the message that
03 we received was that there were some
04 concerns, and they were on behalf of the Science
05 Team.
06 Q. (By Mr. Bentsen) Okay. But those
07 concerns continued on, subsequent to top kill,
08 all the way through the shut-in of the well,
09 correct?
10 A. Yes.

Page 341:16 to 342:09

00341:16 You just testified concerning the burst
17 disks and communications between BP and the
18 United States concerning concerns about whether
19 the burst disks had ruptured. Correct?
20 A. Yes.
21 Q. And I believe you said that Wild Well was
22 not involved in any meeting between BP and
23 Representatives of the United States concerning
24 discussions about the burst rupture disks?
25 A. Not to my recollection, no.
00342:01 Q. All right. So you can't speak to those
02 communications and explanations about why the top
03 kill failed. Can you?
04 A. No, I wouldn't be able to.
05 Q. All right. And you can't say whether or
06 not -- you cannot then speak to whether the
07 United States had concerns about the burst
08 rupture disks prior to meeting with BP. Correct?
09 A. No. I couldn't say.

Page 345:01 to 345:01

00345:01 UNITED STATES DISTRICT COURT
01 EASTERN DISTRICT OF LOUISIANA

Page 345:03 to 345:05

00345:03 IN RE: OIL SPILL) MDL NO. 2179
03 BY THE OIL RIG)
04 "DEEPWATER HORIZON" IN) SECTION "J"

04 THE GULF OF MEXICO, ON)
 05 APRIL 20, 2010) JUDGE BARBIER
 05) MAG. JUDGE SHUSHAN

Page 345:08 to 345:10

00345:08 REPORTER'S CERTIFICATION
 08 TO THE ORAL AND VIDEOTAPED DEPOSITION OF
 09 DAVID ARNOLD BARNETT
 09 WILD WELL CONTROL 30(b)(6)
 10 DECEMBER 14, 2012
 10 VOLUME 1

Page 345:12 to 345:15

00345:12 I, Emanuel A. Fontana, Jr., Certified
 12 Shorthand Reporter in and for the State of Texas,
 13 hereby certify to the following:
 14 That the witness, DAVID ARNOLD BARNETT, was
 14 duly sworn by the officer and that the transcript
 15 of the oral deposition is a true record of the
 15 testimony given by the witness;

Page 345:16 to 345:18

00345:16 That the deposition transcript was submitted
 17 on , 2012, to the witness or to
 17 Attorney _____ for the witness to
 18 examine, sign, and return to Worldwide Court
 18 Reporters, Inc., by , 2012.

Page 345:19 to 345:24

00345:19 That the amount of time used by each party
 20 at the deposition is as follows:
 21 Ms. Flickinger - 3 Hours, 11 Minutes
 21 Mr. Williamson - 1 Hours, 15 Minutes
 22 Mr. Maze - 7 Minutes
 22 Mr. Davis-Denny - 59 Minutes
 23 Mr. von Sternberg - 14 Minutes
 23 Mr. Jones - 1 Minutes
 24 Mr. Bentsen - 28 Minutes

Page 346:01 to 346:03

00346:01 I further certify that I am neither counsel
 01 for, related to, nor employed by any of the
 02 parties in the action in which this proceeding
 02 was taken, and further that I am not financially
 03 or otherwise interested in the outcome of the
 03 action.

Page 346:04 to 346:05

00346:04 SUBSCRIBED AND SWORN to by me on this 14th
05 day of December, 2012.

Page 346:08 to 346:12

00346:08	
08	<hr/> Emanuel A. Fontana, Jr., RPR
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