

Deposition Testimony of:

Paul Tooms

Date: June 17, 2011

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00328:04 PAUL TOOMS,

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00328:08 QUESTIONS BY MR CERNICH:

09 Q. Good morning, Mr. Tooms.

10 A. Good morning.

11 Q. I'd like to turn back to Exhibit -- or Tab 49
12 from yesterday, which was the BP paper on "PRELIMINARY
13 RESPONSE TO THE FLOW RATE AND VOLUME ESTIMATES
14 CONTAINED IN STAFF WORKING PAPER NO. 3."

15 A. (Reviewing document.)

16 Q. And I'd like to direct you back to Page 6,
17 please.

18 (Discussion off the record.)

19 Q. (By Mr. Cernich) And on Page 6 in Section 4,
20 entitled "Failure to Account Accurately for Reservoir
21 Conditions," BP in its paper criticizes the
22 productivity index that was used by -- excuse me -- by
23 the Government Scientists in preparing their -- their
24 flow rate estimates.

25 And I would just -- I'm just trying to get a
00329:01 sense of what -- what they may have been missing or
02 what -- what factors may have -- may have contributed
03 to that Productivity Index. I think as we discussed
04 yesterday, it was my understanding that that
05 Productivity Index was provided to the scientist by --
06 by BP. And do -- do you recall that if -- the numbers
07 of Productivity Index, do you recall whether that was
08 provided to the Government by BP?

09 A. No, I don't specifically recall what number we
10 gave the -- the Government. I do recall that in --
11 prior to doing the actual shut-in of the well, which
12 was known as Well Integrity Test, we -- at that stage
13 we did a whole bunch of modeling to predict what
14 shut-in pressures may be. And -- and I -- as far as I
15 remember, we would have used Productivity Index at that
16 stage, but I don't know what number we used in the
17 model.

18 Q. Would -- would Mr. Merrill be the best person
19 to talk to --

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00329:21 Q. (By Mr. Cernich) -- about what that number is?

Page 329:23 to 330:05

00329:23 A. For the number that we did for the preshut-in
24 modeling, Mr. Merrill would be a good person to talk
25 to.

00330:01 Q. (By Mr. Cernich) And at the time you were
 02 doing the modeling for the shut-in wellhead pressure,
 03 you would have been trying to use the -- the best --
 04 the best numbers, the best information you had on hand,
 05 correct?

Page 330:07 to 331:01

00330:07 A. Sorry, at the time of doing the modeling?
 08 Q. (By Mr. Cernich) Correct.
 09 A. No. Generally when you're doing modeling, you
 10 use numbers towards one end of the range or another in
 11 order to explore the areas that -- that you're afraid
 12 of. So if we were trying to model a potentially high
 13 shut-in pressure, then -- then we'd use a different
 14 number than if we're trying to model a low shut-in
 15 pressure.
 16 Q. Do you recall whether you used a range of
 17 productivity indices --
 18 A. No, I don't --
 19 Q. -- to do that modeling?
 20 A. I don't recall that.
 21 Q. Okay. And can I direct you to Tab 20 in your
 22 binder, please. This was previously marked as an
 23 exhibit. And this is the E-mail from Ms. Cindy
 24 Yeilding, who I believe you testified was part of
 25 the -- the Flow Assessment Team; is that right?
 00331:01 A. Yes, she was.

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00332:19 Q. Do you recall there being geological work done
 20 during the response in order to support the efforts to
 21 determine the shut-in wellhead pressure?
 22 A. Yes, I do recall that.
 23 Q. Okay. Well, now if I could direct you to --
 24 to Page 13, please, of this memo. And at the top of
 25 Page 13, there's a heading "Petrophysics." Can you
 00333:01 tell me what petrophysics are?
 02 A. In general, petrophysics, so far as I know
 03 it -- I'm not an expert in it -- is the -- the
 04 measurements that we make, the direct measurements we
 05 make of the -- of the formation, so using well logs and
 06 so forth.
 07 Q. And those would include -- include factors
 08 like porosity and permeability; is that correct?
 09 A. Those are the measurements that -- that we can
 10 make. Porosity measurements we can infer.
 11 Permeability can't measure directly, unless we have
 12 core samples.
 13 Q. And this -- this "Petrophysics," underneath,
 14 it says "Summary" here in the document, and it says:
 15 "From shows, log response and fluid samples..."
 16 Can you tell me what -- what a "show" is?

17 A. In general, a show is when we are drilling the
 18 well and we -- the mud is being circulated, the
 19 drilling fluid is being circulated around the well as
 20 we drill it, and when that mud gets back to surface,
 21 we -- if it's -- if you drill through a
 22 hydrocarbon-bearing formation, you will tend to entrain
 23 a little bit of hydrocarbon in the mud. And we have
 24 very sensitive instruments at surface that will sense
 25 that, and so that will give you a show. That's --
 00334:01 that's one form.
 02 I think another form of show would be the
 03 cuttings themselves. If you look at them under the
 04 right type of light, you can see if they've got
 05 hydrocarbon stain on them.
 06 Q. Thank you.
 07 Well, this -- this paragraph says: "From
 08 shows, log response and fluid samples it is interpreted
 09 that >90 feet of hydrocarbons were discovered in the
 10 M57" -- excuse me -- "and M56 sands, the majority
 11 occurring in the M56D (22') and the M56E (64.5') sands.
 12 Porosity averages 22%, Sw..."
 13 Can you tell me what "Sw" is?
 14 A. That's -- I take that to be the water
 15 saturation.
 16 Q. So water --
 17 A. I think -- I think. I -- I'm not sure.
 18 Q. Okay. Well, "Sw" that -- which may be water
 19 saturation, "averages 10-17% and permeability averages
 20 in the range of 250-500 mD," and then there -- there's
 21 a parenthetical "(arithmetic, log derived)."

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00334:23 MR. CERNICH: Comma, "log derived."
 24 A. And what -- sorry, what type of log?
 25 Q. (By Mr. Cernich) I'm just reading the --
 00335:01 MR. KRAKOFF: Arithmetic.
 02 A. Arithmetic log, is that -- is that --
 03 Q. (By Mr. Cernich) I'm just -- I'm just reading
 04 from the document.
 05 A. Okay.
 06 Q. And then the next paragraph says: "Fluid
 07 sample quality is high - volatile oil with GOR" -- and
 08 it's my understanding that "GOR" is gas to oil ratio.
 09 Is that your understanding?
 10 A. That's correct.
 11 Q. -- "~3000 and API=35, PVT analysis showed
 12 viscosity of 0.17 cp."
 13 Can you tell me what "cp" stands for?
 14 A. Center points.
 15 Q. Thank you.
 16 Do you know whether this information was
 17 provided to the Government Scientist during the
 18 response effort?
 19 A. I believe it was, but I can't be sure.

20 Q. And do you know whether this information is --
21 is accurate?

22 A. Any -- any data that we collect will have some
23 level of accuracy to it. The -- the portrayal is -- is
24 I believe an accurate portrayal of what we knew, but --
25 but there will be numbers. For instance, they say it's
00336:01 interpreted greater than 90 feet of hydrocarbons were
02 discovered. How much greater, I don't know.

03 Q. Do you know what could be done to improve upon
04 these numbers?

Page 336:06 to 336:20

00336:06 A. Ah, in general if you want to get more
07 reservoir data, you take more cores, more samples.

08 Q. (By Mr. Cernich) Can you tell me whether any
09 more cores or samples were taken from the Macondo Well
10 after this memo was prepared?

11 A. That wouldn't have been possible to have taken
12 more cores or samples because the -- the well was
13 filled with cement.

14 Q. So to the extent that these numbers may have
15 been improved upon subsequent to this memo, that would
16 have been based on reinterp -- reinterpretation or
17 analysis by BP Geologists or Geophysicists?

18 A. Or -- or, indeed, any Geologist or
19 Geophysicist who had access to the -- to the raw data,
20 yes.

Page 346:06 to 349:20

00346:06 Q. (By Mr. Cernich) Sir, I believe my question
07 was whether there had been any revisions or changes to
08 these numbers subsequent to this memo of -- of
09 May 25th, 2010, these assumptions that would be used in
10 reservoir modeling, like porosity, permeability, water
11 support, API, gas-to-oil ratio, or similar geological,
12 geophysical numbers?

13 MS. KARIS: Same instruction with respect
14 to not disclosing any work that may have been done in
15 connection with the privileged project.

16 A. So, given this is done on the 25th of May,
17 and -- and I should add that -- that I don't have
18 expertise and don't claim to have any expertise in this
19 area. I have general knowledge, but not -- not
20 expertise, but given this was done on the 25th of May,
21 and we continued the -- the shut-in beyond July 15th, I
22 think, then more work definitely would have been done
23 on trying to evaluate shut-in pressures and the
24 reservoir.

25 I don't know whether -- how much of this --
00347:01 this basic data was reworked, but I'm sure it was
02 reevaluated.

03 Q. (By Mr. Cernich) Thank you. The -- and -- and

04 just so I understand it, the next -- the next document
05 that's attached to this E-mail, this Technical Note on
06 Macondo shut-in wellhead pressure and build up times,
07 was this work done at -- at your direction, Mr. Tooms?

08 A. Can I just have a -- just refresh myself on
09 what the document is?

10 Q. Certainly.

11 A. (Reviewing Exhibit 6193.) I -- I asked
12 specifically to know what -- what our best estimates of
13 the -- of the likely maximum shut-in wellhead pressure
14 could be. I don't know whether this piece of work was
15 done directly for me or -- or in answer to that
16 question, but -- but certainly I was asking those
17 questions both of BP and of the National Labs.

18 Q. And -- and who did you ask at -- at BP for
19 this information?

20 A. From my memory, I -- I think I asked Kate
21 Baker to -- to organize the work to be done, and -- and
22 then she would have talked to various people who are
23 presumably on this memo.

24 Q. Thank you. If I could please direct you to
25 Page 12 of 13 of that memo, please. And I'll direct
00348:01 you to the top of Page 12, and there's something called
02 a "Summary of Pressure Depletion Calculations." And
03 it's "Macondo MC251-1 Well Expected Reservoir
04 Depletion," and there are a range of depletion curves;
05 would that be an accurate way to describe the -- the
06 lines on that chart?

07 A. Well, it's straight lines, it looks like to
08 me, but -- but I -- I would describe it as depletion
09 against time for -- for a variety of different flow
10 rates, assumptions.

11 Q. And this -- this document shows it for -- or
12 this -- this chart shows it for a depletion of 460 psi,
13 that the flow rate would be 60,000 barrels per day; is
14 that correct?

15 A. I don't know what other assumptions went into
16 this, so this particular chart, if you -- if you read
17 it off at 460 psi, it would give you -- on that date,
18 it would give you a 60,000 barrel a day number, I
19 guess, but that's on the -- I'll point out that's on
20 the 6th -- 15th or 16th of -- of May, if I'm not
21 mistaken.

22 Q. Okay. And then with the 700 psi depletion,
23 this chart would show a -- a flow rate of 93,000
24 barrels per day; is that correct?

25 A. Well, I think the same comments -- I'm -- I'm
00349:01 reading it off the chart, but I would point out that
02 this is -- this is modeling with assumptions to try and
03 understand what the maximum shut-in pressure might be,
04 so the assumptions may well have been taken to
05 different ends of the spectrum.

06 Q. And -- and what are those assumptions?

07 A. The types of assumptions that one would need
08 to be using in general -- and as I say, I'm not -- I'm

09 not an expert in this, but in general, the reservoir
 10 size would be -- would have a -- a major bearing on --
 11 on the depletion. The amount of aquifer support would
 12 have a major bearing on the depletion and the
 13 compressibility of the -- of the rock -- of the -- of
 14 the reservoir would have -- would have a -- a huge
 15 barrier on -- on this, and all those would be
 16 somewhat -- they would be estimates rather than known.
 17 Q. But all of those assumptions you mentioned,
 18 those factors in the assumptions are things that are
 19 studied in -- in great detail by a -- a company like BP
 20 before it drills a well; is that correct?

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00349:22 A. No. A number of those we can only discover
 23 once we have drilled the well. And what I can say is
 24 that all those variables they talked about were -- were
 25 the subject of very lengthy debates, both within BP
 00350:01 and -- and with the National Labs because -- because of
 02 the -- the supplement.
 03 Q. (By Mr. Cernich) You mentioned size of the
 04 reservoir on the -- size of the reservoir is certainly
 05 something that BP looks at before it decides to drill a
 06 well; isn't that correct?
 07 A. We estimate the -- the range of volumes that
 08 we think might be in the reservoir and the range of
 09 volumes that might be recoverable from that reservoir
 10 before we drill a well.
 11 Q. And BP has to -- to audit those -- those
 12 numbers or have those numbers audited, correct?

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00350:14 A. No, I don't believe we do there. I -- I -- I
 15 don't know what you mean by "audit."
 16 Q. (By Mr. Cernich) There's something called a --
 17 as I understand it, called a -- a Reserve Audit, which
 18 in the petroleum industry actually involves auditing of
 19 the petroleum assets that a -- a company has under
 20 its -- under its leases in order to report its assets
 21 to -- to Governmental agencies like the Securities and
 22 Exchange Commission?
 23 A. (Nodding.) So as far as I'm aware, and again,
 24 I'm not an expert in this area. You would be better
 25 off speaking to a Reservoir Engineer, but we keep our
 00351:01 reserves in -- in a number of different categories as
 02 to whether they're proved and unproved or -- or
 03 possible.
 04 And in case, before -- if you're drilling an
 05 exploration well before you've drilled a well, so far
 06 as I'm aware, there would be no such audit required, or
 07 done.
 08 Q. And just going back to this -- this chart

09 again, this chart examines flow rate -- flow rates for
10 four different depletion scenarios, a 700 psi, a 460
11 psi, a 160 psi, and a 40 psi; is that correct?
12 A. I think it's read the other way. I think
13 the -- the -- it examines a number of different rates
14 and then takes what the depletion would be on those
15 dates, I think, is -- is -- is how that chart would be
16 read, but --
17 Q. So what you're saying is that the -- what
18 you're saying is that the -- you would assume a flow
19 rate, and then calculate a depletion based on that?
20 A. In -- in this case, I need to read around --
21 around the document to see the context, but in this
22 case, all we're trying to estimate is -- and given
23 the -- given the timing of it is what the -- what the
24 shut-in pressure buildup, what -- what the shut-in
25 pressure might be and how fast it might arrive there,
00352:01 and -- and this was done for the purposes of, if we
02 shut the well in, and if the rupture disks were
03 exposed, would we be approaching the limits of those --
04 of those rupture disks or, indeed, the casing. So it
05 was a -- it was a modeling exercise for that purpose,
06 and it -- it wasn't a modeling exercise to try and
07 estimate flow rate.
08 Q. Understood. What is the MBAL model?
09 A. I can't be sure what that is.
10 Q. Okay. And the -- the contention of BP in its
11 White Paper submitted to the Presidential Oil Spill
12 Commission is that the -- the reservoir depletion of
13 the -- from the -- from the reservoir into which the
14 Macondo Well was drilled was approxed --
15 approximately 1,250 psi; is that correct?
16 A. Sorry, I'd have to --
17 MS. KARIS: What tab number was that?
18 Q. (By Mr. Cernich) I'll direct --
19 MR. CERNICH: It was Tab 49.
20 Q. (By Mr. Cernich) I'll direct you to Page 6 of
21 that memo. And if you look in the second --
22 A. Yeah.
23 Q. -- paragraph there.
24 A. That's what it states in -- in here is the
25 reservoir depletion was approximately 1250 psi.
00353:01 Q. And that -- that reservoir depletion is higher
02 than any of the modeled depletion -- reservoir
03 depletions in the chart on Page 12 of the memo we were
04 looking at; is that right?

Page 353:06 to 356:05

00353:06 A. Well --
07 Q. (By Mr. Cernich) That was Tab --
08 A. Yes.
09 Q. -- Tab 20?
10 A. I -- I -- I can see that that depletion is
11 higher than any of the numbers listed on that page, but

12 that page only goes up to the first of June. And, as I
13 say, that -- the chart on -- on -- that you previously
14 referred to was done entirely for the basis of working
15 out what the maximum shut-in pressure might be, so we
16 would have made our assumptions to err on the side that
17 would give you a higher shut-in pressure and,
18 therefore, a lower depletion rate, and that would have
19 been the -- the -- the plan.

20 Q. Explain that concept to me, please.

21 A. When Engineers do modeling, they -- they model
22 to provide the answer that -- that -- that I'm asking
23 for. And the answer -- the -- the question I pose to
24 them is: Could the shut-in pressure on this well
25 exceed a certain value? And, therefore, they are
00354:01 modeling to -- to put inputs in to say whether it could
02 or could not exceed that value. So they would choose
03 small -- tend to choose a -- in this case I mentioned,
04 a larger reservoir size and more aquifer support,
05 and -- and so on, so that the reservoir had minimal
06 depletion rather than maximum depletion, but that's the
07 tendency. I don't know exactly what they did in this
08 piece of work.

09 Q. Okay. Thank you. If I can direct you to
10 Page -- Page 7 of Tab 49, the memo. And in Section 5
11 there, entitled "The August 2 DOE/FRTG Estimate Is
12 Inconsistent With the Observed Surface Expression." If
13 I can direct you to the -- around the middle of
14 paragraph where it says: "Additionally, in May..."
15 Can you find that?

16 A. I can see that, yes.

17 Q. -- "BP deployed a riser insertion tube tool"
18 a "(RITT) -- was -- "that captured flow from the riser
19 at a rate of approximately 8,000" barrels of oil per
20 day "at certain points. Once the RITT was inserted and
21 calibrated, the visible evidence of the oil plume and
22 surface expression strongly suggested that the bulk of
23 the flow was captured. The FRTG recognized that the
24 RITT was capturing the bulk of the flow coming from the
25 riser, and this was one of the factors considered in
00355:01 the FRTG's lower-bound flow estimate of 11,000" barrels
02 of oil "per day." And that's on May 27th.

03 Do you know -- do you know specifically what
04 this is -- this paragraph is referring to when it says
05 that the FRTG recognized that the RITT was capturing
06 the bulk of the flow from the riser?

07 A. No, but it's consistent with the testimony I
08 gave yesterday, which was that when the RITT was
09 working at its most efficient, it appeared that the --
10 the flow coming out of the end of the riser was
11 severely depleted.

12 Q. Weren't there times at which the -- the -- the
13 RITT at -- at certain points in time, because as -- as
14 I understand it, there was a -- there was a meter for
15 the RITT that was tracking the -- the flow rate into
16 the RITT, or the collection rate of the RITT on a

17 momentary basis throughout the collection; is that
18 correct?

19 A. To my knowledge, and -- and I didn't audit the
20 meter, the meter was -- the metering was done on the
21 vessel itself, and I think it was an orifice type meter
22 which has inaccuracies, and, therefore, the more
23 accurate way of measuring the flow would have been to
24 check the level in the tanks after a certain period.
25 So it was done -- it was measured periodically rather
00356:01 than instantaneously.

02 Q. But there are -- have you seen the -- any of
03 the collection data that shows that there were points
04 in time where the RITT was collecting much more
05 than 8,000 barrels of oil per day?

Page 356:07 to 356:18

00356:07 A. I saw the -- the collection data. I don't
08 recall it collecting much more than 8,000 barrels a
09 day.

10 Q. (By Mr. Cernich) The -- the RITT wasn't
11 capturing the oil that was -- the oil that was
12 emanating from the -- from the holes in the -- the kink
13 above the riser -- I mean, above the BOP; is that
14 correct?

15 A. That's correct.

16 Q. And the RITT -- RITT capture wasn't affecting
17 the -- the visual expression of the oil escaping from
18 the kink; is that correct?

Page 356:20 to 357:13

00356:20 A. The RITT wasn't --

21 Q. (By Mr. Cernich) So if you're observing the --
22 the oil that was -- that was jetting -- jetting out of
23 the -- the kink above the BOP when you're collecting
24 from the -- the RITT, was that affecting the -- the
25 image of the -- of the jet that was emerging from
00357:01 the -- from the kink?

02 MS. KARIS: Object to form.

03 A. I don't -- don't recall that it was.

04 Q. (By Mr. Cernich) And the -- and the RITT
05 capture work was -- was stopped in order to do the top
06 kill; is that correct?

07 A. The RITT capture work would have to have been
08 stopped during top kill itself, yes.

09 Q. Okay. Do you know that -- did you know that
10 BP has put over 179 Government witnesses on its
11 deponent list for this case related to what the -- the
12 Court is calling "quantification" with regard to
13 measuring the flow rate from the Macondo Well?

Page 357:15 to 358:06

00357:15 A. No, I don't know that.
16 Q. (By Mr. Cernich) You do -- you do know,
17 however, that there were dozens of Government
18 scientists or academics who were employed by the United
19 States to work on calculating the flow rate during the
20 spill though, right?
21 A. I -- no, I don't know that. I only know of a
22 few scientists that were employed on it.
23 Q. You don't know about the Flow Rate Technical
24 Group?
25 A. I know the Flow Rate Technical Group existed.
00358:01 I have no knowledge of the structure or organization or
02 the number of people that were working on the Flow Rate
03 Technical Group.
04 Q. As the Leader of the Flow -- Flow Assessment
05 Team, you've never considered or looked at the -- the
06 members of the -- of the Flow Rate Technical Group?

Page 367:01 to 367:03

00367:01 Q. (By Mr. Cernich) It's true that -- that BP
02 declined to estimate any flow rates during the response
03 to the Macondo Well; is that correct?

Page 367:05 to 367:11

00367:05 A. We were entirely focused on shutting the well
06 in and stopping the flow. That was -- that was the
07 focus of all our efforts, and I think that the papers
08 demonstrate that. And -- and we felt unable to
09 accurately measure the flow rate, from my perspective,
10 from a subsea flow rate measurement. We did not feel
11 that we had the ability to do so.

Page 367:14 to 367:25

00367:14 Q. (By Mr. Cernich) What do you -- what do you
15 consider accurately? I guess I'm looking for a range,
16 if you could -- if you could estimate it to within plus
17 or minus 20 percent, would that be inaccurate, would it
18 be accurate? We've discussed throughout this
19 deposition you've talked about ranges, and using --
20 using variables or assumptions, Engineering
21 assumptions --
22 A. (Nodding.)
23 Q. -- couldn't you have used Engineering
24 assumptions to come up with a range of flow rates
25 during the response?

Page 368:02 to 368:07

00368:02 A. Clearly, we could have come up with -- with

03 ranges. I asked my flow rate special -- flow -- Flow
 04 Assurance Technical Authority to do that in the early
 05 stages, and he told me that he could not reasonably,
 06 with any reasonable degree of accuracy, estimate flow
 07 rate.

Page 369:12 to 369:24

00369:12 Q. (By Mr. Cernich) But you -- you knew at some
 13 point during the response, whether it was after --
 14 after June 2nd or 3rd, or sometime in late June, that
 15 the -- that the flow rate was higher than the 1,000 to
 16 5,000 barrel of oil per day estimates, had
 17 originally -- originally been put out there, I know
 18 there's some dispute as to whether any of those came
 19 from BP, or the Unified Command, or the Government.
 20 But there was a 1,000 to 5,000 barrel of oil per day
 21 estimate that -- that was issued early on.
 22 But would you agree that at some point during
 23 the -- the spill that the flow rate was higher than
 24 5,000 barrels of oil per day?

Page 370:02 to 370:09

00370:02 A. Yes, I would agree that we've collected
 03 substantially more than that later on during the spill.
 04 Q. (By Mr. Cernich) And later on during the spill
 05 when top hat floor was installed over the -- over
 06 the -- the -- the BOP after the riser had been -- had
 07 been cut, you were at the surface collecting -- or BP
 08 at the surface was collecting well over 20,000 barrels
 09 per day; is that correct?

Page 370:11 to 370:21

00370:11 A. I -- I don't recall the exact number, but
 12 after the -- after the riser had been cut off and we
 13 installed the what we call top hat and were collecting,
 14 yes, it was -- it was a number over 20,000 barrels a
 15 day.
 16 Q. (By Mr. Cernich) And at that time there was
 17 still, despite the -- the collection from the -- the
 18 top hat to the surface, there's still oil that was --
 19 that was emanating from under the -- the top hat and
 20 escaping to the ocean; is that correct?
 21 A. That's correct.

Page 373:09 to 376:16

00373:09 (Exhibit No. 6197 marked.)
 10 Q. (By Mr. Cernich) This appears to be an E-mail
 11 dated June 11, 2010 from yourself to a -- a variety of
 12 individuals, including Kent Wells, Gordon Birrell,

13 David Clarkson, Patrick O'Bryan, and others, with an
14 attachment called "BOP Pressure History rev3..." I --
15 I assume that's Revision 3?
16 A. Revision 3, yes.
17 Q. Okay. Did you -- did you write this E-mail,
18 Mr. Tooms?
19 A. Yes, I did.
20 Q. And why did you prepare this E-mail,
21 Mr. Tooms?
22 A. I think I was sharing, as I said in the -- the
23 last paragraph, the -- the various Teams were talking
24 about pressures and -- and things, they were doing it
25 from -- entirely from memory and what they've seen. We
00374:01 had a lot of gauge correction numbers involved, and so
02 all I was trying to do is make sure I put out the
03 dataset that we had.
04 Q. And you're talking about BP Teams when you
05 refer to Teams?
06 A. Predominantly B -- BP Teams, but all the Teams
07 who were working because it was a Unified Command
08 response, but all -- all the Teams that were working in
09 particularly source control.
10 Q. I know you -- you mentioned pressure earlier
11 when you were discussing the last paragraph of this
12 document, but doesn't the last paragraph also say:
13 "This graph will" in -- "be included in a more complete
14 report on pressures and flow indications..." Is that
15 correct?
16 A. That's what I've said there, yes.
17 Q. Okay. And I'll direct you to No. 1, in
18 that -- that document. It says: "Pressures below and
19 across the BOP (with...test rams closed) are broadly
20 the same now as they were prior to...Top Kill. This
21 suggests that overall flow rates have not changed much,
22 unless there is some unexplained mechanism in the
23 well."
24 And are -- are you saying there that flow
25 rates haven't changed much from -- from the -- I'm
00375:01 sorry. If I -- if I could direct you to the attachment
02 to that document. It should slide out of the top of
03 the --
04 A. Right. Thank you.
05 Q. And this chart's titled "Historical Records of
06 BOP Pressures." Did you prepare this chart, Mr. Tooms?
07 A. Actually, I think Doug Wood prepared it on my
08 behalf.
09 Q. Okay. And if I'm understanding this
10 correctly, this is a -- a chart analyzing the -- the
11 pressure differential across the BOP for a range of
12 dates going from May 20th through -- through June 10th;
13 is that right?
14 A. That's correct.
15 Q. And May 20th was before the -- the riser was
16 cut; is that right?
17 A. That's correct.

18 Q. June 10th is after the riser was cut, correct?

19 A. That's correct.

20 Q. So am I reading this correctly, this chart
21 combined with your comment in your -- your E-mail that
22 the -- the -- the flow -- flow rates have not -- didn't
23 change much from before the riser was cut to after the
24 riser was cut?

25 A. That's the -- certainly the -- the inference
00376:01 that we made from -- from the pressure gauge. You also
02 note that we -- we had to apply this very large
03 correction to the -- to -- to -- to the gauge, and --
04 and we were not sus -- suspicious may be not the right
05 word, but we -- we were uncertain as to the reliability
06 of that gauge.

07 Q. And then if we go to No. 2 in your E-mail, it
08 says: "The pressure drop across the BOP has been
09 relatively consistent, and it can be inferred that" the
10 "drillpipe is present and that flow through it has
11 remained relatively unchanged."

12 So is that saying that at least from this
13 period of May 20th through June 10th, that you had
14 concluded had that the pressure drop across the BOP
15 was, in fact, consistent and that flow through it
16 had -- had remained relatively unchanged?

Page 376:18 to 376:20

00376:18 A. That -- that's what I said there. I don't
19 know if -- I -- I don't know if I was correct. That
20 was my inference at the time.

Page 377:09 to 377:09

00377:09 (Exhibit No. 6198 marked.)

Page 378:15 to 379:16

00378:15 Was it your understanding that as of May 31st,
16 that an event-related rupture of a collapse disk could
17 be conjectured?

18 A. Yes, it was -- I think as I gave my earlier
19 testimony, we couldn't see how we had exceeded any
20 rating of the burst disks or -- in either direction.
21 And, in fact, I was surprised when I looked at the
22 integrity of the well to find that -- that unlike most
23 wells that are drilled, that even if we breached the
24 production casing in this case, the -- the -- the next
25 casing string could take the entire shut-in pressure of
00379:01 the well.

02 So the only -- the only thing we could do is,
03 say, if a -- if a rupture disk is done it -- it is --
04 it's conjecture rather than any scientific fact that --
05 that we could conjecture, it might have somehow

06 collapsed inwards.

07 Q. And the next slide is titled "Conclusions &
08 Path Forward." And despite the -- well, maybe as a
09 result of or in spite the con -- of the conjecture, I'm
10 looking at the third bullet point there. It says:
11 "Shutting the well in (via BOP on BOP) is no longer a
12 viable option." But you "Need to maintain BOP pressure
13 below 4,221 psi." And that "Relief wells are most
14 likely solution to kill the well completely."

15 Were -- was that BP's conclusion at this point
16 in time at the end of May?

Page 379:18 to 380:03

00379:18 A. That -- that appears to be what this --
19 this -- this slide is saying. I'm not sure that that
20 was -- what date was this? May the 31st. "Shutting
21 the well in" vi -- "is no longer a viable option," was
22 what it is says on this slide. I don't know that we
23 stayed with that view.
24 Q. (By Mr. Cernich) But if you had presented this
25 to -- in fact, someone from BP had presented this to
00380:01 Secretary zal -- Salazar, I imagine he would have been
02 left with the impression that shutting in the well via
03 BOP on BOP is no longer an option, correct?

Page 380:06 to 380:21

00380:06 A. I -- actually -- now -- now I -- I've read
07 more of this, I think I probably did see this, it's
08 because it was in black and white, I didn't -- didn't
09 recognize it. Yes, the -- if -- if this was presented
10 exactly as it says here, then that would be -- that
11 would be a conclusion you might draw, that you couldn't
12 shut the well in.
13 Q. (By Mr. Cernich) And then in the final bullet
14 point, that the relief wells are the -- are the most
15 likely option to -- option to shut the well in
16 completely or to --to stop the -- stop the flow from
17 the well?
18 A. Yes. And I think this was our -- our review,
19 if -- if I recall correctly, immediately after, and
20 within hours of finishing top kill, so it was a -- very
21 early thoughts.

Page 381:07 to 381:22

00381:07 A. (Reviewing Exhibit 6199.) I -- I don't -- I
08 don't recall it, but it doesn't mean I didn't -- didn't
09 see it.
10 Q. And in this E-mail, Mr. Wulf is asking
11 Mike -- I'm not sure if that's Mike Mason or there's
12 also a Michael Levitan in the -- in the "To" line of

13 this E-mail, "One key question - do we need" to "know
 14 the actual flow rate to estimate the final shut-in
 15 pressure or determine the presence of leak in the well?
 16 E.g. can we reasonably" expect "the final SIP" -- I
 17 assume that means shut-in pressure -- "or determine if
 18 a leak is present from" the "pressure data and only
 19 knowing" the "relative rate reduction?"
 20 So would it be your testimony that you don't
 21 need to know the actual flow rate to estimate the final
 22 shut-in pressure?

Page 381:24 to 383:02

00381:24 A. I think I've already given my testimony, which
 25 is that they -- to -- to -- to know the -- to be able
 00382:01 to accurately predict the final shut-in pressure before
 02 you shut the well in, you would want to know the total
 03 volume produced, as well as the size of the reservoir
 04 and all the other variables that we -- that -- that we
 05 discussed, so a single flow rate would be a -- a
 06 datapoint. We would want an -- either an average flow
 07 rate or a volume, would be more useful.
 08 Q. (By Mr. Cernich) Okay. And if I could direct
 09 you to the -- to the back side of that, that E-mail.
 10 Which was forwarded as -- as part of this E-mail
 11 string. This is an E-mail from Tony Liao to Mike
 12 Mason, dated June 27, 2010. "Subject: Simulation of
 13 Rupture Disks..."
 14 And what I'm looking down is about six lines
 15 down -- well, actually, it says: "Hi Mike, I have some
 16 simulation results for the problems we discussed
 17 yesterday." And it appears that Mr. Liao's doing some
 18 flow rate calculations there. And about five lines
 19 down he says: "If all the rupture discs are closed
 20 (not burst), Qo_Annulus" -- and I assume that Qo is --
 21 is flow rate -- "=26,314" barrels of oil per day,
 22 "Qo_DrillPipe=26,620" barrels of oil per day "as the
 23 base case. The total rate is ~63,000" barrels of oil
 24 per day.
 25 So is it your understanding here that Mr. Liao
 00383:01 was doing a -- a flow rate calculation and came up with
 02 a flow rate of 63,000 barrels of oil per day?

Page 383:04 to 383:14

00383:04 A. No, it's my -- my understanding is that Tony
 05 Liao was doing modeling work and simulating and try --
 06 trying to understand what could have happened, and --
 07 and in particular whether the -- the scenario of
 08 rupture disks failing was -- was a -- was a possible
 09 scenario. And -- and he made assumptions in -- in his
 10 model that gave him those numbers.
 11 Q. (By Mr. Cernich) Okay. But he modeled a flow
 12 rate of 63,000 barrels of oil per day?

13 A. He did model a flow rate of 63,000 barrels a
14 day, yes.

Page 384:02 to 384:12

00384:02 Q. A Tim Lockett?
03 A. No, he was not on the Flow Rate Team.
04 Q. Who is Mr. Lockett?
05 A. Mr. Lockett is a Flow Assurance Engineer who
06 is -- works in our Sunbury office, and works at the
07 direction of Trevor Hill.
08 Q. So you -- do you know whether he was assisting
09 Mr. Hill with his work?
10 A. I know that Mr. Hill during the -- during the
11 event would use Mr. Lockett to do modeling for him.
12 Q. Okay.

Page 387:25 to 388:18

00387:25 Q. Okay. So I'm just trying to establish a
00388:01 timeline. So at some point between -- July 15th, I
02 believe, was the date that the well was shut-in; is
03 that correct?
04 A. Correct.
05 Q. And this document from -- that you sent to
06 Mr. Birrell on November 22nd -- at some point between
07 those dates, the Flow Assessment Technical Team was
08 assembled?
09 A. Ye -- yes, it was, yes.
10 Q. And -- and do you have some sense of whether
11 it was weeks or months after July 15th?
12 A. It was weeks after July 15th.
13 Q. Weeks after July 15th.
14 A. Okay.
15 Q. Thank you.
16 A. One or two weeks, I think.
17 Q. Okay. So late July, beginning of August?
18 A. Correct.

Page 388:20 to 389:07

00388:20 I'm -- and I -- now I'll turn back to -- to a
21 few of the questions I had before about individuals
22 and -- and their -- their roles.
23 Douglas Wood, I believe we looked at a
24 document that had Mr. Wood's name on it a few moments
25 ago. What -- what did -- what is Mr. Wood's role?
00389:01 A. Mr. Wood's role at the time was he was leading
02 the Engineering on our Skarv project in Norway, and I
03 called him over to -- to fill in for Mr. Hill when
04 Mr. Hill was -- had to go away for personal reasons.
05 Q. So he was a Flow Assurance Engineer?
06 A. That's not his regular job, but he has Flow

07 Assurance capability.

Page 391:03 to 391:08

00391:03 Q. Farah Saidi, we discussed yesterday, and I'm
 04 trying to remember -- was Ms. Saidi on the Flow
 05 Assessment Team?
 06 A. As I think I said yesterday, I think she may
 07 be, but I'm not -- not -- not certain whether she's on
 08 it or just peripherally involved.

Page 392:11 to 393:15

00392:11 A. Leith McDonald is a Pipelines Engineer from
 12 the U.S. Pipelines side of the business and so not part
 13 of E&P. He assisted me on the response, and he was not
 14 part of the Flow Assessment Team.
 15 Q. How did he assist you on the response?
 16 A. Initially looking at whether we could do hot
 17 taps into the -- into the riser when it was folded over
 18 and before it had sprung leaks, and then after that,
 19 actually, just general supporting. He, in particular,
 20 did a lot of liaison with Government Sector II, in
 21 particular.
 22 Q. And what would a -- what would a hot tap into
 23 the riser have done?
 24 A. If we could have hot tapped into the riser, it
 25 would have been a way of taking the flow out of the
 00393:01 riser and -- and then into a freestanding riser and up
 02 to a vessel. That was the -- was the thinking behind
 03 that.
 04 Q. Was the analysis of doing a -- a -- a hot
 05 tap -- did the -- did flow rate have any bearing on
 06 whether a hot tap would be feasible?
 07 A. We never got that far. I -- it -- it was much
 08 more to do with -- it could ha -- the -- the hot tap
 09 could have handled any flow rate. The -- the -- the
 10 limit on how much you'd have collected would be how
 11 many risers and vessels you attached to that hot tap.
 12 Q. And so you -- knowing -- knowing the flow rate
 13 would have told you how many risers or vessels you
 14 would have needed, to collect oil from the -- from the
 15 hot tap?

Page 393:18 to 395:10

00393:18 A. If, in fact -- actually, if we had been able
 19 to do a hot tap and the riser had stayed with integrity
 20 and we had been able to somehow shut off the other end
 21 of the riser or -- or -- or severely restrict it, we
 22 may have been able to choke back the flow further in
 23 the well and -- and -- and constrained it all to one
 24 vessel. But that was a lot of if's, and they didn't

25 come to pass.

00394:01 Q. (By Mr. Cernich) Do you have any idea how --

02 how big that one vessel would have had to have --

03 A. We used whatever vessels were -- were

04 available. The first vessel, I -- if I recall, we had,

05 was the -- the ENTERPRISE, and then there were other

06 FPSOs that we had lined up that we could use.

07 Q. But could you choke back -- choke back that

08 flow enough -- you -- you mentioned choking back the

09 flow enough so that you could only use one vessel,

10 right? That's what you -- that's what you --

11 A. Yeah.

12 Q. -- said?

13 A. If -- if one ha -- one -- in order to be able

14 to choke something back, you need to have an engineered

15 connection that -- that -- that can hold pressure.

16 Q. Right.

17 A. And then --

18 Q. Similar to the capping stack.

19 A. Well, that's -- was one of the justifications

20 for putting the capping stack on, was so that we had an

21 engineered connection for whatever we wanted to do

22 thereafter. And we chose to do the Well Integrity test

23 first.

24 Q. Would you be able to choke that back to --

25 strike that.

00395:01 In order to use one vessel to collect any of

02 the -- any of the flow from the ho -- hot tap, you --

03 you would have had to have had some sense of the flow

04 to determine whether one vessel was going to be able to

05 accommodate it or whether you needed multiple vessels,

06 correct?

07 A. At the time we were looking at hot tap, we had

08 a flow rate estimate that we'd been given at around

09 5,000 a day, and we didn't believe it was substantially

10 greater than that at the time.

Page 396:06 to 396:16

00396:06 A. Tom Knox is a -- an Engineer that works in our

07 Sunbury Technical -- Technology Group, and he was

08 focused on inspection.

09 Q. I -- I -- I believe I -- I saw some work by

10 Mr. Knox related to modeling of the -- the riser. Do

11 you recall that?

12 A. I don't recall. I don't think that Tom Knox

13 would have been able to do any modeling of the riser.

14 He may have been included on the -- on -- on E-mails,

15 because Mr. Knox in -- inspected the riser when we

16 first cut it off and recovered it at the surface.

Page 400:14 to 400:19

00400:14 Q. If I could direct you to Tab 36.

15 (Exhibit No. 6202 marked.)
 16 Q. (By Mr. Cernich) All right. This is an E-mail
 17 from Mr. Pattillo to yourself, dated July 3rd. If
 18 you'll just flip to the -- the attachment there. And
 19 this is a memo entitled "Post-Event Flow Scenarios"?

Page 400:22 to 401:16

00400:22 Q. (By Mr. Cernich) And I'm not going to ask you
 23 any detailed information about this -- this mem -- the
 24 specifics of this memo, but what -- what I would like
 25 to know is whether, either prior to or after -- the --
 00401:01 the shut-in of the -- the Macondo Well, you came into
 02 any con -- came to any conclusions regarding the -- the
 03 flow path from the bottom of the well to the -- to the
 04 BOP.
 05 For example, was the flow up the casing? Was
 06 the flow through the -- up through the annulus? Was
 07 the flow from the -- did it come up the -- the shoe
 08 track from the bottom of the well? Did you believe
 09 that it crossed over at one of the casing strings?
 10 A. My belief -- or my -- my preference was that
 11 it was flowing up the casing and -- and entirely up the
 12 casing. I didn't come to any conclusion until we
 13 finally killed the well with heavy mud, and then it
 14 became clear that -- that the only flow path was --
 15 from -- just from the volumes we pumped, the flow path
 16 was up the casing at that point.

Page 407:18 to 408:04

00407:18 Q. (By Mr. Cernich) So the -- the work that the
 19 BP did during the response that showed a -- various
 20 slide shows and calculations that showed that the --
 21 the flow rate, if coming up strictly through the
 22 production casing with the -- the -- the wellhead --
 23 with the BOP removed at the wellhead, assume that --
 24 assuming an open flow at the top of the well, and
 25 those -- those calculations that showed a higher flow
 00408:01 rate up the production casing then, if you just had
 02 an annular flow, those -- are you saying that those
 03 calcul -- those calculations were incorrect?
 04 A. Nope. I'm --

Page 408:06 to 408:12

00408:06 A. I'm not saying that at all. I'm -- I'm saying
 07 that if -- if those calculations would have made
 08 certain assumptions, and if -- if the only thing you
 09 changed was whether it was flowing up the annulus or
 10 flowing up the casing, then you would arrive at a -- a
 11 higher number than -- than -- for -- for the casing
 12 flow rate than the -- than the annular flow rate.

Page 415:17 to 416:23

00415:17 Who's Cheryl Grounds?
 18 A. Cheryl Grounds is the Chief Engineer for
 19 Process Safety and -- Process and Process Safety, and
 20 she reports to me.
 21 Q. Do you know what Process Safety means?
 22 A. There's various definitions of it.
 23 Q. What's your definition of it, if you have one?
 24 A. My definition: It's a structured framework to
 25 manage the hazardous -- hazardous operations and
 00416:01 processes by good Engineering Practice and -- and
 02 Operating Procedures and Engineering.
 03 Q. Okay. Had you -- all right. So you --
 04 A. Good Design Practices is what I meant, not
 05 good Engineering Practices.
 06 Q. Good Design Practices. Okay.
 07 A. Yeah.
 08 Q. Cheryl Grounds reported to you as of January
 09 1st, 2010?
 10 A. She did.
 11 Q. All right. Now, I want to understand a little
 12 bit more about the structure of the E&P Group as of the
 13 date you joined around -- you know, in the beginning of
 14 2010.
 15 A. (Nodding.)
 16 Q. Was Drilling & Completions a part of
 17 Exploration & Production?
 18 A. Drilling & Completions was part of the
 19 Exploration & Production Operating Company.
 20 Q. Part of the Operating Company. Okay.
 21 Nonetheless, even though you were the Chief Engineer
 22 for E&P, you had no role or responsibility with respect
 23 to drilling; is that correct?

Page 416:25 to 417:22

00416:25 A. So I wasn't the -- I wasn't known as the Chief
 00417:01 Engineer.
 02 Q. (By Ms. Hertz) What were you?
 03 A. I was the -- either known as the Head of
 04 Engineering for E&P or VP of Engineering for E&P. And
 05 I didn't have a -- any oversight over Drilling
 06 Engineering nor Reservoir Engineering nor all the other
 07 types of Engineering. It was limited to Discipline
 08 Engineering.
 09 Q. Okay. And what does that mean, "Discipline
 10 Engineering"?
 11 A. It's generally taken to mean the traditional
 12 Engineering that we would do on -- on projects and
 13 structures and would include -- I have five Chief
 14 Engineers that cover the various disciplines, and so
 15 that would include Civil Engineering, Pipelines,
 16 Mechanical Engineering, Process and Process Safety,

17 Instrument Control, Electrical. And that's what I mean
18 by "Discipline Engineering."
19 Q. Did any of those five Discipline Engineering
20 areas that you just ticked off, one of them including
21 Process Safety, govern or apply to the Drilling &
22 Completions Group?

Page 417:24 to 418:09

00417:24 A. The -- the Engineering Group in general, which
25 reports to me, did not have oversight over -- over
00418:01 Drilling.
02 And I should add that the fifth one I forgot
03 was Subsea and Floating Systems.
04 Q. (By Ms. Hertz) Okay. So who, if you know, had
05 oversight for Process Safety for Drilling &
06 Completions?
07 A. I don't know how Drilling was organized at
08 that stage.
09 Q. So the answer is you don't know?

Page 418:11 to 418:17

00418:11 A. I just said I don't know how Drilling was
12 organized at that stage.
13 Q. (By Ms. Hertz) I understand you don't know how
14 it was organized, but my question was slightly
15 different, and that is: Who had responsibility for
16 Process Safety and Drilling in Completions or over
17 Drilling & Completions --

Page 418:21 to 419:19

00418:21 A. I know who one or two individuals were in
22 Drilling who had a bearing on Process Safety --
23 Q. (By Ms. Hertz) Who were they?
24 A. -- I don't know who was responsible for
25 Process Safety overall.
00419:01 Q. All right. So we know some people who had a
02 bearing on Process Safety and Drilling & Completions.
03 Who was that?
04 A. So we had our Well Control, and I think he was
05 known as a Technical Authority, which was Mark
06 Mazzella.
07 Q. Who else had a bearing on Process Safety and
08 Drilling & Completions?
09 A. Actually, I don't know beyond -- beyond that.
10 Q. Okay. Mark Mazzella you believe was Well
11 Control Technical Authority in Drilling & Completions.
12 Was he in that Group, or was he in another Group that
13 had oversight over Drilling & Completions?
14 A. I think he was part of the Drilling &
15 Completions Group.

16 Q. Okay. Does Mark Mazzella now report to you?
17 A. No, he does not.
18 Q. Okay. As Well Control Technical Authority,
19 what was Mark Mazzella's job?

Page 419:21 to 419:22

00419:21 Q. (By Ms. Hertz) And how did that have a bearing
22 on Process Safety and Drilling & Completions?

Page 419:24 to 420:18

00419:24 A. So I do not know exactly what Mark Mazzella's
25 job was, because I didn't have any oversight of -- of
00420:01 Drilling.
02 Q. (By Ms. Hertz) Okay. But you did say his job
03 had a bearing on Process Safety. So please explain to
04 me what that bearing is.
05 A. Well, Well Control -- this is just from my
06 general knowledge of -- of Drilling -- Well Control is
07 one of the aspects of the -- controlling the -- the
08 Safety Processes in -- in Drilling.
09 Q. And that's as specific as you can be as to the
10 bearing that his job had on Process Safety?
11 A. Yes. I just said I don't -- I can't answer
12 for what is -- what his role was.
13 Q. All right. I'm trying to further, you know,
14 understand. You were the one who said it had a bearing
15 on Process Safety. So I'm simply trying to make sure
16 that I exhaust your knowledge.
17 So is that the extent of your knowledge as to
18 how his job had a bearing on Process Safety?

Page 420:20 to 421:03

00420:20 A. Yes, I'm exhausted.
21 Q. (By Ms. Hertz) Did you ever have any
22 discussions with Cheryl Grounds as to the applicability
23 or nonapplicability of her Process Safety Group with
24 respect to Drilling & Completions?
25 A. No, I don't believe I did.
00421:01 Q. Did you ever have a discussion with anybody at
02 BP regarding the applicability of Process Safety to
03 Drilling & Completions?

Page 421:05 to 421:17

00421:05 A. No, I don't believe I did.
06 Q. (By Ms. Hertz) Okay. Who would I ask at BP to
07 tell me about the applicability of Process Safety in
08 Drilling & Completions, if you know?
09 A. If you wanted to -- to understand that, I
10 think I would ask Mr. Mark Bly, since he investigated

11 the HORIZON incident.
12 Q. Okay. And you testified yesterday that
13 Ms. Yilmaz is the Technical Vice President of -- excuse
14 me, back in '10, 2010, she was the Technical Vice
15 President of D&C. Do you believe that she would have
16 an understanding as to who's responsible for Process
17 Safety in Drilling & Completions at that time?

Page 421:19 to 421:21

00421:19 A. Well, she ran the -- well, she was in charge
20 of the Drilling Department. So she might be a person
21 to ask, as well, yes.

Page 422:03 to 422:05

00422:03 Q. All right. Did you ever inquire at any time
04 about this seeming disconnect between D&C Engineering
05 and E&P Engineering?

Page 422:07 to 422:25

00422:07 A. I clarified when I took the position whether I
08 had accountability for Drilling or did not have
09 accountability for Drilling.
10 Q. (By Ms. Hertz) M-h'm.
11 A. And I also -- when I was Head of Subsea, I
12 clarified where Subsea in my world stopped and where
13 Subsea in Drilling started.
14 Q. Okay. And who did you clarify that with when
15 you took the job on January 1st, 2010?
16 A. I clarified it with Gordon Birrell.
17 Q. And what did he tell you?
18 A. He told me that the arrangements were -- until
19 we have done our reorganization, that the arrangements
20 were as they had been before, nothing changed until we
21 changed it.
22 Q. Okay. And as they had been before, was what?
23 A. The -- the eng -- the Discipline Engineering
24 Group that I was in charge of did not have oversight of
25 Drilling & Completions.

Page 423:02 to 423:06

00423:02 Yesterday you testified regarding the Safety
03 and Organizational Risk Group, is that right, S&OR?
04 A. M-h'm.
05 Q. Okay. Was that Group in creation before April
06 1st, 2011, when you had the reorganization?

Page 423:08 to 423:13

00423:08 A. That Group was in creation as part of that
09 reorganization, and Day One, as we named it, was April
10 the 1st. I'm not sure when one would say that S&OR
11 existed or not existed.
12 Q. (By Ms. Hertz) But it wasn't part -- part of
13 the prior organization?

Page 423:15 to 424:02

00423:15 A. It -- it -- it didn't exist prior to the end
16 of the Macondo event.
17 Q. (By Ms. Hertz) Okay. What role -- or what is
18 your understanding of the role now of the S&OR Group?
19 A. The S&OR Group is to provide an independent
20 view of risk and assurance, and it's there to also give
21 deep technical expertise, or provide deep technical
22 expertise, and it's also there to intervene and
23 escalate, if -- if necessary.
24 Q. Okay. Does the S&OR, as it currently exists,
25 have a role in drilling wells, as a company policy, or
00424:01 are they simply called in when risks are identified and
02 their deep knowledge and expertise are needed?

Page 424:04 to 424:10

00424:04 A. The S&OR Group is -- is -- there's a group of
05 S&OR deployed into the -- into the drilling side of the
06 business.
07 Q. (By Ms. Hertz) Okay. But my question was more
08 specific, which is: Are they -- let me -- let me put
09 it this way: Are they involved with drilling of all
10 wells, if you know?

Page 424:12 to 424:25

00424:12 A. Because there needs to be retained some
13 independence, and as I said in the first bullet,
14 they -- the S&OR Group doesn't do the actual planning
15 and drilling of the wells. They're involved in the
16 Standards and that side of it.
17 Q. (By Ms. Hertz) And what is their involvement
18 in the Standards on that side of it?
19 A. So, the -- the S&OR Group, and specifically
20 the Engineering Authority for Wells, is the keeper of
21 the Standards for -- for Wells, for Drilling &
22 Completions, as it was formerly known.
23 Q. Are they also a group that ensures compliance
24 with Standards, or are they simply the keeper of the
25 Standards?

Page 425:02 to 425:21

00425:02 A. We have an S&OR Audit function, as well as the

03 deployed S&OR Group, and the S&OR Audit function
 04 would -- would, I guess, check for compliance. I don't
 05 know whether they ensure compliance or -- I'm not sure
 06 what the word is.
 07 Q. (By Ms. Hertz) Okay. And compliance with
 08 what, specifically?
 09 A. I don't -- I don't -- I'm not a member of the
 10 S&OR Audit Group.
 11 Q. M-h'm.
 12 A. So -- and what answer I give you is -- is --
 13 is my understanding of it. It's not necessarily the --
 14 what the company would say. The -- but to my
 15 knowledge, it's compliance with our Policies and
 16 Standards and -- and Regulations, as well.
 17 Q. Do you know how often the S&OR Group is now to
 18 be conducting such audits?
 19 A. Only so far as I -- I know that they have a --
 20 a schedule of audits, and they have a Rig Audit Team
 21 specifically for rigs, and I don't know beyond that.

Page 427:24 to 428:21

00427:24 Q. Oh, no, no. I'm asking you -- I think my
 25 question specifically said prior to April 1, 2011, were
 00428:01 there any other types of audits being conducted on rigs
 02 that you're aware of, other than the one you just
 03 described?
 04 A. Yes. Going back to my personal knowledge,
 05 when I worked on the rigs, we had numerous audits,
 06 whether they be HSE Department Audits, Permit to Work
 07 Audits, Fire and Gas System Audits. There would be --
 08 there would be --
 09 Q. Okay.
 10 A. -- numerous audits.
 11 Q. Okay. Which is -- what is an HSE Audit?
 12 A. What was an HSE Audit then was -- I think it
 13 was -- the term we used was "Getting HSE Right," and it
 14 was an audit of the status of the -- of -- of the --
 15 the rig and whether we were -- well, of the rig site in
 16 our Operations and whether we were conforming to the
 17 "Getting HSE Right Policy."
 18 Q. Okay. Did those HSE Audits differ from what
 19 you now understand the S&OR Audits to be?
 20 A. I understand that the S&OR Audits are much
 21 deeper than -- than simply an HSE Audit.

Page 430:16 to 430:19

00430:16 Q. Okay. Does John Guide now report to you?
 17 A. No, he does not.
 18 Q. Okay. Do any of the Engineers that were on
 19 the Macondo Wells Team Report to you?

Page 430:21 to 430:21

00430:21 A. No.

Page 431:05 to 431:12

00431:05 MS. HERTZ: The first document that I'm
06 showing the witness is the Exploration & Production OMS
07 Manual dated January 2009. It's Exhibit -- I'm sure
08 it's been marked, but it's Exhibit 6205, and it bears
09 Bates No. MDL 01164601 through 804.
10 (Exhibit No. 6205 marked.)
11 Q. (By Ms. Hertz) I just want to ask you a couple
12 of cursory questions about that document.

Page 431:17 to 432:01

00431:17 A. I'll just make myself some space.
18 Q. (By Ms. Hertz) And my question, as you're
19 reviewing it, is: Have you seen this document before?
20 A. Not in quite this format, but -- but -- but
21 yes.
22 Q. You have seen the E&P OMS?
23 A. I've seen the E&P OMS Manual, yes.
24 Q. Okay. To the best of your knowledge, was this
25 document applicable to Drilling & Completions on
00432:01 April 20th, 2010?

Page 432:03 to 432:07

00432:03 A. I don't know. No, I just -- I -- I don't
04 know.
05 Q. (By Ms. Hertz) Did you ever discuss the
06 applicability of this document or any OMS document to
07 Drilling & Completions --

Page 432:09 to 434:04

00432:09 Q. (By Ms. Hertz) -- in the Gulf of Mexico on
10 April 20th, 2010?
11 A. No, I didn't.
12 Q. Okay. The next document I'm going to hand
13 you we're going to -- oh, it's already been marked as
14 Exhibit 866. It's entitled "Gulf of Mexico SPU
15 Operating Plan (OMS Handbook)." The Bates number is
16 MDL 333155 through 195. First I'd just like to ask you
17 if you've ever seen this document.
18 A. Ah --
19 Q. What's that?
20 A. I was just --
21 Q. Oh.
22 A. -- looking at it.
23 Q. Okay.

24 A. (Reviewing document.) No, I don't believe I
 25 have.

00433:01 Q. All right. Do you have any knowledge as to
 02 whether or not this document was applicable in the Gulf
 03 of Mexico Drilling & Completions on April 20th, 2010?

04 A. No. Since I haven't seen it and I haven't
 05 read it, I have no idea.

06 Q. Okay. Well, I -- I just want to clear up my
 07 question then. I wasn't asking based on whether you've
 08 read it or seen it, but if you had ever learned from
 09 any source whether or not it was applicable?

10 A. Well, no, I haven't -- I haven't read it, I
 11 haven't seen it, and I hadn't learned from any source
 12 whether it's applicable or not.

13 Q. Okay. I'm going to show the witness next
 14 what's already been marked as 6065. This is the Gulf
 15 of Mexico Drilling and Completions "Operating
 16 Plan/Local OMS Manual." It bears Bates Nos. MBI 193448
 17 through 520. Same question: Have you ever seen that
 18 document?

19 A. No. No, I have not seen this document.

20 Q. All right. Do you have any understanding as
 21 to whether or not that document was applicable to
 22 Drilling & Completions in the Gulf of Mexico on
 23 April 20th, 2010?

24 A. I can see that it was approved and issued in
 25 November of 2009, like I see it says that it's the D&C

00434:01 Operating Plan/Local OMS Manual, so --

02 Q. So what does that tell you?

03 A. That it's, in all likelihood, it was
 04 applicable.

Page 439:01 to 439:16

00439:01 Q. Okay. My first question to you is: What is
 02 the Orange Book?

03 A. The Orange Book is a -- a term that we use for
 04 a collection of our HSSE reporting statistics.

05 Q. And that's Health, Safety, and Environmental?

06 A. Yes, and the other S is Security. It all --
 07 there's a bit of a silent S.

08 Q. Where do you obtain the entries that go into
 09 the Orange Book?

10 A. We -- they -- they come through the S&OR
 11 organization, and -- and they -- they are given to us
 12 by the -- the line organizations that are responsible
 13 for safety. So, generally, for our regions, I think
 14 they would come from the VP of HSSE and Engineering
 15 which is now retitled to VP of S&OR.

16 Q. But where do they get them?

Page 439:18 to 439:19

00439:18 Q. (By Ms. Hertz) Does this come through

19 Traction?

Page 439:21 to 440:11

00439:21 A. They come through a number of sources I think,
 22 including Traction.
 23 Q. (By Ms. Hertz) And what are the other sources?
 24 (Exhibit No. 6209 marked.)
 25 A. Incident reporting, our Risk Management
 00440:01 database, I think. I -- but I don't collect this data
 02 personally. I -- I -- I don't assemble the Orange
 03 Book, so I'm not as familiar with it as some might be.
 04 Q. (By Ms. Hertz) Why were you participating in
 05 Orange Book calls in April of 2010?
 06 A. I didn't generally participate in the Orange
 07 Book calls. I was included in the invitation list,
 08 because I was part of the VP -- the TVP of HSSE
 09 Engineering and Operations Team. So I was part of his
 10 Leadership Team, so I had a standing in -- invitation
 11 to participate in the calls.

Page 441:09 to 442:04

00441:09 (Exhibit No. 6210 marked.)
 10 Q. (By Ms. Hertz) And this is going to be
 11 Exhibit 6210. And Cheryl writes to you: "The thought
 12 is to pull a team to look into the process safety side
 13 of it and then do some modeling. I volunteered to
 14 support the initial PS" or Process Safety "discussions
 15 and use the data from there to support modeling work."
 16 Do you recall getting this E-mail from Cheryl
 17 Grounds?
 18 A. I do.
 19 Q. Okay. Did she pull together a Team to look
 20 into the Process Safety side of the DEEPWATER HORIZON
 21 incident?
 22 MS. KARIS: Object to form.
 23 A. H'm, I don't know. She reported into the
 24 Investigation Team at this stage, and -- rather than
 25 the Recovery Team, I was working the Recovery Team.
 00442:01 The Investigation Team did their work separately from
 02 us, so I don't know exactly what she did.
 03 Q. (By Ms. Hertz) So did you just ignore this
 04 E-mail, or did you respond to her?

Page 442:07 to 442:12

00442:07 A. I didn't just ignore it. I -- I probably
 08 thanked her for keeping me informed.
 09 Q. (By Ms. Hertz) Okay. Now, she reports to you.
 10 Did you ever follow up to find out if, in fact, she did
 11 pull together a Team and look into the Process Safety
 12 side of the DEEPWATER HORIZON incident?

Page 442:14 to 443:19

00442:14 A. No. I checked that the Investigation Team had
 15 all the help they needed from my side that I could
 16 provide, and I provided Cheryl Grounds. And Cheryl
 17 Grounds is an extraordinarily competent Leader and can
 18 organize her own Team.
 19 Q. (By Ms. Hertz) Did you ever discuss with her
 20 or anyone the issue of whether Process Safety was
 21 investigated in connection with the DEEPWATER HORIZON
 22 incident?
 23 A. I didn't discuss the -- the -- what was
 24 happening on the investigation at all during the
 25 incident.
 00443:01 Q. "At all during" -- at -- well, I mean, I -- I
 02 guess I wasn't limiting my question to during the
 03 incident. My question is, generally, have you ever
 04 discussed with anybody whether there was a Process
 05 Safety analysis done with respect to what happened on
 06 April 20th, 2010?
 07 A. Yes, I did. I discussed that with Mark Bly
 08 and Tony Brock and -- and understood that they had
 09 looked at the incident on the -- on the HORIZON with a
 10 Process Safety viewpoint.
 11 Q. How -- when did that discussion take place?
 12 A. I don't know, varying times, but well after
 13 the -- the incident was finished.
 14 Q. Before or after the Report, the Bly Report
 15 came out?
 16 A. Well after the Bly Report came out.
 17 Q. Okay. And they told you that they looked at
 18 the Process Safety side of the DEEPWATER HORIZON
 19 incident? Is that what they said?

Page 443:21 to 444:08

00443:21 A. Well, I think it said it in the -- in the
 22 Report, anyway, but -- but they said they'd looked at
 23 it through a Process Safety lens.
 24 Q. (By Ms. Hertz) "A Process Safety lens." Did
 25 they tell you who specifically had taken on those roles
 00444:01 to do that?
 02 A. No, they did not.
 03 Q. Did they tell you what they found after their
 04 Process Safety analysis of the DEEPWATER HORIZON?
 05 A. They didn't tell me anything beyond what's
 06 written in the Bly Report.
 07 Q. So if there's nothing about Process Safety in
 08 the Bly Report, then they didn't tell you anything?

Page 444:11 to 444:23

00444:11 A. They haven't told me anything beyond what's

12 written in the Bly Report.

13 Q. (By Ms. Hertz) Okay. Other than those two,
14 did you ever discuss with anybody the issue of whether
15 there was a Process Safety analysis conducted with
16 respect to the Macondo incident?

17 A. There's another piece of privileged work going
18 on within BP at the behest of lawyers that is looking
19 at some of this, and I don't think I can discuss that.

20 Q. They're looking at Process Safety?

21 A. Reviewing drilling in general.

22 Q. Including Process Safety?

23 A. Including Process Safety.

Page 445:09 to 445:24

00445:09 Q. (By Ms. Hertz) Actually, turn to Tab 25,
10 please. This is an E-mail from yourself to Gordon
11 Birrell regarding Tooms Performance Review Material,
12 dated November 22nd, 2010. This is going to be
13 Exhibit 6211.

14 (Exhibit No. 6211 marked.)

15 Q. (By Ms. Hertz) And I just wanted to ask you a
16 question. First of all, is this -- is this something
17 that you prepared and provided to -- to Gordon Birrell
18 in connection with your Performance Review?

19 A. I prepared the overall document. I didn't
20 prepare the scorecards.

21 Q. Okay. Well, let's look at Page Bates 120,
22 please.

23 A. Sorry, which page?

24 Q. 120.

Page 446:09 to 447:22

00446:09 Q. At the very top, it says: "This year has
10 broadly been split into 3 parts."

11 A. I'm on that page.

12 Q. Excellent. All right.

13 There's something written there that says:
14 "For the reorganisation at the start of the year, I
15 felt that I put in a deal" -- "in a deal of effort and
16 that we were just about to get the new organisation
17 embedded when the Horizon disaster struck. Indeed
18 we...just laid out the Biases for Engineering which
19 would have enabled us to build a much stronger
20 discipline, more focussed on understanding, rigor and
21 risk management."

22 First of all, this came up yesterday. What
23 are "Biases for Engineering"?

24 A. It was my term, and it was my way of saying we
25 could have rules and processes and procedures, but
00447:01 beyond that, there was something that's more -- more
02 like a -- I guess you could use the word "culture," but
03 it's -- when I use the word "bias," it's -- if you're

04 hitting a golf shot and wanted to -- you know that
 05 you're not necessarily going to hit it straight, you
 06 want the bias to be to the right or to the left. So
 07 it's the -- this is the biases, general direction that
 08 Engineering should go in.

09 Q. Okay. When you wrote this, did this
 10 include -- were you thinking in terms of Drilling &
 11 Completions, as well as E&P, or just E&P at this time?

12 A. I -- I was thinking -- so -- so we don't get
 13 confused -- I was thinking purely at this stage of
 14 Discipline Engineering. Didn't mean it wouldn't have
 15 been applicable beyond that, but I was thinking of
 16 Discipline Engineering.

17 Q. Okay. But the new organization that you're
 18 talking about, would that have affected Drilling &
 19 Completions, in that it would have enabled them, as
 20 well, to have "a much stronger discipline, more
 21 focussed on understanding, rigor and risk management"
 22 and the like?

Page 447:24 to 448:06

00447:24 A. This is the reorganization -- the
 25 reorganization I'm referring to is the reorganization
 00448:01 that was happening at -- at the end of 2009, the start
 02 of 2010.

03 Q. (By Ms. Hertz) Okay.

04 A. And so Drilling still would not have been
 05 within my remit, so I -- that's why I was focused on
 06 Discipline Engineering.

Page 448:24 to 449:11

00448:24 Q. (By Ms. Hertz) Do you know who Donnie Carter
 25 is?

00449:01 A. Yes, I do.

02 Q. Could you tell me what his -- what job he
 03 holds at BP?

04 A. He's the Gulf of Mexico Process Safety
 05 Technical Authority, I believe, is his title.

06 Q. And does he report to Cheryl Grounds, if you
 07 know?

08 A. No, not directly.

09 Q. Indirectly?

10 A. He reports to the Gulf of Mexico Engineering
 11 Authority.

Page 449:18 to 450:24

00449:18 Q. (By Ms. Hertz) Did Donnie Carter hold this
 19 position prior to April 1st, 2011?

20 A. Yes. In fact, I was talking prior to April
 21 the 1st, 2011. I'm not sure if he still hold it.

22 Q. Okay. Do you know when he took on this
23 position as Process Safety TA for the Gulf of Mexico?
24 A. No, I don't.
25 Q. Okay. Do you know what his responsibilities
00450:01 are or accountabilities are in that job position?
02 A. We have a -- a document that lays out for --
03 for -- for Engineers what -- what are Technical
04 Authorities' accountabilities are, and they would be
05 per that document, and I -- I can't -- I haven't got it
06 memorized.
07 Q. Okay. I -- I'm not asking you to recite
08 anything from memory. I'm just, to the best of your
09 knowledge, what are his responsibilities as a Process
10 Safety Technical Authority in the Gulf of Mexico?
11 A. Well, to -- to -- to be reasonably precise,
12 I'd actually like to refer to that document, if I was
13 going to give you a full answer.
14 Q. Well, I don't have it, and I'm entitled to
15 know what's in your head. If you can share that with
16 me, I'd appreciate it.
17 A. So in -- off my head, he would ensure that --
18 that if people wanted to -- he would help people with
19 interpretation of what the -- of standards and
20 practices. If somebody wanted a Dispensation from a
21 standard or practice, they would first come to -- to
22 Donnie, and he would provide some deep technical
23 expertise on Process Safety.
24 Q. Okay. Was his a proactive or reactive job?

Page 451:01 to 451:05

00451:01 A. I don't know how he was doing the job at the
02 time.
03 Q. (By Ms. Hertz) Okay. Did he hold that job
04 when you came into E&P on January 1st, 2010?
05 A. Yes, I thought so, yes.

Page 451:19 to 452:06

00451:19 Q. Mr. Tooms, my name is Steve Roberts. I
20 represent Transocean. Do you know the company?
21 A. I do know -- I know the company generally. I
22 don't know it in detail.
23 Q. All right. How do you know the company?
24 A. I know Transocean in that it is a company that
25 we contract with to provide us with drilling rigs
00452:01 and -- and the services associated with the drilling
02 rigs.
03 Q. And it's a company that's still used by BP
04 worldwide?
05 A. It's a company that we are still using
06 worldwide, so far as I know, yes.

Page 452:16 to 454:13

00452:16 Q. All right. So you don't have an opinion
17 regarding the reputation of Transocean one way or the
18 other?
19 A. I -- I do have some opinions.
20 Q. All right. Is it a professional opinion, or
21 is it just a personal opinion?
22 A. My professional opinion was I was disappointed
23 in the -- in the reliability of the BOPs on not only
24 the -- the HORIZON but on subsequent rigs thereafter.
25 Q. What do you know about the reliability of the
00453:01 BOP on the HORIZON?
02 A. I know what I was told by the people who were
03 trying to close the -- the BOPs, and I investigated
04 what -- what the status of the -- the BOP positions
05 were.
06 Q. Okay. Do you have any indication -- any
07 factual information that the status of the BOP had
08 anything to do with the cause of this incident?
09 A. The only information I've got as to the cause
10 of the incident is -- is what I've read in the -- in
11 the Bly Investigation Report.
12 Q. All right. All right. Do you know any of the
13 folks that work for Transocean?
14 A. Only the ones that I met during the -- the --
15 Q. Relief effort?
16 A. -- the -- the -- the -- the relief effort --
17 sorry -- the -- the recovery effort and -- and a couple
18 that I met when I investigated the collapse of the
19 drilling riser on the Transocean -- the ENTERPRISE.
20 Q. Who do you know with Transocean? Who did you
21 work with?
22 A. On that -- on that event, I cannot remember
23 his second name. His first name was Paul, and he
24 was -- he was, I think, Head of your Technical Group.
25 Q. Paul Johnson?
00454:01 A. No.
02 Q. Is there any person with Transocean whose name
03 you can remember, that you've ever worked with?
04 A. No.
05 Q. All right. Who replaced Barbara Yilmaz? You
06 said she was the Technical Vice President for Drilling
07 and Operations.
08 A. We didn't replace that position, so it
09 would -- we changed the organization.
10 Q. Well, who -- who has responsibilities for
11 Drilling that Barbara Yilmaz used to have?
12 A. That would be Richard Lynch.
13 Q. What does Barbara Yilmaz do now?

Page 454:15 to 454:20

00454:15 A. I don't know.
16 Q. (By Mr. Roberts) Professionally, I'm talking

17 about.
 18 A. I don't know.
 19 Q. Do you know if she's been demoted, fired, laid
 20 off, put on garden leave?

Page 454:22 to 455:11

00454:22 A. All I know is the -- is -- is the
 23 communications I get which say what staff movements
 24 are, and the last I can recall seeing is I think she
 25 was working for Jack Lynch.
 00455:01 Q. (By Mr. Roberts) She was working for Jack
 02 Lynch? And what is --
 03 A. I think so.
 04 Q. Sir?
 05 A. I think so.
 06 Q. And what does Jack Lynch do?
 07 A. He's a lawyer with BP.
 08 Q. He's a lawyer?
 09 A. With BP, yes.
 10 Q. So Barbara, who used to be over Drilling, is
 11 now working for a lawyer with BP?

Page 455:13 to 457:02

00455:13 A. So far as I know.
 14 Q. (By Mr. Roberts) All right. And what does
 15 Richard Lynch do, so far as you know?
 16 A. Richard Lynch is -- as I testified yesterday,
 17 I don't know his exact title, whether it's Head of
 18 Wells or VP of Wells, but he's Head -- he's in charge
 19 of Wells.
 20 Q. In -- in the organizational chart of all of
 21 the titles you've got, is there any tree that branches
 22 up to you? In other words, does he have, directly or
 23 indirectly, any reporting responsibilities to you?
 24 A. Richard Lynch has no reporting
 25 responsibilities to me.
 00456:01 Q. Okay. Does anybody with Drilling, in the Gulf
 02 of Mexico, directly or indirectly have any reporting
 03 responsibilities to you?
 04 A. Indirectly, the -- the Wells Engineering
 05 Authority reports to me, but that's on a -- that's on a
 06 functional basis. And he has appointed Area
 07 Engineering Authorities, which would cover deepwater
 08 drilling, which covers the Gulf of Mexico.
 09 Q. Okay. Well, who's the Wells Engineering
 10 Authority?
 11 A. That's Jon Turnbull.
 12 Q. And who has he appointed in the Gulf of
 13 Mexico?
 14 A. I can't recall.
 15 Q. You mentioned yesterday that you report to
 16 John Baxter; is that correct, sir?

17 A. That's correct.

18 Q. And you mentioned that you are over Wells
19 Integrity; is that right?

20 A. No. I'm the -- I'm the Engineering Authority
21 for -- for the Upstream business, which now includes
22 in -- in -- my Engineering Authority now includes
23 Wells. And I said that I have appointed Jon Turnbull
24 as the Engineering Authority for Wells to give it the
25 focus it needs.

00457:01 Q. So Jon Turnbull is directly responsible for
02 Well Integrity, and he reports to you?

Page 457:04 to 457:10

00457:04 A. No. He's the Engineering Authority, so he's
05 not accountable for Well Integrity. That would --

06 Q. (By Mr. Roberts) Who is?

07 A. The people that construct the well. Everybody
08 involved in the -- in the Drilling operation would have
09 accountabilities for Well Integrity.

10 Q. Who's responsible for well design?

Page 457:12 to 457:14

00457:12 A. Specifically for?

13 Q. (By Mr. Roberts) Well design. Who's
14 responsible for well design?

Page 457:16 to 458:22

00457:16 A. I don't know.

17 Q. (By Mr. Roberts) Do you have any role,
18 authority, oversight, in well design?

19 A. I have oversight of well design if the well
20 design Standards were to be -- th -- there wou -- there
21 would be request for them not to be followed and if
22 that would then have an impact on the safety of our
23 Operations.

24 Q. So if there is a requested deviation from the
25 established BP procedures for well design, that has to
00458:01 be approved under your authority?

02 MS. KARIS: Object to form.

03 A. If there was a request for a deviation from --
04 from a Practice for well design, it would first go to
05 Mr. Turnbull, and then depending on the level of the
06 deviation or the level of the Practice that -- that --
07 and -- and risk that they're deviating from, it
08 would -- it may come to me.

09 Q. (By Mr. Roberts) Is temporary abandonment of a
10 well part of well design?

11 A. It -- it's --

12 Q. Let -- let me see if I can rephrase it. Is
13 temporary abandonment of an exploratory well like the

14 Macondo Well part of well design?
 15 A. It wouldn't be -- I -- I don't know.
 16 Q. Is a negative pressure test of an exploratory
 17 well like the Macondo Well part of well design?
 18 A. It may be or it may not be. I don't know.
 19 Q. Well, that -- that -- that's not for me to
 20 decide. Do you know one way or the other whether a
 21 negative pressure test is part of a well design
 22 Practice in the Gulf of Mexico?

Page 458:24 to 459:10

00458:24 A. No, I don't know.
 25 Q. (By Mr. Roberts) You don't know that.
 00459:01 As Global Head of Subsea Discipline -- I think
 02 you said you were; is that correct?
 03 A. Correct.
 04 Q. -- do your responsibilities include BOP
 05 configuration, capacities, procedures, or Standards?
 06 A. No, they don't. Or they didn't.
 07 Q. Do they now?
 08 A. No, because I'm not any longer Global Head of
 09 Subsea.
 10 Q. Did they include those things when you were?

Page 459:12 to 459:24

00459:12 A. No, they didn't.
 13 Q. (By Mr. Roberts) In your current job
 14 capacities, are you over BOPs, stack configuration,
 15 design, procedures, capacities, any of those things?
 16 A. In -- in my current role as -- as the
 17 Engineering Authority --
 18 MR. BRUNO: (Sneezing.)
 19 MS. KARIS: Bless you.
 20 A. -- the -- the -- the Practices that -- that we
 21 lay out for BOPs would fall under the Wells Engineering
 22 Authority, that falls under me.
 23 Q. (By Mr. Roberts) So, currently, the Practices
 24 for BOPs fall under you?

Page 460:01 to 460:25

00460:01 A. Yes, in -- indirectly. They come to the Wells
 02 Authority first.
 03 Q. (By Mr. Roberts) All right. You said
 04 yesterday that well design includes factoring in
 05 components to prevent blowouts. Do you recall that,
 06 sir?
 07 A. Could you just re -- repeat the statement?
 08 I'm not sure I do.
 09 Q. Do you recall testifying yesterday, sir, that
 10 well design includes factoring in the components to

11 prevent blowouts?
 12 A. If the testimony says that I said that, then I
 13 probably said that.
 14 Q. Well, do you agree with that? Do you agree
 15 that well design includes factoring in components to
 16 prevent a blowout?
 17 A. I -- yes, I would.
 18 Q. And you would agree with me that the
 19 configuration of a blow -- blowout preventer is part of
 20 a component to prevent a blowout? In other words, a
 21 blowout preventer is designed to prevent a blowout?
 22 A. Correct.
 23 Q. So the stack configuration of a blowout is
 24 part of the components that go into well design to
 25 prevent blowouts?

Page 461:02 to 462:07

00461:02 A. A well design is -- is -- is -- I would take
 03 it to mean the design of a well.
 04 Q. (By Mr. Roberts) Sir, does blowout pre --
 05 MR. KRAKOFF: He has not finished his --
 06 his answer.
 07 Q. (By Mr. Roberts) Are you finished? You put
 08 your hands down. I thought you were finished.
 09 Go ahead.
 10 A. No, I finished.
 11 Q. All right.
 12 MR. ROBERTS: Object to his objection, if
 13 you would, for me.
 14 Q. (By Mr. Roberts) Going back to my question,
 15 sir: Does blowout stack configuration, blowout
 16 preventer stack configuration, fall under your
 17 responsibilities insofar as you were the Engineering
 18 Authority?
 19 A. So as I've --
 20 MS. KARIS: Object to form.
 21 A. -- as I've already said, insofar as the
 22 blowout stack configuration is part of our Well
 23 Engineering Practices, that does fall under the Wells
 24 Engineering Authority, who -- who, in that basis, falls
 25 under me, so --
 00462:01 Q. (By Mr. Roberts) And it only --
 02 A. -- yes.
 03 Q. I'm sorry. I did interrupt you that time.
 04 And it only makes sense, since you testified
 05 yesterday that well pressures and anticipated
 06 temperatures go in to determine what type of blowout
 07 preventer is used on a well?

Page 462:09 to 462:09

00462:09 Q. (By Mr. Roberts) Is that fair, sir?

Page 462:11 to 464:07

00462:11 A. I don't recall testifying pre --
 12 Q. (By Mr. Roberts) Am I accurate?
 13 A. -- pre -- precisely those words.
 14 Q. Am I accurate that well pressures --
 15 anticipated well pressures and temperatures are factors
 16 to be considered in well design, in deciding what type
 17 of blowout preventer to put on a well?
 18 A. The pressures would be required to understand
 19 what -- what rating of blowout preventer to put on a
 20 well, and the -- the model fluid temperatures would be
 21 factors that you'd need to know, to know what
 22 configuration of -- of elastomers and so on are in that
 23 BOP stack.
 24 Q. So how do you do that? How do you, as part of
 25 the Engine in -- Engineering Authority, ensure that the
 00463:01 BOPs that are part of Wells under you, have appropriate
 02 configurations and -- and capacities to prevent a
 03 blowout? How do you do that?
 04 A. I don't.
 05 Q. Who does that, in your area?
 06 A. I -- in my area, so in the Wells -- in the
 07 Engineering Authority side of it, we ensure that there
 08 are practices written and that they are communicated to
 09 our Teams, and then it is up to the Teams to ensure
 10 that they adhere to them.
 11 Q. So, who in your Authority, your immediate
 12 reporting Group, ensures that those Practices and
 13 procedures are carried out as it regards blowout
 14 preventers? Who does that? Give me the name.
 15 MS. KARIS: Object to form.
 16 A. I don't have a name to give you.
 17 Q. (By Mr. Roberts) Well, who would it be? It --
 18 it -- in the Engineering Authority underneath you, who
 19 would that person be that oversees blowout preventer
 20 stack configuration to ensure that they align
 21 appropriately with the pressures and they match up with
 22 the procedures that BP has established?
 23 A. I just said the Engineering Authority
 24 underneath me ensures that the Practices exist and that
 25 they are communicated. It is up to the -- the Teams
 00464:01 designing the well, contracting the rig, and so forth,
 02 and -- and all parties involved in that, to ensure that
 03 they meet those Practices.
 04 Q. Who should be doing that for BP in the Gulf of
 05 Mexico? Who should be that person? Give me the
 06 person's name.
 07 A. I don't know --

Page 464:10 to 464:22

00464:10 Q. (By Mr. Roberts) But you are the Engineering
 11 Authority.

12 A. I've just told you the limits of what my En --
 13 the -- the Engineering Authority does, which is to set
 14 the --
 15 Q. Right.
 16 A. -- Standards and Practices and ensure that
 17 they're communicated.
 18 Q. Who's the person with the Engineering
 19 Authority that communicates to ensure that these
 20 Practices and procedures are followed in the Gulf of
 21 Mexico? I'm just trying to get the person's name.
 22 A. I just said --

Page 464:25 to 465:04

00464:25 A. I -- I've told you the name. It's Jon
 00465:01 Turnbull, is the Wells Engineering Authority.
 02 Q. (By Mr. Roberts) So Jon Turnbull is the one
 03 reporting to you who's responsible for overseeing
 04 whether the practices and procedures are carried out?

Page 465:06 to 466:02

00465:06 A. No.
 07 Q. (By Mr. Roberts) Yeah --
 08 A. You're -- you're, I think, deliberately
 09 misconstruing my words. I -- I keep saying that the
 10 Engineering Authority is there to ensure that the
 11 Practices are set and that they are communicated to the
 12 Teams.
 13 Q. Who communicates them? That's all I'm trying
 14 to ask. And you said it was Jon Turnbull; is that
 15 correct?
 16 A. Jon Turnbull would be accountable for
 17 communicating those Practices, yes.
 18 Q. Right. And so it would be Jon Turnbull's
 19 responsibility, under you, to make sure that those
 20 procedures are communicated to the appropriate people
 21 within BP in the Gulf of Mexico?
 22 A. Correct.
 23 Q. All right. So now we're all on the same
 24 wavelength, it's Jon Turnbull that works for you,
 25 that's responsible for ensuring appropriate stack
 00466:01 configuration and procedures for well designs in the
 02 Gulf of Mexico --

Page 466:04 to 466:04

00466:04 Q. (By Mr. Roberts) -- correct?

Page 466:06 to 467:07

00466:06 A. No. No. I -- I think you're -- I don't know
 07 if you're deliberately misconstruing what I'm saying,

08 but I'm being quite precise in what I'm saying. Jon
 09 Turnbull, as the Engineering Authority for Wells, sets
 10 the Standards and Practices, and is accountable for
 11 communicating those Standards and Practices to the
 12 Wells Teams. The Wells Teams, who do not report to Jon
 13 Turnbull, would then design the wells and collectively,
 14 including, I'm presuming, with all parties who are
 15 involved in the well, would ensure that those Practices
 16 are met.

17 Q. (By Mr. Roberts) All right. And I won't ask
 18 you another question because you'll accuse me of
 19 misconstruing it, so I'm just going to leave it alone
 20 at that one, okay, sir?

21 Yesterday you said, when you were discussing
 22 the importance of clarity in written Engineering
 23 procedures, you referenced a -- a slide, and I've got
 24 it here, if you want to see it again, but you said
 25 clarity is important, and underneath that it was
 00467:01 "bullets can kill." Do you recall that testimony
 02 yesterday?

03 A. I do.

04 Q. And -- and I take that to mean that, from your
 05 perspective, you want to make sure that things are
 06 clearly written so that there's no potential for
 07 miscommunication whatsoever?

Page 467:09 to 468:13

00467:09 A. That -- that was my intent in that -- in that
 10 statement.

11 Q. (By Mr. Roberts) And -- and as you've said,
 12 you're a very precise person, correct?

13 A. I try to be.

14 Q. All right. Who is the highest ranking person
 15 within BP, that you know of, that's responsible for
 16 ensuring procedures for negative pressure test?

17 MS. KARIS: Object to form.

18 A. The -- the person who's accountable for
 19 ensuring -- the -- the -- there are -- Practices for a
 20 negative pressure test would currently come to the
 21 Wells Authority.

22 Q. (By Mr. Roberts) And who's the Wells
 23 Authority?

24 A. Jon Turnbull.

25 Q. And who does he work for?

00468:01 A. Me.

02 Q. So negative pressure test procedures currently
 03 come to the person that reports to you; is that
 04 correct, sir?

05 A. Yes.

06 Q. Let me hand you what has previously been
 07 marked as Exhibit 70 -- 793 and 794. And would you
 08 take a look at those two rather short E-mails. Have
 09 you ever seen them before, first off?

10 A. No, I don't believe I have.

11 Q. You don't believe you have. All right. Would
 12 you take a look at those two E-mails and tell me if you
 13 can tell the Court what they concern, what they are?

Page 468:23 to 469:03

00468:23 Q. (By Mr. Roberts) Can you tell me what they
 24 are?
 25 A. They look like they are some form of outline
 00469:01 program for the -- for the rig.
 02 Q. For the rig. Can you tell me what they appear
 03 to deal with concerning the rig?

Page 469:05 to 469:11

00469:05 A. They appear to deal with a number of
 06 operations on the rig, including testing casing,
 07 displacing the seawater, putting corrosion inhibitor in
 08 the -- testing the casing of --
 09 Q. (By Mr. Roberts) Sir, as the -- as the
 10 Engineering Authority for BP, can you identify these as
 11 T and A abandonment procedures?

Page 469:13 to 470:08

00469:13 A. They may be part of a T and A abandonment
 14 procedure. I would -- I'd need to know what other
 15 conversations went on around this and what other
 16 documentation there was.
 17 Q. (By Mr. Roberts) Can you identify these as
 18 negative pressure test procedures?
 19 MS. KARIS: Object to form.
 20 A. Well, it says so at the -- at the -- at the
 21 top of the -- the top E-mail, "Here is the negative
 22 test procedure."
 23 Q. (By Mr. Roberts) But without referencing that,
 24 can you look at the document, the content of the
 25 documents and what's outlined, and tell me whether it's
 00470:01 a negative pressure test?
 02 A. It says: "With seawater in the kill close
 03 annular and do a negative test" at "2350 psi
 04 differential."
 05 Q. Let me ask you, sir: Do either of these
 06 documents reflect the level of clarity and detail that
 07 you aspire, as the Engineering Authority, for a process
 08 called a negative pressure test?

Page 470:10 to 470:17

00470:10 A. I don't know what other conversations may or
 11 may not have happened.
 12 Q. (By Mr. Roberts) We don't -- we don't want to
 13 have conversations, we want written procedures. We

14 established that. Do either of these written documents
 15 achieve the level of clarity to which you aspire as the
 16 Engineering Authority?
 17 A. I don't know what --

Page 470:19 to 470:25

00470:19 A. Sir, I don't know what other procedures --
 20 general procedures there are written, so if --
 21 Q. (By Mr. Roberts) Sir --
 22 A. -- if there were other -- other general -- we
 23 have --
 24 Q. I'm asking you about these two. Do either of
 25 these --

Page 472:05 to 472:08

00472:05 Q. Do either of these documents, standing alone,
 06 by themselves, with nothing else around them, achieve
 07 the level of clarity you aspire to in creating written
 08 negative pressure test processes and procedures?

Page 472:11 to 472:17

00472:11 A. So if -- if -- if -- if this is -- just
 12 reading these documents with no other communications,
 13 no other standard procedures, no anything else, I would
 14 look to have a more complete document.
 15 Q. (By Mr. Roberts) Do either of these documents
 16 inform the reader as to what the criteria is for a
 17 successful negative pressure test?

Page 472:19 to 472:25

00472:19 A. On their own, I can't see it in there, but I
 20 don't know, as I say, what other standing procedures,
 21 documents, or conversations were -- were -- were held.
 22 Q. (By Mr. Roberts) Fair enough. I'm just asking
 23 about these documents. Neither of these documents tell
 24 you what the success marker is for a negative pressure
 25 test, do they, sir?

Page 473:02 to 474:02

00473:02 A. I just -- I just gave you my answer, sir.
 03 Q. (By Mr. Roberts) Which was?
 04 A. That without -- without knowing what other
 05 conversations and standing procedures were, I can't see
 06 it in this document.
 07 Q. (By Mr. Roberts) All right. One other
 08 question, a BOP, you said was a barrier to the well?
 09 A. I actually said that a BOP -- closed and

10 tested BOP could be a barrier to the well.

11 Q. Yeah. That's what I was going to come to, and
12 I'm glad you corrected me on that. A BOP during
13 Drilling Operations isn't closed, is it?

14 A. During normal Drilling Operations the BOP
15 would not be closed.

16 Q. So during Drilling Operations, the BOP cannot
17 possibly act as a barrier under your criteria, if it's
18 open?

19 A. If the BOP is open, I wouldn't regard it as a
20 barrier.

21 Q. What happened to the -- the BOP on BOP process
22 that was being considered during the post-Macondo well
23 incident?

24 MR. ROBERTS: Let's mark this as an
25 exhibit.

00474:01 A. Nothing happened with the BOP on BOP.

02 Q. (By Mr. Roberts) Was that ever considered?

Page 474:04 to 477:23

00474:04 MR. ROBERTS: Mark it exhibit next. Give
05 it to me. Just mark the whole thing. What's the next
06 exhibit?

07 THE COURT REPORTER: 6212.

08 A. The answer to your question is --

09 MR. ROBERTS: M-h'm.

10 Q. (By Mr. Roberts) I haven't an -- I haven't
11 asked a question yet.

12 A. You asked was it considered --

13 MR. KRAKOFF: "Was it ever considered,"
14 that was your last question.

15 MR. ROBERTS: I thought he answered that
16 one.

17 A. No, I didn't.

18 MS. KARIS: No. The monitor will show he
19 hasn't answered.

20 Q. (By Mr. Roberts) Go ahead.

21 A. The answer to the question is the concept of
22 BOP on B -- BOP was considered, yes.

23 Q. What happened to the concept?

24 A. It didn't -- it didn't take place.

25 Q. All right. Let me hand you what I've marked
00475:01 as 6212. And can you identify that, please, sir?

02 (Exhibit No. 6212 marked.)

03 A. Yes, I have it.

04 Q. (By Mr. Roberts) What is it? And for the
05 benefit of those in the audience, it's MDL01793905
06 through 929. And I'm sorry, I don't have a bunch of
07 copies of it.

08 A. This appears to be the -- No. It's an E-mail
09 from me to Harry Thierens, forwarding on an E-mail from
10 Jon Turnbull to me, which looks like the outcome from
11 the peer assist that we had on BOP on BOP.

12 Q. And looking at Page 909, the lower right-hand

13 corner, Bates page, it's -- the first -- the top bullet
 14 point is: "Overall Feedback BOP on BOP and Ram/Valve"
 15 or "flex joint." Do you see that, sir?
 16 A. I do.
 17 Q. Says: "Key risks had all been identified - no
 18 significant additional risks identified by review
 19 team." Next one: "Review team believes that...BOP on
 20 BOP has a" greatest "probability of successful
 21 installation than the ram/valve on Flex joint.
 22 Do you see that, sir?
 23 A. I do.
 24 Q. Was the BOP on BOP ever attempted, and if not,
 25 why not?
 00476:01 A. It was not attempted, and the why not is
 02 because after having done this review, when we cut off
 03 the -- the riser joint off the top kill, the -- it was
 04 evident that we had more than one piece of drill pipe
 05 in the BOP stack, and there was a belief or a -- a --
 06 an assessment that the risk of taking the BOP off with
 07 the drill pipes in there may have led to the BOP
 08 getting stuck.
 09 Q. Say that again, the risk of taking --
 10 A. The BOP off --
 11 Q. Uh-huh.
 12 A. -- the top part of the BOP off, in fact, the
 13 lower marine riser package off of the Macondo BOP or
 14 the HORIZON BOP, because there were two -- or at least
 15 two drill pipes going through that BOP stack, and we
 16 didn't understand the configuration of the rest of it,
 17 there was a concern that the -- the BOP might get stuck
 18 part way off.
 19 Q. Were there any other concerns about the BOP on
 20 BOP?
 21 A. There were other risks that we -- that we
 22 identified. Hydrates was -- was one risk. The ability
 23 to unlatch the -- the BOP was another risk. And the
 24 third risk was there was a -- a view that there was
 25 already a leak between the two parts of the BOP, that
 00477:01 the gasket wasn't sealing effectively between the two
 02 parts of the BOP.
 03 Q. M-h'm.
 04 A. And that -- that it may not be possible to --
 05 to -- to operate that, to -- to -- to -- to get a --
 06 reget a seal on that -- on that flange.
 07 Q. Who made the decision not to try the BOP on
 08 BOP?
 09 A. Well, by this stage, the -- the Unified
 10 Command was making decisions, and they were being
 11 driven, to a certain extent, by the -- the U.S.
 12 Administration.
 13 Q. Did you suggest to the U.S. Administration
 14 that the BOP on BOP be attempted or not attempted?
 15 A. My personal suggestion was that we should
 16 attempt it.
 17 Q. Well, who -- who from BOP made

18 whatever this -- excuse me, too many acronyms -- who
 19 from BOP -- who from BP -- can I say British Petroleum?
 20 A. No.
 21 Q. She'll get mad at me. All right.
 22 Who from BP made the final recommendation from
 23 BP about the use of the BOP on a BOP --

Page 477:25 to 477:25

00477:25 Q. (By Mr. Roberts) -- to the U.S. Govt?

Page 478:02 to 478:07

00478:02 A. The recommendation -- the person who -- who
 03 voiced recommendations in general to the Government was
 04 Andy Inglis.
 05 Q. (By Mr. Roberts) What was the final
 06 recommendation from the company to the Government about
 07 whether or not a BOP should be used on top of a BOP?

Page 478:09 to 478:12

00478:09 A. I don't know, so I don't know whether it was a
 10 joint decision or a -- or a recommendation.
 11 Q. (By Mr. Roberts) What was Andy's
 12 recommendation to the Government?

Page 478:14 to 478:22

00478:14 Q. (By Mr. Roberts) As best you know it.
 15 A. As best I know it, Andy outlined the risks of
 16 the various options to the Government --
 17 Q. M-h'm.
 18 A. -- and the various options, and -- so I don't
 19 know that he made a firm recommendation one way or the
 20 other.
 21 Q. Well, when he went into the meeting, was he
 22 pro it or against it?

Page 478:24 to 480:20

00478:24 A. I don't know. I think you need to ask Andy
 25 Inglis that.
 00479:01 Q. (By Mr. Roberts) You don't know one way or the
 02 other? He's never expressed his personal view to you?
 03 A. Andy and I talked about the BOP on BOP, and we
 04 discussed the -- discussed the risks. And I -- I don't
 05 know. He was -- he under -- appreciated the risks
 06 and -- and all the things we were doing.
 07 Q. Did he ever express his view one way or the
 08 other to you about whether he was for or against the
 09 use of a BOP on BOP?

10 A. No, he didn't.
 11 Q. And this concern about the lower marine riser
 12 removal and the stuck pipe, all of that had to come out
 13 anyway, didn't it?
 14 A. The concern was very much that if the BOP got
 15 halfway off, we wouldn't be able to go up or down with
 16 the --
 17 Q. Sir --
 18 A. -- with the BOP, and then we'd have a
 19 situation that we had no means of controlling.
 20 Q. Was there a saw device that was used to
 21 remove -- to assist in the removal of the LMRP and to
 22 cut through the pipe that was at the top of the BOP?
 23 A. A saw device that got jammed in the --
 24 Q. Yeah.
 25 A. -- drill pipe they were trying to cut.
 00480:01 Q. Yes.
 02 A. Yes, there was.
 03 Q. And it -- and it got unjammed and it finished
 04 the job, didn't it, to be precise?
 05 A. No. I think to be precise, I think we
 06 actually used shears --
 07 Q. Right.
 08 A. -- to -- big -- very large shears to -- to cut
 09 that pipe in the end.
 10 Q. Did that in any way prevent you from putting a
 11 BOP on top of a BOP?
 12 A. I think that experience of getting the saw
 13 jammed in cutting the drill pipe and realizing that --
 14 that whilst there were technical solutions to all these
 15 risks, that they -- they may lead to make the situation
 16 worse, and that factored into people's assessment of
 17 the risk.
 18 Q. Well, wait a minute. That fact didn't come in
 19 until after the BOP on BOP solution had been dis --
 20 discarded, did it?

Page 480:22 to 481:08

00480:22 A. From my memory, the -- the planned sequence of
 23 events was to -- after top kill, remove the riser, take
 24 a pause while we reorganized things, and go into
 25 collection mode, and then subsequently do the BOP on
 00481:01 BOP, or -- or other remediation.
 02 So, yes, effectively the -- the decision not
 03 to do BOP on BOP would have been after we'd cut the
 04 riser off.
 05 (Exhibit No. 6213 marked.)
 06 Q. (By Mr. Roberts) Let me hand you what I've
 07 marked as Exhibit 6213. It came out of your custodial
 08 file.

Page 481:15 to 484:06

00481:15 Q. It's called the "BP Global Well Integrity
16 Review" that was conducted by David Anders -- Andrews,
17 the "E&P Segment Strategy for Well Integrity."
18 Have you ever seen this?
19 A. I -- I don't think so.
20 Q. Do you know who David Anders -- Andrews is?
21 A. David Andrews?
22 Q. Yes, sir. His -- his title is "Global Well
23 Integrity Lead, Segment Engineering Technical Authority
24 (Well Ops)."
25 A. So, I -- I knew who David Andrews -- I -- I
00482:01 knew he was that in 2008 or 2009. I don't know what he
02 does now.
03 Q. Is he still with the company?
04 A. I don't know.
05 Q. Was he a person who had a reputation of doing
06 good work, bad work, or do you have a view on that?
07 A. So far as I am aware, he had a reputation for
08 doing good work.
09 Q. And he's reporting to somebody by the name of
10 David Saul. Do you know that person?
11 A. I do know David Saul.
12 Q. What is David Saul's position?
13 A. At that time, he was -- he was in charge of
14 Management for the Well Integrity, I think.
15 Q. And who's over Well Integrity now?
16 A. I think it's still David Saul.
17 Q. And as the Engineering Authority, how do you
18 interface with Well Integrity?
19 A. As I said before, we -- we do it through
20 ensuring that we have Standards and Practices, and --
21 and that those Standards and Practices are
22 communicated.
23 Q. Well, you were identified as the designated
24 representative for BP at this deposition for Well
25 Integrity Analysis. Do you recall that, sir?
00483:01 MS. KARIS: That is incorrect.
02 Q. (By Mr. Roberts) Okay. Go ahead, sir. Answer
03 the question.
04 A. So far as I read in the document that was put
05 in front of me yesterday, I was designated as the
06 expert for the assessment of Well Integrity on the
07 Macondo Well post the incident.
08 Q. Yeah. And yet you've never seen the document
09 that I've put in front of you have called the "Global
10 Well Integrity Review"?
11 A. Yeah. No, not so far as I recall.
12 Q. So while you may have some relationship to
13 Well Integrity post-Macondo, you have not seen a
14 nine -- a 2009 document that deals with "Global Well
15 Integrity Review." Is that correct, sir?
16 A. That's correct.
17 Q. Well, let me go through a couple of the bullet
18 points with you. And by the way, do you know any of
19 these other people that are identified, such as Patrick

20 O'Bryan.
 21 Do you know him?
 22 A. I do.
 23 Q. What's his position?
 24 (Discussion off the record.)
 25 A. His current position, he's one of the VPs
 00484:01 of -- of Wells, and I'm not sure particularly which VP
 02 he is.
 03 Q. (By Mr. Roberts) Let me just go through the
 04 names: David Porter, David Andrews, Joe Anders, Tommy
 05 Houghton, Janet Weiss, Patrick O'Bryan. Are these
 06 senior people within BP?

Page 484:08 to 484:09

00484:08 Q. (By Mr. Roberts) I'm not going through them
 09 all, but are they senior folks?

Page 484:11 to 485:19

00484:11 A. Some of the names on there are senior, some
 12 are less senior, and some have left.
 13 Q. (By Mr. Roberts) Go to Page 728. It's Page 3
 14 of the document. There's a statement --
 15 A. Page 3 -- sorry. Which --
 16 MS. KARIS: 728 you said.
 17 Q. 728, yeah. It's Page 3.
 18 MR. KRAKOFF: It's cut off. The Bates
 19 number is cut off. What's it say at the top?
 20 MS. KARIS: Oh, yeah. Ours all end with
 21 72 at the end.
 22 MR. ROBERTS: All right. I'm sorry about
 23 that.
 24 MR. KRAKOFF: It's okay.
 25 MR. ROBERTS: It's a trick that we use --
 00485:01 (Discussion off the record.)
 02 MR. KRAKOFF: Is this the document?
 03 Q. (By Mr. Roberts) Let's go three pages in, if
 04 you would.
 05 MS. KARIS: Okay.
 06 MR. KRAKOFF: Yeah, that's the one.
 07 (Discussion off the record.)
 08 Q. (By Mr. Roberts) Are you with me, sir? I just
 09 want to read a statement that -- that Mr. Andrews makes
 10 and see if you agree with this: "I'm sure that this
 11 will come as no surprise to you as" will -- "as you
 12 will" often -- you "have often heard me saying that
 13 well integrity is nothing more than an outcome of good
 14 wells practice."
 15 Do you see that line, sir?
 16 A. I do.
 17 Q. Do you agree with the statement: "...wells
 18 integrity is nothing more than an outcome of good wells
 19 practice"?

Page 485:21 to 486:03

00485:21 A. No, I think there's a -- there's a significant
 22 number of issues that affect Well Integrity.
 23 Q. (By Mr. Roberts) Do you agree with the next
 24 statement where Mr. Andrews says: "Arguably, after
 25 the" reserve, "our wells are our biggest single" asset
 00486:01 "yet they are treated with so much indifference at the
 02 corporate level."
 03 Do you agree with that statement, sir?

Page 486:05 to 486:20

00486:05 A. No, I don't, particularly with -- a lot of
 06 interest at corporate level.
 07 Q. (By Mr. Roberts) Drop down to the bottom
 08 paragraph, he says: "I have recently heard it
 09 suggested that SPU's are motivated by greed and fear. I
 10 believe that this assertion is not without merit and to
 11 some extent these" primev -- "primeval instincts are
 12 healthy provided there is" no "conscience."
 13 Do you agree with that statement, sir?
 14 MS. KARIS: Object to form.
 15 A. I thought it said: "...provided there is a
 16 conscience."
 17 Q. (By Mr. Roberts) "...provided there is a
 18 conscience." Do you agree that the SPU's are motivated
 19 by greed and fee -- and fear, and that that can be
 20 healthy?

Page 486:22 to 487:01

00486:22 Q. (By Mr. Roberts) Sir?
 23 A. No, our -- our SPU's are definitely not
 24 motivated by greed and fear.
 25 Q. Do you agree that gree -- greed and fear would
 00487:01 be healthy?

Page 487:03 to 487:24

00487:03 A. Well, since I don't think that they are
 04 motivated by greed and fear, that's a -- that's a
 05 hypothetical question. If you want to give me a -- if
 06 you want me to give a hypothetical answer --
 07 Q. (By Mr. Roberts) Let me make it simple. Would
 08 you --
 09 MS. KARIS: Were you finished?
 10 Q. (By Mr. Roberts) Would you want any of your
 11 employees to be motivated by fear and greed?
 12 A. No.
 13 Q. All right. Go a couple of more pages into
 14 the -- it's actually Page 5, but it's called the

15 "Executive Summary."
 16 Do you see that, sir?
 17 A. I do.
 18 Q. It says: "All our major well integrity
 19 incidents have been due to simple bad practice. Well
 20 integrity is no more than an output of competent basic
 21 operating practice."
 22 Do you see that, sir?
 23 A. I do see that.
 24 Q. Do you agree with that statement?

Page 488:01 to 488:11

00488:01 A. No, I don't.
 02 Q. (By Mr. Roberts) Turn to the next page.
 03 Bottom paragraph, it says quote: "As alluded to
 04 earlier all our well integrity train wrecks have been
 05 down to simple bad practice."
 06 Do you see that, sir?
 07 A. That's on this -- this subsequent -- the next
 08 page on, yeah.
 09 Q. All right. Do you see that paragraph?
 10 A. (Reviewing document.) I see that.
 11 Q. Do you agree with that --

Page 488:13 to 488:15

00488:13 Q. (By Mr. Roberts) -- that your "...well
 14 integrity train wrecks have been down" due "to simple
 15 bad practice"?

Page 488:17 to 489:23

00488:17 A. I don't know what "well integrity train
 18 wrecks" he's -- he's referring to.
 19 Q. (By Mr. Roberts) Is Macondo a train wreck?
 20 MS. KARIS: Object to form.
 21 (Discussion off the record.)
 22 A. A train wreck is -- is -- is a loosely used
 23 term to define --
 24 Q. (By Mr. Roberts) Bad outcome?
 25 A. Well, a -- a sequence of outcomes that pile up
 00489:01 on each other to -- to -- to give you a very bad
 02 outcome. So --
 03 Q. Is it a train wreck?
 04 MS. KARIS: Mr. Roberts, if you can just
 05 allow him to finish his answer, please.
 06 A. So in -- in terms of Macondo, as, I think,
 07 Mark Bly found in his Report, there were a whole
 08 sequence of contributing factors, so in that
 09 definition, you could call it a "train wreck."
 10 Q. (By Mr. Roberts) And do you know what the
 11 Alaska A22 procedure or -- or incident is that he

12 refers to?
 13 A. No, I don't.
 14 Q. You haven't studied that in your aspect as the
 15 Engineering Authority?
 16 A. No. This is -- what's the date of this?
 17 Q. 2009.
 18 A. Yeah. So I wasn't the Engineering Authority
 19 in 2009.
 20 Q. No, sir. But if you want to be a -- a good
 21 Engineering Authority in the future, don't you have to
 22 know a little bit about Engineering Authority
 23 procedures in the past?

Page 490:01 to 491:01

00490:01 Q. (By Mr. Roberts) Sir?
 02 A. I would always want to learn from -- from
 03 previous incidents --
 04 Q. Right.
 05 A. -- and we would take our learnings and -- and
 06 codify them into our new Practices. That's how we do
 07 it.
 08 Q. Right. That's how we learn, isn't it? We
 09 learn from our past?
 10 A. It's hard to learn from the future.
 11 Q. Okay. But you don't know what A -- A22 Alaska
 12 is?
 13 A. No, I don't know.
 14 Q. How about Ula A5, where he describes it as
 15 "...poor handover and bad practice..."
 16 Do you know that one?
 17 A. I don't know what Ula A5 is, no.
 18 Q. How about: "Colombian blow out" due to "poor
 19 practice and risk assessment."
 20 Do you know what that is?
 21 A. No, I don't know what that one is.
 22 Q. Next page, please. He -- he says at the top:
 23 "I believe that the greatest obstacle in delivering
 24 appropriate levels of integrity across BP wellstock is
 25 a lack of clear accountability for that wellstock."
 00491:01 Do you agree with that, sir?

Page 491:03 to 491:18

00491:03 A. I don't know whether if it's the greatest
 04 obstacle. I do understand that you need to have clear
 05 accountability of wells docu -- and -- and we discussed
 06 that yesterday, about making sure that we are clear on
 07 who has accountability for Integrity Management of
 08 wells --
 09 Q. (By Mr. Roberts) Next page -- or excuse me.
 10 A. -- throughout -- throughout their life.
 11 Q. I'm sorry?
 12 Next paragraph, it says, quote: "BP history

13 is littered with inappropriate actions and decisions,
 14 pertaining to wells with little or no accountability,"
 15 end quote.
 16 Do you see that, sir?
 17 A. I do.
 18 Q. Do you agree with that?

Page 491:20 to 492:14

00491:20 A. I don't disagree or -- nor agree because I
 21 don't know --
 22 Q. (By Mr. Roberts) You don't know the history?
 23 A. -- what he's saying.
 24 Yeah.
 25 Q. Okay. You got to know the history to know
 00492:01 whether you can agree or disagree with Mr. Andrews,
 02 don't you?
 03 A. I do.
 04 Q. Where is Mr. Andrews now, do you know?
 05 A. I don't know.
 06 Q. Okay. Is he still with the company?
 07 A. I said I don't know if he's still with the
 08 company.
 09 Q. Down at the bottom, the -- the next to the
 10 last paragraph, it says: "For too long wells have been
 11 treated as one would treat a hire car. There is little
 12 or no ownership of our wells outside the D&C
 13 construction phase."
 14 Do you agree with that, sir?

Page 492:16 to 493:23

00492:16 A. I understand what he's referring to there is
 17 the -- the stage of the well after the wells have been
 18 handed over and put on production. And it's got little
 19 to do with the -- the drilling of the well.
 20 Q. (By Mr. Roberts) Would you go to the -- the
 21 penultimate page of this document?
 22 MR. KRAKOFF: What is that?
 23 MR. ROBERTS: It's the one --
 24 THE WITNESS: It's the one before the
 25 last one.
 00493:01 MR. ROBERTS: -- immediately after the
 02 ante penultimate page to be precise, next to the last.
 03 Q. (By Mr. Roberts) Are you there, sir?
 04 A. I'm here.
 05 Q. Okay. At the top of that page is a Project
 06 and Engineering Organizational Chart. Do you see that?
 07 Next -- let me show you, sir.
 08 A. Oh, I -- this learning circle.
 09 Q. No. We're on different pages.
 10 A. I'm on the penultimate page, I thought.
 11 That's -- that's the ultimate page?
 12 Q. No. That's the penultimate page.

13 MS. KARIS: Well, I think his copy
14 might --
15 Q. (By Mr. Roberts) Right. Yours got cut off.
16 So you go the last page of your --
17 A. Oh, yes. There's the -- I found the ult --
18 Q. A paper clip came off. You're doing this to
19 me. I -- I wasn't wrong.
20 A. So that's the penultimate page. I got it.
21 Q. Yeah, make sure you put all this together.
22 You there?
23 A. Yeah.

Page 494:02 to 494:15

00494:02 Q. (By Mr. Roberts) All right. Back to the top
03 of the page, "Projects & Engineering Organization
04 (Direct Reports to David Clarkson)."
05 Who is David Clarkson? At that time what his
06 job?
07 A. He was the Technology Vice President for
08 Projects & Engineering.
09 Q. Okay. And then I look down, and on the second
10 level down, I see you -- you. You're the Vice
11 President of what, Subsea?
12 A. Subsea.
13 Q. And -- and I forgot yesterday what you said
14 about it. Does Subsea include blowout preventers?
15 A. No, it does not.

Page 494:17 to 496:02

00494:17 Q. (By Mr. Roberts) And then at the bottom of
18 that, it's got Barbara Yilmaz for Drilling &
19 Completions; is that correct, sir?
20 A. I can -- actually, I can vaguely -- I mean, I
21 can read the title, and I think it says "Barbara
22 Yilmaz" in the first box.
23 Q. What changes from the Engineering Authority
24 have been implemented since Macondo in drilling of
25 exploratory wells?
00495:01 A. So since Macondo we have as part of our
02 reorganization to include S&OR. We have instituted an
03 Engineering Authority in Drilling that sits within the
04 S&OR organization -- or in Wells, I should say -- sits
05 within the S&OR organization and -- and that reports up
06 to me functionally and directly to -- to a VP of S&OR.
07 Q. Okay. So we've done some organizational
08 changes. As a practical matter out at the well
09 drilling level, what changes have been made?
10 A. So far as I'm aware, we're adopting the
11 recommendations made in the Bly Report.
12 Q. Are there changes, have there been any changes
13 made to negative test procedures?
14 A. I don't know what changes have been made to

15 negative test procedures at this stage.
 16 Q. You don't know. Do you know whether negative
 17 tests have to be approved onshore?
 18 A. I don't know.
 19 Q. Do you know what changes have been made to
 20 cementing practices?
 21 A. No, I don't know.
 22 Q. Do you know whether cementing has to be
 23 approved by third parties?
 24 A. I don't know.
 25 Q. Do you know whether a cement test, stability
 00496:01 test has to be reviewed before rig personnel are
 02 instructed to proceed with cementing a well?

Page 496:04 to 496:20

00496:04 Q. (By Mr. Roberts) Sir?
 05 A. No, I don't know.
 06 Q. Do you know whether a Cement Bond Log is
 07 required to be used?
 08 A. On every cement job? I don't know.
 09 Q. On any cement jobs. Sir?
 10 A. I would be surprised if it was required on
 11 some of the surface cement jobs, but I don't know.
 12 Q. You don't know whether a Cement Bond Log is
 13 required on any cement job?
 14 A. I don't know if it's required on every cement
 15 job, and I know that it would be required on some
 16 cement jobs.
 17 Q. Would it be required on a job like the T&A
 18 process that was underway on the Macondo Well when the
 19 rig blew up?
 20 A. I --

Page 496:22 to 496:24

00496:22 Q. (By Mr. Roberts) According to your new
 23 procedures.
 24 A. I don't --

Page 497:01 to 497:15

00497:01 A. I don't know when -- when the Cement Bond Log
 02 would be required under our new procedures.
 03 Q. (By Mr. Roberts) Do you know whether the BP
 04 representatives are required now to determine whether
 05 the top -- where the top of cement is under your new
 06 procedures?
 07 A. No, I don't know that.
 08 Q. Do you now whether BP now requires a cement
 09 plug to be put in place in a well before the well is
 10 displaced or mud is removed?
 11 A. No, I don't know that.

12 Q. If these are procedures that may or may not be
13 required under your new procedures, any dev --
14 deviation from those new procedures would have to go to
15 Mr. Turnbull; is that correct?

Page 497:17 to 498:05

00497:17 A. That's correct.
18 Q. (By Mr. Roberts) And if it was a substantial
19 change in the new procedures, that would have to be
20 ultimately approved by you, as you told me earlier?
21 A. If it was a change that would lead to a
22 substantial risk, it would have to come through to me,
23 yes.
24 Q. But you don't know whether any of these things
25 I've just outlined are part of new procedures?
00498:01 A. Well, I haven't received any requests for
02 Dispensations along any of the lines that you've been
03 talking about.
04 Q. So it's possible they're still doing the same
05 thing today out there?

Page 498:08 to 499:05

00498:08 A. Insofar as anything is possible, but if the --
09 if people have asked for Dispensations to procedures
10 and they were given rise to risk and if there were to
11 contravene things that were instituted post-Macondo,
12 I'm pretty sure that they would come through to me.
13 Q. But you haven't seen one, have you?
14 A. Request for Dispensation?
15 Q. Yeah.
16 A. No, I have not.
17 Q. And you don't know one change in the
18 procedure, do you?
19 A. I don't know the changes in the procedure.
20 Q. Do you know whether there's a change in stack
21 configurations or ram requirements on BOPs?
22 A. I know there have been some changes to our BOP
23 stack configurations. I don't know what they are.
24 Q. You're now required to have two blind shear
25 rams in all stacks used for deepwater development,
00499:01 aren't you, sir?
02 A. So far as I'm aware, yes.
03 Q. So any -- would you view a change -- or a
04 request from go -- from going from two to one to be a
05 major change that would require your approval?

Page 499:07 to 500:02

00499:07 A. Yes, I would regard that as a -- as a
08 significant request.
09 Q. (By Mr. Roberts) So if Mr. Turnbull will --

10 were to get a request from a well site or Well Team
 11 Leader to utilize a BOP with only one blind shear ram,
 12 that is the type of change or Request for Dispensation
 13 that would rise to your level?

14 A. That type of Dispensation depending on the --
 15 on the risk would rise to my level.

16 Q. What do you mean, "depending on the risk"?
 17 That's a change in the BOP. What risk would it
 18 require, other than a physical change of the blind
 19 shear ram dup -- duplication?

20 A. Well, if they were to be drilling a well and
 21 they were not to be going anywhere near a reservoir
 22 section, then Mr. Turnbull might be able to assess that
 23 risk on his own.

24 Q. If you were to be drilling a well that had the
 25 potential for pressures in excess of 5,000 psi, would
 00500:01 that be a significant deviation that would require your
 02 approval?

Page 500:04 to 500:14

00500:04 A. We're getting hypothetical here. So I -- I
 05 don't -- I don't know -- I'd need to know all the --
 06 all the facts surrounding the issues.

07 Q. (By Mr. Roberts) Are you familiar with B --
 08 BP's own Practices concerning the stack configuration
 09 requirements for wells in excess of 5,000 psi?

10 A. I've just said I don't know the detail of it.

11 Q. Well, what -- what pressure, anticipated
 12 pressure, would it be that Mr. Turnbull would have to
 13 come to you to get authority to allow a change from two
 14 blind shear rams to one, under the new procedure?

Page 500:16 to 500:17

00500:16 Q. (By Mr. Roberts) Do you know? Do you have
 17 one?

Page 500:19 to 501:18

00500:19 A. He would have to come to me, if -- if the --
 20 if there was a request to deviate from the procedures
 21 in the -- that's laid out for BOPs or other -- any
 22 other thing if it would lead to significant risk.

23 Q. (By Mr. Roberts) What do you call a
 24 "significant risk"? Is it left up to him? Do you have
 25 it written down somewhere as to what guidelines and
 00501:01 procedures he's to follow to come visit with you and
 02 get an approval for a Dispensation?

03 A. Yes. We have a -- we have a group-defined
 04 practice on -- on how we assess risk.

05 Q. And -- and what's that called?

06 A. It's GDP 3.001.

07 Q. And what level does it require your
08 involvement?
09 A. If it got to a -- I can't -- I can't remember
10 the exact -- the exact level on the chart, but if it
11 got to a -- a blue level risk.
12 Q. You're a blue level required authorization.
13 Is that where you are?
14 A. That's where I am.
15 Q. Is changing from -- in development of an
16 offshore well, changing from two BSRs now to one, where
17 the risk potential is 5,000 psi or greater, a blue
18 potential for risk?

Page 501:20 to 502:01

00501:20 A. I don't know. I need to know more information
21 than you're giving me.
22 Q. (By Mr. Roberts) Are you aware in -- in your
23 post-Macondo review of well integrity and pressures and
24 blowout preventers, are you aware that in the BP fleet
25 that there were only two Transocean rigs that BP
00502:01 requested have one blind shear ram?

Page 502:05 to 502:10

00502:05 A. Sorry. Can you restate the question?
06 Q. (By Mr. Roberts) Yeah. Were you aware from
07 all the information you received post-Macondo that in
08 the BP fleet of Transocean rigs, there were only two
09 Transocean rigs that had been stacked configured per
10 BP's specifications with one blind shear ram?

Page 502:12 to 502:22

00502:12 A. No, I'm not aware.
13 Q. (By Mr. Roberts) Were you aware that it's
14 those two rigs that were on the Macondo Well; first,
15 the MARIANAS and then per instructions from BP the
16 DEEPWATER HORIZON? Were you aware of that?
17 A. So I thought -- I thought you said
18 post-Macondo.
19 Q. Post-Macondo, are you aware now that there
20 were two rigs that were put on the Macondo Well at your
21 request, and they were both equipped at your request
22 with one blind shear ram?

Page 502:24 to 503:06

00502:24 A. No, sir. I have no -- so -- so you're --
25 you're confusing me with post-Macondo and pre-Macondo.
00503:01 So I'm not aware of what requests we made
02 pre-Macondo for the BOP configuration.
03 Q. (By Mr. Roberts) Have you ever looked into why

04 it is that BP requested certain of -- of its rigs, its
 05 contracted rigs, to be equipped with one blind shear
 06 ram versus two?

Page 503:08 to 504:05

00503:08 A. This is pre-Macondo?
 09 Q. (By Mr. Roberts) Anytime are you aware of any
 10 investigation or did you become aware of the knowledge
 11 that certain BP rigs were equipped with one blind shear
 12 ram as opposed to two?
 13 A. I'm not aware that post-Macondo that we have
 14 any rigs that -- that are drilling that -- that have
 15 one blind shear ram versus two at our request.
 16 Q. Did you become aware of the fact that prior to
 17 Macondo BP's fleet was varied in the sense that some of
 18 its rigs had two blind shears rams and some had one?
 19 MS. KARIS: Object to form.
 20 A. I was aware that the fleet of rigs we -- we
 21 had which are owned by contractors had different BOP
 22 configurations, and I was aware that the Transocean rig
 23 that was on the HORIZON rig had a blind shear ram and a
 24 casing shear ram on it.
 25 Q. (By Mr. Roberts) Did you ever look -- this is
 00504:01 my last question -- did you ever learn why it is that
 02 when BP specified or gave the contract specifications
 03 to the drilling contractor for a BOP stack
 04 configuration sometimes BP wanted one blind shear ram,
 05 sometimes BP wanted two?

Page 504:08 to 504:09

00504:08 Q. (By Mr. Roberts) Go ahead, sir.
 09 A. No, I didn't.

Page 508:25 to 509:08

00508:25 On April 20, 2010, tell me again: What was
 00509:01 your position with BP?
 02 A. My position with BP at that stage was the Vice
 03 President for Engineering for E&P and Head of
 04 Discipline for -- sorry, the Head of Engineering for
 05 E&P and also the Engineering Authority for E&P in BP.
 06 Q. Okay. And I believe you said yesterday that
 07 that Authority as the Vi -- as the VP of Engineering
 08 for E&P was a Global job, did you not, sir --

Page 509:10 to 509:11

00509:10 Q. (By Mr. Godwin) -- as of April -- as of April
 11 20, 2010?

Page 509:13 to 509:14

00509:13 A. I -- I don't know if I said that, but it --
14 but it was a Global job.

Page 510:08 to 510:20

00510:08 Now, as the Head of Engineering within BP on a
09 Global basis on April 20, 2010, are you able to tell us
10 under what conditions a Cement bob -- Bond Log would
11 have been run on the Macondo Well after the cement job?
12 A. No, I'm not, because whilst the title says
13 Head of Engineering for E&P, it did not include any
14 oversight of what happened in Drilling & Completions.
15 Q. Okay. And I'm not asking you about whether or
16 not you had oversight. I'm asking you for any examples
17 and under what conditions you believe, if you know, a
18 Cement Bond Log would have been required by BP to be
19 run on the Macondo Well on April 20, 2010.
20 A. No.

Page 510:22 to 510:23

00510:22 Q. (By Mr. Godwin) You do not know?
23 A. I do not know.

Page 511:16 to 512:15

00511:16 Q. Now, aside from that, at any time after the
17 incident, have you been engaged in a conversation or
18 partic -- or been in a room where one was had,
19 involving the discussion about whether a Cement bog --
20 Bond Log should have been run on the Macondo Well after
21 my client's cement job?
22 A. Yes, I have. I -- I -- I can't recall the
23 exact time of the conversations, but I recall
24 conversations that there was always an intention to run
25 a Cement Bond Log on Macondo prior to the completion of
00512:01 the -- of the well.
02 Q. Okay. Well, did -- did you have -- since the
03 incident, have you been in any -- any conversation, by
04 phone or in person, where anybody has said that perhaps
05 BP should have had a Cement Bond Log run before the
06 incident occurred on April 20? Has anybody said that
07 in your presence, that perhaps that should -- would
08 have been a good idea?
09 A. Not to my knowledge, no.
10 Q. You've read the Bly Report, haven't you?
11 A. I have.
12 Q. Did you read in the Bly -- in the Bly Report
13 or the BP in -- internal Investigative Report that the
14 Bly Report concluded that a Cement Bond Log should have
15 been run? Did you read that, sir?

Page 512:17 to 514:02

00512:17 A. I read the Bly Report, and I -- I can't
 18 remember the exact wording of -- of the Bly Report, and
 19 it would be important to -- to -- to recall the exact
 20 wording in there, because it is -- Mr. Bly is actually
 21 pretty precise, too.
 22 Q. (By Mr. Godwin) Okay. Have you spoken with
 23 Mr. Mark Bly at any time since the in -- incident,
 24 about the Macondo Well in any respect?
 25 A. I have done on a li -- yes, a li -- limited
 00513:01 respect.
 02 Q. Okay. And where did that conversation or
 03 conversations -- where did they take place, by phone or
 04 in person, by E-mail, or all of the above?
 05 A. In person.
 06 Q. Okay. And where?
 07 A. I think the latest one was in -- in Austin,
 08 Texas.
 09 Q. In Austin. And -- and you say -- and I'd
 10 asked you if you were talking about the Macondo Well.
 11 What were you -- you and Mr. Bly talking about in
 12 Austin, Texas regarding the Macondo Well, in Austin?
 13 A. Simply the -- the fact that we were reissuing
 14 the -- some of our Standards and Practices in response
 15 to the Macondo Well.
 16 Q. Okay.
 17 A. I mean, nothing more than that.
 18 Q. Was this at a -- at a seminar or at a me --
 19 Group meeting, or was it just the two of you gentlemen?
 20 A. That was just a conversation between me and
 21 him.
 22 Q. Okay. And at any time during that
 23 conversation with Mr. Mark Bly, did he say to you, in
 24 that Austin, Texas conversation, that he believed that
 25 BP had made some decisions that were not necessarily
 00514:01 good decisions, or words to that effect, on the Macondo
 02 Well?

Page 514:04 to 515:16

00514:04 A. No, he did not.
 05 Q. (By Mr. Godwin) Okay. What did he say to you
 06 in Austin, Texas, again, about the Macondo?
 07 A. He asked me how we were doing with getting the
 08 procedures and so on rolled out.
 09 Q. Okay. And when was this conversation? Did --
 10 A. When?
 11 Q. Yes, sir, you're referring to.
 12 A. About two or three weeks ago.
 13 Q. Okay. And how long did -- just you visited
 14 for a few moments?
 15 A. Actually, I -- I was with him for a day and a
 16 half, but --

17 Q. Okay.

18 A. -- you know, we spent a few moments talking
19 about anything to do with Macondo.

20 Q. Okay. And just -- and Au -- other than the
21 Austin, Texas few moments of conversation with Mr. Mark
22 Bly, have you spoken with him on any other occasion
23 since April 20, 2010 regarding anything pertaining to
24 the Macondo Well?

25 A. No, I have not.

00515:01 Q. Okay, sir. Have you E-mailed or otherwise
02 communicated with him through written form, if not --
03 if not by phone or not in person, about the Macondo
04 Well, since April 20, sir?

05 A. Not that I can specifically recollect. The --
06 the reason I put that -- that in there is I may have
07 written to him when he requested people to support his
08 Investigation Team. That -- that would be the only
09 types of communication I can think of that I had with
10 him.

11 Q. Have you and Mr. Mark Bly, at any time whether
12 in that short visit you had there in Austin or any
13 other occasion, discussed the negative pressure tests
14 that were performed there on the Macondo Well on the
15 day of the incident?

16 A. No, we have not.

Page 515:18 to 515:20

00515:18 Now, on Exhibit 6175 there, which you have in
19 front of you, if you will look at Page 7 of it, Page
20 No. 7 --

Page 516:17 to 517:05

00516:17 Q. Okay, sir. And there on Page No. 7 under the
18 paragraph which I referred you to, the last couple of
19 sentences where he says: "Being subsea is a big
20 challenge."

21 Do you see where I'm referring to, sir, the
22 third line from the bottom?

23 A. The "Being...", yes, I see that.

24 Q. "Being subsea is a big challenge. It is
25 relatively costly; you have to get it right first time,
00517:01 and intervention is difficult - hence decision making
02 and system reliability are crucial."

03 What did you mean by the statement "...you
04 have to get it right first time..." as related to
05 subsea drilling? What were you talking about?

Page 517:07 to 518:17

00517:07 A. Well, I wasn't actually talking about Subsea
08 Drilling at all here. I was talking about subsea

09 technology --

10 Q. (By Mr. Godwin) Okay.

11 A. -- and -- and in my role as Head of Discipline
12 For Subsea. Before, I said in my testimony, I was
13 looking much more at the -- well, almost entirely at
14 the production systems and risers and so forth,
15 manifolds and valves, and -- and that's what I was
16 relating to.

17 And "...getting it right first time..." is
18 simply that unlike the -- the drilling subsea kick,
19 it's very difficult to recover this and -- and work on
20 it. And so it has to be even more reliable than
21 aircraft. Aircraft do come into land from time to
22 time, whereas --

23 Q. Yes, sir.

24 A. -- subsea kick goes down, and the ships stay
25 down.

00518:01 Q. Right. And are you suggesting there by
02 "...you have to get it right first time..." that
03 there's not much room for error with respect to subsea
04 technology?

05 A. Well, particularly, as I say, I -- I do make
06 the distinction between drilling technology and
07 drilling subsea technology, which is, as I said
08 yesterday, is most retrievable --

09 Q. Okay.

10 A. -- and production technology. But, yes, I
11 stand by that statement.

12 Q. All right. And -- and do you -- do you
13 believe that by the statement you said "...you get it
14 right first time..." that -- that there are not many
15 times when you can have a mistake made when you're
16 dealing with subsea activities in deepwater drilling?
17 Would you agree with that?

Page 518:19 to 519:09

00518:19 A. Well, because subsea is, as I said there,
20 relatively early technology, there are frequently
21 mistakes made in the -- in the application of new
22 technology in subsea, and it's relatively costly
23 because we have to go and intervene before we can put
24 it into service.

25 Q. (By Mr. Godwin) And intervention, would that
00519:01 be -- would that be in the form of remedial work
02 from -- that you're speaking of?

03 A. Yes, I mean, we've had examples where we've
04 had to recover --

05 Q. Okay.

06 A. -- manifolds and fix them or rebuild them
07 and -- and rerun them.

08 Q. In your way of thinking, is a Cement Bond Log
09 a form of remedial work on a well?

Page 519:11 to 520:06

00519:11 A. No. My -- my way of thinking, a Cement Bond
12 Log is a -- is a tool to assess the bond of cement.
13 Q. (By Mr. Godwin) Okay. Is there any other
14 reason to run a Cement Bond Log on a well other than
15 test -- to test the integrity of the cement?
16 A. Yes, there -- there -- associated with the
17 Cement Bond Log tools, there's -- are often calipers
18 and so forth that would test the integrity of the --
19 the casing and so on and so forth.
20 Q. Right. And if you -- if you run a Cement Bond
21 Log after a cement job and it's determined that the
22 cement job is not good, is a squeeze job one of the
23 way -- one of the intervening measures to correct the
24 problem?
25 A. In general, it -- if you get a Cement Bond Log
00520:01 and it's not good, then a squeeze job might be an
02 appropriate response, yes.
03 Q. Okay. Are you aware that the Cement Bond Log
04 that BP had arranged for on this well would have cost
05 something in the -- in the area of \$125,000 to have
06 performed --

Page 520:08 to 520:09

00520:08 Q. (By Mr. Godwin) -- 125 to 127, are you aware
09 of that?

Page 520:11 to 520:22

00520:11 A. No, I wasn't.
12 Q. (By Mr. Godwin) Okay. Well, do you know how
13 much, on a well like the Macondo Well, a Cement Bond
14 Log would cost, or have an -- have an idea, an
15 estimate?
16 A. I -- I could give an estimate in that it would
17 take several hours to run it, and it would be the cost
18 of the -- the rig, and the -- I don't know what a
19 Cement Bond Log tool costs these days, so --
20 Q. Okay. And so my understanding is, is that BP
21 is complaining that Halliburton's cement job was
22 defective. Is that your understanding or not?

Page 520:24 to 521:11

00520:24 A. My understanding is -- is what's written in
25 the Bly Report, because he did the investigation.
00521:01 And -- and so I -- I read what I read in -- in the Bly
02 Report, where he says that Halliburton's cement job was
03 defective, yes.
04 Q. (By Mr. Godwin) Okay, sir. Can we then go
05 from that point to the next point, and that is, that

06 had BP undertaken to run a Cement Bond Log at the cost
07 of several hours of rig time and man-hours, and spent
08 the cost with Schlumberger to run the bond log, that
09 we've been be looking in something in the hundreds of
10 thousands of dollars, that had BP spent that, this
11 horrific blowout would not have occurred, would it?

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00521:14 A. If you're asking for my opinion from what I
15 learned on the well, and given that the flow appeared
16 to have come up the -- the -- through the shoe track, a
17 Cement Bond Log wouldn't have investigated that, so I
18 don't know that it would have helped us.
19 Q. (By Mr. Godwin) Wouldn't the Cement Bond Log
20 have determined the top of cement?
21 A. Yeah, it -- it may have done. I don't know
22 what -- I don't know what the composition of the cement
23 was, its thickening time, or -- or how effective a
24 Cement Bond Log would be a short time after the cement
25 was pumped. I -- I don't know that.
00522:01 Q. Well, do you -- do you -- with regard to
02 contamination, does contamination of cement impact
03 the -- the thickening time?

Page 522:05 to 522:13

00522:05 A. In -- in my experience --
06 Q. (By Mr. Godwin) Yes, sir.
07 A. In my general drilling experience,
08 contaminated cement generally affects thickening time.
09 It may accelerate it, or it may lengthen it.
10 Q. Are you aware that -- that or do you believe
11 that synthetic oil-based mud will -- will
12 contaminate -- will contaminate foam cement? Are you
13 aware of that, sir?

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00522:15 A. No, I -- I don't know that. I don't actually
16 have an expertise in -- in foam cement.
17 Q. (By Mr. Godwin) Do you have -- do you know
18 whether or not synthetic oil-based mud will react
19 negatively when it comes in contact or close proximity
20 to foam cement? Do you know one way or the other?
21 MS. KARIS: Object to form.
22 A. No, I just said, I -- I don't -- I don't --
23 since you made the distinction about foam cement, I
24 don't know what -- what oil-based mud and foam cement
25 does.
00523:01 Q. (By Mr. Godwin) Well, how about any cement?
02 Do you believe that synthetic oil-based mud coming into
03 contact with -- with conventional cement, that it

04 will -- whether it will have a neg -- the cement will
05 have a negative reaction to the synthetic oil-based
06 mud, do you know that?
07 A. No, I know that if you mix the two together,
08 they have a negative reaction.
09 Q. Are you aware that in the --
10 (Discussion off the record.)
11 Q. (By Mr. Godwin) Are you aware that in a rat
12 hole of the Macondo Well, that BP left synthetic
13 oil-based mud in the rat hole? Are you aware of that?

Page 523:15 to 524:01

00523:15 A. No, I'm not aware of that.
16 Q. (By Mr. Godwin) Okay. Are you aware that just
17 above the rat hole, in close proximity, was the
18 conventional cement that my client pumped in? Are you
19 aware of that, or have you learned it through any
20 source?
21 A. I'm -- I'm not sure. Could you explain that
22 to me?
23 Q. Are you aware that in the shoe track, which
24 was in close proximity to the rat hole, that there was
25 conventional cement of my client, in the shoe track?
00524:01 Are you aware of that?

Page 524:03 to 524:11

00524:03 A. No, I'm not aware of that, but that would be
04 what I would expect, that you would have conventional
05 cement in the shoe track.
06 Q. (By Mr. Godwin) Would it surprise you to
07 know -- or strike that.
08 Would you agree that BP should not have
09 allowed synthetic oil-based mud to be in the rat hole
10 in close proximity to the shoe track filled with
11 conventional cement?

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00524:14 A. I -- I would need to know a lot more
15 information about the -- the -- the -- the general
16 arrangement of it, but the cement that's in the shoe
17 track would not have reached the rat hole below the
18 shoe, so I -- I -- I'm not sure what your point is.
19 Q. (By Mr. Godwin) When you read the Bly Report
20 as it related with regard to the -- did you read the
21 part that -- that related to the foam cement -- that
22 the nitrogen breaking out of the foam cement? Did you
23 read that part?
24 A. I did with regard to the cement testing and
25 the --
00525:01 Q. Right, right.

02 A. -- and the -- the foam breakout.
03 Q. Have you had any conversations with anyone at
04 BP since the incident where the discussion of the
05 breakout of the foam cement was discussed?
06 A. Yes.
07 Q. Okay. With whom did you discuss that subject?
08 A. M-h'm. I -- I think, amongst others, with
09 Phil Pattillo.
10 Q. Okay. And when did you have that discussion
11 with Mr. Pattillo?
12 A. During the early stage of the event.
13 Q. Okay. And -- and what was said between the
14 two of you gentlemen regarding the subject of the
15 breakout of the nitrogen from the foam cement?
16 A. Simply we -- we -- we took what we'd heard
17 from the Bly Investigation Team and wanted to
18 understand whether that could have caused the hanger to
19 have lifted.
20 Q. Okay. Was there any discussion with you and
21 anyone else, or that you overheard with anyone from BP,
22 that he or she or they believed that the foam cement
23 was contaminated by whatever means?
24 A. No, we didn't discuss that at all.
25 Q. You didn't discuss that. Okay, sir.
00526:01 When you used, back in this article, back in
02 Exhibit 6175, said: "...and intervention is
03 difficult," what did you mean by the word
04 "intervention" in that sentence, sir?
05 A. I meant getting your sub -- going and either
06 recovering subsea equipment and intervening with an ROV
07 to -- to work on -- on subsea equipment or replace
08 components, that -- that type of intervention.
09 Q. Okay, sir. Let me ask you this, before I go
10 further into that article, briefly: Do you have any
11 knowledge of the design of the cement job on the
12 production casing string that was pumped by my client,
13 Halliburton?
14 A. The only knowledge I have is what I read in
15 the Bly Report.
16 Q. Okay, sir. Do you have any knowledge of the
17 mud logging services that were performed by
18 Halliburton-Sperry employees there on the Macondo Well?
19 A. Again, the only -- the only knowledge I
20 come -- I get comes from the Bly Report and the work
21 preceding the Bly Report.
22 Q. Okay. Have you done anything, Mr. Tooms,
23 following reading the Bly Report to -- to confirm or
24 validate what you read in the Bly Report about my
25 client's cement job and anything you read in the
00527:01 Report? Talk to anybody, read anything, go back and
02 looked at anything whatsoever?
03 A. Beyond the work that we did to try and
04 understand where the flow was coming from during the
05 well -- so we did that work -- no.
06 Q. Okay. Is it -- and what do you mean by beyond

07 the work that you did with regard to the flow? What,
 08 if anything, would that have done with respect to my
 09 client's cement job?
 10 A. We were trying to evaluate -- such as during
 11 the incident leading up and until the time the well was
 12 shut in and -- and finally killed, we were needing to
 13 evaluate --
 14 Q. I'm talking about you, sir, not others, just
 15 you --
 16 A. Oh.
 17 Q. -- right now.
 18 A. Well, me, I was leading the -- the --
 19 Q. Okay.
 20 A. -- Team that was doing it.
 21 Q. All right.
 22 A. So when I say "we," it's also me.
 23 Q. Yes, sir.
 24 A. Me and my Team were looking at which direction
 25 the flow was coming, whether it was coming up the
 00528:01 annulus or whether it was coming up through the -- the
 02 shoe track.
 03 Q. Yes, sir. And in terms of the work that you
 04 and your Team were doing in that regard, what, if
 05 anything, about that work would have equipped you with
 06 any knowledge about my client's cement job, if
 07 anything?
 08 A. The information I had from the Bly Team. So
 09 the early information we had from the Bly Team and --
 10 and then the observations that we made as to which
 11 direction -- where the mud had gone to when we filled
 12 the casing in. So that determined the direction of --
 13 for us to determine the direction of flow, which simply
 14 told us that this cement couldn't have been effective
 15 in the shoe track if the flow was coming up the shoe
 16 track. That's -- that's the extent of it.
 17 Q. And that was a guess that was being made by
 18 you and your Team?

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00528:20 A. I think it's a reasonable estimate.
 21 Q. (By Mr. Godwin) Okay, sir. In other words --
 22 A. A reasonable analysis, in fact.
 23 Q. That the flow came up the shoe track and
 24 through the cement. Is that what you're telling us, up
 25 the shoe track through the cement?
 00529:01 A. It was a -- it was a -- it was an analysis
 02 from the -- the volumes and pressures that we've filled
 03 the well up with that suggested very strongly to us
 04 that the -- the direction of flow was up the casing.
 05 Q. Yes, sir. And there was a point in time in
 06 May of 2010 where you were actually studying whether or
 07 not the flow came up the annulus, were you not, sir,
 08 you and others on your Team?
 09 A. Yes, there was a body of opinion that thought

10 the flow was coming out the annulus, and so we,
 11 obviously, studied that -- that -- that route.
 12 Q. Okay, sir. I want to show you a document, if
 13 I might. I'll find it here in a moment. I'll fi --
 14 I'll find it for you here in a moment.
 15 Even after you and your Team formed the
 16 opinion that the flow went up through the shoe track
 17 and up the casing, you were notified personally, were
 18 you not, there were others in BP that continued to
 19 believe that the flow was up through the annulus, were
 20 you not, sir?

Page 529:22 to 529:23

00529:22 Q. (By Mr. Godwin) Weren't you, sir?
 23 A. After --

Page 529:25 to 531:21

00529:25 MR. GODWIN: What number is that, Jenny?
 00530:01 A. So af -- so -- can you be a bit more specific
 02 about when?
 03 Q. (By Mr. Godwin) Yes, sir. Let me see if I can
 04 find it.
 05 MR. GODWIN: Jenny, you -- I've got it
 06 here marked.
 07 Q. (By Mr. Godwin) Let me see -- I'll give you an
 08 exact quote. There's a -- look at Tab No. 113 in the
 09 materials.
 10 MR. GODWIN: If I can have that, Jenny.
 11 MS. MARTINEZ: Can I have the exhibit
 12 stickers?
 13 MR. GODWIN: Yeah.
 14 (Exhibit No. 6214 marked.)
 15 Q. (By Mr. Godwin) I want to hand you what's been
 16 marked as -- I wanted you to get the exact document
 17 here. I remembered it, it's Exhibit 6214, sir.
 18 MR. KRAKOFF: Thank you.
 19 MS. MARTINEZ: (Nodding.)
 20 Q. (By Mr. Godwin) This is a document that starts
 21 out at the top, where you write on November 18, 2010 to
 22 Mr. Gary Wulf; Mr. McDonald; Cheryl Grounds, the lady
 23 we spoke of -- spoke of earlier; and Cindy Yeilding,
 24 where it says: "But we know with reasonable certainty
 25 that the flow was" up the case -- "up the casing both
 00531:01 initially and during the event. The Brock
 02 investigation team had also proved to themselves
 03 sometime before the kill operations that the initial
 04 flow was up the casing."
 05 Did I read that correctly?
 06 A. You did.
 07 Q. And you signed it, your name and title there
 08 as VP of Engineering, correct?
 09 A. Correct.

10 Q. Now, down below that is an E-mail that
 11 Mr. Wulf wrote to you and -- as well as others, if you
 12 will, and he said there in that E-mail on November 18:
 13 "In case you are interested. There are those who are
 14 very set in preserving the annulus flow case."
 15 Mr. Wulf wrote that to you on November 18,
 16 2010, did he not?
 17 A. He did.
 18 Q. Okay. Now, did you discuss with Mr. Wulf
 19 after you received his E-mail that there were those
 20 within -- those within BP that believed that the flow
 21 was up the annulus?

Page 531:23 to 531:24

00531:23 Q. (By Mr. Godwin) On or after you received his
 24 E-mail did you discuss that subject?

Page 532:01 to 533:13

00532:01 A. No, because I didn't take it as he was
 02 suggesting that there were any within BP that were
 03 still believing the flow was up the annulus.
 04 Q. (By Mr. Godwin) Okay. Well, when he said
 05 "There are those who are very set in preserving the
 06 annulus flow," who did you think he was talking about,
 07 as of November 18, 2010?
 08 A. I thought he was talking about the people who
 09 were quoted in the National Academy of Engineering
 10 Interim Summary --
 11 Q. Okay.
 12 A. -- in the -- in the document that -- that he
 13 attached.
 14 Q. Well, did -- and -- well, if you look over on
 15 the second page of that exhibit -- it's not a number,
 16 but it's the next page of that Exhibit 6214 -- if you
 17 go down to the next-to-the-last paragraph where it says
 18 "BP" -- now, forgive me for pointing, but it will make
 19 it a little quicker for you --
 20 MR. KRAKOFF: That's fine.
 21 Q. (By Mr. Godwin) -- Mr. Tooms. May -- look
 22 here, "BP, and the presidential commission," do you see
 23 that?
 24 A. Yes.
 25 Q. Okay. I will read that. If you will, follow
 00533:01 me here where it says: "BP, and the presidential
 02 commission, both believe the flow of oil went up the
 03 inside of the pipe, not the sides -- a conclusion that
 04 puts the blame more on Halliburton Co., the cement
 05 contractor, than on BP's well design."
 06 Did I read that correctly?
 07 A. You're reading what it says there, correctly,
 08 yes.
 09 Q. (By Mr. Godwin) Okay, sir. Now, obviously,

10 from BP's standpoint, it was better to conclude that it
11 came up the casing so that Halliburton would be blamed
12 for the -- for the events leading up to the blowout.
13 That's what --

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00533:15 Q. (By Mr. Godwin) -- that's what it says there,
16 that by claiming that it came up the casing that it was
17 easier to blame Halliburton.

Page 533:20 to 533:22

00533:20 Q. (By Mr. Godwin) Is that what you understood
21 when you read this piece here, the second page of
22 Exhibit 6214?

Page 533:25 to 535:09

00533:25 A. To be frank, when -- when this was sent to me,
00534:01 I skimmed through this piece, and I had a bit of a
02 cynical view about why people might be arguing against
03 what we had, as I say, I think virtually proved that
04 the cement was coming up the casing.

05 But -- but in addition to that, I can -- I
06 couldn't see that it changed things too much one way or
07 the other, if the cement came up the annulus or the
08 cement came up the casing -- sorry, the flow had come
09 up the annulus or the flow had come up the casing. It
10 had to have been due to failed cement. So I
11 couldn't -- I didn't -- didn't understand that comment.

12 Q. (By Mr. Godwin) Okay. So do I understand you
13 to be saying that in terms of your belief that it
14 didn't matter whether the foam -- excuse me, whether
15 the flow came up the casing or the annulus you still
16 believed there would have been a failure of the
17 Halliburton cement, allowing the escape of the -- of
18 the hydrocarbons; is that correct?

19 A. As I say, this is my personal belief. It's
20 not the company's belief or -- or I'm not representing
21 anything else --

22 Q. Yes, sir.

23 A. -- but it seems simple to me that if the --
24 for the well to have flowed, it had to have flowed
25 through where cement was meant to be, so --

00535:01 Q. Okay, sir. And -- and if it flowed on -- are
02 you familiar with what's referred to as the "backside"
03 of a well?

04 A. I am.

05 Q. And that would be in the annulus.

06 And are you telling us, then, that you think
07 that -- that there's some chance in your mind, still
08 some discussion or belief, that it might have gone up

09 the annulus?

Page 535:11 to 536:04

00535:11 A. No, sir. In my mind there's no chance it went
12 up the annulus.
13 Q. (By Mr. Godwin) Okay, sir. Have you heard
14 from anyone since the incident any discussion about
15 whether or not there was a parting or a tear in the
16 casing down below the BOP at any time prior to the
17 blowout? Has that been said in your presence?
18 A. Could you be a bit more specific? I don't
19 know which --
20 Q. Yes, sir. Has anyone said in your presence
21 since the event, the horrific evening of April 20,
22 2010, that one or more people within BP were of the
23 opinion that there was a parting or a tear in the
24 casing below the BOP that allowed for the hydrocarbons
25 to come up the annulus and go through that parting into
00536:01 the casing and up the riser and onto the rig floor?
02 Has anything like that been said in your presence, sir,
03 since the incident?
04 A. Yes.

Page 536:06 to 538:20

00536:06 A. So --
07 Q. (By Mr. Godwin) It has been?
08 A. So --
09 Q. And you say "yes"?
10 A. If you'd let me finish.
11 Q. Did you say "yes" to that question?
12 A. I was -- I was halfway through saying "yes."
13 Q. Okay, sir. Go ahead.
14 A. So, yes, during the early stage of the
15 incident when we still had not cut it -- done -- done
16 even top kill, there were -- people had ideas that
17 maybe the casing had parted and got stuck across the
18 BOP or wedged in the -- in the kink. They were purely
19 speculation. There weren't -- there weren't -- there's
20 no evidence to -- to support it, and I don't think we
21 saw any evidence since, either.
22 Q. Okay, sir. Let's look at Tab No. 34 in the
23 materials.
24 (Exhibit No. 6215 marked.)
25 Q. (By Mr. Godwin) I'm going to hand you what
00537:01 we've marked as Exhibit 6215, sir. This is an E-mail
02 that you wrote, is it not, on May 16, 2010 to -- and
03 addressee is "tohunte"?
04 A. Tom Hunter.
05 Q. Tom Hunter. Okay, "@sandia.gov," and you
06 copied several other folks there, did you not? Did you
07 not, sir?
08 A. Yes. I'm just looking at the E-mail, yes.

09 Q. Okay. And this is attachment of "Macondo Well
10 Drawing," and it says, "I attach various material as
11 discussed on the call," and there's three things here
12 listed. No. 3 is "A sketch of possible flowpaths in
13 the wellbore." You wrote that, did you not, sir, there
14 in the E-mail, No. 3?

15 A. I did.

16 Q. Okay. If you go down to the next paragraph,
17 the third line down, follow with me where I read where
18 it says, "If the flow path is up the annulus, then it
19 would be coming past the seal assembly which is mounted
20 on top of" a "9 7/8" Casing Hanger. As can be seen
21 this presents a quite tortious path for any solid
22 objects, but could present a significant and relatively
23 unrestrictive flow area for fluids if the seals are no
24 longer present." Did I read that correctly?

25 A. You did.

00538:01 Q. You go down to the next paragraph and it says,
02 "So far as the flow paths are concerned, we do not know
03 which are in play," not "whether the drillpipe is still
04 held and sealed in the BOP stack; so we have modeled
05 and provided for each scenario." Did I read that
06 correctly?

07 A. "Nor" instead of "not," but otherwise, yes.

08 Q. Okay, sir. And -- and did you participate in
09 the modeling of the flow of the hydrocarbons out of the
10 well, with one of the options coming up the annulus,
11 was that modeled by you and others?

12 A. It was modeled for me.

13 Q. Okay.

14 A. I didn't do the modeling.

15 Q. Okay. Because it says here that Paul Tooms --
16 it says, you know, "...we have modeled and provided..."
17 So when you wrote this, when you say, "...we have
18 modeled and provided for each scenario," you didn't
19 mean to say that you and others on your Team had done
20 the modeling, but others have modeled it for you --

Page 538:24 to 541:04

00538:24 A. I was writing to a Government employee --

25 Q. (By Mr. Godwin) Yes, sir.

00539:01 A. -- trying to explain, because they were
02 relatively new into this and didn't understand how
03 drilling worked. They were suggesting that we would
04 throw -- should throw ball bearings down the well to
05 kill it. I was trying to explain to them the various
06 things that we were talking about.

07 When I used the word "we" in there, and when I
08 say, "we have modeled and provided for each
09 scenario" --

10 Q. Yes, sir.

11 A. -- the "we," I think, would have referred to,
12 in general, BP, but in particular, the Team that was
13 doing work for me.

14 Q. Okay. And there at BP, correct?
 15 A. The -- the people doing the modeling were part
 16 of BP, yes.
 17 Q. Okay. Did anybody on the outside of BP
 18 participate in that modeling you're -- you're referring
 19 to, to determine the flow, and that is, whether it was
 20 a casing or the annulus or both?
 21 A. At this stage, so far as I'm aware, this --
 22 this was just -- would have been BP modeling. It was
 23 quite early in the --
 24 Q. Okay.
 25 A. -- the event.
 00540:01 Q. Well, was there anything prepared in writing
 02 in a PowerPoint presentation or -- or any other type of
 03 computer simulation that -- by the folks that were
 04 working under your direction at BP regarding the flow
 05 path up through the annulus, did you see such a
 06 document or presentation?
 07 A. I saw -- I saw the output from -- a number of
 08 different outputs from -- for modeling for all the
 09 different flow paths that we considered, and we
 10 considered absolutely what I -- what I considered to be
 11 every possible configuration, because at that stage, we
 12 couldn't know which way the flow was going.
 13 Q. Okay. And where would those documents have
 14 been kept, those computer simulations or models, where
 15 would we be able to obtain those from, to show the
 16 various models that were run regarding the flow path
 17 that were prepared by folks under you -- working under
 18 your direction within BP?
 19 A. I think some have already been provided to you
 20 already.
 21 Q. Well, they may well have been, and I'm not
 22 disputing that at this moment. What I'm asking is so
 23 we make sure we've got all of our bases covered, if I
 24 wanted to go back and show to the jury, if one is
 25 called in this case, and/or to Judge Barbier all the
 00541:01 models that were prepared by those under your direction
 02 regarding flow path as of May 16, 2010, tell me where
 03 we would locate those documents.
 04 A. Can I just --

Page 541:06 to 541:06

00541:06 THE WITNESS: Can I ask you --

Page 541:14 to 542:05

00541:14 Q. (By Mr. Godwin) I don't think you really ought
 15 to be talking to a lawyer, got a question outstanding.
 16 A. Okay.
 17 Q. All I want to know is, sir, if you do have a
 18 need to talk to the lawyers about a matter that you
 19 think involves privilege, I want you to do that.

20 You -- you'd be doing the right thing. But -- but you
21 said it was not a privilege, when Carrie made the
22 comment, and she did it innocently, I think, to make
23 sure it was not a privilege.
24 But having said that, now that we know it's
25 not, I just want to know how would we locate, how would
00542:01 we define, where would we go, what would we ask for if
02 we wanted to see all the models that showed the flow
03 path that were prepared by those working under your
04 direction or supervision with regard to the Macondo
05 Well --

Page 542:07 to 542:07

00542:07 Q. (By Mr. Godwin) -- which you've referenced?

Page 542:09 to 542:22

00542:09 A. I don't know. We handed over the keys to all
10 our documents to the legal hold --
11 Q. (By Mr. Godwin) Okay.
12 A. -- within BP.
13 Q. Let me try to do it this way, if I can: You
14 say you don't know -- you said there were a number of
15 models run of various scenarios or ideas for how the
16 flow may have gone.
17 About how many models do you think were
18 prepared -- do you believe were prepared, based upon
19 work that you and others on your Team did, showing
20 various routes for the flow of the hydrocarbons up the
21 wellbore and/or the casing? How many models, one, two,
22 five, ten, twenty?

Page 542:24 to 546:23

00542:24 Q. (By Mr. Godwin) And I'm talking about parts of
25 models, complete models. I want to know everything
00543:01 that regard -- that with respect to models that were
02 prepared in whole or in part regarding flow.
03 A. Are you talking what, the entire range of
04 dates, which date range?
05 Q. Well, let's talk about first up to May 16,
06 2010, and then after that, then I'll ask you about any
07 other models that were done thereafter, up through --
08 up through the most current time you're aware of, of
09 any models, if any, that were prepared regarding flow.
10 A. I would estimate that -- that up to this stage
11 it would be less than 10 model runs, but --
12 Q. That was as of May 16?
13 A. Yeah.
14 Q. So as of May 16, fewer than 10, but --
15 A. Well, I said, "I estimate."
16 Q. I -- I know that. I know that. It's 10 or

17 less, certainly more than two?
18 A. There would certainly have been more than two.
19 Q. More than five? I'm just trying to get an
20 estimate, sir?
21 A. I -- I -- I actually don't know. I didn't do
22 the work. There were a lot of different parameters
23 that one could change to -- to -- to do modeling runs,
24 so there could be a -- a significant number of modeling
25 runs.
00544:01 Q. And by "significant," what do you mean?
02 A. More than five.
03 Q. Okay. More than five, but ten or fewer, would
04 that be --
05 A. Well, I -- as I say, I don't know.
06 Q. Okay. It could -- could be more than 10?
07 A. It could be more than 10.
08 Q. Okay. As of May 16, models showing potential
09 flow paths either up the annulus or the casing or both,
10 correct?
11 A. I know that we modeled flow paths and -- up
12 the casing, up the annulus, up the casing and annulus,
13 up the annulus, down the casing, up the drill pipe. So
14 we -- we modeled a variety of different flow paths.
15 Q. Okay. And would those models have been
16 computer generated?
17 A. They would have done -- been done on a
18 computer, yes.
19 Q. Okay. Did you ever see them printed off in
20 hard copy form, any of the models?
21 A. I -- I've never seen the -- the raw data of
22 the models.
23 Q. When you saw the models, were they -- were
24 they on your computer, or did you see them on someone
25 else's computer being printed out for you and possibly
00545:01 others, or both?
02 A. I saw them as pieces of paper with a -- an
03 output on them.
04 Q. Who gave the pieces of paper to you showing
05 the models of the various flow path sources --
06 A. Mike --
07 Q. -- possible sources?
08 A. Mike Mason.
09 Q. Mr. Mason?
10 A. M-h'm.
11 Q. Who is Mr. Mason?
12 A. Mr. Mason is a Petroleum Engineer who was --
13 that we've already discussed in previous testimony, but
14 a Pet -- Petroleum Engineer who was doing work on my
15 behalf to help understand potential flow paths and
16 whether we could rule any out.
17 Q. Did -- when you and Mr. Mason were discussing
18 these various possible flow path tracks, if you will,
19 did the subject of channeling of cement come up for
20 discussion between the two of you?
21 A. Not specifically. Generally.

22 Q. Well, what were you -- you looked like you
23 were in doubt about something. If not you specifically
24 channeling, then what, sir?
25 A. So we discussed whether this -- the flow could
00546:01 be coming up the back side of the casing, the inside of
02 the casing, both sides of the casing at once, and we
03 also discovered what -- discussed whether there may be
04 a partially open -- open part of the reservoir that was
05 partially cemented and not fully cemented, so that's
06 why I hesitate. I'm not sure whether you would -- that
07 was what you intended when you said "channeling."
08 Q. Yes, sir. When you say "partially cemented,"
09 are you -- are you talking there about where the cement
10 did not -- did not go all the way around the pipe?
11 A. We -- because we were doing modeling, we just
12 did it in -- in general terms of saying approximately
13 how much formation would be open, and then converted
14 that to a reservoir skin value.
15 Q. When you were talking to Mr. Mason, or anyone
16 else that was involved in the modeling, did the subject
17 of gas flow potential or gas flow come up for
18 discussion, and how that would have affected -- how
19 that would have affected the flow of the gas as it
20 escaped the well? Did that come up for discussion?
21 A. I don't understand.
22 Q. Gas flow, are you familiar with gas flow or
23 gas flow potential?

Page 546:25 to 547:23

00546:25 Q. (By Mr. Godwin) Does that phrase or term mean
00547:01 anything to you?
02 A. I understand what gas is, and I understand
03 what flowing gas is --
04 Q. Yes, sir.
05 A. -- but I don't understand what you're
06 referring to.
07 Q. At any time when you were involved in
08 assisting in the preparation or the overview --
09 overseeing of the modeling of the potential gas flow
10 routes, did you see any of the OptiCem Reports that
11 have been prepared by Jesse Gagliano of Halliburton?
12 And I'm talking about in whole or in part.
13 A. No, I don't think I did.
14 Q. Okay. Well, did anyone discuss with you when
15 you were going through the modeling steps here and --
16 and all these models that were being prepared, did
17 anyone discuss with you that Mr. Gagliano, on behalf of
18 Halliburton, had some -- some questions and
19 reservations about the number of centralizers that BP
20 was going to run on the casing stream, that would have
21 affected, in his -- his opinion, the gas flow potential
22 there within the well, was that discussed in your
23 presence or with you?

Page 547:25 to 548:06

00547:25 A. No. The only -- the only way I knew about the
00548:01 centralizers, how many were installed or not installed,
02 was through the comments in the Bly Report.
03 Q. (By Mr. Godwin) Well, did you -- do you know a
04 gentleman by the name of Mr. Greg Walz, W-a-l-z, an
05 Engineer within BP?
06 A. I have met him.

Page 548:15 to 548:19

00548:15 Q. Okay. Has anybody told you that Jesse
16 Gagliano of Halliburton met with Mr. Greg Walz on April
17 19, 2010 and informed him, there at the BP office, that
18 if BP decided to go with only six centralizers, that
19 that was going to result in a severe gas flow problem?

Page 548:21 to 548:22

00548:21 Q. (By Mr. Godwin) Have you heard that said
22 before or words to that effect before I just said it?

Page 548:24 to 549:11

00548:24 A. The only discussions that I've heard or read
25 has been, as has been portrayed in the Bly Report.
00549:01 And -- and I should point out that all I was interested
02 in, in -- in this entire period that you're talking
03 about, was figuring out how to get this well under
04 control. I wasn't concerned with --
05 Q. (By Mr. Godwin) Right.
06 A. -- what had gone on prior to this, the --
07 the -- I wasn't investigating the causes of it. I
08 mean, I -- I was just looking at whether we could
09 predict what would happen now --
10 Q. Well --
11 A. -- on this well.

Page 551:10 to 551:23

00551:10 Q. Well, my question, sir, is: You were involved
11 in drilling for some of your younger years, earlier
12 years in your career. You've been about 30 years with
13 BP, correct? You're now the Head of Engineering
14 worldwide for E&P, correct?
15 A. Correct.
16 Q. And I'm asking you, sir, in that position if
17 you learned that a -- that a reputable contractor, like
18 Halliburton, providing services for BP, had told BP
19 that if they do something in connection with what that
20 contractor's doing, that if they do something, that

21 it -- it could subject the well to a severe problem,
 22 wouldn't you want all operations on that well to stop
 23 until the problem was figured out?

Page 552:01 to 552:07

00552:01 A. I -- it's -- again, we're being very
 02 hypothetical. I guess I would want to know what other
 03 conversations had gone on, what conversations gone on
 04 before and since, what modeling BP had done, not done,
 05 what the consequences might be, so there would be a lot
 06 of other information I would want to know before saying
 07 that we should stop work.

Page 552:13 to 554:08

00552:13 (Exhibit No. 6216 marked.)
 14 Q. (By Mr. Godwin) -- Exhibit number --
 15 MR. GODWIN: What, Jenny?
 16 MS. MARTINEZ: 6216.
 17 Q. (By Mr. Godwin) -- 6216. I'm going to hand
 18 you that. We've got just a few minutes, I want to go
 19 through couple -- one page of it quickly.
 20 MR. KRAKOFF: Thank you.
 21 Q. (By Mr. Godwin) You have Exhibit 6216. This
 22 shows there on the front page, if you will, just follow
 23 through with me, so we can look at the front page, flip
 24 back, it shows in the custodian the name of Brett
 25 Cocalles, does it not? Brett Cocalles up at the top?
 00553:01 A. Yes, I see that.
 02 Q. Okay. And go down to "DATE_CREATED," which is
 03 about seven or eight lines down, "DATE_CREATED" shows
 04 November 20 -- November 11, 2009, correct?
 05 A. Correct.
 06 Q. Next line is, last date modified, and that
 07 shows April 13, 2010, does it not?
 08 A. It does.
 09 Q. Okay. And this April 13, we know by the
 10 calendar, is seven days before the blowout on April 20,
 11 correct?
 12 A. Yes. I don't know what --
 13 Q. Okay.
 14 A. -- date last modified means, but --
 15 Q. Right. Turn over to the next page where it
 16 shows Macondo "252 #1," correct?
 17 A. Uh-huh.
 18 Q. You go over now to the Bates number page --
 19 and trying to get through quickly -- that ends with
 20 1899. Do you see that, 1899?
 21 A. (Reviewing document.)
 22 Q. See that, sir?
 23 A. I do.
 24 Q. Okay. Here quicker, it says: "'Keeper
 25 Well'," in quotes, "options..." Correct? Keeper well

00554:01 options?
02 A. Uh-huh.
03 Q. And read down where it says here, with me, the
04 second line: "Cement" -- and this was as of the date
05 of creation, of November 11, 2009 -- "Cement"
06 stimulate -- "simulations indicate it is unlikely to be
07 a successful cement job due to formation breakdown."
08 Did I read that correctly?

Page 554:10 to 554:20

00554:10 A. I -- yes, you got that correctly.
11 Q. (By Mr. Godwin) Okay, sir. Have you seen
12 this document, Exhibit 6216, before today?
13 A. No, I haven't.
14 Q. Have you heard from any source prior to today
15 that BP, through this document, had concluded as of
16 November 11, 2009 as modified on April 13, 2010 that BP
17 believed that the end -- simu -- cement simulations
18 indicated that it was unlikely that a cement job
19 would -- would be good or successful due to a formation
20 breakdown? Had you heard that prior to today?

Page 554:22 to 555:04

00554:22 A. No, I hadn't, other than what I'd read in the
23 Bly Report.
24 Q. (By Mr. Godwin) Okay, sir. And if you would
25 have known as an Engineer, the Head of Engineering for
00555:01 the company, that BP had computer models simulating
02 that the cement job was not going to be successful, as
03 early as November of 2009, would that have caused you
04 concern about the well?

Page 555:07 to 555:09

00555:07 A. I'd want to know what other calculations,
08 conversations, and -- and so on followed on from
09 this --

Page 555:22 to 555:24

00555:22 Q. (By Mr. Godwin) Are you aware that after
23 November of 2009 but prior to the blowout, that this
24 well lost over 16,000 barrels of mud in the formation?

Page 556:01 to 556:01

00556:01 Q. (By Mr. Godwin) Are you aware of that, sir?

Page 556:03 to 556:04

00556:03 A. I think that might have been written in the
04 Bly Report.

Page 556:13 to 556:16

00556:13 Q. (By Mr. Godwin) Sir, within the BP
14 organization, are you familiar with what is referred to
15 as a "critical well"?
16 A. No, I'm not.

Page 557:02 to 557:06

00557:02 Q. Okay. And in -- in any of your visits with
03 anybody post-Macondo event, no one has said anything to
04 you about the Macondo was a critical well?
05 A. No, and I wouldn't have known what they meant
06 if they had.

Page 562:12 to 562:14

00562:12 Q. (By Mr. Godwin) Do you agree that the
13 interpretation of a negative pressure test is critical
14 to determine if a cement job is successful?

Page 562:16 to 562:23

00562:16 A. Interpreting a -- a pressure test is -- a
17 negative pressure test is essentially required to
18 ensure that the integrity of the well in general is --
19 is good.
20 Q. (By Mr. Godwin) And -- and it also is critical
21 to determine if the cement job is successful, is it
22 not, the proper, the correct interpretation of a
23 negative test?

Page 563:01 to 563:03

00563:01 A. I'm -- I'm not sure that the successful
02 integrity test would necessarily confirm that the
03 cement was -- was good.

Page 565:20 to 566:01

00565:20 Q. (By Mr. Godwin) Let me ask it this way:
21 You've read the Bly Report, you're the worldwide Head
22 of Engineering for BP for E&P, correct?
23 A. Correct.
24 Q. Do you agree with everything written in the
25 Bly Report about the underbalancing of the Macondo
00566:01 Well?

Page 566:03 to 566:21

00566:03 A. I don't disagree with anything that's written
 04 in the Bly Report.
 05 Q. (By Mr. Godwin) Okay, sir. And I'm asking
 06 about the underbalancing of the well. Do you agree
 07 with what is written in the Bly Report by Mark Bly and
 08 his com -- his Team about the underbalancing of the
 09 Macondo Well?
 10 A. Well, without being awkward, I can only not
 11 disagree since I didn't do the investigation. So I
 12 can't -- I don't have enough information to -- to form
 13 an opinion that's any --
 14 Q. Contrary?
 15 A. -- that's contrary or any different to Mark
 16 Bly's.
 17 Q. Okay. And with regard to the negative test,
 18 do I understand you to say that regard to the negative
 19 test, whatever Mr. Bly and his Team wrote in the Bly
 20 Report, you agree with, with regard to the negative
 21 test; is that correct?

Page 566:24 to 566:24

00566:24 Q. (By Mr. Godwin) Is that correct, sir?

Page 567:01 to 567:03

00567:01 A. I'll -- I'll repeat what I said. I -- I don't
 02 disagree, which is not necessarily the same as saying I
 03 agree.

Page 570:14 to 570:16

00570:14 Q. Good afternoon, Mr. Tooms. My name is Dennis
 15 Barrow, and I represent Dril-Quip.
 16 A. Good afternoon.

Page 570:20 to 572:02

00570:20 Q. Yesterday, you testified that very early on
 21 after the incident, in late April of 2010, there were
 22 some questions about whether or not the hanger had
 23 lifted. Do you recall that?
 24 A. I do.
 25 Q. Do you know Mr. Thierens?
 00571:01 A. I do.
 02 Q. Mr. Thierens testified that those discussions
 03 were on the order of "What if" discussions. Would you
 04 agree with that characterization?
 05 A. They were -- they were more a -- it was
 06 certainly considered as a possibility, rather than a --
 07 a certainty, so it was a -- they could have -- it could

08 have lifted.

09 Q. Were those discussions about a possibility
10 discussions that occurred before actual evidence was
11 obtained about what was going on inside the wellhead?

12 A. Yes.

13 Q. Did you later form an opinion as to whether or
14 not the hanger lifted?

15 A. Yes, I did.

16 Q. And what is that opinion?

17 A. My opinion was I couldn't -- I couldn't
18 understand the -- the logic that -- that suggested that
19 the hanger might have lifted in the first place.

20 And then my opinion after that was when we did
21 the well kill, that that showed that the hanger almost
22 certainly hadn't lifted because of the -- the -- the
23 calculations of volumes and pressures, as we pumped in
24 the heavy mud into the well.

25 Q. And do you believe that that opinion that the
00572:01 hanger did not lift is based upon a reasonable degree
02 of Engineering certainty?

Page 572:04 to 572:22

00572:04 A. Yes. We -- we had models for what the -- the
05 mud volume and -- and pressure decrease curve would
06 have looked like, if the mud was being displaced into
07 the casing, or if it was being displaced into the
08 annulus or, indeed, if it was being displaced into
09 both, and it was clearly in the -- in the region of
10 just the casing.

11 Q. You were also asked questions about whether
12 you had heard of anyone seeing inside the wellhead,
13 using an ROV. Do you recall that, questions a few
14 minutes ago?

15 A. Whether I had seen the -- whether somebody had
16 seen the -- whether -- whether I had a conversation
17 with someone who had seen the hanger lift?

18 Q. Right. Correct. My question to you is: Are
19 you familiar enough with the wellhead system to know
20 that it is physically impossible to see through the
21 steel cylinder of the wellhead to the interior where
22 the hanger is, using an ROV?

Page 572:24 to 573:08

00572:24 A. Yes, I got quite familiar with the -- what we
25 had to do to see through the -- the wellhead or the
00573:01 BOP, and we determined that we required a -- an
02 enormous radioactive source, a cobalt source, to be put
03 down there, to have any chance of doing radiography
04 through the -- through the wellhead.

05 So even with radiography, it was -- it would
06 have been almost impossible to see through that
07 wellhead. You couldn't -- there's no way you could

08 ever see, visually, through several inches of steel.

Page 573:11 to 574:10

00573:11 Q. (By Mr. Barrow) Would it have been possible to
 12 use a regular ROV camera to see through several inches
 13 of steel in the wellhead?
 14 A. I -- I can't see how.
 15 Q. You were also asked numerous questions about
 16 possibilities in the flow path. I want to cut to the
 17 chase and ask you: Have you formed a final opinion as
 18 to what the flow path was on the Macondo Well?
 19 A. Yes, I have.
 20 Q. And what is that opinion?
 21 A. My opinion -- my final opinion is the flow
 22 path was up through the -- through the shoe track and
 23 straight up the casing. I -- I haven't formed an
 24 opinion as to what happened when it got to the BOP
 25 stack, because I haven't seen the detailed analysis of
 00574:01 the arrangement of pipes in the BOP stack.
 02 Q. Am I correct that you were -- headed up the
 03 Engineering response for BP, in dealing with the
 04 incident?
 05 A. I headed up the Engineering Team that -- that
 06 was part of the response.
 07 Q. Do you base your opinion as to the flow path
 08 of through the shoe track and up the production casing
 09 on the facts and data that you saw while you served as
 10 the Head of the Engineering response?

Page 574:12 to 574:16

00574:12 A. Yes, I do.
 13 Q. (By Mr. Barrow) And do you believe that your
 14 opinion is based on a reasonable degree of medical --
 15 I'm sorry -- a reasonable degree of Engineering
 16 certainty?

Page 574:18 to 574:22

00574:18 Q. (By Mr. Barrow) Let me ask that again. Do you
 19 believe that your opinion on the flow path is based
 20 upon a reasonable degree of Engineering certainty?
 21 MR. GODWIN: Object to form.
 22 A. Yes, I do.

Page 576:14 to 576:16

00576:14 Q. (By Mr. Bruno) Didn't we have some -- some --
 15 some thoughts that the flow might be as high as a
 16 hundred thousand barrels a day?

Page 576:19 to 576:19

00576:19 Q. (By Mr. Bruno) From -- from BP?

Page 576:21 to 577:16

00576:21 A. I -- I don't think so. I -- I -- all I've
22 seen is modeling numbers that -- that go up to a
23 hundred thousand barrels a day, and I think you even
24 showed me a number that was -- was higher than that,
25 but that's not the same as that's what -- that -- that

00577:01 wasn't the same as an estimate.

02 Q. (By Mr. Bruno) Okay. Well, maybe I'm using
03 the words incorrectly. BP did not know how much oil
04 was coming out of that well from the time of the
05 catastrophe until the time that the well was capped;
06 isn't that true?

07 A. In fact, I -- I'd put it stronger than that.
08 I'd say that BP could not know.

09 Q. Well, once again, you always anticipate my
10 next question, because that's what was -- I was going
11 to ask you next. The next question was going to be:
12 In fact, you've told us that BP could not know, right?

13 A. (Nodding.)

14 Q. But BP had some ideas of some highs and some
15 lows of what it might be. I thought that's what you
16 told us over the past two days?

Page 577:20 to 578:06

00577:20 A. You'd have to be specific about which -- which
21 particular period you're talking about.

22 Q. (By Mr. Bruno) Well, an -- any period of time.
23 I mean, I hate to have to haul out the documents again,
24 but there were some folks -- and I think you even
25 testified today -- you said today that you only need to

00578:01 change a few variables and you could change the flow
02 immensely. Didn't you say that today?

03 A. I did.

04 Q. All right. And we didn't know what the
05 variables were, correct?

06 A. I was --

Page 578:08 to 579:18

00578:08 A. I was referring to the modeling efforts that
09 we were -- that we were doing that made assumptions as
10 to what was coming out the reservoir, and it was in
11 reference to whether the flow up the annulus or up the
12 casing could be larger or smaller. That was what that
13 comment was in reference to, so far as I remember.

14 Q. (By Mr. Bruno) Exactly. But the point I'm
15 making is that it's still the -- the case that BP had

16 some ideas of a high and a low with regard to the
 17 potential range of the flow that may be coming out of
 18 the well before it was capped?

19 MR. KRAKOFF: Object to form.

20 MS. KARIS: Object to form.

21 A. We had some -- a -- a range of highs and lows
 22 of the potential of the well, should the well be
 23 unrestricted. We did not have any -- any range of
 24 highs and lows of what the well was actually producing
 25 at.

00579:01 Q. (By Mr. Bruno) I didn't suggest that, sir.
 02 We've already established -- and I don't want to do it
 03 over and over and again and use up my time, which is
 04 precious at -- obviously, at this point.

05 I'm not suggesting that you knew, in fact,
 06 what the flow was. That's established. We've already
 07 established that you did not know what the flow was.

08 But you knew what the range might be, and the
 09 range was a very large range, from five to a hundred
 10 thousand barrels -- it couldn't be higher than a
 11 hundred thousand dol -- hundred thousand barrels a day,
 12 could it?

13 MS. KARIS: Object to form.

14 A. I don't know what the -- the upper end of the
 15 range was. I didn't --

16 Q. (By Mr. Bruno) Okay.

17 A. I didn't do the --

18 Q. All right.

Page 583:09 to 583:18

00583:09 Q. Okay. Well, Mr. Tooms, did you disclose to
 10 anyone, including Mr. Wells, that if the flow out of
 11 the well exceeded 15,000 barrels a day, that it was not
 12 likely to work?

13 A. No, I did not.

14 Q. Do you know, sir, if Kent Wells disclosed that
 15 information to the public?

16 A. I don't know.

17 Q. Do you believe, Mr. Tooms, that that is
 18 information that the public was entitled to have?

Page 583:21 to 583:22

00583:21 A. I -- I don't have any opinion on that.

22 Q. (By Mr. Bruno) Why not?

Page 583:24 to 583:25

00583:24 A. Because I don't know what -- what the public
 25 should or shouldn't have.

Page 585:21 to 586:03

00585:21 Q. (By Mr. Bruno) And that's fine. No -- no harm
22 or no ill intent, you know, in -- meant, but all I'm
23 trying to say is you certainly understood that there
24 was a need -- and I think you even put it in a
25 PowerPoint presentation -- to communicate with people
00586:01 in order to persuade them, and you even communicated
02 that there was a need to do it in such a way that you
03 would not put them off. Do you recall that testimony?

Page 586:05 to 587:02

00586:05 A. I -- I, in fact, said that -- that persuasion
06 was not the best tool.
07 Q. (By Mr. Bruno) Right. But logic was?
08 A. No. I said persuasion and logic, in my view,
09 isn't a very good way of changing people's opinions.
10 Q. What is a good way?
11 A. I went through this in my testimony yesterday,
12 but it was to appreciate where the other person was
13 coming from, be generous to their -- to their -- their
14 level of intellect and their motivations, and
15 understand their point of view.
16 Q. Exactly. And given that as a premise, doesn't
17 it follow that it would be extremely important for BP
18 to tell the public exactly what we just discussed; and
19 that is: One, BP had no way of ascertaining the amount
20 of hydrocarbons flowing from that well; two, that there
21 was a large range of possible flows; three, that there
22 were flows that were possible that would make the top
23 kill impossible to work?
24 Isn't it a fact that that's the kind of
25 information that should have been conveyed to the
00587:01 public, based upon what you've just told me is a proper
02 method of trying to persuade people?

Page 587:05 to 587:21

00587:05 A. All I know, really, is that we certainly
06 shared the information that you're talking about with
07 the Government, specifically Secretary Salazar and
08 others, and I don't know who should have done what from
09 that point. It's not for me to decide.
10 Q. (By Mr. Bruno) The junk shot, is it also the
11 case that there were potential flow rates that would
12 have made the junk shot impossible to kill the well?
13 A. Well, no, I don't think so.
14 Q. All right.
15 A. I think the flow ra -- I think junk shot was
16 relatively insensitive to flow rate.
17 Q. Okay. Why didn't it work?
18 A. I -- I don't know, for sure. Having seen
19 the -- the BOP and the arrangement of pipes in the BOP,
20 I think it's due to the way that the plumbing happened

21 through the BOP with the drill pipes and so forth.