

Deposition Testimony of:
David Rainey

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Page 11:13 to 11:15

00011:13 DAVID RAINEY,
14 having been first duly sworn, testified as
15 follows:

Page 16:09 to 16:10

00016:09 EXAMINATION
10 BY MR. WILLIAMS:

Page 17:10 to 18:09

00017:10 Could you tell me what your job
11 was on April 20th, 2010?
12 A. I was vice president of
13 exploration for the Gulf of Mexico.
14 Q. Okay. And as vice president of
15 exploration for the Gulf of Mexico, what were
16 your specific job responsibilities?
17 A. The scope of the job extended
18 from describing leads and prospects before
19 access. In other words, before we acquired
20 the leases through after acquiring the
21 leases, my teams would mature the prospects,
22 describe the prospects. Then once the
23 prospect was mature, as much work as could be
24 done had been done, we would make the
25 recommendation whether or not to drill the
00018:01 prospect. That recommendation would be taken
02 to our global exploration forum; and if the
03 exploration forum approved the well, then we
04 would move forward to drill the well, but my
05 teams had no accountability for the actual
06 operations of the well. I had teams who
07 reported to me who supported operations, but
08 the operations were carried out under the
09 drilling and completions function.

Page 19:17 to 22:16

00019:17 Q. Okay. Okay. Fair enough. Now,
18 you said you did have some operations people
19 reporting to you. I'm paraphrasing. It's
20 not exactly what you said, but could you
21 explain that relationship in detail for us,
22 please?
23 A. So those are geoscientists, what
24 we call the TIGER team. They are
25 geoscientists have -- that have a particular
00020:01 interest in operations. They speak the
02 language of the drilling engineers, where
03 most of the explorers don't, and they don't

04 have much interaction with the drilling
05 engineers. So we have a team called the
06 TIGER team that specializes in pore pressure
07 prediction, fracture gradient prediction,
08 operations geology, and they tend to stay in
09 those roles because they have an interest in
10 those roles. And they're -- a part of the
11 role of the TIGER team is to support the
12 drilling function and the operations.

13 Q. Okay. So they assist you and
14 your people in determining whether or not
15 it's a prospect worth drilling, at least from
16 a geoscientist standpoint, correct?

17 A. That's correct.

18 Q. And then if the approval is
19 granted and you go ahead to -- and you go
20 ahead and drill a well, the TIGER team and
21 the geoscientists stay involved in support of
22 the D&C operation as well, correct?

23 A. That's correct.

24 Q. Okay. Now, you mentioned global
25 exploration, that once you gather the data
00021:01 and make a recommendation, it goes to global
02 exploration for consideration and approval,
03 correct?

04 A. Right. That's correct.

05 Q. Where is global exploration
06 physically located?

07 A. Well, the global exploration
08 forum is -- it's a -- essentially a committee
09 chaired by Mike Daly, who is the global head
10 of exploration. I was the deputy chair of
11 the exploration forum. And then exploration
12 managers from around the world made up the
13 rest of the exploration forum. So
14 essentially a body that the exploration
15 managers would bring their recommended
16 prospects to and get challenged by the other
17 exploration VPs.

18 Q. So it's kind of a peer --

19 A. Exact.

20 Q. -- peer-review process?

21 A. It's a peer-review process.

22 That's exactly right.

23 Q. Okay. Does the forum actually
24 physically meet? Does the group of people in
25 the forum --

00022:01 A. It meets in general once a
02 quarter.

03 Q. Okay. And where do they meet?

04 A. Usually once a year in London,
05 once a year in Houston. Other meetings --
06 could be sometimes London, sometimes Houston.
07 Sometimes other parts of the world, we go and
08 try and visit and touch base with the

09 explorers in other parts of the world.
10 Q. Okay. What is your job today
11 with BP?
12 A. I retired from BP on Tuesday,
13 June the 1st.
14 Q. Tuesday, June -- just a couple
15 of days ago?
16 A. Yeah.

Page 23:09 to 24:01

00023:09 Q. Did you change jobs after
10 April 20th, 2010?
11 A. I became part of the response.
12 So I was deputy incident commander in Robert
13 under Doug Suttles through the end of June.
14 And then the first week of July, after the
15 July 4 holiday, I started a new role as vice
16 president of Science, Technology, Environment
17 and Regulatory Affairs for the Gulf Coast
18 Restoration Organization.
19 Q. What is the Gulf Coast
20 recovery -- or Restoration?
21 A. Restoration. That's the
22 separate organization that BP set up to carry
23 out the -- after the -- beyond response into
24 restoration. So to deal with the restoration
25 of the Gulf Coast and the aftermath of the
00024:01 incident.

Page 24:11 to 25:15

00024:11 Q. Now, I'm going to go back to
12 April 20th, 2010. Who were your direct
13 reports? Who reported to you directly?
14 A. So I had Cindy Yeilding who was
15 exploration manager, renewal. I had Jay
16 Thorseth who was exploration manager. I
17 forgotten the title that they had, but Cindy
18 Yeilding, Jay Thorseth were my two
19 exploration managers, and Jami Zinkham was
20 appraisal advisor, Kirk Wardlaw who was my
21 chief negotiator, Kemper Howe who was my land
22 manager.
23 Q. Okay.
24 A. I think that's all.
25 Q. Was there an HSSE person or
00025:01 section assigned to exploration?
02 A. No.
03 Q. Now, who did you report to?
04 And, again, I'm talking about April 20th,
05 2010.
06 A. I reported to James Dupree.
07 Q. And what was his title?

08 A. He was the SPU leader for the
09 Gulf of Mexico.
10 Q. Okay. And you -- your
11 exploration was part of that SPU, was it not?
12 A. That's right.
13 Q. And who did Mr. Dupree report
14 to, do you know?
15 A. He reported to Andy Inglis.

Page 28:06 to 28:09

00028:06 Q. (BY MR. WILLIAMS) Yeah. Before
07 the DEEPWATER HORIZON disaster, were
08 incentive bonuses primarily based on the
09 implementation of cost saving measures?

Page 28:11 to 31:02

00028:11 A. I think management of cost was
12 an element.
13 Q. (BY MR. WILLIAMS) Do you know
14 how much weight that element had in the
15 determination of the incentive pay or bonus?
16 A. No, I don't.
17 Q. Okay. Did Mr. Dudley take over
18 for Mr. Hayward while you were still employed
19 by BP?
20 A. Yes, he did.
21 Q. After Mr. Dudley took over, do
22 you know whether or not the algorithm used to
23 determine incentive pay and bonuses was
24 changed to a safety based system?
25 A. I believe that there is more
00029:01 emphasis on safety, but I don't know the
02 details of the algorithm.
03 Q. Okay. I want to ask you some
04 questions about HSSE. What was Steve Tink's
05 job on April 20th, 2010?
06 A. I know he had been the HSE
07 representative for drilling and completions,
08 I believe. And I think he was in the --
09 either had recently retired or was in the
10 process of retiring, but I'm not sure.
11 Q. Okay. I'm just talking about on
12 April 20th right now.
13 A. Well, I --
14 Q. April 20th, 2010.
15 A. I'm not sure.
16 Q. Is -- in your capacity as vice
17 president of exploration, did you have any
18 interaction with Mr. Tink and/or any of
19 his -- any of the people that work for him?
20 A. Either he or some of his direct
21 reports were -- certainly had a standing

22 invitation to my staff meeting, as did
23 representatives of the drilling leadership
24 team.
25 Q. Okay. And did they attend those
00030:01 staff meetings on occasion?
02 A. Yes.
03 Q. Were his direct reports the HSE
04 field and office advisors?
05 A. I'm not sure.
06 Q. Do you know what the difference
07 in drilling and completions, HSE, do you know
08 what the difference is between an office
09 versus a field advisor?
10 A. I'm not sure I've heard the term
11 "office advisor."
12 Q. Okay. Have you heard the term
13 "field advisor"?
14 A. I believe so, yes.
15 Q. And what is your understanding
16 of what the field -- the HSSE field advisors
17 did?
18 A. I believe they spent a lot of
19 time in the field working with the drilling
20 crews, in this case, on HSE.
21 Q. So "in the field" would mean
22 offshore, correct?
23 A. That's correct.
24 Q. And just to clarify, did the
25 field advisor sometimes attend the meetings
00031:01 you described just a few minutes ago?
02 A. I don't believe so.

Page 32:05 to 32:21

00032:05 Q. (BY MR. WILLIAMS) Why don't you
06 just take a quick look at those for me.
07 A. Two packs? Yeah.
08 Q. Yeah. One is dated August 10th,
09 2009, and the other is dated January 7th,
10 2010. The title of the document is
11 "Deepwater Drilling and Completions
12 Organization Chart," is it not?
13 A. Yes.
14 Q. On the August 10th, 2009
15 document -- it's the one you're looking at
16 right now.
17 A. Right.
18 Q. Could you turn to Page 31 for
19 me, please?
20 MR. WILLIAMS: And that's -- Page 31.
21 It's got Bates No. 1566076.

Page 33:04 to 34:18

00033:04 Q. And we see the drilling and
05 exploration HSSE manager is Mr. Tink,
06 correct?
07 A. That's correct.
08 Q. And he has -- I mean, as you go
09 down his chain of command, you've got
10 exploration and appraisal, Thunderhorse and
11 Atlantis Production and New Development,
12 correct?
13 A. That's correct.
14 Q. Did the new development HSSE
15 manager, here it's indicated it was office
16 advisor Clint Honeycutt, did he report to you
17 in any way, shape or form?
18 A. No.
19 Q. Okay. Have you seen this org
20 chart before?
21 A. Not that I can remember. It
22 doesn't mean I haven't, but I certainly don't
23 remember seeing it.
24 Q. Okay. Well, that's fair enough.
25 If you go to Page 34.
00034:01 A. Okay.
02 Q. The Gulf of Mexico SPU
03 leadership team, correct?
04 A. That's correct.
05 Q. And you're listed there as vice
06 president of exploration, correct?
07 A. That's correct.
08 Q. Also listed is a fellow by the
09 name of Fergus Addison who was vice president
10 of development?
11 A. That's correct.
12 Q. Mr. Kevin Lacy, vice president
13 of drilling and completion?
14 A. That's correct.
15 Q. Dan Replogle, vice president of
16 Thunderhorse, and you as vice president of
17 exploration?
18 A. Uh-huh.

Page 34:23 to 38:05

00034:23 Q. Okay. Were you of equal rank
24 with all of those fellows?
25 A. I believe so.
00035:01 Q. Okay. Let's go back to Page 31.
02 Okay. Let's start at exploration and
03 appraisal. You've got an office HSE advisor
04 for the HORIZON and Bob Palmer, correct?
05 A. That's correct.
06 Q. And reporting to him are two
07 field HSE advisors from the DEEPWATER
08 HORIZON, Mr. Mitch Galtier and Mr. Mitch
09 Galtier, correct?

10 A. That's correct.
11 Q. Okay. It says "HORIZON," that
12 means DEEPWATER HORIZON, does it not?
13 A. That's correct.
14 Q. Okay. The Thunderhorse
15 Atlantis, you've got a field HSE advisor,
16 Jeremy Galtier, or that's how we would
17 pronounce it here, I think.
18 A. Right.
19 Q. And under him, you've got two
20 field advisors assigned to the Thunderhorse
21 PDQ, two field -- correct?
22 A. I'm not sure it's under -- I'm
23 not sure how I would read the org chart.
24 Q. Okay.
25 A. I'm not sure -- I'm not sure
00036:01 that Kenny Johnson and Reggie -- I don't even
02 know how to pronounce that -- report to
03 Jeremy.
04 Q. Well, in any --
05 A. They're under the org chart. It
06 looks like they report --
07 Q. Okay. In any event, it looks
08 like Kenny Johnson and Reggie Schexnaider are
09 assigned to Thunderhorse PDQ, correct?
10 A. That's correct.
11 Q. And there is another field
12 advisor for the -- field advisors for the
13 enterprise. You've got two fellows,
14 Mr. Duhon and Mr. Lenoir?
15 A. That's correct.
16 Q. And then you've got another
17 office advisor, Mr. Schonacher, for the
18 Atlantis?
19 A. Right.
20 Q. Development Drillers II and III,
21 correct?
22 A. Correct.
23 Q. And you've got two field
24 advisors that's assigned to DDII and two
25 assigned to DDIII, correct?
00037:01 A. That's correct.
02 Q. And on the production side,
03 you've got office HSE advisor for Holstein,
04 Mr. Honeycutt?
05 A. Uh-huh.
06 Q. You've got two field advisors
07 assigned to Holstein, Messrs. Courtney and
08 Urik?
09 A. Right.
10 Q. And you've got an office advisor
11 for the Marianas/Intervention,
12 Mr. Thibodeaux --
13 A. Yes.
14 Q. -- and a field advisor,

15 Mr. Montanez, correct?
16 A. That's correct.
17 Q. And then there is just one
18 office advisor for new developments, correct?
19 A. That's correct.
20 Q. Now, was it your understanding
21 these field advisors -- let's go to the
22 HORIZON, for instance, Mr. Gill and
23 Mr. Williford, is it your understanding that
24 these fellows were permanently assigned to
25 the DEEPWATER HORIZON?
00038:01 A. That's what the organization
02 chart would imply, yes.
03 Q. They only worked on those rigs,
04 correct? And, again, we're talking about
05 August 8th.

Page 38:07 to 38:16

00038:07 A. I don't know.
08 Q. (BY MR. WILLIAMS) Okay. Do you
09 know whether or not they would alternate
10 hitches on the rig?
11 A. No, I don't.
12 Q. Let take a look real quick at
13 the January 7th, 2010 chart, if you would.
14 We're going to mark the first org chart as
15 Exhibit 3200, the first page, and the Bates
16 range is 1566046.

Page 38:19 to 40:11

00038:19 (Exhibit No. 3200 was marked.)
20 Q. (BY MR. WILLIAMS) Okay. You've
21 got the January 7th org chart?
22 A. Yeah.
23 Q. Okay. Could you turn to the
24 last page, please, Page 32. And, again,
25 we've got a depiction here of the Gulf of
00039:01 Mexico SPU leadership team, correct?
02 A. Correct.
03 Q. It shows Mr. Dupree as the SPU
04 leader?
05 A. That's correct.
06 Q. And you're vice president of
07 exploration?
08 A. Uh-huh.
09 Q. Still?
10 A. Yeah.
11 Q. And we've got Simon Todd as vice
12 president of Thunderhorse?
13 A. Correct.
14 Q. Mr. Pat O'Bryan, drilling and
15 completions --

16 A. Correct.
17 Q. -- vice president. And Mr. Gary
18 Imm, vice president of developments?
19 A. Uh-huh.
20 Q. Okay. Now, could you turn to
21 Page 28, please. And this shows that
22 Mr. Steve Tink is still the D&C HSSE manager,
23 correct?
24 A. That's correct.
25 Q. And under Mr. Tink are listed
00040:01 the HSSE office advisors and the HSSE field
02 advisors, correct?
03 A. Correct.
04 Q. Now, with respect to the field
05 advisors, unlike the August 10th, 2009 org
06 chart -- do you still have that in front of
07 you?
08 A. I do.
09 Q. Okay. They apparently are not
10 assigned to particular rigs or fields or
11 projects, correct?

Page 40:13 to 43:10

00040:13 Q. (BY MR. WILLIAMS) If you know?
14 A. No, I don't -- I don't know.
15 Q. Did you ever learn at any point
16 between August 10th, 2009, and January 7th,
17 2010, that BP cut Mr. Tink's HSSE staff?
18 A. I don't -- I don't remember that
19 for a fact, but I do have some memory that
20 that was the case.
21 Q. Do you recall what the
22 circumstances of that cut were?
23 A. No, I don't.
24 Q. Okay. According to charts when
25 you compare the two, it appears that
00041:01 Mr. Tink's staff -- and I'm just talking
02 about field advisors -- were cut from a total
03 of 14 to a total of eight. Does that sound
04 right to you?
05 A. I'm -- well, I can count them
06 all up, but if that's what's on the org
07 chart, that's what's on the org chart.
08 Q. You said you recalled some
09 discussion or you recalled hearing at least
10 that Mr. Tink's staff had been cut. Do you
11 recall any discussion of why or what the
12 reason for that cut was?
13 A. No, I don't.
14 Q. Do you recall whether or not it
15 had anything to do with issues regarding
16 cost?
17 A. No, I don't remember.
18 Q. Okay. Now, on the January 7th,

19 2010 org chart, if you could turn to Page 31
20 for me, please. And this is the org chart
21 for the SPU HSSE team, is it not?
22 A. Yes.
23 Q. And who is the director as of
24 the date -- as of January 7th, 2010?
25 A. Curtis Jackson.
00042:01 Q. Did you have any interaction --
02 during your tenure as vice president of
03 exploration, did you have any interaction
04 with Mr. Jackson?
05 A. Yes.
06 Q. Could you describe that for us,
07 please?
08 A. Let me just replay the question.
09 During my tenure as vice president of
10 exploration?
11 Q. Correct.
12 A. When I began as vice president
13 of exploration, Curtis was the drilling
14 assurance manager for exploration. So in
15 that role, I had a lot of interaction with
16 him, and then he moved into the HSSE arena,
17 and he was the director of HSSE for the SPU.
18 I don't -- I can't remember what the dates
19 were when that transition took place. But,
20 clearly, I had interactions with him because
21 he frequently sat at the leadership team
22 table with the leadership team.
23 Q. And that would be the SPU
24 leadership team?
25 A. Yes.
00043:01 Q. Now, how long did Mr. Jackson
02 actually work for you when you -- after you
03 became vice president of exploration?
04 A. I don't remember. But it wasn't
05 long because --
06 Q. Less than a year?
07 A. I don't -- my memory would say
08 around about that length of time, but I can't
09 say for certain. And then he was replaced by
10 Mike Zangi.

Page 43:15 to 44:22

00043:15 Q. Now, when Mr. Jackson worked for
16 you, did you note any deficiencies in his job
17 performance, his personality or any other
18 negative issues or problems?
19 A. Not at all.
20 Q. Was he in all respects
21 professional?
22 A. I believe so.
23 Q. Did you ever have to discipline
24 him or take any kind of disciplinary action

25 of any type against him?
00044:01 A. No.
02 Q. Who made the decision to move
03 him to HSSE director?
04 A. I don't know.
05 Q. Now, is this HSSE team that he
06 heads, at least as of January 7th, 2010,
07 that's the HSSE team for the entire SPU,
08 correct?
09 A. Yes, I believe so.
10 Q. Do you have any idea how that --
11 the SPU HSSE team interacted with the
12 drilling and completions HSSE folks, i.e.,
13 Mr. Tink or any of his folks?
14 A. No, I don't.
15 Q. Now, at any time during your
16 tenure as vice president of exploration, did
17 Mr. Curtis Jackson leave the employment of
18 BP?
19 A. I can't remember whether he --
20 he left prior to first quarter 2010 or
21 whether he was in the process of leaving. It
22 was in that 2009-2010 time frame.

Page 45:06 to 45:21

00045:06 Q. Okay. We're still on the same
07 org chart, January 7th, 2010. Could you turn
08 to the last page again, Page 32.
09 A. Uh-huh.
10 Q. Right down at the bottom is a
11 box containing Cindi Skelton's name. Are you
12 familiar with her?
13 A. Yes, I am.
14 Q. Did you work with her in your
15 capacity as vice president of exploration?
16 A. I did.
17 Q. And her job title here at least
18 is vice president HSSE and engineering,
19 correct?
20 A. That's correct.
21 Q. What was her job?

Page 45:23 to 46:23

00045:23 A. I don't know the details of her
24 role.
25 Q. (BY MR. WILLIAMS) You don't
00046:01 know what type of input or assistance or
02 anything like that that she offered or gave
03 the SPU leadership team, correct?
04 A. Not in the detail, no.
05 Q. Well, describe for me your
06 experience with her, your interaction with

07 her. I'm talking about professionally.
08 A. I think I first met Cindi when
09 she was still working in the pipeline
10 business unit during our response to Katrina
11 and Rita. I think that's when I first met
12 her. And then she moved into the SPU, and I
13 can't actually remember what her specific
14 role was. I can't remember what her role
15 was.
16 Q. Okay. Did she provide you with
17 any kind of regular input on issues of any
18 kind?
19 A. Not that I can remember, no.
20 Q. Do you have any idea of how
21 Cindi Skelton fits in with the SPU HSSE team
22 and chain of command run by Mr. Jackson?
23 A. No, I don't remember.

Page 50:03 to 51:25

00050:03 Q. Now, Mr. O'Bryan's predecessor
04 was Mr. Kevin Lacy, was it not?
05 A. That's correct.
06 Q. How long had you known -- have
07 you known Mr. Lacy?
08 A. I'm going to say two or three
09 years.
10 Q. How long had you worked with
11 Mr. Lacy on a leadership team? How long had
12 you been -- both been vice presidents of your
13 individual areas of responsibility?
14 A. I had been five years and I
15 think Kevin was one year.
16 Q. Did you know him before he
17 became vice president of D&C?
18 A. I did because he was head of
19 discipline, and he represented the drilling
20 function on the exploration forum.
21 Q. I'm sorry. He represented --
22 A. The drilling function on the
23 exploration forum.
24 Q. Head of discipline, was that a
25 Gulf of Mexico SPU leadership position?
00051:01 A. No, it was a drilling and
02 completions functions leadership position.
03 Q. Did you consider Mr. Lacy
04 professionally competent?
05 A. Obviously I'm not an expert in
06 the matter, but, yes.
07 Q. I'm just asking based on your
08 personal/professional experience, you
09 considered him competent professionally in
10 all respects?
11 A. Right.
12 Q. No complaints with him?

13 A. No.
14 Q. Did you consider him a good
15 leader in the drilling and completions team?
16 A. Again, I'm not an expert, but I
17 believe so, yes.
18 Q. Do you have any reservations at
19 all with respect to his -- did you have or do
20 you have now any reservations at all with
21 respect to his abilities as a leader of the
22 drilling and completions team?
23 A. No, I had no reservations.
24 Q. Was Mr. Lacy a team player in
25 your opinion?

Page 52:02 to 52:24

00052:02 A. Again, I had no issues with
03 Kevin, but I don't know about his
04 relationships with other people.
05 Q. (BY MR. WILLIAMS) Right. I'm
06 just interested in your relationship with him
07 and what you know about him.
08 A. Right.
09 Q. So I guess we can sum this up.
10 Do you have anything bad to say about
11 Mr. Lacy professionally or personally?
12 A. Not from any of the interactions
13 that I had with him.
14 Q. Okay. Do you have any idea why
15 Mr. Lacy left BP?
16 A. No.
17 Q. Do you know who made the
18 decision to terminate or end Mr. Lacy's
19 employment with BP?
20 A. I don't know -- I don't know for
21 a fact, but his functional leader was Barbara
22 Yilmaz, so I don't know where the decision
23 was made between that leader versus SPU
24 leadership versus higher levels of the firm.

Page 54:14 to 55:08

00054:14 Q. Did Mr. Lacy ever express to you
15 any concerns about process or personal safety
16 issues with respect to BP at any time?
17 A. We had conversations about --
18 the one conversation I can remember having
19 with Kevin was he felt that there was no
20 prioritization in how safety incidents were
21 investigated. So every incident, whether it
22 was a minor incident that had no potential to
23 be any anything else versus another similar
24 incident but which had the potential to be
25 something greater, they were all treated the

00055:01 same way. And I do remember having
02 conversations with Kevin about that.
03 Q. That was his opinion?
04 A. Yeah.
05 Q. Did you agree with that?
06 A. Again, I'm not an expert in
07 operations or safety, so I'm not sure that my
08 opinion is relevant.

Page 55:22 to 56:13

00055:22 Q. And I asked you if you agreed
23 with his position that minor incidents and
24 other issues that could lead to an incident
25 should be treated with the same degree of
00056:01 importance is something you agree with or
02 disagree with?
03 A. I think there is probably
04 arguments on both sides. There is -- there
05 is validity to his argument and there is
06 validity to you need to address all
07 incidents.
08 Q. Well, I thought I understood
09 from your answer that his argument or his
10 view was that all incidents involving safety
11 should be treated with the same degree of
12 respect, consideration and attention,
13 correct?

Page 56:15 to 57:22

00056:15 A. His view was -- that's
16 actually -- that was the philosophy in the
17 SPU. His view was that the incidents that
18 had the higher potential should receive
19 greater attention.
20 Q. (BY MR. WILLIAMS) And what type
21 of incidents that had a higher potential was
22 he talking about?
23 A. I don't know in specifics, but
24 in principle, you can have two incidents that
25 have exactly the same outcome, but there was
00057:01 potential -- there was greater potential in
02 one of those incidents for it to be a more
03 serious incident. And the degree of
04 attention that the incident received was
05 based on the incident itself, not on the
06 potential for the incident.
07 Q. That was his view or the
08 company's view, as you understood it?
09 A. The SPU approach at the time was
10 all incidents will receive the same degree of
11 focus. And his view was that the incidents
12 that had the higher potential should receive

13 greater focus than -- in fact, his view was
14 there was too much focus going on the
15 incidents that had less potential.

16 Q. And were those incidents like
17 personal safety issues as opposed to process
18 safety issues?

19 A. Yeah, I think that's -- in
20 general that's what he was referring to.
21 But, again, I can't remember the details of
22 the conversations.

Page 63:17 to 64:08

00063:17 Q. Can you tell me exactly what the
18 functional leadership team does? What is it
19 responsible for?

20 A. Again, I've never been a member
21 of that team, but in general the functional
22 leadership teams in the firm are responsible
23 for the technical quality of that function.

24 Q. Okay. And does technical
25 quality of that function mean how well or
00064:01 efficiently they drill wells?

02 A. And how -- efficiently and
03 safely.

04 Q. Efficiently and safely?

05 A. Yeah.

06 Q. How long were you employed by
07 BP?

08 A. 31 years.

Page 64:12 to 64:25

00064:12 Q. And what was your job before you
13 were vice president of exploration?

14 A. I was performance unit leader
15 for deepwater exploration in the Gulf of
16 Mexico.

17 Q. Describe for me briefly what
18 your job responsibilities were in that
19 capacity?

20 A. Essentially the same as vice
21 president of exploration except just the
22 deepwater. I didn't have the shallow water
23 piece. And at that time, the performance
24 unit leaders, the drilling teams reported to
25 the performance unit leader.

Page 66:02 to 66:06

00066:02 Q. Let me ask you a couple of
03 questions about your educational background.
04 What is your professional specialty by virtue

05 of your education?
06 A. I'm a geologist.

Page 66:14 to 66:20

00066:14 Q. On April 20th, 2010, did BP have
15 a real-time operations center?
16 A. We had an operations room that
17 had real-time feed of MWD and mud logs, but
18 it wasn't manned 24 hours a day.
19 Q. What floor was that on?
20 A. Second floor.

Page 68:21 to 71:10

00068:21 Q. Do you know whether or not there
22 was a real-time feed of data from the
23 DEEPWATER HORIZON back to the Westlake
24 facility?
25 A. I would expect that there was
00069:01 into the operations room on the second floor.
02 Q. Did you ever visit this
03 operations room on the second floor?
04 A. Yes.
05 Q. And what -- could you describe
06 for me what it looked like?
07 A. Gosh, I suspect it had a table
08 in the middle, a tech table in the middle.
09 It had screens in either corner. It had a
10 set of sliding boards that the data from the
11 current well was permanently mounted on, and
12 the screens were capable of having the MUD
13 log and the MWD log and the -- some of the
14 drilling information --
15 Q. Would the --
16 -- displayed.
17 Q. I'm sorry. Did you ever -- was
18 that second floor -- do you call that a
19 real-time operations center?
20 A. It was called the operations
21 room. We had -- there were two on the second
22 floor.
23 Q. Was it manned on a 24/7 basis,
24 do you know?
25 A. I don't believe it was.
00070:01 Q. Okay. Now, did you ever visit
02 it yourself?
03 A. Uh-huh, yes.
04 Q. Did you ever visit it when --
05 visit it when real-time data was being
06 transmitted from offshore?
07 A. I did.
08 Q. Did this real-time operations
09 center, whatever you call it, command center,

10 on the second floor gather data from all
11 drilling rigs working for BP?

12 A. No. Just those that were
13 working either exploration or appraisal
14 wells.

15 Q. How would you define the other
16 wells that were being drilled? In other
17 words, if they weren't exploration and
18 appraisal wells, what other drilling activity
19 would be going on?

20 A. There's development drilling and
21 production drilling.

22 Q. Under which category would the
23 Macondo project fall under?

24 A. Exploration.

00071:01 Q. Okay. On or about April 20th,
02 2010, do you know which wells or which
03 drilling projects were being monitored or
04 were capable of being monitored on -- in the
05 second floor real-time operations center?

06 A. I would expect that Macondo was.

07 Q. Any other projects that were
08 ongoing at the time?

09 A. Certainly not in exploration.

10 Other -- I don't think there were any
11 appraisal wells at the time either. So...

Page 74:11 to 75:05

00074:11 Q. Okay. Are you sure that the
12 room on the second floor that you've
13 described previously --

14 A. Uh-huh.

15 Q. -- had the capability to receive
16 real-time data?

17 A. Yes, I believe I am.

18 Q. Do you know whether or not
19 there's any type of watch bill that is
20 instituted and disseminated requiring BP
21 personnel, wherever they might work, to
22 monitor well operations in real-time on a
23 periodic or regular basis?

24 A. I'm not aware.

00075:01 Q. Do you know whether or not the
02 real-time operations center or conference
03 room that you've described on the second
04 floor still exists?

05 A. I don't know for a fact, but I
06 think it does.

Page 76:20 to 78:11

00076:20 Q. Thank you. Mr. Rainey, giving
21 me as complete a definition as you can,

22 describe for me in your own words what safety
23 culture means.

24 A. That safety is above everything
25 else. It is the most important thing. And
00077:01 that that's clearly understood at all levels
02 of the firm.

03 Q. Now, when you say "the firm,"
04 are you talking about BP group?

05 A. Uh-huh.

06 Q. All of BP, correct?

07 A. All of BP.

08 Q. Now, is that your personal
09 opinion or is that the -- an opinion that BP
10 shares, as best you know?

11 A. As best as I know, that's an
12 opinion that BP shares.

13 Q. Has that always been BP's
14 attitude with respect to safety as far as you
15 know?

16 A. I believe so, yes.

17 Q. Does your definition of safety
18 culture include both process safety and
19 personal safety?

20 A. Absolutely.

21 Q. Would you agree with me that
22 safety culture includes a culture of
23 leadership responsibility for safety?

24 A. I would.

25 Q. And, in fact, that's dictated by
00078:01 the OMS, is it not?

02 A. Uh-huh, uh-huh.

03 Q. Would you agree with me that
04 drilling oil and gas exploration wells in
05 deep water in the Gulf of Mexico is a
06 high-risk endeavor?

07 A. There is certainly the potential
08 for risk.

09 Q. And BP in various documents
10 quantifies the potential for those risks,
11 does it not?

Page 78:13 to 78:13

00078:13 A. I believe so.

Page 78:15 to 78:20

00078:15 Q. (BY MR. WILLIAMS) What are some
16 of those risks, in your opinion?

17 A. The greatest risk is the risk of
18 a blowout.

19 Q. Is risk of a blowout?

20 A. A blowout.

Page 79:17 to 80:13

00079:17 Q. And a blowout can have
18 disastrous consequences, can it not?
19 A. It can.
20 Q. One of the risks is loss of
21 life?
22 A. That's correct.
23 Q. Loss of business representation?
24 A. That's correct.
25 Q. Damage to the environment?
00080:01 A. That's correct.
02 Q. Loss of license to operate?
03 A. That's correct.
04 Q. Those are all risks that BP
05 recognizes, correct?
06 A. I believe so, yes.
07 Q. And isn't it true that failure
08 to appropriately appreciate and analyze risks
09 can result in disastrous consequences?
10 A. That's a reasonable conclusion,
11 yes.
12 Q. Okay. What is your definition
13 of a safety critical activity?

Page 80:15 to 81:01

00080:15 A. I'm not an expert in operations.
16 I'm a geologist. So I don't think I'm the
17 right person to answer that question.
18 Q. (BY MR. WILLIAMS) Okay. Well,
19 your work at BP is governed by the OMS, is it
20 not?
21 A. It is.
22 Q. Is safety critical activity
23 defined in the OMS?
24 A. It is for functions like
25 drilling and completion. So, yes. But I'm
00081:01 not an expert in drilling and completions.

Page 82:07 to 82:18

00082:07 Q. Do you know whether or not there
08 was a risk register for the Macondo well?
09 A. I don't know for a fact, but I
10 would expect that there was.
11 Q. What is the risk register
12 intended to do, to accomplish?
13 A. As I understand it, expected to
14 articulate the risks for the well and the
15 plan to mitigate those risks.
16 Q. Is there a requirement that the
17 risk register be updated periodically during

18 a project?

Page 82:20 to 83:17

00082:20 A. Again, I'm not an expert, but I
21 would expect that that's the case.
22 Q. (BY MR. WILLIAMS) Would you
23 agree with me that safety should always be an
24 element of the risk register?
25 A. I would.
00083:01 Q. Would you also agree with me
02 that the risk register should never be
03 primarily devoted to impact that risks might
04 have on time and cost of a project, correct?
05 A. Again, I'm not an expert but
06 that sounds reasonable.
07 Q. Does it sound reasonable that
08 safety should always be the primary
09 consideration in the formulation of a risk
10 register?
11 A. Uh-huh. It does, yes.
12 Q. Okay. Would you agree with me
13 that in the business of offshore oil and gas
14 exploration there should never ever be a bias
15 that favors time and cost at the expense of
16 safety?
17 A. Yes.

Page 84:04 to 84:23

00084:04 Q. (BY MR. WILLIAMS) I know you --
05 I know you've not -- you haven't been
06 tendered as an expert --
07 A. Right.
08 Q. -- in operational safety, but
09 you've been with the company for many years.
10 A. Right, uh-huh.
11 Q. I'm just asking you your
12 opinion. And I had asked you a previous
13 question that you agreed with.
14 A. Uh-huh.
15 Q. I proposed to you that in the
16 business of offshore oil and gas exploration
17 there should never ever be a bias that favors
18 time and cost over safety, and you agreed
19 with that, correct?
20 A. I did, yes, uh-huh.
21 Q. And then I asked you, that would
22 be an example of an unhealthy safety culture,
23 wouldn't it, if there were such a bias?

Page 84:25 to 85:01

00084:25 A. From my perspective, that would
00085:01 be a reasonable statement, yes.

Page 85:08 to 85:09

00085:08 Q. If you could turn to Tab 2 for
09 me, sir.

Page 85:13 to 86:01

00085:13 Q. (BY MR. WILLIAMS) The first
14 document is an e-mail from Mark Hafle --
15 Do you know Mark Hafle?
16 A. I do.
17 Q. -- to various people and it
18 begins with Bates number 3660.
19 A. All right.
20 Q. Now, turn, if you would -- the
21 way these documents are produced, if you turn
22 to the next page.
23 A. Uh-huh.
24 Q. The Excel spreadsheets do not
25 have Bates numbers on them. That's the way
00086:01 they were produced.

Page 86:08 to 86:18

00086:08 Q. So skip the document that says
09 "document produced natively," and go to the
10 next page and take a look at it for me, if
11 you would. Just that page.
12 A. All right.
13 Q. Can you tell me what that page
14 represents, please?
15 A. It looks like -- actually, I'm
16 not sure. I see the word "pay out" here. It
17 looks like some relationship with pay out to
18 drilling performance.

Page 86:23 to 86:24

00086:23 Q. Do you know whether or not
24 depending on the results of drilling --

Page 87:01 to 87:04

00087:01 Q. -- and how efficient it was,
02 whether or not you got any type of
03 incentive --
04 A. Yeah, in the past --

Page 87:06 to 87:12

00087:06 A. In the past, I do know we've had
07 incentive programs for wells.
08 Q. Does that -- isn't that what
09 this is?
10 A. That's -- that's what it looks
11 like, but I could not -- I couldn't explain
12 it to you.

Page 87:19 to 89:18

00087:19 Q. The second box on the first
20 one-third of the page from the left says:
21 Benchmark data?
22 A. Uh-huh.
23 Q. It says: Days per 10K?
24 A. Right.
25 Q. Can you tell us what that means,
00088:01 please?
02 A. That's the number of days to
03 drill 10,000 feet.
04 Q. What is that? Is that a measure
05 of productivity?
06 A. It's a measure of drilling
07 performance.
08 Q. Okay. And on the left we've got
09 top quartile, second, third and fourth,
10 correct?
11 A. Correct.
12 Q. And on the right it says:
13 Macondo potential pay outs, and there are a
14 series of numbers there from \$6,000 to zero,
15 pay out extrapolated either way, correct?
16 A. Correct.
17 Q. And it appears, looking at the
18 chart, correct me if I'm wrong, that there is
19 only a pay out if this well is drilled in the
20 first quartile.
21 A. I --
22 Q. If the days it takes to drill
23 this well fall in the first quartile?
24 A. I could reach that conclusion,
25 but I don't know that that's actually what
00089:01 this means. I don't -- there's a -- I would
02 need to see a lot more context behind this to
03 be able to answer these questions.
04 Q. Okay.
05 A. And I'm sure there's a lot more
06 documentation than just this.
07 Q. Do you get involved in
08 determining AFE cost of a well? Are you
09 involved in any way in that determination?
10 A. Yes.
11 Q. And what is your involvement or

12 what was your involvement on or about
 13 April 20th, 2010, and before?
 14 A. I -- I approve the AFEs.
 15 Q. For all exploration wells --
 16 A. Yes.
 17 Q. -- drilled by the SPU?
 18 A. Uh-huh.

Page 89:20 to 89:24

00089:20 A. I'm not the final approval
 21 because usually they -- the final approval
 22 goes above my authority.
 23 Q. Doesn't the AFE normally include
 24 an incentive payout for drilling efficiency?

Page 90:01 to 90:04

00090:01 A. I can't actually remember the
 02 details of what's on the AFE form.
 03 Q. (BY MR. WILLIAMS) Okay. Turn
 04 to the last page of that tab, please.

Page 90:06 to 90:07

00090:06 Q. It says: Macondo D & C cost
 07 estimate --

Page 90:09 to 94:24

00090:09 Q. -- and benchmarking?
 10 A. Right.
 11 Q. Now, up at the top where it
 12 says: Wells cost estimate?
 13 A. Yeah.
 14 Q. You've got: Not to exceed NTE
 15 of 139.5 million.
 16 Correct?
 17 A. Right.
 18 Q. And then it -- just above that
 19 is a performance target number which is 96.1
 20 million, correct?
 21 A. Correct.
 22 Q. What is the difference between
 23 performance target, PT, and not to exceed,
 24 NTE?
 25 A. I'd have to spend some time
 00091:01 reminding myself on all this. But they're --
 02 when the drillers do a well plan and they do
 03 a cost estimate and they look at nearby
 04 wells, they come up with a probabilistic
 05 analysis of what the well cost is going to
 06 be. So it's a range of possible outcomes.

07 And over the years what --
08 precisely what they're not to exceed, whether
09 that's -- I suspect that's the P90 in the
10 analysis -- 90 percent chance of delivering
11 the well under that number, but I -- I don't
12 know that for a fact because those -- those
13 numbers have changed over the years.

14 Q. Okay.

15 A. The performance target would be
16 the P50 or potentially the P mean. And in
17 different -- in different times that number
18 has changed as well, but it's -- there are
19 different levels of probability for
20 delivering the well under that cost when you
21 look at what industry has done in surrounding
22 wells and similar wells.

23 Q. So a big part of this analysis
24 is historical, correct?

25 A. That's correct.

00092:01 Q. And down the bottom -- near the
02 bottom of that sheet it says: Significant
03 risks to delivery, and obviously we're
04 talking about the Macondo --

05 A. Right.

06 Q. -- well, correct?

07 A. Uh-huh, that's correct.

08 Q. You've got weather, narrow pore
09 pressure fracture gradient window slash
10 uncertainty.

11 A. Uh-huh.

12 Q. Can that delay a well, cause it
13 to be more expensive than originally?

14 A. Absolutely.

15 Q. And BOP stack issues, riserless
16 section, what does that mean?

17 A. The riserless section, that's
18 the -- I'm not quite sure why it says
19 weather/seas. But before you connect up the
20 riser, you have to have several casing
21 strings in place. So you're -- those early
22 sections are drilled without riser. So
23 that's what that means. It's a very early
24 part of the well.

25 Q. Okay. And then you've got:
00093:01 Depleted gas sands in 16-inch section
02 faulting into high pressure below --

03 A. Uh-huh.

04 Q. -- the M56, which was --

05 A. Uh-huh.

06 Q. -- the target geological zone
07 for this well, at least as planned.
08 Was it not or was it?

09 A. I can't actually remember.

10 Q. Okay. Now, the significant
11 risks, they're all associated with cost and

12 schedule, correct?

13 A. They all have implications to
14 cost and schedule.

15 Q. Okay. I'm going to mark that as
16 Exhibit 3202 and attach it to your
17 deposition.

18 (Exhibit No. 3202 was marked.)

19 Q. (BY MR. WILLIAMS) Could you
20 turn to Tab 3 for me, please. Now, Tab 3 is
21 a two-page document, Bates 1893, last four
22 numbers, and it's called, "Execute Financial
23 Memorandum"; is that right?

24 A. Yes.

00094:01 Q. And you were actually the
02 approval authority on this document, it
03 appears, correct?

03 A. Correct.

04 Q. The copy we have hasn't been
05 signed by you, but --

06 A. Uh-huh.

07 Q. -- is it -- can I assume that
08 you were the approval authority for this
09 execute --

10 A. Right.

11 Q. -- memo?

12 A. So the financial authority -- I
13 can't remember the legal definition around
14 these words, but either Mike Daly or Andy
15 Inglis has the financial authority. I'm
16 approving as an officer of BP America, just
17 from a legal perspective.

18 Q. Is Mike Daly or was Mike Daly on
19 September 30th, 2009, he was in head of E&A
20 in London, correct, Exploration and Access?

21 A. That's correct.

22 Q. And Andy Inglis, CEO of
23 Exploration and Production?

24 A. Right.

Page 95:03 to 95:04

00095:03 Q. Okay. Let me ask you a couple
04 of questions about this --

Page 95:06 to 95:09

00095:06 Q. -- document. The sanction
07 request 139.5 million, that's the NTE that
08 was -- actually, we saw that same number
09 at --

Page 95:11 to 96:16

00095:11 Q. -- Tab 2, correct?
12 A. Uh-huh, uh-huh.
13 Q. And the PT or performance
14 target, same number --
15 A. Right.
16 Q. -- 96.1 million, correct?
17 A. Right.
18 Q. Now, go to the second page. It
19 says: Key risks and other significant points
20 for discussion.
21 Who actually drafts this
22 document?
23 A. Our commercial team.
24 Q. Where would they get the
25 input -- your commercial team, where would
00096:01 they get the input for the key risks and
02 other significant points for discussion
03 section of this memorandum?
04 A. They would get it off from the
05 drilling -- from the drilling team, from the
06 exploration manager.
07 Q. Okay. And it says: Key risks
08 other significant points for discussion.
09 Subsurface and drilling risks including
10 narrow pore pressure and fracture gradient
11 window --
12 A. Uh-huh.
13 Q. -- stuck pipe, gas kick and
14 shallow depletion from the adjacent Rigel gas
15 field?
16 A. Right.

Page 96:19 to 97:22

00096:19 Q. That was in the same block,
20 right, Mississippi Canyon 252 or right on the
21 border?
22 A. Right on the border, if I
23 remember right.
24 Q. Now, with respect to the Macondo
25 before April 20th, 2010, before the
00097:01 catastrophe, the DEEPWATER HORIZON
02 encountered all of those risks, actually
03 encountered those risks except for depletion
04 from the adjacent Rigel gas field, didn't it?
05 A. I don't know that for a fact.
06 Q. You don't know whether or not
07 they had pore pressure, fracture gradient
08 difficulties?
09 A. Yes, they did.
10 Q. Do you know whether or not they
11 actually got a pipe stuck and had to
12 sidetrack the well?
13 A. I'm not -- I remember -- I'm not
14 sure I remember that for a fact.

15 Q. Do you remember or not whether
16 there was one or more gas kicks during the
17 drilling of this well?
18 A. There were certainly kicks, yes.
19 Q. Okay. We're going to attach
20 that as Exhibit 3203 to Mr. Rainey's
21 deposition.
22 (Exhibit No. 3203 was marked.)

Page 101:04 to 101:07

00101:04 Q. (BY MR. WILLIAMS) Mr. Rainey,
05 during the period of time you were the vice
06 president of exploration, did you ever
07 participate in any -- in any way --

Page 101:09 to 101:17

00101:09 Q. -- in any type of SPU or
10 group-wide OMS gap assessment?
11 A. I participated in the
12 exploration OMS gap assessment that was
13 carried out in 2009.
14 Q. Turn to Tab 5 for me, if you
15 would, please, sir. Have you seen this --
16 you know what, it would be easier -- it's
17 produced in two formats --

Page 101:19 to 101:19

00101:19 Q. -- black and white --

Page 101:21 to 101:21

00101:21 Q. -- and color.

Page 101:23 to 102:01

00101:23 Q. The color is easier -- easier to
24 read. And if you -- just on the other side
25 of the yellow --
00102:01 A. Okay.

Page 102:04 to 103:20

00102:04 Q. Have you seen this gap ranking
05 matrix before?
06 A. I can't say for a fact that I
07 have. I've seen many matrixes like this. I
08 don't know if I've seen this specific one.
09 There's not much information on here.
10 Q. Okay. So you know how to

11 read -- do you know how to read an OMS gap
12 assessment?
13 A. Yes, I think so. In general.
14 Q. Okay. On the first page we've
15 got a depiction of the general idea which is
16 the gap risk, the business, and the
17 importance of that risk, correct?
18 A. Correct.
19 Q. And on the second page, it's
20 titled: OMS gap detail 8, 9 and 10.
21 Those would be the numbers that
22 you see on the first page, correct?
23 A. I can't say for certain. I
24 don't -- I'm not sure.
25 Q. Okay. 8, 9, 10, does it -- does
00103:01 it look to you like it's -- this is a detail
02 of the upper right-hand corner of the ranking
03 matrix shown on the first page?
04 A. I don't know.
05 Q. Did you actually see this OMS
06 gap assessment after it was completed?
07 A. I don't know if I ever saw it in
08 its entirety.
09 Q. Do you know whether or not it
10 was ever discussed at any of the SPU
11 leadership team meetings that you attended?
12 A. There were various meetings with
13 different parts of the leadership team. I do
14 think I was in some of the meetings. I'm not
15 sure that I can remember if there was ever a
16 conversation about the finished product at
17 the leadership team meeting. But I -- there
18 were many meetings in which I participated in
19 some.
20 Q. That involved discussion --

Page 103:22 to 104:23

00103:22 Q. -- of the OMS gap ranking
23 matrix?
24 A. Right, right.
25 Q. But you -- were you asked for
00104:01 input from exploration?
02 A. Some aspects of it, yes.
03 Q. Do you remember what that -- the
04 topics of that input were?
05 A. No. This is two -- two, three
06 years ago.
07 Q. And you don't recall ever
08 discussing in a leadership team meeting the
09 results of the 2010 gap -- OMS gap ranking
10 matrix, correct?
11 A. 2010, no, I don't remember that.
12 Q. When would this have come out?
13 Do you -- do you have any idea?

14 A. I say -- no, I don't. I would
15 have expected it to be -- to have been
16 carried out during the year and -- and upped
17 it to the local OMS made at the end of the
18 year.

19 Q. Okay. We're going to attach
20 this as Exhibit 3205 to Mr. Rainey's
21 deposition, and we've got to take a break to
22 change the tape.

23 (Exhibit No. 3205 was marked.)

Page 138:25 to 141:19

00138:25 Q. (BY MR. CERNICH) Mr. Rainey, if
00139:01 I could please direct you to Tab 4 in your
02 binder. And I believe this is the same
03 e-mail and attachments that you were going
04 over with Mr. Cunningham, but I'm not quite
05 certain that all of the attachments were in
06 that one, so I'm going to go ahead and work
07 with this one.

08 A. Right.

09 Q. This is an e-mail from yourself
10 to Jane Wallace dated Tuesday, April 27th,
11 with some -- Subject: spill vol.xls, with
12 some spreadsheets attached.

13 If you would turn to -- do you
14 recall this e-mail, Mr. Rainey?

15 A. Yes.

16 Q. And you said Ms. Wallace was an
17 assistant?

18 A. She was an administrative
19 assistant that was supporting the folk in the
20 room that we were in in Robert.

21 Q. And why did you send it to
22 Ms. Wallace?

23 A. I believe because I wanted to
24 have some copies made prior to the 4:30
25 meeting so that other folk in the room would
00140:01 have copies when we were talking about the
02 issue.

03 Q. And the 4:30 meeting, can you
04 describe that meeting to me?

05 A. It was a telecom between the --
06 our room in Robert and the source control
07 group in Houston.

08 Q. And who was in the room in
09 Robert for those meetings?

10 A. Doug Suttles, myself, Richard
11 Morrison, a variety of other -- usually BP
12 folk were in that room.

13 Q. And so Ms. Wallace would have
14 printed out this -- the attachments to this
15 e-mail and distributed them?

16 A. They'd have been on the table.

17 Again, I can't remember the details of it,
18 but that's what I -- having read the various
19 e-mails, that's what I think was going on.
20 Q. Okay. And then you would
21 discuss these calculations during that --
22 A. Yeah.
23 Q. -- during that --
24 A. Right.
25 Q. -- meeting on the phone with the
00141:01 team in Houston as well?
02 A. Right.
03 Q. And when you refer to the team
04 in Houston, that's the source control team
05 headed up by Mr. Inglis?
06 A. Andy -- it appeared to be in
07 the -- we were -- it was by telephone so we
08 couldn't see what was going on at the other
09 end. Andy certainly appeared to be in the
10 chair for some of the meetings. Sometimes
11 James Dupree would be in the chair.
12 Q. And would Richard Lynch be
13 involved in those --
14 A. Yes.
15 Q. -- discussions?
16 A. Yeah. Richard was definitely in
17 the room.
18 Q. And Paul Tooms?
19 A. I don't know of a Paul Tooms.

Page 146:02 to 147:11

00146:02 Okay. If you'll turn to Tab 6,
03 please. This is an e-mail from yourself
04 dated Tuesday, April 27th, to Ian Cavanaugh,
05 Subject: spill vol 4-27.
06 And who is Mr. Cavanaugh?
07 A. His role in BP is he's the
08 technology vice president for subsurface and
09 wells. His role in the response by this time
10 was I think best described as science advisor
11 to the incident commander in Houma.
12 Q. And were you sending -- do you
13 recall sending this e-mail to Mr. Cavanaugh?
14 A. I don't actually recall doing
15 it. Of course, I've seen the documents
16 and --
17 Q. Okay. And were you sending this
18 to Mr. Cavanaugh like the -- like when you
19 sent the other e-mail to Ms. Wallace to
20 distribute for a meeting?
21 A. No. This is -- this is later.
22 This is after the meeting.
23 Q. Okay.
24 A. My belief is, and this -- this
25 is reconstructed from looking at the

00147:01 documents and my notes, is that Ian would
02 have been on the 4:30 telecom, and he simply
03 expressed interest as a scientific advisor
04 for Houma in what I was doing, and he thought
05 it might help him as he was working in Houma
06 to assist in planning and applying
07 dispersants.
08 Q. So he was using this -- using
09 these numbers to consider how much dispersant
10 he was going to --
11 A. He needed --

Page 147:15 to 150:13

00147:15 A. My belief is he thought it might
16 be useful, but I don't know what he did with
17 it after he got it.
18 Q. (BY MR. CERNICH) Did you ever
19 discuss these -- these calculations with him?
20 A. I can't say specifically. I
21 have many phone calls with Ian during this
22 period, and I can't say specifically whether
23 I talked about this with him or not.
24 Q. Okay. If you'll look at the
25 attachment, your attachment has the Bonn
00148:01 Agreement approach there and includes --
02 MR. HEBERLIG: Counsel, I'm familiar
03 with this document and it's not complete.
04 MR. CERNICH: (Hands document to
05 Mr. Heberlig.)
06 MR. HEBERLIG: Thank you.
07 A. Okay.
08 MR. CERNICH: Does that satisfy you,
09 Counsel?
10 MR. HEBERLIG: Yes, that's got all
11 three pages.
12 MR. CERNICH: Okay.
13 Q. (BY MR. CERNICH) And if you'll
14 look at the first spreadsheet, which is
15 using -- I'm trying to recall, is that one
16 using the ASTM method or the Metcalf method?
17 A. Neither, actually. The heading
18 says it's using ASTM, but what it's actually
19 using is a hybrid between ASTM and Bonn.
20 Q. Okay. Is that a method that you
21 found on the Internet?
22 A. No. It's the method that I
23 created having had conversations with the
24 folk in the science room, conversations with
25 various other people and at least one other
00149:01 person in NOAA, a senior NOAA official in
02 Seattle, and then more ongoing conversations
03 with folk in the science room. That's --
04 that's where it came from.
05 Q. Is the NOAA official that you're

06 referring to Bill Lehr?

07 A. That's correct.

08 Q. And who did you discuss it with
09 in the science room?

10 A. I can't specifically remember,
11 but there were a lot of folk in that room.

12 Q. Did you discuss it with Doug
13 Suttles?

14 A. I did discuss it with Doug
15 Suttles, yes.

16 Q. Did you show him the -- your
17 hybrid calculations?

18 A. I showed him the -- I don't know
19 whether I showed him the Metcalf & Eddy or
20 the ASTM, but one or other of those two and
21 the Bonn and we discussed the differences in
22 the results. And we discussed sort of the
23 relevance of the upper end of the Bonn
24 Agreement to this particular situation and
25 agreed that it wasn't relevant to this
00150:01 particular situation. And we -- we pulled
02 back from the upper end of Bonn, but we still
03 allowed for -- went well beyond the upper end
04 of the ASTM.

05 Q. And what is the upper end for
06 the -- for the Bonn calculations, for your
07 calculations on that day? I believe it's in
08 the second page, second attachment?

09 A. So the upper end, if I applied
10 the Bonn Agreement and honor the thicknesses
11 that would be implied by the upper end of
12 Bonn, then you get a number of 92,000 barrels
13 a day.

Page 154:22 to 155:20

00154:22 Q. At the top of the spreadsheet it
23 appears to indicate the methodology there.
24 Can you tell me what that is?

25 A. But it wasn't -- this wasn't the
00155:01 meth- -- the header was wrong.

02 Q. Okay.

03 A. The way I developed the
04 methodology, I started out with Metcalf &
05 Eddy. Then the next protocol that I found
06 was the Bonn, and then I eventually found the
07 American Society for Testing and Materials,
08 the ASTM, standards. Bonn is effectively the
09 European standard; ASTM is effectively the
10 American, U.S. standard.

11 When I evolved from the -- I
12 started bringing the hybrid methodology
13 together, I just evolved the spreadsheet.
14 And the header, of course, doesn't -- when
15 you're working on the screen you don't see

16 the header. So I just didn't realize that
17 the header hadn't changed.
18 So this I believe, just from the
19 format of the spreadsheet, is the hybrid
20 methodology.

Page 159:03 to 160:10

00159:03 Q. And for your hybrid methodology
04 there, what are your -- what is the low
05 range, the mid range and the high range?
06 A. The one, 5,700, 14,000.
07 Q. Excuse me, so the low end is
08 what?
09 A. 1,063 barrels per day.
10 Q. Barrels per day, yeah. And the
11 mid range is?
12 A. 5,758 barrels per day.
13 Q. And the high range is?
14 A. 14,266 barrels per day.
15 Q. And then if you'd turn to the
16 next page, which I believe is the Bonn
17 Agreement methodology; is that correct?
18 A. That's correct.
19 Q. And what is your low range
20 there?
21 A. 2,783.
22 Q. Barrels per day?
23 A. Barrels per day.
24 Q. And your mid range?
25 A. 17,328 barrels per day.
00160:01 Q. And the high range?
02 A. 92,028 barrels per day.
03 Q. Thank you. And now if you turn
04 to the next attachment to that e-mail, which
05 I believe is the correct -- which I believe
06 is the -- are the calculations from
07 April 29th. If you could please -- if you
08 could please check that third sheet where you
09 summarize the calculations and confirm for
10 me?

Page 160:12 to 161:17

00160:12 A. This is not a hybrid, so this
13 was not done on April the 28th. This date
14 says April the 26th.
15 Q. (BY MR. CERNICH) Okay.
16 A. So this -- I believe this would
17 have been done on April the 26th.
18 Q. Okay.
19 A. And it was -- this was probably
20 the very first calculation that I did using
21 Metcalf & Eddy.

22 Q. That would have been Metcalf &
 23 Eddy?
 24 A. Yeah.
 25 Q. And what is your -- what is your
 00161:01 low range on that one?
 02 A. 1,620 barrel per day.
 03 Q. And the mid range?
 04 A. 3,004 barrels per day.
 05 Q. And the high range?
 06 A. 9,068 barrels per day.
 07 Q. Okay. Thank you. And then if
 08 you would turn to the next range. Can you
 09 tell me what that calculation is, Mr. Rainey?
 10 A. I don't actually recognize this
 11 one, but I'm going to guess that it was a
 12 Bonn -- using the Bonn standard.
 13 Q. And what is the estimate in that
 14 one?
 15 A. 103,794 barrels per day.
 16 Q. Barrels per day. Thank you. If
 17 you could return that to me, please.

Page 173:25 to 174:05

00173:25 receiving regularly related to the interface
 00174:01 meetings?
 02 A. Uh-huh, yeah.
 03 Q. And you were a recipient of the
 04 e-mail?
 05 A. Right.

Page 176:01 to 177:05

00176:01 Q. (BY MR. CERNICH) If we look at
 02 the notes, 16:30, so that would be 4:30 on
 03 April 26, 2010. Second topic of the crimped
 04 pipe.
 05 The fourth bullet point is an
 06 action. I assume that's an action item
 07 coming out of your meeting for Gordon. Is
 08 that Gordon Birrell?
 09 A. Yes.
 10 Q. It says: Discuss flow
 11 calculations with David Rainey. Action
 12 complete.
 13 Did Mr. Gordon -- did
 14 Mr. Birrell discuss flow calculations with
 15 you?
 16 A. So we had a -- as I remember it,
 17 this particular conversation -- I had many
 18 conversations with Gordon, but this
 19 particular conversation, I think the logic
 20 was for -- the group knew that I was
 21 beginning to work on the topic, and there

22 were some implications from the work that
23 Gordon was doing that would bear on the work
24 that I was doing. So he attempted to explain
25 to me the engineering aspects of the -- of
00177:01 the modeling work that he was doing in
02 Houston.
03 Q. And was that the -- that was the
04 modeling of the crimped riser pipe?
05 A. Right.

Page 179:25 to 181:15

00179:25 read them because I'm not an engineer. But
00180:01 that's my understanding from my memory of the
02 telephone conversation with Gordon and going
03 back through my notes of those
04 conversations -- that conversation.
05 Q. And would -- would Gordon
06 Birrell be the person who would have the most
07 information --
08 A. Yes.
09 Q. -- related to that modeling?
10 A. Uh-huh.
11 MR. CERNICH: I'm going to mark that
12 e-mail and attachment as Exhibit 3217.
13 (Exhibit No. 3217 was marked.)
14 Q. (BY MR. CERNICH) If you'll turn
15 to Tab 5 in your binder, please. This is
16 another similar e-mail, Jason Caldwell to a
17 similar group of people dated Tuesday,
18 April 27th with inter- -- interface meeting
19 notes, April 27th. Actually it looks like
20 there was another attachment, which, I
21 apologize, isn't -- isn't there.
22 MR. CERNICH: I'll agree that this
23 isn't the complete document, Counsel, but I'm
24 just concerned about the meeting notes. It's
25 the attachment 0630, 4/27/2010.
00181:01 Q. (BY MR. CERNICH) Going down to
02 the Crimp Pipe, third bullet point says:
03 Sample section of risers en route to a
04 testing facility to be bent and tested.
05 Estimate -- estimate commencement of testing
06 by the weekend.
07 Can you tell me what you know
08 about that sample section of riser being sent
09 to a testing facility?
10 A. I know nothing about this.
11 Q. Okay. Would Mr. Birrell be the
12 person most likely to have information on
13 that?
14 A. I would suspect he would be,
15 yes.

Page 181:25 to 185:10

00181:25 Q. (BY MR. CERNICH) Mr. Rainey, if
00182:01 you could please turn to Tab 23 in your
02 binder.

03 A. Okay.

04 Q. And this is an e-mail, it starts
05 at the top: From Doug Suttles to John Lynch
06 and Andy Inglis.

07 But if we work down the e-mail
08 chain, it starts with you forwarding a flow
09 rate note to Mr. Suttles. And the attachment
10 to -- and this e-mail is dated May 19th,
11 2010.

12 And the attachment is -- is a
13 document that is entitled: Mississippi
14 Canyon 252 #1 Flow Rate Calculations.

15 Mr. Rainey, is this the memo
16 that you referred to earlier when you were
17 discussing or we were discussing your
18 May 17th calculations?

19 A. I believe it is, yes. I'm not
20 used to seeing it printed in this format
21 but --

22 Q. Yeah, for whatever reason that's
23 the way it printed when we got it. And if
24 you take a look at that and tell me whether
25 it appears that the memo and the attachments
00183:01 to that memo appear to be complete to you.

02 (Discussion off the record.)

03 A. Yes, this looks to be complete
04 at first glance.

05 Q. (BY MR. CERNICH) And did you
06 prepare this memo, Mr. Rainey?

07 A. Yes, I did.

08 Q. And did anyone assist you in
09 preparing this memo?

10 A. It was reviewed by Doug Suttles.

11 Q. Did he ask you to prepare this
12 memo?

13 A. No.

14 Q. Did someone ask you to prepare
15 this memo?

16 A. A request was made. This was my
17 response to the request, not a specific
18 request to prepare a memo.

19 Q. Okay. And what was -- what was
20 the request?

21 MR. LANCASTER: Object and ask you to
22 lay some additional foundation as to who,
23 what and where because I'm going to be
24 instructing the witness not to answer some
25 questions based upon privilege grounds.

00184:01 MR. CERNICH: Okay.

02 Q. (BY MR. CERNICH) Why did you

03 prepare this memo?
04 MR. LANCASTER: That would call for
05 disclosure of conversations with counsel, so
06 I instruct the witness not to answer based
07 upon privilege. You could get the "who" out
08 there, if you want.
09 Q. (BY MR. CERNICH) Who asked you
10 to prepare this memo?
11 A. Nobody asked me to prepare the
12 memo. I prepared the memo in response to a
13 request from BP's counsel.
14 Q. From BP's?
15 A. Counsel.
16 Q. Counsel. Did BP's counsel
17 review drafts of this memo?
18 A. Yes, they did.
19 Q. And is this the final version of
20 that memo?
21 A. I believe it is. The only --
22 there was one edit that was made to the final
23 sentence, and I can't remember whether this
24 is the final or the original version.
25 Q. Did you --
00185:01 A. It wasn't a huge change, so it
02 wasn't really relevant.
03 Q. Did you receive comments from
04 counsel to your memo?
05 A. I believe I did, yes.
06 Q. And did you edit this memo
07 pursuant to the comments from counsel?
08 A. I don't believe I did, no.
09 Q. So this memo reflects only your
10 thoughts and calculations?

Page 185:12 to 188:16

00185:12 A. No, it's a summary of a lot of
13 the work I was aware of that was going on
14 around flow rate and worst-case discharge
15 potential.
16 Q. (BY MR. CERNICH) And do you
17 know why the preparation of this memo fell to
18 you?
19 MR. LANCASTER: If you can answer that
20 question without divulging conversations with
21 counsel, you can answer. Otherwise, I'd
22 instruct you not to answer based upon
23 privilege grounds. The first question is:
24 Can you answer that without disclosing
25 conversations with counsel?
00186:01 THE WITNESS: I think probably not.
02 MR. LANCASTER: Okay. So we would
03 instruct the witness not to answer based upon
04 privilege.
05 Q. (BY MR. CERNICH) So you took it

06 upon yourself to prepare this memo based on
07 conversations but without a direct
08 instruction to prepare this memo. Is that --
09 A. Right.
10 Q. -- is that an accurate --
11 A. Uh-huh.
12 Q. -- statement?
13 Let's look at the memo for a
14 moment. Context, it says: A 30-second video
15 clip of hydrocarbons leaking from the broken
16 end of the DEEPWATER HORIZON drilling riser
17 has been released to the public. Various
18 experts are challenging the Unified Command's
19 best guess estimate of flow rate at the
20 seabed based on the video clip. This note
21 summarizes the various estimates that have
22 been made within the Unified Demand --
23 Unified Command.
24 So your intent in putting
25 together this -- this memo was to summarize
00187:01 the various estimates that had been made
02 within the Unified Command; is that correct?
03 A. That I was aware of, yes.
04 Q. Well, what do you mean by, that
05 you were aware of? Oh, calculations you
06 were -- estimates that you were aware of?
07 A. Yeah.
08 Q. The first section here addresses
09 mass balance, which as -- do I understand
10 correctly that that's the work we were
11 discussing earlier today?
12 A. That's correct.
13 Q. Okay. And then the last
14 paragraph says: From April 27th or
15 April 30th daily estimates of flow rate were
16 made on the basis of visual description of
17 oil on the surface. And those are -- you're
18 referring to the estimates that we discussed
19 earlier today?
20 A. That's correct.
21 Q. And then going on to the next
22 page, it says: Low end was always around
23 1,000 barrels per day.
24 Next bullet: Best guess was
25 between 5,000 and 6,000 barrels per day.
00188:01 And the next bullet is that the
02 high end varied from 12,000 to 14,000 barrels
03 per day?
04 A. That's correct.
05 Q. And it says: The tables
06 associated with these estimates are attached,
07 attachments 1 through 4. These estimates
08 played an important part in the Unified
09 Command's decision to raise the estimate of
10 flow rate from 1,000 to 5,000 barrels per

11 day.
12 A. Uh-huh.
13 Q. Now, this summary doesn't seem
14 to include the calculations that you made
15 using the bond agreement methodology. Can
16 you tell me why?

Page 188:18 to 190:09

00188:18 A. The methodology that was used
19 here does actually include -- it's the
20 hybrid. So it doesn't honor the upper end of
21 the bond protocol, but it goes, I think, to a
22 factor of somewhere around seven or eight
23 times beyond the upper end of the American
24 Standard.
25 Q. (BY MR. CERNICH) But this memo
00189:01 doesn't explain the methodology that you
02 actually used, does it?
03 A. No, because it was a summary.
04 It wasn't a technical paper on that
05 particular methodology.
06 Q. Well, then what was the -- what
07 was the purpose of this summary, then?
08 A. It was to provide a summary of
09 the various estimates of flow rate and
10 maximum discharge potential that had been
11 made.
12 Q. Was it your understanding that
13 this was prepared for distribution to Admiral
14 Allen and Admiral Landry?
15 A. I didn't know that that would
16 happen at the time. But it did subsequently
17 happen.
18 Q. So no one told you that this was
19 going to be distributed outside of BP for any
20 reason?
21 MR. LANCASTER: And let me object to
22 the extent that question is calling for
23 conversations of counsel. If you could
24 phrase it as any non-lawyers or carve your
25 way around it. Otherwise I feel compelled to
00190:01 apply --
02 MR. CERNICH: Certainly.
03 MR. LANCASTER: -- a cautionary
04 instruction not to answer that question if it
05 would require disclosure of conversations
06 with counsel.
07 Q. (BY MR. CERNICH) Did any
08 non-lawyer ever tell you that this would be
09 distributed outside of the BP organization?

Page 190:11 to 190:16

00190:11 A. Could you ask the question
12 again?
13 Q. (BY MR. CERNICH) Did any
14 non-lawyer tell you that this -- that this
15 memo would be distributed outside of the BP
16 organization?

Page 190:18 to 193:02

00190:18 A. Not -- not either before or as I
19 was writing it.

20 Q. (BY MR. CERNICH) So at some
21 point did any non-lawyer tell you after you
22 had completed this memo that it would be
23 distributed to Admiral Allen, Admiral Landry,
24 or anyone in the United States government?

25 A. I don't know if I -- I don't
00191:01 actually remember if I knew before it was --
02 if it was sent to the admirals, that it was
03 going to be, but certainly I found out at
04 this point that it was.

05 Q. Okay. I'd like to move down to
06 the next section, the maximum discharge
07 calculation. And if we move onto the third
08 page of the memo, it says: An absolute worst
09 case flow rate of 60,000 barrels per day was
10 calculated. A more reasonable worst case
11 scenario of 40,000 barrels per day recognizes
12 the following BOP is in place and may be
13 partially activated. The riser and drill
14 pipe is crushed and kinked. Restrictions
15 provided by cement and the casing annulus
16 formation collapse, casing hanger, et cetera,
17 are likely.

18 So this is saying that BP has
19 calculated an absolute worst flow rate of
20 60,000 barrels per day with a more reasonable
21 worst case scenario of 40,000 barrels per
22 day; is that correct?

23 A. That's correct.

24 Q. And that these three items, the
25 BOP in place, the crushed and kinked riser
00192:01 and drill pipe, and these various
02 restrictions listed, would likely reduce that
03 60,000 to a more likely scenario of 40,000;
04 is that correct?

05 A. That's my understanding, yeah.

06 Q. Now, if we can -- this says --
07 this analysis is summarized on attachment 6.
08 Can we turn to Attachment 6, please.

09 And Attachment 6 is -- appears
10 to be a PowerPoint slide. It has a diagram
11 which would purport to be the kinked riser
12 pipe; is that correct?

13 A. That's correct.

14 Q. And the title of the slide is
15 "Sea Floor Exit 7 inch by 9-7/8 inch Casing
16 Annulus Float Path."

17 Does that mean that this is
18 assuming that the flow from the well is
19 coming up solely through the annulus?

20 A. That's correct. That's my
21 understanding.

22 Q. And is it your understanding
23 after all of the work that was done to
24 respond to the well, to close in the well,
25 cement the well, that the flow actually was
00193:01 solely from -- through the annulus up to
02 the -- up to the wellhead?

Page 193:04 to 194:03

00193:04 A. This is way beyond my area of
05 expertise. And I've been focused on the
06 response since then, so I can't say for sure.

07 Q. (BY MR. CERNICH) Have you ever
08 heard that the flow was up the production --
09 the 7 inch by 9-7/8 inch production casing
10 rather than through the annulus?

11 A. I think what I understand is
12 that it was not up the annulus.

13 Q. And is it your understanding
14 that flow -- flow through the production
15 casing would be greater than flow up through
16 the annulus?

17 A. Right. I -- that's my
18 understanding.

19 Q. So in retrospect, the maximum
20 theoretical flow rate in this slide is
21 probably underestimated; is that correct?

22 A. In this slide -- I think the
23 belief at this time from the people who did
24 this was that the likely flow path was up the
25 annulus. So this is a worst case theoretical
00194:01 discharge up through the annulus.

02 Q. But you are aware that there
03 were other calculations that were done?

Page 194:05 to 194:24

00194:05 Q. (BY MR. CERNICH) And that where
06 there were flow estimates done for other
07 scenarios, for example, flow up the
08 production casing as well; is that correct?

09 A. I believe that's the case. I
10 think it's mentioned in my memo.

11 Q. Then if we move on to the next
12 section, fluid velocity at seabed on --

13 A. Can you remind me on the tab?

14 Q. Oh, I'm sorry. We're on Tab 23.
15 A. Okay. Thank you.
16 Q. And I've gone back to the
17 memo --
18 A. To the memo.
19 Q. -- itself. Correct.
20 A. Okay.
21 Q. Okay. I'm done with that
22 exhibit. I'm going to mark that as
23 Exhibit 3218.
24 (Exhibit No. 3218 was marked.)

Page 197:20 to 199:17

00197:20 Q. Did Mr. Suttles task you as
21 the -- as the person at the Unified Command
22 who was the point person or in charge of flow
23 rate estimates?
24 A. I think by this time I had
25 become the science guy. That's what -- we
00198:01 were sort of -- Richard Morrison was focusing
02 in operations and I was focusing on science
03 issues. And flow rate fell for -- it fell
04 under the science issue.
05 Q. And in addition to flow rate,
06 the -- I believe one of the other science
07 issues you were working on was the fate and
08 fingerprinting of the oil; is that correct?
09 A. That was certainly one of them,
10 one of the many issues, yes.
11 Q. What were some of the other
12 issues you were working on?
13 A. I worked on dispersement
14 application, subsea and surface. I did -- I
15 actually did a lot of briefings to staffers
16 and committees in Washington, D.C. I did --
17 I actually started out doing a lot of
18 external work, a lot of external -- doing tie
19 holes down in St. Bernard Parish. I
20 testified before the Natural Resources
21 Committee in Baton Rouge. So I evolved from
22 a external role and then increasingly went
23 into the scientific role.
24 Q. But as you noted earlier, you're
25 not a -- you're not an engineer, you're a
00199:01 geologist?
02 A. Right.
03 Q. Did you ever question your --
04 your placement in this -- in this role in the
05 Unified Command?
06 A. I am a scientist. I'm a
07 geologist. So we were -- I probably was the
08 closest thing there to a scientist.
09 Q. But the flow calculations would
10 appear to me to be more of a -- more of an

11 engineering issue, would you agree?
12 A. Certainly the work that was
13 being done in Houston by the engineers, that
14 was engineering activity.
15 Q. And what was that work that was
16 being done in Houston?
17 A. Well, it was --

Page 199:19 to 200:16

00199:19 A. I don't actually -- there was a
20 lot of work -- I know there was a lot of work
21 going on, there was a lot of people working
22 engineering aspects, but I don't -- I was in
23 Robert. I don't know the details of that
24 work.
25 Q. (BY MR. CERNICH) Was Houston
00200:01 sharing any flow rate estimates with you?
02 A. In some of the documents you
03 have in here, there's information flowing in
04 both -- in both directions.
05 Q. But did they ever provide -- do
06 you ever recall Houston providing you with a
07 flow rate estimate at any point?
08 A. Not a flow rate estimate, no, I
09 don't recall.
10 Q. Early on they were primarily
11 working off of the 5,000 barrel per day
12 number; is that correct?
13 A. Early on 1,000 barrels a day,
14 then up to 5,000. There was a lot of work
15 going on in maximum discharge potential.
16 Some of that information was shared with me.

Page 201:25 to 202:15

00201:25 Lynch to David Rainey and Doug Suttles dated
00202:01 Sunday, May 16th. It's redacted because
02 Mr. Lynch is counsel, but I'd like to direct
03 you down to the bottom of the page.
04 There is an e-mail from Mike
05 Mason sent May 15th, 2010, to Andy Inglis
06 with a copy to Jasper Peijs?
07 A. Peijs, Jasper Peijs?
08 Q. Peijs. Okay. Thank you.
09 Subject: Macondo oil rate.
10 Do you know who Mr. Mason is?
11 A. Again, a senior reservoir
12 engineer. I don't know what his official
13 role is.
14 Q. So you had no interaction
15 personally with Mr. Mason at any time?

Page 202:17 to 205:02

00202:17 A. I'm not aware of any interaction
18 certainly before this period.

19 Q. (BY MR. CERNICH) So you
20 never -- you don't recall ever having spoken
21 with Mr. Mason before this e-mail, before
22 seeing this e-mail; is that correct?

23 A. Certainly not in this response.
24 And, again, I may have met and talked with
25 him before the incident but I -- I'm not sure

00203:01 I could put a face to the name.

02 Q. So you've never met him
03 personally?

04 A. I may have done, but I -- it
05 would be one of those people I would go,
06 okay, yeah --

07 Q. And who is Mr. Peijs?

08 A. At this time he was Mike Daly's
09 executive assistant. And through the
10 incident, the executive assistants were being
11 rotated and shared by all the executives. So
12 I believe at this point he was acting as Andy
13 Inglis' executive assistant.

14 MR. LANCASTER: And for the court
15 reporter, Peijs is P-e-i-j-s.

16 MR. CERNICH: Thank you.

17 Q. (BY MR. CERNICH) And in this
18 e-mail dated May 15th to Mr. Inglis,
19 Mr. Mason says that he just read an article
20 in CNN stating that a researcher at Purdue
21 believes the Macondo well is leaking up to
22 70,000 barrels of oil per day and that BP
23 stands by a 5,000 barrel of oil per day
24 figure. With the data and knowledge we
25 currently have available, we cannot

00204:01 definitively state the oil right from the
02 well.

03 He goes on to say: We should be
04 very cautious standing behind a 5,000 barrel
05 of oil per day figure as our modeling shows
06 that this well could be making anything up to
07 approximately a hundred thousand barrels of
08 oil per day, depending on a number of unknown
09 variables such as flow path either through
10 the annulus, behind the production casing, or
11 through the production casing float shoe.
12 The height of reservoir exposed if drill pipe
13 is suspended in the BOP and sealed by VBR
14 rams, reservoir skin damage, choking effects
15 and et cetera, we can make the case for 5,000
16 barrels of oil per day only based on certain
17 assumptions and in the absence of other
18 information such as a well test.

19 Do you agree that BP was, in

20 fact, standing by an estimate of 5,000
21 barrels of oil per day on May 15th?

22 A. I don't know specifically on May
23 the 15th what our official -- or even if
24 there was an official flow rate estimate.

25 Q. But you were involved in coming
00205:01 up with that 5,000 barrel of oil per day
02 figure; is that correct?

Page 205:04 to 205:23

00205:04 A. In late April I was involved.

05 Q. (BY MR. CERNICH) And I thought
06 you said you also performed calculations on
07 May 17th.

08 A. But I also said that was an
09 interesting intellectual exercise that I have
10 no idea if it had any scientific validity
11 whatsoever.

12 Q. But I thought you also testified
13 that that found its way into your flow rate
14 memo?

15 A. I mentioned it. If the system
16 had been a steady steered system, then it
17 might be -- it might be valid. The fact that
18 it gave the same answer I thought was
19 interesting.

20 Q. But you didn't mention in that
21 memo, your flow rate memo, that your
22 methodology was without any scientific
23 validity either, did you?

Page 205:25 to 206:07

00205:25 A. And, again, it was a summary
00206:01 memo. I mentioned it out of interest, the
02 fact that I had done that calculation and it
03 gave the same answer.

04 Q. (BY MR. CERNICH) An answer that
05 I think we discussed earlier. It didn't
06 account for the dispersement that was being
07 used, correct?

Page 206:09 to 208:06

00206:09 A. I said I wasn't sure whether it
10 did or not. It did account for surface. I'm
11 not sure whether it accounted for subsea.

12 Q. (BY MR. CERNICH) It's not my
13 recollection. Let's go back to that. So
14 you're saying -- so your testimony is that
15 the -- that your May 17th estimate did --
16 did, in fact, account for dispersant --

17 dispersant use on the surface?

18 A. I think it did. I'd have to go
19 back and check the numbers to be sure, but
20 I'd be surprised if I didn't.

21 Q. But you -- but it didn't -- it
22 didn't account for subsea dispersant use?

23 A. I don't know whether it did or
24 not, but I -- and if it didn't, that was a
25 flaw.

00207:01 Q. And then Mr. Mason says we can
02 make a case for 5,000 barrels of oil per day
03 only based on certain assumptions and in the
04 absence of other information such as a well
05 test.

06 Do you know what certain
07 assumptions he's referring to there?

08 A. Well, I think he refers to it in
09 the previous sentence. But other than that,
10 I wouldn't know.

11 Q. Okay. Did you ever discuss
12 Mr. Mason's -- Mr. Mason's e-mail with anyone
13 not including -- not including counsel, of
14 course? Did you discuss it with Mr. Suttles
15 or anyone else?

16 A. I can't specifically remember
17 discussing it with Mr. Suttles. I did
18 discuss it with Mr. Mason.

19 Q. Did you -- and what did -- what
20 were -- what did you discuss with Mr. Mason?

21 A. I just asked them for a bit more
22 information on this e-mail, and he said he
23 would send me a power pack -- a power pack
24 deck that he had talked Mr. Inglis through.

25 Q. Okay. And he did, in fact, send
00208:01 you that?

02 A. And he did, in fact, send me the
03 pack.

04 Q. I'm going to mark this as
05 Exhibit 3220.

06 (Exhibit No. 3220 was marked.)

Page 209:24 to 210:16

00209:24 Q. Okay. If you would turn to
25 Tab 21, please.

00210:01 A. In the original?

02 Q. Correct. This is an e-mail from
03 Cindy Yeilding dated Tuesday, May 18th, 2010.
04 It's to yourself and a number of other people
05 that I understand to be BP employees. Its
06 subject is "Info objectives and delivery
07 MC 252 Macondo."

08 And I've seen, in going through
09 the documents, that you received many, many
10 of these e-mails. I don't recall offhand

11 whether they were weekly or daily or every
12 few days. Do you recall receiving these
13 types of e-mails from Ms. Yeilding?
14 A. I think, like you said, she --
15 yes, but not specifically in any particular
16 one.

Page 211:06 to 212:06

00211:06 Q. There is a -- there is -- on
07 here there is the fourth subject down,
08 reservoir engineering, Kelly McAughan. Am I
09 pronouncing that correct?
10 A. I'm not sure I know how to
11 pronounce it either, so...
12 Q. Okay. Do you know -- is -- do
13 you know whether it's a male or a female?
14 A. It should -- it's female.
15 Q. Ms. McAughan?
16 A. Yeah.
17 Q. And that's M-c-A-u-g-h-a-n. Is
18 she a reservoir engineer?
19 A. I think so, yes.
20 Q. Okay. And the reservoir
21 engineering piece of this e-mail, if you
22 know, is this related to calculating flow
23 rates?
24 A. Certainly at least some of this
25 is related to the flow rate issue, yes.
00212:01 Q. And it's my understanding that
02 BP had a team working on flow rate
03 calculations from a reservoir engineering
04 perspective; is that correct?
05 A. I don't know for certain, again,
06 but that's -- I think that's the case.

Page 212:12 to 212:17

00212:12 Q. So you -- the -- in the variety
13 of e-mails similar to this one on objectives
14 and delivery MC 252, the names that are
15 included in these documents mean the work
16 they were doing, you had no -- absolutely no
17 involvement in that?

Page 212:19 to 214:05

00212:19 A. I had many conversations with
20 many people, so I can't say that for certain.
21 Obviously, I did have a conversation with
22 Mike Mason, but I don't -- I don't remember
23 conversations with any of these other names.
24 I did have a conversation with Kelly McAughan

25 about oil samples.
00213:01 Q. Okay.
02 A. She was the custodian of the NDT
03 samples from the well.
04 Q. Okay. And those samples, as I
05 understand it, correct me if I'm wrong,
06 they -- they had implications both for flow
07 rate as well as for the fingerprinting of the
08 oil; is that correct?
09 A. They certainly had implications
10 for fingerprinting, and I'm reasonably
11 confident that most of my interactions
12 were -- would have been in that arena.
13 Clearly, the oil quality has an impact on
14 flow rate.
15 Q. Did you ever have conversations
16 with anyone related to gas-to-oil ratio or
17 oil shrinkage?
18 A. I do remember this issue of the
19 gas-oil ratio, that the RIT tool appeared be
20 capturing oil and gas at a gas-oil ratio of
21 10,000, if I remember right. And there
22 was -- it was -- it was an issue because when
23 we drilled the well and we sampled the oil
24 from the reservoir, it had a gas-oil ratio of
25 3,000. So there was a question of what's --
00214:01 there is something differently, what's -- how
02 can we explain this difference.
03 Q. Did you or anyone at BP ever
04 come to a conclusion with regard to what the
05 actual gas-to-oil ratio was?

Page 214:07 to 214:17

00214:07 A. The gas-to-oil ratio when we
08 tested from the reservoir was 3,000.
09 Q. (BY MR. CERNICH) And you
10 don't -- and you're not aware of any
11 subsequent work that was done that -- that
12 resulted in an adjustment of that gas-to-oil
13 ratio?
14 A. I don't -- I don't think so.
15 I'm certainly aware of this conversation
16 around how it could be -- how the RIT tool
17 could be sampling it at 10,000.

Page 227:25 to 228:24

00227:25 clear about what was average and what was
00228:01 instantaneous.
02 Q. That's helpful. And if I
03 understand correctly, there were
04 instantaneous readings from the RIT tool as
05 high as 12- and 13,000 barrels per day. Is

06 that your recollection?
07 A. I don't remember the -- I know
08 there were some high -- high readings, but I
09 don't know what they were specifically.
10 Q. You do recall, though, that
11 whatever the RIT tool was capturing, there
12 was still observable flow of oil and gas from
13 the end of the riser pipe --
14 A. Correct.
15 Q. -- that wasn't being captured by
16 the RIT?
17 A. Right.
18 Q. So the flow would have been
19 something above what the capture rate was; is
20 that correct?
21 A. Correct.
22 Q. I'm going to mark this as
23 Exhibit 3223.
24 (Exhibit No. 3223 was marked.)

Page 235:08 to 236:03

00235:08 Q. (BY MR. HASSINGER) As a vice
09 president of BP and somebody who's worked for
10 the company for over 30 years, can you
11 identify for me one lesson learned as a
12 result of the Texas City incident?
13 A. I think one of -- one of the
14 lessons was around having accommodation
15 structures and office structures too close to
16 the facility.
17 Q. Office structures and what?
18 A. Accommodation structures or
19 structures where people would be gathering.
20 Q. Too close to the facility?
21 A. That's correct.
22 Q. All right. What else? Can you
23 name a second one, a second lesson learned as
24 a result of that catastrophe?
25 A. Again, I'm a geologist. I
00236:01 describe prospects.
02 Q. I understand.
03 A. I'm not an operations person.

Page 236:09 to 237:01

00236:09 Q. (BY MR. HASSINGER) I understand
10 that you're an explorer; is that right?
11 A. That's correct.
12 Q. You're a scientist?
13 A. That's correct.
14 Q. You're one of the top executives
15 at BP, is that right, a vice president of the
16 company?

17 A. That's correct.

18 Q. As a scientist, as an explorer,
19 as an executive at BP, and as somebody who's
20 worked there for over 30 years, can you name
21 for me a second lesson learned as a result of
22 the Texas City explosion? And if you can't,
23 just tell me that.

24 A. Well, off the top of my head,
25 no, but I'm sure if I had the chance to think
00237:01 about I could.

Page 237:05 to 237:13

00237:05 One of the comments that you
06 mentioned earlier, which is why I wrote the
07 note, was something to the effect that one of
08 the lessons learned was that the company had
09 become -- and I wasn't -- I couldn't hear
10 what you said actually, but it was too top
11 heavy, too complicated, I think, on the
12 safety and risk management issues; is that
13 right?

Page 237:15 to 237:18

00237:15 A. No, that's not what I said. I
16 said that we recognized at or around that
17 time that the company had become top heavy
18 and too complicated in its processes.

Page 238:01 to 238:03

00238:01 Q. (BY MR. HASSINGER) Was that a
02 lesson learn before or after the Texas City
03 incident?

Page 238:06 to 238:07

00238:06 the Texas -- it wasn't a lesson learn from
07 anything. It was just a recognition.

Page 241:08 to 241:15

00241:08 Q. (BY MR. HASSINGER) Can you, as
09 a top executive at BP, vice president, as
10 somebody who's worked there for 30-plus
11 years, as somebody who was very involved in
12 the effort to try and address the death and
13 destruction that occurred in April of 2010,
14 can you list for me the lessons learned as a
15 result of that event?

Page 241:17 to 241:18

00241:17 A. As a result of the event of
18 April 20?

Page 241:20 to 242:13

00241:20 A. No, that's not my area of
21 expertise.
22 Q. Can you list one lesson, one
23 lesson learned --
24 A. That's not my --
25 Q. -- as a result of that event?
00242:01 A. That's not my area of expertise
02 and I haven't been involved in that area. I
03 was kept very separate from the
04 investigation. I was focussed on the
05 response and focused on moving into
06 restoration. That's why we created a
07 separate organization to do that.
08 Q. As a scientist and as a top
09 executive at BP, have you made any effort to
10 find out what the lessons to be learned are?
11 A. I've heard, seen various
12 presentations, but off the top of my head, I
13 can't speak to the detail of those.

Page 292:09 to 297:03

00292:09 Q. All right. Earlier this morning
10 I heard some testimony from you about you
11 being a scientist, and you're involved in
12 the -- in a -- I guess the identification of
13 potential pay zones, what have you. From the
14 geological point of view, I saw some the
15 documents that we looked at, and they
16 identified certain risks.
17 A. Uh-huh.
18 Q. Well, you remember the risks
19 that we talked about, one was the low frac
20 rate, pore pressure, margin, drilling margin?
21 A. Uh-huh.
22 Q. You're nodding your head "yes"?
23 A. Yeah.
24 Q. You know, the risk of kicks,
25 those things that we were talking about this
00293:01 morning, all of those. Those get identified
02 from the geological point of view, correct?
03 A. That's correct.
04 Q. So you know from the geology
05 that -- that that presents somewhat of an
06 issue because they're presented as risk from
07 the geological perspective, correct?
08 A. That's correct.

09 Q. Now, what type of risk do they
10 pose from the geological perspective? Let's
11 take, you know, low drilling margin, frac
12 rate, pore pressure, what type of risk,
13 when -- when -- when you're talking about
14 getting a go or no-go on a project --
15 A. Uh-huh.
16 Q. -- when you identify those as
17 risks, what's the concern? Why are they a
18 risk?
19 A. So, the areas where you have
20 narrow window between pore pressure and
21 fracture gradient are more difficult to drill
22 than areas that have wide margin between the
23 pore pressure and the fracture gradient.
24 Q. And I think I understand the
25 pore pressure and frac gradients, and I don't
00294:01 want to digress into that. But since they're
02 more difficult --
03 A. Uh-huh.
04 Q. -- what I'm driving at is, what
05 are the risks that you identify when you say
06 it? Is it -- is it potential loss time? Is
07 it they present a risk of not reaching TD?
08 Is it both of those, or is it something else?
09 Is it those in combination with other things?
10 A. Both and others.
11 Q. Okay. So they present risk
12 in -- from the geological point of view in
13 terms of achieving the objective, that is,
14 making this well a pay zone?
15 A. That's correct.
16 Q. Same thing with kicks and all of
17 the other things that we've talked about?
18 A. That's correct.
19 Q. They -- they present risk
20 insofar as achieving the ultimate goal?
21 A. From a geological perspective,
22 yes.
23 Q. From a geological perspective.
24 And some the risks are not only
25 just in ultimately achieving the goal, but
00295:01 they present risk, for example, insofar as
02 nonproductive time, lost circulation,
03 interventions when you have a kick, whatever?
04 A. That's correct.
05 Q. So they're part of the risk
06 that, from the geological standpoint, you
07 identify early on when you look at the
08 geology?
09 A. That's correct.
10 Q. And you present them as part of
11 your consideration for go or no-go on a
12 particular project?
13 A. That is correct.

14 Q. Now, when you identify those
15 risks from the geological point of view, who,
16 if anyone, looks at them from the operational
17 risk point of view?
18 A. The drilling and completions
19 engineers.
20 Q. Do they have to bless it as
21 well?
22 A. Bless what?
23 Q. Do they get their input on,
24 "Man, this low drilling margin," for example,
25 "it's kind of too risky for us to go"? Do
00296:01 they get the say-so, or is it just you guys?
02 A. Absolutely. They -- no, no.
03 It's -- from an operational perspective, once
04 we hand the information over to the
05 engineers, then they design the well around
06 those predictions.
07 Q. All right. So but -- but once
08 y'all decide to do it, it becomes their
09 problem to design for the risk?
10 A. That's correct.
11 Q. And to plan for the risk?
12 A. And subsurface teams support
13 them in that activity, but ultimately it's
14 their accountability.
15 Q. All right. You identified those
16 risks from the, I guess, ultimate -- reach
17 the ultimate goal, problems, and then the
18 operational people have to deal with them
19 from the practical point of view in drilling
20 the well, correct?
21 A. We provide the pore pressure and
22 frac gradient prediction.
23 Q. All right.
24 A. And then they determine how they
25 design the well based on those predictions.
00297:01 Q. All done within BP's internal
02 staff, even before the rig gets spudded down?
03 A. Oh, yes.