Deposition Testimony of:

Stuart Lacy

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Page 8:06 to 8:08

00008:06 STUART LACY,
07 having been first duly sworn, testified as
08 follows:

Page 8:17 to 11:18

00008:17 Q. Can you tell me what you do for a living?
18 A. I'm a well site geologist.
19 Q. Tell me what that is.
20 A. I'm a geologist at the well site when
21 we're drilling a well, and my job is essentially
22 to acquire the data that the oil company requires
23 from that well.
24 Q. What degrees do you have?
25 A. I have a master's -- a Master of Science
00009:01 and Bachelor of Science.
02 Q. When did you achieve those degrees and
03 from where?
04 A. Bristol University was the bachelor, and
05 that was -- I think it finished in 1990. And the
06 master degree at Imperial college here in London,
07 and that was '91 that would have finished.
08 Q. And where is Bristol?
09 A. Bristol is southwest England, down towards
10 Wales.
11 Q. How did you get involved with BP?
12 A. Well, I worked for a small consulting
13 geologist called Core Operations, and we do work
14 for, you know, pretty much all the major oil
15 companies. And so jobs will come up, and -- and
16 we'll go interview for them, and I interviewed for
17 one with BP in about 2000.
18 Q. And since 2000, have you worked as a
19 consultant for BP?
20 A. I have, yes.
21 Q. In what capacity?
22 A. As a well site geologist.
23 Q. Now, tell us from a day-to-day basis what
24 a well site geologist does.
25 A. Well, as I said, my job is to acquire the
00010:01 data as we're drilling. So essentially what it
02 involves is -- is for a start, looking at the
03 rocks. The drill cuttings that come up, I'll be
04 looking -- looking at those under a microscope.
05 Will be looking at all sorts of trends, gas data,
06 LWD data, which is logging while drilling, and
07 then communicating that back to -- back to town in
08 Houston and to the well site leaders.
09 Q. How early do you get involved in a
10 project?
11 A. Normally, we go to a meeting before the
12 project, so that -- that will be before we spud
13 it. But, then, we wouldn't be on the rig until we

got riser rigged up so that we had returns, so we're looking at the cuttings, so before that.
Q. But does your role -- I'm sorry.
A. It's all right.
Q. Does your role begin once the -- your official role begin once you have samples to look at?
A. Essentially, yes. Yeah, before that, they have someone called a "shallow hazard expert."
Q. And is that something you do, that shallow hazard expert, or is that someone else?
A. It's not. I have done for other companies in the past, but BP have their own specialist.
Q. So do you become involved at a certain depth of drilling?
A. Not a certain depth. It's -- it's when the riser is connected to the -- to the well. The top hole they drill without a riser. It's just using seawater. So there's nothing for us to look at. And then when they put the riser on, then returns come back to the rig.
Q. And tell us what returns you look at.
A. We're looking at lithology. I mean, the rocks, the dirt -- the drill bit, the -- the cuttings that come up. They -- they're washed and cleaned, and we look at them under a microscope.
Q. What are you looking for?
A. We're looking for the rock type. Is it sand stained, is it silt stained, is it shale? And we're looking for any traces of hydrocarbons.

Page 14:20 to 14:24

Q. (BY MR. GONZALEZ) Is it important to be able to re- -- review the rocks and obtain the data realtime in order to make reasonable decisions in drilling?
A. Yes.

Page 15:01 to 16:19

Q. (BY MR. GONZALEZ) Why is that?
A. Because we're looking at it realtime, and the idea is that we're trying to get trends, pore pressure trends, to determine our future pore pressure. You know, we have estimates, which is all they can be. And we're trying to refine that by looking at all the factors we can to give us our best estimate.
Q. Are you involved in making the determinations of what the pore pressure is?
A. Not in producing a direct number, but looking at the trends, yes.
Q. How so?

A. We're looking at pretty much anything in the well. For instance, gas data, if we see in the background gas coming out, that can be an indicator of increasing pore pressure. If we see strangely shaped cuttings, if they're curved and splintery, that could be an in- -- indicator of increase in pore pressure. Torque and drag with the drill string could be an indicator. So we're look at all of these things and -- and saying, Is this giving us any clues as to what the pore pressure is doing?
Q. If you find that, what do you do with the data?
A. We communicate it. We're always communicating the database at the time, to the well site leaders.
Q. Who do you speak with involving BP?
A. Well, the well -- the well site leaders obviously are on the rig. Bobby Bodek on this well was my single point of contact.
Q. And when you say "on this well," you mean the Macondo Well?
A. I do.
Q. When did you become involved with Macondo Well 252?
A. I think it was February last year. I couldn't give you the exact date.
Q. February 2010?
A. '10, yeah.
Q. And by whom were you retained, BP?
A. By whom was I retained. BP, yes.

Page 17:11 to 18:04

Q. And tell us from the very beginning what your involvement was on that well.
A. It was being a well site geologist, exactly as I just described.
Q. And tell us what information you were given from the very beginning.
A. By BP?
Q. Yeah. Let's -- take us there. Someone at some point said, We're going to now look at Macondo Well 252, Mr. Lacy. DEEPWATER HORIZON is going to be the rig that's going to be going over there. Where are you at that point in time and what information are you giving?
A. I would have gone into the office before my first hitch out there, and we'd have gone through the well plan, the geology, the expected pore pressure. I then would have gone out to the rig and -- and we'd have started drilling and -- and gone on from there.

Page 18:16 to 20:19

00018:16 Q. Was it among the deepest wells in the
17 Gulf?
18 A. No, it wasn't.
19 Q. How does it rank in terms of depth?
20 A. Moderately deep. I mean, certainly not
21 one of the deepest.
22 Q. What hazards does a well like this present
23 to you of someone like you looking for potential
24 hazards?
25 A. You know, it's -- it's another Gulf
00019:01 deepwater well. Perhaps the only difference with
02 some of the stuff we had done before was that it
03 wasn't sub-salt. There wasn't any salt layer
04 here.
05 Q. So as a geologist, what hazards are you
06 looking for in a well like this?
07 A. The usual ones. You know, increase in
08 pore pressure, which -- which is our -- which is
09 our main one. But all the usual ones of wellbore
10 stability, and well coming in on you. Yeah, I
11 mean, the same hazards we'd look for in any well
12 we drill in the Gulf.
13 Q. What does an increase in pore pressure
14 mean?
15 A. Well, it just means as you get deeper,
16 generally your pore pressure increases. You put a
17 greater overburden, a greater weight of the rock
18 above. So you're pore pressure will increase as
19 you go deep. But it varies as to how it -- it can
20 increase more rapidly or increase more slowly.
21 Q. Did the -- did this well, the Macondo Well
22 252, have narrow drilling margins?
23 A. It did, yes.
24 Q. Tell us what that means.
25 A. It means that the rock essentially is a
00020:01 little bit weak. Your frac-gradient is generally
02 a bit lower than it would be in something like a
03 sub-salt well.
04 Q. What challenges does drilling a narrow
05 drilling well have?
06 A. Well, you've got a narrow window. So
07 you're going to probably have to set more casing,
08 and you're probably going to have to be on the
09 lookout for losses more and -- and for potential
10 kicks.
11 Q. When you say "losses," do you mean mud --
12 mud loss?
13 A. Mud losses.
14 Q. What does mud loss tell you?
15 A. It tells you you've reached a fracture
16 gradient. You've hit a point in that well where
17 the mud weight is greater than frac-gradient.
18 Q. And if you're having a lot of losses, what

is that telling you?

Page 20:21 to 22:02

A. It doesn't mean anything. I mean, it -- some wells have a lot of losses, some wells don't. They are very common in -- in drilling in the Gulf of Mexico and -- and in the well.
Q. (BY MR. GONZALEZ) But it's indicating something, isn't it?
A. No. No, it's not.
Q. Well, if you're losing mud --
A. All oil wells lose mud. It doesn't really indicate anything.
Q. Isn't there supposed to be an equipoint between the pressure of the well and the mud that's being used to neutralize?
A. I'm sorry. Can you say that again?
Q. Yeah. By balance. Equipoint balance. Shouldn't there be a balance between the pressure of the well and the mud?
A. Well, that's what you're trying to do in every well.
Q. If you're losing mud, that would necessarily mean that the balance is off, correct?
A. It would at that point. But this is -- you know, as I said, not uncommon at all in exploration drilling.
Q. But you need to make adjustments when that happens, right?
A. And you do.
Q. Because mud isn't supposed to be lost?
A. In an ideal world, you'd never lose a barrel. But it's -- you know, you can look at all the records of exploration wells any way you'd like, and you'll see mud loss.

Page 24:22 to 25:12

Q. (BY MR. GONZALEZ) How many kicks did this well have?
A. One while I was on it.
Q. You were literally on the rig?
A. Yes.
Q. When was that?
A. March the 8th, 2010.
Q. And tell us the circumstances behind that.
A. Right. I can tell you what happened. I wasn't there at the time. It was nighttime, and I was asleep, so my opposite member was on. But essentially what happened is they were drilling ahead and drilled into a higher pressure -- a higher pressure zone. Some mud came into the well -- some pore pressure fluids came into the

12 well, and eventually they shut the well in.

Page 25:21 to 26:02

00025:21 Q. How long were you on the DEEPWATER
22 HORIZON?
23 A. I think four years.
24 Q. What dates were you on?
25 A. What dates was I on?
00026:01 Q. Yeah, when did you first arrive on the
02 DEEPWATER HORIZON?

Page 26:04 to 26:24

00026:04 Q. (BY MR. GONZALEZ) For the Macondo Well
05 252?
06 A. For the Macondo Well, off the top of my
07 head, I mean, it was in February sometime.
08 Q. Of 2010?
09 A. Yeah. Yeah.
10 Q. And when was your last date on it that you
11 can recall?
12 A. The 15th of April 2010.
13 Q. How many weeks were you on versus off the
14 rig?
15 A. I think I did a total of about six to
16 seven weeks on the rig and about the same off.
17 Q. Six, seven on; six seven off?
18 A. No, no. A lot of the time would be three
19 on, then three off, then three on. And I think on
20 the end, I came on the 8th or 9th of April, and
21 left on the 15th.
22 Q. Did you work 12-hour shifts?
23 A. 12 -- 12 to 14, 15 hours. Yeah, I mean it
24 varied. Some days were busier than others.

Page 36:06 to 36:23

00036:06 Q. Who was the geologist onboard at that
07 time?
08 A. There wasn't one. There never is with the
09 P&A operation.
10 Q. Tell us what that means, "P&A operation."
11 A. Plugging and abandoning. It's -- it's
12 what you do when you finish the well.
13 Q. At what point was the well finished for
14 purposes of your work?
15 A. After the wire line logging, once we
16 reached TD, we then evaluate the well with a
17 mixture of electronic and nuclear tools from --
18 from Schlumberger in this case. And once that's
19 finished, that's my role over and that's when I
20 left the rig.

Q. Did you have concerns while you were on the rig that they were drilling -- the drilling operation was going way too fast.

Page 37:01 to 38:18

A. No, I didn't.
Q. (BY MR. GONZALEZ) When you use the term "We're drilling like a bat out of Hell," and you're discussing the need to slow down in order to have the realtime data evaluated before the drilling continues, what do you mean?
A. What I mean is -- is my job as a geologist trying to -- is -- and get the best data is always going to be easier to slow with drill. However, if we drilled everything at the pave I'd like, we would never get any wells done.
Q. From -- from your perspective as a scientist, you would like to be able to get the data, analyze the data, provide the information, and make reasonable decisions on the drilling based on the information you're providing, correct?
A. And we're able to do that. I mean, there's -- there's no question we're able to do that but my job is -- is easier. I mean, we're always -- basically, subsurface guys -- you know, the job of the drillers is to drill the well as best they can, you know, reasonably quickly. Otherwise, it would be uneconomic. Our job is to get the best data possible. They're slightly at odds. You know, we -- we want good data, and the slower you go, the better data you get but that would be uneconomical.
Q. But you agree with me that it's a smart thing -- the reasonable thing to do is to allow you to get the data, evaluate the data, provide information regarding the data to the drillers, and make drilling decisions based on that?
A. Correct. And we had time to do.
Q. That's the right way to do it?
MR. LAUSCH: Object to form.
A. Yeah, that's the right way to do it and that's what we were doing.
Q. (BY MR. GONZALEZ) And that's what you would recommend?
A. Yes.
Q. And that's what you would teach, if you were teaching someone?

Page 38:20 to 38:23

A. I haven't taught anyone.
Q. (BY MR. GONZALEZ) Well, assuming that you

were going to tell people "This is the right way to do it," it -- that's what you would say, right?

Page 38:25 to 39:01

A. Yes. I mean, that is -- that is, you know, how we drill the wells.

Page 39:06 to 40:24

Q. I'd like to you look at Tab -- what I had previously identified as Tab 28 informally, and it will be Bates stamp No. BP-HZN-2179MDL01209253. And it is an E-mail written by you, Mr. Lacy, dated February -- March 12th. "Subject: Some thoughts on help requested, PP detection, Macondo." It starts at the top by stating, "Hi, John. Been on radio silence all day. Hence, the delay. But have successfully severed the drill pipe. I would agree with pretty much everything you say, and I think we're all a bit complacent having been drilling sub salt wells. This is a different kettle of fish. One thought is that we always used to flow check sands in the exploration wells, but the drive for increased performance has seen this abandoned. Likewise, drilling like a bat out of Hell in these PP, narrow-window wells is perhaps not wise, especially considering the drilling is relatively low percentage of the total time in these wells. Drilling so fast we have to stop and circulate for ECD really doesn't make any sense."

Now, you wrote that on March 12?

A. I did.

Q. And the blowout occurred a little over a month later?

A. Correct.

Q. And at the time, you were discussing that it would be unwise to drill like a bat out of Hell in these PP narrow-window wells -- pore pressure narrow-window wells, right?

A. Pore pressure, yeah.

Q. What you describe for us as "narrow-window" meaning that there would be a higher frac-gradient rate?

A. No. No. It's the difference between the pore pressure and the frac rate.

Q. And it was a very narrow window for this particular well?

A. A narrower window that we previously had been drilling for other wells.

Q. And here, you're asking for, Let's slow it down; let's get more data; let's make decisions based on the data. Correct?

Page 41:01 to 41:20

00041:01 A. No. No. I mean, I -- I'm always saying,
02 Can we go slower, and have been for 20 years to
03 drilling, I'm afraid. So this is completely
04 normal.
05 Q. This time you put it in writing.
06 A. I did. It's been in writing before in
07 other wells.
08 Q. Yeah, here's what you say: "Likewise,
09 drilling like a bat out of Hell in these pore
10 pressure narrow-window wells is perhaps not wise.
11 Especially considering the drilling as a
12 relatively low percentage of the total time in
13 these wells."
14 Those are your words, right, sir?
15 A. They are.
16 Q. You meant when you said?
17 A. I probably overstated it a little bit.
18 Having looked back at the data, we were going 100
19 feet an hour, which actually is a fairly normal
20 rate in the Gulf of Mexico.

Page 42:15 to 43:06

00042:15 Q. Is the -- the bottom part of the E-mail is
16 from Mr. Bellow to you, Mr. Lacy, correct?
17 A. Correct.
18 Q. It's also dated March 12, 2010, right?
19 A. Correct.
20 Q. And it states on the first paragraph,
21 "All, As we have some time while we recover from
22 Mac- -- from the Macondo stuck pipe and kick
23 event, I want to spend sometime reevaluating how
24 we manage realtime pore pressure detection for
25 Macondo-type wells. By 'Macondo-type wells, I
00043:01 mean those wells without thick salt sections that
02 usually have narrow drilling windows for a large
03 part of the well. I believe that we can learn
04 from Macondo to allow these kind of wells to be
05 successfully drilled without subsurface NPT
06 event."

Page 44:16 to 44:24

00044:16 Q. The next sentence states, "To that end,
17 several conversations will take place over the
18 next couple of weeks to assist us in making better
19 pore pressure detections decisions as we drill the
20 remaining four sections at Macondo."
21 Do you think it's a good idea to make
22 good pore pressure detections?

A. Of course. It's what we're trying to do all the time.

Page 46:21 to 46:21

Q. Or any precautions required?

Page 46:23 to 47:15

A. We are always taking the same precautions. The point of exploration drilling is: You don't know what you're going to find. So we're always expecting to drill into anything. You know, the drillers -- the mudloggers are monitoring the well for anything unexpected. And we're looking at the trends and -- and trying to see if there's a pore pressure increase or decrease.
Q. If there's a pore pressure increase that's predicted, what is -- what are the proper steps to be taken?
A. We communicate those to the well site leaders and to the BP team.
Q. Why?
A. So that they can make a decision on -- on what to do.
Q. When in doubt, do you have to rule out the likelihood of an increased pore pressure?

Page 47:17 to 47:21

A. Yeah. I mean, what -- if we think the pore pressure is increasing, yeah, we will tell them that.
Q. You can't ignore it, right?
A. We don't ignore it.

Page 47:24 to 47:25

Q. It's nothing that should be ignored?
A. Yeah. It's our job, you know -- that's

Page 48:02 to 48:08

Q. Your job is to foresee the problem, right?
A. No. We can't foresee the problem.
Q. Predict?
A. We can predict as best we can, based on the current information we have.
Q. Like weather, right?
A. Yeah.

Page 49:06 to 49:22

00049:06 Q. So they can take the appropriate steps?
07 A. Correct. If there's any warning. I mean,
08 often, there are no --
09 Q. When you --
10 A. -- if there's any -- if there's any pore
11 pressure clues. Often, there are none. So
12 sometimes you get clues, you get trends, you get
13 the well talking to you. Other times, you don't
14 at all.
15 Q. When you get those warnings, those trends,
16 that information, you have an obligation to act
17 reasonably with that information, correct?
18 A. Yeah. We inform the well site leaders and
19 BP in town.
20 Q. And it's important for them to take
21 whatever safety steps are necessary to ensure the
22 safety of the project?

Page 49:24 to 50:13

00049:24 A. They then decide on -- on what the -- the
25 forward plan is, but I -- I -- you know, I'm not
00050:01 involved in the process.
02 Q. Well, my question is: You agree with me
03 that safety is important?
04 A. Yes.
05 Q. And you agree with me that, if you have
06 been informed of a potential hazard, it's
07 important to take steps to promote safety?
08 A. What -- what normally happens is we'll
09 say, Okay, we think the pore pressure is
10 increasing to this number. And -- and they then
11 will -- will act upon it. Absolutely.
12 Q. And the way they would act upon it is by
13 increasing the mud weight?

Page 50:15 to 50:15

00050:15 A. Yes.

Page 53:13 to 55:14

00053:13 Q. (BY MR. GONZALEZ) Who made the call on
14 increasing mud weight?
15 A. Increasing mud weight, that was the
16 drilling team.
17 Q. And would that be BP?
18 A. BP and TransOcean.
19 Q. The -- going down that paragraph of the
20 same document, 1209253, where it states: "We have
21 not drilled a huge number of these 'no salt narrow

drilling window' wells."
What's the difference between a no salt versus a salt well?
A. We're having a large -- large layer of salt, which -- which is pretty common in the Gulf of Mexico. The rock gets increased -- increased compressive strength below it so essentially have a wider drilling mud.
Q. And if it's a no salt well, it has a narrow drilling margin?
A. It can do. It can do.
Q. And in this case, the Macondo Well 252 was a narrow drilling well?
A. Yeah. Narrower than the -- the wells we had been drilling.
Q. According to Mr. Bellow, they had not drilled a lot of the wells like the Macondo before?
A. Correct.
Q. Going down a little further where he says, "I am confident."
It states: "I am confident that once we have these discussions and put refine procedures in place, we will be successful as we always are. Please regard these discussions" -- "discussions as a huge learning opportunity. As for our initial thoughts in looking at the kick events, there were signs of pore pressure with all of this. They were in some cases subtle and, again, considering the type wells we usually drill, we would get away with having some connection gas or sonic showing a pore pressure increase. With these tighter margin wells, I want to get...a" -- "to a place where we are considering the all data suggesting pore pressure change much more carefully in the Macondo type wells."
Do you agree with him on that statement?
A. Yes, I do, and that's -- that's what we did. We did not take any more kicks while drilling.
Q. Until April the 20th?

Page 55:17 to 55:18

A. And we did not take anymore kicks while drilling the well.

Page 55:25 to 57:04

Q. (BY MR. GONZALEZ) The next sentence states: "We need to have larger conversations on all signs of pore pressure change with these wells

and as soon as change is observed. We need to be prepared to use dummy connections, D exponent, sonic and any other indicator with more rigor. We can perhaps afford wait longer to raise the flag and watch for a pore pressure trend. We were confident in thick salt wells. However, in these narrow window wells, we believe we need to have pore pressure conversations as soon as ANY," in all caps, "indicator shows a change in pore pressure. We also need to be prepared to have some false alarms and not be afraid of it. We need to have the entire team more aware and focused on ALL," caps, "ALL PP, pore pressure, indicators with the mentality that a couple of dummy connections and the circulation time costs far less than three kick events."

Do you agree with that statement?

A. I do, yes.

Q. Why is it important to do that?

A. To do what exactly?

Q. Follow that advice.

A. Because this is what we're always trying to do. We're always trying to predict, you know, to the best of our ability, you know, any changes in -- in pore pressure, and we did, you know. We -- we drilled the rest of the well without taking any more kicks.

Page 61:25 to 62:24

Q. The next sentence states: "All of these signs were present, but at 85 feet per hour occurred quickly in 'real time'. We" need -- "we just need to refine our process to allow quicker conversations to occur and to ensure that we are monitoring all relevant pore pressure trend data. Once we recover from this event, Bobby Bodek is planning to be on the rig to asset with implementing the improvements thought of in this conversation. I would ask that all of you think of the last events and offer suggestions and improvements to our process. We will capture these comments and suggestions and use to create better proceeds to allow us to drill Macondo and future similar wells with the same low MPT that we drilled Tiber."

And that's an E-mail that you received, right, sir?

A. Yes, it is.

Q. And then as a response -- a response to his request for comments and suggestions, you wrote that: "You shouldn't drill like a bat out of hell in these pore pressure narrow window wells."

Right?

Page 63:01 to 63:01

00063:01 A. I did.

Page 66:21 to 68:04

00066:21 Q. The next paragraph, 3, states: "The
22 application of some traditional exploration
23 drilling practices needs to be considered. In
24 wells with narrow drilling margins, drilling
25 techniques such as drilling at reduced ROP" --
00067:01 what does "ROP" mean?
02 A. Rate of penetration.
03 Q. -- "only having one connection in the hole
04 at a time simulating connections, performing
05 flow-checks when a sand interval is cut and
06 circulating to manage ECD should be employed."
07 What's "ECD"?
08 A. Equivalent circulating density.
09 Q. Why is that important, this whole
10 paragraph?
11 A. You know, these are all things that would
12 increase our ability to detect pressure or
13 increased pressure. It would make our job easier.
14 Q. Next paragraph 4: "Better lines of
15 communication between the rig and Houston office
16 need to be established. Preceding each well
17 control event, subtle indicators of pore pressure
18 increase were either not recognized or not
19 discussed with the greater group."
20 Why is that important?
21 A. I'm not sure. I don't quite understand
22 the --
23 Q. Did you feel you were having adequate
24 communication with the Houston office?
25 A. Yes, absolutely. Absolutely.
00068:01 Q. They seemed to be concerned that they were
02 not getting information of subtle indicators of
03 pore pressure?
04 A. Well, they --

Page 68:06 to 68:19

00068:06 A. The very subtle indicators in this case
07 were -- were missed.
08 Q. (BY MR. GONZALEZ) The next sentence under
09 Paragraph 4 states: "In retrospect, after
10 compiling the above list of observations from
11 various individuals, it seems that the accelerated
12 rate of penetration and the resulting 'onslaught'
13 of drilling indicators exceeded the ability of all
14 team members to effectively recognize, properly

communicate and decisively act upon available data."
That was a statement that was written by BP, correct?
A. Correct.

Page 68:21 to 68:21

00068:21 A. Written by Bobby Bodek, I believe.

Page 70:03 to 71:06

00070:03 Q. (BY MR. GONZALEZ) Well, I was referring to your comments that it is important not to be drilling --
A. Yeah. I believe I was --
Q. -- at the speed of "a bat out of hell."
A. I was being a little flowery with my language, to be honest. You know, Gulf of Mexico drilling is quick by all companies.
Q. Right. But speed should never up-plant safety, right?
A. No. Correct.
Q. The next sentence states: "Practices such as having only one connection in the hole at one time, stopping and circulating during times of uncertainty, simulating connections and performing flow-checks when in narrow drilling window after cutting a sand will be implemented."
That's a good idea, right?
A. Yes.
Q. And the third paragraph: "All indicators, no matter how subtle, will be discussed cross-discipline. For example, an observation made in the office by a subsurface team member
00071:01 will be communicated to the drilling group. Upon cross-discipline consensus of noteworthiness of a feature, either on the rig or in the office, the rig and subsurface-based teams will be assembled."
That's a good idea, too, right?
A. Yes.

Page 76:12 to 76:19

00076:12 Q. Now, Mr. Bodek, who worked for BP, right --
A. Yes.
Q. -- on April the 3rd with having received Kate Payne's E-mail wrote: "It means you've wasted your precious moments of your life reading it. Total non-descript bullshit."
Do you know what he meant by that?

Page 76:21 to 77:12

00076:21 A. No. I mean, again, I haven't seen it.
22 Wasn't there.
23 Q. (BY MR. GONZALEZ) Is Kate Paine a
24 scientist?
25 A. A scientist? She's a geologist.
00077:01 Q. Yeah.
02 A. She's pore pressure specialist.
03 Q. Competent?
04 A. Yes.
05 Q. Well qualified?
06 A. Yes, she is.
07 Q. Respected?
08 A. Yeah.
09 Q. She deserves to be taken seriously?
10 A. Yes, she does.
11 Q. We'll mark this as the next exhibit
12 number --

Page 77:15 to 78:09

00077:15 (Marked Exhibit No. 6394.)
16 Q. (BY MR. GONZALEZ) And if you could turn
17 now to the text tab, which will be -32, it's an
18 E-mail from you, Mr. Lacy, on the top --
19 A. Uh-huh.
20 Q. -- to Bennett Gord, dated April the 5th,
21 2010, Bates Stamp No. BP-HZN-2179MDL0377591. The
22 top E-mail, which -- on the page which you wrote,
23 states: "Blimey. It just sounds like the window
24 is too narrow. Weird, though, as you say the
25 formation had seen 14.83 ppg while drilling. Good
00078:01 to see Earl is still on the ball. Nothing like
02 writing off a gas peak as drill gas after all
03 that's happened in this well."
04 Can you tell us what you meant by
05 that?
06 A. I can't really recall it. But I believe
07 perhaps Earl had said it was a -- a gas peak; it
08 was drill gas. And, in fact, Gord believes it's
09 produced gas.

Page 78:21 to 79:01

00078:21 Q. (BY MR. GONZALEZ) Well, we're discussing
22 your comment here. And if you go to the -- let's
23 put it in context by looking at Mr. Gord's E-mail
24 to you, Mr. Lacy, dated April the 5th, 2010, on
25 the same page. He's a coworker of yours?
00079:01 A. Yes, he is.

Page 80:23 to 81:05

00080:23 Q. "See if that works. If it doesn't they
24 will try Plan B, C through H. I knew we were on
25 the edge yesterday when we got a 780 unit
00081:01 connection/pumps off gas and Earl said it was
02 drill gas. I moaned to Jon that we didn't have
03 control of this well."
04 What does he mean by not having
05 control of the well?

Page 81:07 to 82:08

00081:07 A. I don't know. This -- this is Gord
08 talking, but I -- I wasn't there at the time.
09 He's not in charge of the well anyway. So I -- I
10 don't quite follow.
11 Q. (BY MR. GONZALEZ) Is he a geologist?
12 A. Yes, he is.
13 Q. Is he competent?
14 A. Yes, he is.
15 Q. Do you value his opinions?
16 A. I do.
17 Q. Is he a respected employee?
18 A. Yes, he is.
19 Q. So he states: "I moaned to Jon that we
20 didn't have control of this well." According to
21 this, it's -- he's -- him -- he's the one that's
22 complaining that they don't have control of the
23 well, right?
24 A. It appears so, yes.
25 Q. And then in paren, he says: "(I didn't
00082:01 know what was going on but I knew things were not
02 good.)"
03 That's what he said, right?
04 A. Yes.
05 Q. And Earl was, quote, "just going to drill
06 blindly on." That's an -- that's an exact
07 statement of what this letter says, right?
08 A. Yes.

Page 82:13 to 83:04

00082:13 Q. The next statement said: "John called
14 John, and John and Earl decided to trip for bit
15 and reamer, as ROP dropped to 5 foot per hour.
16 Decided to increase the MW to 14.4 to keep the
17 same ESD we had while drilling for the trip. Made
18 sense to me. It was pumped around the bit, and
19 was coming up the annulus when the hole went to
20 the total loss of return in few minutes.
21 Baffling, as we drill the sands with 4.83 ECD and
22 that is what we had with the 14.4 coming back the
23 annulus."
24 Now, to this you responded -- to that

E-mail you responded. "Blimey, it sounds" -- "Blimey, it just sounds like the window is too narrow."

That was your response, the first sentence, right?

Page 83:06 to 83:11

A. Yeah.

Q. (BY MR. GONZALEZ) So when you said "too narrow," meaning what?

A. The -- the window is getting narrower and narrower. The drilling window that we discussed before between frac gradient and pore pressure.

Page 83:23 to 84:03

Q. (BY MR. GONZALEZ) Well, when the windows are getting more and more narrow --

A. Yeah.

Q. -- as described here, then you have to have -- BP has to have more and more vigilance?

A. Correct.

Page 87:06 to 87:17

MR. GONZALEZ: The last one is Exhibit 6395.

(Marked Exhibit No. 6395.)

Q. (BY MR. GONZALEZ) We're turning now to Tab 34, Bates Stamp No. BP-HZN-2179MDL00335102, and it is a BP document, states "Gulf of Mexico SPU Technical Memorandum," titled "Post Well Subsurface Description of Macondo Well MC252," and it's dated 25th of May 2010.

Are you familiar with this type of memorandum, Mr. Lacy?

A. No, I'm not. I haven't seen this one.

Page 88:06 to 88:14

A. I can't. I haven't seen this document before now.

Q. (BY MR. GONZALEZ) Is this a sonic reading?

A. I can't tell. Sorry, I've never seen this before. I have no idea.

Q. Is this the type of information that you're provided with in your job?

A. No, it's not. This is post well analysis.

Page 90:08 to 90:14

00090:08 Q. Now, when we look at this diagram here,
09 the one at the top at M57B, it states "gas,"
10 right?
11 A. On the chart, yes, it does.
12 Q. And the level of M57B is 17,467 feet.
13 Were you aware of that?
14 A. No, I wasn't.

Page 90:16 to 90:18

00090:16 Q. (BY MR. GONZALEZ) Now, what does that --
17 what does this information tell you as a
18 geologist?

Page 90:20 to 91:06

00090:20 A. It appears to be a report that's
21 describing possible fluid types in -- in various
22 different levels.
23 Q. (BY MR. GONZALEZ) It states that there's
24 a 2-foot thick area likely to be gas, right?
25 A. It says, "M57 sand is possibly 2 feet
00091:01 thick, likely to be log -- likely to be below log
02 resolution for accurate flow determination," is
03 what it actually says.
04 Q. Well, here's --
05 A. Based on its position above the
06 thermogenic, it's likely to be gas, yeah. Okay?

Page 91:13 to 91:14

00091:13 Q. Okay. And gas is hydrocarbon, correct?
14 A. It is, yes.

Page 92:25 to 93:01

00092:25 Q. Have you seen these types of graphs
00093:01 before?

Page 93:03 to 93:06

00093:03 A. Which -- which types of graphs?
04 Q. (BY MR. GONZALEZ) The one we're looking
05 at.
06 A. I haven't, no.

Page 93:10 to 93:11

00093:10 Q. Have you seen this document at all before?
11 A. I haven't, no.

Page 94:11 to 94:15

00094:11 Based on the information that they
12 had available at the time, even though they found
13 that the resolution was low, they felt that at
14 17,467 feet, there was a 2-foot patch of gas --
15 no, it was likely to be a 2-foot patch of gas?

Page 94:18 to 94:19

00094:18 Q. (BY MR. GONZALEZ) Correct?
19 A. Yeah, that's what this report says.

Page 106:13 to 106:16

00106:13 Q. So from all indications from looking at
14 these four documents now, at -- 17,467 references
15 M57B, there appears to be probable gas, a 2-foot
16 patch of probable gas, correct?

Page 106:18 to 106:19

00106:18 A. That's what these documents are
19 suggesting.

Page 106:23 to 107:03

00106:23 Q. (BY MR. GONZALEZ) What -- what date did
24 you personally get off the DEEPWATER HORIZON?
25 A. The 15th of April.
00107:01 Q. Did you consider your work to be done at
02 that point?
03 A. Yes, I did.

Page 111:11 to 111:15

00111:11 Q. What projects are you currently working on
12 for BP?
13 A. BP Jordan.
14 Q. Where is that located?
15 A. In Jordan.

Page 112:14 to 112:17

00112:14 Q. And between the Macondo Well and the Well
15 46 in Jordan, have you worked on any other BP
16 projects?
17 A. I was in BP Libya.

Page 112:24 to 113:07

00112:24 Q. (BY MR. GONZALEZ) Since the Macondo Well
25 incident to the present, have you worked for
00113:01 anyone other than BP?
02 A. No, I have not.
03 Q. Prior to the -- during the Macondo Well
04 incident, were you working for -- I'm sorry, not
05 the incident itself. But with the Macondo Well,
06 were you working for anybody other than BP?
07 A. No.

Page 113:11 to 114:12

00113:11 Q. So from February of 2010 to the present,
12 you've only worked for BP?
13 A. Correct.
14 Q. And prior to that, how far back was it
15 that you only worked for BP?
16 A. I think we started probably in -- in 2000.
17 Q. Working for BP?
18 A. Uh-huh.
19 Q. Is that "yes"?
20 A. Yes.
21 Q. Okay. So from 2000 to the present, you've
22 only worked for BP?
23 A. No. No. There have been other clients in
24 between. I worked --
25 Q. Well, that's my question.
00114:01 A. Okay.
02 Q. What years did you only work for BP?
03 A. I can't recall offhand, but it would be
04 2000 to 2003. I mean, I can't. I'd have to go
05 back and look in the diary.
06 Q. Ballpark.
07 A. There were -- there were jobs for Shell,
08 which lasted about a year, I guess, in the mid
09 2000's.
10 Q. Okay. So other than working for Shell for
11 about a year or so, your work has been for BP?
12 A. It has, yeah.

Page 115:21 to 116:03

00115:21 Q. Okay. Prior to the blowout in April 20,
22 2010, you were one of the individuals for
23 responsible for overseeing the wireline logging of
24 the well; is that correct?
25 A. Correct.
00116:01 Q. Okay. Were you able to successfully
02 perform the job of overseeing the -- the logging?
03 A. Yes, I was.

Page 116:10 to 118:01

00116:10 Q. (BY MR. CHAKERES) Okay. I'm -- okay.
11 What was your -- what was your
12 responsibility in overseeing the logging for a
13 well?
14 A. Well, Schlumberger are the experts.
15 They -- they're the ones running the tools. And
16 we're -- we're interested in acquiring good,
17 quality data effectively. So as I was explaining
18 earlier, my whole job in the world is -- is
19 acquiring data. And -- and so that's the purpose
20 of me supervising Schlumberger.
21 Q. Okay. And so what is it that you do --
22 A. Well, I'm --
23 Q. -- during the wireline logging?
24 A. Okay. The wirelining is a -- is a
25 Schlumberger shack. It's kind of a little --
00117:01 small little office with a winch on the front and
02 two or three people in it. And we've got screens
03 in front of us. And we're running these tools.
04 And the data is -- is, you know, generally in the
05 graph format. And that's running past us as the
06 tool moves up the hole. And we're -- we're
07 looking at that, and we're trying to piece it.
08 We're trying to make sure, does this make sense?
09 Is this good, quality data? Is it reasonable?
10 And we're comparing to the old LWD
11 logs which we got while we were drilling the well,
12 and to the mud log, and seeing, you know, does
13 this agree to what we saw before, is it sensible,
14 is it good. Because bad data is no use to us.
15 Q. Okay. Are you in the shack alongside the
16 Schlumberger personnel?
17 A. Yeah. Not 100 percent of the time,
18 because I was logging -- the other witness was
19 Galina Skripnikova, and we would -- we would
20 alternate on the hole. Some -- sometimes we would
21 be together for some runs, you know. Others it
22 would just be one of us.
23 Q. Okay. And do you have any reason to doubt
24 that Ms. Skripnikova was adequately overseeing
25 Schlumberger?
00118:01 A. No, not at all.

Page 119:12 to 119:20

00119:12 Q. Who makes the decision about how much data
13 to collect?
14 A. That's generally done in town, by the --
15 the petrophysicist and the team in town.
16 Q. Does that include, say, the team reservoir
17 engineer?
18 A. Yeah. The reservoir engineer state their,
19 you know, preferences, what they like, where they
20 like.

Page 120:02 to 120:15

00120:02 Q. And once the data is collected and
03 Schlumberger packages it, it'll go to the people
04 in town, and they'll use that for further --
05 A. Yeah, I mean, they're actually seeing
06 it -- if they want to, they're seeing it realtime
07 as well. Schlumberger have a transmission
08 facility. So they can actually watch it in
09 realtime and see it while we're logging. It's
10 very common. They can see -- see what's going on.
11 Q. And so once it's -- once the logging is
12 done, the people in Houston have that data?
13 A. Yeah. They have it. I mean, if they
14 don't have it immediately, they have it very
15 quickly, yeah.

Page 124:12 to 124:24

00124:12 Q. Were you able to measure everything above
13 18,280?
14 A. I believe so. I mean, yeah, yeah. I'd
15 need to see the logs again. I can't recall
16 offhand. But, yeah. I mean, there would be no
17 reason not to.
18 Q. If there's data in the logs, does that
19 tell you that you're able to collect data for that
20 area?
21 A. Yeah. I mean, if we've got a log starting
22 from whatever depth, that's the depth you go to.
23 I mean, it's easy to show you. We -- we haven't
24 gotten one.

Page 127:21 to 127:23

00127:21 Q. So there are no problems with the quality
22 of the tune of the CMR?
23 A. No. No, it seemed to be all right.

Page 133:06 to 133:10

00133:06 Q. Okay. And then I want to just confirm if
07 I understand what you previously said. At 015 on
08 April 13th, it says, at 18,180 feet: "Take
09 pretest - good test, we appear to have a gas
10 gradient."

Page 134:11 to 134:17

00134:11 Q. Okay. Were there any other kinds of cores
12 taken at the well besides rotary sidewall cores?
13 A. No. I mean, there's only two other kinds

you could do; and that would be a whole core, which we didn't do, or sidewall cores, but -- the percussion style, but no one really uses them anymore.

Page 139:06 to 139:24

Q. Okay. Who decides how many sidewall core samples are to be taken?
A. It's mainly -- it's a bunch of people, I think, in town. But, I mean, various people would weigh in with what they would like, whether it be -- the reservoir engineer would be the main one. They're trying to measure porosity and permeability. But -- but -- yeah. You know, all sorts of people, petrophysicists weigh in. The paleo guys would weigh in. They want some shales to look at bugs and try and do -- do good matches with that. So a bunch of people, will -- will get together and then thrash out a program.
Q. And then who, ultimately, gives the program to you?
A. Bobby Bodek, normally. Or possibly the petrophysicist, but normally Bobby Bodek. We kind of have a single point of contact system for the rig as well.

Page 141:11 to 142:08

Q. Yes. So I'll -- I'll just read that and ask a question about it. It says: "It's slow and painful an we have to settle for less cores (but 50 in 90 feet of sand is overdoing it a bit anyway!) but we are at least cutting them and the evidence on retraction is that we're retrieving them as well."
So did you believe that 50 core samples was overdoing it?
A. In 90 feet of sand, it is, yeah. That's one -- it's a core less than 2 feet for every core. So yeah, that's -- that's way, way more than your normal average.
Q. What's the normal average?
A. It varies. But I mean, you know, you have one every 8, 9, 10 feet. So, I mean, this was an unusual -- not unusual. This was a small -- relatively reservoir compared to the ones that we'd normally evaluate. We'd normally take 50 to 100 cores in these much, much thicker reservoirs. So 50 to 90 was unusually -- unusually dense, basically. It was a lot more than we'd normally take.

Page 145:20 to 146:05

00145:20 Q. But ultimately, that did not prevent you
21 from acquiring a sufficient number of --
22 A. No, no. We did that last run with the new
23 motor. Once we worked out what the problem was,
24 that these motors were failing, then yeah, we got
25 the new tool out from the beach and we got a
00146:01 pretty -- a reasonable recovery.
02 Q. Okay.
03 A. 50 percent is -- is -- you're happy with
04 it. A lot of cores fall out. A lot -- a lot of
05 them don't cut. So that's pretty good.

Page 149:06 to 149:08

00149:06 MS. LAWRENCE: We'll label this
07 Exhibit 6402.
08 (Marked Exhibit No. 6402.)

Page 152:02 to 152:09

00152:02 Q. And is one or the other of the drill gas
03 versus connection gas more significant in trying
04 to predict a kick?
05 A. Yeah. Drill gas -- the connection gas is
06 the one we're looking for --
07 Q. Okay.
08 A. -- in terms of -- in terms of pore
09 pressure increase.

Page 152:20 to 153:24

00152:20 And the first sentence reads:
21 "Blimey, it...sounds like the window's just too
22 narrow."
23 What did you mean by the "window's
24 too narrow"?
25 A. The -- you know, we were starting to get
00153:01 to the end of this section. I mean, once you
02 start having losses and then you're starting to
03 get connection gases, you know, your drilling
04 windows start to narrow, and you need to think
05 about stopping, basically.
06 Q. Okay. So stopping drilling forward?
07 A. Yeah. I mean, at some point, you know,
08 it's -- it's starting to tell you there are these
09 clues happening, okay, it's -- it's narrowing so
10 it's time to have a think about.
11 Q. Okay. And can you go one E-mail up from
12 there, which would be Gord Bennett's reply to the
13 same E-mail back to you on April 6th of 2010 at
14 9:04 a.m.

He writes: "Stu, we are still trying to regain circulation. They are sending off the Paleo folks. I am hearing we will drill another 100 feet to get rathole for logging or TD here if we are unable to drill ahead. So we know where TD is. Until they go to drill the 100 feet and find out there is more sand and then they will drill ahead another 100 feet, wink!"

Did I read that correctly?

A. Yeah.

Page 154:07 to 155:09

A. But, you know, if we drill the 100 feet and there had been some more high recivity sands, more pay, you know, than -- he's saying that it drilled another 100 feet, which -- which is, you know, it's a joke essentially.

Q. Okay. Do you recall any discussions among the -- the drilling team, the various parties involved, you have the geologists, the paleophysicists, then the -- the drillers in -- in Houston. So the whole -- the whole group. Do you recall any discussions among that whole group about, quote/unquote, "pulling the plug early on this well or stopping drilling this well before reaching the objective depths"?

A. I don't personally recall any discussions, no. I'm sure they had some.

Q. And why would you be sure they had some?

A. Because we were running out of drilling margin, and -- and we had found our target, so why carry on to a -- you know, to a -- you don't drill to a specific depth just -- just for the fun of it. I mean, you're actually trying to get your target. Okay. We got them. Plus, we're at a window so there's no point in going on.

Q. Okay. How about before you had reached any of the targets, was -- do you recall any discussion about?

A. No, I don't at all.

Page 155:21 to 156:07

Q. Okay. And what about a circumstance where you haven't reached the target depth so you still don't know if there's a sand there or not, but you abandon the well for some other reason? Have you ever -- has that ever happened, in your experience, with BP?

A. You know, I can't recall. I think it may have happened once because the paleo was all wrong, the ages were wrong, the bugs were wrong. You know, it just didn't add up. So we just said,

look, if this is like this here, it can't be good further down. So we -- we called it a day.

Page 157:04 to 158:03

Q. And I want to direction your attention to the bottom, the Bates page is BP-HZN-MBI 00109160. The second to the last E-mail on that page is one from yourself, Stuart Lacy, March 8, 2010, 8:07 A.m., to Robert Bodek. The subject is "RE: FIT/LOT Result."

You write: "12.55 ppg surface/12.67 ppg downhole from the original shoe test - apparently it's considered valid as we were in communication with the open hole but it's the first time I've ever not drilled the 10 feet required."

Can you explain what you -- what you meant when you were writing that?

A. Well, I believe this is when we had to set casing a little higher, and we had about, I can't remember, 800 feet of open hole below us. So -- so because we were in communication with the open hole, I -- I thought it was considered valid. I'm not actually up to date on my MMS regulations. It's more the drilling -- the drilling guys who do that, but I always assumed you'd have to drill 10 feet, but with the 800 feet of open hole, I mean, I can see why there would be no reason to because they're testing the rock, which is the whole idea.

Page 158:12 to 158:18

Q. Okay. And do you know -- I mean, there are -- are various points of pressure, as I understand it. The leak-off point, the pumps off point, the maximum surface or there's various points. Do you know which point it is in the course of the leak-off test that BP uses?

A. I think it's the leak-off point.

Page 161:12 to 161:16

Q. Okay. And how about the gas levels that you encountered while drilling the Macondo Well? Did they strike you as higher or lower or completely average?

A. They were on the high side. They were on

Page 163:16 to 163:18

Q. So are you paid directly by BP?

A. Yes, I am. At the moment, yeah. Yeah, I

18 am.

Page 165:08 to 167:20

00165:08 Q. You mentioned that you had visited the
09 DEEPWATER HORIZON on several occasions and worked
10 aboard the rig; is that correct?
11 A. For four years, correct.
12 Q. And when you visited the rig, presumably
13 you stayed the night, overnight on the rig?
14 A. Yeah. Normally three weeks at a time.
15 Q. When you first arrived at the rig did you
16 receive a safety orientation?
17 A. Yes. Yes, I did.
18 Q. And it --
19 A. You mean -- you mean the first time I went
20 to out the rig ever? Or every time I was --
21 Q. Probably every time.
22 A. Yeah, every time. We would have a reduced
23 one because we knew the rig and we had the longer
24 one originally. So...
25 Q. And that orientation was given by the
00166:01 TransOcean crew members?
02 A. Yes, it was.
03 Q. Did it include evacuation and emergency
04 procedures?
05 A. Yes, it did.
06 Q. At any time during the drilling of the
07 Macondo Well, did you observe any willful or
08 intentional misconduct towards human safety on the
09 part of any TransOcean crew member?
10 A. No, I didn't.
11 Q. At any time during the drilling of the
12 Macondo Well, did you observe any willful or
13 intentional misconduct towards the environment
14 of -- on the part of any TransOcean crew member?
15 A. No, I didn't.
16 Q. Based on the safety orientation and your
17 experience on the rig, were you aware that you had
18 the authority to call a work stoppage or a
19 time-out for safety if you observed any unsafe
20 condition?
21 A. Yes, I was.
22 Q. Did you ever call a time-out for safety?
23 A. Not in the sense that you mean.
24 Certainly, many times in the past I've stopped us
25 drilling, but it's not sort of stop a job; it's we
00167:01 need to stop and circulate the sand. Kind of,
02 yeah, but probably not in the kind of TransOcean
03 specific way that you mean.
04 Q. And in what way do you mean exactly?
05 A. Well, if we're not sure about something,
06 we can stop and circulate cuttings up and just get
07 our bearings a bit.
08 Q. And when you requested that that be done,

did -- did that happen? Did the work stop?
A. Yes. Yes, it did.
Q. And did the team regroup and --
A. Yeah.
Q. -- make sure that everyone --
A. Yeah, yeah.
Q. -- was on the same page?
A. Yeah. Yes, they did.
Q. And work didn't commence again until everybody was on the same page and felt that it was safe to proceed?
A. Correct, yeah.

Page 169:01 to 169:13

Q. Revisiting the work stoppages you mentioned earlier, did any of those work stoppages involve any unsafe acts on the part of TransOcean crew members?
A. No, they didn't.
Q. So it was never conduct --
A. No, no --
Q. -- on the part of TransOcean that --
A. No, it was -- it was a geological issue.
Q. Okay. Speaking of geological issues, did TransOcean have any geologists onboard the DEEPWATER HORIZON to your knowledge?
A. No. I don't believe so.

Page 170:15 to 171:05

Q. Before we get started, I just want to follow up on one thing that happened prior to my questioning. I'm going to hand you a document that's previously been marked as Exhibit 3537 and this is the wire-line logging diary. I'll let you look at it. We talked about it a little bit today, but this is one that was previously marked in a deposition.
I'd like you -- I can tell you that Ms. Skripnikova -- do you know who she is?
A. I do.
Q. Okay. Ms. Skripnikova, in her deposition, identified both of you as the co-authors of this document. Can you confirm whether or -- whether or not that's in fact true?
A. That's correct.

Page 175:17 to 176:17

Q. Okay. Is it fair for me to say that your primary job is to find hydrocarbons?
A. No. Not as such. My -- my primary job is

to acquire the data from -- from the well basically. We drill a well; my job is to get the data from it. And we don't always find hydrocarbons.
Q. Well, the purpose of gathering the data is to try to identify hydrocarbons, correct?
A. That's partly it, but part -- the other reason for identifying the data is so you can drill wells elsewhere. It's -- it's a building up an education about that basically.
Q. So basically getting -- gathering offset data that you can use for other wells?
A. Precisely.
Q. But if you're specifically tasked as a well site geologist on the Macondo Well, one of your purposes is to help find hydrocarbons, right?
A. That's one of my -- yeah, to try and identify hydrocarbons. Correct.
Q. All right. In fact, I think you said earlier you don't drill the well unless you're trying to find hydrocarbons. That's the purpose of it, right?
A. Correct.

Page 177:07 to 178:20

Q. Are you experienced at reviewing logs that are associated with the data produced during wireline logging operations?
A. Yeah. I mean, I -- what I do there is essentially QA/QC these logs. I'm trying to make sure they're good data.
Q. Okay.
A. So QC these logs to make sure of it.
Q. Do you interpret them?
A. No. Generally not. Most of the interpretation is done back in town.
Q. Okay. You know what a Triple Combo log is?
A. I do.
Q. That's -- in fact, you know how to read the various tracks on a Triple Combo log, correct?
A. I do, yeah.
Q. And you understand what a gamma ray is and resistivity?
A. Yes, I do.
Q. And you understand what neutron density crossover is, correct?
A. Correct.
Q. How about laminated sand analysis? Have you ever seen a laminated sands analysis?
A. No. I --
Q. Is that because that's a post process data analysis?
A. I think so, yeah. I haven't seen one,

so...
Q. So you've never looked at one or interpreted one?
A. No.
Q. How about a structural dipmeter computation?
A. I've seen them, but, again, I'm not involved in producing them or -- or I guess that's -- that's post -- post the fact, as such. We acquire the data; they then interpret it.

Page 179:07 to 184:21

Q. Okay. And I just want to confirm this: You've never been interviewed with anybody associated with Mark Bly's internal investigation?
A. No.
Q. Have you ever heard of the Bly Report?
A. I have.
Q. Have you read it?
A. I read it a long time ago, yeah, when it first came out.
Q. And you were never formally interviewed by anybody at BP about what you saw during your time on the rig?
A. No.
Q. You said you met with BP's lawyers for two days, yesterday and the day before, correct?
A. Correct.
Q. Six to seven hours the first day and then a couple of hours, two to three hours, yesterday?
A. Yes.
Q. What did you guys talk about?
A. We were basically reacquainting myself with the well. It's been 18 months. And if we hadn't -- I hadn't had an opportunity to look through the various reports and logs and documents, I wouldn't been able to remember much to be honest.
Q. What -- what logs did you review yesterday?
A. We looked at the Triple Combo.
Q. Okay.
A. I think that's probably about it. We looked at Triple Combo. We didn't look at a mud log. Yeah, I think mainly it was just the Triple Combo.
Q. What did you talk about of the Triple Combo?
A. We looked at it -- you know, we looked at sands that might be asked questions about and -- basically it.
Q. Did you guys discuss the M57B sand?
A. We did. I had never heard of it before. It did not have a name when I was on the rig.

Q. Okay.
A. So --
Q. Did you notice -- did you notice the density neutron crossover?
A. I didn't.
Q. Okay. If you saw one here today, you're telling me there's no crossover?
A. I am, yeah.
Q. Okay. I want to keep -- I want to hand you what's been marked -- it's Tab 35. And this has been previously marked as Exhibit 3540. The reason I'm going to have you look at this -- I've got another one, but this one has actually been marked and we have the benefit of Ms. Skripnikova having identified the sands at the various depths.
A. Okay. All right.
Q. So I'm going to ask you to open up to -- they're not numbered, unfortunately -- the fifth page.
A. Yeah.
Q. And there's in the depth gauge -- in the depth column there, there's "M57B."
A. Okay.
Q. All right. Now, for density neutron crossover, you're essentially looking for an intersection between the two plots in that far-right track, correct?
A. You're looking for them to cross over, yeah.
Q. Okay.
A. When you see that, you'll see a -- it will -- it will be shaded in yellow. And there's no yellow there.
Q. I understand there's no yellow. My question to you, sir, is: Do you perceive, based on just looking at this right now in front of you, does that -- does the blue line go to the right of the red line in any place?
A. I really can't tell from this. I would need to -- to have it blown up.
Q. Do they --
A. I can see that they touch. They touch. But there's no -- there's no yellow shading at all.
Q. All right. Well, is touch -- would you think that a density neutron plot that -- that touches is at least a preliminary indication of the presence of hydrocarbons?
A. No, I don't.
Q. Then what -- what is the purpose of the density neutron?
A. It's for porosity examination.
Q. Yeah. Well, porosity is just essentially a measure of the space that's inside of rock, right?

A. Correct.
Q. All right. And so if there's nothing -- if there's something there other -- if there is any porosity, then there's some type of fluid in it, correct?
A. Correct.
Q. And those -- let's talk about what fluids can be in a rock. Water?
A. Water.
Q. You agree to that?
A. Yeah.
Q. And hydrocarbons?
A. Yeah.
Q. Anything else?
A. Not really. Cement. I mean dyna -- fluids-wise, that would be it.
Q. That's pretty much it, right?
A. Yeah, absolutely.
Q. Do you understand what the concept of water saturation is?
A. I do, yeah, but I don't do those calculations. I'm not involved in determining SW.
00184:01 Q. Well, let me ask you, what does a "hydrocarbon-bearing zone" mean to you?
A. It's not simply defined. I mean, it's -- it's presumably one that contains more -- more oil or gas than water. It's a sliding scale. You can't simply just say, Okay, this is definitely hydrocarbon; this is definitely water.
Q. Well, let's -- let's --
A. There are different varieties of SW. It's a sliding scale. So...
Q. Fair enough. If I had a sand that I would classify as 40 percent saturated water, that would mean it had 60 percent hydrocarbons in it, right?
A. Uh-huh.
Q. And vice versa, if I had a sand that was classified as 60 percent water saturated, that means I have 40 percent hydrocarbons, right?
A. Correct.
Q. Do you have any idea what BP classified the M57B at for water saturation?
A. I don't, no.

Page 185:05 to 185:14

00185:05 Q. (BY MR. HILL) I'm going to ask you to turn to the chart on page 36 in Exhibit 3533. Now, it's my understanding --
MR. HILL: And, Counsel, you can correct me if I'm wrong because there's been some confusion about this.
Q. (BY MR. HILL) -- that this technical memorandum is not a draft, but actually a final version, dated July 26, 2010.

14 Did you look at this with --

Page 185:16 to 185:17

00185:16 A. No. No, we didn't. I've never seen this
17 report before. We saw it this morning.

Page 185:21 to 186:17

00185:21 Q. All right. On Page 36 there's a chart.
22 Are you there?
23 A. 36? Yeah.
24 Q. It's Figure 35 on the page.
25 A. Okay.
00186:01 Q. All right. And this chart at the top --
02 top of the sand measured at 17646, this chart
03 identifies that as the M57B sand, doesn't it?
04 A. Sorry. Can you say the depth again?
05 Q. The top one, 14 -- 17467.
06 A. Right. It identifies it as the M57B.
07 Q. And --
08 A. It -- it wasn't called that when we were
09 there. It didn't have a name, by the way, when --
10 before this report was produced presumably.
11 Q. You think that the name M57B was attached
12 to that sand only postincident?
13 A. Correct.
14 Q. Okay.
15 A. I -- I know it was. It didn't have a name
16 when we were logging it, when we were logging the
17 well.

Page 187:05 to 187:11

00187:05 Q. (BY MR. HILL) When you say it did not
06 have a name, are you saying it did not have an --
07 the name M57B?
08 A. Correct.
09 Q. Okay. But you're not saying that -- that
10 BP wasn't aware preincident -- preincident that
11 M57 was a potential reservoir?

Page 187:13 to 187:23

00187:13 A. I am saying that. Yeah. I -- I -- there
14 was no discussion of it whatsoever. There was
15 no -- I never heard a mention of the M57 sand
16 until the last two days.
17 Q. (BY MR. HILL) I'm going to hand you a
18 document that I'm going to mark as Exhibit 6404.
19 (Marked Exhibit No. 6404.)
20 Q. (BY MR. HILL) It's an E-mail chain at the
21 top with a date July 16, 2009, and it starts

from -- I'm not even going to try to pronounce the name, but it's H-U-A-W-E-N, last name G-A-I.

Page 188:02 to 188:25

Q. (BY MR. HILL) Now, I'm going to ask you to go down three -- to the bottom E-mail on the first page. You know who Chuck Bondurant is?
A. I do. I know the man by name, yeah.
Q. Okay. There's an E-mail from Chuck -- Chuck dated July 14, 2009, correct?
A. Sorry. Hang on. Where are we?
Q. First page, bottom E-mail.
A. Yeah, okay.
Q. That date correct, July 14, 2009?
A. That's what it says here, yes.
Q. That's preincident, isn't it?
A. That's -- yeah. That's 2009.
Q. Mr. Bondurant asked the people -- asked those who are at -- or to whom the distribution on this E-mail is addressed, it says: "At this time we do not feel that the M57 will be commercial. It is a small amplitude blob not even 50 acres in size. Also, we map the M57 as a large regional seal in the EMC so the amplitude is suspect."
Correct?
A. That's correct.
Q. That M57 naming convention is the one that you didn't think existed prior to the incident?

Page 189:02 to 189:03

A. It's news to me. I mean, I have never heard it described as the M -- M57 sand. So...

Page 190:14 to 190:18

Let's get back to the chart in Exhibit 3533 on Page 36. So we've identified the M57B sand as the top sand identified on this chart, correct?
A. Yeah.

Page 190:20 to 191:19

A. It's -- it's the top sand in this chart, correct.
Q. (BY MR. HILL) Well, the sixth column over says sand name M57B. Did I -- did I read that correctly?
A. You did.
Q. All right. To the right of that are the sand in feet so basically it's been identified as

about 2 feet of sand, correct?
A. That's what it says, correct.
Q. All right. And the average porosity is 18 percent, right?
A. Yeah.
Q. And when you're looking for hydrocarbons, you're basically looking for a sand that has porosity because that's an indication that it might contain fluids, right?
A. Yes, you are.
Q. And then you want to look at them and make sure -- find out whether or not those formation fluids are either water or hydrocarbon, right?
A. Yeah, correct.
Q. Now, do you have any idea what BP set the cutoff for for porosity in terms of the term -- identifying whether or not this was a pay sand?

Page 191:21 to 192:25

A. For porosity, no, I have no idea.
Q. (BY MR. HILL) Please take a look at Page 24 of the same report. There's that section that says "Determination of Net Sand Cutoff." Do you see that?
A. Yes.
Q. Second sentence says: "A net sand cutoff of 14 percent porosity and less than 0.4 VSH" -- you know what that is, right?
A. Yeah. V shale.
Q. V shale?
A. Uh-huh.
Q. Okay. -- "was used."
Does that indicate to you that for purposes of this document, that BP had identified a 14 percent porosity as a cutoff for pay sand?
A. That's what it says in this document. As I said before, I've never seen this before. It was all post my involvement in the well. So I have absolutely no part in the preparation of this document. I -- I -- you know --
Q. I think I understand that, sir, that you had no participation in the creation of the document. I simply want to ask you: Is 18 percent more than 14 percent?
A. It is, yes.
Q. Okay. I want you to look at the next column where it says "Average" satu -- "Average Net SW," and that's saturation of water, right?
A. Let me go back again to the other one.

Page 193:03 to 193:15

Q. So both of the values in the SW columns,

one is average net saturation of water and the other is average pay saturation of water, correct?
A. Okay. Yeah, correct.
Q. And both of them say 52 percent, right?
A. They do.
Q. All right. Now, based on our discussion earlier, with 52 percent water, it's 48 percent hydrocarbon, correct?
A. Correct.
Q. Okay. So I want to ask you: Does a sand that has 48 percent hydrocarbons in it constitute a hydrocarbon-bearing sand in your view?

Page 193:17 to 194:20

A. I couldn't tell you. I'm not sure what BP's cutoff is. I mean, it has -- it has a certain amount of -- of hydrocarbon in it, but, I mean, it has a fair bit of water as well.
Q. (BY MR. HILL) Now, when you say what BP's cutoff is, you understand BP's cutoff to be a number that BP arrives at for determining whether or not it's a commercial sand, correct?
A. No. No. I'm just -- just asking what -- what they used to call it a hydrocarbon sand. I don't know.
Q. Well, let's look. Let's look at Page 36. Actually, no, let's look at Page 27. Now, if I say to you that I'm trying to determine where the pay sands are, does that indicate to you that I'm trying to determine what sands are worth producing?
A. Yes, that would be --
Q. All right. Look at the bottom paragraph on Page 27. I'm starting with the second sentence: "The conservative estimate of 50 percent water saturation cutoff for pay was used in this evaluation."
Did I read that correctly?
A. You did, yeah.
Q. All right. Does that indicate to you that BP had set a 50 percent saturation of water cutoff to differen -- differentiate between sands that are pay and sands that are nonpay?

Page 194:22 to 195:08

A. It does -- it does say that here.
Q. (BY MR. HILL) Okay. Now, back to the chart. If BP has identified saturation of water at 52 percent in the M57B sand leaving 48 percent hydrocarbon, it doesn't meet BP's cutoff --
A. No, it doesn't.
Q. -- of 50 percent, does it?

A. No.
Q. By two percentage points?
A. Yeah.
Q. That doesn't necessarily mean that it doesn't contain hydrocarbon, does it?

Page 195:10 to 196:04

A. I don't know. I mean, that's the cutoff so they're saying -- yeah, they're saying it's not pay.
Q. (BY MR. HILL) But you -- you don't know if it doesn't contain hydrocarbon?
A. No, I don't. As I said, I wasn't any part of this report. I just -- you're asking me to comment on something I had nothing to do with.
Q. As a geologist, you understand the concept of saturation of water, right?
A. Yes, I do.
Q. All right. And I'm not asking you to independently determine these values. I'm asking you to take at face value the -- the -- the data that BP put in this report.
A. Yeah. And I -- I understand --
Q. And based on your experience as a -- as a geologist, something that -- with 52 percent saturation of water contains 48 percent hydrocarbons, correct?

Page 196:06 to 196:10

A. That -- that is what it says here, yeah.
Q. (BY MR. HILL) And your testimony here today to the Court is that you don't -- you don't know if 48 percent hydrocarbons in the sand means it's a hydrocarbon-bearing sand?

Page 196:12 to 196:21

A. Well, correct. That's exactly what we're saying, a pay sand. BP is saying it's below their cutoff.
Q. (BY MR. HILL) I didn't ask you if it was a pay sand. I asked you if it was a hydrocarbon-bearing sand?
A. Well, it has some hydrocarbons in it, but it also has a little water in it.
Q. It bears 48 percent hydrocarbon, doesn't it?

Page 196:23 to 198:09

A. That's what it says here.

Q. (BY MR. HILL) All right. I'm going to ask you to go back to Tab 35, which was the -- the Triple Combo log. Would you mind, sir, if I just looked at your copy real quick?
A. Yeah. Sure.
Q. Thank you. So we're clear, you were looking at on the depth gauge 17467 where it says M57B circled, correct?
A. Okay. Correct.
Q. In order of the density neutron crossover, it is your testimony today that you can't tell whether or not the blue line goes to the right of the red line?
A. You know, it may -- the way we look at crossover is we're looking for the yellow. If you actually go down the log a bit, you'll see proper crossover. If you go down to the M56E or the M56A, that -- that's what we call crossover. It's shaded yellow and it's -- it's -- you know, it's crossed out.
Q. I want you to go a little further. Go to M56D.
A. Yeah.
Q. All right. Do you see any crossover there?
A. I can see a point where the lines are touching.
Q. Do you see any yellow?
A. No.
Q. Do you know that M56D is a sand that BP identified as containing oil?
A. I do, yes.
Q. Okay. So it's not always the case that we're -- that -- that an oil-bearing sand is going to have yellow shaded crossover, is it?
A. No. Correct.

Page 199:03 to 200:01

Q. (BY MR. HILL) All right. Explain where I'm wrong.
A. Where you're wrong is all it's showing -- all that it is showing you is that you've got some porosity. It doesn't mean -- it's absolutely nothing to do with hydrocarbons. That could be a water sample.
Q. It has porosity. But we just identified that once you have porosity, there's really only two things that can be in it, right?
A. Yeah.
Q. Hydrocarbons or water?
A. Water, yeah.
Q. And it requires further analysis to determine whether or not there's hydrocarbons or water, right?

A. Correct. Yeah.
Q. Okay. If you are sitting on the rig and trying to identify what the shallowest hydrocarbon zone is, if you have a density neutron plot that actually touches, that doesn't provide yellow crossover, are you at least asking yourself, okay, this indicates to me that there's porosity and that there may be a fluid there?

Page 200:03 to 201:09

A. Yes. I would say yes, I would look at it and say, yeah, that touches that, you know, what's going on there.
Q. (BY MR. HILL) Okay. And then one of the next questions you would probably ask yourself is what kind of fluid is in there -- fills that porous space in the -- in the sand, right?
A. Correct.
Q. All right.
A. The process, you know, as we're making these logs and taking them, is, well, we go back and we compare it with -- with other data that we've got.
Q. Fair enough. For example?
A. A mud log, for instance, which is produced by the mudloggers.
Q. And on the mud log, are you looking at the resistivity plots or are you looking at the gas tomography?
A. We're looking at the gas and we're looking at the descriptions.
Q. Okay. Do you believe that on that -- well, let me ask you. On Exhibit 3533, on Page 13, there's a petrophysics summary. You see that?
A. I see that, I do.
Q. I counted six paragraphs down.
A. Okay.
Q. In the second sentence there, BP writes that "A greater degree of uncertainty exists in the more heterogenous M56D sand. Further uncertainty exists in the thin minor hydrocarbon-bearing intervals in M576 and M57B."

Page 201:11 to 201:18

Q. (BY MR. HILL) Did I read that correctly?
A. You read it correctly.
Q. Okay. Does that indicate to you that BP is identifying thinner sands in M56 and M57 as hydrocarbon bearing?
A. That's what it says in this report which was produced after the fact, yeah.
Q. Do you disagree with BP's assessment?

Page 201:20 to 202:04

00201:20 A. Well, I mean, I -- "further uncertainty
21 exists." So that -- that was certainly one of the
22 comments. There was another comment earlier on
23 talking about -- I can't -- I can't remember where
24 it was. But, you know, saying it was only so thin
25 it was considered with uncertainty as to what was
00202:01 in it.
02 Q. (BY MR. HILL) Okay. But they identified
03 it as a hydrocarbon-bearing sand in this
04 paragraph, haven't they?

Page 202:06 to 202:15

00202:06 A. That's what it says in this report.
07 Q. (BY MR. HILL) Well, on Page 27 of this
08 report, BP also references the M57B sand as well
09 as several others and says that they have a
10 probable gas signature on the neutron density
11 logs. It's on Page 27. Do you want -- do you
12 want to turn to it?
13 A. Yeah. Yeah. I can see that.
14 Q. Did I read that correctly?
15 A. You did read it correctly.

Page 203:01 to 203:04

00203:01 My only question to you, sir, is
02 that -- this language in Page 27 of BP's technical
03 memorandum indicate that there's a gas signature
04 based on the neutron density logs?

Page 203:07 to 203:13

00203:07 Q. (BY MR. HILL) Now, are you saying that
08 you don't see a gas signature at M57B on the --
09 A. No, I don't see a gas signature.
10 Q. Okay. You don't think that two plots
11 touching is a -- is a gas signature?
12 A. No, it's an indicator of porosity. It's
13 not a gas signature.

Page 203:23 to 204:22

00203:23 Q. (BY MR. HILL) What other factors would
24 you look at?
25 A. You'd be looking -- well, you would be
00204:01 trying to, you know -- your neutron density,
02 resistivity, probably a CMR, taking them all
03 together.

Q. Okay. You have got three of the four things right there, right?
A. I've got two of them.
Q. You've got density and you've got resistivity?
A. Yeah.
Q. And your resistivity indicates that there is resistance in the sand, right?
A. Yeah, there's a little bit.
Q. Which is a potential indicator of hydrocarbons, right?
A. It is, yeah.
Q. Okay. And you looked at the density neutron plot and the two lines touch?
A. Yeah.
Q. That doesn't raise another question in your mind as to whether or not you better investigate the hydro -- if there's hydrocarbon content in that sand?

Page 204:24 to 205:02

A. No, it really doesn't. I mean, it's -- it's, you know, I'm afraid it doesn't. They're not crossing over. It's so thin that, you know, you look below it, you've got the same thing.

Page 205:20 to 206:03

Q. Now, Ms. Skripnikova in her deposition told us all about a particular event or -- I don't know if it was a meeting. I just kind of want to get your take on what happened -- on the rig on April 13th where she said she had the Triple Combo field print --
A. Right.
Q. -- in a room with you present. Do you recall that?

Page 206:05 to 208:24

A. I don't recall it, no.
Q. (BY MR. HILL) Do you recall being in a room with Ms. Skripnikova on April 13th on the rig?
A. Not by memory. No. It's too long ago.
Q. Do you -- do you remember any occasion while you were on the rig during the wireline logging operations where you and Ms. Skripnikova looked at a Triple Combo log together?
A. We would have been looking at it as it was produced.
Q. What --

A. So...
Q. Explain what that means, "as it was produced."
A. Well, we were sitting in the logging shack, and -- and this is scrolling down the screen. So we're seeing it as it comes in.
Q. And so it's gathering kind of like an accordion paper?
A. No, no. No, it's on a screen. It's on -- it's on a screen.
Q. Okay.
A. I mean, you're just seeing the same thing as on here but just, you know, on an LCD T.V. screen.
Q. Do you know what a field print is?
A. I do.
Q. What is -- what is a field print?
A. It's one of these effectively.
Q. Okay. Can you tell me what differences, if any, there are between the field print of the Triple Combo log and the -- you'll note on the first page of that one, it says "final log"?
A. I think the depths are shifted. That's it.
Q. Okay. So you wouldn't -- is -- is the field print in color?
A. The field print is -- no. It's black and white.
Q. Okay. Is it in color on the screen?
A. It is in color on the screen.
Q. But in the field print -- printout, paper printout, it's black and white?
A. Black and white, yeah.
Q. The depths might change --
A. Yeah, as we shift it to get it on depth. Yeah.
Q. Okay. So the -- just to make sure the record is clear: The depths might change between the field print and the final print?
A. Correct.
Q. But you wouldn't expect the actual plot lines, for example, in the "Density Neutron" column to change, right?
A. No.
Q. No, they would not change?
A. No, they would not change.
Q. Look at Page -- I'm going to ask you to go back to 3533, the technical memorandum. I want you to look at Page 32.
A. Okay.
Q. All right. And there under Figure 30, the title of that figure is "Triple Combo Field Print Over M57B and M56A," correct?
A. Yeah, correct.
Q. Does that look to you to be excerpts of

the field print from the log on -- from the Triple Combo on April 13th?
A. Yes, it does.

Page 209:06 to 209:16

Do you see any differences in the actual plot lines between the field print and the final print on the Triple Combo log?
A. No, I would say they look the same.
Q. Okay. And you indicated earlier that you thought that the density neutron plots touched on the final, correct?
A. Correct.
Q. And it looks like they touch right here on the field print on Page 32, correct?
A. Correct.

Page 209:22 to 210:19

Q. (BY MR. HILL) Okay. You don't, at any time, give BP any advice pertaining to the interpretation of logs that they have that have been generated by the wireline logging operations?
A. No. No, our job is acquiring -- acquiring the data and making sure it's good quality data.
Q. Okay.
A. But the interpretation is done in town.
Q. All right. Let me go back to April 13th. You worked with Ms. Skripnikova to witness the wireline logging operations, correct?
A. Correct.
Q. And in fact, if we look at the first page of the Triple Combo log, Exhibit 3540, your name and Ms. Skripnikova's name are on it, correct?
A. Correct.
Q. The bottom of the column says "Witnessed by," right?
A. Yeah.
Q. All right. This particular log was run on the 11th -- I'm sorry. The tool was run on the 11th, correct?
A. It says the log was 10th of April.

Page 210:22 to 210:25

Q. Circulation stopped, 10th of April. Logger on bottom --
A. It says, "logging date, 10th of April." I -- I would need to look at the wireline diary.

Page 211:03 to 211:07

00211:03 Q. Yeah, very top. So logging date was April
04 10th?
05 A. Yeah. Hang on. We've got the wireline
06 diary here. Yeah, it was very late on April
07 the 10th. 2230, it started.

Page 211:09 to 211:15

00211:09 Now, on the same top page over
10 here --
11 A. Okay.
12 Q. -- do I read that correctly that the
13 Triple Combo log was created, this final print,
14 was created on 13th of April, 2010, at about 1:29
15 p.m.?

Page 211:17 to 211:23

00211:17 A. Yeah. That's what it says.
18 Q. (BY MR. HILL) Okay. I want to go back to
19 April 13th. Did you know that one of the things
20 that BP had asked Ms. Skripnikova to do is to
21 identify the shallowest hydrocarbon-bearing sand
22 in the production of the well?
23 A. I didn't. No.

Page 212:03 to 212:10

00212:03 Q. At any time did you have any discussions
04 with Ms. Skripnikova about identifying the
05 shallowest hydrocarbon-bearing sand?
06 A. Not that I remember.
07 Q. Okay. As you sit here today, do you
08 understand the importance of identifying -- or the
09 significance of identifying the shallowest
10 hydrocarbon-bearing sand?

Page 212:12 to 213:03

00212:12 A. Not really, no.
13 Q. (BY MR. HILL) Okay. How about as it
14 relates to cementing?
15 A. I mean, I -- yeah. Yeah. It would be --
16 yeah, you need to cover up your -- your
17 hydrocarbons there.
18 Q. Okay. Do you know what the federal
19 regulation is in terms of covering up your
20 hydrocarbons?
21 A. No, I don't.
22 Q. Have you ever heard that it needs to be at
23 least 500 feet above the shallowest
24 hydrocarbon-bearing sand?
25 A. I may have --

00213:01 MR. LAUSCH: Object to form.
02 A. -- heard it. I mean, I don't know for
03 sure.

Page 213:11 to 213:14

00213:11 Q. (BY MR. HILL) Okay. You're not
12 responsible for ever identifying the shallowest
13 hydrocarbon zone?
14 A. No. No.

Page 213:24 to 217:18

00213:24 Were you ever provided a copy of the
25 Triple Combo log while you were on the rig?
00214:01 A. We had a copy between us. I think we had
02 one copy between Galina and I. And they would --
03 we would just say, "Look, print -- print us a
04 copy." So --
05 Q. Who do you -- who do you ask to print it?
06 There in the shack on the rig?
07 A. There in the shack on the rig. By someone
08 who's named Victor Emanuel.
09 Q. Victor Emanuel printed it?
10 A. Yeah.
11 Q. Okay. And so what he printed is a field
12 print we were talking about?
13 A. Correct.
14 Q. Okay. You said you had it between the two
15 of you?
16 A. Yeah, we'd -- we'd -- it would be in the
17 office or in the logging unit, depending on who
18 was --
19 I mean, I think there was only one.
20 Two may have been produced.
21 Q. Okay. And you don't ever recall having
22 discussions with Ms. Skripnikova about the Triple
23 Combo -- let's -- let's go broadly -- about the
24 Triple Combo log at all?
25 A. Not particularly, no, no. I mean, most of
00215:01 the discussion we had was while it was -- while it
02 was being -- being logged, while we were seeing it
03 on the screen in the logger's shack.
04 Q. While it was being logged, did you
05 identify a sand at 17,467?
06 A. Not off the top of my head. I think
07 what -- what I tend to do when we're logging is
08 cross-check what we're seeing on the screen. I'm
09 trying to QC the stuff. So we've got the LWD
10 logs, which should broadly -- broadly show you the
11 same thing. And then they've got a mud log, which
12 is what we see when we drill.
13 So what I would have done, I would
14 imagine, is seen that small blip and then

cross-referenced it with the mud log, did we see anything when we drilled through that? And -- and we didn't. I mean, we didn't see any shales. And the Sperry-Sun guys are -- are required to produce their own shale reports and zone of interest reports when we drill on them. And they -- yeah, they -- they didn't see anything. I didn't see anything. I -- Gord didn't see anything. So -- so we did not see any evidence of gas in the sand.

Q. Okay. So by that blip that you're looking for, you're referring to a resistivity blip?

A. Yeah. Little sam- -- I mean, gamma ray resistivity blip.

Q. Okay. And if you look at the log there on the gamma ray --

A. Yeah.

Q. -- there is an excursion left, which would constitute your blip, right?

A. Correct.

Q. And on the resistivity, there's an excursion to the right that constitutes your blip, right?

A. Correct.

Q. All right. So at that point, you've got a -- you know it's not a shale, you know there's a sand there?

A. Actually, you -- you can't say that from just those two curves. You would need to look at something else.

Q. You can look at that resistivity and tell me there's --

A. You -- you cannot look at that and say that is definitely a sand.

Q. It's certainly an indication of a sand, right?

A. It could be something else, I'm afraid.

Q. What -- what else could it be?

A. It could be a limestone.

Q. Okay. So your testimony here today is --

A. I'm not saying it's a limestone. I'm saying it could be a limestone. You need more than that, okay, to --

Q. I'm --

A. -- to determine whether or not that's --

Q. I just want to make sure I'm clear that your testimony here today is that that blip on the resistivity curve that has an excursion to the right, in combination with two points -- at a minimum -- touch each other in the density neutron crossover track, none of that is sufficient to warrant further investigation at the moment to find out whether or not it's a hydrocarbon-bearing sand?

Page 217:20 to 218:24

00217:20 A. What would have happened -- and I can't
21 remember, it was 18 months ago specifically -- but
22 we would have seen that. I would then have looked
23 across the mud log to see what happened when we
24 drilled it. Because when you drill through
25 hydrocarbon-bearing sand, you will see some trace
00218:01 of it as we drill it. Either in -- I mean, either
02 in the samples -- you know, you'll see oil
03 staining and -- and florescence in the samples --
04 or you will see a gas blip. And I would have
05 looked at the mud log, and having reviewed the
06 data, I -- I don't see any of that.
07 Q. And one of the other things --
08 A. And the mudloggers didn't see anything
09 either.
10 Q. And one of the -- and one of the other
11 things that you can do is actually take a core
12 sample, right?
13 A. Core sample? A side-wall core.
14 Q. Sure.
15 A. Yeah. You can.
16 Q. Okay. And, in fact, BP's operations were
17 obtaining cores down lower in what it had
18 determined were the pay sands, correct?
19 A. BP were taking cores all over the place
20 for a variety of different reasons.
21 Q. Well, they never took it from the sand at
22 17,803, and they never took it from the sands at
23 17,467, did they?
24 A. That's because the tool broke.

Page 219:01 to 222:14

00219:01 A. We were planning to.
02 Q. You were planning to take them, but you
03 never did?
04 A. Correct.
05 Q. All right. So that would have been a way
06 of confirming, at least, the fluid type?
07 A. No, it wouldn't.
08 Q. What would it -- what would it confirm?
09 A. It would confirm the rock type, not the
10 fluid type.
11 Q. Okay. You wouldn't get any fluids in that
12 sample at all?
13 A. You'd probably -- mostly, it would be full
14 of mud, basically. Drilling mud.
15 Q. Okay. So it could have -- it could have
16 confirmed the presence of sand?
17 A. Yeah. Yeah, it could have confirmed that,
18 absolutely.
19 Q. But the tool broke and --
20 A. The tool broke and we'd had five runs

already and --
Q. And the sample was never taken?
A. Well, to run in and do a sixth run for -- for two priority -- two samples was -- well, it's not economical.
Q. Sir, I just asked you to confirm, the sample was never taken --
A. It was --
Q. -- at 17,467, was it?
A. Not ever.
Q. It was never taken at 17,803, right?
A. I don't believe so. I would have to check on that.
Q. Go back to the Triple Combo log, if you would, please, sir, on the front page. I note on there that there is something called a depth driller at 18,360 feet, correct?
A. Yeah. Correct.
Q. Right below that is a Schlumberger depth at 18,280, correct?
A. Correct.
Q. All right. Now, do I correctly understand that the depth driller, or the driller depth, is the depth of the hole, TD?
A. It's the depth of the hole as measured by -- by the driller, yeah.
Q. By measure?
A. Yeah.
Q. As measured by --
A. Yeah.
Q. -- the driller, correct?
A. Yeah.
Q. And the Schlumberger depth is basically the depth at which they're -- the lower -- the lowest depth they're able to get their tool to?
A. Correct.
Q. Correct?
And there's a delta there, or a difference, of 80 feet, right?
A. Correct.
Q. Okay. What are some of the reasons why Schlumberger would not be able to get its tool down closer than 80 feet to the bottom of the hole?
A. There are a number of possible explanations. You could have a ledge there.
Q. Okay.
A. Which could be holding the base of the tool up. You could have some kind of bridge across the -- across the well. You know, the hole may have come in there a bit. There could be LCM there.
I mean, I -- it's hard to say.
Q. Well, let's take --
A. You generally never find out.

00222:01 Q. Let's take a couple of those. When you
02 say the hole could have come in, is that another
03 way of saying that there could have been cavings
04 or fill-ins from off the wall?
05 A. Yeah, some cavings possibly.
06 Q. Okay. And if there were cavings and
07 fill-ins, that would be an indication of maybe a
08 fragile hole -- wellbore?
09 A. Well, I'd -- I mean, I would be surprised
10 if it was cavings or fill because that would be
11 80 foot of fill. I've never seen that before.
12 Q. Well, how about LCM? Isn't LCM a fibrous
13 material that is -- creates cake against the
14 wellbore?

Page 222:16 to 222:20

00222:16 A. It's -- it's a variety of -- of
17 different --
18 Q. (BY MR. HILL) How -- how is it -- explain
19 to me how it is possible that LCM may be a cause
20 of not being able to get down 80 feet?

Page 222:22 to 223:06

00222:22 A. I mean, if we had enough LCM in the mud
23 and it -- it had filled up the bottom, possibly.
24 Q. (BY MR. HILL) 80 feet of fibrous material
25 from LCM; is that what you're saying?
00223:01 A. It doesn't sound very likely. I --
02 Q. It doesn't, does it?
03 A. No.
04 Q. So you think the most likely scenarios are
05 either a ledge or bridge?
06 A. A bridge or a ledge is --

Page 223:08 to 223:18

00223:08 A. -- probably -- probably the most likely.
09 The thing is, we never know. I mean, we can't
10 tell.
11 Q. (BY MR. HILL) Okay. This well was
12 circulated prior to the wireline logging
13 operations, correct?
14 A. Correct.
15 Q. So if there was material debris, whatever
16 its cause, that prevented the tool from getting
17 80 feet lower, wouldn't you have expected that to
18 have been circulated out?

Page 223:20 to 223:23

00223:20 A. You know, I don't know. I mean, I guess

it should have been circulated out. I -- we don't know what it was that was -- was down there. So, you know, that's -- it's speculation.

Page 224:22 to 225:18

Q. Okay. Was there ever a time that you can recall that you assisted Ms. Skripnikova in reviewing, analyzing, or interpreting the Triple Combo log during the time that wireline operations were being conducted?
A. Yes, we would have looked at it, you know, basically, when the -- when town -- when -- when the purchaser sends us the MDT. And the coring run, we would have had a look at it then to make sure it all made sense. So, we'd have the Triple Combo then. We'd have looked at that and said, Okay, these depths match with what they're interested in. And yes, we do discuss them.
Q. During that process, at any time, was it ever discussed what the shallowless hydrocarbon-bearing zone was?
A. No.
Q. Between you and Ms. Skripnikova?
A. Correct.
Q. Did -- did you know that that was one of the things that she was doing?
A. I didn't, actually. No.

Page 226:15 to 227:07

Q. (BY MR. HILL) Mr. Lacy, you indicated earlier that one of your primary responsibilities is data acquisition, correct?
A. Right.
Q. And in -- in preparation for drilling a well, do you participate in the group that puts together something called a pre-drill data package?
A. I generally don't, no. Obviously, I have one of those when we drill a well, and I'll normally go into the -- into the office before we start drilling the well. And I will discuss it with them going through and spend a couple of days.
Q. Okay. I'm going hand you one -- and I'm going to mark this as Exhibit 6405 because it's the only color version I've ever seen, even though there are black-and-whites in the record.

Page 227:14 to 229:17

Q. (BY MR. HILL) And I -- and I marked --

I'm sorry, I've marked that as what exhibit?
A. 6405.
Q. 6405.
Have you seen this document before?
A. I have, yes.
Q. What part do you participate in -- what -- what -- what parts do you discuss with BP? I mean, what is it that's relevant to what you do?
A. Essentially, you know, quite a bit of it. The shallow hazard's not. The well location, not. But, certainly, you know, pore pressure -- you know, the rest of it, certainly, I'll be involved in one way or other. Yeah.
Q. All right. Thank you. I would like to ask you to turn to page -- the last page. I don't think they're numbered.
A. Okay.
Q. Now, this is -- this is a document that's prepared prior to drilling the well, correct?
A. Correct.
Q. All right. And you look on there and that identifies M 57 as a zone, correct?
A. It's a paleozone.
Q. And -- and that distinction should mean something to me, but maybe you can explain it?
A. Sorry. It's -- it's a bug zone. Micropalen- -- the paleontologists look at these bugs. These -- these end numbers are essentially age -- age zones that BP have come up. With so M57 is -- is -- that -- that M57 there in orange -- can you see that?
Q. I can.
A. Yeah, that is the start of this age zone. So that's the top M57.
Q. All right. So is it fair fro me to say that, prior to drilling the well, based on offset data, prior experience on other wells, seismic, and a variety of other inputs, BP knows that there is an M57 zone. But it's not until you actually drill through a particular sand in that zone that it gets a name, M57 plus an alpha designation, right?
A. That would be correct.
Q. I'd also, sir, like to you quickly turn to Page 29. For whatever reason, that page is numberer.
A. Okay.
Q. Okay. This, to me, looks like the Macondo Well evaluation plan. Are you familiar with this chart?
A. Yes, I am.
Q. Have you seen it before?
A. I have.

Page 229:23 to 230:17

00229:23 Q. Okay. So on this attachment, the far
24 right, it looks to me like there are arrows that
25 are based on time and there are certain operations
00230:01 that the group responsible for acquiring data on
02 the well wants to plan and some that they may like
03 and have designated as optional, based on what
04 they see when they get in the field; is that a
05 fair assessment?
06 A. Yes, the green one's the plan, and then
07 the blue ones are optional.
08 Q. All right. So at the time that the data
09 acquisition -- pre-drill data acquisition package
10 was put together, BP had planned -- as indicated
11 by the green arrow -- to run a USI, CNT, or CBL on
12 the far right, correct?
13 A. Yeah. It says that here.
14 Q. And CBL is "cement bond log," correct?
15 A. Yes, it is. I -- I'd better say now: I
16 had nothing to do with this. They're an
17 engineering log, not a subsurface logs.

Page 237:15 to 237:19

00237:15 What other individuals besides Ms.
16 Paine did they ask about?
17 A. They asked if I thought there was anybody
18 incompetent on the rig, and I said, "No, not to my
19 knowledge, quite frankly."

Page 239:13 to 242:15

00239:13 Q. Okay. Were you aware that there was a
14 joint operating agreement governing the
15 relationship between BP Anadarko and MOEX
16 Offshore?
17 A. I knew that they were partners in the
18 well. I didn't know the details of it.
19 Q. Okay. Did you ever see or read that joint
20 operating agreement?
21 A. No.
22 Q. So you have no knowledge of the contents
23 of it, who had what rights, duties,
24 responsibilities, or anything like that?
25 A. No. Not at all.
00240:01 Q. Did you have any personal contact or
02 communications with MOEX or any of its
03 representatives in connection with the Macondo
04 Well?
05 A. No, I didn't.
06 Q. Did you have any discussions with MOEX or
07 its representatives in connection with any
08 technical matters relating to the Macondo Well?
09 A. No, I didn't.

Q. Did you provide any technical information to MOEX in connection with the Macondo Well?
A. Not directly, no.
Q. Okay.
A. I mean, I provided it to BP, and then they presumably shared it with you guys.
Q. Whatever BP did with it, they did, but you don't do it?
A. Not directly.
Q. To your knowledge, did BP, as operator, ever consult with MOEX or its representatives with respect to any health, safety, and environmental obligations of the operator?
A. I have no idea.
Q. To your knowledge, did MOEX or its representatives provide any technical input related to the production casing that was used for the Macondo Well?
A. I don't know.
Q. To your knowledge, did MOEX or its representatives provide any technical input related to the type or number of centralizers used for the Macondo Well?
A. Again, I don't know.
Q. To your knowledge, did MOEX or its representatives provide any technical input related to the determination that the float collar had converted on the Macondo Well?
A. I don't know.
Q. To your knowledge, did MOEX or its representatives provide any technical input related to decisions about the cement job for the Macondo Well?
A. Again, I don't know.
Q. To your knowledge, did MOEX or its representatives provide any technical input related to the decision to accept the results of the negative pressure test of the Macondo Well?
A. I don't know.
Q. To your knowledge, did MOEX or its representatives provide any technical input related to the temporary abandonment procedure for the Macondo Well?
A. I don't know.
Q. To your knowledge, did MOEX or its representatives provide any technical input related to the use of heavy spacer material in connection with the displacement process in the temporary abandonment process for the Macondo Well?
A. I don't.
Q. To your knowledge, did anyone from MOEX ever visit the DEEPWATER HORIZON in connection with the drilling or the attempt to temporarily abandon the Macondo Well?

15 A. Again, I don't know.

Page 243:05 to 243:15

00243:05 Q. A couple real quick questions. You have
06 no personal knowledge of what happened on the
07 DEEPWATER HORIZON after you left the vessel on
08 April 15th of 2010, correct?
09 A. Correct.
10 Q. You weren't in any further communication
11 with anyone on the vessel after that time?
12 A. Correct.
13 Q. You were not onboard when the production
14 casing was set, correct?
15 A. Correct.

Page 244:09 to 244:25

00244:09 BY MR. LOWENTHAL:
10 Q. Good afternoon. I represent Water- -- oh,
11 Weatherford, and my name is Joe Lowenthal. I'm an
12 attorney from New Orleans.
13 Do you have any expertise, training,
14 experience regarding the design, manufacture, or
15 use of float collars?
16 A. No.
17 Q. Were you involved at all in the selection
18 of the float collar that was used on the
19 long-string on the Macondo Well?
20 A. No.
21 Q. After you left the Macondo Well, did you
22 have any discussions with anyone prior to
23 April 20th regarding the determining whether or
24 not the float collar had converted?
25 A. No.

Page 245:10 to 245:18

00245:10 Q. All right. Good afternoon, Mr. Lacy. I
11 want to ask you a couple of follow-up questions.
12 You were asked several questions
13 earlier today about the sand at 17,476 feet,
14 what's been called the M57B sand. And to frame
15 my -- my following questions, you were also asked
16 about information that you had on the rig at the
17 time you were out there during the wireline
18 logging.

Page 245:20 to 246:02

00245:20 A. Correct.
21 Q. (BY MR. LAUSCH) Did you receive any
22 information or did you have information available

to you from the mudloggers at that time?
A. Yeah. What I have with me is the mud log essentially. That's one of the documents we use to cross check the -- the Triple Combo, the wire line data.

Page 246:11 to 247:03

Q. Do you know what company the mudloggers on the HORIZON worked for?
A. Sperry Sun.
Q. And do you have an understanding as to what mudloggers do?
A. Yes, I do. I used to be one.
Q. Okay. What -- what is your understanding?
A. They monitor the well. It's two different jobs. One -- one of them is -- is evaluation in terms of describing the cutting. They do cuttings descriptions, along with that show descriptions, if they see anything in the cuttings. They collect gas data, and they -- and they monitor the well as well. They monitor the well parameters to -- you know, things like standby pressure, ROP, a variety of different -- different parameters.
Q. Is one of the things that the mudloggers are looking for, the presence of the hydrocarbons?

Page 247:05 to 247:22

A. It is, yes.
Q. (BY MR. LAUSCH) Okay. And would that show up anywhere in information that the mudloggers provide to others?
A. Yep. What you have on the mud log, in terms of gas peaks, you know, you have -- you have -- gas peaks can be one of your shows, and there will also be a description describing the show on -- on the right-hand side of the mud log. Along with that, they then do show reports based on that show or zone of interest. So that'll be a separate document.
Q. Do you recall ever receiving information from the mudloggers or around any mud log before you left the rig on April 15th, 2010, about any hydrocarbons being present around the area of 17,467 feet?
A. No.

Page 247:24 to 248:15

Q. (BY MR. LAUSCH) You had mentioned before a -- a show report. Have you -- for show information. Can you describe what that is?

A. It's essentially a detailed look at -- a detail look at that show interval. So if it's oil, it will be describing the fluorescence characteristics. If it's gas, it will be a breakdown of -- of the -- the C1 through C5 components. It's essentially a detailed look at what that show is.
Q. Okay. And do you have an understanding as to who prepares information -- that show information?
A. It's -- it's the data engineers, the mudloggers.
Q. Okay. I'm going to show you what -- what I've marked as Exhibit 6407.

Page 248:17 to 250:07

Q. (BY MR. LAUSCH) Do you recognize that report?
A. I do, yes.
Q. And what is it?
A. It's a show report.
Q. Okay. And is there a date on that show report?
A. There is, yeah. It's the 4th of April 2010.
Q. And who is this report prepared by?
A. It was prepared by Joseph Keith.
Q. Okay. And Joseph Keith, did he work for Sperry Sun?
A. He did, yeah.
Q. And in this show report -- do you have an understanding as to how this report is prepared?
A. Yeah. They're basically taking a lot of the gas data. Some of the gas in the mud, they take mud samples and take the gas out of the mud and put it through a chromatograph and you start coming up with your gas ratios, your C1 through C5 ratios.
They'll then also be looking at the -- the cuttings. So sandstone cuttings, they'll have some oil staining on them as you see it described down here. You can see the staining of the oil, and then it goes under the fluoroscope and they describe the fluorescence.
Q. Do you know who decides which information to put into a show report? Would that be Sperry Sun, BP or others?
A. It's Sperry Sun. They'll -- they'll do it independently. It's their job to spot these shows.
Q. Okay. In this document before you, which is Exhibit 6407, actually has the Bates No. MDL3775984, 1 through 5, as it's produced in native format. Do you see any information here

regarding a sand at the depth of 17,467 feet?
A. The entire document refers to the sand between 18080 to 18206.

Page 251:13 to 251:20

Q. Okay. And as far as a point which BP reports, is it your understanding that they report at the point where the curve deviates from vertical or is it the point where it -- the line goes horizontal? Do you know one way or the other?
A. I -- I'm not entirely certain, but I believe it was where the point deviates.

Page 251:22 to 251:23

A. Yeah, where the -- where the -- where the line breaks into a curve essentially.

Page 252:13 to 252:21

Q. (BY MR. LAUSCH) All right. I want to finally ask you some questions about some E-mails, in particular, that E-mail that was discussed earlier today regarding your "bat out of hell" comment.
At any time when you were working on the DEEPWATER HORIZON, did you believe that the team was not drilling the well -- well in a safe manner?

Page 252:23 to 253:01

A. No, I didn't or I would have left.
Q. (BY MR. LAUSCH) Your comment about "a bat out of hell," was that a reference to drilling safety?

Page 253:03 to 253:16

A. No. It wasn't -- it was, as I said, possibly slightly exuberant language, but...
Q. (BY MR. LAUSCH) Okay. Have you worked for other companies besides BP?
A. Yes, I have.
Q. Okay. What other companies have you worked for?
A. Shell, Exxon, ConocoPhillips, a bunch of small companies you probably wouldn't have heard of. But most of the big ones.
Q. Okay. Do you have an -- an opinion as to

how BP shapes up compared to those other companies in connection with drilling safety and, in particular, regarding the speed of the drilling?

Page 253:19 to 254:05

A. I think -- I think most of the -- most of the majors are pretty similar. I don't see any great differences. I mean, that -- that's pretty much the -- the same speed that we're drilling in the Gulf. The minor companies, yeah, possibly not quite as good safety-wise.
Q. (BY MR. LAUSCH) And specifically relating to the time period of April of -- March and April of 2010 at the times you were on HORIZON while it was drilling, did you believe that the drill team, BP and TransOcean, were drilling in an unsafe manner?

Page 254:07 to 254:07

A. No, I didn't.

Page 254:16 to 255:06

Q. Can you tell us of any well that you worked on in the Gulf of Mexico that was deeper than the Macondo Well 252?
A. Yes. Quite a few of them.
Q. Which ones?
A. The one that springs into mind is Tiber.
Q. How -- how deep was that?
A. 35,000-and-some-change, I think.
Q. How deep is Macondo?
A. 18,360, I believe.
Q. Any others?
A. There's a bunch of others, but I -- I couldn't give you the depths of -- of that.
Q. When you say "bunch," you mean a handful?
A. I mean a good six or seven that are deeper than Macondo, yeah.

Page 255:10 to 255:16

Q. So 18,360 would be among the deepest, right?
A. No, not these days.
Q. Not necessarily the deepest, but certainly among the deep?
A. I mean, it -- ten years ago, it would have been moderately deep, but now, no, no, not at all.

Page 257:09 to 258:04

00257:09 Q. I'd like to reference Exhibit 6407, the
10 one that was just used. I think during your
11 examination with counsel for BP, you mentioned
12 that they did not identify the area at 17,467 feet
13 as an area showing gas. Is that what you said
14 before?
15 A. Correct.
16 Q. However, if you look at the top right
17 corner of the document, it tells us the zone of
18 interest. The depths that they were looking at
19 were between 18,080 to 18,206 and 18,069 to
20 18,195, correct?
21 A. Yeah. No, you're actually misreading the
22 document. That is the show. It curves from this
23 depth to that depth.
24 Q. That's right.
25 A. So this is describing that show and if
00258:01 there had been a show at 17467, was it?
02 Q. 17467.
03 A. If there had been a show there, one of
04 these documents would have been produced.

Page 258:07 to 258:16

00258:07 Q. (BY MR. GONZALEZ) Unless the information
08 was inaccurate, and they missed it, right?
09 A. Well, in that case, the well site
10 geologist missed it. They missed it. Everyone
11 missed it.
12 Q. And if the information is bad to begin
13 with, then the results are bad?
14 A. But I don't think they missed it. There
15 was nothing there. If you look at the mud log,
16 you can see there's no gas peak.

Page 259:02 to 259:07

00259:02 Q. (BY MR. GONZALEZ) Correct?
03 A. Those documents produced later on after --
04 later analysis, I think, that said "probable gas,"
05 but, you know, we did not have access to that at
06 the time.
07 Q. It did -- it did say "probable gas."

Page 259:09 to 259:11

00259:09 A. Probable gas.
10 Q. (BY MR. GONZALEZ) And that means likely,
11 correct?

Page 259:13 to 259:16

00259:13 A. I think it did actually say "likely gas,"
14 but probable gas, likely gas -- but, again, we
15 didn't have that at the time and no gas was seen
16 when we drew it.