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UNITED STATES DISTRICT COURT
EASTERN DISTRICT OF LOUISIANA

IN RE: OIL SPILL BY THE
OIL RIG *DEEPWATER HORIZON*
IN THE GULF OF MEXICO ON
APRIL 20, 2010

Relates to: No. 10-4536

UNITED STATES OF AMERICA

v.

BP EXPLORATION &
PRODUCTION INC.,
ANADARKO EXPLORATION &
PRODUCTION LP, ANADARKO
PETROLEUM CORPORATION,
MOEX OFFSHORE 2007 LLC,
TRITON ASSET LEASING GMBH,
TRANSOCEAN HOLDINGS LLC,
TRANSOCEAN OFFSHORE
DEEPWATER DRILLING INC.,
TRANSOCEAN DEEPWATER INC.,
AND QBE UNDERWRITING LTD.,
LLOYD'S SYNDICATE 1036

* Civil Action
*
* No. 10-MD-2179
*
* Section J
*
* New Orleans, Louisiana
*
* February 2, 2015

DAY 8, AFTERNOON SESSION
TRANSCRIPT OF TRIAL PROCEEDINGS
HEARD BEFORE THE HONORABLE CARL J. BARBIER
UNITED STATES DISTRICT JUDGE

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AFTERNOON SESSION

(February 2, 2015)

THE COURT: Please be seated, everyone.

All right. Government, do you have a preliminary matter?

MR. ROBERS: We do, Your Honor.

THE COURT: Okay. Go ahead.

MR. ROBERS: Brandon Robers for the United States.

I have here a list -- or, rather, three transcripts of the videos that the United States played as part of its case, together with a thumb drive that contains copies of those transcripts and the videos. These are for Messrs. Bray, Laferriere, and Suttles.

THE COURT: Any objection?

MS. KARIS: No objection.

THE COURT: All right. Without objection, those are admitted.

MS. KARIS: Your Honor, Hariklia Karis for BXP.

We have here BXP's deposition bundle list, which we have exchanged with the U.S., and I understand there is no objection.

MR. ROBERS: No objection, Your Honor.

THE COURT: All right. Those are admitted.

MS. KIRBY: Your Honor, if I can just make one comment. We do have an objection to the Beirne, Bodek, and

01:23:16 1 Wardlaw bundles on the grounds that the U.S. designated alleged
01:23:21 2 culpability evidence. So subject to that objection, which went
01:23:23 3 in with the bundles.

01:23:24 4 **THE COURT:** Well, we can't redo the bundles, so we
01:23:27 5 will admit those subject to those objections. All right. Go
01:23:29 6 ahead.

01:23:31 7 **MS. KIRBY:** Thank you.

01:23:32 8 **MS. KARIS:** And similarly, Your Honor, we have BXP's
01:23:36 9 exhibit list for Dr. Scott, Captain Paskewich, Ms. Folse,
01:23:42 10 Mr. Utsler, and Mr. Tunnell. And we offer those and understand
01:23:48 11 there is no objection with respect to those lists.

01:23:51 12 **MR. ROBERS:** No objection, Your Honor.

01:23:52 13 **THE COURT:** Without objection, those are admitted.

01:23:54 14 **MS. KARIS:** Then lastly, we have a list for
01:23:56 15 Mr. Morrison. We have not included on this list the couple of
01:24:00 16 exhibits and demonstratives that the parties are working
01:24:05 17 towards finalizing subject to the Court's instruction, and we
01:24:06 18 will continue to work on that and hopefully get that resolved.

01:24:12 19 **THE COURT:** All right. Very well.

01:24:12 20 **MS. KARIS:** Thank you. So we would offer those at
01:24:13 21 this time.

01:24:14 22 **THE COURT:** Okay.

01:24:14 23 **MS. KARIS:** Thank you.

01:24:14 24 **THE COURT:** Any other preliminary matters?

01:24:20 25 **MR. BROCK:** Obviously, since the witness is on the

01:24:23 1 stand, we have one issue to address, but we can wait until the
01:24:25 2 end of the day on that.

01:24:27 3 **THE COURT:** Okay.

01:24:27 4 All right. Who is going to cross?

01:24:29 5 **KENNETH ARNOLD,**

01:24:37 6 having been duly sworn, testified as follows:

01:24:37 7 **CROSS-EXAMINATION**

01:24:45 8 **BY MS. FLICKINGER:**

01:24:46 9 **Q.** Good afternoon. I'm Nancy Flickinger for the
01:24:49 10 United States. And, Mr. Arnold, I have you on cross.

01:24:51 11 **A.** Thank you.

01:24:52 12 **Q.** So we will try to move through this fairly quickly.

01:24:56 13 On your direct testimony, you made some references to
01:24:59 14 Mr. Walkup's article and language about strategic versus
01:25:03 15 tactical decision making. You aren't an expert in stage-gate
01:25:11 16 decision making, are you?

01:25:11 17 **A.** I have not published specifically on that issue, but I
01:25:13 18 have used it all my life.

01:25:15 19 **Q.** All right. The stage-gate decision-making process can
01:25:19 20 apply to a single well, correct?

01:25:21 21 **A.** As a decision-making process, it can apply to any activity
01:25:26 22 in the world.

01:25:29 23 **Q.** So it can apply to a single well, correct?

01:25:31 24 **A.** Oh, certainly.

01:25:35 25 **Q.** You also a few times said that the operator will keep data

KENNETH ARNOLD - CROSS

01:25:41 1 proprietary and a nonoperator will keep data proprietary.

01:25:45 2 The model JOA with standard contractual provisions
01:25:48 3 have provisions governing confidential data, correct?

01:25:51 4 A. Yes, they do, so that they can be kept proprietary.

01:25:55 5 Q. Essentially all proprietary data that is acquired or
01:25:59 6 derived from operations under the JOA becomes the property of
01:26:05 7 all the participating parties, correct?

01:26:06 8 A. That's work that comes out as of the activity that they
01:26:09 9 are jointly developing, but not work that they know before they
01:26:14 10 go into the activity. Anything they knew previous to the
01:26:20 11 activity, whatever the activity is --

01:26:22 12 Q. Right. But to the extent --

01:26:23 13 A. -- remains proprietary, but whatever they develop jointly
01:26:27 14 becomes the joint property, yes.

01:26:29 15 I'm not sure about the legal term "joint property,"
01:26:32 16 but in effect it's joint property.

01:26:35 17 Q. Let's talk about the different phases and the degree of
01:26:43 18 nonoperator participation in exploration versus appraisal
01:26:46 19 versus so forth.

01:26:48 20 Do you agree, in terms of numbers, there may be more
01:26:52 21 developmental wells associated with deepwater projects than
01:26:57 22 exploration wells?

01:26:59 23 A. Depends on the prospect, but it's possible.

01:27:01 24 Q. So in some oil fields, you can just have more development
01:27:05 25 wells than exploration wells, correct?

KENNETH ARNOLD - CROSS

- 01:27:08 1 A. That's correct.
- 01:27:08 2 Q. And you understand that certain drilling and completion
- 01:27:12 3 activities may take place in a well regardless of whether it's
- 01:27:15 4 in the exploration phase or in the development phase, right?
- 01:27:20 5 A. Or the appraisal phase.
- 01:27:22 6 Q. Right. And you agree that certain activities will take
- 01:27:26 7 place in a well regardless of what stage it's in?
- 01:27:32 8 A. Depending on the design of the well, each well may have
- 01:27:34 9 different activities in it; but, yes, different activities
- 01:27:39 10 occur within wells when you drill them.
- 01:27:42 11 Q. So, for example, if you are performing temporary
- 01:27:44 12 abandonment procedures, you can have temporary abandonment in
- 01:27:49 13 certain exploration wells or developmental wells or an
- 01:27:52 14 appraisal well, correct?
- 01:27:56 15 A. Yes. Yes.
- 01:27:58 16 Q. All right. You can run the production casing with a float
- 01:28:00 17 collar and a shoe filter regardless of whether it's a
- 01:28:05 18 development well, a production well, or appraisal well, or an
- 01:28:09 19 exploration well, correct?
- 01:28:11 20 A. Yes.
- 01:28:11 21 Q. A cement bond log, you can run that in a well regardless
- 01:28:15 22 of what phase it's in, correct?
- 01:28:17 23 A. That's correct.
- 01:28:18 24 Q. All right. And you would use a spacer between mud and
- 01:28:22 25 cement for running a negative pressure test, for example,

KENNETH ARNOLD - CROSS

01:28:25 1 regardless of whether it's an exploration well, an appraisal
01:28:28 2 well, or a development well?
01:28:29 3 A. Correct.
01:28:34 4 Q. Do you recall in your report you stated that certain
01:28:37 5 activities described by Mr. Walkup were merely aspirational?
01:28:41 6 A. Yes, correct.
01:28:42 7 Q. All right. Do you agree that nonoperators, as an industry
01:28:48 8 norm, will perform the following? They will review a well
01:28:53 9 plan?
01:28:54 10 A. Yes, they will.
01:28:57 11 Q. They would discuss the well plan with the operator?
01:29:00 12 A. They may or they may not.
01:29:06 13 Q. Is your testimony that they sometimes will discuss a well
01:29:10 14 plan with the operator?
01:29:11 15 A. Yes.
01:29:12 16 Q. All right. They will attend a pre-spud meeting?
01:29:17 17 A. Sometimes they will and sometimes they will not.
01:29:20 18 Q. Is it becoming more and more common?
01:29:23 19 A. I can't attest to whether it's becoming more and more
01:29:26 20 common, but it is more common that they will attend than they
01:29:30 21 won't, but it's not necessarily true in either case.
01:29:35 22 Q. They will monitor operations to see if operations are
01:29:38 23 following the well plan?
01:29:42 24 A. I think that is not true in any detailed fashion, but they
01:29:48 25 will monitor to some extent -- as Mr. Walkup pointed out, they

KENNETH ARNOLD - CROSS

01:29:53 1 have -- in his slide that I agreed with, they have a
01:29:59 2 requirement to keep up to pace with it in terms of advising the
01:30:06 3 financial community as to major issues that may be occurring in
01:30:11 4 a well, and so they will have some knowledge of what's
01:30:14 5 happening on the well.

01:30:17 6 Q. And they will engage with the operator if they have any
01:30:20 7 concerns?

01:30:21 8 A. I think they should. I don't know that they always do.

01:30:27 9 MS. FLICKINGER: Could we call up Mr. Arnold's
01:30:32 10 deposition, please. It's TRES-233220.

01:30:38 11 Mr. Jackson, yes, if you could go to page 162.

01:30:52 12 BY MS. FLICKINGER:

01:31:06 13 Q. Do you recall I deposed you in October, Mr. Arnold?

01:31:08 14 A. Yes, I do.

01:31:09 15 Q. In that deposition I asked you the same litany of
01:31:15 16 questions. One question was they will engage with the operator
01:31:18 17 if they have any concerns, and your response --

01:31:22 18 A. What line are you on? I'm sorry.

01:31:23 19 Q. I'm on line 2.

01:31:27 20 A. "Engaging the operator if they have any concerns."

01:31:29 21 Yes.

01:31:29 22 Q. Right. And you responded: "Absolutely"?

01:31:32 23 A. I absolutely think they should. I can't say that they
01:31:36 24 always do.

01:31:37 25 Q. But you think they should?

DAVID SUNDING - VOIR DIRE

01:31:38 1 A. I think they should, yes. That's what I said.

01:31:42 2 MS. FLICKINGER: Thank you. I have no further
01:31:43 3 questions.

01:31:44 4 THE COURT: Any redirect?

01:31:45 5 MR. LOTTERMAN: No, Your Honor. Thank you.

01:31:49 6 THE COURT: Thank you, sir. You are done.

01:31:56 7 Next witness.

01:32:02 8 MR. LOTTERMAN: Your Honor, Tom Lotterman on behalf
01:32:03 9 of Anadarko Petroleum Corporation. I will be handling the
01:32:06 10 direct examination of Professor David Sunding.

01:32:12 11 DAVID SUNDING,
01:32:12 12 having been duly sworn, testified as follows:

01:32:29 13 THE DEPUTY CLERK: State your full name and correct
01:32:29 14 spelling for the record, please.

01:32:39 15 THE WITNESS: My name is David Sunding, D-A-V-I-D,
01:32:42 16 S-U-N-D-I-N-G.

01:32:44 17 MR. LOTTERMAN: May I proceed, Your Honor?

01:32:44 18 THE COURT: Yes.

01:32:44 19 VOIR DIRE

01:32:46 20 BY MR. LOTTERMAN:

01:32:51 21 Q. Good afternoon, Professor Sunding.

01:32:53 22 Are you currently employed?

01:32:54 23 A. I am.

01:32:55 24 Q. By whom?

01:32:56 25 A. I'm a professor at the University of California at

DAVID SUNDING - VOIR DIRE

01:32:59 1 Berkeley where I hold the Thomas J. Graff chair in natural
01:33:04 2 resource economics.

01:33:05 3 Q. In what department?

01:33:06 4 A. It's in the Department of Agricultural & Resource
01:33:10 5 Economics.

01:33:10 6 Q. Who is the chair of that department?

01:33:11 7 A. That would be me.

01:33:13 8 Q. What subjects do you teach?

01:33:15 9 A. I teach, at the graduate level, courses in environmental
01:33:19 10 economics, natural resource economics, a first-year graduate
01:33:24 11 course in microeconomic theory. And then at the undergraduate
01:33:27 12 level courses in water resource economics and natural resource
01:33:32 13 economics.

01:33:32 14 Q. What is environmental and resource economics?

01:33:35 15 A. Well, two parts to that question. Environmental economics
01:33:39 16 is about the economics of pollution, about the economics of
01:33:42 17 environmental quality; and a big part of that field is policies
01:33:47 18 to protect the environment.

01:33:49 19 Natural resource economics is more about the
01:33:51 20 economics of natural resources' inputs into the economy, things
01:33:55 21 like the oil industry, for example.

01:33:59 22 Q. How long have you taught at Berkeley?

01:33:59 23 A. For about 20 years.

01:34:01 24 Q. Have you taught anywhere else during those 20 years?

01:34:03 25 A. Yes. I had a sabbatical year where I was a visiting

DAVID SUNDING - VOIR DIRE

01:34:07 1 professor at the Woods Institute of the Environment at Stanford
01:34:10 2 University.

01:34:11 3 Q. Have you prepared a summary of your background and
01:34:14 4 experience?

01:34:15 5 A. I have.

01:34:15 6 MR. LOTTERMAN: Mr. Stevenson, please call up
01:34:16 7 D-38060.

01:34:20 8 BY MR. LOTTERMAN:

01:34:21 9 Q. Now, is this the slide you prepared?

01:34:23 10 A. Yes, it is.

01:34:23 11 Q. Does it accurately depict your background and experience?

01:34:26 12 A. Yes, it does.

01:34:29 13 MR. LOTTERMAN: Your Honor, for the sake of
01:34:29 14 expedience, I'm not going to go through it, but I would like to
01:34:31 15 note two things with Professor Sunding.

01:34:34 16 BY MR. LOTTERMAN:

01:34:35 17 Q. First of all, sir, I notice a stint on the White House
01:34:38 18 Council of Economic Advisers. Is that right?

01:34:40 19 A. Yes. During the Clinton administration, I was a senior
01:34:44 20 economist at the President's Council of Economic Advisers.

01:34:46 21 Q. What did that job entail?

01:34:48 22 A. Two parts, roughly. One part is providing unbiased
01:34:55 23 economic -- or information about developments in the economy to
01:34:57 24 the President. The other part is about assisting with analysis
01:35:02 25 of policy and assisting in the policy development process.

DAVID SUNDING - VOIR DIRE

01:35:06 1 Q. I notice that the third item in your background noted on
01:35:09 2 the slide discusses being a member of the EPA Science Advisory
01:35:15 3 Board Panel. What did that entail?

01:35:18 4 A. The EPA has a standing Science Advisory Board composed of
01:35:24 5 mainly academics but some people from industry in all fields.
01:35:27 6 And the EPA convened a special panel of the Science Advisory
01:35:32 7 Board to deal with some issues related to civil penalty
01:35:36 8 calculation, some difficulties they were having understanding
01:35:41 9 what would be the right way to approach certain kinds of
01:35:43 10 penalties.

01:35:44 11 Q. Did that analysis include penalties imposed under the
01:35:47 12 Clean Water Act?

01:35:47 13 A. Yes. That was the major part of our effort.

01:35:52 14 Q. Do you believe the issues addressed with that panel are
01:35:55 15 relevant in this case today?

01:35:57 16 A. I do, yes.

01:35:58 17 Q. By the way, how did you become a member of that panel?

01:36:00 18 A. I was appointed by the EPA.

01:36:05 19 Q. Are you a lawyer?

01:36:06 20 A. No.

01:36:06 21 Q. Do you consider yourself qualified to render legal
01:36:09 22 opinions?

01:36:10 23 A. No, certainly not.

01:36:11 24 Q. Have you ever testified before as an expert witness,
01:36:13 25 either in court or deposition?

DAVID SUNDING - VOIR DIRE

01:36:15 1 A. I have, yes.

01:36:17 2 Q. What were some of the areas of your expertise that might
01:36:19 3 be relevant here?

01:36:20 4 A. I testified related to -- well, in a couple of Clean Water
01:36:25 5 Act civil penalty cases, I have testified as an expert on a
01:36:29 6 number of matters related to water quality, water resource
01:36:34 7 allocation, valuation of natural resources, things of this
01:36:38 8 nature.

01:36:39 9 Q. Have you testified specifically about the factor of
01:36:41 10 economic benefit in a Clean Water Act penalty case?

01:36:44 11 A. Yes, I have.

01:36:46 12 Q. Have you testified before Congress?

01:36:48 13 A. Yes, I have, on probably a half-dozen instances.

01:36:53 14 Q. What topics might be relevant here?

01:36:55 15 A. Well, specifically related to the economic effects of
01:37:00 16 enforcement of different provisions of the Clean Water Act;
01:37:04 17 effects on investment, for example.

01:37:07 18 Q. Have you also testified about other environmental
01:37:09 19 statutes?

01:37:11 20 A. I have, yes, related statutes like the economics of the
01:37:14 21 Endangered Species Act.

01:37:17 22 Q. Have you testified in any cases before the U.S.
01:37:19 23 Supreme Court?

01:37:19 24 A. I have, yes.

01:37:20 25 Q. What was your expertise in those cases?

DAVID SUNDING - VOIR DIRE

01:37:22 1 A. Water resource economics, resource valuation, calculation
01:37:27 2 of damages, I believe, econometric analysis or statistical
01:37:34 3 analysis, something like that.

01:37:35 4 Q. Were those cases where the Court was exercising original
01:37:40 5 jurisdiction about disputes between states?

01:37:42 6 A. Yes.

01:37:42 7 Q. Are you currently retained by other states in other
01:37:45 8 original jurisdiction cases?

01:37:48 9 A. Yes. I'm currently retained as an expert by the State of
01:37:51 10 Texas in its suit against the State of New Mexico concerning
01:37:56 11 the Rio Grande River; employed by the State of Florida as an
01:37:59 12 expert in its case against Alabama and Georgia.

01:38:04 13 In the prior case that you mentioned, I was employed
01:38:08 14 as an expert by the State of Nebraska in its suit against the
01:38:11 15 State of Kansas -- or States of Kansas and Colorado concerning
01:38:16 16 the Republican River.

01:38:18 17 Q. Have you been hired by the United States to serve as an
01:38:20 18 expert witness?

01:38:20 19 A. Yes, I have.

01:38:21 20 Q. How many times?

01:38:23 21 A. Four.

01:38:25 22 Q. Now, we have already discussed your work with EPA's
01:38:27 23 Science Advisory Board. Have you advised other federal
01:38:32 24 agencies in other nonlitigation contexts?

01:38:35 25 A. Yes. As a professor at a big, public university, I think

DAVID SUNDING - VOIR DIRE

01:38:39 1 I have an obligation to do that. So when I have the
01:38:45 2 opportunity, I take advantage of it. I have advised, probably
01:38:47 3 most frequently, the Department of the Interior on a number of
01:38:52 4 matters related to water resources.

01:38:54 5 Q. Have you ever advised any states on nonlitigation matters?

01:38:58 6 A. Yes. I'm currently the chief economic adviser to the
01:39:03 7 State of California on the development of what's known as the
01:39:06 8 Bay Delta Conservation Plan, which is a \$25 billion effort to
01:39:11 9 restore and protect the San Francisco Bay Delta estuary.

01:39:17 10 Q. Has your work over the years included designing and
01:39:20 11 conducting econometric analyses?

01:39:24 12 A. Oh, yes.

01:39:24 13 Q. Your slide also -- and I promise not to go there too
01:39:28 14 often. This is the last time. Your slide notes your
01:39:31 15 publications over the years. Is that accurate?

01:39:33 16 A. Yes.

01:39:34 17 Q. Are most of the those publications noted peer-reviewed?

01:39:38 18 A. Oh, yes.

01:39:39 19 Q. Do any of them address the Clean Water Act in particular?

01:39:41 20 A. Yes.

01:39:41 21 Q. Do any of them address deterrence in particular?

01:39:46 22 A. Yep, deterrence is a central theme in environmental
01:39:47 23 economics. It's fundamentally about incentives, creating
01:39:51 24 incentives to influence behavior to ultimately reduce the
01:39:56 25 amount of pollution in the environment.

DAVID SUNDING - VOIR DIRE

01:40:00 1 Q. Have your articles and research been cited by federal
01:40:02 2 courts?

01:40:03 3 A. Yes.

01:40:03 4 Q. Including the U.S. Supreme Court?

01:40:05 5 A. Yes.

01:40:06 6 Q. What did that entail?

01:40:09 7 A. I had some research on Section 404 of the Clean Water Act
01:40:13 8 that was cited by the Supreme Court in the *Rapanos* case.

01:40:18 9 Q. Is that considered a landmark case in your business?

01:40:21 10 A. I believe so, yes.

01:40:23 11 Q. If I recall correctly, that case had both a plurality and
01:40:26 12 dissenting opinions. Is that right?

01:40:29 13 A. Yes.

01:40:29 14 Q. Which side cited your work?

01:40:31 15 A. Both, actually.

01:40:34 16 **MR. LOTTERMAN:** Your Honor, I tender
01:40:35 17 Professor Sunding as an expert in environmental and resource
01:40:38 18 economics, Clean Water Act policies and penalties, and applied
01:40:44 19 econometric analyses.

01:40:45 20 **MS. HARVEY:** The United States does not have any
01:40:47 21 objection to Dr. Sunding's qualifications. However, we have a
01:40:50 22 motion in limine to preclude his testimony as legal opinion
01:40:54 23 testimony. Dr. Sunding purports to weigh the eight penalty
01:40:58 24 factors. In particular, he goes through each of them and --

01:41:04 25 **THE COURT:** I have read the motions. I'm going to

DAVID SUNDING - DIRECT

01:41:08 1 allow him to testify. I certainly accept him as an expert in
01:41:14 2 his field.

01:41:15 3 I do think, though, that there is one part of
01:41:17 4 his report that the government just mentioned where it doesn't
01:41:20 5 seem appropriate to me to allow an economist to opine on --
01:41:29 6 assess the eight factors that the Court has to decide and give
01:41:35 7 me his opinion as to how I should decide each of those eight
01:41:40 8 factors.

01:41:40 9 So I'm going to exclude that part of this
01:41:44 10 witness' testimony, but otherwise, I will allow him to testify.

01:41:49 11 **MR. LOTTERMAN:** Thank you, Your Honor.

DIRECT EXAMINATION

01:41:50 12
01:41:53 13 **BY MR. LOTTERMAN:**

01:41:54 14 **Q.** Professor Sunding, why were you retained by Anadarko in
01:41:56 15 this case?

01:41:56 16 **A.** I was retained to assess from the perspective of
01:41:59 17 environmental economics what would be an appropriate penalty to
01:42:02 18 levy against Anadarko.

01:42:06 19 **Q.** How do economists like yourself deal with statutes like
01:42:10 20 the Clean Water Act?

01:42:13 21 **A.** Well, environmental economics is fundamentally about the
01:42:17 22 economic effects of regulation. It is a field that's created
01:42:21 23 by statutes and by regulatory programs. So what we do is we
01:42:26 24 take that as a starting point for the analysis, but the domain
01:42:30 25 of economics, the kind of core area of economics is about

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01:42:35 1 incentives, economic behavior, and market interactions.

01:42:40 2 So what we study is how market participants,
01:42:44 3 consumers and firms and others, respond to the incentives that
01:42:48 4 are laid down by our whole complex environmental regulations in
01:42:53 5 this country.

01:42:54 6 Q. Is this a commonly accepted practice in your field?

01:42:57 7 A. Absolutely.

01:42:57 8 Q. And again, here, what expertise are you drawing on to
01:43:00 9 formulate and render your opinions?

01:43:03 10 A. Environmental economics.

01:43:05 11 Q. And are your opinions summarized anywhere?

01:43:08 12 A. They are.

01:43:08 13 **MR. LOTTERMAN:** Please call up D-38061.

01:43:11 14 **BY MR. LOTTERMAN:**

01:43:12 15 Q. Can you identify these two reports for me.

01:43:14 16 A. Sure. These are the two expert reports that I prepared as
01:43:18 17 part of this case.

01:43:20 18 Q. And is it both a Round 1 and Round 3 report?

01:43:26 19 A. Yes, Round 1 and Round 3.

01:43:28 20 **MR. LOTTERMAN:** Your Honor, for the sake of clarity,
01:43:29 21 the Round 1 report is designated TREX-280010, and Professor
01:43:35 22 Sunding's CV is TREX-280140. His history of previous expert
01:43:42 23 work is TREX-280142. His list of considered materials is
01:43:47 24 TREX-280143. His mapping of the investors that we will talk
01:43:52 25 about in a minute is TREX-28014. The datasets and coding that

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01:43:57 1 he provided, that he used to map that, has been provided to the
01:44:01 2 U.S.; but we found no way to really put it into evidence, so we
01:44:06 3 are not doing that here.

01:44:07 4 The reason why we have different TRES numbers is
01:44:11 5 because there was an inadvertent omission of that information
01:44:12 6 in the report. I can tell you the report you have has them
01:44:17 7 all, including the appendixes.

01:44:19 8 Round 3 is TRES-280096, and its list of
01:44:25 9 considered materials is TRES-280144.

01:44:29 10 Let's call up D-38062, please.

01:44:34 11 **BY MR. LOTTERMAN:**

01:44:34 12 **Q.** Professor Sunding, is this an outline of the topics you
01:44:37 13 plan to address today?

01:44:38 14 **A.** Yes, it is.

01:44:39 15 **MR. LOTTERMAN:** Your Honor, in order to expedite this
01:44:41 16 process, we plan to collapse both the first and second topics,
01:44:44 17 and hopefully that will move things long.

01:44:50 18 **BY MR. LOTTERMAN:**

01:44:51 19 **Q.** Would you give Judge Barbier a very brief preview of each
01:44:54 20 topic.

01:44:56 21 **A.** Sure. The first two topics are somewhat more conceptual
01:45:00 22 in nature, and the third is more of an empirical analysis.

01:45:04 23 The first two topics are about the economic theory of
01:45:07 24 deterrence and what that implies about the role of penalties in
01:45:11 25 a case such as this one.

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01:45:13 1 And in the second -- the third, really, major theme
01:45:16 2 that I'm going to talk about is almost -- you could consider it
01:45:20 3 more of a due diligence effort on my part. I'm making some
01:45:25 4 conceptual arguments about the potential effect of penalties on
01:45:30 5 economic behavior.

01:45:32 6 Well, the *Deepwater Horizon* incident occurred over
01:45:35 7 four years ago. So the last part of my testimony is about
01:45:38 8 looking back to see if there's any evidence from the capital
01:45:41 9 markets in the four years since then that's consistent with
01:45:45 10 these theories.

01:45:47 11 Q. Now, focusing on the second topic, I want to make
01:45:49 12 something clear. Did you apply your analysis to BP in this
01:45:52 13 case?

01:45:52 14 A. No.

01:45:53 15 Q. Now, you mentioned early on your prior history and
01:45:57 16 experience with Clean Water Act penalty cases. Does this case
01:46:00 17 fit that mold?

01:46:01 18 A. No, not at all, in my view.

01:46:04 19 Q. Have you prepared a slide to address the uniqueness of
01:46:06 20 this case?

01:46:07 21 A. Yes.

01:46:07 22 MR. LOTTERMAN: Please call up D-38063.

01:46:10 23 BY MR. LOTTERMAN:

01:46:11 24 Q. Let's just briefly tick through these, if you would.

01:46:14 25 What do you mean by "Operator: No"?

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- 01:46:16 1 A. Anadarko was not an operator in the context of Macondo.
- 01:46:20 2 Q. Were you told to assume that?
- 01:46:21 3 A. Yes.
- 01:46:23 4 Q. Is that significant here?
- 01:46:24 5 A. Yes, I believe so.
- 01:46:26 6 Q. Now, let's be clear. Is it your testimony today that
- 01:46:30 7 nonoperators can never be penalized under the Clean Water Act?
- 01:46:35 8 A. No.
- 01:46:35 9 Q. Let's turn to culpability. What do you mean by that?
- 01:46:40 10 A. Culpable in the sense of one of the eight Clean Water Act
- 01:46:43 11 penalty factors; meaning, to me, responsible.
- 01:46:47 12 Q. Again, were you told to assume that?
- 01:46:48 13 A. Yes.
- 01:46:48 14 Q. Is it significant here?
- 01:46:49 15 A. Yes.
- 01:46:51 16 Q. Is it your view that a nonculpable party should never be
- 01:46:55 17 penalized under the Clean Water Act?
- 01:46:57 18 A. No, certainly not making any legal conclusions. And, in
- 01:47:01 19 fact, we will talk about some cases where the economic theory
- 01:47:05 20 of deterrence suggests that a nonculpable entity should be
- 01:47:09 21 penalized.
- 01:47:11 22 Q. Professor Sunding, just to be really clear, any question I
- 01:47:13 23 ask you today is not intended to solicit or elicit a legal
- 01:47:18 24 conclusion. Okay?
- 01:47:18 25 A. Yes.

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01:47:18 1 Q. So when you testify, I want you to testify with your
01:47:23 2 economics hat on. All right?

01:47:24 3 A. Absolutely.

01:47:26 4 MS. HARVEY: If it does seem like he is getting into
01:47:29 5 legal testimony, despite that, even if he -- I will object at
01:47:32 6 that point in case it's unclear.

01:47:34 7 THE COURT: Okay.

01:47:35 8 BY MR. LOTTERMAN:

01:47:35 9 Q. Let's move to your third bullet. It says "Any economic
01:47:38 10 benefit to Anadarko: None."

01:47:40 11 Why is that important?

01:47:41 12 A. Again, this is economic benefit. In the Clean Water Act
01:47:44 13 penalty sense, did Anadarko receive any sort of an economic
01:47:49 14 advantage or economic gain as a result of the violation?

01:47:53 15 Q. Were you told to assume none?

01:47:54 16 A. Yes, that it was none. Or at most, I think the phrase was
01:47:57 17 "background noise," some very small amount.

01:48:01 18 Q. Just to cut to the chase on this, if the government were
01:48:04 19 to somehow show that there was some economic benefit in this
01:48:07 20 case, would that change your opinions today?

01:48:11 21 A. No.

01:48:12 22 Q. By the way, one last thing. "Liability under OPA," what
01:48:19 23 does that mean?

01:48:20 24 A. This is referring to damages liability under OPA.

01:48:24 25 Q. Why might that be important here?

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01:48:26 1 A. Well, as we are going to talk about in a few minutes, the
01:48:30 2 thing that's really unique about Section 311 of the Clean Water
01:48:33 3 Act is that there is a robust provision for payment of external
01:48:37 4 harms which is very important in terms of the economics of
01:48:41 5 deterrence.

01:48:42 6 Q. And let's put a stake in the ground here too. Is it your
01:48:47 7 testimony that a defendant can never be penalized for an oil
01:48:49 8 spill under OPA?

01:48:51 9 A. No.

01:48:52 10 Q. One final stake, and then we will talk about your
01:48:56 11 opinions. Were you told to assume that Anadarko has been found
01:49:03 12 liable under the Clean Water Act in this case and is subject to
01:49:06 13 some penalty?

01:49:06 14 A. Yes.

01:49:09 15 Q. And was it your intent, then, to analyze that and all
01:49:13 16 these assumptions in going forward?

01:49:15 17 A. Yes, using the decades of research that's occurred in
01:49:20 18 environmental economics and law on economics on the subject of
01:49:24 19 deterrence.

01:49:25 20 Q. Given this fact pattern and all the assumptions that you
01:49:28 21 were told to make, how did you approach your analysis?

01:49:30 22 A. Well, because this was, in my view, such an unusual -- and
01:49:35 23 I'm talking here about the government's penalty claim against
01:49:39 24 Anadarko, that it was so unusual that it warranted taking a
01:49:43 25 step back and asking a question about what are the purposes of

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01:49:48 1 penalties under the Clean Water Act and what kind of deterrent
01:49:53 2 effect might they have.

01:49:55 3 Q. What are the purposes?

01:49:56 4 A. As I understand, there are two basic purposes: punishment
01:50:01 5 and deterrence of future violations.

01:50:05 6 MS. HARVEY: Your Honor, this is where it gets a
01:50:08 7 little tricky. He's opining on the purposes here of the Clean
01:50:09 8 Water Act.

01:50:11 9 MR. LOTTERMAN: Your Honor, my next question will
01:50:11 10 clarify that, I believe.

01:50:12 11 THE COURT: I'll let you go ahead. Continue.

01:50:14 12 BY MR. LOTTERMAN:

01:50:14 13 Q. And are those purposes commonly accepted in your field of
01:50:17 14 expertise?

01:50:18 15 A. Yes.

01:50:19 16 MR. LOTTERMAN: Please call up 38064, please.

01:50:25 17 BY MR. LOTTERMAN:

01:50:25 18 Q. What is this?

01:50:27 19 A. This is a very highly cited Law Review article that
01:50:30 20 appeared in the Harvard Law Review by two economists who are,
01:50:35 21 to my knowledge, not lawyers, either one of them, but they
01:50:39 22 wrote sort of a survey article on the economics of punitive
01:50:44 23 damages.

01:50:45 24 Q. Did you, in fact, cite this report in your report?

01:50:48 25 A. Yes, I did, a number of times.

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01:50:50 1 MR. LOTTERMAN: That's TREG-280034.

01:50:53 2 BY MR. LOTTERMAN:

01:50:55 3 Q. Has this Court acknowledged that the goals of the Clean
01:50:58 4 Water Act are to punish violators and to deter future
01:51:05 5 violations?

01:51:05 6 A. Yes. To my knowledge, this is not a controversial
01:51:09 7 proposition.

01:51:10 8 Q. Has the government cited those goals in its opening pages?

01:51:13 9 A. Yes.

01:51:14 10 Q. Let's start with the goal of punishment. Did you address
01:51:16 11 that goal in your work here?

01:51:18 12 A. I did not. There is a little bit of law in the economics
01:51:22 13 literature on the question of punishment as a rationale for
01:51:27 14 punitives or penalties, but I think largely that's outside the
01:51:31 15 domain of economics, the question of punishment.

01:51:34 16 Q. Let's turn to the second goal, deterring future
01:51:38 17 violations. But before we do, I would like to you clarify
01:51:40 18 something. How is deterrence relevant to this case?

01:51:44 19 A. Well, deterrence of future oil spills is a question that I
01:51:52 20 think is important here. To the extent that the Court has any
01:51:57 21 discretion about the level of the penalty -- and I'm not making
01:52:02 22 any kind of a judgment about whether that's true. But to the
01:52:04 23 extent the Court has discretion, it seems important to look at
01:52:10 24 what are the deterrence effects of different levels of
01:52:14 25 penalties, since that is what I'm assuming to be one of the

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01:52:17 1 purposes.

01:52:17 2 Q. Is looking at the deterrence effects of certain penalties
01:52:21 3 or punitive damages or whatever something that you and others
01:52:24 4 in your field routinely do?

01:52:26 5 A. Absolutely.

01:52:27 6 Q. So let's get to the point here. What is deterrence
01:52:31 7 generally?

01:52:32 8 A. Deterrence is about changing behavior. It's about
01:52:35 9 preventing pollution by changing behavior.

01:52:38 10 Q. Why is it important to economists?

01:52:41 11 A. Because it's fundamentally about economic incentives. I
01:52:45 12 talked before about how the law and regulations create
01:52:48 13 incentives that actors in the market respond to just like they
01:52:52 14 would respond to taxes or changes in prices. So it seems
01:52:57 15 relevant here.

01:52:58 16 Q. Can penalties serve as a powerful deterrent?

01:53:02 17 A. Absolutely.

01:53:02 18 Q. Can penalties also be a blunt instrument with unintended
01:53:05 19 consequences?

01:53:06 20 A. If they are applied indiscriminately, yes.

01:53:09 21 Q. Have you prepared a slide to explain just what exactly
01:53:11 22 standard theory is?

01:53:14 23 A. I have, yes.

01:53:14 24 MR. LOTTERMAN: Please call up D-38065.

25

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01:53:14 1 BY MR. LOTTERMAN:

01:53:15 2 Q. Let's start with the basic proposition. What is it?

01:53:22 3 A. The basic proposition is that liability -- and that in
01:53:28 4 this context means penalties plus whatever sort of damages
01:53:32 5 liability exists -- that you get a good economic result from a
01:53:35 6 social perspective when liability is equal to the amount of
01:53:39 7 harm caused.

01:53:41 8 Q. Is this often called optimal deterrence?

01:53:44 9 A. It is. That's a somewhat more technical term. "Optimal"
01:53:48 10 is a mathematical concept, but that's how this is referred to
01:53:52 11 in the economics literature, and I use that term in my report.

01:53:55 12 Q. We have already talked about the Polinsky and Shavell
01:53:59 13 article. You also cite an article by Professor Coase?

01:54:04 14 A. Yes. This is probably the all-time classic article in the
01:54:08 15 field of law and economics. It's the most cited Law Review
01:54:11 16 article of all time. It has more than twice as many citations
01:54:17 17 actually as Number 2 on the list, so the influence of this
01:54:20 18 article is felt far and wide.

01:54:23 19 Q. Why is analyzing deterrence important in this context?

01:54:28 20 A. In the context of -- I want to make sure I understand your
01:54:32 21 question.

01:54:33 22 Q. In the context of penalties. I'm sorry.

01:54:35 23 A. Oh, because penalties -- again, they provide economic
01:54:38 24 incentives. There's potentially a financial penalty that
01:54:42 25 results from some sort of a violation. And so to the extent

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01:54:48 1 that producers who are operating in the marketplace are
01:54:53 2 profit-maximizing and respond to incentives, they will respond
01:55:00 3 to the penalties just like they would respond to other sorts of
01:55:00 4 economic phenomena.

01:55:02 5 Q. If that goal is met, why will deterrence be achieved?

01:55:07 6 A. Again, it's all about changing the level of profit.
01:55:11 7 That's the notion of incentives and how they create changes in
01:55:15 8 environmental quality. You essentially create incentives by
01:55:19 9 causing producers to recognize the external consequences of
01:55:23 10 their action. You create incentives for them to take account
01:55:27 11 of the environment as part of their normal profit-making
01:55:30 12 process.

01:55:31 13 Q. Has this basic economic principle been endorsed by EPA's
01:55:36 14 Science Advisory Board?

01:55:38 15 A. Yes, in fact, it has.

01:55:39 16 Q. Have you cited that report in your report?

01:55:41 17 A. Yes, I have.

01:55:42 18 Q. Has Judge Barbier embraced this principle in his decisions
01:55:46 19 in this case?

01:55:47 20 A. I believe so, yes. This is the theory of cost
01:55:50 21 internalization, where the costs of pollution are put on the
01:55:55 22 entity that causes pollution.

01:55:56 23 Q. Has the goal of deterrence been adopted or embraced in
01:55:59 24 other environmental statutes?

01:56:01 25 A. Absolutely.

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01:56:01 1 Q. Also studied by your field?

01:56:03 2 A. Absolutely.

01:56:04 3 Q. Now let's apply the theory you just talked about to oil
01:56:08 4 spills. Okay?

01:56:10 5 MR. LOTTERMAN: Please call up D-38066.

01:56:11 6 BY MR. LOTTERMAN:

01:56:14 7 Q. Did you prepare this slide?

01:56:14 8 A. Yes, I did.

01:56:18 9 Q. How does OPA impose liability for a wide range of damages?

01:56:24 10 A. There are provisions for compensatory damages for a whole
01:56:28 11 wide range of what we economists call externalities or external
01:56:33 12 harms.

01:56:34 13 Q. You have just explained how penalties can deter. Is it
01:56:39 14 your view that damages under OPA can also deter future
01:56:44 15 violations?

01:56:44 16 A. Yes. I'm harkening back to the discussion we had about
01:56:49 17 fungibility earlier in the day. Whether money is paid as a
01:56:53 18 penalty or paid as a damage payment, it has an incentive
01:56:58 19 effect. And something that is so important about Section 311
01:57:04 20 in the Clean Water Act is that it has this, from an
01:57:07 21 environmental economics perspective, great feature of
01:57:11 22 compensation for external harms.

01:57:16 23 Q. Again, how are costs internalized under OPA?

01:57:20 24 A. Well, the idea here would be that when firms are out in
01:57:24 25 the normal course of doing business, OPA forces them to think

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01:57:29 1 about -- because they have to pay for the external harms caused
01:57:33 2 by oil spills, those get internalized into the, again, just
01:57:38 3 day-to-day decision-making process that firms are going
01:57:41 4 through.

01:57:42 5 Q. Does a polluter pay under OPA too?

01:57:45 6 A. Yes. This is another way of saying the same thing:
01:57:48 7 Polluter pays.

01:57:49 8 Q. Did Dr. Mason testify last week in this Court that he
01:57:54 9 agreed with you?

01:57:55 10 A. Yes.

01:57:55 11 MR. LOTTERMAN: Let's turn to the second bullet very
01:57:58 12 briefly.

01:57:59 13 BY MR. LOTTERMAN:

01:57:59 14 Q. How do OPA damages and Clean Water Act penalties work
01:58:02 15 together to deter?

01:58:03 16 A. Because they both have similar incentive effects. I think
01:58:07 17 in the case of an oil spill, from a deterrence perspective,
01:58:11 18 it's important to think about penalties in relation to OPA
01:58:16 19 damages. There's already a provision for oil spills that
01:58:20 20 creates a mechanism whereby firms have to internalize those
01:58:26 21 costs.

01:58:27 22 So economically, the right question to ask about
01:58:30 23 penalties is: What's the role for penalties, given that firms
01:58:34 24 are already compensating for external harms? What's the sort
01:58:38 25 of relation between penalties and damages to achieve a socially

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01:58:43 1 correct deterrence result?

01:58:45 2 Q. Is this a commonly accepted principle in your field of
01:58:48 3 study?

01:58:48 4 A. Absolutely.

01:58:49 5 Q. Did Dr. Mason agree with that when he testified on
01:58:53 6 January 22 that both OPA and the Clean Water Act offer a
01:58:56 7 deterring role?

01:58:59 8 A. Yes, he said that.

01:59:00 9 Q. Let's show a quick example.

01:59:02 10 MR. LOTTERMAN: Please pull up D-38067.

01:59:03 11 BY MR. LOTTERMAN:

01:59:04 12 Q. Now, what you have here -- why don't you explain what you
01:59:06 13 are depicting here, please, sir.

01:59:09 14 A. Sure. This is a very simple hypothetical just to
01:59:13 15 illustrate how damages and penalties might work together from a
01:59:17 16 deterrence perspective.

01:59:18 17 Let's suppose we have a case where a violation causes
01:59:21 18 a hundred dollars in external harm, and a statute like OPA
01:59:25 19 provides for full payment of the external harm. Well, in that
01:59:30 20 case, the standard theory of deterrence would say: There's no
01:59:33 21 need for a penalty above and beyond what's already being paid
01:59:38 22 for in the damages liability; that you achieve an appropriate
01:59:42 23 degree of cost internalization just through the damages payment
01:59:45 24 alone.

01:59:46 25 Q. Apply this basic case to Anadarko in this case.

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01:59:53 1 A. Well, you know, the issue here is that, again, OPA
01:59:58 2 provides a mechanism for compensation of a wide range of harms.
02:00:02 3 And so that second column, that's the role of the OPA damages.

02:00:10 4 Q. Are you saying that basically, if these two are added up
02:00:14 5 in your basic case, they should typically equal external harm
02:00:18 6 to deter?

02:00:19 7 A. Yes.

02:00:22 8 And as one other bit of context here, the standard
02:00:26 9 theory of deterrence is, you are trying to steer a course
02:00:30 10 between two rocks, if you will. On the one hand, it's
02:00:35 11 definitely important to deter environmental violations and
02:00:38 12 improve environmental quality; but on the other hand, it's also
02:00:44 13 important to avoid the dangers of overdeterrence.

02:00:47 14 Just to bring that back to the case of the Gulf of
02:00:50 15 Mexico, we do have a national policy that allows for drilling
02:00:55 16 in the Gulf of Mexico. It's an economically important
02:01:00 17 activity. Congress has talked about it. I think in a way it's
02:01:03 18 self-evident that the industry is important to this region.

02:01:06 19 So those are the two basic objectives that the
02:01:13 20 standard theory of deterrence is trying to take into account.

02:01:18 21 Q. When you use the phrase "OPA damages" in your answers and
02:01:22 22 throughout this examination, are you talking about the specific
02:01:25 23 amount that each defendant pays?

02:01:27 24 A. No. That, I think, is of secondary importance.

02:01:33 25 We will talk in a minute about enriching this

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02:01:37 1 analysis to have more than one participant.

02:01:40 2 The most important thing is that the leaseholders
02:01:44 3 together, all the participants in the venture, are responsible
02:01:48 4 for external harms. How that gets divided up among them can be
02:01:53 5 important, but it's secondary importance.

02:01:56 6 Q. So let's assume that we have -- or you have, in
02:01:59 7 particular, satisfied the standard theory of deterrence in this
02:02:02 8 case. What's the next step in the analysis?

02:02:06 9 A. Well, not every situation looks like this, and I certainly
02:02:09 10 don't want to leave the Court with the idea, if damage
02:02:14 11 liability is paid, that there's never a role for penalties.
02:02:17 12 Because there actually can be a couple of important cases where
02:02:22 13 penalties serve an appropriate deterrence function over and
02:02:26 14 above damages liability.

02:02:29 15 MR. LOTTERMAN: Your Honor, I cut out a couple slides
02:02:31 16 at lunch. I think it won't affect the flow, but let me jump
02:02:34 17 ahead a little bit.

02:02:34 18 Mr. Stevenson, would you please call up D-38072
02:02:36 19 and go all the way down.

02:02:37 20 BY MR. LOTTERMAN:

02:02:42 21 Q. I want to walk through these very briefly,
02:02:44 22 Professor Sunding, if you would.

02:02:47 23 Again, there's the base case you just talked about
02:02:49 24 where the external harm is there and the OPA damages are there.
02:02:52 25 What about this line that says "if 50 percent detection"? What

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02:02:56 1 are you trying to convey there?

02:02:58 2 A. This is really -- in the deterrence literature, this is
02:03:01 3 the classic rationale for payment over and above damages
02:03:05 4 liability. Suppose there's only a 50 percent chance that a
02:03:09 5 violation is detected. Well, then, if the violation is
02:03:13 6 detected, if the violator just pays for external damages, then
02:03:18 7 there's underdeterrence because there's a 50 percent chance
02:03:23 8 they will get away paying nothing. So when they are caught, a
02:03:27 9 penalty or punitive damages of an equal amount of 100 over and
02:03:32 10 above damages liability, that gets you back to the correct
02:03:35 11 level of deterrence.

02:03:36 12 So again, a chance that the violator can avoid
02:03:42 13 detection, that's the classic rationale for punitives or for a
02:03:48 14 penalty over and above damages liability.

02:03:51 15 Q. And again focusing on your 50 percent detection case, is
02:03:54 16 that why the external harm of \$100 is only 50 percent of the
02:03:58 17 total of the damages and the penalty?

02:03:59 18 A. That's correct. There needs to be a penalty of \$100 over
02:04:03 19 and above the actual payment of damage liability. So you
02:04:08 20 multiply 100 plus 100 times 50 percent to get to 100, which is
02:04:15 21 where we were in the first case.

02:04:16 22 Q. Now, this principle of economics, has that been embraced
02:04:19 23 by EPA's Science Advisory Board that you worked on?

02:04:22 24 A. It has, very explicitly.

02:04:24 25 Q. Did you note that in your report?

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0 2 : 0 4 : 2 6 1 A. I did.

0 2 : 0 4 : 2 6 2 Q. Was it a close vote?

0 2 : 0 4 : 2 7 3 A. No, it was unanimous.

0 2 : 0 4 : 3 2 4 Q. Let's move to your next example. It says, "If damages
0 2 : 0 4 : 3 4 5 capped." What do you mean to convey by that?

0 2 : 0 4 : 3 7 6 A. Well, suppose there was some upper limit on the amount of
0 2 : 0 4 : 4 0 7 damages for whatever reason. Well, in that case, let's just
0 2 : 0 4 : 4 5 8 suppose that the cap is \$75. If the violator -- so now we are
0 2 : 0 4 : 5 0 9 back to the certain detection world. But if they just pay \$75
0 2 : 0 4 : 5 5 10 when their actual external harm was \$100, then again we are
0 2 : 0 4 : 5 8 11 back to underdeterrence if we are limited to those capped
0 2 : 0 5 : 0 2 12 damages liabilities alone. So there would be a rationale for
0 2 : 0 5 : 0 7 13 adding a penalty on top of that to get back to a socially
0 2 : 0 5 : 1 1 14 correct amount of deterrence.

0 2 : 0 5 : 1 3 15 Q. Is that why the external harm in that third example is
0 2 : 0 5 : 1 6 16 equal to the sum of the damages and the penalty?

0 2 : 0 5 : 2 0 17 A. That's exactly correct, yes.

0 2 : 0 5 : 2 1 18 Q. Now, as I promised, let's apply this to Anadarko, right
0 2 : 0 5 : 2 4 19 now. We talked about the base case. Does the case of
0 2 : 0 5 : 3 0 20 uncertain detection apply, or should it apply to Anadarko in
0 2 : 0 5 : 3 5 21 this case?

0 2 : 0 5 : 3 7 22 A. No. I think the chances that an oil spill of this
0 2 : 0 5 : 4 0 23 magnitude would go undetected are negligible.

0 2 : 0 5 : 4 4 24 Q. Is that just Professor Sunding on oil spills?

0 2 : 0 5 : 4 8 25 A. No. This has actually been noted in the law on economics

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02:05:53 1 literature too.

02:05:54 2 Q. Any debate about that?

02:05:56 3 A. Not that I have ever heard.

02:06:02 4 Q. Getting to the third example, "if damages capped," does
02:06:08 5 that serve as a rationale for applying the penalty to Anadarko
02:06:13 6 in this case?

02:06:15 7 A. I don't believe so, no.

02:06:16 8 Q. Why not?

02:06:16 9 A. Well, because as far as I know, the cap has been lifted.

02:06:21 10 Q. Well, what about the possibility that a cap might not be
02:06:26 11 lifted? Does that affect your analysis?

02:06:28 12 A. It could if -- again, the idea here is for violators or
02:06:35 13 violators in the future to be given the correct incentives to
02:06:41 14 internalize external harms.

02:06:43 15 Q. And again, if, for example, some producer insisted that
02:06:48 16 the damages in an oil spill be capped at \$75, would the penalty
02:06:53 17 then serve a purpose, in your view?

02:06:55 18 A. The penalty would then come in behind the damages
02:06:59 19 liability and get back to an appropriate level of deterrence.

02:07:04 20 Q. Let's turn up the heat a bit. Let's assume a higher level
02:07:07 21 of deterrence. Okay?

02:07:09 22 A. All right.

02:07:09 23 Q. I want you to assume that the goal of the statute you're
02:07:13 24 looking at is not just to make all violators pay for the harms
02:07:18 25 that they caused, but to prevent all spills, big and small.

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02:07:22 1 Okay. How does an economist handle that?

02:07:25 2 A. Well, that's what we refer to in deterrence theory as

02:07:31 3 absolute deterrence, where all types of a certain violation are

02:07:36 4 deterred no matter what the cost of deterrence.

02:07:40 5 This is -- in the economics literature, this is a

02:07:42 6 common concept, say, with respect to criminal violations.

02:07:46 7 There is no socially optimal number of kidnappings greater than

02:07:52 8 zero, for example. So the idea is to create economic

02:07:57 9 incentives that will absolutely deter certain kinds of

02:08:01 10 violations.

02:08:01 11 **MR. LOTTERMAN:** Please call up D-38074.

02:08:01 12 **BY MR. LOTTERMAN:**

02:08:05 13 Q. Did you prepare this?

02:08:06 14 A. Yes.

02:08:07 15 Q. Now, you just talked about the objective. What is meant

02:08:11 16 by "accomplish by eliminating all gain on the part of the

02:08:15 17 violator"?

02:08:15 18 A. Well, again, the assumption here is that actors are

02:08:19 19 rational and they will respond to incentives and that if the

02:08:24 20 penalty policy eliminates all gain on the part of the violator

02:08:28 21 from the bad act, then they won't commit it.

02:08:31 22 Q. Is the concept of gain addressed as one of the penalty

02:08:35 23 factors under the Clean Water Act?

02:08:36 24 A. It absolutely is. This is what economic benefit is about.

02:08:39 25 Q. And has this approach been commonly accepted by your field

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02:08:44 1 of economics?

02:08:45 2 A. Yes, it has.

02:08:50 3 Q. Now, let's assume that absolute deterrence applies to
02:08:55 4 Anadarko here because that's the goal of the Clean Water Act.
02:08:59 5 All right. So we are not really dealing with harm versus
02:09:03 6 damages, but we are trying to prevent all spills, big and
02:09:08 7 small.

02:09:09 8 What effect would that have on your opinions in this
02:09:11 9 case?

02:09:13 10 A. Well, Anadarko -- again, I was told to assume this. I
02:09:18 11 understand it's not been contested -- that Anadarko received no
02:09:24 12 economic benefit or, at most, a very small economic benefit as
02:09:29 13 a result of the violation, and has already paid a share of OPA
02:09:33 14 damages to the tune of \$4 billion.

02:09:37 15 Q. Now, if the economic benefit were to exceed the damages,
02:09:40 16 let's say \$100 in damages and \$200 in economic benefit, would
02:09:44 17 that provide a rationale to impose a penalty above and beyond
02:09:48 18 the damages?

02:09:49 19 A. It could. It would depend on other -- the hypothetical
02:09:54 20 might be more complicated than that, but it could.

02:09:57 21 Q. But is that the situation here?

02:09:59 22 A. No, I don't believe so.

02:10:00 23 Q. All right. Let's complicate your analysis, and let's add
02:10:04 24 a second party to the picture. Let's assume you have an
02:10:07 25 operator and a nonoperating investor. Have the economists

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02:10:15 1 addressed that relationship?

02:10:16 2 A. We have. If I could say, I think, as an academic and
02:10:20 3 someone who studies this kind of thing a lot, I think this is
02:10:26 4 the really interesting issue in the case.

02:10:28 5 Q. Please --

02:10:28 6 A. -- starting where we were at the beginning, in some ways,
02:10:30 7 what makes the case against Anadarko so unusual.

02:10:35 8 **MR. LOTTERMAN:** Let's call up D-38075, please.

02:10:39 9 **BY MR. LOTTERMAN:**

02:10:40 10 Q. So how is the relationship between an operator and an
02:10:44 11 investor addressed in your field of economics?

02:10:46 12 A. It's actually the subject of -- well, the fellow who won
02:10:51 13 the Nobel Prize just last fall was one of the originators of
02:10:55 14 this field. It's what we call in economics principal agent
02:11:00 15 relationships. That applies to investor-operator relationships
02:11:05 16 in many contexts.

02:11:07 17 It has to do with -- the field of economics that I'm
02:11:09 18 talking about has to do with designing contracts and incentives
02:11:15 19 between principals and agents.

02:11:17 20 Q. Now, when you use the phrase "principal agent," are you
02:11:20 21 using it in the legal sense?

02:11:21 22 A. No, certainly not.

02:11:22 23 Q. When you use the term "investor," why do you use that
02:11:25 24 term?

02:11:26 25 A. Well -- so now back to the offshore oil and gas context.

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02:11:29 1 The investor is contributing capital.

02:11:34 2 Q. Now, if you look at your first bullet up here, I believe
02:11:38 3 you cite Viscusi and Zeckhauser article. Why is an operator's
02:11:45 4 control and superior information important?

02:11:48 5 A. This gets back to the question of economic incentives, and
02:11:51 6 to the extent we are focused on the question of controlling
02:11:54 7 violations of the Clean Water Act, which party is in the best
02:11:58 8 position to influence that.

02:12:00 9 Q. Let's go to your next point. Why is it more effective to
02:12:05 10 incentivize the operator?

02:12:07 11 A. For a number of reasons, but most important of which is --
02:12:11 12 I think this is sort of obviously true -- one is on the rig and
02:12:16 13 one is not. One has better information about day-to-day
02:12:19 14 activities, and the other one doesn't.

02:12:21 15 So from an economic perspective, what I think is
02:12:24 16 interesting here when one thinks about deterrence is should we
02:12:28 17 be penalizing the operator or the investor or both; and to the
02:12:35 18 extent the Court has discretion, to what degree?

02:12:38 19 The fact that a party like Anadarko is not an
02:12:43 20 operator, should that -- again, from a deterrence perspective,
02:12:48 21 would you get a better result if a lower penalty were applied
02:12:53 22 as opposed to a larger one? That's the issue.

02:12:56 23 Q. Is this a commonly accepted principle in your field?

02:12:59 24 A. Absolutely.

02:13:00 25 Q. Is it addressed, as I mentioned, in the Viscusi article,

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0 2 : 1 3 : 0 4 1 which is TREN-280042?

0 2 : 1 3 : 0 7 2 A. Yes. This was an article that came out after the
0 2 : 1 3 : 0 9 3 *Deepwater Horizon* oil spill. Their main purpose in the article
0 2 : 1 3 : 1 4 4 was to do something that I think is not at issue here. They
0 2 : 1 3 : 1 8 5 were thinking more generally about designing a different kind
0 2 : 1 3 : 2 2 6 of insurance scheme to handle large oil spills.

0 2 : 1 3 : 2 6 7 But there are parts of their Law Review article that
0 2 : 1 3 : 2 9 8 I think are very consistent with the arguments I'm making here.
0 2 : 1 3 : 3 3 9 And while we are coming at it from a different perspective,
0 2 : 1 3 : 3 7 10 it's consistent with what we just heard from Mr. Arnold, who
0 2 : 1 3 : 4 1 11 has more on-the-ground practical experience, but I think we are
0 2 : 1 3 : 4 5 12 arriving at the same place here.

0 2 : 1 3 : 4 9 13 Q. Professor Sunding, are you suggesting to this Court that a
0 2 : 1 3 : 5 1 14 nonoperator should never be penalized?

0 2 : 1 3 : 5 4 15 A. No, definitely not.

0 2 : 1 3 : 5 5 16 Q. What are some situations where it might?

0 2 : 1 4 : 0 5 17 A. Well, I think that -- back to the -- if there was some
0 2 : 1 4 : 0 7 18 kind of a cap on damages for whatever reason, then without the
0 2 : 1 4 : 1 4 19 nonoperator stepping in behind to cover some costs of external
0 2 : 1 4 : 1 9 20 damages, there would be an underdeterrence result.

0 2 : 1 4 : 2 2 21 Q. Have economists addressed potential impacts on safety in
0 2 : 1 4 : 2 6 22 this context?

0 2 : 1 4 : 2 8 23 A. Yes.

0 2 : 1 4 : 2 9 24 MR. LOTTERMAN: Let's pull up the next slide.
25

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0 2 : 1 4 : 3 2 1 BY MR. LOTTERMAN:

0 2 : 1 4 : 3 2 2 Q. Who is Pitchford?

0 2 : 1 4 : 3 6 3 A. Rohan Pitchford is an economist. This paper was part of
0 2 : 1 4 : 4 1 4 his doctoral dissertation at MIT. It was published in the
0 2 : 1 4 : 4 6 5 *American Economic Review*, which is the flagship journal in our
0 2 : 1 4 : 5 1 6 field.

0 2 : 1 4 : 5 1 7 Q. That's TREX-280033, for the record.

0 2 : 1 4 : 5 5 8 What did Professor Pitchford say about penalizing
0 2 : 1 4 : 5 9 9 investors and its impact on safety?

0 2 : 1 5 : 0 1 10 A. Well, he looked at a case that's analytically very similar
0 2 : 1 5 : 0 6 11 to the one we are looking at here and again thinking about how
0 2 : 1 5 : 0 9 12 people respond in the marketplace, both investors and
0 2 : 1 5 : 1 3 13 operators, to the extension of liability and penalties on
0 2 : 1 5 : 1 7 14 investors.

0 2 : 1 5 : 1 8 15 Pitchford came to the conclusion that there can be
0 2 : 1 5 : 2 2 16 important cases where penalizing investors can actually reduce
0 2 : 1 5 : 2 6 17 safety.

0 2 : 1 5 : 2 7 18 Different mechanism than what Mr. Arnold was talking
0 2 : 1 5 : 3 0 19 about. This has more to do with responses in the capital
0 2 : 1 5 : 3 4 20 markets, but a similar result.

0 2 : 1 5 : 3 7 21 Q. Now, apply these three principles that we have just
0 2 : 1 5 : 4 0 22 discussed to the situation of Anadarko in this courtroom.

0 2 : 1 5 : 4 6 23 A. Well, turning back to what I think is the really
0 2 : 1 5 : 5 0 24 interesting question here about levying penalties on operators
0 2 : 1 5 : 5 5 25 and investors and, if the Court has discretion, how big those

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02:16:00 1 penalties should be.

02:16:02 2 What this theory -- and this is again, a very large
02:16:07 3 literature. What this part of the deterrence literature
02:16:10 4 suggests is that if the operator has better information and
02:16:14 5 better control over what's happening that causes the violation,
02:16:18 6 it's a stronger incentive, a clear incentive to penalize the
02:16:23 7 operator as opposed to the investor, that you get a stronger
02:16:27 8 deterrence result and at less cost to the economy with less, if
02:16:32 9 you will, collateral damage.

02:16:35 10 Q. Before we move on to the final topic, I want to address
02:16:39 11 the criticisms that Dr. Mason chose to highlight when he
02:16:42 12 testified in week 1. We'll do this very briefly.

02:16:45 13 **MR. LOTTERMAN:** Please bring up D-38076.

02:16:47 14 **BY MR. LOTTERMAN:**

02:16:47 15 Q. Do you recognize this slide, sir?

02:16:49 16 A. I do. This was a slide that Dr. Mason showed.

02:16:53 17 Q. During his direct exam?

02:16:54 18 A. Yes.

02:16:55 19 Q. I want to briefly address his three arguments. The first
02:16:59 20 bullet basically says that his view is that the \$4 billion that
02:17:04 21 Anadarko paid is unsupported as its share of damages in this
02:17:08 22 case.

02:17:09 23 Did you address that criticism in your report?

02:17:12 24 A. I did.

02:17:12 25 Q. In fact, is the amount that Anadarko paid relevant to your

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0 2 : 1 7 : 1 7 1 analysis?

0 2 : 1 7 : 1 9 2 A. The thing that's most important in the standard theory of
0 2 : 1 7 : 2 3 3 deterrence is that external harms are compensated for. The
0 2 : 1 7 : 2 9 4 exact share, whether Anadarko's share was 25 percent or
0 2 : 1 7 : 3 2 5 17 percent or 49 percent, that's not very important except in
0 2 : 1 7 : 3 8 6 some special cases.

0 2 : 1 7 : 3 9 7 What matters is the group of firms that were the
0 2 : 1 7 : 4 3 8 leaseholders are compensated for external harms. Then they
0 2 : 1 7 : 4 8 9 have an incentive to take those into account.

0 2 : 1 7 : 5 0 10 Q. What about Dr. Mason's argument that, sitting here today,
0 2 : 1 7 : 5 3 11 this Court and those of us in this courtroom really have no
0 2 : 1 7 : 5 7 12 idea what the total amount of harm caused by the spill was?

0 2 : 1 8 : 0 2 13 Does that affect your analysis?

0 2 : 1 8 : 0 3 14 A. Well, no. There's a process that will play out probably
0 2 : 1 8 : 0 7 15 here to compensate for natural resource harms, natural resource
0 2 : 1 8 : 1 4 16 damages. There are other mechanisms in place to compensate
0 2 : 1 8 : 1 7 17 people who suffered harms, people who live or work or might
0 2 : 1 8 : 2 2 18 recreate in this region. So that is all being addressed.

0 2 : 1 8 : 2 8 19 Q. The second criticism that Dr. Mason chose to highlight on
0 2 : 1 8 : 3 4 20 the witness stand was the fact that you incorrectly assumed
0 2 : 1 8 : 3 7 21 that risk preferences do not matter.

0 2 : 1 8 : 4 1 22 Is he right on that?

0 2 : 1 8 : 4 2 23 A. No, I don't believe so. This is another issue that's been
0 2 : 1 8 : 4 5 24 considered and dismissed in the academic literature in
0 2 : 1 8 : 5 1 25 environmental economics and law on economics, and there are a

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02:18:54 1 number of theoretical reasons that I think this is not correct?

02:19:00 2 But there's a very practical consideration here.

02:19:04 3 This is at odds with the way we do penalties under the Clean

02:19:08 4 Water Act now. And the idea of measuring a risk premium is

02:19:13 5 very problematic. It's essentially impossible to do.

02:19:18 6 Q. Let's quickly turn to the third bullet. Dr. Mason says

02:19:23 7 you didn't account in your analysis for the interactions

02:19:26 8 between more than one party. Fair criticism?

02:19:30 9 A. No. Frankly, I don't know what to make of this because

02:19:34 10 big parts of both of my reports were about exactly the

02:19:38 11 situation, as we just discussed.

02:19:40 12 Q. Let's briefly summarize, then we'll move on to the third

02:19:43 13 and final topic.

02:19:45 14 MR. LOTTERMAN: Please call up D-38077.

02:19:49 15 BY MR. LOTTERMAN:

02:19:50 16 Q. Professor Sunding, if the Court is looking for a

02:19:51 17 deterrence rationale for imposing a penalty on Anadarko in this

02:19:55 18 particular case, does one exist, in your view?

02:19:58 19 A. No, I don't believe so.

02:20:01 20 Q. And for the reasons you set out here?

02:20:04 21 A. Yes.

02:20:04 22 Q. Now, what if the Court concludes that as a matter of law,

02:20:08 23 it must impose some penalty on Anadarko because it has found

02:20:13 24 Anadarko liable? What magnitude should that penalty be under

02:20:19 25 the theories of deterrence you testified about today?

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02:20:23 1 A. It should be small. Nominal.

02:20:27 2 MR. LOTTERMAN: Let's move on to the third and final
02:20:30 3 topic, please, D-38078.

02:20:32 4 BY MR. LOTTERMAN:

02:20:34 5 Q. So we have talked about the economic theories of
02:20:37 6 deterrence and their role in Clean Water Act cases. We've
02:20:37 7 applied it to Anadarko in this case.

02:20:41 8 Let's now turn to the effects of penalties on
02:20:45 9 investment in the Gulf of Mexico. What prompted this concern?

02:20:49 10 A. Well, again, I think I characterized this earlier as an
02:20:55 11 attempt that I initiated to do some almost due diligence on
02:21:00 12 some of the opinions that I was offering before.

02:21:03 13 What I was saying in the conceptual part of my
02:21:08 14 testimony is that this, in my view, you know, almost
02:21:11 15 unprecedented attempt to penalize a nonoperating investor in an
02:21:17 16 offshore facility, that creates new rules of the road.

02:21:21 17 And since the *Deepwater Horizon* incident occurred
02:21:24 18 four years ago, the government announced its intent to penalize
02:21:29 19 Anadarko and MOEX just over four years ago, it's reasonable to
02:21:34 20 look and see, well, is there any evidence in the capital
02:21:37 21 markets that this has had an impact?

02:21:40 22 Q. Did you test that hypothesis?

02:21:42 23 A. Yes, I did.

02:21:45 24 MR. LOTTERMAN: Let's turn briefly to that now.
02:21:45 25 Would you please call up D-38080.

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0 2 : 2 1 : 4 6 1 BY MR. LOTTERMAN:

0 2 : 2 1 : 4 8 2 Q. Now, let's set the stage here before we talk about your
0 2 : 2 1 : 5 2 3 actual results of your analysis. What exactly were you looking
0 2 : 2 1 : 5 6 4 at under this analysis?

0 2 : 2 1 : 5 9 5 A. What I was looking at -- first of all, if I could just
0 2 : 2 2 : 0 3 6 define a term or two and give some frame of reference for this.

0 2 : 2 2 : 0 9 7 My analysis here concerns nonoperating parties. So
0 2 : 2 2 : 1 4 8 what I did was I got a list of all the deepwater leases from
0 2 : 2 2 : 2 0 9 BOEM and -- deepwater leases in the Gulf of Mexico from BOEM,
0 2 : 2 2 : 2 4 10 and I went and looked at parties that were never an operator in
0 2 : 2 2 : 2 8 11 any lease. So firms like private equity firms and other kind
0 2 : 2 2 : 3 3 12 of firms that were in for investment purposes, but they were
0 2 : 2 2 : 3 7 13 never an operator in deep water.

0 2 : 2 2 : 3 9 14 Q. Why did you focus on them?

0 2 : 2 2 : 4 1 15 A. Well, if there were an effect on capital formation, that's
0 2 : 2 2 : 4 4 16 the part of the market that I would expect to see it first.

0 2 : 2 2 : 4 7 17 Q. Why did you focus on deepwater Gulf of Mexico leases?

0 2 : 2 2 : 5 3 18 A. Because that was the category that the Macondo lease falls
0 2 : 2 2 : 5 7 19 into.

0 2 : 2 2 : 5 7 20 Q. Why did you choose December 15, 2010?

0 2 : 2 3 : 0 0 21 A. That was the date that the government announced its intent
0 2 : 2 3 : 0 3 22 to seek penalties against the nonoperators.

0 2 : 2 3 : 0 6 23 Q. So describe what you did, and tell us what results you
0 2 : 2 3 : 1 1 24 got.

0 2 : 2 3 : 1 1 25 A. Sure. So first what I did was I gathered the list of all

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0 2 : 2 3 : 1 6 1 deepwater leases in the Gulf of Mexico from 1983 through 2010.
0 2 : 2 3 : 2 0 2 Then I defined the set of nonoperators, so firms that ever
0 2 : 2 3 : 2 4 3 showed up on a deepwater lease but they were only in a
0 2 : 2 3 : 2 9 4 nonoperating position. Then what I did was I counted up the
0 2 : 2 3 : 3 5 5 number of those firms who entered every year and the number of
0 2 : 2 3 : 3 7 6 those firms that exited every year. What you see here is the
0 2 : 2 3 : 4 2 7 result -- this is all prior to December 15, 2010.

0 2 : 2 3 : 4 7 8 On average, there was a net entry of almost one of
0 2 : 2 3 : 5 1 9 these firms per year, so there was entry of about 1.8, exits of
0 2 : 2 3 : 5 9 10 negative 0.9, leaving, again, roughly one firm per year who was
0 2 : 2 4 : 0 3 11 entering into this market each year.

0 2 : 2 4 : 0 6 12 Q. Did you also examine the entry and exit rates of
0 2 : 2 4 : 1 1 13 nonoperators after December 15, 2010?

0 2 : 2 4 : 1 4 14 A. Yes, I did.

0 2 : 2 4 : 1 5 15 MR. LOTTERMAN: Let's call up D-38081.

0 2 : 2 4 : 1 7 16 BY MR. LOTTERMAN:

0 2 : 2 4 : 1 8 17 Q. Let's start with this first column. What is that meant to
0 2 : 2 4 : 2 3 18 depict?

0 2 : 2 4 : 2 3 19 A. Well, the first column, the yellow, that just carries over
0 2 : 2 4 : 2 6 20 from the previous slide. So that's the net entry that occurred
0 2 : 2 4 : 3 1 21 prior to December 2010.

0 2 : 2 4 : 3 5 22 And now what I'm looking at is net entry after
0 2 : 2 4 : 3 8 23 December 2010. You can see that there was a very significant
0 2 : 2 4 : 4 3 24 decline. It went from positive 0.9 to negative 1.8, which
0 2 : 2 4 : 4 8 25 indicates a net exit of almost two firms per year.

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0 2 : 2 4 : 5 1 1 Q. What do you mean, "linear trend"?

0 2 : 2 4 : 5 3 2 A. Linear trend is a factor that I included in this analysis
0 2 : 2 4 : 5 7 3 to account for other factors that might be driving entry and
0 2 : 2 5 : 0 2 4 exit in this market.

0 2 : 2 5 : 0 4 5 Q. What is that bar that starts above minus 1.8 and goes
0 2 : 2 5 : 1 1 6 below it?

0 2 : 2 5 : 1 1 7 A. I understand you've discussed this before. This is the
0 2 : 2 5 : 1 2 8 famous "box and whiskers plot." The length of the column down
0 2 : 2 5 : 1 7 9 to negative 1.8, that's the point estimate on net exit after
0 2 : 2 5 : 2 3 10 December 2010. The two dots with the line connecting it,
0 2 : 2 5 : 2 8 11 that's the standard of error around that estimate.

0 2 : 2 5 : 3 1 12 Q. What does that say about the confidence levels of these
0 2 : 2 5 : 3 5 13 results?

0 2 : 2 5 : 3 5 14 A. It says that it's very good. And the right comparison
0 2 : 2 5 : 3 9 15 here is that confidence interval not to zero, but to 0.9. So
0 2 : 2 5 : 4 6 16 0.9 was the net entry rate prior to December 2010. The net
0 2 : 2 5 : 5 1 17 entry rate fell after December 2010 to negative 1.8. And the
0 2 : 2 5 : 5 8 18 confidence interval, you can see, is nowhere close to 0.9.

0 2 : 2 6 : 0 2 19 Q. Now, the results depicted in that second column, which is
0 2 : 2 6 : 0 6 20 in red, were they consistent with your hypothesis?

0 2 : 2 6 : 0 9 21 A. They were.

0 2 : 2 6 : 0 9 22 Q. All right. Let's go to the next column, please.

0 2 : 2 6 : 1 2 23 First of all, tell us what a non -- well, tell us
0 2 : 2 6 : 1 3 24 what you did here.

0 2 : 2 6 : 1 7 25 A. All right. This is from -- this and the next column that

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1 we are going to show in a minute are from the Round 3 report.

2 I did this analysis in response to a criticism of my report
3 that was offered by Dr. Mason in one of his expert reports.

4 And he criticized my use of a linear trend, saying
5 that these exogenous factors in the industry, they don't evolve
6 gradually, that there can be very abrupt changes.

7 So to test that hypothesis, he didn't do any
8 econometric analysis of his own; he just offered this as a, I
9 guess, suggestion. But I implemented it, and actually what it
10 does is it strengthens the results.

11 Q. What are the results?

12 A. The results show after December 2010 a net exit of
13 2.4 firms per year.

14 Q. Were these results consistent with your hypothesis?

15 A. They are as well, yes.

16 MR. LOTTERMAN: Let's go to the final column, please.

17 BY MR. LOTTERMAN:

18 Q. What did you do here?

19 A. The same thing. Here, Dr. Mason also criticized my
20 Round 1 report for not taking the price of oil into account,
21 that changes in the oil market might affect participation in
22 these deepwater leases.

23 So to test that, I added the price of oil as an
24 explanatory factor, and you can see the results here. It's
25 still showing a net exit of about 1.7 firms per year, very much

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1 in the neighborhood of where we started with.

2 Q. Again, consistent or inconsistent with your hypothesis?

3 A. They are all consistent.

4 Q. Let me ask you just a final question on this. Why did you
5 analyze future oil prices as opposed to oil futures provisions?

6 A. Well, the analysis in the far right column, that includes
7 the spot price of oil. And so I think Dr. Mason has made some
8 suggestions about using -- his report actually referred to
9 future prices. Sitting here, he referred to futures prices,
10 which are different. He talked about NYMEX. So I'm a little
11 confused about exactly what he is suggesting.

12 But in any case, there's a large economic literature
13 on this point. Oil futures prices are a very poor predictor of
14 the path of future prices. That's well known. Actually, the
15 current spot price of oil, because it's a storable commodity,
16 is a much better predictor of future prices than are the
17 futures markets, where other sorts of things are going on.

18 MS. HARVEY: I'm going to move to strike this answer.
19 Dr. Sunding in his report did not get into a discussion about
20 differences between futures and oil prices. He merely did the
21 analysis. And to the extent that he is now justifying that
22 analysis, it is outside the four corners of his report.

23 MR. LOTTERMAN: Your Honor, we actually thought long
24 and hard about moving to strike Dr. Mason's testimony because
25 we did not find futures prices mentioned in his report. I just

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02:29:34 1 thought we would deal with it and move on.

02:29:36 2 **THE COURT:** Well, the fact that you thought long and
02:29:39 3 hard but didn't do it doesn't justify having this witness
02:29:43 4 testify to something that's not in his report, so I sustain the
02:29:46 5 objection.

02:29:49 6 **BY MR. LOTTERMAN:**

02:29:50 7 **Q.** Professor Sunding, did Dr. Mason testify that none of the
02:29:53 8 experts, including you, conducted any robustness checks in this
02:29:57 9 case?

02:29:58 10 **A.** He did say that, yes.

02:29:59 11 **Q.** Is that true?

02:30:00 12 **A.** No. What is up on the screen, this is a robustness check.

02:30:06 13 Robustness in a statistical model means invariance to
02:30:13 14 alternative assumptions, and that's precisely what this is.

02:30:18 15 **Q.** By the way, these hypotheses you tested, these entry and
02:30:24 16 exit rates and analysis we're about to talk about, does it
02:30:24 17 address only the threat of penalties being imposed on
02:30:28 18 nonoperators in the Gulf?

02:30:30 19 **A.** Yes. I think that's important to keep in mind, to the
02:30:36 20 extent these results are consistent with a hypothesis, that
02:30:41 21 capital formation in the industry might be affected by
02:30:45 22 penalizing investors, nonoperators, which I think is the case.

02:30:52 23 It's important to keep in mind that this would be
02:30:55 24 just in response to potential penalties. The effect of actual
02:31:00 25 imposition of penalties I would expect to be much larger.

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0 2 : 3 1 : 0 5 1 Q. Now, let's wrap this up, this section up. Did either
0 2 : 3 1 : 1 0 2 expert called by the U.S. in this case analyze entry and exit
0 2 : 3 1 : 1 5 3 rates in the Gulf of Mexico?

0 2 : 3 1 : 1 7 4 A. No.

0 2 : 3 1 : 1 9 5 Q. Did they criticize your analysis?

0 2 : 3 1 : 2 3 6 A. They offered some criticism without doing any econometric
0 2 : 3 1 : 2 9 7 analysis.

0 2 : 3 1 : 2 9 8 Q. I'm going to focus just on two. It might be a bit dated
0 2 : 3 1 : 3 2 9 now, but did both note a booming investment atmosphere in the
0 2 : 3 1 : 3 8 10 deepwater Gulf of Mexico?

0 2 : 3 1 : 4 0 11 A. Yes, they did.

0 2 : 3 1 : 4 1 12 Q. Let's assume that's true, or let's assume it's true six
0 2 : 3 1 : 4 4 13 months from now. Is that a valid criticism?

0 2 : 3 1 : 4 7 14 A. It was true over a lot of the period that I'm considering
0 2 : 3 1 : 5 0 15 here. No. The fact is there are a lot of factors that can
0 2 : 3 1 : 5 5 16 drive investment in the Gulf. Penalties is just one of them.

0 2 : 3 2 : 0 2 17 The issue here that I think is relevant to this case
0 2 : 3 2 : 0 5 18 is, what is the pattern of investment with penalties on
0 2 : 3 2 : 0 8 19 nonoperators as compared to what's the pattern of investment
0 2 : 3 2 : 1 3 20 without those penalties? Whatever else is happening in the
0 2 : 3 2 : 1 8 21 world economy, that stays exogenous. The question is, what's
0 2 : 3 2 : 2 4 22 the economic effect of this precedential attempt to impose
0 2 : 3 2 : 2 9 23 penalties?

0 2 : 3 2 : 2 9 24 Q. Dr. Mason also claims that oil and gas companies are
0 2 : 3 2 : 3 2 25 fungible and can enter and exit easily in this market.

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0 2 : 3 2 : 3 7 1 Fair point?

0 2 : 3 2 : 3 8 2 A. I don't believe so, no.

0 2 : 3 2 : 3 9 3 MS. HARVEY: Again, this is outside of the scope of

0 2 : 3 2 : 4 1 4 the four corners of his report.

0 2 : 3 2 : 4 4 5 MR. LOTTERMAN: Your Honor, I've got his Round 1

0 2 : 3 2 : 4 5 6 report at page 9, his Round 3 report at page 12.

0 2 : 3 2 : 5 5 7 MS. HARVEY: Is there a particular sentence?

0 2 : 3 2 : 5 8 8 MR. LOTTERMAN: I will have to find it.

0 2 : 3 3 : 3 6 9 THE COURT: You said page 9?

0 2 : 3 3 : 3 8 10 MR. LOTTERMAN: Yes, that's what I'm looking at. I

0 2 : 3 3 : 4 0 11 made that notation last night, and I'm trying to find it.

0 2 : 3 3 : 5 1 12 THE COURT: Do you know if that's in your report,

0 2 : 3 3 : 5 2 13 sir? I don't see it there.

0 2 : 3 3 : 5 6 14 MR. LOTTERMAN: You know what, Your Honor, let's not

0 2 : 3 3 : 5 8 15 belabor that point. Let's move on.

0 2 : 3 4 : 0 1 16 THE COURT: Okay.

0 2 : 3 4 : 0 1 17 BY MR. LOTTERMAN:

0 2 : 3 4 : 0 1 18 Q. Professor Sunding, did you conduct any other analysis

0 2 : 3 4 : 0 4 19 about possible consequences of penalizing nonoperators?

0 2 : 3 4 : 0 8 20 A. I did.

0 2 : 3 4 : 1 1 21 Q. Did it involve an HHI analysis?

0 2 : 3 4 : 1 4 22 A. Yes.

0 2 : 3 4 : 1 5 23 Q. Is that an analysis commonly used in your field?

0 2 : 3 4 : 1 9 24 A. It is. HHI stands for Herfindahl Index, which is very

0 2 : 3 4 : 2 4 25 commonly used in antitrust proceedings as a measure of

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0 2 : 3 4 : 2 7 1 concentration.

0 2 : 3 4 : 2 8 2 Q. As a general matter, does the higher index mean a more
0 2 : 3 4 : 3 4 3 concentrated level of ownership?

0 2 : 3 4 : 3 6 4 A. Yes, it does.

0 2 : 3 4 : 3 8 5 Q. In your opinion, can concentrations change as lease shares
0 2 : 3 4 : 4 2 6 are bought and sold?

0 2 : 3 4 : 4 4 7 A. Yes. It's a mathematical matter, the way the Herfindahl
0 2 : 3 4 : 4 9 8 Index is calculated. It's just the sum of the squared lease
0 2 : 3 4 : 5 5 9 shares; and the more concentrated is a particular lease, the
0 2 : 3 4 : 5 9 10 higher would be the Herfindahl Index.

0 2 : 3 5 : 0 1 11 Q. Did you hear Mr. Arnold testify today that that's a common
0 2 : 3 5 : 0 4 12 practice in deepwater Gulf of Mexico?

0 2 : 3 5 : 0 6 13 A. The buying and selling of shares, yes.

0 2 : 3 5 : 1 0 14 MR. LOTTERMAN: Would you please call up D-38083.

0 2 : 3 5 : 1 3 15 BY MR. LOTTERMAN:

0 2 : 3 5 : 1 6 16 Q. Were these, as a very general matter, the results of your
0 2 : 3 5 : 1 9 17 analysis?

0 2 : 3 5 : 1 9 18 A. Yes. We looked at -- or I looked at every deepwater lease
0 2 : 3 5 : 2 7 19 in the BOEM database in the Gulf of Mexico. It's 5,632 leases
0 2 : 3 5 : 3 3 20 and recorded 9,121 lease share changes. The reason that's
0 2 : 3 5 : 3 9 21 larger than the 5,632 is exactly this point that within a
0 2 : 3 5 : 4 4 22 lease, lease shares can change over time.

0 2 : 3 5 : 4 9 23 Q. What were the results?

0 2 : 3 5 : 5 0 24 A. The result was -- again, using this December 15, 2010,
0 2 : 3 5 : 5 4 25 date as a demarcation point, that after that date there was an

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0 2 : 3 6 : 0 2 1 8 percent increase in lease concentration -- or I should say
0 2 : 3 6 : 0 6 2 concentration within leases in the deepwater Gulf.

0 2 : 3 6 : 1 2 3 Q. Is an 8 percent increase cause for concern to an
0 2 : 3 6 : 1 5 4 economist?

0 2 : 3 6 : 1 5 5 A. Yes. In a Herfindahl Index, that's a large change.

0 2 : 3 6 : 2 1 6 Q. Now, let's briefly summarize your various econometric
0 2 : 3 6 : 2 7 7 analyses, please.

0 2 : 3 6 : 2 8 8 MR. LOTTERMAN: Let's call up D-38084.

0 2 : 3 6 : 2 9 9 BY MR. LOTTERMAN:

0 2 : 3 6 : 3 1 10 Q. Now, do both your analyses show an effect on capital
0 2 : 3 6 : 3 7 11 investment in the Gulf of Mexico?

0 2 : 3 6 : 3 8 12 A. Yes, they do. They show -- and I want to be careful about
0 2 : 3 6 : 4 2 13 this. They show empirical patterns that are indicative that
0 2 : 3 6 : 4 9 14 something changed in this December 2010 time period. And
0 2 : 3 6 : 5 4 15 really -- the concentration analysis and the entry/exit
0 2 : 3 7 : 0 0 16 analysis, they are really two ways of looking at the same
0 2 : 3 7 : 0 3 17 phenomenon. They are, if you will, two sides of the same coin.

0 2 : 3 7 : 0 8 18 Q. Do these consequences, assuming they occurred, extend
0 2 : 3 7 : 1 1 19 beyond the oil and gas industry?

0 2 : 3 7 : 1 4 20 A. Certainly. The oil and gas industry is integral to the
0 2 : 3 7 : 1 9 21 economy in this part of the country, so whatever effects on
0 2 : 3 7 : 2 2 22 capital formation or economic activity occur on oil and gas
0 2 : 3 7 : 2 7 23 ripple or spread through the economy in ways that have been
0 2 : 3 7 : 3 2 24 measured.

0 2 : 3 7 : 3 3 25 Q. You address those consequence in your report?

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0 2 : 3 7 : 3 5 1 A. I do, yes.

0 2 : 3 7 : 3 7 2 Q. Now, did Dr. Mason attempt to perform his own Herfindahl
0 2 : 3 7 : 4 2 3 analysis?

0 2 : 3 7 : 4 3 4 A. He looked at concentration, yes.

0 2 : 3 7 : 4 5 5 Q. Was a slide of his results shown both in Mr. O'Rourke's
0 2 : 3 7 : 4 9 6 opening and Dr. Mason's direct?

0 2 : 3 7 : 5 1 7 A. Yes.

0 2 : 3 7 : 5 2 8 MR. LOTTERMAN: All right. Let's put that on the
0 2 : 3 7 : 5 3 9 screen, D-38085.

0 2 : 3 7 : 5 6 10 MS. HARVEY: We're also going to object to this as
0 2 : 3 7 : 5 7 11 outside the four corners of Dr. Sunding's report.

0 2 : 3 8 : 0 1 12 Dr. Sunding's Round 3 report addresses a different analysis
0 2 : 3 8 : 0 6 13 related to borehole and platforms. Dr. Sunding does not
0 2 : 3 8 : 1 1 14 address this particular analysis that is done by Dr. Mason.

0 2 : 3 8 : 1 7 15 MR. LOTTERMAN: Let me do this, Your Honor.

0 2 : 3 8 : 1 8 16 Take that down.

0 2 : 3 8 : 2 2 17 BY MR. LOTTERMAN:

0 2 : 3 8 : 2 3 18 Q. Professor Sunding, were you suggesting in your analysis of
0 2 : 3 8 : 2 8 19 the exit of nonoperators in the Gulf of Mexico that they had
0 2 : 3 8 : 3 2 20 any antitrust implications in this case?

0 2 : 3 8 : 3 5 21 A. No, certainly not.

0 2 : 3 8 : 3 7 22 Q. Now, are there other shortcomings to Dr. Mason's analysis?

0 2 : 3 8 : 4 1 23 A. You're referring to his concentration analysis?

0 2 : 3 8 : 4 4 24 Q. Yes.

0 2 : 3 8 : 4 4 25 A. Yes.

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0 2 : 3 8 : 4 6 1 Q. What were the three categories of data that you reviewed?

0 2 : 3 8 : 5 1 2 A. With respect to?

0 2 : 3 8 : 5 3 3 Q. I'm sorry, the entity and exit analysis.

0 2 : 3 8 : 5 9 4 Let me step back.

0 2 : 3 9 : 0 1 5 MR. LOTTERMAN: Your Honor, I cut some stuff at
0 2 : 3 9 : 0 3 6 lunch, so we are skipping around a little bit.

0 2 : 3 9 : 0 6 7 THE COURT: All right.

0 2 : 3 9 : 1 0 8 BY MR. LOTTERMAN:

0 2 : 3 9 : 1 0 9 Q. Stepping back just generally, your analysis compared to
0 2 : 3 9 : 1 3 10 Dr. Mason's, did you review data showing existing leases?

0 2 : 3 9 : 2 1 11 A. Yes, I did.

0 2 : 3 9 : 2 2 12 Q. Did you review data showing newly acquired leases?

0 2 : 3 9 : 2 6 13 A. Yes, I did.

0 2 : 3 9 : 2 6 14 Q. Did you review data showing changes within a lease?

0 2 : 3 9 : 3 0 15 A. Yes. That was the focus of my analysis.

0 2 : 3 9 : 3 2 16 Q. Did Dr. Mason analyze all three of those categories?

0 2 : 3 9 : 3 6 17 A. No, he did not.

0 2 : 3 9 : 3 7 18 MS. HARVEY: Again, he is going to the point where I
0 2 : 3 9 : 4 0 19 made the objection earlier. He is talking about Dr. Mason's
0 2 : 3 9 : 4 3 20 analysis in Figure 3 of his Round 2 report, and so this
0 2 : 3 9 : 4 7 21 question is leading up to that.

0 2 : 3 9 : 4 9 22 BY MR. LOTTERMAN:

0 2 : 3 9 : 5 0 23 Q. Did you address this in your reports?

0 2 : 3 9 : 5 2 24 A. I believe so, yes.

0 2 : 3 9 : 5 4 25 MR. LOTTERMAN: Your Honor, I can look, but this is

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02:39:56 1 fundamental, as far as I know.

02:39:58 2 **THE COURT:** I don't know.

02:39:59 3 Where is it in the report?

02:40:02 4 **MS. HARVEY:** Your Honor, it's in the end of his
02:40:04 5 Round 3 report, and he's talking about the borehole analysis in
02:40:08 6 a platform.

02:40:12 7 **THE COURT:** Your objection is what?

02:40:15 8 **MS. HARVEY:** Dr. Mason, in his Round 2 report, did
02:40:20 9 two analyses that -- the demonstrative that was up before was
02:40:23 10 with respect to Figure 3 -- or Table 3 in his Round 2 report.
02:40:28 11 Dr. Sunding only addressed the material in Table 5 of the
02:40:33 12 Round 2 report.

02:40:35 13 **MR. LOTTERMAN:** Your Honor, I've got page 11, Round 3
02:40:38 14 report where Professor Sunding talks about Dr. Mason not
02:40:42 15 accounting for the role of nonoperating investors in his
02:40:45 16 analysis. And if you look at the furthermore paragraph, he
02:40:47 17 talks about the fact that his analysis was not concerned with
02:40:51 18 the entire Gulf of Mexico. I believe that covers his
02:40:54 19 testimony.

02:40:56 20 **MS. HARVEY:** Right, but it's referring to the
02:40:57 21 platforms or boreholes, and that's a different analysis that he
02:41:01 22 did.

02:41:03 23 **THE COURT:** I don't know if it's different or the
02:41:05 24 same.

02:41:05 25 I'll let him answer it. Go ahead.

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0 2 : 4 1 : 1 1 1 **BY MR. LOTTERMAN:**

0 2 : 4 1 : 1 1 2 **Q.** So of the three categories of data consisting of leases,
0 2 : 4 1 : 1 5 3 newly acquired leases, and changes to existing leases, which
0 2 : 4 1 : 2 1 4 did Dr. Mason not analyze?

0 2 : 4 1 : 2 2 5 **A.** He didn't analyze two of the three.

0 2 : 4 1 : 2 4 6 **Q.** Is that important here?

0 2 : 4 1 : 2 5 7 **A.** I believe so, yes.

0 2 : 4 1 : 3 5 8 **Q.** To be clear, did any of Dr. Mason's other analyses study
0 2 : 4 1 : 4 1 9 behavior by nonoperators?

0 2 : 4 1 : 4 2 10 **A.** No. They were solely limited to operators.

0 2 : 4 1 : 4 6 11 **Q.** Professor Sunding, as an economist, do you see any
0 2 : 4 1 : 5 0 12 rationale for imposing a penalty on Anadarko in this case?

0 2 : 4 1 : 5 3 13 **A.** I don't.

0 2 : 4 1 : 5 3 14 **Q.** As an economist, do you believe that imposing a penalty on
0 2 : 4 1 : 5 7 15 nonoperators like Anadarko could have negative consequences on
0 2 : 4 2 : 0 2 16 investment in the Gulf of Mexico and beyond?

0 2 : 4 2 : 0 6 17 **A.** I think that's a very real possibility.

0 2 : 4 2 : 0 9 18 **MR. LOTTERMAN:** I pass the witness, Your Honor.

0 2 : 4 2 : 1 1 19 **THE COURT:** All right.

0 2 : 4 2 : 1 1 20 **CROSS-EXAMINATION**

0 2 : 4 2 : 2 9 21 **BY MS. HARVEY:**

0 2 : 4 3 : 3 0 22 **Q.** Judy Harvey for the United States. Dr. Sunding, I have
0 2 : 4 3 : 3 3 23 you on cross-examination.

0 2 : 4 3 : 3 4 24 **A.** Good afternoon.

0 2 : 4 3 : 3 5 25 **Q.** Dr. Sunding, your opinion goes to the impact of a penalty

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0 2 : 4 3 : 3 9 1 on a nonoperator, but you have no personal experience as to how
0 2 : 4 3 : 4 2 2 operators and nonoperators relate on a day-to-day basis,
0 2 : 4 3 : 4 6 3 correct?

0 2 : 4 3 : 4 8 4 A. I do not have any work experience in the oil and gas
0 2 : 4 3 : 5 0 5 industry, no.

0 2 : 4 3 : 5 3 6 Q. You are not relying on any prior professional experience
0 2 : 4 3 : 5 7 7 in oil and gas cases to inform your assumptions in this case
0 2 : 4 4 : 0 2 8 involving nonoperators, correct?

0 2 : 4 4 : 0 5 9 A. That's also correct.

0 2 : 4 4 : 0 6 10 Q. And no aspect of your work prior to this case specifically
0 2 : 4 4 : 0 9 11 focused on Gulf of Mexico deepwater oil and gas operations,
0 2 : 4 4 : 1 4 12 correct?

0 2 : 4 4 : 1 4 13 A. Can you repeat that again?

0 2 : 4 4 : 1 6 14 Q. No aspect of your work prior to this case specifically
0 2 : 4 4 : 2 0 15 focused on Gulf of Mexico deepwater operations, correct?

0 2 : 4 4 : 2 4 16 A. Not specifically or exclusively. It may have been
0 2 : 4 4 : 2 9 17 included in part of a larger aggregate that I was looking at.

0 2 : 4 4 : 3 3 18 Q. You have never reviewed a contract between an oil and gas
0 2 : 4 4 : 3 6 19 operator and nonoperator before this case, correct?

0 2 : 4 4 : 3 9 20 A. That is also true.

0 2 : 4 4 : 4 4 21 Q. And you have done no work for a nonoperator in the oil and
0 2 : 4 4 : 4 7 22 gas industry to assist it in evaluating any sort of investment
0 2 : 4 4 : 5 1 23 decision, correct?

0 2 : 4 4 : 5 2 24 A. Yes, that's also right.

0 2 : 4 4 : 5 8 25 Q. Turning to the Clean Water Act and OPA, you're aware that

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0 2 : 4 5 : 0 1 1 when Congress passed OPA in 1990, it also amended the Clean
0 2 : 4 5 : 0 5 2 Water Act to increase civil penalties for oil spills.

0 2 : 4 5 : 1 0 3 That's consistent with your understanding?

0 2 : 4 5 : 1 1 4 A. Yes, it is.

0 2 : 4 5 : 1 1 5 Q. And these 1990 Clean Water Act amendments also link the
0 2 : 4 5 : 1 7 6 size of the spill in barrels to the penalty amount?

0 2 : 4 5 : 2 0 7 A. Yes. I'm aware of that.

0 2 : 4 5 : 2 2 8 Q. You're aware that both houses of Congress unanimously
0 2 : 4 5 : 2 3 9 passed OPA with the Clean Water Act amendments together in
0 2 : 4 5 : 2 9 10 1990?

0 2 : 4 5 : 3 0 11 A. I noted that. I actually didn't know before I reviewed
0 2 : 4 5 : 3 3 12 that as part of this case; but yes, it was unanimous.

0 2 : 4 5 : 3 8 13 Q. Let's briefly turn to your empirical analysis, and I will
0 2 : 4 5 : 4 3 14 focus on the entry and exit data study that you did.

0 2 : 4 5 : 4 7 15 Your study is based on one observation per year
0 2 : 4 5 : 4 9 16 starting in 1983, or 31 observations in total?

0 2 : 4 5 : 5 5 17 A. Well, to -- I'll make sure I say this precisely. To do
0 2 : 4 6 : 0 0 18 the entry/exit analysis -- entry and exit occurs day-by-day.
0 2 : 4 6 : 0 4 19 So what I had to do in the statistical analysis was collapse
0 2 : 4 6 : 0 9 20 that day-to-day movement into periods of a year. Because lease
0 2 : 4 6 : 1 3 21 shares don't change every day; otherwise, we would have -- I'm
0 2 : 4 6 : 1 7 22 just picking a number -- 150 no changes in a year and then a
0 2 : 4 6 : 2 3 23 few days where things changed.

0 2 : 4 6 : 2 5 24 Q. But just to be clear so that we understand, you picked
0 2 : 4 6 : 2 8 25 December 15 as your date, and you analyzed the 27 years before

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- 0 2 : 4 6 : 3 3 1 that and came up with an average, correct?
- 0 2 : 4 6 : 3 6 2 A. Yes, 2010 and prior.
- 0 2 : 4 6 : 3 9 3 Q. Right. So that's 27 years?
- 0 2 : 4 6 : 4 0 4 A. Yes, that's correct.
- 0 2 : 4 6 : 4 2 5 Q. And then you had the December 15, 2010, going forward for
- 0 2 : 4 6 : 4 7 6 four years, a four-year period, correct?
- 0 2 : 4 6 : 5 0 7 A. 2011 forward, correct.
- 0 2 : 4 6 : 5 3 8 Q. 2010 -- oh, 2011, right?
- 0 2 : 4 6 : 5 4 9 A. Yes.
- 0 2 : 4 6 : 5 6 10 Q. So you did not do a sensitivity analysis to analyze the
- 0 2 : 4 7 : 0 1 11 annual trends before and after, say, December 15, 2004, to see
- 0 2 : 4 7 : 0 6 12 how they compared to after 2004, correct?
- 0 2 : 4 7 : 1 0 13 A. Well, I did note in my report that I used, as alternative
- 0 2 : 4 7 : 1 4 14 trigger dates to do the sensitively analysis, one year prior
- 0 2 : 4 7 : 2 0 15 and one year after.
- 0 2 : 4 7 : 2 2 16 Q. Right. But not going to, for example, 2004?
- 0 2 : 4 7 : 2 6 17 A. No. I did one year prior, one year after, so 2009 and
- 0 2 : 4 7 : 3 0 18 2011.
- 0 2 : 4 7 : 3 4 19 Q. You said on direct that you analyzed all of the deepwater
- 0 2 : 4 7 : 3 8 20 leases, but to be clear, you only analyzed leases in the
- 0 2 : 4 7 : 4 2 21 1,000-meter depth or greater category, correct?
- 0 2 : 4 7 : 4 6 22 A. That's absolutely true.
- 0 2 : 4 7 : 4 7 23 Q. So you didn't analyze any deepwater leases between 1800
- 0 2 : 4 7 : 5 0 24 and approximately 3300 feet, correct?
- 0 2 : 4 7 : 5 2 25 A. Well, I don't want to get caught up in the semantics of

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0 2 : 4 7 : 5 6 1 what's deepwater, what's ultra-deepwater. I analyzed leases
0 2 : 4 8 : 0 1 2 that were in the same category that the Macondo lease was in.

0 2 : 4 8 : 0 5 3 Q. Correct. But you did not analyze any from 1800 to 3300?

0 2 : 4 8 : 0 9 4 A. I looked at 1,000 meters and above.

0 2 : 4 8 : 1 2 5 Q. And your entry/exit analysis only includes parties that
0 2 : 4 8 : 1 5 6 are never listed as a designated operator for leases in that
0 2 : 4 8 : 1 9 7 dataset, correct?

0 2 : 4 8 : 2 0 8 A. Yes. That's by design.

0 2 : 4 8 : 2 2 9 Q. Right. Your dataset of nonoperators excludes Anadarko
0 2 : 4 8 : 2 5 10 because Anadarko sometimes acts as an operator for those
0 2 : 4 8 : 2 9 11 leases, correct?

0 2 : 4 8 : 2 9 12 A. Yes, that's correct. And just so we are clear, there may
0 2 : 4 8 : 3 4 13 be firms that I categorized as nonoperators in deepwater who
0 2 : 4 8 : 3 9 14 are operators in other segments. So when I did my
0 2 : 4 8 : 4 3 15 categorization, I limited it just to that category.

0 2 : 4 8 : 4 6 16 Q. Your dataset also excludes BP because BP sometimes acts as
0 2 : 4 8 : 5 0 17 an operator, correct?

0 2 : 4 8 : 5 1 18 A. Yes.

0 2 : 4 8 : 5 2 19 Q. In fact, it excludes all major oil companies, correct?

0 2 : 4 8 : 5 6 20 A. Yes.

0 2 : 4 8 : 5 8 21 MS. HARVEY: Just so we know the companies that we
0 2 : 4 8 : 5 9 22 are talking about, can we please pull up D-33171.

0 2 : 4 9 : 0 4 23 BY MS. HARVEY:

0 2 : 4 9 : 0 5 24 Q. Dr. Sunding, do you recognize this as a list of the
0 2 : 4 9 : 0 8 25 54 nonoperators that you analyzed for your entry and exit

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0 2 : 4 9 : 1 4 1 analysis?

0 2 : 4 9 : 1 4 2 A. Yes.

0 2 : 4 9 : 1 4 3 The format is somewhat different than the way it
0 2 : 4 9 : 1 8 4 appears to me on my computer, but I went through and I checked
0 2 : 4 9 : 2 4 5 this, and this looks to be the dataset that I used in the
0 2 : 4 9 : 2 8 6 Round 1 analysis.

0 2 : 4 9 : 3 0 7 Q. You agree, and I think you said on direct, it's common in
0 2 : 4 9 : 3 3 8 the industry for companies to act as nonoperators with respect
0 2 : 4 9 : 3 6 9 to some projects and operators with respect to others?

0 2 : 4 9 : 4 0 10 A. Yes.

0 2 : 4 9 : 4 3 11 Q. Your analysis in the entry/exit also does not capture how
0 2 : 4 9 : 4 7 12 many leases each of the nonoperators in your dataset held,
0 2 : 4 9 : 5 0 13 correct?

0 2 : 4 9 : 5 2 14 A. In the entry/exit analysis, that's right; a firm is either
0 2 : 4 9 : 5 8 15 in or it's out.

0 2 : 4 9 : 5 8 16 Q. So you couldn't distinguish a company exiting the Gulf
0 2 : 5 0 : 0 1 17 that held 60 leases from one that held just one lease?

0 2 : 5 0 : 0 6 18 A. Right. They would show up either as ones or zeros;
0 2 : 5 0 : 0 8 19 they're in or they're out.

0 2 : 5 0 : 1 0 20 Q. Let's turn to the trend itself that you identified.

0 2 : 5 0 : 1 3 21 You can't show that the exit trend you identified was
0 2 : 5 0 : 1 6 22 caused by the government's suit, correct?

0 2 : 5 0 : 1 8 23 A. No. I want to be clear about that. I think I took pains
0 2 : 5 0 : 2 1 24 in both my reports to make the point that in econometric
0 2 : 5 0 : 2 9 25 analysis, we don't have the luxury that, say, biologists do or

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02:50:33 1 physicists do. We don't get to do laboratory experiments very
02:50:38 2 often. We have to take data from the market as it comes to us.

02:50:41 3 So we can, through econometric analysis, establish
02:50:46 4 correlation. Causation is a different matter. And so I want
02:50:51 5 to make sure that we are clear about that. I am not claiming
02:50:56 6 causation. What I am claiming is that there was a change in
02:51:00 7 the marketplace that was pretty dramatic, that was consistent
02:51:05 8 with the working hypothesis I developed.

02:51:09 9 Q. You agree as a general matter that there are other things
02:51:11 10 going on in the world that can drive market entry or exit from
02:51:15 11 the Gulf?

02:51:17 12 A. As a general matter, yes.

02:51:19 13 Q. A reason Dr. Mason suggests is that after Macondo, firms
02:51:24 14 became more educated about the likelihood or severity of a
02:51:28 15 blowout. You did not investigate whether this was a reason for
02:51:29 16 the trend you identified?

02:51:30 17 A. It's not possible to do that, I don't believe.

02:51:33 18 Q. You're aware that Mr. Walkup similarly identified some
02:51:37 19 other possible reasons that could have been a reason for small
02:51:42 20 players exiting the Gulf of Mexico after 2010?

02:51:47 21 A. Sure. Firms make these decisions for a number of reasons,
02:51:49 22 one of which might be penalties.

02:51:53 23 Q. Okay. But you did not look at Mr. Walkup's reasons,
02:51:57 24 correct?

02:51:59 25 A. Not Mr. Walkup. I did -- as I talked about a few minutes

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0 2 : 5 2 : 0 2 1 ago, I did look at Professor Mason's.

0 2 : 5 2 : 0 5 2 Q. Two of Professor Mason's?

0 2 : 5 2 : 0 7 3 A. Yes.

0 2 : 5 2 : 0 8 4 Q. Let's turn to the companies that you identify as having
0 2 : 5 2 : 1 5 5 left the market after December 15, 2010. For those companies,
0 2 : 5 2 : 1 9 6 you did not look at their strategic business plans, correct?

0 2 : 5 2 : 2 4 7 A. I think I told you earlier, in my deposition, that I did
0 2 : 5 2 : 2 7 8 some general research but nothing more than that.

0 2 : 5 2 : 3 2 9 Q. You did not look at their capital investment strategies,
0 2 : 5 2 : 3 6 10 correct?

0 2 : 5 2 : 3 7 11 A. That's right.

0 2 : 5 2 : 3 7 12 Q. You did no firm-specific analysis for those companies that
0 2 : 5 2 : 4 0 13 exited, correct?

0 2 : 5 2 : 4 2 14 A. Beyond some checking of the firms that were showing up as
0 2 : 5 2 : 4 5 15 exiting the market, no.

0 2 : 5 2 : 4 7 16 Q. But according to literature that you cite, estimating the
0 2 : 5 2 : 5 0 17 capital distortions may require detailed firm-specific data;
0 2 : 5 2 : 5 5 18 isn't that right?

0 2 : 5 2 : 5 6 19 A. Yes, although, again, given the nature of the firms that
0 2 : 5 2 : 5 9 20 we are talking about here, I think it's unlikely that they
0 2 : 5 3 : 0 3 21 would disclose everything about the reasons that they are
0 2 : 5 3 : 0 6 22 making business decisions.

0 2 : 5 3 : 0 8 23 Q. But you agree that even if capital distortions can be
0 2 : 5 3 : 1 7 24 detected empirically, estimating the social cost of those
0 2 : 5 3 : 2 0 25 distortions require detailed, possibly firm-specific data.

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0 2 : 5 3 : 2 4 1 You agree with that, correct?

0 2 : 5 3 : 2 5 2 A. Well, yes, but with the understanding that's not what I

0 2 : 5 3 : 2 7 3 did. I'm not talking about the social cost of distortions.

0 2 : 5 3 : 3 5 4 Q. Let's turn to MOEX. MOEX is your case study of a

0 2 : 5 3 : 3 9 5 nonoperator that exited the Gulf following the government's

0 2 : 5 3 : 4 2 6 suit.

0 2 : 5 3 : 4 3 7 You are aware that MOEX paid \$90 million in civil

0 2 : 5 3 : 4 7 8 penalties, correct?

0 2 : 5 3 : 4 7 9 A. Yes.

0 2 : 5 3 : 4 8 10 Q. MOEX also paid a billion dollars to settle its claims with

0 2 : 5 3 : 5 3 11 BP over costs related to the Macondo incident. You're aware of

0 2 : 5 3 : 5 4 12 that?

0 2 : 5 3 : 5 4 13 A. Yes.

0 2 : 5 3 : 5 4 14 Q. And MOEX gave up its interest in Macondo as a result of

0 2 : 5 4 : 0 0 15 its settlement with BP?

0 2 : 5 4 : 0 1 16 A. Yes.

0 2 : 5 4 : 0 2 17 Q. At the time it held no other leases in the deepwater Gulf

0 2 : 5 4 : 0 5 18 of Mexico, to your knowledge, correct?

0 2 : 5 4 : 0 6 19 A. I believe that's correct, yes.

0 2 : 5 4 : 0 7 20 Q. So you can't determine why MOEX left?

0 2 : 5 4 : 1 0 21 A. No, but the fact of their leaving is consistent with the

0 2 : 5 4 : 1 4 22 story that penalties might have played a role.

0 2 : 5 4 : 1 8 23 Q. Another company exiting the Gulf in your analysis that you

0 2 : 5 4 : 2 2 24 identify is Black Elk Energy. And you are aware that in 2012,

0 2 : 5 4 : 2 6 25 there was a serious incident involving Black Elk on an offshore

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0 2 : 5 4 : 3 0 1 platform that resulted in the deaths of three individuals?

0 2 : 5 4 : 3 3 2 A. Yes. We discussed that previously.

0 2 : 5 4 : 3 5 3 Q. But you weren't aware of this incident at the time you
0 2 : 5 4 : 3 7 4 submitted your reports in this case, correct?

0 2 : 5 4 : 3 9 5 A. No.

0 2 : 5 4 : 4 1 6 Q. At the time you submitted your report, you couldn't rule
0 2 : 5 4 : 4 3 7 out the possibility that Black Elk left the deepwater market in
0 2 : 5 4 : 4 8 8 part because of this incident?

0 2 : 5 4 : 4 9 9 A. That's right.

0 2 : 5 4 : 5 2 10 Q. Another company you identify as exiting the Gulf is
0 2 : 5 4 : 5 5 11 St. Mary's Energy. St. Mary's is affiliated with SM Energy,
0 2 : 5 5 : 0 1 12 correct?

0 2 : 5 5 : 0 2 13 A. Yes.

0 2 : 5 5 : 0 2 14 Q. You are aware that SM Energy has stated a strategy of
0 2 : 5 5 : 0 6 15 focusing on onshore oil and gas plays with repetitive drilling
0 2 : 5 5 : 1 0 16 and completion opportunities, correct?

0 2 : 5 5 : 1 1 17 A. Yes.

0 2 : 5 5 : 1 3 18 Q. In your analysis that you present in your report, you
0 2 : 5 5 : 1 6 19 didn't consider that strategy might be an alternative reason
0 2 : 5 5 : 1 8 20 for St. Mary's leaving the Gulf, correct?

0 2 : 5 5 : 2 2 21 A. That's right, but I'd note it's not inconsistent.

0 2 : 5 5 : 2 8 22 Q. Moving on from the study, let's turn to your opinion that
0 2 : 5 5 : 3 1 23 as a matter of economic theory, the \$4 billion Anadarko paid to
0 2 : 5 5 : 3 6 24 resolve its OPA liability provides sufficient deterrence.

0 2 : 5 5 : 4 0 25 It's your opinion, and you reiterated this on direct,

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0 2 : 5 5 : 4 3 1 that OPA damages and Clean Water Act penalties have similar
0 2 : 5 5 : 4 6 2 effects on regulated entities with respect to deterrence,
0 2 : 5 5 : 4 9 3 correct?

0 2 : 5 5 : 4 9 4 A. Yes. To the extent that they are both monetary payments,
0 2 : 5 5 : 5 3 5 they would be expected to have similar effects.

0 2 : 5 5 : 5 7 6 Q. You're aware, because you stated this in your report, that
0 2 : 5 5 : 5 9 7 this Court has ruled that private parties could agree to an
0 2 : 5 6 : 0 2 8 indemnification clause for OPA damages; but for public policy
0 2 : 5 6 : 0 6 9 reasons, they could not agree to an indemnification clause for
0 2 : 5 6 : 0 9 10 penalties. Correct?

0 2 : 5 6 : 1 0 11 A. Yes, that's right.

0 2 : 5 6 : 1 0 12 Q. You understand that generally damages can be deducted as
0 2 : 5 6 : 1 4 13 business expenses, but penalties cannot be?

0 2 : 5 6 : 1 7 14 A. Yes, that's my understanding.

0 2 : 5 6 : 1 9 15 Q. Before moving on, I just want to turn really quickly to
0 2 : 5 6 : 2 2 16 the EPA Advisory Board article that you referenced a couple of
0 2 : 5 6 : 2 9 17 times on your direct examination.

0 2 : 5 6 : 3 2 18 Just to be clear, this is a report that was not
0 2 : 5 6 : 3 5 19 approved or endorsed by the EPA, correct?

0 2 : 5 6 : 3 9 20 A. Yeah. I don't know what happened to it after our panel
0 2 : 5 6 : 4 4 21 met and issued the report.

0 2 : 5 6 : 4 6 22 Q. In fact, there's a specific disclaimer within the document
0 2 : 5 6 : 4 9 23 that says: "This report has not been reviewed for approval by
0 2 : 5 6 : 5 2 24 the agency and, hence, the contents of this report do not
0 2 : 5 6 : 5 5 25 necessarily represent the views and policies of the

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0 2 : 5 6 : 5 9 1 Environmental Protection Agency nor of other agencies in the
0 2 : 5 7 : 0 4 2 Executive Branch of the federal government."

0 2 : 5 7 : 0 5 3 A. That's right, I know it has a disclaimer on it. The
0 2 : 5 7 : 0 8 4 report is the opinion of a group of -- I would characterize it
0 2 : 5 7 : 1 1 5 as very distinguished environmental economists.

0 2 : 5 7 : 1 7 6 Q. In the report, the actual opinions to which you refer to
0 2 : 5 7 : 2 5 7 on optimal deterrence, that was beyond the charge that was
0 2 : 5 7 : 2 9 8 asked for by the EPA, correct?

0 2 : 5 7 : 3 0 9 A. Yes. The specific charge was to make economic sense of
0 2 : 5 7 : 3 7 10 this illegal competitive advantage rationale for a penalty, and
0 2 : 5 7 : 4 3 11 the committee did go somewhat beyond that.

0 2 : 5 7 : 4 6 12 Q. That relates to economic benefit, right?

0 2 : 5 7 : 4 8 13 A. Which, the illegal competitive advantage?

0 2 : 5 7 : 5 0 14 Q. Yes.

0 2 : 5 7 : 5 1 15 A. That can be a category of economic benefit.

0 2 : 5 7 : 5 6 16 Q. In your model for economic deterrence or optimal
0 2 : 5 8 : 0 1 17 deterrence, for purposes of total harm, you mean full payment
0 2 : 5 8 : 0 4 18 of actual external damages, correct?

0 2 : 5 8 : 0 7 19 A. Well, allowable full payment, yes.

0 2 : 5 8 : 1 1 20 Q. And you haven't done an assessment of the total harms
0 2 : 5 8 : 1 4 21 here; no one has, correct?

0 2 : 5 8 : 1 6 22 A. That's coming. That's right, I haven't done that.

0 2 : 5 8 : 2 0 23 Q. You have done no assessment of any potential harms from
0 2 : 5 8 : 2 2 24 the incident, correct?

0 2 : 5 8 : 2 3 25 A. No. My opinion was that there is a robust process in

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0 2 : 5 8 : 2 7 1 place to assess those harms.

0 2 : 5 8 : 3 1 2 Q. You also talk about the settlement and the meaning of the
0 2 : 5 8 : 3 3 3 settlement between Anadarko and BP.

0 2 : 5 8 : 3 6 4 At the time you submitted your report, you had no
0 2 : 5 8 : 3 8 5 knowledge of the negotiations between Anadarko and BP leading
0 2 : 5 8 : 4 2 6 up to the settlement, correct?

0 2 : 5 8 : 4 4 7 A. That's right.

0 2 : 5 8 : 4 5 8 Q. You did not see or ask to see any internal calculation of
0 2 : 5 8 : 5 1 9 response costs or estimated future damages prepared by the
0 2 : 5 8 : 5 4 10 parties, correct?

0 2 : 5 8 : 5 5 11 A. No, I didn't, because I don't think it's important whether
0 2 : 5 8 : 5 8 12 or not Anadarko paid exactly, precisely 25 percent of whatever
0 2 : 5 9 : 0 6 13 actual external harms. That's not -- that's not the theory of
0 2 : 5 9 : 0 9 14 deterrence.

0 2 : 5 9 : 1 0 15 Q. You're aware that prior to the settlement, Anadarko
0 2 : 5 9 : 1 3 16 alleged that the spill resulted from BP's gross negligence?

0 2 : 5 9 : 1 6 17 A. Yes.

0 2 : 5 9 : 1 9 18 Q. You're aware that as a result of the settlement, Anadarko
0 2 : 5 9 : 2 2 19 agreed not to file an expert report in the multidistrict
0 2 : 5 9 : 2 5 20 litigation alleging that BP was grossly negligent? That was
0 2 : 5 9 : 2 9 21 part of the settlement?

0 2 : 5 9 : 3 0 22 A. I'm sorry, you said that kind of fast. Would you mind
0 2 : 5 9 : 3 2 23 saying it again.

0 2 : 5 9 : 3 3 24 Q. Sure.

0 2 : 5 9 : 3 4 25 A. I don't think I got it all.

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0 2 : 5 9 : 3 5 1 Q. You're aware that as a result of the settlement, in the
0 2 : 5 9 : 3 8 2 settlement agreement Anadarko agreed not to file an expert
0 2 : 5 9 : 4 1 3 report in the multidistrict litigation alleging that BP was
0 2 : 5 9 : 4 6 4 grossly negligent?

0 2 : 5 9 : 4 7 5 A. Yes.

0 2 : 5 9 : 4 8 6 MR. BROCK: Your Honor, we object to that on
0 2 : 5 9 : 5 0 7 relevance. I don't know what that has to do with this part of
0 2 : 5 9 : 5 2 8 the proceeding.

0 2 : 5 9 : 5 2 9 MS. HARVEY: Your Honor --

0 2 : 5 9 : 5 3 10 THE COURT: I overrule the objection.

0 2 : 5 9 : 5 6 11 BY MS. HARVEY:

0 2 : 5 9 : 5 6 12 Q. You can respond.

0 2 : 5 9 : 5 7 13 A. I did. Yes.

0 2 : 5 9 : 5 9 14 THE COURT: I think he answered it.

0 3 : 0 0 : 0 0 15 MS. HARVEY: Sorry. Thank you.

0 3 : 0 0 : 0 0 16 BY MS. HARVEY:

0 3 : 0 0 : 0 1 17 Q. And you're aware that the settlement between Anadarko and
0 3 : 0 0 : 0 5 18 BP was agreed to the day before experts were due in the
0 3 : 0 0 : 0 9 19 liability phase of this litigation?

0 3 : 0 0 : 1 2 20 A. That sounds correct.

0 3 : 0 0 : 1 5 21 Q. Let's turn to another factor in your analysis that you
0 3 : 0 0 : 1 8 22 talked about on direct, and it has to do with the probability
0 3 : 0 0 : 2 2 23 of detection of a violation.

0 3 : 0 0 : 2 4 24 So in the case of a large oil spill like this, it's
0 3 : 0 0 : 2 7 25 your opinion that the probability of detection is very high,

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03:00:31 1 correct?

03:00:31 2 A. Yes. It's very hard for me to believe that this would go
03:00:35 3 unnoticed.

03:00:37 4 Q. So you're referring to detection of a violation, correct?

03:00:41 5 A. Detection of this violation, yes.

03:00:43 6 Q. You're not looking at the probability of detecting risky
03:00:48 7 behavior that might lead to an oil spill, correct?

03:00:50 8 A. No, certainly not. That's not the way our penalty system
03:00:55 9 works.

03:00:55 10 Q. You're aware that this Court has made findings as to what
03:00:59 11 caused the Macondo blowout, but you have done no analysis of
03:01:02 12 whether those activities that led to the blowout could have
03:01:05 13 been detected, correct?

03:01:07 14 A. No.

03:01:12 15 Q. You haven't done an analysis, correct?

03:01:19 16 A. Could --

03:01:22 17 Q. I'm sorry, what -- I'm being told that I asked a confusing
03:01:26 18 question, so I'm going to -- not correct. So I'll ask it
03:01:27 19 again --

03:01:34 20 **THE COURT:** Wait. I'll read it. Your question was:
03:01:35 21 "But you have done no analysis of whether those activities that
03:01:41 22 led to the blowout could have been detected, correct?"

03:01:44 23 And you answered "No."

03:01:46 24 Did you mean no, you disagree with her or yes,
03:01:48 25 it's correct?

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03:01:49 1 THE WITNESS: It would be yes, it's correct.

03:01:52 2 MS. HARVEY: Thank you for that clarification,

03:01:53 3 Your Honor.

03:01:53 4 THE COURT: That kind of question happens all the

03:01:55 5 time in court.

03:02:13 6 BY MS. HARVEY:

03:02:14 7 Q. One of the articles you discussed on direct was by

03:02:17 8 Pitchford, correct?

03:02:18 9 A. Yes.

03:02:19 10 Q. In Pitchford, that assumes that the lender or the investor

03:02:24 11 is unaware of risky or cost-cutting activities performed by the

03:02:28 12 operator, correct?

03:02:29 13 A. Yes. It's part of this general literature on moral

03:02:32 14 hazard.

03:02:35 15 Q. But you agree that if a nonoperator was aware that an

03:02:37 16 operator was cutting corners on safety, the nonoperator could

03:02:40 17 make a decision about whether or not to invest, correct?

03:02:44 18 A. Yes. They could decide to withhold capital.

03:02:49 19 Q. Or they could decide not to continue to provide capital,

03:02:52 20 correct?

03:02:53 21 A. That's right.

03:02:54 22 Q. And you did not perform an analysis as part of your

03:02:58 23 reports to determine whether nonoperators like Anadarko might

03:03:01 24 have had access to any information about risky behaviors

03:03:06 25 engaged in by the operator, correct?

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03:03:09 1 A. No, I certainly did not.

03:03:10 2 Q. And in your report, you agree that nonoperators contribute
03:03:13 3 to positive HSE outcomes, correct?

03:03:18 4 A. I think I said they could.

03:03:22 5 MS. HARVEY: Thank you. We have no further
03:03:23 6 questions.

03:03:24 7 THE COURT: Redirect?

03:03:25 8 MR. LOTTERMAN: No, Your Honor. Thank you.

03:03:27 9 THE COURT: I just have a couple questions.

03:03:33 10 Do I understand that you are -- in the context
03:03:37 11 of this case, you've used the term "investor." You consider
03:03:42 12 Anadarko, in the context of this arrangement, to be a mere
03:03:47 13 investor?

03:03:48 14 THE WITNESS: Well, I'm using the word "investor"
03:03:52 15 more in an economic sense. They contributed capital. They are
03:03:58 16 certainly not an investor like I might be an investor in a
03:04:02 17 certificate of deposit. That would be a totally passive
03:04:05 18 relationship. I understand there's much more to it than that.
03:04:08 19 But my use of the term "investor" was just simply to denote
03:04:12 20 that they are contributing capital.

03:04:17 21 THE COURT: In terms of, from an economic standpoint,
03:04:19 22 deterrence, does it matter that -- deterrence is not just to
03:04:36 23 deter that defendant in this case. It's to deter others that
03:04:43 24 might do the same thing --

03:04:45 25 THE WITNESS: Yes.

03:04:50 1 **THE COURT:** -- or perhaps do the same thing in the
03:04:53 2 future. Does it matter at all to you whether a party sometimes
03:05:02 3 operates as -- sometimes becomes an operator and at other times
03:05:08 4 is a nonoperator? The same company operating in the same
03:05:13 5 industry in the same area occupies both roles, does that matter
03:05:21 6 in terms of what you are trying to deter here?

03:05:23 7 **THE WITNESS:** No, Your Honor. And when I talk about
03:05:27 8 deterrence, I am thinking about deterring future violations.
03:05:31 9 Obviously, this one can't be deterred; it's already occurred.

03:05:34 10 **THE COURT:** Right.

03:05:37 11 **THE WITNESS:** The question that -- again, to the
03:05:39 12 extent you have discretion in this area, my testimony is about
03:05:45 13 what is the right set of economic incentives to create going
03:05:52 14 forward from a deterrence perspective, understanding that there
03:05:54 15 are two competing social objectives here. There's, on the one
03:05:58 16 hand, a real desire to improve environmental quality and
03:06:02 17 prevent violations; but on the other hand, avoid the dangers of
03:06:06 18 over deterrence.

03:06:07 19 It seems to me that whether Anadarko was the
03:06:10 20 operator in this case or BP was the operator in this case,
03:06:15 21 going forward, you get a better set of economic incentives
03:06:20 22 created by putting responsibility, damages liability and
03:06:24 23 penalties on the operator, whoever the operator is going
03:06:28 24 forward. That would send a clear signal about responsibility
03:06:33 25 and about deterrence and about taking these negative

03:06:37 1 environmental consequences into account.

03:06:40 2 **THE COURT:** So you don't think imposing a penalty on
03:06:43 3 the nonoperator gives them some incentive to consider their
03:06:50 4 investments, if you want to call it an investment, wisely?

03:06:53 5 **THE WITNESS:** You know, it's an excellent question,
03:06:54 6 and with respect to Anadarko, I really think it's the central
03:06:59 7 question. The way I would phrase it, Your Honor, is
03:07:03 8 responsibility for OPA damages already creates an incentive, as
03:07:06 9 well as the fact that Anadarko or any other nonoperator
03:07:13 10 contributed capital.

03:07:15 11 And in the event of a catastrophic blowout, like
03:07:19 12 occurred here, that investment is lost. So there are already
03:07:22 13 incentives put in place by the mere fact of OPA liability. And
03:07:25 14 the question with respect to penalties is, what incentive is
03:07:29 15 needed beyond that.

03:07:32 16 Now, for a culpable operator, there's a totally
03:07:37 17 different analysis, and I didn't do that. But for a
03:07:41 18 nonculpable nonoperator --

03:07:43 19 **THE COURT:** Excuse me. What about a nonculpable
03:07:45 20 operator?

03:07:47 21 **THE WITNESS:** A non- -- yes, the OPA damages
03:07:51 22 certainly would apply in that case.

03:07:53 23 **THE COURT:** No, no. What about penalties?

03:07:55 24 **THE WITNESS:** You know, it would depend on other
03:07:59 25 facts of the case. For example, was the cap waived?

03:08:02 1 **THE COURT:** Because I'm certain -- I know you have
03:08:03 2 studied the Clean Water Act. Without getting into legal
03:08:06 3 opinions, I know you're aware that a non -- when we use
03:08:10 4 "culpability," it can mean different things, but I'm going to
03:08:14 5 say a nonnegligent operator is subject to penalties under the
03:08:21 6 Clean Water Act.

03:08:22 7 **THE WITNESS:** I understand that.

03:08:25 8 **THE COURT:** So how does that deter, then?

03:08:29 9 **THE WITNESS:** A nonnegligent operator?

03:08:31 10 **THE COURT:** Yes.

03:08:32 11 **THE WITNESS:** Sure. The question, I think,
03:08:34 12 Your Honor, is what is the degree of penalties, should it be a
03:08:37 13 very large penalty or a very small penalty. I understand you
03:08:41 14 have discretion.

03:08:42 15 **THE COURT:** Yeah, we know that, and there are eight
03:08:45 16 factors I have to consider, and this is only one of them. But
03:08:49 17 I'm just thinking through your theory of deterrence or
03:08:52 18 nondeterrence. It seemed like you could make the same argument
03:08:55 19 with respect to a nonnegligent operator as easily as you can
03:08:58 20 for a nonnegligent nonoperator.

03:09:01 21 **THE WITNESS:** Yes. For a nonnegligent operator,
03:09:04 22 there might be cases where penalty is required. I think a good
03:09:09 23 example -- or there are two that I have been through here. If
03:09:13 24 it's a smaller spill and there's a chance to avoid detection,
03:09:16 25 that would be a very good rationale for a penalty on top of

03:09:20 1 payment for actual damages. And if the damages cap isn't
03:09:24 2 waived, that would be another rationale for a penalty on top of
03:09:27 3 that. Otherwise, you have an under-deterrence result.

03:09:35 4 **THE COURT:** Okay. Thank you very much.

03:09:39 5 **THE WITNESS:** You're welcome.

03:09:44 6 **THE COURT:** I think you're done.

03:09:52 7 **MS. HIMMELHOCH:** Your Honor, the United States will
03:09:53 8 be offering into evidence and marshaling at the marshaling
03:09:56 9 conference two deposition bundles in rebuttal to the testimony
03:09:59 10 of Drs. Arnold and Sunding, and those bundles are Nicholas
03:10:03 11 Huch, H-U-C-H, and Alan O'Donnell, O-D-O-N-N-E-L-L, his Phase 1
03:10:13 12 deposition. And that will be the entirety of the
03:10:16 13 United States' rebuttal.

03:10:17 14 **THE COURT:** Any objections to those?

03:10:20 15 **MS. KIRBY:** Yes, Your Honor. It is our position, and
03:10:21 16 the United States is aware, that those two depositions have
03:10:25 17 strictly culpability designations in them, which were
03:10:29 18 precluded.

03:10:30 19 **MS. HIMMELHOCH:** Your Honor, they are not being
03:10:32 20 offered to show the culpability of Anadarko but to rebut the
03:10:35 21 expert opinions proffered here today. Some of the testimony in
03:10:39 22 those deposition designations go to the point of rebutting the
03:10:43 23 expert testimony offered today. Anadarko's objections are in
03:10:47 24 the bundles. They will be admitted subject to the bundles, but
03:10:51 25 we believe we have a right --

03:10:54 1 **THE COURT:** I'm going to allow them to be admitted
03:10:57 2 subject to Anadarko's objections. This is probably the
03:11:00 3 20th time I have said that I'm not going to hold Anadarko
03:11:04 4 culpable, i.e., negligent for the accident. Okay? I don't
03:11:07 5 think we need to say that over and over again. So no matter
03:11:12 6 what's in the deposition, okay? So rest assured.

03:11:17 7 **MS. HIMMELHOCH:** We have no intention of crossing
03:11:18 8 your order, Your Honor.

03:11:21 9 **THE COURT:** All right. You want to take up your
03:11:23 10 issue now?

03:11:24 11 **MR. BROCK:** I can, yes, Your Honor.

03:11:36 12 **THE COURT:** Just to set the scene here, so to speak,
03:11:41 13 at the end of last week -- actually, before the end of last
03:11:52 14 week, counsel for BP had alerted the Court off the record that
03:12:00 15 there was a problem with its last expert witness, Mr. Den Uyl,
03:12:07 16 because of some -- without going into detail, some serious
03:12:16 17 medical issues. The request was made of the Court that -- to
03:12:23 18 allow BP to hold its case open until Tuesday, until tomorrow,
03:12:32 19 and I said I would do that for Mr. Den Uyl -- it was
03:12:35 20 represented that counsel believed that Mr. Den Uyl would be
03:12:38 21 able to appear here tomorrow, on Tuesday. And then Friday, it
03:12:43 22 looked less likely that that would occur. And then again
03:12:47 23 today, we met at the lunch recess. And I will let you take it
03:12:53 24 from there, Mr. Brock.

03:12:55 25 **MR. BROCK:** Yes, sir. Just one correction on the

03:12:57 1 timeline. The days are running together for us too, but it was
03:13:01 2 on Wednesday afternoon that we --

03:13:04 3 **THE COURT:** Wednesday, that's right. I said Friday;
03:13:04 4 we weren't here Friday.

03:13:06 5 **MR. BROCK:** Correct. So we let you know that
03:13:07 6 Mr. Den Uyl would not be able to be present. So with that
03:13:11 7 qualification.

03:13:13 8 As we referenced to the Court in chambers, it is
03:13:16 9 BP's desire to present a witness in court on the issue of the
03:13:22 10 economic impact to the violator. On Wednesday when we
03:13:28 11 adjourned court, Mr. Regan and I flew to Chicago and met with
03:13:34 12 some of Mr. Den Uyl's colleagues who had assisted in working on
03:13:40 13 the report and doing some of the research.

03:13:43 14 We also were able to meet with Mr. Den Uyl
03:13:47 15 briefly during our time there. From that, we were able to
03:13:52 16 schedule telephone conferences on Friday with two potential
03:13:59 17 witnesses who we believe may be able to step into Mr. Den Uyl's
03:14:04 18 shoes and sponsor his report and testify live to Your Honor on
03:14:09 19 issues that we believe are important in the case.

03:14:14 20 We have scheduled meetings with each of the
03:14:16 21 potential experts for this week. Obviously we are in court
03:14:21 22 today, but we have one meeting scheduled for tomorrow and a
03:14:25 23 second meeting scheduled for Wednesday. I just make those
03:14:30 24 points to make sure the record is clear that we are proceeding
03:14:34 25 with diligence on this. We are trying to accommodate the

03:14:40 1 parties in the case to move this along as quickly as we can.

03:14:45 2 Just one second, Your Honor. I apologize.

03:14:53 3 And believe that we could be in a position very
03:14:56 4 soon to report to the Court on the issue of tendering a new
03:15:01 5 expert in place of Mr. Den Uyl to testify in the case.

03:15:06 6 We don't believe that any prejudice would result
03:15:09 7 from that to any of the parties. Obviously, there are things
03:15:13 8 to do in the posttrial phase, including findings of fact and
03:15:17 9 conclusions of law. I think for the findings of fact and
03:15:22 10 conclusions of law, we could proceed and do those on the
03:15:25 11 present schedule, allowing for the presentation of the findings
03:15:29 12 of fact on the economic impact at some point in the future to a
03:15:35 13 schedule that would be set by the Court.

03:15:39 14 We would, of course, proceed at Your Honor's
03:15:44 15 instruction with regard to the filing of the posttrial briefs,
03:15:46 16 but there would be ways that we could look at that also.

03:15:51 17 In chambers in looking, Your Honor, at the
03:15:55 18 timeline under which we might be able to accomplish this, I
03:15:59 19 know from one of the witnesses that is a candidate to help us
03:16:04 20 here that he is out of pocket the last two weeks of February,
03:16:07 21 so we have some time to interact with him this week and next,
03:16:14 22 if he continues to be a candidate. They are looking at
03:16:18 23 Mr. Den Uyl's reports, and our goal would be that we would not
03:16:23 24 be filing new expert reports but, rather, we would be working
03:16:31 25 with the experts to sign off on and adopt the reports.

03:16:38 1 It's always possible, as I mentioned in
03:16:40 2 chambers, that a new expert will bring his or her own
03:16:43 3 perspective to a new matter, and we would have to listen to
03:16:47 4 what they have to say about the reports, their view of the
03:16:50 5 reports, the approach that's taken; but we do not anticipate a
03:16:55 6 sea change in terms of the presentation that we would make of
03:16:58 7 BP's case. If we were going to do this, we would do it with
03:17:02 8 the idea that we would essentially follow the methodology that
03:17:07 9 we have put forth to Your Honor to this point in time in terms
03:17:11 10 of the approach.

03:17:14 11 We do think there is prejudice to BPXP in having
03:17:20 12 this trial conducted without the opportunity to present to
03:17:25 13 Your Honor not only our valuation in the case, but also the
03:17:31 14 basis for that valuation, which has been attacked in a very
03:17:37 15 meaningful way by the government's expert in this case,
03:17:39 16 Mr. Ratner.

03:17:41 17 I think I looked at the -- I looked at the times
03:17:44 18 in terms of Mr. Ratner's presence here in court. He accounted
03:17:49 19 for about 20 to 25 percent of their case in terms of his
03:17:55 20 presentation here in court. As I mentioned in chambers, he
03:18:01 21 says some things on the witness stand that we think are just
03:18:04 22 plain wrong, and they are significant to the case. I think we
03:18:09 23 have established in some ways the errors that he made in his
03:18:13 24 analysis on cross-examination, but we need an expert to round
03:18:21 25 that out and make that case.

03:18:24 1 As I mentioned, BXP is the only party in this
03:18:28 2 case who has put forth a valuation of the company. And
03:18:38 3 Mr. Ratner, in his fourth report, expert report in this case,
03:18:47 4 changed some of the things that he had said in his Round 2
03:18:51 5 report as relates to operating expenses. It's a significant
03:18:56 6 change. We think he is wrong about what he said in his fourth
03:19:01 7 round report, as well as what he said here in court.

03:19:04 8 It's a significant issue in the sense that it
03:19:07 9 affects the valuation in the billions of dollars. We would
03:19:14 10 like to present to you in an organized way what that mistake is
03:19:19 11 about and why it makes a difference.

03:19:29 12 It's also the case, Your Honor, that the
03:19:29 13 Wood Mac valuation is a very important issue in this case.
03:19:35 14 Mr. Ratner had his criticisms of that report, but
03:19:37 15 demonstrating, for your benefit, that this is not something
03:19:45 16 that was just pulled out of thin air, that there is significant
03:19:49 17 due diligence that went on to utilize this report, both by
03:19:54 18 Mr. Den Uyl in his report, as well as the underlying work that
03:19:59 19 was done by Wood Mac, we think would be important for the Court
03:20:02 20 to understand. There are many other things that we think would
03:20:07 21 be helpful in terms of the presentation of the case.

03:20:10 22 I know Your Honor, in other cases, has had the
03:20:14 23 approach that you would use the expert reports as the direct
03:20:19 24 examination, but we have done it a little different in this
03:20:22 25 case. I didn't have a prior experience practicing in front of

03:20:26 1 Your Honor, but in this case, we have used the direct testimony
03:20:31 2 to build out the background and experience of the experts, to
03:20:36 3 use graphical presentations that I hope are helpful to the
03:20:41 4 Court, maybe sometimes not, but I hope helpful to the Court in
03:20:47 5 explaining our positions, our responsive modules that we do
03:20:53 6 that will affect the credibility of a witness, especially if
03:20:56 7 there are opposing experts. And those things are important to
03:20:59 8 us in this case.

03:21:01 9 So I think my request is for a brief adjournment
03:21:08 10 of the trial. I will finish out my due diligence on terms of
03:21:13 11 investigating the expert witnesses that might stand in
03:21:18 12 Mr. Den Uyl's place, give Your Honor a prompt report on where
03:21:23 13 that stands as soon as I can work through that, and obviously I
03:21:28 14 would expect to interact with the United States about the
03:21:32 15 protocol that we would use going forward in terms of what would
03:21:36 16 be a fair way for us to present this part of the case.

03:21:43 17 I will just close by saying a couple things. I
03:21:47 18 do believe that if BP is not to be allowed an expert witness in
03:21:54 19 this case to testify live in place of Mr. Den Uyl, that the
03:22:01 20 Court should strike Mr. Ratner's trial testimony. We can go
03:22:07 21 back to a level playing field that way. The parties can submit
03:22:13 22 the expert reports of the opposing experts and utilize the
03:22:19 23 depositions of the opposing experts as they deem fit and cite
03:22:23 24 those to Your Honor in the way that they see fit, because it is
03:22:29 25 the case here that Mr. Ratner filed a Round 4 report after

03:22:36 1 Mr. Den Uyl's Round 4 report.

03:22:39 2 The way it was sequenced was we went first, they
03:22:41 3 went second. We only had an opportunity to examine Mr. Ratner
03:22:47 4 about that Round 4 report here in court. Mr. Den Uyl does not
03:22:53 5 have any testimony in the record related to that. I think
03:23:01 6 that's not an even playing field. And we would move to strike
03:23:04 7 Mr. Ratner's report if we are not going to be given leave to
03:23:12 8 explore the possibility of a replacement for Mr. Den Uyl.

03:23:17 9 My last point is more of a housekeeping matter
03:23:21 10 than anything, but I would like to ask for leave of Court to
03:23:25 11 file a short letter, a brief on this issue. I can do it -- I
03:23:33 12 would like to conduct these interviews, but I would like to be
03:23:37 13 able to convey to the Court what it is that I think that I can
03:23:40 14 do.

03:23:42 15 I have heard the Court in terms of your reaction
03:23:45 16 to something that would be in the 45 to -- I think 45 to
03:23:52 17 70 days was the range that I gave the Court in chambers. I was
03:23:58 18 trying to think about what a schedule might look like and the
03:24:01 19 work that needed to be done; but as I mentioned, I have not yet
03:24:06 20 met with the witnesses that I have spoken to by phone. I have
03:24:10 21 just now been able to start to get some feedback from one of
03:24:13 22 them on his views of the report, so I still have some work to
03:24:17 23 do.

03:24:19 24 I would like to have permission to file a brief
03:24:23 25 saying, here's what we can do at the appropriate time. I also

03:24:28 1 would like to just put in the record, just for the record, just
03:24:32 2 the sequence of our communications with Mr. Den Uyl just on the
03:24:37 3 diligence point. So I think that's it from us on that.

03:24:41 4 **THE COURT:** All right. Thank you, Mr. Brock.

03:24:43 5 **MS. HIMMELHOCH:** Your Honor, I will respond very
03:24:45 6 briefly. Sarah Himmelhoch for the United States.

03:24:48 7 BP has had the opportunity to fully
03:24:50 8 cross-examine Mr. Ratner not once, but twice; first in his
03:24:54 9 deposition and now at trial. They have had an opportunity to
03:24:59 10 challenge and examine Mr. Ratner's fourth report.

03:25:02 11 Under the proposal the United States is making,
03:25:04 12 we will be in a different position. We will not be in an equal
03:25:08 13 position because we will have had no opportunity to
03:25:11 14 cross-examine Mr. Den Uyl on his four reports, and especially
03:25:15 15 the one that was issued after his deposition.

03:25:19 16 Nonetheless, we are willing to live with that
03:25:22 17 disadvantage, given that this is a circumstance beyond BP's
03:25:28 18 control. Leaving the trial open for an unspecified period of
03:25:32 19 time is prejudicial. And offering BP an opportunity to bring
03:25:36 20 in a new witness is, to me, I don't think a good solution
03:25:41 21 because it either is a witness to parrot what is already in the
03:25:47 22 deposition and report which would come in, or an opportunity to
03:25:51 23 provide a new view on the evidence, which would significantly
03:25:56 24 prejudice the United States.

03:25:59 25 Civil trials are not supposed to be trials by

03:26:02 1 surprise. We would be learning of BP's economic case after we
03:26:07 2 had developed our trial strategy and after we had rested our
03:26:11 3 case. That would be an uneven playing field as well. I think
03:26:15 4 the only way that the balance of inequity here works out in any
03:26:22 5 way fairly is to confine ourselves to the evidence that was
03:26:27 6 prepared, disclosed, and examined.

03:26:29 7 And as I said, that gives BP the advantage of
03:26:32 8 having a chance to cross-examine on our fourth report while we
03:26:36 9 will not have had the same opportunity on theirs.

03:26:39 10 With respect to striking Mr. Ratner's testimony,
03:26:40 11 I don't think that is necessary or appropriate. I also heard
03:26:44 12 occasionally Mr. Brock refer to striking Mr. Ratner's report,
03:26:48 13 and I think that was a misspeaking --

03:26:51 14 **MR. BROCK:** I didn't mean to imply that. I meant his
03:26:54 15 trial testimony and the exhibits that were used in his trial
03:26:57 16 testimony.

03:26:59 17 **MS. HIMMELHOCH:** For the same reason that I think the
03:27:00 18 submission of Mr. Den Uyl's report and deposition is
03:27:04 19 sufficient, I oppose the motion to strike Mr. Ratner's
03:27:07 20 testimony.

03:27:09 21 **THE COURT:** I met with counsel for the parties in
03:27:11 22 chambers briefly during the lunch recess; and after listening
03:27:19 23 to BP and the government, I advised counsel for BP that I did
03:27:26 24 not intend and was not going to agree to hold this case open.

03:27:32 25 The suggestion in chambers was a request to hold

03:27:35 1 the case open for 60 to 75 days. Then there was another
03:27:42 2 suggestion of perhaps 45 days. None of those suggestions are
03:27:47 3 acceptable, for several reasons.

03:27:49 4 First of all, this trial has been going on since
03:27:50 5 early 2013. This is the third phase of an ongoing Clean Water
03:27:56 6 Act trial which started in, I think it was, February of 2013.
03:28:01 7 This has been extensively -- this case has been extensively
03:28:08 8 prepared by the parties with the cooperation of the parties,
03:28:11 9 with the great assistance of Magistrate Judge Shushan, who is
03:28:18 10 overseeing the discovery, the handling of depositions, the
03:28:22 11 experts and matters and so forth over a long period of time.

03:28:28 12 The idea of bringing in a replacement expert, I
03:28:32 13 just can't even imagine that with the complexity of this case
03:28:38 14 and the complexity of these reports and the underlying data and
03:28:44 15 evidence and materials that are relied upon, I can't imagine
03:28:50 16 that you could find one expert that would come in and just say,
03:28:54 17 I agree with everything that's in here. I mean, that's pretty
03:28:59 18 unrealistic, I think.

03:29:02 19 They certainly may agree with parts of it; they
03:29:04 20 may agree with large parts of it. And that means the
03:29:09 21 consequence would be we would be opening up discovery again, we
03:29:14 22 would be opening up depositions again. And we are not going to
03:29:17 23 go through all that. It's not fair to anybody.

03:29:20 24 I'm certainly sympathetic to BP's quandary here.
03:29:23 25 It's not their fault, but it's also not the government's fault.

03:29:27 1 It's not anyone else's fault that this has occurred. It is not
03:29:31 2 uncommon in trials -- and I'm sure the parties know this, the
03:29:36 3 attorneys know this -- particularly in bench trials where you
03:29:38 4 have no jury, for parties to often have to rely -- often rely
03:29:47 5 upon depositions of witnesses, even experts, and sometimes even
03:29:52 6 just written reports without depositions.

03:29:56 7 BP has the availability of four separate
03:30:04 8 detailed reports which Mr. Den Uyl has rendered. They have a
03:30:11 9 seven-and-a-half hour -- I understand seven and a half hours of
03:30:15 10 video deposition of Mr. Den Uyl.

03:30:19 11 So to the extent there's a need for the Court to
03:30:22 12 observe a witness testifying in terms of assessing how he
03:30:27 13 presents himself and the credibility and so forth, if BP wishes
03:30:34 14 to submit all or portions of that deposition, that's certainly
03:30:40 15 doable. I think that's the way we will have to proceed -- they
03:30:50 16 will have to proceed.

03:30:52 17 In other words, I'm not going to strike the
03:30:54 18 government's expert because of what has occurred with
03:30:56 19 Mr. Den Uyl. As I said, this is not some problem that the
03:31:02 20 government has caused, so it wouldn't be fair to them to do
03:31:07 21 that.

03:31:11 22 So, Mr. Brock, I guess you have to decide do you
03:31:15 23 want to -- I don't know if you are prepared to say right today.
03:31:18 24 Do you want to submit -- I suppose you want to submit all of
03:31:21 25 Mr. Den Uyl's reports. First of all, there's four different

03:31:25 1 reports, correct?

03:31:29 2 **MR. BROCK:** Yes, sir, we will offer his reports.

03:31:30 3 **THE COURT:** What about the deposition? Do you want
03:31:31 4 to submit the entirety of his seven-and-a-half-hour video
03:31:35 5 deposition, or do you want to take a couple days to designate
03:31:39 6 portions, or how do you want to handle that?

03:31:42 7 **MR. BROCK:** Yes, I would like a few days to look at
03:31:44 8 that to see what we might do. It might be appropriate to have
03:31:50 9 an order that would tell us when to designate, and if the
03:31:55 10 government wanted to counter-designate some of that, they could
03:31:58 11 do that also.

03:32:01 12 **THE COURT:** How long would it take you to do that?

03:32:05 13 **MR. BROCK:** I think we could do that by this time
03:32:07 14 next week.

03:32:09 15 **THE COURT:** Monday a week from now?

03:32:10 16 **MR. BROCK:** Yes, sir.

03:32:12 17 **THE COURT:** And the government could
03:32:13 18 counter-designate in -- how much time do you need to
03:32:17 19 counter-designate?

03:32:18 20 **MS. HIMMELHOCH:** I believe we could get it done by
03:32:20 21 Friday of the same week.

03:32:22 22 **THE COURT:** So BP will designate portions of
03:32:28 23 Mr. Den Uyl's video depositions by -- deposition. It's a
03:32:32 24 single deposition, right?

03:32:34 25 **MS. HIMMELHOCH:** Yes, Your Honor, single volume.

03:32:35 1 **THE COURT:** By Monday a week from now. And the
03:32:39 2 government will counter-designate by the following Friday.

03:32:44 3 **MR. BROCK:** If I could just make two points in
03:32:46 4 response to Your Honor's comments, please.

03:32:49 5 First, the deposition of Mr. Den Uyl, of course,
03:32:53 6 is not a proceeding in which we asked questions. There may be
03:32:57 7 a very short direct examination there. I don't actually
03:33:02 8 recall, but it's not our deposition.

03:33:04 9 **THE COURT:** I understand.

03:33:05 10 **MR. BROCK:** It's not the same as our presentation of
03:33:07 11 the case to you.

03:33:07 12 **THE COURT:** I see that here all the time here,
03:33:09 13 Mr. Brock. The parties have to use what was originally thought
03:33:13 14 to be discovery depositions at trial.

03:33:15 15 **MR. BROCK:** Right. The other issue is in terms of
03:33:19 16 the chances of someone adopting the report in whole or very
03:33:28 17 close to being the entire report, there are aspects of the
03:33:33 18 methodology that are pretty standard. We are talking to other
03:33:37 19 members of Mr. Den Uyl's firm --

03:33:40 20 **THE COURT:** I don't want to cut you off, but I'm just
03:33:42 21 not going there. I have already made my ruling.

03:33:44 22 **MR. BROCK:** I understand. I just hadn't mentioned
03:33:48 23 those points.

03:33:50 24 **THE COURT:** I've made my ruling, and that's it.

03:33:58 25 We interrupted Ms. Kirby's case here. I'm not

03:34:04 1 sure she has rested yet.

03:34:06 2 **MS. KIRBY:** We haven't exactly, Your Honor. It's our
03:34:07 3 intent to move in all of the demonstratives and trial exhibits
03:34:10 4 that we used today. We don't have a list yet that we have
03:34:13 5 shared with the United States.

03:34:14 6 So if it's acceptable to the Court, we will
03:34:16 7 marshal those in at the final marshaling conference. And then
03:34:21 8 subject to marshaling of the evidence, the exhibit bundles, and
03:34:25 9 the orphan documents, we rest our case.

03:34:28 10 **THE COURT:** Very well.

03:34:29 11 **MS. KARIS:** Thank you.

03:34:31 12 **MR. BROCK:** I know your patience is wearing thin, but
03:34:34 13 just one other point. I would like to make a short submission
03:34:39 14 to the Court just identifying what it is that I could do; and
03:34:45 15 if I might just have a few pages to do that at the end of the
03:34:52 16 week, I would appreciate that.

03:34:53 17 **THE COURT:** Five pages.

03:34:54 18 **MR. BROCK:** Five pages.

03:34:55 19 **THE COURT:** Double-spaced.

03:34:56 20 **MR. BROCK:** Double-spaced.

03:35:00 21 **MS. HIMMELHOCH:** 12-point font, Your Honor?

03:35:01 22 **THE COURT:** 12-point font?

03:35:03 23 **MS. HIMMELHOCH:** Your Honor, I've just been told that
03:35:05 24 I put my colleague's marital status in jeopardy by insisting on
03:35:09 25 Friday. Could we have until Monday to do our

03:35:13 1 counterdesignations?

03:35:14 2 **THE COURT:** Marital status in jeopardy?

03:35:17 3 **MS. HIMMELHOCH:** Yes. He had made a commitment
03:35:18 4 about -- the colleague who is handling this issue had made a
03:35:22 5 commitment that his wife was finally going to get to see him
03:35:26 6 for a couple of days, so I'm begging the Court's indulgence to
03:35:27 7 have until Monday to do our counters.

03:35:28 8 **THE COURT:** So BP gets a week and then you get
03:35:31 9 another week after that?

03:35:33 10 **MS. HIMMELHOCH:** Yes, Your Honor.

03:35:34 11 **THE COURT:** That's fine.

03:35:34 12 **MS. HIMMELHOCH:** Thank you. And would you be
03:35:34 13 expecting a -- the United States would like a very short
03:35:39 14 three-page response to BP's brief simply so the record is
03:35:42 15 complete?

03:35:43 16 **THE COURT:** Mr. Brock, when are you going to get your
03:35:46 17 five pages in?

03:35:47 18 **MR. BROCK:** Friday.

03:35:49 19 **THE COURT:** Monday, three pages.

03:35:55 20 **MS. HIMMELHOCH:** Yes.

03:35:56 21 **THE COURT:** Double-spaced.

03:35:56 22 **MS. HIMMELHOCH:** Double-spaced, 12-point font. Thank
03:35:59 23 you.

03:36:00 24 **THE COURT:** All right. So other than that -- I think
03:36:01 25 BP has also rested, correct?

03:36:03 1 MR. BROCK: We have some --

03:36:04 2 THE COURT: Getting in documents, right?

03:36:05 3 MR. BROCK: Yeah, we have some cleanup, but we are
03:36:07 4 ready to do that.

03:36:08 5 THE COURT: Okay. Good.

03:36:10 6 MS. KARIS: Your Honor, Hariklia Karis on behalf of
03:36:14 7 BXP. And subject, of course, to the submissions that we were
03:36:17 8 just discussing with the Court, the other outstanding
03:36:18 9 housekeeping items, if you will, are we are going to go through
03:36:24 10 all of our list of exhibits, demonstratives used with the last
03:36:29 11 few witnesses of our case to confirm that everything is now in
03:36:31 12 the record.

03:36:31 13 As I indicated earlier, there are a couple of
03:36:33 14 exhibits that we are in the process of trying to finalize. In
03:36:36 15 the event that we cannot work that out, we will submit those to
03:36:39 16 the Court with the parties' respective positions. And I have
03:36:43 17 spoken to the United States about that. And specifically,
03:36:45 18 those would be the two demonstratives, one exhibit, one
03:36:48 19 demonstrative used with Mr. Morrison in connection with some of
03:36:53 20 the charts that we used. But again, we hope to work that out.
03:36:58 21 I just wanted to make sure the record is clear that those are
03:37:01 22 not yet in the record.

03:37:02 23 The second point would be with respect to the
03:37:04 24 bundles that we submitted to the Court earlier today. Of
03:37:07 25 course, we offer those bundles with the objections that are

03:37:11 1 noted in those bundles on which we continue to stand. But
03:37:15 2 following the Court's guidance from prior phases, as has been
03:37:20 3 done by the other parties in this case, we submit those into
03:37:23 4 the record with those objections.

03:37:25 5 THE COURT: Very well.

03:37:26 6 MS. KARIS: Thank you, Your Honor.

03:37:27 7 THE COURT: Don't we have a marshaling conference
03:37:30 8 scheduled with Judge Shushan?

03:37:33 9 MS. KARIS: We do, Your Honor.

03:37:34 10 MS. HIMMELHOCH: Yes, Your Honor.

03:37:34 11 THE COURT: When is that set for? Do we know?

03:37:36 12 MS. KARIS: I believe it's February 24.

03:37:37 13 MS. HIMMELHOCH: The 24th, Your Honor.

03:37:38 14 THE COURT: The 24th of this month?

03:37:40 15 MS. HIMMELHOCH: Yes, Your Honor.

03:37:42 16 MS. KARIS: Yes.

03:37:43 17 THE COURT: Okay. Very well. Any other issues?

03:37:47 18 MS. HIMMELHOCH: Not from the United States,
03:37:48 19 Your Honor.

03:37:49 20 THE COURT: No other rebuttal from the United -- you
03:37:50 21 are not calling any live witnesses in rebuttal, right?

03:37:53 22 MS. HIMMELHOCH: No live witnesses.

03:37:54 23 The two deposition bundles and the evidence we
03:37:57 24 will be marshaling in, Your Honor.

03:37:59 25 MS. KARIS: I guess one category I forgot,

03:38:00 1 Your Honor, is the orphan exhibits. The Court has permitted
03:38:04 2 both parties to submit a certain number of orphan exhibits. We
03:38:07 3 will be moving those in, and all that will be done by the time
03:38:11 4 of the marshaling conference.

03:38:12 5 **THE COURT:** Very well.

03:38:13 6 **MS. HIMMELHOCH:** Since she brought up the orphan
03:38:14 7 exhibits, there's one outstanding issue that the parties have
03:38:17 8 disagreed on. We have received Judge Shushan's order; I am now
03:38:23 9 appealing it to you.

03:38:24 10 The defendants have argued that those
03:38:26 11 35 orphans, only 10 of those can be documents that the other
03:38:30 12 side objected to.

03:38:31 13 **THE COURT:** Wait. You're appealing now something
03:38:33 14 that Judge Shushan ruled on?

03:38:38 15 **MS. HIMMELHOCH:** Yes, Your Honor -- and the reason
03:38:38 16 I --

03:38:38 17 **THE COURT:** Why don't you put this in a letter to me
03:38:40 18 or something?

03:38:41 19 **MS. HIMMELHOCH:** Will do.

03:38:43 20 **THE COURT:** I'm not going to sit here and try to
03:38:45 21 figure this out right now. Give me a three-page letter.

03:38:49 22 **MS. HIMMELHOCH:** I can do it in one, Your Honor.

03:38:50 23 **THE COURT:** One? I doubt that, but --

03:38:52 24 **MS. HIMMELHOCH:** Okay. How about two? How about
03:38:53 25 two, Your Honor?

03:38:53 1 THE COURT: I will give you two pages, a two-page
03:38:56 2 letter.

03:38:57 3 And you want to respond to that?

03:38:59 4 MS. KARIS: We do, Your Honor.

03:39:00 5 THE COURT: When can you get me the letter, Sarah?

03:39:02 6 MS. HIMMELHOCH: I can get you that Thursday of this
03:39:04 7 week, Your Honor.

03:39:04 8 THE COURT: And BP can respond by Monday. Okay?

03:39:07 9 MS. KARIS: Thank you, Your Honor. We will do that
03:39:09 10 without putting anyone's marital status in jeopardy.

03:39:11 11 Then lastly, I was just handed a note that we
03:39:14 12 previously, this morning, handed to the United States the
03:39:17 13 transcript of the videos that we played last week: Ms. Cross,
03:39:22 14 Captain Hanzalik, and --

03:39:23 15 THE COURT: I thought we had offered those in -- we
03:39:25 16 put those in already. We didn't?

03:39:26 17 MS. HIMMELHOCH: We put in the United States'.

03:39:28 18 THE COURT: Okay.

03:39:28 19 MS. HIMMELHOCH: There's no objection to BP's.

03:39:30 20 THE COURT: All right. Those are admitted.

03:39:30 21 MS. KARIS: We move those at this time.

03:39:32 22 THE COURT: Those are admitted.

03:39:38 23 MS. KARIS: Thank you, Your Honor.

03:39:39 24 THE COURT: Very well. Anyone has anything else?

03:39:40 25 MR. BROCK: That does it from us.

03:39:44 1 **THE COURT:** Thanks to all of you, all of counsel, the
03:39:47 2 parties for your cooperation.

03:39:53 3 One thing I have said previously and I will
03:39:56 4 repeat it here, it has been a good experience for the Court to
03:40:02 5 preside over these trials because despite whatever else may be
03:40:07 6 going on in this case outside the courtroom, all of you all
03:40:14 7 have always acted very professionally and civilly, and I
03:40:20 8 appreciate that. It's been a pleasure to try these cases.

03:40:26 9 We will take it under advisement. Thank you.

03:40:29 10 **THE DEPUTY CLERK:** All rise.

03:40:29 11 (Proceedings adjourned.)

03:40:29 12 * * *

13 **CERTIFICATE**

14 I, Toni Doyle Tusa, CCR, FCRR, Official Court
15 Reporter for the United States District Court, Eastern District
16 of Louisiana, certify that the foregoing is a true and correct
17 transcript, to the best of my ability and understanding, from
18 the record of proceedings in the above-entitled matter.

19
20
21 *s/ Toni Doyle Tusa*
22 Toni Doyle Tusa, CCR, FCRR
23 Official Court Reporter
24
25

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