VOLUME 29 STATE OF ALASKA 1 2 IN THE SUPERIOR COURT AT ANCHORAGE : 15 3 V.29. X 4 In the Matter of: 5 Case No. 3ANS89-7217 STATE OF ALASKA Case No. 3ANS89-7218 6 versus 7 JOSEPH J. HAZELWOOD 8 9 Anchorage, Alaska March 14, 1990 10 11 The above-entitled matter came on for trial by jury before the Honorable Karl S. Johnstone, commencing at 12 8:35 a.m. on March 14, 1990. This transcript was prepared 13 14 from tapes recorded by the Court. 15 **APPEARANCES:** On behalf of the State: 16 17 BRENT COLE, Esq. 18 MARY ANN HENRY, Esq. Assistant District Attorneys 19 On behalf of the Defendant: 20 DICK L. MADSON, Esq. 21 MICHAEL CHALOS, Esq. 22 THOMAS RUSSO, Esq. 23 24 PRO-TYPISTS, INC. 25 Professional Transcription Service (202) 347-5395 ARLIS Alaska Resources Library & Information Services Anchorage Alaska

SPEC

1	WITNESSES:	CON	TEN	<u>t s</u>		
2	DEFENDANT'S		DIRECT	<u>CROSS</u>	REDIRE	CT RECROSS
3	Michael P. Hlastala			3	21	33
4					41	
5	Ed Siedlick		47	71	88	
0	James Kunkel		92	97		
0	Ivan J. Mihajlovic		100	127	160	180
0					188	
10		FХH	твт	тs		
11	DEFENDANT'S		ĪDENT	IFICAT:	ION IN	EVIDENCE 98
12	СВ					98
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1	PROCEEDINGS
2	(Whereupon, the jury enters the courtroom.)
3	THE COURT: Sir, you're still under oath.
4	Whereupon,
5	MICHAEL P. HLASTALA
6	called as a witness by counsel for the Defendant, resumed
7	the stand and, having been previously sworn by the Clerk,
8	was further examined and testified as follows:
9	CROSS EXAMINATION Resumed
10	BY MR. COLE:
11	Q Good morning, Doctor.
12	A Good morning.
13	Q Very quickly, I'd like to cover one thing that we
14	talked about yesterday. Would it be fair to say that at
15	the 400 criminal trials where you have testified on behalf
16	of the Defendant, the majority of those dealt with the
17	validity of the breath test?
18	A Yes. I think that's fair to say.
19	Q Would that be 80 percent that dealt with the
20	validity of the breath test, or 90 percent?
21	A I don't know, but it could be on that order. I
22	really don't know.
23	Q Okay.
24	Now, do you get referrals for consulting in
25	matters from defense attorneys you've worked for in the

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1 past? 2 Yes. Α 3 I assume that you speak at seminars, correct? Q 4 Α Yes, I have. 5 Now, do you get referrals from speaking in Q 6 seminars? 7 I don't know. I suppose it's possible. No one Α 8 has ever -- well, I don't know if I have been contacted 9 only because of them hearing me speak at the seminar. 10 Now, you've spoken at several seminars in the Q 11 past, correct? 12 Α Yes. 13 One of them would have been what is known as the Q 14 third annual DWI Defense Seminar, correct? 15 That would be the one in Reno? Is it that Α national seminar or was it a local Washington --16 17 Q Excuse me. 18 (Pause) 19 See if this refreshes your recollection. 20 Α Oh, this was in Washington. 21 Thank you. Q 22 You've also spoken at the 4th Annual Criminal Law 23 Seminar, correct? 24 Α I don't remember the title. 25 Q Well --

5 1 Α I've spoken at a number of them. 2 Let's see if this refreshes your recollection. Q 3 Α Right. I remember the Chairman asking me to do that. That was also in the state of Washington. 4 5 Q And you've also spoken at the annual drunk driving seminar, correct? 6 I presume. I don't remember the titles of all 7 Α 8 those seminars, but that's possible. 9 Q Now, at the Third Annual DWI -- well, before I 10 get into that, these seminars are put on by defense 11 attorneys, correct? 12 Many of them are. Some of them are not. But Α many of them are. 13 Q These three were. 14 Those three were put on by defense attorneys. 15 Α It's a local --16 17 It --Q 18 No, wait a minute. The one actually -- I think A that one you showed me was put on by the State Bar 19 20 Association, which is not a defense, necessarily, oriented group. 21 At the Third Annual DWI Defense Seminar, you Q 22 spoke with a person by the name of Stephen Hane, correct? 23 Α Yes. 24 Q And your topic was how and when to use a defense 25

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<sup>1</sup> expert, correct?

2 Α That was the topic he chose, yes. 3 Other topics that were addressed in that Q particular seminar were, for instance, laying the mine 4 5 field cross-examine of an arresting officer, correct? I have no idea. Was that one of the other 6 Α 7 speakers? 8 Q One of the topics that was discussed was laying 9 the minefield to cross-examine the arresting officer. 10 Correct? 11 MR. MADSON: Excuse me. Your Honor, I don't know 12 what the relevance is of some other topic. If this witness didn't speak on the topic, what possible relevance is what 13 14 somebody else believes or says happened. THE COURT: Mr. Cole, you're getting a little far 15 afield. Why don't you get back on track? 16 17 BY MR. COLE: (Resuming) 18 At the Fourth Annual Criminal Law Seminar, your Q 19 topic was breath testing conditions, correct? 20 It could have been. Α 21 Q Does this refresh your recollection, Dr. 22 Hlastala? 23 This is -- let's see. Α 24 Does this refresh your recollection? Q 25 It does. This was about two years ago. Let Α

1 me --2 Q Yes or no. Does this refresh your recollection? 3 Let me read it first. Α 4 Well, then read it. No comments. Just yes or Q 5 no, please. MR. MADSON: Your Honor, he's arguing with the 6 7 witness. 8 MR. COLE: Judge, my questions ask for a simple 9 yes or no, and Dr. Hlastala, every time he gets a chance, goes on to a narrative. I just want a simple yes or no. 10 11 THE COURT: I wish we could avoid this kind of colloquy. Sir, if you can answer the question just yes or 12 no, go ahead. If you can't, just tell Mr. Cole you can't 13 14 answer it yes or no, and that you need to explain your answer. You can do it that way. 15 THE WITNESS: All right, I'll --16 17 THE COURT: Whether a document can refresh your recollection or not just calls for a yes or no answer. 18 THE WITNESS: I'll have to read it to see --19 THE COURT: Sure. 20 (Pause) 21 22 THE WITNESS: Yes. The fourth speaker down is me, so this does refresh my recollection. 23 BY MR. COLE: (Resuming) 24 Q And your topic was breath testing deficiencies, 25

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A That's correct.

Q And at the DWI Seminar that we talked about, the annual Drunk Driving Seminar, your topic was, "Battling the New BAC verifier, correct?"

A It could have been.

Q Now, when we left yesterday -- left off yesterday
8 -- we talked about absorption, correct? Remember talking
9 about that?

A Yes.

Q On direct exam, yesterday, from Mr. Madson, you
 indicated that the absorption rates were between
 half-an-hour and three-and-a-half hours. Correct?

A I did, but I also considered the possibility that it might be longer. But from the Dubowsky article --

16 Q Excuse me --

A -- and some others, it was between half-an-hour
 and three-and-a-half hours.

Q You said, a half-an-hour and three-and-a-half
 hours, correct?

A That was not the complete range I said, but I did say that at one time, yes.

Q In most of the articles that you have read on
 this subject, people fall within that half-an-hour to
 three-and-a-half hour period, correct?

1 Yes. In most of the articles, they do. А 2 Q And the average is about one to two hours. 3 Correct? 4 Α That's correct. 5 And your studies showed that the maximum was one Q 6 to two hours. Correct? 7 Well, the maximum was about two. The range was A 8 about one to two hours. 9 Q So if we were to put up here one-half, one --10 (Pause) 11 You would agree that most people -- most people 12 -- fall within this category from one-half hour to three-and-a-half hours. Correct? 13 14 A I would agree that that would be the range for most people. 15 Q And it would be rare to have someone fall within 16 17 || the period zero to one-and-a-half? 18 Yes. Rare, but possible. Α Q Rare, but possible. 19 20 Α Yes. And it would be possible, but rare, to fall 21 Q outside three-and-a-half hours, correct. 22 Α Yes. 23 Now, I'd like to ask you a question about 24 Q elimination rates. Dr. Prowdy \_\_\_\_\_\_ had testified 25

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1 that fall within a bell-shaped curve, as far as 2 elimination rates. Would you agree with that? 3 Α I think that would be fair to say, yes. 4 (Pause) 5 Let's see. Your studies showed that people fell Q 6 within .10 to .25. Zero -- .25 -- Correct. Or zero -- oh, 7 I'm sorry. And .025. Correct? Well, not exactly, but my -- if you'll recall, my 8 Α 9 studies indicated that there was an average, plus a 10 standard deviation, and --11 Q You said the standard deviation was .010 --12 MR. MADSON: Your Honor --13 BY MR. COLE: (Resuming) 14 -- and .025 --Q 15 Α No. 16 MR. MADSON: -- I think the witness needs to 17 finish his answer. He was cut off in mid-sentence. 18 THE COURT: Do you need to finish the answer? 19 THE WITNESS: No, but I can respond to the second 20 -- the next question. 21 No, I didn't say that. I said that in my 22 studies, I had an average value of a .018 plus or minus 23 .004, which is the standard deviation. 24 BY MR. COLE: (Resuming) 25 Of course. So the standard deviation would Q

1 actually be less than that. It would be 014 or 022. 2 No, that would be one standard deviation, but as A 3 I mentioned in direct, if you want to consider 95 percent 4 of the population, you consider plus or minus two standard 5 deviations, and that would be plus or minus .0008. So --Q So 95 percent of the people are? 6 7 No. 95 percent of the people in my particular Α 8 study, if you use normal parametric statistics, would fall 9 between a .010 and a .026. 10 Well, let's put a 26 here. Q 11 But that --Α 12 Q 95 percent, with the average being .018. Correct? 13 That's correct. 14 Α So -- I mean, that's not to scale, obviously, but 15 Q is that about what it looks like? 16 17 Well, it would look something like that, but the Α only thing is for -- this would be the general population. 18 19 For my particular studies, we only had 15 to 18 or so subjects, so it wouldn't be bell-shaped like that. But if 20 21 you considered the entire population, that would be a fair 22 representation. Okay. And that's pretty consistent with what the 23 Q other people in the field have found, correct? 24 Yes. 25 Α

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1 So this would be about two-and-a-half percent --0 2 statistically -- and this, then, would be about 3 two-and-a-half percent -- statistically? 4 That's right. Α 5 And this part would be 95 percent? Q 6 That's correct. Α 7 With the mean about one-eighth? Q 8 That's right. But let me add one thing. That Α 9 was the data for the males in the study. The females were 10 different. 11 Q Well, we're talking about a male here, so that's 12 fine. 13 Α All right. 14 Now, you say retrograde extrapolation, or back Q 15 calculation, is not an accurate means of measuring a 16 person's blood alcohol content at an earlier time, correct? 17 Α Yes. 18 Now, when you wrote up your questions for Q 19 attorneys, you were -- you took care to make sure that you 20 did that accurately, right? That the things that you told 21 them were accurate, right? 22 Α I took care. I suppose there could have been some things that were inaccurate in some of those earlier 23 questions. I really don't recall. 24 25 Q Well, you -- obviously, if you were going to send

some questions to somebody of what you expected to answer
and what they should ask, you wouldn't want to mislead
them, right?

A Well, you see, they can ask any questions they want. The questions -- I'm not sure I really understand your question, but I suppose I would have tried to be reasonably accurate --

Q You would have tried to be as accurate as
 9 possible, because you wouldn't want to embarrass them by
 10 giving them the wrong information, right?

A It's -- they're the ones that might embarrass themselves. I would not embarrass them by giving them questions. They have the choice of asking the questions they wish to ask.

Q But you admitted yesterday that one of the reasons for doing this, writing up these questions, is because you deal with attorneys that aren't quite as knowledgeable, and sometimes you have to give them the knowledge and the information that they need to effectively cross \_\_\_\_\_ questioning, what?

A Well, attorneys are pretty knowledgeable. It's just that they're not knowledgeable regarding blood alcohol as much -- usually.

Q But you would try and give them as accurate information about the issues of blood alcohol and breath

14 1 testing as you could, correct? 2 I would do that, yeah. Α 3 Now, isn't it true that in one of your questions, Q 4 you said the following. 5 MR. MADSON: Excuse me. I'm going to object. He 6 said "one of his questions." We don't know where, when, 7 what --8 (Inaudible). 9 (Pause) 10 BY MR. COLE: (Resuming) 11 Do you recall drawing up questions, suggesting Q 12 questions directed to Dr. Hlastala on December 5, 1988? 13 Well, I don't recall, but I can certainly look at Α 14 it and see. Yes. 15 Are those the questions that you did? Q 16 Yeah, I believe so. Α 17 Well, I want to make sure --Q 18 Α (Inaudible). 19 Are these the questions that you did, or not? Q 20 They appear to be. I don't recall sending them A 21 to you, but they appear to be ones that I have sent to 22 other people. 23 Other defense attorneys? Q 24 I've also sent them to prosecuting attorneys, so Α 25 I may have sent them to other prosecuting attorneys.

1 Is that when they were prosecutors, or when they Q 2 were defense attorneys? 3 Α They've asked me as prosecutors, and I've sent 4 them to you. 5 And one of the sections that you discussed in Q your questions concerns retrograde extrapolations, correct? 6 7 That, I believe so, yes. Α 8 Q Well, I'm not trying to trick you --9 I believe -- I believe that is in there. yes. Α 10 Towards the end. 11 Now, and you said, "Ask the following if you Q 12 suspect there may have been some absorption of alcohol from the stomach between the time of the stop and the time of 13 the alcohol test." 14 15 Α Yes. "This argument is strongest if there was drinking Q 16 close to the time of the stop." 17 That's correct. Α 18 "This argument is weakened if there was drinking 19 C over a long period of time or if the subject stopped 20 drinking several hours before the driving incident." 21 Correct? 22 Yes, just --Α 23 You said that? Q 24 Yes, that would agree with what I just said here, 25 Α

<sup>1</sup> || right.

Q Now, isn't it true that that calculation,
 retrograde extrapolation, whatever you want to call it, can
 be accurate under certain -- certain circumstances?

A It can be, if -- it can be, if you have
 corroborating information, and if you're really going over
 a short range. Then I think it can be reasonably accurate,
 within a range. You have to consider a range of error, and
 that range of error just gets bigger the farther back you
 go.

Q Okay. You have stated that if the Defendant is well into the post absorption phase, that calculating of blood alcohol content will be accurate. Correct? Correct or incorrect?

A I may have stated that. I -- it would be
 accurate within a certain range. I mean, I would agree
 with accuracy but acknowledging error all the time.

Q Do you recall writing an article called "The
 Physiology of Alcohol in the Body?"

<sup>20</sup> A Yes.

Q And when you write articles to be published, do
you take a certain -- you make sure that everything that
you say is as accurate as possible. Correct?
A I do indeed, but let's -Q Excuse me. Is that correct or not?

1 Sure it is. Α 2 Q And when you write these articles, you don't 3 write misleading information in them, do you? 4 I usually try not to, correct. Α 5 You try and put in as accurate as information as Q 6 you can. 7 That's correct. A 8 Q Right. 9 And in this article, "Physiology of Alcohol in 10 the Body," you wrote, "If the Defendant was well into the 11 post-absorpted phase, calculated BAC will be accurate." 12 Correct? That's what I wrote --Α 13 Q Excuse me. Did you write that or not? 14 That's what I just said. That's what I wrote. 15 Α And next you said, "However, remember that it Q 16 17 sometimes takes four hours after drinking to reach the post-absorptive phase?" 18 Yes. 19 Α "If an individual has been drinking and then goes Q 20 out and is caught driving shortly thereafter, it is 21 entirely possible that the BAC is accurately increasing 22 from the time of the incident to the time of the breath or 23 blood test." Correct? 24 Yes. That's right. 25 Α

1 Q "The drinking pattern is of critical importance 2 when estimating the BAC at the time of the incident from 3 the BAC at the time of the test." Correct? 4 That's a summary of the problems with retrograde Α 5 extrapolation. That's correct. 6 And the period that you mentioned was four hours Q 7 in this. correct? 8 For a normal range of individuals, correct. Α 9 Q For this. 10 Uh-huh. Α 11 Under your normal range of individuals, if a Q 12 person had been eating -- had eaten lunch, at noon, around 13 noon, 1:30, and drank during the afternoon and stopped at 14 between 7:30 and 7:45, that person would be in the 15 post-absorptive phase, or elimination phase, at midnight. Would he? 16 17 Α Everything being average, that would be the case. 18 (Pause) 19 Now, I'm showing you what's been referred to as Q 20 Plaintiff's Exhibit CF, and you do -- you make up this 21 exhibit, right? 22 I ---Δ 23 Q I mean, you didn't make it up but you made a 24 smaller version of it. 25 Α That's correct.

(Inaudible) right? 1 Q 2 Α Right. And you've testified that -- what did you say? 3 Q 95 percent of the people fall within this range of .101 --4 .010 and .025? 5 That's correct. Α 6 Q Correct? 7 And I suppose maybe 1 or 2 percent are less, or 8 9 in this 9004, correct? It would be less than 1 percent, probably. 10 А 11 And under each one of these scenarios, from .004 Q 12 to .0025, this individual at 12:00 o'clock is above a .10. Correct? 13 Α That's correct. 14 And a .004 would be giving a person -- would be a 15 Q very conservative estimate, because very few people fall in 16 that range, correct? 17 I wouldn't call it conservative. I'd call it 18 Α extreme, because if you take a .004, you're assuming -- I 19 mean in order to do that, you're assuming that we have a 20 really unusual person here. We're taking the extremes if 21 we go to that low range. 22 Q Okay. 23 Finally, I notice on your resume that you have a 24 -- you're a pilot? 25

1 Yes, I am. Α 2 Q What kind of rating do you have? 3 Α Are you interest --4 MR. MADSON: Your Honor, I'm going to object. I 5 don't know what relevance his rating --6 MR. COLE: I'll tie it up. 7 MR. MADSON: Tie it up with what? 8 THE COURT: I'll give you a couple of questions. 9 MR. COLE: It's only going to be a couple of 10 questions. 11 BY MR. COLE: (Resuming) 12 What kind of rating do you have? Q 13 Α I have a commercial pilot's license. 14 What does that allow you to do? Q 15 It would -- a commercial pilot's license would Α 16 allow you to fly for hire, but you need further licensing 17 in order to fly commercially, to fly passengers. 18 To fly for hire, but you can fly --Q 19 That's right. Α 20 -- with other people in the --Q 21 Oh, sure. A private license will allow you to do Α 22 that as well. 23 Do you drink before you fly? Q 24 MR. MADSON: Your Honor, I would object. What 25 possible relevance would it have what this individual does

1 or does not do? Whether he drinks or not is irrelevant. 2 This person has been called as an MR. COLE: 3 expert in the field of alcohol, Your Honor. He has done tests on the effects of people. He has testified on that 4 in the past. 5 I think that this is something that tests his 6 7 direct testimony in this case, on the effects of alcohol on an individual. 8 9 THE COURT: Objection sustained. 10 MR. COLE: Nothing further. REDIRECT EXAMINATION 11 BY MR. MADSON: 12 Dr. Hlastala, let me kind of recap, and I'll try Q 13 to be as brief as possible, and go over some of the things 14 Mr. Cole has brought up. For example, yesterday, he 15 16 indicated that your particular field of study didn't really relate to blood alcohol. Can you explain exactly what 17 physiology is, and how it relates to a subtopic such as 18 alcohol in the blood and its effects on a human being? 19 Well, my field is related, certainly very 20 A strongly, to blood alcohol. The dynamics of blood alcohol 21 absorption, distribution around the body, is physiology. 22 It's a physiological problem. 23 Whenever we're dealing with somebody reasonably 24 complex, like the issue of alcohol, there are several 25

fields that kind of overlap: toxicology, biochemistry,
 physiology, medicine, all of these fields are overlapping,
 and you'll find people that have expertise in this area
 that come from these different disciplines.

<sup>5</sup> Blood alcohol measurement with a gas
<sup>6</sup> chromatograph is, in my field, really not a big deal,
<sup>7</sup> because --

8 Q What do you mean, it's not a big deal? 9 Because it's pretty easy to do, if you use the Α 10 right technique. In fact, for the past twenty years, 11 that's what I do. I use a gas chromatograph to make 12 measurements of substances in blood, and also in breath. In order to test the way that the lungs work, we make 13 14 measurements of substances, both in the blood and --

Q Well, let me ask, why would you use a breath test, rather than a blood test, or vice versa? Is there any reason for that?

A A breath test might be used out of convenience
 because it's not invasive, and it gives a representation of
 the amount of alcohol in the blood at a given time, but not
 a very precise representation of it. It's just easier,
 because it's noninvasive. You don't have to put a needle
 into the arm.

Q Mr. Cole said you testified like 400 times in criminal cases, and the majority, if not all of them, dealt

1 with breath tests. Why would that be so, sir? 2 Α Well, in the situation in most states in the 3 United States is that a -- well, in fact, all states -- is they use primarily breath alcohol tests, because they 4 prefer it to be noninvasive. That's not the case in some 5 of the other countries. So --6 7 Q You mean nonabusive? You mean that's not 8 traumatic to the --9 Not taking -- not penetrating the skin. A So that's the kind of information we have, and 10 most criminal offenses related to alcohol are prosecuted 11 based on information from a breath test. There's often 12 other information. As the prosecutor pointed out, I've 13 14 also written a great deal on absorption and burn-off, and those are issues that are also important in any case. 15 Sir, Mr. Cole asked you about one case in 16 Q 17 particular, a Frank Stagnoll (PH) case that he's indicated that I was involved in. 18 19 Α Yes. Did that case, to your recollection, involve 20 Q burn-off and absorption? 21 Α I believe it may have, yes. 22 But -- in other words, since the states, such as Q 23 Alaska, use breath testing devices, your testimony would 24 be, more than likely, sort of involved in the testing 25

1 procedure and the methods and possible deficiencies or 2 errors? 3 Α Yes. Taht would be one of the aspects of the 4 testimony. 5 Q Let me ask you, sir. Are there such things as 6 deficiencies and errors in breath testing? 7 Α Yes. 8 MR. COLE: Objection. Relevance. 9 THE COURT: Overruled. 10 BY MR. MADSON: (Resuming) 11 Not going into detail, but are there, sir? Q 12 Yes, there are. Α 13 Q Dr. Hlastala, have you, in fact, studied the 14 equipment? Is this one of your subspecialties \_\_\_\_\_ 15 breath testing procedures and methods? 16 Α Yes, sir. 17 Do you hold any patents in this area? Q 18 Yes, I do. Α 19 Q What is that, sir? 20 In that particular area, I have a patent, and it Α 21 relates to obtaining a sample of air -- thank you very much 22 -- it relates to sampling of air from the lungs without undergoing a change. We had a grant from the National 23 24 Institutes of Alcoholism and Alcohol Abuse to work on the 25 development of an improved means for breath testing, so the

patent was just part of this process, of the developing of
an improved means for getting a better breath sample, so
that we can get a better estimation of blood.

Q Mr. Cole also asked you about the number of times you've testified for the defense in like DWI cases. Why is this so, sir? Why do you testify for Defendants in DWI prosecutions, for example?

A Well, there's a couple of reasons. One reason is that I'm aware of a number of problems associated with breath testing, variables that can affect breath testing, and it's usually not in the best interests of the prosecution to bring out those errors, so I'm not often called by the -- I'm not called by the prosecution.

In addition, there are individuals who serve as expert witnesses that are salaried by most of the states, that have individuals that can serve as expert witnesses for the prosecution.

18 19 Q Is that true in Alaska, to your knowledge, sir?A Yes, it is.

20 Q We have a crime laboratory here, paid for and 21 supported by the state?

A Yes. That's correct.

Q Mr. Cole said you also spoke at seminars for attorneys. Is that correct?

25

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A Yes.

Q Have you spoken at seminars that -- for instance, Other seminars involving other people in either law enforcement or other part of the judicial system?

A Yes. I've spoken at seminars where there have
been prosecutors and defense attorneys and judges there,
and in fact, I've also spoken to a judge's conference in
the state of Washington.

Q What was the purpose of that conference?
A The purpose there was to talk about the pros and
cons of breath testing, and I was asked to talk, and also
our ex-state toxicologist in the state of Washington, and
we had a sort of a point counterpoint discussion of
problems with breath testing.

Q Now, Mr. Cole asked you also about absorption rates on most people. I think you just went over that. But if I'm correct, most people fall within a range, and there are extremes, but we don't know where -- is it fair to say we don't know where any given individual may or may not fall within this range?

A That's correct.

Q The article he asked you to examine, the one on the physiology of alcohol?

A Yes.

Α

Q When was this written, sir?

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A couple of years ago. I don't remember,

1 exactly.

Q And would you explain the article as you -- what
you wrote, and what you were intending to convey by the
passage that Mr. Cole just asked you to read?

5 A Well, in fact, the whole article was discussing 6 some of the things that we talked about already here 7 yesterday. We talked about variations in absorption, and 8 very often discussed about the problems associated with 9 retrograde extrapolation.

In -- usually -- well, in fact, it's never been a concern in my previous experience, thinking beyond about four hours, and so that four hours is within this normal range, this three-and-a-half absorption. That's why we consider four hours as kind of a limit under most normal circumstances.

There are some other very unusual circumstances, which were not outlined in that particular article, where absorption can be even longer than that, under pathological situations.

Q When you say four hours -- you're talking about going backwards and extrapolating up to four hours a kind of a maximum?

23 A Yeah, that's right.

Q Is -- was that article consistent, or inconsistent, with your testimony here to date?

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		28	6
1	A	That was completely consistent with it.	
2	Q	You haven't changed your feelings	
3	A	That's right.	
4	Q	your mind	
5	A	No.	
6	Q	on this subject in the last few years?	
7	A	I haven't. I need to make sure that it's	
8	understoo	d, though, that the word "accurate" to a scient	ist
9	always br	ings with it a qualifier of error in variation.	
10	Nothing i	s precisely accurate, and I think that's import	ant
11	to recogn	ize, and when a scientist uses the word accurat	.е,
12	you're sp	eaking in a relative sense, and the amount of	
13	error is	something that we consider when we're using the	;
14	word accu	rate. We mean that it's within a certain range	of
15	error.		
16		Now, the implication of something being accura	ite
17	just mean	s that it would be within a range of error. If	,
18	in fact, i	we had something that was farther back, and the	;
19	error was	so large compared to the value, then accuracy	is
20	really no	t a word that applies.	
21	<b>^</b>	Woll is it fair to say comething like with	

Q Well, is it fair to say something like -- with regard to retrograde extrapolation -- the farther back you go, the greater your chances for inaccuracy?

24

A Oh, sure. Definitely.

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Q

And in a case where you're going back, let's say,

29 ten, twelve, fourteen hours, what -- would you have an 1 2 opinion of the chances of inaccuracy in that situation, of retrograde extrapolation? 3 Extremely large, as we've pointed out here Α 4 I can't imagine any -- well. I can't imagine an 5 already. extrapolation like that. 6 Have you ever, in all of your survey of the 7 Q literature and your own personal studies, ever seen an 8 9 attempt made to go back this far, as you have in this case? No, I haven't. 10 Α 11 Now, Mr. Cole also asked you about some questions Q that you had prepared for some attorneys on other 12 occasions? 13 Α Yes. 14 Q Correct? 15 Α Yes. 16 Would you explain, briefly, what was your purpose 17 Q in doing that? I think you may have touched on this 18 already, but if it needs further elaboration, please just 19 tell the jury why you would do that. 20 It's a pretty common -- common approach for Α 21 expert witnesses to provide information via questions like 22 that. Attorneys are individuals who are involved in a 23 variety of things. In some cases, they need to know about 24 things such as alcohol and mechanics of boats and all of 25

<sup>1</sup> these kinds of things in the same case, and the next case <sup>2</sup> is different, and it's very difficult for an attorney to <sup>3</sup> have scientific and -- scientific and factual information <sup>4</sup> related to various different kinds of sciences.

5 So a set of questions allows a way of conveying 6 the key information to an attorney so that he can use that 7 information in developing a case, and in fact, that's part 8 of being an expert witness, is to assist an attorney in 9 developing a case, and in fact, helping them identify areas 10 that are important to consider, and that, in fact, the 11 purpose of questions.

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(Inaudible).

A Let me just add that some attorneys are more knowledgeable than others in that area, and many attorneys that are involved in alcohol related offenses are fairly new to the -- to the -- legal business, and are learning the legal business alone, let alone having to understand some of the scientific things, as well.

Q So it's an assistance to inexperienced or younger attorneys? Is that fair to say?

21 **A** Yes.

Q

Q And possibly even for old duffers like me?

A Possibly.

Q Were they designed at all to embarrass
 prosecutors like Mr. Cole?

I mean, questions can embarrass prosecutors. 1 Α No. But he doesn't need your help in embarrassing 2 Q 3 himself? MR. COLE: Objection. 4 MR. MADSON: I'll withdraw that. 5 MR. COLE: Judge -- I object to that. 6 (Inaudible). 7 MR. MADSON: I withdraw it, and I'll apologize to 8 Mr. Cole. 9 BY MR. MADSON: (Resuming) 10 11 Q Now, Mr. Hlastala, you indicated it would be rare 12 or unusual for someone in a situation involving the absorption rates, okay, to be outside the norm. In other 13 words, the bell-shaped curve, and so on and so forth? 14 Α Yes. 15 Q People can do that. It just -- there is a norm 16 or a general population in the middle, right? 17 Α That's right. 18 Would the same thing be true for -- let's say, Q 19 instead of absorption, but for burn-off rates, as you 20 explained yesterday? 21 Α Yes. 22 For instance, would it be very rare -- or not Q 23 rare, but how would you phrase it, if a person had a 24 burnoff rate of .008, for instance? 25

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1 That would also be rare. That would be unusual. Α 2 Q I take it, though, there's just simply no way of 3 knowing, unless you have more information? 4 That's correct. Actually, you know, I wonder if Α 5 I can use this chart, this one chart. Could I just pull that out? 6 7 Q If you need it to explain it, certainly. 8 Α Yeah. 9 (Pause) I was going to answer your question just by 10 11 reminding you that, you know, the possibilities, if we 12 consider all the possibilities, it's possible that we have a low absorption rate, it's possible that we have -- or 13 14 burnoff rate -- it's also possible that we have a high burn-off rate. It's possible that we will absorb rapidly, 15 and it's also possible that there's a delayed absorption. 16 17 There's a range of possibilities at this midnight 18 timeframe, all the way from near zero up to a .5. There's 19 absolutely no way of knowing where we stand in this 20 particular case unless we look at other information that's 21 available. 22 What other information could there be in this Q situation? 23 24 Α The only other information that we could possibly 25 imagine would be to look at other testimony, and

observations of other individuals, and if, in fact, there was a great deal of apparent intoxication, then, in fact, he may very well have been an average individual up here, an average absorption rate --

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Q Looking at a burnoff of .017.

A Yes. .017, an average absorption about a .25. If he was extremely intoxicated -- in fact, passed out -he might have been up here at the high range. If there was no apparent intoxication, he may have been way down here. He may have been even in here because of the range. I mean, it's just -- you just can't know.

Q Then, sir do you have an opinion based on any -any degree of scientific reliability as to whether or not the particular blood alcohol level can be given, or attributed, to Captain Hazelwood at any given time unless they've been (inaudible)?

A I have an opinion.

Q What's that, sir?

A The opinion is that it's nonsense, to try to pin down a specific alcohol content at that time, at 12:00 o'clock.

22 MR. MADSON: Thank you. I have no other 23 questions.

RECROSS EXAMINATION

BY MR. COLE:

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1 Now, you say it's nonsense to pin down any Q 2 specific time, but you read Dr. Prowdy's testimony, right? 3 A specific alcohol concentration at a specific Α 4 time, and I did read his testimony. 5 And you already testified that 95 percent of our Q 6 population falls between a .010 and a .025 elimination 7 rate, right? 8 Α Yes. 9 So 95-plus percent of our population falls within Q 10 this portion right here, and this portion right here, if we 11 assume that there has been no drinking from point -- from 12 this point to that point, correct? 13 Α Yes. 14 Q 95 percent --15 Α That's right. 16 Q -- fall within that amount? 17 That's right. Α 18 And probably another 1 or 2 percent falls within Q 19 this amount right here, correct? 20 Α That's right. 21 So maybe 96 percent of our population, if there Q 22 is a blood alcohol content of .061 at 10:30, and there is 23 no evidence of drinking, and there is no drinking between that time and midnight, would fall over a .10? Correct? 24 25 At midnight?

1 Α 95 -- no. 95 percent -- I'm sorry -- would fall 2 between -- at midnight, 95 percent would fall between a .17 3 and a .32 blood alcohol, and would be intoxicated, \_\_\_\_\_ intoxicated, at that level. 4 Q And if you included down to .004, that would be 5 maybe 96 percent, correct? 6 No. It would be really rare. There would be a 7 Α very, very small fraction. There's only a -- maybe even 8 one or two people have been reported with that low a value. 9 10 And so it would be even rarer, then, for anybody Q 11 to be in one of these, correct? 12 No. Not necessarily, because as I pointed out on Α that other chart, you can have a burn-off rate like this, 13 you can have a delayed absorption, and you can still come 14 up and intercept one of these curves. So you can have a 15 normal burnoff rate, and if you have this delayed 16 absorption phenomenon going on because of the preprandial 17 alcohol, then you can still be down here. 18 Well, let me ask you, under one of these theories 19 Q right here, if I had a drink, is it -- if -- is what -- let 20 me see if I understand it. If I had a drink at about 8:00 21 o'clock last night, the theory is that you're saying that 22 it's a possibility that I could have alcohol in my stomach 23 this morning. It's a possibility, huh? 24 It's a possibility if you had that clamping down Α 25

phenomenon. You probably need more than one drink, but it
 would be possible.

Q Now, that situation that you talked about is when A a person drinks a lot and then has some food after that, right? Drinks on an empty stomach and then has some food, correct?

A You don't necessarily need the food. The alcohol
 8 itself can do that.

Q Okay. Well, the facts in our case are that the
Defendant ate lunch, so he wasn't having an empty stomach,
so we can exclude these, then, can't we?

A I don't think you can exclude it. I think you
 have to consider it as a possibility.

Q A possibility, but not a probability.

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A It's certainly not a probability, but it's a
 possibility.

Q You said that it's pretty easy to do a blood
 alcohol concentrations on a gas chromatograph, correct?

A Relatively easy. I don't think every person can
 do it, but if you spend a lot of time at it, it's a
 reasonably easy thing.

Q But in your tests, you didn't even do it for your
 blood samples, did you?

A That's because our particular --

Q Excuse me. Did you, or didn't you?
A I mentioned that we sent it down because their chromatograph was more specifically set up, down at the toxicology lab.

Q You didn't do it in your lab, did you?
A That's right. We sent it -- it's sent away.
Q Sir, the whole country uses breath tests,
7 correct?

A I believe so.

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Q And you go around testifying about the inaccuracy
of breath tests, correct?

A That's because the inaccuracies exist in all the places, yes.

Q So it would be fair to say that your opinions on the accuracy of breath tests is in the minority, correct?

A Not in the field of respiratory physiology, but in the forensic community it is, because -- because there's sort of a vested interest in a historical momentum really built up because of the breath test development in the early '50s, but that's true.

Q But you're in the minority, correct?

A But I'm not in the forensic community. In the respiratory community, I'm not in the minority.

Q Now, I guess from what you're saying about your article, when you used the word accurate, you didn't mean accurate, basically? A I meant accurate, but accuracy with the scientist always holds -- you'll have to recognize there's variation and error always, with the word accuracy.

Q 1 percent, 2 percent? It never can be completely accurate, but maybe 1 or 2 percent?

A It's never that tight. If you look at blood tests, blood tests in and of themselves are accurate to within about 10 percent or so, approximately. It would depend on the chromatograph conditions. But if you consider other variations, the farther back you go, the greater the error becomes.

Q Basically, when you said accurate, you didn't
 mean accurate?

A I meant accurate, of the scientific sense of inaccurate.

Q Dr. Hlastala, if you were the only expert to come into this courtroom and testify that you had given questions in the past and that that was common, you would be -- that would be common to you? You would consider that a common practice among experts?

A I'm sorry. Could you rephrase the question?
 Q If you were the only person that testified about
 giving questions to defense attorneys, and that being a
 common practice, would you consider that to be a common
 practice?

1 You mean the process of giving --A 2 Q Yes. Not necessarily. If I'm the only one that Α 3 testified, I may have been the only one that was asked that 4 question. Other people may not have been asked that 5 auestion. 6 You said that a person should look at other Q 7 evidence to corroborate certain -- to see whether or not 8 the ranges are corroborated by the other evidence, correct? 9 No, not the range, but to find out where, within Α 10 the range, you are likely. You need other information. 11 Q One of those would be listening to somebody's 12 voice, to see whether -- to determine whether or not it 13 sounds impaired, correct? 14 I wouldn't think that would be a very good way. Α 15 That wouldn't be a good way? 0 16 Α No. 17 Okay. So when police officers testify in court Q 18 that one of the things they do is they listen to a person's 19 voice to try and determine whether it's slurred, or whether 20 they make mistakes, you don't think that that's good 21 testimony? 22 Not necessarily. They, in that case, will listen Α 23 for slurred speech. Slurred speech is different than what 24 you asked me before. You asked me about listening to a 25

voice that's different. 1 2 Certainly slurred speech can be an indicator, but 3 not necessarily. It can be an indicator of intoxication. 4 And another indicator of intoxication is poor Q 5 judgment, correct? 6 That can be, although I know people that exhibit Α 7 poor judgment even without alcohol. 8 Decision-making, poor decision-making, correct? Q 9 Again, the same thing holds. Α 10 Okay. It's correct that alcohol affects the Q 11 brain primarily? 12 Α Yes, it does. 13 Q It's a central nervous system depressant, 14 correct? 15 Yes, it is. Α 16 And a good indication of whether -- or one Q 17 indication of whether an individual is impaired is to look 18 at his judgment, correct? 19 Α That's one -- but not strong indicator, but that 20 is an indicator of intoxication. 21 Poor judgment by an individual who's been Q 22 drinking is not a good indicator of intoxication? 23 Α No, not in and of itself, because other people 24 that are not intoxicated also can exhibit poor judgment. 25 Q But if you assume that generally that person does

41 1 exhibit good judgment, if on this occasion he does not 2 exhibit good judgment, that might be a good indicator, 3 correct? 4 Α No. I don't think it is. You know. it is an indicator, but I don't think it's a good indicator. 5 MR. COLE: Thank you, Doctor. 6 7 MR. MADSON: This time I promise it will be 8 brief. 9 FURTHER REDIRECT EXAMINATION BY MR. MADSON: 10 11 With regard to the whole subject there, sir, of Q 12 what you testified to about retrograde extrapolation, that is based on one assumption -- one of many assumptions, is 13 it not? And that would be, for instance, that there was 14 absolutely no alcohol consumed past the time that you made 15 your assumption \_\_\_\_\_ 7:30, 8:00 o'clock. 16 17 Yeah, that's correct. If there were alcohol Α 18 consumed and the curve could look very differently -different. 19 20 Would it have any value at all, as far as your Q chart is concerned? 21 22 Α I'm not sure what you mean. If there was drinking after 7:30, let's say, in Q 23 the situation we have there? 24 Well, it would completely change these curves. Α 25

1 If there were drinking after this time, it would change the 2 shape of many of these curves and increase the chance that 3 it could be lower at the time of 12:00 o'clock. 4 Now, let me get a new chart here. Q 5 (Pause) 6 I've put up Exhibit CC, just the generalized 7 curve, for a second. Okay? 8 Now, the chart you just looked at before, this --9 you start off with one point, the .061 blood alcohol 10 reading that was taken at 10:40 or 10:58, correct? 11 Α Yes, sir. 12 Now, let me ask you, sir, if you testified Q 13 yesterday that this generalized curve is just that. Now, 14 for instance, can you explain --15 MR. COLE: Judge, I object. It's outside the 16 scope of redirect -- recross. 17 MR. MADSON: Your Honor, it is certainly not. It 18 goes --19 THE COURT: Mr. \_\_\_\_\_ let Mr. Madson ask 20 these questions. You used a similar chart \_\_\_\_\_. 21 BY MR. MADSON: (Resuming) 22 My question is sir, then, what if the .61, you Q 23 know, percent alcohol reading was taken, and it is not on 24 your general curve? In other words, it fell either below 25 or above the general curve? What effect, if any, would

this have on the prior chart that you explained?

A Well, if I understand, if there is error or -you know, normally, these curves are stylized. There's actual variation that occurs around these, and if that would add additional error to your retrograde extrapolation.

But you've already got enough as it is, that there's so much error that if you had a little variation in this point here, that would still --

Q Now, when you say "this point here," you're referring to the blood alcohol reading test?

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Α

Yes. That's right.

Q And assuming it was a little high -- let's say it's off the curve just a bit, what effect would that have?

A Well, it would -- it would add to your error. It would shift all of these curves in effect. See, if you'd be extrapolating from a point that was up here someplace, that would shift everything upwards, and if it was actually down here, it would shift everything downwards.

Q Was this one of the factors that you considered in saying that retrograde extrapolation in a case like this simply is nonsense?

A That's one of the factors, but the issue is nonsense, even without that error, actually.

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Q

Also, do you know, sir, if there's been any

1 studies on the effect of stress on alcohol absorption at 2 a11? 3 MR. COLE: Objection. It's beyond the scope. 4 MR. MADSON: Your Honor, I think he went into the 5 same thing before. This will be very brief. It's a yes or 6 no answer, short explanation. 7 THE COURT: You've brought up questions 8 concerning judgment and decision-making. I think this is 9 appropriate. 10 THE WITNESS: There haven't been a lot of 11 studies, however, stress would be expected to have a slight 12 effect, and one of the reasons --13 MR. COLE: I object. He's testifying to hearsay. 14 BY MR. MADSON: (Resuming) 15 Q Well, could you testify of your own personal 16 knowledge, sir? 17 Α Yes. Yes. 18 In your field? Q 19 Right. Because of the physiology of the human, Α 20 when you're in a time of stress, you get what's sometimes 21 called the fight or flight syndrome, where you get -- you 22 -- the blood -- blood flow will shift away for the 23 gastrointestinal tract, and more towards other muscles, for 24 example, to use in running and fighting. 25 (TAPE CHANGED TO C-3674)

And that might be expected to decrease the absorption rate of alcohol under those circumstances, although I am not aware of studies that have been done that would --

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Q And you have not done a study (inaudible)?

A I have not done any. That's correct.

Q Lastly, sir, a couple of other things. The .061
 blood alcohol, for the purposes of your testimony, or your
 conclusions or opinions, would it have made any difference
 whether that was a blood test or a breath test?

A It wouldn't have made any difference. That would have just provided information here. All of what goes on back here, in that extrapolation process, would be independent of whether this information was obtained, either with breath or blood.

Q You're starting with the basic assumption that
that number was correct, regardless of how it was derived.
Is that correct?

19

A That's correct.

Q And lastly, do you know if Mr. Prowdy gave Mr. Cole any questions that he phrased in such a way he'd like to get answered, or perhaps suggest questions? Do you know if that was done?

A I don't know.

Q

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I don t know.

If that was done, would you have any objection,

1 as an expert witness to that being done? 2 Α No, no. 3 MR. MADSON: Thank you. I don't have any further 4 questions. 5 MR. COLE: I don't have anything. 6 THE COURT: Would counsel approach the bench, 7 please? 8 (The following was had at the bench?:) 9 THE COURT: (Inaudible). I need to have some 10 (inaudible) do that today, and I'd like to have 11 (inaudible). 12 MR. COLE: Judge, I apologize. Mr. Adams is 13 supposed to be doing it right now. 14 THE COURT: All right. (Inaudible). 15 MR. COLE: Right. 16 THE COURT: Okay. 17 (The following was had in open court:) 18 Whereupon, 19 EDWARD SIEDLICK 20 called as a witness by counsel for the Defendant, and 21 having been duly sworn by the Clerk, was examined and 22 testified as follows: 23 THE CLERK: Sir, would you please state your full 24 name, and spell your last name? 25 THE WITNESS: Yes. My name is Edward Siedlick,

1 S-i-e-d-l-i-c-k.

2	THE CLERK: And your current mailing address?
3	THE WITNESS: Green County, New York.
4	THE CLERK: And your current occupation?
5	THE WITNESS: I'm a consultant.
6	THE CLERK: Thank you.
7	DIRECT EXAMINATION
8	BY MR. MADSON:
9	Q Mr. Siedlick, what's your present employment,
10	sir?
11	A Iam
12	Q Educational background and employment. We'll do
13	it that way. Sorry.
14	A Yes. I am the president of a firm in New York
15	called Investigated Research Associates, Ltd. The company
16	does it's a very it's a small firm, five or six
17	people.
18	The company does primarily three things. We do
19	analysis of audio tapes. We do work that would be normally
20	considered to be under the sphere of private investigative
21	work, litigation type support. I'm a licensed and bonded
22	private investigator in the state of New York. And we also
23	do such things as corporate security, security threats,
24	anti-terrorism, and things like that.
25	Q Where did you go to school, then, sir?

A I graduated from Syracuse University. I have a degree in business economics.

3 What did you do as far as employment is Q 4 concerned, after you finished your formal training? 5 Α Well, after a stint in the United States Air 6 Force, I spent 21 years in law enforcement in the city of 7 New York, primarily with the New York City police 8 department. I served as a police officer, a detective, a 9 detective second grade, a sergeant, a supervisor of 10 detectives, and a lieutenant commander of detectives.

I also served, parallel with that, in another law
 enforcement agency in the city of New York called the
 Department of Investigations, which is the agency that is
 responsible for the investigation of economic crime against
 a government, specifically corruption, largescale frauds
 and embezzlements against the government.

In that particular agency, I served as the
 Executive Officer of the Department. I was the director of
 electronic surveillance for --

Q Would you explain that, what electronic surveillance is, sir?

A Yes. As the director of electronic surveillance,
 I was in charge of the purchasing, the usage and the
 issuance of all devices, audio tape devices, microphones,
 radio devices, in which audio tape evidence is gathered.

We used to log in, at that particular agency, about two to
three thousand audio tapes per year.

I was the chief evidentiary custodian for the department, which specifically meant that I was responsible for the issuance of an audio tape that may be potentially used in any type of a criminal or a legal proceeding, controlling its usage from an evidentiary standpoint, until its final presentation in a court of competent jurisdiction.

10 Getting back to my background, I also served as 11 the Director of Investigative Training for the Department in the city of New York in the Inspector General's training 12 program. In New York City, every department is mandated by 13 statute to have an Inspector General which performs that 14 function which investigates matters that pertain to a 15 particular agency. I was the Director of Investigative 16 Training for the city of New York. 17

And the last four years of my career, I was the chief investigator of that agency. I retired in 1984.

20 Q And then you became -- got into your present 21 employment, is that correct?

22

A Yes, I have.

Q With regard to audio tapes, sir, I wonder if you could just tell the jury what your particular experience has been with audio tapes and associated equipment,

<sup>1</sup> recorders and things?

2 Yes. Well, of course, I've handled, throughout Α 3 my entire police career, the -- being the director of 4 electronic surveillance, I participated in well over 3000 criminal cases in which audio tapes were used. 5 I've 6 examined and analyzed, for transcript purposes or for the 7 purposes of alterations, tampering, changes, editions, 8 editing deletions, well over 10,000 tapes, and it's 9 probably closer to 15,000 tapes.

I'm also a qualified expert in audio tapes, in
 various courts.

Q What courts have you testified in?

13 I'm an expert -- I'm a qualified expert, or have Α 14 given expert testimony, in the Federal court system, 15 specifically in the Southern District of New York, the 16 Eastern District of New York, the District of New Jersey. 17 I've given like testimony in the state system, which is 18 similar to this system. In New York, they call it the 19 Supreme Court system. Also in the New Jersey system, which 20 they call the Superior Court system and in the state of 21 Vermont, which they call the Superior Court system also. 22 Sir, I want to hand you what's been admitted as Q 23 Plaintiff's Exhibit Number 117. What is that, sir?

A

Um --

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Q I mean, just in general? Would you tell the

1 || jury?

A Well, it's an audio, it's an audio cassette, and I believe that this is a copy of the so-called inbound tape that was made on April 22nd -- excuse me, March 22nd.

Now, sir, I wonder if you could, just briefly, tell the jury how an audio tape like this is made, and how is sound produced, and recorded on this?

8 A First of all, an audio tape consists of a -9 excuse me. I've had a cold. May I have some water? I've
10 had it for a week. I'm sorry with respect to the cough.
11 (Pause)

Yes. An audio tape is really plastic backing that has an iron oxide, or a metallic compound, that's coated on it. When sound is captured by a microphone and radio waves -- this is basically what you're hearing is radio frequency waves now -- it's transported into an electrical signal, and it passes -- that particular signal, passes across magnetic poles of what we call a record head.

The tape itself is transported across this particular record head by means of a tape drive system, at a constant speed. And, of course, the particles on this particular tape that's passing the record head are being rearranged, so therefore, when you play it back past the playback head, it plays back the sound of the rearranged particles on there. Now --

Q You said, sir, it travels at a speed over the heads, correct?

A That's correct.

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Q Is there a variation from machine to machine --A Well --

Q Or how is it done?

A Yes, there is. That's called IPS, or inches per
 second, and what that means is is that tapes -- it's
 absolutely essential for a tape to pass a record head, and
 a playback head, for that matter, at a constant speed, so
 you get a uniform sound that comes back.

The speed of audio recorders vary from, shall we say, your commercial type recorders which is 30 inches per second, and what that means is that the tape is passing the recorder head at a rate of 30 inches per second. So if you have one second of conversation, it would be on 30 inches of tape.

And they vary. They start to -- they can also send - they can begin to descend on the inches per second, where you get down to one of the lowest speeds, which is 15/16ths of an inches per second, and what that means is now, that one second of conversation, is on 15/16 of an inch tape.

Q What difference, if any, would this make on the
 audio quality?

1 Well, when you get into 30 inches per second, or Α 2 anything above 15 inches per second, you're getting into 3 what's called studio level quality, and this is your recording industry. Usually when you get down to the 4 5 lowest systems, those systems are designed -- 15/16 inch per second -- are designed to capture audio merely to 6 7 preserve it, but it sacrifices audio quality at that particular speed. And, of course, the idea there is to 8 9 save tape, to have longrunning tapes.

Q Is it fair to say if you're only interested in maybe transcribing the words -- in other words, a person dictating into a machine which would be given to a secretary to transcribe it, that's when the tape-saving --

A Yeah. Like a standard micro cassette, or dictating machine, or a cassette that you would buy would normally be at a 15/16th inch, although micro cassettes are -- they're manufactured overseas, and they're centimeters, but if you transpose it back to inches, it would come out to roughly 15/16 inches per second.

And the reason for that is that you have a small machine and you want to get as much conversation as you possibly can on that. It's not for audio quality. It's just to preserve the audio record.

Now also, I might add that in large machines, okay, you do have large machines that run at a very, very

<sup>1</sup> slow speed and, of course, the purpose there is -- there's <sup>2</sup> several purposes, but one of the primary purposes is that <sup>3</sup> -- so they can have a longrunning machine over a long <sup>4</sup> period of time on, let's say, a 15-inch reel, or a 12-inch <sup>5</sup> reel, whatever the particular machine is rated for.

Q And, sir, calling your attention again to Exhibit
7 117 there in front of you, what -- were you asked to do
8 something with regard to that so-called inbound tape
9 recording?

10

A Yes.

Q Who asked you to do this, and what were you asked
 to do?

A You asked me, to -- what you'd asked me to do is is to make an analysis of a tape that had been turned over by the state to see whether or not there was any evidence of alteration, additions, editing, tampering, splicing, those kinds of analysis.

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Q What did you do in that regard, then?

A Well, I originally listened to the copy that was
 provided, and I did find evidence of electronic start-stop
 signatures on it. Some of the conversations weren't in
 sequence, and didn't appear to be in chronological order.
 So I then said to you that to do a proper analysis, that I
 must examine the original tape.

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Q Where was the original tape located, as far as

1 you --2 It was located in Valdez. Α 3 Q Did you go there? Yes. I did. 4 Α 5 Q When was that? I believe I went there the first week in Α 6 February. 7 And what did you do when you arrived there? Q 8 9 Α Well, I -- through prearrangement with the U.S. Coast Guard, I went to the Coast Guard's base, the station 10 11 there, and --12 Q Was anyone with you, by the way? Well, I ---Α 13 14 Q When you were at the Coast Guard? 15 Α Yes. There was two -- I believe there was one, probably two, Coast Guard officers. There were several 16 people, one, two, enlisted personnel. They were all in 17 uniform, and there was a state police officer who was there 18 who identified himself as Trooper Fox. 19 20 Q And what did you do at the \_\_\_\_\_ ? Well, in regards to the inbound tape, I asked to 21 Α see the original tape, to make a -- what's called a real 22 time copy of the tape. 23 Well, there's two things here, but let me ask 24 Q you, first of all, what is a real time copy of the 25

<sup>1</sup> original?

2 When you do an analysis of the tape, it is Α 3 absolutely essential to examine the original tape, and the 4 reason for this is, when you have a copy of a tape, you 5 don't -- you do not know what processes have been done in 6 the interim between the original tape and the copy of a 7 tape. So if you hear electronic start-stop signatures on 8 the tape, or if there's possible evidence of editing on the 9 tape, or indications probably would be a better word, you 10 don't know if those have been made by the copier, or how 11 many generations of a copy it is, because, as you get into 12 generations of copies, they tend to deteriorate, unless 13 made properly.

<sup>14</sup> So, what you want to do is, you want to examine <sup>15</sup> the original tape itself, and you do a physical <sup>16</sup> examination, because you want to see if there's any <sup>17</sup> evidences of splicing on it, and the second thing you want <sup>18</sup> to do is you then want to make a real time copy of the <sup>19</sup> tape, and what that simply means is, you want to make an <sup>20</sup> actual running time of a tape.

If a tape -- the recorded portion is ten minutes, then you would do it on a tape recording simultaneously off that machine. You would plug a line jack from your recorder into -- directly into the playback machine and, as that tape is playing, you would be making a real time copy

•

1 of this particular tape.

Q Were you able to do that in this situation? A No. I -- when I asked for the tape, I was informed by the Coast Guard officer there that the tape had been destroyed.

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Q What, then, did you do after that?

A Well, in regards to this tape, there wasn't much I could do. I basically went back to Green County, and I had a conversation with counsel and yourself and told them that this particular tape, I couldn't do a proper analysis, that I had to at least, at the very minimum, examine the first generation copy of this tape, the circumstances under which this copy was made.

Q Were you later informed then, of how that copy was made? In other words, the procedure used to make the copy that you did examine?

A Yes, I was.

Q And what was that?

A Well apparently, an employee of the U.S. Coast Guard had gone and had in fact examined the original inbound tape up, I assume, in Valdez, and had a micro cassette recorder, a dictating type of recorder --

Q Excuse me one second. Let me hand you this. I don't (inaudible) should be marked, but you can use it to illustrate your testimony.

1 Yes. Α 2 Q What is that, sir? 3 This is a -- this is a Lanier micro cassette Α 4 dictation type recorder. 5 Maybe you can just take it out, just so everybody Q 6 can see (inaudible). 7 (Pause) 8 What relevance, if any, does this type of 9 recorder have to your ultimate conclusions and everything? 10 How did you use this, or --11 Well, since I was working from a copy of the Α 12 tape, okay, I had to know the circumstances under which the 13 first generation copy is made, because we now cannot 14 examine the original. And so the next -- it's not a 15 complete analysis, but the next step would be to examine 16 the first generation copy that was made, and apparently the 17 first generation copy was made on a micro cassette --18 Q Was it similar (inaudible)? 19 -- with this similar type machine, yes. Α 20 Q Uh-huh. 21 Α And --22 How was it done, sir, do you know? Q 23 Well, of course, this particular machine has an Α 24 internal microphone here which is located on the top of the 25 machine which, when you put this in the record mode, a red

light comes on, and it is recording what is in range of
this particular microphone here.

Just -- another way to possibly do it, it also has a outlet, and the microphone could be plugged in and you could have a microphone --

Q Like this?

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7 Something like we're talking now. And, of Α course, the third way, which is the common way in which you 8 9 make a tape is to exclude additional noise, meaning environmental sounds from one recorder to another, you 10 11 would plug in what's called a line jack and you would take 12 the output of the play machine -- the one you're playing it back on -- and you would plug it into -- use a line, a 13 cord, an electronic cord, and plug it into this and have a 14 direct line recording, and what that does is, after you 15 make a couple of adjustments on the machine for the record 16 17 level, what that basically does is it excludes the 18 environmental sounds that might come on.

For example, somebody might talk during a -okay, that would be on the tape, and you wouldn't know if that was -- if that conversation was part of the original recording, or the original conversation that took place, or whether or not it actually took place subsequently -- at the time of the recording. That's generally why I use the line jack.

1 Is there a line jack on that? Q 2 Α Yes, there is. You see, you can hook the 3 microphone line into it. 4 Did you subsequently learn how this particular Q 5 inbound first generation copy was made \_\_\_\_\_? 6 Α Yes --7 And how did you do that? Q 8 Well, I believe it was in from the report of the Α 9 National Transportation Safety Board, or -- told me that 10 the machine -- that the record method used was used with 11 the internal microphone and it was put into record mode. 12 the playback machine of the original tape was played, and 13 they made a recording of it, by holding it up at some 14 proximity to the machine. 15 Now, with is cassette in that mini -- the small Q 16 recorder there, the same size as the one you have in 17 Exhibit 117? 18 No, this is a cassette. Α 19 Q Uh-huh. 20 This is a cassette copy on a machine, and this is Α 21 -- this takes a micro cassette, which is a much smaller 22 piece of tape. 23 Q What speed does it run at? 24 This particular machine runs at 2.4 centimeters, Α 25 which is roughly 15/16 of an inch.

61 Let's see. Were you able, then, to examine the 1 Q 2 original copy, if you will, of the so-called original, 3 since the original is gone, the next generation copy? 4 Α Yes. 5 Q Where was that, sir? I made that examination -- I made a real time 6 Α 7 copy of that at the audio laboratory of the National Transportation Safety Board in Washington some time in the 8 9 last two weeks. Just to make sure, you said this has a line jack 10 Q 11 in it, but that --12 A microphone jack which can be used as a line Α jack, yes. 13 What -- the method used was to -- not the line 14 Q jack, but just to hold it up to a speaker and record from 15 the internal speaker --16 17 That's my --Α 18 -- the internal microphone, rather. Q 19 Α That's my information, yes. Did you speak with the person in Washington that 20 Q actually made the copy or (inaudible). 21 No, no, I did not, no. I had originally asked 22 Α you, as counsel, to be able to talk to this particular 23 individual, but I'm subsequently informed that he would not 24 be available for interviews. 25

1 What did you do after making this real time copy, Q 2 sir? 3 Well, I examined it for a -- for a variety of Α 4 purposes, but I did an analysis to see whether or not this 5 particular tape, this first generation copy, was an 6 accurate representation of the conversation of the -- that 7 originally took place. 8 If I might -- if I might just elaborate on that 9 just a little bit? 10 Q Sure. 11 There's really two processes that are involved in Α 12 an audio tape process. The first process, of course, is 13 the process of the actual conversation taking place, and 14 similar to this particular -- this is not a conversation; 15 it's testimony -- but what's happening is, we're having 16 this conversation. 17 Somehow, a microphone is injected into a 18 particular conversation, and a record is made of that

<sup>19</sup> particular conversation, and then -- now you have what is
 <sup>20</sup> the original tape, which is the -- usually, the best record
 <sup>21</sup> of a particular conversation that took place.

<sup>22</sup> So, you asked me to perform an analysis -- well, <sup>23</sup> first you asked me if there were any additions, tampering, <sup>24</sup> editings, what have you, because there were start/stop <sup>25</sup> signatures on this tape. Since I cannot examine he

original tape, I cannot tell you whether or not this
 particular conversation was excerpted out of a larger
 conversation, okay? Or a series of larger conversations.
 I cannot make that determination, because I cannot listen
 to the original.

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Q That's the one that's been destroyed?A That's correct.

Q So in my examination in this particular case, led me to the conclusion that this copy, this first generation copy, this micro cassette copy, okay, was not an accurate reproduction of the conversation that took place. And what I mean by that is, is that, in my opinion, the pitch of the tape -- now the pitch is the speed of the tape at which it goes past the record heads, or the playback heads.

In this case, the pitch of the tape seemed to exceed that of the normal talking voice of Captain Hazelwood. Now, I base this on I've had several conversations over the last month with Captain Hazelwood in his conversations, and in listening to his voice, and then comparing against the recorded audio portion of this tape --

Q Let me -- did you hear other recordings of
 Captain Hazelwood, in addition to your personal
 conversations?

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Α

Yes, I did. I --

1 Did you use that in your --Okay. Q 2 Yes, I did. I listened to a tape of an interview Α of Captain Hazelwood that I believe occurred on March 24th 3 4 by a U.S. Coast Guard representative, and I think Trooper 5 Fox was also present at that. So, taking those two 6 comparisons and comparing it against ths copy of the original tape, the pitch of the tape sounded -- sounded 7 8 fast. In other words, he was speaking very, very rapidly 9 -- well, I shouldn't say he was speaking rapidly. What's 10 happening is is that the conversation that is being 11 reproduced on this tape appears to be greater than Captain 12 Hazelwood's normal voice.

Q What could cause this change in pitch, sir, as you've described it?

A Well--

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Q What possible explanations are there?

A There are several. I think we have to go back to the original tape, where probably the answer, you know, may lie -- or it certainly lies there more accurately. The Coast Guard tape, the original Coast Guard tape of March 21 22nd -- and my information is is that they use the same recording system from each 24-hour period.

The original Coast Guard system was recorded at a low audio speed. It's a 24 hour tape. It's what's called a multi-track -- there's various other conversations on it

that -- what a multi-track means is that you can have a phone line hooked up on which you can have different radios hooked up to it, that if people are transmitting on different frequencies, and the purposes of this -- it's called a logging tape, because it gives the time on it.

And the purposes of this multi-track low-speed audio tape is to basically preserve tape, and to preserve an audio record, okay? A transcript of the conversation.

Now, at the low speed, there are certain
phenomena that does occur, because it is not studio level
quality, okay? And you do sacrifice a certain amount of
quality. There are certain characteristics that occur at
low speed. Especially if you play back a tape on a machine
other than what it was recorded out.

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Q Why is that?

16 Α Well, because, what happens is, since you only have one second of conversation on 15/16 inches of a piece 17 of tape, okay, there's less margin for error. Now, usually 18 19 what happens is that when you play back an original tape that's been recorded at a low speed on -- other than a 20 machine that it was played on, there's usually a slight 21 calibration problem, so you get a variation in the speed of 22 the tape, the pitch of the tape, so it could be higher, it 23 could be lower. Okay? 24

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That is why professional machines, professional

people who use low-speed audio tape have variable speed devices on their machines so that they can correct for this change in pitch.

The second thing that happens is low speed IPS audio tapes usually do not have a very good recording range in recording high frequencies. There's also --

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Q What do you mean by high frequencies?

8 Well, when we speak, we're speaking on a various Α 9 frequency range. Our voice speech, or sounds, can go from 10 a very low megahertz range up to a very high range, and a 11 lot of times on slow-playing machines, like normal 12 cassettes that you buy in the store, you'll see they have 13 high frequency tape, low noise roll, trying to compensate because the slow speed has a lot of trouble getting high 14 15 frequency tape -- high frequency conversations on the tape, 16 that part of the signal spectrum.

The other thing is, there's a phenomena in recording an audio recording, and it's called wow and flutter. In fact, it's used when you purchase speakers, or you purchase cassettes in a store, you'll see this term used, wow and flutter.

What wow is -- it' sa musical term, and wow is the momentary variation in a -- in the sustained pitch of a musical note. So it has a momentary variation in the pitch of the note. And flutter is a phenomena which doesn't

amount to wow, but causes overall audio distortion. 1 So when you have slow speed tapes, you tend to 2 get a higher content of wow and flutter in it, and this, of 3 course, is the reason that studios --4 This is different than pitch, right? Q 5 That's right. That's right. Although --6 A although what it is, it's a momentary variation. When I 7 8 talk pitch, I'm talking about the tape testing at a 9 constant speed, okay? The thing is a momentary variation 10 in a musical note so you get a slight variation in the 11 tape. 12 So this is -- this is what happens when you rerecord from an original tape. So that's the first 13 14 problem. But, of course --Let me ask you this. What about the tape itself 15 Q that's used to make the recording? Would it make any 16 difference if it was an original, unused tape, or a used 17 18 tape? Well, guite frankly, a used tape, it really 19 Α 20 doesn't have that great an effect on pitch. I mean, unless it's been used over and over again that the tape is 21 stretched, but, quite frankly, under normal circumstances 22 no. It really -- it really shouldn't be a factor in pitch 23 and speed. 24 Okay. So, getting back to this, so that's 25

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part \_\_\_\_\_\_, the original tape and the original
 machine. On this particular type of machine, this has an
 AC outlet, meaning you can plug it into a battery.

Let me just back up a minute. One of the things that's absolutely essential to constant speed passing across a recorder or playback head, is power. You have to have a constant, uniform power supply so that the machinery doesn't speed up, or slow down.

When you plug into an AC outlet, assuming that
 you don't have power fluctuations, you do get this constant
 speed of the tape going across the heads. This particular
 machine has an AC outlet, okay, which --

Q When you say that particular machine (inaudible) --

A Well, this -- this model Lanier here, which you could plug into an outlet and, assuming that there were no power variations, it should give you a uniform tape drive across the heads -- if you used the batteries in this, okay? Now you're subject to the limitations of the power state of the batteries at the time the recording was made.

And what I mean by that is, if the batteries were in a less than -- if they weren't brand new, fresh batteries, okay? And they were in some sort of a depleted state -- in other words, they had been used several times over and over again, they were in a low state, they would

1 record a certain level.

When you played the tape back at a subsequent date, okay? Even if you played it on this machine, or another machine, since the battery power, the power was low, what would be happening would be -- would be playing back faster than it was originally recorded, so the pitch would be off. People would sound -- tend to be speaking faster than they normally spoke.

Q Are you saying it's recorded at one speed, but
played back at a faster speed?

A That's right. This is common. Batteries -- in using batteries this is very common, and, again, that's why a lot of machines have variable speed devices on them, so to compensate for this.

Q How is that (inaudible)?

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Well what you can do is, it's just sort of a 16 Α 17 control lever that takes the motor and can slightly increase or slightly decrease the speed of the tape drive 18 passing across the heads. So if you had a low power 19 recording that was recording at -- obviously, if this is a 20 2.4 centimeter per second machine, and the batteries were a 21 little run down on this machine, what would be happening 22 23 is, we would be recording this, but then, later on, if we subsequently -- if we played this tape back with fresh 24 batteries, or in another machine, or in an AC outlet, it 25

would -- the conversation would sound a lot faster than it 1 2 would occur.

3 Now, the conversation is isn't taking place 4 faster, but the audio tape itself is flawed in representing 5 that it's an accurate reproduction of that tape.

There's also one other thing that's a 6 possibility, and that is that you don't know if there's any 7 malfunctions in the machine, that there's a problem with 8 9 the tape drive, or the machine has been malfunctioning, or 10 something has been hanging up the tape drive or, you know.

11 You're subject to whatever the mechanical 12 limitations of the machine are. In other words, was the car running at the time -- properly. You don't really know 13 that, and it's very, very difficult to reconstruct that at 14 15 a later date.

Again, I know -- I've testified to this several 16 times, but that is why machines have variable speed devices 17 18 on them.

19 Then when you say accurate reproduction of Q Okay. 20 a conversation, sir, are you -- you're really saying, if I 21 understand you correctly, two things. You can reproduce it 22 accurately so that you could transcribe the words on there 23 -- in other words, you could hear the words?

That's correct. Α

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But this doesn't necessarily mean that the speed,

1 or rate, at which the speaker is speaking is an accurate 2 reproduction of the original conversation? 3 Α That's correct. 4 MR. MADSON: Thank you. I don't have any other questions at this time. 5 THE COURT: We'll take a break. 6 Don't discuss this matter among yourselves or any 7 other person. Don't form or express any opinions. Court 8 9 will stand in recess. 10 THE CLERK: Please rise. This Court stands in 11 recess, subject to call. (A recess was taken from 10:00 a.m. to 10:25 12 a.m.) 13 THE COURT: -- session. Mr. Cole? Ms. Henry? 14 CROSS EXAMINATION 15 BY MS. HENRY: 16 17 Q Good morning, Mr. Siedlick. 18 Α Good morning. Sir, the tape that you were provided by counsel, Q 19 which you've identified as the inbound tape, that tape had 20 three or four series of conversations on it, right? 21 Α That's correct. 22 And I think you testified on direct that they Q 23 appeared not to be in sequence? 24 Well, let me say this. The -- not this 25 Α

particular tape. The first tape that was given to me did
 not appear to be in sequence.

Q All right. Now, this particular tape -- I want to make sure that it's been made clear to you that the only thing on Exhibit 117 is the three-hour report. It doesn't have the other sets of conversations. Would you agree with that?

A When you say the three-hour report?

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Q Oh, I'm sorry. The inbound tape consisted of conversation which are called the three-hour report. That is, they had to report at three hours before they came in.

12 Okay. That's the first time I'm hearing that. Α Okay. And then there was a one-hour report, they 13 Q 14 have to report an hour before they're at Hinchinbrook, and 15 then there was another report, I believe. And the tape 16 which you originally received from counsel included all 17 thee of those \_\_\_\_\_ conversations. Is that right? 18 Α Yes.

Q Okay. And I wanted to make sure that you understand that Exhibit 117 does not contain all of those conversations, only the three-hour report and then a conversation at the end of the three-hour report about berthing?

A Well, you have me at a disadvantage, in that I'm not familiar with what the three-hour report is, and I
73 1 can't place it in my mind without possibly seeing it, you 2 know, written down, okay? What I can -- well, what I can 3 testify to is the fact that the Exhibit, okay, that I'm 4 talking about is a copy of a tape that was made on March 22nd, and has been designated to me, and I've seen it on 5 reports, called the inbound tape, and on that tape -- and I 6 assume we're talking about the first tape that was turned 7 over to me -- but there was a series of conversations on 8 9 that that had -- that appeared to be a series of conversations on the tape -- had some electronic start/stop 10 11 signatures on it. Okay. Q Right. Okay. All right --12 13 Α The tape that I'm testifying to here, okay? 14 Q Uh-huh. Α Is the inbound tape. I'm testifying is the tape 15 -- there's the second copy, the first generation copy. 16 17 That's what I'm testifying to. 18 Q Okay. I understand that. The problem is that the tape that's in evidence, Exhibit 117 that's in front of 19 you --20 Uh-huh. Α 21 -- is only a portion of that tape. Q 22 Α Okay. 23 And I just wanted to make sure you understood Q 24 that, for purposes of your question. 25

1 Okay. If that's the representation. Okay. Α 2 Okay. And perhaps, if I can give you some of the O 3 information, that conversation, as I said, it's the 4 three-hour report conversation, essentially one of the 5 mates was reporting where they were, what time they thought 6 they'd get to Hinchinbrook, reports that they have 7 pilotage, and then inquired as to what berth they were 8 going to report to. Q So do that -- do you remember a conversation like 10 that? 11 Well, in general terms. I don't remember the Α 12 specific parts of the transcript. 13 Okay. So the tape that's before you now, Q 14 Plaintiff's Exhibit 117, only contains that one set of 15 conversations, that one topic. Do you understand that now? 16 Quite frankly, I don't, counsel. Α 17 Q Okay. 18 The -- I think what your statement is is that, of Α 19 the inbound tape that was made under micro cassette, this 20 only contains a portion of that. 21 Q That's correct. 22 Α Okay. 23 Okay. Do you understand --Q 24 That, I understand. Α 25 Q Do you also understand that, as a result of that,

1 the only conversation for that tape in front of you, 117, 2 only contains one start and stop. 3 Α Okay. Okay. Now you said on direct examination that 4 Q 5 the tape that you received and listened to and then, of course, which -- part of which is Exhibit 117, did not 6 7 appear to have been reproduced on real time? I don't know if I said that. Α 8 9 All right. (Inaudible). Q

A Real time? Are you talking now -- which -- which conversation are we talking about?

Q We're talking about the conversation that's on Exhibit 117.

A Okay. The first copy of the tape that was provided to me did not appear to be in real time, in that it did not appear to be in a chronological sequence --

Q Okay.

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A -- as opposed to the real time that I testified,
making the one-to-one copy. Okay.

Q But it wasn't necessarily -- or you don't think it was recorded on fast -- fast record speed?

A Well, well -- I mean, which tape are we talking to now?

24 Q They're the same, sir --

|| A No, no --

1 -- the only difference is this doesn't have all Q 2 the conversations on it. 3 Which tape are you referring to that was recorded Α 4 at a fast speed? 5 You said that the tape you listened to was not Q 6 recorded real time. 7 Α Okay. 8 But in each conversation, that conversation was Q 9 recorded in real time, but then it was stopped. 10 Α Okay. Yes. That's correct, yes. 11 Okay. So the conversation -- there is real time O 12 and there's fast time when you're recording, okay? 13 Α Right. 14 Q Okay. In this particular case, it wasn't 15 recorded at fast speed as far as you can tell, was it? It wasn't reproduced at fast speed? 16 17 Well, no. You see, when we're talking about Α 18 being reproduced at fast speed, I think we have a little 19 confusion at times, because when you produce something at 20 real time, we produce it as I've previously testified, are 21 you talking about high speed copying? 22 High speed copying. Q 23 Α Okay. Sorry. I'm trying to get you (inaudible). 24 Q 25 Yeah. Α

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But it wasn't high speed copying, was it? 1 Q 2 Well, I have no way of knowing how the copy was Α 3 produced. All right. You did talk to someone at NTSB to 4 Q 5 discover how the copy was produced, didn't you? What's that, the -- no, not the copy. How the 6 Α 7 original was produced. All right, so --8 Q 9 The -- excuse me. Not the original, but the Α microcassette, the first -- let's -- just for clarity of 10 11 terms, the first generation copy micro cassette --All right. 12 Q -- how that was produced. Α 13 And that is my question. As far as you know, the 14 Q micro cassette, first generation, was not reproduced at 15 high speed? 16 That's correct. 17 Α All right. Now, it was not reproduced at real 18 Q time, either, in the sense that there were starts and 19 stops? 20 21 Α Well, I don't know that. I mean, you know -when I say there's starts and stops, I mean, are we talking 22 about the total inbound tape? 23 Q Yes. 24 Okay. You see, I don't have any way of knowing 25 Α

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78 1 where the starts begin and where the stops end, for the 2 simple reason I cannot examine the original tape. 3 All right. But my question is, the micro Q 4 cassette first generation --5 Α Yes. 6 -- as far as you know was made in real time, Q 7 except that there are starts and stops? 8 That's correct. Α 9 And you, in fact, listened to the first Q 10 generation micro cassette --11 Yes. Α 12 -- and you could hear that --Q 13 Yes. Α 14 -- couldn't you? Q 15 Yes. Α 16 All right. Q 17 Now, you said that you went down to the U.S. 18 Coast Guard based in Valdez for purposes of listening to 19 the original inbound tape, is that right? 20 Α And to conduct an analysis also. 21 Okay. You already knew before you went down to Q 22 Valdez that that tape no longer -- the original no longer 23 existed, didn't you? Well, let me say this, okay? I didn't know that 24 Α 25 of my own direct knowledge. I was informed that the tape

1 could not be located, okay? 2 0 All right. And you --So my procedure is, okay, whenever I examine, I 3 Α go through a certain -- various steps of procedures, okay? 4 5 As a person who was going to perhaps be called upon in some 6 court of competent jurisdiction to give an opinion, okay, I 7 have certain procedures that I go through. I -- rather than relying on other people, ask people directly, okay, 8 9 "Do you have the original tape?" 10 Q Okay. 11 Α Okay. That's my original question. You were not 12 Q surprised when you got down to Valdez and were informed 13 that they could not provide the original tape? 14 Well, I don't know if I would care to say if I 15 Α was surprised or not. It's a procedure that I go through. 16 I mean, whether I was surprised or not, or whether I was 17 18 forewarned that I may not have it, that's true, but as far 19 as --You were forewarned --20 Q 21 Α -- being surprised --You were forewarned that it probably wasn't going 22 Q to be there? 23 That's correct. Α 24 25 Q Okay.

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80 1 And you also know that, in fact, it was not 2 preserved because routinely they rerecord over those 3 tapes. Is that correct? 4 I didn't know that of my own direct knowledge. Α 5 All right. But you were informed of that? Q Well, actually, what I was informed of -- I can 6 Α 7 exactly, when I asked for that tape, they told me that 8 nobody has seen that tape since last April. 9 And they being --Q 10 Meaning the Coast Guard officer that I asked at Α 11 the time. 12 Okay. So whatever problem there was with Q 13 preserving the original inbound tape, that was with the 14 Coast Guard? 15 Well, I would assume that. Α 16 As far as you know. Q 17 Α As far as I know. 18 It's not the prosecutors, or the state troopers? Q 19 Α Well, you see --20 Q As far as you know --21 My knowledge is -- yes. Α 22 Let's just answer my question, okay? As far as Q 23 you know --24 Well, I'm trying to. Α 25 -- the tape, and the failure to preserve it, was Q

81 with the Coast Guard. Is that correct? 1 2 That would be a reasonable assumption, yes. Α 3 Q Okay. Now, you testified as to how the first generation 4 5 micro cassette copy was made and you got that information 6 from whom? I believe I got that from somebody in the NTSB, Α 7 8 that made that representation to me. 9 Q Do you know who it was? 10 Α No, I don't. Not as I sit here. 11 Q All right. Was it at the headquarters of NTSB 12 that you talked to this person? I don't -- I don't believe so. I talked to a Mr. A 13 Cash there, and he was the audio engineer there, and I 14 don't believe that he discussed it. 15 Now, it is possible that I read a report 16 somewhere, or that somebody else informed me, that -- you 17 know, it was -- it was -- I came to that conclusion, okay, 18 that it was made in the manner in which it was made really 19 for two things. Based upon that information, but also in 20 listening to the tape, I felt there were environmental 21 22 sounds on the tape. All right. So, in any rate, from either Q 23 listening to the tape or talking with some person at NTSB, 24 you discovered that Investigator Johnson, the NTSB 25

<sup>1</sup> Investigator, used his Lanier micro cassette and put it up <sup>2</sup> to the speaker of the original system in Valdez?

A Yes.

Q And the original tape was played through that
speaker and he recorded it on his micro cassette. Is that
your understanding of what happened?

A That's right. It was played through a particular
 Playback machine. I have no idea what the playback machine
 was. I know what it was recorded on, but I don't know the
 playback machine.

Q But you were informed that, in fact, it was
 played back on the original machine that recorded it in
 Valdez?

A Actually, quite frankly, counsel, my information 15 is that it was not played back on the original machine that 16 it was recorded on.

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Q And where did you get that information?

A When I was up in Valdez during my discussions with Coast Guard and the trooper and people, they brought out these original tapes to play, and they played them on a machine that was other than the machine that it was recorded on. In fact, there came a point --

Q All right. So the --

A Well, I'm not --

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No, sir -- sir --

1 MR. MADSON: Your Honor, I think the witness can 2 finish his answer. If it calls for an explanation, he's 3 entitled to do that. 4 THE COURT: She asked where he got the 5 information, and I think the --6 MS. HENRY: Well, he's not answering my question, 7 Your Honor. I'm trying to --8 THE COURT: I think he is. You may finish your 9 answer. 10 BY MS. HENRY: (Resuming) 11 Q All right. Again, where did you get your 12 information that the --13 Α Yeah ---- Investigator Johnson's creation of the first 14 Q 15 generation tape was not being -- he did not use the 16 original --17 Α Yeah. -- to record. Where did you get that 18 Q 19 information? 20 Α Yes, yes. This was as I was explaining my 21 answer, okay? There came a point in time when the Coast Guard 22 took me on a tour of the Vehicle Traffic Center and told me 23 that this is the machine that is used to record the tapes 24 on. And it was a large tape logging machine that had two 25

<sup>1</sup> reels on. I was informed that when a 24-hour period, <sup>2</sup> specifically 2400 hours, 12:00 midnight, the tape is <sup>3</sup> subsequently then removed, and it's secured in some manner <sup>4</sup> or fashion. Okay?

5 The tape that I observe them playing back 6 subsequent dates, okay, outbound tapes, was played on a 7 machine that was not up in the Vehicle Traffic Center that was in use. So my information is is that it was played on 8 9 a machine other than it was recorded on, and I was also 10 informed that this is the machine that they play back and 11 make the copies off of. In fact, I observed Trooper Fox 12 make copies off of.

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Q At the same time you did, basically, wasn't it?A That's right.

Q Okay.

So you are basing your opinion that Investigator
Johnson did not use the original recorder, because you
didn't use it, and Trooper Fox didn't use it? Is that
right?

A That's right. It's an assumption on my part.
 Q All right.

Now, were you also informed that when regular
 sized cassettes, as opposed to micro cassettes, were made
 I guess that would be, then, second generation - A Okay.

-- from the micro cassette, first generation, 1 Q 2 that the NTSB people used Investigator Johnson's original micro cassette recorder that he had used. They put the 3 micro cassette into his micro cassette recorder in order to 4 5 create the second generation tape. Were you aware of that? I -- nobody told me that. Α 6 You weren't aware of that, either? 7 Q I mean, obviously, I was aware that a 8 Α No. 9 subsequent copy was made from the micro cassette, because I 10 was given a copy --11 Q I didn't --12 -- the method in which it was made, I'm not Α familiar with. 13 Q All right. Were you also advised of the type of 14 equipment that the NTSB used in order to make this second 15 generation regular-sized cassette? 16 17 Α No, I wasn't. Q Did you see the equipment that they used at the 18 -- at headquarters there? 19 Not to reproduce this tape. 20 Α Q You didn't see that equipment? 21 Α Well, there was -- there was audio equipment in 22 this particular lab that one sees commonly in any audio 23 lab. Whether or not those subsequent copies were made from 24 that, I have no knowledge of that. 25

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1 But you did see the equipment at the lab there? Q 2 They have audio equipment at the lab. Α 3 All right. And are you aware that that equipment Q 4 that they had at the lab there is equipment that they use 5 for other purposes, for instance, listening to cockpit 6 recordings in airline crashes and that sort of thing. 7 I have no way of knowing that. Α 8 Now, you said, in answer to my question a couple Q 9 of minutes ago, that you, in fact, made a tape yourself 10 from the first generation micro cassette? 11 Α Yes. 12 Q Is that right? Α Yes. A real time copy, yes. 13 14 A real time copy. And do you have that with you? Q 15 I don't, no. Α 16 You did not bring it with you? Q 17 Α No. 18 Now, you also stated that you weren't sure, Q 19 because of the starts and stops on the tape, what 20 conversations may have occurred in between the 21 conversations that were actually recorded. Is that right? 22 Α That's correct. 23 Okay. Are you aware of the system that is used Q by the Coast Guard when they're recording real time? 24 25 It's a logging system. Α Yes.

1 Q It's a logging system. Does get the time get 2 recorded? It's time-date generated log. 3 Α And if, say, there's dead space, because 4 Q somebody's talking on the radio, the tape's still going? 5 That's correct. It's a 24-hour tape. 6 A 7 Q So there would be dead space on the tape. A Yes. 8 Q Would it be fair to assume that some of 9 the \_\_\_\_\_ that was not recorded on the inbound tape 10 11 was dead time? Well, I think it's a fair assumption. 12 Α Okay. Well, you stated that you listened to a Q 13 cassette recording of an interview with Captain Hazelwood 14 and Trooper Fox and Mr. \_\_\_\_\_? 15 Yes. I believe that was his name. 16 Α But anyway, it was the --17 Q I believe the conversation occurred on March 24th 18 A of 1989. 19 Okay. Did that appear to be a fairly accurate Q 20 21 tape? Well -- from the standpoint of what, now? Α 22 Of Captain Hazelwood's voice? 23 Q Yes. Α 24 Are you aware that Trooper Fox in recording that Q 25

88 ١ conversation also used the micro cassette? 2 Α I have no way of knowing how that was recorded. 3 Q All right. So you weren't aware of that? 4 Α No. 5 Now, the inbound tape that you've been referring Q 6 to, and that you listened to, obviously there are other 7 voices on that tape besides Captain Hazelwood's, is that 8 correct? 9 Α That's correct, yes. 10 All right. And if I were to tell you that some Q 11 of the other voices on that tape included a Mr. LeCain and 12 two watch standers from the Vessel Traffic Center, a Mr. Taylor and a Mr. Shepherd, did you compare their voices on 13 14 the inbound tape with their voices when they testified in 15 this trial? 16 Α No. 17 Thank you, sir. That's all I have. Q 18 REDIRECT EXAMINATION 19 BY MR. MADSON: 20 Mr. Siedlick, first of all, you testified that Q 21 when you heard the -- I want to say first generation copy 22 of the nonexistent original, okay, the micro cassette? 23 Α Yes. You said that it contained something that you 24 Q 25 believed to be environmental sounds. Would you explain

1 that, please?

Well, yes. As I've previously testified, if you 2 Α use a recording system other than the line jack system, 3 meaning you use an external microphone or the internal 4 microphone that's on this particular machine, it would not 5 only pick up the sounds that are coming over the speaker, 6 7 but it would also pick up any other sounds within range of this microphone that were going on at the time that the 8 9 copy was being made.

Q Buzzing sounds, or doors opening and closing,
 anything like that?

A Things like that. I also think I indicate that there was a lot of noise on the tape also, at this time. Which was -- which could have been -- see, I did not know who the generation copies were made and of course, I did not have access to the original.

When one makes a recording and using an internal microphone, okay, all -- the internal microphones put noise and distortion on the tape other than what's on the original recording, and what they do is record the circuitry noises -- the motors turning in here, because the microphone is close to the circuitry, so it puts additional noise on it.

Now, the question, then becomes, not knowing how the copies are being made, how much is original noise and

1 how much is distortion, how much is environmental that's 2 been put on, and that's why you go back to the original 3 tape to determine, you know, what sounds shouldn't be on 4 this tape, and this is, of course, why I made the copy of 5 this other tape. 6 Now, just so everyone clearly understands, a Q 7 machine like this little micro cassette was used to make 8 the copy from the so-called original? 9 That's correct. Α 10 Then this, in turn as copied in some manner, some Q 11 fashion, onto a larger cassette? 12 That's correct. Α And that's Exhibit 117? 13 Q 14 That's correct. Α 15 Do you know how many subsequent generations of Q copies were made to end up with Number 117? 16 17 No, I don't. Α 18 Now, if the original contained errors, or let's Q 19 say flaws, or whatever you want to call it, such as pitch 20 -- in other words, assuming, sir, the batteries in the 21 little micro cassette were down, it was recorded at a 22 slower speed and then played back, what effect, if any, 23 would there be on these subsequent generations of copies? 24 Would it clear that up, change it, or what would happen? 25 Α If that was one of the scenarios, okay, among the

others that I testified to, the subsequent copies would 1 2 also show an increase in pitch on the tape. 3 Is there a means of correcting for that if the Q 4 problem was noted, say, early on? Oh, sure. You have -- there's a variable speed 5 Α device. 6 So there could have been -- assuming, of course, 7 Q my scenario or my assumption is correct, it could have been 8 9 modified or changed back to the correct speed by a variable speed control? 10 11 Α That's what most professional people do, yes. 12 MR. MADSON: Thank you. That's all I have. MS. HENRY: No questions. 13 14 THE COURT: You're excused. (The witness was excused.) 15 THE COURT: You may call your next witness. 16 17 (Pause) 18 Mr. Madson, counsel, would you approach? MR. MADSON: Excuse me. Would there be any 19 objection if Mr. Seidick remains in the courtroom? I don't 20 intend to recall him. 21 THE COURT: Any objection? 22 MS. HENRY: No. 23 THE COURT: You're free to stay. 24 (Pause) 25

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92 1 State your name. 2 THE WITNESS: James Kunkel. 3 THE COURT: Mr. Kunkel, you're still under oath 4 sir. 5 Whereupon, 6 JAMES KUNKEL 7 called as a witness by counsel for the Defendant, and 8 having been previously duly sworn by the Clerk, was 9 examined and testified as follows: 10 DIRECT EXAMINATION 11 BY MR. MADSON: 12 Mr. Kunkel, you're the same Mr. Kunkel that Q 13 testified here on behalf of the State at an earlier time, is that correct? 14 That's correct. 15 Α 16 Do you reclal when you testified, the approximate Q 17 dates when you were here? 18 I think it was February 15th or 16th, something A 19 like that. 20 During the time you were here, did you have an Q 21 occasion to go to the District Attorney's office for the 22 purpose of listening to a tape recording? 23 Α Yes, I did. 24 Do you recall when that -- approximatly when that Q 25 occurred?

93 1 I think it was a day, maybe two days, before I Α 2 came here to testify. 3 Was -- who was present at that time? Q 4 One of the attorneys who works with my attorney, Α 5 and a state trooper. And what were you asked to do? Q 6 I was asked to listen to two tapes. 7 Α Q Do you recall what tapes they were, sir, what 8 they were purported to represent? 9 Α One tape was an outbound tape which I heard here 10 in court. Another tape, I was told, was the inbound tape. 11 12 Q How was that inbound -- or how were these tapes played to you? Do you recall what type of equipment? 13 Α They were played on a small tape recorder. 14 When you say small, were they --Q 15 A little bigger than that, but --Α 16 Did it appear to be a normal cassette? Q 17 Α Yes. A cassette player. 18 Did you hear both those tapes? Did you hear the Q 19 tapes (inaudible)? 20 Yes, I did. Α 21 With regard to -- what were you asked? 22 Q I was asked to identify the voices on the tape. Α 23 Q Were you able -- with regard to the outbound 24 tape, for instance, were you able to do that, sir? . 🕳 25

1 Α Yes, I was. What about the so-called inbound tape. When they 2 Q that's -- did you realize what that was, what period of 3 time? 4 5 Α Yes. 6 Q When was that, sir? 7 Yes. Α When was that, sir? 8 Q 9 They told me that was the inbound tape of the Α 10 Exxon Valdez coming into port --11 And you were told that? Q 12 I was told that, yes. Α Okay. With regard to that particular tape, what, 13 Q 14 if anything, did you tell the prosecutor about your identification of voices? 15 16 A At that time, I was not able to recognize any of 17 the voices and confirm the voices. 18 Q Why was that? 19 I just couldn't. From hearing the tape, I could A 20 not recognize the voices. 21 Was it the overall quality of the tape was such Q 22 that you couldn't distinguish one voice from another, or --23 Well, the quality could have had something to do Α 24 with it. 25 MR. COLE: Well, objection. Leading.

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1 THE COURT: Just a minute Objection came up. 2 Leading. Maybe you can rephrase your question. 3 BY MR. MADSON: (Resuming) 4 Q If you can, sir, just -- I mean, you say you 5 couldn't identify voices, and I'm just trying to narrow 6 that down as to why you could not do that. 7 Because I wasn't able to recognize the voices on Α 8 the tape, after hearing them. 9 Q Now, yesterday, sir, did you have an opportunity 10 to hear what was purported to be a copy of that same 11 inbound tape? 12 A. Yes, I did. Where was that? Q 13 14 Α This was at the Captain Cook hotel on the 19th floor, in your office. 15 Okay. Were you asked by myself to -- \_ 16 Q 17 -- to listen to this tape? 18 Α Yes. What --19 Q 20 A One of your attorneys asked me to listen to it. 21 Q Okay. And do you know who prepared that tape, sir? 22 You told me, or I was told it was your expert, Α 23 sound expert. 24 Mr. Siedlick? Q 25

1 Yes. Α 2 Q Okay. 3 After hearing that copy of what was purported to 4 be the inbound tape, could you identify voices on that, 5 sir? 6 Yes, I was able to. Α 7 And could you conclude, or do you have any Q 8 opinions, as to the manner in which the people were 9 speaking? Did it sound familiar to you, or different in 10 any way? 11 I was able to recognize the people, but their Α 12 voices sounded as if they were talking faster than I'm 13 normally used to hearing. 14 Did you hear Captain Hazelwood's voice on that Q 15 tape at any time? 16 Yes, I did. Α 17 What conclusions did you reach about his voice, Q 18 if anything? 19 Α To me, it sounded as if he was talking awful 20 fast. 21 MR. MADSON: Thank you, sir. I don't have any 22 other questions. 23 (Pause) 24 CROSS EXAMINATION 25 BY MR. COLE:

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1 The one you recognized as Captain Hazelwood's Q 2 voice, that was when he was talking about the berthing 3 problems, correct? 4 That's correct. He was talking about berthing. Α 5 MR. COLE: I have nothing further. 6 MR. MADSON: I have nothing further. 7 THE COURT: May the witness be excused? 8 MR. : He may. 9 THE COURT: Thank you. You may call your next 10 witness. 11 MR. MADSON: Excuse me. I do have something Mr. Chalos reminded me. 12 else. 13 (Inaudible). REDIRECT EXAMINATION 14 BY MR. MADSON: 15 Mr. Kunkel, I might ask you -- or now hand you 16 Q 17 what's been marked as Defendant's Exhibits CA, CB and BZ, 18 and ask you if you can recognize what that purports to be, sir? 19 20 The first picture? Α Oh, yeah. All of them. Okay? 21 Q 22 Α That appears to be the gangway set up at the Valdez Terminal. 23 Q Have you, in the past, had occasion to see that 24 gangway, sir, and use it? 25

1 Α Yes. 2 And does this appear to be a true and accurate Q 3 reproduction of that gangway, which is a means, I 4 understand, of getting ashore to the vessel? 5 That's correct. Α 6 MR. MADSON: Thank you, sir. I don't have any 7 other questions, and I would ask that these photographs be 8 admitted into evidence at this time, Your Honor. 9 MR. COLE: No objection. 10 THE COURT: They're admitted. 11 (Defendant's Exhibits CA, 12 CB and BZ were received in 13 evidence.) 14 THE COURT: Cross-examination? 15 MR. COLE: No. 16 THE COURT: All right. Now you're excused. 17 THE WITNESS: Thank you. 18 (The witness was excused.) 19 MR. COLE: Judge, can we approach the bench? 20 THE COURT: Yes. 21 (The following was had at the bench:) 22 MR. COLE: My understanding is that Captain 23 Mihajlovic is going to come in and testify that he is a 24 nonpilotage vessel captain, or was until prior to the 25 grounding, and he's going to talk about his procedure as a

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nonpilotage vessel and what he did while he was on the 1 bridge \_\_\_\_\_. 2 3 I object to his testimony if it's going to be like that, because it's not relevant to this matter. We're 4 not dealing with a pilotage vessel, unless Mr. Madson's 5 going to \_\_\_\_\_ that this is a pilotage vessel, and I 6 would argue that \_\_\_\_\_ testimony is not relevant. 7 MR. MADSON: It's extremely relevant. 8 for three weeks, we've been talking about pilotage. 9 10 THE COURT: \_\_\_\_\_ and we'll deal with it 11 when the time comes. 12 (The following was had at the bench:) THE COURT: Call the name of your next witness, 13 please. 14 MR. CHALOS: The next witness, Your Honor, is 15 Captain Ivan Mihajlovic. 16 17 Whereupon, 18 IVAN MIHAJLOVIC called as a witness by counsel for the Defendant, and 19 having been duly sworn by the Clerk, was examined and 20 testified as follows: 21 THE CLERK: Sir, would you please state your full 22 name, and spell your last name? 23 THE WITNESS: It's Ivan S. Mihajlovic, 24 M-i-h-a-j-l-o-v-i-c. 25

1 THE CLERK: M-i-h --2 THE WITNESS: -- a-j-l-o-v-i-c. 3 THE CLERK: And your current mailing address, 4 sir? 5 THE WITNESS: It's 31 Seaspray Drive. 6 THE CLERK: And your current occupation? 7 THE WITNESS: Master. 8 THE COURT: Seaspray Drive where? What city? 9 THE WITNESS: That's in Sennaport, Sennaport, New 10 York. 11 DIRECT EXAMINATION 12 BY MR. CHALOS: 13 Good morning, Captain Mihajlovic. By whom are Q 14 you presently employed: 15 Exxon Shipping Company. Α 16 In what capacity? Q 17 Α As master. 18 How long have you been master? Q 19 Since 1984. Α 20 Q Do you have a permanent ship that you sail in? 21 I do now, yes. Α 22 Q What's that ship? 23 That's the Exxon San Francisco. Α 24 Is she a tanker? Q 25 Α Yes, she is.

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۱	Q	Does she clone the Valdez?
2	A	Yes, she does.
3	Q	Now, could you give us a brief description of
4	your educ	ational and employment background?
5	A	Yes. I graduated from King's Point.
6	Q	Is that the U.S. Merchant Marine Academy?
7	A	The U.S. Merchant Marine Academy in 1974 in about
8	June. Th	en I started working with Exxon in July of 1974.
9	Q	In what capacity?
10	A	As third mate.
11	Q	Did you work your way up?
12	A	Yes, I did.
13	Q	To master?
14	A	Yes, I did.
15	Q	You sailed for a period of time as third mate?
16	A	That's correct.
17	Q	How long?
18	А	I sailed until about 1976, then I got my second
19	mate's license and in 1978, roughly, thereabouts, I got my	
20	chief mate's license, and then in 1983, I got my master's	
21	license.	
22	Q	And have you been sailing as master, you said,
23	since 1984?	
24	A	No. There was a brief period there in 1985 where
25	I had gon	e into the office there for some months.

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Q When was that?

A That was in 1985.

Q What was the purpose of your going into the
 office?

A The purpose of my going into the office was I was by supposed to be Assistant Marine Advisor.

Q What did you do in that job?

A In that job, I worked with what they call port approvals, where they take a tanker and they decide whether it can fit in certain berths safely and I also did work on the Bridge Organizational Manual. At that time it was still being -- it wasn't completed yet. And anything else that came about that needed any advice.

Q And in the capacity that you just described, did
 you have occasion to review any pilotage regulations?

A Yes, I did.

Q Could you tell us what you reviewed, at that
 time?

A Well, basically, there's three different areas
 there. We're looking at pilotage --

MR. COLE: Objection. If he's going to read,
 state what he read, I object on the grounds of hearsay.
 THE COURT: Are you talking about regulations

<sup>24</sup> that are in evidence?

MR. CHALOS: They may be, Your Honor. I'm not

<sup>1</sup> sure what he read at that particular time. I'm just asking
<sup>2</sup> him generally what type of regulations he --

THE COURT: Without going into the substance of them?

MR. CHALOS: Right.

6 THE COURT: All right. Objection overruled. 7 THE WITNESS: Okay. In the Bridge Organizational 8 Manual, there's a short section on pilotage, and where that 9 comes from, there's a U.S. code, there's a Federal Register 10 -- CFR, as you know it. There's also what they call 11 Navigational and Inspectional Circulars. That comes all 12 out of the Coast Guard and the law, of course, comes out from the law. But then you have interpretations of those. 13

BY MR. CHALOS: (Resuming)

Q Company interpretations?

A Not company interpretations, no. You have the interpretations there as like arts, as law manual, and they interpret the law in different ways. I had to look up some of that stuff and go over with the lawyers on that. And then I just basically told my boss -- who was Captain Duncan -- exactly what I had found, and that's how the thing came out in the Bridge Organizational Manual.

Q Well, just answering yes or no, when you were in the office did you have -- in 1985, did you have occasion to review any proposed changes to the pilotage regulations?

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104 1 Α Yes. 2 MR. COLE: Judge, I object to that question. 3 We've gone into this time and time again, and it's been 4 sustained, and I object on the grounds of relevance. 5 MR. CHALOS: Judge, I'm not going to ask him what 6 those proposed changes were, just whether he read anything 7 regarding proposed changes. 8 THE COURT: I don't see how that could benefit 9 the finder of fact, if he read any --10 MR. CHALOS: Well, I'll tie it up with testimony 11 a little bit later on in this examination. 12 THE COURT: Objection sustained. Disregard the 13 answer. (Inaudible). 14 BY MR. CHALOS: (Resuming) 15 When was the first time that you travelled to Q 16 Valdez on a tanker? 17 That was in 1977 as third mate. Α 18 How many trips did you make to Valdez as a mate, Q 19 as opposed to a captain? 20 How many trips? I ran from 1977 basically to the Α 21 present, with a two-year lay-off period, so the amount of 22 trips could be -- 60, 70? I don't know. I have no idea. 23 Q Do you have your pilotage endorsement for Prince 24 William Sound? 25 Α No, I do not.

Do you know the navigational hazards in Prince 1 Q 2 William Sound? 3 I'm familiar with Prince William Sound, yes. Α 4 Q Do you know the navigational aids? 5 Yes. Α 6 Q Do you think that --7 MR. COLE: Objection. Leading. MR. CHALOS: Let me start again. 8 9 BY MR. CHALOS: (Resuming) 10 Do you feel qualified to take the pilotage exam Q 11 for Prince William Sound? 12 Α I think I could take the pilot's exam, yes. And pass it? Q 13 Α I think so. 14 MR. COLE: Objection. 15 BY MR. CHALOS: (Resuming) 16 In addition to your mate's license, did you hold 17 Q any able-bodied seaman's certificates? 18 19 That's correct. When you graduate from U.S. Α Merchant Marine Academy, or any academy of that kind, 20 that's part of your training, and you receive what they 21 22 call a United States Mariner's document, and that's called your seaman's papers, your Z-card, and on the back of it, 23 it will state that you can sail any unlicensed rating in 24 the deck department up to AB, able seaman. 25

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۱	Q But you've never sailed as an AB, right?	
2	A No, I have never sailed as an AB.	
3	MR. CHALOS: Excuse me one second. Let me get an	
4	exhibit.	
5	(Pause)	
6	BY MR. CHALOS: (Resuming)	
7	Q I want to show you Exhibit B in evidence, and ask	
8	you, have you seen that letter in form or substance before?	
9	A Yes. This is the Alaska Maritime Agency Bob Arts	
10	letter. Yes.	
11	Q Yes. And when was the first time that you saw	
12	that particular letter?	
13	A I saw this letter when I was coming back from	
14	Singapore, and I was going to Valdez. The last time I had	
15	been there, it was daylight only. You could only no	
16	pilotage. You could only go in in daylight and leave in	
17	daylight.	
18	Q Well, let's put it in a timeframe.	
19	A Okay.	
20	Q When did you see this letter for the first time?	
21	What year?	
22	A 1988.	
23	Q All right. When was the last time you had been	
24	to Valdez?	
25	A 1986.	

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107 1 And what were the pilotage regulations as you Q 2 knew them in 1986? 3 In 1986, the --Α THE COURT: Just a minute. Mr. Cole, if you have 4 5 an objection --6 MR. COLE: -- to relevance --7 THE COURT: -- you have to stand and make your 8 objection so I can hear it. 9 MR. COLE: Object. Relevance. THE COURT: Objection overruled. 10 11 BY MR. CHALOS: (Resuming) 12 Go ahead. Q Would you repeat that, please? 13 Α 14 Q Yes. What was the pilotage regulations as you knew them in 1986? 15 In 1986, for a nonpilotage vessel, which I would Α 16 be under, would be daylight only transit. That means, 17 daylight -- the whole transit would have to be in daylight 18 northbound to the dock, and the whole transit southbound 19 would have to be in daylight hours. 20 In 1986, where did you pick up and drop off the Q 21 pilot? 22 I picked up and dropped off the pilot at -- just Α 23 below Busby Island or just above Busby Island. 24 25 Q Let me get a chart and show \_\_\_\_\_.

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1 (Pause) 2 I'm showing you what's been marked as Exhibit 3 Number 26 and ask you, can you point, if you will for the 4 jury -- come on up --5 (Pause) 6 -- where, in 1986, you dropped off and picked up 7 the pilot? 8 Okay. I dropped off the pilot usually in this Α 9 area right here, or this area right here. 10 Now, those areas are well-known to Bligh Reef, Q 11 are they not? 12 That's correct. Α 13 And you didn't have pilotage at the time? Q 14 No, I did not. Α 15 You didn't drop or pick up the pilot, let's say, Q 16 abeam of Bligh Reef light, did you? 17 MR. COLE: Objection. Leading. 18 THE COURT: Will counsel approach the bench, 19 please? 20 (The following was had at the bench:) 21 THE COURT: \_\_\_\_\_ a little bit more 22 professional \_\_\_\_\_ objection. (Inaudible) state your 23 objection in a professional tone (inaudible). 24 (The following was had in open court:) 25 THE COURT: All right. Mr. Chalos, let's refrain
1 from leading terms. The objection is sustained. 2 MR. CHALOS: Yes, Your Honor. Was the objection 3 sustained? THE COURT: Yes. it was. 4 MR. CHALOS: Okay. 5 6 BY MR. CHALOS: (Resuming) 7 Captain Mihailovic? Q 8 Α Yes. 9 Prior to 1986, did there ever come a time when Q you picked up, or dropped off, the pilot abeam of Bligh 10 11 Reef? 12 I really can't remember. Prior to 1986, I really A can't remember. I don't think so. It was always up in 13 this area --14 You mean near Busby? 15 Q Α Yeah. 16 17 Q Okay. How far north is the general area that you just 18 pointed to of Bligh Reef light? 19 It's just about --20 Α 21 Q In terms of distance. If I could just take a look right there -- north 22 Α would be right here -- roughly three-and-a-half miles. 23 And if you picked him up further north, where you 24 Q pointed, that would be more? 25

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110 1 Α That would be more, yes, sir. 2 Q Okay. You may resume your seat. 3 Α Thank you. 4 Now, you say in 1988 on the way back from Q 5 Singapore, you did what? You contacted Alaska Maritime? 6 I first contacted my office and I asked had any Α 7 of the pilotage regulations changed so I could adjust my --8 so I could adjust my speed to arrive at daylight, for 9 instance. That's what at last I had thought it would be. 10 And they had basically said that they were going to send me 11 a Telex of a recent letter that they had gotten, and that 12 they had gotten it after I had left the West Coast. 13 Q The letter had gotten from whom? 14 Well, it had ended up being this letter right Α 15 here, that you're looking at. 16 Q The --17 Α The Bob Arts letter. Yeah. The Bob Arts 18 letter \_\_\_\_\_. 19 And the Telex that you got had the text of that Q 20 particular letter? 21 Α Yes. 22 Q I see. 23 After you received that letter, what -- what did 24 you do? 25 MR. COLE: Your Honor, I'm going to object at

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111 this point as to relevance. 1 2 THE COURT: Objection overruled. 3 BY MR. CHALOS: (Resuming) 4 Go ahead. Q Okay. After I had received this letter? Well, I 5 Α just kept the ship going at its normal speed so I could 6 take arrival at any time. It wasn't a question any more of 7 daylight. It was a question that -- really, that the whole 8 9 pilotage thing was waived, I would imagine. 10 Then when you received that letter, did you Q 11 believe the pilotage had been waived? 12 Yes, I did. Α And had you been operating -- did you operate 13 Q under that assumption, right up through the grounding of 14 this vessel? 15 Yes, I did. Α 16 Now, what was your interpretation of that letter 17 Q when you received it? 18 Well, the only thing on this letter that -- you Α 19 know, that you had to inform the Coast Guard or anything is 20 if the visibility. Visibility was the key factor. Two 21 miles or greater. Anything below that, then you would not 22 be permitted to go into Prince William Sound or you'd have 23 to inform the Coast Guard and they would make the final 24 . 🔔 25 decision.

They had also a two-man watch, a two-man watch there from Cape Hinchinbrook to Montague Point, or vice versa, outbound.

Q Let me get another chart.

(Pause)

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Can you show the jury where Cape Hinchinbrook is,
 and where \_\_\_\_\_\_ is?

A Yes. Cape Hinchinbrook is this light right here,
 and you would keep going -- let's say you're northbound.
 You would keep going until you get abeam of this tip right
 here. And as soon as that -- that is your area that they
 want both ten-minute position reports and a two-man watch.

Q What's the distance in that area?

A (Inaudible). Over here it would be -- roughly
 <sup>15</sup> about 12, 13 miles.

Q All right. And is that the only area you
 understood that a two-man watch was required?

A Yes.

Q Now, for the rest of Prince William Sound,
 whether you were inbound or outbound, did you understand
 that -- how many people did you understand were required to
 be on the bridge?

A Only one person.

Q One watch stander.

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113 1 Whether you were coming up or going? Q 2 That's correct. Α 3 And that was true up until -- up to the pilot's Q 4 station? 5 That's correct. Α 6 Q Sir, do you presently have someone on your vessel 7 with pilotage? 8 Α Yes, I do. I have the chief mate. 9 And he has a pilotage endorsement? Q 10 Α He has a pilotage endorsement. 11 Q When you transit through Prince William Sound, is 12 he on the bridge? 13 Α No. 14 Q Why is that? Well, I mean pilotage -- the pilot is an adviser 15 Α and the chief mate I usually use to send down to and -- go 16 17 across and check the deck out before you get in, especially 18 at this time of year. And I use him more for preparing for the in port operation, which is the real dangerous part. 19 20 Q So the man on your ship with the pilotage is not 21 on the bridge of the ship while you're transitting Prince William Sound? Is that your testimony? 22 That's correct. 23 Α And do you have a one -- who is one the bridge, 24 Q just the watch stander at that point? 25

1 Just the watch stander, or myself, or both of Α 2 It depends. It would depend. us. 3 Have you, in your experience, had occasion to Q 4 leave the bridge in Prince William Sound, leaving just one 5 man on the bridge? 6 Yes. In Prince William Sound, that's all the way Α 7 up through the Narrows? 8 All the way to the Port of Valdez. Q 9 Okay, yes. I've left the bridge there in the Α 10 Narrows and if I'm going to leave the bridge, I might leave 11 the bridge for a short period of time in this area right 12 here. 13 In the area of Bligh Reef? Q 14 Just south of it. Α Yeah. And, sir, when -- in a situation where a man with 15 Q the pilotage endorsement on your ship, the chief mate, is 16 17 below, do you consider yourself to be in violation of the 18 pilotage regulations prior to the grounding? 19 Α No, I don't. 20 Q Why is that? 21 Well, because the master -- the pilot is only Α 22 there as an adviser. And the federal pilotage, the way it 23 is right here, in Prince William Sound, advisory -- I can 24 always call on him at any time. He can be up there at any 25 time I might need him. I actually have more trips than he

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115 does. He just has the piece of paper, and I don't. 1 2 How -- you've sailed to other parts of the world, Q have you not? 3 Yes I have. Α 4 How do you compare sailing in Prince William Q 5 Sound, with respect to navigational hazards, to other areas 6 that you've sailed in? 7 Well, I'll be honest with you there. Prince Α 8 William Sound could not compete -- could not compete with 9 10 anything on the East Coast. Q What do you mean by that? 11 You have the approaches -- in the Gulf of Mexico, 12 Α you have the approaches to Galveston, for example, or 13 Corpus Christi, for example and you have -- on each side, 14 you have a mile fairway, so basically what that would be 15 is, just about from here to the separation zone, and that's 16 for two-way traffic. 17 Now, also on --18 Now, what does that mean? Two-way traffic? 19 Q Well, in other words, you have -- right here, you Α 20 have an inbound, separation zone, and an outbound lane. 21 How much distance is between the three? 22 Q Between the three right here? Α 23 Q Yes. 24 I think it's a thousand. You can almost see. Α 25

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The separation zone, I believe, is a thousand -- thousand
 yards.

Q Okay. So in the other areas that you've sailed in, it's a narrower area?

5 Yes. Also, it is dotted by rigs. In other A 6 words, rigs would be on each side. So as you came in, as 7 you were heading into, let's say, Galveston for example, and you were coming into Galveston. You would have a rig 8 on the edge of the fairway, another rig on the other edge 9 of the fairway, which would leave you to stay in the middle 10 a half a mile on each side. Plus, coupled with outbound 11 traffic and any fishing boats or rig boats that go for 12 transit back and forth to the rigs. 13

So that area over there -- and that extends about 15 18 hours out from Galveston.

Q You would consider that area to be much more hazardous than Prince William Sound?

A Oh, yes. Oh, yes. Without a doubt.

Q In your opinion, is pilotage required in Prince William Sound?

A In my opinion now?

22 Q Yes.

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A I don't think that pilotage is required at this point. I think it was still waived. It's starting to have more correspondence and getting more and more confusing.

117 Now, I'd like to speak a little bit about your Q 1 experience with ice in Prince William Sound. 2 Okay. Α 3 Have you encountered ice in the past? Q 4 Yes, I have. Α 5 Did you encounter ice in the area of the Bligh --Q 6 of Bligh Reef? 7 Α Yes. 8 Q In the situations that you encountered ice, what 9 did you do? 10 The situations where I encountered ice -- may I Α 11 use this chart? 12 Q Yes. 13 Okay. Α 14 Usually I would let, like I said, the pilot off 15 would be around here. I would insist that the pilot --16 depending on the ice, I would insist that the pilot bring 17 the ship around the ice. 18 You mean have him take you out of the lanes? Q 19 Α Exactly, yes. And then he would get off around 20 this area here. 21 Still -- still up in the back of Busby light Q 22 area? 23 Yes. Α 24 Q The Busby Island area? 25

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1 Α Yes. 2 0 And then after the pilot left, you would be out 3 of the lanes? 4 I would be either in northbound lane, or slightly Α 5 out of the lanes, yes. 6 Q Okay. 7 I take it you're diverting around ice at this 8 point? 9 That's correct. Α 10 Q Is that your normal practice? 11 Α That is my normal practice, yes. 12 Q Okay. 13 What type of course did you steer in those 14 situations to get out of the ice? 15 Boy, that's -- that's hard to say. I mean, going Α 16 back -- anywhere between 200 and 180, 175. You know, 17 depending. 18 Have you had occasion to look at the course that Q 19 Captain Hazelwood was using, courses he was using in this 20 case? 21 Yes. Α 22 Were the courses that you used similar to those? Q 23 Α Yes, they were. 24 Q Did you -- your cases come abeam of Busby and the 25 make the turn back?

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1 Yes. (Inaudible). Α 2 Q Did --MR. COLE: I'm going to object to the leading 3 nature, again, of Mr. Chalos's questioning. 4 5 THE COURT: The questions are suggesting the answers, Mr. Chalos. (Inaudible). 6 7 MR. CHALOS: Your Honor, I'll rephrase it. BY MR. CHALOS: (Resuming) 8 9 Q At what point, when you were diverting around ice, did you use to -- as your turning point? 10 I think we would use Busby Island. Almost any 11 A area there that you have -- Busby is the most predominant, 12 because it's obviously before Bligh Reef. So you would use 13 Busby. You could use Reef Island. You could use ranges on 14 anything that you wanted there, basically. 15 Now, what's the control fact as to what Q 16 point \_\_\_\_\_ it where you could get a good fix? 17 Well, the controlling factor would be where it 18 A would be the easiest fix. That would be the easiest fix, 19 let's say, at Busby Island, because it's right there, you 20 know. It's a very simple course change, come down and turn 21 right, basically, is what you're talking about, and coming 22 to an intersection, basically. 23 Just going back to your experience with the Q 24 Galveston area? 25

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Uh-huh. А

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2 You say it normally says about 18 hours to 0 3 transit the area?

That's correct. Α

Are you on the bridge the entire 18 hours? Q

6 No. As a matter of fact, in 1974, when I came to Α 7 work with the company, after I graduated from King's Point, 8 there was one ship that I had where I was a trainee with 9 another trainee -- he was third mate -- and we ran the 10 Florida Keys, which at that time, you were running right 11 off the Florida Keys. You were running at about a mile, 12 mile-and-a-half, off the lights and the reefs, and -- at 13 full speed -- and you know, the training was just there. 14 You just -- you know, that is what the third mate is 15 supposed to be able to do.

16 (TAPE CHANGED TO C-3675)

17 Now, sir, is it in the captain's discretion as to Q 18 when to stand on bridge and when to leave the bridge? 19

Oh, yes. Α

20 Are you aware of any regulations that require the Q 21 captain to be on the bridge at any time?

22 Yes. The only regulation I am aware of is the Α Panama Canal. The Panama Canal has a set -- they have in 23 24 that case over there, that would be pilotage waters, but 25 they have a set -- how would you say it? Routine.

121 The master is assigned to do this. The chief 1 2 mate on watch is assigned to do this, the helmsman is assigned to do this. But that's the only area that I know 3 of. 4 Are you aware of any regulations that require the 5 Q 6 captain to be on the bridge in Prince William Sound? 7 Α No. You're not aware of any? 8 Q 9 Not aware of any, no. Α Now, when you sailed in Prince William Sound as a 10 Q 11 mate, did your captains ever leave you alone on the bridge? 12 Oh, yes. Oh, yes. Α Was that done routinely? 13 Q That was done -- depending on the ship you went 14 Α 15 Some captains would stay up there and they'd point out on. the different areas, like, they'd tell you stories that 16 17 they heard about Bear Cape, for example, Cape Hinchinbrook, and they'd go up that way and other captains would just 18 19 leave the bridge. One captain told me it was like getting pilotage for the Pacific Ocean. I called him at the 20 pilot's station. 21 22 Q What does that mean? Call him up there right before we got to Rocky 23 Α Point. 24 I mean like it was like the Pacific 25 Q No, no.

<sup>1</sup> Ocean. What does that mean?

2 Well, basically, I just took it as, you know, he Α 3 was joking around, and basically it was just that it was so 4 open compared to running the East Coast, that it was 5 nothing. In your opinion, do you have an opinion as to the 6 Q 7 waters between, let's say, Rocky Point and Bligh Reef, as 8 to their hazardous quality, or characteristic? 9 Rocky Point and Bligh Reef is -- it's -- I'm used Α 10 to the East Coast where you have -- where you're constantly 11 maneuvering for traffic, and you're constantly, you know, 12 maneuvering for rigs and stuff. This area is not, to me, 13 hazardous. 14 Now, you spoke about the Bridge Organizational Q 15 Manual you had some experience (inaudible)? 16 That's correct. Α 17 And I take it you also have experience from a Q 18 captain's standpoint? 19 Yes, I do. Α 20 How would you characterize the Bridge Q 21 Organizational Manual? 22 The Bridge Organizational Manual is nothing more Α 23 than a guide. It gathers information, it takes it out of 24 what we had are Exxon Marine Rigs, and puts it all to one 25 manual, so it's easier to locate. But it's nothing more

1 than a guide.

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Q Is the interpretation left to the person reading the guide as to what should be done under a particular situation?

A Oh, yes.

Q And is that specifically true with respect to a
7 master interpreting that?

A Oh, yes. Definitely.

Q The organization manual?

10 A Yes.

Q Are watch conditions, or the setting of watch
 conditions, in the discretion of the master?

MR. COLE: Your Honor, again, I hate to keep interrupting with Mr. Chalos, but he continues his line of leading questions, and I object to the leading nature of his questions.

MR. CHALOS: Judge, I didn't think that was leading. I'm asking him for a yes or no answer without suggesting the answer.

THE COURT: You're leading, Mr. Chalos.
MR. CHALOS: All right. Let me rephrase it.
BY MR. CHALOS: (Resuming)

Q At who's discretion aboard these Exxon vessels are watch conditions set?

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Set by the master.

Q Would you agree or disagree with the proposition that two masters looking at the same situation may differ in what watch condition they would set?

Oh, definitely. There's no question about it. 4 Α 5 As I said, there, in 1984, the watch condition A, B, C, D were in effect, and if you go on one ship, you might have 6 to log it. The master would want you to log; you're in 7 watch condition A. You go on other ships there, they 8 9 really didn't care whether you logged it. They wanted you 10 to just put down that you checked the compasses, and 11 everything else, and that was it.

Q Now, have you read any testimony with respect to
 this trial?

A Yes. I read Captain Beever's, Captain Greiner,
 and I glanced over Mr. Kunkel's, Mr. Cousins' and Harry
 Claar and Maureen Jones a little bit.

Q Now, you're familiar, are you not, with the facts
 relating to the type of maneuvers that were supposed to be
 made in this case?

A Yes, I am.

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Q Okay. Do you have an opinion as to the maneuvers that were made by Captain Hazelwood to avoid the ice?

A Yes. The -- my opinion is that that was the -it was done right after Rocky Point, basically. He saw the ice. He came back to 200 and then to 180. That's a

1 typical, typical maneuver to avoid the ice. 2 You come down and you change course at Busby to 3 go back, either parallel or into the lanes to get around 4 the ice, and then you make your way back by the time you're 5 down to Naked Island there. 6 Do you have an opinion as to whether there was Q 7 sufficient room to make the turn back into the lanes if the 8 turn was started at -- abeam of Busby? 9 Oh, yes. There was plenty of -- plenty of time Α 10 to bring the ship back into the lanes. You have to 11 understand that -- and this was explained to me by pilots, 12 the pilots that we talked to there, about going around the ice, because everyone has --13 14 MR. COLE: Your Honor, I object if he's going to 15 bring out hearsay. MR. CHALOS: I don't know what he's going to say. 16 17 THE COURT: Well, that's the problem with the narration form of testimony, Mr. Chalos. 18 19 MR. CHALOS: All right. 20 BY MR. CHALOS: (Resuming) 21 Q Let me -- let me ask you some specific questions. 22 A Okay. You read the testimony about Captain Hazelwood 23 Q leaving the bridge and leaving Mr. Cousins in charge of the 24 25 watch.

1 Yes, I did. Α 2 Q Do you have an opinion as to -- to that maneuver? 3 I have no problem with that. Α 4 Why is that? Q 5 Because it's a very simple maneuver. Α 6 What simple maneuver are you talking about? Q 7 I'm talking about coming down -- the instructions Α 8 were to come down at Busby Island and bring the ship back, 9 change course and bring the ship back, into the lanes. 10 In your opinion, is that a maneuver that can --Q 11 that a third mate is qualified to make? 12 Α Yes. Oh, definitely. 13 MR. CHALOS: Your Honor, I have no further 14 questions of this witness at this time. THE COURT: Shall we take our break? All right. 15 A ten-minute break, ladies and gentlemen. 16 Don't 17 discuss the case among yourselves or with any other person 18 and don't form or express any opinions. THE CLERK: Please rise. This court stands in 19 recess subject to call. 20 21 (A recess was taken from 11:25 a.m. to 11:50 22 **a.m.**) THE COURT: Mr. Cole. You may proceed, Mr. Cole. 23 CROSS EXAMINATION 24 BY MR. COLE: 25

127 1 Good morn -- I guess it's pretty close to good Q 2 afternoon, Captain Mihajlovic, correct? 3 Α Yes, Captain Mihajlovic. 4 You have worked for Exxon for the past 15 years, Q 5 correct? 6 Α That is correct. 7 And do you presently work for Exxon Corporation Q 8 presently? 9 Α That is correct. 10 You became a permanent shipping -- a permanent Q 11 captain in 1986? 12 That is correct. Α 13 And you began the Valdez run as a permanent Q 14 captain, after becoming a permanent captain, in 1988, 15 correct? No. I was -- I was -- I was a captain there 16 А 17 since 1984. 18 Q You were a -- you first entered Valdez as a 19 permanent captain in 1988? 20 I don't understand what you mean by "permanent Α 21 captain." A captain is a captain. 22 Well, in 1984, you made about nine to ten trips, Q 23 correct, in and out of Valdez? 24 That is correct. Α 25 Q And that was as a relieving captain?

128 1 It's still a captain, though. Α Yes. 2 That was as a relieving captain. Q 3 Yes. Yes. Correct. Α You were filling in for another captain? 4 Q 5 That's correct. Α 6 So it wasn't until 1988, when you were a Q 7 permanent captain, that you started coming into Valdez? That's correct. 8 Α 9 Now, you've known Captain Hazelwood for Q 10 approximately fourteen years? 11 Α That is right. 12 And did you work with Captain Hazelwood when he Q 13 was a captain? 14 A Yes, I did. How many times did you work for Captain 15 Q Hazelwood? 16 17 When he was a captain? Once, I believe. Α 18 And did you work with him when he was a chief Q 19 mate? 20 Yes, years ago. Way, way -- 1974 or five. Α 21 Q How long did you work for him then? 22 Α About two months. 23 Q Okay. Did you work for him any other times? Not that I can recall. 24 Α Q And when you worked with him -- when he was a 25

129 1 captain, how long did you work with him? 2 It was roughly two months. А 3 And that was on the East Coast? Q 4 No, that was on the West Coast. Α 5 Q On this -- in the trade up here? 6 Α Yes. 7 You would consider Captain Hazelwood a friend of Q 8 yours? 9 Yes, I would consider him a friend of mine, yes. Α 10 Have you ever been called upon to critique and Q 11 evaluate and testify to the performance of a captain? 12 Α No, I haven't. 13 I assume that you would find it difficult to Q 14 critique someone who was a friend of yours? 15 You're not critiquing a friend, you're critiquing Α 16 an individual's actions, so I don't see any problem with 17 that. 18 You wouldn't have any problem critiquing Captain Q 19 Hazelwood, even though he's a friend of yours? 20 Α No, I don't think so. No. 21 And you don't think that would have any impact on Q 22 your being objective? 23 No. Α 24 And it wouldn't make any difference that you Q - 25 worked for Exxon Shipping Company right now? That wouldn't

130 1 play into your -- whether or not you were objective in 2 critiquing Captain Hazelwood? 3 No. No, I don't believe so, no. I don't Α 4 understand the questioning. Okay. Now, prior to the Exxon Valdez -- and now, 5 Q 6 I understand, according to your testimony, you have never had pilotage for Prince William Sound? 7 That's correct. 8 А 9 And, as a master, none of your mates ever had Q 10 pilotage in Prince William Sound, correct? 11 Α Except recently, the chief mate did. 12 Q Yes. After the accident. 13 Α 14 Q But prior to the grounding, none of your mates 15 ever had it. А 16 No. 17 Now, every -- you have to report at a -- how many Q 18 times -- you said you took about -- how many trips did you make as a master in and out of Prince William Sound prior 19 to the 1989 grounding? 20 As a master -- I would say -- it's hard to say. 21 Α I'd say 25, 30. I really don't know, to be honest with 22 23 you. But that's a rough estimate? Q 24 Α It's rough, yes. 25

1 Q And every time you came in -- is it fair to say 2 -- and about eight or nine of those happened in 1984, 3 correct? 4 Α That's correct. 5 So the rest of them would have happened in 1988? Q 6 Α That's correct. 7 Okay. And every time you came into Prince Q 8 William Sound in 1988, at the three-hour mark, you declared 9 that you were a nonpilotage vessel? 10 Α That is correct, yes. 11 And you were asked, at that time, are you a Q 12 pilotage or a nonpilotage vessel? 13 That's correct. Α 14 And it never entered your mind that there might Q 15 be something strange about the fact that the Coast Guard as 16 asking whether you were a pilotage or a nonpilotage vessel? 17 No, not at all. They've done that since '77, Α 18 actually. 19 Q And a nonpilotage vessel is a vessel that does 20 not have a mate on board, or the captain with pilotage for 21 that particular area? 22 Α That would be considered a nonpilotage vessel, 23 yes. 24 So -- and every time you left the Port of Valdez Q 25 in these trips since 1988, you declared yourself a

1 || nonpilotage vessel?

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A Well, actually, the pilot would call up, and he would declare the ship to be a nonpilotage vessel.

Q Yeah, but he did it after questioning whether anybody on the bridge, any of the mates, had pilotage, correct?

A Most likely, I would assume.

Q And you always, then, were required to abide by
nonpilotage vessel rules, correct?

A I don't -- nonpilotage vessel rules, as far as this letter, that's basically what we were required to do that, yes.

Q Now, my understanding is that you never dropped the pilot off, or picked him up, at Rocky Point. It was always north, right around north or south of Busby light. Is that correct?

A That's correct, yes.

Q And only vessels that had an officer with
pilotage could drop the -- or pick up -- the pilot at Rocky
Point, correct?

A That would be correct, yes.

Q Now, did you tell the pilot where to get on and get off, or did he tell you where to get on and off? A Well, he usually picked -- he usually told us,

25 you know, "Keep coming, captain. We'll proceed up, and

133 1 we'll meet you up in this area," or it might be the other 2 way around, depending on the weather. 3 Now, the -- you were gone from the Prince William Q 4 Sound trade between some time in 1984 and 1988. Would that 5 be correct? 6 Α Sometime between them, yes. Sometime between the 7 two, yes. 8 Q And the Bob Arts letter was written in 1986? 9 That's correct. Α 10 Q Correct? 11 Α Yes. 12 And when you read that letter, you understood it Q 13 to mean -- to refer to only changes in the nonpilotage 14 laws, correct? 15 No. When I read this letter, over here, and the Α 16 way it had been proceeding, and being in the office, I 17 assumed that it was waived, that there was really no 18 pilotage. 19 0 Would you please read the first sentence of that 20 letter. 21 Α Sure. 22 Q Right there. 23 Effective September 1, 1986, the U.S. Coast Guard Α 24 requirement for daylight passage in Prince William Sound 25 for vessels without pilotage has been waived.

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134 Okay. How does that letter, that sentence right 1 Q 2 there, affect pilotage vessels? 3 Well, all right. You're saying that you're going Α to -- it's -- to me, it's saying that it's pilotage or 4 5 nonpilot vessels, for the simple reason you're not going to have pilotage vessels held to any higher standards than a 6 person who doesn't have pilotage. So you would assume 7 that. 8 Did you assume that this refers to pilotage and 9 Q nonpilotage vessels, even though it very clearly says, "For 10 vessels without pilotage?" 11 That's correct, but it doesn't make sense. 12 Α Okay. Well, if it didn't make sense, did you --Q 13 did you take the time to call the Coast Guard? 14 I wouldn't have to call the Coast Guard for the Α 15 simple reason that the Alaska Maritime Agency is our agent, 16 is our agent in there, and I wasn't really concerned with 17 pilotage or nonpilotage as far as that I knew I didn't have 18 pilotage so this letter, I would look at from that point of 19 20 view. So are you saying that it's clear as to vessels Q 21 without pilotage? 22 Α It's clear for my vessel. 23 Your vessel? 24 Q I feel. Yeah. Α 25

135 1 But you didn't check with the Coast Guard? Q Okay. 2 That's our -- Alaska Maritime Agency, that's Α No. 3 their job. That's -- that would be like me checking into 4 stores or anything else that comes on the vessel. You 5 don't do that. They take care of that. 6 Okay. Would you read the second sentence Q 7 there --8 Α Sure. 9 -- that says, "All (inaudible)." Q 10 All nonpilotage vessels will be able to transit Α 11 from Captain Hazelwood to the pilot's station at all hours, 12 as long as visibility remains two miles or greater." 13 Now, that sentence doesn't refer to pilotage Q 14 vessels, does it? 15 It says nonpilotage vessels. Α No. 16 Is there any place in that letter that refers to Q 17 the regulations applying to a pilotage vessel have changed? 18 Α No, no. It just talks about the nonpilotage. 19 Q Thank you. 20 THE COURT: Mr. Cole, would you move that exhibit 21 back out of the way, please? 22 MR. COLE: Sure. 23 (Pause) 24 BY MR. COLE: (Resuming) . 🕳 25 Now, of course, you said that you interpreted it Q

136 1 to mean to mean pilotage vessels. 2 That is correct, yes. Α And that's because you found this to be 3 Q inconsistent, is that correct? 4 5 Α Yes. It's a little confusing. And, of course, the easiest way to clear that up Q 6 would have been to call the Coast Guard authorities in 7 Valdez and ask them what is the policy, correct? 8 9 No, the easiest way would be to call my agent, Α which I had done, and that's what he said was there. For 10 me, that was perfectly clear. 11 You talked to the Coast Guard every time you come Q 12 13 in and out of Prince William Sound, correct? Α I talk on Channel 13 to the Traffic Center. 14 Q Okay. 15 Α Yes. 16 17 Q You're in town when you're in Valdez for 18 approximately 13 to 14 hours while your vessel is loading and unloading. 19 That's correct, yeah. Α 20 21 Q And you went into town, even, a couple of times when you were in Valdez? 22 That is correct, yes. Α 23 And when you went into town you could have easily Q 24 gone right over to the Coast Guard and asked them about 25

1 whether pilotage or nonpilotage had been waived, correct? 2 You could, but why would you? Why would I go to Α 3 town for -- you know, to go see the Coast Guard when I have 4 a letter stating that my requirements, when I've talked to 5 the Coast Guard inbound. 6 Well, every time you've talked to them, you told Q 7 them that you were a nonpiloted vessel. 8 That is correct. Α 9 When they asked you whether you were pilotage or Q 10 nonpilotage. 11 That's correct. Α 12 So there must have been some difference between Q 13 how they were treating pilotage and nonpilotage vessels. 14 Well, for my vessel right there, that was what I Α 15 did. 16 Now, Alaska Maritime Agency, as far as you know, Q. 17 doesn't change the law or the regulations, it just gives an 18 interpretation of the regulations, correct? 19 It passes on information to the vessels. Α 20 It doesn't change the regulations. It only Q 21 interprets what they think are the regulations, correct? 22 I don't know whether they interpret. I think Α 23 they pass on the information that they receive from the 24 Coast Guard. 25 Q Would you --

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But they don't make the law, no. 1 Α They don't make the law. All they do is 2 Q interpret what they believe it to be. 3 Α Okay. 4 And, of course, this letter, when you saw it, had 5 Q been made in 1986, correct? 6 That is correct. 7 Α And when you were coming into the Prince William Q 8 Sound for the first time, it was nearly two years later? 9 That's correct. 10 Α Now, the role of pilots in a particular area, I'd 11 Q like to talk about that for just a minute. Pilotage is a 12 -- pilots are there to provide their knowledge of the area, 13 correct? 14 Yes, local knowledge. Α 15 Okay. And they're an aid to the safe navigation Q 16 17 of your vessel. Would you agree with me on that? 18 In some ways, yes. А Q And they know things like tides and currents and 19 particular hazards that exist in the area, correct? 20 That's correct. Α 21 And they're job is to pass that along, that 22 Q information along to you, correct? 23 That's correct. Α 24 And the purpose is to assure the safety of the Q 25

139 1 Valdez, correct? 2 That's correct. А 3 Now, TS -- at the Narrows up there, it's a Q 4 one-way zone, correct? 5 That's correct. Α 6 And one of the -- when I mean -- when I say, a Q 7 one-way zone, the purpose of what that means is that only 8 one tanker can be in that area at one time, correct? 9 Α Correct. 10 And the purpose is, so that in that particular Q 11 area, to avoid collisions, correct? 12 Α Yes. 13 Q That would be \_\_\_\_\_ --14 Α That would be fairly --15 Now, the TSS system out in Prince William Sound, Q 16 it's divided into three lanes, correct? 17 That's correct. Α 18 And one -- and they're about a mile wide. Q 19 Α That's right. 20 And one of them is the northbound lane, and then Q 21 you have a separation lane, and then you have a southbound 22 lane, correct? 23 Α That's correct. 24 And those are designed to separate the traffic Q 25 that's coming in and out of Prince William Sound, correct?

1 Α Yes. The one or two ships a day, yes. 2 Q And that -- and the separation zone is in case 3 you have to move in and out, you can do it and still leave in a margin of safety? 4 That would be -- that would be correct. 5 Α 6 Q Would you agree with me, Captain Mihajlovic, that 7 all of these, the pilotage, the one-way traffic in the 8 Narrows, the TSS, is designed so that -- to enhance the safety of tanker traffic in Prince William Sound? 9 10 A Well, it is designed to enhance the safety and to 11 keep the tankers out of the fishing areas, too. 12 Q But primarily it's safety. Yeah. Α 13 Q Correct? 14 Well, okay. 15 Α Would you agree? I'm not trying to put words in Q 16 17 your mouth. Well, when I was running in here originally, 18 Α 19 there was some talk about changing these lanes over here and moving the lanes because of the local fishing areas, 20 21 and that would not be safety. And that would be just a monetary thing. 22 But for the most part? Q 23 But for the most part, okay, yes. 24 A Q It's safety. 25

141 1 Α Yes. 2 Q Now, a pilot, when he comes on board your vessel, 3 he doesn't relieve you as your -- in your responsibilities 4 as the master. does he? 5 Α No, he does not. And that's very well set out in the operations 6 0 7 manual that's on the Exxon tankers. The captain still has 8 responsibilities, right? 9 Α The Bridge Organizational Manual, yes. A few 10 vears back. 11 Q That's your understanding of the way it should 12 be. correct? The captain -- the captain is never relieved of Α 13 any of his responsibilities, but he can designate it to 14 other officers. 15 Q And there are certain times when you designate, 16 17 and I suppose there are certain times when you don't 18 designate authority to other officers? Α True. 19 Would you agree with me on that? 20 Q Α Yes. 21 Now, when the pilot comes on board to navigate 22 Q your vessel, say, from Busby into the docks, you don't 23 expect him to do that down from down in the mess hall, do 24 you? 25

142 1 No. Α 2 You don't expect him to do that from in your Q 3 quarters, do you? 4 Α No. 5 You expect him to be right on the bridge, nav --Q 6 you know, helping to safely navigate your vessel into the 7 dock. correct? Yeah. In this case over here, if he wanted to go 8 A 9 down below, I would take it over for him, for awhile. 10 How many times have you seen in all your trips --Q 11 Α Right. 12 -- a pilot leave the bridge while he was -- where Q 13 you were navigating to and from the dock? 14 Oh, quite a few times. Α 15 A lot of times? Q 16 Α Our head would be outside the bridge area, which 17 is outside, off the navigational bridge. 18 All right. Q 19 And I've seen pilots there gone for as much as Α 20 four, five minutes. 21 Four or five minutes? That's a long time. Q 22 Well, I mean, you asked the question. Α 23 (Inaudible). 24 Is that the longest time you saw him leave, four Q 25 or five minutes?

143 1 Α Yeah, that's about it. And in clips. 2 And that's to go to the rest room? Q 3 That's correct. Α But the rest of the time, they're on the bridge, 4 Q 5 correct? 6 Α That's correct. 7 And how many times of those times was it during Q 8 the transit through the Narrows that the pilots left? 9 I couldn't recall. Α 10 Do you remember any of the pilots ever leaving Q 11 the bridge to the Narrows? I really couldn't recall, to be honest with you. 12 А And how many times during the docking process did 13 Q 14 they leave the bridge? The docking process --Α 15 MR. CHALOS: Your Honor, I object. What would be 16 17 the relevancy of that question? 18 THE COURT: Objection overruled. BY MR. COLE: (Resuming) 19 20 Q How many times during the docking process do you ever remember a pilot leaving the bridge? 21 I don't remember. Α 22 Q Do you ever remember him leaving during the 23 undocking process? 24 Α No. No, not really. 25

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1 How many times -- is the docking and the Q 2 undocking a fairly important time for the safety of the 3 tanker? 4 I would say the docking more than the undocking. A 5 Undocking is pretty cut and dry. 6 And how many times have you not been on the Q 7 bridge during the docking process of one of your tankers? 8 MR. CHALOS: Your Honor, I object again to the 9 relevancy. The evidence here is that Captain Hazelwood was 10 on the bridge was on the undocking process, and for quite a 11 time thereafter, so I don't know what relevancy that would 12 have --13 THE COURT: Overruled. 14 BY MR. COLE: (Resuming) 15 How many times have you not been on the bridge Q during a docking process of your vessel when you were a 16 17 captain? 18 I can't recall that I ever was not on the bridge Α 19 for a docking. 20 So you would agree with me that there are certain Q 21 circumstances where you're always on the bridge? 22 That's correct. Α 23 Now, I believe you said that you have left the Q bridge on certain occasions while transitting in and out of 24 25 Prince William Sound
1 That's correct. Α 2 Q And did you say that you have left the bridge 3 during your transit of the Narrows? 4 Α Yes, I have. 5 How long -- how many times did you leave the Q 6 bridge during that? Oh, it's hard to say. I know I left once -- once 7 Α 8 for sure. Maybe a couple of other times. 9 Once for sure out of 25 round trips? Q 10 Well, okay, yeah. Α 11 Okay. And how long were you gone? Q 12 Just about the whole -- the whole transit. Α 13 Q The whole transit? Yep, uh-huh. 14 Α You understood at that time, obviously, that you 15 Q were not relieved of your responsibilities for the safety 16 of this vessel --17 18 That's right --Α When the pilot was there, correct? 19 Q Α That's correct. 20 And that was the only time you ever did that? 21 Q Α What's that? 22 Left the bridge for the entire time of the 23 Q transit through the Narrows? 24 For the entire time, yes. Α 25

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1 Now, my understanding is that you have used the Q 2 auto pilot in Prince William Sound once, maybe twice, is 3 that correct? 4 That's correct. Α 5 And that would be in all the 25 times that you Q 6 were navigated in and out of Prince William Sound? 7 That's correct. Α 8 And that was during a time when -- maybe once Q 9 when stowing the pilot's ladder? Correct? 10 That's correct. Α 11 Now, you've navigated through ice, is that Q 12 correct? 13 Α Yes. 14 You didn't use the auto pilot when you were Q 15 navigating through ice? 16 No, I didn't. Α 17 And when you were navigating through the Narrows, Q 18 did you use it through the Narrows? 19 Α No. 20 Now, my understanding is that -- well, let me 0 21 just ask you this. Is the safety of the crew, of your crew 22 and your vessel, the most important responsibility a master 23 has aboard a vessel? 24 Yes. Α 25 Q Do you agree?

1 Α Yes. 2 Now, I assume that you would take all reasonable Q precautions to assure that you're -- the vessel that you 3 captain proceeds in a safe manner? 4 That's correct. 5 Α Do you take -- I assume that -- you've been a 6 Q 7 captain for going on six years, off and on? Right. 8 Α 9 Two -- four full-time, correct? Q 10 Α That's correct. 11 The vessel that you captain right now, presently, Q 12 is called the Exxon San Francisco? That's correct. А 13 And it's about 75,000 gross tons? 14 Q No, 75,000 tons, dead weight. 15 Α I'm sorry. 16 Q Gross would be about 200,000, 300,000 17 Α (inaudible). 18 So the vessel that you do is about a third the 19 Q size of the Exxon Valdez? 20 That is correct. 21 Α But that doesn't diminish your responsibility at Q 22 all as to assure its safety, just because it's smaller, 23 24 right? Α No. 25

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148 1 And I assume that, as a tanker captain who has Q 2 only been a permanent person for oh, four years, you might 3 even take a little bit more -- you might be even a little 4 bit more cautious? 5 I don't understand what you meant by "permanent . A 6 person." 7 Well, you were assigned as a --Q 8 For fifteen years, I've been working with the Α 9 company. 10 Q But you were a tanker captain on a permanent 11 basis since 1986, correct? 12 Yeah. That's correct. Okay. Α I would assume that -- how many tanker captains 13 Q 14 are you -- in prioritywise, are you on the low end as far 15 as the number of years you've been on the permanent basis, 16 or are you on the high end. 17 I guess just -- on the low end. On the low end. Α 18 And I assume that there are tanker captains in Q 19 the industry that have 15 or 20 years of experience? 20 Α Not that much with Exxon, but in the industry, 21 yes. 22 Would it be fair to say that you might even be a Q 23 little bit more cautious because of your inexperience as a 24 tanker captain? . 🕳 25 That's possible. Α

149 And I assume that you don't take any unreasonable 1 Q 2 or unnecessary risks when navigating your vessel in a 3 hazardous area. Would that be fair to say? 4 Α Yes, that would be fair to say. Well, when I say hazardous area, I mean things 5 0 like, you don't get any closer to navigating any closer to 6 shore, when navigating close to shore, than you have to. 7 Correct? 8 9 Hazardous area, as you're talking, is very hard Α to explain. You know, what's hazardous? It's all 10 11 relative. It's relative to maybe the East Coast, and maybe 12 the East Coast. It's all relative to where you've been. So I don't really understand what you mean by 13 14 hazardous . Okay. Well, let me give you a couple of 15 Q 16 examples. 17 Α Okay. When you are navigating your vessel, you don't 18 Q get any closer to shore than you have to, correct? 19 That's correct. 20 Α And when you're navigating around ice, you don't 21 Q 22 get any closer to the ice than you have to, correct? Α Correct. 23 When navigating in areas of high density traffic, 24 Q and a lot of ships are coming and going, I suppose you 25

1 don't go any -- any faster than reasonably necessary, 2 correct? 3 That's correct. Α 4 (Pause) 5 Now, as I understand this standard, if you have Q 6 encountered ice how many times as a captain? 7 Oh, three or four. Somewhere around that area. Α And in at least one of them, you insisted that Q 8 the pilot take you around the ice. 9 I never insisted the pilot take me around the A 10 ice. I told the pilot I'd like him to change course to go 11 around it. 12 Q Did you drop him off prior to getting to it? 13 Yes, I did. Α 14 Q Okay. 15 Now, you have always diverted from around the 16 ice. 17 That's correct. Α 18 And that's because you consider ice to be a Q 19 hazardous condition to your ship, correct? 20 I consider that that area, to divert, that the Α 21 thinnest ice, the smallest pieces of ice would be on the 22 eastern side, with the most \_\_\_\_\_. The other side 23 would be the biggest pieces. That's why I would divert. 24 You would consider it a hazardous condition? Q 25

A Yeah. Okay.

2 Q Now, you indicated that the Exxon bridge manual 3 doesn't have -- that it can be interpreted in a number of 4 different ways. It's just kind of up to the master, 5 correct?

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A That is correct.

Q When it says, "within the limitation outlined in paragraph 2.1.5(h) below, the master must be on the bridge whenever conditions present a potential threat to the vessel, such as passing in the vicinity of shoals, rocks, or other hazards which represent any threat to safe navigation."

Do you find that to be a provision that the master can interpret however he wants?

A Could I see that?

<sup>16</sup> Q Sure.

(Pause)

A It's very hard to read something like that.

Q I'm sorry. Go ahead.

A Okay. Right here. This part, "within the
limitations outlined?"

Q Uh-huh.

A Okay. Well, what is your question?

Q Is that a provision that the master has a lot of
discretion in interpreting?

152 1 Oh, yes. Oh, yes. Α 2 What discretion? 0 3 There is nothing in this manual -- nothing in Α 4 this manual that will take anything away from the master's 5 judgment. 6 So even if he's passing close to -- let me read Q 7 it exactly. 8 Even if he's passing in areas which present a 9 potential threat to his vessel, he has the discretion of 10 whether or not he has to be on the bridge? 11 That's correct. He has to look at a hazard. A Α 12 hazard could be anything. It could be a huge sea coming at you. Do you have to be called anytime a huge sea comes at 13 14 you? No. So there is discretion there. But I assume you exercise that discretion with 15 Q always -- with the safety of your vessel in mind? 16 17 That's correct. Α 18 And you don't take any unreasonable chances as a Q 19 tanker captain, correct? 20 No, you wouldn't take any unreasonable chances, Α 21 no. (Pause) 22 Now, you indicated you had no problem with Q 23 Captain Hazelwood leaving the bridge. 24 That's correct. Α 25

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1	Q Is that correct?
2	A That's correct.
3	Q I want to give you a hypothetical.
4	A Okay.
5	Q I want you to assume that you have pilotage?
6	A Okay.
7	Q For Prince William Sound up to Rocky Point. I
8	want you to assume it's March 23, 1989 at about 11:40.
9	Your captaining the Exxon Valdez, which is a 209,000 is
10	it ton vessel?
11	A Yeah. Okay.
12	Q It's valued at \$150 million. You have
13	approximately a crew of about 20 that you're responsible
14	for, their safety.
15	Q Right.
16	A You have a cargo of approximately 1.2 million
17	barrels. And you have drafts of 56 feet and a quarter.
18	And, at that time, you're at full maneuvering speed,
19	because you're just dropped off the pilot about 15 minutes
20	before.
21	Q It's dark, and the weather's calm, but you bring
22	your lookout into the bridge, to the bridge wing, because
23	it's that dark. This is the ice that you initially see in
24	front of you, and you make the choice to go through the
25	ice, under that scenario.

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1	A	To go through the ice.
2	Q	Go through the ice.
3	A	Uh-huh.
4	Q	Where are you on your vessel when you're in the
5	middle of	this ice?
6	A	You're pointing to the wrong lane. Okay, that
7	lane?	
8		When I go through the ice, I'd probably be on the
9	bridge.	
10	Q	Probably, or you would be?
11	А	Probably, depending on, you know, how much
12	concentration of ice there is.	
13	Q	It's the worst ice you've seen in (inaudible).
14	А	Well, yeah, I wou <mark>ld say I would be up</mark> on the
15	bridge at	that time.
16	Q	And if you were just about to enter that ice,
17	where wou	ld you be?
18	А	I might be on the bridge, yeah, probably be on
19	the bridge	Э.
20	Q	Might, or
21	A	I'd probably be on the bridge.
22	Q	Probably?
23	A	Yes.
24	Q	Okay.
- 25		What would what is more important than the

<sup>1</sup> safety of your vessel --

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A There's nothing --

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-- that would keep you off that bridge?

A There is nothing more important than the safety of my vessel. Take -- looking at it from my ship, I have people on my ship that have more experience than I do. They have 20 years of second mate. Those people are quite capable to take care of that, if I had to go down. They are guite capable. I have no doubt at all about that.

<sup>10</sup> So I'm looking at your hypothetical and thinking <sup>11</sup> about how it applies to me, if you understand. So the <sup>12</sup> experience level of a crew member is excellent. I mean, my <sup>13</sup> chief mate is sailing captain while I'm here. So --

Q What is more important than the safety of your vessel?

A There is nothing more important than the safety
17 of the vessel.

Q And this is a hazardous situation, the worst ice
you've seen?

A Correct.

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Q And you might be on the bridge?

A That's correct.

Q Okay. And after you were at this end, you might
be on the bridge, is that right?

A That's correct.

1 Q I want you to assume that you've decided to go 2 around the reef, around the ice, and it's -- and you've 3 left the bridge. Or let's say you're not. If this is Bligh, would you consider this to be a 4 5 hazardous situation, at eight-and-a-half minutes? 6 Α Yes. 7 How about at seven-and-a-half? Q 8 Α Yes. 9 Q And would you be on the bridge in a hazardous 10 condition like that? 11 Α Yes. 12 How about at six-and-a-half? Is that a hazardous Q 13 condition? 14 Now, I'm just looking at that. Is the А Yes. vessel turning or anything? 15 16 Q I just asked you about those positions. 17 Okay, yes. Yes. No question about it. Α 18 Q Now, I'd like to ask you another hypothetical. 19 Α Okay. 20 Q If you decide to turn and take a heading of 21 approximately 200 degrees, and then take a heading of 180 22 degrees --23 Α Yes. 24 Q Now, this 180 degrees will take you within .9 and 1.1 miles of Busby Island? 25

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That's correct. Α

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2 Q It will take you within an even shorter distance, 3 or the equivalent, of the ice that you see outlined in 4 this. You have been informed that in some circumstances 5 your helmsman, by several authorities -- by several people 6 -- that your helmsman has trouble steering your vessel in 7 certain circumstances. Okay? 8

Α Yes.

9 You proceed along the course of 180 degrees until Q 10 about 11:52 when you place this vessel on load program up. 11 The vessel is also on automatic pilot, at this time, when 12 you leave -- at 11:52. At 11:53, your vessel is about a 13 tenth of a mile above Busby.

Uh-huh. Α

15 You've left the TSS zone completely, and you're Q 16 headed in a direction that would put you -- that would 17 cause you to run into Bligh, correct?

Α Yes. Okay.

You're headed toward a red sector, correct? Q

20 Α Right.

> Q And you know a red sector is dangerous --

22 Could be dangerous. Α

23 Constitutes a danger? Q

24 Α Constitutes dangerous, yes.

At 11:53, you would be on the bridge of your Q

158 1 vessel, wouldn't you? 2 Α How is the person that is up there now? Is he 3 good or bad? 4 Q What person? 5 Well, am I the only one up on the bridge now? I Α 6 don't --7 Q You have a third mate up there, and a helmsman 8 that you're aware of has problems. 9 Well, for that hypothetical question, I'd have to Α 10 pretty much find out how well the third mate --11 Q What other information do you need? 12 I will need how good the third mate is. Α Say he has a second mate's license that he's had 13 Q 14 for approximately two months. He has worked as a third 15 mate for about a year, sea time. 16 Time is no matter. You have people that are good A 17 the first day they come out. You have people that are bad 18 after 30 years. You know, forget about time. Is the guy good or is he bad? That's what I want to know to make this 19 20 decision, not the time that he's up there. 21 So you're willing to risk the safety of your Q 22 vessel on one person? No, not at all. 23 Α Q Other than yourself? 24 Not at all. I mean, I am saying there that for 25 Α

1 your hypothetical -- to answer your hypothetical question, 2 I don't need how long the third mate's been around. I need 3 how good he is. Is he good or bad? 4 Q Let's assume that he's good. 5 Is he good? Α 6 Q Yes. 7 Well, then there's no risk. Α 8 Then you'd leave? Q 9 Α Yes, I could leave, very well leave. 10 Okay. And if at 12:0 -- and you would leave the Q 11 instruction, let's assume that you left the instruction 12 that Captain Hazelwood left. You're aware of what that 13 was, right? 14 Somewhat, yes. Α 15 And you would leave for the entire transit Q 16 through that ice, through that maneuver, correct? 17 Α I'm saying in that hypothetical case, yeah. With 18 no qualms. 19 Q You would, or you could? I want to know what you 20 would do. 21 Α I'd have to see the ice, I'd have to go around 22 the ice, but yes, I prob -- I would. 23 Q You would leave the bridge? 24 I would -- I would probably leave the bridge, Α 25 yes. If I had good people.

160 1 Q And you work for Exxon? 2 Yes, I do. А 3 Q Thank you. You're welcome. 4 Α 5 THE COURT: Mr. Chalos? REDIRECT EXAMINATION 6 7 BY MR. CHALOS: 8 Captain Mihajlovic, do you believe Exxon would Q 9 agree or disagree with the testimony that you just gave 10 about leaving the bridge? 11 MR. COLE: Objection. 12 THE WITNESS: I really don't know. 13 THE COURT: Just a minute. Don't answer that 14 auestion. 15 MR. CHALOS: I'll withdraw it, Your Honor. 16 BY MR. CHALOS: (Resuming) 17 Let's go back to the beginning of Q 18 cross-examination. Mr. Cole -- let me start again -- Mr. 19 Cole asked you about sailing as relief captain. Do you 20 recall that? 21 A Is there any difference between a relief captain 22 and a captain? 23 Q No. A captain is a captain. Well, what is a relief captain? 24 Q - •25 Α A relief captain is basically you go from ship to

161 1 ship to ship. You fill in. There are two regular captains 2 assigned to a ship, so you would go on that ship and you 3 would fill in for awhile. 4 In other words, you don't have a permanent ship Q 5 assigned? 6 That's correct. Α 7 But you're still the captain? Q 8 Α That is correct. 9 And you're sailing on your master's license? Q 10 Α That is right. 11 Now, I just -- I didn't ask you this on direct. Q 12 Let me ask you now. When you were sailing as a mate, have 13 you had occasion to observe masters on the bridge? 14 А Oh, yes. 15 Q Can you tell us about the general practice of 16 masters standing at the windows, the front windows, of the 17 wheelhouse? 18 Okay. While I was mate I was on the Exxon North Α 19 Slope and the windows generally had -- it was a sill like 20 -- basically like this, with the window maybe here. Okay? 21 So somebody maybe has even made little paths or something 22 like that. You would stand over there like this. 23 And is it your habit to lean on the windowsill? Q 24 Oh, yes. Either lean or sit down, have a chair Α 25 up there.

Have you observed captains leaning on the 1 Q 2 windowsill? 3 Α Oh, yes. On how many occasions? 4 Q 5 Well, on occasions on the North Slope when I was Α chief mate, and I do it myself. 6 7 Are you -- are you impaired normally when you're Q 8 leaning on the windowsill? 9 No, no. I don't think so, no. А 10 I'd like to speak a little bit about Exhibit B, Q 11 the letter from Mr. Arts. Let me put it up front. 12 Α All right. Now, you -- let me go back to my podium here. Q 13 14 (Pause) You mentioned that when you got this letter, you 15 16 interpreted it as being the pilotage rules, did you not? 17 Α Well, yes. 18 Q Okay. What did you mean by the pilotage rules? What did you understand the pilotage rules to be? 19 20 Well, I had -- after receiving this letter, I Α 21 felt that the pilotage was just waived. And there's been 22 talk about that before in 1985, so --What did you understand the rules were as they 23 0 applied to nonpilotage vessels? 24 25 According to this letter? Α

1 Q Yes. 2 Just the two mates on the bridge from Cape Α 3 Hinchinbrook up to Montague Point and -- as long as the 4 visibility was two miles or greater. 5 Did you also understand that to mean that someone Q with pilotage could travel Prince William Sound with 6 7 visibility less than two miles? 8 MR. COLE: Objection. Leading. Objection. 9 Leading. 10 MR. CHALOS: Let me withdraw -- let me rephrase 11 it. 12 BY MR. CHALOS: (Resuming) 13 Did you have any understanding as to the Q 14 difference in that two mile rule between pilotage and 15 nonpilotage vessels? No, I really didn't. I didn't know whether the 16 Α 17 pilot -- I wasn't a pilotage vessel so I don't know what 18 the pilotage vessels would do. 19 Q Now, let me ask you this. When you sailed as a 20 mate, the chief mate, second mate, third mate --21 A Right. 22 -- in Prince William Sound. were there ships that Q 23 had people with pilotage endorsements on board? 24 Α That's correct. 25 That was prior to 1984, right? Q

164 1 Α That's correct, yes. 2 Q On those occasions, do you remember where the 3 pilot was picked up or dropped off? 4 The pilot was picked up or dropped off, I think Α 5 about two or three miles above -- two miles above Busby 6 Island, usually in this area right here, if I may -- this 7 area right here. 8 And that's basically the same area where you Q 9 picked up and dropped off the pilot? 10 Α Basically, yes. 11 It's really dependent on the circumstances at Q 12 that time. Α That's correct. 13 14 Weather being a factor? Q 15 Weather is a major factor, yes. Α 16 Q Now, I'd like to speak again a little bit about 17 the -- that pilotage letter? You said that you interpreted 18 that letter as a applying to both pilotage and nonpilotage 19 vessels, as we've been describing it. 20 Α That's correct. Well, now what's the basis for that? 21 Q 22 Α Well, if -- let's say I had pilotage, and I'm coming into Prince William Sound, and I have to go by the 23 pilotage regulations. It would be easier to say that my 24 vessel did not have pilotage. 25

1 Q Why? 2 Well, because then I'd have to go by this, right Α 3 here. I could go by -- from two mates up from Cape 4 Hinchinbrook to Montague Point, and would have to be only 5 one mate up on the bridge until the point where you pick up 6 the pilot. 7 Well, do you believe that the regulations -- if Q 8 you read and interpret it as Mr. Cole suggests, do you, 9 then, believe that the regulations for nonpilotage vessels 10 were more lax than those for pilotage vessels? 11 Α Yes. 12 So you would just declare yourself a nonpilotage Q 13 vessel? 14 That's correct. Α 15 In other words, in your interpretation, it makes 0 16 no sense, does it -- or you're saying it makes no sense --17 to have someone with no pilotage go all the way up here 18 with one mate? 19 MR. COLE: Your Honor. I object. 20 THE WITNESS: That's correct. 21 MR. COLE: It's leading. 22 BY MR. CHALOS: (Resuming) 23 And is that the basis --Q 24 THE COURT: Mr. Chalos, objection sustained. 25 Rephrase your question.

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1	MR. CHALOS: I'm sorry okay.
2	BY MR. CHALOS: (Resuming)
3	Q Now, in that letter, it talks about the pilot
4	station?
5	A Yes.
6	Q Is that correct? What is the pilot station, as
7	you know it?
8	A The pilot station, as I know it, according to the
9	coast pilot, is two two-and-a-half miles above Busby
10	Island, somewhere around that area.
11	Q But what is a coast pilot?
12	A A coast pilot is a publication put out at all the
13	ships out at all the ports of the United States.
14	Q Did you have the coast pilot on board your ship?
15	A Yes. All ships have the coast pilot.
16	Q Okay. And where does the where is the pilot
17	station, according to that publication?
18	MR. COLE: Objection. Hearsay.
19	THE WITNESS: It ,
20	THE COURT: Just a minute, Captain Mihajlovic.
21	I haven't heard him ask for a question a
22	question that might call for hearsay yet.
23	MR. COLE: I'm assuming he's testifying according
24	to a book.
•25	MR. CHALOS: Well, I'll rephrase the question.

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1	BY MR. CHALOS: (Resuming)
2	Q Where is the pilot's station as you know it?
3	A Just above Busby Island, two I think it's two
4	miles.
5	Q And that's the general area where you drop off
6	and pick up the pilot?
7	A That's correct.
8	Q Now, when you received this letter, did you rely
9	on it?
10	A Yes, I did.
11	Q In 1988, when you received the text of this
12	letter, did you understand the regulations that are set
13	forth in there, or the situation that's set forth in there,
14	with the existing pilotage requirements?
15	A Yes. When I received this received the
16	contents of this letter, it was pretty for me it was
17	obvious.
18	Q For for 1988. In other words, it was written
19	in 1986, but you understood it
20	A Oh, yes, definitely
21	Q to apply to 1988.
22	A Yes. Yes.
23	Q Now, you were asked about pilots knowing tides
24	and currents. Are there any significant tides and currents
25	in Prince William Sound?

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1 Α 2 Are -- based on your knowledge of Prince William Q 3 Sound, would you say the navigational hazards are well-known and well-marked? 4 5 Α Oh, yes. I'd like to ask you a little bit about the 6 Q one-way zone. Mr. Cole indicated that, in the one-way 7 zone, there's always one vessel, now, is that correct? 8 9 No, there's not one vessel. There's just one Α 10 tanker, but you could have small vessels in there. 11 You could even have two tankers in there going Q 12 the same way, couldn't you? Yes, as long as you stay further apart. I think 13 Α 14 it has a restriction on the amount, the amount of space you keep between the two ships. 15 16 All right. You started to mention that, in Q 17 Prince William Sound, there's only one or two ships a day

18 that have -- that come at night?

Yeah. One or two, maybe three. 19 Α

20 Q Would you say the traffic --

You know, that's high. 21 Α

22 Q Would you say the traffic is light or heavy?

Oh, it's light. The traffic is light. 23 Α

24 Now, Captain Mihajlovic, when you sailed as Q master in this area in 1987, '88, '89, did you believe that 25

No, they're not.

169 1 you were being monitored by the Coast Guard on radar? 2 MR. COLE: Your Honor, I'm going to object. 3 That's outside the scope. 4 MR. CHALOS: I think it goes to --5 THE COURT: I'll let him reopen the evidence. 6 You can have cross-examination on it. 7 BY MR. CHALOS: (Resuming) 8 Did you believe you were being monitored? Q 9 Yes. Α 10 Q Did you believe you were being monitored down to 11 Bligh Reef? 12 Α Oh, yes. 13 Did you believe -- what did you believe would Q 14 happen if your ship was standing into danger? 15 Α I believe that they would let -- they would 16 inform me. Actually, it happened almost -- once. 17 Q To you? 18 Α Yes. 19 What happened? Q 20 Well, we had come out from ice, and we had come Α 21 out past Bligh Reef and the Coast Guard informed me there 22 that I -- I think it was the Overseas Juneau and the Exxon 23 Valdez were behind inbound, and I told them what I was 24 doing, coming around, and he had the Overseas Juneau, asked 25 him if he would haul over into this area, basically, right

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170 1 here, and let me get back into my traffic lane. 2 Q At that time, did you believe they were looking 3 at you on the radar? 4 Α Oh, yes. Yes. Now, you spoke about at least one situation where 5 Q you left the bridge and the Narrows? 6 7 That's correct. Α At that time, did you leave the pilot up there? 8 Q 9 Yes, I did. Α With a mate? 10 Q 11 Α Yes. 12 Q And now, you also mentioned that pilots, in your experience, on your ships, have left the bridge area for --13 14 I think you said 45 minutes? That's correct. Α 15 MR. COLE: Your Honor, I'm going to again object 16 to the leading nature of Mr. Chalos's questions. 17 18 MR. CHALOS: Your Honor, this is just --19 THE COURT: I think he just recapped a question 20 and answer before as preliminary in developing the next question. 21 MR. CHALOS: Yes. 22 THE COURT: The objection overruled. 23 24 BY MR. CHALOS: (Resuming) Sir, do you have an opinion as to whether Q 25

171 1 something could happen in a four- to five-minute period if 2 the pilot is off the bridge? 3 Well, if the pilot's off the bridge, anything can Α 4 I mean, you know -- it could happen. happen. 5 In any event, in those situations, how far was Q 6 the pilot away from the bridge area? 7 In my ship over there, he was about -- 20 feet, Α 8 travelling back. 9 Q How long would it take him to get back up to the 10 bridge if you had to, to get him? 11 Probably about maybe five seconds less. Α 12 What would you have to do to get him back to the 0 13 bridge? Just basically go knock on the door and say come 14 back? 15 Yeah, in that case, you'd have to -- there's no Α 16 telephone in the bathroom, so you'd have to have somebody 17 go back and knock on the door. 18 And he'd have to do whatever he had to do in Q 19 there --20 Α Yeah. 21 Q -- promptly. 22 Α Yes. 23 Q Okay. 24 Now, when you left the bridge in the situations 25 that we've described, where did you go?

1 I went down to -- in that one case that I was Α 2 talking about leaving the bridge in the Narrows, I had to 3 go down to the radio room to make a call. I was going out 4 to lighter the Exxon Valdez with a second ship, and I had 5 to make a call to the office because the wanted us to go around Glacial Island and drift for twelve hours. They 6 7 didn't think that was appropriate, to have a pilot up to 8 twelve hours and then dock the next morning. 9 Who wanted you to go around? Q \_\_\_\_\_ Coast Guard. 10 Α 11 Now, is the radio room at the next level on your Q 12 ship? No. The Exxon San Francisco is designed -- it 13 Α 14 would be kind of hard to explain here --15 Q Do you want to draw it, or something? If I may. 16 Α 17 Q Well, let me ask you this. How far away were you 18 from the bridge in that instance? Well, let's see. There's about three levels 19 · A 20 missing from the San Francisco, so one level above the -one level above the main deck. 21 22 So if you were needed, you could get back there Q in a minute? 23 24 Α Yes. 25 Q Were you close to a telephone if you were needed?

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١	A Oh, yes. Yes.
2	Q And if something was happening on the bridge and
3	you were needed, what would you expect the mate or the
4	pilot
5	A They would call me.
6	Q Is that your standard instructions?
7	A Oh, yes.
8	Q Is that standard instructions as you know it,
9	from every master?
10	A Oh, yes.
11	Q Now, there's been testimony in this case I'll
12	put it to you in a hypothetical form that the auto pilot
13	was put on at 2350, 11:50, and taken off at 23:53 when the
14	vessel was north of Bligh Reef. Do you have an opinion as
15	to whether that was a hazardous maneuver?
16	A North of Busby Island, you mean?
17	Q Yes. Busby Island.
18	A No. It's not hazardous at all.
19	Q Do you have an opinion as to the use of the auto
20	pilot for three to five minutes, let's say, at the most?
21	A No. No. I've used it myself.
22	Q You've studied the testimony in this case?
23	A Some of it, yes.
24	Q You said you read Mr. Kunkel and Mr. Cousins, Mr.
25	Beevers?

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1 That's correct. Α 2 Okay. Do you have an opinion as to whether the Q 3 auto pilot being on for three to five minutes had any role 4 in this matter? 5 Α No. 6 You don't have an opinion? Q 7 No, I have an opinion on it --Α 8 Q What is that 9 -- and the answer is no. Α 10 The answer is no? Q 11 I don't believe that the auto pilot had anything Α 12 to do with this collision, no -- this grounding. 13 Q Now, you also know from the testimony that you've 14 read that the vessel was approximately one mile off Busby Island --15 16 Α Yes. 17 Q -- when she was abeam. Do you consider the one 18 mile distance to be hazardous? 19 Α Ν. 20 You also, I think, have read that she was on Q 21 course 180 at that time. Do you have an opinion as to whether that -- that particular course was a hazardous 22 course? 23 Α No, not at all. 24 Normal course for avoiding the ice? Q 25

1 Normal course for avoiding the ice. Normal Α 2 procedures. 3 Q You also undoubtedly read that the speed of this 4 vessel, at that time, was about -- coming up to 11.5 5 Do you have an opinion as to that speed in terms of knots. 6 hazard? 7 Α No, it's not -- I have no problem with that at 8 all, no. 9 Q When you avoided the ice, how fast was your 10 vessel travelling? 11 When I avoided the ice, it was up to around 12. Α 12 Normal speed for going around ice? Q 13 Yes. Actually, I was a little slower. Α 14 Now, do you have any opinion as to whether any of Q 15 the maneuvers that were made by Captain Hazelwood were 16 prudent or imprudent? 17 Do I have any opinion on that? Α 18 Q Yes. 19 I have an opinion on it, and I don't -- I Α No. 20 don't think there was anything wrong with it. 21 Q Now, your ship, the Exxon San Francisco, is, I 22 think you said, 75,000 tons? 23 That is correct. Α 24 What's her length, though? Q 25 Α 864 feet.

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1	Q	Which is about 100 feet shorter than the
2	A	Valdez.
3	Q	Valdez.
4	A	Yes.
5	Q	She's just not as wide?
6	A	That's right. I'm only 125 feet wide.
7	Q	I'd like to speak a little bit about your
8	testimony	with respect to the ice. You said that in your
9	experience	e, the eastern or leading edge of the ice here
10	is gene	erally thinner than what you would find in the
11	southbound	d lane?
12	A	That is correct.
13	Q	Does that play any role at all in why one would
14	divert are	ound ice?
15	A	That is correct.
16	Q	Now, in at the times that you saw ice, you
17	didn't	did you see ice as a sheet, or did you see it as
18	pieces of	ice?
19	A	It's pieces of ice, you know.
20	Q	And how would you describe the pieces that you
21	saw on the	e eastern edge, or the leading edge of it?
22	A	Well, the leading of it usually is very very
23	smalle	r pieces. It's the easier ones, should you have
24	to turn i	nto the ice, and you can go through it with the
25	least amo	unt of danger.

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177 1 Or just maneuver a little bit to get around it? Q 2 Just \_\_\_\_\_\_ a little around it, yes. It's --Α 3 that is the normal procedure. 4 Now, Mr. Cole gave you -- strike that. Q 5 Let me show you this exhibit again that Mr. Cole 6 showed you, Exhibit BU. 7 Α Uh-huh. 8 Mr. Cole asked you if whether, at Q 9 eight-and-a-half minutes, or seven-and-a-half minutes, or 10 six-and-a-half minutes after midnight, in the situation 11 outlined on this exhibit, whether you would be on the 12 bridge, and your answer was yes? 13 That's correct. Α 14 Would your answer be different if -- if you Q 15 didn't know that the vessel was in this area at this 16 particular time? In other words, you had assumed, or were told, that the vessel \_\_\_\_\_ to turn back at Busby 17 18 Island light? 19 Oh, yes. My answer would be different. IF I Α 20 didn't know it was there, yes, it would be different. 21 Q Now you read testimony that Captain Hazelwood 22 asked the mate to call him and let him know when he started 23 his maneuver. Do you remember that? 24 Yes. Α 25 Q And you remember that the third mate, Cousins, in

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1	fact called at 2357 and said, "Captain, I've started my
2	maneuver."
3	A Uh-huh.
4	Q Now, is that the type of call you would expect to
5	get from a mate with whom you left instructions?
6	A Yes.
7	Q If you'd gotten that call, what would that tell
8	you?
9	A It would tell me that he was doing the maneuver.
10	Q And would your mind be put at ease?
11	A Yes.
12	Q Now, there was some testimony or Mr. Cole
13	outlined the situation to you involving a helmsman who had
14	problems steering. In your mind, is there a difference
15	between steering and following a helm order?
16	A Yes.
17	Q For 10 degree right rudder?
18	A Yes.
19	Q What's the difference?
20	A Well, the difference on the helm order is, the
21	helm order is just you give a right ten rudder command,
22	for example, or a right five. That's a rudder command.
23	You just turn the wheel. You line up the rudder angle
24	indicator on ten, which is the rudder, and that's the
· <b>•</b> 25	extent of it.

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1 Now, the steering is actually different, because 2 as the vessel swings, you have to apply counter rudder to 3 it, which is rudder put the opposite way, to slow the swing 4 down, and you have to bring her around, and then you have 5 to steady it up there. That's different. Which would you say is more difficult? 6 Q 7 Oh, if you have to steer a course. That would be Α 8 a lot more difficult than a rudder angle. 9 Q How difficult is -- is following a ten degree 10 right rudder command? 11 I'm sure anybody here could do that. Put them on Α 12 the ship there. Not difficult at all. 13 Q And how difficult is it carrying out that task? 14 Not difficult at all. Α 15 Lastly, Mr. Cole asked you about the course that Q 16 this vessel was steering, 180, at the time they got abeam 17 of Busby, ad he indicated that that course would be taking 18 you down towards Bligh Reef. Do you recall that? 19 That's correct. Α 20 Now, when you were in the Port of Valdez and Q 21 you're on course 270, you're doing about full sea speed in 22 that area? 23 In that area to bring her up, yes. About 12 Α 24 knots. 25 Okay. If you don't make the course change to get Q

into Entrance Island, you're going to wind up on the other 1 2 shore here, are you not? That's correct. 3 Α And when you're down in this arm steering 290 --4 Q 5 219? Is that right? That's 218 to 219, yes. 6 Α 7 If you don't change course, what happens? Q 8 Α You'll hit Naked Island. 9 In other words, every course that you may be Q steering in Prince William Sound at one time or another is 10 11 taking you towards land? 12 Α That is correct. And you're going to wind up hitting the land, 13 Q 14 unless there's a course change? Α That's correct. 15 MR. CHALOS: I have no further questions. 16 17 RECROSS EXAMINATION BY MR. COLE: 18 There's nothing in that letter that you have in 19 Q front of you that changes the requirements for pilotage 20 regs, is there? For pilotage vessels, is there? 21 Α 22 No. 23 Q That letter was written in 1986, correct? That's correct. Α 24 25 Q And you relied on it in 1988, correct?
1 That's correct. Α 2 And you didn't ask, or call, a Coast Guard person Q 3 to determine whether or not that was still the policy, 4 correct? 5 That's correct. Α 6 Pilotage laws -- one of the purposes of pilotage Q 7 laws is to aid in the safe navigation of tankers. Would 8 you agree with me on that? 9 Yes. Α 10 And TSS zones are designed to aid in safety of Q 11 the vessel, correct? 12 Α Correct. 13 And it seems to me that you believe that there's Q 14 no reason to have pilotage in Prince William Sound, is that 15 correct? 16 That's my opinion, yes. Α 17 So anybody who has pilotage or TSS or a BTC is Q 18 being overly safe? Is that correct? 19 Anybody that has it? Α 20 If that's what we have in Prince William Sound, Q 21 those people who have instilled that system are being 22 overly cautious, correct 23 MR. CHALOS: Objection, Your Honor. No 24 foundation for whether they're cautious, overly cautious, 25 not cautious.

182 1 THE COURT: Rephrase your question. They 2 instilled the system -- I don't understand what you're 3 trying to get at. 4 BY MR. COLE: (Resuming) 5 Policies designed to have pilots aboard vessels, Q one-way zones, speed limits, separation zones, are designed 6 7 to promote safe navigation of tanker vessels in Prince 8 William Sound. Do you agree with that? 9 Α Yes. 10 And to do away with that would make this less Q 11 safe? 12 А No. 13 Do you agree with that? Q 14 No. I don't agree with that. Α 15 Where do you live? Q I live in New York. 16 Α 17 Q How --18 Senneport, Long Island. Α 19 Q How long have you been here in Anchorage? 20 Α Since February 28th. 21 Q And you've talked with the defense attorneys in this case? 22 Yes, I have. Α 23 In fact, I'm sure you have even talked about this 24 Q 25 hypothetical that I talked with you about?

A I might have, yes.

Q You might have, or you did?

A I don't remember.

Q You don't remember.

<sup>5</sup> A There've been so many things that I've talked to <sup>6</sup> them about, that I really wouldn't remember this <sup>7</sup> hypothetical that you just gave me.

Q The way I understand your testimony on redirect
 9 is that you evaluated Captain Hazelwood's conduct
 10 throughout the passage of this vessel -- from the passage
 11 out to where it grounded, and you find nothing wrong with
 12 anything that he did. Is that correct?

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That's correct.

Q Well, what about if the testimony in this case was that Captain Hazelwood was in a bar from 4:15 -- and drank, and stopped drinking around -- he drank until approximately quarter to 8:00, when he stopped? Do you have an opinion on whether that's good or proper or improper?

THE COURT: Don't answer the question.

MR. CHALOS: Yes. I object, Your Honor, unless
 he gives him a little more foundation. He could have been
 in a bar, could have had one drink, could have had a soda.
 THE COURT: Why don't you \_\_\_\_\_ the evidence
 somewhat.

## BY MR. COLE: (Resuming)

2	Q The evidence is that Captain Hazelwood was in a
3	bar from, say, 1:45 to 2:45 and, say, then arrived back at
4	around 4:15. He had two drinks the first time he was in
5	there. He came back, he had several drinks until
6	approximately 7:00, 7:15. Went to another bar from there
7	and had another drink there, and left at about quarter to
8	8:00 and arrived back to the ship and took the helm. Do
9	you have an opinion about that?
10	A I'm totally confused.
11	MR. CHALOS: I object.
12	THE COURT: The objection is overruled. I
13	haven't heard any ground, whether it's relevancy or
14	foundation, but it's overruled on both grounds.
15	MR. CHALOS: Well, it the reason I'm objecting
16	is, I take it Mr. Cole has given him a hypothetical,
17	because there's certainly a lot of dispute as to the
18	evidence of when Captain Hazelwood was in the bar.
19	THE COURT: He's asking him a question based on
20	his view of the evidence, and I think it's within the realm
21	of the evidence, so I'm going to let it stand.
22	BY MR. COLE: (Resuming)
23	Q Do you have an opinion about that?
24	A Could you please go over that again? You've said
25	that he had a couple of drinks, from 1:45 to 2:45. Is that

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<sup>1</sup> correct?

2 Q That was correct. 3 And then I -- you talked about other places? Α 4 And then he had -- came back into the bar at Q 5 4:15. 6 Α Okay. 7 And had a couple of more drinks until 7:00 Q 8 o'clock, and then he went to another bar and had another 9 drink there, and left that bar at about quarter to 8:00 and 10 made it back to the ship around 8:25. 11 Okay. Now, what's your question? Α 12 My question is, is that a violation of Coast Q 13 Guard regs? 14 MR. CHALOS: Your Honor, that wasn't his first 15 question. 16 THE COURT: That wasn't your first question, Mr. 17 Cole. You asked him about an opinion he might have. 18 BY MR. COLE: (Resuming) 19 Do you have an opinion on whether that's Q Okay. 20 proper conduct by a tanker captain master for the Exxon 21 Shipping Company? 22 It's something I probably wouldn't do, no. A 23 If you would be willing to go, in my Q 24 hypothetical, if you would be willing to go below the 25 bridge, you must believe, then, that that would be what

1 Exxon Shipping Company would call an A watch stander type 2 watch, correct? 3 Watch condition A, yes. Α Is that right? You would consider that a watch 4 Q 5 condition A? That's correct. 6 Α 7 And do you know who Captain Duffy is? Q Yes, yes. Captain Duffy. I know who Captain 8 Α 9 Duffy is. And you've sailed with him before? 10 Q 11 I relieved him once \_\_\_\_. Α 12 Q Do you consider him a good tanker captain? I don't know. I never sailed with him. I 13 Α 14 relieved him. 15 Do you have any reason to believe that he's not a Q good tanker captain? 16 17 No. Α 18 And if he said that he would be on the bridge Q during that time, you would disagree with him? 19 No. It's up to the master if he wants -- if he 20 Α thinks that, in that hypothetical, that he should be up on 21 the bridge, yes. 22 23 Q You would -- if he said he would be up there, you would disagree with him, correct? 24 25 No, no. That's his opinion. His opinion is --Α

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187 1 If his opinion is different than yours, you would Q 2 disagree with him, correct? 3 I wouldn't disagree with him. That's his Α My opinion would be, maybe they wouldn't be up 4 opinion. 5 there. His opinion would be that he would be up there. So 6 as far as our opinions would disagree, yes. 7 You would disagree. Q 8 But I wouldn't disagree with -- yeah. Α 9 You would disagree? Q 10 Α Okay. 11 He said he would be up there and you said you Q 12 wouldn't. 13 Α Okay. 14 You would be disagreeing. Q 15 Okay. Okay. We would be disagreeing, yes. Α 16 Q Do you know who Captain Saltzer is? 17 Α Yes. 18 And you've sailed with him before? Q 19 Α No. 20 Q Have any reason to believe he's not a good tanker 21 captain? 22 Α I have no reason at all. 23 And if he testified that it was his understanding Q 24 that the entire Prince William Sound passage, that would be 25 a watch type C, at least, you would disagree with him on

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Q And if he said that he would be on the bridge under a certain situation like that, you would disagree with him on that, correct?

A Correct.

Yes.

Q And if another tanker captain who had been coming not in and out by the name of Captain Beevers testified that a tanker captain should be on the bridge during this entire time, you would disagree with him, correct?

A Correct.

Q And if Captain Walker had come in here and said that his personal philosophy would have been to be on the bridge in this situation, you would disagree with him?

A That's correct.

MR. COLE: I have nothing further.

MR. CHALOS: Just a few questions, Your Honor.

FURTHER REDIRECT EXAMINATION

BY MR. CHALOS:

Q Captain Mihajlovic, Mr. Cole asked you about the VTS system being a way to assure safety. He asked you about the pilotage regulations being a way to insure safety. Was the Coast Guard monitoring system -- that is the Coast Guard monitoring vessels on their radar also part of the safety system?

189 1 Α That's correct. 2 And that was installed for the purpose of Q 3 insuring that vessels don't run aground, or run into each 4 other? 5 . **A** That is correct. 6 Now, Captain Mihajlovic, are the navigational Q 7 risks south of Rocky Point, after you drop off the pilot, 8 any different for a pilotage vessel as opposed to a 9 nonpilotage vessel? 10 No, there's no difference. Α 11 No difference at all? Q 12 No difference. Α 13 Q So whether you have pilotage or not, the risks 14 are the same? 15 That's correct. Α 16 And the way you interpret the pilotage Q 17 regulations, all you need is one man on the bridge, south 18 of Rocky Point? 19 Α That is correct. 20 Now, Mr. Cole asked you about being here since Q 21 the 28th of February? 22 That is also correct. Α 23 Was it your understanding that you would testify Q 24 sooner than you have testified? 25 That's why I came up here. I left my vessel to Α

come up here the 28th to testify the 1st and the 2nd. 1 And it wasn't your fault that you didn't come in 2 0 3 until today? 4 Α No. Now, you said that you, as a matter of 5 0 preference, wouldn't drink ashore? 6 7 That's correct. Α 8 Does that -- does the fact that someone might Q 9 make it improper? 10 Α No. 11 Speaking about the Bridge Organizational Manual, Q 12 I think you've testified already to this. Different captains can interpret it different ways? 13 14 Α That's correct. 15 Q And if Captain Duffy interpreted it one way, and Captain Stalzer interpreted it either the same way or a 16 17 little bit different, that would be their prerogative? 18 Α That's correct. 19 Q And that was -- that was --20 MR. COLE: Your Honor, again, I'm going to object 21 to the leading nature of Mr. Chalos's questioning. 22 THE COURT: Sustained. BY MR. CHALOS: (Resuming) 23 Sir, do you have an opinion as to the 24 Q interpretations given by Captains Duffy, Stalzer and · •25

1 Beevers as to what they would have done under the 2 circumstances that we've described, in hindsight? 3 Can you repeat that, please? Α 4 Yeah. Do you have an opinion as to the things Q 5 that Captains Duffy, Stalzer or Beevers said they would 6 have done in hindsight? I mean, does the fact that it's 7 hindsight play any role? 8 Yes. I feel --Α 9 MR. COLE: Objection. Leading. 10 THE COURT: Objection overruled. go ahead. 11 BY MR. CHALOS: (Resuming) 12 Go ahead. Q 13 I feel that definitely is the case. Α 14 What is the case? Q 15 That knowing what happened, knowing the Α 16 grounding, yes, you -- you're going to, you know -- you're 17 not going to say what exact -- well, maybe you wouldn't do 18 it, but now definitely you're going to do it, is basically 19 the idea now, you know? I know that the Valdez ran 20 aground. I was alongside it taking the cargo off, you know, 21 it would affect my decisions there that I had made earlier, 22 I'm sure. 23 Well, even knowing that the Valdez ran aground, Q 24 you still hold the opinion that what Captain Hazelwood did 25 on that particular night was not reckless?

1 Α No. That's correct. 2 Q Okay. 3 MR. CHALOS: No further questions. 4 MR. COLE: Nothing. 5 THE COURT: Sir, I've got just a couple of questions for you. 6 7 THE WITNESS: Sure. 8 THE COURT: From Bligh Reef into the port where 9 you would berth the vessel, are there any visibility 10 restrictions for pilotage vessels that you're aware of? 11 THE WITNESS: From Bligh Reef in? 12 THE COURT: Yes. THE WITNESS: Just the ones there for the two 13 14 miles, for me. THE COURT: For pilotage vessels? 15 16 THE WITNESS: Oh, for pilotage vessels. No, I'm 17 really not, sir. 18 THE COURT: You're not what? 19 THE WITNESS: I'm not familiar with the pilotage 20 -- for the pilotage vessels whether there's a restriction there for that or not. I don't believe there is, though. 21 THE COURT: All right. So the Arts letter, 22 Exhibit B, are there visibility restrictions for 23 nonpilotage vessels? 24 THE WITNESS: Well, you'd have the two mile --25

1 two mile visibility restriction.

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THE COURT: Is that a difference between pilotage and nonpilotage vessels, even under the Arts letter?

THE WITNESS: I'm really not familiar with the pilotage, if you had pilotage, sir.

THE COURT: Now you've mentioned your vessel was
 7 75,000 tons?

THE WITNESS: That is correct.

<sup>9</sup> THE COURT: Tell me, what is the difference
 <sup>10</sup> between dead weight tons and gross tons. I don't
 <sup>11</sup> understand the difference.

12 THE WITNESS: Well, gross tons is -- you really 13 don't go by gross tons. Dead weight tons is the weight of 14 the cargo on the ship. Then there's displacement tons, 15 which is the weight of the cargo, the ship, everything. 16 Gross tons is something that you put on the pilot receipt 17 there, and they take away certain spaces. It really 18 doesn't have anything to do with how much the vessel ways. 19 THE COURT: When we've been hearing that the

Exxon Valdez is in excess of 200,000 tons, are we talking
 about gross tons or dead weight tons?

THE WITNESS: No, what you're talking about is -if you want the weight of the vessel, you're talking about 24 209,000 dead weight tons, sir. Like, mine is 75,000 dead 25 weight tons.

1 THE COURT: And that's what the cargo weighs, is 2 that what you're saying? 3 THE WITNESS: That's the weight of the cargo, 4 right. Then you add the weight of the ship. 5 THE COURT: All right. Thank you. That's all 6 the questions I have. 7 You're excused. 8 THE WITNESS: Okay. Thank you, sir. 9 (The witness was excused.) 10 THE COURT: Would counsel approach the bench? 11 (The following was had at the bench:) 12 THE COURT: How long will your next witness take? THE : Well, I (inaudible). 13 THE COURT: (Inaudible). 14 : (Inaudible). MR. 15 THE COURT: Well, we're going to be recessing in 16 17 about \_\_\_\_\_ minutes, so (inaudible). 18 MR. : (Inaudible). THE COURT: \_\_\_\_\_ do you have? 19 20 MR. : (Inaudible). And then there's a motion (inaudible). 21 THE COURT: All right. So possibly (inaudible). 22 (Inaudible exchanges.) 23 : No objection. 24 MR. (The following was had in open court:) 25

1 THE COURT: We're going to recess a tad bit early 2 today. I've been informed from reliable sources that the 3 volcano has erupted again and is coming in this direction, 4 so we'll give you a little jump start on the volcano. 5 We'll see you tomorrow at 8:15. Don't discuss 6 this case among yourselves or with any other person. Do 7 not form or express any opinions concerning the facts. 8 Remember my instructions regarding the media sources and 9 not being exposed to it. 10 We'll see you tomorrow. Be safe. 11 Anything we can take up, counsel? 12 MR. No. : 13 THE COURT: We'll stand in recess, then. 14 THE CLERK: Please rise. This Court stands in 15 recess, subject to call. 16 (Whereupon, at 1:06 p.m., the hearing recessed.) 17 18 19 20 21 22 23 24 25

SUPERIOR COURT ) Case No. 3ANS89-7217 Case No. 3ANS89-7218 ) STATE OF ALASKA ) I do hereby certify that the foregoing transcript was typed by me and that said transcript is a true record of the recorded proceedings to the best of my ability. alexandra Joma - *3* 

VOLUME 30 1 STATE OF ALASKA 2 IN THE SUPERIOR COURT AT ANCHORAGE 3 - x 4 In the Matter of: 5 STATE OF ALASKA Case No. 3ANS89-7217 : 6 Case No. 3ANS89-7218 versus : 7 JOSEPH J. HAZELWOOD • 8 9 Anchorage, Alaska 10 March 15, 1990 11 The above-entitled matter came on for trial by 12 jury before the Honorable Karl S. Johnstone, commencing at 13 8:35 a.m. on March 15, 1990. This transcript was prepared 14 from tapes recorded by the Court. 15 APPEARANCES: 16 On behalf of the State: 17 BRENT COLE, Esq. 18 Assistant District Attorneys 19 On behalf of the Defendant: 20 DICK L. MADSON, Esq. 21 22 23 24 \_25 PRO-TYPISTS, INC. Professional Transcription Service (202) 347-5395

1	<u>VITNESSES</u> :									
2	DEFENDA		<u>'s</u>			DIRECT	<u>CROSS</u>	REDIF	RECT	RECROSS
3	Julius	Le	itz			4	60			
4	Donald	R.	Hudson			127	150	156		158
6	Robert	₩.	Mackin	tire		163	182	211	212	
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EXHIBIIS <u>IDENTIFICATION IN EVIDENCE</u> -- 210 08 09 08 09

DEFENDANT'S

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CL	15	16	
СМ	129		
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1 PROCEEDINGS 2 (Whereupon, the jury enters the courtroom.) 3 THE CLERK: -- the Honorable Karl S. Johnstone 4 presiding is now in session. 5 THE COURT: Thank you. You may be seated. 6 Are you ready to call your next witness? 7 MR. CHALOS: Good morning, Your Honor. The 8 defense calls Julius Leitz to the stand. ç Whereupon, 10 JULIUS LEITZ 11 called as a witness by counsel for the Defendant, and 12 having been duly sworn by the Clerk, was examined and 13 testified as follows: 14 THE CLERK: Sir, would you please state your full 15 name, and spell your last name? 16 THE WITNESS: Julius Herman Leitz. L-e-i-t-z. 17 THE CLERK: And your current mailing address? 18 THE WITNESS: 5650 Northeast Columbia Boulevard, 19 Portland, Oregon. 20 THE CLERK: And your current occupation? 21 THE WITNESS: Heavy marine salver. 22 THE CLERK: Thank you. 23 THE COURT: You may inquire. 24 DIRECT EXAMINATION 25 BY MR. CHALOS:

5 1 C. Good morning, Mr. Leitz. By whom are you 2 presently employed? 3 A company that I own by the name of J.H. Leitz Α 4 and Associates, Incorporated. 5 Q What is the business of J.H. Leitz? 6 Well, heavy marine salvage is the principal Α 7 interest, and I also do marine consulting, usually 8 connected with salvage or offshore construction. Ģ As a salv -- are you a salver? C 10 Α Yes. 11 Q What do you do as a salver? 12A Well, we refloat sunken vessels, stranded 13 vessels, (inaudible), anything to do with marine 14 casualties. 15 Q You salvaged the Exxon Valdez did you not? 16 A That's correct. 17 Your company was hired for that purpose? Q 18 А Yes. 19 You were hired by Exxon? Q 20 Α Yes. When did you first go on board the Exxon Valdez? 21 Q On Tuesday, March 28th. 22 Α 23 Q Had you commenced your salvage efforts prior to that? 24 25 Α Yes.

1 When did you first come on to the -- when were C . 2 you first engaged? 3 Α I was engaged on Saturday the 25th of March by 4 Exxon, and I travelled to Valdez on the 26th, arriving on 5 Sunday the 26th. 6 And -- well, before we get into what you did with Q 7 respect to the salvage of the Exxon Valdez, let me ask you 8 this. What is your background? How long have you been a 9 salver? 10 This is my 31st year in the marine salvage Α 11 business. 12 Ô How many vessels have you salvaged in that period 13 of time? 14 А Oh, something in excess of 150, significant 15 I've worked on a lot of smaller things, too. vessels. 16 Q How many -- how many strandings have you 17 salvaged? 18 Α Oh, probably in the neighborhood of, you know, 40 19 or 50. 20 Q How many vessels that went aground, that became 21 stranded, did you salvage off rocks, or coral? 22 Α Ah, seventeen. 23 Q And how many of those were tankers? 24 Two, before the Exxon. The Exxon made three. Α 25 Q In terms of the salvage business, there's not

1 much difference between coral and rock, is there?

A Practically none. In fact, a lot of times, coral covered rocks. Once you grind the coral away, you are on rock.

Q Now, going back to the Exxon Valdez, you said you
 started your efforts when you arrived on the 26th?

A Yes.

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Q What did you do in that regard?

A Well, the first thing is to become -- let me back up. When they initially called me on Saturday, they gave me a lot of information over the phone, like the quantities of cargo, and the various tanks, and a lot of statistics about the vessel, and from that, you make some rough numbers when you're riding in the airplane.

15 Then on arrival in Valdez, I met with the Exxon 16 people in charge of the ship that were on scene, and 17 actually interviewed them, you know, to find out all I 18 could about the vessel, and its condition, and -- her 19 present condition. You know, cargo remaining. Looked at 20 copies of the blueprints that they had available. Requested copies of the blueprints that I needed that 21 weren't available, and looked at soundings that they had 22 23 made, or that had been made after the stranding, and then also looked --24

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Q These were while you were in Valdez?

1 A. Yes. 2 Q You were given soundings while you were in 3 Valdez? 4 Α Yes. 5 (Defendants' Exhibits CJ 6 and CK were marked for 7 identification.) 8 Let me show you what I've marked Defendants' Q 9 Exhibits CJ and CK, and ask you, are these the soundings 10 that you were given? 11 Yes, sir. This is one set of soundings I was А 12 given. 13 And when did you receive those soundings? Q 14 On Sunday the 26th. Α 15 And when were those soundings taken? Q 16 At 0945 on March 24th. А 17 That's 9:45 in the morning on March 24th? Q 18 That's correct. Α 19 Do you know who took those soundings? Q 20 I believe they were taken by the pilot vessel at Α 21 the captain's request. 22 Did you rely on these soundings in your salvage Q 23 plan? 24 Yes. That, and a subsequent set of soundings. Α 25 And then also we took additional soundings later on.

1 Q And you say these soundings were made at the 2 captain's request? 3 Α Yes. 4 (Pause) 5 MR. CHALOS: Your Honor, I offer Exhibits CJ and 6 CK into evidence. 7 MR. COLE: No objection. 8 THE COURT: They're admitted. ç (Defendants' Exhibits CJ 10 and CK were received in 11 evidence.) 12 MR. CHALOS: All right. BY MR. CHALOS: (Resuming) 13 14 Q What else did you do while you were in Valdez, in 15 preparation for the salvage operation? 16 Well, I ordered a lot of equipment to be shipped Α in, portable salvage equipment. Asked the naval architect 17 18 that I used to come up as quick as he could. 19 Q Who is that? 20 Donald R. Hudson. Α 21 Okay. Go ahead. Q 22 In general, you evaluate the situation, checked Α into the progress -- they already started the lightering 23 24 operation, and so I asked about how that was coming, and in that they are, you know, professional -- lightering is 25

<sup>1</sup> their business, I really didn't get involved in that too <sup>2</sup> much, except during the last stage of the lightering when <sup>3</sup> it started affecting the attitude of the vessel on the <sup>4</sup> rock. So I was involved in that part of the lightering, <sup>5</sup> which is the final step.

Q Well what do you mean by affecting the attitude
 7 of the vessel?

A Well, the port tanks were intact, and the starboard slop tank was intact, so therefore, if you just simply pumped the oil out of those tanks, the vessel would tip off --

Q To starboard?

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A Yeah or the port side would rise, and so therefore, the --

Q It would list to the starboard side?

A It would list to starboard. And so therefore, we
 developed the plan so that we could ballast the port side
 as we removed the cargo, just exchanging weights without
 changing the attitude of the vessel.

Q Now, did you believe there was a need for you to go to the vessel, let's say between the 26th and the 29th when you first went on to the vessel?

A No. There was plenty to do. The salvage plan we had written during this period of time, I worked with some ship group coordinators of evidence, you know, in this

<sup>1</sup> familiarization process about how systems worked. It was <sup>2</sup> necessary for a salver in a very short period of time to <sup>3</sup> become familiar with a vessel he hasn't been on, and so you <sup>4</sup> do the ground work first, then go to the vessel.

This isn't always the case. If there wasn't a crew on the vessel, and if something wasn't happening by competent people, then of course, I would have went to the vessel right away, but you've really got to do your homework before it's not very effective \_\_\_\_\_. I know what a tanker looks like sitting on a rock.

<sup>11</sup> Q Did the information that you received between the <sup>12</sup> 26th and the 29th indicate that the vessel was stable at <sup>13</sup> that time?

A Yes. The vessel was never -- while it was sitting on a rock, it was never in danger of capsizing. A vessel can't capsize sitting on the bottom.

Q Did you do any strength calculations while you
 were in Valdez?

19 A Yes.

Q What was the result of those calculations with respect to the strength of the vessel while she stayed on the reef?

A There was never a serious problem with the strength of the vessel.

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Q Was there ever any danger of this vessel breaking

1 up while she was on the reef? 2 А There's always that danger of, you know, a vessel 3 on a reef is out of its normal element, but you'd actually 4 have to try pretty hard to do any serious damage to it, in 5 this particular case. 6 Q In any event, the calculations that you made did 7 not -- let me rephrase it. 8 Based on the strength calculations that you made, 9 was there any indication that the vessel wasn't strong 10 enough to stay on the reef? 11 Α No. 12 Q Now, you say you arrived at the vessel on the 13 29th. 14 28th, I think it was. Tuesday the 28th. Α 15 All right. What did you do when you arrived on Q 16 the vessel? 17 Well, I met with several of the people on abroad А 18 that were directing the discharge of cargo and there was 19 two ship's group, or two ship superintendents of Exxon, 20 John McCracken and \_\_\_\_\_ Schafer, and the ship's chief 21 engineer, Jerzy Glowacki, and they took me on a tour of the 22 vessel so that I could actually, you know -- general 23 walkaround, get familiar with the vessel. 24 I was interested in verifying where we were going 25 to make connections to it to inject inert gas into it,

1 and \_\_\_\_\_\_ salvage connections. 2 Q What would have been the purpose of injecting 3 inert gas? 4 Α Well, eventually that was the means to refloat 5 it. 6 All right. We'll get into that in a second. Did Q 7 you make any determinations when you got onboard as to how 8 hard this vessel was aground? 9 Well, I actually made those, you know, Α 10 calculations before I went out to the vessel, and then they 11 were -- they were all later confirmed by my naval 12 architect, Mr. Hudson. 13 Q How would you describe the vessel sitting on the 14 reef? 15 Α Well, it was --16 0 Was it lightly aground, hard aground? 17 No, it was very hard aground. А 18 Q Did there come a time when you made a 19 determination that she was impaled? 20 Α Yes, but you can only make an assumption about something like that, because there's no practical way to 21 22 take measurements underneath the ship. You can take measurements around the ship and what have you, but that 23 still doesn't tell you what's under the ship. 24 · **--2**5 If the ship was empty, for example, you would put

<sup>1</sup> divers down inside of it and take a look, but when the ship
<sup>2</sup> is full of oil, it's useless. They can't see a thing, and
<sup>3</sup> you don't dare put them in that environment, because it
<sup>4</sup> would be totally by feel. And even in calm water like
<sup>5</sup> this, within a ship, tends to wiggle. I mean, move a
<sup>6</sup> little bit, continually.

Q What causes her to --

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A There's always a small amount of surge, and it will just very gently -- you have to really pay attention to feel it. But anyhow, if a diver goes down in there, he's totally \_\_\_\_\_\_. He can't see a thing. So he sticks his fingers here and there, and he's probably going to lose a hand or something, so you just don't do that.

Q Okay. How would you describe the salvage of the Exxon Valdez in terms of salvage \_\_\_\_\_?

A The salvage operation is actually a very simple one. The sheer size of the ship made it difficult, and the pollution aspects compounded the matter, you know, the actual, physical salvage of the operation was something I'd done many times before, and it was pretty straightforward.

Q What do you mean by the pollution aspects? A Well, obviously, we didn't want to allow any more oil to get out of the ship, you know, during the salvage operation. And we eventually -- more than four-fifths of

the oil in the ship was recovered, and that was one of our

15 1 primary objectives before we attempted to move the ship. 2 C Okay. Let me -- I have a chart --3 (Defendant's Exhibit CL ₫ was marked for 5 identification.) 6 BY MR. CHALOS: (Resuming) 7 Q I want to show you --8 Could I get a drink of water? Α 9 Q Yes. 10 (Pause) 11 А Thank you. 12 Before I put this up, is there a standard salvage Q principle that one would use in a vessel aground? 13 14 No, there are really no standard methods. Every Α situation is somewhat different. You know, there's all 15 sorts of things that you do regularly to -- or some things 16 17 infrequently, but there's no prescribed method of salvage. 18 Every vessel has the same --19 Q Well, let me show you what we marked as Exhibit 20 CL for identification and ask you, have you seen this diagram before? 21 22 Α Yes. 23 Q What does this diagram purport to show? 24 Well, it's just a graphic illustration of the Α principle that was used to refloat the Exxon Valdez. This 25

1 illustration was made early on to show the press, the 2 media, how it was going to be done. This was done in 3 Valdez. 4 Q All right. Can you -- before we get into the --5 into the specifics of the refloating of the Exxon Valdez, 6 could you explain to the jury just the basic principles 7 that you used to get this ship off the strand? 8 А Yes. 9 Q There's a pointer to your left. 10 Well, to start off with the deck of the vessel --Α 11 Now, hold on, Mr. Leitz, before you describe, I'd Q 12 like to offer at this time, Your Honor, Exhibit CL into 13 evidence. 14 MR. COLE: No objection. 15 THE COURT: It's admitted. 16 (Defendant's Exhibit CL 17 was marked for 18 identification.) 19 BY MR. CHALOS: (Resuming) 20 Q Okay. Go ahead. 21 This is a cross-section of the ship looking Α 22 forward, as though you cut the ship right in two with a 23 knife, and this is what you'd see. The port tanks, of 24 course, were tight -- that's this area over here. The 25 center tanks and the starboard tanks were holed, as kind of

illustrated right here.

2 The deck of the vessel was all sealed up. All 3 the openings in the deck were made tight. Most of the 4 openings in the deck that we've made tight, we also welded 5 in fittings, so that we could attach all the and 6 engage lines and everything else we needed to monitor the 7 operation as it was going on, and when the ship is sitting 8 on the rock here, the sea levels show in here, and after a 9 few hours -- or really, less than that, after about 35 minutes, the oil, the head of oil in the ship had already 10 11 discharged out of the vessel, so therefore, the liquid 12 level in the ship was equal in weight to the water level outside. 13 14 And the reason that -- actually, this 15 illustration is a little -- this would be at the time we

16 did it, because we have the oil out of it, and it was pure 17 water. So therefore, in the ruptured tanks, the water line 18 inside these tanks would be exactly the same as outside. 19 Right after the stranding, this liquid level would have 20 been higher than that.

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Q Why is that?

A Because the specific gravity of the oil is .89, which is 11 percent less than the weight of water.

Q In other words, the oil was pushed up by the water?

1 No, it's floating on the water. Α 2 Q Okay. 3 Α It's 11 percent lighter than the water, so if you 4 have a column of oil inside here, it would reach 11 percent 5 over the depth outside the ship, the sea level outside the 6 vessel. 7 Did the oil in the ship, after the grounding, Q 8 have anything to do with the vessel's buoyancy? ç No, it really doesn't. It's a complex thing. А 10 It's got a different specific gravity, but when you have no 11 bottom of the ship kind of becomes null and void. Because 12 -- well, to go on here, it may become clearer. 13 Q Go ahead. 14 So anyhow, you have a liquid in sight of -- I Α 15 think I'm going to back up and say that we've got water 16 here, now the oil has been removed. You know, because 17 we're talking about the salvage operation. 18 Q Right. How is the oil removed? 19 The oil was removed by pumping it over the top of Α 20 the vessel with portable salvage pumps. 21 Okay. Go ahead. Q 22 Anyhow, so after the oil was removed, we now have Α 23 water inside the tanks, so the level inside and outside is 24 exactly the same. The -- we use the ship's IG system and 25 then supplemented by portable salvage blowers to boost its

19 1 pressure, and when you force air down through the deck of 2 the ship, it -- the pressure pushes the water level down, and in this illustration, it's shown it being pushed down 3 this level. This space between the water line outside, and 4 inside becomes buoyancy, which lifts the ship. 5 6 Q Is that how the Exxon Valdez was removed from the 7 strand? 8 Α Yes. 9 Q Now, were there any injuries in the process of 10 removing the vessel? 11 None. Well, we had some minor injuries, you Α 12 know, scratches or bruises, but we had -- in fact, we had 13 no serious injuries at all during the whole four-and-a-half 14 month operation, clear through delivery into the dry dock. 15 Q Speaking of the dry dock, did you have occasion to view the vessel in San Diego? 16 17 Α Yes, I did. 18 Q Were the damages that you saw in San Diego the type of damages that were reported to you when the vessel 19 20 was at Bligh Reef? Were they consistent? 21 Well, when the ship was on Bligh Reef, there was Α -- it was impossible to do a completely comprehensive 22 survey of the bottom of the vessel, because divers couldn't 23 24 get under the area that was resting on, or impaled by, the · 🚑5 rocks, so a thorough survey was done after it was -- Naked

<sup>1</sup> Island.

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Q Okay. Was the damage that you saw in San Diego
 consistent with the damage that was surveyed at Naked
 Island?

A Yes, it was.

Q And you looked at the damage in San Diego?

A Yes, I did.

Q Can you describe what you saw there?

A Well, the bottom of the ship was, you know, very badly torn up, as would be expected. There was -- the most probable scenario is two collisions with the rock, two separate situations. It's even possibly a third, but it was less significant by a long ways.

14 The first impact, that the ship's crew may not 15 even have been aware of, started pretty near the center of 16 the bow and travelled pretty well straight back slowly, 17 moving to the right, exiting in the \_\_\_\_\_ space 18 underneath the starboard slop tank. And of course, the 19 second major impact was in starboard number 1, 2, 3 frame 20 spaces into number 3, and a part of the centers in 1 and 21 2. That's where, you know, the main impact and the final 22 resting position came.

Q That's where the vessel finally came to a stop?
A Vessel -- yeah, and that offered enough
resistance to bring the vessel to a complete stop.
21 1 C) Now, I take it -- let me start again. 2 You didn't do any calculations as to the length 3 of time between the first and second striking by this vessel, did you? 4 Α No, I didn't. 5 Q Okay. 6 7 Now, the damage that you saw in San Diego, was that all in the fore and aft direction, or some other 8 direction? 9 Α 10 It was all pretty much in the fore and aft 11 direction, with the center, or the first impact, travelling 12 from the -- from the center towards the right of the vessel, so it curved 80 feet, approximately, in about oh, 13 700 foot of the vessel's length. 14 Q All right. 15 Do you have an opinion as to when the damage that 16 you observed was caused? 17 MR. COLE: Objection. Lack of foundation. 18 THE COURT: Mr. Chalos? 19 MR. CHALOS: I'll rephrase it, Your Honor. 20 BY MR. CHALOS: (Resuming) 21 Based on what you saw of the damage, and based on Q 22 the survey that was done at Naked Island, do you have an 23 opinion as to when this particular damage occurred? Was it 24 in the striking? Was it afterwards? 25

1 I don't understand. Which damage are you Α 2 referring to? 3 Q The damage that you saw, this fore and aft damage 4 that you described? 5 That was all from the collisions with the rock. Α 6 Now, there's been testimony in this trial that it Q 7 would have been impossible for this vessel to move from the 8 grounding on the reef using the vessel's engine and 9 rudder. Do you agree or disagree with that? 10 А I agree with that. 11 There's also been some evidence that this vessel Q 12 was impaled on the bottom and there were bottom plates that 13 were hanging down also, interfering with the bottom. Do 14 you agree or disagree with that? 15 That's correct. Α 16 Q What is the effect of this impalement and the 17 bottom plates hanging down and interfering with the bottom? 18 Well, the bottom plates hanging down would offer А 19 some resistance. It would depend on what configuration 20 they were in, how much resistance, but the impalement is 21 the important part of it all. 22 The -- normally when a ship's aground, like on 23 sand or gravel, or even very flat rock, you have something 24 called a friction coefficient with the bottom, and that 25 kind of determines how much force it's going to take to

<sup>1</sup> move the vessel. But when you have an impalement, the ship <sup>2</sup> is actually around the rock. It's actually a mechanical <sup>3</sup> connection, so the friction coefficients are just kind of <sup>4</sup> out the window. They don't mean a thing, you know, you <sup>5</sup> actually -- you have them -- a true mechanical connection, <sup>6</sup> and this had a very large humped up area stuck up inside <sup>7</sup> the ship, and it just -- you know --

Q Is that the basis for you saying that it would have been impossible to move this vessel, using the ship's engines and rudder?

A That's correct.

11

Q There's been some testimony here that no matter what Captain Hazelwood did after the grounding, this vessel was not going to move off this reef. Do you agree or disagree with that?

16 A I agree with that.

Q Do you have any opinion as to whether any further
 damage was done to this vessel after the grounding by the
 use of the engine and rudder?

20AIf -- when the vessel rotated some 13 degrees --21QWhen did that occur?

A After the thing was grounded, and then also again on Sunday, there was a 70-mile an hour windstorm that rotated the ship some 14 degrees. Then it was pushed back in position by tugs, you know, held them -- the thing was <sup>1</sup> straightened back out and held in position by tugs.

2 This area of the impact was heavily damaged, and 3 any further aggravation of that would have been absolutely 4 insignificant. You wouldn't have been able to detect it. 5 Do you have an opinion as to whether there was Q 6 any additional leakage of oil from the vessel as a result 7 of the use of the engine or rudder after the grounding? 8 There would have been no increase in Α No. 9 anything, because the bottom was opened up already, and I 10 think it's verified in Mr. Kunkel's testimony. 11 Q In what way? 12 Well, all -- when he went down to the control А 13 room, all the gauges in the control room \_\_\_\_\_ gauges 14 were all clicking off, indicating flooding in the ballast 15 tanks and the forepeak, number 2 and number 4 starboard, 16 and all the cargo tanks were opened. Every -- all those 17 gauges were moving, which says that the bottom was opened

<sup>18</sup> up immediately. There's no question about the fact it was
<sup>19</sup> open. So --

Q All right. Do you have an opinion as to whether
 or not the use of the engine or rudder after the grounding
 would have caused this vessel to break up in the condition
 that she was in?

A I don't feel that it would. The vessel didn't have any structural deficiency that was going to cause the

25 breakup on the rock and this would have been very minor. 1 2 The amount of power that was being used to hold 3 the vessel on the rock is only about 112 long tons, you know, just calculated long tons. 4 Did you make a calculation in that regard? 5 Q Yes, I did. 6 Α And is it your opinion that the power that was 7 Q used at 55 rpm would not have been sufficient to cause this 8 9 vessel any structural problems? Yeah, but that's some -- 55 rpms works out to 10 Α 11 about -- about 9000 horsepower, a little bit less than that, and 9000 horsepower, using, oh, general efficiency 12 calculations for a propeller, translates into about 112 13 long tons, which is just -- for a vessel that size, is 14 insignificant. It isn't anything. 15 Now, just turning to another subject, Mr. Leitz, Q 16 do you have an opinion as to whether ship's crews in 17 general, and masters in particular have the training or 18 background to deal with major casualties such as the 19 grounding of the Exxon Valdez? 20 Generally not. I have seen a few crews on 21 occasion where someone had been involved in a similar 22 situation, and so that helps. But actually, out of all the 23 ships that cruise around the world, very few of them ever 24 get in trouble. A lot of people spend their entire life at · 25

1 sea and are never involved in a casualty. You know, the -- \_\_\_\_\_\_ sometimes there's minor groundings and that 2 3 type of thing where they back the ship back off or get some tug assistance and get it out, and that happens frequently 4 in the Mississippi River, where you have the channels 5 continually changing locations, so the ship runs on the 6 mud, and to get it out, that's really not a true salvage 7 operation. 8

Q Well, having said that, once you have a grounding such as this, what would you expect the captain and the crew to rely on in terms of experience to handle the situation?

A Well, this was a major casualty, and I don't think that they had the expertise to really salvage it. They also didn't have the equipment to salvage it. You know, they -- you know, again, according to Mr. Kunkel's testimony, and -- they did all the things that you would normally expect them to do. They checked the conditions of the vessel thoroughly, you know, the engine room --

Q Well, I don't want to get into the specifics, but let me ask you this. You've been on vessels that stranded before --

A Yes.

23

Q And I take it -- have you been on vessels within a short period of time after the grounding?

27 1 A Yes. 2 Q In those situations, did you have occasion to 3 observe the vessels -- the crew's behavior and appearance, 4 if you will? 5 Α Yes, I have. 6 And what did you find in those situations? How Q 7 -- what state was the crew in? 8 Well, it depends on the severity of the Α 9 situation, but they're generally upset and uptight, there's 10 | no question about it. 11 G Have you noticed what we would know as shock in 12 that situation? 13 Α es. 14 Q Let me ask you then some specific questions about 15 the actions that were taken by Captain Hazelwood and his crew after this grounding. Have you read any testimony? 16 17 Α Yes. 18 Q Which testimony have you read? The chief mate, Kunkel's: The naval architect 19 А Vorus and Bill Milwee. 20 Q The salvage expert that was put up here by the 21 State? 22 Α Yes. 23 Or brought up by the State? 24 Q Okay. I'd like to give you some actions that 25

<sup>1</sup> were taken that are in evidence and ask your opinion, based <sup>2</sup> on your knowledge of these things, as to whether they were <sup>3</sup> prudent or imprudent maneuvers.

After the vessel grounded, the captain came up to the bridge, went to the bridge wing, looked over the side and assessed the situation. Is that a prudent or imprudent maneuver?

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A Prudent.

Q He came back into the wheelhouse and ordered the third mate to take a fix and he ordered the helmsman to put the rudder at amidships. Is that a prudent or an imprudent action?

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A That's also prudent action.

<sup>14</sup> Q He told the third mate to go below, take the AB <sup>15</sup> and go below and wake up the crew. Do you consider that to <sup>16</sup> be prudent or imprudent?

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A I think that's the right move, yes.

<sup>18</sup> Q There's been some criticism of the captain for <sup>19</sup> not, at that point, ringing the general alarm. Do you have <sup>20</sup> an opinion as to whether that should have been done or not?

A I think under the circumstances out there that that was probably a wise move, because by sending -- these ships nowadays have fairly small crews, so it's not that big a deal to go down there and wake them up, and if you go down and wake them up and tell them what's happening and

29 1 get their clothes on and get the cobwebs out of their head, 2 and then they can come up and be in a condition to help, to 3 do whatever needs to be done. If you ring the general 4 alarm, you're either going to have all the people running 5 up in their skivvy shorts to the fire station, or they're 6 going to go to the life boats, you know, and that isn't 7 going to accomplish very much. 8 So I take it you don't recommend ringing the Q 9 general alarm in that situation? 10 MR. COLE: Objection. That's not --11 THE WITNESS: Not in this case. That's not --12 MR. CHALOS: Well, let me rephrase it. 13 BY MR. CHALOS: (Resuming) 14 Q I take it, then, you agree with the fact that the 15 general alarm was not rung in this case? 16 Yeah. I agree with that. Α 17 Q Okay. 18 Now, there's also been testimony that the captain 19 ordered the third mate to call -- at about the same time -call the engine room and shut the engines. Is that prudent 20 21 or imprudent? 22 Α To shut the engine down? 23 Q Yes. 24 Well, that was -- at that particular point in Α time, that was the right thing to do also. 25

<sup>1</sup> O Okay. There's also been testimony that the <sup>2</sup> captain called the engine room and told the engineers to <sup>3</sup> sound the voids in the engine room tanks. Do you consider <sup>4</sup> that prudent, or imprudent?

A That's standard operating procedure on a
 casualty.

Q There's also been testimony that the chief mate
 came up to the bridge with some information for the captain
 regarding stability and the amount of oil that was lost,
 and the number of tanks that were damaged, and the captain
 conferred with the chief mate on that point.

Do you consider that prudent or imprudent? A Well, it's important that the chief mate keep the captain advised of what's going on with the vessel, yes.

<sup>15</sup> Q There's been testimony that the captain then told <sup>16</sup> the chief mate to go back down to the cargo control room <sup>17</sup> and obtain additional information and keep him posted. Do <sup>18</sup> you consider that to be prudent or imprudent?

A That's prudent.

Q There's also been testimony that he told the chief mate at that time to lower the boats, the life boats to the embarkation deck and get the fire mains ready. Is that to be prudent or imprudent, in your opinion?

A Prudent.

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Q There's also been some testimony that, at some

31 1 point, the captain ordered the anchor to be lowered to the 2 water's edge. Is that prudent or imprudent? 3 That's also prudent. Α 4 Q There's been some testimony that the chief mate 5 was told by the captain to give him some options as to the 6 possibility of ballasting down, if it was necessary. Is 7 that a prudent maneuver, or imprudent? 8 That's prudent also. Α ç Now, do you have an opinion as to whether or not Q 10 soundings were necessary at the time that the vessel ran 11 aground? 12 Immediate soundings wouldn't have proved very А much. They would have had no means to detect the real 13 14 predicament, which was the impalement of the vessel on the 15 rock. Soundings wouldn't have told them that. It wouldn't have told them where they were 16 Q 17 impaled, would it? 18 Α Not necessarily, no. 19 Q Okay. 20 How about taking soundings through the oil? 21 Α Well, there are ways to do that. It just makes 22 it a little more complicated. 23 Q Mr. Milwee said that he would have taken soundings every ten to fifteen feet --24 • 🔁 5 MR. COLE: Objection, Your Honor. That's

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(inaudible).

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MR. CHALOS: I think that's exactly what he said. MR. COLE: I disagree.

BY MR. CHALOS: (Resuming)

Q Well, assuming -- let me rephrase the question -assuming that there's been testimony that soundings should have been taken at a distance of, let's say no more than twenty feet between them. Do you have an opinion as to how long that would have taken?

A It would have taken -- if you had about four people doing it, you know, one guy on the sounding line and another guy writing all the stuff down, moving along, that's four people, two guys on each side of the ship. You'd have been a couple of hours doing it.

Q And that's assuming that there's no problems
 encountered, I take it?

17

A That's right.

Q And I take it also that that's assuming that the
 lines don't get fouled up by the oil?

A Well, the only means that they would have had to do it out there would have been to measure from the deck edge. You know, the -- it would have been -- the only way they could have taken soundings from around the vessel immediately would be to lower a life boat and do it, and that wouldn't have been -- with all the oil in the water and everything, and not only that, but I think that would have been an unnecessary risk to the personnel, the people's lives that had to do it. I mean, you've got a motor lifeboat and you put it down in a puddle of oil with the fumes coming off it, I seriously doubt if the people could have even breathed down there.

Q Now, you -- we put into evidence today the soundings that you have that were taken at 9:45 in the morning by the pilot boat. Do you consider, if soundings were taken at that time, to be sufficient and timely soundings, under the circumstances?

A I think -- yeah. Under the circumstances, I think that, you know, given an hour or two, that it's a -it was about appropriate. I think it would have been imprudent to attempt it in the dark, and what have you, you know. Perhaps it could have been done an hour or two sooner, but it didn't make any difference, because it was past high water.

And you've got to keep in mind that to have tried to refloat the vessel and get all its information -- the ship went aground something like eleven minutes after midnight, and high water was 0157, and that's all the time you'd have to make a complete evaluation, take soundings and do everything in the world. You know, and it's not feasible to do all that.

<sup>1</sup> Q Because there's other things that need more
<sup>2</sup> immediate attention?

A That's right. You know, we should concentrate on the safety of the vessel and the people first.

Q Now, based on your experience in this area, is
there anything else that you would have done that Captain
Hazelwood didn't do on that particular night? Keeping in
mind, of course, that you're the expert matters and
captains, you said, don't necessarily have that kind of
expertise.

A I think he did, you know, very well, under those
<sup>12</sup> circumstances.

13

Q Why do you say that?

14 А Well, you read off the list of all the things he 15 did, and you know, continuing to monitor the condition was 16 very important. You know, you don't know how vast it's 17 deteriorating. I kind of had the advantage of knowing, 18 when I got up there, by that time, they had divers out 19 there, and they had actually physically looked at the 20 bottom of the vessel, so when I got there, I knew it was 21 impaled.

He didn't know any of that stuff that night, you He didn't know any of that stuff that night, you know, and -- well, the best thing he could do was to keep it where it was at until help could come, you know, people and equipment and what have you.

1 Q How would you characterize the captain's action
2 on that particular night?

A I think he did pretty well personally, under the circumstances.

Q Now, there's been testimony that about 12:35,
12:40 in the morning on the 24th, the captain restarted his
7 engines. Do you have an opinion as to that?

A Yes. I think that he'd become aware, you know, that the tide was rising and the vessel may get light and tend to want to slide off there. You know, if it wasn't impaled, that was a distinct possibility I think he considered. So therefore, he plotted enough power to -- in the same general heading as the initial striking, so therefore, the vessel couldn't move.

We know that -- or you would have known that, heading in that same direction there was enough resistance to have stopped the vessel at some ten knots, so therefore, applying enough maneuvering power, you know, holding it there, you precluded it from sliding it off, if that was possible. He didn't know that that was impossible, at that time.

22 Q Now, he also used the rudder in the course of 23 running the engines forward. Do you have an opinion as to 24 that?

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A Yeah. It's necessary to use the rudder to

<sup>1</sup> maintain a heading.

2	Q What do you mean by that?
3	A Well, you have to use a little bit of rudder
4	power to keep to maintain any kind of a heading. A big
5	ship like that, or even small ones, tend to walk sideways.
6	If you just set the rudder at midships, for example, the
7	rudder's turning ahead, it tends to make the ship
8	Q You mean the propeller?
9	A The propeller.
10	Q Go ahead.
11	A It tends to make the stern of the ship locked one
12	way or the other. If you're backing up, it moves to the
13	left, and if you're sitting there steady moving ahead, it
14	moves to the right. So therefore, you have to use a little
15	bit of rudder to this is true of single screw
16	vessels screw vessels you can set on a heading
17	and pretty well hold it, but a single screw vessel tends to
18	walk one way or the other, just from, for instance, the
19	power going around.
20	Q Is the Exxon Valdez a single screw vessel?
21	A Yes, it is.
22	Q And do you agree or disagree with the use of the
23	rudder as used by Captain Hazelwood?
24	A I think the use of the rudder was absolutely
25	necessary.

Q Now, Mr. Milwee testified that he considered the
 use of 55 rpms and the use of the rudder as a lot of force,
 being applied to this vessel. Do you agree or disagree
 with that characterization?

A I don't think under the circumstances it's a lot of force. You've got to look at the propeller -- you know, you look at the propeller curves of the ship, it's less than one-third of its power, you know, and that's not very much, you know. It's -- like I said earlier, that's about 112 tons of force, and, you know, on a vessel this size, it isn't an awful lot.

Q Now, the decisions that Captain Hazelwood made were -- took place somewhere between 12:10 when the vessel ran aground and, let's say 1:40, 2:00 o'clock, or two hours later. Do you have an opinion as to -- as to the time that Captain Hazelwood had to make all these decisions?

A Well, it wasn't an awful lot of time.

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Q Would you say that the decisions he made were
 done quickly?

A I'd -- yes. It was -- what he did, in managing the crisis, it was very professional. I think that it reflects his training.

Q Now, Mr. Milwee criticized Captain Hazelwood for shutting the vessel's engine down at 1:40 in the morning, opining, if you will, that he should have kept -- if he

1 was trying to keep the vessel on the reef, he should have 2 kept the engines running until past high water, at 2:00 3 o'clock, and then perhaps even for an hour later. Do you 4 agree or disagree with that opinion?

> Well, I disagree with it. Α

Q

Why?

7 Well, because we are now approaching high water, A 8 and if you intended to refloat the vessel, you would 9 operate the engine through high water. You wouldn't stop 10 before high water, and you're trying to hold it on the rock 11 up to high water, you know, and the vessel's getting the 12 lightest, then you want to stop. If you continue to 13 operate the engine, you may accidentally refloat it.

14 Q So in your opinion, shutting the engine down at 15 1:40 before high water was the proper move?

А That's right.

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If he wanted to keep the vessel on the reef? Q 18 That's right. If you intended to refloat the Α 19 vessel, then you would not only -- I mean, you wouldn't be 20 using one-third power and stopping before high water. 21 You'd be using all the power you've got, and you'd operate 22 the engine all the way through high water.

23 Q Well, I want to ask you about that, but before I 24 do, let me ask you this. You've gotten a lot of ships off 25 the strand before, have you not?

A Yes.

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Q Have you ever backed a ship down to get it off the strand?

A Almost always.

Q Is that the preferred -- if you wanted to get a ship off the reef, is that the way you would do it? Back the engines?

A It depends on the -- how -- how hard the vessel's 9 aground. If there's nothing wrong with the power plant in 10 the engine, and if the power is all right, and the 11 machinery is all right, it's just another source of force, 12 so you use it. It's there.

13 Usually, in the type of stuff I get into, propeller power alone is not enough. I have to get, you 14 know, a salvage vessel that has \_\_\_\_\_ capacity, or a 15 lot of extra tugs, or sometimes you screen out the vessel 16 17 anchor, you know, drag it out behind the ship and use the 18 anchor \_\_\_\_\_\_ apply additional power, or sometimes you put tackle on back and run anchors out to apply additional 19 20 power.

21 Q And in those situations, do you also use the 22 engine astern?

A If the engine's operable, you generally do. It's
just another source of force.

Q Okay.

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1 Now, you had the opportunity to examine the 2 actions that Captain Hazelwood took on that particular 3 night with respect to the use of the engines and rudder. 4 You also had an opportunity to read Mr. Kunkel's testimony 5 about the information that he had given the captain over a 6 period of about an hour. 7 Do you have an opinion as to what Captain 8 Hazelwood was doing, or trying to do? 9 Well, everything that he did, in my opinion, was А 10 aimed at keeping the vessel on the rock, which, under the 11 circumstances, was the prudent thing to do. 12 Why do you say that? Q 13 Ah --Α 14 On what do you base your opinion that he was Q 15 trying to keep it on the rock? 16 Well, well, the main indication, I suppose, was Α 17 the fact that he didn't back up at all. I mean, you can't 18 -- the ship come to a dead stop in roughly, you know, the 19 direction that it was headed, so you then -- you keep it on 20 the rock by working the engine ahead. 21 Nobody would think that you can get this ship off 22 by going ahead. You have to back up. You have to reverse 23 the direction that went in there to get out of there. 24 He didn't use -- he used less than a third of the 25 power he had available to it, to attempt to get it off.

41 1 What would you have done if you find yourself in Q 2 the same situation? I mean, if you wanted to get off, what 3 would you have done? 4 Α Well -- you mean if I was serious about taking 5 the ship off? 6 Q Yes. 7 Α Well, if the ship -- to start off with, I 8 wouldn't have tried, you know, because of the severity of 9 the damage to the ship. 10 Q To get if off. 11 А You asked me what I would do. 12 Q Yes. 13 I wouldn't have tried to take it off until I got Α 14 some help. 15 Q And in this situation, you don't believe Captain 16 Hazelwood was trying to get it off either? 17 Not a single thing he did would indicate to me he Α 18 was trying to get it off. 19 Q All right. 20 Suppose you did want to get it off, what would you have done? 21 All right. Well, to start off with, if I was 22 Α 23 trying to get it off, I would have probably worked the ship ahead a lot harder than it was, and I would have swung it a 24 lot more, and what the purpose of all this is is to grind 25

<sup>1</sup> away at the rock.

The way ships are extracted from rocks with just sheer force, you know, not floating them off, like we did the Exxon Valdez, but you just try to pull them off, you have to remove the interference, you know, get this mechanical connection with the rock taken away, so you do that by swinging the ship back and forth and working ahead on it.

9 What power would you have used to do that? Q 10 Well, probably a little bit more than Α 11 maneuvering, you know, where -- it depends on the 12 circumstances. For one thing, to do this, you should have 13 a better idea where the rock is located and that type of 14 thing, so you don't go ripping anything else open. You 15 know, that's -- in this case, if you put a whole lot of 16 power on it going forward, you're jeopardizing the intact 17 tanks under the pump room and the engine room and the --18 and if the thing went far enough, you could wipe out the 19 propeller and the rudder.

In this case, well, if it was me in this
hypothetical, but if it was me out there, I wouldn't have
had any way to find out just exactly where the impalement
was at, so that's why I said in the first place, I wouldn't
have tried. But if you did that, you would work the ship
ahead, swing it back and forth to grind away on the rock,

43 1 you know, chip the rock away, and that's what happened. 2 Then from time to time, you'd back the ship up and in this 3 case, you'd use all your power and move the -- try and move 4 the ship back, also try and swing it while this is going 5 on. 6 Swinging the ship, going astern in an impalement 7 isn't real easy to do. The rudder is pretty ineffective. 8 You really need tugs to swing the thing. And you just keep 9 repeating this operation until you chip the ship away. 10 The two ways you pull a ship off a rock is break 11 the rock out from under it, or rip the steel and the hull 12 away, to release it, and in real life, it's generally a 13 combination of both of them. You know, you rip some steel 14 away, and you break a lot of rock away. 15 Now, Captain Hazelwood didn't do those actions in Q this case, did he? 16 17 MR. COLE: Objection. Leading. 18 MR. CHALOS: I'll rephrase it. BY MR. CHALOS: (Resuming) 19 20 Q Were any of the actions that you've described done in this particular case? 21 Α They were not. 22 Now, inert gas system was maintained open during Q 23 this period of time, is that correct? 24 . 25 Α Yes.

Q Do you have an opinion as to the effect of keeping the IG system in terms of trying to get the vessel off, or keeping her on the reef?

4 Well, if you want them to get it off, you would Α 5 -- you should have closed the IG system. Once the oil had 6 gone out in some 35 minutes, at that point in time, the IG 7 system should have been closed, so you could have trapped 8 some air as the tide rose. That would give you some amount 9 of lift on the -- you know, the hour -- you'd have about an 10 hour and twenty to thirty minutes of tide rise, which would 11 have started pressurizing the tanks, you know, so that 12 should have been done earlier if you intended to get the 13 thing off.

Q The fact that Captain Hazelwood didn't close down
 the IG system, is that indicative to you of anything?
 A No, he wasn't -- also, again that he wasn't
 really trying to get it off.

Q Okay.

Now, in this maneuver, the hypothetical maneuver that you're talking about, where you would go forward, using power, and using your rudder to grind down the rock and then backing up, how far back would you go in order to accomplish that -- or accomplish the maneuver that you're talking about?

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A What do you mean, how far back?

Q Well, would you go a couple of hundred feet
back? Would you go a thousand feet back, in order to do
what you're talking about?

4 A Well, the ship would only -- when you back up on 5 the ship, it would only move -- the rock had come away, you wouldn't -- you'd probably only gain a little bit each time 6 7 you did this. I mean, it wouldn't move a hundred feet. Tt. 8 would -- you'd have to -- you'd have to go ahead and back 9 and then swing it back and forth. \_\_\_\_\_ wear them 10 down.

11 I had a ship down by Trinidad, one time, that 12 took us two tides, you know, to get off, and it was on coral, coral and rocks, and we ground away on it, swung it 13 back and forth. I \_\_\_\_\_ tugs on it, beach -- the 14 15 anchor gear out, beach gear on it. We even put air in the double bottom tanks to lighten. We took 6000 tons of 16 17 bunkers and cargo off of it. We did all those things to 18 one vessel, and it still took two tides.

Q Okay. Let me show you what's been marked as
Exhibit AK, and ask you, did you see these soundings
before?

A Yes. I directed that these soundings be taken.
Q They were taken at your request?
A That's correct.

Q Now, you notice the soundings astern of the

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vessel, reaching up anywhere between 180 feet and 150 feet?
A Yes.

Q There was plenty of water back there, was there not?

<sup>5</sup> A Yes, there was.

Q So if Captain Hazelwood wanted to make the
maneuver that you testified about -- that is, go forward
and grind the rock down a little bit and then back up -did he have enough water behind him to do that?

A Yeah, he would have. And he would have had
 enough water to the south, if he'd just swung it -- that
 direction.

Q Now, Mr. Leitz, you say that all the actions that
 you studied in this case that were taken by Captain
 Hazelwood led you to believe that he was trying to keep the
 vessel on the rock?

A That's correct.

Q Or on the reef.

Yes.

Did you have the occasion to review a transcript of a tape between Captain Hazelwood and the Coast Guard? A Yes, sir, I did.

Q And do you recall on the tape the captain was
 telling the Coast Guard that he was ascertained, but he was
 going to try and extract the vessel from the reef?

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47 1 Do you have -- how do you square with he's Q 2 telling the Coast Guard what he was doing on that 3 particular night, and your opinion that he was trying to 4 keep it on the reef? 5 MR. COLE: Objection. Speculation. 6 MR. CHALOS: I'm asking his opinion as to --7 THE COURT: Counsel. 8 (The following was had at the bench:) ç (Inaudible remarks). 10 (The following was had in open court:) 11 BY MR. CHALOS: (Resuming) 12 Let me pick up the thread again, Mr. Leitz. Q 13 You've read the transcript of the transmission, the radio 14 transmission between the vessel and the Coast Guard. 15 Α Yes. And I take it you read that Captain Hazelwood 16 Q 17 indicated to the Coast Guard that he was trying to extract 18 the vessel from the shoal? 19 А Yes. 20 You said that, based on what you observed in this Q 21 situation, the testimony that you read and the actions that 22 were taken, you believed that he was trying to keep the vessel on the reef. 23 That's correct. Α 24 25 Q Well, how do you square the two?

48 1 Well, the first conversation, I think at that A 2 time he really -- I think he really thought he was going to 3 try and get the vessel off. And --4 Q Now, why would that --5 Well, he had -- you know, that was not too long Α 6 after the ship went aground, and I think that he thought 7 that -- he didn't have a full evaluation of the condition 8 of it at that time, and so I think that, you know -- first, 9 you have to remember that Captain Hazelwood is --10 THE COUPT: Excuse me just a second. Would 11 counsel approach the bench, please? 12 (The following was had at the bench:) 13 THE COURT: Before I let this in, I want to make 14 sure that it's not based on something Captain Hazelwood told this witness (inaudible). 15 16 (Inaudible) make sure it's based on his opinion 17 and based on his experience and not based on anything 18 independent. Okay. 19 (The following was had in open court:) 20 THE COURT: Excuse me for the interruption. 21 BY MR. CHALOS: (Resuming) 22 Q Mr. Leitz, in expressing the opinion that you're 23 about to express, that's based on your opinion and not on 24 something that you might have heard from anyone, is that 25 correct?

49 1 That's correct. A 2 Q Okay. 3 Now, can you reply? 4 Yeah. I think that the -- you know, you have to Α 5 kind of look at the captain's seagoing experience. He has 6 a very good reputation as a mariner, and he had never 7 been --8 MR. COLE: I object to that. He has no basis to 9 say that. 10 THE COURT: Yeah, that's improper. You can ask 11 him his opinion. I want to make sure it's not based on 12 anything Captain Hazelwood told him, what anybody else told him, based on his review of the record here, and supplied 13 14 to him. 15 MR. CHALOS: Your Honor, that's what I'm asking him. 16 17 THE COURT: But he's giving information that's not based on the record. 18 MR. CHALOS: All right. 19 20 BY MR. CHALOS: (Resuming) Would you just confine your answer to your 21 Q opinion as based on what you reviewed in the record? That 22 is, Mr. Kunkel's testimony, the various things that you 23 reviewed as far as the engine orders and the rudder orders 24 and your experience? - 25

1 Well, can I ask you a question? А 2 (Laughter) 3 I spent, you know, three-and-a-half months with a Α 4 lot of people that were crew members of that ship and 5 worked --6 Ignore --Q 7 Α I'd have to ignore that? 8 THE COURT: Okay. I tell you what. The way we 9 do this here is he asks questions and you give answers, and 10 I think we'll have to stick with that format. 11 BY MR. CHALOS: (Resuming) 12 All right. Let's try that one again. Q 13 Confine your answers to what you reviewed in 14 terms of testimony, exhibits, and your own personal 15 experience, either when you were on the vessel and you saw 16 it with your own eyes, not what somebody told you, and your 17 experience in general as a salvage master. 18 So my question to you is, Captain Hazelwood is, 19 based on your opinion, trying to keep the vessel on the 20 reef, but he's telling the Coast Guard, at about that same 21 time, that he's trying to get the vessel off the reef. Do 22 you have an opinion as to why there's a difference between 23 the two? 24 Yeah. Well, okay. The first conversation, I Α 25 think that he still thought that he could get the thing

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1 off. I don't think the severity of the situation had sunk 2 in. And by the time --

3 Q Is that uncommon in these type situations? 4 No, it's not. No, in my experience -- I've been Α 5 on a lot of ships where the masters have been very upset. 6 In fact, I was on one called the \_\_\_\_\_, which was a 7 Greek ship, the captain locked himself in his stateroom and 8 wouldn't eat, and after two days we had the Coast Guard 9 come out and haul him away in a basket. I mean, that's how 10 upset he was. I mean, he wasn't wild or anything. He was 11 just very, very upset.

And I've seen -- that's an unusual situation, but I've seen various degrees of this type of trauma, if you will, many times.

All right. So, go ahead with your opinion. 15 Q 16 Α Well, the second conversation -- he, I think 17 mentally, in his mental state at the time, he just 18 absolutely refused to accept the fact that he couldn't --19 he didn't have a solution for it. I don't think he'd ever 20 kind of had a seagoing problem before that he couldn't 21 resolve, and here he is, faced with a situation that is, 22 you know, catastrophic. If you, you know -- and I don't 23 think that he wanted to announce to the world, to the Coast 24 Guard and to everybody that's listening on the radio --25 MR. COLE: Judge, I object to this. This is

1 purely speculation.

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THE COURT: This has gone past the expertise of this witness. Objection is sustained as to relevance. It's too speculative.

MR. CHALOS: Okay.

BY MR. CHALOS: (Resuming)

Q Now, was there anything that you observed, any of
 8 the actions that the captain took on this particular night,
 9 that would indicate that, in fact, he was trying to get the
 10 vessel off the reef?

A Absolutely nothing.

Q Now, did you say you read Mr. Vorhus's testimony?
 A Yes, I did.

G (Inaudible). Do you agree that the four or five
 scenarios that he spoke about are hypothetical?

A They're all hypothetical, yeah.

<sup>17</sup> Q Do you have an opinion as to -- well, let me back
<sup>18</sup> up. Why do you say they're hypothetical?

A Because there was no chance in the world the ship
 was going to come off. It would take levitation to have
 got it off that night.

Q Do you -- do you agree or disagree with Mr.
Vorhus's opinion that, if the vessel came off -- by
levitation or otherwise -- that she would have sunk within
a period of 75 to 90 minutes?

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53 1 I disagree. A 2 Q Do you agree or disagree with Mr. Vorhus's 3 opinion that the vessel's crew would have done nothing if 4 the vessel came off? 5 I disagree with that, also. Α 6 What is the basis for that? Q 7 Well, the -- experienced tankermen are used to Α 8 changing the trim of their vessel by pumping ballast from 9 here to there, and around, and what have you. Experienced 10 seamen. And, you know, I can't believe that they'd sit 11 there and let the ship --12 MR. COLE: Judge, again, I'm going to object. 13 It's purely speculation. 14 MR. CHALOS: This is based on his experience, 15 Your Honor, with actions of the crew. 16 THE COURT: I'm going to let it come in, Mr. Cole. 17 18 BY MR. CHALOS: (Resuming) 19 Go ahead. You can answer. Q 20 Α Okay. Where were we? 21 Well, you were saying that, based on your Q experience, that the vessel's crew of a ship --22 23 Α Okay. 24 -- starting to list would do something. Q 25 Right. Well, they'd sort of evaluate the Α

1 situation and if it had levitated off the beach and was 2 floating there, the thing would have tended to go down, 3 list slightly to starboard and go down by the head. But 4 with very minimal intervention of the crew, this could have 5 been stopped. 6 Well, hold on a second. Let me get you a model, Q 7 and maybe you can explain to the jury what you're talking 8 about. 9 (Pause) 10 I'm showing you now what's been marked as Exhibit 11 154. Let me --12 (Pause) 13 All right. Now, would you graphically show the 14 jury what you're talking about? 15 Yeah. А 16 Q Would you like to stand up and approach the jury? 17 MR. CHALOS: Your Honor, is that all right? 18 THE COURT: Surely. 19 MR. : (Inaudible). 20 MR. CHALOS: Wait a minute. 21 THE WITNESS: (Inaudible). 22 Well -- anyhow, if the ship, if it had gone off 23 of the reef and if -- and this is hypothetical. It 24 couldn't possibly have done it, but if it had gone off the 25 reef out into the water and assumed it was levelled to

55 1 start with, then slowly the ship would have tipped like 2 this, \_\_\_\_\_ gone down by the starboard side, which is this side, and down by the head, so it would have tended to 3 go like that. But it would eventually stop at about 12 4 5 degrees of list. 6 Now, if you -- pretend my arm is -- oh, like a 7 teeter-totter, if you will. Anyhow, so this ship was going 8 down like this. We have buoyancy along the port side, 9 buoyancy back here, and 10 BY MR. CHALOS: (Resuming) 11 Q Why do you have buoyancy on the port side? 12 4 Because the tanks are intact. 13 Q Okay. 14 А So now, all we have to do to counteract this tipping -- and this is an oversimplification of it -- is to 15 ballast back in here, at number four port, and also the 16 port wing tank in the engine room, or the after peak tank, 17 18 which is back here. The port \_\_\_\_\_ wing tank is here, and the number four port is right here. 19 20 With very little intervention, they could counteract this and bring the thing back up. It's as 21 simple as that. 22 Q (Inaudible). 23 It's like a teeter-totter. 24 Α Q · •25 That counteraction, would that keep it afloat?

A Yes, it would.

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Q How quickly could the valves \_\_\_\_\_ on number 3 four port?

A · I believe it would take about two hours to
completely fill it. Now wait. Number four port. That's
where the ballast \_\_\_\_\_\_. Probably something of an
hour or so. It would take a little bit longer to fill this
port wing tank and the engine room.

Q How about -- did you have occasion to look at the
 <sup>10</sup> ballast system in the \_\_\_\_\_?

11 А Yes. It's all electrically operated, so to do anything, any ballasting, like number four port, it's a 12 matter of pushing a couple of buttons \_\_\_\_\_ operator 13 from the control room and the \_\_\_\_\_ operator from the 14 control room. Ballasting the engine room, you'd have to 15 call the engineer. That's controlled from the engine room, 16 17 but that's still a matter of a phone call \_\_\_\_\_\_ --18 this is a very modern, sophisticated ship, so all the stuff 19 is really automatic.

Q Would you agree or disagree with the opinion that as soon as the valves were open to ballast down number four port, the vessel would start righting itself?

A Ballating number four port -- I suppose that's
what this indicates here?

Q Yeah, right.

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1 It would tend to start tipping this thing back. A 2 Using the engine room tanks would be even a little bit more dramatic, because you have more leverage. It's further 3 4 back. It's like a fulcrum, you know, lever. 5 Q How 'bout --6 The other thing is --Α 7 \_\_\_\_\_ port starboard? Q 8 Α Port starboard was pumpable. The damage to it 9 was very small. We actually patched it up, but the pumps 10 could -- easily take the water out of that and hold it. 11 Q What would the effect of that be? 12 Α Well, just gives it more to lever this thing 13 over. You've got some positive buoyancy in here. 14 Q So the ship's crew could have pumped that tank out if they wanted to? 15 16 Α Yeah. 17 Q (Inaudible). 18 That's right. And it would have really been -- I Α 19 think the crew would have done it instinctively, because if you start to tip down here, you know, an experienced 20 21 tankerman knows that if you put some weight back here, the 22 thing's going to come back up. And the interesting thing, 23 when we worked it out was that, whether you used \_\_\_\_\_ port or the starboard -- or the port engine room wing tank, 24 25 or the after peak, the effect was pretty much the same.

1 So you really couldn't miss. You could use -- do 2 all three things and the net result is the bow comes back 3 up. 4 Q ' Okay. You can resume your seat. 5 (Pause) 6 Do you agree, or disagree, with the opinion 7 expressed by Mr. Vorhus that if there -- put water in 8 number four port and the port ballast tanks and the engine 9 room that the vessel would have sunk? 10 Absolutely not. A 11 You don't agree with that? Q 12 А It wouldn't have sunk. 13 Q Was the possibility of pumping air into any of 14 these tanks feasible? 15 It's possible that they could have soddered it Α 16 and done it, but I think it's a little bit too difficult. 17 I don't think that that's so feasible. I don't ultimately 18 think that it was probably necessary. 19 I think if they managed to straighten the ship up 20 that far, that they probably would have got around to doing 21 that, after the immediate crisis was over with. You know, 22 more at their leisure. 23 Q Okay. 24 Α But you've got to remember, this is all assuming 25 the thing could leap off the rock.

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1	Q Which you don't believe?
2	A No, I don't think so.
3	Q Would have been possible?
4	A NO.
5	Q Okay. Lastly, there's been testimony that at
6	least ten, possibly eleven, tanks in varying degrees were
7	damaged on this vessel. Does the fact that you might have
8	eleven tanks open on the bottom mean that the vessel will
9	automatically sink?
10	A It depends where the eleven tanks are located,
11	and
12	Q Well, how about the eleven tanks on this vessel
13	are located?
14	A Well, no. It doesn't necessarily mean that.
15	Q Would you explain why not?
16	A Well, because the top of the vessel closed up, so
17	therefore, as it goes down, it tends it will build air
18	pressure, just by the act of sinking creates air pressure.
19	And in fact, for every 2.3 feet the thing would go down,
20	you'd create one pound of air pressure, which creates
21	buoyancy, just like inserting the air from the top. You
22	can do it by lowering the vessel in the water. It has the
23	same effect.
24	Q Okay.
25	MR. CHALOS: I have no further questions at this

1 time. 2 THE COURT: Let's take a recess. 3 Don't discuss the matter among yourselves or with 4 any other person, and don't form or express any opinions. 5 THE CLERK: Please rise. This court stands in 6 recess subject to call. 7 (A recess was taken from 9:50 a.m. to 10:10 a.m.) 8 THE COURT: Mr. Cole? 9 CROSS EXAMINATION 10 BY MR. COLE: 11 Mr. Leitz, you would agree that if Captain Q 12 Hazelwood was attempting to remove that vessel from the 13 reef, that was the absolute wrong thing to do under the 14 situation, would you not? 15 If he was attempting to remove that vessel from 16 the reef, that was absolutely the wrong thing to do, given 17 the damage that his vessel had sustained? 18 А I wouldn't have -- he shouldn't have tried to 19 remove it, no. 20 Q That was absolutely the wrong thing to do. 21 Correct? 22 MR. CHALOS: He answered the question, Your 23 Honor. 24 THE COURT: Objection overruled. 25 BY MR. COLE: (Resuming)

Q That was absolutely the wrong thing to do.
 2 Correct?

A I think absolutely is a bit strong, but it wouldn't have been the proper thing to do under the circumstances.

Q And if I wrote your quote down correctly, you said there's absolutely no evidence that would lead you to believe that he was trying to remove that vessel from the reef? Correct?

A Definitely. None of his actions indicated that he was trying to remove the ship from the reef.

Q Well, when a person speaks, that's a type of action, isn't it?

A Well, I didn't -- that's just an opinion based on what he was doing. He -- everything he did indicates to me that there was no way that he wanted to remove that ship from the reef.

Q And you've read a statement of his conversation
with the Coast Guard. Is that correct?

20 A Yes.

21 Q Have you listened to the tape?

22 A Yes, I have.

Q Well, I'm going to ask you to listen to it again. MR. COLE: Judge, I would ask to play the tape at this time.

62 1 MR. CHALOS: Your Honor, I think it's improper. 2 He said he listened to it. Unless there's a question that 3 he's trying to refresh his recollection or impeach him, I 4 think it's improper. 5 THE COURT: He said he listened to the tape, Mr. 6 Cole. What's the purpose of playing it again? 7 MR. COLE: I want him to evaluate it and make 8 sure that it's the same tape that he listened to before. ç THE COURT: I'll sustain it. 10 (Pause) 11 BY MR. COLE: (Resuming) 12 So when Captain Hazelwood said, "We're working Q 13 our way off the reef," he didn't mean that? 14 I don't think he did. Α 15 You mean he think he meant, by the words, "We're Q working our way off the reef," "We're working our way on 16 17 the reef?" 18 I mean -- well, he wasn't working his way А 19 anywhere. He was just holding it right there. I don't 20 think he was prepared to announce to the world that he 21 couldn't handle the situation. 22 Sir, he didn't say, "We don't know what we've got Q 23 here." He didn't say, "I'm trying to keep it on the 24 reef." He didn't say, "I'm trying to figure out what we're 25 trying to do." What he said is, "We're working our way off

1 the reef." Didn't he?

2 A He said that in the tape, but he told Mr. Kunkel 3 that, "It looks like we're going to stay here," in Kunkel's 4 deposition -- in testimony -- he said the word -- "It looks 5 like we're going to stay here." And --6 Q Sir --7 Α I think that that's probably more accurate than what he said on the tape. 8 0 Q You think? 10 A I mean -- more accurate with respect to what he 11 was doing. I can only make a judgment from what he 12 actually did. You know, he --He didn't say, "We're trying to keep on the 13 Q reef." He said, "We're working our way off the reef." 14 15 Didn't he? A Well, he said that on the tape, yes. 16 17 Q And then in the next sentence, he said, "Well" --18 no, he said, "We've -- the vessel's been holed and we're 19 ascertaining. Right now, we're trying to just get her off 20 the reef." Correct? The next sentence. 21 I think the man was upset, distraught and what Α have you. None of the things he did -- if you --22 MR. COLE: Well, Judge, I move to strike as 23 nonresponsive. 24 25 THE COURT: All right. The question was, did he

1 make that statement on the tape, and --2 THE WITNESS: Oh, yes, he made the statement. 3 THE COURT: -- that calls for a yes or no 4 answer. The motion is granted. Disregard the last answer. 5 BY MR. COLE: (Resuming) 6 He didn't say, in the next sentence, "Right now, Q 7 we're trying to get her back on the reef," did he? 8 No, he didn't say that. Α 9 He didn't say, "Right now, we're trying to keep Q 10 her on the reef," did he? 11 A NO. 12 He didn't say, "Right now, she's starting to Q 13 slip, and I'm taking action to keep her on the reef," did 14 he? 15 А NO. 16 Q He said, "We're trying to just get her off the 17 reef." Correct? 18 Α Yes. 19 And then there's a conversation where Captain --Q 20 or Commander McCall says something, and Captain Hazelwood 21 answers him again, and he says, "We're -- uh -- in pretty 22 good shape right now stabilitywise. We are just trying to extract her off the shoal here." Correct? 23 24 Α Yeah. 25 He didn't say, "We're -- uh -- just trying to Q

65 1 keep her on the shoal here," did he? 2 A NO. 3 Q He didn't say, "We're -- uh -- just trying to put her back on the shoal, because we're starting to slip," did 4 5 he? 6 He didn't say that. Α 7 Q He said, "We're just trying to extract her off the shoal." Correct? 8 ç А Yes. 10 Q What does extract mean to you, Mr. Leitz? 11 А Pull out. Pull out. What do you mean? 12 Q А Well, back off, or --13 14 Q Get off. Α Remove. 15 Q Remove? 16 <u>,4</u> 17 Like a tooth. Extract. Pull out. 18 Q Get off a reef maybe? Α Yeah. 19 20 Q And then he goes on to say, "And once we get underway, I'll let you know." What did -- he didn't say, 21 "And once we get this situation stabilized, I'll let you 22 know," did he? 23 Α No. 24 He didn't say, "Once we get this -- this slippage Q 25

66 1 problem and -- and I'm worried about my vessel, I'll get 2 back to you." He didn't say that, did he? 3 Α No. 4 He said, "Once we get underway, I'll get back to Q 5 you." Correct? 6 Α Yes. 7 And what does, "Once we get underway" mean to Q 8 you? ç А It means the ship is steaming away someplace. 10 Q And that's an action that would indicate he's 11 trying to get off the reef, isn't he? 12 Well, his actions indicated he wasn't trying to A 13 get off the reef, no matter what he said. 14 Q Well, those are words that would indicate he's 15 trying to get off the reef --16 А I understand that, but the things that he did are 17 not the things you would do to extract the vessel from the 18 reef. We'll get to that. I'll let you explain that. 19 Q 20 Α Those are deeds, not words. 21 (Inaudible) about these things, right here. I Q 22 want to talk about his words first, and his words were, 23 "Once we get underway, I'll let you know," correct? MR. CHALOS: He's asked that twice, Judge. 24 25 THE COURT: Yes. Let's go on, Mr. Cole.

67 1 BY MR. COLE: (Resuming) 2 Do you think, as the other defense witness said, Q that Captain Hazelwood was losing his senses, cracking up 3 at this point? 4 MR. CHALOS: Objection, Your Honor. 5 I don't think that was the testimony of the other witness? 6 7 THE COURT: Well, it was something like that. If 8 that's your objection, the objection is overruled. Answer the question. 9 BY MR. COLE: (Resuming) 10 11 Q Is that what you think? 12 А I think that probably puts it a little strongly. I think the man was highly distraught. He was upset. And 13 he just simply was not prepared to announce to the world 14 that he couldn't handle a situation, a man who had been 15 going to sea -- who went to sea for years and he had never 16 17 been in a seagoing situation that he couldn't handle, and I've seen it happen with other captains. 18 I've had it happen for myself. One --19 I'm sorry. All I asked you was --Q 20 MR. CHALOS: Judge, he invited that answer. 21 He was getting the answer. He didn't like it, so he 22 interrupted. I would ask that the witness be allowed to 23 finish his answer. 24 THE COURT: I think the witness finished the . 25

<sup>1</sup> answer. Go on to the next question.

BY MR. COLE: (Resuming)

Q Do you think he was trying to tell the Coast Guard what they wanted to hear?

A I don't think it was necessarily that, even. I think that he -- that he just didn't want to admit to himself, and to the world, that he was in a situation that he can't handle. The guy's a professional mariner, you know, and he's never been in a situation in his life that he couldn't handle, you know, heavy weather, whatever.

11 With a ship -- I don't know that he had ever been 12 involved in any kind of a casualty before. I don't know. 13 But I've seen other captains behave pretty much the same 14 way. You know, they just -- they almost perform by rote. 15 They do all the right things and in their mind, you know, 16 they've got a mindset, or a mental block, against admitting 17 the situation to be beyond their capability. They haven't 18 got the equipment. They haven't got the personnel. You 19 know, they can't really cope with it.

(Pause)

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Q He then said, "I think we've done major damage.
It's kind of dumb. We caught on rock and rolled over it,
and we're just kinda hung up in the stern here." Correct?
A Yes.

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"And we're just -- we'll -- we'll -- we're just

69 1 -- uh -- will drift over it." Correct? 2 А Yes. 3 And he didn't say, "We're going to hang right Q 4 here on this reef and wait out until you guys get out 5 here," did he? 6 Α No. 7 (TAPE CHANGED TO C-3678) 8 Q And he didn't say, "We're slipping, and I'm ç taking action right now to try and keep us on this reef," 10 did he? 11 А No. 12 Q And he didn't say, "I'm doing everything I can to save this ship and keep us on the reef," did he? 13 14 А He didn't say that. Q 15 He said, "We're just kinda hung up in the stern here. We'll just -- uh -- we'll drift over it." Correct? 16 17 A Yes. 18 (Pause) 19 Q Now, if -- did you listen to any of the 20 statements of the crew members that were on the bridge that 21 evening? 22 Α Well, the only deposition -- or the testimony I read was Kunkels, as far as crew members go. 23 Then you were aware that Mr. Kunkel, before 24 Q 25 testifying in this case, had told the FBI that he thought

the captain was trying to get it off the reef, aren't you?
A I'm not familiar with that at all. I didn't see
that.

Q You didn't see that in his testimony. Are you -are you aware that Mr. Kagan, when he was asked, prior to
coming to trial, told people that he was try -- that the
captain was trying to get it off the reef?

MR. CHALOS: Your Honor, I object to that. They
-- they've testified here. They were examined by Mr. Cole
as to those statements. They explained those statements.
I think it's improper to question this witness on a
statement that's already been explained in court.

THE COURT: I think Mr. Cole is entitled to the cross-examine this witness on his opinion based on the information he had available, and whether he reviewed it or not. The objection is overruled.

BY MR. COLE: (Resuming)

<sup>18</sup> Q Did you review any of the statements of Mr. <sup>19</sup> Kagan?

A No, I didn't.

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Q Did you know that he says, in his statements,
 that Captain Hazelwood was attempting to get the vessel off
 the reef?

A No, I don't know anything about what Mr. Kagan thought.

71 1 Q And how about Mr. Cousins? Did you review any of 2 his statements? 3 No. Α Q And did you know that in his statements he said 4 5 that Captain Hazelwood was attempting to get it off the reef? 6 7 MR. CHALOS: Judge, I object. Mr. Cole has 8 mischaracterized two statements that didn't say anything 9 like that. I don't know where he's getting this -- this 10 information. 11 THE COURT: First of all, when the witness said 12 he didn't review the statements, it's going to be really unlikely that he was aware of what the statement said, so 13 14 I'm going to sustain the objection. BY MR. COLE: (Resuming) 15 Q Are you aware that Captain Hazelwood gave a 16 statement to the state trooper? 17 18 Α No. Well, let me let you read it. You didn't -- you Q 19 didn't read that before you gave your opinion that he was 20 trying to get on the reef? 21 No. Let me get this straight. I am basing my 22 Α opinion solely on these actions, not on a single word he 23 said. Everything that he did is what a prudent seaman 24 would do to keep the thing on the reef. I -- if I was in 25

1 his shoes and I was out there, and I wanted to keep the 2 ship --3 MR. COLE: Judge. I object. It's nonresponsive. 4 THE COURT: Mr. Leitz, just answer the question 5 if you can. You're volunteering things that are not 6 responsive to the question. The question was, did you 7 review Captain Hazelwood's statement before giving your 8 opinion. 9 THE WITNESS: No. 10 THE COURT: Okay. 11 BY MR. COLE: (Resuming) 12 Q I would ask you to read that paragraph right 13 there. 14 (Pause) 15 I think that that says exactly what I'm talking Α 16 about. He said he tried the engines. I think --17 Q Excuse me. Let me read this for you. It says, 18 does it not: "I tried to run the engines for a few minutes 19 to see if we could extract it from the situation." He said 20 extract it, right? 21 MR. CHALOS: Your Honor, if he's going to read, I 22 request that he read the whole thing. MR. COLE: I'm going to read the whole thing. 23 24 I'll get to the whole thing. BY MR. COLE: (Resuming) 25

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He said "extract," right?

A I think after the initial grounding that he -- he -- he had that in his mind, that he -- he thought he could get the thing off, and I think that's just exactly what it says. It doesn't say when he said that. It said that he -- then he decided that he -- that it was best not to get it off, so he didn't get it off. I think that's just exactly what that says.

Q He says -- doesn't he -- "I tried to run her on engines for a few minutes to see if we could extract it from the situation, but then I got my faculties about me. I was a little upset of course, but then I thought about it, and driving her off might not be the best way to go, because it just exacerbate the damage, so I just stopped the engines."

A That's exactly what he did.

(Pause)

Q And he stopped the engines at 1:41, correct?

A (Inaudible).

Q And he was maneuvering the vessel during the time up to 1:41, correct? Yes or no, please?

MR. CHALOS: Your Honor, I object --

THE WITNESS: No.

24 MR. CHALOS: -- there's another indication of an • • 25 engine stop. I think the witness is trying to explain

that.

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THE COURT: The witness can answer the question yes or no, to -- go ahead and answer the question yes or no, if you can answer it.

5THE WITNESS: I forget what you asked exactly.6BY MR. COLE: (Resuming)

<sup>7</sup> Q He was maneuvering the vessel between 12:38, when
<sup>8</sup> he started the vessel, and when he stopped it at 1:41,
<sup>9</sup> wasn't he?

A Yes. Yet --

Q Want to see a course recorder?

12 I've looked at the course recorder. Yeah. Α He 13 was operating -- he stopped the engine at 20 minutes after 14 midnight, so nine minutes after he stranded, he stopped the 15 engine, four minutes -- or sixteen -- he sat there with the 16 engines stopped for sixteen minutes, which is, by the time 17 of the -- I think about the time of the first conversation 18 with the Coast Guard that -- he said he was going to try 19 and get it off, and then he operated the -- you know, was 20 stopped for 16 minutes.

He operated -- he started dead slow, operated dead slow for four minutes, came up to slow for four more minutes, operated at half for eight minutes, you know, which -- which is very, very little power, and it was all ahead. And I have no doubt that he -- in the beginning he

75 1 thought he could get it off. He told the Coast Guard 2 that. And then --3 Q Do you know what time he told the Coast Guard 4 that? Do you know what time he was talking when he said, 5 "We're holed and we're ascertaining right now. We're 6 trying to get her off the reef?" Do you know what time 7 that was? 8 Α Which conversation? 9 Q The --10 A The one was at 20 -- I think 26 minutes after 11 midnight and the other was at 1:07. Are those the 12 conversations? 1:07. That's the second conversation. I 13 tried to explain what I feel about that already, or what I 14 think about that. And it boils down that he's telling the Coast 15 Q Guard he's trying to get off the reef. Correct? Correct? 16 17 Is he telling the Coast Guard --18 Α Yeah. Yeah, he said that. 19 Q And his engines have been running for nearly 30 minutes, correct? 20 21 Α Yes. 22 And they've been at full ahead for nearly 20 Q 23 minutes, correct? 24 MR. CHALOS: Well, Your Honor. I object. Full 25 ahead maneuvering.

1 BY MP. COLE: (Resuming) 2 Q Full maneuvering speed for twenty minutes. 3 correct? 4 Α Yes. 5 Q And he's telling the Coast Guard that he's trying 6 to get off the reef, correct? 7 Α Well --8 Q Correct, or incorrect? 9 He couldn't have got off the reef by going Α 10 ahead. That's all there is to it. 11 But he didn't know that, did he? Q 12 А Well, I think -- I think he probably did, because 13 the ship was heading in that direction, and there was, you 14 know, enough interference with the bottom to completely 15 stop the ship at some ten knots, which is one heck of a lot 16 of force, you know. 17 Full ahead maneuvering -- well, most of this --18 or quite a bit of this time, he was going dead slow, slow 19 at half, which is even less power. I didn't work out the 20 actual force, but it's slow -- or at full maneuvering is 21 only 112 tons. 22 Sir, you're saying only a little bit of the time Q 23 he was going full ahead? 24 Α For --25 Q Is that what you're saying?

77 1 4 For about an hour I think it is. 2 Q He started the engine up at 12:36, right? Dead slow. 3 A 4 Q Can you read this? This --5 А I've got it written right here. Q Dead slow at 12:36, right? 6 7 Α Yes. Q Then he goes to slow ahead, at 12:40, correct? 8 9 That's correct. A 10 So he had that on for two minutes, correct? Q 11 А Four minutes. 12 Q Four minutes. And then he goes to half ahead at 12:48, correct? 13 That's correct. Four more -- or eight more 14 А minutes at half. 15 Q So he's been going twelve minutes total, correct? 16 Yes. All working ahead. 17 Α 18 Q And then, at 956, he goes full ahead, correct? А That's right. 19 So he's been running it for a total of twenty Q 20 minutes, correct? 21 Yeah, but at very low speeds, and that's very low Α 22 power settings. 23 Q And then for the next forty minutes, he runs in 24 at full maneuvering speed, correct? 25

78 1 A That's right. This is the most critical time --2 if it were going to slip off, it would slip off nearer to 3 high water, so he just -- in my opinion, he was just 4 holding it there. 5 Q Okay. 6 You say he had to know that the vessel was on a 7 rock somehow. Right? 8 Α Yep. 9 (Pause) 10 Q Now, I am not the greatest artist. 11 (Pause) 12 I want you to assume that this -- this is a 13 hypothetical. This is a vessel, and it's on a rock right 14 there, okay? And that rock goes to this point, right here. 15 And this is what the tide is, correct? Right here? Let's 16 say it's this level right here. 17 А Two inches? 18 Q Two -- two feet. Okay? 19 And let's say high tide is going to go up to 20 four. And this rock is three feet. Okay? Do you 21 understand the scenario so far? 22 Yes. This is a hypothetical. We're not talking Α 23 about the --24 Q It's a hypothetical, right. 25 -- Exxon Valdez anymore. А

79 1 Q Right. 2 Α Okay. 3 Q Do you understand it? 4 Right. Α 5 And if this vessel -- when the tide goes up from Q 6 two to four feet, this vessel will rise, correct? 7 Α That vessel would, but the Exxon Valdez wouldn't. Q 8 Just -- this vessel right here would rise, 9 correct? 10 Α You're talking about a hypothetical vessel now? 11 Q That's right. That's right. 12 MR. CHALOS: Your Honor, if we're talking hypothetically and it has no application to this case, I 13 14 object to the relevancy. THE COURT: Objection overruled. You may 15 cross-examine the witness. 16 17 BY MR. COLE: (Resuming) 18 Q Okay? Now, I want you to explain to the jury, 19 under this hypothetical, how going forward will keep you on 20 that rock, this three-foot rock, when it goes up to four feet? 21 MR. CHALOS: Your Honor, I object. There's no 22 foundation that in this particular case, the Exxon Valdez, 23 that the captain knew all these factors, and was 24 maneuvering the vessel forward. I think he's set several 25

1 false premises and then asked for a conclusion as to what 2 happened in this case. 3 THE COURT: Objection is noted. You can answer 4 the question, if you can. 5 THE WITNESS: I don't think that this has a whole 6 lot of connection with the Exxon Valdez, personally. 7 BY MR. COLE: (Resuming) 8 Q Sir, all I'm asking is that you answer my 9 question. 10 Well, first off, what kind of a vessel is it. A 11 Are these -- is it just this one tank here is holed? All 12 the rest of the tanks are intact? 13 G That's right. 14 А Okay. In that case, the ship would lift. In the 15 case of the Exxon Valdez, there is no buoyancy down this 16 side, so the vessel cannot lift. 17 Q Sir, would you just tell me how going forward 18 with the rising tide under this scenario will keep that 19 ship on that rock? 20 Well, it won't, in that scenario. Α 21 Q Thank you. 22 (Pause) 23 Now, you testified that according to the 24 soundings -- I'd like to talk about these soundings for a • • 25 minute.

1 £ Uh-hut. These, what's been marked as Defendant's Exhibit 2 C 3 AK is soundings that you directed be taken around the 4 vessel. 5 Α That's correct. Correct? And Exhibit CK were soundings that you 6 Q 7 were told were done at 945 on 3/24. Correct? That's right. 8 А 9 Q And when you were in vessel, you asked them for every piece of information that they had concerning the 10 11 vessel, correct? Where it -- how it was sitting, because 12 that was important to you, correct? А 13 Yes. And did you receive any soundings that the crew 14 C) made itself? 15 А No. 16 17 Q Now, this right here, this wasn't available to Captain Hazelwood when he was attempting to remove the reef 18 at 1:40 on the 24th, was it? 19 MR. CHALOS: Your Honor, I object. I don't think 20 there's been any evidence that Captain Hazelwood has been 21 trying to remove the reef. 22 MR. COLE: Remove the vessel from the reef? 23 THE COURT: When you refer to an exhibit, why 24 don't you identify it for the record, (inaudible)? 25

82 1 BY MR. COLE: (Resuming) 2 Q Exhibit AK wasn't available to Captain Hazelwood 3 that evening, was it? 4 Α No. That was done on April 2nd, I believe. 5 Yeah. 6 Q And you saw the chart where the vessel was 7 located, correct? 8 Α Yes. 9 Q And you saw the plot where the vessel was 10 located, correct? 11 Α Yes. 12 And that was right about there, where it's marked Q 13 on this photograph, which has been marked for 14 identification as Plaintiff's Exhibit Number 29, correct? 15 Α Yes. 16 Q And what's sitting directly behind that chart? 17 What kind of fathom marker? 18 MR. CHALOS: Your Honor, I object to the 19 characterization of directly behind. I think the evidence 20 has shown it was a quarter of a mile, or a half-mile, 21 behind. 22 THE COURT: Okay. Now we know that, so go ahead, 23 Mr. Cole. 24 BY MR. COLE: (Resuming) 25 Q What fathom marker is right behind that?

1 Six fathoms. A 2 G That's a six right there? 3 Α You're looking at that? Q That, right there, right. 4 5 Α It looks like a six to me. Okay. Six fathoms wasn't enough to float this 6 Q 7 vessel -- for this vessel to float on, was it? Α No, but I -- but the soundings we 8 9 took, \_\_\_\_\_\_ show six fathoms right behind the ship. 10 Q Six fathoms is 36 feet, correct? 11 That's right. А 12 Q This vessel's draft were over 50 feet, correct? А That's right. 13 Now, you indicated that people who are grounded 14 Q and want to get off the rock would go astern, correct? 15 If they impacted going forward -- it is very Α 16 17 unlikely that you would go forward to get off. It's like 18 running your car into the side of a building and thinking you can get off -- get away from the building by putting it 19 in drive instead of reverse. It's the same thing, even 20 21 though you can't see the rock from the surface of the water. 22 Captain Hazelwood thought his vessel was aground 23 Q astern, didn't he? 24 А Yes. 25

Q And you would still think that a person who thinks they're aground astern would go backward?

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A Absolutely.

Q Absolutely?

5 Well, to go forward over a rock would destroy the Α 6 remaining -- the tanks -- he knew that the tanks aft of 7 number five starboard and center were still intact. He had 8 sounded the double bottom tanks under the pump room. They 9 checked the pump room bilges, the engine room, the engine 10 | room bilges, the engine room double bottom tanks and what 11 have you, and all of this -- if you drove the ship ahead, 12 you would risk ripping all that open, and perhaps 13 destroying your propeller and rudder and everything else, 14 so you just wouldn't do that.

Q You wouldn't do anything, would you? Because
 anything you do is a risk until you assess your condition.
 Correct?

A Well -- yes. You would do a lot of things.
 Q You do a lot of things, but you wouldn't move
 your ship until you're sure -- you were sure of the
 consequences and what would happen --

22 A No.

23 Q -- to your ship, correct?

A If you know the direction that the ship goes aground, and you are worried about it slipping back -- he

had no way of knowing how impaled he was, or exactly where
he was impaled, but he knew that there was enough
resistance going forward that you can't move the ship,
because the resistance that the ship encountered stopped
the ship.

If he -- if he really wanted to get it off, he would have had to back up, and I think it's completely obvious.

Q So, what you're saying is, if this is your tanker, and you're -- and you think you're aground astern, back here --

No, because -- this thing is an absolute 12 A oversimplification that has no bearing on the situation. 13 If he -- the way that he would have thought that he was 14 aground aft was by the damage information from the cargo 15 control room. The -- he knew that there was no -- that 16 17 there was damage back aft from the readings from the cargo control room, so that it isn't \_\_\_\_\_ back here on the 18 19 back end like you've got that thing shown. It's quite a bit forward of that. 20

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(Pause)

Q We just kinda hung up in the stern. What does that mean to you?

A Well, kinda hung up in the stern. I don't know. I suppose anything from about here on back you could

1 probably say that about. The Exxon Valdez has a fathometer 2 that hooks to a recorder on the stern, and it's a simple 3 thing to check it. It wouldn't be back -- I don't know 4 just exactly where the transducer is at. But \_\_\_\_\_ 5 good water underneath the stern of it, and that was easily 6 -- information easily obtainable because it went to the 7 recorder. 8 So I suspect that -- and then from the other 9 information he had, which was from Kunkel, that, you know, 10 five was ruptured, four was making water, five was losing 11 oil. So I suspect that he thought that the vessel had come 12 on the rock and stopped about here. 13 Q Okay. Just leave your hand right there, and I 14 want you to back that vessel up over your hand. 15 (Pause) 16 Just keep going. 17 Yeah. Α 18 That's what he say somebody who really wanted to Q 19 get it off the reef, that's what they'd do? 20 That's what you'd have to do. Α (Pause) 21 22 Now, when you got there on the 26th -- let me Q rephrase that. 23 24 You found out about this on the 25th, correct? - 25 On a Saturday?

A That's when I was hired. I knew about it from 1 2 the morning paper on Saturday, but I -- they called me about 6:00 o'clock in the evening on Saturday. 3 4 Q And I'm sure they told you that several of the tankers had holed? 5 Α They told me exactly which tanks were holed. 6 And when you heard that, you knew that this 7 Q vessel had suffered major structural damage, didn't you? 8 9 A Yes. You knew that this was a catastrophic event? 10 Q 11 MR. CHALOS: Objection, Your Honor, to the use of the word "catastrophic." It's all relative. 12 THE COURT: I think it's a fair term. Go ahead. 13 BY MR. COLE: (Resuming) 14 Q You knew that this was a catastrophic event, 15 didn't you? 16 17 Α I knew it was a serious event. Q You knew that this vessel was in bad shape, 18 right? 19 Α Yes. 20 You didn't have to have a computer to tell you 21 Q that. You knew it just from the information you got on the 22 phone, right? On how the holes \_\_\_\_\_? How the tanks 23 were holed, right? 24 A Well, that's kind of an oversimplification, 25

1 because I was merely told which tanks were holed. I didn't 2 know at that time the size of the holes in the tank, so 3 that would change the degree somewhat, you know, if you had 4 a tank hole in one tank and a small rip in the next tank 5 that's easily patchable, that's a different situation. I'm 6 looking at it from a salvage point of view. 7 You knew that it was major damage that had been Q 8 done, though, based on what you were told? 9 Vessels that go on rocks generally have serious А 10 damage. 11 Tanker captains know that, too, don't they? Q 12 А Yes. And the operation that you were involved in was 13 Q 14 the operation of salvaging this vessel, correct? 15 I directed the salvage of the vessel, that's Α 16 correct. 17 Q And when you -- one of the first things you did 18 when you came into town is that you ordered that all the 19 slider valves be closed, right? 20 Α I did not. You did not? 21 Q 22 Α No. When did you do that? 23 Q We didn't close the slider valves until the 24 Α 25 morning we refloated the vessel, and there's a reason for

that. While the lightering operation was going on, the
tanks had to be opened to get the pumps not them, and you
got that reason why it wouldn't do any good to close the
slider valves, because the tanks are opened, anyway.

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The other thing is, that while the -- we didn't 5 know how to move the ship until we had the lightering 6 7 complete. If a person, for example, would have closed the slider valves, and had all the \_\_\_\_\_ openings closed, 8 and the access trunks, and the ullage openings and 9 everything closed -- let's say you did all that at low 10 water. The ship would try to float prematurely, before you 11 had all the -- before you were ready, or had all the 12 lightering done. 12

So if you want to keep it on a reef, you have to keep it ventilated so the water can freely come in on the increasing tide, and freely go out on the ebb tide.

Q There's also some problems of buildup of
petroleum fume, isn't there, when you close those valves?
A Yes.

Q And I note it took several days before you
finally compiled a plan to get this vessel off, correct?
A No, I wrote -- I started writing the plan on
Sunday after I got all the basic information and it was
completed on Monday.

Q And --

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And then it was a matter of taking the plan, you know, step by step and walking through it, you know, filling in the blank squares and doing the necessary calculations. Meantime, the Exxon people were -- and a lot of outside contractors were pumping the oil off.

Q And -- but it took several days in order to enact
7 your plan, correct?

8 Well, the plan -- the actual salvage of the ship Α 9 could have probably been done in about five days if --10 without considering the matter of taking the oil off. In 11 fact, that was my recommended procedure, that we -- we pump 12 off enough water to establish a water block in all the 13 tank, refloat the ship and then take the remaining oil off 14 of it afterwards. But it was Exxon's attitude that they 15 wanted to get the oil entirely out of harm's way, that they 16 were, you know, afraid that if anything went wrong that we 17 could have more spill.

<sup>18</sup> So that was just a management decision there. So <sup>19</sup> it could have been done as early as five days, probably, <sup>20</sup> after the casualty was -- actually we took it off on the <sup>21</sup> 5th when all the oil was removed. It was just a safety --<sup>22</sup> it was a safer way to go -- more detrimental to the damage <sup>23</sup> on the ship, but safer from a pollution standpoint.

Q And when you lifted the vessel off, basically what you did is you let nature lift it off. You filled it

<sup>1</sup> up with air and made kind of a bubble and the the high tide
<sup>2</sup> came up and lifted it right off the rock, right?

A No, a little complicated than that. We --Q That's a simple term, right? Without going into a great deal, is that a simplification --

A No. We pumped gas into the various tanks to
minimize stresses on the vessel. The final bit of lift was
done as you suggested. All the tanks were preloaded to
various degrees to relieve stress, then the tide supplied
about the last pound of pressure. The final pound of
pressure was supplied by the rising tide.

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Q You waited until a high tide, correct?

A No, we started the plan an hour-and-a-half before low tide filling up various tanks in a sequence, and pre-pressurizing certain tanks to sort of -- all the tanks had -- in the final analysis, all the tanks had different pressures in them. That was to relieve the stress on the ship.

You know, a tank with higher pressure has more lift to it than one with a lower pressure, so you could actually adjust the stress on the ship by adjusting the pressures in the tanks. So the tanks that required a higher pressure were preloaded to that higher pressure, and it got to the point where all the tanks that needed to be pressurized were automatically pressurized by the tide for

1 the final pound of pressure, which came upon the vessel 2 absolutely uniformly. So it was gently \_\_\_\_\_, if you 3 will. 4 Q But it was lifted up by the rising tide, correct? 5 MR. CHALOS: Your Honor --6 THE WITNESS: Only the final --7 MR. CHALOS: I think that answer has been 8 explained and I think Mr. Leitz explained exactly how the 9 ship was prepared before it was lifted up, and he explained 10 also that the final pound was -- of pressure -- was 11 supplied by the tide. 12 MR. COLE: I'm just trying to -- I'll rephrase the question. 13 14 BY MR. COLE: (Resuming) 15 Mr. Leitz, when this vessel finally left the Q 16 rock, wasn't, you know, it with the rising tide, correct? 17 You weren't going -- the tide wasn't going down when you 18 were pumping the air in, or when you had it ready to lift 19 off, it was lifted up with the combination of your air and 20 the rising tide. Would that be fair to say? 21 That's right. We needed the higher water in Α 22 order to get the ship to clear the rock, but the plan was 23 initiated about an hour-and-a-half before low water, and we worked through low water and about 45 minutes into high 24 25 water, which would be about the end of -- I mean of low
water, excuse me -- about 45 minutes past low 1 2 water, \_\_\_\_\_ low water, which would be about the end of low water slack, everything was in place and 3 prepressurized. Then we waited for the tide to pick the 4 ship up. Correct. 5 Q You waited for the tide to pick the ship up, 6 right? 7 Yeah. We needed more water. Α 8 Q Okay. And that was at high tide. When it lifted 9 off --10 А No, it was not. 11 12 C Ohay. А It was about half-tide. 13 (Pause) 14 0 You indicated that the damage that you observed 15 to the Exxon Valdez was mostly caused by the grounding, 16 correct? 17 Well, there's really eventually two types of A 18 damage. The major damage was caused by the grounding. The 19 turn of the bilge on the starboard side was caused by the 20 ship rocking up and down on the subsequent tides. You 21 know, the tide that caused -- now, this was the period 22 between the time that the ship grounded and the time we 23 eventually took it off. Every high water on the port side 24 would lift, and low water would come back down. That 25

1 rock \_\_\_\_\_ on the other side.

2 But the initial surveys by divers of the port 3 side -- there was no damage to the port turn of the bilge, 4 the radius plate on the corner -- well, right here. 5 (Inaudible) on this side of the ship. Right up in here. 6 This is the radius plate in here, the turn of the 7 bilge. Anyhow, the thing -- this didn't start 8 deteriorating until about the fourth or fifth day when the 9 divers started -- we wanted to watch this, because we were 10 afraid of a fracture developing up the side. You know, we 11 would have had to do something earlier if we started 12 getting in trouble with the hull fracturing. You know, if this turn failed, the fracture started propagating 13 14 vertically. 15 MR. COLE: Move to strike. Nonresponsive. 16 THE COURT: What was your question, Mr. Cole? 17 MR. COLE: My question was, major damage was 18 caused by the grounding. 19 MR. CHALOS: I think Mr. Leitz was explaining how 20 the damage was caused. 21 THE COURT: I think Mr. Cole asked him if he had not testified that the major damage was done by the 22 23 grounding, and that would call for a yes or no answer. If 24 you can't answer it yes or no, you can tell Mr. Cole that, 25 and maybe he'll let you explain it. But try to confine

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95 1 your answers to the question (inaudible). THE WITNESS: I'm sorry, Your Honor. I get kind 2 3 of wound up. I apologize. 4 BY MR. COLE: (Resuming) Q You did not see the damage that was done by the 5 grounding itself, because the only -- well, let me strike 6 that. Let me rephrase it. 7 Some crushing damage was done at the first low 8 9 tide on March 24th at 8:30, correct? Α Yes. 10 Q And no one saw the damage that was done, or how 11 the vessel looked, prior to that time? Correct? 12 А Uh --13 Q That you're aware of. 14 Prior to the following low water? Α 15 Q Yeah. 16 Α No. 17 Q The divers didn't get out there until that night, 18 on the 24th, correct? 19 Α I'm not sure exactly what time the divers -- I 20 mean, they were local divers and that was before I got 21 there, so I'm not exactly sure what time the first survey 22 was done. 23 Q But nothing that you saw showed you any of the 24 damage that was done prior to the low tide on March 24th at 25

1 8:30?

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A No. There would be no way anybody could get that information.

Q And that crushing -- the initial low tide did cause some crushing damage, correct?

A It no doubt did.

Q And that crushing damage would have destroyed
 evidence of initial damage that had been done to the
 grounding, correct? At the grounding, correct?

MR. CHALOS: Objection. That calls for absolute
speculation.

THE COURT: The witness can answer that.

THE WITNESS: Well, you know, the original collision with the rock caused massive structural damage, so that the whole structure is weakened, so there's no question that the low water would have aggravated the condition.

BY MR. COLE: (Resuming)

Q And would the -- and the crushing caused the loss
of -- crushing prevented us from seeing some of the damage
that was done in the initial grounding, correct?

A I kind of think the extent of damage probably was still there. It may have -- it would be strictly straight in, probably, further, but I think as far as the major fractures, and that type of thing, that was probably still 1 the same.

Now, you've got to remember also that we've cut a lot of plates out of that thing, so I don't know just exactly what spot you're talking about, but in order to take it down the ocean, we had to trim it, and then we had to trim it some more to get it in the dry dock, and that type of thing.

8 So I don't know what you -- what exact spot 9 you're referring to.

Q Let's say between section 3 and 2, where it was sitting on the rock. That's about where it was sitting on the rock, right?

A No. Yeah -- that's -- it -- the major part of the rock was in way of number 2. There was only three frame spaces -- I think when everybody went down to look at it in the dry dock, the plate was peeled back off of three starboard for quite aways, but that happened at sea. There were only three frame spaces -- 16 foot frame spaces, so it's 48 foot of the forward end.

Number 3 starboard was affected up there. There rest of it was caused by sea action while we were underway, and we had to trim that off on purpose, off of San Diego.

Q Now, any damage that would have been caused due to the rudder orders by Captain Hazelwood would have been in the area of where the rock -- where the ship was

1 grounded on the rock?

A That's correct.

Q And any damage that would have been sustained at that time would have been in the area where the crushing feffect occurred from the low water. Correct?

A Yes.

Q And so any evidence of any damage that Captain
 Hazelwood did would very possibly have been lost by that
 crushing effect, correct?

MR. CHALOS: I object, Your Honor. This is all speculation. There is no evidence that any damage was done or was caused by the use of the rudder or the engine. Mr. Cole is asking the witness to speculate as to the type of damage, the extent of damage, and what might have happened to it.

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THE COURT: Objection overruled.

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THE WITNESS: Well --

BY MR. COLE: (Resuming)

Q Sir, let me ask the question again. Any evidence of damage that was caused by Captain Hazelwood's rotating, turning, the vessel that morning very likely would have been lost by the crushing effect that occurred at 8:30 in the morning at low tide, correct?

A Yeah. Well, you know, I think the damage would \_\_\_\_25 have been minimal, but you're right, it would -- it would be obscured by the crushing effect, and also it would have been obscured by the fact that the ship turned some 14 degrees on Sunday and was pushed back with tugs, which was also a rotating effect, so I don't know how you'd ever separate what caused which crack or dent.

Q Did you see any evidence of rotation when you were in Valdez looking at it -- in San Diego looking at it lin dry dock?

A No, I didn't.

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(Pause)

Q Now, you were asked a number of opinion questions by Mr. Chalos about whether action taken was proper by Captain Hazelwood. And you indicated all these things that he did correctly. You're aware, of course, I assume, that two of the crew members, at least, weren't even woken up that night, correct?

A No, I didn't know that. What I read, you know, that -- I read Kunkel's testimony and I thought they were all --

20 Q You would agree that one of the first things a 21 captain should do is make sure that his crew is aware of 22 the danger that the vessel is in, correct?

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A I would agree with that.

Q And it's pretty hard for a person -- it's also important to let them know how to prepare for that danger, <sup>1</sup> and what steps to take. Correct? Would you agree with me <sup>2</sup> on that?

3 I don't quite follow you, but --Α 4 It would be important for -- it would be Q 5 important to let the crew members know what steps to take 6 in case something worse happened, like the vessel started 7 to capsize, correct? 8 Well, if the vessel started to capsize, for Α 9 example, I think you would -- in that -- in that event 10 you'd be proper to ring the general alarm and everybody 11 would get in the boats. I mean, you'd want to get off the 12 thing. 13 Q Well --

A Or get their survival suits on and get in the
boats. I think the first order of business would be to,
you know, muster your crew so you've get people available
to do whatever needs to be done, you know, to --

Q And one way of doing that in putting them in like a mess hall. Send them all into a mess hall, and you keep them there and you get a head count, right?

A Yeah, well -- yeah. I don't know that the captain would necessarily do anything like that. You'd have to rely on your officers.

In a situation like that, the captain, or whoever is in charge, has to delegate authority. That's a -- you 1 know, a very large ship, and you personally can't go around 2 and do all these things.

Q Do you know how many crew members that were on 4 that vessel?

A I believe 19.

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Q That's not that many, is it?

A No, but you're still (inaudible) it is -- I think you were saying that Captain Hazelwood should have done all these things I think he had to delegate the authority, and I think Mr. Kunkel and Mr. Cousins and some of the other ones were -- I think he told them to do it, and I think that that's -- his role is to delegate responsibility.

Q So he could attempt to get the vessel off the reef?

MR. CHALOS: Your Honor, I object.

THE COURT: Mr. Cole?

MR. COLE: Well, that's what the evidence is. MR. CHALOS: No, I don't think the evidence --THE COURT: It's argumentative. The question is argumentative, Mr. Cole.

BY MR. COLE: (Resuming)

Q So if crew members weren't woken up, you wouldn't
think that would be a particularly good -- good thing to
do?

A Pardon?

2	Q If crew members were not woken up, you would not
3	believe that that was a particularly good thing?
4	MR. CHALOS: Your Honor, I object to the
5	relevance of this. Unless he can show that Captain
6	Hazelwood had to go, himself, to their rooms to wake them
7	up and he didn't, then it's irrelevant. He gave the right
8	order. That's the evidence in this case.
9	THE COURT: Your relevance objection is
10	overruled.
11	BY MR. COLE: (Resuming)
12	Q So you would agree with me that if crew members
13	weren't woken up during this whole time, there's something
14	wrong with that, correct?
15	A Yeah. But whoever was supposed to do that, you
16	know, the third mate, or the second mate, or the chief
17	mate, or whatever, that was by delegating authority,
18	that was their responsibility to do that, I would think.
19	Yes, and I agree with you, that he shouldn't that that
20	oversight shouldn't have happened.
21	Q So maybe Captain Hazelwood didn't completely act
22	in a correct manner?
23	A Well, he gave the
24	MR. CHALOS: Objection, Your Honor. There's no
25	foundation for that question.

103 1 MR. COLE: That's exactly what Mr. Chalos brought 2 out. He brought out everything that he believes Mr. --3 Captain Hazelwood did right. I'm just seeing if this makes 4 a little bit difference for this witness. 5 THE COURT: Well, rephrase your question, Mr. 6 Cole. 7 BY MR. COLE: (Resuming) 8 You don't know when the anchor was put in the Q 9 water, do you? 10 Just shortly after the engine was shut down at A 11 high tide, I believe. 12 It was after. After the engine had been shut Q 13 down, correct? 14 That's right. You wouldn't have dropped the Α 15 anchor while the engine was operating. 16 Q Especially when you were going forward, correct? 17 Well, you wouldn't drop the anchor while you were Α 18 going anywhere. 19 Now, do you remember a conversation that you had Q 20 with me \_\_\_\_\_\_ where there were two Exxon attorneys and 21 Mr. Milwee and Mr. Vorhus present? 22 conversation? 23 A I wasn't sure who all the people on the call 24 were, if you want me to be honest. 25 Q Well, you knew Mr. Milwee, right?

104 I knew Milwee. I remember Vorhus, and --1 А And you had a couple of attorneys with you from 2 Q 3 Exxon there. No. 4 Α 5 Q One attorney? Α Just -- Howard Naughton was the only one that was 6 7 there. And you remember that I asked you a question, 8 Q 9 correct, right at the end, and the question was, if this 10 vessel had come off the reef, what would have happened? 11 I said that it would keel over to the starboard А and go down by the head, and perhaps capsize. And I also 12 qualified that a couple -- a little bit later by saying 13 that - you know, you asked how could you figure that out, 14 and I said you'd have to do some calculations. 15 At that time, I hadn't done calculations, so what 16 17 I told you was exactly true, and then after \_\_\_\_\_ calculations, I found out that that could be checked. I --18 there was a demonstration, there were a lot of those, that 19 it wouldn't have gone that far. That was just of the top 20 of my head. 21 You said it would capsize, at that time, though, 22 Q right? 23 Α Yes. But I also told you that that had to be 24 <u>2</u>5 confirmed with calculations that weren't done.

1 Q But at that time, you said it would capsize, 2 correct? 3 Α No, I qualified it, sir, though. 4 MR. CHALOS: Your Honor --5 THE COURT: It's been asked and answered three 6 times, Mr. Cole. 7 BY MR. COLE: (Resuming) 8 And you worked for Exxon Shipping Company in this Q 9 case, didn't you? 10 Α I was an independent contractor employed for 11 salvaging the ship, and that's it. 12 You were hired by Exxon Shipping Company? Q 13 Α That's right. 14 Q And you worked for them for the whole time, the 15 four-and-a-half months that you were involved in this, 16 correct? 17 Α That's right. 18 MR. COLE: Thank you. I have nothing further. 19 REDIRECT EXAMINATION 20 BY MR. CHALOS: 21 Mr. Leitz, you're not a professional witness, are Q 22 you? 23 Α No. 24 Q You're a working salver? 25 Α Yes.

1 Now, Mr. Cole asked you about some -- about your Q 2 statement to him on the telephone that you thought the 3 vessel would go down by the head, and list to starboard, and possibly capsize, but you needed to make some 4 calculations. 5 That's correct. 6 Α 7 Q Have those calculations been made? А Yes. 8 9 And what do those calculations show? Q It shows the same thing I demonstrated, with the 10 Α 11 ship -- well, what I demonstrated was, with minimal 12 intervention by the crew, the tendency to role would be -could be stopped and reversed. Also, it showed that the 13 thing \_\_\_\_\_ about 12 degrees, and stop all by itself. 14 Which would --15 Q Without anything being done by the crew? 16 Yeah. 17 Α Now, when you say minimal intervention by the 18 Q crew, what do you mean? 19 Well, things that are reasonably within the 20 Α capability of the crew, and that would be to put ballast 21 in, you know, pump number 4 starboard, ballast number 4 22 port, and ballast -- the port, engine room wing tank and 23 perhaps the after peak, or some combination thereof. 24 In your opinion -- in your opinion, are those Q 25

1 maneuvers difficult to do?

A Very easy.

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Q And are they -- can they be come quickly? A Yes.

Q Now, Mr. Cole asked you about the vessel coming off the reef. Now, it's your opinion, even if she came off by whatever method, whether she was driven off, or she floated off, or she levitated off, in your opinion, she would have stayed afloat?

A Yes. With minimal intervention. Q Now. Mr. Cole went through a series o

Q Now, Mr. Cole went through a series of questions
 regarding what the captain didn't say to the Coast Guard.
 Do you remember those?

A Yes.

Q With respect to the things that he did, as opposed to the things that he didn't say, in your opinion, were those things intended to do what? That he did?

A Well, all the things he did were the things you do in that circumstance, find out just exactly how much trouble you're in with the severity of the damage to the vessel, what's dry, what's flooded, you know. Get the life boats out. Get your fire stations ready to go, in case you have a fire. I mean, he did all those kind of things.

I think -- these people are so well-trained, it's almost by rote that a lot of this stuff gets done, and --

1 Q Well, what's the purpose of everything that was 2 done, in your opinion? Α To protect the -- minimize the loss, if you will, 3 I guess, or protect the crew. 4 Q And what about in respect to the vessel, related 5 to the reef? 6 Α Working the engine ahead, you mean? 7 Q Yes. 8 9 Well, I think that, in that he didn't know A 10 exactly -- I mean he didn't know that that ship was impaled 11 in the -- for sure, or where the rock was that for sure --12 that's pretty obvious -- and so the thing to do is not try to float it off. 13 Q Now, how long did it take for your crew to 14 determine that this vessel was impaled? 15 We didn't know that for sure until we refloated Α 16 17 it. The day we refloated the ship, it had actually come \_\_\_\_\_ -- oh, God, I can't remember what time, 18 like 10:30, let's say, and you know, that's wanting to feel 19 some kind of motion to it, and there was an hour later 20 before we could actually clear the rock, and where the ship 21 came, floated clear of the rock, and I had the pilot take 22 the thing broadside and then out to the channel. 23 Assuming that soundings were feasible immediately Q 24 after the grounding, do you have an opinion as to whether 25

<sup>1</sup> they would have told -- those soundings would have told
<sup>2</sup> Captain Hazelwood where and how he was impaled?

3 I think it would have -- if they'd have done it Α 4 from the deck edge and what have you, you know, measuring 5 down, it would have given an indication, but we did that 6 later on, and it still didn't tell us if we were impaled or 7 not. We had no practical way to find that out. It was too 8 dangerous to stick divers under it. They went back and 9 looked as well as they could, but they couldn't go back 10 there.

We couldn't go down from the top, because you were -- we were going through oil, and \_\_\_\_\_\_ the tanks were pumped out and what have you, it was, pretty -- we still had a -- you know -- I should explain that, I guess.

15 When you pump the ship down with these \_\_\_\_ 16 pumps, these oil salvage pumps, you can't get the last bit 17 of oil out. All the tanks have four to six to eight inches 18 of oil still floating on the water, you know, at the time 19 we refloated the ship. By the time a diver gets down 20 through that and looks around, there's no visibility, you 21 know. He's all covered with oil, and if he goes through 22 there, we -- so it -- the guy just simply can't go down and 23 feel around down there, because he's going to lose an arm 24 or something, or worse.

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Q All right. Now, this vessel ran aground at

1 || night, did it not?

A Yes.

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3 In your opinion, when Captain Hazelwood told the Q 4 Coast Guard that he believed he was hung up astern, based on whatever information he had at that particular time, do 5 you believe he was guessing at that point? 6 I think he was --7 Α MR. COLE: Objection. Leading. 8 9 THE COURT: Don't answer the question. BY MR. CHALOS: (Resuming) 10 11 Q Let me withdraw that question. In your opinion, was it reasonable, based on the 12 information that Captain Hazelwood had, to assume that he 13 was hung up somewhere in the after body of the ship, in the 14 areas that you pointed out? 15 MR. COLE: Objection. Leading, speculation. 16 THE COURT: Rephrase your question. 17 18 BY MR. CHALOS: (Resuming) Mr. Leitz, on the basis of your experience, and 19 Q based on the evidence that you read here with respect to 20 the type of damage that the vessel sustained, and the 21 information that Captain Hazelwood had, do you have an 22 opinion as to the reasonableness of what he believed, or 23 where he believed, he was hung up? 24

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MR. COLE: Objection. Calls for speculation.

1 MR. CHALOS: I think it's going to be based on 2 what he's read and seen and has experienced, Your Honor, 3 and that's what I asked. 4 THE COURT: Objection sustained. 5 BY MR. CHALOS: (Resuming) 6 Now, getting back to what the captain was saying Q 7 to the Coast Guard and what he was doing at the time, is it 8 your opinion that everything the captain was doing, in 9 terms of the use of the rudder and the engine, was for the 10 purpose of keeping the vessel on the reef? 11 MR. COLE: Objection. 12 THE COURT: Mr. Chalos, you persist on leading questions. I'm going to sustain every objection. 13 14 MR. CHALOS: Well, all right. I'll rephrase it. BY MR. CHALOS: (Resuming) 15 16 Mr. Leitz, based on what you read in this Q 17 particular case, and the evidence that you've viewed, what 18 is your opinion as to the -- the use of the engine and 19 rudder? For what purpose was it being used? 20 To keep it on the rock. Α 21 And you say that, despite the captain was saying Q 22 to the Coast Guard? 23 MR. COLE: Objection Leading. 24 THE COURT: Sustained. 25 BY MR. CHALOS: (Resuming)

112 You read, I take it, Mr. Kunkel's testimony? 1 Q 2 Α Yes. 3 Q And you recall Mr. Kunkel initially telling the captain that the vessel was stable? 4 Yes. Α 5 Did that fact play any role in your opinion that 6 Q the captain was attempting to keep the vessel on the reef? 7 Well, a vessel that's aground is in no danger of Α 8 capsizing, so -- and the captain would have known that. 9 Now, you started to talk about the second 10 Q conversation that the captain had with Mr. Kunkel? 11 12 Α Yes. Do you remember that conversation, where Mr. 12 Q Kunkel told him that the stability was marginal? 14 Α Yes. 15 And the captain then told him, I think you said, Q 16 that "We're staying right here?" 17 18 Α Yes. Did that play any -- that conversation play any Q 19 role in your opinion that the vessel was -- that the 20 captain was trying to keep the vessel on the reef? 21 I think -- the way I understood that Α 22 conversation, it was as much as saying that. He said it 23 was like we're going to say right here, and Mr. Kunkel said 24 the captain responded. And also the stability question, 25

113 1 Mr. Kunkel was talking about a seaway condition, about 2 taking the thing out into a seaway condition as opposed to 3 a harbor condition, you know. 4 Q And is that -- again, I think you testified that 5 there was no way, using the vessel's engine or rudder, that 6 this vessel was coming off? 7 MR. COLE: Objection. Leading. 8 MR. CHALOS: I'm just using that, Your Honor --9 THE COURT: It's preliminary to --10 BY MR. CHALOS: (Resuming) 11 Q Is that correct? 12 Α Would you say it again? I'm sorry. Well, let me withdraw it. I think you made it 13 Q 14 clear. You spoke in your cross-examination about seeing 15 captains perform by rote in these type of situations. What 16 17 do you mean by that? 18 Α Well, ship crews, you know, that are used to 19 doing a job, and they do it over and over again, and 20 they're very professional at it. You know -- you know -let's say they strike an object. You know, they're 21 22 cruising along, and they hit a log or something, and it makes a racket that somebody notices. (Inaudible) the 23 24 ship. Or an ice condition, where something was bumping 25

along, you know, it would be almost automatic to ask the 1 engineers to check the bilges, and check the sound tanks or 2 something if they thought there was any serious damage, or 3 probably a better example is a piece of ice went through Δ the propeller. That would make quite a ruckus back there. 5 They would go back and check that portion of the ship for 6 damage, and this is the standard operating procedure. 7 And a lot of these things that he did that night 8 are standard operating procedure under -- well, not only a 9 stranding situation, but other types of situations. 10 11 Q Do you, in your mind, equate the word "rote" with "instinct"? 12 Well, more like training. Α 13 Q Now, I'd like to show you that -- the data logger 14 again that Mr. Cole showed you? Do you remember this? 15 Α Yes. 16 Q 17 Okay. Now, you -- you started to list the number of 18 minutes the engine was used at various speeds? 19 Α Yes. 20 Taking the speeds that were used by Captain Q 21 Hazelwood, starting, I guess, at 12:35 onto 1:40, what do 22 those speeds indicate to you? 23 I just -- daintily holding this thing in there A 24 and just kind of feeling it out. I think he was also 25

115 1 trying to figure out what the pivot point was at --2 MR. COLE: Objection. Speculation. 3 THE COURT: I think that goes to Captain 4 Hazelwood's state of mind --5 MR. CHALOS: Well --6 THE COURT: -- and goes beyond this -- this 7 witness's expertise, so I'm going to sustain the objection. 8 MR. CHALOS: All right. 9 BY MR. CHALOS: (Resuming) 10 Taking a look now at the speeds that were used, Q 11 do you have an opinion as to whether those -- the use of 12 the engine in that manner was intended to drive the vessel over the reef? 13 14 Well the engine settings used simply do not have Α enough power to drive over the reef. He couldn't be 15 driving over the reef at dead slow and slow and half, you 16 know. And even full maneuvering isn't -- it's less than a 17 18 third of the power the vessel is able to produce. 19 If he was trying to drive it over the reef, he 20 certainly would have used, you know, full ahead flank, all 21 31,000 horsepower versus 9,000 horsepower. 22 Now, Mr. Cole gave you a scenario behind that Q 23 data logger. Do you remember that scenario? 24 Α Yeah. 25 Q Do you remember that?

A Yeah, I do. Yeah.

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Q All right. That wouldn't in any way represent the Exxon Valdez scenario, does it?

A Not even close.

Q In the Exxon Valdez scenario, as you found the ship, do you have an opinion as to whether running the engines ahead were intended -- or were for the purpose of keeping it on the reef?

MR. COLE: Objection.

BY MR. CHALOS: (Resuming)

Q Let me withdraw that question.

Now, I'd like to turn to a different subject: soundings. In terms of things to be done in this type of situation, where would you put soundings as a matter of priority?

I suppose about the middle of the spectrum of all Α 16 the things there are to do. Well, you've got ship's 17 safety, crew safety, all that stuff is being done -- I 18 think it should be done at the first available opportunity, 19 without risking your people. In this particular case, the 20 only way he could have done soundings very soon would be to 21 launch a lifeboat to do it, and I think that would be very, 22 very imprudent. 23

Q You mean put the lifeboat in the water and --A That's right.

1 -- have someone go around the ship? Q 2 And that's no way to get soundings that are A 3 meaningful. For soundings to be meaningful, if you're 4 worried about what direction you're going to go, they have 5 to be away from the ship, and obviously, you can't do that from the ship, so you have to have some means of getting 6 7 out there, you know. And I think eventually, of course, I think the pilot boat took the soundings. It came out and 8 9 did it for them, you know.

Q Now, when you testified soundings were taken at 9:45 in the morning, do you consider that to be a reasonable period under the circumstances?

Let me rephrase it. You stated that soundings were taken at 9:45 in the morning at the instruction of the captain. Do you have an opinion as to the reasonableness of the timing?

A Yeah. That's related to the situation, and if he fully intended to refloat the ship, he had to do it by one -- by high tide in the morning, which was 1:57, or whatever. So it didn't really make too much difference when they were made. They obviously couldn't have been done in time for the tide.

The tide was falling, and it didn't make much difference when they were done after that, and at this time of the year, that spot -- it's first light about -- and I

think it could have been done an hour or two earlier or later. It didn't make any difference any more. It was past high water, and it was done before the next high water, if you were thinking about doing something on the next high water.

Q Just one more question on the soundings.
According to the soundings that you took, there was plenty
of good water behind the vessel, was there not?

9 A For a -- as far as they went. There was a couple 10 of -- there was a couple of hundred foot. There was, yes.

11 Q And that's enough room if he wanted to -- did you 12 have an opinion as to whether that was sufficient room if 13 the captain wanted to back his vessel out?

A Yeah. Had it slid off the rock -- you know, a ship that size takes quite awhile to get up momentum. Also, the backing power of a big ship like this is -- it's poor. You don't get as much power going astern as you do ahead. And -- so if the thing slid off, it isn't like it would be suddenly doing ten knots. It would be -- it would take awhile for that to build up any speed.

So you have time to stop the thing. You know, he wouldn't go any further than he had to, I don't think. I mean, he wouldn't be going off a mile or two backwards, you know, because that's uncalled for, you know. He'd probably be trying to get out to the channel, if he got off of

1 there. 2 Now, Mr. Cole asked you whether or not this Q 3 vessel was in bad shape. Do you remember him using that 4 term? 5 Α Yes. 6 Q Was the vessel stable? 7 Α Aground? 8 Q Yes. 9 Α Sure. 10 And, based on your calculations, she would have Q 11 also been stable afloat? 12 MR. COLE: Objection. BY MR. CHALOS: (Resuming) 13 14 Q If she came off? THE COURT: Don't answer the question. 15 16 MR. CHALOS: Let me rephrase it. 17 BY MR. CHALOS: (Resuming) 18 Q If the vessel had come off, do you have an opinion as to stability? 19 I think it would have been -- yeah, it would have 20 Α been stable. 21 22 Q Okay. Now, did the vessel have sufficient strength 23 aground? 24 25 MR. COLE: Objection. Leading.

120 BY MR. CHALOS: (Resuming) 1 Mr. Leitz, do you have an opinion as to the 2 Q vessel's strength when she was aground? 3 It was adequate, and there was no problem with Α 4 the strength. 5 Q Do you agree or disagree with Mr. Vorhus's 6 testimony that, had she come off the reef, there would have 7 been no problem with her strength? 8 Α Would you repeat that? 9 Q Yes. 10 Do you agree or disagree with the testimony of 11 Mr. Vorhus that, had the vessel come off the reef, there 12 would have been no problem with her strength? 12 Α I agree with that. 14 Q Now, when you float the vessel off, what -- you 15 had to take the cargo off first? 16 We -- no, we didn't have to, but you've got 17 Α another consideration. The vessel is only one 18 consideration -- minimizing pollution in this case probably 19 far outweighed the value of the vessel. So we took the oil 20 out, out of harm's way, if you will, and then we -- we 21 floated the vessel. 22 Q And you pressurized the tanks, I think --23 To refloat the vessel, that's correct. Α 24 In your opinion, based on the condition of the Q 25

vessel at the time of the grounding, could she have been
floated off by the crew the way you floated it off ten days
later?

A Theoretically it could have been done, not on that tide, but on some several -- you'd have to go into like a minus tide situation, seal the vessel up, and then wait for the tide to come back in. This wouldn't be -this would be -- would float as best it could, you know. It wouldn't be with very much finesse, but it's conceivable it could have come off that way.

Q Did you find any evidence in this case that indicated that the crew was trying to refloat the vessel, in the manner that you -- you floated it off?

No. No, there's no evidence of that. But it's 14 Α also an impossibility, because it went aground an hour and 15 fifty-seven minutes, or even less than that, before high 16 17 water, and that fluctuation in a tide is not enough to have 18 done anything -- or pardon me. I should say it would do very little. You know, it's only about an hour and forty 19 -- fifty minutes, forty-five minutes, before the high tide, 20 and that's all the lift you'd get. 21

Q Given your opinion in this case as to what the captain was attempting to do with respect to the vessel on the reef, what is your opinion with respect to the use of the rudder as part of that procedure?

A Well, the only thing I can say about that is I 1 2 think it was just the bottom line with what you would expect to try and maintain a heading. 3 Q All right. Now, this vessel proceeded from Bligh 4 Reef to Naked Island and then down to San Diego. Am I 5 correct? 6 Α Yes. 7 Q How long was the journey? 8 Α 9 It was thirty -- we eventually were out to sea 38 days. 10 11 Q And how many miles, do you remember? Not right off the top of my head. We -- we towed Α 12 it around backward down at San Diego for days \_\_\_\_ 13 were busy trying to get permission to get some place 14 to \_\_\_\_\_ her bottom. It was eleven -- if we had gone 15 to the Columbia River, that was about eleven days planned 16 voyage, and if we had gone to San Diego and been allowed to 17 go in, that would have been about an eighteen day planned 18 voyage. 19 All right. Now, these 38 days that you were 20 Q afloat, were they with the bottom of the ship open in the 21 way that she had run aground? 22 Absolutely. Α 23 MR. COLE: Objection. Leading, and outside the 24 scope of cross. . 🚽 25

1 MR. CHALOS: Your Honor, this goes to the 2 question of if she came off with her bottom open, what 3 would have happened? 4 THE COURT: Mr. Chalos, I'm going to overrule the 5 objection, but refrain from leading questions, please, Mr. Chalos. 6 7 MR. CHALOS: All right, Your Honor. BY MR. CHALOS: (Resuming) 8 ç Sir, in what condition was the vessel on your Q 10 journey going down to San Diego? 11 With the bottom open. А 12 Q And I take it she didn't sink? 13 Α No. 14 (Pause) 15 Now, Mr. Leitz, there's been testimony here that Q the captain ordered third mate Cousins to go around and 16 17 wake up the crew, and I believe you testified that that was 18 a prudent order. In your opinion, would you expect the 19 captain to leave the bridge in that situation and make the 20 wakeup calls himself? 21 Absolutely not. Α 22 Do you agree, or disagree, with the delegation of Q that responsibility to one of his mates? 23 24 Α I agree with it. 25 MR. CHALOS: I have no further questions.

124 1 MR. COLE: I have one, Your Honor. 2 RECROSS EXAMINATION BY MR. COLE: 3 Q Mr. Leitz, how much did Exxon Shipping Company 4 pay you for your work for them? 5 MR. CHALOS: Objection, Your Honor. I think it's 6 irrelevant. 7 THE COURT: Objection overruled. 8 THE WITNESS: Paid for what? 9 BY MR. COLE: (Resuming) 10 11 For all of your work, that you did from the time Q 12 you left -- is it Portland? -- on March 24th until this date for your work on resalvaging the ship. 13 Well, this, what I'm doing here, has absolutely Α 14 nothing to do with what I did there, for openers. 15 All I'm asking is how much they paid you. Q 16 MR. CHALOS: Your Honor, again, I don't see the 17 18 relevancy to this action. THE COURT: I've ruled already, Mr. Chalos. 19 THE WITNESS: Well, in the actual salvage 20 operation -- you asked a question --21 BY MR. COLE: (Resuming) 22 All I want is the total. Just give us the total Q 23 figure. 24 Well, you've got to know where this total is Α 25

1 going because you're going to get the implication that it 2 all went in my pocket. You know. I hired subcontractors 3 and paid them. I personally charged \$125.00 an hour for my 4 time, and I got a \$50,000.00 bonus for successfully 5 refloating the ship. And for that part. The whole sum 6 total \_\_\_\_\_ was probably about \$1.8 million. MR. COLE: Thank you. 7 8 FURTHER REDIRECT EXAMINATION 9 BY MR. CHALOS: 10 Q Mr. Leitz, of that \$1.8 million, how much of it 11 was paid to subcontractors and other people you utilized on 12 the job? 13 Α Probably about 80 percent. 14 Q So you made a 20 percent profit on this deal? Α Yeah. 15 Is that reasonable in your business? 16 Q 17 It's about par for the course. Α 18 MR. CHALOS: No further questions. 19 THE COURT: May the witness be excused? 20 MR. COLE: Yes. 21 THE COURT: You're excused sir. THE WITNESS: Thank you. 22 THE COURT: We'll take our next break at this 23 24 time, ladies and gentlemen. Don't discuss the matter among yourselves or with any other person. Don't form or express 25

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1
   any opinions.
2
              THE CLERK: Please rise. This court stands in
3
   recess subject to call.
              (A recess was taken from 11:31 a.m. to 11:50
Δ
   a.m.)
5
              THE CLERK: This court is now in session.
6
              THE COURT: Are you ready to call your next
7
   witness, counsel?
8
C
             MR. CHALOS: Yes, Your Honor.
10
             Your Honor, at this time, the defense calls Don
11
   Hudson.
12
   Whereupon,
                          DONALD R. HUDSON
13
14
   called as a witness by counsel for the Defendant, and
   having been duly sworn by the Clerk, was examined and
15
   testified as follows:
16
17
              THE CLERK: Sir, would you please state your full
   name, and spell your last name?
18
             THE WITNESS: Donald R. Hudson, H-u-d-s-o-n.
19
20
             THE CLERK: And your current mailing address?
              THE WITNESS: 13084 Southwest Amber Place in Lake
21
22
   Oswego, Oregon 97034.
             THE CLERK: What was the town, please?
23
             THE WITNESS: Lake Oswego.
24
             THE CLERK: And your occupation?
25
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		127
1		THE WITNESS: I'm a naval architect.
2		(Pause)
3		DIRECT EXAMINATION
4		BY MR. CHALOS:
5	Q	Mr. Hudson, by whom are you employed?
6	A	I'm self-employed.
7	Q	You have your own company?
8	A	Yes.
9	Q	You say you're a naval architect?
10	A	Yes.
11	Q	How long have you been a naval architect?
12	A	Or, since about 1949.
13	Q	Were you involved in the Exxon Valdez refloating
14	at all?	
15	A	Yes. I was on the ship for six weeks, a few days
16	prior to	refloat, and about six weeks afterwards, until the
17		
18	Q	What was your role in the refloating?
19	A	Do the hull stress calculations and the stability
20	and trend	calculations for getting her off the reef, and
21	then subs	equently to evaluate the damage as the divers
22	would exa	mine the vessel.
23	Q	All right. Who hired you for that role?
24	A	Mick Leitz.
25	Q	You were working for him?

128 I was. 1 A 2 Q You were a subcontractor for Mr. Leitz? 3 Α Yes. 4 Q Now, with respect to this case, what were you 5 asked to do? To come and attend the proceedings where Mr. Α 6 Vorhus and a Mr. Milwee testified, and then to examine 7 their testimony and make suggestions to the defense. 8 ç Q Were you asked to do anything else in this matter? 10 11 А Yes. Maybe to present another hypothesis by those presented by the prosecution witnesses. 12 Q And what did you do in that regard? 13 Oh, I did calculations regarding the attitude of 14 Α the vessel subsequent to -- hypothetically coming off the 15 reef. 16 All right. We're going to get into that in a 17 0 18 second. Can you tell us a little bit about your educational background? 19 Yes. I graduated from the University of Michigan Α 20 in naval architecture and marine engineering. 21 Q Do you have a degree? 22 A Yes. 23 Q What year did you graduate? 24 Α 1949. • • 25
129 1 C What have you done since 1949? 2 А Oh, I ---3 Briefly, of course. Q 4 Α I worked for shipyards for about ten years --5 Q As a naval architect. 6 Yes, and a project manager. And then I went into Α 7 business for myself. 8 Q When -- when was that? 9 About '62 or '3. А 10 Q That's when you started your business? 11 А Yes. 12 And what does your business do? What is the Q business of your business? 13 14 Marine design and engineering, and we work А 15 engineering problems on all manner of floating equipment. What do you do specifically? Do you design 16 Q 17 vessels? 18 А Yes. 19 Do you do calculations when, for instance, Q 20 vessels are damaged? 21 I've done a lot of that. Α 22 Similar to those you did on the Exxon Valdez? Q 23 Α Yes. I've done that. 24 Q Have you ever been involved with grounded vessels 25 before?

	130
1	A Yes.
2	Q How many?
3	A Oh, three or four, maybe.
4	Q Have you done stability and strength calculations
5	in those instances?
6	A Yes.
7	Q Now, what do you do with respect to to
8	coordinating with salvage masters, such as Mr. Leitz, when
9	you're called on to a job like the Exxon Valdez?
10	A I give him technical backup and help him work
H	some of the problems that and make some of the hard
12	decisions that have to be made.
13	Q Do you coordinate with the salvage master?
14	A Work with him real really close.
15	Q Okay. What type of things are you working
16	closely with him?
17	A Oh, I don't know. Just mostly engineering
18	aspects of the job.
19	Q What do you mean by that?
20	A Oh, stability, strength. All sorts of physical
21	physics problems.
22	Q Are these calculations done before the vessel is
23	taken off the ground?
24	A Yes. We were prepared the salvage plan, and
25	Mick prepared the salvage plan, and I added filled in

1 a lot of the details.

2	Q And did you do you also make calculations,
3	speaking generally now, after the vessel is off the ground
4	to see what stability and strength you might have?
5	A Yes. We maintained a pretty close watch on the
6	vessel as far as her hull bending and hull stresses, as
7	well as her stability, but mostly trim and heel problems.
8	Q You're speaking now specifically about the Exxon
9	Valdez?
10	A Yes.
11	Q Did you do calculations, strength and stability
12	calculations, for this vessel prior to her coming off the
13	reef?
14	A Yes.
15	Q And did you do strength and stability
16	calculations subsequent to the vessel coming off the reef?
17	A Yes.
18	(Defendants' Exhibit CM,
19	CN and CO were marked for
20	identification.)
21	Q Now, before we get into the specifics, you've
22	been called here as an expert by Captain Hazelwood's
23	defense, have you not?
24	A Yes.
25	Q What is the fee arrangement that you have with
ļ	

132 the defense? 1 2 We haven't even discussed it. А What do you normally charge per hour for your 3 Q time? 4 \$65.00 an hour for time out of the office. 5 Α \$50.00 for travelling. 6 Are you going to bill the defense your normal 7 Q fee, your normal hourly rate? 8 C Α Yes. Could you estimate how many hours you've spent on 10 Q this case so far? 11 I haven't bookkeeped -- I keep a log of what I do 12 А and when I do it, but I haven't accumulated anything. 12 Do you have an idea of how much we're talking 14 Q about, generally, roughly? 15 А No. I don't. I've been up here oh, maybe ten or 16 eleven days prior to -- to this time, and I was -- I've 17 been here three or four this time. That's -- then I was at 18 home a week and did a lot of the work there. 19 Q So would you say you've put in about twenty days? 20 Α I guess. 21 Q And what do you normally charge per day? 22 Oh, it's usually by the hour. It depends on what Α 23 24 I do during the day, but I would guess that \$650 a day plus expenses. 25

Q Okay.

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4

5

Do you estimate that your fees will exceed ten to 3 fifteen thousand dollars in this case?

A No, I don't, really.

Q Okay.

Now, let's talk about the Exxon Valdez. What did
 you specifically do in terms of strength and stability
 calculations?

9 Well, we -- prior to the -- lifting her off the А 10 rock, we had some preliminary surveys and discussions about 11 how much damage there was under the vessel, and we tried to 12 make as educated estimate of what loss there had been to 13 the hull structure, and then in computing the lift-off 14 condition, both the stability and the floatation and the 15 heel, and the anticipated bending moments, to see whether 16 or not the hull stresses approached anything critical.

Q The bending moments and stresses that you're
 talking about deal with strength, do they not?

A Yes.

Q

Q Based on the calculations that you made with respect to strength, do you have an opinion as to whether or not this vessel was in danger of breaking up by the use of the rudder and engine after the grounding?

A No, that was not --

25

24

19

Well, do you have an opinion, first of all? Yes

1 or no?

	i	
2	А	No I don't think it was. Rudder and engine
3	forces are	e nothing compared to sea wave forces, and I
4	didn't rea	ally consider that part of it critical.
5	Q	So your opinion is that the strength was
6	sufficien	t after the grounding, is that correct?
7		MR. COLE: Objection.
8		THE COURT: Sustained.
9		BY MR. CHALOS: (Resuming)
10	Q	Now when you say you didn't consider that
וו	critical,	what do you mean, specifically?
12	A	Well, the forces that are applied to the vessel
13	are, in a	seaway and at sea, very large, and the thrust
14	forces of	which the engine was capable aren't that great,
15	and/or ru	dder. They're enough to steer the vessel and move
16	it in the	water, but if it they really aren't enough to
17	to frac	cture all that steel.
18	Q	Do you have an opinion as to strike that.
19		Did you view the damage on this vessel in San
20	Diego?	
21	A	I did not.
22	Q	You did not?
23	A	No.
24	Q	I made a pretty detailed drawing of the damage
25	reports by	y the divers, but that's as far as I took it.

135 1 Q Where did you make this drawing? 2 Α On the ship. 3 Q Up at Bligh Reef? 4 Naked Island. Α 5 0 Let me pull the chart and show you. 6 (Pause) 7 I can't seem to locate it. Oh, here it is. 8 Let me show you what's been marked as Exhibit 9 103, and ask you, is this the drawing you're referring to? 10 Yes. It's a reproduction of it, reduced, but --Α 11 the drawing I did was on butcher paper and on a big plywood 12 table that was about eight feet long. Okay. You didn't put in the numbers that are on 13 Q this exhibit? 14 15 Α No. Do you see the various numbers? 16 Q No. Just the lighter \_\_\_\_\_ which details 17 Α 18 all the fractures that were found, and the plate that was 19 missing, and that part of it. 20 Now, based on the information you had and the Q 21 drawing you made, do you have an opinion as to how this 22 damage was caused? 23 Well, the bulk of it was done on the initial Α 24 stranding, and then some of the loss of the bilge plating 25 was during subsequent tides that occurred with the vessel

1 hung up on the beach.

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2	Q Do you have any opinion as to whether any
3	additional damage was done by the use of the vessel's
4	rudder, or engine after the grounding?
5	A I don't think anything that was done in that
6	stage was a bit it was all done by then.
7	Q Now, you said that you listened to Mr. Milwee's
8	testimony?
9	A Yes.
10	Q Do you agree or disagree with his opinion that,
11	no matter what Captain Hazelwood did after the grounding
12	with the ship's engine and rudder that the vessel was not
13	going to come off the reef?
14	A Not much chance.
15	Q So you agree with his opinion?
16	A Yes.
17	Q Do you remember Mr. Milwee expressing an opinion
18	that if Captain Hazelwood wanted to keep the vessel on the
19	reef, as opposed to trying to get it off, he would have
20	used constant right rudder? Do you remember that
21	testimony?
22	A Yes.
23	Q Do you agree or disagree with that opinion?
24	A Oh, I wouldn't do that at all. The results would
25	be ridiculous.

Well, would you explain what you mean by that? 1 Q 2 Α Well, the vessel was impaled in this area right 3 in here, and right rudder, constant right rudder with power 4 would just pivot the vessel right around here. She'd just 5 swing, like a pinwheel, and no telling what she could run 6 into. 7 Q Well, what would you do in order to avoid that 8 pinwheel effect? 9 Α Oh, try to maintain a heading close to the one 10 she had coming on. 11 Well, what do you mean by that? Try to maintain Q 12 a heading? Well, once she finally came to rest, she was 13 Α 14 headed in a certain compass bearing, or course, and you'd try to keep her there as you ran the engines slowly. 15 (TAPE CHANGED TO C-3679) 16 17 And in your opinion, what would have to be done Q 18 with the rudder in order to maintain this setting? Well, the stern of a vessel tends to walk, the 19 Α 20 single screw vessel, and you just have to use some rudder 21 to maintain the heading. Besides, the vessel was impaled 22 on one side, and in the forward part of the vessel, would 23 -- would, with power on, be comparable to \_\_\_\_\_ the 24 swing. And you'd have to steer it, just as you would 25 underway.

138 Q Sir, could you explain to the jury what you mean 1 2 by the vessel having to walk? 3 Α Well, the vessel has about -- I don't know, a 30, 28-foot wheel, I would guess. 4 Q You mean the size of the propeller? 5 Yeah. And as it turns, it wants to act like a 6 A wheel. The dents -- the pressure is at the lower part of 7 the wheel. The pressure at the top of the wheel is less 8 and they just tend to walk. She would probably swing her 9 stern to starboard. 10 11 And how does one counter this effect, this Q 12 walking effect, if you wanted to keep the vessel on a heading? 12 A Rudder. 14 Q Now, you listened to the testimony of Mr. Vorhus, 15 did you not? 16 Α Yes. 17 18 Q And you heard him give his hypothetical situations -- he had four or five hypothetical situations 19 where the vessel came off the reef and then sank within a 20 period of time? 21 Α 22 Yes. First of all, do you have an opinion as to the Q 23 likelihood of any of his scenarios ever coming to be? 24 Well, \_\_\_\_\_ of his scenarios were off the Α 25

1 reef in deep water. I don't think that was likely. 2 Q Would you agree or disagree with his opinion 3 that, had the vessel come off, by whatever method -- one 4 witness described it as levitation -- do you have an 5 opinion as to whether or not the vessel would have sank? 6 Α The hypothesis that Mr. Vorhus espoused was with 7 the assumption that the crew would jus stand idly by and watch their vessel sink. I don't think that --8 9 Q Do you have an opinion as to the likelihood of 10 that? 11 I think that's a -- rather ridiculous to think Α 12 that they would not respond to the way the vessel's -- the aspect of the vessel and if she came off the reef. 12 14 Q On what basis do you say that? 15 Α Well, they're a capable group of people and 16 they're on the ship, and you would think they would try to 17 do something to save the vessel first, before they abandon 18 ship, anyway. Also, the vessel just adjacent, just the 19 port of the vessel was some fairly shoal water. It 20 wouldn't have sunk anyway. It would have gone down by the 21 head, perhaps, and taken a list to starboard. 22 Q Did you make any calculations to support your conclusion that this vessel would not have sunk if she came 23 24 off the reef? 25 A Yes, I explored situations where the crew did

1 | take action.

7

Q All right. We'll get into that in a second. Let me just show you what we marked as Defendant's Exhibits CO, CM and CN for identification and ask you, do those represent the calculations you've made to support your conclusions?

A Yes, these are the ones.

Q Okay. What did you use as your factors and your
 9 rate of constants in that -- in those calculations?
 10 A I --

Q In other words, what information -- on what is that information based that you --

A Well, I have good data in the file from the time we lifted it off the rock, and I used a load condition for the vessel at the time when all of the oil had run out and all of the ballast spaces had been filled, and --

17 Q Did you use the -- any of the information from
18 the ship's computer?

A Yes. I used the ship's computer all the time the vessel was -- or not the ship's computer, but the ship's loading program in my own computer all the time that the vessel was going down to San Diego. so I had access to the ship's loading program.

Q Did you use the ship's loading program in your calculations that you made for this --

A Yes, I did.

Q Okay.

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Now, you said that the condition that you used in your calculations was when all the oil had gone out and the water had come in at that point?

A Yes, I established that as the initial load
7 condition for this levitated vessel.

Q At what time would your situation occur, assuming
 the ship ran aground at 12:10?

A (Inaudible).

Q Yes. At what time did you assume that this
 vessel would have come off the reef?

A Oh, she's stranded a little after midnight, and for all of that to take place, it would have taken a couple of hours or better, two-and-a-half hours.

Q And in your condition of what time do you have
 the vessel coming off the reef?

A Oh, 2:00 to 2:30 in the morning.

Q Now, do you agree or disagree with Mr. Vorhus's testimony that all the oil that would have come out of this vessel would have come out in the first -- I think he said 18 minutes?

MR. COLE: Your Honor. I object to that. That's not what Professor Vorhus said. He said that it would come out -- the first batch, the first half, would come out in

142 the first half-an-hour, and that the rest of it would come 1 out as the tide went down. 2 MR. CHALOS: Well. take --3 THE COURT: Please rephrase your question. 4 MR. CHALOS: I will. 5 6 BY MR. CHALOS: (Resuming) 7 Q Taking what --THE COURT: Ask him what his opinion is 8 9 concerning it, if you want, rather than whether he 10 disagrees or agrees with that, if you don't know exactly Di what . 12 MR. CHALOS: All right. BY MR. CHALOS: (Resuming) 13 Do you have an opinion as to how long it would 14 Q have taken for the -- Mr. Cole calls it the initial batch 15 of oil to come out of the vessel? 16 17 А Yes. I made my own estimate, and it was around 30 to 40 minutes, and --18 Q What did you use as a basis for calculating --19 (Inaudible). Α 20 Q -- the \_\_\_\_? 21 I was giving the manufacturer's full data for the 22 A -- all the pressure vacuum relief valves on all of the 23 tanks, plus the fact that some of the -- during this 24 discharge of oil would -- the \_\_\_\_\_ vacuum breaker, 25

1 the big one, had been discharged, and it was inoperative. 2 Q All right. Now, you -- you mentioned that --3 strike that. What did your calculations show? 4 Well, it -- the oil would go out very fast, but Α 5 the ballast tanks aren't -- the segregated ballast tanks on 6 the starboard side that were holed, were not vented with PV 7 valves. They were just a four-inch and a six-inch pin, and 8 I had data for those, and that filling would take much 9 longer than the loss of all the oil. 10 Well, what was your ultimate conclusion? Q 11 A Oh, probably take over two hours, probably, for 12 the vessel to stabilize at the tide level that she was 13 resting with. 14 Q You're talking now about the reef? 15 Α Yes. 16 Q Okay. 17 Now, you made certain calculations if the vessel 18 came off the reef? 19 Α Yes. 20 What did the dose calculations show? Q 21 Well, the assumptions I made were that the crew A -- as soon as she began to take the trim to the box and the 22 23 starboard list, they would take corrective measures and the initial one of those measures would be to get all those 24 25 slider valves closed.

144 Okay. You're talking now -- the ship has come 1 Q off the reef? 2 Yes. Α 3 And you said what would happen would be the trim Q 4 and list? 5 Well, she'd begin to go down by the bow, or she Α 6 would be down by the bow, because of the way she was loaded 7 with the loss of oil. She would be down by the bow, and 8 have a starboard list. 9 Q Okay. 10 Α And --11 You mentioned the crew closing the slider Q 12 How many slider valves were we talking about? valves. 13 Well, there's -- some are more critical than A 14 others in this condition. I would close all the forward 15 ones first and --16 How many slider valves --Q 17 There are eight altogether, the cargo slider Α 18 valves. 19 Q How many are up forward? 20 I don't even know -- maybe four? Α 21 Q All right. 22 How long would it take to close the slider 23 valves, if one wanted to do it? Just that? 24 I would say four men could do it in fifteen or Α 25

1 twenty minutes.

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Q For all eight?

A Yeah.

Q Now, was there -- did your calculations assume any other actions by the crew, besides closing the slider valves?

A Well, if she took a starboard list, they would
 8 want to counterballast for that, and aft, too, if possible,
 9 because she was going down by the head.

Q Let me get a model and maybe you can demonstrate to the jury what you're talking about.

(Pause)

I'm showing you what's been marked as Exhibit 14 154. Now, would you hold up the model? Would you step 15 forward -- with your permission, Your Honor -- and show the 16 jury what you're talking about?

THE COURT: Put that little black box in your pocket and I think you can carry the cord with you.

19 (Pause)

MR. CHALOS: Here, let me help you.

21 (Pause)

THE WITNESS: The vessel would be taking an aspect, down by the bow, and a starboard list. These four tanks are segregated ballast tanks, and they would be floating with water, or oil, surrounding the vessel, and

1 all these other tanks -- the forepeak, and everything along here, and back here were all holed. They would have lost 2 3 the oil rather quickly. But these tanks here are on a 4 different venting system where they're filled more slowly. And the crew, to correct this going down, would 5 close all the slider valves, which would inhibit the 6 7 sinking, slow it up considerably. And then counterballasting -- by that, I mean they're -- the --8

9 these tanks back here, the foreport and starboard, the
10 ballast tanks, this one was pretty much intact. This
11 (inaudible) damage developing on the starboard side. This
12 would be filling.

And there was water coming in here. The first 13 14 thing to do is to shift this sea water to the port side, correct some of the list, and also start down this way, and 15 then in the control room, the cargo control room, there's a 16 button to use to execute the flooding tank -- the ballast 17 tank, and they would flood this tank and that would be 18 sufficient to start the vessel on the way up, rather than 19 on the way down. 20

Q What would be the effect of ballasting, let's say, number four port, in terms of the vessel's stability? A Well, it would tend to correct the starboard list, and the forward trim. It would start bringing the bow up and the vessel to a righted position.

1 Q And what would be the net result of that in terms 2 of the oil coming out of the ship? 3 It would still come out until -- well, it really Α 4 wouldn't. In deeper water, she would -- all of the -- she 5 was on a higher draft when she was on a rock than she was 6 out here, so the oil would float up in her tanks. 7 Q Having ballasted down number four port, what 8 would that do with respect to the danger of capsizing the 9 vessel? Would --10 Α It -- like I say, it would start the vessel back 11 on uneven trim and list. 12 Q And what would it do with respect to her 13 remaining afloat? 14 Α It would correct it. 15 Q And keep it afloat? 16 Keep it afloat. Α 17 Q Okay. How long would it have taken the crew to 18 ballast down number four port tank? 19 Well, the first thing you would want them to do Α 20 is check the flooding from one side to the other with the 21 pumping system. 22 How is that done? Q 23 With a button in the cargo control room. A 24 So, are you saying, then, you're moving the water Q 25 from the number four starboard over to the number four

port? 1 2 А Yes. And that's done by pressing a button? 3 Q It's my understanding, that's right. Α 4 If the crew wanted to take out all the water in Q 5 number four starboard --6 Yes. Α 7 -- under the starboard side, what would they have Q 8 to do? 9 Α Oh, they would continue pumping that. 10 Would that --Q 11 Α At the same time, flooding the port side. 12 Was that option feasible to the crew? Q 13 Yes. Α 11 In your opinion? Q 15 Α Yes. 16 How long would it have taken them to put a 17 Q sufficient amount of water in number four port to correct 18 the list, in your opinion? 19 Α Well, the first initial shift in the continued 20 flooding would just tend to bring it back. It would be 21 around an hour and fifteen or twenty minutes, maybe. 22 And the vessel -- what would the vessel be doing Q 23 in the meantime? 24 Correcting its aspect. Α 25

1 Q Now, based on your calculations, had those 2 maneuvers been made, what would have happened to the 3 vessel? 4 Α She could have been brought to an uneven trim. 5 And what would that result in? Q 6 Α Just floating there. 7 Q Okay. You may resume your seat again. 8 (Pause) 9 Now, Mr. Hudson, the condition that you spoke 10 about just now, would it have been necessary for the crew 11 to put any water in the after peak, or the engine room 12 tanks in order to achieve the stable condition? 13 Α It wouldn't have been necessary, but it would 14 have been advisable, and that would take a little longer, 15 but since she's on a correcting load, why they would probably have time to do that. It would -- another thing 16 17 you're counting on in this procedure is that -- that 18 pressure vacuum relief valves in each of the tanks close at 19 any pressure less than two-and-a-half pounds. Well, what was the feasibility -- what would have 20 Q 21 been the feasibility of that? 22 Let me start again. What would have been the 23 feasibility of that under the situation as you calculate 24 it? 25 Α Yeah. When she gets in a righted position, and

out of this heavy list, the pressure would be reduced and 1 2 eventually dropped back to something that the pressure 3 vacuum relief valves could handle. Q In other words, the pressure would have fallen 4 below a certain level? 5 Α Yes. 6 7 Q And what would that level have been? Α Two-and-a-half pounds per square inch. 8 9 Q And what would have happened to the pressure 10 relief valves? 11 Α They'd have closed, and there wouldn't have been any more flooding. 12 Q Does that help the buoyancy of the vessel, the 13 (inaudible)? 14 Α Well, she quit sinking. 15 Ĵ At that point? 16 17 A Yes. Now, in your opinion, what would the feasibility 18 Q have been of the crew taking the action you suggested under 19 the circumstances? 20 It's completely feasible -- probable, really. Α 21 MR. CHALOS: No further questions, Your Honor. 22 CROSS EXAMINATION 23 BY MR. COLE: 24 Mr. Hudson, would you agree with me that in a Q 25

151 1 situation where a ship has been grounded, or has suffered 2 some kind of damage, the strength and stability is kind of 3 a dynamic concept -- in other words, it changes over time. 4 Would that be a fair statement? 5 Α As long as it's in a floating condition, and as 6 long as it's sustaining forces that can extend the damage. 7 I would agree. 8 Q You were on the Exxon Valdez at some point, 9 correct? 10 А Yes. 11 Did you do the load -- the computer program that Q 12 was onboand the Exxon Valdez to -- or did you use another 13 computer? 14 А I --MR. CHALOS: Excuse me. Your Honor, that was two 15 16 diffe ent questions. He asked if he used the program, and 17 then he asked if he used another computer. Which does he 18 mean? 19 MR. COLE: Sorry. I'll rephrase. 20 BY MR. COLE: (Resuming) 21 Did you use the load -- the computer on board the Q 22 Exxon Valdez? 23 I had ship personnel helping me and I would Α 24 submit the loading conditions to them and they used their 25 own computer.

1 Q It's correct, isn't it, that there was some 2 problems with that program, some people suspected that 3 there was some problems with it, and computers were used --4 the computers from Houston were used in a lot of the --5 Α Houston was following us on everything we did 6 with their own computer. 7 And the program -- the scenario that you ran, you Q 8 ran with the help of a very similar loadmaster computer ç program. Is that correct? 10 А The same one. 11 The same one. And that was for the scenario that Q 12 you did? 13 Α Yes. 14 Q That computer program doesn't take into computer 15 program doesn't take into consideration structural damage 16 to the vessel, does it? 17 No, but it -- the structural damages evaluated Α 18 can be applied to the answers that you get from the 19 program. 20 Q And if -- if I understand it right -- correct me 21 if I'm wrong. The way I understand it is that tells you 22 what the strength and stress of the vessel is at any one 23 particular point in time, depending on what the ullages are 24 that you place into the computer? 25 Α Yes.

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1 And so a computer program that is dynamic and C 2 changes over time might be a little bit better than that 3 computer program. Do you agree with that? 4 Α Faster, but not better. 5 You said you listened to the testimony of Mr. Q 6 Milwee about the slight right degree rudder turn? 7 Yes. Α 8 When he was asked that question, was he asked Q 9 under the circumstances where a ship is impaled, or was he 10 asked that under the circumstances where you believe you 11 are sliding off of, say, for instance, mud, or a reef. Do 12 you remember? 13 I don't recall. Α 14 And -- I'm sorry. Can I just put that here? Q 15 (Pause) It's your testimony, then, that when Captain 16 17 Hazelwood was making these numerous turns, and -- after 18 12:30 it was one, two, three, four, five, six, seven, 19 eight, nine, ten, eleven, twelve, thirteen, fourteen, 20 fifteen, sixteen, that he was just trying to maintain his position? 21 22 MR. CHALOS: Your Honor, I object to the characterization that Captain Hazelwood was making these 23 24 turns. All that's showing is swing. It doesn't necessarily have to be because of applied rudder. · 🚽 5

1 THE COURT: Objection overruled. You may answer 2 the question. 3 BY MR. COLE: (Resuming) 4 Q Is it your -- your opinion that he was just 5 keeping it going straight ahead? 6 Α That's my opinion. 7 And in your scenarios, you assumed that it would Q 8 take 15 to 20 minutes to close all eight slider valves? 9 That was an off-the-cuff answer, yes. A 10 Q How would that have been done? 11 Oh, put a couple of men on each side of the Α 12 vessel and start forward and work aft. 13 How would you close them? Q 14 Α Manually. 15 Q Close them -- would you explain that to the jury? 16 Well, they're big gates and then a screw, and 4 17 it's got a wheel on a crank. I --18 Q What about all the PV valves? Would you be able 19 to close those in 15 to 20 minutes? 20 Α Nope. 21 In your scenarios, at two-and-a-half hours -- I Q 22 assume -- correct me if I'm wrong, now -- you assume that 23 the vessel came off the reef at about 2:00, 2:30, in your 24 scenarios? 25 I think it would take probably that long to get Α

155 1 the vessel in the condition in which I work with. 2 What was its heel and trim immediately after Q 3 coming off the rock under your scenario? 4 Α Oh, about 12 degrees to starboard and -- oh, mind 5 if I look at --6 Sure. No, I don't. Q 7 (Pause) 8 Twelve degrees starboard and like four degrees to Α 9 the head -- or four feet to the head. 10 Okay. If you would, I would just -- you can Q 11 demonstrate to the jury what the vessel would have looked 12 like at that point? And let's assume that this was -- you 13 know. Well, four feet by the head and the vessel about 14 Α a thousand feet long is almost negligible, but 18 degrees 15 is very pronounced. 16 17 Q Would it have been 18 or 12? 18 Α Or 12. 19 Q It's very pronounced? And the crew members would have been out on the 20 21 deck, and been expected to close the slider valves in a pronounced keel like this? 22 23 Α Yes. You said it would have taken about an hour to an 24 Q 25 hour and fifteen minutes to ballast number four?

156 1 Completely. Α 2 Q Yes. 3 MR. COLE: Your Honor, I have nothing further. 4 MR. CHALOS: Just a few guestions, Your Honor. 5 REDIRECT EXAMINATION 6 BY MR. CHALOS: 7 Would a 12 degree list on this vessel prevent Q 8 someone from going out on deck and doing work, in your 9 opinion? 10 А Not at all. 11 Q And you said that it would take about an hour to 12 an hour and fifteen minutes, to completely fill number four 13 port? 14 Α Yes. In the meantime, you could be also 15 ballasting the port -- engine room salt water ballet tank, 16 and the aft peak, which is also a step in the right 17 direction, although slower. 18 Q What would be happening as all this was going on 19 to the trim of the vessel? 20 The vessel would be coming back. А 21 Now, under your scenarios, would you have had to Q 22 close the PV valves in order to keep the vessel afloat? 23 MR. COLE: Objection. 24 MR. CHALOS: I'll rephrase it. 25 BY MR. CHALOS: (Resuming)

157 1 Q Mr. Cole asked you about the PV valves being 2 open? 3 Yes. Α 4 Do you recall that? In your scenario, did you Q 5 consider the PV valves? 6 Yes. The fact that they would offer Α 7 two-and-a-half PSI resistance to further flooding. 8 Q And how did that affect your ultimate opinion 9 that the vessel would stay afloat, the fact that they might 10 have been opened? 11 Well, they would slow the righting process, Α 12 certainly, but there is additional -- there is a way to blank them on the site. I don't know whether they would 13 14 have done that or not, but that's -- you know, if it was --15 if they were suffering a reversal in this process, they 16 could take other measures. 17 Well, in your opinion, would the PV valves have Q to be blacked off in order to achieve the result that you 18 got? 19 20 Α No. Now, lastly, did you consider the vessel's 21 Q 22 computer program to be accurate for the purpose of determining stability and strength? 23 Yes, if properly applied. 24 Α 25 I assumed you properly applied it? Q

1 А Yes. 2 MR. CHALOS: I have no further questions. 3 MR. COLE: Just two quick questions. 4 RECROSS EXAMINATION 5 BY MR. COLE: 6 When you did your scenario, your hypothetical at Q 7 approximately 2:00 or 2:30, how often -- how many -- at 8 what periods of time did you assess the stability and 9 strength after it came off? 10 Well, I -- it -- the thing that the interlock Α 11 computer program offers is doing the iterations that you 12 have to do rapidly, and it was tedious for me to do them 13 with this program. But I took it in several steps -- and I 14 don't know whether that answers the question, or not. 15 Q Did you, like every 15 minutes, or every 20 16 minutes, or every hour, or every two hours then --17 Α No, I just did it in four stages. 18 How much did you get paid for your work for the Q 19 Exxon Valdez salvage? 20 MR. CHALOS: Your Honor, for the record I would 21 object to the relevancy. 22 THE COURT: Overruled. 23 THE WITNESS: I don't know. About thirty to 24 forty thousand dollars for six weeks. 25 BY MR. COLE: (Resuming)

159 1 Q And that was as a subcontractor for Exxon 2 Shipping Company? 3 MR. CHALOS: Well, I object, Your Honor. 4 THE WITNESS: No. I was a subcontractor to Mick 5 -- Mick Leitz. 6 MR. COLE: Nothing further, Your Honor. 7 MR. CHALOS: No questions, Your Honor. 8 MR. MADSON: The defense rests, Your Honor. 9 THE COURT: Would counsel approach the bench, 10 please? 11 You may step down, please. You're excused. 12 (The following was had at the bench:) 13 THE COURT: (Inaudible) need a break \_\_\_\_\_' 14 at this time? 15 MR. : Yep. 16 MR. : Judge (inaudible). I would like 17 to -- (inaudible) that just came out that (inaudible) the Judge to personally \_\_\_\_\_ outside the presence of the 18 19 jury and (inaudible). THE COURT: (Inaudible). 20 Mr. Cole? Just one more minute. 21 (Inaudible remarks). 22 (The following was had in open court:) 23 THE COURT: Ladies and gentlemen, we're going to 24 excuse you for just a couple of minutes to take up a matter - •25

1 very briefly, but we'll call you back in in just a few 2 minutes. Don't discuss this case among yourselves or with 3 any other person. Don't form or express any opinions. 4 That's just as important now as it was in the beginning of 5 the case. I'll call you back (inaudible). 6 (Whereupon, the jury leaves the courtroom.) 7 THE COURT: All right. At the side bench 8 conference immediately after Mr. Madson stated the defense 9 rests, Mr. Cole said there was a recent Court of Appeals 10 decision suggesting that the Court inquire of the Defendant 11 of his desire not to take the stand. 12 Do you happen to have that citation handy, Mr. 13 Cole? 14 MR. COLE: Your Honor, I apologize. I do not. 15 It was brought up in a staff meeting by Mr. 16 Linton \_\_\_\_\_. I will be happy to provide that, the 17 Court with that. 18 THE COURT: I wish you would get that to me at 19 some time. I'm going to inquire of Captain Hazelwood, but 20 I'd like it when you do make that representation, be 21 prepared to give me a cite. 22 Any objection to the Court inquiring of Captain 23 Hazelwood? 24 MR. MADSON: No, Your Honor. 25 THE COURT: All right.

1 Captain Hazelwood, you have the right to testify 2 on your own behalf here. If you do testify, you would be 3 subjected to cross-examination, and if you do testify, the 4 Court would instruct the jury that they're to consider your 5 testimony and evaluate your testimony the same way they 6 would any other witness's testimony. Do you understand 7 that right, sir? 8 THE DEFENDANT: Yes. 9 THE COURT: All right. If you decline to take 10 the stand, that is your Constitutional right, and this 11 Court will instruct the jury they're not to consider that 12 in any way adversely to you. Do you understand that? 13 THE DEFENDANT: Yes, sir. 14 THE COURT: Is it your desire at this time not to 15 testify? THE DEFENDANT: That's correct. 16 17 THE COURT: And have you consulted with your 18 attorneys concerning this decision? 19 THE DEFENDANT: I have. 20 THE COURT: And is that decision made with your advice and consent, Mr. Madson? 21 MR. MADSON: It is, Your Honor. 22 THE COURT: Okay. 23 24 Let's call the jury back in. Let's see if your witness is available first. 25

1 MR. COLE: He is, Your Honor. (Inaudible). 2 THE COURT: All right. Let's bring the jury back 3 in, then. 4 (Whereupon, the jury enters the courtroom.) 5 THE COURT: Ladies and gentlemen, the defense has 6 rested. The State may call its rebuttal witness at this 7 time. 8 Call the name of your witness, please. 9 MR. COLE: Captain Mackintire. 10 Whereupon, 11 ROBERT W. MACKINTIRE 12 called as a witness by counsel for the State of Alaska, and 13 having been duly sworn by the Clerk, was examined and 14 testified as follows: 15 THE CLERK: Sir, would you please state your full 16 name, and spell your last name? 17 THE WITNESS: Robert W. Mackintire, spelled 18 M-a-c-k-i-n-t-i-r-e, all one word. 19 THE CLERK: And your current mailing address? 20 THE WITNESS: It would be Hersey Side, 21 H-e-r-s-e-y S-i-d-e, Pembroke, Maine 04666. 22 THE CLERK: And your current occupation? 23 THE WITNESS: Ship's captain with Texaco. 24 MR. COLE: May I proceed, Your Honor? 25 THE COURT: Sure.

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1		DIRECT EXAMINATION
2		BY MR. COLE:
3	Q	Captain Mackintire, you work for Texaco?
4	A	That's correct.
5	Q	What ship are you the captain of right now, sir?
6	A	The Brooklyn, T.T. Brooklyn.
7	Q	How long have you been a tanker captain?
8	A	About 12 years.
ç	Q	Would you explain how you became involved in the
10	maritime -	industry?
11	А	I went to the Massachusetts Maritime Academy,
12	graduated	in 1954, and worked for Atlantic Refining Company
13	for about	a year-and-a-half, and then went
14	Q	What were you doing for them?
15	A	I
16	Q	What were you doing for them?
17	A	I was AB to start with and relieving third mate.
18	Q	And after finishing how long did you work
19	there?	
20	A	About a year-and-a-half.
21	Q	Where did you go where did you what did you
22	do after t	that?
23	A	Went in the Navy for about three-and-a-half
24	years.	
25	Q	Would you briefly describe to the jury what you

164 1 did while you were in the Navy? 2 Α I was an officer in the Navy, an ensign, and I'm 3 a Lieutenant JG, and I was First Lieutenant on the DE --4 that is the officer in charge of the deck department. And 5 then eventually promoted to gunnery officer and operations 6 officer while I was on there. That was for about two 7 years. 8 Q What's a DE? 9 Α Destroyer Escort. 10 And then what did you do after that? Q 11 Α And then I was transferred to a passenger vessel, 12 MST all-Navy crew operation -- MSTS is the Military Sea 13 Transportation Service Vessel. And I was a navigator and 14 operations officer on that vessel. 15 Q Do you want some more water? 16 No, that's all right. Α 17 After your -- your service in the Navy, what did Q 18 you do? 19 I left the Navy and I returned to the Merchant Α 20 I went with the American Trading and Production Marine. 21 Company and was second or third mate with them for about 22 three years. 23 And where did you go to work after that? Q 24 And then I left them and I went with Texaco, a Α 25 job opening occurred at Texaco. Went with them, started
165 ł sailing as third mate and then second mate, and after about 2 two years, I started sailing chief mate with them, which 3 lasted for about twelve years, and then about twelve years 4 ago I was promoted to captain, and I've been sailing 5 captain ever since. 6 Q How long have you worked for Texaco? 7 Α It will be 27 years now. 8 What -- would you describe for the jury where Q 9 you've been as a tanker captain? 10 Worked on several of their vessels. The last one Α 11 I was on was the Texaco Rhode Island, which was a tanker 12 operating primarily on the West Coast, and it's about 600 foot long tanker, and then I was -- about a year ago, I was 13 transferred to the Brooklyn and --14 15 Q Where -- I'm sorry. Go ahead. 16 Α -- which is a much larger ship. It's about 1094 17 feet long, 145 feet wide. 18 Well, when you -- would you describe for the Q jury, as a captain for Texaco, where you've been required 19 20 to -- to go. What places? 21 Well, the Brooklyn has been operating -- when I A 22 first joined it, it was operating between Long Beach, 23 California and Valdez, Alaska. 24 Q Prior to joining the Brooklyn, where did you • 🛫 5 travel?

1 Α On the Rhode Island, we were operating primarily 2 on the West Coast between Long Beach, San Francisco, 3 Seattle, that area, and occasionally to Anchorage, Alaska. 4 Prior to that, the ship was operating for Military Sea Lift 5 Command, and we were operating around the world in 6 different areas, to the Ascension Island and the Far East 7 and South America areas. 8 Q You talked a little bit about the Brooklyn. How ç much oil can the Brooklyn carry? 10 Well, we carry, fully loaded, about 1.6 million Α 11 barrels. 12 Q And in dead weight tons, how --13 We're 225,000 dead weight tons. Α 14 Q Would you tell the jury when you were assigned to 15 the Brooklyn? 16 А January of 1989. 17 And after being assigned to that, what routes did Q 18 you take that vessel on? 19 We were -- as I was saying, we were operating Α 20 between Long Beach, California and Valdez, Alaska until 21 April of last year, and then we were transferred and 22 operating in the Far East area. 23 Where had you been working in the Far East? Q 24 We -- last summer, we took a load of grain from Α 25 Portland, Oregon and took it to Bangladesh, and then after

1 that, we started operating out of the Persian Gulf. 2 carrying the crude oil between the Persian Gulf and South 3 Korea. 4 South Korea? Q 5 Α South Korea, yes. 6 Q Now, how many trips did you make in and out of 7 Prince William Sound on the Brooklyn? 8 Α It would be about seven trips, round trips. Ģ 0 Seven trips. 10 As a captain, would you explain to the jury what 11 your most important responsibilities are? 12 It would be -- primarily it's the safe navigation Α of the vessel, and the efficient operation for the carrying 13 of the cargo. 14 Q Would your safe navigation include the safety of 15 your crew members? 16 17 Yes, that's correct. Α 18 Now, when you came into Prince William Sound, did Q 19 you have pilotage for the Prince William Sound area? 20 No, I don't. Α I'm sorry. 21 Q 22 Α No, I don't. Did any of your mates on any of crews that you 23 Q 24 had during the transits have pilotage? 25 Α No, they didn't.

1 What -- when you were asked at the three hour Q 2 period outside of Cape Hinchinbrook whether you had 3 pilotage or whether you were a pilotage vessel or a 4 nonpilotage vessel, how would you respond? 5 Α I would tell them that we didn't -- I did not --6 it was -- no one had pilotage on board for the transit. 7 Q What -- what requirements, then, were you 8 required to follow? 9 Α In that case, then, we were required to make 10 reports as we passed Cape Hinchinbrook, and every ten 11 minutes, we would report the ship's position to the Vessel 12 Traffic Center, and we were required to pick up a pilot at 13 Bligh Reef for the approach into Valdez Arm and Valdez 14 Harbor. 15 Q How many officers were required to be on the 16 bridge? 17 Α We were required to have two officers on the 18 bridge while we were transitting Prince William Sound. 19 Did that stop when you got abeam of Montague? 0 20 Α No. No. 21 What about visibility requirements? Q 22 Α In what --23 Where there any visibility restrictions on Q 24 whether or not you could come in? 25 Α They -- not that I know of, but they could if you

169 1 under certain circumstances, the VTS may tell us that we 2 couldn't come in because of visibility restrictions. 3 Possibly if we had radar that was broken down, we didn't 4 have both radars operating, they would restrict us for 5 possibly waiting for the weather to clear. But there's 6 nothing in writing that I know of specific about that. 7 Q Do you have -- does Texaco have an agent in 8 Valdez? 9 Yes, we do. Α 10 Q Who is that agent? 11 Alamar, the Alaska Maritime Agency. Α 12 When your vessels were transitting Prince William Q 13 Sound, what was your practice, as far as whether or not you 14 were on the bridge? When I was -- well, I was always on the bridge 15 Α while transitting the Prince William Sound, usually because 16 17 the regular deck officers would be tired from the loading 18 operation, give them plenty of rest. 19 Where would you pick up the pilot? Q 20 I'd pick up the pilot of Bligh Reef, in the Α vicinity of Bligh Reef buoy. 21 22 I have a -- I think there's a pointer right there Q next to you. 23 Α Yes, there is. 24 25 Q Would you mind pointing to the jury in the area

1 where you --

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(Pause)

A We'd pick up the pilot in this area here, come abeam of the buoy, and then we would usually -- due to prevailing winds, we would change course to the right and pick up the pilot, and then we'd change course, come back again, the pilot would take over, and conn the ship into the harbor and back it.

Q Would it be the same as far as where you would
 drop them off?

A Generally, it would be the same idea. We'd come back out, and then we'd get in the vicinity of Bligh Reef, the pilot would get off. We'd provide a lead for him. He'd get out, and then we'd continue on down out through the traffic lane.

Q Thank you.

<sup>17</sup> Now, when you were transitting into Prince
 <sup>18</sup> William Sound, where did you believe that you were being
 <sup>19</sup> observed by the Vessel Traffic System?

A My understanding was that they had limited radar coverage, but it did -- supposed to have extended down to Bligh Reef, in that area.

Q Did you rely on -- on the fact that they would
tell you where you were?

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Not really, no. No.

Q Why is that?

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2 We did our own navigation and responsible for our Α 3 own navigation, so that would be the manner that we would 4 determine where we were, and I wouldn't be relying on the 5 VTS to tell us. 6 Had you ever -- did you ever have to leave the Q 7 lanes at all while you were --8 Α Yes, we have. 9 Did you contact the Vessel Control System when Q 10 you did that? 11 That was our procedure, was if we had to leave, Α 12 we would tell them that it was necessary to leave the traffic -- traffic lanes, and they would acknowledge that 13 we had notified them. 14 Q Did that include not only just going from your 15 traffic lane to the separation lane, but also include the 16 outside of the lanes? 17 18 Yes, that's correct. Α Now, while you were transitting in and out of 19 Q 20 Prince William Sound, what -- did you use the automatic pilot in there? 21 22 No, we didn't. We maintained manual steering all Α the way. 23 Q Why is that? 24 Primarily it's company policy when we're in 25 Α

1 restricted waters that we should be operating under manual 2 steering.

Q You talked about company policy. Is there a -did Texaco have a bridge manual for you?

A Well, they had an operating manual that included
 a chapter on bridge requirements for -- under different
 circumstances: reduced visibility, pilotage waters, and
 docking and undocking procedures.

Q Would it be fair to say there was about three
 different watch type conditions?

A Yes, there were. They considered three different situations that would be wrong.

Q And would you briefly explain to the jury what
 those were?

<sup>15</sup> MR. MADSON: Your Honor, I'm going to object. I
 <sup>16</sup> don't see the relevance of Texaco's bridge operating policy
 <sup>17</sup> as opposed to Exxon's. You know, it may be different, it
 <sup>18</sup> may be the same, but what -- I don't see the relevance.

<sup>19</sup> MR. COLE: Your Honor, the relevance is the type
 <sup>20</sup> of watch scenarios that these companies put together.
 <sup>21</sup> There were guidelines to be used. They were -- the purpose
 <sup>22</sup> is to show what the standard in the industry was.

MR. MADSON: It shows the standard by Texaco and
 not anybody else. It isn't the standard of an industry.

THE COURT: Objection overruled.

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BY MR. COLE: (Resuming)

Q Would you briefly explain to the jury what those three areas were?

A The first one was -- would be when you were at sea, outside the headlands and we would probably be in a condition of reduced visibility and it would be necessary to have additional people and watch standers available on the bridge, and what we would do in having the engines on standby, ready for operation, and the use of whistles for fog and look outs that would be stationed.

And then the next one would be when we were operating in restricted waters, such as inside Prince William Sound, or Santa Barbara Channel, or places like that, where there is more activity, and within the headlands, and then you would --

Q I'm sorry. When you say within the headlands,
17 that's maybe a concept that hasn't been talked about.

A Un-nuh.

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Q Would you explain what you mean to the jury? A Well, that would be when we -- that's when we entered into a land mass area and started going into an area where we would not actually be -- have a pilot on board, and the ship was doing the navigating, and it would be in an area where we'd have to do extensive navigation.

And when you're in this situation, then it would

<sup>1</sup> require that we would have two officers on the bridge. In
<sup>2</sup> fact, the first situation I mentioned, company policy was
<sup>3</sup> to have two officers on the bridge, and one would be
<sup>4</sup> expected to be the captain, and if for some reason he
<sup>5</sup> couldn't be up there, then you'd use the chief mate, if the
<sup>6</sup> captain felt he was qualified for it.

And the third situation would be docking the Nessel when you had a pilot on board, and this would be still the same idea, only it's -- only you also have the pilot up there, and the captain and mate on watch would be available.

Q If you were found to not be in compliance with the bridge manual, what would happen to you as a captain?

A I don't -- how would that -- if it --

<sup>15</sup> MR. MADSON: I agree, Your Honor. I don't know
 <sup>16</sup> what it means, either. I would --

MR. COLE: I'll withdraw the --

MR. MADSON: -- agree with the witness.

MR. COLE: I'll withdraw the question.

BY MR. COLE: (Resuming)

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Q As a tanker captain, would you explain -- do you
 get a certain sense of how your ship runs after awhile,
 after being on it?

A Yes. You mean that feeling for the ship and how it operates and the maneuvering characteristics, yes.

Q And would you describe to the jury whether or not you can -- you can tell whether the engine is running improperly, or things like that?

4 Α Yes. You could get feelings of changings of 5 conditions when the ship changes course, slows down, breaks 6 down. A lot of times you will notice this effect when 7 you're not on the bridge, and the ship will change course. 8 You can feel it veer over, or if we've lost the engines for 9 some reason, a breakdown, you feel a vibration change, and 10 -- on the vessel, and you sense these things after awhile 11 and realize something's happened.

Q Would you -- what was the Texaco alcohol policy for American ships?

MR. MADSON: Your Honor, I'll object to Texaco policy again. I don't see what relevance a company's policy other -- even Exxon's, but certainly Texaco's, has to do with this case.

THE COURT: The relevancy objection is overruled.
 BY MR. COLE: (Resuming)

Q Well, what -- yes, go ahead?

A All right. The policy was there was no liquor on board Texaco vessels.

Q Were people allowed to go ashore?

A Yes, they were.

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23

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Q What would happen if somebody was drinking

1 onboard?

A If they were drinking on board and they would be i fired, you know, was my policy.

Q Now, when you came into the situation like you
did on the Brooklyn, where you had a new crew, what steps
would you take to get acquainted with the crew?

A Oh, this did happen with the Brooklyn. I joined January 1989 and I was new to the ship. I would try to get as much input from the officers that were on board at that time, and telling me the characteristics of the ship and how it was operating. And the crew members' qualifications and things I should be looking for, and this would come from the officers already on board.

I would question them, and determine ceratin
 things of this nature.

Q And as the master, are you able to place people
 in various positions, your crew members, in various
 positions at ceratin time?

A Yes. If I felt somebody was limited in their
 abilities to handle the -- certain jobs, I would change
 them around, or make adjustments so that they weren't there
 at the critical times, yes.

Q Now, on March 22nd, would you describe for the
 jury -- of 1989 -- would you describe for the jury when you
 -- approximately when you would have called into the VTC

177 1 Center. Do you remember that? 2 Α On what date? 3 March 22nd. Q 4 On -- that would be --Α 5 Q 1989. 6 Α That would be on arrival. 7 Q Yes. 8 Yes. Well, we were about there hours before we Α 9 made arrival at Cape Hinchinbrook. We would call in on the 10 VHF radio and notify them that we were -- our ETA at Cape 11 Hinchinbrook and then we would give them the information 12 that they request about -- if we had any breakdowns, or any 13 problems with the ship and whether we had a pilot on board. 14 Q And what did you indicate when they asked you 15 whether you were a pilotage or a nonpilotage? 16 We told them no. Α 17 Q And what happened when you -- after you went past 18 Cape Hinchinbrook? Could you describe that, your voyage 19 into the Bligh Reef area? 20 Well, as we start in, we would start notifying Α the VTS when we got abeam of Cape Hinchinbrook, and then 21 every ten minutes, all the way up to Montague, we would 22 23 then give them a position every ten minutes, and after that 24 point, we would -- well, they would release us from giving a position, and then we continued on up here to Bligh Reef - 25

where we would pick up the pilot.

Q And while you were travelling from Montague,
 abeam of Montague, to Bligh Reef, the Bligh Reef area, did
 you remain on the bridge?

A Yes, I did.

Q And were there any other mates on the bridge?
 A The watch standing mate that was on watch at that
 8 time.

Q And would you point to where you picked up the pilot? Would you point to where you picked up the pilot?

A We picked up the pilot about -- in this area <sup>12</sup> here, at Bligh Reef.

Q What were the ice conditions when you went
 through that morning?

15 They were light ice conditions. It was quite a A 16 bit of ice on the -- this side, west side, and it had 17 drifted across into the inbound traffic lane, through this 18 area here, and it was necessary to avoid some of the ice, 19 and we've gone a little bit into the traffic separation 20 zone and -- before we could pick up the pilot. And I made 21 the turn to the right there, \_\_\_\_ some ice, make a 22 turn to the right to pick up the pilot, give him a lead. 23 And what happened from the time you picked up the Q 24 pilot until the time you got into port?

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A The pilot took over -- he had the conn and we

<sup>1</sup> made our maneuvers into the dock. There was no ice from <sup>2</sup> that point on in.

Q What are your responsibilities when the pilot
 comes aboard, as captain?

5 Α Well, I'm still responsible for the vessel and 6 the safe navigation of it. What I do is turn over the 7 operation of the conn, as they call it, to the pilot. He 8 gives the rudder orders and the speed the vessel has to ç proceed on, and he does the maneuvering, and I would be 10 supervising him, and if anything -- if he did anything 11 wrong, I could take the conn away from him and take control 12 myself, if I felt he was doing something wrong.

Q What time did you arrive at Valdez that morning?
 A I believe we docked about 9:00 o'clock in the
 morning.

Q And during -- then I assume that you went through
 the standard unloading and loading process?

A That's correct.

19 Q Did you go into town that day?

20 A Yes, I did.

18

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21 Q Why did you go into town?

A I went to the doctor.

Q What was your standard practice during this
docking and undocking process -- as far as going into town?
A Well, normally, I didn't go into town. I usually

180 1 stayed with the ship -- no particular reason to go to town, 2 and I felt I -- I'd stay on the ship, be available for 3 anything that might come up. 4 Q When did you leave Valdez, then, on the tanker? 5 The next morning we started preparing to get Α 6 underway about 0730 and we cleared the dock probably around 7 8:30 in the morning. 8 Would that have been March 23rd? Q 9 A On the 23rd. 10 Q 1989? 11 That's correct. A 12 Q And where were you during the unloading -- or the 13 undocking process? 14 Α I was on the bridge. 15 And who else was on the bridge with you? Q 16 Α The third mate was on the bridge, the pilot, and 17 the quartermaster, the helmsman (inaudible). 18 And until you dropped off the pilot that morning, Q 19 who -- who -- who stayed -- who was on the bridge? 20 The same people. We have a third mate and myself Α 21 and the pilot. 22 Q And that would have been through the Narrows and 23 out to Bligh Reef? 24 Α That's correct. 25 Would you describe what happened when you made it Q

1 out into the TSS lane, the maneuvers that you took after 2 you went past the Narrows?

A We started coming down this area here, after passing the Narrows, and we had been informed prior to going out there that there was extensive ice out there, and the pilot and I discussed how we would maneuver at this point, particularly for getting himself out. So as we get down here, we could see the ice coming down across -close --

Crose --

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Q I have another one.

A It might show up better.

Q (Inaudible) bigger --

(Pause)

A Okay.

15 Q Go ahead.

16 Α (Inaudible). So about this point, we observed 17 the ice heading down in a wedge shape, down to -- close to 18 Bligh Reef buoy and then it cut back across this way. The 19 ice had come out of the glacier area here and was being 20 blown across, so at this point, discussing it with the 21 pilot, we decided the best procedure was to follow the edge 22 of the ice rather than trying to go through it, was follow 23 the edge of the ice by Bligh Reef, where we had an open stretch of about a half a mile to six-tenths of a mile, in 24 25 that area.

1 Even though there were a few extra ice bergs that 2 had drifted over there, but they were minor, and we were 3 able to go around them. So that's what we decided to do. 4 We went on ahead, and about this point here, we 5 -- the pilot got off. And then I continued on with the 6 vessel and we passed about half a mile off Bligh Reef buoy 7 and then we turned following the edge of the ice, we turned 8 back and crossed over into the outbound lane, and continued ç our passage. 10 Q And did you leave the bridge during the time you 11 were transitting that area? 12 Α No. I didn't. 13 Q At what speed was your vessel going during that 14 time? 15 Α We were running at a -- probably about eight to 16 ten knots. 17 Q And did you use auto pilot during that time? 18 Α No we didn't. 19 MR. COLE: Thank you, Captain Mackintire. I have 20 nothing further. 21 CROSS EXAMINATION 22 BY MR. MADSON: 23 Now, Captain Mackintire, first of all you were Q 24 subpoenaed here by the state of Alaska, were you not, sir? 25 Α That's correct.

183 1 Q When were you subpoenaed for? 2 Α I received the subpoena yesterday. 3 Q Just yesterday. 4 Α Yes. 5 Q And where were you? 6 Α Here in Anchorage. Here in . 7 Q How did you get here? I mean, if you weren't 8 subpoenaed to be here --Ģ Α My lawyer was -- or Texaco's lawyer -- was told 10 that we were going to be subpoenaed and that -- for us to 11 be available, so Texaco made me available. 12 Q Where did you come from, sir. 13 Α Originally? 14 Q No, just before you came to Anchorage yesterday. 15 Α From home. Q Maine? 16 17 Yes. That's correct. Α 18 And you didn't know you were going to testify Q 19 until just a few days ago? Is that correct? 20 Α For sure, yes. That's correct. 21 When did you first talk to the state of Alaska Q then, sir? 22 Α Yesterday --23 Or a representative? Q 24 -25 Α Yesterday afternoon.

184 1 Q What about -- do you remember talking to a 2 Sergeant back in -- Investigator back in February? 3 Yes. He was a state police officer, yes. Α 4 Q Was that just by phone, or in person? 5 That was on the phone. Α 6 And were you in Maine at that time also? Q 7 I was in Texas. Α 8 Now, you said that you worked for Texaco for a Q ç number of years. Twenty-seven years. 10 Twenty-seven years. That's correct. Α 11 Q Is it true, sir, that Texaco has far fewer 12 tankers now than they did in years passed? 13 Α That's correct. 14 Q And their fleet is declining? 15 Α Yes. 16 Does that mean, then, that the personnel is Q 17 declining also? In other words, that ship's captains, 18 there's fewer of them than there used to be? 19 Yes. Α 20 Q Would it be fair to say, sir, that you would be 21 wanting to be, let's say, an extra -- a real good captain 22 at this stage of your career? In other words, to save your 23 job as much as you could? 24 MR. COLE: Objection. Argumentative. 25 MR. MADSON: I'm not going to argue, Your Honor.

185 1 I just asked the question. 2 THE COURT: Objection overruled. 3 BY MR. MADSON: (Resuming) 4 Q You know -- I don't want you to say that you're 5 in fear of your job, but certainly you want to keep your job. Is that fair to say? Do you understand? 6 7 A Certainly. Of course. Yes. 8 And certainly, you want to do everything to be Q 9 sure that your employer is not unhappy with you. Would you 10 say that's fair? 11 A I do the best I can. That's what they pay me 12 for, yes. 13 Q You don't want to rattle the corporate cage, so to speak? 14 15 Α I don't think I can do that. 16 Now, the Brooklyn that you said that you were the Q 17 captain on, how long have you been the captain of the 18 Brooklyn? 19 Α Since January of 1959 -- '89. 20 January of '89. Q 21 Α '89. And you said it's 1084 feet long and 145 feet 22 Q wide? 23 That's correct. 24 A 25 Q Compared to the Exxon Valdez -- do you know the

186 1 statistics, by the way, of the Exxon Valdez, sir? 2 Α I think she's less than a thousand feet, and 250 3 feet wide, and a 37-foot draft somewhere. I think that's 4 -- is that correct. 5 Is it -- well, I'm afraid you've got to answer. Q 6 Α I think it's --7 Is it fair to say it's roughly the same, but Q 8 perhaps the length of the Valdez is a little shorter? 9 A little shorter. Α 10 Q And a little wider? 11 Α A little wider, yes. 12 Q Handling characteristics of ships, do they vary, 13 you know, from one to another, tankers? 14 Yes, they do. Α 15 Have you ever been on the Exxon Valdez? Q 16 Α No, I haven't. 17 So is it fair to say you don't know exactly how Q 18 that vessel would feel -- would respond to rudder orders 19 and things like this, whether you feel the vibrations and 20 things? 21 It would probably handle a little different Α No. 22 than the ships I've been on, yes. 23 Q And Mr. Cole here asked you a number of questions 24 about where you'd been in all the world. 25 Α Uh-huh.

187 1 Q You have travelled extensively as a captain. 2 А Yes, I have. 3 Q All over, right. 4 Is it fair to say, sir, that some areas are much 5 more dangerous, or more difficult to navigate in than 6 others? 7 Α Yes. 8 And prior to March 23rd -- 22nd and 23rd, the Q 9 trip you were just testifying about to Valdez? 10 Α yes. 11 Q How many trips had you made into Valdez as captain of the Brooklyn, prior to March 23rd? 12 About six trips. That would probably be the 13 Α 14 seventh trip I had made. Q How long does it take to make one trip? 15 Α You mean round trip? 16 17 Q Yes. 18 Α In the harbor? Well, I'll -- let me rephrase that. You were Q 19 travelling from Valdez to where? 20 Α Long Beach. 21 22 Q Where was your -- what was your target? Long Beach? 23 Α Yeah. About a two-week round trip. 24 It would take two weeks for a round trip? Q 25

188 1 Uh-huh. Α 2 Q So you had started in January -- I presume that 3 was fairly early in January? 4 Α Yes. 5 So you would have two -- one, two, say three Q 6 trips in January? 7 Α Three --8 Q Maybe --9 Well, probably -- yeah. Α 10 Q Another three in February or so? 11 And part of March. Α 12 Q You were making this run continuously, weren't 13 you? 14 That's right. А Yes. 15 You hadn't been to Prince William Sound prior to Q 16 January, then, of 1989? 17 I had been to Prince William Sound, but I'd never А 18 been to Valdez. 19 Q Where did you go? 20 Α Prior? 21 Q Yeah. 22 I'd been to Whittier, which you have -- that's Α 23 over in this area over here. 24 Q Okay. 25 Α It's on this side. You came up here --

189 1 Q You have to go through Cape 2 Hinchinbrook \_\_\_\_\_ the entrance. 3 Α To do that, yes. 4 Q Okay. What was the purpose of going there? Was 5 it a tanker also? 6 Α Yes, it was a tanker, and we were taking military 7 cargo to Whittier. 8 Q And on the six or seven -- say six or seven trips Ģ prior to March 23rd, you didn't have pilotage, right? 10 Α That's correct. 11 Federal endorsement, correct? Q 12 Α Uh-huh. 13 Now, you must have known something about pilotage Q 14 requirements in Prince William Sound -- or did you, before going in? 15 A Yes. 16 17 Where did you get that information? Q 18 We were supplied with letters from the captain of Α the port, provided to the company which they forwarded to 19 20 us. We had them on the ship. 21 Q Do you know if they came from via Alamar or not, 22 or American --I --23 Α 24 Q The Alaska Maritime Agency? - 75 Α Oh, no. They were probably originated by them

190 1 and sent to Texaco, or distributed to the ships. 2 Q Then, sir, were you aware of the fact that --3 let's say that there was a visibility requirement? 4 Α No. 5 Q You did not know that. 6 Α No. 7 And did you ever -- well, let me ask you this, Q 8 then, sir. We're trying to get done by 1:30 if we can, 9 sir. 10 I need Exhibit Number 2 -- B (inaudible) yeah, 11 here it is. 12 (Pause) 13 Captain Mackintire, let me hand you what's been 14 handed as Exhibit -- Defendant's Exhibit B, and I'll ask 15 you if you've seen that document any time in the past, sir? 16 (Pause) 17 Α No, I haven't, no. 18 What does that purport to be? You've had a Q 19 chance to read it? Is that the --20 MR. COLE: Your Honor, I object. He says he 21 hasn't seen it. 22 MR. MADSON: Well, I want to make sure that the 23 record -- what it is. 24 THE COURT: He hasn't seen B, which is the Arts 25 letter.

191 1 MR. MADSON: The Arts letter. 2 BY MR. MADSON: (Resuming) 3 Q Do you know Mr. Arts, sir? 4 Α No. 5 Alaska Maritime is the same agent for Texaco as Q it is for Exxon? 6 7 Α That's correct. 8 As far as you know? Q 9 А Yes. 10 Q So when you arrived at three hours prior to 11 entering Prince William Sound, you would call the Coast 12 Guard and they would essentially ask you some questions, right? Where are you? What's your ETA at Cape 13 Hinchinbrook, things like that? 14 15 Α Yes. And then would you -- would they ask you if you Q 16 17 had pilotage on board? 18 Α Yes. And you would respond no? 19 Q 20 Α Right. 21 You said, then, that you would enter Hinchinbrook Q 22 and, from there, to abeam of Montague Island, you would report your position every ten minutes? 23 24 Α Yes. Did you ever enter when visibility was less than 25 Q

192 1 two miles? 2 No, I don't believe so. Α 3 Q Do you know whether or not you could have been --4 I have been in fog up in the other areas, but not Α 5 in Hinchinbrook, no. 6 Q When you say other areas, what areas are you 7 speaking of? 8 Well, when we approached up to Bligh Reef and Α 9 this area here. 10 You say this area here. You're on -- you're Q 11 virtually a course that's pretty near straight north --12 Α That's correct. 13 Q -- in Prince William Sound somewhere. 14 Uh-huh. Α 15 Q And you say you've got into fog in those areas? 16 Yeah. Α 17 And visibility would be less than two miles? Q 18 Yes. Α 19 Do you know if there was any -- I guess you said Q 20 you didn't know that there was no restrictions on 21 nonpilotage vessels where visibility was under two miles? 22 Α We were not told that, no. 23 The Coast Guard never told you that? Q 24 Α No. 25 Q Did they ever ask you what the visibility was?

A They have -- they request weather reports at various times. They will ask us to give it to them, and if we have an unusual situation, such as ice, we spotted ice, we would report it to the VTS, yes. So unusual weather conditions. Q Would you say that the ice reporting was probably the best way of potifying other vessels what ice conditions

7 the best way of notifying other vessels what ice conditions
8 that you actually saw would go through it?

A Yes. That was -- I believe that was the usual way for them to be -- VTS to know, VTC would know that we were in ice.

Q And then -- in other words, radar may not be the best -- the Coast Guard radar may not be the best way (inaudible) --

A That's correct. I would go along with that, yes.
 Q But sir, you did on occasion, at least one
 occasion, then, be on the vessel proceeding toward Bligh
 Reef in fog, with visibility less than two miles, at a time
 when no one on board the vessel had federal pilotage?

A That's correct.

Q And it takes a number of trips to get the pilotage endorsement, doesn't it?

23 A About twelve trips.

24 Q Twelve?

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A Ten or twelve trips.

194 1 Have you applied for that since? Q 2 I haven't accumulated that much. We stopped Α 3 going there as of last April. I started collecting it, 4 though. 5 Q I take it you plan on getting it? 6 Α If the opportunity presents, yeah. 7 Q You know -- do you have pilotage endorsements for 8 any other areas \_\_\_\_\_? 9 No, I don't. A 10 Q Do you know what's required to get to take this 11 test, sir, the pilotage test? 12 A You'll have to draw a chart and answer questions 13 relative to the area that you're going through, and rules 14 of the road examination and a few other general questions 15 they will probably ask you. 16 Q They'd want to know whether you knew the area or 17 not? 18 That's correct. Α 19 Q Do you feel you know the Prince William Sound 20 area pretty well at this point? 21 I feel comfortable with transitting, I guess. Α 22 Q It's not a real difficult area to transit, is it? 23 Α No. 24 Q There's sufficient navigation aids, you have some 25 wide open spaces?

195 1 Yes. Α 2 And you have deep water. Q 3 Α Yes. 4 Now, you also said that -- well, let me ask you Q 5 this. When you were proceeding from Montague all the way to, let's say, the pilot's station where you pick up the 6 7 pilot, would you report your position every ten minutes? 8 Through -- just through Cape Hinchinbrook --Α 9 Q yeah. 10 Α -- to Montague, yes. 11 Did you ever forget to do that and have the Coast Q 12 Guard call in --13 Α No. 14 Q -- and say, you didn't report? 15 Α No. 16 And you believed that to be a requirement. Q Is 17 that right? 18 Α They told us -- when we called in, they told us 19 we would have to make the report. They would -- on the 20 radio, they would tell us to start making your reports every ten minutes. 21 22 And of course you didn't rely at all on the Q letter there, Exhibit B. I think you've already said you 23 never saw it? 24 • • • 25 MR. COLE: Objection --

1 THE WITNESS: No, I never saw it, no. 2 MR. COLE: -- asked and answered. 3 BY MR. MADSON: (Resuming) 4 Q You're relying only on what the Coast Guard told 5 you. Is that fair to say? 6 About the positioning? Yes. Α 7 And you believe -- you said that you believed Q 8 that the Coast Guard was monitoring you on radar at least ç in the area of Bligh Reef. Is that correct to say? 10 I understand their radar would reach down Α Yes. 11 into the Valdez Arm, at least to Bligh Reef, or close to 12 it. 13 Now, I think you said you didn't rely on them as Q 14 a navigational aid or tool. If, in fact, something had 15 gone wrong with your vessel, either steering problem or a 16 rudder, or something, and you veered suddenly and started a 17 course heading toward danger, do you believe the Coast 18 Guard -- they'd have you on radar -- would notify you at 19 least? 20 It would have to be -- see what the circumstances Α 21 were, but I don't believe they could tell us soon enough, 22 or if they were plotting us to be able to determine that, 23 it would take them at least three minutes for plotting, and 24 maybe longer for them to really decide something had --

25

Well --

Q

A -- gone wrong before they could notify us. I wouldn't rely on them to tell us that they could -something was going wrong.

Q What would you rely on them for? What was their purpose, then, as far as you \_\_\_\_\_?

A The Coast Guard required -- they would plot the vessels in and out primarily to pass the information back and forth to the different vessels that you would need, be meeting a ship, or something like that. But primarily the service of the VTS is an informational service.

Q What about the separation --

A We still have to navigate the vessel.

13 Q Well, of course.

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A And take -- I'm responsible for it.

Q I don't think there's any argument about that, but would you agree, sir, the purpose of the radar and the VTS system -- that is the separation zones and the reports you're required to make, and all these sort of things, is to really prevent collisions and groundings?

A Well, that's correct.

Q And the Coast Guard function there -- let me ask you this, that if you got out of -- did it ever happen that you got out of your assigned lane, say? Did you ever -did the Coast Guard ever get on the radio and call you and say, "Hey, you're not in the place you're supposed to be?"

198 1 А NO. 2 Did that ever happen? That is, did you ever get Q 3 out of the -- straight out of the lanes? 4 Not out of the lanes. We've gone into the Α 5 separation zone, and they never said anything. 6 Q Well, certainly if you were out of the lanes 7 you'd be in an area where there would be far more danger --Well, \_\_\_\_\_ qualify that. I have -- we've 8 Α 9 gone out of the lanes and notifying that we're doing it, 10 but they didn't come back and tell us that we were outside 11 and all. 12 Q But from your testimony, you never accidentally 13 strayed out of the lanes at all, correct? 14 Α No. 15 But would you agree, sir, that if you were out of Q 16 the lanes, and in, you know, beyond the area where they say 17 you're supposed to be, that's the area where you would be 18 in more danger as opposed to being right in the 19 north/south \_\_\_\_\_. 20 That's correct, yes. Α 21 Q Right. 22 Now, you said that in Prince William Sound, you 23 stayed on the bridge, because oftentimes your deck officers 24 were tired, because they had been up all night or something 25 like that?

199 1 That's correct. Α 2 Q So you were generally letting them rest. Is that 3 fair to say? 4 Α Yes. 5 Well, if you had a -- you kept a progress chart, Q 6 did you not, of your transit in and out of Prince William 7 Sound on the 22nd, 23rd? 8 Yes. 23rd. Α 9 Q 23rd. 10 MR. MADSON: I may have to find that, Your 11 Honor. I don't know exactly where it is. 12 (Pause) Your Honor, it may very well be that we're not 13 14 going to get done in five minutes. I wonder whether if 15 this may be a time to break. I'm going to have to find that chart. 16 17 THE COURT: Would counsel approach? 18 (The following was had at the bench:) THE COURT: (Inaudible). 19 20 MR. COLE: I'm not going to have any redirect, so far. 21 MR. MADSON: Ten minutes, maybe would do it. 22 THE COURT: Yeah. We'll finish \_\_\_\_\_. 23 MR. MADSON: (Inaudible). 24 25 THE COURT: Thank you.

200 1 (The following was had in open court:) 2 MR. COLE: Excuse me. Is this (inaudible). 3 That's my copy. 4 (Inaudible remarks.) 5 BY MR. MADSON: (Resuming) 6 Captain Mackintire, let me hand you what's been Q 7 marked as Exhibit AE, and ask you if you can recognize that 8 copy, sir? 9 Yes. That's a copy of our chart for when we Α 10 departed Valdez on March 23rd. 11 Q Now, there seems to be a dark line that's marked 12 on there. Is that your chart? \_\_\_\_\_ the vessel's 13 course, rather? 14 That's the -- yes. That was the track we made Α 15 during that departure. 16 And there's some numbers there, is there not? Q 17 One, two, three, four, five, six, seven, eight? 18 Α Yes. 19 Q Tell us, please, what those numbers mean? 20 Well, somebody has apparently marked the various Α 21 locations for clarification for that, and they're positions 22 that we took off the navigational aids, and put on the 23 chart, and they labeled them one, two, three, four, five, 24 six, seven, and eight. 25 Q And you testified a minute or two ago that that
201 1 was the course you took? 2 Α That's correct. 3 Now, where does that -- does that indicate where Q 4 the pilot was dropped off? 5 Fairly closely, yes. The pilot got off at 1100 Α 6 and we have a position of 1101. 7 Now, you say 11 -- the pilot is off, does that Q 8 mean off the bridge, or off the vessel? 9 Α Off the vessel. 10 Q So he would actually leave the bridge sooner than 11 11:00 o'clock? 12 Α (Inaudible) yes. 13 Q Okay. Then where, according to the chart, do you 14 believe the pilot was actually dropped off? 15 Α It would be right about -- about here. 16 Q That's before \_\_\_\_\_ Bligh Reef? 17 Α That's right. 18 Approximately how far. I think you pointed to Q 19 here. 20 Α From the buoy itself? 21 Q Yeah. 22 About a mile, mile-and-a-half. Mile -and-a-half. Α (TAPE CHANGED TO C-3680) 23 24 Q Then, sir, after the pilot was released or 25 dropped off, you continued on without pilotage endorsement

202 1 to go around Bligh Reef. Is that correct? 2 Yes. That's correct. Α 3 Q Now you also testified that you had a company 4 policy -- I think a Texaco policy, correct? A bridge 5 manual? 6 Α Yes. 7 It was supplied to all masters such as yourself Q 8 that worked for Texaco? 9 Α That's correct. 10 And was it ever given to Exxon? Q 11 Α No. Not that I know of. 12 Q And have you ever seen the Exxon bridge manual, 13 sir? 14 No. Α 15 Do you know if it's the same, or similar, to the Q 16 Texaco one? 17 I've been informed that they used it as a guide Α 18 when they established ours, when they revised it. Yes. 19 Well -- I'm sorry, did --Q 20 That's only information, hearsay information. Α 21 Was yours a guide, or was it something you had to Q 22 follow, like a rule? 23 It's a guide. It's minimum standards that we Α 24 were supposed to abide by, and if -- of course, if anything 25 happened, we would have to justify not using those

1 particular guidelines.

2 Q When you say something happened, what do you 3 mean? 4 Well, accident, incident, grounding, or --Α 5 Q Is it fair to say --6 Α -- or collision or something like that. 7 I'm sorry if I'm cutting you off. Q 8 That's all right. Α 9 Q I don't mean to do that. 10 In the event of an accident, is it fair to say 11 that maybe the company is looking out for themselves by 12 having this policy to protect their interests a little bit? Well, I hope it's a guide to us so that we will 13 Α 14 have standards and good information and what they expect of us. That's what I look at it as. 15 16 Q At the same time, you have the discretion to 17 determine what Watch Condition A, or what watch condition 18 you're in? 19 A That's correct, yes. 20 In fact, you have discretion at all times with Q 21 regard to that? 22 Yes. Actually, yes. Not use their standards at Α all, and use my own. 23 And you don't know of any particular Coast Guard 24 Q requirements, or rules or regulations, for instance, 25

204 1 governing the use of auto pilot in Valdez Arm, or -- Prince 2 William Sound? 3 Α Not specifically in that nature. 4 And there's no Coast Guard restriction, to your Q 5 knowledge, is there, about when a master can leave the 6 bridge or must stay on the bridge, in Prince William Sound? 7 Α As far as the master is concerned? 8 Ô Yeah. 9 Α No. There's not -- the restriction is not to the 10 master. You must have two officers on the bridge. 11 Q For what? 12 You must have two officers on the bridge. Α 13 Q No, as a nonpilotage vessel, correct? 14 That's correct. Α 15 Now, do you know what the rules are with regard Q 16 to a pilotage vessel? 17 Α Not specifically, no. 18 In other words, you don't know whether or not if Q 19 it's a pilotage vessel, somebody on board has pilotage, 20 whether the two people are required to be on watch on the 21 bridge all the time, two officers? 22 Α Yes. I would think they'd still have to have two 23 officers on the bridge. 24 Q You would think that --25 Α Yes.

205 1 Q -- but you don't know. 2 Α Well, that's the way the letter is written. It 3 doesn't say whether it's pilotage or nonpilotage. It says 4 Prince William Sound, I believe, you have to have two 5 officers on the bridge. 6 What letter is that? Q 7 Well, the original Coast Guard letter. Α 8 But you don't have that with you here, right? Q ç Α No. 10 I take it, then sir, that if the master was Q 11 informed otherwise, that if he didn't have to say he had 12 pilotage, and he didn't have to have two watch officers on the deck, you could go by that information as opposed to 13 14 the information you've received. Do you understand that question? 15 Yes, I think that's reasonable. Α 16 17 Q You also indicated that it was important to -- to get acquainted with your crew. Does Texaco, are they a 18 19 union company, sir? 20 MR. COLE: Objection, relevance. MR. MADSON: Well, do they come or go? Are they 21 22 stationed on that ship at all times, or the same crew or different people? I want to -- I think I can go into that. 23 24 THE COURT: Okay. I'm going to let Mr. Madson go 25 into his knowledge of the crew.

206 ] BY MR. MADSON: (Resuming) 2 Q Is it a union --3 The officers are Texaco employees. The Α 4 unlicensed crew are National Maritime Union members, which 5 Texaco hires, or that is supplied from the Union Hall. 6 Q So you could get a variety of people at any given 7 time, right? 8 Α As far as the unlicensed is concerned, yes. 9 Q Unlicensed, you mean ordinary seamen and able 10 seamen? 11 Α That's correct. 12 They're not assigned to the ship as such? They Q 13 don't work for Texaco all the time? 14 They become permanent members of the ship in that Α 15 they -- when they take the job they can come back to it 16 after leaving on vacation, so they do become permanent, but 17 they aren't employees of Texaco, no. 18 They can go and work for some other ship if they Q 19 want, right? 20 Α Yes, they can. 21 And you agree that it's important to know, you Q 22 know, the kind of crew you have, right? 23 Α Yes. 24 Is it fair to say that you can tell right away Q 25 some people are -- some of your officers are just excellent

207 1 officers. They're just good. 2 Α Yes. 3 It doesn't take years and years for you to know Q 4 that, right? 5 That's correct. Α 6 Other people, is it fair to say that, no matter Q 7 how long it takes, you're not going to really rely on them 8 100 percent? 9 Well, yes, you have to understand the limitations Α 10 of the people involved, yes. 11 Q Sure. 12 Now, for instance, a helmsman, some you would think are better at steering than others, okay? 13 14 That's correct. Α 15 Q Now, when we say steering, what does that mean to you, sir, to steer a vessel? 16 17 I'm not sure I understand you. Α 18 Well, I'll withdraw that then. Q 19 Would you say there's a difference between 20 steering a vessel to a course, say, changing course, to 21 come about to another course, as opposed to just carrying 22 out a rudder maneuver? 23 Yes. Those are two different -- yeah. That Α would be two different situations, yeah. 24 25 Q In other words, if a person were on a course, if

<sup>1</sup> your ship was on course of 180 or due south, and you said <sup>2</sup> come to -- told the helmsman come to a course of 245, he'd <sup>3</sup> have to change, actually turn and then kind of turn back <sup>4</sup> again, and you know, keep the ship from going too far, that <sup>5</sup> sort of thing?

A He would have to apply rudder that will make the ship turn, and when he reached his course, the new course, he would have to apply opposite rudder, and stop the ship from swinging, line it up and maintain the new course, yes.

Q What about a rudder order like 10 degrees right rudder. is that a simple command?

A Yes, it is.

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Q Do you feel that any helmsman, any AV could be
 able to carry that out?

A If given that order, yes.

(Pause)

Q With regard to the ice, your testimony about the
 ice, sir, when you came out of your -- you're on your
 outbound lane, now, loaded, leaving Valdez, and I think you
 said you deviated outside the VTS to go around the ice.

A Yes, that's correct, yeah.

Q That was in daylight, wasn't it?

A Yes.

Q And in daylight, you still thought it was better to go around the ice rather than going through the ice?

209 1 At that time yes, yeah. A 2 Q What do you base your recollection on, sir, when 3 you were going eight to ten knots at that time? 4 Well, we were running at full ahead, but we were Α 5 actually running it at reduced RPMs for full ahead, and was listed on our bellbook, and we had slowed down for the 6 7 letting the pilot off. So. 8 Q Now, does Exhibit AE there indicate in any way 9 how fast you were travelling, what your rate was at that 10 time? 11 No, but you can check the times between the two Α 12 positions to determine it, and I think it shows about eight 13 knots. 14 Have you done that just now? Q 15 No, not just now. Α Would you do it, take a look at it again, just to 16 Q 17 double check, sir? 18 Well, there's no way of doing it without Α dividers. 19 Q You mean the course recorder? 20 Dividers, and getting the distances and things. 21 Α We don't have the speed down, but previously it was about 22 eight knots. 23 If someone were to testify that they had checked Q 24 25 this and it was actually around 13 knots, would you say

1 that you may be mistaken? 2 Α I would have to re-evaluate it and come to a 3 decision on that, yes. 4 Q Whether it was eight to ten knots or thirteen 5 knots or twelve knots, wouldn't you say that was very 6 critical, at that time? 7 In this situation? Α 8 Q Yeah. 9 Α As far as I was concerned, the speed had nothing 10 to do with safety here, no. 11 In other words, even if you're travelling --Q 12 In this situation. А 13 Q I didn't mean to cut you off. 14 If you're travelling at 12 knots, that wouldn't 15 affect the safety of the maneuver you were doing? 16 А Not in the case -- that case, no. 17 Q And whether you decided to go through the ice at 18 a slower speed, or around the ice at a slightly faster 19 maneuvering speed, that was at your discretion, was it not? 20 That's correct. Α 21 MR. MADSON: That's all the questions I have, 22 Your Honor. I would ask that Exhibit AE be offered in 23 evidence. It's been identified now by the captain. 24 THE COURT: Any objection? 25 MR. COLE: No objection.

211 1 THE COURT: It's admitted. 2 (Defendant's Exhibit AE 3 was received in evidence.) 4 MR. COLE: Just a couple of questions. 5 THE COURT: A couple. All right. REDIRECT EXAMINATION 6 7 BY MR. COLE: 8 Q Captain Mackintire, why did you let the pilot off Ģ where you did on March 23, 1989? 10 Why did I do it? А 11 Yeah. In that particular --Q 12 А Well, the pilot requested that he get off early because the pilot boast was having a problem keeping up and 13 14 he was -- they were concerned about the ice for the pilot boat, so it was a good, clear shot, and had the Bligh Reef 15 buoy on the port side, and looked like we could pass clear 16 without any problem at all. So I let him go. 17 18 Q Were you lined up past Bligh Reef before the pilot got off? 19 Α 20 Yes. And the transits that you made in and out of Q 21 Prince William Sound, were they in daylight hours, or at 22 night time? 23 24 Α They would be varied. I mean, all the times I've gone through, they -- both. 25

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2		MR. COLE: I have nothing further.
3		RECROSS EXAMINATION
4		BY MR. MADSON:
5	Q	And Captain Mackintire, if the pilot wanted to be
6	dropped of	ff north of Bligh Reef, and in fact was, as you
7	indicated	in this situation, because the pilot boat
8	couldn't k	keep up and he was afraid of the ice or
9	concerned	about the ice?
10	А	Concerned about it, yeah.
11	Q	And you felt that was all right?
12	А	Yes.
13	Q	I take it you could have insisted he stay on
14	longer, it	f you wanted to?
15	A	Yes.
16	Q	You felt comfortable with letting him off, even
17	though you	u didn't have pilotage?
18	A	That's correct.
19	Q	And technically, this might be in violation of
20	the Coast	Guard's policy at that time? If they required
21	the pilot	to stay on right down to Bligh Reef?
22	A	I don't think Bligh Reef it isn't a cut and
23	dried line	e that you have to reach in order to change. It's
24	a general	vicinity where you can maneuver the ship to
25	Q	Sure. You had some discretion as to when the

213 1 pilot should get on or off, and the pilot had some, 2 correct? 3 Α That's correct. 4 Weather conditions could change, could they not? Q 5 That's correct. Α 6 Q Ice conditions? 7 A That's correct. 8 Q A number of factors. It just kind of looked to 9 an overall safety evaluation. Is that fair to say? 10 That's correct. Α 11 MR. MADSON: I don't have any other questions. 12 MR. COLE: (Inaudible). 13 THE COURT: You're excused, sir. 14 THE WITNESS: Thank you. 15 THE COURT: Would counsel approach the bench, please? 16 17 (The following was had at the bench:) 18 THE COURT: (Inaudible). I think it's going to take up some time. \_\_\_\_\_ some motions you're going 19 20 (inaudible). It's going to take us some time for that. The \_\_\_\_\_ are by no means in any state near completion 21 and \_\_\_\_\_ authorities and I'm asking for --22 : \_\_\_\_\_\_ filed a memorandum 23 MR. 24 today. THE COURT: (Inaudible). I don't think -25

1 (inaudible) Tuesday morning (inaudible). Give you time to 2 prepare for --

<sup>3</sup> MR. : (Inaudible) plenty of time.
 <sup>4</sup> THE COURT: I hope there will be plenty of time.
 <sup>5</sup> I don't know (inaudible).

MR. : No.

THE COURT: Okay.

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(The following was had in open court:)

THE COURT: Any further witnesses from the State? MR. COLE: No, Your Honor. The State rests. THE COURT: Surrebuttal from the Defendant?

MR. MADSON: None, Your Honor.

13 THE COURT: That completes the taking of evidence 14 in this case, but that does not complete the case, by any 15 means. There will be some matters that we'll have to take 16 up outside your presence, which will take a good part of 17 tomorrow, and then the Court is required to prepare, with 18 the assistance of counsel, some jury instructions. This is 19 going to take some time also. They will be fairly 20 voluminous, because of the nature of the case. I imagine 21 that will take a good part of the day.

So it will be -- it will do no good to bring you in here tomorrow, whatsoever, and it would do no good to bring you in on Monday, because you'd just be sitting in that jury room, and those of you who are playing cards and

1 losing would lose some more.

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(Laughter)

THE COURT: So we'll bring you in on Tuesday at 8:30 a.m. That will be week eight. We've estimated this case to be six to eight weeks, so we're still within our estimate.

In the meantime, it's particularly important that you not discuss this case with any other person, nor discuss it among yourselves, and it's particularly important not to form or express any opinions about this cases. You'll have plenty of opportunity to do so in jury deliberations, to express and form opinions then, and that's what jury deliberations are for.

And again, I want to caution you about being exposed to the media sources of information about this case. You've been given instructions to decide this case based solely on the evidence presented in court, and in accordance with the Court's instructions. Media sources of information are not evidence. Avoid them -- do your best to avoid them. Have people screen newspapers for you.

It's particularly important now, because we're closing in on your -- the important function, which will be your function, to decide the facts of this case, and I don't want you to be tainted in any way. But don't let people talk to you about the case, don't watch the news,

1 listen to the radio about the cases.

I would expect a full day on Tuesday not a half day, and I don't know how long arguments will take. If they take more than one day, then I expect the next day to be listening to arguments, too. And that's basically what will happen. You'll listen to final arguments by the parties, and then I'll instruct you on the law, and you'll commence your deliberations.

Your deliberations will be at the sound
discretion of the jury. I'll let you deliberate full days,
and if it's necessary, deliberate more than a day, or in
the evening. That's up to you, too. But once you start
deliberating, you'll be in the charge of a bailiff, and you
won't be free to go and come as you please. But you will
not be housing you. You'll be free to go home at night.

That's just giving you some preliminary
 information about the case. In the meantime, be back here
 Tuesday morning at 8:30. We need all fourteen of you back
 Tuesday morning at 8:30. So be safe, and I'll see you
 them.

(Whereupon, the jury leaves the courtroom.)
 THE COURT: I will need tomorrow morning -- and
 consider that an order, because my suggestions don't seem
 to get carried out very well -- I need some authority for
 your instructions, and I'll need it by tomorrow morning, or

217 1 I'll assume you have no authority for those instructions. 2 I've never seen some of them before, so I need some 3 assistance. 4 MR. MADSON: Do you need that in writing, Your 5 Honor, or could we just come in --6 THE COURT: Yes, sir. I want you to give me 7 citations, just like you're supposed to --8 MR. MADSON: Okay. 9 THE COURT: -- at the bottom of the proposed 10 instruction. 11 MR. MADSON: That's fine. 12 THE COURT: Will you have some application to make tomorrow morning? 13 14 MR. MADSON: Yes. There will be some other things. We have a few evidentiary matters to clear up, and 15 16 there's still that motion, I think, that I filed that 17 hasn't been addressed yet with regard to striking the 18 testimony of Lt. Commander Falkenstein. 19 THE COURT: We can argue that motion tomorrow. 20 MR. MADSON: Yes. That would be fine. THE COURT: I would like you to focus on a couple 21 22 of things, and one is whether or not these lesser includeds you're asking for are truly lesser includeds. I need some 23 authority to establish whether reckless driving and 24 negligent driving is a lesser included offense of driving 25

while under the influence, or is it a lesser included of
 one of the other charges of information, or --

MR. COLE: Uh --

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THE COURT: I don't know, so maybe you can do that in the form of a memorandum, with points and authorities.

7 Also, the question of whether or not factual 8 impossibility bars the jury from considering what Captain 9 Hazelwood did do in efforts to remove the vessel from --10 the evidence on him trying to remove the vessel from the 11 reef, and what might have happened had he been successful, 12 bars that from the jury's consideration of the crime of 13 criminal mischief in the second degree and reckless 14 endangerment.

MR. : I thought we filed something on
that already.

THE COURT: I need more assistance from the State on that, to be frank. I haven't got anything from the State on that one yet.

And then the final area of concern that I'll need some assistance on is whether or not the vessel in the condition it was on Bligh Reef after Captain Hazelwood shut the engines down for the final time was a vessel that was used, or capable of being used, for transportation or navigation. (Pause)

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2 Now, so you can figure out who should be doing 3 this research, Mr. Cole, it's my inclination to give a jury 4 instruction to prevent the jury from considering as 5 evidence of recklessly creating a risk of damage, Captain 6 Hazelwood's efforts trying to remove the vessel from the 7 reef, or what may have happened to the vessel, based on 8 factual impossibility and based on those two New York 9 cases. I've found no other case law that suggests 10 something to the contrary.

11 It's also my inclination to restrict 12 consideration of the driving while under the influence of a 13 water craft, to events up to and including the moment he 14 shut down the engines for the last time, but after that, 15 after he shut the engines down for the last time, it's my 16 inclination not to consider any actions by Captain 17 Hazelwood to be used by the jury in determining the driving 18 while under the influence.

Also, the same for the reckless endangerment, the factual impossibility barring that from -- barring the jury from considering what Captain Hazelwood did in trying to extract the vessel from the reef, or \_\_\_\_\_.

Is there anything we can do right now before we
 recess until tomorrow?

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MR. MADSON: Just as a starting point, Your

<sup>1</sup> Honor, I think I can offer some assistance to the Court on
 <sup>2</sup> the lesser includeds, for what it's -- it's State v. Kamo
 <sup>3</sup> (PH). I'm trying to find the citation. I have it here.

THE COURT: I don't mean to put you at some burden that's difficult for you, but I need a brief with points and authorities.

MR. MADSON: Your Honor --

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8 THE COURT: I understand you're living in 9 Fairbanks, but you've got two able counsel with you. I 10 don't know how you're going to do it, but I need a brief 11 with points and authorities on it, not some citations or 12 some Xeroxed copies. I need some argument on this.

MR. MADSON: That's fine, Your Honor, but able MR. MADSON: That's fine, Your Honor, but able counsel aren't able to type, and we've lost our support Staff due to an emergency. She's not coming back until late tonight.

<sup>17</sup> So we'll do the best we can. I'll try to find <sup>18</sup> somebody.

THE COURT: All right. Well, that's something that will be probably more meaningful on Monday morning to look at than it will be tomorrow.

MR. MADSON: Okay. That's fine. If we have to Monday, that's plenty of time, Your Honor.

THE COURT: Monday morning.

Is there anything else we can do?

MR. : No. THE COURT: Okay. We'll stand in recess at this time. THE CLERK: Please rise. This Court stands in recess, subject to call. (Whereupon, at 1:50 p.m., the hearing recessed.) 

SUPERIOR COURT ) Case No. 3ANS89-7217 Case No. 3ANS89-7218 ) STATE OF ALASKA ) I do hereby certify that the foregoing transcript was typed by me and that said transcript is a true record of the recorded proceedings to the best of my ability. ALEXANDRA TOMALONIS