IN THE TRIAL COURTS FOR THE STATE OF ALASKA

THIRD JUDICIAL DISTRICT

AT ANCHORAGE

STATE OF ALASKA,

Plaintiff,

vs

JOSEPH HAZELWOOD,

Defendant.

No. 3AN 89-7217; 3AN 89-7218

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BEFORE THE HONORABLE KARL JOHNSTONE
Superior Court Judge

Anchorage, Alaska
March 1, 1989
8:40 a.m.

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THE CLERK: The Superior Court for the State of Alaska, with the Honorable Karl S. Johnstone presiding, is now in session.

THE COURT: You may be seated. We will resume with the cross examination of the witness. You are still under oath, Captain Beevers.

ROBERT BEEVERS

recalled as a witness, having previously been sworn, upon oath, testified as follows:

CROSS EXAMINATION OF CAPTAIN BEEVERS, CONTINUED

BY MR. MADSON:

Q Good morning, Captain Beevers.

A Good morning.

Q Just before the volcano interrupted us we were at the point where the ship was hard aground, correct?

A The ship was aground, yes.

Q Well, do you got some questions about whether it was hard aground or not?

A Not after reviewing all the information we have at this date, no.

Q We'll get to that in a minute. First of all, sir, I believe you acknowledged that the conditions at the time of the grounding, it was dark?

A Yes.

Q And the ship had come to a stop. The engine was still running?

A Yes.

Q Now, at that point, would you agree, certain decisions had to be made?

A Yes.

Q You know, relatively soon?

A Yes.

Q The captain didn't have the luxury of sitting back and analyzing things for a period of week or months, right?

A That's correct.

Q He had to do it now? One of the things we talked about was soundings. Soundings on a ship of this size is a very time consuming process, is it not?

A It would be relatively time consuming compared to a smaller ship, but it's something that could be done with the personnel he had, that he could have had soundings taken, yes.

Q What about knowing the ship's load condition. Is that important?

A That's important. I think he had the chief mate checking that.

Q The tide was rising, was it not?

A Yes.

Q Between 12:00 o'clock -- 12:07 and high tide, how much difference in tide would there be? How much rise in tide?

A I would have to look at a graph to tell you exactly, but...

Q Did you look at one before?

A Yes, I would say the tide was coming up two and half, three feet, something like that, in that length of time.

Q Between...

A Yes. It was a 12 foot tide, and I would have to look at the thing to get the exact...

Q Maybe we could find that.

A Let me see that, and I could...

Q I believe it's a plaintiff's exhibit.

A That should be the a.m. of the 24th.

Q Let me hand you both Plaintiff's Exhibit 123 and 124. One appears to be for Thursday and one for Friday. So maybe between the two of them.

A Okay. According to this, at midnight, the height of the tide was just under 10 foot, and at high tide it was going to be approximately 12 1/2 foot. So, roughly two and a half feet the tide was coming up.

Q And the draft on this vessel was what?

A Fifty-six foot something -- 56.

Q So would you agree it would be rather difficult to know just what affect the rise in tide is going to have on your grounding -- on your condition?

A It would be something to check, yes. Something to keep an eye on and worry about and consider.

Q But there's certainly no way of checking that, is there?

A At that point there is no way to know if it is going to have an affect or if it isn't going to have an affect, no.

Q So there's no way to know for sure whether that tide was going to cause you to lift off the reef or not, because the water level's rising?

A The -- it would be a hard decision to make. The only thing that you would have indicating -- would be, once you got your information back from

your computer on the load, and what you had lost in oil, what you gained in water. You might determine then that you had enough weight that it wouldn't bother you, but it would be something you would need to look -- you couldn't make that decision at once from the bridge, no.

Q And, of course, if you were awaiting the information from your chief mate on a computer analysis, that takes time, too, does it not?

A Yes.

Q It isn't something that's done immediately?

A No, it's not instantaneous, it takes a few minutes.

Q And if you were concerned about floating off the reef, wouldn't you agree that it would be better to have your engines running and available?

A With that particular -- with a diesel engine you could stop it and still have it available, it's just a matter of moving the throttle to start it from a dead low, or slow, or full ahead, whatever you want.

Q You mean, if the engines are full stop, how long does it take to get it started and get it up to some kind of speed?

A To get it up to some kind of speed your talking -- with the propeller you're talking just a matter of a few seconds. It just depends on what speed you want to get up to.

Q Let me ask you about this then. In the sequence of event that occurred between the grounding at 12:07 according to your time, and the time the engines were stopped at 12:20?

A 12:20, I believe.

Q You evaluated the information you had from the state of Alaska regarding the captain's decisions and what he did, right?

A Yes.

Q You know that after the grounding he told the mate to get a fix immediately?

A Yes. And that's a correct thing to do.

Q Because if you needed help you need to find out where you're at?

A That's right.

Q Do you agree to calling the engine-room to check if the engines were okay and everyone was okay down there?

A That's a correct move, yes.

Q Shutting down the engines in a relatively short period of time, is that correct?

A That may have not been a relatively short period of time, but that could be explained due to the confusion. I really didn't find that much fault with leaving on that long. I think he could have probably stopped them earlier, but that's not -- you know, that's one of those things that's decided at the time under the circumstances. I wouldn't...

Q That's one of those judgment calls that you gotta decide this first or that first, right?

A Yeah. But the engine would be something that most people would want to stop as quickly as possible.

Q Well, from the grounding to the stop, what were the engine orders on that?

A It was on full ahead when they grounded somewhere in here, and then they went to half ahead at 18 minutes. They continued on full ahead from 05 until 18 minutes after. They went to half ahead at 18 after; slow ahead; dead slow and then stop.

Q The engines were gradually slowed down to stop?

A From 18 minutes until -- yes, two minutes. So they went full ahead from 7 minutes until 18

minutes after.

Q And the engine at the time of the grounding was on the load program up, right, on the computer program?

A Yes.

Q So that wasn't really full ahead, when you say "full ahead" there? That was full maneuvers, right?

A It was on the...

Q A little bit beyond full maneuver?

A This was at -- it was -- at 24 after it was still on 4 left. At 005 it was up to 61. So it was a little above normal maneuvering speed.

Q Yeah. But when you say "full speed"?

A No, it wasn't up to full sea speed.

Q Full sea speed was what? How many knots would you say in that condition?

A Well, in that condition, I would say around 16 knots. That would vary with weather and whatever, but somewhere near 16 knots.

Q Then he called the captain also asking the chief engineer to sound the void spaces and check the ER tanks?

A Engine-room tanks.

Q Engine-room tanks.

A Yes, that was the correct move to make.

Q He also asked if the engines were okay and could be used?

A That's a correct move to make, yes.

Q What about preparing to lower -- giving an order to lower the life boats down to the de-embarkation deck, I guess it's called.

A That apparently was done, but I didn't determine just at what time. It seemed to me that was done a little later in the -- I don't think that was done immediately.

Q But you don't know that for sure?

A That was later.

Q Well, "later" -- later from when?

A The information that I have, it was never decided, but it wasn't anything that was mentioned as being done early on. This was done after they got everything else done and got finished with the engines completely, I believe, or something. It was not something done in the first 10 or 15 minutes.

Q Was it done, would you say, within 15 minutes?

A I have no opinion as to how soon it was done. I think it was done much later than that, but I don't have a definite time.

(1087)

Q And you weren't here to hear Chief Mate Kunkel's testimony?

A What I read of his testimony, I believe that they talked about getting things ready at 12:30. But he didn't -- I mean, that was the -- the discussion was to get some fire fighting equipment out and get the boats ready, but there was not indication that they immediately did this.

I checked on the statements from the unlicensed crew and apparently they sat around in their rooms. This would have been a good time to have them out at 12:30 getting this ready, and there is no indication that they did.

Q Who sat around in the room?

A That's what Mr. Radtke, I believe, said in his statement; Mr. Claar and Maureen Jones and Kagan worked on the bridge. And the other two crew members, there was no mention of them that I recall.

Q Once again, when somebody is present at the time, they would be in a better position to judge the condition of the vessel as to whether or not it was a life or death situation, and we better

abandon ship, or if things are stable enough, we could sit here and wait for awhile until we get a determination, right?

A The thing is, in a situation where you severely grounded your vessel and you are leaking oil at the rate that they were leaking oil, it is an extreme emergency. It is a situation that you want to be prepared for and you want to be prepared as soon as possible.

Q Well, I guess your criticism is, from the information you have, you think the life boats could have been lowered sooner than they were?

A The life boats and the fire fighting equipment could have been readied a lot quicker than it was, yes.

Q When you say "a lot", what are you talking about?

A It should have been -- that should have been up there right after -- or in conjunction with such things as sounding the engine-room spaces and determining the cargo tanks. You have the second mate that apparently -- if it was used, it was used by itself. You have all your sailors and crew. You could have had them doing various things at the same time. You don't have to do it

one step at a time. There's people on there -- the people that have been trained -- people that should be able to do those jobs, and you should use them.

Q And they did those jobs, didn't they?

A Eventually.

Q Well, how about -- I think you said, the day before yesterday, that you would have sounded the general alarm.

A I believe I would have, yes. And used the PA system to announce that we have grounded the vessel; don't panic; report to such and such a place. Then you could use your people. From there you could have an officer tell them -- explain to them about all the safety procedures you want followed at that time and what you want them to do.

Q And you say you believe that, but you, from that statement can't say you're absolutely sure if that was done?

A Like I said at that time, if I didn't sound the general alarm, and if I had opted to send an officer around to tell the crew, I would have aroused them from their rooms. I would have had them go to a central place where you could use

them to work. Give them a job at that time. There was a delay in using the crew to assist in preparing for this possible -- or, this emergency underway and prepare for further damage. And they weren't used at that time.

Q You said there is a PA system available on the ship, right?

A Yes.

Q I mean, you could get on there, in seconds you could inform everybody of what to do?

A Not necessarily. If they're asleep they may not hear it. You sound your general alarm; you muster the people. The general alarm will normally wake everyone up. But the key thing that they didn't do, whichever way he called them -- the key thing they did not do, was they did not check to see that, in fact, everyone was woke up and everyone knew the danger; everyone knew what should be done.

Q Well, let's see. You will agree the captain was pretty busy on the bridge, was he not?

A Oh, yes, yes.

Q He gives an order to the third mate. He says, "Go wake up everybody up; tell them we're aground, stand by." Would you agree that he is

giving a command someone that he would expect to carry it out?

A He got it that far and he should have had -- he should have ins -- had the third mate check the people, or he should have -- and someone certainly should have asked the third mate to give a report, or -- there's got to be a way, because invariably when you call a group of people you do not get them all up. I found that out from experience.

You send someone around to wake the crew up for such things as clearing the ship coming back from foreign, and invariably there's one or two missing. So you should have a muster list and check that you got them all up.

Q Once they're all assembled in the room it wouldn't take very long to see who's missing; go back and get them, would it?

A Sometimes in cases of explosion or fire you don't have time to go back to get them.

Q Explosion or fire he wouldn't have time to do anything, would he?

A But you'd have them all up and out at that time.

Q Unless the explosion or fire happened to kill

everybody that was in that particular area?

A That's a possibility too, yes.

Q Well, what we're talking about here is possibilities?

A Yes. Right. Yes.

Q You notified the Coast Guard?

A Yeah. At -- a little -- yes, at 26 after, and that would be reasonable with everything else he's doing first. I have no objection with his notification of the Coast Guard at all, no.

Q He told the second mate to walk the anchors out to the water line. Remember that?

A That come quite a bit later.

Q Still it's something, in case you're going to have to secure your position, you want your anchors down?

A Yes. But the anchors weren't walked out until considerably later. So that's no problem either because, as you say, they had other things to do. When they decided not to go anywhere then it was obviously time to walk the anchors out.

Q Would you agree, sir, that at 12:30 the chief mate told the captain that he had run an analysis and at that time the computer analysis said we are stable, in the sense that you couldn't go to

sea. couldn't go past Cape Hinchinbrook. But it would be at least safe if you got off the reef?

A He gave him that report, yes.

Q Would this cause -- would this, in your opinion, then, give Captain Hazelwood any certain degree of confidence, maybe small, maybe great. But some degree of confidence that if he did get off the reef the vessel was not going to capsize or sink at that point?

A Well, when I -- if I woulda looked at that I would have realized that you have several tanks that's got liquid in or out that's different, and I would be suspect of the computer printout. And I would use that as part of my determination, but I would also consider that the tanks that had lost so much oil would be the overriding factor and I wouldn't consider it an accurate piece of information as far as being safe to take the ship off the reef, no.

Q So you would have to take that analytical piece of information and balance it against your subjective judgment, experience and everything else...

A Yes. Yes.

Q ...and make your decision?

A Yes.

Q And, of course, Captain Hazelwood was in a position to see what was going on, but you were not?

A That's right. Yeah.

Q But based on that information you agree that that's something you would want to know.

A Oh, yes. I would want to know what he had -- what the chief mate had worked up, and I'd certainly use that in making a judgment call, but I wouldn't depend on that solely, no.

Q But at least in part that would cause you to either have a feeling that the risk involved is reduced, because you have one more piece of information that says, "Hey, if we get off the reef we're going to be stable."

A I'll agree that I would have one more piece of information; I won't agree that that would cause me to feel more secure in it. It would give me what I would consider a little more insight as to what all the problems were that I were facing, but that's...

Q You've got a number of problems and use all the information available from whatever source, drawing on your experience, things like this,

right?

A Yes. Your experience and your judgment of what the condition is at the time, yes.

Q And, of course, your prior grounding experience was in mud, never on a rock, right?

A Right.

Q So if you never had the experience before, that makes it a little more difficult to judge the situation completely accurately?

A Oh, yes, it does.

Q Now, one other thing, your opinion, you said Captain Hazelwood was reckless because he was trying to get off this, and not knowing whether the ship was going to capsize, or sink, or cause damage, right?

A Uh-huh (affirmative).

Q Why didn't he back up; go astern? There's no astern orders on there, is it?

A There's no astern orders there, no. What I based my decision that he was trying to get off the reef on is statements to the Captain of the Port while he was maneuvering ahead, during the time he was maneuvering the vessel full ahead, and the statements he made upon the first investigating officers come out.

In both cases he stated he was trying to get off the reef in various terms. And I had no reason to think that he, at that time, would be lying to the Coast Guard or the Captain of the Port when he's talking to them. I would think that whatever he told him would be what he was doing and what he felt at the time.

Q And maybe by telling that to the Coast Guard he was trying to alleviate some of their concerns that the vessel wasn't really in peril. That things were going to be okay. He's going to get back to them -- "I'm going to assess the stability, I'll get back to you.", things like this?

A It seems to me that all the way through the grounding that Captain Hazelwood tried to minimize the scope of the emergency.

Q Okay. Now, would you agree, sir, that if you run aground, the ship was going forward, just instinctively, you would want to try -- if you are going to get away from that situation, instinctively you'd want to go astern.

A If I ran a ship aground, instinctively I would stop the engine, and I would survey the situation. That's...

Q But my question was not that, what you want. If you instinctively wanted to get off the reef -- away from it?

A Yeah, I don't think I would instinctively want to -- I mean, you're asking me a question that I don't...

Q You ram into something. You say, "I want to get out of here." What's your first reaction? "I go forward and I stop. I got deep water astern."

A I don't think that an experienced captain would do that. I think that everyone has thought about these disasters. You try to avoid them naturally, but I think that they -- I don't think you would have that instinct. No, I think that if you went astern it would be after considering all the possibilities.

Q In all that time, Captain Hazelwood, in your opinion, was trying to get off this reef and never once tries it astern, when he can't move it all going forward.

A You look at where he's at and the majority of the reef is behind him. The shallower part of the reef, according the chart that's available to use, is behind him, ahead of him is deep water.

I would think that if he made a decision to get off the reef, which he said he made that decision, I would think that he would be trying to do it in what he would have determined would be the best fashion. And apparently he determined going ahead was.

(1587)

Q But if you make that determination and you spend that much time -- the time involved in trying to go ahead and you're not having any success, you have no reason to believe that ship moved forward at all, do you?

A Not significantly, no. We discussed that yesterday. No, not...

Q By significant we can't even talk about a foot, can we? Say for sure it moved a foot?

A We can't say it moved -- I'm sure with that much action and that much turning it moved somewhat, but whether it's inches or yards, or something, but it wasn't significant. That's...

Q You had a lot of discussions with the district attorney about this concern -- about him not going astern, didn't you?

A We discussed it, yeah. The same thing, I don't think that a master would automatically

just gone up to the bridge and threw his vessel astern instinctively.

Q Well, whether he did it automatically or not, given the time available to him and the ability to assess the situation, the acknowledgement that he could not go forward -- would you, in that case say, not instinctively, but in a thoughtful manner, say, "I can't go forward, I better try going backwards."

A In that situation he would have looked and seen most of the reef was behind him. You don't have as much power when you're backing -- your vessel is not as -- if you do get loose or not, it's maneuverable. And if he -- I would have though that if he instinctively wanted to go astern when he tried to get off the reef, he would have...

Q Okay. I didn't mean to interrupt.

A Yeah. Go ahead, that's all right. Well, my next question was, in your opinion he was very determined to get off that reef and he was going to do it in a forward manner, right?

A That seems to be the indication of everything, yes.

Q Okay. Then in that situation, would you not -

- would you agree that Captain Hazelwood would want to use all the power available to him to get off the reef by going forward?

A Not necessarily because you are in a situation like that -- there, again, he hasn't really studied it, he just started ahead. And if you're going to use full sea speed for the -- load the program up, you're talking about another 40 minutes to get up to sea speed.

And I would -- if I was aground and I can't foresee any time that I would have ever wanted to use full ahead, but if I had I would have never considered sea speed until I tried everything else.

Q Okay. Trying to go off the reef, going forward, he would have to use a certain amount of thrust to get him off that stuck situation, right?

A Yes.

Q Now, you could certainly get off the load program up by simply pushing a button?

A Yes. It's easy to -- it upsets the engineers. The engine is built to increase slowly and reduce speed slowly, but, yes, you could -- at any time you can go from full sea speed to maneuvering

speed quickly.

Q And the engineers might be a little upset by this time anyway, right?

A Right. They might be. Yes.

Q Now, that little thing isn't probably going to cause any more concern.

A Yeah.

Q Okay. So then you have whatever power that engine can generate at your disposal to use by going forward, right. How much power did Captain Hazelwood utilize on the Exxon Valdez to get off that reef, considering the amount of potential power you had available?

A He had it on full ahead maneuvering.

Q Well, how much horse power is that?

A That I don't know. You'll have to get a chart out here and I could tell you, but I'm not -- I never checked the horsepower. I didn't enter into that -- that didn't enter into my decision on the fact that he was trying to get off the reef.

Q How much total available power did he have?

A I believe 31,000, something like that; 31,600, is that right? I mean, I'm thinking...

Q Well, let's assume that's correct.

A I'm thinking from memory now. It's been a while since I looked at that.

Q Assuming, sir, you're correct, it's in the neighborhood of 32,000, let's call it.

A Something like that.

Q In that situation, my question was, did you calculate or did you make any determination of what a power he was generating at 55 rpm's?

A No, I didn't. I didn't make a calculation to that, no.

Q Would you agree sir, that the -- well, first of all, the engine -- there's curves for -- horsepower rpm curves for engines, are there not?

A Uh-huh (affirmative).

Q As you increase rpm horsepower -- well, if we go rpm, let's say on the baseline, horsepower vertically. There's an increase in horsepower as the speed of the engine is increased?

A Yes.

Q Is that a linear type of progression or is that exponential in a low speed diesel engine?

A That I don't know.

Q And you do not know, sir, that Captain Hazelwood at 55 rpm was using less than a third of the available horsepower that he had?

A That would be reasonable, but I don't know for sure what it is. But it wouldn't be to the maximum that you would have at full sea speed, no.

Q But still it would be in that neighborhood of a third of its available power, at 55 rpms?

A I wouldn't want to hazard a guess on that, but it would be well below sea speed. But that doesn't alter the fact that from every statement that he made and every maneuver he made with the rudder, and the fact that he was not trying to get the ship off the reef.

Q You don't think that's inconsistent with trying to get off the reef when you're using only a third of the power you have available?

A Not when he stated several times that he's trying to get off the reef. I would take the -- I had no reason to believe that Captain Hazelwood would lie to the Coast Guard. I've got no reason to believe that he would tell him anything, other than what he's trying to do.

Q Sir, yesterday you said you disbelieved certain witnesses since -- Mr. Cousins and Mr. Kagan with regard to the autopilot?

A I said I -- I said that I -- from the facts

that I could see, that they couldn't have done what they said they done. That's disbelieving them. But I don't see anything in what Captain Hazelwood did that leads me to disbelieve what he told the Coast Guard.

Q That Kagan and Cousins couldn't have done what they said they did by turning the autopilot off?

A They could not -- during the time they had, the vessel on 180, they could not have made -- put the rudder over before -- shortly before they started their turn, because the vessel would have turned.

Q Because the autopilot was on, right?

A If the autopilot was on it wouldn't turn, it would have to be off, yes. I mean, there's an inconsistency in their statement. With Captain Hazelwood telling the Coast Guard, "I'm trying to get off the reef.", and his maneuvering the vessel. I don't see any inconsistency there.

Q Well, let's try it again. You say there's an inconsistency -- or, is there an inconsistency between Kagan and Cousins' testimony that they turned the autopilot off and the vessel didn't turn because perhaps the order wasn't given or the turn wasn't made? That's consistent, isn't

it?

A Yes. What -- there's something that didn't happen there, obviously, or else they would have made the turn.

Q If that theory is correct, then -- or, your theory about the autopilot to be correct, you have to say, "Well, then we have to disbelieve Kagan and Cousins. That autopilot must have been on and they didn't tell the truth."

A You have to believe that their statements at that point -- now, the rest of their statements may be true; they may be confused at that point on what they said. But from my findings, they did not get the rudder to go 10 right when they said they did, whatever -- for whatever reason.

Q Well, sir, I don't believe there's any dispute as to the fact the rudder wasn't turned.

A Right. Yeah.

Q But then getting back to this situation, you want to say just the opposite. You want to say, "I'll believe Captain Hazelwood, that's what he said. And then I will discount everything that he did, or a lot of what he did."

A I'm not discounting -- what I base my decision that I though he was getting off -- he's on the

edge of the reef heading in the direction to get off the reef, first off. Behind him is a marking there of approximately five fathoms behind him. He's put the engine on full ahead maneuvering, which seems like an intention to go ahead. He's used the rudder a total of, I believe, 16 times the heading change, so that would indicate at least 16 rudder commands were given. That would indicate to me that he's trying to get the ship to move free from whatever he's on.

Q Or not some indication to find out if his position is such that he could either turn the vessel one way or the other.

A Well, without taking soundings around -- to get back to the soundings again, if he's turning the vessel like that and moving the vessel from one -- swinging the vessel, he runs the risk of further holing either his cargo tanks or the engine-room from either side as the vessel was rotating on this rock that it's impaled on.

Q On that point, sir, do you have any specialized knowledge about salvage operations or anything like that? How do get ships off the reef?

A I've never done it. I have no specialized

knowledge in that field at all, no.

Q Well, let me ask you, have you ever run across any type of equations or anything, any studies, as to when it would be physically impossible to remove a ship from a grounded condition, because of the co-efficient of friction, the force that's on the rock or the mud, or whatever?

A No. I have never done that. I don't know of anyone that would be able to determine that from the middle of the night on a ship stranded on a reef, no.

Q Well, let's do it now in the courtroom. Let's talk about it right now, 11 months later.

A Okay. I am not a salvage expert, I'm a tanker captain. I never sat down to try to figure -- I didn't assume -- when I was interpreting what Captain Hazelwood did, I didn't assume that he knew that he could or couldn't get the vessel off the reef. I assumed from every indication that I had that he was making a maneuver to do what he said he was going to do, and that was to get the vessel off the reef.

Q What if he couldn't get the vessel off the reef. Did you consider that? No matter what he did it simply wouldn't move.

A Well, that's what happened. And so then eventually they stopped and went through other things.

Q And you don't have any dispute with any conclusion or finding by anybody else, that no matter what he did, that vessel could not have been removed from that reef at that time?

A That's probably -- I don't know for sure, but I would assume that that's probably true. That doesn't mean he wasn't trying to get it off at that point.

Q Very true, sir. But doesn't that -- if there's a risk involved, as you said earlier -- there's a risk -- the ship did get off, it would either sink, the damage would cause more oil to spill, things like this. There would be that risk if you get off the reef, right?

A There's that risk of further damage just trying to get off the reef.

Q But if the ship didn't move...

A Well, if the ship didn't get off the reef, it -- obviously, if it stays on the reef it's not going to sink or capsize, but in his maneuvering at that time, he had no idea whether it would get on or off the reef.

Q Okay. But you have no evidence whatsoever to indicate that any damage whatsoever -- additional damage was done to that ship by any maneuver he made after the grounding?

A I have no evidence that any damage was -- any additional damage was done. My statement was that he risked doing further damage by his movements. Now, to -- apparently most of the damage was done during the original grounding. That doesn't mean that he didn't risk doing further damage when he was maneuvering the vessel.

Q You've certainly had a lot of time to talk to Mr. Cole about this risk factor, haven't you? You knew you were going to be asked about this, didn't you? Did he tell you about that?

A I talked to Mr. Cole about this. I don't recall any specific questions or statements or anything, no.

Q He didn't tell you you were going to be questioned, perhaps, about the risk involved? Whether any damage was done, or could have been done?

A When we first went over this we were talking about this, and one of the things that he asked

me was what the risk would be in trying to get off --the maneuver to get off the reef and I told him. This was a while back, yes.

Q There's a risk involved in trying to get off the reef, right?

A Yes.

Q There's a risk involved if the vessel would move to cause that to happen, correct?

A Yes.

Q If it did not happen, then there may have been a risk, but the risk would be very substantially reduced, would it not, if it was physically impossible to move the vessel to cause the damage?

(2234)

MR. COLE: Judge, I'm going to object. Mr. Madson is going into an area of the law that this person is not qualified. He's giving him a question that goes to the instructions that the court is going to give.

MR. MADSON: Well, Your Honor, if the witness isn't qualified then I'd ask the court to strike all his testimony, because that's exactly what he's been testifying about.

THE COURT: Form of the question; sustained.

Q (Captain Beevers by Mr. Madson:) Captain Beevers, if I were to tell you -- if I were to go over to that wall and there's people next door, and I'm going go say, "I'm intending to push this wall over on those people and kill them.", do you feel there's any real risk involved in my doing that? With the available power that I have, and obvious strength of that wall?

A The only risk that you may be locked up, yes.

Q I'll be the first one to go.

A You know, that's...

Q Yeah, it would be impossible.

A But this is after the fact, as far as the fact he couldn't get off. At the time Captain Hazelwood did not realize that the vessel was -- that it couldn't get off. I'm sure that that was something that naval architects sat down and figured out over a period of time at a later date.

Q Let's assume, though, that I really believe I can do that. In my mind that's my intent, I believe I can. But I still can't, right?

A That's -- yeah.

Q No matter how hard I believe and how much I want to do it, I can't do it.

A I don't believe that's a good analogy -- you know, that's a good reference to the ship being on the reef.

Q Well, I'm talking about the actual potential of something occurring; the degree of risk involved. I'm talking about that situation.

A Okay.

Q And we don't know and you don't know that this ship moved one inch, that it created any additional damage, or even came close to it after the grounding.

A No, I don't know that there was any additional damage, no.

Q Let me ask you something else, but I think I may have to draw a diagram. I'm going to ask you, Captain Beevers, about floatation of a vessel such as the Exxon Valdez.

Now, sir, let's assume that this is a glass, sir -- some kind of a tumbler. Let's assume it's a glass. If you were to invert that and put that into water, it would go down to a certain level, and assuming it would stay stable and turn over, it would essentially float, wouldn't it?

A Depending on the weight of the glass, yes.

Q In other words, the air in here is trapped?

A Yes.

Q And the water is here.

A Uh-huh (affirmative).

Q Would you agree that that's somewhat analogous to the Exxon Valdez or an oil tanker?

A Close to it, if there's no bottom, yes. That would be...

Q Assume, of course, the tanker has a bottom.

A Yes.

Q Now, what if we put a -- let's say a vent here. Now, if you could vent the air away, that would allow the water to rise, or the tumbler or the ship to sink, right?

A Uh-huh (affirmative).

Q Now, at the risk of over simplifying, I would ask you, then, in the Exxon Valdez, or a tanker like that that has tanks which are essentially sealed.

A They're closed up, yes. You have a -- these tanks are sealed from the atmosphere by the -- being closed up and they do have their inert gas system which is sealed off from the atmosphere by water seals, yes.

Q And one way of reducing the -- or, increasing the draft and decreasing the buoyancy of the

vessel, is to open valves and allow water to come in, or oil, or whatever, and allow, then, the vessel to sink, right?

A Yes.

Q Do you recall the testimony of Mr. Kunkel, the chief mate?

A Yes.

Q Do you recall him saying, "Well, earlier on I thought the captain was trying to get off the reef, but then when I realized he was giving me these orders or making these requests, I knew he wanted me to make sure we could get the buoyancy reduced to settle on the reef."?

A He -- from what I remember reading, he asked him to do some calculations on that, yes.

Q And Mr. Kunkel agreed that what he was trying to do, in his opinion, was to be ready in case the tide was coming up, the vessel was going to -- actually going to go off -- he wanted to be ready to flood tanks and settle on the reef.

A This was one of the scenarios that he was working up as an option to do with -- you know, in finding out what they could do and what they couldn't, which is in the scope of what they should have been doing, yes.

Q That's in the scope of what should have been done?

A Find out their options, yes.

Q Now, getting back to the -- and I'm hopefully finally done here -- getting back to the bridge situation prior to the grounding, okay. Let's say from 11:55, 11:56 to oh, 6 -- let's say 6 minutes after, something in that period.

Would you agree sir, that there was -- would there be a period of time after which, no matter what anybody had tried to do, the vessel was going to run aground as long as it remained on that course at that speed, under our situation? I don't mean to confuse you. What I'm saying is...

A Actually, if it remained on 180 there's a possibility it would have skimmed down behind it, but they already started their course change by that time, and at that point it was too late to keep from running on the reef, yes.

Q Right. The facts that the course hadn't changed, there was a good possibility it could have made it to the east of Bligh Reef?

A Something nobody would ever attempt to do, but, yes.

Q Would it raise a little anxiety problem?

A But at that point, when they started the swing, there is no question that they were beyond...

Q So there was, say, what? Six minutes, would you say, from the time the vessel was supposed to turn. At least Captain Hazelwood thought it was turning.

A Five to six minutes, yes.

Q So he thought -- there was a point in time for five or six minutes, he thought it was turning, then you reach that point, no matter what he or anybody else did, it would have been too late and it was unavoidable, right?

A Yes.

Q Okay. Now, with regard to his actions on the bridge and your opinion concerning them, did you use the same thought process and degree of objectivity on that as you have with the grounding situation? Just as objective in your analysis in that case as you are with the grounding?

A I would think so, yes. I don't quite understand what you're driving at, but I looked at everything and, you know, did the best I could

to be fair and impartial in what I decided, and, yes, I would say I was objective in that.

Q And you had to use different degrees of expertise, would you say, in either situation, both -- you know, one, a grounding is a little bit different than being on the bridge?

A Yeah. I know more about maneuvering a vessel than I do about getting one off a reef, if that's what you're...

Q Yeah.

A Yes. Because of my experience as a ship's master, not as a salvage master, yes.

Q And you still, even with, would you say, is less experience and less knowledge about getting ships off a reef, you still came to some very firm conclusions and opinions, right?

A Yes.

Q And you're just as firm based on the same degree of how you approached the situation and how you look at it...

A Yes.

Q ...in the grounding, as you were, on the bridge situation, right?

A Yes.

Q Then your disagreement -- or, what you said

Captain Hazelwood really did wrong was leaving the bridge, right?

A That's what caused this. If Captain Hazelwood would have stayed on the bridge, as he should have, due to his pilotage, and due to the fact they were in these close quarter situations, I'm sure that when he ordered the right rudder that Captain Hazelwood has enough experience, could have realized the vessel wasn't turning, and he would have realized it much quicker than a relatively inexperienced third mate. And if it wasn't, in fact, turning, I would certainly assume that he would have realized that before and made the change properly, yes.

Q You're assuming he would have checked to see if Cousins had checked to see if Kagan had, in fact, turned?

A I would certainly thing so, yes. I don't think that Captain Hazelwood would have got to be a master on one of Exxon's vessels if he wasn't competent and able to do that, and I'm sure he would have if he would have been there.

Q And competent master's rely on competent help and competent mates?

A In the proper place, yes. This wasn't the

proper place to leave someone. This is a place the master should have been on the bridge.

Q I assume, then, sir, you would say exactly the same thing if Captain Hazelwood had said, "I've got to go in the bathroom for a while.", and he's there for six minutes and he can't see rudder indicators. But he says, "Let me know when you start your turn."

And Cousins says, "We're starting now, Captain."

A The thing is, you just kinda train yourself not to go to the bathroom at those times. That's...

Q Do you jump up and down?

A Whatever it takes. But normally when a vessel of that size is turning, even with 10 degrees rudder, you can certainly feel a lot of vibration while it's making the turn.

Q Have you ever been on the Exxon Valdez in a turn of 10 degrees right?

A I've been on large tankers for years, and every one I've been on has always -- with a 10 degree turn you could tell a change in the vibration. Every ship, when it's moving, has a little vibration.

Q Every one you've been on, but you haven't been on the Exxon Valdez?

A I haven't been on the Exxon Valdez. But that would...

Q So Captain Hazelwood would have been just a reckless with a bad case of diarrhea and having to go to the bathroom and not being there to see if Cousins watches the rudder indicator or not?

A No one's ever indicated in nothing I've ever read that he had diarrhea, or that he had an upset stomach, or anything at that time.

Q I'm saying, if that had happened. He's not there to see it.

A I'm sure that in a major medical problem, that would be taken into consideration when you're evaluating things. At this point that wasn't part of the information I had.

Q Okay. Let's say it isn't a major medical problem, but to say he was in the bathroom?

A Like I say, normal bathroom functions can be held back for a few minutes, or what have you. And I don't think that leaving the vessel in a tight situation...

Q Well, he didn't leave the vessel, did he?

A Or, leaving the -- he left the vessel in a bad

situation. He didn't leave the vessel himself. But I don't think that doing that -- I don't think going to the bathroom normally -- under normal circumstances would warrant leaving the vessel's con to a third mate in that situation, no, if that's what he did.

Q Then what about the -- there's a chartroom right behind the bridge area, is there not?

A Uh-huh (affirmative).

Q That's normally kept lighter than the bridge. The bridge is kept dark?

A Uh-huh (affirmative).

Q Captains normally go back there, too, occasionally, do they not?

A Yes.

Q And if Captain Hazelwood had stepped behind there and said to Cousins, in effect, "I'm going to be over here for a few minutes doing something, let me know when you start the turn." And he is informed that, "Yeah, we're starting the turn." But he doesn't come out and check to see if that really was done. Would that be the same recklessness?

A If he's in the chartroom he will be able to check by the fact that you'll hear the course

recorder clicking as the heading is changing. This is something that a man with experience would automatically -- if you are in the -- if you would be in the chartroom you'll hear this. You'll know that making a course change -- if you're concerned whether they're going the right way or not, you can tell by looking at the course recorder.

Q And, of course, if that order or that maneuver had been carried out, it wouldn't -- the turn would have been made in plenty of time, right?

A Yes.

Q So, in essence, a master can be on the bridge and yet be in a situation where he is not available and not in a position to readily see whether an order is carried out or not, because of the bathroom, the chartroom, or something like that?

A They -- normally, going to the bathroom is a minute. It's not a 10 or 15 minute thing. He had five or six minutes from the time the course should have been changed until it was too late. And there is no reason not to be on the bridge.

During that five minutes, if he had to go to the bathroom for a minute and back out, or if he

stepped in the chartroom and back out, he still had time to check and see that the course was properly changed. And from your stateroom you can't do that.

Q He's 12 seconds away, but he's vertically away, rather than 12 seconds away horizontally, right?

A Yeah, he's out of -- up on the bridge deck area you're in the realm of operating the vessel. Down in your stateroom you're out of that area.

Q And he would be out of the area, in the sense that you're in the chartroom, you can't see rudder indicators and things like that?

A The chartroom -- the use in entering and leaving the chartroom area from the bridge -- the chartroom is something you do normally in the functions of maneuvering a vessel. That's not -- that's traditionally, and that -- you walk in there to look at the chart or put a position down, and back out -- that's part of the routine.

Q And, sir, lastly, if Mr. Cousins was a competent person -- competent to the extent that all he had to do was look at a rudder indicator, and if he gave a command -- assuming he gave the command to Mr. Kagan, and assuming Mr. Kagan was

competent enough to turn the rudder 10 degrees to the right, and Mr. Cousins told Captain Hazelwood whether he was in the chartroom, bathroom, or even off the bridge and down in his stateroom, that, we're starting our turn -- we're starting our turn. That, you said yesterday, would be an indication that his degree of consciousness or awareness of a risk would be reduced, would it not?

(2989)

A If I said that. I think that if a third mate told you he was altering course at that time, I would think that you could accept that under normal circumstances. However, in their situation this wasn't your usual position, that you have a third mate conning the vessel, where he would be telling you what he was doing. This is a situation where you would be -- as master, would be conning the vessel.

Q And you agreed yesterday, other ships certainly went through the area, around the ice at higher speeds close to Bligh Reef?

A Yes.

Q And you don't know necessarily who was on the con at the time?

A Well, in my looking at them, I don't know specifically names or anything, but they both took frequent fixes which would indicate that there were two people on the bridge.

Q You don't know that for a fact?

A It's certainly an indication that they did, and that's what we're having to work with, the facts that we have. And I don't approve of what they did or what the -- they were on maneuvering speed. Their heading was -- they never put themselves heading behind Bligh Reef or anything, that was a normal maneuver.

Q But certainly the Arco Juneau was reckless?

A The Arco Juneau was excessive in their speed, as far as I'm concerned. They got a little close to Bligh Reef for that speed, and -- but they had fixes regularly. Apparently they had -- as best I could determine, they had two people on the bridge, and I have to assume one of those was the master who had pilotage for that area. They also were right at -- the Juneau, it was not quite dark yet, which gives them a little better visibility than the Exxon Valdez.

Q One second -- I don't mean to interrupt.

A Well, the degree of recklessness there, it's

still something I wouldn't do -- something that I don't think was right. But the captain managed to do it and managed to go on about his business, so therefore it's not -- he's not here today. That's fine.

Q Well, you don't know why he's not here today?

A He didn't run into the reef, that's why he's not here today.

Q Oh, is that why we're here today.

A You know, I mean...

Q Because someone ran into the reef, but the same could be reckless and not run into the reef, and that's okay.

A It's not okay, no. I don't approve of that. But then that's...

Q Well, do you approve of the state of Alaska judging the actions of tanker captains in Prince William Sound and deciding who or who shall not...

MR. COLE: Objection. I object.

MR. MADSON: I'll withdraw the question, Your Honor. I agree, it's improper.

Q Now, you had, of course -- did you talk with Mr. Cole last night or yesterday afternoon after you finished in court yesterday?

A Not much, just a minute or two.

Q Did he indicate that perhaps you should change your mind a little bit about the degree of recklessness of the Arco Juneau?

A No. He asked me why I considered it reckless, and I told him.

Q How many other charts of other vessels have you examined before coming here today?

A Just those two.

Q So you don't know how many other ships, of what other company, Arco, Texaco, Exxon, have executed similar maneuvers and similar speeds in the vicinity of Bligh Reef?

A No, that I don't know.

Q You don't know how many masters did not have pilotage and didn't have a state pilot on board between Rocky Point and Bligh Reef?

A No, that I don't either.

Q I have no other questions.

REDIRECT EXAMINATION OF CAPTAIN BEEVERS

BY MR. COLE:

Q Captain Beevers, is it your understanding -- what is your understanding of whether the regulations with regards to pilotage vessels has changed?

A The way I understand it is the only change from when we originally started up here was the fact that a vessel without pilotage could transit from Hinchinbrook into the Bligh Reef area and back, with approval on a trip-by-trip basis with approval from the Coast Guard. Originally, that was a daylight transit, which now has been changed again by an issue of an order by the Captain of the Port to the fact that it was a two mile visibility and a few other things. They had them put -- you had to have -- do you want the details of what they required, or just the fact -- okay. And that's the only change I know of, is that.

Q Were there any changes to pilotage vessels themselves?

A No, that remained that same.

Q And if you had any questions about what your responsibilities were, as a mater on board a tanker, coming into Prince William Sound, who would you ask?

A You would call the Coast Guard.

Q And how easy is that to do?

A Well, that's exactly what I did after this all happened when I heard that they made some changes

in the pilotage, I called Commander McCall in Valdez.

Q Now, as a captain on the bridge, even in times where you were you required -- are there times that you need to leave the bridge?

A It can happen, yes.

Q Are there times when you don't leave the bridge?

A There is times when you definitely should not leave the bridge, or that I never did leave the bridge, yes.

Q What type of situations are those?

A Okay. Two things definitely is going through the Narrows, and secondly, is if you are maneuvering through or around the ice, or if you have -- if there is other vessels in the area, and if you have to leave the traffic lanes that are over -- close to any land, it's definitely a time for a master to be on board.

Q Mr. Madson asked you about delegating or relieving the chief mate, how a master can take over a chief mate's watch. Are there other ways to do that?

A Yeah. You know, I was looking -- going over that and I was looking, and it seemed to me that

the chief mate had time off between 8:00 a.m. and noon, in his statement. He had time off between 1:00 p.m. and 4:00 p.m., and then truly was up until 10:00.

But it seemed to me that at the time that he would have been coming on watch at 4:00 a.m., that he would have had more rest than Captain Hazelwood during the day. But another way to alleviate that problem is the same as they were doing at midnight when Cousins stayed up to -- a little longer to allow LeCain to have a little rest. There would have been nothing wrong with the two watch mates doing this until the chief mate had had a full night sleep, if that's what he needed.

There wouldn't have been a problem with -- if they wanted him to have eight hours sleep before he went on watch. Cousins could have stood until 1:00. LeCain could have added an extra hour on his watch, and then the chief mate could have came on. It didn't have to be that Captain Hazelwood had to relieve him.

(3541)

As far as I could see, Kunkel had enough rest as it was, he could have stood his own watch.

Q As a master of a tanker, are there certain duties that you do not delegate?

A Yes.

Q What are those?

A You don't delegate your...

MR. MADSON: Excuse me, Your Honor. I'm going to object unless it's clear this witness is testifying only from his personal preference. There is no regulation or law that he's referring to.

THE COURT: He may give his opinion. I take it, in the form of opinion. Objection overruled.

A Okay. You don't delegate your authority when you are maneuvering in close quarters; docking and undocking a vessel; maneuvering in any area where you are close to a danger of the vessel. That's just something that's not done.

When you are a little further out if you have to go below for a couple of minutes and you are transitting through the traffic lanes -- you know, common sense will tell you if you have to go below for a minute or two, that's the time to do it. And I doubt -- it may not comply with the law that you have to be up there all the time, but I think that's acceptable, if something happens you can run below and back up.

Q Who handles the majority of commands during docking and undocking procedures.

A You are directly giving the commands to the -- it depends on the situation. Normally, on the bigger ships, and the way I did it on my ship was the pilot -- if we were in the wheelhouse the pilot would issue the commands to the quartermaster and command for the engine speed change. If we were out on the bridge wing, then he would tell me, and I would use the Walkie-Talkie to call in, so we didn't have to shout and have any misunderstanding with yelling back and forth.

Q How do you find out whether or not a vessel's sailing time has changed when you are in Valdez?

A You can call the terminal or you can call the -- your agent would know.

Q Captain Beevers, would you leave the bridge of your vessel in the Valdez Arm, relying on the fact that if your vessel got into trouble the Coast Guard would contact you and let you know?

A No.

Q Why?

A First off, it's your responsibility to maneuver properly. Secondly, I wouldn't have

that much confidence in their radar plotting. And, you know, you're getting farther off in the distance -- the people manning that I have never met before, would have no idea -- and I've always considered the radar as strictly an advisory to the vessel. Anything that they would say, I would certainly check it and do what I felt was right.

Q Why, in your opinion, is it necessary for a master to be aboard -- be on the bridge when transitting the Narrows?

A Well, you are in restricted waters, a very narrow channel. You're going at a reduced speed. The reason they pick the six knots as reduced speed, that's after tests, they decided that was the optimum speed, that you could still steer your vessel and have minimum damage if you lost steering, and if you lost your plant, would still basically drift on through the Narrows.

And why a master is up there is that any -- you know, it's the tightest place in the Sound and it's a place that if there was a problem, you would want to immediately be able to react, and you would then be able to tell your crew what you wanted them to do and get a response as soon as

possible.

Q Mr. Madson asked you some questions yesterday about when Captain Hazelwood came to the bridge. Does the fact that Captain Hazelwood may have come to the bridge earlier change your opinion about whether he used bad judgment in not being on the bridge through the Narrows?

A No. At that point they were beyond the Narrows at Potato Point, and that doesn't change my opinion, his not being on the bridge at that time was a bad judgment call.

Q In Evaluating Mr. Cousins' and Mr. Kagan's statements, are they in conflict with the physical evidence in this case?

A Yes.

Q And did their prior statements -- were they in conflict with the statements in this case?

A Yes.

MR. MADSON: What statements are we talking about? Prior to what, when, and -- I would like a little more foundation so we could look at that if we had to.

THE COURT: The question's already been answered. You may ask your next question.

(3940)

Q Captain Beevers, once again, why would -- if your third mate brought you a computer program, which he said he ran aground in the grounding mode, why wouldn't you rely upon the stability figures from that?

A If the chief mate...

Q Brings the computer program printout up to you, why wouldn't you rely on it?

A Well, because, obviously looking at the program you would see that you had 2:30 of your tanks ruptured, so you would have to assume that there's a tremendous amount of structural damage to the bottom, which would weaken the integrity of the vessel, and that's what the stress figures are on based on -- that's what your stability is based on, is an intact ship.

And I would take that as fine -- you know, as a piece of information to use, but I certainly wouldn't rely on it as the whole -- to make every decision on. That's just another factor. And I would be very leery of the facts that it showed that it was stable, and the fact that it showed that it could go to sea, or that it could float or anything else. I would just think that the holed tanks are the more important part of that.

Q Would you rely on it to the extent that you would attempt to get your tanker off a reef -- a rock reef?

A No.

Q Were Captain Hazelwood's actions that evening consistent with the statements that he gave both the Coast Guard and the trooper that day?

A I believe so, yes.

Q How important is it to give the Coast Guard important information when you call them?

A Well, it's accepted that you're going to give them the information that is required that they need, and it's important because they're -- at this point they're handling a response team; they're handling notifying the proper agencies and getting equipment out. So you should keep them --give them as accurate information as you have.

(Pause)

Q I'm showing you Plaintiff's Exhibit 29. Do you recognize that?

A Yes. This is the chart of the Busby Island/Bligh Reef area.

(Tape: 3648)

(000)

Q And is that an accurate representation?
A Yes.
Q Do you remember seeing this chart?
A Yes. This has got -- this is the copy, I think, that the Coast Guard picked up, is that right.
Q And when you look at that can you tell where the plot of this vessel was when it grounded on Bligh Reef?
THE COURT: What number are you referring to?
MR. COLE: Exhibit 29.
A Well, they have an arc here and an arc this way (indicating), and it looks like it's either a bearing line -- it's scribbled, but it looks like two possible positions here. There's two dots. But anyway, one of these two dots is -- perhaps they had a range in bearing on each one, and that's the range in bearing, that's the range in bearing. So the position would be either one of those two, or in between, or in that area, yes.
Q And right behind that, what's the depth of the reef right behind that?
A That's five fathom. That's approximately 30 feet.
Q And what else was behind the vessel?

A Reef Island.

Q And what was in front of the vessel that the tanker captain was looking at?

A The traffic lanes.

MR. MADSON: Excuse me. I'm going to object. We don't know the captain was looking at that. There's no foundation for that whatsoever. And he's leading the witness.

THE COURT: Rephrase your question, Mr. Cole.

Q What fathom marks were in front of the Exxon Valdez as she lay at rest?

A Okay. As soon as you get off the reef you've got 22 fathoms, 40 fathoms, 33 fathom. It's -- you're very close to deep water there.

Q Twenty-two fathoms is approximately how deep in feet?

A Hundred and thirty-two.

Q Five fathoms is approximately how deep?

A Thirty.

Q And the draft of this ship was?

A Fifty-six foot, in that area.

Q Captain Beevers, what happened when this vessel grounded prior to the first time that it shut off? Do you remember reading the chief engineer's statement of what he observed when he

was in the engineering room?

A Yes. At the time they were in program up mode and the engine was over-heating.

Q And that was between 12...

A This is 12:07 and 12:20, yes.

Q And that was when it was on load program up?

A Yes.

Q what happens to the bottom of the vessel when it's stuck on a reef and you turn it back and forth?

A Well, you're undoubtedly doing more damage to the area that is sitting on the reef.

Q Why do you say that?

A Because of the weight of the vessel, and the fact you're on rock, and the fact that you're with -- with turning and moving at each end of the vessel, you're moving considerable -- you know, up to 100 feet probably from one side of the arc to the other. So there's considerable movement, and you would definitely damage the vessel.

Q If a vessel was going to be lifted off a rock by high tides -- by high tide -- by cresting of high tide, would driving it full ahead -- full maneuvering speed keep you on that rock?

A It would not -- it would depend on how -- setting on a rock like it turns out the Exxon Valdez was, I doubt it very much. Going at full speed is the -- if the ship, indeed, did float up, it would nearly cause you to go off the reef, because there was nothing in front of him to -- if you're going to go full ahead and stay on the reef you have to make sure your bow is pointed in the direction of shallower water, so that you will stay where you want to stay.

(Pause)

Q Now, Captain Hazelwood -- or, when you evaluated the tanker captain of the Arco Juneau, have you ever been on a ship like that before?

A Yes, I was on a ship that was exactly like that. I was on the Overseas Juneau and that was originally built for Arco and sold to Maritime Overseas before it was completed getting built, and then I was captain on that for four or five years, something like that.

Q And is it a steam turbine or a diesel?

A That's a steam turbine.

Q What was it about that -- his transit that you found to be unacceptable, to be reckless?

A Okay. What I found unacceptable about it is

that he was going at sea speed when he's very close to Bligh Reef, and also with ice in the area.

Q Why is that a problem?

A Well, his vessel, as I say, is a steam turbine, and if he's up to sea speed -- if you immediately come back to maneuvering speed on a turbine you end up having to dump so much steam in your condenser, you don't -- what you do is you --as your steam is used through your turbine it's dropped down and condensed back to water and pumped back in the boiler as water. And if you get too much steam in there it can't condense and you're putting steam right back in your boiler and this upsets the water and can create a problem with the boiler or a problem with the turbine, for that matter, and it could be a serious problem for the engine.

So you have to have time to slow a steam turbine down. It's not something that you would just do automatically. A diesel you could slow down a lot quicker.

Q From the plots on the chart of the Arco Juneau, does that give you an indication of who -- of how many people were on the bridge?

A Yes. There were significant plots to indicate that there were probably two people on the bridge all the way through the transit.

Q Now, one thing I would like you to point out to the jury. The Exxon Valdez is right here (indicating). Let's say it's about a mile north of Busby Island. How long are we talking about before that vessel gets back over into that safe area?

MR. MADSON: I object to the form of the question. It assumes that it's leading and it's also assuming something that is not in evidence, as to what's safe and what isn't safe.

MR. COLE: I'll rephrase it.

Q How long are we talking about that Captain Hazelwood had to be on the bridge before he got back into the TSS lane?

A You've got roughly six or seven miles to get past Bligh Reef, and depending on how fast you could get back over here. And six miles at full speed, it's a little over a half hour. So if he'da stayed on the bridge, maneuvered the vessel around and through that, probably within 30 minutes they would have been well clear of the ice, well clear of Bligh Reef and back over in

this area someplace where he could set a course to come back into the proper lane.

Q Now, Captain Beevers, I'd like to talk for a minute about your experience in going through ice. When you were travelling in the area of Antarctica, what type of icing conditions would you get in that area.

MR. MADSON: Your Honor, excuse me, but I don't see the relevance in comparing Antarctica with Prince William Sound. Well, that's my objection.

THE COURT: Are you going to tie this up somehow?

MR. COLE: Yes.

THE COURT: I'll let you have a chance, Mr. Cole, with a couple of questions. Get on track.

Q (Captain Beevers by Mr. Cole:) What kind of conditions?

A Okay. On your way southbound out in the ocean in deep water, the first thing you would come across is large icebergs. And they are -- you know, they're much bigger down there than they are up here. And you travel through that on into calmer waters.

What keeps the icebergs in that area is the rough water further north. There's a -- in the

50's. It's usually high winds and the icebergs naturally drift out as far as they can and then they just circle the earth.

In fact, once you get inside that you run into areas of ice that area -- you have areas of open water, of course, too, but you run into areas of sea ice that has been frozen and broken up into hugh pancake sheets that may be any -- you know, one to two foot thick. Maybe thicker, depending on the -- how the winter it was. And this drifts around, and through the months ends up in huge long tidal rows -- wind rows or something.

You'll have an open stretch of water and you may have a stretch of ice as far as you can see that may be a mile or two miles across, maybe a half a mile across, depending on that particular one, that you either have to maneuver around, if it's possible. And if you look from horizon to horizon, there's nothing but ice. Obviously, the thing you do then, is you maneuver through this ice.

Q Had you maneuvered through ice and went around it in Prince William Sound?

A Yes.

Q And, always, what was your utmost objective?

A Safety of the vessel. And you have to -- that's the big concern with operating a ship, is you have to keep your vessel in a safe condition and keep it afloat.

Q And did you ever have any problem going through ice, weaving your way through it?

A In Prince William Sound, no.

Q And what is the advantage of going around the ice?

A Versus through?

MR. MADSON: Your Honor, I'm going to object. It's been asked and answered, and I think it's obvious by now that there is no ponderous to determine there is no proper way to do it or not do it. It's immaterially irrelevant, which he would, and problems he may have, or advantages you think that exist?

THE COURT: Objection overruled.

Q What is the advantage going around?

A The advantage for going around is, one, you don't have to maneuver through the ice. Number two is, you save time in this situation because you can -- going around the ice, you can go a little faster than when you are maneuvering through the ice.

Q Captain Beevers, if Captain Hazelwood had

wanted to be sure that Mr. Cousins was giving the orders appropriate to avoid this ice situation, how could he have done it?

A By being on the bridge.

Q And if he wanted to make sure that Mr. Kagan was following those orders as he was given, how could he have done it?

A There again, by being on the bridge.

Q Thank you.

THE COURT: Mr. Madson, why don't we take our break and come back.

MR. MADSON: That's fine, Your Honor. I didn't realize it was 10:00 o'clock, sure.

THE COURT: Remember my instructions, Ladies and gentlemen, not to discuss this matter among yourselves or to form or express any opinions. We'll call you back in about 15 minutes.

THE CLERK: Please rise. This court stands in recess subject to call.

(Off record - 10:01 a.m.)

(On record - 10:22 a.m.)

(499)

THE CLERK: Court now resumes its session.

THE COURT: Mr. Madson.

MR. MADSON: Thank you, Your Honor.

RECROSS EXAMINATION OF CAPTAIN BEEVERS

BY MR. MADSON:

Q Captain Beevers, at the risk of kicking this horse one more time. It's not dead, maybe we'll finish him off here shortly. Before we go too far, let me hand you something here. Handing you what's been previously marked as Exhibit AJ. I believe -- do you care to see this again.

Let me ask you if you can identify this, sir?

A Yes. This is a paper with a list of positions that was taken on board the Exxon Valdez on April 2 by -- it's four positions here, three of which were taken or observed by me. One of which with the ship's officers had taken.

Q You signed that document, did you not?

A Yes.

Q Does it appear to be a true and accurate copy?

A Yes.

Q Okay. This was on April 2nd, was it?

A April 2nd.

Q And it was on the Exxon Valdez after the grounding?

A Yes.

Q What was the purpose of taking these fixes?

A Two things. One is to -- so we'd have an idea

where the vessel was at, and then to check the equipment that would be used to take fixes to see if it was working properly.

Q You also got gyro headings, did you not?

A I believe so. Let me -- yes.

Q Okay. Those told not only the location of the vessel on the reef -- let me back up. Mr. Cole showed you earlier a chart, did he not?

A Uh-huh (affirmative).

Q And you said, here's -- basically, here's where the vessel was, on Bligh Reef. You pointed to a spot on the chart. Right.

A I pointed to an area, yes.

Q Okay. And you could do the same thing on a chart over there, right?

A Uh-huh (affirmative).

Q Okay. What I'm getting at is, that tells you the location on a chart, but it does not tell you the heading of the vessel, from just looking at the chart, right?

A No. How you would tell the heading of the vessel is with other information, such as here where we read the gyro, or in the case of the grounding, that you'd use the course recorder.

Q Okay. So from that document there you were

able to determine not only the position that it was, in fact, on Bligh Reef, but the actual physical position of the vessel with relationship to how it was on Bligh Reef and which direction it was heading?

A On April 2, yes.

Q Now, do you know whether or not this -- the heading on April 2 was different or the same as the heading, that it was on the 24th?

A It seems to me -- I'd have to look, but it seems to me it was 280 something on the 24th when they finished up according to the course recorder, and it's 294 here.

Q Okay. So there may be a difference of 10 degrees or so?

A Yes, 10 degrees roughly different. They had done some lightering and stuff too in there, so that -- that just doesn't mean that's where it actually ended up at the...

Q Yes. What I'm getting at, sir, is if you knew roughly. It's within, say, as far as you know, 10 degrees of its original position?

A Yes. Within a point on the compass, yes.

Q Okay. But the point is, the heading on the reef -- the position as the vessel lies on the

reef, would tell you, would it not, exactly -- if you're going to compare that with soundings, you know, as far as the depth of water is concerned, the exact position is necessary to determine what water you have behind you or ahead of you, or at the port or starboard, right?

A Uh-huh (affirmative).

Q Now, you've also indicated -- Mr. Cole asked you about, well, if you had questions about pilotage, you know, you go to the Coast Guard. They are the ultimate authority on this, as I understand?

A On a day-to-day basis, yes, they are.

Q So you went to Captain McCall and asked him, you know, what he meant by this essentially, right? What he meant by Captain of the Port order?

A Yes.

Q When did you do that?

A This was some time after the grounding. Probably on or around -- it wouldn't be on, but near this...

Q After the grounding?

A Yeah. After the grounding. Near that -- April 2nd.

Q And you don't know whether or not the Coast Guard had any interest in what might happen? Any litigation involving them? Or the fact that they may be potential defendants in a case, or anything like that, right? Captain McCall didn't -- you know, have any reservations about that?

A I was surprised, he told me exactly what he had there, yes.

Q Well, you mean, you were surprised. You expected them to...

A I wouldn't have been surprised if he would have said, you know, "No comment.", or something. Because he didn't have any idea who I was when I was calling up, I just called up and asked him about it.

Q But certainly he as telling you, whoever you were -- I mean, whoever he thought you were, "Hey, this was perfectly obvious. This is what I meant." Pretty clear, right?

A Yeah.

Q Taking all that responsibility away from the Coast Guard, if there was any. Right.

Now, you also talked about the possibility of other people taking the chief mate's watch, and whether he could have stood that watch rather

than Captain Hazelwood doing it for him, right?

A Uh-huh (affirmative).

Q Again, this is a nice thing to look at in hindsight, right?

A Uh-huh (affirmative).

Q And would you also agree it's a captain's prerogative to decide who might be tired and who is the best person to maybe take over for another one?

A That's correct. He could make that decision any time he wants to. I just was pointing out that it seemed that Mr. Kunkel had probably had --at that time had as much rest as anyone else.

Q Well, maybe you might ask Mr. Kunkel that. He might have been able to say, "Hey, I was really tired. I appreciated having a few more hours of sack time." Right?

A I'm sure he would appreciate having the time off, yes.

Q Now, certainly, sir, while the master or captain of the vessel is very important, if he should drop over with a heart attack or get severely ill, the ship doesn't come to a complete halt, and everybody is running around saying, "What do we do now." That doesn't happen, does

it?

A Well, it shouldn't happen. There's a progression of order there, yes.

Q For instance, on the Exxon Valdez, Kunkel -- Mr. Kunkel had a master's license?

A Uh-huh (affirmative).

Q He would be authorized to operate this vehicle. "Authorized", when I say that, maybe not by Exxon hiring practices, but by Coast Guard standards, he was authorized to operate that vessel -- command it.

A Oh, yes, he had the license. He could have been -- they could have just as well named him captain of that vessel if they had chosen to, that's right.

Q Now, you also talked about when captains should be on the bridge and when they shouldn't. And, again, you said closed quarters. If you're a mile from Busby Island and two miles from Bligh Reef, do you consider that closed quarters?

A For a ship that size, yes.

Q And you disagree with Captain Murphy when he said those waters aren't dangerous?

(800)

MR. COLE: Objection, Your Honor. I don't

think that's what -- is he's saying, this situation is not dangerous? Is he's saying, general travel in the area of Busby Island?

THE COURT: Are you asking him if he does disagree?

MR. MADSON: Yeah. Just if he disagrees.

Q If Captain Murphy, in fact, had indicated, in that area it was not dangerous in his opinion, would you agree or disagree?

A On that, with the conditions the way they were then, yes, I would disagree with him.

Q You also said that he Coast Guard -- you wouldn't rely on them to tell you you're off course, but you would at least expect them to advise you that you may be off course, would you not?

A Yes. Before -- up until this -- yes, I would have expected them to advise you to be off course.

Q After the grounding, now, you wouldn't have that expectation anymore?

A Yeah. I realize now they're not doing it. To that point I thought they were checking it, yes.

Q No reason to think Captain Hazelwood didn't have the same knowledge that you did, and the

same belief that you did, is there?

MR. COLE: Objection. Speculation.

THE COURT: He'd be in no way of answering that question -- no way to answer. Sustained.

Q Now, with regard to the statements of Cousins and Kagan and turning off the autopilot, you looked a number of their statements, did you not?

A Yes.

Q They were entirely consistent at all times, weren't they, that the autopilot was turned off?

A I'd have to review them each individually now, but I believe that somewhere along the line they both had said, yes, they're off. But there's -- I have never got a clear picture of just exactly when, what and how. I said that the other day, I believe. But somewhere along the line they both said that the autopilot was off.

Q In addition to their statements, they both testified under oath at the NTSB hearing here in Anchorage, did they not?

A Uh-huh (affirmative).

Q Did you review that testimony?

A Yes.

Q And they both said clearly at that time, it was turned off, didn't they?

A Uh-huh (affirmative).

Q I'm afraid you'll have to answer out loud.

A Yes. Yes.

Q You testified again on redirect examination about possible damage to a ship if it was turning, say, 100 feet laterally after it's grounded?

A Yes.

Q Did you talk to Captain Greiner about his theory of the grounding?

A We discussed it, but nothing specific that I recall, no.

Q Well, did he mention to you anything about maybe 94 feet of possible movement of the bow?

A We both figured out various, depending on the point. At the time I was discussing it with him, I wasn't sure where the point was. But we took various measurements and figured it out, and I got one scenario in which I don't have the figures with me here. But 123 foot, one of just over 100. And I think he had something less than that.

Q And there's a lot of scenarios?

A Oh, sure. It's all speculation at that point. You know it's swinging, you know it's moving. We

were just trying to determine how far it actually was swinging.

Q And that would be almost, like, on a pinnacle, would it not. It's pivoting like this?

A Uh-huh (affirmative).

Q If there's a distance of, let's say, 100 feet -- 150 feet that the vessel is actually riding on. You know 150 feet is a relatively long distance, is it not?

A Well, yes. It's...

Q And if the ship is having to move on that 150 feet -- that, is swing -- when it -- that distance, wouldn't you expect to see some lateral damage obvious on the hull of that vessel?

A You would expect to see that.

Q I may have used the wrong word. Let's say "transverse", okay?

A Yes, I know what you mean. Yes, you would. And I would -- that's one of the things that I believe they went into. I happened to not go to San Diego when they looked at it, so...

Q So you didn't go down there to see if any such damage was observed?

A No.

Q And you don't, when talking with Captain

Greiner -- did he tell you that they saw no damage to indicate the ship had turned in a sideways fashion at all -- could not determine that?

A Apparently there wasn't anything that they could see. I think what they determined is that it either had been crushed in so badly, or broken away, or cut off before they got to see the ship, that they really couldn't determine if there had been or there hadn't been.

Q Okay. So then what you did, and what Captain Greiner did, was take the worst case scenario, right?

A I just took an idea that there were approximately 330 or 350 feet off, and assumed that it had pivoted on that point. I didn't take into consideration that -- still, if you are pivoting, I would assume that there's a point -- somewhere there's a center of that circle. Whether you got 150 foot base that it's pivoting around, or whether you've got a pinpoint, there's still a point. And all I was trying to do was determine, actually, how much swing that they were getting.

Q And, of course, there is no way of determining

now, or even earlier, what, if any damage was caused in excess of what was already caused by the initial grounding itself?

A That's correct. I couldn't determine any -- you know, I wouldn't be able to do it now, and I wouldn't have been able to, probably in San Diego, if other people didn't. No.

Q You talked a little bit, again, about steam turbines and diesel engines. From your knowledge of a slow speed diesel engine such as that on the Exxon Valdez, isn't it true, sir, that when you turn the diesel engine in reverse -- in other words, put it in reverse, you have all the power available in reverse as you have in forward?

A You have all the power on the engine, yes. Where you have trouble with power is the fact of the propeller. And the prop wash against the vessel.

Q Okay. You have horsepower but you don't necessarily have the same amount of thrust, is that what you're saying?

A Right.

Q But the engine itself will turn just as much?

A Yes. Yes.

Q And the propeller will go around just in

reverse just as much, same rpm and everything like that?

A Yeah. Just you don't have the -- if I give you the impression that it didn't have the same rpms astern as ahead, that's wrong; it does.

Q The only difference is because you have the bulk of the vessel behind you; instead of pushing it you're trying to pull it?

A Yeah.

Q Now, last -- getting to the end here, hopefully. The Arco Juneau, you went into that a little bit, and the Brooklyn. Those were the last two trips out of Valdez prior to the Exxon Valdez, correct?

A To my knowledge, yes.

Q And you examined no other ones?

A No.

Q So if you were to assume, sir, that those two trips by the Brooklyn and the Arco Juneau and the Exxon Valdez, all went around the ice -- maybe not exactly the same course, but at different speeds, but went around the ice. Would you tend to believe that that might be the normal procedure for what is done in Prince William Sound?

A I would say that that may have been what they chose at that time. It may be normal, yes.

Q When I say "for Prince William Sound", I'm, again assuming that there's ice conditions that would cause one to make those maneuvers.

A Right. That may be normal. You know, I can't speak for everybody transitting in through there. It would appear that all three determined to go around it that time for some reason, yes.

Q And that was three in succession, wasn't it?

A Yes.

Q And so they chose to go around, and not what you necessarily might do by slowing down and maneuvering through?

A Yeah. That's a decision for the master to make on site at that time, yes.

Q And lastly, sir, you are retired, correct?

A Yes.

Q You don't have to be concerned about perhaps having other people sit in judgment of your actions in the future as a commander of a vessel?

A As a sea captain.

Q Right?

A No.

Q And, of course, if I were to stand here for

the next two days, you aren't going to substantially change your opinions, are you?

MR. COLE: Objection.

THE COURT: I don't think that's gonna help anybody answering that question.

Q Let's say, sir, that you have pretty firm opinions, right, in this case?

A On what I've read and seen, yes, I do have a firm opinion.

Q And you don't feel, in all fairness, that your fee in this case influenced any of those opinions at all, not in the slightest?

A No.

Q I don't have any other questions.

THE COURT: Anything further, Mr. Cole?

MR. COLE: Just two brief areas.

REDIRECT EXAMINATION OF CAPTAIN BEEVERS

BY MR. COLE:

Q Captain, what would tell you that the vessel, the Exxon Valdez, was moving -- the heading of the vessel was moving on March 24, 1989 between, say, 12:35 and 1:40?

A The most obvious thing that would tell you that it's moving is the course recorder, because you're changing heading as the rudder's is being

-- had been put over one way or the other.

Q As a retired master, you don't have to go back to the shipping industry and face the pressure from the shipping industry for testifying in this case, do you?

A No.

Q Thank you. Nothing further.

THE COURT: All right. May this witness be excused from further performance?

MR. COLE: Yes.

THE COURT: Mr. Madson?

MR. MADSON: He may be excused, yes, sir.

THE COURT: Okay. You're excused.

(1200)

(Witness excused)

THE COURT: Call your next witness.

(1250)

(Oath administered)

A I do.

WILLIAM MILWEE

called as a witness in behalf of the plaintiff, being first duly sworn upon oath, testified as follows:

THE CLERK: Sir, would you please state your full name and spell your last name?

A My name is William I. Milwee, Jr.,

M-i-l-w-e-e.

THE CLERK: Your current mailing address?

A 4019 Southwest 55th Drive, Portland, Oregon, 97221.

THE CLERK: Your current occupation?

A I'm a consultant in marine salvage diving, towing and related disciplines.

THE CLERK: Thank you.

DIRECT EXAMINATION OF MR. MILWEE

BY MR. COLE:

Q Mr. Milwee, why have you been asked to testify in this matter?

A I was asked to look at the Exxon Valdez and the incident in which it grounded on Bligh Reef, and to evaluate the action that was taken following the grounding.

Q Before we talk about this, would you tell the jury what your education background is?

A I have a B. S. from the U. S. Naval Academy in 1959. I have a Master's in Naval Architecture from Webb Institute, and a Bachelor's in Marine Engineering.

Q And where did you get your Bachelor's in Marine Engineering?

A At Webb Institute, also.

Q What is Webb Institute?

A It's a school of naval architecture in New York.

Q And after -- would you explain your Naval career to the jury?

A The first four years after I graduated from the naval academy, I was a line officer. I served in the destroyers as a deck officer and was chief engineer. I was -- during that time I qualified for command of destroyers. Following that I went to graduate school at Webb for three years.

Immediately after graduate school I went to the Naval School of Diving and Salvage where I was trained in, obviously, diving and salvage. Went to a short tour at Long Beach Naval Shipyard in the ship repair business. During that time I was borrowed for a salvage job in Viet Nam. Following that I went to a unit that was doing salvage in Viet Nam and other places in the Pacific.

Following that tour I spent five years in the Supervisor of Salvage office in the Navy in Washington. And following that, for four years I was salvage officer for the Pacific Fleet. And

the following two years back at Long Beach Naval Shipyard I retired in 1979.

Q When you say that you were the fleet salvage officer for the U. S. Pacific Fleet, what does that mean?

A It means that I was responsible for the fleet readiness as far as salvage and operations, insuring that we were equipped and prepared, and I personally went to the scene and took charge of salvage operations.

Q Now, once you retired, would you tell the jury about your career after retirement from the Navy?

A When I retired I went to work as a marine manager for an offshore drilling company in the southeast. They were operating 12 rigs in the Gulf of Mexico. I was responsible for all the marine aspects of that, including moving the rigs.

Ten days after I got there we lost a drill tender and they realized they had just hired somebody to do something about salvage, so I took charge of that operation.

Q What's a drill tender?

A It's a type of drilling rig in which a floating platform is used for the support of the

drilling platform. And this thing was moored alongside the platform.

Then I joined a consulting group as president. We were doing salvage and -- the same types of things I'm doing now.

I was with them for about two years and then I became senior vice president and general manager of Devine Salvage down in Portland. When I left them I set up my own operation. I've been doing this since 1983.

Q What type of salvaging operations have you been involved in? Can you give the jury an idea?

A Just about everything possible. I've done sinkings, strandings, vessel raising from small craft, barges, tugs, cargo ships, maybe half a dozen tankers, ships up to 250,000 tons dead weight, both a tanker of that size and a bulk carrier of that size.

I've been, oh, just about everything you can be on one of those operations, from salvage engineer to salvage master.

Q What is a salvage master or salvage engineer?

A A salvage master is essentially the person that's in charge of the salvage operation. The salvage engineer does the engineering and

calculations associated with the operation.

Q Have you been involved in groundings and rock?

A Yes. And the last 10, 12 years I've been involved in at least 30 casualties that I can recall. And roughly half of those have been either on rock or coral, which have very similar characteristics.

Q And can you give the jury an idea of where in the world you've worked?

A Well, I've worked on all seven continents, actually. I've done a lot of work in the Pacific and the South Pacific. I've looked at a lot of casualties up here in Alaska for one reason or another. I've worked on both coasts of the United States, and the Persian Gulf and South America, and was even on a casualty in Antarctica last year.

Q Have you worked in military areas?

A Oh, yes. I got my basic training in Viet Nam in doing salvage in the rivers and along the coast of Viet Nam, where we had all sorts of conditions ranging from rock to mud, groundings, sinking, combat casualties, fires.

Q Would you like a glass of water?

A Please. Thank you.

Q Now, would you give the jury and idea of how many -- let's talk just about the tanker casualties that you've been to and worked with?

A I've done five or six tanker casualties. The only one -- and I've done those around the United States and abroad, Persian Gulf, Gulf of Mexico, Hawaii.

The one in Alaska, it was a tanker striking a rock. It was at Glacier Bay out in Cook Inlet in 1987, which hit a rock and then floated off on the tide you have in Cook Inlet before I got there. But we did an emergency discharge of the ship.

(1610)

Q Now, have you done any writing in the area of casualty salvage?

A Yes, I've done quite a bit of writing in the area. I've written roughly 10 articles that have been published in the United States and Great Britain in the professional press on casualties and salvage. I've done roughly the same number in other areas.

One of these articles was an article on essentially what to do after the ship is aground and before the salvo's arrive. I, also, for the

last two years, have been the technical director of a project to rewrite the U. S. Navy Salvage Manual which is a six volume set of how-to books on salvage. It's about half done. We've done the volume on strandings and the one on sinkings.

Q Have you done any other work for the U. S. Navy as far as publication?

A Yes. I'm involved in the publication of the Salvage Engineer's Handbook. I worked on the U. S. Navy -- and contributed to the U. S. Navy Damage Control Manual, the Salvers Handbook, and I have written some directives for them on how salvage operations should be handled and managed.

Q How about any group memberships?

A I believe to the Society of Naval Architects and Marine Engineers, the American Society of Naval Engineers, the Nautical Institute, which is a British Organization, the Society of Underwater Technology, which is also a British organization, and the Marine Technology Society, in which I'm chairman of a group of professional committees.

Q Have you been asked to testify in the past?

A Yes, I have. I've testified in Alaska, Washington, Texas, California, Louisiana.

Q Can you give the jury an idea of what type of

cases those have been?

A About half of them have been salvage and salvage related cases. One involving an incident in Dutch Harbor in which a processor broke loose from moorings and was rendered salvage assistance by two fishing boats.

Another ship grounded in Kiska and was rendered some salvage assistance again by fishing boats. Oh, two drill rigs that were casualties. The remainder were diving cases.

Q Now, when were you asked to provide your services in this matter?

A In August of this year -- August 1989, last year.

Q And did you enter into a contract with the State of Alaska for your services?

A Yes, I did.

Q Would you explain that to the jury? What that contract entailed?

A Well, it was a contract to do as I said earlier, to look at the documentation and material relative to this and to use my expertise in evaluating the casualty that occurred and the action that was taken after the casualty.

Q What was your rate per hour?

A My rate per hour is $90.00. And in circumstances involving actual testimony or being all burning ships or casualties, it has a 25% premium on that.

Q What information did you evaluate? Did you receive any information in this matter?

A I received a stack of paper that was somewhat over two feet high in this matter.

Q And did you review that?

A Yes, I did.

Q Would you tell the jury in particular, were there any areas that you -- in the paperwork that you paid particular attention to?

A If I may refer to my notes so I don't miss anything. I looked at all the NTSB testimony and the exhibits that went along with that. The interviews by the Alaska State Troopers; the grand jury testimony; the characteristics of the ship; the Bell Log; the maneuvering characteristics; chart -- course recorder; I looked at the salvage documents; loading and damage data; and transcripts of taped conversations between the Exxon Valdez and the Coast Guard Vessel Traffic System.

And I also did a -- I looked at the analysis

of the course recorder tape from these people at King's Point. And I used a lot of reference material from my own library.

Q Did you have any conversations with a gentleman by the name of Mr. Lights (ph)?

A Yes, I did. I had a telephone conversation with Mick Lights in which we discussed the salvage operation.

Q Who is he?

A He's a salvage master that lives in Portland, and was salvage master during the Exxon Valdez refloating.

Q And do you know him personally?

A Yes, I do.

Q What did you discuss with him?

A Again, I'll refer to my notes to be -- (pause) -- we discussed the conditions that he found on board and what he did on board the vessel, and the salvage -- generally what was done during the salvage operation on the vessel.

Q Now, did you end up going and visiting the Exxon Valdez?

A Yes, I did. I visited the ship on 7 September.

Q And why did you go there?

A I was asked to go there by your office to look at the damage and to familiarize myself with it and see if I could add to the evaluation of the damage.

Q After reviewing that damage and using your own experience, do you have any opinions as to how that damage occurred?

A Yes, I do.

Q Would you explain that to the jury?

A The damage was typical of the damage one sees on ship's aground on rock. And that that was plating, it was upset -- by "upset" I mean dented and torn, badly scraped, from the stem of the ship -- the most -- forward-most part to just forward of the pumproom bulkhead well -- well aft of the ship.

Q If you would, I will hold up the model here. Maybe you could indicate to the jury...

A The damage started in this area of the ship on the starboard side. It went mostly along the bottom in a line that curves just about five degrees from straight back, and extended back to -- oh, right about in here (indicating). That was the last markings.

It varied throughout in intensity. Some of it

was quite bad. There were holes. Two cases there were rocks still in holes.

In the midships area here, just centered right around bulkhead 23, the ship structure just simply no longer existed. The ship's plating was no longer there and there were large holes.

The longitudinal members -- structural members were twisted, oh, as much as 90 degrees.

Q Now, before you -- what is a longitudinal?

A It's a structural member that runs the length of a ship and it's one of the primary structural members in the ship.

Q Where would it be running on the bottom of the vessel?

A Oh, they run at very relatively close spacing all along the bottom of the vessel inside the plating.

The damage in that area, because the way that the hull was set up, indicated that the hull was crushed and that the ship had sat down very hard on that area, and it's...

Q That was in the area of where?

A That was in the midships area around bulkhead 23, maybe 100 feet on either side of it. Maybe 80 to 100 feet on either side of it, I'd say.

Q Can you give the jury an idea -- do you have an opinion as to how the vessel was -- how that came to be caused?

A Yes. I think the vessel came over a rocky area, passed completely over it, continued for a short distance and then came to rest grounded on an area along the starboard side, extending over to just about midships.

Q Why do you say that it passed completely over the first rocks?

A Because the damage extended well past the area where it was hard grounded and back near the stern of the ship, near the pumproom.

Q And do you have an estimate as to how long that process would have taken?

A It's impossible to say exactly how long that process would take, because one of the things that happens as a ship grounds is the speed decays -- the speed slows down. And that process is impossible to predict, because there are other things happening at the same time that affect it.

But to move that far it would take just about two minutes for the ship to move that far under the average speed that it had to be moving at.

Q Now, did you see any evidence of -- well,

before we get to that, I would like to talk about something else. What does it mean to ground a vessel?

A Well, can I draw a picture on that?

Q Yes.

(2185)

(Pause)

A When a ship is afloat and in the water it's completely supported by the force of buoyancy. And the force of buoyancy, which comes from the surrounding water, is exactly equal to the weight of the vessel. When a ship grounds, if it grounds high and dry, it sometimes happens so that it's completely out of the water and it's sitting completely up on the land, the land supports the vessel, and it completely supports the weight of the vessel.

When a ship grounds as is the more normal case, so that it is partially support by the water and partially supported by the land -- that being the land that the vessel is resting on -- it's partially supported by the buoyancy -- it's own buoyancy and by the ground. But the combination of the two -- the buoyancy, and what we call the ground reaction, is exactly equal

again -- exactly equal to the weight of the vessel.

Now, the vessel in this condition still has a water line because it's still in the water. But this water line is the below the water line that the ship would normally float at, which would be up here somewhere. The area between those two water lines, or the volume between those two water lines, actually, represents the lost buoyancy of the vessel, and is exactly equal to the ground reaction of the vessel.

Q Now, what, again, is the ground reaction?

A The ground reaction is the amount of the weight of the vessel that is supported by the ground. And it's an amount of buoyancy that the vessel has lost in grounding.

Q When a -- what causes a vessel to stop?

MR. CHALOS: Objection, Your Honor. Turn the engine off. Any number of thing could cause a vessel to stop.

THE COURT: Well, that may be true, but we'll let the witness answer that question. Objection overruled.

I'm going to answer that question where a vessel is grounding. When a vessel grounds

several things happen to it. It's bodily lifted and it stops. The stopping is generally caused by the friction of the vessel on the bottom.

Q And what has to be overcome before the vessel comes to a stop after initial contact with the bottom?

A Well, the momentum of the vessel has to go from whatever it is, which depends on the size of the vessel and the speed at which it's travelling to zero.

Q Could you give the jury an idea of how the type of bottom that a ship grounds on affects the damage that's done?

A It's -- the damage that's done is a direct result of the hardness of the bottom and what the bottom is composed of. If a ship grounds in soft mud it will generally just mush into it. And since the mud is much softer than the steel of the vessel, there's usually very little damage to the vessel.

If it grounds on sand, depending on the consistency of the sand, it has very little damage to the vessel. There's -- sometimes if it's very hard sand there will be some upsetting in denting of a plate. Seldom enough to tear it,

unless there are rock or coral formations in the sand.

On coral it depends on the age of the coral. Young soft living coral is not as hard as old hard coral. Old coral is very much like rock. Rock is really the worst thing to ground on from the standpoint of the damage to the vessel, because it's more likely to severely indent and/or tear the bottom.

I don't believe I've ever seen the bottom of a vessel torn unless it grounded on either rock or coral.

Q What about after the grounding? What's the possibility of immediately refloating a vessel depending upon what a vessel grounds on?

A Well, it depends on a number of conditions, how hard the vessel is aground, what the vessel is aground on, and how it's aground -- how it lies.

It would be very difficult to quantify the possibility of refloating it with -- it's impossible to quantify it without knowing more about the condition of the grounding.

Ofttimes a ship in -- oh, down in the Mississippi or in an area like that, where

there's a soft bottom, is able to just nose into a mud bank and back right off again.

Q Do the actions that you take as a salvage master differ depending on the type of bottom that a vessel has grounded?

A It depends on -- yes. It varies with the type of bottom and the type of ship.

Q Now, I would like to talk a bit about what the procedures should be of a master after a ship has been grounded. What should a captain do?

MR. CHALOS: Your Honor, I object. No foundation. Grounded, and what type of bottom, how grounded. Is it grounded by the bow, on the stern. There's so many factors that have to be laid out before.

MR. COLE: Judge, he's just being asked to give some general recommendations. I think there are certain things that you should always do and I'm just exploring that area.

MR. CHALOS: And I would further add, Your Honor, that Mr. Wilwee, I believe, is an expert on salvage operations, but I don't think he has been qualified as an expert captain. I don't think that foundation has been laid either.

THE COURT: Lay a little bit better foundation

for this type of an answer, what a captain should do.

Q (Mr. Milwee by Mr. Cole:) Well, as a salvage master, are there certain things that need to be done in order to allow you to do your job as a salvage master?

A One of the first things you must do in any grounding is to determine a condition of the grounding. And the determination of the condition of the grounding should be made before any salvage attempt is made.

Q How does one do that?

(2570)

A Well, the first thing to do is to take sounding all around the vessel to determine how the vessel lies on the ground, how much of it is actually resting on the ground, and how hard she is resting on the ground.

From these soundings it's a very simple calculation to determine the ground reaction and the amount of weight of the vessel that is supported by the ground.

Q Is it important to know, for instance, the damage done to the vessel?

A Oh, yes, it's very important to know the damage done by the vessel.

Q Why?

A Because to refloat a vessel with extensive damage is extremely dangerous. It may result in the loss of a vessel.

Q What do you use to ascertain the damage?

A When it's possible, an inspection of the damaged area should be made. If it's not possible, because of cargo or material in the ship, the soundings should be taken -- or, essentially measurements of the depth of water inside the various holds to determine if there is leakage coming in from the outside, and how bad it is.

In the case of a tanker, one of the best indications of damage is -- because there's a loss of cargo.

Q What needs to be done as far as the crew?

MR. CHALOS: Objection, Your Honor. No foundation. This gentleman has expertise as to what a captain would do on a ship with his crew. Unless he's asking what should be done with the crew after he comes on board when the vessel is being salvaged.

THE COURT: Mr. Cole?

THE COURT: Your Honor, I think he can testify as a salvage master, as to what he regards as the

important things to be taken into consideration.

THE COURT: I don't think he's been qualified in that area, Mr. Cole. Objection sustained.

Q (Mr. Wilwee by Mr. Cole:) Well, when you come aboard -- and let's say that you got there a very short time after a grounding, and you were -- what would be your first priority?

A Well, I've been in exactly that circumstance where I have come aboard groundings immediately and there has been no one else around other than the crew.

My first priority is to insure that the ship is secure and that the crew is secure. And by secure, I mean to determine the extent of the grounding. And I use that crew working through the master, of course, to assist me in determining the extent of the grounding, and also make sure that if the situation worsens for some reason, that we've got a way out of there. The proper safety measures have been taken.

Q When you say "secure the crew", what do you mean?

A Essentially insure that measures have been taken for their safety. That boats are rigged. Everybody's got the proper survival gear, and

they are ready to use it, and fire protection measures have been taken. And usually measures have been taken to prevent any further deterioration of the ship, if the ship is in an extremely hazardous condition.

Q What about communicating with authorities? Is that something that you would do?

A That should have been done by the master immediately upon grounding. But I would certainly communicate with whoever I'm representing on the case.

Q When you come on a vessel immediately after a grounding, what type of options are open to you? (2830)

MR. CHALOS: Objection, Your Honor. I think the testimony is that that happened once. We don't know how quickly it came on after the grounding, but I think Mr. Cole is asking generally what's available when he comes on board in a grounding. I think the testimony is one specific incident. And whatever options were available then, and certainly he could testify to, but no generally.

THE COURT: This witness can give his opinion in general. Objection overruled.

A Would you repeat the question, please?

Q When you come aboard tanker vessels. And let's say, for instance, if you're on it immediately after the grounding, what options do you have available as far as action that can be taken?

A Again, the first necessary action is to determine the condition of the grounding by taking soundings, perhaps getting a sounding boat out, wants to get a boom out, also, around the vessel and contain any cargo that may have spilled. And in doing that you use whatever resources are available. If it clearly is the only resource available, you use them. If you have a salvage crew or a crew that you bring in from the shore, you use them, too.

Q Now, do you -- your experience, has it been, that you, say, for instance, check the holds -- open hold. The engine-room, the pumproom, to make sure that they're...

A That's right. You check all the spaces on the ship, not just the spaces where you knew there is damage indicated.

Q After evaluating the evidence that you have in front of you, what are your options then at that point?

A When I come aboard a vessel and I start to make an evaluation, my first -- my choices are, after I determine how I lie on the ground and what my conditions are, I just start to develop a salvage plan and to determine if I am going to refloat the vessel.

Probably the first thing to get out of the way is to determine if it's practical or possible or reasonable to make an initial refloating attempt using the ship's engines and whatever tugs I may have available. Or, if I should just put that option aside and wait for it -- and lighten the vessel, or bring out heavy gear to drag the vessel back afloat.

Q What type of risks are associated with immediately trying to refloat a vessel?

A If the vessel is badly damaged there is risk that the vessel may sink; that you may put the crew in the water; that you may have additional pollution; or, that you may strike something that you don't know about as you refloat. It's absolutely vital to determine the conditions before you do anything, and have knowledge of what you are about to do before you do it.

Q What would be the risk of not attempting to

refloat a vessel after a grounding?

MR. CHALOS: Your Honor, I object to not any foundation being laid. Again, what circumstances are we talking about.

THE COURT: Objection overruled. This witness may give a dissertation in general on this subject, he's been qualified.

A It depends on the condition of the grounding of the vessel. If the vessel is grounded, oh, on a sandy beach -- sandy, moderately sloping beach and a surf, it's an extremely dangerous situation to the vessel. And one in which a refloating attempt is often justified immediately, without some of the knowledge that you would have otherwise.

Q What makes that situation dangerous?

A If the ship lies directly facing the surf, it's a very good chance that she is going to rotate so that she's broadside to the beach. And on a sandy beach the surf coming in will generate very high currents around the ends of the vessel that will scour the sand out from the vessel and around the ends of the vessel so that she's supported only in the middle. And a vessel will break very quickly like this.

The Old Alaskan out on St. Paul Island in '87 is an example of exactly this type of casualty. She grounded on a Friday and broke on Sunday night and she was broad side of the beach.

Ships like that, on that type of beach in a surf, may pound very hard and do itself additional damage and hole herself even more. A ship aground on rock is better left alone until other measures can be taken. Because she will ride heavy on that rock and stay there. But if you try to move her in an initial refloating attempt, there's a possibility of doing additional damage to the ship. Coral is the same as rock.

(3190)

Q Now, you reviewed the evidence in this matter. Do you have an opinion of what Captain Hazelwood was attempting to do with the throttle and the rudder after the Exxon Valdez was grounded on March 24, 1989?

A Yes. I believe he was attempting to refloat the vessel.

Q Why do you say that?

A Because he used a full bell and considerable rudder. He essentially was doing...

Q What did you say, "a full bell"?

A A full ahead on the engines at his maneuvering speed. He was using a lot of force to disturb the vessel, which is exactly what you do when you try to refloat a vessel. You try to disturb its position so that it will move. He did this on a rising tide, which is exactly the way you would do to refloat a vessel.

Q Why do you say that?

A Because as the tide rises this water line comes up closer to the original floating water line of the ship and the ground reaction is reduced. The ship rests more easily on the bottom. And Captain Hazelwood said that he was attempting to refloat the ship.

Q Did you rely on statements that you heard from Captain Hazelwood?

A Yes, I did.

Q Do you have an opinion on whether or not his actions were inconsistent with attempting to keep the vessel on the reef?

A Yes, I do. I do. I think they were consistent with attempting to keep the vessel on the reef, because it was too much force to use. And most telling to me is that he stopped doing

this at 17 minutes before the water was at the highest, when the ship was resting most lightly on the ground.

If it had been necessary to do that and to use that much force to keep the ship on the reef, he would have had to continue that during the water and well out to the high water until the ship was resting as it was an hour or two hours before.

Q Maybe you can explain that concept by referring to Plaintiff's Exhibit 123 and 124.

A This is a representation of the tide. And as it rises -- as it rose and fell on the night of -- I think I've got the right one here. This is March 23.

Q Was it the evening of March 23 or the 24th?

A Well, this is early in the morning of March 24. It was -- the high water was at 1:57, just before 2:00 here. And it was in the period from the time of the -- some time after the stranding until 1:40 that the maximum force was used to -- as I believe, to free the vessel.

Coming up on about 17 minutes before high water, the water is continuing to rise. And the tide may stand at its high water for a period of time. And during that time the vessel is resting

very lightly on the ground, or as lightly as it's going to rest.

If it's necessary to use a lot of force to keep the vessel on the ground, that's when you have to do it. Again, the tide began to drop after the high water. And the same conditions that existed in that time before high water exists after high water. As the tide begins to drop the vessel rests more heavily on the ground. But it goes through that period where it's as light as it's going to be at the time, and where, if you have to use a lot of force to keep it there, you have to do it the whole time, not just part of it. And certainly you don't stop just before it's lightest.

Q You indicated the use of excessive disturbing forces -- how is the use of the rudder inconsistent with attempting to stay on the reef in this matter?

A Well, the rudder swings the ship and it disturbs the condition under which the ship lies. If you are attempting to stay on the reef you don't disturb it; you make the ship heavy and you don't move it. You just don't do anything that's going to disturb the conditions under that ship.

Q Would you describe for the jury what action is being done from 12:35 to 1:40? And there's a pointer there if you want to point to that.

A Get out of this tangle.

Q You may have to stand just a little bit to the side so that they could see.

A This area in here indicates changes in heading of the ship in both directions, and obviously, as it comes back and forth, and it indicates to me that the rudder is being used in conjunction with the engines to swing the ship back and forth and to disturb it as it lies on the bottom.

Q Now, is that consistent with going ahead or trying to get something off the reef, or trying to stay on?

A It's consistent with trying to get it off. If the ship were -- if there were conditions existing that made it necessary to keep the ship on the reef, it would generally just drop off in one direction and there would be a response to it; to hold the ship as steady as possible, not to wiggle it.

Q If you had rock and you had a tanker and you were worried about your tanker coming off that rock, how would you turn your rudder and how

would you use your throttle to stay on that reef?

MR. CHALOS: Objection, Your Honor. Does that purport to be the grounded condition of this vessel, or is Mr. Cole just asking about that example of the...

MR. COLE: I'm asking a general question using that example.

MR. CHALOS: Then I object to the foundation, Your Honor, and relevance, really.

THE COURT: Okay. Can you understand what that picture is?

A Yes, sir.

THE COURT: Okay. If you can answer the question, go ahead. Objection overruled.

A The rock is holding the ship at some point and the ship may be able to rotate. Now, would you repeat the question, because I got a little lost.

Q (Mr. Milwee by Mr. Cole:) If you felt that there was a chance, or you had a problem that was going to cause your ship to come of that rock, how would you take that action to prevent that?

A You would see what that problem was doing to you. If you had a current that was acting to rotate you away from that, you would use just as little engine and rudder as necessary to hold the ship in position.

Q So it's literally a turning into?

A Well, in this case you would turn ahead to start, just throw the stern to port, and keep it hard up on the rock.

(Pause)

Q How would you use your anchor if you were concerned about keeping the vessel on the reef?

MR. CHALOS: Objection, Your Honor. No foundation.

THE COURT: With the same qualifications before, the objection is overruled.

A You would put your anchor in the water and the scope would change, depending on the depth at your bow and the type of bottom.

Q What about using the rudder commands to change to cause your ship to move back and forth to determine what kind of bottom you have underneath. Is that a good way to use your rudder?

A It certainly is not, particularly if you are on rock, because you're not going to do anything but just wiggle that thing and grind it back and forth on the bottom.

Q If you are sitting on a rock, and you are going back and forth, what is happening to the

bottom of the vessel?

A You're grinding the two surfaces together. Just like if you take an orange and squeeze it, or take your foot and rub it back and forth on the deck. You're grinding that ship on that rock. And you are going to stand a very good chance of doing additional damage to it.

Q And what about if you are unaware of other areas that have rock while you're going back and forth like that?

A You are likely to bump into one. You certainly shouldn't do it -- you should attempt to move that ship in any way until you have a knowledge of the water that lies immediately around the ship; the way the ship lies on the ground; and the water that lies in the direction in which you intend to move it.

Q After a grounding, what is the general rule that you should abide by before taking any action?

A Find out what you got.

Q Now, Mr. Milwee, you've give us your opinion on what you believe Captain Hazelwood was attempting to do after the Exxon Valdez was grounded. I'm reading you the definition of

recklessly in the state of Alaska.

"A person acts recklessly with respect to a result or to a circumstance described by a provision of law defining an offense when that person is aware of and consciously disregards a substantial and unjustifiable risk that the result will occur or that the circumstance exists. The risk must be of such a nature and degree that disregard of it constitutes a gross deviation from the standard of conduct that a reasonable person would observe in the situation."

Do you have an opinion on whether or not Captain Hazelwood acted recklessly in attempting to move that vessel from the reef on March 23, 1989?

(4145)

MR. CHALOS: I object, Your Honor. This gentleman has not been qualified as a tanker master or having knowledge of what a tanker master should or should not do. On that basis, he can't give an opinion as to whether Captain Hazelwood acted reckless. All he can give an opinion on is what he saw from a salvage standpoint.

MR. COLE: Your Honor, he is a salvage

captain. He evaluates tanker captains' actions. That's what he makes decisions on in salvage plants. He should be able to give his opinion on that action.

MR. CHALOS: I don't think there's been any testimony, Your Honor, that this gentleman evaluates tanker captains' actions.

(Tape: C-3649)

(000)

THE COURT: Objection overruled. He may give his opinion.

A Yes, I have such an opinion.

Q (Mr. Milwee by Mr. Cole:) Would you tell the jury what that opinion is?

A It think it was reckless, because Captain Hazelwood did not have enough knowledge of the situation to make the decision to make a refloating -- an immediate refloating attempt. He knew that he had a badly damage ship. He had enough information to know that he should stay there, but he didn't have enough information to know that he should refloat.

Q When you say he had enough information to say that he should stay there, what do you mean?

A He -- from the drop of the level in the cargo tanks that was reported to him by his chief mate,

he knew that he had severe hull damage. He knew from his knowledge of the bottom, that anyone going into a certain area had, that he was aground on rock. That was information that he did not know how he was aground. He didn't know where he was aground. He just simply did not have enough information to make the decision to make that immediate refloating attempt.

MR. CHALOS: Your Honor, I move to strike This gentleman can't tell us what Captain Hazelwood knew as to how he was aground or where he was aground. I don't think there's been any testimony to that effect.

THE COURT: Objection overruled.

Q And when you say he didn't have enough information to take action to refloat the vessel, what do you mean?

A He had not taken soundings around the vessel; he had not made any attempt to determine how the vessel lay upon the ground. It's just basic information that's needed for attempting to refloat a vessel.

Q If you refloat a vessel, how certain should you be before you attempt to do it, that your vessel will float?

A Dead certain.

Q What do you risk by not being certain?

A Loss of the vessel, loss of your crew, additional pollution.

MR. COLE: I have nothing further.

THE COURT: We'll take our break now.

Don't discuss the matter among yourselves or with anybody else; do not form or express any opinion.

THE CLERK: Please rise. This court stands in recess subject to call.

(Off record - 11:36 a.m.)

(On record - 11:47 a.m.)

(96)

(Jury not present)

THE COURT: You may be seated. I understand there is a discovery request?

MR. CHALOS: We received, as part of the discovery, a letter from Mr. Milwee to Sam Adams dated February 12, 1990. May I approach the bench and give a copy to Your Honor.

As you will notice, Your Honor, Mr. Milwee renders a pretty extensive opinion in that particular letter, but it makes reference to a letter or a memorandum that he received from Mr. Adams on February 2nd, 1990. We've asked for production of that

particular letter so we could determine what it is that he was asked to do, and what information he was given on which he could base these conclusions.

THE COURT: He wants the memorandum?

MR. CHALOS: Yes.

THE COURT: Let's hear, why not?

MS. HENRY: Your Honor, the memorandum contains attorney work product. It contains our view and our theories of the risk that Captain Hazelwood did in his conduct in this case. In addition to that, the memorandum contains a list of the information that we provided to Mr. Milwee, which defense already knows. They already provided that independently of this memorandum. And it also contains a list of requests that we were making of Mr. Milwee to set forth in a report that he was to produce. Our request of what he was to do, as has also has been made known to the defense.

So the only other thing in this memorandum, other than those two areas, is work product. If I could approach the bench with that report.

(Pause)

THE COURT: So the portion here that sets forth the view of Mr. Adams, Mr. Cole, retired Captain Bob Beevers, and Mary Anne Henry, and State Trooper

Sgt. Jim Stogsdill, is that portion of the letter that you object to as work product, setting forth what your opinions are to this witness?

MS. HENRY: Yes, Your Honor.

THE COURT: As far as the rest of the letter, you have no problem with it, correct?

MS. HENRY: Yes, sir. I have no problems as to the rest of the letter. That's not work product. It was just my view that we had already provided most of that information, except the documents.

THE COURT: What is objectionable about setting forth your views to this memorandum to the witness. It doesn't seem to be any kind of a surprise. I'm sure that that's consistent with the opening statement that's been made by Mr. Cole and the tenor of the testimony so far. What's so surprising about this, or something that you want to keep confidential that hasn't already been disclosed in opening statements and your examination of witnesses?

MS. HENRY: Your Honor, I don't believe our entire theory of the case and discussions that we had over the last 11 months about our theory of the case, which did involve evolve in change, is something that the defense has a right to know.

THE COURT: I'll order production of the

letter to Bill Milwee from Sam Adams dated February 2, 1990, subject: Expert Analysis. And you already have the February 12, 1990 letter. You can have that back.

Is this a copy of it, Ms. Henry?

MS. HENRY: That is a copy that can be provided.

THE COURT: Is it okay if we give this one, then. We don't need a...

MS. HENRY: Yes, that's fine.

THE COURT: That doesn't mean that what's contained in here is necessarily admissible before a jury. This is just a discovery. We'll take a recess and come back in about five or six minutes.

THE CLERK: Please rise. This court stands in recess subject to call.

(Off record - 11:54 a.m.)

(On record - 12:02 p.m.)

(311)

(Jury present)

THE COURT: Mr. Chalos?

CROSS EXAMINATION OF MR. MILWEE

BY MR. CHALOS:

Q Good morning, Mr. Milwee.

A Hello.

Q You are here under contract to the State, are

you not?

A That's correct.

Q How much is your contract for?

A The maximum value of my contract is $25,000.00.

Q Have you billed the State?

A I have.

Q How much have you billed them so far?

A I'm not dead sure. It's under $5,000.00.

Q Do you expect to bill them more?

A Yes, I do.

Q Do you expect to bill them up to $25,000.00?

A I doubt it.

Q What do you think you are going to bill them before this is over?

A I don't know exactly. I've been in Anchorage for 10, 11 days now. Probably another $9,000.00, $10,000.00 at least.

Q Plus your expenses?

A Plus expenses.

Q Now, you're not a ship's master, are you?

A No, I'm not.

Q And you hold no licenses issued by the Coast Guard?

A No, I don't.

Q You don't have any engineering licenses issued by the Coast Guard?

A No, I don't.

Q You've never commanded a merchant ship, I take it?

A No, I have not.

Q Now, have you ever been on a ship that's going along and all of a sudden it grounds?

A No, I have not.

Q You said that...

A Ah!

Q Yes, go ahead.

A That's not totally true. I have intentionally grounded a ship, but that was part of a salvage operation.

Q Why did you intentionally ground a ship?

A Because it was the safest thing to do with the ship at the time. We wanted to ground it so that we could secure the ship and salvage it.

Q In other words, in that case you wanted to make the ship more secure?

A That's correct.

Q And you ran it forward, I take it?

A That's correct.

Q On to something?

A On to a sandbar.

Q Now, you said that you had been on ship where you came on shortly after the grounding, is that correct?

A No, that's not correct. I've been on ships where I came aboard shortly after the grounding. I've been on several in that situation.

Q How quickly after the grounding was the quickest you've ever been on?

A Probably six or seven hours.

Q By then all the initial decisions by the master had been done, had they not?

A Usually.

Q And no doubt by then the vessel was secure in whatever fashion it was secured at that time?

A Usually they required additional action to make them totally secure.

Q Now, with respect to the Exxon Valdez, you didn't see the ship out at Bligh Reef, I take it?

A No, I didn't.

Q And you didn't see it at Naked Island, is that right?

A No, I didn't.

Q Just a little bit about your experience. You said you have been involved with tanker

groundings before. How many of those tanker groundings involved a rock bottom?

A As I stated, the only one that I have been involved that hit a rock was at Glacier Bay out in Cook Inlet.

Q And by the time you got there the vessel had already been refloating?

A The vessel was refloating.

Q How did they refloat the vessel in that case? Did they back up?

A No, it was tide rise.

Q The tide took it up and refloated it?

A That's correct.

Q She was holed, wasn't she?

A Yes, she was.

Q And she didn't sink?

A She was holed in two tanks. She was not...

Q But she didn't sink?

A She didn't sink. There was no way she was going to sink with the amount of damage that was done.

Q Okay. Now, your work as a salvage master is based on accidents, isn't it?

A Marine casualties, yes.

Q When an accident happens, the ship runs

aground, and you're called out?

A That's right. When there's a casualty I respond to it.

Q Would you agree that groundings happen frequently?

A It would depend on your definition of "frequently" and the degree of the grounding. There are major groundings and there are very minor groundings.

Q They are part of the maritime life, are they not?

A That's correct.

Q Now, that can happen no matter how prudent a master is, right?

A It's like any other kind of accident. There is usually a cause for it. There is always a cause for it. And it's very rare that there is not a grounding to -- a deviation from the norm when there is a casualty.

Q But that's true, isn't it, of every accident. There is some deviation from the norm that puts you into an accident situation?

A Well, I'm not qualified to talk about every accident.

Q Well, if you act normally you would expect not

to have an accident, wouldn't you? I mean, using the word "normally" as you use it.

A I suppose so. It's a matter of semantics, yeah.

Q You spoke about some of the writings that you've done over the years. You wrote an article that appeared in the U. S. Naval Institute Proceedings for March of 1974?

A Yes, I did.

(560)

Q I would like to talk generally about salvage operations, and specifically about your article. Let me approach you if I may. We marked the document as Exhibit AH for identification. Do you recognize that as a copy of your article?

A Yes, I do.

Q And you wrote that article, did you not?

A Yes, I did.

Q have you read it recently?

A Yes, I have.

Q Do you agree with the precepts that you set forth in it?

A Just about completely.

Q Well, in the first paragraph you write...

MR. COLE: Objection. What is the purpose of

reading it? Is it to refresh his recollection? Is it to...

MR. CHALOS: Your Honor, I want to know if he agrees with the specific opinions that he expressed in this letter -- or, in this article. The title is "The Ship Aground, the Do's and Don'ts."

MR. COLE: He can't just read it in, that's improper...

THE COURT: It's hearsay, and the objection will be sustained unless you can come up with something -- some exception here. I'm finding a relevance problem here, too, with you just reading something into the record without letting us know what it is about.

MR. CHALOS: Well, I'll ask him questions about it then.

Q (Mr. Milwee by Mr. Chalos:) Mr. Milwee, do you agree that when a grounding occurs, any grounding, that there is a lot of confusion?

A Usually.

Q And that would be moreso in a situation where you have a tanker the size of the Exxon Valdez at night at Bligh Reef. Would you expect a lot of confusion at that point?

A I would expect no more confusion there than in the case of any other grounding.

Q But you would expect to see some confusion, at least in the first five, 10 minutes?

A Yes.

Q Now, do you agree with the proposition that when a vessel grounds there is an instinctive reaction to get off?

A Yes.

Q And would you also agree with the proposition that the instinctive reaction is to back up?

A No. It depends on how the ship grounds.

Q Well, let's say it grounds going forward and comes to a stop.

A Ships ground going forward in any number of ways. They may pass -- they may ground going directly into shore. They may ground on a reef or a sandbar. It depends on how the ship grounds. And, no, I would not agree the instinctive reaction is to back up.

Q Let me ask you this, then. Would you agree that the wrong thing to do in a grounding, initially, is to back up.

A Again, it depends on the condition of the grounding and how the ship grounded and what the master knows about the grounding.

Q Well, in this article you say, "Perhaps the

most common error made by the commanding officer of a stranded ship is to attempt extraction by lightering the ship and backing full on high tide." Now, what do you mean by "lightering"?

A Likening, not lightering.

Q I'm sorry.

A Making your ship lighter.

Q How do you do that?

A Remove weight from the ship.

Q Such as?

A Cargo.

Q Cargo, ballast.

A Ballast. Any kind of weight.

Q How about in the case of a tanker -- how about closing down your IG system? And I'm talking now about a tanker that's been holed.

A That would be an excellent move.

Q To make it lighter?

A No. It would be an excellent move to prevent the loss of cargo.

Q And how about making the ship more buoyant?

A It would depend on the amount of oil in the tanks and the amount of damage that was done.

Q But that's another method if you wanted to make the ship lighter?

A Not necessarily in itself.

Q Okay. We're going to talk about that in a while. Now, you had a chance of studying the evidence in this case, right?

A That's correct.

Q And would you agree that at not time after the grounding, did Captain Hazelwood put his engines astern?

A That's correct.

Q So he didn't commit the error that you say is most common in this situation? That is, trying to back up.

A That's correct.

Q Now, would you agree that one of the tasks that a master has is to try and put his vessel in any stranding in as secure position as possible?

A That's correct.

Q And is it your feeling that when a vessel grounds, under no circumstances should the captain back the vessel up?

A No, absolutely not.

(770)

Q Well, in your article on page 120 did you say this: "In general the following form the basis for action in most strandings. Unless the

weather is dead calm and no possibility exists that the ship could be driven further ashore..."

A Wait a minute, I'm not finding you.

Q Let me come over and help you.

A Okay.

Q Are yo with me. Starting with, "In general". Shall I start again? "In general the following form the basis for action in most strandings. Unless the water is dead calm and no possibility exists that the ship can be driven further ashore, broach or pound, no tug should be made to back off. All efforts should be devoted to making the ship secure."

Do you remember writing that?

A If I were writing that today I might not be so definite about it.

Q Oh, so you disagree with what you wrote back in '74?

A I don't necessarily disagree with it, I would give that some thought and see if, perhaps, I learned something in the intervening 16 years.

Q Well, let me ask you this: is it your opinion that the standard of practice, rather than backing the ship up and trying to get it off the reef in that fashion, would be to weigh the ship

down?

A Sound practice is to determine a condition of the grounding before you do anything. That's the most critical thing.

Q Well, we're going to talk about that as well, I promise.

MR. COLE: I object to Mr. Chalos' commentary in the questioning.

MR. CHALOS: I'll try and restrict it as best as I can.

Q Mr. Milwee, did you say in this article, "By far the standard practice is to weigh the ship down by filling all tanks from the sea"?

A That's a good practice in general. I was not specifically referring to tankers certainly.

Q Now, in this article you also mentioned the term "tons aground"?

A Yes.

Q Can you explain for the jury what that means?

A That's the ground reaction that I was speaking of when I drew the pictures up here on the thing. It's another term for aground reaction.

Q Let me see if we could simplify it, because I have a tough time understanding ground reaction. Do you mean by "tons aground" or "ground

reaction" that that is the weight of the vessel resting on a particular bottom?

A It's the weight of the vessel that is supported by the bottom, yes. Or the portion of the weight of the vessel that is supported by the bottom.

Q Did you make any determinations in this case as to how many tons this ship was aground?

A I did. Of course, the ground reaction to tons aground varies with the tide.

(911)

Q All right. We'll get into some detail. Now, I would like to refer your attention to some excerpts of a book by a fellow by the name of Graham Danton (ph), called the "Theory of Practice of Seamanship".

And ask -- which we marked as Exhibit AI for identification. And ask you, does this book come out of your library?

A Yes, it does.

Q You refer to it from time to time?

A Yes, I do.

Q You use it as part of your reference work?

A Yes, I do.

Q Have you referred to this book in respect to

your testimony here?

A Certainly have. I believe I gave you this.

Q You did?

A Uh-huh (affirmative).

Q Now, in this particular book starting with Chapter 8, entitled "Stranding and beaching". Mr. Danton gives 13 things to be done after a grounding, does he not?

A Yes, he does.

Q And nine of them are immediate action upon stranding, and four of them are subsequent action. Do you see that?

A Yes.

Q Now, do you agree with the proposition that the first thing that one does after the vessel runs aground is to stop the engine and put it astern as the tide is falling?

A No, I don't. Not necessarily.

Q So Mr. Danton doesn't know what he's talking about?

A I didn't say that. Mr. Danton has a different opinion than I do about that.

Q Okay. Do you agree with a second opinion that he expresses which is: "The master must be called to the bridge and the engine-room

informed."

A Yes.

Q Now, you've read evidence in this case, did you not?

A Yes.

Q You read the testimony of Mr. Cousins?

A Yes, I did.

Q How about Mr. Kunkel?

A Yes.

Q How about Mr. Kagan?

A Yes.

Q Basically, all the crew members?

A Yes, I think so. All the crew members.

Q Okay. Do you remember testimony to the effect that one of the things -- the first thing that was done by the captain was to call the engine-room to ascertain their condition?

A It was one of the things that was done by the captain, yes.

Q And you also remember testimony that the engineers were told too sound the void spaces and to sound the engine-room tanks?

A I don't remember the engineers were told that; I remember the engineers did it.

Q Did you read Mr. Glowacki's testimony?

A Yes, I did.

Q And do you remember him saying that?

A I remember him saying that the tanks were sounded, yes.

Q Do you consider those prudent actions?

A They were correct actions.

Q How about the taking of a fix to ascertain the position of the vessel?

A That's a correct action.

Q Good action?

A Good action.

Q The third thing that Mr. Danton suggests is: "Close watertight doors and make the signal for emergency stations." Do you agree with that?

A That's correct.

Q The fourth thing is to swing out the boats. He means life boats, doesn't he?

A Yes, he does.

Q Do you remember the testimony in this case that Captain Hazelwood wanted the life boats brought down to the embarkation deck?

A Yes, I do.

Q Good action?

A Good action.

Q Now, number five says: "Observe Rule 30 of the

Rules For Preventing Collisions and show the appropriate lights and shapes." Do you agree with that?

A Yes.

Q Have you heard from anyone, or has anyone told you that after the grounding they lit up their two red lights?

A I don't know whether that was done or not.

Q Sixth action: "Ascertain position of the ship." That was done?

A (No audible response.)

Q The seventh action, he gives is distress message to be sent to other ships in the area. Do you agree with that?

A Oh, yes.

Q In this case the Coast Guard was called?

A Oh, yes.

Q The eighth action that he suggests is: "The master must decide whether to call for tugs to stand by." Do you agree with that?

A Yes.

Q Do you remember the testimony of Mr. Myers having a conversation with the captain about getting salvage tugs out there?

A Yes, I do.

Q Correct action?

A In this case it's almost a trivial action because of the nature of the tugs in the Valdez area.

Q Well, that's not Captain Hazelwood's fault.

A That's true.

Q Now, number nine he says: "If the vessel is damaged oil pollution may be occurring. This should be reported to the coast radio stations." That was done in this case, right?

A That's correct.

Q Okay. Now, he doesn't specifically say it, but would you agree -- I know there are important action to do here, is to ascertain where your damage is and how you've been damaged and how much oil you lost?

A Absolutely.

Q You remember Mr. Kunkel's testimony, do you not?

A Yes.

Q Captain told him to go below, ascertain where we're losing oil, how much oil we're losing, the rate that we're losing it...

A Yeah. I think he said go below...

Q ...and report back to me on stability?

A ...and see what you've got and check your options. Same thing.

Q In effect, the same thing, right? Correct action?

A Correct action.

Q Now, in this Mr. Danton goes on and says: "Subsequent action." He says: "The owner's charter should be informed."

A Well, let's look at what Mr. Danton really says. He said: "What should be classed as immediate and subsequent action is very much a matter of personal opinion and choice.

Q Okay. And that's the master's discretion at that point?

A Well, I think it's what the master should do immediately, yes.

Q Just choice, based on what he sees at that time, based on what information he has at that time?

A Uh-huh (affirmative).

Q Now, he puts number 12 as the item -- what he called the item -- "The ship should now be examined for damage, never forgetting that the force of impact may have caused hatches to spring away." It doesn't apply here, but certainly the

checking for damages is an important part of it, right?

A Yes.

Q And the last thing that he has on here is: "Soundings should be carried out overside and a general survey of the area, weather permitting, will enable the master to assess the best direction to try falling off." Do you agree with that?

A I agree with that. I think it's -- location in here is perhaps unfortunate, because I think it's a very, very important thing to do.

Q Okay. Mr. Danton...

A Because without it you can't make any rational decision about action to be taken.

Q In the list of 13 things to be done, some immediate and some subsequent, Mr. Danton lists the soundings as the 13th item out of 13.

A That's Mr. Danton's opinion.

Q But you don't agree with that?

A I do not agree with it.

Q Okay. Now, let's talk a little bit about soundings. Would you tell the jury how soundings are made?

A Well, generally in soundings on a casualty you

take a weighted line and drop it over the side to measure the depth of the water. You do this at very frequent intervals around the ship in order to get a picture of the profile of how the ship rests upon the ground.

In the case of rough weather or something that interferes with being able to take soundings in a normal manner, you take the soundings by measuring not from the surface of the water to the bottom, but from the deck edge to the bottom, and then marking it on a profile of the ship. So you are essentially marking this distance, rather than measuring from the water surface to the bottom.

Q Mr. Milwee, when you talk about a "weighted line", can you tell the jury what you're saying?

A It's a piece of relatively light line with a weight on the bottom of it, so it will go in the water -- and it's essentially a plumb line, so it will sink and hang straight down into the bottom.

Q And how does one measure the depth of the water when you're sounding on that particular line?

A Well, if you're taking soundings from the surface, you measure the depth of the weighted

line.

Q All right. You know in this case, from reading what you've read so far, that there was a lot of oil in the water, right?

A Correct.

Q Okay. So we go over to the side with this sounding that you say. We drop it over the side the first time. The line gets coated with oil, doesn't it?

A That's correct.

Q Okay. So the second time we take it and drop it into the water, you can't tell what the depth is?

A And that's exactly why you don't do it that way. That's why you measure it from the deck edge. And measure it...

Q The deck edge to what? To the water line?

A From the deck edge to the bottom. You measure until you...

Q Bottom of what?

A The bottom of the sea. And then you measure that depth and plot it on a profile of the ship.

Q Now, would you agree that with oil spewing out all over the ship, you're not going to get an accurate reading?

A No, you're not going to get a totally accurate reading at any one spot, that's why you take a lot of them.

Q And would you agree that one of the ways you determine your draft when you're taking soundings, or determine how you're aground, is to know what your draft is, right? Are you with me on that?

A No, I'm not. Go back over that one again.

Q Well, you start out with a proposition that you know you're drawn 57 feet; your draft is 57 feet.

A You start out, you knew you were drawing 57 feet when you were afloat.

Q Okay. But now you're holed. Now you're losing oil and you're gaining water. You don't know what your draft is, do you?

A That's correct.

Q Okay. So what good are soundings if you don't know what your draft is?

A Because you can then determine the profile of the bottom.

Q But if you don't know how deep you are in the water you can't tell...

A That's exactly what you're trying to

determine. That's exactly what you are determining.

Q Let's look at it a different way. If you are on a rocky pinnacle bottom, right, which Prince William Sound is. You can take a draft right here and it would read one thing. You go over here two feet away and it reads completely different.

A That's right.

Q It could be even 20 feet difference?

A That's right. And then I know I've got a problem.

Q You go back there and it reads something else, right.

A And I know I got a problem.

Q Well, you know you're on a pinnacled bottom.

A I know I'm on a tough bottom and it's -- I have some idea how hard I was on there.

Q Captain Hazelwood knew, didn't he, that he was on a rock pinnacled bottom?

MR. COLE: Objection. Lack of knowledge.

MR. CHALOS: I'll rephrase the question, Your Honor.

Q Based on what Captain Hazelwood was told at the time, and based on the testimony you read,

it's fair to say, isn't it, that Captain Hazelwood knew he was aground?

A Oh, yes.

Q And he knew that he was aground in Prince William Sound?

A Yes.

Q And he knew he was aground on a rocky bottom?

A Yes.

Q Let's talk about what Captain Hazelwood did know. He knew he wasn't holed on the port side, didn't he? He was told that by...

A He didn't have any loss of cargo on the port side. He had reason to believe he wasn't holed.

Q And he knew that on the basis of what was given to him that he had enough water at least right below his propeller and his rudder?

A Say that again, please.

Q He knew that he had sufficient water around his propeller and rudder at that point? Do you remember that testimony?

A I don't believe he knew that. I don't believe he could have known that.

Q He knew that he was holed on the starboard side, did he not?

MR. COLE: I'm going to object. Objecting

what he knew, that that's impossible for this person to say.

MR. CHALOS: Well, let me rephrase it.

THE COURT: That's in evidence, Mr. Cole. Mr. Kunkel told him what was happening with those tanks, and I think that's the inference, is that he knew there was damage on the right side. So the objection is overruled.

(1470)

Q He knew that he was holed in the center tanks and he knew he was holed on the starboard side?

A That's correct. And that's all he knew.

Q All right. What more would soundings have told him? He knew all that information already.

A He didn't know where he was aground. He didn't know how hard he was aground. He didn't know how he was sitting on the bottom.

Q Again, if he was sitting on a pinnacle rock, and that rock was projecting into the ship, the fact that he may have taken a sounding over the side over here where the rock wasn't, would have told him how far in the rock was, would it?

A Nothing would have told him how far in the rock was, but he didn't make any attempt to determine that, and it's very basic information.

Q You know, I agree with you, if we're talking about a mud bottom...

MR. COLE: Judge...

Q ...or we're talking about a shoal bottom, but you say the same principal would apply when you have a pinnacled rock bottom?

A It would apply on any type of bottom. It's basic information. You've got to try to determine it.

Q In spite of all the problems that we've just discussed, the oil and the fact that he didn't know his draft, and he knew certain other information, that's your opinion?

A He knew very little information. He did not try to determine this information, and I think he should have.

Q By the soundings?

A That's correct.

Q Just before we leave this subject. The soundings would have told them how the rocks were impaled in this ship, would they?

A No, they can't.

Q And the soundings wouldn't necessarily, on a pinnacled bottom, tell them how many tons he had aground?

A Give him a pretty good indication.
Q Assuming that the bottom is uniform at that point?
A No, not necessarily.
Q Would the soundings tell how much oil he's losing?
A No.
Q Would the soundings tell him anything other than what you say may be the general area assuming that he could get through the oil?
A It would tell him roughly how much of the ship was resting on the bottom. And by a very simple calculation, it would have given him an approximation of how hard the ship was aground.
Q Now, just a few more questions about your background. You say you testified on a number of times.
A Yes, I have.
(1610)
Q How many times have you testified?
A Half a dozen. Maybe 10.
Q Have you testified in any situation involving a tanker aground?
A No.
Q Did I understand you correctly that you looked

at the King's Point simulation of this vessel's force?

A Yes, I did.

Q why did you look at that?

A General background.

Q Did you rely on it in any way in coming to your conclusions?

A No.

Q You mentioned, also, that you spoke with Mr. Lights about the grounding?

A Yes, I did.

Q And without getting into the substance, he basically told you what he did?

A How the salvage operation went, yeah.

Q Do you have any problems with what he did to get this vessel off?

A Not at all. Not at all.

Q Do you have an understanding as to how this vessel was lightered and taken off the strain?

A Cargo was removed and pressure was put on the tanks where necessary and so she was lightened. It's pretty much the standard way to remove tankers. You lighten them and move them. You don't try to drag them on the bottom, and you particularly don't try to drag them on rock

bottoms.

Q In this particular case she was refloated on high tide?

A That's correct. It happened to be high tide, yes. It was -- one would normally choose to do it on high tide because it simplifies some of the other problems.

Q Okay. Now, you this ship down in San Diego, did you not?

A Yes, I did.

Q And you saw the damage that she had at that time?

A Yes, I did.

Q You couldn't tell, could you, by looking at it in San Diego what damage was caused by the grounding, what damage may have been caused by subsequent tidal action, what damage may have been caused by the refloating attempts of the salvers, or what plates may have been cut away?

A Well, no, that's not totally correct. Damage caused by the grounding was obvious. Damage caused...

Q What damage was that?

A It was the scraping and the upset plate -- the torn plate throughout the length of the ship.

Damage by the tidal action was also very obvious because it was vertically oriented damage in the structure of the ship. Crushing of the hull plate. Ruffling of structural members, well up into the ship.

Damage in the salvage attempt, there should have been none, the way the ship was refloating. She brought -- just brought straight up. That's why you do that with tankers. That's why you lighten them and refloat them that way rather than trying to drag them.

Any damage that was done in the initial refloating attempt couldn't be apparent because the platings where that damage would have occurred, essentially the shell plating -- the hull plating in the grounded area was gone.

Q Could you tell in San Diego by looking at the bottom of the ship whether there had been any damage done transversely as a result of using the rudders?

A I didn't see any, but most of that damage I would have expected to appear in the area that was gone.

Q Would you agree that whatever damage this ship suffered occurred in the striking of the reef,

other than the damage that occurred because of the tidal action?

A All that I saw occurred from both the striking of the reef and the tidal action.

Q I would like to talk a little bit about your opinion that there were two hits. It hit initially and then it hit again and stopped.

Have you done any plotting to figure out where this ship was at any particular time?

A No, except for the soundings that were taken during the salvage survey, there are no fine grained soundings in that area that I know of.

Q The soundings which you're talking about now were done during the salvage survey. Have you looked at those?

A I've looked at them. I haven't studied them in great detail, but...

Q Do you have a copy in your book?

A I'm not sure whether I do or not. I don't think I do.

Q Well, from memory -- from memory, do you remember that in those soundings there was plenty of water after of the ship, according to the soundings?

A Immediately after the ship, I believe there

was. I didn't spend a great deal of time on those soundings, because I wasn't greatly interested in the salvage operation, rather than just as a matter of general professional interest.

Q But you do recall plenty of water being aft of the ship.

A Immediately aft of the ship.

Q Okay. Now, you say that you didn't plot the ship's course or speed on any chart to determine where she might have been at any particular time just before the grounding?

A I plotted it, but I just did it as a rough plot; as a matter of general background.

Q And I take it you spoke to Mr. Greiner about his theory of two hits, and the hits had flashed in about two minutes between them?

A Well, I don't think we talked about it lasting two minutes between them. We talked about taking a total of about two minutes where the vessel had come to rest.

Q That would depend, I suppose, on what depth the water was in that particular area, as to whether it would take two minutes, or one minute, or 30 seconds?

A It would depend on the distance, how hard the vessel hit the reef. How much of the energy of the vessel went into speed decay. How much went to physical lifting of the vessel. How much of it went into breaking of the rock. But just from the distance that the vessel followed, it looked like it was about two minutes.

Q But you didn't plot it to make sure that your theory is correct?

A No way to. No way to. The information wasn't available.

Q And you heard the crew's testimony, or you read the crew's testimony about the type of action they felt; the type of noises they felt?

A I heard it was bumping and grinding across the bottom, yes.

Q About 15, 20 seconds, you remember if they said that?

A Well -- no, I heard a few seconds, but I don't think anybody was that specific.

Q Now, if several members of the crew said, "We felt vibrations; we felt the vessel rocking, and that lasted about 15 second and we came to a stop." That would be inconsistent with your two minute theory, wouldn't it?

A It would be inconsistent with the vessel travelling the distance it would have had to travel to damage the length that it did.

Q Well, that's because you assumed that the vessel first hit at the bow and then travelled the whole length?

A Vessels going forward normally first hit at the bow when they have damage to the bow, yes.

Q And you didn't assume any other potential scenario?

A No. And the damage I saw was consistent with damage at the bow first.

Q Did you speak to Mr. Vorus about this theory of two hits?

A I don't recall specifically discussing it with him. We may have.

(2100)

Q Have you seen a letter written by Mr. Vorus dated September 11, 1989 which we marked for identification as AA?

THE COURT: I suppose it should be shown to Mr. Cole.

MR. CHALOS: I'm going to show him what we marked for identification.

THE COURT: Have you shown it to Mr. Cole yet?

MR. CHALOS: I think he knows the letter I'm referring to.

(Pause)

Q (Mr. Milwee by Mr. Chalos:) Have you seen this letter before?

A No, I haven't.

Q This is the first time you've seen this?

A Yes.

THE COURT: Which Exhibit are you referring to?

MR. CHALOS: AA, Your Honor.

Q First time?

A First time.

Q Have you discussed with Mr. Vorus the proposition that you -- the experts in this case had to show conclusively that there were two hits on this vessel in order to offer that as a logical explanation as to why Captain Hazelwood did not go astern in this case. Did you ever discuss that?

A I definitely have not discussed that with Mr. Vorus.

Q How about with Mr. Greiner?

A No. I haven't discussed that with anyone.

Q And this is the first time you're hearing that

proposition?

A That's correct.

Q Okay. May I approach the witness, Your Honor. Let's talk about tons aground.

Have you looked at any schematics of the vessel aground? Specifically I'll show you what I marked as AG, which is a blow-up of something that you had in your file?

A Yes, I've seen several of those schematics.

Q Okay. Do you recall seeing this one here?

A I've seen several. It was either that one or close cousins to it, but that's typical of the ones that I've seen.

Q You made certain calculations about how many times this vessel was aground?

A Yes, I did.

Q Did you base those calculations in part on this schematic?

A Not that particular one.

Q One close to it?

A One close to it.

Q How...

MR. COLE: Is this being offered for admittance? If it is, I object. I object to him using it.

MR. CHALOS: Your Honor, I just want to ask him how he determined the tons aground on the face of a schematic, either this one or one close to it. I had this blown up from documents that came out of...

THE COURT: Did you use this document in making that determination?

A No, sir, not this particular one. I used one very similar to it.

THE COURT: You're not offering it as an exhibit, just...

MR. CHALOS: No. Just as illustrative right now.

THE COURT: I'll let you go ahead. It won't be admitted.

Q (Mr. Milwee by Mr. Chalos:) Could you tell the jury how you made the determination how many tons were aground?

A In the one that I had there were drafts marked on the particular drawing. There were drafts for the starboard bow, port bow, starboard quarter and port quarter. I used a method of averaging those drafts, in which you take means several times in order to determine a mean draft or result a mean draft. And from that I multiplied it by quantity known as the tons per inch

emersion, which is the amount of weight that must be removed from a ship to raise it one inch, or add it to a ship to increase the draft one inch. And I determined the amount that the ship had been raised during the grounding.

That gave me the ground reaction under a particular condition of the tide, and the drawing that I had had the time on it, as this one does. And then I took that and ran a series of calculations for all states of the tide that existed during the period of the grounding.

Q Let's just stop there one second. At what stage of the tide did you start your calculations?

A Oh, I think it was -- in fact, that's the date and time. It was -- soundings were taken between 3:30 in the afternoon and 5:00 on that date. I took -- I said, "Well, let's take the mean of that, and let's take the average time and call the soundings at 1615." And high water that day was about 4:09. I said, "Well, let's just assume it's at top of the tide." And we calculated the ground reaction for that, and then it's just a matter of going up and down a straight line.

Q Okay. So it's fair to say that you started

with the tons aground where the tide came in at its highest?

A It wasn't at the highest that it reached during that period, and it certainly wasn't...

Q Well, at high tide.

A ...at the high -- but it was a high for that particular day. The tide doesn't reach the same height every day.

Q Okay. Now, is it fair to say that this vessel was always aground no matter what stage the tide was in? Whether it was high tide or low tide? She was always resting on the bottom?

A Yes, it was.

Q Would you agree that this vessel was very hard aground, on the basis of what you read?

A It was from hard aground to very hard aground.

Q Was she impaled?

A I don't know that. I suspect that there was rock. If not actually impaling the vessel, there was rock well up into the -- some of the indentations in the upset.

Q Mr. Greiner testified that for this vessel to hit the forward most, or the aftermost point on which it was aground, it would have to move forward about 350, 400 feet. Would you agree

with that assessment?

A It would have to move forward from its initial impact 300 or 400 feet. This is 300 or 400 feet after the stem.

Q Right. And to get to the engine-room space it would have to move another 300, 400 feet?

A That's more than that, I think. I think the ship's well over that.

Q Well, what do you think?

(2470)

A Well, the ship's 945 feet long. This is about 480 -- yeah, it's about 400, almost 500 feet.

Q So in order for the engine-room spaces to come up here and hit this portion of the rock, the vessel would have to move forward about 400, 500 feet?

A That's correct.

Q Now, let me take this down. You made some calculations as to the number of tons aground at any particular point. How many tons aground did you figure approximately two hours before high water?

A Two hours before high water, it would depend on the...

Q And the reason I'm using two hours before high

water, it would have been about the time that this vessel grounded on that night, the 24th.

A I calculated a figure when she grounded of something around 13,000 tons.

Q 13,000 tons. May I write this down. Okay. That means that 13,000 tons of this vessel was resting on the bottom?

A That's correct.

Q And that number, as the tide changed, would get bigger, wouldn't it? As the tide dropped it...

A As the tide dropped it would get bigger. As the tide rose, it would get smaller.

Q Okay. Now, this 13,000 is based strictly on this TPI that you used?

A That's correct.

Q You didn't take into account the fact that there was oil mixed in with water and more -- as the oil was coming out more water got in?

A No, I didn't.

Q Okay. And that would increase the...

A That would increase it.

Q Would you agree with me that at the time this vessel was aground, and approximately number of tons aground was about 20,000 tons, given the

amount of oil that was going out and the water coming in?

A I wouldn't agree with you without making those calculations, no.

Q Okay. Do you find the number 20,000 to be wacky, for instance?

A I wouldn't use the term "wacky". I just wouldn't want to put a number on it without doing my own calculations. It would be greater than 13,000.

Q It would be greater. Okay. Could you explain to the jury what the term "coefficient of friction" means?

A I think so. I'm gonna come around there and draw pictures with you. (Pause) If weight, no matter what it would be, is resting on the surface, and all that weight is packing down and supported by the surface, you can move that weight by pushing on it. We all know that. You have to push on it with a certain amount of force in order to move it along the surface. And the resistance to that and the amount of force that you use, depends upon the surface that it's on and how much friction there is between the surface and the object, and the friction that has

to be over overcome before that thing is gonna move.

So as a formula that engineers use, it says the force is equal to the coefficient of friction times the weight. So the coefficient of friction is a number that relates the weight to the amount of force that it takes to move that weight.

Q Another way of saying "force" in respect to a ship would be the thrust generated by its engine, would it not? In other words, that's the way a ship moves, is by the thrust generated by its engine?

A Not always in salvage operations, no. But that's one thing that moves a ship, yes.

Q Okay. Now, the coefficient of friction varies depending on what type of bottom you're one?

A Yes, it does.

Q For sand it's something; for coral it's something else; and for rocks it's a different number?

A Yes it is.

Q What is the coefficient of friction for a rock bottom?

A It varies. It's quite high for rock. It varies from about .8 to 1.5.

Q And I think in one of your papers you always use 1.5 in determining the force necessary to move the vessel?

A My practice is to be very conservative in this because I don't want to get caught short with insufficient force to move it.

Q Okay.

A It's not necessarily an accurate determination of the force that is going to be used. It's a planning figure for operation planning, yes.

Q All right. This is 13,000 tons. Now, the coefficient of friction of 1.5 assumes a fairly smooth rock bottom and a vessel that's not hung up in any way?

A It assumes a rock bottom.

Q And a vessel not hung up?

A Not impaled in any way. If it's impaled you're not gonna move it.

Q All right. Well, that's my next question. If you have an impalement, the coefficient of friction just goes right off the graph?

A Well, it becomes irrelevant.

Q And infinitive.

A Well, it become irrelevant because that's -- you're working against the rock. If the rock is

up in the ship you've got to move the rock, it's not simply slide over it.

Q Okay. That would be the same, also, if you had plates hanging down, hung up on the rock.

A To a lesser extent, yeah.

Q Okay. Let's assume for the moment that this ship, Exxon Valdez was not impaled. And let's use your number, which you say is 13,000, but it could have been more at the time of the grounding. And use the coefficient of friction of 1.5.

So the force that you needed to move this vessel would have been, would you agree, 19,650 tons?

A That's about right.

Q So even under the minimum circumstances you described -- and, by the way, this number got up, I think you calculate, as high as 50,000.

A Yeah. But it also got down as low as 4,000 -- or, less than 4,000.

Q That was at the highest high tide?

A That was at the high tide that existed shortly after the grounding.

Q Again, not using -- not taking into account the fact that oil was mixed in with water, and

that would tend to raise it?

A No.

Q That's correct. So let's just for calculation sake, take 19,650 tons and move this vessel an eighth of an inch, right? Do you agree?

A Any distance at all, yes.

Q Have you done any calculations as to what kind of thrust this engine would generate?

A Yeah, I did a quick and dirty on it that gave me a...

Q What do you mean by "quick and dirty"?

A ...very high figure. An approximation. And it intentionally gave me a very high figure.

Q What was the figure you came up with?

A Oh, I came up with about 365 tons, which I think is probably about twice or better than what the engine would actually do.

Q So you think the engine would do about 200 tons?

A At the outside.

Q So the best this ship could do using maximum power, 31,000 horsepower, is 200 tons, right?

A That's about right.

Q And it had to overcome 19,650 tons of friction to move?

A There is absolutely no question that this ship could not have moved using its engines alone.

Q No matter what Captain Hazelwood did?

A No matter what Captain Hazelwood did. But Captain Hazelwood didn't take any -- make any attempt to determine that.

Q That's not the question. The question is: Captain Hazelwood could have thrown this thing in full full ahead, which he did; use the full 31,000 horsepower that he had, and the best he was going to generate was 200 tons of thrust, right?

A That's correct.

Q And even under your scenario, which you are saying could have been higher at that time, he would have to overcome 19,650 tons of friction?

A He would have to overcome a figure that was greater than the amount of thrust that he was able to generate. Those figures are a little indeterminate because the ship was rising. The tide was rising. The thrust was going down. That's the highest possible coefficient of friction...

Q You're talking about an impossibility, aren't you? It was impossible to move this ship with

the power that it had in the condition she was hung up?

A That's correct.

Q And that would be -- strike that. (Pause) Sir, you say Captain Hazelwood couldn't have known how he was aground, because you say he didn't take soundings. We covered that ground already.

Captain Hazelwood, on the basis of testimony you read, knew that he had been holed in 10 tanks. He knew that his ship was hung up somewhat. He could tell that just by using the rudder, couldn't he?

A That's right. According to his statement to Commander McCall, he thought the was hung up astern somewhere.

Q Okay. But he thought at that time that he was hung up somewhat, am I correct?

A That's correct.

Q And it's safe to assume, if he were making calculations, he would know that at least one, possibly two tanks, were sitting on the bottom at that point?

A That's correct.

Q And he did a real quick calculation and said,

"I've got number three tank, number four tank aground. I know that my tons aground are going to exceed by far any potential thrust of this engine."

A You've lots me completely.

Q Captain Hazelwood would have known he was aground somewhere, right?

A Yes.

Q And he would have known that there was a certain tonnage aground, whether he knew it was 13,000, or 19,000, or 50,000...

A Or 50.

Q Fifty?

A He had no idea how hard aground he was.

Q When you say "50" you're assuming one pinnacle and the ship rests on that pinnacle, right?

A Not necessarily, no.

Q Well, how would he know that it would be...

A He could be very lightly aground. He could be just resting very lightly on the bottom.

Q Well, okay. Let's take your scenario. If that's true, if that's what he's trying to determine, wouldn't one of the things that he would do would be to use his rudder to see how the ship swung?

A On rock, absolutely not.

Q That's your...

A Attempting to move a ship aground on rock, without knowing anything about the grounding condition, is not the thing to do.

Q And that's your opinion?

A Particularly a tanker that you can do additional damage to.

Q What if he knows that he's got 10 tanks holed and he's concerned about coming off this little pinnacle that he might be on. What does he do in that situation? Does he keep his engines running?

A It would depend on what indication he had of a reason to be concerned about coming off of this, as you phrase it "little pinnacle", but he wasn't on a little pinnacle, and he did nothing to determine what he was on.

Q Mr. Wilwee, you will agree, won't you, that we're talking about a major casualty situation, right?

A Absolutely.

Q And you will agree that ship's crews are not trained, or geared up, or experienced in major casualty situations. Do you agree with that?

(3220)

A I will agree that most ship's crews are not experienced in major casualty situations.

Q And will you agree that in a situation like that the captain has to make some quick decisions?

A That's correct.

Q And the decisions that he has to make are under the pressure of the moment -- the panic of the moment, the situation that exists at that moment? Do you agree?

A I certainly wouldn't phrase it like that. I certainly wouldn't say the panic of the moment. I would say they have to be made under a great deal of stress.

Q Okay. Stress is a better word. Did you read the testimony of Mr. Kunkel when he came up to the bridge at 1:30 and he spoke with Captain Hazelwood?

A Yes, I did.

Q And do you remember how Mr. Kunkel described Captain Hazelwood at that moment?

A I believe he said he was calm and collected and...

Q And in command, right?

A Your words. Or, Mr. Kunkel's, perhaps.

Q Mr. Kunkel's words.

Now, the other situation where Captain Hazelwood, under the stress of the moment and the heat of the moment, had to make certain decisions. And one of the decisions he absolutely had to make was to figure out how his ship was hung up at that particular time, right?

Now, you criticize him 11 months later for using his rudder. But isn't that one of the ways -- a quick way to try to figure out if you are hung up astern, forward, in the middle; if you're hung up on a pinnacle?

A The massive damage that that ship had at that time, using the rudder was not the way to figure out anything.

Q Sir, with the massive damage that the ship had at that time, what other damage could have been done by turning the ship a little bit to find out whether you're aground or not?

A You don't know what kind of other damage could have been done. And it's a risk that's not worth taking. You know you've got massive damage. The best thing to do is hold her right where she is, not go wiggling around on the rocks.

Q You're a salvage master, right?

A That's right.

Q It's your job to know these things and to do those things and to speak about those things as an expert?

A That's correct.

Q The captain is not a salvage master?

A That's correct.

Q The captain has to do what he has to do at that particular time in trying to minimize the situation, right?

A That's correct.

Q Okay. You had 11 months to think about, "Boy, if I was Captain Hazelwood on that night, and I came up to the bridge, and I saw oil all around, the first thing I would have done is I would have run down and thrown my line over the side to get some soundings, right?

A I've had more than 11 months to think about what should be done in the case of a stranding. I've had about six weeks, I think, to look at any information in this case.

Q Let's talk about the information that you looked at in this case. Before we do that, you don't know what training or experience Captain

Hazelwood had in groundings on rock bottoms with this type of vessel?

A Say that again, please?

Q I say, you don't have any idea whether Captain Hazelwood had any training at all as to handling a situation of this type?

A No, I don't.

Q There's no school, is there, that takes masters, such as Captain Hazelwood, and says to them, "Look, we're going to give you 14 scenarios. And if scenario number 12 comes up, that is, night, Prince William Sound, hard around on Bligh Reef, you do one, two, three, four, five, six, eight, 12, 13 things." No school like that, is there?

A There are no schools like that. There are certainly publications for tanker masters about what to do on groundings.

Q Well, talking about that, I read your two publications. One was yours and one was Mr. Danton's, right?

A That's two of four publications that I know of in the English language.

Q All right. And let me give you a third one called "Ship Board Damage Control" by Mr.

Bissell, Oro and Livingston (ph). Do you know this book?

A I've seen it. It's not one I have in my library.

Q They say on page 55...

MR. COLE: Judge, could I see this before he reads it into the record?

(Pause)

(3621)

THE COURT: One of you folks needs to take a break?

JUROR: Yes.

THE COURT: We're going to be finished in about 10 minutes. Can you wait 10 minutes?

JUROR: (Indiscernible - away from mike.)

THE COURT: We can take one now if you need to and we'll come back in about five or 10 minutes, and we will be back about five or 10 minutes when we come back.

We're going to recess at 1:30.

JUROR: (Indiscernible - away from mike.)

THE COURT: Can you wait for another 10 minutes?

JUROR: Yes.

Q (Mr. Milwee by Mr. Chalos:) Showing you page

65, Misters Bissell, Oro and Livingston say: "It is evidence that prompt action must be taken by..."

MR. COLE: What are we doing here? Are we reading this for the record?

MR. CHALOS: I'm going to read it...

THE COURT: Well, Mr. Cole, if you had an objection...

MR. COLE: I object to his reading this into the record without a proper foundation.

THE COURT: Okay. I hear hearsay hidden somewhere behind that, but you could make my job a little easier if you will just make it clear to me what your objection is, Mr. Cole.

This hasn't been given the learned treatise foundation by this witness if you trying to read it in the record for that purpose.

MR. CHALOS: Judge, I'm only going to read this sentence and ask him, in his opinion, if that is correct or not.

THE COURT: Well, that's what learned treatises are for and you have to lay a foundation for them, Mr. Chalos. And he hasn't given you the foundation, so the objection is sustained.

Q (Mr. Milwee by Mr. Chalos:) Mr. Milwee, you

say you know of this book?

A I know of that book.

Q And you read it?

A No, I haven't read it. I've looked -- thumbed through it, looked at excerpts from it, and I haven't read the book.

Q Do you know whether or not this book is used in any Naval architecture school, such as Webb?

A I don't know that, no.

Q Have you seen this in the library of Webb Institute?

A I think that book was published long after I was last in the library of Webb Institute.

Q Where did you see this book?

A Oh, heavens, I don't know. Probably in the Naval Institute book store, or the publisher's book store, or in some marine shop somewhere.

Q Have you had occasion to visit other salvage master's offices?

A Yes, I have.

Q Have you seen this book in their libraries?

A I don't specifically recall seeing it in their libraries.

Q Let me -- if an opinion is expressed in this book that the commanding officer should...

THE COURT: Mr. Chalos, you are trying to do indirectly what you can't do directly. This witness has not testified that this is a reliable source which he relies upon, and you've got no foundation for it.

Q Mr. Milwee, do you consider this a learned treatise for the salvage business?

A Well, I don't use it. I have never used it. And I have deliberately not bought it on a couple of occasions.

Q Do you know Mr. Bissell?

A No, I don't. I don't know any of the authors.

Q You don't. Is there a particular reason why you wouldn't want to use this book?

A No, I just haven't chosen to use it.

Q Well, let's get back to the two treatises that we did read, yours and Mr. Danton's, that you do rely on. There seems to be a discrepancy between what you would do and what Mr. Danton suggests, right.

Mr. Danton says you should back up. You say, no, never back up.

A I didn't say "never back up". I said I don't agree with him that that's always the first thing that you do.

Q Okay. You said there were publications

available to ship's masters. So if a ship master was reading your paper and Mr. Danton's paper, what does he do? You're saying one thing; he's saying another.

A Well, I think he would evaluate what they said and weighed it accordingly. I think he might, also, if he were very interested in the subject -- might go out and find the other documents that apply. And I think if he were a tanker master, he would go out and find the one that was specifically directed at tanker masters.

Q Is there such a publication?

A Yes, sir, there is.

Q You didn't bring it here today?

A Yes, I did.

Q Do you have it with you?

A I have it with me.

Q Well, you didn't make that available to us.

A I certainly did.

Q You did. What's the name of it?

A It's "Peril At Sea and Salvage, A Guide For Masters". It's published by the Oil Company International Marine Forum and the International Chamber of Shipping.

Q What is the name of it?

A "Peril At Sea and Salvage, A Guide For Masters". It should be in that stack.

Q Well, maybe you could just point me to it. Because I read all the publications.

A I didn't give you the whole thing. There's just excerpts of it there.

Q Could you point out to me where that is?

A Well, this is a portion of it. This is the proceedings from where it was introduced.

Q But you didn't give us any of the material...

A Wait a minute. Wait a minute.

Q ...all you gave us was the Forward on that.

A I haven't finished going through the material. Yes, here it is. It looks like the whole thing to me.

Q Let me...

A No, it's not the whole thing. It's the Table of Contents and some pertinent portions.

Q Okay. (Pause) Now, I take it you've read this article; the one that you just referred me to?

A Yes, I have.

Q And would you agree that the premise of the article is that every situation differs? Every grounding situation differs?

A Anyone who has ever been anywhere around a casualty situation knows that every grounding situation differs, and that's why it's very important to get all the information you can.

Q Right. And the situation, as it exists, is best known by the people who were there? They are the ones that are in the best position to evaluate what the situation is?

A If they take the action to determine what the situation is.

Q And in that article there is a suggestion, is there not, that -- depending on the master's discretion he can try and refloat the vessel if he desires?

A After full information of the damage has been obtained, and only after the full damages, it would be possible to make a good attempt.

Q Now, just so we understand each other, the thing that you say that Captain Hazelwood did not do to complete this knowledge of everything that's gone on, was take soundings, right?

A That's a primary thing that he didn't do. He did not attempt to gain information that was available to him that he could have gained.

Q And, again, assuming that the soundings would

have told him anything given the condition around the ship at the time; the oil, and so on and so forth. But he did do everything else that was required in order to ascertain his condition, did he not?

(Tape: C-3650)

(000)

A No he didn't. He did the one you skipped very quickly over and...

Q Which one was that?

A Mr. Dattan's book, sounding the emergency stations and getting the crew up and counting 'em available for use and...

Q Okay. What you're saying is he should have rang the general alarm, right?

A That's correct.

Q Do you remember Mr. Kunkel's testimony?

A Yes. I do.

Q Mr. Kunkel came up and said, "Captain," he said he was in high anxiety, maybe even in a panic situation.

He said, "Captain, let's ring the general alarm. Let's go over here and pull this lever and ring -- get everybody up."

And the captain said, "Calm down. I don't

want to get anybody excited or panicked here. I've sent the third mate down to -- to wake everybody up."

Do you consider that to be imprudent?

A I consider it not to be prudent to sound the general alarm, come on immediately on the PA system and address the situation and get the people up with their survival suits and in a central location.

Q You do recall Mr. Cousins saying that he was sent around to get everybody up?

A That's correct.

Q And that was a conscious decision that the captain made at that particular time?

A Yes.

Q And you're criticizing him for not -- him now, 11 months later?

A I would criticize him 11 months later, 11 minutes later, or 11 seconds later.

Q But you've never been aground. You haven't been the master of a ship aground?

A No, but I've been in some pretty difficult situations with salvage crews.

Q Uh-huh (affirmative). And in those situations did you run over and pull the general alarm?

A I sure made sure I knew where my people were and that they were prepared for the emergency. And I have gotten crews up and assembled and working in the middle of the night...

Q You think...

A ...when there was...

Q You think Captain...

A ...emergency.

Q ...Hazelwood had the luxury of making sure every right command that he issued was carried out at that particular time?

A I think that was his job.

Q You think he had the luxury of time in order to bring Mr. Cousins back and say, "Mr. Cousins, I told you to go down and get everybody up. Did you make sure you got everybody up?"

A I think that was his job.

Q Do you have any evidence that he didn't do that?

A We have a -- we have evidence that he didn't get people up and assembled and...

Q No, you have...

A ...with their survival suits.

Q ...evidence that Mr. Cousins might not have gotten them up. You don't have evidence that

Captain Hazelwood didn't get them up.

A We have evidence that Captain Hazelwood did not sound the general alarm and give what I consider proper instructions in an emergency situation.

Q But you do have evidence that Captain Hazelwood was aware of -- of ringing the general alarm and made a conscious decision at that time not to panic the crew but to get them up individually?

A I can't imagine a crew that sounding the general alarm is going to panic. If they are, they're not much of a crew.

Q Well, in one of the treatises that I read that you referred me to they -- do you recall reading something about not panicking the crew? Not putting -- not telling the crew members to get into the boats, 'cause there's a tendency to lower the boats and get into the water before they have to? Do you remember reading that?

A Not telling them to get -- I wouldn't tell them to get into the boats, no. But I don't think it's -- sounding the general alarm is a cause for panic.

Q Well, Mr. Milwee, did a single crew member on

this ship get hurt?

A No.

MR. COLE: Objection to relevance.

Q (Mr. Milwee by Mr. Chalos:) Did anybody whose testimony you read here say I was frightened for my life and Captain Hazelwood wasn't doing what he was supposed to be doing?

A No.

Q Do you remember reading any such testimony?

A I've read -- read some testimony that said I was frightened for my life.

Q That was Mr. Kunkel, wasn't it?

A That was Mr. Kunkel.

Q Right. He came up and he said, "Captain, let's ring the general alarm, let's put on our survival suits, let's do this, let's do that."

And do you remember what Mr. Kunkel said?

A Mr. Kunkel said later that he was a measure of his inexperience. I think it was a measure of his good judgment.

Q Do you remember what Mr. Kunkel said after he spoke with the Captain?

A Which time?

Q He said, "After talking to the captain and taking his instructions my anxiety dissipated. I

was completely at ease and I went about my business. I went and did what the captain told me to do."

A I...

Q You remember that?

A ...don't remember it being quite that extreme with all this completely at ease business.

If he was completely at ease on his -- stranded on a grounded tanker that was leaking cargo he was not rational.

Q Well, at ease enough to go about doing his job. Do you remember him saying that?

A Uh-huh (affirmative).

THE COURT: Mr. Chalos, we're not gonna finish this witness between now and...

MR. CHALOS: No. I...

THE COURT: ...half past and at least one of the jurors want to take a break and I want to take one now, too. So, let's recess for the day, ladies and gentlemen and I'll see you back tomorrow morning at 8:15.

Remember my former instructions and continuing admonishment regarding media information as well as my admonishment not to discuss this case in any form or fashion with anybody and not to form or express any

opinions. See you back at 8:15 and be safe, please.

THE COURT: We'll stay here for a minute.

You can step down.

(Pause)

(108)

How many more witnesses after this one?

MR. COLE: Three.

THE COURT: I thought you added a couple to your...

MR. COLE: No.

THE COURT: Subtracted a couple now? Okay. So the current number is three.

MR. COLE: I think we have a good chance of -- well, I'm not gonna say it, but I was hoping to say tomorrow.

THE COURT: Maybe tomorrow? Okay.

MR. MADSON: It's never gonna happen tomorrow, Your Honor. Never.

We're right now figuring even if -- well, we were figuring before that they probably would finish on Tuesday. We are ready for Wednesday. Now that we're geared up for Wednesday -- well, I don't know if we can move it up or not. We can try.

THE COURT: I'd get geared up for Monday just

in case.

If we get finished tomorrow -- we have any time tomorrow, we can take up other matters and we can take up some matters Wednesday morning if we have to, but...

MR. MADSON: Well, Your Honor, just for tomorrow -- just from my understanding they have three more experts to go, is that correct?

MR. COLE: Well, one of them is a trooper. Two of them.

MR. MADSON: Stogsdill and Propst and somebody else?

MR. COLE: Vorus actually it's Prouty.

MR. MADSON: Prouty and then Vorus, right? And then, Stogsdill and who?

MR. COLE: That's it.

MR. MADSON: Oh. Okay.

THE COURT: Well, do this much, how 'bout if we do this, if he's finished tomorrow we can use Monday to take care of some motions. You can gear up. We won't call the jury in.

If he doesn't finish tomorrow, then we're gonna have to have the jury come in on Monday and I'll consider releasing them early and then we take those matters on Monday after the State completes. Is that

fair enough?

MR. MADSON: We'll make every effort to be ready for Tuesday, then, certainly.

THE COURT: Please rise. Court stands in recess.

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(Off record - 1:26 p.m.)

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