NATIONAL TRANSPORTATION SAFETY BOARD
VERBATIM TRANSCRIPT OF INTERVIEW WITH
QC
STS1(SS) EDWARD W. McGiboney

CONDUCTED AT COMMANDER, SUBMARINE SQUADRON 1 CONFERENCE ROOM, 822 CLARK STREET, BUILDING 661, PEARL HARBOR, HAWAII

ON 14 FEBRUARY 2001

MR. ROTH-ROFFY: Please, for the record state your name.

WIT: Petty Officer McGiboney.

MR. ROTH-ROFFY: Thank you. Good afternoon, Petty Officer McGiboney, my name is Tom Roth-Roffy and I'm with the National Transportation Safety Board. I and several other safety board investigators are here to investigate the accident that occurred between the USS GREENEVILLE and the fishing vessel the Ehime Maru on February 9, 2001. Also joining in today's interviewing will be representatives of the U.S. Coast Guard and the U.S. Navy. For your information the National Transportation Safety Board is an independent federal agency responsible for investigating transportation accidents in the U.S. Safety boards Office of Marine Safety, which I work, investigates major marine accidents. The purpose of the National Transportation Safety Boards investigation is to determine the cause of accidents and then to make safety recommendations aimed at preventing the re-occurrence of a similar accident. In our investigation we make no effort to assign blame to any person or party. That is not the purpose of our investigation, nor do we have any legal authority to penalize any person involved in an accident. Our investigation is strictly a safety investigation and not a legal investigation. If you desire, you may have another person assist you during this interview. Would you like to have somebody assist you or you feel you are able to make it through on your own?

WIT: I think I can make it through on my own. Of course the logs will help with bearings and contact numbers.

MR. ROTH-ROFFY: Okay, as I mentioned also joining me in this interview will those--will be those seated around the table. I would like to ask each of them to introduce themselves at this time.

MR. WOODY: I'm Bill Woody from NTSB.

LT JOHNSON: I'm LT Charlie Johnson from the U.S. Coast Guard.

CAPT KYLE: CAPT Tom Kyle from the U.S. Navy.

LTJG KUSANO: LTJG Ken Kusano, U.S. Coast Guard.

MR. ROTH-ROFFY: Okay, we have two others that are from the U.S. Navy that will probably be coming in a little bit later. I believe they went to get the sonar logs.

CAPT KYLE: It would be CDR John Caccivio and CDR Rich Santomauro.

MR. ROTH-ROFFY: What I would like to do now is to ask you to think about what happened on Friday morning when you reported to the vessel and prepared to get underway. And I would like you to describe as best you can in as much detail as to what happened from the time the vessel left the pier, got underway, until some period of time after the collision occurred. I don't know how far. We will let you just keep talking and we'll stop you when we think we have enough, but again--try to visualize and just describe from your memory as best you can with as many details as you can everything that happened to you from the time the vessel got underway. And I would like the interviewers not to interrupt you until you have completed your telling the whole story.

WIT: Okay. Friday morning I started--I was actually on duty the day before as duty chief. We had got up and were getting our last minute preps for getting ready to go to sea. Ahh--making sure the signs were off the side of the boat, floats were out of the water, brow banners come down. We get everything ready so we can get to the maneuvering watch and we can get ready to leave. Once I get to that point or completed to that point, I turn over aft maneuver to that watch with the control supervisor as in that aspect. Then I kind of go back into the sonar realm where I work. Get last minute things done for the maneuvering watch. I'm a line one supervisor so I just change shoes to get on topsiders to head topside. We stand there waiting for any guests to come on board, any last minute things that need to be done, then we lift off the brow. We got underway. We stayed topside for a while so guests could take pictures as we departed the channel. For short spells when we are going out for a short spell where our line handlers are on the pier, we don't single up lines. We just go ahead and drop off the lines and let them go. We got them down, as you can

see, kind of the mouth as we were leaving. Do all the normal sound quieting things we are suppose to do. Get down below and take all of our stuff with us. From that point I went pretty much up to sonar to where I was going to help out with the tours as they were coming through. Kind of let whoever is in there kind of keep one's focus on what is going on. I did that from--I would say from approximately nine or nine-thirty-ish--somewhere in there to just before eleven-thirty when they were going to have lunch. Had lunch, came up--that is when we were getting ready to do--I guess I want to say about thirty minutes to an hour--I'm guessing before we started our angles and dangles. You make a--kind of just a quick look through the shack to make sure nothing is going to fall down so in case you are going to have somebody that is going to sit in some of the areas around. And then you are watching to see what happens on your displays. While I am sitting there we had my broadband operator, workload share operator, and the guy kind of watching him who was kind of an over instruction because we are training him as well. At that time I don't think there was any other people in there for the angles and dangles. Most of the other guests or anybody else on the boat were either probably in GSES or the front end of the boat on the very top, control space or electronic space or other places--control, the mess decks, not in sonar at that time. We finished angles and dangles and we wanted to get steady course so we could get our contacts at least three to five minute delay of bearing data so we could get that information out to fire control. I had two contacts roughly up to the north. I'm thinking they were sierra 12 and 13----

CAPT KYLE: Still working on the log, sir.

WIT: Okay. I'll get a little better on that one here when we get those. And I had one out towards I believe the west at that point, which should have been an opening contact. We took a leg of data and then we did our baffle clear, we came right--I have to do a little reconstruct data--I think it was around course one-two-zero, but I am not absolutely positive on that. We did come right. I know we didn't come 120 degrees, I'm just not sure exactly start yet. I have to see a little--some logs. Did a baffle clear, we did not pick up anybody new during the baffle clear. The operator is going to focus on the area that we had behind us in our baffles. I'm sure you guys understand what the baffles are. We looked behind us to make sure there was nobody there and at that point we are getting ready to do our preps for PD--our open mikes energized, we are kind of listening to what is going on, we are waiting for the word to go to periscope

depth. With indications on the screen on that time I didn't have anybody apparent that would have been close. Some of the things I am looking for as a supervisor is something with a very high bearing rate, something that may be on our left side drawing right, or right side drawing left. It would indicate that it could be a closing situation. I'm looking for multiple pass perception on the source sphere. You have eight DEs that we look at or depress in elevations. In eight windows on each stack, so if I see sound coming in two and three it doesn't tell you he is far away it just has a better indication he is probably more distant than close depending on how loud he is. If he is in all eight DEs he has a better chance to be close than a guy that is in two. So, that is some of the things that I am looking for. I'm looking for anything that comes on my WLR-9 physical interceptor that can pick up active bottom sounders, fish finders, anything that could also indicate something close. It can pick up cavitations sometimes depending on aspect of how fast the contact is going. We finished our baffle clear--no contacts out of that baffled area so still basically had the two up towards the north and one that was out toward the west, which we had put in the baffles--it was like I said, I think it was an opening contact--it was out in that direction. I believe we turned right, but I'm not sure what course we came to. We were coming right a little bit as we ascended to periscope depth. On the ascent to periscope depth, we were going to change our displays a little bit because we wanted a longer short time history to watch for any type of transient noise--anything that may be different, a quick change of a bearing rate of a contact--something that is unexpected from where--from what we just had; something that is beyond the normal. A longer short time history lets you identify something that shows up like that--a little bit better on your ascent to periscope depth. We came up to periscope depth as soon as they go up they do--I'm not sure how many sweeps off the top of my head--I know we do a few--do a couple of safety sweeps to make sure there is no close contacts. Once we have no close contacts, we change our display back from a two time history, a short and intermediate time, back to a three-time history. At that point you are not looking for that little short burst of something that may be out there. Did the back to three-time history and no close contacts. I heard that we were coming up higher in the water--I'm not sure exactly how high, I just heard that we were coming up a little bit--depth, I don't know. I heard two different people on the scopes through the open mike--I believe one was the Captain. I do not know who the other one was. I don't know who was doing the sweeps. As soon as they did their visuals, they got ready to proceed back down to 400

feet. One of the quicker ways to do that is to use emergency deep where the chief of the watch is going to flood in water rapidly to get down to that depth. We did that. They called emergency deep out. We went down to 400 feet. I believe we turned back a little--I'm not sure how far back towards the left--back towards the east to when they commenced the emergency blow on the ballast tank which emergency surface and on that we should have steadied up on course with the rudder amidships to go up for the ascent. During ascent you are not going to hear much during the emergency blow because once you initiate the switches, or on the descent down it can also mask you a little bit--not as much as the blow, because when you are flooding on rapid water it is going to see all that noise out to the sphere. It is going kind of--not totally mask everything with the flooding of water, but when you do the blow it is sending all that air into the air banks. So during the initial movement of air it is going to blank out that screen for the initial lift. Once it kind of settles, the air is in place and it is kind of going out the sides, it is not going to blanket as much, but it still a little difficult to see. Once you start coming up on the blow if I see something--like I said--once again on periscope approach it is an indication that something is very close, multiple capacity DE--a nine going off--something that alerts me that something is close I call close aboard contact. That lets the conn know right away there is somebody very close. Somebody has a chance of hitting us in some fashion. They do the ash--I'll tell them the bearing of close aboard contact--where he's at. As we lifted through the water I remember hearing--I think it was over the 1MC--talking about the angle of the ship, how high the bow would be compared to the rudder and right before the hit I remember hearing as we are coming up you should feel the boat start to ascend up through the water, you'll feel kind of a light feeling like a--I don't think he said a roller coaster, but he explained the procedure of going through the water. That is when I kind of felt the boat kind of angle forward just a little bit and then--I mean, as soon as you felt the angle a little bit there was a thud. I couldn't figure out where it was coming from at first until we finally got up on surface and you heard a second thud that came from further back. At that point when you had a--I don't know it is kind of like when you hear a shotgun somewhere you kind of know it is a shotgun, but you can't tell where it is from but when you get the second shotgun blast you know it is something. At that point, I was very confident we hit something. I glanced back down at my displays to see if I still had three traces. I did look down to see if I had three traces. I did see that just as another supervisor was coming up. We had three traces. I

looked and verified through my other DEs just to make sure nothing was there that I couldn't see or have seen or missed. Nothing indicated any change of bearing rate, nothing indicated on the left drawing right, nothing--no fish finders from the nine. At that point I presumed this dive that we had hit had been sitting still in the water because we did not have anything from him that I could tell based on what I was seeing on my display. At that point I turned over to the other supervisor cause I heard that we were steady on depth or holding depth--that means we weren't sinking. At that point I felt confident with another senior supervisor here is what I've got, this is what's happened, the reason I was turning over is our First Lieutenant was looking for this tour--which is kind of like one of the safety guys. January or excuse me, February of this past year, not this year, I turned over to another guy. I was previously a First Lieutenant so I knew what the safety gear was, I knew where the ladders were, the life rings and man overboard bags, everything that was needed. I knew at that point that my better help would be to get that stuff moving. Because I didn't know who could have done it at that point. So I kind of shifted from sonar once I thought I had my contacts back in ATF, the turnover was done, we were holding, that is when I took off for all the safety gear. The first thing I went to get out of the fan room was the ladder we hang out of the sail. It hadn't been gotten out yet so I grabbed that with the clips we clip it up to the sail so if we needed to go over--kind of with glance--in passing going to get this ladder I could see the perivise, I could see the water and I knew that with how it was we probably weren't going to bring anybody into our escape trunk. It was over the deck, so that means the sail that is why I went for the ladder. I put that up there, we got a life ring up there. By the time I was getting ready to go down to get that forward escape trunk ready, if necessary, the divers were in place in the upper level in control, outside the Captains state room. They were--I think there was three if I remember right, ready to go. We had set up in a sail for them and that is when I went down to ensure we had people dressed out to go topside if needed as well as get what we call a bathtub rigged up in the athwartships passageway or underneath the escape trunk itself. And what we will do with that is if we do need to go topside, and we are taking water over the side, it will at least take that water to a point and if it is too much it is still going to come out of it a little bit, but it is designed to take it down into the machinery room through basically a big funnel and it is going to take it down there. If you are taking too much it is still going to come out and go over. At that point once I felt the safety gear was at least in place, the gear was

out, we had people dressed out, I knew divers were ready, I went back up to sonar to see what I could do up there.

MR. ROTH-ROFFY: Go on, once you got back up to sonar anything else significant happen while you were up there?

WIT: By the time I got back up to sonar they had already regained--the ship itself I believe at that point, which was by then sinking through the water, I probably could probably look here a few seconds, but I think it was sierra 16--I think was the number what they designated the part that actually sank and I was trying just trying to get a feel for what was going on, but I did not take the watch back over. I was just kind of was in there to see what they needed, if they needed something or if I was going be--go somewhere else.

MR. ROTH-ROFFY: Okay, I guess that's--we go on and now ask more detailed questions about some of the information you told us and some of the areas we are interested in. Could you go to please describe those two contacts I believe you had initially called sierra 12 and sierra 13 to the north. Could you--by referring to the logs there--verify, provide some additional details on those--those sonar contacts.

WIT: Do you have other logs to like the regular hand written logs. It would have any information..screw blade

CAPT KYLE: I'm sorry.

WIT: We have other logs--the handwritten, they would have more of the screw blade information.

CAPT KYLE: Where do those logs come from?

WIT: These right here, sir?

CAPT KYLE: Are they ARC log?

WIT: Yes, sir, they come right out of the logger. This would be a little more confusing because it prints all the sonar bearings in relative.

CAPT KYLE: Here we go. I think these are the sonar logs I'm used to seeing.

WIT: Yes, sir. That's--Yes, sir. That would be a little easier to understand too. [READING THE SONAR LOGS] Okay, we

have both contacts here at 12--sierra 13, initially classified as surface contact just by nature of sound. You can usually listen to them and determine--if it is a submarine it is going to have a different sound than if it is a surface boat, if it is a warship its going to be usually a little bit cleaner, because they keep their screw a little cleaner than just a merchant boat out there. Surface contact they were both up towards the north and 12 is bearing three-three-two at gain and sierra 13 was bearing three-five-seven almost exactly north.

MR. ROTH-ROFFY: I'm sorry, say that again.

WIT: The gain bearings of sierra 13 was three-five-seven. We hit the--like I said the only three we had in contact were those three contacts. Sierra 10 was the other one which was more of a--what we consider a light craft due to the screw blade configuration and anything beyond 300 turns per minute we put in a light craft range. It could be something decent sized but the screw blades try to push faster. Usually your merchants or your bigger boats have screw blades that are going to take them through kind of a slower turn count, but they still get to move a decent speed. And we had him towards the southwest.

MR. ROTH-ROFFY: What was his bearing?

WIT: Gain bearing is here one-zero--it was two-zero-two was gain bearing.

CAPT KYLE: Can I interrupt for just a second. Can you tell me the time--gain times of these different contacts.

WIT: Yes, sir. Gain time on sierra 12 was twenty-two thirty.

CAPT KYLE: That is the zulu time?

WIT: Zulu time, yes, sir.

CAPT KYLE: And what time is that locally.

WIT: I think it is twelve hours difference--I'm----

CAPT KYLE: ----Ten thirty--twelve thirty.

WIT: ----And the other would be twelve-thirty three local time for sierra 13 and that was bearing three-five-seven.

MR. ROTH-ROFFY: What do you mean by gain bearings? Is that a relative or is that a true bearing?

WIT: That is true bearing, sir.

CAPT KYLE: What is sierra tens gain time?

WIT: Sierra tens gain time--I need to correct the bearing on that one as well. Sierra tens gain time--minus ten would be twenty-one forty--eleven forty nine local time and it was two-six-two was the initial gain bearing.

CAPT KYLE: What happened to sierra 11? What was he?

WIT: That was merchant. It was only held for approximately 15 minutes and that was towards the bearing of one-one-six.

CAPT KYLE: And it only held for 15 minutes?

WIT: That is all I have in the book, sir.

MR WOODY: Would you give the time on sierra 11?

WIT: Sierra 11s gain time would have been eleven forty nine local time.

MR. WOODY: And you held him for how long?

WIT: It was approximately 15 minutes.

CAPT KYLE: It faded or into the baffles or what happened to him?

WIT: Ahh--into the baffles. That would--roughly the same bearing I would assume at that point the course the ship had completed a maneuver of some type.

MR. Roth-Roffy: Now on these contacts you have bearings, do you also have ranges for these contacts?

WIT: Ahh, we don't get the ranges right away by sonar--we do our mental geometry's. We look at our DEs and if anything is greater than like negative 13 downward showing up in our display we can get a DE bottom bounce range to a contact see how far he is. You can kind of do screw blade ranges on a contact to see when a ship--when you change course--how do I explain this? You have a line of sight with a contact. He'll be on certain

bearing, he'll be on a certain bearing, that will give you certain geometry based on how fast you are going and the angle you presented, how much speed you are putting in or across the line of sight and he'll be doing obviously the same thing. He'll present so much information--speed and across the line of sight. You use that data with bearing rate to figure out what a range may be. Early we had a problem with the bearing rate I had. I had him about 10 to 12 thousand yards based on some geometry. I think later down here--I'll have to find out the times--we started doing maneuvers. I'll have to look in the logs on the time, not for when we did them but when I can see guys be placed with baffles or maybe have to see the quartermaster logs to see where we changed.

MR. Roth-Roffy: When you say 10 to 12 thousand yard range, which contact are you referring to?

WIT: Both the contacts I had toward the north. That is my initial----

MR. Roth-Roffy: They were both in the same range?

WIT: Approximate same range.

MR. Roth-Roffy: That's--just to clarify sierra 12 and sierra 13?

WIT: Sierra 12 and sierra 13. One of the things I was looking for at that time for ranging is I'm watching for--at that time I had full contacts showing up in three of my basically upper DEs--you get 8 DEs to look at. Anywhere from plus 11 down to negative 53. I see them in three DEs, that is not going to be below my negative 13 to where I can obtain an automatic bottom bounce range. What I'm going to do basically that is take--when it does go below that, I can take that value match that against water depth on the adage or formula and I'll find out what that range is at that point. It didn't get below the negative 13--that is one range I wasn't able--I couldn't use.

MR. Roth-Roffy: And at what time--or how long did it take for you to obtain this range--rating or estimate or whatever you call it.

WIT: Ahh--I'd say about five, ten minutes I guess.

MR. Roth-Roffy: From the time it was gained?

WIT: From the gain-- I--you want to get time for the screen depth HC so you can see some version of a bearing rate plus what you're doing and then you've got to trying to without doing any leg right off the bat assume a course of some type on that contact. In sonar most of the time I'm going to sit there and I'm going to gain—when I gain a contact to me that indicates he's probably closing. You can't go with it every time, but general rule of thumb is we can use a thirty-sixty-ninety rule. You gain it at a thirty degree angle on the bow, sixty degrees later his CPA's, ninety degrees from that is his course. That is kind of a rough--a rough solution for a guide--how we can do that. Then have a lot of factors involved, speed, you are assuming he's closing--a lot of things there.

MR. Roth-Roffy: And how were contacts sierra 12 and sierra 13 classified?

WIT: It would continue to be logged as a surface contact-- [flipping through sonar logs]-- I'm just trying to find out if we had a different classification besides surface. Okay, that looks like--no, all we've got is a surface contact. I don't have any screw blade information on those contacts.

MR. Roth-Roffy: And why weren't--why don't you have any screw blade information on those contacts?

WIT: I know we normally cut those to class. I would have to look in the logs. When you first initially gain, you can get screw blade, you may not always get screw blade. I don't think we got it originally from those two contacts--umm--most of the time it does show up. I don't remember seeing it at the times we did cut the contacts. Ahh--I kind of need to know where we started the angles and dangles, cause once you start angles and dangles you want to keep your two stacks--kind of focus a little bit on safety to watch where you're going on bearing rates. We have two stacks in sonar for the busy system and we want to maintain that safety of vessel -- Broadband Operator and the workload share guy who is his backup. Workload share guy is going to analyze contacts as he can. But with driving the boat back and forth--I'm not sure the exact time we started the turns.

CAPT KYLE: What are you looking for the deck log?

WIT: Just the time we started angles and dangles.

CAPT KYLE: Large angles [inaudible--paper rustling].

WIT: Okay local time twelve thirty. [Looking at the deck log] That was about the time--twenty-two thirty or ten thirty--ten thirty-three, which is already in the notes for gain times for those. We wouldn't have had too many opportunities--I'm pretty sure we cut them both twice, but I would have to check with the workload share operator as well as the guy that was UI'ing him or instructing him. There shortly after my display is going to be pretty much not set so you can always change and look with the angles and dangles. At that point I'm a little concerned about what may just show up. We are traveling at different speed--a higher speed, we are cutting through different parts of the water. I need to see what is coming at me. So, we didn't do that many cuts on that contact. I thought we had a screw blade, but that was on 10 and I believe--let me see what the other one--eleven. Sierra 11 was the merchant, his was ninety-two on a four.

MR. ROTH-ROFFY: And what about the vibrations from the engines of these contacts, sierra 12 and 13? Were you able to distinguish the----

WIT: ----between the two?

MR. ROTH-ROFFY: Yes. What did you actually hear on these--ahh these two contacts?

WIT: How do I explain this? Ahh--you can tell when a contact is a surface contact based on sometimes you'll have maybe a diesel engine, his type of propulsion, ahh--if you get screw blade, which most of times is the case, just screw blade. That is the noise it is presenting to broad depth. You can kind of hear that in the headphones as you are monitoring the contact. You get an idea of what he is and you get that data out to fire control--as much you can gather from that contact. They both sounded surface and then I could tell they were on the surface. They weren't submerge--submarines, they weren't warships, cause warships kind of--you get like a galloping beat, they don't labor, they get where they want to go. I don't know how to explain the sound of surface--ahh both contacts--ahh you have a lot up surface contacts. Many of them can sound the same. They aren't running anything really special, unique that another guy or trawler, merchant may not have.

CAPT KYLE: And the information on these contacts, the three that you held, how did these--how does this information pass to the Officer of the Deck?

WIT: Initially it is done through the twenty-seven MC and also the information is relayed through the fire control. We can open our curtain--did you get that to let him know there is stuff coming in. Most of the time it is through the twenty-seven MC.

CAPT KYLE: So the twenty-seven MC is a sound powered phone circuit?

WIT: Yeah, at the----

CAPT KYLE: An announcing----

WIT: ----It is an announcing circuit for the--ahh, ahh, the sonar control towards the torpedo room, you can hear that and the radio as well.

CAPT KYLE: Okay, so when you gained these--these targets--well let's just consider one at a time--at what point do you announce them to--to the Officer of the Deck?

WIT: As soon as you gain them. When you see the trace come up on your screen, you've got to right then determine if it is a contact of some type or if it is a rain trace, if it is fish, or if it is undetermined. If it is undetermined if it is a contact of some type you put a tracker on it. At that point you call it out and that data is being sent to fire control.

MR. ROTH-ROFFY: Could you give us an example of how you would report a contact to--on the twenty-six MC? For example, how would you report that contact?

WIT: Okay, I'll just do this one. Con sonar gain sierra 12 bearing--it is tough to read this--three-two-two in ATF, whatever track it may go on if it is charlie, delta, whatever way I am sending to control.

MR. ROTH-ROFFY: And would you at that time know what course that contact is on?

WIT: That initial gain. Initial gain you are not going to have a bearing rate yet. You just have a--a demonstrates a bright--a brighter line than other parts of the display.

MR. ROTH-ROFFY: Okay, what time or at what point would you--would you be able to determine a course of the contacts?

WIT: That is--over time you keep doing different solutions trying to kind of just prove what maybe your solution is. Ahh--you try to get data--ahh to come in different DEs to see if he is coming closer. You try to watch for your bearing rate to change, to increase. If the ship maneuvers you try to get--to get another leg of data on that contact. Anytime you can get anything that might give it--ahh, we didn't have a mount, if you have a towed array out you can get what they call a tri-range or a triangulation range from that contact. It would be one bearing on the sphere. You may have a different bearing on the towed array based on how far you put it out and that can give you a range as well. Just kind of what is available.

MR. ROTH-ROFFY: At what time or what point did you establish a range on these contacts?

WIT: Ahh--12 and 13, like I said, about 10 minutes after the gain----

MR. ROTH-ROFFY: ----How would you report that information to the Officer of the Deck?

WIT: You could do the same--you could still you the twenty-seven MC. You could give them the sierra number, you can give them the sierra number, the bearing and your range estimate. Ahh--depending on what's going on in control sometimes you alert the fire control, you'll say, you know, what do you have? But you can pass that information out.

MR. ROTH-ROFFY: Okay, so did you correlate your target information or contact information with fire control on these two--three contact?

WIT: I cannot remember--which--I know I did a couple, but I cannot remember which ones. I did a couple with him. I think sierra 10 at our time was kind of interesting at that--it had the more bearing rate if I remember right. And we were thinking this guy is not close, but in terms of --closer than the other guys. So we were interested in them to see what solutions they had in fire control to see if that was matching what we were seeing?

MR. ROTH-ROFFY: And were they matching?

WIT: They had him farther out than we were assuming based on the bearing rate, speed, whatever. How they dial that out in

fire control--how they get their information, they had him farther out than we did.

MR. ROTH-ROFFY: And the contact information that you passed to the OOD--ahh how does he keep track of that, bearing range contact information?

WIT: Data wise? I'm sure he is just a little bit different, but they have the fire control system that--with contact and ATF all that information is going to their screen. They also have a CEP plug in control that he can look at and they update the CEP plot with the targets or contacts so they can get a visual little bit wider than the screens we have in sonar as well as the repeater we have of sonar in control. The screens we look at are about this wide with 360 degrees, while the contact evaluation plotter (CEP) is about this wide. So it gives them a little bit broader picture so he can separate things and see things a little clearer than maybe we can.

MR. ROTH-ROFFY: Now that CEP is that a manual plotter or is that----

WIT: That is a manual plotter.

MR. ROTH-ROFFY: And who maintains that plotter?

WIT: I think at that time fire control was maintaining that plot. Depending on contact density, fire control could be busy on his equipment evaluating the ranges and they can bring another guy into put the dots up. They can--I'm not sure exactly, I think it is the auxiliary electrician forward I think that can monitor that stack or that chart.

MR. ROTH-ROFFY: The sonar information, is it electronically recorded? Do you maintain electronic copies of your sonar data?

WIT: As in the log sense?

MR. ROTH-ROFFY: No, is there any recording equipment that would automatically retain your ----

WIT: We do have various systems that we could use. One of the systems that we do have is a two task and tape decks that will record voice annotations in the sonar shack itself, what is being said, as well as you are going to have one channel--you got two channels--one for voice and one for whatever stack you have assigned to monitor--whatever he's steering around

listening to, that is the data you may pick up for the tasking tapes. There is other equipment onboard that can be used mers and mars that take a lot more data in that is usually just done on stations taking towed array data, frequency data, a lot more---

CAPT KYLE: Do you have any of those recorders onboard the ship now?

WIT: We do have them onboard. We do not have the VHS tapes. That is normally an item we get at--get for our load up for WESTPAC, as well as the small 8mm tapes. I think we have like 8 on board. Once again, most of the time that is brought down prior to WESTPAC and you are training on your OPS when you are doing--training for tracking other subs or mission data and your inspections for weapons readiness inspections, before we go and use these tapes.

MR. ROTH-ROFFY: My understanding is you did not have the tapes onboard and----

WIT: ----Not for the WESTPAC what we call mers and mars recorders for the normally tasking were basically cassette tapes. We had two of those units up. The whole morning up to the accident itself we had a biologics tour tape for guests and we did not record any other data for that.

MR. ROTH-ROFFY: So you actually playing a tape rather than recording the incoming data?

WIT: We had stopped the tapes for the evolutions--for the periscope approach and the emergency blow. That was stopped. We don't want extra sound in the sonar shack.

MR. ROTH-ROFFY: I'm not sure I understand, but you were playing the tape at some point and by playing that, it inhibited you ability to record data?

WIT: Correct, sir.

MR. ROTH-ROFFY: What is your routine on recording data and communications is that something that you do on special occasions or routinely or----

WIT: Normally you have a tape deck running 24 hours a day once a week. There weren't tapes--if at the end of the work tape there is nothing on it, you hit record and you start again.

After a basic day you want to change that tape out so you are not getting tape stretch, anything else that could damage the tape. You've got to clean the tape deck, but basically it is being used to record.

MR. ROTH-ROFFY: Okay, so generally you are recording all the time, but in this case you are not recording?

WIT: Correct.

MR. ROTH-ROFFY: Could you maybe just tell us a little bit more about that and why you didn't--you know, go in the record mode after you had discontinued to play that?

WIT: Not beyond I didn't put the tape in or have it on soft breeder and put the tape in to hit record. We just started angles and dangles. I was focused there, okay. I did not think to have it turned on.

MR. ROTH-ROFFY: I need to take a little breather now. Would you like to take a break or are you alright. You would you like to continue with the----

MR. WOODY: We got about ten minutes.

WIT: Actually, I am fine.

MR. ROTH-ROFFY: Actually, I am provided by Mr. Woody that we have about 10 minutes and then we will be concluding the interview for today and then resuming tomorrow. So why don't I go ahead and pass it on to--who would like to go, is anybody chomping at the bits here.

CAPT KYLE: I have just a couple of questions. Maybe I'll just ask a couple of questions for completeness.

MR. ROTH-ROFFY: Yes.

CAPT KYLE: Umm--I'm looking at the master contact log here, it is over here. We also have a couple of other sonar contacts in the time of question and maybe you could tell me what you know about those contacts. You told us about the contact sierra 10, 11, 12, and 13. Ahh 2333 it looked like we gained a sierra 14, classified surface bearing three-five-eight. What was the gain bearing and the same kind of data we had on the last one.

WIT: Okay----

CAPT KYLE: What happened per the log there.

WIT: One thirty two, I guess it is sierra 14, gain bearing was three-five-eight.

CAPT KYLE: Okay, classification in there was?

WIT: Just surface contact. I'll have to look through--I believe it was only surface contact.

CAPT KYLE: Any screw blade?

WIT: No, sir.

CAPT KYLE: Range, sonar range.

WIT: No, sir. Did not have a range on sierra 14.

CAPT KYLE: And when did you lose contact on him?

WIT: That would have been one fifty on sierra 14 at bearing three-five-zero.

CAPT KYLE: What was his SNR?

WIT: Ahh, plus one.

CAPT KYLE: Okay, straight plus one pretty much or did----

WIT: It was a gain bearing and fade bearing, sir.

CAPT KYLE: Gain and fade? And he just faded?

WIT: I got him as fade, sir.

CAPT KYLE: Is the—is the time of the collision logged in those logs there?

WIT: [Looking through the logs] No, sir. It is not.

CAPT KYLE: About what time did that happen in your memory?

WIT: I'm not sure, sir. I really don't know.

MR. ROTH-ROFFY: Did you want to know?

CAPT KYLE: Yes.

MR. ROTH-ROFFY: It would be twenty-three thirty-one, twenty-three fort--one—forty-five, somewhere in there zulu.

UNKNOWN: The clocks are right over there.

CAPT KYLE: Yes, so that--twenty-three forty-one so that is thirteen forty-one local.

UNKOWN: Collision thirteen forty-five.

CAPT KYLE: So this contact faded five--about five minutes after the collision, sierra 14, according to the sonar log there?

UNKNOWN: Sierra 14 faded at twenty-three forty-one, three or four minutes before the collision.

WIT: Right, they have another annotation, I believe this was after I had just left. When they have an M or maintain bearing and that don't have him again.

UNKNOWN: Is that a minus 30 SNR?

WIT: I don't know how you get a minus 30. You can't have minus 30.

MR. ROTH-ROFFY: I'm sorry. Could we keep the conversations—you know, identify yourself rather than informally, just for the transcript.

WIT: Item--at 2358 or 2350 sierra 14, I have the last bearing on him as three-five-zero and it has an M in the log, which would be maintaining. I'm not sure how he could be maintaining. I'm not sure how he could be maintaining, he has to fade into the bounce or something. I don't think that is a good annotation on the logs.

CAPT KYLE: That's the last--that's the last bearing you had on him in the logs?

WIT: That's the last bearing in the log, sir.

CAPT KYLE: But he was--you had contact on him after the collision?

WIT: Yes, sir. They did.

CAPT KYLE: That's right. You got--what time did you get relieved to get relieved to go to first lieutenant----

WIT: ----Right----

CAPT KYLE: ----and how soon after the collision?

WIT: I would say very shortly, sir. The other first class was in sonar right after the bump.

CAPT KYLE: Okay. So the fading of that contact probably happened on his watch?

WIT: Yes, sir.

CAPT KYLE: Okay. What can you tell us about sierra 15?

WIT: I have no idea, sir.

CAPT KYLE: Not in the log?

WIT: It is in the lo--oh, I'm sorry as in----

CAPT KYLE: ----time gained, the same kind of--

WIT: 2346 or 146 local, gained surface contact sierra 15 bearing zero-seven-eight.

CAPT KYLE: And SNR.

WIT: Gain was a negative 2.

CAPT KYLE: And how long did we hold this contact?

WIT: It was a gain and fade.

CAPT KYLE: Gain, fade.

WIT: At the same time.

CAPT KYLE: Okay.

WIT: Two degrees difference, zero-seven-six was the fade.

CAPT KYLE: Okay and sierra one six.

WIT: Sierra six----

CAPT KYLE: ----One six.

WIT: One six, 146 local, surface contact gained at one-seven-four and there is nothing beyond a gain bearing on sierra one six.

CAPT KYLE: And I think--I think you said earlier you thought--you thought sierra one six was ahh, ahh, I believe you ruled----

WIT: I believe that's--yes, sir. It says gained and faded at the same--in the annotations on the logs for sierra one six.

CAPT KYLE: So just go back over the contacts real quickly for me, ahh sierra 12--ahh gained at 2230, bearing three-three-two. What is the bearing at the nearest time to the collision logged in the log there.

WIT: What was the---

CAPT KYLE: 2325

WIT: 2325, sierra 12 was bearing three-one-three.

CAPT KYLE: At what time?

WIT: That was 2341 or 141----

CAPT KYLE: What was the SNR at that time?

WIT: That's a fade.

CAPT KYLE: That was a fade?

WIT: At that time. Ahh--right prior to that a negative 9.

CAPT KYLE: Negative 9. And how about sierra one three? What's the nearest bearing?

WIT: At time it was bearing three-zero-nine.

CAPT KYLE: At what time?

WIT: Ahh, 2345 or 145.

CAPT KYLE: SNR.

WIT: Was plus 9.

CAPT KYLE: Plus 9. Is that pretty high?

WIT: Relatively high--ahh, depends on the source level--ahh----

CAPT KYLE: What was the preconditional gained SNR?

WIT: It looks like a plus 7.

CAPT KYLE: So he was a pretty loud contact. That was--was gained at 2333?

WIT: Yes, sir.

CDR CACCIVIO: CAPT Kyle, the majority of those were also plus DEs on those with the guy you are asking about.

CAPT KYLE: Okay.

WIT: Yes, sir. I don't--in fact any of the logs. That would have to go back to sierra nine, which way back is the only one that I have right now which is negative five, that is sierra 13 and a negative 10 at 2332.

CAPT KYLE: I'm sorry, say that again.

WIT: At time 2332, sierra 13 it was bearing zero-zero-eight. It's SNR ratio was a negative eight and its DE angle was a negative ten.

CAPT KYLE: Okay, let's see, sierra 10, what was that guys SNR at--near the collision. What's his bearing nearest to the collision and what was his SNR?

WIT: Ahh, the last bearing we had was 2246, we placed him in the baffles at bearing one-seven-four. I'll go one step back and he was a negative 8 and a negative 3 DE.

CAPT KYLE: Okay, that was last bearing was one-seven-four, time 2246.

WIT: Into the baffles, yes sir.

CAPT KYLE: Okay and fine let's do the same--I've already got sierra 11 so I guess we got all that stuff now. Can you tell me a little about how you relieved the watch? What do you look at?

WIT: You're going to look at what's going on with the equipment. You have a tour you make to check to make sure if there is anything electricity-wise going into the shack, you're going to check for normal-normal on your power coming in for your BTs. You're come into the shack, you get a turnover from the sup to find out what he has and what may be wrong, or what he has on assumptions on contacts.

CAPT KYLE: Okay.

WIT: Once you get a handle of that, you take a look at basically where you are in the water to see if you have any constraints. Like in this case you know the Hawaiian--Oahu is up to your north. You are expected to get some contacts out of that direction or more contacts out of there than you would in other places.

CAPT KYLE: How did you review that? How did you figure that out? How would you—where do you go?

WIT: You can look at the quartermaster's stand to find out your geographic picture basically what you have.

CAPT KYLE: Did you do that that day?

WIT: Ahh, I didn't because I had been kind of in the shack the whole time in back and forth. I did not go look at the plot. I knew roughly we were close to the island of Oahu.

CAPT KYLE: What time did you relieve the watch?

WIT: I think it was right about twelve or eleven thirty. It was right after I ate. I was----

CAPT KYLE: ----You stayed up the DV's until they went down for lunch. You went down and got some food and then came up and relieved the watch?

WIT: ----Yes, sir.

CAPT KYLE: Okay. So what else do you do--check on for watch relief?

WIT: Umm--if you are on--on station or you are doing a different evolution----

CAPT KYLE: No this is on--I'm just interested in that day.

WIT: Umm--the stash of gear, the contacts you have and your going to check kind of your surrounding. You also look at your environment to see if your layer depth is different than what you think it is suppose to be.

CAPT KYLE: What was your layer depth that day.

WIT: Ahh, about 400 feet.

CAPT KYLE: How do you determine that?

WIT: Ahh, you can--the ship can do a depth change, which we had dove coming out and that is going to help you out with the--ahh, monitoring the sound velocity from the ship as well as during your angles and dangles you can do it. Prior to my watch, mine was basically the dive--you could pull up the sound velocity trace on the busy-system and you could look at the sound velocity.

CAPT KYLE: Would you mind drawing on a piece of paper kind of what you—you can get a piece of paper there--what the SVP looked like, as far as you recall.

MR. ROTH-ROFFY: Captain, we are going to have to be leaving here shortly.

WIT: Something kind of--something kind of--just kind of not really isomer, it kind of has a little bit of bend near the top and then it works it's way down and then started to bend backward.

CAPT KYLE: Okay, what impact--how did you access the tactical implications of that SVP there?

WIT: You get plenty of sound in the depths we were operating in. The sounds going to be coming down towards the minimum sound velocity, down here. So I know the sound is working towards where I am at.

CAPT KYLE: One last question for the day and we'll wrap up and finish up tomorrow. While we are going at it, what--in your

watch relief, what equipment--how--summarize your equipment status.

WIT: The ASVDU or the repeater for the busy system on the conn was--had a bad, we believe a deflection page, which takes your data that is supposed to be displayed like this and kind of pushes it to one side. We had two sound velocity monitor feeds measured the temperature sound in the water in the dome, two of those heads or measuring devices are not good. We do have one in the sail and the keel that are good.

CAPT KYLE: Along that topic, was those--do you know which head was used to determine those, that----

WIT: That would take an average out of the ones that are working. Ahh, any bad data. It doesn't average it.

CAPT KYLE: All right.

WIT: The Q-10 system we only use for our towed arrays. We didn't have those displays up, not going to use that. Umm, the BQR-22 spectrum analyzer we have was currently tagged out. They wanted to remove the remote unit we use out there on the conn or in control. They had that removed so it is currently tagged out. It is an analyzer we use underneath the 9.

CAPT KYLE: So, the remote unit was tagged out, but how about the unit in the sonar control?

WIT: The--I'll make that a little bit clearer. The whole unit is tagged out, because if you--we've got to tag out especially that unit because it takes power or the main power switch for unit 13 of the remote and what we call unit 5, which is the interface for the 22 system is on the same power switch on the 22 system. So to get that more isolated passed a power panel switch in the ship--regular "p" panel--you have to get more drawings out, do a little more than just tag out the unit.

CAPT KYLE: How long has that been tagged out about?

WIT: I think it was pretty much right--ahh, cl--Wednesday or Thursday before. I'd have to look at the tag out log. It was there shortly before.

CAPT KYLE: Anything else significant sonar wise, equipment status?

WIT: No, all the little remote displays for everybody to look at different items on the ship were still working. My two CDC's or where we sit broadband in workload share, those screens are fine.

CAPT KYLE: While you are talking that, real dispute, I promise my last question. The sonar line up, which console was in broadband and which was in workload share?

WIT: Broadband was unit 1103----

CAPT KYLE: ----Which is which one?

WIT: Which is more forward in the shack and 1104 is the one closer to control.

CAPT KYLE: And----

MR. ROTH-ROFFY: ---- Nope, you promised.

CAPT KYLE: No this is an add-on to the final question. 1104, unit 1104 what was on which display, upper or lower? Can you jet class up on that or how are you----

WIT: No, sir--when you do classification, you do it on the 1104 stack or workload stack. And it will take the upper display when you're cutting a contact.

CAPT KYLE: So you bring that up to cut contacts and then what do you do?

WIT: Then you would bring it back to the----

CAPT KYLE: [phone ringing]----Telling me I'm done here.
WIT: ----4 DE or AD----

CAPT KYLE: ----Okay, thanks.

MR. ROTH-ROFFY: Thank you, Captain Kyle for that lengthy interview. We would like to now break for the day. I have about 1607. I would like to resume tomorrow at 0830. That concludes the interview of Petty Officer----

NATIONAL TRANSPORTATION SAFETY BOARD
VERBATIM TRANSCRIPT OF INTERVIEW WITH

STS1(SS) EDWARD W. McGiboney

CONDUCTED AT COMMANDER, SUBMARINE SQUADRON 1 CONFERENCE ROOM, 822 CLARK STREET, BUILDING 661, PEARL HARBOR, HAWAII

ON 15 FEBRUARY 2001

MR. ROTH-ROFFY: Good morning. It is about 9:33 in the morning, Thursday, February 15, 2001. And we are here with Petty Officer McGiboney and we're resuming our interview that was terminated at the end of yesterday. I'd like to again remind everybody, please for the interview purposes if we could state your name before asking any questions for the transcription. It makes it a little easier for that person. Again, Petty Officer McGiboney we'd like to at this time for you to recount the events of your observations in the sonar room using--referring to the charts and logs and kind of just step us through what was going on there and what you were thinking, what you saw and what you did, what you communicated in as much detail as you can. Just kind of recreate what was happening on that afternoon.

LT HEDRICK: Here are your sonar logs. Here's some fire control system print outs of sonar data. We've made available for you a copy of the CEP plot and I also have a copy of the deck logs. And I think just looking roughly at the logs I think unless you have other information you would like to bring up, I think if we start with the gain of sierra 12 and sierra 13, roughly an hour or so before the incident--if you'll step us through, give us the time, significant analysis that you recall making in sonar. I'm interested both in your analysis and what your were thinking at the time, anything that you can specifically as information that was passed on to the conn or to the FTOW. It would also be appreciated that you go through this--please also gives a feel for the environment in sonar if you can. If you specifically recall certain people coming in or coming out. I know you mentioned the XO at one point. Go ahead and do that as we go along. Of course we will interrupt with a few questions along the way. We will try to keep that at a minimum because we really want you to try to picture yourself back in sonar and let us know what you were thinking and reporting.

LCDR SANTOMAURO: Could you give us an idea, just a brief description of what the sound velocity profile was, the water

conditions, and that--and what you thought that was, the picture that you had in your mind at that--at that point.

WIT: Okay. A couple of things that I didn't mention yesterday that the Executive Officer was in sonar. I'm not sure at what point. He came in prior to our baffle clear. He came in prior to the baffle clear. He was there through the baffle clear and through the ascent to PD. There shortly after getting to periscope depth is where the XO left. I'm not sure exactly what time. It was af--just after reaching periscope depth. One other note from yesterday. I was trying to explain how can you tell if it is surface contact vice another type of contact. The best way I can kind of describe that is kind of like when you are listening to music you may not know the band that is playing, but you can recognize what type of music it is; if it's rock music, if it's jazz. You know the type, just like you know if it's a surface contact, vice a submarine, vice a warship. You have a generic idea what it is off the bat.

LT HEDRICK: Based on how many years of sea duty do you have roughly?

WIT: About seven.

LT HEDRICK: And that is all as a sonarman?

WIT: Yes, sir.

LT HEDRICK: Additionally, as a sonarman do you routinely or even infreq—what—at what frequency do you conduct any type of training related to contact identification? You know, audio-type training?

WIT: You have trainers that you go to at the training building over here while you are in port. While you are out to sea, you do have work tape or training tapes you can plug in to listen to. But usually unless you are in a very open part of the ocean there's a contact out there sometime you can do a lot of on-the-job training. You can listen to them and every now and then you do get a chance to go up to periscope depth to take a look to see what that contact looked like as well as hear it.

LT HEDRICK: So even when you're not at sea and you're in-port and attending these trainers on some type of periodic basis you're getting this experience. How often would you say in-port you're doing this? Weekly, monthly, quarterly type basis that you are listening to a tape?

WIT: Monthly to every two months I guess would be the schedule. It kind of depends on your in-port schedule, what you are doing and what are the needs at that point. We try to get over there when we can.

LT HEDRICK: And then underway you are using the actual noises in the ocean and when not available using the audio tapes that you have onboard as well. Thank you. We can go ahead and start with your gain of sierra 12--I think is the point where we probably need to start in the logs. Once again, insight into what you were thinking, what you may have directed the operators in front you, what you may have passed onto control is of interest as well.

WIT: Okay, umm, the time backwards again--at 2230 or 1230----

LT HEDRICK: ----You can just stay with zulu time. The times that are written in the logs are zulu time, that is ten hours ahead of the local time. Just maintain zulu time so you don't have to do the math in your head for all of these.

WIT: 2230 sierra 12 was gained at a bearing of three-three-two. I gained sierra 33, or correction sierra 13 at 2233 and his bearing was three-five-seven.

LT HEDRICK: Do you recall who gained these contacts, if there was anything unusual, absent or extra in the gain reports that were made to you and what you may or may not have passed out to control?

WIT: On an initial gain us just you gain the trace itself. You have—once he listens to it, surface contact or if it's a trace it's not surface contract, what it is. He gained that as a surface contact--that was on a broadband operator, he reported both sierra 12 and 13 as initial gains, surface contacts.

LT HEDRICK: Did you listen to either of those contacts at the beginning?

WIT: Yes I did, sir.

LT HEDRICK: And what was your personal classification.

WIT: They sounded like surface contacts, sir. At the time 2235, sierra 12 faded in the logs bearing at three-two-eight--doing just kind of a quick bearing rate time versus a range of a

contact, he traveled 4 degrees in approximately five minutes. It tells me that he has a little bit of a distance because he's not traveling rapidly and bearing rate plus his is initial gains so you've got to wait a little bit to determine a little more travel time, but the initial range that I had on him was excess of 10,000 yards based on that bearing rate, he didn't have significant bearing rate.

LT HEDRICK: Just for tactical clarification, when the sonar system gains these noise levels and trackers are assigned so that the computer can process the data and determine a bearing, frequently it will take a minute or two for what the sonarman refer to as time for contact to settle in or stabilize. While the initial processing is going on, the computer system is doing its interpolations from all the different hydrophones to decide which precise bearing down to say a half-degree or so that it is on. So initially, there is a few degrees slop in the bearing and that is why he is saying you have to wait for the bearing to stabilize before you can start doing its bearing rate analysis.

LT JOHNSON: Petty Officer McGiboney, when you gained sierra 12 and 13, did you have approximate range of which you detected these contacts or could you--do you have a best guess or anything along those long as to how far out they were?

WIT: On initial gain it is tough to get a--you can get an assumption range, but you can't get a good range. If you gain a contact or he starts up or he just starts to show up, his noise starts to hit us, you can look at your--the person elevations on the sphere itself. If he's showing up closer or more negative than 13 degrees on the sphere, you can use that with the bottom depth to correlate a possible range. That wasn't available. He was higher up than the negative 13, means which we would get a direct path as well as he was probably out a distance based on that lack of information.

LT JOHNSON: But you wouldn't be able to tell that he was 2,000 yards away or 20,000 yards away on an actual contact----

WIT: Not on a initial gain, sir.

LT JOHNSON: Okay.

CDR CACCIVIO: Real quick. I need you just to explain to me these right here so that I can follow along with you. What is the--this "R" is relative?

WIT: These are--these are the logs that printed off the Q-10 system.

CDR CACCIVIO: What bearing did you gain sierra 12 at?

WIT: Bearing three-three-two true.

CDR CACCIVIO: Okay and okay, thank you.

LT HEDRICK: Continuing on you said sierra 12 had faded three-two-eight and I think you were about to give us your rough idea of the range. As you go through the contacts if you recall that you were picturing, in your head, a particular range please let us know that and once again anything that got passed down to control that you recall.

WIT: Okay, both contacts, sierra 12 and 13, initially you are not getting much bearing rate on them. I didn't see him past that negative 13 DE. They were not extremely loud contacts as in maybe they just started up--to create a very large SNR. So with a little bearing rate, lack of DEs and a relatively low SNR, I put out the initial assumption that both contacts were outside of 10--10,000 yards, with information I had there in sonar. It tie--it looks like we may have made a course change somewhere between the time between two thirty five. I got one guy going in the baffles.

LT HEDRICK: Just a second. Where is the----

MR. ROTH-ROFFY: Deck logs--Now the deck logs are they also in zulu time or are they in local time?

LT HEDRICK: Ships deck logs are in local time. What time are you looking at, 2235?

WIT: 2235, I've got sierra 10.

LT HEDRICK: For clarification for the tape, we do have a hand-copied version of the deck logs on an easel behind us starting at time 2245 zulu. Prior to that--1207--oh wait, you are going zulu time. At 2207 the ship was on course north. At time 2240, which would be after the gain of sierra 12 and 13, so sierra 12 and 13 were gained on course north, the course change that Petty Officer McGiboney can see from his log occurred at approximately at 2240. Course change was to the left to course two-four-zero and that now puts you were you are on the logs here showing

initial two-four-zero, ten knots, six-five-zero feet, and then another rudder order at 1245.

WIT: I believe we were coming--changing depth with the ship. Not rapid depth change, but casual depth change.

LT HEDRICK: Does that impact your analysis, small depth changes of a couple hundred feet in this environment, in this location?

WIT: No sir, not depth changes. Course changes can--not create, it can have some effect on your bearing rate as you change course. If you're a constant course you know the contact is not going to change course. It's going to have a certain track or path. In that track or path you expect certain bearing rates at certain points. As the ship changes course it can affect that bearing rate in various fashions.

LT HEDRICK: So by analyzing the speed that the ship has perpendicular to the contact speed across the line of sight you are able to gain some ranging information over time in several course changes, depending of course--the quality of the data depending on what the actual course changes are relative to that contact?

WIT: Yes, sir.

LT HEDRICK: But the depth changes that were occurring were not negatively or positively impacting your analysis?

WIT: No sir.

LT JOHNSON: Can we go back to 2235 where you lost sierra 12 and pick up there cause I'm getting kind of side tracked here as to where we are. We want you--are we just going for a chronological sequence here of what is going on----

WIT: Okay.

LT JOHNSON: Okay, cause I'm trying to follow you here and I'm getting lost here so.

WIT: At 2235 that is when we faded sierra 12. Also faded sierra 13 bearing three-five-nine.

CDR CACCIVIO: Say again what time you faded sierra 13.

WIT: At 2235.

CDR CACCIVIO: And the bearing was three-five-nine?

WIT: Yes, sir.

LT JOHNSON: Did you--are you notified every time there is a course change or depth change?

WIT: I don't remember that one.

LT JOHNSON: Is it likely though?

WIT: It's on the open mike and most of the time I do hear that. I just don't remember every course change that we did with depth change.

LT JOHNSON: They don't specifically contact you, you know, sonar conn coming left to this or sonar conn we are going to change depth to this?

WIT: Normally we do if the open microphone is not on because they can announce it through the microphones in control.

LT JOHNSON: Sure. Okay.

WIT: And I do not remember if they were us--I----

LT JOHNSON: ----Would you note that in your logs?

WIT: No sir.

LT JOHNSON: You would not? Okay. I'm sorry. Go ahead.

CDR CACCIVIO: It is procedurally required to notify the sonar supervisor of course changes?

WIT: Procedurally yes.

CDR CACCIVIO: And how is that accomplished?

WIT: You can do that through open microphone or you can do that through the 27 MC circuit or announcing circuit.

CDR CACCIVIO: Thank you.

LT HEDRICK: Do you have--do you also have indications in sonar of ships course and speed that are readily apparent to you?

WIT: Yes sir on the broadband display you have a stern marker that recognizes the back end of the boat. That is the eas--kind of the easiest indication that you are changing course because it will move as the ships move. A little bit harder one to recognize is there is a little "V" shape above the bearings and that is on the ships heading. That will move back and forth a little bit harder to watch as you the display.

LT JOHNSON: Follow up on the commander's point of--on this particular day in question, were you being in fact notified of every course and depth change or was that just up to you to pick it off the machinery or to overhear it on the MC? Anything specific is what I'm getting at because you have sonar conn we are changing depth course or whatever, were you ever notified directly or specifically I should say.

WIT: I think the early course changes I was and I think it went to the, not specifically, but through the open mike later though but I'm not sure at what point that would have shifted.

LT JOHNSON: Okay, thank you. Now we are at 2235 and you just faded sierra 13, correct?

WIT: Yes sir.

LT JOHNSON: Alright. Thanks.

WIT: At time 2240 have a regain of sierra one three bearing three-five-nine. At time 2242 I have a fade of sierra one three bearing three-five-nine, same bearing.

LT HEDRICK: Petty Officer McGiboney, we've got a couple of gains of fades here. How would you--in your recollection, how were thinking of about these contacts or characterizing them at the time. Are the gains and faded because it is a weak contact? Is it because the contact has a high bearing rate and the tracker can't keep up? Is it a manual problem of the operator? Explain what you think the contact was actually doing?

WIT: Okay. I believe it was very faint. They have the SNR ratio which was negative 19, ahh the system you want to have at least a negative 13 or higher for a very good track so it wasn't very solid track. It was probably a small trace. It appeared they gained it and probably faded it thereafter.

LT HEDRICK: Does that correlate with your memory of the visual picture from the display and the audio that you and/or your operator were listening to?

WIT: I believe so.

LT HEDRICK: All you can give me is what you can recall. Please don't make stuff up if you can't recall or you just think continue to state it that way.

LT JOHNSON: On the issue of the regains, and please bear with my ignorance here, did you get any screw blade information on sierra 13 when you first----

WIT: No, sir. We did not get screw blade on sierra 12 or 13.

LT JOHNSON: So what--I guess and please bear with me like I asked, how do you know it is a regain of a previous contact and not a new contact. That when you first faded sierra 13 it was--it's off--another words it is off the scope and now we got a new guy coming in on a the same bearing. If you didn't get any screw blade information or anything to put a signature on it, is it possible that this could--that your redesignate--or your regain of sierra 13 could have been another vessel or is that--am I way out in left field here with that?

WIT: Yes sir. That is correct. It could have been another vessel.

LT JOHNSON: What made you sure it was a regain? Or suspect, let me say that.

WIT: I would have suspected it was a regain. It was at the previous bearing of sierra 13. We had him at that bearing. You regained it at that bearing. There is always a chance that it is a new guy there, but generically the closer guy--if there is another guy in that bearing, is going to be the guy that you've been tracking.

LT JOHNSON: Can I and I want to purpose--is that okay here Tom?

MR. ROTH-ROFFY: Sure.

LT JOHNSON: I want to ask you--I need to go to the board here though because I have an acoustic type question and I need to draw a picture, representation. Once again I am not a sonar tech so if I appear stupid here. [Drawing a picture] If I've

got a contact--I'm just going to say this circle represents your submarine and it is a pretty circle. Okay, this is your submarine right here. And this could be any amount of distance, any range that you want to call it. And I've got a contact----

MR. ROTH-ROFFY: Could you put it on hard paper?

LT JOHNSON: Sure. Okay. Here is your submarine down here, okay. And I've got a contact and this range could be anything you want to call it, it doesn't matter. And I've got a this my little boat with a screw, okay? And I've got this, actually let me get closer than that--and here's the screw. Okay, we got the picture here. Two boats, this could be 10,000 yards, it doesn't matter. But I've got two completely different aspects of the vessel, which one of these in your experience is going to give you a better picture or sound picture. Which one are you going to pick up more prevalent, the one with the screw facing you that is pushing sound in this direction or the closer contact that may be pushing in this direction?

WIT: It is going to be the guy with the screw blade behind him.

LT JOHNSON: Vessel one. We'll just call him vessel one and we'll call him vessel two.

WIT: Yes, sir.

LT JOHNSON: So even though vessel two may a closer contact, vessel one would give you the more prevalent sound?

WIT: Yes sir. Based on, you are still going to hear something from two at that angle. If you get what we call a bow null from a contact----

LT JOHNSON: Uh-huh.

WIT: He's directly pointing you, you may not see anything from a contact at a certain distance, at a certain place you are going to see contact either from the bottom bounce or he is going to be emitted sound in front of him, but not as much as you are going to see behind him.

LT JOHNSON: Right----

LCDR SANTOMAURO: I'd like to just state that at this point the time that we are at, 2240 zulu, the contacts that we are talking

about, sierra 12 and sierra 13 are off the starboard beam approximately actually. The course is on two-four-zero.

LT JOHNSON: That is my next question. Once again here is your sub----

MR. ROTH-ROFFY: Okay. Just to interrupt one second. You've flipped over a new page. Let's call the first one exhibit 1.

LT JOHNSON: You need me to annotate that?

MR. ROTH-ROFFY: If you would, mark the first page of exhibit 1 of the interview with Petty Officer McGiboney and then just mark the second page, which you are starting now, as exhibit 2.

LT JOHNSON: Okay. We are back down on the submarine. I'm going to close the scale down here, okay? You've got--you've got your sierra 13 here--okay here is the screw right here and he's tracking off, let's just say this way. This will be your three-five-nine bearing. Okay, you with me? And you lose him for whatever reason, he's opening the range and you lose him. He would be the prevalent screw noise going away. You have another vessel that is perhaps on the course of one-five-zero to one-seven-zero it is now coming into the picture. This guy is fading out, this guy is coming in and you are detecting him along the same bearing lines. Is it possible to confuse this vessel number two to be a regain of vessel number one?

WIT: Yes sir. It is.

LT JOHNSON: Okay, the--okay that is my question. Wanted to make sure that we could have one faded, that actually went out of your scope and another one that came back in with the same bearing line and you would not be able to differentiate between the two.

WIT: Correct, sir. The thing with initial gain and the time span on the two contacts that is possible, but once you gain a contact with the sonar if they are moving and it is not a start up, you are gaining them on a closing course. It ahh--how do I explain that--it's like if you could stand on a side of the interstate and wait till you hear the sound of a car moving, the initial of that sound car moving is something coming toward you, not moving away from you. If you----

LT JOHNSON: So you are saying when you initially gain a contact that has a stern type aspect on the bow you can't----

WIT: If it starts up, that means its noise now is radiating out----

LT JOHNSON: When you say start up, what are you talking about?

WIT: He decides to start up his engine, he is starting to move his screws.

LT JOHNSON: But at a range--if we had a contact that were--this is kind of educating for me too--his screws back here with a contact out here now. Whatever range you want to plug in, a long way away range let's just say. You may not hear it, you may not hear, you may not hear it, you may not hear it , and you may hear him, you may hear him cause as he turns his maneuvers, he starts to present to you the screws, would you not hear that?

WIT: You would hear it in that case. I am just saying normally when you are looking at sonar, as something starts to get closer to you----

LT JOHNSON: Doppler?

WIT: Yes, sir. You are going to start to pick that up.

LT JOHNSON: Right.

WIT: You don't normally pick it up as if he is--I don't know how to explain this. He is not coming directly at you--I shouldn't have put it that way--put it that way but----

LT HEDRICK: A point of clarification here. One of the original questions from LT Johnson was, "Is it possible to not hear a contact coming toward you" and the answer was yes due to a phenomenon that is known as a bow null the contact is directly pointing at you. Based on the environment you may or may not know hear him. In most cases you do still hear contacts that are pointing toward you. Petty Officer McGiboney is trying to state that picture yourself next to an interstate and vehicles are going by you. How many of those vehicles do you hear for the first time after they have already passed you and are going away? None. So the standard two ships passing in the night both on constant courses without any abnormalities in the environment, such as large sea cliffs or anything else in other places in the water, you will almost always pick each other up on a closing aspect--almost always, okay. And that is one of the things the sonarman do for their analysis.

LT HEDRICK: But we can't confuse might not hear him on closing and gain until opening with what is normally experienced.

LT JOHNSON: I'm just asking if it is possible, because I know in experience of aircraft I've had aircraft flying directly at me and don't hear a thing until they turn away and present their engines.

LCDR SANTOMAURO: Can we summarize the situation that we are at right now?

LT JOHNSON: Yeah.

LCDR SANTOMAURO: Okay we have already gone through 12 minutes of logs.

LT JOHNSON: I'm happy. He answered my question. I just wanted to know about the regain issue.

LCDR SANTOMAURO: Right, but after 12 minutes we've got--here is the situation that we got right now. The ships turn to course two-four-zero, we've had two contacts off the starboard beam that are basically 30 degrees apart on a maneuvering board. I would find it hard to really establish the fact that we'd be confusing sierra 12 or sierra 13 seeing as fact there is a 30 degree difference in space there.

LT JOHNSON: I'm not saying sierra 12 and 13. I'm saying that the regain of 13--could the regain of 13 in actuality been a completely new contact?

LCDR SANTOMAURO: Now, what I will say is that you have these contacts and they've had very little bearing rate?

WIT: Yes, sir. Also at that point they are at the edge of the ships baffled region with the course of two-four-zero north. You have 120 degrees on one side, you have 120 degrees on the other side of the bow. That's your normal listening area so that is right at the edge of the baffled region.

LT HEDRICK: So you said the contact faded at time 42 bearing three-five-nine. Did that contact fade because his signal got weaker on that bearing or because he went into the ships baffles. Do you recall?

WIT: I do not recall. The gain was a negative 19 SNR. It could have been because it was right at the baffles. He could of drew in a little bit. I don't --don't recall that.

LT HEDRICK: Okay.

LTJG KUSANO: Could you explain a little more about gain, SNR? What do you mean by minus 19 and minus 13? How much of a difference is that?

WIT: SNR is signal to noise ratio. It is how much noise above background or near background he is presenting to the system, whatever contact it is. As the noise is emitting from a ship, we call that a source level. He has a certain amount of decibels that he is presenting out into the water. We are going to see that based on propagation lost, how far a contact is, how much loss of sound--or source level. It could be from his point to our point into the sphere. Once the sphere picks it up that is going to show us by a bright demis trace or a brighter green color on our displays. And then the system will analyze that information coming in based on the background noise that it sees and in comparison to how much it seeing it is going to give it a signal to noise ratio on our display saying it is a negative 19 or very low up to a plus 20 which would be very high.

LTJG KUSANO: So going back to comparison as you were talking about different types of music, how would you compare that when if you were listening to a type of music. What would you compare that to? Volume or----

WIT: That's volume. That would be volume of the contact. It is not an adjustable because he usually presents the same source level.

LT HEDRICK: What would you, based on experience, just consider the minimum SNR to have good track on a contact?

WIT: Say at least negative 13 or higher would give me a good track. Anything beyond that or higher is a lot more stable.

LT HEDRICK: At negative 19 can you track a contact?

WIT: That's more of not an ATF or automatic tracking. The principle if you have a demonstrates it is kind of there, you can see it but it is not going to hold a tracker that is standing out, you can buzz bearings to the fire control system.

LT HEDRICK: Demonstrates is the sonar term for the visual representation of the noise on a certain bearing. It is the term they assign to the visual indication of a contact. ATF is a part of the sonar system and that is the systems ability to automatically track or follow a target. So at a—Petty Officer McGiboney has stated that at about negative 13 he has confidence in his system to track a contact. Below that he is relying mainly on the operators ability to determine the best bearing for the contact. Is that a--I don't want to put words in your mouth Petty Officer McGiboney.

WIT: That is correct. Negative 13 is about where I have a little more faith in the ATF.

LT JOHNSON: I apologize for side tracking from your chronological thing so right now we are at 2242, sierra 13 has faded at three-five-nine. Is that correct?

WIT: Yes, sir.

LT JOHNSON: I'm sorry for getting you off track. I just wanted to clarify.

LT HEDRICK: Do you have other tools beside bearing to determine if a gain of a contact is the same as the loss of a contact other than bearing? Say sierra 13 faded three-five-nine sierra 13, gained three-five-nine, is there any other tools to identify sierra 13 besides that bearing?

WIT: You can bring up a classification stack to analyze that contact as well, which we did not have any classification on that contact yet.

LT HEDRICK: Any other things that you might be able to use?
WIT: Obviously you can hear what is out there to see what he sounds like. With merchants you could have five or six merchants sounding the same. You can listen to it, sometimes they have maybe a lower pitch, higher pitch broadband signature than one of the others, but generically surface contacts on initial gain or close to initial gain you kind of more going off your bearing, but you can listen to it to see if there is some aural clue to let you see the diff--if there's something different.

LT HEDRICK: Do you recall what the regain was based on? Was it based on bearing?

WIT: It was more based on bearing, sir.

LT HEDRICK: Thank you. Please continue.

WIT: Hold a regain of sierra one three at time 2256.

MR. WOODY: Say that again--repeat that please.

WIT: Time 2256 I have a regain of sierra one three bearing zero-zero-one. And that was in a negative 11 SNR.

LT HEDRICK: A point of clarification at time 45, the ship did come back and to the right roughly course north. So that would be between the fade of time 42 and this gain that Petty Officer McGiboney said at time 56.

WIT: Also have a gain or re-gain of sierra one two at the same time, 2256 and that was bearing three-two-eight and that was a negative 4 SNR ratio.

LT HEDRICK: Petty Officer McGiboney, we have now gone through about 30 minutes of logs on these two contacts. Do you recall any other contacts?

WIT: There was a sierra ten. Do you want me to recount every contact----

LT HEDRICK: Were you tracking sierra ten at this time?

WIT: Yes sir. I was.

LT HEDRICK: You were. What was his bearing throughout most of the time?

LT JOHNSON: I'm sorry. Sierra who? Ten?

WIT: Sierra one zero.

LT JOHNSON: When did we gain him cause I don't have him on--I've got--right now I only show that we are talking sierra 12 and 13.

MR. WOODY: That's because we started at a certain time.

LT JOHNSON: Right, so we got sierra ten?

WIT: Sierra ten was gained at back at time 2140 at a bearing of two-six-two.

MR. WOODY: So we started with him. We started with sierra -- sierra 10 was being tracked at the time we started our----

WIT: ----Re-gain and our gain of sierra 12 and 13 yes.

LT JOHNSON: What was the bearing you gained sierra 10 on?

WIT: Gain bearing was two-six-two.

LT JOHNSON: Did you class him?

WIT: Yes. He was classified later as a light craft making 526 turns on one three bladed screw.

LT JOHNSON: Do you have a--if this is classified certainly just tell me that. Do you have a minimum range your passive sonar can detect contacts. In other words is there a blind spot when you get too close or can you hear them basically right up to you touch them?

WIT: You can hear them up to----

LT JOHNSON: ----Obviously there is a maximum range.

WIT: Yes sir.

LT JOHNSON: But the minimum--there is no--are no blind spots other than the baffles?

WIT: Baffled area sir.

LT JOHNSON: Alright, so let me get myself right, we are at 2256, we got a regain in sierra 12 at three-two-eight with a negative 4 SNR. And we've just briefly touched on sierra 10, which was gained at 2140 at two-six-two, correct?

WIT: Correct, sir.

LT JOHNSON: Okay. So back to--back to 2256 when we--can we go on.

CDR CACCIVIO: So at this point in time we have three contacts right now, correct?

WIT: Yes, sir.

LT HEDRICK: Let's get caught up to date at around time 56, which is where we left off with sierra 12 and 13 were you still tracking sierra 10?

WIT: Yes sir, I was.

LT HEDRICK: Rough bearing at that time?

WIT: 2242 he was--sierra 10 was at two-zero-two.

LT HEDRICK: How would characterize your track of sierra 10? Tenuous? Constant and strong?

WIT: It has a negative 8. At that point he should have been in ATF.

LT HEDRICK: Okay. Should have been or do you know if he was?

WIT: Ahh, I do not recall with sierra 10. I don't recall if we were in ATF on sierra 10. I'm looking at the SNR and the logs.

LT HEDRICK: Very well. Continue on from time 05.

LT JOHNSON: Can you clarify ATF?

WIT: Automatic tracker following where the system will do it automatically and send that information to fire control.

LT JOHNSON: Okay.

LCDR SANTOMAURO: What I would like to do is once we get through either three or six minutes is just do a summary of the actual overall picture of where we are at and then we could—you know, ships course of speed, the contacts that we held and what their bearings were and possible ranges. Just a summary after I'd say three to six minutes.

WIT: Okay. We logged roughly every fifteen minutes on surface contact unless there is a significant event as in he goes into baffles, a regain, shuts down, otherwise it is every fifteen minutes.

LT JOHNSON: Are--are there any other contacts-- I guess I'm asking this to the interviewers here as well--are there any other contacts that go into the mix prior to this? Can we go

ahead and do that now so we don't get confused. Were you tracking anybody else that is relevant to this? We originally started this at time 2230. Is there anybody else that you were tracking prior to that that is important that we put into the mix right now?

WIT: No, sierra 11, the other contact was faded at time 2213.

LT JOHNSON: And there was never a regain on sierra 11?

WIT: I never regained sierra 11.

LT JOHNSON: Okay, so right now all we that you have that are actively tracking is 10, 12 and 13, correct? With 13 popping in and out?

WIT: Yes, sir.

LT JOHNSON: Okay and there is no--I want--okay.

WIT: The last bearing-I'll make it easier--for sierra one zero, time 2246 was one-seven-four when we placed him into the baffles. After that we never regained sierra one.

LT JOHNSON: One one?

WIT: I'm sorry. Or excuse me one zero.

MR. WOODY: I'm sorry, the bearing?

WIT: It was one-seven-four.

LT HEDRICK: At time 56 you'd said you had just gained sierra 12 and 13. Sierra 12 bearing three-two-eight minus 4 SNR, sierra 13 bearing zero-zero-one. You did not state an SNR. Can you tell as the sonar supervisor at this time what you--what you thought of your contact picture. You know, if I was the Officer of the Deck, or the XO, or the CO and I walked into the sonar shop and I say what do we got sup?

WIT: Okay, sierra 12 and 13 I both had towards the north. And I had one guy that—sierra ten we had just into the baffles down towards the south. I had two contacts north, one to the south and at that point we were getting ready to start, if not already, the turns to show how a ship could maneuver. I had two contacts and I would have said that the rough range, just based on the bearing rate, was probably excess of about 10,000.

LT HEDRICK: So still evaluating both contacts in excess of 10,000 yards?

WIT: Correct, sir.

LT HEDRICK: Okay. Please continue.

WIT: That was 2256 on the gains. The next time mark, roughly fifteen minutes, will be 2311 where we have sierra one two bearing three-three-four and sierra one three bearing zero-zero-seven.

LT HEDRICK: Any additional thoughts on these contacts during these—that fifteen minute period? Any ability to additionally classify them? Any more analysis that you did? Do you recall passing on anything out to control other than the bearings that are automatically sent to fire control and did you ever discuss any of these contacts with the officer of the deck or report them?

WIT: No sir. No additional information was sent out. Like I said, I believe we were getting close--look at the logs--were getting close to where we are starting to move the ship back and forth and I believe change speeds. At that point you not bringing up your classification stack as much because you want the safety of the ship--the broadband displays to be up so you can watch for anything that may be abnormal or different.

LT HEDRICK: The logs show a minor course change time 1304 to the right to course zero-two-zero time 1315 increasing speed to standard and coming shallow to one-five-zero. That is actually after the last point Petty Officer McGiboney said so. If you would continue please with 2211.

LT JOHNSON: Do you re-evaluate your contact picture with depth changes? In other words, what did you say you log every fifteen minutes, is that correct?

WIT: That is correct, sir.

LT JOHNSON: If you have a depth change and it doesn't fall on your fifteen minute normal routine log, would you still do a look around at your contacts going from say 600 feet to 400 feet to 150 feet? Would you reassess everything at 150 feet?

WIT: Yes sir. You'll look at the broadband displays, but you won't log any data or remarks section. You'll just basically look at it.
MR. ROTH-ROFFY: We would like to take about a five-minute break here for--to use the head or whatever we need to do. Thank you.

MR. ROTH-ROFFY: Okay, the time is now about 1034 and we are resuming our interview with Petty Officer McGiboney.

LCDR SANTOMAURO: We stopped at in the timeline of 2311 zulu and we had bearings to sierra 12 and sierra 13 to the north at three-three-four--three-three-four true for sierra 12, sierra 13 at zero-zero-seven.

WIT: Correct. The next time mark I have would be 2325, sierra 13 was bearing zero-zero-nine and sierra 12 was bearing three-two-zero and those were a fade bearing.

LT HEDRICK: On both contacts?

WIT: Yes sir, on both contacts. 1325 they're one-four-zero----

LT HEDRICK: So both contacts faded as you came around to the right to course one-four-zero?

WIT: Correct. That would--by looking at the course change, the log ticker it looks like they should have gone in the baffles. It looks like we made a course change to one-four-zero.

LT JOHNSON: Do you note that in your logs there that the contact fades due to baffle noise or due to SNR?

WIT: It is suppose to be F for faded as in he has faded or I, into the baffles as in it went into the baffles.

LT JOHNSON: Is that how you logged your setup?

WIT: Yes sir. That is how it is suppose to be. I've got a under instruction, or at that time, had a under instruction guy on my workload share stack that had a guy behind him and he was taking logs. He put faded instead of into the baffles. Because it says fade----

LT HEDRICK: You are your saying your best recollection is not the fade that the log indicates, but that you had sufficient SNR and were tracking the contact, but that you lost him because of ships maneuver he is not in the circled baffled area?

WIT: Yes sir. At this point we are doing angles, dangles. We are turning left and right basically to show what the ship can do to the guests that were onboard--for the guests that were on board. I don't know. I would have to ask him. If he put F for when he dropped the contact or if he meant I. I would have to ask him.

LT JOHNSON: Do you make that report to the conn if you lost him in the baffles or they faded? Do differentiate when you report that to the conn?

WIT: Normally you do, sir. If we were normal operation moving through the water just like you would to gain a contact, you'd say--in this case say 12 entered the baffles at this bearing or was placed in the baffles at this bearing. With the numerous course change and back and forth, that would have been a lot information over the twenty-seven MC with the one MC.

LT JOHNSON: And that is where I am going with that because of the extensive maneuvering that was going on it is just something not typically----

WIT: Not typical, that is correct.

LT JOHNSON: And that is fine. I just wanted to make sure. I didn't think that it was and that is what I wanted to bring out for the record that that is not a normal report that is made.

LT HEDRICK: Thank you. We are at 2325.

WIT: I have a regain of sierra one three bearing zero-zero-four.

LT HEDRICK: Time?

WIT: That was 2328.

LT HEDRICK: At time 27 the ship came back left to course north.

WIT: And I have regain of sierra one three, excuse me, 2330 I have a regain of sierra--I don't have a regain of sierra one two yet. 2330 sierra one three was bearing zero-zero-eight F eight and I----

LT JOHNSON: That is four degrees in two minutes. Does that give you any range indication there?

WIT: Real roughly they have a formula where you can divide your bearing rate into a number of 20 its course range and that would indicate about 10,000 yards.

LT JOHNSON: So in this case, 4 degrees in two minutes gives you about 10K?

WIT: Yes sir. And once again like you mentioned earlier, it takes a little bit for the trackers to stabilize, but that is a rough range.

LT HEDRICK: Do you recall--you had another gain and fade and some contact among ship maneuvers do you recall what you thought this contact was doing at this time? A rough course speed range type thing now that you've had on and off contact from him for over an hour now?

WIT: Early on I had a fairly comfortable feeling he was towards the east or easterly type course. I didn't have time to really get any solid course on the contact.

LT HEDRICK: This fade at 2330 for sierra 13 at 2328 the ship is executing a course change with a full rudder to one-two-zero does your log show this contact fades or is that I for it goes into the baffles.

WIT: It shows fade again, sir.

LT HEDRICK: It doesn't show into the baffles?

WIT: No sir.

LT HEDRICK: Do we think that maybe that was a little in error, that maybe it really did get into the baffles?

WIT: It could have been. I'd have to check to maneuvers----

LT HEDRICK: If you roll and come to one-two-zero is that going to put that particular bearing in the baffles?

WIT: It will put it right at the edge of the baffle.

LT HEDRICK: Yeah, so zero-zero-eight and one-two-zero put it at the edge of the baffles?

WIT: Yeah, yeah, one-two-zero to the baffles would technically start at zero-zero-zero true.

LCDR SANTOMAURO: The officer will order up headgear on a head flank with a cavitate so it is probably going to be a little bit noisier.

LT HEDRICK: Technical clarification. Several references to the baffles being the 120 degrees centered on the ships stern, is that a hard fast number 120.0 degrees, 60 degrees to either side of the stern?

WIT: No sir. The higher you go up into the sphere itself, sometimes you can catch a little further or more information than if your locked at one-two-zero and you go a little bit farther in the baffles. Also when you go farther down on the sphere--on the negative side of the sphere you can get a little more information as well. If the contact is strong, very loud SNR, you can track sometimes into the baffles a little bit. The bearings are going to be a little bit fuzzy just based on that it is in that baffled area it is not as accurate, but you can track.

LT HEDRICK: Thank you for the technical clarification.

WIT: At 2332 I have a regain of sierra one three, same bearing as fade, zero-zero-eight.

LT HEDRICK: The deck logs show that at 2331 the ship has maneuvered back to a northerly course, has slowed down from flank to full and two-thirds it was also coming shallow to one-five-zero eight.

WIT: And at the same time have a regain of sierra one two bearing three-one-three. Both these contacts at that regain was about sierra one three was a negative eight SNR; sierra one two was a negative nine SNR.

MR. WOODY: What was the bearing on 12?

WIT: 12 the bearing was three-one-three. Same time, time 2332 gained a sierra one four, surface contact at bearing three-five-eight.

LT HEDRICK: Gain as a surface contact obviously that is an operator gaining and logging. Do you recall if you yourself listened to this contact, sierra one four.

WIT: I do not recall if I listened to sierra one four.

LT HEDRICK: Did you say it was a surface contact?

WIT: A surface contact, yes sir, it was.

LT HEDRICK: And the SNR on it?

WIT: It was a plus one.

LT HEDRICK: Did you get any class out on this screw blade?

WIT: No sir. This is--once again we are doing angles and dangles and at that point we are focusing on any new dynamic changes to----

LT HEDRICK: Do you normally get screw blade when you pick up something out there to help you class it?

WIT: Not initially, but later down the road or in time you can get that information.

LT HEDRICK: What do you have at your disposal to help get you that?

WIT: Items we can use, we--for our system right now we have to modify our workload share stack where you only can listen to four DEs at a time and cut the contact that you want to class---

LT HEDRICK: Do you mean like a spectrum analyzer or a noise--some video?

WIT: You can use a spectrum analyzer but it is not right there. Well it is kind of a spectrum ana--it is our low fire display which has a certain frequency spectrum or coverage or as well it will analyze the screw blade in what we call our demon information so you can put both those up to help classify a contact.

LT HEDRICK: Demodulated---

WIT: ----Sound, yes sir.

LT JOHNSON: Right. Did you have all your equipment available to you?

WIT: That was available. We could have placed that up. Once again with angles and dangles, the operator is more focused on any dynamic changes of anything we have before we go put that up and with the course changes. If we were steady speed, course or slight changes then we're going to put that up to get that classification data. At this point we are moving back and forth fairly rapidly.

LT JOHNSON: Did you have all your sonar equipment available to you?

WIT: No sir. The BQR-22----

LT JOHNSON: Which is a?

WIT: A spectrum analyzer itself if you can analyze a contact without interrupting those two stacks.

LT JOHNSON: When would you normally use that piece of equipment?

WIT: Normally you don't--that's used for--when I leave it on is normally if there's active out in the water or you have a chance to get active we'll leave one of the hydrophones patched in through a patch panel to that BQR-22 so if you do get that we can analyze how far that active signal is based on the bottom bounce, direct path, time interval----

LT HEDRICK: ----Yeah, so that analyzer actually helps you get a range?

WIT: For active, not just for----

LT HEDRICK: ----For active, but not for passive?

WIT: Correct sir.

LT JOHNSON: So I'm not going to go anywhere with that. When would you--I'll tell you what, just go ahead with this and I'll have--I'll state that because I don't want to confuse the issue here. So we are at 2332, you just picked up sierra 14 at three-five-eight at a plus one SNR?

WIT: Correct, sir.

LT HEDRICK: Do you recall if that gain was reported to the control room?

WIT: I cannot recall.

LT JOHNSON: Are all contacts normally reported?

WIT: They are normally reported out.

MR. WOODY: On your BQR-22, do you sometimes pick up other ship's depth sounders?

LT HEDRICK: There is potential classification issues involved once we start asking about specific frequency responses of equipment. Petty Officer McGiboney, please keep your answer general. Don't refer to specific frequencies, frequency ranges and sensitivity of equipment. You could probably answer the question on whether or not you would normally see interference from other merchants or whether you would not expect that to be the case, based on the line up that you had. Don't go into a discussion of all the possible line-ups in place.

WIT: Twenty-two is not where you would see that data. You could see that on a WR-9 our acoustic interceptor. I don't know if I can keep into--if I get closer I may see something not frequency wise--but can I get into that on the 9.

LT HEDRICK: I don't think that is needed. I think the question was Mr. Woody was concerned whether or not these other contacts in the area would significantly interfere with the operation of the BQR-22 and I think it is safe to say that Petty Officer McGiboney's answer is umm--under almost all normal operational circumstances, including this one, that answer would be no. There are some very unique and specific phenomenon that he would be aware of that might present something else.

WIT: Here by that point, I think we---I'd have to look at the courses, but it's got to be near the baffle clear to be periscope depth. I'll take a look.

LT HEDRICK: 32?

WIT: I'm at time---I'm getting ready to go to time 41 in the logs.

LT HEDRICK: Okay.

WIT: 32 to 41.

LT HEDRICK: Well before we take a look at the logs and hash all that out, why don't you please tell us--I think it would be appropriate to take a few minutes here and tell us what happened as far as preparations for your baffle clear on your way to periscope depth.

LT JOHNSON: Can I ask something before we even get to that far. Did you know--are you able to come up and figure approximate courses and speeds for these contacts? I know they are coming in and out a lot. You're angles and dangles and you are maneuvering a lot. Were you at any time able to come up with a you know, sierra 13 is on course X at Y knots?

WIT: Not any specific solution. I had a kind of feel for range and I had a--sierra 13 was kind of eastish. I didn't have an exact course, but sierra 12 I had it going a little bit towards the west. I didn't have exact courses of that.

LT JOHNSON: Sure. You didn't do any of the solution. In your logs over there--I forgot what you told me a while a go, I didn't write it down, do you make annotations as to depth changes as to where you are in the water column when you pick up these contacts?

WIT: No sir.

LT JOHNSON: You don't?

WIT: No sir.

LCDR SANTOMAURO: When you say eastish, you mean right bearing rate? When you say west, you mean left bearing rate?

WIT: Yes sir.

LCDR SANTOMAURO: We are getting ready to go to periscope depth. Can you tell me whether or not the Officer of the Deck called in the--the watchstanders to discuss the periscope depth operation that was upcoming, the purpose of this periscope depth evolution and did he give any prior instructions prior to this periscope depth period preparation?

WIT: No sir. We did--I did not recall being called out towards the control room area for a brief.

LCDR SANTOMAURO: Normally, before you go to periscope depth, do you or do you not hold a periscope depth briefing prior to going up?

WIT: Yes sir. You do hold a brief. The Officer of the Deck, the sonar supervisor, the radioman of the watch, the SM of the watch and the fire controlman gather in control as the diving officer of the watch, chief of the watch are obviously here and they need to raise the master antenna, but there is a brief normally held.

LCDR SANTOMAURO: Was it clear in your mind prior to this periscope depth operation with the purpose of this excursion the PD was going to be or can you tell me what you thought you were going to PD for?

WIT: I believe I heard it through the--over the 1MC, but we are going to do a baffle clear, we are going to take a look around because we knew the emergency blow was coming shortly. Going to do a look around, then we go a little higher in the water to a high look around, go straight down and come straight back up. I knew that was the next events, but it was not--I don't remember it being told to me. I don't remember--I can't remember if I heard it on the 1MC that that is what we were getting ready to do. It wasn't addressed to me we are doing a baffle clear that I remember.

LCDR SANTOMAURO: So either the Officer of the Deck, the XO, or someone told you that you were going to do a look around and then a high look around also? You did remember hear----

WIT: No sir. I don't remember hearing them tell me they are doing a high look around. That is normally what is done and that is kind of what I heard over the open mike as we changed depth higher in the water and that is what we were doing, but I don't remember them telling me that's what we were doing.

LCDR SANTOMAURO: So you had no prior knowledge before you went to PD as to what scenario was going to be up there is what I am saying?

WIT: No sir. I was not specifically told. We did not hold a brief.

LT JOHNSON: This is LT Johnson. When you have these briefings for periscope depth, what is normally discussed in those?

WIT: Ahh, contacts that are held. You are going to do what is the intention are we going to transmit, are we going to receive through radio, the ESM operators will ask me maybe how many contacts I have out there, he'll look at the CEP plot so he can get an idea what he might see as in what type of signal strength or what type information he'll pick up. If there's going to be any evolutions while were done up there. We are going to want--if we need to bring on water, if we need to get rid of anything off the boat. Whatever evolution is going to be happening. We want to do a surface ventilate or ventilate where we bring air into the ship to kind of change the air in the boat. Whatever is going to happen normally----

LT JOHNSON: Is this important information for you? Is this briefing--you're a sonar supervisor, do you in your supervisor role consider this briefing prior to periscope depth important to you in the function of your duties to know the----

WIT: ----Not every particular part----

LT JOHNSON: ----Right. In general, I'm just talking in general. Just so you have a big picture?

WIT: In general, yes sir.

LT JOHNSON: Umm, any ideas as to why it wasn't conducted this time?

WIT: I can only assume, sir. It is an aid.

LT JOHNSON: I don't want you to do that. But you don't have any reason? Do you—is there a specific written instruction or procedure on the vessel that requires this briefing to be conducted, any guidance?

WIT: There should be a CO--a Commanding Officer standing order.

LT JOHNSON: Would you happen to know--have you ever read the standing order?

WIT: Yes, sir. I have read it, but I----

LT JOHNSON: And it requires this?

WIT: I'm not sure which number, but there is one that talks about having briefs before major evolutions.

LT JOHNSON: Did--prior to coming to periscope depth in the absence of this—obviously re--normally required briefing, did the OOD contact you as the sonar sup direct and say, hey sup, give me a contact picture. What have I got? So he would know where to focus his efforts once he does his quick sweep, in order to focus his efforts to locate these contacts visually?

WIT: No sir. Did not get that.

LT JOHNSON: He never requested----

WIT: At that time the XO was in sonar for that baffle clear. I don't know if he--I'm not sure.

LT JOHNSON: Did the XO ever request a complete sonar picture from you?

WIT: No sir.

LT JOHNSON: Did the CO ever request one from you?

WIT: No sir.

LT JOHNSON: Did anyone ever ask you what you had on the surface before going to periscope depth.

WIT: No sir. The only thing that we were kind of concerned about in sonar, at that time, obviously contacts but sierra 10 it was the closer contact. We asked fire control, "Where do you have this guy," because we don't have exact ranges. Where do you have for a solution on sierra 10? He said he was opening and of course he faded.

LT JOHNSON: Do you happen to remember the ESM watch stander made a tour to sonar or came by, just stop in and say hey, you got anything I might be interested in?

WIT: I had myself, the Executive Officer, and the over instruction of my workload share operator that was sitting there. I don't recall anybody opening the curtain beyond me asking him to ask fire control about sierra 10.

LT HEDRICK: Who asked fire control about sierra 10?

WIT: That would be the over instruction of watch of the work load share. You'll have him on the interviews.

LT JOHNSON: You say that this is--this is--is kind of abnormal not to have this required briefing. Did that make you a little uneasy at all or did you feel like everything is going along pretty good. We've got a really good feel for where all the ships are or were you----

WIT: I felt comfortable with seeing the pictures I had in sonar with my bearing rates, the contacts with the exception of 10, which I didn't have a warm fuzzy on distance or range on. I felt comfortable in what I had.

LT HEDRICK: You already discussed sierra 10. What did you have sierra 12 and 13? You said you felt comfortable so what were you thinking?

WIT: I was thinking they were outside of 10,000 yards. I didn't have anything to indicate they were any closer. Normally, like I said, you can--if you get a bottom bounce trace it starts to show up and they show up in the lower DEs that indicates they are closer. I can't get into range, but at a certain point, if a contact has a bottom sounder on or a fish finder on, there are systems that will alert to tell me hey, this is here. If I get those where I can even see them, then I am not going to sit there and say-- if I see those come up, I am going to say hey, I got this at this bearing. That tells me and the control room that there is something close because fish finders and bottom sounders don't go that far in the water.

LT JOHNSON: Yeah, they are pretty much up and down----

LCDR SANTOMAURO: Do you cons----

LT JOHNSON: Did you hear any engine noises, any mechanical noises?

WIT: Beyond the normal broadband energy that I was hearing on the contacts.

LCDR SANTOMAURO: What do you consider closer? You are going to making a baffle clear, upon your completion of the baffle clear, if you saw the Officer of the Deck going to periscope depth and you thought you had a contact that would place the ship in extremis, what distance--what range would you consider that to be?

WIT: I consider being close just is kind of, I'd say under eight to seven thousand yards. That--that's close. Just with speed at periscope depth it is a little bit slower, but with ships speed you can close at a rapid time depending on how fast you want to travel and depending on where he is going. But somewhere around six to seven thousand yards is close to me.

LCDR SANTOMAURO: So with the picture that you had, you felt comfortable going to periscope depth?

WIT: Yes sir. I did.

LT HEDRICK: You talked about a reference to a CO standing order that talked about pre-evolution briefs or significant evolutions. In your experience, recent experience onboard the GREENEVILLE, were periscope depth briefs normally conducted prior to going to periscope depth?

WIT: Yes sir.

LT HEDRICK: Were you as sonar supervisor part of those?

WIT: Yes, I have been sir.

LT HEDRICK: How long have you been standing the sonar supervisor on the GREENEVILLE?

WIT: This boat, roughly about three years.

LT HEDRICK: Roughly about three years. In your previous three years of standing sonar supervisor, during those three years, was GREENEVILLE operational the entire time or were you in shipyard?

WIT: We went to a three or two and a half to three month----

LT HEDRICK: Let me rephrase my question. Ball park number, hundred, two hundred, thousand, about how many times to you think you've taken the GREENEVILLE to PD as sonar supervisor?

WIT: I don't even have a clue, a lot. I have no idea.

LT HEDRICK: Okay, so let's just say three hund--let's say two hundred times, just for a ballpark number.

WIT: Yes, sir.

LT HEDRICK: If it was two hundred, if it was two hundred, how many of those time do you think you did a periscope depth brief prior to going up?

WIT: Almost all of them. I would say 95 or better percent and if it wasn't, it was briefed over like an open microphone maybe due to what you were doing.

LT HEDRICK: Okay, so between formally going out to control for a periscope depth brief and a brief over the open mike were you didn't leave sonar, what would you say the number of times was that the ship just went to periscope depth without you as sonar sup having any fore knowledge.

WIT: I don't recall any.

LT HEDRICK: You don't recall any? Okay, it might have been one or two but you don't recall any.

WIT: I don't recall any.

LT HEDRICK: Okay. That is all I was trying--I was trying to get a rough idea that is why I wasn't trying to pin you down to a certain number. What was the first indication that the ship was going to periscope depth or intended to go to periscope depth?

WIT: That is called over the open microphone, which we have a speaker in sonar and they'll say, "All stations proceed to periscope depth".

LT HEDRICK: And you heard that on February 9th?

WIT: Yes I did, yes.

LT HEDRICK: And that was your first indication that the ship was intended to come shallower than 150 feet or did you have any other indications prior to that that you felt you might be going up.

WIT: I can say I remember--I can't remember if it was the 1MC, I knew that's what was getting ready to happen, just by how much time before we pull into port. I think and like I said I'd have to--I don't remember every 1MC, but I thought they were talking about we're getting--making preparations to go emergency blow and there were different things that were being said over the

1MC because I heard we were getting ready. I just didn't know a lot of the things that were going to go with that.

LT HEDRICK: Okay and that hearing that you were getting ready that gave you a sense that you might be going to periscope depth, are you talking that you had that feeling a minute or two before you went to six zero feet, five minutes, fifteen, thirty?

WIT: I don't--I don't recall. It wasn't that long because as soon as we stopped our angles and dangles and driving the boat around, we steadied up--I don't know how long, it wasn't too too long and that's when we're--I think you take two legs and not have to look at the track again to get like bearing rates and solutions for fire control out there for the Officer of the Deck. I don't recall the time span on that.

LT HEDRICK: Not trying to do a reconstruction, trying to remember what you were feeling at the time when you heard--you did say that you heard the Officer of the Deck, proceed to periscope deck or dive make your depth six zero feet? You guys hear that out in the open mike?

WIT: Yes, sir.

LT HEDRICK: When that was said, what were you thinking with regards to a baffle clear maneuver? Was one done, was it sufficient?

WIT: One was done. We had turned to the right. I don't know the exact course we had come to, I'm not sure the exact course we were on----

LT HEDRICK: Do you feel it was a sufficient baffle clear as sonar supervisor?

WIT: Yes sir. We had turned at least 120 degrees. I don't know the exact courses.

LT HEDRICK: Once again trying to remember how you felt at the time because you said you are not exactly sure what or at what point you felt you would probably be going to periscope depth, once you were aware you were going up you've said that you felt a sufficient baffle clear maneuver had been accomplished. During that maneuver, were you thinking as that maneuver was occurring that hey, this is the baffle clear probably before going to periscope depth?

WIT: I felt that was a baffle clear. I can't remember hearing, this is our baffle clear.

LT HEDRICK: Right, but as this maneuver was occurring, do you recall if you were thinking hey, this could be the baffle clear?

WIT: Yes sir. I felt that was the baffle clear.

LT HEDRICK: You felt it was? Did anybody state that to you at any point?

WIT: I can't recall, sir.

LT HEDRICK: Don't recall?

WIT: I do not recall.

LT JOHNSON: Are you normally notified by the conn when they change--sonar, conn, you know, changes course to umptyfrats to clear baffles to make you more attentive to search in that particular area?

WIT: Yes and that is the ordinary--I can't remember if I--when I heard it, if I heard it. I can't remember.

LT JOHNSON: Right, but you are normally notified of that?

WIT: Yes I am.

LT JOHNSON: Let me ask you-umm--you know where--umm--if you wanted to get a better range or--or--what is more accurate for you, an accurate sonar, a passive sonar, a contact detection, in ranging information, what would be--which active or passive would prove more beneficial to you as a sonarman?

WIT: A lot of variables. Umm----

LT JOHNSON: ----Sure. Generally.

WIT: Generally, anything close and active will work. The farther something out is depends--I can't get into type pulse---

LT JOHNSON: Sure, understand.

WIT: The pulse you are going use----

LT JOHNSON: Let me rephrase the question for you the way I think can answer it. Can active sonar detect contacts that passive sonar will not hear?

WIT: If they are sitting in the water, they are not moving, making noise, yes active can pick that up.

LT JOHNSON: Active sonar has a better chance of detecting contacts than just relying on sound emitted from the other ship?

WIT: I wouldn't say better. I would say it is another way to detect--if the contact is moving in the water, making noise in the water, that's going to show up on the screen. You've got a bearing over time it could be processed. I don't know all the intimates of the fire control system----

LT JOHNSON: ----Yeah, and I don't want to get into that----

WIT: ----But it can be tracked and analyzed.

LT JOHNSON: Have you ever used active sonar on the sub?

WIT: I have used active sonar. It is something we don't do commonly.

LT JOHNSON: And why would you--can you talk--I don't know--don't want to get into classified stuff----

WIT: Most of it is training.

LT JOHNSON: Just for training? And you are able to get very good contact information out of that active sonar?

WIT: Ahh, once again it kind of depends on a couple of factors of the water.

LT JOHNSON: And what you said a while ago-I want to make sure I've got--my notes are correct here and I'm not misunderstanding you is that active sonar would prove very beneficial in aiding you in detecting a contact that say might just be sitting still in the water, not running----

WIT: Correct, if it is sitting still in the water it could and it depends on and I can't go why or how, but ra----

LT JOHNSON: ----I understand. But if you were in an area that had numerous small boats and close to shore that could be out

fishing, swimming, doing whatever, your passive sonar would probably not hear it if they weren't actually engaged in some mechanical engine noise or screw noise, but the active was.

WIT: You can also with the active pulse transmitting, you'll be able to see the contact, but you also got to--you don't look at it well if it is in the water, but that's----

LT JOHNSON: ----Right, but the active is going to give you a better picture----

WIT: ----It could----

LT JOHNSON: ----It is going detect things that aren't actually moving.

LT HEDRICK: He said it could.

WIT: It could.

LT JOHNSON: I understand.

WIT: Just depending on a lot of factors.

LT JOHNSON: Do you--when you are doing the safety search of the surface, do you—would you normally use an active sonar?

WIT: As in when we are at periscope depth?

LT HEDRICK: Yes, not at 150 feet, but prior to, would you use it?

WIT: Not prior to. It is not a normal----

LT JOHNSON: What is the purpose of not using an active sonar? You obviously have it onboard the vessel, why don't we use it?

WIT: The better way to track something is passively so we get that information out to fire control. When you active in the water, the operator on the broadband display has to cut his hearing down to about in half because when you send that active pulse in the water, that frequency data sitting out there and it is going to mess up your display----

LT JOHNSON: Your passive displays?

WIT: Right.

LT JOHNSON: What about your active displays? Do you have active displays?

WIT: You will have an active display, but it doesn't look like our broadband display. It is totally different.

LT JOHNSON: But why don't submarines use active--I mean----

CAPT KYLE: What else do you get when you go active? You get just the contact data or do you get other data? Your experience going active, what else did you see in the active display?

WIT: A lot of times you are getting a lot of reverberation from whatever may be in the water. Anything from the bottom, the fish, to the surface noise, to--whatever may be just in the water----

LT JOHNSON: Can you differentiate between those when you get that or is that something you can't really tell the difference in?

WIT: If you get a contact and you hit it with active really strong and you get a strong return you can really tell okay I've got something solid there. The active if you hit fish or something, you'll get a return, you'll hear a return, but it's not as defined maybe as if you hit something say broad sided with the active. If it is a small angle, you may not be able to hit it as well. It will show up as something else. A lot of factors that you may not see--you may not get a good picture.

LT JOHNSON: But it gives away the location of the submarine, which is that not an overriding factor why submarines don't use active sonar.

WIT: That--yes, sir that is.

LT JOHNSON: When you do a EMBT blow, are you putting a lot of noise into the water just the evolution from what you said earlier?

WIT: Yes sir. Once we got up, did our periscope, came back down, once you hit the blow switches that is going to put all the 4500 pounds of air pressure into the tanks, which is obviously very loud behind the sphere. It is going to blank out things going on until that air kind of settles out.

LT JOHNSON: Do you guys--when you dump this air to the ballast tanks do your sonar watchstanders normally take their earphones off because it is so loud?

WIT: Well, they don't really have to take them off. They kind of lean them forward----

LT JOHNSON: Well I did--I just took mine off because it would blow my ears out.

WIT: It is kind of loud.

LT JOHNSON: Is it safe to say or I'm asking you do they--if the active sonar is basically a tactical disadvantage to you right?

WIT: Yes, sir.

LT JOHNSON: Because it puts noise in the water? This EMBT blow, does it put a lot of noise in the water or just a tiny bit of noise in the water?

WIT: I would say a lot of noise.

LT JOHNSON: A lot of noise? Is the submarine blowing its ballast tanks with the EMBT blow at 400 feet going to give its position away?

WIT: I'm sure it will.

LT JOHNSON: Sure it will. We--and so that's wh--we are thinking tactical issues now, right?

WIT: With the active sonar, when you are transmitting out you have a certain level decibels that it is sending out--it is the sphere itself. When you send that signal out, the broadband display will stop momentarily so it can get out and then it is ready to listen again. But you are transmitting that sound over a period of place at a certain decibel level, then the sphere is not going okay I've heard this right in front of me, it's blanked it out why the initial send is going. The blow is more so behind the sphere that is something the sphere can't just kind of blank out. It affects the sphere more so than the active did.

LT JOHNSON: Were you guys in a tactical situation out there doing this?

WIT: No sir.

LT JOHNSON: Did you care if anybody knew where you were?

WIT: I don't believe so, sir.

LT JOHNSON: The umm, after you executed the blow we agree that it is a lot of noise in the water and your--I don't want to use--I'm trying to get the right term--I want to use the term blind, but you really are kind of blind sonar wise while you are blowing the tanks?

WIT: Yes sir.

LT JOHNSON: Because you're emitting more than you are receiving so that is going to blind you?

WIT: Yes sir.

LT JOHNSON: After the blow is secured, what is--what is your capability passively in sonar? Do you return back to where you were prior to the blow? I mean can you hear?

WIT: Like I said, once the air kind of settles a little bit--you are still getting the rush of the boat moving up--upward, but your passive starts to come back.

LT JOHNSON: Right.

WIT: I don't know how to explain it. Just as it settles you are going to see your display a little better.

LT JOHNSON: And does that continue to clear itself out as you come up or does is degrade as you come up or does it actually get better as you come up?

WIT: Well it is going to get better I guess until the point where we get ready to come through the water itself.

LT JOHNSON: Do you report contacts to the conn during your ascent if you have--your operators obviously listening to the hydrophone array during the ascent. Are you actively reporting contacts to the conn during this ascent?

WIT: On emergency blow?

LT JOHNSON: Yeah.

WIT: Not unless there is something that is obviously seriously wrong. You're probably not going to see anything almost to the point you are up there.

LT JOHNSON: Okay, so you're--you're not really going to hear anything all the way up there is what you are saying?

WIT: Near the top you are going to start seeing data again.

LT JOHNSON: Right.

WIT: And it is going to--there is no time--I don't know the time span, but there is no set time that says okay, if they--15 seconds after the blow or at this depth that your screen comes back. Cause it just--it will kind of get into where you can start seeing something.

LT JOHNSON: When you talk about the screen I mean, that is different from your audible, right?

WIT: What you can see if what you are hearing.

LT JOHNSON: Okay, so even your audible you can't really differentiate between ship noise----

WIT: You are hearing kind of a shhhhh noise until you get past it.

LT JOHNSON: I'm just curious cause I don't know. I'm not asking you questions I already know the answers to. I don't know when you--when after you blow the tanks and you secured the blow if in your ascent, your transition, you've got a 20 degree up angle I believe is what our notes say on the submarine, so obviously your sonar, your pointed up, your hydrophone array above the air--if you can hear vessels up there at all or if you can't hear because of only ships noise or what. I have no idea what you're feeling then.

WIT: Not really. I mean it starts to come back in, you'll be able to gain things back, but--I don't even know how to--at some point in that ascent, near the top, its where you'll start really getting sonar kind of back. You come up through, it kind of washes out until you get back to the water.

LT JOHNSON: Did you ever get your sonar back before you--before the actual collision? Did you ever feel like you had your sonar picture back intact prior to breaking the surface?

WIT: I think just prior to where I thought--I don't know the depth we were at--it was just prior to where I thought I heard the 1MC saying pretty soon now, or now you are going to see--or feel--the boat lift through the water. I think that is about when I had a normal looking display.

LT JOHNSON: Is making the 1MC--am I going way too far where we want to be?

MR. ROTH-ROFFY: We are getting away from the logs--I think----

LT JOHNSON: I'm sorry--I've got a train of thought going here—

--

MR. ROTH-ROFFY: I would like to get through the----

MR. ROTH-ROFFY: You could, LT Johnson just make a note to yourself so we can return to this subject. It is very good to pursue this and we would like to do this.

LT JOHNSON: Can I clarify one thing and then we go on and this is a log issue that we talked earlier. You say there is a CO's standing order requiring a briefing prior to going to periscope depth and that this briefing did not take place and you don't know why it did not take place prior to this evolution?

WIT: That is correct. I'm not sure----

LT JOHNSON: That is what I wrote down. I want to make sure I'm writing down the exact—accurate. Tom, I'm sorry.

MR. ROTH-ROFFY: No, no, no. That is alright.

LT JOHNSON: I think I screwed us all up.

LCDR SANTOMAURO: Can we just stop the clock. It is 2336 zulu, the Officer of the Deck is—we are at 2336 zulu, we've completed the baffle clear and the Officer of the Deck is getting ready to make his depth six zero feet and we are on our way to periscope depth and I'll turn it back over to the sonar supervisor.

MR. WOODY: The last time I have logged is time 32.

LCDR SANTOMAURO: When was your next log entry there Petty Officer?

WIT: I have 32 and then 2341.

LCDR SANTOMAURO: Right, so now on to 32, the Officer of the Deck is now going up.

LT JOHNSON: The deck log shows at 1336 they received an order to make the depth 60 feet and they raised the number two periscope. Now I'm assuming the depth at that time was 150 feet, is that correct.

LCDR SANTOMAURO: Right 150 feet, they are making turns for six knots and were on a course of one-two-zero. We are on our way to periscope depth at this point. And I'll let you pick it up from here. I guess we go up to periscope depth. It appears to me since you logs don't pick up until 42 that we are at periscope depth. We do several--we do visuals and ESM searches and then at 1340 the emergency deep is initiated by the Commanding Officer and that's left five degrees rudder, increases it to 15, coming around to course three-four-zero on the emergency deep. Then the next point we are at 1342, all ahead two-thirds and that is where your logs pick up.

WIT: Yes sir. 2341, we faded both contacts----

MR. ROTH-ROFFY: What time was that?

WIT: Ahh, 2341----

LT JOHNSON: While you were at periscope depth, did you get another round on those contacts at 60 feet? Nothing to show what you did at periscope depth?

WIT: No sir. Just sending the data out to fire control.

LT JOHNSON: At 2341 you faded both contacts?

WIT: Yes sir. I've only got two faded, ahh, I'm not sure where 13--we had him at a later time still in ATF, we don't have him faded. But the operator when we get to blow will come out of ATF.

LT JOHNSON: You say you faded two at 41?

WIT: Okay sierra 12 faded----

LT JOHNSON: Okay, bearing?

WIT: Three-one-three.

LT JOHNSON: Okay.

WIT: Same time sierra one four faded at three-three-nine----

LT JOHNSON: Wow. Were these in the baffles or they faded? Did they go in the baffles or did they fade.

WIT: I believe based on the noise we faded them, but I thought we had a----

CAPT KYLE: At time--what time are we talking here now one more time?

LT JOHNSON: 41.

CAPT KYLE: 41. You think that's the time the blow happened by your clock? Cause 42 is when it happened on----

WIT: Yeah, I think so, sir. I would have to ask the log----

LCDR SANTOMAURO: We were now on course three-four-zero so they are not in the baffles so they must have fade by----

LT JOHNSON: Yeah Captain you weren't here but we had some discrepancies in the log where some contacts--I think we agree actually went into baffles, but the log indications are not accurate.

CAPT KYLE: I understand. I just wanted to make sure that is where I'm at. From the geographic situation, they are not in the baffles based on the heading so this has got to be----

LT JOHNSON: Wanted to get that on the record though.

CAPT KYLE: Before we much further while I got the mike here I have one other question for you. While we're at periscope depth, before we went deep, do you remember or did you pass out, remember being asked for in your memory did the Officer of the Deck ask for sonar contacts for the visual verification?

WIT: I did not hear that sir--don't remember----

CAPT KYLE: Didn't ask you that, don't remember hearing it on the open mike was open.

WIT: I don't remember hearing that. Yes, it was sir.

CAPT KYLE: Okay. Thanks.

MR. ROTH-ROFFY: Just a follow up on that. Would the Officer of the Deck normally request that sort of information; bearing information to the contact so that he could verify them visually?

WIT: I don't think he usually comes to sonar. I think he asks the fire controlman so he can match bearings. He doesn't usually ask sonar.

MR. ROTH-ROFFY: Okay.

LT JOHNSON: I'm sorry. He did not normally ask sonar for the round?

WIT: Not for the round while he is doing scope bearings, he'll go to fire----

LT JOHNSON: When does he normally get that information though from you? During the briefing prior to coming to periscope depth?

WIT: Yeah--we'll he have the CEP plot in front of him with fire control and we'll discuss contacts, where they are, what fire control has on a range, if I see any trends that could indicate something.

LT JOHNSON: Right. I wanted to make sure I copied this right, during this briefing he's got you, he's got the sonar sup, he's got the fire control gentleman there, he's got the ESM watch stander there and this is a mass coordination we are getting ready to periscope depth, sonar sup what do I got, the ESM guy is okay I know what to look for and where to look for it, fire control what are you running and we are all on the same sheet of music?

WIT: Yes, sir and it is done in the control room so the dive and the chief of the watch can also----

LT JOHNSON: So he doesn't normally have to request this information from you because it is normally provided in this required briefing?

WIT: At least contacts from sonar.

LT JOHNSON: In this case we did not have the briefing and he didn't request it specifically either. Okay just wanted to make sure I got myself right.

MR. ROTH-ROFFY: Just as a further point of clarification on the brief. What is the normal duration of that brief that is held in the control room?

WIT: Not extensively long. Maybe two minutes, it's not--it's just kind of letting everyone know what is going on--get a handle of everything that's going on so we know what we are going to do in the six or seven minutes until we get up.

MR. ROTH-ROFFY: And generally who conducts that brief?

WIT: The Officer of the Deck will conduct the brief.

MR. ROTH-ROFFY: And when he conducts that brief, does he ask each watch station questions or do they have a normal thing that they just in turn report on with the information? He just sits back and takes it in?

WIT: I have had asked questions towards me on certain things, what do you feel about this, what do you feel about that, maybe a suggested course to come up to—kind of I guess the officer of the deck at that time may have a question looking at what he has--I don't know----

MR. ROTH-ROFFY: But in general do you or do you not have the—kind of a set of information that you know you are going to convey to the Officer of the Deck and you kind of just spiel that out and he takes it in. If there's any questions then he asks that.

WIT: I remind him of the contacts I have and where I feel they are at. For me he has other things to look at and I also tell him how I get that information if it was the DEs that were really low down in so he's close by that type of range. If I got information that I can help--if I see something maybe that I know is closing then I can tell him hey this guy is closing. If I have something to give him I can give him that.

MR. ROTH-ROFFY: Okay, thank you.

LT KUSANO: So let's say you would have had the briefing, what would have said to the OOD?

WIT: I have two contacts towards the north. Based on all the stuff that we were doing I'd say my tentative range is about still in the 10,000 yard range. I didn't have anything really to indicate anything different. I wouldn't have too much to say at that brief, just those guys and sierra 10 to me was the closer guy prior to that.

LT JOHNSON: Were you--did you overhear of any word of any scheduling issues or you know, we have got to be at point X by a certain time so we need to get this thing going guys. Kind of a--not those specific terms, but were you aware of any okay listen we've got to be at Papa Hotel at this certain time, we need to get moving here.

WIT: I was never told we need to be--I know where we have to be at certain times, but nobody came in and said hey we got to be here by this time. Nobody did that.

LT JOHNSON: You had an open mike with control. Do you hear any conversation over that open mike that might have occurred between the Captain and the Officer of the Deck concerning locations----

WIT: No sir. I'm trying to key really on making course changes or depth changes--obviously the word sonar; something, but I'm not listening to everything that is said. There is, I think two mikes in control that relay data and I don't recall any conversation like that.

LT JOHNSON: Okay. Thank you.

LCDR SANTOMAURO: You are now--we've done the emergency surface procedure we are on our way up, did you hear anything at all prior to that time that would indicate any kind of contact.

WIT: No sir. Nothing--umm, some of the things that I'm looking for--at anytime for close abort contacts. I'm listening for my double R9 to go off, for fish finders or bottom sounders. I'm listening--or I'm watching the screen for anything that would be say on the left drawing right or right drawing left that would indicate a definite close in scenario. I'm looking for things

to become very strong in all my depression elevations on the sphere that would indicate something is rapidly approaching----

LCDR SANTOMAURO: ----What we are looking to do now just take us through the rest of this whole deal. Describe the collision itself and everything that went on during that period and then go through the contact scenarios afterwards if you have--just continue on for----

WIT: Okay, ahh, once the collision hit--right before the collision I kind of felt the boat tip forward a little bit. It was kind of weird. I didn't know if they had pushed down on the sticks, it didn't make any sense. I don't even know how quickly thereafter you felt the thud. I can only guess it kind of angled the boat down before the impact with the water. I don't know. Heard a thud, didn't really feel anything different in sonar. We still came up and then I heard a second thud. At that time it was very obvious we hit something that was up there. I looked down at the displays to see if there was anything that was different than two to three minutes before the bang. I didn't see any indication of anything beyond what was already there. It was still the same. At that point when we heard the second thud I didn't know what it was up there, obviously the boat had hit something. First impression was it had to be still in the water based on I have anything that is moving out there already being tracked somehow. I didn't have any indications of something being really close to me at that point. That is why at that point I assumed he was dead in the water. There quickly after that I made sure everybody was getting placed back into ATF or automatic tracker following the ones that we did have. As soon as I saw three contacts back in ATF that is when another sonar supervisor came up--I'm sure you guys are going to get to interview him a little bit later. At that point we also had some other problems, our first lieutenant was not on board who normally does all the safety gear for the boat.

LCDR SANTOMAURO: I got a question. After you had those contact came back on your screen can you correlate them to any of the contacts that you had previously 10, 12, or 13.

WIT: I would have to--I can only just kind of looked, we were turning but I didn't---- I would have to ask the next sup the exact bearings.

LT JOHNSON: How long are you blind on the surface because I know when you do this evolution the hydrophones are out of the

water when you come up, right? There's such a water noise, the bow and everything is up, then you bury back down and settle. How long are you blind?

WIT: It is not very long--not very long, sir. Just the weight of it as guess, 20 maybe--no probably a little longer than that--30 seconds or so, somewhere in there. That is just a ballpark cause you got to wait for the--it is sea state, you got to wait for the bow to kind of settle.

LT JOHNSON: When you say you--you heard the thump and everything you are talking you actually heard it just in the submarine, not on the sonar----

WIT: ----the ship--not the over the headphones----

LT JOHNSON: Oh, okay, not over the hydrophones.

WIT: Just in the--felt it kind of I guess it would be off to my right at the time--kind of control aspect. And the first one I was like okay what do they do out there cause I didn't really feel anything. Second one you knew something was hit.

LCDR SANTOMAURO: Go ahead with----

WIT: He came up there just about at the time we hit--just after. I turned over to him, here's your three contacts, they are back in ATF. The first lieutenant was kept in port, one of the major members of the deck division was kept in port. I had previously been in first lieutenant on the ship. I knew where the safety ladder for the sail was. I knew where the, what we call a bathtub, for the forward escape trunk was. I knew where the gear was to get things moving. One thing I waited for before leaving was to hear the ship is holding. Meaning it is holding its depth. It's not going to sink. Once I heard that then I turned over to him and I said, here. And it wasn't an extensive turnover. It was here's your three contacts, I've got to go get the stuff ready. In route seeing--there's--I don't remember if I glanced to perivision control if it was the one in middle level. I glanced and saw a perivise of part of a boat sticking out of the water. Definitely confirmed we had hit a boat. Then I went for the sail ladder first. I kind of felt how the boat was moving, I knew we would take water on the back a little bit so the first thing was to go get the ladder for the sail. Went and got that, put it up in the sail with a--a life ring as well as a lanyard attached to that with a light that floats that kind of blinks. By the time I came back down from

the bridge area, that's when I saw the diver--I think one or two divers ready to go and I think there was three by the time I got out of that area completely. Went down and around, went through the mess decks to find out if we had people dressed out in the safety harness, k-pocks to ensure they were moving. I can't remember--I know there was at least two, maybe three people, dressed out already. The one thing that hadn't been accomplished yet, kind of another reason I figured it hadn't been, is the bathtub for the forward escape trunk wasn't rigged and nobody was going to get it. So I grabbed three people, headed back, grabbed that--the bathtub. We came up and started rigging that. Once that was close to being rigged I checked--at that point I think we had three people ready to go. I just said, stand-by, I'll go see what is going on. And went back up towards control. The divers were still standing there so I felt nobody was going over the side at that point. And I went back into sonar to see what was going on. Time, I'm not sure after that.

LT JOHNSON: When you--did you ever have any of the visitors or guests in sonar during the--just prior to the EMBT blow or during the actual blow?

WIT: No, sir. Most of that was done prior to the lunch break. I was in there giving the tours for everybody and there wasn't that many so we managed to get them pretty much through, let them listen to some fish. We did have fish out in the water, or biologics----

LT JOHNSON: ----Were all the watchstanders on the equipment qualified watchstanders in sonar?

WIT: No, sir. One of the guys we have on the workload share stack was an under instruction with a first class that was behind him.

LT JOHNSON: Is the first class listening to the same thing that this under instruction or watch stander is listening to? In other words does he have like a duplicate controls or headphones or----

WIT: ----No sir. What is normally done is he is listening and the over instruction is watching to see how he is doing the evolutions. Broadband can listen to everything that the workload share stack operator is listening to and as well as like going up to periscope depth or during a baffle clear, I

have a set of headphones that I can monitor either stack at that time.

LT JOHNSON: Were you monitoring the under instruction watch stander during this time?

WIT: I was flipping back and forth and I'm not sure which one I had when I went to PD, but I was going back and forth.

LT JOHNSON: Is it--so you are not sure whether you were monitoring the non-qualified individual at periscope depth or not?

WIT: No sir. I had an over instruction watching him. I was listening to either one, but I'm not sure which one I had last selected to. They are both concentrating on the same place. When we go up to periscope depth you are looking at the top two DEs on the sphere and they are both concentrating right off the bow.

LT JOHNSON: Do you want to--I'll lead it off into something--else if you had other areas you were going Tom--

MR. ROTH-ROFFY: Actually yeah. I think maybe this might be a good place to break for lunch. The time is about 1132 and we will resume at 1230.

MR. ROTH-ROFFY: Okay. We are back now. We're resuming an interview with Petty Officer McGiboney. The time is now about 18 minutes after 2:00. Does anybody recall where we left off?

LT HEDRICK: LT Johnson, I think you were about ready to pursue a new line of questioning or do you want to recap where we left off?

LT JOHNSON: Where I am is we were at 2341, sierra 12 had faded at three-one-three and sierra 14 had faded at three-three-nine and we were--actually had--were doing the EMBT blow at this point, right. I believe that we had already discussed and I want to make sure I am clear on this, the baffle clears that occurred before then--my notes indicate that you indicated that you were not specifically advised that you were conducting the baffle clear. You just made that assumption because of the course changes.

WIT: Yes sir. I can't remember if by the 1MC they were talking about the next steps the ship would take--or the Captain was

addressing people via 1MC more so guessed this is what we would be doing, this would be doing. It was never really addressed to say sonar, conduct the baffle clear to the right. Nothing was really specifically addressed, I kind of just understood that is what we were doing.

LT JOHNSON: Do you change any of your procedures--your--your passive listening or searching, if you will, procedures for a baffle clear as opposed to just your normal watch standing routine?

WIT: The screens are all the same. When you are clearing your baffles, you'll search in the area of where the baffles used to be to find out----

LT JOHNSON: So you would want to focus your search in that specific area?

WIT: Right. You focus your search in that baffled area to see if there are any new contacts in that area.

LT JOHNSON: How does the GREENEVILLE clear baffles?

WIT: Sometimes you do a 120 to the right or left, sometimes it is a—you may go 60 degrees this way, wait for a little bit to see that side of the baffles, then go back this way 120 to catch the other side, various ways.

LT JOHNSON: How was the GREENEVILLE doing their baffle clears on the 9th?

WIT: That was a 120, I believe, to the right.

LT JOHNSON: Now, I think where we were we had conducted the EMBT blow, we are headed to the surface and you--the Captain, while you are in the process of surfacing, begins to speak on the 1MC.

WIT: Yes sir. He was explaining the change of water depth in front of the boat and the back of the boat. I couldn't tell you exact depths, which he was doing that. He kind of gave a scenario this is where we're at, this is what we'll feel and this is what we do and this is the depth differences or because of this angle, the height difference. It wasn't lengthy, lengthy, but there was 1MC's that were being said during the blow.

LT JOHNSON: Now, during your surfacing evolution, are you still actively listening for contacts in sonar?

WIT: During the blow or----

LT JOHNSON: Well yeah, during this evolution, the EMBT blow.

WIT: As best you can. You are pretty much blind with the exception like say when that air starts to calm down would I guess be the best way to put it from being blown into the tank. It starts to calm down and then you can start to see your display again, but it is not much data.

LT JOHNSON: Does the Captain--does the captain's voice over the 1MC get the crews attention?

WIT: I believe so, sir.

LT JOHNSON: It is a recognizable voice to the entire crew?

WIT: Yes sir. You know it is the Captain.

LT JOHNSON: You know it is the Captain. Does that distract watchstanders from what they're doing when they hear the Captain come over the 1MC to try to hear what word he is passing?

WIT: I guess it could----

LT JOHNSON: Does it you? Let me just talk about you specifically. You are the sonar sup, if you hear the Captain come over the 1MC are you going to be oh, let me hear what the Captain's got to say or what?

WIT: For this I'll hear him, but I'm not going to say okay here I'm going to focus on everything he says. Cause I kind of know what he's about to talk about. I don't know exact words he is going to use. I'm kind of listening to the open mike to see what is going on in control as well.

LT JOHNSON: You say you kind of already know what he is going to talk about. Is this common for him to get on the 1MC during emergency surface and start to talk while the ship is in the process?

WIT: He uses the 1MC. I'm not sure every time we've gone to emergency blow is he--if he uses like--I know he's done it

before, but I don't know how many times. I don't know percentages or----

LT JOHNSON: Could that distract the watchstanders from their normal duties of listening on the sonar?

WIT: It possible could--I don't know for them if it did or not.

LT JOHNSON: Were you ahh--during the ascent, were you maintaining your contacts with sierra 13 and sierra 14? I think we only have two, if my notes are correct and I may have gotten lost in the shuffle here, but I show we only have 13 and 14. Actually, I see where 14 and 12 have faded so right now, according to my notes, you only hold 13. Is that correct?

WIT: I would have to check with the log taker. I thought we faded all three contacts on the blow.

LT JOHNSON: You did?

WIT: I'd have to check. I thought we had faded everybody because it does pretty much blank out the screen.

LT JOHNSON: I show at 2341 we faded sierra 12 at three-one-three and we faded sierra 14 at three-three-nine.

WIT: Yes sir.

LT JOHNSON: I don't have any notes here reflecting sierra 13. Do you show him fading?

WIT: No, I have a bearing of roughly zero-zero-eight and that was 2332, as a regain----

LT JOHNSON: Do you still hold him during the surfacing?

WIT: I do not remember holding him during--during the blow.

LT JOHNSON: Does he faded on your log?

WIT: He does not have a faded on the logs. The next bearing they have for him was three-zero-nine, which----

LT JOHNSON: What time was that?

WIT: 2345, that would have been after we pretty much had gone up to the surface.

LT JOHNSON: Where's our log-our deck logs. 2345 you hold sierra 13 at what now?

WIT: At three-zero-nine, which I don't know if that was a bearing--good bearing or not. That is after the--23--2345.

LT JOHNSON: What was the time of the collision?

WIT: Just before that.

MR. ROTH-ROFFY: 1345.

LT JOHNSON: So you got him--you got a bearing on him about the time of the----

WIT: Yeah, the logs do. I believe I had everybody out of ATF at that time. I would have to check with the logs to see if that was the time he logged it, if it was before or after.

LT JOHNSON: How long in your logbook there---- What's the--what's the next time you have a range of bearing to sierra 13?

WIT: Well after that they have another bearing of sierra 13 at 2348 back at three-four--I believe it is three-four-zero. So I don't know how good of a bearing either one of those are. That was kind of right after, right as I was turning.

MR. WOODY: What is the signal to noise.

WIT: The one at 45 was a plus 9.

LT JOHNSON: So you've got 2348, you've got sierra 13 at three-four-zero?

WIT: 2345 sierra 13 is three-zero-nine.

LT JOHNSON: Okay and at 2348 you've got him at three-four-zero is that right?

WIT: Correct and it says into the baffles. And I don't know how good that data would be.

LT JOHNSON: And what were you----

LCDR SANTOMAURO: What heading.

LT JOHNSON: The ships heading I don't know.

LT HEDRICK: What time?

MR. ROTH-ROFFY: Deck log.

LT HEDRICK: What time?

LT JOHNSON: 2348.

MR. ROTH-ROFFY: It's after, it's not on this.

LT HEDRICK: Oh, after.

MR. ROTH-ROFFY: Right it's after.

WIT: If that was after, they are probably doing a turn----

CAPT KYLE: It should be in the deck log right there, right?

MR. ROTH-ROFFY: Again, if we could just having more than--not having a general conversation otherwise it is hard to recognize the transcript.

CDR CACCIVIO: I have no course changes from 1340--to the deck log I have no course changes indicated from 1345 to--umm, okay. I take that back, you have conning of the ship vice ordered courses at 1347 you have right full rudder, at 1348 you have right full rudder, at 1350 you have right hard rudder, 1351 you have right hard rudder.

LT JOHNSON: I would assume that is when they are maneuvering to take station of the—for the survivors----

WIT: I would believe so.

LT JOHNSON: Petty Officer McGiboney, in your opinion--I've been studying your bearings that you've given me and the different data--in your opinion, is it possible that the vessel that you actually collided with was sierra 13?

WIT: I would say possibly yes, I'm not sure. Like I said, I've always been told if you have some bearing rate on the left going left or right going right that is something you can't hit. I had bearing rate the whole time. I don't know how if this was the guy we hit it. I really don't know.

LT JOHNSON: But do you think it is possible----

WIT: It's possible----

LT JOHNSON: ----that sierra 13 was in fact the Ehime Maru that you hit?

WIT: It's possible.

LT JOHNSON: And I've come to that--I came--I got in my mind about two hours ago listening to you read off your bearings and your times and the bearing rate--you had constant bearing for awhi--that is where I was and so--you know, you are the professional, you do this for a living and given the data that you have in front of you, the data I have in front of you points in that direction, I just wanted your professional opinion on that.

WIT: It is possible with what we had. The thing is I don't understand how we could have hit it with bearing rate. I don't know.

LT JOHNSON: Thanks. Right now that is all I have.

LT KUSANO: 2348 was the last--was that the last mark you had for sierra 13?

WIT: No, they have other marks and bearings. Once again, it kind of stayed towards the north with the exception of that one bearing of three-zero-nine. The next bearing was 2358 bearing three-four-eight.

LT KUSANO: And you said at 2348 they were losing him in baffles.

WIT: It went into the baffles and I believe that was based on changing course to come back around.

LT JOHNSON: I have a question on top of you, Ken. Is it at all possible that--that what you are calling sierra 13 after the time of collision could have in fact been a regain because of the maneuver of sierra 14 or 12? Because what were your actions immediately after the collision?

WIT: Immediately after we felt the bump, I looked up to see if we still had three traces. We did still have three traces,

that's when the other supervisor came in. They were regaining the traces as I was doing my turnover.

LT JOHNSON: Were you able to give him any kind of an in-depth good turn over or were you----

WIT: No sir. No sir. I told him we had three traces right here or the tracers we had, these are the contacts, we just hit something I am going to do the first lieutenant stuff. It was not a very lengthy turnover.

LT JOHNSON: Is it possible that he could of not knowing the situation could have seen sierra 14 which is on a--or sierra 12, which the last time they faded were on those approximate bearings of three-one-three and three-three-nine to assume--

WIT: Possible.

LT JOHNSON: Are there any other entries in there on 12 and 14?

WIT: There's--I see 12. You have another entry--this--this is possible, sierra 12 at 2352. This looks like a regain--I'm going to try to read--three-zero-nine and that was the last bearing of sierra one three.

LT JOHNSON: Exactly, sierra 12 is regain on the same bearing of the last bearing of sierra 13.

WIT: Yes, sir. It is very possible. The operator himself would have been doing the numbers.

LT JOHNSON: Okay--do you understand?

MR. ROTH-ROFFY: No. Could you--

LT JOHNSON: Okay, what I asked him was it possible that what they continued to track as sierra 13 could have possibly been sierra 12 or 14. After the collision what they are noting is a regain of sierra 12 is on the very same bearing that they had as the last for sierra 13, so as they continued to mark--or what they were calling 13 or 12 they got on the same bearing as 13.

MR. ROTH-ROFFY: What you are saying is that what was regained as 12 may have actually been 13 still?

LT JOHNSON: Just the opposite. What was regained as 13, after the collision, was actually 12 because it was picked up on the

same bearing as the last known bearing of 13 prior to the collision.

MR. ROTH-ROFFY: Okay.

CDR CACCIVIO: Let me make sure I under--so you are saying you think, after the collision, sierra 12 was actually regained as sierra 13 and I have him over to the west, is that correct?

WIT: That is possible. I have the same bearing as sierra 12---

LT JOHNSON: Yeah, yeah with the notes I have yeah. Cause we faded him at 2341, sierra 12 at three-one-three and then four minutes later he is at three-zero-nine.

LT HEDRICK: What time did you fade him?

WIT: They were all faded--2341.

LT JOHNSON: So that is a tremendous amount of change for the ranges that----

WIT: ----Needs to be a lot more accurate, I just don't--we don't

LT JOHNSON: Yeah, my numbers in my notes here--I'm asking you is it possible that the collision occurred with what was sierra 13 and then your--the continuation of tracking of a contact noted as 13 was in fact a regain of another contact since they were all in that general area.

WIT: It's possible. Umm--look at this, I can see where they could have switched 13 and sierra 12 or made sierra 12 13 at that bearing.

LT JOHNSON: And I know that there is no certainty there, I'm just asking for an opinion based on you were there, I wasn't. I know it had to be very confusing, very hectic----

WIT: Right after that, yes sir.

LT JOHNSON: And information can get lost and confused. I don't have anything further at this point Tom.

LT KUSANO: I just want to kind of get a feel of control room. Would you say--is this your first sub?

WIT: No sir.

LT KUSANO: Have you served with other Captains before?

WIT: Actually on this boat, this is the second Captain I have served under and on other boats I think I have been under three different Captains total on the other boats.

LT KUSANO: Would you consider this Captain a screamer or mellow?

WIT: He is a talker. He's not a screamer.

LT KUSANO: What would you say the mood is if--if anybody--if anybody would have aborted some kind of exercise, some kind of training and they were wrong, what do you think—what kind of mood do you think the OOD or the Captain----

WIT: ----Well, that is what the Captain preaches is efficiency, safety, and backup. You got backup, you notice something is wrong, you just stop something. I have never seen a situation where somebody has tried to back something up and him come out and just jump all over them. I have never seen a situation like that.

LT KUSANO: So if during the whole time you never felt that--you were hiding--or knew that you wanted to say something that was important?

WIT: No, sir.

MR. ROTH-ROFFY: Who would like to question next.

CDR CACCIVIO: I have a couple of questions. Maybe you covered these, just tell me if you did. Do you have a feel for what broadband LE was?

WIT: No ideal sir.

CDR CACCIVIO: Do you have a feel for what broadband LE is routinely in that area?

WIT: Usually I would say it is in the low 30's scenario.

CDR CACCIVIO: Based on audio could you tell whether you thought today was a nosier day than normal, a quieter day than normal or just a normal day?

WIT: It kind of seemed like a normal day by sound.

CDR CACCIVIO: Did we--how often do you determine LE?

WIT: Normally it is done every hour. With the tours going on we not taking LE's so they can sit--earlier in the day----

LT JOHNSON: Could you define what you mean by LE.

CDR CACCIVIO: I'm sorry.

WIT: That is the background noise level in the water, the M-E level and how much--how much ship is putting into this--the overall level of sound in the water, a certain level. If your environment changes, your sea state gets heavier, more fish come into the area, something in that environment changes, increases/decreases, that can move up your down your LE. If the sound velocity varies by a certain amount that can raise or lower your LE's and that determines how far or short you may be able to pick something up.

CDR CACCIVIO: What does LE stand for?

WIT: It's the level of energy in the water, but it is your background noise, that is what it is.

CDR CACCIVIO: The purpose of asking that question was basically LE is the overall reflection of the ambient noise in the water so therefore obviously if there's--if it's louder ambient noise therefore it would be harder for the sonar operator to distinguish a contact, harder for the system and the operator to distinguish a contact. If it were very quiet then he would be expect that the system and he would be expected to detect more--a contact more easily so. Was there any--was there any significant shipping noise during the watch?

WIT: Ahh, most of the traffic was obviously out of the northern area. There was nothing that was really masking out anything else. Everything else was discernable--you could pick things up.

CDR CACCIVIO: Okay. How does your sonar line up change for going to periscope depth specifically with the passive broadband operator?

WIT: Both with passive broadband and the work load disp--share operator, you are going to go into a two-time history display instead of a three-time history display. You've got a short, intermediate, and a long time history when you normally do a search. When you go to periscope depth you are going to change that to a short time and an intermediate time so you can recognize the changes. You are more focused on maybe a transient, its more repetition that you can recognize and it gives you a little bit longer data.

CDR CACCIVIO: Would you say these changes improve your ability to recognize a contact or a change in the contacts operation or decreases your ability to do that. Is this an enhancement that improves your ability to detect contacts?

WIT: Kind of both. It can help you out as in if you notice some changes or if you notice there is a certain--a transient coming from that contact you may be able to see the repetition better and a longer history than a shorter history. You lose a lot of your—you don't lose it, you just shift the screen on your long term history and kind of gets rid of that long term history picture right there in front of you. It more aids than hurts by any means by going to that longer history--by going to a larger, short term----

CDR CACCIVIO: By going to a longer short-term display, does that increase your update rate to assist the operator, his ability to see more data?

WIT: Oh no. The update rate stays the same, you just get more.

CDR CACCIVIO: Okay, you had an under instruction sonar supervi--sonar operator in sonar is that correct?

WIT: Correct.

CDR CACCIVIO: And what was his name?

WIT: That was SN Rhodes.

CDR CACCIVIO: SN Rhodes is he a sonar technician?

WIT: Yes he is.

CDR CACCIVIO: Can you describe for me his experience level?

WIT: Not very much. He got here during the shipyard availability time that we had right before Christmas and he's pretty much been in sonar operational through the last East PAC at sound trial we did before we came back here.

CDR CACCIVIO: He was an UI watch here. He had qualified watch there with him?

WIT: Over--up to the point where we had gone to periscope depth and did our look around.

CDR CACCIVIO: What happened after that?

WIT: At that point the over instruction--because we were on the way down, I asked him to have another sup come up and relieve me for a head call before we stationed the maneuvering watch at that point.

CDR CACCIVIO: So at that point you had a qualified broadband operator on the one console and then you had a non-qualified under instruction watch on the other console?

WIT: Yes I did.

CDR CACCIVIO: Is that a normal operating line up?

WIT: In sonar you are suppose to have qualified operators on the stacks by NWP guidance. Most of the time we do have somebody qualified there or an over instruction there.

CDR CACCIVIO: Did you ask the OOD's permission to secure to over instruction watch?

WIT: No I did not.

CDR CACCIVIO: Why did you choose to secure the over instruction watch vice having the messenger go find your relieving sonar supervisor?

WIT: At PD after the high look around, I felt confident in what we had available with no visual and no significant bearing rates that nothing was inside an envelope that was unsafe--umm and I knew we were proceeding straight down and then straight back up.

CDR CACCIVIO: Let me make sure I clarify something. Where was the ship physically when you sent the qualified workload share operator to find your relief?

WIT: I believe it was right before we headed back down or right after we headed back down to 400 feet.

CDR CACCIVIO: So at periscope depth how many sonar contacts did you hold?

WIT: I believe it was two--three, 12, 13, and 14.

CDR CACCIVIO: So who did you believe was managing the trackers and the contacts at that time? Which one of your operators?

WIT: That would be broadband.

CDR CACCIVIO: So then who was responsible for safety of ship in conducting new contacts?

WIT: He--broadband tracks the contacts as well as look for new contacts. The guy annotating the logs would be the workload share stack.

CDR CACCIVIO: What is the purpose of having a workload share operator?

WIT: To aid if the contact density is too high on broadband and he can't handle those trackers. If he has three or--if he has numerous trackers to where he can't keep track of all the trackers then workload share can be assigned trackers to track with broadband.

CDR CACCIVIO: How many trackers are available to the broadband operator?

WIT: Four available for the sphere.

CDR CACCIVIO: So at what point would you consider him to have to many trackers assigned?

WIT: Any time he has more than probably four where they have to time-share a tracker.

CDR CACCIVIO: Okay--let me make sure your stated that--you really mean more than four contacts, not four trackers?

WIT: Yes, more than four contacts sorry.

CDR CACCIVIO: So to summarize what you are saying, correct me if I'm wrong, you are saying that basically you--your broadband operator can safely track four contacts. Above four contacts then you would transfer contact management to the passive broadband--passive broadband workload share operator?

WIT: He could help out with the tracking. I could give him one of the trackers. I could give him okay, I want you to track these two contacts with this one tracker. Time share, you track them for this long, you track them for this long and you share that tracker back and forth. We didn't have to where we were overloaded. We didn't have that many contacts.

CDR CACCIVIO: Is that common practice to have the operators swap back and forth on use of the tracker or is it more common to take a contact and transfer it to the workload share operator to manage entirely?

WIT: Well when you transfer--you got to give him--the stack set up--how we've got it set up is the broadband display is--I've got them assigned to all the trackers so if he needs a tracker, he can use that tracker----

CDR CACCIVIO: All the trackers meaning comp 1, comp 2, broadband 1, broadband 2?

WIT: That's correct sir. I'm going to give him all the trackers so he can go at it. If I feel that he is overburdened or maybe he is too junior to handle more that two or three contacts even if qualified, I can shift--I can select, through the BSY system, and take one of the trackers, either the broadband or a comp and I can shift that over the workload share stack to have him track or monitor a contact if necessary.

CDR CACCIVIO: So until you get the four contacts or more, then workload share would have no trackers assigned?

WIT: Correct. I don't have any assigned. That is how I do it. There is no set guidance on how you are to split the contacts.

CDR CACCIVIO: Which is your primary search tracker?

WIT: Tracker? Primary you would use comp A or comp 1 which is the letter alpha.

CDR CACCIVIO. Okay, so prior to securing the over instruction watch had the workload share been managing any contacts?

WIT: No he had not. He was a secondary search and logs.

CDR CACCIVIO: Secondary search? So what is the purpose of secondary search?

WIT: He steers around and looks for contacts as broadbands steering around looking for contacts.

CDR CACCIVIO: Is there a 1MC speaker in sonar?

WIT: Yes it is. It is in the most forward part of the shack up in the corner.

CDR CACCIVIO: Is that 1MC overridden by your 27MC?

WIT: I do not believe so.

CDR CACCIVIO: So during a--if the CO was on the 1MC during your ascent to periscope depth and you had to announce no close contacts, would that override the 1MC speaker in control? Excuse me, if you had to announce a close aboard contact would that override the 1MC in control?

WIT: I do not know. I know the 27 since it is above fire control, you would be able to hear me. I can cut everybody out with my 27MC that is on a 27MC. So if I say something it is coming to one of the speakers in the control room. I don't know 15's and 17's. I can't----

CDR CACCIVIO: You just don't know whether it overrides the 1MC?

WIT: I do not know if it overrides. I cannot remember.

CDR CACCIVIO: But you feel it overrides all the other 27MC's.

WIT: It will override every other 27 MC.

CDR CACCIVIO: You said that you felt that the contact had, sierra 13, had bearing rate prior to going to periscope depth?

WIT: Yes sir.

CDR CACCIVIO: And what was the bearing rate?

WIT: Ahh, if I remember the display right I thought we had left bearing rates on the contact to the north before that point. And that was due, I think, because the driving around of the ship.

CDR CACCIVIO: Okay so you had a left bearing rate. I realize you probably don't have a number, but if I looked at the short time averaging interval display would I see a relatively low bearing rate steady or would I see a medium bearing rate or would I see a high bearing rate cutting across the ITA display?

WIT: You would see probably anywhere--if I remember it was kind of--I call it moderate to slow. It didn't have a high bearing rate. What I'm looking for a high bearing rate would be something that's--up here I guess would be a good example, on sierra 10 how it's going off to one side or this way, that is high bearing rate. When I would kind of----

CDR CACCIVIO: We are referring to short time averaging interval display or the ITA display?

WIT: The short time.

CDR CACCIVIO: Okay.

WIT: More so down here where they have sierra 6 on the CEP plot----

CDR CACCIVIO: For the benefit of the guys that may not understand what I am driving at here, basically the three waterfall displays we talked about are three intervals and basically the first display will give you 7.6 seconds of data, okay, and it will give you bearing left or right. So the waterfall will come down 7.6 seconds. The ITA display, depending on the way the line up is, will give you roughly, if I remember right, about 7 minutes of data, okay. So obviously as the bearing rate of the trace goes across in a short time display, that means it is a pretty high bearing rate contact. If it goes across the same angle--it would not expect the angle that to be the same and not intermediate time averaging because it is a longer that they are looking at. My line of questioning here is I'm trying to find out whether this was a high bearing rate contact, a medium bearing rate contact, or a no bearing rate contact, okay. Okay, so you're saying that it was comparable to what we are looking at on the CEP, which is sierra 10?

WIT: No, comparable to sierra 6. A high bearing rate would be like sierra 10. Kind of what I saw was closer to sierra 6 down here towards the bottom—what I saw on my STA gauge was closer to this right here. It had kind of a bend to it.

CDR CACCIVIO: I would say that would probably be about a five or ten degree bearing change in about seven seconds. It would be less than that--be less than that--can't do that here. Okay so I would say that would be--I would say it is not a high bearing rate contact and it is probably not a medium rate contact, but it is not a zero bearing rate contact.

WIT: Correct sir. I had bearing rate left I would say if anything moderate was where--how I was looking at it.

CDR CACCIVIO: You indicated that you felt that based on the bearing rate, the contact would not be close so therefore you--what experience--based on your experience what range would you expect that contact to be at? What would you expect the minimum range to be at for that contact with that type of bearing rate?
WIT: I would have to go calculate it back, but definitely out—minimum--I'd have to see how many degrees he traveled on MCA----

CDR CACCIVIO: It is kind of tough to do I know that, but did you have a feel for what you thought the range was?

WIT: I still felt he was outside of six to seven thousand, anything in that minimum circle that I was mentioning earlier today, he was outside of that. I didn't have any strong bearing rate to give me something that was close.

CDR CACCIVIO: And did you consider him to be on a lead or a lag line of sight?

WIT: Originally I had him going out towards the east and at periscope that would have been a lead. That was original course from way back before all our course changes----

CDR CACCIVIO: ----So with a left bearing rate, they would have actually put him in a full view, put you in an over lead line of sight?

WIT: Yes sir, but it doesn't--like I said with all the course changes I don't know initial gain. That was my assumption on which path he was going.

CDR CACCIVIO: Okay. That is all I have.

LT JOHNSON: Can I ask a couple of follow ups? Couple of follow up questions regarding this bearing rate issue. A small bearing rate--if you have a small bearing rate, that is indicative of what?

WIT: Probably a distant contact.

LT JOHNSON: Is that range of a contact? Is there any other aspect of a contact that would give you a small bearing rate?

WIT: If the contact was pretty much pointing at you.

LT JOHNSON: A bow on contact coming at you?

WIT: A bow on and you've got to kind of be towards him as well.

LT JOHNSON: To verify a small bearing rate contact as having a range, does a submarine have to do anything with it's own courses and speeds and----

WIT: ----It depends on the job--where you are at. Contacts at the north you could drive the submarine in different directions. You can say, zero-nine-zero, you could put it back two-seven-zero and that could give you legs of data on better bearing rate then solutions thereafter.

LT JOHNSON: Is that commonly referred to as driving the bearing rate?

WIT: Yes. That is one thing you can do with it.

LT JOHNSON: You would have to drive the bearing rate then to a ascertain--the range or to get a better feel for the range.

WIT: Yes sir.

LT JOHNSON: I want to make sure I understand you correctly. There's two ways you can have a small bearing rate and that is to either have a long range contact or have a contact with a bow on aspect i.e. one that is coming at you?

WIT: It is coming at you or near zero--your matching speed across the line of sight with him but yet you are closing range so it is going to show it a very minimum.

LT JOHNSON: Yeah, something along the lines of this?

WIT: Correct sir, something that is close.

LT JOHNSON: Right. So you are not going to--I just want to make sure that there is another reason for a small bearing rate other than range and it has got to do with the bow on aspect or a contact that is actively closing your position----basically you are both driving to the same point of the ocean.

WIT: Or very close point.

LT JOHNSON: Or very close. That is all I have.

MR. ROTH-ROFFY: Just to follow-up, a question to make sure I understand. The second console--what--how did you have that designated with your calling it a workload share console. What function was he serving in this evolution? I believe you said the passive--or the first console was doing target tracking and what was the workload share?

WIT: What his responsibility is is to backup the broadband. He is looking at the same DEs as the broadband operator. Broadband has all the trackers. He's going to monitor the tracking--do the tracking. The workload share guy can put up the classification stack, he monitors all the DEs. He is looking for something on his APEs that the broadband operator may not see. He is kind of an extra or backup for that. He's not really--he don't monitor the tracking because broadband is the guy that's making the track, he's making that happen unless that is too overwhelming. You get somewhere where you have a large, large number of contacts then you will split it so it is a little easier for the broadband operator. But three contacts is not a lot.

MR. ROTH-ROFFY: Who is maintaining the paper log?

WIT: That would be the workload share operator as well.

MR. ROTH-ROFFY: Okay, I believe that is all I have for now. I believe Mr. Bill Woody would like to----

MR. WOODY: Just a couple of questions. What--I think we heard what your responsibilities are, but what is your primary mission of sonar?

WIT: Detect tracks and then classify.

MR. WOODY: What do you mean by track?

WIT: Track as in if you have a trace on the screen for broadband purposes you put a letter designation or a tracker on it and you send that information out to fire control.

MR. WOODY: You had mentioned some methods of determining range to contacts. Is that one of your primary responsibilities in determining range to contacts?

WIT: Not primary, but we do it to assist and back up--kind of more so a pride issue in there, we try to get the better solution and ranges than the fire control because they got the computer, we have our wizzy wheels and paper.

MR. WOODY: Is the primary responsibility for determining range the fire control organization?

WIT: I'm not sure their primary. I'm sure it probably has something to do with it. I don't know all the different things that fire control for their exact purpose is. I can't get into everything they do.

MR. WOODY: This is probably a matter of record, but could you give me the names of the people on watch--the unqualified for example----

WIT: That was SN Rhodes was the UI.

MR. WOODY: R-H-Y-D?

WIT: R-H-O-D-E-S. Petty Officer Bowie was broadband. That is the broadband B-O-W-I-E. The over instruction was Petty Officer Reyes, R-E-Y-E-S.

MR. WOODY: Petty Officer Bowie, what is his rating?

WIT: Sonar tech third class.

MR. WOODY: And Reyes?

WIT: First class.

MR. WOODY: And in the sonar organization who is the senior sonar man onboard the GREENEVILLE?

WIT: That would be Chief Gross.

MR. WOODY: Was Chief Gross in sonar at any time that day?
WIT: No, he was left in port that day. The senior sonarman onboard was Petty Officer Holmes who was the one that relieved me right after.

MR. WOODY: Holmes? H-O-L-M-S?

WIT: E-S, yes.

MR. WOODY: His rating please?

WIT: STS1 as well, petty officer first class.

MR. WOODY: I know that this has been touched upon. You said you had three traces. Just tell me again what you meant--after the collision you wanted to make sure you had three traces?

WIT: Yes sir.

MR. WOODY: What did you mean by that?

WIT: The demonstrations on the screen, what we were tracking before. I just wanted to make sure with the bump that we had three more traces still up there as in were they getting ready to be tracked again. I saw three traces come back on the screen roughly thereabouts where the other three were.

MR. WOODY: Did these correlated to the three contacts?

WIT: They did at that time.

MR. WOODY: As the ship made the emergency surface, were you aware of any kind of a course change or were you aware of the heading of the vessel?

WIT: You can see the heading. I had heard we were coming left, but I'm not sure the exact course we had come to.

MR. WOODY: You didn't take note of this yourself?

WIT: I did not know the exact--we have indications on the screen, I mentioned earlier the little "V" shape that is there it follows the stern marker, will move to indicate a course change, but on emergency blow--or right prior to the emergency blow, I did not study or focus on the exact heading of the ship at that time.

MR. WOODY: I see. And you weren't aware whether the ship changed--any change during the blow or not.

WIT: Not during the blow I did not.

MR. WOODY: The name of the fire control person that you were working with.

WIT: That was Petty Officer Seacrest.

MR. WOODY: S-E-A, spell the rest of the name.

WIT: C-R-E-S-T I think.

CDR CACCIVIO: Think you will find that those names are on your interview sheet.

MR. WOODY: I want to thank you very much.

CAPT KYLE: There is only three people on watch? That's all the watchstanders that were in sonar?

WIT: That was all the watchstanders, sir.

CAPT KYLE: SN Rhodes, had you stood watch with him before?

WIT: Yes, sir. I was his sonar sup on our East PAC coming back from there.

CAPT KYLE: How close is he qualifying his first qualifications pertaining to sonar?

WIT: That would be passing broadband and he's still got a little ways to go.

CAPT KYLE: How long have you been qualified sonar sup?

WIT: On this boat three and a half years and I was previously qualified on another boat for about a year I think, if I remember right.

CAPT KYLE: What was your previous boat?

WIT: The last boat I was on was the WOODROW WILSON and the JAMES MONROE.

CAPT KYLE: Little bit different sonar.

WIT: Yes sir, BQR-21 system.

CAPT KYLE: And I know CDR Caccivio asked this one. You mentioned earlier you had biologics around the ship--during the orientation phase when the----

WIT: Yes, sir. We had some fish in the various places throughout and what we'll do when the guests come in we will let them sit on that workload share display because broadband obviously has broadband, he's safety of the ship and you can let the guests sit in the chair, listen to what is out there in the water, as well as if there is more than one that wants to hear then I can also put it on the speaker in sonar to let them hear as well so I can kind of do both.

CAPT KYLE: So just prior to the emergency blow--during that baffle clear stuff was there any—do you remember by chance were you in a biologics field--getting back to this question about the noisiness around the boat.

WIT: I believe right prior to we had biologics in about north to about east, but it wasn't heavy, heavy biologics and I don't think they were really close because you could still make determinations on traces on front of them.

CAPT KYLE: North to northeast, you had some biologics.

WIT: You had biologics. You always can tell when they are going to be over the level of shipping contacts or closer because they will make noises, they will kind of scream across the displays. You'll still see traces and contacts, but it just makes it a little bit harder, but I didn't feel that they were any----

CAPT KYLE: ----Some nights can do that.

WIT: Exactly sir.

CAPT KYLE: You mentioned that you relieved the watch you went out and this occasion you didn't go out and check the chart, I think we asked that?

WIT: Yes, sir. I did not check the chart.

CAPT KYLE: At the time of the incident, did you know how far from land you were? Up to—you knew land was up to the north or you were south of Oahu----

WIT: Yes sir.

CAPT KYLE: Did you know how far?

WIT: Exact distance? No I did not sir.

CAPT KYLE: So the exact distance it didn't look like--you know, that puts sort of a maximum range to any contacts up to the north, you know where you are and you kind of know where the reef is out there and where the ships normally would operate, they were not going to drive right down the reef so you didn't have the flavor for like the maximum range to the north any contact could be?

WIT: No sir I did not do that. I had been in prior to—not as supervisor, but kind of tour guide to help people or understand sonar. I was in pretty much sonar throughout the whole day.

CAPT KYLE: Thanks. I'm finished.

LT JOHNSON: Tom, can I ask another one? Were you aware, what was the bottom contour like in the area you were operating in? Were you flat, upslope, down slope, over the curve, where were you?

WIT: You've got a slight--an upslope, but it is not steep till you get close into the island itself then it comes up pretty steep, but it is a slope--it's not like the middle of the ocean is really flat, it kind of slopes off, but not an extreme, extreme amount.

LT JOHNSON: You had an upslope to the north?

WIT: Correct.

LT JOHNSON: How would that effect your--in sounds emitted from vessels to the north as far as SNR's or ranges or would it have an effect on them to you in estimating ranges?

WIT: It can but it usually in a lot closer--kind of have like a megaphone effect if you are in shallow water it would help--make that sound louder as it gets farther out—but we were a little bit farther out for that to happen.

LT JOHNSON: Would the vessel being more to the north and the bottom sloping from north to south give the appearance of it being farther away from you or closer to you? Do you understand what I am asking?

WIT: Understand. The slope we were at I don't think was that great. You could not--I guess depending on how it is bouncing off, it may change your range a little bit to where you might think he is a little farther off.

LT JOHNSON: But it would have an effect on how you would determine range as the slope?

WIT: A little.

LT JOHNSON: Okay and the last thing that I have for you is I understand that at one point you left this unqualified watch in sonar?

WIT: Yes, that was right before the blow.

LT JOHNSON: Is there any standing orders or regulations that prohibit that?

WIT: No sir.

LT JOHNSON: So you mean you can----

WIT: There is no order saying that I could have let that guy go. There is nothing saying that it is okay to send the over instruction out. There is nothing to say that I----

LT JOHNSON: Are there any standing orders or regulations that require that an under instruction watch be directly supervised by a qualified watch stander?

WIT: There is but I'm not sure what that----

LT JOHNSON: You're not if that is a standing order----

WIT: I'm not sure where that's at. I know it is--should have an over instruction that is teaching an under instruction.

LT JOHNSON: Have you ever allowed a non-qualified or under instruction watch stander to man a piece of equipment without a qualified watch stander supervising them directly? I'm going--

is that standard practice to leave an unqualified for a period of time?

WIT: Not a standard practice. Not a period of time. Will be on occasion to leave a guy there depending on the conditions in sonar. You usually have more than two operators. Usually we have a group of four. It has been done before.

LT JOHNSON: And you are not aware of any standing order requiring direct supervision?

WIT: You do have supervision. I don't know of any that says you cannot have them supervised.

LT JOHNSON: Your understanding is that there are standing orders that require an unqualified watch to have supervision?

WIT: Yes.

LT JOHNSON: I think we're saying the same thing. That is all I have, Tom

MR. ROTH-ROFFY: Does anybody have any further questions for the witness? With that the time is 1508. It concludes our interview of Petty Officer McGiboney.