

## **USS Tigrone AGSS 419**

Now I have to assure you that this is an absolute, positive no-shitter... I know because I was there. I may have told some of you this story before, but as I'm now so old I can't remember which one of you have heard it and due to the fact that you're now all so old you probably don't remember it anyway, I'm going to tell all of you.

The first boat I served on was the USS Tigrone AGSS-419. My original orders were for the USS Cobbler SS-344, but she was up North freezing the water in her bilges when I received my orders, so I was sent TAD to the Tigrone who was scheduled to make one of her runs to the Azores.

The Tigrone was actually operated by USN/USL (US Navy/Underwater Sound Lab) and carried an experimental active sonar system called BRASS. We had both BRASS I and BRASS II and if you've ever seen a picture of the Tigrone during this time in her long and useful service life, she was a weird looking boat. I'll try to attach a copy at the end of this email.

The Tigrone was the only boat I was ever aboard which made no big deal about going to test depth. When we operated that monster sonar we always went directly to test depth and following the diving alarm, the diving officer would be given that depth to head for and if the various compartments got rigged for deep by the time we got there, good enough, if not, oh well, they would as soon as they could get to it!

I cannot tell you how many watts the BRASS was capable of transmitting into the water, but suffice it to say it far exceeded anything else in anybody's Navy at that time and maybe even today's Navies for all I know. To give you an idea of the sound level it produced, all hands forward of the engine rooms were required to wear enginemen's hearing protection when it was operating! The overhead of that boat was festooned with enginemen's earmuffs, hanging from every possible location to be readily available when the word was passed: "Now rig for BRASS Ops!"

There were no torpedo tubes on the Tigrone at that time. The after room had been turned into a bunk room and held tier after tier of racks for the crew. The forward room was dedicated to the sonar system including it's very own MG set to power that monster. The sonarmen stood their watches on standard AN/BQR-2B passive sonar set which was in a little corner up forward where the tubes used to be. The Port half of the forward room was all the equipment the civilian USN/USL personnel used to operate the BRASS. It was a very sophisticated system, capable of varying both the amplitude and duration of the pulses it generated and if I can attach the picture, you will note a huge "shit-can" mounted where the bow should be. Inside that huge and cumbersome protrusion was a transducer which looked like a huge log lying on its side atop a round table. The round table could be rotated, thereby presenting the horizontal length of the "log" in whatever direction was desired. In addition to the horizontal training, this transducer "log" was constructed in staves (like a barrel) and the operators could select which staves were to be used, giving them the ability to direct the transmitted beam in whatever direction they would like it to go.

We would go to test depth off the Azores and transmit a pulse in a South-Westerly direction so that it could be received by the USS Baya who would be operating off the Tongue of the Ocean in the Bahamas!!!! Like I said, BRASS put a LOT of power into the water.

Needless to say our activities drew the attention of the Russians and one of those 'fishing boats' brisling with antenna, would follow us around, undoubtedly listening to and recording every transmission we made.

Well one day we were pounding away with the BRASS when one of the civilians asked me where the Russian fishing boat was. I was standing a regular passive sonar watch and I need to explain that whenever the BRASS transmitted a relay in my sonar set would cut out my audio for the duration of the pulse and then cut back in. When the audio returned, I could hear the reverberations from the transmission bouncing off the bottom, off waves, off thermal-clines and maybe off the Azores themselves for several minutes, it was deafening!

I reported that the 'fishing boat' was dead astern making 80 RPM's, just enough to keep up with our three knot submerged speed. "Keep us posted if anything changes." I was told and I sat up to pay closer attention. Pretty soon I noticed a decrease in the amplitude (power) of the transmitted pulses from the BRASS. The same was true of the pulses following that and so on, until the BRASS was barely making a 'b-e-e-p' for each transmission. "He's picking up speed and closing" I announced to the civilians who were twisting the dials on the BRASS equipment and watching me to see if their efforts were producing the desired results. "Tell us when he's directly overhead," was the request as the pulses became weaker still. Evidently the Russian figured that we had sped up and were leaving him behind, as the very loud transmissions we had been making were now so weak he could hardly hear them. "He's making 220 turns and coming right up our stern", I reported. The USN/USL boys made some more adjustments to their equipment, "Is he overhead yet?" they asked, "Almost", I said, wondering what in hell they were going to do. Just then he came out of our baffles and I could hear his diesel engine roaring above the sound of his cavitating propeller blades, as he picked up speed. "HE'S OVERHEAD NOW - NOW - NOW!!" I shouted and just then the relay in my audio circuit cut my sound. It didn't matter, I could hear the prolonged blast of a BRASS transmission coming right through our hull, it seemed that it would never end. I didn't realize they could extend the pulse length so long! The operators had turned the transducer table until the 'log' was crosswise to the length of our hull, then they had selected just the top staves so that all that transmitted energy went straight up to the Russian Trawler who listening equipment was undoubtedly turned up has far as it would go in an effort to hear our previously weaken signals over their own ships noise. You guys know what test depth was in those old boats, so you know just how far away his receiver was from probably a million or more watts being aimed directly at him. We fried his sonar system . . . cooked it . . . blew every transistor . . . toasted every tube . . . Probably rendered the operator deaf for life. You've heard the old saying, "That noise was ten dB above the threshold of pain" - well can you imagine what sound level BRASS could produce at that short a distance? It was a wonder we didn't blow a hole in his hull and sink him.

For the next week the only time that 'Fishing Trawler' caught up with us was when we surfaced after a day's work. He could still pick us up when we were on the surface with his radar, but he couldn't find us when we were submerged and BRASS was transmitting. After about six or seven days, a second trawler showed up and relieved him. They would follow us, but never got real close to us. Once burned, twice shy....

And that's my Russian Trawler Sea  
Story...  
Roger Ramjet

Here's the picture:

